

資料編

資料1 調査団員氏名

1-1 第1回協力準備調査(2010年1月15日から2月17日)

No.	氏名	担当	所属
1	Mr. Yoshiyuki TAKAHASHI 高橋 嘉行	Leader 総括	Chief Representative, JICA Kenya Office JICA ケニア事務所所長
2	Ms. Sonoko TAKAHASHI 高橋 園子	Project Coordinator 計画管理	Assistant Director, Reproductive Health Division, Health Systems and Reproductive Health Group, Human Development Department, JICA JICA 人間開発部母子保健課調査役
3	Mr. Shoichi TASHIRO 田代 正一	Project Manager / Architectural Planning 業務主任/建築計画	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所
4	Mr. Koichi NAKAMURA 中村 宏一	Architectural Design / Utility Planning 建築設計/設備計画	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所
5	Mr. Sachie OKITA 沖田 幸恵	Construction Planning /Quantity Survey 施工計画/積算	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所
6	Mr. Makoto SUZUKI 鈴木 誠	Equipment Planning /Quantity Survey 機材計画/積算	Nihon Sekkei Medical Core, Inc. 株式会社 日本設計メディカルコア
7	Dr. Keiko KOBAYASHI 小林 恵子	EPI Planning EPI 予防接種拡大計 画	KRI International Corporation 株式会社 コーエイ総合研究所
8	Mr. Sumio IKEDA 池田 澄夫	Utility Planning (voluntary) 設備計画(自主補強)	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所

(注) 池田団員 (No.8) は横河建築設計事務所による自社負担による派遣団員。

1-2 第2回協力準備調査(2010年7月5日から7月9日)

No.	氏名	担当	所属
1	Mr. Masaaki KATO 加藤 正明	Leader 総括	Chief Representative, JICA Kenya Office JICA ケニア事務所所長
2	Ms. Sonoko TAKAHASHI 高橋 園子	Project Coordinator 計画管理	Assistant Director, Health Division 1, Health Group 1, Human Development Department, JICA JICA 人間開発部保健第一課調査役
3	Mr. Shoichi TASHIRO 田代 正一	Project Manager / Architectural Planning 業務主任/建築計画	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所
4	Mr. Sachie OKITA 沖田 幸恵	Construction Planning /Quantity Survey 施工計画/積算	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所

1-3 概略設計説明（2010年12月6日から12月10日）

No.	氏 名	担 当	所 属
1	Mr. Masaaki KATO 加藤 正明	Leader 総括	Chief Representative, JICA Kenya Office JICA ケニア事務所所長
2	Ms. Yasuyo KAWAMURA 川村 康予	Project Coordinator 計画管理	Representative Health JICA Kenya Office JICA ケニア事務所保健医療担当
3	Mr. Shoichi TASHIRO 田代 正一	Project Manager / Architectural Planning 業務主任/建築計画	Yokogawa Architects & Engineers, Inc. 株式会社 横河建築設計事務所
4	Mr. Makoto SUZUKI 鈴木 誠	Equipment Planning / Quantity Survey 機材計画/積算	Nihon Sekkei Medical Core, Inc. 株式会社 日本設計メディカルコア

資料2 調査行程

2-1 第1回協力準備調査(2010年1月15日から2月17日)

日 期	月 日	曜 日	官団員		(a)	(b)	(c)	(d)	(e)	(f)				
			総括	計画管理	業務主任/建築計画	建築設計/設備計画	施工計画/積算	機材計画/積算	EPI予防接種拡大計画	自主精強 (設備計画)				
			高橋 嘉行	高橋 潤子	田代 正一	中村 宏一	沖田 幸恵	鈴木 誠	小林 恵子	池田 澄夫				
			調査日数	12	16	36	36	27	36	29	27			
1	1/14	木	[Shaded Area]	羽田発20:20 (開空、F-八経由)							羽田発20:20 (開空、F-八経由)	羽田発20:20 (開空、F-八経由)	[Shaded Area]	
2	1/15	金		ナイロビ着13:15 JICA事務所表敬・協議、 家族保健局予防接種表敬・協議、スケジュール調整							ナイロビ着13:15 (a)に同行			
3	1/16	土		類似案件調査(医療施設)							(a)に同行	(a)に同行		
4	1/17	日		団内会議・資料整理							羽田発20:20 (開空、F-八経由)	団内会議・資料整理		羽田発20:20 (開空、F-八経由)
5	1/18	月		インセプションレポート説明、スケジュール調整、 自サイト別質問書の回収・確認 ナイロビ着13:15	自然条件調査現地再委託業務調査/協議、 現地コンサルと協議		ナイロビ着13:15 ナイロビ中央保健庫 確認・調査	(a)に同行	家族保健局予防接種、 公衆衛生省での情報収集	ナイロビ着13:15 ナイロビ中央保健庫 確認・調査				
6	1/19	火		A班: ナイロビ発8:00 車(3時間) メル-着11:00 メル-サイト調査	ナイロビ発7:45 飛行機(45分) エルドレット着8:30 エルドレットサイト調査		A班: (a)に同行	B班: (b)に同行	B班: (b)に同行	B班: (b)に同行				
7	1/20	水		メル-サイト調査 メル-発15:00 車(3時間) ナイロビ着18:00	エルドレットサイト調査 エルドレット発12:00 車(2.5時間) カカメガ着15:30 カカメガサイト調査		(a)に同行	(b)に同行	(b)に同行	(b)に同行				
8	1/21	木		ナイロビ発8:00 車(3時間) ナクル着11:00 ナクルサイト調査	カカメガ着7:30 車(1.5時間) キスム着9:00 キスムサイト調査		(a)に同行	(b)に同行	(b)に同行	(b)に同行				
9	1/22	金		ナクルサイト調査 ナクル発15:00 車(3時間) ナイロビ着18:00	カカメガ発7:30 車(1.5時間) キスム着9:00 キスム発18:20 飛行機(50分) ナイロビ着19:05		(a)に同行	(b)に同行	(b)に同行	(b)に同行				
10	1/23	土		羽田発20:40 (開空、Fパイ)	建設事情・積算関連調査 (質問票配布)		設備事情・積算関連調査 (質問票配布)	建設事情・積算関連調査 (質問票配布)	現地代理店調査 (質問票配布)	類似案件調査 (医療施設)	設備事情・積算関連調査 (質問票配布)			
11	1/24	日	ナイロビ着14:55 団内協議	資料整理団、内会議/説明										
12	1/25	月	A班:ナイロビ発8:00 カリッサ着13:00 カリッササイト調査	B班: ナイロビ発8:00 車(3時間) メル-着11:00 メル-サイト調査		A班: ナイロビ発8:00 車(5時間) ガリッサ着13:00 ガリッササイト調査	ナイロビ発8:00 車(3時間) メル-着11:00 メル-サイト調査	A班: (a)に同行	B班: (b)に同行	B班: (b)に同行	B班: (b)に同行			
13	1/26	火	カリッササイト調査 カリッサ発13:00 ナイロビ着	メル-サイト調査 メル-発15:00 車(3時間) ナイロビ着18:00		ガリッササイト調査	メル-サイト調査 メル-発15:00 車(3時間) ナイロビ着18:00	(a)に同行	(b)に同行	(b)に同行	(b)に同行			
14	1/27	水	ナイロビ発8:30 飛行機(60分) モンバサ着9:30 モンバササイト調査	ガリッサ発13:00 車(5時間) ナイロビ着18:00		ガリッササイト調査	ナイロビ発8:30 飛行機(60分) モンバサ着9:30 モンバササイト調査	(a)に同行	(b)に同行	(b)に同行	(b)に同行			
15	1/28	木	モンバササイト調査 モンバサ発18:50 飛行機(60分) ナイロビ着19:50	家族保健局予防接種と協議		モンバササイト調査	モンバサ発18:50 飛行機(60分) ナイロビ着19:50	建設事情・積算関連調査 (質問票配布)	(b)に同行	(b)に同行	(b)に同行			
16	1/29	金	日本大使館表敬、公衆衛生省表敬、家族保健局予防接種表敬・協議 ナイロビ中央保健庫サイト調査			ナイロビ発7:00 車(2.5時間) エニリ着9:30 エニリサイト調査	建設事情・積算関連調査 (質問票配布)	(b)に同行	家族保健局予防接種と EPI関連調査	ナイロビ中央保健庫 サイト調査	(b)に同行			
17	1/30	土	類似案件調査(医療施設)											
18	1/31	日	団内会議・資料整理											
19	2/1	月	家族保健局予防接種とミニッツ協議			建設事情調査	建設事情・積算関連調査 (質問票配布)	(a)に同行	ナイロビ中央保健庫のEPI 関連調査	設備・インフラ関連機関 訪問・調査				
20	2/2	火	ミニッツ協議			建設事情調査	建設事情・積算関連調査 (質問票配布)	(a)に同行	家族保健局予防接種と EPI関連調査	設備・インフラ関連機関 訪問・調査				
21	2/3	水	ミニッツ協議			建設事情調査	建設事情・積算関連調査 (質問票配布)	(a)に同行	家族保健局予防接種と EPI関連調査	設備積算関連調査				
22	2/4	木	ミニッツ最終協議、ミニッツ署名			自然条件調査現地再委託業務調査/協議、 現地コンサルと協議	施工関連調査	(a)に同行	家族保健局予防接種と EPI関連調査	設備積算関連調査				
23	2/5	金	大使館報告			自然条件調査現地再委託業務調査/協議、	施工関連調査	(a)に同行	他ドナーの補助動向調査	設備事情調査				
24	2/6	土	ナイロビ発16:40 (Fパイ、開空経由)	建設事情調査、施工関連調査			現地代理店調査 (質問票配布)	類似案件調査 (医療施設)	設備事情調査					
25	2/7	日	羽田発着19:55	団内会議・資料整理										
26	2/8	月	団内会議・資料整理		ナイロビ発8:00 車(5時間) ガリッサ着13:00 ガリッササイト調査	積算関連調査 (質問票回収)	(b)に同行	(b)に同行	(b)に同行					
27	2/9	火	現地保健事情調査 (ベスライン調査)		ガリッサ発13:00 車(5時間) ナイロビ着18:00	積算関連調査 (質問票回収)	(b)に同行	(b)に同行	(b)に同行					
28	2/10	水	建設事情調査		ナイロビ発7:00 車(3時間) ナクル着10:00 ナクルサイト調査	積算関連調査 (質問票回収)	(b)に同行	EPI関連調査 ナイロビ発14:15 (F-八、開空経由)	(b)に同行					
29	2/11	木	家族保健局予防接種と協議		建設事情調査、施工関連調査	積算関連調査 ナイロビ発14:15 (F-八、開空経由)	現地代理店調査 (質問票配布)	羽田着20:40	積算関連調査 ナイロビ発14:15 (F-八、開空経由)					
30	2/12	金	家族保健局予防接種と協議		建設関連法規調査	羽田着20:40	現地代理店調査 (質問票配布)	[Shaded Area]	羽田着20:40					
31	2/13	土	現地コンサルと協議、建築事情調査							機材調達関連調査				
32	2/14	日	団内会議・資料整理											
33	2/15	月	家族保健局予防接種と協議			建設事情調査、施工関連調査	現地代理店調査 (質問票回収)	[Shaded Area]	[Shaded Area]					
34	2/16	火	家族保健局予防接種と最終協議、テクニカルノート署名、JICA報告							現地代理店調査 (質問票回収)				
35	2/17	水	現地コンサルと協議 ナイロビ発14:15 (F-八、開空経由)		自然条件調査現地再委託業務確認 ナイロビ発14:15 (F-八、開空経由)	現地代理店調査 ナイロビ発14:15 (F-八、開空経由)	[Shaded Area]	[Shaded Area]	[Shaded Area]					
36	2/18	木	羽田着20:40		羽田着20:40	羽田着20:40	[Shaded Area]	[Shaded Area]	[Shaded Area]					

2-2 第2回協力準備調査（2010年7月5日から7月9日）

日順	月日	曜日	官団員		コンサルタント団員	
			総括	計画管理	業務主任/建築計画	施工計画/積算
			JICA ケニア事務所長 加藤 正明	高橋 園子	田代 正一	沖田 幸恵
1	7/4	日	成田発 20:50 (ドー八経由)			
2	7/5	月	ナイロビ着 13:15			
			ナイロビ新計画敷地の調査及びインフラ関連調査 敷地内既存施設調査、自然条件調査準備 地元コミュニティおよび既存施設関係者との協議			
3	7/6	火	AM ナイロビ新計画敷地の調査及びインフラ関連調査 敷地内既存施設調査、自然条件調査 PM 公衆衛生省と協議 JICA事務所表敬・打合せ			
4	7/7	水	公衆衛生省・家族保健局予防接種課と協議(ミニッツ協議)			
5	7/8	木	ミニッツ署名、テクニカルノート署名、JICA事務所報告 積算補足調査、自然条件調査協議、契約締結			
6	7/9	金	ナイロビ発 14:15 (ドー八経由)			
7	7/10	土	成田着 19:30			

2-3 概略設計説明調査（2010年12月6日から12月10日）

日順	月日	曜日	官団員		コンサルタント団員	
			総括	計画管理	業務主任/建築計画	機材計画/積算
			JICA ケニア事務所長 加藤 正明	川村 康予	田代 正一	鈴木 誠
1	12/5	日	成田発 20:50 (ドー八経由)			
2	12/6	月	ナイロビ着 12:30			
			JICA事務所表敬・打合せ 16:00			
3	12/7	火	公衆衛生省・家族保健局予防接種課と協議 補足調査			
4	12/8	水	公衆衛生省・家族保健局予防接種課と協議 (ミニッツ協議、ミニッツ案作成) 補足調査			
5	12/9	木	公衆衛生省・家族保健局予防接種課と協議 ミニッツ署名 15:00			
6	12/10	金	ナイロビ発 14:15 (ドー八経由)			
7	12/11	土	成田着 19:05			

資料3 関係者（面会者）リスト

氏名	所属・職務
公衆衛生省 Ministry of Public Health & Sanitation	
• Mr. Mark K. Bor, CBS	Permanent Secretary(次官)
• Mr. Nimrod K. Waweru	Deputy Secretary(次官補)
• Mr. J.M. Gitonga	Senior Public Health Officer(上級管理官)
• Mr. N.N.Njagi	Deputy Principal Accountant Controller(副經理管理官)
家族保健局 Department of Family Health	
• Dr. Josephine Kibaru	Head - Department of Family Health, M.Med. DDMS(家族保健局長)
予防接種課 Division of Vaccines & Immunization (DVI)	
• Dr. Tatu Kamau	Head of DVI (部門長)
• Dr. Dominic Mutie	Quality Assurance and Commodity Security (品質保証・商品管理)
• Dr. Ali Arale	National Logistician(物流総合管理)
• Mr. Ernest Some	Cold Chain Medical Engineer (コールドチェーン医療技師)
• Ms. Carol Ng'ang'a	Health Administrative Officer(保健管理官)
リフトバレー州公衆衛生局 Provincial Public Health & Sanitation-Eldoret	
• Dr. Waqo D. E. Jersa	Director (局長)
• Mr. Benadette Musavakwa	EPI Logistician (ワクチン物流)
• Ms. Wendy J. Tirop	Logistician Nurse (物流担当)
• Mr. Stephen Gathu	DVI Senior Nurse (DVI 上級看護師 KEMSA 倉庫常勤)
• Mr. Anthony T. Murachin	Medical Engineer & Technician (医療技師)
• Dr. Kariuki	District Medical Officer of Health (地域保健医務官)
• Dr. Murima	Medical Superintendent (州病院医療監督官)
• Ms. Mary Nyabuti	Senior Nurse (州病院上級看護師)
• Mr. George W. Wanambisi	DVI Nurse (DVI 看護師 KEMSA 倉庫常勤)
• Ms. Dorothy Mwangangi	Storekeeper (倉庫管理)
• Ms. Ahaka Consolata	DVI Nurse-West (DVI 看護師西地区)
• Ms. Rose Kale	DVI Nurse-East (DVI 看護師東地区)
• Dr. Lubamar M. B.	Medical Officer of Health-West (保健医務官 西地区)
エルドレット地方保管庫 Eldoret KEMSA Depot	
• Mr. Abraham K. Komen	Regional Liaison Officer (倉庫所長)
ケニア電力エルドレット支局 KPLC-Eldoret	
• Mr. Chrispine Obilo	Linesman (送電審査課)
• Mr. Matthews Okello	Linesman (送電審査課)
公共事業省エルドレット支局 Ministry of Public Works-Eldoret	
• Mr. Simeon P.T. Nyakundi	Mechanical Officer (機械技師長)
• Mr. Sammy K.Sowek	Electrical Engineer (電気技師)
ナクル地方保管庫 Nakuru KEMSA Depot	
• Mr. Joseph Odhiambo	Store Keeper (倉庫所長)
• Mr. Ann N. Muthoga	Storer (倉庫職員)

