

マニラ西首都圏下水にかかる
情報収集・確認調査

ファイナルレポート
(第2巻 図面集)

平成28年9月
(2016年)

独立行政法人
国際協力機構 (JICA)

日本工営株式会社
株式会社コーエイ総合研究所

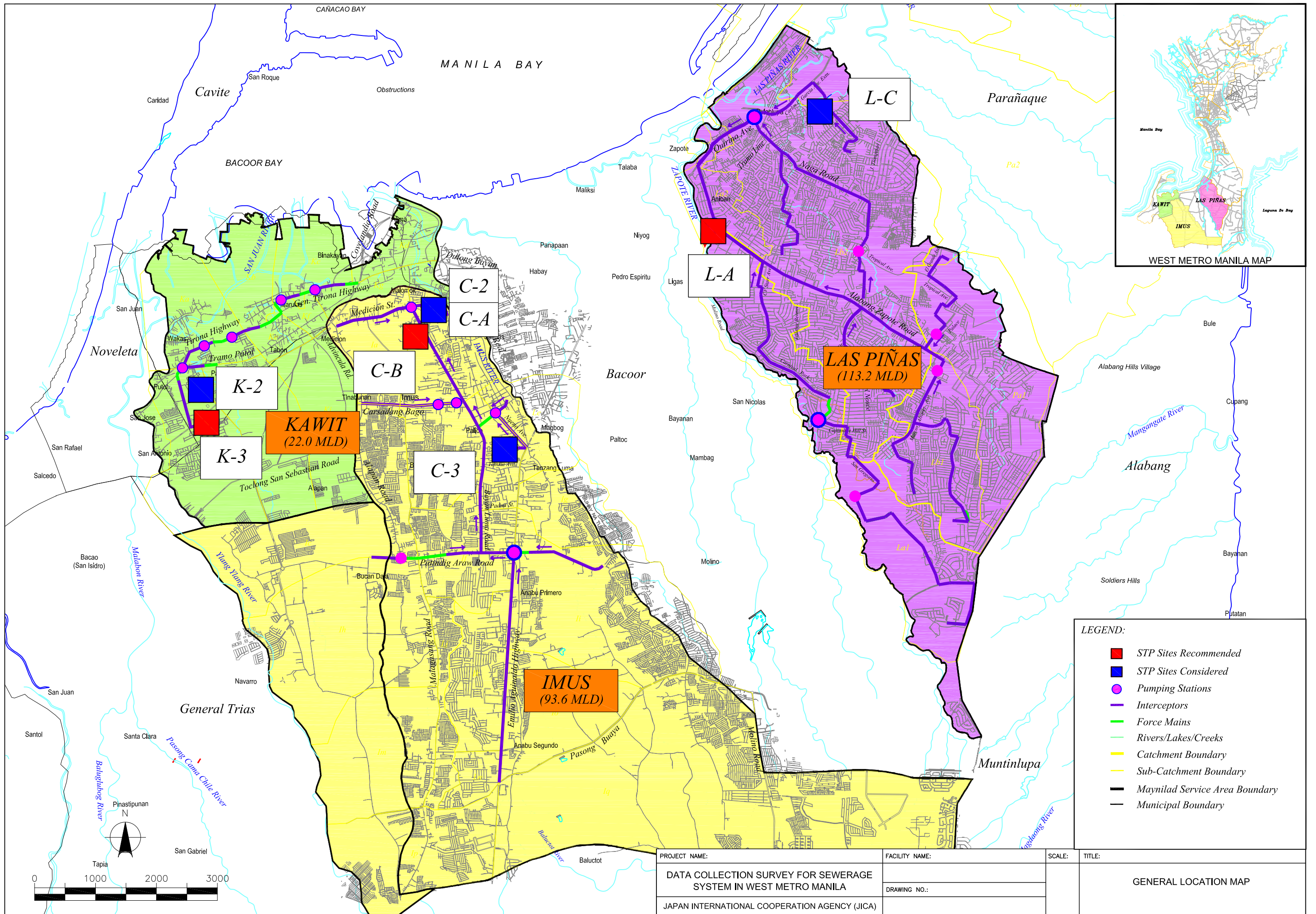
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- LEGEND:**
- STP Sites Recommended
 - STP Sites Considered
 - Pumping Stations
 - Interceptors
 - Force Mains
 - Rivers/Lakes/Creeks
 - Catchment Boundary
 - Sub-Catchment Boundary
 - Maynilad Service Area Boundary
 - Municipal Boundary

PROJECT NAME: DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	FACILITY NAME: DRAWING NO.:	SCALE:	TITLE: GENERAL LOCATION MAP
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ファイナルレポート構成

<u>第1巻(メインレポート)</u>	
□	第1章 序章
	第2章 上下水道事業に係る制度
	第3章 マニラ西首都圏および調査対象地域における下水道・衛生サービス
	第4章 最新の用地情報およびデータ
	第5章 調査地域における下水道システムの計画
	第6章 経済財務分析
	第7章 環境社会配慮
	第8章 結論
<u>第2巻(図面集)</u>	
■	図面集-1 下水処理場レイアウト
	図面集-2 下水道計画図
	図面集-3 ポンプ場

マニラ西首都圏下水にかかる情報収集・確認調査

ファイナルレポート
(第2巻 図面集)

下水処理場レイアウト図リスト

図番号	図タイトル	縮尺
	LAS PINAS CITY	
CAS-LP-1	LAS PINAS L-A CAS Q=113,200m ³ /d WITH DIGESTION PROCESS	1:2000
CAS-LP-2	LAS PINAS L-A CAS Q=113,200m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBR-LP-1	LAS PINAS L-A MBR Q=113,200m ³ /d WITH DIGESTION PROCESS	1:2000
MBR-LP-2	LAS PINAS L-A MBR Q=113,200m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-LP-1(1/2)	LAS PINAS L-A SBR Q=56,600m ³ /d WITH DIGESTION PROCESS	1:2000
SBR-LP-1(2/2)	LAS PINAS L-C SBR Q=56,600m ³ /d WITH DIGESTION PROCESS	1:2000
SBR-LP-2(1/2)	LAS PINAS L-A SBR Q=64,900m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-LP-2(2/2)	LAS PINAS L-C SBR Q=48,300m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBBR-LP-1(1/2)	LAS PINAS L-A MBBR Q=80,000m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-LP-1(2/2)	LAS PINAS L-C MBBR Q=33,200m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-LP-2	LAS PINAS L-A MBBR Q=113,200m ³ /d WITHOUT DIGESTION PROCESS	1:2000
	IMUS CITY	
CAS-IMS-1	IMUS C-A CAS Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
CAS-IMS-2	IMUS C-A CAS Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
CAS-IMS-3	IMUS C-B CAS Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
CAS-IMS-4	IMUS C-B CAS Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBR-IMS-1	IMUS C-A MBR Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
MBR-IMS-2	IMUS C-A MBR Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBR-IMS-3	IMUS C-B MBR Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
MBR-IMS-4	IMUS C-B MBR Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-IMS-1(1/2)	IMUS C-2 C-A SBR Q=57,800m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITH DIGESTION PROCESS	1:2000
SBR-IMS-1(2/2)	IMUS C-3 SBR Q=35,800m ³ /d WITH DIGESTION PROCESS	1:2000
SBR-IMS-2(1/2)	IMUS C-2 C-A SBR Q=57,800m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITHOUT DIGESTION PROCESS	1:2000
SBR-IMS-2(2/2)	IMUS C-3 SBR Q=35,800m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-IMS-3(1/2)	IMUS C-A SBR Q=50,000m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITH DIGESTION PROCESS	1:2000
SBR-IMS-3(2/2)	IMUS C-3 SBR Q=43,600m ³ /d WITH DIGESTION PROCESS	1:2000
SBR-IMS-4(1/2)	IMUS C-A SBR Q=57,800m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-IMS-4(2/2)	IMUS C-3 SBR Q=35,800m ³ /d WITHOUT DIGESTION PROCESS	1:2000
SBR-IMS-5	IMUS C-B SBR Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
SBR-IMS-6	IMUS C-B SBR Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBBR-IMS-1(1/2)	IMUS C-2 C-A MBBR Q=33,200m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITH DIGESTION PROCESS	1:2000
MBBR-IMS-1(2/2)	IMUS C-3 MBBR Q=60,400m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-IMS-2(1/2)	IMUS C-2 C-A MBBR Q=33,200m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITHOUT DIGESTION PROCESS	1:2000
MBBR-IMS-2(2/2)	IMUS C-3 MBBR Q=60,400m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBBR-IMS-3(1/2)	IMUS C-A MBBR Q=65,000m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-IMS-3(2/2)	IMUS C-3 MBBR Q=28,600m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-IMS-4	IMUS C-A MBBR Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBBR-IMS-5	IMUS C-B MBBR Q=93,600m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-IMS-6	IMUS C-B MBBR Q=93,600m ³ /d WITHOUT DIGESTION PROCESS	1:2000
	KAWIT TOWN	
CAS-KWT-1	KAWIT K-3 CAS Q=22,000m ³ /d WITH DIGESTION PROCESS	1:2000
CAS-KWT-2	KAWIT K-3 CAS Q=22,000m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBR-KWT-1	KAWIT K-2 MBR Q=22,000m ³ /d WITH DIGESTION PROCESS	1:2000
MBR-KWT-2	KAWIT K-2 MBR Q=22,000m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBR-KWT-3	KAWIT K-3 MBR Q=22,000m ³ /d WITH DIGESTION PROCESS	1:2000
MBR-KWT-4	KAWIT K-3 MBR Q=22,000m ³ /d WITHOUT DIGESTION PROCESS	1:2000
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SBR-KWT-2	KAWIT K-3 SBR Q=22,000m ³ /d WITHOUT DIGESTION PROCESS	1:2000
MBBR-KWT-1	KAWIT K-3 MBBR Q=22,000m ³ /d WITH DIGESTION PROCESS	1:2000
MBBR-KWT-2	KAWIT K-3 MBBR Q=22,000m ³ /d WITHOUT DIGESTION PROCESS	1:2000

下水道計画図リスト

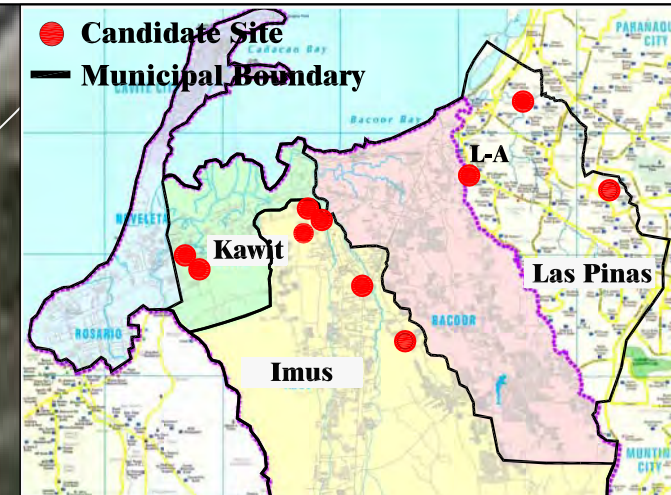
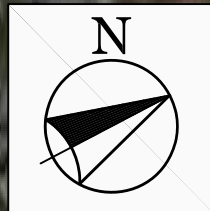
図番号	図タイトル	縮尺
	LAS PINAS CITY	
CAS-LP-1&2	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (CAS-LP-1&2)	As shown
MBR-LP-1&2	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (MBR-LP-1&2)	As shown
SBR-LP-1	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (SBR-LP-1)	As shown
SBR-LP-2	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (SBR-LP-2)	As shown
MBBR-LP-1	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (MBBR-LP-1)	As shown
MBBR-LP-2	SEWERAGE PLAN FOR STP OPTIONS IN LAS PINAS CITY (MBBR-LP-2)	As shown
	IMUS CITY	
CAS-IMS-1&2	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (CAS-IMS-1&2)	As shown
CAS-IMS-3&4	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (CAS-IMS-3&4)	As shown
MBR-IMS-1&2	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBR-IMS-1&2)	As shown
MBR-IMS-3&4	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBR-IMS-3&4)	As shown
SBR-IMS-1&2	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (SBR-IMS-1&2)	As shown
SBR-IMS-3	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (SBR-IMS-3)	As shown
SBR-IMS-4	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (SBR-IMS-4)	As shown
SBR-IMS-5&6	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (SBR-IMS-5&6)	As shown
MBBR-IMS-1&2	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBBR-IMS-1&2)	As shown
MBBR-IMS-3	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBBR-IMS-3)	As shown
MBBR-IMS-4	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBBR-IMS-4)	As shown
MBBR-IMS-5&6	SEWERAGE PLAN FOR STP OPTIONS IN IMUS CITY (MBBR-IMS-5&6)	As shown
	KAWIT TOWN	
CAS-KWT-1&2	SEWERAGE PLAN FOR STP OPTIONS IN KAWIT TOWN (CAS-KWT-1&2)	As shown
MBR-KWT-1&2	SEWERAGE PLAN FOR STP OPTIONS IN KAWIT TOWN (MBR-KWT-1&2)	As shown
MBR-KWT-3&4	SEWERAGE PLAN FOR STP OPTIONS IN KAWIT TOWN (MBR-KWT-3&4)	As shown
SBR-KWT-1&2	SEWERAGE PLAN FOR STP OPTIONS IN KAWIT TOWN (SBR-KWT-1&2)	As shown
MBBR-KWT-1&2	SEWERAGE PLAN FOR STP OPTIONS IN KAWIT TOWN (MBBR-KWT-1&2)	As shown

ポンプ場図面リスト

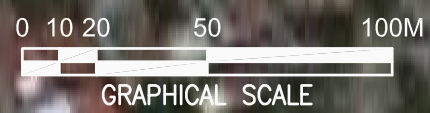
図番号	図タイトル	縮尺
PS-1	TYPICAL LAYOUT OF MANHOLE PUMP STATION (SMALL) (PLAN & SECTION)	1:20
PS-2	TYPICAL LAYOUT OF MANHOLE PUMP STATION (LARGE) (PLAN & SECTION)	1:40
PS-3	TYPICAL LAYOUT OF LARGE PUMP STATION (WITH PUMP HOUSE) (PLAN & SECTION)	1:40

図面集-1

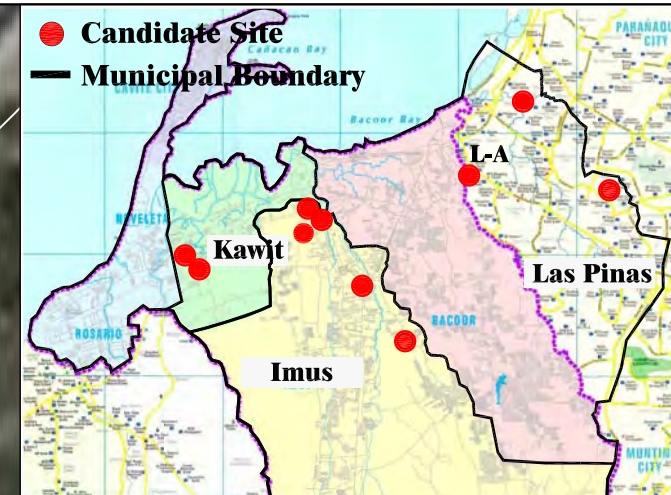
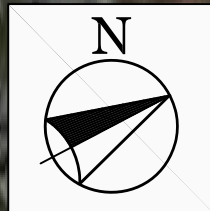
下水処理場レイアウト



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)



PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L- A CAS Q=113,200 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	CAS - LP - 1		



RLA = 2.55 ha.

ALA = 3.25ha.

SLUDGE THICKENER

DEHYDRATOR BUILDING

SECONDARILY SETTLING TANK

REACTOR

PRIMARY SETTLING TANK

ADMINISTRATION BUILDING

MACHINE ROOM

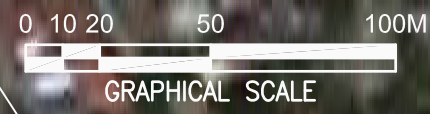
ROAD

ROAD

END OF ROAD

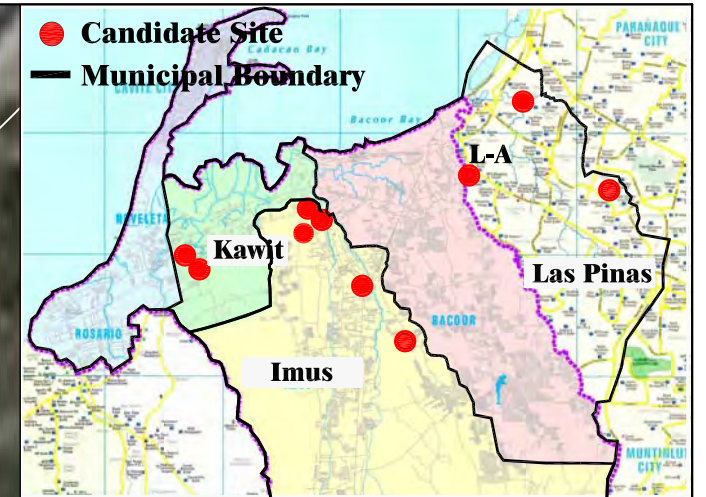
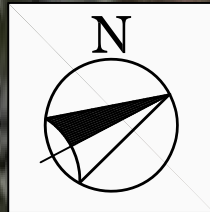
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ROAD



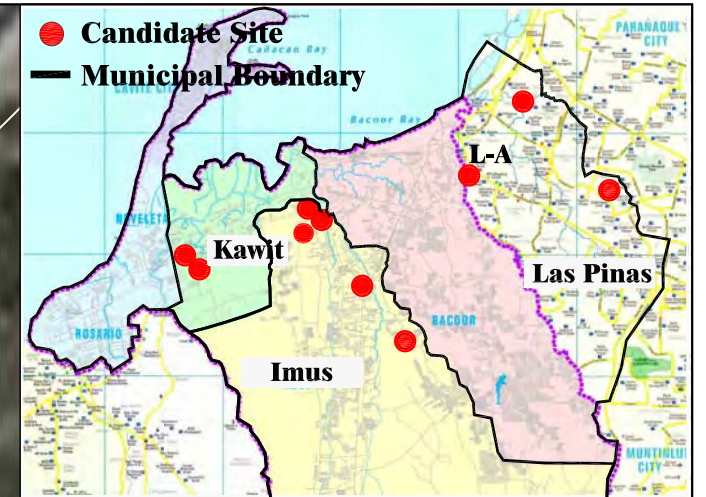
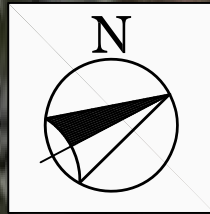
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A CAS Q=113,200 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CAS - LP - 2		

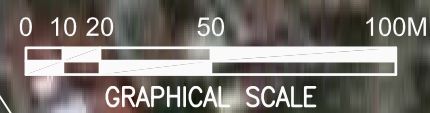


LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

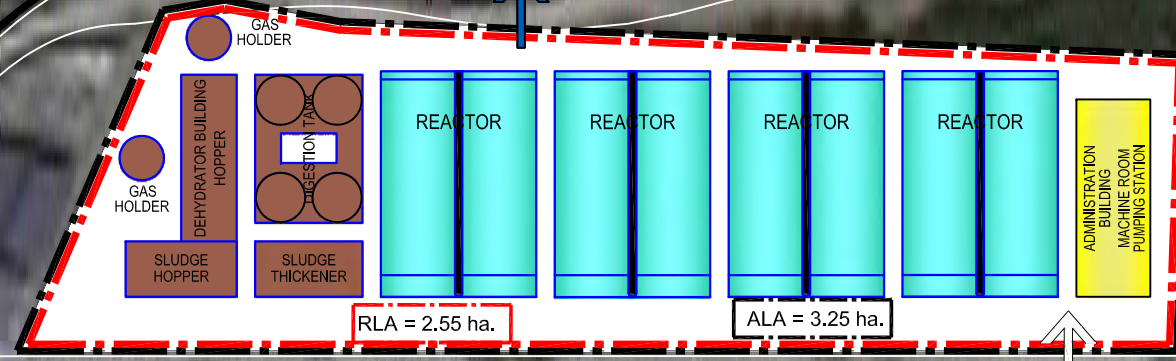
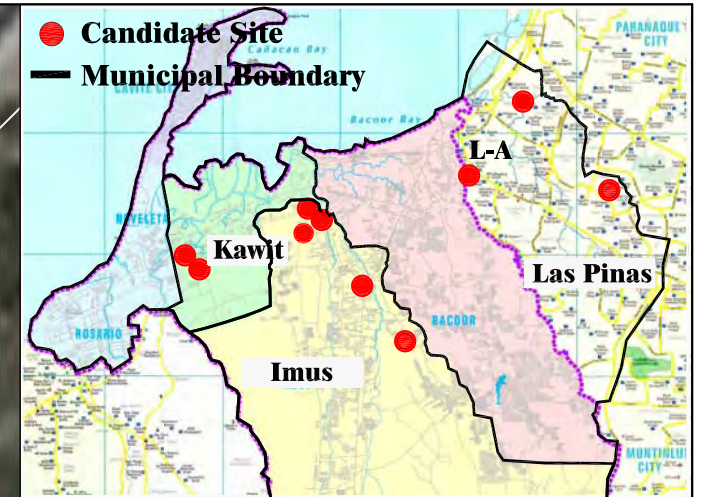
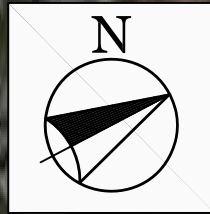
PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A MBR Q=113,200 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: MBR - LP - 1		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)



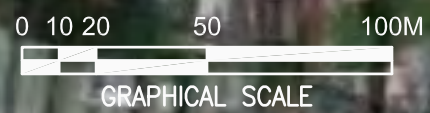
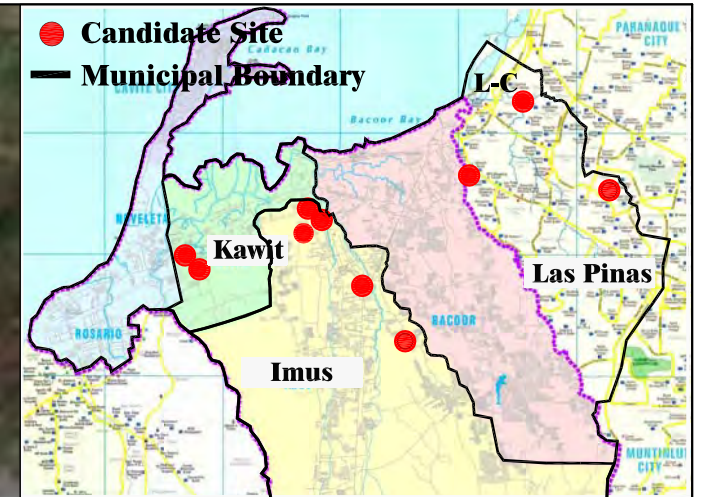
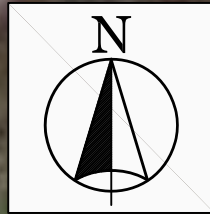
PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A MBR Q=113,200 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBR - LP - 2		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

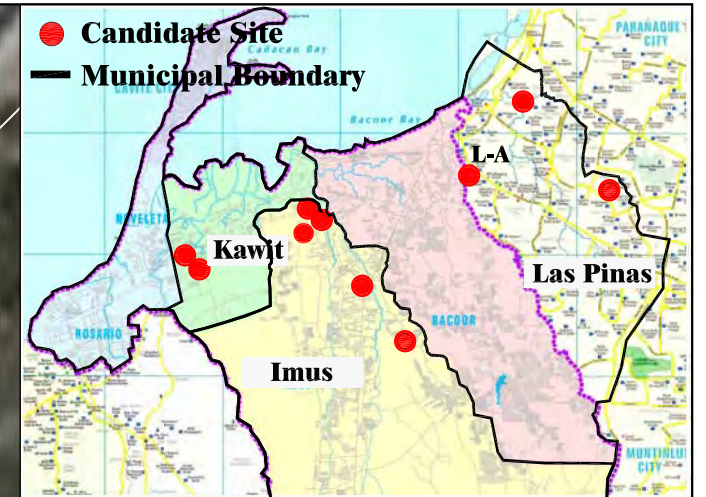
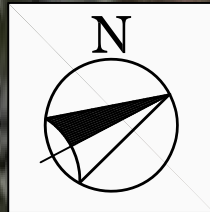


PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A SBR Q=56,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - LP - 1 (1/2)		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-C SBR Q=56,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	SBR - LP - 1 (2/2)		



RLA = 2.55 ha. ALA = 3.25 ha.

