

Late Backup

Bob Thompson
South Lamar Neighborhood Association
December 6, 2012

- ◆ Both SLNA and PSW desire negotiated SF6 result, but differ on the density allowed within the CO.
- ◆ SLNA seeks to adhere to our precedent of only permitting upzoning with a CO to permit no more density, impervious cover, etc. than would be available under the existing zoning.
- ◆ Therefore knowledge of the ACHIEVABLE SF3 subdivision density, AFTER enforcement of all site plan and other restrictions, is important guidance to both SLNA and PSW.

Background Information

- ◆ This neighborhood is undergoing major infill development, and the existing infrastructure is already inadequate.
- ◆ Recent developments have caused flooding of homes in the neighborhood.

Challenges Unique to this Site

- ◆ High traffic with very poor ^{SIGHT} site lines; hence, difficult and dangerous access.
- ◆ Drainage Issues, due to severe topographical hilliness, and presently virgin state of the tract.

Questions Impacting Achievable Subdivision Density

- ◆ Floodwater Detention Capability
- ◆ Square Footage Requirements (See Final Page of Handout Material)

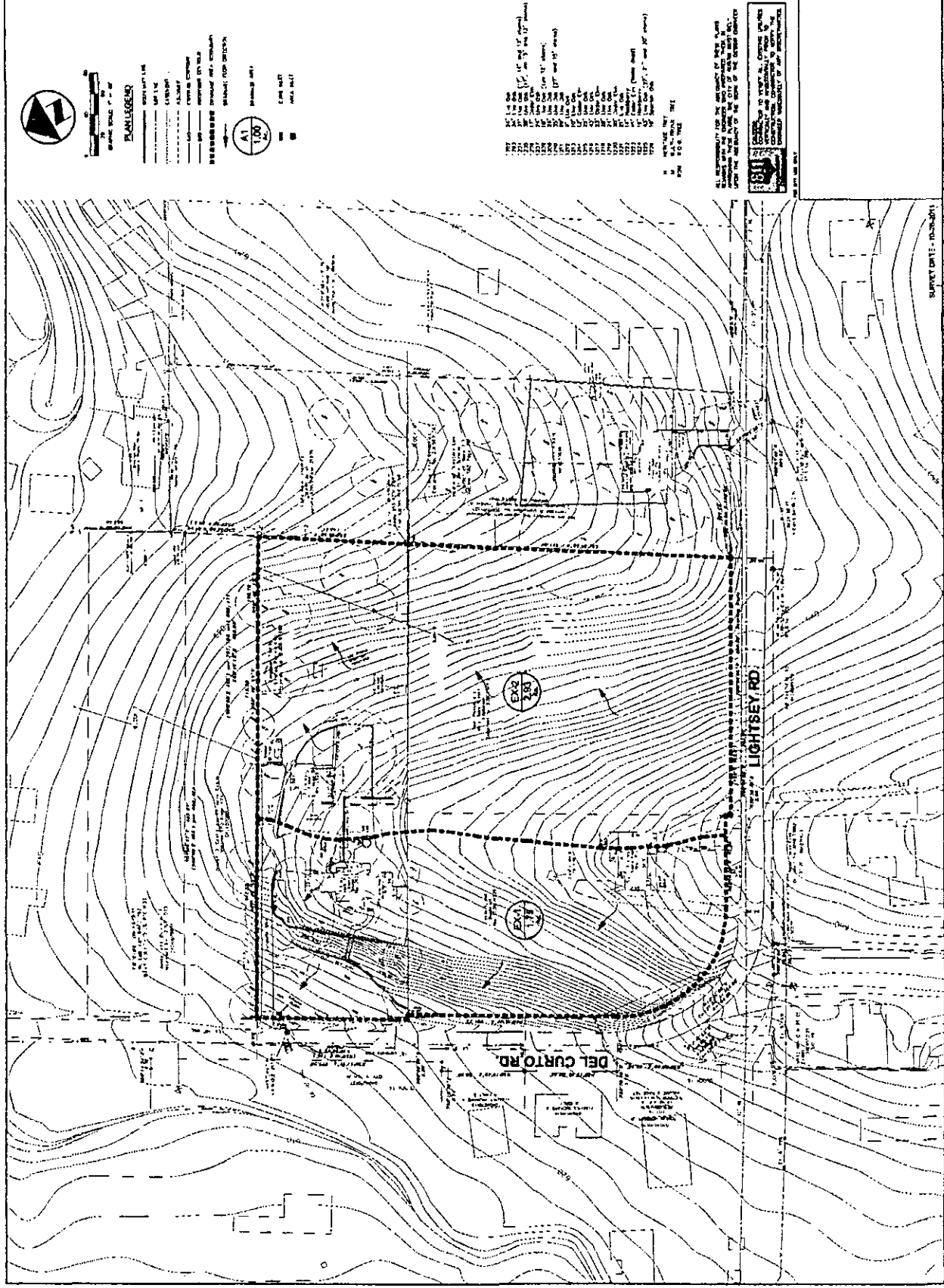
SHEET

EX-A

EXISTING DRAINAGE AREA MAP



PERALES ENGINEERING, L.L.C.
Land Development and
Environmental Consulting Services
T.S.P.E. # F-12013



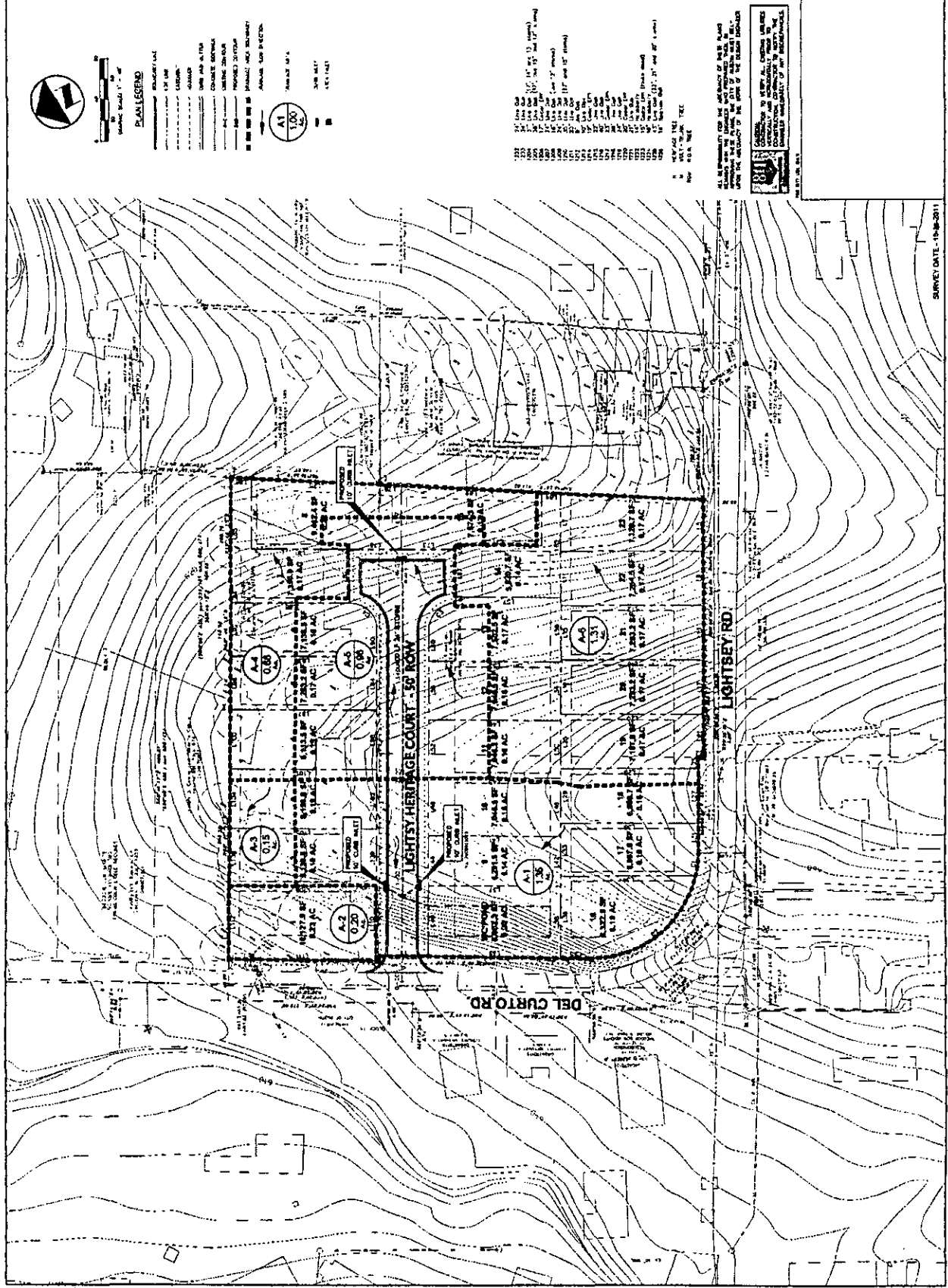
EX-B

PROPOSED DRAINAGE AREA MAP
LIGHTSEY OAKS SUBDIVISION

PERALES ENGINEERING, L.L.C.
Environmental Consulting and
Development Services
T.S.P.E. # F-12013



