

EXHIBIT 1

VARIANCE REQUESTS FROM LAKE TRAVIS INDEPENDENT SCHOOL DISTRICT PERMIT APPLICATION #12-1748

This Exhibit includes:

- 1) Letter from Cunningham – Allen requesting waterway setback variance
- 2) Letter from Cunningham – Allen requesting cut and fill variances
- 3) Letter from Lake Travis ISD requesting fiscal security variance
- 4) Letter from Cunningham – Allen estimating costs for erosion controls and permanent stabilization



Cunningham | Allen

December 18, 2012

Travis County
Transportation and Natural Resources
Development Services
411 W. 13th Street
Austin, TX 78701

Attn: Ms. Teresa Calkins, P.E.

RE: Variance Request - Activity in Waterway Setbacks
LTISD New Middle School (Permit Number 12-1748)
CAI Job No.452.0301

Dear Ms. Calkins:

On behalf of Lake Travis ISD (LTISD), we are hereby requesting a variance from the "Limitation of Activity in Waterway Setbacks", Sec. 82.941.(i) of the Travis County Development Regulations to allow for the placement of a storm sewer outlet headwall within the waterway setback for an unnamed tributary of Bee Creek. This headwall and associated storm sewer is the splitter box outlet line from Water Quality Pond #1 serving the proposed new LTISD Middle School at 4932 Bee Creek Road. This storm sewer outlet headwall will be constructed off of the school property within a proposed Drainage Easement granted by the adjacent property owner (Architectural Granite and Marble - 19012 Hwy. 71). The property is within the extraterritorial jurisdiction of the City of Lakeway.

Sec. 82.941.(i) of Chapter 82 - Travis County Development Regulations states:

- (i) *Limitation of Activity in Waterway Setbacks. The following requirements apply to waterway setbacks established in subsections (g) - (h) of this section:*
- (1) *Setbacks shall remain free of construction, development, and other alterations except for approved utility and roadway crossings.*
 - (2) *Wastewater collection lines and lift stations are prohibited from running within the setback zone parallel or sub-parallel to the waterway.*
 - (3) *No golf courses, on-site wastewater systems or wastewater irrigation shall be located in a waterway setback.*
 - (4) *Before reaching a setback area, drainage patterns from a development shall be designed to prevent erosion, maintain infiltration and recharge of local seeps and springs, attenuate the harm of contaminants collected and transported by storm water, and dispersed into a*

Cunningham | Allen, Inc. • Engineers • Surveyors • Planners

3103 Bee Cave Road, Suite 202 • Austin, Texas 78746-5580 Tel: (512) 327-2946 • Fax: (512) 327-2973 • www.cunningham-allen.com
TBPE Firm Registration #: F-284

sheet flow pattern. Whenever possible, the natural drainage features and patterns must be maintained.

Based on the topography of the project site and the required layout of the school building and water quality ponds, it would be impractical to attempt to discharge the splitter box bypass flow from Water Quality Pond #1 as sheet flow to existing grade onsite. The peak flows from this splitter box are approximately 85 cfs and 115 cfs in the 25 and 100-year storm events. The existing natural topography between WQ Pond #1 and the school property line is marked by bands of very steep (>35%) slopes consisting of limestone ledges with poor soil and heavy juniper growth. An attempt to disperse the splitter box bypass as sheet flow at the head of such slopes would lead to additional site disturbance in the construction of a long flow spreader which would likely not completely prevent long term erosion on these steep slopes.

In addition, the downgradient property owner (Architectural Granite and Marble) has expressed a desire that he not receive these flows distributed along the length of the joint property line but would prefer to receive these flows as a point discharge which can be more conveniently conveyed to the existing waterway on his property. For this reason, the Water Quality Pond #1 splitter box bypass flow is designed to be conveyed via enclosed storm sewer directly to an existing unnamed tributary of Bee Creek located on the adjacent property.

