



Palestine Polytechnic University  
College of Engineering and  
Technology

## Profile For Pipes

**Created by :**

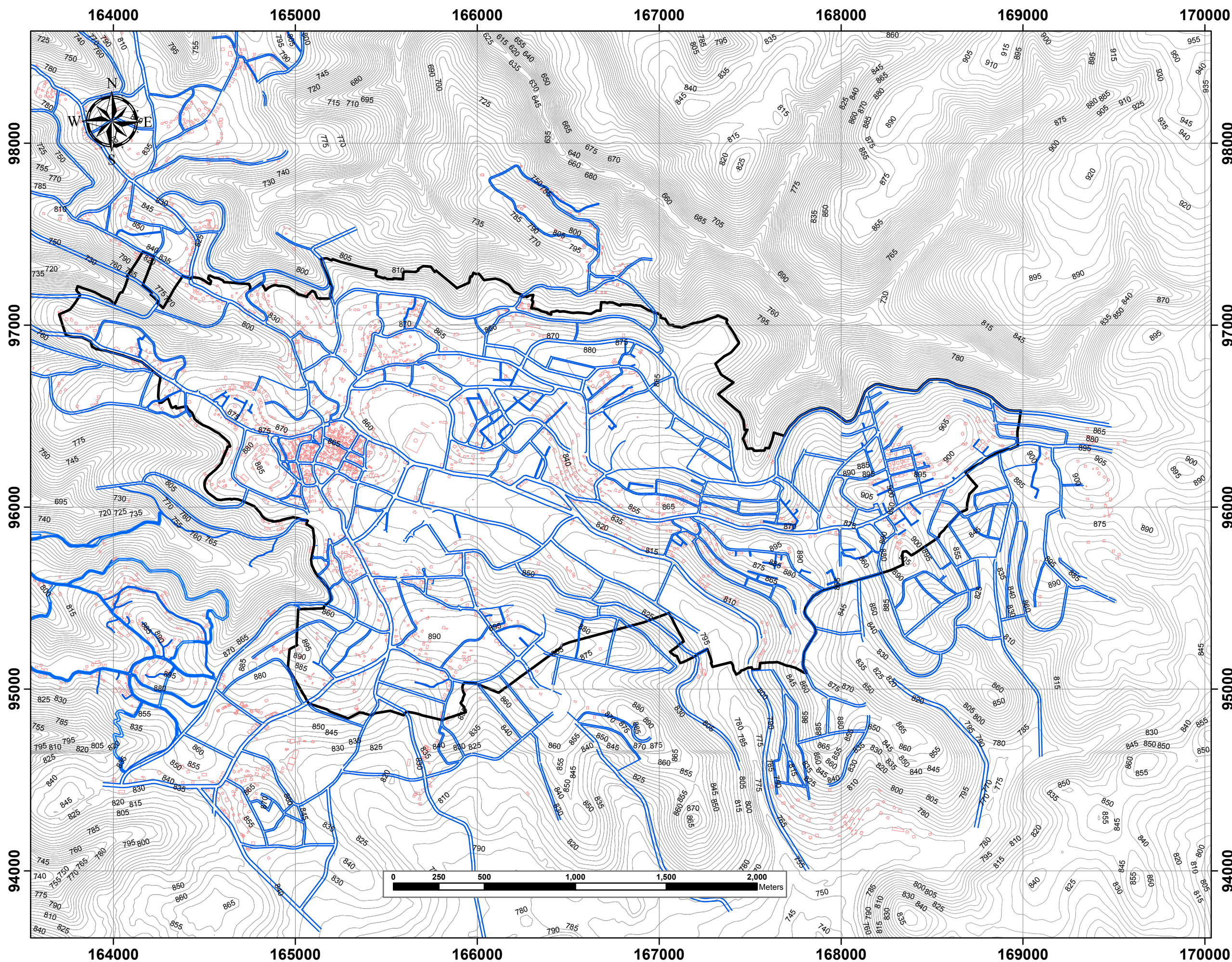
Mohammed Jebreen  
Noor Dodin

**Project Supervisor :**  
Eng . Samah Al-Jabari

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# Topographic Map For Dora City



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## Legend

- Contours Lines
- Buildings
- Boundary of City
- Raods

**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Created by :**

**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

Coordinate System : Palestine\_1923\_Palestine\_Grid  
Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality

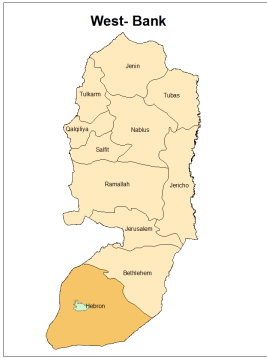
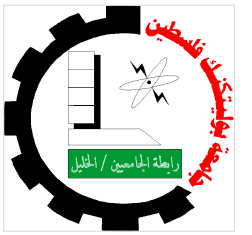


Figure Number ( C1)

# Layout Of Waste Water Collection System For Dora City with Contours Line



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- Contours Lines
- Flow Direction
- Water Divider
- Main Sewer
- Sub Main Sewer
- Direction of catchment area
- Buildings
- Boundary of City

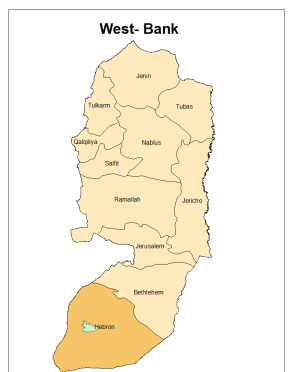
**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

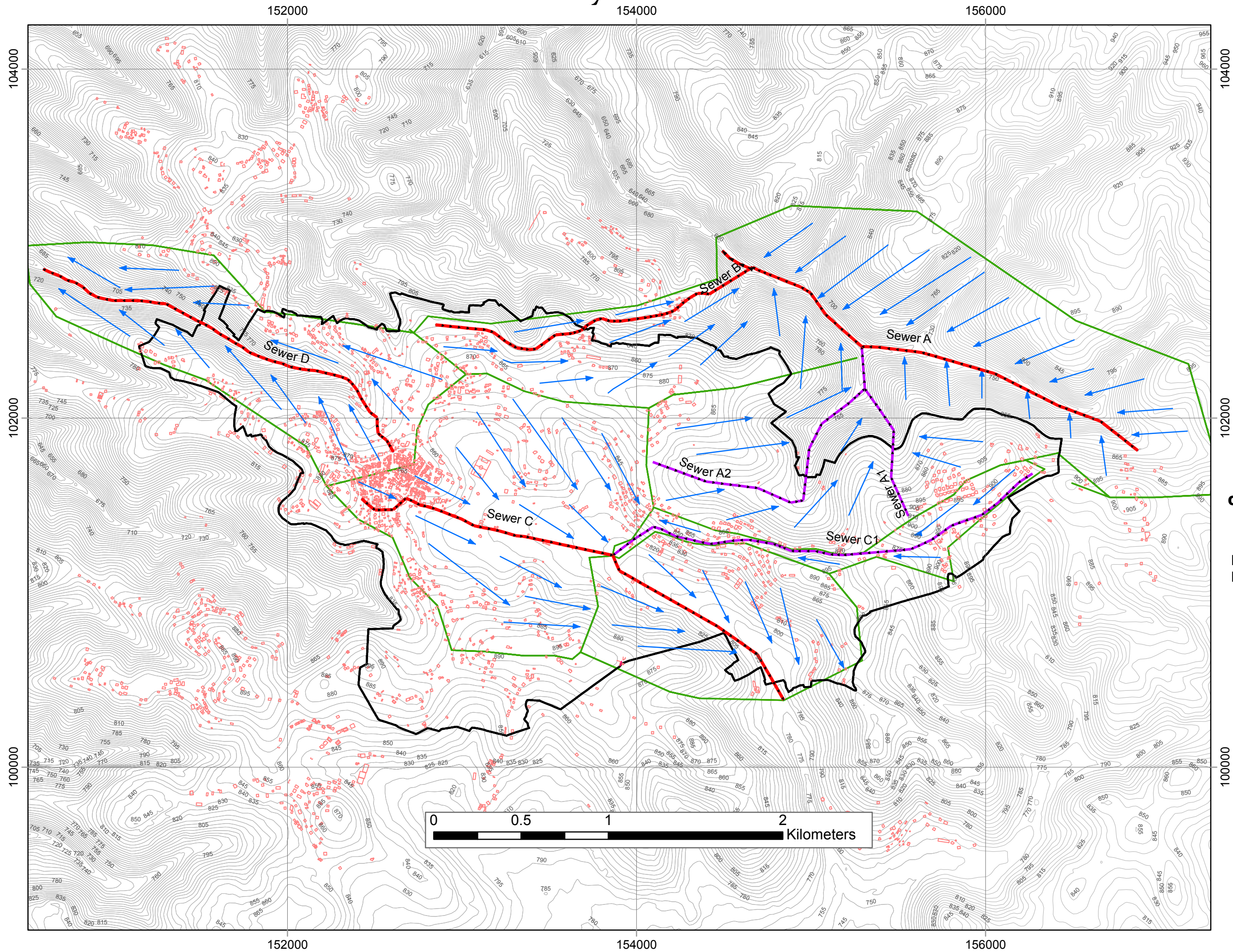
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Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality

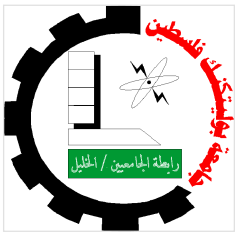


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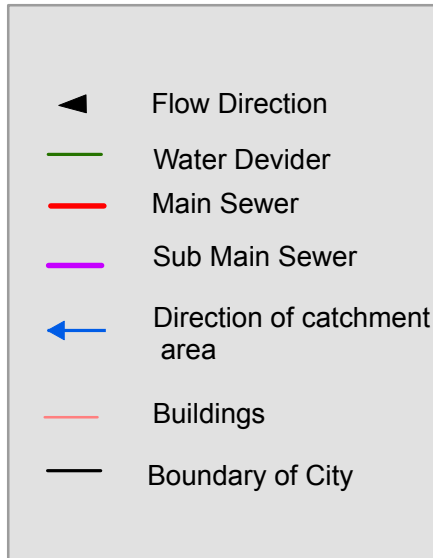
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# Layout Of Waste Water Collection System For Dora City with out Contours Line



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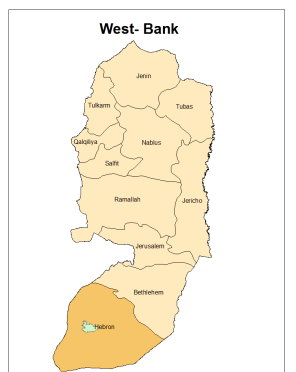
**Project Title :**  
**Design Of Waste Water Collection System For Dora City**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

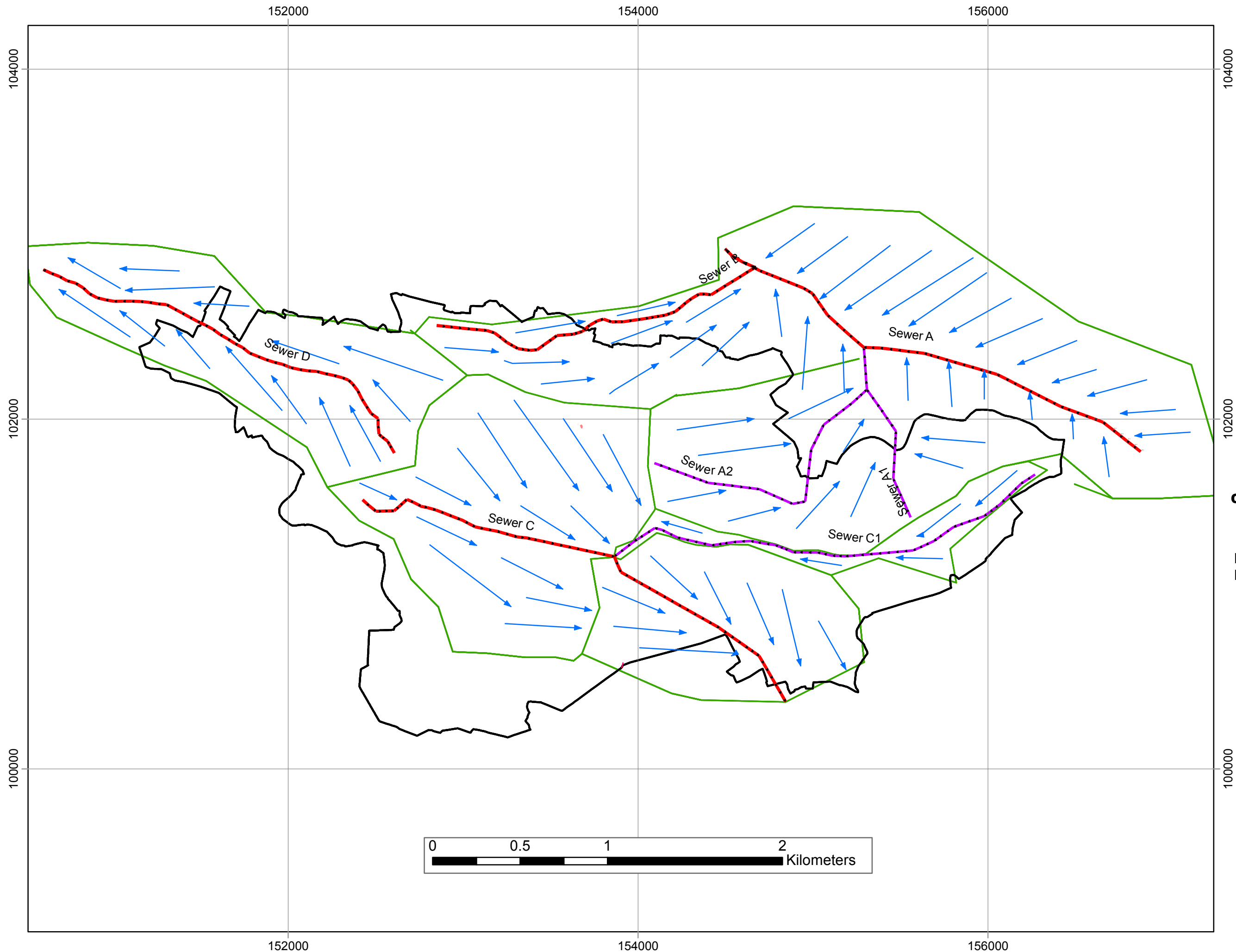
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Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality



**Figure Number ( C3 )**

**Page ( 3 )**



# Waste Water Profile ,Sewer A



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Legend

Grid

Ground\_Elevation

Sewer

Manhole

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Design Of Waste Wate Collection  
System For Dora City

Created by :  
Mohammed Jebreen  
Noor Dodin

Project Supervisor :  
Eng . Samah Al-Jabari

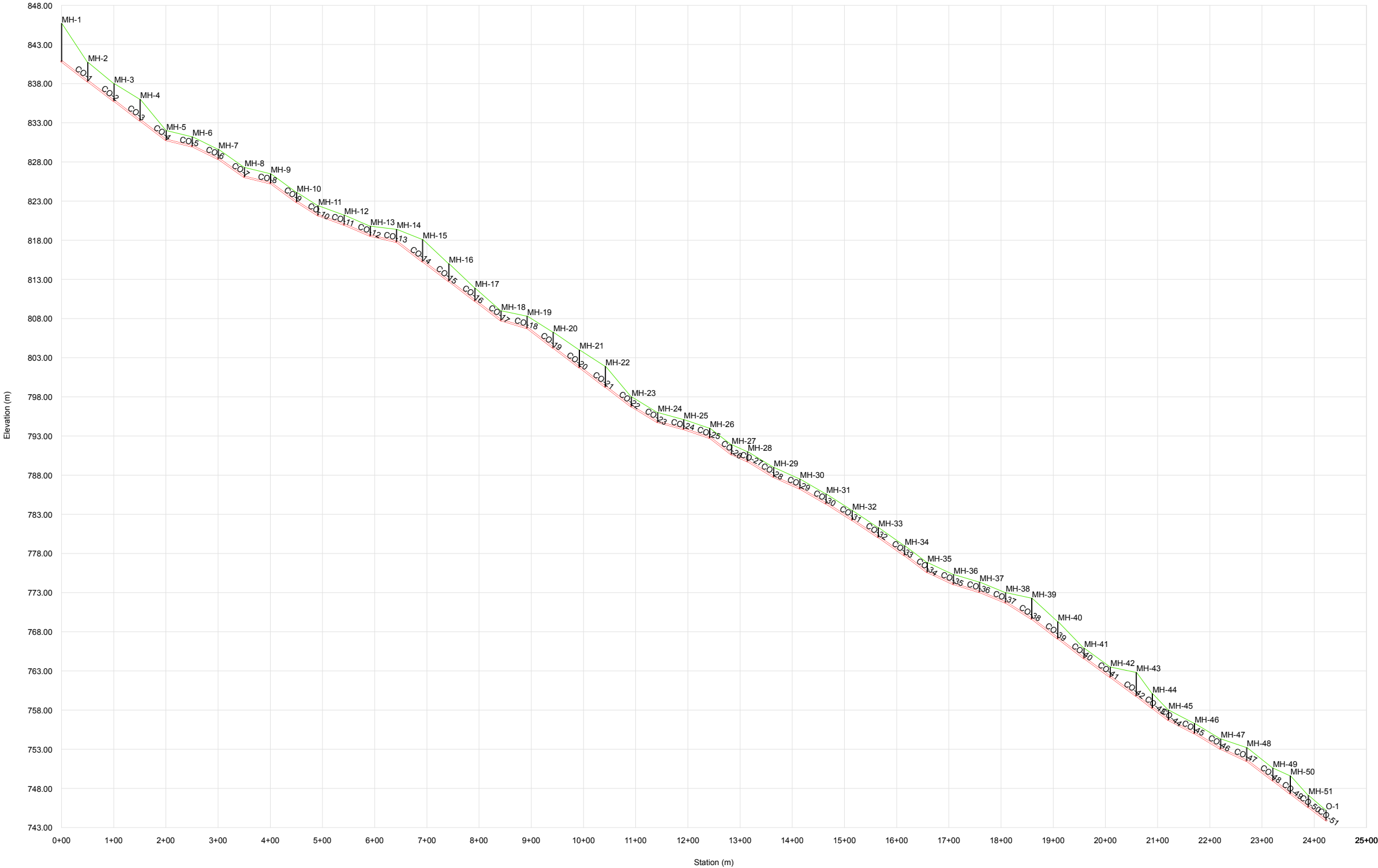
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Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality

Scale : To Fit

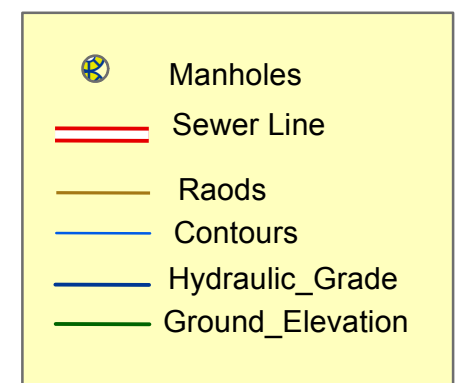
Figure Number ( C4 )

Page ( 4 )





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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 1 To Manholes 5)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

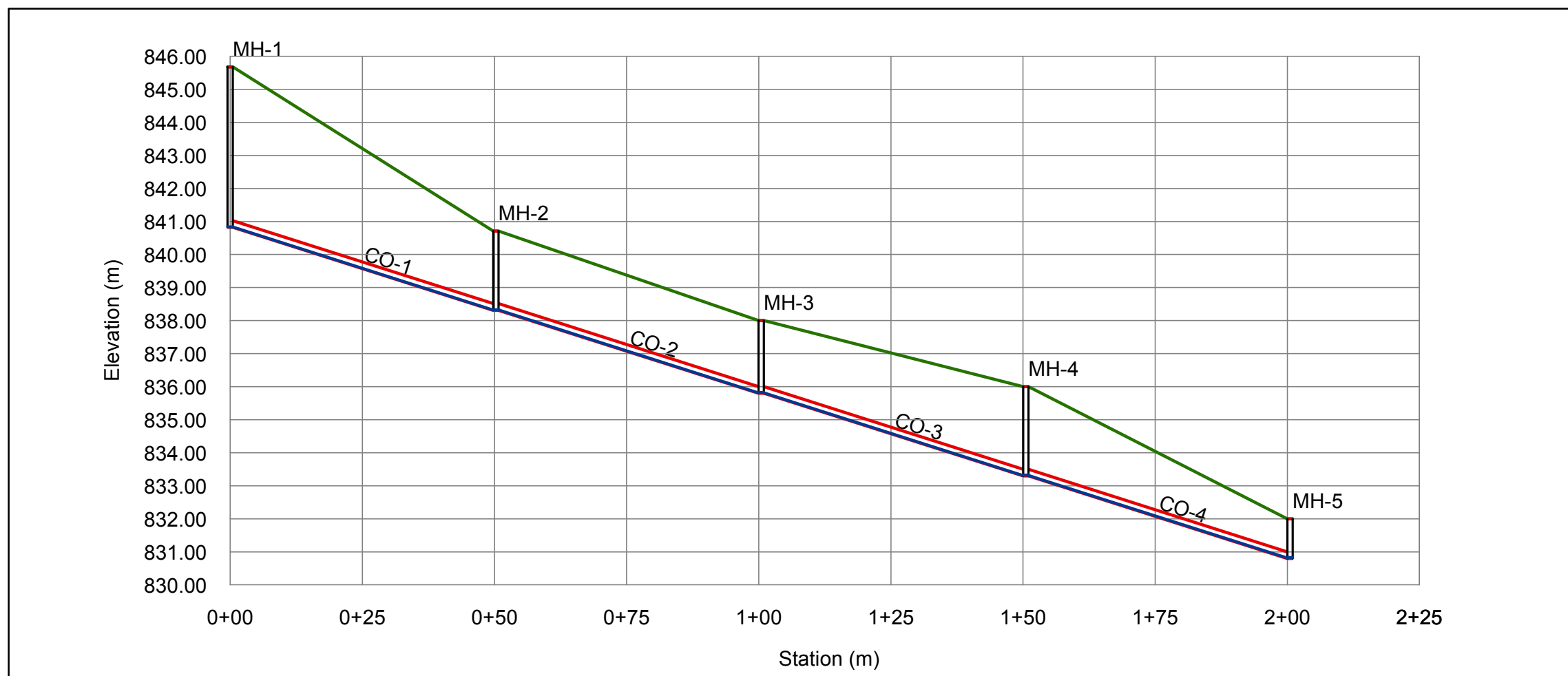
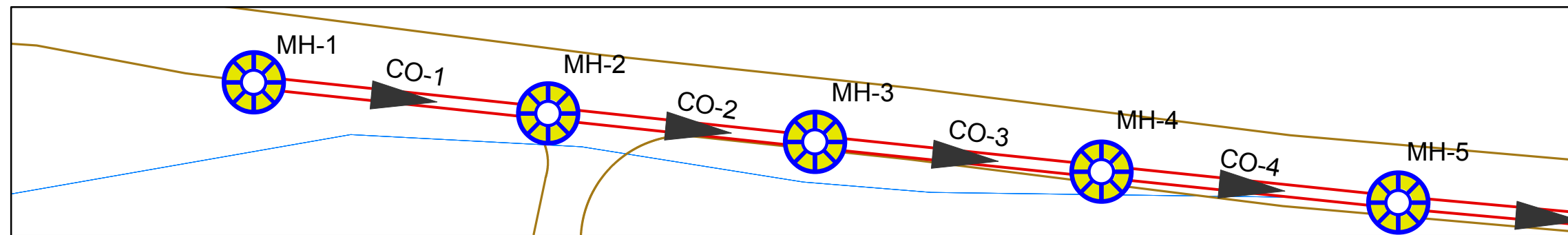
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C4 -1)**

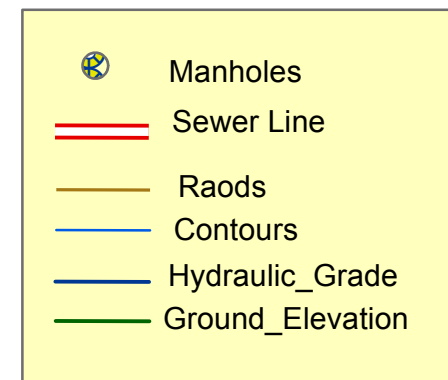
**Page ( 5 )**



| Point Number             | 1      | 2      | 3     | 4     | 5     |
|--------------------------|--------|--------|-------|-------|-------|
| Manhole Number           | MH-1   | MH-2   | MH-3  | MH-4  | MH-5  |
| Station                  | 0+00   | 0+50   | 1+00  | 1+51  | 2+01  |
| Ground Elevation         | 845.68 | 840.71 | 838   | 836   | 832   |
| Invert Elevation         | 840.82 | 838.31 | 835.8 | 833.3 | 830.8 |
| Depth Of Manholes        | 4.86   | 2.4    | 2.2   | 2.7   | 1.2   |
| Distance Of Manholes (m) |        | 50     | 50    | 50    | 50    |
| Pipe Diameter (inch)     |        | 8      | 8     | 8     | 8     |
| Pipe Slope %             |        | 5.02   | 5.02  | 5     | 5     |
| Type Of Surface          | PVC    | PVC    | PVC   | PVC   | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 5 To Manholes 9)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

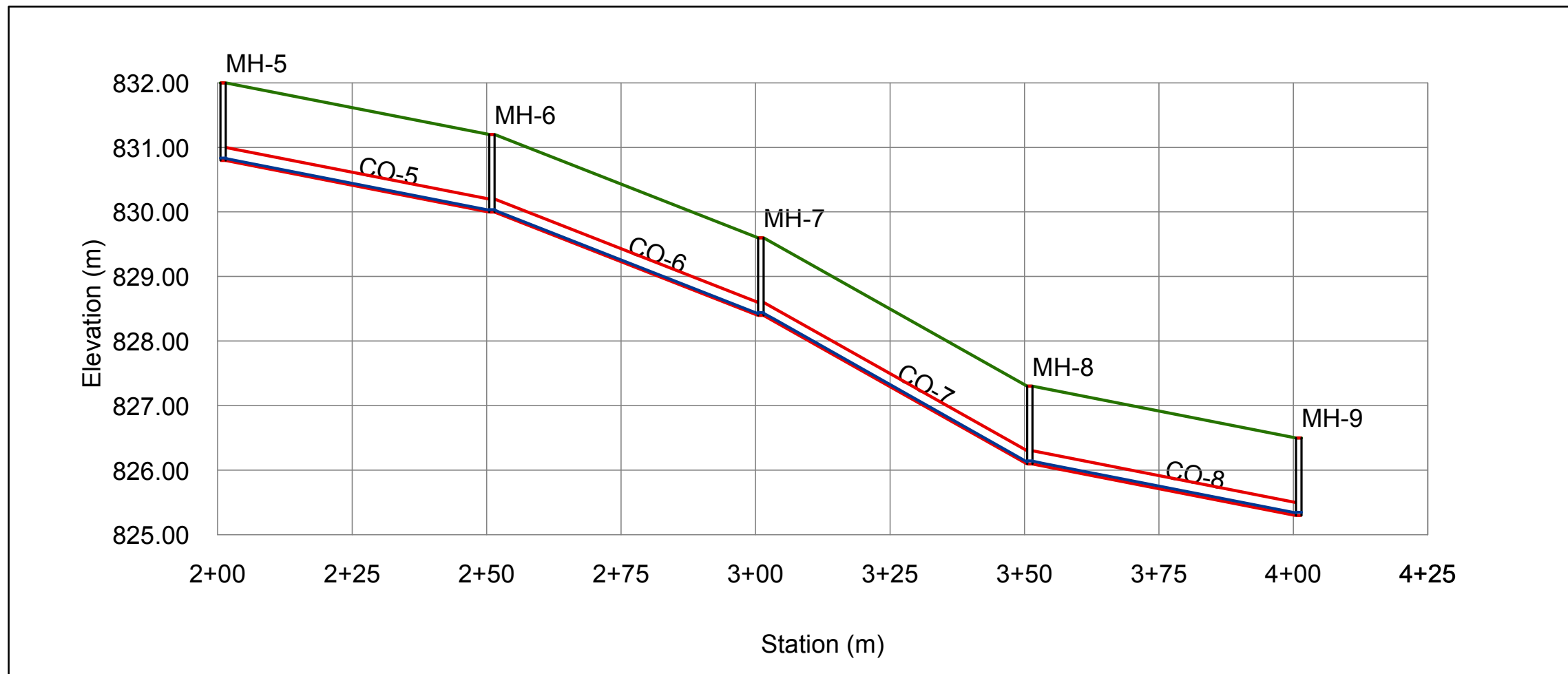
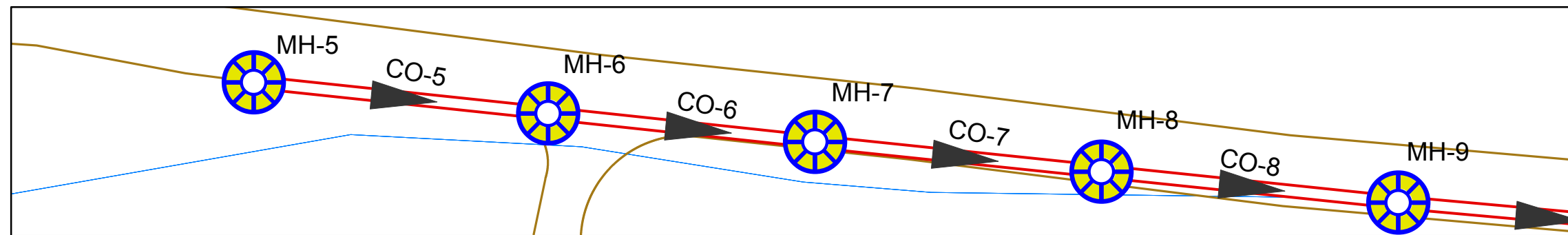
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

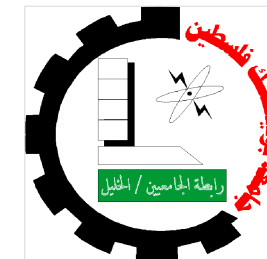
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

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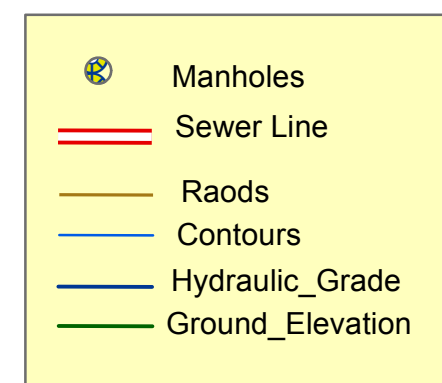
**Page ( 6 )**



| Point Number             | 5     | 6     | 7     | 8     | 9     |
|--------------------------|-------|-------|-------|-------|-------|
| Manhole Number           | MH-5  | MH-6  | MH-7  | MH-8  | MH-9  |
| Station                  | 2+01  | 2+51  | 3+01  | 3+51  | 4+01  |
| Ground Elevation(m)      | 832   | 831.2 | 829.6 | 827.3 | 826.5 |
| Invert Elevation(m)      | 830.8 | 830   | 828.4 | 826.1 | 825.3 |
| Depth Of Manholes(m)     | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| Distance Of Manholes (m) |       | 50    | 50    | 50    | 50    |
| Pipe Diameter (inch)     |       | 8     | 8     | 8     | 8     |
| Pipe Slope %             |       | 1.6   | 3.2   | 4.6   | 1.6   |
| Type Of Surface          | PVC   | PVC   | PVC   | PVC   | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 9 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

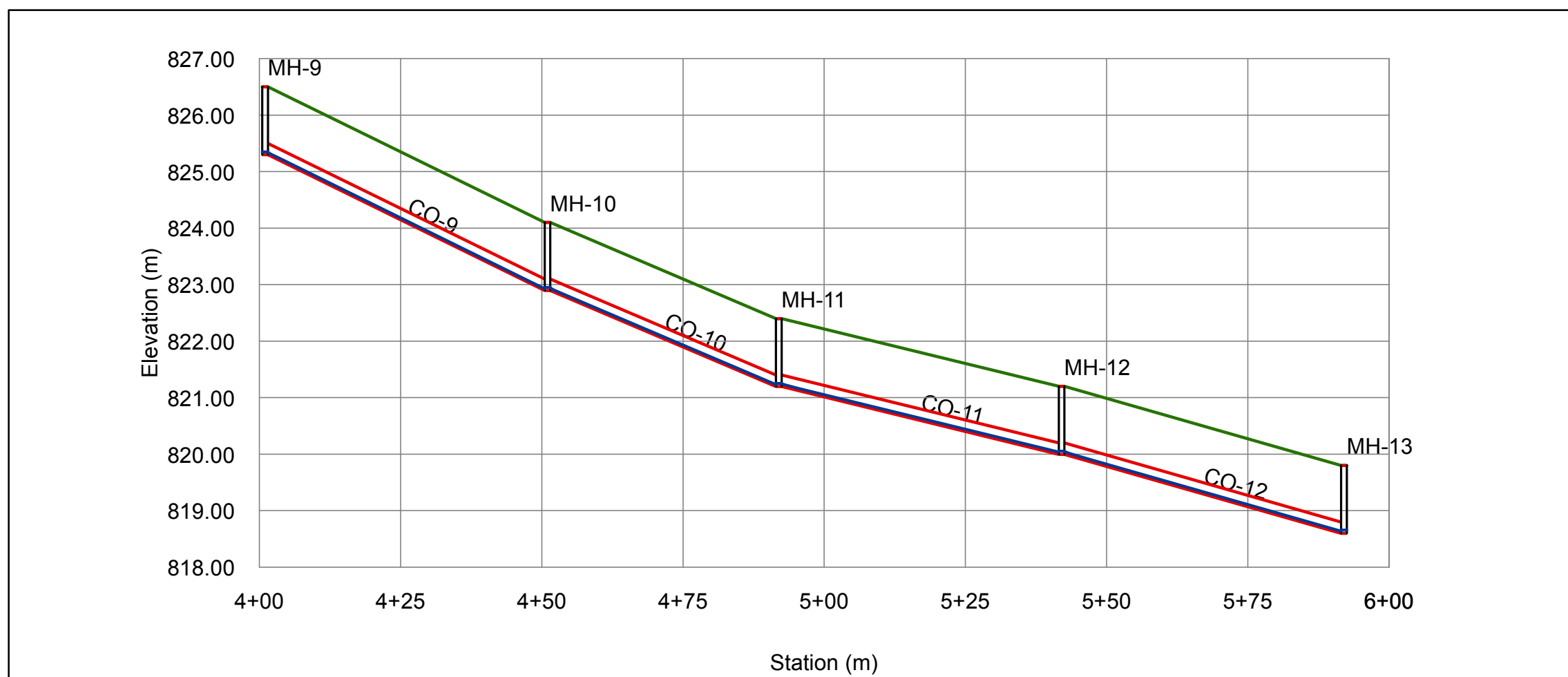
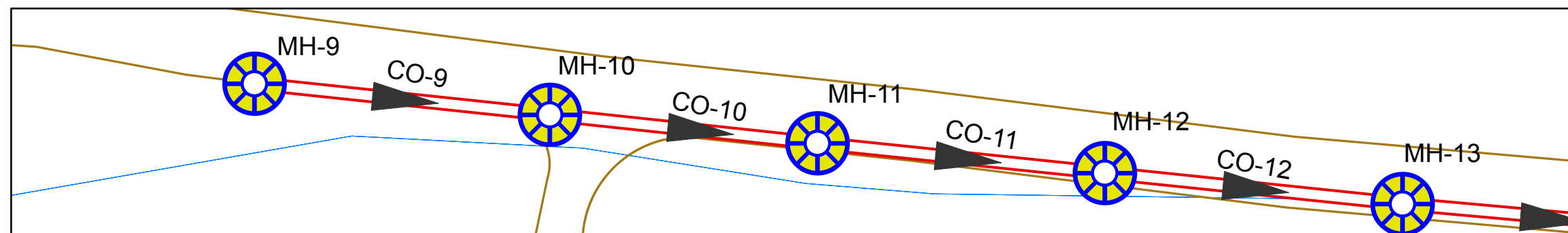
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Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

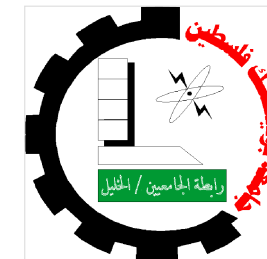
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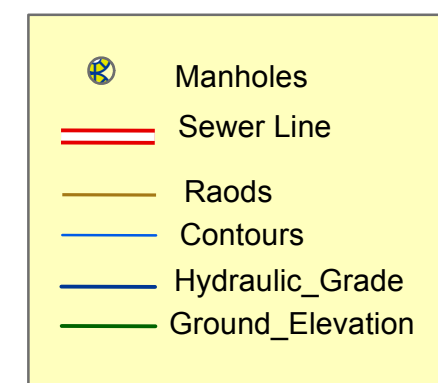
**Page ( 7 )**



| Point Number             | 9     | 10    | 11    | 12    | 13    |
|--------------------------|-------|-------|-------|-------|-------|
| Manhole Number           | MH-9  | MH-10 | MH-11 | MH-12 | MH-13 |
| Station                  | 4+01  | 4+51  | 4+91  | 5+42  | 5+92  |
| Ground Elevation         | 826.5 | 824.1 | 822.4 | 821.2 | 819.8 |
| Invert Elevation         | 825.3 | 822.9 | 821.2 | 820   | 818.6 |
| Depth Of Manholes        | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| Distance Of Manholes (m) |       | 50    | 41    | 50.1  | 50    |
| Pipe Diameter (inch)     |       | 8     | 8     | 8     | 8     |
| Pipe Slope %             |       | 4.8   | 4.15  | 2.40  | 2.80  |
| Type Of Surface          | PVC   | PVC   | PVC   | PVC   | PVC   |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 13 To Manholes 17)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

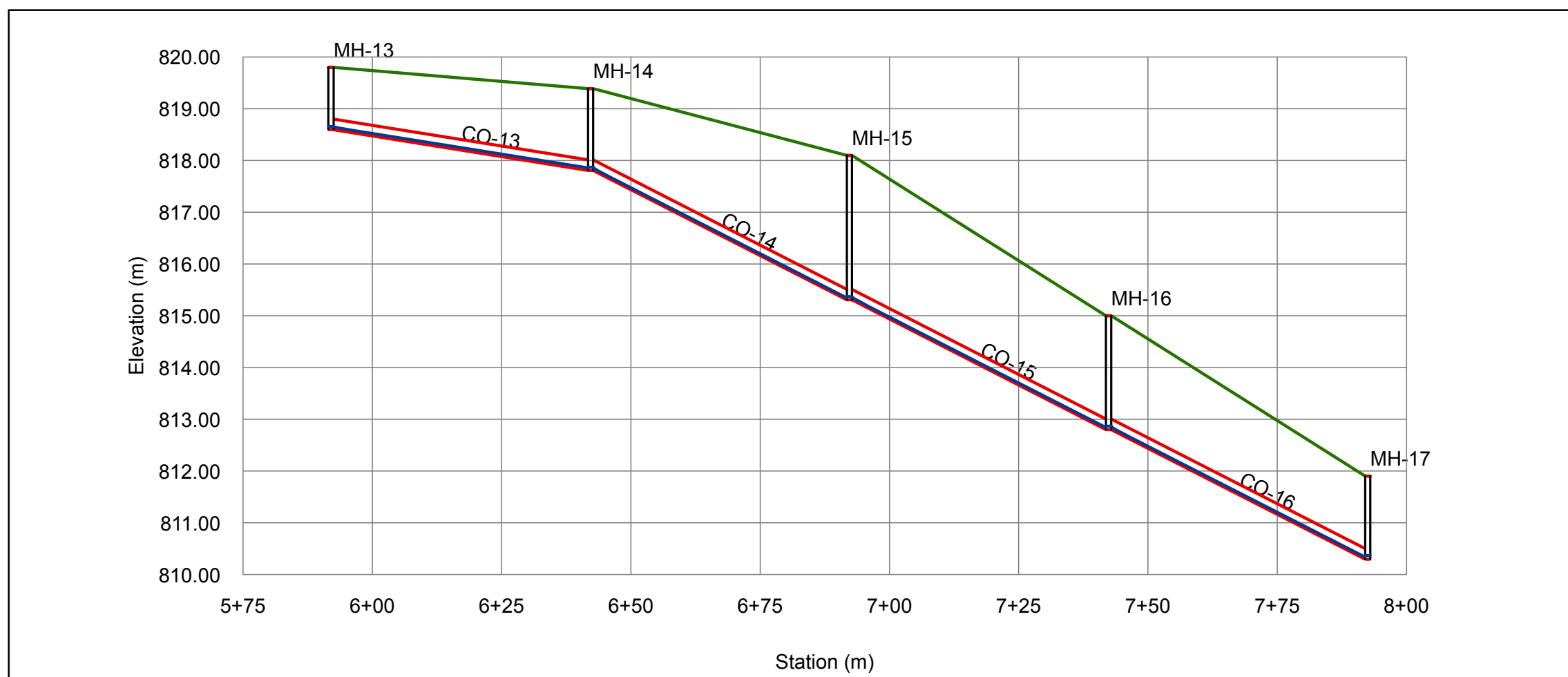
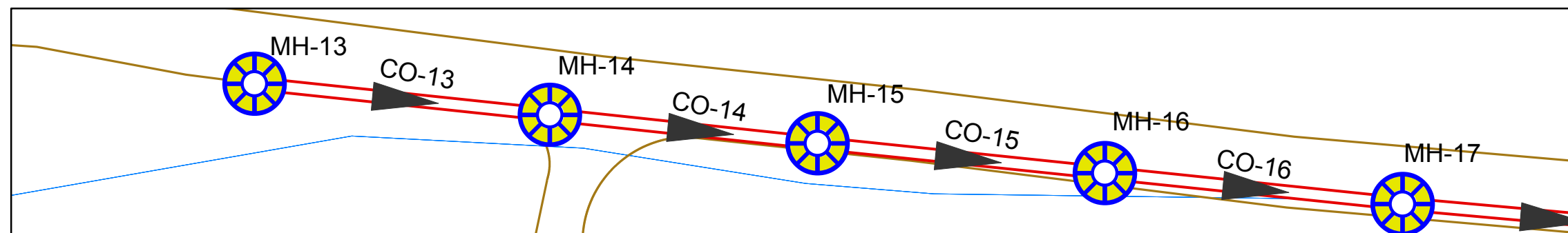
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

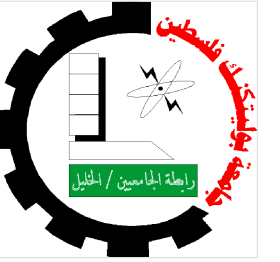
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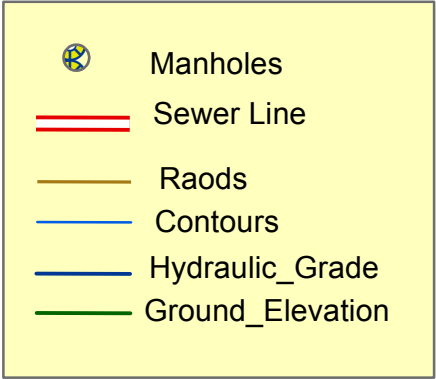
**Page ( 8 )**



| Point Number             | 13    | 14     | 15     | 16    | 17     |
|--------------------------|-------|--------|--------|-------|--------|
| Manhole Number           | MH-13 | MH-14  | MH-15  | MH-16 | MH-17  |
| Station                  | 5+92  | 6+42   | 6+92   | 7+42  | 7+92   |
| Ground Elevation         | 819.8 | 819.39 | 818.1  | 815   | 811.9  |
| Invert Elevation         | 818.6 | 817.81 | 815.31 | 812.8 | 810.29 |
| Depth Of Manholes        | 1.2   | 1.58   | 2.79   | 2.2   | 1.61   |
| Distance Of Manholes (m) |       | 50.2   | 50.1   | 50.1  | 50.1   |
| Pipe Diameter (inch)     |       | 8      | 8      | 8     | 8      |
| Pipe Slope %             |       | 1.57   | 4.99   | 5.01  | 5.01   |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC   | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 17 To Manholes 21)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

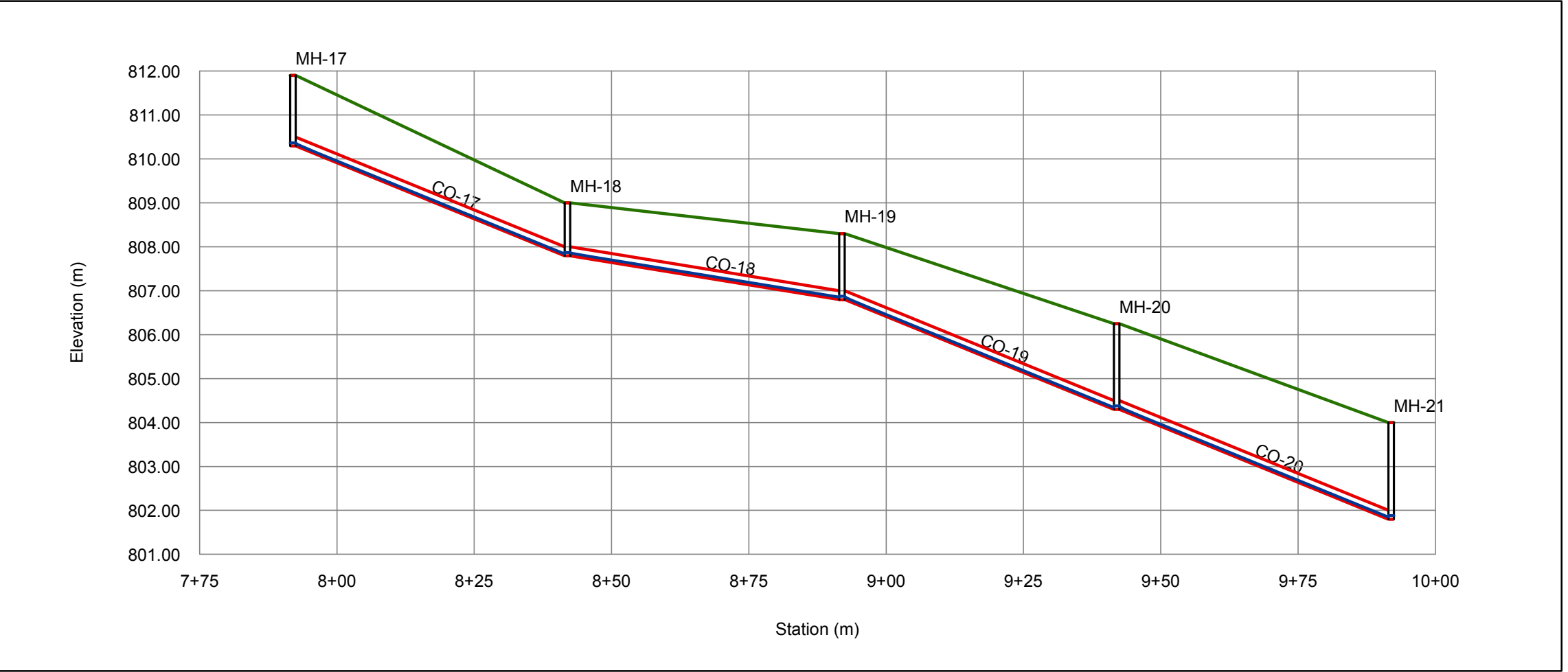
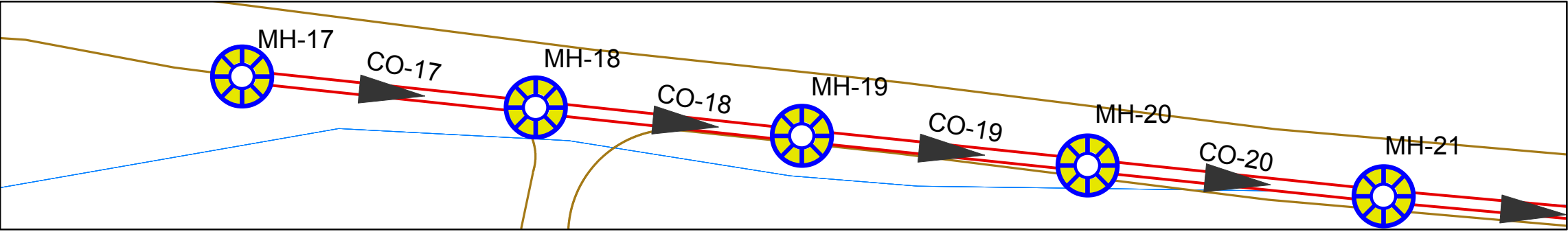
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

**Figure Number (C4 -5)**

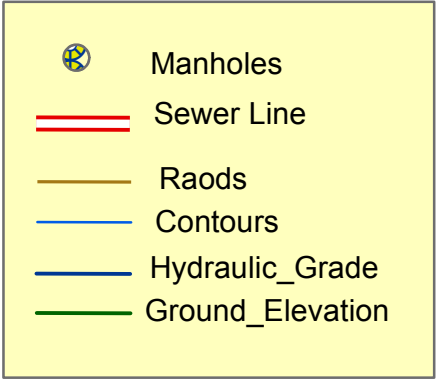
**Page ( 9 )**



| Point Number             | 17     | 18    | 19    | 20     | 21    |
|--------------------------|--------|-------|-------|--------|-------|
| Manhole Number           | MH-17  | MH-18 | MH-19 | MH-20  | MH-21 |
| Station                  | 7+92   | 8+42  | 8+92  | 9+42   | 9+92  |
| Ground Elevation         | 811.9  | 809   | 808.3 | 806.25 | 804   |
| Invert Elevation         | 810.29 | 807.8 | 806.8 | 804.3  | 801.8 |
| Depth Of Manholes        | 1.61   | 1.2   | 1.5   | 1.95   | 2.2   |
| Distance Of Manholes (m) |        | 50    | 50    | 50     | 50    |
| Pipe Diameter (inch)     |        | 8     | 8     | 8      | 8     |
| Pipe Slope %             |        | 4.98  | 2.00  | 5.00   | 5.00  |
| Type Of Surface          | PVC    | PVC   | PVC   | PVC    | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main A)**  
**(From Manholes 21 To Manholes 25)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

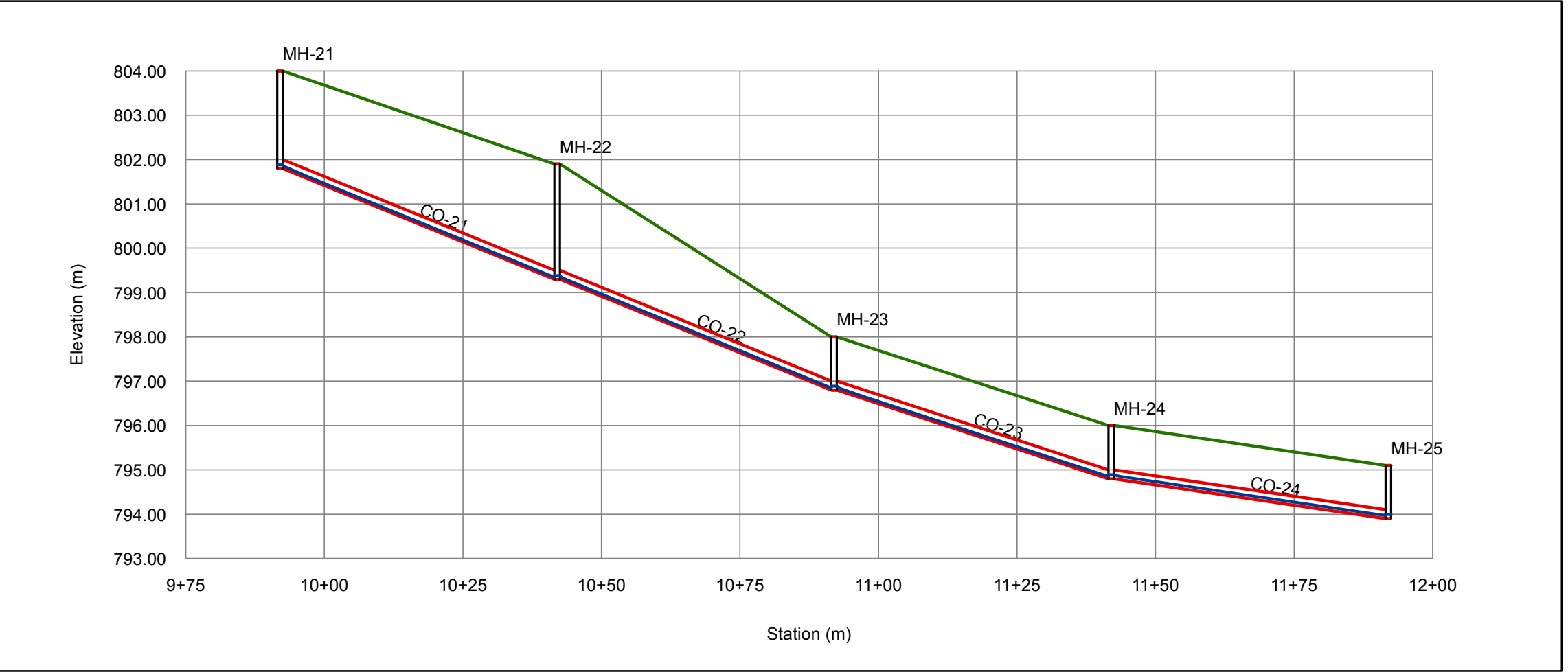
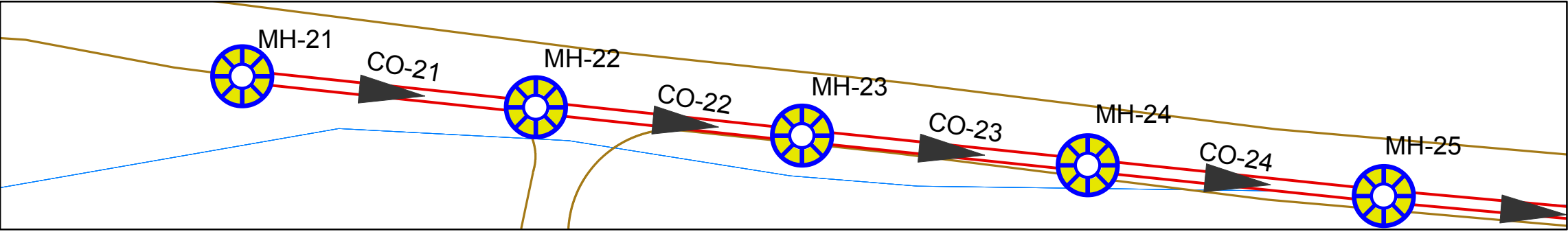
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C4 -6)**

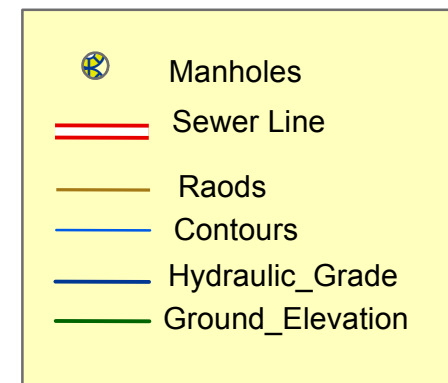
**Page ( 10 )**



| Point Number             | 21    | 22    | 23    | 24    | 25    |
|--------------------------|-------|-------|-------|-------|-------|
| Manhole Number           | MH-21 | MH-22 | MH-23 | MH-24 | MH-25 |
| Station                  | 9+92  | 10+42 | 10+92 | 11+42 | 11+92 |
| Ground Elevation         | 804   | 801.9 | 798   | 796   | 795.1 |
| Invert Elevation         | 801.8 | 799.3 | 796.8 | 794.8 | 793.9 |
| Depth Of Manholes        | 2.2   | 2.6   | 1.2   | 1.2   | 1.2   |
| Distance Of Manholes (m) |       | 50    | 50    | 50    | 50    |
| Pipe Diameter (inch)     |       | 8     | 8     | 8     | 8     |
| Pipe Slope %             |       | 5.00  | 5.00  | 4.00  | 1.80  |
| Type Of Surface          | PVC   | PVC   | PVC   | PVC   | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

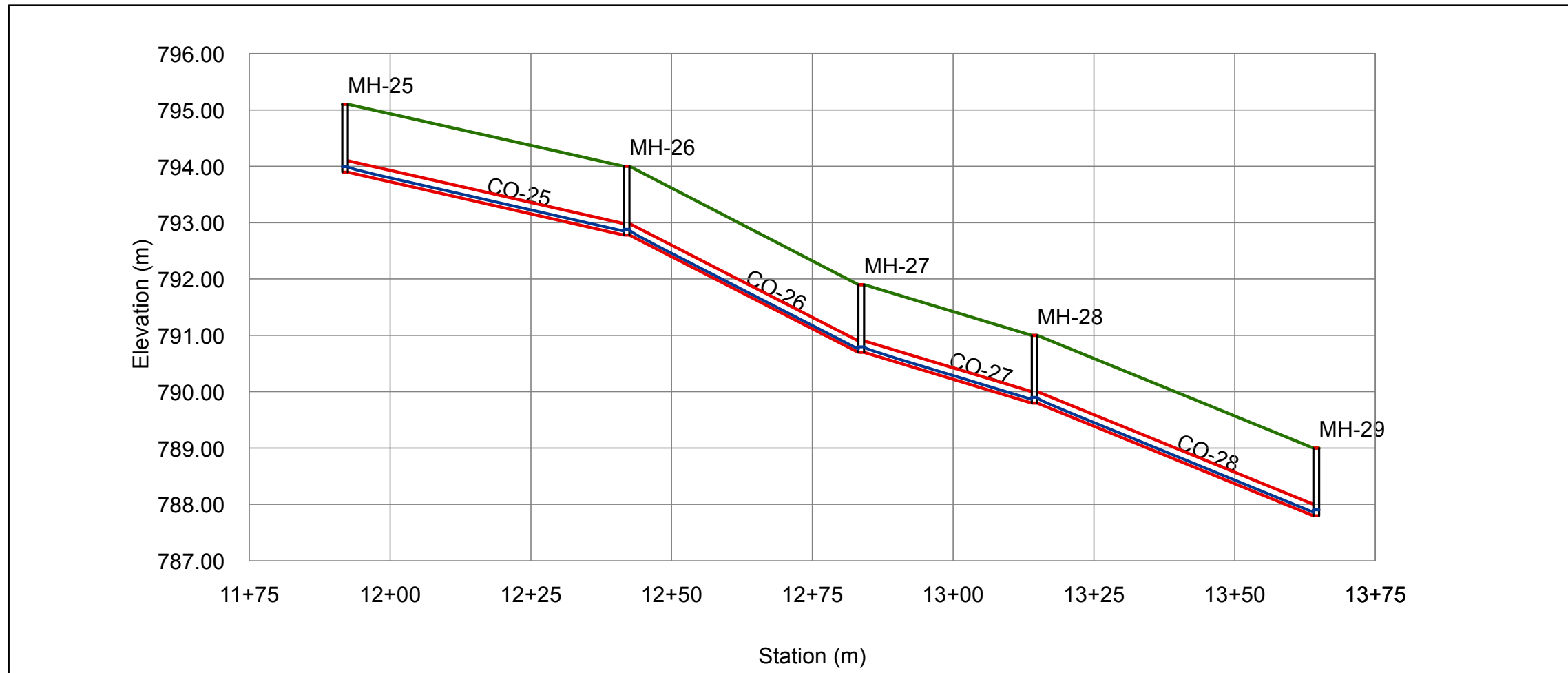
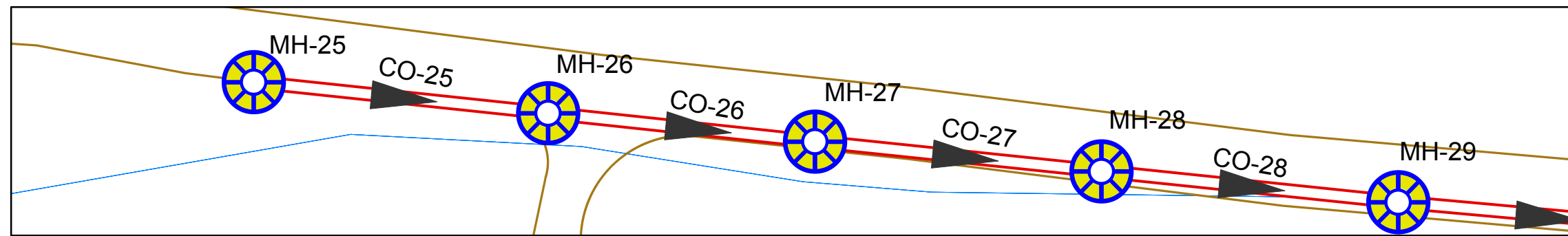
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

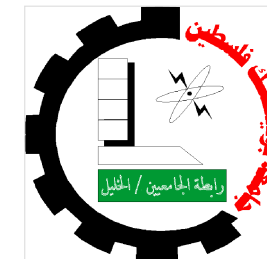
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

**Figure Number ( C4 -7)**

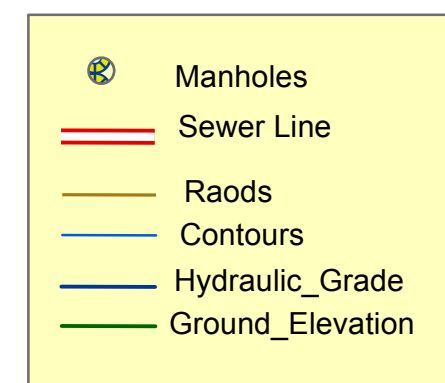
**Page ( 11 )**



| Point Number             | 25    | 26     | 27    | 28    | 29    |
|--------------------------|-------|--------|-------|-------|-------|
| Manhole Number           | MH-25 | MH-26  | MH-27 | MH-28 | MH-29 |
| Station                  | 11+92 | 12+42  | 12+84 | 13+14 | 13+65 |
| Ground Elevation         | 795.1 | 794    | 791.9 | 791   | 789   |
| Invert Elevation         | 793.9 | 792.78 | 790.7 | 789.8 | 787.8 |
| Depth Of Manholes        | 1.2   | 1.22   | 1.2   | 1.2   | 1.2   |
| Distance Of Manholes (m) |       | 50     | 41.7  | 30.8  | 50    |
| Pipe Diameter (inch)     |       | 8      | 8     | 8     | 8     |
| Pipe Slope %             |       | 2.24   | 4.99  | 2.92  | 4.00  |
| Type Of Surface          | PVC   | PVC    | PVC   | PVC   | PVC   |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 29 To Manholes 33)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

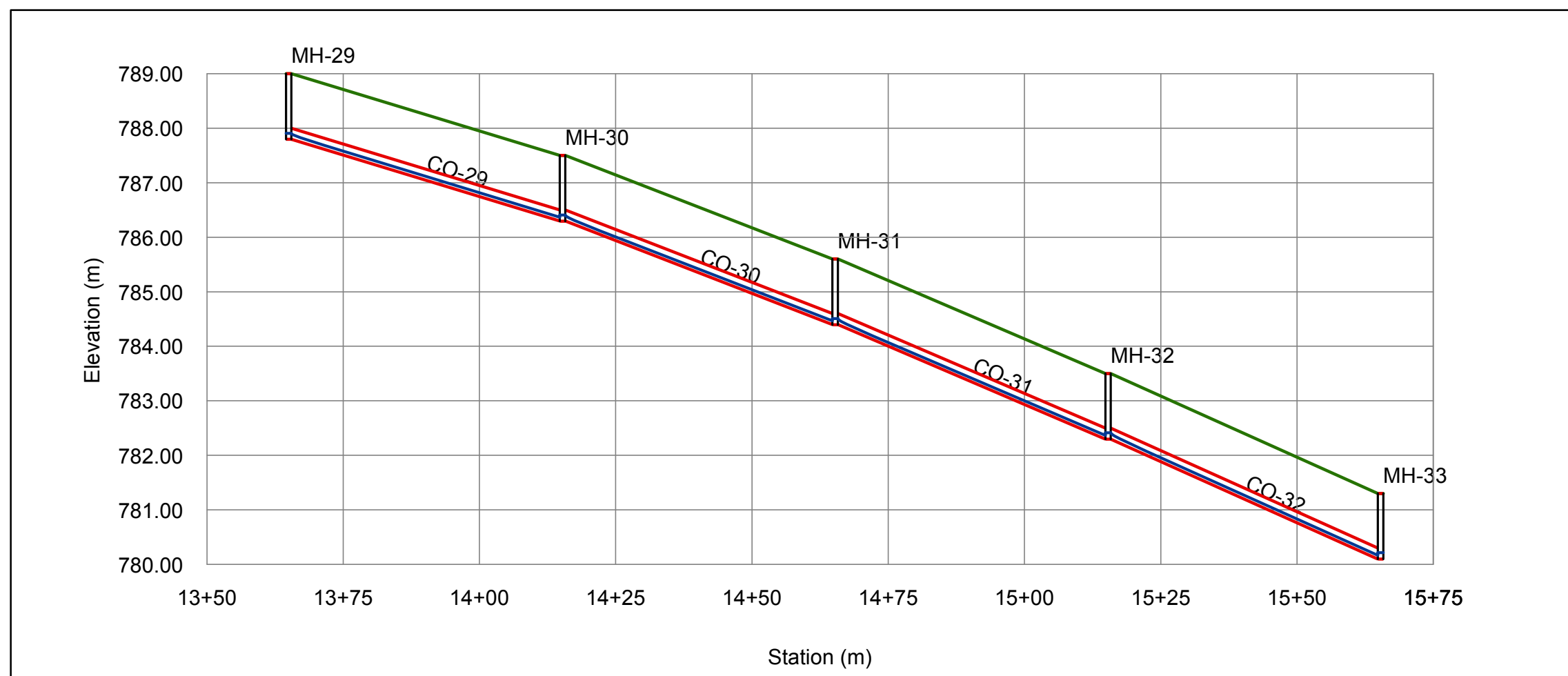
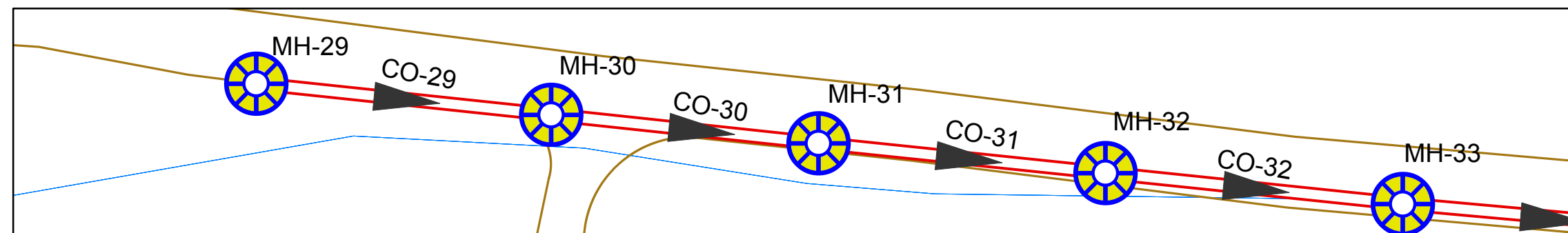
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