DATE	BY	REVISION
10/10/2011	W.C. REND	1.00



SURVEY DATE: 10-10-2011

W.C. REND
8662 SF

Subj: Questions on Drainage/Floodwater Detention for Lightsey Tract
 Date: 11/30/2012 11:58:24 P.M. Central Standard Time
 From: JRT3308@aol.com
 To: ryan@pswrealestate.com
 CC: nancy.maclaine@gmail.com

Ryan,

Below are a few questions that I posed for staff, to try to initiate a conversation with them about some of the drainage issues which seem technically thorny to me. I don't pretend to be a hydrologist, but I think that I understand a little bit about the issues.

Caveat: I have had difficulty trying to usefully access the material that Sylvia emailed to us, because I have to constantly move it sideways and vertically on my computer, while it is blown up enough to read. It is mostly graphical, with a few charts. I haven't seen any verbal analysis, staff comments, etc. on these documents.

Drainage/Flood Water Detention Questions:

- (1) How much water detention capability (cu.ft.) is provided, and how was this amount determined? Is the pond shown near the W boundary, with 8662 SF, the only floodwater detention pond, and how deep is it?
 - (2) How will the flood runoff water be intercepted before it leaves the tract along the W, N, and E boundaries? (Otherwise, what is the assurance that the provisions of Section 1.2.2 of the Drainage Policy will be obeyed?)
 - (3) The illustrated pond appears positioned at surface elevations between about 625 ft. at the NW corner and 641 ft. at the SE corner, as it is to be constructed on a steep hillside. Has someone reviewed the engineering design of the pond's construction?
 - (4) How is the intercepted floodwater to be conveyed to the pond, taking into account the topographic elevations of the tract? For example, there is a relatively high ridge running NS through the tract, about one-third of the way across the tract from the W edge. This ridge has elevation ranging from a high of 660 ft. at the southern (Lightsey) end, and the ridge elevation does not fall below 641 ft. until very near the N end of the tract, beyond the existing constructed walls. To illustrate the challenge, the SE quadrant of the tract, apparently designated as drainage area A-6, will send a lot of floodwater runoff to the ENE where it will naturally tend to exit the tract along the SE boundary at elevations of 622 ft. to 632 ft. or so. If this flood runoff water is collected at these elevations, how is it to be conveyed west beyond the ridge that may be some 20-30 feet higher, before being brought back down to the pond elevation? Will there be pumps installed to raise the water? Will there be deeply excavated pipes to convey the water deep beneath the ridge line? Will there be pipes to convey the water N along the E edge of the tract, until lower elevations are reached and the water may more easily be diverted to the W (even then having to combat increasing ground elevations to the W)?
- As a second illustration of the difficulties, floodwater in the NE portion of the tract, in drainage area A-4, will tend to drain toward the NE corner of the tract where it might exit at elevations of around 615 feet or so, if not collected. If it is somehow collected, how is it to be conveyed uphill past the central ridge line? Again, will there be pumps or deeply excavated piping?
- (5) If the construction plan does envision massive excavations of 20 feet or more on the tract, have there been engineering evaluations and environmental evaluations of these plans?
 - (6) Will the developer be permitted to discharge water from the detention pond during a flood event? If so, how much discharge will be allowed, and where will the water be discharged?
 - (7) Given that there are anecdotal reports of the nearby creek overflowing during sufficiently heavy floods, will any discharge into the creek be allowed? Has there been a drainage assessment of the regional watershed?

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impacting the creek upstream of this tract, to evaluate its carrying capacity during flood events, taking into account the present state of impervious cover in the vicinity?

(8) To the extent that HEC codes or similar models are used in the drainage assessments for this tract, will they be benchmarked by comparing predicted pre-development runoff with that which may be observed during mild rainfall events? (This question is motivated by knowledge that oftentimes, HEC codes are tuned to urban watershed conditions, and tend to over-predict runoff from very rural, undeveloped tracts such as this one.)

(9) Will drainage engineering features, such as lengthy collection culverts, pumps, floodwater distribution piping, etc. be permitted to be sited on or beneath residential lots? Who will be responsible for the maintenance of these features?

