SITE SURVEY CHECK LIST

(Date: 1998/ 10 / 21)

1. Site No. : 29
   East Longitude 91 ° 35 ' 354 "
   North Longitude 22 ° 41 ' 332 "

2. Name of School Kurua GPS

3. Site Location : District ; Chittagong Thana ; Mirsharai
   Union ; Haitkandi Village ; Kurua

4. Interviewee : Name Mr. Lokanath Jaw Position ; Head master
   Mr. Abul Mansur Buiyan President SMC
   Mr. M. N Huda President UP

5. Accessibility
   1) Nearest Station, Port, Main Road: Dakha-Chittagong Road Distance; 3.0 km
   2) Road Conditions
   - Kind of Pavement : (Earth) Gravel, Brick, Asphalt, Concrete
   - Conditions of Pavement : Good, Not so good (Bad)
   - Road Width : 3 m
   - Passable Vehicle : Motor cycle, Rikisha, Sedan, Jeep, Truck (4 ton)
   - Necessity for Repair of Road : (Yes) No
   - Necessity for Repair of Bridges or Culverts : (Yes) No

6. Conditions of School
   1) Name of Landowner : Government
   2) Area of School Site : 1023 m^2 (including Playground of 360 m^2)
   3) School Building : 2 no(s) (Floor Area: 18.55 m × 5.9 m + 13.0 m × 1.5 m = 129 m^2)
   4) Type of Building : RC (Brick) Wooden
   5) Building Conditions : Good (Not so good) Bad (14 years after built)
   6) Layout of Building : Class Room : 3+1 nos. (5.9 m × 5.9 m)
   Teacher's Room : 1 no(s) (2.7 m × 5.9 m)
   Other
   - Principal's Room : NIL no(s) (___ m × ___ m)
   - Storage : NIL no(s) (___ m × ___ m)
   - Toilet : 2 no(s) (1 m × 1 m) one for teachers, one for students
   7) Ancillary Facility : Well (Yes) No,
   if yes, Depth of Well; 12 m with pump or not) 50 feet (shallow tubewell)
   spec: RFL-6
   Present Conditions: (Good) Not so bad, Bad.

Toilet (Yes) No,
if yes, common or (separate)
spec: Dipping up
Present Conditions: Good, Not so bad, Bad
Electric Facility (Yes, No) 3 Km away

8) Material of Fixtures : Desk (Steel), Chair (Steel)
Locker (Steel), Blackboard (wooden),
Notice board (/), Bookshelf (—),
Shelf (—), Other (—)

9) Maintenance of Building : Place; Roof (Leaking of rain?), good
Piller (Exfoliate of concrete?), good
Wall (Colour painting?), good
Window (Window door fitting?) good.
Method; Name of organisation,
Organisational unit for maintenance
(H.Q., District, Thana or school),
Procedure for repair
(Requesting, Patrol by engineer = when)

7. Surrounding Conditions

1) Population within a 1.5km Radius : 10000nos. (above)

2) Distance to Neighbouring Primary School : 2 km

3) Distance to Neighbouring Cyclone shelter : 3 km very old (1965)

4) Neighbouring Killa : Distance from the School; NIL m
Size (Top) ; ____ m × ____ m, Height; ____ m
Progress Ratio ; ____ %

5) Topographic Conditions Nearby : no obstruction
(Obstruction for School Attendance or Evacuation at Cyclone Time)

6) Normal Flood Level in Site : 0.6 m 1991 5~6 feet

7) Neighbouring Warning System for Cyclone : Warning organisation; Red-crescent U.P.
Measure of warning; By saying signal No. 6~10 etc.
Kind of signal; Hand Megaphone, Siren, Miking etc.

8) Maximum Damage by Cyclone in the Past : Year of Hitting: 1962
Causalities; 400 nos.
(Why so may died?) Sudden & Severe hit
(How to solve?) making cyclone shelter
Surge Height: 3.5 m
Houses Broken: all nos.
Damage of Crops: all ha
Damage of Livestock: Cow 100% nos.
Goat 100% nos.
Sheep ____ nos.

8. Item to Be Confirmed in Case of the Project Being Executed

1) Necessity for Demolition of the Existing School Building : Yes (If yes: Executing Body chairman (UP), No.

2) Construction Body for Temporary School Building during the Construction of New school. : Madrasha promises will be used. (6:00 AM – 8:00 AM) Madrasha time. after that school class can be managed.

3) Management and Maintenance System for Planned Facilities (Shelter-cum-school) : SMC

4) Neighbouring Inhabitants' Participation in Management and Maintenance for the Planned Facilities. : request by the SMC (Manual Labour)

9. Similar facilities construction plans (primary schools or cyclone shelters) constructed or to be constructed by other donors (including NGOs) around each site none

1) Past or currently implemented construction of similar facilities by other donors

2) Survey of similar projects (requests to other donors, etc.) and any overlapping

10. Capability of Sub-Contractor near the Site

1) No. of Sub-Contractor near the Site : none

2) No. of Engineers :

3) Past Experience and Construction Records :

11. Availability of Procuring Construction near the site

1) Equipment : —

2) Materials : Brick

12. Existing Well around the Site

1) Well depth : 12 m

2) Screen depth : N.A

3) Well diameter : 38 mm.

4) Water quality : Arsenic 0.02 mg/l (See table A10-2)

5) Pump spec. : RFT-6 non-drinkable

13. The situation of education

1) Current enrolment (1998)

1997
280 + 27
= 307

INTAKE

		Class 1	Class 2	Class 3	Class 4	Class 5
34	Boys	34	32	31	38	29
20	Girls	30	23	32	26	27
54	Total	64	55	63	64	56

302

2) The number of drop-out student (1997)

	Class 1	Class 2	Class 3	Class 4	Class 5
Boys					
Girls					
Total					

3) The number of repeaters (1997)

	Class 1	Class 2	Class 3	Class 4	Class 5
Boys					
Girls					
Total					

4) The attendance rate : (71) % of the total registered pupils

5) The number of classes

	Class 1	Class 2	Class 3	Class 4	Class 5
No. of Classes	1	1	1	1	1

6) The number of teachers (including principal)

	Male	Female
Qualified	3	2
Non-Qualified	—	—

5

7) The number of shifts of classes: 1 shift (2 shifts)/ 3 shifts/ multi-grade classes: grade (1, 2) and grade (3, 4, 5)

8) The total number of children of school age in this school area

307/308 (1997) 356/500 (1998)

9) What is your expectation on the enrolment change in the next five years?

a. It will increase a lot.

(b.) It will increase a little.

c. Almost same as in this year.

d. It will decrease a little.

e. It will decrease a lot.

class 1 - 62%
2 - 70
3 - 76
4 - 78
5 - 78

average ≒ 71 %

10) What are the three leading problems in terms of the environment of your school?

a. Shortage of classrooms

b. Shortage of furniture

(c) Shortage of toilets

d. Shortage of water supply facilities

e. Shortage of textbooks or other education materials

f. Deterioration of school building

g. Difficulty to repair facilities/equipment

h. Lack of involvement of the community in school management

i. Lack of parental appreciation for education

j. Other (road condition electricity)
playground → ✗ Boundary wall

11) Which of the following points need to be emphasized in order to increase pupils' attendance at your school?

a. Improvement of school facilities

b. Enhancement of equipment

c. Increase in parental appreciation for education

d. Improve community participation

e. Improvement of the access to school (routes and transportation)

f. Qualitative improvement of teachers

g. Increase in the number of female teachers

h. Improvement of educational content

i. Improved distribution of textbooks

j. Introduction of automatic advancement system

k. Introduction of meal system

l. Introduction of girls' classes

m. Other (_____)

14. School management and maintenance

1) What is your school budget for the current fiscal year?

Income:

a. from the central government	(0) TK
b. from the local government	(189,804) TK Salary
c. fees from students	(_____) TK
d. donation	(3,000) TK exam
e. Others	(_____) TK
TOTAL	(_____) TK

Expenditure:

a. Salary for teachers	(1,19,800) TK
b. Salary for other personnel	(_____) TK
c. Purchase of educational materials or chalks	(1770/14) TK
d. Maintenance of the facilities/equipment	(_____) TK
e. Other	(_____) TK
TOTAL	(_____) TK

2) Is this school currently or going to be utilized in the future for other purposes such as adult literacy classes and community meetings?

a. currently utilized -----> (not utilized) purposes: (_____)

b. will be utilized in the future -----> (not be utilized) purposes: (_____)

3) Currently how the school facilities maintained?

Responsibility	Overall responsibility	Finance	Manual labor
a. Thana education office		○	
b. Teachers			
c. SMC	○	○	○
d. Parents of pupils			
e. Community			
f. Others			

4) How often SMC is held? : (12) / year — 10 male member

Other teacher-parents meetings : (4) / year — 1 female member

15. Social environment of children

1) How long does it take for pupils to go to school?: (25) minutes to (30) minutes

How do they commute to school?: (walk) bicycle/ bus/ other

2) Do pupils work outside of schools?

a. Boys: Paid work: yes (no) -----> what kind of work? (_____)

Household work: (yes) no -----> what kind of work? (Helps their parents in Household work)

b. Girls: Paid work: yes (no) -----> what kind of work? (_____)

Household work: (yes) no -----> what kind of work? (Helps their mother)

3) What are the main economic activities in this community?

(80% Farmer cultivation, 10% Service Holder) other 10%

What do you think the economic situation in this community compared with the average Bangladesh communities?

a. Much better than the average

b. Better than the average

c. Almost the same

ⓓ Worse than the average (finantial condition)

e. Much worse than the average

4) What are the characteristics of this community in terms of social classes, ethnicity, and religion?

(normally Calm & Quite)

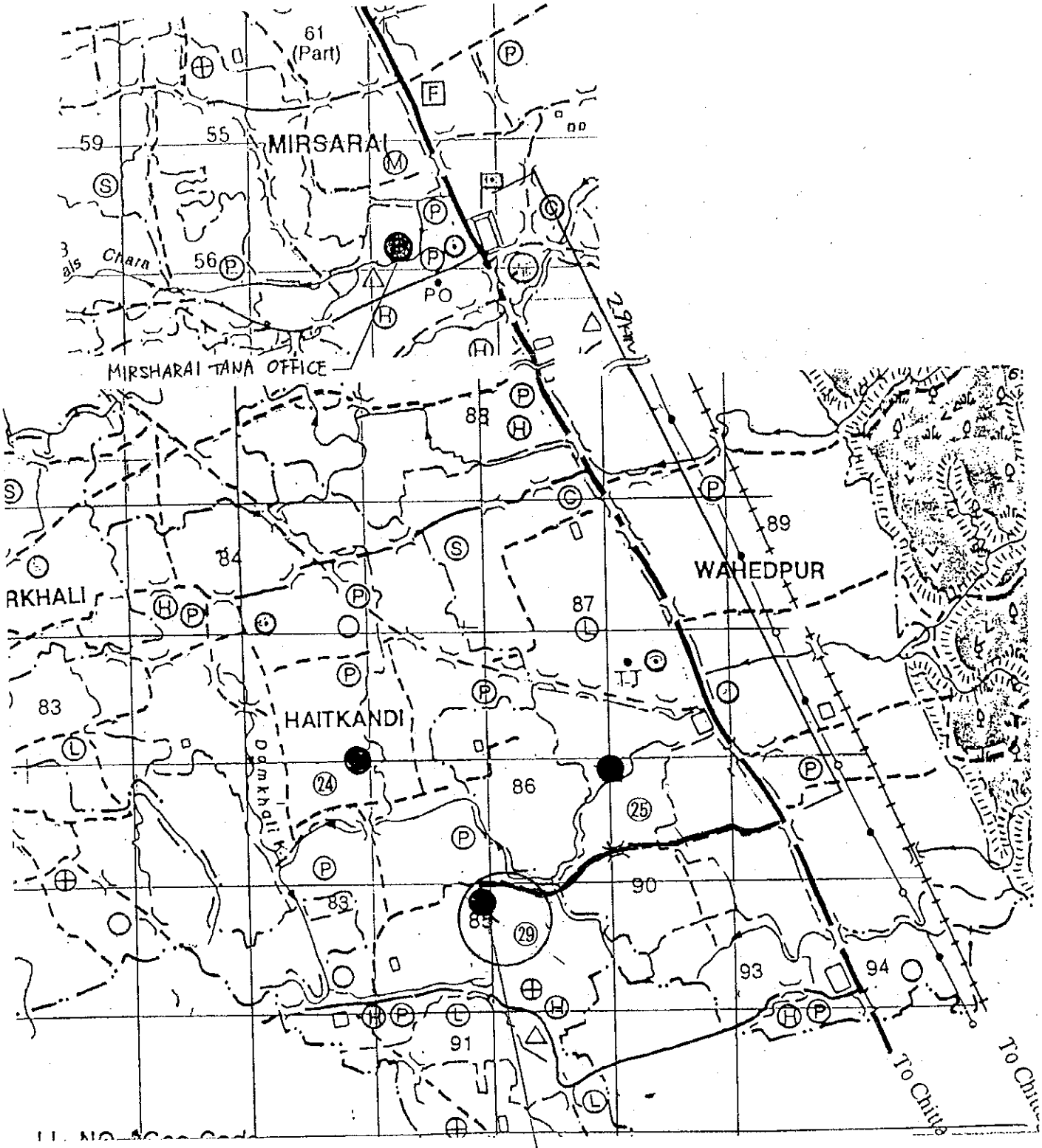
5) Are there any community organizations besides SMC in this community?

(None)

16. Others

LOCATION MAP OF THE SITE

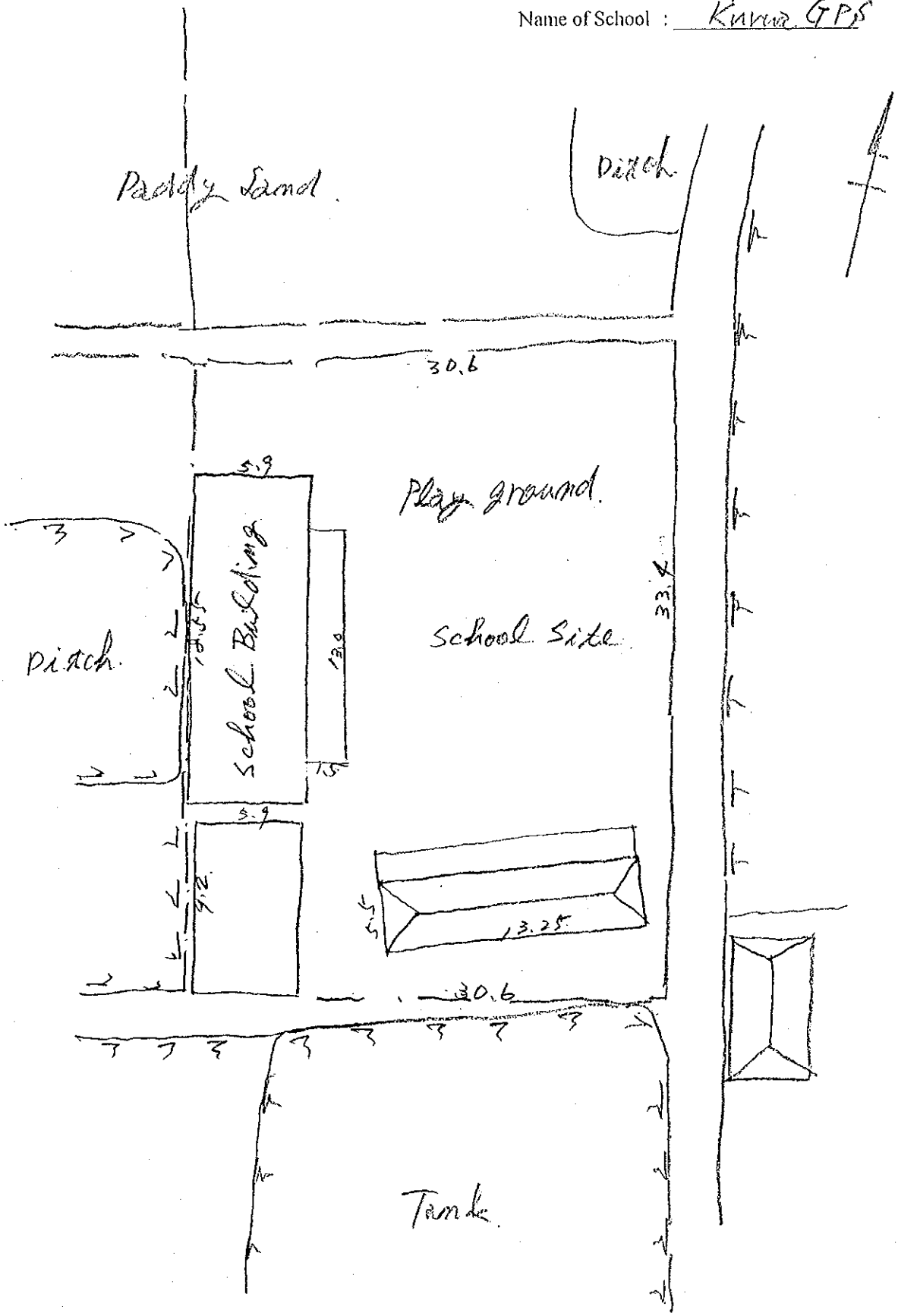
Site No.: 29



SKETCH OF THE SITE

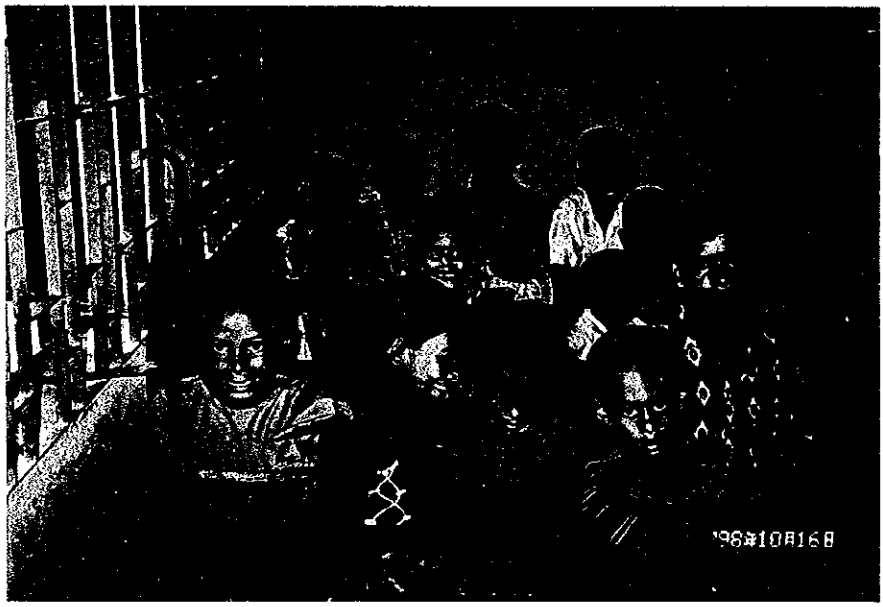
Site No. : 29

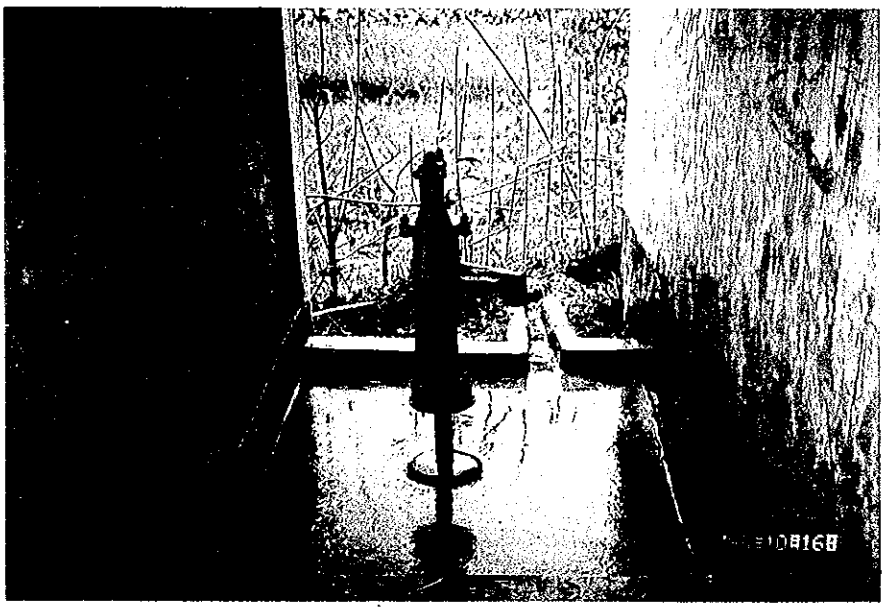
Name of School : Kuruva GPS



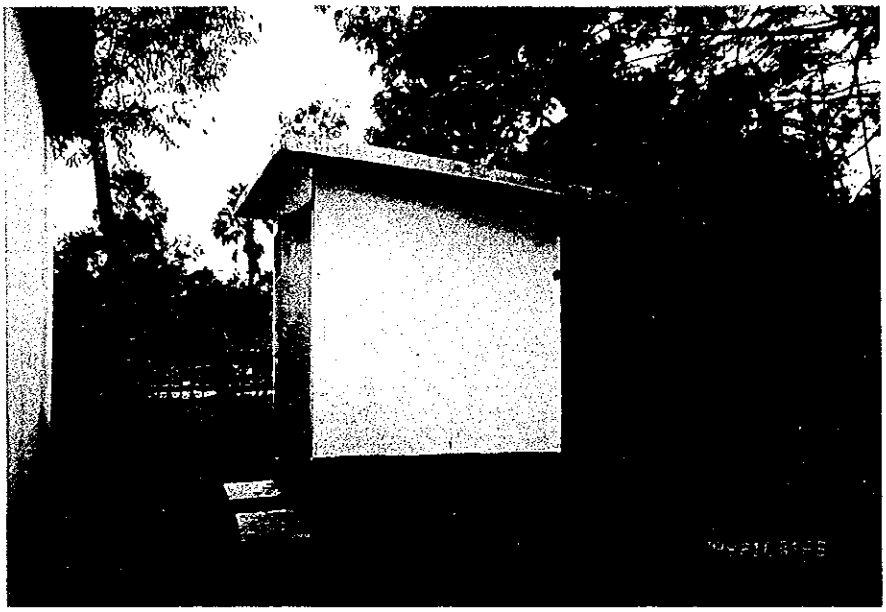
校舎全景

教室内状況





付帯施設の状況



付帯施設の状況

学校周辺の道路状況

SITE SURVEY CHECK LIST

(Date: 1998/ 10 / 23)

1. Site No. : 31
   East Longitude 91 ° 40 ' 850 "
   North Longitude 22 ° 33 ' 560 "

2. Name of School Bankhali G.P.S

3. Site Location : District ; chittagong Thana ; Mirsharai
   Union ; Osmanpur Village ; Bankhali

4. Interviewee : Name MR D.Chandra Karmaker, Position ; Head master
   MR. Gulam Murtoja chairman SMC
   MR. Moinal Islam chairman UP

5. Accessibility
   1) Nearest Station, Port, (Main Road: Dakha-chittagong Road) Distance; 9.5 km
   2) Road Conditions
   - Kind of Pavement : (Earth), Gravel, Brick, Asphalf, Concrete
   - Conditions of Pavement : Good, Not so good, (Bad)
   - Road Width : 2 m
   - Passable Vehicle : Motor cycle, Rikisha, Sedan, Jeep, (Truck) (2 ton)
   - Necessity for Repair of Road : (Yes), No
   - Necessity for Repair of Bridges or Culverts : Yes, (No)

6. Conditions of School
   1) Name of Landowner : G.O.B
   2) Area of School Site : 916 m^2 (including Playground of 400 m^2)
   3) School Building : 1 no(s) (Floor Area: 12.5 m × 5.6 m = 63 m^2)
   4) Type of Building : RC, Brick, (Wooden)
   5) Building Conditions : Good, Not so good, (Bad) (2 years after built)
   6) Layout of Building : Class Room : 1 nos. (6.2 m × 3.5 m)
      Teacher's Room : 1 no(s) (3 m × 3.2 m)
      Other
      - Principal's Room : ___ no(s) (___ m × ___ m)
      - Storage : ___ no(s) (___ m × ___ m)
      - Toilet : ___ no(s) (___ m × ___ m)
   7) Ancillary Facility : Well (Yes) No,
      if yes, Depth of Well; 22 m with pump or not)
      spec: spail 6
      Present Conditions: (Good) Not so bad, Bad.

Toilet (~~Yes~~), No,
if yes, (common) or separate)
spec: dipping up
Present Conditions: Good, Not so bad, (Bad)
Electric Facility (Yes, No) 300 m away

8) Material of Fixtures : Desk (Wooden), Chair (wooden)
Locker (Wooden), Blackboard (—),
Notice board (—), Bookshelf (—),
Shelf (—), Other (—)

9) Maintenance of Building : Place; Roof (Leaking of rain?), rain leaking
Piller (Exfoliate of concrete?), deteriorated
Wall (Colour painting?), -do-
Window (Window door fitting?) -do-
Method; Name of organisation, T.E.O
Organisational unit for maintenance
(H.Q., District, Thana or school),
Procedure for repair
(Requesting), Patrol by engineer = when)

7. Surrounding Conditions

1) Population within a 1.5km Radius : 1002 nos.

2) Distance to Neighbouring
Primary School : 2 km

3) Distance to Neighbouring
Cyclone shelter : 4 km

4) Neighbouring Killa none : Distance from the School; ____ m
Size (Top) ; ____ m × ____ m, Height; ____ m
Progress Ratio ; ____ %

5) Topographic Conditions Nearby : No obstruction
(Obstruction for School Attendance or Evacuation at Cyclone Time)

6) Normal Flood Level in Site : 0.6 m

7) Neighbouring Warning System : Warning organisation; B.R.C.S
for Cyclone Measure of warning; Mi'King
Kind of signal; Flag Siren

8) Maximum Damage by Cyclone in the Past : Year of Hitting: 1960
Causalities; 2000 nos.
(Why so may died?) no shelter
(How to solve?) necessary of cyclone shelter
Surge Height: 3 m
Houses Broken: all nos.
Damage of Crops: all ha
Damage of Livestock: Cow 1000 nos.
Goat 3000 nos.
Sheep 2000 nos.

8. Item to Be Confirmed in Case of the Project Being Executed

1) Necessity for Demolition of the Existing School Building : Yes (If yes: Executing Body SMC), No.

2) Construction Body for Temporary School Building during the Construction of New school. : SMC

3) Management and Maintenance System for Planned Facilities (Shelter-cum-school) : SMC

4) Neighbouring Inhabitants' Participation in Management and Maintenance for the Planned Facilities. : Hire as Local Labour

9. Similar facilities construction plans (primary schools or cyclone shelters) constructed or to be constructed by other donors (including NGOs) around each site

1) Past or currently implemented construction of similar facilities by other donors none

2) Survey of similar projects (requests to other donors, etc.) and any overlapping none

10. Capability of Sub-Contractor near the Site

1) No. of Sub-Contractor near the Site : 0

2) No. of Engineers : 0

3) Past Experience and Construction Records : 0

11. Availability of Procuring Construction near the site

1) Equipment : —

2) Materials : Bricks

12. Existing Well ~~around~~ in the Site

1) Well depth : 22 m

2) Screen depth : 8 m

3) Well diameter : 1.5 inch

4) Water quality : 0.11 mg/l Arsenic was detected (See Table A-10-2) ; Non-drinkable

5) Pump spec. : Spaco 6

13. The situation of education

1) Current enrolment (1998)

Baby	Class 1	Class 2	Class 3	Class 4	Class 5
Boys 60	30	25	35	24	25
Girls 30	35	38	35	30	30
Total 90	65	63	70	54	55

2) The number of drop-out student (1997)

	Class 1	Class 2	Class 3	Class 4	Class 5
Boys					
Girls					
Total					

none

3) The number of repeaters (1997)

	Class 1	Class 2	Class 3	Class 4	Class 5
Boys					
Girls					
Total					

none

4) The attendance rate : (9/) % of the total registered pupils

5) The number of classes

	Class 1	Class 2	Class 3	Class 4	Class 5
No. of Classes	1	1	1	1	1

6) The number of teachers (including principal)

	Male	Female
Qualified	4	—
Non-Qualified	—	—

7) The number of shifts of classes: 1 shift / 2 shifts / 3 shifts/ multi-grade classes: grade (K. 1. 2) and grade (3. 4. 5)

8) The total number of children of school age in this school area

602 R=1.5

9) What is your expectation on the enrolment change in the next five years?

(a.) It will increase a lot.

b. It will increase a little.

c. Almost same as in this year.

d. It will decrease a little.

e. It will decrease a lot.

10) What are the three leading problems in terms of the environment of your school?

(a) Shortage of classrooms
(b) Shortage of furniture
(c) Shortage of toilets
d. Shortage of water supply facilities
e. Shortage of textbooks or other education materials
(f) Deterioration of school building
g. Difficulty to repair facilities/equipment
h. Lack of involvement of the community in school management
i. Lack of parental appreciation for education
j. Other (_____)

11) Which of the following points need to be emphasized in order to increase pupils' attendance at your school?

(a) Improvement of school facilities
b. Enhancement of equipment
c. Increase in parental appreciation for education
d. Improve community participation
(e) Improvement of the access to school (routes and transportation)
f. Qualitative improvement of teachers
(g) Increase in the number of female teachers
h. Improvement of educational content
i. Improved distribution of textbooks
j. Introduction of automatic advancement system
k. Introduction of meal system
l. Introduction of girls' classes
m. Other (_____)

14. School management and maintenance

1) What is your school budget for the current fiscal year?

Income:

a. from the central government	(Salary + NTA) TK
b. from the local government	(0) TK
c. fees from students	(0) TK
d. donation	(0) TK
e. Others	(0) TK
TOTAL	(Salary + NTA) TK

Expenditure:

a. Salary for teachers	(Salary) TK
b. Salary for other personnel	( ) TK
c. Purchase of educational materials or chalks	(150/M) TK
d. Maintenance of the facilities/equipment	( ) TK
e. Other	( ) TK
TOTAL	(Salary+150/M) TK

2) Is this school currently or going to be utilized in the future for other purposes such as adult literacy classes and community meetings?

ⓐ currently utilized -----> purposes: (adult literacy)
not utilized

ⓑ will be utilized in the future -----> purposes: (Community Center (Clinic))
not be utilized

3) Currently how the school facilities maintained?

