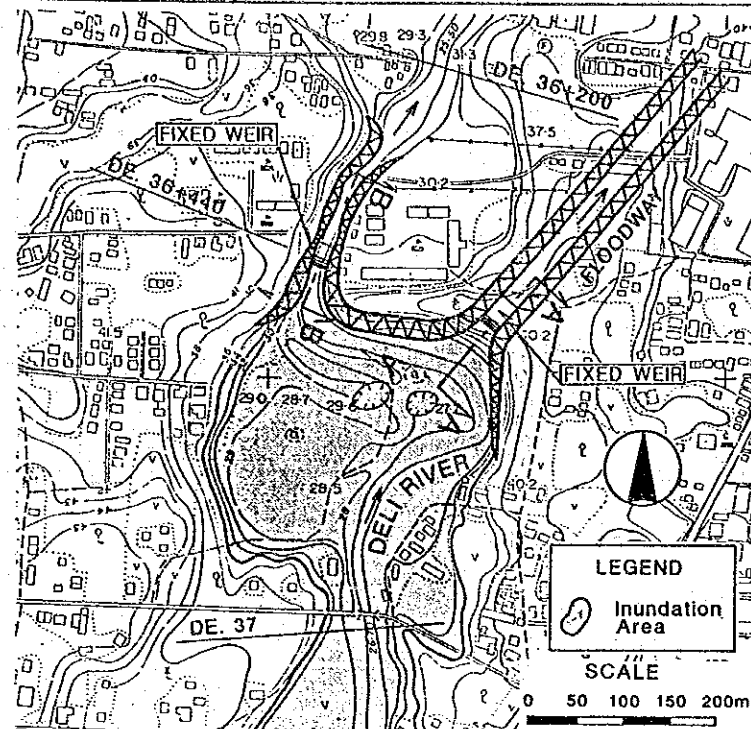
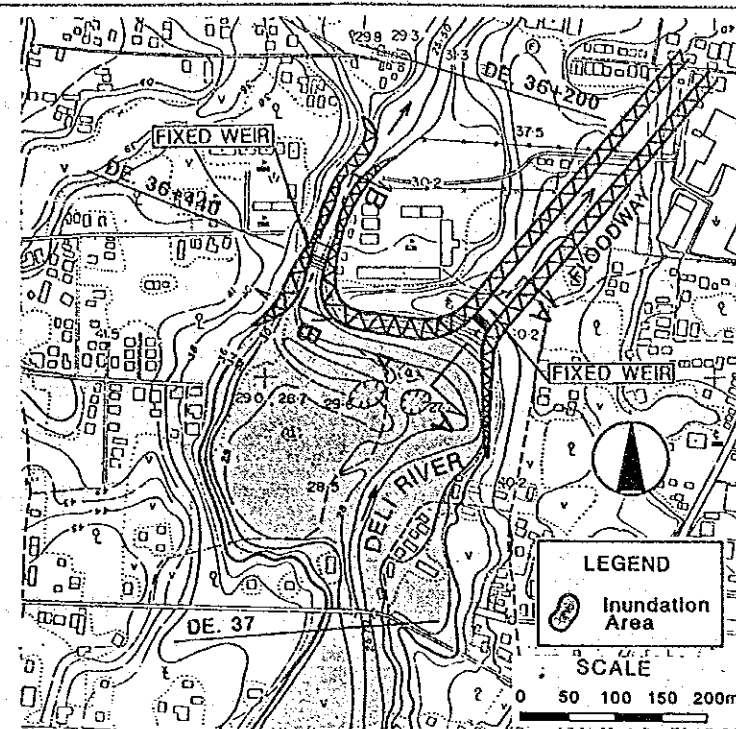




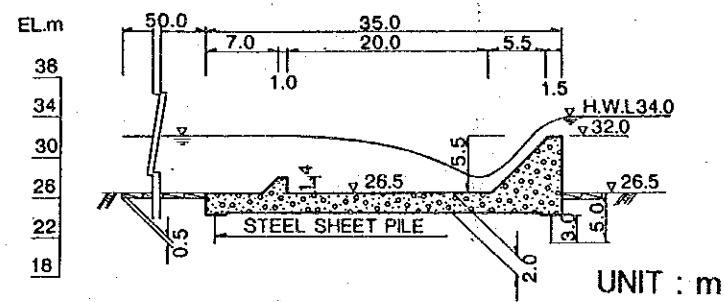
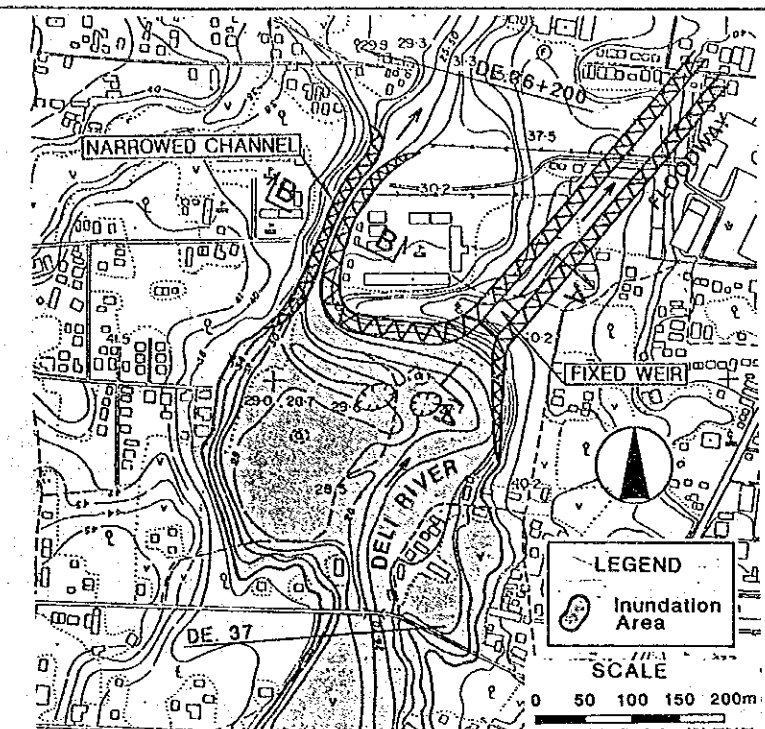
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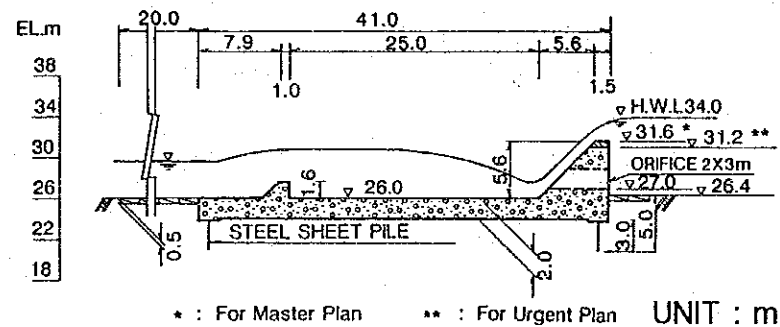
TYPE II



