



# Procurement Assessment: Mongolian Road Subsector

---

Project Number: 48186-005  
June 2018

## Mongolia: Regional Road Development and Maintenance Project

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Asian Development Bank

## CONTENTS

I.	INTRODUCTION AND PROGRESS	5	
2.	OBJECTIVE AND PURPOSE OF THE ASSIGNMENT	5	
	A.	Scope of Work	5
	B.	Capacity of the Local Road Industry	5
	C.	Contract Packaging	10
	D.	Eligibility of Local Road Maintenance Units	11
	E.	Private Sector Participation in Road Maintenance	11
	F.	EA's Procurement and Internal Control Capacity	11
	G.	Draft Procurement Plan and Implementation Schedule	13
	H.	Training PIU and EA on Procurement Related Documentation	13
	I.	Access to Construction Sites near Border	14
	J.	Training EA on ADB Procurement Requirements	14
	K.	Prepare Bidding Documents for Civil Works	14
	L.	Prepare Bidding Documents for Consultancy Services	18
II.	ASSESSMENT OF CAPACITY OF NATIONAL ROAD CONSTRUCTION INDUSTRY	19	
	A.	Licensing System for Road Contractors	19
	B.	Details of Licensed Contractors	20
	C.	Evaluation of Licensing System	20
	D.	Assessment of Capacity of National Contractors	21
III.	ASSESSMENT OF THE OPERATIONAL AND FINANCIAL EFFICIENCY OF STATE OWNED ROAD MAINTENANCE COMPANIES IN MONGOLIA	41	
	A.	General	41
	B.	The current situation of road maintenance	41
	C.	Disbursed fund for road maintenance:	44
IV.	REGULATIONS APPLICABLE TO ROAD CONSTRUCTION NEAR BORDERS	45	
APPENDIXES			
1.	Capacity of national road construction industry		
2.	State owned road maintenance companies		
3.	Regulations applicable to activities near border		
4.	Training on ADB procurement requirements		

## ABBREVIATIONS

ADB	-	Asian Development Bank
BEC	-	Bid evaluation committee
BER	-	Bid Evaluation Report
CAS	-	Chinese Accounting Standards
CDTA	-	Capacity Development Technical Assistance
CPS	-	Country Partnership Strategy
DCS	-	Design and Construction Supervision Consultant
EA	-	Executing Agency
IA	-	Implementing Agency
IASB	-	International Accounting Standards Board
ICB	-	International Competitive Bidding
ICQ	-	Internal Control Questionnaire
IFRS	-	International Financial Reporting Standards
GABP	-	General Authority for Border Protection
GPA	-	Government Procurement Agency
MDB	-	Multilateral Development Bank
MOF	-	Ministry of Finance
MRA	-	Mongolian Road Association
MRTD	-	Ministry of Road and Transport Development
NCB	-	National Competitive Bidding
PBMC	-	Performance-based Maintenance Contract
PCU	-	Public Complaints Unit
PD	-	Procurement Division
PIU	-	Project Implementation Unit
PMCBC	-	Project Management and Capacity Building Consultant
PPLM	-	Public Procurement Law of Mongolia
PPTA	-	Project Preparation Technical Assistance
PRC	-	People's Republic of China
PWC	-	Price Waterhouse Coopers
QBS	-	Cost-Based Selection
QCBS	-	Quality- and Cost-Based Selection
RAM	-	Road Asset Management
SME	-	Small- and Medium-sized Enterprises
TA	-	Technical Assistance

## I. INTRODUCTION AND PROGRESS

1. This document reviews the proposed arrangements for procurement under the Project and the capacity of the agencies involved. Procurement of goods, civil works and consulting services is a key element of the project implementation. If efficient and transparent procurement processes are established by the Executing Agency (EA), then this will help lead to a smooth and effective project implementation. With this objective in mind, a procurement capacity assessment of the proposed project procurement arrangements has been conducted (refer to **Annex 8**). This assessment is based on an Internal Control Questionnaire (ICQ) approach in accordance with ADB project administration instructions and ICQ documentation provided by ADB in January 2014.

### 2. OBJECTIVE AND PURPOSE OF THE ASSIGNMENT

#### A. Scope of Work

3. The procurement assessment has:

- (i) assessed the capacity of the local road industry to undertake civil works under the project (Appendix 1);
- (ii) reviewed the status of state-owned maintenance companies (Appendix 2);
- (iii) assessed the procurement capacity of the Executing Agency (EA) (Annex 8);
- (iv) reviewed legal restrictions on working near the borders (Appendix 3);
- (v) made recommendations on contract packaging, and eligibility requirements as they relate to local road maintenance units and private sector participation in the road maintenance task, and
- (vi) worked with the international road asset management (RAM) specialists to develop terms of reference and bidding documents.

#### B. Capacity of the Local Road Industry

4. During the assessment, the Consultant carried out the following tasks:

- (i) Interviewed a selection of national road contractors.
- (ii) Reviewed and evaluated the contractor licensing system operated by the Mongolian Road Association (MRA) and Ministry of Road and Transport Development (MRTD) (see Appendix 1 for details).
- (iii) Extracted and analyzed data on national road contractors from MRTD and MRA's websites (see Appendix 1 for details).

5. Meetings were held with several road construction contractors to discuss their experience and track record, resources (plant, equipment and staff), and financial capacity. The following companies were met:

- ARJ Capital LLC
- ESTO LLC – Road and Railway Construction
- UILS Road LLC
- ALTAIN ZAM LLC – Road Construction
- KHURDNII ZAM LLC – Road Construction

6. The key findings are:

- (i) Most companies were established between 10 to 15 years ago, although one, ALTAIN ZAM, was originally founded as a state road maintenance company in 1935 and was privatized in 1996.
- (ii) Annual construction turnover in 2015 or 2016 ranged from \$1.5m to \$7.5m although most companies were turning over more than \$10m a few years ago,
- (iii) All the companies spoken to were struggling in the current market, made worse by the fact that the government is very slow in paying for work funded by the State Budget. If it wasn't for work in the commercial sector some of the companies admitted they would probably be bankrupt.
- (iv) Many companies said they were confident they could take on much more work given the opportunity.
- (v) All companies demonstrated a significant investment in training staff and acquiring new plant and equipment.
- (vi) All the contractors demonstrated a strong commitment to utilize modern technology and were very innovative in researching / utilizing new technologies. These included chip sealing, fiber reinforced asphaltic concrete, cold recycling of asphaltic pavements, use of geogrids and geofabrics in pavement construction, soil stabilization using lime instead of cement, GPS guided equipment, sophisticated planning software, etc.
- (vii) Contractors wanted to know whether these new technologies would give them a competitive advantage when it came to bidding for works and, if so, how they could best demonstrate this.
- (viii) Private companies often subcontract to foreign companies, primarily Chinese, but tend to get a very small portion of the contract value.
- (ix) Forming joint ventures with other national companies, with the aim of increasing their technical and financial capacity, was discussed but was not generally considered viable.
- (x) NGOs could take a lead in lobbying MRTD and MOF to focus more on periodic maintenance.
- (xi) Although the quality track record of bidders is considered when evaluating bids, the view was that this could be strengthened. One company noted that MRTD's licensing system for road contractors, which is based only on a contractor's resources (plant, equipment and skilled personnel) and not their experience or financial capacity (see Appendix 1), is partly to blame for the poor quality of some work.
- (xii) All contractors spoken to were interested in bidding for ADB funded road rehabilitation and reconstruction work but felt that, based on previous experience (see below), local contractors miss out due to their financial capacity (cash flow and turnover).

7. One of the ADB's key qualification criteria in assessing a company's financial situation is their annual average construction turnover. The minimum qualifying turnover is usually set at two times the annualized value of the subject contract expressed as  $2 \times V/T$  where V is the estimated cost (including contingencies) and T is the contract duration in years. For a contract with an estimated value of \$10m and a 2-year construction period, representative of the size of the rehabilitation contracts being considered for this project, the minimum qualifying average annual construction turnover would be \$10m.

8. If the bidder is a single entity they must meet this requirement alone. If the bidder is a joint venture then all partners combined must meet this criteria with each partner is usually required to meet a minimum of 25% and one partner required to meet at least 40%. In the above example,

each partner would need to demonstrate an annual average construction turnover of \$2.5m and one partner \$4m.

9. The average annual construction turnover of the companies interviewed based on figures supplied by them and using ADB methodology is as shown in the following table.

**Table 1: Average Annual Construction Turnover**

Company		2012	2013	2014	2015	2016	Average Annual Construction Turnover
MNT/USD Rate on 31 Dec		1,375	1,610	1,876	1,986	2,481	
ESTO LLC	MNT m			21,416	5,438	18,401	15,085
	USD m			11.4	2.7	7.4	<b>7.2</b>
UILS Road LLC	MNT m			6,452	7,763	8,035	7,417
	USD m			3.4	3.9	3.2	<b>3.5</b>
ALTAIN ZAM LLC	MNT m	20,041	26,063	8,862	2,180	2,963	12,022
	USD m	14.6	16.2	4.7	1.1	1.2	<b>7.6</b>
KHURDNII ZAM LLC	MNT m			23,362	8,979	3,704	12,015
	USD m			12.5	4.5	1.5	<b>6.2</b>

10. The average annual construction turnovers of these four companies range from \$3.5m to \$7.6m. Based on the example above none of these companies would qualify as a single entity but, in most cases, would qualify as a joint venture of two. In order to encourage the development of the local construction industry then contracts of this size and duration (or larger if the construction period is extended, e.g. \$15m over 3 years) should therefore be considered.

11. **Financial Reporting:** In discussions with local contractors about their experience of bidding for donor funded projects in Mongolia, two of the companies expressed concern about the way cash flow / turnover was measured for evaluation purposes and felt that the financial reporting standards in Mongolia unfairly penalized local companies over contractors from the PRC. To better understand the reasons for this, the Project requested a copy of the Bid Evaluation Report (BER) for ADB Loan No.3129 MON: Western Regional Road Corridor Investment Program Tranche-2, Bid No. ICB(MON)-2014/01, a bid in which at least 4 Mongolian firms participated.

12. Bids for these contracts, which were divided into four lots, with lengths from 25.8km to 60km, were invited in August 2014 and, by the time bids closed 6 weeks later in October 38 bidders had submitted a total of 73 bids for the four lots. The Bid Evaluation Committee (BEC), which was first established 08 April 2014, went through several amendments / changes before the membership was finalized on 02 June 2015.

13. The Bid Validity Period, which expired on 01 February 2015, was extended twice to 30 June 2015, during which a total of 20 Bidders either withdrew (2) or did not respond (18) and were subsequently rejected. Bid evaluation was completed and a final BER was issued on 17 June 2015. Two packages went to a Chinese contractor, China Huashi Enterprises Company Limited; one to a Mongolian / Chinese JV, HKB International Holding LLC JV with Xinjiang Road and Bridge Construction Group Co. Ltd; and one to a Mongolian Joint Stock Company, AltainZam JSC, a member of the New Progress Group [<http://newprogressgroup.mn/content/22>].

14. It is noted that the final BER dated 17 June 2015 states that it supersedes an earlier revision dated 30 March 2015. This was revised by the then Ministry of Road and Transport (MRT) because:

- (i) a revised methodology for evaluation of the qualification criteria for financial resources has been applied;
- (ii) the composition of the BEC was changed in January, February and March 2015 and the latest BEC was formed on 11 May 2015 following reformation of the Mongolian Government; and
- (iii) MRT requested Bidders extend their bid validity three times and 18 bidders out of 23 bidders who had been requested, confirmed the extension of bids until June 30, 2015.

15. Details of the revised methodology for evaluation of the qualification criteria for financial resources were not available but it is noted that two of the local contractors interviewed expressed the view that they were not successful with their bids because of the lack of financial resources.

16. Mongolia has adopted the **International Financial Reporting Standards (IFRS)** which 'are designed as a common global language for business affairs so that company accounts are understandable and comparable across international boundaries. They are a consequence of growing international shareholding and trade and are particularly important for companies that have dealings in several countries. They are progressively replacing the many different national accounting standards. They are the rules to be followed by accountants to maintain books of accounts which are comparable, understandable, reliable and relevant as per the users internal or external.' [Refer <https://www.pwc.com/us/en/cfodirect/assets/pdf/pwc-ifs-by-country-2016.pdf> for Price Waterhouse Coopers (PWC) list of countries, including Mongolia, that have adopted IFRS]

17. IFRS in Mongolia – IFRS was adopted in 2002. IFRS or IFRS for SMEs is required for consolidated and standalone/separate financial statements.

18. IFRS in China - China has adopted national accounting standards (Chinese Accounting Standards ("CAS")) that are substantially converged with IFRSs. However, it is not a direct translation of IFRS; rather, the principles of IFRS are re-written into a format that is easily-understandable to the Chinese reader. Before 2008, financial institutions were required to prepare IFRS (as published by the International Accounting Standards Board (IASB) financial statements in addition to the statutory financial statements prepared under CAS, however this requirement was removed in 2008. The Ministry of Finance has continued to amend CAS so that its principles are in effect in line with IFRS.

19. **Contractor Licensing System:** The review of the contractor licensing system operated by MRA and MRTD, and the analysis of the data available on these two agencies websites highlighted several factors that impact on national contractors' ability to compete against foreign firms. These include:

- (i) Although the contractor licensing system is thorough it only considers a company's human and technical resources; the financial capacity and resources of the company are not considered in the evaluation process.
- (ii) The assessment of the submissions received for licenses are limited to a review of documents submitted by the applicants and no visual / site inspection or capacity evaluation is conducted at the company's premises.
- (iii) Once licenses have been issued there is no regular monitoring or evaluation of a company's performance by MRTD or MRA.
- (iv) Of the total of 545 companies that have been issued licenses under the various categories (see Appendix 1 for details), only 45 (8.2%) have been awarded road



construction contracts and only 28 (5.1%) have been awarded road rehabilitation contracts in the last five years.

- (v) 80 percent of licensed contractors have no permanent workplace, permanent human resource and only limited technical capacity; this includes companies in the highest category of licenses for road construction from 25-50 km and 50 km and above.
- (vi) Although opportunities in the road construction sector in Mongolia have increased rapidly in the last few years, more than 50% of this work has gone to foreign companies.
- (vii) The limited financial capacity of national road contractors, with even the largest only turning over less than \$10m a year, makes it very difficult for them to compete directly for large multilateral aid funded works contracts, even when they are packaged into smaller lots.