ウェスタン州公衆衛生局 Provincial Public Health & Sanitation-Kakamega

- Dr. Ahiwaukha Q.B. Director (局長)
- Ms. Assumpta Matekwa Nurse Officer (看護師長)
- Mr. Hudson Malongo Vaccine (ワクチン担当)
- Mr. Anyango Philip Amoko Medical Engineer (医療技師)

カカメガ地方保管庫 Kakamega KEMSA Depot

- Mr. Geoffry Semere Warehouse Officer (倉庫所長)

公共事業省カカメガ支局 Ministry of Public Works-Kakamega

- Arch. Ernest K. Murey District works Officer (建築指導地区局長)

ニャンザ州公衆衛生局 Provincial Public Health & Sanitation-Kisumu

- Dr. Peter O. Okoth Provincial Disease Prevent Control Officer (疾病取締官)
- Ms. Monica Ominchi Administration Officer (管理官)
- Ms. Clementine Gwoswar Nurse (看護師)
- Mr. Jared Miyombe Medical Engineer (医療技師)
- Mr. John W. Oaera Logistician (物流担当)

キスム地方保管庫 Kisumu KEMSA Depot

- Mr. Raphael Okun Warehouse (Nursing) Officer (倉庫所長)

イースタン州公衆衛生局 Provincial Public Health & Sanitation-Embu

- Dr. Shi Kanga Provincial Disease Prevent Control Officer (疾病取締官)

メルー地域公衆衛生局 District Public Health & Sanitation-Meru

- Dr. James Gitonga Medical Officer of Health (保健医務官)
- Dr. Joe Kanja Medical Officer of Health: Pharmacist (保健薬事官)
- Mr. Leonard Miriti Health Administrative Officer (保健管理官)
- Ms. Hallan M. Nguku Public Health Nurse (公衆衛生看護師)
- Mr. Jackson K. Mboroki Public Health Officer (公衆衛生官)
- Mr. Robert Kinoti DHRIO Health Officer (保健官)
- Mr. Erastus Muriuki Hospital Bio-Medical Depot Engineer (病院生物医療工学者)

コースト州公衆衛生局 Provincial Public Health & Sanitation-Mombasa

- Dr. Anisa Omar Director (局長)
- Mr. Joseph M. Kimwele Health Officer DPT (ワクチン担当)
- Ms. Esha Yahya Clinical Office (臨床官)
- Mr. Christopher Ziroh Medical Engineer (医療技師)
- Dr. Mohamed Hanif Pharmacist (薬事官)

モンバサ地方保管庫 Mombasa KEMSA Depot

- Mr. Katana Saroh Store Keeper (倉庫所長)
- Mr. Moses Okal Store Clerk (倉庫職員)

セントラル州公衆衛生局 Provincial Public Health & Sanitation-Nyeri

- Dr. Onesmus Maina Director (局長)
- Ms. Florence N. Kungania EPI Logistician (ワクチン物流)
- Mr. B-K. Ialofi Logistician (物流担当)
- Mr. Charles N. Chivri Logistician (物流担当)

ニエリ地方保管庫 Nyeri KEMSA Depot

- Mr. Paul Macharia Wise Officer (倉庫所長)
- Mr. Jack Ndambiri Hospital Bio-Medical Depot Engineer (病院生物医療工学者)

ノース・イースタン州公衆衛生局 Provincial Public Health & Sanitation-Garissa

- Dr. Osman Warfa Director (局長)
- Dr. Njoroge Joseph Medical Superintendent (医療監督官)
- Mr. Stephen Ngari Provincial Physical Planner (施設計画者)
- Mr. John Njuguna Meteorological Superintendent (気象監督官)

ガリッサ医療事務所 Garissa Medical Office

- Dr. Hussein Osman District Medical officer of Health (地域保健医務官)

公共事業省 Ministry of Public Works

- Arch. C.J.M. Maweu Senior Principal Superintending Architect (上級建築監督最高責任者)
- Arch. J.K. Kafuna Chief Superintending Architect (建築監督部長)

ケニア統計局 Kenya National Bureau of Statistics

- Mr. Abdul Kadir A.Awes Senior Manager Population & Social Statistics (人口社会統計官)
- Mr. Christopher N. Omollo Senior Manager Population & Social Statistics (人口社会統計官)

在ケニア日本国大使館 Japanese Embassy in Kenya

- 岩谷滋雄 (Shigeo Iwatani) Ambassador (特命全権大使)
- 鈴木武彦 (Takehiko Suzuki) First Secretary (一等書記官)
- 横谷 薫 (Kaoru Yokotani) 調査/経済協力班

JICA ケニア事務所 JICA Kenya Office

- 高橋嘉行 (Yoshiyuki Takahashi) Chief Representative (所長) (第1回現地調査時)
- 加藤正明 (Masaaki Kato) Chief Representative (所長) (第2回現地調査時)
- 河添恭輔 (Kyosuke Kawazoe) Deputy Chief Representative (次長)
- 公文和子 (Kazuko Kumon) 企画調査員 (保健医療)
- 讃井一将 (Kazumsa Sanui) Programme Officer (保健医療担当所員)
- Elijah Kinyangi Programme Officer (保健医療担当所員)
- 川村康予 (Yasuyo Kawamura) Representative (Health) (保健医療担当所員)

MINUTES OF DISCUSSIONS
ON PREPARATORY SURVEY
ON THE PROJECT FOR THE REINFORCEMENT OF VACCINE STORAGE
IN THE REPUBLIC OF KENYA

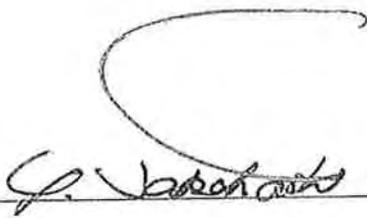
In response to a request from the Government of the Republic of Kenya (hereinafter referred to as "Kenya"), the Government of Japan decided to conduct a Preparatory Survey on the Project for the Reinforcement of Vaccine Storage in Kenya (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kenya a Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Yoshiyuki Takahashi, Chief Representative, JICA Kenya Office, and is scheduled to stay in the country from 15th January to 17th February, 2010.

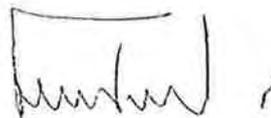
The Team held discussions with the officials concerned from the Government of Kenya and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Nairobi, 4th February, 2010



Mr. Yoshiyuki Takahashi
Chief Representative
JICA Kenya Office
Leader
Preparatory Survey Team
Japan International Cooperation Agency



Mr. Mark K. Bor, CBS
Permanent Secretary
Ministry of Public Health and Sanitation
The Republic of Kenya

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve immunization coverage in the Republic of Kenya through the reinforcement of efficient distribution and storage of vaccines by constructing necessary facilities and supplying and installing necessary equipment in the Nairobi National Vaccine Depot and eight (8) Regional Vaccine Depots.

2. Project sites

The sites of the Project are as follows:

- 2-1. Nairobi National Vaccine Depot: The site of the Project is located on Off Mombasa Road, Embakasi, Nairobi as shown in Annex-1-1.
- 2-2. Nyeri Regional Vaccine Depot: The site of the Project is Kenya Medical Supplies Agency (hereinafter referred to as "KEMSA") Nyeri, located on Hospital Road, Nyeri, Central Province.
- 2-3. Nakuru Regional Vaccine Depot: The site of the Project is KEMSA Nakuru, located on Nakuru-Kabarak Road, Nakuru, Rift Valley Province.
- 2-4. Eldoret Regional Vaccine Depot: The site of the Project is KEMSA Eldoret, located on Oloo Street, Eldoret, Rift Valley Province.
- 2-5. Kisumu Regional Vaccine Depot: The site of the Project is KEMSA Kisumu, located on Busia Road, Kisumu, Nyanza Province.
- 2-6. Mombasa Regional Vaccine Depot: The site of the Project is KEMSA Mombasa, located on Nairobi Highway at Changamwe, Mombasa, Coast Province.
- 2-7. Meru Regional Vaccine Depot: The site of the Project is located in the east of the compound of the Meru District Hospital on Mortuary Road, Meru, Eastern Province as shown in Annex-1-2.
- 2-8. Kakamega Regional Vaccine Depot: The site of the Project is located in the south of the compound of the Kakamega Provincial General Hospital on Fitina Road, Kakamega, Western Province as shown in Annex-1-3.
- 2-9. Garissa Regional Vaccine Depot: The site of the Project is located in the north of the compound of the District Office of Ministry of Public Health and Sanitation on Sankuri Road, Garissa, North Eastern Province as shown in Annex-1-4.

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3. Responsible and Implementing Agency

The Responsible Agency and the Implementing Agency is the Ministry of Public Health and Sanitation.

Organization chart of the above Agency and the ultimate user unit, Division of Vaccines and Immunization (hereinafter referred to as "DVI"), Department of Family Health, Ministry of Public Health and Sanitation, are shown in Annex-2-1 and Annex-2-2.

4. Items requested by the Government of Kenya

After discussions with the Team, the items described in Annex-3 (facilities) and Annex-4 (equipment) were finally requested by the Kenyan side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1. The Kenyan side understands the Japan's Grant Aid Scheme explained by the Team, as described in Annex-5.

5-2. The Kenyan side will take the necessary measures, as described in Annex-6 and Annex-7, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6. Schedule of the Study

6-1. The consultants will proceed to further studies in Kenya until 17th February, 2010.

6-2. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in May, 2010.

6-3. In case that the contents of the report is accepted in principle by the Government of Kenya, JICA will complete the final report and send it to the Government of Kenya by August, 2010.

7. Other relevant issues

7-1. The Kenyan side agreed to allocate budget and secure necessary measures to procure necessary vaccines with its own budget.

7-2. The Kenyan side agreed to allocate budget (operational and maintenance costs) and manpower (health service providers, cold chain technicians and any other personnel) necessary for the proper and sustainable operation and maintenance of the facilities and the equipment to be provided under the Project.

The Team requested that the Kenyan side should secure budget to implement the undertakings by the Kenyan side which should be completed before the beginning of civil works of the Project under the fiscal year (FY) 2010 budget (from July 2010 to June 2011). The Kenyan side agreed to it.

7-3. The Kenyan side agreed to coordinate with other related agencies of the Government of Kenya, including KEMSA, regarding the issues handled by such agencies.

7-4. Cold room and freezers installed between 2006 and 2009 in Kakamega by the Kenyan side in the provisional facility will be transferred to the new warehouse of Kakamega Regional Vaccine Depot by the Kenyan side. The Kenyan side agreed to allocate sufficient budget for such transfer.

7-5. Cold room for Meru Regional Vaccine Depot and cold room for Garissa Regional Vaccine Depot being procured by the Kenyan side and scheduled to be delivered by June 2010 will be transferred to the new warehouses by the Kenyan side. The Kenyan side agreed to allocate sufficient budget for such transfers.

7-6. Both sides agreed to the following architectural designing criteria of facility:

- (1) Quantity of vaccines, related materials and equipment
- (2) The number of staff
- (3) Function of the facilities

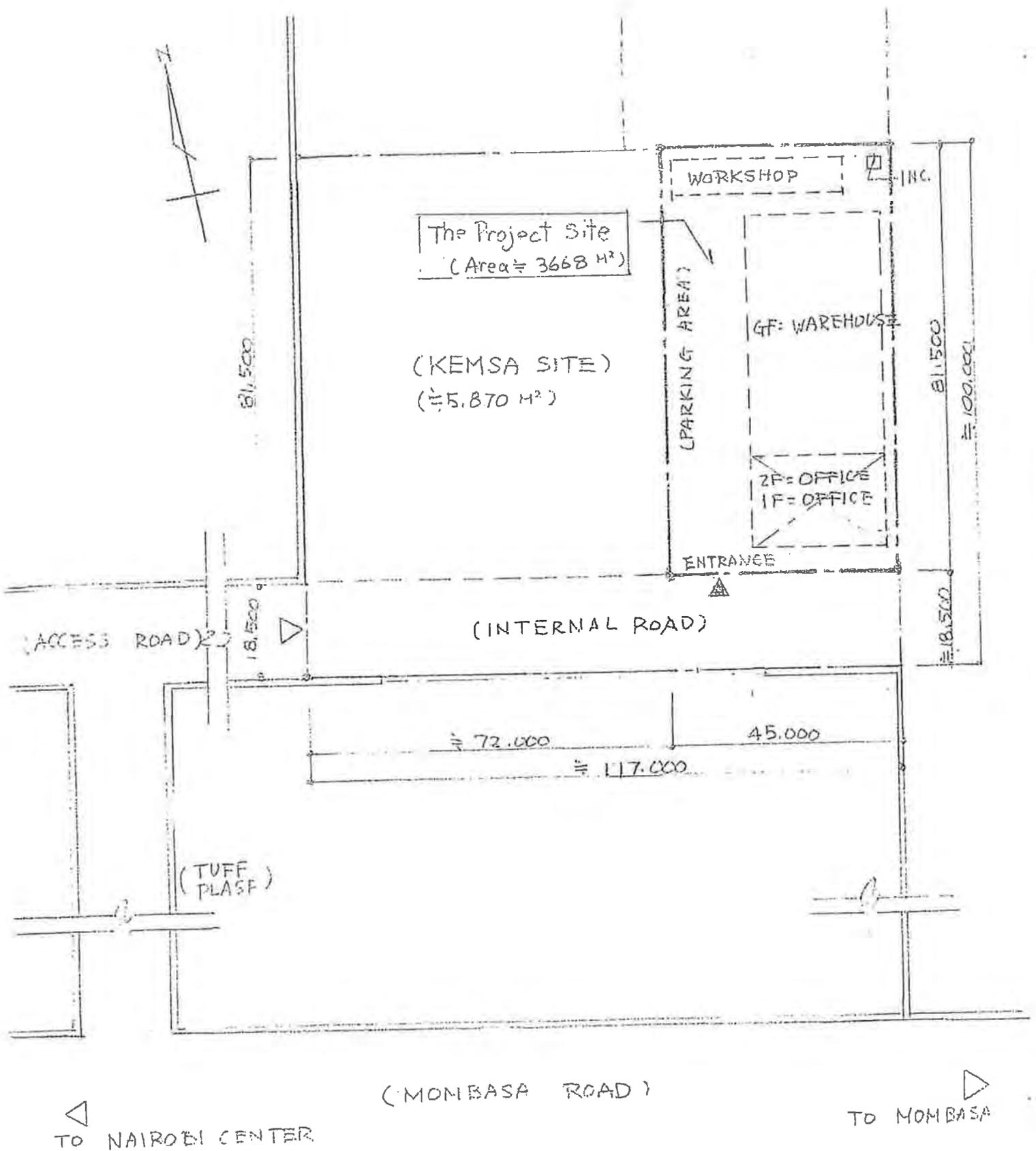
7-7. Both sides agreed to the following selection criteria of equipment:

- (1) Calculation of number of cold room(s), freezer room(s) and freezers based on volumes of vaccines that would be necessary ten (10) years from now. The Kenyan side will purchase additional equipment in the future, as and when necessary.
- (2) Available technical staff to operate and maintain the equipment
- (3) Technical and financial feasibility of operation and maintenance of equipment including procurement of spare parts and consumables