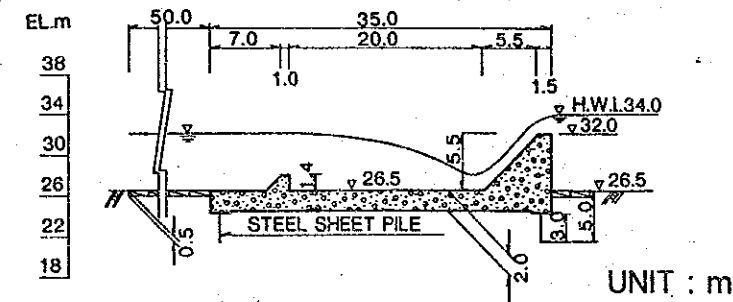
TYPE III



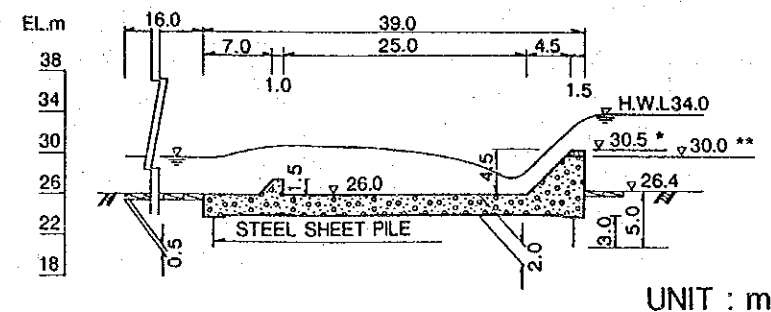
SECTION A-A



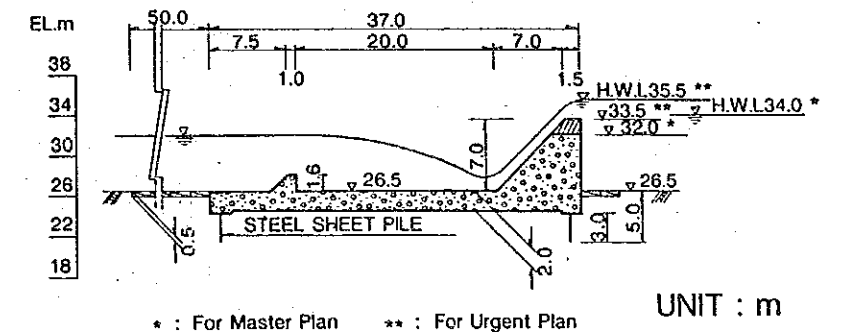
SECTION B-B



SECTION A-A

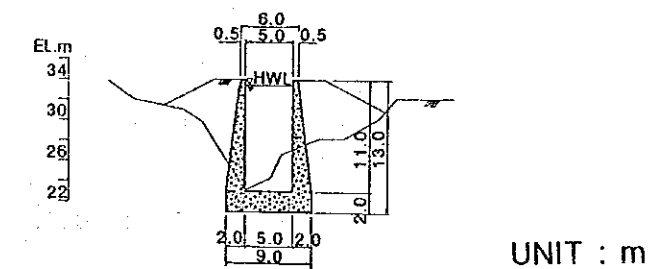


SECTION B-B



SECTION A-A

\* : For Master Plan \*\* : For Urgent Plan



SECTION B-B

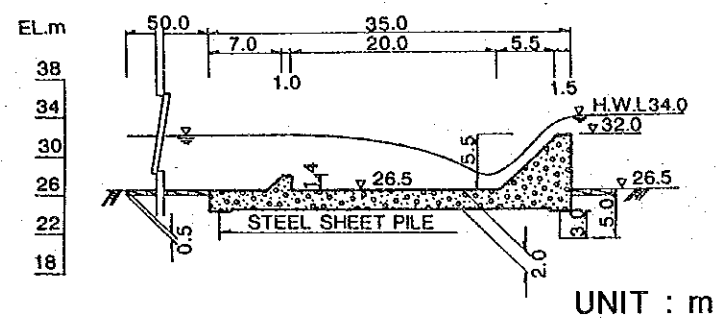
THE STUDY ON BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT  
IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

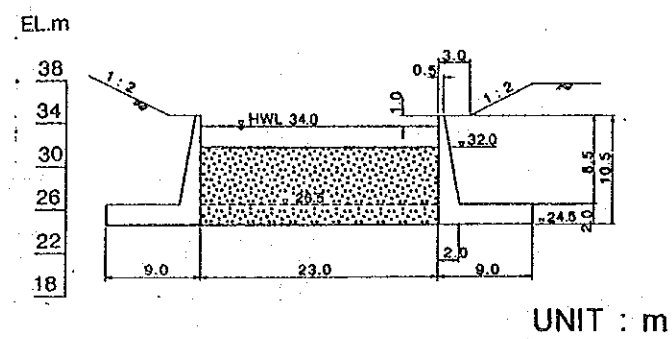
ALTERNATIVE STRUCTURES OF DIVERSION  
WORKS

