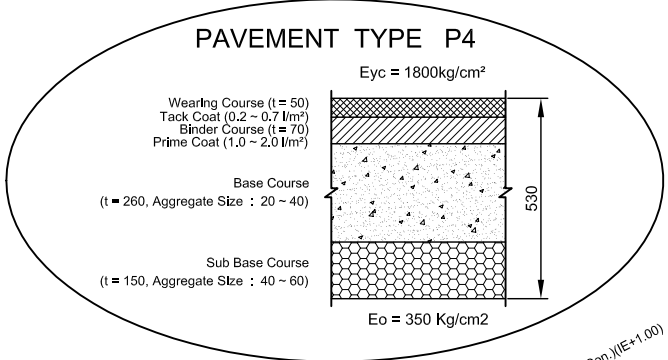
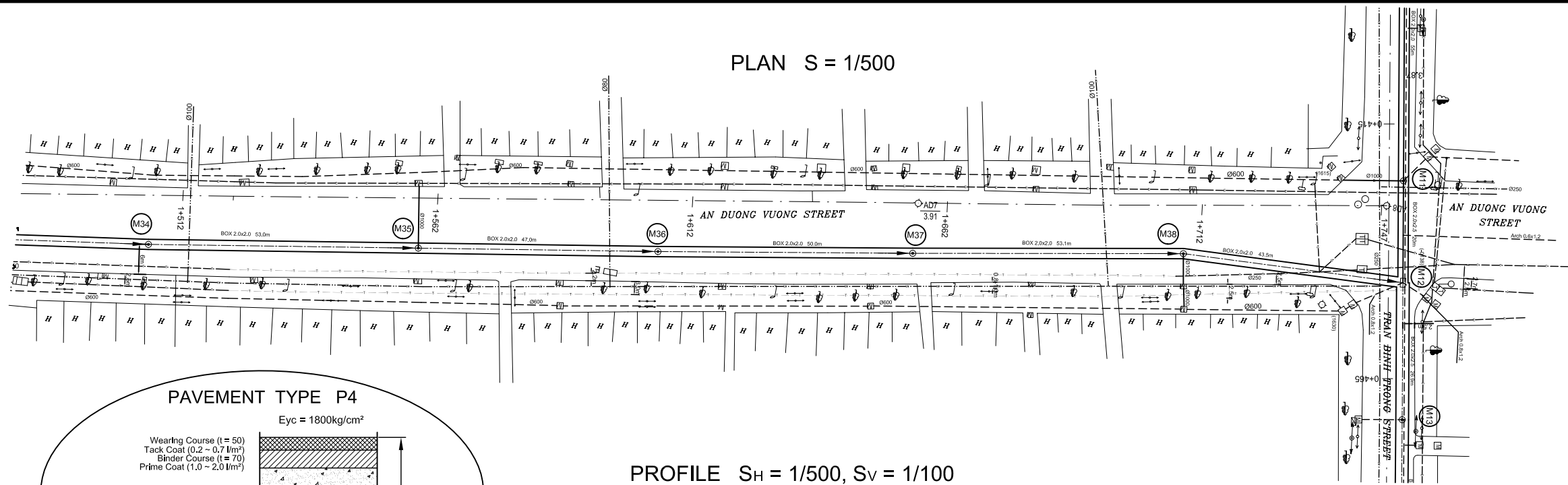
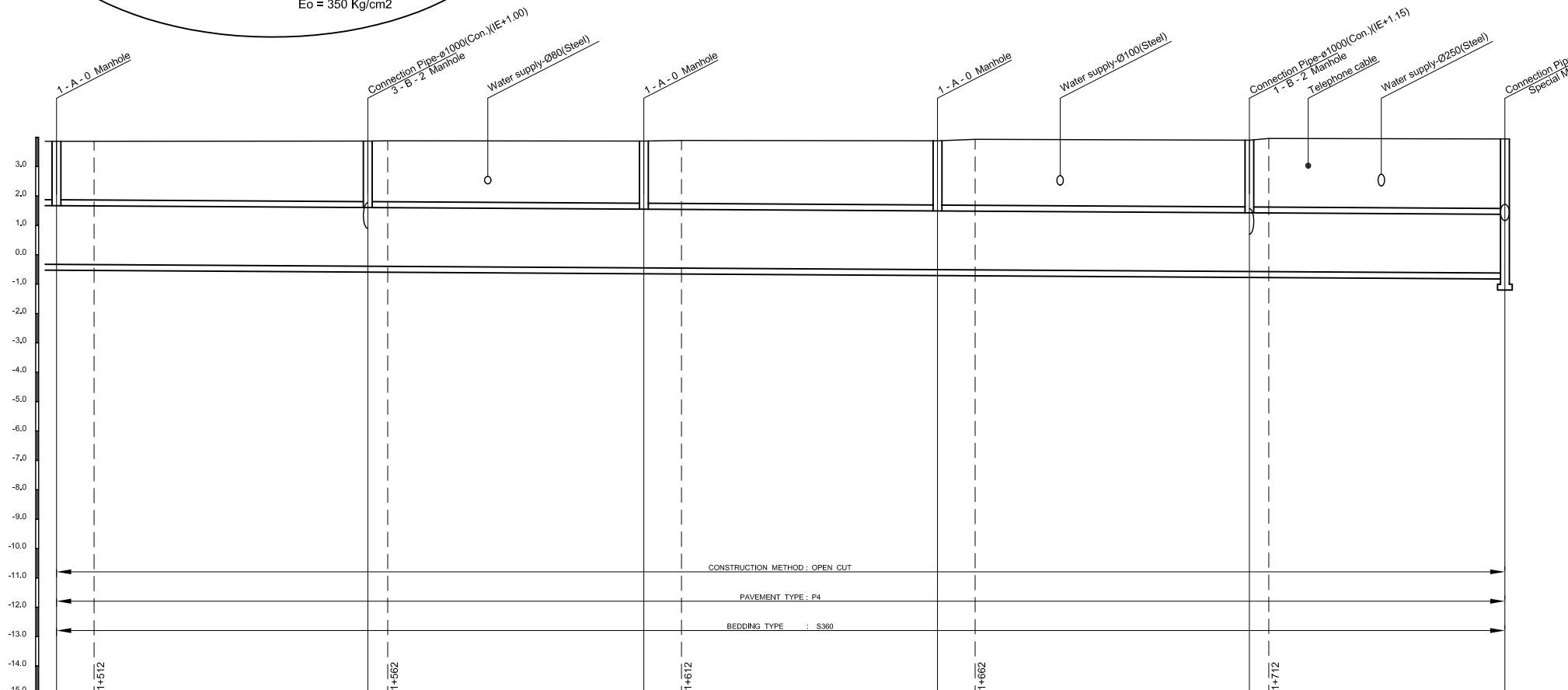


