



CITY OF WEST LAKE HILLS, TEXAS
NOTICE OF ZONING & PLANNING COMMISSION (ZAPCO) REGULAR MEETING
Wednesday, January 17, 2024 at 6:30 PM

Notice is hereby given that the Zoning and Planning Commission (ZAPCO) of the City of West Lake Hills, Texas, will hold a Regular Meeting on the 17th day of January 2024 at 6:30 p.m., in the Council Chamber, Municipal Building, 911 Westlake Drive, West Lake Hills, Texas, at which time the following items will be discussed, to-wit:

1. Call to Order. Chairman Robert Meisel.

REMOTE ACCESS: Any citizens or applicants that wish to speak at the meeting are encouraged to attend virtually, as the number of people in the chambers will be limited due to physical distancing.

Join Zoom Meeting: <https://us02web.zoom.us/j/3499549035>

Meeting ID: 349 954 9035

If you wish to listen to the meeting via telephone: Dial (346) 248-7799, Meeting ID 349 954 9035.

If you wish to speak during the meeting or provide written comments, please provide your name, phone number, comments, and the item number you wish to speak on to pzsec@westlakehills.gov by 1:00 P.M. on January 17, 2023.

2. Citizen Communications The Commission welcomes public comments at this point on any issue. If the issue is listed on the agenda, the speaker may choose to comment during the Public Comment period or when the specific agenda item is taken up by the Commission later in the meeting. The Commission cannot respond to or discuss matters not listed on the agenda. The Commission may provide factual information, refer the item to a staff member, or request the item be added to a future meeting agenda. Speakers shall limit their comments to five (5) minutes each.
3. Consent Agenda The following items are considered to be self-explanatory by the Commission and will be enacted with one motion. There will be no separate discussion of these item/s unless a Commission Member or citizen so requests.
 - a. Minutes from the November 15, 2023 regular Zoning & Planning Commission meeting.

4. **Public Hearing 205 West Spring:** Discuss and make a recommendation on a variance to encroach up to 8.25 feet into the required 15-foot side setback for the addition to an existing one-story non-conforming residential structure. (Section 22.03.275 and 22.03.281 of the West Lake Hills Code).

Applicant: William McAshan, Property Owner

5. **Public Hearing 3421 Bee Cave Road:** Discuss and make recommendations on the following variances from the West Lake Hills Code:
 1. Section 22.03.249(b)(2) Driveway, parking and loading area setback, 30 foot minimum.
 2. Section 22.03.281(b): Schedule of regulations – Minimum side setback distance of 25 feet.
 3. Section 22.03.304(a)(4) Tree and vegetation Removal - 4 trees 14 inches and greater (T246, T221, T868, T095);
 4. Section 22.03.241: Schedule of minimum number of (parking) spaces – 50 spaces required;
 5. Section 22.03.281 IX Exceeding the Impervious Cover maximum for O – Office zoning of 38% with incentive bonuses;
 6. Section 22.03.251 (d) Screening, trees and landscaping – 25-foot buffer along Bee Cave and 25% of the lot remaining in its natural state.

Applicant: Ramon Aguirre, Director of Operations for Clear Terra Group

6. **Administration** Update from staff on items forwarded to BOA and City Council from the previous meeting.
7. Adjournment. Chairman Robert Meisel.

By Jennifer C. Bills, Director of Building & Development Services

Certificate

I certify that the above Notice of the January 17, 2024 Zoning & Planning Commission Meeting was posted on the bulletin board at the Municipal Building, 911 Westlake Drive, West Lake Hills, Texas on Friday, January 12, 2024 at 5:00 pm. and will remain posted continuously until said meeting is convened.

By Joel Sherrouse, Development Coordinator

The City of West Lake Hills is committed to compliance with the Americans with Disabilities Act. Reasonable accommodations and equal access to communications will be provided upon request.

All items on the agenda are for discussion and/or action. ZAPCO reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices), and 551.086 (Economic Development).

CITY OF WEST LAKE HILLS, TEXAS
MINUTES OF A ZONING & PLANNING COMMISSION (ZAPCO) REGULAR MEETING
Wednesday, November 15, 2023 at 6:30 PM

1. Call to Order. Chairman Robert Meisel.

With a quorum present, Vice-Chairman Pledger called the meeting to order at 6:31 p.m.

ZAPCO Members Present

**Vice-Chairman Jim Pledger
Patrick Stewart
Julia Webber
Laurie Maccini - arrived 6:54
Karen Bartoletti**

City Staff Present

**Dir. of Building & Development Jennifer Bills
Development Coordinator Joel Sherrouse
Asst. City Attorney Josh Brockman-Weber**

2. Citizen Communications The Commission welcomes public comments at this point on any issue. If the issue is listed on the agenda, the speaker may choose to comment during the Public Comment period or when the specific agenda item is taken up by the Commission later in the meeting. The Commission cannot respond to or discuss matters not listed on the agenda. The Commission may provide factual information, refer the item to a staff member, or request the item be added to a future meeting agenda. Speakers shall limit their comments to five (5) minutes each.

Vice-Chairman Pledger opened the meeting for public comments. Hearing none, the public comment section was closed.

3. Consent Agenda The following items are considered to be self-explanatory by the Commission and will be enacted with one motion. There will be no separate discussion of these item/s unless a Commission Member or citizen so requests.
Motion for Approval made by Commissioner Stewart with a Second by Commissioner Bartoletti.
Motion for Approval carried unanimously by a vote of 3 ayes to 0 nays.

4. Land Use 100 Redbud Trail - Discuss and make a recommendation on variances for a 17-foot encroachment into the 50-foot front yard setback to demolish and reconstruct a pool house (Section 22.03.275 of the West Lake Hills Code). Applicant James Hughes Holland
Staff Briefing

Director Bills gives the staff briefing.

Staff Recommendation: Approval.

Presentation by Applicant

Hughes Holland is the applicant and explains the variance request. The impervious

cover is reduced.

Public Hearing

Vice-Chairman Pledger opened the meeting for public comments. Hearing none, the public comment section was closed.

Discussion/Recommendation

Commissioner Webber: Thank you for changing the submittal.

Commissioner Stewart: We appreciate the impervious cover reduction.

**COMMISSIONER BARTOLETTI MOVES TO RECOMMEND APPROVAL.
COMMISSIONER WEBBER SECONDS. UNANIMOUS (3-0) APPROVAL.**

5. Land Use 434 Brady Lane - Discuss and make a recommendation on proposed variances for the removal of two (2) trees with trunk diameters of 14 inches or greater, a double trunk 14"/19" live oak and an 18" live oak (Section 22.03.304 of the West Lake Hills Code).
Applicant: Monte Janssen, J5 Homes, LLC.

- Tree # 323 - Double trunk 14"/19" Live Oak; and
- Tree # 325 - 18" Live Oak.

Staff Briefing

Director Bills gives the staff briefing.

Staff Recommendation: Denial due to design.

Commissioner Webber: Can you remind me what the impervious cover is?

Director Bills: It's about 37%.

Presentation by Applicant

Monte Janssen is the applicant and is with J5 Homes and I am the builder and the owner of this property. By the time you bring in 20' from both sides there's not a lot of lot left. We don't have enough left to build a house. I did go to various neighbors and gotten support for the removal of the trees and moving our project forward. We don't have anybody that's against us but we want you to be with us to be able to improve this property.