Fig.5-12

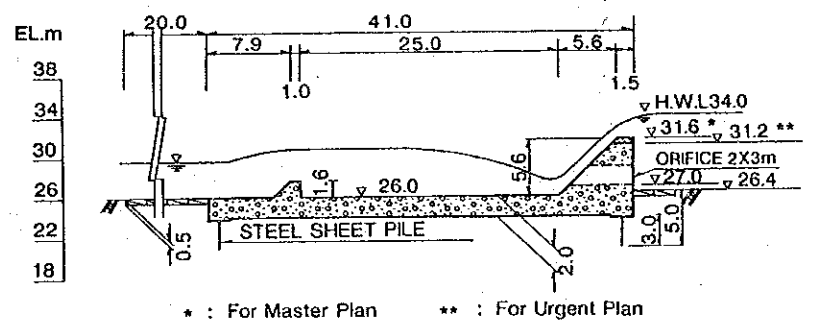




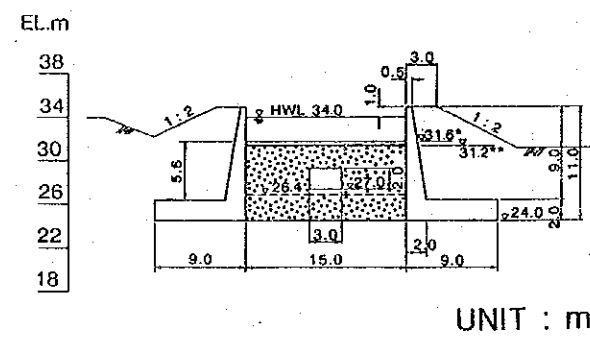
SECTION A-A



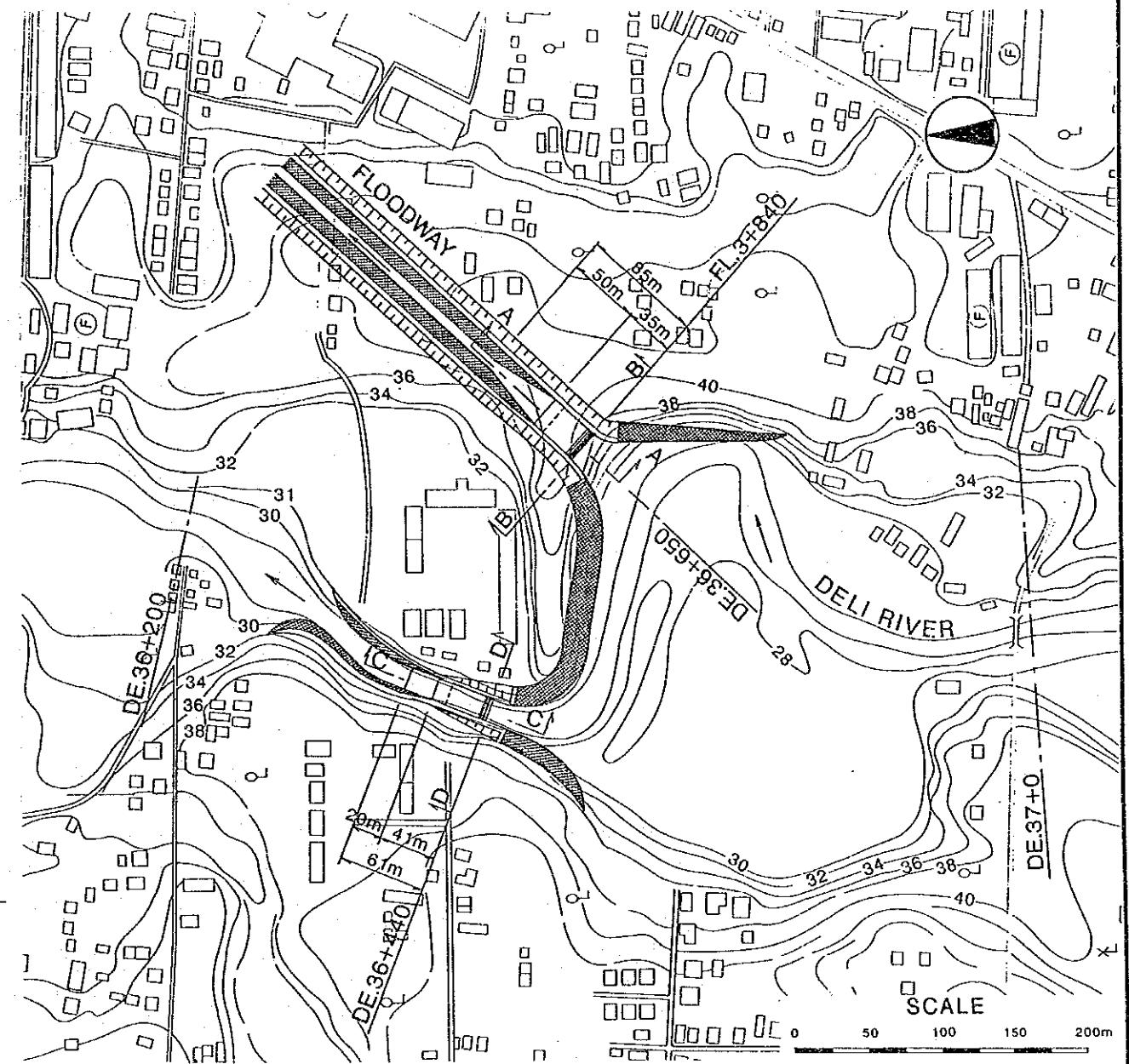
SECTION B-B



SECTION C-C



SECTION D-D



PLAN OF DIVERSION FACILITY

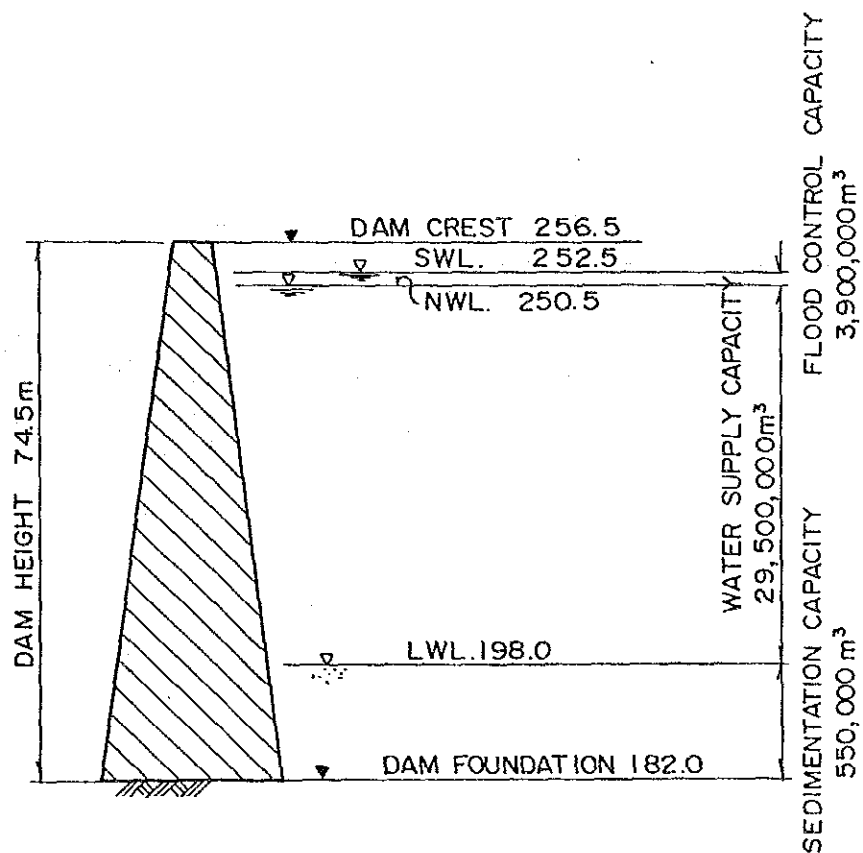
THE STUDY ON BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT  
IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

