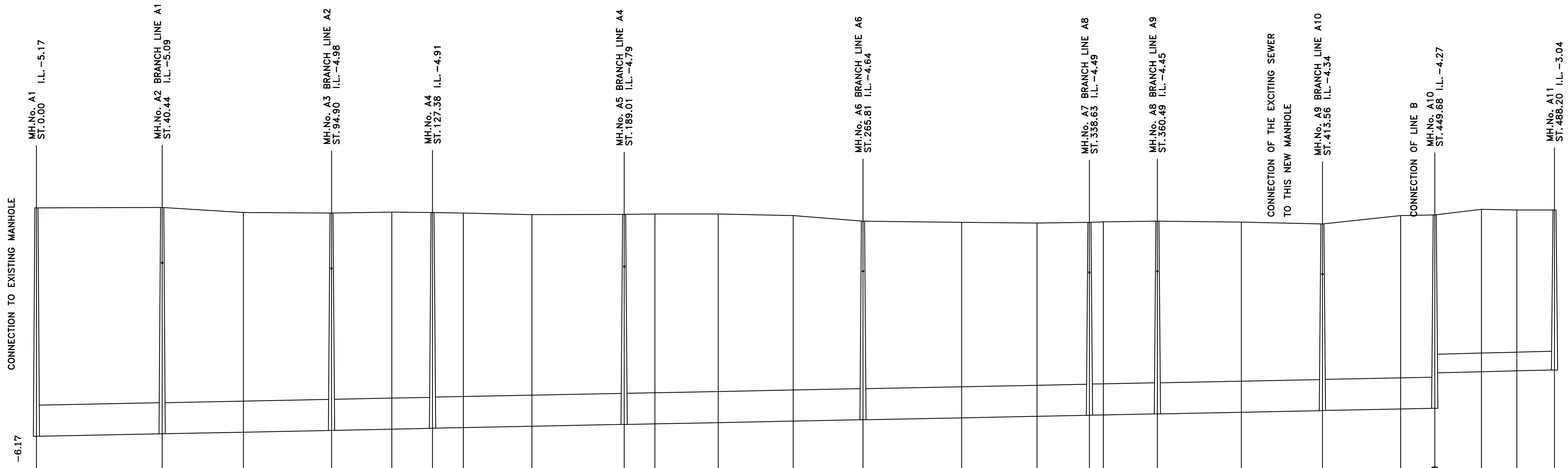
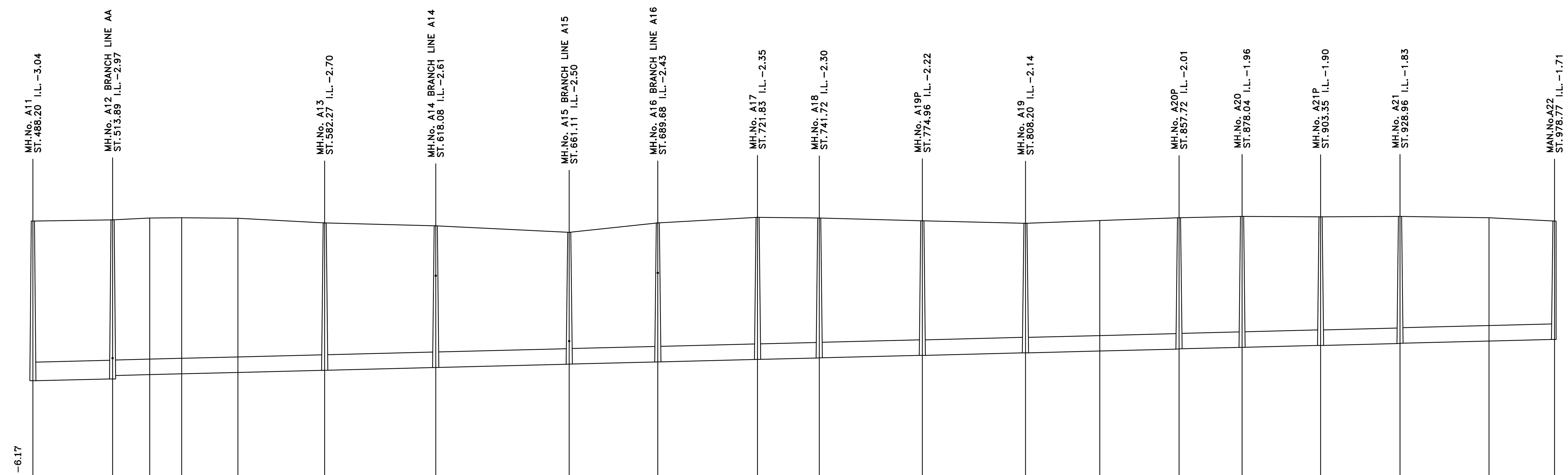
## LINE A