These questions are intended to initiate a conversation with staff to illuminate the details of the developer's drainage plan, and the extent of staff's analysis of this plan so far. Since our neighborhood has already experienced unfortunate flooding events from the development of tracts much less topographically challenged than this one, we welcome early detailed analysis from staff, and would appreciate the opportunity for face to face discussions of these drainage issues.

This is the material that I put together for staff. Hope it is helpful to you.

Bob

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----- Original Message -----

From: Autry, Kevin

To: Antonio Gonzalez

Sent: Thursday, February 16, 2012 10:34 AM

Subject: RE: Developer Comment

Antonio!

So good to hear from you. All is well here.

The detention requirement is always based on controlling the increase in runoff rate between the existing conditions and the proposed conditions. In the case of a single family residential subdivision the lots would be assumed to have 45% impervious cover, the maximum allowable by zoning regulations, for the proposed condition.

1.2.0 CITY OF AUSTIN DRAINAGE POLICY

1.2.1 Application

The City of Austin drainage policy shall govern the planning and design of drainage infrastructure within the City of Austin and within all areas subject to its extraterritorial jurisdiction. Definitions, formulae, criteria, procedures and data in this manual have been developed to support this policy. If any condition requiring some additional measure of protection is identified during design or construction, the engineer shall make provisions within the design. In order to receive an administrative variance to any of the criteria or policy in this manual, the applicant must receive approval from the Director of the Watershed Protection and Development Review Department. A request for an administrative waiver must comply with State law regarding engineering work and must include justification from the engineer that compliance is not feasible.

1.2.2 General

- A. Stormwater runoff peak flow rates for the two (2), ten (10), twenty-five (25) and one-hundred (100) year frequency storms shall not cause increased inundation of any building or roadway surface.
- B. Street curbs, gutters, inlets and storm sewers shall be designed to intercept, contain and transport all runoff from the 25-year frequency storm.
- C. In addition to B above, the public drainage system shall be designed to convey those flows from greater than the 25 year frequency storm up to and including the 100-year frequency storm within defined public rights of way or drainage easements.
- D. Stormwater runoff peak flow rates shall not be increased at any point of discharge from a site for the two (2), ten (10), twenty-five (25) and one hundred (100) year storm frequency events.
- E. Regulation of peak flows to allowable levels, as determined by the provisions of this policy, shall be achieved by storage on-site or off-site or by participation in an approved Regional Stormwater Management Program. The Detention Section of this manual provides a guide to acceptable methods, but does not limit the designer to the methods presented therein. Guidelines for participation in the Regional Stormwater Management Program are contained in the Detention Section of this manual.
- F. For those developments which are immediately adjacent and discharge directly into Lake

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Residential Density Possible With SF-3 Zoning:

PSW cannot state what the final density of their duplex subdivision is until they address the right-of-way (r.o.w.) dedication of 30 feet from the centerlines of both Del Curto and Lightsey Rd.

PSW was informed of the r.o.w. dedication requirement in the original case report provided to them on May 7th, 2012.

The current preliminary plan drawing shows the following:

- The Update #2 preliminary plan has 17 duplex lots and 4 single family lots smaller than 7,000 square feet for a total density of 38 units.
- PSW has stated that they simply made a mistake on the plan, and that they have sufficient land area to make all 21 lots larger than 7,000 square feet.

A review of their current plan does not appear to support that statement once the right-of-way dedication comment is addressed.

- How much land area do the lots fronting on Lightsey Rd. have today?
 1. Lots 17 and 18 are already less than 7,000 square feet.
 2. Lots 19 through 23 are all less than 321 square feet larger than 7,000 square feet. How many will be smaller than 7,000 square feet after r.o.w. is dedicated?
 3. Lot 16 will lose the most land area because it is a corner lot.
- Do the lots directly north of the lots fronting on Lightsey have sufficient land area in order to adjust the lot lines and make all lots larger than 7,000 square feet?
 1. Lots 9 and 14 are already less than 7,000 square feet.
 2. Lots 10, 11 and 12 are all less than 50 square feet above the 7,000 square foot minimum.
 3. The Pond lot will also lose land area to the r.o.w. dedication.
- Based on their own drawing and information, there is reasonable doubt that PSW can address the right-of-way dedication and still maintain the number of duplex lots, and density, they are currently showing.

PSW should be given the opportunity to submit a preliminary plan that addresses the r.o.w. dedication and all other comments, and clearly demonstrate how many buildable duplex and/or single-family lots can be built on this site.