- Annex-1-1 Location Map for Nairobi
- Annex-1-2 Location Map for Meru
- Annex-1-3 Location Map for Kakamega
- Annex-1-4 Location Map for Garissa
- Annex-2-1 Organization Chart of the Ministry of Public Health and Sanitation
- Annex-2-2 DVI Organogram
- Annex-3 Facility List
- Annex-4 Equipment List
- Annex-5 Japan's Grant Aid
- Annex-6 Major Undertakings to be Taken by Each Government
- Annex-7 Major Undertakings to be Taken by the Kenyan Side in Each Site
- Annex-8 Undertakings by the Ministry of Public Health and Sanitation

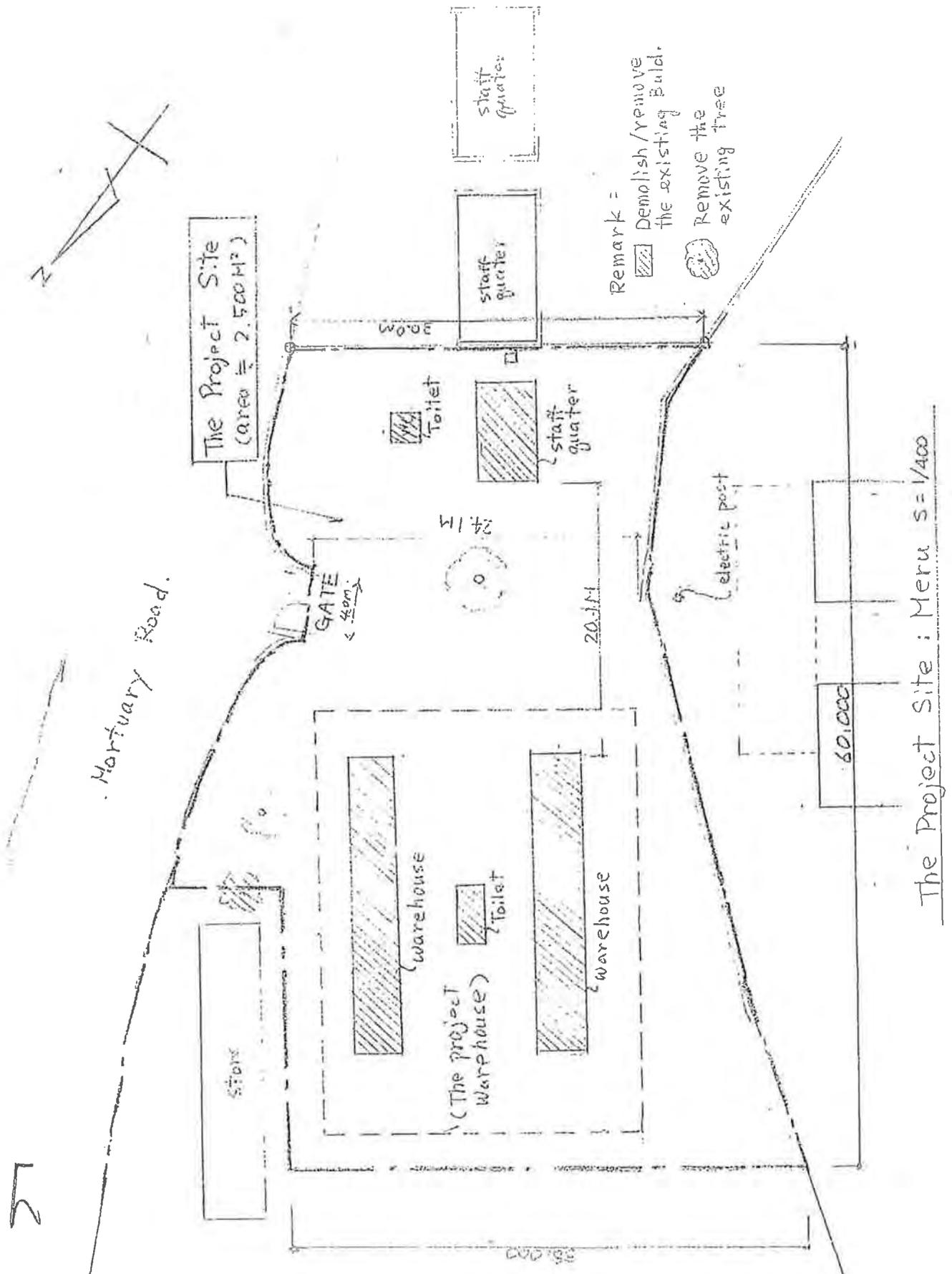
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Location Map for Nairobi