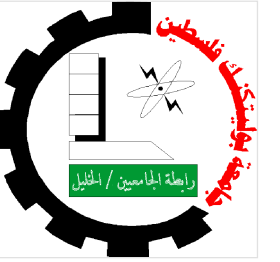
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

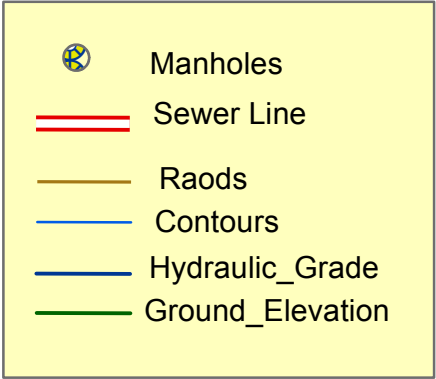
**Figure Number (C4 -8)**



| Point Number             | 29    | 30    | 31    | 32    | 33    |
|--------------------------|-------|-------|-------|-------|-------|
| Manhole Number           | MH-29 | MH-30 | MH-31 | MH-32 | MH-33 |
| Station                  | 13+65 | 14+15 | 14+65 | 15+15 | 15+65 |
| Ground Elevation         | 789   | 787.5 | 785.6 | 783.5 | 781.3 |
| Invert Elevation         | 787.8 | 786.3 | 784.4 | 782.3 | 780.1 |
| Depth Of Manholes        | 1.2   | 1.2   | 1.2   | 1.2   | 1.2   |
| Distance Of Manholes (m) |       | 50.2  | 50    | 50.1  | 50    |
| Pipe Diameter (inch)     |       | 8     | 8     | 8     | 8     |
| Pipe Slope %             |       | 2.99  | 3.80  | 4.19  | 4.40  |
| Type Of Surface          | PVC   | PVC   | PVC   | PVC   | PVC   |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

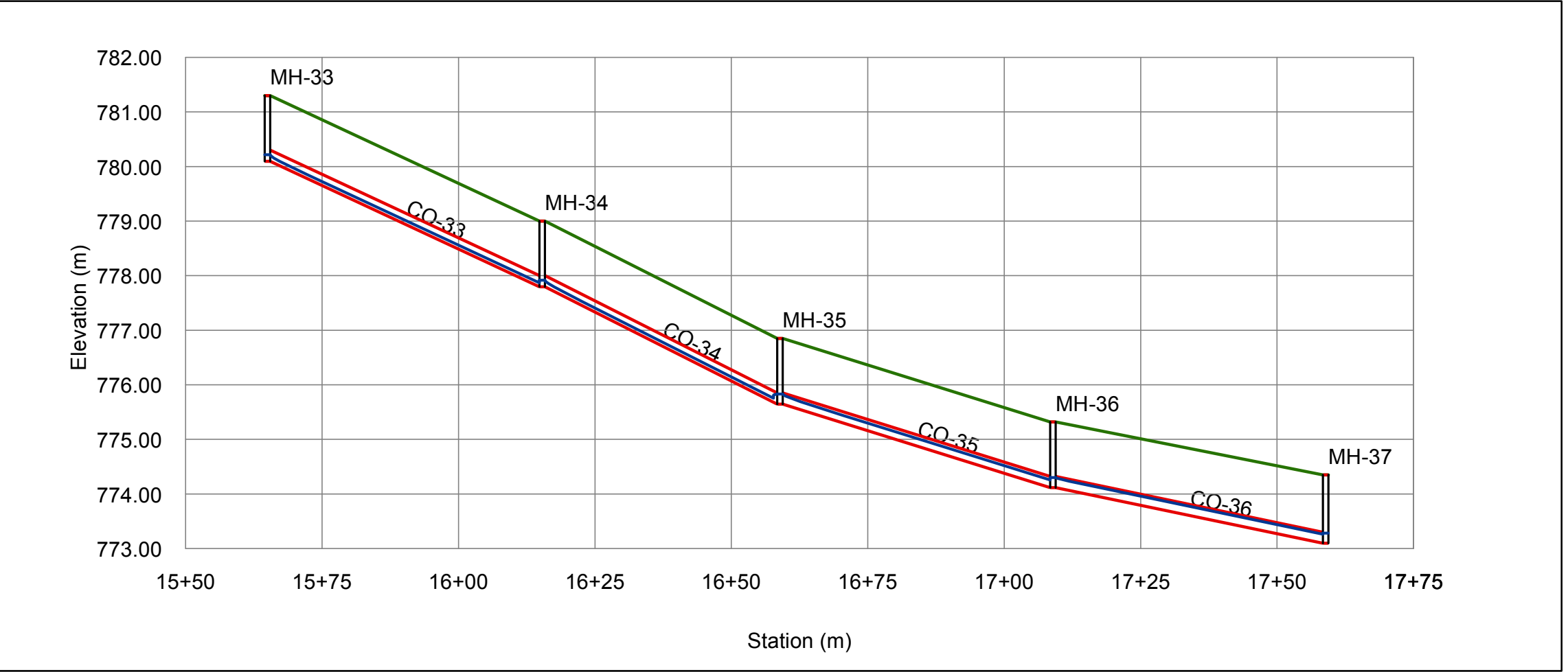
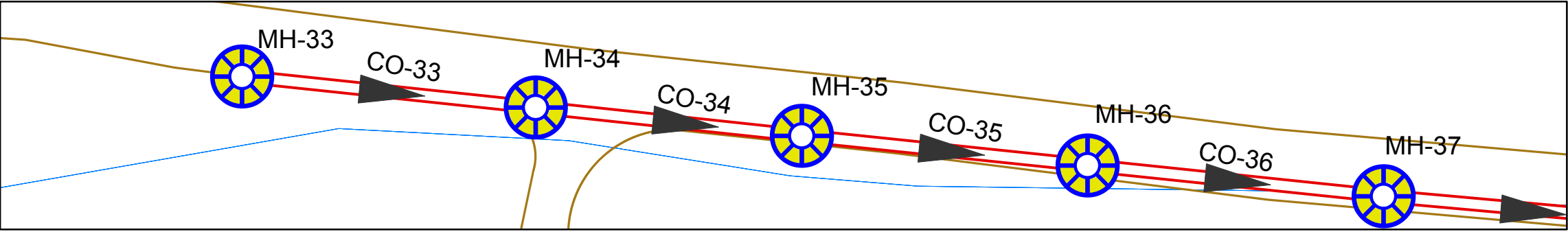
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C4 -9)**

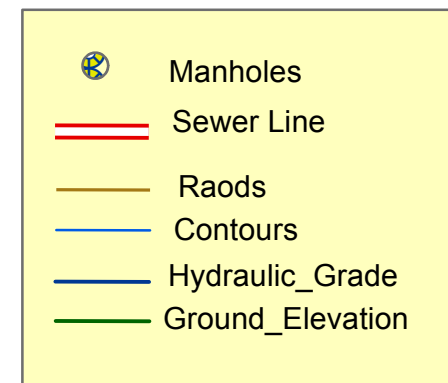
**Page ( 13 )**



| Point Number             | 33    | 34    | 35     | 36     | 37     |
|--------------------------|-------|-------|--------|--------|--------|
| Manhole Number           | MH-33 | MH-34 | MH-35  | MH-36  | MH-37  |
| Station                  | 15+65 | 16+15 | 16+59  | 17+09  | 17+59  |
| Ground Elevation         | 781.3 | 779   | 776.85 | 775.32 | 774.35 |
| Invert Elevation         | 780.1 | 777.8 | 775.65 | 774.12 | 773.1  |
| Depth Of Manholes        | 1.2   | 1.2   | 1.2    | 1.2    | 1.25   |
| Distance Of Manholes (m) |       | 43.6  | 50     | 50     | 50     |
| Pipe Diameter (inch)     |       | 8     | 8      | 8      | 8      |
| Pipe Slope %             |       | 5.28  | 4.30   | 3.06   | 2.04   |
| Type Of Surface          | PVC   | PVC   | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 37 To Manholes 41)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

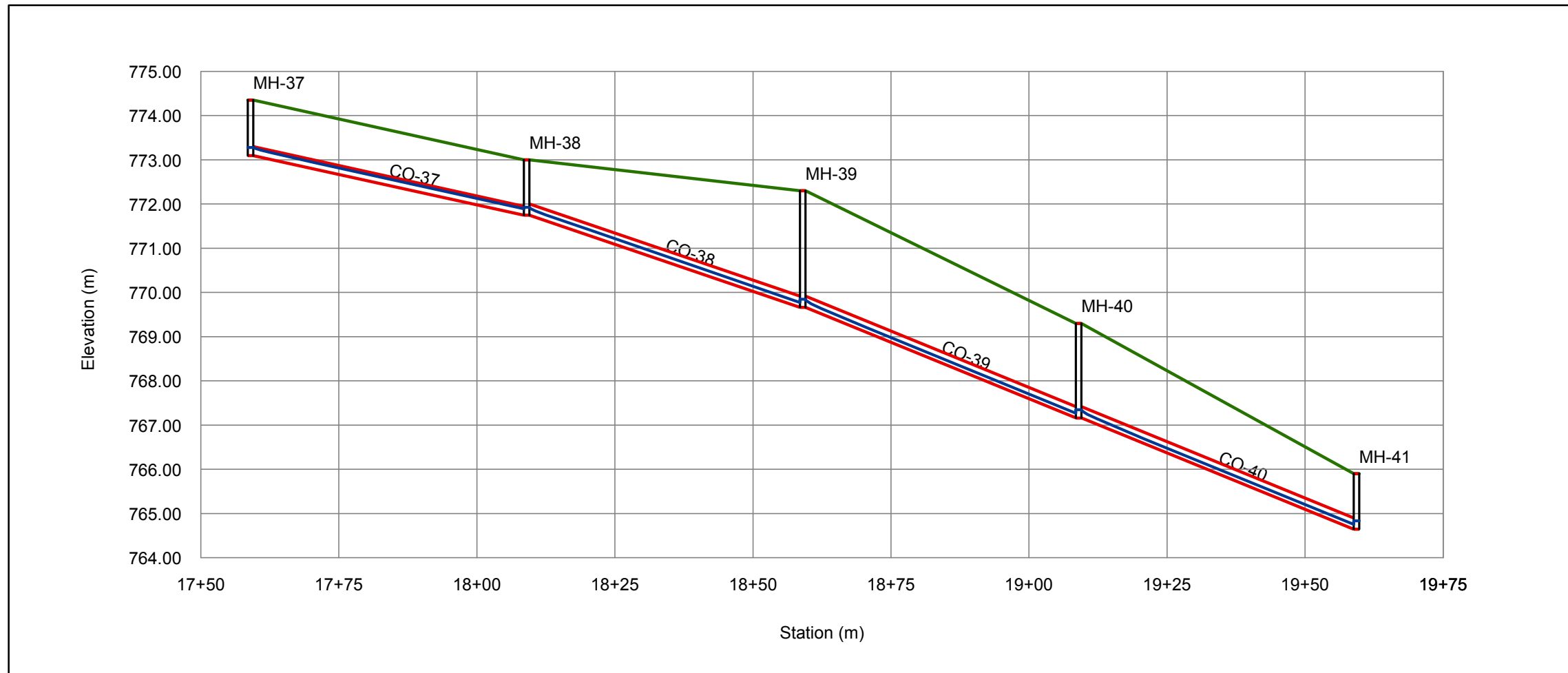
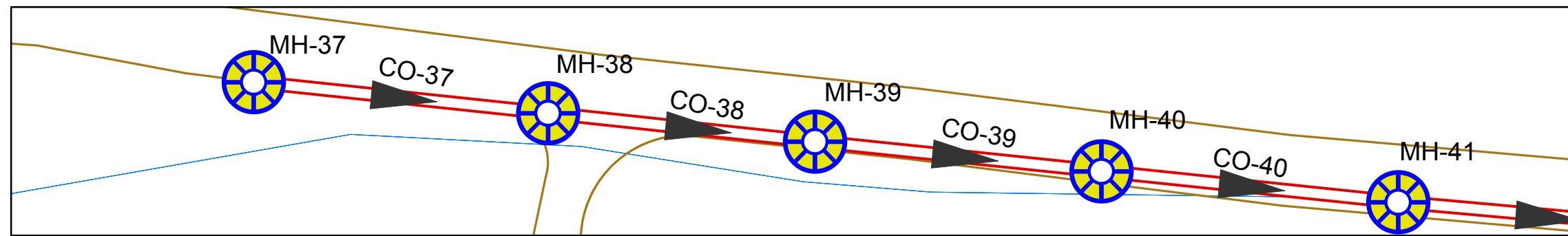
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

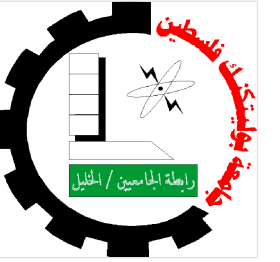
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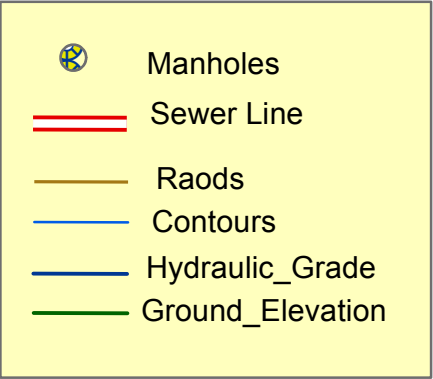
**Page ( 14 )**



| Point Number             | 37     | 38     | 39     | 40     | 41     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40  | MH-41  |
| Station                  | 17+59  | 18+09  | 18+59  | 19+09  | 19+60  |
| Ground Elevation         | 774.35 | 773    | 772.3  | 769.3  | 765.9  |
| Invert Elevation         | 773.1  | 771.75 | 769.66 | 767.16 | 764.65 |
| Depth Of Manholes        | 1.25   | 1.25   | 2.64   | 2.14   | 1.25   |
| Distance Of Manholes (m) |        | 50     | 50     | 50.3   | 50.3   |
| Pipe Diameter (inch)     |        | 8      | 10     | 10     | 10     |
| Pipe Slope %             |        | 2.70   | 4.18   | 4.97   | 4.99   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 41 To Manholes 45)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

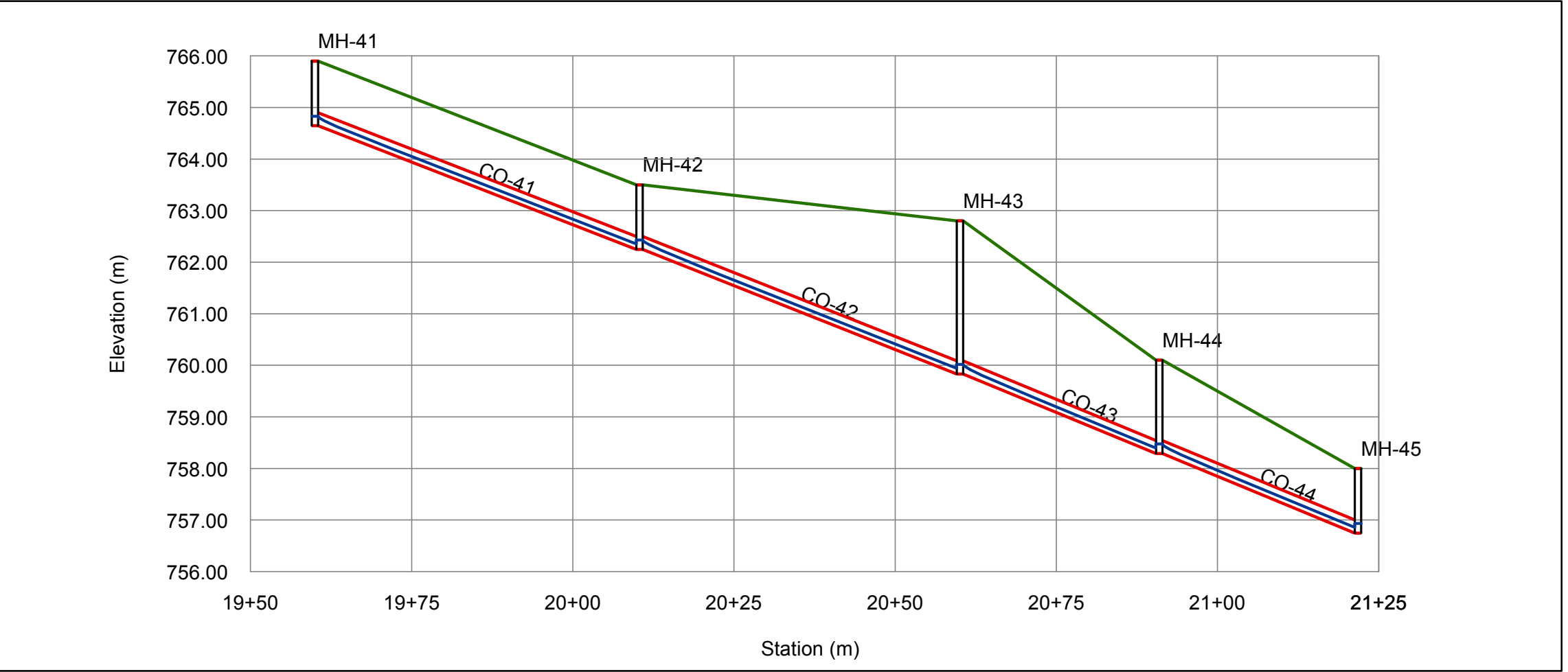
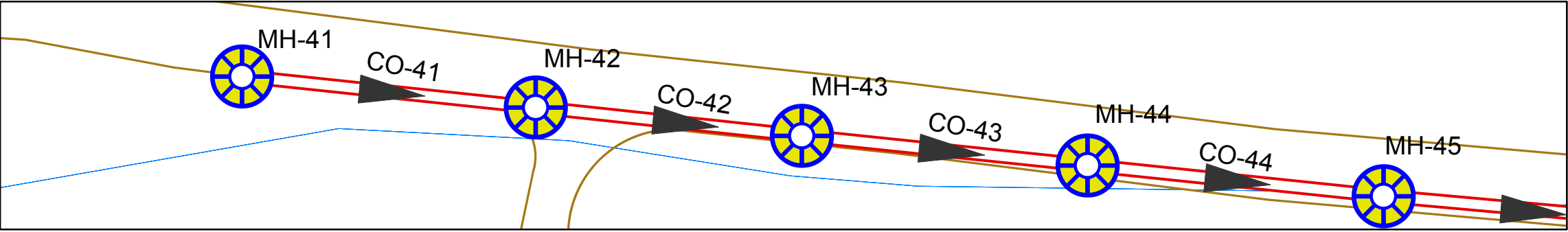
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C4 -11)**

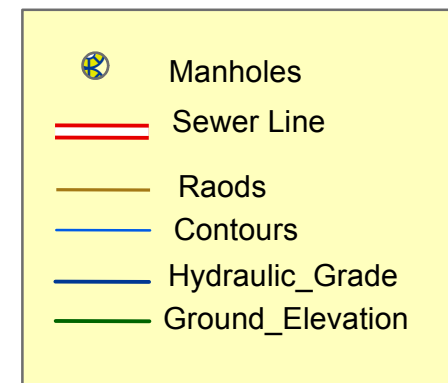
**Page ( 15 )**



| Point Number             | 41     | 42     | 43     | 44     | 45     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-41  | MH-42  | MH-43  | MH-44  | MH-45  |
| Station                  | 19+60  | 20+09  | 20+59  | 20+90  | 21+21  |
| Ground Elevation         | 765.9  | 763.5  | 762.8  | 760.1  | 758    |
| Invert Elevation         | 764.65 | 762.25 | 759.83 | 758.29 | 756.75 |
| Depth Of Manholes        | 1.25   | 1.25   | 2.97   | 1.81   | 1.25   |
| Distance Of Manholes (m) |        | 49.7   | 50     | 30.8   | 30.9   |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 4.83   | 4.84   | 5.00   | 4.98   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 45 To Manholes 49)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

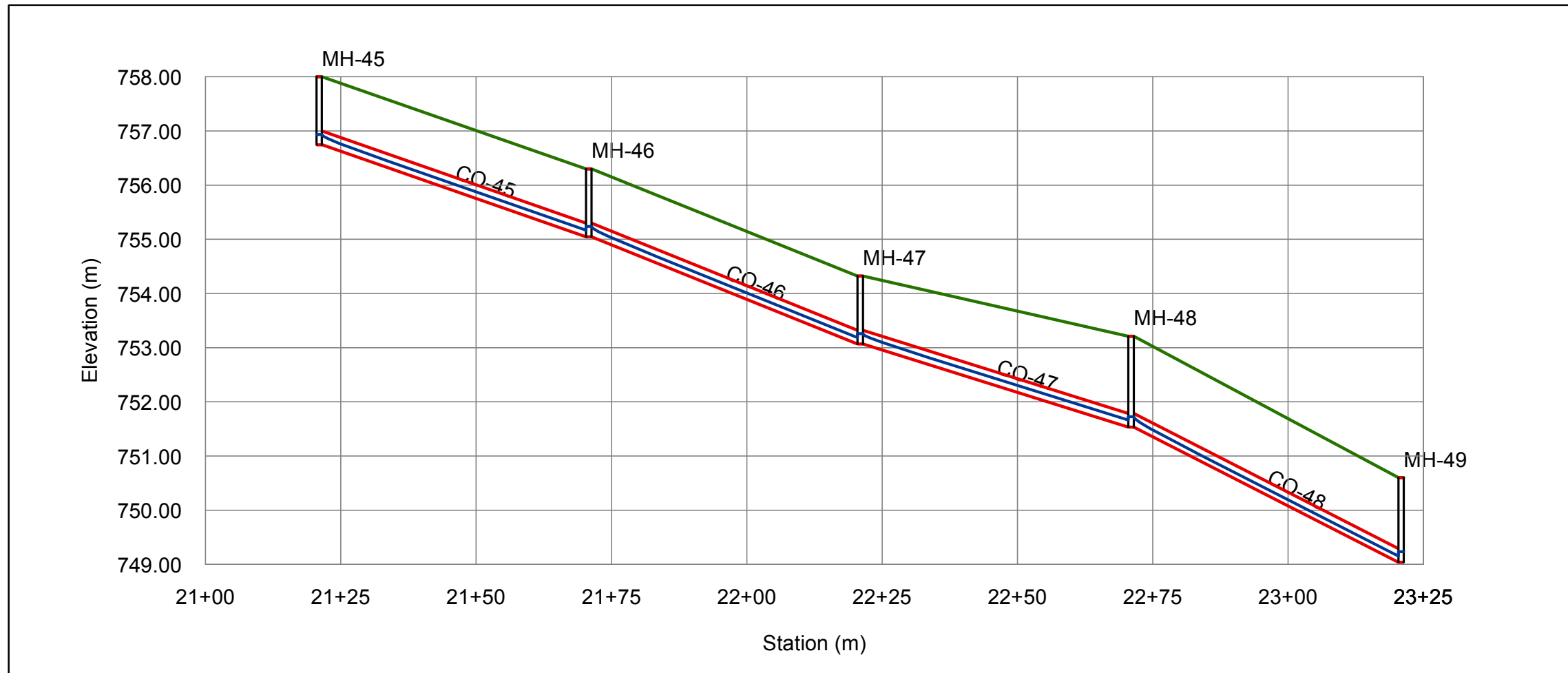
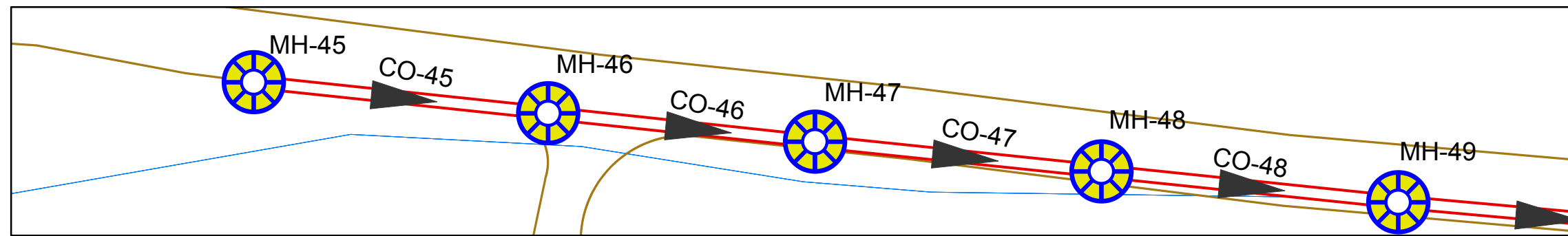
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

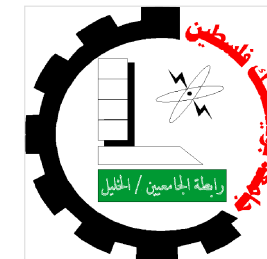
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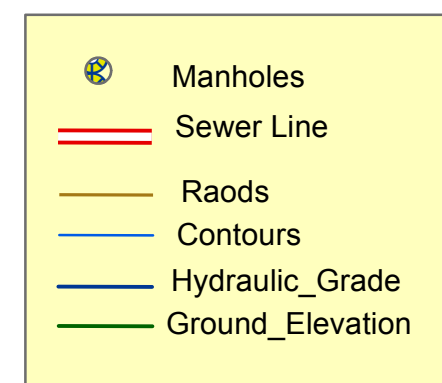
**Page ( 16 )**



| Point Number             | 45     | 46     | 47     | 48     | 49     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-45  | MH-46  | MH-47  | MH-48  | MH-49  |
| Station                  | 21+21  | 21+71  | 22+21  | 22+71  | 23+21  |
| Ground Elevation         | 758    | 756.3  | 754.32 | 753.21 | 750.6  |
| Invert Elevation         | 756.75 | 755.05 | 753.07 | 751.53 | 749.04 |
| Depth Of Manholes        | 1.25   | 1.25   | 1.25   | 1.68   | 1.56   |
| Distance Of Manholes (m) |        | 49.8   | 50.1   | 50     | 49.9   |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 3.41   | 3.95   | 3.08   | 4.99   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( Main A)**  
**(From Manholes 49 To outfall O-1)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

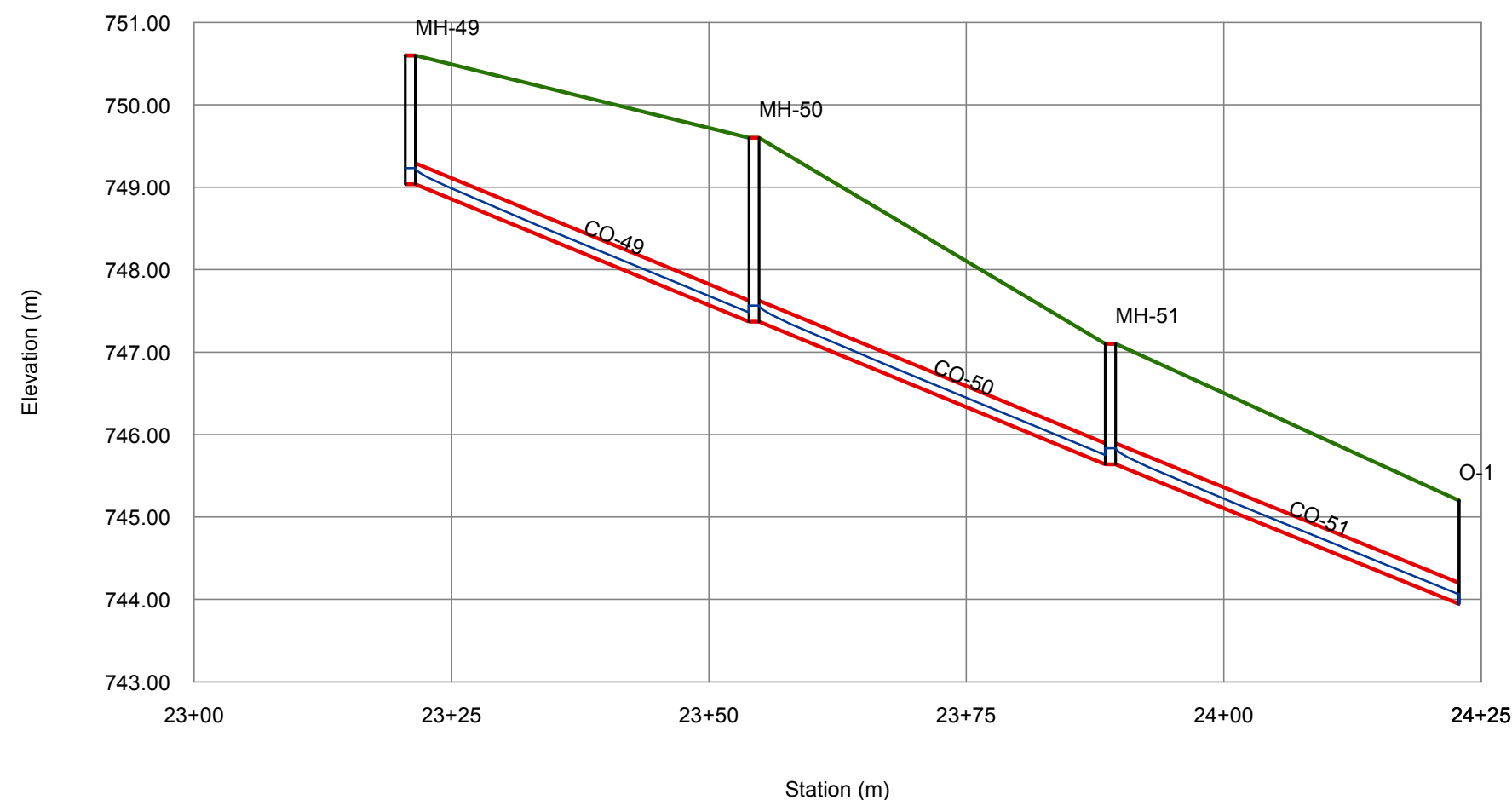
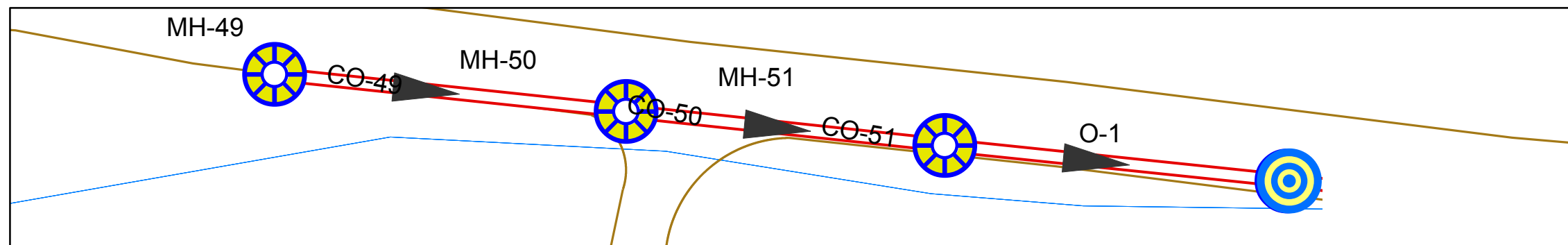
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C4 -13)**

**Page ( 17 )**



| Point Number             | 49     | 50     | 51     | 52     |
|--------------------------|--------|--------|--------|--------|
| Manhole Number           | MH-49  | MH-50  | MH-51  | O-1    |
| Station                  | 23+21  | 23+54  | 23+89  | 24+23  |
| Ground Elevation         | 750.6  | 749.6  | 747.1  | 745.2  |
| Invert Elevation         | 749.04 | 747.37 | 745.64 | 743.95 |
| Depth Of Manholes        | 1.56   | 2.23   | 1.46   | 1.25   |
| Distance Of Manholes (m) |        | 33.4   | 34.6   | 33.8   |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     |
| Pipe Slope %             |        | 5.00   | 5.00   | 5.00   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    |

# Waste Water Profile ,Sewer A1



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**College of Engineering and**  
**Technology**

## Legend

- Grid
- Ground\_Elevation
- Sewer
- Manhole

**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

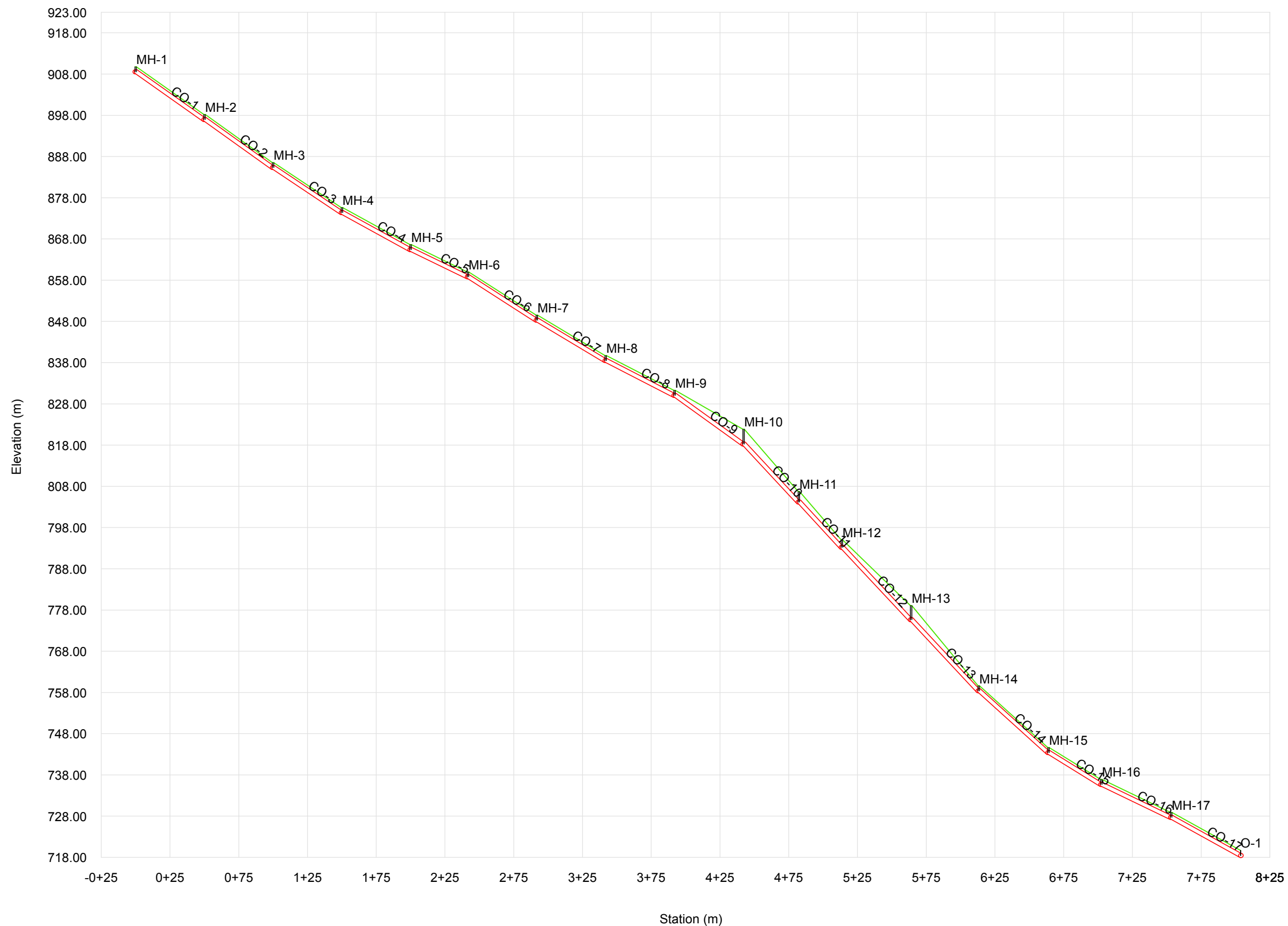
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

Coordinate System :Palestine\_1923\_Palestine\_Grid  
Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality

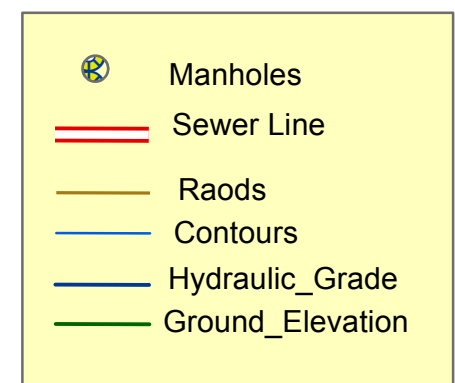
**Figure Number ( C5 )**

**Page ( 18 )**





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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A1)**  
**(From Manholes 1 To Manholes 5)**

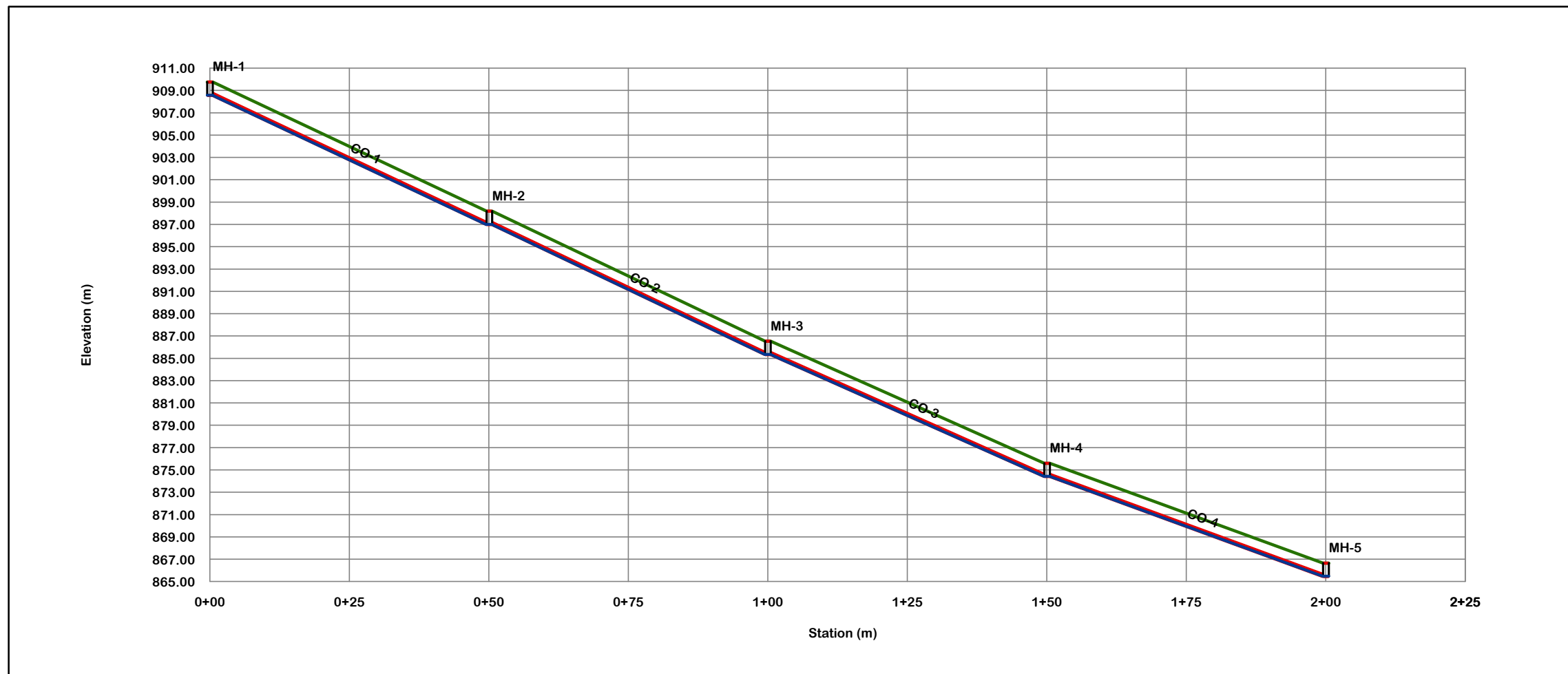
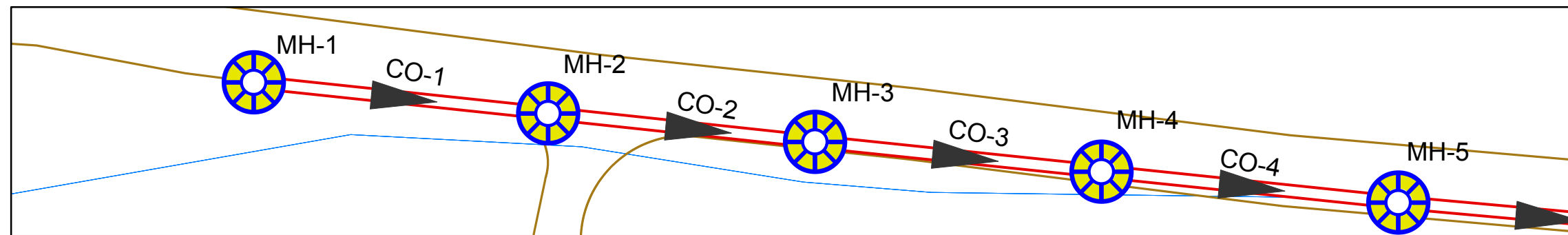
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

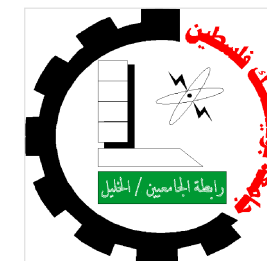
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

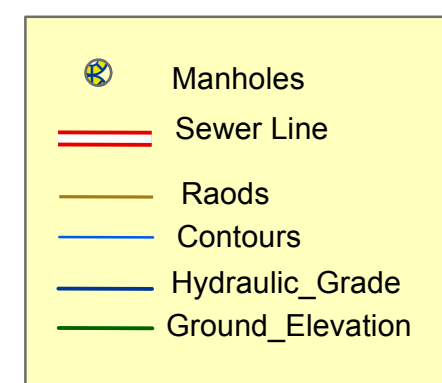
**Figure Number (C5 -1)**



| Point Number             | 1      | 2      | 3      | 4     | 5      |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-1   | MH-2   | MH-3   | MH-4  | MH-5   |
| Station                  | 00+00  | 0+50   | 1+00   | 1+50  | 2+00   |
| Ground Elevation         | 909.76 | 898.18 | 886.52 | 875.6 | 866.64 |
| Invert Elevation         | 908.56 | 896.97 | 885.32 | 874.4 | 865.44 |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.2   | 1.2    |
| Distance Of Manholes (m) | 0      | 50     | 50     | 50    | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 23.16  | 23.32  | 21.84 | 17.92  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A1)**  
**(From Manholes 5 To Manholes 9)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

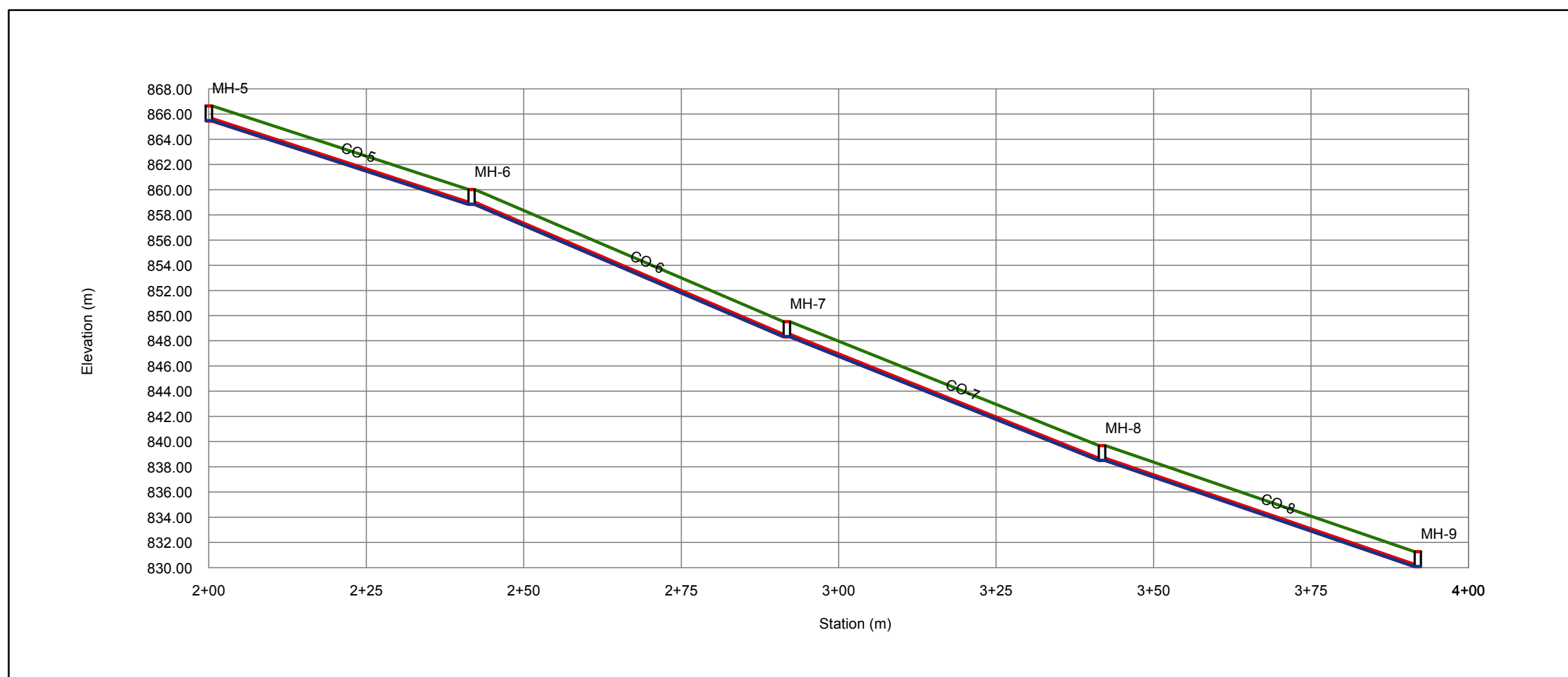
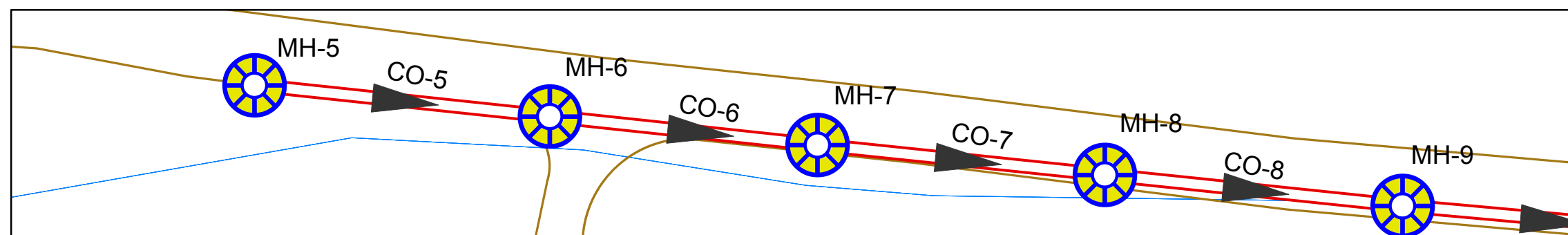
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Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

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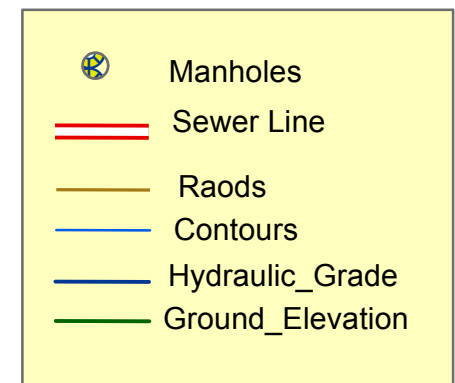
**Page ( 20 )**



| Point Number             | 5      | 6      | 7      | 8      | 9      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-5   | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 2+00   | 2+42   | 2+92   | 3+42   | 3+92   |
| Ground Elevation(m)      | 866.64 | 860.01 | 849.51 | 839.69 | 831.27 |
| Invert Elevation(m)      | 865.44 | 858.81 | 848.31 | 838.49 | 830.07 |
| Depth Of Manholes(m)     | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 41.7   | 50     | 50     | 50.1   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 15.90  | 21.00  | 19.64  | 16.81  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A1)**  
**(From Manholes 9 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

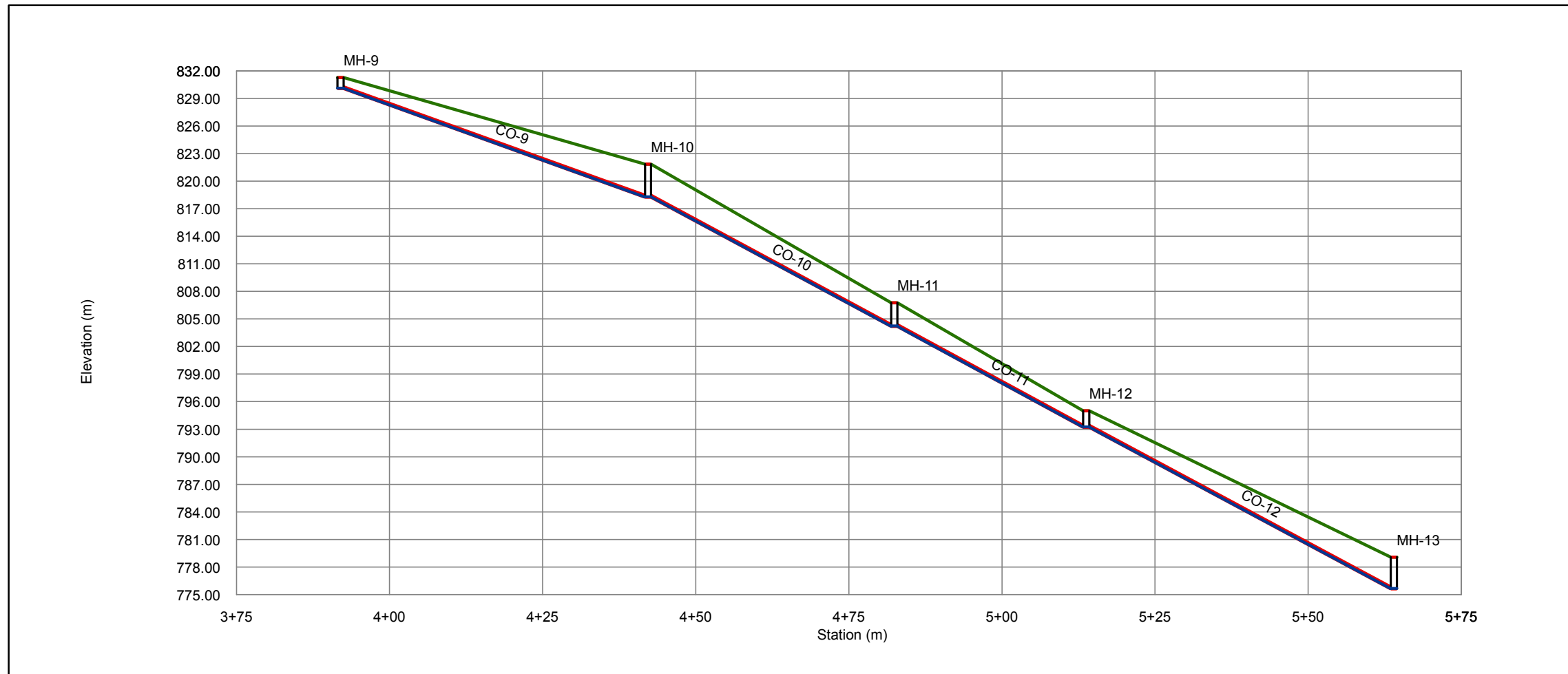
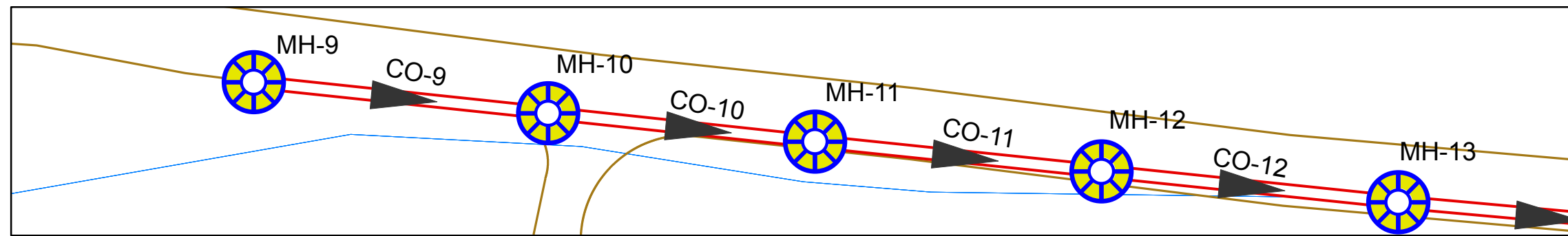
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

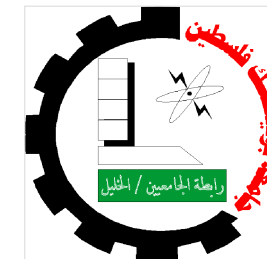
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

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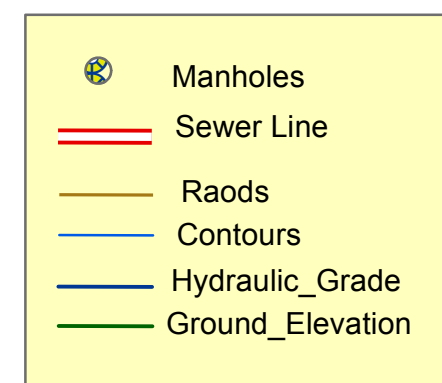
**Page ( 21 )**



| Point Number             | 9      | 10     | 11     | 12     | 13     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-9   | MH-10  | MH-11  | MH-12  | MH-13  |
| Station                  | 3+92   | 4+42   | 4+82   | 5+14   | 5+64   |
| Ground Elevation         | 831.27 | 821.85 | 806.76 | 795.01 | 779.07 |
| Invert Elevation         | 830.07 | 818.26 | 804.18 | 793.21 | 775.63 |
| Depth Of Manholes        | 1.2    | 3.59   | 2.58   | 1.8    | 3.44   |
| Distance Of Manholes (m) |        | 50.2   | 40.2   | 31.3   | 50.2   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 23.53  | 35.02  | 35.05  | 35.02  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A1)**  
**(From Manholes 13 To Outfall 1)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

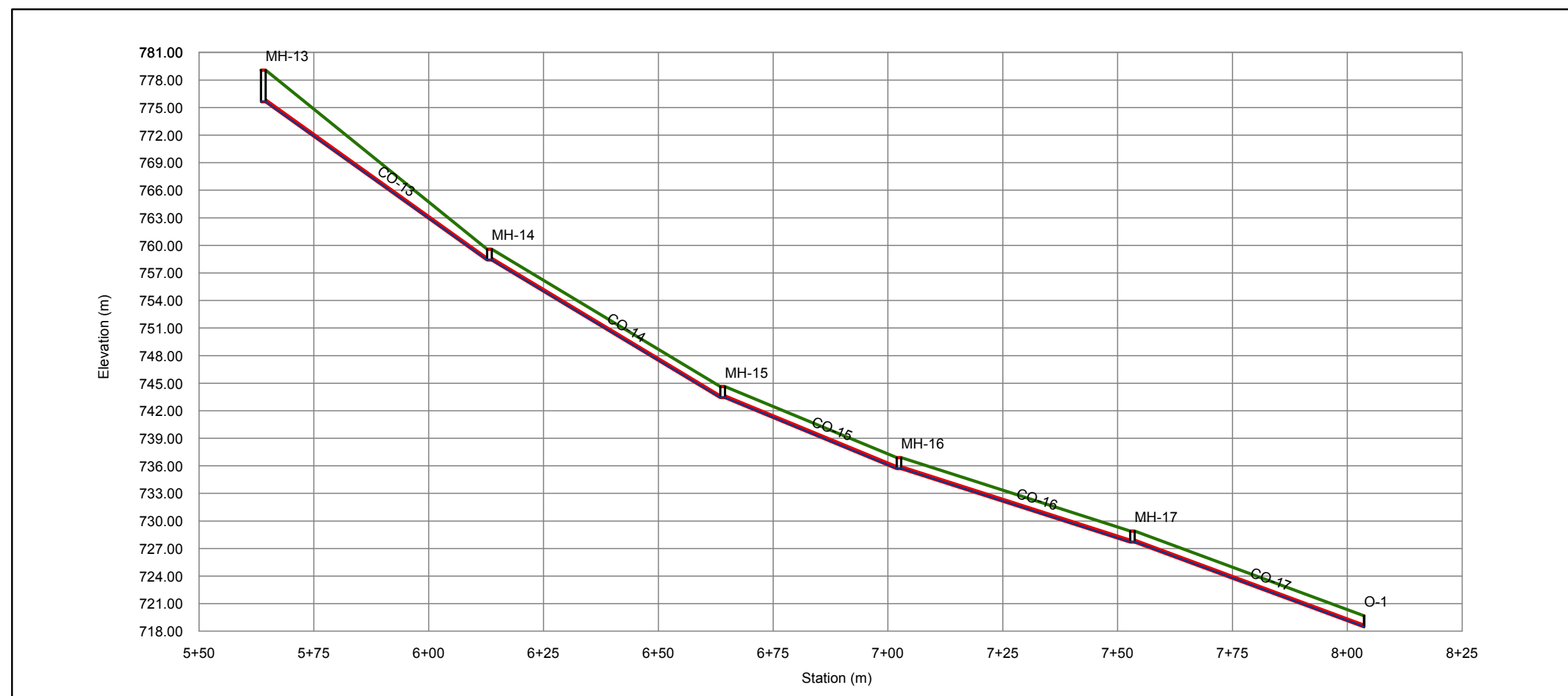
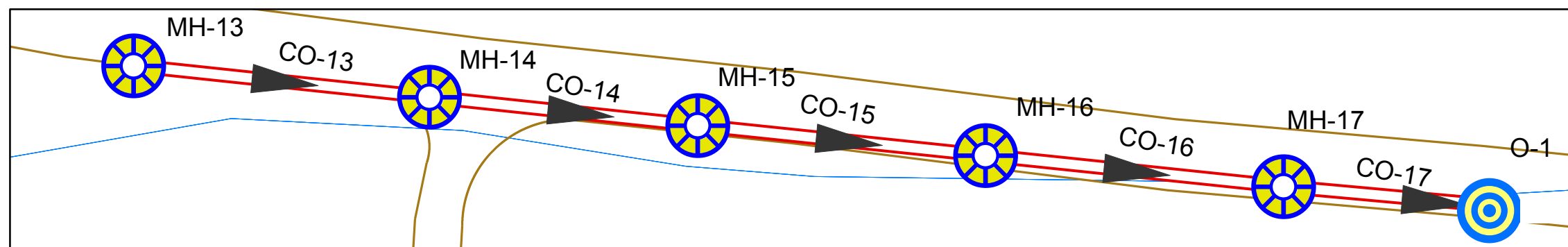
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C5 -4)**

**Page ( 22 )**



| Point Number             | 13     | 14     | 15     | 16     | 17     | 18         |
|--------------------------|--------|--------|--------|--------|--------|------------|
| Manhole Number           | MH-13  | MH-14  | MH-15  | MH-16  | MH-17  | O-1        |
| Station                  | 5+64   | 6+13   | 6+64   | 7+02   | 7+53   | 8+04       |
| Ground Elevation         | 779.07 | 759.6  | 744.62 | 736.91 | 728.91 | 719.67     |
| Invert Elevation         | 775.63 | 758.39 | 743.42 | 735.7  | 727.71 | 718.47     |
| Depth Of Manholes        | 3.44   | 1.21   | 1.2    | 1.21   | 1.2    | 1.2        |
| Distance Of Manholes (m) |        | 49.2   | 50.7   | 38.4   | 50.8   | 50.5       |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      | 8          |
| Pipe Slope %             |        | 35.04  | 29.53  | 20.10  | 15.73  | 18.2970297 |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    | PVC        |

# Waste Water Profile ,Sewer A2



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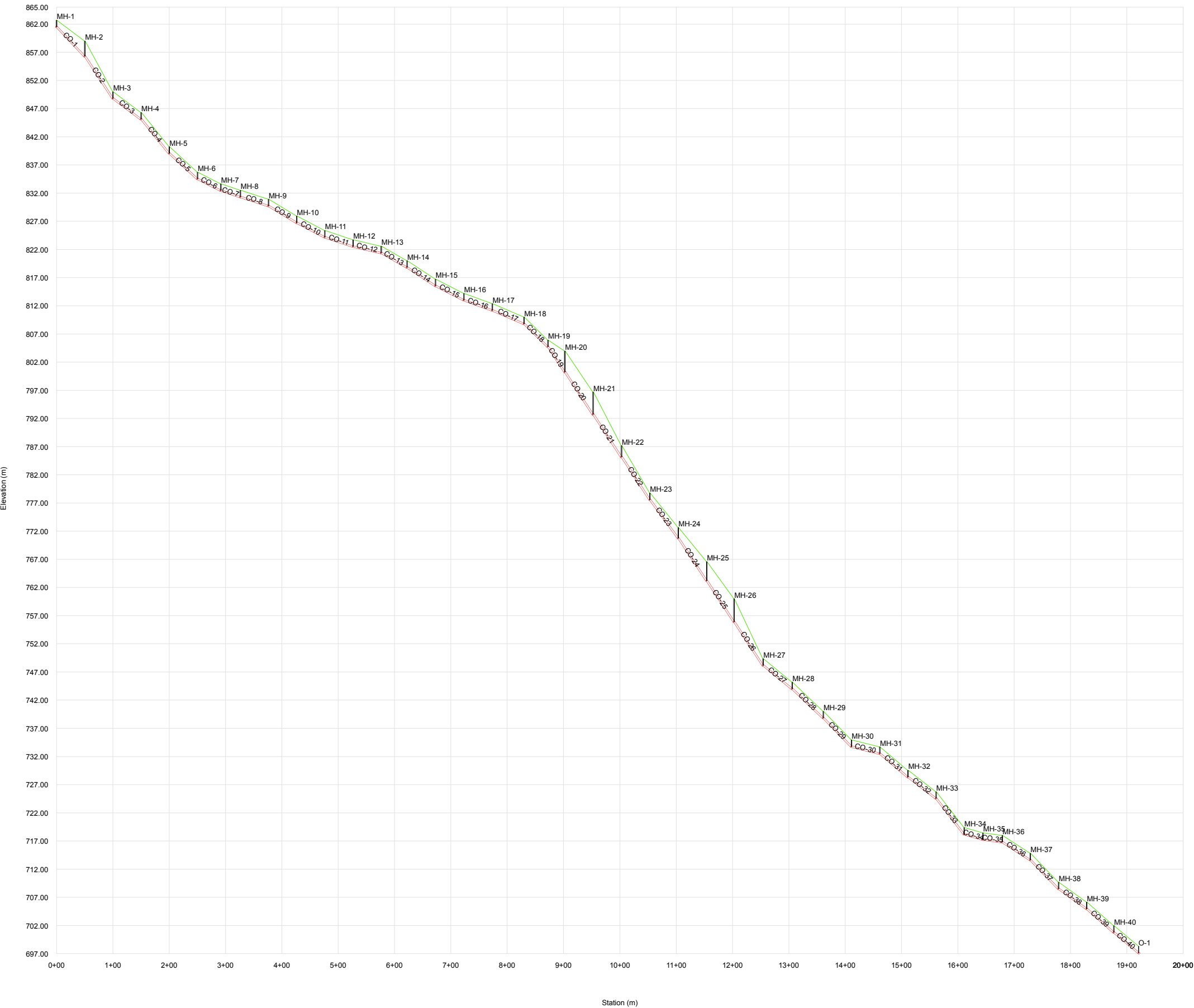
Legend

Grid

Ground\_Elevation

Sewer

Manhole



Project Title :  
Design Of Waste Wate Collection  
System For Dora City

Created by :  
Mohammed Jebreen  
Noor Dodin

Project Supervisor :  
Eng . Samah Al-Jabari

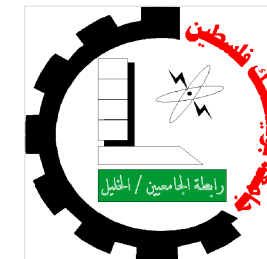
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Linear Unit: Meter  
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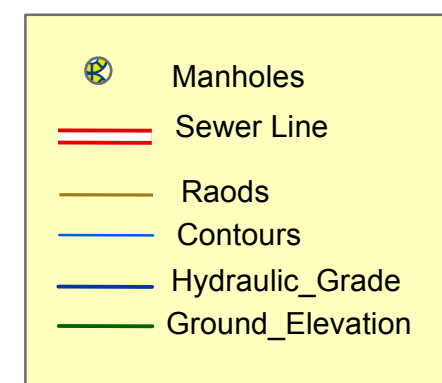
Scale : To Fit

Figure Number ( C6 )

Page ( 23 )



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 1 To Manholes 5)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

