other additional works.

c) Works for metallic constructions

Works for metallic construction are suitable for construction of sports venues and emergency stairs, shelters and different decorative elements.

Likewise, simple metallic constructions are used also in surroundings of sports venues and yards of the buildings.

d) Steel reinforced concrete works

Works for supply and placement of iron in r/c structures.

e) Brick masonry works

Works for realization of dividing and supporting masonry, as well as surrounding venues.

f) Hydro-isolation works

Works for hydro-isolation of foundations, terrace, hydro-sanitary knots and other venues where this intervention is necessary according to technical conditions of the implementation.

g) Layers works

Works for realization of different internal layers (ceiling, terrace), as well as layers for completion of external venues.

h) Ceiling and plastering works

Works for realization of internal, external and ceiling plastering

i) Tile fitting works

Realization of tile fitting of sanitary knots, kitchen venues, etc.

j) Doors and windows mounting. Supply and installation of external and internal doors, as well as windows in the object

k) Painting works - internal and external

l) Different works and demolitions. Different works for realization of external surfaces and demolition of existing objects (if any)

m) Scaffolding and formworks. Scaffolding and formworks for completion of r/c structure and masonry works. n) Electrical works. Realization of internal and external electrical installations, o) Hydro-sanitary works. Works for realization of hydro-sanitary knots and installation of respective equipments.

p) Heating and thermo-isolation works. Works for completion of heating system and installation of respective devices (heating system and respective equipments, radiators), etc.

q) Sewerage works

This works include works in the internal network of waters discharge, pipes in the external network, water supply system, drainage system for the object and sites.

r) Works for technological installations.

Works in this category include surveillance and supervision systems, internet and phone lines, necessary technological equipments for teaching program.

4.3.3. Construction methods

The construction methods and materials used in educational objects shall meet the following characteristics:

a) resistance and mechanic stability;

b) security in case of fire;

c) hygiene, health and environment;

ç) security for use;

d) protection from noises;

dh) energy saving and heating protection.

Most suitable construction methods, which must be taken into consideration during drafting of projects for education objects according to categories are:

Excavations for bases and foundations

Excavations for foundations or underground works up to 1,5 m deep underground, in any type of land, nature and composition, dry or wet (clay even compact, sand, gravel, stone, etc.) including cutting and removal of roots, trunks, stones and objects with a volume up to 0.30 m3, completion of obligations related to underground constructions, sewerages, pipes in general, etc.

Fillings

Layer composed of stones and selected brick pieces in well-pressed layers, dust-free, plaster and organic materials resulting from the demolition of above-mentioned items. All the materials deriving from demolitions must be controlled by the Supervisor and their re-use will authorized by him. All the materials remaining from the demolition will be previously controlled by the Supervisor.

Use of excavated material:

The suitable material and re-filled material from temporary works will be used for ri-filling. Any other extra material will be put at disposal to meet requirements of lacking materials.

Filling around the structures

Material shall be placed in simultaneous way on both sides of the supporting wall or column. The later on fillings must be obtained from a material approved by the Supervisor, cast 150 mm thick pressed layers.

- Standard foundations

Concrete foundations

Foundations made of concrete M100 per m3 and cleaned in thick and well-vibrated layers, with dimensions and shape demonstrated in the respective drawings, including the forms, type of work, support and enter requirements to complete the work in a qualitative way.

Foundations and bases of buildings made of buto-concrete

Foundations and bases of buildings made of buto-concrete formed by concrete and limestone less than 20 cm in ratio m3: concrete M 100, 0.77 m3 and stones 0.37 m3, with a dosage of concrete per m3 same as concretes, including formwork, reinforcements and any other necessary obligation for completion of foundations.

Footing for columns

Footings realized and duly reinforced according to instructions in the project, M 200 concrete, cast on the object in thin and well-vibrated layers, with a dosage according to concrete M 200 with inert, including reinforcing steel, forms and reinforcements, as well as any other necessary obligation and masteries for completion of works.

3.6 Supporting works for foundations

Hydro-isolation of footing

Hydro isolation layer for vertical walls of the foundations composed of a bituminous emulsion membrane and two bituminous layers M-3 with a dosage of 3.8 kg / m2 and applied hot, including any other obligation for completion of work.

Hydro-isolation of foundations in buildings without basement.

The buildings with basement need the hydro-isolation of horizontal top base of the foundations in the level of upper base with sand cement mortar 1:2. This hydro isolation layer shall be connected to the hydro isolation layer of the ceiling and hydro isolation of external vertical side of the foundations, located in the zone between the pavement and upper base.

Hydro-isolation of foundations in buildings without basement

In the buildings with basement is carried out:

- Hydro-isolation of the horizontal ground of the foundations in the hydro-isolating level of hydro isolation of the basement ceiling.
- hydro-isolation of the external side of the foundation wall. This is connected to the hydro isolation of the horizontal ground and it is raised not less than 10 cm above the pavement level.

Perimetric and superficial drainage

The perimetric drainage is carried out along the foundations, but not on them. This drainage is composed of ring lines with discharge pipes and control manholes.

If under the building´s ceiling is found a capillary layer, then there shall be carried out a ring drainage with pipes.

If the drainage must be done under the sub-soil, then it is necessary for the sub-soil of foundations in this area to be deeper.

Pipes will be placed starting from the lower point to the highest in a direct line with an inclination, on a gravel filtering layer 15 cm thick and covered for about 25 cm with the same filtering material. Likewise, we must take into account that the sub-soil of the pipe must be at the minimum 20 cm under the ceiling level, in order to allow the removal of water without problems from the capillary layer.

Beside perimetric drainage, an important role in removal of water from the foundations is played by the superficial drainage, which is realized as following :

Concrete Elements and sub-elements

Lintels cast in-situ

Lintels are realized in the entire width of the masonry with a min. 25 cm bearing on the lateral sides with a different height depending on the light space, duly reinforced and according to the guidelines in the project, prepared from M 200 and M 250 concrete, including service scaffold, forms, reinforcements, iron of the formworks and any other necessary thing completion of the work.

Pre-cast lintels

Supply and installation of the prefabricated arch-beams with a total width up to 40 cm and

different sections created by regularly reinforced concrete according to guidelines in the project, placed in the object with a cement mortar and different sections created by M-200 concrete, duly reinforced according to the guidelines in the project placed on the object with cement mortar M-1:2, including reinforcing steel, rebar works, as well as any other obligation for completion of works.

Cast beams

Concrete beams; Concrete duly reinforced beams according to guidelines of the project, up to the height of 4 m, realized with concrete cast on the object with thin well-vibrated layers, M-200 concrete with dosage of Make 200 with inert, including service scaffold, forms, reinforcements, rebar, as well as any other obligation for completion of works.

Concrete layer

Realization of the layer in the entire width of the masonry below and a height of about 15 to 20 cm, reinforced according to Technical Implementation Conditions (KTZ) and Albanian Standards (STASH), realized with concrete cast in situ, added in thin well-vibrated layers, Concrete M 150 up to M 200 with inert and as indicated in the drawings, including forms, reinforcements, rebar, service scaffold, as well as any other requirement for completion of works.

Columns

Concrete columns, reinforced regularly and according to the guidelines in the project, up to 4 m high, realized with the concrete cast on situ in thin and well-vibrated layers, concrete, concrete m-200 and dosage according to M 200 concrete with inert as indicated in the drawing, including forms, reinforcements, rebar, service scaffold, as well as any other requirement for completion of works.

SAP reinforced slab

Supply and mounting of “SAP” slab, placed on masonry previously leveled with m-1:2, anchored in a connecting layer according to guidelines of the project, duly reinforced with M 200 to M 250, cast on object in thin and well-vibrated layer and according to light space of the campate will need an reinforcement steel and additional slap, including forms, reinforcements, scaffolds and any other requirement to complete the works.

Pre-cast slabs

Pre-cast concrete/reinforced slab, in different heights from 11 cm up to 16 cm, placed on the object above the well-leveled layer, including installation of the slab and respective cast of M 250 or M 300 concrete.

r/c slab

Monolith concrete slab duly reinforced with M 200 concrete according to the project, cast in-site with thin and well-vibrated, including iron, forms, reinforcements, service scaffolds, as well as any other obligation for completion of work.

r/c stairs cast in-site

Stairs for each floor, realized with ramps, respective landings and bearing beams. The treads must be cast in concrete at the same time with the ramp. Concrete Make M 200 to M 250, including forms, reinforcement, scaffolds, excavations for foundations, rebar, as wells as any other requirements to complete the works.

Main entrance cover

Beam slab at the building entrance realized with concrete slab/monolith reinforced, which is one with the concrete / reinforced layer of the building corpus and can be cast in concrete in the type of consol or based on consol beam. e be M 200 to M 250. Works are realized including forms, reinforcement, service scaffolds, excavations for foundations, reinforced steel, as well as any other obligation for completion of work.

r/c structures

Part of buildings with reinforced concrete bearing structure, built separately from the masonry, envisaging a technical expansion joint for 40 m length. The concrete/reinforced structure shall be formed with a skeleton with beams, columns, footing, stairs related between them; and realized in a monolith way with concrete M 200 to M 250. These structures are completed starting from the foundations.

Walls and divisions

Wall with complete bricks 25 cm

Masonry with supporting complete bricks up to 3 m high, realized with bastard mortar m-25, according to item 5.1.1 per m3 surface: complete bricks no. 400, bastard mortar m3 0.25, cement 400, for any wall thickness, including every detail and requirement for connecting bricks, corners, scaffold, as well as any other necessary requirement for completion of masonry works. For ground floor masonry, the upper base surface shall be leveled with a cement mortar layer 1:2 not thicker than 2cm.

Lightweight bricks wall

Masonry with lightweight bricks up to 3 m high, realized with bastard mortar m-25 according to item 1.2, per m^3: lightweight bricks no. 205, bastard mortar m3 0.29, cement 400, for any thickness including every detail and requirement for connecting bricks, corners, openings of windows, service scaffold, as well as any other necessary thing for completion of masonry works. For the masonry of ground floor, the upper base surface shall be leveled at a layer of cement mortar 1:2 with a thickness not less than 2 cm.

Separating Wall 12 cm

Masonry with complete bricks 12 cm wide and bastard mortar m-25 per m^3 surfaces: complete bricks 424 pieces, mortar 0.19 m3, cement 400 and water.

Internal wall with full bricks

Masonry with complete bricks 25 cm thick realized with bastard mortar m- 25 per m3 surface: complete bricks no. 400, mortar 0,25 m3, cement 400, 38 kg and water, including every detail of the requirements for connecting bricks, corners, opening of windows, service scaffolds, as well as any other necessary thing for completion of masonry works.. For the

masonry works of ground floor the For the masonry of ground floor, the upper base surface shall be leveled with a cement mortar layer 1:2 not thicker than 2 cm.

Internal wall with hollow bricks 11 cm

Masonry with 6 hole bricks, 11 thick cm and bastard mortar m-25 per m3 surface: bricks with 6 holes 177 pieces, mortar 0,10 m3, cement 400 and water, including every detail of the requirement for connecting bricks, corners, opening in windows, service scaffold, as well as any other necessary thing for completion of masonry works. For masonry of ground floor, the upper base surface shall be leveled with a cement mortar layer 1:2 not thicker than 2 cm.

Internal wall with hollow bricks 20 cm

Masonry with 6-hole bricks, 20 cm realized with bastard mortar m-25 per m3 surface: bricks with 6 holes, 172 pieces, mortar 0,12 m3, cement 400 and water, including every detail of requirements for connecting brick, corners, opening of windows, scaffold as well as any other necessary thing for completion of masonry works. For the masonry of the grand floor, the upper base surface be leveled with a cement mortar layer 1:2 not thicker than 2 cm.

Double wall with bricks

Same as in the cases presented above, whereas the difference is that here there are two rows of bricks attached to each other and bonded between them.

Double wall with lightweight bricks

Same as in the cases presented above, whereas the difference is that here there are two rows of bricks attached to each other and bonded between them.

Concrete block walls

Metallic structures

The designing process of steel constructions shall take into account the requirements reflecting works characteristics of these constructions through respective instructions supporting these technical conditions.

Solidity and stability of steel constructions must be guaranteed during the exploitation process, transport and installation.

4.3.4 Technologies and equipments to be used

Technologies used during the construction will boost energy use efficiency.

Central heating systeme

Heating system pipes may be divided according to the material :

- Iron pipes
- Zinc-plated iron pipes
- Copper pipes
- Plastic pipes

Central heating radiators

- Aluminium

- Steel

Thermo isolation of the object:

- Capot System
- Walls with layers (wall +polystyrene+ wall)
- Slabs thermo-isolation (polystyrene)
- Thermo-isolation of ground floor

Sun panels for heating sanitary water

- Feed-return pipes network
- Sun panels (fixing on terraces of the objects)
- Central Bolier

Fire protection

- Supervision tools
- Smoke alert.
- Automatic fire alert
- Alarm bell

In case of fire, way to put it off are:

- o Fixed types
- o Hydrants inside the building
- o Hydrants outside the building
- o Spraying system
- o Mobile Type
- o Different tanks

Surveillance camera system:

- Installation grid
- Cameras
- Central Surveillance Cameras

4.3.5 List of respective technical standards to be taken into account during the project implementation

Regarding technical implementation standards, we will refer to the Council of Ministers Decision No.68, dated 15.02.2001 "Technical Conditions of Implementation", as well as EUROCODEs for works and materials that may be used during the project implementation. (Annex no. 5 attached)

4.3.6 Evaluated construction period

Period for realization of the construction will be calculated from the moment of signature of the contract, which will go through the following phases:

1. Signing of contract
2. Draft- Idea 2 months
3. Project Implementation 4 months

4. Approval of Project Implementation (approval at Institution and technical revision) 1 month
5. Approval of construction permit and other respective permits 1 month
6. Implementation of the construction 12 months

From the moment of signing of contract, the implementation project for objects must be completed within 6 month period.

After drafting of project implementation, for one month should be approved and equipped with respective permits.

After approval of the project and equipment with respective permits, the construction of the object must be completed for one year.

Table 16 – Stages of project realization

Nr.	Etapat e relaizimit të objektit	MUAJ																			
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX
1	Lidhja e kontratës																				
2	Projekt ideja																				
3	Projekt zbatimi																				
4	Miratimi i projektit të zbatimit (miratim në Institucion dhe oponenca)																				
5	Miratimi i lejes së ndërtimit dhe lejeve të tjera përkatëse																				
6	Zbatimi i ndërtimit																				

4.4. Costs of project implementation

4.4.1. Designing and Building Costs

Pursuant to needs for new classes made evident for each Administrative Unit, requests for were coordinated in schools with a number of classes in line with standards specified by MoES through the "Guideline for designing of school buildings". These school models offer opportunities for fulfilment of needs envisaged for classes of pre-university education, respecting legal requirements for pre-university education classes for determination of parallel classes for each teaching cycle. In the same time, for nine-year schools have been envisaged even venues for pre-schools cycle, as part of nine-year education institution, according to MoES requirements.

Table 17 - No of necessary schools to be built

	Nine-year			High schools		
ADMINISTRATIVE UNIT	New schools	School typology	No students	New schools	School Typology	No students
ADMINISTRATIVE UNIT 1	**0**	0	0	**0**	0	0
ADMINISTRATIVE UNIT 2	**2**	Type 2 - 30 classes	1800	**1**	Type 4 - 21 class	630
ADMINISTRATIVE UNIT 3	**0**	0	0	**0**	0	0
ADMINISTRATIVE UNIT 4	**0**	0	0	**0**	0	0
ADMINISTRATIVE UNIT 5	**1**	Type 2 - 30 classes	900	**0**	0	0
ADMINISTRATIVEUNIT 6	**0**	0	0	**0**	0	0

ADMINISTRATIVE UNIT 7	**0**	0	0	**1**	Type 4 - 21 classes	630
ADMINISTRATIVE UNIT 8	**1**	Type 1 - 20 classes	600	**1**	Type 4 - 21 classes	630
ADMINISTRATIVE UNIT 9	**1**	Type 1 - 20 classes	600	**1**	Type 4 - 21 classes	630
ADMINISTRATIVE UNIT 10	**0**	0	0	**0**	0	0
ADMINISTRATIVE UNIT 11	**2**	Type 2 - 30 classes	1800	**1**	Type 4 - 21 classes	630
AU DAJT	**0**	0	0	**1**	Type 4 - 21 classes	630
AU FARKE	**1**	Type 3 - 20 classes	480	**0**	0	0
AU VAQARR	**0**	0	0	**0**	0	0
AU KASHAR	**2**	Type 2 - 30 classes	1800	**1**	Type 4 - 21 classes	630
AU NDROQ	**0**	0	0	**0**	0	0
AU PEZE	**0**	0	0	**0**	0	0
AU PETRELE	**0**	0	0	**0**	0	0
AU BALDUSHK	**0**	0	0	**0**	0	0
AU BERZHITE	**0**	0	0	**0**	0	0
AU KRRABE	**0**	0	0	**0**	0	0
AU SHENGJERGJ	**0**	0	0	**0**	0	0
AU ZALL BASTAR	**0**	0	0	**0**	0	0
AU ZALL HERR	**0**	0	0	**0**	0	0
TOTAL	**10**		**7980**	**7**		**4410**

Taking into account the need for kindergartens, nine-year and high schools, as well as increase of the efficiency of this investment, during the study were considered even these needs by envisaging the integration of venues for kindergartens in nine-year schools buildings. These may be integrated in the same building, but with separated entrance and yard, as well as by ensuring all the suitable technical parameters guarantying the security of children and well-going of education processes and care for chidren of this agegroups.

As long as “Guideline for desining of school buildings” (Norms and Standards) does not envisage standards of kindergartens, every cost and construction cost is carried out based on similar projects built in the course of last years by Tirana Municipality, in concrete:

1. New construction kindergarten in Selaudin Bekteshi str
2. New construction Kindergarten no. 21
3. New construction Kindergarten no. 34

Table 18 – Detailed data for the proposed schools

	SHKOLLA 9-VJEÇARE DHE KOPËSHTE							SHKOLLA TË MESME	
NJESIA ADMINISTRATIVE	SHKOLLA TE REJA	NR KLASASH 9-VJECARE/ SHKOLLË	KLASA PARASHKOLORE/ SHKOLLË (5-6 VJEC)	AMBJENTE KOPËSHTI/ SHKOLLË (4-5 VJEC)	AMBJENTE KOPËSHTI/ SHKOLLË (3-4 VJEC)	TOTAL KLASA/ SHKOLLE	TOTAL KLASA	SHKOLLA TE REJA	NR KL/ SHKOLLË
NJESIA ADMINISTRATIVE 1	**0**							**0**	0
NJESIA ADMINISTRATIVE 2	**3**	18	2	2	2	24	72	**1**	21
NJESIA ADMINISTRATIVE 3	**0**							**0**	0
NJESIA ADMINISTRATIVE 4	**1**	18	2	2	2	24	24	**0**	0
NJESIA ADMINISTRATIVE 5	**1**	27	3	3	3	36	36	**0**	0
NJESIA ADMINISTRATIVE 6	**3**	27	3	3	3	36	108	**1**	21
NJESIA ADMINISTRATIVE 7	**0**							**1**	21
NJESIA ADMINISTRATIVE 8	**0**							**0**	0
NJESIA ADMINISTRATIVE 9	**0**							**0**	0
NJESIA ADMINISTRATIVE 10	**0**							**0**	0
NJESIA ADMINISTRATIVE 11	**2**	27	3	3	3	36	72	**1**	21
NJA DAJT	**1**	18	2	2	2	24	24	**1**	21
NJA FARKE	**0**							**0**	0
NJA VAQARR	**0**							**0**	0
NJA KASHAR	**0**							**0**	0
NJA NDROQ	**0**							**0**	0
NJA PEZE	**0**							**0**	0
NJA PETRELE	**0**							**0**	0
NJA BALDUSHK	**0**							**0**	0
NJA BERZHITE	**1**	18	2	2	2	24	24	**0**	0
NJA KRRABE	**0**							**0**	0
NJA SHENGJERGJ	**0**							**0**	0
NJA ZALL BASTAR	**0**							**0**	0
NJA ZALL HERR	**0**							**0**	0
TOTAL	**12**						**360**	**5**	**105**

Referring to the teaching program and standards set by Ministry of Education and Sports, types of classes, necessary spaces for each level, for nine-year educaiton, will be according to Tables No. 1- No. 4 .

Refering to teaching program and standards set by Ministry of Education and Sports, types of classes, their size, necessary spaces for each level for higher middle education will be according to Table 5. Depending on zone where the school will be built, they are divided into rural and urban zones. As envisaged, average number of students in urban zones will be 30 students/class, whereas in rural zones with a low residential density will be 24 students/class. As long as need for educational institutions in Administrative Unit of Dajt has been calculated in a urban area, in this case, there shall be followedë the standards of an urban area.

Same logics is valid also for other similar cases for Administrative Units joining Tirana Municipality following the Administrative Territorial Reform.

In this respect, in total, there are made evident 4 types of schools:

Table 19 – Types of schools

Type	Location	Cycle	No classes	Students/ Class	Total No students	M2/students	Total surface
Type1	Urban	Basic education	20	30	600	8.23	4938
Type2	Urban	Basic education	30	30	900	7.32	6588
Type3	Rural	Basic education	20	24	480	8.42	4041.6
Type4	Urban	Higher middle	21	30	630	6.35	4000.5

The construction cost of kindergartens is calculated according to interim payments report prepared by Tirana Municipality in 2012-2013 period. This price includes the construction costs of the educational object together with the open spaces in its function. (yard). As long as interim payment reports of these objects have been drafted by referring to the Technical Manual of Construction Works Prices for 2012 – 2013, there has been an indexation for meter square of price obtained by this interim payment reports.

This indexation is referred to the INSTAT Bulletin "Average Annual Changes of Indexation of Construction Costs (for dwellings) 1994-2015", where for 2013 – 2015 period, index of increase of average constructions price is 0.55%.

In the end, the average price together with the increase rate is estimated at : 54,381 leke/m2 without VAT.

Table 20 - Surfaces of kindergartens according to types

Type	Location	Cycle	No classes	St/class	No. students total	M2/students	Total surface (m^2)
Type 1	Urban	Kindergarten(3-5 years)	4	24	96	9.1	874
Type 2	Urban	Kindergarten(3-5 years)	6	24	144	9.1	1310
Type 3	Rural	Kindergarten (3-5 years)	4	24	96	9.1	874

Table 21 –Kindergartens' construction costs according to typology

Type	Cycle	Total surface	Total construction cost (lekë)
Type1	Kindergarten(3-5 years)	874	47,528,848
Type2	Kindergarten(3-5 years)	1310	71,238,892
Type3	Kindergarten(3-5 years)	874	47,528,848

Construction Cost

determination of construciton cost of schools is refered to interim payment reports drafted for new construction of educaiton objects in Tirana Municipality, financed by public funds and donors as following :

- New construction – nine year school in "Selaudin Bekteshi" street, financed by EU Delegation in Tirana in framework of IPA 2012;
- New construction of nine-year school "Ahmet Gashi", public funds financing;
- New construciton of nine-year school at "Ish Parku i Autobusave", public funds financing
- New construction of nine-year school at "Ish Magazinat e Kombinatit tekstil", public funds financing
- New construction of " Hoxha Tahsin" high school, public funds financing .

According to interim payment reports analyses for 5 objects, categories of works are as following :

Table 22 – Categories of works

Nr.	TITULLI
1	**PUNIME CIVILE**
1.1	DEMOLIM DHE PASTRIM I KANTJERIT
1.2	PUNIME GERMIMI DHE MBUSHJE
1.3	PUNIME BETONI
1.4	PUNIME KONSTRUKSIONI METALIKE
1.5	PUNIME HIDROIZOLIMI
1.6	PUNIME MURATURE
1.7	PUNIME TE CATISE
1.8	PUNIME SUVATIMI
1.9	PUNIME SHTRESASH DHE VESHJESH
1.10	DYER DHE DRITARE
1.11	PUNIME STRUKTURORE METALIKE
1.12	PUNIME METALIKE
1.13	DEKORACIONE DHE LYERJE
1.14	PUNIME JASHTE GODINES
1.15	TE NDRYSHME
2	**PUNIMET MEKANIKE**
2.1	SISTEME NGROHJE
2.2	SISTEM VENTILIMI
2.3	RRJETI I UJIT TE PIJSHEM
2.4	RRJETI I UJERAVE TE ZEZA DHE UJERAVE TE SHIUT
2.5	SISTEMI KUNDRA ZJARRIT
3	**PUNIMET ELEKTRIKE**
3.1	SISTEMI I GJENERATOREVE DHE UPS
3.2	SHPERNDARJA E ENERGJISE
3.3	INSTALIMI I KABLLOVE, KANALINA DHE KUTI SHPERNDARESE
3.4	PRIZA, CELESA DHE RRJETI I NDRICIMIT
3.5	SISTEMI I DETEKTIMIT TE ZJARRIT
3.6	SISTEMI I THIRRJES SE PUBLIKUT
3.7	RRJETI LOKAL (LAN)
3.8	SISTEMI I TELEVIZIONIT (IT)
3.9	SISTEMI I CCTV
3.10	SISTEMI I RRUFEPRITJES
	TOTALI
4	**Fondi Rezerv**
	TOTALI + Fondi Rezerve

Specifically, heating system includes installation of necessary network for heating system and respective devices. Boiler with all the accessories and necessary equipment, radiators, etc.

Ventilation system is used for the gym of the school

CCTV System, public call, fire detection, includes instalation of necessary grids and respective devices.

Based on the analysis of these interim payment reports, it results that the specific weight of each of these works categories compared to the total cost of the project is as following :

- Civil Works 76% (varies from 71% to 80%)
- MechanicalWorks 10% (varies from 9% to 12%)
- Electrical works 10% (varies from 6% to 13.5%)
- Reserve Fund 4% (varies from 3% to 5%)

As long as interim payment reports of these objects have been drafted by referring to the Technical Manual of Construction Works Prices for 2012 – 2013, there has been an indexation for meter square of the price obtained by this interim payment reports.

This indexation is referred to the INSTAT Bulletin "Average Annual Changes of Indexation of Construction Costs (for dwellings) 1994-2015", where for 2013 – 2015 period, index of increase of average constructions price is 0.55%.

In the end, the average price together with the increase rate is estimated at : 46,332 leke/m2 without VAT.

Based on this analysis, the construction cost of these education objects, according to the above-mentioned typology is as following :

Table 23 – Total cost for construction of teaching objects according to typology

Type	Cycle	Total surface (m2)	Total construction cost VAT (leke)
Type 1	Basic education	4938,0	228,785,770
Type 2	Basic education	6588,0	305,233,020
Type 3	Basic education	4041.6	187,207,732
Type 4	Higher middle	4000.5	185,349,833

The total construction cost of the schools together with the integrated kindergartens is as following:

Table 24 – Total construction cost

Type	Location	Cycle	Kindergarten surface	Basic education surface	Higher middle level surface	Cost/ School (lek)	Cost/ Kindergarten (lek)	Cost
								Total
Type 1	Urban	Basic education + kindergarten	874	4,938	0	228,785,770	47,528,848	276,314,618
Type 2	Urban	Basic education +Kindergarten	1310	6,588	0	305,233,020	71,238,892	376,471,912
Type 3	Rural	Basic education +Kindergarten	874	4,041.6	0	187,207,732	47,528,848	234,736,581
Type 4	Urban	Higher middle		0	4000.5	185,349,833	0	185,349,833

4.4.2. Costs of furniture and laboratories

Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 "On Pre-university education system in the Republic of Albania", changed, for which Ministry of Education and Sports has prepared the Guideline "On designing of school buildings" (Norms and Standards).

Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.

For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 25 – Furniture costs according to typology

Type of school	No. Classes	St/Class	No st. total	Cost/student	Total cost
Basic Education (Urban Zone)	20	30	600	24.167	14.500.000
Basic Education (Urban Zone)	30	30	900	24.167	21.750.000
Basic education (Rural Zone)	20	24	480	24.167	11.600.000
Higher middle education	21	30	630	24.167	15.225.000

The furniture costs for basic education includes three levels envisaged for these types.

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.

Costs for furniture of kindergartens per children is about 27.916 lek without VAT

This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 26 –Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.00

							0

Regarding costs for lab equipements, we referred to the purchase contract "Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools" realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 27 Preliminary Costs of laboratories according to typology

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602
4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

Based on schools typology, determined according to designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is defiend the quantity of laboratories for each type, we have the following table: :

Table 28 Costs of laboratories according to school typology s

No	Type of schools	Costs without VAT
1	Basic Education (Type 1)	6,095,850
2	Basic education (Type 2)	7,279,450
3	Basic Education (Type 3)	5,743,950
4	Arsimi i Mesëm i Lartë (Type 4)	13,983,067

Based on all the above-mentioned data, it results that the total furniture and labs cost of 17 schools is 602,378,267 leke without VAT.

4.4.3. Maintenance Costs

To calculate the maintenance cost of pre-university education objects was taken under review a nine-year school with a surface of 3500 m^2. Based on the calculations, the average surface of a physical class is estimated at 36m^2. The calculation of cost includes all the maintenance categories realized by General Directorate No. 3 of the city. Likewse, it was taken under consideration also the history of interim payment reports of maintenance (together with the value in leke) that have been carried out for this object in one school year.

The following table presents all the maintenance category and their costs in leke for a one-year period, translated into annual costs for a physical class. According to the table, the annual costs of expenses for a class with an average surface of 36 m^2 is 422,107 Leke with VAT or 351,755 lek without VAT. Thus, the maintenance cost is estimated at 11,725 leke per m^2 with VAT or 9,770 leke per m^2 without VAT .

Table 29 – Categories of maintenance and their costs (LEKE) for a one-year period per physical class

Description of works/repairs	Unit	Total quantity	Price per unit (leke)	Total of monthly expenses	Total of annual expenses (including material+ worker)	Totali shpenzimeve vjetore/ klase fizike (mesatarisht me siperfaqje 36 m2)
Painting						
Hydromat paint	Kg	577	90		38.298	
Plastic Paint	Kg	1.166	187		160.806	
Acrylic Paint	Kg	970	545		389.879	
Oil paint	Kg	13	440		4.219	
Internal Stucco paint	Kg	60	45		1.991	
External Stuko Lyerje e Jashtme	Kg	30	60		664	
Astar	Kg	147	260		14.094	
Pigment	Kg	35	3.850		99.378	
Solvent	Kg	2	200		295	
Total Paint I					**709.624**	**22.891**
*** Internal paint is calculated once in two years, toilets once a year and external façade is calculated for once in four years**						
Plastering repair works	m2	314	670		210.380	
Hydroisolations	m2	420	1.232		517.440	
Total II					**727.820**	**23.478**
Repair and maintenance works of the Building						
Hydraulic Maintenance					62.710	
Electrical Maintenance					50.575	
Masonry maintenance					47.617	
Carpentry maintenance					61.723	
Total III					**222.624**	**7.181**
Repair of school objects						
Chairs Repair	piece	200	542		159.890	
Tables repair	piece	100	2.476		365.210	
Total IV					**525.100**	**16.939**

Structure Maintenance						
Security staff	Employee	2	36.945	73.890	886.680	
Sanitary staff	Employee	6	32.840	197.040	2.364.480	
Secretary	Employee	1	39.466	39.466	473.592	
Total V			109.251	310.396	**3.724.752**	**120.153**
Repair PC devices (Total VI)	Lekë				**800.000**	**25.806**
Maintenance of technical installations (above-mentioned)						
Cleaning Materials (Total VII)	Lekë				**262.500**	**8.468**
Other materials :						
Fuel substances for heating and hot water during the entire year	Litër	16.000	162		2.592.000	
Maintenance of heating-cooling plants (air conditioning)	Lekë				1.050.000	
Maintenance of potable and hot water	Lekë				250.000	
MNZSH (maintenance, detection alert system, fixed refilling etc)					40.000	
Totali VIII					**3.932.000**	**126.839**
Reserve Fund 5 %	(not valid for maintenance, purchase and paint)					
Total I+II+III+IV+V+VI+VII+VIII					**10.904.420**	**351.755**
V.A.T 20%					**2.180.884**	**70.351**
TOTAL					**13.085.304**	**422.107**

4.4.4. Other costs

Beside construction costs of the school object construction, there are also some other costs and tariffs for :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Impact in infrastructure

For definition of tariff for **study, design, supervision and technical control,** we refer to Council of Ministers Decision 354, dated 11.05.2016 "On approval of manual of tariffs for service in Territory Planning, Designing, Supervision and Technical Control".

For educational objects, referring to Chapter III, Section I "Buildings and their functional typology", where we obtained the group IV of tariffs and referred to table 6, "Accompanying Table of Tariffs, article 25 – Buildings and their functional typology, as well as structures in external venues", in compliance with types of educational objects and their amounts, we have the preliminary sums (with VAT) according to the following table :

Table 30 – Other costs

Type	Construction cost	Study-Design	Works supervision	Technical control
Type 1	276,314,618	4,481,127	3,140,921	110,526
Type 2	376,471,912	10,110,384	4,177,904	150,589
Typ 3	234,736,581	6,638,188	2,703,942	93,917
Type 4	185,349,833	5,345,868	2,182,239	76,855

Study-Design passes through following phases with respective percentage :

1. Analysis of designing tasks 3%
2. Preliminary Draft-idea 7%
3. Final Draft-idea 11%
4. Project for approval of construction permit 6%
5. Implementation Project 32%
6. Final IPR 10%

Total **69%**

Whereas the supervision of works is subject of the following phases :

1. Supervision 25%
2. Preparation of final documents for technical control 3%

Total **28%**

For the determination of the Technical Control value, we referred to Chapter V "Services for Technical Control", article 62, of CoMD 354, date 11.05.2016.

Technical Revision

Calculation of technical revision is made referring to CoMD no.1055 dated 22.12.2010 "On definition of technical revision for construction works projects", where based on the value of the object are determined the coefficients according to the following table :

Table 31 –Calculation of technical opposition

Cost (million leke)	Tariff (in %)
100	6.5
150	6.0
200	5.5
250	5.0
300	4.5
mbi 300	4.0

Technical revision is calculated based on value of project implementation and IPR of project implementation, which take 42% of the estimated value of study-design referring to CoMD 354, dated 11.05.2016 "On approval of manual of tariffs for service in Territory Planning, Designing, Supervision and Technical Control".

For the types of schools subject of this analysis, the value of technical revision will be as following :

Table 32 – Technical Opposition according to school typology

Type	Construction Cost	Technical Opposition
Type 1	276,314,618	223,183
Type 2	376,471,912	250,675
Type3	234,736,581	208,967
Type 4	185,349,833	184,846

- Fire protection

For the tariff paid for fire protection, we refer to CoMD no. 285, dated 27.06.2002 "On tariffs of series carried out by Fire Protection and Rescue Police for citizens and juridical, physical, local and foreign persons". For object with a value over 100.000.000 lek, the tariff is 50.000 lek.

- Environmental Permit

Tariff to be paid for obtaining an environmental permit is based on law no. 10448, dated 14.07.2011 “On environmental permits”and CoMD no. 417, dated 25.06.2014 “On approval of tariffs of environmental permits”, for this case, new construction, is 30.000 thousand lek.

- Impact on infrastructure

Tax of impact on infrastructure is defined based on law 107/2014 “On territory planning and development”, article 46, item 4, which envisages that “Local Planning Authority does not pay the tax of impact on infrastructure from new construction of its own developments with public funds”. For schools construction this local tax is 0.

5. ENVIRONMENTAL AND SOCIAL IMPACT

5.1 Environmental impact

This environmental report addresses the forecast of preliminary negative and positive effects of construction of these school objects in Tirana city.

Environmental evaluation of the territory object of the study is focused on making evident physical-natural elements that are of special importance for preservation, as well as assessment of impact on environment of new elements that will be introduced by this project. This evaluation will help in harmonization and urban regulation of these zones aiming to achieve the required parameters.

5.1.1 Legal framework

Albanian legislation regarding Environmental Protection is as following :

- Law no. 10431, dated 09.06.2011, "On Environmental Protection", changed;
- Law no. 8906, dated 06.06.2002, "On Protected Zones", changed;
- Law no. 9587, dated 20.07.2006, "On protection of biodiversity", changed;
- Law no. 9774, dated 12.07.2007, "On assessment and administration of noise in the environment", changed;
- Law no. 10440, dated 07.07.2011, "On assessment of impact on environment", changed;
- Law no. 10463, dated 22.09.2011, "On integrated management of wastes", changed;
- Law no. 162/2014, "On protection of air quality in the environment";
- Law no.111/2012, "On Integrated Management of water resources";
- Decision of Council of Ministers no. 13, dated 04.01.2014, "On approval of rules, responsibilities and deadlines for holding of procedures for assessment of impact on the environment";
- Decision of Council of Ministers no. 247, dated 30.04.2014, "On definition of rules, requests and procedures for information and inclusion of public in environmental decision-making";
- Decision of Council of Ministers no. 803, dated 4.12. 2003, "On approval of norms of air quality", changed;

- Decision of Council of Ministers no.177 dated 31.03.2005, “On allowed norms for liquid discharges and zoning criteria of receiving water environments”;
- Decision of Council of Ministers no. 676, dated 20.12.2002, “On proclamation protected zone for the Albanian nature monuments”;
- Decision no. 99, dated 18.02.2005, “On approval of Albanian catalogue about classification of wastes”, changed;
- Regulation no. 1, dated 15.03.2006, “On prevention of negative impacts on health and environment of the construction activities”.

5.1.2 Description of Flora and Fauna in the zone object of this study

Tirana is affected by influences of river micro-basins (Lana, Tirana and Erzen Rivers). The contain several echo-systems that are ecologically different, important for characteristic habitats and their associations, but that are currently violated by discharge of solid and liquid urban wastes.

The zones where is envisaged the construction of school objects may be divided into two major groups. The first group is made of sites located in urban zones, where are built existing objects or cast concrete layers. This group includes sites 2/3 and 2/6 in Administrative Unit no. 2, site 9/1 in Administrative Unit no. 9 and site 11/2 Administrative Unit no. 11. The flora in these sites is very rare and floristic physiognomy includes mediterranean herbs and bushes, falling or ever green leaves.

The second group consists of sites located in urban or sub-urban zones where vegetation is dense. This group includes site 5/1 in Administrative Unit no. 5, site 6/6 in Administrative Unit no. 6, site 7/1 in Administrative Unit no. 7, site 8/1 in Administrative Unit no. 8, site 11/1 in Administrative Unit no. 11, site D2 in Administrative Unit of Dajt and site F3 in Administrative Unit of Farke.

Floristic physiognomy of these zones includes herbs such as *hygrofile*, *heriofile* etc., mediterranean bushes such as *macchia* or bushes *salix* and in some of the sites are present also tree plants, which are very rare and mainly cultivated. Near sites 7/2 and 6/6, which are situated near Lana River is noted even the banks vegetation, even though Lana banks are organized this vegetation is rare.

Zones affected by the projects, due to their location in urban zones, do not have a rich fauna, despite their variety of animal habitat. Following is a full list of animal species found in this

territory. Some species of snakes, birds, small amphibians and amphibians are determined in the EU Directives on habitats of Flora and Fauna, Annex II and IV and in EU Directive on Birds.

Mammals:
Lutra lutra
Plecotus auritus (long-eared bat)
Nyctalus noctula (bat)

Birds:
Hippolais olivetorum (olive gull)
Sylvia nisoria (gull)

Reptiles:
Emys orbicularis (swamp turtle)
Mauremys caspica (swamp turtle)
Testudo hermanii (mediterranean land turtle)
Natrix tesselata (snake)
Lacerta trilineata (green lizard with three strips)
Lacerta viridis (green lizard)
Podarcis taurica (lizard)

Amphibian :
Rana lessonae (small water frog)
Hyla arborea (tree toad)
Triturus cristatus (salamander)
Bufo viridis (green toad).

5.2 Assessment of impact on environment in zones in the study

Assessment of expected impacts on the environment includes two stages of project´s realization. The first stage deals with negative impacts on the environment during construction of schools and second stage is related to negative impact on the environment during their implementation.

5.2.1. Impacts on environment during construction stage

Earth

Construction of school objects will be carried out on land surfaces that may be divided into: non-natural, as long as on them are found existing constructions, organized and pave territory, and natural land surfaces. In these cases, the greatest impact on the environment comes from change of destination of land use. This impact is long-term and permanent.

Use of land and landscape

Construction of schools will fully change the visual aspects of the selected zones. Taking into account the fact that new school objects will be built in populated urban zones, their construction may be easily integrated in the landscape of the territory.

Superficial waters

Superficial waters are not present in majority of selected sites, therefore they cannot have a negative impact on the environment. There is an exclusion only for sites 6/6 and 7/2 that are situated near Lana River. Nevertheless, the river is found outside the potential surroundings of the construction site and as a result, the possibility of pollution of waters from fuel and lubricants of construction machineries is very small.

Air

Air quality may be affected by noises as a result of use of heavy excavation, transportation and auto-concrete machineries that may be used durin the construction of the buildings and production of dusts that may accompany the construction since the moment of opening the foundations up to final works. New school objects will be built near residential areas, therefore their impact will be medium. Nevertheless, these two impacts are temporary because are related only to the construction stage.

Biodiversity

Schools will be built on exploited and unexploited land surfaces which are partly covered by herbs and rare vegetation. This vegetation will be cleaned as a result of the construction, but impact on the environment will be almost zero and none of the species is important for the biodiversity. Regarding fauna, the impacts will be minimal, because the sites are found in urban zones and are not populated by animals.

Wastes and inerts

As a result of excavations, there will be construction debris, such as earth, mortar remaining, bricks, stones, inert, limestones and reinforcing steel, etc. In case these wastes will be re-usable then they will be used for fillings. If they are not useful, they will be deposited in places defined by the terms chosen by Tirana Municipality.

Traffic

As a result of entries and exits of heavy tonnage machineries in the construction site, there might be a momental traffic. This will be temporary - only during the construction phase.

Social-economic environment

Majority of selected zones is situated near residential urban centers, and as a result the above-mentioned impacts will affect the community. Nevertheless, these impacts are temporary - only during the construction phase.

5.2.2 Impact on the environment during operation stage

Waters

Operation of school objects are not expected to have any pollution effects on the superficial or underground waters.

Air

Functioning of new schools may not have any impacts on the air quality, despite noises generated by children´s game in the yard, an impact limited within the school yard.

Traffic

During school functioning, there might be generated some traffic in their entrance. Nevertheless, this will be a limited phenomenon before 8 of clock in the morning, when parent take children to school.

Wastes

Urban wastes will be generated during school operation. Management of these wastes will be carried out by Tirana Municipality in line with management plan.

Social-economic environment

The impacts on social-economic environment will have a positive character. At first, children living in zones in the proximity of schools may go to a school near their residence. Second, new schools will revitalize the zones where they will be built and will bring in economic development, because they will favor the creation of nearby economic units that will offer different services.

5.3 Measures for smoothing impact on environment during construction and operation phases

Measures for protection and sustainable development of the environment are part of the work organization plan. The iinvestor will take all necessary measures to minimizee the negative impacts on the surrounding construction site.

Environmental Management Plan will aim to implement the environmental standards during the construction and operational phases. This plan is based on recognized and accepted norms and principles for environmental protection. Measures including in the plan aim to eliminate negative above-mentioned impacts on the environment. In concrete, these measures will include:

- Surrounding of the construction site with a tin net in its entire perimeter leaving an entrance for the construction;
- Transportation of necessary materials will be programmed to avoid concerns with the local traffic. There will be orienting tables for movement of vehicles;
- Construction wasters, such as earth, mortar remaining, bricks, stones, inert, limestone, rebar, wood, etc will be deposited in places defined by Tirana Municipality and not outside the construction surrounding;
- Discharge of sewage waters will be carried out in respective manholes;
- In case of discovery of archaeological or cultural objects of great importance, then the project shall be changed;
- Water spraying to limit emission of dusts near construction materials;
- Covering of surfaces with plastic layers during storage and transportation of materials;
- Planting of trees near the construction site;
- Periodical clearance of construction site and entry road;
- Efficient use of modern construction machineries to minimize the pollution;
- Protection nets for minimization of dusts that will be used at the end of concrete structure;
- Noisy devices will not be allowed to be used 22^{00}-6^{00} every day.

5.4 Social Impact

Education is a powerful mean through which individuals have the opportunity to actively participate in the society. Construction of new school objects, not only offers students the possibility to attend studies in favorable conditions, which has a direct influence in learning, but also favors the development of communities around them.

5.4.1. Social benefits of education

Education offers important benefits to the society expanding abilities, improving social status and as a result creating more employment opportunities or increase of incomes.

Construction of these new school objects will put an even once and forever to the sharp social problem of over-population of classes and performance of teaching process in two shifts. Likewise, it solves also the problem of long distance from schools and residences, which forced children to make long trips to school. Social impact will be important also for parents and family members who due to the distance of school or attendance of studies in the afternoon were obligated to accompany children in unfavorable timetables with the working hours.

Lack of education infrastructure was a serious problems for families in need living in newly developed zones of the capital. This may also be one of the main reasons for abandoning school in these communities. Construction of new schools in these areas will guarantee the access in education as a fundamental right and will offer a precious help in the social integration of inhabitants in these areas.

Construction of these schools will affect the entire surrounding community. Considered as community centers, these venues will be used by the community after official teaching schedule, turning into a incentive for establishment of mutual relations between the community members. The entire zone will be object of a revitalization process that would partly come from the activity of schools, but also from private business interested in opening different activities, such as study centers, library, stationary, etc.

Among indicators provided from Organization for Economic Cooperation and Development, among other things lists that education influences in the health situation of the individuals. According to it, persons with higher education levels, enjoy good health .[1]

5.4.2 Expropriation and compensation

Implementation of the construction of school objects may also face the resistance of the community. Based on the current situation, it is pointed to the construction of 17 schools. They will be built in the following zones :

Unit 2 – 3 schools (2 sites)

Unit 5 – 1 school (1 site)

Unit 7 – 1 school (1 site)

Unit 8 – 2 schools (1 site)

Unit 9 – 2 schools (1 site)

[1] Education at a Glance 2014, OECD indicators, OECD Publishing, pg. 172

Unit 11 – 3 schools (2 sites)

Unit Kashar (Yzberisht) – 3 schools (2 site)

Unit Dajt – 1 school (1 site)

Unit of Farke – 1 school (1 site)

One of the social impacts of the construction would be the expropriation of private properties for public interest. Based on the selected locations for schools construction, the expropriation is estimated at about 58, 547 m^2.

This process will be realized based on law No 8651 "On expropriations and temporary take into use of private properties for public interest", 22.12.1999.

In case of the construction of school infrastructure, the expropriation right and temporary take into use of private property will be exercised for a public interest that can not be realized or protected in any other way than for causes and in respect of procedures defined in the respective law at the necessary amount for realization of the expropriation purpose and with a fair compensation[2]

In this respect, Article 8, item ç) of this law envisages that among the expropriation reasons are also the realization of national or local projects and investments, in function of the protection of environment, health, culture and public education, as well as infrastructure in service and public interest.

Regarding, the technical assessment criteria and calculation of compensation for expropriations will refer to Council of Ministers Decision No.138/200 "On Technical Assessment Criteria and Calculation of Compensation of Expropriated Private Properties, Depreciation of Assets and Third Persons Rights for Public Interest".

This process may be accompanied by land owners residence and may cause delays in deadlines envisaged for completion of schools.

[2] Law No 8651 "On expropriations and obtaining of private properties of public interest for a temporary use", 22.12.1999, Article 2, item 2.

6. ECONOMIC AND FINANCIAL ANALYSIS

Economic and financial analysis of this feasibility study, in line with Council of Ministers Decision no. 575, dated 10.07.2013, "On approval of rules for assessment and granting for concession/private-public partnership", article 7, mainly focuses on determination of value for money of the project, as well as on completion of an evaluation of the investment in total, operative costs and maintenance, as well as any other income expected to be generated during the duration of the project.

6.1 Economic Model of the Concession / Public-Private Partnership

Law no. 125/2013, changed with law no. 88/2014, regulates the competences of contracting authorities in order to sign concessions/public-private partnerships. In this type of relations, the private partner takes the responsibility of financing, designing, building and/or re-building/ renewal the public infrastructure object, to operate and maintain the public infrastructure object built and/or rebuilt/newly renewed. Among the fields of implementation of this law is also education.[3]

Based on the data analysis, it results that to put an end to the over-crowded schools problem and two shifts learning, Tirana Municipality needs to build 17 new schools - 10 nine-year schools and seven high schools. The total cost of construction and furnitures for these schools is calculated at 7.6 billion leke. Such amount of money is financially unaffordable for Tirana Municipality, whose total annual budget is 10 billion leke, whereas investments for construction of new schools in the course of last years has been not more than 500 million leke.

In this respect, in order to settle this problem, Tirana Municipality must implement innovative methods of procurement and financing of the proposed project. To guarantee the realization possibility of the schools construction project, it was chosen a more innovative and cost-efficient approach, combining the designing, financing, construction and maintenance in one and only procurement contract. Due to the considerable dimensions of this project, this methodology will not only offer facilitations during the development process, but will provide more sustainability after its completion.

In the framework of the "Design, Finance, Build and Maintain" (DFBM) model as internationally known "Design, Build, Finance & Operate (DBFO)", **c**ontractors take the responsibility of designing, building, financing and maintaining an object for entire duration of the contract. The contractor who may be one company or a consortium is responsbile for

[3] Article 4, item dh), Law 125/2013

designing, financing, construction and maintenance of the object for a determined period of time, which is proposed to be 7 years. The payment after the completion of the object is dictated based on completion of some determined performance standards regarding the physical condition of the buildings, capacity, quality, etc. This model which goes beyond the designing and construction phase, naturally encourages the designer/builder to provide since the beginning a qualitative construction plan in order to have less costs during the maintenance phase, as long as the responsibility belongs to their consortium. Likewise, integration of all project´s contract in one reduces different transactional costs and boosts project management efficiency.

This PPP model has been widely used for construction of major infrastructure projects, such as construction of highways, hydro power stations, wastes management plants, etc, because the dimensions of such projects required considerable funds, efficient organization of capital and human resources, high designing and construction quality, maximal security and constant maintenance. In this respect, such models have been considered successful for development of projects that guarantee their realization and efficiency of the investment. Nevertheless, the use of this PPP form is not limited only in major public infrastructure works mentioned above. In many OECD countries, mainly in the United Kingdom, this methodology is used also for public service projects, such as construction of new schools.

