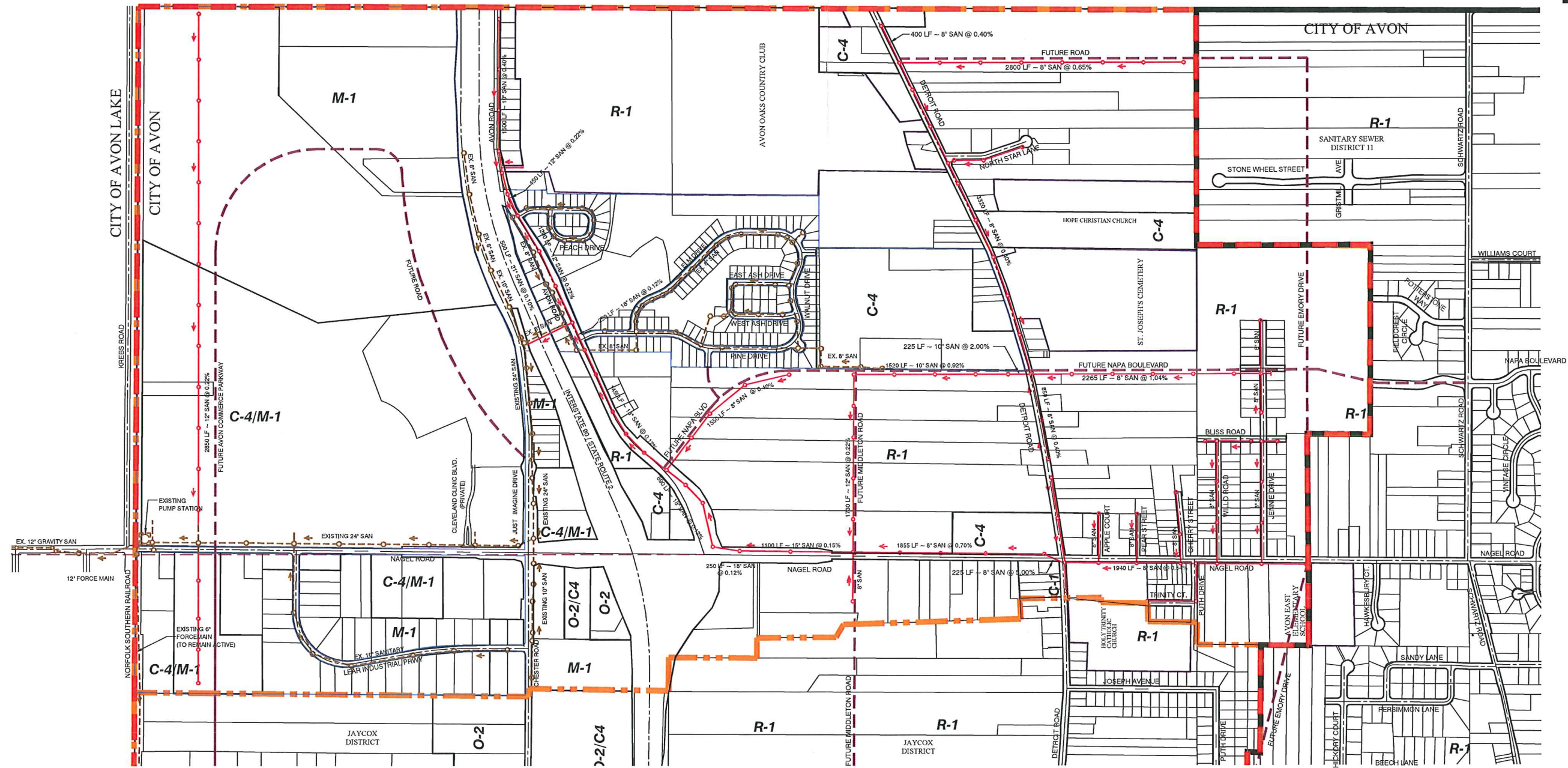
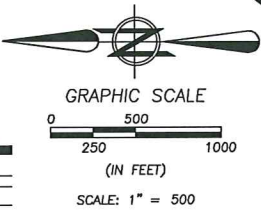


# NAGEL SANITARY SEWER DISTRICT MASTER PLAN



PIPE SIZE, MINIMUM SLOPE & FLOW RATE

|         |       |   |           |     |
|---------|-------|---|-----------|-----|
| 8-INCH  | 0.40% | → | 494,009   | GPD |
| 10-INCH | 0.28% | → | 749,161   | GPD |
| 12-INCH | 0.22% | → | 1,079,985 | GPD |
| 15-INCH | 0.15% | → | 1,616,901 | GPD |
| 18-INCH | 0.12% | → | 2,351,725 | GPD |
| 21-INCH | 0.10% | → | 3,238,253 | GPD |
| 24-INCH | 0.08% | → | 4,135,224 | GPD |

