

Republic of Ghana

GHANA: Municipal Financing Alternatives for the Municipality of Sekondi-Takoradi

The use of sub national finance in Ghana

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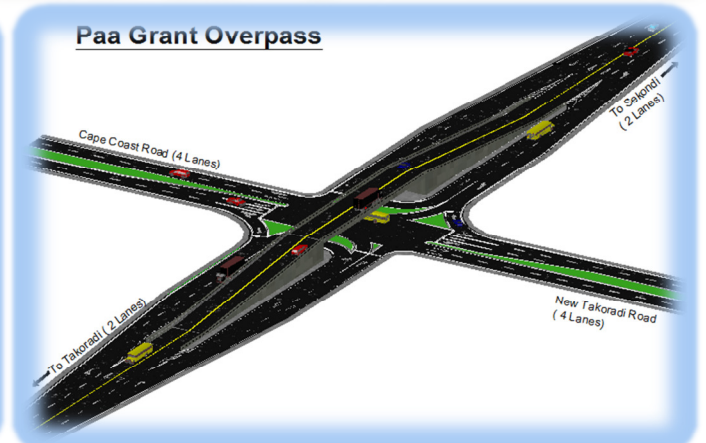
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FINAL REPORT



Municipal Financing to Face Urban Challenges of Sekondi-Takoradi, Ghana



PPIAF Sub National Development Technical Assistance Program

Transportation Challenges in Sekondi-Takoradi

May, 2013

The World Bank

PPIAF Sub National Development Technical Assistance Program

Transportation Challenges in Sekondi-Takoradi

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May, 2013

List of Acronyms

CBD:	Central Business District
DA:	District Assembly
DACF:	District Assemblies Common Fund
DFR:	Department of Feeder Roads
DUR:	Department of Urban Roads
DVLA:	Driver's & Vehicle Licensing Authority
GHA:	Ghana Highway Authority
GRFS:	Ghana Road Fund Secretary
GTTC:	Government Technical Training Centre
GUMPP:	Ghana Urban Management Pilot Project
HIPC:	Highly Indebted Poor Countries
IDA:	International Development Agency
IGF:	Internally Generated Funds
MLGDRE:	Ministry of Local Government and Local Development
MMDAs:	Metropolitan, Municipal and District Assemblies
MMTL:	Metro Mass Transit Limited
NDPC:	National Development Planning Commission
NHS:	National Health Service
NRSC:	National Road Safety Commission
PPIAF:	Public Private Infrastructure Facility
PPP:	Public Private Partnership
SIF:	Social Investment Fund
SNTA:	Sub National Technical Assistance
SPV:	Special Purpose Vehicle
STCCI:	Sekondi Takoradi Chamber of Commerce and Industry
STMA:	Sekondi-Takoradi Metropolitan Assembly

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Executive Summary

1. Sekondi-Takoradi, a port city of 385 square miles, with an estimated population of 559,548 by 2012, is at crossroads due to current and anticipated economic activities. This is characterized by a heavy traffic congestion problem due to disparity in transportation demand and supply. The presence of many informal and unregulated taxis and Tro-tro¹ services and trucks moving goods in and out of this second most important port is noted.
2. The road network is in a deteriorated condition due to lack of sufficient funds for road maintenance or paving of existing roads. Needs for improvement in the short term includes rehabilitation and widening of existing roads and bridges to more lanes, construction of interchange passageways, paving of interlocking roads, construction of parking spaces and signaling. In the long term building of at least two new roads will be needed to provide a long lasting solution. It is projected that the actual road network will collapse in a two-three year period when a second oil platform enters into an operational phase, increasing trucks and its services provider's related traffic which will further increase the number of vehicles of all sizes utilizing the existing ill maintained roads. Main problems could be summarized as follows:
 - a) High level of congestion;
 - b) Low level of service provided by the urban road network of Sekondi-Takoradi and truck road links, characterized by high traffic volumes, more than 20,000 vehicles per day;
 - c) Conflicts at most leveled intersections (generally roundabouts of small size);
 - d) Lack of vertical and horizontal signs;
 - e) Severe damage to the road surface due to the heavy traffic load (canalized surface routing);
 - f) Invasion of the right of way by informal businesses;
 - g) Unregulated operations and lack of strict control for taxis and Tro Tros accounting for more than half of the current traffic volume registered in the network
3. Based on the aforementioned findings, the Mission recommended proceeding with a Road investment Plan, prioritized by phases, in the following way:
 - a. **Short Term:** built two overpasses, in the Paa Grant and Kwame Nkrumah roundabouts, with simple designs oriented to ease the circulation with the higher traffic volume. Remaining traffic in both circles would be resolved at the lower level, under the bridges with traffic lights support and an adequate signaling. The simplicity of design allows performing the works on the existing right of way and avoiding relocation of houses and businesses that abound around these intersections or incur in costly compensation payments given the delayed and complex nature of these processes. These overpasses would have to be built one after another to avoid more traffic complications and it is suggested to start with Paa Grant Circle and once this work is finished then start the other. The new overpass design at Kwame Nkrumah circle must be compatible with future enlargement of Axim Road to 6 lanes.

¹ Tro tro- privately owned minibus and shared taxis that travel on fixed routes.

- b. **Medium Term:** Widen from 2 to 4 lanes the first section of Axim Road², and besides, widen from 4 to 6 lanes, 3 for each way, the second section in the same street.
- c. **Medium-Long Term:** Rehabilitate and/or widen, according to each case requirement, the 4 main interlocking roads connecting Sekondi Road to Accra/Cape Coast Road and Kansawurado Road, to give higher connectivity to the network and supply with more options to enter and leave the port. These interlocking roads are Ketan, Fijai, Effia and Takoradi Poly.
4. Instead of initiating immediately the works for Axim Road widening, a better alternative would be to start with a maintenance and improvement project in this road that serves directly the companies that demand most of port services, transporting their products to and from the port, which is the case of the corridor Axim Road – Accra Road – Kansawurado Road. Hence the recommendation of building in the first stage the two mentioned overpasses and in a second stage proceed to widen this corridor from 2 to 4 lanes in the sector adjacent to the port and from 4 to 6 lanes in the northern section creating through both project stages one route that would much facilitate the entering and leaving of heavy traffic to the port. A preliminary estimate of costs for the suggested interventions could be as follows:

Table 1: Suggested Intervention

Suggested intervention	Estimated cost
1. Construction of two overpasses:	
a. Overpass in Paa Grant Circle	US\$ 3.5 million
b. Overpass in Kwame Nkrumah Circle	US\$ 5.0 million
2. Widening of Axim Road (7 kms)	US\$ 11.5 million
3. Rehabilitation of 4 interlocking roads:	
a. Ketan Road (3.2 Kms, 2 lanes)	US\$ 3.84 million
b. Fijai Road (1.8 Kms, 4 lanes)	US\$ 3.60 million
c. Effia Road (2.0 Kms, 2 lanes)	US\$ 2.40 million
d. Takoradi Poly Road (2.1 Kms., 2 lanes)	US\$ 2.52 million

5. The sub region presents clear economic growth potential which will definitely have an additional impact on the basic infrastructure, more specifically on the port and road infrastructure.
6. The Government of Ghana has issued the Ghana's National Public Private Partnership Policy (PPP) which defines a PPP as a "...contractual arrangement between a public entity and a private sector party, with clear agreement on shared objectives for the provision of public infrastructures and services traditionally provided by the public sector....". This policy provides an ideal framework for STMA to consider a PPP initiative for the maintenance and enhancement of urban roads in the STMA area, as well as for the provision of traffic solutions thereof. Advantages in using PPP arrangements derive from the local definition of investment needs and funding, besides the fast track contracting process for studies and final designs and construction. Also, the PPP provides an independent administration and supervision alternative provided that adequate mechanisms for transparency and accountability are built under the agreement.

² Please refer to the map included in chapter one of this report.

7. Implementation of the recommended works implies that the STMA goes through a process of obtaining the right mix of funding by increasing of the fees currently applied or creating new ones, strengthening of its collection efficiency, putting together a taxpayer's inventory, etc. STMA need to extend and improve its transportation programs by combining: (1) local government capital budget allocations; (2) proceeds from the Ghana Road Fund Secretariat, and 3) entering in PPP agreements with the private sector stakeholders. An adequately conformed mix of alternatives to finance transportation works from the private sector stakeholders for urban infrastructure will enable STMA to alleviate traffic congestion in the short term.

8. It can spread the cost of infrastructure over the useful life of the physical asset and be more responsive and flexible than relying on one source of funding, such as the Ghana Road Fund Secretariat which is transferring resources at a delayed an insufficient pace. Urban infrastructure financing for the STMA under a new PPP regulatory environment can simultaneously encourage deepening of financing options and protect the authorities against risky transactions.

9. In regard to STMA capacity of internally generating the required funding, an analysis of the financial trends aroused concerns from:
 - Lack of an inventory that properly identify tax payers (goods/services/economic activities) within the STMA area.
 - The need to update the property cadaster
 - Lack of a proper study for increases of minimum rates and ranges of some taxes for goods and economic activities in light of the expected increase in economic activity.
 - Lack of tax management capacity

10. Given the scarce financial resources available to STMA and its lack of experience participating in for profit associations with private sector entities, it is important that a staged solution to Sekondi-Takoradi traffic congestion problems be formulated. Therefore, a program for institutional strengthening of STMA is needed to build capacity for tax management reorientation including:
 - Potential connection between local and core databases allowing further identification;
 - Progressive increases of minimum rates and their corresponding ranges in the case of those businesses/services that benefit most of the increased economic activity in the STMA area;
 - Extended use of banking accounts for taxes and fees due payments;
 - Promote SPV and trust creation in order to have a better planning process for investment with private sector participation, converting such investments in current expenditure in the municipal budget given that current accounting policy impede the needed periodic financial registering for investments.
 - Identify the need for training for the STMA personnel.
 - Explore possibilities in the case of licenses to link the tax/fee to a range related with the income declared to the National tax Agency for the last year.
 - Institutional strengthening of STMA promoting transparency and taking care of equality for the taxpayers and the authorities.

11. Once the program for institutional strengthening of STMA has been designed and implementation started, taking into account the planned staged implementation of urban infrastructure works and given that there are future developments with a high degree of certainty that will occur, as:
- The installation of a second oil platform will generate a boost in economic activity;
 - The Implementation and construction of the Trans-West African Coastal Highway;
 - The growth in services sector.
12. STMA authorities could begin with the consensus formation process facing the future fiscal years to achieve an agreement around some of the following alternative actions:
- Increase of licensing to hospitality companies and in every establishment related to the restaurant and leisure sector (bars, restaurants, etc.), seeking an adequate structure of fees and taxes that companies that contribute most given that the sector is one of the most benefited by the current business activity with a positive billing perspective;
 - Increase of rates (stickers), to Taxis and enforcement/supervision of compliance;
 - Increase of penalties for traffic violations and implementation;
 - Increase of rates (stickers), to commercial vehicles residing in STMA territory, differentiating between heavy and light vehicles.
 - Establish a rate (sticker), for noncommercial private vehicles residing in the STMA territory, differentiating by vehicle cylinder capacity.
 - Establish a rate (sticker), for commercial vehicles non- residing in STMA territory differentiating between taxis, heavy commercial and light commercial vehicles.
 - Consider the establishment at the different gates to the port (in agreement with the Ghana Port Authority) of “tellers” charging tolls to loaded vehicles entering to load/unload materials at the port;
 - Consider establishing a “pollution charge fee” similar to the London congestion charge fee that penalizes damages to the environment.
13. Undertaking the above described actions would require a considerable amount of time and effort from STMA authorities that should select the most politically and economically feasible alternative. It will also require institutional reforms and strengthening which could be politically consuming. This process of reform will need the full support of the Central Government, full participation of stakeholders and the accompaniment of the external donors as the reforms will constitute a short term solution to the scarcity of financial resources for STMA.
14. A PPP is considered as the most viable alternative for STMA financial needs in financing the required improvements on the urban road network. For that purpose, two separated SPVs are presented in the report, one for the short term priorities (*the two overpasses*) and the second, for the financing of the medium and long-medium term priorities (*widening of Axim road and improvement of 4 interlocking roads*), given that these latter works require a larger amount of financing and more preparation at STMA. Both SPVs (I and II) are conceived as PPPs between STMA and a private partner, where the cash flow is administered by a private financial institution and structured as a trust fund with the sole purpose of collecting the monies arising from the fees/taxes allocated by STMA for the project and making the corresponding payments to contractors for works implementation, supervision and maintenance.

15. The SPV I would collect revenues transferred directly by STMA, resulting from the increase produced by tax management improvements of the type suggested in chapter 4 of the report and SPV II would collect proceedings from the “pollution charge” applied to heavy trucks and fuel tanks. With these resources, the PPP organized as an SPV between STMA and a private party could contract loans for the amount required to finance the most urgent works to alleviate traffic congestion, being those, first, the overpasses at Paa Grant circle and Kwame Nkrumah circle. SPV I could also execute other businesses like the construction of parking facilities around the Market Circle and around the port, for heavy trucks; and second, the works for Axim Road widening and improvement of the four interlocking roads.
16. The cash flow projections resulting from the income and expenses detailed in the above paragraph are sufficient to cover the expenses of the SPVs being the most important the payment of the administration fee for the trust fund management and the interest payment associated to the loan. The cash flow is also capable of generating the amounts required to cover the payments of principal to the lender. It would be desirable that the financial institution chosen to be the manager of the trust fund be at the same time the lender of the amount needed to finance the investments in urban infrastructure improvements in order to ensure an adequate level of confidence and guarantees in the financial viability of the operation presented by the SPVs. In this way, the SPV will be an instrument of transparency and corporate governance that gives confidence to the stakeholders and to STMA, to which also serves as a benchmark of collection efficiency in its relationship to RevNet³.
17. Given that the main contributing factor to traffic congestion in Sekondi-Takoradi as well as to the deterioration of the physical condition of the urban roads is undoubtedly the transportation of goods to and from the port of Takoradi, along with the oil distribution industry that produces the daily circulation of between 30-50 heavy trucks that besides causing traffic congestion create an environmental potential hazard. In average, the data show a daily average of 246 heavy trucks entering the city. If we add the traffic originated by the oil distribution industry to the annual resulting figure, it is increased by 10,440 additional heavy trucks. As a result, an annual 98,951 trips of trucks with a median cargo of 60 tonnes circulates by the urban road network of Takoradi. The figures provided support the feasibility of the creation of an environmental charge, London style, as a mean to create a new revenue source to finance the urban road network improvements. For STMA, the establishment a pollution charge of the type recommended could be a solution for generating additional income in a sufficient quantity to secure a private partner and having the required payment capacity for the obligations undertaken by the SPV II to finance the medium term improvements required by the urban road network of Sekondi-Takoradi.
18. An Action Plan and a Time Schedule for the implementation of the recommended works are included as part of the report and a draft for the terms of reference for an engineering consulting firm that would be needed to make the final studies and designs is included as an annex.

³ A tax collection enhancement firm that is currently working for STMA under a government contract.

Introduction

A World Bank Mission visited Sekondi-Takoradi Metropolitan Assembly (STMA) in March 2013. The Mission was funded by the generous contribution of the Sub National Technical Assistance (SNTA) grant. The SNTA program was launched in 2007 under the Public Private Infrastructure Facility (PPIAF). It helps sub-national entities to access market-based finance without sovereign guarantees. The program is aimed to improve the borrowing capacity of local governments and utilities by providing financing for credit ratings, creditworthiness enhancement programs, assistance in the preparation of financing without sovereign guarantees for knowledge generation and dissemination.

The Mission visited STMA in response to a request made to the Bank by the STMA authorities in 2012, asking for assistance to determine short term improvements to the district's road network using financial alternatives, develop a sustainable financial base for road maintenance, establish long term needs to alleviate traffic congestion and maintain an efficient traffic flow within the city.

The Mission's task was to conduct a thorough analysis of the STMA current financial situation, detect points of conflict in the traffic flows noting other related problems and to structure a short term financial and technical proposal for transportation works implementation. This report summarizing the findings of the Mission is to be presented both to the Office of The World Bank Representative in Ghana and the STMA Authorities.

It contains some background information to provide a better understanding of the current situation; Chapter One is devoted to the existing road network conditions and a short term problem identification; Chapter Two provides an assessment of the legal and regulatory framework for transportation sector in Ghana; Chapter Three contains a detailed SWOT assessment of the current financial situation of STMA, its capabilities, strengths and weaknesses. In Chapter Four, short term proposals to maintain the road network functioning properly and the alternatives envisioned for financing and for the long term transportation improvements are presented.

I. Background

1. Ghana has one of the fastest growing economies in the world. Its economy has performed well, especially in the last five years, conducting to the re-classification of the country from the low income/ IDA only country to a lower middle-income country by the World Bank. One result derived from the enhanced economic growth is urbanization. The country's urban population is projected to reach a 65% of total by 2030.
2. Sekondi-Takoradi is one of Ghana's fastest growing cities. Situated on the Gulf of Guinea, it is one of the six Metropolitan Assemblies and the third most populated city of the country. The city is experiencing a steady increase in population (3.25% annual rate by 2013) which will increase the number of inhabitants to a 660,000 estimate by 2030. Sekondi-Takoradi is situated on a 385 square miles⁴ area and it is the regional capital of the Western Region of Ghana.⁵ As the commercial, educational, political and administrative nerve center of the West, it has also become the headquarters of the oil and gas industry. Its port facilities were built in 1928 and handles 62% of all national exports in the form of bulk commodities, while Tema handles 63% of all national seaborne traffic. Trade volume in Takoradi reached 5.3 million tonnes in 2012.
3. The relatively high population rate of growth of Sekondi-Takoradi feeds from major economic activities in the sub-region resulting in an urbanization process which is taking place along all Ghana's territory but is more intensely directed to cities where dynamic economic activity is expected to generate employment opportunities. This process of rapid urbanization besides changing the patterns of poverty distribution between urban and rural areas is also creating new challenges for the recipient cities ranging from socio political and economic concerns to infrastructure and environmental issues.

The Sub Region

4. The sub region is endowed with natural resources. This presents an economic growth potential which is definitely having an impact on the basic existing infrastructure in Sekondi-Takoradi in general and more specifically the Takoradi Port. In a Draft Sub-Regional Spatial Development Plan⁶ expansion of economic activities noted are in oil, natural gas, mining, primary agriculture and tourism sectors. This justifies the need of improving and expanding the road network of Sekondi-Takoradi, especially the port related sections to avoid situations of worst traffic congestion and a deteriorated urban road network.
5. The Plan provides a summary of the existing economic base of the sub-region. The highlights are as follows:
 - a. The sub-region provides significant contribution in food crops and cash crops such as rubber, oil palm, cocoa and coconut.
 - b. The sub-region is rich in minerals – typically gold, copper, bauxite, manganese, mica, limestone, clay and occasional diamonds. The most prominent is gold deposits, across three (3) Districts. Minerals exploitation is still in its infancy. It is noted that vehicle traffic volume to the Takoradi Port has

⁴ Equals 219 sq. kms.