PLAN S = 1/500

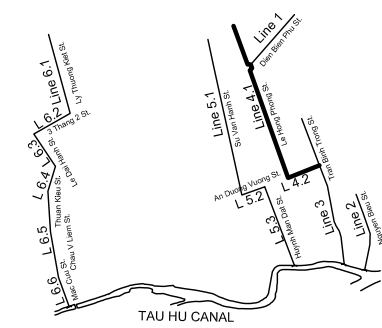


PROFILE SH = 1/500, Sv = 1/100



| Manhole Number | M34 | M35 | M36 | M37 | M38 | M12TBT |
|-------------------------------|-----------------|--------|-----------------|--------|-----------------|--------|
| Diameter (mm) | Box 2000 x 2000 | | Box 2000 x 2000 | | Box 2000 x 2000 | |
| Gradient (%) | 1.2 | | 1.2 | | 1.2 | |
| Length (m) | 53.0 | | 47.0 | | 43.5 | |
| Existing Ground Elevation (m) | 3.86 | 3.87 | 3.87 | 3.88 | 3.90 | 3.94 |
| Earth Covering (m) | 1.99 | 2.06 | 2.12 | 2.19 | 2.27 | 2.36 |
| Invert Elevation (m) | -0.33 | -0.39 | -0.45 | -0.51 | -0.57 | -0.62 |
| Total Accumulation Length (m) | 1476.2 | 1529.2 | 1576.2 | 1626.2 | 1679.3 | 1722.8 |