The attached storm sewer plan shows the proposed alignment of the storm sewer line and the proposed headwall construction within the Waterway Setback (indicated thereon as a 25' setback from the approximate 100-yr floodplain). Our design entails the construction of a 36" concrete headwall/stilling basin at the base of the existing stream bank with a large rock splash pad in the stream bottom. We've estimated the cost to construct this headwall/stilling basin at approximately \$12,000, the large rock splash pad at \$1500, and additional 36" storm sewer line constructed within the waterway setback at approximately \$12,500 for a total estimated cost for the work within the setback at \$26,000.

Following are additional justifications in support of our request:

1. Discharging this large amount of storm water outside of the Waterway Setback would require the construction of a large flow spreader set back a minimum of 25' from the top of the stream bank. In this area, the stream bank is a mix of old alluvial deposits and severely weathered limestone and caliche, which is prone to erosion. Assuming that it was feasible to distribute the storm sewer discharge as sheet flow (less than 2" depth to minimize erosion in this erosion prone material), the weir flow equation gives a required weir length of 563' long for the 115 cfs in the design storm. In addition to a concrete flume/weir, a loose rock splash pad would also be necessary along the length of the spreader. At an estimated \$75/lf for a concrete flume/flow spreader, this would be approximately \$42,225 in addition to the cost of the proposed headwall/stilling basin (\$12,000) for a total estimated cost of \$54,225. Since the location of this flow spreader would be on an adjacent property owner (not LTISD property), it is likely that there would be additional unknown costs/hardships involved to procure the necessary easement/property to contain the required flow spreader. It is also probable that despite attempts to spread the flows out, the continual discharge of flows directly at the top of this bank will lead to severe erosion of this stream bank.
2. By discharging directly to the stream bed in lieu of constructing a long flow spreader as required to distribute this large amount of flow outside the Waterway Setback, the proposed plan will minimize the long term maintenance otherwise needed to ensure the design functionality.

3. The proposed construction of the storm sewer outlet headwall within the Waterway setback includes the placement of large rock dissipaters (12"-15" in size) at the lip of the headwall. Field reconnaissance indicates the existing stream bed in this area is bedrock, which would negate the need for rock dissipaters. We are proposing the use of flowable backfill behind the proposed headwall and over the proposed section of the storm sewer built within the waterway setback. Silt fence will be used around the perimeter of construction, a temporary rock berm placed at the headwall within the setback, and temporary rock berms will be placed at intervals along the length of the storm sewer construction from the headwall up to the pond splitter box. Construction will proceed from the lower end at the creek bank up to the pond splitter box. As individual sections of line are backfilled, the surface shall be restored with seeding and soil blankets as soon as practicable and the temporary rock berms relocated up the hill to act as a temporary BMP for the next section of line under construction.

In accordance with the detailed Sequence of Construction included in the permit plans, the construction of this storm sewer line and proposed outfall directly to the creek will be one of the first permanent items built. In addition, this line will not be placed into service until the onsite permanent water quality ponds are constructed and fully functioning as sediment ponds.

If you have any questions or need any additional information concerning this variance request, please let me know.

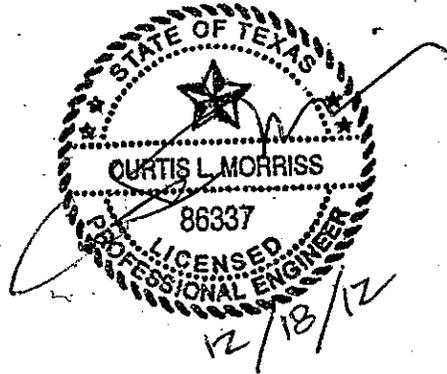
Sincerely,

CUNNINGHAM | ALLEN, INC.

Curtis Morriss, P.E.