### **C. Contract Packaging**

20. After a number of iterations the Project now comprises the following components:

- (i) Periodic maintenance of the road between Nalaikh (25 km south of Ulaanbaatar) and Choir (201 km) including approximately 185 km of surface dressing and 16 km of rehabilitation; safety improvements, including road marking, road signs, guardrail and construction of 3.5 km of climbing lanes; and an extended 3 year Defects Notification period during which the contractor will also be responsible for the routine maintenance of the road (total estimated cost \$16 million).
- (ii) Periodic maintenance of the road between Darkhan and Altanbulag (118 km) including approximately 86 km of surface dressing and 5km of asphaltic concrete (AC) overlay (27 km of the road has recently been rehabilitated) plus safety improvements, including road marking, road signs, guardrail and construction of 7.1 km of climbing lanes (total estimated cost \$8 million).
- (iii) In addition, and as part of the proposed improvements to road asset management capacity and implementation, a number of maintenance packages will be procured through national competitive bidding (total estimated cost \$10 million).

21. In discussions with ADB about supporting the development of the domestic construction industry, it was agreed that, provided contract packaging makes sense from a technical and economic efficiency perspective, the size of individual contracts should be such that they would attract domestic contractors and allow them to compete against foreign firms. As noted in para 10 above, if domestic contractors were to bid for contracts as single entities this would mean 2-year contracts of no more than \$7.6m. If, however, they were to bid as a joint venture of domestic contractors then 2-year contracts of up to \$20m would be achievable under ADB financial qualification criteria.

22. For the Nalaikh to Choir road, the following contract packages could be considered:

- (i) Km 30+000 (Nalaikh) to Km 60+000: This 30km section includes all the proposed slow vehicle lanes plus full resurfacing and 1km of road rehabilitation. Although relatively short in length, the inclusion of the slow vehicle lanes would make it attractive to a more construction, rather than maintenance, orientated company (approx. cost \$ 6.3 million).
- (ii) Km 60+000 to Km 231+400: This 171.4km section includes 157km of resurfacing and 14.5km of rehabilitation (approx. cost \$ 9.1 million)

23. For the Darkhan to Altanbulag road, the following contract packages could be considered:

- (i) Km 227+000 (Darkhan) to Km 276+000 (south of Sukhbatar): This 49km section includes a significant number of the proposed climbing lanes for the northern route, but equally has only 25% requiring resurfacing as much of the road was resurfaced in 2015 or 2013. (approx. cost \$7.4 million)
- (ii) Km 276+000 (south of Sukhbatar) to Km 345+000 (Altanbulag): This 69km section has fewer climbing lanes, but requires 100% of the length to be resurfaced. (approx. cost \$2 million)

24. As agreement still needs to be reached over the packaging of individual contracts for the Nalaikh to Choir road, this road being MRTD's priority and due to commence in 2018, bid documents for this road have been prepared assuming only one contract for the whole 201.4km. If the proposed packaging is approved during loan fact-finding then it is a relatively simple exercise to split the bid documents into two or more slices as per Sub-Clause 2.4 of ADB Procurement Guidelines. This would attract the interest of both small and large firms which would be allowed, at their option, to bid for individual contracts (slices) or for a group of similar contracts (package).

#### **D. Eligibility of Local Road Maintenance Units**

25. Of the total of 28 Road Maintenance Units in Mongolia (see Appendix 2 for details of these companies and the outcome of discussions with a selection of them), 22 are government owned entities. To be eligible to bid for works funded by the ADB, it is necessary to establish that Government-owned enterprises in the Employer's country (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Employer.<sup>1</sup>

26. The state-owned road maintenance companies lack sufficient financial resources, road maintenance equipment, modern maintenance technology and qualified staff. The lack of resources combined with their legal status means that privatizing these organizations in the hope of improving their efficiency and competitiveness is not considered a viable option.

#### **E. Private Sector Participation in Road Maintenance**

27. The 28 companies (22 state owned enterprises and 6 private contractors) that are responsible for road maintenance across Mongolia only receive sufficient funds for 15% of routine maintenance requirements. In addition, there is currently no funding for periodic maintenance under the current arrangements. Until sufficient and sustained funding is available for routine and periodic the private sector will not invest in the plant and equipment required to maintain the road network.

#### **F. EA's Procurement and Internal Control Capacity**

28. In 2012, the Government of Mongolia created the Government Procurement Agency (GPA) with the intention of moving from a decentralized system in which procurement is handled by line ministries and agencies, to centralization of public procurement. In accordance with Article

<sup>1</sup> Sub-clause 4.5 of Section 1 - Instructions to Bidders, ADB Standard Bidding Document for Procurement of Works, December 2015

53 of the Public Procurement Law of Mongolia (PPLM), the GPA is responsible for all public procurement using government funds in Mongolia except for:

- Projects implemented by the Development Bank of Mongolia.
- National security and defense-related procurement.
- Procurement of works and services related to repair and maintenance of national automobile roads undertaken by state-owned enterprises (PPLM, Articles 3.4-3.6).

29. This means that, other than road repair and maintenance implemented by state-owned enterprises, the Executing Agency, MRTD, is no longer involved in procurement.

30. The current situation appears to be quite different. In August 2016, the GPA was downsized from 65 to a total of 20 staff and changed from an independent Government agency to a Division of the Agency for Policy Coordination on State Property. In the process the name was changed from the Government Procurement Agency (GPA) to the Procurement Division (PD) of Agency for Policy Coordination on State Property. This was in accordance with the Mongolian State Great Hural (the Parliament) Decree No 4, 2016 and Resolution of the Government No 12, 2016, which liquidated the GPA and transferred its functions to the Agency for Policy Coordination on State Property in accordance with Article 53-a of the Law on Procurement of Goods and Services using State and Local Property.

31. From discussions with MRTD Procurement Officers and the PD, the role of the PD in the procurement process of MRTD projects is unclear. In theory, the PD is responsible for the procurement of all works, goods and services funded from the State budget. This relationship is apparently supported by a joint resolution signed by MRTD and PD in which PD will provide procurement expertise to MRTD. In practice, it seems the MRTD are increasingly managing these procurements directly with limited assistance on some projects from the PD (preparation of bidding documents and managing the bidding process including use of the government e-procurement system), and even this involvement is diminishing.

32. Since GPA was formed in 2012 it is understood that they have been under a lot of pressure from various line ministries, particularly those that perform poorly, to relinquish their legal role as the Government's procurement agency. This includes two unsuccessful amendments presented to Parliament and the recent change in August 2016 to downsize them from 60 to 20 staff and make them a division of a largely dysfunctional agency rather than an independent agency reporting directly to the Deputy Prime Minister.

33. To better understand the roles of MRTD and PD and their capacity to procure the proposed works under this project a Project Procurement Risk Assessment of both parties was carried out using the ADB Guide on Assessing Procurement Risks and Determining Project Procurement Classification, August 2015. The Procurement Capacity Assessment Report is included in Annex 8 and the key findings are listed below. In addition, informal meetings were also held with both agencies.

#### **Strengths**

- (i) Both the MRTD and PD have some experience of procuring goods, works and services for Multilateral Development Bank (MDB) financed projects.
- (ii) Government of Mongolia procurement practices are generally in line with international best practice.
- (iii) Both agencies have sufficient staff numbers and other resources to manage the procurement required under this project.

### **Weaknesses**

- (i) Apparent confusion over which agency will be responsible for procurement.
- (ii) A lack of experience and capacity through all phases of procurement and project / contract management.
- (iii) Previous projects have demonstrated a reluctance to adopt MDB procurement principles and guidelines.
- (iv) Misunderstanding over the differences between key principles of ADB procurement guidelines and Public Procurement Law.
- (v) Both agencies also manage the procurement of state funded goods, works and services which may result in less priority being placed on the procurement of this project.

### **Proposed actions**

- (i) Ensure appropriately trained and experience specialists are hired for the Project Implementation Unit (PIU).
- (ii) Provide additional technical assistance (TA) to support the PIU, through a Project Management and Capacity Building Consultant (PMCBC).
- (iii) Provide initial and ongoing training to MRTD and PD in ADB procurement principles, guidelines and processes.
- (iv) Coordinate capacity building activities with proposed ADB CDTA 49193-001 MON: Strengthening of Public Procurement for improved Project Implementation.
- (v) Consider recommendations of the upcoming ADB Country and Sector / Agency Procurement Risk Assessments which was completed in March 2017 and will be published as an annex to the next Country Partnership Strategy (CPS) 2017-2019.

## **G. Draft Procurement Plan and Implementation Schedule**

34. A draft Implementation Schedule and Procurement Plan have been prepared and are included in Section II and VI and Appendix 1 of the Project Administration Manual (PAM).

## **H. Training PIU and EA on Procurement Related Documentation**

35. Training of the PIU and EA on procurement related documentation will be provided by the proposed Project Management and Capacity Building Consultant (PMCBC). In addition, training will also be provided through ADB CDTA 49193-001 MON: Strengthening of Public Procurement for Improved Project Implementation. This TA has four outputs as detailed below. Output 3 of will provide training on ADB procurement guidelines and procedures and Output 4 will provide capacity building in project and contract management. This will be targeted at various agencies including MRTD, MOF and the Procurement Division (PD) of Agency for Policy Coordination on State Property.

- (i) Output 1 – to assist the Government of Mongolia develop and implement legislative changes to allow advance procurement action, currently not allowed under the Public Procurement Law of Mongolia (PPLM) unless project is 100% externally funded.
- (ii) Output 2 – provide support to Government of Mongolia to develop manuals for procurement audits and inspections.
- (iii) Output 3 – capacity building in procurement to PD and line ministries including MRTD.
- (iv) Output 4 – capacity building in project and contract management to MOF and line ministries including MRTD.

## **I. Access to Construction Sites near Border**

36. There are two laws / regulations that apply if road construction work is to be carried out near the Mongolian border. These are:

- Mongolian Border Law approved by Parliament on 21 October 1993.
- Procedure for licensing and controlling activities in Border zone - Order A/21 of Head of General Authority for Border Protection (GABP), 28 August 2009.

37. Details of these laws / regulations can be found in Appendix 3 which describe the activities that can be carried out in the border zone and the process for obtaining permission from the relevant authority (GABP, Local Government and Border Army) before any work is carried out.

## **J. Training EA on ADB Procurement Requirements**

38. Presentations in English on the following ADB procurement requirements have been prepared and are included in Appendix 4:

- (i) ADB Procurement Guidelines
- (ii) ADB Standard Bidding Documents
- (iii) ADB Guidelines on the Use of Consultants

39. Translation of these training materials into Mongolian will be required before the training program can be delivered. The following Mongolian language documents are currently available:

- ADB Procurement Guidelines, February 2007
- National Competitive Bidding (NCB) Documents for procurement of Goods, prepared by 2014

40. As noted under Section H above, procurement training is also being provided by ADB CDTA 49193-001 MON: Strengthening of Public Procurement for Improved Project Implementation. This TA has four outputs; Output 3 will provide training on ADB procurement guidelines and procedures to various agencies including MRTD and the Procurement Division (PD) of the Agency for Policy Coordination on State Property.

## **K. Prepare Bidding Documents for Civil Works**

41. **ICB & NCB:** In most cases, International Competitive Bidding (ICB), properly administered, and with the allowance, where appropriate, for a preference for domestic contractors for works under prescribed conditions is the most appropriate method. In most cases ADB requires its borrowers to obtain goods, works and services through ICB open to eligible suppliers and contractors.

42. As an alternative, National Competitive Bidding (NCB) is the competitive bidding procedure normally used for public procurement in the country of the borrower, and may be the most appropriate way of procuring goods or works which, by their nature or scope, are unlikely to attract foreign competition. This is unlikely to be the case for the works contracts to come out of this project as demonstrated by the strong interest in the ADB funded Western Regional Road Corridor Investment Program for which many Chinese firms submitted bids. This project was similar in scale and scope to the work proposed under the current project. In addition, the value

of these contracts exceed the US\$5m limit above which ICB is required and so precludes the adoption of NCB.

43. Although the use of Domestic Preference for procurement of goods is possible in Mongolia, it cannot be applied to the procurement of works as Mongolia's per capita GNP is above ADB's specified threshold.

44. The Bidding Documents for this Project will therefore be based on ADB's Standard Bidding Document for Procurement of Works, December 2016, packaged as set out in Section C above.

45. **Prequalification:** ADB's Procurement Guidelines require that borrowers carry out due diligence on the technical and financial qualifications of bidders to be assured of their capabilities in relation to the contract(s) being let. This can be done in one of two ways: **prequalification** whereby the implementing agency carries out an assessment of the suitability of firms to perform a particular contract prior to being invited to submit a bid; or **post qualification** whereby the implementing agency requires bidders to submit information pertaining to their qualification together with their bids.

46. Experience gained from the evaluation of Western Regional Road Corridor Investment Program where many bids were received – 38 bidders submitted a total of 73 bids for the 4 lots – suggests that prequalification of bidders may be worthwhile as it will ensure that invitations to bid are extended only to those who have adequate capabilities and resources ((a) experience and past performance on similar contracts, (b) capabilities with respect to construction or manufacturing facilities, and (c) financial position) and so simplify bid evaluation. This may however, extend the time required to award the civil works contracts, work on the first of which (Nalaikh to Choir Road) is due to commence in the 2018 construction season. It is therefore recommended that prequalification is not carried out for this contract.

47. **Detailed Design:** The first component, the Nalaikh to Choir Road, includes an extended 3 year Defects Notification Period during which the contractor will also be responsible for the routine maintenance of the road. This, plus the 24-month construction period (two construction seasons) compared to the loan implementation period of five years (January 2018 - December 2022), means that procurement of both the works contract and the design and supervision consultant needs to begin as soon as possible to allow construction to commence in the 2018 construction season.

