



ITEM FOR ENVIRONMENTAL BOARD AGENDA

BOARD MEETING

DATE REQUESTED: July 21, 2010

**NAME & NUMBER
OF PROJECT:** Springs of Walnut Creek
C8-2010-0051

**NAME OF APPLICANT
OR ORGANIZATION:** Pape-Dawson Engineers, Inc.
Jim Huffcut – Phone (512) 454-8711

LOCATION: 12009 ½ N IH 35 SVRD NB

PROJECT FILING DATE: April 23, 2010

**PDR/ENVIRONMENTAL
STAFF:** Keith Mars, 974-2755
keith.mars@ci.austin.tx.us

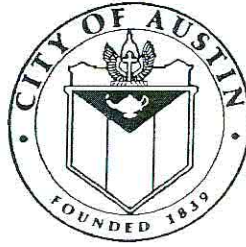
**PDR/
CASE MANAGER:** Don Perryman, 974-2786
don.perryman@ci.austin.tx.us

WATERSHED: Walnut Creek (Suburban)
Desired Development Zone

ORDINANCE: Comprehensive Watershed Ordinance (Current Code)

REQUEST: Applicant is proposing a wastewater line to tie into a main line already located in the Critical Water Quality Zone. Therefore, the applicant is requesting the following variance: Variance from LDC 25-8-392 – to allow development within the Critical Water Quality Zone.

RECOMMENDATION: Recommend approval



MEMORANDUM

TO: Mary Gay Maxwell, Chair and Members of the Environmental Board

FROM: Keith Mars, Environmental Review Specialist Senior
Planning and Development Review Department

DATE: July 21, 2010

SUBJECT: Variance from LDC 25-8-392 – to allow development within the Critical Water Quality Zone by proposing a wastewater line to tie into a main line already located in the Critical Water Quality Zone.

Description of Project

The Springs of Walnut Creek consists of approximately 62.58 acres and 108 single-family lots. The project is located at 12009-1/2 North IH35, which is east of the Texas Commission on Environmental Quality complex and north of Braker Lane.

Description of Property

The proposed Springs of Walnut Creek is located in the Walnut Creek Watershed and is classified as suburban. The tract is undeveloped and undisturbed with the exceptions of a utility line corridor, old ranch roads, and an abandoned pad site. Vegetation largely consists of a dense oak/juniper overstory canopy and riparian corridors with instream wetland vegetation. There are four waterways onsite: Walnut Creek, a major waterway, borders the southern boundary of the project, an unnamed minor waterway that drains into Walnut Creek, and two unnamed, unclassified tributaries to Walnut Creek. All creeks are either protected by critical water quality zones (CWQZ) or by critical environmental feature (CEF) buffers due to wetlands, springs, seeps, and/or rimrock features.

Existing Topography/Geology/Soil Characteristics/Vegetation

The site elevation ranges from approximately 580 feet above mean sea level at Walnut Creek to 680 feet above mean sea level at Yager Lane. The majority (~82.0%) of the site is characterized as relatively flat, upland conditions. The waterways and transitional

areas (~18.0%) are characterized by steep (1:1, 2:1) midslopes of the creek basin down to the creek bed.

The site is located within the Austin Chalk formation and is particularly apparent in the waterways dominated by chalk and marled limestone. The soils on the property are classified in the Austin-Eddy Association. These soils are silty-clay to clay loam. The underlying material is weathered chalk and silty clay loam.

Upland vegetation largely consists of an oak-juniper woodland interspersed with patch upland grasses. The upland woodland canopy is stratified in two layers. The overcanopy is dominated by Live Oak (*Quercus fusiformis*) and Red Oak (*Quercus texana*) while the understory is dominated by hollies (*Ilex vomitoria* and *Ilex decidua*), and Redbuds (*Cercis Canadensis*). The riparian and instream areas are characterized by riparian woody plants, such as American Elm (*Ulmus americana*) and Eastern Cottonwood (*Populus deltoides*) and wetland plants, such as, rush (*Juncus spp.*) and arrowhead (*Sagittaria spp.*)

Critical Environmental Features/Endangered Species

There are 27 critical environmental features (CEFs) that have been identified within the project boundaries. 11 are rimrock, 9 are wetlands, 4 are seeps, and 3 are springs. All critical environmental features are protected by buffers. These CEFs, their associated buffers and the critical water quality zone area (19.09 acres of the 62.58 acre tract) have been dedicated to the City as parkland.