SLUDGE THICKENER

DEHYDRATOR BUILDING HOPPER

REACTOR

REACTOR

REACTOR

REACTOR

ADMINISTRATION BUILDING MACHINE ROOM PUMPING STATION

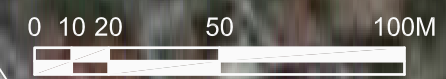
ROAD

ROAD

END OF ROAD

ROAD

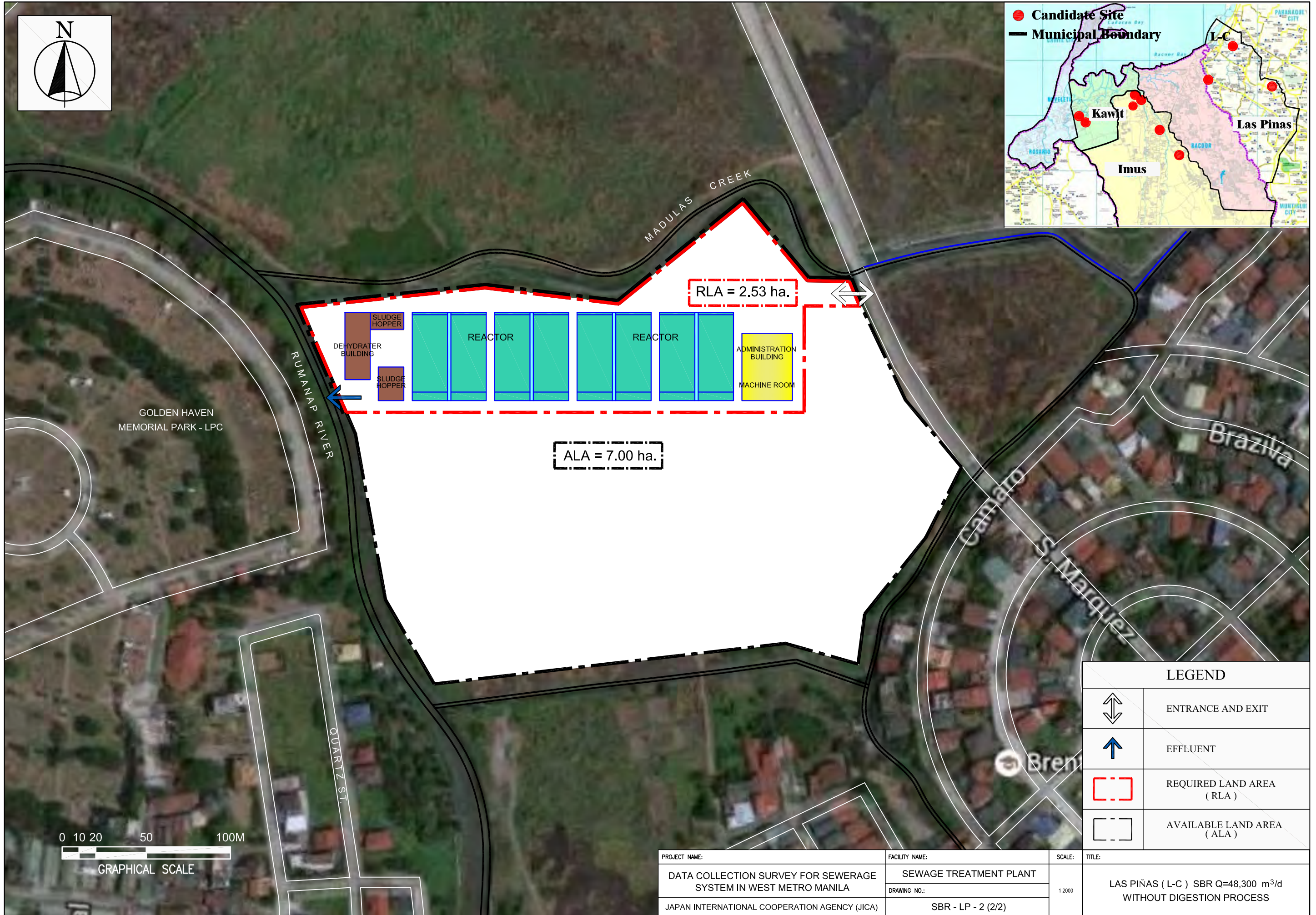
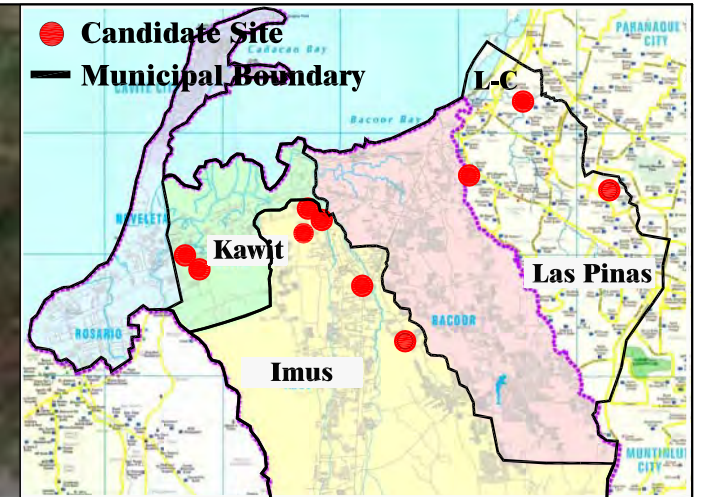
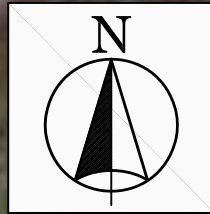
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GRAPHICAL SCALE

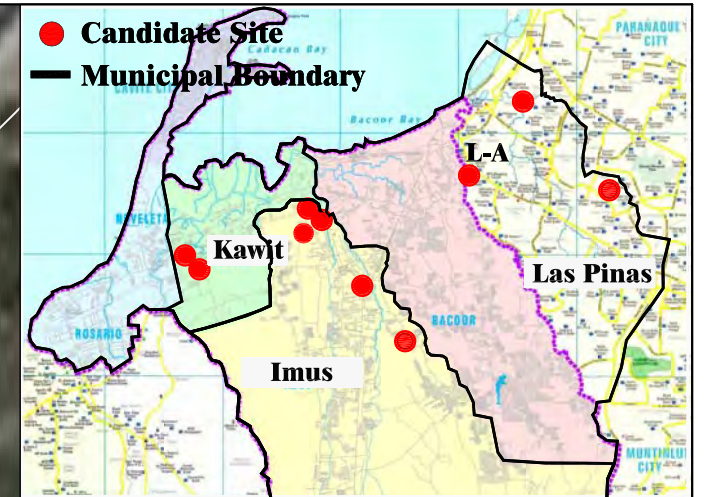
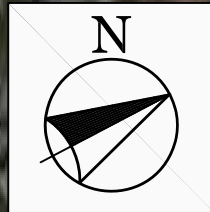
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A SBR Q=64,900 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - LP - 2 (1/2)		



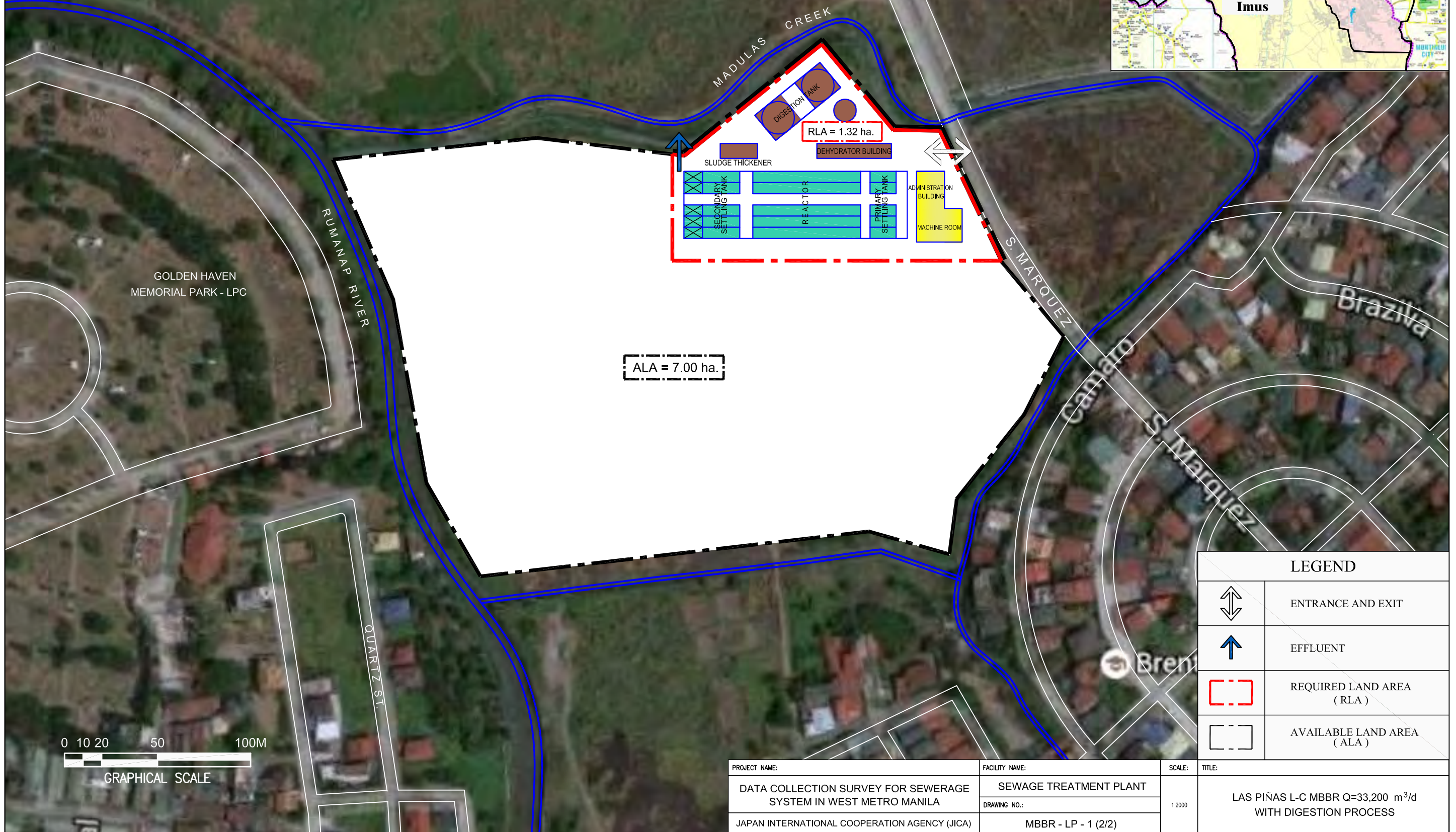
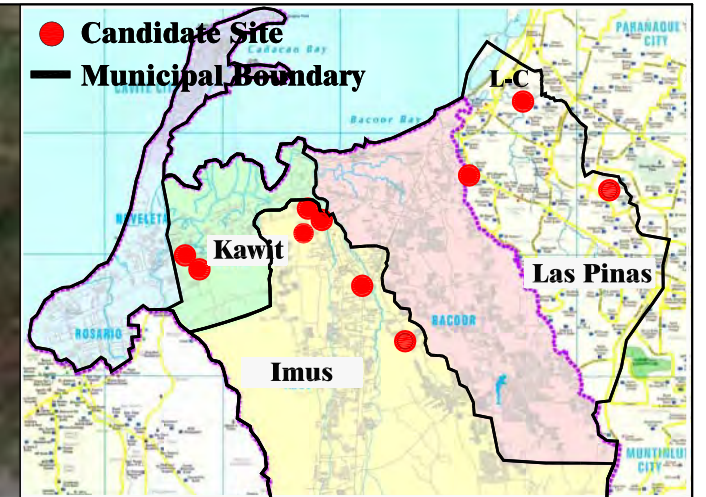
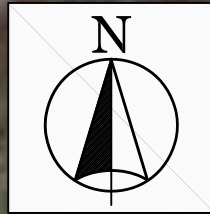
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	LAS PIÑAS (L-C) SBR Q=48,300 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - LP - 2 (2/2)		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

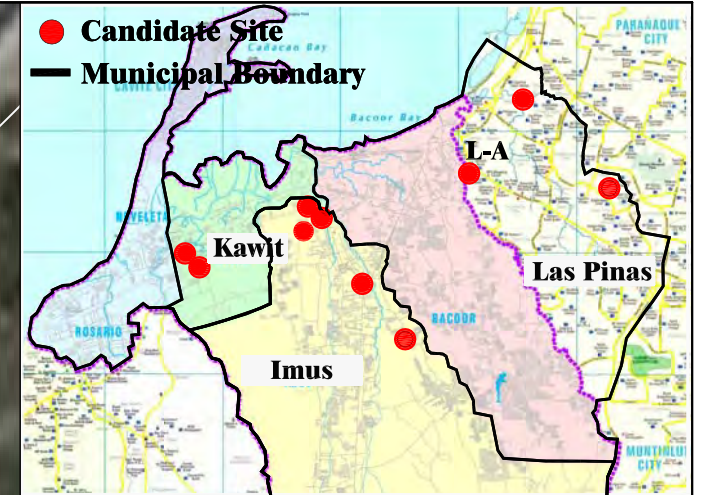
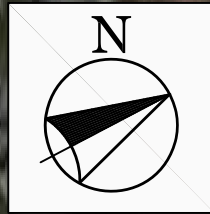
PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	LAS PIÑAS L-A MBBR Q=80,000 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - LP - 1 (1/2)		



LEGEND	
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	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)



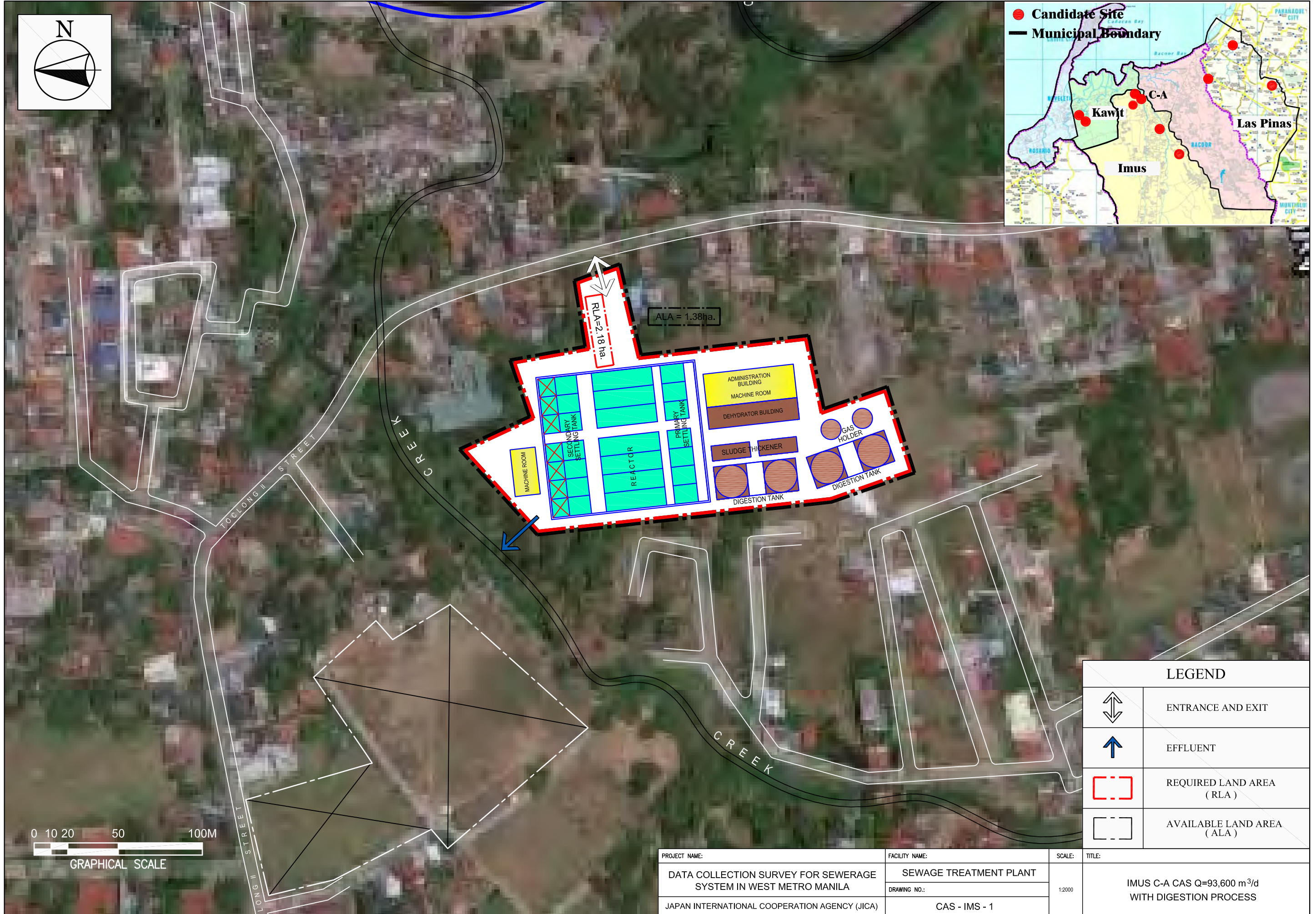
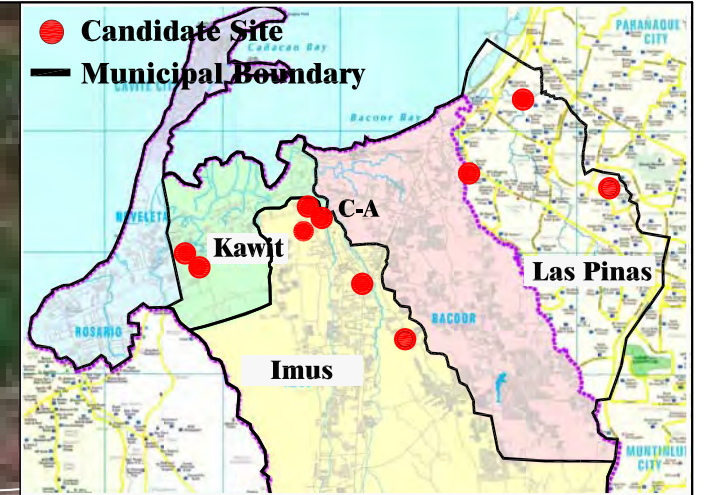
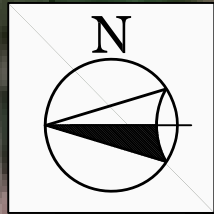
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - LP - 1 (2/2)		



LEGEND	
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	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)



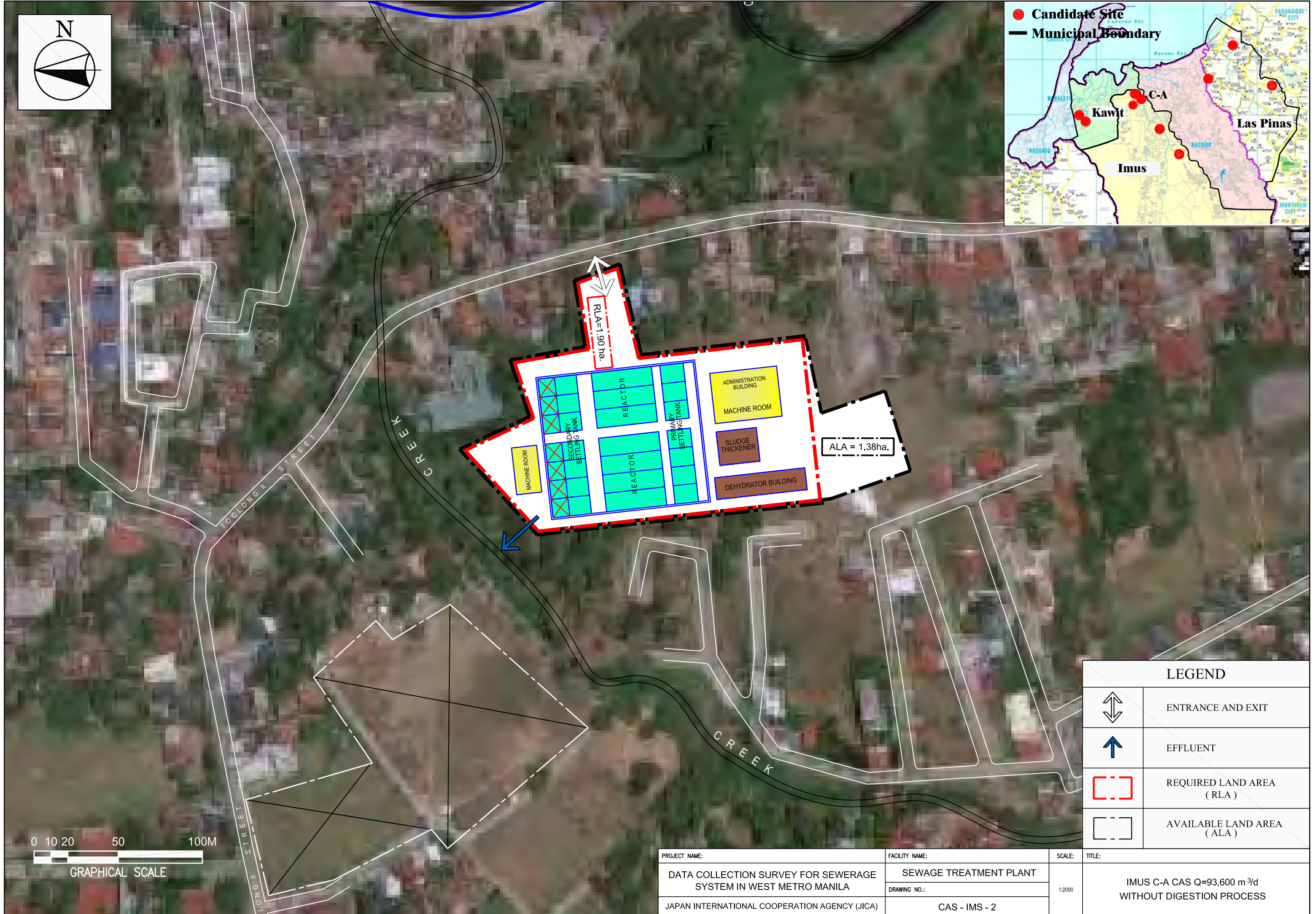
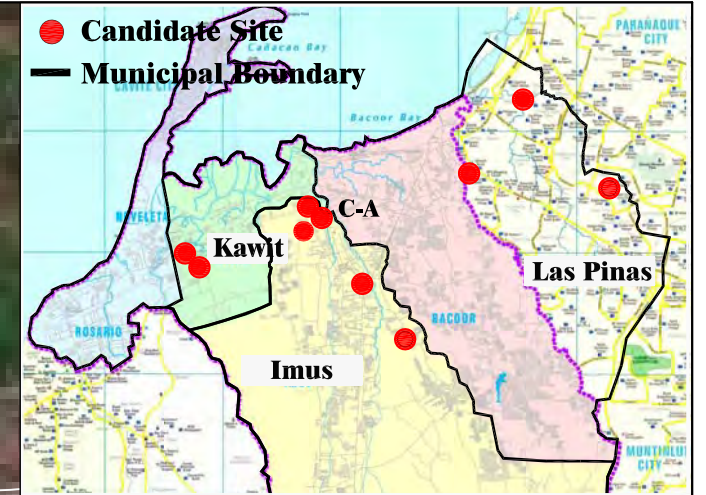
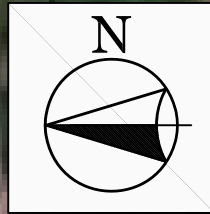
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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - LP - 2		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