48. Unlike the section of the Eastern Regional Road Corridor (ERRC) between Baruun-Urt and Bichigt, for which detailed designs had been prepared prior to the PPTA, no design has been carried out for the periodic maintenance and safety improvement works of either the Nalaikh to Choir or Darkhan to Altanbulag roads. Considering the time constraints described in para 0 above, an alternative to the traditional / linear approach to detailed design of these works, particularly for the Nalaikh to Choir road, was required. A fast track / parallel approach was therefore proposed as described below:

- (i) Traditional, linear, approach comprising:
  - a. procurement of design and supervision consultant; followed by;
  - b. surveys, investigation, detailed design and preparation of bid documents; followed by;
  - c. procurement of road works contract; followed by;
  - d. construction of road and construction supervision of works.

- (ii) Fast-track approach comprising:
  - a. procurement of road works contract using bid documents for road works prepared by PPTA Consultant based on visual survey and outline design in parallel with procurement of design and supervision consultant using ToR prepared by PPTA Consultant; followed by;
  - b. construction of road and construction supervision of works during which design and supervision consultant sub-contracts surveys and investigation, finalizes detailed designs, obtains MRTD approval, and issues to contractor in sections.

49. Indicative programmes, based on the above, were prepared and show that the traditional approach would take at least 1, possibly 2 years, longer than the fast-track approach to complete construction of the road. Following discussions with MRTD it was agreed that the fast-track approach described above would be adopted.

50. The scope of works included in the Bid Documents (Section 6. Employer's Requirements and Section 4. Bill of Quantities) for the Nalaikh to Choir works contract have been prepared by the PPTA Consultant based only on a visual inspection of the road; no site investigations or surveys were carried out. The designs are therefore considered preliminary and are to be finalized during construction by the design and supervision consultant.

51. The Terms of Reference (ToR) for the design and supervision consultant includes the following:

Preparation of Detailed Design. The preparation of the detailed designs shall include but not be limited to the following tasks:

- (i) Review preliminary designs prepared by the IA including design and location of proposed periodic maintenance treatments for road pavement (surface dressing, asphaltic concrete overlay, rehabilitation) and safety improvements (slow vehicle lanes, localized improvements to safety black spots, guardrails, road marking and road signs) as detailed on the Drawings and in the Specification.
- (ii) Prepare Terms of Reference for geotechnical investigation and testing of existing pavement; obtain and evaluate three quotations; prepare evaluation report and request PIU and ADB approval to utilize Provisional Sum; instruct supplier and supervise investigation.
- (iii) Prepare detailed design of periodic maintenance works including standard details of treatments, schedule of locations, and estimated quantities and cost.
- (iv) Prepare Terms of Reference for topographic survey and geotechnical investigation and testing of sites for proposed slow vehicle lanes; obtain and evaluate three quotations; prepare evaluation report and request PIU and ADB approval to utilize Provisional Sum; instruct supplier and supervise survey and investigation.
- (v) Model slow vehicle lanes using appropriate software to confirm locations and prepare detailed designs including vertical and horizontal alignment, plan, cross sections, standard details, and estimated quantities and cost.
- (vi) Prepare schedules based on standard detail drawings showing location of road signs, road marking, edge marker posts and guardrails, including estimated quantities and cost.

Final designs for maintenance treatments for each section of road plus safety improvements (slow vehicle lanes, road marking, road signs, etc.), including standards, calculations, drawings, specifications, quantities and cost estimates, are to be submitted to the Employer for review and approval. A programme covering the packaging of the

designs and review and approval process is to be discussed and agreed with the Employer at commencement and set out in the Inception Report.

After each package of final design has been approved by the Employer, the Engineer shall issue instructions to the Contractor to carry out the Works.

52. To ensure the first package of detailed design is ready to be issued to the works contractor at the start of the 2018 construction season the design and supervision consultant needs to mobilize early in 2018. This will allow time to procure and award a contract for the geotechnical investigation and testing of existing pavement, complete investigations and prepare designs for the first section of maintenance works, and obtain MRTD approval to issue these designs to the contractor while they are mobilizing prior to the start of the construction season.

53. Although there is a risk that delays in completing surveys, investigations and detailed design will impact the works programme, it should be noted that most of the periodic maintenance works on eh Nalaikh to Choir road (>80% by length of road) is surface dressing of the existing asphaltic concrete surface for which only limited investigation and design is required.

54. Although the primary objective of adopting the fast-track approach to detailed design for the Nalaikh to Choir road is to allow construction to commence in the 2018 construction season and complete the works and extended Defects Notification Period during the loan implementation period, there are also good engineering reasons for adopting this approach. A traditional / linear approach to detailed design means that the works contractor is constructing works that were designed one or two years previously and which themselves may have been based on surveys and investigations that are older still. While this is not necessarily a problem for the construction of a new road on a greenfield site, or even the upgrading of an existing road (gravel to seal, 2-lane to 4-lane), it is not suitable for periodic maintenance works in which the condition of the existing road can deteriorate significantly in a year, particularly in harsh climate such as in Mongolia. It is therefore recommended that, although the periodic maintenance and road safety improvement works on the Darkhan to Altanbulag road may not go ahead for one or two years, the same fast-track approach to the detailed design of these works is adopted.

55. This approach to detailed design will also be made clear in the Bid Documents for the works contract which will include the following:

NOTE: The information provided in these Bid Documents, including Section 6. Employer's Requirements and Section 4. Bill of Quantities, is based on a visual inspection of the road. The design is therefore considered preliminary and will be finalized during construction by the Engineer. Revised Drawings and Schedules will be issued to the Contractor in accordance with the accepted Programme.

56. Bidders will be required to take this into account when preparing their Technical Proposal and Programme as part of their Bid. This aspect of the Bids will also be carefully assessed during bid evaluation to ensure the approach to detailed design is clearly understood.

57. **Drawings:** The following drawings have been prepared and will form part of Section VI Employer's Requirements of the Bid Documents:

- Standard detail showing proposed periodic maintenance treatments (single seal surface dressing, asphaltic concrete overlay, rehabilitation either through in-situ cement stabilization or dig-out and replace methods) including table detailing proposed locations (start / end / L&R points for each).



- Standard detail showing road cross section including lane widths, shoulder widths and camber / superelevation of carriageway and shoulders.
- Standard details for road furniture (road signs, road marking, guardrails, edge marker posts, kilometre posts) including proposed locations.
- Standard detail for proposed slow vehicle lanes including road geometry, earthworks details and pavement structure plus a table detailing proposed locations (start / end / L&R points for each).

58. As noted in para 20 above, the civil works contract for Nalaikh to Choir road includes an extended 3 year Defects Notification Period during which the contractor will also be responsible for the routine maintenance of the road. This will include, but is not limited to, the following tasks:

- (i) a full-time Site Management Team
- (ii) road management and prioritization systems
- (iii) traffic safety
- (iv) environmental management
- (v) occupational health & safety
- (vi) road pavement maintenance and repairs
- (vii) drainage maintenance and repairs
- (viii) geotechnical & slope stability
- (ix) road reserve management
- (x) maintenance and repairs of structures
- (xi) Incident Management System
- (xii) Quality Control System

#### **L. Prepare Bidding Documents for Consultancy Services**

59. The bidding documents for design and supervision consulting services will be based on Guidelines on The Use of Consultants by Asian Development Bank and Its Borrowers – March 2013.

60. ADB's preferred procurement process is Quality- and Cost-Based Selection (QCBS). The use of alternative selection methods, including Quality Based Selection (QBS), is not justified as the (i) the scope of work can be precisely defined, (ii) the TOR are well specified and clear, and (iii) the Borrower and the consultants can estimate with reasonable precision the personnel time as well as the other inputs required of the consultants.

61. In addition to the clearly defined role of the consultants in administering the Contract, ensuring the quality of the works through appropriate Quality Assurance processes, and in the role of the Engineer to the Contract, the Design and Construction Supervision Consultant (DCS) will also be responsible for the following project specific activities:

- (i) Carrying out surveys and investigations, preparing detailed designs of the proposed periodic maintenance and safety improvement works and issuing instructions to the Contractor as detailed in para 0 above.
- (ii) Supervising Contractor's routine maintenance activities during extended Defects Notification Period as detailed in para 58 above.

## II. ASSESSMENT OF CAPACITY OF NATIONAL ROAD CONSTRUCTION INDUSTRY

### A. Licensing System for Road Contractors

62. In Mongolia, road and bridge construction and rehabilitation works are undertaken by companies that have obtained a special license from the Ministry of Road Transport and Development (MRTD) in accordance with the “Mongolian law on Licensing”.

63. Procedures and requirements to be followed in the process of license issuance and suspension is governed by the “Rule on Issuing, suspending and revoking special licenses of entities engaged with road, bridge construction and rehabilitation” which is an annex to the Ministerial order #152, dated July 1, 2013.

64. According to this rule, any entity planning to apply for the special license shall prepare all necessary documents and submit its application to Mongolian Road Association (MRA). Upon submission MRA will review the company’s application and conclude its final evaluation within 7 days whether that application is qualified for further consideration.

65. If the application package and all supporting documents are not qualified for the requirement of the subject special license, then MRA sends back the application to the applicant entity. If the application passes the requirement for the subjected license, then MRA will insert all relevant information of the applicant to the registration database and submit the final evaluation to the MRTD. With Ministerial order, special commission to discuss the application for further evaluation will be established at the MRTD and upon completion of this evaluation; the final decision will be held.

66. Special licenses, which are issued depending on a contractors technical and human capacity, are divided in following four main categories:

- Construction of paved and unpaved road or gravel road
- Construction of Road establishments (bridges, tunnels, exit, etc.)
- Production of road materials
- Conduct of road rehabilitation and maintenance

67. In addition, the special license on construction of paved roads is also divided as following:

- Construction of road with length of 50 km and above
- Construction of road with length from 25 km to 50 km
- Construction of road with length from 15 km to 25 km
- Construction of road with length from 5 km to 15 km
- Construction of road with length from 3 km to 5 km
- Construction of road with length up to 3 km

68. In terms of construction of bridge and its related parts, following licenses are being issued for qualified entities, namely:

- Construction of bridges with length of 100 meters or longer
- Construction of bridges with length from 25 meter to 100 meters

- Construction of bridges up to 25 meters
- Construction bridge crossing

69. In terms of rehabilitation and maintenance related work, following licenses are being issued for qualified entities, namely:

- Rehabilitation of all types of road;
- Rehabilitation of all types of bridges;
- Renovation of road and squares, construction and rehabilitation of floating bridges;
- Installation of road signs, boards and appliances.

70. According to above mentioned rules, it is acceptable that 50 percent of total engineers and technical staff of the applying entity may be working in foreign companies or different company at the time of application and certain percent of total tools and equipment of the applying company may be rental.

71. It is worth emphasizing that the financial capacity of the applicant company is not considered in the evaluation process in terms of issuing, suspending and revoking licenses and no specific provision on this matter is included in the rule, approved by the Ministry of Road, Transportation and Development.

72. Tables I-2 to I-5 at the end of this report detail the minimum requirements of human resources and technical capacity of the entity applying for the various licenses.

## **B. Details of Licensed Contractors**

73. To obtain registration and other relevant information of national companies with special licenses on construction and rehabilitation of road and related structure, the Consultant submitted an official request to the Mongolian Road Association on several occasions but no useful information was provided.

74. As a result, information on the 545 national companies that hold special licenses for the construction and rehabilitation of road and related structure has been downloaded from the official web pages of the MRA and MRTD (updated as of May 16, 2016). This is presented in Tables I-6 and I-7 at the end of this report and includes the name of the company, the date of issuance of the license and its validity. The websites do not include details of the types of special licenses held by each company.

## **C. Evaluation of Licensing System**

75. Despite the legal regulations on special licenses, such as the Mongolian law on Special Licenses, a rule approved by the MRTD, there are a number concerns about the effectiveness of the system. These include:

- (i) Human resource and technical equipment capacity is considered as the main indicator of qualified company while financial indicators such as company capital, annual profit, annual sale rate are not considered at all;
- (ii) Commissions granted with rights to issue special licenses at all levels are only limited by the analysis and review of paper documents submitted by the applicant

companies, and no visual / site inspection or capacity evaluation is conducted at the company`s premises.

- (iii) After the issuance of special licenses, no regular monitoring of a company`s performance is carried out. For example no information is collected as to whether that company has successfully implemented road projects, whether there was a contract violation during construction, whether there was quality assurance issue, etc. Regardless of their performance, companies are still able to hold their special licenses until its expiration date.

76. According to relevant rules and legislations, a company that has obtained a special license should maintain their human resource and technical capacities until they are awarded a construction contract with the government, this despite the fact that it is very rare to have construction work from the government that fits with their human resource and technical capacities. For example, in the last five years, of the 545 abovementioned companies with special licenses, only 45 (8.2%) have been awarded road construction contracts while only 28 (5.1%) have been awarded road rehabilitation contracts.

77. Due to lack of specific direction or policy directive approved MRTD on sustainability and enhancement of national road companies, more than 80 percent of total national companies holding special licenses still have no permanent workplace, permanent human resource, and only limited technical capacity. In effect they are only active and capable on “paper”, in order to win tenders advertised, and if they win a tender they seek to subcontract the work to another contractor. This includes companies that hold special licenses for road construction from 25-50 km, or even 50 km and above

#### **D. Assessment of Capacity of National Contractors**

78. Based on the latest information collected by the MRTD on newly constructed roads and capacity related information collected by the Consultant from various national companies, a limited analysis has been carried out. This is based on interviews with several contractors and publicly available information on each company`s human resources and technical capacities, the number and value of successfully concluded contracts and the number and value of contracts that are under implementation.

79. This analysis (

80. Table II-1) contains limited financial information on these companies as this data is not publicly available and most companies the Consultant approached did not wish to provide it. It is worth noting that, although the analysis is not linked to MRTD's licensing system, many of the companies listed have special licenses that fit with their current capacity.

81. **Although opportunities in the road construction sector in Mongolia have increased rapidly in the last few years, most of this work has gone to foreign companies with high technical capacity and sufficient human resources.** For instance, in 2013, a total of 1,825km road was constructed, out of which 60% or 1,090km was constructed by foreign companies or companies with foreign direct investments. The same figures in the following years were; 2014 a total of 553km of road and 49% (271km); 2015 a total 1008km of road and 54% (549km); and in 2016 a total of 506km road with 53% (267km) constructed by foreign companies.

