City of RW – Proposed Drainage Ordinance 9/21.16

Overarching concerns and questions:

1. How many RW structures (residential and commercial) are estimated to have moderate to severe flooding concerns? How many have serious drainage concerns?
2. Executive Summary states ordinance goal is mitigating future drainage issues – implication being that it will not solve current issues or bring into compliance properties with inadequate drainage features/facilities. How does a piecemeal approach advance the ultimate goal of preventing flooding?
3. Is there a plan to incorporate the various drainage plans into a comprehensive plan? What happens if changes must be made to the City approved drainage plan in order to properly incorporate into a comprehensive plan?
4. There is a causation issue at play – it's easy to measure the impact an adjoining property may be having on a property, and state law requires no negative impact on adjoining properties. That burden is supposed to be alleviated once the water is taken to a public facility, like the road. How far downstream are impacts being considered by the City Engineer for drainage plans?
5. Who is intended to monitor, review, and track all of the plans, facilities and infrastructure for the future?

SECTION 1

Preface: this is tied to a portion of COA's DCM.

- Assume this was done for two reasons?:
    - We don't have to reinvent the wheel
    - Local contractors should be familiar with it
- Has this been fully vetted, by which I mean, are we certain that these sections 2-8 can stand alone and aren't impacted by other portions of the DCM that either are not incorporated by reference or may not otherwise be accounted for in this proposed ordinance?
- How readily accessible is the COA's DCM, specifically this 2014 Supplemental?
    - RW's ordinance remains static if COA alters or amends, but what happens to DCM accessibility when/if that happens?
    - If RW doesn't also opt to alter/amend, won't we just be undoing benefit derived from 1.a.ii.?

Specific Design Criteria: design engineer must prepare and submit

- They must follow the more stringent rules of either RW or COA, so contractors will have to sort through two different sets of rules and make a determination on which is the more stringent? Alternatively, they must rely on city engineers' determination of which is more stringent? Neither seems to solve a stated primary goal: to make the permitting/development process easier to navigate
- City Council will have to approve variations in writing – this will require input from city engineers, Utility Commission.
    -

- City code already provides a process for seeking a variance, would this be subject to those procedures? As written, this seems ambiguous, and city attorney will need likely need more background on the goal in order to flesh out.

1.2.2. General The proposed ordinance doesn't define "developer" or "development", this could be broadly construed to apply to anyone making any changes or narrowly construed to mean just 3rd parties hired to make substantial changes **or** really anything in between.

B.2. A "change in topography" – this is so broad. Something as seemingly innocuous as planting new trees, a hedge row or gardens will potentially change the topography and drainage patterns. Most RW residents are certainly laypersons with regards to drainage engineering – will they have to worry about modest landscaping if this is adopted?

B.3. Not sure how this works – rooflines are designed to direct runoff from the top of a structure onto the ground. It's the topography that then directs the course of the runoff.

- Assuming this is in regards to the single downspout issue that has been raised several times during the course of these discussions, I am not sure this captures the intent. Plus, the downspout issue is something that is already clearly regulated by State law, right? Does the City or its Engineers really want to get in the middle of squabble between neighbors?

B.4. applies to development that increases current runoff

- We already have determined that current runoff is a problem, so why are we only setting a standard for curtailment of increases from current?
- Why is it less desirable to have runoff travel down property lines? Property lines would seem like the most natural way of doing it: 1. Preserves integrity of overall property, 2. Creates the most likely scenarios for adjoining properties to cooperate in controlling runoff issues
- Why was the 250sqft of impervious decided upon? Is there a minimum threshold for impervious coverage where I wouldn't need any engineering approval, eg if I wanted to place a couple of paving stones down in front of my grill, would I technically be violating this ordinance?

C. peak flows –

- is there standard lvl for drainage control, ie do cities that attempt to control drainage via peak flow have a standard threshold, say 100yr?
- Although we have had several 100yr floods recently, that isn't the norm. What is the justification for controlling up to 100yr floods, but not beyond, say 500yr? Similarly, why 100yr and not 25yr?
- How do the new FEMA regulations for Floodplain construction/development play into this?