Public Hearing

Thomas Finsberg: I'm here to support this because I'm a potential buyer. All four of

our children have been raised and educated in Westlake; this is our home. We're interested in purchasing the home for our son who is wanting to do his residency in Austin. We learned the setbacks were changed from 5' to 20' and that would limit rebuilding the house. We're wanting to bring in more trees than what are there. We've been working really hard to comply with the new rules. I think the plans we have would be a significant improvement.

Vice-Chairman Pledger closes the Public Hearing.

Discussion/Recommendation

Commissioner Maccini: Before I say anything I want to apologize for my tardiness.

Commissioner Stewart: I think this is another one to tag along with Julia earlier, I appreciate we've received a great deal more information from the first time we saw this application. I do see a hardship in the lot size. I'm encouraged by what I see and the support of the neighbors.

Commissioner Webber: Thank you for the resubmittal with the additional information. I still have reservations about this project because the lot size is not unique to projects in our city. The street would like a much smaller house. The original house is 1,000 sq. ft. smaller. It's unfortunately we're trying to stuff all that into a Brady Lane lot. However, you've met the impervious cover restrictions and fitting in the setback rules. I'm in support because our zoning rules don't stop this sort of building on smaller lots.

Commissioner Maccini: We're changing the lot to fit the design instead of the design to fit the lot. Brady is a charming street. Replacement trees need to be watered.

COMMISSIONER WEBBER MOVES TO RECOMMEND APPROVAL DUE TO THE SIZE OF THE LOT AND ALL OTHER ASPECTS MEET CODE. COMMISSIONER STEWART SECONDS. APPROVED (3-1) COMMISSIONER BARTOLETTI OPPOSES.

Commissioner Webber: How and when do we bring up the discussion of potential code modifications to keep the nature and character we are talking about?

Director Bills: We can add that to the report that ZAPCO makes the request to look at design considerations dealing with the smaller lots because we can't have a one size fits all in the smaller neighborhoods.

Commissioner Maccini: Would that also include design?

Director Bills: Explains the state law has limitations on a municipality's ability to regulate design and materials.

6. Land Use 603 Spurlock Valley - Discuss and make recommendation on a variance to the side setback for pool encroachment of 10 feet to the required 20-foot side setback (Section 22.03.275 and 22.03.281 of the West Lake Hills Code.) Applicant Tim Kirkendall

Staff Briefing

Director Bills gives the staff briefing.

Staff Recommendation: Denial. No public responses.

Commissioner Bartoletti: I have a couple of questions. The diagrams we've got are a little bit different than what was in the package and what we got tonight. Are we clear that there's not an encroachment into the 30' front setback? The original looks like there is an encroachment.

Director Bills: There has been an inspection and there isn't an encroachment.

Commissioner Stewart: Did I hear you correctly that with the pool addition it would put them over the impervious cover?

Director Bills: By the plans we have on file, yes.

Commissioner Maccini: Were there no trees on most of the lot?

Director Bills: The trees, under a separate action, they removed trees without permits and they have a court ordered replacement.

Commissioner Maccini: It just stood out to me.

Commissioner Webber: One portion of the pool is going to be 9' above grade?

Director Bills: The lot has a significant slope to it. 18" is the maximum grading they can do.

Presentation by Applicant

Richard Weise is the architect with the project. One item I'd like to clear up is the impervious cover issue. When we submitted our application we were required to do a detention pond and when they sized it they included additional square feet on Sheet 8 of the civil package and so that was in the original application but it's unused. It's a relatively small lot and going over the hardships, the setbacks take up 56% of the overall lot. We had limited possibilities working with the natural grade. One of the biggest hardships is we have a Spurlock Valley address but our lot is completely inaccessible from Spurlock Valley because of the culvert. The setbacks are a hardship because it compresses the lot. We do have letters of support (not provided to ZAPCO).

Public Hearing

The next door neighbor is present and states this is the first time he's seeing this.

Vice-Chairman Pledger closes the Public Hearing.

Discussion/Recommendation

Vice-Chairman Pledger: I can't imagine an argument that the existing setbacks that are applicable would constitute a hardship. I don't think that works.

Commissioner Webber: Remind me the square footage of the lot?

Director Bills: It's .46 acres. Roughly 20,000 sq. ft.

Commissioner Webber: I agree. The setbacks are not an issue for hardship. I also think placing a 3,600 sq. ft. house that takes up available land with a pool was a choice that was made. My biggest objection is that the pool will be 9' above grade. I'm very unconvinced of the viability of a pool that requires that condition of the land. I'm not compelled to change a setback for a pool if there's no real hardship. So I'm not in support of this project.

Commissioner Bartoletti: I might also add, I live in this general neighborhood and I wish I had a dollar for every unbuildable lot that I've seen a house get built on. The argument that the lot may not ever be built on the adjacent lot doesn't ring true.

COMMISSIONER WEBBER MOVES TO RECOMMEND DENIAL BASED ON LACK OF HARDSHIP AND LACK OF FEASIBILITY FOR FURTHER CONSTRUCTION AND VARIANCES. COMMISSIONER MACCINI SECONDS. UNANIMOUS (4-0) DENIAL.

7. Land Use 499 Rocky River Road - Discuss and make recommendations on variances to the front yard setbacks and to allow a second driveway (Section 22.03.275 and 22.03.175 of the West Lake Hills Code). Applicant Aaron McIntyre, Munir Group

Staff Briefing

Director Bills gives the staff briefing.

Staff Recommendation: Approval of front yard to 30'. Denial of second driveway. No public responses.

Commissioner Bartoletti: I have a question for staff and probably you, Jim. When a variance is granted like this, ZAPCO can't approve changing a 50' setback to a 30' setback. Am I just dreaming that we've had this conversation?

Vice-Chairman Pledger: ZAPCO doesn't have the authority to approve anything. We just make recommendations.

Commissioner Bartoletti: But as part of the variance process in general.

Commissioner Webber: I thought that once a variance is passed it is with the lot.

Commissioner Stewart: We're not approving the entire 50' setback, we're only approving the encroachment into that setback.

Commissioner Bartoletti: So if this particular project does not get built, it's not like the setback has been changed.

Vice-Chairman Pledger: Right.

Commissioner Stewart: On the second driveway, if that is approved, they will be over the impervious cover?

Director Bills: They are proposing pervious pavers which is calculated at 50%.

Commissioner Stewart: It will still be over.

Presentation by Applicant

Michael Munir and Aaron McIntyre are the owners of the property. It came with a permissible set of plans with approved variances. The previous house had been demolished. Given the lot size that we were showing good faith. We did keep the trees and it is a hardship with the width on the Reveille side of the street. We wanted to look at the second drive as a safety issue. Our primary concern is the buildability of the lot. I don't think we're asking for more than what has previously been approved. The previous plan that was approved was around 7,000 sq. ft. We designed a smaller structure so we're decreasing the coverage.

Aaron McIntyre: I would just emphasize the placement of the trees. The previous variance approval was to remove some of those trees.

Commissioner Webber: If you were to have that second driveway do you foresee any place on the lot you could remove 229 sq. ft. of hardscape to be compliant with the impervious cover?