Water/Wastewater

Water and wastewater service are proposed to be provided by the City of Austin.

Environmental Variance Request

LDC 25-8-392 – to allow development within the Critical Water Quality Zone by proposing a wastewater line to tie into a main line already located in the Critical Water Quality Zone.

The applicant is proposing an eight inch wastewater line collection system to pass through the critical water quality zone and tie into the existing 54 inch mainline located in an existing drainage easement in the critical water quality zone. The easement and requested wastewater line is located approximately 60 feet away from the creek centerline to the centerline of the easement and is located outside of the creek basin. The proposed wastewater line runs near perpendicular to the creek until within the existing 40 foot easement and 54 inch mainline. Then, to avoid building a more environmentally intrusive new manhole, the applicant is proposing to run approximately 40 feet of the new line parallel to the critical water quality zone to tie into an existing manhole eye-out. Though tying into an existing wastewater line already located in the critical water quality zone, the proposed 40 feet section that runs parallel to the critical water quality will not be code compliant. Thus, the environmental variance for the proposed work has been requested.

Recommendations

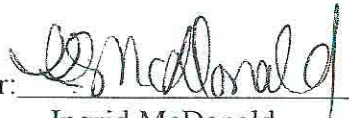
Staff has worked with the applicant and reviewed iterations of the proposed project since February 2009 (date of the first submittal that expired in February 2010) to ensure environmental code requirements are met. Staff has also spent, at a minimum, 50 staff hours traversing the site assessing onsite conditions. Given the sensitive condition of the riparian and waterway areas, staff also attempted to work with the applicant and city real estate staff in purchasing some or all of the property for conservation. An agreement could not be negotiated and the plans were resubmitted. Short of purchasing the land outright, and recognizing the applicant's desire to develop the property, staff has ensured environmental code requirements have been met other than the requested variance.

In the context of the variance request, staff confirms that the line location is the least intrusive location for the line placement and represents minimum departure from code. Staff also agrees with the applicant that building a new manhole to tie into would be more environmental degrading than would running the line parallel in the critical water quality zone to tie into an existing manhole eye-out. Staff has also consulted with Austin Water Utility and has confirmed that no other line location is feasible. For the aforementioned reasons, staff recommends approval of the environmental variance request and has required that the disturbed area within the critical water quality zone be revegetated per 609s native seeding and direct planting.

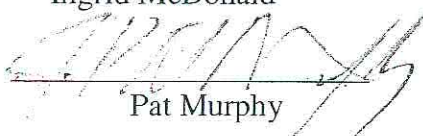
If you need further details, please contact Keith Mars at 974-2755.

Keith Mars, Environmental Review Specialist Senior
Planning and Development Review

Environmental Program Coordinator:


Ingrid McDonald

Environmental Officer:


Pat Murphy



Planning and Development Review
Staff Recommendations Concerning Required Findings
Water Quality Variances

Application Name: Springs of Walnut Creek
Application Case No: C8-2010-0051
Code Reference: Land Development Code Section 25-8-392 Development within the Critical Water Quality Zone
Variance Request: To allow approximately 50 feet of 8 inch wastewater line to be constructed parallel and within the CWQZ of Walnut Creek to tie into an existing 54 inch mainline.

A. Land Use Commission variance determinations from Chapter 25-8, Subchapter A – Water Quality of the City Code:

1. The requirement will deprive the applicant of a privilege or the safety of property given to owners of other similarly situated property with approximately contemporaneous development.

Yes. The variance is necessary to construct the wastewater line parallel to the creek and within the critical water quality zone. There is an existing 54 inch mainline located in an existing drainage easement in the critical water quality zone.