⁵ Political and administrative center

⁶ Draft Sub Regional Development Plan, The Consortium, 2012

increased involving the export of minerals like bauxite and manganese by many companies transporting these products and having established headquarters in Sekondi-Takoradi.

- c. The sub-region has a fair spread of landing sites for fishing and market centers for agricultural output but in all cases, this set of economic infrastructure is under-developed.
 - d. Despite the vast array of touristic resources – white sandy beaches, forests with unique biodiversity, navigable rivers, forts, castles and monuments, rare species of forest and coastal animals etc., the sub-region has an under-developed tourism industry.
 - e. The emerging oil and gas industry is at its infancy but already making an impact. Highlights include expansion plans for oil exploitation, extraction by new oil companies that will be operational within the next 5 years.
6. The uncontrolled urbanization process resulting from above is creating an expansion of densely populated peripheral zones in Sekondi-Takoradi, straining transportation, water supply and sanitation. Most inhabitants are engaged in low income - informal economic activities as artisans, small scale street vendors with a high concentration of women traders operating marginal enterprises. The commercial sector has been expanding as the local economy is liberalizing and growing into the service sector including telecommunications and some of them alongside formal industrial sector.
 7. The pace of urbanization in Sekondi-Takoradi is also resulting in an increasing vehicular fleet of more than 4% percent per annum. The situation poses major problems, especially in the Central Business District (CBD) and the port environs, where the bulk of the increase is occurring. Already, a considerable time is spent commuting to and from work each day by the working population living at the periphery. Rapid urbanization means increased motorization and economic activity, leading to increased air pollution, aggravated by poorly maintained vehicles without emission control and poor regulatory framework. This situation has the tendency to reduce productivity, production of pollution by exhaust fumes of vehicles, increase the fuel consumption bill, and cause stress and deterioration in the overall health condition of the population. The number of traffic related accidents during the last two years for which information is available, register an annual average of 163 crashes causing injuries to 150 persons of which 20 resulted in deaths.
 8. With regard to the national road funding and as noted in most District Assemblies in Ghana, Sekondi-Takoradi Metropolitan Assembly (STMA) is largely dependent on Ghana Road Fund Secretariat and Consolidated Fund of the Central Government. This is in the form of capital transfers to finance investment projects and road maintenance because a series of limitations on its revenue generation capabilities and existent legal restrictions impeding debt-financing.
 9. As a result, the STMA is not able to provide more services to its population. The initial step towards the development of the city was with the Medium Term Development Plan⁷ prepared by the STMA followed by Spatial Development Plan and a draft Structure Plan (prepared by consultants). These plans are ongoing and have still to be implemented due to limitations in the budgeting and allocation process for public resources and the local needs.

⁷ STMA Medium Term Development Plan, 2010-2013

10. The STMA has a heavy traffic congestion problem due to disparity in transportation demand and supply and the presence of many informal and unregulated taxis and Tro-tro⁸ services and trucks moving goods in and out of the port. The road network is in a deteriorated condition due to lack of sufficient funds for road maintenance or paving of existing roads. Needs for improvement in the short term includes rehabilitation and widening of existing roads and bridges to more lanes, construction of interchange passageways, paving of interlocking roads, construction of parking spaces and signaling. In the long term building of at least two new roads will be needed to provide a long lasting solution. It is projected that the actual road network will collapse in a two-three year period when a second oil platform enters into an operational phase, increasing trucks and its services provider's related traffic which will further increase the number of vehicles of all sizes utilizing the existing ill maintained roads.
11. The Ghanaian Government has issued a Public Private Partnership Policy in 2011, which provides opportunities for STMA to constitute alliances or enter in joint ventures with private sector entities to make improvements to the existing road network or invest in new roads which alleviate the densely congested traffic within the STMA area, especially the roads conducting to the harbor, where the truck traffic is heavier.
12. In the following chapters, the conditions of the existing road network, the regulatory framework for the transportation sector, institutional arrangements and the financial situation of STMA are reviewed in more details. The current capabilities for STMA entering into a PPP agreement are assessed and finally, a proposal to finance the short term improvements required, within the PPP policy framework is presented.

⁸ Tro tro- privately owned minibuses and shared taxis that travel on fixed routes.

II. CHAPTER I: STMA Road Network, Transportation and Traffic Problems

Overview

1. This section highlights problems arising from traffic congestion within the twin cities of Sekondi-Takoradi. The main purpose is to make general recommendations on financing, with private sector participation to make possible the implementation of road network interventions, define preparation of required technical and economic studies needed to support prioritized interventions.
2. As stated before, traffic congestion related problems have escalated in the last years due to the significant increase in economic activity generated by a strong service sector activities arising from: i) Trade activity related to mining exploitations in the Western Region of Ghana; ii) commercial activities related to the recent oil discovery in the coastal zone west of Takoradi; and iii) Population growth with a high informal commercial activity.
3. The existing situation and findings presented in this report were generated through a staged process, described as follows:
 - a. Analysis of several documents and reports⁹
 - b. Work meetings with STMA authorities, Department of Urban Roads of the Ministry of Roads and Highways; the Driver and Vehicle Licensing Authority (DVLA), Ghana Ports and Harbors' Authority, and main stakeholders.

Image 1: Meetings with Authorities



Meetings with Ministry of Roads and Highways / DHLA, Authorities

- c. Detailed on site visits and assessments of the Sekondi-Takoradi road network condition and congestion performed along with technical personnel of ST Department of Urban Roads.
- d. Coordination meetings with other members of the consultants' team and the team leader.

⁹ STMA Drainage Master Plan (Mott McDonald, 2006), Traffic studies (DAOV-TECH ,2008)

- e. Meetings with Sekondi-Takoradi Chamber of Commerce membership and stakeholders, seeking to assess the possible participation of the private sector in the configuration of solutions to funding problems.
- f. Proposal elaboration, Action Plan and corresponding Terms of reference.

Findings

- 4. After the documentation review, an onsite reconnaissance visits to the main streets and avenues that integrate the urban road network and its connections to the inter-cities roads were undertaken.

Image 2: The traffic in roundabouts



Typical traffic in roundabouts

- 5. During these site visits, the following were noted:
 - a. High level of congestion;
 - b. Low level of service provided by the urban road network of Sekondi-Takoradi and truck road links, characterized by high traffic volumes, more than 20,000 vehicles per day;
 - c. Conflicts at most leveled intersections (generally roundabouts of small size);
 - d. Lack of vertical and horizontal signs;
 - e. Severe damage to the road surface due to the heavy traffic load (canalized surface routing);
 - f. Invasion of the right of way by informal businesses;
 - g. Unregulated operations and lack of strict control for taxis and tro tros accounting for more than half of the current traffic volume registered in the network.
- 6. Regarding transportation and distribution of oil products, the major companies operating in this activity include Ahiadome Transport and J.K. Horgle Inc. (operating from the Cirrus oil storage depot alone there is a daily supply around 30-50 tankers) In addition, other fleet of tankers from the United Storage Company (a merger of Goil and Chase) all distribute refined products in the city and the western region of the country, which makes them major truck traffic users of the urban road network. These companies do not utilize the port facilities, since they fuel pump piped directly into their storage tanks and load the tankers from there.

Image 3: Parking Area



Parking area / CIRRUS Oil Co.

7. Regarding transportation and distribution of oil products, the major companies operating in this activity include Ahiadome Transport and J.K. Horgle Inc. (operating from the Cirrus oil storage depot alone there is a daily supply around 30-50 tankers) In addition, other fleet of tankers from the United Storage Company (a merger of Goil and Chase) all distribute refined products in the city and the western region of the country, which makes them major truck traffic users of the urban road network. These companies do not utilize the port facilities, since they fuel pump piped directly into their storage tanks and load the tankers from there.

Image 4: Market Place



«Market Place» sector

8. The Market Circle area has a high level of traffic congestion and pedestrian, at all times, which directly affects the circulating vehicles in the surrounding streets leading to and from the Takoradi Port. The congested Market Circle, covering an area of approximately 1 sq. km is the commercial and economic hub of Sekondi-Takoradi and the Western Region.
9. By the “*Floating Vehicle*” mechanism, consisting in circulating in the middle of the traffic mass in normal conditions, at different times each day, we estimated the speed of routing ranging from 25 to 35 kph in “*non-peak hours*” and descending during *peak hours* to 20 kph or less, increasing operation cost and travel time of users. In fact, data collected in an earlier traffic study put clear already by 2008, the need to improve and expand the urban road network and its connections with the inter-urban network.
10. An urgent need identified is to provide the cities with roads to appropriately attend additional traffic that will be generated in the short term arising from the expansion plans for oil extraction of the Government of Ghana and the new oil companies that will enter the activity during the next 5 years. Precisely due to the commercial activity generated by the strong demand for goods and services required by the drilling platforms at sea southwest of the port of Takoradi, vehicle traffic volume has increased beyond the normal demands involving besides the export of minerals by the port and that many companies operating in the generation and distribution of these products and services have established headquarters in Sekondi-Takoradi.

Image 5: Manganese Plant**Manganese at the port**

11. A related issue emerges from the recommendations derived from STMA Drainage Master Plan (Mott McDonald, 2006) which calls for much attention due to the serious drainage problem in the city. These includes the widening coverage of the surface water system, both for rain and sewerage water, (which currently run by open air channels normally crowded by trash mostly plastic, condition aggravated by the plain topography of the city where there are low drain impulse) This problem tends to worsens during the rainy season, from May to July and from September to October, registering accumulated precipitation volumes near to 3,000 mm. per year. It should be noted that the clogging of drainage channels causes additional damage to the rolling surface and lower layers of the pavement. Additionally, this situation is a permanent source of contamination throughout the two cities.
12. The sub region presents clear economic growth potential which will definitely have an additional impact on the basic infrastructure, more specifically on the port and road infrastructure. This requires the formulation of an integral development plan to adopt concrete actions according to that growth potential.
13. In the Sub-Regional Spatial Development Plan for the western region which includes the cities of Sekondi and Takoradi ¹⁰, important data concerning the activities developed in the oil, natural gas, mining, primary agriculture and tourism sectors can be found. Such information confirms the need for improving and expansion for the road network of Sekondi-Takoradi, especially the port related sections to avoid situations of worst traffic congestion in the future and eventually the urban road network collapsing.

Image 6: Takoradi Port**Takoradi Port**

¹⁰ Executed by the firm The Consortium in July 2012

Interventions to consider

14. Traffic studies made by DAOV-TECH in 2008, clearly signaled the problem of traffic congestion and since, this has been aggravated by the annual growth rate between 2 and 4.5 % registered as average by the vehicle fleet size in the cities.
15. Currently, the city moves along two main road axes:
 - a. Sekondi Road, two lanes, one per direction of circulation, of approximately 9 kms., which runs from west to east, parallel to the coast, from the port to the city center; and
 - b. Cape Coast /Accra Road going from National Road N-1 from Accra to the port, in the north section of the city with an approximate length of 17 kms. Both report traffic volumes above 27,000 vehicles /day, with high levels of congestion due mainly to the high number of taxis circulating among them, without control.
16. Currently, works for widening and improving Kansawurado Road are being executed under a contract administered by The Department of Urban Roads. This road is situated to the north, parallel to Cape Coast /Accra Road, and when is finished will drive directly the incoming traffic from the north east, Cape Coast and Accra to the west, in direction of Apowa and Ahanta West District. The interconnection between Axim Road and Kansawurado Road in the named Apollo Juntion, makes Axim Road the in/out corridor to the port with most potential and lesser interferences than other urban roads and hence the need of providing it with the urgent maintenance works and widening required.

Image 7: Works at Kansawurado Road



Current works at Kanwosorado Rd.

17. An idea for the construction of a new way across the south west area of the airport, leading directly to the port was also investigated but the use of the existing roads would be cumbersome and cost-prohibitive, given that parts of that area are heavily populated with a large amount of businesses and residences. Besides, the high end neighborhood is situated next to the port, all of what would create surmounting difficulties to obtain the land and conclude the resettlement of the affected population. By all means, this idea could be considered as a long term solution only if a route from the port through the coastal zone can be designed overcoming the economic and environmental problems that such a project would arise.

Image 8: Takoradi



Residential area - Takoradi

Image 9: Access zone to the Port



Future direct access zone to the Port

18. Hence the recommendation of making short term improvements to Axim Road and its interlocking streets (triangle B-C-H on map) with overpass solutions in the points “H” and “C”. In the future, this type of overpasses can be the immediate solution to most of the city intersections, now operating with small level roundabouts. From there also arises the importance of improve and rehabilitate the interlocking roads between the aforementioned two main axis Sekondi road and Cape Coast/Accra road and provide higher connectivity to the network, especially in Ketan Road, Fijai Road, Effia Road and Takoradi Poly-CDH Road.
19. Based on the aforementioned findings, it is recommended to proceed with a Road investment Plan, prioritized by phases, in the following way:
 - a. **Short Term:** built two overpasses, in the Paa Grant (circle “H” on the map below) and Kwame Nkrumah (circle “C” on the map) roundabouts, with simple designs oriented to resolute completely the way of circulation with the higher traffic volume, from west to east in “H” and to Apowa-Axim in “C”. Remaining traffic in both circles would be resolved at the lower level, under the bridges with traffic lights support and an adequate signaling. The simplicity of designs allow to perform the works on the existing right of way and avoid relocation of houses and businesses that abound around these intersections or incur in costly compensation payments given the delayed and complex nature of these processes.

These overpasses would have to be built one after another to avoid more traffic complications and it is suggested to start with “H”- Paa Grant Circle and once this work is finished then start the other. The new overpass design at Kwame Nkrumah circle (“C”) must be compatible with future enlargement of Axim Road to 6 lanes.

- b. **Medium Term:** Widen from 2 to 4 lanes the section “A”-“B” of Axim Road, and besides, widen from 4 to 6 lanes, 3 for each way, section “B-C-D” in the same street, which together represent a length of 7 kms.
- c. **Medium-Long Term:** Rehabilitate and/or widen, according to each case requirement, the 4 main interlocking roads connecting Sekondi Road to Accra/Cape Coast Road and Kansawuradu Road, to give higher connectivity to the network and supply with more options to enter and leave the port. These interlocking roads are Ketan, Fijai, Effia and Takoradi Poly (CDH).
- d. **Long Term:** Built a new access to the port by the west side, using the coastal area to avoid massive compensation payments until splice with the road to Apowa, after a detailed study of engineering and socio- environmental impacts.

Image 10: Rail Road



Rail Road existing *right of way*

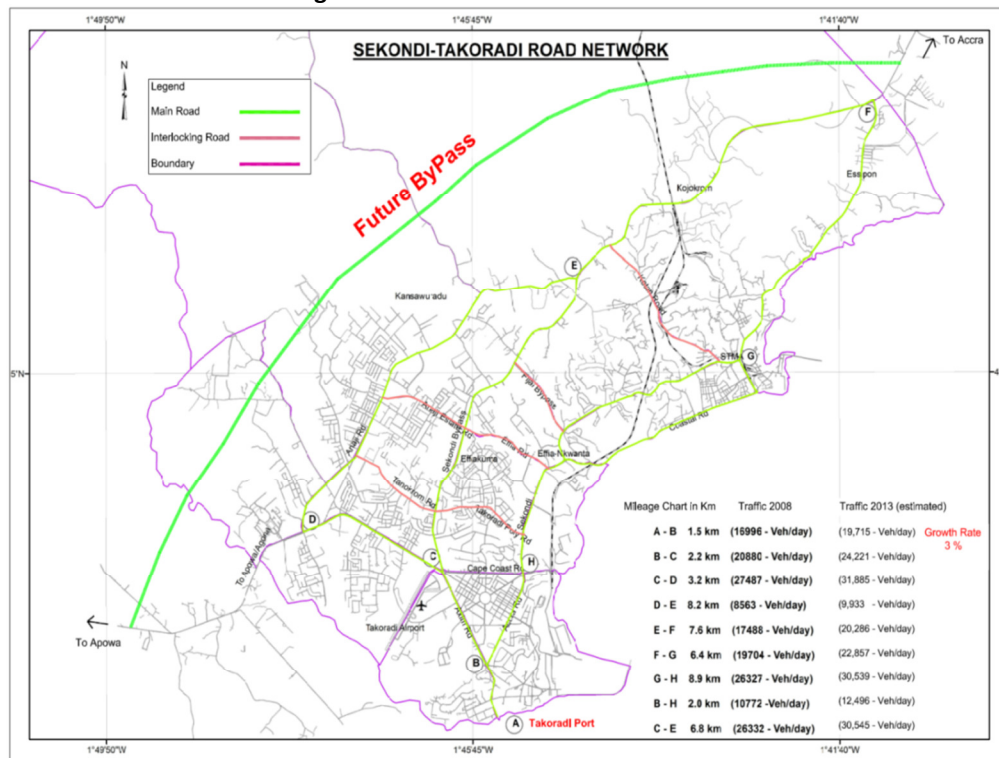
Image 11: Abandoned Rail Road



Abandoned Rail Road patio

20. Other of the ideas considered was the use of the right of way currently in use by the railroad that goes through the metropolitan area of Sekondi-Takoradi, which represents a valuable space free of squatters that in case the railroad operations be discontinued could accommodate an alternate road from east to west parallel to the coast and generate a rapid decongestion of urban traffic.
21. Current operations of the railroad are minimal with one or two trips per week transporting manganese from Nsuta to the port; the rest of minerals extracted in the region are normally transported by trucks to the port.
22. This idea is however not feasible due to the current Railway Rehabilitation program under discussions in Parliament. It is planned to open up Sekondi-Takoradi route in the Western Region and facilitate the transport of bulk cargo, which is currently being transported by road. The Ghana Rail Rehabilitation Project entails the rehabilitation of the existing western, eastern and central rail lines. The western line is linked to the Takoradi Port. The Ministry of Transport is facilitating the project and a master plan is currently being undertaken.
23. The city’s Master Plan includes the construction of a future “Bypass” to the north of the city, joining Route N-1 with the road to Apowa, which besides of avoiding heavy traffic on properly urban roads would bring some relief on the pressure to the port leading to the north the future housing, industrial and commercial developments far from the city center.
24. The map shown below illustrates the former proposals.