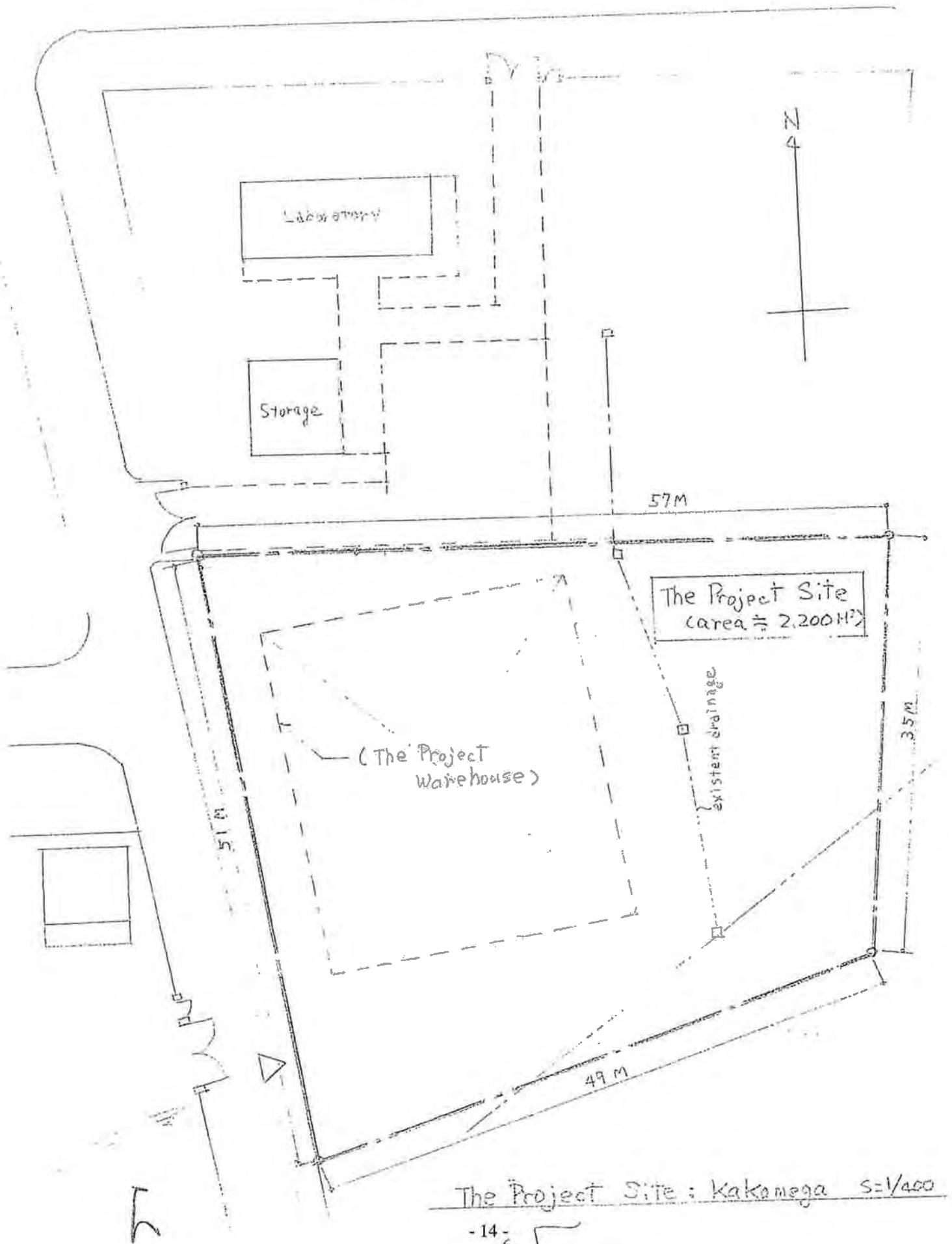
The Project Site : Nairobi s = 1/1000

Location Map for Meru



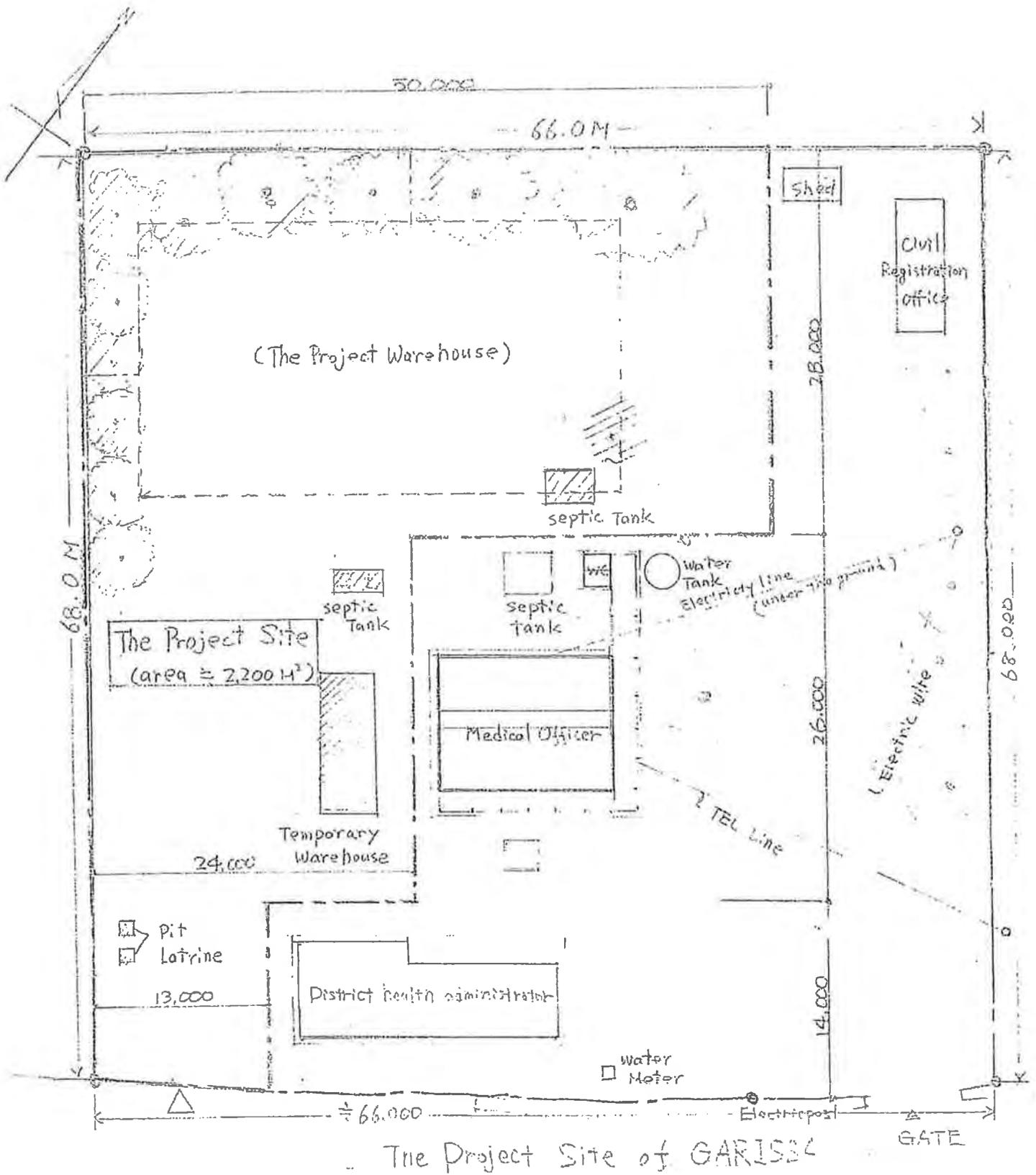
The Project Site : Meru s = 1/400

Location Map for Kakamega



The Project Site : Kakamega S=1/400

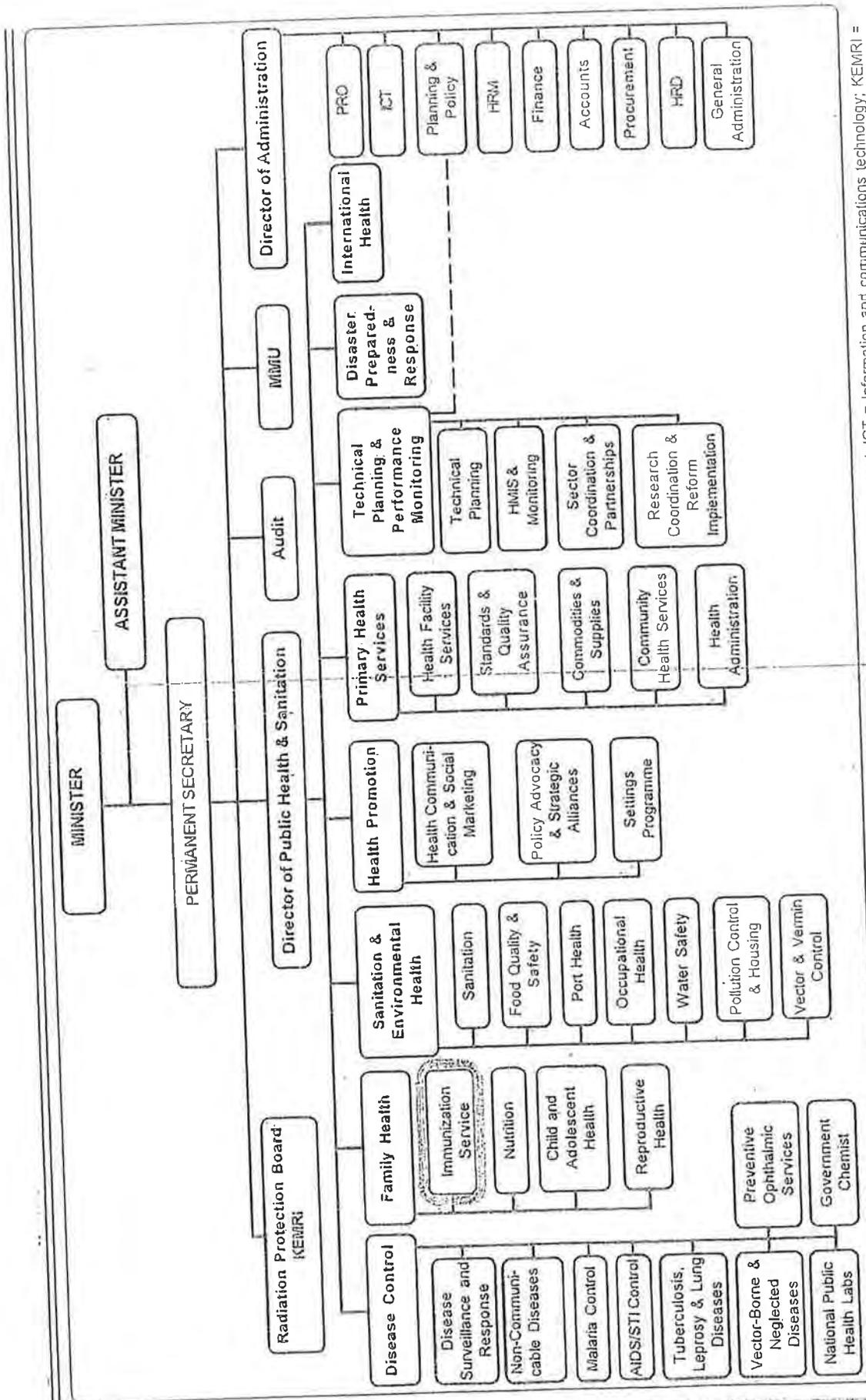
Location Map for Garissa



Remarks:  = Demolish/remove the existing Building
 = Remove the existing tree

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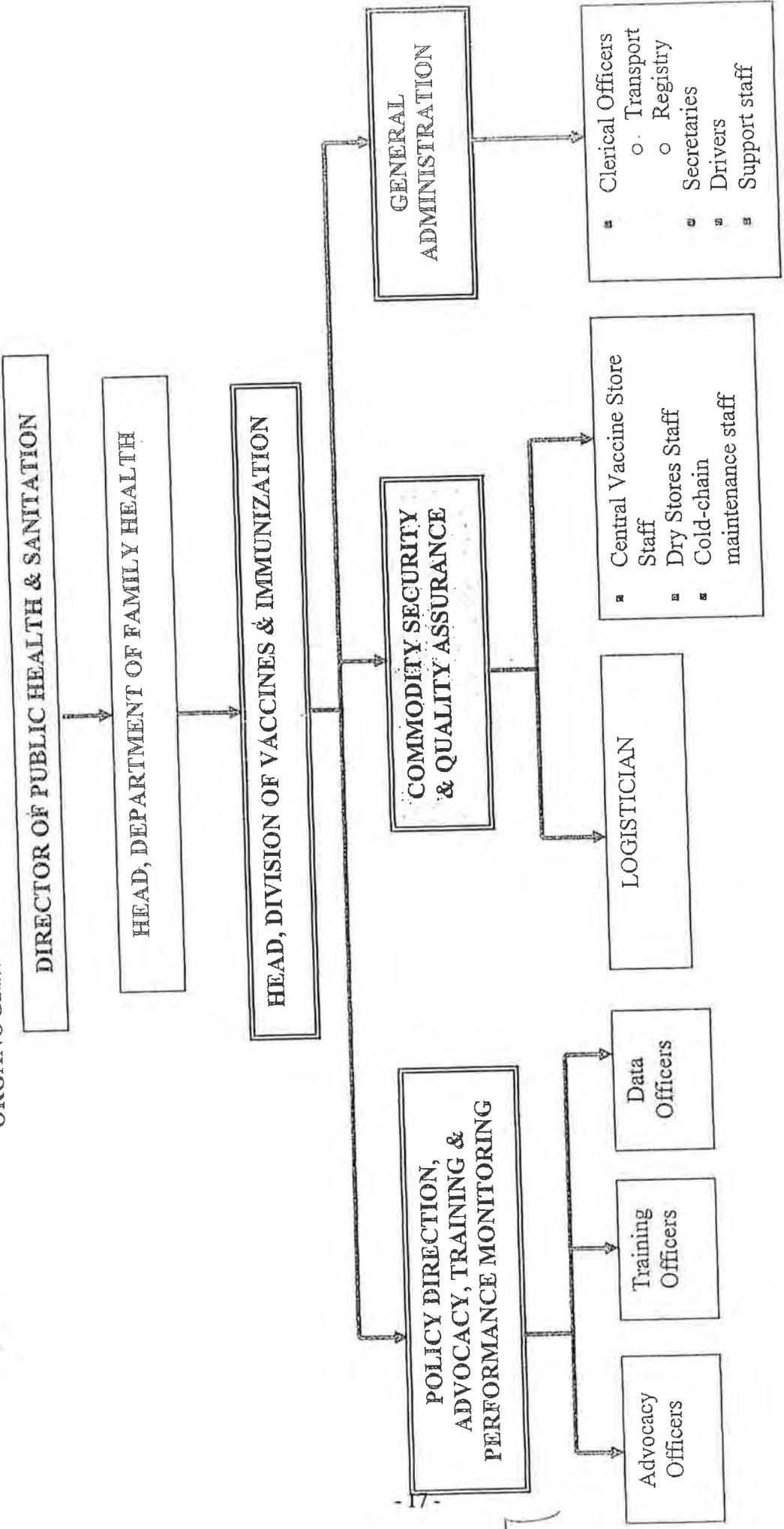
Organization Chart of the Ministry of Public Health and Sanitation



Key: HMIS = Health management information system; HRD = Human resources development; HRM = Human resources management; ICT = Information and communications technology; KEMRI = Kenya Medical Research Institute; MIMU = Ministerial Management Unit; PRO = Public Relations Office

DVI's Organogram

MINISTRY OF PUBLIC HEALTH & SANITATION
ORGANOGRAM OF THE DIVISION OF VACCINES & IMMUNIZATION



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Facility List

Item No.	Name of Facility
(1) Nairobi National Vaccine Depot	
1	Coordination offices for the Division of Vaccines and Immunization
2	Warehouse for the Nairobi National Vaccine Depot
3	Workshop
4	Incinerator
5	Generator
(2) Meru Regional Vaccine Depot	
1	Warehouse for the Regional Vaccine Depot
2	Generator
(3) Kakamega Regional Vaccine Depot	
1	Warehouse for the Regional Vaccine Depot
(4) Garissa Regional Vaccine Depot	
1	Warehouse for the Regional Vaccine Depot
2	Generator

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Equipment List

Item No.	Name of Equipment	Priority
(1) Nairobi National Vaccine Depot		
1	Cold room	A
2	Freezer room	A
3	Computerized fridge temperature monitoring system	B
4	Freezer	B
5	Forklift	A
6	Manual pallet lifter	A
7	Refrigeration equipment maintenance kit	B
(2) Nyeri Regional Vaccine Depot		
1	Freezer	A
2	Manual pallet lifter	B
3	Refrigeration equipment maintenance kit	B
(3) Nakuru Regional Vaccine Depot		
1	Cold room	A
2	Freezer	A
3	Manual pallet lifter	B
4	Refrigeration equipment maintenance kit	B
(4) Eldoret Regional Vaccine Depot		
1	Cold room	A
2	Freezer	A
3	Manual pallet lifter	B
4	Refrigeration equipment maintenance kit	B
(5) Kisumu Regional Vaccine Depot		
1	Freezer	A
2	Manual pallet lifter	B
3	Refrigeration equipment maintenance kit	B
(6) Mombasa Regional Vaccine Depot		
1	Cold room	A
2	Freezer	A
3	Manual pallet lifter	B
4	Refrigeration equipment maintenance kit	B
(7) Meru Regional Vaccine Depot		
1	Freezer	A
2	Manual pallet lifter	A
3	Refrigeration equipment maintenance kit	B
(8) Kakamega Regional Vaccine Depot		
1	Manual pallet lifter	A
2	Refrigeration equipment maintenance kit	B
(9) Garissa Regional Vaccine Depot		
1	Freezer	B
2	Manual pallet lifter	A
3	Refrigeration equipment maintenance kit	B

Remarks: A – It is necessary

B – It is necessary but further study is required

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JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures :

- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid

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Scheme from a technical, financial, social and economic point of view.

- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of a outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will

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be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as Annex.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant Aid, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant Aid.

(7) "Export and Re-export"

The products purchased under the Grant Aid should not be exported or re-exported from the recipient country.

(8) Banking Arrangements (B/A)

- a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to JICA under

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an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

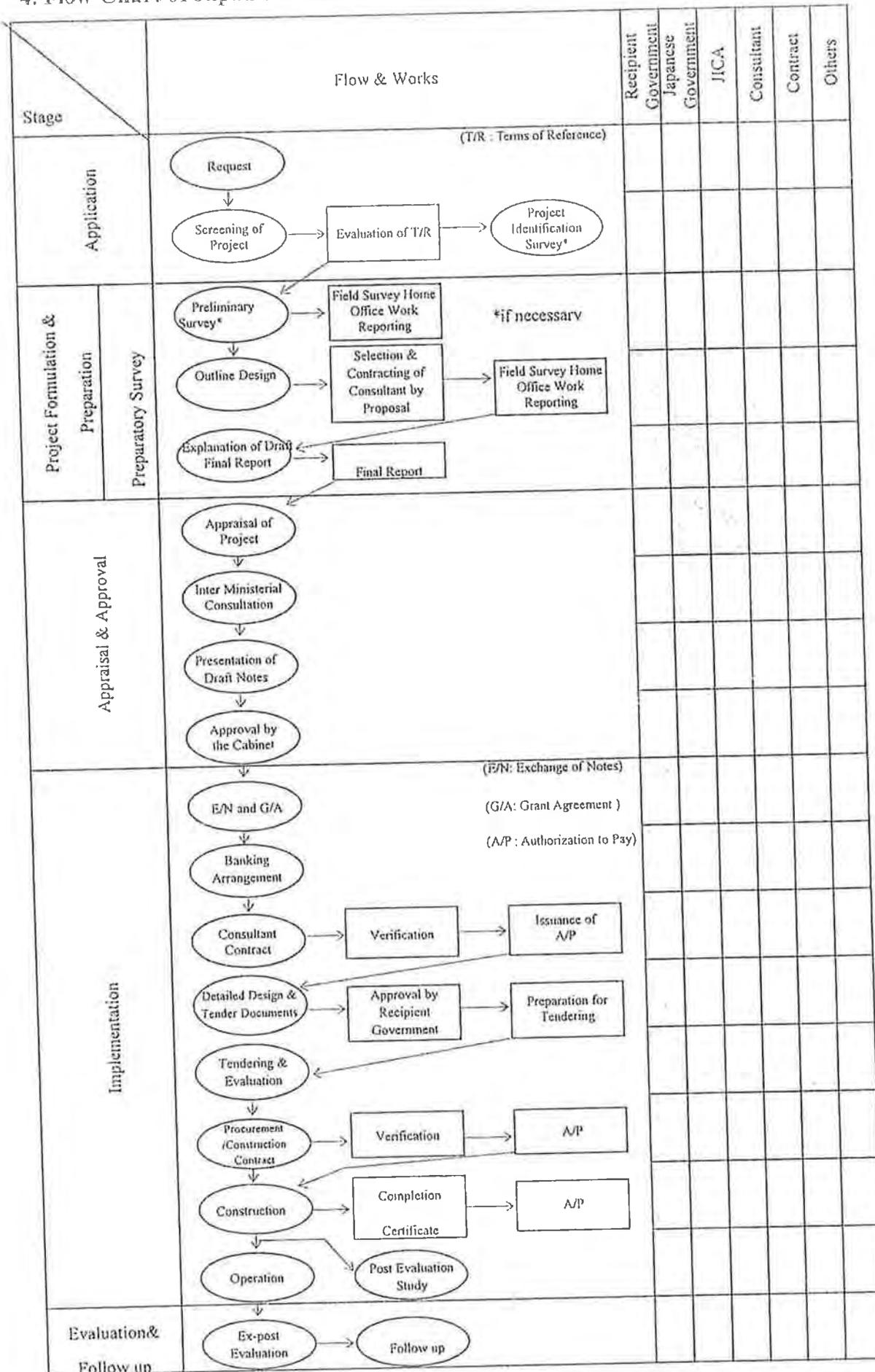
The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.



4. Flow Chart of Japan's Grant Aid Procedures



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Major Undertakings to be Taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure adequate land necessary for the implementation of the Project and to clear the sites		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the sites		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
4	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the Products at the port of disembarkation		●

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No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
	3) Internal transportation from the port of disembarkation to the project site	●	
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted		●
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that the Facilities and the products be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		●
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

(B/A: Banking Arrangement, A/P: Authorization to pay)

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Major Undertakings to be Taken by Kenya Side in Each Site

1) Nairobi National Vaccine Depot

No.	Items
1	To secure land
2	To construct gates and fences in and around the site
3	To provide electricity line to the site
4	To provide water supply to the site
5	To provide drainage pipe to the site
6	To provide telephone line to the site
7	To provide construction work area

2) Nyeri Regional Vaccine Depot

No.	Items
1	To secure the space for cold room
2	To provide electricity, including electricity from the existing generator, for freezers

3) Nakuru Regional Vaccine Depot

No.	Items
1	To secure the space for cold room and freezers
2	To provide electricity, including electricity from the existing generator, for cold room and freezers
3	To provide drainage for cold room

4) Eldoret Regional Vaccine Depot

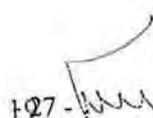
No.	Items
1	To secure the space for cold room and freezers
2	To provide electricity, including electricity from the existing generator, for cold room and freezers
3	To provide drainage for cold room

5) Kisumu Regional Vaccine Depot

No.	Items
1	To secure the space for cold room
2	To provide electricity, including electricity from the existing generator, for freezers

6) Mombasa Regional Vaccine Depot

No.	Items
1	To secure the space for cold room and freezers
2	To provide electricity, including electricity from the existing generator, to the site
3	To provide drainage for cold room

7) Meru Regional Vaccine Depot

No.	Items
1	To demolish/remove the existing buildings (2 warehouses, 1 staff quarter and 2 toilets)
2	To remove the existing trees
3	To level the site
4	To level the road in front of the gate
5	To move/transfer the existing cold room and freezers
6	To provide electricity to the site
7	To provide water supply to the site
8	To provide drainage pipe to the site
9	To provide telephone line to the site
10	To provide construction work area

8) Kakamega Regional Vaccine Depot

No.	Items
1	To level the site
2	To level the road in front of the gate
3	To move/transfer the existing cold room and freezers and generator
4	To provide electricity, including electricity from the existing generator, to the site
5	To provide water supply to the site
6	To provide drainage pipe to the site
7	To provide telephone line to the site
8	To provide construction work area

9) Garissa Regional Vaccine Depot

No.	Items
1	To demolish/remove the existing building (temporary warehouse and 2 pit latrines)
2	To demolish/remove the existing septic tanks
3	To remove the existing trees
4	To move/transfer the existing cold room and freezers
5	To provide electricity to the site
6	To provide water supply to the site
7	To provide drainage pipe to the site
8	To provide telephone line to the site
9	To provide construction work area

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Undertakings by the Ministry of Public Health and Sanitation

1) Nairobi National Vaccine Depot

No.	Items
1	Provide the Project site
2	Ensure easy accessibility to the Project site

2) Nyeri Regional Vaccine Depot

No.	Items
1	Provide the space for DVI's freezers
2	Provide electricity (including generator line) for DVI's freezers

3) Nakuru Regional Vaccine Depot

No.	Items
1	Provide the space for DVI's cold room and freezers
2	Provide electricity (including generator line) for DVI's cold room and freezers

4) Eldoret Regional Vaccine Depot

No.	Items
1	Provide the space for DVI's cold room and freezers
2	Provide electricity (including generator line) for DVI's cold room and freezers

5) Kisumu Regional Vaccine Depot

No.	Items
1	Provide the space for DVI's freezers
2	Provide electricity (including generator line) for DVI's freezers

6) Mombasa Regional Vaccine Depot

No.	Items
1	Provide the space for DVI's cold room and freezers
2	Provide electricity (including generator line) for DVI's cold room and freezers

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MINUTES OF DISCUSSIONS
ON PREPARATORY SURVEY (Outline Design No.2)
ON THE PROJECT FOR THE REINFORCEMENT OF VACCINE STORAGE
IN THE REPUBLIC OF KENYA

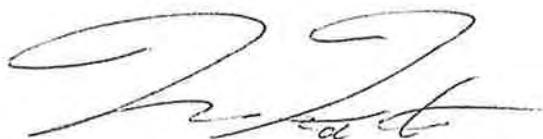
From January to February, 2010, Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey (Outline Design) Team on the Project for the Reinforcement of Vaccine Storage in Kenya (hereinafter referred to as "the Project") to the Republic of Kenya (hereinafter referred to as "Kenya"), and through discussion and field survey, JICA and the Kenyan side signed the Minutes of Discussions on 4th February, 2010.

Since the project site for the Nairobi National Vaccine Depot has been changed, JICA sent to Kenya a Preparatory Survey Team (Outline Design No.2) (hereinafter referred to as "the Team"), which is headed by Mr. Masaaki Kato, Chief Representative, JICA Kenya Office, and is scheduled to stay in the country from 5th July to 9th July 2010.