2. The variance:

- a) Is not based on a condition caused by the method chosen by the applicant to develop the property, unless the development method provides greater overall environmental protection than is achievable without the variance;

Yes. The proposed location is less environmentally degrading than the code compliant option of running the line perpendicular through the critical water quality zone and building up a new manhole eye-out. Though a 40 foot section of the proposed wastewater line runs parallel to the creek, there is an existing manhole eye-out at the proposed terminal point of the 8 inch wastewater line. Thus, though code compliant, building up a new manhole would be more environmentally degrading than utilizing the existing manhole eye-out, albeit requiring the line to run 40 feet parallel to the creek.

b) Is the minimum change necessary to avoid the deprivation of a privilege given to other property owners and to allow a reasonable use of the property;

Yes. After consulting with Austin Water Utility and ensuring compliance the environmental code requirements, this line location represents the minimum change necessary.

c) Does not create a significant probability of harmful environmental consequences; and

Yes.

3. Development with the variance will result in water quality that is at least equal to the water quality achievable without the variance.

Yes. The proposed wastewater line will result in water quality that is at least equal to the water quality achievable without the variance. The proposed wastewater alignment has been selected over the alternate wastewater alignments because: (1) the proposed alignment avoids building a new manhole eye-out; (2) even if possible, other alternative locations would require going through critical environmental feature setbacks; (3) 609S revegetation is required for work within the critical water quality zone; and (4) the proposed wastewater alignment will minimize the depth of trenching activities.

B. Additional Land Use Commission variance determinations for a requirement of Section 25-8-393 (Water Quality Transition Zone), Section 25-8-423 (Water Quality Transition Zone), Section 25-8-453 (Water Quality Transition Zone), or Article 7, Division 1 (Critical Water Quality Zone Restrictions):

1. The above criteria for granting a variance are met;

Yes. The criteria for granting a variance are met as described above.

2. The requirement for which a variance is requested prevents a reasonable, economic use of the entire property; and

Yes. There are no other feasible locations for the wastewater line.

3. The variance is the minimum change necessary to allow a reasonable, economic use of the entire property.

Yes. The proposed wastewater line represents minimum departure from code and is actually a less environmentally degrading alternative than code compliance due to the utilization of an existing manhole eye-out.

Reviewer Name:

Keith Mars

Reviewer Signature:



Date: July 7, 2010

Staff may recommend approval of a variance after answering all applicable determinations in the affirmative (YES).



LAND DEVELOPMENT ENVIRONMENTAL TRANSPORTATION WATER RESOURCES SURVEYING

May 26, 2010

Director, Planning and Development Review Department
c/o Keith Mars
505 Barton Springs Road, 2nd Floor
Austin, TX 78704

RE: Request for Variance to Section 25-8-261(E)
 Critical Water Quality Zone Crossing, Non-Perpendicular
 The Springs of Walnut Creek Subdivision (C8-2010-0051)

Dear Director:

On behalf of our client, Yager Development, LLC, we are requesting a formal variance to §25-8-261(E) of the City of Austin Land Development Code for construction of a non-perpendicular wastewater line crossing in the Critical Water Quality Zone (CWQZ) for The Springs of Walnut Creek Subdivision. We feel that the project as proposed represents the minimum departure necessary from City requirements and represents the most feasible and environmentally responsible option

Project Description

The Springs of Walnut Creek Subdivision is proposed to consist of approximately 62.58 acres of land and 108 single family residential lots in north Austin, southeast of the IH35 / Tech Ridge Blvd. intersection, specifically southwest of the Yager Lane / Copperfield Drive intersection. The project is within the City of Austin Full-Purpose jurisdiction and within the Walnut Creek watershed, which is a Suburban watershed. The southern boundary of the site is bordered by Walnut Creek. The project lies within City of Austin (COA) Grid Numbers M-32, M-33, N-32, and N-33. The current project site is undeveloped land. This development is in the Desired Development Zone and does not lie within the Recharge or Transition Zone of the Edwards Aquifer.