Attachment: Storm Sewer Plan Exhibit

cc: Jim Ratcliff, Lake Travis ISD
Chuck Fields, Fields and Associates Architects





Cunningham | Allen

December 19, 2012

Travis County
Transportation and Natural Resources
Development Services
411 W. 13th Street
Austin, TX 78701

Attn: Ms. Teresa Calkins, P.E.

RE: Variance Request - Maximum Cut and Fill
LTISD New Middle School
CAI Job No.452.0301

Dear Ms. Calkins:

On behalf of Lake Travis ISD (LTISD), we are hereby requesting a variance from the maximum allowable cut and fill limitation for the construction of the new middle school proposed on their 32.466 acre property located off Bee Creek Road, approximately 0.5 miles north of its intersection with Highway 71. The property is within the extraterritorial jurisdiction of the City of Lakeway.

The new middle school will consist of the main school building designed to accommodate 1200 students, associated drives and parking lots, one football field with running track, one practice field, one outdoor basketball court, and four tennis courts.

Sec. 82.943(a) of Chapter 82 – Travis County – Standards for Construction of Streets and Drainage in Subdivisions states (in part):

- (a) *Land Balancing. Except as provided by subsection (b) of this section, a proposal for cut and fill land balancing must comply with the following requirements:*
- (1) *All cut and fill land balancing is limited to a maximum of eight vertical feet. This includes eight vertical feet maximum of excavated cut, eight vertical feet maximum placement of fill, or an eight vertical feet maximum combination of cut and fill.*
 - (2) *Applicable fill containment, temporary controls, and permanent stabilization standards specified in Sections 82.936, 82.937, and 82.970 must be followed.*
 - (3) *A retaining wall over five feet in height shall be detailed in the construction plans sealed by a Texas licensed professional engineer and submitted with the development permit application for a commercial site development, multi-family dwelling, or subdivision.*
 - (4) *Cut and fill located on a slope with a gradient of more than 15 percent must include appropriate BMPs to prevent erosion, including diversion of surface water runoff; use of terraces; soil retention blankets, mulch, riprap or structural containment; establishment of mixed vegetation (such as forbs, shrubs, trees); or similar controls.*

Based on the topography of the project site and the required layout of the school building and associated amenities, we are hereby submitting a variance request application for cuts and fills exceeding 8 feet.

The slopes of the existing topography are such that retaining walls, cuts, and fills in excess of 8 feet will be necessary at several locations to allow for the adequate and efficient use of the proposed facilities, and to satisfy maximum slope requirements for handicapped accessibility and parking, as well as passenger, bus, fire, and emergency vehicle access drives. In an effort to minimize cut and fill, the building was designed with split levels to better adapt to the topography, with the main entrance and associated parking being at the higher level and the other amenities at the lower level.

The attached exhibit shows the proposed site and grading plan and delineates in different colors cut/fill areas ranging from 8' to 11'-11", 12' to 17'-11", 18' to 23'-11", and 24' and greater.

Following are additional justifications in support of our request:

1. LTISD, as a public school district, seeks to maximize the use of property purchased with public funds. This site's location is ideal for the District's need of a new middle school based on the demographics in the area. However, the topography of the site - which is consistent with the general topography in the area - is such that there are substantial grade differences across the property. Cuts and fills over 8' are necessary in order to design a functional site to properly provide the intended educational services and the use of the associated amenities. Application of the cut and fill provision to this project deprives the District of the reasonable and useful use of the property as a vital public facility within the community.
2. It is not feasible to fully comply with the requirements of Sec. 82.943(a) while accommodating all of the educational programs and athletic functions required for a middle school. At a minimum, full compliance would require the elimination of the practice and competition fields (areas 'A', 'B', 'C' and 'D') due to the size of their respective footprints, and the natural topography in these areas.
3. As requested by Sec. 82.921(b)(2), the following is an approximate design and cost comparison of the proposed designs for each area exceeding the 8' cut/fill limitation to a hypothetical design not exceeding the 8' cut/fill limitation. Please note that these are hypothetical scenarios used for discussion only as we don't believe that they would all be feasible when integrated over the entire site.
 - (a) The fill over 8' could be eliminated at the chiller and fire turnaround area (area 'E') by lowering the fire department access drive by approximately 8 feet. However, this would require 8' higher structural concrete walls adjacent to the building and problematic fire/emergency access to the competition field. The added cost of the higher concrete retaining walls adjacent to the building would be partially offset by the lower cost of the limestone block walls around the chiller. Based on the length of the walls involved, the estimated wall height of 8', and an estimated cost of \$18/sf for limestone block wall along the fire lane vs. \$30/sf for the structural concrete walls adjacent to the building, we estimate this cost at \$52,320.
 - (b) The fills over 8' at the rear of the building (areas 'F', 'G', and 'H') could be reduced but would require extensive handicap compliant ramps to get down from the building exits. Based on