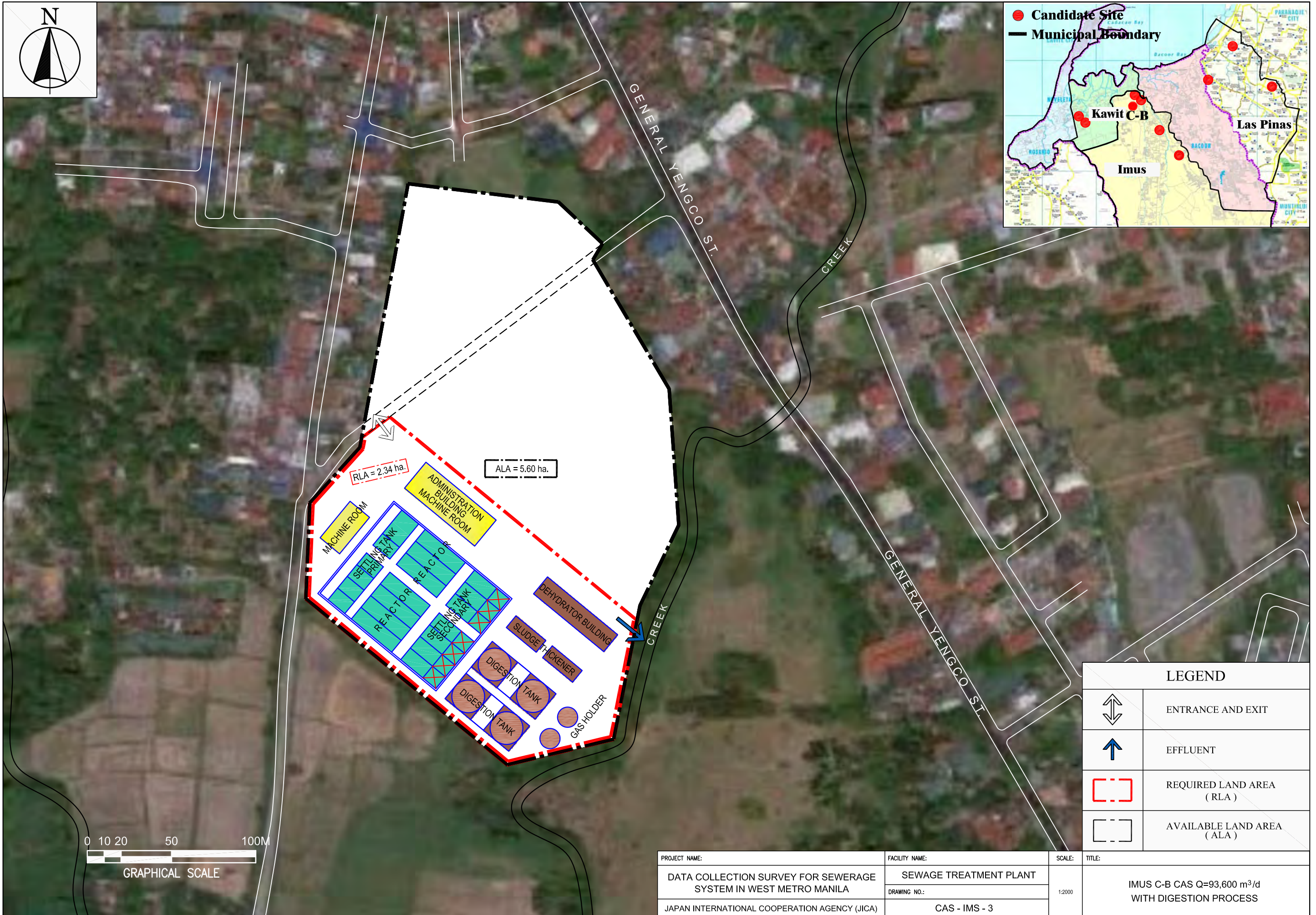
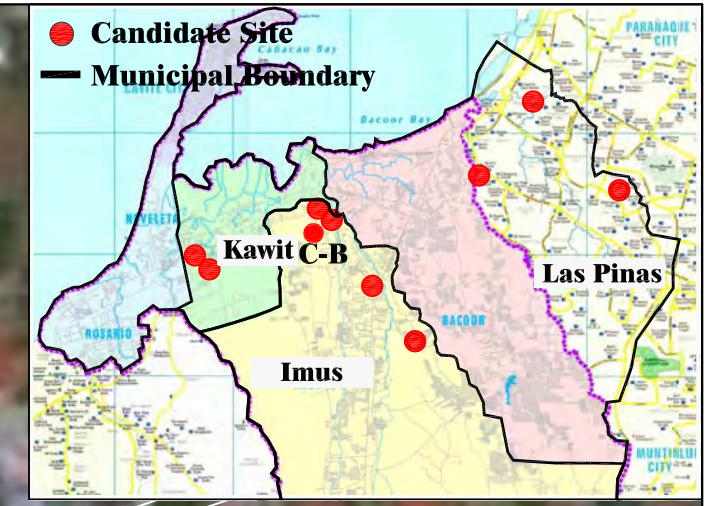
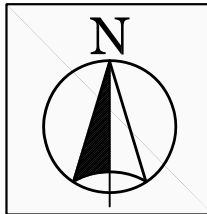


PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-A CAS Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CAS - IMS - 1		



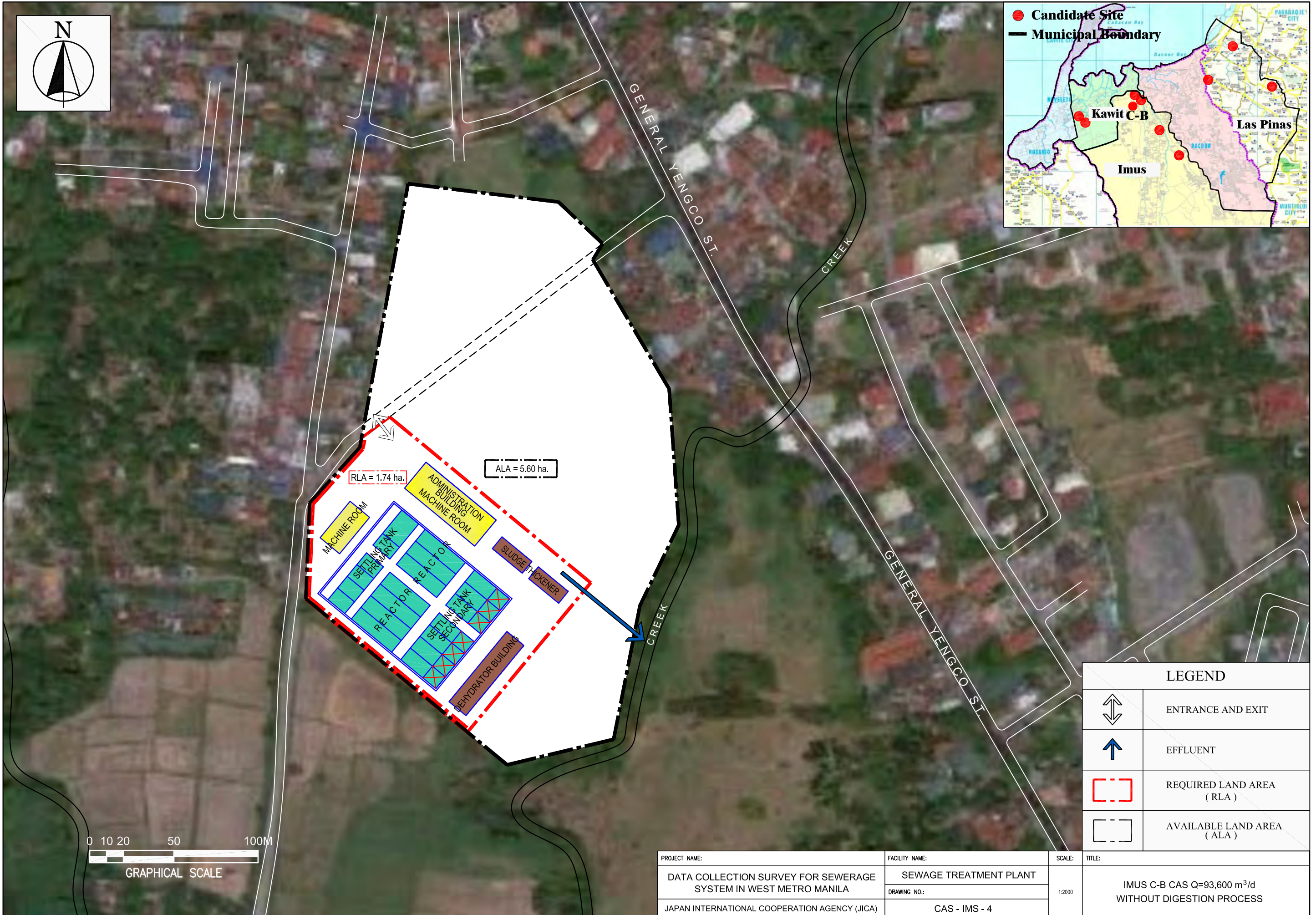
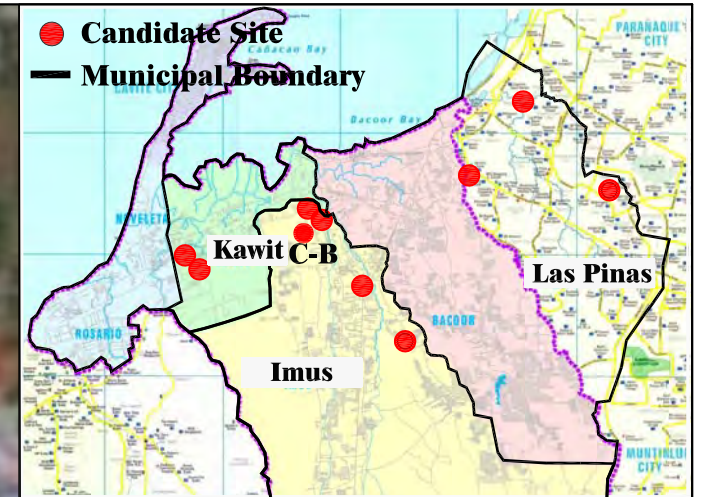
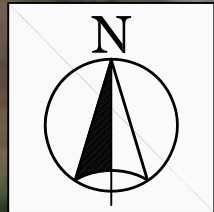
LEGEND	
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	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	12000	IMUS C-A CAS Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CAS - IMS - 2		



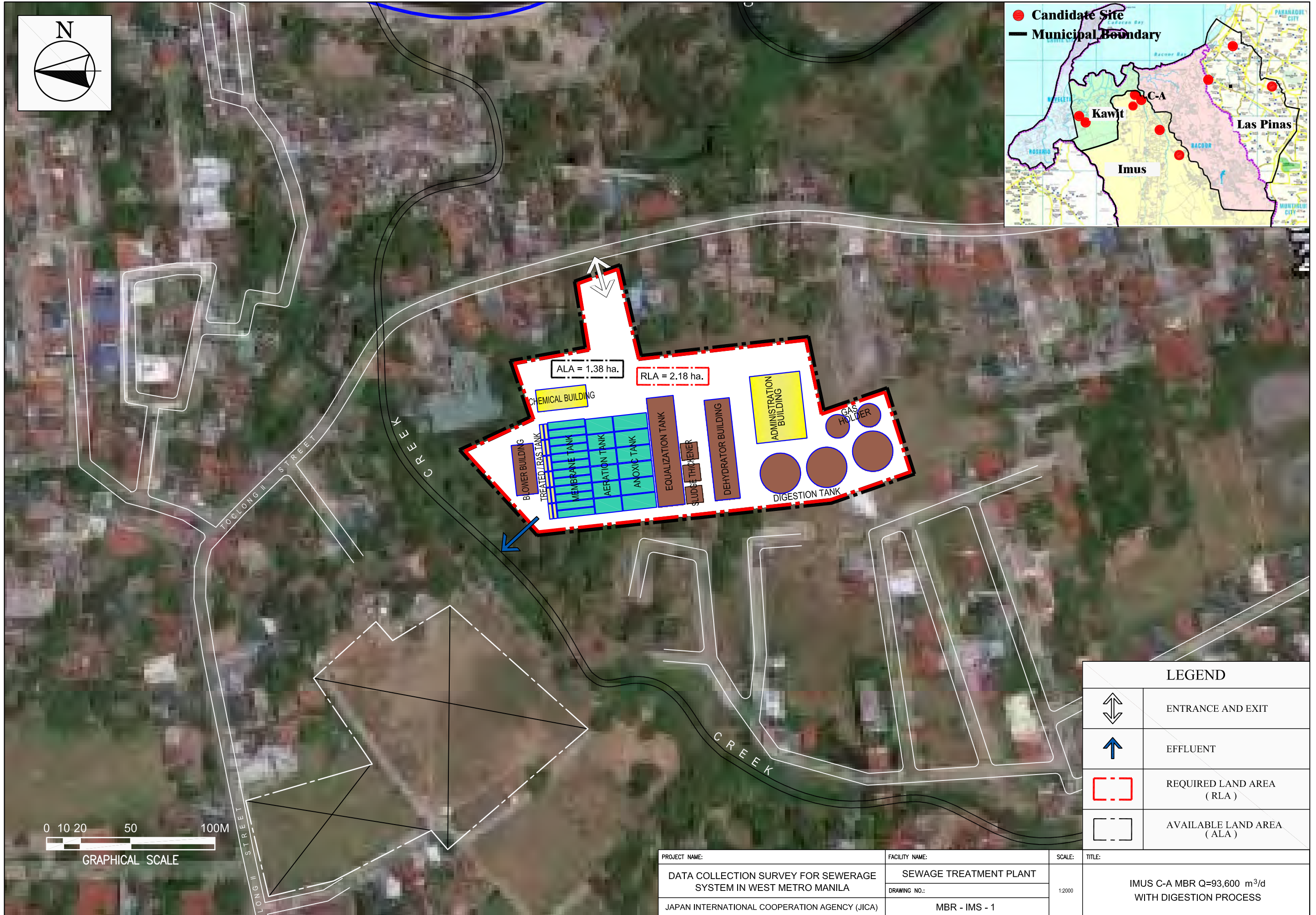
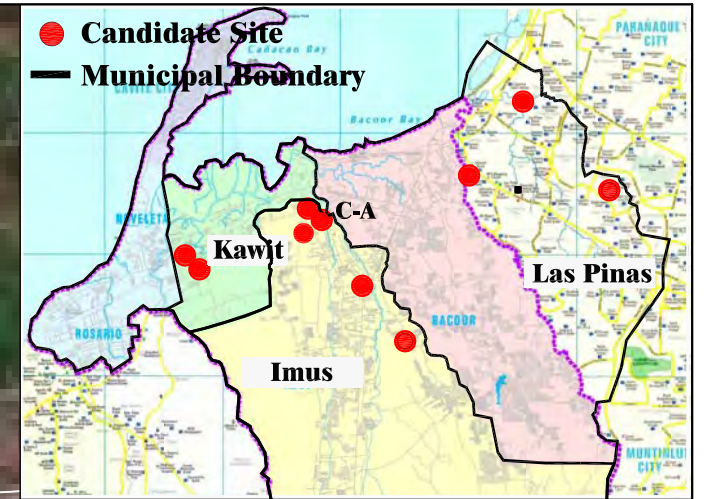
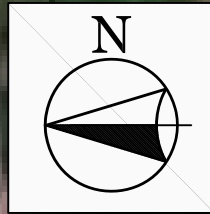
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B CAS Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CAS - IMS - 3		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B CAS Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: CAS - IMS - 4		



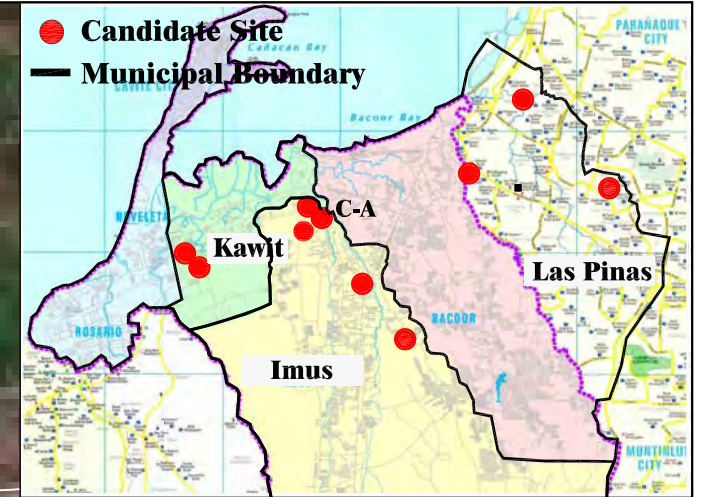
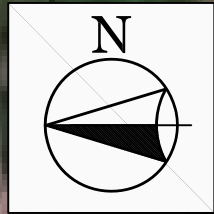
ALA = 1.38 ha.

RLA = 2.18 ha.

LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

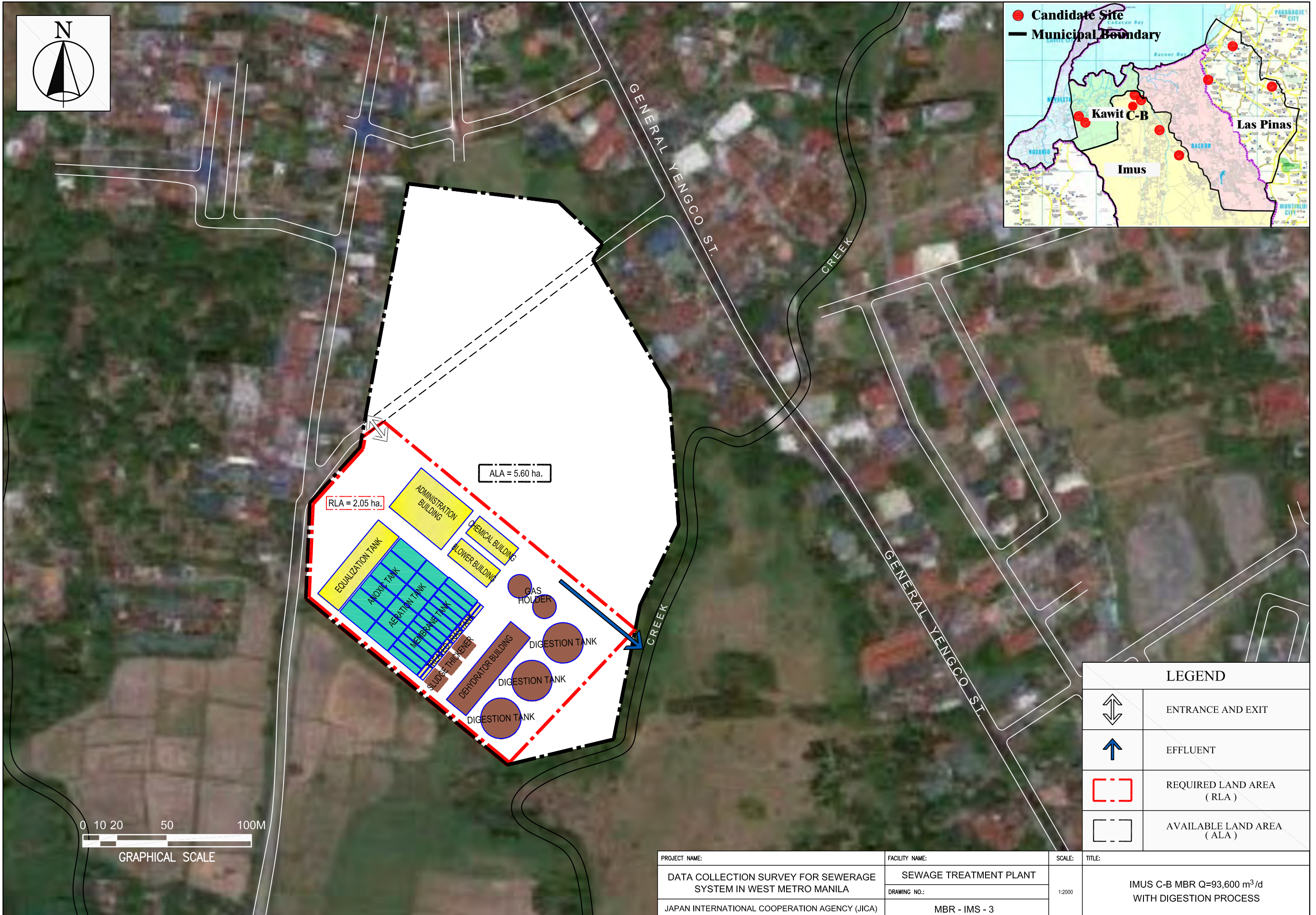
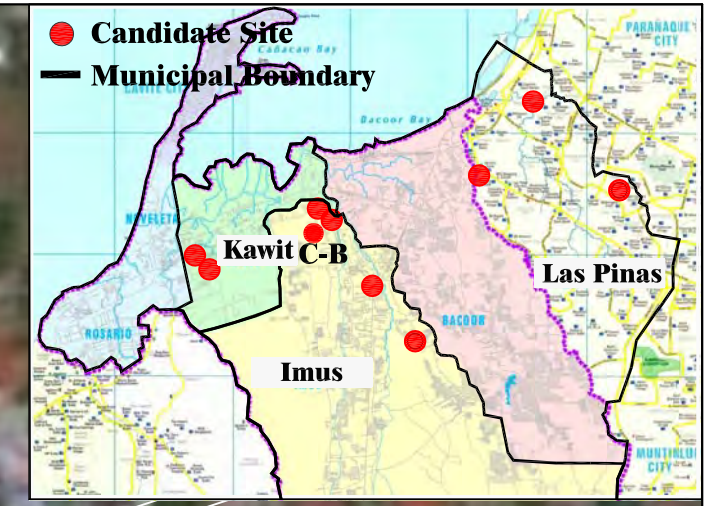
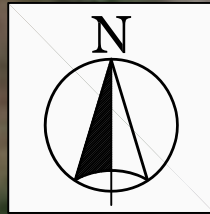


PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	IMUS C-A MBR Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBR - IMS - 1		



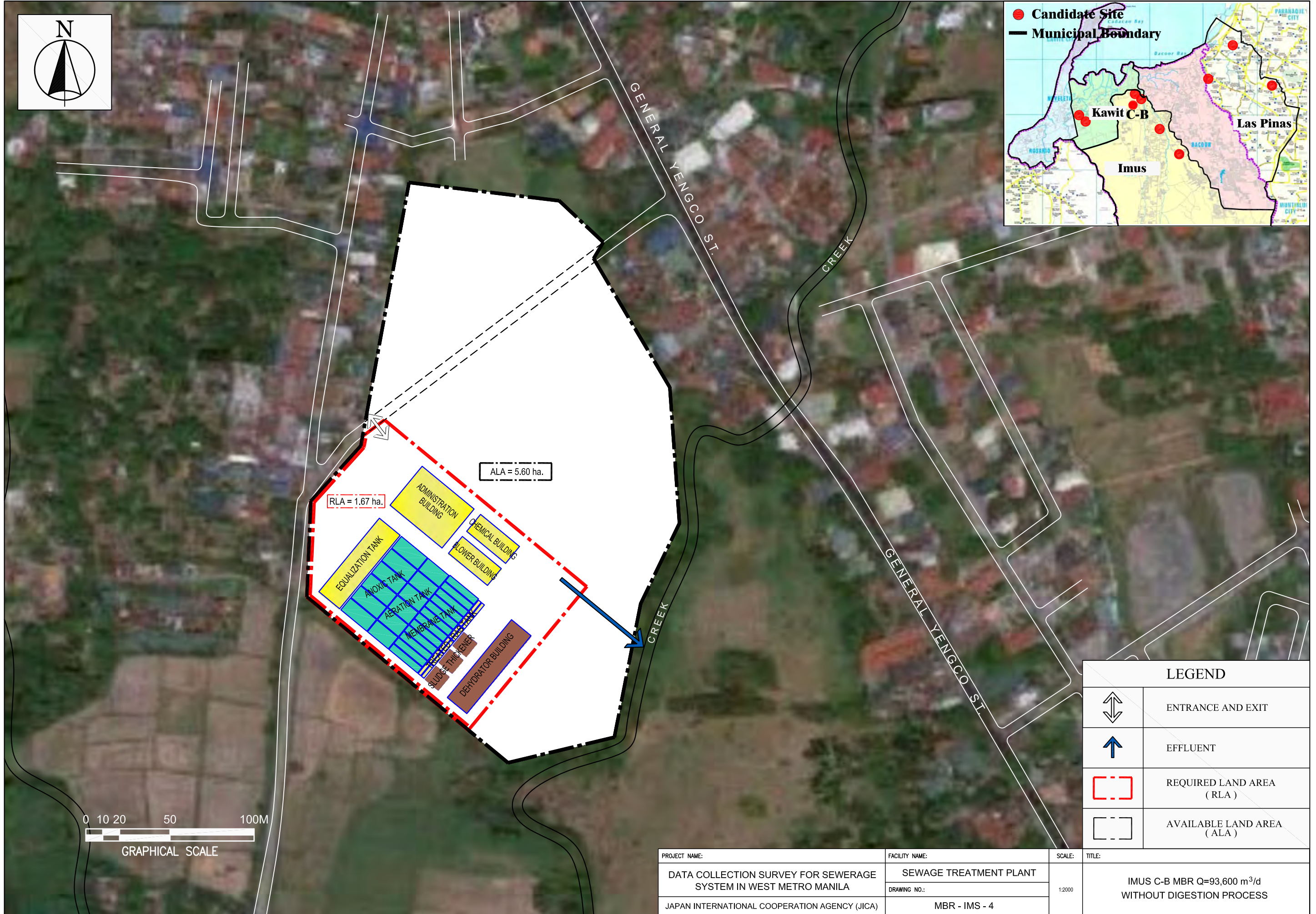
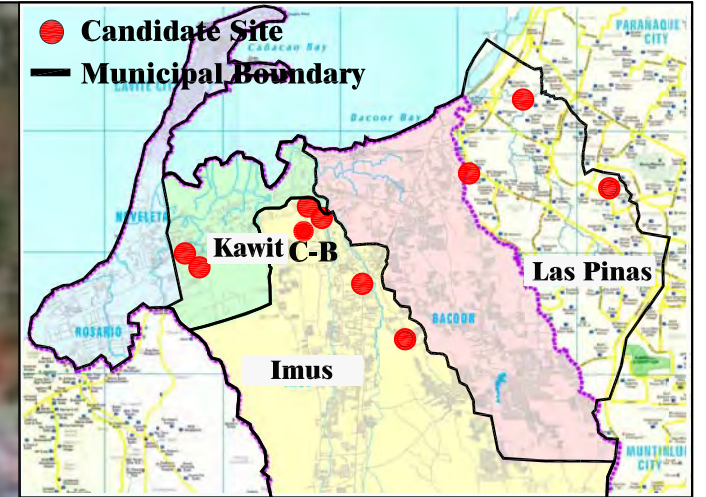
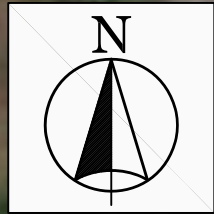
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	12000	IMUS C-A MBR Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: MBR - IMS - 2		