Michael: I'm just trying to stay in the rules. We maybe might make the existing driveway grasscrete.

Commissioner Webber: You may have more parking on that grasscrete.

Michael: That's something we discussed in the design meetings.

Commissioner Webber: I want to commend you for your presentation and thank you for your clarity.

Public Hearing

Vice-Chairman Pledger opened the meeting for public comments. Hearing none, the public comment section was closed.

Discussion/Recommendation

Commissioner Maccini: I have my own perspective of this lot. I live down the street. I have walked this street for 28 years. We're talking about adjusting a lot for the house instead of adjusting the house for the lot. I see a 3-car garage. There is also a pool house and a pool. I appreciate that it's less than 7,000 sq. ft. but there is almost 5,600 sq. ft. of conditioned space. I think the house is just too large for the lot. Off street parking is difficult on Reveille. I was one of the people fighting to get a sidewalk. If you didn't have so much sq. ft. of house you would have more room. I'm not in favor for the setbacks or the second driveway.

Commissioner Webber: I see this as a failing of our code to restrict this kind of project. As long as our code is written the way it is, I agree is it too large for the lot. The project should be delaying to ascertain the true clarification around the setback so the drawings truly reflect the information. There are two A/C units that are outside the setback that I would flag and I'm not in favor or increasing the impervious cover for this project for approving a second driveway.

Commissioner Stewart: Are we able to vote on this? It seems incomplete.

Vice-Chairman Pledger: Would the 50' setback on the side follow the street?

Director Bills: Yes.

Vice-Chairman Pledger: It's a very large house for a very small lot.

Commissioner Webber: And our code doesn't restrict that.

Vice-Chairman Pledger: It does through variances for setbacks.

Commissioner Webber: I agree with you. Until the proper setbacks are on the plan, I'm not sure we can make a recommendation.

Applicant requests to postpone.

**COMMISSIONER BARTOLETTI MOVES TO APPROVE TO POSTPONE TO JANUARY MEETING. SECONDED BY COMMISSIONER WEBBER.
UNANIMOUS APPROVAL (4-0).**

8. **Land Use 5001 Jeffery Place** - Discuss and make recommendations on variances for 1. A 13-foot encroachment for a fence in a 20-foot fence setback, 2. To allow 0% transparency, where 80% is required and 3. Encroachment of pool equipment 1.5 feet in the 20-foot side

yard setback on a corner lot (Section 22.03.173 and Section 22.03.275 of the West Lake Hills Code). Applicants Huang Lung Wang (Victor) & Elisa Jiang, Property Owners
Staff Briefing

Director Bills gives the staff briefing.

Staff Recommendation: Denial for fence location and transparency. No public comments received.

Presentation by Applicant

Victor Wang and wife Elisa, are the owners. This is a corner lot. We want 7.5' into the front setback and privacy. We moved the pool equipment so that variance isn't needed. Victor goes over each slide showing the details of the fence. Traffic is an issue on Ridgewood going to Rollingwood Drive. Having a solid fence will act as a buffer and also provide privacy. We do have support from our neighbors.

Vice-Chairman Pledger: All those properties you have marked, are they in Rollingwood?

Victor: No. All the lots on the left are West Lake Hills. The other side is Rollingwood.

Public Hearing

Vice-Chairman Pledger opened the meeting for public comments. Hearing none, the public comment section was closed.

Discussion/Recommendation

Commissioner Maccini: Here's where I stand with it. I'm not in favor of changing the setback. I am fine with a modified solid fence and no higher than six feet.

Vice-Chairman Pledger: I know we recently approved a fence for noise mediation at Westlake Drive and Yaupon. I think it's a flat fence completely.

Commissioner Maccini: I'm not at all in favor of modifying the setback. We have setbacks for a reason.

Commissioner Webber: This is my neighborhood. I drive by this property all the time. Welcome back to the hood and glad to have you back. It's a tricky situation for me to saying no that at least the property line request given there are other property line fences. I don't know when we stop approving these variances. I'm not in favor of a 0% fence. That can be resolved through greenery. Your presentation was beautiful.

Commissioner Stewart: We have to be careful using non-conforming things because we don't know how those came to be. I don't see the hardship.

COMMISSIONER WEBBER MOVES TO RECOMMEND DENIAL TO ALL

REQUESTS DUE TO LACK OF HARDSHIP AND NOT MEETING THE CONCERNS IN OTHER WAYS. COMMISSIONER BARTOLETTI SECONDS. UNANIMOUS (4-0) DENIAL.

9. **Ordinance:** Discuss and make a recommendation on the approval of an ordinance to adopt a Subdivision Checklist, as required by House Bill 3699, codified in the Texas Local Government Code Section 212.0081

Staff Briefing

Director Bills goes over the subdivision checklist.

Discussion/Recommendation

Commissioner Bartoletti: One of these items talks about deed restrictions. The plat notes should show the pre-existing deed restrictions. For example, HOA restrictions. I thought the subdivision checklist should say existing and proposed should be connected with the subdivision. If you look at some of the new subdivisions they don't look like the rest of the city. The people moving in look at the HOA rules, not the code. I wish it would refer to deed restrictions.

Director Bills: Those are private property agreements and the city doesn't enforce those.

Commissioner Bartoletti: Would like to make HOA regulations be consistent with City Code.

Director Bills: They are private restrictions that the city is not a party to. The city regulations trump private restrictions.

Commissioner Bartoletti: They don't know that.

Public Hearing

Vice-Chairman Pledger opened the meeting for public comments. Hearing none, the public comment section was closed.

Continued Discussion

Commissioner Webber: Anytime I see an X I don't want to do it. Change it to a bullet on the checklist. Can we give an example of an approved plat?

Director Bills: We can definitely look into doing that.

Commissioner Maccini: We should do the same for variances.

COMMISSIONER MACCINI MOVES TO RECOMMEND APPROVAL AS PRESENTED WITH AMENDMENTS AND GRAPHICS. COMMISSIONER WEBBER SECONDS. UNANIMOUS (4-0) APPROVAL.

10. Administration Update from staff on items forwarded to BOA and City Council from the previous meeting.

Staff Briefing

Director Bills gives updates.

11. Adjournment. Chairman Robert Meisel.

Vice-Chairman Pledger adjourns the meeting at 9:03 p.m.

Respectfully submitted,

ROBERT MEISEL, CHAIRMAN

ATTEST:

Development Coordinator Joel Sherrouse

These minutes were approved on _____, 2024.



City of West Lake Hills

Zoning and Planning Commission

AGENDA REPORT

Meeting Date:	January 17, 2024	Item Number:	4
	Building & Development		
Department:	Services		
Prepared By:	Jennifer C. Bills	Cost / Budget:	None
Exhibits:	See Attached	Source of Funds:	N/A

Subject

205 West Spring: Discuss and make recommendation on a variance to encroach up to 8.25 feet into the required 15-foot side setback for the addition to an existing one-story non-conforming residential structure. (Section 22.03.275 and 22.03.281 of the West Lake Hills Code).

Applicant: William McAshan, Property Owner

Recommendation

Staff recommends approval of the variance request. The addition to the building is keeping in the character of the original structure and neighborhood, while preserving the existing trees. A 27.5 inch double trunk live oak in the middle of the lot presents a physical hardship that would otherwise need to be granted a variance and removed to add to the existing structure.