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----------|------|--------------|----|-------|
| REVISIONS | | | | |

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

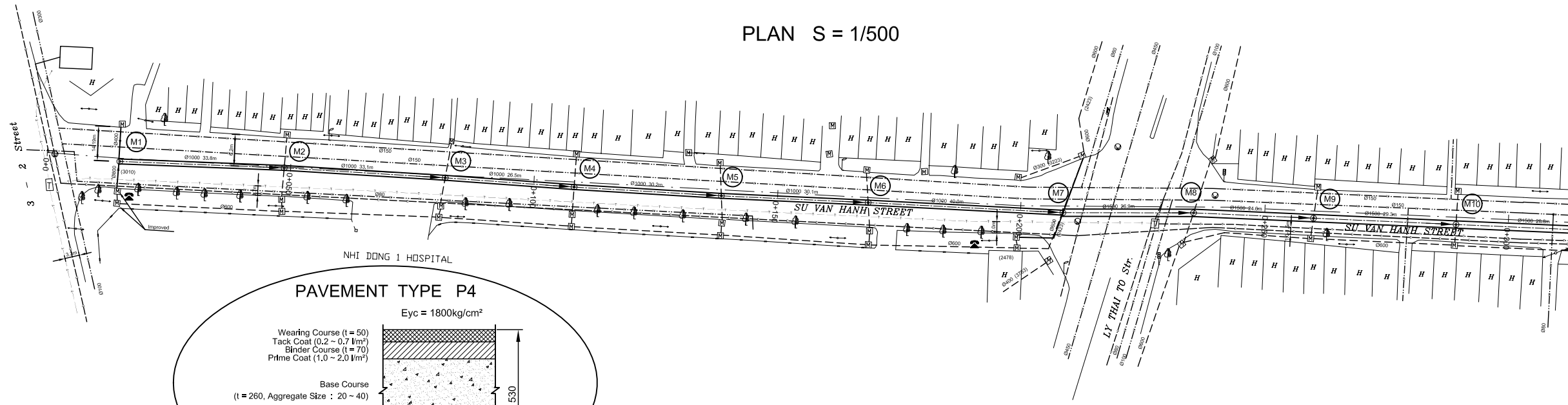
THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE D
EXISTING COMBINED SEWER IMPROVEMENT

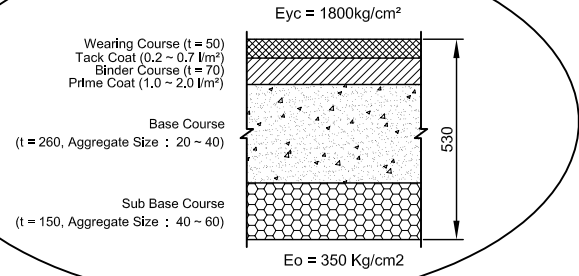
PLAN AND PROFILE
ECSI - LINE 4.1 - 4.2 (6)

| | |
|---|--------------------------|
| SCALE : As Shown | |
| JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) | |
| PACIFIC CONSULTANTS INTERNATIONAL | |
| DESIGNED KATSUKI TAKAOKI | CHECKED KONDO MASAMI |
| DATE : JUNE 2001 | DWG. No. PD - ECSI - 217 |