LAYOUT AND STRUCTURE OF OPTIMUM  
DIVERSION WORKS

Fig.5-13



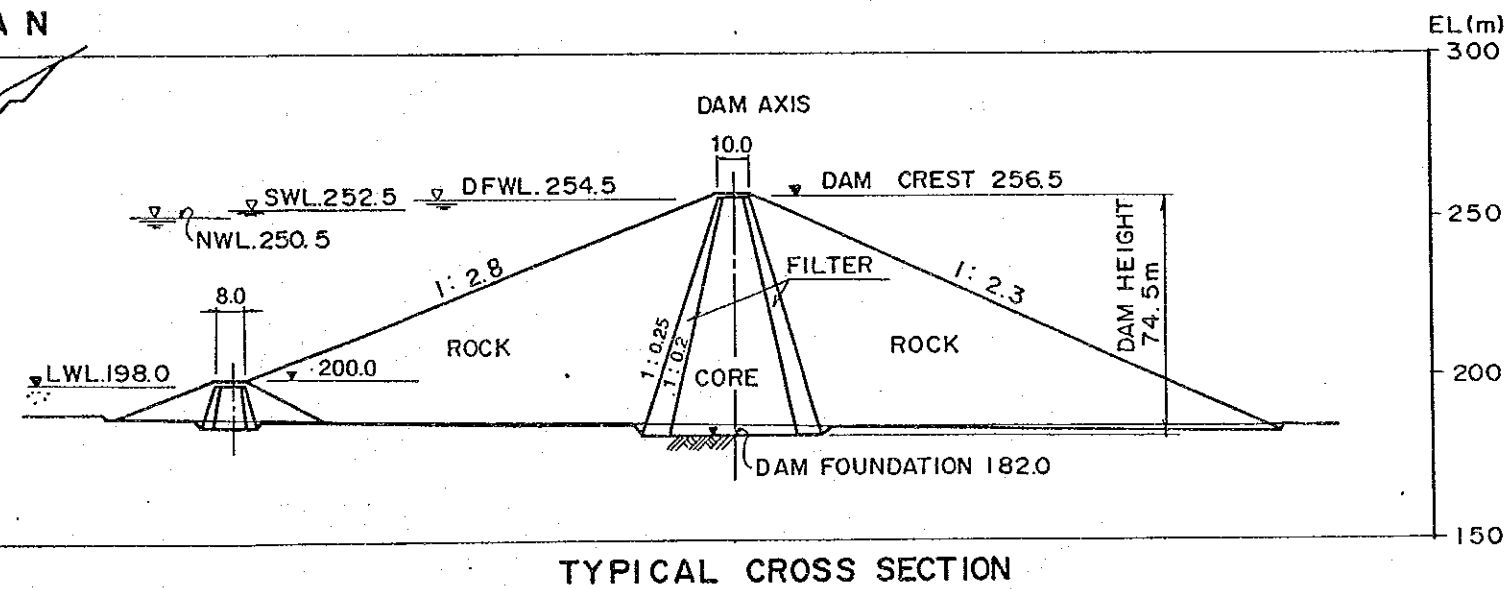
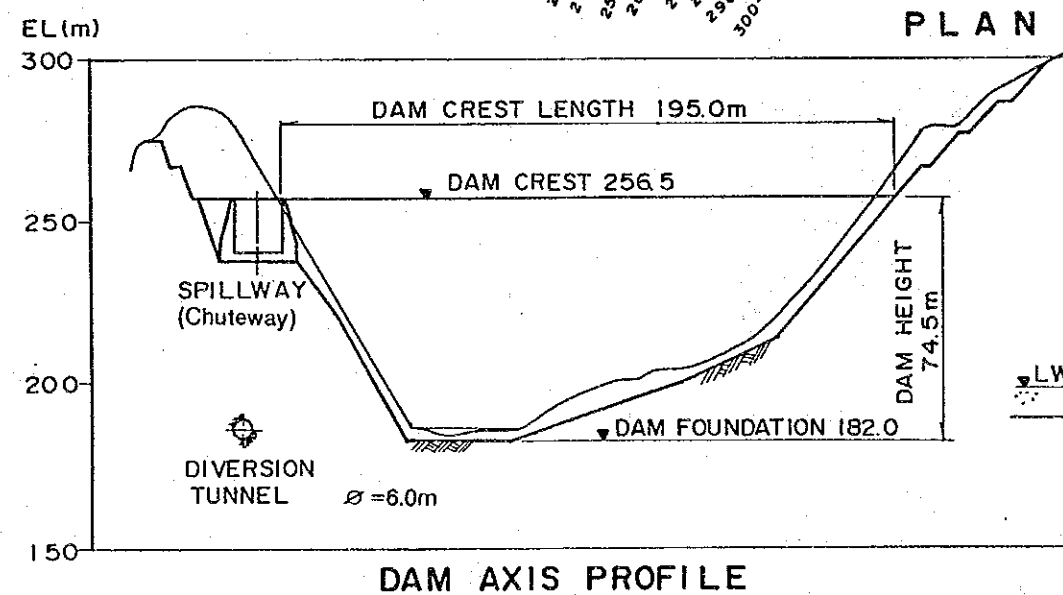
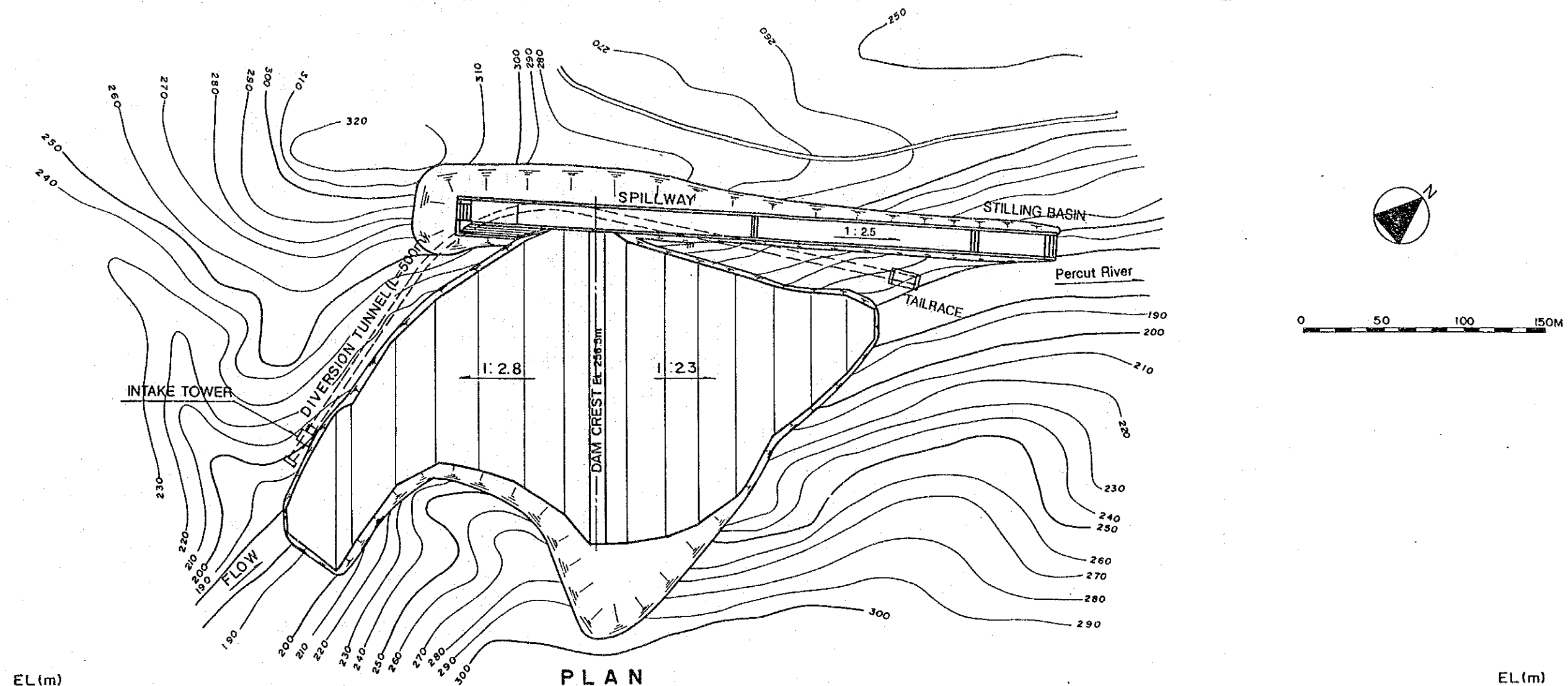


THE STUDY ON BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT  
IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

RESERVOIR CAPACITY ALLOCATION FOR  
LAUSIMEME MULTIPURPOSE DAM

Fig.5-14



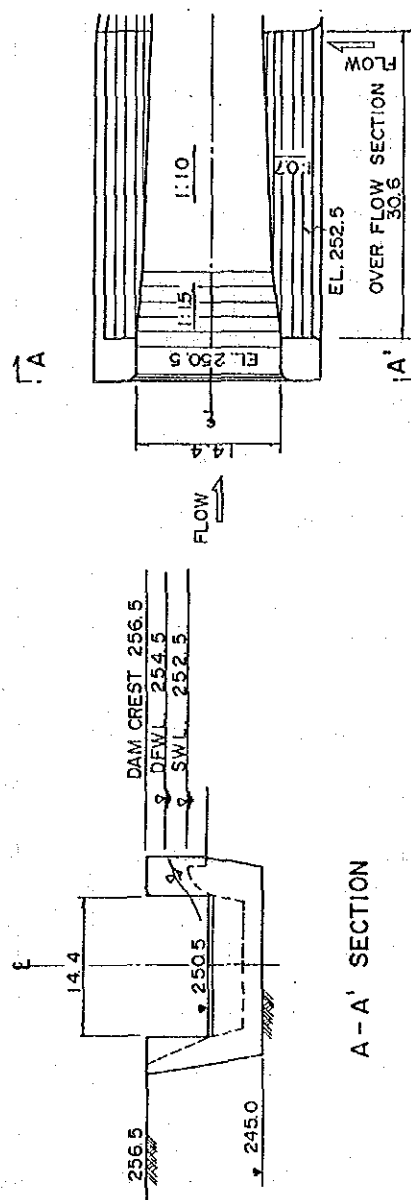
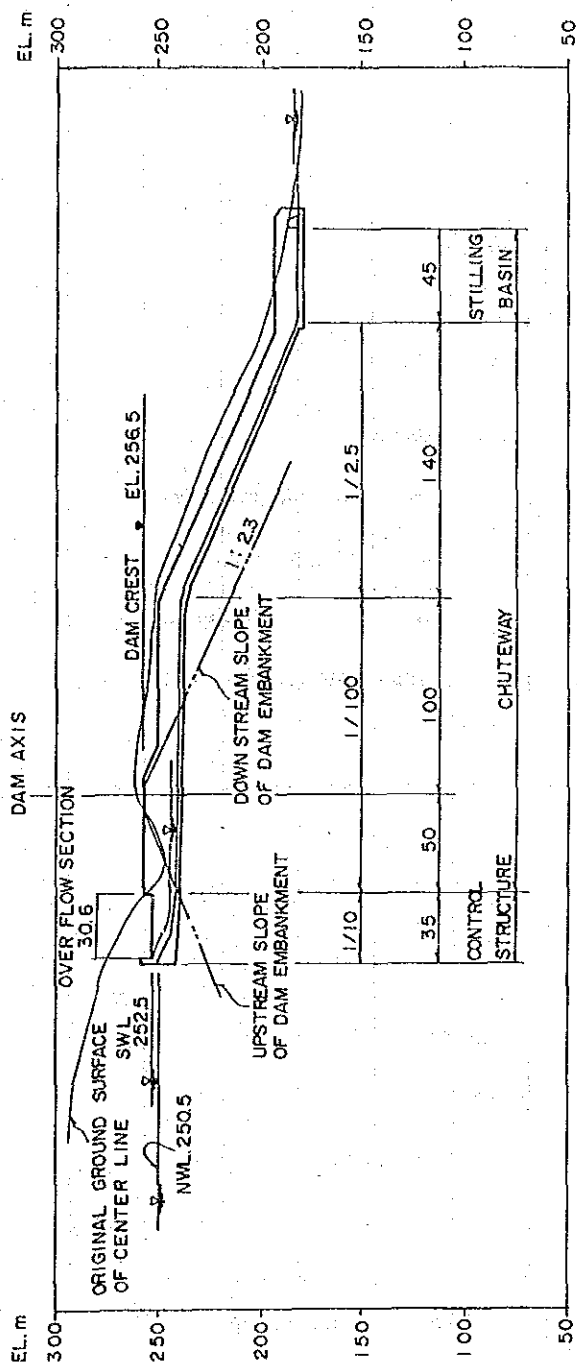
THE STUDY ON BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT  
IN THE REPUBLIC OF INDONESIA  
JAPAN INTERNATIONAL COOPERATION AGENCY