Following are some examples from different countries that have successfully implemented this model for projects of educational infrastructure:

C**anada**[4]**:** "Alberta Schools Alternative Procurement" Program. In 2007, Alberta region in Canada declared the first stage of the program which envisages the construction of 18 new school buildings (kindergartens and nine-year schools), which were completed in 2010. After the completion of works, duration of the contract will continue with the maintenance and it estimated at about 30 years. The second phase of the program envisaged the construction of other 10 nine-year schools according to the same model and 4 high schools through the simple model of Designing-Constructing contract, which were completed in 2013.

Greece[5]: "Macedonia Schools and Attica Schools" Program. With the use of DBFM mechanism, private operators designed construction of 51 schools with a total amount of about 269 million Euro and 25 year contracts.

United Kingdom[6]: "Building Schools for the future" Program. This program is a long-term investments program, which is contributing in the construction of a considerable number of schools in the entire territory of UK. Majority of schools has been built through the Design-

[4] "Flexible and alternative approaches to providing school infrastructure in Alberta, Canada" – OECD, 2010
[5] "The role and impact of public-private partnerships in education", pg. 82 – World Bank, March 2009 .http://www.ungei.org/resources/files/Role_Impact_PPP_Education.pdf
[6] Ibidem (i.e. extracted from same WB document in the above-mentioned reference and same page)

Build-Finance-Maintenance scheme, but in this case often has been included also the element of school management by a private subject of a determined period. In general, total duration of the contract is estimated up to 30 years. The private consortium is regularly paid by public funds based on its performance during the contract period. If the consortium does not achieve the required performance, the payment is reduced. At the end of the contract period, school is given back to government.

New Zealand [7]: The project of New Zealand Ministry of Education for construction of two schools in Hobsonville, Auckland. This project envisages the construction of a new lower cycle school and one lower middle cycle school in the suburb region of Hobsonville in Auckland city. The private sector is partly responsible for designing, building and financing of the objects, together with their constant maintenance and management of common services. Construction of these schools has been successfully completed in 2014.

In this aspect, the project for construction of new schools in Tirana needs the application of the same approach for improvement of education service in the entire territory of the Municipality. Big number of schools that will be built, financial limitations, short period for implementation of the project, as well as need to guarantee the maximal security of buildings point to the necessity of establishment of an efficient and successful public private partnership.

6.2 Main assumptions

In the framework of financial and economic analysis effects of this feasibility study, were made the following assumptions:

- Concessionary will cope with its incomes the entire investment for construction of education objects and their functioning, whereas Tirana Municipality will face with its funds the expropriation of private lands to be used for this purpose.
- Educational objects will be built and functional at maximum 18 months from the signing of the construct.
- After the construction and functioning of schools, concessionary will be accountable for administration and maintenance of the objects for a 7 year period and for every problematic regarding risks of assets for these period.
- After the construction of objects, Tirana Municipality will pay the concessionary a certain annual sum until the full payment of the invested amount. Incomes for this payments will be provided from the annual incomes of Temporary Tax on Education Infrastructure and conditioned transfer from Ministry of Finance.

[7] "Mayoral Position Paper on Public Private Partnerships" – Ernst and Young, November 2013.

6.3 Costs analysis

Based on technical, it has come to be conclusion that in total will be built 17 schools: 10 nine-year schools and 7 high schools. The new schools will be designed and built according to models in line with standards specified by Ministry of Education and Sports through "Guideline for School Buildings Design". The school models offer the opportunity to fully meet the needs for pre-university education classes, respecting legal and technical requirements for definition of parallel classes according to each teaching cycle. In the same time, for nine-year schools are envisaged also venues for pre-school education, as part of the nine-year education institution. Referring to above-mentioned standards, there exist 4 main types of schools with the following operational data:

Type 1 of schools includes 20 classes per pre-school and school students with a construction surface of about 4,938 m2. Likewise, this schools will included a kindergarten of about 4 classes with a surface of about 874 m2. In total, the construction surface for this type of school is 5,812 m2. **Type 2** of schools is nine-year education with 30 classes for pre-school and school students with a construction surface of about 6,588 m2. Likewise, this school will include a kindergarten with 6 classes with a surface of about 1,310 m2. In total, the construction surface for this type of school is 7,898 m2. **Type 3** of schools is higher middle for rural zones with 20 classes with a construction surface of about 4,041 m2. **Type 4** of schools consists of higher middle schools for urban zones with 21 classes and a construction surface of about 4001 m2.

According to quantitative analysis carried out and explained above, there are necessary a total of 17 schools, 2 out of them belonging to Type 1, 7 schools of Type 2, 1 school of Type 3 and 7 high schools of Type 4. Respectively these schools will be built according to following administrative units and data:

Table 33 Detailed data for each school

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	nxënës për klasë	Nxënës për shkolle	Sipërfaqe totale shkolla	Klasa kopësh ti	Nxënës për klasë kopështi	nxënës për kopësht	Sipërfaqe totale kopësht	Siperfaqe totale ndertimi
1	NJA 02	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
2	NJA 02	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
3	NJA 02	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
4	NJA 05	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
5	NJA 07	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
6	NJA 08	Tipi 1	9-vjeçar	20	30	600	4,938	4	24	96	874	5,812
7	NJA 08	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
8	NJA 09	TIPI 1	9-vjeçar	20	30	600	4,938	4	24	96	874	5,812
9	NJA 09	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
10	NJA 11	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
11	NJA 11	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
12	NJA 11	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
13	NJA Dajt	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
14	NJA Farke	Tipi 3	9-vjeçar	20	24	480	4,041	4	24	96	874	4,915
15	NJA Kasha	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
16	NJA Kasha	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
17	NJA Kasha	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
Totali				417		12,390	88,036	54	240	1,296	11,792	99,828

Summarizing according to schools typology, in total, we have the following operational data :

Table 34 Summarized data for proposed schools according to typology

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Nr nxënës për klasë	Nxënës për shkollë	Nr klasa kopështi për shkollë	Nr nxënës për klasë kopështi	Nxënës për kopësht	Sip ndërtimi i shkolla	Sip ndërtimi kopështe	Tot Sipërfaqe ndërtimi	Total Nxënës në shkolla	Total Nxënës në Kopështe	Nr Total i nxënësve
Tipi 1	2	20	30	600	8	24	96	9,876	1,748	11,624	1,200	192	1,392
Tipi 2	7	30	30	900	42	24	144	46,116	9,170	55,286	6,300	1,008	7,308
Tipi 3	1	20	24	480	4	24	96	4,041	874	4,915	480	96	576
Tipi 4	7	21	30	630	-	-	-	28,004	-	28,004	4,410	-	4,410
Grand Tc	**17**	**91**				**72**	**336**	**88,036**	**11,792**	**99,828**	**12,390**	**1,296**	**13,686**

For a better analysis of value for money of the project, we have grouped the expenses in four main categories, based on accounting standards and requirements of CoMD no. 575, dated 10.07.2013, “On approval of rules for assessment and granting of concession/public private partnership”, article 7, section 3-6:

Direct costs of investments

Direct costs of maintenance

Due to the effects of the following analysis, all the prices and values will be without VAT, unless is speficied otherwise.

6.3.1. Direct Costs of Investments

During the analysis and in line with above-mentioned CoMD, there were identified the following direct costs of investments:

1. Costs of Land Expropriation ;
2. Construction Cost ;
3. Cost of Study and Designing ;
4. Supervision Cost ;
5. Cost of Technical Control;
6. Technical Revision ;
7. Cost for Furniture and Equipment;
8. Cost of lab devices.

6.3.1.1.Cost of Land Expropriation

According to determination of trace where these schools will be built, it results that will be expropriated a total of 58,547.50 m2 of private properties, which according to the calculations are estimated at an expropriation value of 814,242,252 leke. On the other side, the state-owned land will be subject of respective procedures in order to take the respective properties under the administration.

With the approval of CoMD in this respect and completion of financial and legal documents in line with the CoMD and normative acts in force, every expropriated subject will be paid by Tirana Municipality through a fund determined for this purpose.

Table 35 Summarized table of expropriations

Nr rendor i tabeles	Adresa	Tipi	Sheshi	Shpronesimi ne Vlere	Siperfaqje ne m2 te shpronesuar	Cmimi mesatar per m2
4	NJA 05	Tipi 2	5/1	218,519,847	3,263	66,969
5	NJA 07	Tipi 4	7/2	261,101,406	8,482	30,783
6	NJA 08	Tipi 1	8/1	150,790	5	30,158
7	NJA 08	Tipi 4	8/1	150,790	5	30,158
8	NJA 09	Tipi 1	9/1	23,404,716	687	34,068
9	NJA 09	Tipi 4	9/1	23,404,716	687	34,068
11	NJA 11	Tipi 2	11/1	103,053,248	4,484	22,985
12	NJA 11	Tipi 4	11/1	103,053,248	4,484	22,985
13	NJA Dajt	Tipi 4	D2	53,044,000	14,900	3,560
14	NJA Farke	Tipi 3	F3	3,368,064	7,518	448
15	NJA Kashar	Tipi 2	6/6	20,913,060	4,930	4,242
16	NJA Kashar	Tipi 2	6/3	2,039,184	4,552	448
17	NJA Kashar	Tipi 4	6/3	2,039,184	4,552	448
Grand Total				**814,242,252**	**58,548**	**13,907**

6.3.1.2. Construction Costs

Based on the report obtained from General Directorate of Public Works No. Prot. 21407/2, dated 09.08.2016, costs for schools construction is 46,331.67 leke/m2, whereas the kindergartens costs are 54,380.83 leke/m2. From the combination of this data with the total construction surface for each type of school, it results that :

- The construction value of a Type 1 school is 228,785,770 leke and to this amount is added also the construction of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 1 school, including the kindergarten venue is 276,314,618 leke.
- The construction value of a Type 2 is 305,233,020 leke and to this amount is added the construction cost of a kindergarten of about 71,238,892 leke. In total, the general cost of the construction of a Type 2 school, including the kindergarten venue is 376,471,912 leke.
- The construction value of a Type 3 schools is 187,207,732 leke and to this amount is added the construction cost of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 3 schools, including the venues of a kindergarten is 234,736,581 lekë.
- The construction value of a Type 4 school is 185,349,833 leke and these schools do not include kindergarten premises.

Table 36 Summarizing table of construction costs

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Klasa kopësh ti për shkollë	Sip ndërtim i shkolla	Sip ndërtim i kopështe	Tot Sipërfaqe ndërtimi	Cmimi i ndertimit te shkollave lek/m2	Cmimi i ndertimit te kopështeve lek/m2	Kosto ndertimi të një shkolle	Kosto e ndërtimit të një kopështi	kosto e ndërtimit të një shkolle + kopesht	Kosto e përgjithshme e ndertimit
Tipi 1	2	20	4	9,876	1,748	11,624	46,332	54,381	228,785,770	47,528,848	276,314,618	552,629,237
Tipi 2	7	30	6	46,116	9,170	55,286	46,332	54,381	305,233,020	71,238,892	376,471,912	2,635,303,382
Tipi 3	1	20	4	4,041	874	4,915	46,332	54,381	187,207,732	47,528,848	234,736,581	234,736,581
Tipi 4	7	21	-	28,004	-	28,004	46,332	54,381	185,349,833	-	185,349,833	1,297,448,828
Grand To	**17**	**91**	**14**	**88,036**	**11,792**	**99,828**	**185,327**	**217,523**	**906,576,355**	**166,296,588**	**1,072,872,943**	**4,720,118,027**

In total, there will be built 2 Type 1 schools with a construction cost of 276,414,618 leke per school, 7 Type 2 schools with a construction cost of 376,471,912 leke per school and 1 Type 3 schools with a construction cost of 234,736,581 leke per school and 7 Type 4 schools with a construction cost of 185,349,833 leke per school. As a result, the total construction costs for this project amounts to 4,720,118,027 leke. This cost will be covered by the concenssionary.

6.3.1.3.Other direct investment costs

Based on the report from Public Works General Directorate, in Document No. Prot. 21407/2, date 09.08.2016, other direct investment costs are :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Tax of impact in infrastructure

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Taking into account the data analyszed in this chapter on costs, it results that the direct investment const is as following :

Table 37 Summarizing table of other costs

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
Tipi 1	2	11,624	8,962,254	6,281,842	221,052	446,366	100,000	60,000
Tipi 2	7	55,286	70,772,689	29,245,329	1,054,124	1,754,725	350,000	210,000
Tipi 3	1	4,915	6,638,188	2,703,942	93,917	208,967	50,000	30,000
Tipi 4	7	28,004	37,421,081	15,275,677	537,985	1,293,922	350,000	210,000
Grand To	**17**	**99,828**	**123,794,213**	**53,506,790**	**1,907,078**	**3,703,980**	**850,000**	**510,000**

Tax of impact on infrastructure for public works is 0.

6.3.1.4. Furniture costs

In order to make schools functional, it is necessary to provide necessary IT equipment and laboratories. Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 "On Pre-university education system in the Republic of Albania", changed, for which Ministry of Education and Sports has prepared the Guideline "On designing of school buildings" (Norms and Standards).

Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.

For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 38 Cost of school furniture

Type of schools	No of classes	st/class	Total no of students	Cost/students	Total cost
Type 1	20	30	600	24,167	14,500,000
Type 2	30	30	900	24,167	21,750,000
Type 3	20	24	480	24,167	11,600,000
Type 4	21	30	630	24,167	15,225,000

The furniture cost for basic education have been included three levels which envisage the following types :

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.
Costs for furniture of kindergartens per children is about 27.916 lek without VAT
This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 39 –Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.000

Regarding costs for lab equipements, we referred to the purchase contract "Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools" realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 40 Costs for lab equipment

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602
4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

According to schools typology defined based on the designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is determined the quantity of labs for each type, we have the following table :

Table 41 Costs for lab equipment according to schools typology

No	Tyes of schools	Cost without VAT
1	**Basic education (Type 1)**	6,095,850
2	**Basic education (Type 2)**	7,279,450
3	**Basic education (Type 3)**	5,743,950
4	**Higher Middle Education (Type 4)**	13,983,067

According to the analysis of all the above-mentioned data, it result that the total cost of furniture and lab equipments of 17 schools is 502,378,267 leke without VAT, according to the following table :

Table 42 Summarizing cost for school furniture, kindergarten venues and laboratories Kosto përmbledhëse për mobilim të shkollave, ambjenteve të kopështëve dhe laboratoreve

Tipi	Nr i shkollave sipas tipit	Kosto e mobilimit te shkollave	Kosto e mobilimit të kopështeve	Total Kosto Mobilimi	Kosto Laboratori	Total kosto pajisje, mobilje dhe orendi
Tipi 1	2	29,000,000	5,360,000	34,360,000	12,191,700	46,551,700
Tipi 2	7	152,250,000	28,140,000	180,390,000	50,956,150	231,346,150
Tipi 3	1	11,600,000	2,680,000	14,280,000	5,743,950	20,023,950
Tipi 4	7	106,575,000	-	106,575,000	97,881,467	204,456,467
Grand To	**17**	**299,425,000**	**36,180,000**	**335,605,000**	**166,773,267**	**502,378,267**

6.3.1.5. Direct Investment Cost

In conclusion, the direct investment cost of this project is estimated at **6,221,010,605 lekë**. About **814,242,252** leke out of them are calculated as necessary funds for expropriation, which will be covered by Tirana Municipality. Whereas, the total cost of the project that will be covered by the concessionary is **5,406,768,353** leke, where the construction cost is **4,720,118,027** leke without VAT, Costs of the Designing, Technical Revision, Supervision, Technical Control, furniture and laboratories is **686,650,327** leke without VAT. In details, the calculated categories are as following :

Table 43 Direct Investment costs according to categories

Viti	Pershkrimi	Grand total
A.	**Kostot Direkte te Investimit**	**6,221,010,605**
A.1	**Kostot e Truallit**	**814,242,252**
A.2	Kostot e Projektimit	123,794,213
A.3	- Ndertim + instalime	4,720,118,027
A.4	- Oponenca teknike	3,703,980
A.5	- Takse Infrastrukture	-
A.6	- Leje mjedisore	510,000
A.7	- Mbrojtje ndaj Zjarrit	850,000
A.8	- Kosto Supervizimi	53,506,790
A.9	- Kosto Kolaudimi	1,907,078
A.10	- Mobiljet dhe Orendi	335,605,000
A.11	- Investime IT&T dhe Labs	166,773,267

6.3.2. Direct Maintenance Costs

Based on calculations carried out from General Directorate No. 3 of City's Workers, annual maintenance cost per class is 422,107 leke with VAT or 351,755 leke without VAT. Making respective calculations, the annual cost for the general maintenance for each type of school is 8,442,132 leke per one school of Type 1, about 12,663,198 leke per one school of type 2, 8,442,132 leke per one school of type 3 and 7,386,865 per one school of type 4. The total maintenance cost for all schools is 165,676,838 leke per year. The annual cost of maintenance for calculation effects starts from 2018 and pursuant until the completion of PPP period. For more details, see the following tables:

Table 44 Annual cost of maintenance according to type of schools

Tipi i shkollave	Nr i shkollave	Kosto e mirëmbajtjes për shkollë	Kosto e përgjithshme e mirëmbatjes
Tipi 1	2	8,442,132	16,884,264
Tipi 2	7	12,663,198	88,642,385
Tipi 3	1	8,442,132	8,442,132
Tipi 4	7	7,386,865	51,708,058
Grand Total	**17**	**9,745,696**	**165,676,838**

In total, for 7 years, the general maintenance cost will be 1,159,737,664 leke without VAT. About 763,592,363 leke without VAT out of them is the maintenance costs of assets and 396,145,301 leke without VAT is the cost of maintenance staff. The following table is the analysis of categories of maintenance expenses for each school in one year, without VAT:

Table 45 Seven-year cost of maintenance

B.	**Kostot Direkte të Mirëmbajtjes**	**1,159,737,664**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**763,592,363**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	176,556,240
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve	446,105,322
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi	55,846,898
B.1.4	- Mirëmbajtje IT&T (HD+SW)	85,083,903
B.2	**Staf Mirembajtje**	**396,145,301**
B.2.1	Staf Roje	58,272,458
B.2.2	Staf Sanitare	251,473,857
B.2.3	Staf Sekretare	50,368,763

Table 46 Detailed cost of maintenance for each school

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	Lyerje per klase	Riparim suvatim + hidroizolim per klase	Riparime dhe mirembajtje e Nderteses	Riparime Orendi shkollore	Riparime Pajisje PC	Materiale Pastrimi	Lëndë djegëse për ngrohje dhe ujë të	Mirembajtje kondicionim, impiante uji dhe	Sherbim roje	Sherbim pastrimi	Sherbim sekretarie	Total kosto mirembajtjee
1	NJA 02	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
2	NJA 02	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
3	NJA 02	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
4	NJA 05	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
5	NJA 07	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
6	NJA 08	Tipi 1	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
7	NJA 08	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
8	NJA 09	TIPI 1	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
9	NJA 09	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
10	NJA 11	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
11	NJA 11	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
12	NJA 11	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
13	NJA Dajt	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
14	NJA Farke	Tipi 3	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
15	NJA Kasha	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
16	NJA Kasha	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
17	NJA Kasha	Tipi 4	i mesëm i	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
																-
Totali i Mirembajtjes				**471**	**10,781,702**	**11,058,165**	**3,382,449**	**7,978,136**	**12,154,834**	**3,988,312**	**39,381,682**	**20,359,354**	**13,471,815**	**35,924,846**	**7,195,542**	**165,676,837**

6.4 Analysis of PPP incomes

6.4.1. Tariff for the use of schools

Tariff for use of schools (hereinafter "Tariff") will be calculated in such way so that could cover the costs of concessionary and guarantee a minimal income margin for the concessionary in order to make this PPP attractive and the best economic solution compared to other potential scenario. The tariff is paid for the entire maintenance and administration period of schools by concessionary, i.e. for 7 years. This tariff is paid to every year by Tirana Municipality through financing resources detailed as following. This scheme provides for the construction of 17 schools in a record time, solving the two-shifts teaching and over-crowded classes, but as long as all the risks for maintenance and careful use of the asset will be under the responsibility of the concessionary and related to the payments, this will enable qualitative constructions in the interest of the community.

As long as the direct investment costs, i.e. construction and functioning of schools is calculated based on interim payment reports, which include the income margin of the contractor, on this category will not be calculated the additional income margin. But on the other side, as long as the invested values of the concessionary in this respect will be covered in a seven-year period, he must be minimally reimbursed for the value in time of the money, as well as for the normal and extraordinary maintenance part for this period.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period[8], respectively the results of seven year obligations from 2015 until 15.09.2016.

[8] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016

Table 47 Results of auctions for 7-seven year fixed obligations

ISIN	Dt.Ankandi	Ankandi	Muaji	Datë Emetimi	Datë Maturimi	Shuma e shpallur (fillestare)	Shuma e shpallur (nd. strukture)	Shuma e kërkuar	Shuma e pranuar	Prorata Konkurues	Prorata Jo Konkuruese	Yieldi Uniform i Pranuar
AL0017NF7Y23	13.09.2016	*7vjeçar/7years(fix)*	*Shtator*	15.09.2016	15.09.2023	*3,000,000*		*2,309,000*	*2,309,000*			*4.89%*
AL0016NF7Y23	01.06.2016	*7vjeçar/7years(fix)Rihapje*	*Qershor*	03.06.2016	16.03.2023	*2,000,000*		*3,141,400*	*2,000,000*	*4.40%*		*4.00%*
AL0016NF7Y23	11.03.2016	*7vjeçar/7years(fix)*	*Mars*	16.03.2016	16.03.2023	*3,000,000*		*8,247,000*	*2,999,900*	*76.48%*		*4.90%*
AL0015NF7Y22	14.12.2015	*7vjeçar-fiks*	*Dhjetor*	16.12.2015	16.12.2022	*2,500,000*		*5,288,600*	*2,500,000*	*67.70%*	*100.00%*	*6.79%*
AL0014NF7Y22	14.09.2015	*7vjeçar-fiks*	*Shtator*	16.09.2015	16.09.2022	*1,000,000*		*1,430,600*	*1,000,000*	*100.00%*	*100.00%*	*7.78%*
AL0013NF7Y22	12.06.2015	*7vjeçar-fiks*	*Qershor*	16.06.2015	16.06.2022	*3,000,000*		*2,953,500*	*2,953,500*	*100.00%*	*100.00%*	*7.80%*
AL0012NF7Y22	12.03.2015	*7vjeçar-fiks*	*Mars*	16.03.2015	16.03.2022	*2,500,000*		*2,815,800*	*2,500,000*	*80.98%*	*77.92%*	*7.81%*
										Yieldi Mesatar i pranuar		6.28%

The income margin will be object of bidding procedures of competitors in this PPP, but in the mean time, it is necessary to understand the general value of this PPP. The income margin will be calculated for the remaining value of the direct investment every year and on annual maintenance costs. Thus, the financing scheme is attractive for potential competitors and total cost of the project is not higher than the traditional financing methods.

Based on the calculations, annual tariff to be paid to the concenssionary with a margin of about 6.28% will be as following :

Table 48 Annual tariff to be paid to the concenssionary

A	B	C	D	E	F	G	H	I	J	K	L	M
Nr rendor	Viti	Kosto Direkte e Investimit ne Fillim të Periudhës (pa TVSH) (C3=F2)	marzhi i fitimit	Shlyerja vjetore për Koston Direkte të Investimit (C2/B8)	Vlera e Mbetur e Kostos Direkte te Investimit (C-E)	Marzhi i fitimit mbi koston Direkte të investimit (C*D)	pagesa vjetore për koston direkte të investimit Pa TVSH (E+G)	kosto vjetore mirembajtjeje Pa TVSH	Marzhi i fitimit mbi Mirembajtjen (D*I)	pagesa vjetore për koston direkte të investimit Pa TVSH (I+J)	Total Marzhi i Fitimit	Tarifa Vjetore Pa TVSH
1	0	5,406,768,353										
2	1	5,406,768,353	6.28%	772,395,479	4,634,372,874	339,545,053	1,111,940,532	165,676,837	10,404,505	176,081,342	349,949,558	**1,288,021,874**
3	2	4,634,372,874	6.28%	772,395,479	3,861,977,395	291,038,616	1,063,434,096	165,676,837	10,404,505	176,081,342	301,443,122	**1,239,515,438**
4	3	3,861,977,395	6.28%	772,395,479	3,089,581,916	242,532,180	1,014,927,659	165,676,837	10,404,505	176,081,342	252,936,686	**1,191,009,002**
5	4	3,089,581,916	6.28%	772,395,479	2,317,186,437	194,025,744	966,421,223	165,676,837	10,404,505	176,081,342	204,430,250	**1,142,502,566**
6	5	2,317,186,437	6.28%	772,395,479	1,544,790,958	145,519,308	917,914,787	165,676,837	10,404,505	176,081,342	155,923,814	**1,093,996,130**
7	6	1,544,790,958	6.28%	772,395,479	772,395,479	97,012,872	869,408,351	165,676,837	10,404,505	176,081,342	107,417,378	**1,045,489,694**
8	7	772,395,479	6.28%	772,395,479	0	48,506,436	820,901,915	165,676,837	10,404,505	176,081,342	58,910,941	**996,983,257**
Grand total				**5,406,768,353**		**1,358,180,210**	**6,764,948,563**	**1,159,737,859**	**72,831,538**	**1,232,569,397**	**1,431,011,748**	**7,997,517,960**

Table 49 Amount of annual installment

Nr rendor	Viti	Tarifa Vjetore Pa TVSH
1	0	
2	1	**1,288,021,874**
3	2	**1,239,515,438**
4	3	**1,191,009,002**
5	4	**1,142,502,566**
6	5	**1,093,996,130**
7	6	**1,045,489,694**
8	7	**996,983,257**
Grand total		**7,997,517,960**

To guarantee the economic success of the scheme, the concenssionary will be paid with decreasing annual installments. This payment method will help the concenssionary to avoid financial difficulties during the entire period of the duration of the concenssion period contract. Therefore, in the first year the installment will be 1,288,021,874 leke and each year will be decreasing until reaching 996,983,257 leke in the last year.

6.4.2 Financing source

The general amount of this project is 8,811,760,212 leke, about 814,242,252 out of them are expropriations to be paid by Tirana Municipality to the expropriated persons and 7,997,517,960 leke is the amount of the concenssion:

Table 50 General value of the project

Nr	Vlera e Pergjithshme e Projektit	Çmimi	Sasia	Vlera totale
1	**Kostoja e përgjithshme e shpronësimit**	**814,242,252**	**1**	**814,242,252**
2	**Kosto direkte e Investimit pa TVSH**	**5,406,768,353**	**1**	**5,406,768,353**
2.1	Kosto direkte e investimit te koncesionarit Pa TVSH	5,406,768,353	1	5,406,768,353
3	**Kosto e mirembajtjes pa TVSH**	**165,676,837**	**7**	**1,159,737,859**
3.1	Kosto e mirembajtjes te koncesionarit Pa TVSH	165,676,837	7	1,159,737,859
4	**Marzhi i Fitimit**	**1,431,011,748**	**1**	**1,431,011,748**
4.1	Marzhi i Fitimit të Koncensionarit	1,431,011,748	1	1,431,011,748
	Total i pergjithshëm i kostos(1+2+3+4+5)			**8,811,760,212**

Table 51 Amount to be covered by municipality and concenssionary

Nga të Cilat:	Bashkia	Koncesionari	Totali
1. Vlera e Përgjithshme e Projektit Pa TVSH	814,242,252	7,997,517,960	8,811,760,212
Totali	**814,242,252**	**7,997,517,960**	**8,811,760,212**

This expenses will be covered by incomes of the Municipality, Conditioned Grants of Ministry of Finance for project.

Incomes of Tirana Municipality for this project will be generated from the Interim Tax on Education Infrastructure, which is applied upon decision of Municipal Council No. 59, dated 30.12.2015, “On taxes and local tariffs system in the city of Tirana”.

Table 52 Forecast of incomes from Interim Tax on Education Infrastructure

Description	PLAN YEAR 2016	FORECAST 2017	FORECAST 2018
Interim Tax on Education Infrastructure	**870 000 000**	**940 000 000**	**1 000 000 000**
Families	320 000 000	340 000 000	350 000 000
Trade subject	550 000 000	600 000 000	650 000 000

Incomes from Interim Tax on Education Infrastructure are estimated at 870 million leke in 2016, whereas these incomes are envisaged to increase to 940 million leke in 2017 and 1 billion leke in 2018. This interim tax will be applied for 7 years and for 2019-2022 period, the annual incomes are projected to amount to 1 billion leke. Incomes from specific transfer from Ministry of Finance will be 700 million lek per year. Therefore, the fund at the disposal of Tirana Municipality for completion of periodical payments is estimated at 1 billion and 700 million leke per year.

6.5 Financial Analysis

Table 53 Summarized table of costs and incomes of the project

Viti	Pershkrimi	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
A.	**Kostot Direkte te Investimit**	**6,221,010,605**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6,221,010,605**
A.1	**Kostot e Truallit**	**814,242,252**								**814,242,252**
A.2	Kostot e Projektimit	123,794,213								123,794,213
A.3	- Ndertim + instalime	4,720,118,027	-							4,720,118,027
A.4	- Oponenca teknike	3,703,980								3,703,980
A.5	- Takse Infrastrukture									-
A.6	- Leje mjedisore	510,000								510,000
A.7	- Mbrojtje ndaj Zjarrit	850,000								850,000
A.8	- Kosto Supervizimi	53,506,790								53,506,790
A.9	- Kosto Kolaudimi	1,907,078								1,907,078
A.10	- Mobiljet dhe Orendi	335,605,000	-	-	-	-	-	-	-	335,605,000
A.11	- Investime IT&T dhe Labs	166,773,267								166,773,267
B.	**Kostot Direkte të Mirëmbajtjes**	**-**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**1,159,737,859**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**-**	**109,084,634**	**109,084,634**	**109,084,634**	**109,084,634**	**109,084,634**	**109,084,634**	**109,084,634**	**763,592,438**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	-	25,222,316	25,222,316	25,222,316	25,222,316	25,222,316	25,222,316	25,222,316	176,556,212
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve		63,729,348	63,729,348	63,729,348	63,729,348	63,729,348	63,729,348	63,729,348	446,105,436
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi		7,978,136	7,978,136	7,978,136	7,978,136	7,978,136	7,978,136	7,978,136	55,846,952
B.1.4	- Mirëmbajtje IT&T (HD+SW)		12,154,834	12,154,834	12,154,834	12,154,834	12,154,834	12,154,834	12,154,834	85,083,838
B.2	**Staf Mirembajtje**	**-**	**56,592,203**	**56,592,203**	**56,592,203**	**56,592,203**	**56,592,203**	**56,592,203**	**56,592,203**	**396,145,421**
B.2.1	Staf Roje		13,471,815	11,226,513	9,355,427	7,796,189	6,496,824	5,414,020	4,511,684	58,272,472
B.2.2	Staf Sanitare		35,924,846	35,924,846	35,924,846	35,924,846	35,924,846	35,924,846	35,924,846	251,473,922
B.2.3	Staf Sekretare		7,195,542	7,195,542	7,195,542	7,195,542	7,195,542	7,195,542	7,195,542	50,368,794
A+B	**Totali i Kostove (A+B+C)**	**6,221,010,605**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**165,676,837**	**7,380,748,464**

C.	**Të Adhurat**	**814,242,252**	**1,288,021,874**	**1,239,515,438**	**1,191,009,002**	**1,142,502,566**	**1,093,996,130**	**1,045,489,694**	**996,983,257**	**8,811,760,212**
C.1	Likujdimet e shpronesimeve	814,242,252								**814,242,252**
C.2	Tarifa e Shfrytezimit pa TVSH		1,288,021,874	1,239,515,438	1,191,009,002	1,142,502,566	1,093,996,130	1,045,489,694	996,983,257	**7,997,517,960**
D	**Fitimi (humbja)**	(5,406,768,353)	1,122,345,037	1,073,838,601	1,025,332,165	976,825,729	928,319,293	879,812,857	831,306,420	**1,431,011,748**
E	**Fitimi (humbja) progresive**	(5,406,768,353)	(4,284,423,316)	(3,210,584,715)	(2,185,252,551)	(1,208,426,822)	(280,107,529)	599,705,327	1,431,011,748	**1,431,011,748**
F	**15% Tatim fitim**	0	0	0	0	0	0	(89,955,799)	(124,695,963)	**(214,651,762)**

Table 54 Cashflow of the project t

Fluksi i Arkës									
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Flukse dalese nga Investimet	- 6,221,010,605	-	-	-	-	-	-	-	- 6,221,010,605
Flukse dalese nga Mirëmbajtja	-	- 165,676,837	- 165,676,837	- 165,676,837	- 165,676,837	- 165,676,837	- 165,676,837	- 165,676,837	- 1,159,737,859
Flukse dalese nga Taksat	-	-	-	-	-	-	- 89,955,799	- 124,695,963	- 214,651,762
Totali i flukseve dalese	**-6,221,010,605**	**- 165,676,837**	**- 165,676,837**	**- 165,676,837**	**- 165,676,837**	**- 165,676,837**	**- 255,632,636**	**- 290,372,800**	**- 7,595,400,226**
Flukse hyrese nga Operimet	**814,242,252**	**1,288,021,874**	**1,239,515,438**	**1,191,009,002**	**1,142,502,566**	**1,093,996,130**	**1,045,489,694**	**996,983,257**	**8,811,760,212**
Gjendja e Arkes ne fund te periudhes	**-5,406,768,353**	**1,122,345,037**	**1,073,838,601**	**1,025,332,165**	**976,825,729**	**928,319,293**	**789,857,057**	**706,610,457**	**1,216,359,986**
Gjendja e arkes progresive	**-5,406,768,353**	**- 4,284,423,316**	**- 3,210,584,715**	**- 2,185,252,551**	**- 1,208,426,822**	**- 280,107,529**	**509,749,528**	**1,216,359,986**	**1,216,359,986**

6.6 Economic Profitability of the Project

6.6.1 NPV (Net Present Value)

NPV, as standard method for assessment of long-term projects through analysis of time value of money, presents the discounted amount of cashflow of the project. Every investor, when decides to undertake an investment analyzes the incomes generated by one project compared to the potential incomes of the invested money in another project. In general, these analyses are carried out taking into account the interest rate in case of the investment of the money, e.g. treasury bonds or government obligation, which have almost a zero risk.

Classical formula of NPV calculation, if the investment is made in one year, is :

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_o$$

where:

C_0 – presents the money spent for the initial investment

C_t – presents the incomes from the investment ;

t – presents duration of the project ;

r – presents the expected rate of discount .

To see the economic profitability of the project, the financial model has been tested with several potential discount rates. From this analysis, it resulted that the potential concenssionaries will be interested in this project only if their opportunity cost is lower than 5.79%. In other words, for every discount rate over 5.79% this project does not consist of any economic profitability for the concenssionary.

	NPV							
norma e skontimit e parashikuar	**5%**		**5.79%**		**6%**		**7%**	
NPV	**29,884,696**	**-**	**15,136**	**-**	**7,682,796**	**-**	**42,661,484**	

6.6.2 IRR (Internal Rate of Return)

IRR is a method used to measure the incomes of potential income. IRR is a discount rate that makes the nett present value (NPV) of all cashflows of a project equal to zero. According to economic theory, every project with an IRR higher than its capital cost is probitable, as a result investors will be interested to invest in it. Based on the financial analysis, the IRR of this project is estimated at 5.79%.

Table 55 Internal Rate of Return of the project

Viti	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
Gjendja e Arkes ne fund te periudhes	-1,176,772,556	244,264,887	233,707,556	223,150,225	212,592,894	202,035,563	171,909,712	153,782,766	264,671,046

IRR	5.79%

6.6.3 Payback Period

The payback period presents the necessary time needed for the invested capital to recover the initial investment from the project incomes. In general, the payback period is calculated by dividing of the investment cost by annual incomes. Hence, as long as the annual incomes in this project consist of decreasing installments, the payback period is assessed by analyzing the cashflow to determine the latest year when this flow is negative.

Periudha e Vetëshlyerjes		
Viti i fundit i gjendjes se arkes negative		5
Gjendja e arkes kumulative ne vitin e fundit negativ	-	61,021,432
Gjendja e arkes pozitive krijuar ne vitin vijues		171,909,712
PBP (periudha e veteshlyerjes)		5.35

In this respect, the self-payment period for this project is achieved in 5.35 years. Nevertheless, taking into account that payment from Tirana Municipality will be annual, then the self-payment period will not be 5.35 years, but 6 years.

6.6.4 Financial compatibility

According to CoMD no. 575, dated 10.07.2013, article 7, item 10, the financial compatibility of a project "indicates whether the project seems to be able to attract guarantees/financial support and qualitative loaners, by providing a strong and reasonable financial."

Based on the above-mentioned financial analysis, this project is economically profitable and this profitability is presented as following:

- NPV = 5.79% > 0
- IRR = 5.79% > than interest of deposits or treasury bonds
- PBP = 6 year < 7 years (duration of concession)

6.7 Quantitative and Qualitative Risk Analysis

The main goal of Risk Analysis is to identify and evaluate the gamma of risks that may affect the project. Therefore, a strategy on risk management is carried out in order to guarantee the successful realization of the project. In compliance with Decision of Council of Ministers No. 575, dated 10.07.2013 "On approval of rules for evaluation and issuance of concession/private-public partnership" following is a risk analysis regarding this project.

1.7.1 Qualitative Risk Analysis

Land Risk

Description of the Risk: Lands selected for construction of 17 schools will mostly be owned by the state, whereas the private-owned lands will be expropriated in line with the legislation in force and will be put at disposal of the concessionary. As a result, this risk has a low probability, almost zero, about this project. Regarding the necessary permits, there is no risk, because Tirana Municipality is itself the responsible body to grant these permits. In relation to environmental standards, the selected lands are plots located in areas were the environmental standard is not affected, therefore the risk is considered zero.

Management of risk: This risk is assessed with a zero probability and it is covered by Tirana Municipality. Tirana Municipality will carry out all the procedures for expropriation of private lands out of this PPP scheme, before the beginning of works. If any of the selected lands is in a ownership conflict, turning expropriation impossible, authorities will ask for information at the Immovable Properties Registration Office for alternative sites to be used. Regarding geological conditions and environmental standards, there has been a environmental study part of this feasibility study, which has come to the conclusion that the construction of these objects does not have an impact on the environmental standards. Hence, during the procedures for obtaining a construction permit, there will be also a detailed environmental study by the concessionary.

Risk of design, construction and functioning

Description of the Risk: Calculation of costs for construction and furniture of new schools is based on above-mentioned methodology, which takes into consideration the cost of schools built by Tirana Municipality in the last three years. Therefore, the possibility of a higher construction cost than the calculated cost is almost zero. Construction and functioning of schools depend in a certain scale on the obtaining of construction permit and meeting of preconditions for obtaining of this permit, such as environmental permit, connection with the electrical grid or water supply system, approval of projects for fire protection, etc. The concessionary has the right to draft the designing, prepare the documents for equipment with a construction permit, as well as to build the school objects. From this point of view, the risk of delays in equipment with construction permits, delays in kick-off works, readiness is possible.

Management of risk: This risk belongs to the concessionary. He is accountable for compilation of documents and equipment with construction permit. If the concessionary does not prepare the project on time and will neglect the application for construction permit by not applying on time or having irregularities in documents, or failure to start works on time, then he will be accountable for failure in starting works on time and will compensate the contracting authority according to the requirements in the concessionary contract. Likewise, as long as the concessionary is responsible for drafting and implementing the project, each delay in completion of construction works, excluding the case when the delay comes as a result of a force majeure will be under the concessionary´s responsibility and will be forced to compensate the contracting authority according to requirements in the concessionary contract.

Functioning Risk

Description of the Risk: The possibility that the new schools will not be functional after the construction is related to the non-qualitative works by the concessionary, which might make the performance of teaching in new buildings impossible. This risk has a low probability because the completion of works will be carried out by the technical supervisor and financial bill of quantities will be supervised by the contracting authority. Regarding the risk of a higher maintenance cost than expected, the probability is almost zero, because the annual maintenance cost is calculated based on annual expenses of Tirana Municipality for the maintenance of existing schools, which have been constructed long ago. According to engineering standards, the maintenance cost of newly-built objects is lower than that of the objects built before.

Management of risk: The probability of this risk is low and it is considered as a risk transferred to the concessionary. In case the construction quality will make the performance of teaching process impossible, the concessionary will be accountable and will be forced to carry out extra works until the works quality will be in line with the requests of the designing tasks. In case school buildings might have any problems due to construction works, in the course of seven years of the contract duration, which will make the teaching process impossible, the concessionary will be obligated to carry out extra works to make the school functional again. If the maintenance cost is higher than predicted, this would be a result of the inaccuracies in the design or construction. Therefore, the risk belongs to the concessionary, who is accountable for the designing and building of these schools.

Risk of demand and other trade risks

Description of the Risk: This risk is related to the situations when use of the object is different from what is expected or the generated incomes are lower than the forecast. As long as objects to be build are school buildings that will not have a different use and cannot generate incomes, this risk cannot applied on this project.

Management of risk: The possibility that this project can be affected by this risk is zero, because it is not subject of its impact.

Economic and Financial Risks

Description of the Risk: As long as this project includes financial transactions to be implemented in the course of time, there exists the possibility of an impact from economic and financial risks. The unpredicted increase of the norms of interest may increase the financial costs of the project from the concessionary. On the other side, changes in exchange rate course may have a worsening affect in the finances of the concessionary if his incomes and expenses are in a different currency, e.g. the concessionary has been granted a loan in EUR of USD for the financing of the project, while Tirana Municipality makes the annual payments in Leke. In the end, as long as this project includes periodical payments for a seven year period, there exists the possibility of an impact from inflation in the concessionary´s incomes.

Management of risk: Due to the fact that Albania is a country with a sustainable macroeconomic situation, the probability that this project may be affected by such risk remains low. The risk of interest rates or exchange rates belongs to the concessionary and shall be calculated in its financial projections. Inflation risk is shared among the concessionary and Tirana Municipality. As long as the Bank of Albania policy is keeping infection under 3% and duration of the project is only 7 years, the probability of this risk is low. Nevertheless, in the definition of income margin as related to interest rate of 7 year obligations, Tirana Municipality guarantees the concessionary the same protection toward the economic and financial risks as guaranty of Albanian Government for buyer of obligations.

Risks of assets ownership

Description of the Risk: This risk is related to the possibility that technology might get older or if the value of assets might be different at the end of the contract. As long as, the construction consists of school buildings, which will be maintained by the concessionary for seven years, the probability of this risk is low. Nevertheless, the quality and value of assets may be lower than the projection due to non-qualitative maintenance.

Management of risk: This risk is transferred to the concessionary. Maintenance of schools buildings and their furniture will be completed in line with the standards in force and will be supervised by the Contracting Authority. In case the concessionary will not maintain schools in line with the above-mentioned determination, the concessionary contract will envisage provisions obligating him to pay the damage. If at the end of the contract, the value of assets will be different from the predicted, the concessionary contract will define provisions obligating the concessionary to pay the damage.

Political risk

Description of risk: The risk of an impact from political decisions on the project is evident. As long as it is a project initiated from Tirana Municipality, a local government body, the success of the project depends on the coordination with local government. Likewise, there is a potential possibility that the results of next local elections – a potential change of Tirana mayor – may also cause the change of priorities and as a result the project can be blocked.

Management of risk: This risk is transferred on the Contracting Authority - Tirana Municipality. To ensure the consent of central government, with the approval of the feasibility study from the head of Tirana Municipality, will be required also an approval from the Ministry of Finance and Ministry of Education and Sports. Regarding risk of a negative impact of the project as a result of changes in the leadership of Tirana Municipality, the concessionary contract will envisage provisions that obstacle the dismissal of the Contract for non-legal reasons by the Contracting Authority.

Risks deriving from change of legal framework

Description of risk: Potential changes in legislative framework may affect the project positively and negatively. As long as the project is related to the construction of school buildings, the possibility of an affect from legal changes is related only to standards and construction manuals. Therefore, this risk has a low probability. Regarding changes in fiscal laws, the negative or positive influence can be felt only in the finances of concessionary.

Management of risk: This risk falls on the concessionary. In order to have minimal effects, the concessionary contract will include provisions that protect it from discriminating changes in law – always if the discrimination is proved by the court. On the other side, the concessionary will be forced to implement any legal changes coming as a result of governance policies.

Risk from force majeure

Description of risk: Force majeure risks, such natural calamities, civil unrests or wars are transferred to the concessionary and contracting authority. Taking into account the fact that Albania is a member of NATO and with a clear perspective of EU integration, the probability of risks from wars or unrests is almost zero. On the other side, the probability of and impact from earthquakes or other natural disasters on the project is low – How? As a result of the above-mentioned analysis of environmental impact on the project.

Management of risk: Probability of these risks is very low and it is transferred on both parts. The concessionary contract will envisage clauses of force majeure which will guarantee that any negative impact on the project shall be divided between the parties.

6.7.2. Quantitative Analysis of Risks

This analysis aims to prioritize risks that may affect the project by calculating their probability and potential impact on the achievements of project objectives. The quantitative evaluation is based on the probability of occurrence of each risk and potential impact on costs and deadlines of the project.

Impact of risks on project costs is calculated based on the specific weight of each of them in the project's cost. Whereas, the impact on deadline of completion of works is calculated based on legal deadlines for completion of defined procedures that may be necessary for well-going of the project.

Following is a quantitative analysis on the impact of each risk in the costs and deadlines for realization of the project.

Lands risk. Probability of this risk is low, 0-5%. Its impact on the project' cost is zero because expropriations of private lands that will be used for construction of school will be carried out by Tirana Municipality with a special fund out of the financial scheme of this project. The lands selected for construction of the schools are state-owned and private properties. In case use of any of these lands is impossible than will be used an alternative selected land with the necessary information from the Immovable Properties Registration Office. As a result, the impact on the deadline of completion of works is related the handing in of the state-owned land if it is not a property of Tirana Municipality or expropriation of private properties. The impact on deadline of works is calculated at 3 - 6 months.

Risk of designing, construction and functioning. Probability of this risk is low, 5-10%. The costs assessment process of the schools construction is carried out in line with the MoES guidelines manuals and based on the construction of schools by Tirana Municipality in the course of last years and prices have been indexed according to construction prices index of INSTAT. Hence, maximal influence of this risk in costs is less than 5%. On the other side, the deadline of works may not be respected as a result of failure to receiving the construction permit or other permits on time by the concessionary or due to slower completion of works than the calendar of works. In case designing is delayed or documents for equipment with necessary permits are not compiled, the impact on deadline of works is calculated from 3 to 12 months.

Functioning Risk. Probability of this risk is calculated at 0-5%. As long as this project is related to the construction of new schools, there exists the possibility of a low quality of construction. This could require additional works beyond the defined deadline. The impact of this risk in the deadline of works is calculated from 1 to 3 months, whereas the impact on total cost of the project is envisaged at 5-10%. There exists an opportunity that the maintenance cost may result higher than the forecast, but compared to total cost of the project the impact of this cost is almost zero.

Risk of demand and other trade risks. This risk cannot be applied on the project and the possibility of an impact from it on cost or deadlines is zero.

Economical and financial risks. Probability of this risk is low, 0-5%, taking into consideration that it is not a long-term concession where the concessionary generates incomes from the operation of the object of concession. As long as incomes of the concessionary are guaranteed by Tirana Municipality and covered by inflation, impact of risk on total cost of the project is low, 5% - 10%. On the other side, the impact on deadlines of completion of works is not envisaged longer than 12 months.

Risks of assets ownership. Probability of this risk is calculated at 0 - 5%. Its impact on total cost of the project is related to the maintenance costs, in case the latest results higher than forecast and a more rapid amortization of buildings that envisaged in the concession contract. Its impact on project's costs is predicted to be at maximum 5%. Probability of this risk does not affect the deadline for realization of works.

Political risk. Probability of such risk is medium low and is calculated at 10 - 20%. The occurrence of such risk may block works or interrupt the periodical payments for the concessionary by increasing the financing cost of the project and delaying the realization of works. In this respect, a potential influence of this risk on costs is calculated at 20 - 30%, whereas the impact on deadline of realization of works is calculated from 16 to 24 months.

Risk of change of legal framework. This risk has a probability of 5 to 15%. Potential legal changes, such as in standards to be followed for construction of new schools, may considerably boost the project cost. Therefore, the potential risk on costs is medium, varying from 20 to 40%. Likewise, potential legal changes may cause the re-drafting of the project or other delays that may be negatively affect the deadline for realization of works. Therefore, impact on deadline of works is calculated from 12 to 16 months.

Force Majeure Risk. Probability of this risk to happen is very low - 0 to 5%. Nevertheless, in case it happens, the impact on costs or deadline of works will be medium high. Therefore, impact on cost is calculated at 30% to 50%, whereas impact on deadline of works from 12 to 24 months.

Table 77 Summarizing table of impact of risks

No.	Risk	Probabiliy	Impact on cost	Impact on works deadline
1	Risk on land	0% - 5%	0%	3 - 6 months
2	Risk on designing, construction and implementation	5% - 10%	0% -5 %	3 - 12 months
3	Functioning Risk	0% - 5%	5% -10%	1 - 3 months
4	Risk of demand and other commercial risks	-	-	-
5	Economic and Financial Risks	0% - 5%	5% -10%	6 - 12 months

6	**Risks of assets ownership**	**0% - 5%**	**0% - 1%**	**-**
7	**Political Risk**	**10% - 20%**	**20% - 30%**	**16 - 24 months**
8	**Risk of change of legal framework change**	**5% - 15%**	**20% - 40%**	**12 - 16 months**
9	**Force majeure**	**0% - 5%**	**30% - 50%**	**12 - 24 months**

6.8 Sensitivity Analysis

Main factor that may change during the tender process is the income margin. At the same time, the details of respective costs will be respectively defined based on factual approved projects, depending on the approved projects. The direct cost will be calculated base on the factual realized volumes, which in no way will be higher than the costs envisaged in this project.

