Variances Specifically Requested for the Final Plat of Capitan Trading Post

1. Reduction of Pavement Width from 34 feet wide to 24 feet wide including construction of a concrete rollover curb rather than standard curb and gutter.

   Justification:

   Ten extra feet of road width produces nearly 2 additional cfs of runoff per 100 feet of road. We are trying to minimize runoff in proximity to the floodplain and thus a variance on reducing the width of the road decreases the amount of runoff. Because of the low velocity of road drainage, rollover curb is being proposed that will also allow for the flexibility of driveway construction.

2. Increase of the length of the cul-de-sac road on Turning Leaf Court. Ordinance states maximum length to be 500 feet. Platted length of proposed road is 600 feet before entering cul-de-sac.

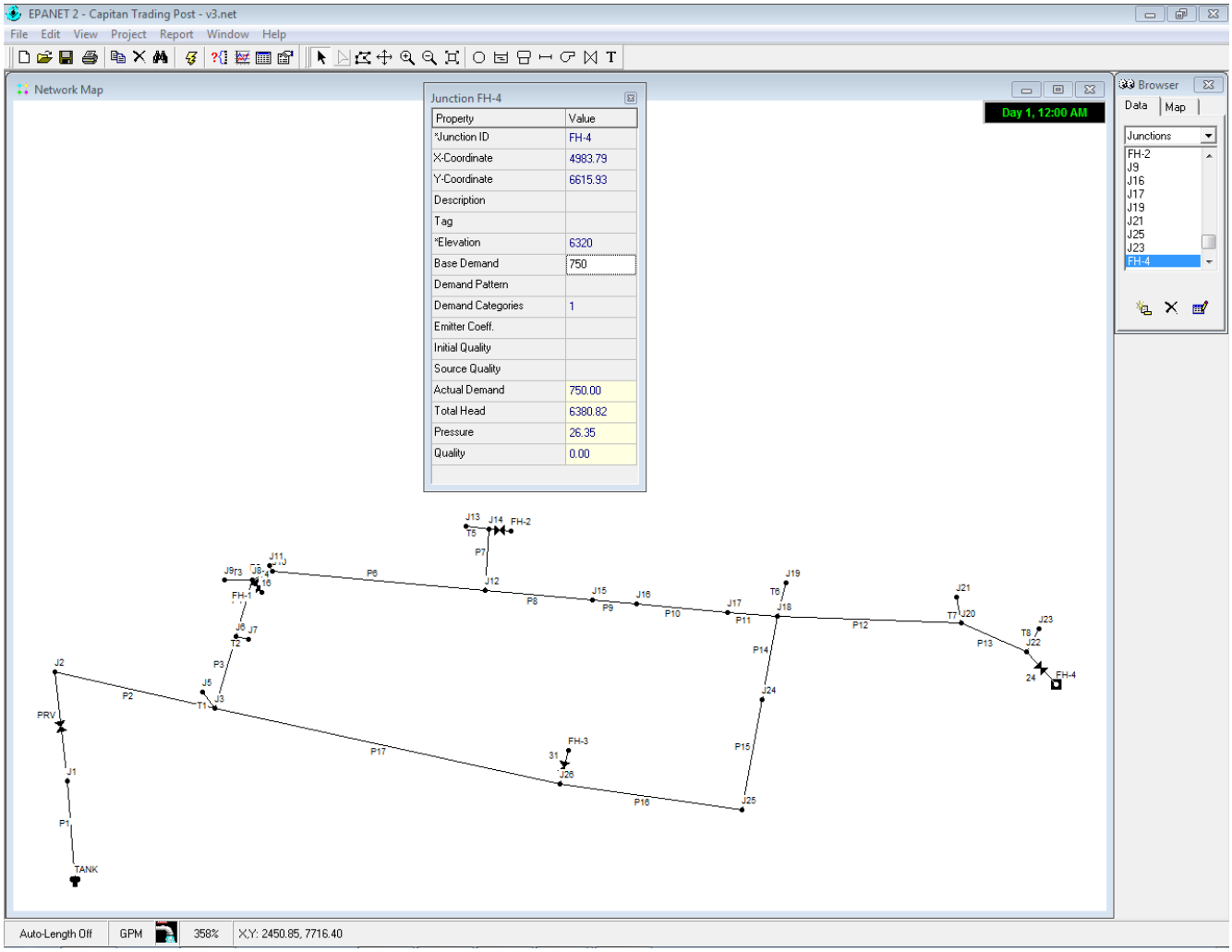
   Justification:

   Five hundred feet is overly restrictive compared to 600 feet which is a typical design length of cul-de-sac roads in the area. Additional cul-de-sac area adds to impervious areas and increases runoff in proximity to the flood plain.

3. Ability to use a 6" non-looped waterline for the water line serving the Creekside Drive cul-de-sac fire hydrant.

   Justification:

   The water system for the Capitan Trading Post for Unit 1 as shown on the construction plans, including Creekside and Rivulet Drives has been modeled using EPANET to confirm the suitability of the line sizes with demands as outlined in the Fire Flows report. In particular, it is needed to confirm that the unlooped 6" line to the end of the cul-de-sac is adequate. Therefore, a demand of 750 gpm was applied at the farthest fire hydrant at the end of the cul-de-sac, and an additional 550 gpm was applied at each of the other hydrants in turn. The lowest resulting residual pressure anywhere in the system was found to be 26psi, which is more than the required 20psi minimum residual pressure that is required.


EPANET 2 - Capitan Trading Post - v3.net
File Edit View Project Report Window Help
Network Map
Junction FH-4
Property | Value
*Junction ID | FH-4
X-Coordinate | 4983.79
Y-Coordinate | 6615.93
Description
Tag
*Elevation | 6320
Base Demand | 750
Demand Pattern
Demand Categories | 1
Emitter Coeff.
Initial Quality
Source Quality
Actual Demand | 750.00
Total Head | 6380.82
Pressure | 26.35
Quality | 0.00
Day 1, 12:00 AM
Browser
Data Map
Junctions
FH-2
J9
J16
J17
J19
J21
J25
J23
FH-4
J13 J14 FH-2
T5
P7
J12
P6
P8
J15
P9
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J19
T6
J21
T7
J20
P13
J23
T8
J22
24
FH-4
P14
J24
P15
J25
P16
FH-3
31
J26
P17
J2
P2
J5
T1
J3
P3
J6
T2
J7
FH-1
PRV
J1
P1
TANK
Auto-Length Off
GPM
358%
X,Y: 2450.85, 7716.40