lowering these areas by 4', three 48' long ramps with hand railing would be required at an estimated cost of \$8,160/ramp or \$24,480 total. The costs of these ramps would be offset by concrete and block wall heights reduced by 4' in these areas with an estimated savings of \$49,200. We estimate the net cost of this change at (\$24,720). Although in theory there may be a potential cost savings by reducing the fill in these areas, in practice there is little space available at in areas 'G' and 'H' for ramps.

- (c) The cuts over 8' next to the building (areas 'I', and 'J') could be eliminated but would require substantial waterproofing and subsurface drainage of the building exterior walls in these locations at an estimated cost of \$25,000. The building would also require extensive redesign at area 'J' as this is a point of emergency ingress/egress. It is unknown the magnitude of this cost.
 - (d) The fill over 8' for the tennis courts (area 'K') could be eliminated with the construction of an 8' high, 260' long concrete retaining wall and a 96' long handicap ramp complex between the tennis courts and the adjacent parking lot. We estimate the cost of this wall and ramp complex at approximately \$82,120. However, lowering the tennis courts would reduce the available depth in the adjacent water quality pond which would require this pond to occupy a larger footprint to attain the necessary water quality volume. We estimate the footprint for this pond would be approximately 60% larger than the current design and would cost an additional \$75,000. We estimate the total cost to lower the tennis courts at approximately \$160,000.
 - (e) Elimination of the cut over 8' for the main entry drive (area 'L') along the building front would require raising this drive by approximately 4'. This would reduce the wall height of the limestone block wall adjacent to the property line and require higher concrete retaining walls adjacent to area 'J' and additional walls/handicap ramps next to the building's main entrance. We estimate the additional wall cost at \$21,600 and the additional ramp at \$8,160 for a total of \$29,760.
 - (f) With the current mass grading plan, the cut under the building footprint balances the fill on the remaining portion of the site. Currently we don't anticipate large amounts of either import or haul will be required for the mass grading. Reducing the amount of fill in the areas noted above would require substantial lowering of the current building finish floor elevations. Not only would this lowering of the building elevation generate more cut to be dealt with, but there would be no opportunity for this additional material to be used on site. We estimate that to bring this site into substantial compliance with the cut/fill limitations of 82.943(a) would require lowering the building and the bulk of the 29 acres within the Limits of Construction by an average 2'. This would generate approximately 90,000 yd³ of excess material which would need to be disposed of offsite. At a rough cost of \$5/yd, this is an additional \$450,000.
 - (g) Taken together, these costs could add as much as \$700,000 to the cost of this project on top of the elimination of practice and competition fields. It should be noted that changes to most of these site elements would require the construction of switchback handicap ramp complexes and that it is likely that a cut/fill variance would still be necessary for the area occupied by the ramps.
4. The total area involved in this variance request is approximately 0.519 acres of cut and 2.441 acres of fill. These areas are broken down on the attached exhibit accompanying this variance request.
 5. The proposed cut/fill areas located on slopes with a gradient of more than 15% will be contained by structural retaining walls. These walls will act to armor the faces of the cut slopes in the cut areas

and the embankment materials in the fill areas and protect these cut/fill slopes from erosion. This degree of erosion protection is the same regardless of whether the wall height is less than or more than 8'. The embankment adjacent to the tennis courts will be placed with a final design slope of 4:1 and will be finished with solid grass sod. Finally, permanent rock berms will be placed downgradient from the perimeter walls at the practice field (areas 'A' and 'B'), the competition field (areas 'D' and 'E') and the tennis courts (area 'K').