NAGEL SERVICE ACREAGE & FLOWRATE SUMMARY

| ZONE                         | AREA (ACRES) | GPDA | GPDA  | PEAK FACTOR | GPDA (PEAKED)           | INFILTRATION(400GPD/AC) | TOTAL         |         |                       |
|------------------------------|--------------|------|-------|-------------|-------------------------|-------------------------|---------------|---------|-----------------------|
| R-1<br>(C-4 TO R-1 74 AC)    | 845          | X    | 760   | =           | 642,200                 | X 3.33                  | = 2,138,528   | 338,000 | 2,476,528             |
| C-4<br>(R-1 TO C-4 45 AC)    | 93           | X    | 1,200 | =           | 111,600                 | X 5.00                  | = 558,000     | 37,200  | 595,200               |
| C-4/M-1                      | 216          | X    | 1,200 | =           | 259,200                 | X 5.00                  | = 1,296,000   | 86,400  | 1,382,400             |
| C-4/M-1<br>(CLINIC PH 1 & 2) | 41           | X    | 2,210 | =           | 90,610                  | X 5.25                  | = 475,577     | 16,400  | 491,977               |
| M-1                          | 317          | X    | 280   | =           | 88,760                  | X 5.00                  | = 443,800     | 126,800 | 570,600               |
| O-2                          | 7            | X    | 500   | =           | 3,500                   | X 6.67                  | = 23,345      | 2,800   | 26,145                |
| O-2/C-4                      | 5            | X    | 1,200 | =           | 6,000                   | X 6.67                  | = 40,020      | 2,000   | 42,020                |
| C-1                          | 3            | X    | 1,200 | =           | 3,600                   | X 5.00                  | = 18,000      | 1,200   | 19,200                |
| TOTAL                        | 1,527 ACRES  |      |       |             | 1,205,470 GPD (837 GPM) |                         | 4,993,268 GPD | 610,800 | 5,604,068 (3,892 GPM) |

- EXISTING SANITARY SEWER SYSTEM
- PROPOSED SANITARY SEWER IMPROVEMENTS
- NAGEL DISTRICT BOUNDARY
- FUTURE PUBLIC ROADS
- NOACA SECTION 208 WATER QUALITY MANAGEMENT PLAN AREA (FRENCH CREEK DISTRICT BOUNDARY)
- NOACA SECTION 208 WATER QUALITY MANAGEMENT PLAN AREA (AVON LAKE DISTRICT BOUNDARY)

- NOTES:
- THE ZONING SHOWN ON THIS MAP IS PER ZONING AS OF 04-20-2010. NAGEL SANITARY SERVICE DISTRICT FLOW RATE SUMMARY CALCULATIONS ARE PER ZONING AS OF 04-20-2010. FOR CURRENT ZONING REFER TO THE LATEST OVERVIEW PLAN.
  - PRIVATE DEVELOPERS SHALL BE RESPONSIBLE FOR PROVIDING CALCULATIONS TO APPROPRIATELY SIZE PROPOSED SANITARY SEWERS. DEVELOPERS SHALL ALSO VERIFY THE CAPACITY OF THE EXISTING SANITARY SEWER SYSTEM AS REQUIRED. ALL CALCULATIONS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO. CALCULATIONS AND SUPPORTING DOCUMENTATION SHALL BE SUBMITTED TO THE CITY FOR REVIEW.
  - FOR ADDITIONAL INFORMATION ON CITY OF AVON SANITARY SEWER DISTRICTS REFER TO THE EXHIBIT OF PROPOSED MASTER SANITARY SEWER PLAN.
  - THE INFORMATION SHOWN ON THIS DRAWING INCLUDING LINEAR FOOTAGE, PIPE SIZE AND SLOPE IS FOR GENERAL PLANNING ONLY. SANITARY SEWER INFORMATION SHALL BE FIELD VERIFIED BY THE DEVELOPERS DESIGN ENGINEER AND SUBMITTED TO THE CITY FOR REVIEW.

| REVISION | DATE     | BY  | DESCRIPTION               |
|----------|----------|-----|---------------------------|
|          | 10/17/08 | MCB | UPDATED                   |
|          | 11/18/08 |     | UPDATED                   |
|          | 01/21/09 |     | UPDATED                   |
|          | 11/5/09  |     | UPDATED                   |
|          | 04/20/10 |     | UPDATED                   |
|          | 12/13/10 |     | UPDATED                   |
|          | 02/13/13 |     | REVISED PER CITY COMMENTS |

DRAWN BY:  
DDW/AMK  
  
CHECKED BY:  
RAP

**BRAMHALL**  
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PREPARED FOR:

City of Avon



NORTH BRANCH INTERCEPTOR  
MASTER PLAN  
NAGEL SANITARY SEWER DISTRICT  
FORMERLY SEWER DISTRICTS 1A & 1C

SHEET  
1 OF 1  
JOB NO.  
05-2067A