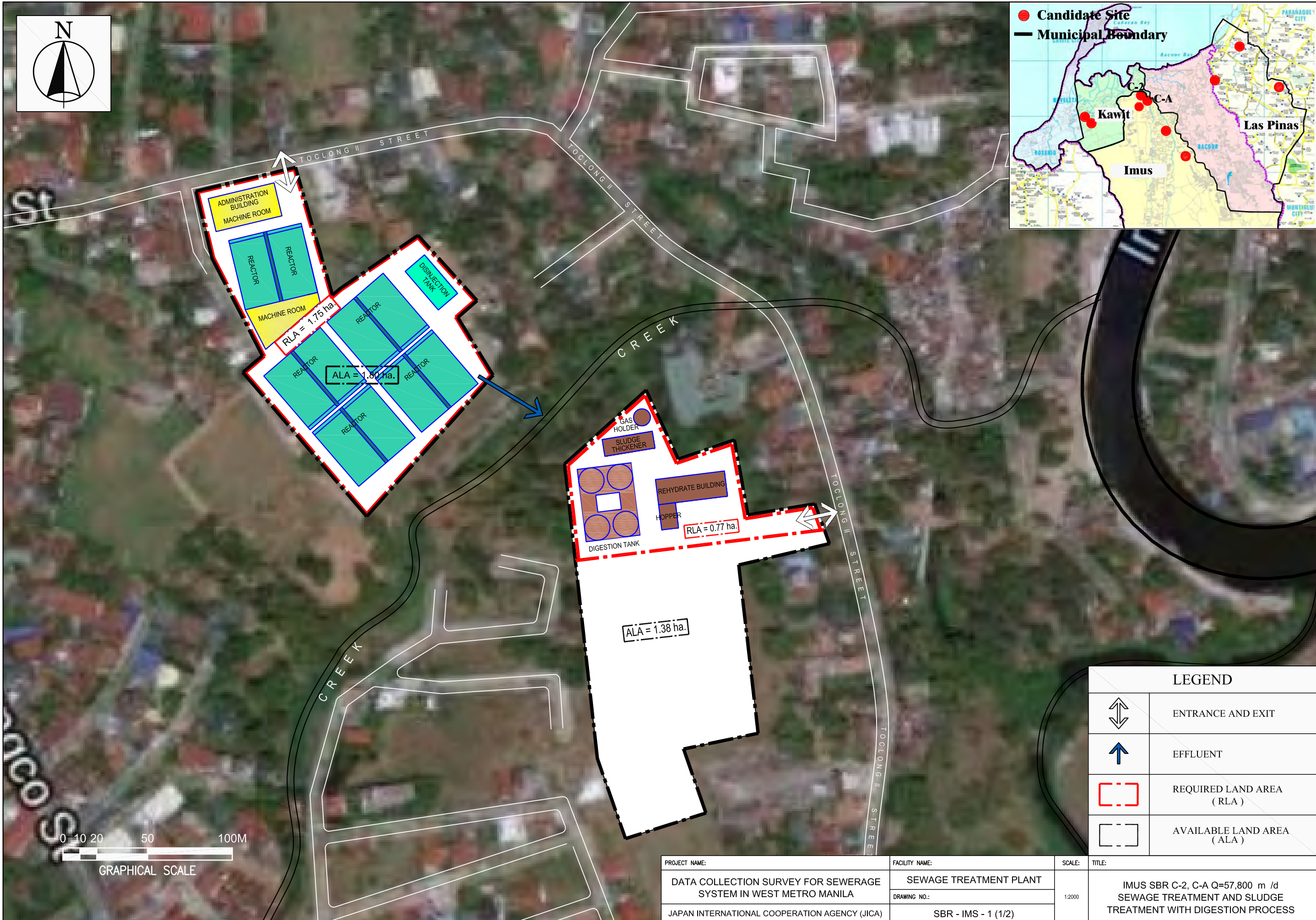
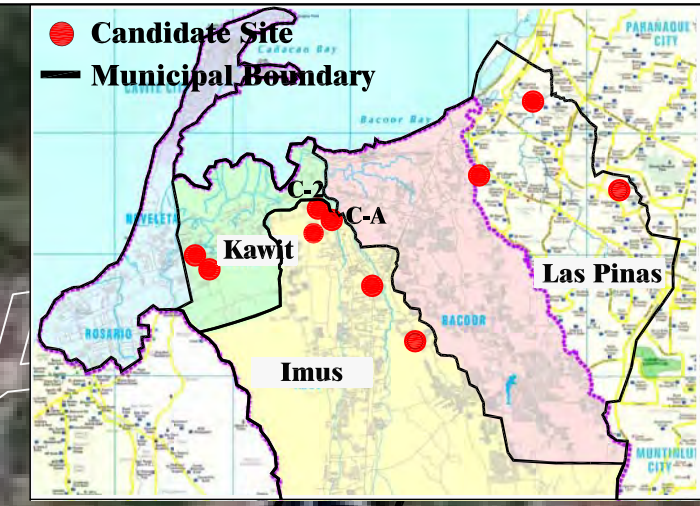
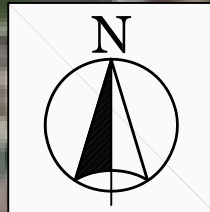
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B MBR Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBR - IMS - 3		



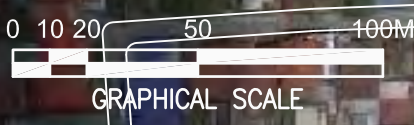
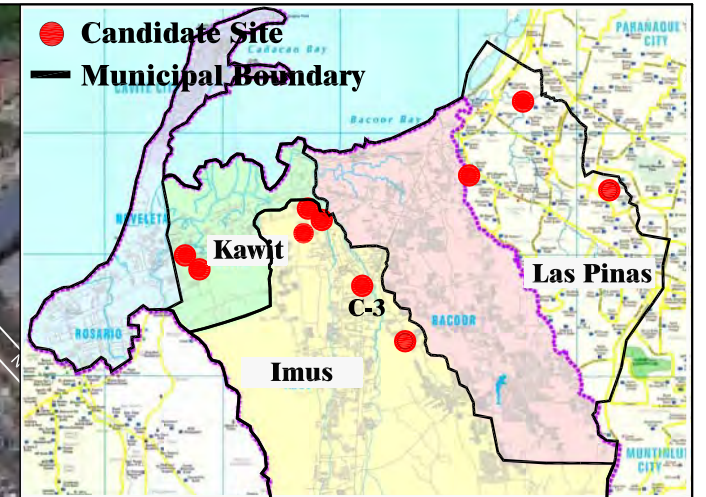
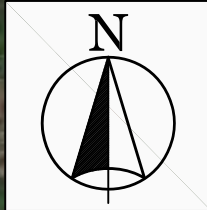
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B MBR Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: MBR - IMS - 4		



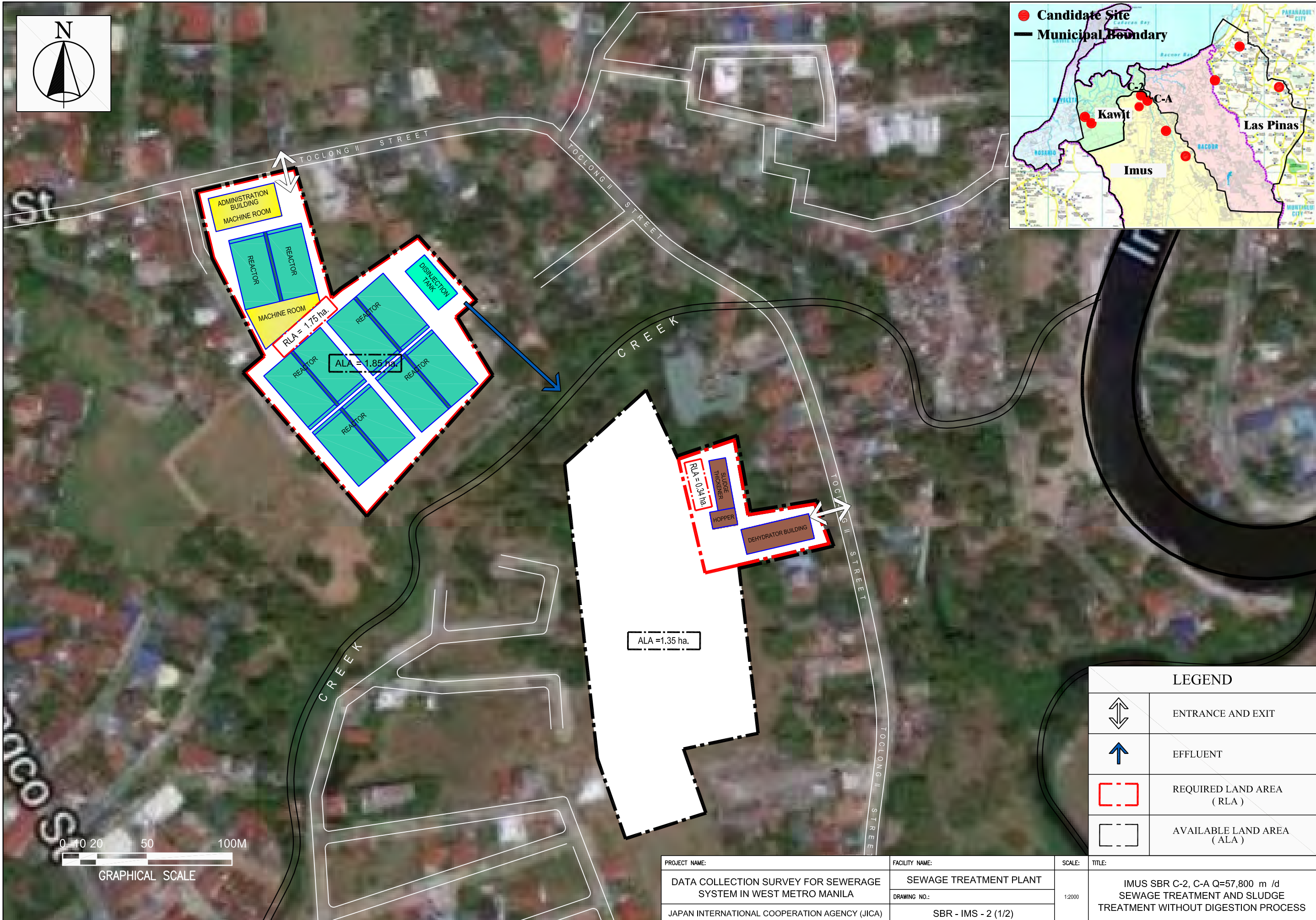
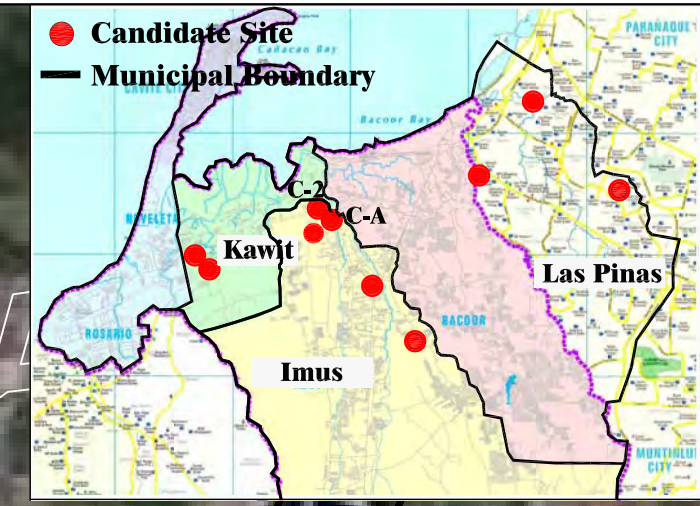
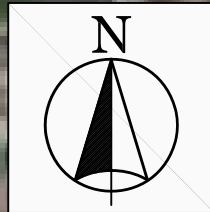
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS SBR C-2, C-A Q=57,800 m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	SBR - IMS - 1 (1/2)		

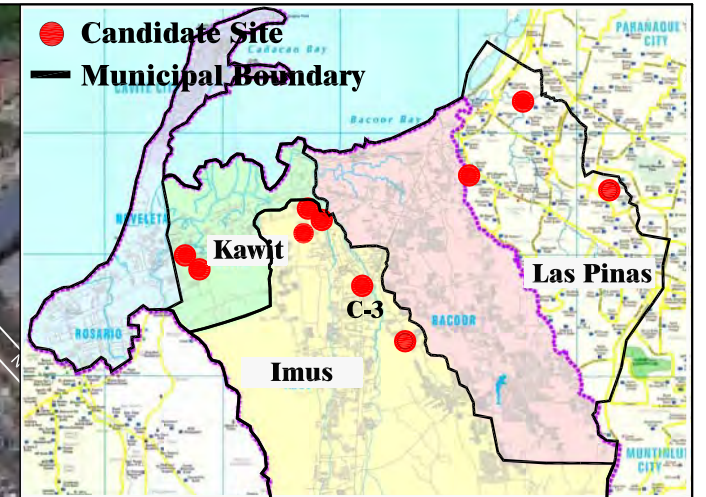
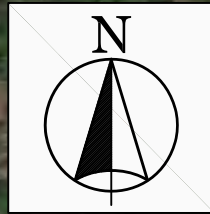


LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 SBR Q=35,800 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - IMS - 1 (2/2)		

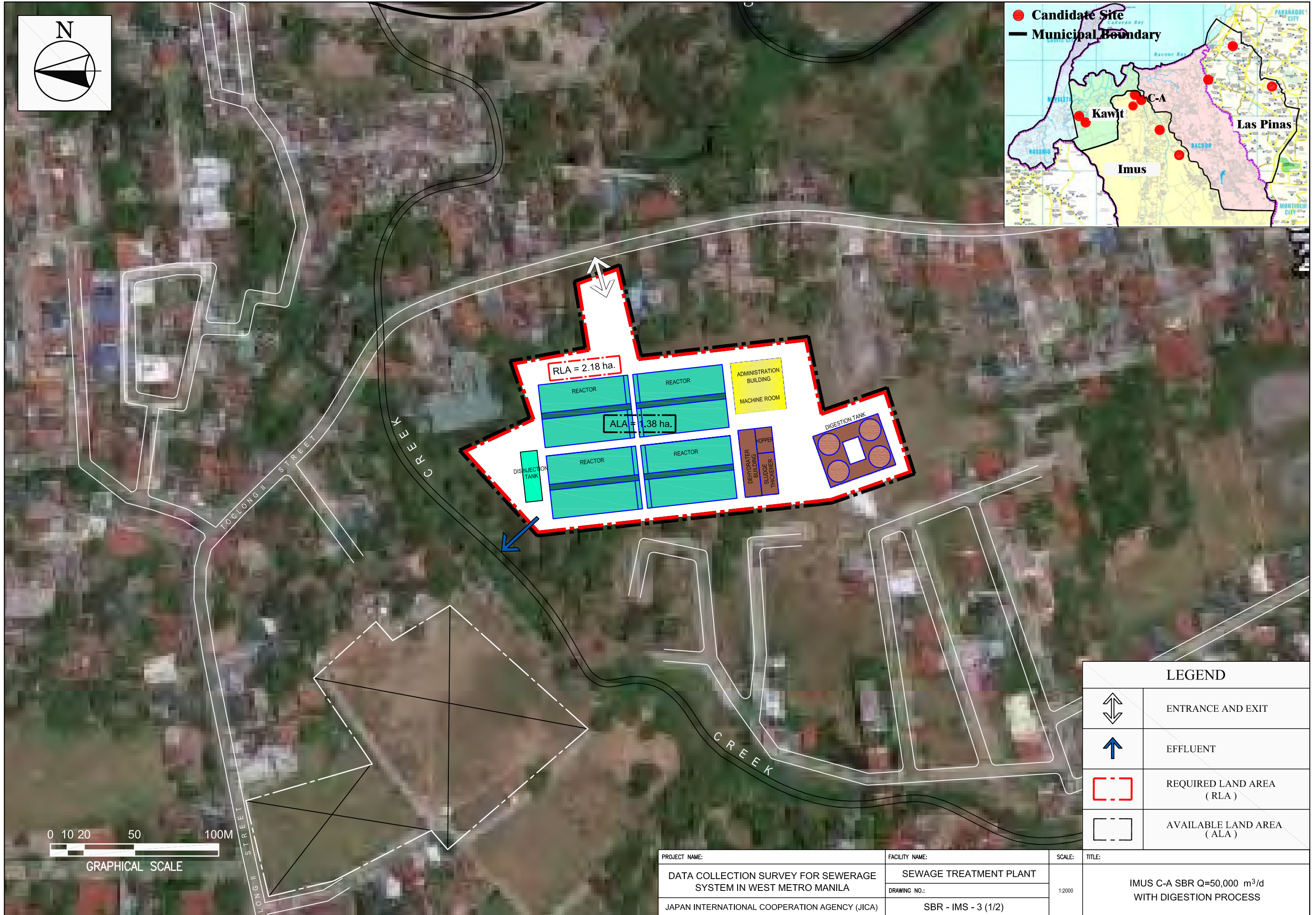
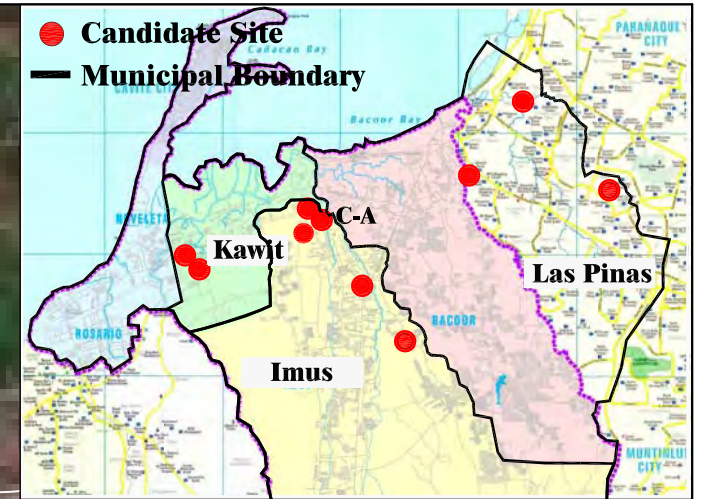
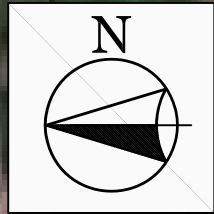


PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS SBR C-2, C-A Q=57,800 m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - IMS - 2 (1/2)		



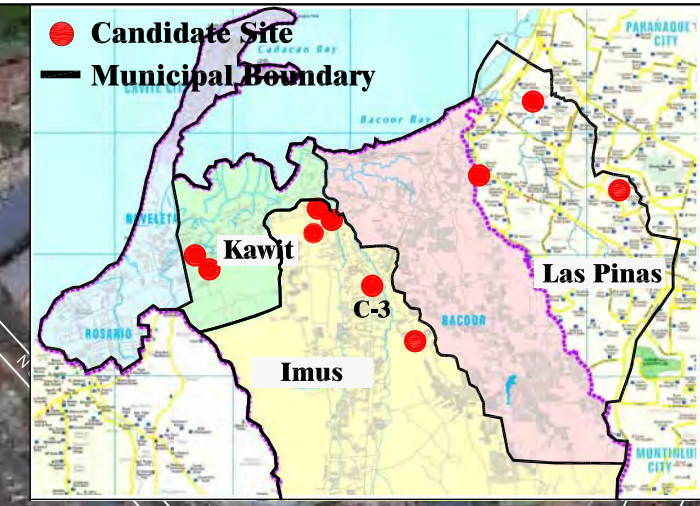
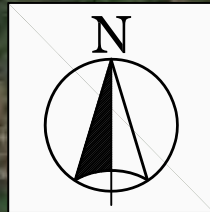
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 SBR Q=35,800 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: SBR -IMS 2 (2/2)		



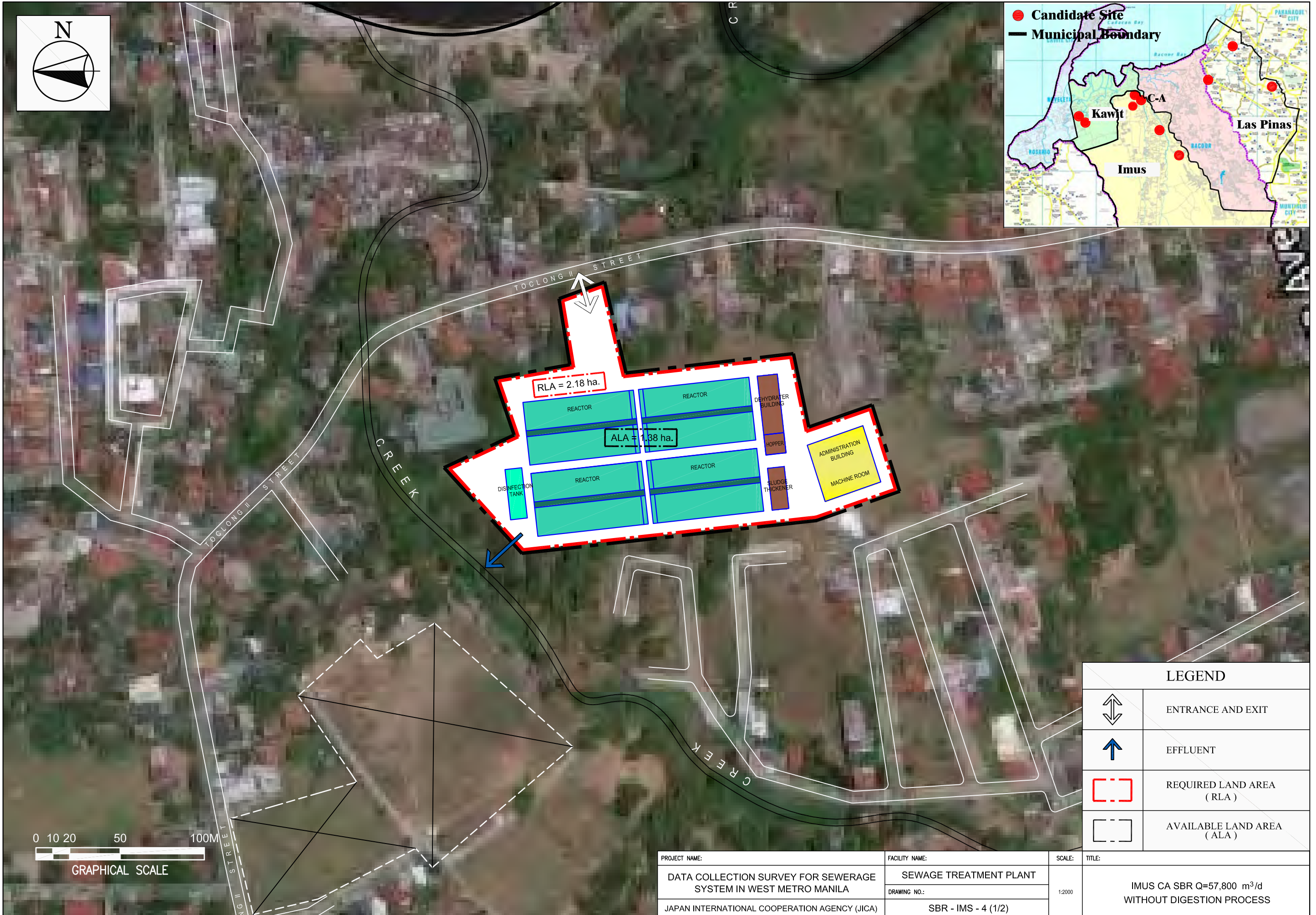
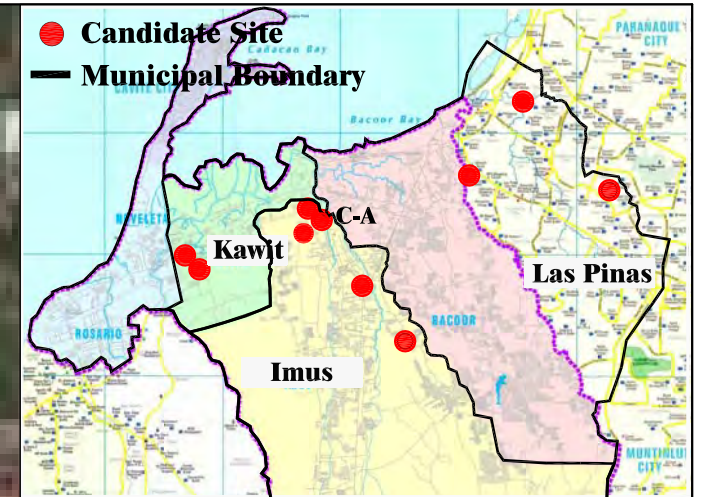
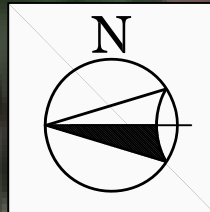
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-A SBR Q=50,000 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	SBR - IMS - 3 (1/2)		