Nevertheless, due to the effects of sensitivity analysis, the calculation will made as if the costs have increased and decreased by 5% and 10%, whereas the income margin increases and decreases by 5% and 10%.

Table 78 Sensitivity Analysis if costs and income margin rincrease or decrease by 5 – 10 %

	Incomes and expenses increase by 10%	Incomes and expenses increase by 5%	Basic Model	Incomes and expenses decrease by 5%	Incomes and expenses decrease by 10%
Sensitivity Norm	10%	5%	0	-5%	-10%
Outflow from Investments	- 7,267,445,188	- 6,937,106,771 F-	6,606,768,353	- 6,276,429,936	-5,946,091,518
Outflow from Maintenance	- 1,275,711,645	- 1,217,724,752	1,159,737,859	- 1,101,750,966	-1,043,764,073
Incomes	10,274,681,048	9,786,000,321	9,197,517,960	8,713,446,063	8,188,265,320
Income before taxes	1,731,524,215	1,631,168,798	1,431,011,748	1,335,265,161	1,198,409,729
Tax on Income 15%	259,728,632	244,675,320 -	214,651,762	- 200,289,774	- 179,761,459
Nett income	1,471,795,583	1,386,493,478	1,216,359,986	1,134,975,387	1,018,648,270
NPV by 5.79%	110,223,600	81,672,242	170,329	23,634,170	- 68,587,789
IRR	6.38%	6.25%	5.79%	5.64%	5.34%
Self-Payment Norm	5.20	5.28	5.35	5.43	5.51

2. Explanation of PPP Decision

7.1 Explanation of Decision of Concession/Public Private Partnership A

Based on Council of Ministers Decision No. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership", the explanation of the decision is carried out based on definition of value for money and total nett costs of the project in case this could be obtained in a traditional procurement method. In this respect, it is used the Public Sector Comparison (PSC) that measures exactly the cost of the project in case it would be financed by the contracting authority through traditional procurement.

In contrary to normal concession/public private partnerships, where the concessionaires build public infrastructure objects with their funds, operate them until they obtain the investment costs plus the incomes and then transfer this object to contracting authority, this concession/public private partnership is characterized by another nature. As long as the object of the concession/public private partnership is the construction of school buildings, its incomes will not come from the use of the concession, but from the annual transfers to be paid by Tirana Municipality to the concessionary calculating an income margin of about 6,28%. Taking into consideration even the fact that for solving the over-population and two-shift learning in schools and meeting the MoES standards, Tirana Municipality needs 17 new schools, then the explanation of the decision deals with the opportunities of the Municipality for financing the construction of these new schools through traditional procurement methods.

Based on the above-mentioned economic analysis, the direct investment cost for construction of 17 new schools is 7,743,692,163 leke. For construction of these schools through traditional procurement methods, Tirana Municipality can use three methods : i) direct immediate procurement of 17 new schools, ii) procurement of 17 new schools expanding it in a three-year period iii) procurement of one or several schools per year according to its financial opportunities.

1. The direct investment cost for construction of 17 new schools is 7,743,692,163 leke. Taking into consideration that 2015 factual budget of Tirana Municipality was 8,730,933,000 leke (including also the conditioned transfer), is easily understandable that financial possibility of the Municipality for procurement of this project is zero. The construction cost of this project consists of about 89% of the municipality´s factual budget and in case it would finance the project itself, the Municipality will not be able to offer any other service, even the payment of the wages for its employees.

2. According to Law no. 9643, dated 20.11.2006, "On public procurement", changed, a project can be procured according to traditional methods implemented in the course of a three year period. If Tirana Municipality could procure the construction of 17 new schools in the course of three years than the Municipality

will need to spend 2,581,230,721 leke per year. This amount, compared to 2015 factual budget, is equal to 30% of total budget and 51% higher than total of capital expenses for 2015, which were estimated at 1,701,849,000 leke. Hence, if Tirana Municipality would choose this procurement method, it will not be able to offer any other public investment in other sectors for three 3 years, but it would also need to cover the difference of about 879,381,721 leke by reducing operative or staff expenses. Even if they were going to be used for this purpose, the incomes from Interim Tax on Educational Infrastructure, which are estimated at 940,000,000 leke per year, Tirana Municipality would still need to cover each year with its own incomes the difference between the necessary 2,581,230721 leke and 940,000,000 leke which are the incomes from the interim tax. This difference is 1,641,230,721 leke and still is almost equal to the total of 2015 capital expenses. Thus, even if it would use this possibility, the Municipality will not be able to carry out any public investment in other sectors such as local public services, roads and public transport, housing, social healthcare, etc. that would considerably worsen the life standard of Tirana citizens.

3. If it chooses to procure one or several schools per year, Tirana Municipality could use for financing of this project the investment fund of the pre-university education program and incomes from the Interim Tax on education infrastructure. The average factual investments in the last three years of the pre-university education program were estimated at 262,621,006 leke. It is important to highlight that through this budget program only 10% of the fund has been used for construction of new schools in the last years, and the majority of the fund was used for reconstruction of nurseries, schools and kindergartens. This is because the amortization level of education objects has been high and urgent need was and is focused on their reconstruction in order to enable a normal teaching process. Taking into account even the fact that with the territorial reform, Tirana Municipality is responsible also for nurseries, kindergartens and schools in rural zones, which suffer from even a higher level of amortization, the possibility of the Municipality to finance the construction of new schools through this budget program is minimal. As a result, procurement of new schools would be able only from the Interim Tax on Education Infrastructure. Average annual incomes envisaged from this tax is 940,000,000 leke per year. Taking into account that this tax in collected for a seven year period, in total, the Municipality will collect 6,580,000,000 leke from this tax. If it chooses this type of procurement method, the Municipality would built only 14 new schools out of 17 necessary. And the most important thing is that two new schools could be procured each year, and considering that a works for one school last for an average of 20 months, construction will end 9 years after the kick-off works.

Compared to three possibilities for use of traditional public procurement methods, this concession/public private partnership offers considerable advantage and guarantees the realization of the project in a much shorter period of time and higher efficiency of value for money.

The first two possibilities, immediate procurement of 17 new schools and their procurement for a three year period are clearly beyond the financial possibilites of Tirana Municipality. Therefore, with the use of these traditional procurement methods this project is not feasible and financially impossible. The third above-mentioned possibility does not fully complete the project, because it can enable construction of only 14 out of 17 necessary schools. Likewise, these 14 schools can not be built immediately but in the next nine-years. Hence, this opportunity does not only offer a partial solution to the over-population and two-shift learning problems, but also does not offer a solution in the course of time.

In contrary to three possibilities of traditional procurement of the project, the scheme of proposed concession/public private partnership is not only possible to be realized immediately and with feasibility, but also without an extra cost for Tirana Municipality budget, as long as it does not touches the investment fund for the future. Through this scheme, Tirana Municipality solve the problem the over-population and two-shift learning in two years.

Likewise, an important element is also the fact that the financial costs of this concession/public private partnership scheme are not higher than the government costs to take loans. As long as the direct investment cost, i.e. construction and functioning of schools is calculated based on IPR, which include the income margin of the Contractor, then this category is not calculated as an extra income margin. But, on the other side, as long as the invested values in this respect by the concessionary will be paid in the course of 7 years, they shall be minimally reimbursed for the time value of the money. In this respect, as an income margin is considered the limit average rate of fixed 7-year obligations of the Albanian government.

7.2 Advantages of a Concession/Public Private Partnership Contract

All major infrastructure or construction projects of special importance are subject of several separated development phases, starting from designing and construction, to continue with management and maintenance. For realization of this projects, in general were used the traditional procurement methods, which are divided into phases, where contractors are different entities with different responsibilities and objectives.

This procurement method, widely used for infrastructure projects of small or average dimensions, has many positive aspects, but when it comes to major projects, developed countries have been using new innovative methods, which save time and money and considerably boost efficiency, directly affecting the feasibility of the project. The individual bidding procedure for different phases of complex projects is considered as not a very efficient method because their realization requires more time. Experience shows that in many cases the initial conditions change after the completion of procedures, requiring a change of the project and beginning of new procedures, causing delays in the realization of the project. Likewise, implementation of traditional procurement methods for these projects does not always guarantee the value for money, because the many bureaucratic procedures

considerably increase the project costs. In this respect, such division consists of an obstacle for realization of the project and its further stability after the construction phase.

On the other side, as a result of changes in global economic structure, in order to guarantee the competitiveness, local and central governments worldwide are facing budget problems, which is translated into incapacity to finance their services. This has obligated governments to develop innovative methods for financing and realization of major infrastructure projects.

In this respect, in order to solve this problem Tirana Municipality shall implement innovate procurement and financing of this project. To guarantee the accomplishment of the schools construction project, authorities will use more innovative and cost-efficient approaches combining designing, financing, construction and maintenance in one procurement contract. Exactly due to the considerable amount of the project, this methodology would not only facilitate the development process, but will also provide more sustainability after its completion.

In the **Design, Finance, Build and Maintain** model, concessionaires are accountable for designing, construction, financing and maintenance of a work in the course of period determined in the contract. The payment after the completion of project will be dictated based on fulfillment of some determined standards of the performance, regarding physical condition of the buildings, quality, capacity, etc. This model, which is implemented beyond the designing and construction phase, naturally encourages the designer/builder to provide at the very beginning a qualitative construction plan, in order to reduce costs during the maintenance phase, as long as the responsibility still belongs to their consortium.

In the World Bank publication "Role and Impact of Public and Private Partnership in Education", it is mentioned that Public Private Partnership for schools construction must be embraced because:

- First, offers to the contracting authority the possibility to attract private investments in those sectors where sources/public funds are not at disposal;
- Second, private partner, in the framework of a contracting condition, is accountable for the constructed infrastructure;
- Third, from the education perspective, Public Private Partnership helps the contracting authority to provide the necessary school infrastructure according to the defined parameters.

This kind of partnership offers facilities to public sector, in case of no funds, by enabling construction of school structures immediately without losing the ownership right. If the partnership would grant the concessionary even the maintenance of school buildings, this will have a positive impact in the education process.

Among other advantages of concession/public private partnership we can mention:

- Potential extra capital;
- Optimization of public property use, alienated with the passing of time;
- A better quality of designing and construction;
- Constructive and efficient organization;
- Use of more qualitative construction materials;
- Integration of innovative technologies;
- General reduced cost (in particular during maintenance process);
- Transfer of risk;
- Elimination of judicial processes deriving from the disputes between contracting parties for different phases of the project;
- Acceleration of project realization compared to traditional method.

7.3 Allocation of risks

According to item 5, article 8 of CoMD no. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership", it is necessary to review the allocation of risks in line with the principle that the party responsible about the risk is the one that is in the best position to cope with the risk and minimize its effects. According to the above-mentioned quantitative and qualitative analysis of risks, the allocation of risks is carried out according to the following table:

Table 56 Summarizing table of allocation of risks

Type of risk	Allocation ofrisk
Risku i trojeve	Kept riks
Risku i projektimit, ndërtimit dhe vënies në punë	Transferred risk
Risku i funksionimit	Transferred risk
Risku i kërkesës dhe risqe të tjera tregtare	N/A
Risqet ekonomike dhe financiare	Common risk
Risqet e pronësisë së aseteve	Transferred risk
Risku politik	Kept risk
Risku i ndryshimit të kuadrit ligjor	Transferred risk
Risku i forcës madhore	Common risk

The item 6, article 8 of CoMD no. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership"," requires that allocation of risk must be used as a fundamental mean to make sure whether a concenssion/public private partnership is classified either "inside" or "outside" the balance sheet of contracting authority based on rules of European System of ESA95 Accounts, according to the combination of construction risk allocation, risk of availibility and risk of demand.

The ESA95 Manual on Deficit and Government Debt[9], in Part IV on Leasing, Licenses and Concenssions says that in the concenssions/public private partnerships where the contracting authority makes regular payments to the concenssionary (as in the case of concenssion/public private partnership) must be distinguished two cases: the case when majority of risks is kept by the contracting authority and the case when the majority of risks has been transferred to the concenssionary. Item 6, article 8 of CoMD no. 575, dated 10.07.2013 envisages that this analysis shall take into consideration only three types of risks, construction risk, risk of availability and risk of demand. Based on the abovementioned risks analysis, it results that the construction risks and risk of availability have been transferred to the concenssionary, whereas the risk of demand is not applied on this concenssion/public private partnership.

As a result, in line with ESA 95, "when the concenssionary is exposed to the majority of risks during the contract duration, the infrastructure is registered in the financial reports of the concenssionary. Hence, in the course of contract duration, the concenssionary shall be responsible of the constructed infrastructure and school buildings will be registered in its financial reports. Thus, this concenssion/public private partnership is classified "outside" the balance sheet of the contracting authority.

According to ESA95 requirements, this concenssion/public private partnership is classified as an operative leasing agreement and not a financial leasing agreement. Only the regular payments that contracting authority wil make to the concenssionary will have an impact on the loan-taking and loan-granting abilities of the contracting authority. In the end of the concenssion contract, when the built education infrastructure will be transferred to the contracting authority, it will be registered in its balance as a value of stable gross active without reduction of the amortization.

Therefore, schools are registered in the name of Tirana Municipality, and are given for administration to the concenssionary for seven years, and during this period the concenssionary gives them in use to Tirana Municipality, guarantying through SLA, the quality of construction in phase 1, well-administration of assets and normal and extraordinary maintenance, as well as providing for use of the assets in the interest of community for further development of art, culture and sports in the community.

7.4 Recommendation on division of project implementation into Lots

Taking into consideration the high cost of the project and big volume of necessary works to be performed and obligation to complete works on time, there has been carried out another analysis regarding technical and economic capacities of the economic operators in the market for realization of this project.

7.4.1 Technical and professional capacities of education objects construction

[9] http://ec.europa.eu/eurostat/documents/3859598/5860213/KS-42-02-585-EN.PDF/34346b49-bc38-4063-a423-74590fdaf8bd

For the construction of a school+kindergarten building, according to the proposed typology, the complete necessary construction time is 14 months. This period includes the following work processes:

- Organization of the construction site;
- Determination of foundations and their construction
- Construction of the beam-column-slab structure ;
- Electricall Installations;
- Hydraulic installations e;
- Heating system installation;
- Fire protection installations ;
- Internal finishings ;
- External finishing ;
- Installation of devices ;
- External clearance, etc.

During each working process, it is necessary to have one resident engineering, part of the company's staff as following:

- Civil engineer minimum 2 (two)
- Environmental Engineer minimum 1 (one)
- Hydrotechnic engineer minimum 1 (one)
- Topographic engineer minimum 1 (one)
- Electrical engineer minimum 1 (one)
- Mechanical engineer minimum 1 (one)

All the construction works must be followed by a resident civil engineer.
Beside human resources and machineries, the location of the construction site is very important for the organization of works.

In order to be efficient during the object construction and distribution of workers and machineries, it is important for the location of 3-4 construction sites to be in short distances from each other or within an administrative unit.

Taking into account the quantity of machineries necessary to an economic operators to successfully complete an education object (school 4 floors) we will have:

Table 57 Necessary technical capacities for construction of 17 schools at once

Means	Quantity	State
Self-discharing trucks (transporting capacity minimum 10 tons/truck)	Total transporting capacity minimum 100 tons	Owned or rented
Auto concrete vehicles	4 pieces	Owned or rented
Moto concrete vehicle	6 pieces	Owned or rented

Scaffolds	3000 m2	Owned or rented
Protection net	3000 m2	Owned or rented
Carrel crane	3 pieces	Owned or rented
Excavation machinery	5 pieces	Owned or rented
Motogenerator	2 pieces	Owned or rented
Auto-crane with a holding capacity 8 tons	1 pieces	Owned or rented
Water deposit (minimal capacity 2000 liters)	2 pieces	Owned or rented
Plastering pump	3 pieces	Owned or rented
Machinery for demolition of concrete structures	2 pieces	Owned or rented
Machineries for demolition of concrete structures	2 pieces	Owned or rented

The economic operators may have the abovementioend machineries at disposal or rented, and shall not be a limitation for the capability of operators to cope with more than 4 objects. A limitation in the case of machiniers is that the operator shall have the necessary respective technical staff to support the activity carried out by these means.

7.4.2 Financial capacity of the economic operators

Regarding technical and professional capability, the Economic Operator shall meet the following minimal requirements:

1. Successful experience in execution of at least:

Similar contracts with works of the same nature as the procurement object, at least amounting at 50% of the calculated value of the procured contract.

2. Similar contracts with works of the same nature as the procurement object, where the total value of work in the last three years is at least two times the value of limit fund.

Based on the report obtained from the General Directorate of Public Works, No. Prot. 21407/2, dated 09.08.2016, the construction cost of the schools is 46,331.67 leke/m2, whereas for the construction fo kindergartens is 54,380.83 leke/m2. From the combination of this data with the total construction surface, it results that :

- Construction value of a Type 1 school is 276,314,618 lekë. (2 schools)
- Construction value of a Type 2 school is 376,471,912 lekë. (7 schools)
- Construction value of a Type 3 school is 234,736,581 lekë. (1 schools)
- Construction value of a Type 4 school is 185,349,833 lekë (7 schools)

(Refering to the Economic Analysis carried out by the Finance Office)

The minimal cost for realization of 17 envisaged schools (construction, furniture, laboratories, maintenance) is 4,720,118,027 leke (construction) + 502,378,267 (cost of furniture+labs) + 1,159,737,664 (maintenance cost for 7 years) = **6,382,233,958 leke without VAT.**

In order to meet the first requirement, the competing Economic Operators must in their portfolio similar Contracts with nature of the procured object at least 50% of the calculated value of procured contract, i.e, 3,191,116,979 leke.

Wheres, to meet the second requirements, the competing Economic Operators must have in their portfolio similar Contracts with the same nature of procurement object, where the total work of the last three years could be at least two times the limit fund, i.e. an mount of 12,764,467,916 leke, or more than 51 schools of the size of the project.

As long as in Albania there have been no such investment in the field of education, the chances of finding experienced Economic Operators in this field with the above-mentioned financial abilities is are few, even inexistent. In any case, if there were Economic Operators with the completion of similar contracts, their number would be very limited, which could limit the competitiveness, therefore harming the procurement process. .

Beside, the PPP financing scheme envisages that the Economic Operator shall serve also as an investor, not only a constructor. This element makes even more difficult finding Economic Operators with capacities for realization the entire project.

Therefore, it is recommended that the project shall be divided into at minimum 4 Lots in order to boost the opportunities for fulfillment of the above-mentioned requirements.

7.4.3 Union of operators and sub-contracting

Referred to Law No. 125/2013, changed to Law No.88/2014 “On concession and public private partnership”

Article 34 Subcontracting 1. The Contracting Authority may : a) ask the concenssionary to offer contracts that consist at minimum of 30 per cent of the total amount of the total concession contract to third parties. Economic operators shall receive in sub-contracting at minimum 30% of total amount of the contract.

In the same time, taking into account Law no. 9643, dated 20.11.2006, changed to Law no. 9800, dated 10.09.2007, Law no. 9855, dated 26.12.2007, Laws no. 10170, dated 22.10.2009, Law no. 10309, dated 22.07.2010, Law no. 22/2012, Law no. 131/2012, and Law no. 182/2014 "On public procurement", article 61, item 2 Sub-contracting: Economic Operator shall not have in sub-contraction more than 40 % of total amount, because in these cases the essence of the contract would be lost, as well as the essence of its implementation.

In this respect, taking into account also the cases when the Economic Operators will sub-contract 30%-40% of total amount of the project, still the remaining part of the project, i.e. at 60% of the project, it is very ambitious to be completed on time by one and only Economic

Operators. The upper limit of sub-contracting considerably limits the technical capacities of operators and their ability of implementing 5 or more objects at once. Therefore, it is recommended that the project shall be divided into minimum 4 Lots, with not more than 5 educational objects in each of the Lot.

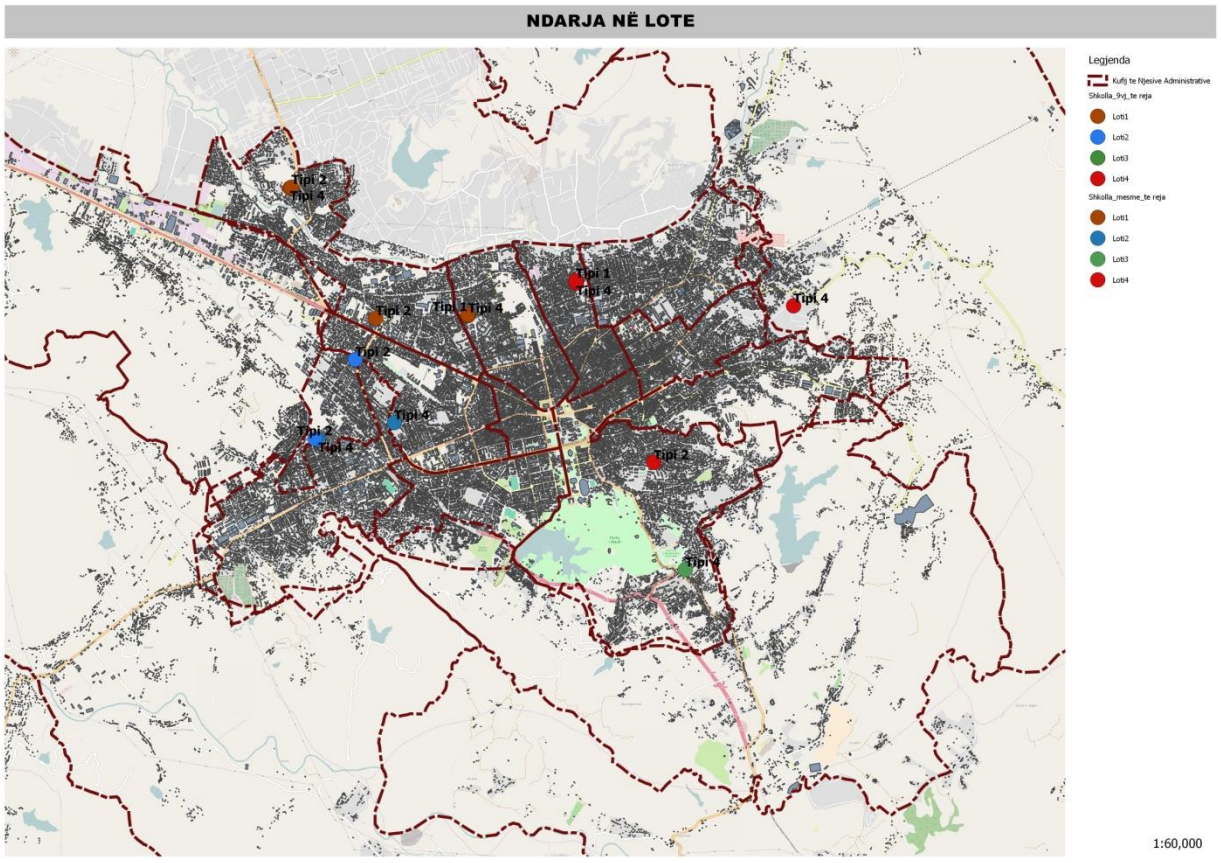
8. Implementation Feasibility of each lot

In this respect, as a result of the analysis of necessary technical and financial capacities for implementation of the project as a whole, it resulted as a more secure alternative the division of project into 4 lots. Distribution into lots aims to guarantee a higher interest by economic operators to participate in this scheme, by increasing the competitiveness, as well as facilitate the project implementation. Distribution into 4 Lots has been carried out taking into consideration two key criteria:

- Schools included in one lot must be physically near each other
- Lots shall have a similar number of schools and similar financial values

In this respect, the proposal for distribution into lots is indicated in the following map :

Map 39 Distribution of schools in lots



8.1. Lot 1

8.1.1. Location of school sites included in Lot 1

Lot 1 includes 5 schools, 3 out of them in Administrative Unit 11 and 2, Administrative Unit 9. Distribution of schools included in Lot 1 is indicated in the following map :

Map 40 Location of schools included in Lot 1

8.1.2. Total surfaces to be permanently seized by school sites included in Lot 1

SITE 9/1

Map 41 Orhtophoto of the site

LOCATION : Proposed site No.**9/1** is located in "Don Bosko" quarter. It is a developing area where is noted a multiple floors residential buildings and informal low dwellings.

TECHNICAL DATA Site 9/1: Surface – 12989 m2

CURRENT SITUATION OF THE SITE :

- A relatively calm zone.
- Easy access in the site. Road infrastructure may be problematic. There are many positive aspects, becuase it is situated in a high density populated area.
- No high schools in this area.
- The site includes in its territory an old warehouse, which seems interesting due to its big surface.

Picture 2 Photo of site 9/1

SITE 11/1

Map 42 Orthophoto of the site

LOCATION : The proposed square no. 11/1 is located inside the campus of Agricultural University of Tirana. This site is bordered by "Taulantët" street and "Blue" Boulevard.

TECHNICAL DATA : Site 11/1: Surface - 8,967 m2

CURRENT SITUATION OF THE SITE :

- It is an untouched area with a poor green space surface .

- The site has a considerable inclination

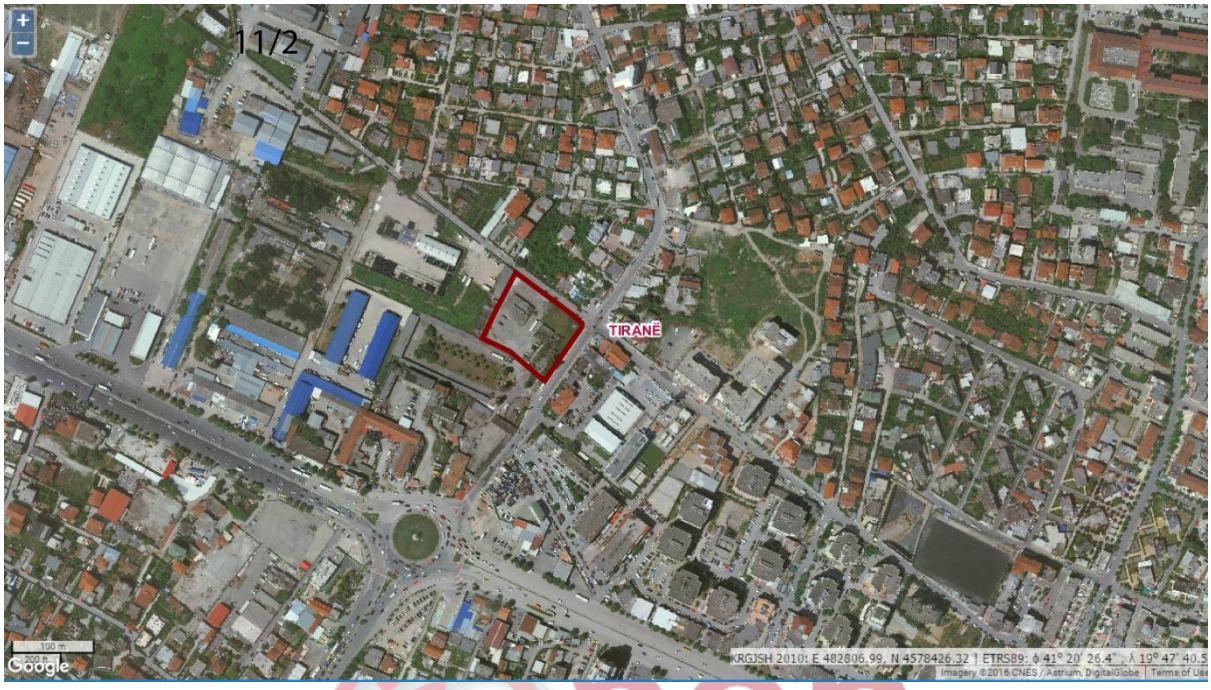
- Road infrastructure is problematic

- Access to the site is difficult

Picture 3 Photo of the site 11/1

SITE 11/2

Map 43 Orthophoto of the square



LOCATION : The proposed site no. **11/2** is located near Dogana Roundabout. Accesable from Vangjel Noti street.

TECHNICAL DATA : Site 11/2: sip 14,102 m2/

CURRENT SITUTATION OF THE SITE :

- It is a zone under the ownership of Ministry of Defense .
- Located near the inhabitated area.
- Easy access

Picture 4 Photo of the site 11/2

8.1.3 Legal status of sites of schools included in Lot 1

Site 9/1

Map 44 Indicative map of properties

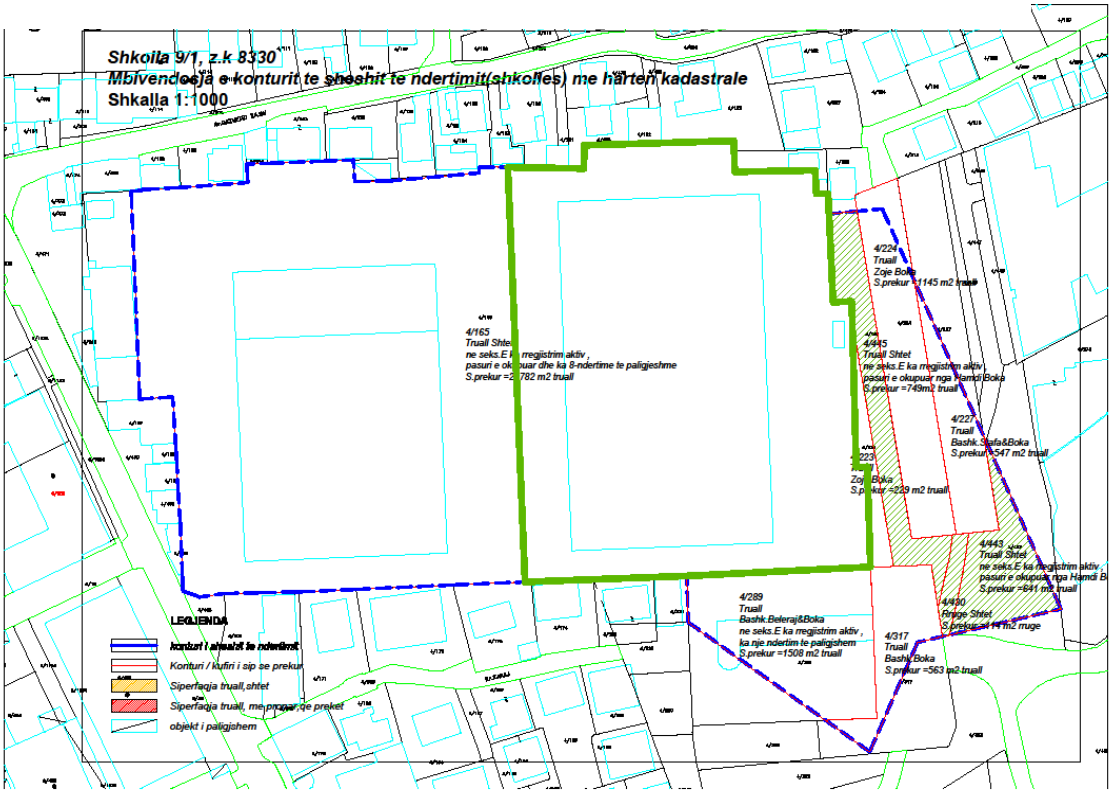


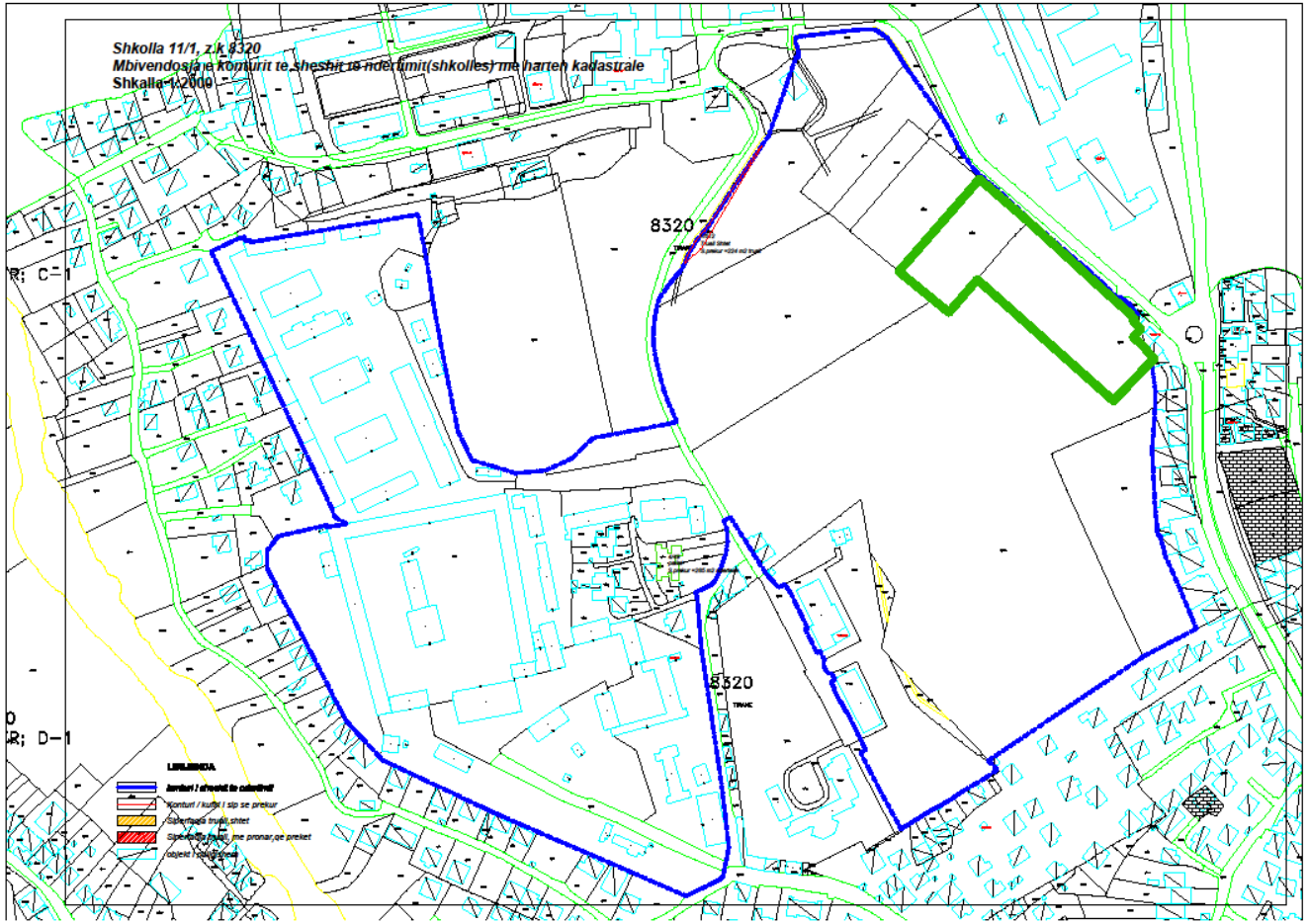
Table 58 Table with preliminary calculation of properties to be affected by the project

No	NAME	Note in Sec. E	Cadastral Zone	No. Property	Surface of affected land (m^2)	Land price lek/m^2	Surface of the affected Obj. (m^2)	Price Obj.lek/m^2	Amount in leke
1	State-owned	Occupied with 8 construction	8330	4/165	10111.00	34068			0.0
2	Zoje Boka		8330	4/224	1145.00	34068			39,007,860.0
3	State-owned	Occupied by Hamdi Boka	8330	4/445	749.00	34068			0.0
5	Zoje Boka		8330	4/223	229.00	34068			7,801,572.0
6	State-owned	Occupied by Hamdi Boka	8330	4/443	641.00	34068			0.0
7	Rruge Shtet		8330	4/430	114.00	34068			0.0
					12989.00				46,809,432.0

The school to be built in cadastral zone 8330 will affect a total of about 12,989 meter square property, composed of 6 properties, 4 out of them are state-owned properties and 2 private property objects. For the land, the calculated price is obtained from CoMD No. 89, dated 03.02.2016.

Site 11/1

Map 45- Indicative map of properties



PPP Evaluation Commission has not managed to obtain information on the legal status of properties affected by the proposal of plot with Code 11/1 within the deadlines for drafting this feasibility study. Aiming to plan the necessary budget for completion of expropriation for this project, the Commission has assumed that the properties included in this plot consist of land and private properties and in this respect it has calculated also the expropriation costs. These costs will be reviewed with the obtaining of the complete information from Local Office for Immovable Properties Registration and certainly before the beginning of tender procedures.

Table 59-Table with preliminary calculation of properties to be affected by the project

No	NAME	Note in Sec. E	Cadastral Zone	No asset	Surface of affected land (m²)	Land price lek/m²	Surface of the affected object (m²)	Price Obj.lek/m²	Amount in leke
1	No information				8,967	22,985			206,106,495
					8,967				206,106,495

Site 11/2

Map 46 Indicative map of properties

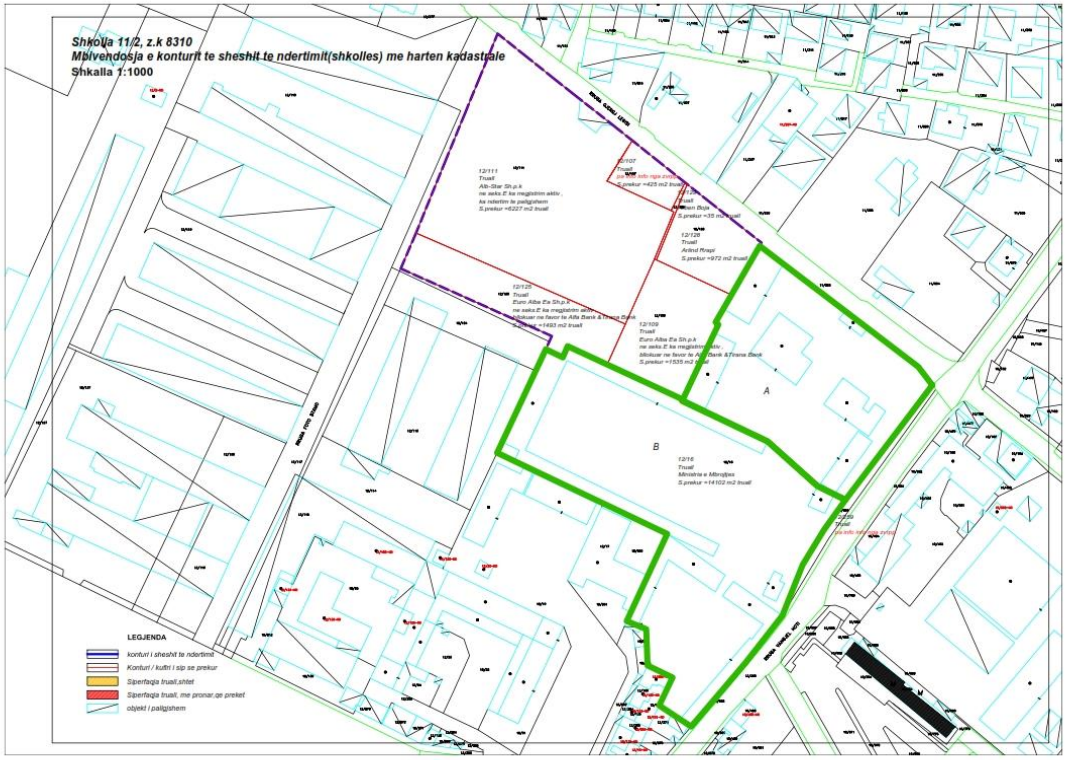


Table 60 Table with preliminary calculation of properties to be affected by the project

Nr	NAME	Note in Sec. E	Cadastral zone	No. Property	Surface of affected land (m²)	Land price lek/m²	Surface of affected object (m²)	PriceObj.lek/m²	Amount in leke
7	Ministry of Defense		8310	12/16	14,102.00	31219			0.0
					14,102.00				0.0

School to be built in the cadastral zone 8310 will affect a total of 14,102 meter square property, composed of 1 property no 12/16, which is currently under the ownership of Ministry of Defense. For the land, the calculated price is obtained from CoMD No. 89, dated 03.02.2016.

8.1.4 Typology of schools included in Lot 1

The Lot 1 envisages construction of 5 schools, respectively: two new schools in Administrative Unit 9 and three Administrative Unit 11 . In details, AU 9 includes construction of a nine-year school Type 1 and one higher middle education cycle school, Type 4. AU 11 includes the construction of two basic education cycle schools type 2 and one of type 4. The following table indicates in details the typology, location, education cycle, no of classes and no of students for each class, etc,.

Table 61 –School typology

Type	Location	Cycle	No clases	st/class	No st. total	M2/students	Total suface
Type1	Urban	Basic education	20	30	600	8.23	4938
Type2	Urban	Basic education	30	30	900	7.32	6588
Type3	Rural	Basic education	20	24	480	8.42	4041.6
Type4	Urban	Higher middle	21	30	630	6.35	4000.5

8.1.5 ECONOMIC AND FINANCIAL ANALYSIS FOR LOT 1

8.1.5.1 Financial and economic analysis

Economic and financial analysis of this feasibility study, in line with Council of Ministers Decision no. 575, dated 10.07.2013, "On approval of rules for assessment and granting for concession/private-public partnership", article 7, mainly focuses on determination of value for money of the project, as well as on completion of an evaluation of the investment in total, operative costs and maintenance, as well as any other income expected to be generated during the duration of the project.

1.1. Economic Model of the Concession / Public-Private Partnership

Law no. 125/2013, changed with law no. 88/2014, regulates the competences of contracting authorities in order to sign concessions/public-private partnerships. In this type of relations, the private partner takes the responsibility of financing, designing, building and/or re-building/ renewal the public infrastructure object, to operate and maintain the public infrastructure object built and/or rebuilt/newly renewed. Among the fields of implementation of this law is also education.[10]

Based on the data analysis, it results that to put an end to the over-crowded schools problem and two shifts learning, Tirana Municipality needs to build 17 new schools - 10 nine-year schools and seven high schools. The total cost of construction and furnitures for these schools is calculated at 7.6 billion leke. Such amount of money is financially unaffordable for Tirana Municipality, whose total annual budget is 10 billion leke, whereas investments for construction of new schools in the course of last years has been not more than 500 million leke.

In this respect, in order to settle this problem, Tirana Municipality must implement innovative methods of procurement and financing of the proposed project. To guarantee the realization possibility of the schools construction project, it was chosen a more innovative and cost-efficient approach, combining the designing, financing, construction and maintenance in one and only procurement contract. Due to the considerable dimensions of this project, this methodology will not only offer facilitations during the development process, but will provide more sustainability after its completion.

In the framework of the "Design, Finance, Build and Maintain" (DFBM) model as internationally known "Design, Build, Finance & Operate (DBFO)", **c**ontractors take the

[10] Article 4, item dh), Law 125/2013

responsibility of designing, building, financing and maintaining an object for entire duration of the contract. The contractor who may be one company or a consortium is responsbile for designing, financing, construction and maintenance of the object for a determined period of time, which is proposed to be 7 years. The payment after the completion of the object is dictated based on completion of some determined performance standards regarding the physical condition of the buildings, capacity, quality, etc. This model which goes beyond the designing and construction phase, naturally encourages the designer/builder to provide since the beginning a qualitative construction plan in order to have less costs during the maintenance phase, as long as the responsibility belongs to their consortium. Likewise, integration of all project´s contract in one reduces different transactional costs and boosts project management efficiency.

This PPP model has been widely used for construction of major infrastructure projects, such as construction of highways, hydro power stations, wastes management plants, etc, because the dimensions of such projects required considerable funds, efficient organization of capital and human resources, high designing and construction quality, maximal security and constant maintenance. In this respect, such models have been considered successful for development of projects that guarantee their realization and efficiency of the investment. Nevertheless, the use of this PPP form is not limited only in major public infrastructure works mentioned above. In many OECD countries, mainly in the United Kingdom, this methodology is used also for public service projects, such as construction of new schools.

Following are some examples from different countries that have successfully implemented this model for projects of educational infrastructure:

C**anada**[11]**:** "Alberta Schools Alternative Procurement" Program. In 2007, Alberta region in Canada declared the first stage of the program which envisages the construction of 18 new school buildings (kindergartens and nine-year schools), which were completed in 2010. After the completion of works, duration of the contract will continue with the maintenance and it estimated at about 30 years. The second phase of the program envisaged the construction of other 10 nine-year schools according to the same model and 4 high schools through the simple model of Designing-Constructing contract, which were completed in 2013.

Greece [12] : "Macedonia Schools and Attica Schools" Program. With the use of DBFM mechanism, private operators designed construction of 51 schools with a total amount of about 269 million Euro and 25 year contracts.

United Kingdom[13]: "Building Schools for the future" Program. This program is a long-term investments program, which is contributing in the construction of a considerable number of

[11] "Flexible and alternative approaches to providing school infrastructure in Alberta, Canada" – OECD, 2010

[12] "The role and impact of public-private partnerships in education", pg. 82 – World Bank, March 2009 .http://www.ungei.org/resources/files/Role_Impact_PPP_Education.pdf

schools in the entire territory of UK. Majority of schools has been built through the Design-Build-Finance-Maintenance scheme, but in this case often has been included also the element of school management by a private subject of a determined period. In general, total duration of the contract is estimated up to 30 years. The private consortium is regularly paid by public funds based on its performance during the contract period. If the consortium does not achieve the required performance, the payment is reduced. At the end of the contract period, school is given back to government.

New Zealand [14]: The project of New Zealand Ministry of Education for construction of two schools in Hobsonville, Auckland. This project envisages the construction of a new lower cycle school and one lower middle cycle school in the suburb region of Hobsonville in Auckland city. The private sector is partly responsible for designing, building and financing of the objects, together with their constant maintenance and management of common services. Construction of these schools has been successfully completed in 2014.

In this aspect, the project for construction of new schools in Tirana needs the application of the same approach for improvement of education service in the entire territory of the Municipality. Big number of schools that will be built, financial limitations, short period for implementation of the project, as well as need to guarantee the maximal security of buildings point to the necessity of establishment of an efficient and successful public private partnership.

1.2 Main assumptions

In the framework of financial and economic analysis effects of this feasibility study, were made the following assumptions:

- Concessionary will cope with its incomes the entire investment for construction of education objects and their functioning, whereas Tirana Municipality will face with its funds the expropriation of private lands to be used for this purpose.
- Educational objects will be built and functional at maximum 18 months from the signing of the construct.
- After the construction and functioning of schools, concessionary will be accountable for administration and maintenance of the objects for a 7 year period and for every problematic regarding risks of assets for these period.
- After the construction of objects, Tirana Municipality will pay the concessionary a certain annual sum until the full payment of the invested amount. Incomes for this

[13] Ibidem (i.e. extracted from same WB document in the above-mentioned reference and same page)
[14] "Mayoral Position Paper on Public Private Partnerships" – Ernst and Young, November 2013.

payments will be provided from the annual incomes of Temporary Tax on Education Infrastructure and conditioned transfer from Ministry of Finance.

a. Costs analysis

Based on technical, it has come to be conclusion that in total will be built 17 schools: 10 nine-year schools and 7 high schools. The new schools will be designed and built according to models in line with standards specified by Ministry of Education and Sports through "Guideline for School Buildings Design". The school models offer the opportunity to fully meet the needs for pre-university education classes, respecting legal and technical requirements for definition of parallel classes according to each teaching cycle. In the same time, for nine-year schools are envisaged also venues for pre-school education, as part of the nine-year education institution. Referring to above-mentioned standards, there exist 4 main types of schools with the following operational data:

Type 1 of schools includes 20 classes per pre-school and school students with a construction surface of about 4,938 m2. Likewise, this schools will included a kindergarten of about 4 classes with a surface of about 874 m2. In total, the construction surface for this type of school is 5,812 m2. **Type 2** of schools is nine-year education with 30 classes for pre-school and school students with a construction surface of about 6,588 m2. Likewise, this school will include a kindergarten with 6 classes with a surface of about 1,310 m2. In total, the construction surface for this type of school is 7,898 m2. **Type 3** of schools is higher middle for rural zones with 20 classes with a construction surface of about 4,041 m2. **Type 4** of schools consists of higher middle schools for urban zones with 21 classes and a construction surface of about 4001 m2.

According to quantitative analysis carried out and explained above, there are necessary a total of 17 schools, 2 out of them belonging to Type 1, 7 schools of Type 2, 1 school of Type 3 and 7 high schools of Type 4. Respectively these schools will be built according to following administrative units and data:

Table 62 Detailed data for each school in Lot 1

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkolle	nxënës për klasë	Nxënës për shkolle	Sipërfaqe totale shkolla	Klasa kopësh ti	Nxënës për klasë kopështi	nxënës për kopësht	Sipërfaqe totale kopësht	Siperfaqe totale ndertimi
1	NJA 09	TIPI 1	9-vjeçar	20	30	600	4,938	4	24	96	874	5,812
2	NJA 09	Tipi 4	i mesëm i lartë	21	30	630	4,001	-	-	-	-	4,001
3	NJA 11	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
4	NJA 11	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
5	NJA 11	Tipi 4	i mesëm i lartë	21	30	630	4,001	-	-	-	-	4,001
Totali				122		3,660	26,115	16	72	384	3,494	29,609

Summarizing according to schools typology, in total, we have the following operational data :

Table 86 Summarized data for proposed schools according to typology for lot 1

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Nr nxënës për klasë	Nxënës për shkollë	Nr klasa kopështi për shkollë	Nr nxënës për klasë kopështi	Nxënës për kopësht	Sip ndërtimi shkolla	Sip ndërtimi kopështe	Tot Sipërfaqe ndërtimi	Total Nxënës në shkolla	Total Nxënës në Kopështe	Nr Total i nxënësve
TIPI 1	1	20	30	600	4	24	96	4,938	874	5,812	600	96	696
Tipi 2	2	30	30	900	12	24	144	13,176	2,620	15,796	1,800	288	2,088
Tipi 4	2	21	30	630	-	-	-	8,001	-	8,001	1,260	-	1,260
Grand To	**5**	**71**				**48**	**240**	**26,115**	**3,494**	**29,609**	**3,660**	**384**	**4,044**

For a better analysis of value for money of the project, we have grouped the expenses in four main categories, based on accounting standards and requirements of CoMD no. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership", article 7, section 3-6:

Direct costs of investments

Direct costs of maintenance

Due to the effects of the following analysis, all the prices and values will be without VAT, unless is specified otherwise.