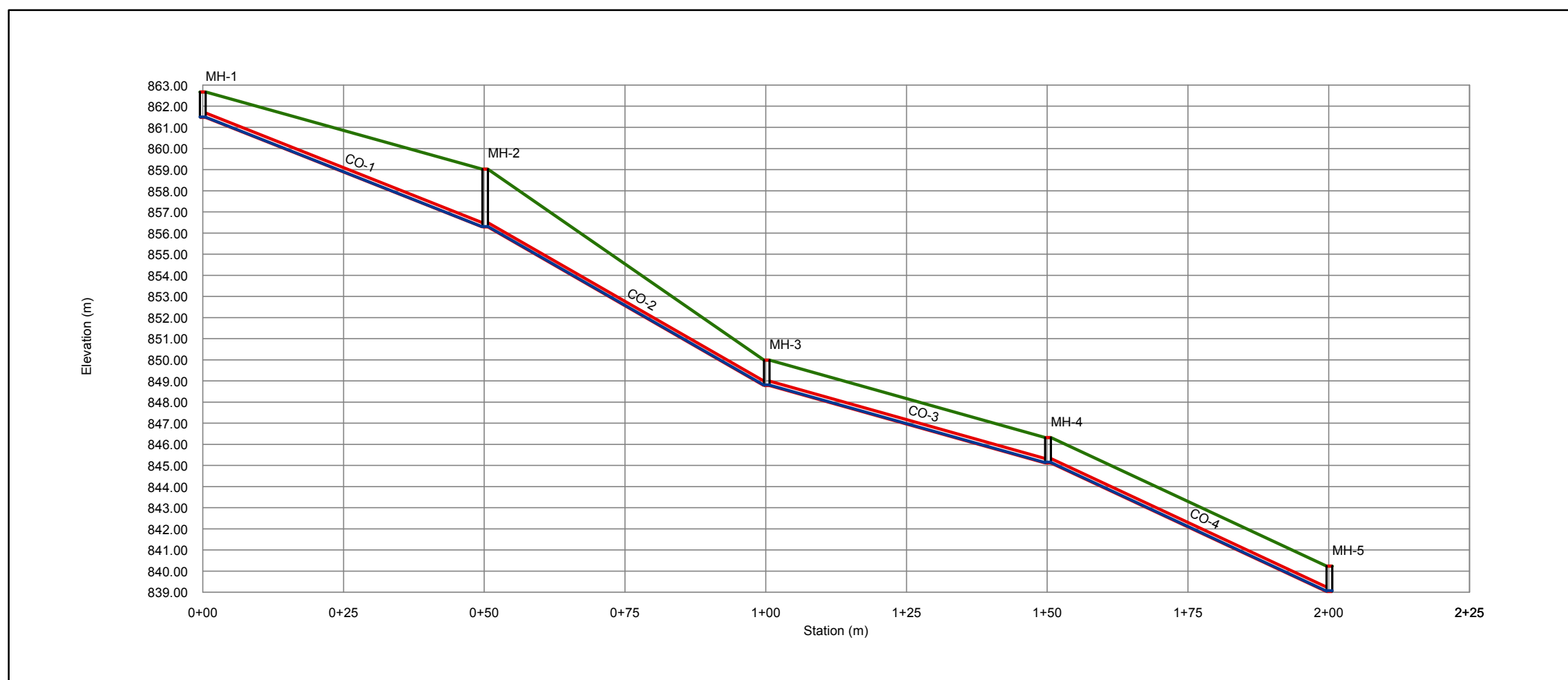
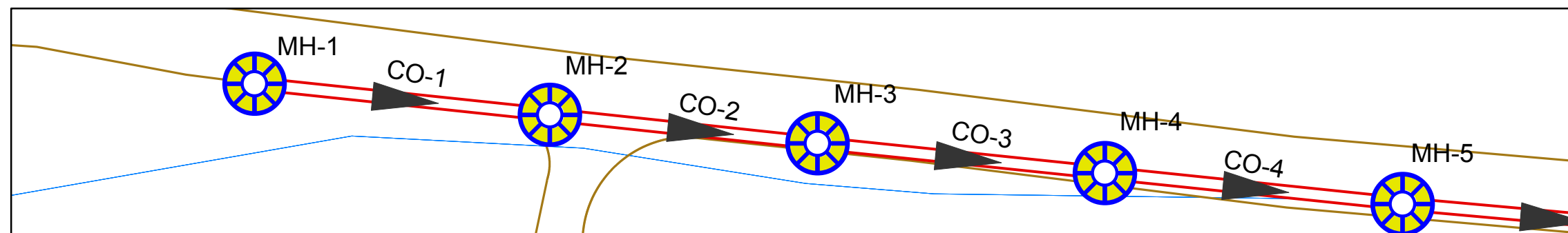
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

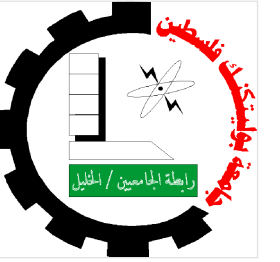
Data Source : Dora Municipality

**Figure Number (C6 -1)**

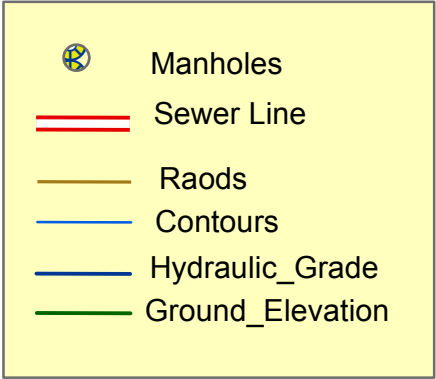
**Page ( 24 )**



| Point Number             | 1      | 2      | 3      | 4      | 5      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-1   | MH-2   | MH-3   | MH-4   | MH-5   |
| Station                  | 00+00  | 0+50   | 1+00   | 1+50   | 2+00   |
| Ground Elevation         | 862.68 | 859.02 | 849.99 | 846.32 | 840.24 |
| Invert Elevation         | 861.47 | 856.29 | 848.79 | 845.12 | 839.04 |
| Depth Of Manholes        | 1.21   | 2.73   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 10.36  | 15.00  | 7.34   | 12.16  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Wate Collection System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 5 To Manholes 9)**

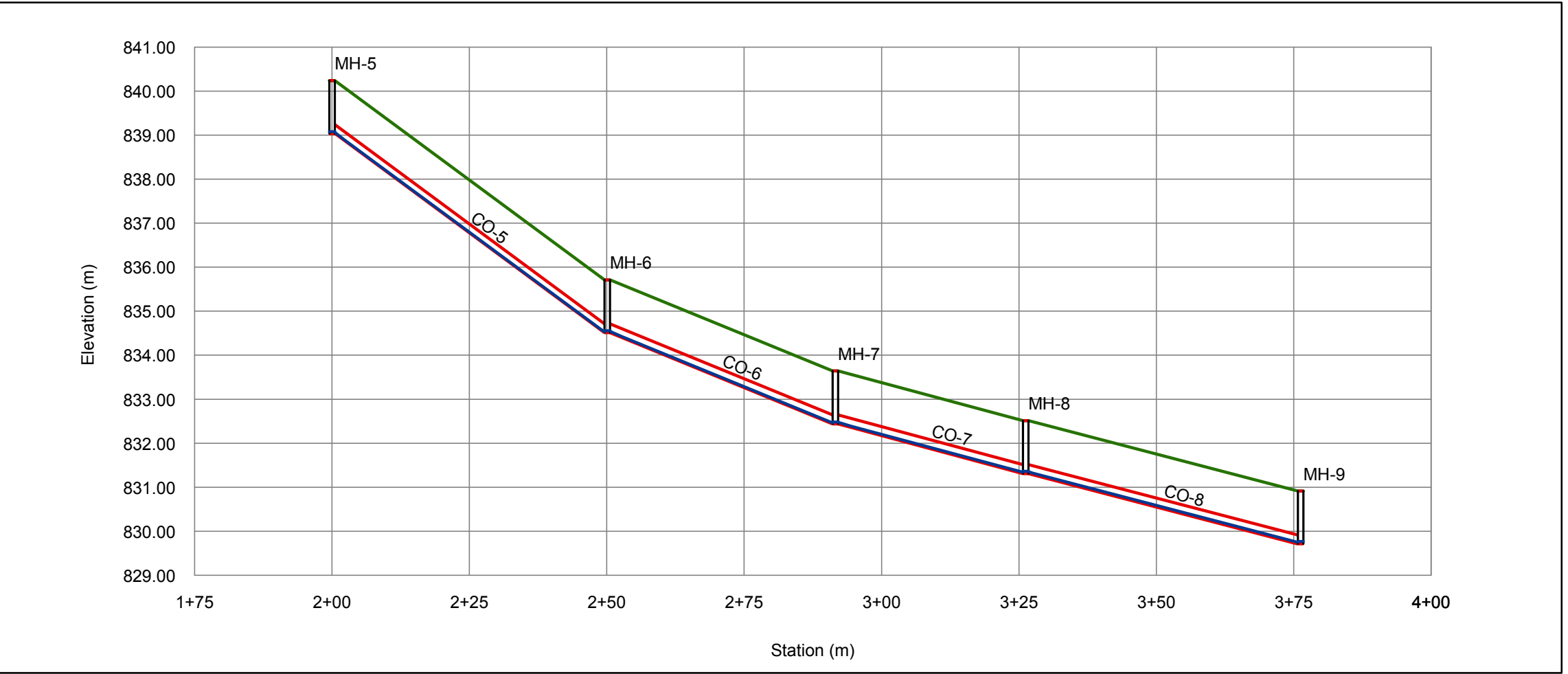
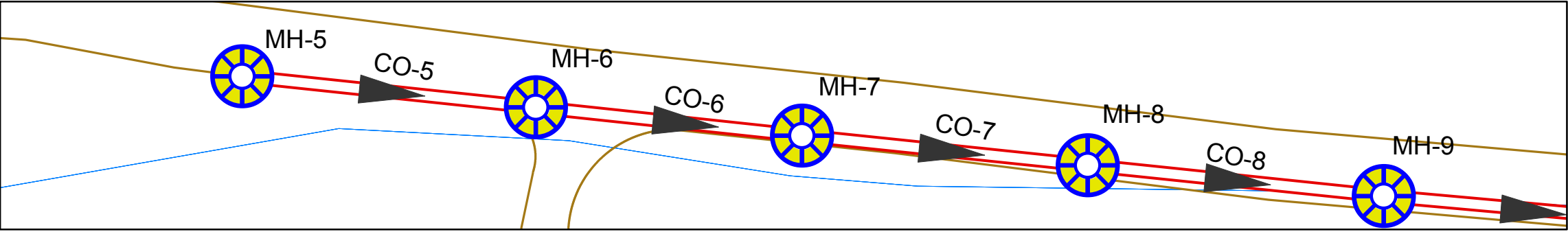
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

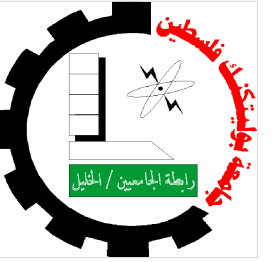
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**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

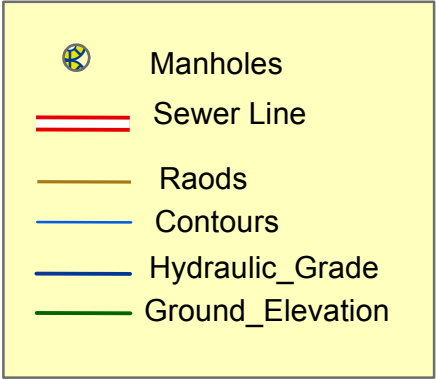
**Figure Number (C6 -2)**



| Point Number             | 5      | 6      | 7      | 8      | 9      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-5   | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 2+00   | 2+50   | 2+92   | 3+26   | 3+76   |
| Ground Elevation(m)      | 840.24 | 835.71 | 833.64 | 832.51 | 830.91 |
| Invert Elevation(m)      | 839.04 | 834.51 | 832.44 | 831.31 | 829.71 |
| Depth Of Manholes(m)     | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50.1   | 41.5   | 34.6   | 50.00  |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 9.04   | 4.99   | 3.27   | 3.20   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 9 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

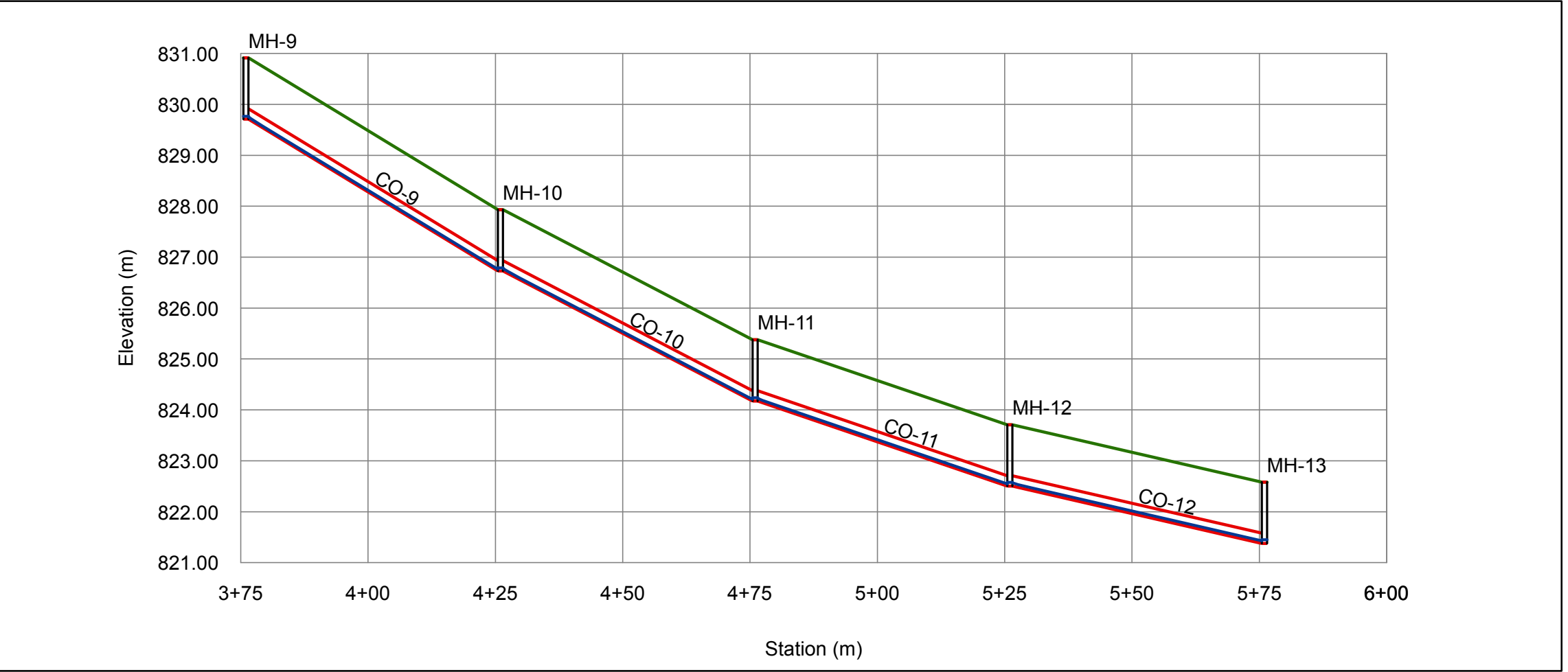
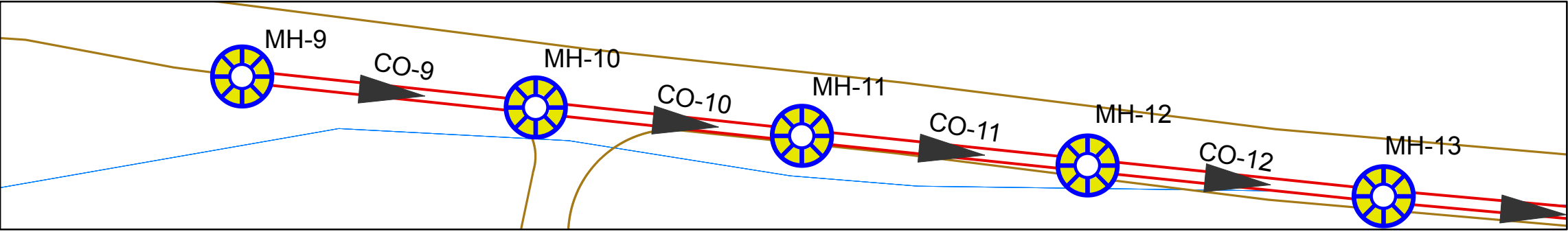
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

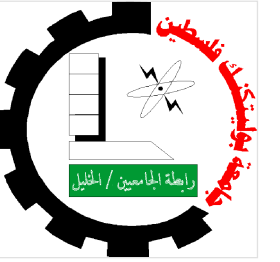
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 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

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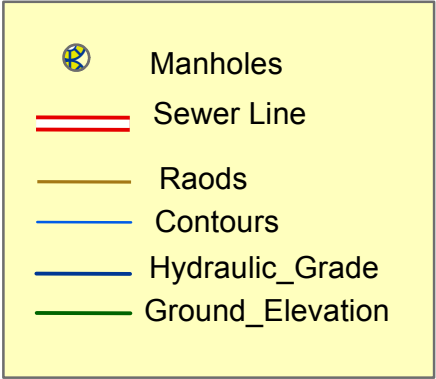
**Page ( 26 )**



| Point Number             | 9      | 10     | 11     | 12     | 13     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-9   | MH-10  | MH-11  | MH-12  | MH-13  |
| Station                  | 3+76   | 4+26   | 4+76   | 5+26   | 5+76   |
| Ground Elevation         | 830.91 | 827.93 | 825.38 | 823.71 | 822.58 |
| Invert Elevation         | 829.71 | 826.73 | 824.17 | 822.5  | 821.38 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.21   | 1.21   | 1.2    |
| Distance Of Manholes (m) |        | 50.00  | 50.00  | 50.00  | 50.00  |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 5.96   | 5.12   | 3.34   | 2.24   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 13 To Manholes 17)**

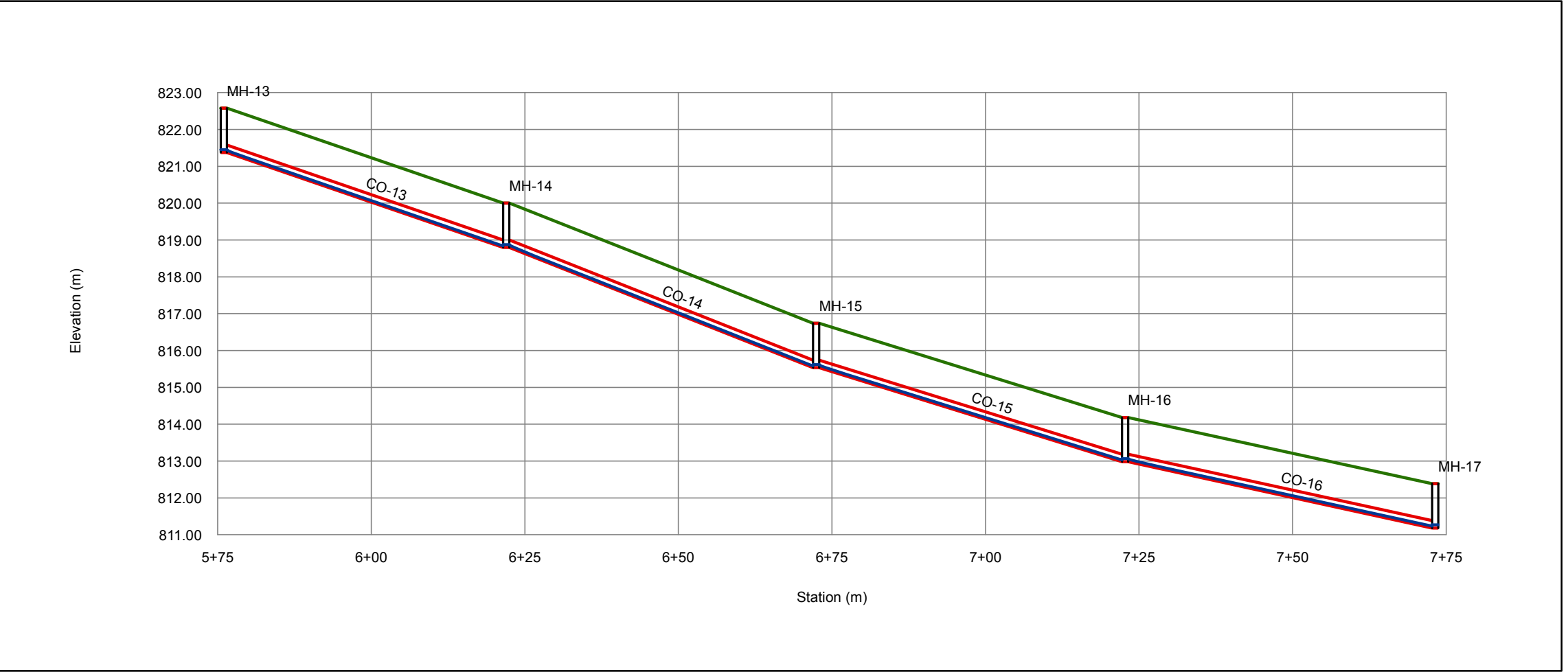
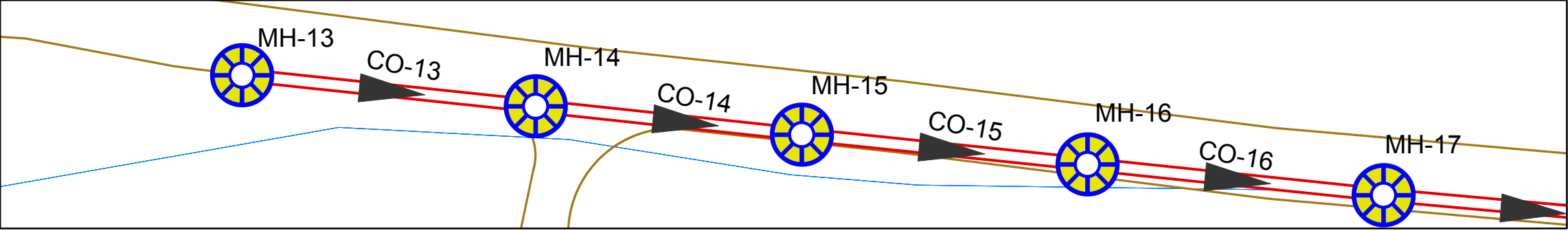
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

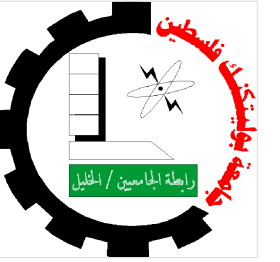
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**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

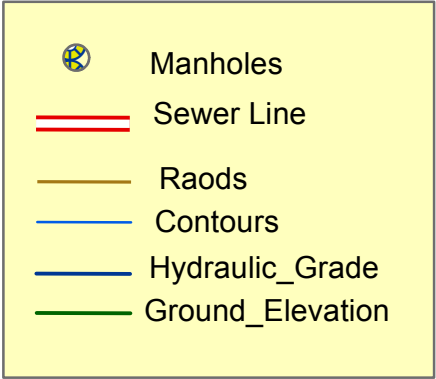
**Figure Number (C6 -4)**  
**Page ( 27 )**



| Point Number             | 13     | 14    | 15     | 16     | 17     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-13  | MH-14 | MH-15  | MH-16  | MH-17  |
| Station                  | 5+76   | 6+22  | 6+73   | 7+23   | 7+74   |
| Ground Elevation         | 822.58 | 820   | 816.74 | 814.18 | 812.38 |
| Invert Elevation         | 821.38 | 818.8 | 815.54 | 812.98 | 811.18 |
| Depth Of Manholes        | 1.2    | 1.2   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 46    | 50     | 50     | 50.5   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 5.61  | 6.52   | 5.12   | 3.56   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 17 To Manholes 21)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

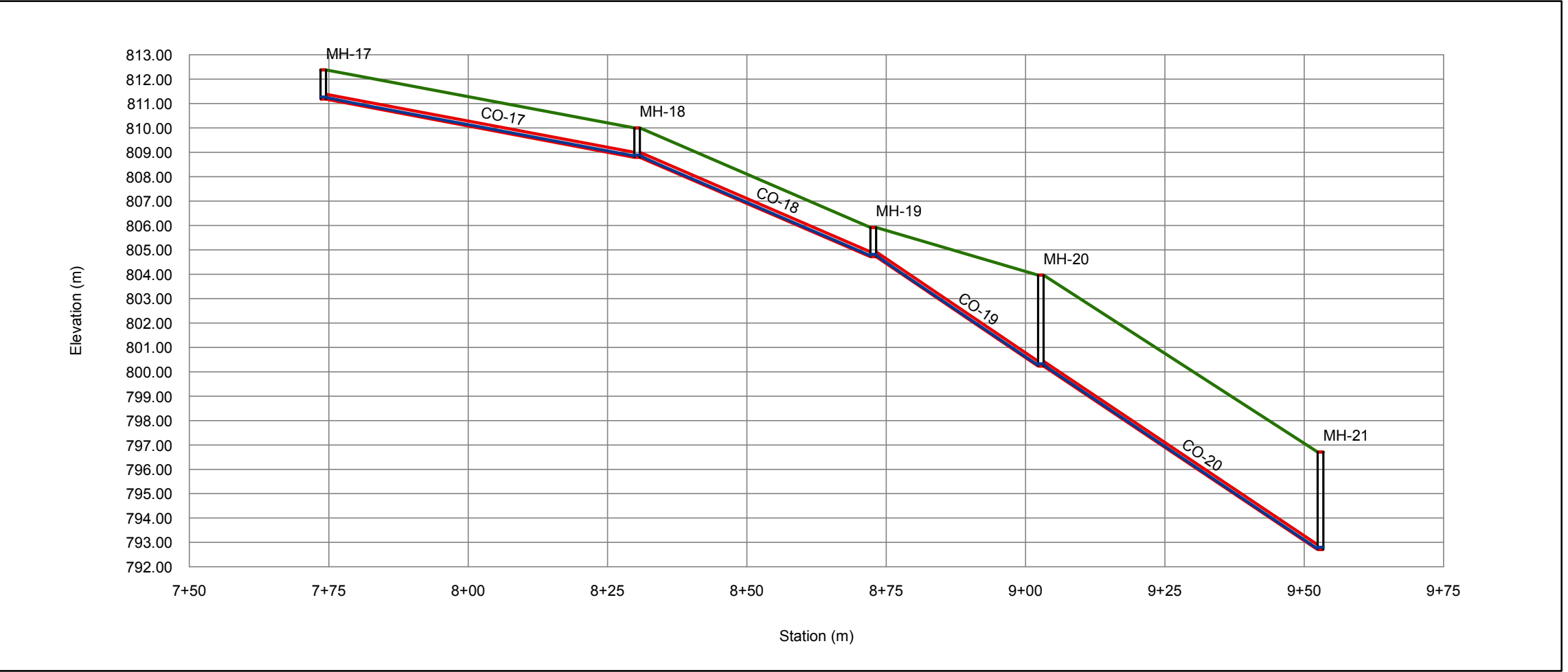
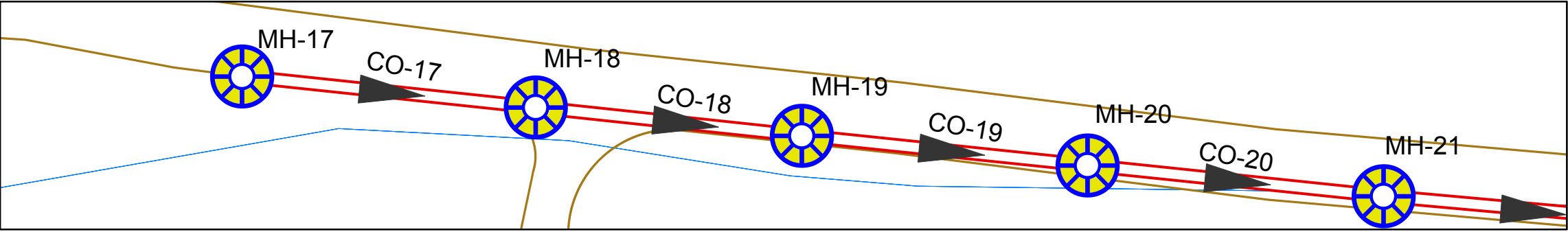
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C6 -5)**

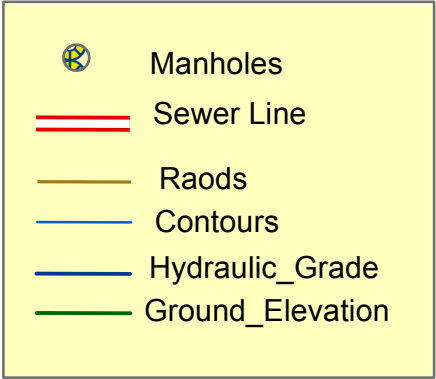
**Page ( 28 )**



| Point Number             | 17     | 18    | 19     | 20     | 21     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-17  | MH-18 | MH-19  | MH-20  | MH-21  |
| Station                  | 7+74   | 8+30  | 8+72   | 9+02   | 9+53   |
| Ground Elevation         | 812.38 | 810   | 805.92 | 803.96 | 796.71 |
| Invert Elevation         | 811.18 | 808.8 | 804.72 | 800.23 | 792.7  |
| Depth Of Manholes        | 1.2    | 1.2   | 1.2    | 3.73   | 4.01   |
| Distance Of Manholes (m) |        | 50.3  | 42.4   | 30.1   | 50.2   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 4.73  | 9.62   | 14.92  | 15.00  |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 21 To Manholes 25)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

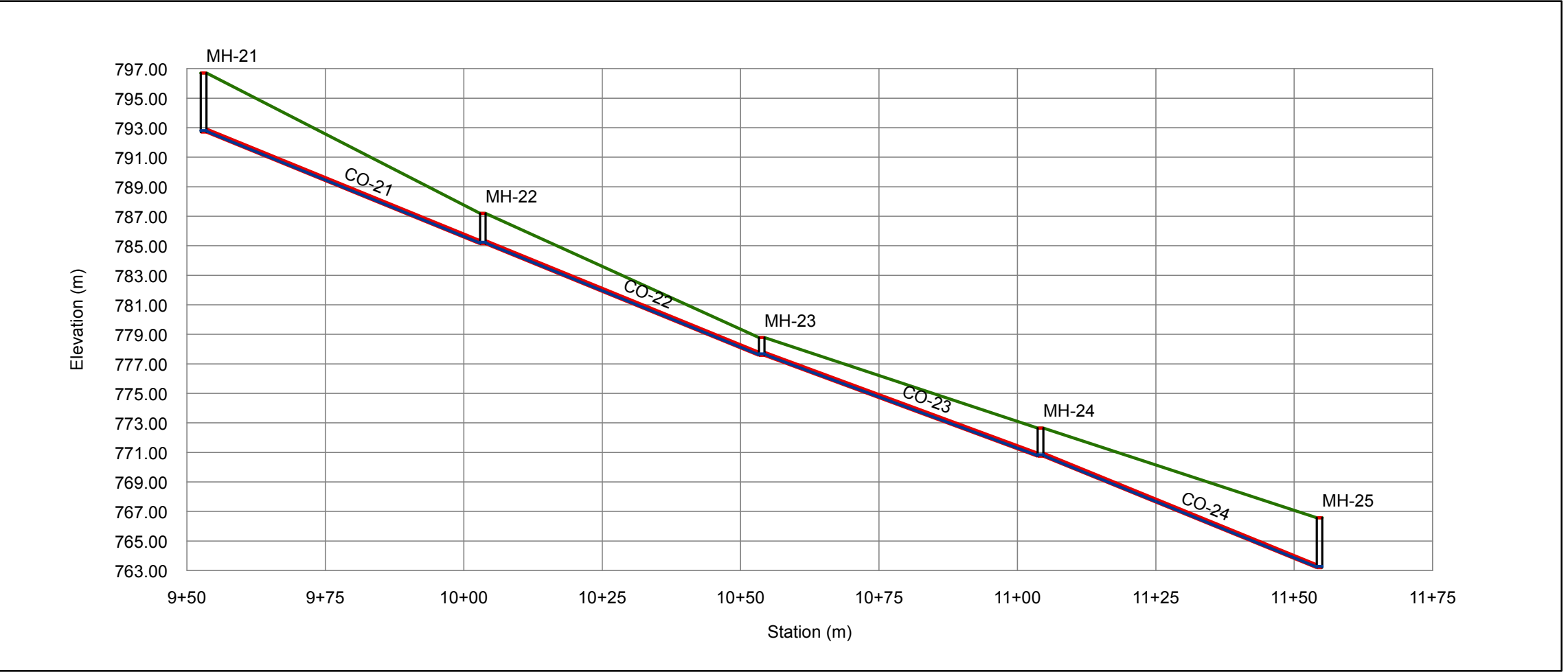
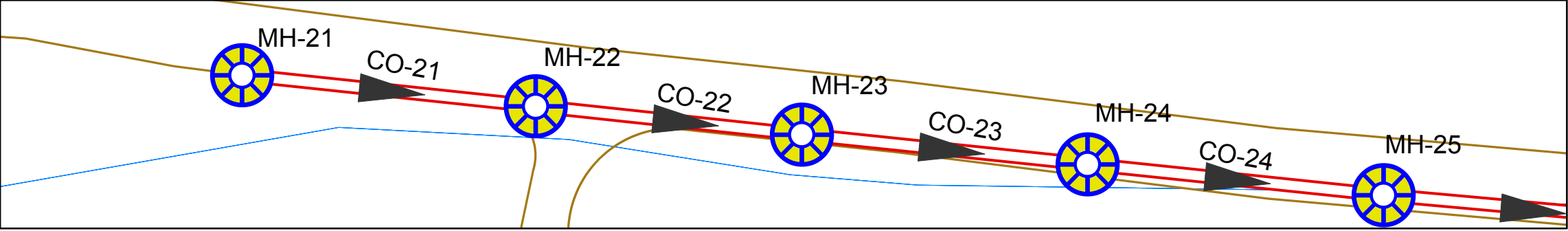
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

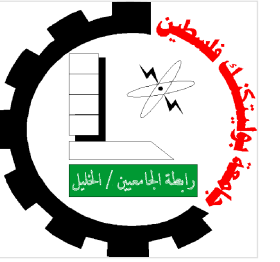
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

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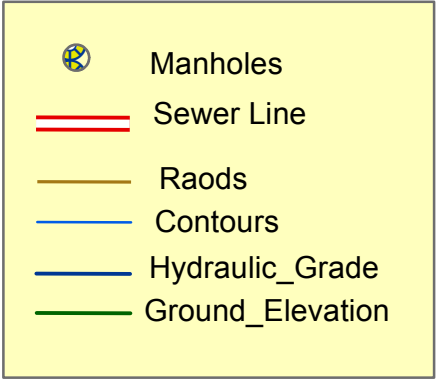
**Page ( 29 )**



| Point Number             | 21     | 22     | 23     | 24     | 25     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-21  | MH-22  | MH-23  | MH-24  | MH-25  |
| Station                  | 9+53   | 10+03  | 10+53  | 11+04  | 11+54  |
| Ground Elevation         | 796.71 | 787.18 | 778.78 | 772.65 | 766.58 |
| Invert Elevation         | 792.7  | 785.14 | 777.58 | 770.75 | 763.19 |
| Depth Of Manholes        | 4.01   | 2.04   | 1.2    | 1.9    | 3.39   |
| Distance Of Manholes (m) | 50.2   | 50.4   | 50.20  | 50.4   | 50.4   |
| Pipe Diameter (inch)     | 8      | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 15.00  | 15.06  | 13.55  | 15.00  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

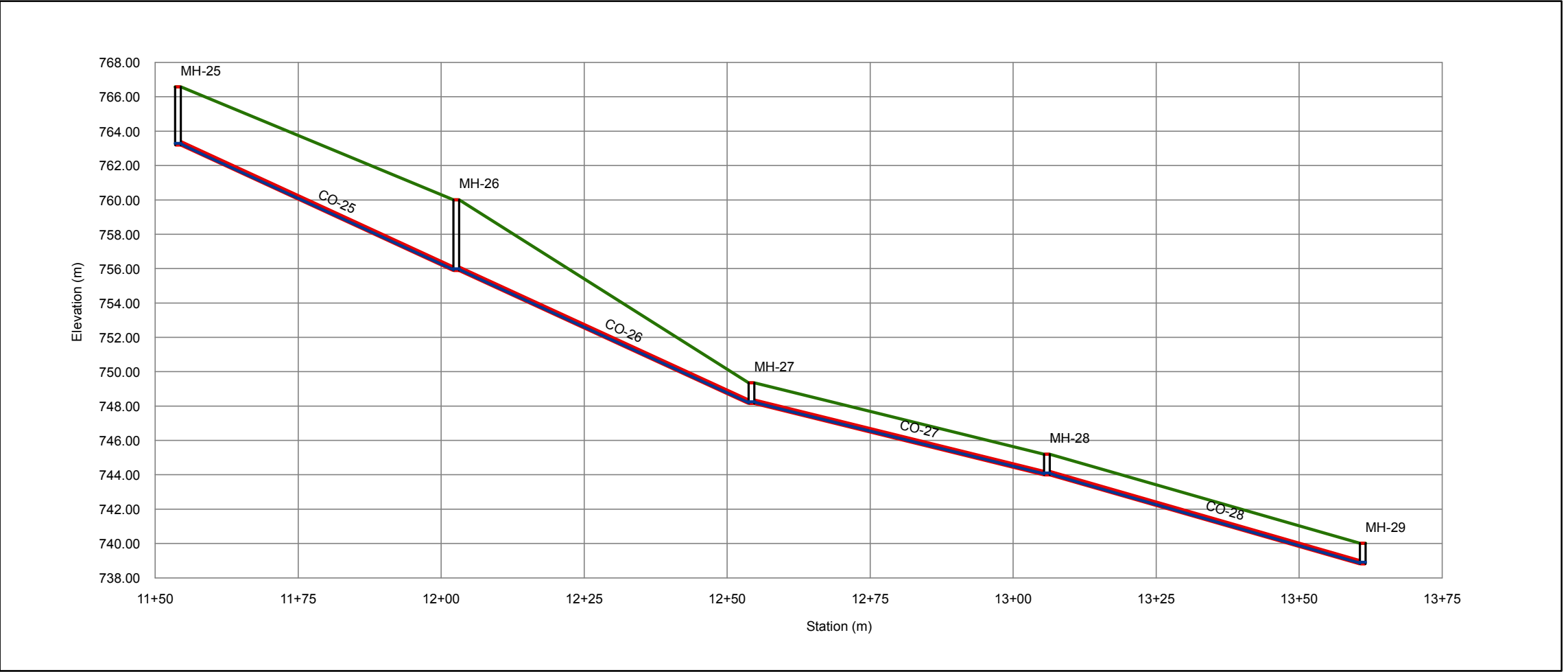
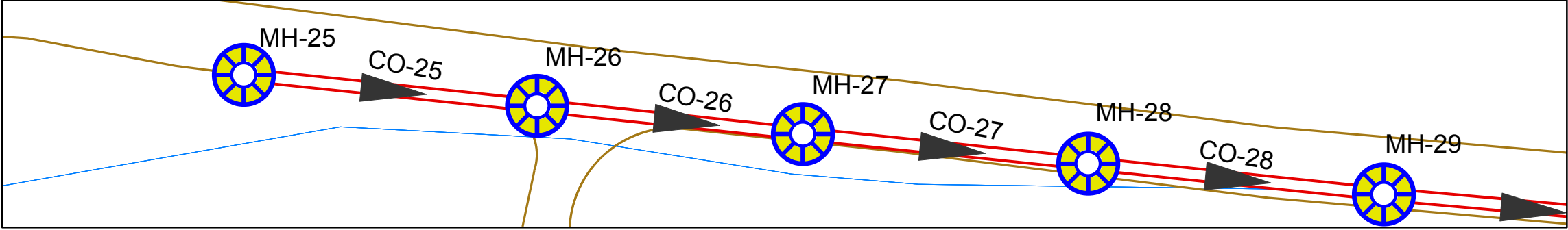
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C6 -7)**

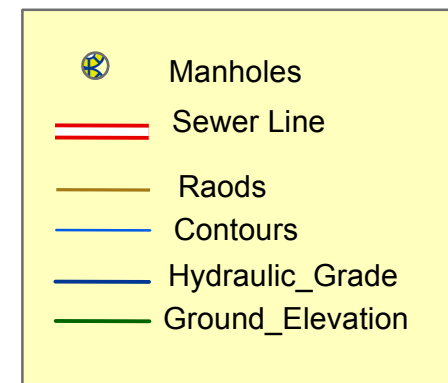
**Page ( 30 )**



| Point Number             | 25     | 26     | 27     | 28    | 29     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-25  | MH-26  | MH-27  | MH-28 | MH-29  |
| Station                  | 11+54  | 12+03  | 12+54  | 13+06 | 13+61  |
| Ground Elevation         | 766.58 | 760.01 | 749.35 | 745.2 | 740.01 |
| Invert Elevation         | 763.19 | 755.89 | 748.15 | 744   | 738.81 |
| Depth Of Manholes        | 3.39   | 4.12   | 1.2    | 1.2   | 1.2    |
| Distance Of Manholes (m) |        | 48.7   | 51.6   | 51.6  | 50.2   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 14.99  | 15.00  | 8.04  | 10.34  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 29 To Manholes 33)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

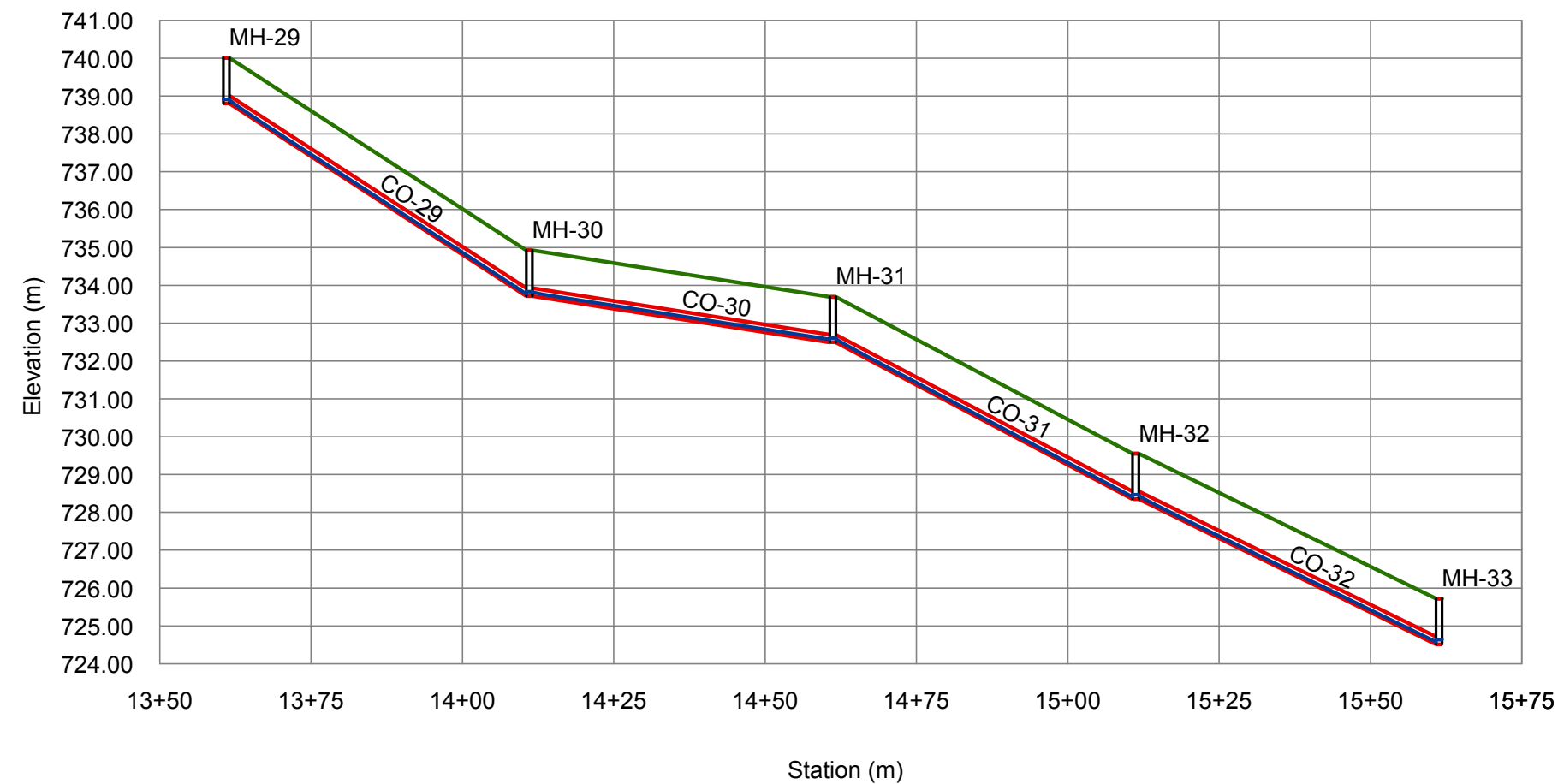
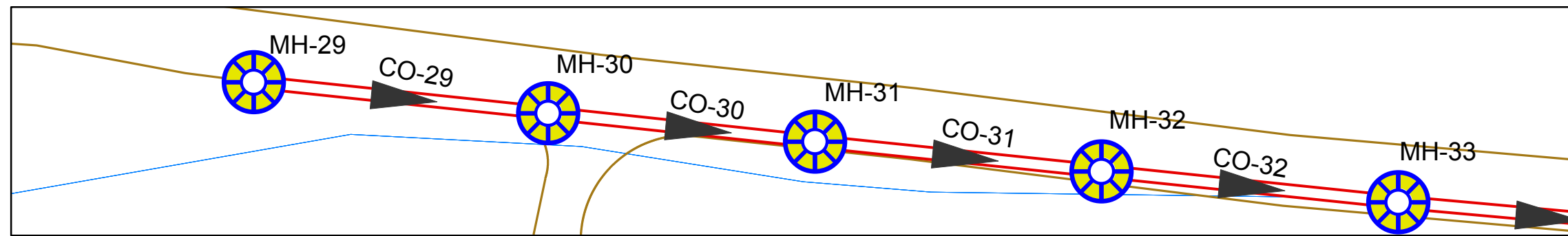
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

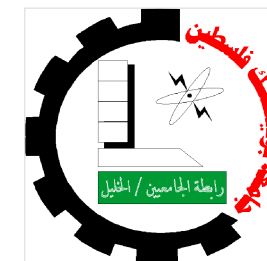
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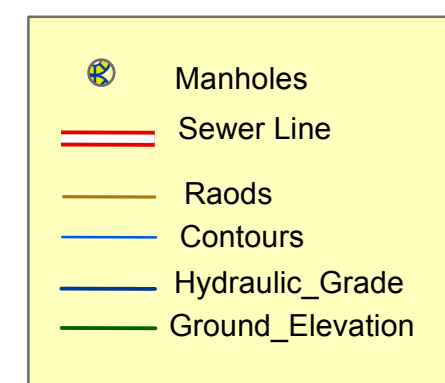
**Page ( 31 )**



| Point Number             | 29     | 30     | 31     | 32     | 33     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-29  | MH-30  | MH-31  | MH-32  | MH-33  |
| Station                  | 13+61  | 14+11  | 14+61  | 15+11  | 15+62  |
| Ground Elevation         | 740.01 | 734.92 | 733.7  | 729.55 | 725.72 |
| Invert Elevation         | 738.81 | 733.72 | 732.49 | 728.35 | 724.52 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.21   | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50.1   | 50.1   | 50.00  | 50.1   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 10.16  | 2.46   | 8.28   | 7.64   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

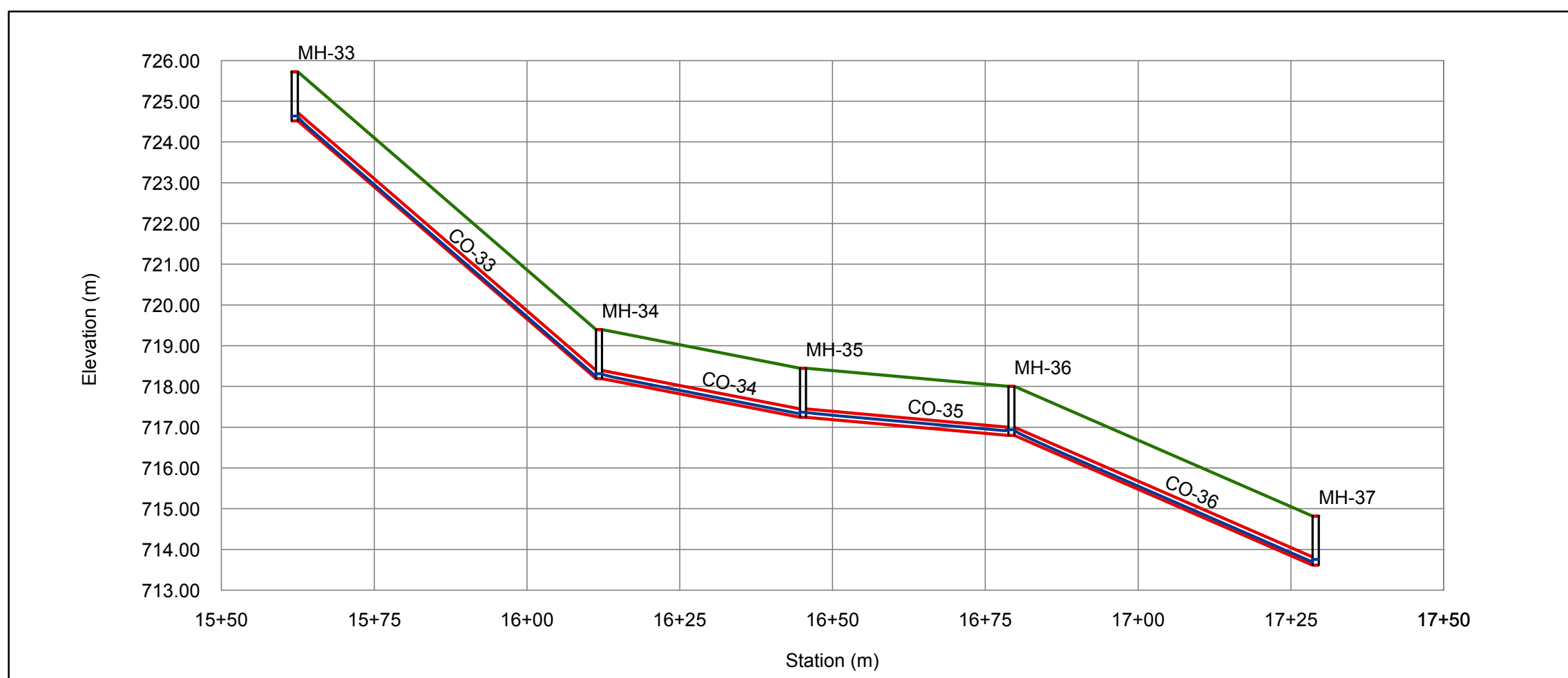
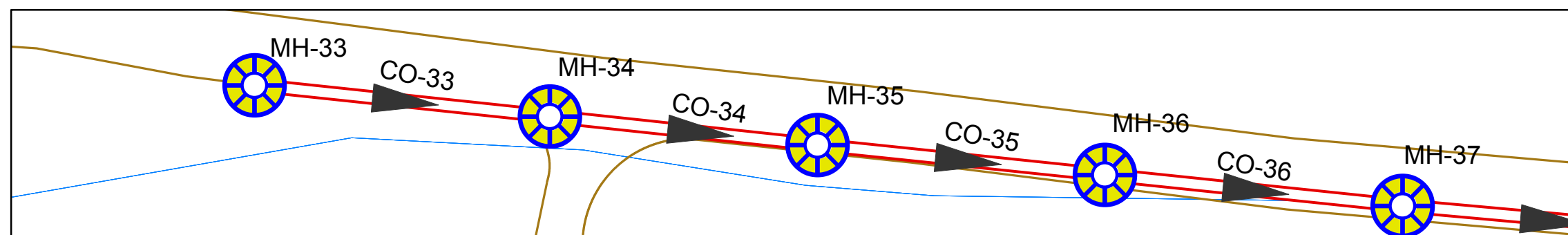
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C6 -9)**

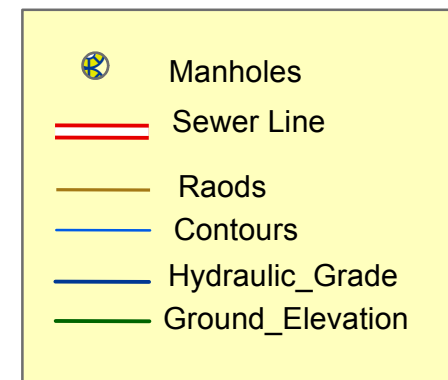
**Page ( 32 )**



| Point Number             | 33     | 34     | 35     | 36    | 37     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-33  | MH-34  | MH-35  | MH-36 | MH-37  |
| Station                  | 15+62  | 16+11  | 16+45  | 16+79 | 17+29  |
| Ground Elevation         | 725.72 | 719.39 | 718.45 | 718   | 714.81 |
| Invert Elevation         | 724.52 | 718.19 | 717.24 | 716.8 | 713.61 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.21   | 1.2   | 1.2    |
| Distance Of Manholes (m) |        | 49.8   | 33.4   | 34.10 | 49.8   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 12.71  | 2.84   | 1.29  | 6.41   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



**Palestine Polytechnic University**  
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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main A2)**  
**(From Manholes 37 To Outfall 1)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

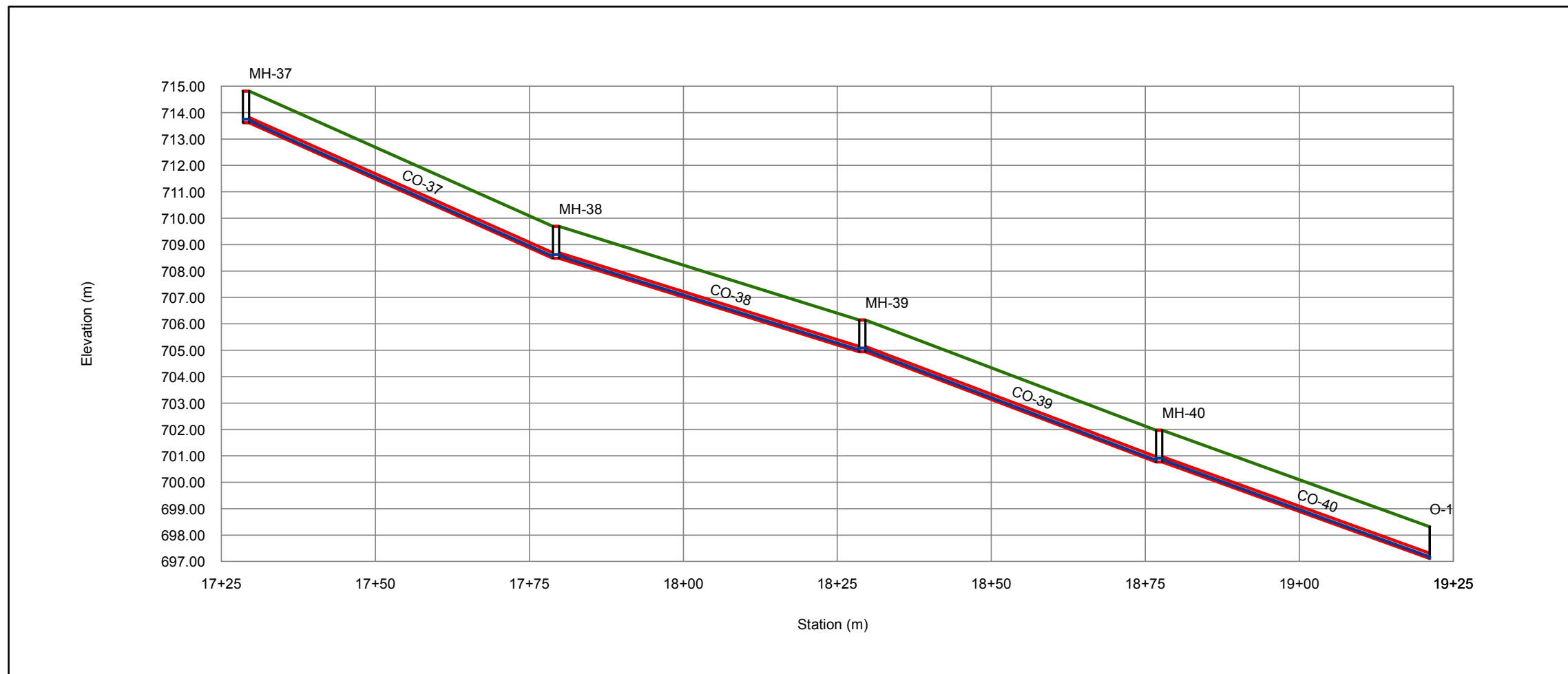
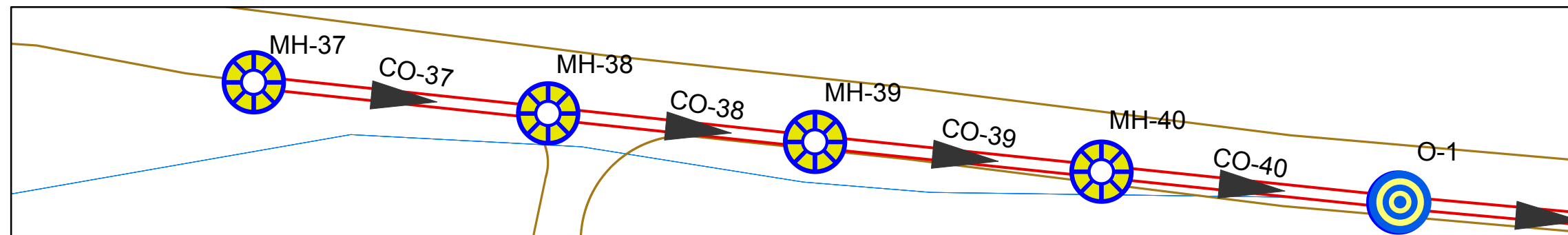
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C6 -10)**

**Page ( 33 )**

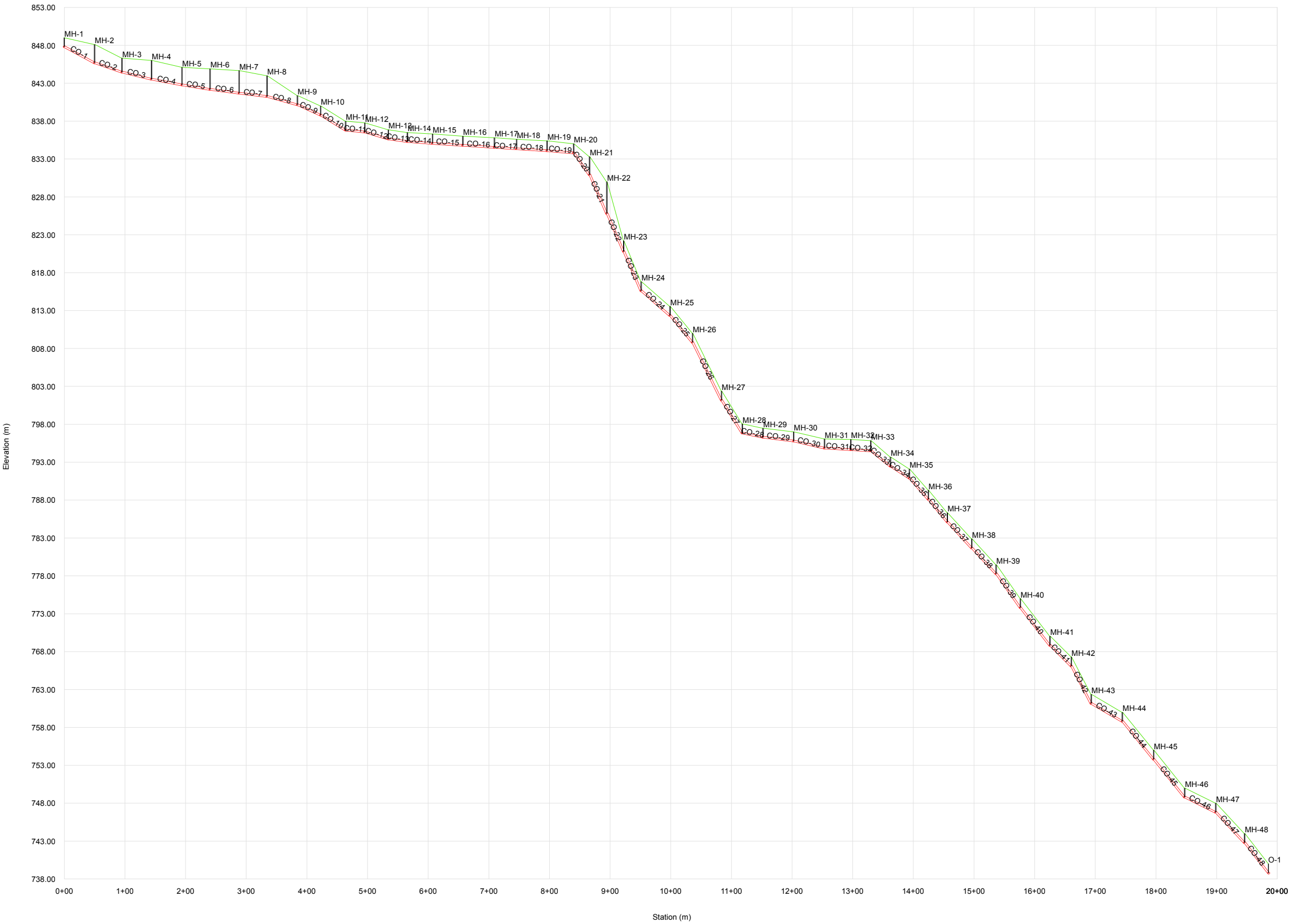


| Point Number             | 37     | 38     | 39     | 40     | 41     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40  | O-1    |
| Station                  | 17+29  | 17+79  | 18+29  | 18+77  | 19+21  |
| Ground Elevation         | 714.81 | 709.69 | 706.14 | 701.97 | 698.31 |
| Invert Elevation         | 713.61 | 708.48 | 704.94 | 700.77 | 697.11 |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50.3   | 49.8   | 48.2   | 43.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 10.20  | 7.11   | 8.65   | 8.34   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |

# Waste Water Profile ,Sewer B



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College of Engineering and  
Technology



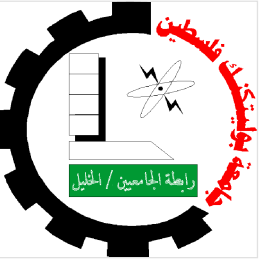
Project Title :  
Design Of Waste Wate Collection  
System For Dora City

Created by :  
Mohammed Jebreen  
Noor Dodin

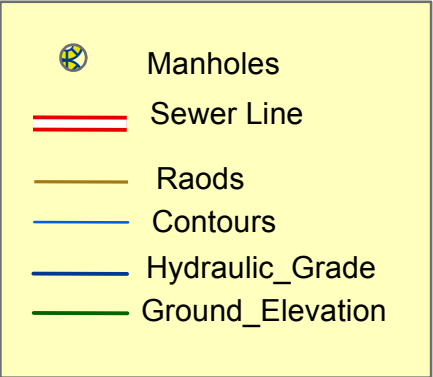
Project Supervisor :  
Eng . Samah Al-Jabari

Coordinate System :Palestine\_1923\_Palestine\_Grid  
Projection: Cassini  
Linear Unit: Meter  
Data Source : Dora Municipality

Figure Number ( C7 )



**Palestine Polytechnic University**  
**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Wate Collection System For Dora City**

**Map Title :**  
**Sewer Line (Main B)**  
**(From Manholes 1 To Manholes 5)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

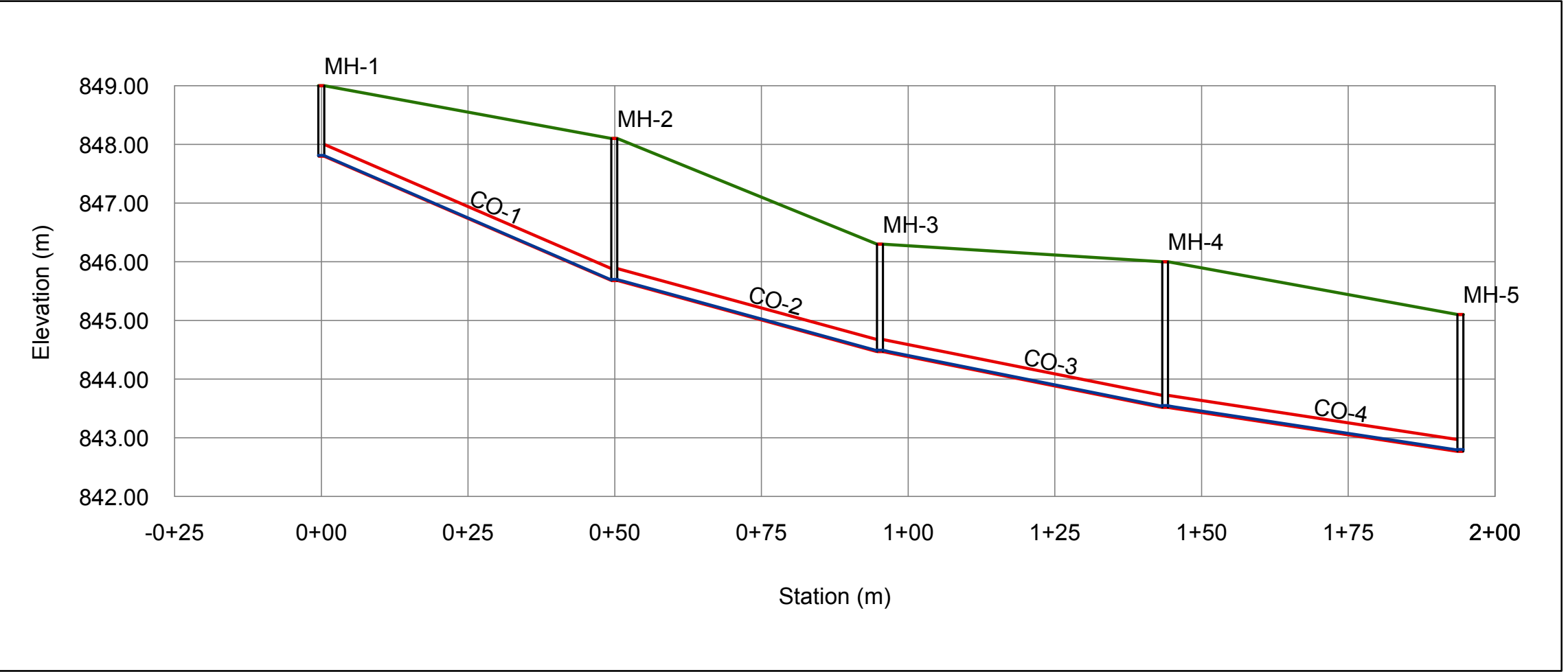
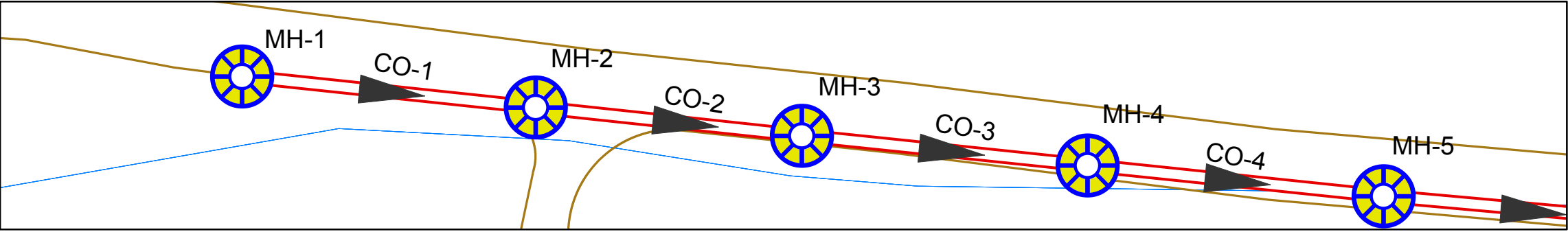
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

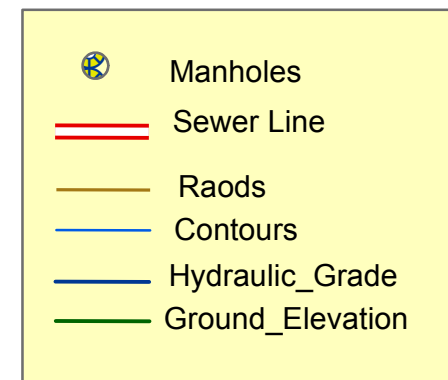
**Figure Number (C7 -1)**



| Point Number             | 1     | 2      | 3      | 4      | 5      |
|--------------------------|-------|--------|--------|--------|--------|
| Manhole Number           | MH-1  | MH-2   | MH-3   | MH-4   | MH-5   |
| Station                  | 00+00 | 0+50   | 0+95   | 1+44   | 1+94   |
| Ground Elevation         | 849   | 848.1  | 846.3  | 846    | 845.1  |
| Invert Elevation         | 847.8 | 845.68 | 844.47 | 843.52 | 842.77 |
| Depth Of Manholes        | 1.2   | 2.42   | 1.83   | 2.48   | 2.33   |
| Distance Of Manholes (m) |       | 49.9   | 45.3   | 48.6   | 50.3   |
| Pipe Diameter (inch)     |       | 8      | 8      | 8      | 8      |
| Pipe Slope %             |       | 4.25   | 2.67   | 1.95   | 1.49   |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main B)**  
**(From Manholes 5 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