Responsibility	Overall responsibility	Finance	Manual labor
a. Thana education office	0	0	0
b. Teachers			
c. SMC			
d. Parents of pupils			
e. Community			
f. Others			

4) How often SMC is held? : (12) / year
Other teacher-parents meetings : (3) / year

15. Social environment of children

1) How long does it take for pupils to go to school?: (5) minutes to (30) minutes
How do they commute to school?: (walk) bicycle/ bus/ other

2) Do pupils work outside of schools?

a. Boys: Paid work: yes ----->
(no)
what kind of work? ( )

Household work: (yes) ----->
no
what kind of work? (House Keeping)

b. Girls: Paid work: yes ----->
(no)
what kind of work? ( )

Household work: (yes) ----->
no
what kind of work? (House keeping)

3) What are the main economic activities in this community?

(Agriculture)

What do you think the economic situation in this community compared with the average Bangladesh communities?

a. Much better than the average

b. Better than the average

c. Almost the same

d. Worse than the average

e. Much worse than the average

4) What are the characteristics of this community in terms of social classes, ethnicity, and religion?

(none)

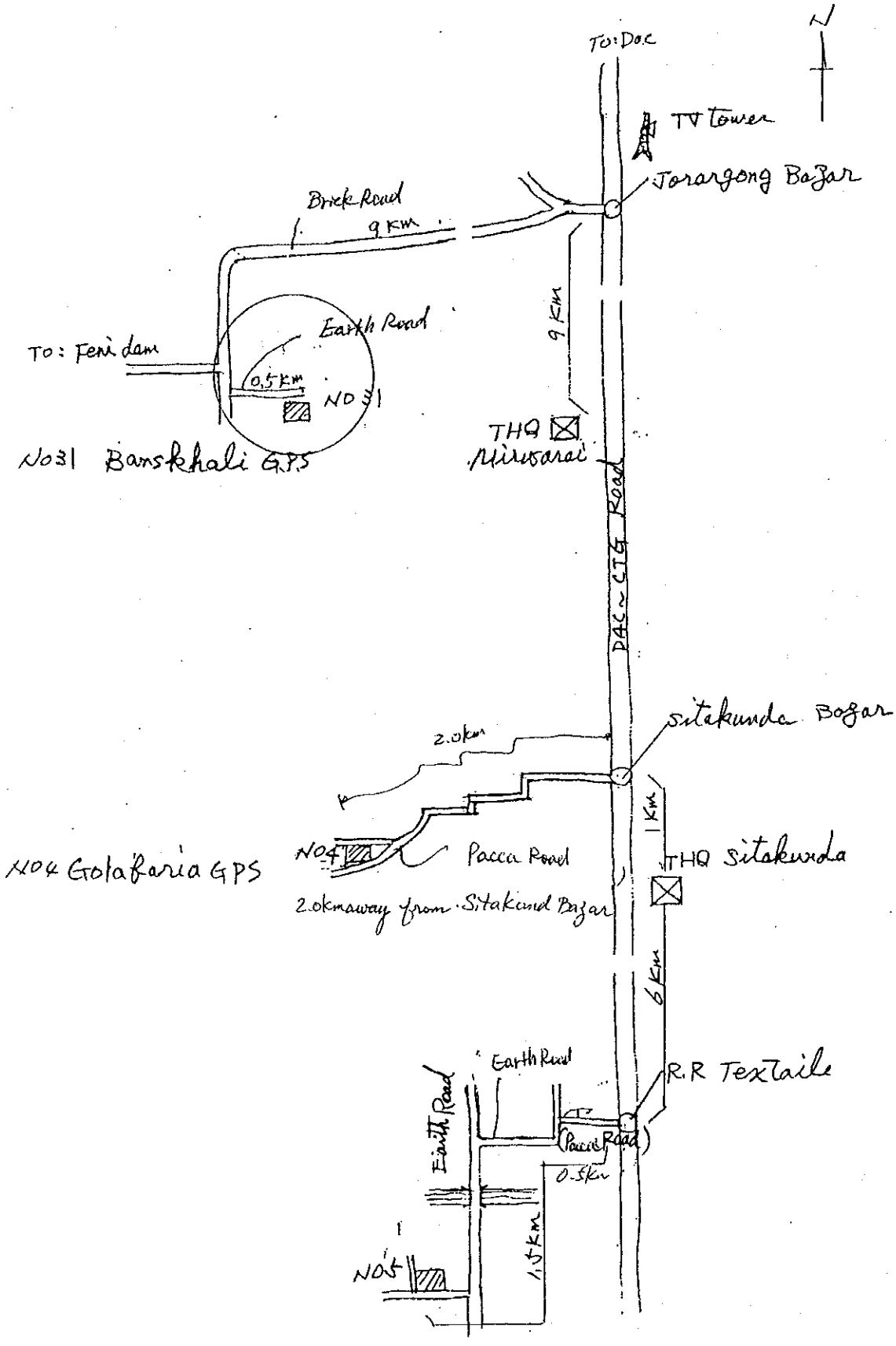
5) Are there any community organizations besides SMC in this community?

(none)

16. Others

LOCATION MAP OF THE SITE

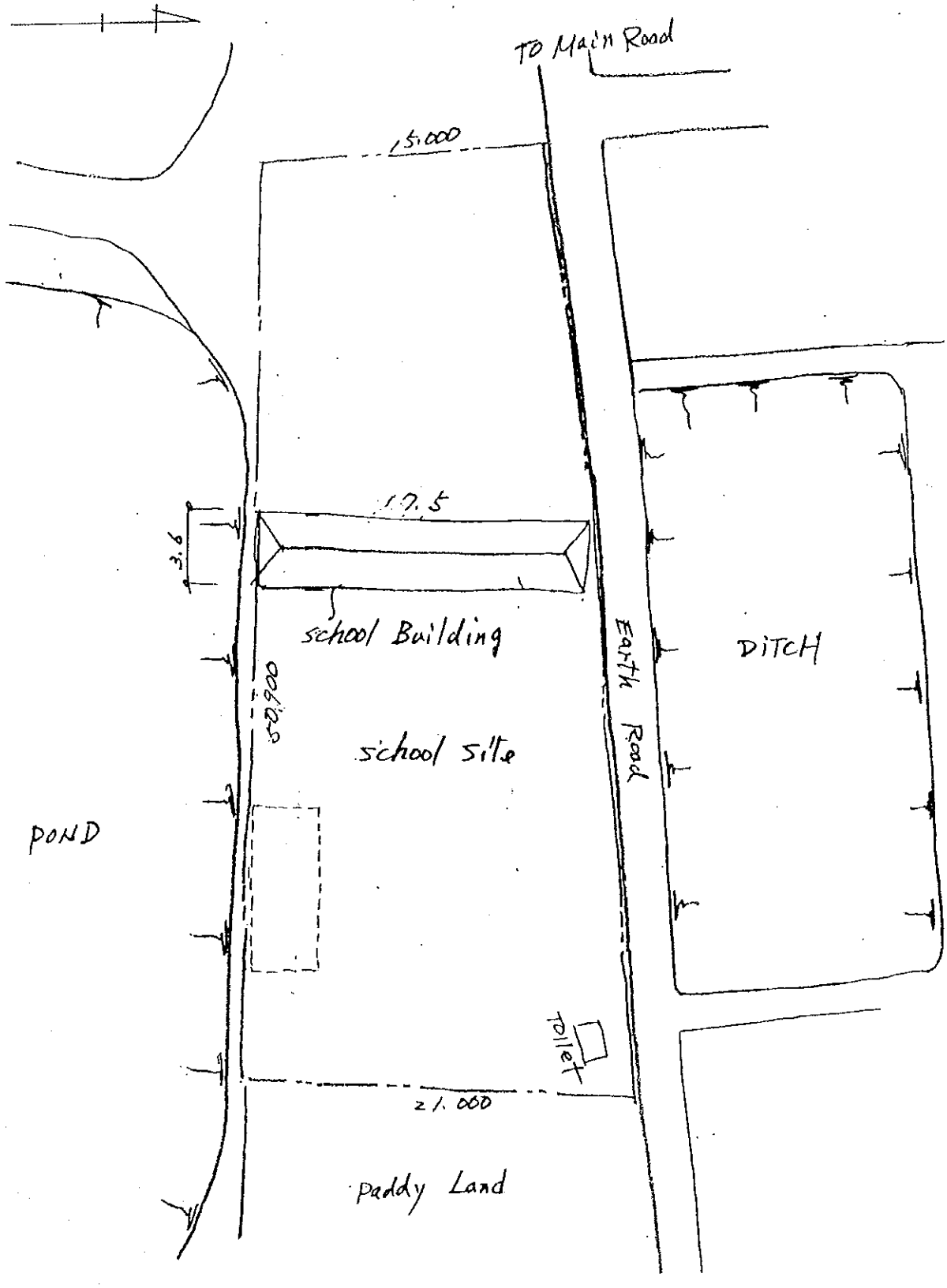
Site No.: 31



SKETCH OF THE SITE

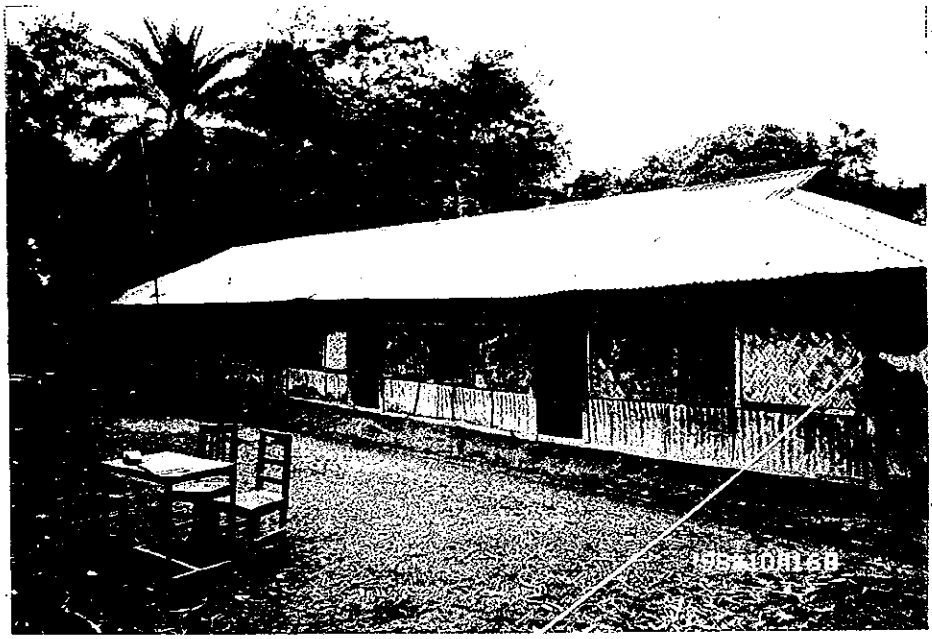
Site No. : 3/

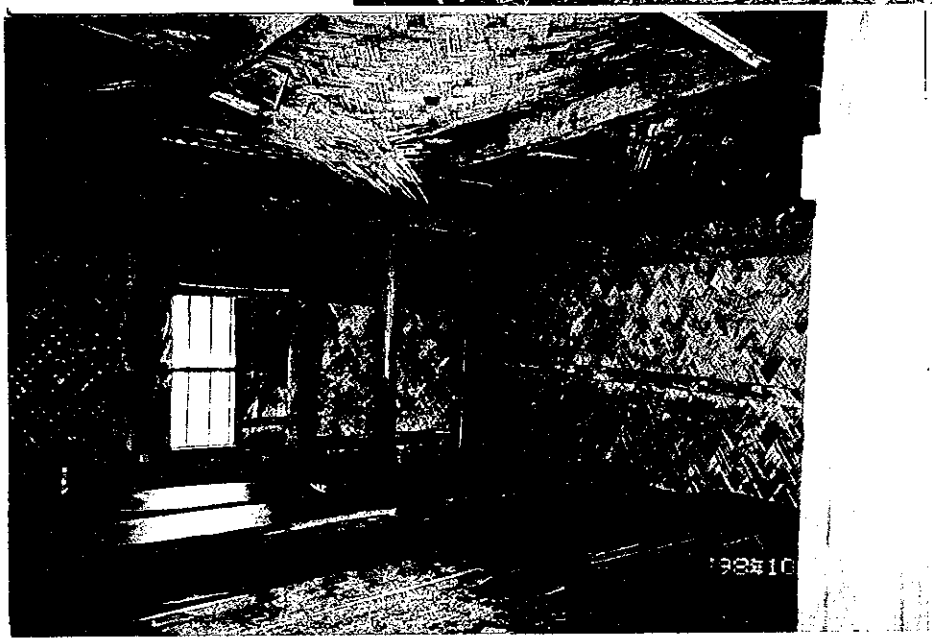
Name of School : Bamskhali GPS



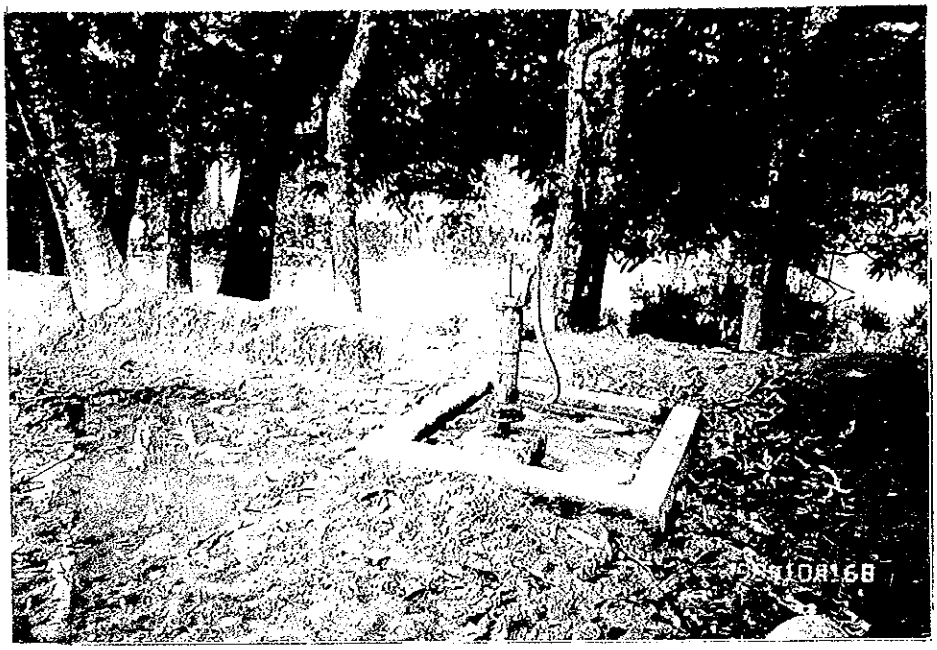
学校敷地全景

校舎全景





教室内状況



付帯施設の状況

学校周辺の地形状況

学校周辺の道路状況

資料11.　自然条件調査結果

資料11. 自然条件調査結果

サイクロンシェルター建設計画策定に必要なデータを収集するために、サイト概要調査結果より選定された２１サイトに対して、現地業者に以下に示す地形測量調査及び地質調査を委託した。また、計画対象地域の気象状況を把握するために直営にて気象調査を実施した。その結果は以下のとおりである。

11-1 地形測量

(1) 目的

各サイトにおいて、サイクロンシェルターの計画に必要な地形状況を把握する。

(2) 調査範囲

1ヵ所当りシェルター建設候補地を含む３haとした。ただし、周辺にキラ又その建設候補地があれば、それを含む３haとした。

(3) 業務内容

1)平板測量（３ha）

2)２０m間隔での杭の設置

3)水準点測量

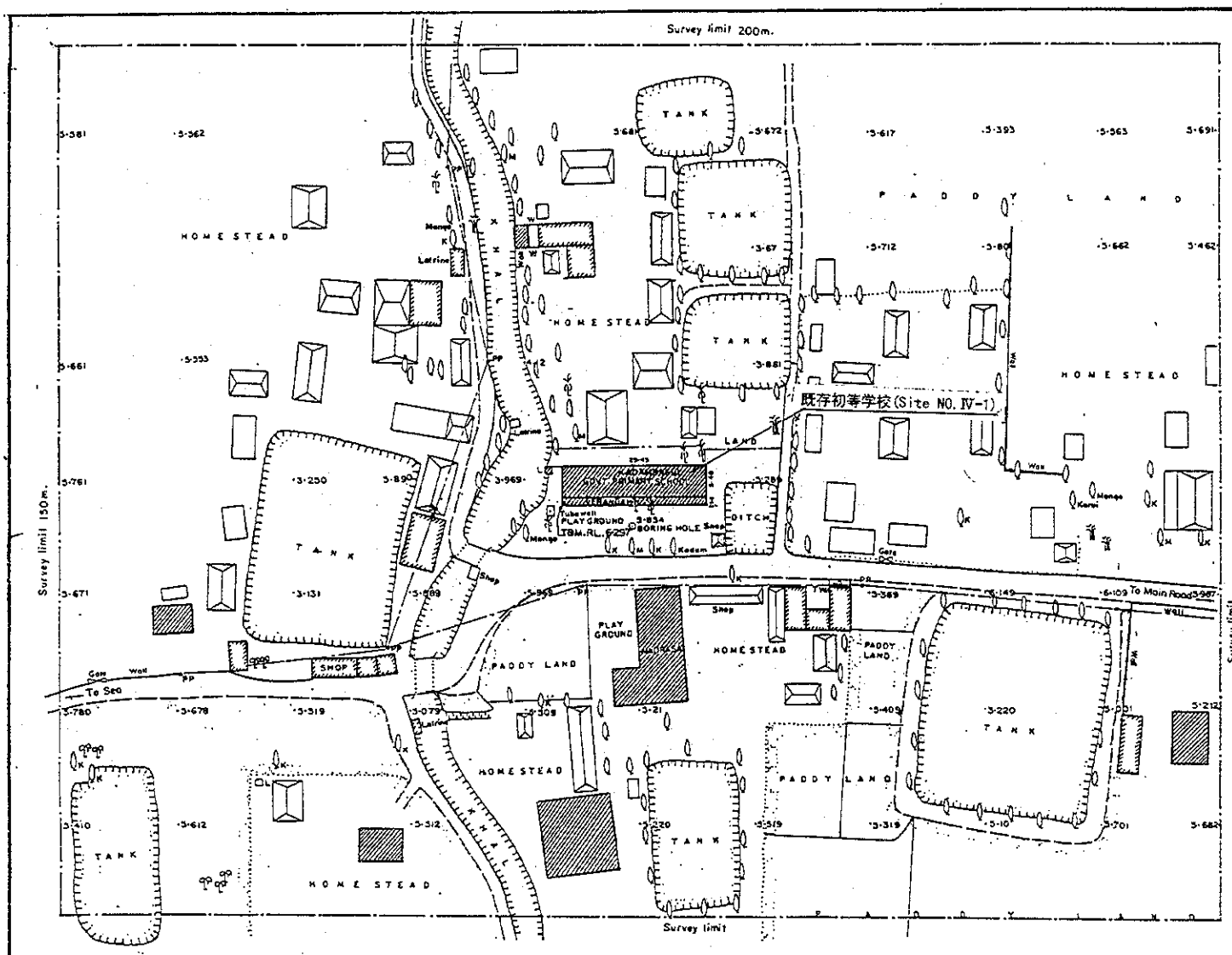
4)仮ベンチマークの設置

(4) 測量結果

上記測量結果を以下に示す。

この測量結果において、大半のサイトにおいては、シェルター建設候補地点の近傍に、キラの建設が可能な広大な水田が広がっている。但し、２ヵ所程（サイトNo. IV-1, No. IV-5）では、平面図内には必要な広さの水田は存在しないが、どちらも候補地点から200m程のところに十分な広さの水田が存在していることが確認されている。

11-1　地形測量図



LEGEND:

1. Structure; Permanent, Semi permanent, Tinshed, Hut
2. Road; Brick paved, Unmetalled
3. Khal, Tank, Ditch, Curing
4. Wall, Survey limit
5. Mouza Plot limit
6. Power line
7. Temporary Bench Mark (TBM), Spot height — TBM.RL. 6.257 "3.369
8. Trees; Mango, Coconut, Karai, Banana & Others

NOTE:

Height Received from pillar no. 6068 School Ground Voliary High School. Compound. Village Voliary, Post. Voliary, PS. Sitakund. Dist. Chittagong. The BM is Situated at the S/E corner of Voliary High School. R.L. 6·8430m. (P.W.D).

Heighest Flood Level ... ... 7·184 m. in 1991 (from local information)

Contour Intervals ... ... 0·5 metre

Site No. IV-1
Kadamrasul GPS

SCALE: 1: 500

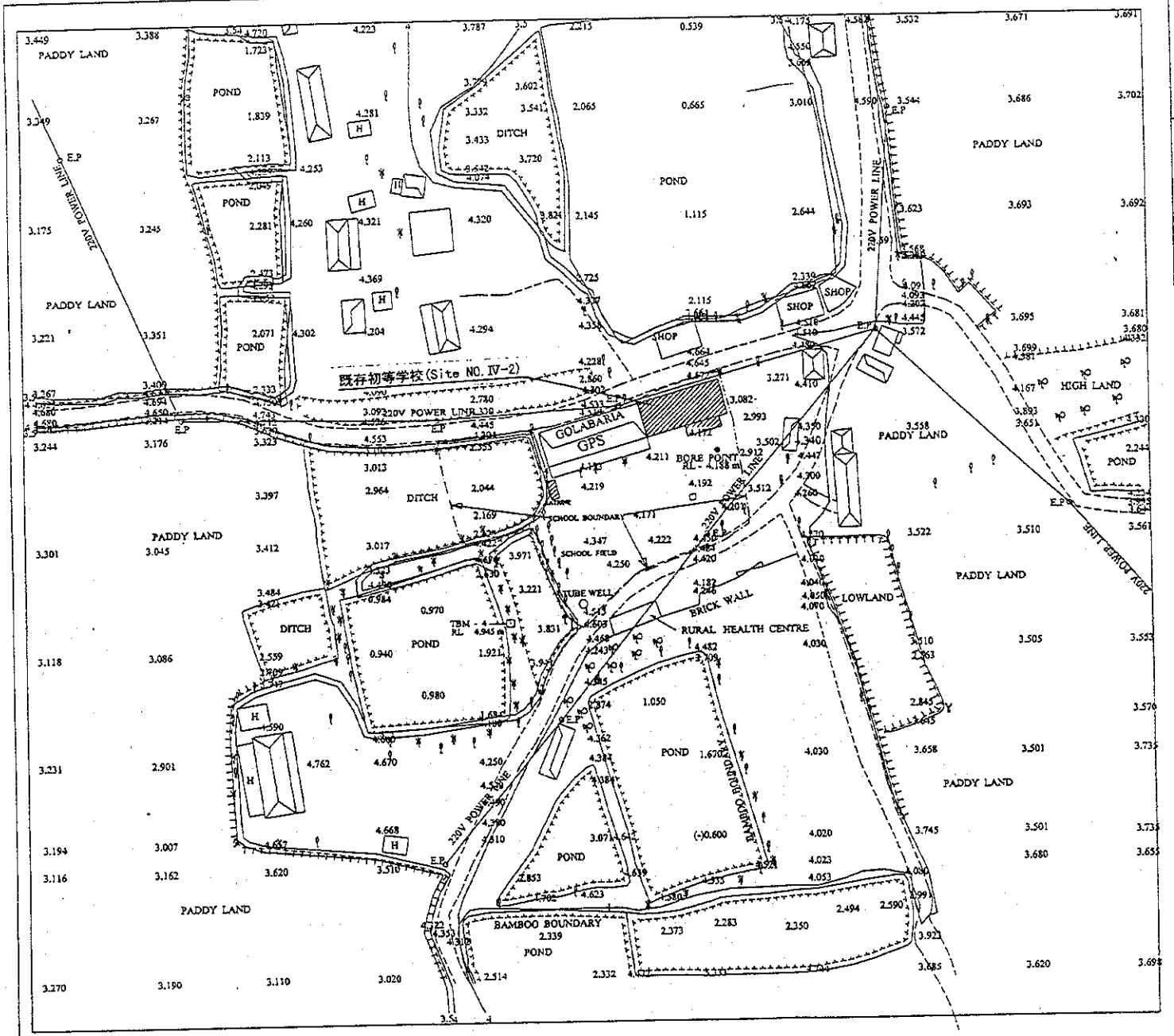
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO.03, KADAMRASUL G P.S. THANA-SITAKUNDA

Drawn by:	Checked by:	Date
	Approved by:	

Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 5.114m MSL IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL = 4.130m MSL
AREA SURVEYED = 3.000 HECTARES

HEIGHT RECEIVED FROM FM BM NO. 4516, RL 6.999m MSL.

TBM 4 JICA ISTALLED ON THE BANK OF THE POND WHICH IS 28m AWAY FROM THE GOLABARIA GPS IN SOUTH WEST DIRECTION. THE DISTANCE BETWEEN THE TBM - 4 JICA AND THE TUBE WELL IS 13m.

Site No. IV-2
Golabaria GPS

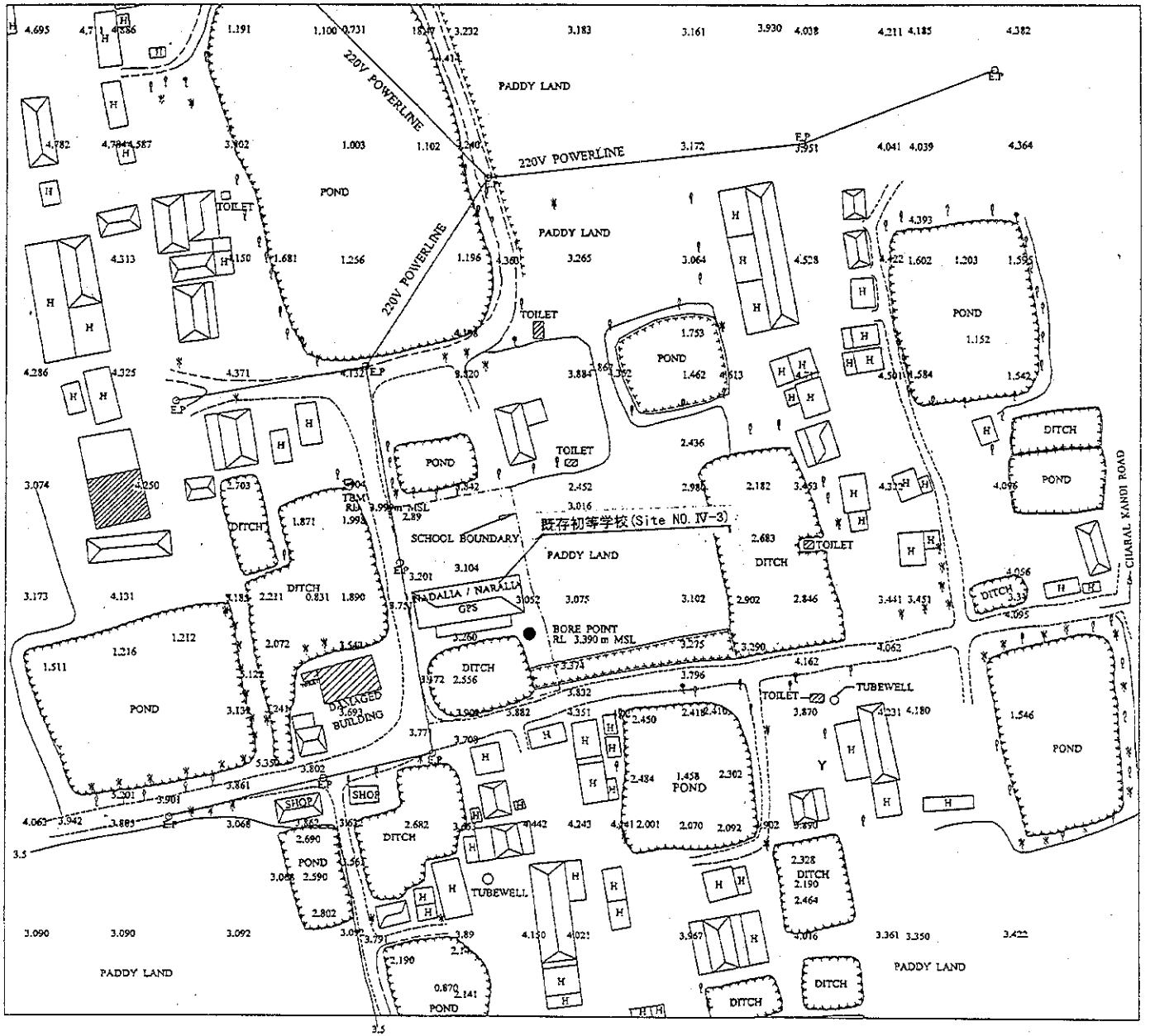
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 4 GOLABARIA GPS
THANA : SITAKUNDA

Surveyed by : Md. Babul Akter	November - 1998
Drawn by : Md. Shamim Hossain	

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 6.066m MSL IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL = NIL
AREA SURVEYED = 3.000 HECTARES