1.3.1 Direct Costs of Investments

During the analysis and in line with above-mentioned CoMD, there were identified the following direct costs of investments:

9. Costs of Land Expropriation ;
10. Construction Cost ;
11. Cost of Study and Designing ;
12. Supervision Cost ;
13. Cost of Technical Control;
14. Technical Revision ;
15. Cost for Furniture and Equipment;
16. Cost of lab devices.

1.3.1.1 Cost of Land Expropriation

According to determination of trace where these schools will be built, it results that will be expropriated a total of 58,547.50 m2 of private properties, which according to the calculations are estimated at an expropriation value of 814,242,252 leke. On the other side, the state-owned

land will be subject of respective procedures in order to take the respective properties under the administration.

With the approval of CoMD in this respect and completion of financial and legal documents in line with the CoMD and normative acts in force, every expropriated subject will be paid by Tirana Municipality through a fund determined for this purpose.

Table 87 Summarized table of expropriations for lot 1

Nr rendor i tabeles	Adresa	Tipi	Sheshi	Shpronesimi ne Vlere	Siperfaqje ne m2 te shpronesuar	Cmimi mesatar per m2
1	NJA 09	TIPI 1	9/1	23,404,716	687	34,068
2	NJA 09	Tipi 4	9/1	23,404,716	687	34,068
4	NJA 11	Tipi 2	11/1	103,053,248	4,484	22,985
5	NJA 11	Tipi 4	11/1	103,053,248	4,484	22,985
Grand Total				**252,915,927**	**10,341**	**24,458**

1.3.1.2 Construction Costs

Based on the report obtained from General Directorate of Public Works No. Prot. 21407/2, dated 09.08.2016, costs for schools construction is 46,331.67 leke/m2, whereas the kindergartens costs are 54,380.83 leke/m2. From the combination of this data with the total construction surface for each type of school, it results that :

- The construction value of a Type 1 school is 228,785,770 leke and to this amount is added also the construction of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 1 school, including the kindergarten venue is 276,314,618 leke.
- The construction value of a Type 2 is 305,233,020 leke and to this amount is added the construction cost of a kindergarten of about 71,238,892 leke. In total, the general cost of the construction of a Type 2 school, including the kindergarten venue is 376,471,912 leke.
- The construction value of a Type 3 schools is 187,207,732 leke and to this amount is added the construction cost of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 3 schools, including the venues of a kindergarten is 234,736,581 lekë.
- The construction value of a Type 4 school is 185,349,833 leke and these schools do not include kindergarten premises.

Table 63 Construction costs for schools in Lot 1

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Klasa kopësh ti për shkollë	Sip ndërtim i shkolla	Sip ndërtim i kopësht e	Tot Sipërfaq e ndërtimi	Cmimi i ndertimit te shkollave lek/m2	Cmimi i ndertimit te kopështeve lek/m2	Kosto ndertimi të një shkolle	Kosto e ndërtimit të një kopështi	kosto e ndërtimit të një shkolle + kopesht	Kosto e përgjithshme e ndertimit
TIPI 1	1	20	4	4,938	874	5,812	46,332	54,381	228,785,770	47,528,848	276,314,618	276,314,618
Tipi 2	2	30	6	13,176	2,620	15,796	46,332	54,381	305,233,020	71,238,892	376,471,912	752,943,823
Tipi 4	2	21	-	8,001	-	8,001	46,332	54,381	185,349,833	-	185,349,833	370,699,665
Grand To	**5**	**71**	**10**	**26,115**	**3,494**	**29,609**	**138,995**	**163,143**	**719,368,623**	**118,767,740**	**838,136,363**	**1,399,958,107**

In total, there will be built 2 Type 1 schools with a construction cost of 276,414,618 leke per school, 7 Type 2 schools with a construction cost of 376,471,912 leke per school and 1 Type 3 schools with a construction cost of 234,736,581 leke per school and 7 Type 4 schools with a construction cost of 185,349,833 leke per school. As a result, the total construction costs for this project amounts to 4,720,118,027 leke. This cost will be covered by the concenssionary.

1.3.1.4 Other direct investment costs

Based on the report from Public Works General Directorate, in Document No. Prot. 21407/2, date 09.08.2016, other direct investment costs are :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Tax of impact in infrastructure

.

Taking into account the data analyzed in this chapter on costs, it results that the direct investment const is as following :

Tabela 64 Kostot e drejtpërdrejta të investimit për Lotin 1

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
TIPI 1	1	5,812	4,481,127	3,140,921	110,526	223,183	50,000	30,000
Tipi 2	2	15,796	20,220,768	8,355,808	301,178	501,350	100,000	60,000
Tipi 4	2	8,001	10,691,738	4,364,479	153,710	369,692	100,000	60,000
Grand To	**5**	**29,609**	**35,393,633**	**15,861,208**	**565,414**	**1,094,225**	**250,000**	**150,000**

Table 65 Summarizing table of other costs

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
Tipi 1	2	11,624	8,962,254	6,281,842	221,052	446,366	100,000	60,000
Tipi 2	7	55,286	70,772,689	29,245,329	1,054,124	1,754,725	350,000	210,000
Tipi 3	1	4,915	6,638,188	2,703,942	93,917	208,967	50,000	30,000
Tipi 4	7	28,004	37,421,081	15,275,677	537,985	1,293,922	350,000	210,000
Grand To	**17**	**99,828**	**123,794,213**	**53,506,790**	**1,907,078**	**3,703,980**	**850,000**	**510,000**

Tax of impact on infrastructure for public works is 0.

1.3.1.4 Furniture costs

In order to make schools functional, it is necessary to provide necessary IT equipment and laboratories. Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 “On Pre-university education system in the Republic of Albania”, changed, for which Ministry of Education and Sports has prepared the Guideline “On designing of school buildings” (Norms and Standards).

Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.

For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 90 Cost of school furniture

Type of schools	No classes	st/class	No st. total	Cost/student	Total cost
Type 1	20	30	600	24,167	14,500,000
Type 2	30	30	900	24,167	21,750,000
Type 3	20	24	480	24,167	11,600,000
Type 4	21	30	630	24,167	15,225,000

The furniture cost for basic education have been included three levels which envisage the following types :

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.
Costs for furniture of kindergartens per children is about 27.916 lek without VAT
This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 91 –Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.000

Regarding costs for lab equipements, we referred to the purchase contract “Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools” realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 92 Costs for lab equipment

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602

4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

According to schools typology defined based on the designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is determined the quantity of labs for each type, we have the following table :

Table 94 Costs for lab equipment according to schools typology

No	Tyes of schools	Cost without VAT
1	Basic education (Type 1)	6,095,850
2	Basic education (Type 2)	7,279,450
3	Basic education (Type 3)	5,743,950
4	Higher Middle Education (Type 4)	13,983,067

According to the analysis of all the above-mentioned data, it result that the total cost of furniture and lab equipments of 17 schools is 502,378,267 leke with VAT, according to the following table :

Table 66 Furniture costs and lab equipments for schools in Lot 1

Tipi	Nr i shkollave sipas tipit	Kosto e mobilimit te shkollave	Kosto e mobilimit të kopështeve	Total Kosto Mobilimi	Kosto Laboratori	Total kosto pajisje, mobilje dhe orendi
TIPI 1	1	14,500,000	2,680,000	17,180,000	6,095,850	23,275,850
Tipi 2	2	43,500,000	8,040,000	51,540,000	14,558,900	66,098,900
Tipi 4	2	30,450,000	-	30,450,000	27,966,133	58,416,133
Grand To	**5**	**88,450,000**	**10,720,000**	**99,170,000**	**48,620,883**	**147,790,883**

1.3.1. 5 Direct Investment Cost

In conclusion, the direct investment cost of this project is estimated at **1,853,979,397 lekë**. About **252,915,927** leke out of them are calculated as necessary funds for expropriation, which will be covered by Tirana Municipality. Whereas, the total cost of the project that will be covered by the concessionary is **1,601,063,470** leke, where the construction cost is **1,399,958,107** leke without VAT, Costs of the Designing, Technical Revision, Supervision, Technical Control, furniture and laboratories is **201,105,364** leke without VAT. In details, the calculated categories are as following :

Table 95 Direct Investment costs according to categories forlot 1

Viti	Pershkrimi	Grand total
A.	**Kostot Direkte te Investimit**	**1,853,979,397**
A.1	**Kostot e Truallit**	**252,915,927**
A.2	Kostot e Projektimit	35,393,633
A.3	- Ndertim + instalime	1,399,958,107
A.4	- Oponenca teknike	1,094,225
A.5	- Takse Infrastrukture	-
A.6	- Leje mjedisore	150,000
A.7	- Mbrojtje ndaj Zjarrit	250,000
A.8	- Kosto Supervizimi	15,861,208
A.9	- Kosto Kolaudimi	565,414
A.10	- Mobiljet dhe Orendi	99,170,000
A.11	- Investime IT&T dhe Labs	48,620,883

1.3.2 Direct cost of maintenance

Based on calculations carried out from General Directorate No. 3 of City's Workers, annual maintenance cost per class is 422,107 leke with VAT or 351,755 leke without VAT. Making respective calculations, the annual cost for the general maintenance for each type of school is 8,442,132 leke per one school of Type 1, about 12,663,198 leke per one school of type 2, and 7,386,865 per one school of type 4. The total maintenance cost for all schools of Lot 1 is **48,542,258** leke per year. The annual cost of maintenance for calculation effects starts from 2018 and pursuant until the completion of PPP period. For more details, see the following tables:

Table 96 Annual cost of maintenance according to type of schools for lot 1

Tipi i shkollave	Nr i shkollave	Kosto e mirëmbajtjes për shkollë	Kosto e përgjithshme e mirëmbatjes
TIPI 1	1	8,442,132	8,442,132
Tipi 2	2	12,663,198	25,326,396
Tipi 4	2	7,386,865	14,773,731
Grand Total	**5**	**9,708,452**	**48,542,258**

In total, for 7 years, the general maintenance cost will be **339,795,806** leke without vat. About **223,727,721** leke without VAT out of them is the cost of maintenance and **116,068,085** leke without VAT is the cost of maintenance staff. The following table is the analysis of categories of maintenance expenses for each school in one year, without VAT:

Table 67 Maintenance costs for 7 years of Lot 1

B.	**Kostot Direkte të Mirëmbajtjes**	**339,795,806**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**223,727,721**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	51,729,846
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve	130,706,051
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi	16,362,801
B.1.4	- Mirëmbajtje IT&T (HD+SW)	24,929,023
B.2	**Staf Mirembajtje**	**116,068,085**
B.2.1	Staf Roje	17,073,463
B.2.2	Staf Sanitare	73,680,257
B.2.3	Staf Sekretare	14,757,736

Table 68 Detailed costs of maintenance for Lot 1

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	Lyerje per klase	Riparim suvatim + hidroizolim per klase	Riparime dhe mirembajtje e Nderteses	Riparime Orendi shkollore	Riparime Pajisje PC	Materiale Pastrimi	Lëndë djegëse për ngrohje dhe ujë të ngrohtë	Mirembajtje kondicionim, impiante uji dhe MNZSH	Sherbim roje	Sherbim pastrimi	Sherbim sekretarie	Total kosto mirembajtjee
1	NJA 09	TIPI 1	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
2	NJA 09	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
3	NJA 11	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
4	NJA 11	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
5	NJA 11	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
Totali i Mirembajtjes				**138**	**3,158,970**	**3,239,972**	**991,036**	**2,337,543**	**3,561,289**	**1,168,550**	**11,538,582**	**5,965,161**	**3,947,156**	**10,525,751**	**2,108,248**	**48,542,258**

1.4 Analysis of PPP incomes

1.4.1. Tariff for the use of schools

Tariff for use of schools (hereinafter "Tariff") will be calculated in such way so that could cover the costs of concessionary and guarantee a minimal income margin for the concessionary in order to make this PPP attractive and the best economic solution compared to other potential scenario. The tariff is paid for the entire maintenance and administration period of schools by concessionary, i.e. for 7 years. This tariff is paid to every year by Tirana Municipality through financing resources detailed as following. This scheme provides for the construction of 17 schools in a record time, solving the two-shifts teaching and over-crowded classes, but as long as all the risks for maintenance and careful use of the asset will be under the responsibility of the concessionary and related to the payments, this will enable qualitative constructions in the interest of the community.

As long as the direct investment costs, i.e. construction and functioning of schools is calculated based on interim payment reports, which include the income margin of the contractor, on this category will not be calculated the additional income margin. But on the other side, as long as the invested values of the concessionary in this respect will be covered in a seven-year period, he must be minimally reimbursed for the value in time of the money, as well as for the normal and extraordinary maintenance part for this period.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period [15], respectively the results of seven year obligations from 2015 until 15.09.2016.

[15] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016

Table 69 Income Margin

ISIN	Dt.Ankandi	Ankandi	Muaji	Datë Emetim	Datë Maturim	Shuma e shpallur (fillestare)	Shuma e shpallur (nd. strukture)	Shuma e kërkuar	Shuma e pranuar	Prorata Konkurues	Prorata Jo Konkuruese	Yieldi Uniform i Pranuar
AL0017NF7Y23	13.09.2016	*7vjeçar/7years(fix)*	*Shtator*	15.09.2016	15.09.2023	*3,000,000*		*2,309,000*	*2,309,000*			*4.89%*
AL0016NF7Y23	01.06.2016	*7vjeçar/7years(fix)Rihapje*	*Qershor*	03.06.2016	16.03.2023	*2,000,000*		*3,141,400*	*2,000,000*	*4.40%*		*4.00%*
AL0016NF7Y23	11.03.2016	*7vjeçar/7years(fix)*	*Mars*	16.03.2016	16.03.2023	*3,000,000*		*8,247,000*	*2,999,900*	*76.48%*		*4.90%*
AL0015NF7Y22	14.12.2015	*7vjeçar-fiks*	*Dhjetor*	16.12.2015	16.12.2022	*2,500,000*		*5,288,600*	*2,500,000*	*67.70%*	*100.00%*	*6.79%*
AL0014NF7Y22	14.09.2015	*7vjeçar-fiks*	*Shtator*	16.09.2015	16.09.2022	*1,000,000*		*1,430,600*	*1,000,000*	*100.00%*	*100.00%*	*7.78%*
AL0013NF7Y22	12.06.2015	*7vjeçar-fiks*	*Qershor*	16.06.2015	16.06.2022	*3,000,000*		*2,953,500*	*2,953,500*	*100.00%*	*100.00%*	*7.80%*
AL0012NF7Y22	12.03.2015	*7vjeçar-fiks*	*Mars*	16.03.2015	16.03.2022	*2,500,000*		*2,815,800*	*2,500,000*	*80.98%*	*77.92%*	*7.81%*
										Yieldi Mesatar i pranuar		6.28%

The income margin will be object of bidding procedures of competitors in this PPP, but in the mean time, it is necessary to understand the general value of this PPP. The income margin will be calculated for the remaining value of the direct investment every year and on annual maintenance costs. Thus, the financing scheme is attractive for potential competitors and total cost of the project is not higher than the traditional financing methods.

Based on the calculations, annual tariff to be paid to the concenssionary with a margin of about 6.28% will be as following :

Table 70 Annual Tariff to be paid to the concenssionary for Lot 1

A	B	C	D	E	F	G	H	I	J	K	L	M
Nr rendor	Viti	Kosto Direkte e Investimit ne Fillim të Periudhës (pa TVSH) (C3=F2)	marzhi i fitimit	Shlyerja vjetore për Koston Direkte të Investimit (C2/B8)	Vlera e Mbetur e Kostos Direkte te Investimit (C-E)	Marzhi i fitimit mbi koston Direkte të investimit (C*D)	pagesa vjetore për koston direkte të investimit Pa TVSH (E+G)	kosto vjetore mirembajtjeje Pa TVSH	Marzhi i fitimit mbi Mirembajtjen (D*I)	pagesa vjetore për koston direkte të investimit Pa TVSH (I+J)	Total Marzhi i Fitimit	Tarifa Vjetore Pa TVSH
1	0	1,601,063,470										
2	1	1,601,063,470	6.28%	228,723,353	1,372,340,118	100,546,786	329,270,139	48,542,258	3,048,454	51,590,712	103,595,240	**380,860,851**
3	2	1,372,340,118	6.28%	228,723,353	1,143,616,765	86,182,959	314,906,312	48,542,258	3,048,454	51,590,712	89,231,413	**366,497,024**
4	3	1,143,616,765	6.28%	228,723,353	914,893,412	71,819,133	300,542,486	48,542,258	3,048,454	51,590,712	74,867,587	**352,133,198**
5	4	914,893,412	6.28%	228,723,353	686,170,059	57,455,306	286,178,659	48,542,258	3,048,454	51,590,712	60,503,760	**337,769,371**
6	5	686,170,059	6.28%	228,723,353	457,446,706	43,091,480	271,814,833	48,542,258	3,048,454	51,590,712	46,139,933	**323,405,544**
7	6	457,446,706	6.28%	228,723,353	228,723,353	28,727,653	257,451,006	48,542,258	3,048,454	51,590,712	31,776,107	**309,041,718**
8	7	228,723,353	6.28%	228,723,353	(0)	14,363,827	243,087,179	48,542,258	3,048,454	51,590,712	17,412,280	**294,677,891**
Grand total				**1,601,063,470**		**402,187,144**	**2,003,250,614**	**339,795,806**	**21,339,177**	**361,134,983**	**423,526,320**	**2,364,385,597**

Thus, for seven years, Tirana Municipality will pay to the Concenssionary, annual tariffs not more than :

Nr rendor	Viti	Tarifa Vjetore Pa TVSH
1	0	
2	1	**380,860,851**
3	2	**366,497,024**
4	3	**352,133,198**
5	4	**337,769,371**
6	5	**323,405,544**
7	6	**309,041,718**
8	7	**294,677,891**
Grand total		**2,364,385,597**

1.4.1 Source of financing

The general amount of this project is **2,617,301,524** leke, about **252,915,927** out of them are expropriations to be paid by Tirana Municipality to the expropriated persons and **2,364,385,597** leke is the amount of the concession:

Table 71 General amount of project for Lot 1

Vlera e Pergjithshme e Projektit	Çmimi	Sasia	Vlera totale
Kostoja e përgjithshme e shpronësimit	**252,915,927**	**1**	**252,915,927**
Kosto direkte e Investimit pa TVSH	**1,601,063,470**	**1**	**1,601,063,470**
Kosto direkte e investimit te koncesionarit Pa TVSH	1,601,063,470	1	1,601,063,470
Kosto e mirembajtjes pa TVSH	**48,542,258**	**7**	**339,795,806**
Kosto e mirembajtjes te koncesionarit Pa TVSH	48,542,258	7	339,795,806
Marzhi i Fitimit	**423,526,320**	**1**	**423,526,320**
Marzhi i Fitimit të Koncensionarit	423,526,320	1	423,526,320
Total i pergjithshëm i kostos(1+2+3+4+5)			**2,617,301,524**

Table 72 Amount to be covered by the municipality and concenssionary

Nga të Cilat:	Bashkia	Koncesionari	Totali
1. Vlera e Përgjithshme e Projektit Pa TVSH	252,915,927	2,364,385,597	2,617,301,524
Totali	**252,915,927**	**2,364,385,597**	**2,617,301,524**

These expenses will be covered by incomes of the Municipality, Conditioned Grants of Ministry of Finance for project.

Incomes of Tirana Municipality for this project will be generated from the Interim Tax on Education Infrastructure, which is applied upon decision of Municipal Council No. 59, dated 30.12.2015, "On taxes and local tariffs system in the city of Tirana".

Table 103 Forecast of incomes from Interim Tax on Education Infrastructure

Description	PLAN YEAR 2016	FORECAST 2017	FORECAST 2018
Interim Tax on Education Infrastructure	**870 000 000**	**940 000 000**	**1 000 000 000**
Families	320 000 000	340 000 000	350 000 000
Trade subject	550 000 000	600 000 000	650 000 000

Incomes from Interim Tax on Education Infrastructure are estimated at 870 million leke in 2016, whereas these incomes are envisaged to increase to 940 million leke in 2017 and 1 billion leke in 2018. This interim tax will be applied for 7 years and for 2019-2022 period, the annual incomes

are projected to amount to 1 billion leke. Incomes from specific transfer from Ministry of Finance will be 700 million lek per year. Therefore, the fund at the disposal of Tirana Municipality for completion of periodical payments is estimated at 1 billion and 700 million leke per year.

1.5. Financial Analysis

Table 73 Summarizing table of costs and incomes of the project

Viti	Pershkrimi	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
A.	**Kostot Direkte te Investimit**	**1,853,979,397**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,853,979,397**
A.1	**Kostot e Truallit**	**252,915,927**								**252,915,927**
A.2	Kostot e Projektimit	35,393,633								35,393,633
A.3	- Ndertim + instalime	1,399,958,107	-							1,399,958,107
A.4	- Oponenca teknike	1,094,225								1,094,225
A.5	- Takse Infrastrukture									-
A.6	- Leje mjedisore	150,000								150,000
A.7	- Mbrojtje ndaj Zjarrit	250,000								250,000
A.8	- Kosto Supervizimi	15,861,208								15,861,208
A.9	- Kosto Kolaudimi	565,414								565,414
A.10	- Mobiljet dhe Orendi	99,170,000	-	-	-	-	-	-	-	99,170,000
A.11	- Investime IT&T dhe Labs	48,620,883								48,620,883
B.	**Kostot Direkte të Mirëmbajtjes**	**-**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**339,795,806**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**-**	**31,961,103**	**31,961,103**	**31,961,103**	**31,961,103**	**31,961,103**	**31,961,103**	**31,961,103**	**223,727,721**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	-	7,389,978	7,389,978	7,389,978	7,389,978	7,389,978	7,389,978	7,389,978	51,729,846
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve		18,672,293	18,672,293	18,672,293	18,672,293	18,672,293	18,672,293	18,672,293	130,706,051
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi		2,337,543	2,337,543	2,337,543	2,337,543	2,337,543	2,337,543	2,337,543	16,362,801
B.1.4	- Mirëmbajtje IT&T (HD+SW)		3,561,289	3,561,289	3,561,289	3,561,289	3,561,289	3,561,289	3,561,289	24,929,023
B.2	**Staf Mirembajtje**	**-**	**16,581,155**	**16,581,155**	**16,581,155**	**16,581,155**	**16,581,155**	**16,581,155**	**16,581,155**	**116,068,085**
B.2.1	Staf Roje		3,947,156	3,289,297	2,741,081	2,284,234	1,903,528	1,586,273	1,321,895	17,073,463
B.2.2	Staf Sanitare		10,525,751	10,525,751	10,525,751	10,525,751	10,525,751	10,525,751	10,525,751	73,680,257
B.2.3	Staf Sekretare		2,108,248	2,108,248	2,108,248	2,108,248	2,108,248	2,108,248	2,108,248	14,757,736
A+B	**Totali i Kostove (A+B+C)**	**1,853,979,397**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**48,542,258**	**2,193,775,203**

C.	**Të Adhurat**	**252,915,927**	**380,860,851**	**366,497,024**	**352,133,198**	**337,769,371**	**323,405,544**	**309,041,718**	**294,677,891**	**2,617,301,524**
C.1	Likujdimet e shpronesimeve	252,915,927								**252,915,927**
C.2	Tarifa e Shfrytezimit pa TVSH		380,860,851	366,497,024	352,133,198	337,769,371	323,405,544	309,041,718	294,677,891	**2,364,385,597**
D	**Fitimi (humbja)**	(1,601,063,470)	332,318,593	317,954,766	303,590,940	289,227,113	274,863,286	260,499,460	246,135,633	**423,526,320**
E	**Fitimi (humbja) progresive**	(1,601,063,470)	(1,268,744,878)	(950,790,112)	(647,199,172)	(357,972,059)	(83,108,773)	177,390,687	423,526,320	**423,526,320**
F	**15% Tatim fitim**	0	0	0	0	0	0	(26,608,603)	(36,920,345)	**(63,528,948)**

Table 74 Cashflow of the project

Fluksi i Arkës									
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Flukse dalese nga Investimet	- 1,853,979,397	-	-	-	-	-	-	-	- 1,853,979,397
Flukse dalese nga Mirëmbajtja	-	- 48,542,258	- 48,542,258	- 48,542,258	- 48,542,258	- 48,542,258	- 48,542,258	- 48,542,258	- 339,795,806
Flukse dalese nga Taksat	-	-	-	-	-	-	- 26,608,603	- 36,920,345	- 63,528,948
Totali i flukseve dalese	**-1,853,979,397**	**- 48,542,258**	**- 48,542,258**	**- 48,542,258**	**- 48,542,258**	**- 48,542,258**	**- 75,150,861**	**- 85,462,603**	**- 2,257,304,151**
Flukse hyrese nga Operimet	**252,915,927**	**380,860,851**	**366,497,024**	**352,133,198**	**337,769,371**	**323,405,544**	**309,041,718**	**294,677,891**	**2,617,301,524**
Gjendja e Arkes ne fund te periudhes	**-1,601,063,470**	**332,318,593**	**317,954,766**	**303,590,940**	**289,227,113**	**274,863,286**	**233,890,857**	**209,215,288**	**359,997,372**
Gjendja e arkes progresive	**-1,601,063,470**	**- 1,268,744,878**	**- 950,790,112**	**- 647,199,172**	**- 357,972,059**	**- 83,108,773**	**150,782,084**	**359,997,372**	**359,997,372**

1.6. Economic Profitability of the Project

1.6.1 NPV (Net Present Value)

NPV, as standard method for assessment of long-term projects through analysis of time value of money, presents the discounted amount of cashflow of the project. Every investor, when decides to undertake an investment analyzes the incomes generated by one project compared to the potential incomes of the invested money in another project. In general, these analyses are carried out taking into account the interest rate in case of the investment of the money, e.g. treasury bonds or government obligation, which have almost a zero risk.

Classical formula of NPV calculation, if the investment is made in one year, is :

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_o$$

where:

C_0 – presents the money spent for the initial investment

C_t – presents the incomes from the investment ;

t – presents duration of the project ;

r – presents the expected rate of discount .

To see the economic profitability of the project, the financial model has been tested with several potential discount rates. From this analysis, it resulted that the potential concenssionaries will be interested in this project only if their opportunity cost is lower than 5.79%. In other words, for every discount rate over 5.79% this project does not consist of any economic profitability for the concenssionary.

	NPV						
norma e skontimit e parashikuar	**5%**		**5.79%**		**6%**		**7%**
NPV	**29,884,696**	**-**	**15,136**	**-**	**7,682,796**	**-**	**42,661,484**

i. IRR (Internal Rate of Return)

IRR is a method used to measure the incomes of potential income. IRR is a discount rate that makes the nett present value (NPV) of all cashflows of a project equal to zero. According to economic theory, every project with an IRR higher than its capital cost is probitable, as a result investors will be interested to invest in it. Based on the financial analysis, the IRR of this project is estimated at 5.79%.

Table 75 Internal Rate of Return of the project

Viti	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
Gjendja e Arkes ne fund te periudhes	-1,176,772,556	244,264,887	233,707,556	223,150,225	212,592,894	202,035,563	171,909,712	153,782,766	264,671,046

IRR	5.79%

1.6.3. Payback Period

The payback period presents the necessary time needed for the invested capital to recover the initial investment from the project incomes. In general, the payback period is calculated by dividing of the investment cost by annual incomes. Hence, as long as the annual incomes in this project consist of decreasing installments, the payback period is assessed by analyzing the cashflow to determine the latest year when this flow is negative.

Periudha e Vetëshlyerjes		
Viti i fundit i gjendjes se arkes negative		5
Gjendja e arkes kumulative ne vitin e fundit negativ	-	61,021,432
Gjendja e arkes pozitive krijuar ne vitin vijues		171,909,712
PBP (periudha e veteshlyerjes)		5.35

In this respect, the self-payment period for this project is achieved in 5.35 years. Nevertheless, taking into account that payment from Tirana Municipality will be annual, then the self-payment period will not be 5.35 years, but 6 years.

1.6.4. Financial compatibility

According to CoMD no. 575, dated 10.07.2013, article 7, item 10, the financial compatibility of a project "indicates whether the project seems to be able to attract guarantees/financial support and qualitative loaners, by providing a strong and reasonable financial."

Based on the above-mentioned financial analysis, this project is economically profitable and this profitability is presented as following:

- NPV = 5.79% > 0
- IRR = 5.79% > than interest of deposits or treasury bonds
- PBP = 6 year < 7 years (duration of concession)

1.7 Quantitative and Qualitative Risk Analysis

The main goal of Risk Analysis is to identify and evaluate the gamma of risks that may affect the project. Therefore, a strategy on risk management is carried out in order to guarantee the successful realization of the project. In compliance with Decision of Council of Ministers No. 575, dated 10.07.2013 "On approval of rules for evaluation and issuance of concession/private-public partnership" following is a risk analysis regarding this project.

1.7.1. Qualitative Risk Analysis

Land Risk

Description of the Risk: Lands selected for construction of 17 schools will mostly be owned by the state, whereas the private-owned lands will be expropriated in line with the legislation in force and will be put at disposal of the concessionary. As a result, this risk has a low probability, almost zero, about this project. Regarding the necessary permits, there is no risk, because Tirana Municipality is itself the responsible body to grant these permits. In relation to environmental standards, the selected lands are plots located in areas were the environmental standard is not affected, therefore the risk is considered zero.

Management of risk: This risk is assessed with a zero probability and it is covered by Tirana Municipality. Tirana Municipality will carry out all the procedures for expropriation of private lands out of this PPP scheme, before the beginning of works. If any of the selected lands is in a ownership conflict, turning expropriation impossible, authorities will ask for information at the Immovable Properties Registration Office for alternative sites to be used. Regarding geological conditions and environmental standards, there has been a environmental study part of this feasibility study, which has come to the conclusion that the construction of these objects does not have an impact on the environmental standards. Hence, during the procedures for obtaining a construction permit, there will be also a detailed environmental study by the concessionary.

Risk of design, construction and functioning

Description of the Risk: Calculation of costs for construction and furniture of new schools is based on above-mentioned methodology, which takes into consideration the cost of schools built by Tirana Municipality in the last three years. Therefore, the possibility of a higher construction cost than the calculated cost is almost zero. Construction and functioning of schools depend in a certain scale on the obtaining of construction permit and meeting of preconditions for obtaining of this permit, such as environmental permit, connection with the electrical grid or water supply system, approval of projects for fire protection, etc. The concessionary has the right to draft the designing, prepare the documents for equipment with a construction permit, as well as to build the school objects. From this point of view, the risk of delays in equipment with construction permits, delays in kick-off works, readiness is possible.

Management of risk: This risk belongs to the concessionary. He is accountable for compilation of documents and equipment with construction permit. If the concessionary does not prepare the project on time and will neglect the application for construction permit by not applying on time or having irregularities in documents, or failure to start works on time, then he will be accountable for failure in starting works on time and will compensate the contracting authority according to the requirements in the concessionary contract. Likewise, as long as the concessionary is responsible for drafting and implementing the project, each delay in completion of construction works, excluding the case when the delay comes as a result of a force majeure will be under the concessionary´s responsibility and will be forced to compensate the contracting authority according to requirements in the concessionary contract.

Functioning Risk

Description of the Risk: The possibility that the new schools will not be functional after the construction is related to the non-qualitative works by the concessionary, which might make the performance of teaching in new buildings impossible. This risk has a low probability because the completion of works will be carried out by the technical supervisor and financial bill of quantities will be supervised by the contracting authority. Regarding the risk of a higher maintenance cost than expected, the probability is almost zero, because the annual maintenance cost is calculated based on annual expenses of Tirana Municipality for the maintenance of existing schools, which have been constructed long ago. According to engineering standards, the maintenance cost of newly-built objects is lower than that of the objects built before.

Management of risk: The probability of this risk is low and it is considered as a risk transferred to the concessionary. In case the construction quality will make the performance of teaching process impossible, the concessionary will be accountable and will be forced to carry out extra works until the works quality will be in line with the requests of the designing tasks. In case school buildings might have any problems due to construction works, in the course of seven years of the contract duration, which will make the teaching process impossible, the concessionary will be obligated to carry out extra works to make the school functional again. If the maintenance cost is higher than predicted, this would be a result of the inaccuracies in the design or construction. Therefore, the risk belongs to the concessionary, who is accountable for the designing and building of these schools.

Risk of demand and other trade risks

Description of the Risk: This risk is related to the situations when use of the object is different from what is expected or the generated incomes are lower than the forecast. As long as objects to be build are school buildings that will not have a different use and cannot generate incomes, this risk cannot applied on this project.

Management of risk: The possibility that this project can be affected by this risk is zero, because it is not subject of its impact.

Economic and Financial Risks

Description of the Risk: As long as this project includes financial transactions to be implemented in the course of time, there exists the possibility of an impact from economic and financial risks. The unpredicted increase of the norms of interest may increase the financial costs of the project from the concessionary. On the other side, changes in exchange rate course may have a worsening affect in the finances of the concessionary if his incomes and expenses are in a different currency, e.g. the concessionary has been granted a loan in EUR of USD for the financing of the project, while Tirana Municipality makes the annual payments in Leke. In the end, as long as this project includes periodical payments for a seven year period, there exists the possibility of an impact from inflation in the concessionary´s incomes.

Management of risk: Due to the fact that Albania is a country with a sustainable macroeconomic situation, the probability that this project may be affected by such risk remains low. The risk of interest rates or exchange rates belongs to the concessionary and shall be calculated in its financial

projections. Inflation risk is shared among the concessionary and Tirana Municipality. As long as the Bank of Albania policy is keeping infection under 3% and duration of the project is only 7 years, the probability of this risk is low. Nevertheless, in the definition of income margin as related to interest rate of 7 year obligations, Tirana Municipality guarantees the concessionary the same protection toward the economic and financial risks as guaranty of Albanian Government for buyer of obligations.

Risks of assets ownership

Description of the Risk: This risk is related to the possibility that technology might get older or if the value of assets might be different at the end of the contract. As long as, the construction consists of school buildings, which will be maintained by the concessionary for seven years, the probability of this risk is low. Nevertheless, the quality and value of assets may be lower than the projection due to non-qualitative maintenance.

Management of risk: This risk is transferred to the concessionary. Maintenance of schools buildings and their furniture will be completed in line with the standards in force and will be supervised by the Contracting Authority. In case the concessionary will not maintain schools in line with the above-mentioned determination, the concessionary contract will envisage provisions obligating him to pay the damage. If at the end of the contract, the value of assets will be different from the predicted, the concessionary contract will define provisions obligating the concessionary to pay the damage.

Political risk

Description of risk: The risk of an impact from political decisions on the project is evident. As long as it is a project initiated from Tirana Municipality, a local government body, the success of the project depends on the coordination with local government. Likewise, there is a potential possibility that the results of next local elections – a potential change of Tirana mayor – may also cause the change of priorities and as a result the project can be blocked.

Management of risk: This risk is transferred on the Contracting Authority - Tirana Municipality. To ensure the consent of central government, with the approval of the feasibility study from the head of Tirana Municipality, will be required also an approval from the Ministry of Finance and Ministry of Education and Sports. Regarding risk of a negative impact of the project as a result of changes in the leadership of Tirana Municipality, the concessionary contract will envisage provisions that obstacle the dismissal of the Contract for non-legal reasons by the Contracting Authority.

Risks deriving from change of legal framework

Description of risk: Potential changes in legislative framework may affect the project positively and negatively. As long as the project is related to the construction of school buildings, the possibility of an affect from legal changes is related only to standards and construction manuals.

Therefore, this risk has a low probability. Regarding changes in fiscal laws, the negative or positive influence can be felt only in the finances of concessionary.

Management of risk: This risk falls on the concessionary. In order to have minimal effects, the concessionary contract will include provisions that protect it from discriminating changes in law – always if the discrimination is proved by the court. On the other side, the concessionary will be forced to implement any legal changes coming as a result of governance policies.

Risk from force majeure

Description of risk: Force majeure risks, such natural calamities, civil unrests or wars are transferred to the concessionary and contracting authority. Taking into account the fact that Albania is a member of NATO and with a clear perspective of EU integration, the probability of risks from wars or unrests is almost zero. On the other side, the probability of and impact from earthquakes or other natural disasters on the project is low – How? As a result of the above-mentioned analysis of environmental impact on the project.

Management of risk: Probability of these risks is very low and it is transferred on both parts. The concessionary contract will envisage clauses of force majeure which will guarantee that any negative impact on the project shall be divided between the parties.

1.7.2. Quantitative Analysis of Risks

This analysis aims to prioritize risks that may affect the project by calculating their probability and potential impact on the achievements of project objectives. The quantitative evaluation is based on the probability of occurrence of each risk and potential impact on costs and deadlines of the project.

Impact of risks on project costs is calculated based on the specific weight of each of them in the project's cost. Whereas, the impact on deadline of completion of works is calculated based on legal deadlines for completion of defined procedures that may be necessary for well-going of the project.

Following is a quantitative analysis on the impact of each risk in the costs and deadlines for realization of the project.

Lands risk. Probability of this risk is low, 0-5%. Its impact on the project' cost is zero because expropriations of private lands that will be used for construction of school will be carried out by Tirana Municipality with a special fund out of the financial scheme of this project. The lands selected for construction of the schools are state-owned and private properties. In case use of any of these lands is impossible than will be used an alternative selected land with the necessary information from the Immovable Properties Registration Office. As a result, the impact on the deadline

of completion of works is related the handing in of the state-owned land if it is not a property of Tirana Municipality or expropriation of private properties. The impact on deadline of works is calculated at 3 - 6 months.

Risk of designing, construction and functioning. Probability of this risk is low, 5-10%. The costs assessment process of the schools construction is carried out in line with the MoES guidelines manuals and based on the construction of schools by Tirana Municipality in the course of last years and prices have been indexed according to construction prices index of INSTAT. Hence, maximal influence of this risk in costs is less than 5%. On the other side, the deadline of works may not be respected as a result of failure to receiving the construction permit or other permits on time by the concessionary or due to slower completion of works than the calendar of works. In case designing is delayed or documents for equipment with necessary permits are not compiled, the impact on deadline of works is calculated from 3 to 12 months.

Functioning Risk. Probability of this risk is calculated at 0-5%. As long as this project is related to the construction of new schools, there exists the possibility of a low quality of construction. This could require additional works beyond the defined deadline. The impact of this risk in the deadline of works is calculated from 1 to 3 months, whereas the impact on total cost of the project is envisaged at 5-10%. There exists an opportunity that the maintenance cost may result higher than the forecast, but compared to total cost of the project the impact of this cost is almost zero.

Risk of demand and other trade risks. This risk cannot be applied on the project and the possibility of an impact from it on cost or deadlines is zero.

Economical and financial risks. Probability of this risk is low, 0-5%, taking into consideration that it is not a long-term concession where the concessionary generates incomes from the operation of the object of concession. As long as incomes of the concessionary are guaranteed by Tirana Municipality and covered by inflation, impact of risk on total cost of the project is low, 5% - 10%. On the other side, the impact on deadlines of completion of works is not envisaged longer than 12 months.

Risks of assets ownership. Probability of this risk is calculated at 0 - 5%. Its impact on total cost of the project is related to the maintenance costs, in case the latest results higher than forecast and a more rapid amortization of buildings that envisaged in the concession contract. Its impact on project's costs is predicted to be at maximum 5%. Probability of this risk does not affect the deadline for realization of works.

Political risk. Probability of such risk is medium low and is calculated at 10 - 20%. The occurrence of such risk may block works or interrupt the periodical payments for the concessionary by increasing the financing cost of the project and delaying the realization of works. In this respect, a potential influence of this risk on costs is calculated at 20 - 30%, whereas the impact on deadline of realization of works is calculated from 16 to 24 months.

Risk of change of legal framework. This risk has a probability of 5 to 15%. Potential legal changes, such as in standards to be followed for construction of new schools, may considerably boost the project cost. Therefore, the potential risk on costs is medium, varying from 20 to 40%. Likewise, potential legal changes may cause the re-drafting of the project or other delays that may be negatively affect the deadline for realization of works. Therefore, impact on deadline of works is calculated from 12 to 16 months.

Force Majeure Risk. Probability of this risk to happen is very low - 0 to 5%. Nevertheless, in case it happens, the impact on costs or deadline of works will be medium high. Therefore, impact on cost is calculated at 30% to 50%, whereas impact on deadline of works from 12 to 24 months.

Table 107 Summarizing table of impact of risks

No.	Risk	Probabiliy	Impact on cost	Impact on works deadline
1	Risk on land	0% - 5%	0%	3 - 6 months
2	Risk on designing, construction and implementation	5% - 10%	0% -5 %	3 - 12 months
3	Functioning Risk	0% - 5%	5% -10%	1 - 3 months
4	Risk of demand and other commercial risks	-	-	-
5	Economic and Financial Risks	0% - 5%	5% -10%	6 - 12 months
6	Risks of assets ownership	0% - 5%	0% - 1%	-
7	Political Risk	10% - 20%	20% - 30%	16 - 24 months
8	Risk of change of legal framework change	5% - 15%	20% - 40%	12 - 16 months
9	Force majeure	0% - 5%	30% - 50%	12 - 24 months

1.8 Sensitivity Analysis

Main factor that may change during the tender process is the income margin. At the same time, the details of respective costs will be respectively defined based on factual approved projects, depending on the approved projects. The direct cost will be calculated base on the factual realized volumes, which in no way will be higher than the costs envisaged in this project.

Nevertheless, due to the effects of sensitivity analysis, the calculation will made as if the costs have increased and decreased by 5% and 10%, whereas the income margin increases and decreases by 5% and 10%.

Table 78 Sensitivity Analysis if costs rincrease or decreasedby 5 – 10 %

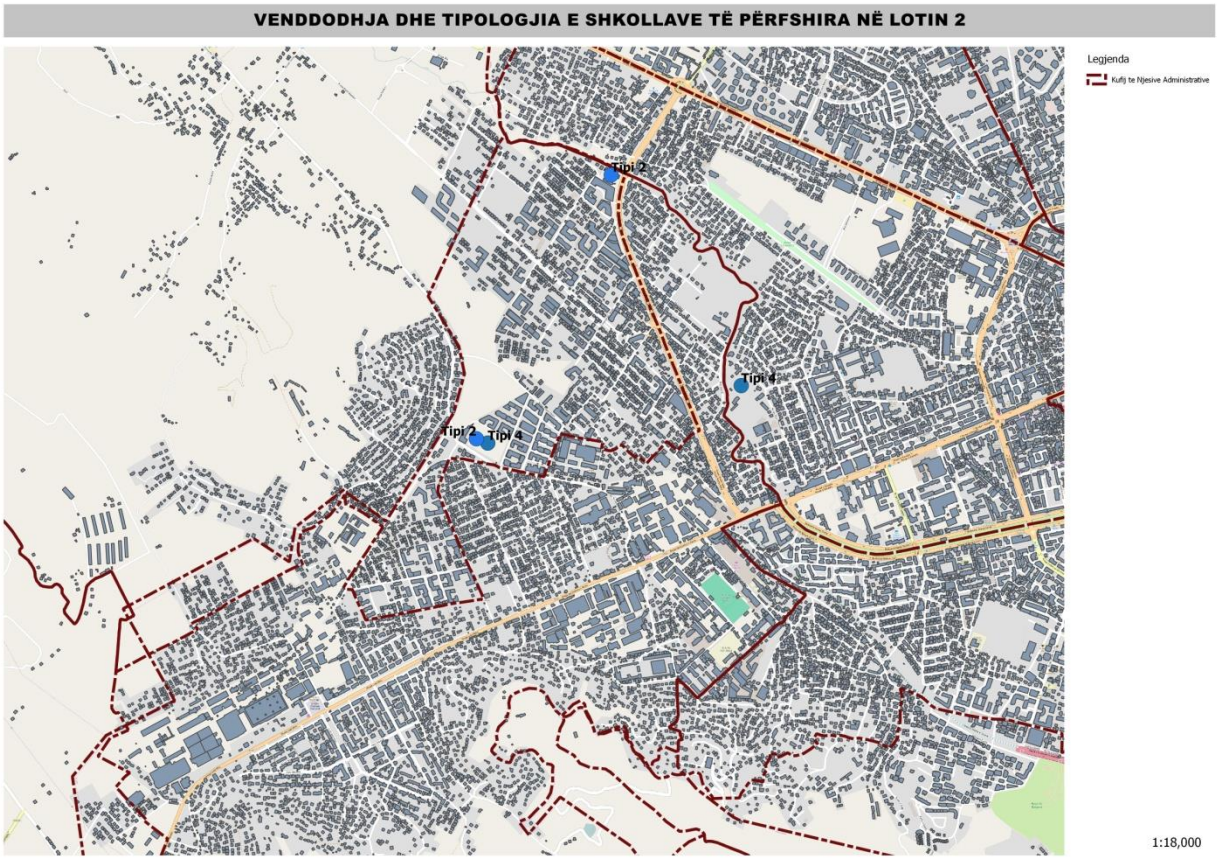
	Incomes and expenses increase by 10%	Incomes and expenses increase by 5%	Basic Model	Incomes and expenses decrease by 5%	Incomes and expenses decrease by 10%
Sensitivity Norm	10%	5%	0	-5%	-10%
Outflow from Investments	- 7,267,445,188	- 6,937,106,771	6,606,768,353	- 6,276,429,936	-5,946,091,518
Outflow from Maintenance	- 1,275,711,645	- 1,217,724,752	1,159,737,859	- 1,101,750,966	-1,043,764,073
Incomes	10,274,681,048	9,786,000,321	9,197,517,960	8,713,446,063	8,188,265,320
Income before taxes	1,731,524,215	1,631,168,798	1,431,011,748	1,335,265,161	1,198,409,729
Tax on Income 15%	259,728,632	244,675,320	214,651,762	- 200,289,774	- 179,761,459
Nett income	1,471,795,583	1,386,493,478	1,216,359,986	1,134,975,387	1,018,648,270
NPV by 5.79%	110,223,600	81,672,242	170,329	23,634,170	- 68,587,789
IRR	6.38%	6.25%	5.79%	5.64%	5.34%
Self-Payment Norm	5.20	5.28	5.35	5.43	5.51

8.2 Lot 2

8.2.1 Location of sites in schools included in Lot 2

Lot 2 includes 4 schools, 3 in Unit of Kashar (Yzberisht), one in Administrative Unit 7. Distribution of schools included in Lot 2 are indicated in the following map :

Map 47 Location of schools included in Lot 2



8.2.2 Total surface to be seized permanently by sites of schools included in Lot 2

SITE 6/3

Map 48 Orhtophoto of the site

LOCATION : The proposed site no.**6/3,** for nine-year and secondary school is located near "Kombinati i Mishit", Yzberisht. Accessable from "3 Deshmorët" street.

TECHNICAL DATA : Site 6/3 : 9103 m2

CURRENT SITUATION OF THE SITE :

- Easy access .
- There are no secondary schools in this area
- The surrounding zone is organized and with green spaces, consisting of a suitable zone for construction of a new school.

Picture 5 Photo of site 6/3

SITE 6/6

Map 49 Orthophoto of the site

LOCATION :

The proposed site no.**6/6,** for a nine-year school is located near the Dogana round about. It is accessable from Teodor Keko street and it near Lana River.

TECHNICAL DATA : Site6/6 :4930 m2

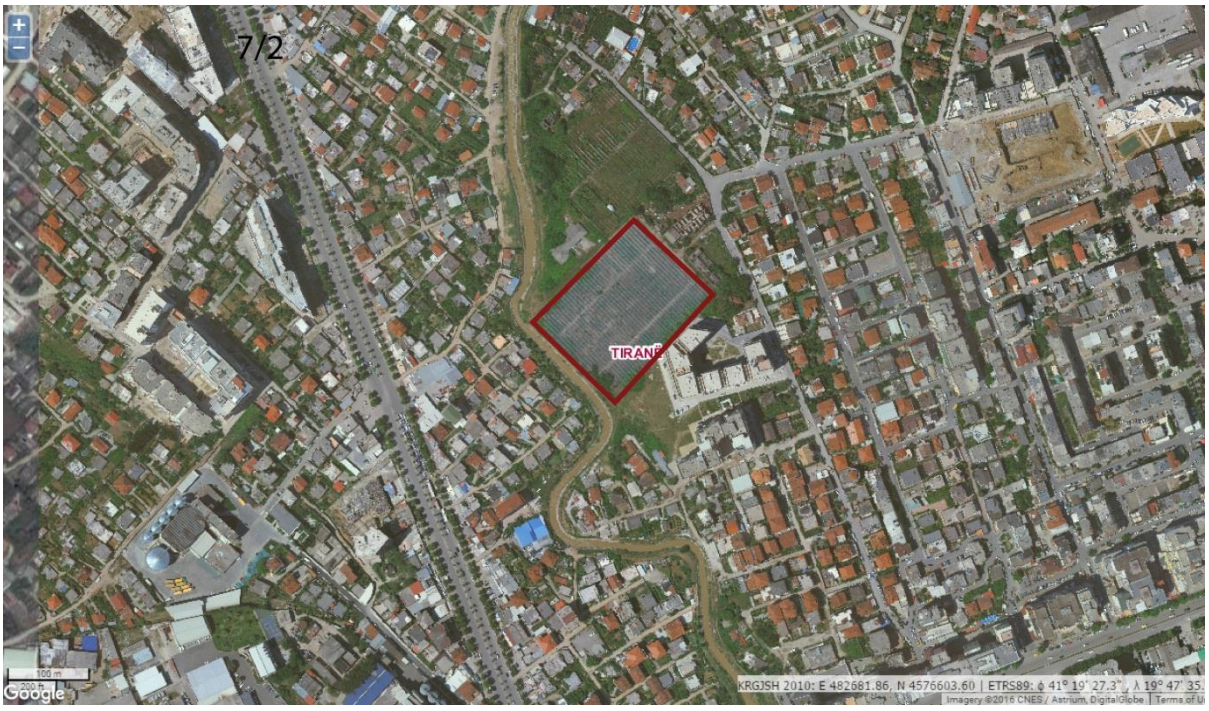
CURRENT SITUATION OF THE SITE :

- It is a zone in ownership of private subject, surrounded.
- It is located near the inhabitated zone with a a high intensity.
- Easy access from two roads .
- No secondary schools in this zone
- Road infrastructure may be problematic.