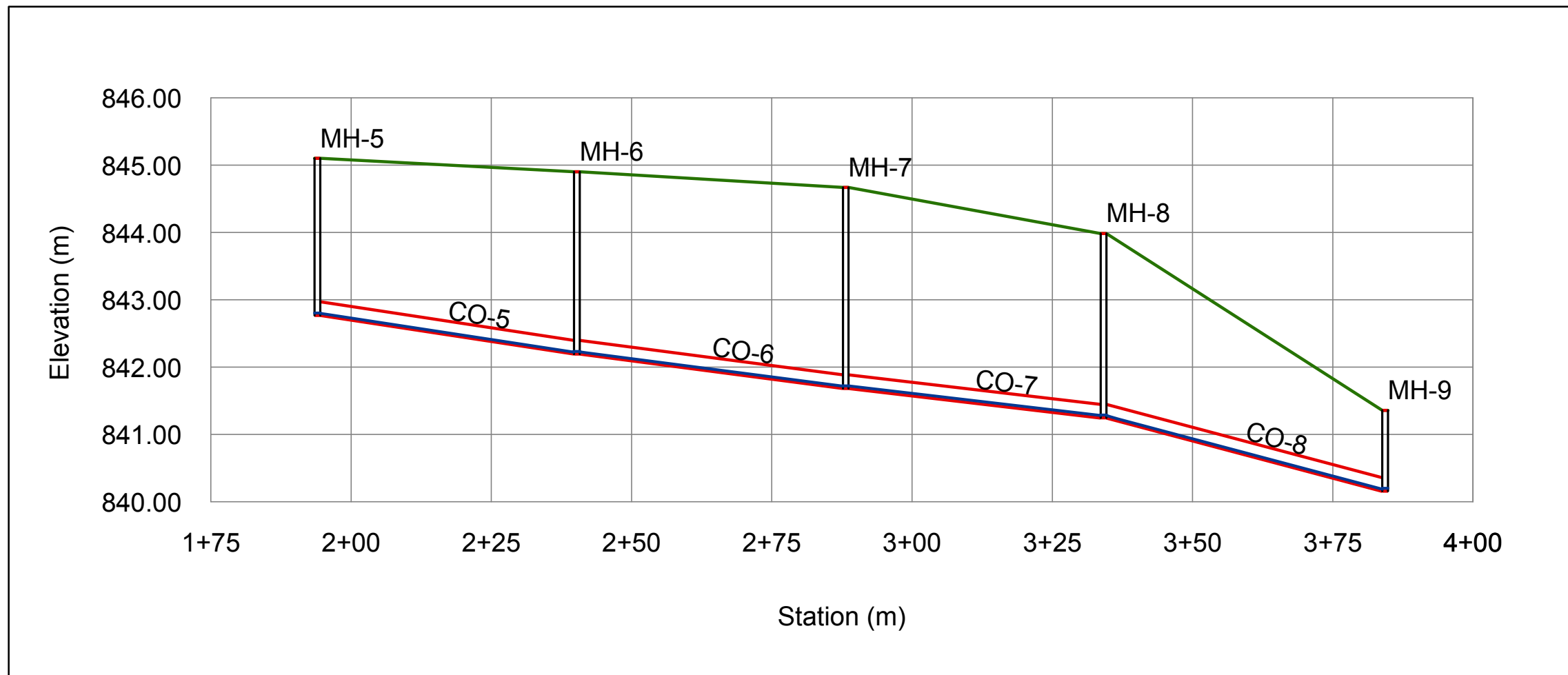
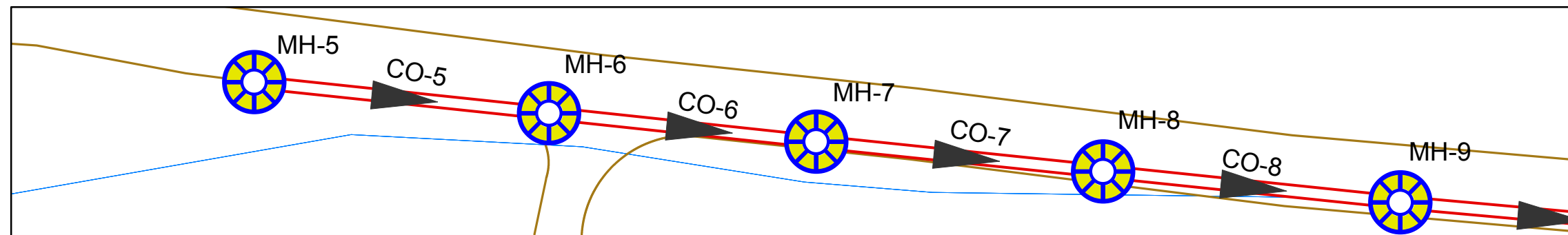
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

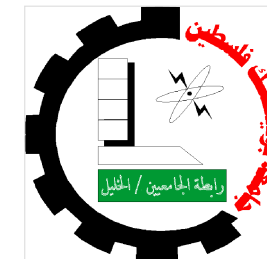
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 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C7 -2)**

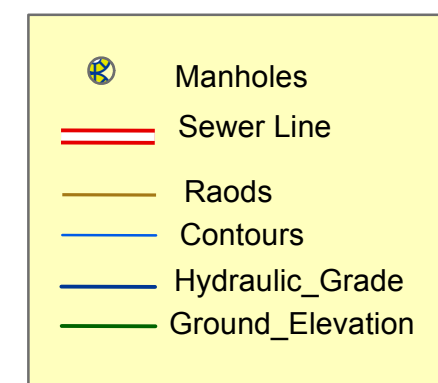
**Page ( 36 )**



| Point Number             | 5      | 6      | 7      | 8      | 9      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-5   | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 1+94   | 2+40   | 2+88   | 3+34   | 3+84   |
| Ground Elevation(m)      | 845.1  | 844.9  | 844.67 | 843.98 | 841.36 |
| Invert Elevation(m)      | 842.77 | 842.19 | 841.68 | 841.24 | 840.16 |
| Depth Of Manholes(m)     | 2.33   | 2.71   | 2.99   | 2.74   | 1.2    |
| Distance Of Manholes (m) |        | 46.2   | 47.9   | 46     | 50.2   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 1.26   | 1.06   | 0.96   | 2.15   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 9 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

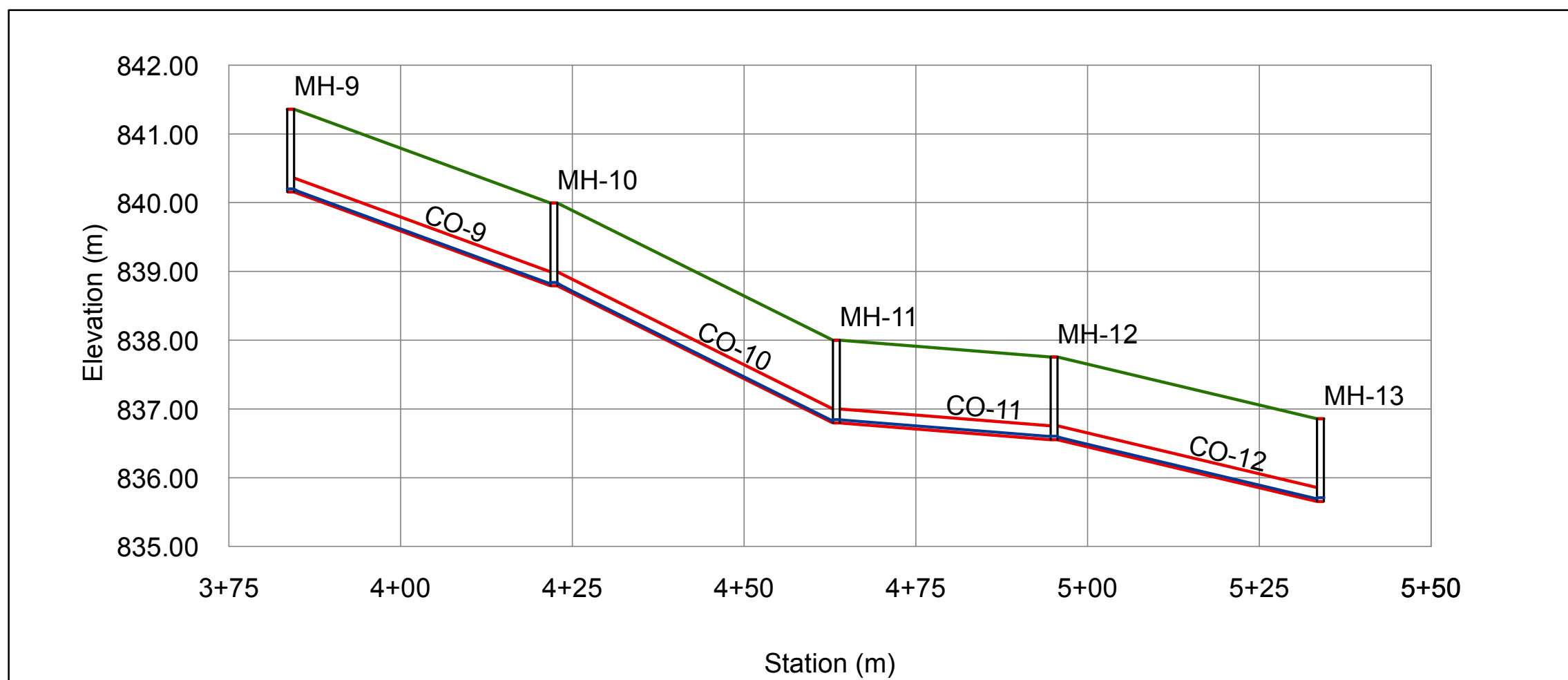
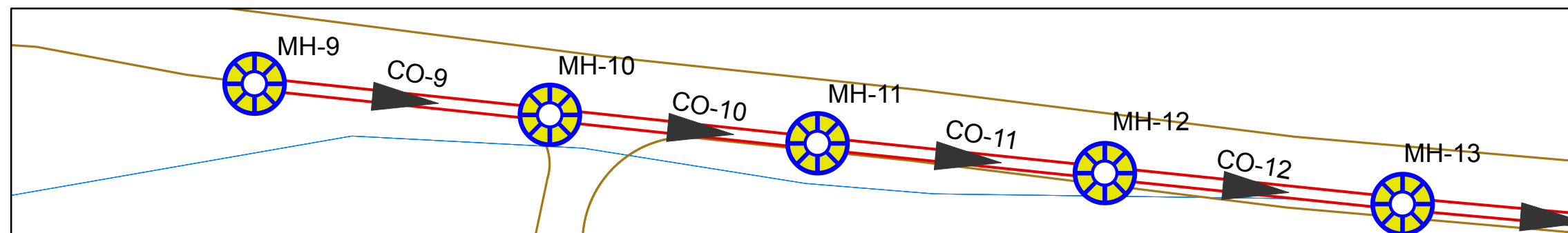
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

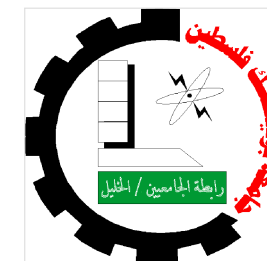
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

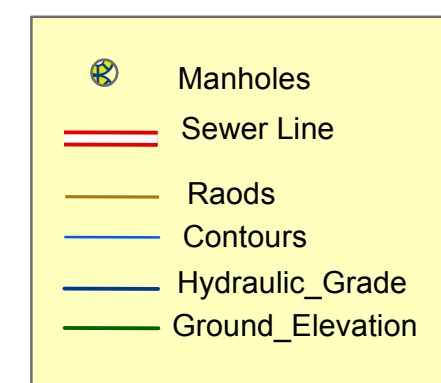
**Figure Number (C7 -3)**



| Point Number             | 9      | 10     | 11    | 12     | 13     |
|--------------------------|--------|--------|-------|--------|--------|
| Manhole Number           | MH-9   | MH-10  | MH-11 | MH-12  | MH-13  |
| Station                  | 3+84   | 4+23   | 4+64  | 4+96   | 5+34   |
| Ground Elevation         | 841.36 | 839.99 | 838   | 837.75 | 836.86 |
| Invert Elevation         | 840.16 | 838.79 | 836.8 | 836.55 | 835.65 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.2   | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 38.3   | 41.1  | 31.7   | 38.8   |
| Pipe Diameter (inch)     |        | 8      | 8     | 8      | 8      |
| Pipe Slope %             |        | 3.58   | 4.84  | 0.79   | 2.32   |
| Type Of Surface          | PVC    | PVC    | PVC   | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 13 To Manholes 17)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

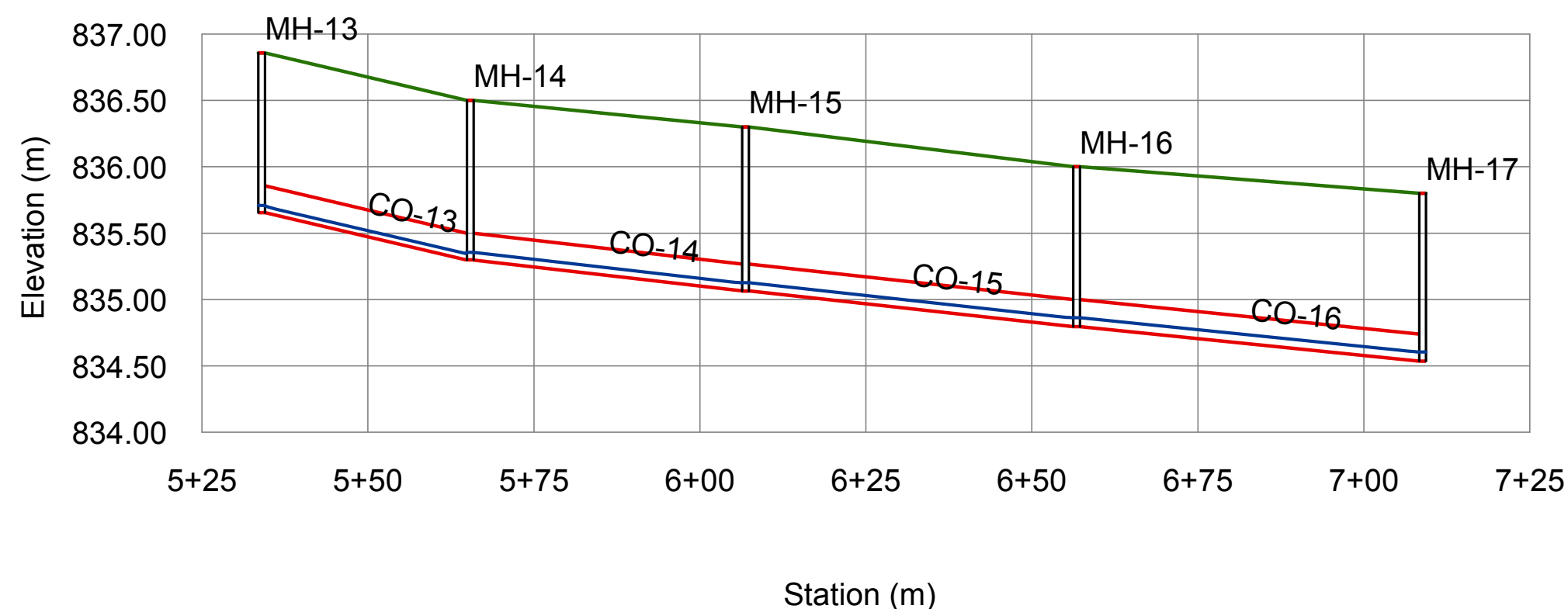
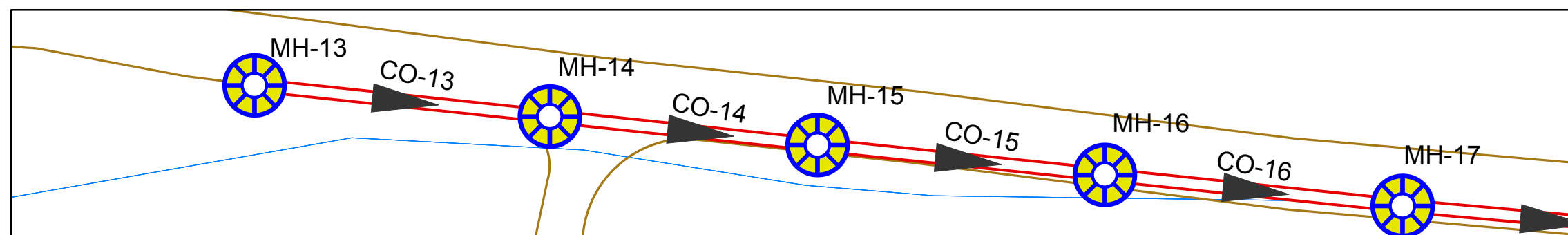
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Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers

Data Source : Dora Municipality

**Figure Number (C7 -4)**

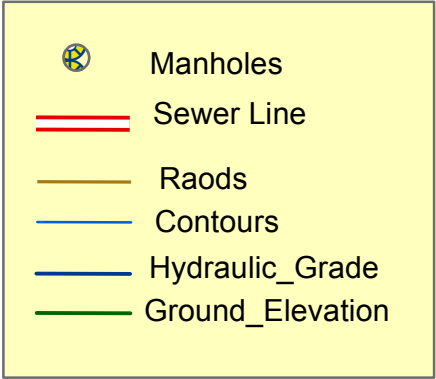
**Page ( 38 )**



| Point Number             | 13     | 14    | 15     | 16    | 17     |
|--------------------------|--------|-------|--------|-------|--------|
| Manhole Number           | MH-13  | MH-14 | MH-15  | MH-16 | MH-17  |
| Station                  | 5+34   | 5+66  | 6+07   | 6+57  | 7+09   |
| Ground Elevation         | 836.86 | 836.5 | 836.3  | 836   | 835.8  |
| Invert Elevation         | 835.65 | 835.3 | 835.06 | 834.8 | 834.54 |
| Depth Of Manholes        | 1.21   | 1.2   | 1.24   | 1.2   | 1.26   |
| Distance Of Manholes (m) |        | 31.4  | 41.5   | 49.9  | 51.1   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8     | 8      |
| Pipe Slope %             |        | 1.11  | 0.58   | 0.52  | 0.51   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC   | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 17 To Manholes 21)**

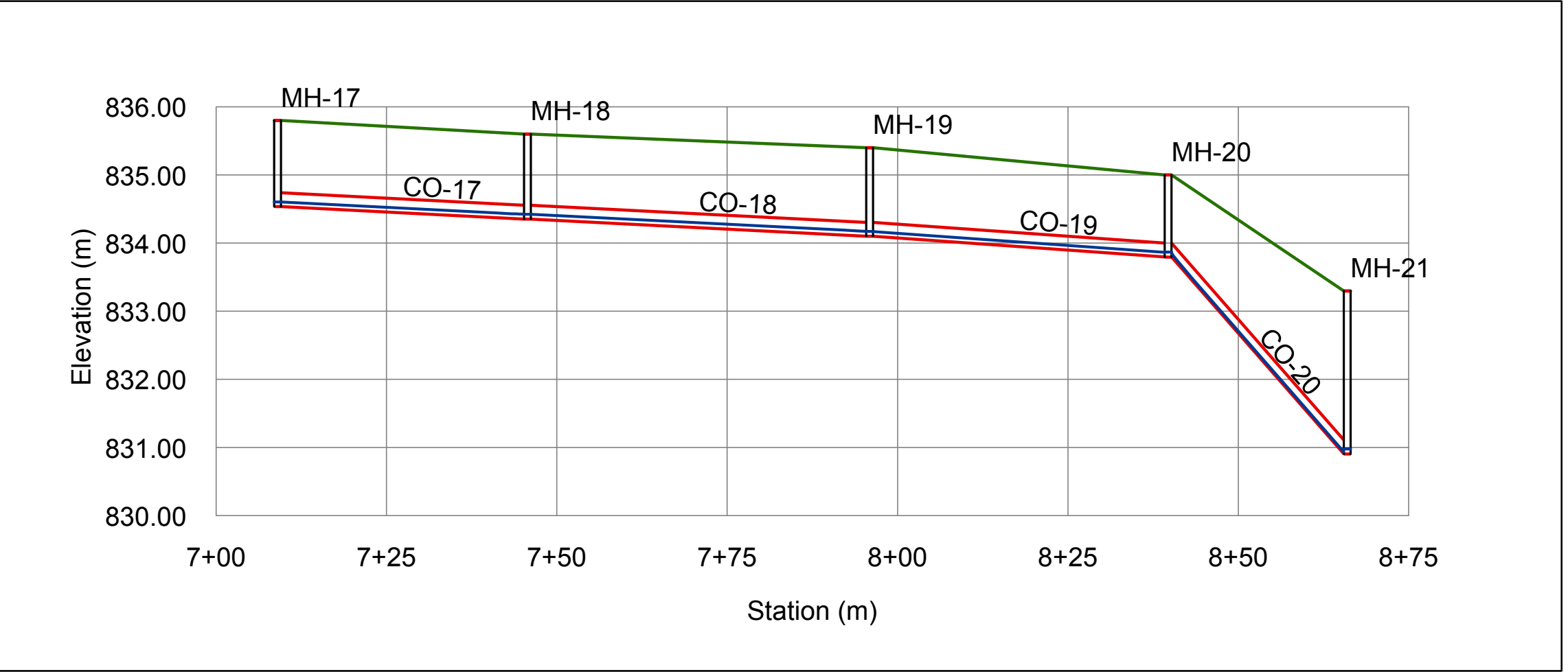
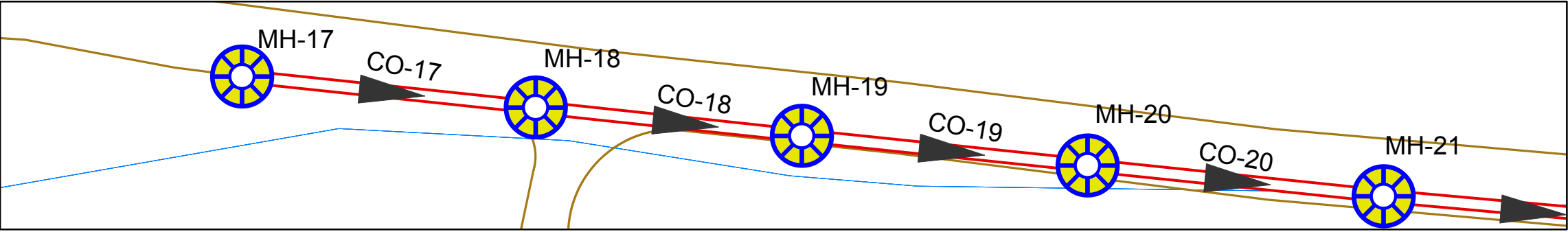
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

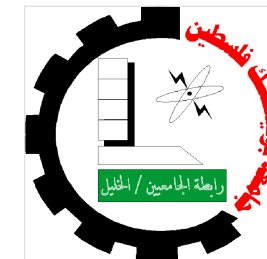
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Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

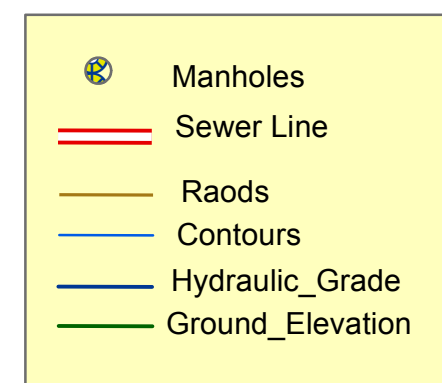
**Figure Number (C7 -5)**



| Point Number             | 17     | 18     | 19    | 20    | 21     |
|--------------------------|--------|--------|-------|-------|--------|
| Manhole Number           | MH-17  | MH-18  | MH-19 | MH-20 | MH-21  |
| Station                  | 7+09   | 7+46   | 7+96  | 8+40  | 8+66   |
| Ground Elevation         | 835.8  | 835.6  | 835.4 | 835   | 833.3  |
| Invert Elevation         | 834.54 | 834.35 | 834.1 | 833.8 | 830.91 |
| Depth Of Manholes        | 1.26   | 1.25   | 1.3   | 1.2   | 2.39   |
| Distance Of Manholes (m) |        | 36.7   | 50.2  | 43.8  | 26.3   |
| Pipe Diameter (inch)     |        | 8      | 8     | 8     | 8      |
| Pipe Slope %             |        | 0.52   | 0.50  | 0.68  | 10.99  |
| Type Of Surface          | PVC    | PVC    | PVC   | PVC   | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 21 To Manholes 25)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

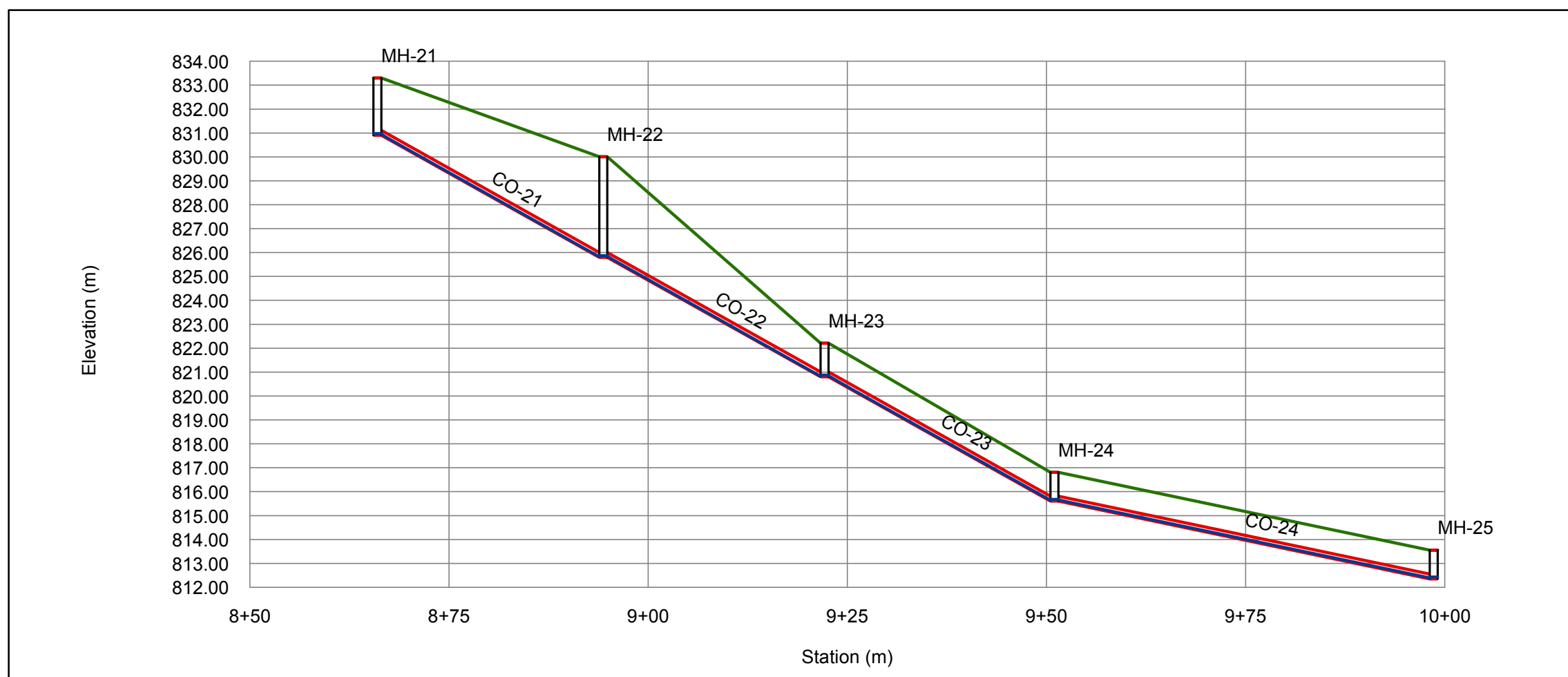
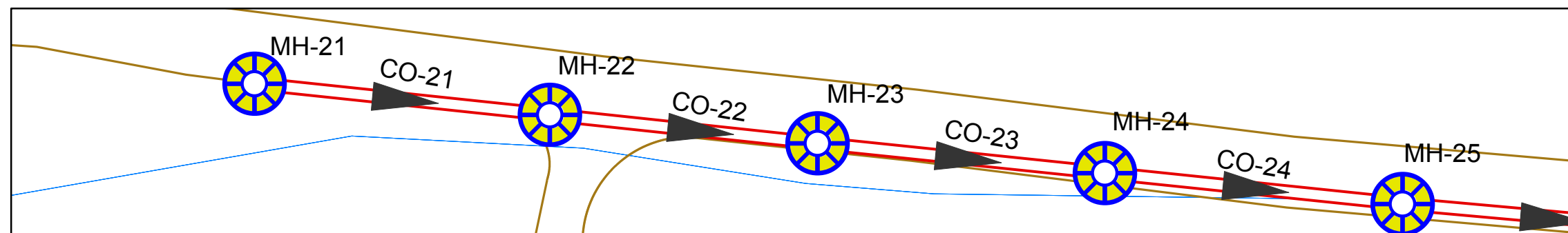
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Notes:  
1- All Pipe Diameter In inch  
2- All Pipe length In Metrs

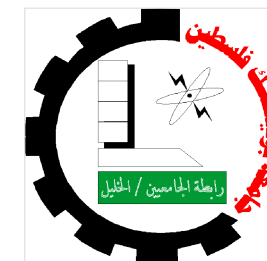
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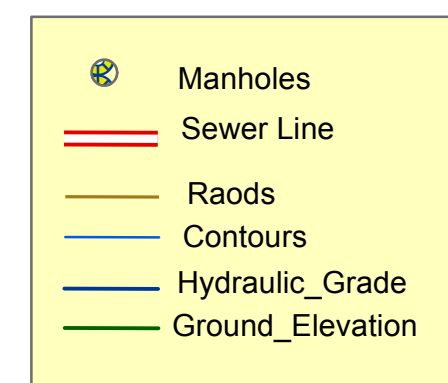
**Page ( 40 )**



| Point Number             | 21     | 22    | 23     | 24     | 25     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-21  | MH-22 | MH-23  | MH-24  | MH-25  |
| Station                  | 8+66   | 8+95  | 9+22   | 9+51   | 9+99   |
| Ground Elevation         | 833.3  | 830   | 822.21 | 816.81 | 813.56 |
| Invert Elevation         | 830.91 | 825.8 | 820.8  | 815.61 | 812.35 |
| Depth Of Manholes        | 2.39   | 4.2   | 1.41   | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 28.4  | 27.8   | 28.9   | 47.6   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 17.99 | 17.99  | 17.96  | 6.85   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

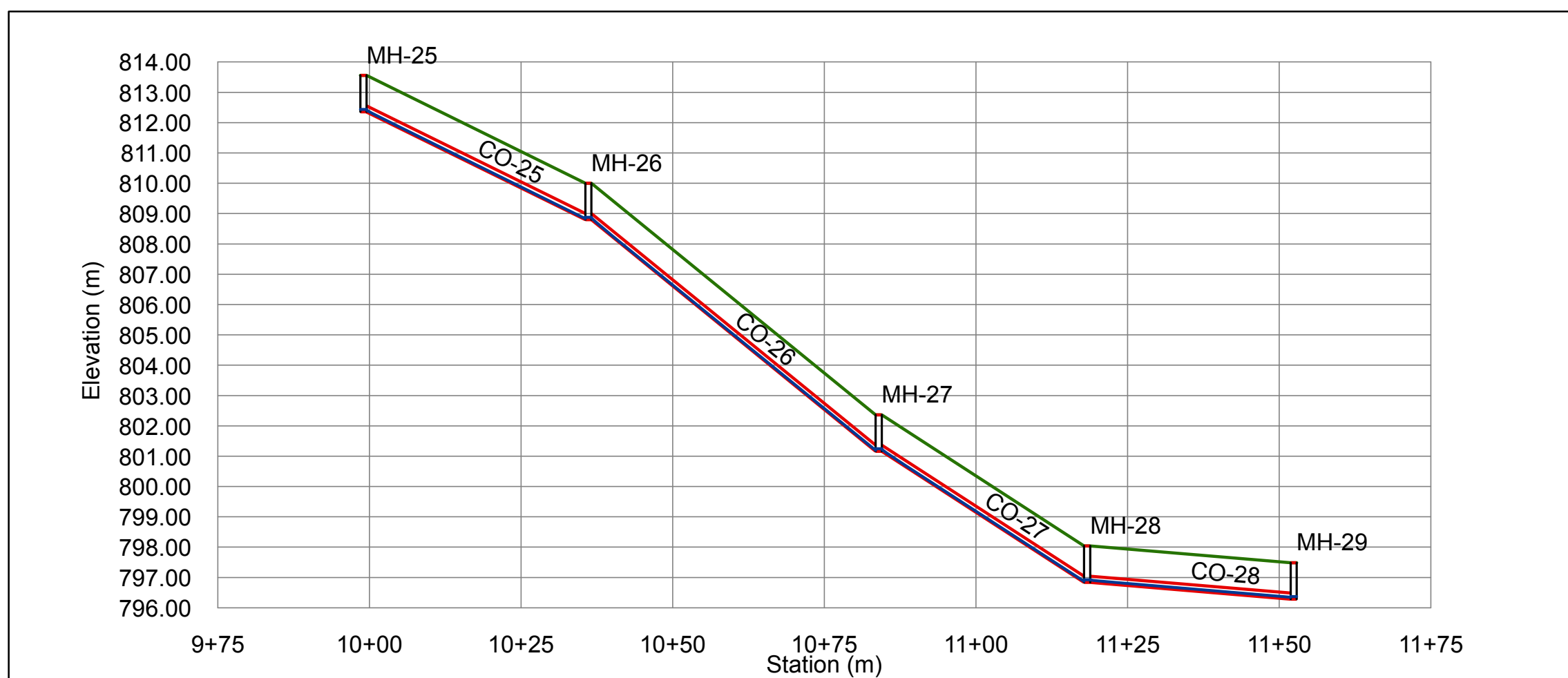
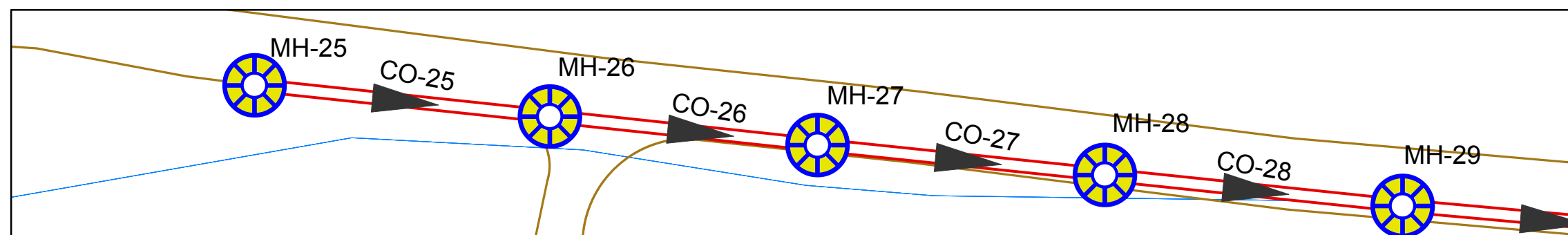
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**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metres

Data Source : Dora Municipality

**Figure Number (C7 -7)**

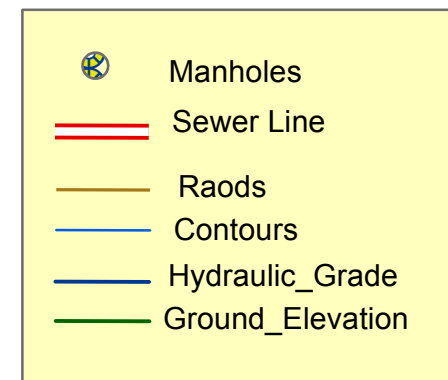
**Page ( 41 )**



| Point Number             | 25     | 26    | 27     | 28     | 29     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-25  | MH-26 | MH-27  | MH-28  | MH-29  |
| Station                  | 9+99   | 10+36 | 10+84  | 11+18  | 11+52  |
| Ground Elevation         | 813.56 | 810   | 802.36 | 798.04 | 797.48 |
| Invert Elevation         | 812.35 | 808.8 | 801.16 | 796.84 | 796.28 |
| Depth Of Manholes        | 1.21   | 1.2   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 37.1  | 47.9   | 34.4   | 34.1   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 9.57  | 15.95  | 12.56  | 1.64   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 29 To Manholes 33)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

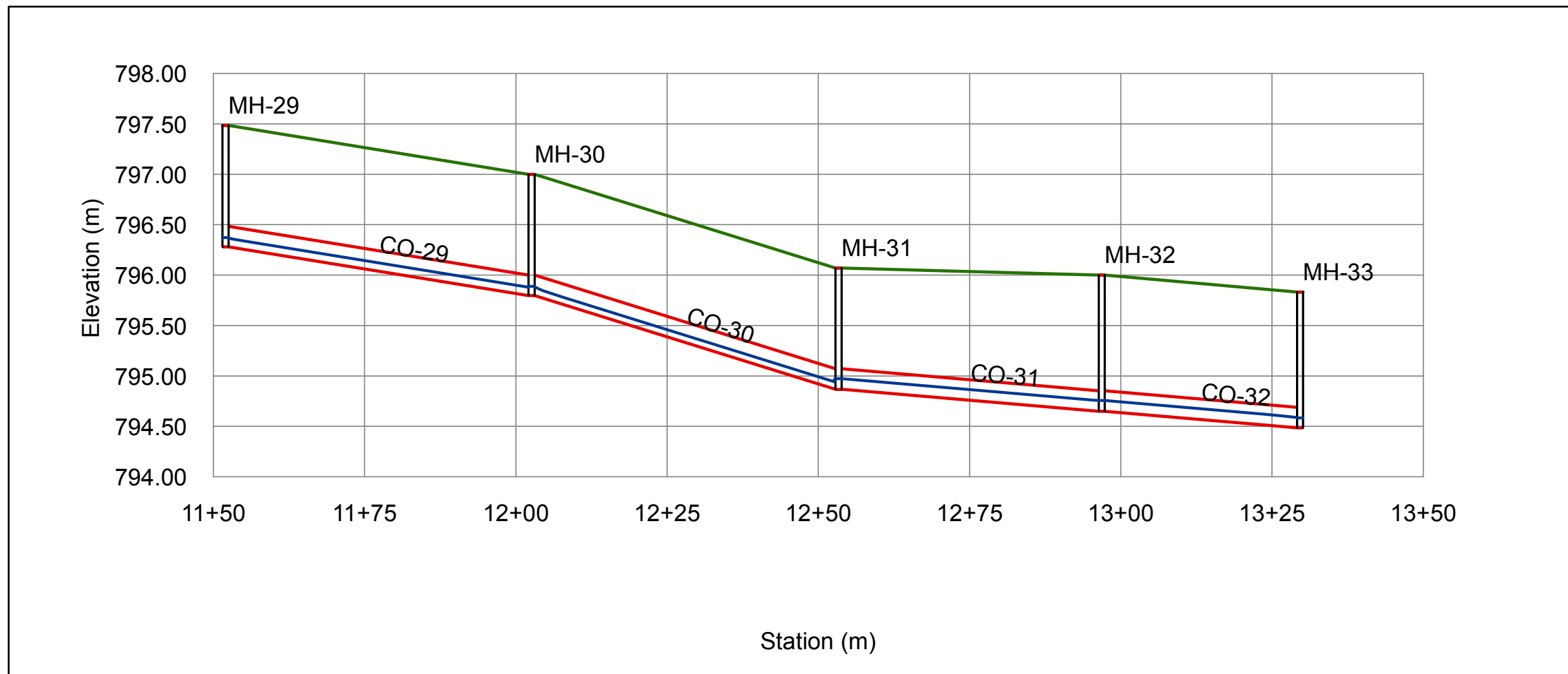
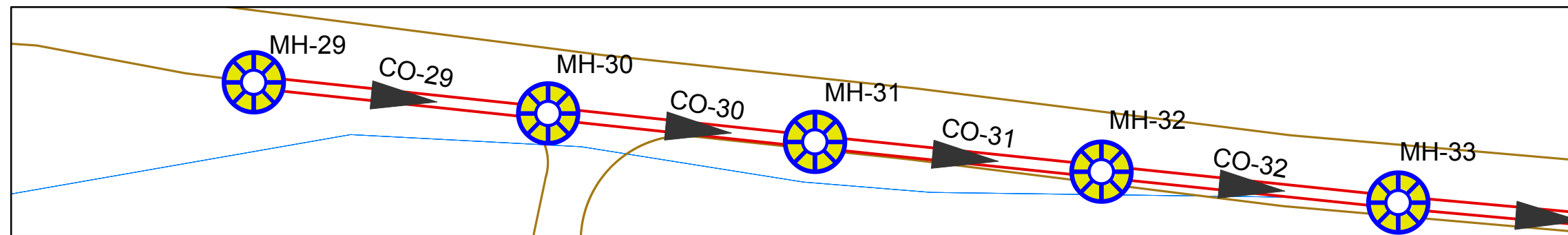
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

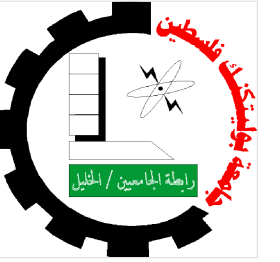
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

**Figure Number (C7 -8)**

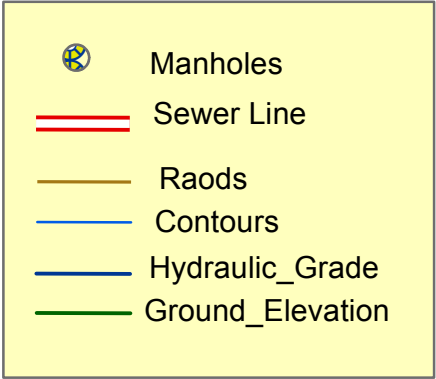
**Page ( 42 )**



| Point Number             | 29     | 30    | 31     | 32     | 33     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-29  | MH-30 | MH-31  | MH-32  | MH-33  |
| Station                  | 11+52  | 12+03 | 12+54  | 12+97  | 13+30  |
| Ground Elevation         | 797.48 | 797   | 796.07 | 796    | 795.83 |
| Invert Elevation         | 796.28 | 795.8 | 794.87 | 794.65 | 794.49 |
| Depth Of Manholes        | 1.2    | 1.2   | 1.2    | 1.35   | 1.34   |
| Distance Of Manholes (m) |        | 50.6  | 50.7   | 43.5   | 32.8   |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 0.95  | 1.83   | 0.51   | 0.49   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

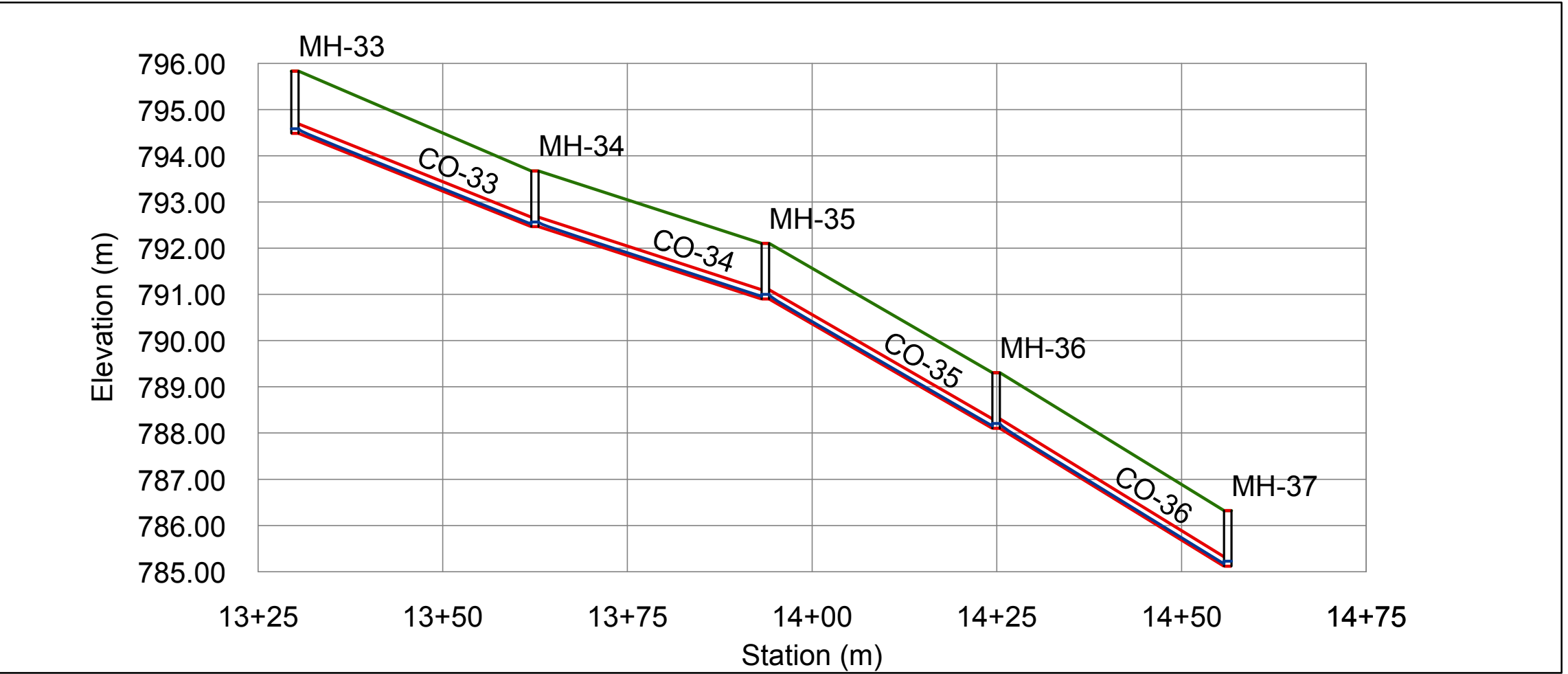
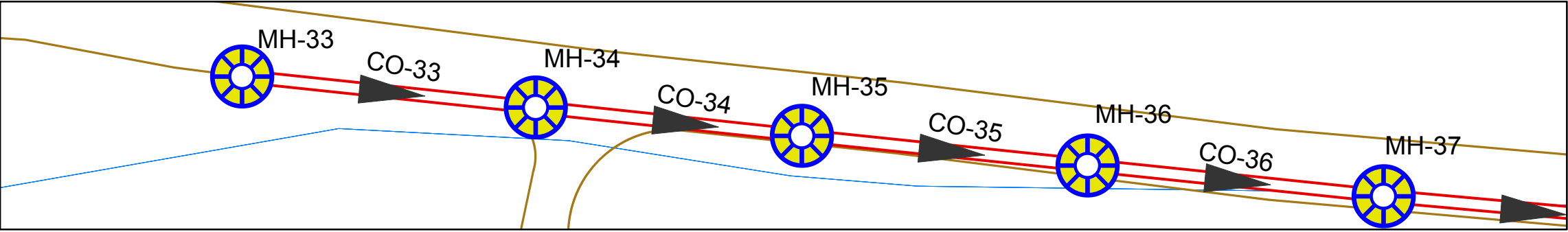
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

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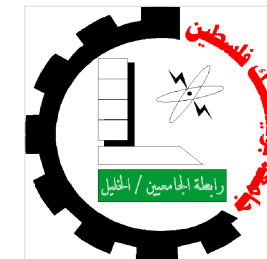
Notes:  
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 2- All Pipe length In Metrs

Data Source : Dora Municipality

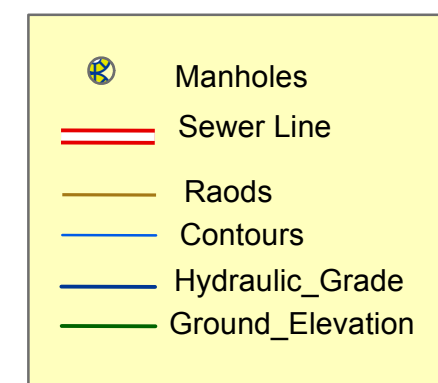
**Figure Number (C7 -9)**



| Point Number             | 33     | 34     | 35    | 36     | 37     |
|--------------------------|--------|--------|-------|--------|--------|
| Manhole Number           | MH-33  | MH-34  | MH-35 | MH-36  | MH-37  |
| Station                  | 13+30  | 13+62  | 13+93 | 14+25  | 14+56  |
| Ground Elevation         | 795.83 | 793.67 | 792.1 | 789.31 | 786.32 |
| Invert Elevation         | 794.49 | 792.47 | 790.9 | 788.1  | 785.12 |
| Depth Of Manholes        | 1.34   | 1.2    | 1.2   | 1.21   | 1.2    |
| Distance Of Manholes (m) |        | 32.5   | 31.2  | 31.2   | 31.3   |
| Pipe Diameter (inch)     |        | 8      | 8     | 8      | 8      |
| Pipe Slope %             |        | 6.22   | 5.03  | 8.97   | 9.52   |
| Type Of Surface          | PVC    | PVC    | PVC   | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 37 To Manholes 41)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

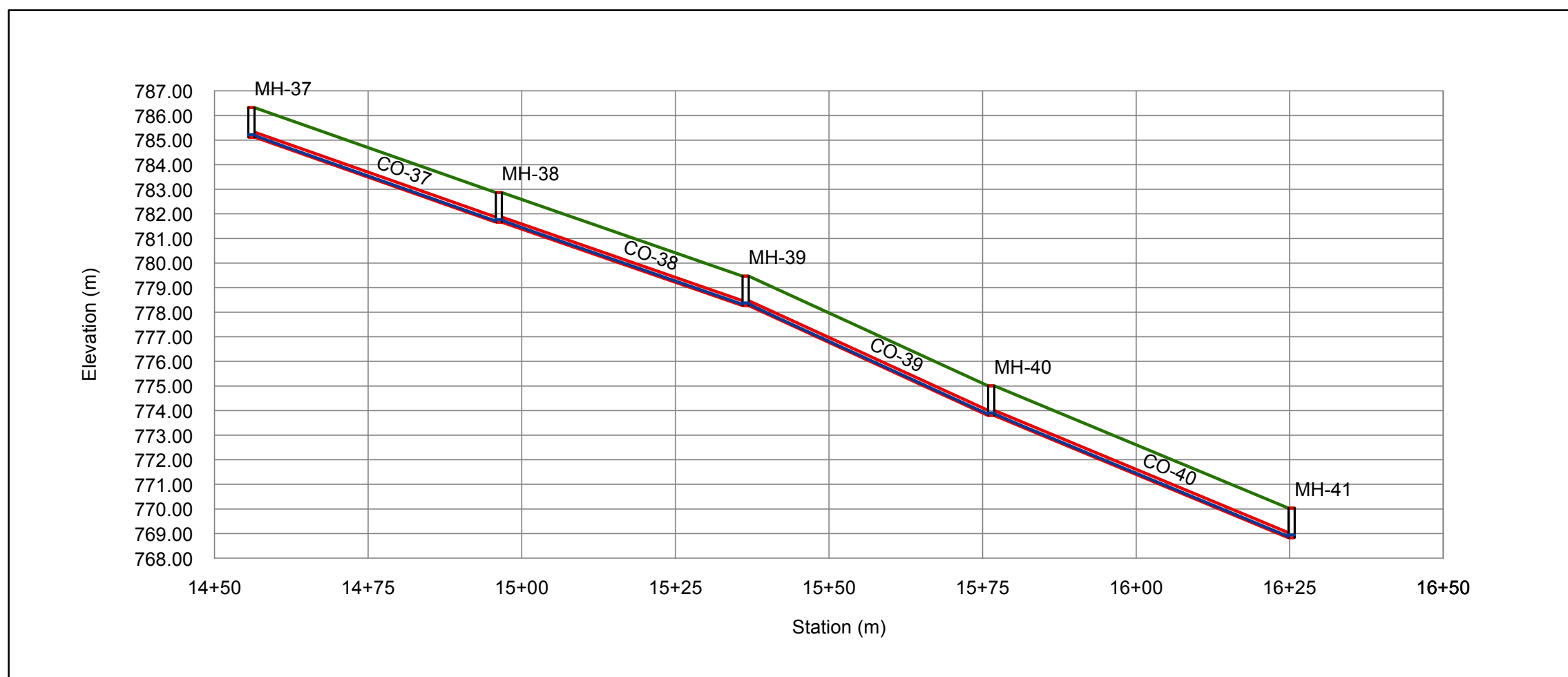
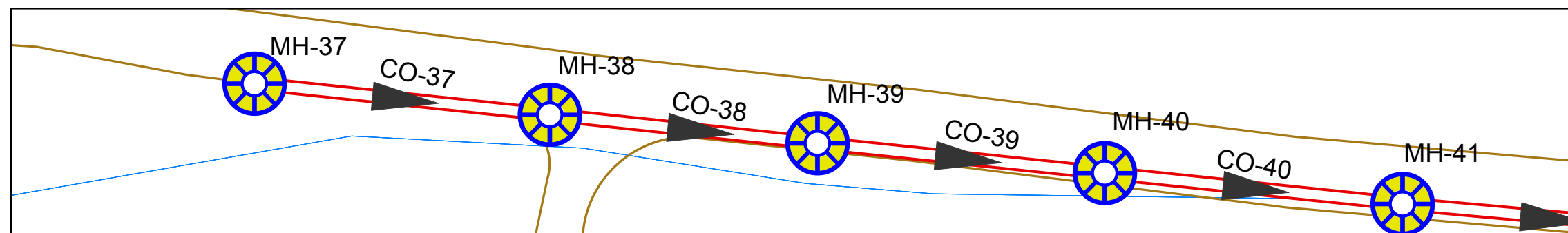
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

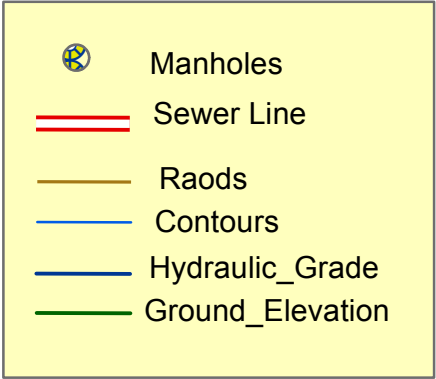
**Figure Number (C7 -10)**



| Point Number             | 37     | 38     | 39     | 40    | 41     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40 | MH-41  |
| Station                  | 14+56  | 14+96  | 15+37  | 15+76 | 16+25  |
| Ground Elevation         | 786.32 | 782.87 | 779.47 | 775   | 770.03 |
| Invert Elevation         | 785.12 | 781.67 | 778.27 | 773.8 | 768.83 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.2    | 1.2   | 1.2    |
| Distance Of Manholes (m) |        | 40.3   | 40.2   | 40    | 48.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 8.56   | 8.46   | 11.18 | 10.16  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



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**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main B)**  
**(From Manholes 41 To Manholes 45)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

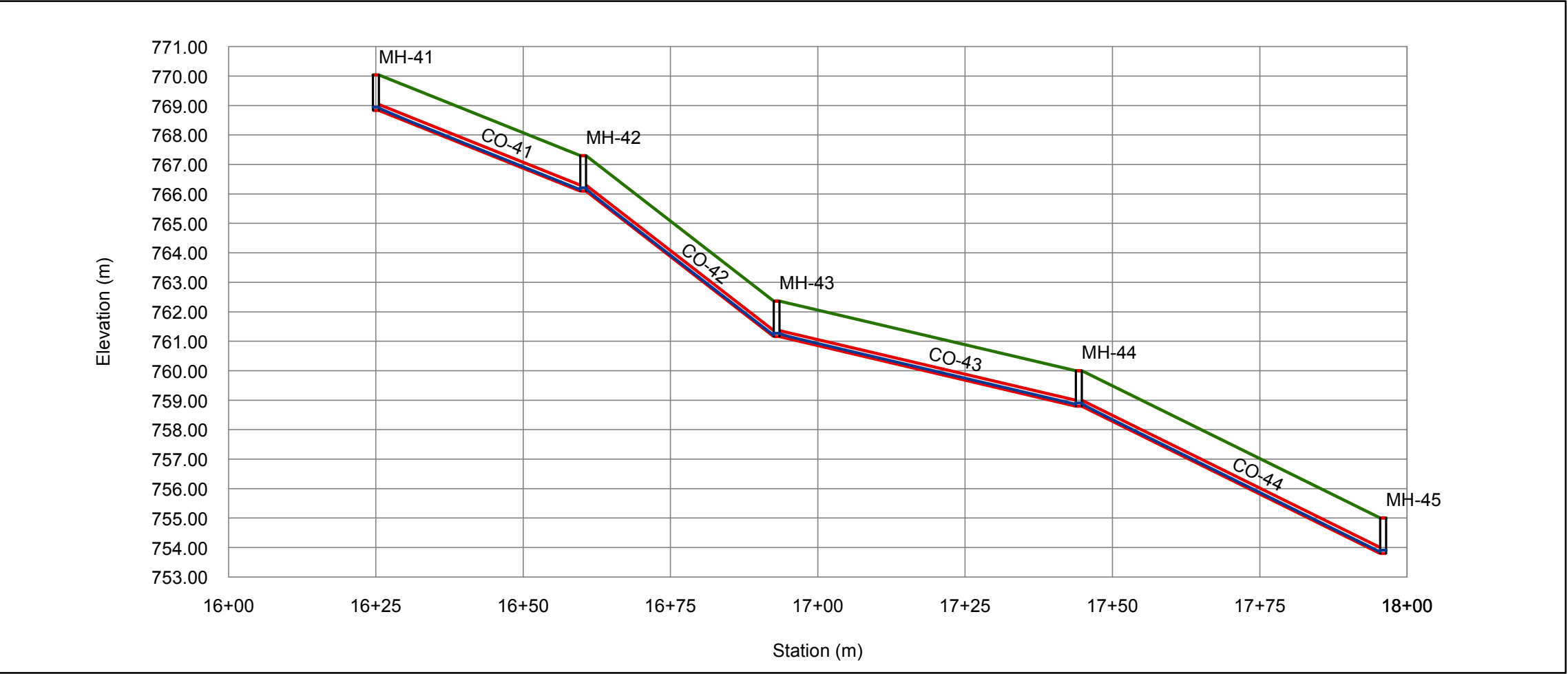
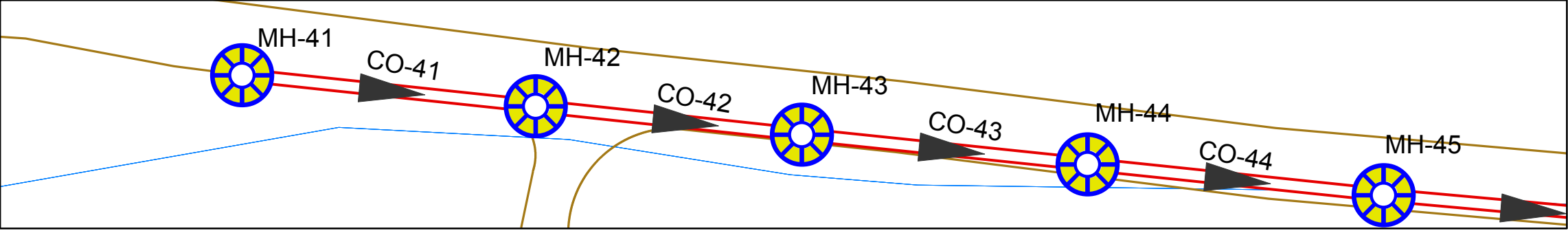
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

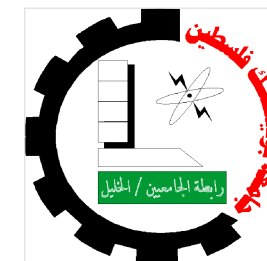
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers

Data Source : Dora Municipality

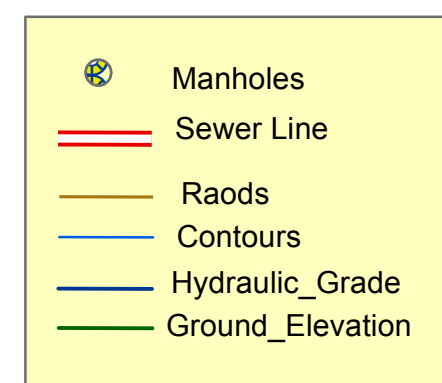
**Figure Number (C7 -11)**



| Point Number             | 41     | 42     | 43     | 44    | 45    |
|--------------------------|--------|--------|--------|-------|-------|
| Manhole Number           | MH-41  | MH-42  | MH-43  | MH-44 | MH-45 |
| Station                  | 16+25  | 16+61  | 16+93  | 17+45 | 17+96 |
| Ground Elevation         | 770.03 | 767.3  | 762.36 | 760   | 755   |
| Invert Elevation         | 768.83 | 766.09 | 761.16 | 758.8 | 753.8 |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.2   | 1.2   |
| Distance Of Manholes (m) |        | 35.2   | 32.8   | 51.3  | 51.6  |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8     |
| Pipe Slope %             |        | 7.78   | 15.03  | 4.60  | 9.69  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC   |



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**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( mainB)**  
**(From Manholes 45 To Outfall 1)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

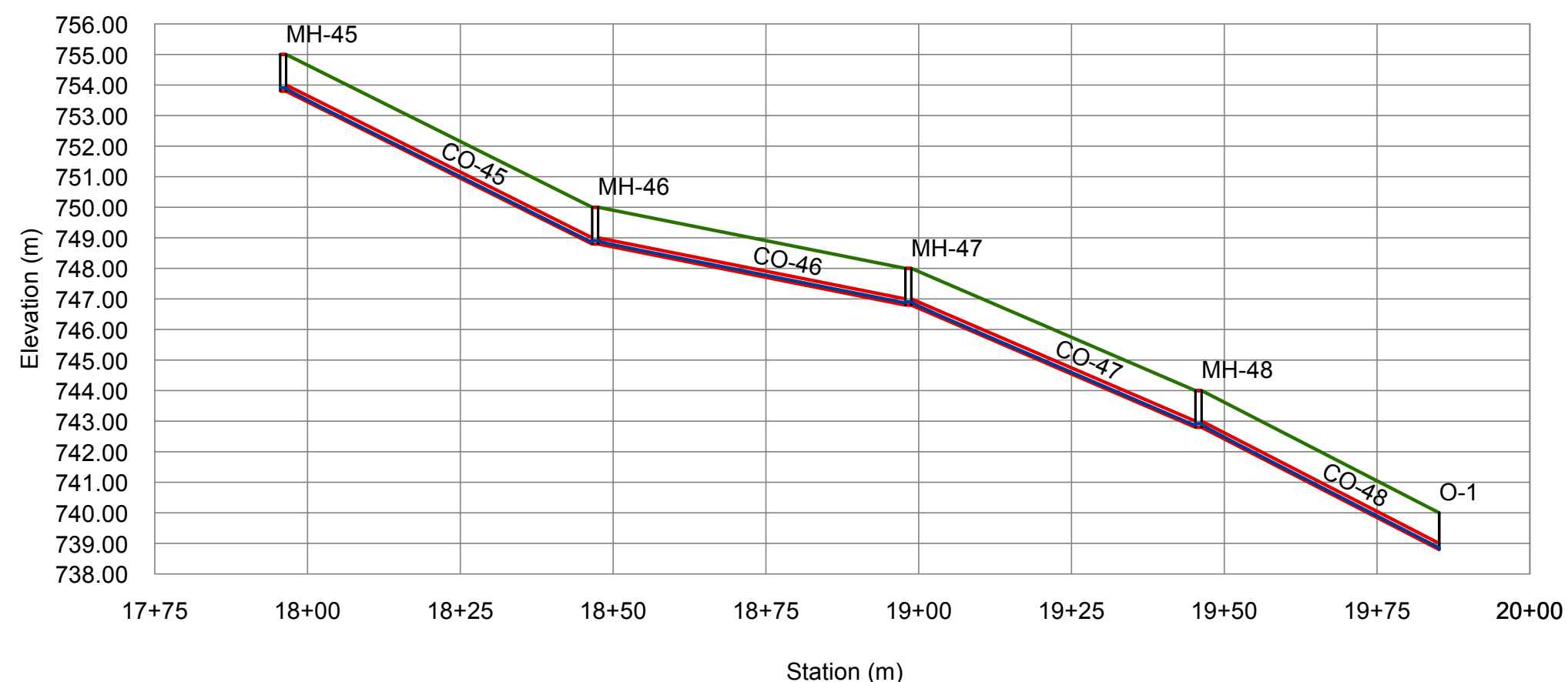
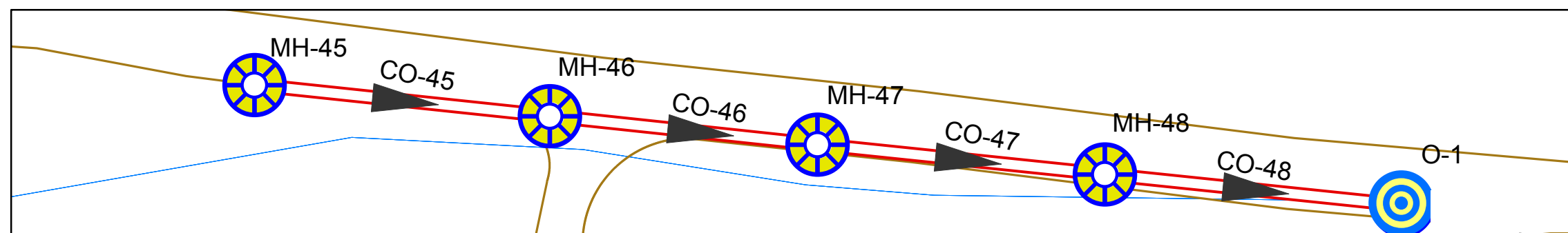
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C7 -12)**

**Page ( 46 )**



| Point Number             | 45    | 46    | 47    | 48    | 49    |
|--------------------------|-------|-------|-------|-------|-------|
| Manhole Number           | MH-45 | MH-46 | MH-47 | MH-48 | O-1   |
| Station                  | 17+96 | 18+47 | 18+99 | 19+46 | 20+32 |
| Ground Elevation         | 755   | 750   | 748   | 744   | 740   |
| Invert Elevation         | 753.8 | 748.8 | 746.8 | 742.8 | 738   |
| Depth Of Manholes        | 1.2   | 1.2   | 1.2   | 1.2   | 2     |
| Distance Of Manholes (m) |       | 51.2  | 51.3  | 47.5  | 39.4  |
| Pipe Diameter (inch)     |       | 8     | 8     | 8     | 8     |
| Pipe Slope %             |       | 9.77  | 3.90  | 8.42  | 12.18 |
| Type Of Surface          | PVC   | PVC   | PVC   | PVC   | PVC   |