Image 12: Sekondi-Takoradi Road Network



Costs

25. To have an idea of the costs involved in the proposal, an earlier and very preliminary estimate of the improvement and widening works in consideration was made based on some information provided by the STMA-Department of Urban Roads, comparing that information to the budget allocation STMA had in 2012 to perform urban roads maintenance and improvements, which is extremely low.
26. The inventory of the road network and the most recent report on its condition according to road type, dating from 2008, were also considered, finding that over 50% of the urban road network was in bad condition so far and that the situation have worsened to date.
27. On the other hand it is expected that to be able to plan interventions on the road network in a prioritized, technically and economically justified manner, newly built or road maintenance works would require detailed studies and designs, performed by a specialized engineering consultant firm or group of consultants whose terms of reference are attached to this report for its use, in case of being needed.
28. Such consultants could utilize the World Bank program RNET, created for road network evaluations in sub-Saharan countries like Ghana. This planning tool basically requires to be feed with updated information from the road network: Classified Traffic census, Vehicle operating cost, time travel cost for users, fuel cost and the physical condition of the roads measured through the roughness (IRI Index) in each section. The IRI could be obtained with self propelled equipment but also with simple and low cost manual equipment MERLIN type whose results have the precision needed to run the RNET program with reliable and enough data to program interventions duly prioritized.
29. Nevertheless to initiate with a pilot program under the PPP policy of the Government of Ghana, it is advisable to start with a moderate reach of spot improvement works, to the end that STMA technical personnel acquire familiarity with the scheme and be prepared technically and administratively to execute projects of a larger reach, following an action plan.
30. Given the aforementioned conditions a better alternative could be to start with a maintenance and improvement Project in the road that would serve directly to the companies that demand most of port services, transporting their products to and from the port, which is the case of the corridor Axim Road – Accra Road – Kansaworodo Road. Hence the recommendation of first build the two mentioned overpasses and in a second stage proceed to widen this corridor from 2 to 4 lanes in the sector adjacent to the port (Section A-B) and from 4 to 6 lanes in the northern section (Section B-C-D) creating through both project stages one route that would much facilitate the entering and leaving of heavy traffic to the port. A preliminary estimate of the suggested interventions could be as follows:

- **Priority 1. Construction of two (2) overpasses in points “h” and “c”:**

1. A. *Overpass in Paa Grant Circle (“H”):*

Estimated US\$ 3.5 millions

Image 13: Paa Grant Overpass

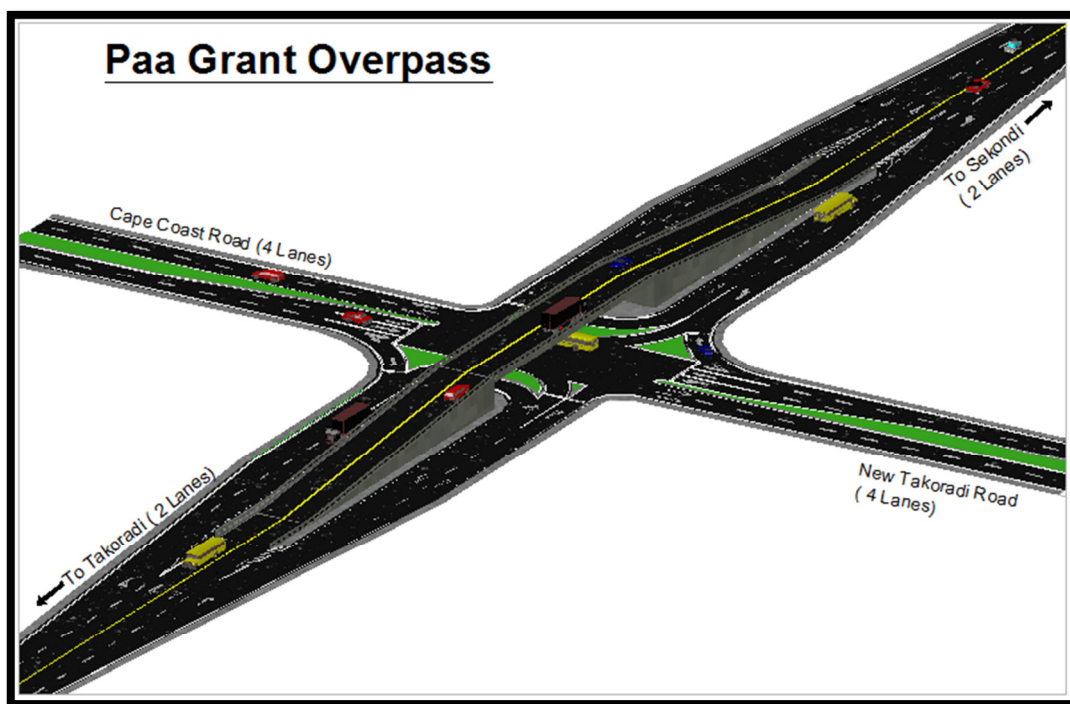
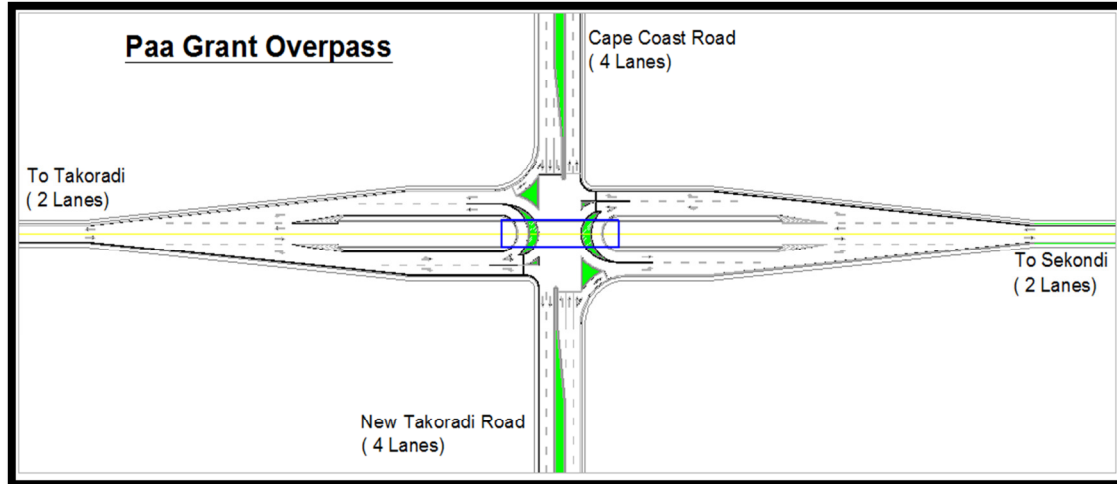


Image 14: Paa Grant Overpass, Preliminary Configuration.



1. B. Overpass in Kwame Nkrumah Circle ("C"): Estimated US\$ 5.0 millions

Image 15: Kwame Nkrumah Overpass

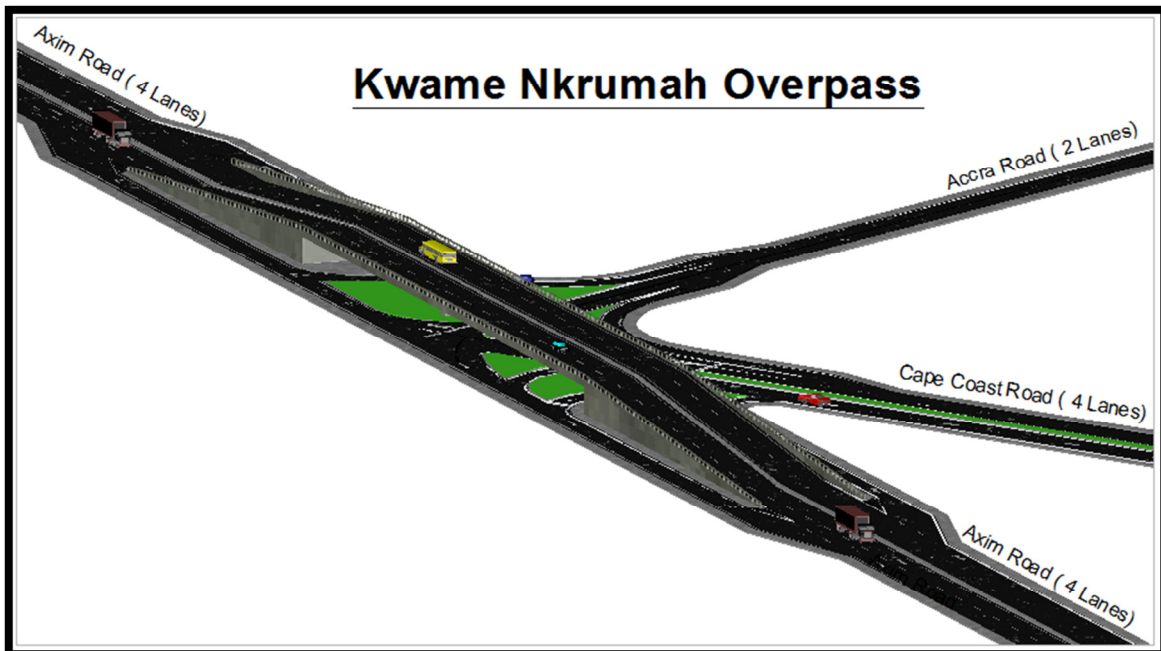
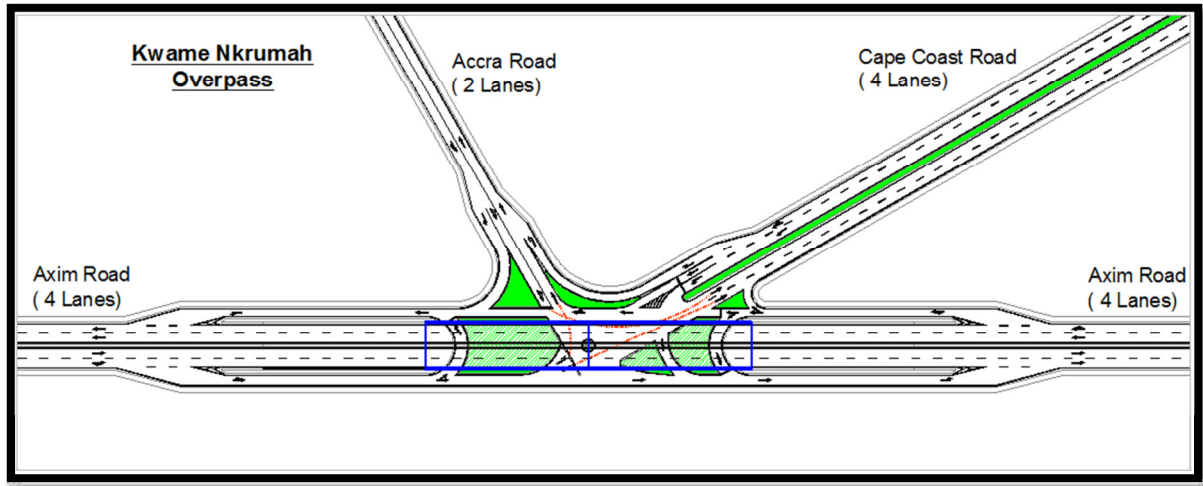


Image 16: Kwame Nkrumah Overpass, Preliminary Configuration.



- **Priority 2. Widening of axim road (7 kms. A-b-c-d) from 4 to 6 lanes:**

Estimated US\$ 11.55 Millions

Image 17: Axim Road Current Traffic



Axim Rd.- Strecht A-B to be widened to 4 lanes



Current Axim Road (4 lanes)



Traffic congestion at Axim Road

- **Priority 3. Rehabilitation of 4 interlocking roads**

3.A. Ketan Road (aprox. 3.2 kms, 2 lanes):	US\$ 3.84 millions
3.B. Fijai Road (aprox. 1.8 kms, 4 lanes):	US\$ 3.60 millions
3.C. Effia Road (aprox. 2.0 kms, 2 lanes):	US\$ 2.40 millions
3.D. Takoradi Poly (CDH) Road (aprox. 2.1 kms, 2 lanes):	US\$ 2.52 millions

Image 18: Rehabilitation of 4 Interlocking Road



Intersection Accra Road – Ketan Rd. (interlocking road)



Effia (Interlocking Road)



Fijai (Interlocking Road)

Stakeholders Position

31. With assistance and support from the Sekondi-Takoradi Chamber of Commerce & Industry (STCCI), a meeting with the some of the stakeholders of the transportation sector in the District was held during the Mission. The objective was to discuss the issues affecting traffic and persons and goods transportation along the city. Representatives¹¹ from the taxi and tro tros union, truck transportation companies, the port authority, STMA representatives, commodity exporting companies and representatives of the business community discussed their points of view on traffic congestion, roads condition, conflict points, parking space, interlocking roads and adequacy of main roads serving the harbor zone.

Image 19: Stakeholders meetings



32. Main problems highlighted by attendees were:

- a. Lack of capabilities (or actions) by STMA authorities to address traffic congestion and a perceived lack of planning to attack the problems in the near future.
- b. Growing congestion on traffic in the harbor routes especially near the port.
- c. Lack of parking spaces for trucks waiting to enter the port to load/unload merchandise.
- d. Taxis and tro tros with no license/permits
- e. Heavy congestion at the market area
- f. Lack of adequate funding from the Ghana Road Fund Secretariats and the Consolidated Fund.
- g. Improvements and actual Road Widening on selected streets such as the Axim Road
- h. Improvements to conditions of Interlocking or Interconnecting Roads such as the Fijai Road
- i. Kwame Nkrumah Circle need for improvements

33. The need to adopt preventive measures at the very short term, given the coming phase of operation for a second oil platform was emphasized by the Mission and confirmed by STMA Authorities, who besides asked the attendees and private sector parties with interest in the road network in the community to work together in the working out of solutions to the aforementioned problems.

¹¹ A detailed list of attendees is incorporated in the annexes to this report.

Other stakeholders interest in PPPs at a sub national level

34. The Mission team also visited other stakeholders that could be interested in participating in a PPP agreement with STMA to assess their knowledge of the PPP policy and the type of projects they could have interest in. Among the private companies interviewed, were two private local banks: Fidelity Bank and UT Bank.
35. Since the beginning, executives from both financial institutions expressed special interest for participating in the projects both in their financing as in the administration of the SPVs that could emerge as the managing/executing vehicle for the required investments or as administrators of the trust fund that could be constituted to the PPP purposes.
36. Mr. Alex Dodoo, Director for the Public Sector in Fidelity Bank informed the mission team that at an earlier date this year, he paid a visit to the Ministry of Finance to communicate the interest of his bank to participate in the PPP policy implementation.
37. About the amount of financing, a figure of US\$ 3.0 million was tested as a sample of a hypothetical project requirement, seeming that the executives considered it low for their expectations, responding that they expected also to participate in operations for higher values.

III. CHAPTER II: Transportation Sector Regulations in Ghana

1. There are several legislative bodies containing provisions that apply to the transportation sector in Ghana. These legislation bodies are analyzed in the following paragraphs.

Constitution of Ghana (1992)

2. The Republic of Ghana is a unitary state with multiparty democracy. Government is divided in three different branches: The Executive, the Legislature (Parliament) and the Judiciary.
3. The Executive includes the President, the Vice-President, the Council of State, the Cabinet, the National Security Council and the National Development Planning Commission. Parliament is organized as a unicameral body with 275 seats. The Members of Parliament are directly elected by universal adult suffrage for a term of four years. The Judiciary consists of the Superior Courts of Judicature, comprising the Supreme Court, the Court of Appeal and the High Court and Regional Tribunals, and the lower courts.
4. The Republic of Ghana is divided into ten administrative regions. Each is headed by a Regional Minister appointed by the President.

A. The Executive Power

5. The President is the Head of State, Government and Commander-in-Chief of the Armed Forces. The President is directly elected by universal adult suffrage requiring more than 50 per cent of the votes. The executive authority is vested in the President who can perform said authority either directly or through officers subordinated to him.
6. A candidate shall be deemed to be duly elected as Vice-President if the candidate who designated him as candidate for election to the office of Vice-President has been duly elected as President. The main function of the Vice-President is to substitute the President whenever he or she is absent or otherwise cannot perform his or her duties.
7. The Cabinet which consists of the President, the Vice-President and no more than nineteen Ministers of State, assists the President in the determination of general policy of the Government. The President also receives counsel about the performance of his or her duties from the Council of State.
8. The National Development Planning Commission (NDPC) consists of a Chairman appointed by the President in consultation with the Council of State, the Minister of Finance, other ministers and public officials, including one representative of each Region. The NDPC responds to the President and advises on development planning policy and strategy. Among other things, the NDPC is authorized to monitor, evaluate and co-ordinate development policies, programs and projects.
9. There are no specific provisions in the Constitution of Ghana that refers or regulate matters related to roads and traffic.

B. Institutional Aspects Related to Traffic and Transportation

1. Ministry of Transportation

10. This entity is responsible of all regulatory aspects for the Civil Aviation Services, Road Transport Services, Maritime Services and Rail Services rendered in Ghana. For the Road Transport Services Sub-Sector, the Ministry counts with the following agencies: Driver's & Vehicle Licensing Authority (DVLA), the National Road Safety Commission (NRSC), the Metro Mass Transit Limited (MMTL) and the Government Technical Training Centre (GTTC). For the purposes of this report, we will address matters concerning only to the DVLA.
11. The DVLA was created by the Driver and Vehicle Licensing Authority Act (1999), for the purpose of promoting good driving standards in the country, and ensure the use of road worthy vehicles on the roads and in other public places. Among others, the DVLA is responsible for establishing, managing and updating standards and methods for the training of driver instructors and drivers of motor vehicles, including motorcycles, issuance of driving licenses, inspection, testing and registering of motor vehicles, and issuance of vehicle registration and examination certificates.
12. Section 26 of the DVLA law, gives the Ministry of Transportation the authority to approve regulations relating to driving and use of motor vehicles which may include fees to be charged for services performed by the DVLA.
13. Under Section 175 of the Constitution of Ghana, all monies collected by the DVLA are considered fiscal revenues of the Central Government and a part of the resources channeled to the Consolidated Fund which is basically comprised of all revenues or other monies raised or received for the purposes of, or on behalf of the Government, and other monies raised or received in trust for, or on behalf of the Government. There is also a Contingency Fund which is basically comprised of monies voted for the purpose by Parliament.

2. Ministry of Roads and Highways

14. This entity is responsible of all regulatory aspects for the road transportation sector, including issuance of the regulatory framework for road transport operations, investments and the development of an integrated road transport system which is modally complementary. For such purpose, the Ministry counts with the following agencies: Department of Feeder Roads (DFR), Department of Urban Roads (DUR), Ghana Highway Authority (GHA) and the Ghana Road Fund Secretariat (GRFS). For the purpose of this report we will address matters concerning only to the DUR and the GRFS.
15. The Road (Vehicle Use) Act (1998) creates a mandatory "Road Certificate" which consists on a sticker that must be placed on the front windscreen of all motor vehicles. The stickers are paid in accordance to a fee. For commercial vehicles the payment of this fee must be done once every six months, while for private vehicles, the payment is due annually.
16. Under Section 6 of this law, the Minister of Roads and Highway has the authority to amend the fees and/or prescribe different rates for different types of vehicles. Section 5, prescribes that the fees collected must be used for periodic and routine maintenance of roads, and road-facilities.

All monies collected as a result of the mandatory “Road Certificate” system must be deposited in a bank account for the purpose of the Road Fund Act which is explained below.