Picture 6 Photo from site 6/6

SITE 7/2

Map 50 Orthophoto of the site



LOCATION :

Proposed site no.7/2 is located near Lana River. Accessed by “Javer Malo” and “Stavri Themeli” street.

TECHNICAL DATA : Site 7/2 : 8482 m2

CURRENT SITUATION OF THE SITE :

- No high schools in this area, but there is an increase of density of population .
- Road infrastructure may be a problem

Picture 7 Photo from site 7/2

8.2.3 Legal status of sites of schools included in Lot 2

Site 6/3

Map 51 Indicative map of properties

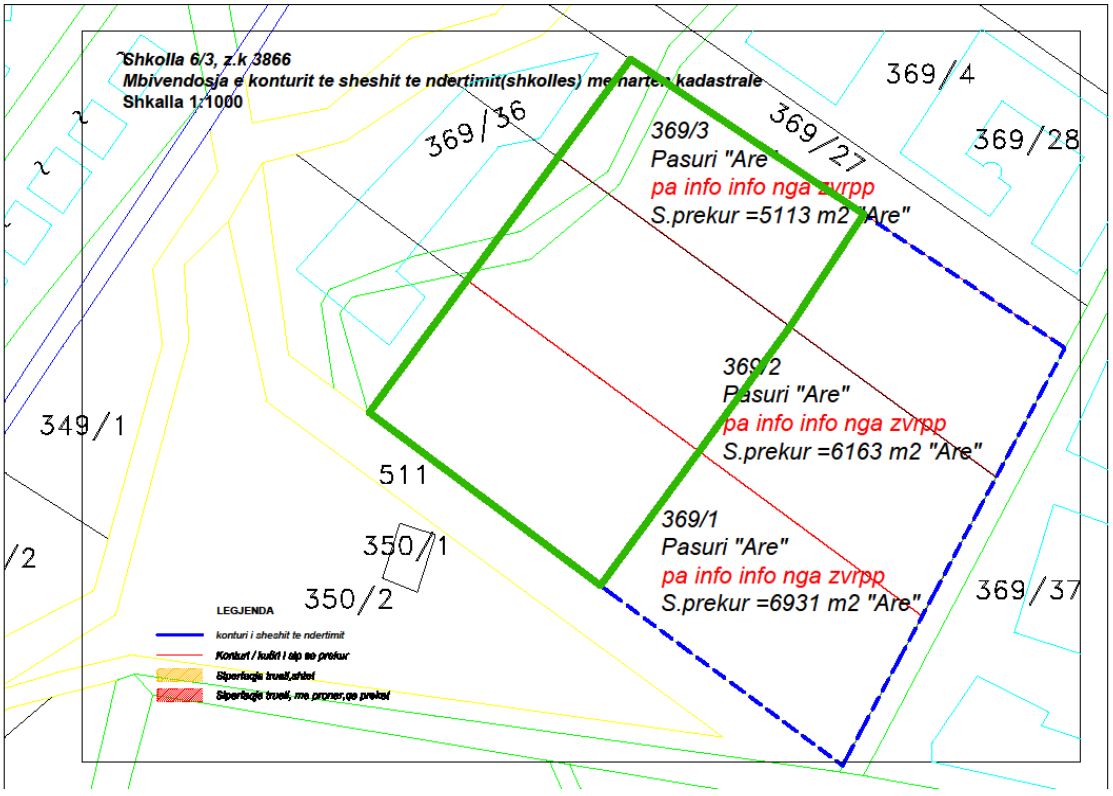


Table 76 Table with preliminary calculations of properties affect by this project

No	Name	Note in Sec. E	Cadastral Zone	No of property	Surface of affected land (m²)	Land price lek/m²	Surface of affected land (m²)	Price Obj.lek/m²	Amount in leke
1	No information	Arable land	3866	369/1	3465.50	448			1,552,544.0
2	No information	Arable land	3866	369/2	3081.50	448			1,380,512.0
3	No information	Arable land	3866	369/3	2556.50	448			1,145,312.0
					9103.50				4,078,368.0

The school to be buit in Cadastral Zone 3866 will affect a total of 9103 meter square property, composed of three properties. These three properties are arable lands. Currently, there is no information of their ownership. For the land, the calculated price is obtained from CoMD No.89, dated 03.02.2016.

Site 6/6

PPP Evaluation Commission has not managed to obtain information on the legal status of properties affected by the proposal of plot with Code 6/6 within the deadlines for drafting this feasibility study. Aiming to plan the necessary budget for completion of expropriation for this project, the Commission has assumed that the properties included in this plot consist of land and private properties and in this respect it has calculated also the expropriation costs. These costs will be reviewed with the obtaining of the complete information from Local Office for Immovable Properties Registration and certainly before the beginning of tender procedures.

Map 52- Orthophoto of the site

Table 77-Table with preliminary calculations of properties to be affected by the project

No	Name	Note in Sec. E	Cadastal zone	Property No	Surface of affected land (m²)	Land price lek/ m²	Surface of affected object (m²)	Price Obj.lek/ m²	Amount in leke
1	No information				4930	4242			20,913,060
					4930				20,913,060

Site 7/2

Map 53 Indicative map of properties

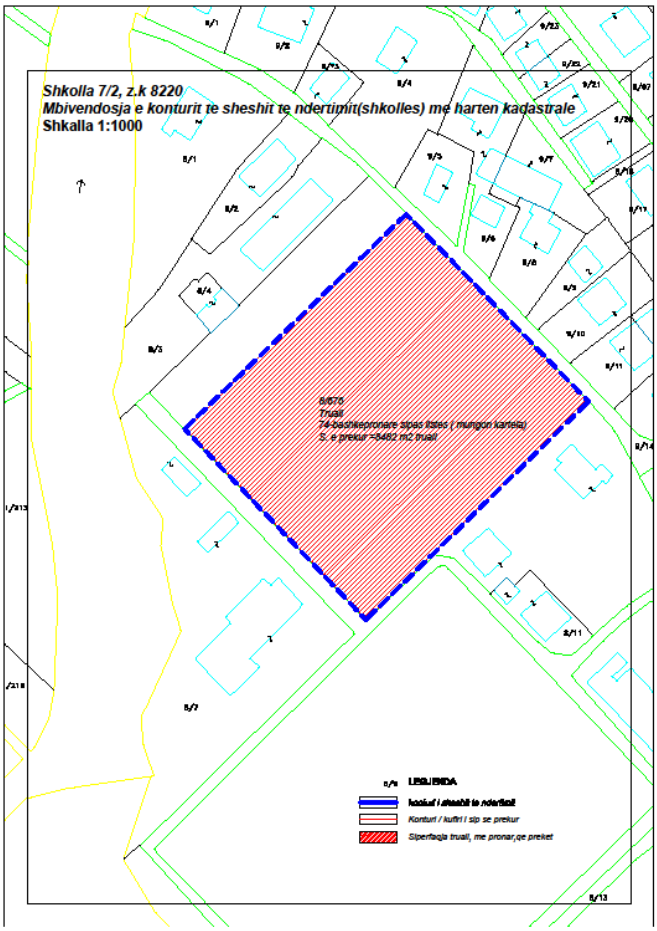


Table 78 Table with preliminary calculations of properties to be affected by the project

No	NAME	Note in Sek . E	Cadastral zone	No property	Surface of affected land (m²)	Land price lek/m²	Surface of the affected property (m²)	Price Obj.lek/ m²	Amount in leke
1	74 Co-owners	List missing	8220	8/676	8482.00	30783			261,101,406.0
					8482.00				261,101,406.0

School to be built in cadastral zone 8220 will affect a total of 8482 meter square property, composed of one property no. 8/676, owned by co-owners. For the land, the calculated price is obtained from CoMD No.89, dated 03.02.2016.

8.2.4. Typology of schools included in lot 2

Lot 2 envisages the construction of 4 new schools, three in Administrative Unit of Kashar and one in Administrative Unit 7. In details, in AU Kashar is envisaged the construction of two basic education cycle schools of type 2 and one high school type 4. Whereas in AU 7 is envisaged the construction of one type 4 school, i.e. lower middle cycle. The following table indicates these data:

Table 79 – Schools typology

Type	Location	Cycle	No classes	St/class	No st. total	M2/students	Total surface
Type1	Urban	Basic education	20	30	600	8.23	4938
Type2	Urban	Basic education	30	30	900	7.32	6588
Type3	Rural	Basic education	20	24	480	8.42	4041.6
Type4	Urban	Higher middle	21	30	630	6.35	4000.5

8.2.5. ECONOMIC AND FINANCIAL ANALYSIS FOR LOT 2

2. Economic and financial analysis

Economic and financial analysis of this feasibility study, in line with Council of Ministers Decision no. 575, dated 10.07.2013, "On approval of rules for assessment and granting for concession/private-public partnership", article 7, mainly focuses on determination of value for money of the project, as well as on completion of an evaluation of the investment in total, operative costs and maintenance, as well as any other income expected to be generated during the duration of the project.

2.1 Economic Model of the Concession / Public-Private Partnership

Law no. 125/2013, changed with law no. 88/2014, regulates the competences of contracting authorities in order to sign concessions/public-private partnerships. In this type of relations, the private partner takes the responsibility of financing, designing, building and/or re-building/ renewal the public infrastructure object, to operate and maintain the public infrastructure object built and/or rebuilt/newly renewed. Among the fields of implementation of this law is also education.[16]

Based on the data analysis, it results that to put an end to the over-crowded schools problem and two shifts learning, Tirana Municipality needs to build 17 new schools - 10 nine-year schools and seven high schools. The total cost of construction and furnitures for these schools is calculated at 7.6 billion leke. Such amount of money is financially unaffordable for Tirana Municipality, whose total annual budget is 10 billion leke, whereas investments for construction of new schools in the course of last years has been not more than 500 million leke.

In this respect, in order to settle this problem, Tirana Municipality must implement innovative methods of procurement and financing of the proposed project. To guarantee the realization possibility of the schools construction project, it was chosen a more innovative and cost-efficient approach, combining the designing, financing, construction and maintenance in one and only procurement contract. Due to the considerable dimensions of this project, this methodology will not only offer facilitations during the development process, but will provide more sustainability after its completion.

[16] Article 4, item dh), Law 125/2013

In the framework of the "Design, Finance, Build and Maintain" (DFBM) model as internationally known "Design, Build, Finance & Operate (DBFO)", **c**ontractors take the responsibility of designing, building, financing and maintaining an object for entire duration of the contract. The contractor who may be one company or a consortium is responsbile for designing, financing, construction and maintenance of the object for a determined period of time, which is proposed to be 7 years. The payment after the completion of the object is dictated based on completion of some determined performance standards regarding the physical condition of the buildings, capacity, quality, etc. This model which goes beyond the designing and construction phase, naturally encourages the designer/builder to provide since the beginning a qualitative construction plan in order to have less costs during the maintenance phase, as long as the responsibility belongs to their consortium. Likewise, integration of all project´s contract in one reduces different transactional costs and boosts project management efficiency.

This PPP model has been widely used for construction of major infrastructure projects, such as construction of highways, hydro power stations, wastes management plants, etc, because the dimensions of such projects required considerable funds, efficient organization of capital and human resources, high designing and construction quality, maximal security and constant maintenance. In this respect, such models have been considered successful for development of projects that guarantee their realization and efficiency of the investment. Nevertheless, the use of this PPP form is not limited only in major public infrastructure works mentioned above. In many OECD countries, mainly in the United Kingdom, this methodology is used also for public service projects, such as construction of new schools.

Following are some examples from different countries that have successfully implemented this model for projects of educational infrastructure:

C**anada**[17]**:** "Alberta Schools Alternative Procurement" Program. In 2007, Alberta region in Canada declared the first stage of the program which envisages the construction of 18 new school buildings (kindergartens and nine-year schools), which were completed in 2010. After the completion of works, duration of the contract will continue with the maintenance and it estimated at about 30 years. The second phase of the program envisaged the construction of other 10 nine-year schools according to the same model and 4 high schools through the simple model of Designing-Constructing contract, which were completed in 2013.

Greece [18] : "Macedonia Schools and Attica Schools" Program. With the use of DBFM mechanism, private operators designed construction of 51 schools with a total amount of about 269 million Euro and 25 year contracts.

[17] "Flexible and alternative approaches to providing school infrastructure in Alberta, Canada" – OECD, 2010

[18] "The role and impact of public-private partnerships in education", pg. 82 – World Bank, March 2009 .http://www.ungei.org/resources/files/Role_Impact_PPP_Education.pdf

United Kingdom[19]: "Building Schools for the future" Program. This program is a long-term investments program, which is contributing in the construction of a considerable number of schools in the entire territory of UK. Majority of schools has been built through the Design-Build-Finance-Maintenance scheme, but in this case often has been included also the element of school management by a private subject of a determined period. In general, total duration of the contract is estimated up to 30 years. The private consortium is regularly paid by public funds based on its performance during the contract period. If the consortium does not achieve the required performance, the payment is reduced. At the end of the contract period, school is given back to government.

New Zealand [20]: The project of New Zealand Ministry of Education for construction of two schools in Hobsonville, Auckland. This project envisages the construction of a new lower cycle school and one lower middle cycle school in the suburb region of Hobsonville in Auckland city. The private sector is partly responsible for designing, building and financing of the objects, together with their constant maintenance and management of common services. Construction of these schools has been successfully completed in 2014.

In this aspect, the project for construction of new schools in Tirana needs the application of the same approach for improvement of education service in the entire territory of the Municipality. Big number of schools that will be built, financial limitations, short period for implementation of the project, as well as need to guarantee the maximal security of buildings point to the necessity of establishment of an efficient and successful public private partnership.

1.9 Main assumptions

In the framework of financial and economic analysis effects of this feasibility study, were made the following assumptions:

- Concessionary will cope with its incomes the entire investment for construction of education objects and their functioning, whereas Tirana Municipality will face with its funds the expropriation of private lands to be used for this purpose.
- Educational objects will be built and functional at maximum 18 months from the signing of the construct.
- After the construction and functioning of schools, concessionary will be accountable for administration and maintenance of the objects for a 7 year period and for every problematic regarding risks of assets for these period.

[19] Ibidem (i.e. extracted from same WB document in the above-mentioned reference and same page)
[20] "Mayoral Position Paper on Public Private Partnerships" – Ernst and Young, November 2013.

- After the construction of objects, Tirana Municipality will pay the concessionary a certain annual sum until the full payment of the invested amount. Incomes for this payments will be provided from the annual incomes of Temporary Tax on Education Infrastructure and conditioned transfer from Ministry of Finance.

1.10 Costs analysis

Based on technical, it has come to be conclusion that in total will be built 17 schools: 10 nine-year schools and 7 high schools. The new schools will be designed and built according to models in line with standards specified by Ministry of Education and Sports through "Guideline for School Buildings Design". The school models offer the opportunity to fully meet the needs for pre-university education classes, respecting legal and technical requirements for definition of parallel classes according to each teaching cycle. In the same time, for nine-year schools are envisaged also venues for pre-school education, as part of the nine-year education institution. Referring to above-mentioned standards, there exist 4 main types of schools with the following operational data:

Type 1 of schools includes 20 classes per pre-school and school students with a construction surface of about 4,938 m2. Likewise, this schools will included a kindergarten of about 4 classes with a surface of about 874 m2. In total, the construction surface for this type of school is 5,812 m2. **Type 2** of schools is nine-year education with 30 classes for pre-school and school students with a construction surface of about 6,588 m2. Likewise, this school will include a kindergarten with 6 classes with a surface of about 1,310 m2. In total, the construction surface for this type of school is 7,898 m2. **Type 3** of schools is higher middle for rural zones with 20 classes with a construction surface of about 4,041 m2. **Type 4** of schools consists of higher middle schools for urban zones with 21 classes and a construction surface of about 4001 m2.

According to quantitative analysis carried out and explained above, there are necessary a total of 17 schools, 2 out of them belonging to Type 1, 7 schools of Type 2, 1 school of Type 3 and 7 high schools of Type 4. Respectively these schools will be built according to following administrative units and data:

Table 80 Detailed data for each school of Lot 2

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkolli	nxënës për klasë	Nxënës për shkolle	Sipërfaqe totale shkolla	Klasa kopësh ti	Nxënës për klasë kopështi	nxënës për kopësht	Sipërfaqe totale kopësht	Siperfaqe totale ndertimi
1	NJA 07	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
2	NJA Kasha	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
3	NJA Kasha	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
4	NJA Kasha	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
Totali				102		3,060	21,177	12	48	288	2,620	23,797

Summarizing according to schools typology, in total, we have the following operational data :

Table 104 Summarized data for proposed schools according to typology for lot 2

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Nr nxënës për klasë	Nxënës për shkollë	Nr klasa kopështi për shkollë	Nr nxënës për klasë kopështi	Nxënës për kopësht	Sip ndërtimi shkolla	Sip ndërtimi kopështe	Tot Sipërfaqe ndërtimi	Total Nxënës në shkolla	Total Nxënës në Kopështe	Nr Total i nxënësve
Tipi 2	2	30	30	900	12	24	144	13,176	2,620	15,796	1,800	288	2,088
Tipi 4	2	21	30	630	-	-	-	8,001	-	8,001	1,260	-	1,260
Grand To	**4**	**51**				**24**	**144**	**21,177**	**2,620**	**23,797**	**3,060**	**288**	**3,348**

For a better analysis of value for money of the project, we have grouped the expenses in four main categories, based on accounting standards and requirements of CoMD no. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership", article 7, section 3-6:

Direct costs of investments

Direct costs of maintenance

Due to the effects of the following analysis, all the prices and values will be without VAT, unless is specified otherwise.

1.10.1 Direct investment costs

6.3.3. Direct Costs of Investments

During the analysis and in line with above-mentioned CoMD, there were identified the following direct costs of investments:

17. Costs of Land Expropriation ;
18. Construction Cost ;
19. Cost of Study and Designing ;
20. Supervision Cost ;
21. Cost of Technical Control;
22. Technical Revision ;
23. Cost for Furniture and Equipment;
24. Cost of lab devices.

1.10.1.1 Land expropriation costs

Table 115 Summarized table of expropriations

Nr rendor i tabeles	Adresa	Tipi	Sheshi	Shpronesimi ne Vlere	Siperfaqje ne m2 te shpronesuar	Cmimi mesatar per m2
1	NJA 07	Tipi 4	7/2	261,101,406	8,482	30,783
2	NJA Kashar	Tipi 2	6/6	20,913,060	4,930	4,242
3	NJA Kashar	Tipi 2	6/3	2,039,184	4,552	448
4	NJA Kashar	Tipi 4	6/3	2,039,184	4,552	448
Grand Total				**286,092,834**	**22,516**	**12,706**

According to determination of trace where these schools will be built, it results that will be expropriated a total of **12,706 m2**of private properties, which according to the calculations are estimated at an expropriation value of **286,092,834** leke. On the other side, the state-owned land will be subject of respective procedures in order to take the respective properties under the administration.

With the approval of CoMD in this respect and completion of financial and legal documents in line with the CoMD and normative acts in force, every expropriated subject will be paid by Tirana Municipality through a fund determined for this purpose.

1.10.1.2 Construction costs

Based on the report obtained from General Directorate of Public Works No. Prot. 21407/2, dated 09.08.2016, costs for schools construction is 46,331.67 leke/m2, whereas the kindergartens costs are 54,380.83 leke/m2. From the combination of this data with the total construction surface for each type of school, it results that :

- The construction value of a Type 1 school is 228,785,770 leke and to this amount is added also the construction of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 1 school, including the kindergarten venue is 276,314,618 leke.
- The construction value of a Type 2 is 305,233,020 leke and to this amount is added the construction cost of a kindergarten of about 71,238,892 leke. In total, the general cost of the construction of a Type 2 school, including the kindergarten venue is 376,471,912 leke.
- The construction value of a Type 3 schools is 187,207,732 leke and to this amount is added the construction cost of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 3 schools, including the venues of a kindergarten is 234,736,581 lekë.
- The construction value of a Type 4 school is 185,349,833 leke and these schools do not include kindergarten premises.

Table 81 Summarizing table of construction costs

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Klasa kopësh ti për shkollë	Sip ndërtim i shkolla	Sip ndërtim i kopështe	Tot Sipërfaqe ndërtimi	Cmimi i ndertimit te shkollave lek/m2	Cmimi i ndertimit te kopështeve lek/m2	Kosto ndertimi të një shkolle	Kosto e ndërtimit të një kopështi	kosto e ndërtimit të një shkolle + kopesht	Kosto e përgjithshme e ndertimit
Tipi 2	2	30	6	13,176	2,620	15,796	46,332	54,381	305,233,020	71,238,892	376,471,912	752,943,823
Tipi 4	2	21	-	8,001	-	8,001	46,332	54,381	185,349,833	-	185,349,833	370,699,665
Grand To	**4**	**51**	**6**	**21,177**	**2,620**	**23,797**	**92,663**	**108,762**	**490,582,853**	**71,238,892**	**561,821,744**	**1,123,643,488**

In total, there will be built **2 Type 2 schools** with a construction cost of 376,471,912 leke per school, **2 Type 4 schools** with a construction cost of 185,349,833 leke per school. As a result, the total construction costs for lot 2 amounts to **1,123,643,488** leke. This cost will be covered by the concessionary.

1.10.1.3 Other direct investment costs

Based on the report from Public Works General Directorate, in Document No. Prot. 21407/2, date 09.08.2016, other direct investment costs are :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Tax of impact in infrastructure

.

Taking into account the data analyzed in this chapter on costs, it results that the direct investment const is as following :

Table 82 Direct investment costsfor lot 2

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
Tipi 2	2	15,796	20,220,768	8,355,808	301,178	501,350	100,000	60,000
Tipi 4	2	8,001	10,691,738	4,364,479	153,710	369,692	100,000	60,000
Grand To	**4**	**23,797**	**30,912,506**	**12,720,288**	**454,888**	**871,042**	**200,000**	**120,000**

Tax on impact in infrastructure for public works is 0.

1.10.1.4 Furniture costs

In order to make schools functional, it is necessary to provide necessary IT equipment and laboratories. Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 "On Pre-university education system in the Republic of Albania", changed, for which Ministry of Education and Sports has prepared the Guideline "On designing of school buildings" (Norms and Standards).
Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.
For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 83 Furniture cost according to typology

Type of schools	No classes	st/class	No st. total	Cost/student	Total cost
Type 1	20	30	600	24,167	14,500,000
Type 2	30	30	900	24,167	21,750,000
Type 3	20	24	480	24,167	11,600,000
Type 4	21	30	630	24,167	15,225,000

The furniture cost for basic education have been included three levels which envisage the following types :

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.
Costs for furniture of kindergartens per children is about 27.916 lek without VAT
This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 119 –Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.000

Regarding costs for lab equipements, we referred to the purchase contract "Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools" realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 120 Costs for lab equipment

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602
4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

According to schools typology defined based on the designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is determined the quantity of labs for each type, we have the following table :

Table 121 Costs for lab equipment according to schools typology

No	Tyes of schools	Cost without VAT
1	**Basic education (Type 1)**	6,095,850
2	**Basic education (Type 2)**	7,279,450
3	**Basic education (Type 3)**	5,743,950
4	**Higher Middle Education (Type 4)**	13,983,067

According to the analysis of all the above-mentioned data, it result that the total cost of furniture and lab equipments of 4 schools is **124,515,033** leke with VAT, according to the following table:

Table 84 Furniture Costs and laboratory equipments for schools of Lot 2

Tipi	Nr i shkollave sipas tipit	Kosto e mobilimit te shkollave	Kosto e mobilimit të kopështeve	Total Kosto Mobilimi	Kosto Laboratori	Total kosto pajisje, mobilje dhe orendi
Tipi 2	2	43,500,000	8,040,000	51,540,000	14,558,900	66,098,900
Tipi 4	2	30,450,000	-	30,450,000	27,966,133	58,416,133
Grand To	**4**	**73,950,000**	**8,040,000**	**81,990,000**	**42,525,033**	**124,515,033**

1.10.1.5 Direct investment cost

In conclusion, the direct investment cost of this project is estimated at **1,579,530,079 lekë**. About **286,092,834** leke out of them are calculated as necessary funds for expropriation, which will be covered by Tirana Municipality. Whereas, the total cost of the project that will be covered by the concessionary is **1,293,437,245** leke, where the construction cost is **1,123,643,488** leke without VAT, Costs of the Designing, Technical Revision, Supervision, Technical Control, furniture and laboratories is **169,793,757** leke without VAT. In details, the calculated categories are as following :

Table 123 Direct Investment costs for lot 2

Viti	Pershkrimi	Grand total
A.	**Kostot Direkte te Investimit**	**1,579,530,079**
A.1	**Kostot e Truallit**	**286,092,834**
A.2	Kostot e Projektimit	30,912,506
A.3	- Ndertim + instalime	1,123,643,488
A.4	- Oponenca teknike	871,042
A.5	- Takse Infrastrukture	-
A.6	- Leje mjedisore	120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000
A.8	- Kosto Supervizimi	12,720,288
A.9	- Kosto Kolaudimi	454,888
A.10	- Mobiljet dhe Orendi	81,990,000
A.11	- Investime IT&T dhe Labs	42,525,033

1.10.2 Direct investment costs

Duke kryer përllogaritjet përkatëse kosto mesatare vjetore për mirëmbajtjen e përgjithshme për secilin tip shkollash është 12,663,198 lekë për një shkollë të tipit 2 dhe 7,386,865 për një shkollë të tipit 4. Kosto totale e mirëmbajtjes për të gjitha shkollat për **Loti 2** është **40,100,126** lekë në vit. Kosto vjetore e mirëmbajtjes për efekt llogaritjesh fillon nga viti 2018 dhe në vijim deri në përfundim të periudhës së PPP. Për më shumë detaje, shih tabelat më poshtë.

Based on calculations carried out from General Directorate No. 3 of City's Workers, annual maintenance cost per class is 422,107 leke with VAT or 351,755 leke without VAT. Making respective calculations, the annual cost for the general maintenance for each type of school is 12,663,198 leke per one school of Type 2, about 7,386,865 leke per one school of type 4. The total maintenance cost for all schools in **Lot 2** is **40,100,126** lekë në vit.The annual cost of maintenance for calculation effects starts from 2018 and pursuant until the completion of PPP period. For more details, see the following tables:

Table 124 Annual cost of maintenance for schools of lot 2

Tipi i shkollave	Nr i shkollave	Kosto e mirëmbajtjes për shkollë	Kosto e përgjithshme e mirëmbatjes
Tipi 2	2	12,663,198	25,326,396
Tipi 4	2	7,386,865	14,773,731
Grand Total	**4**	**10,025,032**	**40,100,126**

In total, for 7 years, the general maintenance cost will be **280,700,882** leke without VAT. About **184,818,550** leke without VAT out of them is the maintenance costs of assets and **95,882,332** leke without VAT is the cost of maintenance staff. The following table is the analysis of categories of maintenance expenses for each school in one year, without VAT:

Table 85 7 year maintenance cost for Lot 2

B.	**Kostot Direkte të Mirëmbajtjes**	**280,700,882**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**184,818,550**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	42,733,348
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve	107,974,566
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi	13,517,098
B.1.4	- Mirëmbajtje IT&T (HD+SW)	20,593,538
B.2	**Staf Mirembajtje**	**95,882,332**
B.2.1	Staf Roje	14,104,165
B.2.2	Staf Sanitare	60,866,302
B.2.3	Staf Sekretare	12,191,172

Table 86 Detailed costs of maintenance for Lot 2

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	Lyerje per klase	Riparim suvatim + hidroizolim per klase	Riparime dhe mirembajtje e Nderteses	Riparime Orendi shkollore	Riparime Pajisje PC	Materiale Pastrimi	Lëndë djegëse për ngrohje dhe ujë të ngrohtë	Mirembajtje kondicionim, impiante uji dhe MNZSH	Sherbim roje	Sherbim pastrimi	Sherbim sekretarie	Total kosto mirembajtjeje
1	NJA 07	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
2	NJA Kasha	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
3	NJA Kasha	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
4	NJA Kasha	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
Totali i Mirembajtjes				**114**	**2,609,584**	**2,676,498**	**818,682**	**1,931,014**	**2,941,934**	**965,324**	**9,531,872**	**4,927,742**	**3,260,694**	**8,695,186**	**1,741,596**	**40,100,126**

1.1 Analysis of PPP incomes

1.11.1. Tariff for the use of schools

Tariff for use of schools (hereinafter "Tariff") will be calculated in such way so that could cover the costs of concessionary and guarantee a minimal income margin for the concessionary in order to make this PPP attractive and the best economic solution compared to other potential scenario. The tariff is paid for the entire maintenance and administration period of schools by concessionary, i.e. for 7 years. This tariff is paid to every year by Tirana Municipality through financing resources detailed as following. This scheme provides for the construction of 17 schools in a record time, solving the two-shifts teaching and over-crowded classes, but as long as all the risks for maintenance and careful use of the asset will be under the responsibility of the concessionary and related to the payments, this will enable qualitative constructions in the interest of the community.

As long as the direct investment costs, i.e. construction and functioning of schools is calculated based on interim payment reports, which include the income margin of the contractor, on this category will not be calculated the additional income margin. But on the other side, as long as the invested values of the concessionary in this respect will be covered in a seven-year period, he must be minimally reimbursed for the value in time of the money, as well as for the normal and extraordinary maintenance part for this period.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period [21], respectively the results of seven year obligations from 2015 until 15.09.2016.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period [22], respectively the results of seven year obligations from 2015 until 15.09.2016.

[21] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016
[22] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016

Table 87 Income Margin

ISIN	Dt.Ankandi	Ankandi	Muaj	Datë Emetim	Datë Maturim	Shuma e shpallur (fillestare)	Shuma e shpallur (nd. strukture)	Shuma e kërkuar	Shuma e pranuar	Prorata Konkurues	Prorata Jo Konkuruese	Yieldi Uniform i Pranuar
AL0017NF7Y23	13.09.2016	*7vjeçar/7years(fix)*	*Shtator*	15.09.2016	15.09.2023	*3,000,000*		*2,309,000*	*2,309,000*			*4.89%*
AL0016NF7Y23	01.06.2016	*7vjeçar/7years(fix)Rihapje*	*Qershor*	03.06.2016	16.03.2023	*2,000,000*		*3,141,400*	*2,000,000*	*4.40%*		*4.00%*
AL0016NF7Y23	11.03.2016	*7vjeçar/7years(fix)*	*Mars*	16.03.2016	16.03.2023	*3,000,000*		*8,247,000*	*2,999,900*	*76.48%*		*4.90%*
AL0015NF7Y22	14.12.2015	*7vjeçar-fiks*	*Dhjetor*	16.12.2015	16.12.2022	*2,500,000*		*5,288,600*	*2,500,000*	*67.70%*	*100.00%*	*6.79%*
AL0014NF7Y22	14.09.2015	*7vjeçar-fiks*	*Shtator*	16.09.2015	16.09.2022	*1,000,000*		*1,430,600*	*1,000,000*	*100.00%*	*100.00%*	*7.78%*
AL0013NF7Y22	12.06.2015	*7vjeçar-fiks*	*Qershor*	16.06.2015	16.06.2022	*3,000,000*		*2,953,500*	*2,953,500*	*100.00%*	*100.00%*	*7.80%*
AL0012NF7Y22	12.03.2015	*7vjeçar-fiks*	*Mars*	16.03.2015	16.03.2022	*2,500,000*		*2,815,800*	*2,500,000*	*80.98%*	*77.92%*	*7.81%*
										Yieldi Mesatar i pranuar		**6.28%**

The income margin will be object of bidding procedures of competitors in this PPP, but in the mean time, it is necessary to understand the general value of this PPP. The income margin will be calculated for the remaining value of the direct investment every year and on annual maintenance costs. Thus, the financing scheme is attractive for potential competitors and total cost of the project is not higher than the traditional financing methods.

Based on the calculations, annual tariff to be paid to the concenssionary with a margin of about 6.28% will be as following :

Table 88 Annual tariff to be paid to the concenssionary for Lot 2

A	B	C	D	E	F	G	H	I	J	K	L	M
Nr rendor	Viti	Kosto Direkte e Investimit ne Fillim të Periudhës (pa TVSH) (C3=F2)	marzhi i fitimit	Shlyerja vjetore për Koston Direkte të Investimit (C2/B8)	Vlera e Mbetur e Kostos Direkte te Investimit (C-E)	Marzhi i fitimit mbi koston Direkte të investimit (C*D)	pagesa vjetore për koston direkte të investimit Pa TVSH (E+G)	kosto vjetore mirembajtjeje Pa TVSH	Marzhi i fitimit mbi Mirembajtjen (D*I)	pagesa vjetore për koston direkte të investimit Pa TVSH (I+J)	Total Marzhi i Fitimit	Tarifa Vjetore Pa TVSH
1	0	1,293,437,245										
2	1	1,293,437,245	6.28%	184,776,749	1,108,660,496	81,227,859	266,004,608	40,100,126	2,518,288	42,618,414	83,746,147	**308,623,022**
3	2	1,108,660,496	6.28%	184,776,749	923,883,747	69,623,879	254,400,628	40,100,126	2,518,288	42,618,414	72,142,167	**297,019,042**
4	3	923,883,747	6.28%	184,776,749	739,106,997	58,019,899	242,796,649	40,100,126	2,518,288	42,618,414	60,538,187	**285,415,063**
5	4	739,106,997	6.28%	184,776,749	554,330,248	46,415,919	231,192,669	40,100,126	2,518,288	42,618,414	48,934,207	**273,811,083**
6	5	554,330,248	6.28%	184,776,749	369,553,499	34,811,940	219,588,689	40,100,126	2,518,288	42,618,414	37,330,227	**262,207,103**
7	6	369,553,499	6.28%	184,776,749	184,776,749	23,207,960	207,984,709	40,100,126	2,518,288	42,618,414	25,726,248	**250,603,123**
8	7	184,776,749	6.28%	184,776,749	0	11,603,980	196,380,729	40,100,126	2,518,288	42,618,414	14,122,268	**238,999,143**
Grand total				**1,293,437,245**		**324,911,436**	**1,618,348,681**	**280,700,882**	**17,628,015**	**298,328,897**	**342,539,451**	**1,916,677,579**

To guarantee the economic success of the scheme, the concessionary will be paid with decreasing annual installments. This payment method will help the concessionary to avoid financial difficulties during the entire period of the duration of the concession period contract. Therefore, in the first year the installment will be 1,288,021,874 leke and each year will be decreasing until reaching 996,983,257 leke in the last year.

Table 89 Amount of annual installment

Nr rendor	Viti	Tarifa Vjetore Pa TVSH
1	0	
2	1	**308,623,022**
3	2	**297,019,042**
4	3	**285,415,063**
5	4	**273,811,083**
6	5	**262,207,103**
7	6	**250,603,123**
8	7	**238,999,143**
Grand total		**1,916,677,579**

1.11.2 Source of financing

The general amount of this project for **Lot 2** is **2,202,770,413** leke out of them, **286,092,834** are for the expropriations, which will be paid directly by Tirana Municipality to the expropriated and **1,916,677,579** leke is the amout of concenssion:

Table 90 Annual amount of project for Lot 2

Nr	Vlera e Pergjithshme e Projektit	Çmimi	Sasia	Vlera totale
1	**Kostoja e përgjithshme e shpronësimit**	**286,092,834**	**1**	**286,092,834**
2	**Kosto direkte e Investimit pa TVSH**	**1,293,437,245**	**1**	**1,293,437,245**
2.1	Kosto direkte e investimit te koncesionarit Pa TVSH	1,293,437,245	1	1,293,437,245
3	**Kosto e mirembajtjes pa TVSH**	**40,100,126**	**7**	**280,700,882**
3.1	Kosto e mirembajtjes te koncesionarit Pa TVSH	40,100,126	7	280,700,882
4	**Marzhi i Fitimit**	**342,539,451**	**1**	**342,539,451**
4.1	Marzhi i Fitimit të Koncensionarit	342,539,451	1	342,539,451
	Total i pergjithshëm i kostos(1+2+3+4+5)			**2,202,770,413**

Table 91 Amount to be covered by municipality and concenssionary

Nga të Cilat:	Bashkia	Koncesionari	Totali
1. Vlera e Përgjithshme e Projektit Pa TVSH	286,092,834	1,916,677,579	2,202,770,413
Totali	**286,092,834**	**1,916,677,579**	**2,202,770,413**

These expenses will be covered by incomes of the Municipality, Conditioned Grants of Ministry of Finance for project.

Incomes of Tirana Municipality for this project will be generated from the Interim Tax on Education Infrastructure, which is applied upon decision of Municipal Council No. 59, dated 30.12.2015, "On taxes and local tariffs system in the city of Tirana".

Table 132 Forecast of incomes from Interim Tax on Education Infrastructure

Description	PLAN YEAR 2016	FORECAST 2017	FORECAST 2018
Interim Tax on Education Infrastructure	**870 000 000**	**940 000 000**	**1 000 000 000**
Families	320 000 000	340 000 000	350 000 000
Trade subject	550 000 000	600 000 000	650 000 000

Incomes from Interim Tax on Education Infrastructure are estimated at 870 million leke in 2016, whereas these incomes are envisaged to increase to 940 million leke in 2017 and 1 billion leke in 2018. This interim tax will be applied for 7 years and for 2019-2022 period, the annual incomes are projected to amount to 1 billion leke. Incomes from specific transfer from Ministry of

Finance will be 700 million lek per year. Therefore, the fund at the disposal of Tirana Municipality for completion of periodical payments is estimated at 1 billion and 700 million leke per year.

1.12Financial Analysis

Table 92 Summarizing table of costs and incomes of the project

Viti	Pershkrimi	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
A.	**Kostot Direkte te Investimit**	**1,579,530,079**	-	-	-	-	-	-	-	**1,579,530,079**
A.1	**Kostot e Truallit**	**286,092,834**								**286,092,834**
A.2	Kostot e Projektimit	30,912,506								30,912,506
A.3	- Ndertim + instalime	1,123,643,488	-							1,123,643,488
A.4	- Oponenca teknike	871,042								871,042
A.5	- Takse Infrastrukture									-
A.6	- Leje mjedisore	120,000								120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000								200,000
A.8	- Kosto Supervizimi	12,720,288								12,720,288
A.9	- Kosto Kolaudimi	454,888								454,888
A.10	- Mobiljet dhe Orendi	81,990,000	-	-	-	-	-	-	-	81,990,000
A.11	- Investime IT&T dhe Labs	42,525,033								42,525,033
B.	**Kostot Direkte të Mirëmbajtjes**	**-**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**280,700,882**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**-**	**26,402,650**	**26,402,650**	**26,402,650**	**26,402,650**	**26,402,650**	**26,402,650**	**26,402,650**	**184,818,550**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	-	6,104,764	6,104,764	6,104,764	6,104,764	6,104,764	6,104,764	6,104,764	42,733,348
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve		15,424,938	15,424,938	15,424,938	15,424,938	15,424,938	15,424,938	15,424,938	107,974,566
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi		1,931,014	1,931,014	1,931,014	1,931,014	1,931,014	1,931,014	1,931,014	13,517,098
B.1.4	- Mirëmbajtje IT&T (HD+SW)		2,941,934	2,941,934	2,941,934	2,941,934	2,941,934	2,941,934	2,941,934	20,593,538
B.2	**Staf Mirembajtje**	**-**	**13,697,476**	**13,697,476**	**13,697,476**	**13,697,476**	**13,697,476**	**13,697,476**	**13,697,476**	**95,882,332**
B.2.1	Staf Roje		3,260,694	2,717,245	2,264,371	1,886,976	1,572,480	1,310,400	1,092,000	14,104,165
B.2.2	Staf Sanitare		8,695,186	8,695,186	8,695,186	8,695,186	8,695,186	8,695,186	8,695,186	60,866,302
B.2.3	Staf Sekretare		1,741,596	1,741,596	1,741,596	1,741,596	1,741,596	1,741,596	1,741,596	12,191,172
A+B	**Totali i Kostove (A+B+C)**	**1,579,530,079**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**40,100,126**	**1,860,230,961**

C.	**Të Adhurat**	**286,092,834**	**308,623,022**	**297,019,042**	**285,415,063**	**273,811,083**	**262,207,103**	**250,603,123**	**238,999,143**	**2,202,770,413**
C.1	Likujdimet e shpronesimeve	286,092,834								**286,092,834**
C.2	Tarifa e Shfrytezimit pa TVSH		308,623,022	297,019,042	285,415,063	273,811,083	262,207,103	250,603,123	238,999,143	**1,916,677,579**
D	**Fitimi (humbja)**	(1,293,437,245)	268,522,896	256,918,916	245,314,937	233,710,957	222,106,977	210,502,997	198,899,017	**342,539,451**
E	**Fitimi (humbja) progresive**	(1,293,437,245)	(1,024,914,349)	(767,995,433)	(522,680,496)	(288,969,539)	(66,862,563)	143,640,434	342,539,451	**342,539,451**
F	**15% Tatim fitim**	0	0	0	0	0	0	(21,546,065)	(29,834,853)	**(51,380,918)**

Table 93 Cashflow of the project

Fluksi i Arkës									
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Flukse dalese nga Investimet	-1,579,530,079	-	-	-	-	-	-	-	-1,579,530,079
Flukse dalese nga Mirëmbajtja	-	-40,100,126	-40,100,126	-40,100,126	-40,100,126	-40,100,126	-40,100,126	-40,100,126	-280,700,882
Flukse dalese nga Taksat	-	-	-	-	-	-	-21,546,065	-29,834,853	-51,380,918
Totali i flukseve dalese	**-1,579,530,079**	**-40,100,126**	**-40,100,126**	**-40,100,126**	**-40,100,126**	**-40,100,126**	**-61,646,191**	**-69,934,979**	**-1,911,611,879**
Flukse hyrese nga Operimet	**286,092,834**	**308,623,022**	**297,019,042**	**285,415,063**	**273,811,083**	**262,207,103**	**250,603,123**	**238,999,143**	**2,202,770,413**
Gjendja e Arkes ne fund te periudhes	**-1,293,437,245**	**268,522,896**	**256,918,916**	**245,314,937**	**233,710,957**	**222,106,977**	**188,956,932**	**169,064,165**	**291,158,534**
Gjendja e arkes progresive	**-1,293,437,245**	**-1,024,914,349**	**-767,995,433**	**-522,680,496**	**-288,969,539**	**-66,862,563**	**122,094,369**	**291,158,534**	**291,158,534**

1.13 Economic Profitability of the Project

1.13.1 NPV (Net Present Value)

NPV, as standard method for assessment of long-term projects through analysis of time value of money, presents the discounted amount of cashflow of the project. Every investor, when decides to undertake an investment analyzes the incomes generated by one project compared to the potential incomes of the invested money in another project. In general, these analyses are carried out taking into account the interest rate in case of the investment of the money, e.g. treasury bonds or government obligation, which have almost a zero risk.

Classical formula of NPV calculation, if the investment is made in one year, is :

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_o$$

where:

C_0 – presents the money spent for the initial investment

C_t – presents the incomes from the investment ;

t – presents duration of the project ;

r – presents the expected rate of discount .

To see the economic profitability of the project, the financial model has been tested with several potential discount rates. From this analysis, it resulted that the potential concenssionaries will be interested in this project only if their opportunity cost is lower than 5.79%. In other words, for every discount rate over 5.79% this project does not consist of any economic profitability for the concenssionary.

	NPV						
norma e skontimit e parashikuar	**5%**		**5.79%**		**6%**		**7%**
NPV	**29,884,696**	**-**	**15,136**	**-**	**7,682,796**	**-**	**42,661,484**

1.13.2 IRR (Internal Rate of Return)

IRR is a method used to measure the incomes of potential income. IRR is a discount rate that makes the nett present value (NPV) of all cashflows of a project equal to zero. According to economic theory, every project with an IRR higher than its capital cost is probitable, as a result investors will be interested to invest in it. Based on the financial analysis, the IRR of this project is estimated at 5.79%.

Table 94 Internal Rate of Return of the project

				IRR					
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Gjendja e Arkes ne fund te periudhes	**-1,176,772,556**	**244,264,887**	**233,707,556**	**223,150,225**	**212,592,894**	**202,035,563**	**171,909,712**	**153,782,766**	**264,671,046**

IRR	**5.79%**

1.13.3 Payback Period

The payback period presents the necessary time needed for the invested capital to recover the initial investment from the project incomes. In general, the payback period is calculated by dividing of the investment cost by annual incomes. Hence, as long as the annual incomes in this project consist of decreasing installments, the payback period is assessed by analyzing the cashflow to determine the latest year when this flow is negative.

Periudha e Vetëshlyerjes		
Viti i fundit i gjendjes se arkes negative		5
Gjendja e arkes kumulative ne vitin e fundit negativ	-	61,021,432
Gjendja e arkes pozitive krijuar ne vitin vijues		171,909,712
PBP (periudha e veteshlyerjes)		5.35

In this respect, the self-payment period for this project is achieved in 5.35 years. Nevertheless, taking into account that payment from Tirana Municipality will be annual, then the self-payment period will not be 5.35 years, but 6 years.

1.13.4 **Financial compatibility**

According to CoMD no. 575, dated 10.07.2013, article 7, item 10, the financial compatibility of a project "indicates whether the project seems to be able to attract guarantees/financial support and qualitative loaners, by providing a strong and reasonable financial."

Based on the above-mentioned financial analysis, this project is economically profitable and this profitability is presented as following:

- NPV = 5.79% > 0
- IRR = 5.79% > than interest of deposits or treasury bonds
- PBP = 6 year < 7 years (duration of concession)

1.14 Quantitative and Qualitative Risk Analysis

The main goal of Risk Analysis is to identify and evaluate the gamma of risks that may affect the project. Therefore, a strategy on risk management is carried out in order to guarantee the successful realization of the project. In compliance with Decision of Council of Ministers No. 575, dated 10.07.2013 "On approval of rules for evaluation and issuance of concession/private-public partnership" following is a risk analysis regarding this project.

1.14.1 Qualitative Risk Analysis

Land Risk

Description of the Risk: Lands selected for construction of 17 schools will mostly be owned by the state, whereas the private-owned lands will be expropriated in line with the legislation in force and will be put at disposal of the concessionary. As a result, this risk has a low probability, almost zero, about this project. Regarding the necessary permits, there is no risk, because Tirana Municipality is itself the responsible body to grant these permits. In relation to environmental standards, the selected lands are plots located in areas were the environmental standard is not affected, therefore the risk is considered zero.

Management of risk: This risk is assessed with a zero probability and it is covered by Tirana Municipality. Tirana Municipality will carry out all the procedures for expropriation of private lands out of this PPP scheme, before the beginning of works. If any of the selected lands is in a ownership conflict, turning expropriation impossible, authorities will ask for information at the Immovable Properties Registration Office for alternative sites to be used. Regarding geological conditions and environmental standards, there has been a environmental study part of this feasibility study, which has come to the conclusion that the construction of these objects does not have an impact on the environmental standards. Hence, during the procedures for obtaining a construction permit, there will be also a detailed environmental study by the concessionary.

Risk of design, construction and functioning

Description of the Risk: Calculation of costs for construction and furniture of new schools is based on above-mentioned methodology, which takes into consideration the cost of schools built by Tirana Municipality in the last three years. Therefore, the possibility of a higher construction cost than the calculated cost is almost zero. Construction and functioning of schools depend in a certain scale on the obtaining of construction permit and meeting of preconditions for obtaining of this permit, such as environmental permit, connection with the electrical grid or water supply system, approval of projects for fire protection, etc. The concessionary has the right to draft the designing, prepare the documents for equipment with a construction permit, as well as to build the school objects. From this point of view, the risk of delays in equipment with construction permits, delays in kick-off works, readiness is possible.

Management of risk: This risk belongs to the concessionary. He is accountable for compilation of documents and equipment with construction permit. If the concessionary does not prepare the project on time and will neglect the application for construction permit by not applying on time or having irregularities in documents, or failure to start works on time, then he will be accountable for failure in starting works on time and will compensate the contracting authority according to the requirements in the concessionary contract. Likewise, as long as the concessionary is responsible for drafting and implementing the project, each delay in completion of construction works, excluding the case when the delay comes as a result of a force majeure will be under the concessionary´s responsibility and will be forced to compensate the contracting authority according to requirements in the concessionary contract.

Functioning Risk

Description of the Risk: The possibility that the new schools will not be functional after the construction is related to the non-qualitative works by the concessionary, which might make the performance of teaching in new buildings impossible. This risk has a low probability because the completion of works will be carried out by the technical supervisor and financial bill of quantities will be supervised by the contracting authority. Regarding the risk of a higher maintenance cost than expected, the probability is almost zero, because the annual maintenance cost is calculated based on annual expenses of Tirana Municipality for the maintenance of existing schools, which have been constructed long ago. According to engineering standards, the maintenance cost of newly-built objects is lower than that of the objects built before.

Management of risk: The probability of this risk is low and it is considered as a risk transferred to the concessionary. In case the construction quality will make the performance of teaching process impossible, the concessionary will be accountable and will be forced to carry out extra works until the works quality will be in line with the requests of the designing tasks. In case school buildings might have any problems due to construction works, in the course of seven years of the contract duration, which will make the teaching process impossible, the concessionary will be obligated to carry out extra works to make the school functional again. If the maintenance cost is higher than predicted, this would be a result of the inaccuracies in the design or construction. Therefore, the risk belongs to the concessionary, who is accountable for the designing and building of these schools.

Risk of demand and other trade risks

Description of the Risk: This risk is related to the situations when use of the object is different from what is expected or the generated incomes are lower than the forecast. As long as objects to be build are school buildings that will not have a different use and cannot generate incomes, this risk cannot applied on this project.

Management of risk: The possibility that this project can be affected by this risk is zero, because it is not subject of its impact.

Economic and Financial Risks

Description of the Risk: As long as this project includes financial transactions to be implemented in the course of time, there exists the possibility of an impact from economic and financial risks. The unpredicted increase of the norms of interest may increase the financial costs of the project from the concessionary. On the other side, changes in exchange rate course may have a worsening affect in the finances of the concessionary if his incomes and expenses are in a different currency, e.g. the concessionary has been granted a loan in EUR of USD for the financing of the project, while Tirana Municipality makes the annual payments in Leke. In the end, as long as this project includes periodical payments for a seven year period, there exists the possibility of an impact from inflation in the concessionary´s incomes.