# Waste Water Profile ,Sewer C



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Legend

Grid

Ground\_Elevation

Sewer

Manhole

Project Title :  
Design Of Waste Wate Collection  
System For Dora City

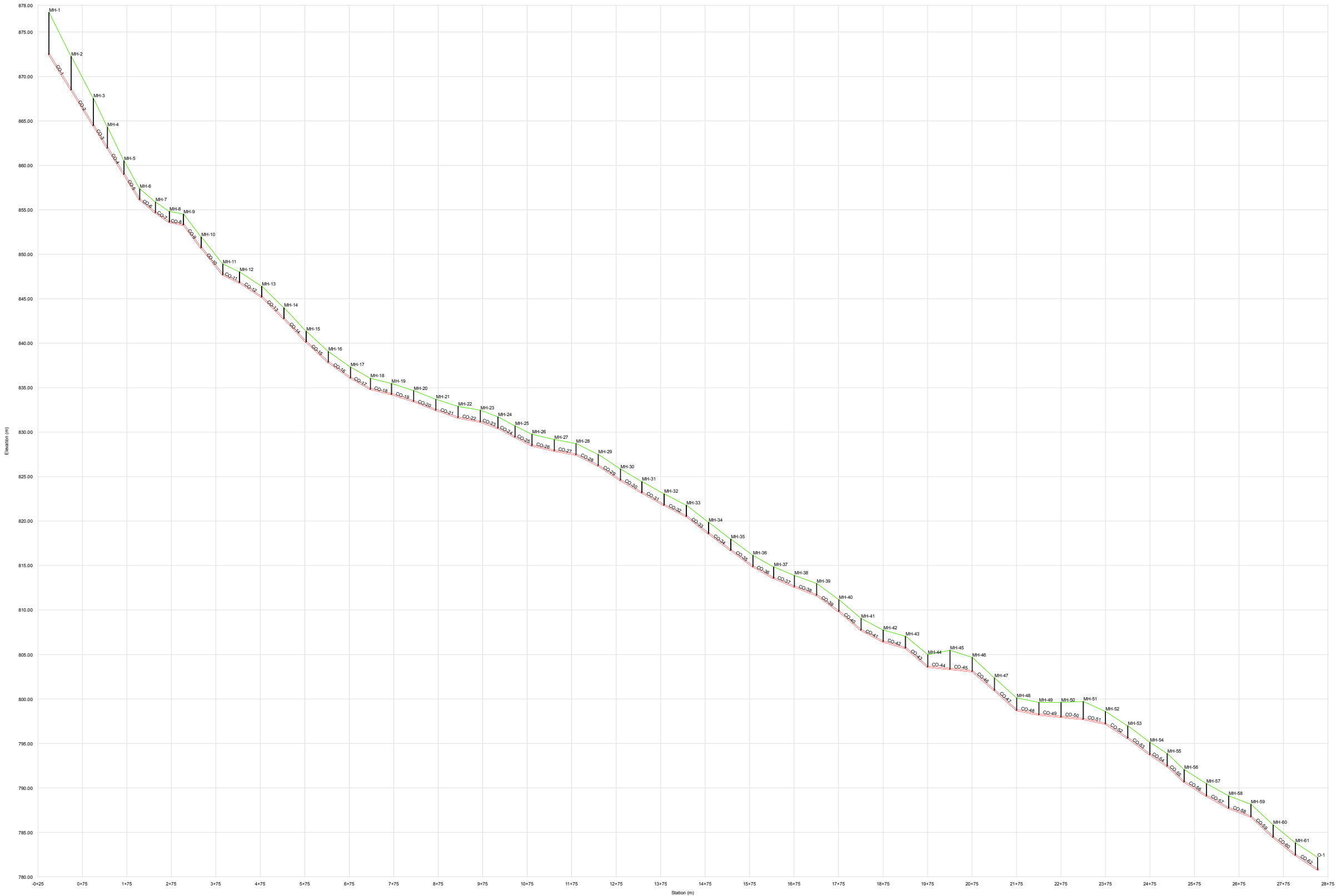
Created by :  
Mohammed Jebreen  
Noor Dodin

Project Supervisor :  
Eng . Samah Al-Jabari

Coordinate System :Palestine\_1923\_Palestine\_Grid  
Projection: Cassini

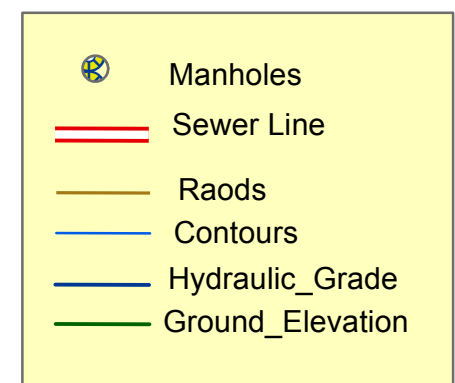
Linear Unit: Meter  
Data Source : Dora Municipality

Figure Number ( C8 )





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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main C )**  
**(From Manholes 1 To Manholes 5)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

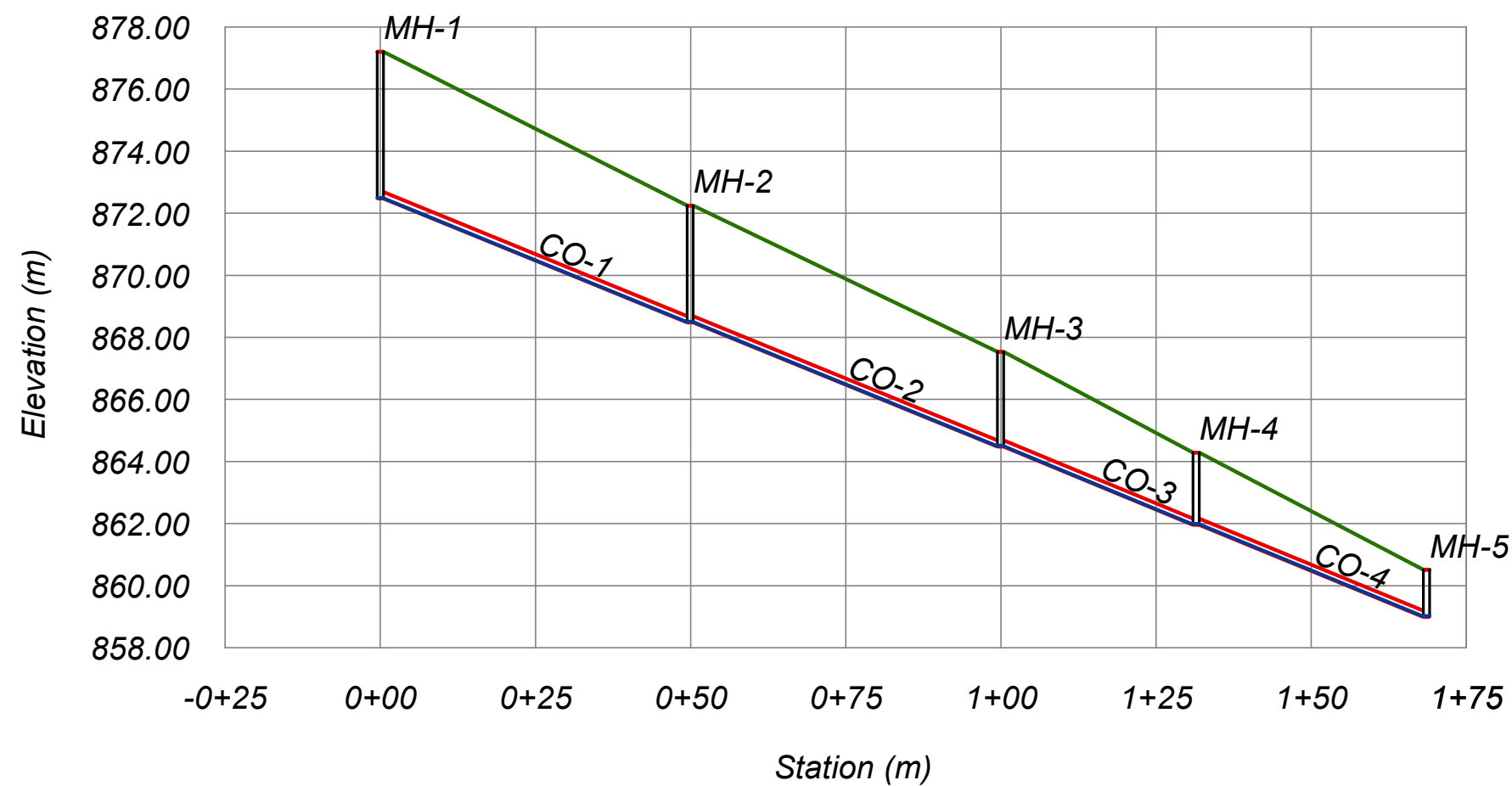
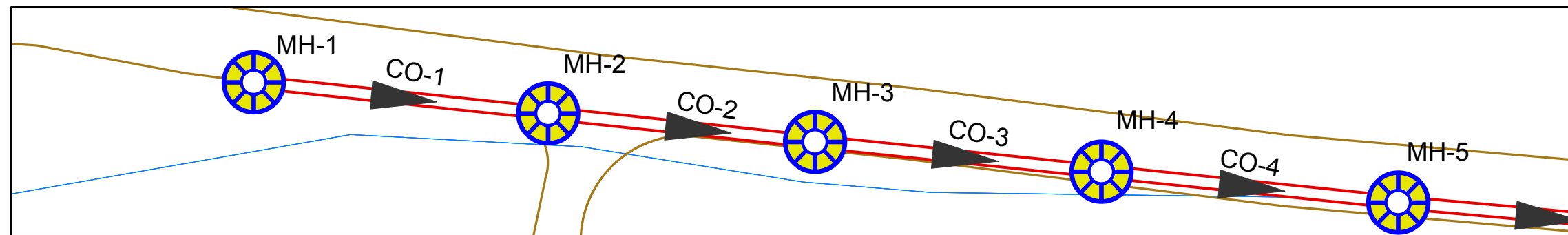
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

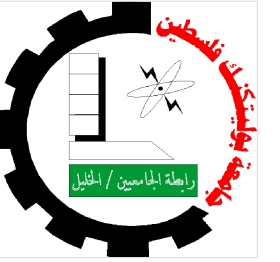
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C8 -1)**

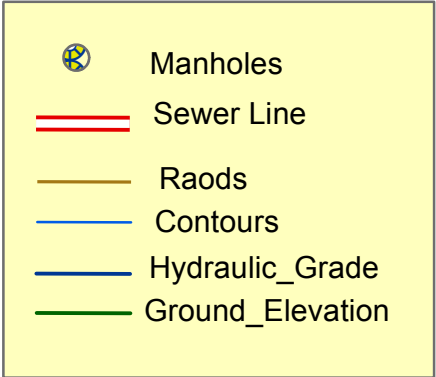
**Page ( 48 )**



| Point Number             | 1      | 2      | 3      | 4      | 5      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-1   | MH-2   | MH-3   | MH-4   | MH-5   |
| Station                  | 00+00  | 0+50   | 1+00   | 1+31   | 1+69   |
| Ground Elevation         | 877.2  | 877.2  | 867.54 | 864.29 | 860.51 |
| Invert Elevation         | 872.48 | 868.48 | 864.48 | 861.96 | 858.99 |
| Depth Of Manholes        | 4.72   | 8.72   | 3.06   | 2.33   | 1.52   |
| Distance Of Manholes (m) |        | 49.9   | 50     | 31.5   | 37.1   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 8.02   | 8.00   | 8.00   | 8.01   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 5 To Manholes 9)**

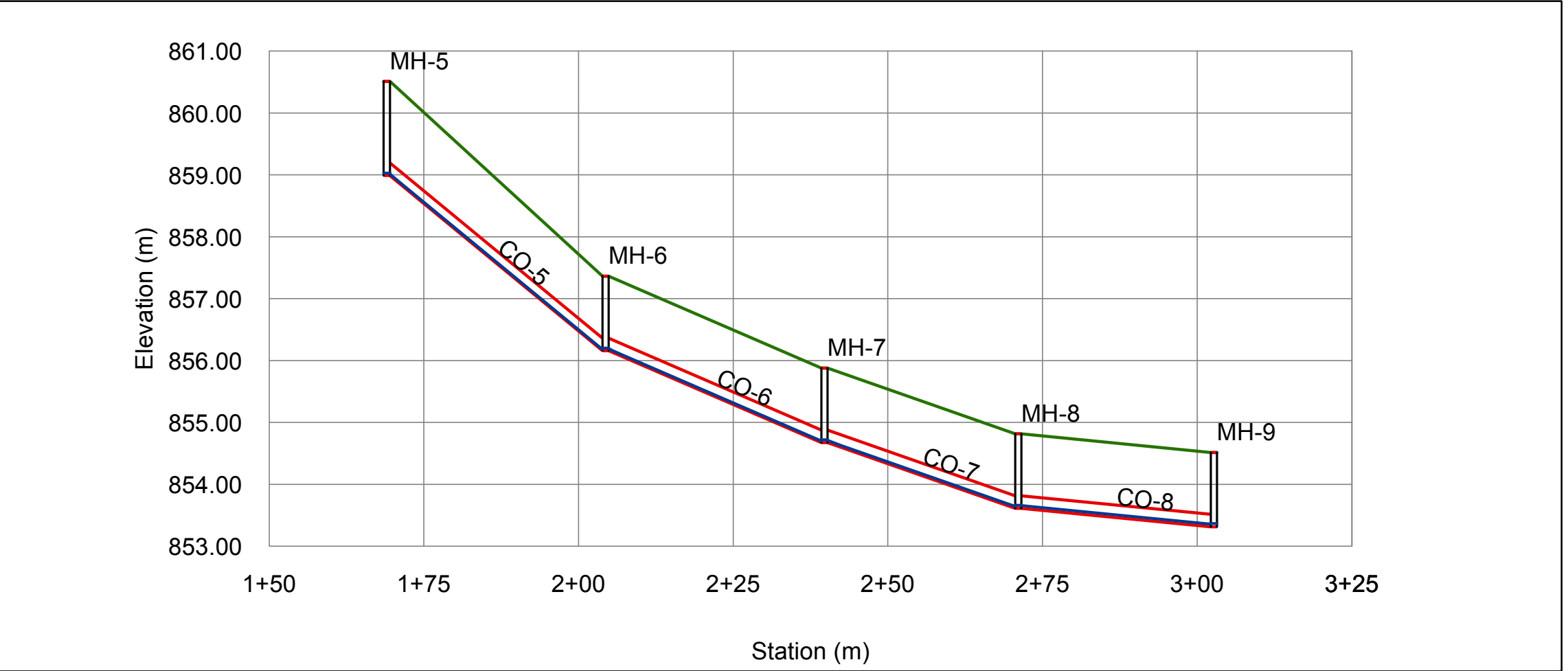
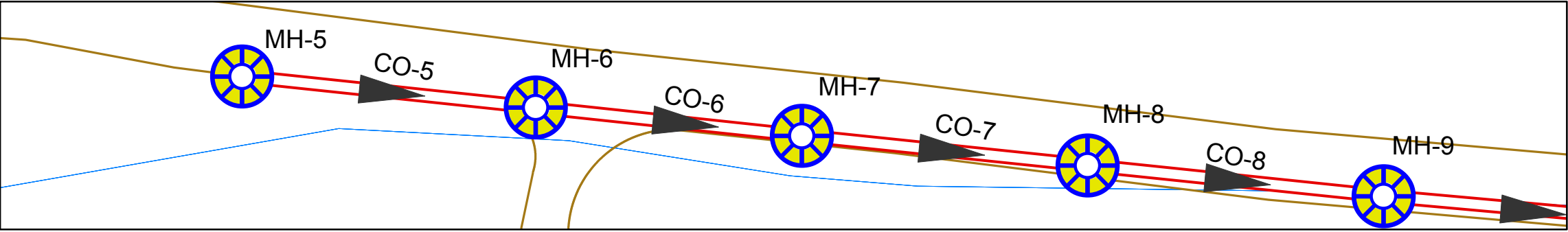
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

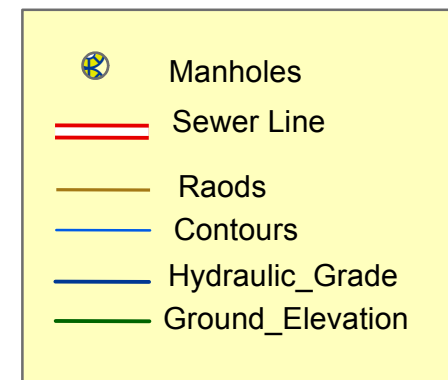
**Figure Number (C8 -2)**  
**Page ( 49 )**



| Point Number             | 5      | 6      | 7      | 8      | 9      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-5   | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 1+69   | 2+04   | 2+39   | 2+71   | 3+02   |
| Ground Elevation(m)      | 860.51 | 857.36 | 855.88 | 854.82 | 854.52 |
| Invert Elevation(m)      | 858.99 | 856.16 | 854.68 | 853.61 | 853.31 |
| Depth Of Manholes(m)     | 1.52   | 1.2    | 1.2    | 1.21   | 1.21   |
| Distance Of Manholes (m) |        | 35.4   | 35.4   | 31.4   | 31.6   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 7.99   | 4.18   | 3.41   | 0.95   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 9 To Manholes 13)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

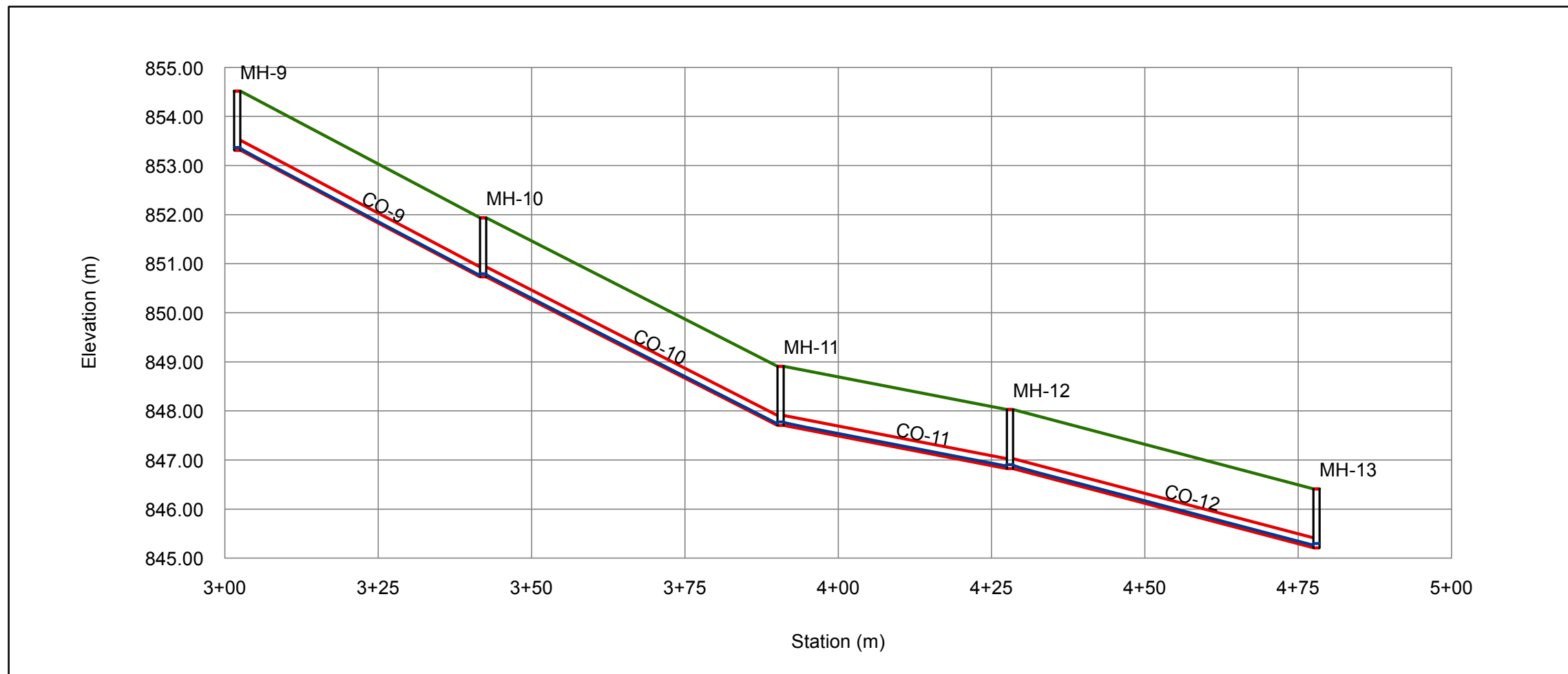
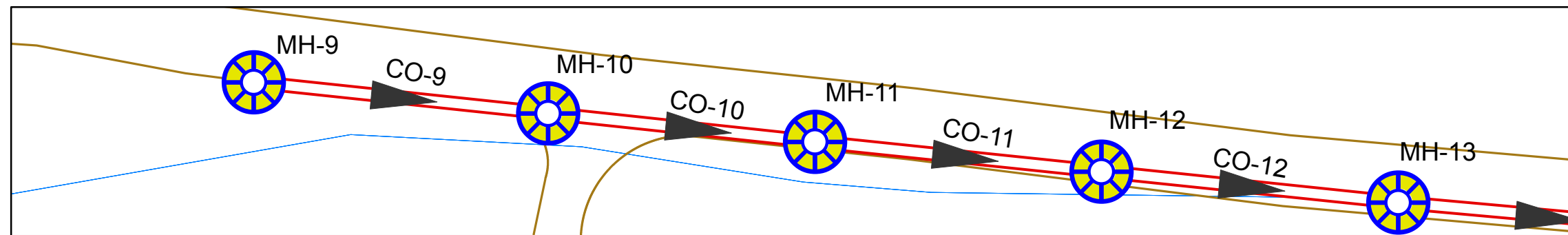
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

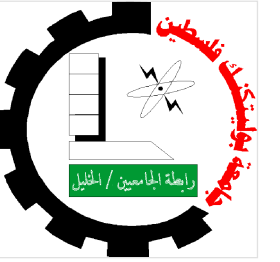
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C8 -3)**

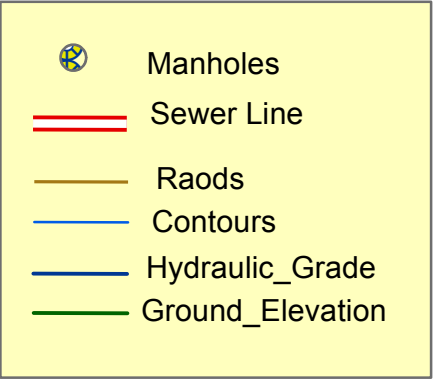
**Page ( 50 )**



| Point Number             | 9       | 10     | 11     | 12     | 13     |
|--------------------------|---------|--------|--------|--------|--------|
| Manhole Number           | MH-9    | MH-10  | MH-11  | MH-12  | MH-13  |
| Station                  | 3+02    | 3+42   | 3+91   | 4+28   | 4+78   |
| Ground Elevation         | 854.52  | 851.94 | 848.91 | 848.03 | 846.41 |
| Invert Elevation         | 853.31  | 850.73 | 847.71 | 846.83 | 845.21 |
| Depth Of Manholes        | 1.21    | 1.21   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) | 31.6    | 40.1   | 48.5   | 37.4   | 50     |
| Pipe Diameter (inch)     | 8       | 8      | 8      | 8      | 8      |
| Pipe Slope %             | #VALUE! | 6.43   | 6.23   | 2.35   | 3.24   |
| Type Of Surface          | PVC     | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 13 To Manholes 17)**

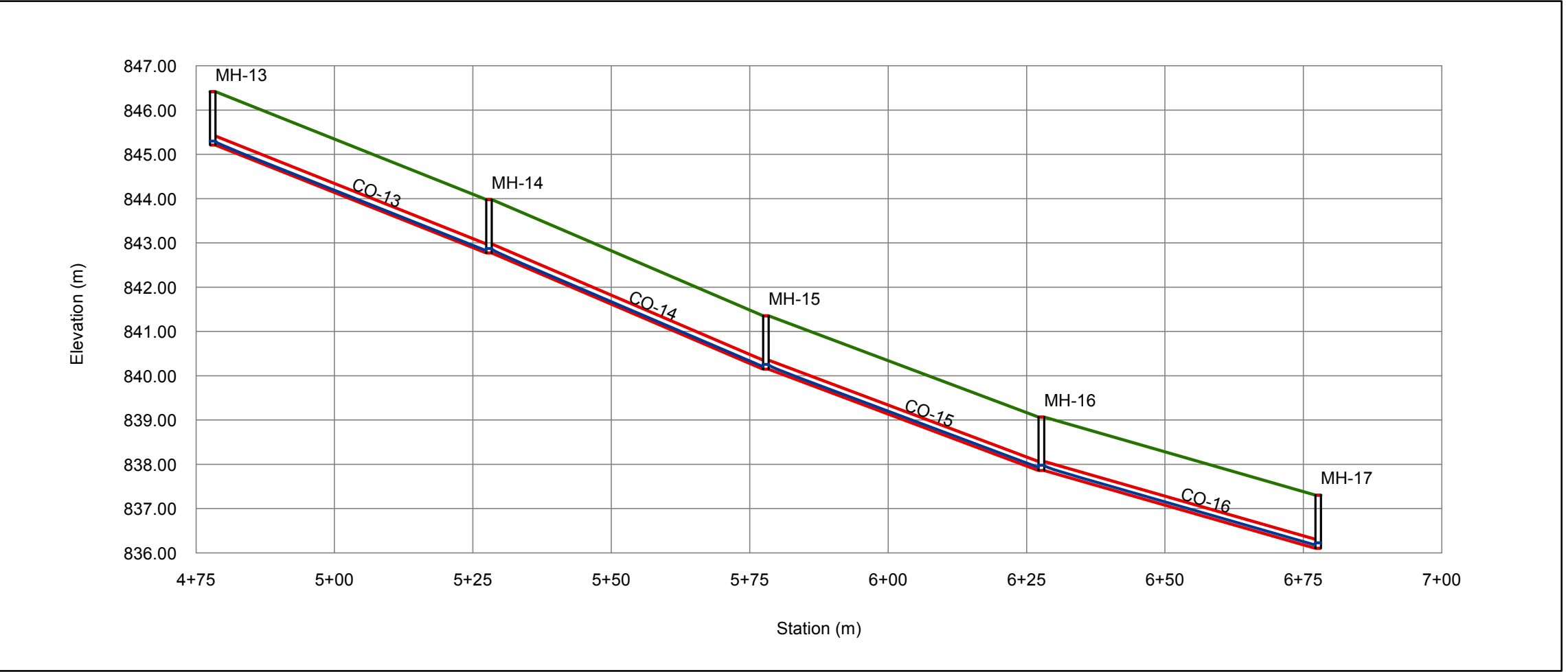
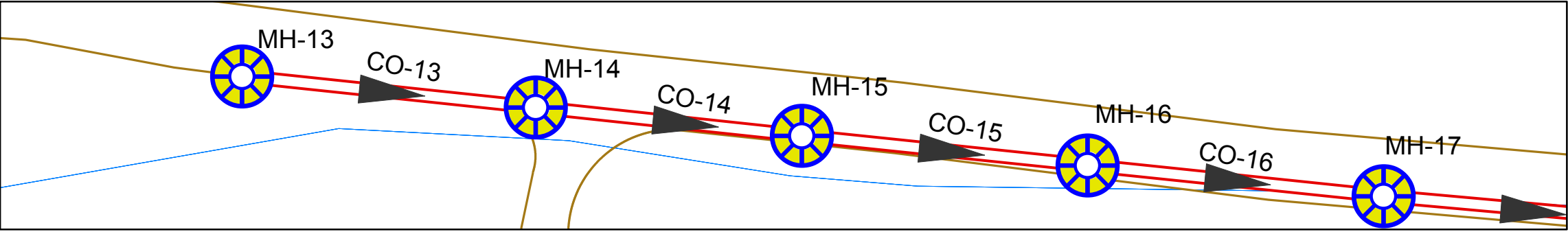
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

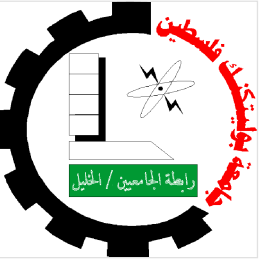
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

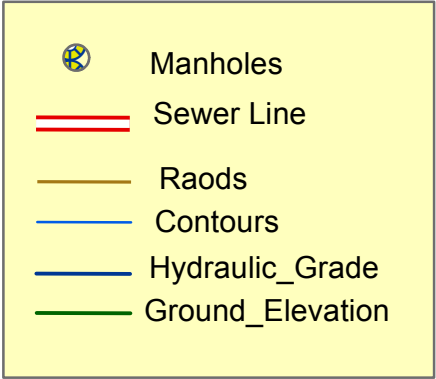
**Figure Number (C8 -4)**  
**Page ( 51 )**



| Point Number             | 13     | 14     | 15     | 16     | 17     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-13  | MH-14  | MH-15  | MH-16  | MH-17  |
| Station                  | 4+78   | 5+28   | 5+78   | 6+28   | 6+78   |
| Ground Elevation         | 846.41 | 843.98 | 841.35 | 839.07 | 837.31 |
| Invert Elevation         | 845.21 | 842.77 | 840.15 | 837.86 | 836.1  |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.21   | 1.21   |
| Distance Of Manholes (m) | 50     | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 4.88   | 5.24   | 4.58   | 3.52   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 17 To Manholes 21)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

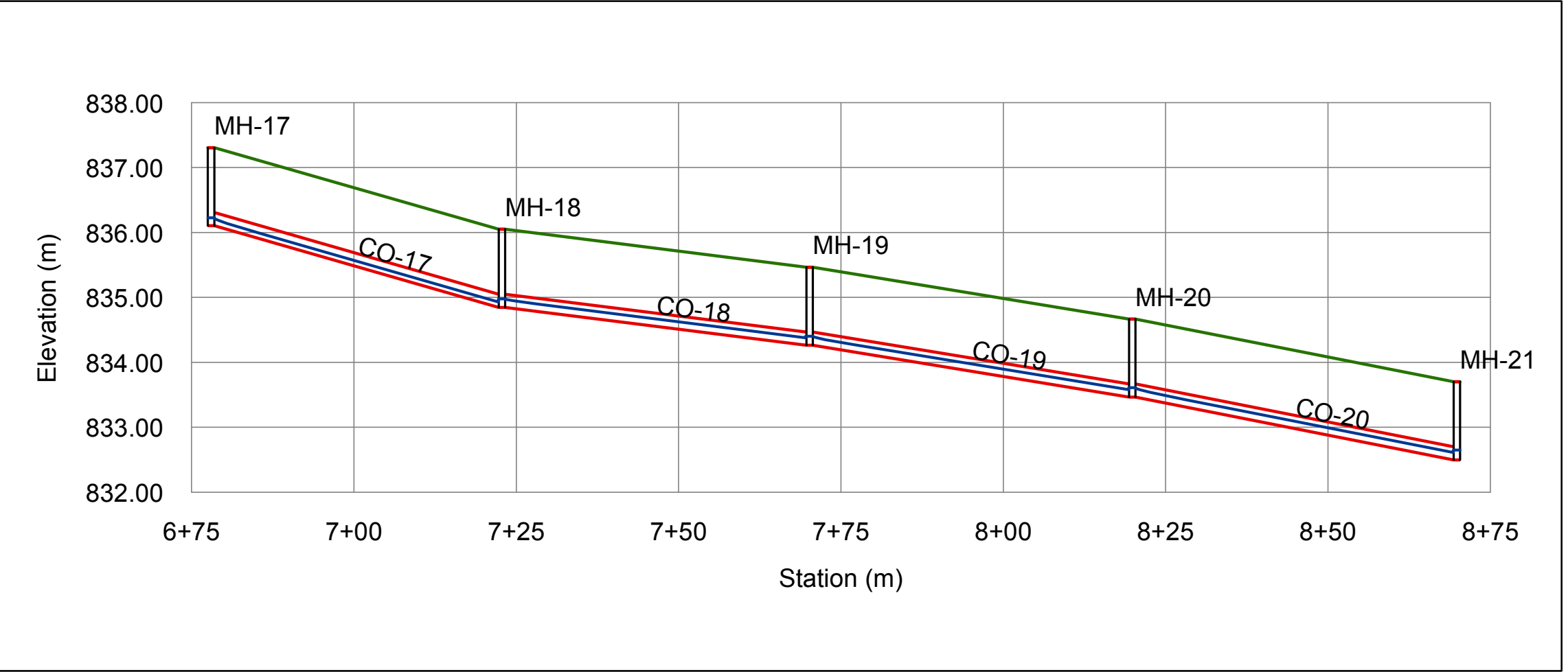
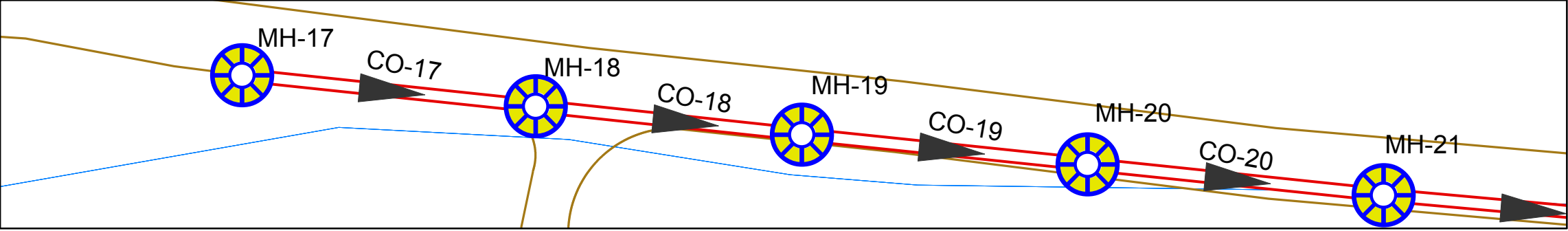
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

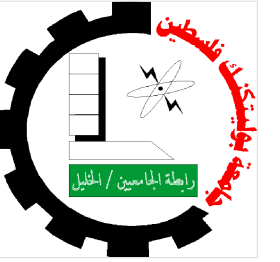
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

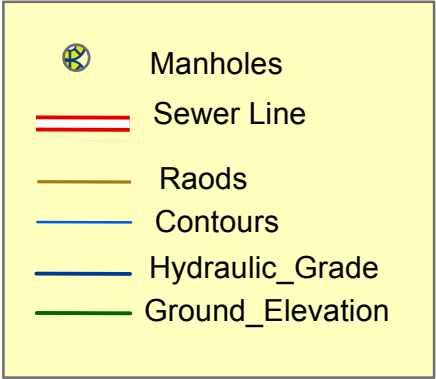
**Figure Number (C8 -5)**



| Point Number             | 17     | 18     | 19     | 20     | 21    |
|--------------------------|--------|--------|--------|--------|-------|
| Manhole Number           | MH-17  | MH-18  | MH-19  | MH-20  | MH-21 |
| Station                  | 6+78   | 7+23   | 7+70   | 8+20   | 8+70  |
| Ground Elevation         | 837.31 | 836.05 | 835.47 | 834.67 | 833.7 |
| Invert Elevation         | 836.1  | 834.85 | 834.26 | 833.46 | 832.5 |
| Depth Of Manholes        | 1.21   | 1.2    | 1.21   | 1.21   | 1.2   |
| Distance Of Manholes (m) |        | 44.8   | 47.4   | 49.7   | 50    |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8     |
| Pipe Slope %             |        | 2.79   | 1.24   | 1.61   | 1.92  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 21 To Manholes 25)**

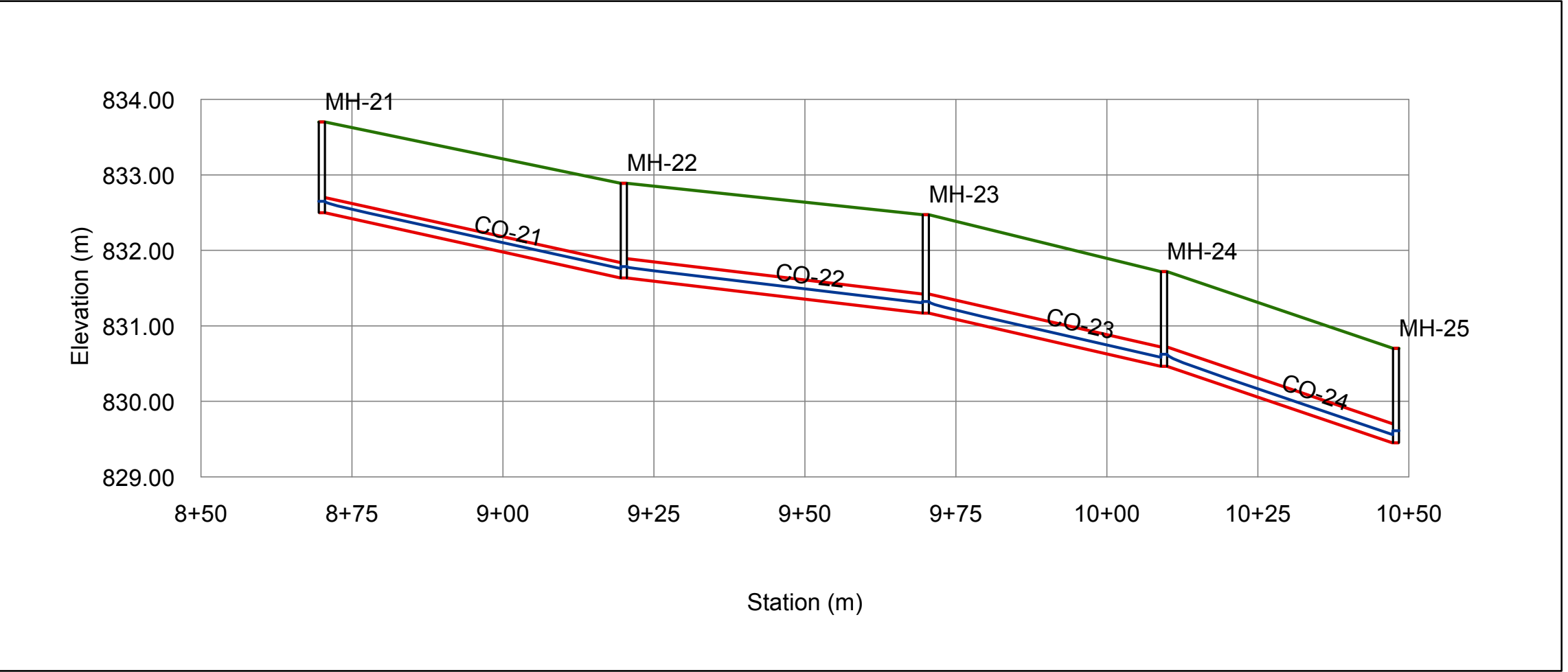
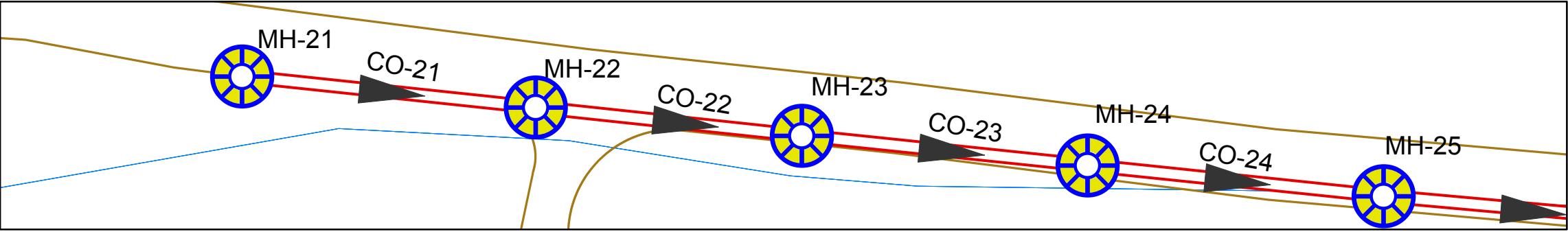
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

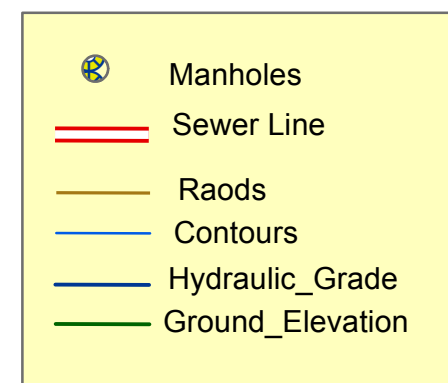
**Figure Number (C8 -6)**  
**Page ( 53 )**



| Point Number             | 21    | 22     | 23     | 24     | 25     |
|--------------------------|-------|--------|--------|--------|--------|
| Manhole Number           | MH-21 | MH-22  | MH-23  | MH-24  | MH-25  |
| Station                  | 8+70  | 9+20   | 9+70   | 10+09  | 10+48  |
| Ground Elevation         | 833.7 | 832.89 | 832.47 | 831.72 | 830.7  |
| Invert Elevation         | 832.5 | 831.63 | 831.17 | 830.46 | 829.45 |
| Depth Of Manholes        | 1.2   | 1.26   | 1.3    | 1.26   | 1.25   |
| Distance Of Manholes (m) |       | 50     | 50     | 39.5   | 38.4   |
| Pipe Diameter (inch)     |       | 8      | 10     | 10     | 10     |
| Pipe Slope %             |       | 1.74   | 0.92   | 1.80   | 2.63   |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

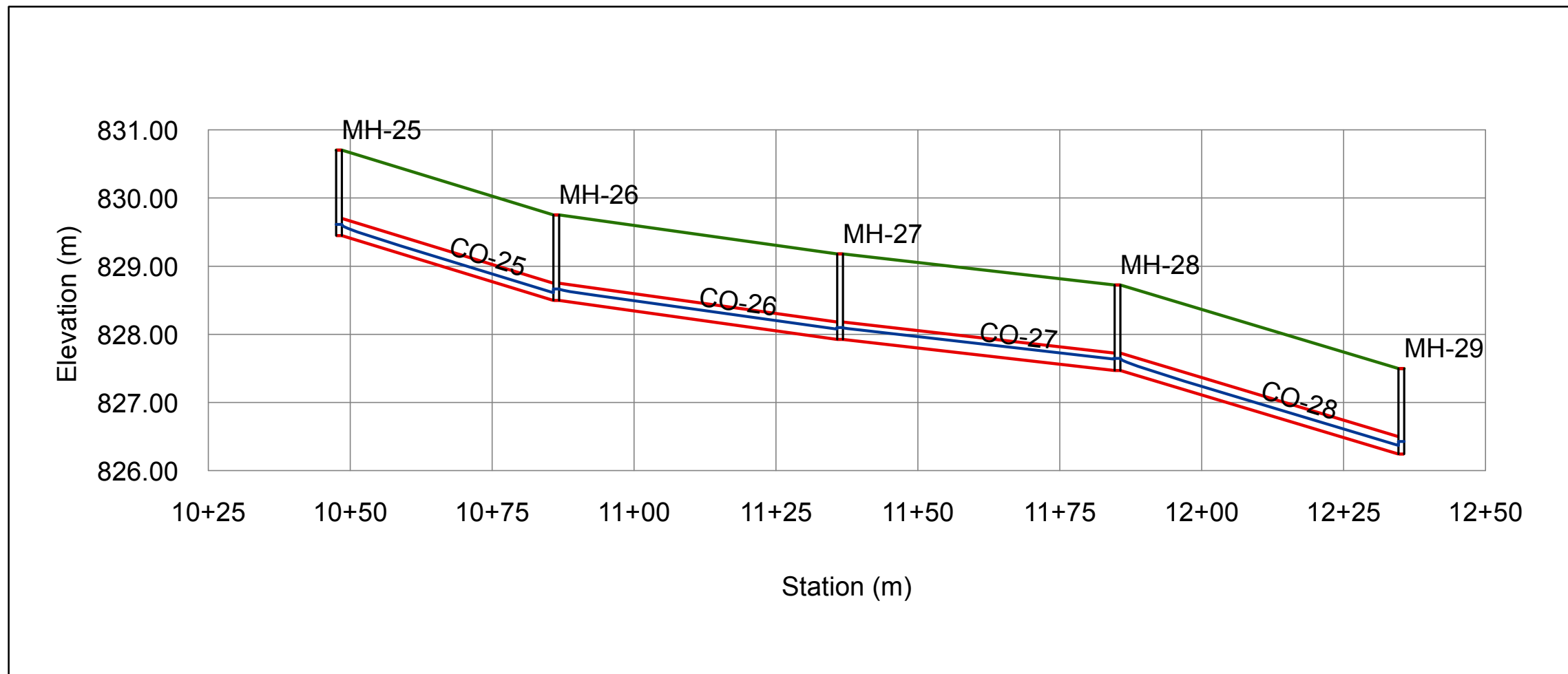
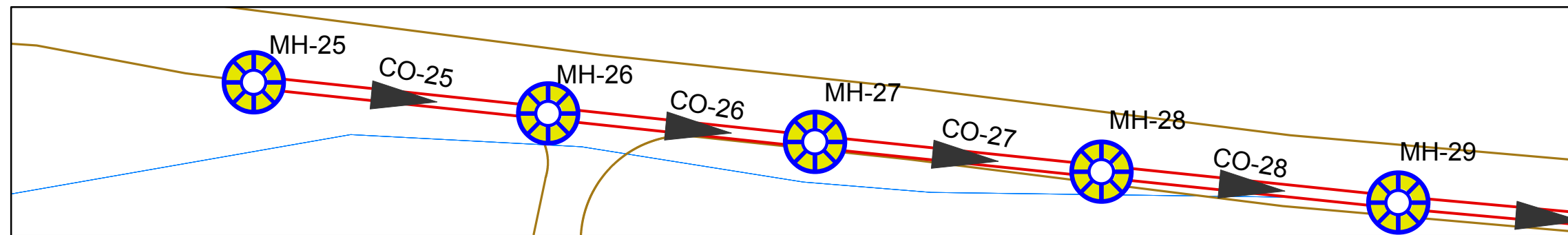
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

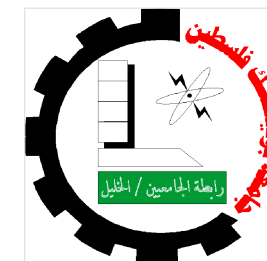
Data Source : Dora Municipality

**Figure Number (C8 -7)**

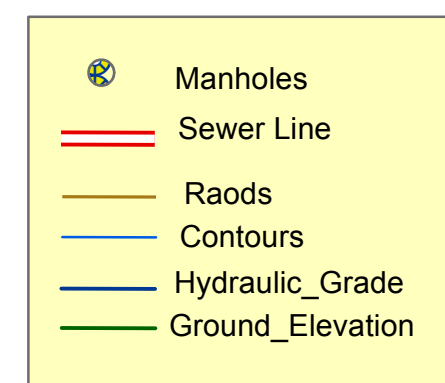
**Page ( 54 )**



| Point Number             | 25     | 26     | 27     | 28     | 29     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-25  | MH-26  | MH-27  | MH-28  | MH-29  |
| Station                  | 10+48  | 10+86  | 11+36  | 11+85  | 12+35  |
| Ground Elevation         | 830.7  | 829.75 | 829.18 | 828.72 | 827.5  |
| Invert Elevation         | 829.45 | 828.5  | 827.92 | 827.47 | 826.24 |
| Depth Of Manholes        | 1.25   | 1.25   | 1.26   | 1.25   | 1.26   |
| Distance Of Manholes (m) |        | 38.3   | 50     | 48.9   | 50     |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 2.48   | 1.16   | 0.92   | 2.46   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 29 To Manholes 33)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

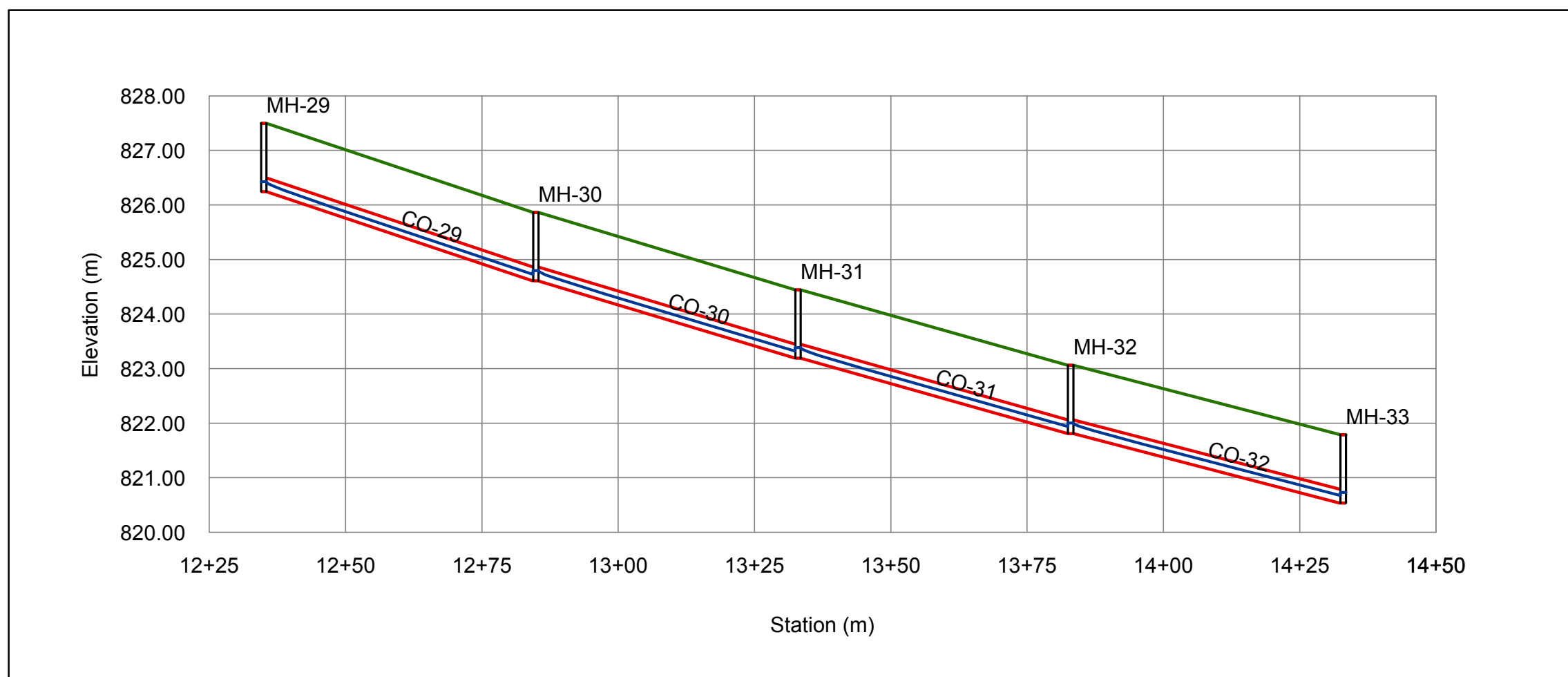
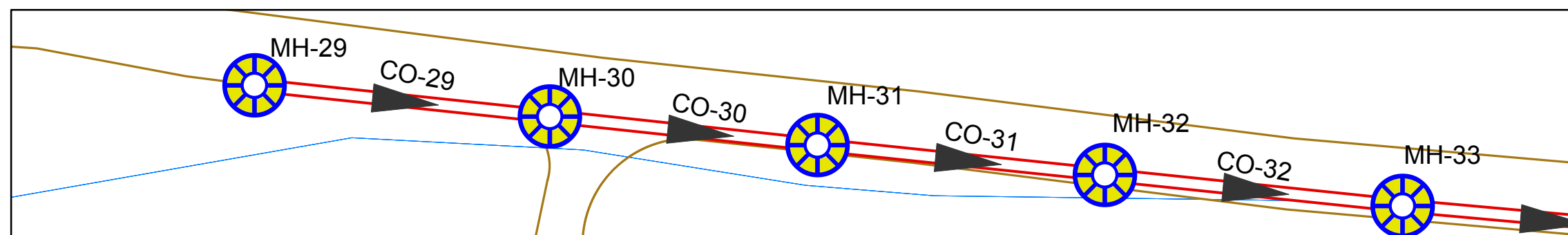
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

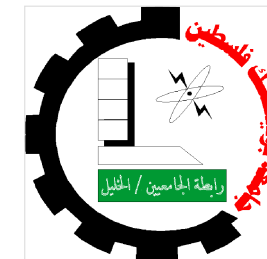
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**Figure Number (C8 -8)**

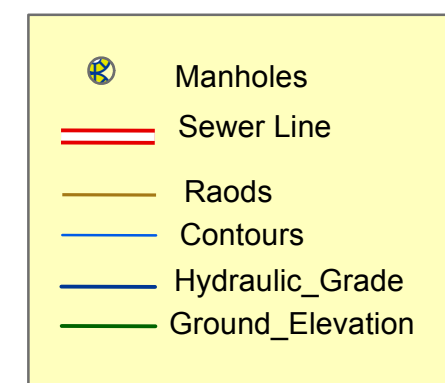
**Page ( 55 )**



| Point Number             | 29     | 30     | 31     | 32     | 33     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-29  | MH-30  | MH-31  | MH-32  | MH-33  |
| Station                  | 12+35  | 12+85  | 13+33  | 13+83  | 14+33  |
| Ground Elevation         | 827.5  | 825.86 | 824.45 | 823.06 | 821.79 |
| Invert Elevation         | 826.24 | 824.61 | 823.19 | 821.81 | 820.53 |
| Depth Of Manholes        | 1.26   | 1.25   | 1.26   | 1.25   | 1.26   |
| Distance Of Manholes (m) |        | 49.9   | 48.1   | 50     | 50     |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 3.27   | 2.95   | 2.76   | 2.56   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

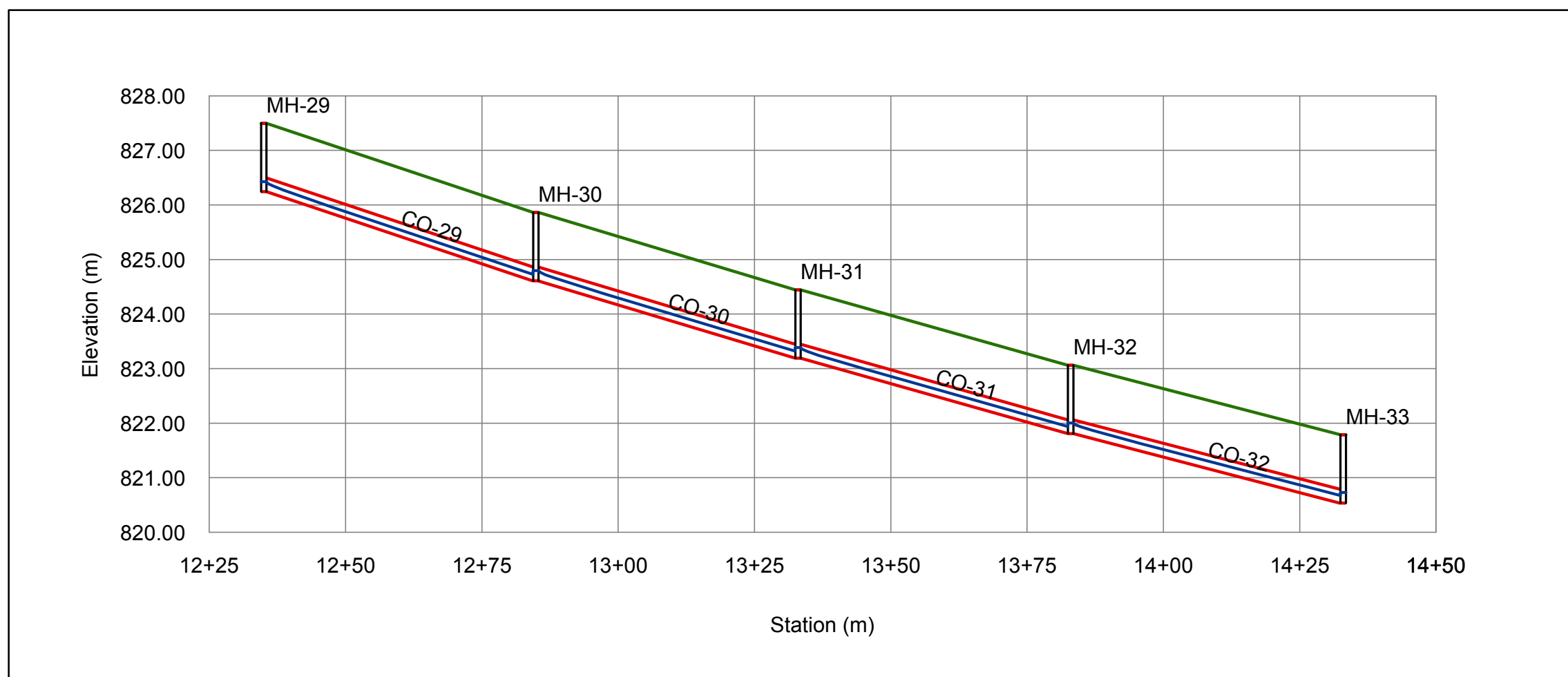
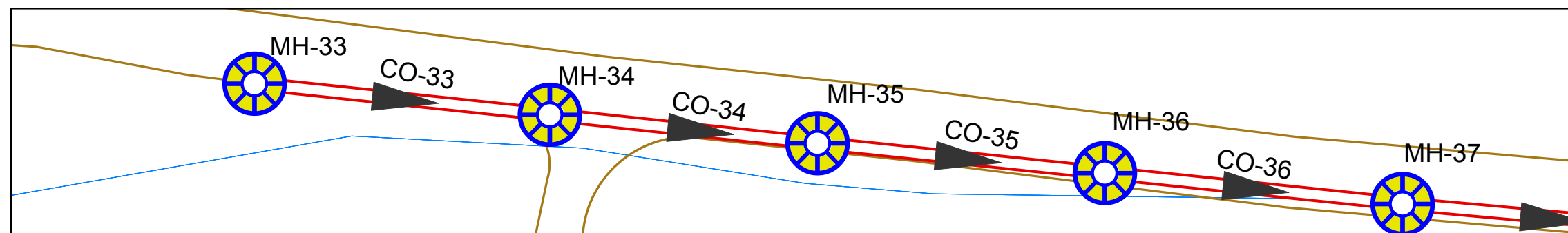
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C8 -9)**

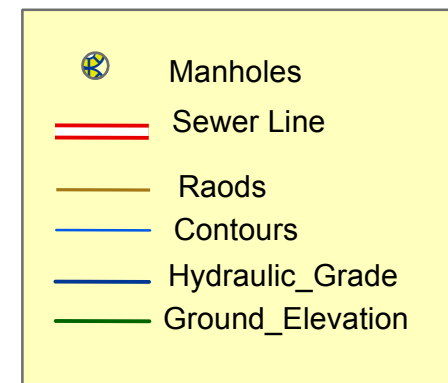
**Page ( 56 )**



| Point Number             | 33     | 34     | 35     | 36     | 37     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-33  | MH-34  | MH-35  | MH-36  | MH-37  |
| Station                  | 14+33  | 14+83  | 15+33  | 15+82  | 16+29  |
| Ground Elevation         | 821.79 | 819.85 | 817.97 | 816.14 | 814.85 |
| Invert Elevation         | 820.53 | 818.6  | 816.72 | 814.89 | 813.59 |
| Depth Of Manholes        | 1.26   | 1.25   | 1.25   | 1.25   | 1.26   |
| Distance Of Manholes (m) |        | 50     | 50     | 49.6   | 46.6   |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 3.86   | 3.76   | 3.69   | 2.79   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 37 To Manholes 41)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

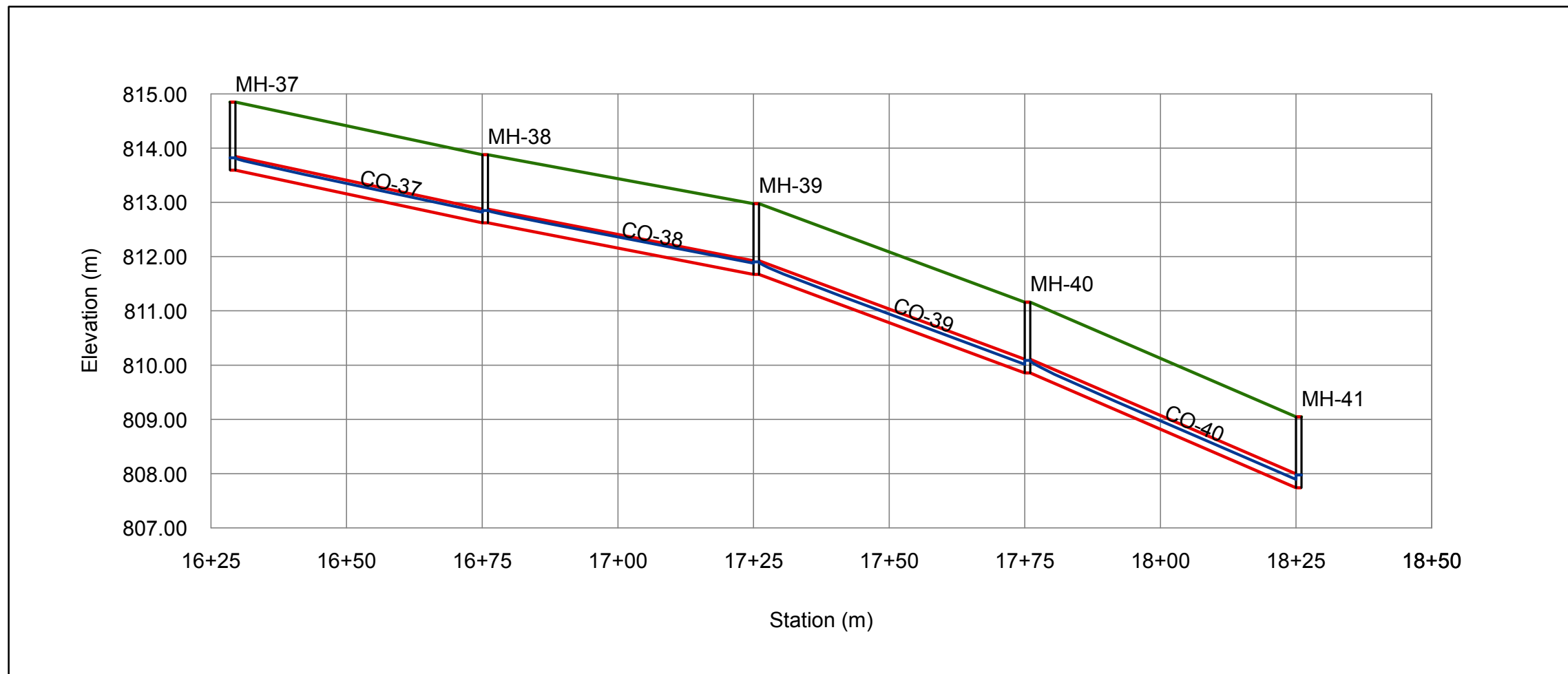
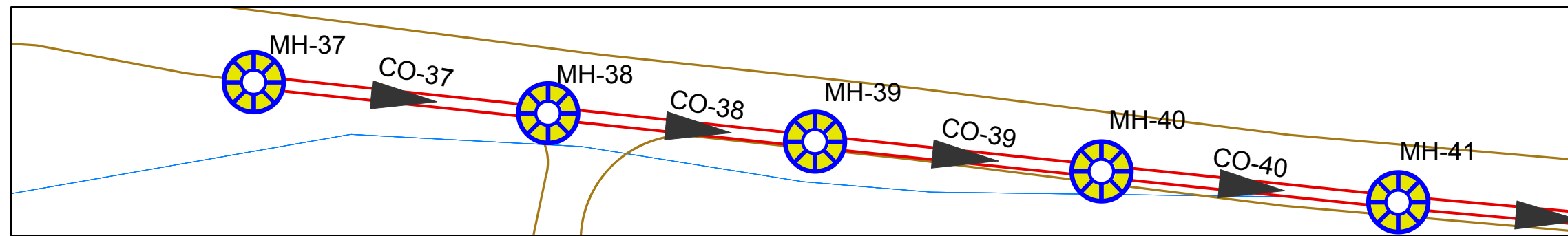
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

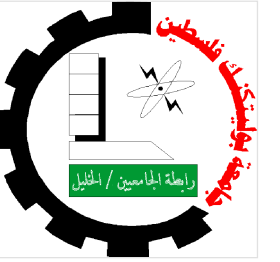
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

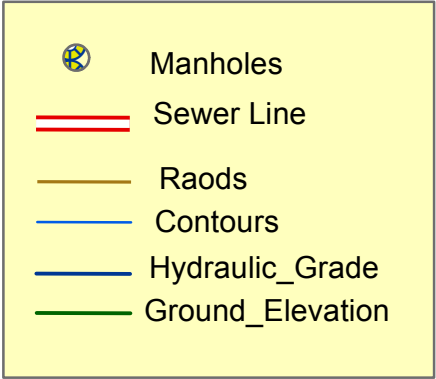
**Figure Number (C8 -10)**



| Point Number             | 37     | 38     | 39     | 40     | 41     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40  | MH-41  |
| Station                  | 16+29  | 16+76  | 17+26  | 17+76  | 18+26  |
| Ground Elevation         | 814.85 | 813.88 | 812.98 | 811.16 | 809.05 |
| Invert Elevation         | 813.59 | 812.62 | 811.67 | 809.86 | 807.74 |
| Depth Of Manholes        | 1.26   | 1.26   | 1.31   | 1.3    | 1.31   |
| Distance Of Manholes (m) |        | 46.6   | 49.9   | 50     | 50     |
| Pipe Diameter (inch)     |        | 10     | 10     | 10     | 10     |
| Pipe Slope %             |        | 2.08   | 1.90   | 3.62   | 4.24   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 41 To Manholes 45)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