6. As currently designed, the site essentially balances with onsite material being processed and reused onsite.
7. The proposed design minimizes unnecessary cuts and fills. The building is designed with split levels and was located, along with the athletic fields and parking facilities within the relatively flatter area of the site.
8. The District has instructed the design team to conserve existing trees on-site as much as reasonable. To this end, several trees in the vicinity of the proposed building and parking lots will have tree islands or wells constructed to enable tree survival. Also, the north driveway was reduced in width and realigned to provide additional room for a large tree. The District is also considering as an alternate the use of rain-barrel collection systems for implementation into their science curriculum. While relatively small in comparison to the total water quality volume of the proposed structural ponds, these rainwater harvesting systems would act to decrease the net storm runoff from the building roof areas and increase the volume of runoff treated from the parking areas beyond what is required by County Code.

The School District agrees to hold their construction contractor responsible to strictly follow the detailed Sequence of Construction and other Best Management Practices (BMPs) included in the permit plans to mitigate runoff from the large amounts of fill material exposed on the steep slopes during construction, and to fully cooperate and address the concerns of County Inspectors and representatives during the construction period.

If you have any questions or need any additional information concerning this variance request, please let me know.

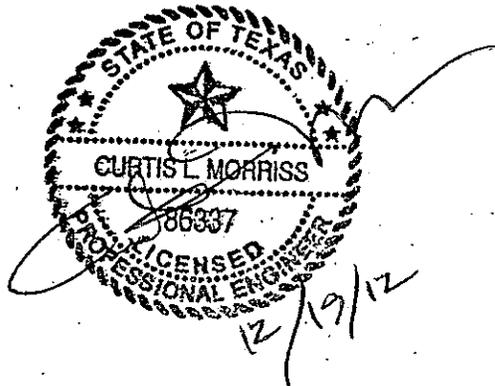
Sincerely,

CUNNINGHAM | ALLEN, INC.

Curtis Morriss, P.E.

Attachment: Cut and Fill Exhibit

cc: Jim Ratcliff, Lake Travis ISD
Chuck Fields, Fields and Associates Architects





LAKE TRAVIS ISD

Every heart. Every mind. Every day.

Facilities and Construction

December 18, 2012

Travis County
Transportation and Natural Resources
Development Services
411 W. 13th Street
Austin, TX 78701

Attn: Ms. Teresa Calkins, P.E.

RE: Variance Request - Fiscal Security
LTISD New Middle School (Permit Number 12-1748)
CAI Job No. 452.0301

Dear Ms. Calkins:

Lake Travis ISD (LTISD) hereby requests a variance from the requirement in Sec. 82.920 "Fiscal Security" to post fiscal security in accordance with the requirements of Sec. 82.401 of the Code. This variance request accompanies the current Site Development Permit Application currently in review for the LTISD New Middle School. The area within the overall Limits of Construction for this project is approximately 29.2 acres.