The nearest existing wastewater lines are a 54-inch RCP line located along the southern boundary of the site that runs parallel to and north of Walnut Creek, and a 12-inch PVC pipe running along the eastern boundary of the site and also within the Yager Lane right of way. Based on the site topography, service is proposed to tie to an existing manhole on the 54-inch RCP line. The manhole is located near the southwest corner of the site, approximately 60-feet north of Walnut Creek, and includes an existing 8-inch eye-out for connection of the proposed wastewater line. The subdivision's internal 8-inch wastewater collection system is proposed to pass through the CWQZ once in order to tie to the existing 54-inch RCP and provide service to the entire subdivision.

The City's Land Development Code §25-8-261(E) states that a "utility line may cross a critical water quality zone". The current policy interpretation is that a complete and perpendicular crossing of the CWQZ and the creek is required for work within the CWQZ to maintain compliance with LDC provisions. The preferred alignment of the proposed 8-inch PVC wastewater line does not cross Walnut Creek and crosses perpendicular to the CWQZ until it reaches the existing 40-foot wastewater easement (Vol. 6932, P. 971) that contains the 54-inch wastewater line. Once inside the existing easement, the proposed line runs parallel to and north of the 54-inch wastewater line for approximately 50 LF in order to tie to the existing manhole on the 54-inch RCP line. The proposed 8-inch wastewater line will cross a small tributary to Walnut Creek that does not qualify as requiring its own CWQZ. We are therefore requesting a variance from the requirements of COA LDC §25-8-261(E).

Analysis of Alternatives

For this project, compliance with the LDC is achievable, but is clearly the more environmentally costly option, as well as the more financially-costly option. Compliance could be achieved by cutting the existing 54-inch RCP line and installing an additional manhole where the proposed internal wastewater collection system projects perpendicular across the CWQZ. This solution is not practical or economical, and would require a more significant construction footprint in order to be completed. Since the existing 54-inch RCP line is located along the north side of Walnut Creek, no creek crossing will be required. It is our opinion that trenching parallel to the existing line for 50 LF and tying into an existing manhole eye-out is the least environmentally invasive approach. Adding a new manhole 50 LF down from an existing manhole on such a large line will have a more pronounced environmental impact on the area.

Construction methods for the proposed alignment will include clearly delineating the limits of construction by staking and installation of construction fencing, installing tree protection within the limits of construction, installing silt fencing along the creek side of the existing wastewater easement, and installing a rock berm in the tributary downstream of the work area. Construction efforts will be coordinated to limit the size of excavated trench, the equipment performing the work, and the disturbed work area. Additionally, surplus excavated materials will be removed on a daily basis, pump discharge will be filtered if groundwater is encountered, 85% densities will be achieved above the pipe zone, the gabion mattress will be replaced within the tributary crossing, trenches will be backfilled to natural grade, and all disturbed areas will be immediately seeded and matting placed after backfilling is complete. Construction activities are anticipated to be completed in one week or less.

Construction methods for the alternative alignment will require a minimum 8-ft x 8-ft cast in place structure for the manhole base within an excavation measured 50-ft x 50-ft at the surface. The cast in place structure will involve construction below the water table, thus requiring drilling well shafts upstream of the excavation with continuous pumping. The pumped discharge would require filtration by sedimentation pond or frac tanks. After an estimated three weeks of continuous

pumping, the excavation could be ready to begin forming and pouring the cast in place concrete manhole base, followed by cure time, stacking riser sections, air testing, manhole coating, backfill, cleanup, topsoil and hydromulch. Estimated completion time of six weeks. Project would involve a very large disturbed area and pose an environmental risk when working on a thirty year old wastewater pipe.

Findings of Fact

Under current City Land Development Code, the Director may grant variance if the Director determines that:

- 1. Are there special circumstances applicable to the property involved where strict application deprives such property owner of privileges or safety enjoyed by other similarly situated property with similarly timed development?**

YES – The Austin Water Utility (AWU) department has determined that connection to the existing wastewater manhole, as shown on the Preliminary Plan, is their preferred point of service for the tract. AWU will not allow construction of a lift station to tie wastewater service in to a different location.