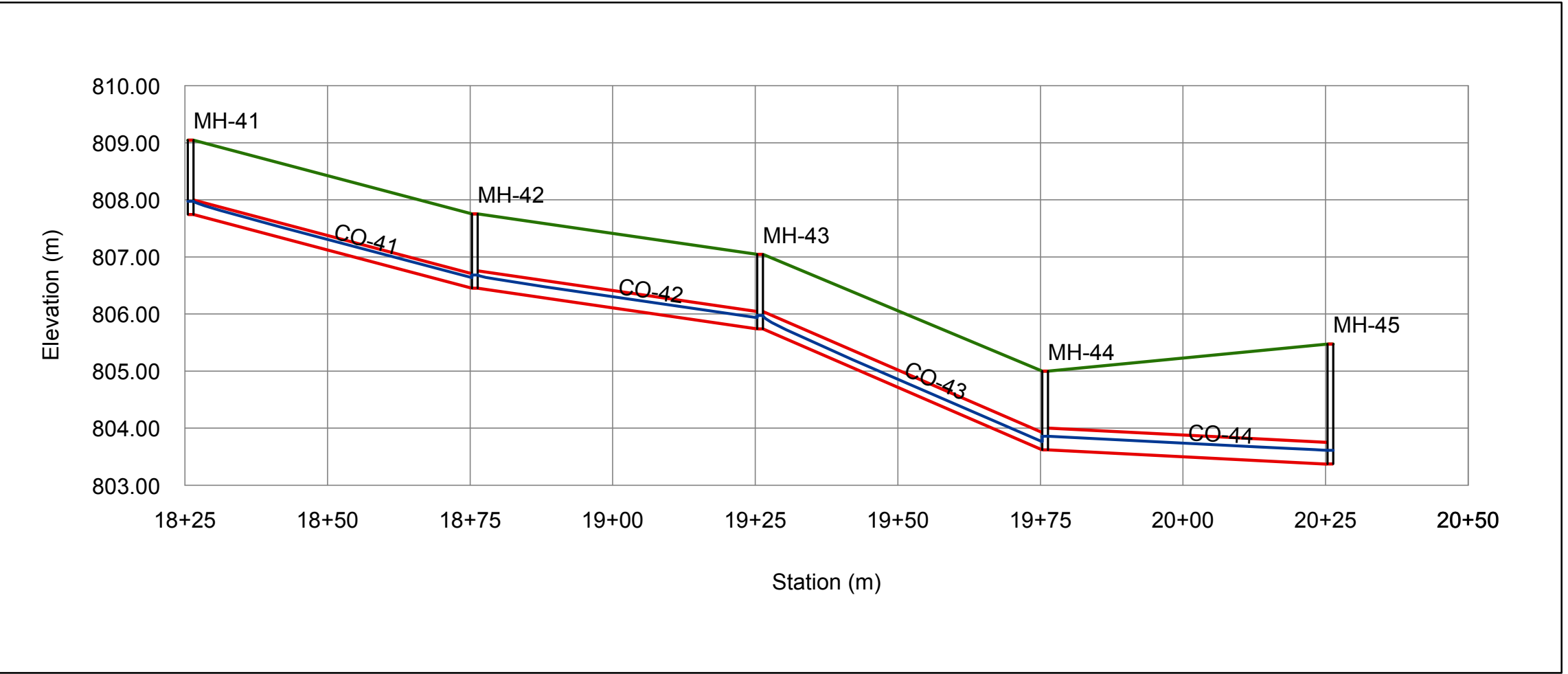
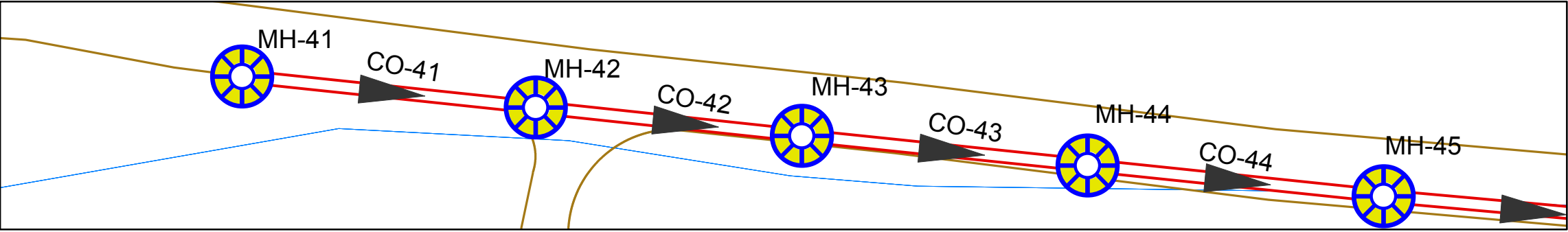
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

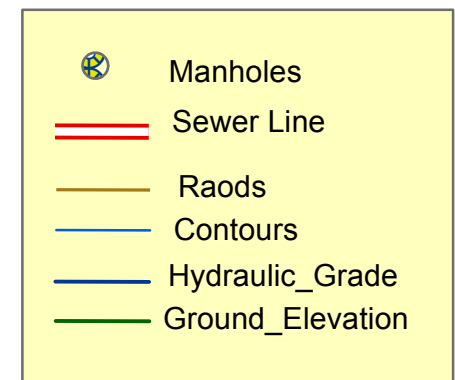
**Figure Number (C8 -11)**



| Point Number             | 41     | 42     | 43     | 44     | 45     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-41  | MH-42  | MH-43  | MH-44  | MH-45  |
| Station                  | 18+26  | 18+75  | 19+25  | 19+75  | 20+25  |
| Ground Elevation         | 809.05 | 807.76 | 807.04 | 805    | 805.47 |
| Invert Elevation         | 807.74 | 806.45 | 805.74 | 803.62 | 803.37 |
| Depth Of Manholes        | 1.31   | 1.31   | 1.3    | 1.38   | 2.1    |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 10     | 12     | 12     | 15     |
| Pipe Slope %             |        | 2.58   | 1.42   | 4.24   | 0.50   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 45 To Manholes 49)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

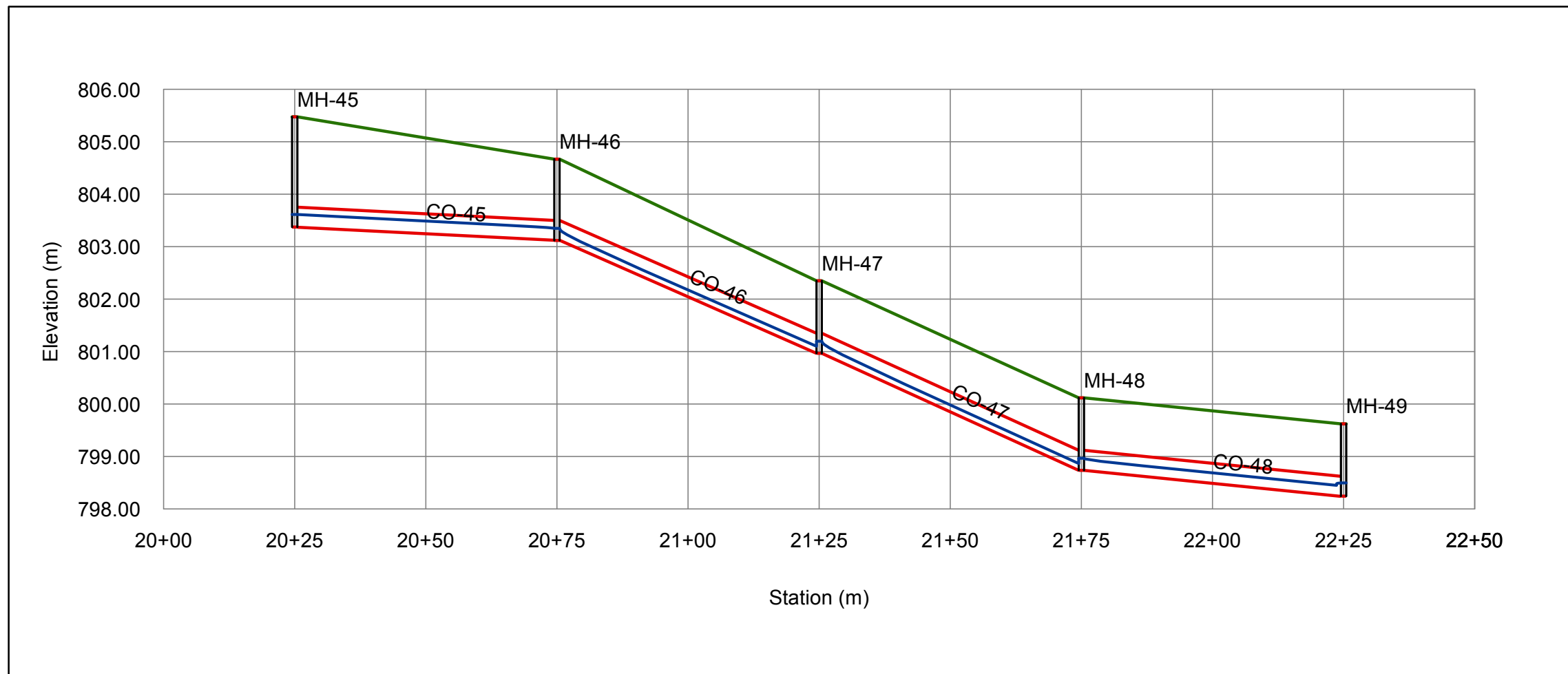
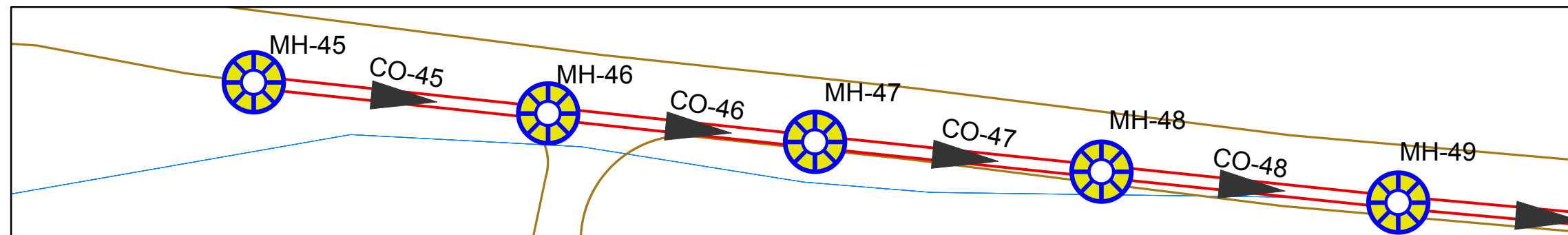
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metres

Data Source : Dora Municipality

**Figure Number (C8 -12)**

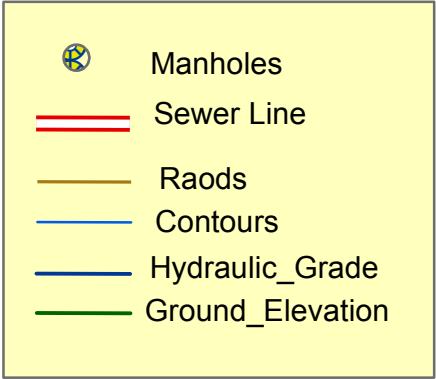
**Page ( 59 )**



| Point Number             | 45     | 46     | 47     | 48     | 49     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-45  | MH-46  | MH-47  | MH-48  | MH-49  |
| Station                  | 20+25  | 20+75  | 21+25  | 21+75  | 22+25  |
| Ground Elevation         | 805.47 | 804.67 | 802.35 | 800.11 | 799.62 |
| Invert Elevation         | 803.37 | 803.12 | 800.97 | 798.73 | 798.24 |
| Depth Of Manholes        | 2.1    | 1.55   | 1.38   | 1.38   | 1.38   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 15     | 15     | 15     | 15     |
| Pipe Slope %             |        | 0.50   | 4.30   | 4.48   | 0.98   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c1)**  
**(From Manholes 49 To Manholes 53)**

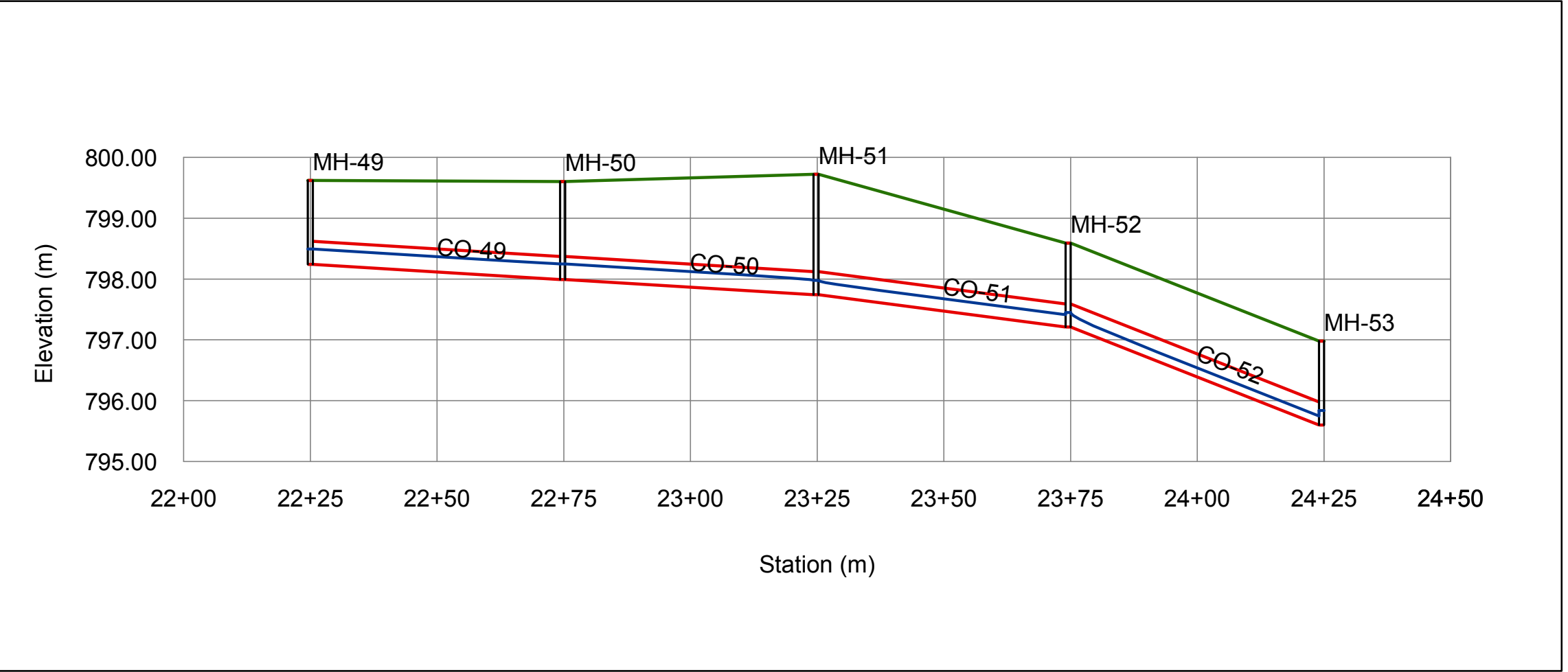
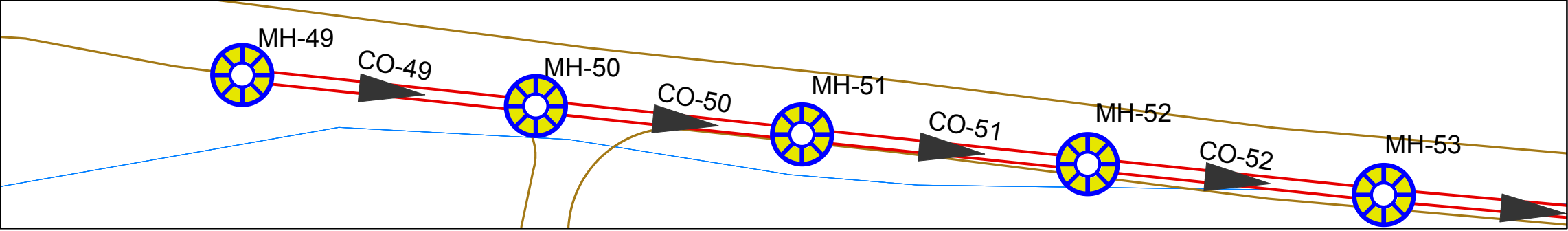
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

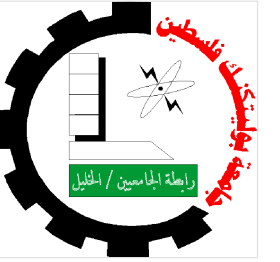
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metres  
 Data Source : Dora Municipality

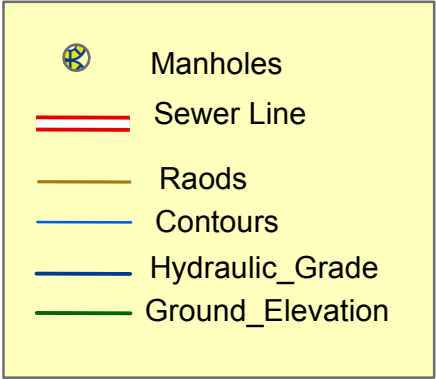
**Figure Number (C8 -13)**



| Point Number             | 49     | 50     | 51     | 52     | 53     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-49  | MH-50  | MH-51  | MH-52  | MH-53  |
| Station                  | 22+25  | 22+75  | 23+25  | 23+75  | 24+25  |
| Ground Elevation         | 799.62 | 799.6  | 799.72 | 798.59 | 796.98 |
| Invert Elevation         | 798.24 | 797.99 | 797.74 | 797.21 | 795.6  |
| Depth Of Manholes        | 1.38   | 1.61   | 1.98   | 1.38   | 1.38   |
| Distance Of Manholes (m) |        | 50     | 49.8   | 50     | 49.8   |
| Pipe Diameter (inch)     |        | 15     | 15     | 15     | 15     |
| Pipe Slope %             |        | 0.50   | 0.50   | 1.06   | 3.23   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 52 To Manholes 57)**

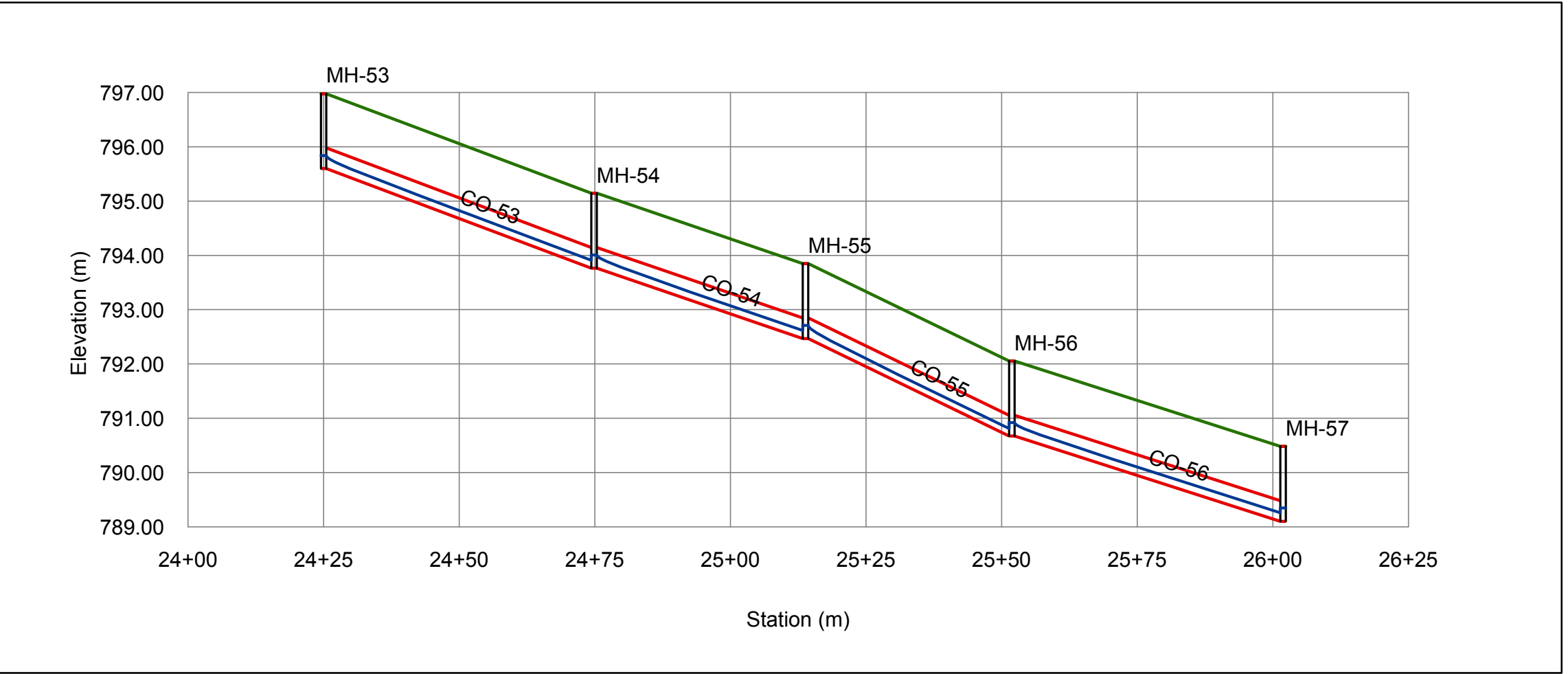
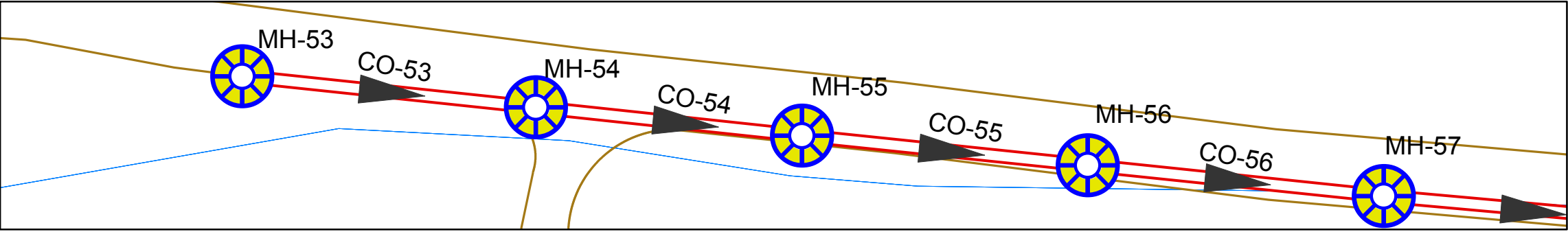
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

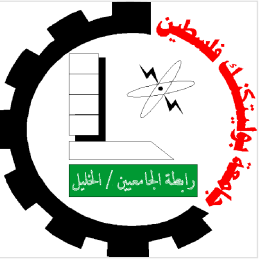
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

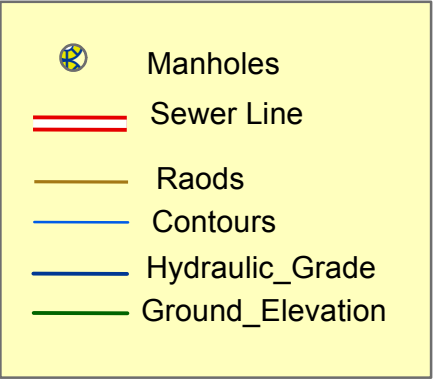
**Figure Number (C8 -14)**



| Point Number             | 53     | 54     | 55     | 56     | 57     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-53  | MH-54  | MH-55  | MH-56  | MH-57  |
| Station                  | 24+25  | 24+75  | 25+14  | 25+52  | 26+02  |
| Ground Elevation         | 796.98 | 795.14 | 793.85 | 792.05 | 790.48 |
| Invert Elevation         | 795.6  | 793.76 | 792.47 | 790.67 | 789.1  |
| Depth Of Manholes        | 1.38   | 1.38   | 1.38   | 1.38   | 1.38   |
| Distance Of Manholes (m) |        | 50     | 39     | 38     | 50     |
| Pipe Diameter (inch)     |        | 15     | 15     | 15     | 15     |
| Pipe Slope %             |        | 3.68   | 3.31   | 4.74   | 3.14   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main c)**  
**(From Manholes 57 To Outfall 1)**

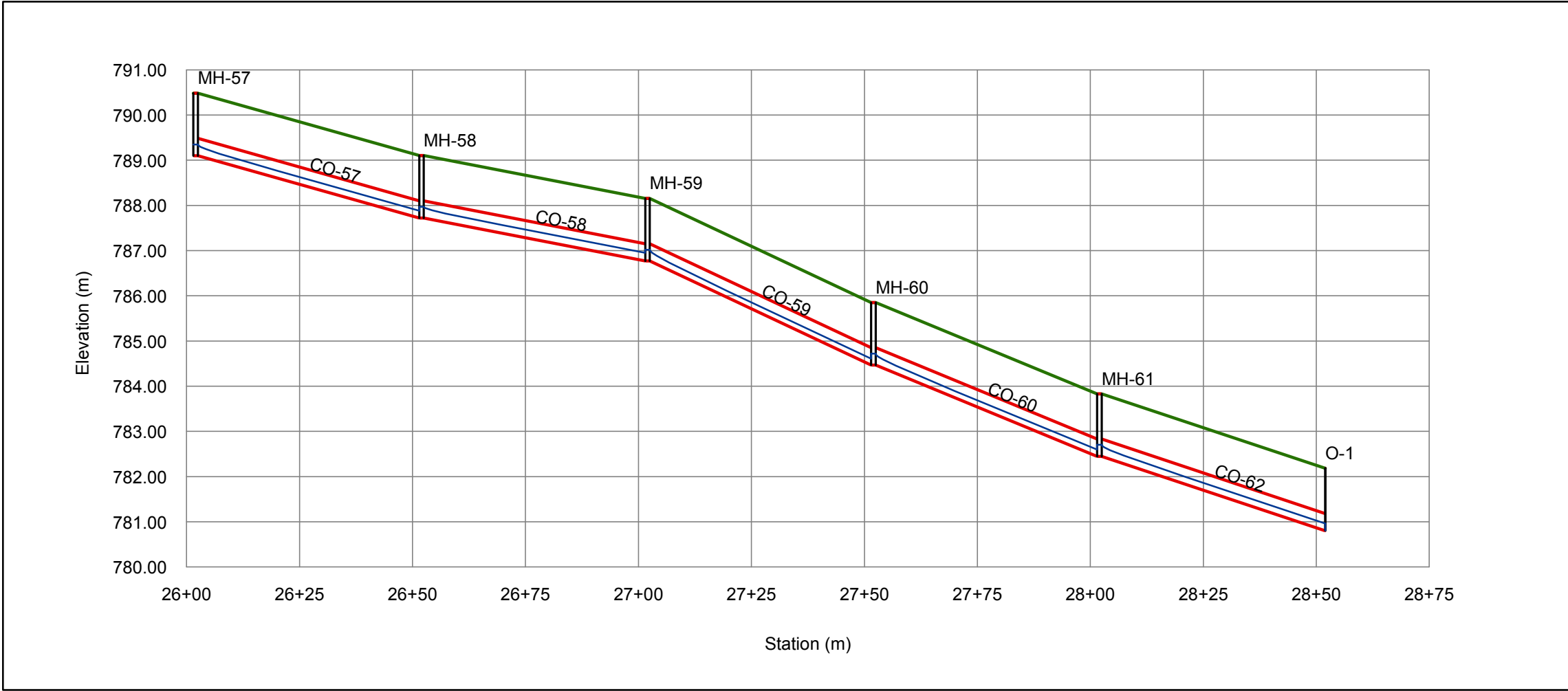
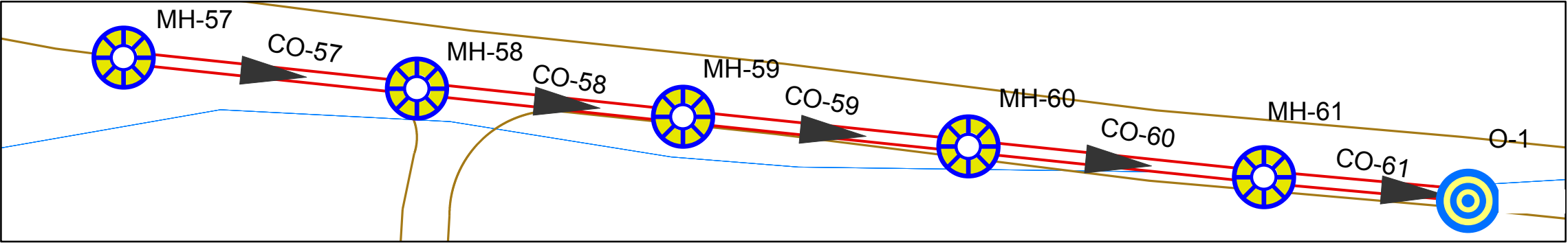
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C8 -15)**



| Point Number             | 57     | 58     | 59     | 60     | 61     | 62     |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-57  | MH-58  | MH-59  | MH-60  | MH-61  | O-1    |
| Station                  | 26+02  | 26+52  | 27+02  | 27+52  | 28+02  | 28+52  |
| Ground Elevation         | 790.48 | 789.1  | 788.15 | 785.85 | 783.83 | 782.18 |
| Invert Elevation         | 789.1  | 787.72 | 786.77 | 784.47 | 782.45 | 780    |
| Depth Of Manholes        | 1.38   | 1.38   | 1.38   | 1.38   | 1.38   | 2.18   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 15     | 15     | 15     | 15     | 15     |
| Pipe Slope %             |        | 2.76   | 1.90   | 4.60   | 4.04   | 4.90   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    | PVC    |

# Waste Water Profile ,Sewer C1



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Legend

Manhole

sewer

Ground\_Elevation

Grid

Project Title :  
Design Of Waste Wate Collection  
System For Dora City

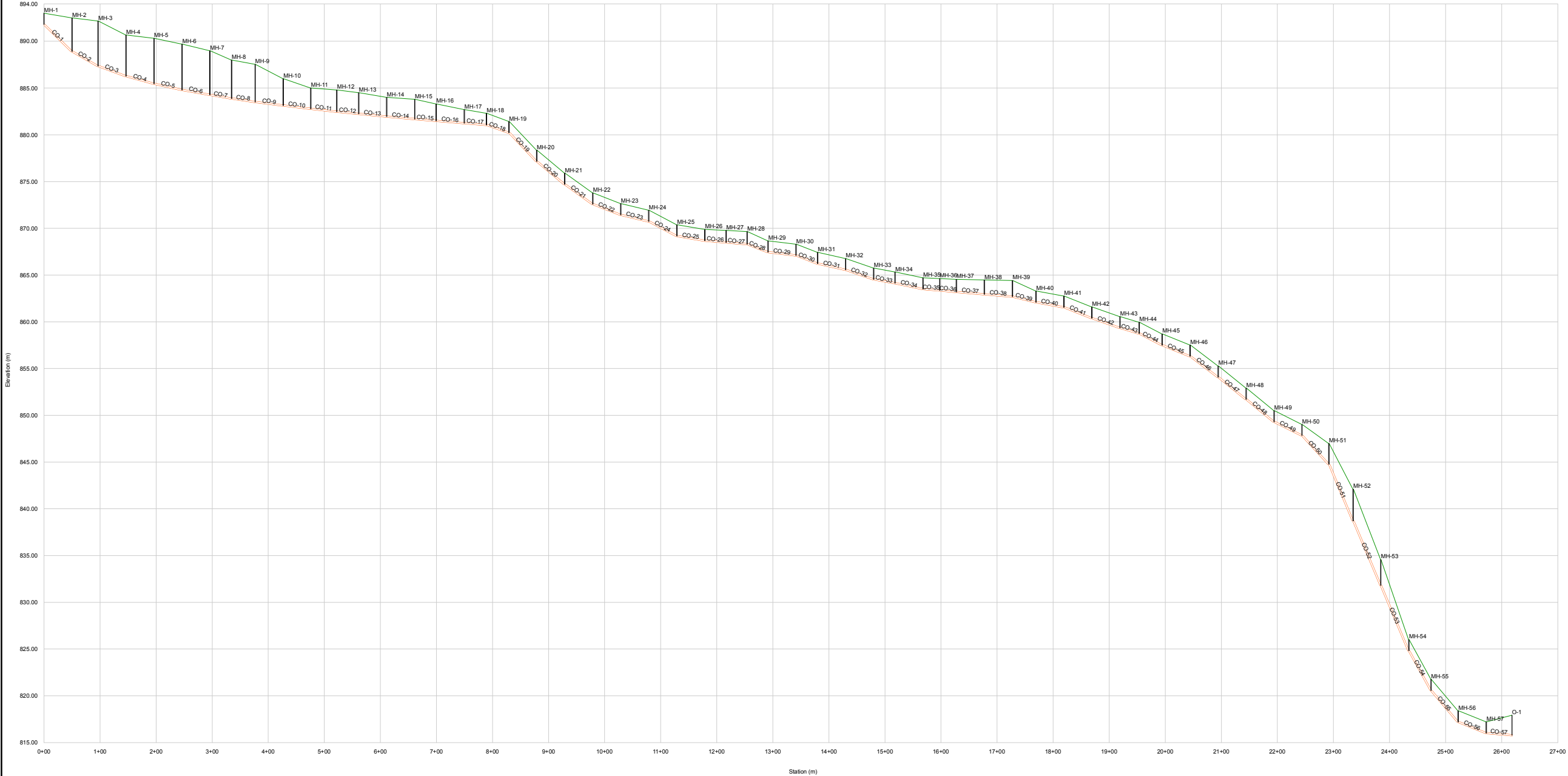
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Noor Dodin

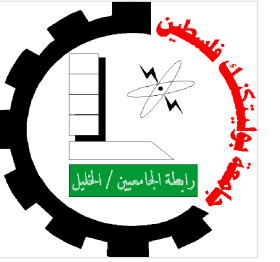
Project Supervisor :  
Eng . Samah Al-Jabari

Coordinate System :Palestine\_1923\_Palestine\_Grid  
Projection: Cassini

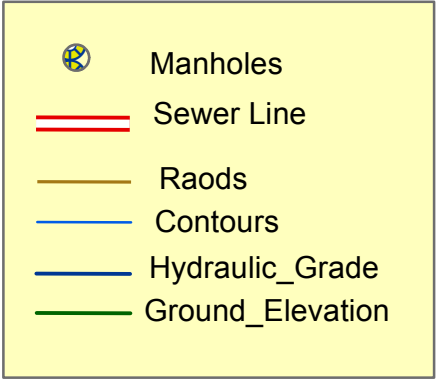
Linear Unit: Meter  
Data Source : Dora Municipality

Figure Number ( C9 )





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**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Water Collection System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 1 To Manholes 5)**

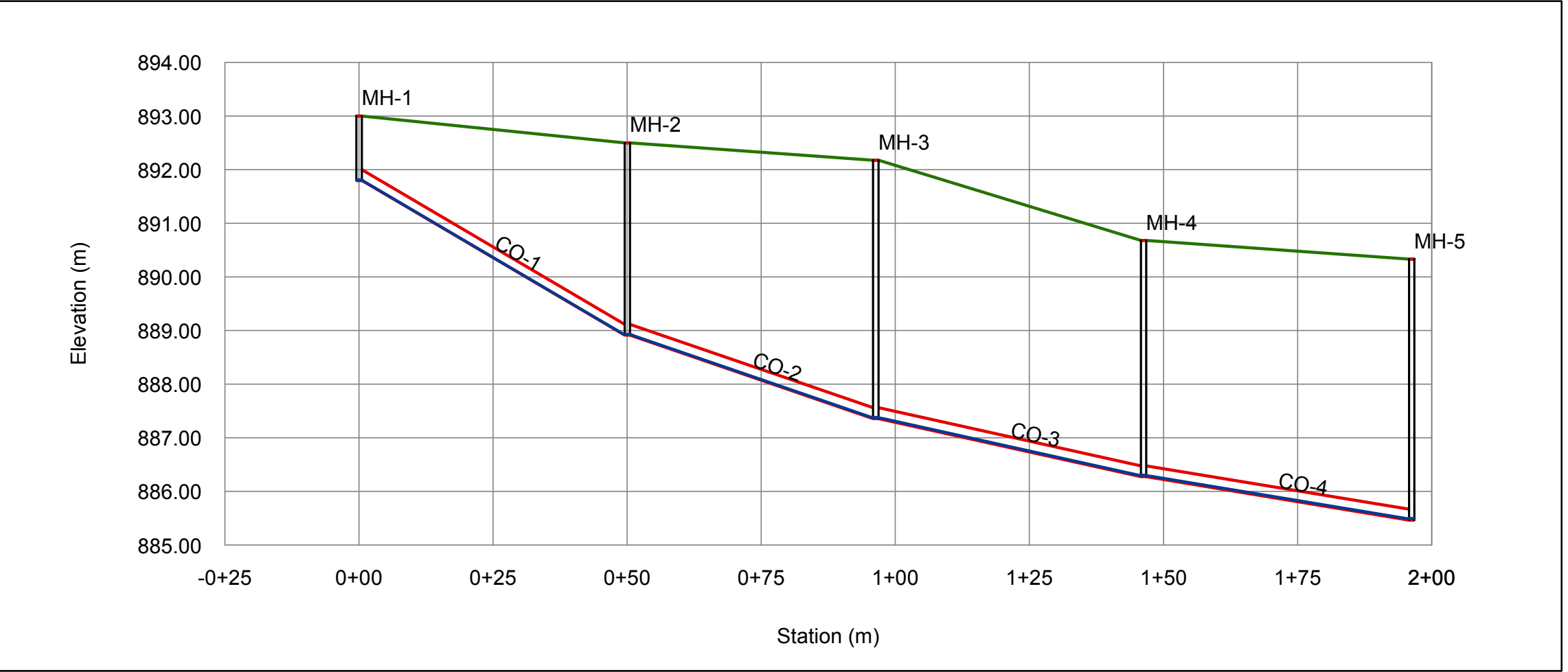
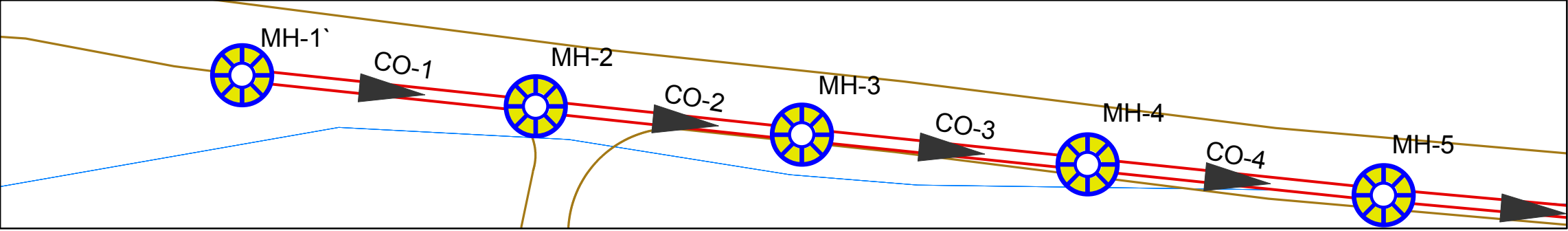
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

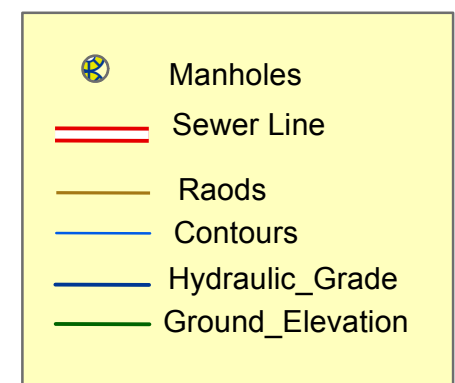
**Figure Number (C9 -1)**



| Point Number             | 1     | 2      | 3      | 4      | 5      |
|--------------------------|-------|--------|--------|--------|--------|
| Manhole Number           | MH-1  | MH-2   | MH-3   | MH-4   | MH-5   |
| Station                  | 00+00 | 0+50   | 0+96   | 1+46   | 1+96   |
| Ground Elevation         | 893   | 892.5  | 892.17 | 890.68 | 890.33 |
| Invert Elevation         | 891.8 | 888.91 | 887.36 | 886.27 | 885.46 |
| Depth Of Manholes        | 1.2   | 3.59   | 4.81   | 4.41   | 4.87   |
| Distance Of Manholes (m) |       | 50     | 46.3   | 49.9   | 50     |
| Pipe Diameter (inch)     |       | 8      | 8      | 8      | 8      |
| Pipe Slope %             |       | 5.78   | 3.35   | 2.18   | 1.62   |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 5 To Manholes 9)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

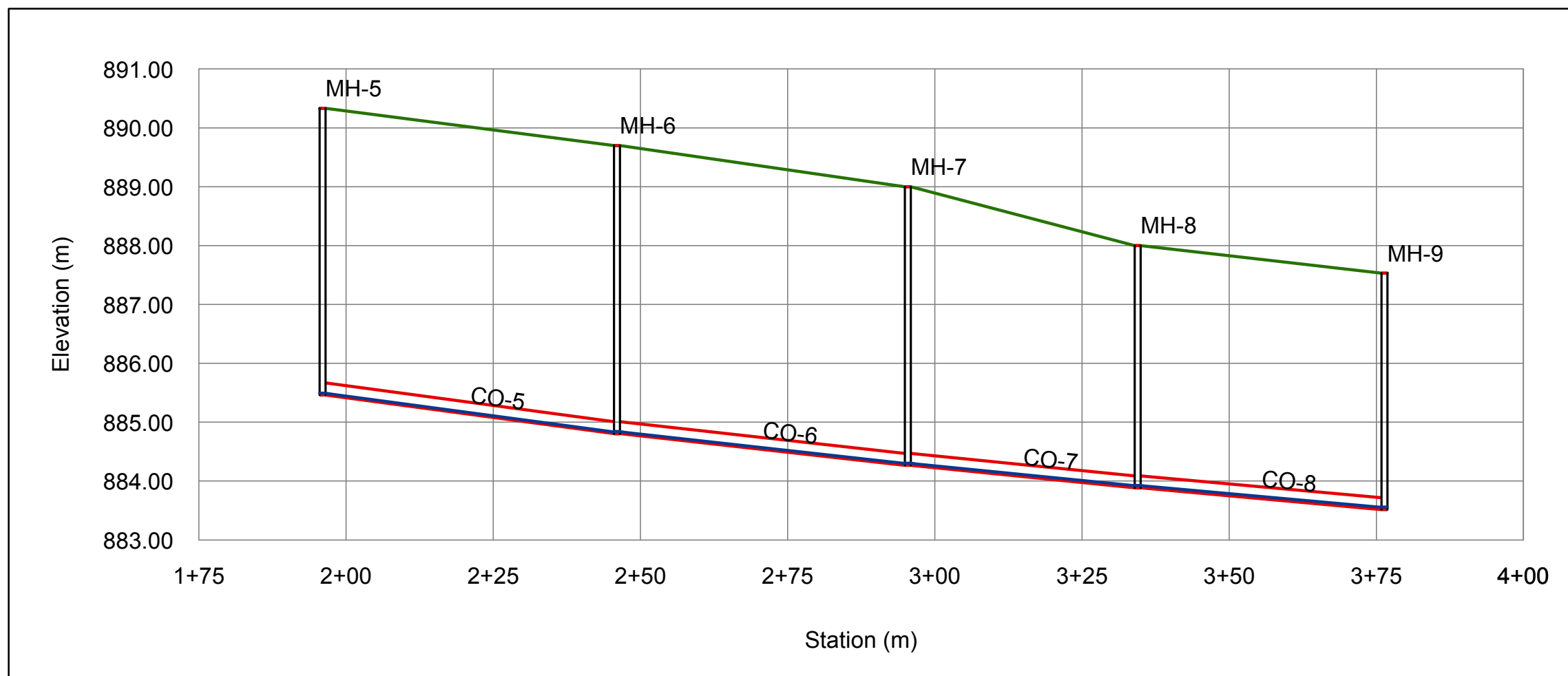
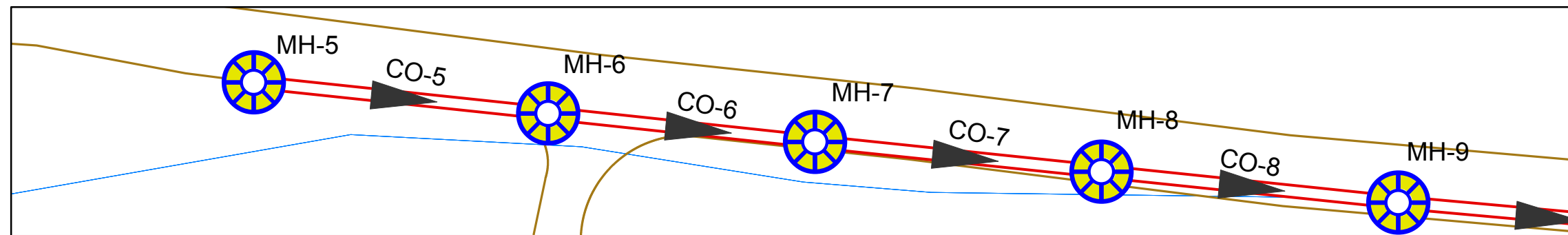
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

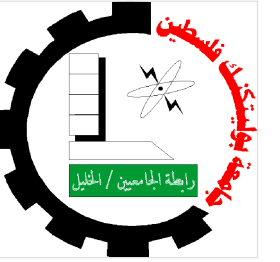
Data Source : Dora Municipality

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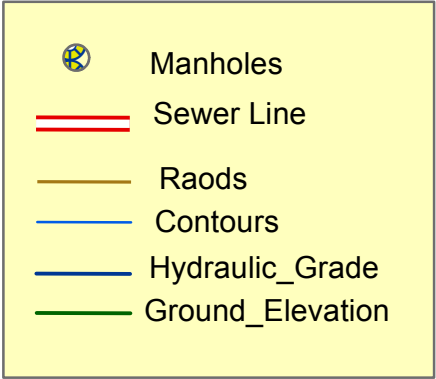
**Page ( 65 )**



| Point Number             | 5      | 6      | 7      | 8      | 9      |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-5   | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 1+96   | 2+46   | 2+96   | 3+35   | 3+77   |
| Ground Elevation(m)      | 890.33 | 889.7  | 889    | 888    | 887.53 |
| Invert Elevation(m)      | 885.46 | 884.81 | 884.27 | 883.88 | 883.52 |
| Depth Of Manholes(m)     | 4.87   | 4.89   | 4.73   | 4.12   | 4.01   |
| Distance Of Manholes (m) |        | 50     | 49.4   | 39     | 41.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 1.30   | 1.09   | 1.00   | 0.86   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 9 To Manholes 13)**

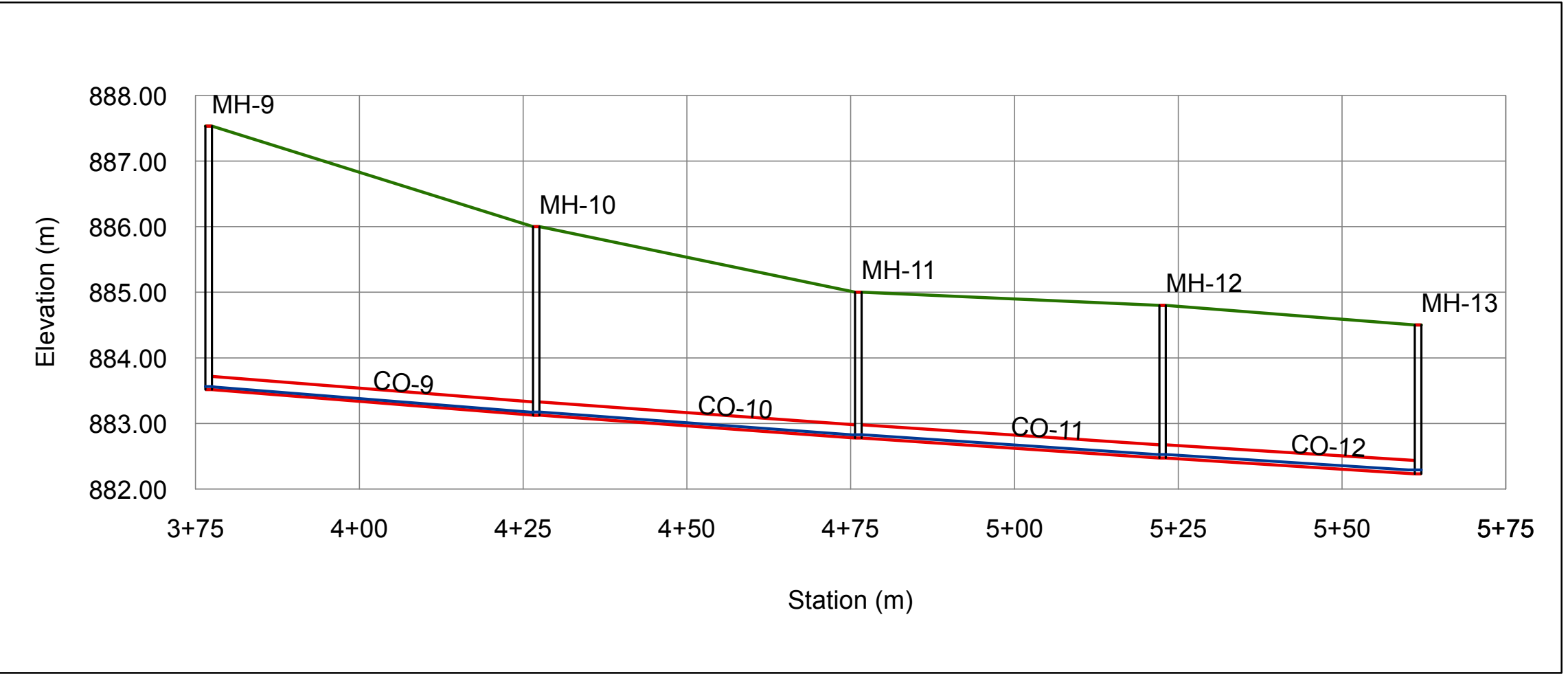
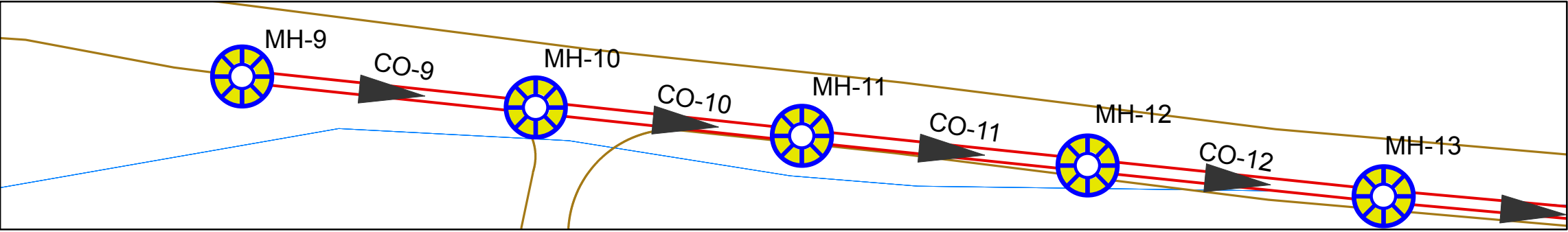
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

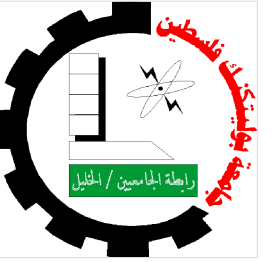
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**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

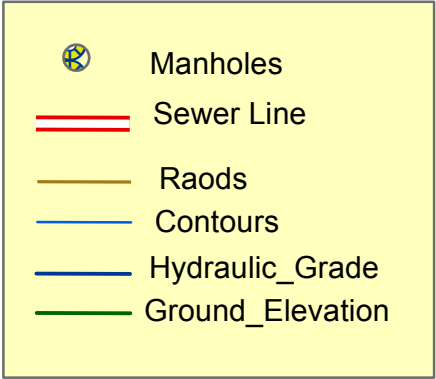
**Figure Number (C9 -3)**



| Point Number             | 9      | 10     | 11     | 12     | 13     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-9   | MH-10  | MH-11  | MH-12  | MH-13  |
| Station                  | 3+77   | 4+27   | 4+76   | 5+22   | 5+61   |
| Ground Elevation         | 887.53 | 886    | 885    | 884.8  | 884.5  |
| Invert Elevation         | 883.52 | 883.13 | 882.78 | 882.47 | 882.23 |
| Depth Of Manholes        | 4.01   | 2.87   | 2.22   | 2.33   | 2.27   |
| Distance Of Manholes (m) |        | 50     | 49.2   | 46.5   | 39     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 0.78   | 0.71   | 0.67   | 0.62   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 13 To Manholes 17)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

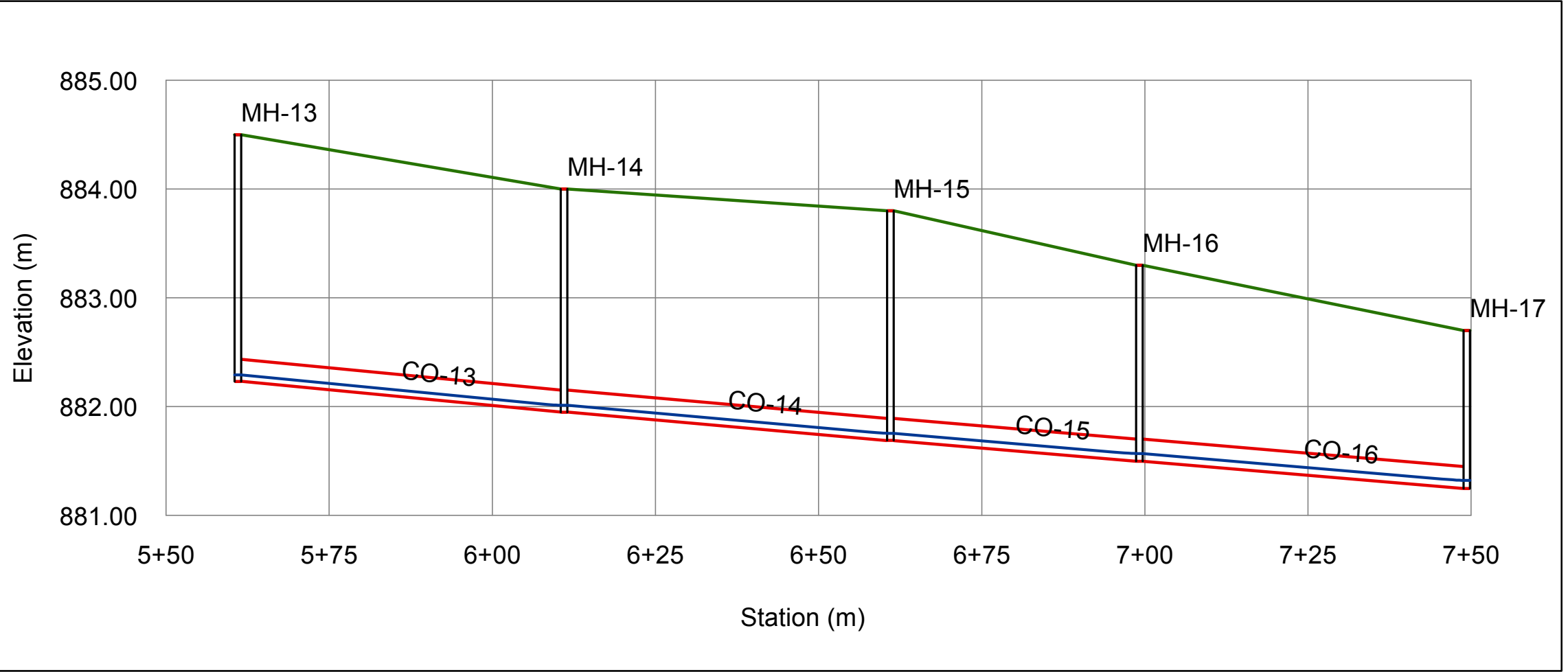
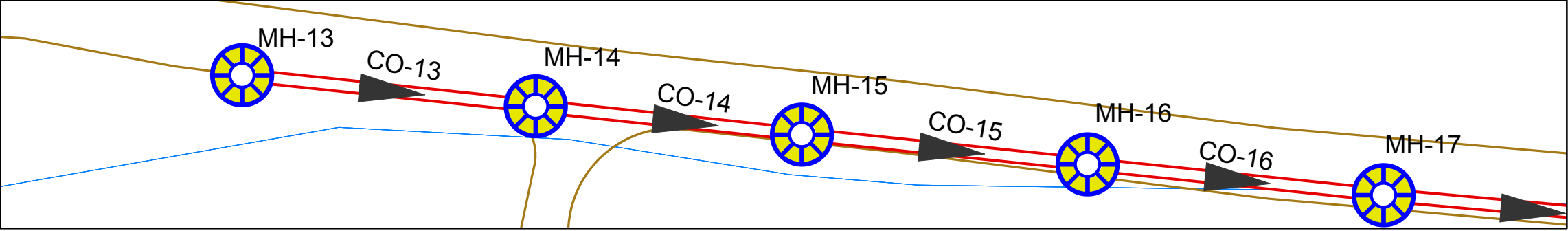
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

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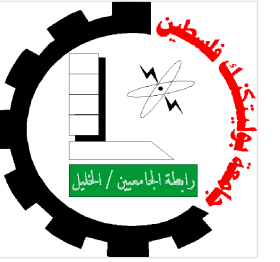
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 2- All Pipe length In Metrs

Data Source : Dora Municipality

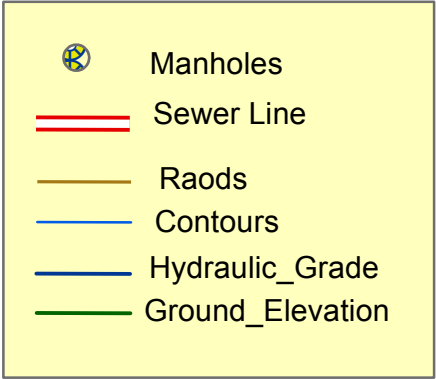
**Figure Number (C9 -4)**



| Point Number             | 13     | 14     | 15     | 16    | 17     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-13  | MH-14  | MH-15  | MH-16 | MH-17  |
| Station                  | 5+61   | 6+11   | 6+61   | 6+99  | 7+50   |
| Ground Elevation         | 884.5  | 884    | 883.8  | 883.3 | 882.7  |
| Invert Elevation         | 882.23 | 881.95 | 881.69 | 881.5 | 881.25 |
| Depth Of Manholes        | 2.27   | 2.05   | 2.11   | 1.8   | 1.45   |
| Distance Of Manholes (m) |        | 50     | 50     | 38.2  | 50.2   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 0.56   | 0.52   | 0.50  | 0.50   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 17 To Manholes 21)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

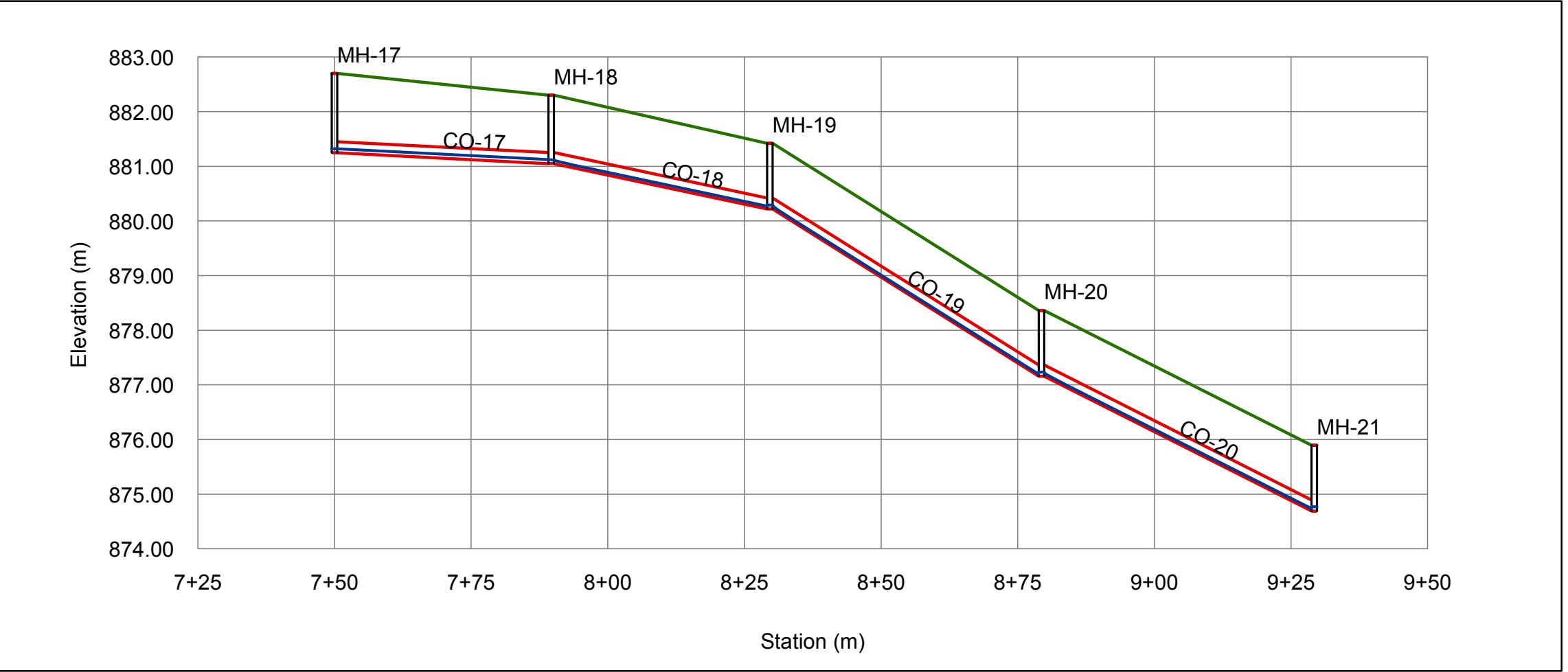
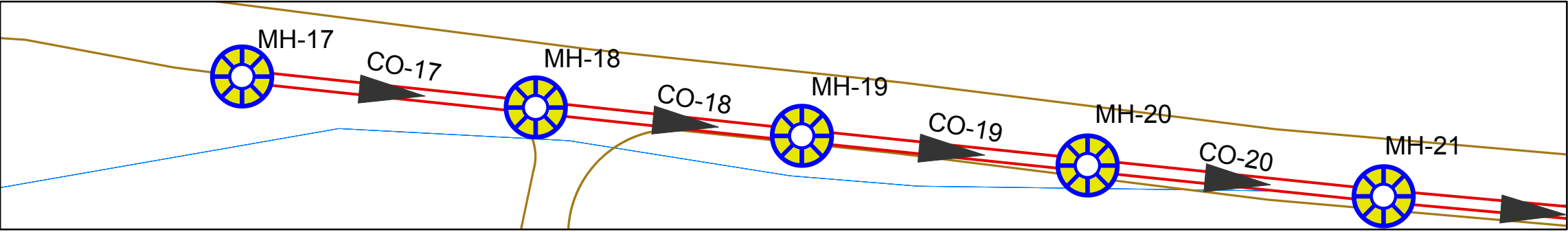
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

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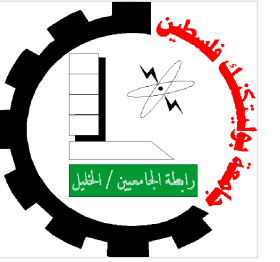
Notes:  
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 2- All Pipe length In Meters

Data Source : Dora Municipality

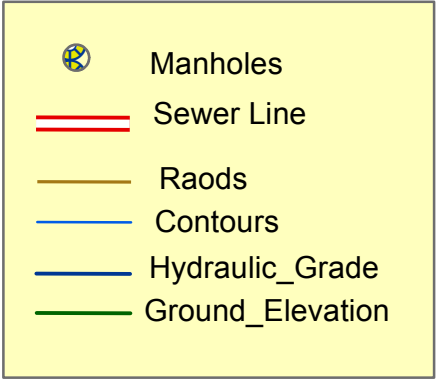
**Figure Number (C9 -5)**



| Point Number             | 17     | 18     | 19     | 20     | 21     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-17  | MH-18  | MH-19  | MH-20  | MH-21  |
| Station                  | 7+50   | 7+89   | 8+29   | 8+79   | 9+29   |
| Ground Elevation         | 882.7  | 882.3  | 881.42 | 878.36 | 875.9  |
| Invert Elevation         | 881.25 | 881.05 | 880.22 | 877.16 | 874.69 |
| Depth Of Manholes        | 1.45   | 1.25   | 1.2    | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 39.6   | 40     | 49.7   | 49.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 0.51   | 2.07   | 6.16   | 4.95   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 21 To Manholes 25)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

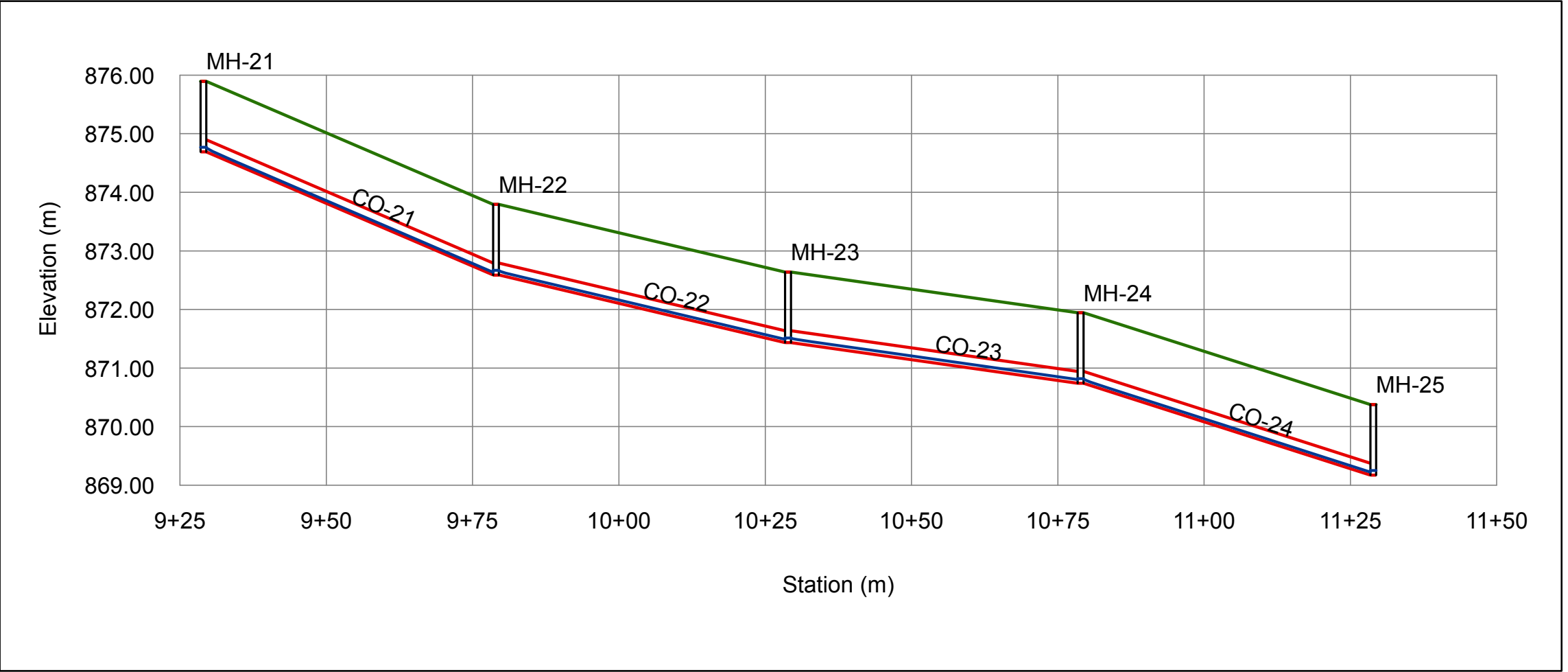
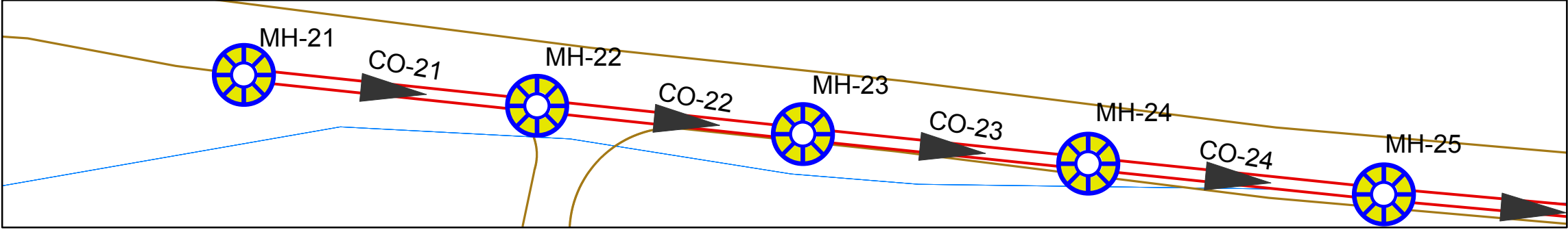
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