82. **The limited financial capacity of Mongolia's road companies does not allow them to compete directly for large multilateral aid works (mostly provided by ADB).** Typical contract size has been \$15 to \$25 million, which is beyond the capacity of the largest national contractors. At the same time, some donors (e.g. Japan, the Republic of Korea, and the PRC) only contract with their own national contractors.

**Table II-1: National Contractors Actively Engaged in Road Construction**

№	Company name	Length of paved roads constructed until 2013 /km/	2013		2014		2015		2016		Paved road under construction /km/	Number of engineer and technical staff	Number of machinery and
			Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor			
<b>Companies with capacity to construct road more than 50 km</b>													
1	Altain zam LLC	115.1	100		43.1						311	9	56
2	Arj capital LLC	23.65	50				132		25			10	86
3	Nasny zam LLC	201.4			30		61.5				70.1	11	95
4	Monroad LLC	199.2	54				100					8	92
5	Hurdny zam LLC	78.9					69		8		127	7	58
6	ESTO LLC	118.2			25		17.1					7	35
<b>Companies with capacity to construct road of 25 km to 50 km</b>													
1	Uils road LLC	2.42			6.9		51	40				8	28
2	Och-naran LLC	0.6					40	40			50	8	35
3	National developer LLC	45	50									5	31
4	Mongolyn Hurdny zam LLC	15	104	104					42	42		5	26
5	Ochir tuv zam LLC	109.7	31.7								28	4	66
6	Hotgor zam LLC	15	29.5		54.5		7		9.8			5	24
7	Zamyn bitum LLC	1.1	66.1	42	24.1		15.8					6	26
8	Yalguusan LLC	91	48.8	48.8	43				19			6	42
9	Gashuunii gol LLC	15.4	48.8	48.8	27.8				27			5	26
<b>Companies with capacity to construct road of 15 km to 25 km</b>													
1	Erdene zam LLC	78.8										6	59
2	Zaabar LLC	44.35										7	39
3	Huvsgul zam LLC	1.9	4.5								22.1	6	50
4	Ochir nyam LLC	2.23	8.2				29.4	29.4				4	36
5	KTK LLC	10	32.2	32.2								3	27
6	Anandyn zam LLC	15	32.2	32.2					1			3	20
7	Batcubik LLC	11.07	17	17								4	19
8	Tugs zam LLC	19.77	17	17					5.5			3	22
9	Ih Mongol barilga LLC				25							3	10
10	Hansuun zam LLC	3.1									61.7	4	18
11	Motor service LLC								42	42		5	12
12	Herem zam LLC	40										4	25
13	Berkh zaraa LLC	70										5	28
14	Tum arvijih LLC	1.3			45.3							3	20
15	Madimos Grupp LLC				25							4	18
16	Tumdelgereh LLC						20		5			3	21

№	Company name	Length of paved roads constructed until 2013 /km/	2013		2014		2015		2016		Paved road under construction /km/	Number of engineer and technical staff	Number of machinery and
			Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor	Total road, /km/	Work jointly performed with contractor			
17	Uvur zalaat LLC										23.3	3	23
18	Badrah-Oil LLC								52.8			4	19
<b>Companies with capacity to construct road of 5 km to 15 km</b>													
1	Tosgol LLC	20										4	20
2	Naranbulag han LLC	11.92									3.4	3	17
3	ODND LLC						5					3	13
4	Hotyn zam LLC	4.6									-	5	42
5	Avto zam LLC	12.72										2	20
6	Geotrass LLC	6.4										3	29
7	Erdenet suvarga LLC	19										2	30
8	Urgun govi LLC	10										3	23
9	Jeï Keï Si LLC	2.92										3	14
10	Huchit zal LLC	15.1										5	23
11	Chailgan LLC	25										4	32
12	Mon-Agaar LLC	2.6										1	34
13	Bilegt zam LLC	10										3	18
14	Setsed LLC	10.16										2	19
15	Bering LLC	1										2	21
16	Power logistic LLC	1.6										4	26

Source:

**Table II-2: Construction of Paved and Unpaved / Gravel Road**

#	Equipment name and necessary capacity	Types of license					
		50 km and above	Up to 50 km	Up to 25 km	Up to 15 km	Up to 5 km	Up to 3 km
<b>Main machineries and equipment</b>							
1	Excavator /0.65M <sup>3</sup> /	6	4	2	2	1	1
2	Bulldozer /130M.x/	4	3	2	1		
3	Auto grader /250M.x/	6	4	2	2	1	1
4	Loaders more than /1.0M <sup>3</sup> /	8	6	4	3	1	1
5	Drum roller more than 20 t	8	4	2	2	2	1
6	Gas roller /20 t/	8	4	2	1	1	1
7	Roller /more than 10 t/	3	3	2	1		
8	Roller /more than 10 t/	3	1				
9	Heavy duty dump truck more than 6M <sup>3</sup>	30	20	12	8	6	4
10	Water truck more than /5 t/	8	5	4	2	1	1
11	Asphalt paver not less than /7.0M/	3	2	1	1		
12	Auto crane /25 t and over/	2	2	1	1		
13	Filtered stone crushing machinery /60 t per hour	2	2	2	1	1	
15	Asphalt concrete plant 80 t/hour/	2	1	1	1		
<b>Other equipment</b>							
16	Auto hydrogenate /3.5 m/	2	2	1	1		
17	Concrete mixer	6	4	2	2	1	1
18	Asphalt concrete cutting saw /2M/min/	4	4	1	1	1	1
19	Trimming cutter, folder	2	2	1	1	1	1
20	Compressor /7M <sup>3</sup> /	4	4	1	1	1	1
21	Deep vibrator	8	6	2	2	1	1
22	Field vibrator	8	6	1	1	1	1
23	Welding apparatus	5	4	2	2	1	1
24	Laboratory /comprehensive/	1	1	1	1		
25	Geodesy equipment /comprehensive/	4	2	1	1	1	1
26	Field laboratory	2	1	1	1	1	
#	Minimum requirements for human resource capacity – road engineers and technical staff						
1	Road engineer	4	2	2	1	1	1
2	Bridge and artificial establishment engineer	2	1				
3	Geodesy engineer	2	2	1	1		
4	Material engineer	2	2	1	1	1	1
5	<b>Total number of engineers</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>



**Table II-3: Construction of Bridges and Bridge Related Structures**

#	Equipment name and necessary capacity	Types of work			
		Constructing bridge			Bridge crossing /tunnel
		Up to 25 m	25-100 m	100 m and above	
Main machineries and equipment					
1	Excavator /0.65M <sup>3</sup> /	1	2	2	2
2	Bulldozer /130M.x/	1	1	2	1
3	Auto grader /250M.x/	1	1	1	1
4	Loader /1.0M <sup>3</sup> /	1	2	2	4
5	Drum roller more than 10 t	1	1	2	3
6	Gas roller more than 20 t		1	1	2
7	Roller /more than 10 t/				
8	Roller /less than 10 t/				
9	Heavy duty dump truck more than 6M <sup>3</sup>	3	4	4	6
10	Water tank more than 5 t	1	1	1	2
11	Asphalt paver no less than 7.0M				
12	Auto crane more than 25 t	1	2	2	2
13	Filtered stone crushing machinery /60 t per hour				
15	Asphalt concrete plant /80 t/hour/				
Other equipment					
16	Auto hydro generator 3.5 m				
17	Concrete mixer	2	2	3	4
18	Asphalt concrete cutting saw /2M/min/				
19	Trimming cutter, folder	1	1	2	2
20	Compressor /7M <sup>3</sup> /	1	1	2	3
21	Deep vibrator	2	2	3	6
22	Field vibrator	2	2	3	6
23	Welding apparatus	2	2	3	6
24	Laboratory /comprehensive/			1	1
25	Geodesy equipment /comprehensive/	1	1	1	2
26	Field laboratory	1	1	1	1
#	Minimum requirements for human resource capacity – road engineers and technical staff				
1	Road engineer			1	1
2	Bridge engineer	1	1	2	2
3	Geodesy engineer		1	1	2
4	Material engineer	1	1	1	2
5	<b>Total number of engineers</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>7</b>

**Table II-4: Production of Road Construction Materials**

#	Machinery name and necessary capacity	Production of road construction and maintenance materials
Main machineries and equipment		
1	Excavator /0.65M <sup>3</sup> /	2
2	Bulldozer /130M.x/	1
3	Auto grader /250M.x/	1
4	Loader /1.0M <sup>3</sup> /	2
5	Heavy duty dump truck – more than 6M <sup>3</sup> -ээс	6
6	Water truck more than 5 t	1
7	Manual roller	1
8	Filtered stone crushing machinery 60 t per hour	1
9	Asphalt concrete plant /30 t/hour/	1
10	Concrete mixer	2
Other equipment		
11	Auto hydrogenator /3.5 m/	
12	Trimming cutter, Folder	2
13	Compressor /7M <sup>3</sup> /	2
14	Deep vibrator	1
15	Field vibrator	1
16	Welding apparatus	1
17	Laboratory /comprehensive/	1
18	Geodesy equipment /comprehensive/	1
#	Minimum requirements for human resource capacity – road engineers and technical staff	
1	Road engineer	1
2	Material engineer	2
3	Bridge engineer	1
4	<b>Total number of engineers</b>	<b>4</b>

**Table II-5: Rehabilitation and Maintenance of Roads**

#	Name and necessary capacity	Type of work			
		All type of road maintenance	All types of bridge maintenance	Landscaping of road and field	Production of road signs, board and related appliances
Main machineries and equipment					
1	Excavator /0.65M <sup>3</sup> /	2	1	1	
2	Bulldozer /130M.x/	1	1	1	
3	Auto grader /250M.x/	3	1	1	
4	Loader /1.0M <sup>3</sup> /	2	1	1	1
5	Drum roller more than 10 t	2	1	1	Portable machineries
6	Gas roller /20 t/	1	1	1	

#	Name and necessary capacity	Type of work			
		All type of road maintenance	All types of bridge maintenance	Landscaping of road and field	Production of road signs, board and related appliances
7	Roller - more than 10 t	1		1	equipped with tools for marking and signage - 2 units
8	Roller - less than 10 t	1	1	1	
9	Heavy duty dump truck more than 6M <sup>3</sup>	5	2	2	
10	Water tank more than 5 t	2	1	1	
11	Asphalt paver no less than 7.0 m				
12	Auto crane more than 25 t		1		
13	Manual roller	2	1	2	1
14	Filtered stone crushing machinery /60 t per hour	1			
15	Asphalt concrete plant - 30 t/hour/	1			
Other equipment					
16	Auto hydrogenate 3.5 m	1			
17	Concrete batching	1	1	1	
18	Asphalt concrete cutting saw /2m/min/	1	1	1	
19	Trimming cutter, Folder	1			
20	Compressor /7M <sup>3</sup> /	1			2
21	Deep vibrator	1			
22	Field vibrator	1	1		1
23	Welding apparatus	1	1		1
24	Geodesy equipment /comprehensive/	1	1		1
25	Field laboratory	1	1		
26	Installation of signage alongside the road				1
27	Specialized machinery for horizontal marking or sign				2
#	Minimum requirements for human resource capacity – road engineers and technical staff				
1	Road engineer	2	1	1	1
2	Bridge engineer		1		
3	Other engineer and technical staff	2	2	1	1
4	<b>Total number of engineers and technical staff</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>

**Table II-6: List of National Companies with Special Licenses for Road Construction**

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
1	Avto zam	Mar/28/2014	Mar/28/2017
2	Avto-Agro LLC	Mar/13/2014	Mar/13/2017
3	Avtoroad LLC	Jun/27/2013	Jun/27/2016
4	Agiu LLC	Oct/8/2014	Oct/8/2017
5	Ai Ai Si LLC	Oct/14/2014	Oct/14/2017
6	Aisui zam LLC	Jun/16/2015	Jun/16/2018
7	Altain zam LLC	Apr/12/2016	Apr/12/2019
8	Altain bayasgalan treid LLC	May/16/2014	May/16/2017
9	Altainhuder LLC	Mar/20/2014	Mar/20/2017
10	Altan gun tugs LLC	May/5/2016	May/5/2019
11	Altan tashuur LLC	Jan/25/2016	Jan/25/2019
12	Altanbalysh LLC	Mar/13/2014	Mar/13/2017
13	Altanmalgait LLC	Apr/13/2016	Apr/13/2019
14	Amjiltyn shar zam LLC	Jul/21/2015	Jul/21/2018
15	Anandyn zam LLC	Apr/12/2016	Apr/12/2019
16	Apsilon LLC	Aug/7/2013	Aug/7/2016
17	Araat uul LLC	Jun/16/2015	Jun/16/2018
18	Arvis interneshnl LLC	Mar/20/2014	Mar/20/2017
19	Argamag hulegt munhhangai LLC	Jul/21/2015	Jul/21/2018
20	Ardaagan LLC	Jan/25/2016	Jan/25/2019
21	Arj capital LLC	Mar/15/2016	Mar/15/2019
22	Ariunjim LLC	May/5/2016	May/5/2019
23	Arts suvarga LLC	Jul/21/2015	Jul/21/2018
24	Artssky LLC	Aug/27/2014	Aug/27/2017
25	Asgatkent LLC	Jan/25/2016	Jan/25/2019
26	Atrium Rosdor LLC	Apr/17/2014	Apr/17/2017
27	Aurum-Alt LLC	Jun/26/2014	Jun/26/2017
28	Ashid butemj LLC	May/5/2016	May/5/2019
29	Ashid munhiin zam LLC	Jun/16/2015	Jun/16/2018
30	Badrah-Oil LLC	Aug/7/2013	Aug/7/2016
31	Baigali od construction LLC	Mar/20/2014	Mar/20/2017
32	Bak-Yard LLC	Sep/19/2014	Sep/19/2017
33	Bat buh zam LLC	Mar/20/2014	Mar/20/2017
34	Bat sod engineering LLC	Sep/19/2014	Sep/19/2017
35	Batburdel LLC	Jun/16/2015	Jun/16/2018
36	Batgurvan erdene LLC	Jul/21/2015	Jul/21/2018
37	Batjinsregt LLC	Mar/28/2014	Mar/28/2017
38	Batcubik LLC	May/5/2016	May/5/2019
39	Bayan marz LLC	Jun/16/2015	Jun/16/2018
40	Bayan sutain zam LLC	Oct/8/2014	Oct/8/2017
41	Bayanmandal zam LLC	Jun/27/2013	Jun/27/2016
42	Bering LLC	Jun/27/2013	Jun/27/2016
43	Best innovation LLC	Mar/15/2016	Mar/15/2019
44	Bi Bi Servis LLC	Jan/17/2014	Jan/17/2017
45	Bi Ti U LLC	Aug/7/2013	Aug/7/2016