| STATION NUMBER | NATURAL GROUND ELEVATION | SEWER INVERT LEVEL | SEWER GRADIENT | SEWER SIZE (mm) | PARTIAL DISTANCE | CUMULATIVE DISTANCES |
|---|---|---|---|---|---|---|
| H115 | 2.23 | -5.12 | 0.0020 | 1000 | 40.44 | 0.00 |
| BA11 | 2.24 | -5.04 | 0.0020 | 1000 | 26.14 | 40.44 |
| BA10 | 2.08 | | | | 28.32 | 66.58 |
| BA9 | 2.06 | -4.93 | 0.0020 | 1000 | 19.39 | 94.90 |
| BA8 | 2.09 | | | | 13.09 | 114.29 |
| BA7 | 2.08 | -4.86 | 0.0020 | 1000 | 9.90 | 127.38 |
| BA6 | 2.06 | | | | 22.08 | 137.28 |
| BA5 | 2.01 | | | | 29.65 | 159.36 |
| BA4 | 2.02 | -4.74 | 0.0020 | 1000 | 9.88 | 189.01 |
| BA3 | 2.03 | | | | 20.37 | 198.89 |
| BA2 | 2.03 | | | | 24.11 | 219.26 |
| BA1 | 1.98 | | | | 22.44 | 243.37 |
| BFV8 | 1.80 | -4.59 | 0.0020 | 1000 | 31.71 | 265.81 |
| BFV7 | 1.76 | | | | 24.27 | 297.52 |
| BFV6 | 1.74 | | | | 16.84 | 321.79 |
| BFV5B | 1.76 | -4.44 | 0.0020 | 1000 | 4.46 | 338.63 |
| BFV5 | 1.78 | | | | 17.40 | 343.09 |
| BFV4 | 1.80 | -4.40 | 0.0020 | 1000 | 27.01 | 360.49 |
| BFV3 | 1.77 | | | | 26.06 | 387.50 |
| BFV2 | 1.71 | -4.29 | 0.0020 | 1000 | 25.16 | 413.56 |
| BFV1 | 1.98 | | | | 10.96 | 438.72 |
| VH100B | 2.00 | -3.08 | 0.0025 | 600 | 15.02 | 449.68 |
| VH100 | 2.18 | | | | 11.38 | 464.70 |
| VH99 | 2.16 | | | | 12.12 | 476.08 |
| VH98 | 2.16 | -2.99 | | | | 488.20 |

## LINE A




| STATION NUMBER | NATURAL GROUND ELEVATION | SEWER INVERT LEVEL | SEWER GRADIENT | SEWER SIZE (mm) | PARTIAL DISTANCE | CUMULATIVE DISTANCES |
|---|---|---|---|---|---|---|
| VH98 | 2.16 | -2.99 | 0.0025 | 600 | 25.69 | 488.20 |
| VC55B | 2.20 | -2.82 | 0.0025 | 500 | 11.97 | 513.89 |
| BVH97 | 2.26 | | | | 10.29 | 525.86 |
| BVH96 | 2.27 | | | | 18.14 | 536.15 |
| BVH95 | 2.25 | | | | 27.98 | 554.29 |
| BVH94 | 2.10 | -2.65 | 0.0025 | 500 | 35.81 | 582.27 |
| FK3B | 2.01 | -2.56 | 0.0025 | 500 | 43.03 | 618.08 |
| FE6B | 1.80 | -2.45 | 0.0025 | 500 | 28.57 | 661.11 |
| FE4B | 2.10 | -2.38 | 0.0025 | 500 | 32.15 | 689.68 |
| FE3B | 2.28 | -2.30 | 0.0025 | 500 | 19.89 | 721.83 |
| HD3 | 2.26 | -2.25 | 0.0025 | 500 | 33.24 | 741.72 |
| HB86P | 2.17 | -2.17 | 0.0025 | 500 | 33.24 | 774.96 |
| HB86 | 2.09 | -2.09 | 0.0025 | 500 | 23.95 | 808.20 |
| HB85 | 2.18 | | | | 25.57 | 832.15 |
| HB84 | 2.27 | -1.96 | 0.0025 | 500 | 20.32 | 857.72 |
| HB83 | 2.31 | -1.91 | 0.0025 | 500 | 25.31 | 878.04 |
| HB82 | 2.30 | -1.85 | 0.0025 | 500 | 25.61 | 903.35 |
| HB81 | 2.31 | -1.78 | 0.0025 | 500 | 28.69 | 928.96 |
| HB80 | 2.27 | | | | 21.12 | 957.65 |
| HB79 | 2.16 | -1.66 | | | | 978.77 |

1- THE CONDITION OF THE EXISTING WASTEWATER LINES IS TO BE VERIFIED ON SITE BY THE CONTRACTOR.
2- WHERE A NEW LINE IS CONNECTED TO AN EXISTING MANHOLE, THE INVERT LEVEL OF THE MANHOLE SHOULD BE VERIFIED ON SITE BY THE CONTRACTOR, AND THE CONTRACTOR WILL TAKE ALL THE MEASURES TO DEAL WITH FLOW.
3- WHERE THE PIPE COVER IS LESS THEN 90cm A CONCRETE SURROUND WILL
4- WHERE THERE IS AN INTERSECTION WITH A WATER SUPPLY LINE A CONCRETE SURROUND WILL BE EXECUTED.
5- THE NEW EXECUTED LINE WILL REPLACE THE EXISTING ONE WHICH WILL BE DISCONNECTED BY THE CONTRACTOR WHEN THE NEW SYSTEM WILL BE PUT IN SERVICE.
6- FOR THE HOUSE CONNECTIONS REFER TO THE PARTICULAR SPECIFICATIONS.
7- FOR MANHOLES DETAILS REFER TO THE PARTICULAR SPECIFICATIONS AND STANDARD DRAWINGS.
8- FOR TRENCH DETAILS REFER TO THE PARTICULAR SPECIFICATIONS AND STANDARD DRAWINGS.