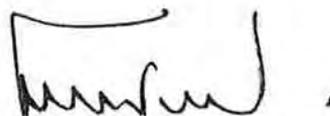
The Team held discussions with the officials concerned from the Government of Kenya and conducted a field survey in Nairobi.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Nairobi, 8th July, 2010



Mr. Masaaki Kato
Chief Representative
JICA Kenya Office
Leader
Preparatory Survey Team (Outline Design No. 2)
Japan International Cooperation Agency



Mr. Mark K. Bor, CBS
Permanent Secretary
Ministry of Public Health and Sanitation
The Republic of Kenya

ATTACHMENT

The following points are amended from the description referred in the Minutes of Discussion dated 4th February 2010.

1. Project sites for Nairobi National Vaccine Depot

The site of the Project for Nairobi National Vaccine Depot is located on Plot No. Zone 49 – Noonkopir T, Centre as shown in Annex-1-1 (Tentative map subject to topographic map by surveyor).

The letter from the Ministry of Public Health and Sanitation dated 14th June, 2010 with the attachment of the Letter of Allotment by the County Council of Olkejuado dated 14th June 2010 is shown in Annex-1-2.

2. Schedule of the Study

2-1. JICA will prepare the draft report in English and dispatch a mission in order to explain its contents in October, 2010.

2-2. In case that the contents of the report is accepted in principle by the Government of Kenya, JICA will complete the final report and send it to the Government of Kenya by around January, 2011.

3. Other Relevant Issues

3-1 Scope of the Project

The issues discussed between the Kenyan side and the Team are as follows:

(1) Coordination offices for the Division of Vaccines and Immunization

The Team expressed its concern about the necessity of including coordination offices of the Division of Vaccines and Immunization for the Nairobi National Vaccine Depot at the new project site which is located in Kitengela, outside Nairobi city. The Kenyan side explained that it is indispensable to locate the coordination offices in the same unit with the warehouse and workshop for the Nairobi National Vaccine Depot, in order to ensure efficient and effective operation for vaccine management. The Team understood the necessity of such offices; however, the size of the offices could be minimized, while the possibility for further expansion would be included in the design, so that the Kenyan side could expand the offices upwards in future. Both sides also confirmed that cost estimation will be further studied by the Japanese side, and that the inclusion of offices will be subject to approval of the Government of Japan.

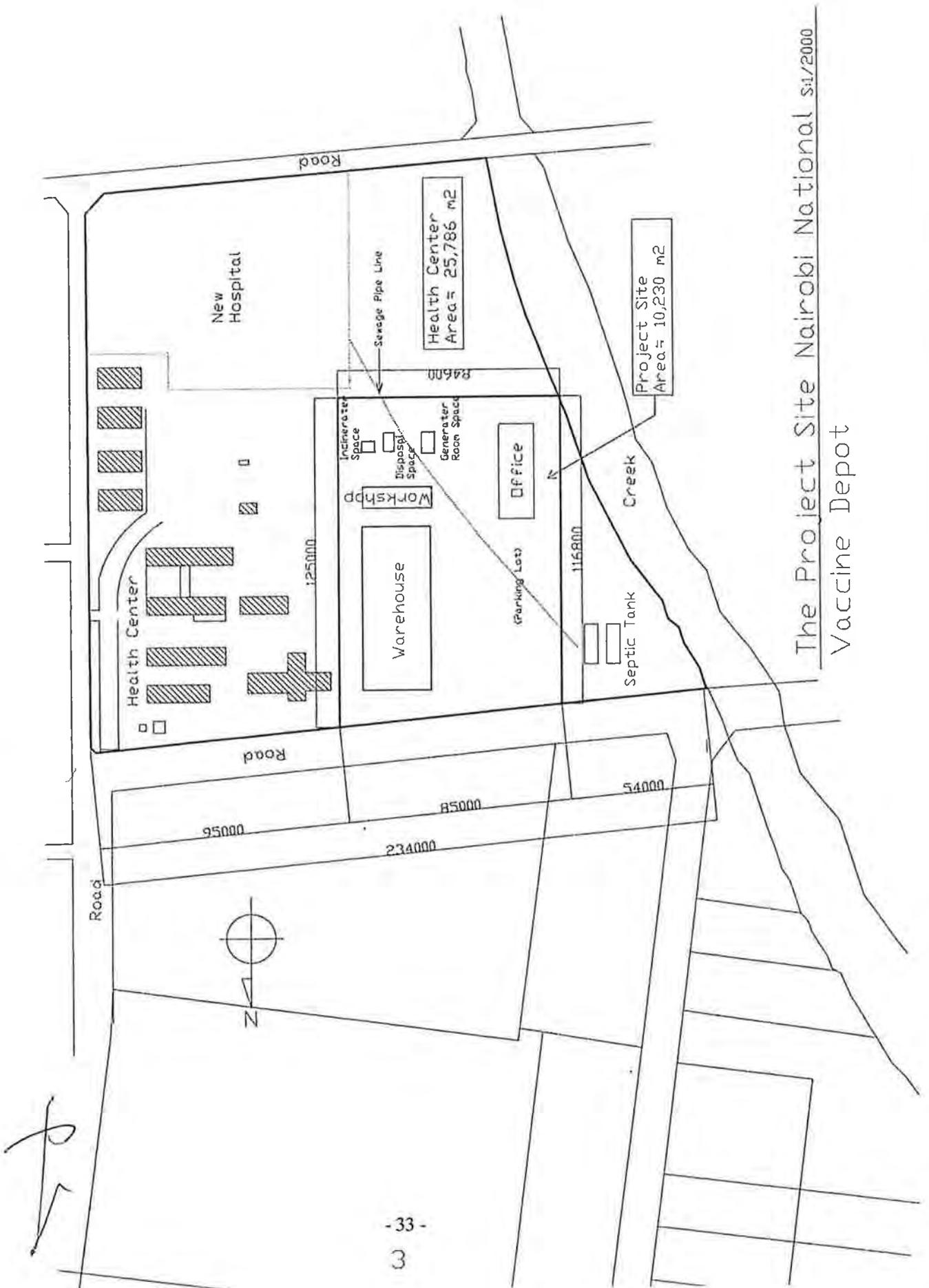
Annex-1-1 Location Map for Nairobi National Vaccine Depot

Annex-1-2 Letter from the Ministry of Public Health and Sanitation dated 14th June, 2010 with the attachment of the Letter of Allotment by the County Council of Olkejuado dated 14th June

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Location Map for Nairobi National Vaccine Depot



The Project Site Nairobi National s:1/2000
Vaccine Depot

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MINISTRY OF PUBLIC HEALTH AND SANITATION

Telegrams: "MINHEALTH", Nairobi
Telephone Nairobi 0202717077
Email: psph@health.go.ke
When replying please quote

AFYA HOUSE
CATHEDRAL ROAD
P O Box 30016
NAIROBI

Ref. No. MPHS/FIN/12/A/4/27

Date: 14th June 2010

Masaaki KATO
Chief Representative
JICA Kenya Office
NAIROBI

Dear

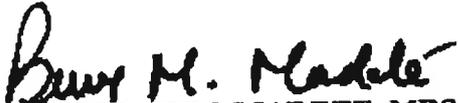
RE: REQUEST REGARDING DOCUMENTS OF ALLOTMENT OF THE LAND IN KITENGELA FOR CONSTRUCTION OF VACCINES STORAGE FACILITY

Reference is made to your letter Ref.No. TC-22-075(EK) of 3rd June 2010 on above subject.

We are pleased to inform you that the County Council of Olkejuado has issued a Letter of Allotment to the Ministry of Health for Kitengela Health Centre land measuring 8.9 acres (copy attached). We are now in the process of acquiring the title deed for the same land from the Ministry of Lands. We expect the title deed to be ready very soon.

In view of the above we request that you proceed with dispatch of the second survey mission.

Thank you for your continued support.


AMB. BRUCE M. MADETE, MBS
FOR: PERMANENT SECRETARY



004103

Our Ref. No. ...OCC/LND/16/NOONKOPIR/TC/LOA/VOL. 3/12.

COUNTY
COUNCIL OF
OLKEJUADO



P.O. Box 11,
Telephone: 21212/3
KAJIADO

MINISTRY OF HEALTH
KITENGELA (NOONKOPIR) HEALTH CENTRE

Date 14th June 2010...

LETTER OF ALLOTMENT



Plot No. ZONE 4₉ (8.9 ACRES) - NOONKOPIR T. CENTRE:

This is to confirm allotment of the above-referred plot to you by County Council of Olkejuado acceptance of which will be signified by initially paying:-

- a) Annual rent (revisable) Shs.
- b) Survey fees Shs. 3000.00
- c) Local Authority Services Charge Shs.
- d) Plot identification fees Shs.

CONDITIONS

1. This plot may be developed for... HEALTH CENTRE... use only.
2. The council may reposses (without compensation) any plot that remains undeveloped 2 (two) year after allocation.
3. Sale, sub-division or charge of the plot may only be done with the written consent of the council.
4. All building plans in respect of the plot shall be approved by the Council before execution.
5. This letter is only valid when signed by the Clerk to the Council.

Fredrick O. Ndebe
FREDRICK O. NDEBE
CLERK TO COUNCIL

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Issued without erasures or alterations whatsoever.

**MINUTES OF DISCUSSIONS
ON PREPARATORY SURVEY
ON THE PROJECT FOR THE REINFORCEMENT OF VACCINE STORAGE
IN THE REPUBLIC OF KENYA
(EXPLANATION ON DRAFT REPORT)**

Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey (Outline Design) Team on the Project for the Reinforcement of Vaccine Storage in Kenya (hereinafter referred to as "the Project") to the Republic of Kenya (hereinafter referred to as "Kenya") from January to February, 2010, and also dispatched a Preparatory Survey Team (Outline Design No.2) on the Project to Kenya in July 2010, and through discussion, field survey, and technical examination of the survey results in Japan, JICA prepared a draft report of the survey.

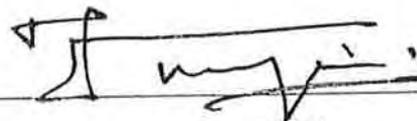
In order to explain and to consult Kenya on the component of the draft report, JICA sent to Kenya a Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Masaaki Kato, Chief Representative, JICA Kenya Office, from 6th December to 10th December, 2010.

In the course of discussions, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Preparatory Survey Report.

Nairobi, 9th December, 2010



Mr. Masaaki Kato
Chief Representative
JICA Kenya Office
Leader
Draft Report Explanation Team
Japan International Cooperation Agency



Mr. Francis K. Musyimi, CBS
Secretary Administration
Ministry of Public Health and Sanitation
The Republic of Kenya

ATTACHMENT

1. Components of the Draft Report

The Government of Kenya agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid Scheme

The Kenyan side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Kenya as explained by the Team and described in Annex-5, Annex-6, Annex-7, and Annex-8 of the Minutes of Discussions signed by both parties on 4th February, 2010.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Kenya by February 2011.

4. Confidentiality of the Project Design

Both sides confirmed that all information related to the Project design including detailed specifications of equipment and other technical information shall not be released to any outside parties before the signing of all the Contract(s) for the Project.

5. Other Relevant Issues

5-1 Confidentiality of the Project Cost Estimation

The Team explained the cost estimation of the Project as described in Annex-1. Both sides agreed that the Project Cost Estimation SHALL NOT be duplicated or released to any outside parties before the signing of all the Contract(s) for the Project. Both sides understand that the Project Cost Estimation described in Annex-1 is not final and is subject to change.

5-2 Project sites for National Vaccine Depot, Nairobi

Regarding the Project site for Nairobi National Vaccine Depot, the Certificate of Lease/Kitengela Government Land for the Proposed National Vaccines Depot dated 10th November, 2010 is shown in Annex 2.

The Kenyan side explained that no additional procedures are necessary for land acquisition for the Nairobi site as the lease certificate issued by the Commissioner of Lands is adequate.

5-3 Scope of Works

The issues discussed between the Team and the Kenyan side are as follows:

5-3-1 Kenyan side requested cage separation area within the dry storage for quarantine goods (vaccines and syringes) at Nairobi Central Depot. The Team will consider this request.

5-3-2 Kenyan side requested the relocation of compressors on the east side of cold storage room at Nairobi Central Depot so as to reduce noise disturbance to the adjacent offices. The Team will consider this request.

5-3-3 Kenyan side requested the relocation of the conference room in the coordination office at Nairobi Central Depot because of difficulties in access for visitors. The team promised to relocate it closer to the main entrance of the building.

5-3-4 Kenyan side requested to remove the middle entrance door of the workshop at Nairobi central Depot as two doors would be sufficient for depot operations. The Team agreed to it.

5-3-5 Kenyan side requested for connecting canopies between the main buildings and external toilets for Garissa and Meru Regional Vaccine Depots respectively. The Team explained that it will need to consult further on the feasibility of this request.

Based on the above, both sides agreed, as the scope of works of the Project, the outline of the Project described in Annex-3, and equipment list described in Annex-4.

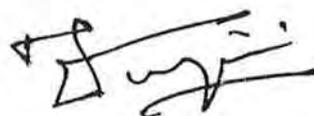
5-4 Operation and Maintenance Cost

The Kenyan side agreed to secure and allocate necessary budget and staff for the proper and sustainable operation and maintenance of the facilities and the equipment to be provided under the Project as described in Annex-5, and in accordance with the maintenance organization in Annex 6.

5-5 Obligation Works to be undertaken by the Kenyan side

The Kenyan side agreed to implement necessary infrastructure and construction works related to the Project by appropriate time including securing necessary budget allocation to meet the costs for such works as described in Annex-2. The Team explained that the timely completion of the obligation works by the Kenyan side based on the schedule in Annex-7 is crucial for Japanese side to implement its portion of works as scheduled, and in case that works by the Kenyan side would be behind the schedule for certain period of time, the Japanese side might have to re-schedule its implementation schedule accordingly.

Apart from the recurrent cost mentioned in section 5-4, the Team explained that counterpart budget shall be needed for implementation of the Project. The Team requested that the Kenyan side secures the counterpart budget under the fiscal years (FY) 2011/2012 and 2012/2013 budget. The Kenyan side agreed to secure the necessary budget.



5-6 Tentative Schedule of the Project

The tentative schedule of the Project is described in Annex-8.

5-7 Utilization of Vaccine Storage Facilities

The Kenyan side explained that vaccines are acquired on regular basis and that all vaccines handled by the Government of Kenya are currently stored in the national and regional depot sites and will continue to expand the storage at the sites.

END

Annexes

Annex-1 The Certificate of Lease by the Kajiado District Land Registry dated 10th November, 2010

Annex-2 Project Cost Estimation

Annex-3 Outline of the Project

Annex-4 Equipment List

Annex-5 Operation and Maintenance Cost for Facilities and Equipment

Annex-6 Maintenance Organization

Annex-7 Undertakings by the Kenyan side

Annex-8 Tentative Schedule of the Project

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Annex-1 Certificate of Lease



REPUBLIC OF KENYA

THE REGISTERED LAND ACT.
(Chapter 300)

Certificate of Lease

TITLE No. _____ APPROXIMATE AREA
KITENGELA TOWNSHIP /462 3.737 Ha.

LESSOR OLKARIAPO COUNTY COUNCIL

RENT 72/= TERM 99 Years FROM 1.9.2010

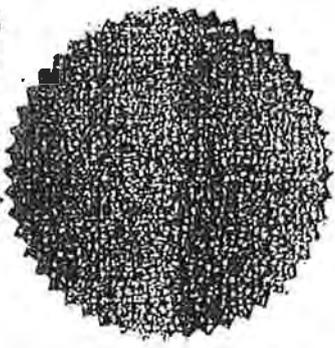
This is to certify that PERMANENT SECRETARY TO THE
TREASURY OF KENYA - AS TRUSTEE FOR MINISTRY OF PUBLIC HEALTH
AND SANITATION P.O. BOX 30007 NAIROBI =

Is (are) now registered as the proprietor(s) of the leasehold interest above referred to, subject to the agreements and other matters contained in the registered lease, to the entries in the register relating to the lease and to such of the overriding interests set out in section 30 of the Registered Land Act as may for the time being subsist and affect the land comprised in the lease.