GENERAL PLAN OF LAUSIMEME MULTIPURPOSE  
DAM

Fig.5-15







# PLAN OF CONTROL STRUCTURE

# IMPLEMENTATION SCHEDULE

| ITEM   | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|--|------|------|------|------|------|------|------|------|------|------|
| <b>DELI-PERCU RIVER FLOOD CONTROL AND WATER SUPPLY PROJECT</b> |      |      |      |      |      |      |      |      |      |      |
| 1. Feasibility Study (JICA)                                    | ■    | ■    |      |      |      |      |      |      |      |      |
| 2. Loan Application for Detailed Design                        |      | ■    |      |      |      |      |      |      |      |      |
| 3. Detailed Design (2 years) *                                 |      |      | ■    | ■    | ■    |      |      |      |      |      |
| 4. Environmental Impact Assessment                             |      |      | ■    | ■    |      |      |      |      |      |      |
| 5. Loan Application for Construction                           |      |      |      | ■    |      |      |      |      |      |      |
| 6. Compensation by Government                                  |      |      |      | ■    | ■    | ■    |      |      |      |      |
| 7. Construction  |      |      |      |      | ■    | ■    | ■    | ■    | ■    | ■    |
| (1) Percut River Improvement                                   |      |      |      |      | ■    | ■    | ■    | ■    | ■    | ■    |
| (2) Medan Floodway   |      |      |      |      | ■    | ■    | ■    | ■    | ■    | ■    |
| (3) Lausmeme Dam   |      |      |      |      | ■    | ■    | ■    | ■    | ■    | ■    |
| (4) Deli River Improvement **                                  |      | ■    | ■    | ■    | ■    |      |      |      |      |      |
| <b>PADANG RIVER IMPROVEMENT PROJECT</b>                        |      |      |      |      |      |      |      |      |      |      |
| 1. Feasibility Study (JICA)                                    |      | ■    | ■    |      |      |      |      |      |      |      |
| 2. Loan Application for Detailed Design and Construction       |      |      | ■    |      |      |      |      |      |      |      |
| 3. Detailed Design (1.5 year)                                  |      |      |      | ■    | ■    |      |      |      |      |      |
| 4. Environmental Impact Assessment                             |      |      |      | ■    | ■    |      |      |      |      |      |
| 5. Compensation by Government                                  |      |      |      |      | ■    | ■    | ■    |      |      |      |
| 6. Construction  |      |      |      |      |      | ■    | ■    | ■    | ■    | ■    |

\* Detailed design work for the Deli-Percut Flood Control and Water Supply Project excluding the Deli River Improvement

\*\* Construction works of Deli River Improvement under MUDP II

THE STUDY ON BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT  
IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

IMPLEMENTATION SCHEDULE OF URGENT  
PROJECT

Fig.5-17

## ANNEX



MINUTES OF MEETING

ON

THE INCEPTION REPORT

OF

THE STUDY

ON

BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT

The JICA Study Team headed by Mr. Mitsuo Nakahiro, hereinafter referred to as the Team, commenced the Study on Belawan-Padang Integrated River Basin Development ( hereinafter referred to as the Study ) on May 16, 1990. The Advisory Committee headed by Mr. Hidehiro Sadakane visited Indonesia on June 7, 1990 and conducted field reconnaissance from June 8 to June 11, 1990.

A meeting was held between the Team and the Directorate of Planning and Programming, DGWRD, the Ministry of Public Works, Indonesia (hereinafter referred to as the Indonesian Side) on June 12, 1990 at the conference room of the Directorate of Planning and Programming, in the presence of the Advisory Committee, with the attendance listed in the attached sheet.

Presentation of the Inception Report was carried out during this meeting, and the following has been confirmed by and between the Indonesian Side and the Team.

1. The Team has submitted forty (40) copies of Inception Report to the Indonesian Side.



2. All the contents of the Inception Report have been in principle understood and accepted by the Indonesian Side. The main points discussed during the meeting are summarized as follows:

- (1). All water demands for urban water supply, industrial use and river maintenance flow as well as irrigation requirements of the existing and the proposed systems shall be included in the water balance study for the formulation of Master Plan.
- (2). The results of the Study on Medan Urban Development Project I and II (MUDP I and II) shall be referred for the formulation of long-term water resources development in the Master Plan, as far as the said study will be available.
- (3). The project scale of flood control in the Master Plan will be determined on the basis of socio-economic and technical justification by setting the target year at 2010.  
Feasibility Study of the flood control will be carried out for the area which has a high priority or an urgency of flood mitigation, in consideration of rather smaller project scale than that in the Master Plan as well as stage-wise project implementation.

(4). The flood control plan of swampy areas along the sea coast shall be formulated on account of existing swampy development program, if any.


3. The Team expressed a strong concern on the arrangement and coordination to be made by the Indonesian Side required for providing the Team with the available data and information related to the Study.