LEGEND

- MANHOLE
- SEWER PIPE
- DROP MANHOLE
- MANHOLE WITH BRANCH LINE

# REPUBLIC OF LEBANON

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION


BUREAU TECHNIQUE POUR LE DEVELOPPEMENT

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FAX:(04) 712159


EL MINA REMAINING COASTAL SEWER COLLECTORS

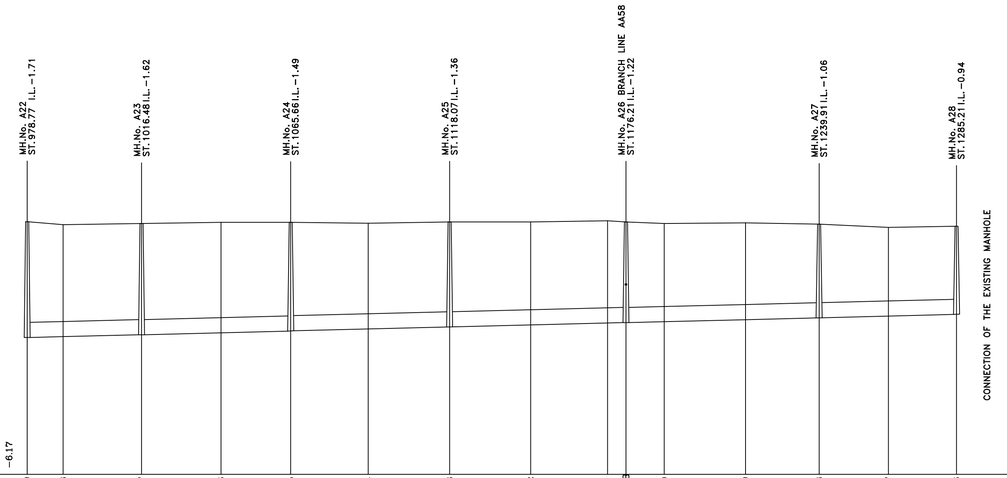
LOT 1 - COMPULSORY

| EL MINA REMAINING COASTAL SEWER COLLECTORS | LINE A PROFILE |
|---|---|

| | DESIGNED BY | DRAWN BY | CHECKED BY |
|---|---|---|---|
| 451W-A1P01 | B.T.D | B.T.D | B.T.D |

| DATE | SCALE | SHEET No. | DRAWING No. |
|---|---|---|---|
| DECEMBER 2025 | V=1:100<br>H=1:1000 | 1/2 | 451W-A1P01 |

# LINE A




| REFERENCE PLAN | -6.17 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STATION NUMBER | HB79 | HB78 | HB77 | HB76 | HB75 | HB74 | HB73 | HB72 | HB71 | HB70B | HB70 | HB69 | HB68 | HB67 | HB66 |
| NATURAL GROUND ELEVATION | 2.16 | 2.06 | 2.10 | 2.14 | 2.14 | 2.11 | 2.15 | 2.15 | 2.19 | 2.15 | 2.10 | 2.12 | 2.08 | 1.97 | 2.01 |
| SEWER INVERT LEVEL | -1.66 | | -1.57 | | -1.44 | | -1.31 | | -1.17 | | | | -1.01 | | -0.89 |
| SEWER GRADIENT | 0.0025 | | 0.0025 | | 0.0025 | | 0.0025 | | 0.0025 | | | | 0.0025 | | |
| SEWER SIZE (mm) | 500 | | 500 | | 500 | | 500 | | 500 | | | | 500 | | |
| PARTIAL DISTANCE | 11.86 | 25.85 | 26.22 | 22.96 | 25.55 | 26.86 | 26.71 | 25.36 | 6.07 | 12.62 | 26.81 | 24.27 | 22.86 | 22.44 | |
| CUMULATIVE DISTANCES | 978.77 | 990.63 | 1016.48 | 1042.70 | 1065.66 | 1091.21 | 1118.07 | 1144.78 | 1170.14 | 1176.21 | 1188.83 | 1215.64 | 1239.91 | 1262.77 | 1285.21 |

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| EL MINA REMAINING COASTAL SEWER COLLECTORS | LINE A PROFILE |
|---|---|

| | *DESIGNED BY* | *DRAWN BY* | *CHECKED BY* |
|---|---|---|---|
| 451W-A1P02 | B.T.D | B.T.D | B.T.D |

| *DATE* | *SCALE* | *SHEET No.* | *DRAWING No.* |
|---|---|---|---|
| DECEMBER 2025 | V=1:100<br>H=1:1000 | 2/2 | 451W-A1P02 |