HEIGHT RECEIVED FROM BM NO. 4516 RL 6.999 MSL

TBM 5 JICA LOCATED AT A DISTANCE OF 22.5m FROM THE SCHOOL TOWARDS THE NORTH WEST DIRECTION

Site No. IV-3
Noralia GPS

PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

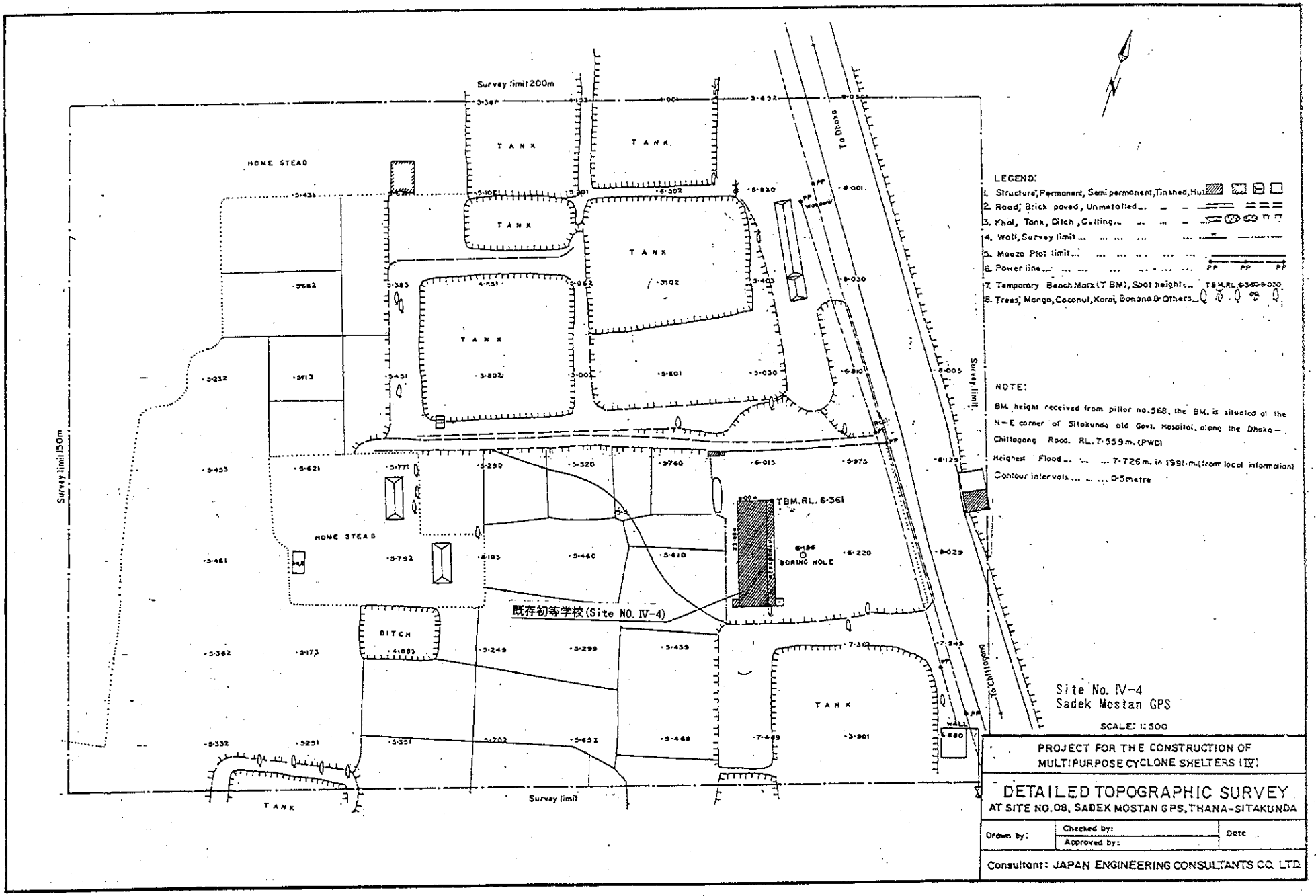
AT SITE NO. 5 NARALIA GPS
THANA : SITAKUNDA

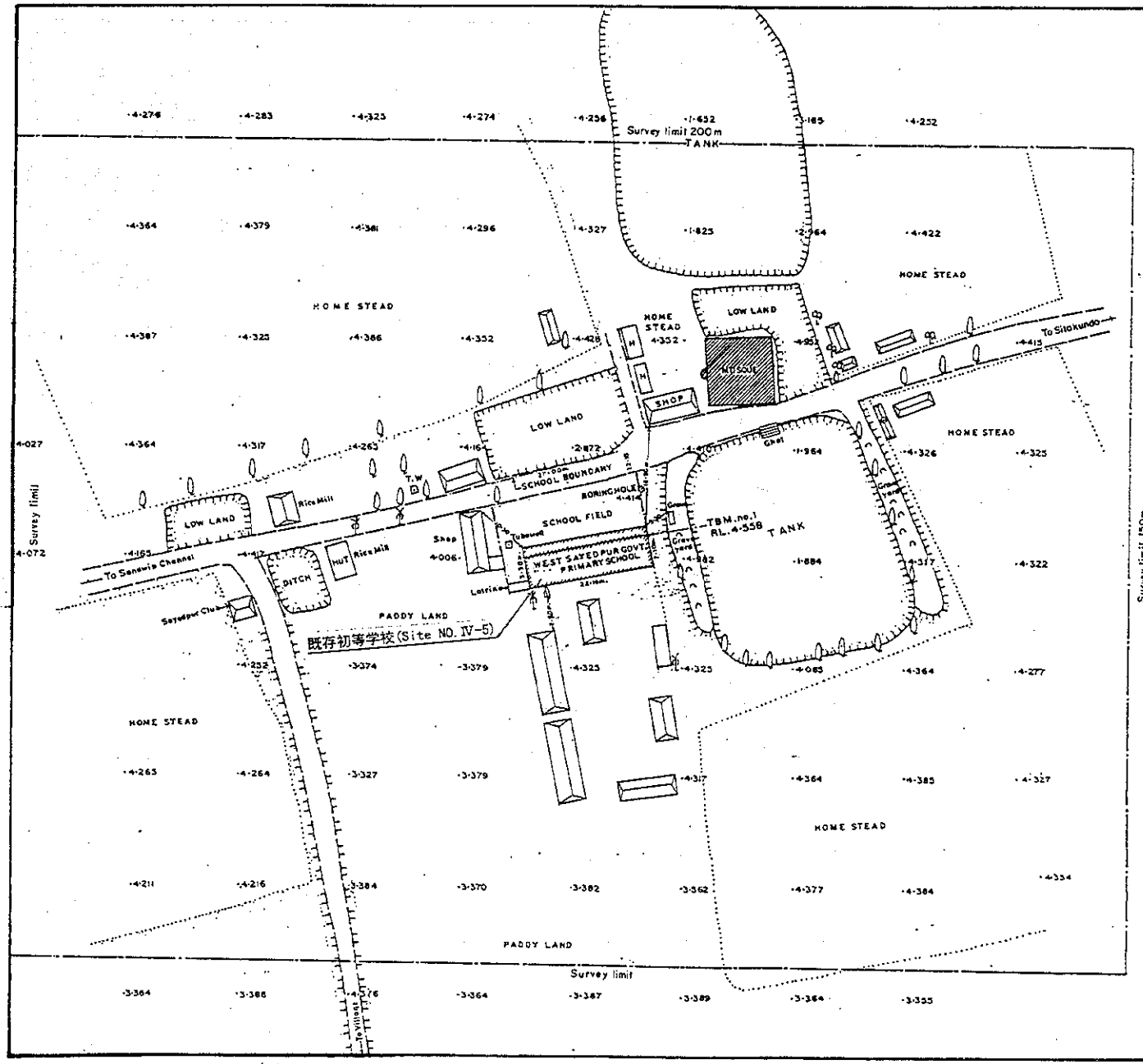
Surveyed by : Md. Babul Akter

Drawn by : Md. Shamim Hossain

November - 1998

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.


Survey limit 200m
HOME STEAD
TANK
TANK
TANK
TANK
TANK
To Dhaka
Survey limit 150m
Survey limit
HOME STEAD
TBM.RL. 6·361
BORING HOLE
既存初等学校(Site NO. IV-4)
DITCH
TANK
Survey limit
TANK
Bridge
LEGEND:
1. Structure, Permanent, Semi permanent, Tinshed, Hut
2. Road, Brick paved, Unmetalled
3. Khal, Tank, Ditch, Cutting
4. Wall, Survey limit
5. Mouza Plot limit
6. Power line
7. Temporary Bench Mark (T BM), Spot height
8. Trees, Mango, Coconut, Korai, Banana & Others
NOTE:
BM. height received from pillar no.568, the BM. is situated at the N-E corner of Sitakunda old Govt. Hospital, along the Dhaka—Chittagong Road. RL. 7·559 m. (PWD)
Heighest Flood ... 7·726 m. in 1991 m. (from local information)
Contour intervals ... 0·5 metre
Site No. IV-4
Sadek Mostan GPS
SCALE: 1:500
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)
DETAILED TOPOGRAPHIC SURVEY
AT SITE NO.08, SADEK MOSTAN GPS, THANA-SITAKUNDA
Drawn by:
Checked by:
Approved by:
Date
Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND:

1. Structure; Permanent, Semipermanent, Tin shed, Hut
2. Road; Brick paved, Unmetalled
3. Khal, Tank, Ditch, Cutting
4. Wall, Survey limit
5. Mouza Plot limit
6. Power line
7. Temporary Bench Mark (TBM), Spot height ... TBM.RL.4.558 · 4.326
8. Trees; Mango, Coconut, Karoi, Banana & Others

NOTE:

BM height received from pillar no. 568, the BM. is situated at the N-E corner of Sitakunda old Govt. Hospital, along the Dhaka-Chittagong Road. RL. 7.559 m. (PWD)

Highest Flood ... ... 8.500m. in 1963 m. (from local information)

Contour interval ... ... 0.50 m.

Site No. IV-5
West Sayedpur GPS

SCALE: 1: 500

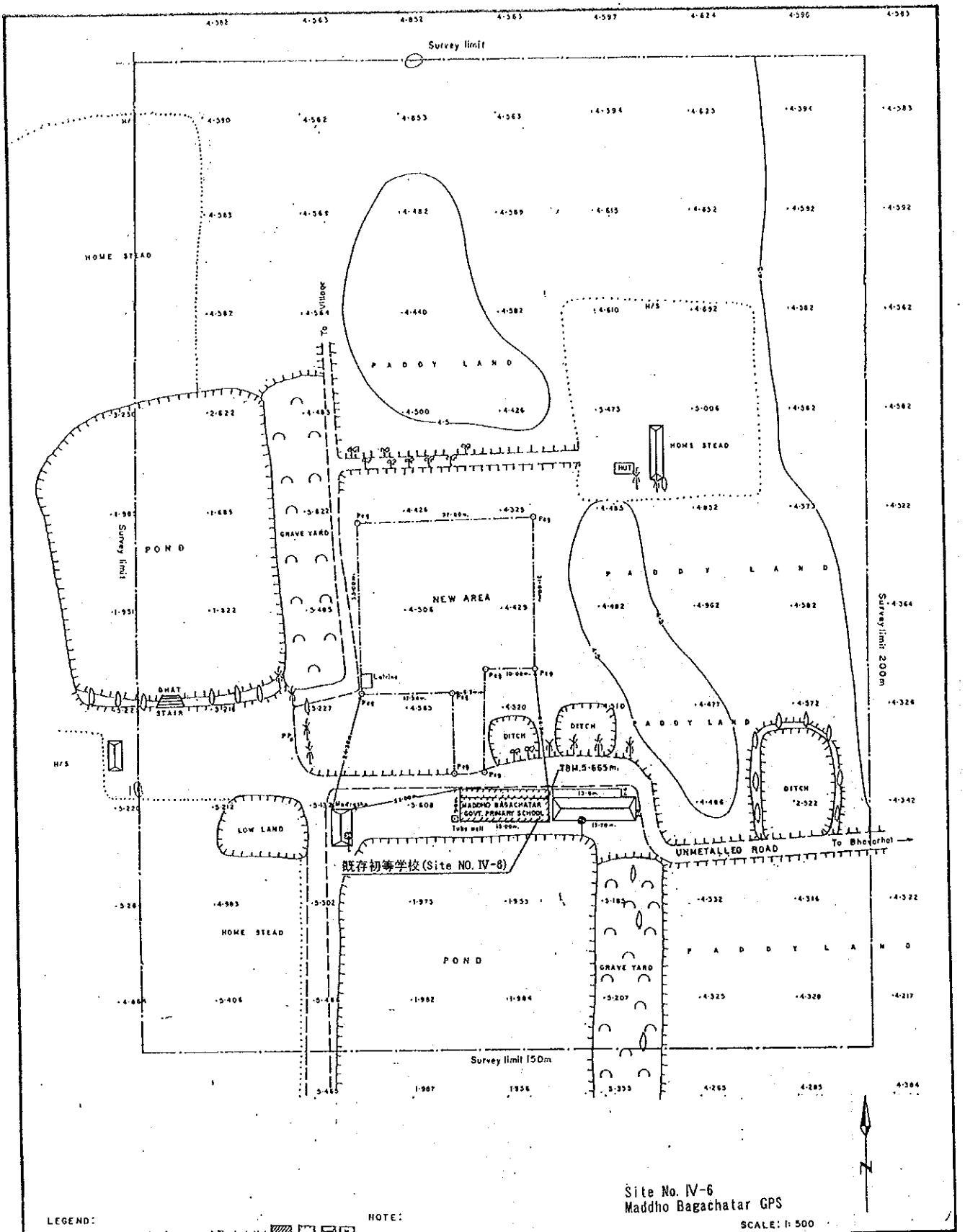
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IX)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 09, WEST SAYEDPUR G P S, THANA-SITAKUNDA

Drawn by :	Checked by :	Date
	Approved by :	

Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND:

1. Structure ; Permanent, Semipermanent, Finished, Hut.
2. Road ; Brick paved, Unmetalled ...
3. Ditch, Pond, Cutting ...
4. Grave Yard, Survey Limit ...
5. Power line ...
6. Temporary Bench Mark (TBM) Spot height ... TBM. RL. 5·665 · 4·486
7. Trees ; Mango, Coconut, Date palm, Tarl palm, ... Banana & Others ...

NOTE:

B.M. height received from pillar no. 568, the B.M. is Situated at the N-E corner of Sitakunda old Govt. Hospital, along the Dhaka-Chittagong Road.
RL. 7·559m. (PWD)
Heighest Flood ..... 8·400m. in 1963 (from local information).
Contour Interval ..... 0·5m.

Site No. IV-6
Maddho Bagachatar GPS

SCALE: 1: 500

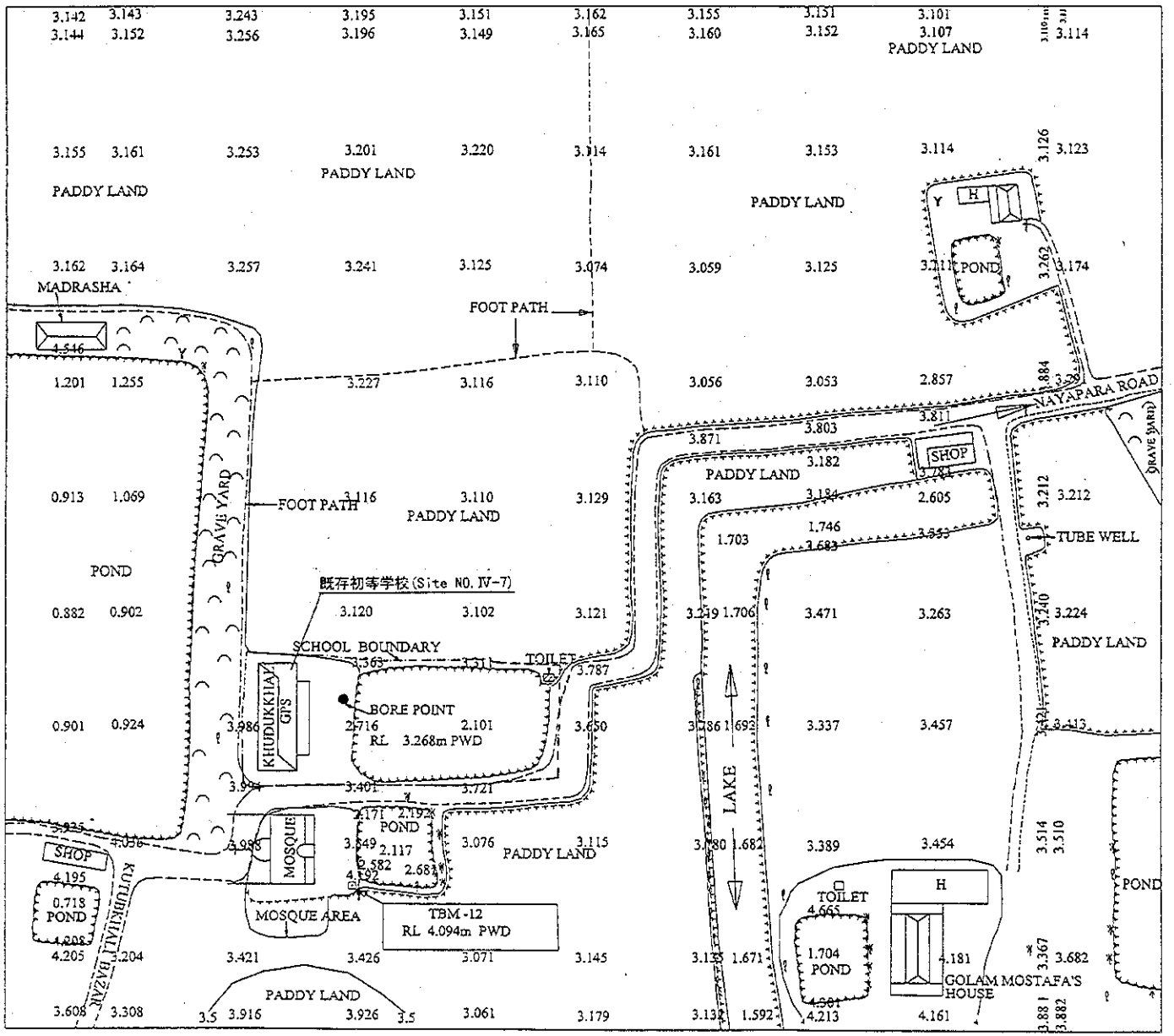
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 10, MADDHO BAGACHATAR GPS, THANA- SITAKUNDA

Drawn by :	Checked by :	Date
	Approved by :	

Consultant : JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 6.463m PWD IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL - 3.295m PWD
AREA SURVEYED 3.000 HECTARES

HEIGHT RECEIVED FROM SLUICE GATE NO. 7 RL 5.070m

TBM 12 JICA LOCATED UNDER THE BAMBOO BUSH WHICH IS 21.5m AWAY FROM THE SCHOOL AND 6.0m FROM THE MOSQUE

Site No. IV-7
Khudukkhali GPS

PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

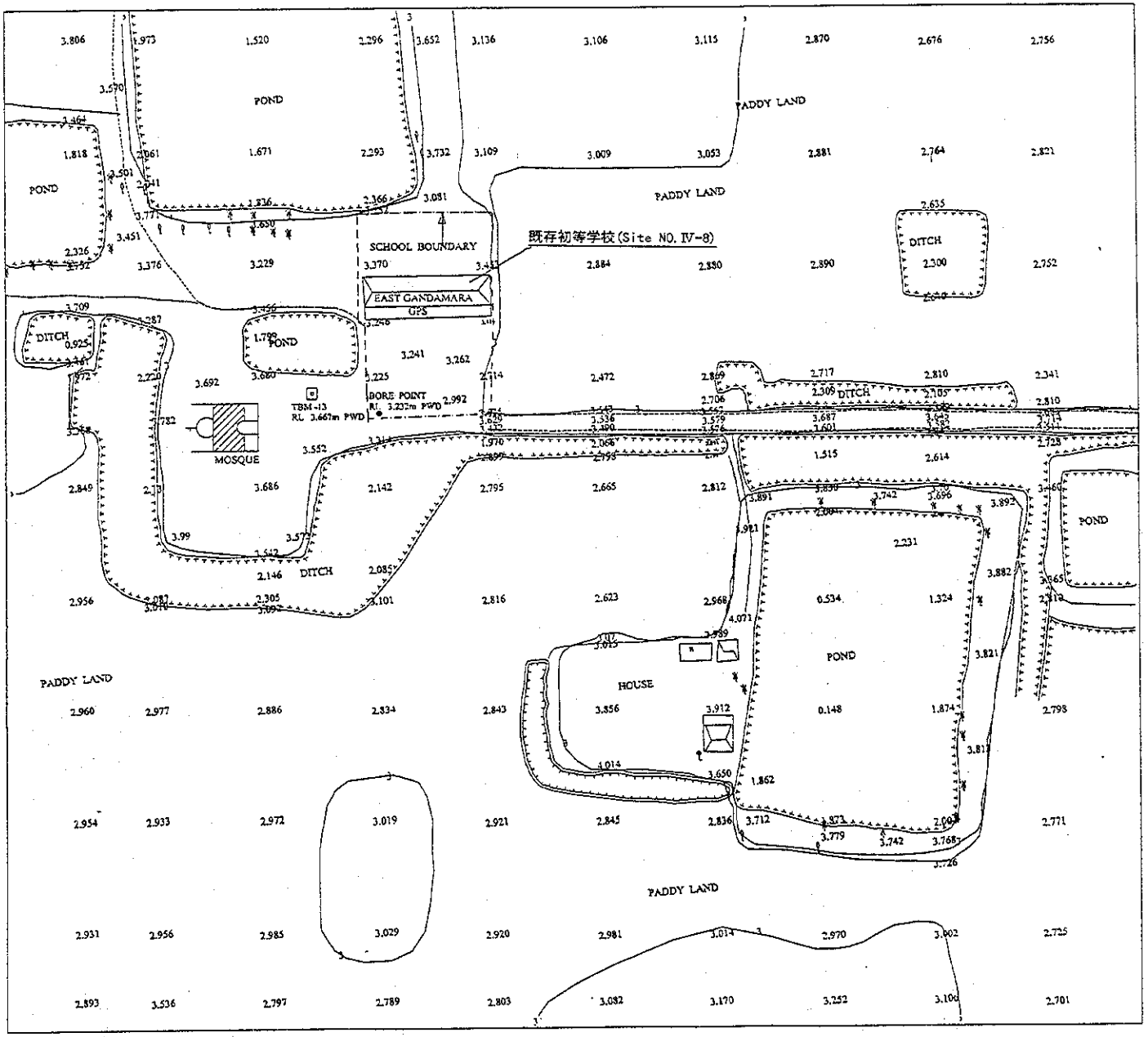
AT SITE NO. 12 KHUDUKKHALI GPS
THANA - BANSKHALI

Surveyed by : Md. Babul Akter

Drawn by : Md. Shamim Hossain

November - 1998

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 5.735m PWD IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL = 3.557m PWD
AREA SURVEYED = 3.000 HECTARES

HEIGHT RECEIVED FROM FLOOR OF OLD CYCLONE SHELTER RL 8.600m PWD

TBM 13 JICA LOCATED IN FRONT OF THE MOSQUE WHICH IS 10 m AWAY FROM THE MOSQUE AND 16.00m FROM THE SCHOOL

Site No. IV-8
East Gandamara GPS

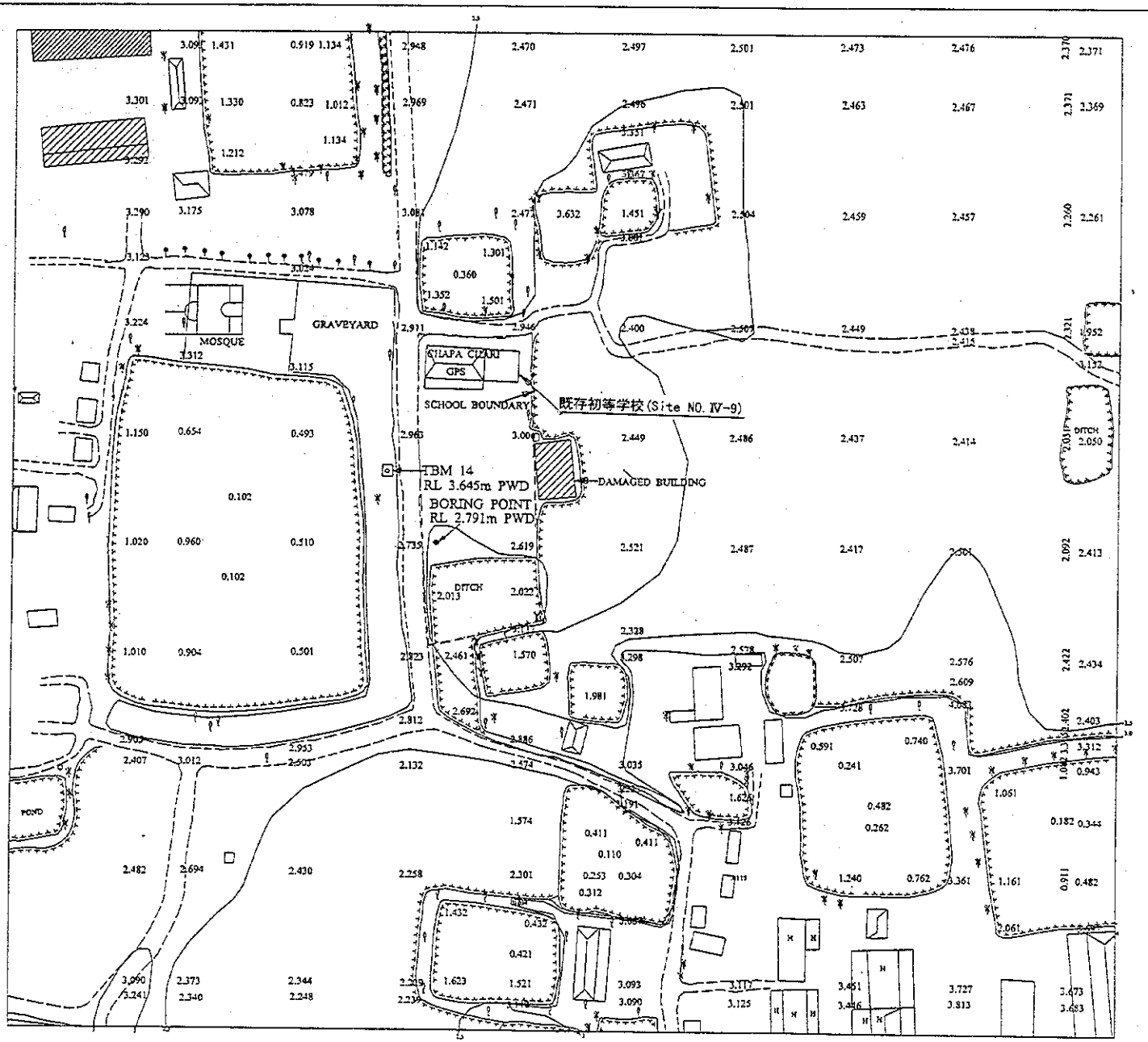
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 13 GANDAMARA GPS
THANA - BANSKHALI

Surveyed by : Md. Babul Akter	November - 1998
Drawn by : Md. Shamim Hossai	

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 4.562m PWD IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL = 2.98m PWD
AREA SURVEYED = 3.000 HECTARES

HEIGHT RECEIVED FROM FLOOR OF SADHANPUR CYCLONE SHELTER RL 6.600m PWD

TBM 14 JICA LOCATED ON THE BANK OF POND NEAR PUCCA GRAVEYARD AND WHICH IS 18.00m AWAY FROM THE SCHOOL IN SOUTH WEST DIRECTION.

Site No. IV-9
Chapa Chari Rashidia GPS

PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

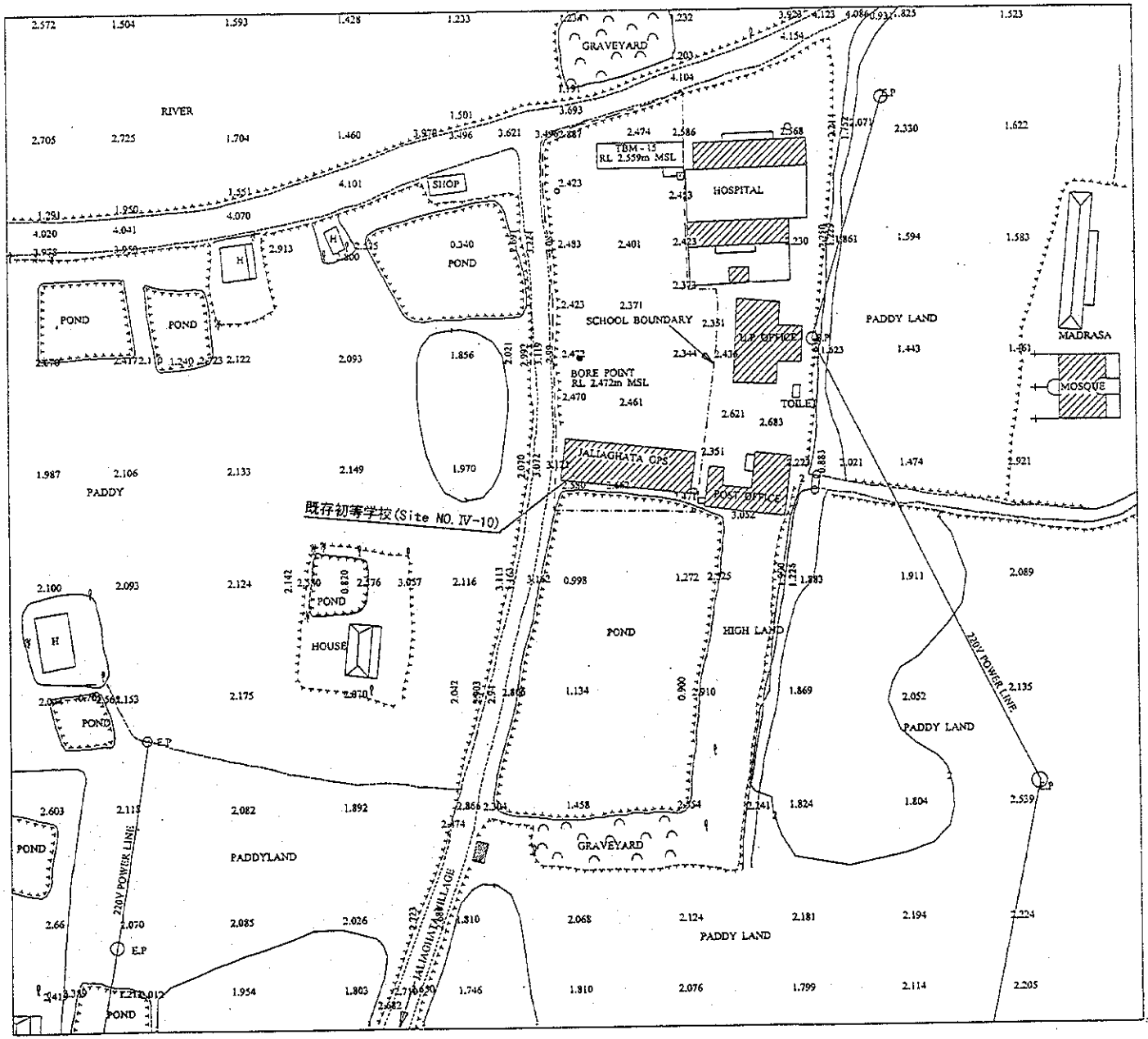
AT SITE NO. 14 CHAPA CHARI RASHIDIA
THANA - BANSKHALI

Surveyed by : Md. Babul Akter

Drawn by : Md. Shamim Hossain

November - 1998

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.