Jakarta, June 13, 1990

AGREED BY AND BETWEEN :

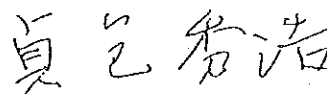


IR. MOHAMAD SIDHARTO  
Chief of Sub-Directorate  
of River Basin Development  
Planning,  
Directorate General of  
Water Resources Development,  
Ministry of Public Works



MITSUO NAKAHIRO  
Team Leader  
The JICA Study Team

WITNESS :



HIDEHIRO SADAKANE  
Chairman, Advisory Committee  
Japan International  
Cooperation Agency  
( J I C A )

# LIST OF ATTENDANTS

## Indonesian Side :

| Name                     | Occupation  |
|--------------------------|---|
| 1. Ir. M. Sidharto       | Chief, Sub-Directorate of River Basin Development Planning      |
| 2. Ir. P. Sirait         | Chief, Sub Project of P3SA                                      |
| 3. Ir. Ruchyat Kustomi   | Chief, Section I of Sub-Directorate                             |
| 4. Sujono                | Staff, Directorate of Planning & Programming                    |
| 5. Drs. Sudarminto       | Chief, Section of Cross Sectoral Cooperation                    |
| 6. Ir. Suharto           | Chief, Survey Section   |
| 7. Drs. Acep Sohib Husen | Staff, Foreign Aid Sub Division, Dit. of Planning & Programming |
| 8. Ir. Ilham Abia        | Staff, Technical Planning Sub Directorate                       |
| 9. Bambang Prayitno      | Staff, Bilateral Section Sub. Directorate of F.A.A*             |
| 10. Djoko Sasongko MSc.  | Chief, Survey Section, Directorate of Rivers                    |
| 11. Drs. Isnugroho       | Chief, Water Resources Data Section                             |
| 12. B. Trenggono         | Chief, Budget Planning Section                                  |
| 13. Takuya Khon          | JICA Expert   |

\* F.A.A. Foreign Aid Administration

*PS*

*1/n*

JICA Study Team

| Name                  | Occupation                                      |
|-----------------------|---|
| 1. Mitsuo Nakahiro    | Team Leader                                     |
| 2. Hitoshi Kim        | Flood Control Planner/<br>Assistant Team Leader |
| 3. Yasuhisa Kaneshima | Hydrologist/Hydraulics<br>Analyst               |
| 4. Makoto Migita      | Water Resources<br>Development Planner          |
| 5. Tata Sukarta       | Regional Development/<br>Land Use Planner       |

Advisory Committee

| N a m e              | Occupation           |
|----------------------|----------------------|
| 1. Hidehiro Sadakane | Chairman             |
| 2. Ichiro Morikawa   | Hydrology/Hydraulics |
| 3. Kiyoshi Yoshimoto | Coordinator          |

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MINUTES OF MEETING  
ON  
PROGRESS REPORT I  
OF  
THE STUDY  
ON  
BELAWAN - PADANG INTEGRATED RIVER BASIN DEVELOPMENT

The JICA Study Team headed by Mr. Mitsuo Nakahiro, hereinafter referred to as the Team, commenced the Study on Belawan-Padang Integrated River Basin Development (hereinafter referred to as the Study) on May 16, 1990.

A meeting was held among the Directorate of Planning and Programming of DGWRD and the North Sumatra Provincial Public Works of the Ministry of Public Works, Indonesia (hereinafter referred to as the Indonesian Side), and the Team on October 10, 1990 at the conference room of the Provincial Public Works of North Sumatra, with presence of Head of the Provincial of Public Works (the attendants are listed in the attached sheet).

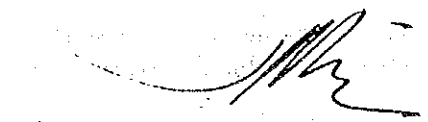
Presentation of the Progress Report I was carried out during this meeting, and the following has been confirmed by and between the Indonesian Side and the Team.

1. The Team has submitted forty (40) copies of the Progress Report I to the Indonesian Side on October 2, 1990.
2. All the contents of the Progress Report I have been in principle understood and accepted by the Indonesian Side. The main points discussed during the meeting are summarized as follows :
  - (1) The forecasting of a future land use will be carried out based on the recommended land use map (source : RePPProt in 1988) shown in Progress Report I.
  - (2) The water quality will be evaluated by the standards of the

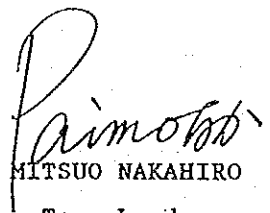
Peraturan Pemerintah Republik Indonesia No. 20, which was published in 1990, and should be considered for the formulation of water supply master plan.

Medan, October 10, 1990

AGREED BY AND BETWEEN



IR. HENDRO MOELJONO  
Head of North Sumatra Provincial  
Public Works  
Ministry of Public Works



MITSUO NAKAHIRO  
Team Leader  
The JICA Study Team



# LIST OF ATTENDANTS

## Indonesian Side :

| Name                   | Occupation   |
|------------------------|--|
| 1. Ir. Hendro Moeljono | Head, North Sumatra Provincial Public Works, Ministry of Public Works  |
| 2. Ir. M. Sidharto     | Chief, Sub-Directorate of River Basin Development Planning, Directorate General of Water Resources Development |
| 3. Ir. K. Pangaribuan  | Chief, Water Resources Development Provincial Public Works North Sumatra                                       |
| 4. Djoko Sasongko MSc. | Chief, Survey Section, Directorate of Rivers   |
| 5. Ir. Ruchyat Kustomi | Chief, Section I of Sub-Directorate of River Basin Development Planning  |
| 6. Amir Tobing         | Planning Assistant, Provincial Development Planning Board, North Sumatra (BAPPEDA)                             |
| 7. Miftahua Falah      | Staff of Planning Section, Provincial Development Planning Board North Sumatra (BAPPEDA)                       |
| 8. Kumala Siregar      | Technical Director Municipal Water Works TIRTANADI   |
| 9. Sugeng HS           | Planning Assistant, Municipal Water Works TIRTANADI  |
| 10. Bambang Georitno   | Project Manager, Medan Urban Development Project II  |
| 11. Idris Nasution     | Project Manager, Ular Project  |
| 12. T. Otani           | Consultant Engineer, Ular Project  |
| 13. T. Imai            | Consultant Engineer, Ular Project  |
| 14. P. Hutasoit        | Counterpart, Ular Project  |
| 15. S. Ban             | Consultant Engineer, Ular Project  |
| 16. Aisyah             | Chief, Hydrological Section, North Sumatra Province  |

Indonesian Side :

| Name                           | Occupation  |
|--------------------------------|---|
| 17. P.F. Mont Ford             | Planning/Management Advisor, MUDP   |
| 18. Eddy Putra                 | Staff of Planning Section, DPUP   |
| 19. Apon Rendy                 | Project Manager Water Supply Project, North Sumatra   |
| 20. Tonggo Siahaan             | Managing Director, Balcon Consultant  |
| 21. Dr. Ir. Sastra D. Sebayang | Team Leader, Virama Karya - Balcon Consultant   |
| 22. Ir. Makmur Ginting         | Co. Team Leader, Virama Karya - Balcon Consultant/Counterpart Water Resources Development Planner |
| 23. Ir. Syahlan Nasution       | Counterpart Construction Planner/Cost Estimator   |
| 24. Ir. Surung Siregar         | Assistant Planning Section of Third Irrigation Sector Project, DPUP                               |
| 25. Ki Hee Ryu                 | Consultant of Third Irrigation Sector Project   |
| 26. Ir. Sujono                 | Staff of P3SA Project/Counterpart Sabo, DPUP  |
| 27. Drs. Sangap Tarigan        | Staff of P3SA Project/Counterpart Hydrologist, DPUP   |
| 28. Pardomuan Gultom M.Eng     | Staff of P3SA Project/Counterpart Flood Control Planner, DPUP                                     |
| 29. Ir. Yani Siregar           | Planning Assistant of River Section, DPUP   |
| 30. I.U. Simorangkir           | Assistant of Rehabilitation and Upgrading Project, Third Irrigation Sector Project, DPUP          |

Pto

JICA Study Team

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| Name               | Occupation                                     |
|--------------------|--|
| 1. Mitsuo Nakahiro | Team Leader                                    |
| 2. Hitoshi Kim     | Flood Control Planner/Assistant<br>Team Leader |
| 3. Yuzo Mizota     | Structural Design Engineer                     |
| 4. Masanobu Oka    | Construction Planner/Cost Estimator            |

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**MINUTES OF MEETING**

**ON**

**INTERIM REPORT**

**OF**

**THE STUDY**

**ON**

**BELAWAN - PADANG INTEGRATED RIVER BASIN DEVELOPMENT**

The JICA Study Team headed by Mr. Mitsuo Nakahiro, hereinafter referred to as the Team, has commenced the Study on Belawan - Padang Integrated River Basin Development (hereinafter referred to as the Study) on May 16, 1990. The Team conducted the master plan study and compiled the results into the Interim Report, and started again the field survey for the Feasibility Study on June 3, 1991.