GIVEN under my hand and the seal of the

KAJIADO District Registry

this 10th day of November 2010



P. N. [Signature] 344
Land Register



REPUBLIC OF KENYA

THE REGISTERED LAND ACT
(Chapter 300)

Certificate of Lease

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MINISTRY OF PUBLIC HEALTH AND SANITATION

Telegrams: "MINIHEALTH",
Nairobi
Telephone Nairobi 0202717077
Email: psph@health.go.ke
When replying please quote

AFYA HOUSE
CATHEDRAL ROAD
P O Box 30016
NAIROBI

Ref. MPHS/FIN/12/A/4/35

Date: 11th November, 2010

Mr. Masaaki KATO
Chief Representative
JICA Kenya Office
NAIROBI.

Dear

Masaaki

RE: CERTIFICATE OF LEASE/KITENGELA GOVERNMENT LAND FOR THE PROPOSED NATIONAL VACCINES DEPOT

Forwarded herewith please find a copy of the Certificate of Lease for Kitengela Government land for the proposed National Vaccines Depot. The Certificate of Lease is equivalent to a Title deed and is issued in accordance with the Registered Land Act, Cap 300 of the Laws of Kenya. The original Certificate is available for verification in our offices.

The Commissioner of Lands granted a ninety nine (99) year lease to the Permanent Secretary Treasury against which the certificate is issued. The Certificate of Lease shall be the only Prima Facie evidence for the land ownership by the Government during the period of which the lease remains valid.

Thank you for your continued support.

Yours

sincerely,

Mark K. Bor

Mark K. Bor, CBS
PERMANENT SECRETARY

Encl.

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Annex-2 Project Cost Estimation

(1) Costs to be borne by the Japanese side

Estimated total project cost: Approximately 1,019.6 million yen

Items	Estimated Project Cost (in million yen)		
	Facilities		781.4
Equipment		131.4	
Working design, Construction and equipment supervision		106.8	

(2) Costs to be borne by the Kenyan side

Items	Cost Estimate (in thousand KShs)
1) Acquisition of land	0
2) Preparation and leveling of the land	1,200
3) Demolition of the existing structures and trees, and their removal out of the site	1,800
4) Connection of infrastructure systems (electric power, water supply, sewage, etc.)	1,500
5) Acquisition of the permission for construction	0
6) Banking commissions (0.2% of the contract price)	1,671
7) Procurement of general furniture for the buildings to be constructed in the project	2,200
8) Construction of fence around the site and a gate in it, and planting	9,000
9) Destruction and reconstruction of an incinerator in the premises of Kitengela Health Center	600
Total	17,971

(Equivalent to 22 million yen)

(3) Calculation Conditions

- 1) Time of Estimation : as of February 2010
- 2) Conversion Rate : 1.00 US\$ = 92.15 yen
: 1.00 US\$ = 75.42 KShs
: 1 KShs = 1.22 yen
- 3) Construction Period : 12 months
- 4) Other Conditions : project implementation intended to be in compliance with the Grant Aid scheme of the Government of Japan.

Annex-3 Outline of the Project

	Facility	Structure/Areas	Component
Nairobi National Vaccine Depot	Warehouse	Structure: RC, partly S Floor Areas: 1,612.0m ²	Dry storage, Cold storage, Store, Office, Medical lab technologist room, Officer in charge of vaccine depot room, Dry storage manager room, Assistant room, Support staff room, Fire pump room, Security room, Kitchen, WC
	Coordination Office	Structure: RC, partly S Floor Areas: 507.0m ²	Head of DVI room, Deputy head of DVI room, Secretary room, Office, Data room, Conference room, Server room, Support staff room, Store, Kitchen, WC
	Workshop	Structure: RC, partly S Floor Areas: 210.0m ²	Workshop, Chief medical engineer's room, Medical engineer's room
	Generator House	Structure: RC, partly S Floor Areas: 40.0m ²	Generator room, Switch panel room
	Disposal Space	(Shed)	Separate space for combustible, incombustible and medical wastes
	Incinerator Space	(Shed)	Space for installing the incinerator
	Floor Areas	2,369m ²	
Regional Vaccine Depot	Kakamega	Structure: RC, partly S Floor Areas: 675.0m ²	Warehouse, Officer in charge of vaccine depot room, Secretary / Waiting room, Support staff room, Store, WC
	Meru	Structure: RC, partly S Floor Areas: 415.0m ²	Warehouse, Officer in charge of vaccine depot room, Secretary / Waiting room, Support staff room, Store, WC
	Garissa	Structure: RC, partly S Floor Areas: 395.0m ²	Warehouse, Officer in charge of vaccine depot room, Secretary / Waiting room, Support staff room, Store, WC
	Floor Areas	1,485m ²	
Total Floor Areas		3,814m ²	

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Annex-4 Equipment List

No	Name of Equipment	Total Quantity
1	Cold room with 3-rooms, 40m ³ each	1
2	Cold room with 2-rooms, 40m ³ each	2
3	Cold room, 1-room, 30m ³ A	1
4	Cold room, 1-room, 30m ³ B	3
5	Freezer room with 2-rooms, 20m ³ each	1
6	Cold room/freezer room temperature monitoring system	1
7	Freezer	23
8	Forklift	1
9	Manual pallet lifter	10
10	Refrigeration gas charging station	9
11	Oxy-acetylene gas soldering set	9
12	Nitrogen gas cylinder set	9
13	Cabinet for Non-EPI vaccine	3
14	Automatic Voltage Regulator	23

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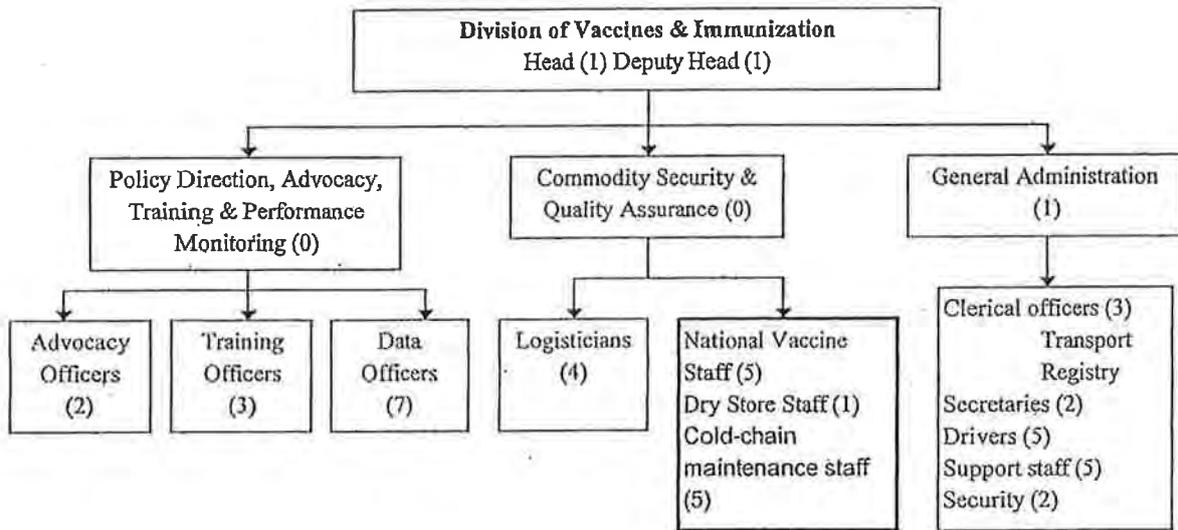
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Annex-5 Operation and Maintenance Cost for Facilities and Equipment

Annual Costs for Operation and Maintenance					(in KShs)
	Electricity	Water Supply/Sewage	Generator Energy	Equipment Repairs	Total
National Vaccine Depot (new)					
Nairobi	1,378,302	262,560	156,358	503,000	2,300,220
Regional Vaccine Depot (new)					
Kakamega	327,768	18,000	54,914	157,000	557,682
Meru	177,134	18,000	46,068	86,000	327,202
Garissa	148,081	18,000	52,843	86,000	304,924
Regional Vaccine Depot (existing)					
Nyeri	7,266	—	654	86,000	93,920
Mombasa	40,068	—	7,044	157,000	204,112
Kisumu	14,531	—	723	208,000	223,254
Eldoret	54,599	—	3,291	157,000	214,890
Nakuru	50,967	—	2,015	86,000	138,982
Total	2,198,716	316,560	323,910	1,526,000	4,365,186

Note: Figures for the regional vaccine depots (existing) indicate the expected annual cost increase due to the equipment supply in this project.

Annex-6 Maintenance Organization



Organization of the Division of Vaccines & Immunization

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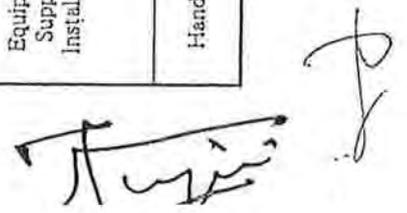
Annex-7 Undertakings by the Kenyan Side

Items		Nairobi	Kakamega	Meru	Garissa	Nyeri	Nakuru	Eldoret	Kisumu	Mombasa
1) To secure land	Completion	Jan. 2012	Jan. 2012	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
2) To excavate and level the site	Completion	Jan. 2012	Jan. 2012	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
3) To level the road in front of the gate	Completion	NA	NA	Feb. 2012	NA	NA	NA	NA	NA	NA
4) To demolish the existing buildings and trees, and remove them out of the site	Completion	NA	NA	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
5) To acquire the permission for construction	Completion	Jan. 2012	Jan. 2012	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
6) To connect infrastructure systems (electricity, water supply, drainage, telephone line, etc.) to the site	Completion	Jan. 2012	Jan. 2012	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
7) To provide electricity, including electricity from the existing generator, for cold room and freezers, and to provide drainage for cold room	Completion	NA	NA	NA	NA	July. 2012				
8) To provide construction work area	Completion	Jan. 2012	Jan. 2012	Feb. 2012	June. 2012	NA	NA	NA	NA	NA
9) To secure the issuance of the Banking Arrangement and the Authorization to Pay, and payment of required banking commissions (0.2% of the contract price)	Consultant	Aug. 2011								
10) To procure general furniture for the buildings to be constructed in the project	Contractor/ Supplier	Feb. 2012								
11) To construct fence around the site and a gate in it, and planting	Completion	Feb. 2013	Oct. 2012	Oct. 2012	Feb. 2013	NA	NA	NA	NA	NA
12) To destruct and reconstruct an incinerator in the premises of Kitengela Health Center	Completion	Feb. 2013	Oct. 2012	Oct. 2012	Feb. 2013	NA	NA	NA	NA	NA
13) To secure the space for cold room and freezers	Completion	NA	NA	NA	NA	July. 2012				
14) To move/transfer the existing cold rooms and freezers	Completion	Feb. 2013	NA	NA	NA	NA	NA	Oct. 2012	Oct. 2012	Oct. 2012

Annex-8 Tentative Schedule of the Project

		Months																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Project	E/N																					
	G/A																					
Detailed Design	○ Consultant agreement																					
	□ Verification of consultant agreement by JICA																					
Tender Assistance	■ Survey and discussions for detailed design																					
	□ Approval of design documents by the Client																					
Supervision of Construction Works	□ Preparation of tender documents																					
	□ Approval of tender documents																					
Equipment Supply / Installation	□ Tender																					
	□ Evaluation of tender / Contract with contractors (for construction / equipment)																					
Handover	Construction works of Nairobi National Vaccine Depot (12 months)																					
	Construction works of Meru Regional Vaccine Depot (7 months)																					
Handover	Construction works of Kakamega Regional Vaccine Depot (8 months)																					
	Construction works of Garissa Regional Vaccine Depot (7 months)																					
Equipment Supply / Installation	Equipment manufacturing																					
	Transportation																					
Handover	Installation and commissioning Meru/Kakamega/5 Existing Depots																					
	Installation and commissioning Nairobi/Garissa																					
Handover	Handover of Meru Depot																					
	Handover of Kakamega Depot																					
Handover	Handover of Nairobi Depot																					
	Handover of Garissa Depot																					

Note:  : Works in Kenya  : Works in Japan



資料5 参考資料

5 - 1 既存施設位置図



- 1 : DVI 事務所
- 2 : DVI 倉庫(冷凍庫)
- 3 : DVI 倉庫(コールドルーム等)
- 4 : 空港近くの民間倉庫
- 5 : KEMSA 倉庫

サイト名	ナイロビ中央	カカメガ地方	メルー地方	ガリッサ地方	備考
Dry Storage43品目の保管量:2010年	537,483				
ナイロビ中央保管庫の対象人口(全国):2010年	1,540,008				
一人当たりの量(V1)	0.0003490	0.0003490	0.0003490	0.0003490	ナイロビ中央の保管量/対象人口(全国):2010年より算定
各サイトの対象人口:2020年	2,101,174	287,912	134,722	117,180	カリッサ対象人口=住民 98,288 + 避難民 18,892 = 117,180 人
2020年における年間保管量(V)=	733.34	100.49	47.02	40.90	
搬出入1回当たりの数量 /2 = (A)	366.67	50.24	23.51	20.45	保管物を2回/年に分けて搬出入した保管量
Diluent:2020年(年間)	36.20		2.40	2.00	年間保管量
Diluent:2020年の1回の搬出入量	18.10	1.20	0.60	0.50	
Droppers:2020年(年間)	18.20	2.40	1.20	1.20	年間の保管量
Droppers:2020年の1回の搬出入量	9.10	0.60	0.30	0.30	ナイロビ保管庫:保管物を2回/年に分けて搬出入した保管量 地方保管庫:保管物を4回/年に分けて搬出入した保管量
Syringes & safety boxes:2020年保管量(V)=	1,354.80	185.20	86.60	75.40	Dry Storageの倉庫に保管
搬出入1回当たりの数量 /4 = (B)	338.70	46.30	21.65	18.85	保管物を4回/年に分けて受け入れた保管量
(A) + (B) = 合計 (2020年)	705.37	96.54	45.16	39.30	
Dry Storage 設計保管可能数量	715.52	98.40	47.20	40.20	Dry Storageに保管
目標保管量と設計保管量との差	10.15	1.86	2.04	0.90	カリッサ保管庫は避難民を考慮して施設を設計する
本設計フリーザールーム数	2	0	0	0	
本設計コールドルーム数	8	0	0	0	
DVI:納入コールドルーム数	0	1	1	1	
合計コールドルーム数	8	1 + 1 = 2	1	1	1:将来ケニア国側で1台増設
本設計冷凍庫数	0	0	2	1	
DVI納入冷凍庫数	7	6	1	2	カリッサ保管庫は避難民を考慮
合計冷凍庫数	7	6	3	3	
将来増設案	3	2	1	1	将来ケニア国側で増設
将来冷凍庫合計	10	8	4	4	電気容量設計計算用

備考:保管量の単位はm3

Demanded Valid Storage Volume

705.37 m³

(No. L x W x H x Ratio)