N

METER

SCALE : 1 : 500

TOPOGRAPHIC LEGEND :

- METALLED ROAD
- UNMETALLED ROAD
- TREES, BETEL-NUT
- COCONUT-TREE / DATE - TREE AND BANANA
- STRUCTURE, HUT
- SEMIPERMANENT, TIN SHED
- POND, DITCH, KHAL

TOPOGRAPHIC NOTES :

CONTOUR INTERVALS IN 0.5 METERS
HIGHEST FLOOD LEVEL = 3.572m PWD IN 1991 (FROM LOCAL INFORMATION)
NORMAL FLOOD LEVEL = 2.65Sm. PWD
AREA SURVEYED = 3.000 HECTARES

HEIGHT RECEIVED FROM BM NO. 0416 RL 3.842m MSL

TBM 15 JICA LOCATED BY THE SIDE OF THE WEST BOUNDARY WALL OF THE HOSPITAL WHICH IS 51.5m AWAY FROM THE SCHOOL AND 15.0m FROM THE ROAD.

Site No. IV-10
Jaliaghata GPS

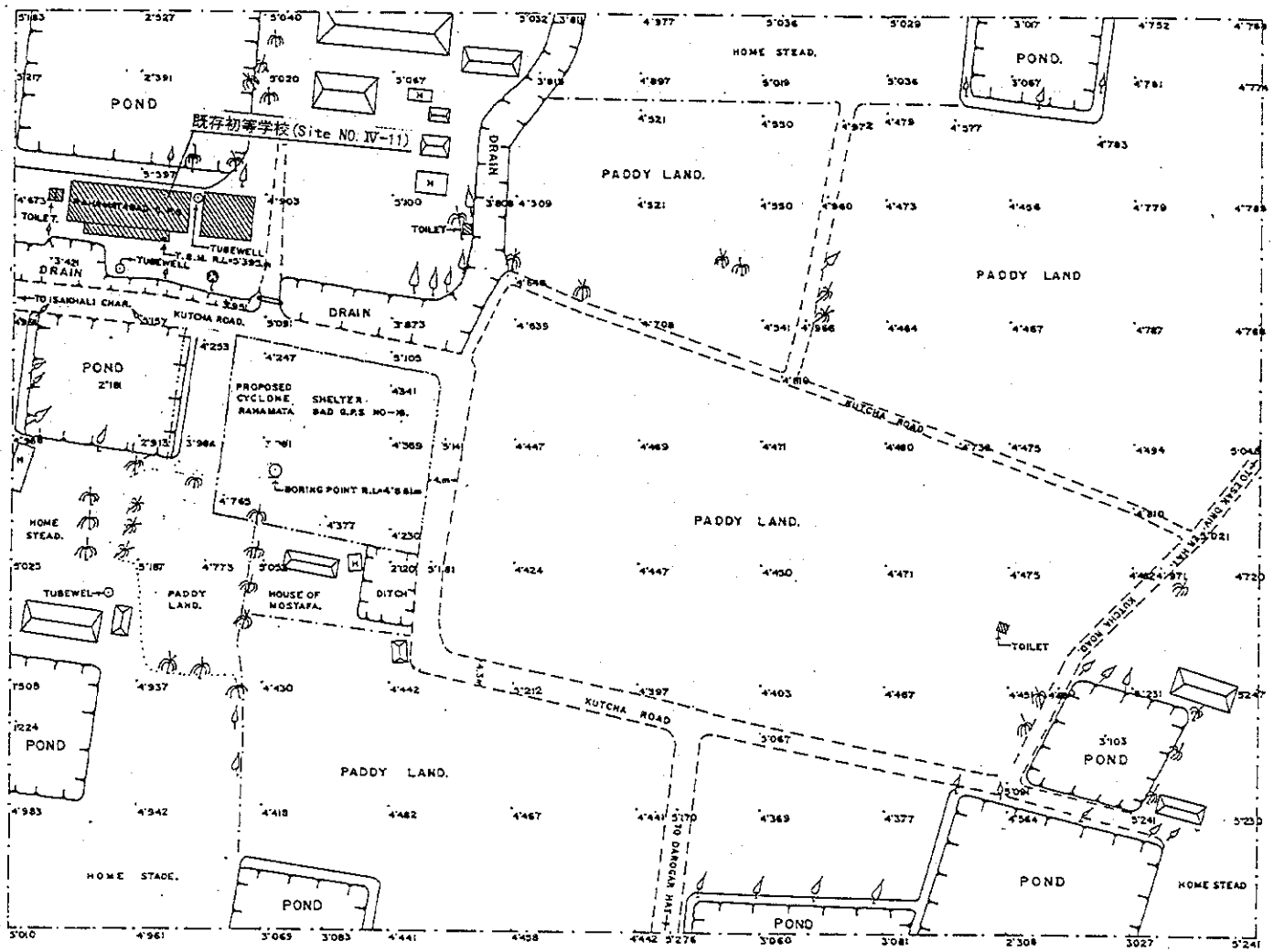
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 15 JALIAGHATA GPS
THANA - BANSKHALI

Surveyed by : Md. Babul Akter	November - 1998
Drawn by : Md. Shamim Hossain	

CONSULTANT :
JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND.

1. STRUCTURE—SEMI PERMANENT, TIN SHED, HUT.
2. ROAD, UNMETEL.
3. POND, DITCH, DRAIN, KHAL.
4. SURVEY LIMIT
5. TEMPORORY BENCH MARK..... T. B. M=5'395.m
6. TREES—COCONUT, DATE PALM, TARI PALM, & OTHERS.
7. CONTOUR & SPOTHEIGHT
8. BORING POINT. R. L=4'68.m.

NOTE.

SITE NO—16.

HEIGHT RECEIVED FROM B.M. (R.L=5'860.m.) W.D.B. ISAKHALI REGULATER AT RETAINING WALL TOP IN COUNTRY SIDE AT ISAKHALI. MIRSHARI. CHITTAGONG. 4.K.M. FROM RAHAMATABAD G.P.S.

ALL HEIGHTS ARE IN TERMS OF P.W.D DETUM.

CONTOUR INTERVAL IS. 0'50.METRE.

HIGHEST FLOOD LEVEL....IN=1988 —— 5'890.m.
" " " " =1991 —— 6'190.m.
" " " " =1998 —— 4'710.m.

NORMAL FLOOD LEVEL ..... —— 4'980.m.

AREA SURVEYED ..... —— 5.HECTORES.

T.B.M.....R.L=5'395.m (P.W.D.)

ISAKHALI REGULATER TO RAHAMATABAD G.P.S =4.K.M.

T.B.M MARKED ON RED PAINT NORTH EAST CORNEER OF SCHOOL BARANDA FLOOR LEVEL.

Site No. IV-11
Rahamotabad GPS

SCALE:—1:500.m.

PROJECT FOR THE
CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER(IV)

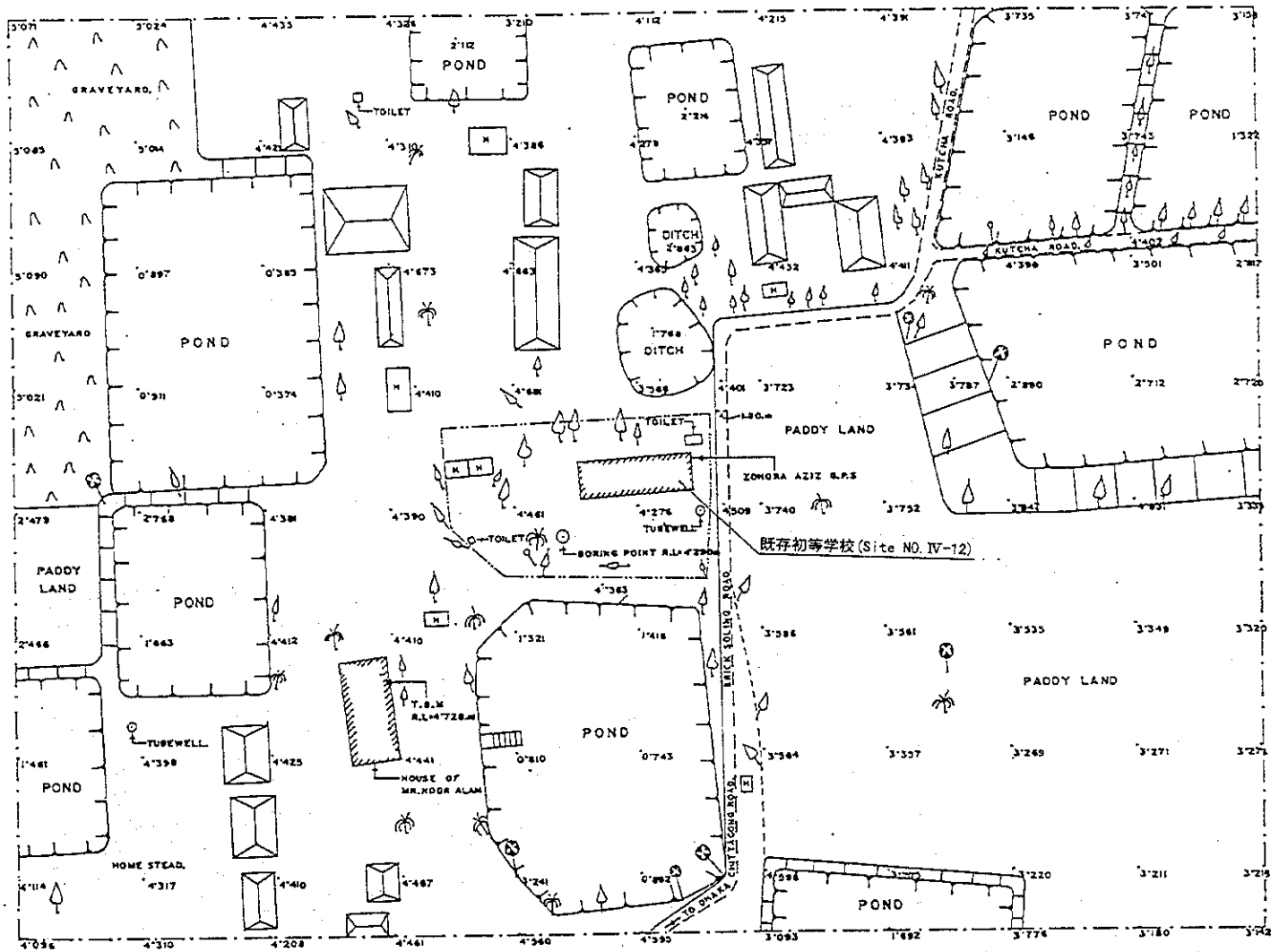
DETAILED TOPOGRAPHIC SURVEY.

AT SITE NO.16. RAHAMATABAD G. P. S
THANA—MIRSHARAI.

SURVEYED BY. MD. MAHASHIN.	NOVEMBER
DRAWN BY. M. RAHMAN.	1998.

CONSULTANT: JAPAN ENGINEERING CONSULTANTS CO.LTD.

A11-13



LEGEND.

1. STRUCTURE:- SEMI PERMANENT, TIN SHED, HUT.
2. ROAD, UNMETEL
3. POND, DITCH, BORROW PIT, KHAL
4. SURVEY UNIT
5. TEMPORORY BENCH MARK ..... T.B.M=4'728m
6. TREES=COCONUT, DATE PALM, TARI PALM, & OTHERS.
7. CONTOUR & SPOTHEIGHT ..... 7'55
8. BORING POINT ..... R.L=4'29m

NOTE.

SITE NO—17.

HEIGHT RECEIVED FROM B.M (R.L=6'4085m) S.O.B. TOP OF IRON R.C.C PILLER AT KARER HAT K.M HIGH SCHOOL COMPLEX SOUTH EAST CORNER, MIRSARAI, CHITTAGONG. 11.50 K.M FROM SOUTH SONAPAHAR ZOHORA AZIZ G.P.S.

ALL HEIGHTS ARE IN TERMS OF P.W.D DETUM.

CONTOUR INTERVAL IS. 0'50 METRE.

HIGHEST FLOOD LEVEL.....IN=1988 —— 5'273m.
" " " —1998 —— 5'053m.

NORMAL FLOOD LEVEL ..... —— 4'135m.

AREA SURVEYED ..... —— 3 HECTORES.

T.B.M ..... R.L=8'728m (P.W.D)

KARER HAT TO SOUTH SONAPAHAR ZOHORA AZIZ G.P.S=11.50K.M.

T.B.M MARKED ON RED PAINT PUCCA FLOOR EAST SIDE HOUSE OF MR. NOOR ALAM.

N

Site No. IV-12
South Sonapahar
Johora Aziz GPS

SCALE—1:500m.

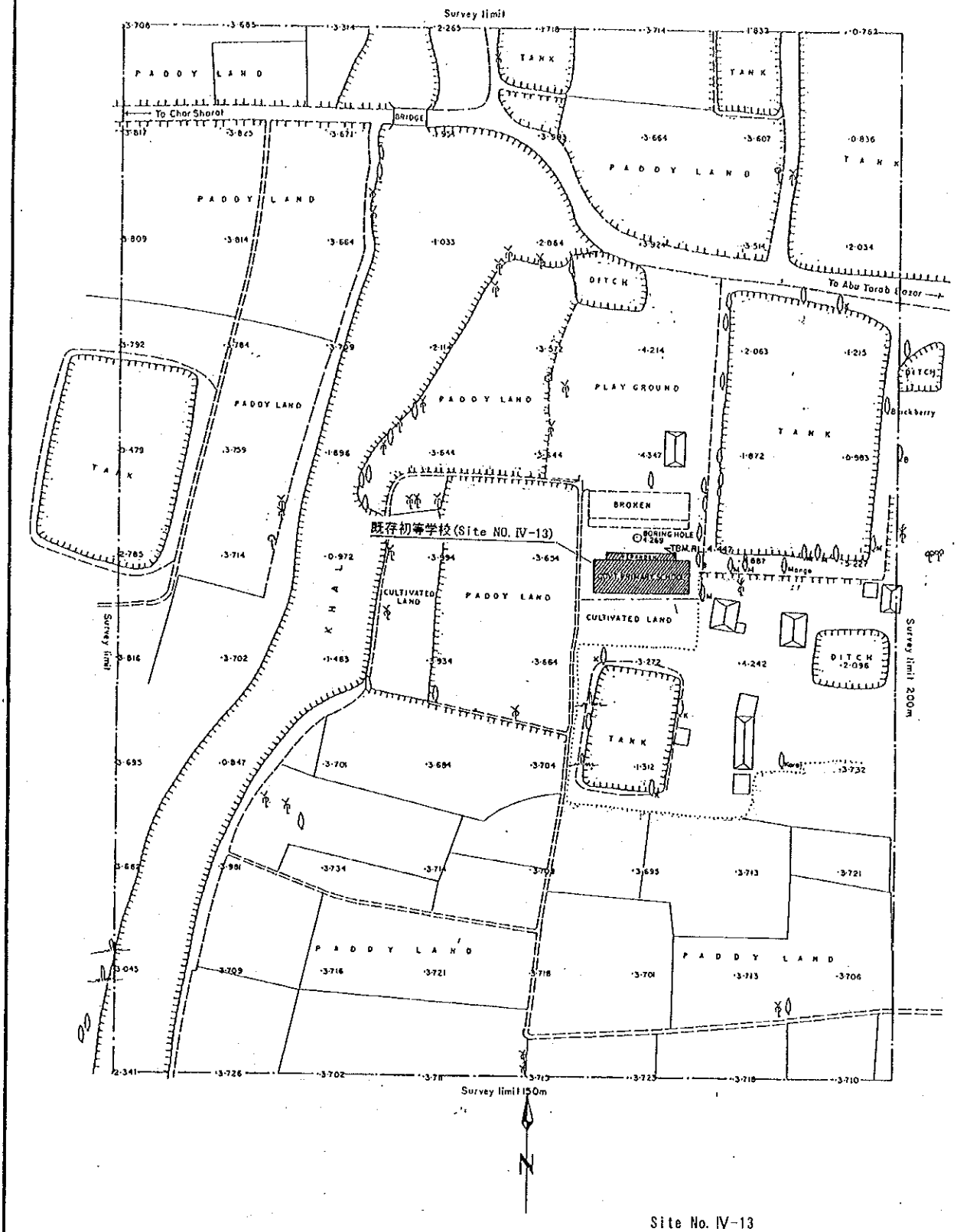
PROJECT FOR THE.. CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER(V)

DETAILED TOPOGRAPHIC SURVEY.

AT SITE NO.17, SOUTH SONAPAHAR ZOHORA AZIZ G.P.S
THANA—MIRSHARAI.

SURVEYED BY. MD. MAHASHIN — NOVEMBER
DRAWN BY. M. RAHMAN. — 1996.

CONSULTANT: JAPAN ENGINEERING CONSULTANTS CO.LTD.



Site No. IV-13
Mondarhat GPS

SCALE: 1: 500

LEGEND:

1. Structure; Permanent, Semipermanent, Tinshed, Hut...
2. Road; Brick paved, Unmetalled...
3. Khal, Tank, Ditch, Cutting...
4. Wall, Survey limit...
5. Mouza Plot limit...
6. Power line...
7. Temporary Bench Mark (TBM), Spot height... TBM RL. 4.447 '3.715
8. Trees; Mango, Coconut, Karal, Banana & Others...

NOTE:

Height Received from Top of iron plate S/E corner of Mirsarai Inspection Bungalow. RL. 6.375 m. (PWD)

Heighest Flood Level... ...3.809m. in 1991 (from local information)

Contour Intervals... ... 0.5 metre

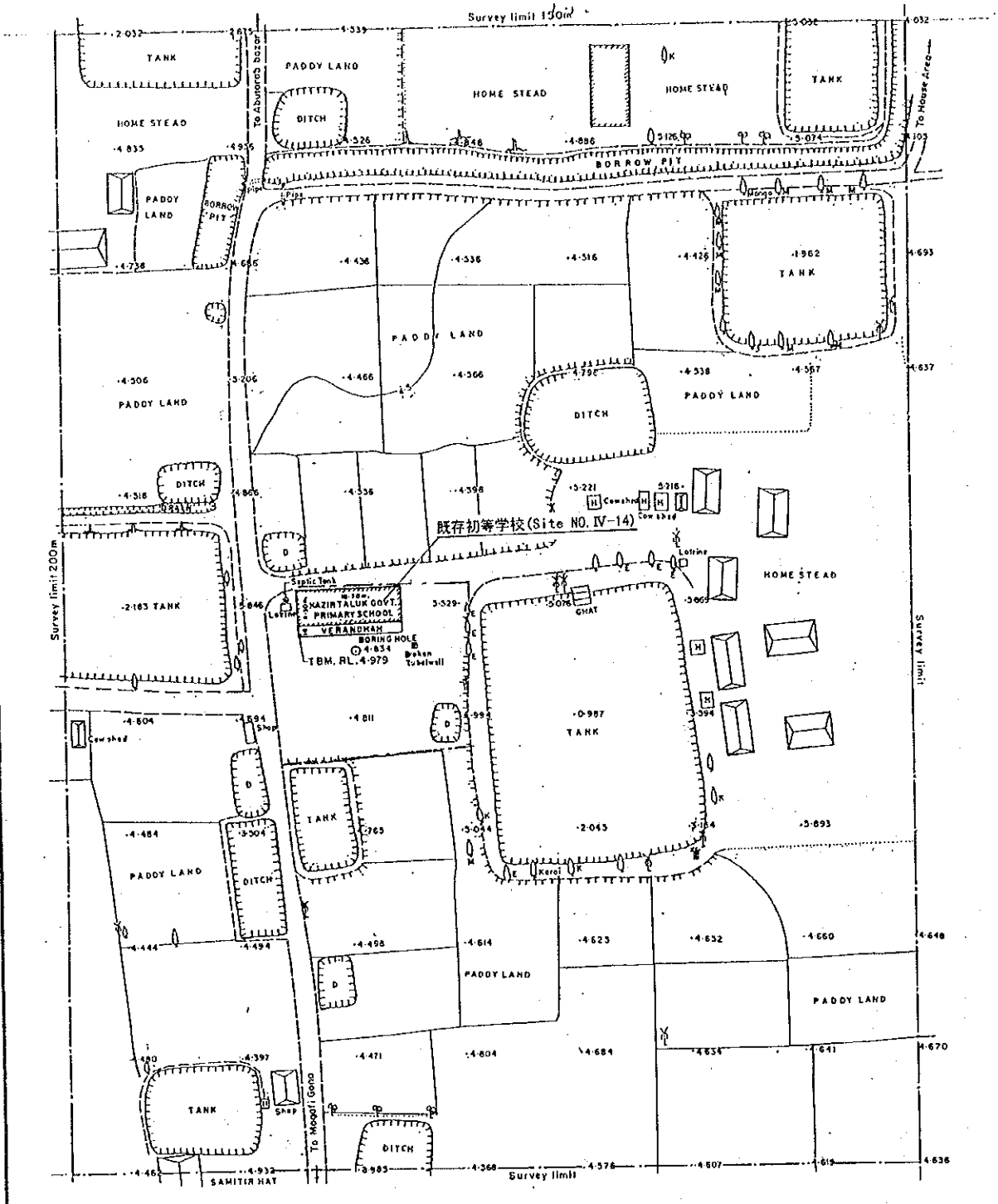
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 20, MOZUMDER HAT G.P.S., THANA- MIRSHARAI

Drawn by:	Checked by:	Date
	Approved by:	

Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



Site No. IV-14
Kazia Taluk GPS

SCALE: 1: 500

LEGEND:

1. Structure; Permanent, Semipermanent, Tin shed, Hut.
2. Road; Brick paved, Unmetalled...
3. Khal, Tank, Ditch, Culting...
4. Wall, Survey limit...
5. Mouza Plot limit...
6. Power line...
7. Temporary Bench Mark (TBM), Spot height...
8. Trees; Mango, Coconut, Karal, Banana & Others...

NOTE:

Height Received from Top of iron plate S-E corner of Mirsarai Inspection Bangalow RL. 6.375m (PWD)
Heighest Flood Level.....5.907m. in 1991 (from local information)
Contour Intervals 0.5metre

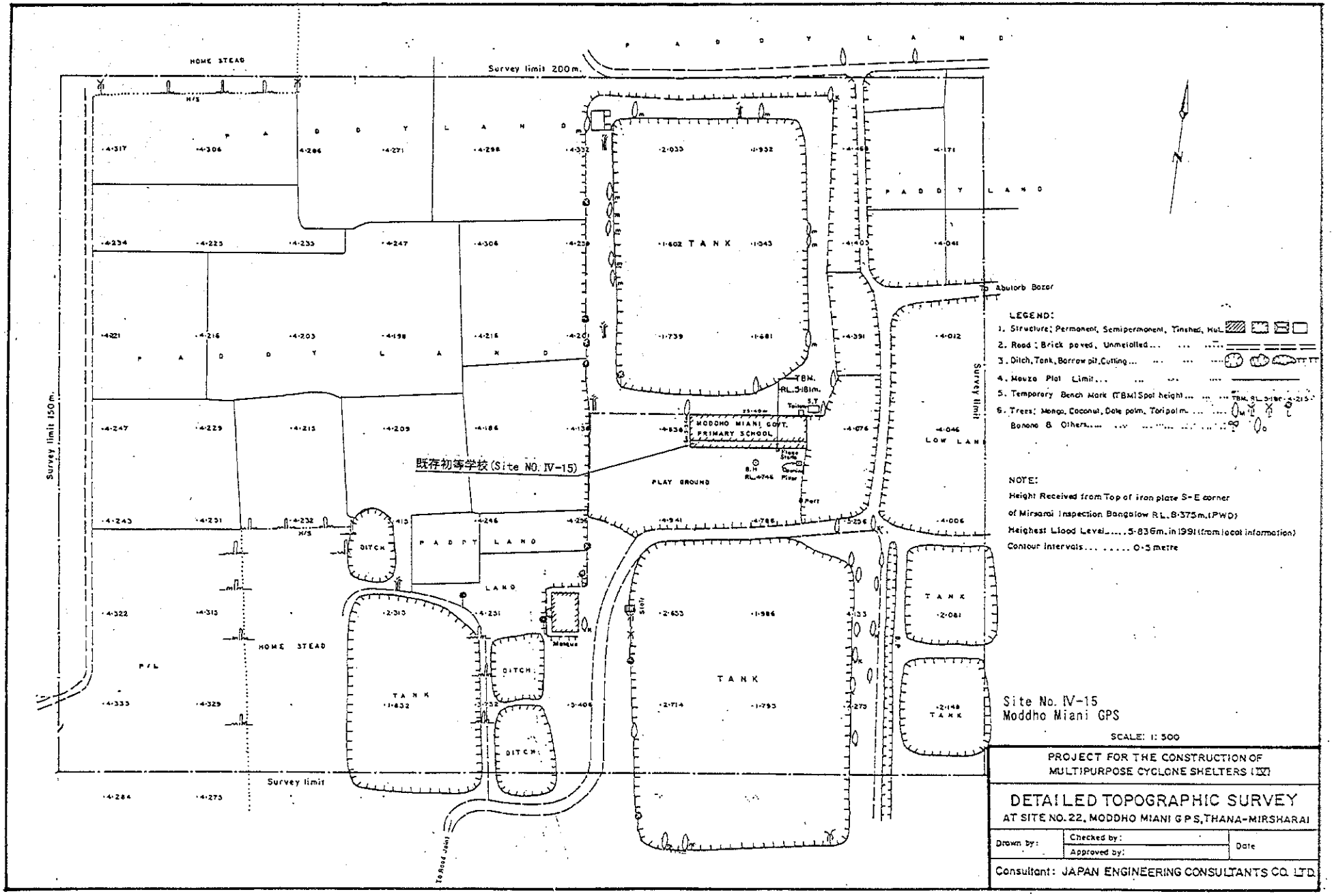
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

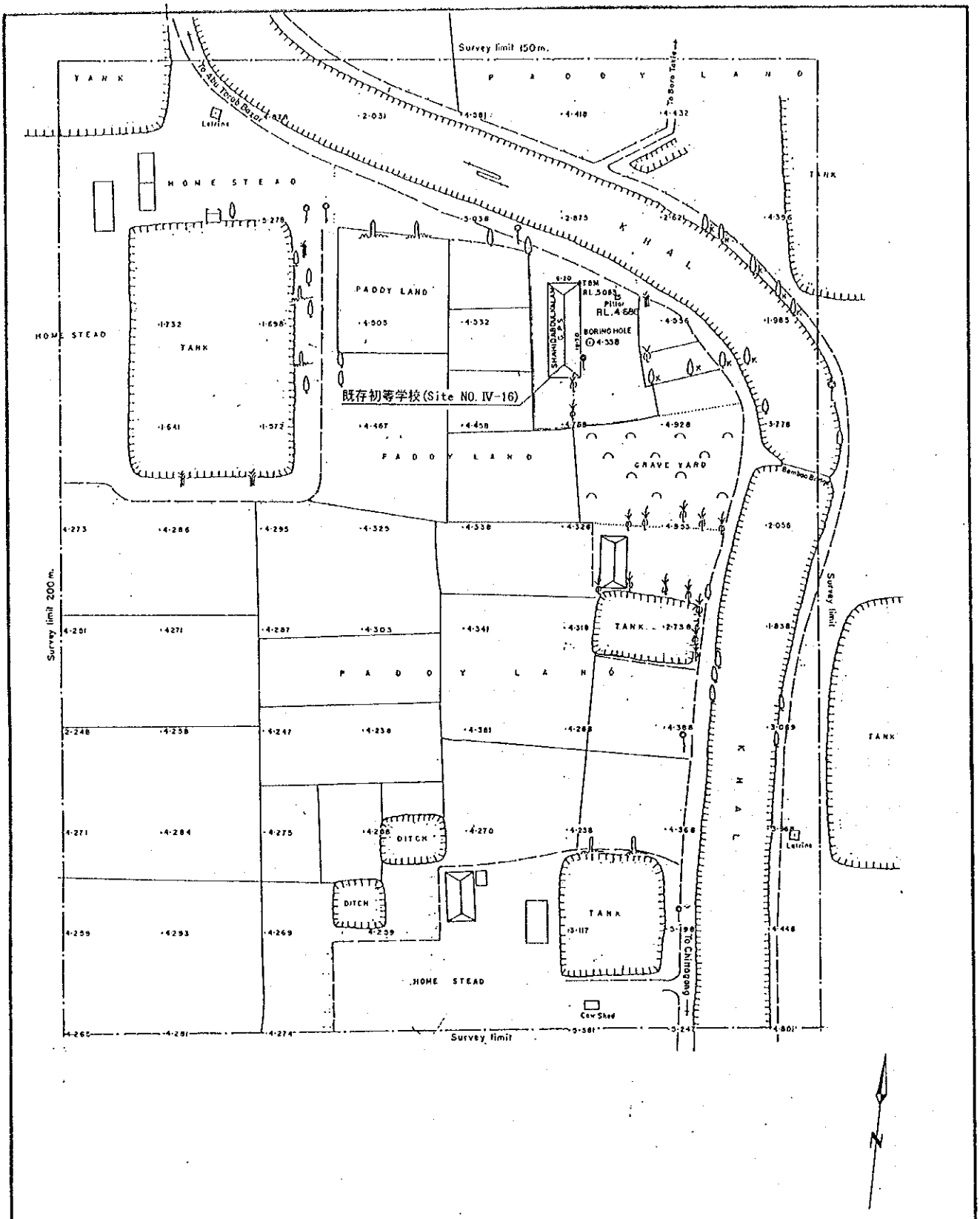
DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 21, KAZIR TALUK GPS, THANA-MIRSHARAI

Drawn by:	Checked by:	Date
	Approved by:	

Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.