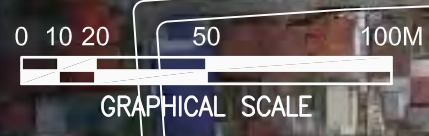
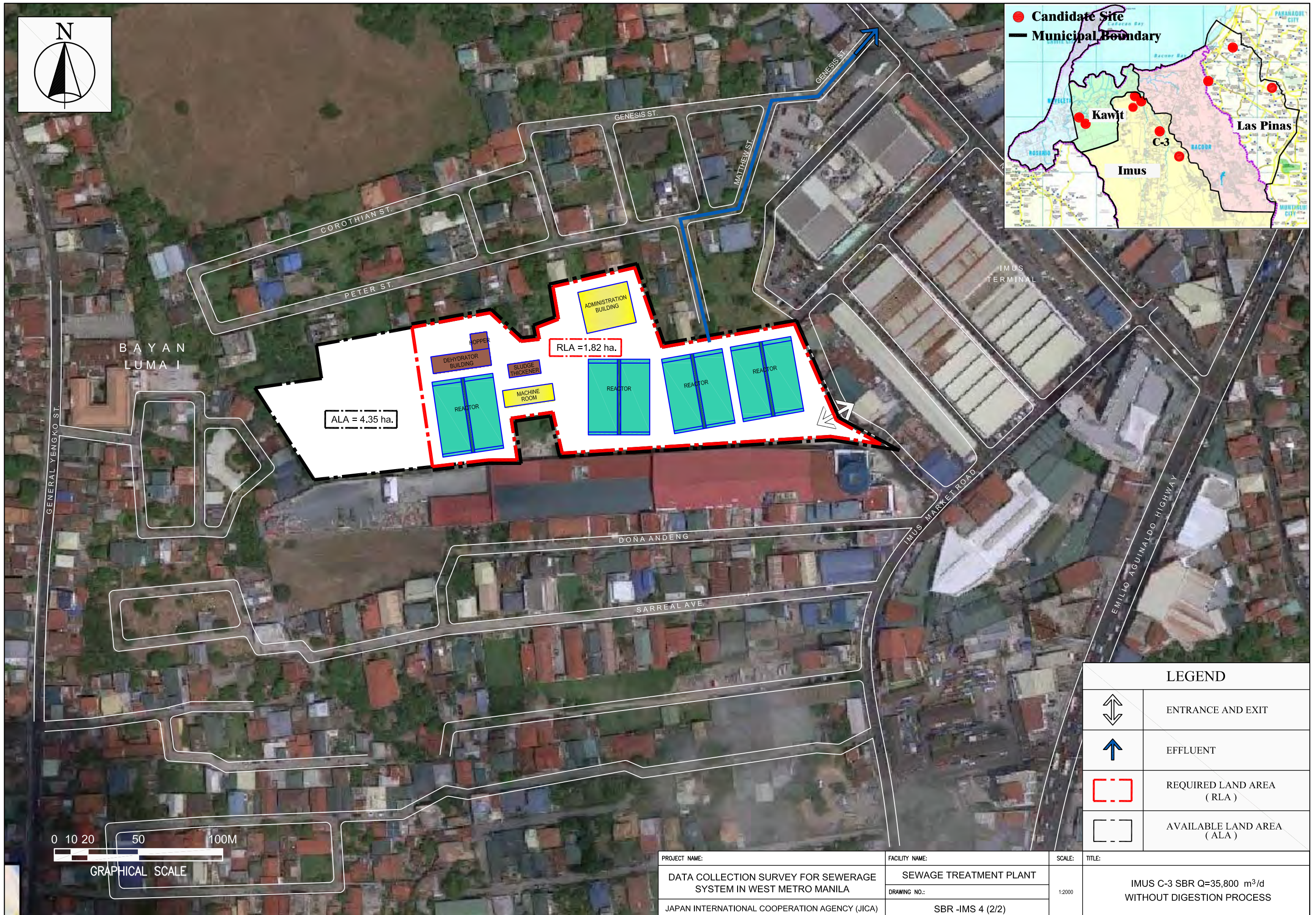
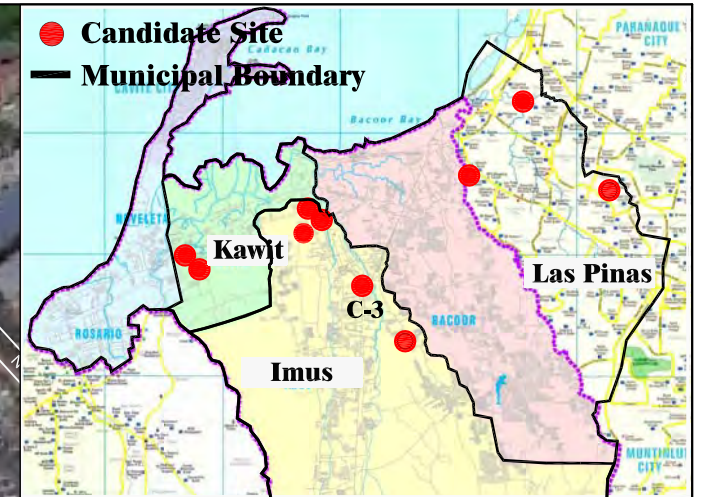
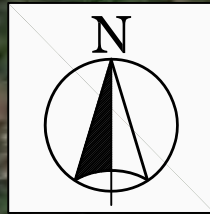
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 SBR Q=43,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - IMS - 3 (2/2)		



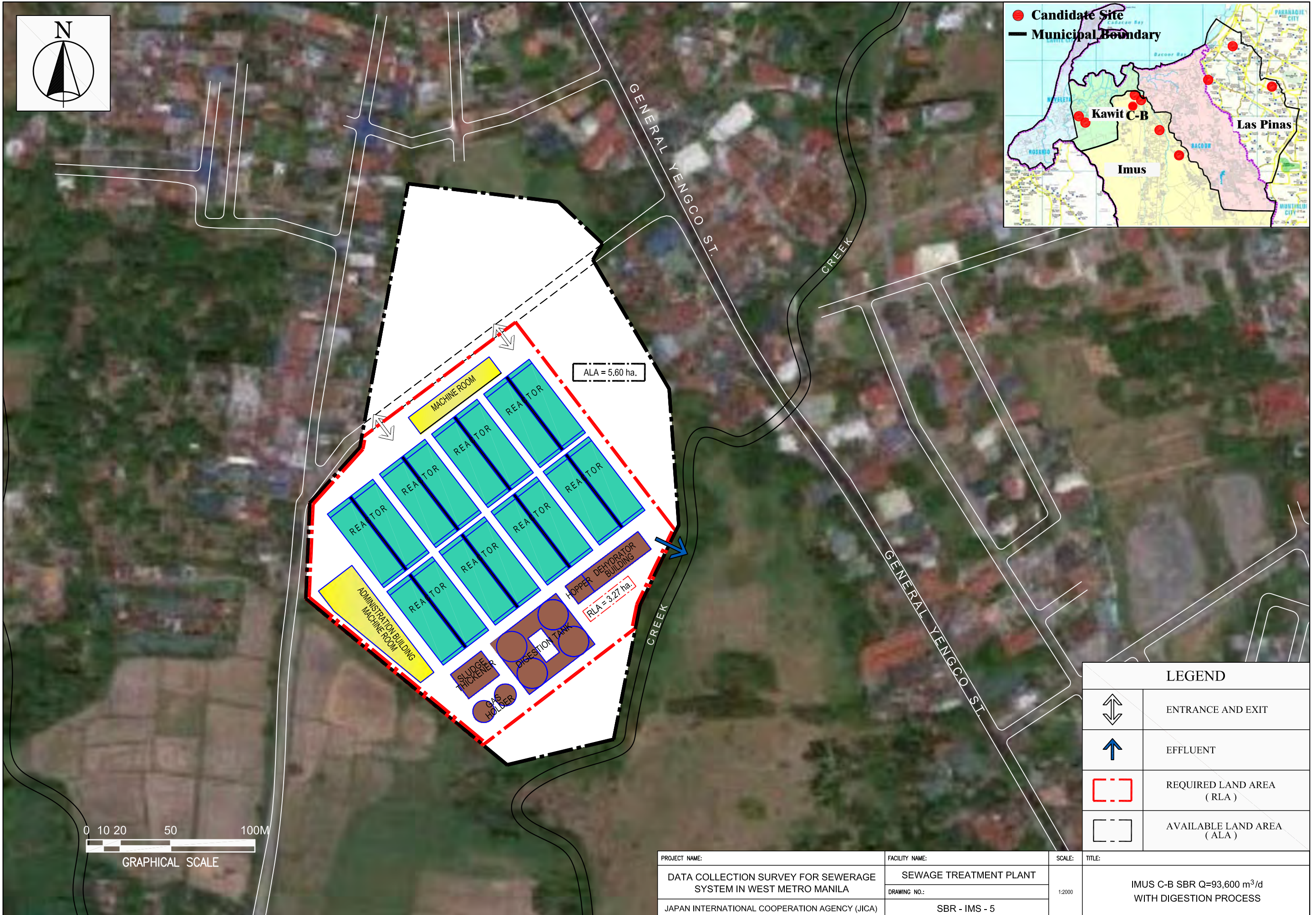
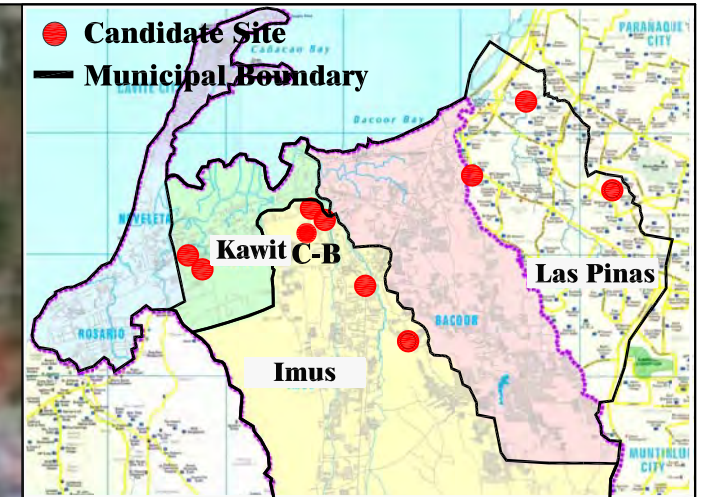
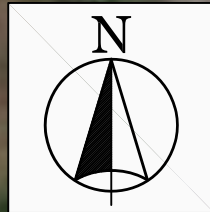
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS CA SBR Q=57,800 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	SBR - IMS - 4 (1/2)		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 SBR Q=35,800 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR -IMS 4 (2/2)		

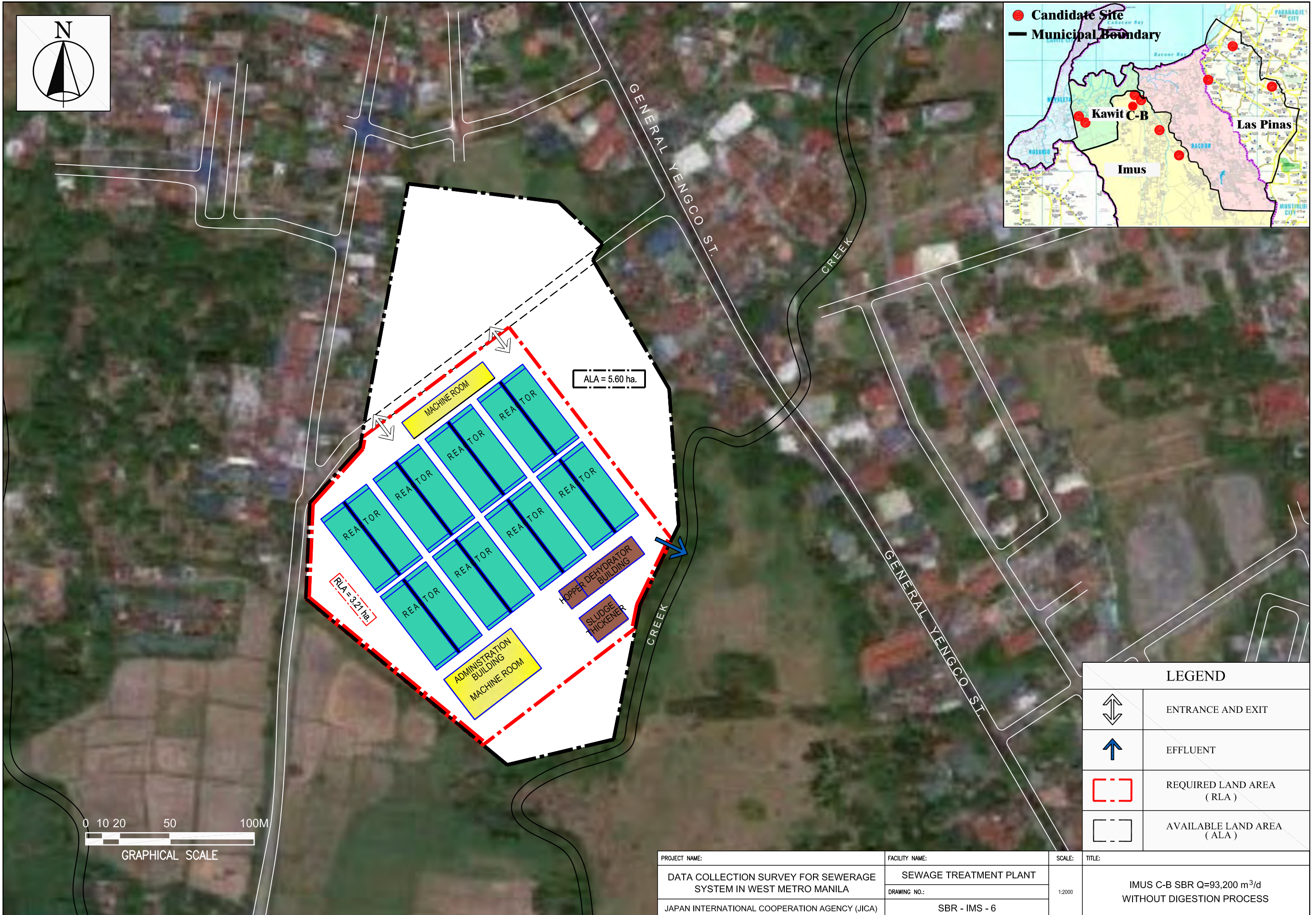
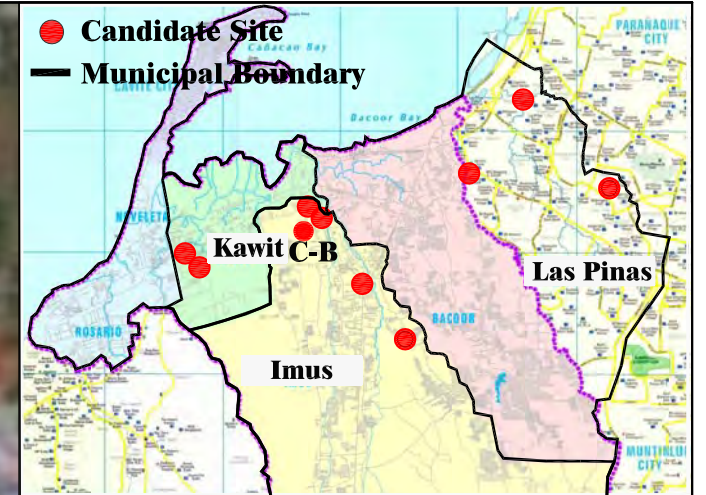
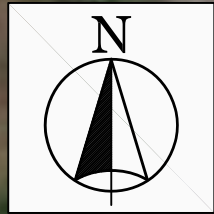


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GRAPHICAL SCALE

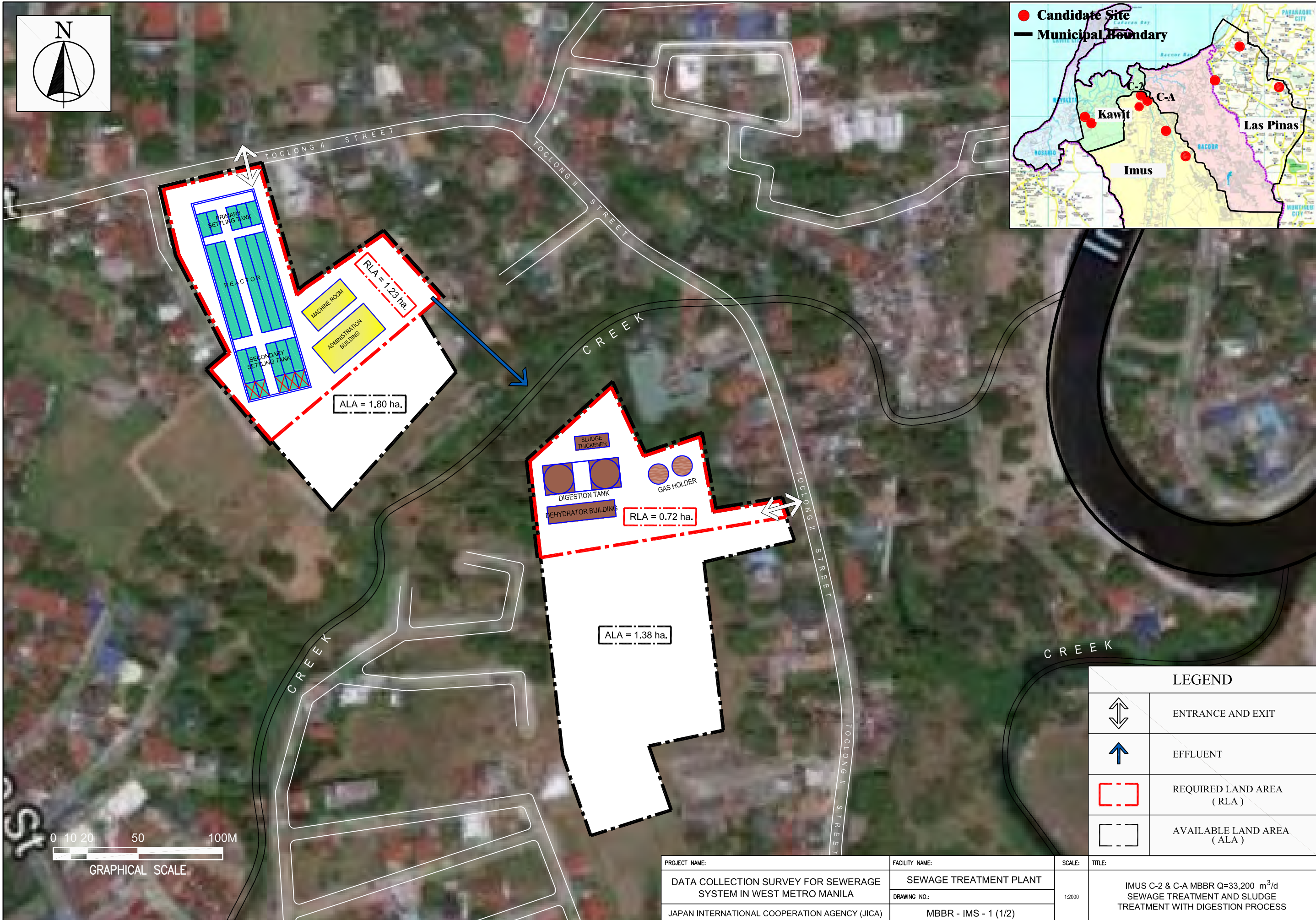
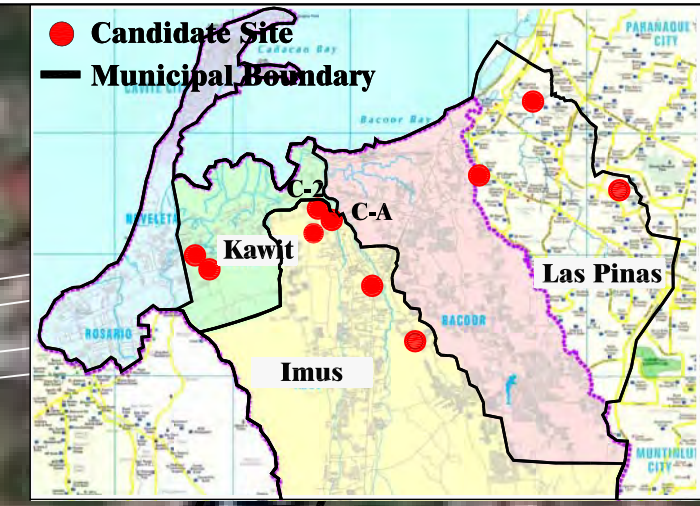
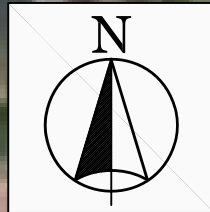
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B SBR Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - IMS - 5		



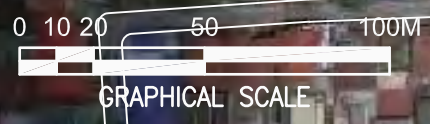
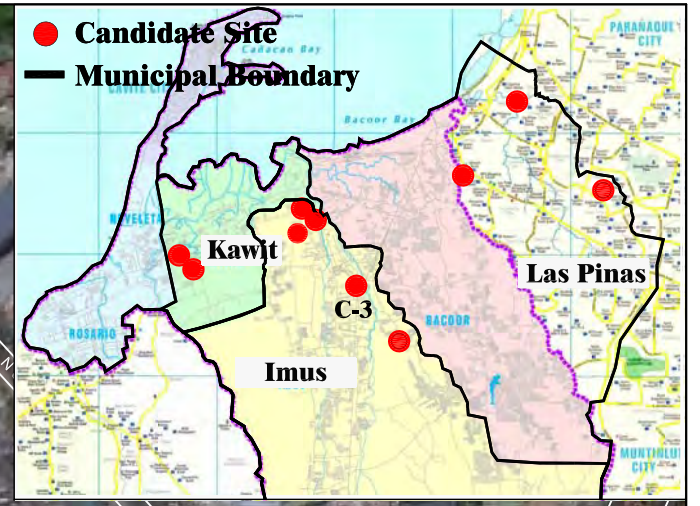
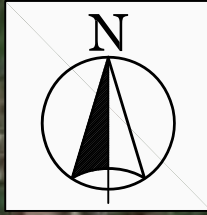
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B SBR Q=93,200 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.: SBR - IMS - 6		



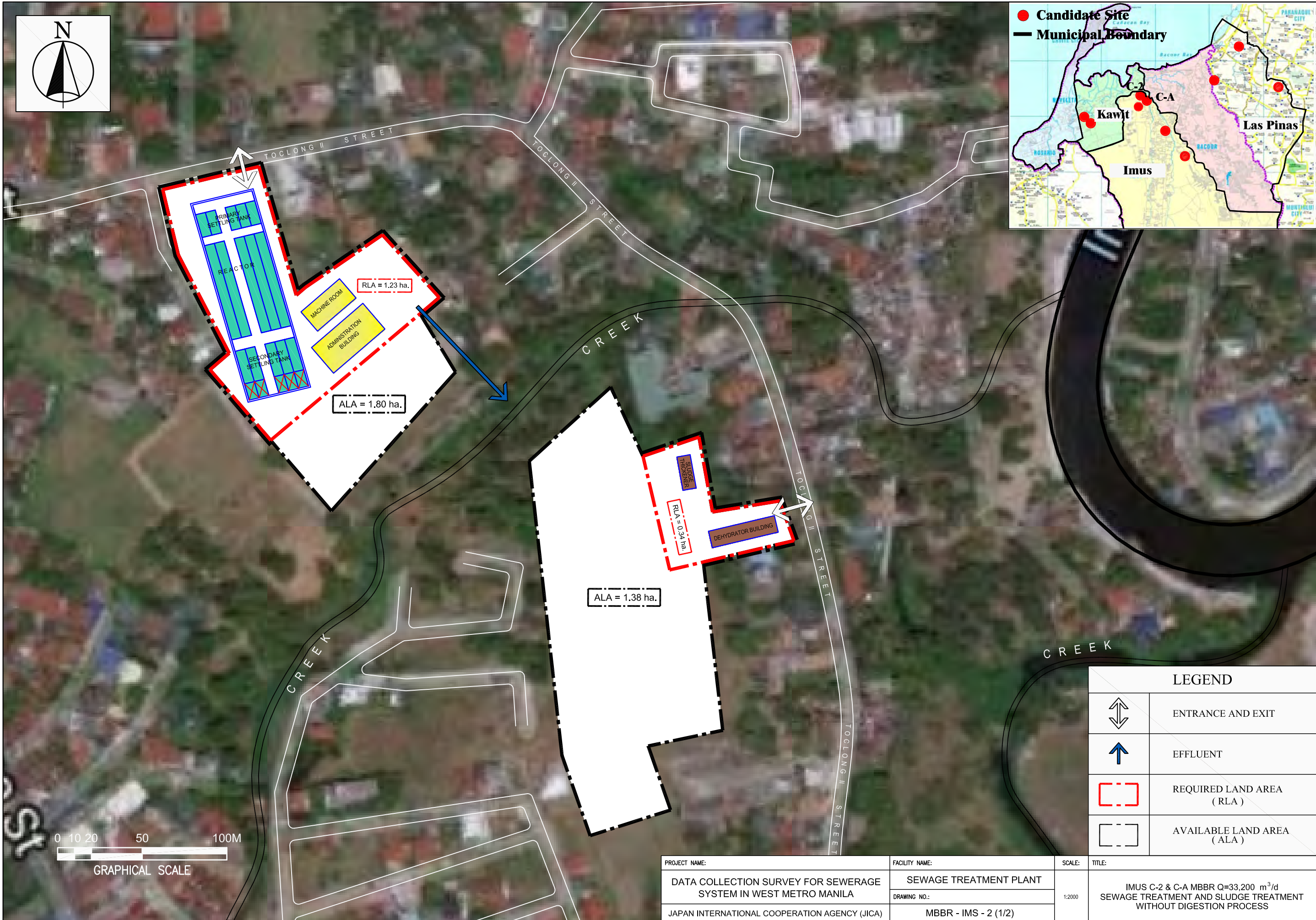
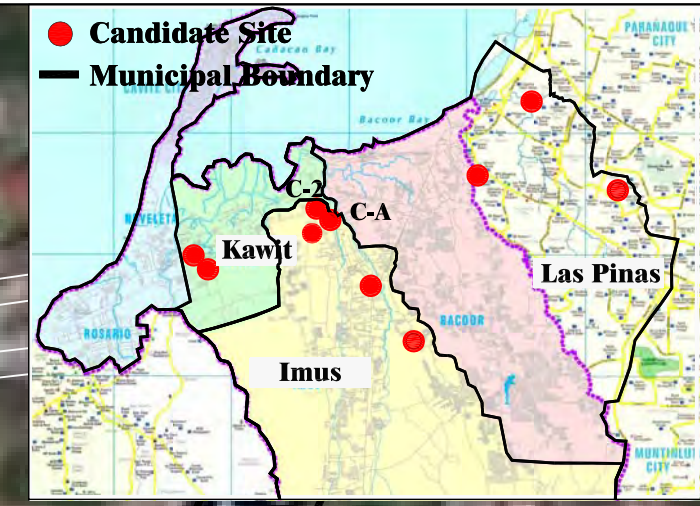
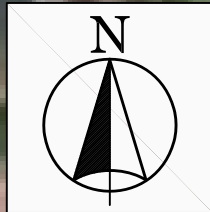
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-2 & C-A MBBR Q=33,200 m ³ /d SEWAGE TREATMENT AND SLUDGE TREATMENT WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 1 (1/2)		



