



WATER SUPPLY SYSTEM SIZING USING APPENDIX "A"

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Phone: (702) 229-6251

The following information is requested to verify the sizing of the water piping is in conjunction with the 2018 UPC; Appendix "A" is used. **Please provide supporting documents for the information provided.** The information in this form should not be used or relied upon for any specific application without competent professional examination and verification of its accuracy, suitability and applicability by a competent licensed mechanical engineer, architect, or other licensed professional. Anyone making use of this information assumes all liability arising from such use.

LAS VEGAS VALLEY WATER DISTRICT REACHABLE AT: 702-258-8518 OR NLV WATER DISTRICT AT: 702-633-1206

PRELIMINARY INFORMATION:

- 1) _____ PSI (Minimum average daily service pressure)
- 2) _____ / _____ Inches (Water meter and RPPA size)
- 3) _____ / _____ Total _____ PSI loss (Water meter and RPPA pressure loss at continuous flow, see demand load)

DEMAND LOAD:

- 4) _____ FU (Total Fixture Units from Table A103.1. Provide list of fixtures & units for each)
- 5) _____ GPM (Flow in gallons per minute from Table A103.1 (2)/A103.1 (1) using number of total fixture units from line 4)
- 6) _____ GPM (Continuous supply demands i.e. sprinklers, A/C, etc.)
- 7) _____ TOTAL GPM through Meter (Line 5 added to line 6 equals the total flow)

PERMISSIBLE FRICTION LOSS:

- 8) _____ PSI (Minimum residual pressure desired 15 lbs. min.)
- 9) _____ Feet Elevation of highest fixture above street water main
- 10) _____ X 0.43 _____ = PSI (Static elevation pressure loss equals maximum elevation multiplied by 0.43)
(Max elevation) (Static pressure loss)
- 11) _____ PSI - (_____ PSI + _____ PSI + _____ PSI + _____ PSI) = _____ PSI
(Min daily service pressure) (Static Loss) (Residual Pressure) (Meter loss) (RPPA Loss) (Pressure available)

The average minimum daily service pressure minus (the static pressure loss + residual pressure desired + meter pressure loss + RPPA pressure loss) = pressure available for friction loss in supply piping.

- 12) $\frac{100 \times \text{pressure available for friction loss}}{\text{Total developed length of piping}}$ = PSI per 100 ft of Piping

- 13) Using the above information the building supply, branches and risers can be sized.

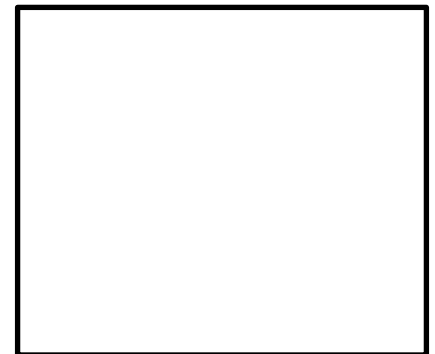
Check below which chart is used.*

Chart A105.1 (1) _____

Chart A105.1 (2) _____

Chart A105.1 (3) _____

Chart A105.1 (4) _____



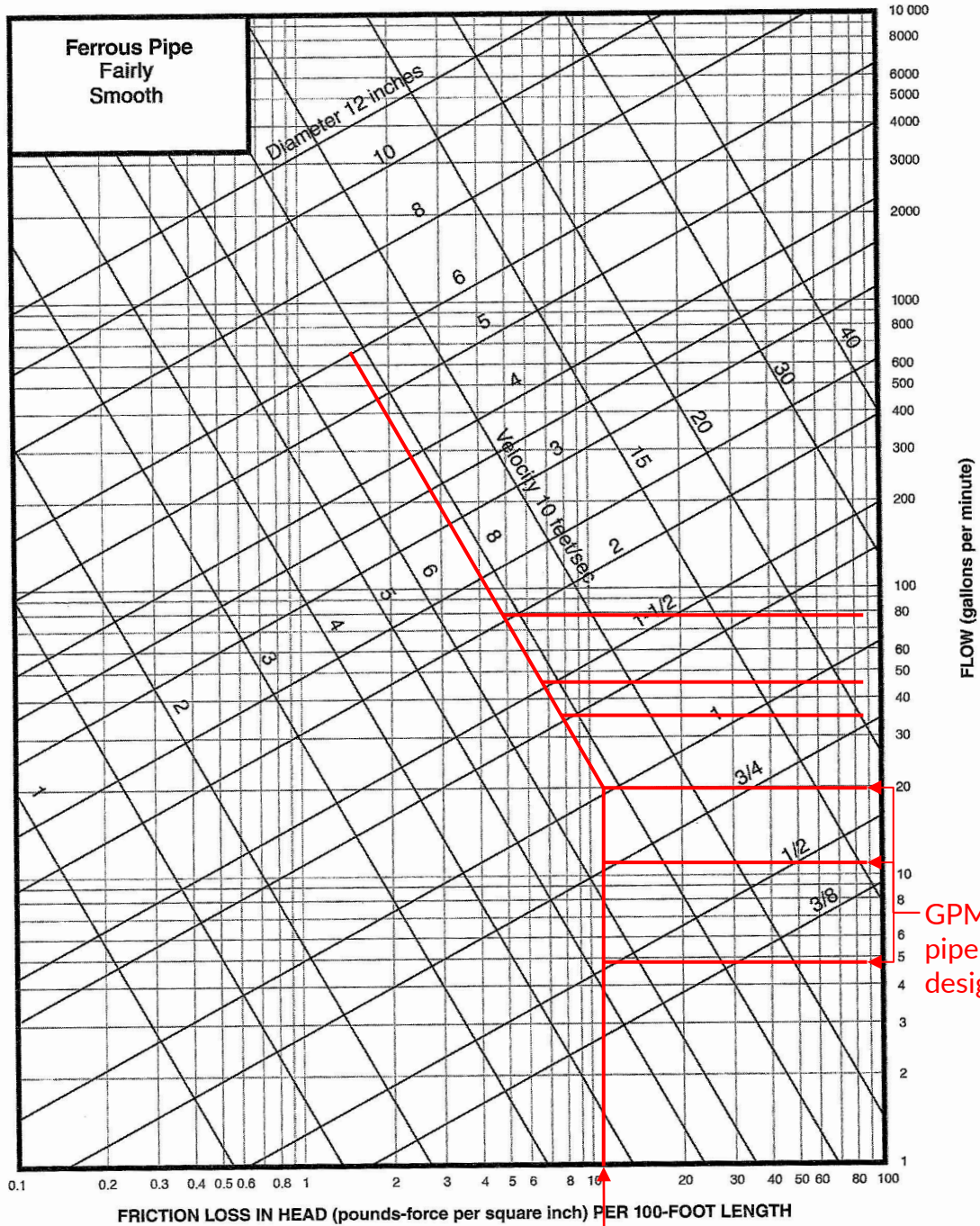
Engineer / Contractor's Seal, Signature & Date

* -Charts and Appendix A Calcs shall be on plans with permissible friction loss per 100 ft. and flow (GPM) clearly identified on chart (See Example).

EXAMPLE

APPENDIX A

CHART A 105.1(2)



GPM for each
pipe size in
design.

Friction loss from calculation

For SI units: 1 inch = 25 mm, 1 gallon per minute = 0.06 L/s, 1 pound-force per square inch = 6.8947 kPa, 1 foot = 304.8 mm, 1 foot per second = 0.3048 m/s