HOME STEAD
Survey limit 200m.
P A D D Y L A N D
Survey limit 150m.
TANK
MODDHO MIANI GOVT. PRIMARY SCHOOL
既存初等学校 (Site NO. IV-15)
PLAY GROUND
TBM. RL.5.181m.
Survey limit
LOW LAND
DITCH
Mosque
Abulorb Bazar
LEGEND:
1. Structure; Permanent, Semipermanent, Tinshed, Hut
2. Road ; Brick paved, Unmetalled
3. Ditch, Tank, Borrow pit, Cutting
4. Mouza Plot Limit
5. Temporary Bench Mark (TBM) Spot height
6. Trees; Mango, Coconut, Date palm, Toripalm, Banana & Others
NOTE:
Height Received from Top of iron plate S-E corner of Mirsarai Inspection Bangalow R.L. 8.375m.(PWD)
Heighest Llood Level.....5.83Gm. in 1991 (from local information)
Contour intervals..... 0.5 metre
Site No. IV-15
Moddho Miani GPS
SCALE: 1: 500
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (XV)
DETAILED TOPOGRAPHIC SURVEY
AT SITE NO. 22, MODDHO MIANI G P S, THANA-MIRSHARAI
Drawn by:
Checked by:
Approved by:
Date
Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND:

1. Structure; Permanent, Semi permanent, Tin shed, Hut...
2. Road; Brick paved, Unmetalled...
3. Khal, Tank, Ditch, Cutting...
4. Wall, Survey limit...
5. Mouza Plot limit...
6. Powe line...
7. Temporary Bench Mark (TBM), Spot height... TBM.RL.5.083 4.28M
8. Trees; Mango, Coconut, Karol, Banana & Others

NOTE:

Height Received from Top of Iron plate S-E corner of Mirsarai Inspection Bangalow RL. 6.375m.(PWD).
Heighest Flood Level .....5.838m in 1991 (from local information)
Contour Intervals .....0.5 metre

Site No. IV-16
Shohid Abdul Kalam GPS

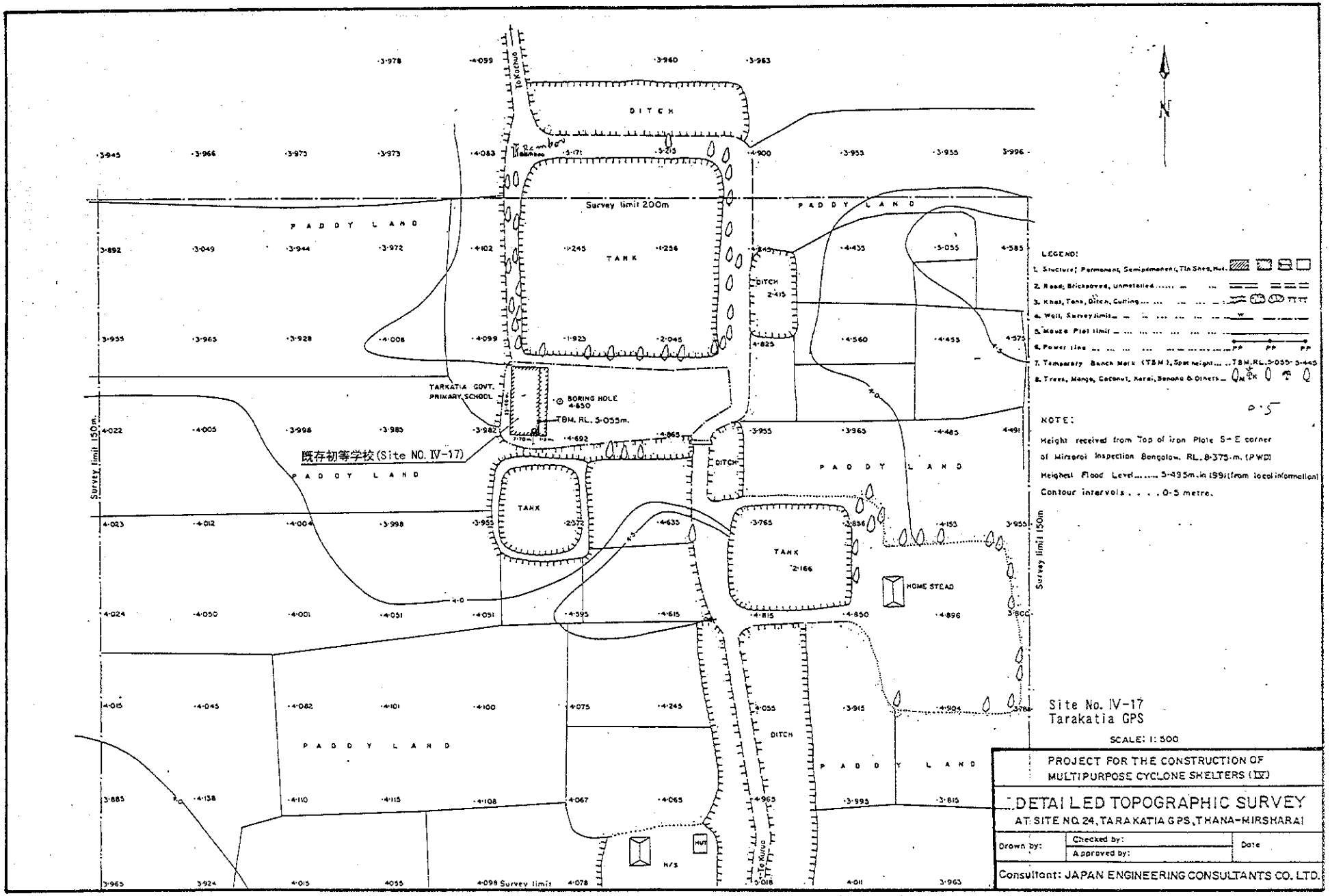
SCALE: 1: 500

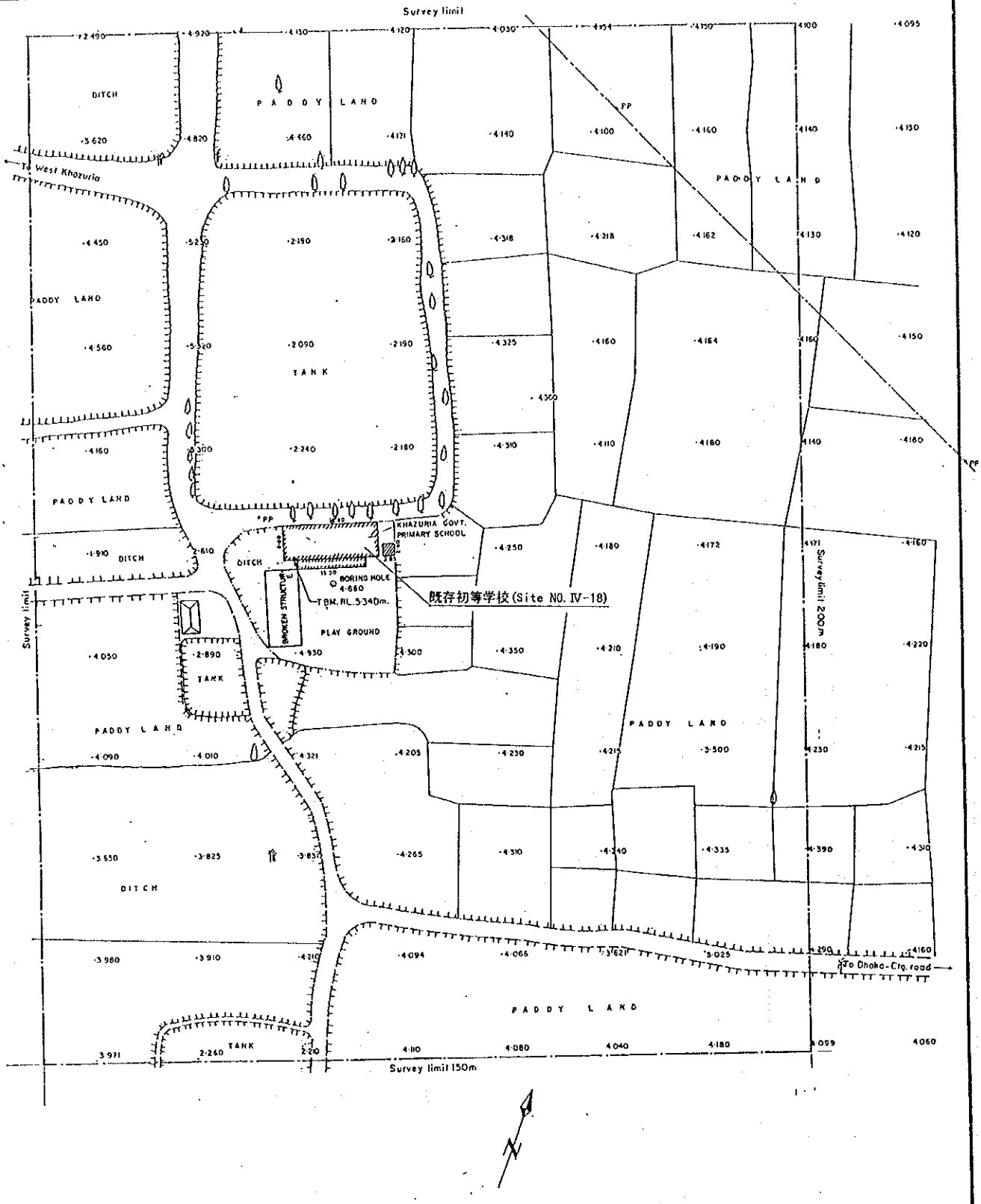
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

DETAILED TOPOGRAPHIC SURVEY
AT SITE NO.23, SHAHID ABDUL KALAM GPS, THANA-MIRSHARAI

Drawn by:	Checked by:	Date:
	Approved by:	

Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.


Survey limit 200m
DITCH
PADDY LAND
TANK
TARKATIA GOVT. PRIMARY SCHOOL
既存初等学校(Site NO. IV-17)
BORING HOLE 4.650
TBM, RL. 5.055m.
HOME STEAD
Survey limit 150m.
Survey limit 150m
N/S
Survey limit
LEGEND:
1. Structure; Permanent, Semipermanent, Tin Shed, Hut.
2. Road; Brickpaved, Unmetalled
3. Khal, Toro, Ditch, Cutting
4. Wall, Survey limits
5. Mouza Plot limit
6. Power line
7. Temporary Bench Mark (TBM), Spot height
8. Trees, Mango, Coconut, Karai, Banana & Others
NOTE:
Height received from Top of iron Plate S-E corner of Mirsarai Inspection Bangalow. RL. 8.375 m. (PWD)
Highest Flood Level..... 5.495m. in 1991 (from local information)
Contour intervals . . . . 0.5 metre.
Site No. IV-17
Tarakatia GPS
SCALE: 1: 500
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)
DETAILED TOPOGRAPHIC SURVEY
AT SITE NO. 24, TARAKATIA GPS, THANA-MIRSHARAI
Drawn by:
Checked by:
Approved by:
Date
Consultant: JAPAN ENGINEERING CONSULTANTS CO. LTD.



Site No. IV-18
Khazuria GPS

SCALE: 1:500

LEGEND:

1. Structure; Permanent, Semipermanent, Tin shed, Hut
2. Road; Brick paved, Unmetalled ...
3. Khal, Tank, Ditch, Cutting ...
4. Wall, Survey limit ...
5. Mouza Plot limit ...
6. Power line ...
7. Temporary Bench Mark (TBM), Spot height ... TBM. RL. 5.340
8. Trees; Mango, Coconut, Karai, Banana & Others ...

NOTE:

Height Received from Top of Iron Plate S-E corner of Mirsarai Inspection Bangalow. RL. 8.375 m. (PWD)

Heighest Flood Level ... 6.210m. in 1991. (from local information).

Contour intervals 0.5metres

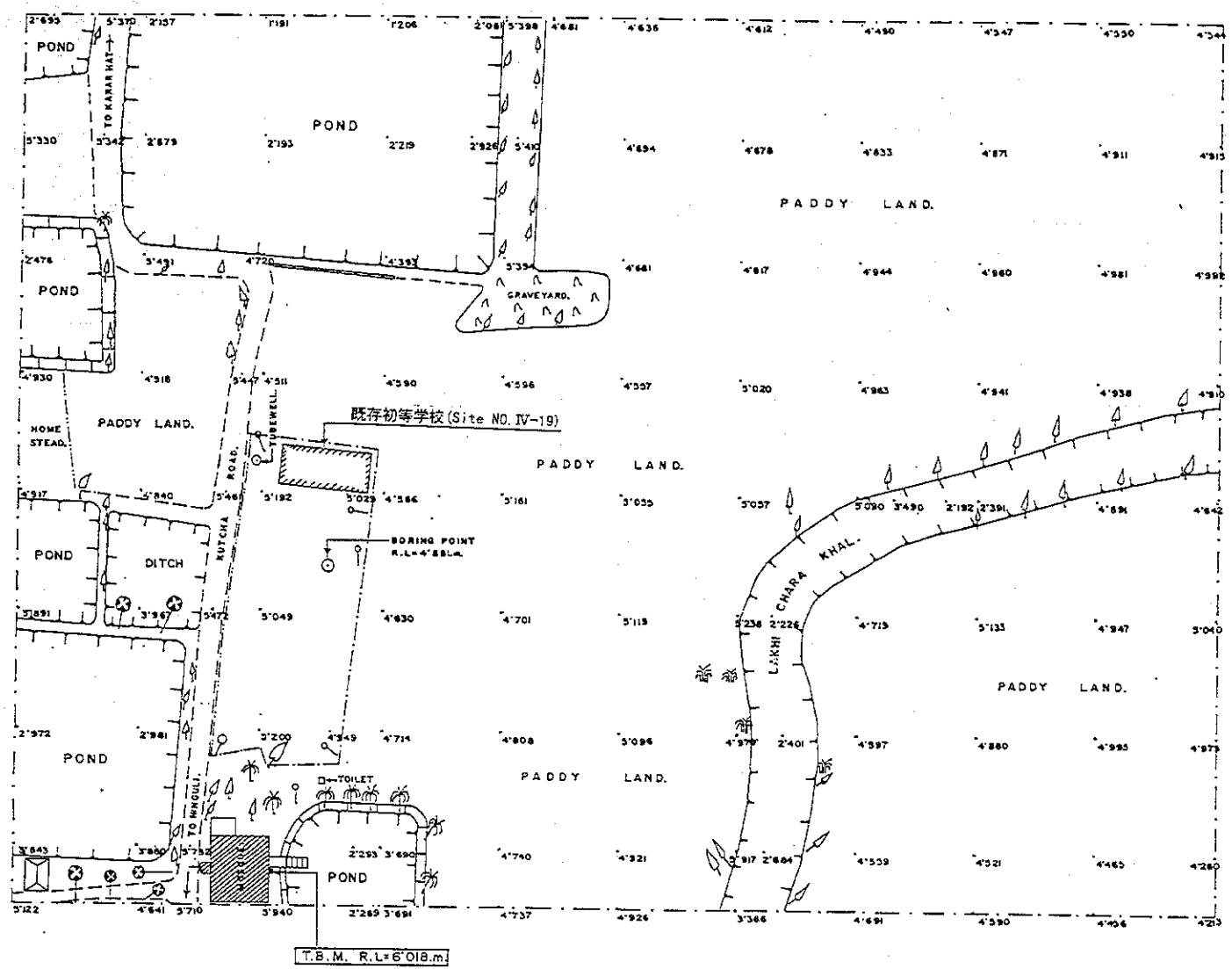
PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IV)

DETAILED TOPOGRAPHIC SURVEY

AT SITE NO. 25, KHAZURIA GPS, THANA-MIRSHARAI

Drawn by:	Checked by:	Date:
	Approved by:	

Consultant : JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND.

1. STRUCTURE:—SEMI PERMANENT, TIN SHED, HUT.
2. ROAD, UNMETEL.
3. POND, DITCH, BORROW PIT, KHAL.
4. SURVEY LIMIT
5. TEMPORORY BENCH MARK ..... :— T.B.M= 6'0185.m
6. TREES:—COCONUT, DATE PALM, TARI PALM, & OTHERS.
7. CONTOUR & SPOTHEIGHT ..... 2'5 4'94.
8. BORING POINT ..... ⊙ R.L=4'88.m.

NOTE.

SITE NO—28.

HEIGHT RECEIVED FROM B.M. (R.L=6'4085.m.) S.O.B.,
TOP OF IRON R.C.C PILLER AT KARER HAT, K.M. HIGHSCHOOL COMPLEX SOUTH EAST CORNEER, MIRSARAI, CHITTAGANG.
3.K.M NORTH EAST FROM NORTH EAST AZAMNAGAR G.P.S.

ALL HEIGHTS ARE IN TERMS OF P.W.D DETUM.
CONTOUR INTERVAL IS. 0'50.METRE.
HIGHEST FLOOD LEVEL....IN = 1988 —— 6'5985.m.
" " " " = 1998 —— 6'6286.m.
NORMAL FLOOD LEVEL ..... —— 4'9850.m.
AREA SURVEYED ..... —— 3.HECTORES.

T.B.M .....R.L = 6'0185.m (P.W.D)
KARER HAT TO NORTH EAST AZAMNAGAR G.P.S.=3.K.M.
T.B.M MARKED ON RED PAINT EAST SIDE OF MOSQUE DOOR FLOOR LEVEL.

N

Site No. IV-19
North East Azamnagar GPS

SCALE:—1:500.m.

PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER(M)

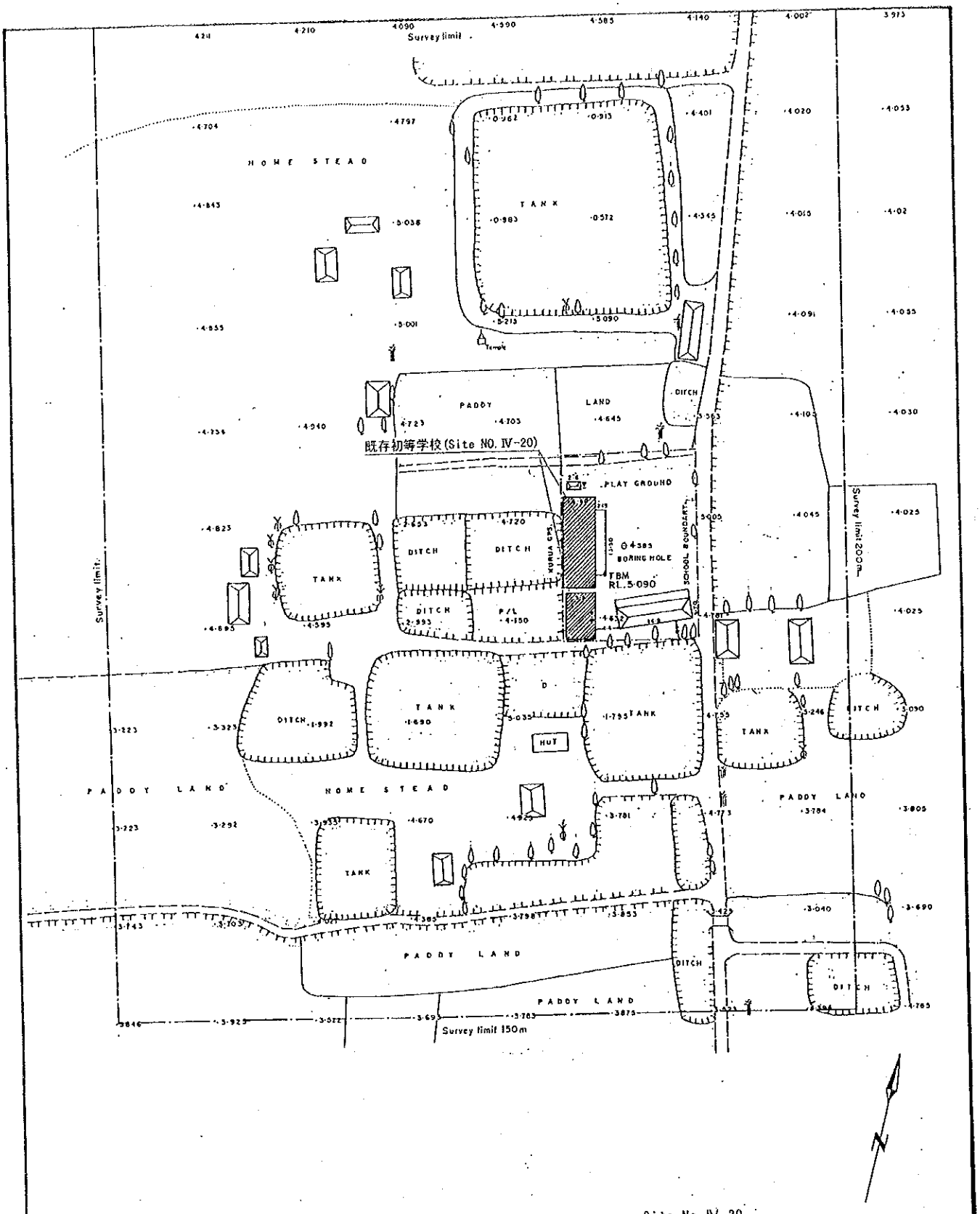
DETAILED TOPOGRAPHIC SURVEY.

AT SITE NO. 28. NORTH EAST AZAMNAGAR G.P.S. THANA—MIRSHARAI.

SURVEYED BY. MD. SHABUDDIN.	NOVEMBER
DRAWN BY. M. RAHMAN.	1998.

CONSULTANT: JAPAN ENGINEERING CONSULTANTS CO.,LTD.

A11-21



LEGEND:

1. Structure; Permanent, Semi-permanent, Unshed, Hut
2. Road; Brick paved, Unmetalled
3. Khal, Tank, Ditch, Culling
4. Wall, Survey limit
5. Mouza Plot limit
6. Power line
7. Temporary Bench Mark (TBM), Spot height
8. Trees; Mango, Coconut, Karai, Banana & Others

NOTE:

Height received from Top of Iron Plate S-E corner of Mirsarai Inspection Bangalow. RL. 8.375 m. (PWD)

Heighest Flood Level..... 5.490m. in 1991 (From local information).

Contour Interval..... 0.50m.

Site No. IV-20
Kurua GPS

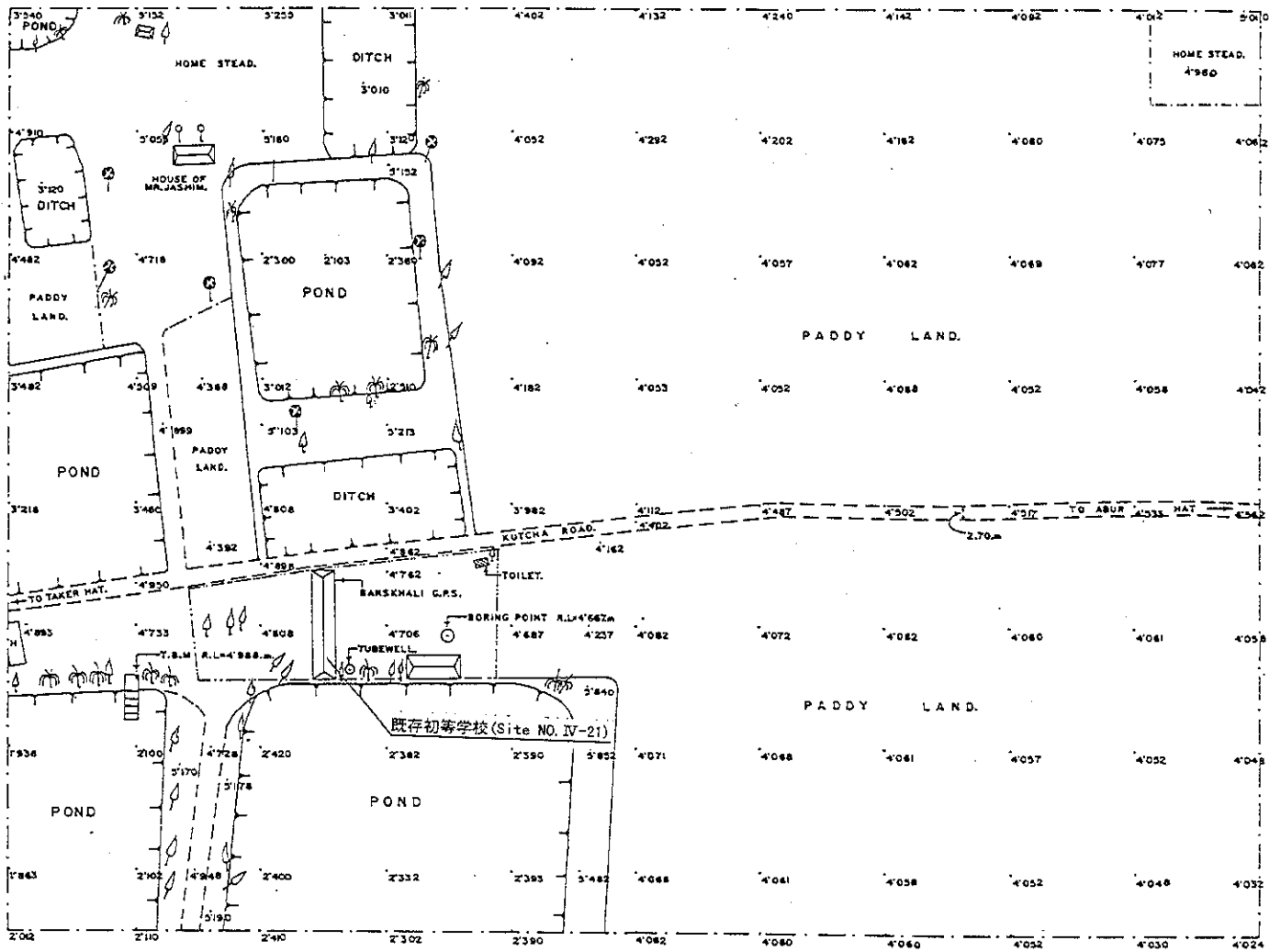
SCALE : 1: 500

PROJECT FOR THE CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTERS (IX)

DETAILED TOPOGRAPHIC SURVEY
AT SITE NO. 29, KURUA GPS, THANA- MIRSHARAI

Drawn by :	Checked by :	Date
	Approved by :	

Consultant : JAPAN ENGINEERING CONSULTANTS CO. LTD.



LEGEND.

1. STRUCTURE—SEMI PERMANENT, TIN SHED HUT.
2. ROAD, UNMETEL
3. POND, DITCH, BORROW PIT, KHAL
4. SURVEY LIMIT
5. TEMPORORY BENCH MARK ——— T.B.M=4'988.m.
6. TREES—COCONUT, DATE PALM, TARI PALM, & OTHERS.
7. CONTOUR & SPOTHEIGHT 2'50 4'06.
8. BORING POINT R.L=4'667.m

NOTE.

SITE NO—31.

HEIGHT RECEIVED FROM B.M. (R.L=4'840.m). W.D.B. TOP OF PUCCA R.C.C PILLER AT MOHORI PROJICT AREA 70.m NORTH WEST FROM NORTH WEST CORNEER OF MOHORI BRIDGE COUNTRY SIDE WEST BANK, MIRSHARAI, CHITTAGONG. 4.K.M FROM BANSKHALI G.P.S.

ALL HEIGHTS ARE IN TERMS OF P.W.D DETUM.

CONTOUR INTERVAL IS. 0'50.METRE.

HIGHEST FLOOD LEVEL..... IN=1988 ——— 4'997.m
" " " " =1991 ——— 5'852.m
" " " " =1998 ——— 5'372.m

NORMAL FLOOD LEVEL ——— 4'792.m

AREA SURVEYED ——— 3.HECTORES.

T.B.M..... R.L=4'988.m (P.W.D).

MOHORI PROJECT TO BANSKHALI G.P.S=4.K.M.

T.B.M MARKED ON RED PAINT NORTH EAST CORNEER OF PUCCA GHATLA SLAVE LEVEL.

N

Site No. IV-21
Banskhali GPS

SCALE—1:500 m.

PROJECT FOR: THE.
CONSTRUCTION OF MULTIPURPOSE CYCLONE SHELTER(IV)

DETAILED TOPOGRAPHIC SURVEY.

AT SITE NO. 31. BANSKHALI G.P.S.
THANA—MIRSHARAI.

SURVEYED BY. MD. RAZZAKUL HAYDHAR.	NOVEMBER
DRAWN BY. M. RAHMAN.	1998.

CONSULTANT: JAPAN ENGINEERING CONSULTANTS CO. LTD.