This item will be forwarded to the February 14, 2024 Board of Adjustment meeting for consideration.

Discussion

Property Information, Zoning & Site Characteristics:

Owner: Allison & William McAshan

Legal Description: Westlake Park Lot 15

Lot Size: 0.2811 acres (12,244.37 square feet)

Zoning: R-1, One Family

The properties surrounding the subject property are zoned R-1, One Family

Background & Analysis:

The applicant is requesting a variance to encroach into the required 15-foot side setback (for one-story, increases to 20 feet for two stories) up to 8.25 feet with an addition to the existing non-conforming single family residential house (Attachment 1). The existing structure is a 1,573 square foot single-story house that was built in 1968. The applicant wants to add additional living space, while maintaining the style and scale of the original structure, while preserving a 27.5-inch double trunk live oak in the middle of the yard (Attachment 5). The proposed addition would extend along the west side of the property straight back, continuing from the existing wall. The new encroachment would be 8.25 feet at the north part of the new addition to 6.1 feet at the rear (Attachment 2). The applicant provided Attachment 3, showing an addition that would meet the side setback requirement, but would require removal of the tree. Most of the houses in this neighborhood were

built in the 1960-70s as one to one and a half story structures, using 5-10 foot side setbacks. Additionally, the lots in this neighborhood are all smaller than the West Lake Hills average at less than 0.30 acres in size.

Public Comments:

At the time of this report, Staff had received no comments on the requested variance.

Variance Criteria Review:

When applying for a variance, the applicant has provided the following evidence:

1. *The strict or literal enforcement of the terms of this chapter, because of special conditions, will result in unnecessary hardship to the applicant.*

Strict enforcement of setback regulations on our non-conforming lot at 205 W Spring Drive, where a significant tree is centrally located, creates hardship. Our plan to extend the existing structure directly back is essential to preserve this tree, which limits our design options within the current setback rules.

2. *There will not be unreasonable disruption of the natural terrain or unreasonable destruction of existing flora.*

The variance allows us to extend our structure in a way that preserves the central tree and minimizes disruption to the natural terrain, ensuring the existing flora remains largely undisturbed.

3. *There is no reasonable alternative to the requisite variance that will alleviate the difficulty or hardship complained of.*

Other options, like redesigning within current setbacks or moving the structure, either endanger the tree or drastically limit living space. The variance is the only solution that preserves the tree and meets our space needs.

4. *The variance will not be greater than the minimum required to alleviate the difficulty or hardship complained of.*

The requested variance is the minimum necessary, allowing for an extension that accommodates the tree without additional encroachment into the setback area. This approach precisely addresses our spatial constraints while preserving the tree.

5. *The variance does not violate the intent of the Zoning Ordinance or goals of the Comprehensive Plan.*

Our request aligns with West Lake Hills' goals to preserve natural resources and maintain a quality living environment. The variance supports preserving a central tree, reflecting the city's emphasis on protecting native flora and respecting the character of the area.

6. *The variance will not adversely affect neighboring properties or interfere with the enjoyment of these properties by their owners.*

Our variance plan, centered on tree preservation, will not disrupt neighboring properties. It respects the area's natural aesthetics and maintains neighbors' privacy and enjoyment.

Outdoor Lighting

Outdoor lighting is not proposed with this variance request. Any outdoor lighting will comply with the City's Code.

Compliance with Adopted International Building Code

The property and future construction will have to comply with all applicable City codes.

Subdivision

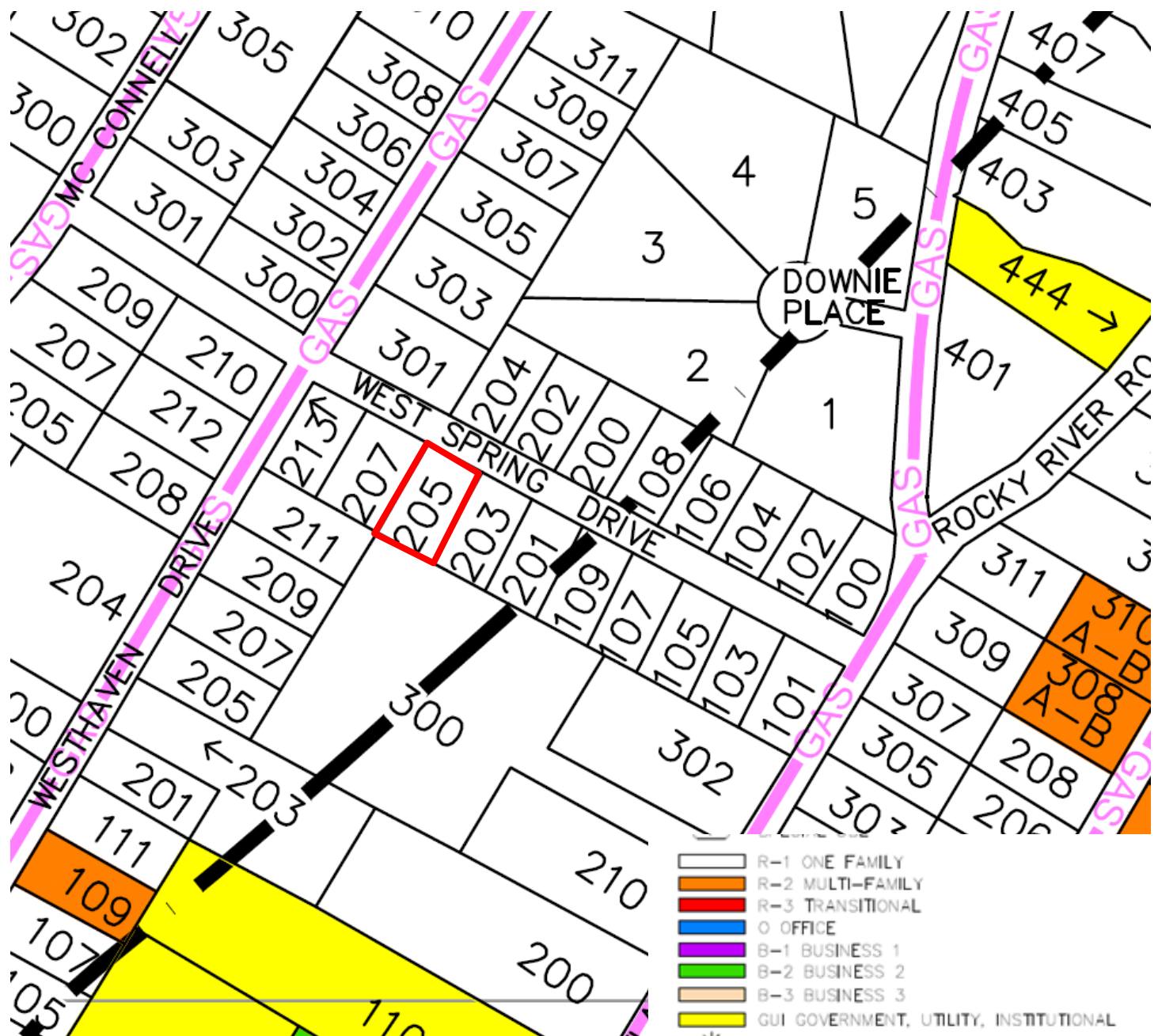
There is no change to the subdivision proposed with this application.