Following is the applicable information necessary to allow the Commissioner's Court to make the findings specified in Sec. 82.921(c) of the Code; specifically:

- (1) This Variance is being sought from the requirement to post fiscal security in accordance with Sec. 82.920 "Fiscal Security" and Sec. 82.401 "Construction Fiscal Security" of the Code.
- (2) In accordance with the requirements of Sec. 82.920 and Sec. 82.401, the District must post fiscal for the cost of all temporary erosion/sedimentation controls, permanent stabilization of disturbed areas, and public improvements associated with the development of the site. The stated purpose of the fiscal security is "...to ensure that temporary erosion and sedimentation controls and permanent site stabilization for a commercial development...are constructed and maintained in accordance with the approved plan, permit, and standards required by Subchapters I and K". This provision is in the code to provide a means and the necessary funds for the County to construct and/or maintain these items should a private developer fail to do so. However, the School District is a public institution and has funds that are budgeted for this project. The District intends to expend the necessary funds to fully perform the temporary and permanent ESC measures required by the Travis County Code. School districts usually benefit from this consideration and are not required to post fiscal.

Ms. Teresa Calkins, P.E.
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Thank you for your assistance in having this placed on the agenda as requested. If you have any questions or need any additional information concerning this variance request, please let me know.

Respectfully submitted,



Jim Ratcliff, Senior Director
Facilities and Construction
Lake Travis ISD

12/27/2012

Thomas Weber
Travis County Transportations and Natural Resources
411 West 13th Street
Austin Texas, 78704

REF: LTISD Bee Creek Middle School
Erosion Control Fiscal Estimate
TNR Permit #12-1748
CAI #: 452.0301

Dear Mr. Weber,

Below is our opinion of probable construction cost for erosion controls associated with the above referenced project.

Erosion Controls

Description	Unit	Quantity	Unit Price	Amount
Hydromulch seeding (w/ topsoil & watering)	SY	141,325	\$ 2.00 \$	282,650
Silt Fence	LF	5,900	\$ 3.00 \$	17,700
Stabilized Construction Entrance	EA	5	\$ 1,000.00 \$	5,000
Rock Berm	LF	2,130	\$ 15.00 \$	31,950
Inlet Protection	LF	405	\$ 3.00 \$	1,215
Tree Protection	LF	2,375	\$ 1.80 \$	4,275
Total Erosion Controls			\$	342,790

In providing opinions of probable construction cost, it is understood that Cunningham|Allen, Inc. has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that Cunningham|Allen, Inc. opinions of probable construction costs are made on the basis of Cunningham|Allen, Inc. professional judgment and experience. Cunningham|Allen, Inc. makes no warranty, express or implied, that the bids or the negotiated cost of the work will not vary from Cunningham|Allen, Inc. opinion of probable construction cost.

Unless otherwise stated, these costs do not include gas, electric, telephone, cable, or fiber optic construction, nor permit or inspection fees.

Please do not hesitate to call should you have any questions.

Sincerely,
CUNNINGHAM|ALLEN INC.,

Curtis Morriss, P.E.