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
46	Bi Es Em Ji LLC	Aug/11/2014	Aug/11/2017
47	Bi U Em U LLC	Aug/7/2013	Aug/7/2016
48	Bidnii zam LLC	May/5/2016	May/5/2019
49	Bileg jiguur LLC	Jun/27/2013	Jun/27/2016
50	Bilegt boorj LLC	May/9/2014	May/9/2017
51	Bilegt boorchi LLC	Mar/28/2014	Mar/28/2017
52	Bilegt zam LLC	Jan/17/2014	Jan/17/2017
53	Bitumina central azia LLC	May/16/2014	May/16/2017
54	Bogdzam LLC	Jul/21/2015	Jul/21/2018
55	BOZI LLC	Aug/11/2014	Aug/11/2017
56	Boldyn zam LLC	Jul/21/2015	Jul/21/2018
57	Bolor bogd zam LLC	Jul/21/2015	Jul/21/2018
58	Borjigon trans LLC	Oct/8/2014	Oct/8/2017
59	Borhoin zam LLC	Aug/7/2013	Aug/7/2016
60	Buun ulias treid LLC	Mar/20/2014	Mar/20/2017
61	Bridg laif LLC	Apr/25/2014	Apr/25/2017
62	BSM LLC	Sep/19/2014	Sep/19/2017
63	Bugattenger zam LLC	Apr/29/2015	Apr/29/2018
64	Bulbul LLC	Oct/8/2014	Oct/8/2017
65	Bulgangempil LLC	Jul/21/2015	Jul/21/2018
66	Buman arvijih undraga LLC	Oct/8/2014	Oct/8/2017
67	Buman hishigten tsereg LLC	Aug/11/2014	Aug/11/2017
68	Bumbat davaa LLC	Apr/17/2014	Apr/17/2017
69	Burgatai zam LLC	Jun/16/2015	Jun/16/2018
70	Buyant tsetserleg LLC	Jul/21/2015	Jul/21/2018
71	Burd ded butets LLC	Oct/8/2014	Oct/8/2017
72	BUETI LLC	Apr/12/2016	Apr/12/2019
73	Bccz LLC	Jun/16/2015	Jun/16/2018
74	Bers intaim LLC	Jun/16/2015	Jun/16/2018
75	Berh zaraa LLC	May/31/2013	May/31/2016
76	Bestvinding road LLC	Aug/7/2013	Aug/7/2016
77	Bestroad LLC	Apr/17/2014	Apr/17/2017
78	Beyus LLC	Jun/27/2013	Jun/27/2016
79	Vidasuentun LLC	May/5/2016	May/5/2019
80	Gan od tulhuur	Aug/11/2014	Aug/11/2017
81	Gan tumur guur LLC	Oct/14/2014	Oct/14/2017
82	Gangar invest LLC	May/5/2016	May/5/2019
83	Ganguur LLC	Mar/15/2016	Mar/15/2019
84	Garnet brilliant LLC	Sep/23/2013	Sep/23/2016
85	Gashuunii gol LLC	Apr/29/2015	Apr/29/2018
86	Giatsint LLC	Apr/17/2014	Apr/17/2017
87	Gol zam LLC	Mar/20/2014	Mar/20/2017
88	Gold ulziit LLC	May/9/2014	May/9/2017
89	Golden driim LLC	Sep/19/2014	Sep/19/2017
90	Golomt construction LLC	Apr/29/2015	Apr/29/2018
91	Gotik gold LLC	Oct/21/2013	Oct/21/2016
92	Grand avto land LLC	Jul/21/2015	Jul/21/2018

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
93	Grand povyer LLC	May/16/2014	May/16/2017
94	Grandroad grupp LLC	Jul/21/2015	Jul/21/2018
95	Gryeit road LLC	Mar/15/2016	Mar/15/2019
96	Griin steishn LLC	Aug/27/2014	Aug/27/2017
97	Griinstepe LLC	Oct/14/2014	Oct/14/2017
98	Griit lait vei lojistik LLC	Jul/21/2015	Jul/21/2018
99	Gurvan zam LLC	Apr/13/2016	Apr/13/2019
100	Guntelmen LLC	Jan/25/2016	Jan/25/2019
101	Gerelt zam guur LLC	Mar/15/2016	Mar/15/2019
102	Gereltjin LLC	Jan/25/2016	Jan/25/2019
103	Dagshin hargui LLC	Jul/21/2015	Jul/21/2018
104	Daimondroad LLC	Jun/16/2015	Jun/16/2018
105	Dairgant LLC	May/5/2016	May/5/2019
106	Daichinzam LLC	Jun/16/2015	Jun/16/2018
107	Dalai naran orchlon LLC	Oct/14/2014	Oct/14/2017
108	Damas LLC	Mar/15/2016	Mar/15/2019
109	Dar zam LLC	Apr/29/2015	Apr/29/2018
110	Dardan gov' LLC	Mar/28/2014	Mar/28/2017
111	Darhan konkryet LLC	Oct/14/2014	Oct/14/2017
112	Dyeltapi LLC	Jun/27/2013	Jun/27/2016
113	Di Ar Ji LLC	Apr/29/2015	Apr/29/2018
114	Di Ar Jei LLC	Sep/19/2014	Sep/19/2017
115	Di Vai Kei Bi LLC	Jul/21/2015	Jul/21/2018
116	Di Di Eich End Bois LLC	Apr/29/2015	Apr/29/2018
117	Di Es En Es LLC	Oct/14/2013	Oct/14/2016
118	Dogshin suvarga LLC	Aug/27/2014	Aug/27/2017
119	Dorno urnu zam LLC	Jul/21/2015	Jul/21/2018
120	Dornyn uer LLC	Jul/21/2015	Jul/21/2018
121	Dornyn chimeg LLC	Apr/13/2016	Apr/13/2019
122	Dulguun chanad LLC	May/16/2014	May/16/2017
123	Dragonbridj LLC	Mar/28/2014	Mar/28/2017
124	Driim road LLC	Oct/8/2014	Oct/8/2017
125	Duuren jim LLC	Oct/8/2014	Oct/8/2017
126	Devjih erdene LLC	Apr/29/2015	Apr/29/2018
127	Deed ceg LLC	Apr/29/2015	Apr/29/2018
128	YEn shin road bridj building korporeishn grupp LLC	Oct/8/2014	Oct/8/2017
129	Javhlan hargui LLC	May/9/2014	May/9/2017
130	Jargalant usuh travyel LLC	Oct/14/2014	Oct/14/2017
131	Jyenyeral road LLC	Mar/15/2016	Mar/15/2019
132	Jyenyeral eko partnryers LLC	Aug/11/2014	Aug/11/2017
133	Jyeosta road Mongolia LLC	Aug/27/2014	Aug/27/2017
134	Ji Jei Si LLC	May/9/2014	May/9/2017
135	Ji Di Eich LLC	Oct/14/2014	Oct/14/2017
136	Ji Ji Si Em LLC	May/16/2014	May/16/2017
137	Ji Pi Ar LLC	Apr/29/2015	Apr/29/2018
138	Ji Pi Di LLC	Aug/7/2013	Aug/7/2016

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
139	Ji Pi ekspryess finans LLC	Jul/21/2015	Jul/21/2018
140	Ji Es Di Ji LLC	Jun/16/2015	Jun/16/2018
141	Jilinmandal LLC	May/5/2016	May/5/2019
142	Jinhene zam LLC	Jan/25/2016	Jan/25/2019
143	Jol LLC	Apr/29/2015	Apr/29/2018
144	Jej Kei Si LLC	May/16/2014	May/16/2017
145	Jej Ei En LLC	Aug/11/2014	Aug/11/2017
146	Zag LLC	Apr/29/2015	Apr/29/2018
147	Zalanmunh LLC	Jul/21/2015	Jul/21/2018
148	Zam guur barilga negdel LLC	Oct/8/2014	Oct/8/2017
149	Zamch ireedui LLC	Apr/12/2016	Apr/12/2019
150	Zamyn bitum LLC	Jan/17/2014	Jan/17/2017
151	Zangihargui LLC	Jul/21/2015	Jul/21/2018
152	ZBIB LLC	Jan/25/2016	Jan/25/2019
153	ZZB LLC	Apr/12/2016	Apr/12/2019
154	Zingirsaram LLC	Jul/21/2015	Jul/21/2018
155	ZMZ LLC	Apr/13/2016	Apr/13/2019
156	Zotol uul intyerneishni LLC	Jan/25/2016	Jan/25/2019
157	Zuv tugs tuguldur LLC	Aug/11/2014	Aug/11/2017
158	Zunzam LLC	Mar/13/2014	Mar/13/2017
159	Zunhu barilga hugjil construction LLC	Apr/25/2014	Apr/25/2017
160	Zest hulug LLC	Aug/7/2013	Aug/7/2016
161	Zevsegt huchnii 340 dugeer анги	Jun/16/2015	Jun/16/2018
162	Iderjargalant zam LLC	Jun/16/2015	Jun/16/2018
163	Istern road LLC	Sep/19/2014	Sep/19/2017
164	Isonsiem LLC	May/5/2016	May/5/2019
165	Iltset LLC	Oct/14/2013	Oct/14/2016
166	Ilichit haliun LLC	Apr/29/2015	Apr/29/2018
167	Industrial syervis byuro LLC	Jul/21/2015	Jul/21/2018
168	Innoveishnlogik LLC	Aug/11/2014	Aug/11/2017
169	Ireeduin gan zam LLC	May/5/2016	May/5/2019
170	ISN construction LLC	Jul/21/2015	Jul/21/2018
171	Ih borolzoi LLC	Aug/27/2014	Aug/27/2017
172	Ih zam buteen baiguulalt LLC	Jul/4/2014	Jul/4/2017
173	Ih Mongol barilga LLC	Apr/29/2015	Apr/29/2018
174	Ih haadyn tamga LLC	Apr/29/2015	Apr/29/2018
175	Ih harguin zam LLC	Mar/28/2014	Mar/28/2017
176	Ih ezen CHingis grupp LLC	Apr/29/2015	Apr/29/2018
177	Karavan mainz LLC	Jul/21/2015	Jul/21/2018
178	Kvadrovei LLC	Jul/21/2015	Jul/21/2018
179	Kyenalkap LLC	Apr/29/2015	Apr/29/2018
180	KM intyer projyekt LLC	Jul/21/2015	Jul/21/2018
181	Kristalhill kapital LLC	Apr/13/2016	Apr/13/2019
182	KTK LLC	Apr/13/2016	Apr/13/2019
183	Lunasemita LLC	May/9/2014	May/9/2017
184	Lunsht-Eh LLC	Aug/11/2014	Aug/11/2017
185	Luutai zam guur LLC	Apr/12/2016	Apr/12/2019

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
186	Leiton LLC	Jun/27/2013	Jun/27/2016
187	Magistral' zam LLC	Jun/27/2013	Jun/27/2016
188	Madimos Grupp LLC	Apr/17/2014	Apr/17/2017
189	MAZ LLC	Jun/16/2015	Jun/16/2018
190	Makd LLC	Jul/4/2014	Jul/4/2017
191	Maksroad LLC	Apr/13/2016	Apr/13/2019
192	Mandalgoviin zam LLC	Feb/7/2014	Feb/7/2017
193	Mandaltushee guen LLC	Jul/21/2015	Jul/21/2018
194	Mandah bulag LLC	Jul/21/2015	Jul/21/2018
195	Manlaitergelen LLC	Jul/21/2015	Jul/21/2018
196	Margad Mongol LLC	Aug/27/2014	Aug/27/2017
197	Mastyerroad LLC	Jan/25/2016	Jan/25/2019
198	Myega engineering construction end tryeidng LLC	Aug/27/2014	Aug/27/2017
199	Myegatitan LLC	Apr/13/2016	Apr/13/2019
200	Myetalmaklyer LLC	Aug/7/2013	Aug/7/2016
201	Mijid LLC	Jun/27/2013	Jun/27/2016
202	Mogulroad LLC	Apr/29/2015	Apr/29/2018
203	Moze LLC	Oct/14/2014	Oct/14/2017
204	Moko haivei LLC	May/31/2013	May/31/2016
205	Mokohan construction LLC	Jul/21/2015	Jul/21/2018
206	Mon-Agaar LLC	Aug/7/2013	Aug/7/2016
207	Mongan'd LLC	Jun/16/2015	Jun/16/2018
208	Monglob magistral LLC	May/5/2016	May/5/2019
209	Mongol zam grupp LLC	Apr/29/2015	Apr/29/2018
210	Mongol n'yu traak LLC	Mar/28/2014	Mar/28/2017
211	Mongol Sata Intyerneshnl LLC	Feb/24/2014	Feb/24/2017
212	Mongol uls STSYE LLC	Jul/21/2015	Jul/21/2018
213	Mongol els LLC	Jul/21/2015	Jul/21/2018
214	Mongolian reilvei korporeishn LLC	Jun/16/2015	Jun/16/2018
215	Mongoltuurgatny zam LLC	Jul/21/2015	Jul/21/2018
216	Mongolyn Hurdny zam LLC	Jun/27/2013	Jun/27/2016
217	Mongol-Els LLC	Jun/16/2015	Jun/16/2018
218	Mondulaan tryeid LLC	Aug/7/2013	Aug/7/2016
219	Monjalun zam LLC	May/16/2014	May/16/2017
220	Moninjbar LLC	Jun/16/2015	Jun/16/2018
221	Monros-Altai LLC	Feb/24/2014	Feb/24/2017
222	Monroad LLC	May/5/2016	May/5/2019
223	Montrak zam LLC	Jul/21/2015	Jul/21/2018
224	Montryeis tinto LLC	Apr/13/2016	Apr/13/2019
225	Most intyerneshnl LLC	Sep/19/2014	Sep/19/2017
226	Motoblok LLC	Jun/26/2014	Jun/26/2017
227	Motor syervis LLC	Jun/27/2013	Jun/27/2016
228	Mungun delger n'yu aidyeas LLC	Aug/11/2014	Aug/11/2017
229	Mungun Mod LLC	Mar/28/2014	Mar/28/2017
230	Munh urguu LLC	Jul/21/2015	Jul/21/2018
231	Munh tengeriin hargui LLC	Jul/21/2015	Jul/21/2018