Management of risk: Due to the fact that Albania is a country with a sustainable macroeconomic situation, the probability that this project may be affected by such risk remains low. The risk of interest rates or exchange rates belongs to the concessionary and shall be calculated in its financial projections. Inflation risk is shared among the concessionary and Tirana Municipality. As long as the Bank of Albania policy is keeping infection under 3% and duration of the project is only 7 years, the probability of this risk is low. Nevertheless, in the definition of income margin as related to interest rate of 7 year obligations, Tirana Municipality guarantees the concessionary the same protection toward the economic and financial risks as guaranty of Albanian Government for buyer of obligations.

Risks of assets ownership

Description of the Risk: This risk is related to the possibility that technology might get older or if the value of assets might be different at the end of the contract. As long as, the construction consists of school buildings, which will be maintained by the concessionary for seven years, the probability of this risk is low. Nevertheless, the quality and value of assets may be lower than the projection due to non-qualitative maintenance.

Management of risk: This risk is transferred to the concessionary. Maintenance of schools buildings and their furniture will be completed in line with the standards in force and will be supervised by the Contracting Authority. In case the concessionary will not maintain schools in line with the above-mentioned determination, the concessionary contract will envisage provisions obligating him to pay the damage. If at the end of the contract, the value of assets will be different from the predicted, the concessionary contract will define provisions obligating the concessionary to pay the damage.

Political risk

Description of risk: The risk of an impact from political decisions on the project is evident. As long as it is a project initiated from Tirana Municipality, a local government body, the success of the project depends on the coordination with local government. Likewise, there is a potential possibility that the results of next local elections – a potential change of Tirana mayor – may also cause the change of priorities and as a result the project can be blocked.

Management of risk: This risk is transferred on the Contracting Authority - Tirana Municipality. To ensure the consent of central government, with the approval of the feasibility study from the head of Tirana Municipality, will be required also an approval from the Ministry of Finance and Ministry of Education and Sports. Regarding risk of a negative impact of the project as a result of changes in the leadership of Tirana Municipality, the concessionary contract will envisage provisions that obstacle the dismissal of the Contract for non-legal reasons by the Contracting Authority.

Risks deriving from change of legal framework

Description of risk: Potential changes in legislative framework may affect the project positively and negatively. As long as the project is related to the construction of school buildings, the possibility of an affect from legal changes is related only to standards and construction manuals. Therefore, this risk has a low probability. Regarding changes in fiscal laws, the negative or positive influence can be felt only in the finances of concessionary.

Management of risk: This risk falls on the concessionary. In order to have minimal effects, the concessionary contract will include provisions that protect it from discriminating changes in law – always if the discrimination is proved by the court. On the other side, the concessionary will be forced to implement any legal changes coming as a result of governance policies.

Risk from force majeure

Description of risk: Force majeure risks, such natural calamities, civil unrests or wars are transferred to the concessionary and contracting authority. Taking into account the fact that Albania is a member of NATO and with a clear perspective of EU integration, the probability of risks from wars or unrests is almost zero. On the other side, the probability of and impact from earthquakes or other natural disasters on the project is low – How? As a result of the above-mentioned analysis of environmental impact on the project.

Management of risk: Probability of these risks is very low and it is transferred on both parts. The concessionary contract will envisage clauses of force majeure which will guarantee that any negative impact on the project shall be divided between the parties.

1.14.2 Quantitative Analysis of Risks

This analysis aims to prioritize risks that may affect the project by calculating their probability and potential impact on the achievements of project objectives. The quantitative evaluation is based on the probability of occurrence of each risk and potential impact on costs and deadlines of the project.

Impact of risks on project costs is calculated based on the specific weight of each of them in the project's cost. Whereas, the impact on deadline of completion of works is calculated based on legal deadlines for completion of defined procedures that may be necessary for well-going of the project.

Following is a quantitative analysis on the impact of each risk in the costs and deadlines for realization of the project.

Lands risk. Probability of this risk is low, 0-5%. Its impact on the project' cost is zero because expropriations of private lands that will be used for construction of school will be carried out by Tirana Municipality with a special fund out of the financial scheme of this project. The lands selected for construction of the schools are state-owned and private properties. In case use of any of these lands is impossible than will be used an alternative selected land with the necessary information from the Immovable Properties Registration Office. As a result, the impact on the deadline of completion of works is related the handing in of the state-owned land if it is not a property of Tirana Municipality or expropriation of private properties. The impact on deadline of works is calculated at 3 - 6 months.

Risk of designing, construction and functioning. Probability of this risk is low, 5-10%. The costs assessment process of the schools construction is carried out in line with the MoES guidelines manuals and based on the construction of schools by Tirana Municipality in the course of last years and prices have been indexed according to construction prices index of INSTAT. Hence, maximal influence of this risk in costs is less than 5%. On the other side, the deadline of works may not be respected as a result of failure to receiving the construction permit or other permits on time by the concessionary or due to slower completion of works than the calendar of works. In case designing is delayed or documents for equipment with necessary permits are not compiled, the impact on deadline of works is calculated from 3 to 12 months.

Functioning Risk. Probability of this risk is calculated at 0-5%. As long as this project is related to the construction of new schools, there exists the possibility of a low quality of construction. This could require additional works beyond the defined deadline. The impact of this risk in the deadline of works is calculated from 1 to 3 months, whereas the impact on total cost of the project is envisaged at 5-10%. There exists an opportunity that the maintenance cost may result higher than the forecast, but compared to total cost of the project the impact of this cost is almost zero.

Risk of demand and other trade risks. This risk cannot be applied on the project and the possibility of an impact from it on cost or deadlines is zero.

Economical and financial risks. Probability of this risk is low, 0-5%, taking into consideration that it is not a long-term concession where the concessionary generates incomes from the operation of the object of concession. As long as incomes of the concessionary are guaranteed by Tirana Municipality and covered by inflation, impact of risk on total cost of the project is low, 5% - 10%. On the other side, the impact on deadlines of completion of works is not envisaged longer than 12 months.

Risks of assets ownership. Probability of this risk is calculated at 0 - 5%. Its impact on total cost of the project is related to the maintenance costs, in case the latest results higher than forecast and a more rapid amortization of buildings that envisaged in the concession contract. Its impact on project's costs is predicted to be at maximum 5%. Probability of this risk does not affect the deadline for realization of works.

Political risk. Probability of such risk is medium low and is calculated at 10 - 20%. The occurrence of such risk may block works or interrupt the periodical payments for the concessionary by increasing the financing cost of the project and delaying the realization of works. In this respect, a potential influence of this risk on costs is calculated at 20 - 30%, whereas the impact on deadline of realization of works is calculated from 16 to 24 months.

Risk of change of legal framework. This risk has a probability of 5 to 15%. Potential legal changes, such as in standards to be followed for construction of new schools, may considerably boost the project cost. Therefore, the potential risk on costs is medium, varying from 20 to 40%. Likewise, potential legal changes may cause the re-drafting of the project or other delays that may be negatively affect the deadline for realization of works. Therefore, impact on deadline of works is calculated from 12 to 16 months.

Force Majeure Risk. Probability of this risk to happen is very low - 0 to 5%. Nevertheless, in case it happens, the impact on costs or deadline of works will be medium high. Therefore, impact on cost is calculated at 30% to 50%, whereas impact on deadline of works from 12 to 24 months.

Table 136 Summarizing table of impact of risks

No.	Risk	Probabiliy	Impact on cost	Impact on works deadline
1	Risk on land	0% - 5%	0%	3 - 6 months
2	Risk on designing, construction and implementation	5% - 10%	0% -5 %	3 - 12 months
3	Functioning Risk	0% - 5%	5% -10%	1 - 3 months

4	Risk of demand and other commercial risks	-	-	-
5	Economic and Financial Risks	0% - 5%	5% -10%	6 - 12 months
6	Risks of assets ownership	0% - 5%	0% - 1%	-
7	Political Risk	10% - 20%	20% - 30%	16 - 24 months
8	Risk of change of legal framework change	5% - 15%	20% - 40%	12 - 16 months
9	Force majeure	0% - 5%	30% - 50%	12 - 24 months

1.15 Sensitivity Analysis

Main factor that may change during the tender process is the income margin. At the same time, the details of respective costs will be respectively defined based on factual approved projects, depending on the approved projects. The direct cost will be calculated base on the factual realized volumes, which in no way will be higher than the costs envisaged in this project.

Nevertheless, due to the effects of sensitivity analysis, the calculation will made as if the costs have increased and decreased by 5% and 10%, whereas the income margin increases and decreases by 5% and 10%.

Table 137 Sensitivity Analysis

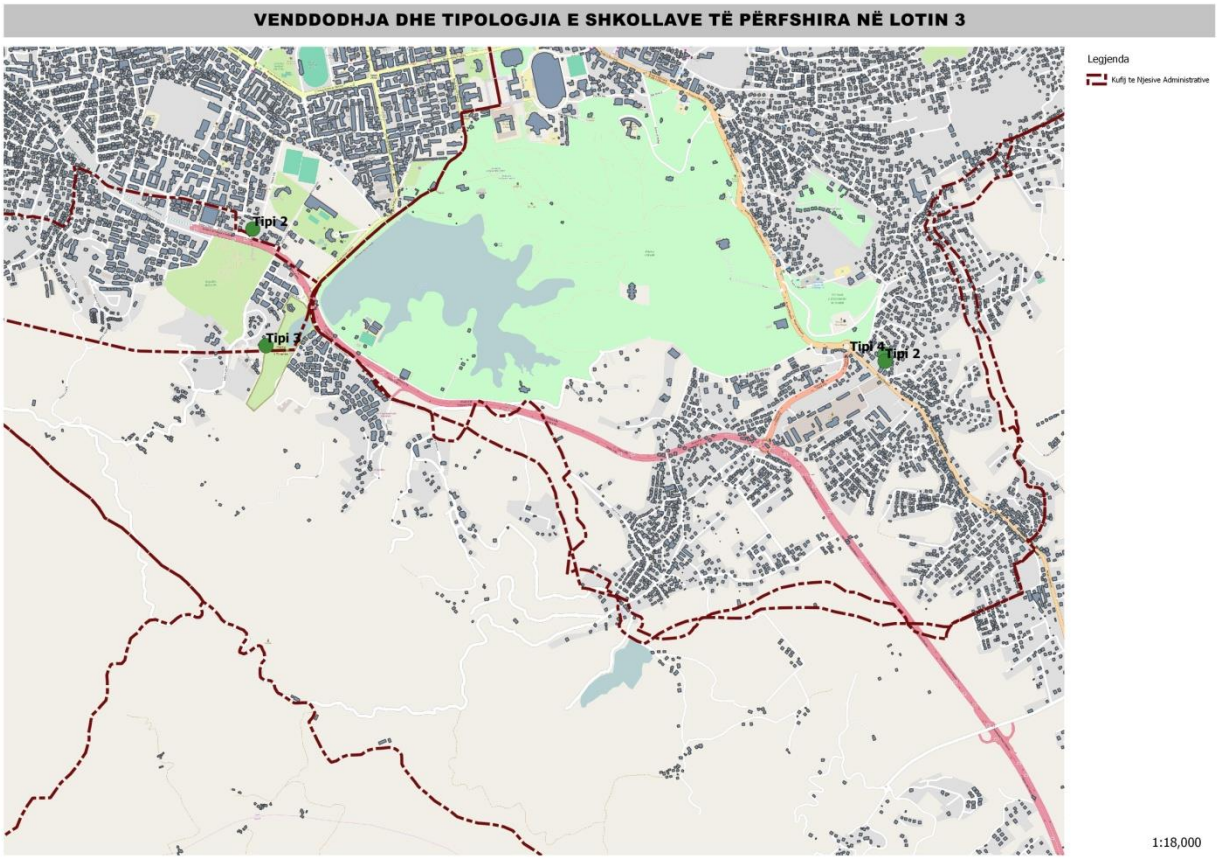
	Incomes and expenses increase by 10%	Incomes and expenses increase by 5%	Basic Model	Incomes and expenses decrease by 5%	Incomes and expenses decrease by 10%
Sensitivity Norm	10%	5%	0	-5%	-10%
Outflow from Investments	- 7,267,445,188	- 6,937,106,771	- 6,606,768,353	- 6,276,429,936	-5,946,091,518
Outflow from Maintenance	- 1,275,711,645	- 1,217,724,752	- 1,159,737,859	- 1,101,750,966	-1,043,764,073
Incomes	10,274,681,048	9,786,000,321	9,197,517,960	8,713,446,063	8,188,265,320
Income before taxes	1,731,524,215	1,631,168,798	1,431,011,748	1,335,265,161	1,198,409,729
Tax on Income 15%	259,728,632	244,675,320	- 214,651,762	- 200,289,774	- 179,761,459
Nett income	1,471,795,583	1,386,493,478	1,216,359,986	1,134,975,387	1,018,648,270
NPV by 5.79%	110,223,600	81,672,242	170,329	23,634,170	- 68,587,789
IRR	6.38%	6.25%	5.79%	5.64%	5.34%
Self-Payment Norm	5.20	5.28	5.35	5.43	5.51

8.3 Lot 3

8.3.1 Location of sites of schools included in Lot 3

Lot 3 includes 4 schools, 2 in the Administrative Unit 2 , one in Administrative Unit 5 and one in Administrative Unit of Farke. Distribution of schools included in Lot 3 is indicated in the following map:

Map 54 Location of schools included in Lot 3



8.3.2 Total surface to be permanently seized by the sites of schools included in Lot 3

SITE 2/6

Map 55 Orthophoto of the site

LOCATION:

The proposed site no. **2/6** for construction of a nine-year school and high school is located in the southern side of Tirana, in the Administrative Unit no 2. It is accessable from "Elbasani" stre and " Haxhi Aliaj" street.

TECHNICAL DATA : Site has a surface of about 5425 m^2.

CURRENT SITUATION OF THE SITE :

- It is a relatively calm and easily accessable area.
- it is a developing area with low buildings 2-3 floors.
- Road infrastructure is good.

Picture 8 Photo of site 2/6

SITE 5/1

Map 56 Orthophoto of site

LOCATION : The proposed site no. 5/1 for a nine-year school is located near the lake area. It is accessed from Hasan Alla street and Tiranë-Elbasan highway.

TECHNICAL DATA : Site 5/1 : 3269 m2

CURRENT SITUATION OF THE SITE :

- It is located near the botanic garden in a high density area
- Easy access .

Picture 9 Photo of the site 5/1

SITE F3

Map 57 Orthophoto of the site

LOCATION : Proposed site no.**F3**

TECHNICAL DATA : Site F3 : 8340 m2

CURRENT SITUATION OF THE SITE :

- Difficult access
- Relatively sloppy site
- Road infrastructure may be problematic

Picture 10 Photo of site F3

8.3.3 Legal Status of shools sites included in Lot 3

Site 2/6

Map 58 Indicative map of properties

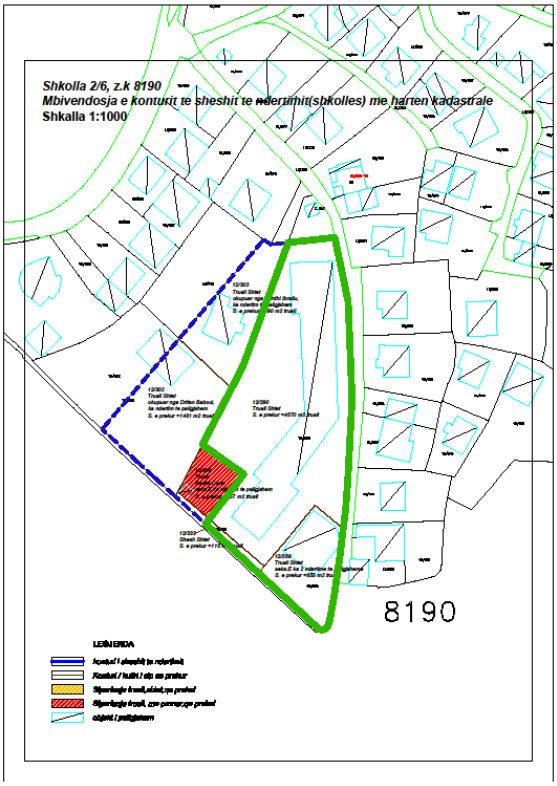


Table 95 Table with preliminary calculations of properties affected by this project

Nr	NAME	Note in Sec. E	Cadastral Zone	No. Property	Surface of the affected land (m²)	Land price lek/m²	Surface of the affected object (m²)	Price Obj.lek/ m²	Amount in money
1	State owned land	Illegal construction	8190	12/289	855.00	66969			0.0
2	State owned land		8190	12/290	4570.00	66969			0.0
					5425.00				0.0

The school to be built in this area will affect a total of 5425 meter square property, consisting of 2 state owned properties. For the land, the calculated price is obtained from CoMD No. 89, dated 03.02.2016.

Site 5/1

Map 59 Indicative map of properties

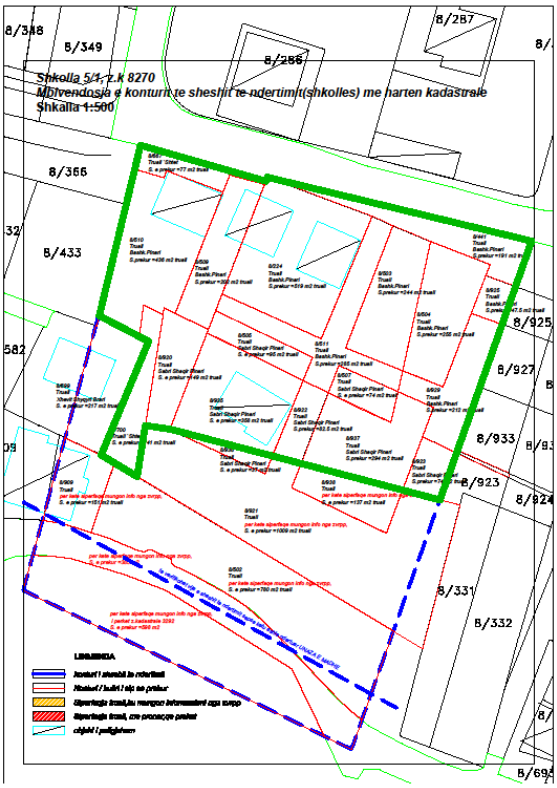


Table 96 Table with preliminary calculations of properties affected by the project

Nr	NAME	Fathes's name	Surname	Cadastral zone	No. Pro	Surface of the land (m^2)	Land price lek/ m^2	Surface of objectm ^{2})	Price Obj.lek/ m^2	Amount in leke
4	State owned			8270	8/700	141.00	66969			9,442,629.0
8	Sabri	Shaqir	Pinari	8270	8/935	358.00	66969			23,974,902.0
9	Sabri	Shaqir	Pinari	8270	8/920	149.00	66969			9,978,381.0
10	Sabri	Shaqir	Pinari	8270	8/922	82.50	66969			5,524,942.5
11	Sabri	Shaqir	Pinari	8270	8/937	294.00	66969			19,688,886.0
12	Sabri	Shaqir	Pinari	8270	8/923	74.00	66969			4,955,706.0
13	Co-owners		Pinari	8270	8/510	436.00	66969			29,198,484.0
14	State owned			8270	8/667	77.00	66969			5,156,613.0
15	Co-owners		Pinari	8270	8/509	202.00	66969			13,527,738.0
16	Co-owners		Pinari	8270	8/224	519.00	66969			34,756,911.0
17	Sabri	Shaqir	Pinari	8270	8/505	95.00	66969			6,362,055.0
18	Co-owners		Pinari	8270	8/511	285.00	66969			19,086,165.0
19	Co-owners		Pinari	8270	8/503	244.00	66969			16,340,436.0
20	Sabri	Shaqir	Pinari	8270	8/507	74.00	66969			4,955,706.0
21	Co-owners		Pinari	8270	8/441	191.00	66969			12,791,079.0
22	Co-owners		Pinari	8270	8/925	47.50	66969			3,181,027.5
23	Co-owners		Pinari	8270	8/929	212.00	66969			14,197,428.0
						3269.00				218,921,661.0

The school to be built in cadastral zone 8270 will affect a total of 3269 meter square property, composed of 23 properties, 22 out of them private properties and 1 state owned. Property no. 8/667 is state owned. For the land, the calculated price is obtained from CoMD No. 89, dt.03.02.2016.

Site F3

Map 60 Indicative map of properties

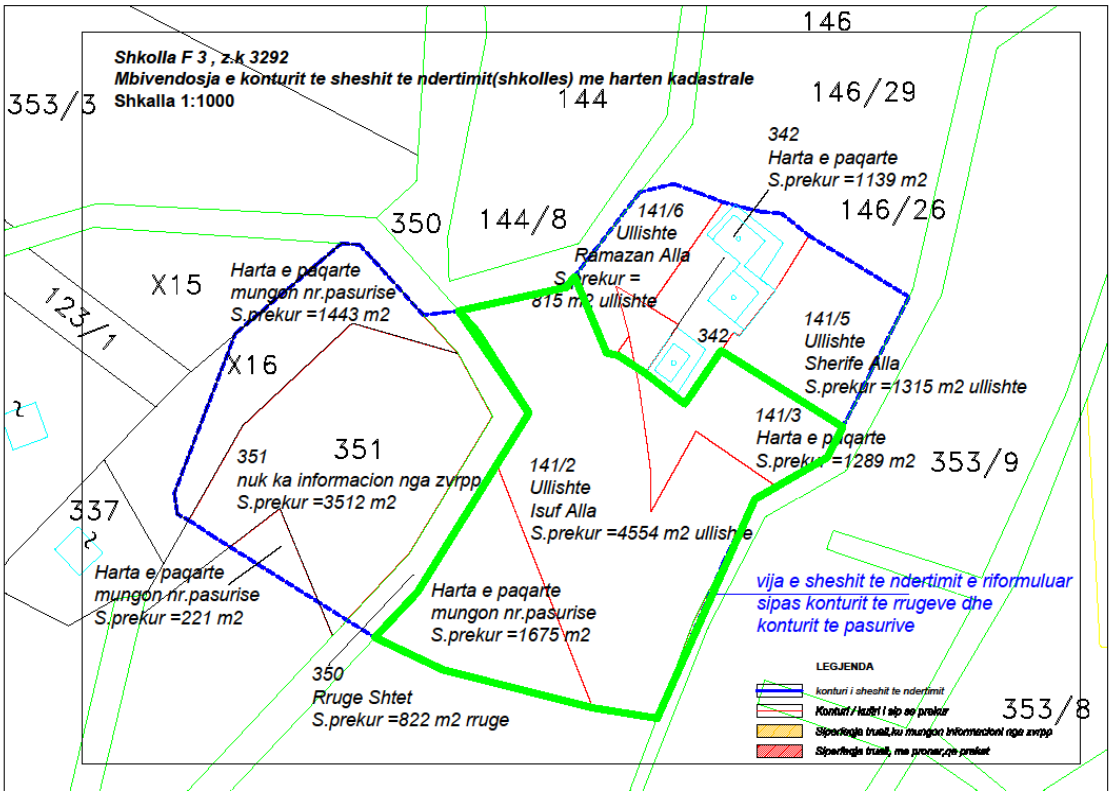


Table 97 Table with preliminary calculations of properties affected by project

Nr	NAME	Note in Sek. E	Cadastral zone	No. Prop	Sur affected land (m²)	Land price lek/m²	Sur affected Obj. (m²)	Price Obj.lek/ m²	Amount in leke
1	Stateowned road		3292	350	822.00	448			0.0
2	Unclear map	No number of property	3292		1675.00	448			750,400.0
3	Isuf Alla	Olive grove	3292	141/2	4554.00	448			2,040,192.0
4	Unclear map		3292	141/3	1289.00	448			577,472.0
					8340.00				3,368,064.0

School to be built in cadastral zone 8292 will affect a total of 8,340 meter square property composed of 4 properties, 8 object in private ownership and 1 object, no. 12/16 owned by ministry of defense and for another one there is no information For the land, the calculated price is obtained from CoMD No. 89, dt.03.02.2016.

8.3.4 Tipologjitë e shkollave të përfshira në Lotin 3

Lot 3 envisages the construction of 4 schools. Respectively, in Unit 2, Unit 5 and Unit of Farke. In details, in AU 5 is envisaged the construction of one basic education cycle school of Type 2. In AU 2 is envisaged the construction of a basic education cycle school of type 2 and another higher middle school of type 4. In AU Farke is envisaged the construction of a basic education cycle school of type 1. The following data indicates these detailed data:

Table 98 – Schools typology

Type	Location	Cycle	No class	st/class	No st. total	M2/students	Sur.total
Type1	Urban	Basic education	20	30	600	8.23	4938
Type2	Urban	Basic education	30	30	900	7.32	6588
Type3	Rural	Basic education	20	24	480	8.42	4041.6
Type4	Urban	Higher middle	21	30	630	6.35	4000.5

8.3.5. ECONOMIC AND FINANCIAL ANALYSIS FOR LOT 1

2. Economic and financial analysis

Economic and financial analysis of this feasibility study, in line with Council of Ministers Decision no. 575, dated 10.07.2013, "On approval of rules for assessment and granting for concession/private-public partnership", article 7, mainly focuses on determination of value for money of the project, as well as on completion of an evaluation of the investment in total, operative costs and maintenance, as well as any other income expected to be generated during the duration of the project.

2.1 Economic Model of the Concession / Public-Private Partnership

Law no. 125/2013, changed with law no. 88/2014, regulates the competences of contracting authorities in order to sign concessions/public-private partnerships. In this type of relations, the private partner takes the responsibility of financing, designing, building and/or re-building/ renewal the public infrastructure object, to operate and maintain the public infrastructure object built and/or rebuilt/newly renewed. Among the fields of implementation of this law is also education.[23]

Based on the data analysis, it results that to put an end to the over-crowded schools problem and two shifts learning, Tirana Municipality needs to build 17 new schools - 10 nine-year schools and seven high schools. The total cost of construction and furnitures for these schools is calculated at 7.6 billion leke. Such amount of money is financially unaffordable for Tirana Municipality, whose total annual budget is 10 billion leke, whereas investments for construction of new schools in the course of last years has been not more than 500 million leke.

[23] Article 4, item dh), Law 125/2013

In this respect, in order to settle this problem, Tirana Municipality must implement innovative methods of procurement and financing of the proposed project. To guarantee the realization possibility of the schools construction project, it was chosen a more innovative and cost-efficient approach, combining the designing, financing, construction and maintenance in one and only procurement contract. Due to the considerable dimensions of this project, this methodology will not only offer facilitations during the development process, but will provide more sustainability after its completion.

In the framework of the "Design, Finance, Build and Maintain" (DFBM) model as internationally known "Design, Build, Finance & Operate (DBFO)", **c**ontractors take the responsibility of designing, building, financing and maintaining an object for entire duration of the contract. The contractor who may be one company or a consortium is responsbile for designing, financing, construction and maintenance of the object for a determined period of time, which is proposed to be 7 years. The payment after the completion of the object is dictated based on completion of some determined performance standards regarding the physical condition of the buildings, capacity, quality, etc. This model which goes beyond the designing and construction phase, naturally encourages the designer/builder to provide since the beginning a qualitative construction plan in order to have less costs during the maintenance phase, as long as the responsibility belongs to their consortium. Likewise, integration of all project´s contract in one reduces different transactional costs and boosts project management efficiency.

This PPP model has been widely used for construction of major infrastructure projects, such as construction of highways, hydro power stations, wastes management plants, etc, because the dimensions of such projects required considerable funds, efficient organization of capital and human resources, high designing and construction quality, maximal security and constant maintenance. In this respect, such models have been considered successful for development of projects that guarantee their realization and efficiency of the investment. Nevertheless, the use of this PPP form is not limited only in major public infrastructure works mentioned above. In many OECD countries, mainly in the United Kingdom, this methodology is used also for public service projects, such as construction of new schools.

Following are some examples from different countries that have successfully implemented this model for projects of educational infrastructure:

C**anada**[24]**:** "Alberta Schools Alternative Procurement" Program. In 2007, Alberta region in Canada declared the first stage of the program which envisages the construction of 18 new school buildings (kindergartens and nine-year schools), which were completed in 2010. After the completion of works, duration of the contract will continue with the maintenance and it estimated at about 30 years. The second phase of the program envisaged the construction of other

[24] "Flexible and alternative approaches to providing school infrastructure in Alberta, Canada" – OECD, 2010

10 nine-year schools according to the same model and 4 high schools through the simple model of Designing-Constructing contract, which were completed in 2013.

Greece [25] : "Macedonia Schools and Attica Schools" Program. With the use of DBFM mechanism, private operators designed construction of 51 schools with a total amount of about 269 million Euro and 25 year contracts.

United Kingdom[26]: "Building Schools for the future" Program. This program is a long-term investments program, which is contributing in the construction of a considerable number of schools in the entire territory of UK. Majority of schools has been built through the Design-Build-Finance-Maintenance scheme, but in this case often has been included also the element of school management by a private subject of a determined period. In general, total duration of the contract is estimated up to 30 years. The private consortium is regularly paid by public funds based on its performance during the contract period. If the consortium does not achieve the required performance, the payment is reduced. At the end of the contract period, school is given back to government.

New Zealand [27]: The project of New Zealand Ministry of Education for construction of two schools in Hobsonville, Auckland. This project envisages the construction of a new lower cycle school and one lower middle cycle school in the suburb region of Hobsonville in Auckland city. The private sector is partly responsible for designing, building and financing of the objects, together with their constant maintenance and management of common services. Construction of these schools has been successfully completed in 2014.

In this aspect, the project for construction of new schools in Tirana needs the application of the same approach for improvement of education service in the entire territory of the Municipality. Big number of schools that will be built, financial limitations, short period for implementation of the project, as well as need to guarantee the maximal security of buildings point to the necessity of establishment of an efficient and successful public private partnership.

2.2 Main assumptions

In the framework of financial and economic analysis effects of this feasibility study, were made the following assumptions:

[25] "The role and impact of public-private partnerships in education", pg. 82 – World Bank, March 2009 .http://www.ungei.org/resources/files/Role_Impact_PPP_Education.pdf

[26] Ibidem (i.e. extracted from same WB document in the above-mentioned reference and same page)

[27] "Mayoral Position Paper on Public Private Partnerships" – Ernst and Young, November 2013.

- Concessionary will cope with its incomes the entire investment for construction of education objects and their functioning, whereas Tirana Municipality will face with its funds the expropriation of private lands to be used for this purpose.
- Educational objects will be built and functional at maximum 18 months from the signing of the construct.
- After the construction and functioning of schools, concessionary will be accountable for administration and maintenance of the objects for a 7 year period and for every problematic regarding risks of assets for these period.
- After the construction of objects, Tirana Municipality will pay the concessionary a certain annual sum until the full payment of the invested amount. Incomes for this payments will be provided from the annual incomes of Temporary Tax on Education Infrastructure and conditioned transfer from Ministry of Finance.

2.3.Costs analysis

Based on technical, it has come to be conclusion that in total will be built 17 schools: 10 nine-year schools and 7 high schools. The new schools will be designed and built according to models in line with standards specified by Ministry of Education and Sports through "Guideline for School Buildings Design". The school models offer the opportunity to fully meet the needs for pre-university education classes, respecting legal and technical requirements for definition of parallel classes according to each teaching cycle. In the same time, for nine-year schools are envisaged also venues for pre-school education, as part of the nine-year education institution. Referring to above-mentioned standards, there exist 4 main types of schools with the following operational data:

Type 1 of schools includes 20 classes per pre-school and school students with a construction surface of about 4,938 m2. Likewise, this schools will included a kindergarten of about 4 classes with a surface of about 874 m2. In total, the construction surface for this type of school is 5,812 m2. **Type 2** of schools is nine-year education with 30 classes for pre-school and school students with a construction surface of about 6,588 m2. Likewise, this school will include a kindergarten with 6 classes with a surface of about 1,310 m2. In total, the construction surface for this type of school is 7,898 m2. **Type 3** of schools is higher middle for rural zones with 20 classes with a construction surface of about 4,041 m2. **Type 4** of schools consists of higher middle schools for urban zones with 21 classes and a construction surface of about 4001 m2.

According to quantitative analysis carried out and explained above, there are necessary a total of 17 schools, 2 out of them belonging to Type 1, 7 schools of Type 2, 1 school of Type 3 and 7 high schools of Type 4. Respectively these schools will be built according to following administrative units and data:

Table 99 Detailed data on each school for Lot 3

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	nxënës për klasë	Nxënës për shkolle	Sipërfaqe totale shkolla	Klasa kopësh ti	Nxënës për klasë kopështi	nxënës për kopësht	Sipërfaqe totale kopësht	Siperfaqe totale ndertimi
1	NJA 02	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
2	NJA 02	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
3	NJA 05	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
4	NJA Farke	Tipi 3	9-vjeçar	20	24	480	4,041	4	24	96	874	4,915
Totali				101		2,910	21,217	16	72	384	3,494	**24,711**

Summarizing according to schools typology, in total, we have the following operational data :

Table 100 Data on proposed schools according to typology for lot 3

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Nr nxënës për klasë	Nxënës për shkollë	Nr klasa kopështi për shkollë	Nr nxënës për klasë kopështi	Nxënës për kopësht	Sip ndërtimi shkolla	Sip ndërtimi kopështe	Tot Sipërfaqe ndërtimi	Total Nxënës në shkolla	Total Nxënës në Kopështe	Nr Total i nxënësve
Tipi 2	2	30	30	900	12	24	144	13,176	2,620	15,796	1,800	288	2,088
Tipi 3	1	20	24	480	4	24	96	4,041	874	4,915	480	96	576
Tipi 4	1	21	30	630	-	-	-	4,001	-	4,001	630	-	630
Grand To	**4**	**71**				**48**	**240**	**21,217**	**3,494**	**24,711**	**2,910**	**384**	**3,294**

For a better analysis of value for money of the project, we have grouped the expenses in four main categories, based on accounting standards and requirements of CoMD no. 575, dated 10.07.2013, "On approval of rules for assessment and granting of concession/public private partnership", article 7, section 3-6:

Direct costs of investments

Direct costs of maintenance

Due to the effects of the following analysis, all the prices and values will be without VAT, unless is specified otherwise.

2.3.1 Direct investments costs

During the analysis and in line with above-mentioned CoMD, there were identified the following direct costs of investments:

1. Costs of Land Expropriation ;
2. Construction Cost ;
3. Cost of Study and Designing ;
4. Supervision Cost ;
5. Cost of Technical Control;

6. Technical Revision ;
7. Cost for Furniture and Equipment;
8. Cost of lab devices.

2.3.1.1.Land Expropriation Costs

According to determination of trace where these schools will be built, it results that will be expropriated a total of **10,781 m2** of private properties, which according to the calculations are estimated at an expropriation value of **221,887,911** leke. On the other side, the state-owned land will be subject of respective procedures in order to take the respective properties under the administration.

Table 101 Summarizing table of expropriation for Lot 3

Nr rendor i tabeles	Adresa	Tipi	Sheshi	Shpronesimi ne Vlere	m2 te shpronesuar	mesatar per m2
3	NJA 05	Tipi 2	5/1	218,519,847	3,263	66,969
4	NJA Farke	Tipi 3	F3	3,368,064	7,518	448
Grand Total				**221,887,911**	**10,781**	**20,581**

With the approval of CoMD in this respect and completion of financial and legal documents in line with the CoMD and normative acts in force, every expropriated subject will be paid by Tirana Municipality through a fund determined for this purpose.

2.3.1.2.Construction Costs

Based on the report obtained from General Directorate of Public Works No. Prot. 21407/2, dated 09.08.2016, costs for schools construction is 46,331.67 leke/m2, whereas the kindergartens costs are 54,380.83 leke/m2. From the combination of this data with the total construction surface for each type of school, it results that :

- The construction value of a Type 1 school is 228,785,770 leke and to this amount is added also the construction of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 1 school, including the kindergarten venue is 276,314,618 leke.
- The construction value of a Type 2 is 305,233,020 leke and to this amount is added the construction cost of a kindergarten of about 71,238,892 leke. In total, the general cost of

the construction of a Type 2 school, including the kindergarten venue is 376,471,912 leke.

- The construction value of a Type 3 schools is 187,207,732 leke and to this amount is added the construction cost of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 3 schools, including the venues of a kindergarten is 234,736,581 lekë.
- The construction value of a Type 4 school is 185,349,833 leke and these schools do not include kindergarten premises.

Table 102 Construction costs for schools in lot 3

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Klasa kopësh ti për shkollë	Sip ndërtim i shkolla	Sip ndërtim i kopësht e	Tot Sipërfaq e ndërtimi	Cmimi i ndertimit te shkollave lek/m2	Cmimi i ndertimit te kopështeve lek/m2	Kosto ndertimi të një shkolle	Kosto e ndërtimit të një kopështi	kosto e ndërtimit të një shkolle + kopesht	Kosto e përgjithshme e ndertimit
Tipi 2	2	30	6	13,176	2,620	15,796	46,332	54,381	305,233,020	71,238,892	376,471,912	752,943,823
Tipi 3	1	20	4	4,041	874	4,915	46,332	54,381	187,207,732	47,528,848	234,736,581	234,736,581
Tipi 4	1	21	-	4,001	-	4,001	46,332	54,381	185,349,833	-	185,349,833	185,349,833
Grand To	**4**	**71**	**10**	**21,217**	**3,494**	**24,711**	**138,995**	**163,143**	**677,790,585**	**118,767,740**	**796,558,325**	**1,173,030,237**

In total, there will be built **2 Type 2 schools** with a construction cost of 376,471,912 leke per school, **1 Type 3 school** with a construction cost of 234,736,581 leke per school and **1 Type 4 school** with a construction cost of 185,349,833 leke per school. As a result, the total construction costs for l**ot** 3 amounts to **,173,030,237** leke. This cost will be covered by the concessionary.

2.3.1.3. Other direct investment costs

Based on the report from Public Works General Directorate, in Document No. Prot. 21407/2, date 09.08.2016, other direct investment costs are :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Tax of impact in infrastructure

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Taking into account the data analyzed in this chapter on costs, it results that the direct investment cost is as following :

Tax of impact on infrastructure for Public Works is 0.

Table 103 Direct investment costs for lot 3

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
Tipi 2	2	15,796	20,220,768	8,355,808	301,178	501,350	100,000	60,000
Tipi 3	1	4,915	6,638,188	2,703,942	93,917	208,967	50,000	30,000
Tipi 4	1	4,001	5,345,869	2,182,240	76,855	184,846	50,000	30,000
Grand To	**4**	**24,711**	**32,204,825**	**13,241,990**	**471,950**	**895,163**	**200,000**	**120,000**

2.3.1.4.Furniture Costs

In order to make schools functional, it is necessary to provide necessary IT equipment and laboratories. Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 "On Pre-university education system in the Republic of Albania", changed, for which Ministry of Education and Sports has prepared the Guideline "On designing of school buildings" (Norms and Standards).
Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.
For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 104 Furniture costs for schools typology

Type of school	No class	st/class	No st total	Cost/students	Total cost
Type 1	20	30	600	24,167	14,500,000
Type 2	30	30	900	24,167	21,750,000
Type 3	20	24	480	24,167	11,600,000
Type 4	21	30	630	24,167	15,225,000

The furniture cost for basic education have been included three levels which envisage the following types :

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.
Costs for furniture of kindergartens per children is about 27.916 lek without VAT
This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 148–Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.000

Regarding costs for lab equipements, we referred to the purchase contract "Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools" realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 149 Costs for lab equipment

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602
4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

According to schools typology defined based on the designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is determined the quantity of labs for each type, we have the following table :

Table 150 Costs for lab equipment according to schools typology

No	Tyes of schools	Cost without VAT
1	**Basic education (Type 1)**	6,095,850
2	**Basic education (Type 2)**	7,279,450
3	**Basic education (Type 3)**	5,743,950
4	**Higher Middle Education (Type 4)**	13,983,067

According to the analysis of all the above-mentioned data, it results that the total cost of furniture and lab equipments of 4 schools is **115,330,917** leke without VAT, according to the following table :

Table 105 Furniture cost and lab equipments for schools of lot 3

Tipi	Nr i shkollave sipas tipit	Kosto e mobilimit te shkollave	Kosto e mobilimit të kopështeve	Total Kosto Mobilimi	Kosto Laboratori	Total kosto pajisje, mobilje dhe orendi
Tipi 2	2	43,500,000	8,040,000	51,540,000	14,558,900	66,098,900
Tipi 3	1	11,600,000	2,680,000	14,280,000	5,743,950	20,023,950
Tipi 4	1	15,225,000	-	15,225,000	13,983,067	29,208,067
Grand To	**4**	**70,325,000**	**10,720,000**	**81,045,000**	**34,285,917**	**115,330,917**

2.3.1.5. Direct investments cost

In conclusion, the direct investment cost of this project is estimated at **1,557,382,992 leke**. About **221,887,911** leke out of them are calculated as necessary funds for expropriation, which will be covered by Tirana Municipality. Whereas, the total cost of the project that will be covered by the concessionary is **1,335,495,081** leke, where the construction cost is **1,173,030,237** leke without VAT, Costs of the Designing, Technical Revision, Supervision, Technical Control, furniture and laboratories is **162,464,845** leke without VAT. In details, the calculated categories are as following :

Table 106 Direct investment costs for Lot 3

Viti	Pershkrimi	Grand total
A.	**Kostot Direkte te Investimit**	**1,557,382,992**
A.1	**Kostot e Truallit**	**221,887,911**
A.2	Kostot e Projektimit	32,204,825
A.3	- Ndertim + instalime	1,173,030,237
A.4	- Oponenca teknike	895,163
A.5	- Takse Infrastrukture	-
A.6	- Leje mjedisore	120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000
A.8	- Kosto Supervizimi	13,241,990
A.9	- Kosto Kolaudimi	471,950
A.10	- Mobiljet dhe Orendi	81,045,000
A.11	- Investime IT&T dhe Labs	34,285,917

2.3.2 Direct maintenance costs

Based on calculations carried out from General Directorate No. 3 of City's Workers, annual maintenance cost per class is 422,107 leke with VAT or 351,755 leke without VAT. Making respective calculations, the annual cost for the general maintenance for each type of school is 12,663,198 leke per one school of Type 2, and about 7,386,865 leke per one school of type 4. Total maintenance cost for all schools of **Lot 3** is **41,155,393** leke per year. The annual cost of maintenance for calculation effects starts from 2018 and pursuant until the completion of PPP period. For more details, see the following tables:

Table 107 Annual maintenance costs for schools of lot 3

Tipi i shkollave	Nr i shkollave	Kosto e mirëmbajtjes për shkollë	Kosto e përgjithshme e mirëmbatjes
Tipi 2	2	12,663,198	25,326,396
Tipi 3	1	8,442,132	8,442,132
Tipi 4	1	7,386,865	7,386,865
Grand Total	**4**	**10,288,848**	**41,155,393**

In total, for 7 years, the general maintenance cost will be **288,087,751** leke without VAT. About **189,682,199** leke without VAT out of them is the maintenance costs of assets and **98,405,552**

leke without VAT is the cost of maintenance staff. The following table is the analysis of categories of maintenance expenses for each school in one year, without VAT:

Table 108 Maintenance costs for seven years in Lot 3

B.	**Kostot Direkte të Mirëmbajtjes**	**288,087,751**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**189,682,199**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	43,857,912
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve	110,815,999
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi	13,872,810
B.1.4	- Mirëmbajtje IT&T (HD+SW)	21,135,478
B.2	**Staf Mirembajtje**	**98,405,552**
B.2.1	Staf Roje	14,475,328
B.2.2	Staf Sanitare	62,468,042
B.2.3	Staf Sekretare	12,511,996

Table 109 Detailed cost of maintenance for Lot 3

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	Lyerje per klase	Riparim suvatim + hidroizolim per klase	Riparime dhe mirembajtje e Nderteses	Riparime Orendi shkollore	Riparime Pajisje PC	Materiale Pastrimi	Lëndë djegëse për ngrohje dhe ujë të ngrohtë	Mirembajtje kondicionim, impiante uji dhe MNZSH	Sherbim roje	Sherbim pastrimi	Sherbim sekretarie	Total kosto mirembajtjeje
1	NJA 02	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
2	NJA 02	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
3	NJA 05	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
4	NJA Farke	Tipi 3	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
Totali i Mirembajtjes				**117**	**2,678,257**	**2,746,933**	**840,226**	**1,981,830**	**3,019,354**	**990,727**	**9,782,711**	**5,057,419**	**3,346,502**	**8,924,006**	**1,787,428**	**41,155,393**

2.4 Analysis of PPP incomes

2.4.1 Tariff for the use of schools

Tariff for use of schools (hereinafter "Tariff") will be calculated in such way so that could cover the costs of concessionary and guarantee a minimal income margin for the concessionary in order to make this PPP attractive and the best economic solution compared to other potential scenario. The tariff is paid for the entire maintenance and administration period of schools by concessionary, i.e. for 7 years. This tariff is paid to every year by Tirana Municipality through financing resources detailed as following. This scheme provides for the construction of 17 schools in a record time, solving the two-shifts teaching and over-crowded classes, but as long as all the risks for maintenance and careful use of the asset will be under the responsibility of the concessionary and related to the payments, this will enable qualitative constructions in the interest of the community.

As long as the direct investment costs, i.e. construction and functioning of schools is calculated based on interim payment reports, which include the income margin of the contractor, on this category will not be calculated the additional income margin. But on the other side, as long as the invested values of the concessionary in this respect will be covered in a seven-year period, he must be minimally reimbursed for the value in time of the money, as well as for the normal and extraordinary maintenance part for this period.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period [28], respectively the results of seven year obligations from 2015 until 15.09.2016.

Table 110 Income Margin

ISIN	Dt.Ankandi	Ankandi	Muaji	Datë Emetim	Datë Maturim	Shuma e shpallur (fillestare)	Shuma e shpallur (nd. strukture)	Shuma e kërkuar	Shuma e pranuar	Prorata Konkurues	Prorata Jo Konkuruese	Yieldi Uniform i Pranuar
AL0017NF7Y23	13.09.2016	7vjeçar/7years(fix)	Shtator	15.09.2016	15.09.2023	3,000,000		2,309,000	2,309,000			4.89%
AL0016NF7Y23	01.06.2016	7vjeçar/7years(fix)Rihapje	Qershor	03.06.2016	16.03.2023	2,000,000		3,141,400	2,000,000	4.40%		4.00%
AL0016NF7Y23	11.03.2016	7vjeçar/7years(fix)	Mars	16.03.2016	16.03.2023	3,000,000		8,247,000	2,999,900	76.48%		4.90%
AL0015NF7Y22	14.12.2015	7vjeçar-fiks	Dhjetor	16.12.2015	16.12.2022	2,500,000		5,288,600	2,500,000	67.70%	100.00%	6.79%
AL0014NF7Y22	14.09.2015	7vjeçar-fiks	Shtator	16.09.2015	16.09.2022	1,000,000		1,430,600	1,000,000	100.00%	100.00%	7.78%
AL0013NF7Y22	12.06.2015	7vjeçar-fiks	Qershor	16.06.2015	16.06.2022	3,000,000		2,953,500	2,953,500	100.00%	100.00%	7.80%
AL0012NF7Y22	12.03.2015	7vjeçar-fiks	Mars	16.03.2015	16.03.2022	2,500,000		2,815,800	2,500,000	80.98%	77.92%	7.81%
										Yieldi Mesatar i pranuar		6.28%

[28] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016

The income margin will be object of bidding procedures of competitors in this PPP, but in the mean time, it is necessary to understand the general value of this PPP. The income margin will be calculated for the remaining value of the direct investment every year and on annual maintenance costs. Thus, the financing scheme is attractive for potential competitors and total cost of the project is not higher than the traditional financing methods.

Based on the calculations, annual tariff to be paid to the concenssionary with a margin of about 6.28% will be as following :

Table 111 Table with preliminary calculations of the properties affected by the project

A	B	C	D	E	F	G	H	I	J	K	L	M
Nr rendor	Viti	Kosto Direkte e Investimit ne Fillim të Periudhës (pa TVSH) (C3=F2)	marzhi i fitimit	Shlyerja vjetore për Koston Direkte të Investimit (C2/B8)	Vlera e Mbetur e Kostos Direkte te Investimit (C-E)	Marzhi i fitimit mbi koston Direkte të investimit (C*D)	pagesa vjetore për koston direkte të investimit Pa TVSH (E+G)	kosto vjetore mirembajtjeje Pa TVSH	Marzhi i fitimit mbi Mirembajtjen (D*I)	pagesa vjetore për koston direkte të investimit Pa TVSH (I+J)	Total Marzhi i Fitimit	Tarifa Vjetore Pa TVSH
1	0	1,335,495,081										
2	1	1,335,495,081	6.28%	190,785,012	1,144,710,070	83,869,091	274,654,103	41,155,393	2,584,559	43,739,952	86,453,650	**318,394,054**
3	2	1,144,710,070	6.28%	190,785,012	953,925,058	71,887,792	262,672,804	41,155,393	2,584,559	43,739,952	74,472,351	**306,412,756**
4	3	953,925,058	6.28%	190,785,012	763,140,046	59,906,494	250,691,505	41,155,393	2,584,559	43,739,952	62,491,052	**294,431,457**
5	4	763,140,046	6.28%	190,785,012	572,355,035	47,925,195	238,710,207	41,155,393	2,584,559	43,739,952	50,509,754	**282,450,158**
6	5	572,355,035	6.28%	190,785,012	381,570,023	35,943,896	226,728,908	41,155,393	2,584,559	43,739,952	38,528,455	**270,468,859**
7	6	381,570,023	6.28%	190,785,012	190,785,012	23,962,597	214,747,609	41,155,393	2,584,559	43,739,952	26,547,156	**258,487,561**
8	7	190,785,012	6.28%	190,785,012	-	11,981,299	202,766,310	41,155,393	2,584,559	43,739,952	14,565,857	**246,506,262**
Grand total				**1,335,495,081**		**335,476,364**	**1,670,971,446**	**288,087,751**	**18,091,911**	**306,179,662**	**353,568,275**	**1,977,151,107**

To guarantee the economic success of the scheme, the concessionary will be paid with decreasing annual installments. This payment method will help the concessionary to avoid financial difficulties during the entire period of the duration of the concession period contract. Therefore, in the first year the installment will be **318,394,054** leke and each year will be decreasing until reaching **1,977,151,107** leke in the last year.