17. The Road Fund Act (1997) establishes a fund for the purpose of financing routine and periodic maintenance and rehabilitation of public roads in Ghana. The fund can also be used to assist the Metropolitan, Municipal and District Assemblies in the exercise of their functions relevant to public roads.
18. Under Section 3 of the law, the Road Fund is formed by the monies coming from:
 - a. Petrol, diesel and refined oil levy.
 - b. Bridge, ferry and road tolls.
 - c. Vehicle license and inspection.
 - d. Entrance to Ghana of foreign vehicles.
19. Under Section 5 of the law, the Road Fund Act is managed by a Fund Management Board comprised by the following persons appointed by the President of Ghana:
 - a. The Minister for Roads and Transportation or his representative who shall be the Chairman;
 - b. The Minister for Finance or his representative;
 - c. The Minister for Mines and Energy or his representative;
 - d. The Accountant-General or his representative;
 - e. The Minister for Local Government and Rural Development or his representative;
 - f. Two persons nominated from outside the Ministry of Roads and Transportation by the Minister; and
 - g. One representative from each of the following organizations nominated by the organization concerned:
 - The Association of Road Contractors;
 - The Ghana Private Road Transport Union;
 - The Ghana Private Enterprise Foundation;
 - The Ghana Road Haulage Association;
 - The Ghana Institute of Engineers; and
 - The Ghana National Association of Farmers and Fishermen (Crops).
20. The Law mandates for the preparation of an Annual Road Program and an Annual Expenditure Program. These documents must be prepared annually at least three months before the end of each financial year for the consideration and approval of the Fund Management Board, in respect of the next financial year by the departments and bodies charged with the implementation of the road policies of the Ministry of Roads and Highways. Among other items, the Annual Road Program must include the grounds for the expenditure in respect of each road and the revenue projections for the financial year of the department and bodies for the Fund.
21. Under Section 12, Sub-Section (3), allocations from the Fund to the implementing department and bodies shall be based among other considerations on the conditions of the road network, maintenance requirements and lengths of the road network and the relevant volume of traffic.

C. Local Government and Decentralization

22. Under the Ghana Constitution, the system of local government and administration shall, as far as practicable, be de-centralized, for which purpose Parliament has the authority to legislate in order to ensure that resources are transferred to local governments in a coordinated manner and take measures to enhance the capacity of local government authorities.
23. The Constitution mandates that each local government unit should have a sound financial base and people in the service of local government shall be subject to effective control of local authorities who have the mandate to afford people with the opportunity to participate in their own governance.
24. District Assemblies are also responsible for the preparation of their development plans and annual budget. The plans must be tendered through the Regional Coordinating Council for final approval by NDPC. District Assemblies must take the necessary steps and measures to execute approved development plans for the district, initiate and encourage joint participation with any other bodies to execute approved development plans, promote or encourage other persons or bodies to undertake projects under approved development plans. The District Assemblies have to encourage and support social development in the district, initiate programs for the development of infrastructure and provide municipal works and services.

D. Local Government Act (1993)

25. For the purposes of local government, Ghana is currently divided into 216 MMDAs. The highest political authority in the district is the District Assembly who has deliberative, legislative and executive powers and its main duties include the formulation and implementation of plans, programs and strategies for the effective mobilization of the resources necessary for the overall development of the district, and the levying and collection of taxes, rates, duties and fees.
26. Each District Assembly must have a District Chief Executive (Mayor) who is appointed by the President with the prior approval of not less than two-thirds majority of the members of the Assembly. The Mayors are responsible for the day-to-day performance of the executive and administrative functions of the District Assembly. An Executive Committee of a District Assembly collaborates in the performance of the executive and administrative functions of the District Assembly.
27. Under the Local Government Act, a District Assembly exercises political and administrative authority in the district, provides guidance, gives directions to and supervises the other administrative authorities in the district. Specifically, the District Assembly is responsible for the overall development of the district ensuring the preparation and submission through the Regional Coordinating Council of (i) development plans of the district to the National Development Planning Commission for approval, and (ii) budget of the district to the Minister of Finance, for approval. The budget submitted has to be closely related to the approved development plan.
28. A District Assembly shall consist of the District Chief Executive, one person from each electoral area within the district elected, the member or members of Parliament from the constituencies that fall within the area of authority of the District Assembly, but these members of Parliament shall not have a voting right at the District Assembly, and other persons not exceeding 30 percent of the total membership of the District Assembly appointed by the President in consultation with the traditional authorities and any other interest groups in the district.

29. Seventy percent of the District Assembly members are elected, and the remaining thirty percent of the members are appointed to the District Assembly. However, the Local Government Act prescribes special provisions for the establishment of Metropolitan Assemblies. The Local Government Act provides that the legislative instrument establishing a Metropolitan Assembly shall specify the appropriate and relevant provisions of the Local Government Act that are applicable to the Metropolitan Assembly in question.
30. The Local Government Act provides that there are three kinds of districts: districts, municipalities and metropolises, and each shall have an Assembly as the highest political authority, as follows:
- a. District Assemblies in districts with a minimum population of 75,000 people.
 - b. Municipal Assemblies in districts with a minimum population of 95,000 people.
 - c. Metropolitan Assemblies in districts with a minimum population of 250,000 people.
31. The Executive Committee of a District Assembly is responsible for the performance of the executive and administrative functions, and is empowered to oversee the administration of the district, develop an executive approved plans of the units, areas and towns and sub-metropolitan districts. The executive committee has five sub-committees that assist them in attending the citizens and community requirements:
- a. Development planning;
 - b. Social services;
 - c. Works;
 - d. Justice and security;
 - e. Finance and administration;
32. District Assemblies are authorized to open and maintain bank accounts for the revenues and any other monies raised or received. District Assemblies may incur the expenditure necessary for the performance of the functions conferred to it by Law, provided the expenditure is included in the approved budget of the district for the relevant year; however, the monies received by a District Assembly from the District Assemblies Common Fund shall be spent only on projects forming part of its approved development plan.
33. A District Assembly may raise loans or obtain overdrafts within Ghana of the amounts, from the sources, in the manner, for the purpose and on the conditions approved by the Minister of Finance; however, approval is not required where the loan or overdraft does not exceed 20 million Cedis and the loan or overdraft does not require a guarantee by the Government.

E. District Assemblies Common Fund Act (1993)

34. The Constitution creates the District Assemblies Common Fund which shall annually receive no less than five percent (5%) of the total revenues of the Ghana's central government and any interests and dividends accruing from investments of said monies. Distribution of the Fund's resources is based on a formula approved by Parliament. The appropriations must be used by the District Assemblies for development projects and are transferred in quarterly installments. Each District Assembly must appoint a District Assemblies Common Fund Administrator whose functions and tenure are prescribed by law.

35. General administration of the DACF is executed by an Administrator appointed by the President, in consultation with the Council of State, and with the approval of Parliament. This public official holds office for a period of four years and can be re-appointed.
36. The DACF's Administrator is responsible to propose to Parliament the distribution of the DACF resources to the District Assemblies each year. Once approved, he or she must manage and distribute the resources among the District Assemblies. Investment of exceeding DACF's funds is allowed, prior approval of the Minister of Finance.
37. The Ministry of Finance and the Administrator of the DAFC determine the category of expenditure of the approved development budget of District Assemblies that can be met out of the amounts received from the DAFC.

F. Sekondi-Takoradi Metropolitan Assembly

38. Sekondi-Takoradi Metropolitan Assembly (STMA) is one of the six (6) Metropolitan Assemblies in Ghana and the most highly developed of the seventeen (17) districts in the Western Region. STMA is the City Authority of Sekondi-Takoradi, having being established by Legislative Instrument 1316 in 1994.¹²
39. STMA comprises of four sub metros. Each Sub metro has a presiding chair or president. The four sub metros are namely:
 - a. Takoradi Sub metro
 - b. Sekondi Sub metro
 - c. Effia-Kwesimintim Sub metro
 - d. Essikado-Ketan Sub metro
40. The Assembly is comprised of a Chief Executive, Presiding member a Coordinating Director and 65 members (49 elected and 16 appointed) with various committees. The functions of the STMA are undertaken by a number of Departments namely:
 - a. Development Planning-Coordinates Medium Term Development Plan and Action Plans
 - b. Department of Works-Building Permits, Inspections, maintenance and standards
 - c. Waste Management-environmental sanitation and promotion of public health.
 - d. Metro Finance-Financial Management and revenue generation
 - e. Budget & Rating-Preparation of City Budget and setting fees for services
 - f. Health and Sanitation-Collaborate to ensure equitable access to health information
 - g. Department of Urban Roads-maintenance of existing roads and technical road services.
 - h. Internal Audit-
 - i. Physical Planning-Development of Physical Plans and policy development.
 - j. Legal Department-Providing legal services to the Metro Departments.
 - k. Public Relations –Dissemination of policies, educational programs for the Assembly
 - l. Social Welfare-Provides community services, social integration for vulnerable populations

¹² In the year 2008 Legislative Instrument 1928 replaced Legislative Instrument 1316

41. STMA functions under various committees including the finance and budget committees that make an assessment of the financial structure, revenues and its obligations.
42. As we can see, Ghana has created legal instruments designed specifically to generate funds for the maintenance of urban roads; however, the decision-making process with respect to the allocation of funds for such purpose resides in the Central Government which means that the overall process tends to be highly cumbersome and slow.
43. As per the Decentralization Policy referred to in the Constitution, the Municipal Assemblies should play a more important role designing initiatives that would allow them to rapidly identify and prioritize projects for the development of infrastructure and municipal works and services. This means that the maintenance and enhancement of urban roads and the provisions of traffic solutions thereof can be included as part of a local government's Decentralized agenda, and therefore, all the initiatives for any such purposes can include the identification of the appropriate legal financial mechanisms that would generate the funds needed to successfully execute prioritized projects.
44. Ghana's National Public Private Partnership Policy (PPP) defines a PPP as a "...contractual arrangement between a public entity and a private sector party, with clear agreement on shared objectives for the provision of public infrastructures and services traditionally provided by the public sector....". This allows us to comfortably recommend to the STMA to consider a PPP initiative for the maintenance and enhancement of urban roads in the ST area, as well as for the provision of traffic solution thereof.

IV. CHAPTER III: STMA Current Financial Situation

1. Under the Local Government Act of 1993 (Act 462), the STMA has the following powers and duties:
 - a. Preparation and approval of its annual budget;
 - b. Charge fees for any license or permit prescribed by the MLGDRE¹³ by legislative instrument.
 - c. Receive financing from the Common Fund, which may only fund projects that are part of the approved development plan for the District.
 - d. Open and maintain a bank account for all revenues and other monies raised or received.
 - e. Raise loans (Approval is required where the loan or overdraft to be raised exceeds 20 million Cedis).
 - f. Submit the budget to the Regional Coordinating Council¹⁴.
 - g. Publish the annual statement of its accounts.

2. The faculties conferred to MMDAs by the Law imply a certain revenue generation capacity which should make it able to finance service delivery. As a complementary income, STMA receives transfers from the Central Government through the District Assemblies Common Fund, established by the Law 455 of 1993, amounting to a specific proportion of the total monies allocated to the Fund, by an equivalent to 5% of the Central Government current revenue which is distributed between MMDAs in Ghana, according to a formula approved by Parliament. The amount to distribute could reach 7.5% of current revenue, as contributions made by international development partners of the Government of Ghana are received as a financial complement to support the decentralization process.

3. Act 462 also attributes to STMA responsibility for preparation of district development plans, carrying of studies regarding economic, social, spatial and environmental issues of development and for the mobilization of human and physical resources for the district development.

4. When considered as a unit, public investment financing within the territory of Sekondi-Takoradi Metropolitan Assembly (STMA) comes from two well differentiated sources of funds, namely:
 - a. Resources from the central government (Consolidated Fund)
 - b. Municipal resources coming from the tax recollection that for different services correspond to the municipal authority.

5. It should be noted that in the Republic of Ghana, municipal budgets includes central government transfers that are made on a quarterly basis to the municipal treasuries by the Common Fund, which is a state fund for distribution between the District Assemblies of the country.

¹³ Ministry of Local Government and Rural Development

¹⁴ The Regional Coordinating Council coordinates the plans and programs of the District Planning Authorities within the region and harmonizes the plans and programs with national development policies for consideration and approval by National Development Planning Council.

6. The District Assemblies' Common Fund, embodied in the 1992 Constitution of Ghana was implemented for the first time in 1994; it has become as the single largest source of income for the Assembly. It contributes about 75% average of the annual revenue of the Ghanaian Assemblies.
7. The transfers are made up of revenue from the central government sources and the Lands Commission to Assembly. Those from the central government include the ceded revenue, the common fund, wages and salaries of local government staff at Assembly.
8. The common fund to the Assembly is "not less than 5% of the annual total revenue of country". The objective of the fund is to make available to the District/ Municipal/ Metropolitan Assemblies additional resources for development.
9. The ceded revenue, on the other hand, is derived from specific revenue sources that the central government has "ceded" to the District Assemblies in pursuit of decentralization. Upon an approval formula, the Assembly receives its share from the Ministry of Local Government and Rural Development. The transfer from the Lands Commission is the Assembly's share of lands revenue collected from stool lands in the District by the Commission.
10. When analyzing municipal finance of a MMDA, one must highlight the accounting policies applied, which are later justified among others, for delays that occur in the central government transfers and that impede an adequate management of the municipal treasury because of the impact that those delays have over the cash flow.
11. The financial statements are prepared on a modified Cash Basis. Government reports revenue in the period in which they are received. Expenditure is recognized when good and services are received and paid for. Payments for Fixed Assets acquired are written off in the accounting year of acquisition. Loans and investments are recorded on a historic cost basis without any provision for reduction in value.
12. Beginning in 2012, MMDAs will also count with a new source of a fund recently created, denominated Development Fund, constituted by 2,5% of external cooperation resources that Ghana receives from donors.
13. Hence, when examining municipal finances, it is necessary to differentiate between the resources proceeding from the State, (except from the Common Fund) to the STMA territory that integrate the "Composite Budget", which contributes to cover the financing needs of the DA, from those resources generated by the tax collection.
14. In the following table, the recent budgetary trends for STMA in the three year period from 2010/2012 are presented.

Table 2: Sekondi- Takoradi Metro Revenue Performance (2010-2012).

		2010	2011	2012
RATES	EST	557,900.04	695,000.00	890,000.00
	ACTUAL	620,232.30	746,859.99	918,471.67
LANDS	EST	161,500.00	185,500.00	255,500.00
	ACTUAL	347,441.19	176,473.52	272,436.00
FEES & FINES	EST	511,980.24	636,000.00	693,000.00
	ACTUAL	456,735.71	681,534.85	711,242.60
LICENSES	EST	969,960.08	1,235,200.00	1,297,100.00
	ACTUAL	824,953.97	1,090,042.76	1,337,401.30
RENT	EST	166,090.04	174,100.00	178,000.00
	ACTUAL	85,355.43	124,419.18	112,636.56
INVESTMENT	EST	100.00	36,100.00	36,100.00
	ACTUAL	2,941.50	29,307.68	14,855.16
MISCELLANEOUS	EST	8,700.00	53,100.00	43,100.00
	ACTUAL	53,610.40	137,463.21	28,273.06
TOTAL OWN REVENUE	EST	2,386,230.40	3,015,000.00	3,349,715.00
	ACTUAL	2,391,170.50	2,986,111.19	3,395,312.35
GRANTS	EST	6,381,000.00	6,303,947.59	15,239,000.00
	ACTUAL	4,982,518.09	5,982,477.45	8,410,838.15
GRAND TOTAL	EST	8,767,230.40	9,318,947.59	18,588,715.00
	ACTUAL	7,373,688.59	8,968,588.64	11,806,150.50

Source: The Composite Budget of the Sekondi- Takoradi Metropolitan Assembly for the fiscal year 2012.

15. It should be highlighted that from 8.410.838, 15 cedis of central government funds given to the STMA in 2012, Central Government Grant Salaries & Wages fund, (most of STMA employees are considered public servants employed by the central government), has amounted to 5.090.765,97 cedis; which is a 60,53% of total funding. On the contrary, during fiscal year 2012, payroll for “local employees” amounted to just 436,000 cedis.

Table 3: Composite Budget

Composite Aport. 2012	EST	ACTUAL	%Total Composite
Central Gvt. Sal & Wages	4.880.000,00	5.090.765,97	60,53
HIPC/GUMP/UDG/SIF	1.285.000,00	1.032.551,78	12,28
Ghana School Feeding P	870.000,00	560.852,80	6,67
MP's Common Fund	200.000,00	68.816,15	0,82
MP's Common Fund (arrears)	42.886,00	42.886,05	0,51
DA Common Fund	1.442.222,00	879.489,51	10,46
DA Common Fund (arrears)	397.349,00	397.349,38	4,72
DDF Revenue	322.000,00	338.126,51	4,02
CBRDP/GOG Transfer	1.000.000,00		
TOTAL	10.439.457,00	8.410.838,15	100,00

Source: The Composite Budget of the Sekondi- Takoradi Metropolitan Assembly for the fiscal year 2012

16. The rest of budgetary allocations that integrate the Common Fund refer to:
- a. 1,285,00 cedis for diverse HIPC (Highly Indebted Poor Countries) programs, that support specific projects funded by external donors; funds for a pilot program of urban development in implementation at a national level (Ghana Urban Management Pilot Project- GUMPP); and to the Social Investment Fund- SIF.
 - b. 870,000 cedis for the Food for Schools program; also executed at a national level; and,
 - c. 1,000,000 cedis for a Community Based Rural Development Project, not yet received.
17. The rest of the cash budget (available) of STMA is divided between resources called “Internally Generated Funds”, which come from the own collection efforts of the STMA, which are completed by the so-called DA Common Fund.
18. As District Assemblies do not have a previous knowledge over the amounts that will be allocated to them through the Composite Budget in the next fiscal year, they are not allowed to formulate financial plans for investment.
19. Besides, during the fiscal year, the Common Fund resources allocated to the DAs could be:
- a. Increased or diminished;
 - b. Charged for direct payments for activities performed by government agencies on behalf of the DA, deducting the amounts of those payments out of the annual allocation. For instance, in the fiscal year 2012, STMA Common Fund allocation was 1.442.222 cedis from which they received 879.489 cedis only. To those amounts one should add 397.349 cedis for arrears that according to the Composite Budget report of the Central Government for 2012 were executed fully in 2012. Nevertheless, in the municipal financial report for 2012, STMA registers income for 1.276.838 cedis from the Common Fund (879.489 corresponding to fiscal year 2012 + 397.349 of arrears), that were diminished by the Central Government to 379.840 cedis, because of several charges¹⁵ made to STMA.
20. As a matter of fact, in the budget implementation report for 2012, the Financial Manager of STMA recommends that, in lieu of the “low stream of Funds coming from the Common Fund Administrator”, the Assembly should make reductions on the local salaries payments to a minimum in order to make room for other projects oriented to STMA development needs. The Financial Manager also recommends that projects funded by Common Fund resources be maintained at a minimum, given that the income from this source is largely uncertain.
21. During fiscal year 2012, STMA financial statements have closed showing the following transactions:

¹⁵ Final Account For the Year 2012 (STMA)

Table 4: STMA financial statements

Revenues	Actual 2012	Expenditures	Actual 2012
Rates	918,471.00	Personal Emoluments	6,198,631.00
Lands	272,436.00	Travelling & Transport	455,519.00
Fees/fines	711,242.00	General Expenditure	596,480.00
Licences	1,337,401.00	MTCE Repairs	274,509.00
Rent	112,632.00	Miscellaneous	523,223.00
Grants	8,410,838.00	Total Recurrent	8,048,363.00
Investments	14,855.00	Total Capital Expend.	4,248,731.00
Miscellaneous	28,273.00		
Grand Total	11,806,150.00	Grand Total	12,297,095.00

Source: Final Account for the Year 2012. Sekondi- Takoradi Metropolitan Assembly

22. These figures imply a deficit of 490,945, cedis for the past year: In view of the results of the previous years, registered in the table immediately below, it can be concluded that the STMA dependence of funds transfers from the central government is basic to determine its economic independence. The more worrisome is that recurring revenues of STMA, 3,395,212.00 cedis, just cover for 42,18 % of recurring expenses (8,048,363.00 cedis) in the fiscal year; however, STMA officials expressed that most of the rest of DAs in Ghana have higher levels of dependency from the Central Government compared to STMA.