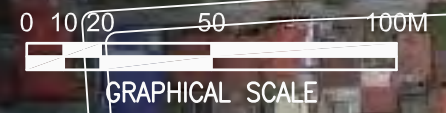
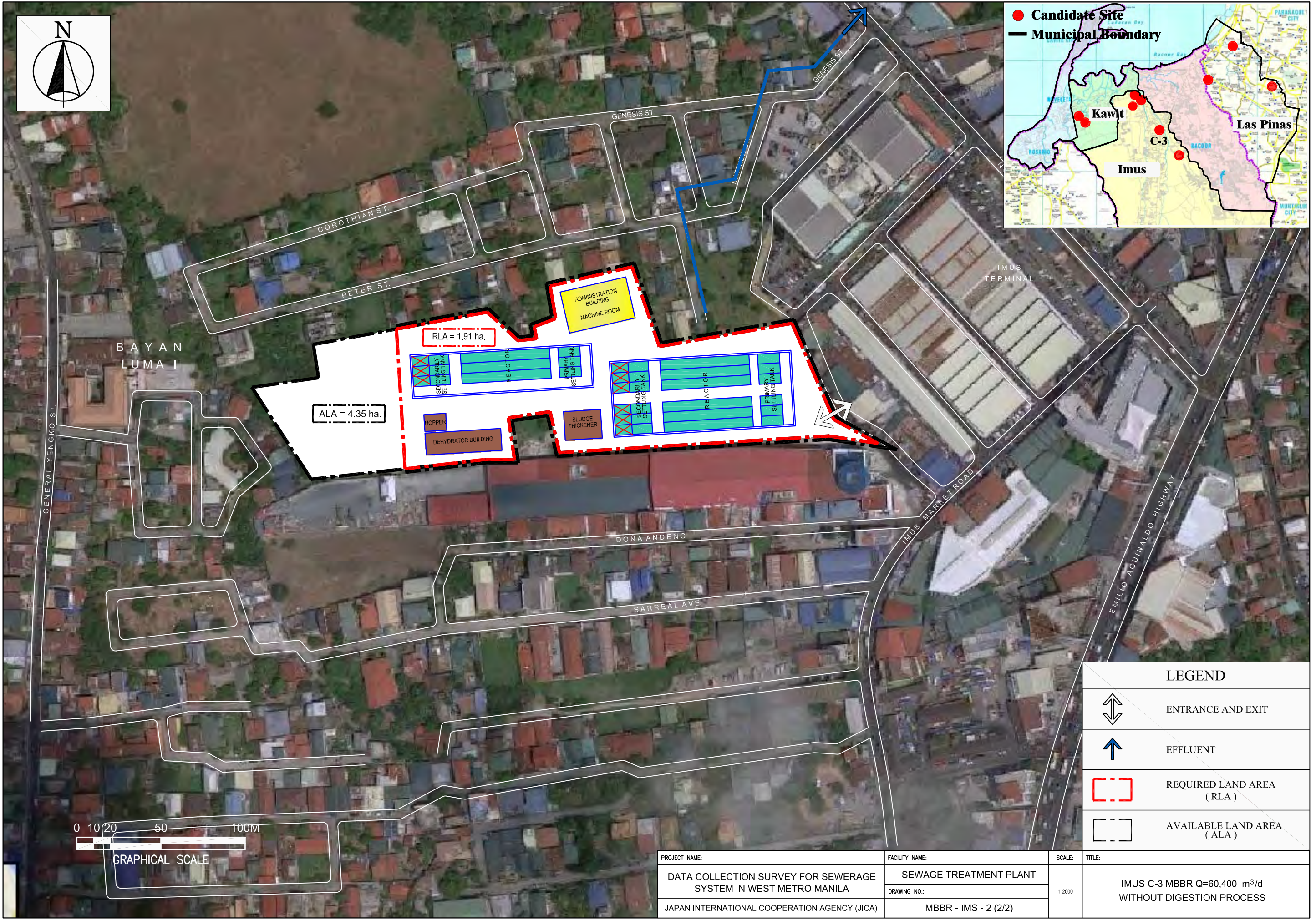
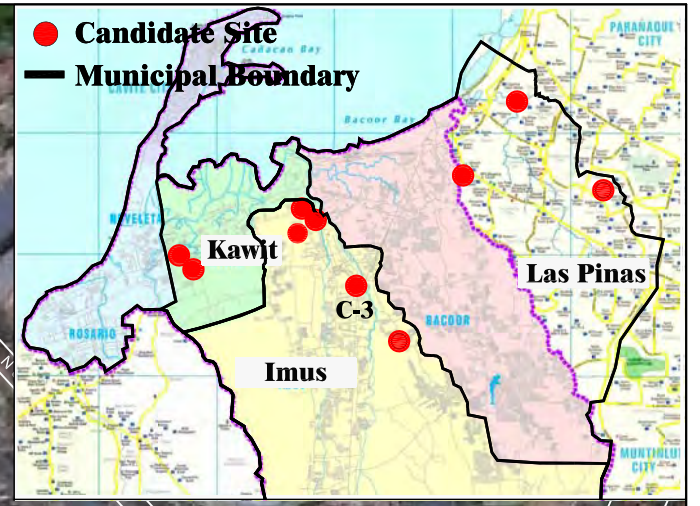
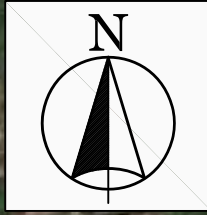
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	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	IMUS C-3 MBBR Q=60,400 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - IMS - 1 (2/2)		



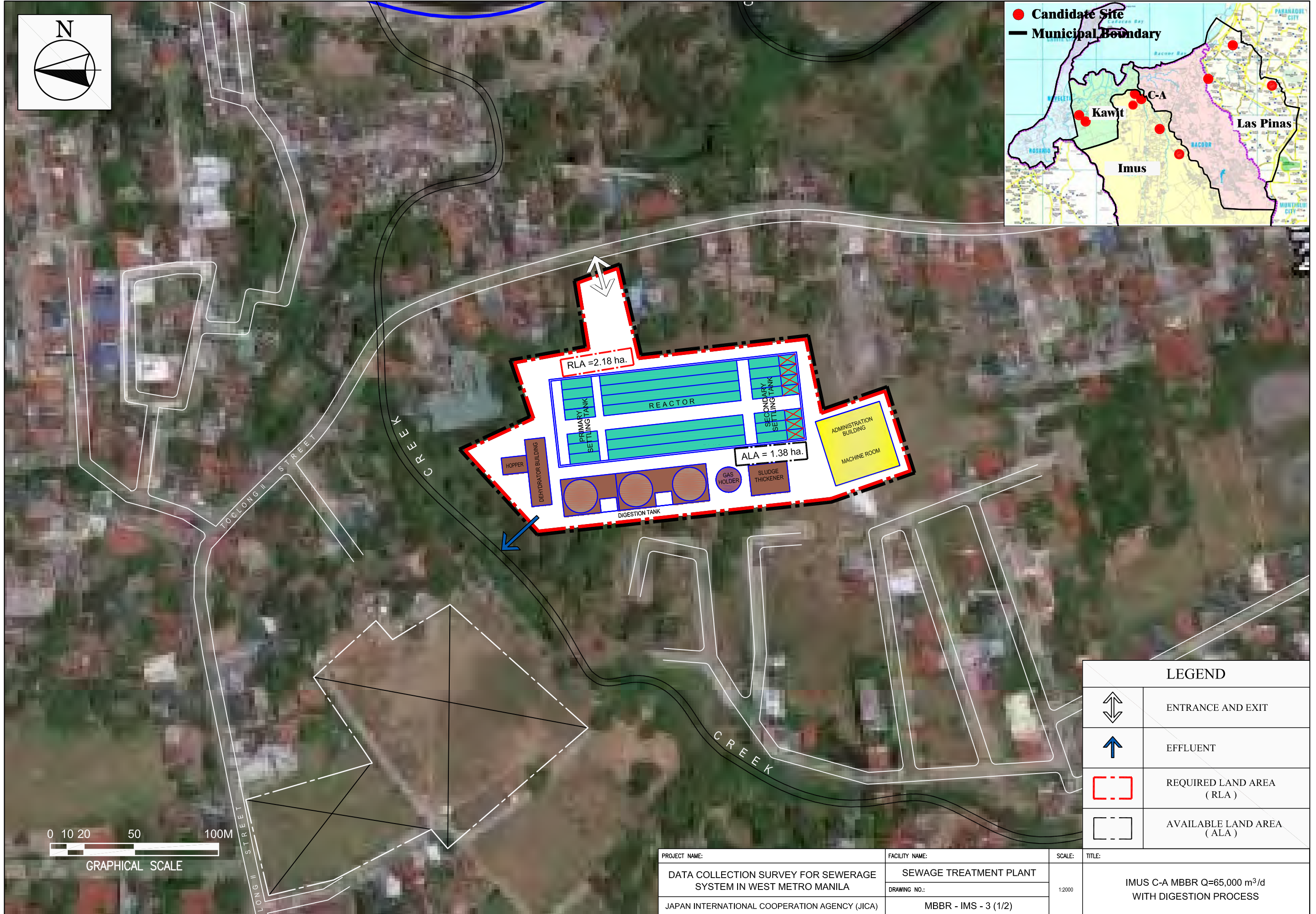
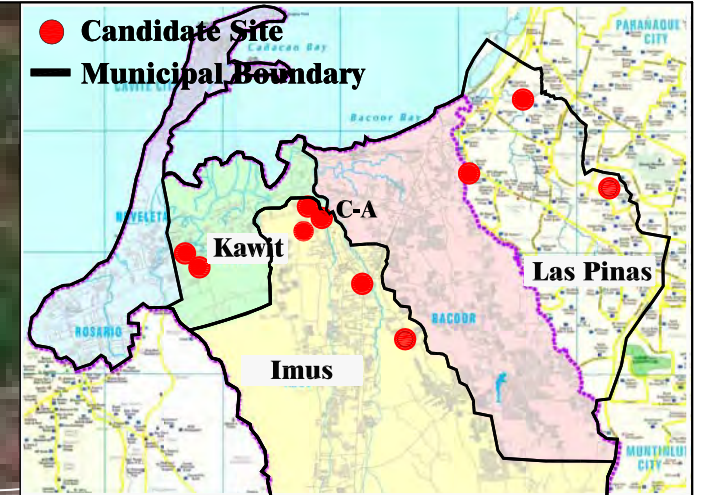
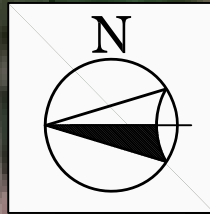
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	IMUS C-2 & C-A MBBR Q=33,200 m ³ /d SEWERAGE TREATMENT AND SLUDGE TREATMENT WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - IMS - 2 (1/2)		



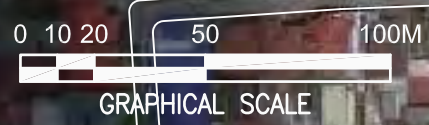
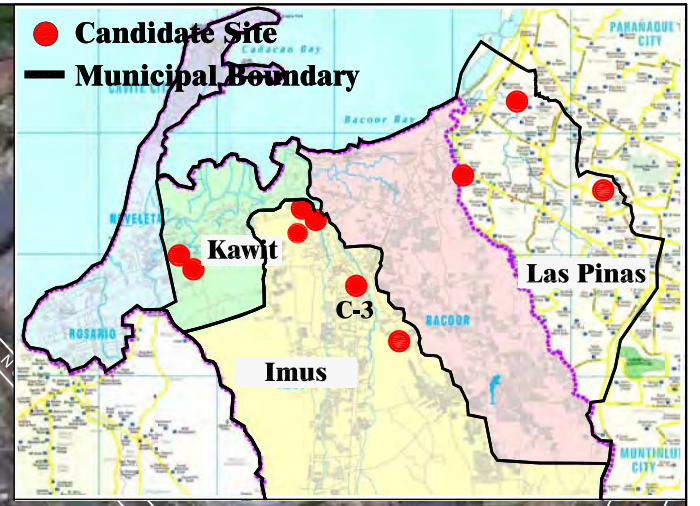
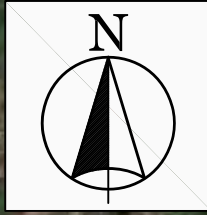
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 MBBR Q=60,400 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 2 (2/2)		



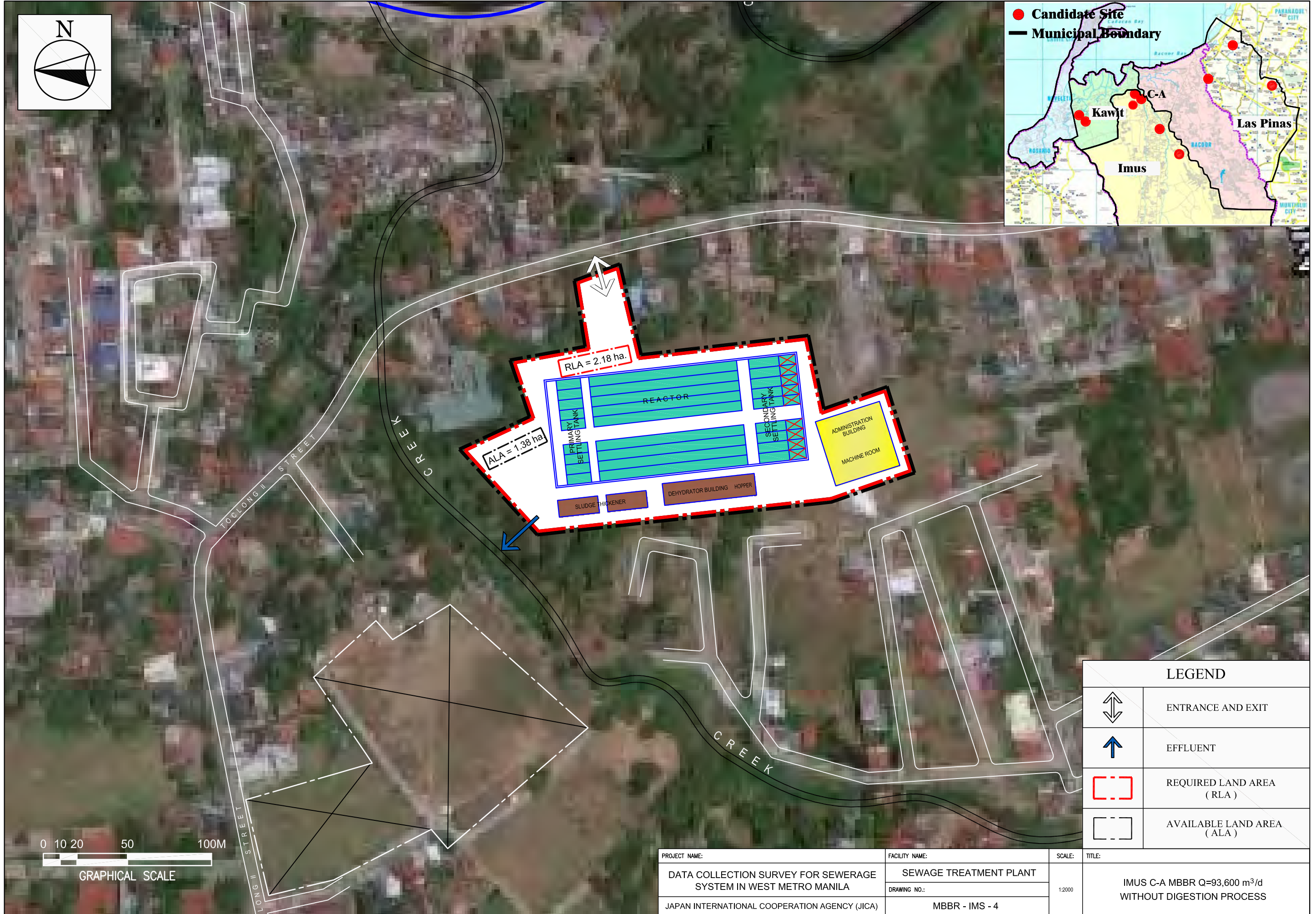
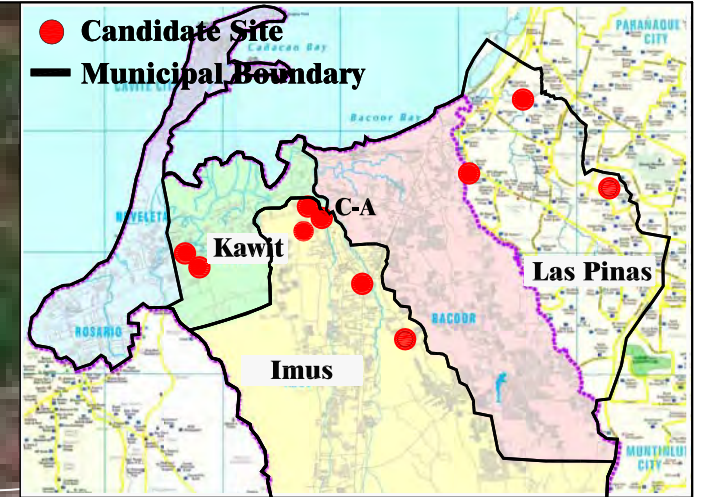
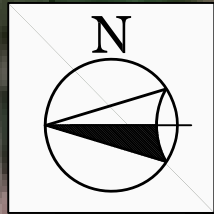
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	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	12000	IMUS C-A MBBR Q=65,000 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 3 (1/2)		



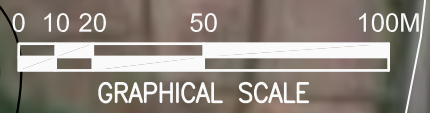
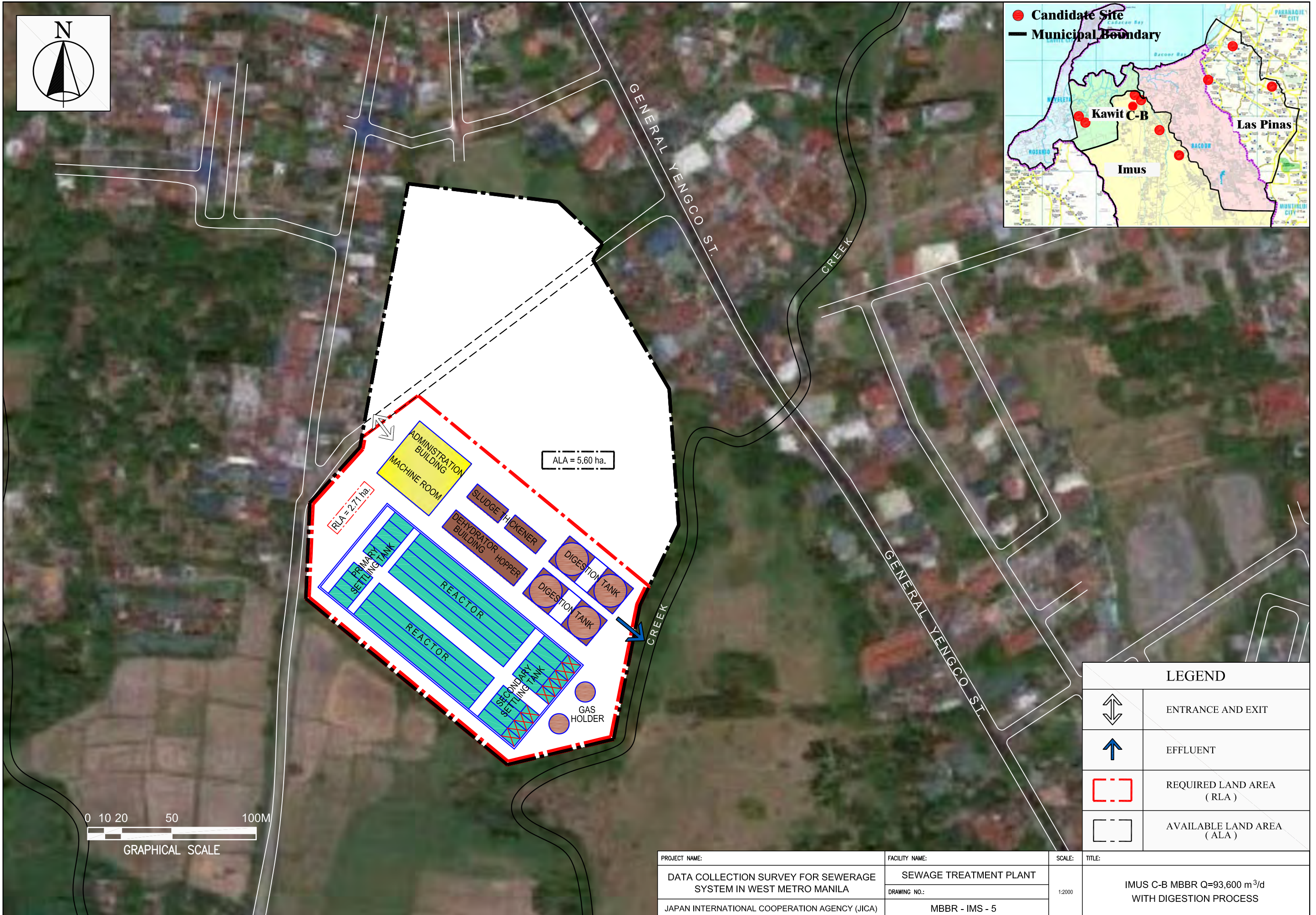
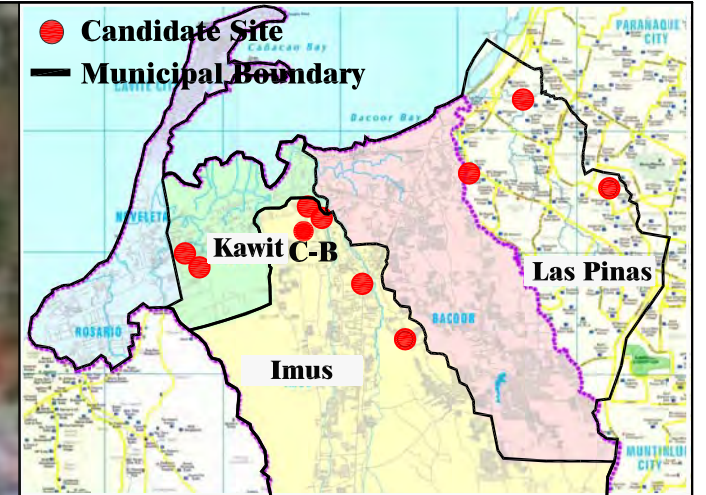
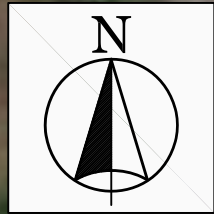
LEGEND	
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	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-3 MBBR Q=28,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBBR - IMS -3 (2/2)		