Comprehensive Planning Analysis

The existing and future land use is in conformance with the City of West Lake Hills Master Plan.

Links to Relevant Code:

- [Section 22.03.275 Building setback distances](#)
- [Section 22.03.281 Schedule of Regulations](#)
- [Section 38.05.031: Variances](#)
- [Section 22.03.511: Criteria and process required for granting variance](#)

Zoning:



Aerial:



Street View:



Mr. Robert Meisel
Place 1, Chair
Zoning and Planning Commission (ZAPCO)
City of West Lake Hills
911 Westlake Drive
West Lake Hills, TX 78746

Subject: Variance Request for 205 W Spring Drive

Dear Mr. Meisel,

I am writing to formally request a variance concerning the property located at 205 W Spring Drive in the City of West Lake Hills. This request is made in the context of a planned remodel and extension of the existing structure on our property.

The primary motive for this request is the preservation of a significant, mature tree centrally located on our lot. The tree not only enhances the natural beauty and ecological balance of our neighborhood but also represents a valuable asset to our local community. In order to protect this tree, we are seeking a variance to the current side yard setback requirements.

Under the current zoning laws, our ability to remodel and expand our home while preserving this natural feature is significantly restricted. Our proposed plan involves extending our existing non-conforming structure directly back, in a manner that would encroach into the current setback area. This approach, while deviating from the existing zoning regulations, is the only feasible option to accommodate the growth of our family, respect the topographical constraints of our property, and, crucially, preserve the health and integrity of the tree.

We understand and respect the City's commitment to maintaining its unique and natural character. Our proposal aligns with the City's comprehensive plan, prioritizing the preservation of native trees and wildlife, and ensuring minimal disruption to our neighbors and the surrounding environment. We are committed to a development approach that is respectful of our neighborhood's character and the City's zoning objectives.

We kindly request the opportunity to present our case to the Zoning and Planning Commission and are prepared to provide any additional information required for your review. Your consideration of this variance request would be greatly appreciated.

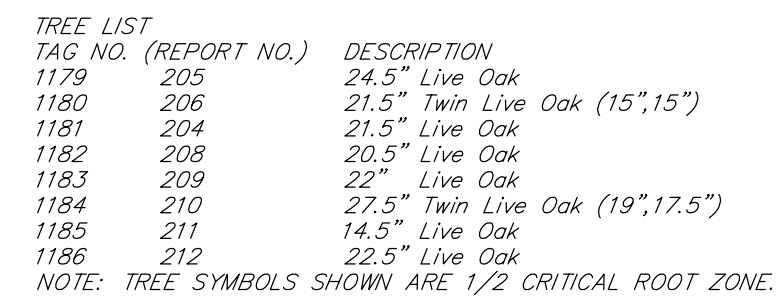
Thank you for your time and attention to this matter. I look forward to the possibility of discussing this further with you and the Commission.

Sincerely,



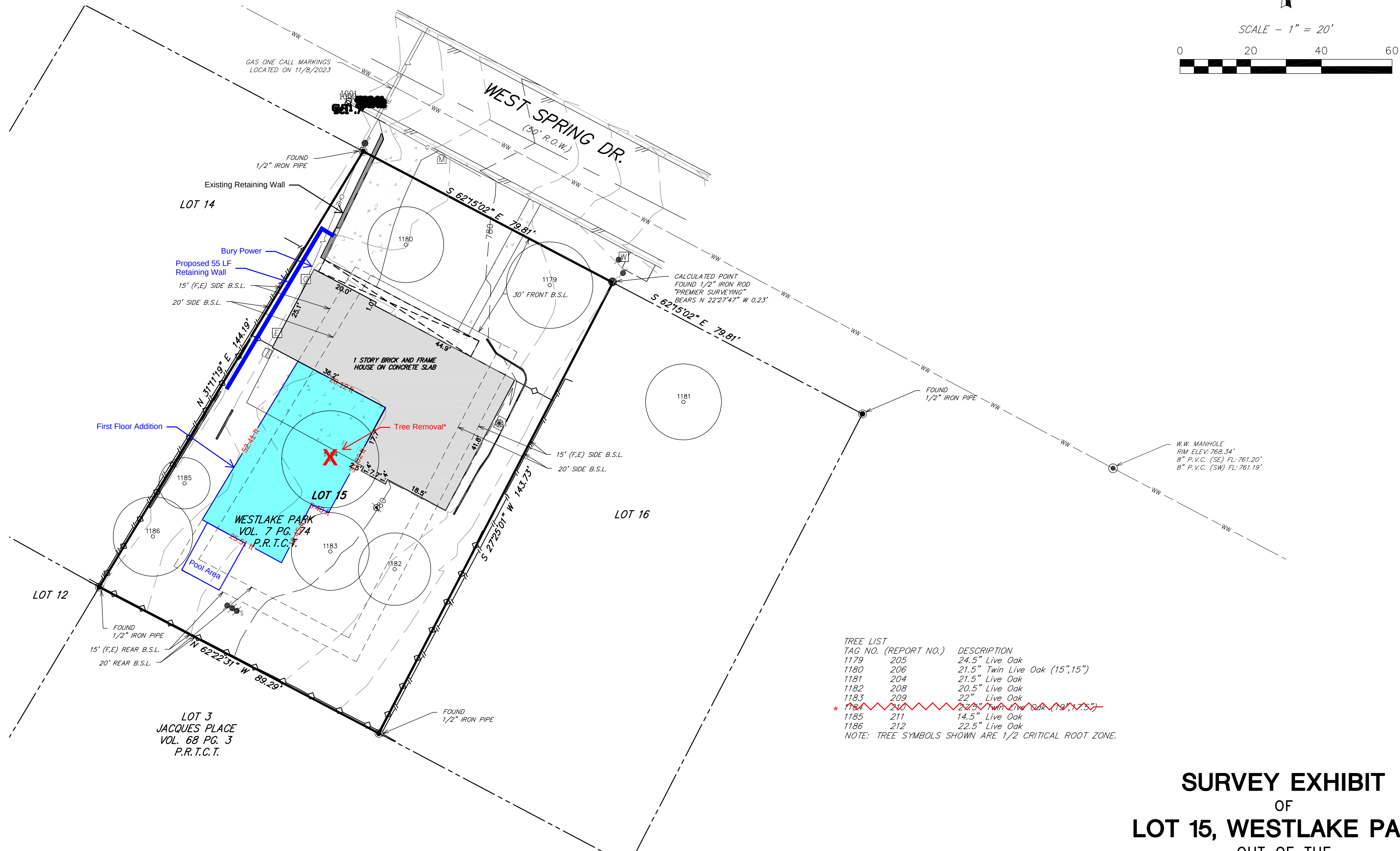
William McAshan
205 W Spring Drive

SCALE - 1" = 20'



QUIDDITY
 Texas Board of Professional Engineers and Land Surveyors Reg. No. 10046100
 3100 Alvin Devane Boulevard, Suite 150 • Austin, TX 78741 • 512.441.9493