Table 5: Total Revenue and Expenditure (2007-2012)

	2007	2008	2009	2010	2011	2012
Revenue Grand Total	4,401,332.06	6,118,270.96	3,504,398.77	7,372,293.59	8,968,590.07	11,806,150.00
Expenditure Grand Total	4,056,511.06	6,496,087.36	3,339,307.97	7,514,687.11	8,355,766.09	12,297,093.00

23. STMA holds eight (8) bank accounts in different banking institutions: i) Bank of Ghana; ii) Ghana Commercial Bank; iii) National Investment Bank (also credit relationship) where the Common Fund resources are accredited; iv) Zenith Bank;; v) Fidelity Bank; vi) Ecobank; vii) Merchant Bank; and, viii) United Bank of Africa.

24. The Sekondi Takoradi Metropolitan Assembly, in accordance with Section 97 of the Local Government Act, 1993 (Act 462), is the rating Authority and by its resolutions, imposes the rates for each fiscal year

25. The major sources of revenue are rates, licenses, Fees and Fines, and Rent. As above mentioned, in addition to these traditional sources is the District Assemblies' Common Fund. Under the taxes are the basic and property rates, licenses and building permits. The basis for the rates is the immovable property and the resident adult population. The ratable population includes adults of 18 to 70 years. Students are however exempted. The property rate, on the other hand is levied on immovable properties. They include residential, commercial and industrial properties. Temporary structures also attract the rate. Exemption from property rate includes public places of worship, hospitals and clinics.

26. Licenses are based on economic activities in the district. This license or tax serves as the permit for undertaking any such activity in the district. Whilst some of such licenses are paid on annual or quarterly basis a greater number of them are paid on monthly basis, and thus increasing the cost of collection.
27. The non-taxes include market fees, other charges and rent as well as interest on investment. The fees are charges on tolls paid by users of the services provided by the Assembly. Examples are the market tolls, rent, lorry parks tolls, etc. Interest refers to the returns from monetary investment.
28. Given that recurring revenues amount to only 42% of recurring expenses, it appears to be obvious that an analysis of the collection capacity of STMA must be made along with the current tax collection capacity improvement efforts.
29. STMA has 42 employees devoted exclusively to the collection of metropolitan fees and taxes. Tax collection is difficult because of the high degree of informality in the local economy and the small amounts of fees charged. Generally, tax collectors are placed in the local market entrance in an attempt to achieve effectiveness and mitigate cost of collection, given that in many cases, operational cost is higher than the collected revenue.
30. Collection mechanisms are frankly improvable but the improvement should be achievable as part of a plan for institutional strengthening of the STMA, which is considered as a need for all ends.
31. During fiscal year 2010, effective in January, STMA contracted the services of the collection company RevNet.
32. RevNet Limited is a Ghana registered IT company that offers to tailor a revenue tracking, monitoring and collection management service to the Metropolitan, Municipal and District Assemblies (MMDAs). Based in Accra, it manages the tax collection for 5 different DAs: Adenta, Cape Coast, Shama, Kumasi, and Sekondi-Takoradi.
33. The revenue collection capacity of STMA has been increasing over the years with significant increases since 2009 to 2012. The impact of hiring RevNet is difficult to determine for the Mission because we have not had access to the contract between the company and the STMA which makes that some data included in the table below even being remarkable cannot be commented given the lack of information.
34. However, is noteworthy that the increase in revenue incurred during the years 2011 and 2012, were achieved in those headings that charge large customers/ industrial companies easily identifiable with lower management effort con (i.e. property rates for companies and license fees).
35. Finance officers of STMA, have highlighted to the Mission team that in exercising the powers granted by the Local Government Act, at the time of increasing tax rates normally a consensus between the municipal authorities and the tax payers is achieved so 15% to 20% increases do not represent insurmountable barriers and agreements are easily achieved.

Table 6: Internally Generated Fund

Internally Generated Fund	Budg, Est	CUM. AC	%	Budg.	Budg. Est	CUM. AC	%	CUM
Revenue Head	2011	to 2011	CUM/Est	2012/2011	2012	to 2012	CUM/Est	2012/2011
Basic Rates	30000	22926	76,42	20,00	6000	5842	97,37	25,48
Property rates Ind/Private	150000	151150	100,77	100,00	150000	132594	88,40	87,72
Property rates Firms & Cia.	480000	535458	111,55	108,33	520000	710990	136,73	132,78
Licence	1235200	1090042	88,25	120,99	1494500	1337401	89,49	122,69
Total	1895200	1799576	94,95	114,53	2170500	2186827	100,75	121,52
Commission on RevNet	250000	46984	18,78	92,00	230000	164436	71,49	349,98
	13,19	2,61			10,60	7,52		

Source: Final Account for the Year 2012. Sekondi- Takoradi Metropolitan Assembly..

36. Exercising its powers, STMA has established new rates for fiscal year 2013 (see Sekondi-Takoradi Metropolitan Assembly; 2013 Fee Fixing Resolution). The Municipal Resolution determines every tax and fee that the municipality charges and collects; it makes a differentiation between a unique personal tax (basic rate) corresponding the rest to taxes and fees applied to goods/ services/ economic activities, etc.
37. Annual rates are agreed with the taxpayers in a consensus reaching process that initiates in September each year and concludes at mid-October.
38. Except for the personal tax rate every other tax or fee is sub-divided in a classification by amount applied as a function of the variables that intervene in the good/service/economic activity which is subject to the charge.
39. Municipal employees or RevNet personnel visit taxpayers for a payment citation delivery; within the next 30 days taxpayers can pay the amount due either in the municipality office or through a banking branch. While it is rare and undesired, some cash payments to RevNet employees sometimes occur.
40. The classification and the subjacent criteria are totally rational because they obey to a logic differentiation of the variables that could affect the goods/services taxed. Not so with the minimum charges nor the established ranges.
41. The rates, as noted above, are increased on an annual basis as agreed in the consensus formation procedure. It is because of that that this report proposes an increase of 15% for 2014, percentage that resides in the lower range that financial official of STMA expressed as easily achievable. Also we add some suggestions to increase efficiency of collection efforts.
42. Below is a detailed description of main taxes and fees that constitute the tax structure of STMA:

I. Basic rates

43. The Basic Rate is a personal tax for living within the Area Authority. Passive subjects of this tax are the STMA inhabitants between 18 and 70 years old. This is a merely census generated tax and the annual rate is minimum (1 cedi per year) which makes that the operating cost of collection being higher than the amount collected.
44. The current population is based on the 2000 population census and was projected to be at 559,548 in 2012. These projections were based on the average growth rate of 3.2%. Out of the lot 49.1% are males while 50.9% are females. The current population density of the Metropolis stands at 8,140 persons/km².
45. The age structure of the metropolis is as follows; 44.8% of the population is below the age of 14 with 51.9% between 15 and 64 while those above 65 are only 3.3%. The economically active population is about 60 percent of the population. That means that about 270,000 of the inhabitants should be actively generating same kind of income whether in a formal or informal way.
46. Despite the hiring of a specialized company (RevNet), only 22,926 individuals paid their basic rate in 2011, declining to less than 6,000 citizens in 2012.
47. The problems for a properly implementation of the basic rate is as follows:
- a. Delay in release of central government grants; and,
 - b. Delays in the centralized production of ID Cards or other identification items.
48. Significant difficulties arise to get an approximate estimate of the number of persons between 18 and 70 years old that should be paying the basic rate due to the registering problems of the country and the many diverse obstacles for a proper citizens' Identification, like:
- a. National Identification Card (a small part of Ghana's population has it);
 - b. Electoral Card (most part of the population have it due to the compulsory voting);
 - c. SSNIT (pension purposes, formal employees and a small percentage of informal workers have it);
 - d. National Health Insurance (it is voluntary and largely spread through rural and poor people);
 - e. Drivers license
 - f. Passport; and,
 - g. Other
49. However, taking into account survey data provided by other government service agencies, like health services, we could obtain a more accurate number.
50. Based on health statistics published by the National Health Service contained in the Composite Budget of the Central government for 2012, an extrapolation resulted in:

Table 7: The STMA Composite Budget for fiscal year 2012

	No. of Individuals	%	STMA Population (estimate)
1. Informal Members	57,473	14.57	66,293
2. SSNIT Contributors	16,904	4.29	19,519
3. SSNIT Pensioners	1,230	0.31	1,410
4. Indigents	195	0.05	227
5. Under 18 years	63,145	16.01	72,845
6. 70 yrs.	6,777	1.72	7,826
7. Pregnant Women	11,157	2.83	12,876
8. Total No.of People Registered	156,890	39.77	180,953
9. Active Members	45,876	11.63	52,916
10. Total No. of People with renewed Cards	34,812	8.83	40,176
11. Total No. of People Identified	394,459	100	455,041

Source: NHIS Statistics Item Sekondi. The STMA Composite Budget for fiscal year 2012 (Table 7)

51. From the table resulted that the National Health Service (NHS) has treated and identified during 2011 more than 394,459 individuals; whose identification does not guarantee their active economic condition or residency at STMA.
52. However, selecting passive subjects that are more likely STMA residents, some categories should be discarded, especially those under number 1 (informal members); 3 (SSNIT Pensioners); 4 (indigents); 5 (Under 18 yrs.); 6 (more than 70 yrs.); and even 8 (Total No. Of People registered), given they could belong to one of the already discarded categories.
53. With all of the above and just cross referencing the database of STMA with the database that includes the citizens treated in the STMA area by the NHS, we should have the individuals belonging to one of the following categories: 2 (SSNIT Contributors); 7 (pregnant women); 9 (Active members); and, 10(Total No. of People with renewed card). Accounting only for those individuals and extrapolating the resulting percentage to the population estimate for the STMA, we would obtain a collective of 125,487 passive subjects to the Basic Rate payment, comprised between the ages of 18 to 70 years old and formally or informally employed.
54. Even accounting for the uncertainty embodied in the extrapolation method and assuming that a third of this collective could not be located because of the informal nature of their employment (41,629 individuals), we should have a collective of 83,858 people that should be paying the basic rate.
55. Nevertheless, according to the financial statements of STMA, the figures for taxpayers of the Basic rate for fiscal years 2011/2012, have been:

Table 8: Taxpayers

	Est. Budget	CUM	15% amount Increase	Potential Cum
Fiscal Year 2011	30,000.00	22,926.00	-	-
Fiscal Year 2012	6,000.00	5,842.00	-	-
NHS Extrapolated Data		83,858.00	12,578.00	96,436.00

Source: Final Account for the Year 2012. The Sekondi- Takoradi Metropolitan Assembly, and own elaboration

56. Even departing from the more pessimistic figure and without increase in the rate, (1 cedi/year), with a management as simple as a cross between the STMA and NHS databases, the revenue collected should have being increased for more than 4 times in the fiscal year 2011 and for more than 13 times for the fiscal year 2012.
57. If the Municipal Authority increased by 15% the Basic Rate, and make improvements to the identification mechanisms, the revenue collection would have increased markedly.

II. Property rates

58. About 69% of the populations were urban with 31% rural in the year 2000; however there has been tremendous increase in the urbanization from 69% to 72.9% and rural decrease from 31% to 27.1% as at 2010. Most of the socioeconomic infrastructures are densely concentrated in the core urban centers of the metropolis such as Takoradi and Sekondi with sparsely distributed facilities at the peri-urban.
59. The metropolis Sekondi-Takoradi, is well developed, with the best of socio-economic infrastructure and facilities in terms of electricity, water, telecommunication education, health with industrial set ups and other several economic activities. The metropolis is adequately connected to the national electricity grid and it has over 97 percent supply of electricity. There has also been some level of improvement and extension on the supply lines.
60. There are still few rural communities without electricity, some of these are Akromakrom, AhantaAbaasa, etc. The Metropolis is connected to the pipe borne water distribution system which is covering 90 percent on the metropolis. There are also existing public and private wells providing water whenever there are interruptions in the flow of water from pipe lines. All the rural communities with no pipe system have boreholes and hand dug wells for water provision. Some of the communities are Akromakrom, Mampong, AhantaAbaasa, etc.
61. The distribution and level of health facilities in the metropolis are public and private health facilities in the metropolis, made up of the regional and 3 other hospitals, 2 poly-clinics, 19 health centres and clinics as well as maternity homes. There are herbal clinics that are also recognized as informal service providers that support the general health delivery system. Most of the health facilities in the metropolis are located within the Takoradi Sub- Metropolitan area.
62. Housing is an important determinant of standard of living as it enhances the life of occupants. Houses in the Metro are mostly constructed and owned by individuals and families. The total housing stock is estimated at 36,079¹⁶ by the valuation list of the Land Valuation Division of the Lands Commission. The data on the household from the national census in 2000 estimates an average household size of 4.2 persons.
63. Immovable property cadastre of STMA just covers a total of 22,000 immovable of which, according to information provided by the municipality officials, 4000 immovable are tax exempt. The data implies that municipal cadastre just identifies 60% of immovable already identified by the central government.

¹⁶ Source: The Composite Budget of the Sekondi- Takoradi Metropolitan Assembly for the fiscal year 2012

64. Property tax structure is segmented by immovable type establishing a minimum amount and a range by square meter, both of them subject to the location of the property. It also divides the properties differentiating them according to the following categories: i) residential housing; ii) industrial (heavy & Light Industrial); iii) Commercial (Category “A” & “b”); iv) Mixed Used Properties; v) Immovable property of public agencies or parastatals (for those there are not minimum amounts established); vi) Not cadastre properties (differentiating between residential areas, industrial areas or mixed used); and, vii) properties under construction but in use (differentiating between residential zones and between industrial and commercial). For properties included in numbers v), vi), y, vii) there are no minimums existing just a range for footprint.
65. Cadastre values are calculated departing from an appraisal that the Land Commission (Central Government agency) executes every five (5) years; in 2013, the appraisal is being executed in STMA. The last time it was updated was in 1999.

Table 9: Total Property

Rates	Est. 2011	Actual 2011	Est. 2012	Actual 2012
Property Private	150,000	151,150	150,000	132,594
Property Firms	480,000	535,458	520,000	710,990
Arrears Private	15,000	34,197	20,000	18,252
Arrears Firms	20,000	3,128	20,000	50,792
Total	665,000	572,783	710,000	912,628

Source: Final Account Fiscal Year 2012. Sekondi-Takoradi Metropolitan Assembly.

66. Since January 2011, STMA hired RevNet collection services. In light of the budgetary implementation in 2011 and 2012 this company seems to have been emphasized in ensuring the collection of the Basic and Property Rates particularly from industrial and companies’ properties as a relatively “easy” way to achieve an increase in revenue collected. An evident conclusion is that the municipality should make a special effort to strengthen the municipal cadastre information completing at least the identification of the properties already identified by the Central Government in order to facilitate RevNet collection efforts and increase revenue.
67. An increase of only 15% in the rate, with no further action in properties identification, would increase by 40% the current revenue. Interest for arrears should be reduced by at least 50% given that a better management for collections should imply a reduction of delayed and unpaid taxes. It could be argued that an increase of 40% is exaggerated given that the difference between the two databases is less than that; therefore we have estimated a 20% increase only due to the difference between the two databases.

Table 10: Properties total increase (2012)

Rates	Actual 2012	Data Central Govt. 40% /20%	Annual Increase 15%	Total Increase /2012
Private Properties	132,594.00	185,631.00	213,500.00	80,906.00
Property Firms	710,990.00	853,188.00	981,166.20	270,176.20
Arrears Private	18,252.00	9,126	9,126.00	- 9,126.00
Arrears Firms	50,792.00	25,396	25,396.00	-25,396.00
Total	912,628.00	1,073,341.00	1,229,188.20	316,560.20

Source: Final Account for the Fiscal Year 2012. - Sekondi-Takoradi Metropolitan Assembly

III. Lands

68. The Budget category denominated “Lands”, refers basically to two items:

- a. A percentage that is due to the municipality as a proceeding from the land lease arrangements between the Chiefs and other party¹⁷ and that according to the Ghana constitution becomes DAs revenue. Is not possible for the municipality to conduct any management actions related to this entry and it is limited to charge a percentage as has been established at the central level.
- b. Building Permits is simply a fee charged for the permit to execute construction works on a property. It is evident that a growing economic activity would lead to an increase of building permits because of the increasing trends in construction.

69. The next construction of a second oil platform in the sea off the coast of STMA, promises a further increase in economic activity. During fiscal year 2012, revenue for building permits extension has increased by 5.21 %, going from 132,852.63 cedis in 2011 to 211,523.00 cedis in 2012, this implies that in the coming year’s construction sector activity will have a significant growth. Also, increased economic activity will generate a surge in the demand for land and to a higher number of “lease” / “rent” contracts by the Chiefs and more payments to the Municipality.

70. For the purpose of the report estimations of these trends have not being considered, nor an analysis of the Rate Schedule for fiscal year 2013 and just a linear increase of 15% exclusively in building permits related revenue has been used.

Table 11: Lands

LANDS	Actual 2011	Actual 2012	Annual increase 15%	T. Increase
Share of Stool Lands Revenue	45,477.52	60,013.00	-	-
Building Permit	130,852.00	211,523.00	243,251.00	31,728.00
Quarrying/ sand winning	143.87	-	-	-
	176,474.02	272,436.00	304,164.00	31,728.00

Source: Final Account for the Year 2012. - The Sekondi-Takoradi Metropolitan Assembly

¹⁷ Ten percent of the revenue accruing from stool lands shall be paid to the office of the Administrator of Stool Lands to cover administrative expenses; and the remaining revenue shall be disbursed in the following proportions:

- a) twenty-five percent to the stool through the traditional authority for the maintenance of the stool in keeping with its status;
- b) twenty percent to the traditional authority; and,
- c) fifty-five percent to the District Assembly, within the area of authority of which the stool lands are situated.

IV. Fees & Fines

71. This entry covers either “fees” related to economic activity (Market Tolls, Slaughter House, On Street Parking, Road block fees, Lorry Park Entry Fees, and others), social activities (marriages, divorces,) and administrative fees for several municipal services (Waste, Cemetery Burial Permits).

Table 12: Fees and Fines

Fees & Fines	Actual 2011	Actual 2012	Annual increase 15%	Net Increase
Market Tolls and Slaughter	133,221.20	145,839.00	167,714.85	21,875.85
Different Parking fees	400,859.35	342,842.00	394,268.30	51,426.30
Waste Disposal	75,888.00	118,755.03	136,568.28	17,813.25
Marriage & Divorce	47,241.00	75,145.75	86,417.07	11,271.32
Other	24,325.30	28,660.72	32,959.82	4,299.11
Total	681,534.85	711,242.60	817,928.30	106,687.30

Source: Final Account for the Year 2012. The Sekondi- Takoradi Metropolitan Assembly.