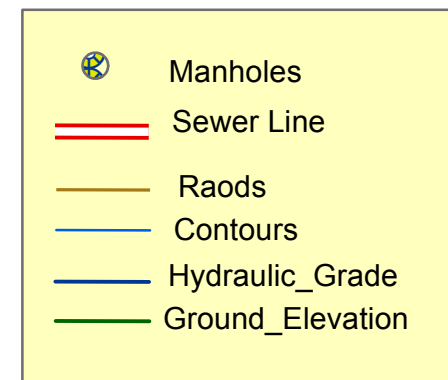
**Figure Number (C9 -6)**  
**Page ( 69 )**



| Point Number             | 21     | 22     | 23     | 24     | 25     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-21  | MH-22  | MH-23  | MH-24  | MH-25  |
| Station                  | 9+29   | 9+79   | 10+29  | 10+79  | 11+29  |
| Ground Elevation         | 875.9  | 873.79 | 872.64 | 871.94 | 870.38 |
| Invert Elevation         | 874.69 | 872.59 | 871.43 | 870.74 | 869.17 |
| Depth Of Manholes        | 1.21   | 1.2    | 1.21   | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 4.20   | 2.32   | 1.38   | 3.14   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

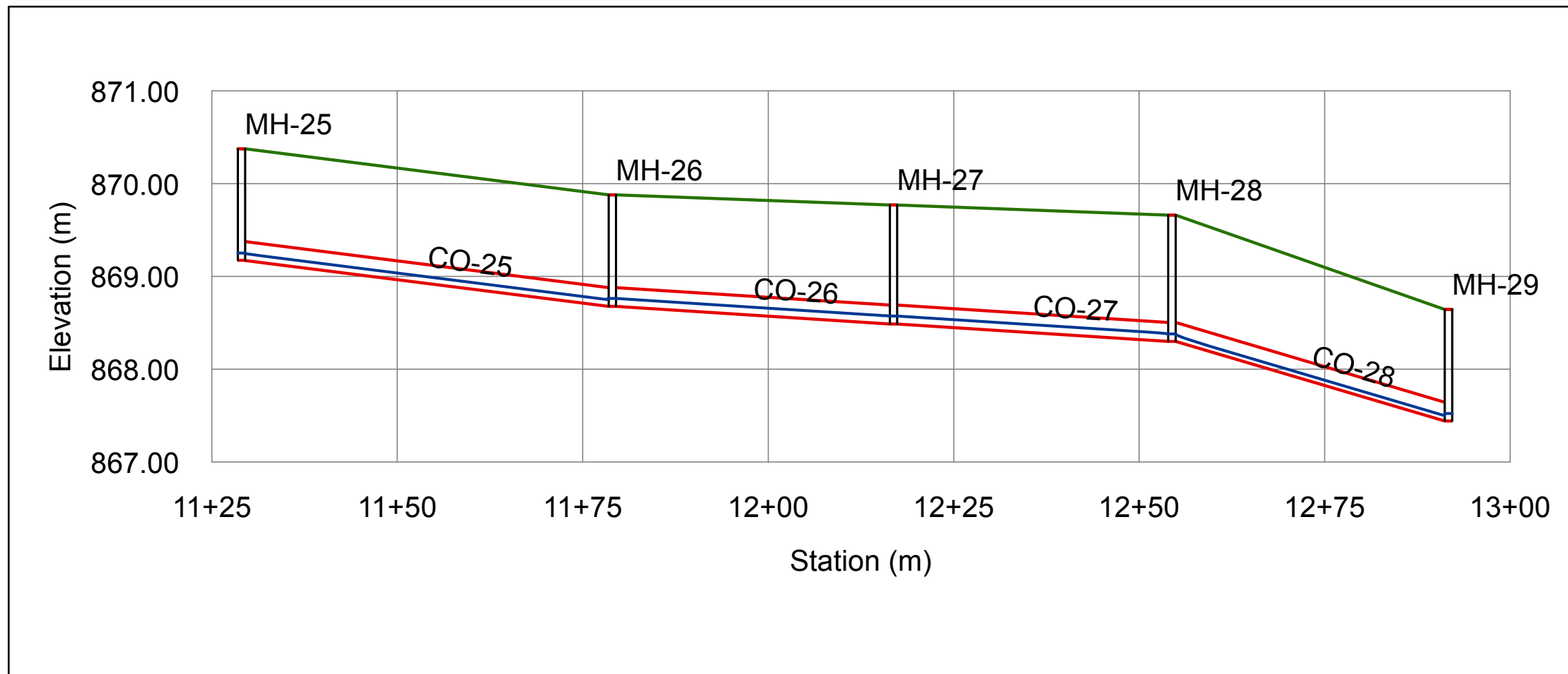
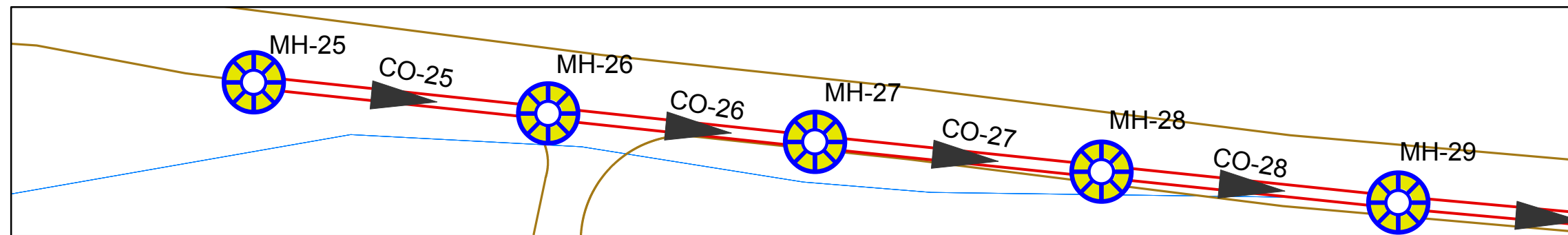
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

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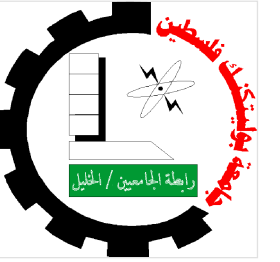
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metres

**Data Source :** Dora Municipality

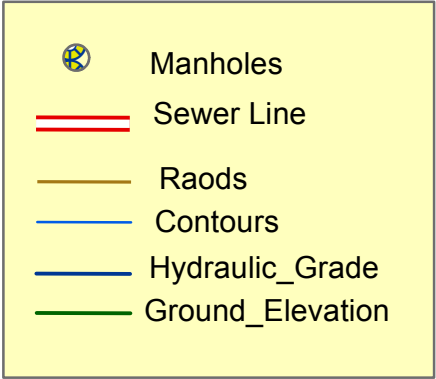
**Figure Number (C9 -7)**  
**Page ( 70 )**



| Point Number             | 25     | 26     | 27     | 28     | 29     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-25  | MH-26  | MH-27  | MH-28  | MH-29  |
| Station                  | 11+29  | 11+79  | 12+17  | 12+54  | 12+91  |
| Ground Elevation         | 870.38 | 869.88 | 869.77 | 869.66 | 868.64 |
| Invert Elevation         | 869.17 | 868.68 | 868.49 | 868.3  | 867.44 |
| Depth Of Manholes        | 1.21   | 1.2    | 1.28   | 1.36   | 1.2    |
| Distance Of Manholes (m) |        | 50     | 37.9   | 37.5   | 37.3   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 0.98   | 0.50   | 0.51   | 2.31   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 29 To Manholes 33)**

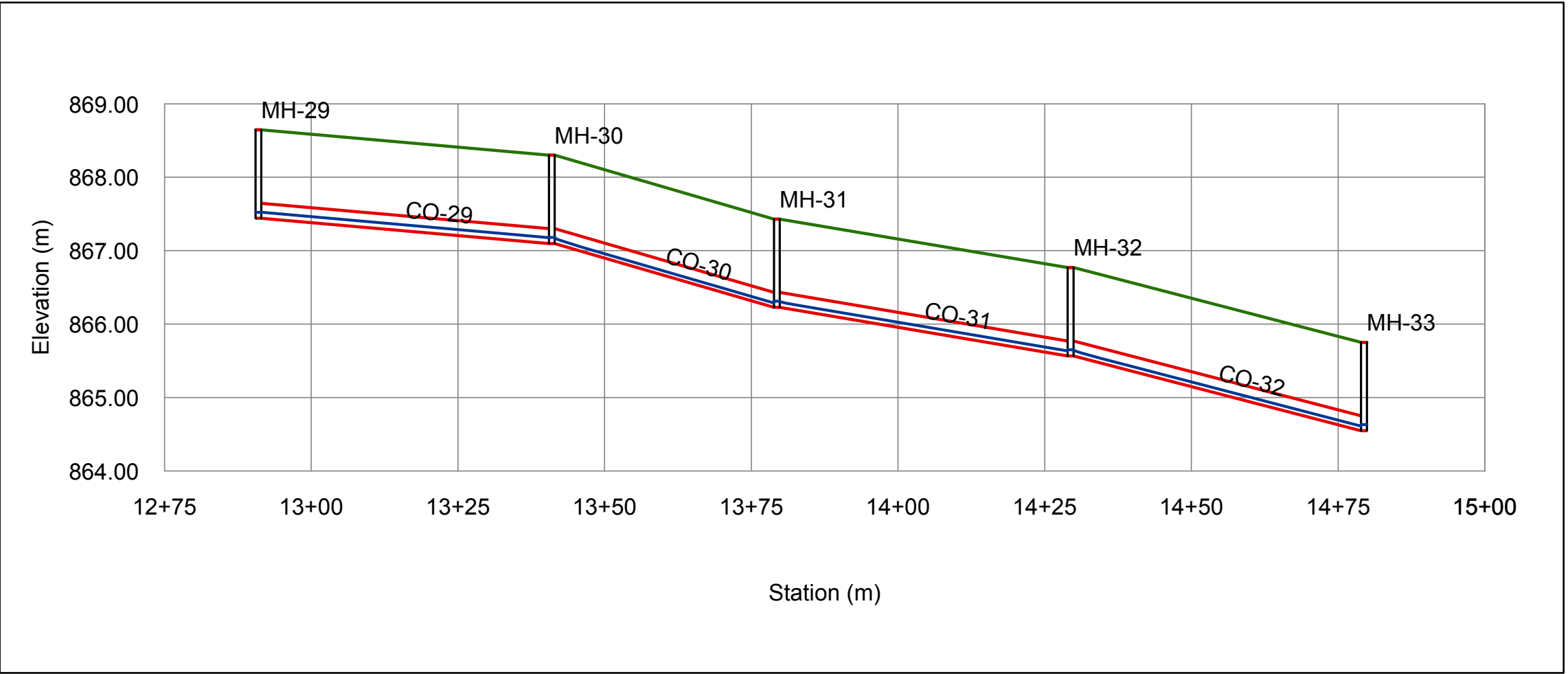
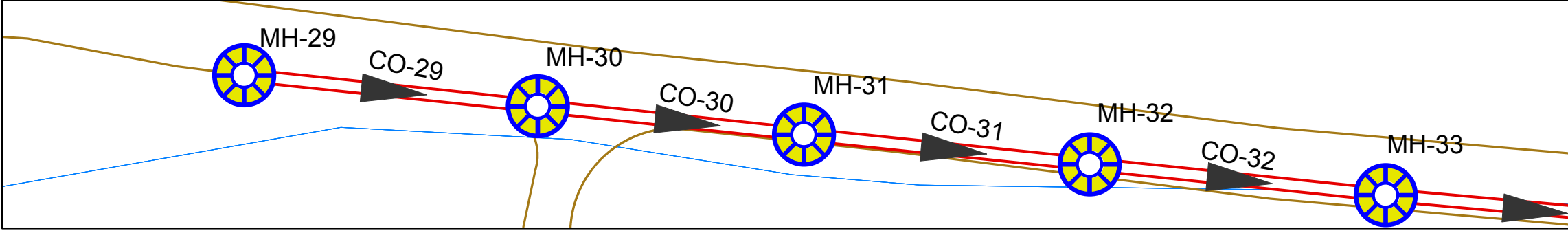
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

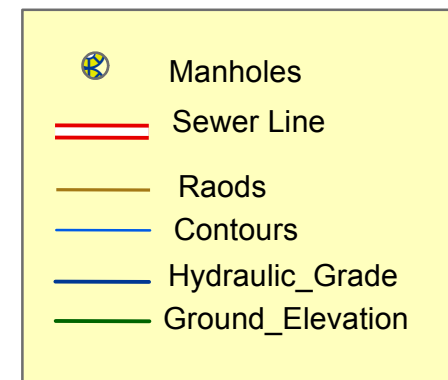
**Figure Number (C9 -8)**



| Point Number             | 29     | 30    | 31     | 32     | 33     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-29  | MH-30 | MH-31  | MH-32  | MH-33  |
| Station                  | 12+91  | 13+41 | 13+80  | 14+30  | 14+80  |
| Ground Elevation         | 868.64 | 868.3 | 867.43 | 866.77 | 865.75 |
| Invert Elevation         | 867.44 | 867.1 | 866.23 | 865.57 | 864.55 |
| Depth Of Manholes        | 1.2    | 1.2   | 1.2    | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50    | 38.4   | 50.1   | 50     |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 0.68  | 2.27   | 1.32   | 2.04   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

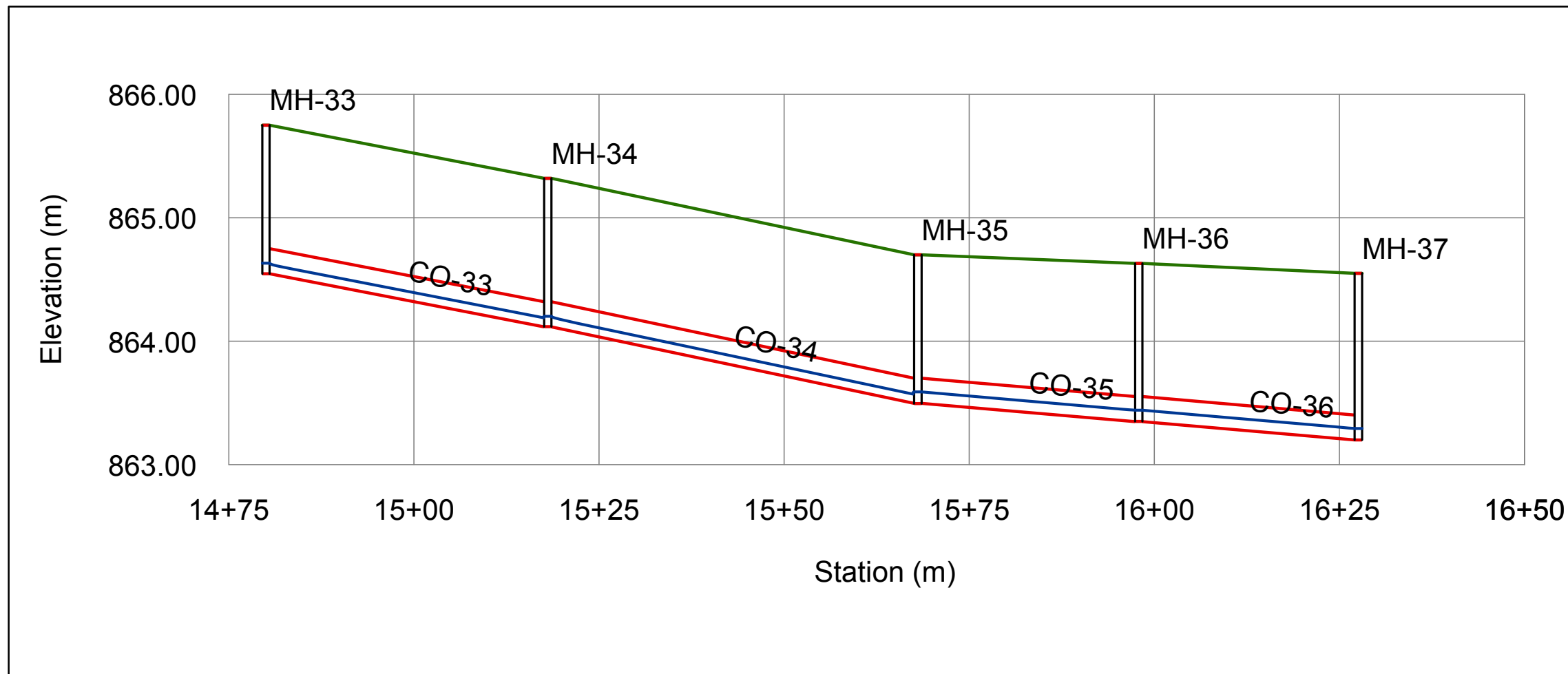
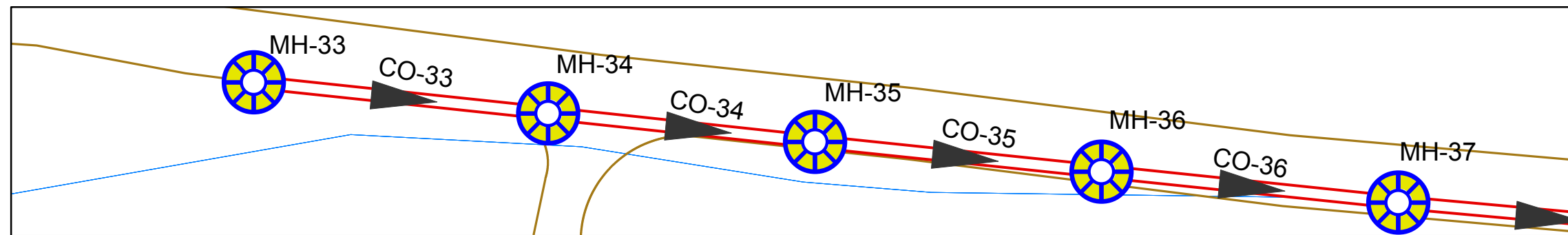
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**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

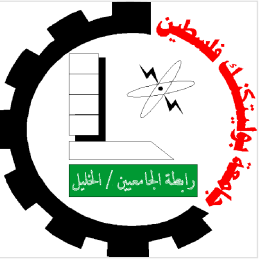
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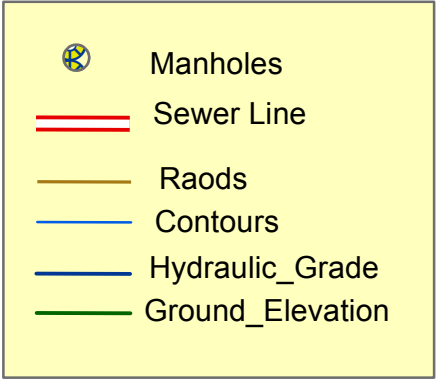
**Page ( 72 )**



| Point Number             | 33     | 34     | 35    | 36     | 37     |
|--------------------------|--------|--------|-------|--------|--------|
| Manhole Number           | MH-33  | MH-34  | MH-35 | MH-36  | MH-37  |
| Station                  | 14+80  | 15+18  | 15+68 | 15+98  | 16+27  |
| Ground Elevation         | 865.75 | 865.32 | 864.7 | 864.63 | 864.55 |
| Invert Elevation         | 864.55 | 864.12 | 863.5 | 863.35 | 863.2  |
| Depth Of Manholes        | 1.2    | 1.2    | 1.2   | 1.28   | 1.35   |
| Distance Of Manholes (m) |        | 29.8   | 29.7  | 49.9   | 50     |
| Pipe Diameter (inch)     |        | 8      | 8     | 8      | 8      |
| Pipe Slope %             |        | 1.44   | 2.09  | 0.30   | 0.30   |



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**Project Title :**  
**Design Of Waste Wate Collection System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 37 To Manholes 41)**

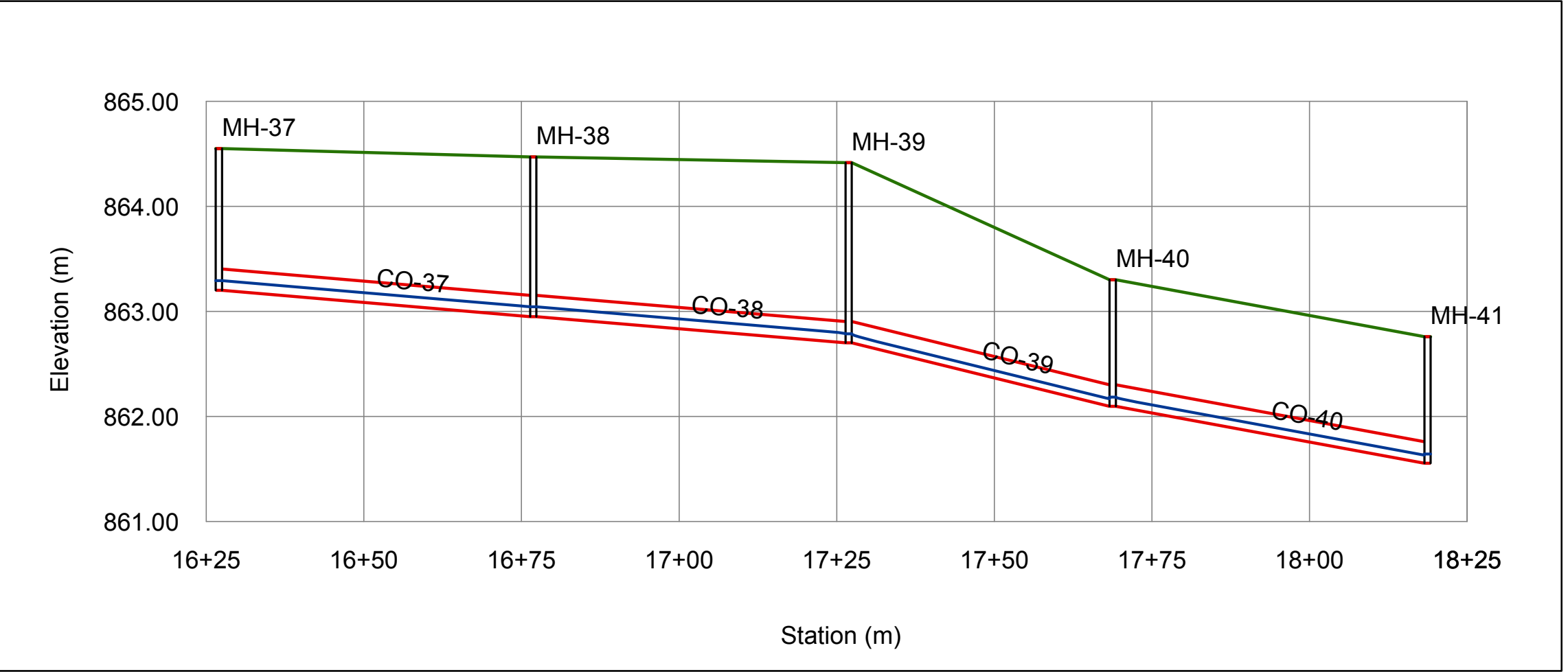
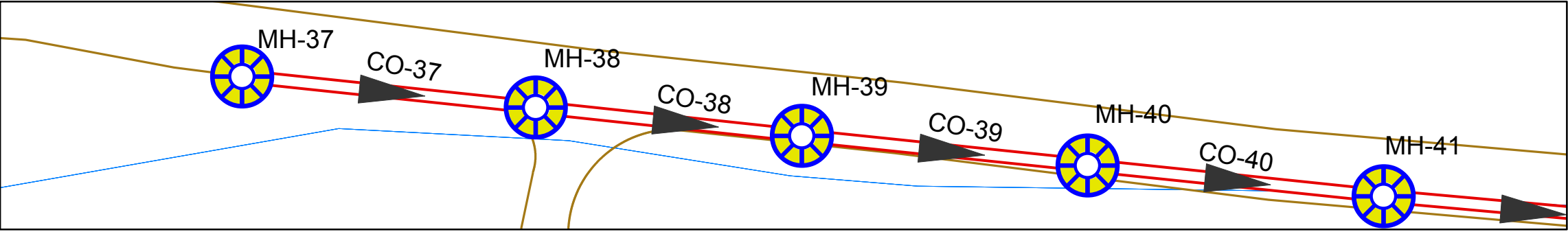
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

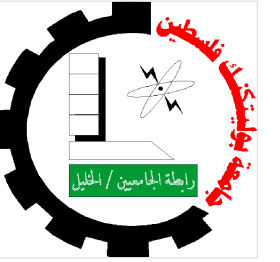
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**Notes:**  
 1- All Pipe Diameter In inch  
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 Data Source : Dora Municipality

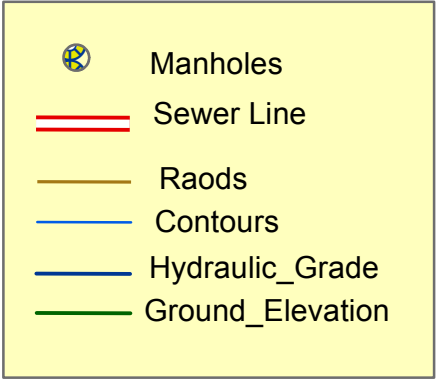
**Figure Number (C9 -10)**  
**Page ( 73 )**



| Point Number             | 37     | 38     | 39     | 40    | 41     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40 | MH-41  |
| Station                  | 16+27  | 16+77  | 17+27  | 17+69 | 18+19  |
| Ground Elevation         | 864.55 | 864.47 | 864.41 | 863.3 | 862.76 |
| Invert Elevation         | 863.2  | 862.95 | 862.7  | 862.1 | 861.55 |
| Depth Of Manholes        | 1.35   | 1.52   | 1.71   | 1.2   | 1.21   |
| Distance Of Manholes (m) |        | 50     | 50     | 41.9  | 49.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 0.50   | 0.50   | 1.43  | 1.10   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 41 To Manholes 45)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

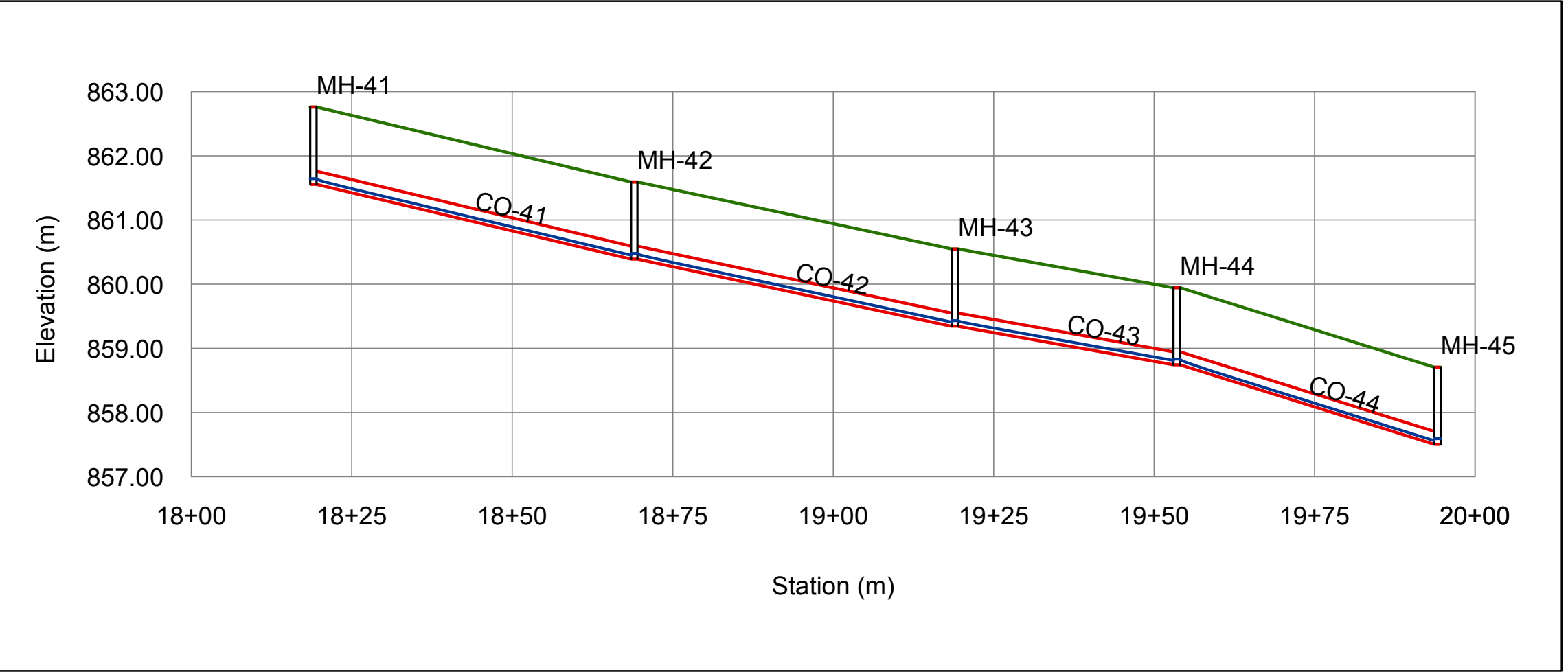
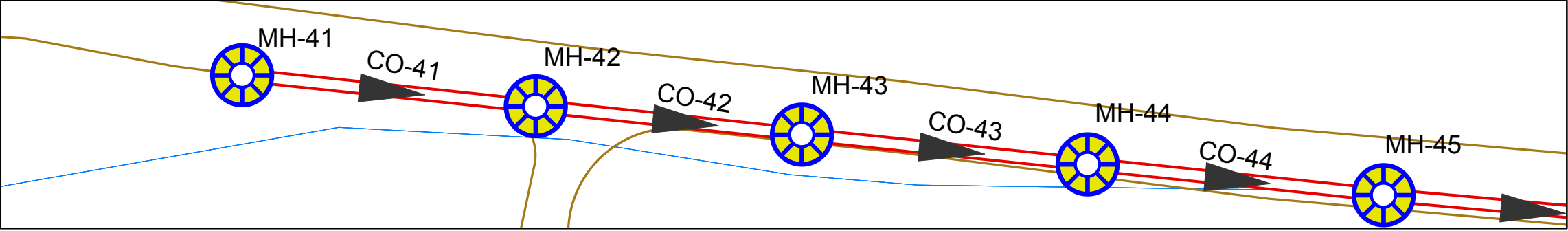
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

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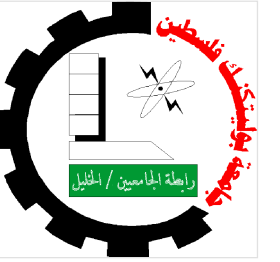
**Notes:**  
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 2- All Pipe length In Metrs

Data Source : Dora Municipality

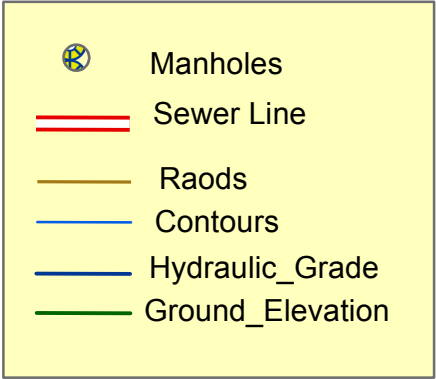
**Figure Number (C9 -11)**



| Point Number             | 41     | 42     | 43     | 44     | 45     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-41  | MH-42  | MH-43  | MH-44  | MH-45  |
| Station                  | 18+19  | 18+69  | 19+19  | 19+54  | 19+94  |
| Ground Elevation         | 862.76 | 861.59 | 860.55 | 859.95 | 858.71 |
| Invert Elevation         | 861.55 | 860.39 | 859.34 | 858.74 | 857.5  |
| Depth Of Manholes        | 1.21   | 1.2    | 1.21   | 1.21   | 1.21   |
| Distance Of Manholes (m) |        | 49.8   | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 2.33   | 2.10   | 1.20   | 2.48   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 45 To Manholes 49)**

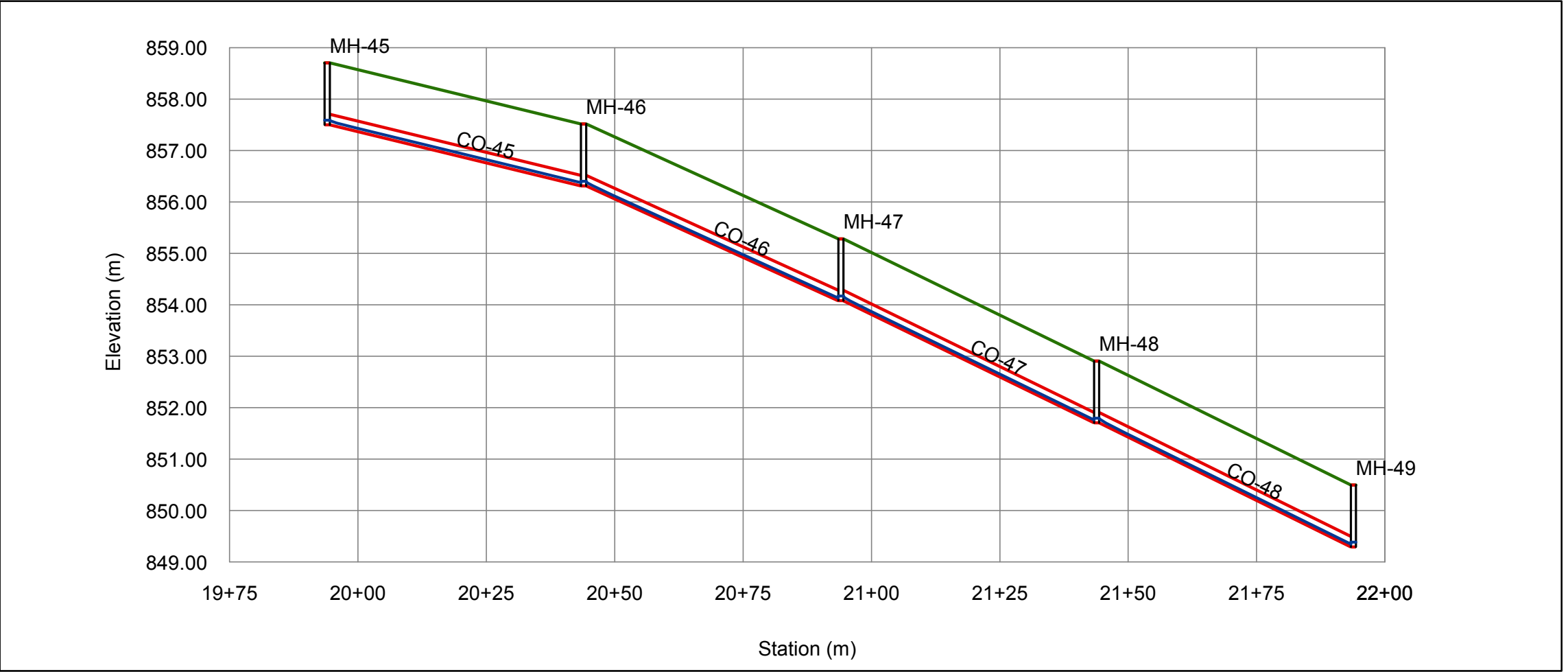
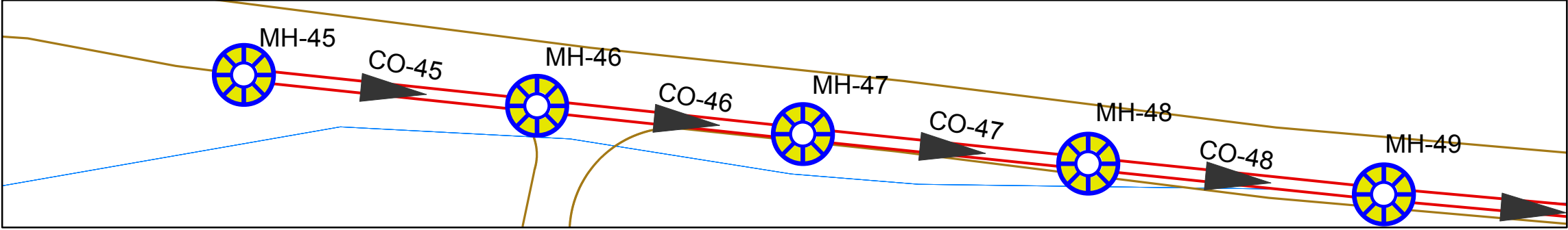
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

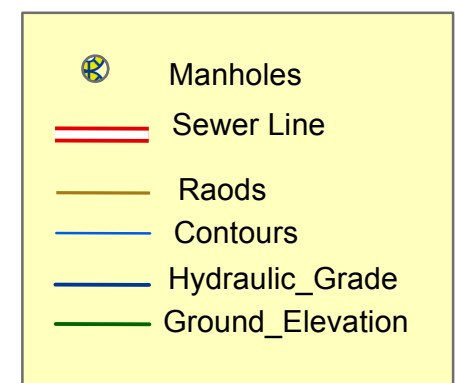
**Figure Number (C9 -12)**  
**Page ( 75 )**



| Point Number             | 45     | 46     | 47     | 48     | 49     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-45  | MH-46  | MH-47  | MH-48  | MH-49  |
| Station                  | 19+94  | 20+44  | 20+94  | 21+44  | 21+94  |
| Ground Elevation         | 858.71 | 857.52 | 855.28 | 852.91 | 850.49 |
| Invert Elevation         | 857.5  | 856.31 | 854.08 | 851.7  | 849.29 |
| Depth Of Manholes        | 1.21   | 1.21   | 1.2    | 1.21   | 1.2    |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 2.38   | 4.46   | 4.76   | 4.82   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



**Palestine Polytechnic University**  
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**Technology**



**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 49 To Manholes 53)**

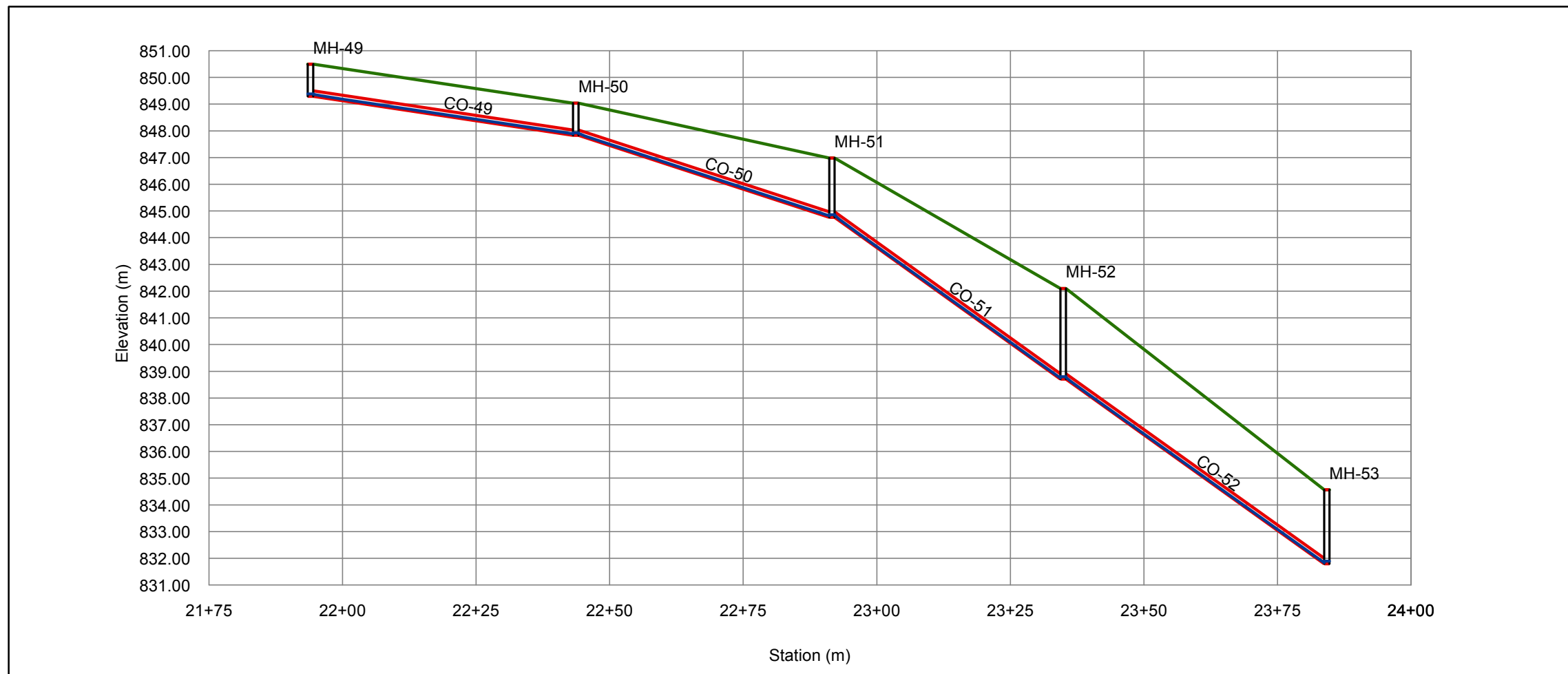
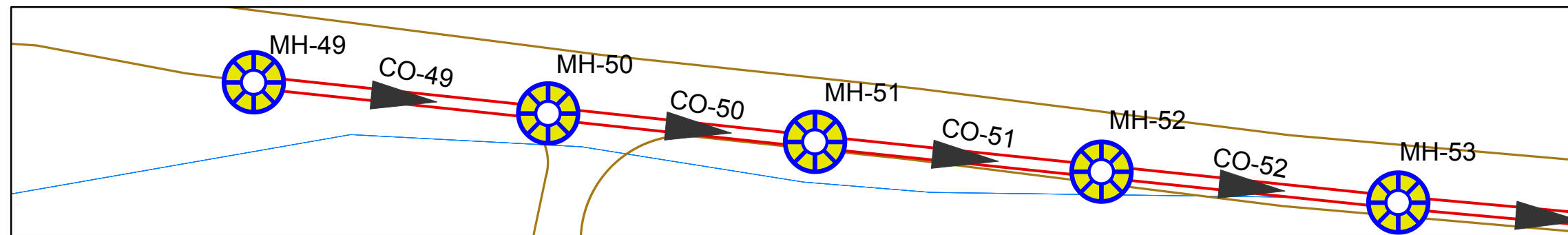
**Created by :**  
 Mohammed Jebreen  
 Noor Dodin  
  
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

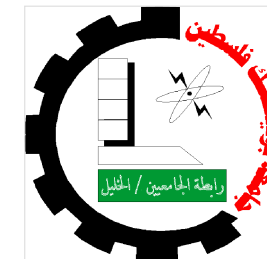
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C9 -13)**

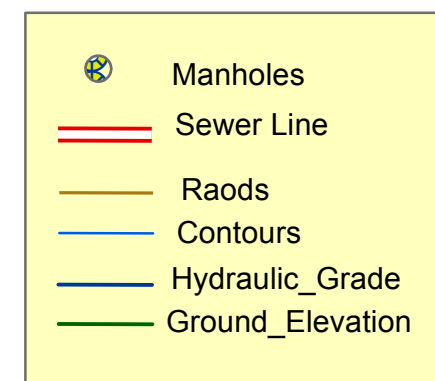
**Page ( 76 )**



| Point Number             | 49     | 50     | 51     | 52    | 53     |
|--------------------------|--------|--------|--------|-------|--------|
| Manhole Number           | MH-49  | MH-50  | MH-51  | MH-52 | MH-53  |
| Station                  | 21+94  | 22+44  | 22+92  | 23+35 | 23+84  |
| Ground Elevation         | 850.49 | 849.03 | 846.98 | 842.1 | 834.57 |
| Invert Elevation         | 849.29 | 847.83 | 844.76 | 838.7 | 831.8  |
| Depth Of Manholes        | 1.2    | 1.2    | 2.22   | 3.4   | 2.77   |
| Distance Of Manholes (m) |        | 49.7   | 47.9   | 43.3  | 49.3   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8     | 8      |
| Pipe Slope %             |        | 2.94   | 6.41   | 14.00 | 14.00  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC   | PVC    |



**Palestine Polytechnic University**  
**College of Engineering and**  
**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main c1)**  
**(From Manholes 53 To Outfall 1)**

**Created by :**  
 Mohammed Jebreen  
 Noor Dodin

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

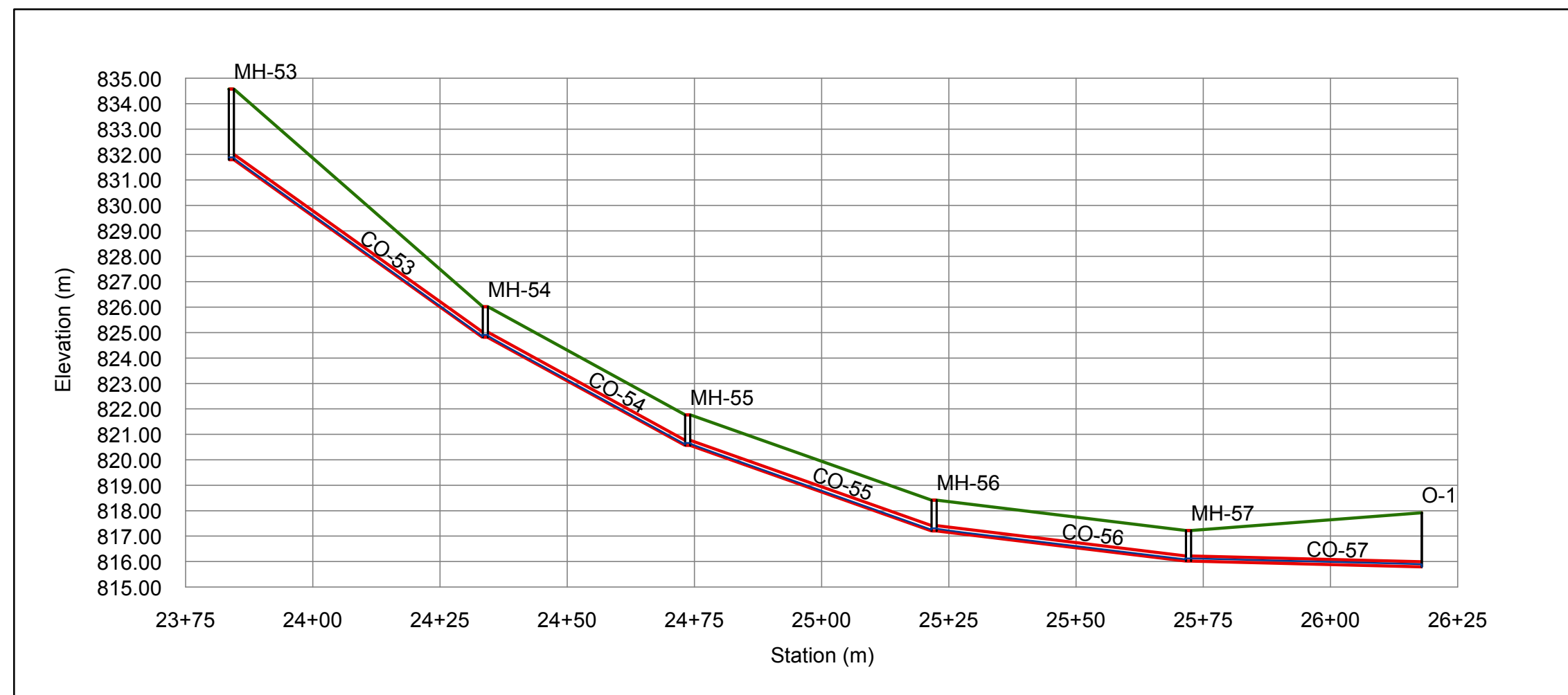
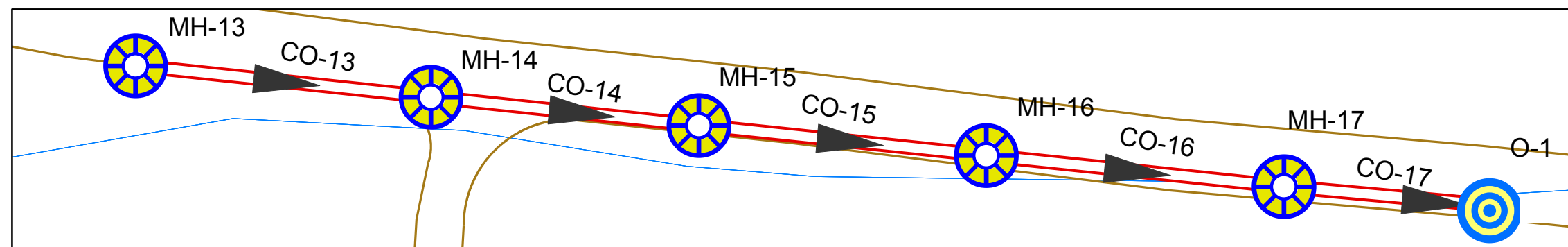
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C9 -14)**

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| Point Number             | 53     | 54     | 55     | 56     | 57     | 58     |
|--------------------------|--------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-53  | MH-54  | MH-55  | MH-56  | MH-57  | O-1    |
| Station                  | 23+84  | 24+34  | 24+74  | 25+22  | 25+72  | 26+18  |
| Ground Elevation         | 834.57 | 826.01 | 821.77 | 818.41 | 817.22 | 817.92 |
| Invert Elevation         | 831.8  | 824.81 | 820.56 | 817.21 | 816.02 | 815.79 |
| Depth Of Manholes        | 2.77   | 1.2    | 1.21   | 1.2    | 1.2    | 2.13   |
| Distance Of Manholes (m) |        | 49.9   | 39.8   | 48.4   | 50     | 45.9   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 14.01  | 10.68  | 6.92   | 2.38   | 0.50   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    | PVC    |

# Waste Water Profile ,Sewer D



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## Legend

- Grid
- Ground\_Elevation
- Sewer
- Manhole

Project Title :  
Design Of Waste Wate Collection  
System For Dora City

Created by :  
Mohammed Jebreen  
Noor Dodin

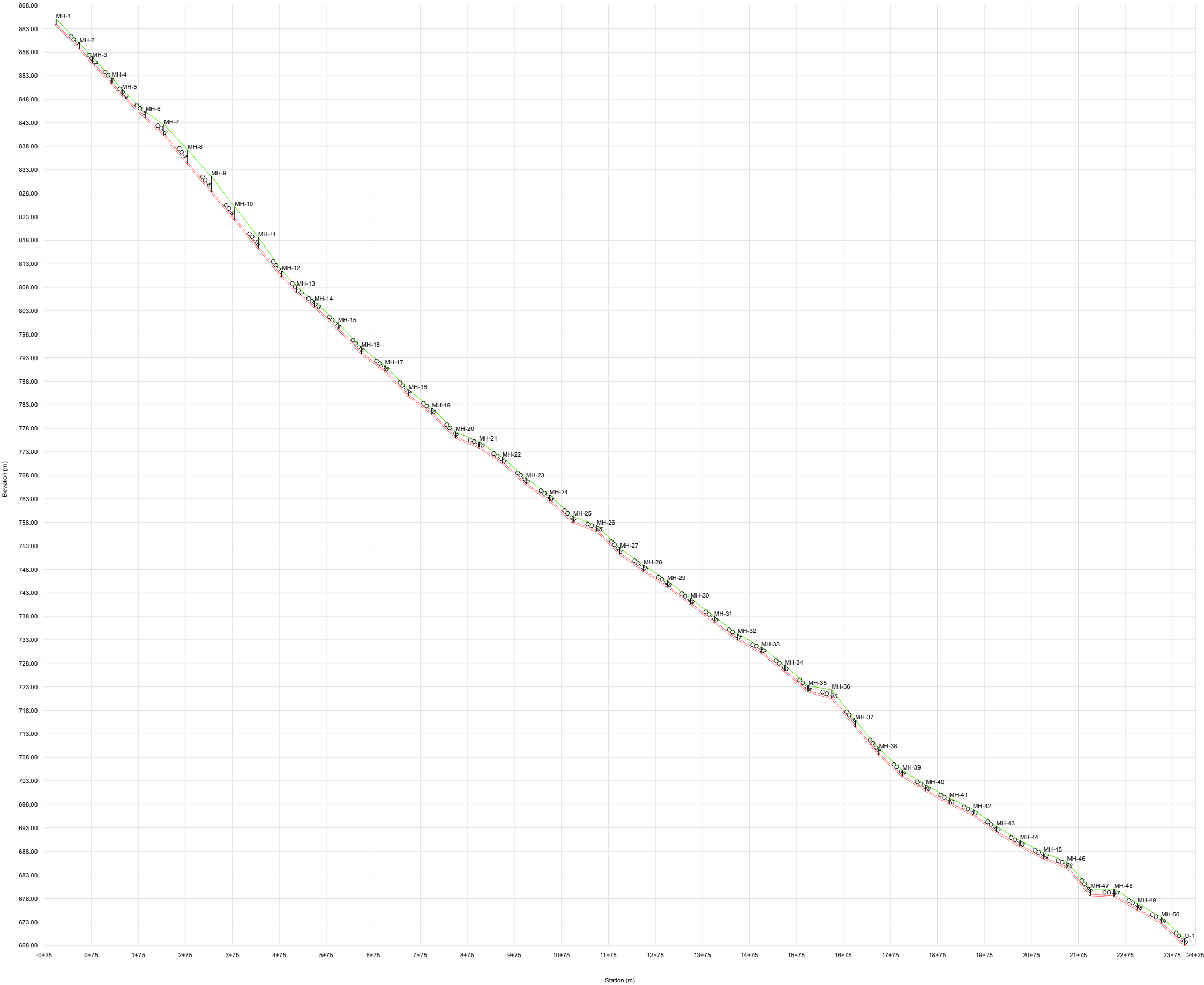
Project Supervisor :  
Eng . Samah Al-Jabari

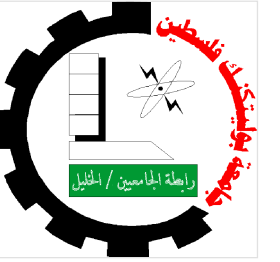
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Projection: Cassini

Linear Unit: Meter  
Data Source : Dora Municipality

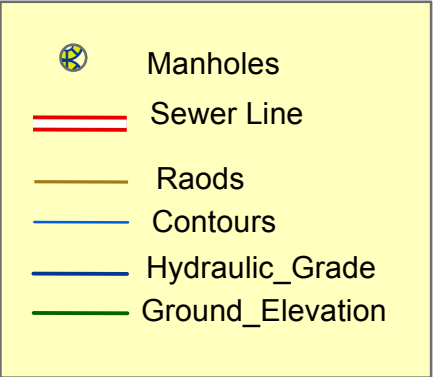
Figure Number ( C10 )

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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 1 To Manholes 5)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

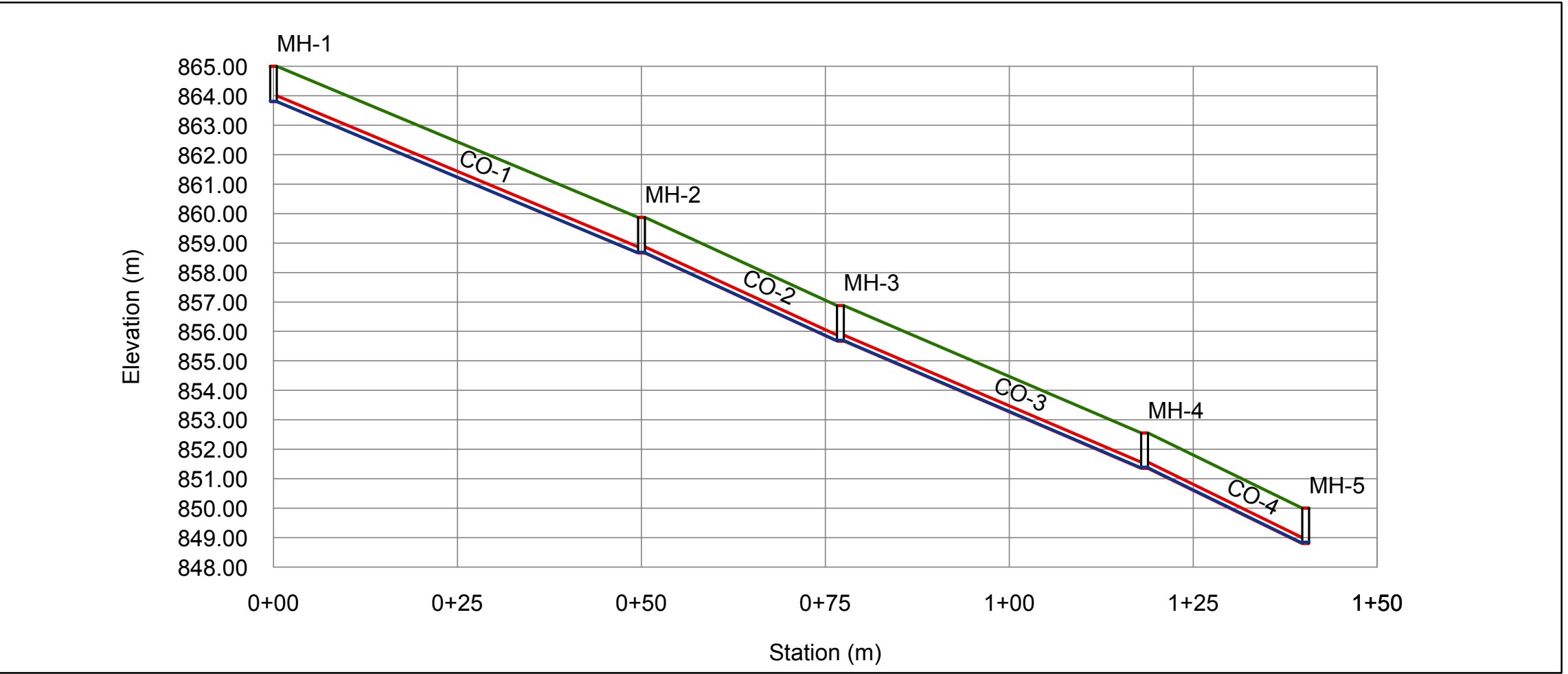
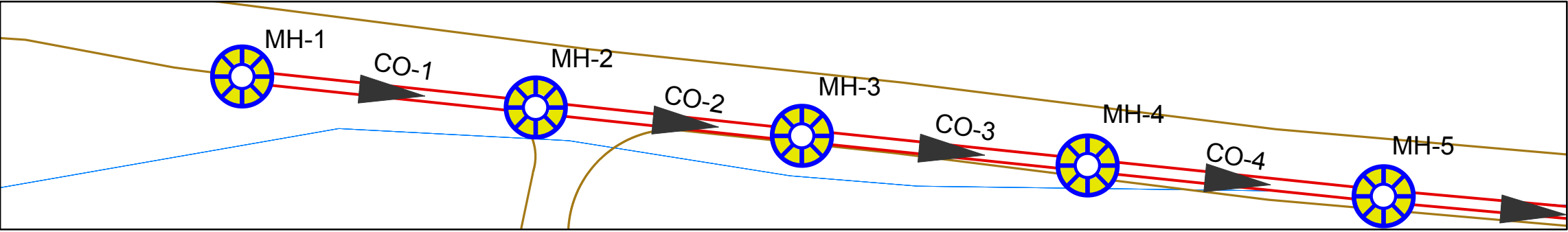
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

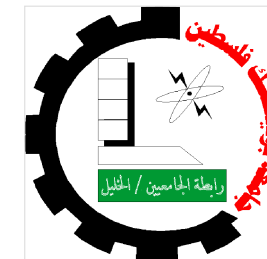
**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

**Figure Number (C10 -1)**

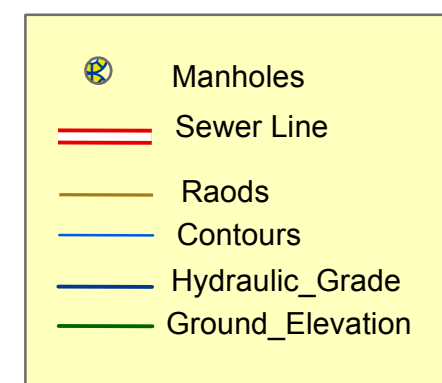
**Page ( 79 )**



| Point Number             | 1     | 2      | 3      | 4      | 5     |
|--------------------------|-------|--------|--------|--------|-------|
| Manhole Number           | MH-1  | MH-2   | MH-3   | MH-4   | MH-5  |
| Station                  | 00+00 | 0+50   | 0+77   | 1+18   | 1+40  |
| Ground Elevation         | 865   | 859.87 | 856.87 | 852.56 | 850   |
| Invert Elevation         | 863.8 | 858.67 | 855.67 | 851.35 | 848.8 |
| Depth Of Manholes        | 1.2   | 1.2    | 1.2    | 1.21   | 1.2   |
| Distance Of Manholes (m) |       | 50     | 27     | 41.3   | 21.9  |
| Pipe Diameter (inch)     |       | 8      | 8      | 8      | 8     |
| Pipe Slope %             |       | 10.26  | 11.11  | 10.46  | 11.64 |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 5 To Manholes 9)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

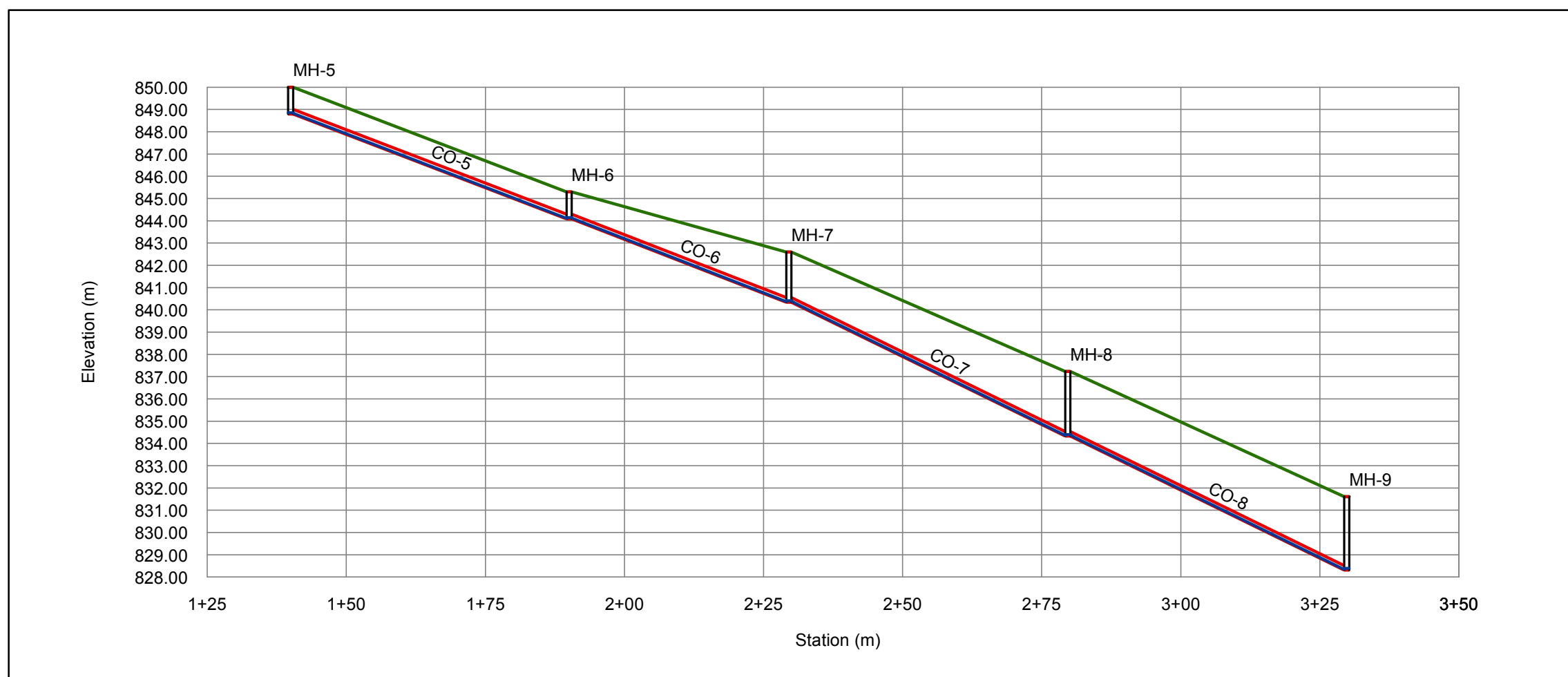
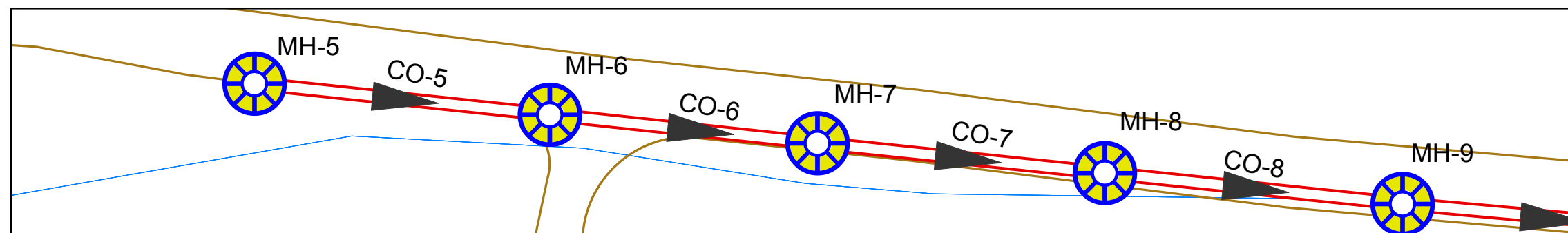
**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers

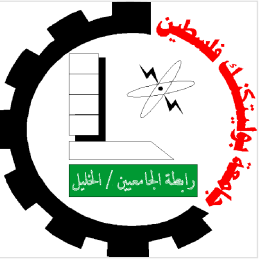
Data Source : Dora Municipality

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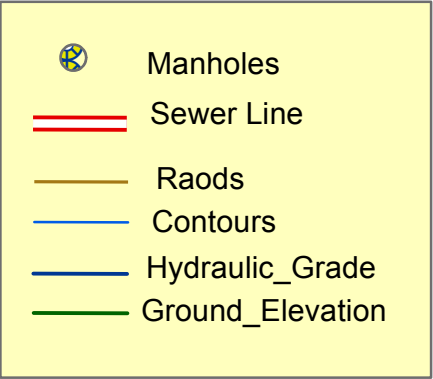
**Page ( 80 )**



| Point Number             | 5     | 6      | 7      | 8      | 9      |
|--------------------------|-------|--------|--------|--------|--------|
| Manhole Number           | MH-5  | MH-6   | MH-7   | MH-8   | MH-9   |
| Station                  | 1+40  | 1+90   | 2+30   | 2+80   | 3+30   |
| Ground Elevation(m)      | 850   | 845.29 | 842.6  | 837.23 | 831.6  |
| Invert Elevation(m)      | 848.8 | 844.09 | 840.34 | 834.33 | 828.31 |
| Depth Of Manholes(m)     | 1.2   | 1.2    | 2.26   | 2.9    | 3.29   |
| Distance Of Manholes (m) |       | 50.1   | 39.5   | 50.1   | 50.2   |
| Pipe Diameter (inch)     |       | 8      | 8      | 8      | 8      |
| Pipe Slope %             |       | 9.40   | 9.49   | 12.00  | 11.99  |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 9 To Manholes 13)**