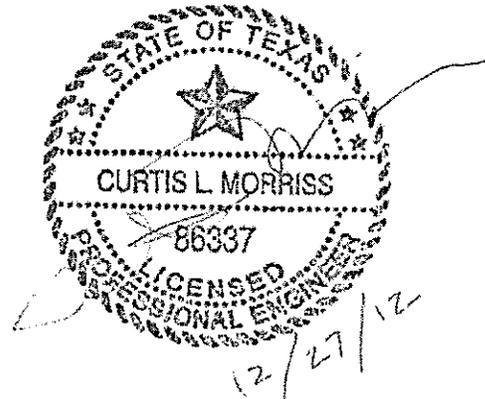
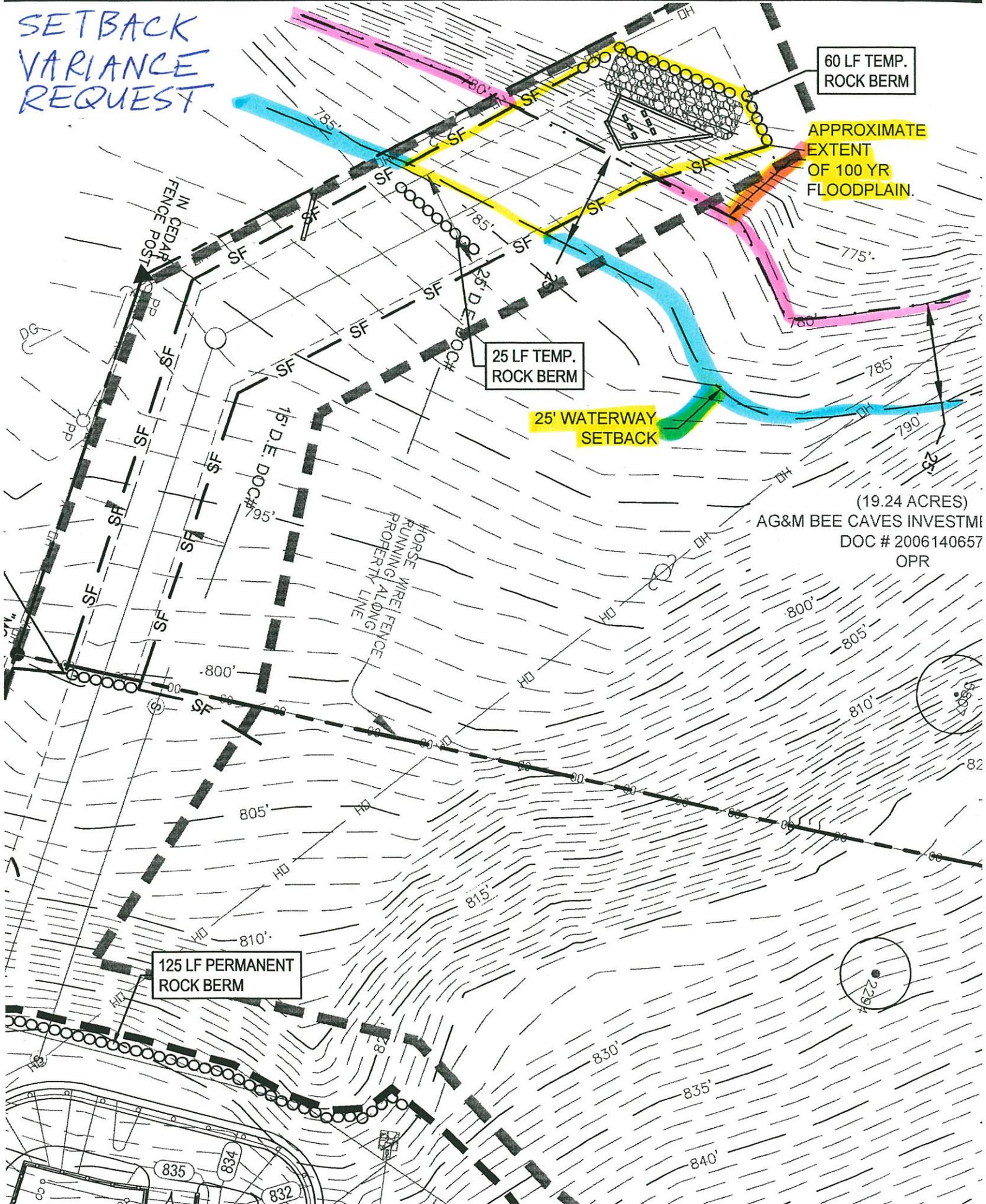


EXHIBIT 2

WATERWAY SETBACK DIAGRAM

LAKE TRAVIS ISD MIDDLE SCHOOL - WATERWAY

SETBACK
VARIANCE
REQUEST



60 LF TEMP.
ROCK BERM

APPROXIMATE
EXTENT
OF 100 YR
FLOODPLAIN.

25 LF TEMP.
ROCK BERM

25' WATERWAY
SETBACK

125 LF PERMANENT
ROCK BERM

(19.24 ACRES)
AG&M BEE CAVES INVESTMENT
DOC # 2006140657
OPR

EXHIBIT 3

SITE AND CUT & FILL DIAGRAM