72. A target of a 15% increase in this entry of revenue appears as a conservative scenario for 2014. The above mentioned target is achievable with maintaining the actual management only. Revenues from parking fees and market tolls constitute the 68.7% of the entry total in 2014.

73. An improvement in tax collection management along with the expected growth in economic activity in the near future because of the installation of a second oil platform and trade volume growth, would result in a yield of augmented revenue in all the budget entries related to economic activity. Those sub-heads related to administrative fees collection should follow the increasing trend given to higher economic growth generate a surge in the demand for services. However the above does not apply strictly to the social services but a raised rate coupled with increasing revenue potential in the other sub-heads allows a linear increase of 15% in total revenue.

V. Licenses (Business permits)

74. The local economy of the Metropolis could be classified into three major sectors; namely industry, agriculture and service.

A. Industrial Activities

75. The STMA has a number of manufacturing industries such as cement, cocoa processing, and other small scale industries. The timber industry has seen a major decline. There are also individuals in micro enterprises such as confectionery, sachet water production, batik, tie and dye and leather works. The major agro-processed items are cassava and palm kernel and fish that are mostly smoked. Examples of existing industrial set-ups:

- a. Paper manufacturing
- b. A few remaining lumber
- c. Metal fabrication
- d. Micro enterprises
- e. Agro-processing

B. Agriculture Activities

76. Majority of those engaged in agriculture are into crop farming and still remains at subsistence level due to problems of the topography negating application of mechanized farming and several challenges that affects production. Fishing is the other predominant component of the agriculture sector due the long stretch of coastline. Fish production in the metropolis is noted to be decreasing since 2007, for reasons attributed to artisanal fishing, pair trawling by big trawlers and overfishing practices done overtime. There is also the 500 meter no fishing zone that surrounds the Jubilee Oil Field drilling operations. Also no cold store is located at the landing beaches leading to post harvest losses.

C. Service Sector

77. The services sector is the largest employer of the labor force in the Metropolis. It employs 59.9% of the active labor force who are mostly employed in white collar jobs in private and public institutions. The economy is thus dominated by Service sector:

- a. Shipping/Forwarding
- b. Hotel /Hostel/Restaurant
- c. Bulk Oil Storage and Distribution
- d. Transport Services
- e. Harbour and Port Services
- f. Commerce
- g. Tourism: The metro has no unique tourism attraction sites. However the forts at Sekondi are being used as lighthouse by the Port Authority. T near the central business district and the coast line that can be developed into pristine beach sites along with the development of beach sports.

Table 13: Service Sector Statistics

Licence	Actual 2011	Actual 2012	Annual increase 15%	Net Increase
Hotel, Hostels, Resturant, Chop Bars, Drinkables	39,011.91	43,712.67	52,455.20	8,742.53
Outdoor advertisement/sings and Companies	701,642.93	793,866.62	952,639.94	158,773.32
Financial Institution	69,304.00	65,541.00	78,699.20	13,108.20
Shipping /Forwarding Agencies	14,690.00	71,745.00	86,094.00	14,349.00
Provision Stores	54,765.00	66,362.00	79,634.40	13,272.40
Others	210,628.92	296,171.09	355,405.31	59,234.05
Total	1,090,042.76	1,337,401.38	1,604,881.20	267,480.20

Source: Final Account for the Year 2012. Sekondi- Takoradi Metropolitan Assembly.

78. For this assumption, the potential for growth within the territory of STMA, prices and occupancy rates observed have been taken into account, recommending an increase of 15% for fiscal year 2014, a percentage that according to STMA officials is easily achievable.

79. It should be noted in the chapter of licenses that the large increases in revenue were due to companies and advertising (outdoor advertising) which are easily controllable with a minimum effort.
80. However, despite the huge growth and increases in business activity in the hospitality industry (hotels and catering companies), they have barely had any rate increases. The amount from 39,000 cedis in 2011 to 43,000 cedis in fiscal year 2012 does not correspond at all with the occupancy rate and room charges.
81. It is also noted that revenues from financial institutions were down from 69,000 in 2011 to 65,000 in 2012. In the trade sector, which is also easily identifiable and controllable, the increase from 2011 to 2012 has been impressive, from 14,000 cedis to 71,745 cedis.
82. In the future it could be interesting to explore the possibility of linking the licenses fees to the billing revenue declared to the National Tax Agency in the income tax declaration form.

VI. Rent

83. Under the entry of “Rent” the budget registers revenue for rates applied to sales and storage facilities in the markets.
84. Noteworthy is the increase of the Sub head “Franchised Trans. Terminals”, which implies the start of municipality exploitation of transportation terminals. In the future, it is expected that increases in commercial vehicles traffic, both heavy and light, bring an exponential increase on recollection of the rates registered under this entry.

Table 14: Rents

Rents	Actual 2011	Actual 2012	Annual increase 15%	Net Increase
Market Stores Takoradi, Sekondi, Essikados/Ketan and Lorry Park	121,633.60	78,465.70	90,235.55	11,769.85
Franchise Trans. Terminals	-	18,997.76	21,847.41	2,849.65
Jur. Staff Qtrs. Assembly	2,795.58	15,169.10	17,444.46	2,275.36
Total	124,429.18	112,632.56	129,527.44	16,894.88

Source: Final Account for the Year 2012. Sekondi- Takoradi Metropolitan Assembly.

85. However, within the conservative exercise that has been carried out in this report (increase of 15% - lower band suggested by STMA officials and improved identification of taxpayers), it seems more than clearly, the potential for growth in tax collection is far superior to the projected increases.

VII. Summary and recommendations

86. This section summarizes the problems associated with tax management in STMA. The main concerns arise from:

- a. Lack of an inventory that properly identify tax payers (goods/services/economic activities) within the STMA area.
- b. The need to update the property cadaster
- c. Study for increases of minimum rates and ranges of some taxes for goods and economic activities in light of the expected increase in economic activity.
- d. Lack of tax management capacity

87. Therefore, a program for institutional strengthening of STMA is needed to build capacity for tax management reorientation including:

- a. Potential connection between local and core databases allowing further identification;
- b. Progressive increases of minimum rates and their corresponding ranges in the case of those businesses/services that benefit most of the increased economic activity in the STMA area;
- c. Extended use of banking accounts for taxes and fees due payments;
- d. Promote SPV and trust creation in order to have a better planning process for investment with private sector participation, converting such investments in current expenditure in the municipal budget given that current accounting policy impede the needed periodic financial registering for investments.
- e. Identify the need for training for the STMA personnel.
- f. Explore possibilities in the case of licenses to link the tax/fee to a range related with the income declared to the National tax Agency for the last year.
- g. Institutional strengthening of STMA promoting transparency and taking care of equality for the taxpayers and the authorities.

88. In the table below we present the results that could be achieved with a small improvement in tax management, crossing information between STMA database and the National tax Agency. Also devoting the hired tax recollection company efforts to have a proper identification of passive subjects that the more income are likely to render for STMA without disregard of the population subject to administrative fees payments on a daily or monthly basis. As it has been mentioned before, except for the entries “Basic rates”, Property rates” and “License”, a 15% linear increase is proposed.

Table 15: Tax Management

I.G.F.	Actual 2012	Other measures + Annual Increase 15%	Net Increase / Actual 2012
Basic Rates	5,842.00	96,436.00	90,594.00
Property rates	912,628.00	1,229,188.20	316,560.00
Lands	272,436.00	313,301.40	40,865.40
Fees & Fines	711,242.00	817,928.30	106,687.30
Licence	1,337,401.00	1,604,881.20	267,480.20
Rent	112,632.56	129,527.44	16,894.88
Total	3,352,181.00	4,182,125.14	839,081,78

Source: Own source; based on data from Final Account for the Fiscal Year 2012- Sekondi-Takoradi Metropolitan Assembly

89. According to the estimate presented in the table above, the increase in revenue could significantly increase the internal capacity of fund generation of STMA but the implementation of the measures proposed requires a considerable effort in the short term to strengthen the capacity of collection, including redefining the terms of the contract with RevNet for a more efficient performance.
90. Once the program for institutional strengthening of STMA has been designed and implementation started, taking into account the planned staged implementation of urban infrastructure works and given that there are future developments with a high degree of certainty that will occur, as:
- a. The installation of a second oil platform will generate a boost in economic activity;
 - b. The Implementation and construction of the Trans-West African Coastal Highway;
 - c. The growth in services sector;
91. STMA authorities could begin with the consensus formation process facing the future fiscal years to achieve an agreement around some of the following actions:
- a. Increase of licensing to hospitality companies and in every establishment related to the restaurant and leisure sector (bars, restaurants, etc.), seeking an adequate structure of fees and taxes that companies that contribute most given that the sector is one of the most benefited by the current business activity with a positive billing perspective;
 - b. Increase of rates (stickers), to Taxis and enforcement/supervision of compliance;
 - c. Increase of penalties for traffic violations and implementation;
 - d. Increase of rates (stickers), to commercial vehicles residing in STMA territory, differentiating between heavy and light vehicles.
 - e. Establish a rate (sticker), for noncommercial private vehicles residing in the STMA territory, differentiating by vehicle cylinder capacity.
 - f. Establish a rate (sticker), for commercial vehicles non- residing in STMA territory differentiating between taxis, heavy commercial and light commercial vehicles.
 - g. Consider the establishment at the different gates to the port (in agreement with the Ghana Port Authority) of “tellers” charging tolls to loaded vehicles entering to load/unload materials at the port;
 - h. Consider establishing a “pollution charge fee” similar to the London congestion charge fee that penalizes damages to the environment.
92. Undertaking the above described factors would require a considerable amount of time and effort from STMA authorities. It will also require institutional reforms and strengthening which could be politically consuming. This process of reform will need the full support of the Central Government, full participation of stakeholders and the accompaniment of the external donors as the reforms will constitute a short term solution to the scarcity of financial resources for STMA.

V. CHAPTER IV: Financing the Proposals for Urban Road Network Improvement.

V.1 Metropolitan Assemblies treatment within the PPP policy¹⁸

1. The issuance of the PPPs policy arises from the Government of Ghana's Coordinated Programme of Economic and Social Development Policies 2010-2016 and the revised GSGDA 2010 - 2013. The PPPs policy is conceived in that framework as a mean to maximize opportunities to build the required infrastructure that the country needs to support the acceleration of growth from a more diversified scope of economic activities, employment generation and export growth that is aimed to attain the objective of raising the per capita income to US\$ 3,000 in 2020.
2. The MAs have to encourage and support social development in the district, initiate programs for the development of infrastructure and provide municipal works and services. To this end, the MAs have to strengthen its revenue generation capacity through an effort to widen the tax base and improve the collection mechanisms and at the same time develop planning capacity and skill to identify properly and formulate investment projects suited to be executed within a PPP agreement.
3. It is apparent that doing business with MAs in the infrastructure sector is considered by the private sector to be a non-comfort zone due mainly to the lack of confidence, unreliable effective payment mechanisms and also, uncertainty with respect to transparent bidding and selection processes; hence, the private sector does not appear interested in doing business with MAs. Given that MAs participation in PPP projects will be regulated almost exclusively by the PPP policy, conditions authorized during the approval process of the project and the contract documentation as approved by the corresponding authorities will be the compliance assurances given to the private party.
4. In this regard, local authorities should be aware that project proposals have to be built around the idea of a potential profit which is what makes the joint venture attractive for potential private investors. Local governments must also be conscious that PPPs in infrastructure are about risk sharing, value for money, public service provision and long-term partnerships. Smaller projects have great potential, because of lower costs and potentially less complex structuring needs.
5. Given the scarce financial resources available to STMA and its lack of experience participating in for profit associations with private sector entities, it is important that a staged solution to Sekondi-Takoradi traffic congestion problems be formulated.

¹⁸ For a detailed assessment please refer to WB Working Paper 68785, "Ghana – Assessment of the viability of PPPs and subnational lending"; Bosompen, Montes, Bodden and Mejia de Pereira, 2012.

V.1.1 Summary of Issues for Consideration

6. Sekondi-Takoradi is a city of 385 square miles with an estimated population of 559,548 by 2012 which is at crossroads due to current and anticipated economic activities. Before the oil and gas discoveries along the coastal areas and its supporting chain supply services (all located in Sekondi-Takoradi subregion), the city had seen a decline in its traditional economic base, namely exports of raw materials and cocoa, wood and timber industry as evident by the scattered empty industrial activities.
7. The current growth is fueled by an increased population growth, high rural to urban migration to the city and a resultant high growth in the informal sector and increase in services sector, all characterized by traffic problems.
8. It is the aspiration of the STMA authorities to build upon the city's attributes and provide its citizens with a vibrant and innovative local economy with a distinctive identity.
9. The STMA draft Structural Plan shows land use categories and their interrelationships in a way that provides a vision for future land uses around the market circle, the Takoradi Port, Industrial areas and the informal sector. This will form a framework to link together current and future projects into a vibrant cohesive pattern. The existing land use generating most traffic comprise of the following:
 - a. Industrial Use and Service Sectors- Port of Takoradi, Kokompe Artisans, Industrial activities along Sekondi Road, Effia and Mpintism areas.
 - b. Mixed uses and Informal Sectors in the Market Circle areas and along the Sekondi and Accra Roads
10. Major efforts to decongest the city and roads can be based on comprehensive land use recommendations that promote a distinct Central Business District, planned parking spaces, regulation of informal sectors and a citywide transportation improvement plan. Ultimately, the STMA will have to promote new investments for planned and modernized transport terminals for haulage, intra-urban travel, and car parking facilities and regulate the existing systems of taxis and Tro tros to compliment the corridor network.
11. Efforts to provide effective financing alternatives should be related to the STMA Department of Urban Roads Capital Improvement Programs (CIP). The alternatives will serve as complimentary efforts to support CIP programs in the city. Such an effort will respond to the needs of the Plan and help alleviate some of transportation problems, namely:
 - a. Deficit in the existing stock of roads
 - b. Congestion of arterial road with the epicenter being towards the city centre
 - c. Unpaved and deplorable state of neighborhood roads
 - d. Surge of heavy cargo traffic to and from the harbor and deterioration of key arterial roads
 - e. Unregulated predominant mode of public transportation
 - f. Unplanned, neither undersigned nor adequate transport terminals
 - g. Inadequate parking infrastructure as well as pedestrian movement in the City Center
 - h. Haphazard arrangement transportation, for haulage vehicles and warehousing transportation infrastructure

12. STMA and Department of Urban Roads CIP has the following works proposals as needed to resolve the transportation problems in the city:
 - a. Sekondi-Effia Nkwanta Hospital Dual Carriageway
 - b. Paa Grant Roundabout Interchange
 - c. Axim Road Junction-Agona Nkwanta Rehabilitation
 - d. Takoradi Polytechnic Junction Road to Sekondi Bypass
 - e. Axim Road Rehabilitation
 - f. Kansaworrodo Outer Bypass

13. Implementation of these works implies that the STMA goes through a process of obtaining the right mix of funding by increasing of the fees currently applied or creating new ones, strengthening of its collection efficiency, putting together a taxpayer's inventory, etc. STMA need to extend and improve its transportation programs by combining: (1) local government capital budget allocations; (2) proceeds from the Ghana Road Fund Secretariat, and 3) entering in PPP agreements with the private sector stakeholders.

14. Some of the largest companies operating in the city, Jubilee Partners (Tullow Oil, Kosmos Energy and Anadarko Petroleum) financed the cost of the preparation of the STMA Draft Structural Plan and Draft Sub-Regional Plan at a cost of \$ 1.6 million and according to interviews made during the Mission, they have a good relationship with the City authorities besides an economic interest in the efficient operation of the transportation sector.

15. Other important stakeholders have started initiatives to work along with STMA, like the Ghana Ports and Harbor Authority which is the main anchor of development in Sekondi-Takoradi, the Ghana Shippers Authority which is the importers and exporters association and Marco Group, which is a major shipping company with extensive activities at the Port of Takoradi.

16. An adequately conformed mix of alternatives to finance transportation works from the above private sector stakeholders for urban infrastructure will enable STMA to alleviate traffic congestion in the short term. It can spread the cost of infrastructure over the useful life of the physical asset and be more responsive and flexible than relying on one source of funding, such as the Ghana Road Fund Secretariat which is transferring resources at a delayed an insufficient pace.

17. Urban infrastructure financing for the STMA under a new PPP regulatory environment can simultaneously encourage deepening of financing options and protect the authorities against risky transactions. Notwithstanding, the PPP policy is new and not yet well understood by local government officials. Institutional support for adequate local government project development is lacking and key financing components have yet to be broadly replicated.

V.2 STMA Current Financial Relationships

18. From the three sources available to fund capital expenditures (saving, grants, and loans) STMA relies on grants and within a small extent also to savings.
19. Relationships of STMA with financial institutions are limited to the following financial institutions where it is an account holder:
 - a. Bank of Ghana (Central bank)
 - b. Ghana Commercial Bank (State Owned bank)
 - c. National Investment Bank (State Owned Bank)
 - d. Zenith Bank Takoradi
 - e. Fidelity Bank
 - f. Ecobank
 - g. Merchant Bank
 - h. UBA
20. Besides, STMA receives short term credit for cash flow purposes. In 2012 STMA renegotiated the payment terms of 2 Short Term Loan secured from National Investment Bank Ltd., Takoradi Branch, in order to meet other obligations. The outstanding Principal and Interest at due date in early 2012, was recapitalized and consolidated into a single credit facility.

V.3 Two Alternatives for PPP structuring

21. A Public Private Partnership (PPP) is defined as a contractual arrangement between a public entity and a private sector party, with the clear agreement on shared objectives for the provision of public infrastructure and services traditionally provided by the public sector.
22. It is expected that the private party performs delivery of public services and assume the associated risks for a significant period of time, in exchange for a financial remuneration/benefit, subject to compliance with contractual performance criteria, derived either from service tariffs or user charges or from payment proceedings allocated periodically through the Government's budget (fixed or partially fixed annuities).
23. A PPP is considered as the most viable alternative for STMA financial needs in financing the required improvements on the urban road network, as was presented in Chapter One of this report. For that purpose, two separated SPVs are presented in this section, one for the short term priorities and the second, for the financing of the medium and long-medium term priorities, given that these latter works require a larger amount of financing and more preparation at STMA.
24. Both SPVs are conceived as PPPs between STMA and a private partner, where the cash flow is administered by a private financial institution and structured as a trust fund with the sole purpose of collecting the monies arising from the fees/taxes allocated by STMA for the project and making the corresponding payments to contractors for works implementation and maintenance.

