



MEMORANDUM

TO: Chuck Lesniak

FROM: Meagan Banse, PE, MBA, LEED AP

DATE: March 27, 2015

RE: Seepage Along Idelwild Road

BODY:

In Mr. Shaukat's presentation to the Environmental Board, he has requested that the City "take an active role in reduction of water flow through Idlewild's yards, driveways, and houses" and "fix the water drainage from TXDOT parking lots". We acknowledge his concerns, but it has been concluded that his issues are a private matter and the seepage on these Idlewild properties has not been caused by deficiencies in the City's infrastructure. The City is not able to use public funds for a private benefit.

As the Watershed Protection Department's (WPD) sponsor of the Ridgelea Storm Drain Improvements (SDI) project, I have been included in correspondence with Mr. Shaukat and his neighbors since December of last year regarding the groundwater and seepage issues they are reporting at their properties. The Ridgelea SDI project is now nearing completion and all drainage improvements proposed with the project have been constructed.

During the last five months, WPD staff has met with Idlewild residents multiple times and have made several site visits to observe and assess the residents' complaints. We have been informed that this seepage has existed for multiple decades and we have determined that it has not been caused or worsened by the Ridgelea SDI project. WPD staff has shared this message with the residents in person and by email.

I met with Mr. Shaukat, Idlewild residents, and representatives from City Council staff, Milestone Development, TXDOT, and City staff (Watershed Protection, Public Works and Planning and Development Review) on March 10, 2015 to again observe the seepage situation and discuss the City's role in the Milestone redevelopment plans for the 75-acre Bull Creek tract.

I shared with the meeting attendees that the City does not address drainage issues resulting from private site to site drainage. I also explained that the purpose of the Ridgelea SDI project was to improve the City's infrastructure to alleviate flooding caused by inadequate storm drain infrastructure. I encouraged Mr. Shaukat and his neighbors to employ a drainage engineer to explore solutions to their seepage problems.

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TO: John Wepryk, P.E. – City of Austin Public Works Department

FROM: Samuel Shorter, P.E.

SUBJECT: Ridgelea Storm Drain Project - Groundwater Issues

DATE: February 13, 2015



F-293
2-13-15

Introduction

RPS is providing this memo regarding groundwater concerns along the approximate address range of 4008 to 4116 Idlewild Road on the western side of the street. There is an existing high groundwater condition in this area as identified by physical observation by RPS and the City of Austin prior to and during construction of the project. The decades-long high groundwater condition was acknowledged in a 1/9/15 field meeting by impacted residents attended by RPS and multiple City of Austin representatives. A location map included below in Figure 1.

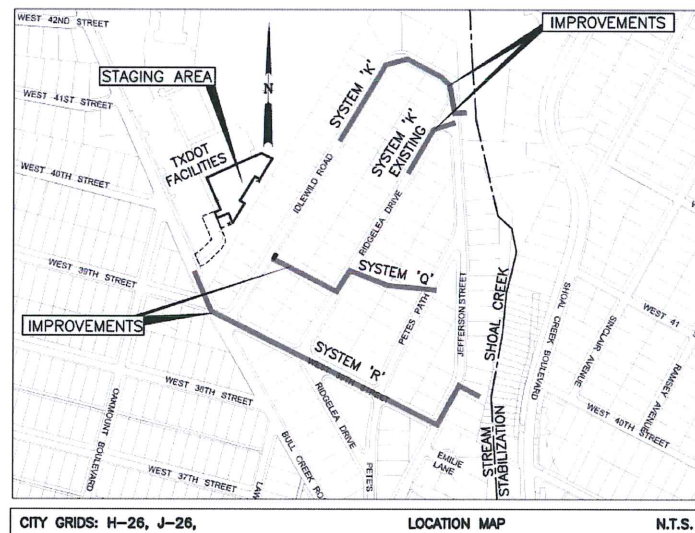


Figure 1 – Location Map

Historically the neighborhood has experienced high groundwater as evidenced by the numerous underdrain outfalls within driveways, retaining walls with weepholes, and weepholes cut into existing curb and gutter. Many of these “seeps” from private driveway joints and pipe outfalls are six-feet higher (or greater) than the existing street grade.