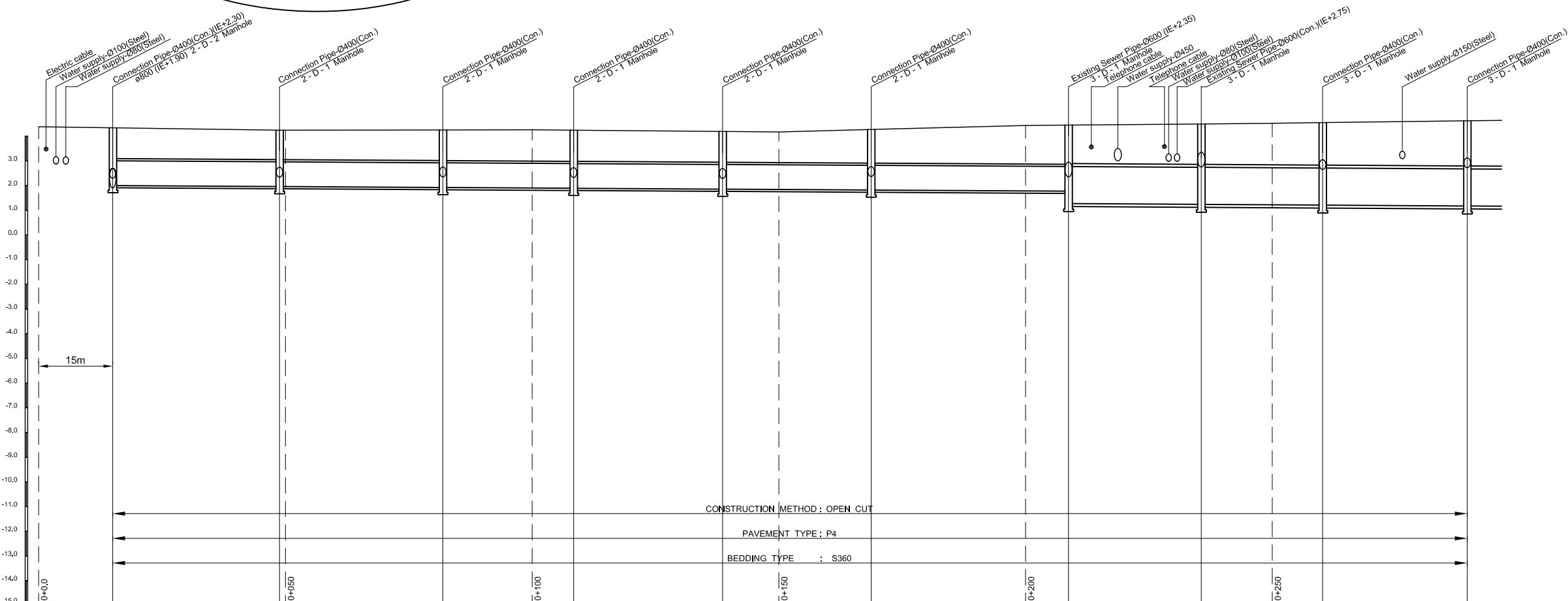
PLAN S = 1/500



PAVEMENT TYPE P4

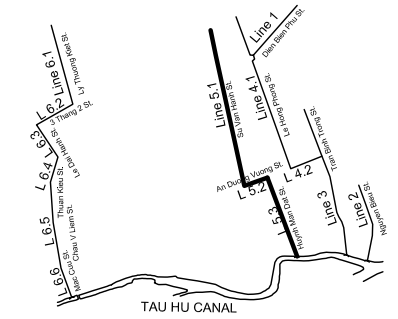


PROFILE S_H = 1/500, S_V = 1/100

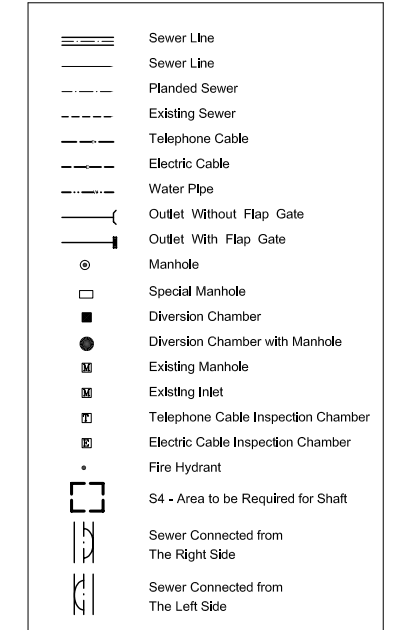


| Manhole Number | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 | M10 | | | | | |
|-------------------------------|------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|
| Diameter (mm) | | Ø1000 | Ø1000 | Ø1000 | Ø1000 | Ø1000 | Ø1000 | Ø1500 | Ø1500 | Ø1500 | | | | | |
| Gradient (%) | | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | | | | | |
| Length (m) | | 33.8 | 33.1 | 26.5 | 30.2 | 30.1 | 40 | 26.9 | 24.6 | 29.3 | | | | | |
| Existing Ground Elevation (m) | 4.38 | 4.34 | 4.24 4.24 | 4.25 | 4.26 | 4.24 | 4.19 | 4.17 | 4.27 | 4.43 | 4.45 | 4.49 | 4.52 | 4.55 | 4.62 |