Table 112 Amount of annual installment

Nr rendor	Viti	Tarifa Vjetore Pa TVSH
1	0	
2	1	**318,394,054**
3	2	**306,412,756**
4	3	**294,431,457**
5	4	**282,450,158**
6	5	**270,468,859**
7	6	**258,487,561**
8	7	**246,506,262**
Grand total		**1,977,151,107**

2.4.2 Source of financing

The general amount of this project for **Lot 3** is **2,199,039,018** leke, about **221,887,911** out of them are expropriations to be paid by Tirana Municipality to the expropriated persons and **1,977,151,107** leke is the amount of the concession:

Table 113 General amount of the project for Lot 3

Nr	Vlera e Pergjithshme e Projektit	Çmimi	Sasia	Vlera totale
1	**Kostoja e përgjithshme e shpronësimit**	**221,887,911**	**1**	**221,887,911**
2	**Kosto direkte e Investimit pa TVSH**	**1,335,495,081**	**1**	**1,335,495,081**
2.1	Kosto direkte e investimit te koncesionarit Pa TVSH	1,335,495,081	1	1,335,495,081
3	**Kosto e mirembajtjes pa TVSH**	**41,155,393**	**7**	**288,087,751**
3.1	Kosto e mirembajtjes te koncesionarit Pa TVSH	41,155,393	7	288,087,751
4	**Marzhi i Fitimit**	**353,568,275**	**1**	**353,568,275**
4.1	Marzhi i Fitimit të Koncensionarit	353,568,275	1	353,568,275
	Total i pergjithshëm i kostos(1+2+3+4+5)			**2,199,039,018**

Table 160 Amount to be covered by municipality and concessionary

Nga të Cilat:	Bashkia	Koncesionari	Totali
1. Vlera e Përgjithshme e Projektit Pa TVSH	814,242,252	7,997,517,960	8,811,760,212
Totali	**814,242,252**	**7,997,517,960**	**8,811,760,212**

These expenses will be covered by incomes of the Municipality, Conditioned Grants of Ministry of Finance for project.

Incomes of Tirana Municipality for this project will be generated from the Interim Tax on Education Infrastructure, which is applied upon decision of Municipal Council No. 59, dated 30.12.2015, “On taxes and local tariffs system in the city of Tirana”.

Table 161 Forecast of incomes from Interim Tax on Education Infrastructure

Description	PLAN YEAR 2016	FORECAST 2017	FORECAST 2018

Interim Tax on Education Infrastructure	**870 000 000**	**940 000 000**	**1 000 000 000**
Families	320 000 000	340 000 000	350 000 000
Trade subject	550 000 000	600 000 000	650 000 000

Incomes from Interim Tax on Education Infrastructure are estimated at 870 million leke in 2016, whereas these incomes are envisaged to increase to 940 million leke in 2017 and 1 billion leke in 2018. This interim tax will be applied for 7 years and for 2019-2022 period, the annual incomes are projected to amount to 1 billion leke. Incomes from specific transfer from Ministry of Finance will be 700 million lek per year. Therefore, the fund at the disposal of Tirana Municipality for completion of periodical payments is estimated at 1 billion and 700 million leke per year.

2.5.Financial Analysis

Table 114 Summarizing table of costs and incomes of the project

Viti	Pershkrimi	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
A.	**Kostot Direkte te Investimit**	**1,557,382,992**	-	-	-	-	-	-	-	**1,557,382,992**
A.1	**Kostot e Truallit**	**221,887,911**								**221,887,911**
A.2	Kostot e Projektimit	32,204,825								32,204,825
A.3	- Ndertim + instalime	1,173,030,237	-							1,173,030,237
A.4	- Oponenca teknike	895,163								895,163
A.5	- Takse Infrastrukture									-
A.6	- Leje mjedisore	120,000								120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000								200,000
A.8	- Kosto Supervizimi	13,241,990								13,241,990
A.9	- Kosto Kolaudimi	471,950								471,950
A.10	- Mobiljet dhe Orendi	81,045,000	-	-	-	-	-	-	-	81,045,000
A.11	- Investime IT&T dhe Labs	34,285,917								34,285,917
B.	**Kostot Direkte të Mirëmbajtjes**	-	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**288,087,751**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	-	**27,097,457**	**27,097,457**	**27,097,457**	**27,097,457**	**27,097,457**	**27,097,457**	**27,097,457**	**189,682,199**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	-	6,265,416	6,265,416	6,265,416	6,265,416	6,265,416	6,265,416	6,265,416	43,857,912
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve		15,830,857	15,830,857	15,830,857	15,830,857	15,830,857	15,830,857	15,830,857	110,815,999
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi		1,981,830	1,981,830	1,981,830	1,981,830	1,981,830	1,981,830	1,981,830	13,872,810
B.1.4	- Mirëmbajtje IT&T (HD+SW)		3,019,354	3,019,354	3,019,354	3,019,354	3,019,354	3,019,354	3,019,354	21,135,478
B.2	**Staf Mirembajtje**	-	**14,057,936**	**14,057,936**	**14,057,936**	**14,057,936**	**14,057,936**	**14,057,936**	**14,057,936**	**98,405,552**
B.2.1	Staf Roje		3,346,502	2,788,752	2,323,960	1,936,633	1,613,861	1,344,884	1,120,737	14,475,328
B.2.2	Staf Sanitare		8,924,006	8,924,006	8,924,006	8,924,006	8,924,006	8,924,006	8,924,006	62,468,042
B.2.3	Staf Sekretare		1,787,428	1,787,428	1,787,428	1,787,428	1,787,428	1,787,428	1,787,428	12,511,996
A+B	**Totali i Kostove (A+B+C)**	**1,557,382,992**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**41,155,393**	**1,845,470,743**

C.	**Të Adhurat**	**221,887,911**	**318,394,054**	**306,412,756**	**294,431,457**	**282,450,158**	**270,468,859**	**258,487,561**	**246,506,262**	**2,199,039,018**
C.1	Likujdimet e shpronesimeve	221,887,911								**221,887,911**
C.2	Tarifa e Shfrytezimit pa TVSH		318,394,054	306,412,756	294,431,457	282,450,158	270,468,859	258,487,561	246,506,262	**1,977,151,107**
D	**Fitimi (humbja)**	(1,335,495,081)	277,238,661	265,257,363	253,276,064	241,294,765	229,313,466	217,332,168	205,350,869	**353,568,275**
E	**Fitimi (humbja) progresive**	(1,335,495,081)	(1,058,256,420)	(792,999,057)	(539,722,993)	(298,428,228)	(69,114,762)	148,217,406	353,568,275	**353,568,275**
F	**15% Tatim fitim**	0	0	0	0	0	0	(22,232,611)	(30,802,630)	**(53,035,241)**

Table 115 Cashflow of the project

Fluksi i Arkës									
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Flukse dalese nga Investimet	-1,557,382,992	-	-	-	-	-	-	-	-1,557,382,992
Flukse dalese nga Mirëmbajtja	-	-41,155,393	-41,155,393	-41,155,393	-41,155,393	-41,155,393	-41,155,393	-41,155,393	-288,087,751
Flukse dalese nga Taksat	-	-	-	-	-	-	-22,232,611	-30,802,630	-53,035,241
Totali i flukseve dalese	**-1,557,382,992**	**-41,155,393**	**-41,155,393**	**-41,155,393**	**-41,155,393**	**-41,155,393**	**-63,388,004**	**-71,958,023**	**-1,898,505,984**
Flukse hyrese nga Operimet	**221,887,911**	**318,394,054**	**306,412,756**	**294,431,457**	**282,450,158**	**270,468,859**	**258,487,561**	**246,506,262**	**2,199,039,018**
Gjendja e Arkes ne fund te periudhes	**-1,335,495,081**	**277,238,661**	**265,257,363**	**253,276,064**	**241,294,765**	**229,313,466**	**195,099,557**	**174,548,239**	**300,533,034**
Gjendja e arkes progresive	**-1,335,495,081**	**-1,058,256,420**	**-792,999,057**	**-539,722,993**	**-298,428,228**	**-69,114,762**	**125,984,795**	**300,533,034**	**300,533,034**

2.6.Economic Profitability of the Project

2.6.1. NPV (Net Present Value)

NPV, as standard method for assessment of long-term projects through analysis of time value of money, presents the discounted amount of cashflow of the project. Every investor, when decides to undertake an investment analyzes the incomes generated by one project compared to the potential incomes of the invested money in another project. In general, these analyses are carried out taking into account the interest rate in case of the investment of the money, e.g. treasury bonds or government obligation, which have almost a zero risk.

Classical formula of NPV calculation, if the investment is made in one year, is :

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_o$$

where:

C_0 – presents the money spent for the initial investment

C_t – presents the incomes from the investment ;

t – presents duration of the project ;

r – presents the expected rate of discount .

To see the economic profitability of the project, the financial model has been tested with several potential discount rates. From this analysis, it resulted that the potential concenssionaries will be interested in this project only if their opportunity cost is lower than 5.79%. In other words, for every discount rate over 5.79% this project does not consist of any economic profitability for the concenssionary.

	NPV							
norma e skontimit e parashikuar	**5%**		**5.79%**		**6%**		**7%**	
NPV	**29,884,696**	**-**	**15,136**	**-**	**7,682,796**	**-**	**42,661,484**	

2.6.2. IRR (Internal Rate of Return)

IRR is a method used to measure the incomes of potential income. IRR is a discount rate that makes the nett present value (NPV) of all cashflows of a project equal to zero. According to economic theory, every project with an IRR higher than its capital cost is probitable, as a result investors will be interested to invest in it. Based on the financial analysis, the IRR of this project is estimated at 5.79%.

Table 116 Internal Rate of Return of the project

Viti	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
Gjendja e Arkes ne fund te periudhes	-1,176,772,556	244,264,887	233,707,556	223,150,225	212,592,894	202,035,563	171,909,712	153,782,766	264,671,046

IRR	5.79%

2.6.3. Payback Period

The payback period presents the necessary time needed for the invested capital to recover the initial investment from the project incomes. In general, the payback period is calculated by dividing of the investment cost by annual incomes. Hence, as long as the annual incomes in this project consist of decreasing installments, the payback period is assessed by analyzing the cashflow to determine the latest year when this flow is negative.

Periudha e Vetëshlyerjes		
Viti i fundit i gjendjes se arkes negative		5
Gjendja e arkes kumulative ne vitin e fundit negativ	-	61,021,432
Gjendja e arkes pozitive krijuar ne vitin vijues		171,909,712
PBP (periudha e veteshlyerjes)		5.35

In this respect, the self-payment period for this project is achieved in 5.35 years. Nevertheless, taking into account that payment from Tirana Municipality will be annual, then the self-payment period will not be 5.35 years, but 6 years.

2.6.4. Financial compatibility

According to CoMD no. 575, dated 10.07.2013, article 7, item 10, the financial compatibility of a project "indicates whether the project seems to be able to attract guarantees/financial support and qualitative loaners, by providing a strong and reasonable financial."

Based on the above-mentioned financial analysis, this project is economically profitable and this profitability is presented as following:

- NPV = 5.79% > 0
- IRR = 5.79% > than interest of deposits or treasury bonds
- PBP = 6 year < 7 years (duration of concession)

2.7 Quantitative and Qualitative Risk Analysis

The main goal of Risk Analysis is to identify and evaluate the gamma of risks that may affect the project. Therefore, a strategy on risk management is carried out in order to guarantee the successful realization of the project. In compliance with Decision of Council of Ministers No. 575, dated 10.07.2013 "On approval of rules for evaluation and issuance of concession/private-public partnership" following is a risk analysis regarding this project.

2.7.1 Qualitative Risk Analysis

Land Risk

Description of the Risk: Lands selected for construction of 17 schools will mostly be owned by the state, whereas the private-owned lands will be expropriated in line with the legislation in force and will be put at disposal of the concessionary. As a result, this risk has a low probability, almost zero, about this project. Regarding the necessary permits, there is no risk, because Tirana Municipality is itself the responsible body to grant these permits. In relation to environmental standards, the selected lands are plots located in areas were the environmental standard is not affected, therefore the risk is considered zero.

Management of risk: This risk is assessed with a zero probability and it is covered by Tirana Municipality. Tirana Municipality will carry out all the procedures for expropriation of private lands out of this PPP scheme, before the beginning of works. If any of the selected lands is in a ownership conflict, turning expropriation impossible, authorities will ask for information at the Immovable Properties Registration Office for alternative sites to be used. Regarding geological conditions and environmental standards, there has been a environmental study part of this feasibility study, which has come to the conclusion that the construction of these objects does not have an impact on the environmental standards. Hence, during the procedures for obtaining a construction permit, there will be also a detailed environmental study by the concessionary.

Risk of design, construction and functioning

Description of the Risk: Calculation of costs for construction and furniture of new schools is based on above-mentioned methodology, which takes into consideration the cost of schools built by Tirana Municipality in the last three years. Therefore, the possibility of a higher construction cost than the calculated cost is almost zero. Construction and functioning of schools depend in a certain scale on the obtaining of construction permit and meeting of preconditions for obtaining of this permit, such as environmental permit, connection with the electrical grid or water supply system, approval of projects for fire protection, etc. The concessionary has the right to draft the designing, prepare the documents for equipment with a construction permit, as well as to build the school objects. From this point of view, the risk of delays in equipment with construction permits, delays in kick-off works, readiness is possible.

Management of risk: This risk belongs to the concessionary. He is accountable for compilation of documents and equipment with construction permit. If the concessionary does not prepare the project on time and will neglect the application for construction permit by not applying on time or having irregularities in documents, or failure to start works on time, then he will be accountable for failure in starting works on time and will compensate the contracting authority according to the requirements in the concessionary contract. Likewise, as long as the concessionary is responsible for drafting and implementing the project, each delay in completion of construction works, excluding the case when the delay comes as a result of a force majeure will be under the concessionary´s responsibility and will be forced to compensate the contracting authority according to requirements in the concessionary contract.

Functioning Risk

Description of the Risk: The possibility that the new schools will not be functional after the construction is related to the non-qualitative works by the concessionary, which might make the performance of teaching in new buildings impossible. This risk has a low probability because the completion of works will be carried out by the technical supervisor and financial bill of quantities will be supervised by the contracting authority. Regarding the risk of a higher maintenance cost than expected, the probability is almost zero, because the annual maintenance cost is calculated based on annual expenses of Tirana Municipality for the maintenance of existing schools, which have been constructed long ago. According to engineering standards, the maintenance cost of newly-built objects is lower than that of the objects built before.

Management of risk: The probability of this risk is low and it is considered as a risk transferred to the concessionary. In case the construction quality will make the performance of teaching process impossible, the concessionary will be accountable and will be forced to carry out extra works until the works quality will be in line with the requests of the designing tasks. In case school buildings might have any problems due to construction works, in the course of seven years of the contract duration, which will make the teaching process impossible, the concessionary will be obligated to carry out extra works to make the school functional again. If the maintenance cost is higher than predicted, this would be a result of the inaccuracies in the design or construction. Therefore, the risk belongs to the concessionary, who is accountable for the designing and building of these schools.

Risk of demand and other trade risks

Description of the Risk: This risk is related to the situations when use of the object is different from what is expected or the generated incomes are lower than the forecast. As long as objects to be build are school buildings that will not have a different use and cannot generate incomes, this risk cannot applied on this project.

Management of risk: The possibility that this project can be affected by this risk is zero, because it is not subject of its impact.

Economic and Financial Risks

Description of the Risk: As long as this project includes financial transactions to be implemented in the course of time, there exists the possibility of an impact from economic and financial risks. The unpredicted increase of the norms of interest may increase the financial costs of the project from the concessionary. On the other side, changes in exchange rate course may have a worsening affect in the finances of the concessionary if his incomes and expenses are in a different currency, e.g. the concessionary has been granted a loan in EUR of USD for the financing of the project, while Tirana Municipality makes the annual payments in Leke. In the end, as long as this project includes periodical payments for a seven year period, there exists the possibility of an impact from inflation in the concessionary´s incomes.

Management of risk: Due to the fact that Albania is a country with a sustainable macroeconomic situation, the probability that this project may be affected by such risk remains low. The risk of interest rates or exchange rates belongs to the concessionary and shall be calculated in its financial projections. Inflation risk is shared among the concessionary and Tirana Municipality. As long as the Bank of Albania policy is keeping infection under 3% and duration of the project is only 7 years, the probability of this risk is low. Nevertheless, in the definition of income margin as related to interest rate of 7 year obligations, Tirana Municipality guarantees the concessionary the same protection toward the economic and financial risks as guaranty of Albanian Government for buyer of obligations.

Risks of assets ownership

Description of the Risk: This risk is related to the possibility that technology might get older or if the value of assets might be different at the end of the contract. As long as, the construction consists of school buildings, which will be maintained by the concessionary for seven years, the probability of this risk is low. Nevertheless, the quality and value of assets may be lower than the projection due to non-qualitative maintenance.

Management of risk: This risk is transferred to the concessionary. Maintenance of schools buildings and their furniture will be completed in line with the standards in force and will be supervised by the Contracting Authority. In case the concessionary will not maintain schools in line with the above-mentioned determination, the concessionary contract will envisage provisions obligating him to pay the damage. If at the end of the contract, the value of assets will be different from the predicted, the concessionary contract will define provisions obligating the concessionary to pay the damage.

Political risk

Description of risk: The risk of an impact from political decisions on the project is evident. As long as it is a project initiated from Tirana Municipality, a local government body, the success of the project depends on the coordination with local government. Likewise, there is a potential possibility that the results of next local elections – a potential change of Tirana mayor – may also cause the change of priorities and as a result the project can be blocked.

Management of risk: This risk is transferred on the Contracting Authority - Tirana Municipality. To ensure the consent of central government, with the approval of the feasibility study from the head of Tirana Municipality, will be required also an approval from the Ministry of Finance and Ministry of Education and Sports. Regarding risk of a negative impact of the project as a result of changes in the leadership of Tirana Municipality, the concessionary contract will envisage provisions that obstacle the dismissal of the Contract for non-legal reasons by the Contracting Authority.

Risks deriving from change of legal framework

Description of risk: Potential changes in legislative framework may affect the project positively and negatively. As long as the project is related to the construction of school buildings, the possibility of an affect from legal changes is related only to standards and construction manuals. Therefore, this risk has a low probability. Regarding changes in fiscal laws, the negative or positive influence can be felt only in the finances of concessionary.

Management of risk: This risk falls on the concessionary. In order to have minimal effects, the concessionary contract will include provisions that protect it from discriminating changes in law – always if the discrimination is proved by the court. On the other side, the concessionary will be forced to implement any legal changes coming as a result of governance policies.

Risk from force majeure

Description of risk: Force majeure risks, such natural calamities, civil unrests or wars are transferred to the concessionary and contracting authority. Taking into account the fact that Albania is a member of NATO and with a clear perspective of EU integration, the probability of risks from wars or unrests is almost zero. On the other side, the probability of and impact from earthquakes or other natural disasters on the project is low – How? As a result of the above-mentioned analysis of environmental impact on the project.

Management of risk: Probability of these risks is very low and it is transferred on both parts. The concessionary contract will envisage clauses of force majeure which will guarantee that any negative impact on the project shall be divided between the parties.

2.7.2. Quantitative Analysis of Risks

This analysis aims to prioritize risks that may affect the project by calculating their probability and potential impact on the achievements of project objectives. The quantitative evaluation is based on the probability of occurrence of each risk and potential impact on costs and deadlines of the project.

Impact of risks on project costs is calculated based on the specific weight of each of them in the project's cost. Whereas, the impact on deadline of completion of works is calculated based on legal deadlines for completion of defined procedures that may be necessary for well-going of the project.

Following is a quantitative analysis on the impact of each risk in the costs and deadlines for realization of the project.

Lands risk. Probability of this risk is low, 0-5%. Its impact on the project' cost is zero because expropriations of private lands that will be used for construction of school will be carried out by Tirana Municipality with a special fund out of the financial scheme of this project. The lands selected for construction of the schools are state-owned and private properties. In case use of any of these lands is impossible than will be used an alternative selected land with the necessary information from the Immovable Properties Registration Office. As a result, the impact on the deadline of completion of works is related the handing in of the state-owned land if it is not a property of Tirana Municipality or expropriation of private properties. The impact on deadline of works is calculated at 3 - 6 months.

Risk of designing, construction and functioning. Probability of this risk is low, 5-10%. The costs assessment process of the schools construction is carried out in line with the MoES guidelines manuals and based on the construction of schools by Tirana Municipality in the course of last years and prices have been indexed according to construction prices index of INSTAT. Hence, maximal influence of this risk in costs is less than 5%. On the other side, the deadline of works may not be respected as a result of failure to receiving the construction permit or other permits on time by the concessionary or due to slower completion of works than the calendar of works. In case designing is delayed or documents for equipment with necessary permits are not compiled, the impact on deadline of works is calculated from 3 to 12 months.

Functioning Risk. Probability of this risk is calculated at 0-5%. As long as this project is related to the construction of new schools, there exists the possibility of a low quality of construction. This could require additional works beyond the defined deadline. The impact of this risk in the deadline of works is calculated from 1 to 3 months, whereas the impact on total cost of the project is envisaged at 5-10%. There exists an opportunity that the maintenance cost may result higher than the forecast, but compared to total cost of the project the impact of this cost is almost zero.

Risk of demand and other trade risks. This risk cannot be applied on the project and the possibility of an impact from it on cost or deadlines is zero.

Economical and financial risks. Probability of this risk is low, 0-5%, taking into consideration that it is not a long-term concession where the concessionary generates incomes from the operation of the object of concession. As long as incomes of the concessionary are guaranteed by Tirana Municipality and covered by inflation, impact of risk on total cost of the project is low, 5% - 10%. On the other side, the impact on deadlines of completion of works is not envisaged longer than 12 months.

Risks of assets ownership. Probability of this risk is calculated at 0 - 5%. Its impact on total cost of the project is related to the maintenance costs, in case the latest results higher than forecast and a more rapid amortization of buildings that envisaged in the concession contract. Its impact on project's costs is predicted to be at maximum 5%. Probability of this risk does not affect the deadline for realization of works.

Political risk. Probability of such risk is medium low and is calculated at 10 - 20%. The occurrence of such risk may block works or interrupt the periodical payments for the concessionary by increasing the financing cost of the project and delaying the realization of works. In this respect, a potential influence of this risk on costs is calculated at 20 - 30%, whereas the impact on deadline of realization of works is calculated from 16 to 24 months.

Risk of change of legal framework. This risk has a probability of 5 to 15%. Potential legal changes, such as in standards to be followed for construction of new schools, may considerably boost the project cost. Therefore, the potential risk on costs is medium, varying from 20 to 40%. Likewise, potential legal changes may cause the re-drafting of the project or other delays that may be negatively affect the deadline for realization of works. Therefore, impact on deadline of works is calculated from 12 to 16 months.

Force Majeure Risk. Probability of this risk to happen is very low - 0 to 5%. Nevertheless, in case it happens, the impact on costs or deadline of works will be medium high. Therefore, impact on cost is calculated at 30% to 50%, whereas impact on deadline of works from 12 to 24 months.

Table 165 Summarizing table of impact of risks

No.	Risk	Probabiliy	Impact on cost	Impact on works deadline
1	Risk on land	0% - 5%	0%	3 - 6 months
2	Risk on designing, construction and implementation	5% - 10%	0% -5 %	3 - 12 months
3	Functioning Risk	0% - 5%	5% -10%	1 - 3 months

4	**Risk of demand and other commercial risks**	**-**	**-**	**-**
5	**Economic and Financial Risks**	**0% - 5%**	**5% -10%**	**6 - 12 months**
6	**Risks of assets ownership**	**0% - 5%**	**0% - 1%**	**-**
7	**Political Risk**	**10% - 20%**	**20% - 30%**	**16 - 24 months**
8	**Risk of change of legal framework change**	**5% - 15%**	**20% - 40%**	**12 - 16 months**
9	**Force majeure**	**0% - 5%**	**30% - 50%**	**12 - 24 months**

2.8 Sensitivity Analysis

Main factor that may change during the tender process is the income margin. At the same time, the details of respective costs will be respectively defined based on factual approved projects, depending on the approved projects. The direct cost will be calculated base on the factual realized volumes, which in no way will be higher than the costs envisaged in this project.

Nevertheless, due to the effects of sensitivity analysis, the calculation will made as if the costs have increased and decreased by 5% and 10%, whereas the income margin increases and decreases by 5% and 10%.

Table 78 Sensitivity Analysis if costs rincrease or decreasedby 5 – 10 %

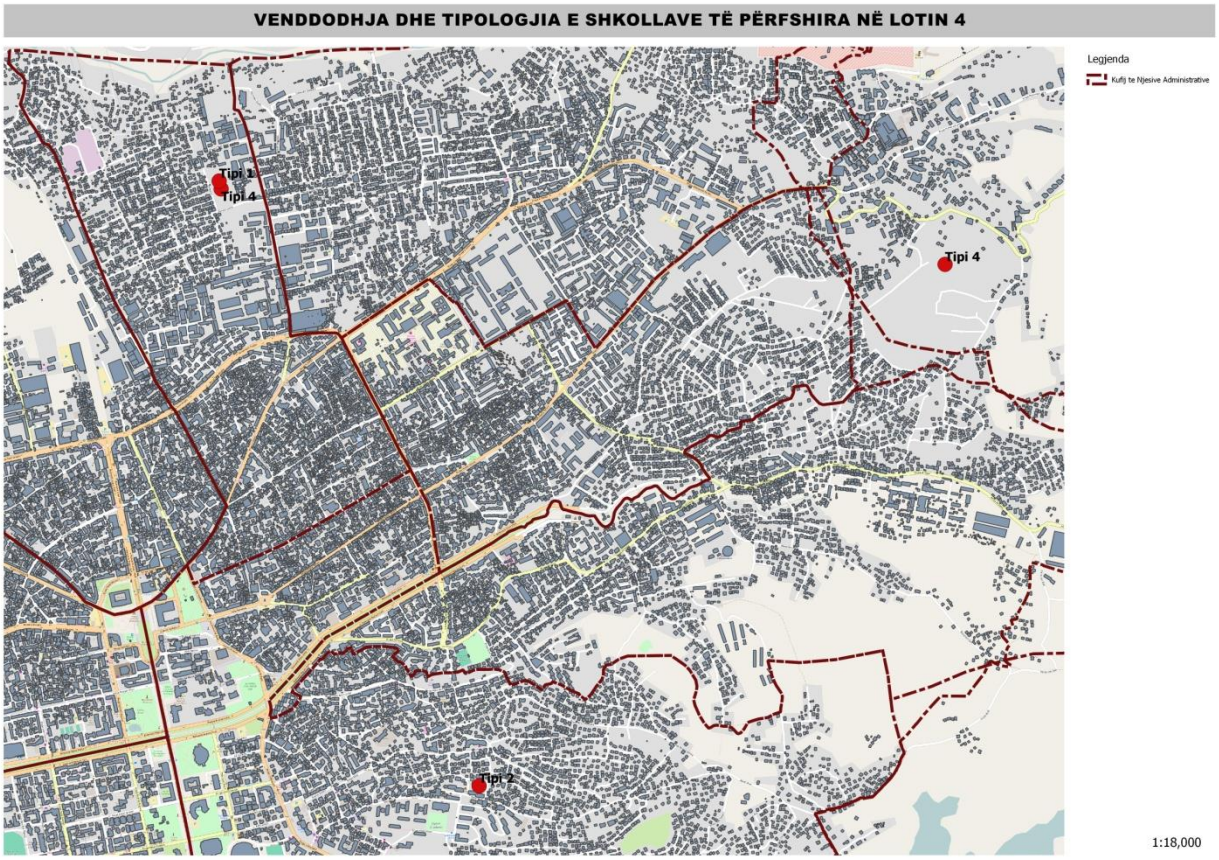
	Incomes and expenses increase by 10%	Incomes and expenses increase by 5%	Basic Model	Incomes and expenses decrease by 5%	Incomes and expenses decrease by 10%
Sensitivity Norm	10%	5%	0	-5%	-10%
Outflow from Investments	- 7,267,445,188	- 6,937,106,771 F-	6,606,768,353	- 6,276,429,936	-5,946,091,518
Outflow from Maintenance	- 1,275,711,645	- 1,217,724,752	1,159,737,859	- 1,101,750,966	-1,043,764,073
Incomes	10,274,681,048	9,786,000,321	9,197,517,960	8,713,446,063	8,188,265,320
Income before taxes	1,731,524,215	1,631,168,798	1,431,011,748	1,335,265,161	1,198,409,729
Tax on Income 15%	259,728,632	244,675,320 -	214,651,762	- 200,289,774	- 179,761,459
Nett income	1,471,795,583	1,386,493,478	1,216,359,986	1,134,975,387	1,018,648,270
NPV by 5.79%	110,223,600	81,672,242	170,329	23,634,170	- 68,587,789
IRR	6.38%	6.25%	5.79%	5.64%	5.34%
Self-Payment Norm	5.20	5.28	5.35	5.43	5.51

8.4 Lot 4

8.4.1 Location of sites of schools included in Lot 4

Loti 1 includes 4 schools, 2 in Unit 8, 1 in Unit 2 and 1 in Administrative Unit of Dajt. Distribution of schools included in Lot 4 are indicated in the following map :

Map 61 Location of schools in Lot 4



8.4.2 Total surfaces to be permanently seized from sites of schools included in Lot 4

SITE 2/3

Picture 11 – Orhtophoto of the site

LOCATION :

Proposed site no.**2/3** for a nine-year school is near Hygiene Directorate. Accessable from Mihal Grameno str.

TECHNICAL DATA : Site 2/3 : 4093 m2

CURRENT SITUATION OF THE SITE :

- It is in an area owned by private subjects, surrounded.
- Considerably sloppy
- High density area.
- No high schools in this zone
- Road infrastructure may be a problem.

Picture 12 Photo of site 2/3

SITE D2

Map 62 Orthophoto of the site

LOCATION : Proposed site no.**D2** is located near Linza, Administrative Unit of Dajt. Accessed through "Shefqet Kuka" street.

TECHNICAL DATA : Site D2 : 13.244 m2

CURRENT SITUATION OF SITE :

- Simple access and presence of road network in the vicinity of site ;
- Site is located near the inhabited zone of Linze
- Currently the site is composed of land and buildings owned by former-Military Informative Service

Picture 13 Photo of the site D2

SITE 8/1

Map 63 Orhtophoto of the site

LOCATION : Proposed site no. **8.1** is located near "5 Maji" street in Unit 8.

TECHNICAL DATA : Site 8.1 Surface – 17520 m2

CURRENT SITUATION OF THE SITE :

- Relatively calm zone.
- Easy access to the site. Road infrastructure may be a problem. Many positive aspect becuase it is located in a high density are.

Picture 14 – Photo from site 8/1

8.4.3 Legal Status of schools sites included in Lot 4

Site 2/3

Map 64 Indicative Map of properties

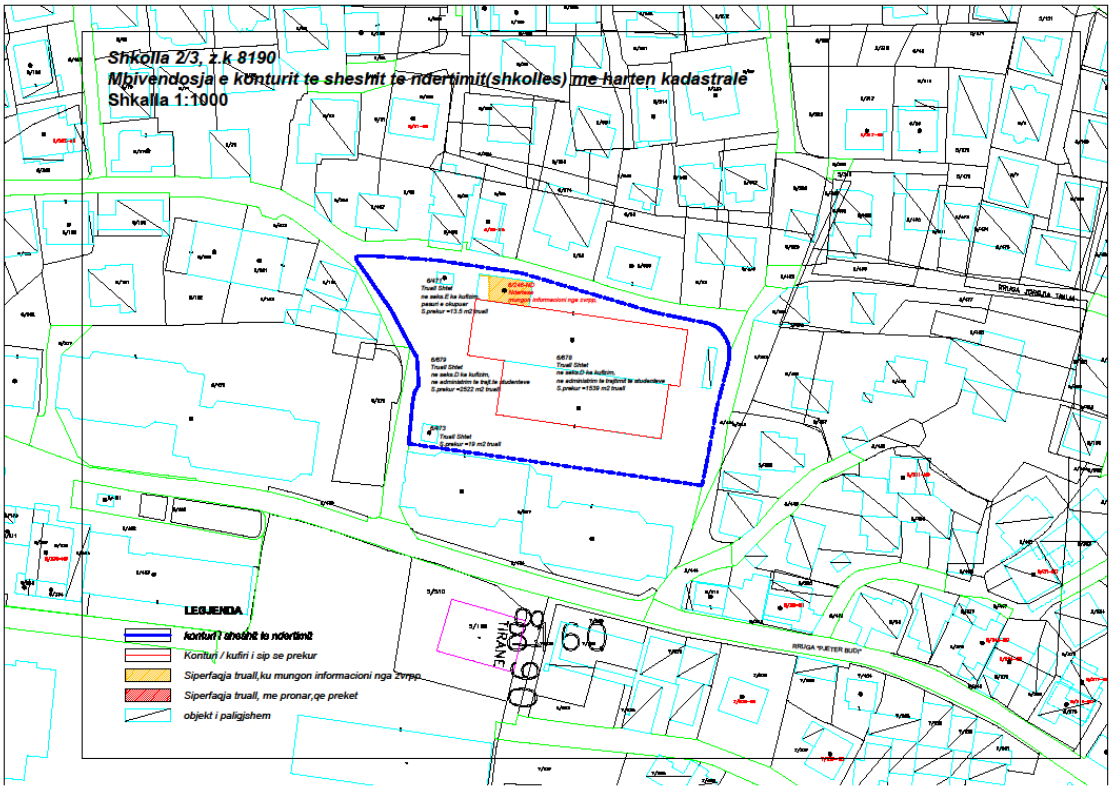


Table 117 Table with preliminary calculation of properties to be affected by the project

Nr	NAME	Note in Sec. E	Castral zone	No. Property	Sur. Affect land (m²)	Land price lek/m²	Sur. affected Obj. (m²)	Price Obj.lek/m²	Amount in lekë
1	State-owned	Occupied property	8190	6/471	13.50	66969			0.0
2	No information	Building	8190	6/246 - ND	0.00	66969		32113	0.0
3	State	Sec.D limit in students treatment administration	8190	6/678	1539.00	66969			0.0
4	State	Sec.D limit. in students treatment administration	8190	6/679	2522.00	66969			0.0
5	State		8190	6/473	19.00	66969			0.0
					4093.50				0.0

Schools to be built in cadrastral zone 8190 will affect a total of 4093.5 meter square property composed of 5 properties. 4 of them are state-owned properties, whereas for property no. 6/246 there is no information on its legal status, but depending on the zone the price of the object will be 32,113 per meter square. Price of the land is refered to CoMD No. 89, dt.03.02.2016.

Site D2

Map 65 Orthophoto of the site

PPP Evaluation Commission has not managed to obtain information on the legal status of properties affected by the proposal of plot with Code D/2 within the deadlines for drafting this feasibility study. Aiming to plan the necessary budget for completion of expropriation for this project, the Commission has assumed that the properties included in this plot consist of land and private properties and in this respect it has calculated also the expropriation costs. These costs will be reviewed with the obtaining of the complete information from Local Office for Immovable Properties Registration and certainly before the beginning of tender procedures.

Tablae118- Table with preliminary calculations affected by the project

No	NAME	Note in Sec. E	Cadastral Zone	No. Property	Surface of the affected land (m²)	Land price lek/m²	Surface of the affected price (m²)	Price Obj.lek/m²	Amount in leke
1	No information				14,900	3,560			53,044,000
					14,900				53,044,000

Site 8/1

Map 66 Indicative map of properties

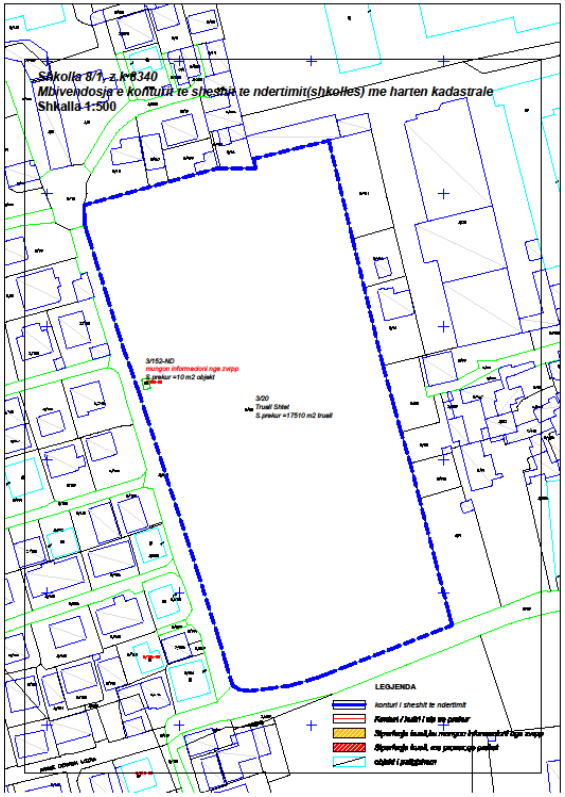


Table 119 Table with preliminary calculations of properties affected by the project

Nr	NAME	Note in Sek. E	Cadastral zone	No. Property	Sur affected land (m^2)	Land price lek/m^2	Sur of the affected land (m^2)	Price Obj.lek/m^2	Amount in leke
1	State owned land		8340	3/20	17.510	30158			0.0
3	No information	Object	8340	3/152 - ND	10.00	30158			301,580.0
					17.520				301,580.0

School to be built in cadastral zone 8340 wiill affect a total of 17,520 meter square property, composed of 2 properties, 1 is a state-owned object, no. 3/20 and 1 is a property with no information no 3/152. For the land, the calculated price is obtained from CoMD no.89, dt.03.02.2016.

8.4.4 Typology of schools included in Lot 4

Lot 4 envisages construction of 4 schools. Respectively, in administrative unit no. 2, administrative unit of Dajt and Administrative Unit No. 8. In concrete, in Au 2 is envisaged the construction of a basic education cycle school of type 2. In AU Dajt is envisaged the construction of a type 4 school of higher middle education. Whereas in Unit 8 is envisaged the construction of 2 schools - 1 of the basic education cycle of type 1 and one of higher middle education, type 4. The following table indicates detained data:

Table 120 – Schools typology e

Type	Location	Cycle	No classes	st/class	No st total	M2/students	Total surface
Type1	Urban	Basic education	20	30	600	8.23	4938
Tipi 2	Urban	Basic education	30	30	900	7.32	6588
Tipi 3	Rural	Basic education	20	24	480	8.42	4041.6
Tipi 4	Urban	Higher middle	21	30	630	6.35	4000.5

8.4.5. ECONOMIC AND FINANCIAL ANALYSIS FOR LOT 4

1. Economic and financial analysis

Economic and financial analysis of this feasibility study, in line with Council of Ministers Decision no. 575, dated 10.07.2013, "On approval of rules for assessment and granting for concession/private-public partnership", article 7, mainly focuses on determination of value for money of the project, as well as on completion of an evaluation of the investment in total, operative costs and maintenance, as well as any other income expected to be generated during the duration of the project.

1.1 Economic Model of the Concession / Public-Private Partnership

Law no. 125/2013, changed with law no. 88/2014, regulates the competences of contracting authorities in order to sign concessions/public-private partnerships. In this type of relations, the private partner takes the responsibility of financing, designing, building and/or re-building/ renewal the public infrastructure object, to operate and maintain the public infrastructure object built and/or rebuilt/newly renewed. Among the fields of implementation of this law is also education.[29]

Based on the data analysis, it results that to put an end to the over-crowded schools problem and two shifts learning, Tirana Municipality needs to build 17 new schools - 10 nine-year schools and seven high schools. The total cost of construction and furnitures for these schools is calculated at 7.6 billion leke. Such amount of money is financially unaffordable for Tirana Municipality, whose total annual budget is 10 billion leke, whereas investments for construction of new schools in the course of last years has been not more than 500 million leke.

In this respect, in order to settle this problem, Tirana Municipality must implement innovative methods of procurement and financing of the proposed project. To guarantee the realization possibility of the schools construction project, it was chosen a more innovative and cost-efficient approach, combining the designing, financing, construction and maintenance in one and only procurement contract. Due to the considerable dimensions of this project, this methodology will not only offer facilitations during the development process, but will provide more sustainability after its completion.

In the framework of the "Design, Finance, Build and Maintain" (DFBM) model as internationally known "Design, Build, Finance & Operate (DBFO)", **c**ontractors take the responsibility of designing, building, financing and maintaining an object for entire duration of

[29] Article 4, item dh), Law 125/2013

the contract. The contractor who may be one company or a consortium is responsbile for designing, financing, construction and maintenance of the object for a determined period of time, which is proposed to be 7 years. The payment after the completion of the object is dictated based on completion of some determined performance standards regarding the physical condition of the buildings, capacity, quality, etc. This model which goes beyond the designing and construction phase, naturally encourages the designer/builder to provide since the beginning a qualitative construction plan in order to have less costs during the maintenance phase, as long as the responsibility belongs to their consortium. Likewise, integration of all project´s contract in one reduces different transactional costs and boosts project management efficiency.

This PPP model has been widely used for construction of major infrastructure projects, such as construction of highways, hydro power stations, wastes management plants, etc, because the dimensions of such projects required considerable funds, efficient organization of capital and human resources, high designing and construction quality, maximal security and constant maintenance. In this respect, such models have been considered successful for development of projects that guarantee their realization and efficiency of the investment. Nevertheless, the use of this PPP form is not limited only in major public infrastructure works mentioned above. In many OECD countries, mainly in the United Kingdom, this methodology is used also for public service projects, such as construction of new schools.

Following are some examples from different countries that have successfully implemented this model for projects of educational infrastructure:

C**anada**[30]**:** "Alberta Schools Alternative Procurement" Program. In 2007, Alberta region in Canada declared the first stage of the program which envisages the construction of 18 new school buildings (kindergartens and nine-year schools), which were completed in 2010. After the completion of works, duration of the contract will continue with the maintenance and it estimated at about 30 years. The second phase of the program envisaged the construction of other 10 nine-year schools according to the same model and 4 high schools through the simple model of Designing-Constructing contract, which were completed in 2013.

[30] "Flexible and alternative approaches to providing school infrastructure in Alberta, Canada" – OECD, 2010

Greece[31]: "Macedonia Schools and Attica Schools" Program. With the use of DBFM mechanism, private operators designed construction of 51 schools with a total amount of about 269 million Euro and 25 year contracts.

United Kingdom[32]: "Building Schools for the future" Program. This program is a long-term investments program, which is contributing in the construction of a considerable number of schools in the entire territory of UK. Majority of schools has been built through the Design-Build-Finance-Maintenance scheme, but in this case often has been included also the element of school management by a private subject of a determined period. In general, total duration of the contract is estimated up to 30 years. The private consortium is regularly paid by public funds based on its performance during the contract period. If the consortium does not achieve the required performance, the payment is reduced. At the end of the contract period, school is given back to government.

New Zealand [33]: The project of New Zealand Ministry of Education for construction of two schools in Hobsonville, Auckland. This project envisages the construction of a new lower cycle school and one lower middle cycle school in the suburb region of Hobsonville in Auckland city. The private sector is partly responsible for designing, building and financing of the objects, together with their constant maintenance and management of common services. Construction of these schools has been successfully completed in 2014.

In this aspect, the project for construction of new schools in Tirana needs the application of the same approach for improvement of education service in the entire territory of the Municipality. Big number of schools that will be built, financial limitations, short period for implementation of the project, as well as need to guarantee the maximal security of buildings point to the necessity of establishment of an efficient and successful public private partnership.

1.2 Main assumptions

In the framework of financial and economic analysis effects of this feasibility study, were made the following assumptions:

[31] "The role and impact of public-private partnerships in education", pg. 82 – World Bank, March 2009 .http://www.ungei.org/resources/files/Role_Impact_PPP_Education.pdf

[32] Ibidem (i.e. extracted from same WB document in the above-mentioned reference and same page)

[33] "Mayoral Position Paper on Public Private Partnerships" – Ernst and Young, November 2013.

- Concessionary will cope with its incomes the entire investment for construction of education objects and their functioning, whereas Tirana Municipality will face with its funds the expropriation of private lands to be used for this purpose.
- Educational objects will be built and functional at maximum 18 months from the signing of the construct.
- After the construction and functioning of schools, concessionary will be accountable for administration and maintenance of the objects for a 7 year period and for every problematic regarding risks of assets for these period.
- After the construction of objects, Tirana Municipality will pay the concessionary a certain annual sum until the full payment of the invested amount. Incomes for this payments will be provided from the annual incomes of Temporary Tax on Education Infrastructure and conditioned transfer from Ministry of Finance.

1.3 Costs analysis

Based on technical, it has come to be conclusion that in total will be built 17 schools: 10 nine-year schools and 7 high schools. The new schools will be designed and built according to models in line with standards specified by Ministry of Education and Sports through "Guideline for School Buildings Design". The school models offer the opportunity to fully meet the needs for pre-university education classes, respecting legal and technical requirements for definition of parallel classes according to each teaching cycle. In the same time, for nine-year schools are envisaged also venues for pre-school education, as part of the nine-year education institution. Referring to above-mentioned standards, there exist 4 main types of schools with the following operational data:

Type 1 of schools includes 20 classes per pre-school and school students with a construction surface of about 4,938 m2. Likewise, this schools will included a kindergarten of about 4 classes with a surface of about 874 m2. In total, the construction surface for this type of school is 5,812 m2. **Type 2** of schools is nine-year education with 30 classes for pre-school and school students with a construction surface of about 6,588 m2. Likewise, this school will include a kindergarten with 6 classes with a surface of about 1,310 m2. In total, the construction surface for this type of school is 7,898 m2. **Type 3** of schools is higher middle for rural zones with 20 classes with a construction surface of about 4,041 m2. **Type 4** of schools consists of higher middle schools for urban zones with 21 classes and a construction surface of about 4001 m2.

According to quantitative analysis carried out and explained above, there are necessary a total of 17 schools, 2 out of them belonging to Type 1, 7 schools of Type 2, 1 school of Type 3 and 7 high schools of Type 4. Respectively these schools will be built according to following administrative units and data:

Table 121 Detailed data on each school for Lot 4

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	nxënës për klasë	Nxënës për shkolle	Sipërfaqe totale shkolla	Klasa kopësh ti	Nxënës për klasë kopështi	nxënës për kopësht	Sipërfaqe totale kopësht	Siperfaqe totale ndertimi
1	NJA 02	Tipi 2	9-vjeçar	30	30	900	6,588	6	24	144	1,310	7,898
2	NJA 08	Tipi 1	9-vjeçar	20	30	600	4,938	4	24	96	874	5,812
3	NJA 08	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
4	NJA Dajt	Tipi 4	i mesëm i lartë	21	30	630	4,001	0	0	0	0	4,001
Totali				92		2,760	19,527	10	48	240	2,184	**21,711**

Summarizing according to schools typology, in total, we have the following operational data :

Table 122 Data on proposed schools according to typology for Lot 4

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Nr nxënës për klasë	Nxënës për shkollë	Nr klasa kopështi për shkollë	Nr nxënës për klasë kopështi	Nxënës për kopësht	Sip ndërtimi shkolla	Sip ndërtimi kopështe	Tot Sipërfaqe ndërtimi	Total Nxënës në shkolla	Total Nxënës në Kopështe	Nr Total i nxënësve
Tipi 1	1	20	30	600	4	24	96	4,938	874	5,812	600	96	696
Tipi 2	1	30	30	900	6	24	144	6,588	1,310	7,898	900	144	1,044
Tipi 4	2	21	30	630	-	-	-	8,001	-	8,001	1,260	-	1,260
Grand To	**4**	**71**				**48**	**240**	**19,527**	**2,184**	**21,711**	**2,760**	**240**	**3,000**

For a better analysis of value for money of the project, we have grouped the expenses in four main categories, based on accounting standards and requirements of CoMD no. 575, dated 10.07.2013, “On approval of rules for assessment and granting of concession/public private partnership”, article 7, section 3-6:

Direct costs of investments

Direct costs of maintenance

Due to the effects of the following analysis, all the prices and values will be without VAT, unless is specified otherwise.

1.3.1 Direct costs of investment

During the analysis and in line with above-mentioned CoMD, there were identified the following direct costs of investments:

1. Costs of Land Expropriation ;
2. Construction Cost ;
3. Cost of Study and Designing ;
4. Supervision Cost ;
5. Cost of Technical Control;
6. Technical Revision ;
7. Cost for Furniture and Equipment;
8. Cost of lab devices.

1.3.1.1 Land Expropriation Cost

According to determination of trace where these schools will be built, it results that will be expropriated a total of **14,910 m2** of private properties, which according to the calculations are estimated at an expropriation value of **53,345,580** leke. On the other side, the state-owned land will be subject of respective procedures in order to take the respective properties under the administration.

With the approval of CoMD in this respect and completion of financial and legal documents in line with the CoMD and normative acts in force, every expropriated subject will be paid by

Tirana Municipality through a fund determined for this purpose.

Table 123 Table on expropriations for Lot 4

Nr rendor i tabeles	Adresa	Tipi	Sheshi	Shpronesimi ne Vlere	Siperfaqje ne m2 te shpronesuar	Cmimi mesatar per m2
2	NJA 08	Tipi 1	8/1	150,790	5	30,158
3	NJA 08	Tipi 4	8/1	150,790	5	30,158
4	NJA Dajt	Tipi 4	D2	53,044,000	14,900	3,560
Grand Total				**53,345,580**	**14,910**	**3,578**

1.3.1.2 Construction costs

Based on the report obtained from General Directorate of Public Works No. Prot. 21407/2, dated 09.08.2016, costs for schools construction is 46,331.67 leke/m2, whereas the kindergartens costs are 54,380.83 leke/m2. From the combination of this data with the total construction surface for each type of school, it results that :

- The construction value of a Type 1 school is 228,785,770 leke and to this amount is added also the construction of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 1 school, including the kindergarten venue is 276,314,618 leke.
- The construction value of a Type 2 is 305,233,020 leke and to this amount is added the construction cost of a kindergarten of about 71,238,892 leke. In total, the general cost of the construction of a Type 2 school, including the kindergarten venue is 376,471,912 leke.
- The construction value of a Type 3 schools is 187,207,732 leke and to this amount is added the construction cost of a kindergarten of about 47,528,848 leke. In total, the general cost of the construction of a Type 3 schools, including the venues of a kindergarten is 234,736,581 lekë.
- The construction value of a Type 4 school is 185,349,833 leke and these schools do not include kindergarten premises.