A picture showing an example of the existing groundwater condition can be found below in Figure 2. There are groundwater seeps in the driveway from private property upslope of the storm drain project.



Figure 2 – Groundwater Condition on Idlewild Road

Project Purpose

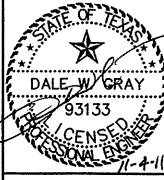
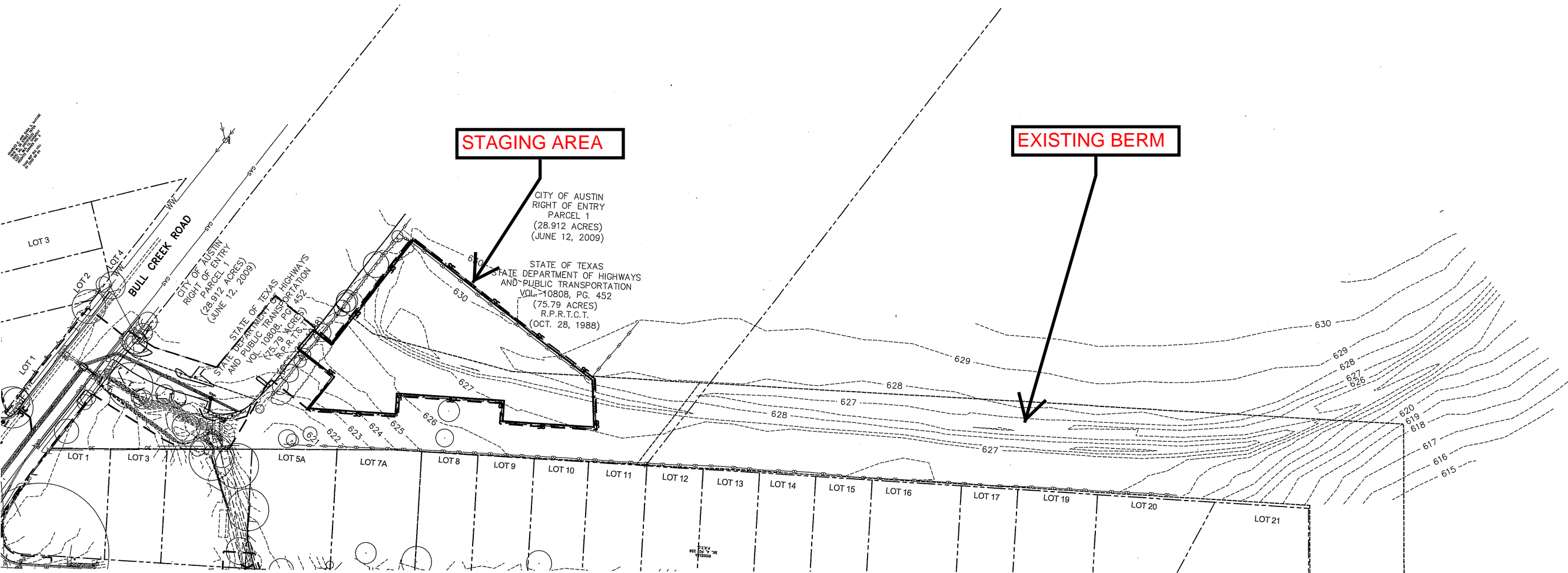
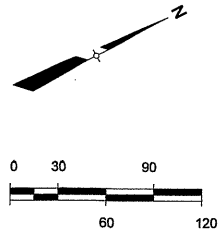
The Project is a local flood hazard mitigation project designed to improve surface stormwater runoff conveyance along City of Austin right-of-way via storm drains and inlet improvements. The in-situ groundwater issue is not a local flooding issue but a groundwater issue on private property; therefore, the original project design did not include elements to mitigate the groundwater condition upslope of the improvements within Idlewild Road right-of-way.

Design Considerations

The Project conducted a design phase topographic survey in the area behind the lots in question all the way to Bull Creek Road to assess existing drainage patterns. Please find a copy of Plan Sheet 16 included as Attachment 1 with callouts provided for clarification.