<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
232	Munhjim urguu LLC	Mar/28/2014	Mar/28/2017
233	Munhiin zam LLC	Aug/7/2013	Aug/7/2016
234	Munhiin tod hargui LLC	Apr/13/2016	Apr/13/2019
235	Munhtiv LLC	Aug/7/2013	Aug/7/2016
236	Munhtooroit LLC	Oct/21/2013	Oct/21/2016
237	Munhhuh tyanhua LLC	May/9/2014	May/9/2017
238	Mujlan bros LLC	Jun/16/2015	Jun/16/2018
239	Mejik driim lend LLC	Mar/20/2014	Mar/20/2017
240	Mejikdriim LLC	Mar/20/2014	Mar/20/2017
241	Mejistral LLC	Apr/17/2014	Apr/17/2017
242	Meilbridj LLC	Aug/11/2014	Aug/11/2017
243	Mergen tuulah zam LLC	May/9/2014	May/9/2017
244	Nano ekologi LLC	Mar/15/2016	Mar/15/2019
245	Naranbulag han LLC	Apr/13/2016	Apr/13/2019
246	Narny uusgel LLC	Apr/13/2016	Apr/13/2019
247	Nart shuteen nutag LLC	Oct/14/2014	Oct/14/2017
248	Nasny zam LLC	May/31/2013	May/31/2016
249	Nayad LLC	Jun/16/2015	Jun/16/2018
250	Ndesp LLC	Jun/16/2015	Jun/16/2018
251	Nyeman construction LLC	Oct/8/2014	Oct/8/2017
252	Niguulsen zam LLC	Mar/15/2016	Mar/15/2019
253	Niislesl grupp LLC	Apr/13/2016	Apr/13/2019
254	Niitiin uilchilgeenii Ulaanbaatar negtgel	Apr/29/2015	Apr/29/2018
255	NLMH LLC	May/16/2014	May/16/2017
256	Nogoon torgot LLC	Feb/24/2014	Feb/24/2017
257	Norbrue LLC	Jul/21/2015	Jul/21/2018
258	Norov zam LLC	Apr/29/2015	Apr/29/2018
259	Norovtuen LLC	May/5/2016	May/5/2019
260	Nutgiin buyan grupp LLC	Apr/29/2015	Apr/29/2018
261	Nutgiin zam grupp LLC	Aug/27/2014	Aug/27/2017
262	N'yu ulgii road LLC	Oct/14/2014	Oct/14/2017
263	N'yu sit road LLC	Aug/27/2014	Aug/27/2017
264	N'yu sentyuri road LLC	Jul/21/2015	Jul/21/2018
265	N'yukom maining syervis LLC	Apr/13/2016	Apr/13/2019
266	N'yuland road LLC	Mar/20/2014	Mar/20/2017
267	N'yuprocyess LLC	Aug/7/2013	Aug/7/2016
268	Neishnlroad LLC	Apr/13/2016	Apr/13/2019
269	Nemegt orgil LLC	May/5/2016	May/5/2019
270	Ogtorguin buteel LLC	Sep/19/2014	Sep/19/2017
271	ODND LLC	Mar/15/2016	Mar/15/2019
272	Oilroad LLC	Apr/13/2016	Apr/13/2019
273	OMMA road LLC	May/5/2016	May/5/2019
274	Oorcog-Uul LLC	Aug/11/2014	Aug/11/2017
275	Opalrok LLC	May/16/2014	May/16/2017
276	Orgil zam grupp LLC	Jun/26/2014	Jun/26/2017
277	Orgilon delgereh sum LLC	Jun/16/2015	Jun/16/2018
278	Ord talst LLC	Jan/25/2016	Jan/25/2019

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
279	Orhonzam LLC	Jan/25/2016	Jan/25/2019
280	Otgon zam LLC	May/9/2014	May/9/2017
281	Otgon caram drilling LLC	Mar/20/2014	Mar/20/2017
282	OTSD LLC	Oct/14/2014	Oct/14/2017
283	Offissyervis LLC	Apr/29/2015	Apr/29/2018
284	Ochir global trans LLC	May/9/2014	May/9/2017
285	Ochir nyam LLC	May/10/2013	May/10/2016
286	Ochir tuv zam LLC	Apr/29/2015	Apr/29/2018
287	Ochir erdene zam LLC	Aug/7/2013	Aug/7/2016
288	Ochirttenhleg LLC	May/5/2016	May/5/2019
289	Och-naran LLC	Mar/15/2016	Mar/15/2019
290	Oyuutunamal LLC	Mar/13/2014	Mar/13/2017
291	Uvgudiin jim LLC	Jul/21/2015	Jul/21/2018
292	Uvurzalaat LLC	Jun/16/2015	Jun/16/2018
293	Uguudein zam LLC	Aug/7/2013	Aug/7/2016
294	Uguumur zam LLC	Aug/7/2013	Aug/7/2016
295	Ulziihutagiin naran LLC	May/9/2014	May/9/2017
296	Undur ovoo LLC	Mar/15/2016	Mar/15/2019
297	Undursant hairhan LLC	Apr/29/2015	Apr/29/2018
298	Unu zam LLC	Apr/13/2016	Apr/13/2019
299	Unur zam LLC	Apr/13/2016	Apr/13/2019
300	Urgun gov' LLC	May/9/2014	May/9/2017
301	Urnuh camhag LLC	Oct/14/2014	Oct/14/2017
302	Usun urjih zam LLC	Jan/25/2016	Jan/25/2019
303	Usuh ue LLC	Jun/16/2015	Jun/16/2018
304	Usuh-uram LLC	Mar/28/2014	Mar/28/2017
305	Pablikroad LLC	May/31/2013	May/31/2016
306	Powerlojistiks LLC	May/31/2013	May/31/2016
307	Pi Si Ef LLC	Mar/28/2014	Mar/28/2017
308	Pik dyevyelopmyent LLC	Apr/29/2015	Apr/29/2018
309	Piramidproyekt LLC	Jan/25/2016	Jan/25/2019
310	Propyersiti construction LLC	Feb/7/2014	Feb/7/2017
311	Ring road LLC	Apr/12/2016	Apr/12/2019
312	road end robyeks LLC	Aug/11/2014	Aug/11/2017
313	roadtryeid LLC	Apr/12/2016	Apr/12/2019
314	Res LLC	Apr/29/2015	Apr/29/2018
315	Sainsaihan engineering	Jun/16/2015	Jun/16/2018
316	Samon LLC	Mar/20/2014	Mar/20/2017
317	Samoson LLC	Jun/16/2015	Jun/16/2018
318	San od Horshoo	May/31/2013	May/31/2016
319	Sant bayan berh LLC	Mar/13/2014	Mar/13/2017
320	Sapfir LLC	Apr/29/2015	Apr/29/2018
321	Saruul jim LLC	May/10/2013	May/10/2016
322	Saruul camhag LLC	Jul/21/2015	Jul/21/2018
323	Satilaitpovyer LLC	Aug/7/2013	Aug/7/2016
324	SDMM LLC	May/31/2013	May/31/2016
325	Syevyen propyerti LLC	Oct/14/2014	Oct/14/2017

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
326	Si Ar Si Ji Mongolia dyevyelopmyent LLC	Oct/8/2014	Oct/8/2017
327	Si Ji Ji Si Mongolia LLC	Mar/15/2016	Mar/15/2019
328	Si Ef Si grupp LLC	Mar/15/2016	Mar/15/2019
329	Skai-Armada LLC	Jul/21/2015	Jul/21/2018
330	Skaistar LLC	Jun/16/2015	Jun/16/2018
331	Sod cag LLC	Oct/8/2014	Oct/8/2017
332	Sodon buudai LLC	May/5/2016	May/5/2019
333	Solongo camhag LLC	Apr/17/2014	Apr/17/2017
334	Sorgu zam LLC	Apr/13/2016	Apr/13/2019
335	Stiri Stila LLC	Apr/25/2014	Apr/25/2017
336	Suruga mongol LLC	Apr/13/2016	Apr/13/2019
337	SUEDA LLC	May/10/2013	May/10/2016
338	Sumtiin camhag LLC	Mar/28/2014	Mar/28/2017
339	Selenge yesun erdene LLC	Oct/14/2013	Oct/14/2016
340	Seced LLC	May/31/2013	May/31/2016
341	Secen beil LLC	Apr/17/2014	Apr/17/2017
342	Taimtuetaim LLC	Mar/15/2016	Mar/15/2019
343	Taiharyn zam LLC	Aug/27/2014	Aug/27/2017
344	Talisman LLC	Aug/7/2013	Aug/7/2016
345	Tanil sanaa LLC	Jan/25/2016	Jan/25/2019
346	Tankshtyellye LLC	Jul/21/2015	Jul/21/2018
347	Tany zam LLC	May/9/2014	May/9/2017
348	Ti Ai Bi LLC	Jan/17/2014	Jan/17/2017
349	Tiansan construction LLC	Aug/27/2014	Aug/27/2017
350	TM consalting LLC	Aug/7/2013	Aug/7/2016
351	Tom pantyer LLC	Aug/7/2013	Aug/7/2016
352	Top soyol LLC	Jun/16/2015	Jun/16/2018
353	Torgon uils LLC	Jun/16/2015	Jun/16/2018
354	Total inj LLC	May/5/2016	May/5/2019
355	Tugs zam LLC	Apr/17/2014	Apr/17/2017
356	Tugs urjih zam LLC	May/5/2016	May/5/2019
357	Tugs cas LLC	May/9/2014	May/9/2017
358	Tumur guur LLC	Apr/17/2014	Apr/17/2017
359	Trass zam LLC	Oct/8/2014	Oct/8/2017
360	Truei road LLC	Mar/28/2014	Mar/28/2017
361	Tulgajargalant LLC	May/31/2013	May/31/2016
362	Tulgat zam LLC	Jun/16/2015	Jun/16/2018
363	Tuulyн guur dalai LLC	Jun/26/2014	Jun/26/2017
364	Tuurain jim LLC	Mar/20/2014	Mar/20/2017
365	Tuevshin gegee LLC	Feb/24/2014	Feb/24/2017
366	Tum Arvijih LLC	Mar/28/2014	Mar/28/2017
367	Tumdelgereh LLC	Apr/29/2015	Apr/29/2018
368	Tumtiin zam LLC	Feb/7/2014	Feb/7/2017
369	Tumen ulziit zam LLC	Oct/8/2014	Oct/8/2017
370	Tumencogt badrah LLC	Apr/29/2015	Apr/29/2018
371	Tushig bagana LLC	Oct/8/2014	Oct/8/2017
372	Tegsh plant LLC	May/5/2016	May/5/2019

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
373	Telmenroad LLC	Aug/7/2013	Aug/7/2016
374	Temuun holding LLC	Sep/19/2014	Sep/19/2017
375	Tenger uul construction LLC	May/5/2016	May/5/2019
376	Tengeriin shugam LLC	Apr/29/2015	Apr/29/2018
377	Tengeriin erhes grand LLC	Oct/14/2014	Oct/14/2017
378	Tengerleg hiic LLC	Apr/13/2016	Apr/13/2019
379	Terguun zam holding LLC	Jul/21/2015	Jul/21/2018
380	Terguun saruul zam LLC	May/5/2016	May/5/2019
381	Terguun-Invest LLC	Jul/21/2015	Jul/21/2018
382	Terguur LLC	Feb/7/2014	Feb/7/2017
383	Uvt-Invest LLC	May/16/2014	May/16/2017
384	Uliastai shine ehlel horshoo LLC	Mar/28/2014	Mar/28/2017
385	Unaks LLC	Aug/7/2013	Aug/7/2016
386	Undraga-Od LLC	Apr/17/2014	Apr/17/2017
387	Universalroad LLC	Mar/13/2014	Mar/13/2017
388	Urban road LLC	Aug/11/2014	Aug/11/2017
389	Urgamlyn dalai LLC	Aug/7/2013	Aug/7/2016
390	Urgah zam LLC	Jan/25/2016	Jan/25/2019
391	Usan zuiliin gol LLC	May/16/2014	May/16/2017
392	Utaat zalaat LLC	Aug/7/2013	Aug/7/2016
393	Uujim hargui LLC	Aug/27/2014	Aug/27/2017
394	Uul uurhain undesnii olborlogch LLC	Oct/21/2013	Oct/21/2016
395	Uhaa bilguut LLC	Oct/14/2014	Oct/14/2017
396	Uhaalagzam consalting LLC	Apr/29/2015	Apr/29/2018
397	Uildveriin barilga baiguulamj korporaci LLC	May/16/2014	May/16/2017
398	Uils road LLC	Feb/24/2014	Feb/24/2017
399	Ulemjiin zam LLC	Oct/8/2014	Oct/8/2017
400	Undesnii jim LLC	Mar/15/2016	Mar/15/2019
401	Hai vei intyerneshnl grupp LLC	Apr/13/2016	Apr/13/2019
402	Hairhan bar LLC	9/19/2014	9/19/2017
403	Hairhan holding LLC	May/9/2014	May/9/2017
404	HAKMS LLC	Jun/16/2015	Jun/16/2018
405	Halla gonsol LLC	Aug/27/2014	Aug/27/2017
406	Hambyn zam LLC	Apr/29/2015	Apr/29/2018
407	Han ursgal LLC	Oct/8/2014	Oct/8/2017
408	Han huhii zam LLC	Apr/25/2014	Apr/25/2017
409	Hanaroad LLC	Jan/17/2014	Jan/17/2017
410	Hangain zam LLC	Aug/7/2013	Aug/7/2016
411	Hanlig-Ilch LLC	Oct/8/2014	Oct/8/2017
412	Hanmyeng invyest LLC	Apr/17/2014	Apr/17/2017
413	Hansuun zam LLC	May/31/2013	May/31/2016
414	Hanchin orgil LLC	Apr/29/2015	Apr/29/2018
415	Has zam urguu LLC	Jan/25/2016	Jan/25/2019
416	Hiimoriin ih zam LLC	Jun/16/2015	Jun/16/2018
417	Hitruue ekologi LLC	Aug/11/2014	Aug/11/2017
418	Hishig arvin industrial LLC	May/31/2013	May/31/2016