Table 124 Construction costs of schools for Lot 4

Tipi	Nr i shkollave sipas tipit	Nr klasash për shkollë	Klasa kopësh ti për shkollë	Sip ndërtim i shkolla	Sip ndërtim i kopështe	Tot Sipërfaqe ndërtimi	Cmimi i ndertimit te shkollave lek/m2	Cmimi i ndertimit te kopështeve lek/m2	Kosto ndertimi të një shkolle	Kosto e ndërtimit të një kopështi	kosto e ndërtimit të një shkolle + kopesht	Kosto e përgjithshme e ndertimit
Tipi 1	1	20	4	4,938	874	5,812	46,332	54,381	228,785,770	47,528,848	276,314,618	276,314,618
Tipi 2	1	30	6	6,588	1,310	7,898	46,332	54,381	305,233,020	71,238,892	376,471,912	376,471,912
Tipi 4	2	21	-	8,001	-	8,001	46,332	54,381	185,349,833	-	185,349,833	370,699,665
Grand To	**4**	**71**	**10**	**19,527**	**2,184**	**21,711**	**138,995**	**163,143**	**719,368,623**	**118,767,740**	**838,136,363**	**1,023,486,195**

In total, there will be built **1 Type 1 school** with a construction cost of 276,414,618 leke per school, 1 Type 2 school with a construction cost of 376,471,912 leke per school and 1 Type 4 schools with a construction cost of 185,349,833 leke per school. As a result, the total construction costs for this project amounts to **1,023,486,195** leke. This cost will be covered by the concessionary.

1.3.1.3 Other direct investment costs

Based on the report from Public Works General Directorate, in Document No. Prot. 21407/2, date 09.08.2016, other direct investment costs are :

- Study – Design
- Supervision of works
- Technical Control
- Technical Revision
- Fire protection
- Environmental Permit
- Tax of impact in infrastructure

.

Taking into account the data analyzed in this chapter on costs, it results that the direct investment const is as following :

Table 125 Direct investments costs for Lot 4

Tipi	Nr i shkollave sipas tipit	Tot Sipërfaqe ndërtimi	Kosto Studim Projektim	Kosto Mbikqyrje	Kosto kolaudimi	Oponenca teknike	Zjarrefikes	Leje Mjedisore
Tipi 1	1	5,812	4,481,127	3,140,921	110,526	223,183	50,000	30,000
Tipi 2	1	7,898	10,110,384	4,177,904	150,589	250,675	50,000	30,000
Tipi 4	2	8,001	10,691,738	4,364,479	153,710	369,692	100,000	60,000
Grand To	**4**	**21,711**	**25,283,249**	**11,683,304**	**414,825**	**843,550**	**200,000**	**120,000**

Tax of impact on infrastructure for Public Works is 0.

1.3.1.4 Cost of furniture

In order to make schools functional, it is necessary to provide necessary IT equipment and laboratories. Furniture of new nine-year and high schools of Tirana Municipality will be realized based on law 69/2012 "On Pre-university education system in the Republic of Albania", changed, for which Ministry of Education and Sports has prepared the Guideline "On designing of school buildings" (Norms and Standards).

Pursuant to needs for new schools, made evident by you, referring to MoES standard for classes typology and other venues in line with teaching program, there were carried out the respective calculations about the furniture costs per student, which is about 24.167 leke without VAT. This cost includes the amount for furniture without the equipments, computers and other necessary devices for laboratories of physics, chemistry and biology, etc.

For the calculation of furniture price, we considered the offers obtained by 6 economic units for furniture items according to technical specifications of MoES.

Concretelly, according to school typology, the furniture cost is as following :

Table 176 Cost of school furniture

Type of schools	No	st/clas	No st.	Cost/stu	Total cost

	classes	s	total	dent	
Type 1	20	30	600	24,167	14,500,000
Type 2	30	30	900	24,167	21,750,000
Type 3	20	24	480	24,167	11,600,000
Type 4	21	30	630	24,167	15,225,000

The furniture cost for basic education have been included three levels which envisage the following types :

For furniture of new kindergartens, we referred to the previous experience in furniture manner and their necessary quantity. Regarding furniture costs, we referred to the market prices, as well as previous indexed interim payment reports.
Costs for furniture of kindergartens per children is about 27.916 lek without VAT
This furniture cost, beside furniture of children premiee (sitting room, bedroom) includes also the office of director, psychologist and costs for kitchen furniture.

In conclusion, the furniture costs according to kindergarten typology is as following :

Table 177 –Furniture costs according to typology

Type	Location	Cycle	No class	St/Class	No st. total	Cost/children	Total cost
Type1	Urban	Kindergarten(3-5years)	4	24	96	27.916	2.680.000
Type2	Urban	Kindergarten(3-5years)	6	24	144	27.916	4.020.000
Type3	Rural	Kindergarten(3-5years)	4	24	96	27.916	2.680.000

Regarding costs for lab equipements, we referred to the purchase contract “Scientific Laboratories (Chemistry, Physics, Biology) for Pre-University schools” realized by Ministry of Education and Sports during 2016, in which results that the value per laboratory without VAT is as following:

Table 126 Costs for lab equipment

I	Basic education school	Amount/ laboratory
1	Natural Sciences Laboratory	186,998
2	Chemistry Laboratory	223,125
3	Physics Laboratory	1,183,602
4	Biology Laboratory	632,467
5	IT Laboratory	3,869,658
II	High school	-
1	Chemistry Laboratory	528,469
2	Physics Laboratory	1,294,500
3	Biology Laboratory	651,657
4	IT Laboratory	3,869,658

According to schools typology defined based on the designing standards of pre-university education objects, set by Ministry of Education and Sports, in which is determined the quantity of labs for each type, we have the following table :

Table 179 Costs for lab equipment according to schools typology

No	Tyes of schools	Cost without VAT
1	Basic education (Type 1)	6,095,850
2	Basic education (Type 2)	7,279,450
3	Basic education (Type 3)	5,743,950
4	Higher Middle Education (Type 4)	13,983,067

According to the analysis of all the above-mentioned data, it results that the total cost of furniture and lab equipments of 4 schools is **114,741,433** leke without VAT, according to the following table :

Table 127 Furniture Costs and lab equipments for school of Lot 4

Tipi	Nr i shkollave sipas tipit	Kosto e mobilimit te shkollave	Kosto e mobilimit të kopështeve	Total Kosto Mobilimi	Kosto Laboratori	Total kosto pajisje, mobilje dhe orendi
Tipi 1	1	14,500,000	2,680,000	17,180,000	6,095,850	23,275,850
Tipi 2	1	21,750,000	4,020,000	25,770,000	7,279,450	33,049,450
Tipi 4	2	30,450,000	-	30,450,000	27,966,133	58,416,133
Grand To	**4**	**66,700,000**	**6,700,000**	**73,400,000**	**41,341,433**	**114,741,433**

1.3.1.5 Direct investment costs

In conclusion, the direct investment cost of this project is estimated at **1,230,118,136 lekë**. About **53,345,580** leke out of them are calculated as necessary funds for expropriation, which will be covered by Tirana Municipality. Whereas, the total cost of the project that will be covered by the concessionary is **1,176,772,556** leke, where the construction cost is **1,023,486,195** leke without VAT, Costs of the Designing, Technical Revision, Supervision, Technical Control, furniture and laboratories is **153,286,361** leke without VAT. In details, the calculated categories are as following :

Table 128 Direct cost of investment for Lot 4

Viti	Pershkrimi	Grand total
A.	**Kostot Direkte te Investimit**	**1,230,118,136**
A.1	**Kostot e Truallit**	**53,345,580**
A.2	Kostot e Projektimit	25,283,249
A.3	- Ndertim + instalime	1,023,486,195
A.4	- Oponenca teknike	843,550
A.5	- Takse Infrastrukture	-
A.6	- Leje mjedisore	120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000
A.8	- Kosto Supervizimi	11,683,304
A.9	- Kosto Kolaudimi	414,825
A.10	- Mobiljet dhe Orendi	73,400,000
A.11	- Investime IT&T dhe Labs	41,341,433

1.3.2 Maintenance costs

Based on calculations carried out from General Directorate No. 3 of City's Workers, annual maintenance cost per class is 422,107 leke with VAT or 351,755 leke without VAT. Making respective calculations, the annual cost for the general maintenance for each type of school is. The total maintenance cost for all schools of **Lot 4** is **35,879,060** leke per year.The annual cost of maintenance for calculation effects starts from 2018 and pursuant until the completion of PPP period. For more details, see the following tables:

Table 129 Annual maintenance costs for schools of lot 4

Tipi i shkollave	Nr i shkollave	Kosto e mirëmbajtjes për shkollë	Kosto e përgjithshme e mirëmbatjes
Tipi 1	1	8,442,132	8,442,132
Tipi 2	1	12,663,198	12,663,198
Tipi 4	2	7,386,865	14,773,731
Grand Total	**4**	**8,969,765**	**35,879,060**

In total, for 7 years, the general maintenance cost will be **251,153,420** leke without VAT. About **165,363,968** leke without VAT out of them is the maintenance costs of assets and **85,789,452** leke without VAT is the cost of maintenance staff. The following table is the analysis of categories of maintenance expenses for each school in one year, without VAT:

Table 130 Detailed cost of maintenance for Lot 4

Nr i shkollave	Adresa	Tipi	Cikli	nr klasash për shkollë	Lyerje per klase	Riparim suvatim + hidroizolim per klase	Riparime dhe mirembajtje e Nderteses	Riparime Orendi shkollore	Riparime Pajisje PC	Materiale Pastrimi	Lëndë djegëse për ngrohje dhe ujë të ngrohtë	Mirembajtje kondicionim, impiante uji dhe MNZSH	Sherbim roje	Sherbim pastrimi	Sherbim sekretarie	Total kosto mirembajtjeje
1	NJA 02	Tipi 2	9-vjeçar	36	824,079	845,210	258,531	609,794	929,032	304,839	3,010,065	1,556,129	1,029,693	2,745,848	549,978	12,663,198
2	NJA 08	Tipi 1	9-vjeçar	24	549,386	563,474	172,354	406,529	619,355	203,226	2,006,710	1,037,419	686,462	1,830,565	366,652	8,442,132
3	NJA 08	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
4	NJA Dajt	Tipi 4	i mesëm i l	21	480,713	493,039	150,810	355,713	541,935	177,823	1,755,871	907,742	600,654	1,601,745	320,820	7,386,865
Totali i Mirembajtjes				**102**	**2,334,891**	**2,394,762**	**732,505**	**1,727,749**	**2,632,257**	**863,711**	**8,528,517**	**4,409,032**	**2,917,463**	**7,779,903**	**1,558,270**	**35,879,060**

1.4 Analysis of PPP incomes

1.4.1. Tariff for the use of schools

Tariff for use of schools (hereinafter "Tariff") will be calculated in such way so that could cover the costs of concessionary and guarantee a minimal income margin for the concessionary in order to make this PPP attractive and the best economic solution compared to other potential scenario. The tariff is paid for the entire maintenance and administration period of schools by concessionary, i.e. for 7 years. This tariff is paid to every year by Tirana Municipality through financing resources detailed as following. This scheme provides for the construction of 17 schools in a record time, solving the two-shifts teaching and over-crowded classes, but as long as all the risks for maintenance and careful use of the asset will be under the responsibility of the concessionary and related to the payments, this will enable qualitative constructions in the interest of the community.

As long as the direct investment costs, i.e. construction and functioning of schools is calculated based on interim payment reports, which include the income margin of the contractor, on this category will not be calculated the additional income margin. But on the other side, as long as the invested values of the concessionary in this respect will be covered in a seven-year period, he must be minimally reimbursed for the value in time of the money, as well as for the normal and extraordinary maintenance part for this period.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period[1], respectively the results of seven year obligations from 2015 until 15.09.2016.

In this respect, as the income margin has been considered the limit of average norm of Albanian government obligations for a fixed seven year period [34], respectively the results of seven year obligations from 2015 until 15.09.2016.

Table 131 Income Margin

[34] http://www.financa.gov.al/al/raportime/borxhi/ankandet-e-emetimit-te-letrave-me-vlere-te-qeverise/rezultatet-e-ankandeve/2016

ISIN	Dt.Ankandi	Ankandi	Muaj	Datë Emetim	Datë Maturim	Shuma e shpallur (fillestare)	Shuma e shpallur (nd. strukture)	Shuma e kërkuar	Shuma e pranuar	Prorata Konkurues	Prorata Jo Konkuruese	Yieldi Uniform i Pranuar
AL0017NF7Y23	13.09.2016	*7vjeçar/7years(fix)*	*Shtator*	15.09.2016	15.09.2023	*3,000,000*		*2,309,000*	*2,309,000*			*4.89%*
AL0016NF7Y23	01.06.2016	*7vjeçar/7years(fix)Rihapje*	*Qershor*	03.06.2016	16.03.2023	*2,000,000*		*3,141,400*	*2,000,000*	*4.40%*		*4.00%*
AL0016NF7Y23	11.03.2016	*7vjeçar/7years(fix)*	*Mars*	16.03.2016	16.03.2023	*3,000,000*		*8,247,000*	*2,999,900*	*76.48%*		*4.90%*
AL0015NF7Y22	14.12.2015	*7vjeçar-fiks*	*Dhjetor*	16.12.2015	16.12.2022	*2,500,000*		*5,288,600*	*2,500,000*	*67.70%*	*100.00%*	*6.79%*
AL0014NF7Y22	14.09.2015	*7vjeçar-fiks*	*Shtator*	16.09.2015	16.09.2022	*1,000,000*		*1,430,600*	*1,000,000*	*100.00%*	*100.00%*	*7.78%*
AL0013NF7Y22	12.06.2015	*7vjeçar-fiks*	*Qershor*	16.06.2015	16.06.2022	*3,000,000*		*2,953,500*	*2,953,500*	*100.00%*	*100.00%*	*7.80%*
AL0012NF7Y22	12.03.2015	*7vjeçar-fiks*	*Mars*	16.03.2015	16.03.2022	*2,500,000*		*2,815,800*	*2,500,000*	*80.98%*	*77.92%*	*7.81%*
										Yieldi Mesatar i pranuar		6.28%

The income margin will be object of bidding procedures of competitors in this PPP, but in the mean time, it is necessary to understand the general value of this PPP. The income margin will be calculated for the remaining value of the direct investment every year and on annual maintenance costs. Thus, the financing scheme is attractive for potential competitors and total cost of the project is not higher than the traditional financing methods.

Based on the calculations, annual tariff to be paid to the concenssionary with a margin of about 6.28% will be as following :

Table 132 Annual tariff to be paid to concenssionary for Lot 4

A	B	C	D	E	F	G	H	I	J	K	L	M
Nr rendor	Viti	Kosto Direkte e Investimit ne Fillim të Periudhës (pa TVSH) (C3=F2)	marzhi i fitimit	Shlyerja vjetore për Koston Direkte të Investimit (C2/B8)	Vlera e Mbetur e Kostos Direkte te Investimit (C-E)	Marzhi i fitimit mbi koston Direkte të investimit (C*D)	pagesa vjetore për koston direkte të investimit Pa TVSH (E+G)	kosto vjetore mirembajtjeje Pa TVSH	Marzhi i fitimit mbi Mirembajtjen (D*I)	pagesa vjetore për koston direkte të investimit Pa TVSH (I+J)	Total Marzhi i Fitimit	Tarifa Vjetore Pa TVSH
1	0	1,176,772,556										
2	1	1,176,772,556	6.28%	168,110,365	1,008,662,191	73,901,317	242,011,682	35,879,060	2,253,205	38,132,265	76,154,522	**280,143,947**
3	2	1,008,662,191	6.28%	168,110,365	840,551,826	63,343,986	231,454,351	35,879,060	2,253,205	38,132,265	65,597,191	**269,586,616**
4	3	840,551,826	6.28%	168,110,365	672,441,461	52,786,655	220,897,020	35,879,060	2,253,205	38,132,265	55,039,860	**259,029,285**
5	4	672,441,461	6.28%	168,110,365	504,331,096	42,229,324	210,339,689	35,879,060	2,253,205	38,132,265	44,482,529	**248,471,954**
6	5	504,331,096	6.28%	168,110,365	336,220,730	31,671,993	199,782,358	35,879,060	2,253,205	38,132,265	33,925,198	**237,914,623**
7	6	336,220,730	6.28%	168,110,365	168,110,365	21,114,662	189,225,027	35,879,060	2,253,205	38,132,265	23,367,867	**227,357,292**
8	7	168,110,365	6.28%	168,110,365	-	10,557,331	178,667,696	35,879,060	2,253,205	38,132,265	12,810,536	**216,799,961**
Grand total				**1,176,772,556**		**295,605,266**	**1,472,377,822**	**251,153,420**	**15,772,435**	**266,925,855**	**311,377,701**	**1,739,303,677**

To guarantee the economic success of the scheme, the concessionary will be paid with decreasing annual installments. This payment method will help the concessionary to avoid financial difficulties during the entire period of the duration of the concession period contract. Therefore, in the first year the installment will be **280,143,947** leke and each year will be decreasing until reaching **1,739,303,677** leke in the last year.

Table 133 Annual installment amount

Nr rendor	Viti	Tarifa Vjetore Pa TVSH
1	0	
2	1	**280,143,947**
3	2	**269,586,616**
4	3	**259,029,285**
5	4	**248,471,954**
6	5	**237,914,623**
7	6	**227,357,292**
8	7	**216,799,961**
Grand total		**1,739,303,677**

1.4.2 Financing source.

Vlera e përgjithshme e këtij projekti për **Loti 4** është **1,792,649,257** lekë nga të cilat, **53,345,580** janë shpronësime që do të paguhen direkt nga Bashkia Tiranë te të shpronësuarit dhe **1,739,303,677** lekë është vlera e koncensionit:

The general amount of this project for lot 4 is **1,792,649,257** leke, about **53,345,580** out of them are expropriations to be paid by Tirana Municipality to the expropriated persons and **1,739,303,677** leke is the amount of the concession:

Table 134 General amount of the project for Lot 4

Nr	Vlera e Pergjithshme e Projektit	Çmimi	Sasia	Vlera totale
1	**Kostoja e përgjithshme e shpronësimit**	**53,345,580**	**1**	**53,345,580**
2	**Kosto direkte e Investimit pa TVSH**	**1,176,772,556**	**1**	**1,176,772,556**
2.1	Kosto direkte e investimit te koncesionarit Pa TVSH	1,176,772,556	1	1,176,772,556
3	**Kosto e mirembajtjes pa TVSH**	**35,879,060**	**7**	**251,153,420**
3.1	Kosto e mirembajtjes te koncesionarit Pa TVSH	35,879,060	7	251,153,420
4	**Marzhi i Fitimit**	**311,377,701**	**1**	**311,377,701**
4.1	Marzhi i Fitimit të Koncensionarit	311,377,701	1	311,377,701
	Total i pergjithshëm i kostos(1+2+3+4+5)			**1,792,649,257**

Table 135 Amount to be covered by municipality and concessionary

Nga të Cilat:	Bashkia	Koncesionari	Totali
1. Vlera e Përgjithshme e Projektit Pa TVSH	53,345,580	1,739,303,677	1,792,649,257
Totali	**53,345,580**	**1,739,303,677**	**1,792,649,257**

These expenses will be covered by incomes of the Municipality, Conditioned Grants of Ministry of Finance for project.

Incomes of Tirana Municipality for this project will be generated from the Interim Tax on Education Infrastructure, which is applied upon decision of Municipal Council No. 59, dated 30.12.2015, “On taxes and local tariffs system in the city of Tirana”.

Table 189 Forecast of incomes from Interim Tax on Education Infrastructure

Description	PLAN YEAR 2016	FORECAST 2017	FORECAST 2018
Interim Tax on Education Infrastructure	**870 000 000**	**940 000 000**	**1 000 000 000**
Families	320 000 000	340 000 000	350 000 000
Trade subject	550 000 000	600 000 000	650 000 000

Incomes from Interim Tax on Education Infrastructure are estimated at 870 million leke in 2016, whereas these incomes are envisaged to increase to 940 million leke in 2017 and 1 billion leke in 2018. This interim tax will be applied for 7 years and for 2019-2022 period, the annual incomes are projected to amount to 1 billion leke. Incomes from specific transfer from Ministry of Finance will be 700 million lek per year. Therefore, the fund at the disposal of Tirana Municipality for completion of periodical payments is estimated at 1 billion and 700 million leke per year.

1.5 Financial Analysis

Table 136 Summarizing table of costs and incomes of the project

Viti	Pershkrimi	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
A.	**Kostot Direkte te Investimit**	**1,230,118,136**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,230,118,136**
A.1	**Kostot e Truallit**	**53,345,580**								**53,345,580**
A.2	Kostot e Projektimit	25,283,249								25,283,249
A.3	- Ndertim + instalime	1,023,486,195	-							1,023,486,195
A.4	- Oponenca teknike	843,550								843,550
A.5	- Takse Infrastrukture									-
A.6	- Leje mjedisore	120,000								120,000
A.7	- Mbrojtje ndaj Zjarrit	200,000								200,000
A.8	- Kosto Supervizimi	11,683,304								11,683,304
A.9	- Kosto Kolaudimi	414,825								414,825
A.10	- Mobiljet dhe Orendi	73,400,000	-	-	-	-	-	-	-	73,400,000
A.11	- Investime IT&T dhe Labs	41,341,433								41,341,433
B.	**Kostot Direkte të Mirëmbajtjes**	**-**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**251,153,420**
B.1	**Kostot e Mirëmbajtjes së Aseteve**	**-**	**23,623,424**	**23,623,424**	**23,623,424**	**23,623,424**	**23,623,424**	**23,623,424**	**23,623,424**	**165,363,968**
B.1.1	- Kostot e Mirëmbajtjes së Ndërtesave	-	5,462,158	5,462,158	5,462,158	5,462,158	5,462,158	5,462,158	5,462,158	38,235,106
B.1.2	- Kostot e Mirëmbajtjes së Pajisjeve		13,801,260	13,801,260	13,801,260	13,801,260	13,801,260	13,801,260	13,801,260	96,608,820
B.1.3	- Kostot e mirëmbatjes Mobiljet dhe Orendi		1,727,749	1,727,749	1,727,749	1,727,749	1,727,749	1,727,749	1,727,749	12,094,243
B.1.4	- Mirëmbajtje IT&T (HD+SW)		2,632,257	2,632,257	2,632,257	2,632,257	2,632,257	2,632,257	2,632,257	18,425,799
B.2	**Staf Mirembajtje**	**-**	**12,255,636**	**12,255,636**	**12,255,636**	**12,255,636**	**12,255,636**	**12,255,636**	**12,255,636**	**85,789,452**
B.2.1	Staf Roje		2,917,463	2,431,219	2,026,016	1,688,347	1,406,956	1,172,463	977,052	12,619,516
B.2.2	Staf Sanitare		7,779,903	7,779,903	7,779,903	7,779,903	7,779,903	7,779,903	7,779,903	54,459,321
B.2.3	Staf Sekretare		1,558,270	1,558,270	1,558,270	1,558,270	1,558,270	1,558,270	1,558,270	10,907,890
A+B	**Totali i Kostove (A+B+C)**	**1,230,118,136**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**35,879,060**	**1,481,271,556**

C.	**Të Adhurat**	**53,345,580**	**280,143,947**	**269,586,616**	**259,029,285**	**248,471,954**	**237,914,623**	**227,357,292**	**216,799,961**	**1,792,649,257**
C.1	Likujdimet e shpronesimeve	53,345,580								**53,345,580**
C.2	Tarifa e Shfrytezimit pa TVSH		280,143,947	269,586,616	259,029,285	248,471,954	237,914,623	227,357,292	216,799,961	**1,739,303,677**
D	**Fitimi (humbja)**	(1,176,772,556)	244,264,887	233,707,556	223,150,225	212,592,894	202,035,563	191,478,232	180,920,901	**311,377,701**
E	**Fitimi (humbja) progresive**	(1,176,772,556)	(932,507,670)	(698,800,114)	(475,649,889)	(263,056,995)	(61,021,432)	130,456,800	311,377,701	**311,377,701**
F	**15% Tatim fitim**	0	0	0	0	0	0	(19,568,520)	(27,138,135)	**(46,706,655)**

Table 137 Cashflow of the project

Fluksi i Arkës									
Viti	**Viti 0**	**Viti 1**	**Viti 2**	**Viti 3**	**Viti 4**	**Viti 5**	**Viti 6**	**Viti 7**	**Grand total**
Flukse dalese nga Investimet	- 1,230,118,136	-	-	-	-	-	-	-	- 1,230,118,136
Flukse dalese nga Mirëmbajtja	-	- 35,879,060	- 35,879,060	- 35,879,060	- 35,879,060	- 35,879,060	- 35,879,060	- 35,879,060	- 251,153,420
Flukse dalese nga Taksat	-	-	-	-	-	-	- 19,568,520	- 27,138,135	- 46,706,655
Totali i flukseve dalese	**-1,230,118,136**	**- 35,879,060**	**- 35,879,060**	**- 35,879,060**	**- 35,879,060**	**- 35,879,060**	**- 55,447,580**	**- 63,017,195**	**- 1,527,978,211**
Flukse hyrese nga Operimet	**53,345,580**	**280,143,947**	**269,586,616**	**259,029,285**	**248,471,954**	**237,914,623**	**227,357,292**	**216,799,961**	**1,792,649,257**
Gjendja e Arkes ne fund te periudhes	**-1,176,772,556**	**244,264,887**	**233,707,556**	**223,150,225**	**212,592,894**	**202,035,563**	**171,909,712**	**153,782,766**	**264,671,046**
Gjendja e arkes progresive	**-1,176,772,556**	**- 932,507,670**	**- 698,800,114**	**- 475,649,889**	**- 263,056,995**	**- 61,021,432**	**110,888,280**	**264,671,046**	**264,671,046**

1.6 Economic Profitability of the Project

1.6.1. NPV (Net Present Value)

NPV, as standard method for assessment of long-term projects through analysis of time value of money, presents the discounted amount of cashflow of the project. Every investor, when decides to undertake an investment analyzes the incomes generated by one project compared to the potential incomes of the invested money in another project. In general, these analyses are carried out taking into account the interest rate in case of the investment of the money, e.g. treasury bonds or government obligation, which have almost a zero risk.

Classical formula of NPV calculation, if the investment is made in one year, is :

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_o$$

where:

C_0 – presents the money spent for the initial investment

C_t – presents the incomes from the investment ;

t – presents duration of the project ;

r – presents the expected rate of discount .

To see the economic profitability of the project, the financial model has been tested with several potential discount rates. From this analysis, it resulted that the potential concenssionaries will be interested in this project only if their opportunity cost is lower than 5.79%. In other words, for every discount rate over 5.79% this project does not consist of any economic profitability for the concenssionary.

	NPV						
norma e skontimit e parashikuar	**5%**		**5.79%**		**6%**		**7%**
NPV	**29,884,696**	**-**	**15,136**	**-**	**7,682,796**	**-**	**42,661,484**

1.6.2.IRR (Internal Rate of Return)

IRR is a method used to measure the incomes of potential income. IRR is a discount rate that makes the nett present value (NPV) of all cashflows of a project equal to zero. According to economic theory, every project with an IRR higher than its capital cost is probitable, as a result investors will be interested to invest in it. Based on the financial analysis, the IRR of this project is estimated at 5.79%.

Table 138 Internal Rate of Return of the project

Viti	Viti 0	Viti 1	Viti 2	Viti 3	Viti 4	Viti 5	Viti 6	Viti 7	Grand total
Gjendja e Arkes ne fund te periudhes	-1,176,772,556	244,264,887	233,707,556	223,150,225	212,592,894	202,035,563	171,909,712	153,782,766	264,671,046

IRR	5.79%

1.6.3 Payback Period

The payback period presents the necessary time needed for the invested capital to recover the initial investment from the project incomes. In general, the payback period is calculated by dividing of the investment cost by annual incomes. Hence, as long as the annual incomes in this project consist of decreasing installments, the payback period is assessed by analyzing the cashflow to determine the latest year when this flow is negative.

Periudha e Vetëshlyerjes		
Viti i fundit i gjendjes se arkes negative		5
Gjendja e arkes kumulative ne vitin e fundit negativ	-	61,021,432
Gjendja e arkes pozitive krijuar ne vitin vijues		171,909,712
PBP (periudha e veteshlyerjes)		5.35

In this respect, the self-payment period for this project is achieved in 5.35 years. Nevertheless, taking into account that payment from Tirana Municipality will be annual, then the self-payment period will not be 5.35 years, but 6 years.

1.6.4 Financial compatibility

According to CoMD no. 575, dated 10.07.2013, article 7, item 10, the financial compatibility of a project "indicates whether the project seems to be able to attract guarantees/financial support and qualitative loaners, by providing a strong and reasonable financial."

Based on the above-mentioned financial analysis, this project is economically profitable and this profitability is presented as following:

- NPV = 5.79% > 0
- IRR = 5.79% > than interest of deposits or treasury bonds
- PBP = 6 year < 7 years (duration of concession)

1.7 Quantitative and Qualitative Risk Analysis

The main goal of Risk Analysis is to identify and evaluate the gamma of risks that may affect the project. Therefore, a strategy on risk management is carried out in order to guarantee the successful realization of the project. In compliance with Decision of Council of Ministers No. 575, dated 10.07.2013 "On approval of rules for evaluation and issuance of concession/private-public partnership" following is a risk analysis regarding this project.

1.7.1. Qualitative Risk Analysis

Land Risk

Description of the Risk: Lands selected for construction of 17 schools will mostly be owned by the state, whereas the private-owned lands will be expropriated in line with the legislation in force and will be put at disposal of the concessionary. As a result, this risk has a low probability, almost zero, about this project. Regarding the necessary permits, there is no risk, because Tirana Municipality is itself the responsible body to grant these permits. In relation to environmental standards, the selected lands are plots located in areas were the environmental standard is not affected, therefore the risk is considered zero.

Management of risk: This risk is assessed with a zero probability and it is covered by Tirana Municipality. Tirana Municipality will carry out all the procedures for expropriation of private lands out of this PPP scheme, before the beginning of works. If any of the selected lands is in a ownership conflict, turning expropriation impossible, authorities will ask for information at the Immovable Properties Registration Office for alternative sites to be used. Regarding geological conditions and environmental standards, there has been a environmental study part of this feasibility study, which has come to the conclusion that the construction of these objects does not have an impact on the environmental standards. Hence, during the procedures for obtaining a construction permit, there will be also a detailed environmental study by the concessionary.

Risk of design, construction and functioning

Description of the Risk: Calculation of costs for construction and furniture of new schools is based on above-mentioned methodology, which takes into consideration the cost of schools built by Tirana Municipality in the last three years. Therefore, the possibility of a higher construction cost than the calculated cost is almost zero. Construction and functioning of schools depend in a certain scale on the obtaining of construction permit and meeting of preconditions for obtaining of this permit, such as environmental permit, connection with the electrical grid or water supply system, approval of projects for fire protection, etc. The concessionary has the right to draft the designing, prepare the documents for equipment with a construction permit, as well as to build the school objects. From this point of view, the risk of delays in equipment with construction permits, delays in kick-off works, readiness is possible.

Management of risk: This risk belongs to the concessionary. He is accountable for compilation of documents and equipment with construction permit. If the concessionary does not prepare the project on time and will neglect the application for construction permit by not applying on time or having irregularities in documents, or failure to start works on time, then he will be accountable for failure in starting works on time and will compensate the contracting authority according to the requirements in the concessionary contract. Likewise, as long as the concessionary is responsible for drafting and implementing the project, each delay in completion of construction works, excluding the case when the delay comes as a result of a force majeure will be under the concessionary´s responsibility and will be forced to compensate the contracting authority according to requirements in the concessionary contract.

Functioning Risk

Description of the Risk: The possibility that the new schools will not be functional after the construction is related to the non-qualitative works by the concessionary, which might make the performance of teaching in new buildings impossible. This risk has a low probability because the completion of works will be carried out by the technical supervisor and financial bill of quantities will be supervised by the contracting authority. Regarding the risk of a higher maintenance cost than expected, the probability is almost zero, because the annual maintenance cost is calculated based on annual expenses of Tirana Municipality for the maintenance of existing schools, which have been constructed long ago. According to engineering standards, the maintenance cost of newly-built objects is lower than that of the objects built before.

Management of risk: The probability of this risk is low and it is considered as a risk transferred to the concessionary. In case the construction quality will make the performance of teaching process impossible, the concessionary will be accountable and will be forced to carry out extra works until the works quality will be in line with the requests of the designing tasks. In case school buildings might have any problems due to construction works, in the course of seven years of the contract duration, which will make the teaching process impossible, the concessionary will be obligated to carry out extra works to make the school functional again. If the maintenance cost is higher than predicted, this would be a result of the inaccuracies in the design or construction. Therefore, the risk belongs to the concessionary, who is accountable for the designing and building of these schools.

Risk of demand and other trade risks

Description of the Risk: This risk is related to the situations when use of the object is different from what is expected or the generated incomes are lower than the forecast. As long as objects to be build are school buildings that will not have a different use and cannot generate incomes, this risk cannot applied on this project.

Management of risk: The possibility that this project can be affected by this risk is zero, because it is not subject of its impact.

Economic and Financial Risks

Description of the Risk: As long as this project includes financial transactions to be implemented in the course of time, there exists the possibility of an impact from economic and financial risks. The unpredicted increase of the norms of interest may increase the financial costs of the project from the concessionary. On the other side, changes in exchange rate course may have a worsening affect in the finances of the concessionary if his incomes and expenses are in a different currency, e.g. the concessionary has been granted a loan in EUR of USD for the financing of the project, while Tirana Municipality makes the annual payments in Leke. In the end, as long as this project includes periodical payments for a seven year period, there exists the possibility of an impact from inflation in the concessionary´s incomes.

Management of risk: Due to the fact that Albania is a country with a sustainable macroeconomic situation, the probability that this project may be affected by such risk remains low. The risk of interest rates or exchange rates belongs to the concessionary and shall be calculated in its financial projections. Inflation risk is shared among the concessionary and Tirana Municipality. As long as the Bank of Albania policy is keeping infection under 3% and duration of the project is only 7 years, the probability of this risk is low. Nevertheless, in the definition of income margin as related to interest rate of 7 year obligations, Tirana Municipality guarantees the concessionary the same protection toward the economic and financial risks as guaranty of Albanian Government for buyer of obligations.

Risks of assets ownership

Description of the Risk: This risk is related to the possibility that technology might get older or if the value of assets might be different at the end of the contract. As long as, the construction consists of school buildings, which will be maintained by the concessionary for seven years, the probability of this risk is low. Nevertheless, the quality and value of assets may be lower than the projection due to non-qualitative maintenance.

Management of risk: This risk is transferred to the concessionary. Maintenance of schools buildings and their furniture will be completed in line with the standards in force and will be supervised by the Contracting Authority. In case the concessionary will not maintain schools in line with the above-mentioned determination, the concessionary contract will envisage provisions obligating him to pay the damage. If at the end of the contract, the value of assets will be different from the predicted, the concessionary contract will define provisions obligating the concessionary to pay the damage.

Political risk

Description of risk: The risk of an impact from political decisions on the project is evident. As long as it is a project initiated from Tirana Municipality, a local government body, the success of the project depends on the coordination with local government. Likewise, there is a potential possibility that the results of next local elections – a potential change of Tirana mayor – may also cause the change of priorities and as a result the project can be blocked.

Management of risk: This risk is transferred on the Contracting Authority - Tirana Municipality. To ensure the consent of central government, with the approval of the feasibility study from the head of Tirana Municipality, will be required also an approval from the Ministry of Finance and Ministry of Education and Sports. Regarding risk of a negative impact of the project as a result of changes in the leadership of Tirana Municipality, the concessionary contract will envisage provisions that obstacle the dismissal of the Contract for non-legal reasons by the Contracting Authority.

Risks deriving from change of legal framework

Description of risk: Potential changes in legislative framework may affect the project positively and negatively. As long as the project is related to the construction of school buildings, the possibility of an affect from legal changes is related only to standards and construction manuals. Therefore, this risk has a low probability. Regarding changes in fiscal laws, the negative or positive influence can be felt only in the finances of concessionary.

Management of risk: This risk falls on the concessionary. In order to have minimal effects, the concessionary contract will include provisions that protect it from discriminating changes in law – always if the discrimination is proved by the court. On the other side, the concessionary will be forced to implement any legal changes coming as a result of governance policies.

Risk from force majeure

Description of risk: Force majeure risks, such natural calamities, civil unrests or wars are transferred to the concessionary and contracting authority. Taking into account the fact that Albania is a member of NATO and with a clear perspective of EU integration, the probability of risks from wars or unrests is almost zero. On the other side, the probability of and impact from earthquakes or other natural disasters on the project is low – How? As a result of the above-mentioned analysis of environmental impact on the project.

Management of risk: Probability of these risks is very low and it is transferred on both parts. The concessionary contract will envisage clauses of force majeure which will guarantee that any negative impact on the project shall be divided between the parties.

1.7. 2. Quantitative Analysis of Risks

This analysis aims to prioritize risks that may affect the project by calculating their probability and potential impact on the achievements of project objectives. The quantitative evaluation is based on the probability of occurrence of each risk and potential impact on costs and deadlines of the project.

Impact of risks on project costs is calculated based on the specific weight of each of them in the project's cost. Whereas, the impact on deadline of completion of works is calculated based on legal deadlines for completion of defined procedures that may be necessary for well-going of the project.

Following is a quantitative analysis on the impact of each risk in the costs and deadlines for realization of the project.

Lands risk. Probability of this risk is low, 0-5%. Its impact on the project' cost is zero because expropriations of private lands that will be used for construction of school will be carried out by Tirana Municipality with a special fund out of the financial scheme of this project. The lands selected for construction of the schools are state-owned and private properties. In case use of any of these lands is impossible than will be used an alternative selected land with the necessary information from the Immovable Properties Registration Office. As a result, the impact on the deadline of completion of works is related the handing in of the state-owned land if it is not a property of Tirana Municipality or expropriation of private properties. The impact on deadline of works is calculated at 3 - 6 months.

Risk of designing, construction and functioning. Probability of this risk is low, 5-10%. The costs assessment process of the schools construction is carried out in line with the MoES guidelines manuals and based on the construction of schools by Tirana Municipality in the course of last years and prices have been indexed according to construction prices index of INSTAT. Hence, maximal influence of this risk in costs is less than 5%. On the other side, the deadline of works may not be respected as a result of failure to receiving the construction permit or other permits on time by the concessionary or due to slower completion of works than the calendar of works. In case designing is delayed or documents for equipment with necessary permits are not compiled, the impact on deadline of works is calculated from 3 to 12 months.

Functioning Risk. Probability of this risk is calculated at 0-5%. As long as this project is related to the construction of new schools, there exists the possibility of a low quality of construction. This could require additional works beyond the defined deadline. The impact of this risk in the deadline of works is calculated from 1 to 3 months, whereas the impact on total cost of the project is envisaged at 5-10%. There exists an opportunity that the maintenance cost may result higher than the forecast, but compared to total cost of the project the impact of this cost is almost zero.

Risk of demand and other trade risks. This risk cannot be applied on the project and the possibility of an impact from it on cost or deadlines is zero.

Economical and financial risks. Probability of this risk is low, 0-5%, taking into consideration that it is not a long-term concession where the concessionary generates incomes from the operation of the object of concession. As long as incomes of the concessionary are guaranteed by Tirana Municipality and covered by inflation, impact of risk on total cost of the project is low, 5% - 10%. On the other side, the impact on deadlines of completion of works is not envisaged longer than 12 months.

Risks of assets ownership. Probability of this risk is calculated at 0 - 5%. Its impact on total cost of the project is related to the maintenance costs, in case the latest results higher than forecast and a more rapid amortization of buildings that envisaged in the concession contract. Its impact on project's costs is predicted to be at maximum 5%. Probability of this risk does not affect the deadline for realization of works.

Political risk. Probability of such risk is medium low and is calculated at 10 - 20%. The occurrence of such risk may block works or interrupt the periodical payments for the concessionary by increasing the financing cost of the project and delaying the realization of works. In this respect, a potential influence of this risk on costs is calculated at 20 - 30%, whereas the impact on deadline of realization of works is calculated from 16 to 24 months.

Risk of change of legal framework. This risk has a probability of 5 to 15%. Potential legal changes, such as in standards to be followed for construction of new schools, may considerably boost the project cost. Therefore, the potential risk on costs is medium, varying from 20 to 40%. Likewise, potential legal changes may cause the re-drafting of the project or other delays that may be negatively affect the deadline for realization of works. Therefore, impact on deadline of works is calculated from 12 to 16 months.

Force Majeure Risk. Probability of this risk to happen is very low - 0 to 5%. Nevertheless, in case it happens, the impact on costs or deadline of works will be medium high. Therefore, impact on cost is calculated at 30% to 50%, whereas impact on deadline of works from 12 to 24 months.

Table 193 Summarizing table of impact of risks

No.	Risk	Probabiliy	Impact on cost	Impact on works deadline
1	Risk on land	0% - 5%	0%	3 - 6 months
2	Risk on designing, construction and implementation	5% - 10%	0% -5 %	3 - 12 months
3	Functioning Risk	0% - 5%	5% -10%	1 - 3 months
4	Risk of demand and other commercial risks	-	-	-
5	Economic and Financial Risks	0% - 5%	5% -10%	6 - 12 months
6	Risks of assets ownership	0% - 5%	0% - 1%	-
7	Political Risk	10% - 20%	20% - 30%	16 - 24 months
8	Risk of change of legal framework change	5% - 15%	20% - 40%	12 - 16 months
9	Force majeure	0% - 5%	30% - 50%	12 - 24 months

1.8 Sensitivity Analysis

Main factor that may change during the tender process is the income margin. At the same time, the details of respective costs will be respectively defined based on factual approved projects, depending on the approved projects. The direct cost will be calculated base on the factual realized volumes, which in no way will be higher than the costs envisaged in this project.

Nevertheless, due to the effects of sensitivity analysis, the calculation will made as if the costs have increased and decreased by 5% and 10%, whereas the income margin increases and decreases by 5% and 10%.

Table 194 Sensitivity Analysis

	Incomes and expenses increase by 10%	Incomes and expenses increase by 5%	Basic Model	Incomes and expenses decrease by 5%	Incomes and expenses decrease by 10%
Sensitivity Norm	10%	5%	0	-5%	-10%
Outflow from Investments	- 7,267,445,188	- 6,937,106,771 F-	6,606,768,353	- 6,276,429,936	-5,946,091,518
Outflow from Maintenance	- 1,275,711,645	- 1,217,724,752	1,159,737,859	- 1,101,750,966	-1,043,764,073
Incomes	10,274,681,048	9,786,000,321	9,197,517,960	8,713,446,063	8,188,265,320
Income before taxes	1,731,524,215	1,631,168,798	1,431,011,748	1,335,265,161	1,198,409,729
Tax on Income 15%	259,728,632	244,675,320 -	214,651,762	- 200,289,774	- 179,761,459
Nett income	1,471,795,583	1,386,493,478	1,216,359,986	1,134,975,387	1,018,648,270
NPV by 5.79%	110,223,600	81,672,242	170,329	23,634,170	- 68,587,789
IRR	6.38%	6.25%	5.79%	5.64%	5.34%
Self-Payment Norm	5.20	5.28	5.35	5.43	5.51

9. Results of the Feasibility Study

Tirana Municipality counts in total about 191 public schools. According to the calculations, it results that 61 schools count more students than their maximal capacity and 57 school perform classes in two shifts. In total, Tirana Municipality counts about 14,292 students beyond the maximal capacity of the education infrastructure and 14,919 students holding classes during the second shift. This situation creates three major problems faced by Tirana students and their families: attendance of teaching process in two shifts, big number of students per class and difficulty of access in schools, in particular in newly created quarters with a high density in whose territory there is no school.

The solution of these problems and guaranty of the possibility that students can attend a normal teaching process is not only necessary but also a necessity. This project aims at solving the above-mentioned problems with the construction of 17 new schools, 10 out of them will be nine-year schools and 7 high schools. The construction of these schools will put an end to over-crowded schools or teaching in two shifts. As a result, this project, does not only solve a problem of the present, but also guarantees the sustainable development of future generations, which may benefit a public qualitative education.

The drafting and implementation of this project is an important element of the political program of head of Tirana Municipality for 2015-2019 term. This political engagement is reflected in the 2016-2018 Midterm Budget Program, where it is highlighted that one of the key priorities of this MBP is elimination of two-shift teaching. For implementation of this priority, upon Decision of Municipal Council No. 59, dated 30.12.2015, was applied also the Interim Tax on Educational Infrastructure. The report accompanying this Decision of Municipal Council clearly says that incomes generated from this tax will be only for putting an end to the two-shift teaching through construction of new schools.

Likewise, this project is in line with the national and sectoral planing process, as well as long-term policies for development of Tirana, such as 2013 General Local Plan or 2016 General Plan Tirana 030. It is in line with the 2015-2020 National Strategy for Development and Integration and 2014-2020 Strategy for Pre-University Education, which have determined as an important objective of Government policies regarding pre-university education the improvement of service “Qualitative Education for All”, through update and establishment of infrastructure in the new and existing kindergartens, schools, in line European standards, including access for the disabled children.

Construction of these 17 new schools through a concession/public private partnership scheme, where new schools are designed, financed, built and maintained by the concessionary for a 7 year period is technically possible to realize, financial suitable. The location of new schools is determined in line with general rules of urban planning respecting the Ministry of Education standards regarding the coverage range of educational objects. Selection of sites for construction of schools has been by giving priority to public property. If there have been no public properties, there were found private

properties, but always keeping in mind that these land must not have residences or other economic activities, in order to keep the social impact or economic expropriation at minimum.

The total cost of the project is calculated in a way that schools can be built in line with the highest contemporary standards, at the same time, in order that the project could generate sufficient incomes according to legislation in force to become attractive for the private sector.

The construction cost of schools and kindergartens is defined through interim pre-payment reports of projects completed by Tirana Municipality in the course of last years, which have been indexed with "Annual Average Changes of the Construction Costs (for residences), 1994-2015" of INSTAT. Based on the report of General Directorate of Public Works, No. Prot. 21407/2, dated 09.08.2016, the cost of schools construction is 46,331.67 leke/m2, whereas for construction of kindergartens is 54,380.83 leke/m2, calculating also other project´s costs, such as furniture costs, maintenance costs, designing study, supervision of works, technical control, technical opposition and fire protection and environmental permit.

In total, the direct investments costs for construction of 17 new schools is estimated at 5,406,768,353 leke. As long as the concessionary will be paid with annual installments by Tirana Municipality for a seven year period, then he shall be reimbursed for the value of money in time. In this respect, as income margin was considered the average rate of Albania government obligations, for fixed seven year obligations was calculated at 6,28%. After 7 years, with the completion of the contract, together with the maintenance costs, the total cost of concession/private public partnership scheme will be about 7,997,517,960 leke.

This project is not only fruitful, but also attractive for private sector, as well as easily accessible within the budget ability of Tirana Municipality. The annual installments that will be paid to the concessionary will be covered from the incomes from Interim Tax on Education Infrastructure and conditioned transfer from Ministry of Finance. This concession/private public partnership does not create difficulties for the financial capacities of Tirana Municipality, therefore preserving the investments fund and other budget categories. Hence, Tirana Municipality may invest without any financial obstacle in other sectors, such as road infrastructure, public services, housing, social care, etc.

On the other side, the analysis on environmental and social impact of the project showed that there is no negative influence neither on the environment nor society. The location of the zones selected for the implementation of these projects enjoy a rich flora and fauna. They are divided into two major groups. The first group consists of sites located in urban areas, where have been built existing objects or were placed concrete layers. The second group consists of sites located in urban or sub-urbane areas where plants are present, but they remain in the level of grass and rare bushes. As a result, this project does not have negative impacts on the environment, despite air pollution and noises during the working phases.

Regarding social impact, the project present no negative aspect, but on the contrary, it represents a

series of positive impacts in solving some sharp social problems. Construction of this new school objects will put an end once and forever to the sharp social problem of over-crowded classes and performance of teaching process in two shifts. It is also a solution to the distances of schools from residences, which forces students to walk long distances to school. Construction of these schools may affect the entire surrounding community. Considered as community centers, these venues will be used by community also after the official teaching deadline by turning into an incentive in establishment of mutual relations between the community members.

In the end, the realization of this project through the granting of a concession/PPP contract is fruitful compared to the opportunity of granting a public procurement contract. For the construction of 17 new schools with the help of traditional procurement methods, Tirana Municipality can use three way: direct immediate procurement of 17 new schools, procurement of 17 new schools spread in a three year period and procurement of one or some schools per year according to its financial possibilities.

Taking into account the total cost of the project, the first two opportunities are considerably out of the financial opportunities of Tirana Municipality. Therefore, the project is financially impossible to be completed through two traditional procurement methods. The third above-mentioned opportunity does not fully complete the project because it can only support construction of 14 out of 17 necessary schools. Likewise, even the 14 schools cannot be build immediately but only in the course of next nine years.

In contrary to three traditional opportunities of procurement of the project, the proposed scheme of concession/public private partnership, the project can be realized immediately and with a feasibility study, but also without additional costs for Tirana Municipality budget, as long as it does not touches the investments fund for the next years. Through this scheme, Tirana Municipality does not solves in two years the problem of over-crowded classes and learning with two shifts.

In conclusion, this project is necessary because it will bring in an important improvement in quality of education in Tirana and it is technically implementable, and what is more important is financially suitable. Likewise, taking into account the budget capability and financial capacity of Tirana Municipality, the project can be realized only with a concession/public private partnership, because through traditional procurement methods this project cannot be realized, or can be completed partially or for a long-term period.