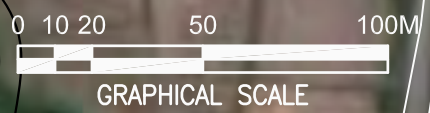
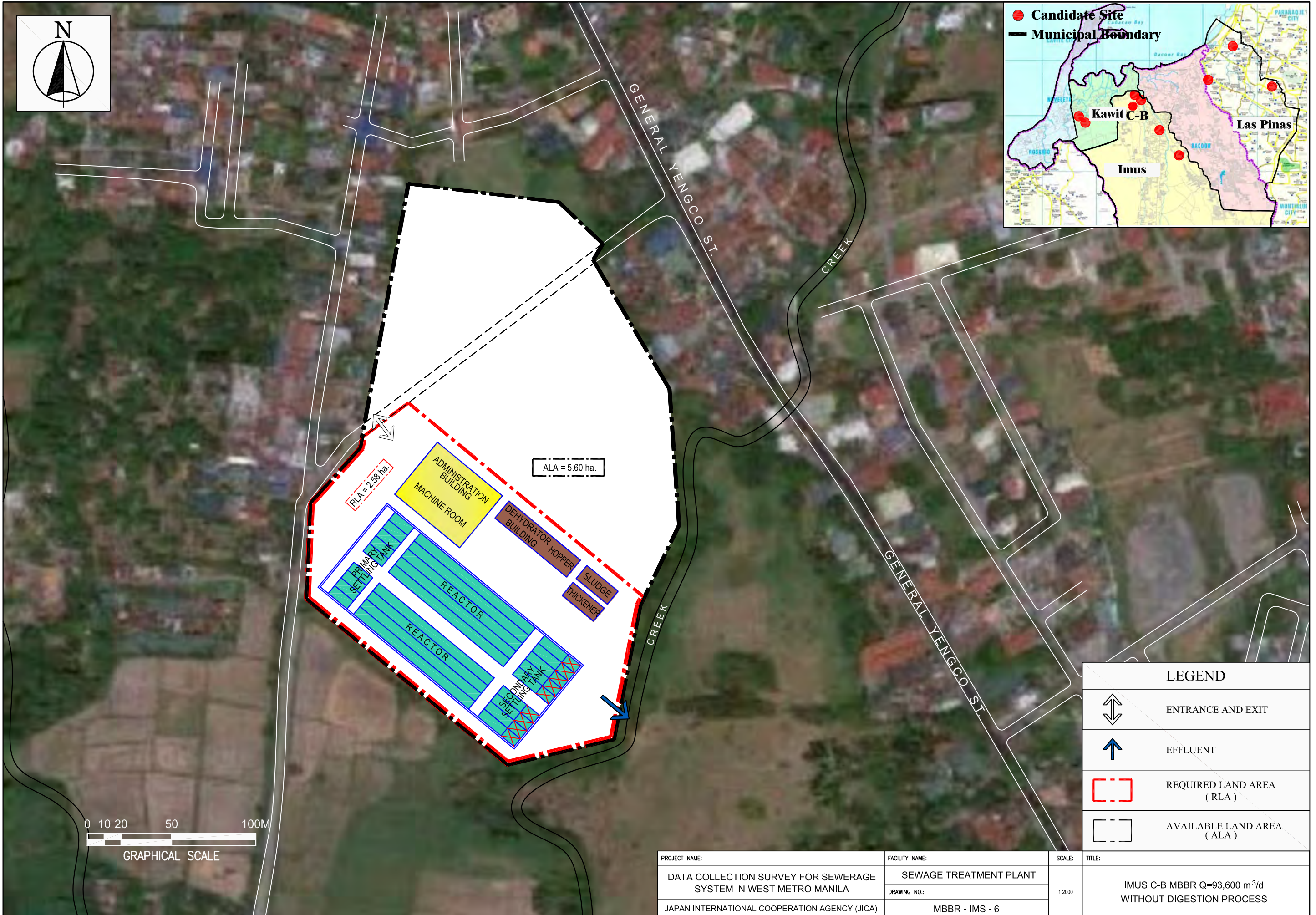
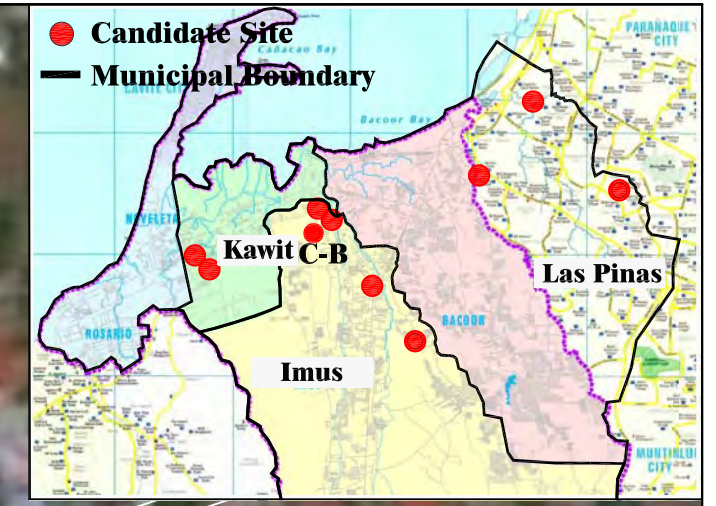
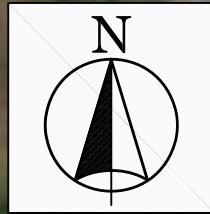
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWERAGE TREATMENT PLANT	1:2000	IMUS C-A MBBR Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 4		



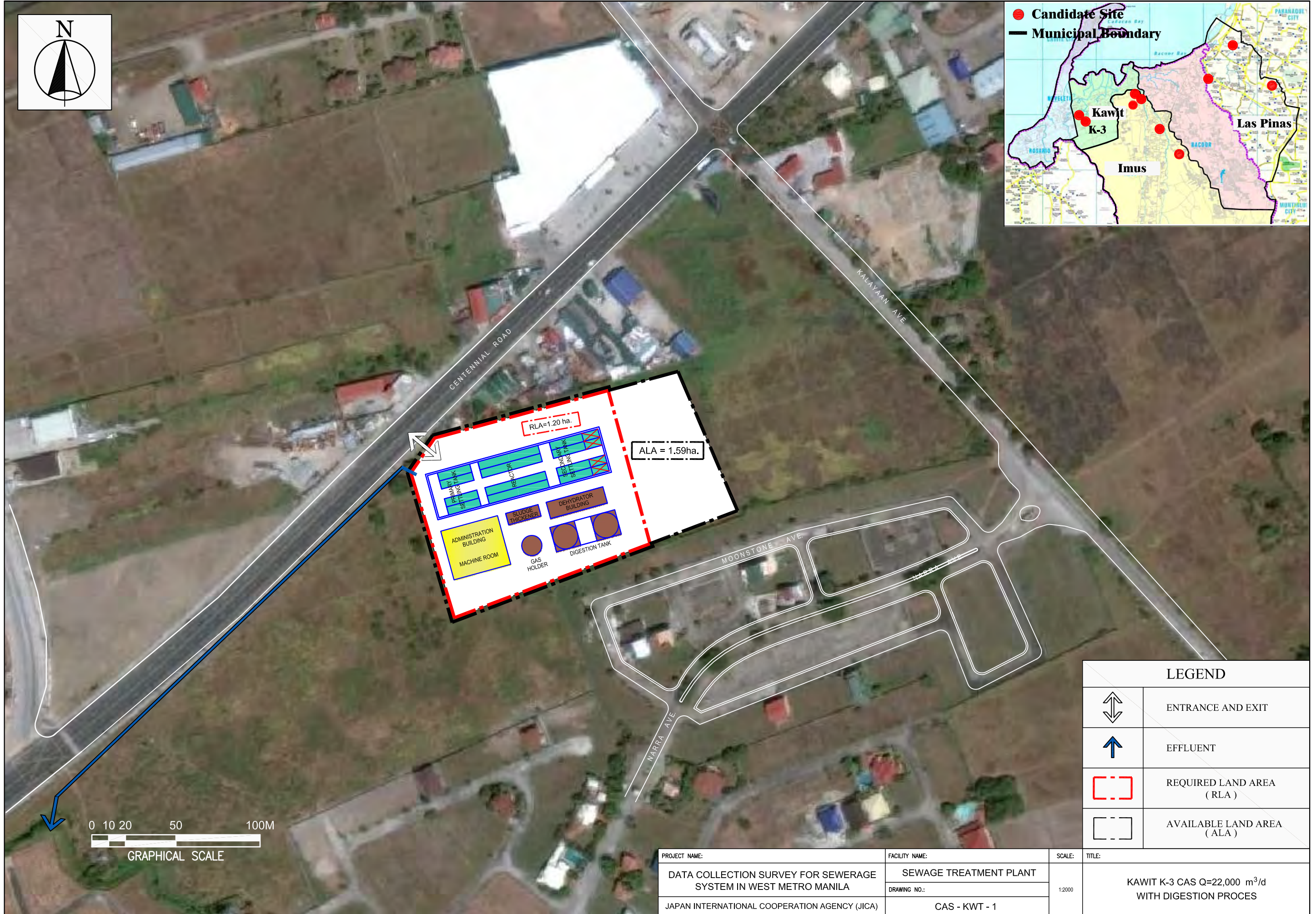
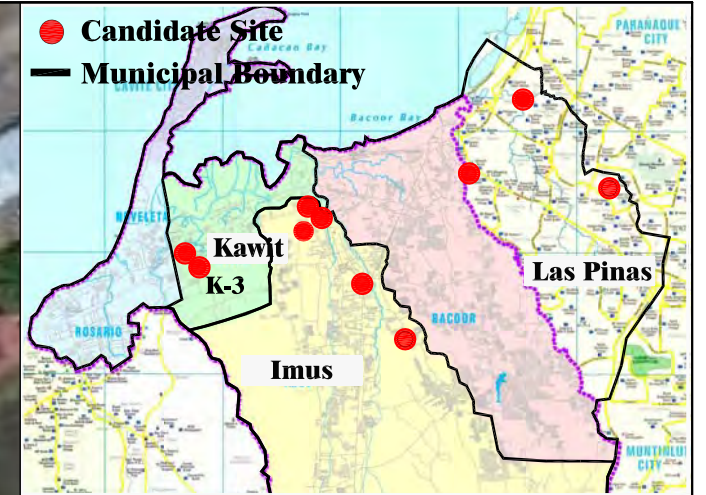
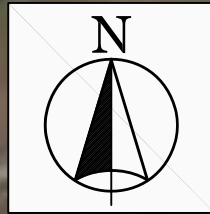
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B MBBR Q=93,600 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 5		



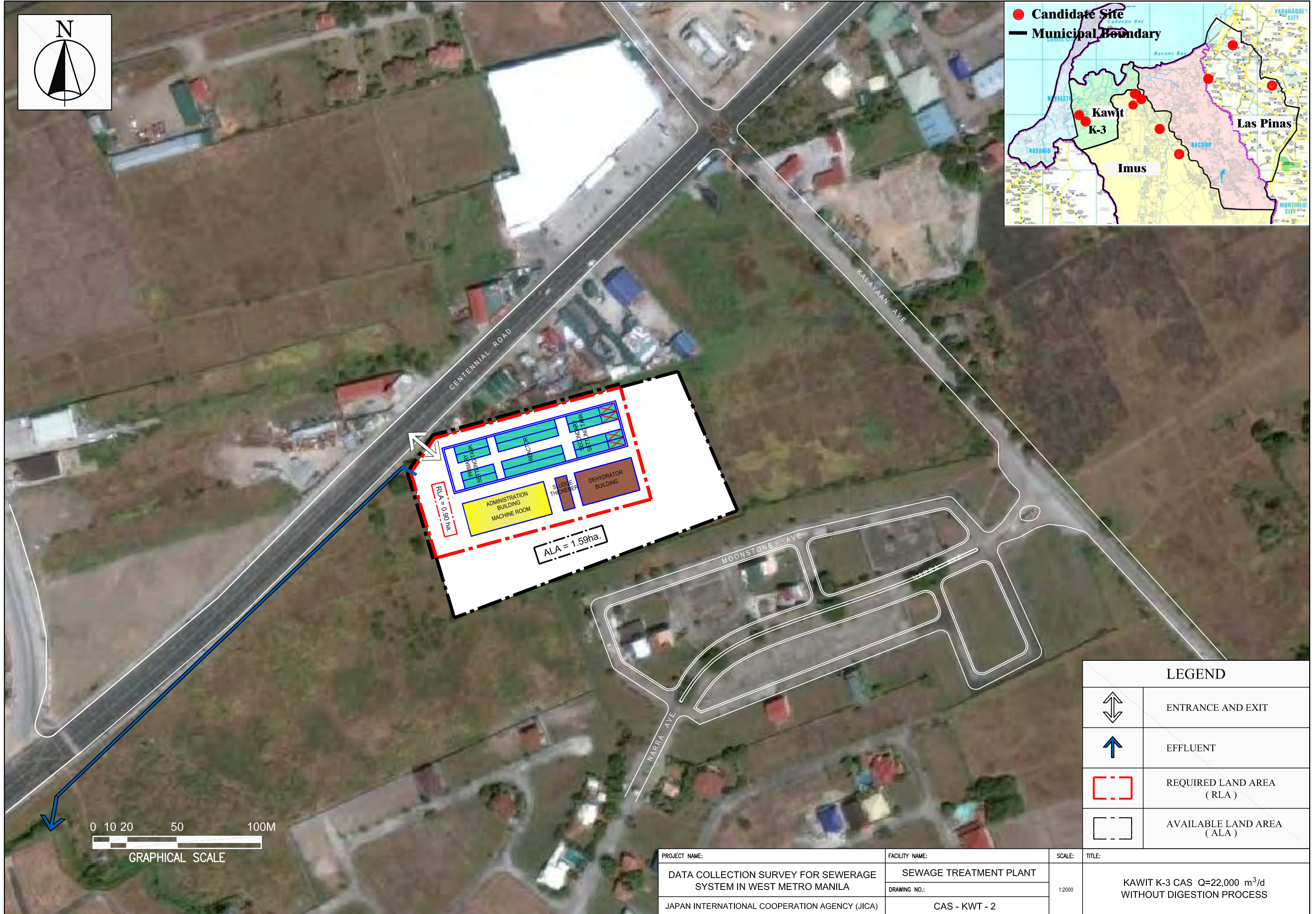
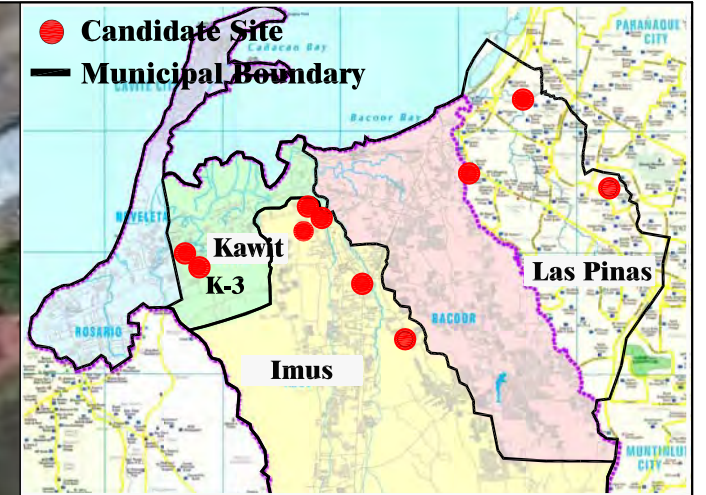
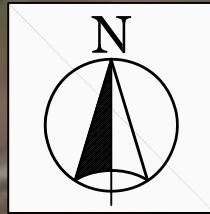
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	IMUS C-B MBBR Q=93,600 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - IMS - 6		



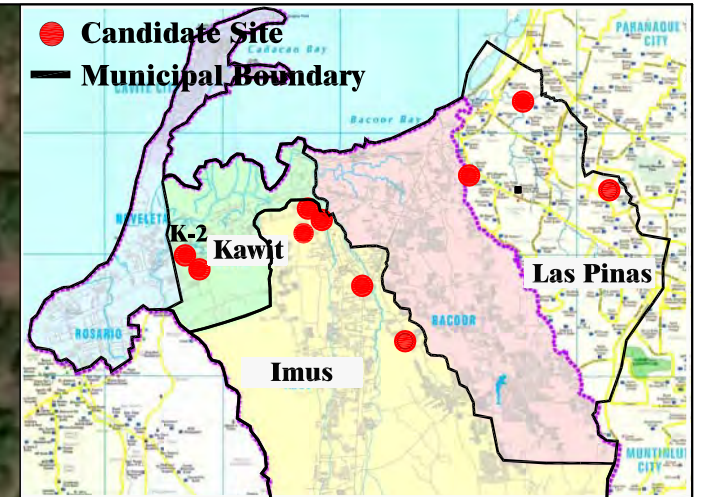
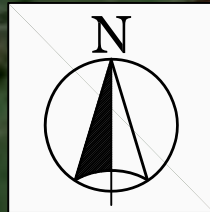
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 CAS Q=22,000 m ³ /d WITH DIGESTION PROCES
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	CAS - KWT - 1		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 CAS Q=22,000 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	CAS - KWT - 2		

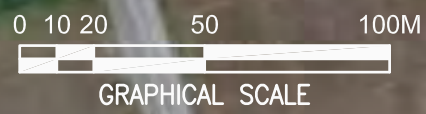
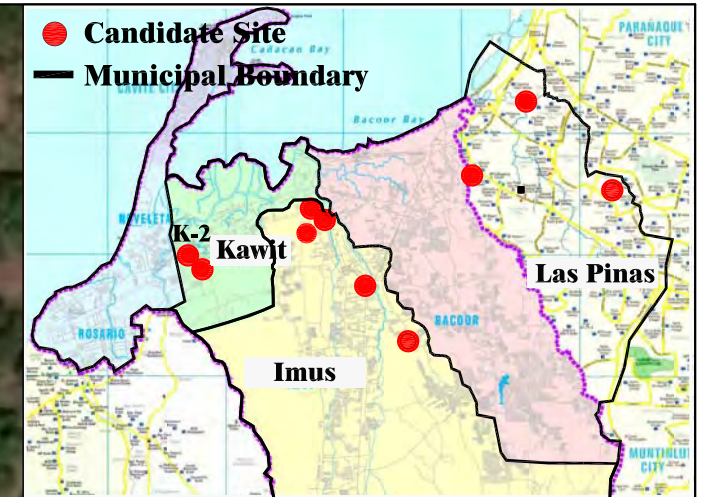
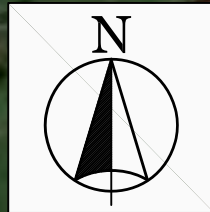


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GRAPHICAL SCALE

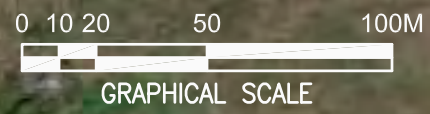
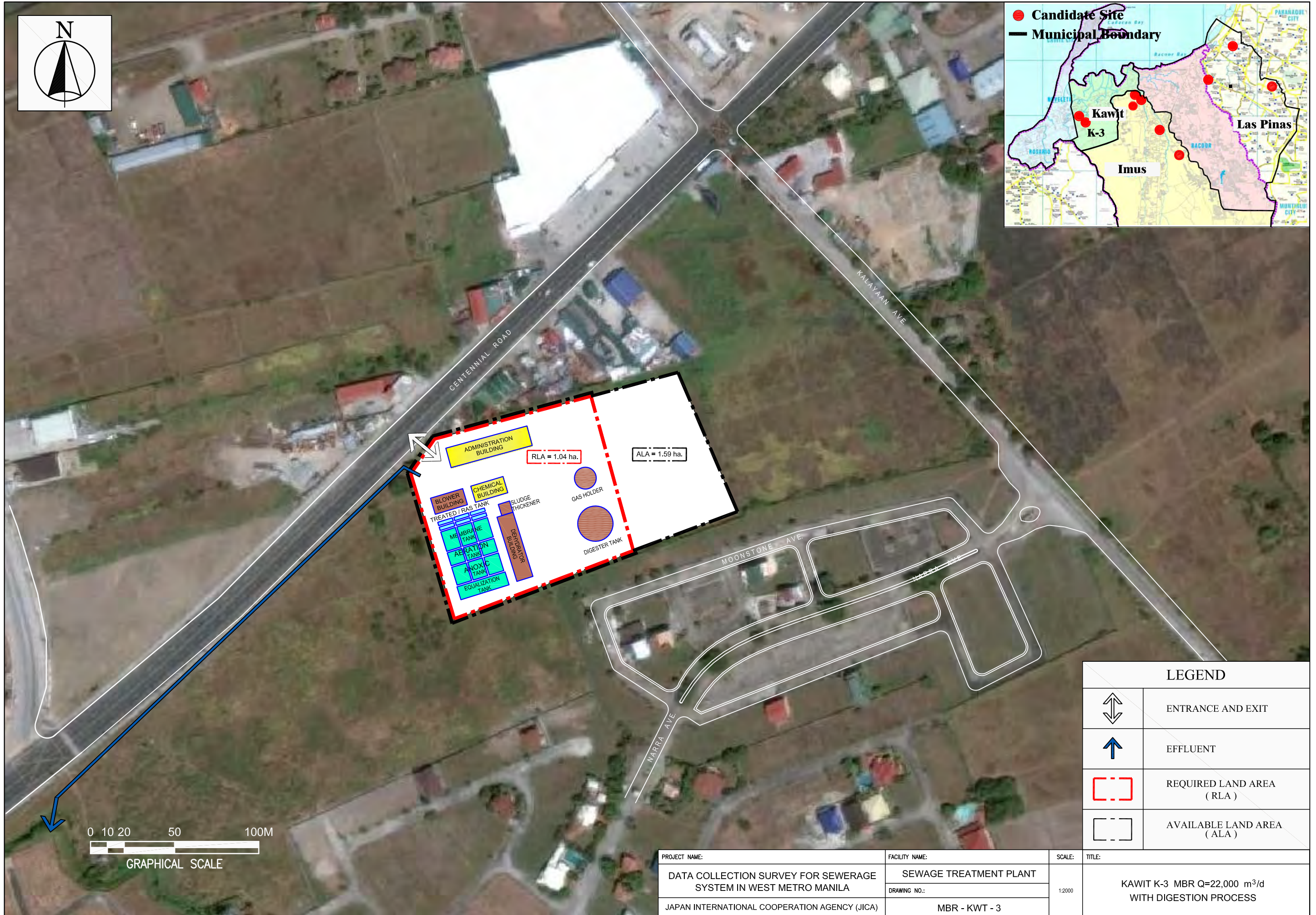
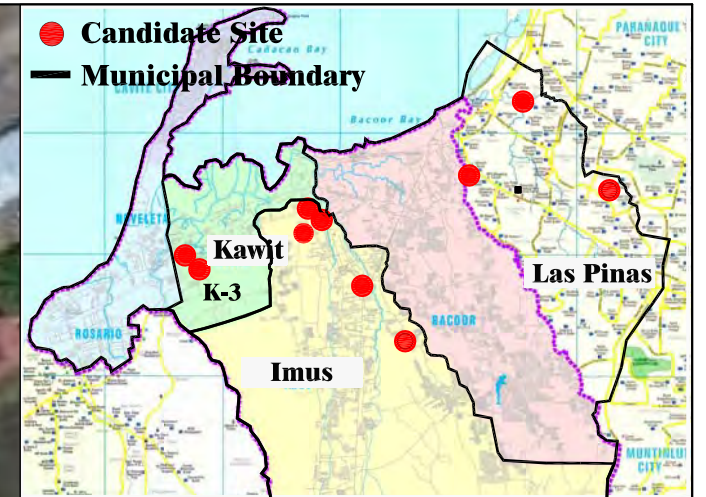
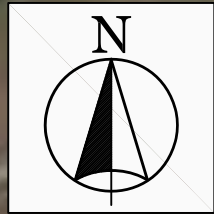
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-2 MBR Q=22,800 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBR - KWT - 1		