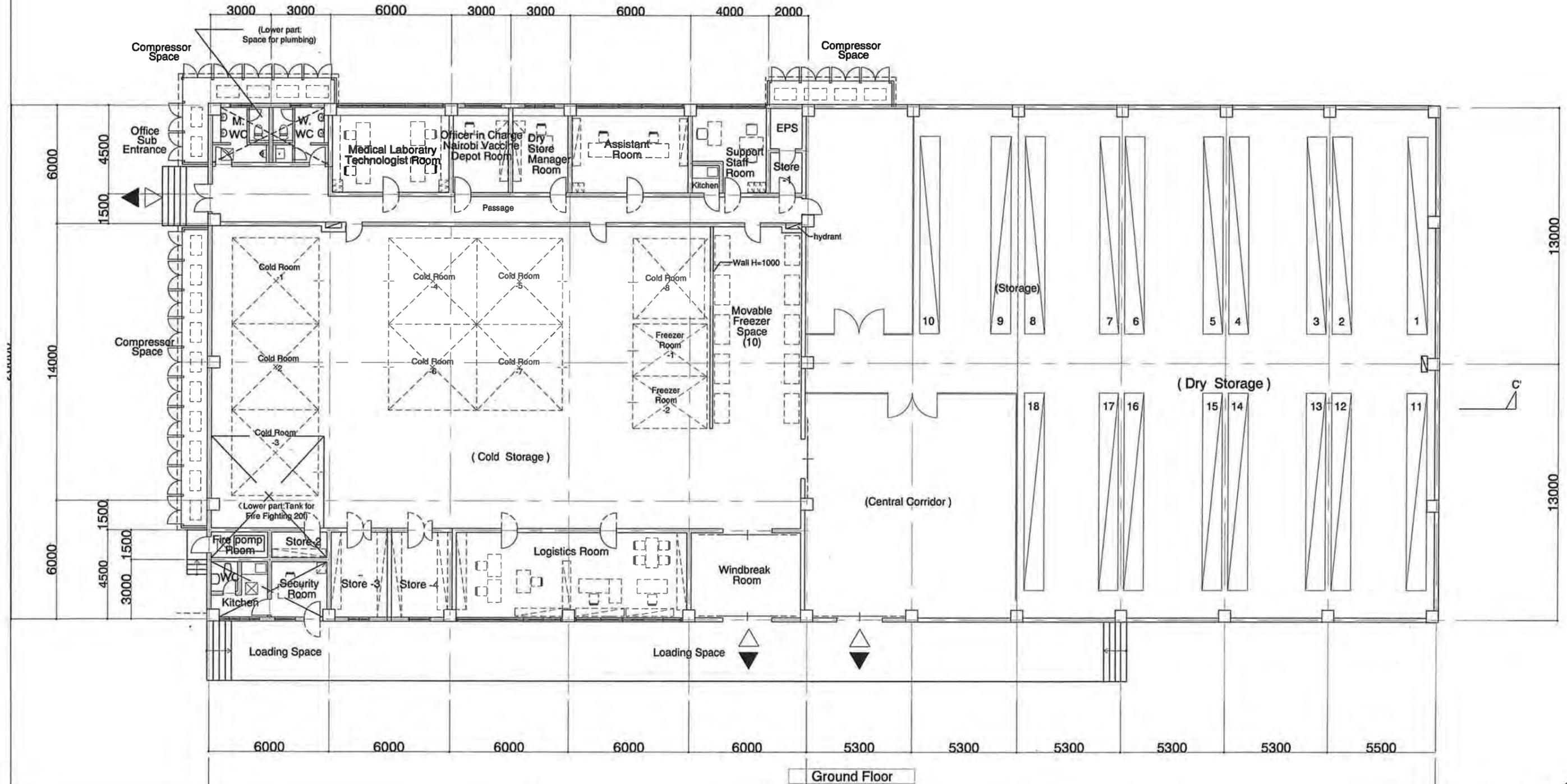
- 1 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 2 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 3 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 4 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 5 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 6 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 7 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 8 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 9 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³
- 10 : 10.0 x 1.0 x 5.2 x 0.8 = 41.60 m³

(No. L x W x H x Ratio)

- 11 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 12 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 13 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 14 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 15 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 16 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 17 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³
- 18 : 9.0 x 1.0 x 5.2 x 0.8 = 37.44 m³

Total = 715.52 m³

Floor Area = 1,612.00m²



Ground Floor



YOKOGAWA ARCHITECTS & ENGINEERS, INC.

THE PROJECT FOR THE REINFORCEMENT OF VACCINE STORAGE
IN THE REPUBLIC OF KENYA

Name of Drawing
(DRAFT)

Nairobi
Warehouse

Rack Layout

2010.06.17

Number of Drawing

NA-01

Scale 1:200

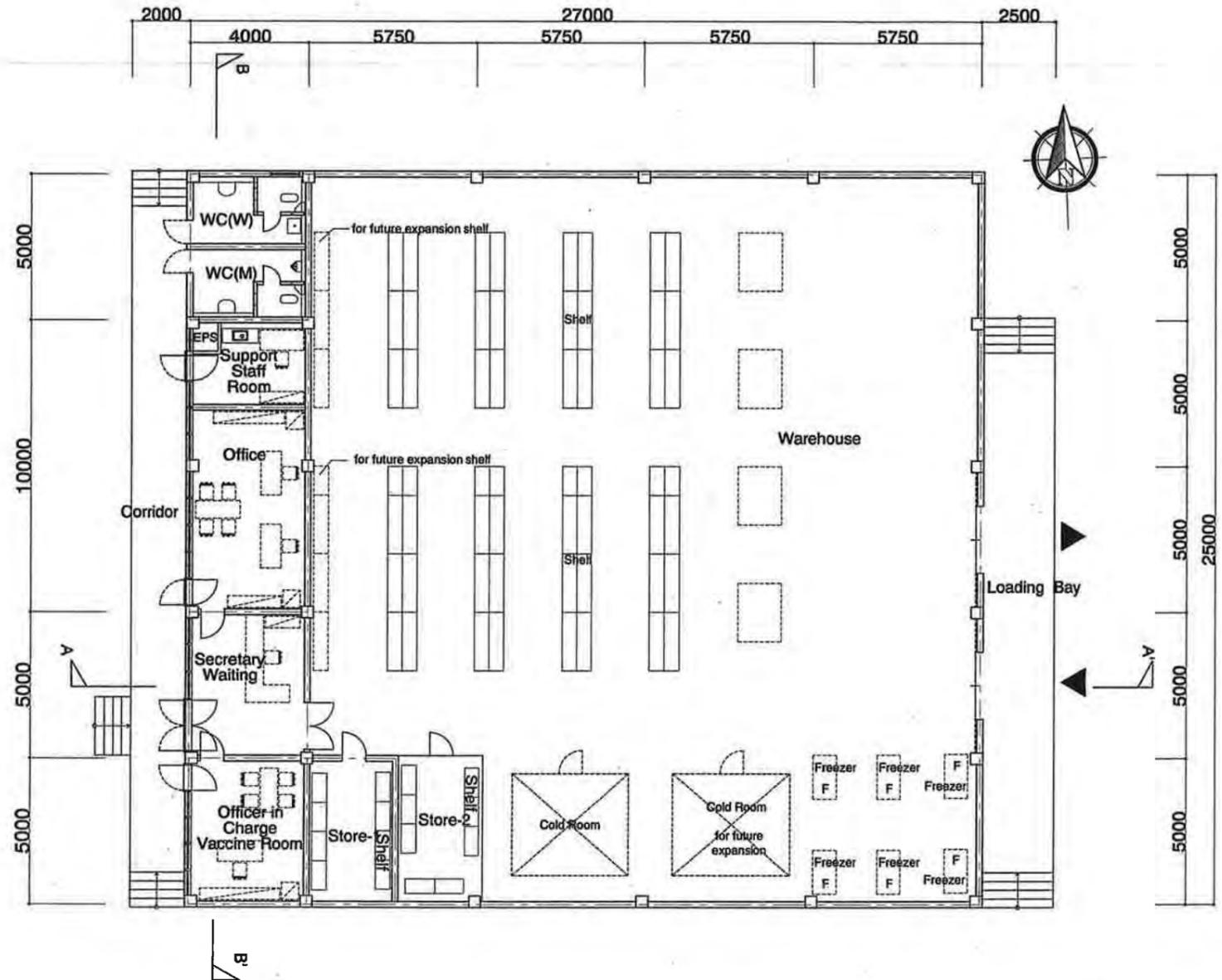
Demanded Valid Storage Volume
96.54 m³

Expression of Calculation of Valid Storage Volume
(No. L x W x H x Ratio)

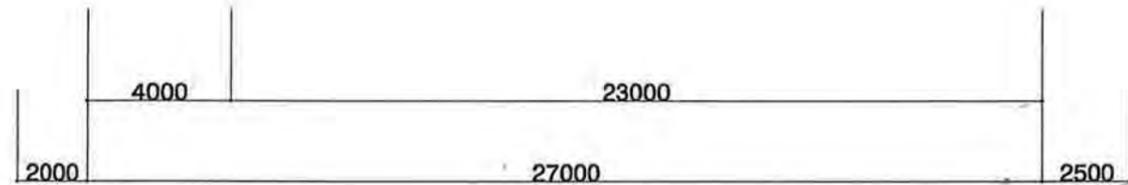
- 1 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 2 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 3 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 4 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 5 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 6 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 7 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 8 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 9 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 10 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 11 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 12 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 13 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 14 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 15 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 16 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 17 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 18 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 19 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
 - 20 : 7.0 x 0.5 x 2.0 x 0.7 = 4.90 m³
- Total = 98.40 m³

Spare Space for Future

- 21 : 6.0 x 0.5 x 2.0 x 0.7 = 4.20 m³
 - 22 : 7.0 x 0.5 x 2.0 x 0.7 = 4.70 m³
- All Total = 107.30 m³



Floor Area = 675.00m²



kakamega Depot

Demanded Valid Storage Volume
45.16 m³



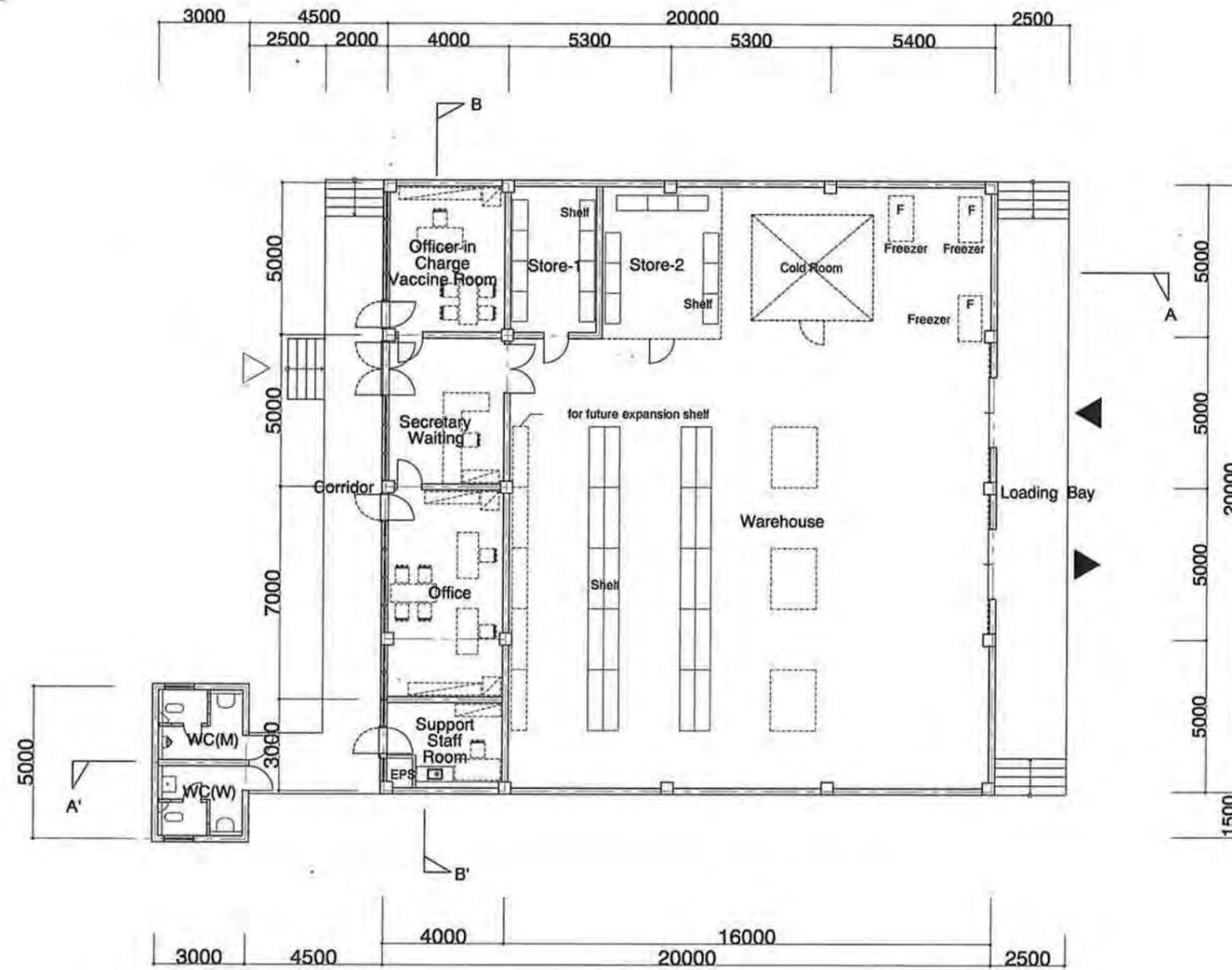
Expression of Calculation of Valid Storage Volume

(No. L x W x H x Ratio)

- 1 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 2 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 3 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 4 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
 - 5 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
 - 6 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
 - 7 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
- Total = 47.20 m³

Spare Space for Future

- 8 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
- All Total = 54.2 m³



Floor Area = 415.00m²

Meru Depot

Demanded Valid Storage Volume
39.30 m³

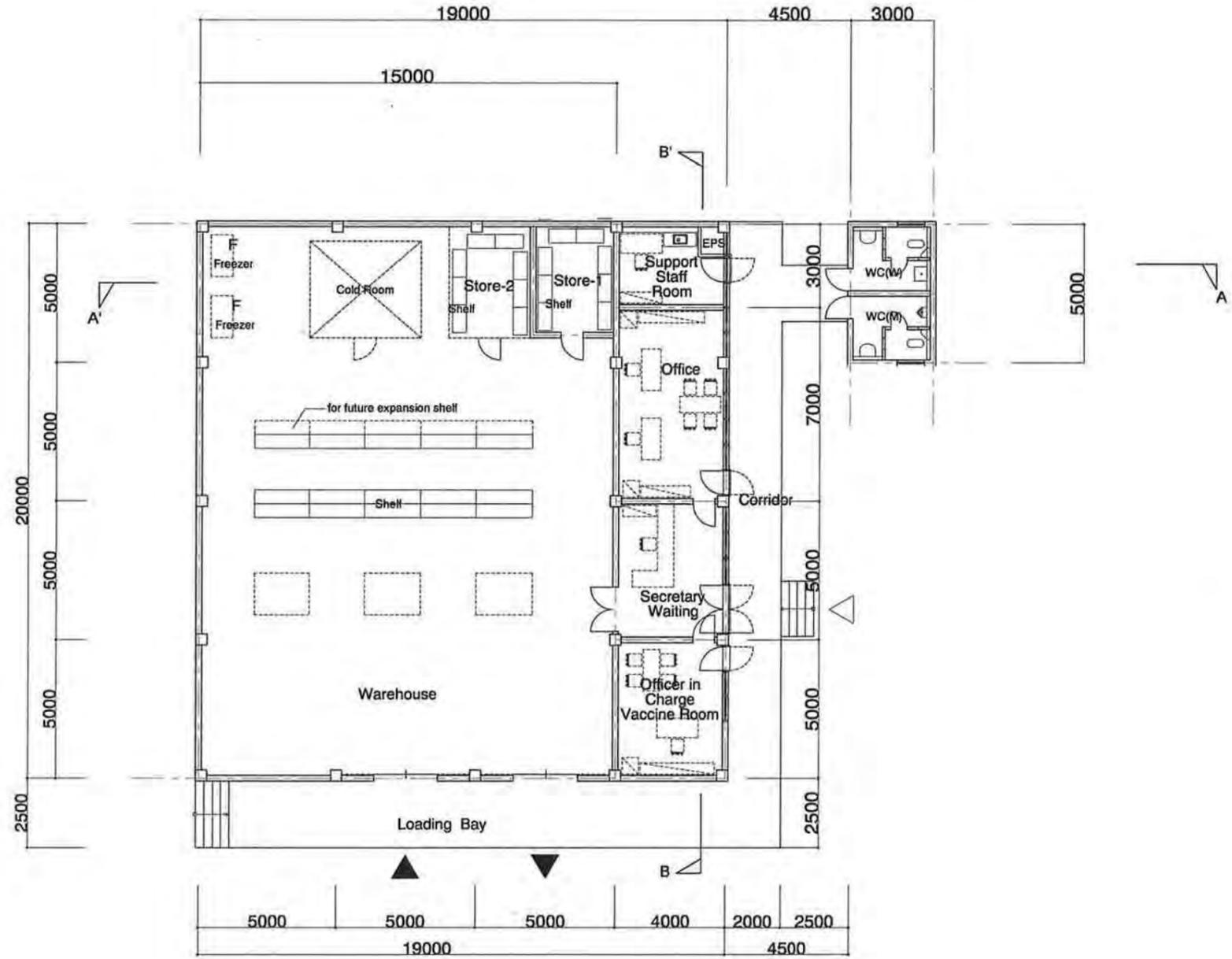
Expression of Calculation of Valid Storage Volume