The Advisory Committee headed by Mr. Hidehiro Sadakane visited Indonesia on June 7, 1991 and conducted field reconnaissance on June 8 to June 11, 1991.

A meeting was held between the Team and the Directorate of Planning and Programming of DGWRD, Ministry of Public Works (hereinafter referred to as Indonesian Side) on June 12, 1991 at the conference room of the Directorate of Planning and Programming, in the presence of the Advisory Committee and officials concerned as listed in the attached sheet.

Presentation of the Interim Report was carried out during this meeting, and the following has been confirmed by and between the Indonesian Side and the Team.

1. The Team has submitted forty (40) copies of the Interim Report to the Indonesian Side on June 4, 1991.
2. All the contents of the Interim Report have been in principle understood and accepted by the Indonesian Side, especially the feature of Master Plan and five (5) urgent projects selected for the Feasibility Study.


Therefore, the JICA Study Team will proceed their survey and investigation for the Feasibility Study as scheduled.

3. The main points discussed during the meeting are summarized as follows:
  - (1) There are two (2) other study teams, HASKONING (Dutch Consulting Firm) conducting the surveys of flood control and water resources development and C. LOTTI & ASSOCIATES (Italian Consulting Firm) of water resources allocation for Medan City, under the Second Medan Urban Development Project which is partly financed by the Asian Development Bank.

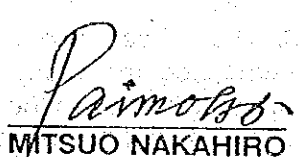
- (2) The coordination and arrangement with the two teams will be made by the Indonesian Side to avoid the duplication of the study, so that the studies by the teams should be conducted based on the Master Plan formulated by the Team.

Jakarta, June 13, 1991

AGREED BY AND BETWEEN

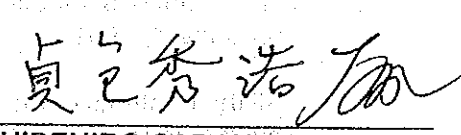


Ir. DJOKO S. SARDJONO  
Director of Planning and  
Programming, Directorate  
General of Water Resources  
Development  
Ministry of Public Works



MTSUO NAKAHIRO  
Team Leader  
The JICA Study Team

Witness :



HIDEHIRO SADAKANE  
Chairman, Advisory Committee  
Japan International Cooperation  
Agency (JICA)

## LIST OF ATTENDANCE

| Name                     | Designation  | Office                                    |
|--------------------------|--|---|
| <u>Indonesian Side :</u> |  |   |
| 1. Ir. Djoko Sardjono    | Director of Planning and Programming   | DGWRD                                     |
| 2. Ir. Soentoro          | Chief, Directorate of Rivers   | -ditto-                                   |
| 3. Ir. R. Zainuddin      | Directorate of Irrigation II   | -ditto-                                   |
| 4. Ir. Roesli Rais       | Directorate of Irrigation I  | -ditto-                                   |
| 5. Ir. Ruckyat Kustomi   | Directorate of Planning and Programming  | -ditto-                                   |
| 6. Ir. Manapang Pasaribu | Chief, Planning & Programming Division,<br>Department of Public Work Sumatra Utara | North Sumatra<br>Province of Public Works |
| 7. Ir. P. Sirait         | Chief of P3SA Sumatra Utara  | -ditto-                                   |
| 8. Ir. Arjuno Siregar    | PPS Sumatra Utara  | -ditto-                                   |
| 9. Pardomuan Gultom ME   | P3SA Sumatra Utara   | -ditto-                                   |
| 10. Ir. Kati A.          | Directorate of Air Bersih  | DGCK                                      |
| 11. S.C. de Haan, M.Sc.  | Team Leader, Study of River Flows<br>and Flood Control in Medan River Basins       | Haskoning                                 |
| 12. T. Khon              | JICA Expert  | DGWRD                                     |
| <u>Japanese Side</u>     |  |   |
| 1. H. Sadakane           | Chairman, Advisory Committee   | MOC, Japan                                |
| 2. I. Morikawa           | Member, Advisory Committee   | -ditto-                                   |
| 3. H. Emomoto            | Coordinator  | JICA, Tokyo                               |
| 4. M. Nakahiro           | Team Leader  | JICA Team                                 |
| 5. H. Kin                | Asst. Team Leader/Flood<br>Control Planner   | -ditto-                                   |
| 6. K. Ikari              | Dam and Reservoir Planner  | -ditto-                                   |



MINUTES OF MEETING  
ON  
PROGRESS REPORT II  
OF  
THE STUDY  
ON  
BELAWAN - PADANG INTEGRATED RIVER BASIN DEVELOPMENT

The JICA Study Team headed by Mr. Mitsuo Nakahiro, hereinafter referred to as the Team, resumed the field investigation for the Study on Belawan-Padang Integrated River Basin Development (hereinafter referred to as the Study) on June 3, 1991.

A meeting was held among the Directorate of Planning and Programming of DGWRD and the North Sumatra Provincial Public Works of the Ministry of Public Works, Indonesia (hereinafter referred to as the Indonesian Side), and the Team on August 28, 1991 at conference room of the Provincial Public Works (the attendant list is attached hereto).

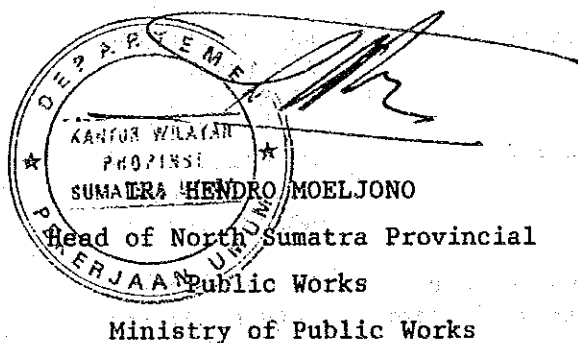
Presentation of the Progress Report II was carried out during this meeting, and the following has been confirmed by and between the Indonesian Side and the Team.

1. The Team has submitted forty (40) copies of the Progress Report II to the Indonesian Side on August 24, 1991.
2. All the contents of the Progress Report II have been in principle understood and accepted by the Indonesian Side. The main points discussed during the meeting are summarized as follows :
  - (1) River improvement plan is to be prepared paying more attention on river morphological aspects as well as social impacts such as land acquisition and house evacuation.
  - (2) Since the mapping of Lausimeme reservoir area and the

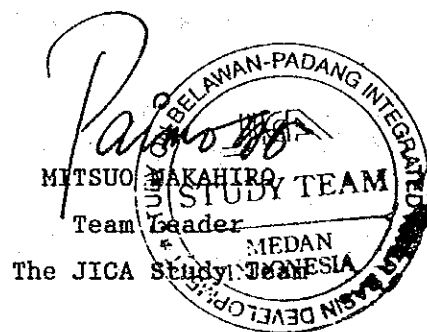
geological investigation at the dam site were completed, type and height of dam and its associated structures will be detailedly studied together with the construction cost for reviewing the priority projects.