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
419	Holboh zam LLC	Apr/17/2014	Apr/17/2017
420	Homyn tal LLC	Sep/19/2014	Sep/19/2017
421	HONB LLC	Oct/8/2014	Oct/8/2017
422	Horvoo delhii uujim LLC	Sep/19/2014	Sep/19/2017
423	Hosmungun zam LLC	Jun/16/2015	Jun/16/2018
424	Huvchiin zam LLC	May/16/2014	May/16/2017
425	Hugjiin tod zam LLC	Jul/4/2014	Jul/4/2017
426	Hugjiin cogc haraa LLC	Oct/14/2014	Oct/14/2017
427	Huh baigal' LLC	May/9/2014	May/9/2017
428	Huh munh syervis LLC	May/16/2014	May/16/2017
429	Huh shina grupp LLC	May/16/2014	May/16/2017
430	Huhii construction LLC	Nov/15/2013	Nov/15/2016
431	Hushig ulaan LLC	Apr/29/2015	Apr/29/2018
432	Huljiin gol zam LLC	Oct/8/2014	Oct/8/2017
433	Hurdny zam LLC	Apr/13/2016	Apr/13/2019
434	Hurdroad LLC	Jun/16/2015	Jun/16/2018
435	Hushingaryn navch LLC	May/16/2014	May/16/2017
436	Hujiin gal construction LLC	Apr/17/2014	Apr/17/2017
437	Hulgiin deed LLC	Apr/29/2015	Apr/29/2018
438	Huslent buteemj LLC	Aug/27/2014	Aug/27/2017
439	Huchit zam LLC	Mar/20/2014	Mar/20/2017
440	Herem zam LLC	May/5/2016	May/5/2019
441	Hyundai avtos LLC	Oct/14/2014	Oct/14/2017
442	Cagaan zam LLC	Mar/15/2016	Mar/15/2019
443	Cast impyeks LLC	Mar/20/2014	Mar/20/2017
444	Cogt-lh ovoo LLC	Jun/27/2013	Jun/27/2016
445	Tsuurden LLC	Mar/20/2014	Mar/20/2017
446	Cengiin zam LLC	Jul/21/2015	Jul/21/2018
447	Centoin LLC	Jun/16/2015	Jun/16/2018
448	Cenher-urlug LLC	Sep/19/2014	Sep/19/2017
449	Cecgen zam LLC	May/16/2014	May/16/2017
450	Cecuuh tryeid LLC	Aug/27/2014	Aug/27/2017
451	Cecegleltiin ue LLC	Aug/27/2014	Aug/27/2017
452	Chailgan LLC	May/31/2013	May/31/2016
453	Chaina reilvei fyerst grupp mongolia LLC	May/5/2016	May/5/2019
454	Chambai zam LLC	Jun/26/2014	Jun/26/2017
455	Chamin zasal LLC	May/9/2014	May/9/2017
456	Chandman'tal LLC	Mar/13/2014	Mar/13/2017
457	Chin hishig zam LLC	May/16/2014	May/16/2017
458	Chingeltei duurgiin tohijilt ueilchilgee LLC	Mar/15/2016	Mar/15/2019
459	Choidor LLC	May/31/2013	May/31/2016
460	Shagain jim LLC	Mar/20/2014	Mar/20/2017
461	Shal murun hatan gol LLC	Apr/13/2016	Apr/13/2019
462	Shanhain zam LLC	Jun/16/2015	Jun/16/2018
463	Shan'si hugjiin grupp LLC	Jul/21/2015	Jul/21/2018
464	Shargyn zam LLC	Mar/20/2014	Mar/20/2017
465	Shijir zam LLC	Aug/28/2013	Aug/28/2016

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
466	Shimt gazar LLC	Mar/15/2016	Mar/15/2019
467	Shinjian byeishin road end bridj construction LLC	Jul/4/2014	Jul/4/2017
468	Shinjian pyetroleum engineering LLC	Oct/14/2014	Oct/14/2017
469	Shinjian shinfu LLC	May/5/2016	May/5/2019
470	Shinjianlyudivan LLC	Jun/16/2015	Jun/16/2018
471	Shinkueconstruction holdings LLC	Jul/21/2015	Jul/21/2018
472	Shine gerelt zam LLC	Mar/28/2014	Mar/28/2017
473	Shine ilion nen yuan' LLC	Jun/26/2014	Jun/26/2017
474	Shine orgil zam LLC	Jul/21/2015	Jul/21/2018
475	Shine hugjil zam LLC	Apr/29/2015	Apr/29/2018
476	Shine hua lu cho LLC	Aug/27/2014	Aug/27/2017
477	Evttrak LLC	Jul/21/2015	Jul/21/2018
478	Evt-Uul LLC	Jul/21/2015	Jul/21/2018
479	Ei Bi Di I LLC	Jun/16/2015	Jun/16/2018
480	Ei dabl'yu pi LLC	Sep/19/2014	Sep/19/2017
481	Eich Ke Bi intyerneshnl holding LLC	Apr/13/2016	Apr/13/2019
482	Eko togtol LLC	Aug/26/2013	Aug/26/2016
483	Ekskapital road LLC	Apr/29/2015	Apr/29/2018
484	Ekspryess zam LLC	May/10/2013	May/10/2016
485	Ei Ei Bi Ar LLC	Jun/16/2015	Jun/16/2018
486	Elbeg bayan gov' LLC	Aug/27/2014	Aug/27/2017
487	Em Ar Di Es LLC	Jun/16/2015	Jun/16/2018
488	Em En Ai Jei LLC	Apr/29/2015	Apr/29/2018
489	Em En Eich I LLC	Jun/27/2013	Jun/27/2016
490	Em En Es Ji LLC	Aug/27/2014	Aug/27/2017
491	Em Es Bi Vyborg LLC	Feb/24/2014	Feb/24/2017
492	En Bi Ti Ti LLC	Mar/28/2014	Mar/28/2017
493	En Di Si engineering LLC	Jan/25/2016	Jan/25/2019
494	En Di Ti Kei LLC	Oct/14/2014	Oct/14/2017
495	En Di treid LLC	Jul/21/2015	Jul/21/2018
496	En Ti Bi LLC	May/9/2014	May/9/2017
497	En Eich Ei I end Si LLC	Aug/7/2013	Aug/7/2016
498	Enguun ord grupp LLC	Jan/25/2016	Jan/25/2019
499	Enyerji-Impair LLC	Jul/21/2015	Jul/21/2018
500	Enu hurel LLC	Aug/27/2014	Aug/27/2017
501	Enh tugul beh LLC	Jul/21/2015	Jul/21/2018
502	Erdene zam LLC	Mar/15/2016	Mar/15/2019
503	Erdene chandman' uul LLC	Oct/14/2014	Oct/14/2017
504	Erdenesiin bayan humrug LLC	Jun/27/2013	Jun/27/2016
505	Erdenet suvarga LLC	Apr/13/2016	Apr/13/2019
506	Ermuun zam LLC	Apr/17/2014	Apr/17/2017
507	Erhem naran erdene LLC	Jun/26/2014	Jun/26/2017
508	Es I Zet Ei Em LLC	Jul/21/2015	Jul/21/2018
509	Es end Ei tryeid LLC	Jun/16/2015	Jun/16/2018
510	Es end Em intyerneshnl LLC	Aug/7/2013	Aug/7/2016
511	Esde LLC	Jun/16/2015	Jun/16/2018

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
512	ESTO LLC	Mar/15/2016	Mar/15/2019
513	Ef uue Em LLC	Mar/15/2016	Mar/15/2019
514	Eh golomtyn ilch LLC	Jun/16/2015	Jun/16/2018
515	Eh nutgiin zam LLC	Jul/21/2015	Jul/21/2018
516	Eh-Achlal LLC	Aug/7/2013	Aug/7/2016
517	Een LLC	Jul/4/2014	Jul/4/2017

**Table II-7: List of National Companies with Special Licenses for Rehabilitation and Maintenance of Roads**

<b>№</b>	<b>Company name</b>	<b>Date of issue</b>	<b>Validity of License</b>
1	Arkhangai AZZA	Jun/27/2013	Jun/27/2016
2	Baganuur AZZA	Apr/29/2015	Apr/29/2018
3	Bayanchandmani AZZA	Sep/19/2014	Sep/19/2017
4	Bulgan AZZA	May/5/2016	May/5/2019
5	Govi-Altai AZZA	Jan/17/2014	Jan/17/2017
6	Darkhan AZZA	May/5/2016	May/5/2019
7	Dornogovi AZZA	Apr/17/2014	Apr/17/2017
8	Zavkhan AZZA	Mar/28/2014	Mar/28/2017
9	Nalaikh AZZA	Sep/19/2014	Sep/19/2017
10	Orkhon AZZA	Oct/14/2013	Oct/14/2016
11	Uvurkhangai AZZA	Jun/16/2015	Jun/16/2018
12	Selenge AZZA	May/31/2013	May/31/2016
13	Tov AZZA	Feb/7/2014	Feb/7/2017
14	Uvs AZZA	May/16/2014	May/16/2017
15	Erdenesant AZZA	Jun/27/2013	Jun/27/2016
16	Khargui	Oct/21/2013	Oct/21/2016
17	Kharkhorin AZZA	Mar/13/2014	Mar/13/2017
18	Khovd AZZA	Aug/7/2013	Aug/7/2016
19	Khuvsgul AZZA	Mar/28/2014	Mar/28/2017
20	Talyn zam LLC	Aug/7/2013	Aug/7/2016
21	Borgidoin zam LLC	Jun/16/2015	Jun/16/2018
22	Jol LLC	Oct/14/2014	Oct/14/2017
23	Ih bogd zam LLC	Oct/14/2014	Oct/14/2017
24	Saruul hargui LLC	Apr/29/2015	Apr/29/2018
25	Yalguusan Co.ltd	Jun/16/2015	Jun/16/2018
26	Dash zam LLC	Apr/29/2015	Apr/29/2018
27	Huvsgul zam LLC	Apr/13/2016	Apr/13/2019
28	Dornod avto zam HK	Apr/17/2014	Apr/17/2017

## APPENDIX 2

### III. ASSESSMENT OF THE OPERATIONAL AND FINANCIAL EFFICIENCY OF STATE OWNED ROAD MAINTENANCE COMPANIES IN MONGOLIA

#### A. General

83. The assessment of the operational and financial efficiency of state owned road maintenance companies in Mongolia was conducted based on Terms of Reference submitted by the Client and all road maintenance companies in Mongolia who operate maintenance works participated in the survey.

84. A total of 28 companies including 20 state owned companies, and 8 private companies participated in the survey and all relevant data and information were collected either online or at the site.

85. The representatives of companies who operate maintenance work in central, north and eastern regions were selected in consultation with the Client, and the surveys were conducted at the sites of the following road maintenance companies.

- (i) Bayanchandmani AZZA, State owned company
- (ii) Darkhan AZZA, State owned company
- (iii) Selenge AZZA, State owned company
- (iv) Dornogovi AZZA, State owned company
- (v) Khargui, State owned company
- (vi) Taliin zam, State owned company
- (vii) Nalaikh AZZA, State owned company
- (viii) Baganuur AZZA, State owned company
- (ix) Saruul khargui Co.ltd
- (x) Borkhoin zam Co.ltd
- (xi) Dornod avtozam Co.ltd

86. These companies were selected considering their obligations for example, the types, classifications, and capacity of roads they are responsible for. The selection criteria focused on to what kind of obligations they have, for example; Darkhan AZZA, Dornogovi AZZA and Dornogovi AZZA are responsible for the road maintenance of only paved roads, Taliin zam Co.ltd is responsible for the maintenance of about 70% improved earth roads. The Nalaikh AZZA and Bayanchandmani AZZA were newly established. The consultants had met with directors, technicians and workers of represented companies and made the interview and comments between them using the survey questionnaire, and comments or applications by them were recorded. Also, other surveys indicated in TOR were conducted and all survey data, information are incorporated herein.

#### B. The current situation of road maintenance

87. The population of Mongolia is 3.09 million, the territory has an area of 1,564,116 km<sup>2</sup> and the distance from west to east is 2,392 km, the distance between north and south is 1,259 km. the median height above sea level is 1,580m, the maximum is 4,374m, and the minimum is 532m above sea level. It has an extreme continental climate with long, cold winters and short summers, during which most precipitation falls. The climate is down to -50oC in January and up to +40oC in July. Mongolia is the world's 17th largest country and is landlocked.



88. The length of road network in Mongolia is 49,250km and which of 12,646km are international and state roads connecting capital with aimag centers, roads connected between aimag centers and roads connecting with state borders. The length of local road is 36,603.4 km and about 42.7% of state roads are paved and about 10% of local roads are paved. The road maintenance companies have an obligation to be responsible for regular maintenance and willingness of these 12,646km international and state roads.

89. In the meantime, total 28 companies are responsible for the maintenance of international and state roads. Name of companies, length of road maintenance and classifications are shown in Table below.