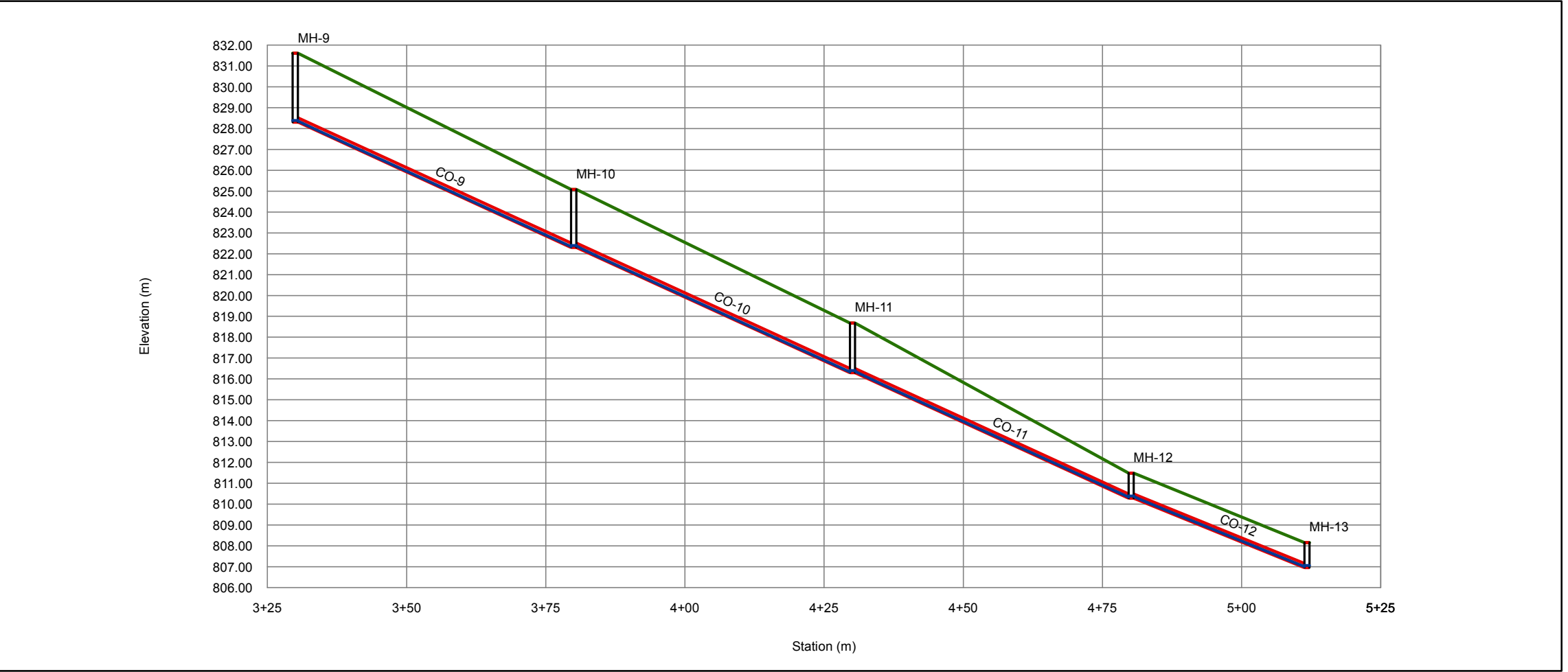
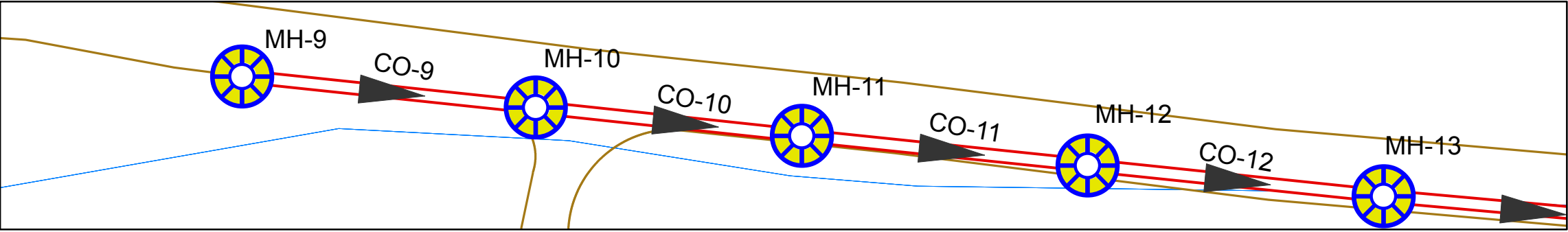
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

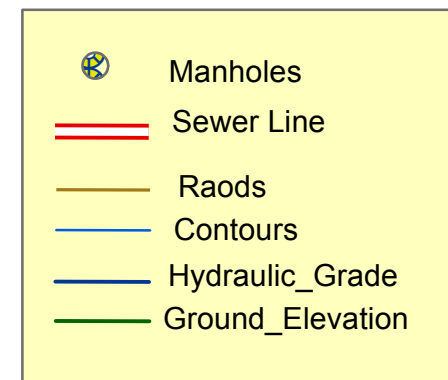
**Figure Number (C10 -3)**  
**Page ( 81 )**



| Point Number             | 9      | 10     | 11     | 12     | 13     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-9   | MH-10  | MH-11  | MH-12  | MH-13  |
| Station                  | 3+30   | 3+80   | 4+30   | 4+80   | 5+12   |
| Ground Elevation         | 831.6  | 825.08 | 818.68 | 811.49 | 808.16 |
| Invert Elevation         | 828.31 | 822.3  | 816.3  | 810.29 | 806.96 |
| Depth Of Manholes        | 3.29   | 2.78   | 2.38   | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 50     | 50.1   | 50.1   | 31.6   |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 12.02  | 11.98  | 12.00  | 10.54  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Main D)**  
**(From Manholes 13 To Manholes 17)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

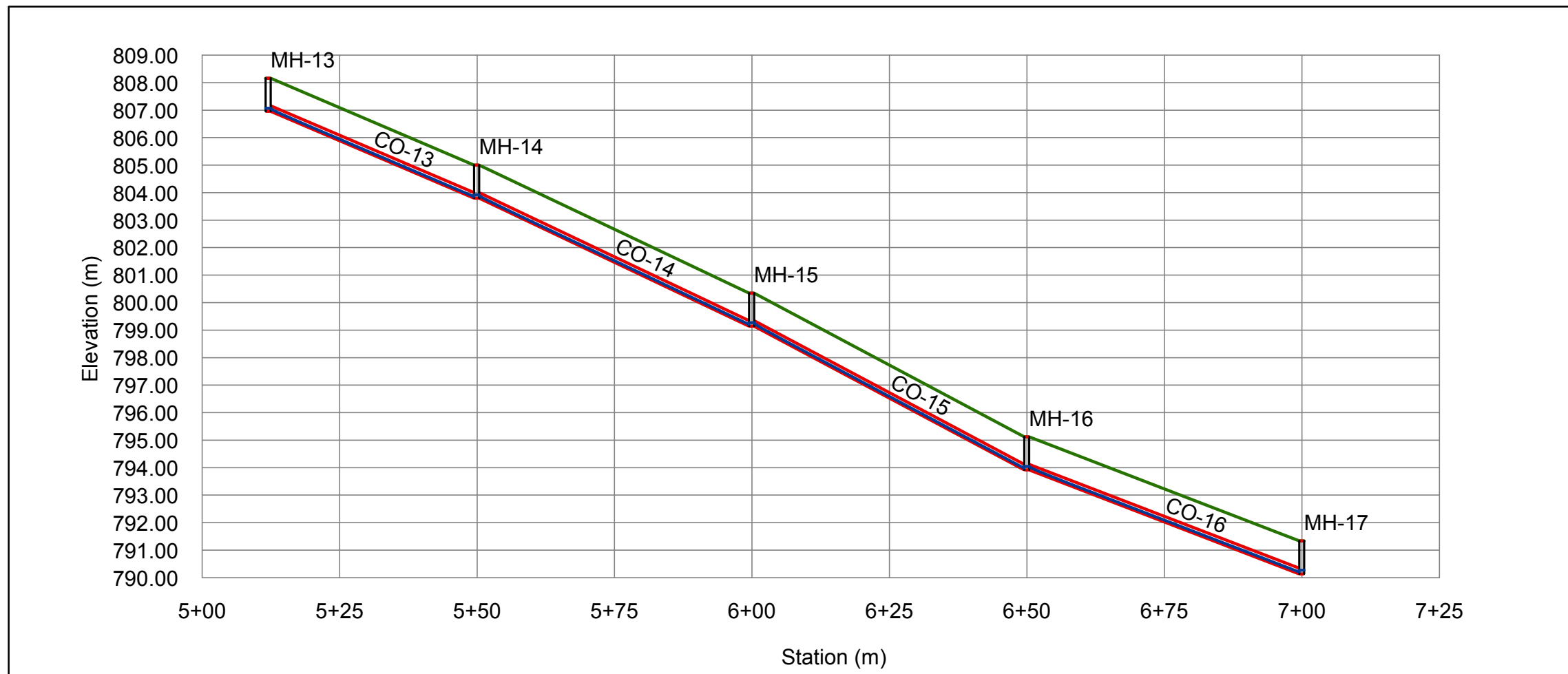
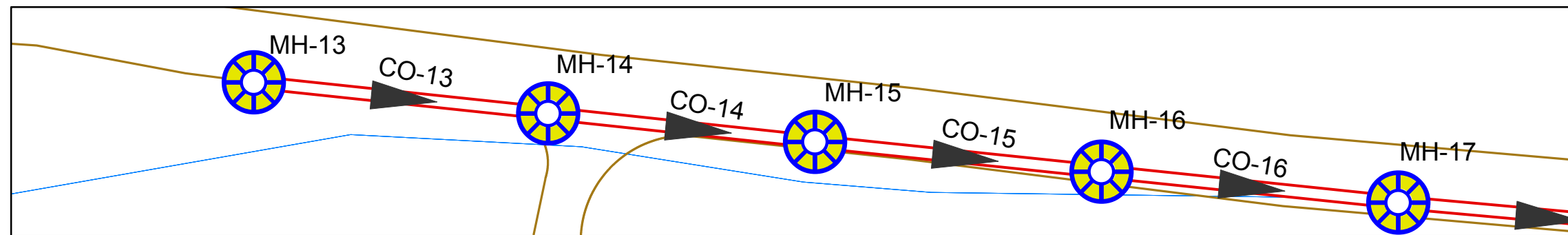
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrers  
 Data Source : Dora Municipality

**Figure Number (C10 -4)**

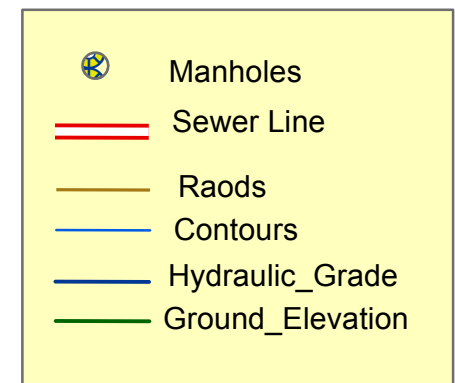
**Page ( 82 )**



| Point Number             | 13     | 14    | 15     | 16     | 17     |
|--------------------------|--------|-------|--------|--------|--------|
| Manhole Number           | MH-13  | MH-14 | MH-15  | MH-16  | MH-17  |
| Station                  | 5+12   | 5+50  | 6+00   | 6+50   | 7+00   |
| Ground Elevation         | 808.16 | 805   | 800.35 | 795.12 | 791.34 |
| Invert Elevation         | 806.96 | 803.8 | 799.14 | 793.92 | 790.14 |
| Depth Of Manholes        | 1.2    | 1.2   | 1.21   | 1.2    | 1.2    |
| Distance Of Manholes (m) |        | 37.9  | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8     | 8      | 8      | 8      |
| Pipe Slope %             |        | 8.34  | 9.32   | 10.44  | 7.56   |
| Type Of Surface          | PVC    | PVC   | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Main D)**  
**(From Manholes 17 To Manholes 21)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

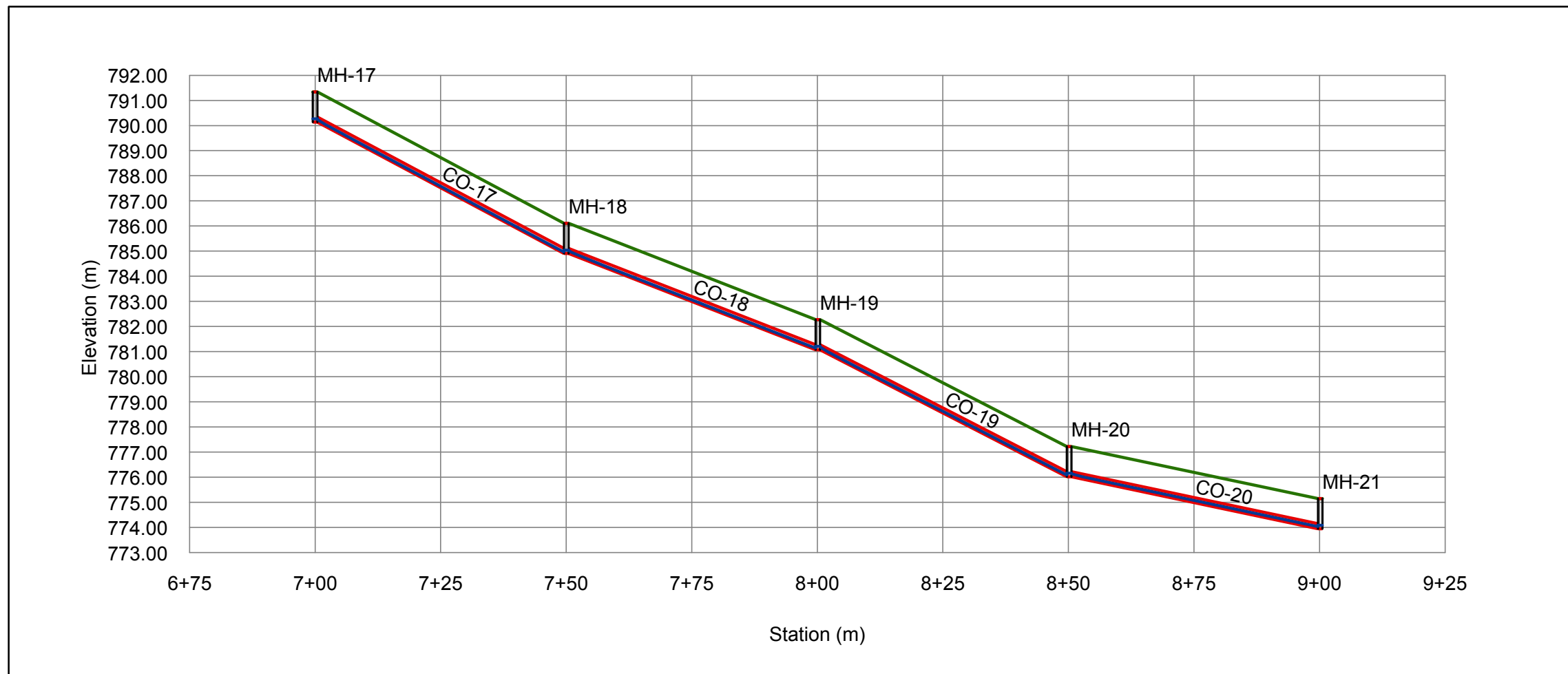
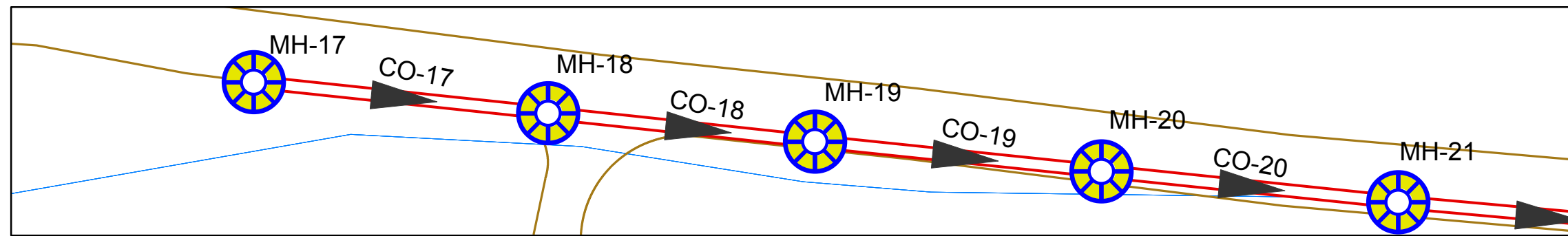
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

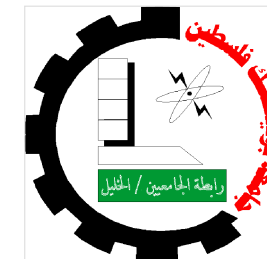
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C10 -5)**

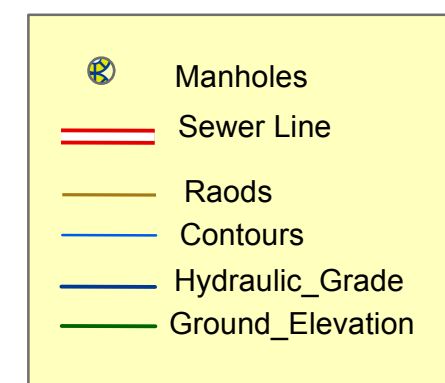
**Page ( 83 )**



| Point Number             | 17     | 18     | 19     | 20     | 21     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-17  | MH-18  | MH-19  | MH-20  | MH-21  |
| Station                  | 7+00   | 7+50   | 8+00   | 8+50   | 9+00   |
| Ground Elevation         | 791.34 | 786.11 | 782.27 | 777.22 | 775.15 |
| Invert Elevation         | 790.14 | 784.9  | 781.07 | 776.01 | 773.94 |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.21   | 1.21   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 10.48  | 7.66   | 10.12  | 4.14   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 21 To Manholes 25)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

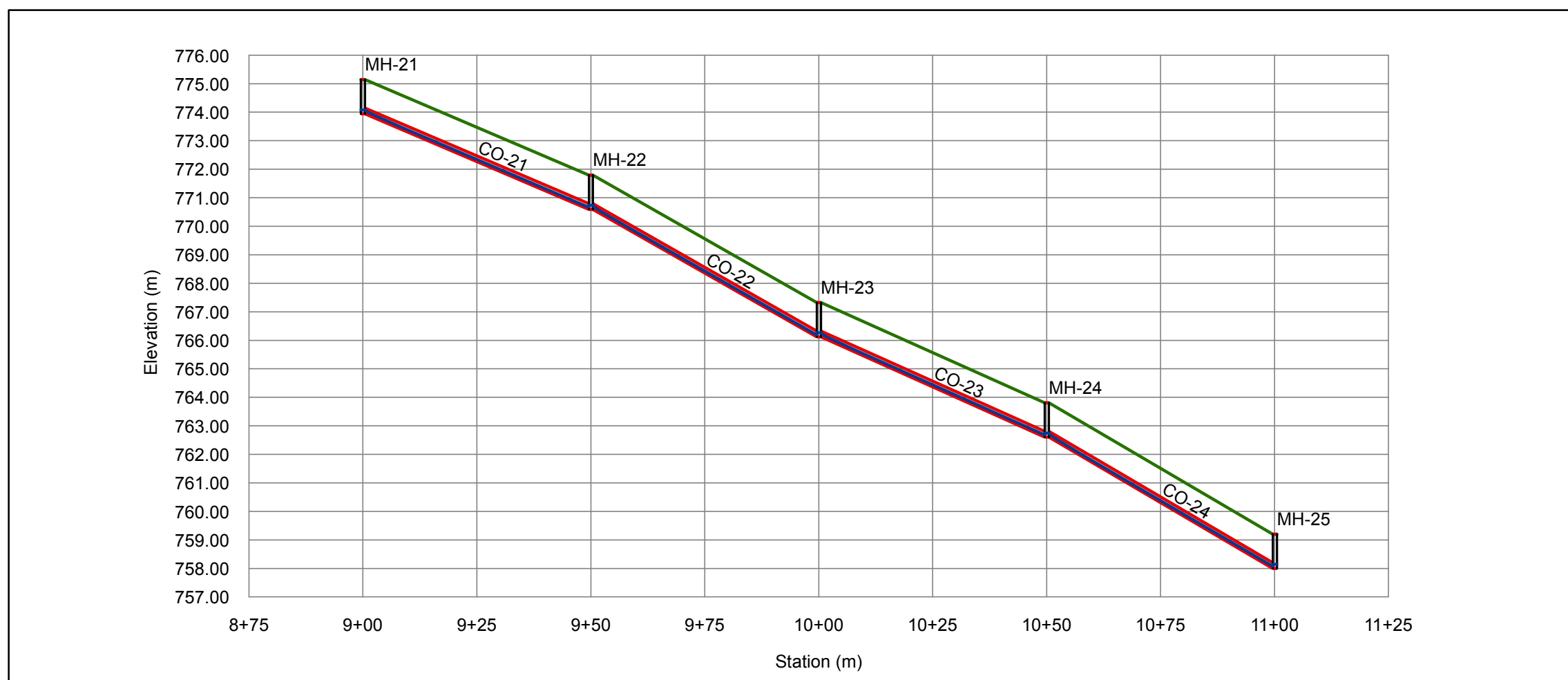
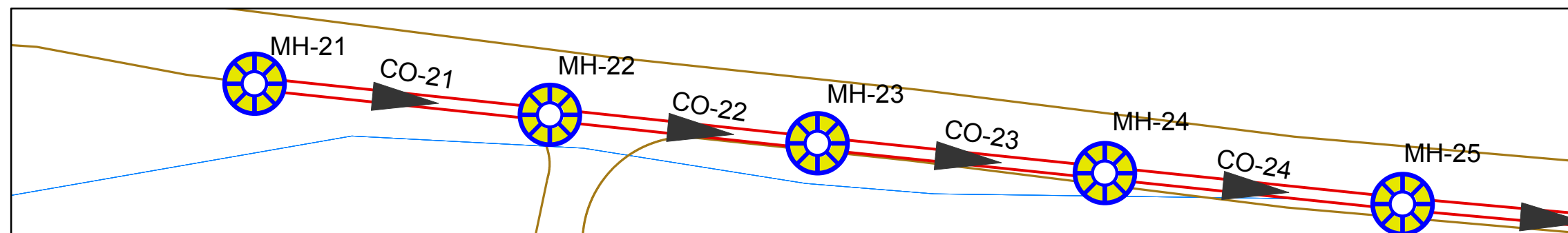
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metres

**Data Source :** Dora Municipality

**Figure Number (C10 -6)**

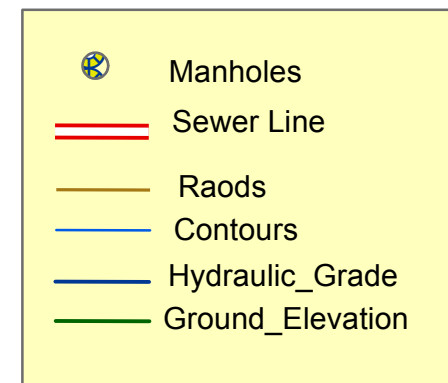
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| Point Number             | 21     | 22     | 23     | 24     | 25    |
|--------------------------|--------|--------|--------|--------|-------|
| Manhole Number           | MH-21  | MH-22  | MH-23  | MH-24  | MH-25 |
| Station                  | 9+00   | 9+50   | 10+00  | 10+50  | 11+00 |
| Ground Elevation         | 775.15 | 771.79 | 767.32 | 763.81 | 759.2 |
| Invert Elevation         | 773.94 | 770.59 | 766.12 | 762.6  | 758   |
| Depth Of Manholes        | 1.21   | 1.2    | 1.2    | 1.21   | 1.2   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50    |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8     |
| Pipe Slope %             |        | 6.70   | 8.94   | 7.04   | 9.20  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC   |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line (Sub main D)**  
**(From Manholes 25 To Manholes 29)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

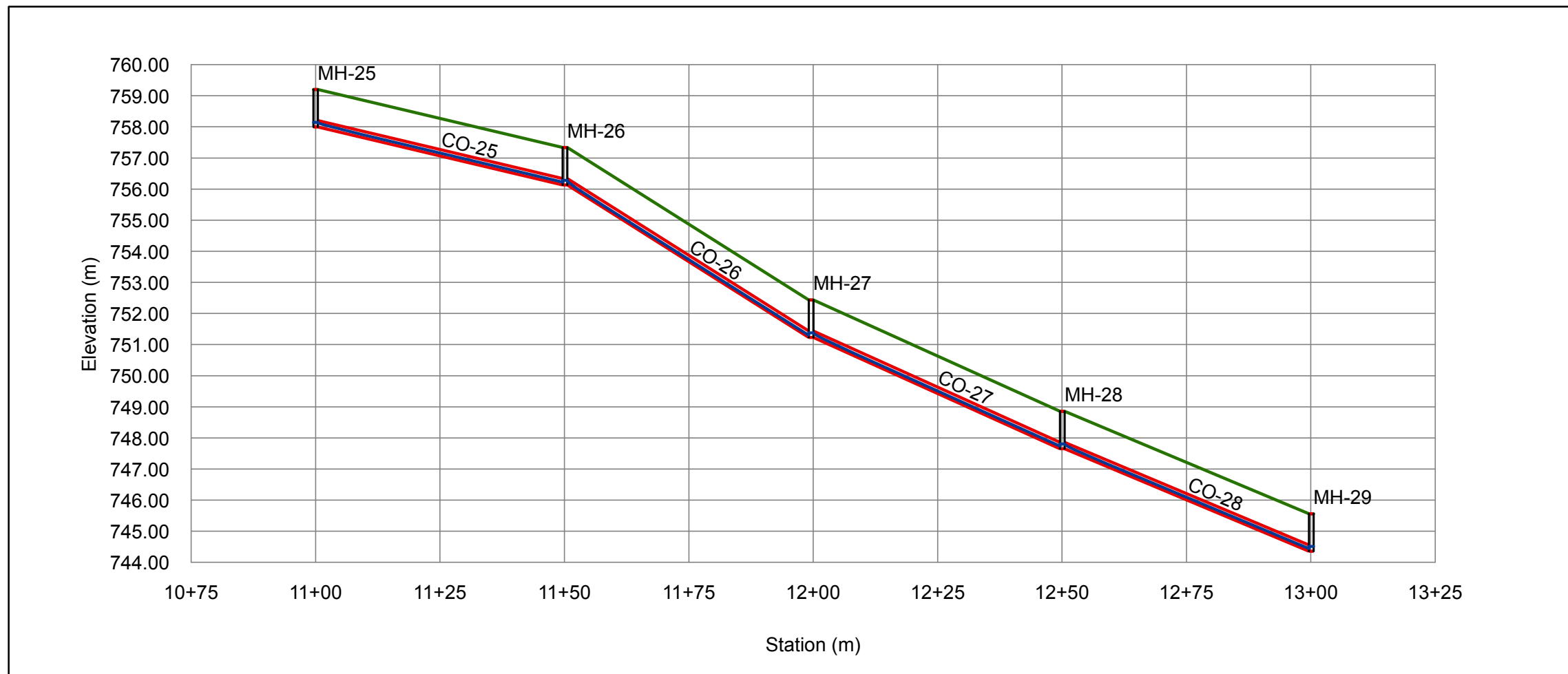
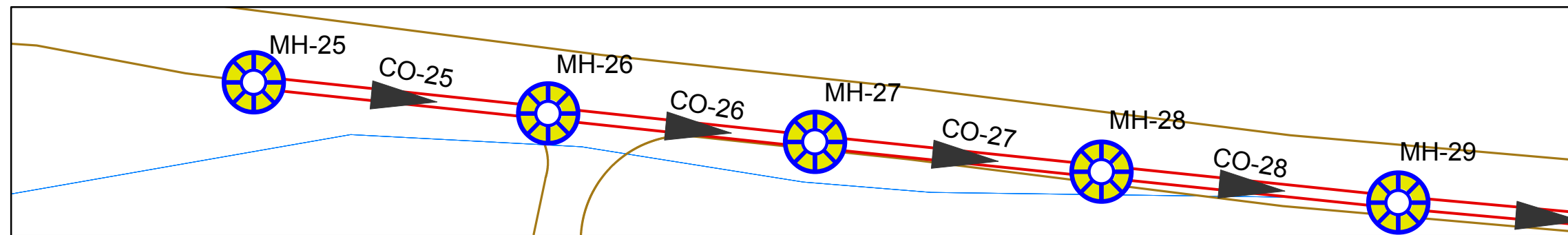
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C10 -7)**

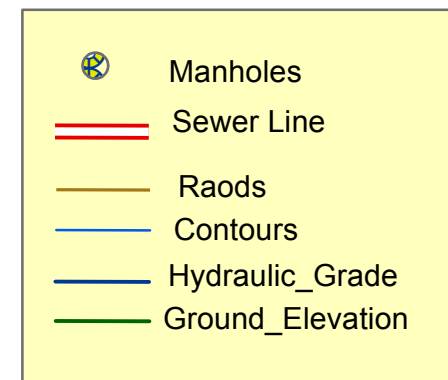
**Page ( 85 )**



| Point Number             | 25    | 26     | 27     | 28     | 29     |
|--------------------------|-------|--------|--------|--------|--------|
| Manhole Number           | MH-25 | MH-26  | MH-27  | MH-28  | MH-29  |
| Station                  | 11+00 | 11+50  | 12+00  | 12+50  | 13+00  |
| Ground Elevation         | 759.2 | 757.33 | 752.43 | 748.86 | 745.56 |
| Invert Elevation         | 758   | 756.13 | 751.23 | 747.65 | 744.36 |
| Depth Of Manholes        | 1.2   | 1.2    | 1.2    | 1.21   | 1.2    |
| Distance Of Manholes (m) |       | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |       | 8      | 8      | 8      | 8      |
| Pipe Slope %             |       | 3.74   | 9.80   | 7.16   | 6.58   |
| Type Of Surface          | PVC   | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Water Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 29 To Manholes 33)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

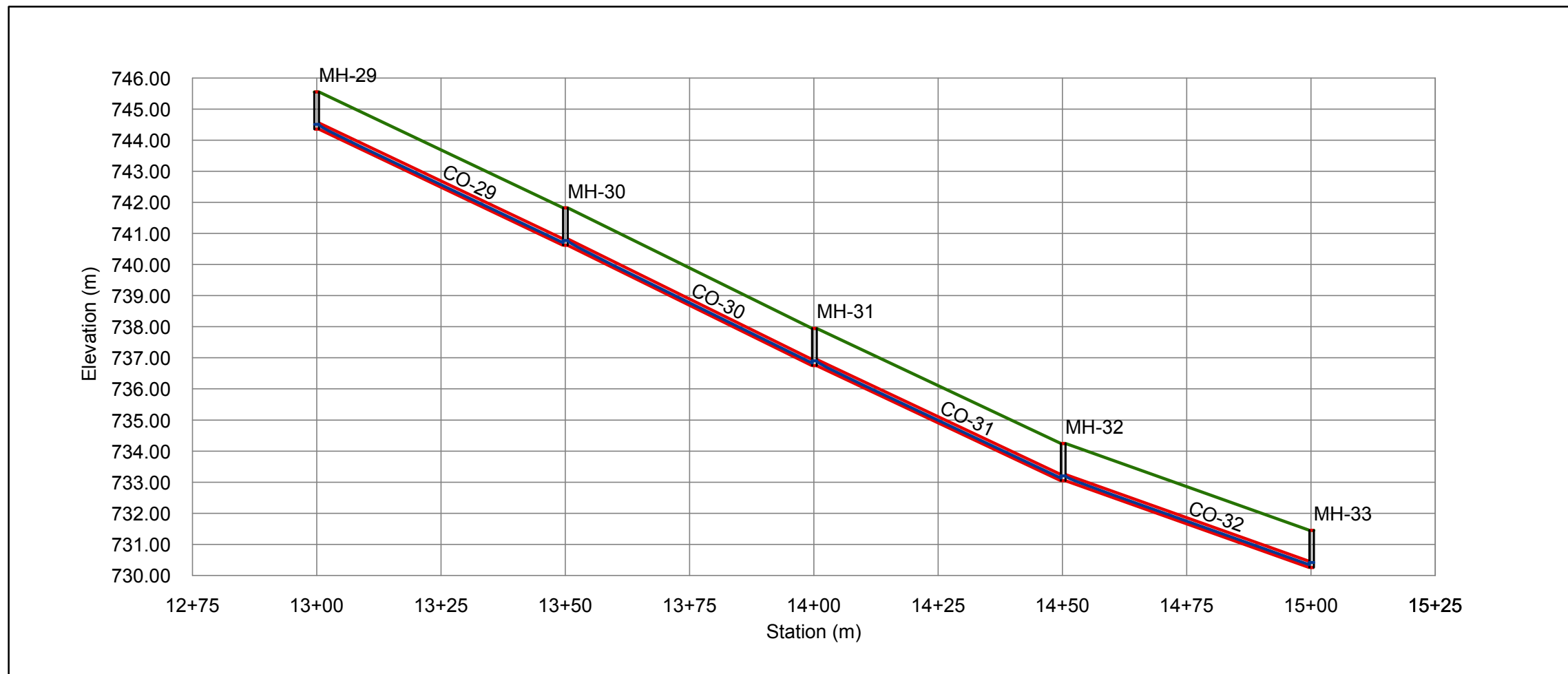
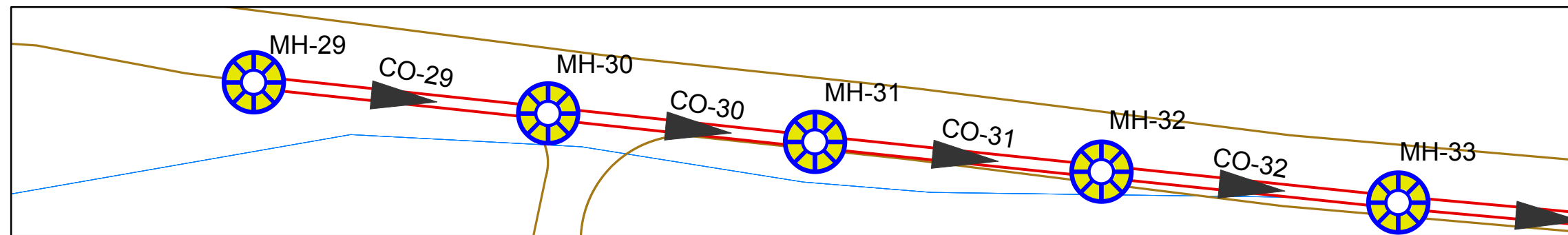
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

Data Source : Dora Municipality

**Figure Number (C10 -8)**

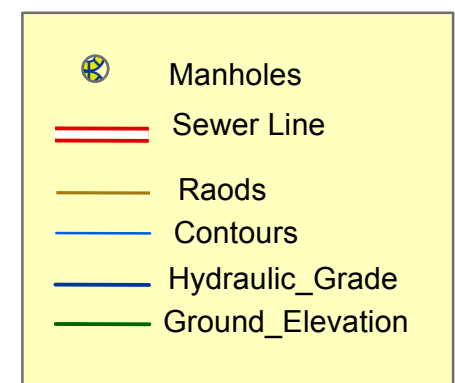
**Page ( 86 )**



| Point Number             | 29     | 30     | 31     | 32     | 33     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-29  | MH-30  | MH-31  | MH-32  | MH-33  |
| Station                  | 13+00  | 13+50  | 14+00  | 14+50  | 15+00  |
| Ground Elevation         | 745.56 | 741.82 | 737.95 | 734.25 | 731.45 |
| Invert Elevation         | 744.36 | 740.62 | 736.75 | 733.04 | 730.25 |
| Depth Of Manholes        | 1.2    | 1.2    | 1.2    | 1.21   | 1.2    |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 7.48   | 7.74   | 7.42   | 5.58   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**College of Engineering and Technology**



**Project Title :**  
**Design Of Waste Wate Collection System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 33 To Manholes 37)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

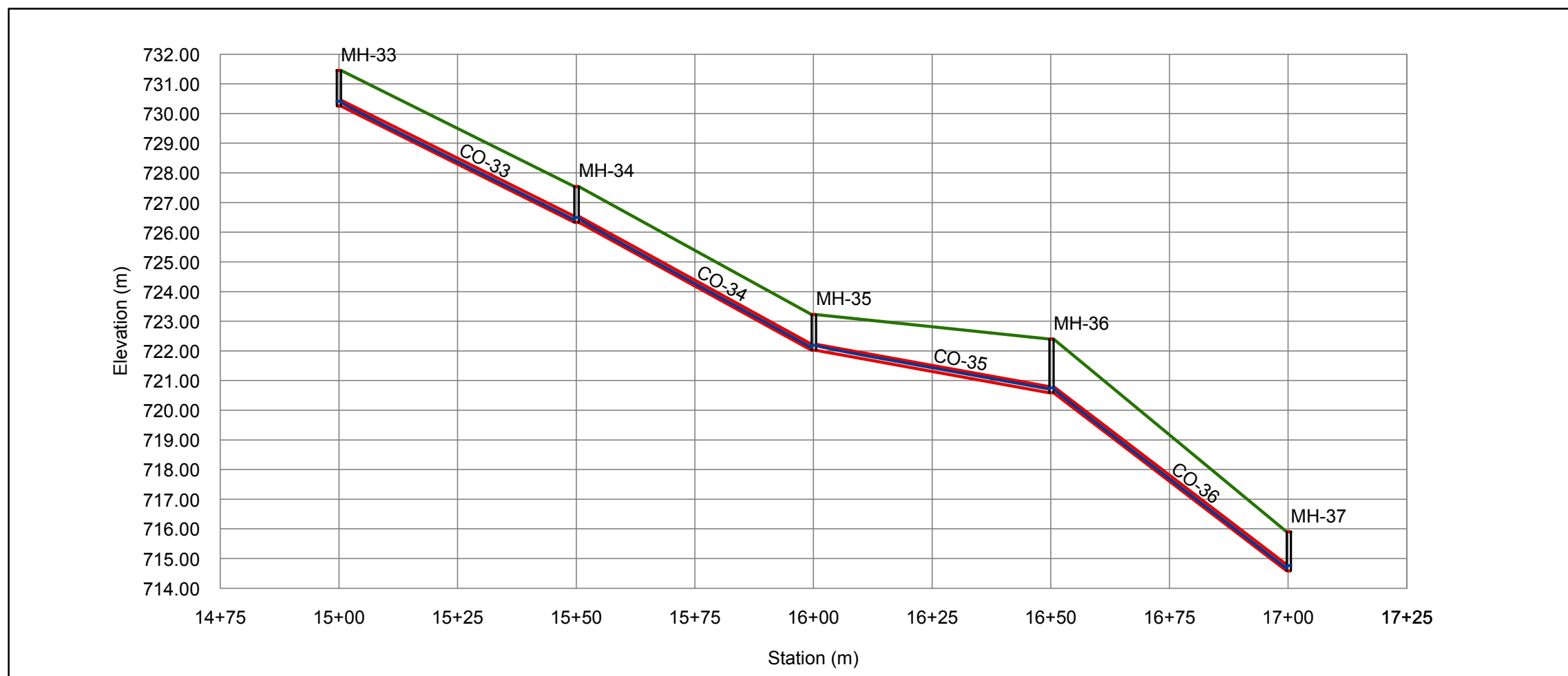
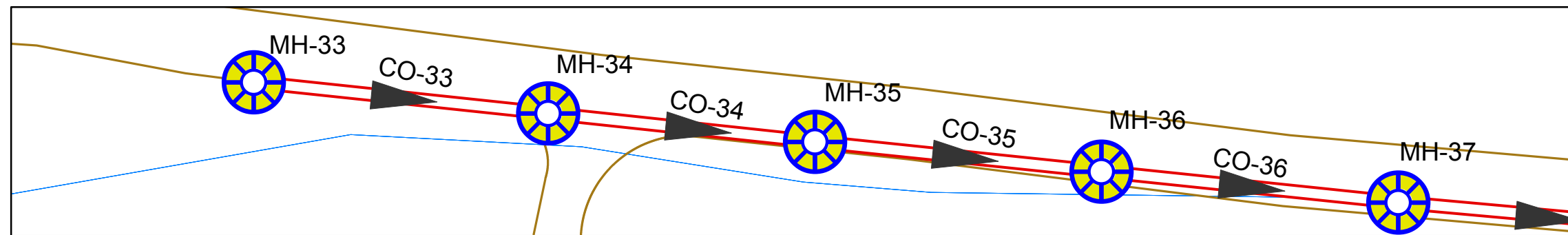
**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

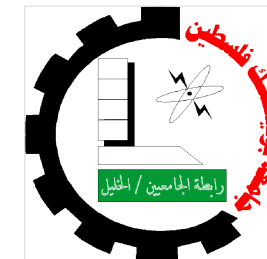
Notes:  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C10 -9)**

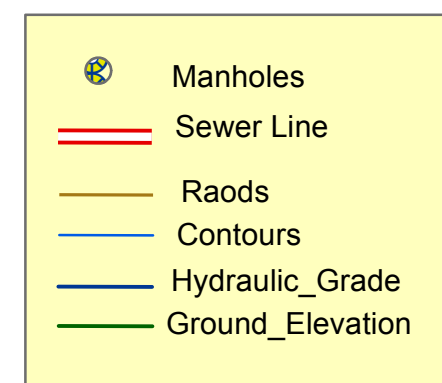
**Page ( 87 )**



| Point Number             | 33     | 34     | 35     | 36     | 37     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-33  | MH-34  | MH-35  | MH-36  | MH-37  |
| Station                  | 15+00  | 15+50  | 16+00  | 16+50  | 17+00  |
| Ground Elevation         | 731.45 | 727.54 | 723.22 | 722.4  | 715.9  |
| Invert Elevation         | 730.25 | 726.33 | 722.02 | 720.59 | 714.59 |
| Depth Of Manholes        | 1.2    | 1.21   | 1.2    | 1.81   | 1.31   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 7.84   | 8.62   | 2.86   | 12.00  |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Technology**



**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 37 To Manholes 41)**

**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

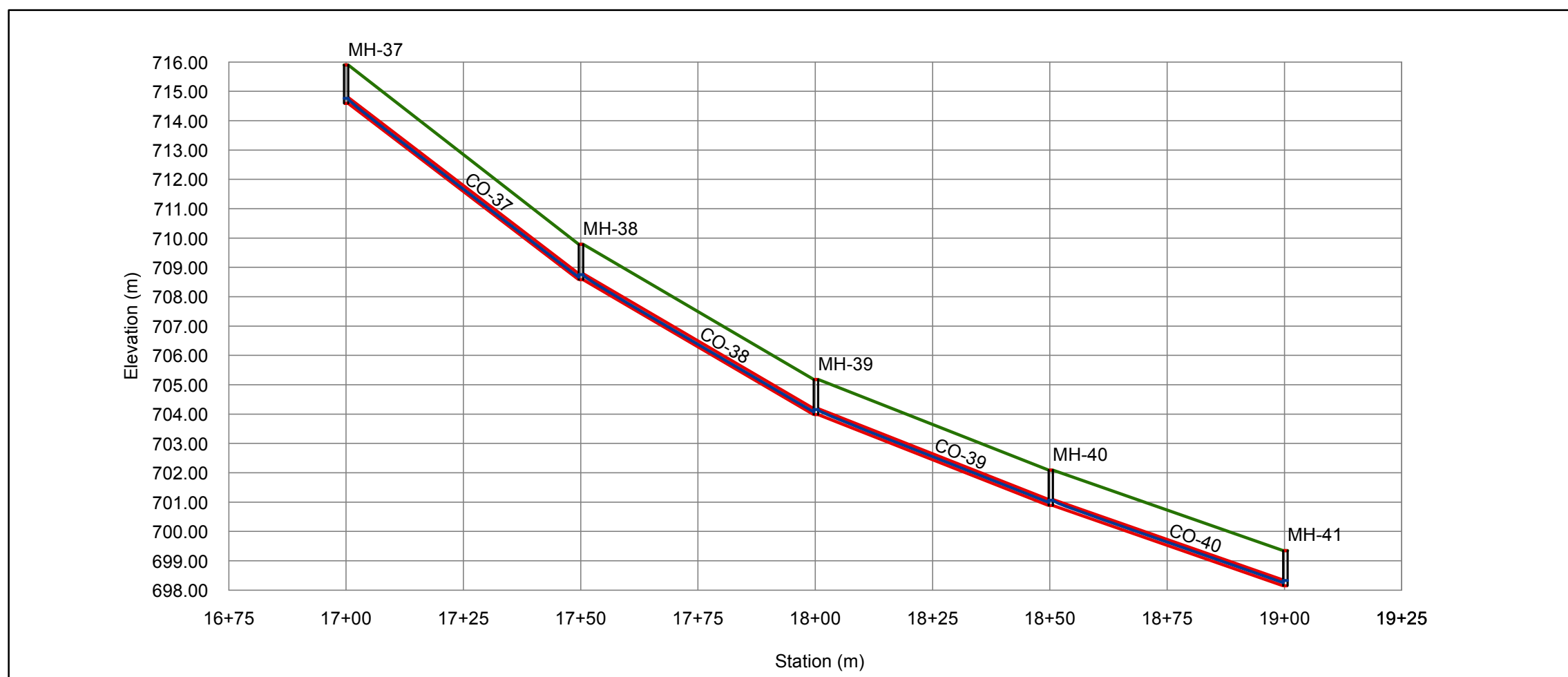
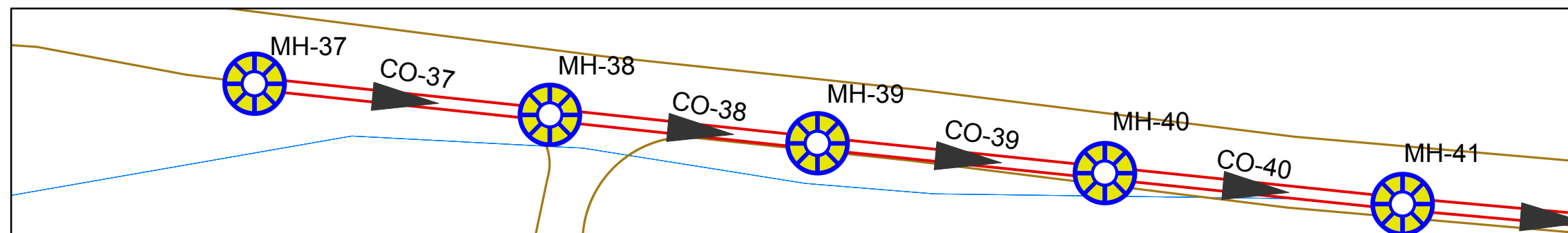
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs

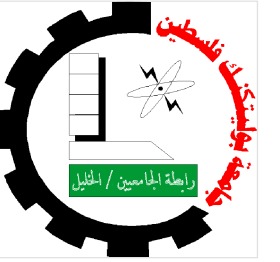
Data Source : Dora Municipality

**Figure Number (C10 -10)**

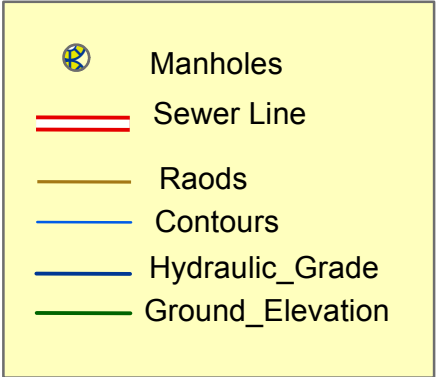
**Page ( 88 )**



| Point Number             | 37     | 38     | 39     | 40     | 41     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-37  | MH-38  | MH-39  | MH-40  | MH-41  |
| Station                  | 17+00  | 17+50  | 18+00  | 18+50  | 19+00  |
| Ground Elevation         | 715.9  | 709.78 | 705.18 | 702.09 | 699.35 |
| Invert Elevation         | 714.59 | 708.58 | 703.98 | 700.89 | 698.14 |
| Depth Of Manholes        | 1.31   | 1.2    | 1.2    | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 12.02  | 9.20   | 6.18   | 5.50   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 41 To Manholes 45)**

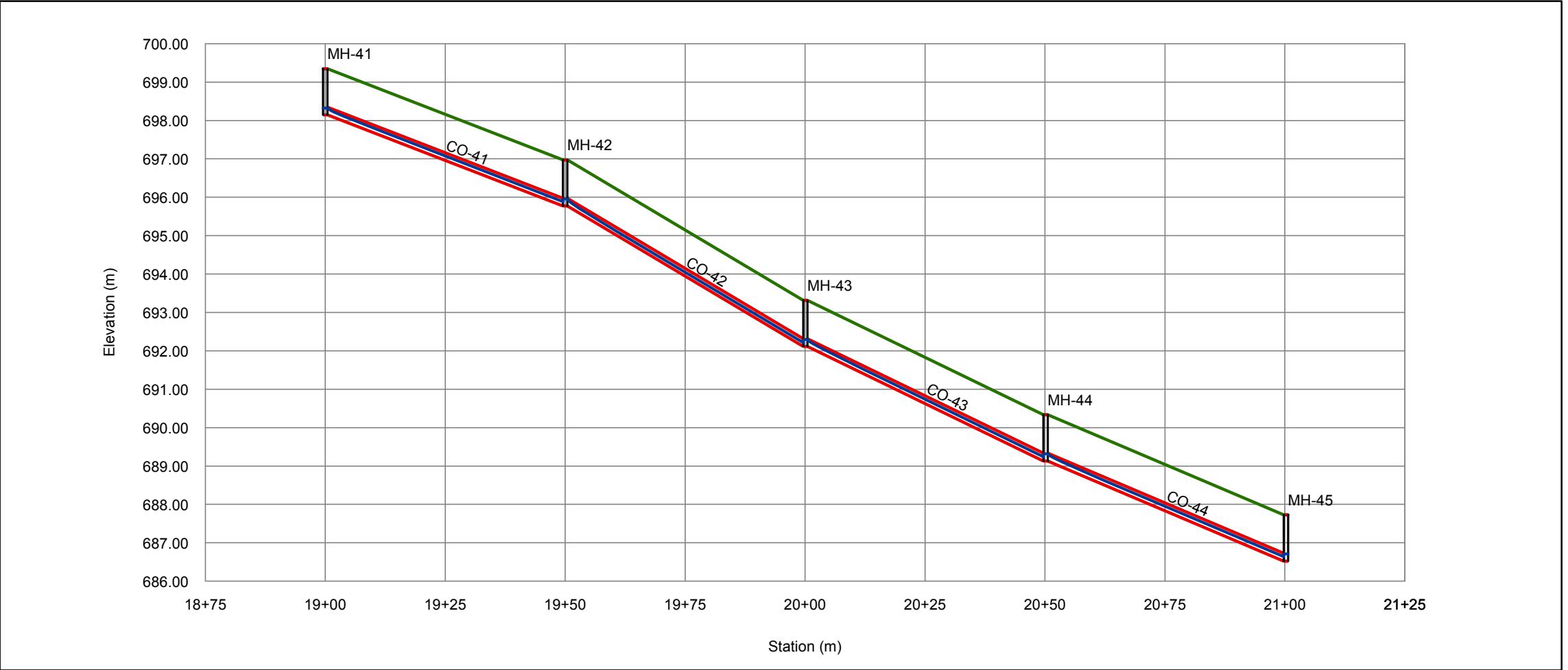
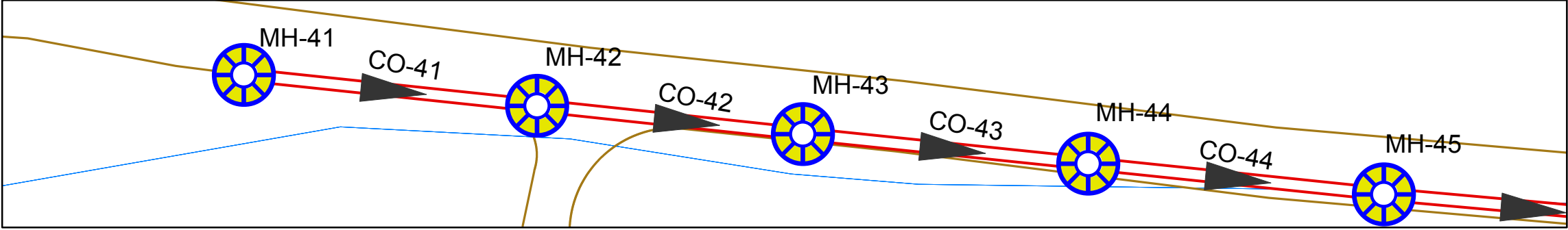
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

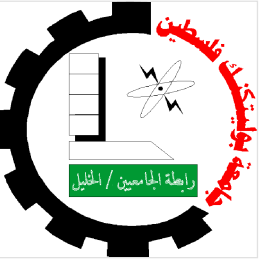
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

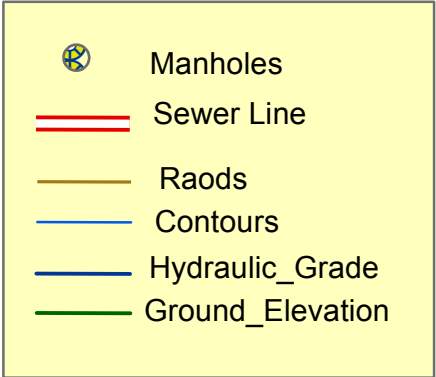
**Figure Number (C10 -11)**  
**Page ( 89 )**



| Point Number             | 41     | 42     | 43     | 44     | 45     |
|--------------------------|--------|--------|--------|--------|--------|
| Manhole Number           | MH-41  | MH-42  | MH-43  | MH-44  | MH-45  |
| Station                  | 19+00  | 19+50  | 20+00  | 20+50  | 21+00  |
| Ground Elevation         | 699.35 | 696.98 | 693.32 | 690.33 | 687.73 |
| Invert Elevation         | 698.14 | 695.77 | 692.11 | 689.13 | 686.52 |
| Depth Of Manholes        | 1.21   | 1.21   | 1.21   | 1.2    | 1.21   |
| Distance Of Manholes (m) |        | 50     | 50     | 50     | 50     |
| Pipe Diameter (inch)     |        | 8      | 8      | 8      | 8      |
| Pipe Slope %             |        | 4.74   | 7.32   | 5.96   | 5.22   |
| Type Of Surface          | PVC    | PVC    | PVC    | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 45 To Manholes 49)**

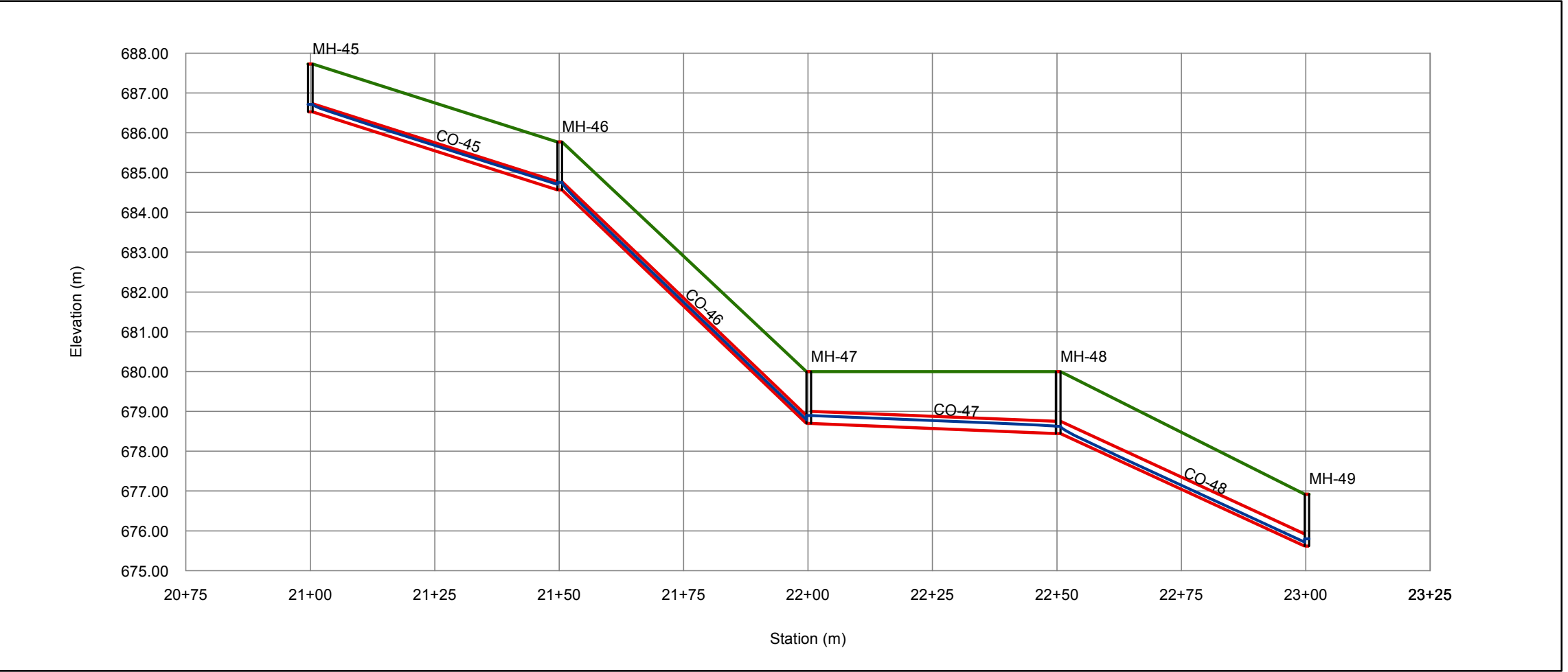
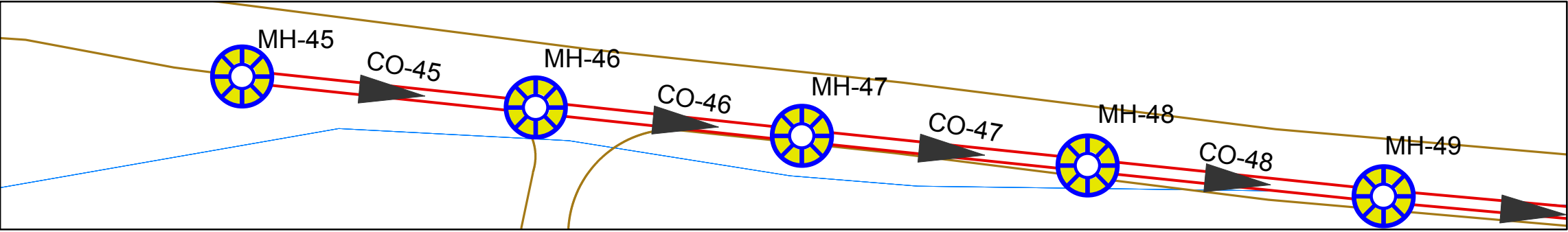
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

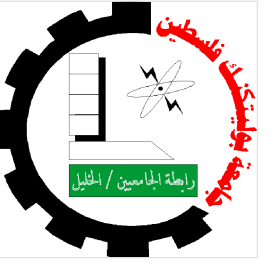
**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

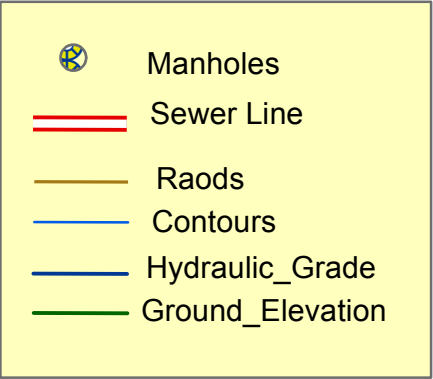
**Figure Number (C10 -12)**  
**Page ( 90 )**



| Point Number             | 45     | 46     | 47    | 48     | 49     |
|--------------------------|--------|--------|-------|--------|--------|
| Manhole Number           | MH-45  | MH-46  | MH-47 | MH-48  | MH-49  |
| Station                  | 21+00  | 21+50  | 22+00 | 22+50  | 23+00  |
| Ground Elevation         | 687.73 | 685.77 | 680   | 680    | 676.92 |
| Invert Elevation         | 686.52 | 684.57 | 678.7 | 678.44 | 675.62 |
| Depth Of Manholes        | 1.21   | 1.2    | 1.3   | 1.56   | 1.3    |
| Distance Of Manholes (m) |        | 50.1   | 50    | 50.1   | 50     |
| Pipe Diameter (inch)     |        | 8      | 8     | 12     | 12     |
| Pipe Slope %             |        | 3.89   | 11.74 | 0.52   | 5.64   |
| Type Of Surface          | PVC    | PVC    | PVC   | PVC    | PVC    |



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**Project Title :**  
**Design Of Waste Wate Collection**  
**System For Dora City**

**Map Title :**  
**Sewer Line ( main D)**  
**(From Manholes 47 To Outfall 1)**

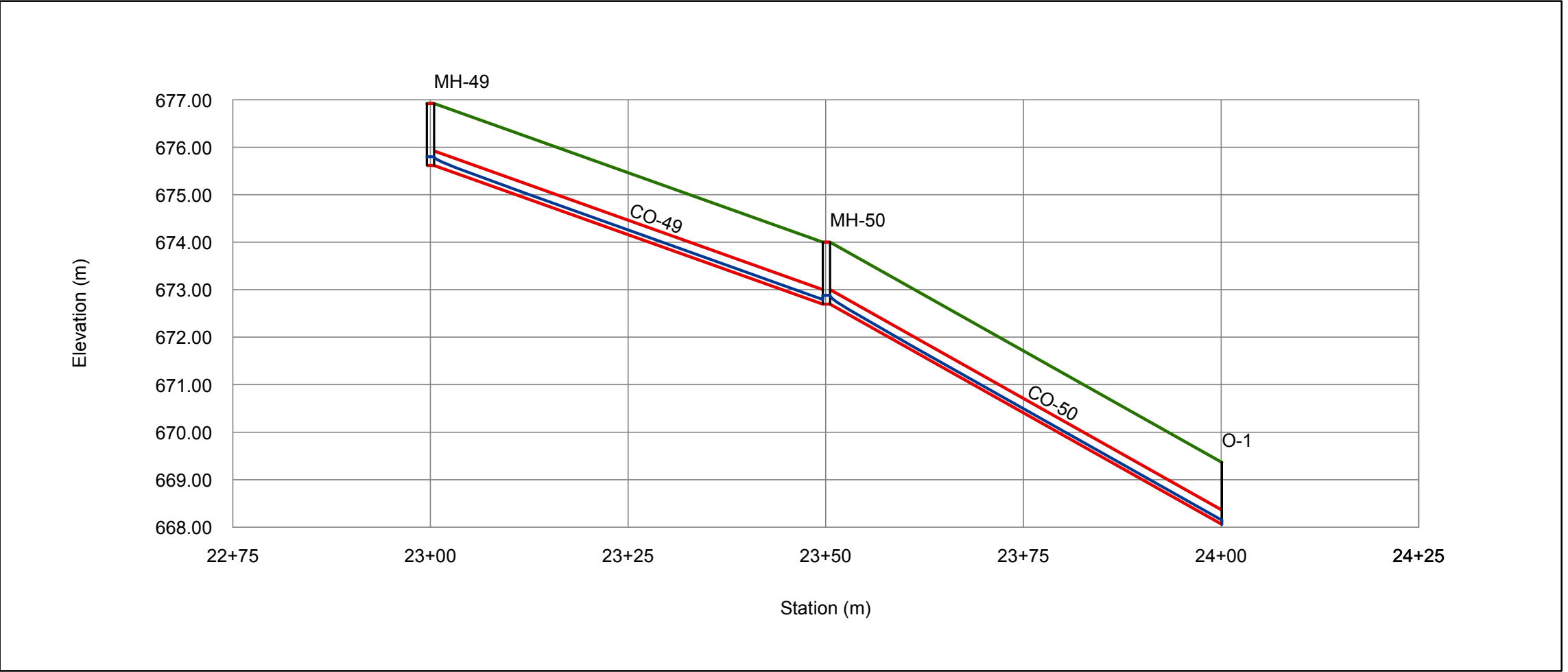
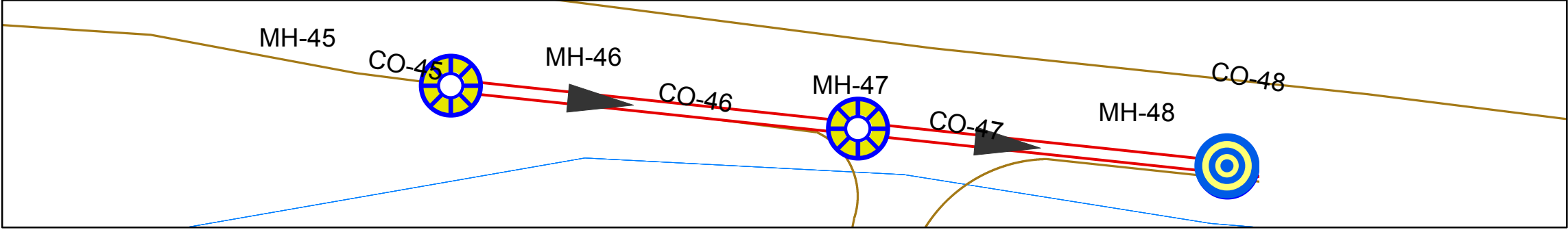
**Created by :**  
**Mohammed Jebreen**  
**Noor Dodin**

**Project Supervisor :**  
**Eng . Samah Al-Jabari**

**Scale : To Fit**

**Notes:**  
 1- All Pipe Diameter In inch  
 2- All Pipe length In Metrs  
 Data Source : Dora Municipality

**Figure Number (C10 -13)**  
**Page ( 91 )**



| Point Number             | 49     | 50    | 51     |
|--------------------------|--------|-------|--------|
| Manhole Number           | MH-49  | MH-50 | O-1    |
| Station                  | 23+00  | 23+50 | 24+00  |
| Ground Elevation         | 676.92 | 674   | 669.36 |
| Invert Elevation         | 675.62 | 672.7 | 668.06 |
| Depth Of Manholes        | 1.3    | 1.3   | 1.3    |
| Distance Of Manholes (m) |        | 50    | 50     |
| Pipe Diameter (inch)     |        | 12    | 12     |
| Pipe Slope %             |        | 5.84  | 9.28   |
| Type Of Surface          | PVC    | PVC   | PVC    |