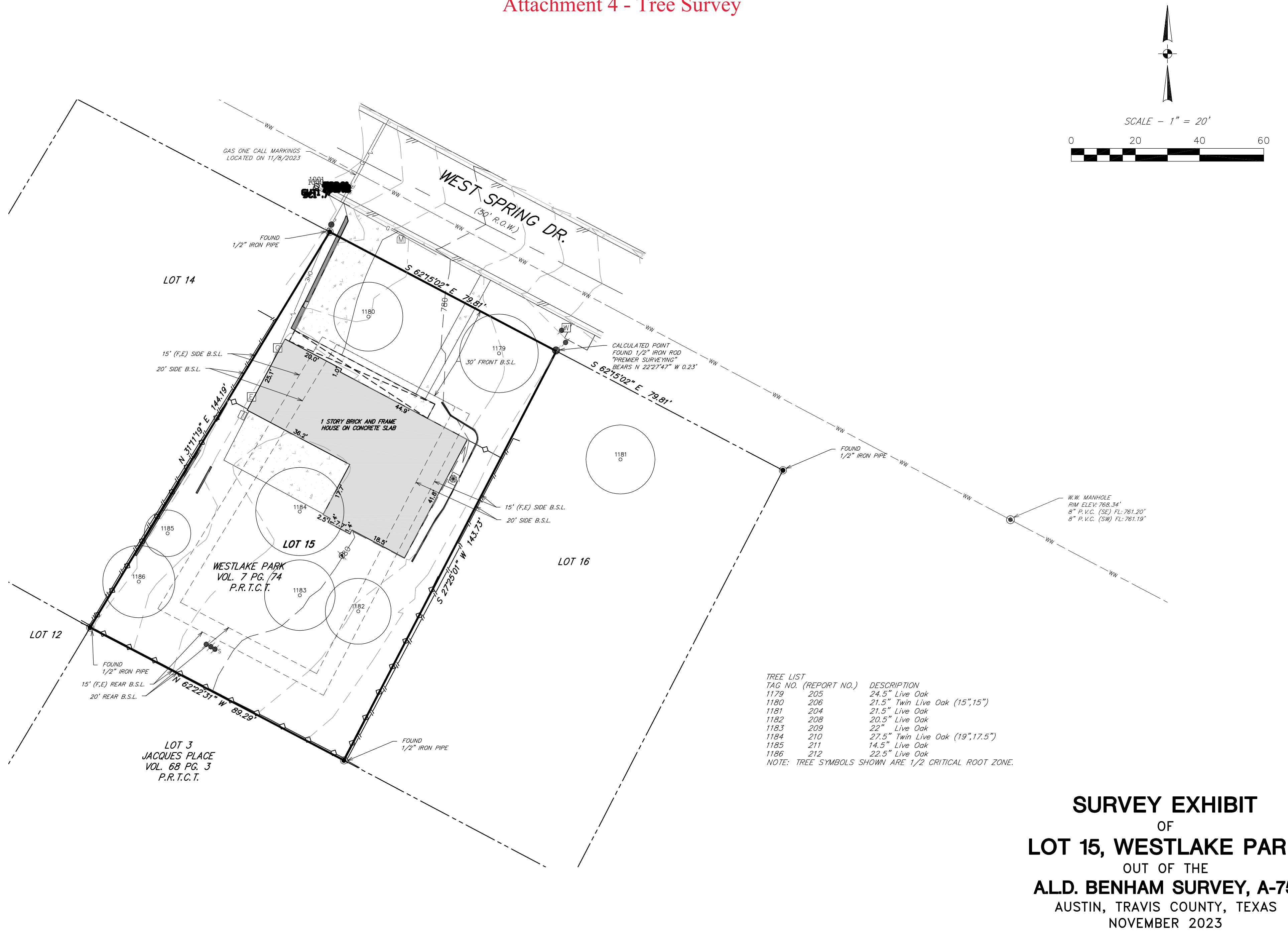
Attachment 3 - Code Compliant Setback
Tree Variance Required



SURVEY EXHIBIT
OF
LOT 15, WESTLAKE PARK
OUT OF THE
A.L.D. BENHAM SURVEY, A-75
AUSTIN, TRAVIS COUNTY, TEXAS
NOVEMBER 2023



Attachment 4 - Tree Survey



SURVEY EXHIBIT
OF
LOT 15, WESTLAKE PARK
OUT OF THE
A.L.D. BENHAM SURVEY, A-75
AUSTIN, TRAVIS COUNTY, TEXAS
NOVEMBER 2023



QUIDDITY

Texas Board of Professional Engineers and Land Surveyors Reg. No. 10046100
3100 Alvin Devane Boulevard, Suite 150 • Austin, TX 78741 • 512.441.9493



















City of West Lake Hills

Zoning and Planning Commission

AGENDA REPORT

Meeting Date:	January 17, 2024	Item Number:	5
Department:	Building & Development Services		
Prepared By:	Jennifer C. Bills	Cost / Budget:	None
Exhibits:	See Attached	Source of Funds:	N/A

Subject

3421 Bee Cave Road: Discuss and make recommendation on the following variances from the West Lake Hills Code:

1. Section 22.03.249(b)(2) Driveway, parking and loading area setback, 30 foot minimum.
2. Section 22.03.281(b): Schedule of regulations – Minimum side setback distance of 25 feet.
3. Section 22.03.304(a)(4) Tree and vegetation Removal - 4 trees 14 inches and greater (T246, T221, T868, T095);
4. Section 22.03.241: Schedule of minimum number of (parking) spaces – 50 spaces required;
5. Section 22.03.281 IX Exceeding the Impervious Cover maximum for O – Office zoning of 38% with incentive bonuses;
6. Section 22.03.251 (d) Screening, trees, and landscaping – 25-foot buffer along Bee Cave and 25% of the lot remaining in its natural state.

Applicant: Ramon Aguirre, Director of Operation for Clear Terra Group

Recommendation

Staff recommend conditional approval of variance request 4. Staff recommend denial of the remaining variances, for the reasons stated in the Analysis.

This item will be forwarded to the February 14, 2024 City Council and Board of Adjustment meetings for consideration.

Discussion

Property Information, Zoning & Site Characteristics:

Owner: Clear Terra Group, LLC

Legal Description: Lot 2A, First Resubdivision of Keene Brodie Subdivision Lot 2

Lot Size: 0.7754 acres (33,775.40 square feet)

Zoning: O - Office

The properties surrounding the subject property are zoned O - Office, B-2 - Business 2, and B-3 - Business 3.

Background & Analysis:

The applicant is proposing to move the Spanish Immersion Day Care and preschool at 3636 Bee Cave Road to the site at 3421 Bee Cave Road. The school serves up to 195 pre-school age children and employs 25 staff personnel.

This property was previously granted the following variances (language from staff report below) for a two-story office building with parking underneath at the June 8, 2022 Board of Adjustment meeting (<https://westlakehillstx.portal.civicclerk.com/event/178/files/718>).

1. Driveway Setback Encroachment – proposed driveway comes up to approximately 2-feet from the property line, an 8-foot encroachment into the driveway setback.
2. Side Building Setback Encroachment – proposed building is 15-feet from the side property line, a 10-foot encroachment into the 25-foot side setback.
3. Tree Removal- removal of two trees with trunk diameters of 14-inches or greater (T2 – 18-Inch Cedar Elm, T8 –18-Inch Live Oak).
4. Cut/Fill in a Setback – Asking for up to five (5) feet of cut/fill in the front setback for the detention pond.
5. Impervious Cover – Code allows 30% plus incentives. They get up to 38% with incentives. Applicant is asking for 42.3%.