During the design phase, the project team established a staging area and small channel modification near Bull Creek Road (and the southern TXDOT parking lot). Both the staging area and small channel modification were thoroughly analyzed and subsequently certified to create no adverse impact from increased surface runoff directed at private residences.

ATTACHMENT 1



GENERAL PERMIT OFFICE
SHOAL CREEK - RIDGELEA STORM DRAIN IMPROVEMENTS
STAGING AREA BERM
(FOR INFORMATION ONLY)

REVISIONS		REMARKS
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(512) 326-5659
Registration No. F-293
EC PROJECT NO. 07031.20

SHEET INFORMATION
DATE AUG 2011
SHEET 16 OF 127

GENERAL PERMIT PROGRAM

From: [Pope, Sylvia](#)
To: [ashaukat@att.net](#); [cassyschaukat@att.net](#); [kimberly.zipfel@gmail.com](#); [eric.zipfel@gmail.com](#); [bennett.brier@va.gov](#); [bbrier@austin.rr.com](#); [betty.littrell@va.gov](#); [tom-stewart@att.net](#); [DortheaStewart@att.net](#)
Cc: [Pope, Sylvia](#); [Johns, David](#); [Lott, Stephanie](#); [Banse, Meagan](#)
Subject: Ridgelea runoff and groundwater problems
Date: Thursday, January 15, 2015 3:43:54 PM

Hi Ridgelea neighbors,

I'm sorry to hear about the recent drainage problems on your property. The project team passed along your contact info and I wanted to follow up with you and share my observations from a site visit yesterday. The TXDOT berm and ditch didn't look like it had changed substantially from my last visit in 2011. There were 2 notable but minor changes: the ditch on the upslope side of the berm now is primarily bedrock rather than a soil/gravel mixture and there are sizable piles of dirt, grass clippings and brush debris along the tree line adjacent to the creek. It looks like recent yard/landscaping work on one of the lots may be the source of the dirt and brush. Although this isn't a large area, it may be ponding water more so than in the past.

There was an open borehole (nearby stake says BH-19) that had olive-gray clay cuttings at the ground surface and standing water at 2 feet below ground. This indicates that water is ponding in the TXDOT property, probably over the Del Rio Clay/Shale formation. It is common to have water seeping out of the ground at the top of this formation. In fact, there are two seeps that are discharging roughly 25 feet east of the tree line and at a shallow elevation. This water is likely perched on top of the Del Rio Clay/Shale formation at a shallow depth and is moving laterally until it reaches a discharge point; one zone is along the front of the upslope side of Idlewild Road. There's also a corrugated black plastic pipe behind 4116 Idlewild Road that appears to be discharging at about the same rate as a ½ inch or 5/8 inch garden hose.

If there has been recent work on your lots within the upper 2 to 5 feet of soil within the perched groundwater zone, it's possible that subsurface pathways may have changed drainage rates and that's what you're observing at the front of your properties.

The trenching activity associated with the Ridgelea Storm Drain Project, which is downslope of your properties; shouldn't have resulted in the increase in perched water discharge on your lots and at a higher elevation than the project. We have seen trenching activities divert groundwater in other locations but the result is that the discharge shifts to a lower elevation and follows the backfill along the trench.

I hope that this information helps and I hope to talk to you soon. Please let me know if you have any questions.

Sylvia R. Pope, P.G.
Hydrogeologist

City of Austin

Watershed Protection Department

Environmental Resources Management Division

Water Resources Evaluation Section

One Texas Center

505 Barton Springs Road, 11th Floor

Austin, Tx 78704

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Geology and groundwater seep horizon Ridgelea neighborhood



0 500 1,000
Feet

Legend

Geologic Units - BEG map

NAME

- Qucr - terrace deposits
- Kdr - Del Rio (shale/clay)
- Kef - Eagle Ford (shale)
- Kbu - Buda (limestone)

The blue line represents the geologic contact between the overlying Buda limestone with the underlying Del Rio clay. Seepage is common at this geologic contact; in the Ridgelea neighborhood and other locations within the region.

Map by Sylvia R. Pope, P.G.
04/07/2015