| Earth Covering (m) | | 1.25 | 1.19 | 1.24 | 1.26 | 1.26 | 1.25 | 1.37 | 1.59 | 1.64 | 1.72 | 1.64 | 1.72 | 1.83 | |
| Invert Elevation (m) | | 2.00 | 1.96 1.96 | 1.92 | 1.90 | 1.89 | 1.85 | 1.84 | 1.81 | 1.78 | 1.77 1.77 | 1.23 | 1.22 | 1.21 | 1.17 |
| Total Accumulation Length (m) | 0.0 | 33.8 | 35.0 | 66.9 | 85.0 | 93.4 | 123.6 | 135.0 | 153.7 | 185.0 | 193.7 | 220.6 | 235.0 | 245.2 | 274.5 |

KEYMAP



LEGEND



| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----|------|--------------|----|-------|
|-----|------|--------------|----|-------|

REVISIONS

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE
ECSI - LINE 5.1 (1)

SCALE : As Shown

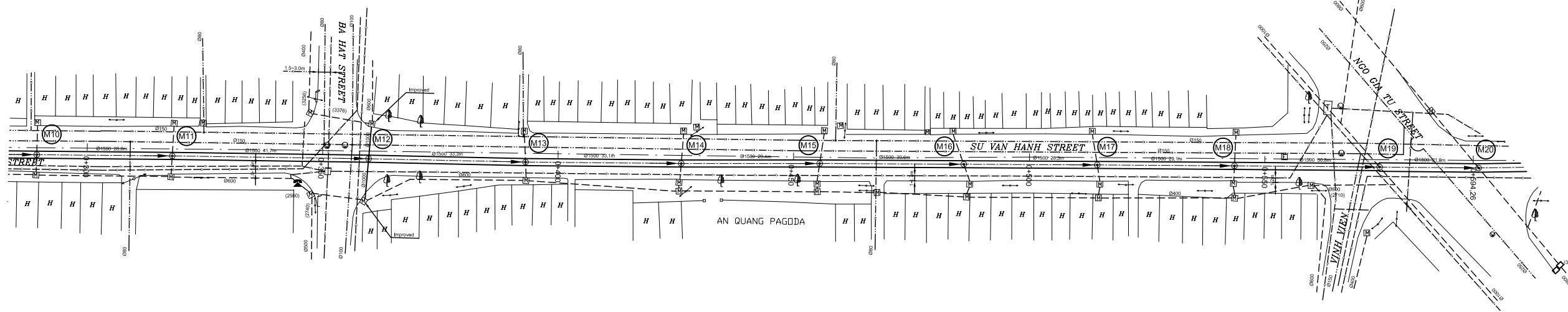
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