11-2 地質調査

(1) 目的

各サイトにおいて、サイクロンシェルターの設計及び施工上必要な地質状況を把握する。

(2) 調査項目

地盤の種類、層厚、支持力、一軸圧縮強度、粒度分布、比重、含水比等。

(3) 調査位置

各サイト内の施設建設予定地点とする。但し、既存施設を取り壊してシェルターを建設する場合には、既存施設にできるだけ近接した地点にて調査を行なう。

(4) 調査方法

1)ボーリング

各サイトにおいて1本のボーリングを実施する。ボーリング深度は平均20m／本 とし、支持層に達した地点から５mまでとする。

2)標準貫入試験

原則として１mごとに実施する。

3)土質試験

ボーリング時に資料を採取し、それの土質試験を行なう。採取はボーリング1本当り4ヵ所とする。試験項目は一軸圧縮強度、比重、粒度分布、含水比等。

4)調査結果

上記調査結果を以下に示す。

この結果より、大略、次のような土質状況が見られる。

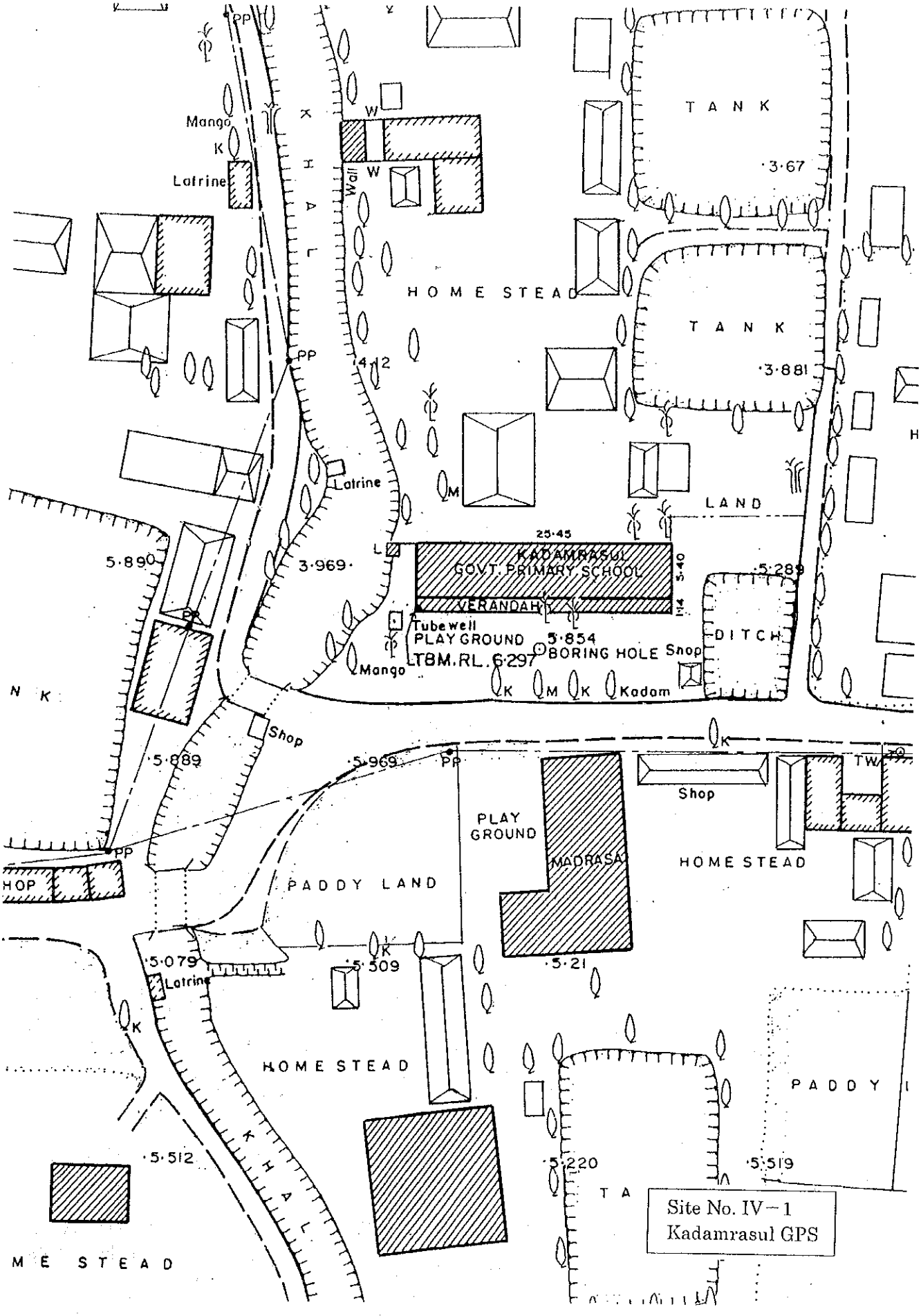
Mirsharaiでは深度の差はあれ、大半のサイトにおいて支持層と見られる砂層が存在している。

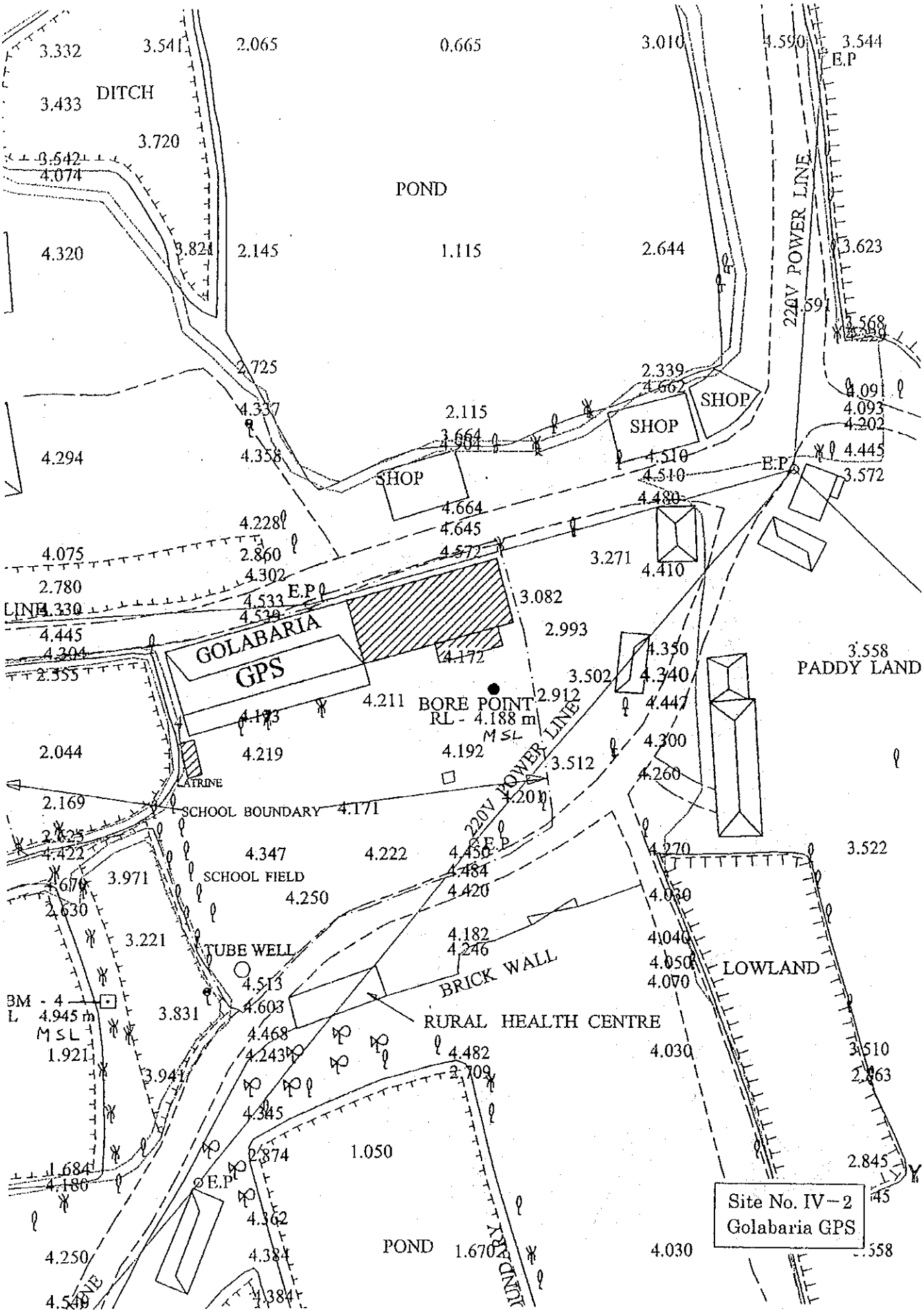
Sitakundaでは固結したシルト層或いは砂層の明瞭な支持層と、支持層が明瞭でないサイトの２種類に大別される。

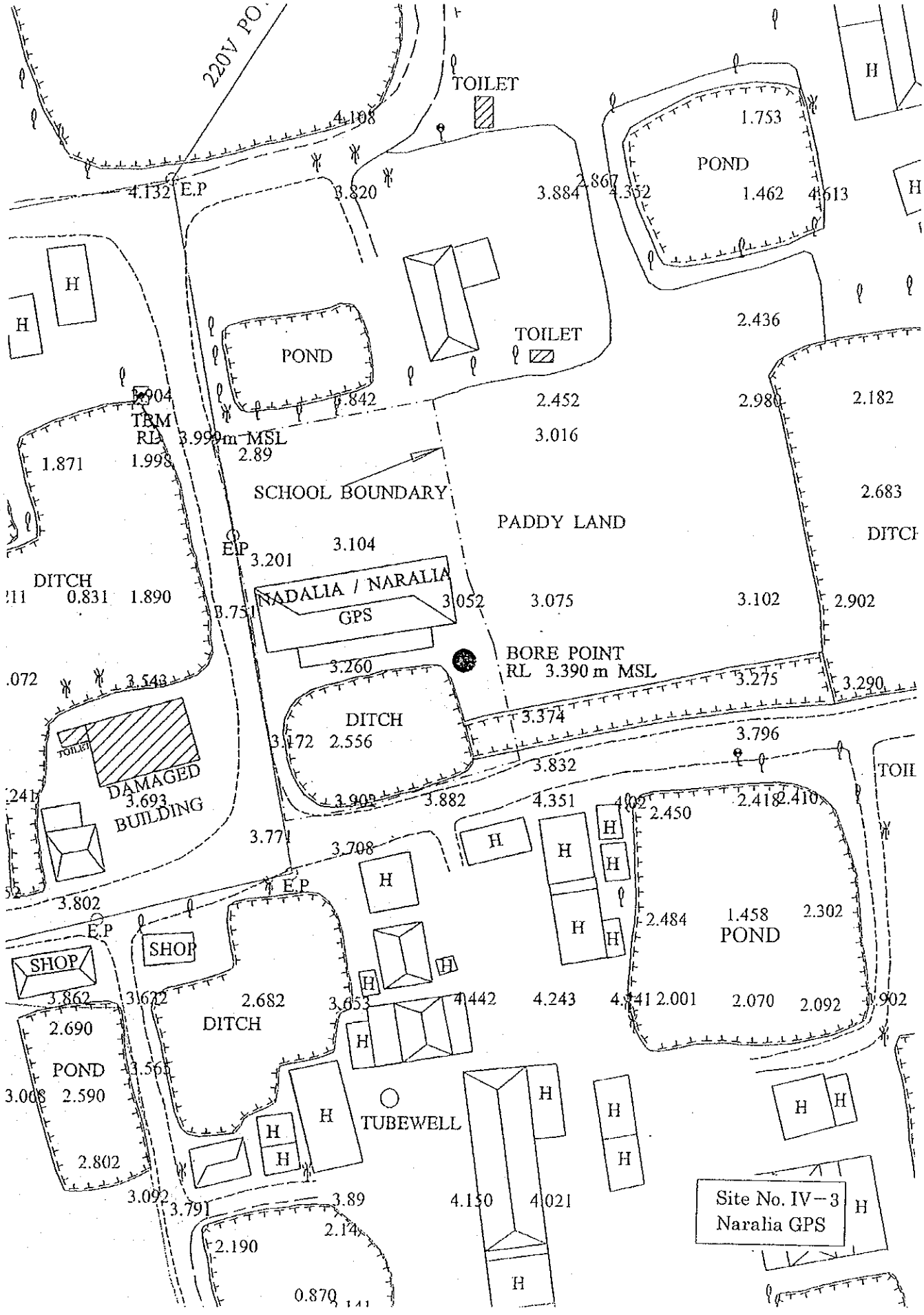
Banskhaliでは１サイトで大きな支持力を有すると見られる固結シルト層が存在するほかは支持層が明瞭でないサイトが大半である。

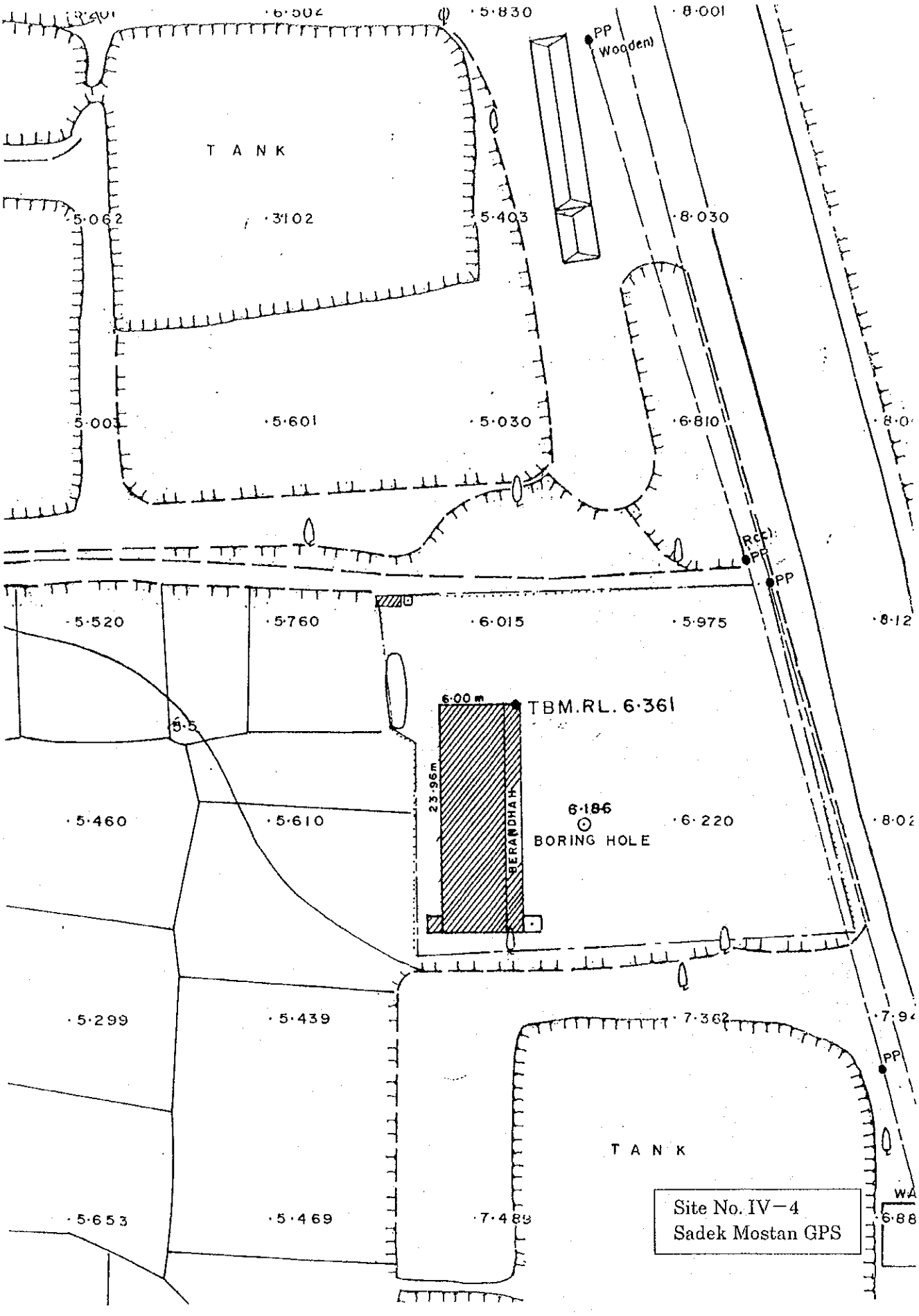
これより、調査対象地域の北部のMirsharaiでは良質な支持層が見られるが中部のSitakundaでは良質な支持層が見られるサイトと見られないサイトが半々となっており、南部のBanskhaliでは大半のサイトにおいて良質な支持層が見られない傾向にある。

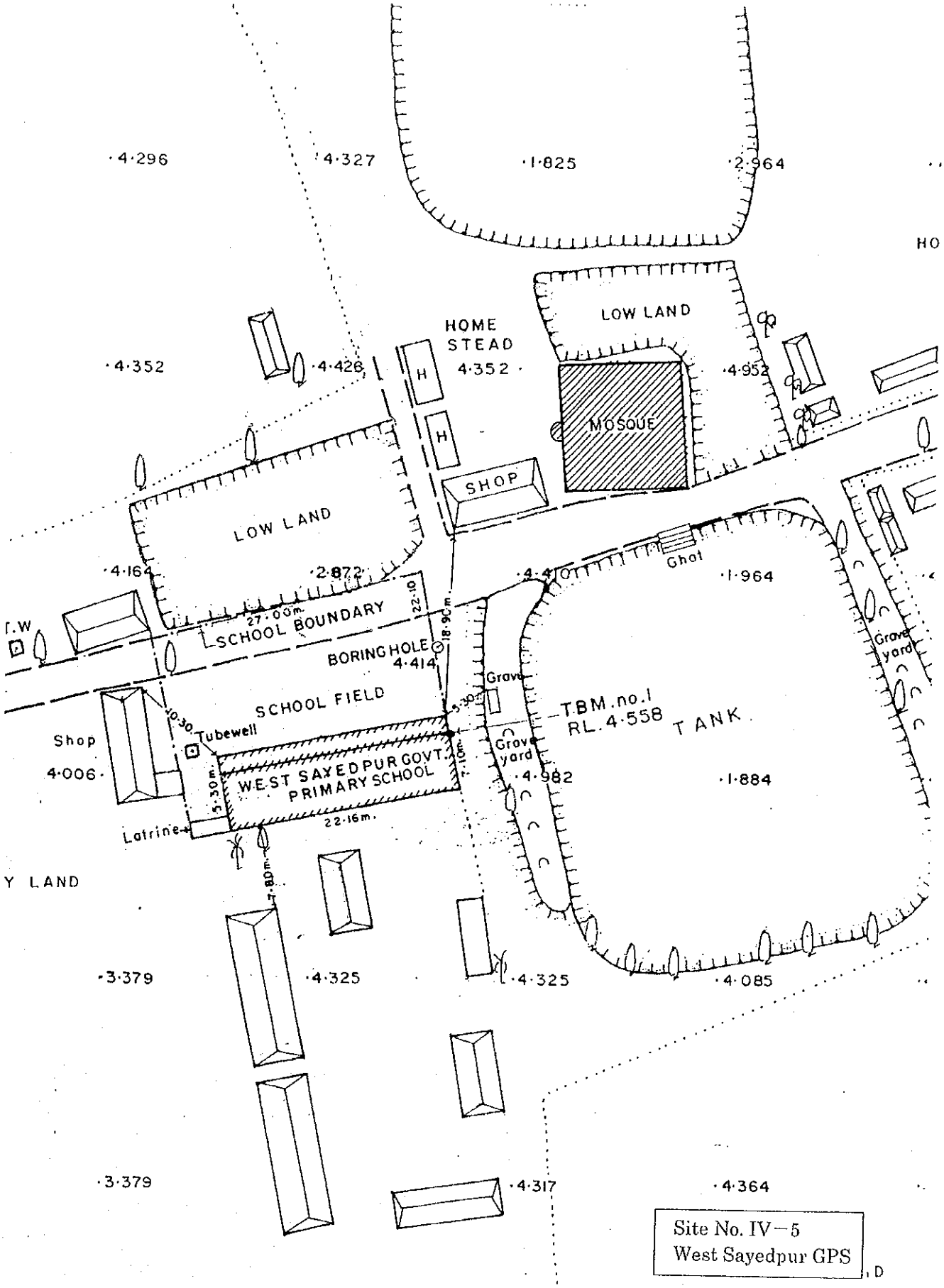
11-2-1　ボーリング調査位置図

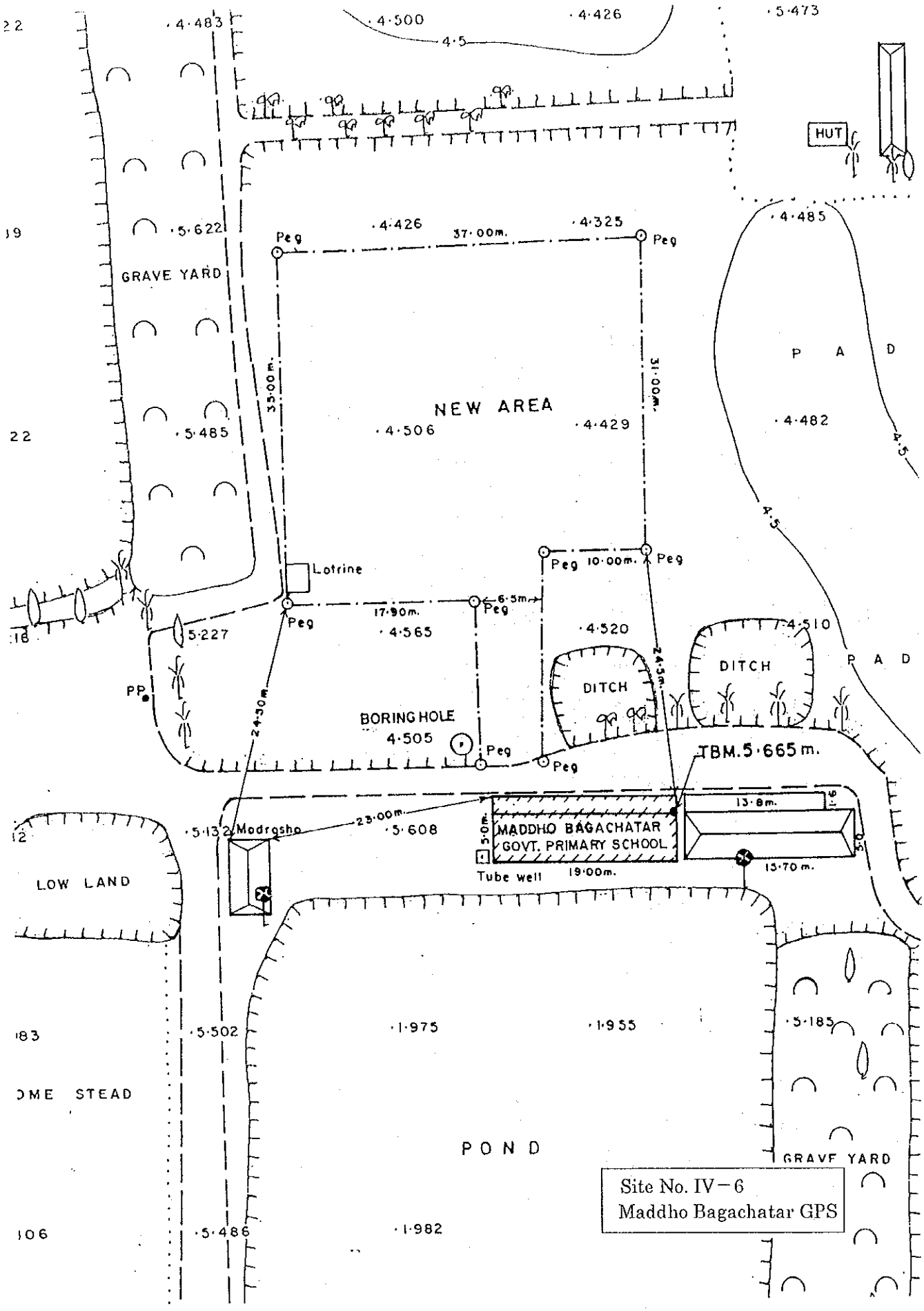

PP
Mango
K
Latrine
W
Wall
W
KHAL
TANK
3·67
HOME STEAD
TANK
3·881
4·12
PP
Latrine
M
LAND
25·45
KADAMRASUL
GOVT. PRIMARY SCHOOL
3·40
VERANDAH
1·14
5·890
3·969
L
5·289
Tubewell
PLAY GROUND
5·854
BORING HOLE
Shop
DITCH
TBM. RL. 6·297
Mango
K
M
K
Kadam
N K
Shop
5·889
5·969
PP
K
Shop
TW
PLAY
GROUND
MADRASA
HOME STEAD
PP
HOP
PADDY LAND
5·079
Latrine
K
5·509
5·21
K
HOME STEAD
PADDY
5·512
KHAL
5·220
5·519
T A
M E STEAD
Site No. IV−1
Kadamrasul GPS

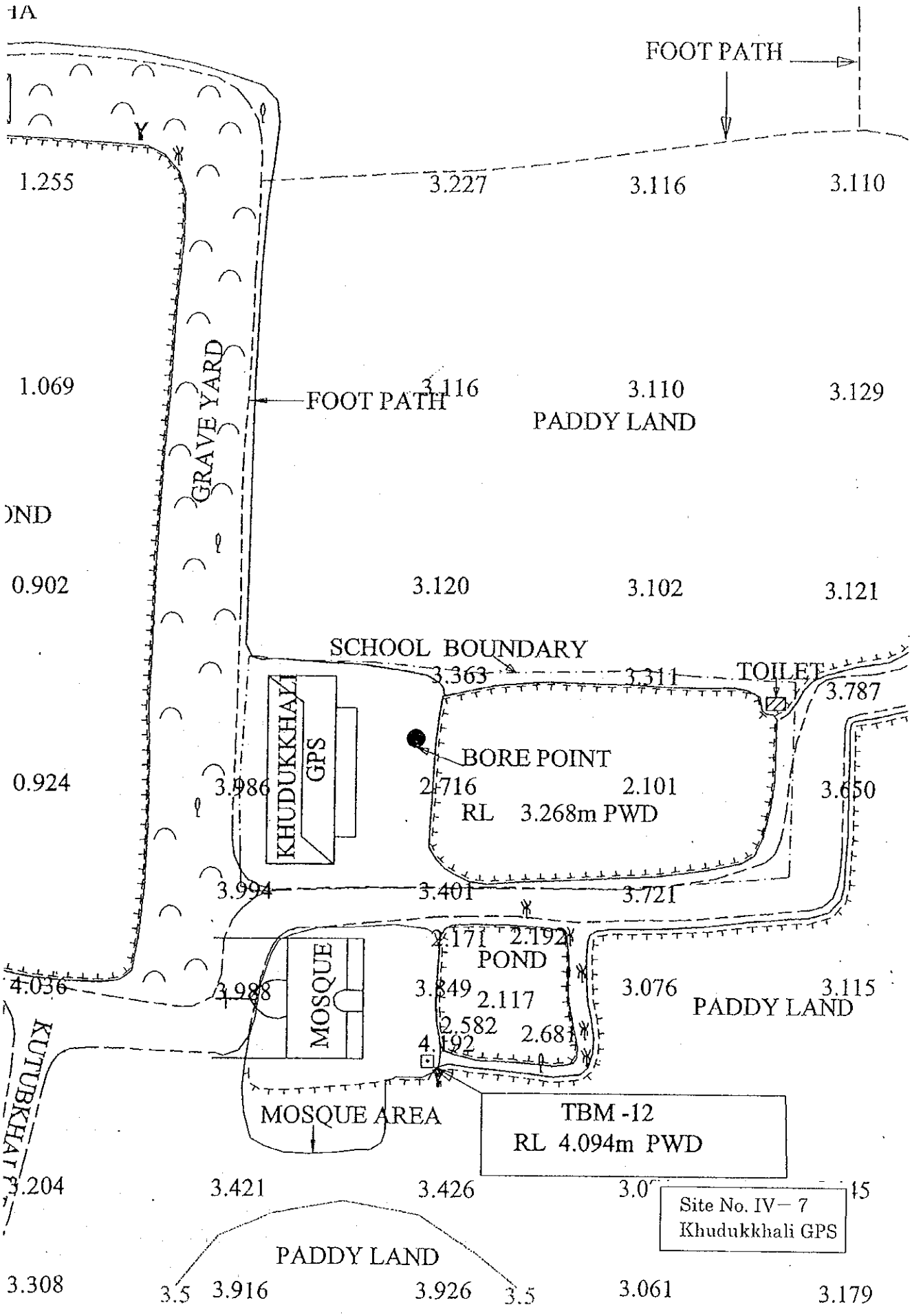

DITCH
POND
220V POWER LINE
SHOP
SHOP
SHOP
E.P
GOLABARIA
GPS
BORE POINT
RL - 4.188 m
MSL
PADDY LAND
LATRINE
SCHOOL BOUNDARY
SCHOOL FIELD
TUBE WELL
BRICK WALL
RURAL HEALTH CENTRE
LOWLAND
BM - 4
L 4.945 m
MSL
POND
Site No. IV–2
Golabaria GPS

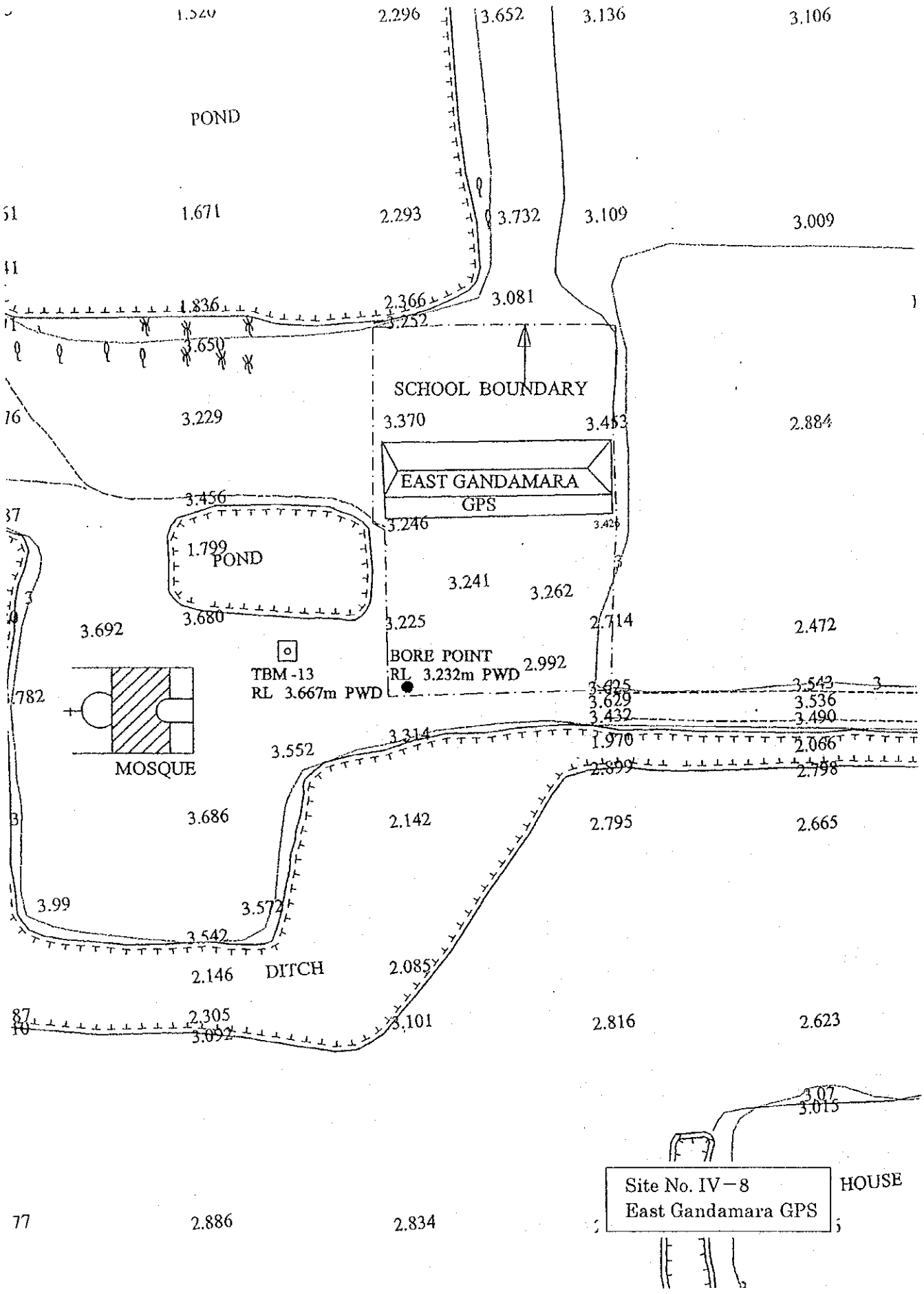

220V PO
TOILET
4.108
4.132 E.P
3.820
3.884
2.867
4.352
1.753
POND
1.462
4.613
H
H
H
POND
TOILET
2.436
2.904
TBM
RL 3.990m MSL
2.89
2.842
2.452
2.980
2.182
3.016
1.871
1.998
SCHOOL BOUNDARY
PADDY LAND
2.683
DITCH
E.P
3.201
3.104
DITCH
0.831
1.890
NADALIA / NARALIA
GPS
3.052
3.075
3.102
2.902
3.260
BORE POINT
RL 3.390 m MSL
3.275
3.290
3.543
DITCH
3.374
3.796
3.172
2.556
3.832
TOILET
DAMAGED
BUILDING
3.693
3.902
3.882
4.351
2.450
2.418
2.410
3.771
3.708
H
H
H
H
H
H
E.P
3.802
E.P
SHOP
SHOP
2.484
1.458
2.302
POND
3.862
3.622
2.682
3.653
4.442
4.243
4.341
2.001
2.070
2.092
2.690
DITCH
H
H
H
H
H
H
TUBEWELL
H
H
H
H
H
2.802
3.092
3.791
3.89
4.150
4.021
Site No. IV–3
Naralia GPS
H
2.14
2.190
0.870
H