V.3.1 Short Term Financial Structure (Priority One)

25. The first PPP (Short Term SPV) would constitute the basis to develop the capacity to handle the vegetative growth of economic activity in STMA area. Current level of economic activity is generating a 4% annual increase in the vehicle fleet registered at STMA. It is expected (as was explained in detail in Chapter Three) that the increased economic activity will also produce an increase in STMA fiscal revenue.
26. It is estimated that in the next five (5) years, an accumulated increase of near 3.0 million cedis will add to the fiscal revenue of STMA, with a 15% annual increase in economic activity related fees. At the current exchange rate, the estimated increase is equivalent to approximately US\$ 1.9 million, as can be seen in the table immediately below:

Table 16: Estimated Net Increases

Yearly Estimated Net Increases			
Year	Actual & Estimated	Yearly Net Increase 15% /Actual 2012	Amount in US\$ (1 US\$= 1.8 Cedis)
2012	3,352,181.00		
2013	3,855,008.15	502,827.15	279,348.42
2014	4,433,259.37	578,251.22	321,250.68
2015	5,098,248.28	664,988.91	369,438.28
2016	5,862,985.52	764,737.24	424,854.02
2017	6,742,433.35	879,447.83	488,582.13
Total		3,390,252.35	1,883,473.53

27. However, the analysis of STMA finance has demonstrated that the possibilities of obtaining a higher increase in revenue just by introducing efficiency improvements on the tax payers' information and methods of collection are very high and that is why a program of technical assistance oriented to the institutional strengthening of STMA is also recommended.
28. Clearly, if increases between 15 al 25% are relatively easily accepted by taxpayers, by being more effective in identifying all taxpayers will increase the amounts collected without breaking the consensus already built between STMA and the taxpayers around an annual increase of the mentioned size.
29. Only in the "Licences" fees the increases should reflect more precisely the business figures that every company reaches either linking the increase to the annual income tax declaration made to the Central Government or directly establishing an increase as a function of occupancy estimates for hotels, restaurant sales projections, business volume, etc.
30. Also as "licensed business" is the taxis and Tro Tros that constitute more than half of the 20,000 vehicles that generate the daily congestion in the city's traffic, thus a strict control of these vehicles, besides a sizable increase of fees collection will also contribute to generate a "formalization" process of public transportation.
31. The Short Term SPV should receive the annual increases of tax revenue arising from the 15% increase in fees agreed between the STMA and the stakeholders, meanwhile the additional revenue that STMA generates through the measures to improve tax management should be addressed to other STMA budget needs.

32. The Short Term SPV could also receive the resources that from the Central Government, Department of Urban Roads of the Ministry of Roads and Highways, Ghana Road Fund Secretariat, are allocated on an annual basis for the road network maintenance.
33. With these resources, the PPP organized as an SPV between STMA and a private party could contract a loan for the amount required to finance the most urgent works to alleviate traffic congestion, being those the overpasses at Paa Grant circle and Kwame Nkrumah circle, and could also execute other businesses like the construction of parking facilities around the Market Circle and around the port, for heavy trucks.
34. The cash flow resulting from the income detailed in the above paragraphs should cover the expenses of the SPV being the most important the payment of the administration fee for the trust fund management and the interest payment associated to the loan. The cash flow should also be capable of generating the amounts required to cover the payments of principal to the lender.
35. It would be desirable that the financial institution chosen to be the manager of the trust fund be at the same time the lender of the amount needed to finance the investments in urban infrastructure improvements in order to ensure an adequate level of confidence and guarantees in the financial viability of the operation presented by the SPV. In this way, the SPV will be an instrument of transparency and corporate governance that gives confidence to the stakeholders and to STMA, to which also serves as a benchmark of collection efficiency in its relationship to RevNet.
36. An example of the short term SPV financing is developed in the Table below, departing from the following assumptions:
 - a. The Bank or Banks (in case of a syndicated loan) makes the loans needed to build the overpasses (priority 1), divided in two loans (or one loan with two disbursements) for a total of US\$ 8.5 million to the short term SPV .
 - b. An amortization term of twenty years, including 36 months of grace is granted to the SPV, for each disbursement/loan.
 - c. Interest rate charged for the Loan is 9%.
 - d. Estimations are based on annual payments, leveled quota for principal and interest payment on due balances during the amortization period. During the grace period, annual payment is the current interest due.
 - e. The investment of the loan resources is made during the grace period of the loan.
 - f. The administration charge is 10% based on the annual revenue entering the trust fund.
 - g. Obligations of the trustee include supervision of the works implementation, accounting and reporting to the SPV which costs are covered by the administration fee.
37. Short Term SPV receives the fiscal revenue increase starting from 2014 which includes a minimum guaranteed income equivalent to US\$ 350,000.00 (this is a contingent liability in case of having to be fulfilled by STMA which will be accounted for as a current expense) which as explained in the tables above is covered by the vegetative growth of fees and taxes.

Short Term SPV financial projections

Table 17: Projected revenue

Year	Annual revenue in US\$
2014	350,000
2015	420,000
2016	504,000
2017	604,800
2018	725,760
2019	870,912
2020	1,045,094
2021	1,254,113
2022	1,504,936
2023	1,805,923
2024	2,167,108
2025	2,600,529
2026	3,120,635
2027	3,744,632
2028	4,493,714
The revenue continues from this year on growing at the same rate	

38. Departing from an initial transfer of US\$ 350,000.00 funded by the growth in the fiscal revenues of STMA arising from the collection strengthening efforts mentioned in chapter 4, the annual revenues are projected to increase by 20% which is equivalent to the vegetative growth of this revenue.

Loan Projections

Table 18: Loan Projections

Year	First Disbursement	Annual Payments Interest & Principal	Second Disbursement	Annual payments, interest & principal	Total Payments
Year 1 (2015)	3,500,000	315,000			315,000
		315,000			315,000
		383,412.67			383,412.67
		383,412.67			383,412.67
Year 4 (2019)		383,412.67	5,000,000	450,000	833,412.67
		383,412.67		450,000	833,412.67
		383,412.67		547,732.38	931,145.05
		383,412.67		547,732.38	931,145.05
		383,412.67		547,732.38	931,145.05
		383,412.67		547,732.38	931,145.05
Payments continue until year 20					

Cash Flow of SPV 1

Table 19: Cash Flow of SPV 1

Year	Annual Revenue	Administration fee (10%)	Payments	Net cash flow	Accumulated cash flow
1	350,000	35,000	315,000	0	0
2	420,000	42,000	315,000	63,000	63,000
3	504,000	50,400	383,412.67	70,187.34	133,187.34
4	604,800	60,480	383,412.67	160,907.34	294,094.67
5	725,760	72,576	833,412.67	--180,228.66	113,866.01
6	870,912	87,091	833,412.67	-49,591.86	64,274.15
7	1,045,094	104,509	931,145.05	9,439.92	73,714.07
8	1,254,113	125,411	931,145.05	197,556.91	271,270.99
9	1,504,936	150,493	931,145.05	423,297.30	694,568.29
10	1,805,923	180,592	931,145.05	694,185.77	1,388,754.06
11	2,167,108	216,711	931,145.05	1,019,251.94	2,408,006.00
12	2,600,529	260,053	931,145.05	1,409,331.33	3,817,337.33
13	3,120,635	312,063	931,145.05	1,877,426.60	5,694,763.93
14	3,744,632	374,463	931,145.05	2,439,140.93	8,133,904.87
15	4,493,714	449,371	931,145.05	3,428,198.13	11,562,102.99
At this point, the trust fund could be liquidated to advance amortization period					

39. As can be seen in the tables above, the projected revenue is sufficient to make the payments due for administration fee, interest and principal due for the two loans obtained to build the overpasses and could be liquidated ahead of the end of amortization period if desired.

V.3.2 Medium Term SPV (PPP to finance medium and medium-long term investments)

40. Main contributing factor to traffic congestion in Sekondi-Takoradi as well as to the deterioration of the physical condition of the urban roads is undoubtedly the transportation of goods to and from the port of Takoradi, along with the oil distribution industry that produces the daily circulation of between 30-50 heavy trucks that besides causing traffic congestion create an environmental potential hazard.

41. The table immediately below illustrates the importance of traffic related to the port, highlighting the circumstance that more than 5.3 million tonnes are involved in the traffic to or from the port of Takoradi. All goods are transported by road, with the exception of bauxite, causing a negative impact both physical and environmental to the road network.

Table 20: Traffic related to the port

CARGO TYPE	IMPORT		EXPORT	
	YR: 2011	2012	YR: 2011	2012
20' FULL	72.317,00	71.950,00	153.322,00	130.553,00
40' FULL	67.794,00	72.420,00	117.226,00	142.750,00
OTHERS	-	-	-	-

QUICKLIME	5.201,00	-	-	-
SODA	6.012,00	-	-	-
RICE	20.950,00	-	-	-
CALCIUM CHLORIDE	6.051,00	5.748,00	-	-
CEMENT	29.081,00	24.738,00	536,00	21,00
COCOA BEANS	-	-	27.288,00	30.892,00
AMMONIUM NITRATE	69.052,00	93.469,00	1.500,00	-
WOOD CHIPS	-	-	-	105.900,00
CHEMICALS	80,00	-	-	-
PALM KERNEL SHELLS	-	-	31.757,00	35.797,00
SOYA BEANS	7.070,00	6.022,00	-	-
CLINKER	1.073.460,00	1.221.678,00	-	-
WHEAT	164.233,00	169.271,00	-	-
QUICKLIME	125.972,00	134.360,00	-	-
SHEANUT SHELL	-	-	15.426,00	18.999,00
BAUXITE	-	-	404.880,00	752.529,00
MANGANESE	-	-	1.821.236,00	1.523.747,00
WHEAT PALLETS	-	-	8.631,00	2.774,00
COCOA BEANS	-	-	210.000,00	200.550,00
MECH/EQUIPMENT	16.998,00	10.700,00	2.473,00	2.440,00
RODS/PIPES	22.085,00	47.139,00	1.050,00	839,00
PLATES	645,00	579,00	-	-
STEEL/WIRE COILS	5,00	356,00	-	-
YAM	-	-	-	-
FROZEN FISH	43.707,00	18.808,00	13.437,00	-
PALM KERNEL CAKE	-	-	-	-
GENERAL CARGO	8.741,00	17.246,00	1.628,00	1.519,00
CARS	500,00	888,00	-	-
MINI VEHICLES	489,00	728,00	-	2,00
UTILITY VEHICLES	8.681,00	10.444,00	193,00	-
TRAILERS	3.286,00	3.334,00	21,00	3,00
BULL DOZERS/GRADERS	2.375,00	1.716,00	188,00	20,00
LOGS	-	-	-	-
SAWN TIMBER	2,00	-	13.172,00	9.756,00
PINE/TEAK POLES	-	-	-	-
LP GAS	-	9.180,00	-	-
VENEER	-	-	-	-
CHEMICALS	4.382,00	5.986,00	-	-
PET. PRODUCT	379.473,00	426.296,00	-	-
TOTAL	2.138.642,00	2.353.056,00	2.823.964,00	2.959.091,00

42. Classifying the 2012 traffic according to commodities transported to/ from the Port of Takoradi (see table immediately below) and estimating that the trucks are allowed a maximum weight of 60 tonnes, resulted that:

Table 21: Classification of Commodity Traffic

CLASSIFICATION OF COMMODITY TRAFFIC (TONNES)		
TAKORADI PORT JANUARY - DECEMBER 2012		
No. of Trips in 60 tonnes trucks		
C/NAME	TOTAL	60 Tonnes /Trips
Containerized	417.053,00	6.950,88
Bagged Cargo	154.868,00	2.581,13
General Cargo	37.449,00	624,15
Dry Bulk	4.154.576,00	69.242,93
Machines/Equipments	12.422,00	207,03
Iron/Steel	48.913,00	815,22
Forest Products	26.807,00	446,78
Vehicles	17.147,00	285,78
Liquid Bulk	441.462,00	7.357,70
TOTAL	5.310.697,00	88.511,62

43. In average, the data show a daily average of 246 heavy trucks entering the city. If we add the traffic originated by the oil distribution industry to the annual resulting figure, it is increased by 10,440 additional heavy trucks. As a result, an annual 98,951 trips of trucks with a median cargo of 60 tonnes circulates by the urban road network of Takoradi.
44. This figure provides the basis for the calculations of cash flows of the second PPP and its associated SPV.
45. In Chapter Three, one of the recommendations was the creation of an environmental charge, London style, as a mean to create a new revenue source to finance the urban road network improvements.
46. The London congestion charge is a fee charged on most motor vehicles operating within the Congestion Charge Zone (CCZ) in central London between 07:00 and 18:00 Monday to Friday. It is not charged at weekends, public holidays or between Christmas Day and New Year's Day (inclusive). The charge, which was introduced on 17 February 2003, remains one of the largest congestion charge zones in the world despite the cancellation of the Western Extension which operated between February 2007 and January 2011.
47. The charge aims to reduce congestion, and to raise investment funds for London's transport system. The standard charge is £10 for each day, for each non-exempt vehicle that travels within the zone with a penalty of between £60 and £187 levied for non-payment.
48. In Sekondi- Takoradi the charge could be much more modest and the payment could be made by establishing a toll booth system near the entrance to the STMA. The fee charged could be related to the vehicle tonnage being the highest fee the one charged to the 4 axis trucks and the lowest the charged to private sedan cars.
49. Private cars and taxis and/or tro tros, registered at STMA and already paying their "licences" would be EXEMPT. For heavy trucks registered at STMA an annual payment could be established.

50. In spite of being a higher toll for heavy trucks the financial impact of the pollution charge is diluted between the numbers of tonnes transported, reducing the effect on the cost of the goods or merchandise.

51. As an example, the following table contains a revenue estimate departing from a hypothetical rate and differentiating between vehicle types.

Table 22: Vehicle type

Vehicle type	Nr. of Trips *	Toll Fee in cedis **	Revenue in cedis	Revenue in US\$ (1US\$=1.80 cedis)
Truck 60 Tonnes	44,255	60	1,434,255.00	796,808.50
Truck International Transport		30		
Fuel tank truck	10,440	60	626,400.00	348,000.00
Light truck		25		
Passengers bus		15		
Private Vehicles and Taxis		5		
TOTAL	54,695		2,060,655,00	1,144,808.50

* in the case of heavy transportation to the port, the annual number of trips is divided by two, given that trucks enter the port loaded with a merchandise and leave with a different load. **In the case of fuel tank trucks it is assumed that they enter empty and leave loaded, although their fee could be equated to the highest in attention to the environmental hazard they represent.

52. The figures shown in the table above support the conclusion that for STMA, the establishment a pollution charge of the type recommended could be a solution for generating additional income in a sufficient quantity to secure a private partner that it has the capacity for the payment of the obligations undertaken by the SPV to finance the medium term improvements required by the urban road network of Sekondi-Takoradi.

53. In the financial projections we have included only two of the six possible types of vehicles from the table above, in spite of what the results confirmed that a pollution charge could be an adequate and efficient solution to generate the cash flow that the projects implementation requires. A summary of financial projections is presented below.

54. The assumptions utilized are as follows.

- a. The SPV II receives a loan of US\$ 23,860,000 divided in two disbursements of US\$11,500,000 and US\$ 12,360,000 in order to execute the priority 2 projects (widening of Axim road and improvement of interlocking roads).
- b. Each disbursement is conceded with a 36 months grace period during which works are executed.
- c. Annual Interest rate is 9% and administration fee is 10% estimated over the projected annual revenue.
- d. Annual revenue of SPV II is projected on the basis of the pollution charge for only two types of vehicles (60 tonnes trucks and fuel tanks) but it should be applied to all kinds of vehicles to contribute to enhance the total STMA fiscal collections. The pollution charge is projected to increase at a rate of 5% per year, consistent with the expected growth of this type of traffic.

SPV II Revenue Projections

Table 23: Revenue Projections

REVENUE BY TYPE OF VEHICLE								
Year	Truck 60 TONNES			Fuel Tank Truck			TOTAL	
	TRIPS PER YEAR	Toll Fee in US\$	Revenue in US\$	TRIPS PER YEAR	Toll Fee in US\$	Revenue in US\$	TRIPS PER YEAR	Revenue in US\$
1	44,255	\$33.33	\$1475,166.67	10,440	\$33.33	\$348,000.00	54,695	\$1823,166.67
2	44,255	\$35.00	\$1548,925.00	10,440	\$35.00	\$365,400.00	54,695	\$1914,325.00
3	44,255	\$36.75	\$1626,371.25	10,440	\$36.75	\$383,670.00	54,695	\$2010,041.25
4	44,255	\$38.59	\$1707,689.81	10,440	\$38.59	\$402,853.50	54,695	\$2110,543.31
5	44,255	\$40.52	\$1793,074.30	10,440	\$40.52	\$422,996.18	54,695	\$2216,070.48
6	44,255	\$42.54	\$1882,728.02	10,440	\$42.54	\$444,145.98	54,695	\$2326,874.00
7	44,255	\$44.67	\$1976,864.42	10,440	\$44.67	\$466,353.28	54,695	\$2443,217.70
8	44,255	\$46.90	\$2075,707.64	10,440	\$46.90	\$489,670.95	54,695	\$2565,378.59
9	44,255	\$49.25	\$2179,493.02	10,440	\$49.25	\$514,154.49	54,695	\$2693,647.52
10	44,255	\$51.71	\$2288,467.67	10,440	\$51.71	\$539,862.22	54,695	\$2828,329.89
11	44,255	\$54.30	\$2402,891.06	10,440	\$54.30	\$566,855.33	54,695	\$2969,746.39
12	44,255	\$57.01	\$2523,035.61	10,440	\$57.01	\$595,198.10	54,695	\$3118,233.71
13	44,255	\$59.86	\$2649,187.39	10,440	\$59.86	\$624,958.00	54,695	\$3274,145.39
14	44,255	\$62.85	\$2781,646.76	10,440	\$62.85	\$656,205.90	54,695	\$3437,852.66
15	44,255	\$66.00	\$2920,729.10	10,440	\$66.00	\$689,016.20	54,695	\$3609,745.29
16	44,255	\$69.30	\$3066,765.55	10,440	\$69.30	\$723,467.01	54,695	\$3790,232.56
17	44,255	\$72.76	\$3220,103.83	10,440	\$72.76	\$759,640.36	54,695	\$3979,744.19
18	44,255	\$76.40	\$3381,109.02	10,440	\$76.40	\$797,622.37	54,695	\$4178,731.40
19	44,255	\$80.22	\$3550,164.47	10,440	\$80.22	\$837,503.49	54,695	\$4387,667.97
20	44,255	\$84.23	\$3727,672.70	10,440	\$84.23	\$879,378.67	54,695	\$4607,051.36
21	44,255	\$88.44	\$3914,056.33	10,440	\$88.44	\$923,347.60	54,695	\$4837,403.93
22	44,255	\$92.87	\$4109,759.15	10,440	\$92.87	\$969,514.98	54,695	\$5079,274.13
23	44,255	\$97.51	\$4315,247.11	10,440	\$97.51	\$1017,990.73	54,695	\$5333,237.84
24	44,255	\$102.38	\$4531,009.46	10,440	\$102.38	\$1068,890.27	54,695	\$5599,899.73
	1062,120		\$65647,865.34	250,560		\$15486,695.61	1312,680	\$81134,560.95