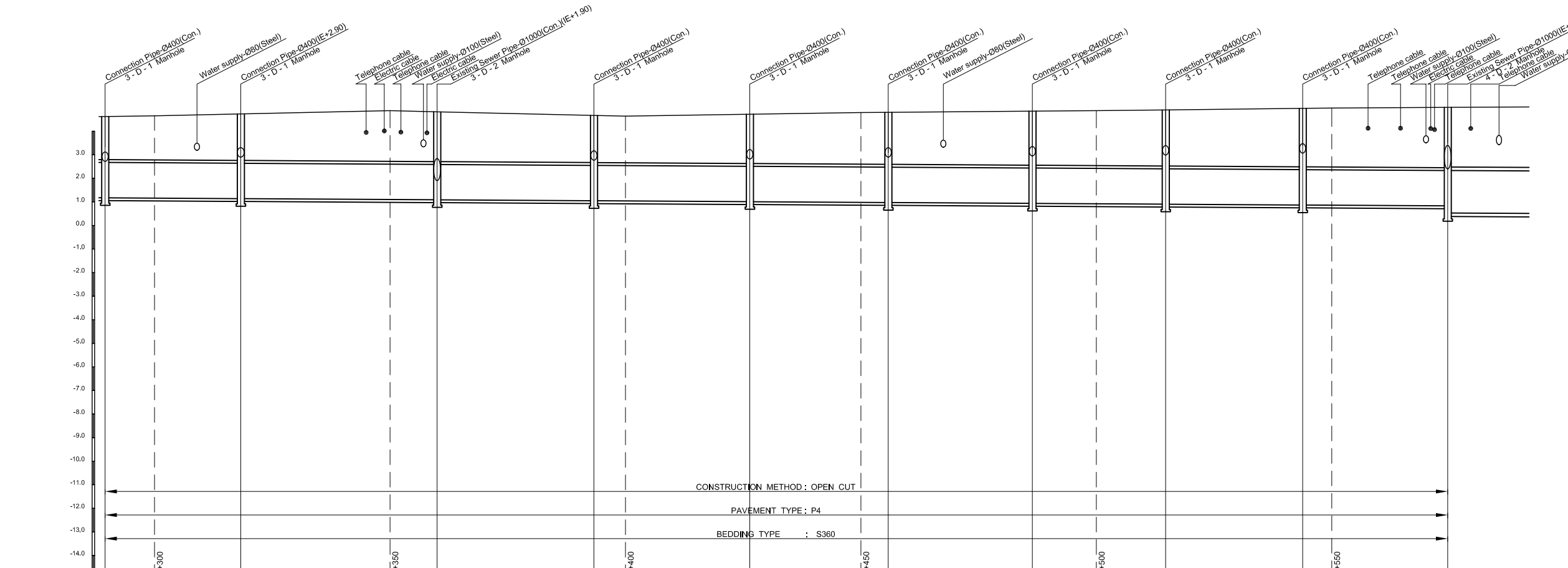
DESIGNED KATSUKI TAKAOKI
CHECKED KONDO MASAMI

DATE : JUNE 2001 DWG. No. PD - ECSI - 218

PLAN S = 1/500

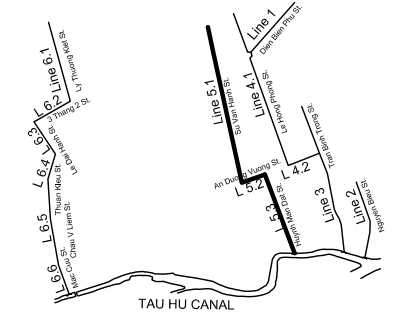


PROFILE S_H = 1/500, S_V = 1/100



| Manhole Number | M10 | M11 | M12 | M13 | M14 | M15 | M16 | M17 | M18 | M19 | | | | | | |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Diameter (mm) | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1500 | Ø1800 | | | | | | |
| Gradient (%) | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.00 | | | | | | |
| Length (m) | 28,8 | 41,7 | 33,3 | 33,1 | 29,4 | 30,6 | 28,3 | 29,1 | 30,8 | 21 | | | | | | |
| Existing Ground Elevation (m) | 4.62 | 4.65 | 4.73 | 4.67 | 4.64 | 4.72 | 4.79 | 4.80 | 4.85 | 4.87 | 4.90 | 4.97 | 4.98 | 5.01 | | |
| Earth Covering (m) | 1.83 | 1.87 | 2.12 | 2.00 | 2.09 | 2.21 | 2.30 | 2.38 | 2.49 | 2.56 | | | | | | |
| Invert Elevation (m) | 1.17 | 1.16 | 1.14 | 1.07 | 1.08 | 1.01 | 0.98 | 0.97 | 0.93 | 0.91 | 0.90 | 0.86 | 0.86 | 0.83 | 0.53 | |
| Total Accumulation Length (m) | 274.5 | 285.0 | 303.3 | 335.0 | 345.0 | 378.3 | 385.0 | 411.4 | 435.0 | 440.6 | 471.4 | 485.0 | 499.7 | 528.6 | 535.0 | 559.6 |

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
- Manhole
- Special Manhole
- Diversion Chamber
- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|-----------|------|--------------|----|-------|
| REVISIONS | | | | |

PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT PROJECT
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE D
EXISTING COMBINED SEWER IMPROVEMENT

PLAN AND PROFILE
ECSI - LINE 5.1 (2)

SCALE : As Shown

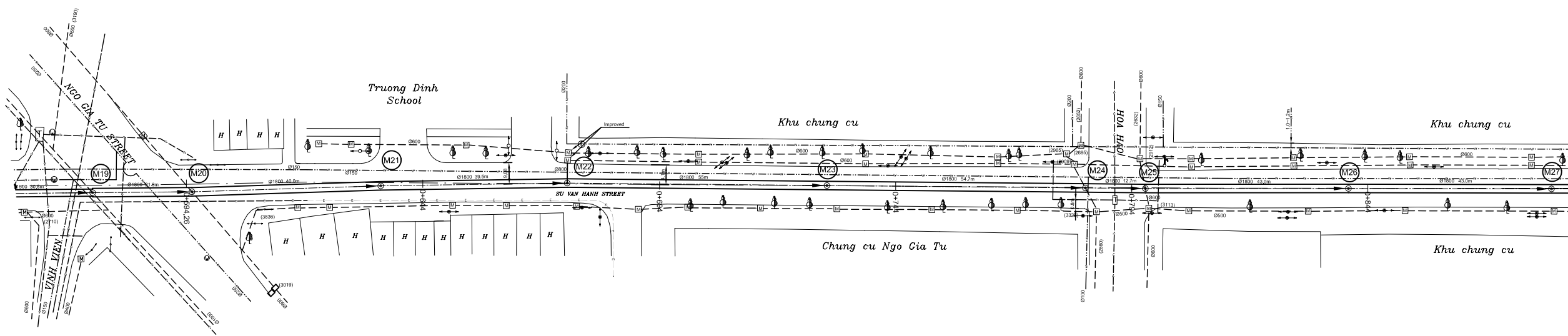
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

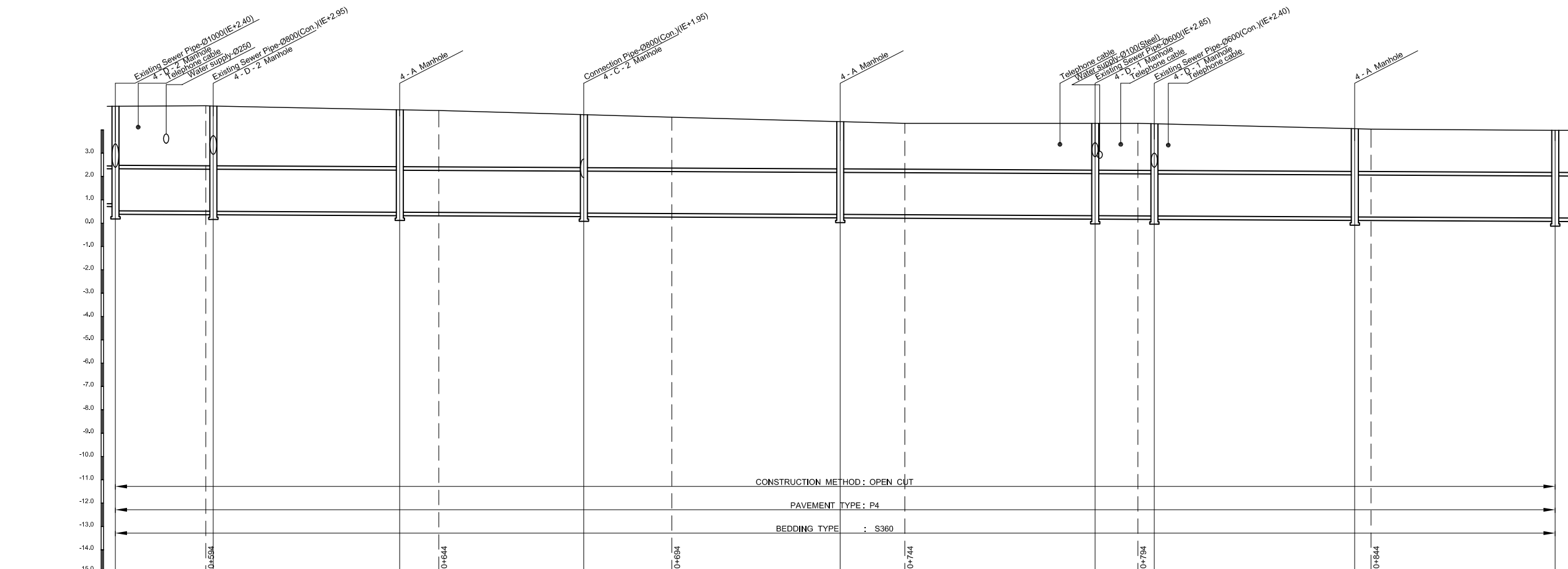
| | |
|-----------------------------|-------------------------|
| DESIGNED KATSUKI TAKAAKI | CHECKED KONDO MASAMI |
|-----------------------------|-------------------------|