Medan, August 28, 1991

AGREED BY AND BETWEEN



HENDRO MOELJONO  
Head of North Sumatra Provincial  
Public Works  
Ministry of Public Works



Team Leader  
The JICA Study Team

# LIST OF ATTENDANTS

## Indonesian Side :

| Name                       | Designation   | Office                                  |
|----------------------------|---|---|
| 1. Ir. Hendro Moeljono     | Head of North Sumatra Provincial Public Works       | Ministry of Public Works                |
| 2. Ir. Siswoko             | Chief of Planning and Designing                     | Directorate of Rivers, DGWRD            |
| 3. Ir. Joko Resmianto      | Cief of Water Supply Section                        | Directorate of Air Bersih, DGCK         |
| 4. Ir. Ruchyati Kustomi    | Chief of Section                                    | Directorate of Bina Program, DGWRD      |
| 5. Ir. M. Pasaribu         | Chief of Planning and and Programming Division      | North Sumatra Provincial Public Works   |
| 6. Ir. Roslila Sitompul    | Chief of River and Swamp Division                   | - ditto -                               |
| 7. Ir. P. Sirait           | Chief of P3SA Sub-Project                           | - ditto -                               |
| 8. Pardomuan Gultom M.Eng. | Staff of P3SA Project/ Counterpart of Flood Control | - ditto -                               |
| 9. Ir. Salam Siregar       | Staff of Planning Section                           | BAPPEDA, North Sumatra                  |
| 10. Ir. Kumala Siregar     | Technical Director                                  | PDAM Tirtanadi                          |
| 11. Ir. Bambang Goeritno   | Project Manager                                     | Medan Urban Development Project II      |
| 12. Ir. O.P. Hutagalung    | Project Manager                                     | Flood Control of Medan and its Vicinity |
| 13. Ir. Idris Nasution     | Project Manager                                     | Ular River Project                      |

Consultant :

| Name                     | Designation                             | Office                   |
|--------------------------|---|--------------------------|
| 1. H.H. Toxopeus         | Water Resources Plan/<br>Civil Engineer | HASKONING                |
| 2. M.J.L. Chapman        | Team Leader                             | C.LOTTI and<br>Associats |
| 3. Dr. K.N. Mutreja      | Advisor for Flood Control               | ECI                      |
| 4. P.F. Montford         | Advisor                                 | PMU of MUDP II           |
| 5. Dr.Ir.Sastra Sebayang | Asst. Director                          | LATMI USU                |

JICA Study Team :

| Name                 | Designation                                     |
|----------------------|---|
| 1. Mitsuo Nakahiro   | Team Leader                                     |
| 2. Hitoshi Kim       | Flood Control Planner/<br>Assistant Team Leader |
| 3. Tatsuhiko Isomura | Environmental Impact<br>Analyst                 |

**MINUTES OF MEETING**  
**ON**  
**DRAFT FINAL REPORT**  
**OF**  
**THE STUDY**  
**ON**  
**BELAWAN-PADANG INTEGRATED RIVER BASIN DEVELOPMENT**

The JICA Study Team headed by Mr. Mitsuo Nakahiro, hereinafter referred to as the Team, arrived in Indonesia to present and discuss on the Draft Final Report of the Study on Belawan-Padang Integrated River Basin Development (hereinafter referred to as the Study) on January 7, 1992.

The Advisory Committee headed by Mr. Hidehiro Sadakane visited Indonesia on January 13, 1992 and conducted field reconnaissance with the Team from January 14 to 16, 1992.

A meeting was held between the Team and the Directorate of Planning and Programming, DGWRD, Ministry of Public Works, Republic of Indonesia (hereinafter referred to as the Indonesian Side) on January 18, 1992 at the conference room of the Directorate of Planning and Programming, in the presence of the Advisory Committee, with the attendance listed in the attached sheet.

Presentation of the Draft Final Report was carried out during this meeting, and the following has been confirmed by and between the Indonesian Side and the Team.

1. The Team has submitted the Draft Final Report consisting of forty (40) copies of main report, executive summary, supporting report and five (5) copies of drawing to the Indonesian Side.

2. All the contents of the Draft Final Report have been in principle understood and agreed by the Indonesian Side, while the followings were confirmed to compile into the Final Report which will be submitted within two (2) months after the receipt of comments of the Indonesian Side.

#### Technical Aspects

- (1) Revised route of the floodway, and type and feature of Lausimeme Dam are agreed to be the economically optimum.
- (2) The results of environmental impact study shall be submitted to the Central Commission of Environmental Impact Assessment, Ministry of Public Works (KOMPUS AMDAL-DPU) for their discussion, and the Final Report shall be compiled incorporated with the evaluation results of KOMPUS.
- (3) Results of water balance analyses of the respective river basins in the study area shall be summarized and compiled into the Final Report, together with the sources of data for the analyses.

#### Policy Aspects

- (1) To materialize the proposed Urgent Project at the earliest possible time, a step-wise implementation shall be considered; all activities related to the Project shall be divided into phases and stages, and the sensitivity analyses of investments shall be made for each alternative implementation schedule. -
- (2) More definite description on the possibility for the private sector to take a part of further development of the Project shall be made in the Final Report.



3. All the comments including the evaluation by KOMPUS shall be provided and conveyed to JICA within one (1) month after this meeting.

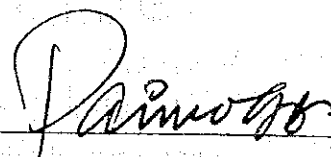
Jakarta, January 18, 1992

AGREED BY AND BETWEEN :



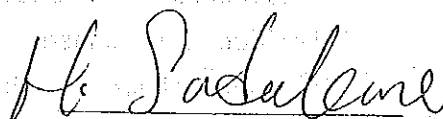
Ir. DJOKO S. SARDJONO  
Director

Directorate of Planning  
and Programming,  
Directorate General of  
Water Resources Development



MITSUO NAKAHIRO  
Team Leader  
JICA Study Team

WITNESS :



HIDEHIRO SADAKANE  
Chairman  
Advisory Committee,  
Japan International  
Cooperation Agency

## LIST OF ATTENDANCE

### Indonesian Side

| Name                    | Occupation   |
|-------------------------|--|
| 1. Ir. Djoko Sardjono   | Director, Planning and Programming, DGWRD  |
| 2. Ir. M. Sidharto      | Chief, Sub-Dit. of River Basin Development,<br>Dit. of Planning and Programming, DGWRD (BPP) |
| 3. Drs. Chaizur Nasri   | Chief, Adjustment Division, BPP  |
| 4. Ir. Ruchyat Kusutomi | Chief, Sub-River Basin Development Div. BPP  |
| 5. Ir. P. Sirait        | Chief, Sub-Project of P3SA, North Sumatra<br>Provincial Public Works (DPUP-SU)               |
| 6. P. Gultom M. Eng.    | Staff of P3SA, DPUP-SU   |
| 7. Djoko Sasongko MSc.  | Chief, Survey Section, Dit. of Rivers, DGWRD   |
| 8. Agus Muharrami       | Staff, Sub-Dit. of PUWD, DGCK  |
| 9. Agus Sofyan          | Staff, Dit. of Water Supply, DGCK  |
| 10. Sudiyarto           | Staff, Dit. of Water Supply, DGCK  |
| 11. Acep Sohib Husen    | Staff, Sub-Dit. ABLN, BPP  |
| 12. Takuya Khon         | JICA Expert, Dit. of Rivers  |
| 13. Katsuhiko Kimura    | JICA Expert, BPP   |

### JICA Study Team

| Name               | Occupation                              |
|--------------------|---|
| 1. Mitsuo Nakahiro | Team Leader of Study Team               |
| 2. Hitoshi Kin     | Flood Control Planner/Asst. Team Leader |
| 3. Yuzo Mizota     | Structural Design Engineer              |

## Advisory Committee

| Name                 | Occupation                     |
|----------------------|--------------------------------|
| 1. Hidehiro Sadakane | Chairman of Advisory Committee |
| 2. Minoru Yasuda     | Flood Control Expert           |
| 3. Hiroshi Shiono    | JICA Coordinator               |







11/11/11