D. easing detention restrictions on properties adjoining Eanes Creek: wouldn't we want detention restrictions eased on all properties that are receiving runoff from uphill? For instance, a drainage plan accounts for runoff created by development and impervious coverage on the property, but it does not account for drainage that is presently occurring from uphill properties that are currently unregulated. This would seem to create a potential flooding issue for the new development

E. temporary drainage infrastructure – just not sure how practical this is from a cost/benefit perspective.

F. Drainage and water facilities: We have 73 projects currently underway

- If the city is responsible for providing the M&O plans, does this extend any liability to the City if the facilities fail or the plan is alleged/determined to be the root cause of unforeseen issue, such as downstream flooding?
- How is the City going to track all of these improvements on a go-forward basis?

G. Special Permit for construction activity or post construction activity (in doc, should be "affect" not "effect")

- City currently has no "special permit" designations – aside from overview in Section 4.2, so far we have been provided no draft of language, scope, or fees.

F. Signs of failure

- This implies monitoring by someone other than the property owner. Who is taking on this roll?
- Ultimately on property owner if failure happens or repairs are necessary – what happens when/if property owner can't afford to bring everything back into compliance?

1.2.3. Drainage Easements: A. although seems to be common practice in municipalities, technically duty of the easement owner to maintain easement, with burden on subservient estate not to create an obstruction; property owners would in effect be contracting to accept burden

1.2.4 Storm Water Drainage Channels: as proposed, this appears to be aesthetics based. Is there an engineering rationale to mandating dense grasses over other channeling methods?

- How do you imagine this works in practice? Must be contained within property RoW, but what if RoW doesn't correspond with best option for facilitating a drainage solution?
- Requirements for permanent soil erosion control measures – is this a requirement of the TCEQ? If so, why does City need to include in code? Just as enforcement mechanism?

1.2.5. Storm Water Detention: permanent detention ponds should be constructed on property

- **E**. Aesthetic enhancements – this ends up being subjective; assuming no engineering justification for this?

- **F.** Setback requirements to keep out of easements, RoW, etc? Again begs question of value in shared drainage/detention facilities btwn adjoining properties

SECTION 2

SECTION 3

3.1 General: TCEQ sets regulations for water quality in recharge zone – are cities within recharge mandated to adopt ordinances to regulate water quality to match TCEQ guidelines?

E. Aesthetic enhancements – do they serve an engineering or water quality purpose?

SECTION 4

4.1 General: O&M establishes guidelines for routine inspection and maintenance – by whom?

- property owners are required to maintain and perform inspections of facilities; is this going to be reasonable for a layperson to adhere to? Is a typical property owner supposed to know if a berm or channel is off grade, or if buried facilities are leaking or clogged? Is it reasonable to expect them to?

4.2 Permits: is this intended to be the establishment of the "special permit" referred to in Section 1.2.2.(G)?

- As proposed, this seems to have little affect or impact aside from a pseudo-agreement to adhere to this ordinance. Why even include this?
- Are there fees attached?

SECTION 5

5.1 Site Disturbance: Some of these seem to stem directly from Corps and FEMA guidelines for development within Floodplain. Are these standard engineering and construction guidelines? If yes, why include them here rather than reference them wherever the codified standards appear? If no, how were these specifics achieved?

L. what constitutes "special care"? how does this differ from a reasonably prudent standard? Is the City Engineer the best to determine whether tree removal will impact drainage flows? Isn't this exactly why COA and Westlake have arborists?

<u>Comments from Bobby Dillard:</u>

1. What is budget for ongoing maintenance from City?
2. Map every house with drainage issue.
3. Map open permits since we started requiring drainage facilities.
4. Group discussion of ordinance by:
    a. Standard Calculation
    b. Ongoing maintenance
    c. Permitted types of drainage features.