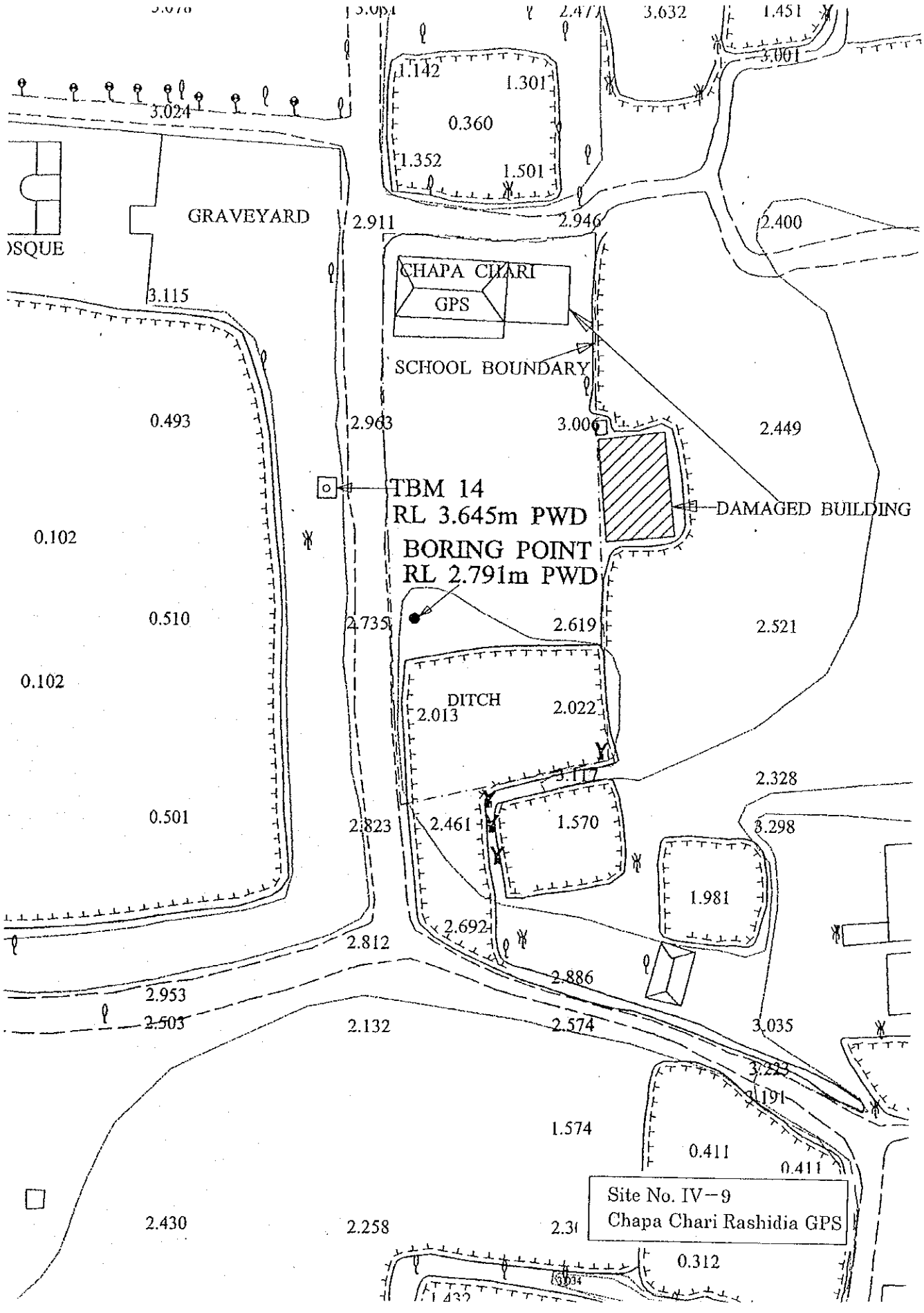

TANK
·6·502
·5·830
·8·001
PP
(Wooden)
·3102
5·062
5·403
·8·030
5·003
·5·601
·5·030
·6·810
·8·0
RCC
PP
PP
·5·520
·5·760
·6·015
·5·975
·8·12
6·00 m
TBM.RL. 6·361
23·96m
BERANDAH
6·186
BORING HOLE
·6·220
·8·02
·5·460
·5·610
·5·299
·5·439
·7·362
·7·9
PP
TANK
·5·653
·5·469
·7·489
6·88
Site No. IV−4
Sadek Mostan GPS

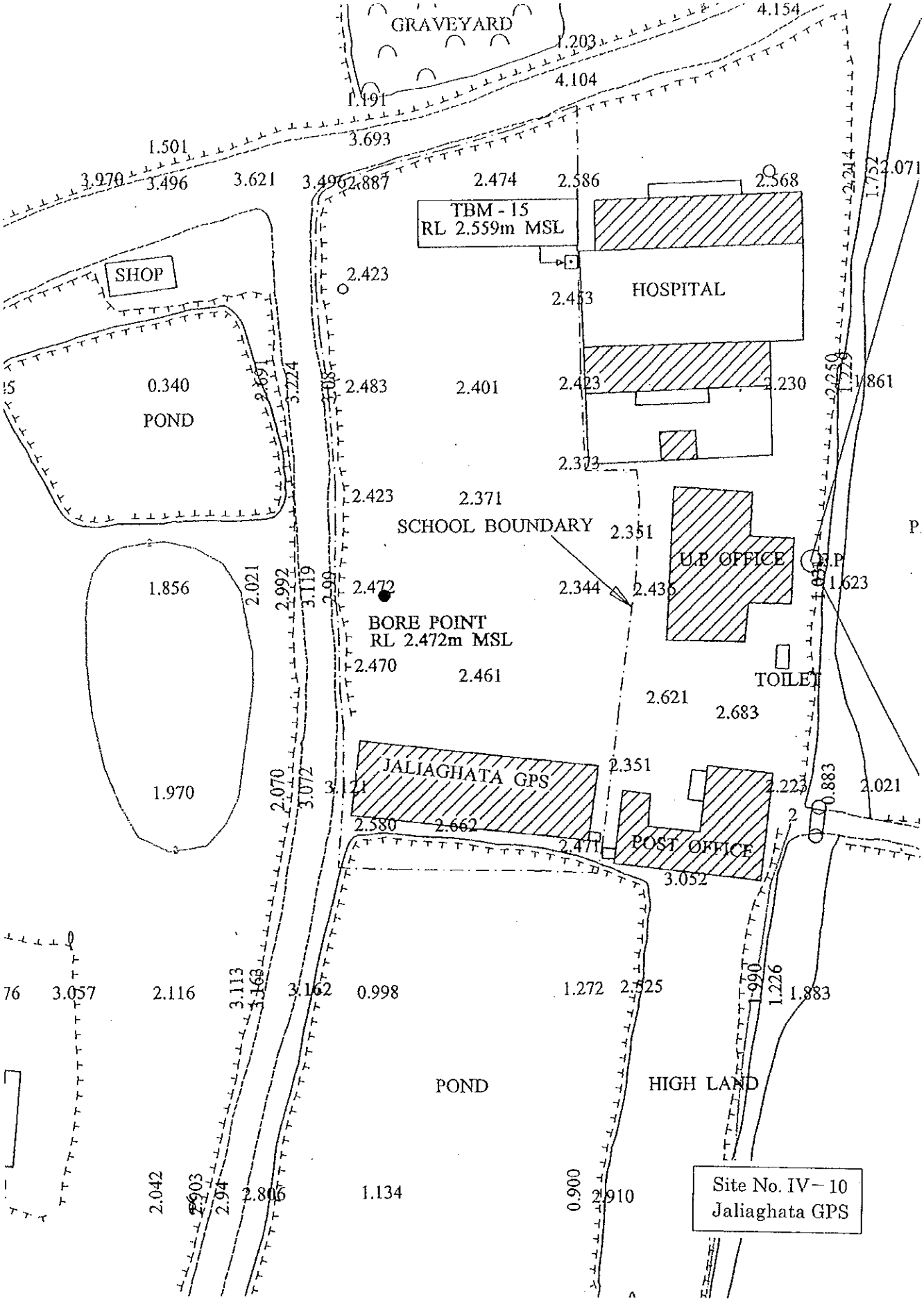

·4·296
·4·327
·1·825
·2·964
HO
HOME STEAD
4·352
·4·352
·4·426
H
H
LOW LAND
·4·952
MOSQUE
SHOP
LOW LAND
·4·164
·2·872
Ghat
·1·964
27·00m.
SCHOOL BOUNDARY
22·10
18·90m
BORING HOLE
4·414
SCHOOL FIELD
Grave
Grave yard
TBM.no.1
RL.4·558
TANK
Shop
4·006
Tubewell
10·30
5·30m
WEST SAYEDPUR GOVT. PRIMARY SCHOOL
7·10m
22·16m.
Latrine
7·80m
·4·982
·1·884
Y LAND
·3·379
·4·325
·4·325
·4·085
·3·379
·4·317
·4·364
Site No. IV–5
West Sayedpur GPS

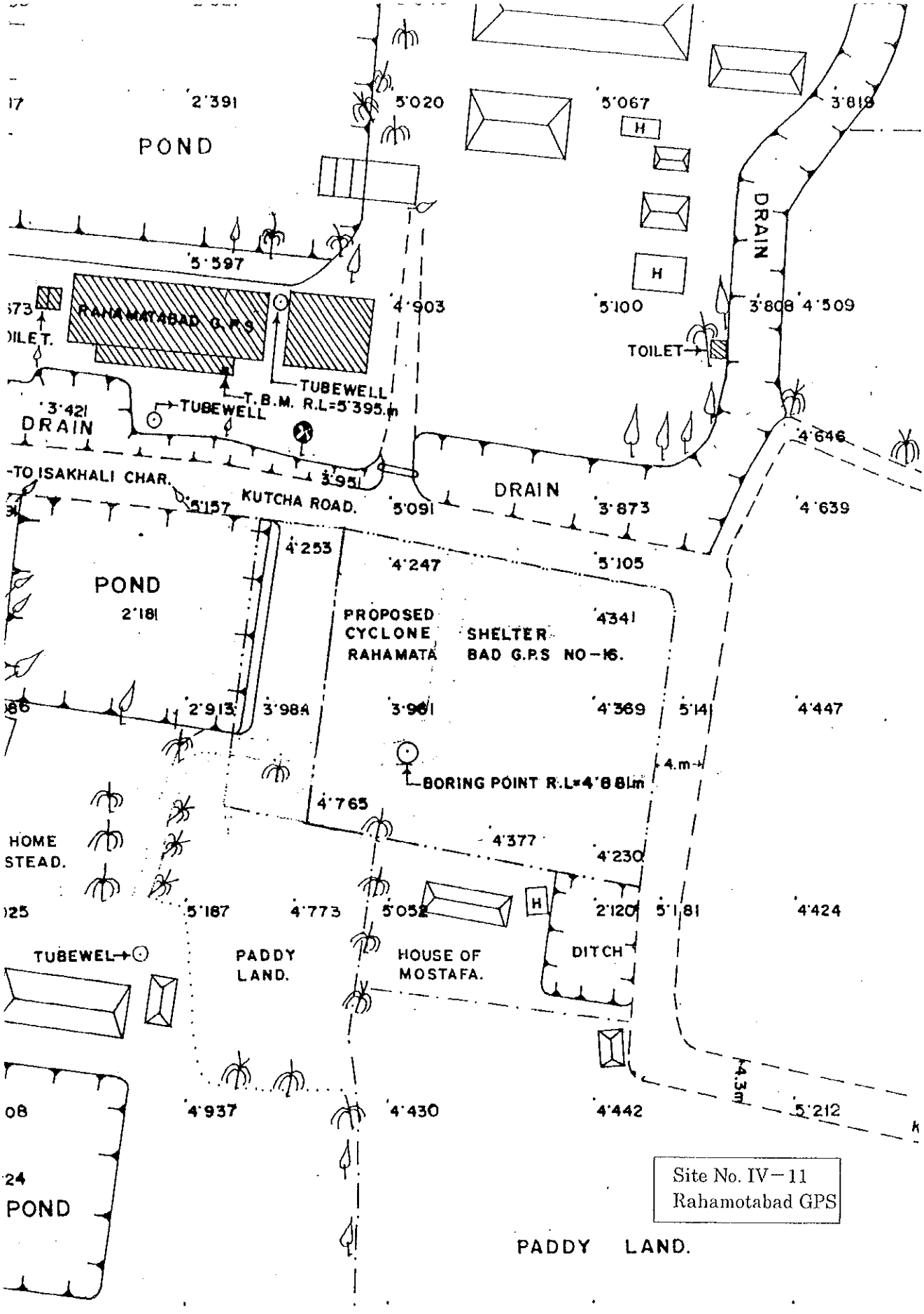

HUT
GRAVE YARD
NEW AREA
PAD
Peg
37.00m.
35.00m.
31.00m.
Latrine
17.90m.
6.5m.
10.00m.
DITCH
BORING HOLE
4.505
PP
24.30m.
24.30m.
TBM.5.665 m.
Modrasha
23.00m.
MADDHO BAGACHATAR
GOVT. PRIMARY SCHOOL
13.8m.
13.70m.
19.00m.
Tube well
LOW LAND
POND
GRAVE YARD
Site No. IV－6
Maddho Bagachatar GPS

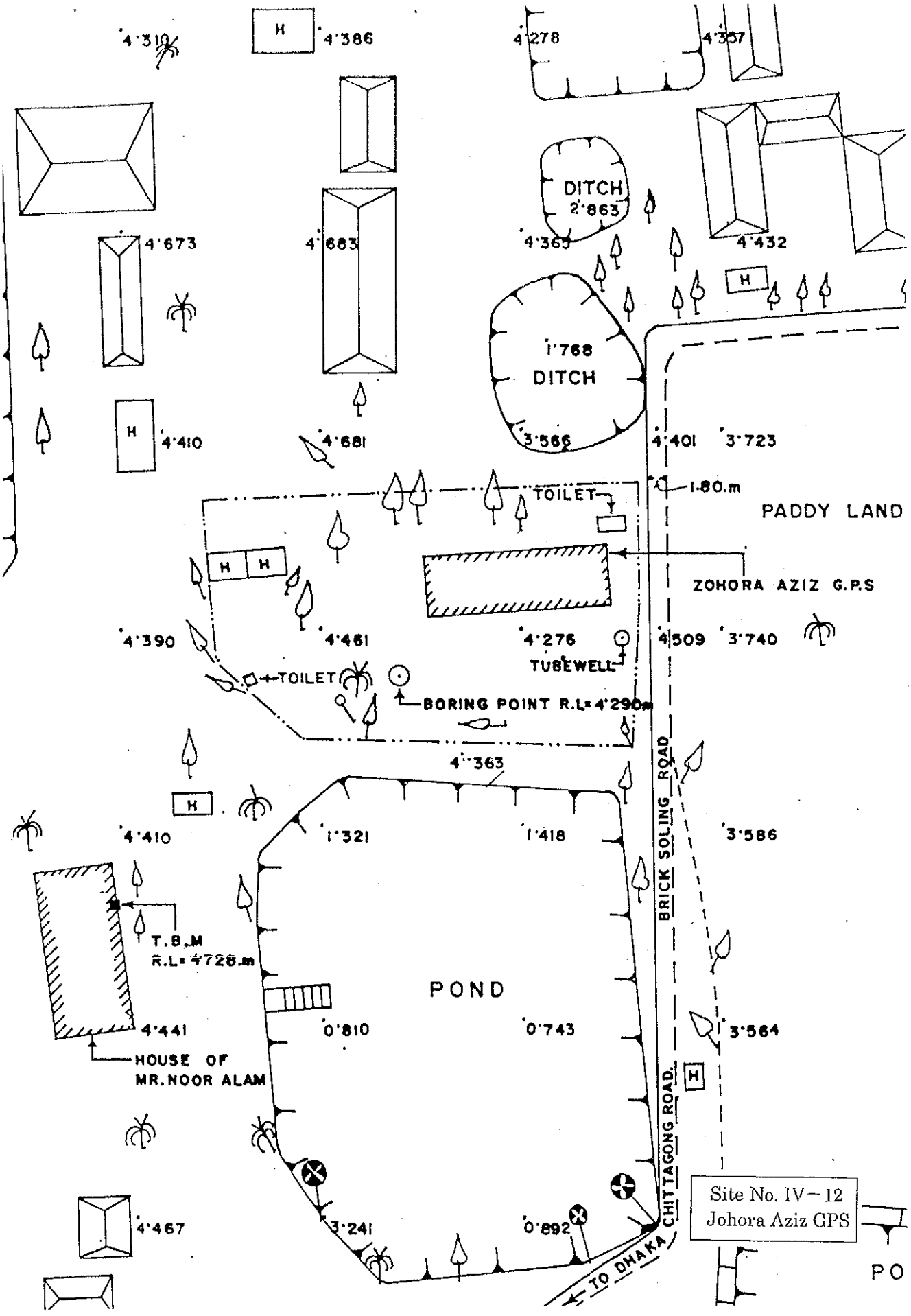

FOOT PATH
1.255
3.227
3.116
3.110
1.069
3.116
3.110
3.129
FOOT PATH
PADDY LAND
GRAVE YARD
0.902
3.120
3.102
3.121
SCHOOL BOUNDARY
3.363
3.311
TOILET
3.787
KHUDUKKHALI GPS
BORE POINT
0.924
3.986
2.716
2.101
3.650
RL 3.268m PWD
3.994
3.401
3.721
2.171
2.192
POND
4.036
3.988
MOSQUE
3.849
2.117
3.076
3.115
PADDY LAND
2.582
2.681
4.192
MOSQUE AREA
TBM -12
RL 4.094m PWD
3.204
3.421
3.426
Site No. IV– 7
Khudukkhali GPS
PADDY LAND
3.308
3.5
3.916
3.926
3.5
3.061
3.179

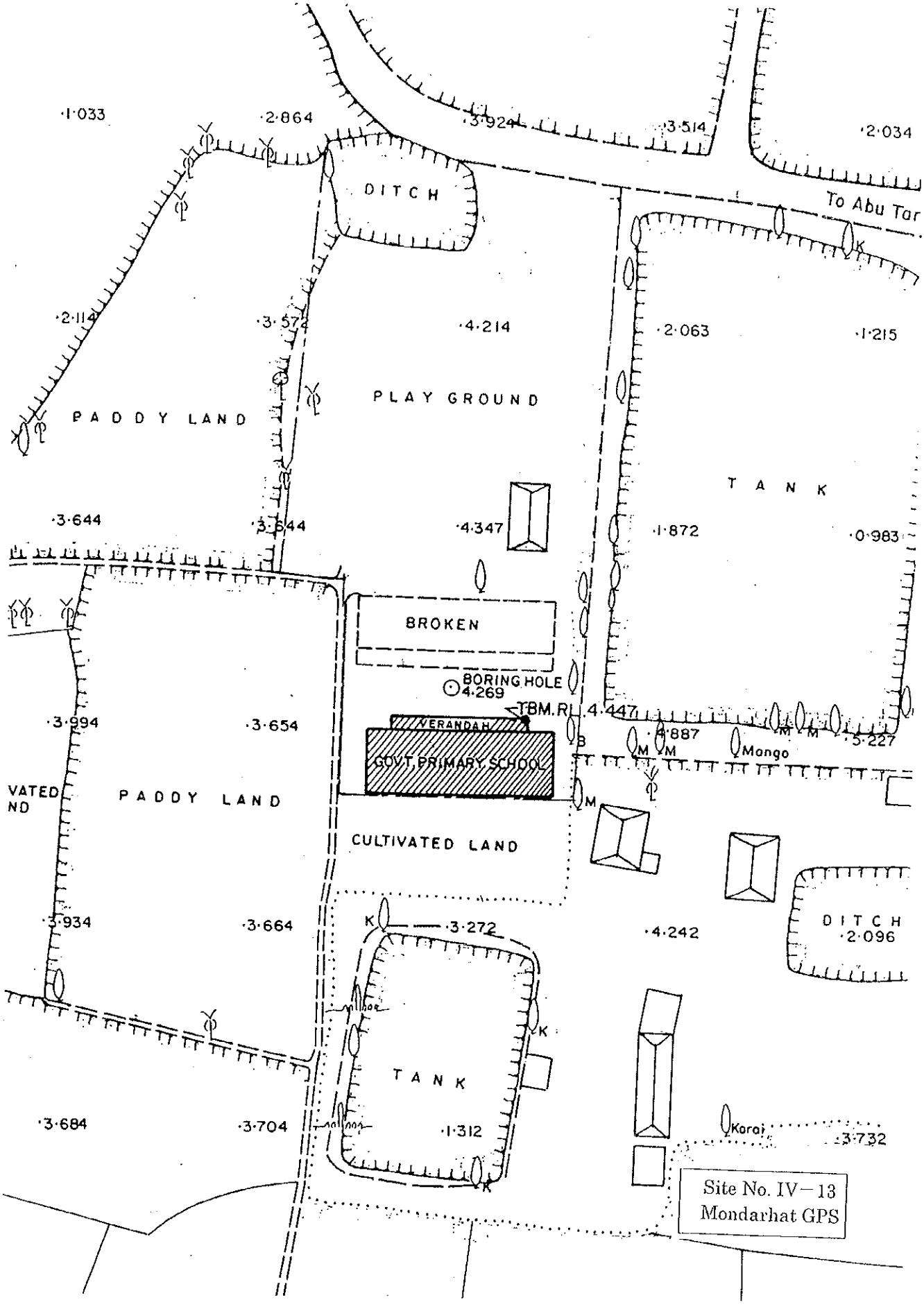

1.520
2.296
3.652
3.136
3.106
POND
51
1.671
2.293
3.732
3.109
3.009
41
1.836
2.366
3.081
3.252
3.650
SCHOOL BOUNDARY
16
3.229
3.370
3.453
2.884
EAST GANDAMARA
GPS
3.456
37
3.246
3.426
1.799
POND
3.241
3.262
3.680
3.225
2.714
2.472
3.692
TBM -13
RL 3.667m PWD
BORE POINT
RL 3.232m PWD
2.992
3.782
3.625
3.629
3.543
3.536
3.432
3.490
1.970
2.066
2.899
2.798
3.552
3.314
MOSQUE
3.686
2.142
2.795
2.665
3.99
3.572
3.542
2.146
DITCH
2.085
87
2.305
3.092
3.101
2.816
2.623
3.07
3.015
Site No. IV－8
East Gandamara GPS
HOUSE
77
2.886
2.834

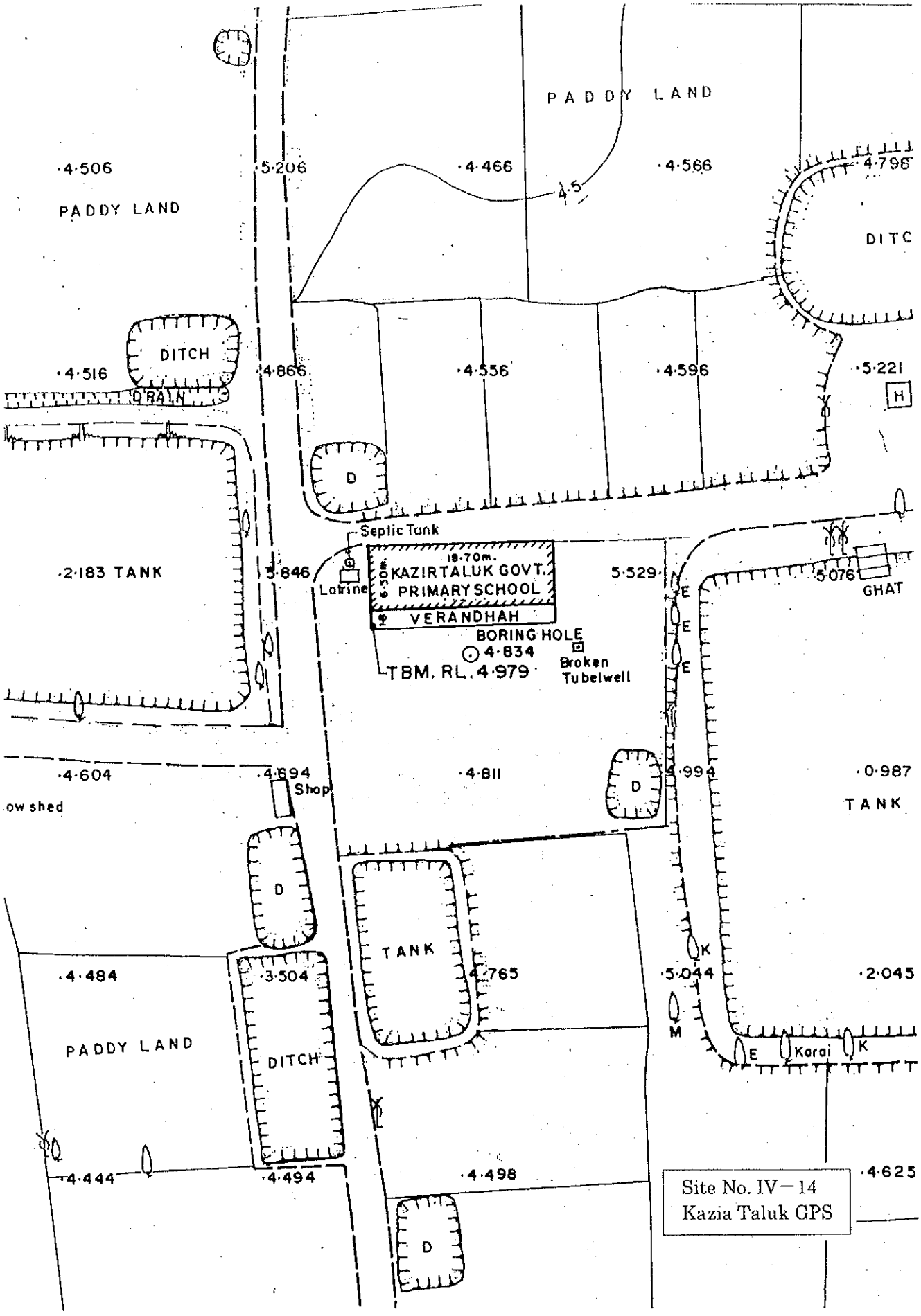

3.632
1.451
3.001
1.142
1.301
0.360
1.352
1.501
3.024
GRAVEYARD
2.911
2.946
2.400
)SQUE
CHAPA CHARI
GPS
3.115
SCHOOL BOUNDARY
0.493
2.963
3.006
2.449
TBM 14
RL 3.645m PWD
DAMAGED BUILDING
0.102
BORING POINT
RL 2.791m PWD
0.510
2.735
2.619
2.521
0.102
DITCH
2.013
2.022
3.117
2.328
0.501
2.823
2.461
1.570
3.298
1.981
2.692
2.812
2.886
2.953
2.503
2.132
2.574
3.035
3.223
3.191
1.574
0.411
0.411
Site No. IV−9
Chapa Chari Rashidia GPS
2.430
2.258
0.312

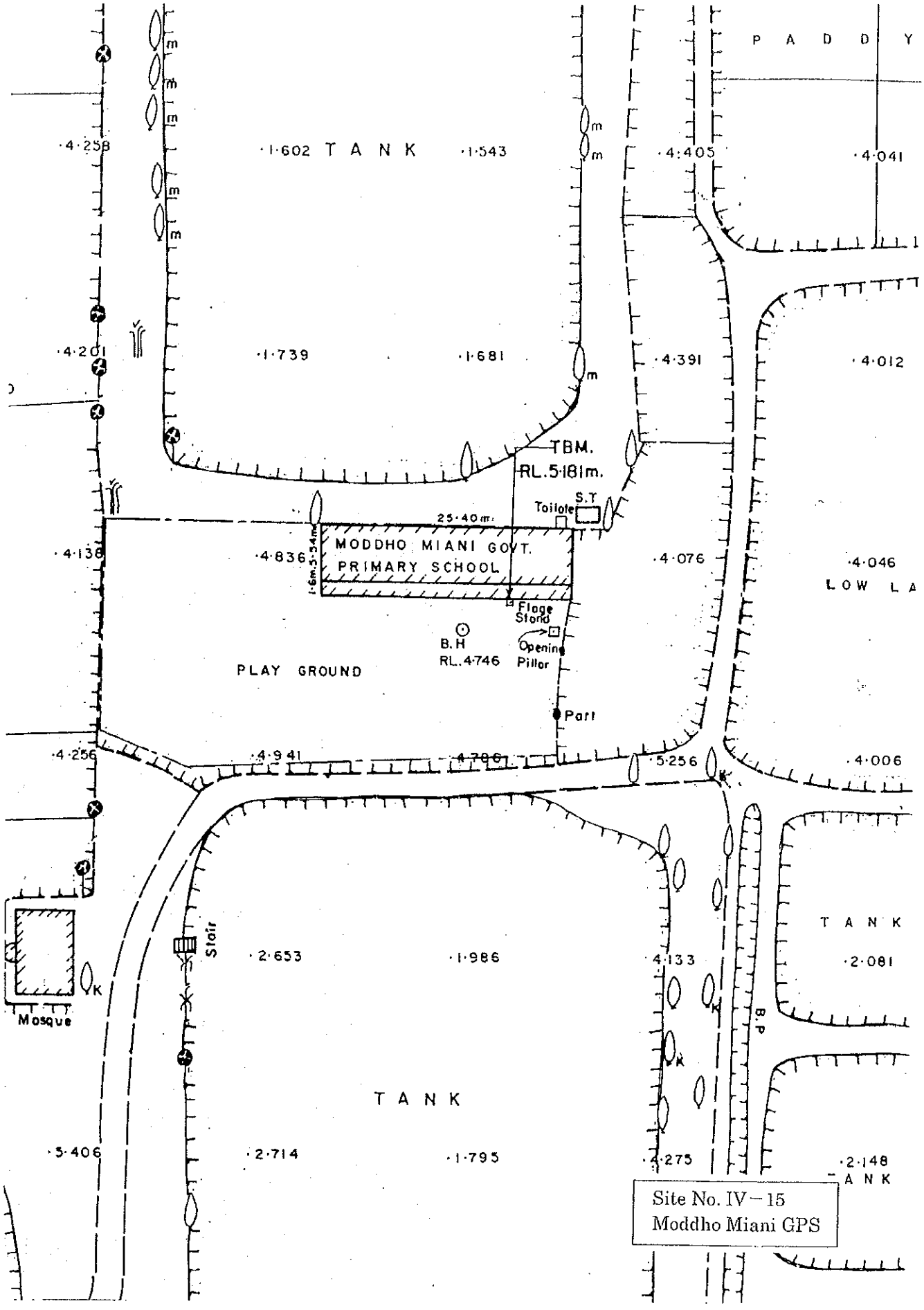

GRAVEYARD
TBM - 15
RL 2.559m MSL
HOSPITAL
SHOP
POND
0.340
SCHOOL BOUNDARY
U.P OFFICE
BORE POINT
RL 2.472m MSL
TOILET
JALIAGHATA GPS
POST OFFICE
POND
HIGH LAND
Site No. IV – 10
Jaliaghata GPS