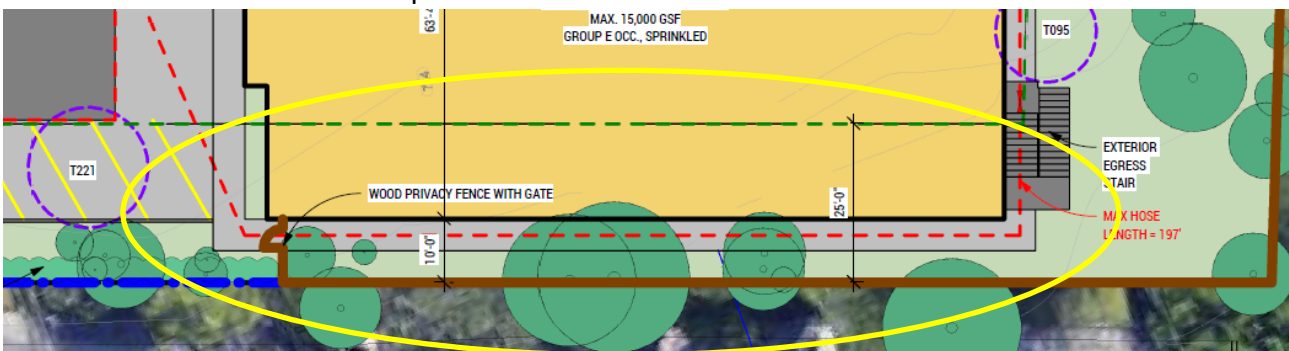
These variances expired on June 9, 2023 as they did not move forward in the permitting/development process.

With the new conceptual plan for building a pre-school/daycare site, the applicant is requesting six variances. The full extent of some of the variances has not been provided as the applicant states they won't have that information until a full site plan is developed.

1. Section 22.03.249(b)(2) Driveway, parking and loading area setback, 30 foot minimum.
The conceptual site plan shows a fire turn around at the front of the property that encroaching into the required driveway setback. This area is also within the 25-foot required buffer from Bee Cave Road (variance #6).

Staff recommend **denial** of the variance as the hardship driven the location of the site elements.

2. Section 22.03.281(b): Schedule of regulations – Minimum side setback distance of 25 feet.
The conceptual site plans show the location of the proposed building. On the west side, the request is to encroach 15 feet into the required 25 feet side setback.



Staff recommend **denial** of the variance as the size of the building is driving need for the encroachment not existing, unique site conditions.

3. Section 22.03.304(a)(4) Tree and vegetation Removal - 4 trees 14 inches and greater (T246, T221, T868, T095);

The applicant is requesting to remove four trees:

T246 – 18" Cedar Elm

T221 – 21" Live Oak

T868 – 16" Cedar Elm

T095 – 15" Cedar Elm

Given the location of T246 and T221, these trees may need to be removed for any future development of the site. Trees T868 and T095 are to the rear of the site and with a different design and less lot occupation, these trees could remain undisturbed.

Staff recommends **denial** at this time as the circumstances requiring removal is occupying almost 60% of the site with building and parking.

4. Section 22.03.241: Schedule of minimum number of (parking) spaces – 50 spaces required;
The applicant is requesting to have 24 spaces on site with an agreement with Good Shepard Lutheran for 30 spaces off-site. The daycare would have a maximum of 195 students and 25 employees. The offsite parking will accommodate the staff, which leaves the 24 onsite parking available for drop off and pick up.

Staff recommend **conditional approval** of the variance with the off-site parking agreement for daycare use. A change in use to a different building occupancy would be required to follow the adopted code.

5. Section 22.03.281 IX Exceeding the Impervious Cover maximum for O – Office zoning of 38% with incentive bonuses;

The applicant has submitted a conceptual site plan and preliminary drainage plan (Attachment 7) showing 58.8% impervious cover (for building, parking, and driveway/drive aisles). For office zoning a property is allowed up to 30% impervious cover by right, with the allowance for an additional 8% for a site connected to public sewer. The applicant is requesting a variance for an additional 20.8%. The existing site is connected to the public sewer but a study for available capacity needed for the daycare has not yet been completed. The preliminary drainage study provides analysis that 58.8% impervious cover is feasible while meeting city and TCEQ drainage requirements for detention and water quality.

Staff recommends **denial** of the variance for the additional impervious cover as there is no undue hardship. The applicant has a large building (7,600 sq. ft. footprint) and parking lot requirements (11,038 sq. ft.) that are oversized for a lot this small (33,541 square feet).

6. Section 22.03.251 (d) Screening, trees and landscaping – 25-foot buffer along Bee Cave and 25% of the lot remaining in its natural state.

The first 25 feet of the lot from the front property line is to remain undisturbed, except for the driveway crossing. The conceptual site plan shows a 6-foot encroachment of the driveway parallel to Bee Cave Road.

As the location of the driveways is currently driven by site design with other variance requests, staff recommends **denial** at this time.



For the entire lot, 25% of the lot must remain in a natural state, with a minimum of half of the area located between Bee Cave Road and the building. The applicant states that 17% of the site in front of the building will remain in its natural state, but this accounts for all pervious areas, not undisturbed areas. When asked for clarification the applicant replied that they will not have specific numbers until further designing the site plan.

Due to the unknown nature of the request, staff recommend **denial** at this time.

Development Process:

For the site to be developed as requested, the following processes/steps must be completed:

- ZAPCO Recommendation for Variances – January 17, 2024
- BOA/City Council Variance Decision – February 14, 2024
- BOA Special Use Permit for Daycare Use – February 24, 2024
- Public Sewer Capacity Study – after variance and SUP determination
- Site Development Pland and Traffic Impact Study – TBD, after sewer

Public Comments:

No comments have been received directly by staff as of this report. The applicant provided community support letters (Attachment 5).

Variance Criteria Review:

When applying for a variance, the applicant has provided the following evidence:

1. *The strict or literal enforcement of the terms of this chapter, because of special conditions, will result in unnecessary hardship to the applicant.*

The hardship results from the shape of this site – a long rectangle site. At only 100' wide, applying the 4 setbacks would leave just 37% of the site buildable. 63% of the site would be allocated to the setbacks if the ordinance is literally enforced. This creates a significant constraint for any development of this site.

Applying the two 25' side setbacks would leave only a 50' wide area for the construction of:

- 1) A 20' Fire Lane,
- 2) The new building, and
- 3) The parking area.

This is unfeasible and thus the narrow shape of the lot represents a hardship for this project

2. *There will not be unreasonable disruption of the natural terrain or unreasonable destruction of existing flora.*

The plan for development is to maintain the natural state of the property to the greatest extent possible while providing improvements to sufficiently meet the economical and physical needs of the proposed development. The proposed development includes a rectangular building to minimize the lateral setbacks encroachment. We are proposing to remove 4 trees > 14" in diameter and will mitigate by replacing them on a 150% basis. The back of the lot will be left in its natural state (9,374 SF – 28% of lot area).