(No. L x W x H x Ratio)

- 1 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 2 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 3 : 2.0 x 2.0 x 2.0 x 0.8 = 6.40 m³
 - 4 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
 - 5 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
 - 6 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
- Total = 40.20 m³

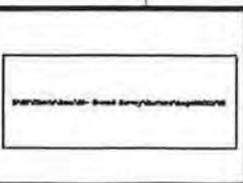
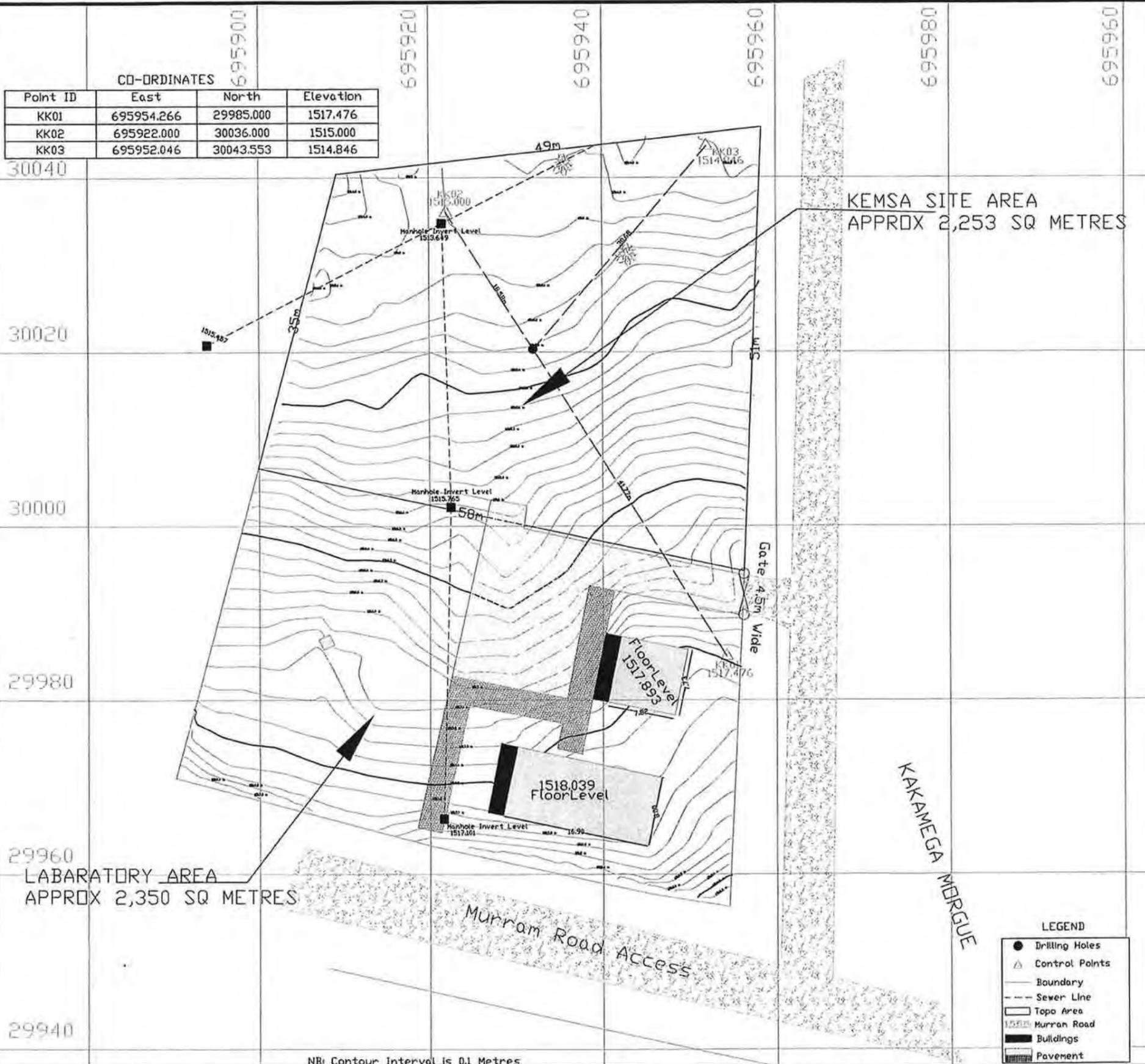
Spare Space for Future

- 7 : 10.0 x 0.5 x 2.0 x 0.7 = 7.00 m³
- All Total = 47.2 m³



Garissa Depot

Floor Area = 395.00m²



RAMANI GEOSYSTEMS
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 TEL:+(254) 20 604823
 FAX:+(254) 20 602035
 EMAIL:info@ramani.co.ke

CLIENT:
 YUKOGAWA ARCHITECT
 & ENGINEERS

TOPOGRAPHICAL SURVEY
 LOCATION:
 Kakamega Site

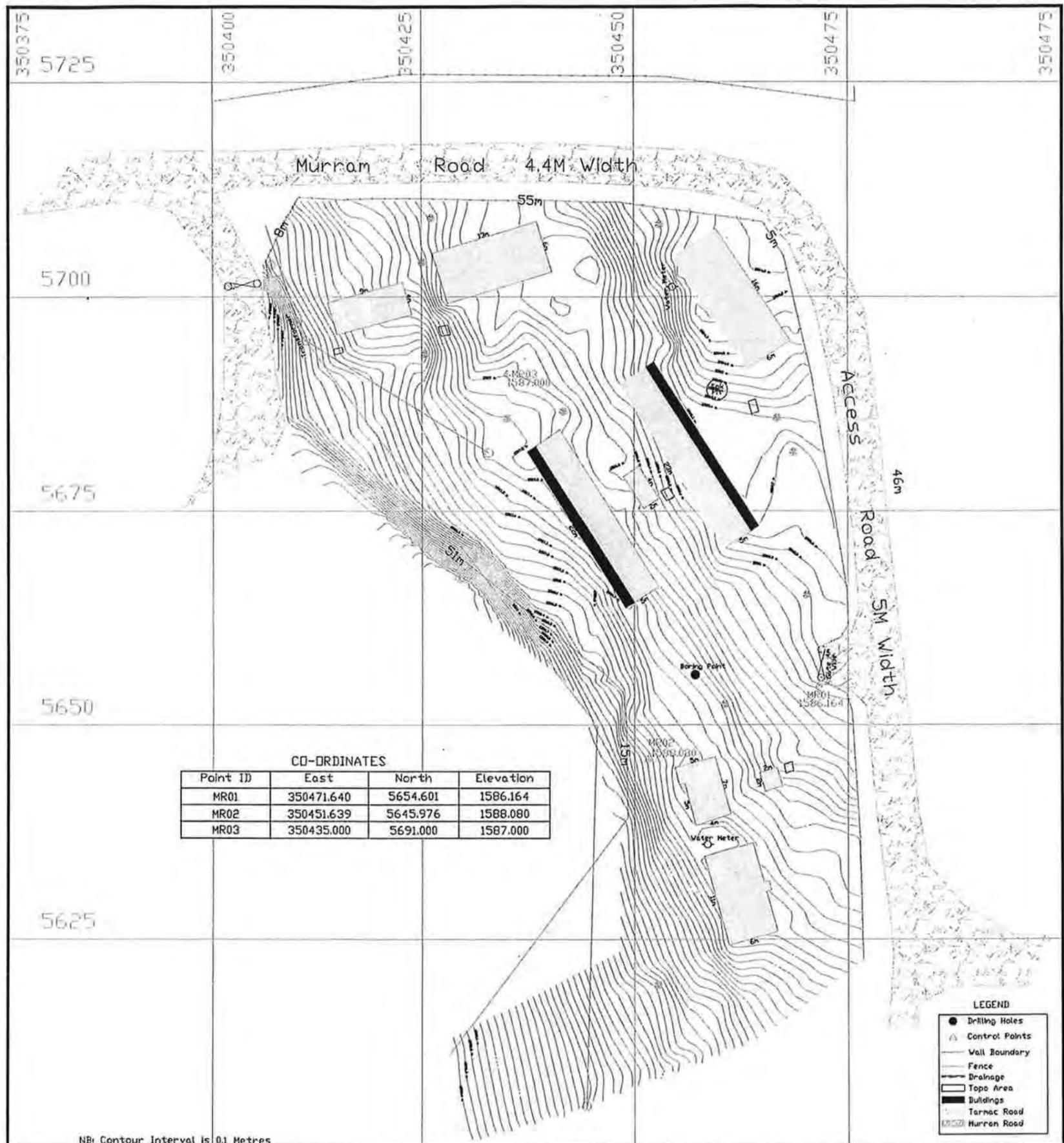
SURVEYED BY
 Ramani Geosystems
 JOB NO:1709 30138
 CHECKED BY W. ABIERO
 Sign.....
 DATE: MARCH/2010



PROJECTION: UTM
 DATUM: WGS84
 ZONE: 37 SOUTH

UNIT: METRES
 SCALE 1:500
 EDITION 1
 SHEET 1/1

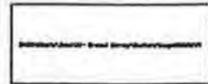
This Map is not an authority on Boundaries

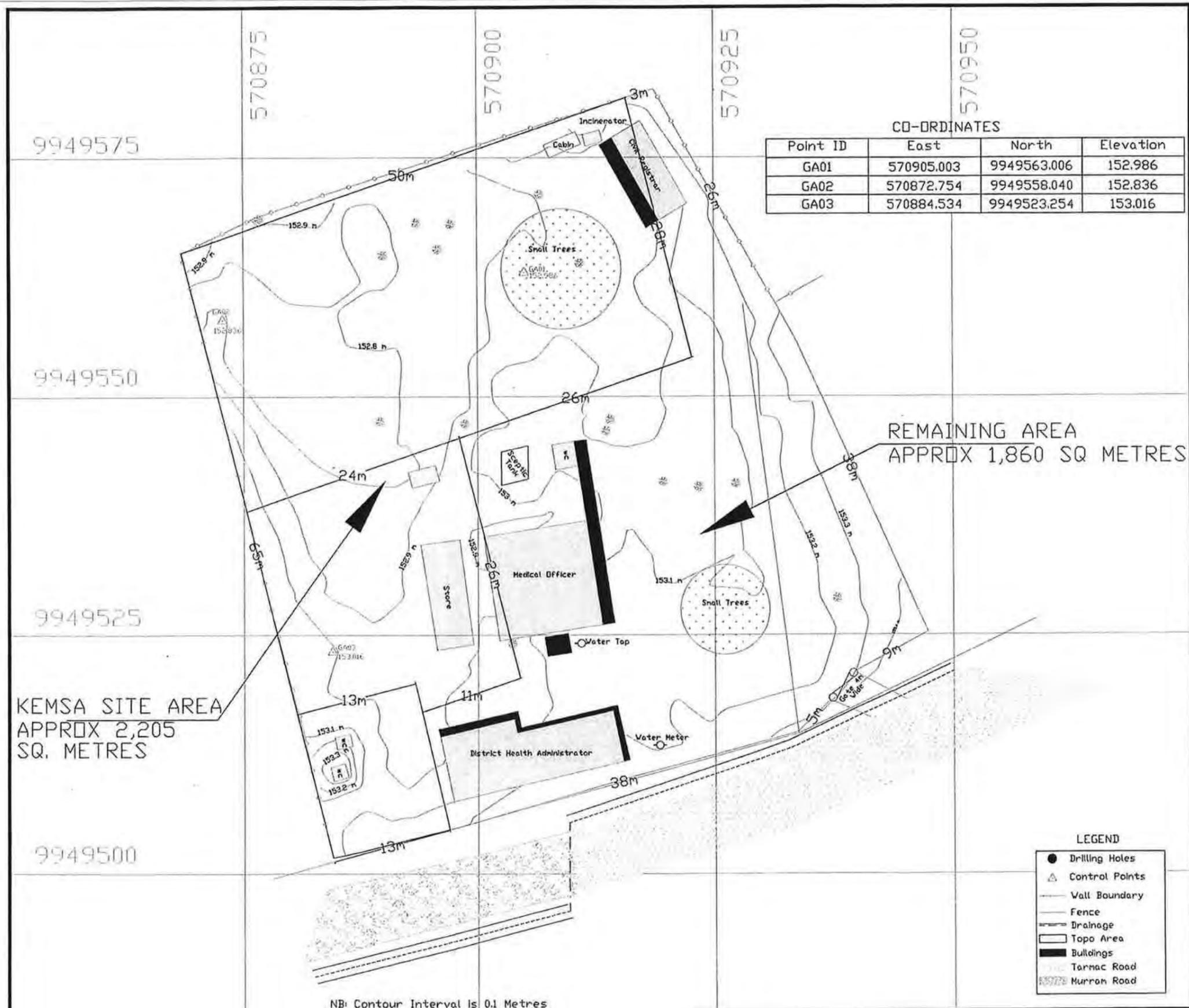


CO-ORDINATES

Point ID	East	North	Elevation
MR01	350471.640	5654.601	1586.164
MR02	350451.639	5645.976	1588.080
MR03	350435.000	5691.000	1587.000

NB: Contour Interval is 0.1 Metres

 <p>RAMANI GEOSYSTEMS P.O. BOX 15353-00509 TEL: +(254) 20 604823 FAX: +(254) 20 602035 EMAIL: info@ramani.co.ke</p>	<p>CLIENT: YUKOGAWA ARCHITECT & ENGINEERS</p>	<p>TOPOGRAPHICAL SURVEY LOCATION: Meru Site</p>	<p>SURVEYED BY Ramon Geosystems JOB NO: 1789 30138 CHECKED BY V. ABJERO Sign: _____ DATE: MARCH/2010</p>		<p>PROJECTION: UTM DATUM: WGS84 ZONE: 37 NORTH</p>	<p>UNIT: METRES SCALE: 1:500</p>	<p>EDITION: 1 SHEET: 1/1</p>
This Map is not an authority on Boundaries							



CO-ORDINATES

Point ID	East	North	Elevation
GA01	570905.003	9949563.006	152.986
GA02	570872.754	9949558.040	152.836
GA03	570884.534	9949523.254	153.016

KEMSA SITE AREA
APPROX 2,205
SQ. METRES

REMAINING AREA
APPROX 1,860 SQ METRES

LEGEND

●	Drilling Holes
△	Control Points
—	Wall Boundary
—	Fence
—	Drainage
□	Topo Area
■	Buildings
—	Tarmac Road
—	Murrum Road

NB: Contour Interval is 0.1 Metres

	RAMANI GEOSYSTEMS P.O BOX 15353-00509 TEL: +(254) 20 604823 FAX: +(254) 20 602035 EMAIL: info@ramani.co.ke	CLIENT: YUKOGAWA ARCHITECT & ENGINEERS	TOPOGRAPHICAL SURVEY LOCATION: Garissa Site	SURVEYED BY Ramani Geosystems JOB NO: 1709 30138 CHECKED BY V. ABIERO Sign: DATE: MARCH/2010		PROJECTION: UTM DATUM: WGS84 ZONE: 37 SOUTH	UNIT: METRES SCALE: 1:500
	This Map is not an authority on Boundaries						EDITION 1