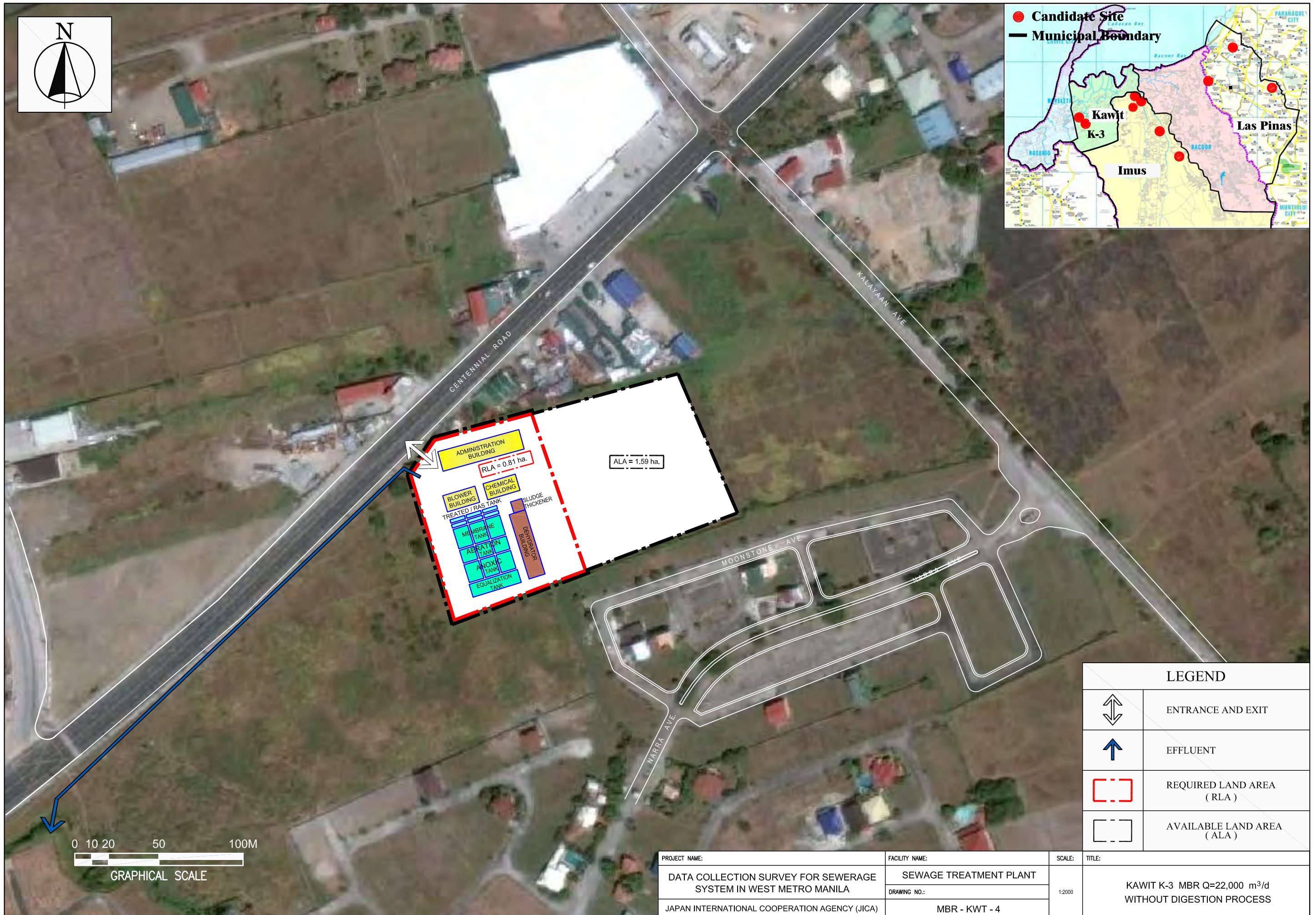
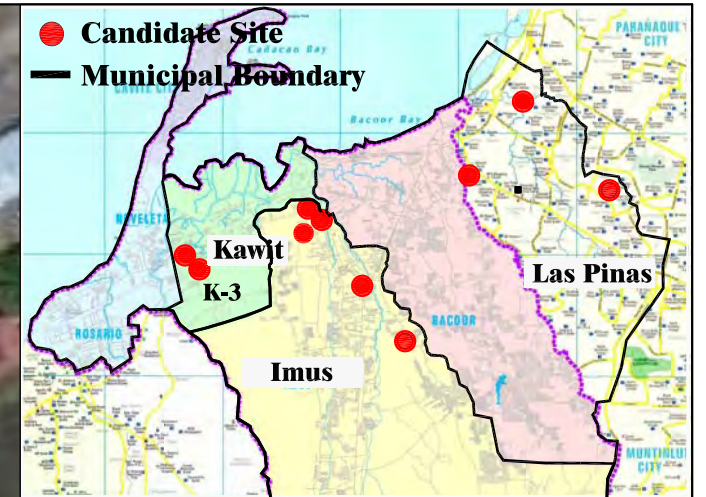
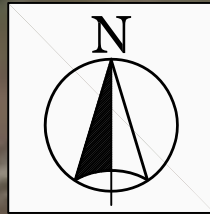
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-2 MBR Q=22,800 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBR - KWT - 2		



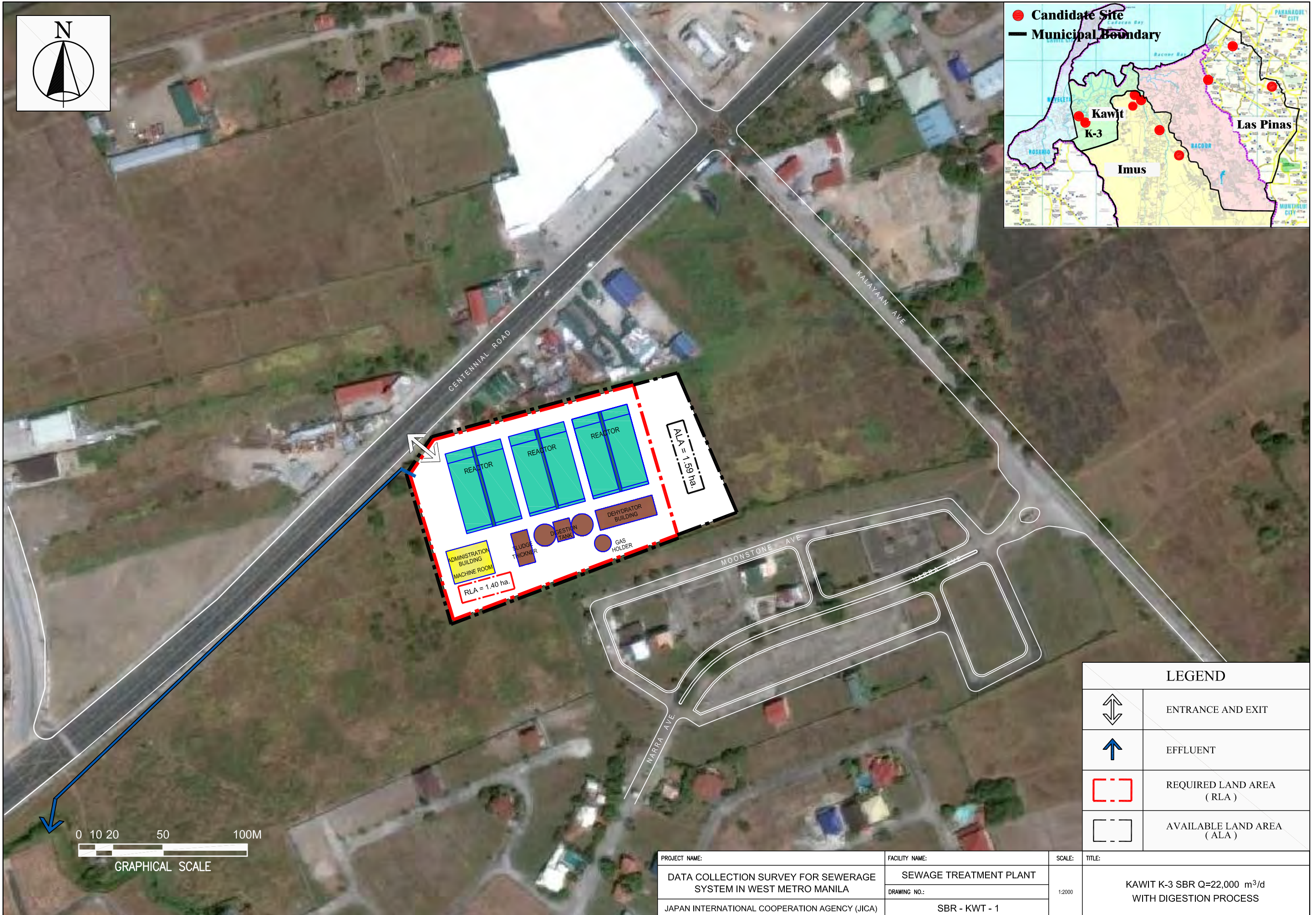
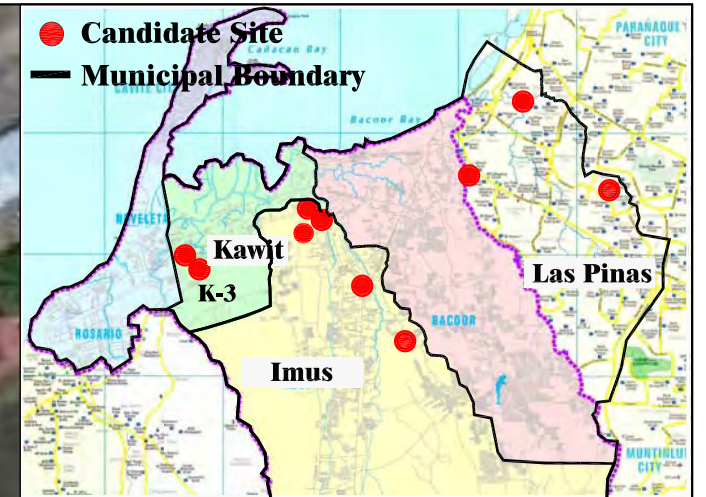
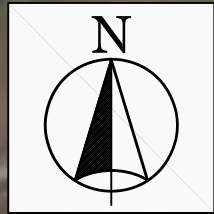
LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 MBR Q=22,000 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBR - KWT - 3		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 MBR Q=22,000 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DRAWING NO.:		
	MBR - KWT - 4		

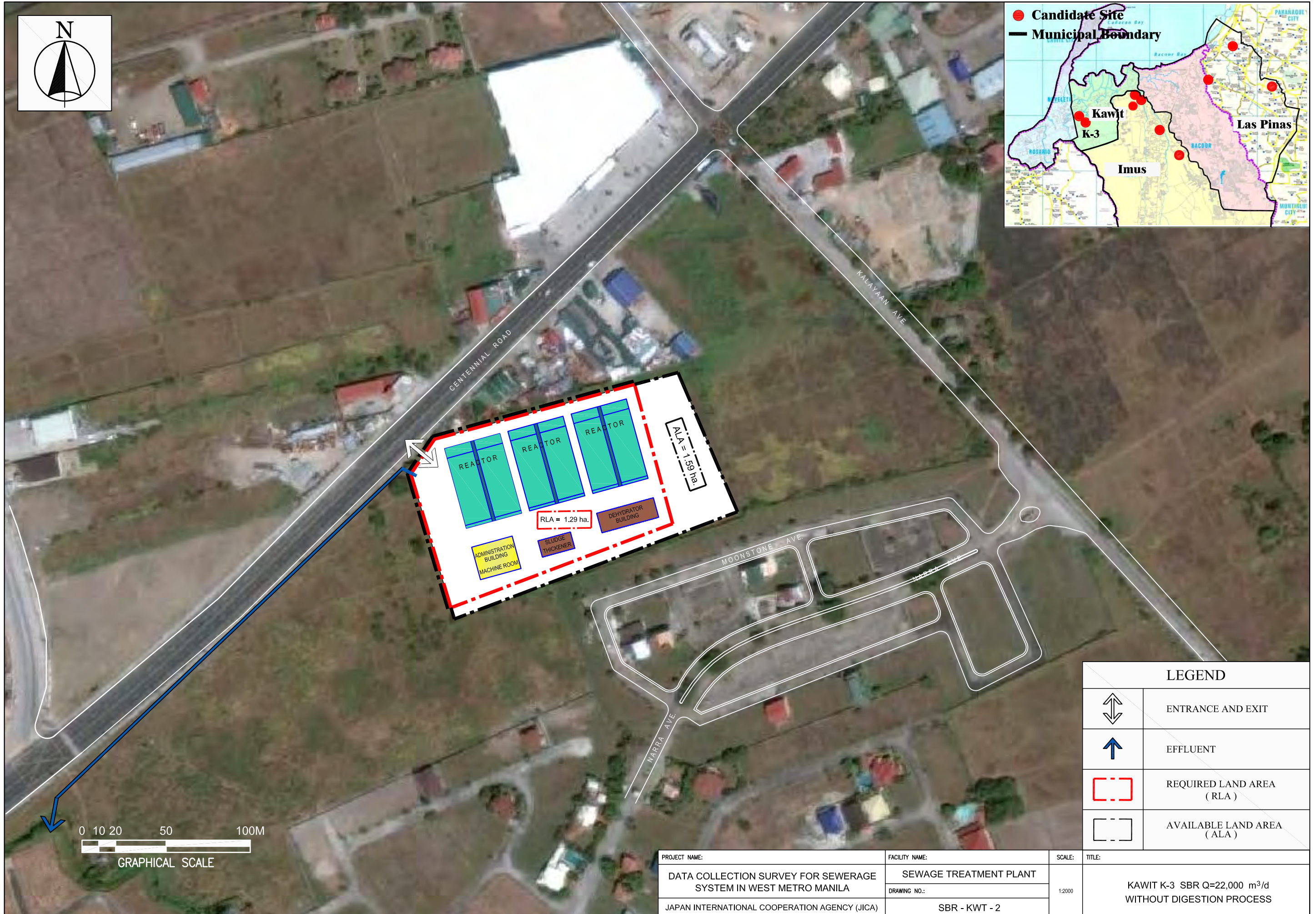
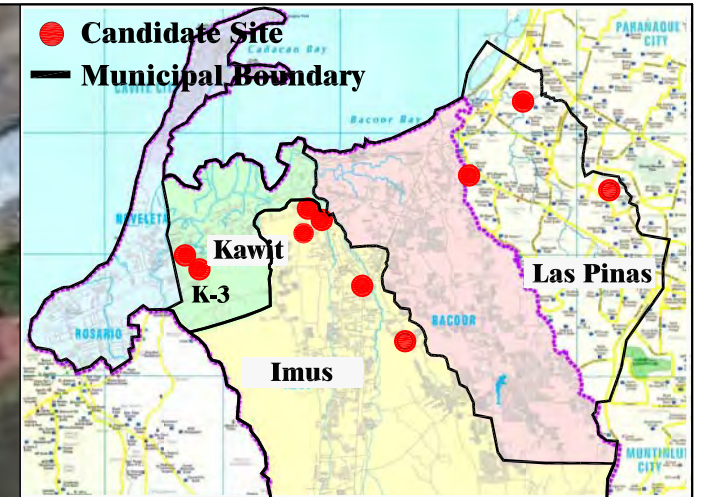
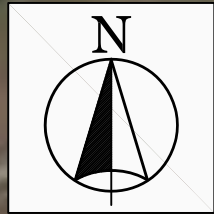


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GRAPHICAL SCALE

LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 SBR Q=22,000 m ³ /d WITH DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - KWT - 1		

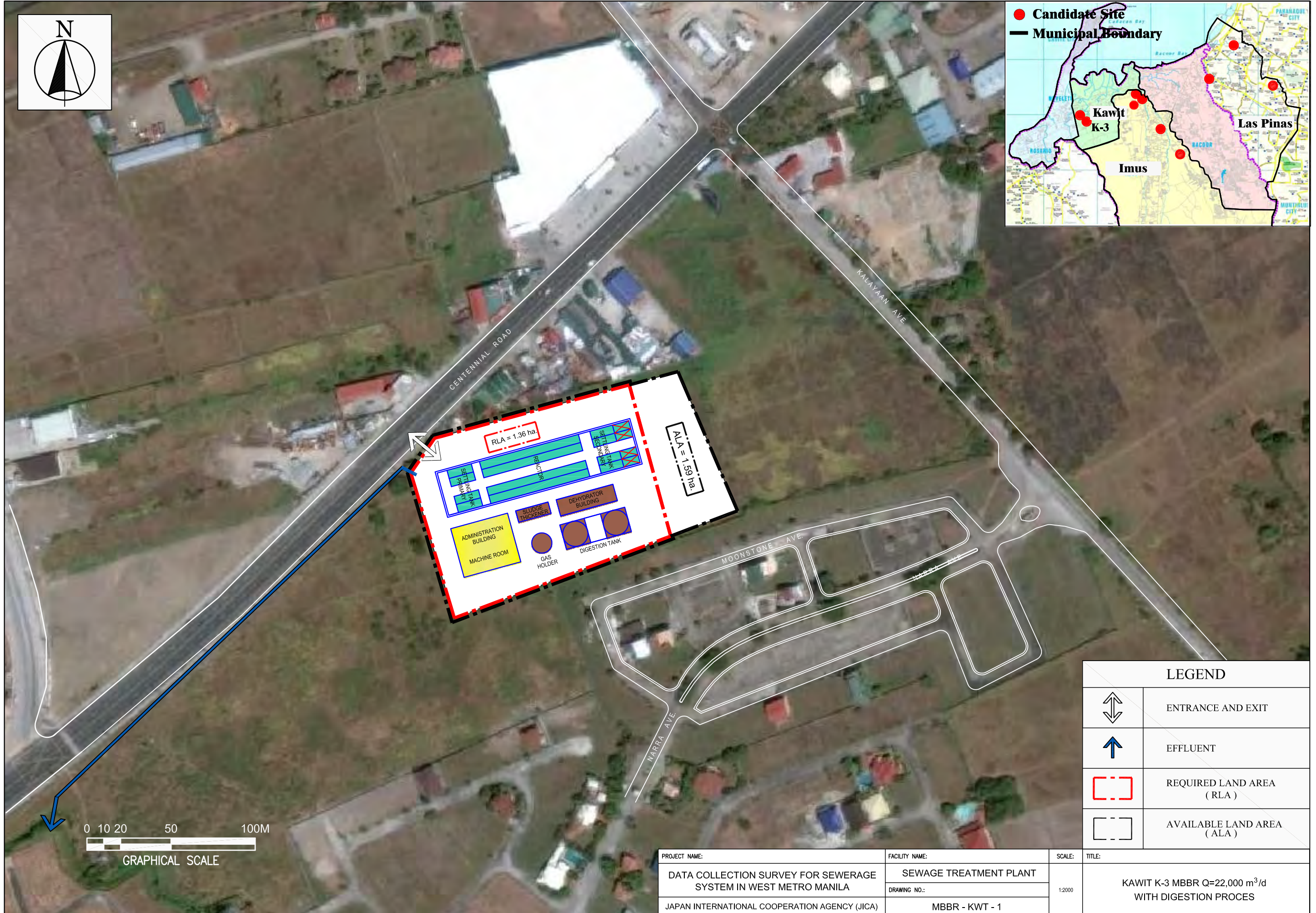
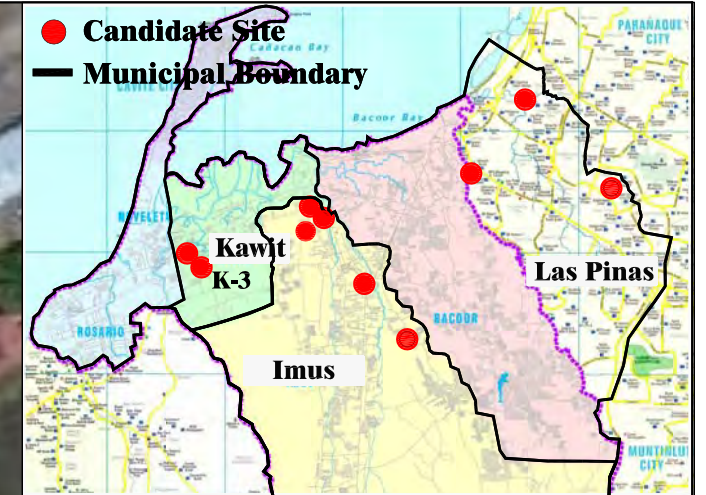
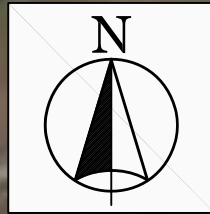


0 10 20 50 100M

GRAPHICAL SCALE

LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

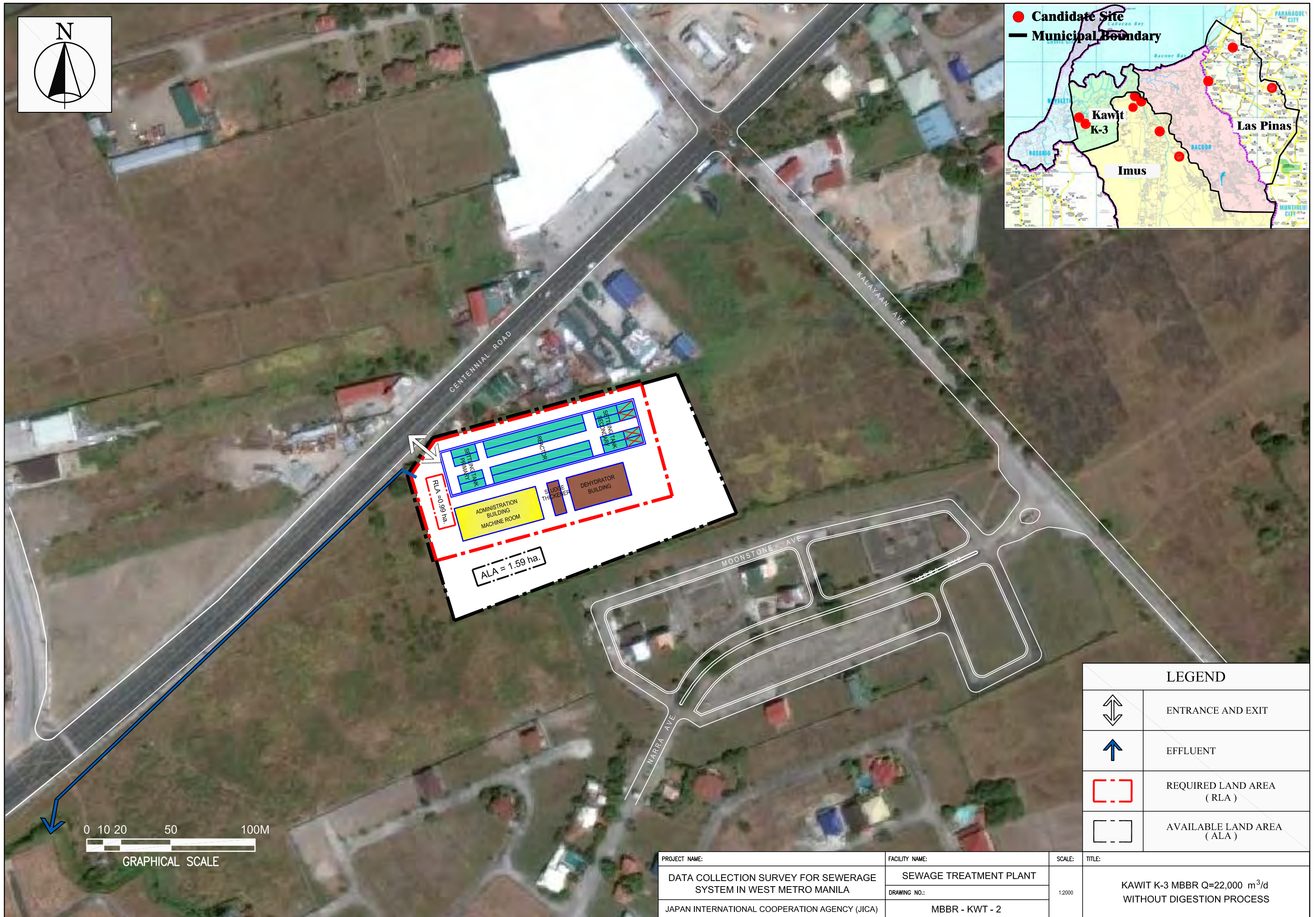
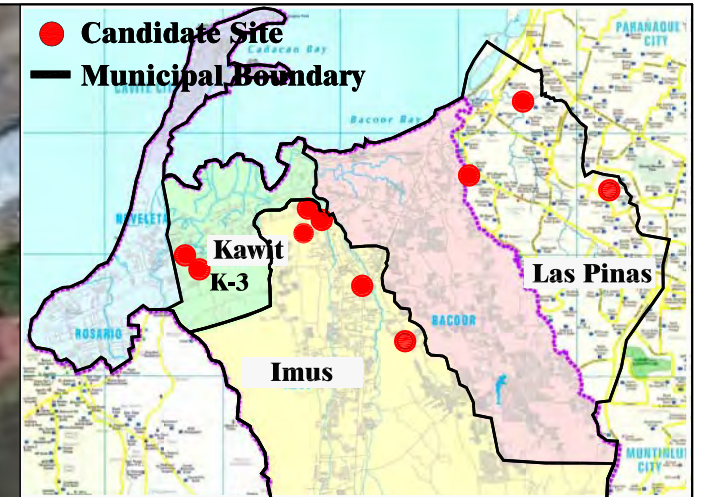
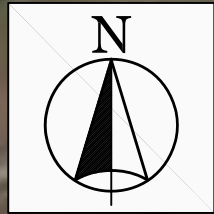
PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 SBR Q=22,000 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	SBR - KWT - 2		



GRAPHICAL SCALE

LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 MBBR Q=22,000 m ³ /d WITH DIGESTION PROCES
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - KWT - 1		



LEGEND	
	ENTRANCE AND EXIT
	EFFLUENT
	REQUIRED LAND AREA (RLA)
	AVAILABLE LAND AREA (ALA)

PROJECT NAME:	FACILITY NAME:	SCALE:	TITLE:
DATA COLLECTION SURVEY FOR SEWERAGE SYSTEM IN WEST METRO MANILA	SEWAGE TREATMENT PLANT	1:2000	KAWIT K-3 MBBR Q=22,000 m ³ /d WITHOUT DIGESTION PROCESS
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	MBBR - KWT - 2		