**Table III-1: Road maintenance companies and length of roads maintained by them**

No.	Contractor companies	Total length of roads which are responsible for (km)	Including (km)		
			Length of paved roads	Length of gravel roads	Length of earth roads
<b>1. State owned companies</b>					
1	Darkhan AZZA	117.00	117.00	0.00	0.00
2	Ovorkhangai AZZA	822.30	338.10	15.00	469.20
3	Arkhangai AZZA	388.05	208.15	13.90	166.00
4	Govi-Altai AZZA	739.65	129.00	91.26	519.39
5	Dornogovi AZZA	328.00	328.00	0.00	0.00
6	Bulgan AZZA	612.40	356.28	60.79	195.33
7	Zavkhan AZZA	1,243.57	33.65	189.97	1,019.95
8	Orkhon AZZA	137.70	137.70	0.00	0.00
9	Selenge AZZA	222.30	113.30	109.00	0.00
10	Nalaikh AZZA	166.20	164.14	2.06	0.00
11	Bayanchandmani AZZA	208.00	208.00	0.00	0.00
12	Khargui	570.00	223.00	209.00	138.00
13	Kharkhorin AZZA	263.00	263.00	0.00	0.00
14	Taliin zam	535.10	162.86	0.00	372.24
15	Uvs AZZA	683.31	319.15	16.44	347.72
16	Khovd AZZA	992.30	532.28	44.36	415.66
17	Tov AZZA	176.21	176.21	0.00	0.00
18	Khuvsgul AZZA	484.30	285.88	15.74	182.68
19	Baganuur AZZA	142.00	142.00	0.00	0.00
20	Erdenesant AZZA	214.00	214.00	0.00	0.00

No.	Contractor companies	Total length of roads which are responsible for (km)	Including (km)		
			Length of paved roads	Length of gravel roads	Length of earth roads
	<b>Subtotal</b>	<b>9,045.39</b>	<b>4,451.70</b>	<b>767.52</b>	<b>3,826.17</b>
<b>2. Private companies</b>					
1	Borkhoin zam Co.ltd	80.00	72.28	0.00	7.72
2	Jol Co.ltd	651.60	134.36	50.25	466.99
3	Ikh Bogd zam Co.ltd	509.30	75.20	46.30	387.80
4	Saruulkhargui Co.ltd	110.00	110.00	0.00	0.00
5	Yalguusan Co.ltd	252.20	252.20	0.00	0.00
6	Dashzam Co.ltd	477.90	233.77	12.54	231.59
7	Khuvsgul Zam Co.ltd	235.53	0.23	50.85	184.45
8	Dornod Avto zam	1,284.75	77.68	291.17	915.90
	<b>Subtotal</b>	<b>3,601.28</b>	<b>955.72</b>	<b>451.11</b>	<b>2,194.45</b>
	<b>TOTAL LENGTH</b>	<b>12,646.67</b>	<b>5,407.42</b>	<b>1,218.63</b>	<b>6,020.62</b>

**Table III-2: The operational ages of international and state paved roads**

No.	Contractor companies	Total length of paved roads (km)	Including (km)		
			0-4 years old	5-13 years old	Above 13 years old
<b>1. State owned companies</b>					
1	Darkhan AZZA	117.00	13.30	0.00	103.70
2	Uvurkhangai AZZA	338.10	126.00	212.10	0.00
3	Arkhangai AZZA	208.15	42.00	166.15	0.00
4	Govi-Altai AZZA	129.00	128.00	0.00	1.00
5	Dornogovi AZZA	328.00	246.10	78.40	3.50
6	Bulgan AZZA	356.28	69.30	258.70	28.28
7	Zavkhan AZZA	33.65	29.50	0.00	4.15
8	Orkhon AZZA	137.70	0.00	29.70	108.00
9	Selenge AZZA	113.30	0.00	0.00	113.30
10	Nalaikh AZZA	164.14	34.14	130.00	0.00
11	Bayanchandmani AZZA	208.00	12.10	144.90	51.00
12	Khargui	223.00	16.00	207.00	0.00

No.	Contractor companies	Total length of paved roads (km)	Including (km)		
			0-4 years old	5-13 years old	Above 13 years old
13	Kharkhorin AZZA	263.00	93.40	169.60	0.00
14	Taliin zam	162.86	161.90	0.00	0.96
15	Uvs AZZA	319.15	190.00	70.80	58.35
16	Khovd AZZA	532.28	419.10	65.00	48.18
17	Tov AZZA	176.21	176.21	0.00	0.00
18	Khuvsgul AZZA	285.88	282.80	0.00	3.08
19	Baganuur AZZA	142.00	18.10	99.14	24.76
20	Erdenesant AZZA	214.00	6.90	207.10	0.00
	<b>Subtotal</b>	<b>4,451.70</b>	<b>2,064.85</b>	<b>1,838.59</b>	<b>548.26</b>
<b>2. Private companies</b>					
1	Borkhoin zam Co.ltd	72.28	66.48	5.80	0.00
2	Jol Co.ltd	134.36	100.00	30.00	4.36
3	Ikh Bogd zam Co.ltd	75.20	22.30	50.00	2.90
4	Saruulkhargui Co.ltd	110.00	40.00	0.00	70.00
5	Yalguusan Co.ltd	252.20	236.20	16.00	0.00
6	Dashzam Co.ltd	233.77	233.77	0.00	0.00
7	Khuvsgul Zam Co.ltd	0.23	0.00	0.00	0.23
8	Dornod Avto zam	77.68	68.40	0.00	9.28
	<b>Subtotal</b>	<b>955.72</b>	<b>767.15</b>	<b>101.80</b>	<b>86.77</b>
	<b>TOTAL LENGTH</b>	<b>5,407.42</b>	<b>2,832.00</b>	<b>1,940.39</b>	<b>635.03</b>

**C. Disbursed fund for road maintenance:**

90. The fund for road maintenance is adopted including in annual state budget and this fund is insufficient for that year's road maintenance. This issue was discussed during the meeting with administrators of companies.

## APPENDIX 3

### IV. REGULATIONS APPLICABLE TO ROAD CONSTRUCTION NEAR BORDERS

(Unofficial Translation)

91. If the road construction work is begun near Mongolian border area, road construction law should be complied with. The applicable Mongolian road construction laws are as follows:

92. Mongolian Border Law /approved by Parliament on 21 October 1993.

- 26.1: The border area width is defined as being no more than 100 km from country's borderline on basis of agreement with General Authority for Border Protection (GABP), head of Local Government.
- 26.2. Following procedures should be complied within Country's border zone;
  - 26.2.4 if citizens, organizations and entrepreneurs which are not settled permanently in border area, run the business and any operation, the official approval should be taken from The Border Protection Organization.
- 27.1: Country border line means area defined by General Authority for Border Protection 15 km inward to country border line in order to control obedience of border regulation, border protection, border engineering for border control point.
- 27.1.3. Following activities are forbidden, to be run by Citizen and Organization in the border area.
  - 2/ Activities related to farming the land, excavating the trench and constructing the facilities shall be disallowed in other background excepting allowed in law.
  - 4/ Any activities which make a loss to Mongolian Interest, operate manufacture and cause blast without preliminary permit from General Authority for Border Protection

93. Procedure for licensing and controlling to operate activity in Border line and zone / Order A/21 of Head of General Authority for Border Protection, 28 August 2009.

- Article 2.1: The GABP gives permission to access in border line and zone according to Chapter 26 and 27 of Mongolian Border Law.
- 2.3a/ Accessing permission as aiming for exploring, mining, operating business and flight(test) shall be taken from Chief Deputy Director of GABP and Head of Border Army.
- Article 2.4: The accessing permission has two types: permanent / 1 year and single entry / 30 days.
- Article 3: Following documents shall be needed to request for getting access permission into border line and zone.
  - Official letter with travel aim, duration and plan;
  - Organization's certificate and a copy;
  - Topographic map /scale 1:100.000/; which shall be included itinerary route, staying place and operating activity area in border line and zone.
  - Copies of ID cards, the name list of working group and leader
  - Vehicle certification's copy;
  - If person who, runs the operation in border zone, is foreign citizen, work permission of General Authority for Labour and Welfare shall be checked;

- 6 Article: Citizen and organization's rights and duties;
  - 6.1. Operation license of citizen, organization and entrepreneur shall be officially registered in the affiliate office of Border Army and Post.
  - 6.2. if permanent operating activity shall be started, a treaty shall be concluded with head office of border army.
  - 6.4. To work for supporting border protection activity and to inform that any activity which breaking the border rule, to GABP in the appropriate time.
  - 6.5. To cooperate with GABP when natural disaster, forest and steppe fire occurs.

94. In conclusion, road construction work shall have been implemented barrier-free if the organization and entrepreneurs shall take proper permission to start the work in the border line and zone, and comply with the border rule. When the some kind of work shall be done, GABP, Local Government and head office of border army shall be always communicated and provided information on implementing work.

## ХИЛИЙН ОЙРОЛЦОО ЗАМ БАРИЛГЫН АЖИЛ ГҮЙЦЭТГЭХТЭЙ ХОЛБООТОЙ АСУУДЛЫН ТУХАЙ ТАНИЛЦУУЛГА

Монгол улсын хилийн ойролцоо авто замын барилга угсралтын ажил явуулахтай холбоотой дараах хууль, журмын зохицуулалт байна. Үүнд:

Нэг. Монгол улсын хилийн тухай хууль /УИХ-аас 1993 оны 10 сарын 21-нд баталсан/

- ✓ 26.1 хэсэг: Хилийн бүсийн өргөнийг хил хамгаалах байгууллага, засаг захиргаа, нутаг дэвсгэрийн нэгжийн Засаг даргатай зөвшилцсөний үндсэн дээр улсын хилийн шугамаас 100 км-ээс илүүгүйгээр тогтооно
- ✓ 26.2.Улсын хилийн бүсэд дараахь журмыг мөрдөнө:
  - 26.2.4 ...хил орчмын нутаг дэвсгэрт оршин суудаггүй иргэн, байрладаггүй байгууллага, аж ахуйн нэгж нь улсын хилийн бүсэд ажил, үйлдвэрлэл явуулах тохиолдолд Улсын хил хамгаалах байгууллагаас зөвшөөрөл авна.
- ✓ 27.1 хэсэг: Улсын хилийн бүсэд хилийн дэглэмийг сахиулах, улсын хил хамгаалалт, шалган нэвтрүүлэх албаны зориулалттай хилийн инженер, техникийн байгууламж барих зорилгоор улсын хилийн шугамаас дотогш 15 км-ээс илүүгүйгээр Улсын хил хамгаалах байгууллагаас тогтоосон нутаг дэвсгэрийн улсын хилийн зурвас гэнэ.
- ✓ 27.1.3. Улсын хилийн зурваст иргэн, байгууллага, аж ахуйн нэгжээс дараахь үйл ажиллагаа явуулахыг хориглоно.
  - 2/хуульд зөвшөөрснөөс бусад үндэслэлээр газар хагалах, суваг шуудуу татах, барилга байгууламж барих;
  - 4/Монгол Улсын эрх ашигт хохирол учруулсан ажил, үйлдвэрлэл явуулах, Улсын хил хамгаалах байгууллагад урьдчилан мэдээлэхгүйгээр тэсэлгээ хийх;

Хоёр. Хилийн бүс, зурваст үйл ажиллагаа явуулах зөвшөөрөл олгох, хяналт тавих журам /Хил хамгаалах ерөнхий газрын даргын 2009 оны 8 сарын 28-ны өдрийн А/21 дүгээр тушаал/

- ✓ 2.1 зүйл: Хил хамгаалах байгууллага нь Монгол Улсын Хилийн тухай хуулийн гуравдугаар бүлгийн 26, 27 дугаар зүйлийг үндэслэн хилийн бүс, зурваст нэвтрэх зөвшөөрлийн асуудлыг шийдвэрлэнэ.
- ✓ 2.3а/Хилийн бүс, зурваст ашигт малтмалын хайгуул, олборлолт, ажил үйлдвэрлэл явуулах, нислэг үйлдэх зэрэг зорилгоор нэвтрэх зөвшөөрлийг Хил хамгаалах ерөнхий газрын тэргүүн дэд дарга бөгөөд Хилийн цэргийн штабын дарга олгоно.
- ✓ 2.4 зүйл: Хилийн бүс, зурваст олгогдох зөвшөөрөл нь байнгын /1 жил хүртэл/, нэг удаагийн /30 хоног хүртэл/ гэсэн хоёр төрөл байна.
- ✓ 3 зүйл: Хилийн бүс, зурваст нэвтрэх зөвшөөрлийг албан байгууллага, аж ахуйн нэгж, дараах материалыг бүрдүүлнэ.
  - Хилийн бүс, зурваст нэвтрэх зорилго, хугацаа, замнал зэргийг тусгасан албан бичиг;
  - Байгууллагын гэрчилгээ болон хуулбар;
  - Хилийн бүс, зурваст үйл ажиллагаа явуулах нутаг дэвсгэр, явах замнал, байрлах газар зэргийг оруулсан байр зүйн зураг /Масштаб 1:100.000/;

- Бүлгийн ахлагч болон ажиллах хүмүүсийн нэрсийн жагсаалт, иргэний үнэмлэхийн хуулбар,
  - Тээврийн хэрэгслийн гэрчилгээний хуулбар;
  - Ажил үйлдвэрлэл эрхлэгч нь гадаадын иргэн бол Монгол Улсын нутаг дэвсгэрт хөдөлмөр эрхлэх Хөдөлмөр, халамжийн үйлчилгээний газрын зөвшөөрөл;
- ✓ 6 зүйл: **Иргэн, аж ахуйн нэгж, байгууллагын хүлээх үүрэг**
- 6.1.Иргэд, байгууллага, аж ахуйн нэгжүүд үйл ажиллагаа явуулах зөвшөөрлөө харъяа хилийн отряд, заставт албан ёсоор бүртгүүлнэ.
  - 6.2.Тухайн хилийн бүс, зурваст байнгын үйл ажиллагаа явуулах тохиолдолд хилийн отрядтой гэрээ байгуулна.
  - 6.4.Ажил үйлдвэрлэл явуулж байгаа байрлалаараа улсын хил хамгаалалтад оролцож, хилийн болон хил орчмын дэглэм зөрчсөн үйлдлийн талаар хил хамгаалах байгууллагад цаг тухайд нь мэдэгдэнэ.
  - 6.5.Байгалийн аюулт үзэгдэл, гамшиг, ой хээрийн түймрийн үед хил хамгаалах байгууллагатай хамтран ажиллана.

Хилийн бүсэд зам барилгын үйл ажиллагаа явуулах аж ахуйн нэгж байгууллага нь дээрх хууль, журмын дагуу зохих зөвшөөрлийг авч, хил орчимд ажиллахдаа тогтоосон горимыг мөрдөж ажиллах тохиолдолд зам барилгын ажил ямар нэг хэлбэрээр саатах, тасалдах асуудал гарахгүй гэж дүгнэж болно.

Харин зам барилгын ажил гүйцэтгэхдээ Монгол улсын хил хамгаалах ерөнхий газар, тухайн хил орчмын орон нутгийн засаг захиргааны нэгж болон хил хамгаалах отрядтай байнгын холбоо, харилцаатай байх шаардлага тавигдах юм.