DATE : JUNE 2001 DWG. No. PD - ECSI - 219

PLAN S = 1/500

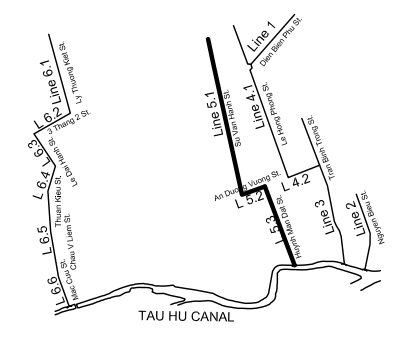


PROFILE S_H = 1/500, S_V = 1/100



| Manhole Number | M19 | M20 | M21 | M22 | M23 | M24 | M25 | M26 | M27 |
|-------------------------------|--------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| Diameter (mm) | Ø1800 | Ø1800 | Ø1800 | Ø1800 | Ø1800 | Ø1800 | Ø1800 | Ø1800 | Ø1800 |
| Gradient (%) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Length (m) | 21 | 40 | 39.5 | 55 | 54.7 | 12.7 | 43 | 43 | |
| Existing Ground Elevation (m) | 5.01 | 5.03 5.02 | 4.86 | 4.83 | 4.65 | 4.54 | 4.35 | 4.28 | 3.98 |
| Earth Covering (m) | 2.56 | 2.56 | 2.44 | 2.27 | 2.03 | 2.01 | 2.01 | 1.84 | 1.81 |
| Invert Elevation (m) | 0.83 0.53 | 0.51 0.51 | 0.47 | 0.46 | 0.43 | 0.41 | 0.37 | 0.35 | 0.22 |
| Total Accumulation Length (m) | 559.6 | 579.0 580.6 | 620.6 | 629.0 | 660.1 | 679.0 | 715.1 | 729.0 | 868.5 |

KEYMAP



LEGEND

- Sewer Line
- Sewer Line
- Planned Sewer
- Existing Sewer
- Telephone Cable
- Electric Cable
- Water Pipe
- Outlet Without Flap Gate
- Outlet With Flap Gate
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- Special Manhole
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- Diversion Chamber with Manhole
- Existing Manhole
- Existing Inlet
- Telephone Cable Inspection Chamber
- Electric Cable Inspection Chamber
- Fire Hydrant
- S4 - Area to be Required for Shaft
- Sewer Connected from The Right Side
- Sewer Connected from The Left Side

| NO. | DATE | DESCRIPTIONS | BY | APRO. |
|---|------|-----------------------------------|----|-------|
| REVISIONS | | | | |
| PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT | | | | |
| THE DETAILED DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM | | | | |
| PACKAGE D EXISTING COMBINED SEWER IMPROVEMENT | | | | |
| PLAN AND PROFILE ECSI - LINE 5.1 (3) | | | | |
| SCALE : As Shown | | | | |
| JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) | | PACIFIC CONSULTANTS INTERNATIONAL | | |
| DESIGNED KATSUKI TAKAOKI | | CHECKED KONDO MASAMI | | |
| DATE : JUNE 2001 | | DWG. No. PD - ECSI - 220 | | |