3RD STREET WATERLINE REPLACEMENT (TD-3 GROUP)

DESIGN QUESTIONS

We are only looking at doing a couple of blocks at this time but the overall project is over 7,000 feet of 12 inch waterline and 17 intersection. It is best to look at the design of overall project so that when we do one or two blocks at a time we are working most efficiently towards that end product. With that in mind the questions I have are

1. Which is the better option?
   1. Build as close to the existing pipe as possible. If so what is a safe offset?
      1. + Less pavement disturbed
      2. + Less connection distance / pipe
      3. – Risk of damage to existing pipe during construction
      4. – Sanitary Sewer conflict from 11th Avenue to 14th Avenue
      5. ?
   2. Build on the opposite side of the street.
      1. + Less chance of damage to old pipe during construction
      2. + Straighter overall alignment
      3. – Longer service connections
      4. – More pavement patch
      5. ?
2. Should we offset the crosses to match up to future east – west alignments. If so what would be the minimum offset between existing and new pipe.
   * 1. + Less work and fitting for future pipe replacement
     2. – More fitting and work to tie to existing lines
3. Does a 4 foot bury of a 12 inch pipes make it more difficult to connect to the existing lines or would it be better to shallow the bury to match the existing pipe centerline? (More fittings)
4. Can the cross and valve assemblies be prefabricate then set in place or are they too heavy to maneuver around?
5. Do we need two 12 inch valves at every intersection for isolation or can they be at certain intervals? This overall project has 17 intersection meaning at least 34 valves at around $5,000 each.
6. Are we replacing all the valves at our east-west tie-ins?
   1. Would they all be 8 inch valves?
   2. If so can the old valves be left in place or should they be removed during our tie-ins?
7. Will all the fire hydrants be replaced and if so is it best to keep in same location or move to minimize piping?
8. What lessons if any did we learn from our Delsol Lane project?