Loan Projections

Table 24: II Loan Projections

Year	Disbursement 1	Annual payments interest and principal due	Disbursement 2	Annual payments interest and principal due	Total payments
1	11,500,000	1,035,000			1,035,000
2		1,035,000			1,035,000
3		1,035,000			1,035,000
4		1,259,784.46	12,360,000	1,112,400	2,372,184.46
5		1,259,784.46		1,112,400	2,372,184.46
6		1,259,784.46		1,112,400	2,372,184.46
7		1,259,784.46		1,353,994.43	2,613,778.89
8		1,259,784.46		1,353,994.43	2,613,778.89
9		1,259,784.46		1,353,994.43	2,613,778.89
10		1,259,784.46		1,353,994.43	2,613,778.89
11		1,259,784.46		1,353,994.43	2,613,778.89
12		1,259,784.46		1,353,994.43	2,613,778.89
13		1,259,784.46		1,353,994.43	2,613,778.89
14		1,259,784.46		1,353,994.43	2,613,778.89
15		1,259,784.46		1,353,994.43	2,613,778.89

SPV II Cash Flow Projections

Table 25: SPV II Cash Flow Projections

Year	Total revenue	Administration fee	Payments	Net cash flow	Accumulated cash flow
1	1823,166.67	182,316	1,035,000	605,850.00	605,850
2	1914,325.00	191,432	1,035,000	687,892.50	1,293,742.50
3	2010,041.25	201,004	1,035,000	774,037.13	2,067,779.60
4	2110,543.31	211,054	2,372,184.46	-472,695.48	1,595,084.10
5	2216,070.48	221,607	2,372,184.46	-377,721.03	1,217,363.10
6	2326,874.00	232,687	2,372,184.46	-277,997.86	939,365.30
7	2443,217.70	244,322	2,613,778.89	-414,882.96	524,482.30
8	2565,378.59	256,538	2,613,778.89	-304,938.17	219,544.10
9	2693,647.52	269,365	2,613,778.89	-189,496.13	30,048.00
10	2828,329.89	282,833	2,613,778.89	-68,281.99	-38,234.00
11	2969,746.39	296,974	2,613,778.89	58,992.85	20,758.90
12	3118,233.71	311,823	2,613,778.89	192,631.44	213,390.30
13	3274,145.39	327,414	2,613,778.89	332,951.96	546,342.30
14	3437,852.66	343,785	2,613,778.89	480,288.50	1,026,630.80
15	3609,745.29	360,974	2,613,778.89	634,991.87	1,661,622.60
16	3790,232.56	379,023	2,613,778.89	797,430.41	2,459,053.00
17	3979,744.19	397,974	2,613,778.89	967,990.87	3,427,043.90
18	4178,731.40	417,873	2,613,778.89	1,147,079.36	4,574,123.30
19	4387,667.97	438,767	2,613,778.89	1,335,122.28	5,909,245.60
20	4607,051.36	460,705	2,613,778.89	1,532,567.33	7,441,812.90
21	4837,403.93	483,740	2,613,778.89	1,739,885.04	9,181,697.94
The cash flow continue accumulating exceeding amounts, but it could be liquidated at this point if desired					

55. From the tables presented above, it is evident that the SPV II cash flow suffices to cover the projected obligations. In the year 10, where is a negative outcome it results from the fact that projections are based on two disbursements only in order to facilitate projections even in practice it should be that more than two disbursements should be made given that works in the four interlocking roads could not be executed simultaneously. If additional disbursements are considered, these do not represent significant modifications to the financial results.

V.4 Action Plan.

Table 26: Action Plan, Implementation of short term works for the urban road network in Sekondi-Takoradi

ACTION PLAN					
Implementation of short term works for the urban road network in Sekondi-Takoradi					
Name of the project		TRANSPORT CHALLENGES IN SEKONDI TAKORADI METROPOLITAN ASSEMBLY. GHANA			
Item	Action / Responsible	Term	OBSERVATIONS		
1	1.1 Detailed estimate of costs associated with the required works to improve the urban road network in the short run. 1.2 Definition of the source for financial resources to be invested in the implementation of the improvements.	STMA, with possible support from a consultant	3 months	Possible sources: 1) Current fees or taxes increases; 2) Creation of a new rate or charge for pollution; 3) Create a toll charge for vehicles accessing the port.	
2	Assessment of Multi-Car Parking solution to decongest CBD through STMA and private sector ¹⁹	STMA, with possible support from a consultant	1 month	As observed at Stakeholder meetings all interventions will have implications for over all urban road networks in the STMA.	
3	Assessment of Heavy Truck Parking in the proposed industrial zone in the north by to decongest truck traffic in the City through STMA and private sector	STMA, with possible support from a consultant	1 month	Implementation will have implications for over all heavy truck traffic in the STMA.	
4	Elaboration of TORs for the PPP, the base documentation for the bidding process and draft for the Trust contract.	Hiring of legal consultant services	2 months	Possible partners for the PPP: 1) Bank or Banks; 2) Oil companies; 3) Companies in the distribution and transportation of oil products; 3) Transportation companies; 4) local Transportation sector participants (Taxis and <i>tro-tros</i> unions); and, 6) Port Authority of Takoradi. The consultant and STMA should define the contracting arrangement according to the local regulations.	

¹⁹ The financial projections for the parking solutions are not presented in this document because of lack of cost estimates. Financial projections should be included in the TORs for the consultant contract.

5	Negotiation and Contracting of the Trust Fund.		2 months	This process should be directed by STMA with technical support from the Department of Urban Roads, Ministry of Roads and Highways.
6	Implementation of the engineering studies and final designs for works required in the short and medium term.	Hiring of consulting firm	6 months	STMA and the Department of Urban Roads will define the scope of the studies ²⁰ . Contracting a firm is suggested given the requirements of traffic census, lab tests, sampling and the need for different specialists to participate in the engineering design elaboration process.
7	Prioritize and define the urgent works to be executed based on available resources.	STMA / Department of Urban Roads	2 months	Priorities to be defined in light of the engineering studies and the funds available, currently and in the future, within a 5 year horizon.
6	Elaboration of contracting and supervision documentation for the priority Works.	Department of Urban Roads	1 month	It is suggested that ST-Department of Urban Roads, elaborates the necessary documents, with eventual support from a consultant if required.
8	Contract of the Works.	Selection and contracting of a construction firm	4 months	Partial disbursements from the loan proceeds according to implementation advancements.
9	Implementation of the short term works as prioritized by STMA		18 months	Supervision by the trustee

²⁰ An example for the Terms of Reference is included as annex II of this report.

V.5 Time Schedule.

Table 27: Schedule.

ACTIVITY / MONTHS		1	2	3	4	5	6	7	8	9	10	11	12
1	Projections, assessment of resources required to finance urgent or short term Works/ define revenue source.	█											
2	Elaboration of TOR's for PPP structuring.		█										
3	Elaboration of bidding documents			█									
4	Trust fund contracting process				█								
5	Elaboration of studies for urgent or short term works.		█										
6	Prioritize, define urgent Works to be executed taking into account available financial resources.							█					
7	Elaboration of contracts for Works implementation and supervision.							█					
8	Contract of Works and supervision									█			
9	Implementation of short and medium prioritized Works. ²¹											█	

²¹ The implementation of the prioritized works is programmed for 18 months that start at the 12th month of the time schedule as presented above.

Bibliography

- a. Consultancy Services for Traffic Data Collection in Sekondi-Takoradi (2008)
- b. Sekondi-Takoradi Drainage Master Plan (June 2006)
- c. STMA City Spatial Development Plan 2010 – 2013
- d. Sub-Regional Plan
- e. Budget of STMA 2012
- f. Final Account For the Year 2012 (STMA)
- g. Composite Budget of the Sekondi- Takoradi Metropolitan Assembly for the fiscal year 2012
- h. Constitution of Ghana: <http://www.ghanaweb.com/GhanaHomePage/republic/constitution.php>
- i. Local Government Act: <http://ghanalegal.com/?id=3&law=167&t=ghana-laws>
- j. District Assemblies Common Fund Act: <http://ghanalegal.com/?id=3&law=119&t=ghana-laws>
- k. Road Fund Act: <http://ghanalegal.com/?id=3&law=207&t=ghana-laws>
- l. Road (Vehicle Use) Fee Act: <http://ghanalegal.com/?id=3&law=206&t=ghana-laws>
- m. Driver and Vehicle Licensing Authority Act: <http://ghanalegal.com/?id=3&law=121&t=ghana-laws>
- n. National PPP Policy: http://www.mofep.gov.gh/sites/default/files/reports/ppp_policy.pdf

Annexes

Annex I

ATTENDEES AT MEETING ORGANIZED WITH THE REGIONAL CHAMBER OF COMMERCE AND INDUSTRY (STRCCI) ON MUNICIPAL FINANCING OF URBAN INFRASTRUCTURE FOR WORLD BANK MISSION IN SEKONDI-TAKORADI

- **Date/Time of Meeting:** March 20, 2013 10.00am- 2.00pm
- **Location of Meeting:** Ray Bow Hotel, Sekondi-Takoradi.

Table 28: Annex I

Members Present:

No	NAME	ORGANIZATION
1	Capt. Anthony Cudjoe	Mayor, Sekondi-Takoradi Metropolitan Assembly (STMA)
2	Abudali Zakari	Coordinator, STMA
3	Josephine Owes	STMA
4	William Donkor	Roads Engineer, STMA
5	Jacob Ntiamoah	Development Planner, STMA
6	John Easel	Ghana Railway Development
7	William Quarter	Sekondi-Taxi Local Union
8	F.K. Ofosu	Sekondi-Taxi Local Union
9	Edward Mensa	New Site Taxi Branch
10	Anthony Hanford	New Site Tax Branch
11	Rubin-Huws Barnes	Ghana Shippers Authority
12	Peter Amoo-Bediako	Ghana Ports Authority
13	Benjamin Quardzie	Ghana Bauxite Company Ltd.
14	Abass Salifu	Ghana Public Road Transport Union (GPRTU)
15	Joseph Arthur	GPRTU
16	Randy Dankwah	Macro Group
17	Ebenezer Easel	Autopak
18	David Odame	State Transport Corporation (STC)
19	Edward Howard	Perfect Consults
20	Cynthia Asmah	Ghana Manganese Company
21	Felix Abakah	Ghana Manganese Company
22	Joseph Owes	STMA
23	Nii Ashitey Affram	MMT
24	Billy Hackman	MMT
25	Henry Ocansey	Chamber of Commerce
26	Abena Amposah	Chamber of Commerce
27	Emanuel Otoo	Chamber of Commerce
28	Kwasi Bosompem	Consultant, World Bank
29	Mirna Solano	Consultant, World Bank
30	Kwasi Apenteng	Consultant, World Bank
31	Ricardo Montes	Consultant, World Bank
32	Ricardo Figueroa	Consultant, World Bank
33	Ana Cristina de Pereira	Team leader, World Bank

Annex II

Municipal financing to face urban challenges of Sekondi-Takoradi, Ghana

Terms of Reference for the Study of Transport Challenges in STMA.

PPIAF Sub National Development Technical Assistance Program

April, 2013

Background

1. Sekondi-Takoradi Metropolitan Assembly (STMA), has a population 559,548²², is the capital of the Western Region of Ghana (which has a total population of 2,376,021) and it has an area of 385 square miles. STMA occupies the south-eastern part of Western Region, on the coast, about 200 km west of Accra. This city has going strong changes due to the recent off shore oil and gas discoveries, and it has become the energy capital of Ghana, which has come with a rapid rise of demand of services for a growing population, both resident and migrant.
2. This accelerated growth is exerting pressure on the existing infrastructure. Both public and private travel demands have steeply risen, travel demand expanded and in general, corridor capacities are exceeded. Due to the new oil and gas industry, the establishment of businesses and high rate of migration into the Sekondi-Takoradi, has resulted in an increase in vehicular traffic. The urban transport environment in the city is characterized by heavy congestion, low vehicle utilization rates, weak implementation of traffic management measures, inadequate facilities for pedestrians and bicyclists, poor road safety arrangements and high accident rates. The transport sector is a dominant source of local air pollutants that are responsible for poor health and other.
3. This is further aggravated by soaring private trips and limited public transportation options for a large percentage of travel dependency on urban transport. Other issues include the fact that the poor are disproportionate affected by the inadequate public transport service while they spend a large portion of their incomes on transportation. Also other sectors, as water and sanitation, solid waste management, lack of public illumination, signs, etc. are under stress.

Objective

4. The objective of this study is to identify and prioritize the interventions needed on the road network to alleviate traffic congestion, financed from private sources. The consultant will prepare, based on current available information and data that will be gathered through traffic surveys and assessments of the current condition of the urban road network, the necessary final designs and cost estimates, to prioritize the recommended short and medium term works that were identified as improvements required to alleviate traffic congestion in the most conflictive intersections and roads in Sekondi-Takoradi, especially those related with the access of heavy trucks to the port of Takoradi. Besides, a five year program for maintenance of the paved road network will be needed, including recommendations to improve interlocking roads to create alternate ways to the end of decongesting the principal road network.

²² Census 2011 www.gss.gov.gh

Tasks

5. The consultant will carry out a detailed assessment of STMA's traffic congestion problems, based on current information and the traffic census that should be part of the tasks performed or other information to be prepared as part of their activities. The consultant will then prepare a detailed roadmap of prioritized interventions that the city would need to undertake, and to be probably financed from the creation of a mechanism under a PPP arrangement.
6. The tasks of the consultant include:
 - a. Obtain in site and analyze updated data related to the traffic congestion in STMA to carry out an assessment of the traffic issues in STMA. The priority exercise will be essential to identify the timing of the resources needed. This assessment should bring up elements of the operation of a SPV for the municipal infrastructure in STMA, Ghana. The consultant will prepare the composition of hourly and daily traffic in the city, an analysis of origins and destinations, mapping of routes by public transportation, transiting traffic, so to determine final designs, funding requirements, priority actions, and costing of interventions.
 - b. Confirm the prioritization of the urgent transportation works as recommended in the Report "*Transportation Challenges in Sekondi- Takoradi, April 2013*" and then proceed to elaborate engineering final designs until the detailed final construction plans are completed corresponding to the works recommended in the most conflictive points in intersections and main roads, that tentatively would be:
 - a) Paa Grant circle and Kwame Nkrumah circle;
 - b) Widening of Axim Road; and
 - c) rehabilitation of main *interlocking roads*. The consultant firm may rely to establish these priorities on the road management program RONET (Road Evaluation Network Tools), of the World Bank. This program is used to evaluate maintenance policies and road networks rehabilitation. Designs of overpasses for the above mentioned intersections should include every detail of geometrical and structural designs, time management of traffic lights for the vehicles circulating under the overpass, a full design for the traffic necessary signs, rights of way space identification, ornamental elements and the rest of the engineering elements required.

Design of a maintenance program is also required to establish prioritization of the routine maintenance, periodic maintenance, rehabilitation, reconstruction, improvement and widening of the paved road network, the consultant may conduct the road network assessment through the RONET model, in order to develop a five (5) year maintenance program starting in 2014, that minimizes operation cost and time of travel for users.

Between the tasks that could be performed through the use of the RONET model, are the following:

- Monitoring of the current condition of the urban road network
- Planning the allocation of resources
- Evaluation of the macro-policies impact on the urban road network
- Evaluation of the income produced by the proposed financial charges for the users of the urban road network.

- c. The maintenance program proposed should be based on an inventory of the paved urban roads including: Condition of the road surface and lower layers of the pavement, condition indicators (IRI – International Roughness Index), description and location of the pavement failures (potholes, cracks, settlements, channeling, etc.), drainage condition, Hourly and the Daily Average Classified Traffic (DAT) for each corridor. Traffic study should include economic benefits, vehicle operation and time of travel savings with every level of investment. The consultant should transfer to STMA the database and road management system with its operation manual. The consultant will provide training to STMA personnel to utilize and apply the system. The studies could include measures as: overpasses, to widen roads to 4 or 6 lanes in both directions, entry and merge lanes (acceleration–deceleration) in appropriate points and the improvement of respective intersections, improvement or rehabilitation of interlocking roads, construction of a bicycle exclusive lane in heavy populated areas, parking bays for public transportation, works for security and protection, pedestrian bridges, informational and preventive signs; etc., in order to improve the functionality of the urban road network. The studies would recommend the reinforcement required by each paved corridor, either with re-paving with asphalt overlays or granular/stabilized additional layers, rigid pavements, surface asphalt treatments, seals, reconstructions, rehabilitations, etc., considering projected traffic design loads for a minimum of 15 year horizon.
- d. The study should include suggestions of international best practice on how to issue local policies of traffic management, improve road maintenance techniques, annual maintenance funding program for the most urgent works and for the maintenance program of the road network during the 2014-2018 period and a suggested training program to staff at the local government of STMA on how to work with the problems of congestion.
- e. In addition the study should comprehend a detailed evaluation of the costs, if any, associated to resettlement or severance payments to free the right of way required in every corridor to intervene.
- f. The consultant should discuss with the Bank and STMA the findings of the study, and make a presentation to local stakeholders of the results.

Qualifications

7. The consultant firm should have an adequate experience in transport engineering, experience in roads, bridges and urban overpass designs is desirable as in road maintenance works, and be familiar with planning tools and have worked in an environment of local governments, and be aware of challenges faced by communities, and how to address them in an inclusive manner. The consultant should be able to understand the work of local governments and its regulatory framework. The consultant will use its own facilities to prepare its study.

Language

8. The working language of the study is English.

Term for Implementation

9. The consultant will have six (6) months to develop the complete the tasks as described in these terms of reference, to the satisfaction of The World Bank and STMA, starting on the date of issuance of the boot order. In case an extension is required, it should be justified.

Reports

10. The consultant will prepare, in one (1) original and four (4) printed copies, plus one (1) digital copy, the following reports:
 - a. **Initial Report**, within the first 30 days of the contractual term, including the current traffic situation of the city, main problems, conflicting points, relationships of the ongoing traffic with the access to the port of Takoradi, etc., based on available documentation describing the methodology, time schedule and work plan that it will apply to deliver the tasks related to the study elaboration. The consultant will include in this first report, a summary of the visits and interviews carried out, and the references to any documents it has used as a reference.
 - b. **Mid-term Report** at the end of the third month of the contractual term, containing the progress report of the tasks performed, also the prioritized list of intersections and stretches / corridors demanding urgent improvement works and will resume the overall progress reached by the consultant during the period.
 - c. **Final Report** at the end of the contractual term, containing the final results and engineering designs. Once the draft final report is prepared, the work will be shared with the Bank and STMA team. Once their comments are received and incorporated, the report will be considered as final.

Logistical Support

11. The consultant must provide the personnel, premises, vehicles, furniture and equipment as considered necessary for the performance of the services as described in these terms of reference. Besides it should maintain an effective communication system with the World Bank Representative office in Ghana and the personnel that STMA appoint as a counterpart for these works. For the purpose of the described services delivery, the consultant may have access to the information available in STMA and the Department of Urban Roads; however the consultant will be responsible for the compilation, processing and interpretation of the information, as of the results, designs and recommendations.

Payment Form

12. The total contract sum will be US\$ _____ distributed in three payments as follows:
 - a. 30% of the total, against acceptance of the Initial Report
 - b. 40% against acceptance of the Medium Term Report by the Bank and STMA of the progress made by the consultant and partial results that has been attained.
 - c. 30% against acceptance of the Final report by the Bank and STMA, including observations and requirements made to the draft presented by the consultant.

SPVs operational diagram