POND
2·391
5·020
5·067
3·819
5·597
RAHAMATABAD G.P.S
4·903
5·100
3·808
4·509
TOILET
TOILET
TUBEWELL
T.B.M. R.L=5·395m
TUBEWELL
3·421
DRAIN
DRAIN
4·646
TO ISAKHALI CHAR.
KUTCHA ROAD.
5·157
5·091
DRAIN
3·873
4·639
3·951
4·253
4·247
5·105
POND
2·181
PROPOSED CYCLONE SHELTER RAHAMATABAD G.P.S NO-16.
4·341
2·913
3·984
3·961
4·369
5·14
4·447
4·m
BORING POINT R.L=4·881m
4·765
4·377
4·230
HOME STEAD.
5·187
4·773
5·052
2·120
5·181
4·424
TUBEWEL
PADDY LAND.
HOUSE OF MOSTAFA.
DITCH
4·3m
4·937
4·430
4·442
5·212
POND
PADDY LAND.
Site No. IV–11
Rahamotabad GPS

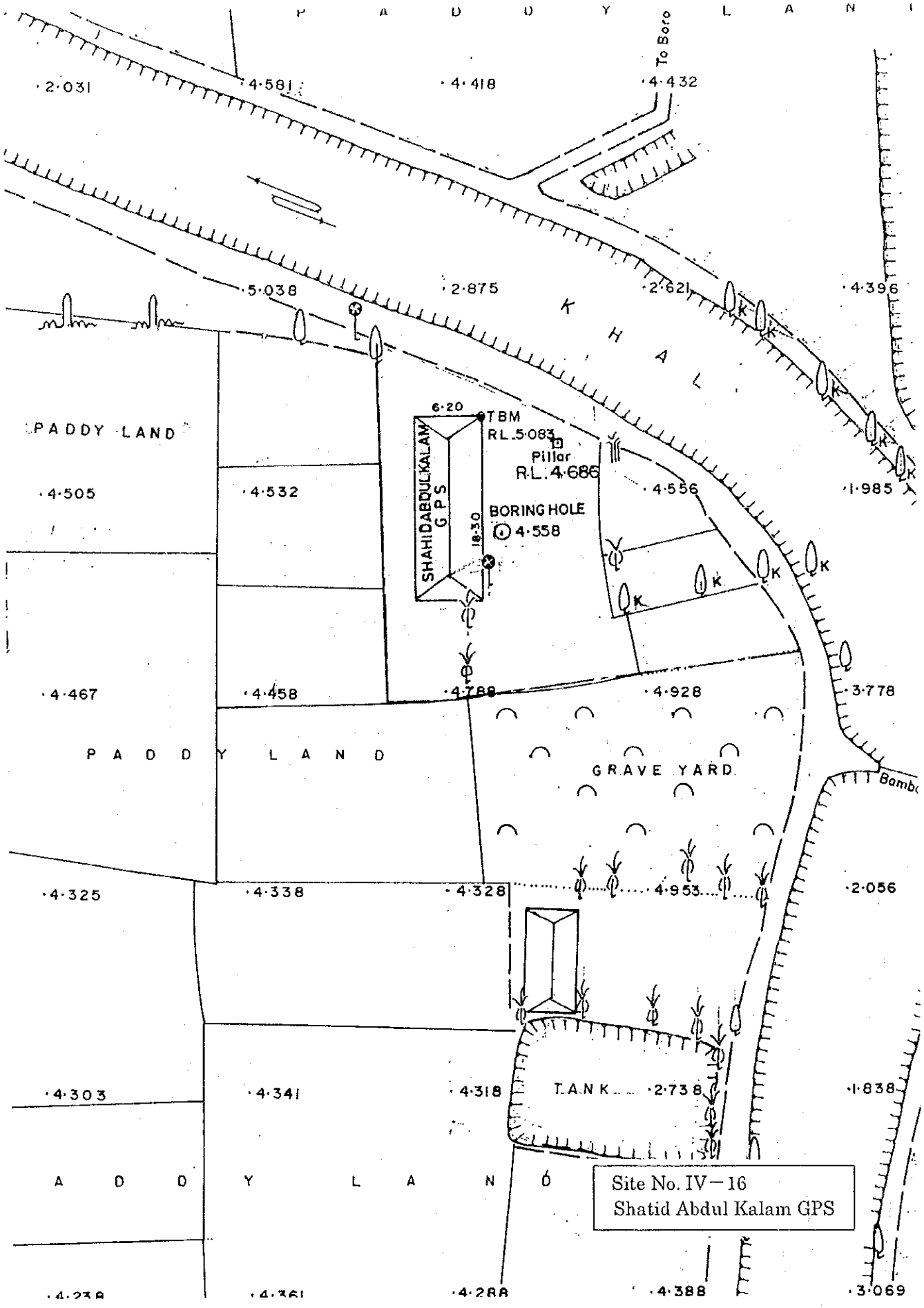

4·310
H
4·386
4·278
4·357
DITCH
2·863
4·673
4·683
4·365
4·432
H
1·768
DITCH
H
4·410
4·681
3·566
4·401
3·723
1·80.m
TOILET
PADDY LAND
H H
ZOHORA AZIZ G.P.S
4·390
4·461
4·276
4·509
3·740
TUBEWELL
TOILET
BORING POINT R.L=4·290m
4·363
H
4·410
1·321
1·418
3·586
BRICK SOLING ROAD
T.B.M
R.L=4·726.m
POND
4·441
0·810
0·743
3·564
HOUSE OF
MR.NOOR ALAM
H
CHITTAGONG ROAD.
4·467
3·241
0·892
TO DHAKA
Site No. IV–12
Johora Aziz GPS
PO

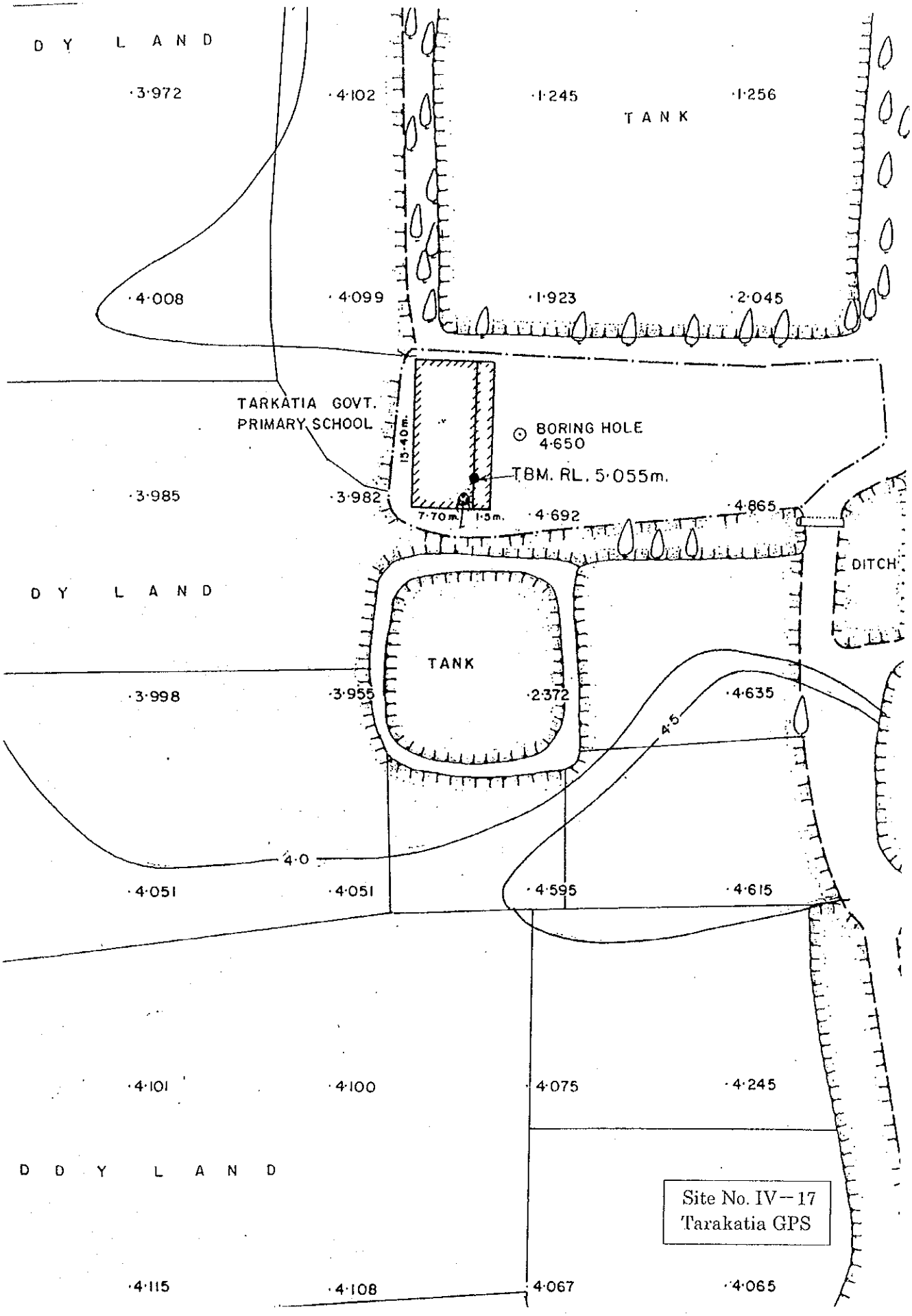

·1·033
·2·864
·3·924
·3·514
·2·034
DITCH
To Abu Tar
·2·114
·3·572
·4·214
·2·063
·1·215
PADDY LAND
PLAY GROUND
TANK
·3·644
·3·644
·4·347
·1·872
·0·983
BROKEN
BORING HOLE
·4·269
TBM. RL 4·447
·3·994
·3·654
VERANDAH
GOVT. PRIMARY SCHOOL
·4·887
·5·227
Mango
VATED
ND
PADDY LAND
CULTIVATED LAND
·3·934
·3·664
·3·272
·4·242
DITCH
·2·096
TANK
·3·684
·3·704
·1·312
Karai
·3·732
Site No. IV–13
Mondarhat GPS

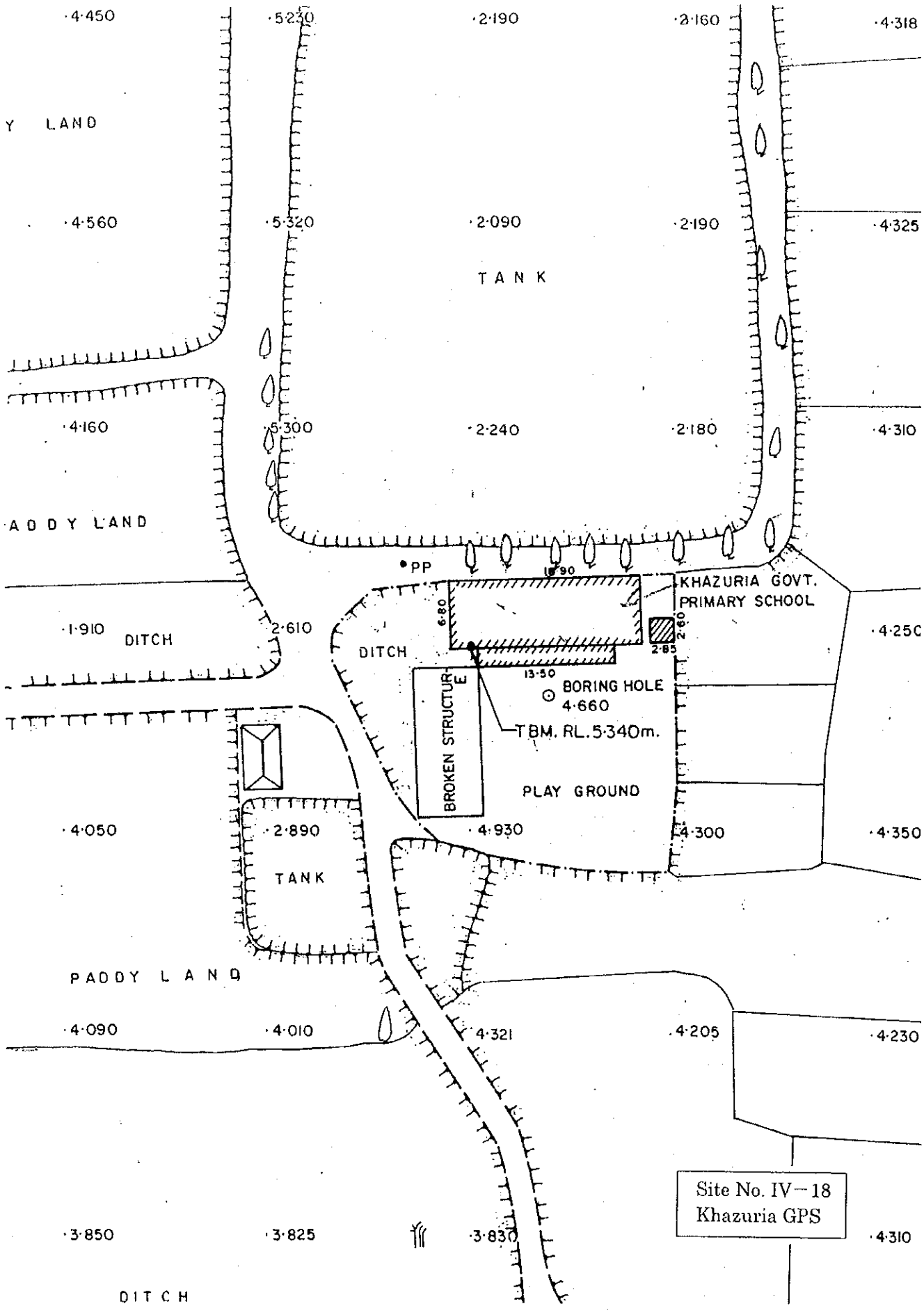

PADDY LAND
·4·506
PADDY LAND
5·206
·4·466
·4·566
4·796
DITC
DITCH
·4·516
4·866
·4·556
·4·596
·5·221
H
D
Septic Tank
·2·183 TANK
5·846
Latrine
18·70m.
KAZIRTALUK GOVT.
PRIMARY SCHOOL
VERANDHAH
BORING HOLE
4·834
TBM. RL. 4·979
Broken
Tubelwell
5·529
5·076
GHAT
·4·604
4·694
Shop
·4·811
·4·994
·0·987
TANK
ow shed
D
TANK
·4·484
3·504
4·765
·5·044
·2·045
PADDY LAND
DITCH
M
Korai
·4·444
4·494
·4·498
·4·625
D
Site No. IV—14
Kazia Taluk GPS

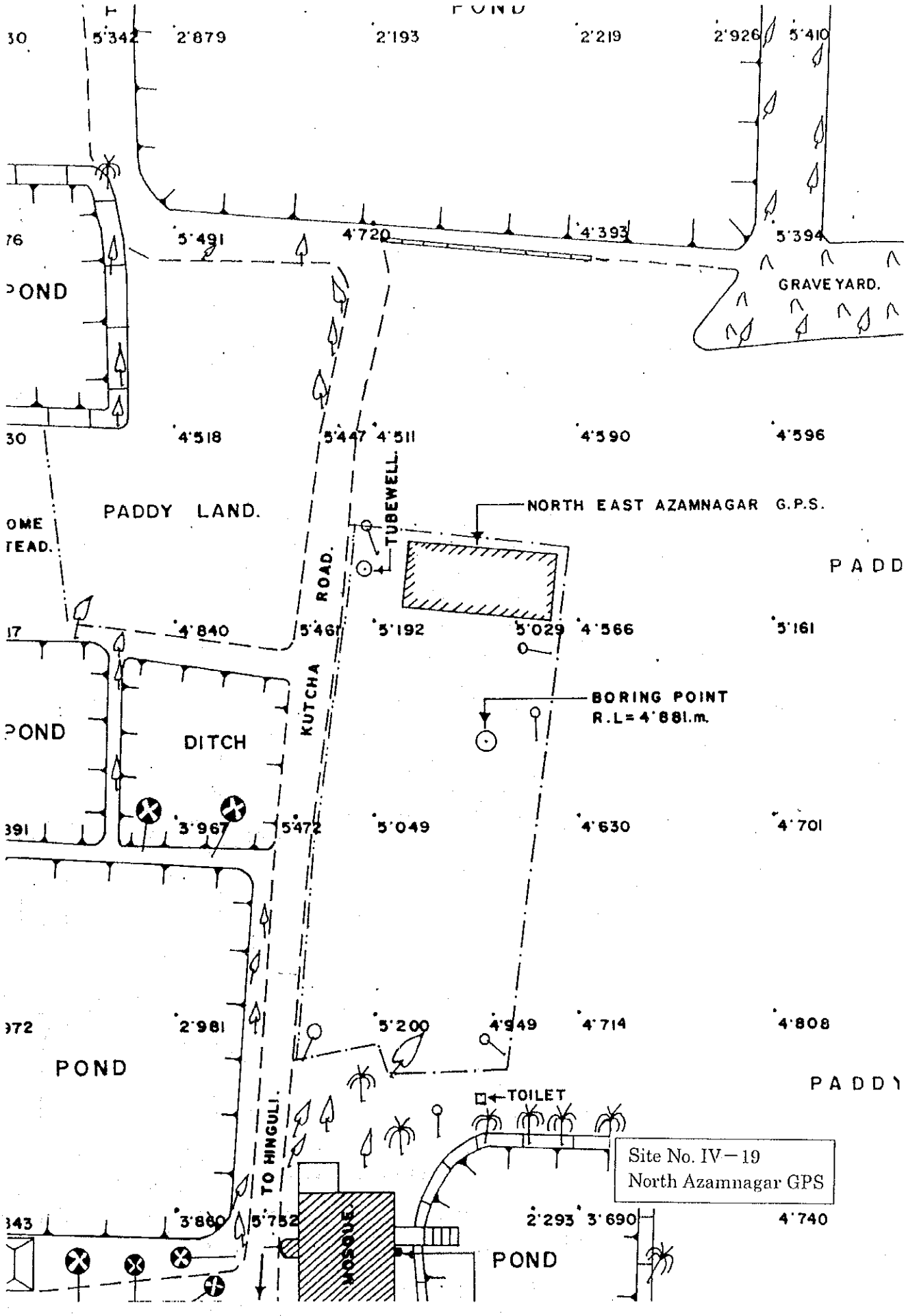


Site No. IV－15
Moddho Miani GPS

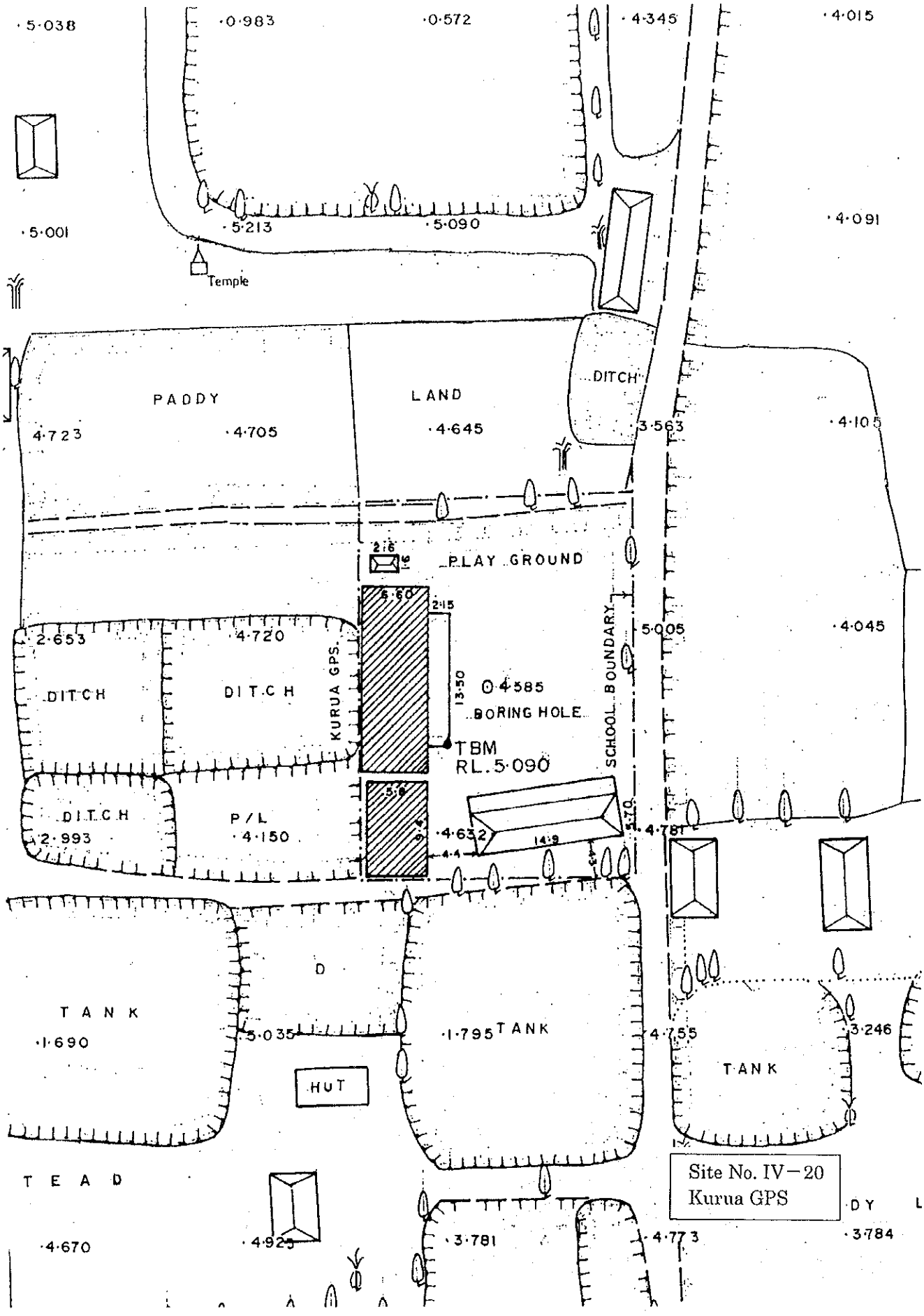

PADDY LAND
To Boro
·2·031
·4·581
·4·418
·4·432
·5·038
·2·875
KHAL
·2·621
·4·396
PADDY LAND
6·20
TBM
R.L.5·083
Pillar
R.L.4·686
SHAHIDABDULKALAM GPS
18·30
BORING HOLE
·4·558
·4·505
·4·532
·4·556
·1·985
·4·467
·4·458
·4·788
·4·928
·3·778
PADDY LAND
GRAVE YARD
·4·325
·4·338
·4·328
·4·953
·2·056
·4·303
·4·341
·4·318
TANK
·2·738
·1·838
PADDY LAND
·4·238
·4·361
·4·288
·4·388
·3·069
Site No. IV—16
Shatid Abdul Kalam GPS

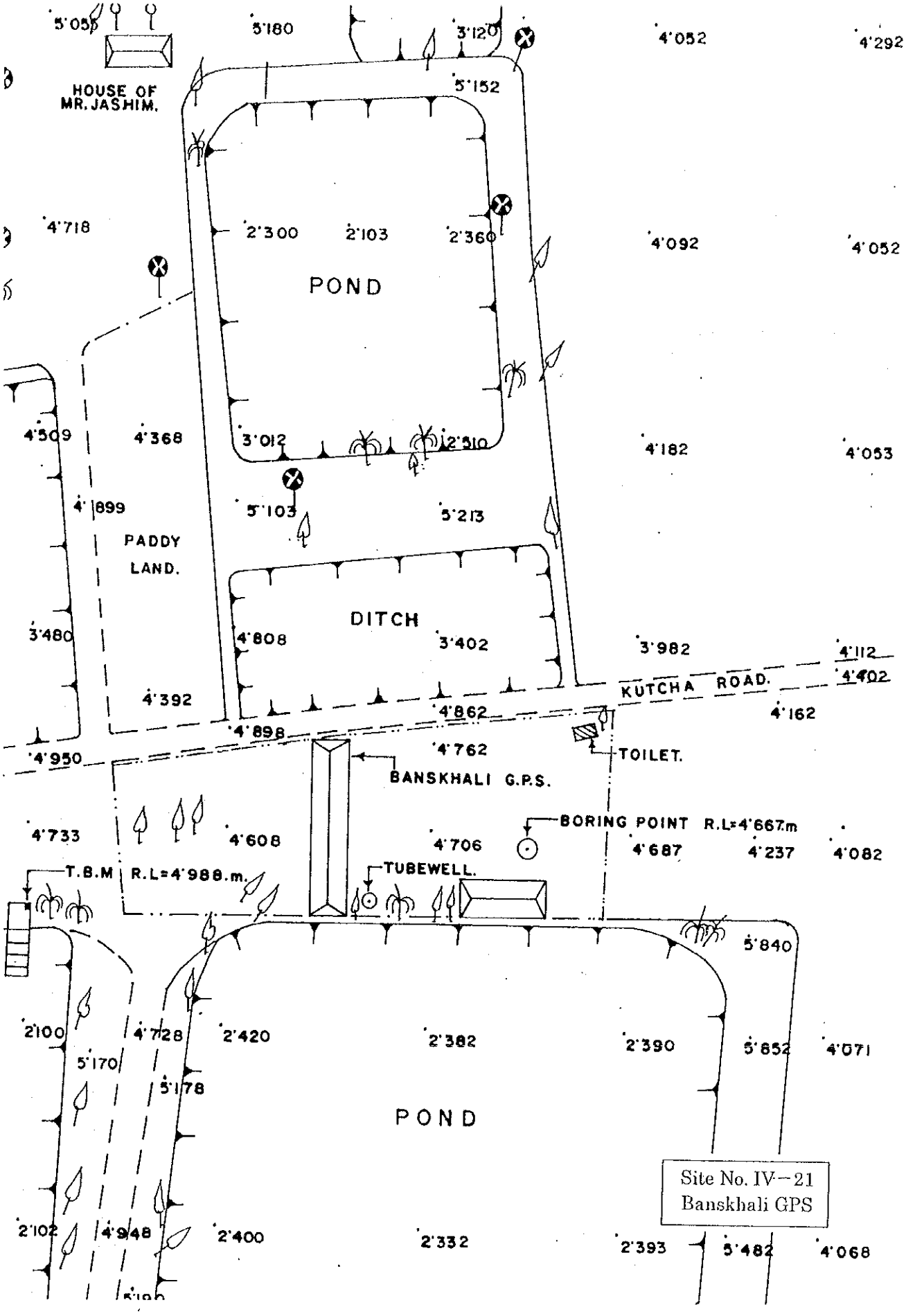

D Y L A N D
·3·972
·4·102
·1·245
TANK
·1·256
·4·008
·4·099
·1·923
·2·045
TARKATIA GOVT.
PRIMARY SCHOOL
15·40m.
BORING HOLE
4·650
TBM. RL. 5·055m.
·3·985
·3·982
7·70m.
1·5m.
·4·692
·4·865
DITCH
D Y L A N D
TANK
·3·998
·3·955
·2·372
·4·635
4·5
4·0
·4·051
·4·051
·4·595
·4·615
·4·101
·4·100
·4·075
·4·245
D D Y L A N D
·4·115
·4·108
·4·067
·4·065
Site No. IV—17
Tarakatia GPS


·4·450
·5·230
·2·190
·2·160
·4·318
Y LAND
·4·560
·5·320
·2·090
·2·190
·4·325
TANK
·4·160
·5·300
·2·240
·2·180
·4·310
ADDY LAND
PP
KHAZURIA GOVT.
PRIMARY SCHOOL
·1·910
DITCH
·2·610
DITCH
·4·250
BORING HOLE
4·660
TBM. RL.5·340m.
BROKEN STRUCTURE
PLAY GROUND
·4·050
·2·890
TANK
·4·930
·4·300
·4·350
PADDY LAND
·4·090
·4·010
·4·321
·4·205
·4·230
Site No. IV—18
Khazuria GPS
·3·850
·3·825
·3·830
·4·310
DITCH



Site No. IV—19
North Azamnagar GPS


5·038
0·983
0·572
4·345
4·015
5·001
5·213
5·090
4·091
Temple
PADDY
LAND
DITCH
4·723
4·705
4·645
3·563
4·105
PLAY GROUND
2·16
6·60
2·15
2·653
4·720
5·005
4·045
DITCH
DITCH
KURUA GPS.
13·50
0·4585
BORING HOLE
SCHOOL BOUNDARY
TBM
RL.5·090
DITCH
2·993
P/L
4·150
5·8
9·4
4·632
14·9
4·781
TANK
1·690
5·035
D
1·795
TANK
4·755
TANK
3·246
HUT
T E A D
4·670
4·925
3·781
4·773
3·784
Site No. IV−20
Kurua GPS



Site No. IV–21
Banskhali GPS