- 2. Does the project demonstrate minimum departures from the terms of the ordinance necessary to avoid such deprivation of privileges enjoyed by such other property and to facilitate a reasonable use, and which will not create significant probabilities of harmful environmental consequences?**

YES – By constructing the approximately 50 LF of wastewater line parallel to the creek within the existing 54-inch wastewater line's 40-foot easement, the proposed wastewater line will be installed within a previously utilized work zone and will minimize new construction impacts to the creek. Construction impacts from the proposed alignment will be significantly less than the environmental impacts resulting from the alternative alignment.

- 3. The proposal does not provide special privileges not enjoyed by other similarly situated properties with similarly timed development, and is not based on a special or unique condition which was created as a result of the method by which a person voluntarily subdivided land.**

YES – The property boundary is centered within a tributary to Walnut Creek that has a rimrock outcropping that is designated as a Critical Environmental Feature (CEF). This environmental barrier limits the ability to route the wastewater line to the connection point and prevents a perpendicular crossing of the CWQZ.

4. Does the proposal demonstrate water quality equal to or better than would have resulted had development proceeded without the variance?

YES – Construction impacts will be significantly reduced for the proposed alignment which requires the variance, as compared to that of the non-variance alternative. The alternative alignment requires a much longer construction timeline, larger disturbed work area, and modification to a 30-year old 54-inch wastewater line that would increase the potential for a wastewater spill. The proposed alignment provides the least invasive approach to providing wastewater service to the property.

5. For a variance from the requirements for development within the Critical Water Quality Zone and/or Water Quality Transition Zone: Does the application of restrictions leave the property owner without any reasonable, economic use of the entire property?

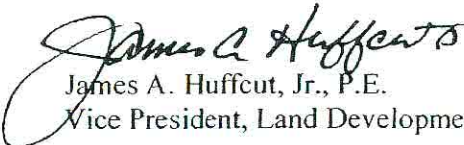
YES – The Austin Water Utility (AWU) department has determined that connection to the existing wastewater manhole, as shown on the Preliminary Plan, is their preferred point of service for the tract. AWU will not allow construction of a lift station to tie wastewater service in to a different location. Also, the presence of multiple CEF's and associated setbacks, prevent connection to the 54-inch wastewater line along the remainder of the property. The proposed alignment provides the only point of service for the property.

Thank you for your consideration of our request. If you have any questions or need additional information concerning this variance request, please contact Dustin Goss, P.E.

Sincerely,

Pape-Dawson Engineers, Inc.

Texas Board of Professional Engineers, Firm Registration # 470



James A. Huffcut, Jr., P.E.
Vice President, Land Development

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Google maps

Directions to I-35 Frontage Rd N

10.9 mi – about 16 mins – up to 30 mins in traffic

Save trees. Go green!

Download Google Maps on your phone at google.com/gmm



 505 Barton Springs Rd, Austin, TX 78704

1. Head **east** on **Barton Springs Rd** toward **W Riverside Dr**
About 1 min
go 0.2 mi
total 0.2 mi
-  2. Turn **left** at **S Congress Ave**
About 1 min
go 0.3 mi
total 0.5 mi
-  3. Turn **right** at **E 1st St/E Cesar Chavez St**
Continue to follow E Cesar Chavez St
About 2 mins
go 0.5 mi
total 1.1 mi
-  4. Turn **left** at **I-35 Frontage Rd N**
go 197 ft
total 1.1 mi
-  5. Take the ramp on the **left** onto **I-35 N**
About 10 mins
go 9.0 mi
total 10.2 mi
-  6. Take exit **244** toward **Yager Ln**
go 0.2 mi
total 10.3 mi
7. Merge onto **I-35 Frontage Rd N**
About 1 min
go 0.6 mi
total 10.9 mi

 I-35 Frontage Rd N

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

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