3. *There is no reasonable alternative to the requisite variance that will alleviate the difficulty or hardship complained of.*

This project has had several iterations. Each of them had a challenging time providing adequate and safe access within impervious cover limitations and side yard setback requirements. At the early stages we had a larger impervious cover percentage and an above surface detention pond. This approach was abandoned in favor of designing most of the driveway and parking areas as pervious and implementing a below grade water detention and treatment system.

Also, by designing the building as a long rectangle, to conform to the shape of the lot, we were able to reduce the encroachment of the side setbacks.

4. *The variance will not be greater than the minimum required to alleviate the difficulty or hardship complained of.*

The need for these variances is a result of the unique characteristics of this lot. Unfortunately, the property cannot reasonably be developed in a manner consistent with the existing zoning. We believe the reduction of the side setback areas is the most sensitive way to solve the physical challenges this site presents. We are also required to construct a full fire lane with compliant hammerhead turnaround, this fire lane alone accounts for 4,022 SF or 20% of the proposed impervious cover.

5. *The variance does not violate the intent of the Zoning Ordinance or goals of the Comprehensive Plan.*

The City Master Plan has defined the Bee Cave Road Corridor as the commercial development corridor for the city. Therefore, we believe the proposed preschool building is an appropriate use. Also, two areas of vegetative screens will be added on one side of the building.

6. *The variance will not adversely affect neighboring properties or interfere with the enjoyment of these properties by their owners.*

We have the support of our adjacent neighbor to the east (see letter of support from Hill Country Specialists, owners of 3423 Bee Cave Rd) and the support of the owners of the Bee Cave Center at 3425 Bee Cave Rd (see letter of support).

3421 Bee Caves Rd is surrounded by the parking lots and driveways of the adjacent commercial properties, to the east, west, and south. (See above picture)

The neighboring properties are zoned B-1 and O. The proposed new building would not be near the neighboring buildings as these driveways and parking areas provide a buffer between the properties. Also, we will also be adding two areas of vegetative screening as shown in our site plan.

As required, we will comply with the drainage and erosion code ordinances and the Preliminary Drainage Plan is being submitted with this application (Please see attached Drainage Analysis.)

Outdoor Lighting

Outdoor lighting is not proposed with this variance request. Any outdoor lighting will comply with the City's Code.

Compliance with Adopted International Building Code

The property and future construction will have to comply with all applicable City codes.

Subdivision

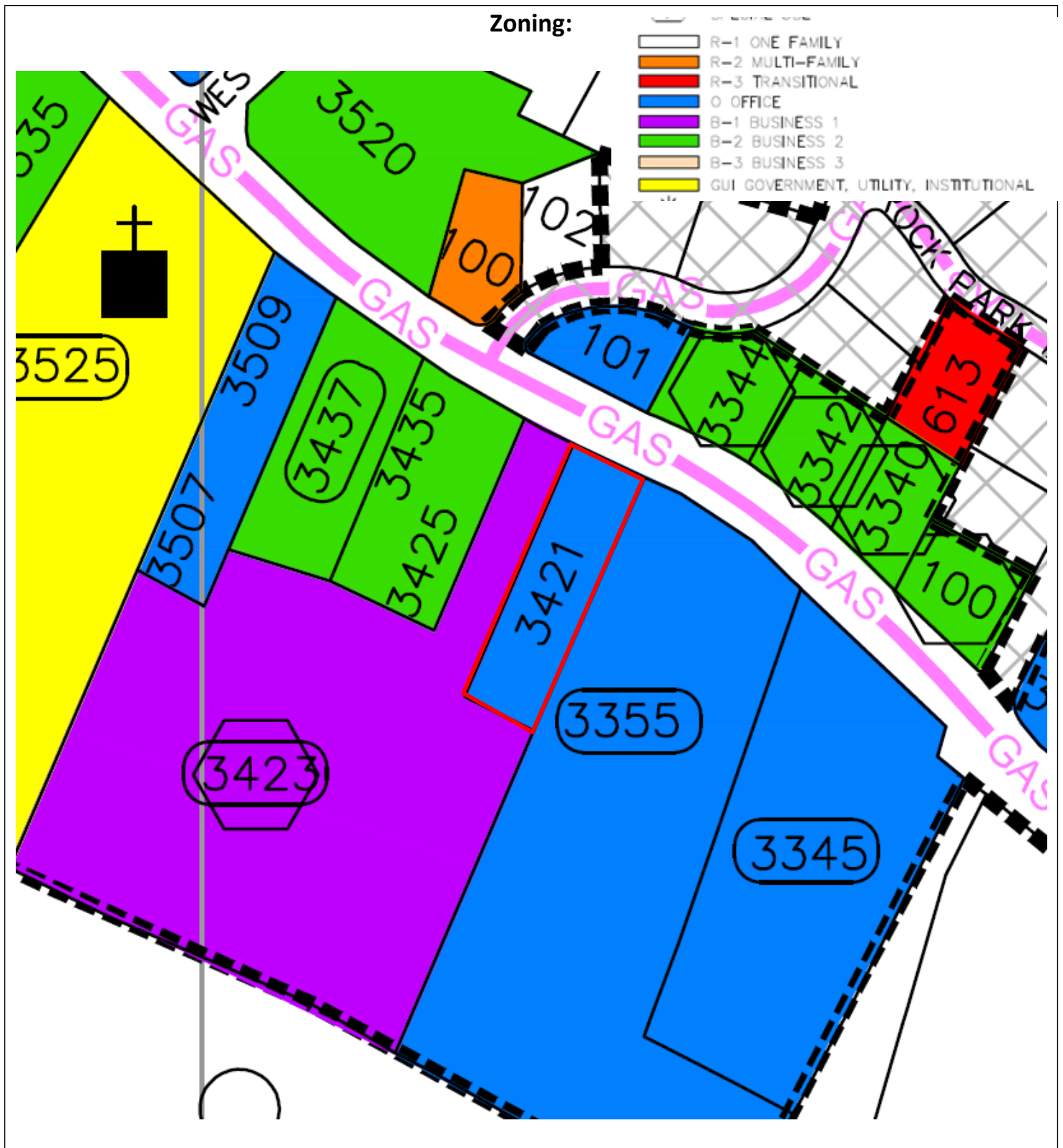
There is no change to the subdivision proposed with this application.

Comprehensive Planning Analysis

The existing and future land use is in conformance with the City of West Lake Hills Master Plan.

Links to Relevant Code:

- [Section 22.03.241: Schedule of minimum number of spaces](#)
- [Section 22.03.249: Driveway, parking and loading area setbacks](#)
- [Section 22.03.251: Screening, trees and landscaping](#)
- [Section 22.03.275: Building setback distances](#)
- [Section 22.03.281: Schedule of Regulations](#)
- [Section 22.03.304: Tree vegetation removal and replacement](#)
- [Section 38.05.031: Variances](#)
- [Section 22.03.511: Criteria and process required for granting variance](#)



Aerial:



Street View:





PO BOX 160775
Austin TX 78716-0775

November 28, 2023

Chairman Robert Meisel
West Lake Hills Zoning and Planning Commission
911 Westlake Drive
West Lake Hills, TX 78746

**Re: Variances Request
Clear Terra Group LLC
3421 Bee Cave Road
West Lake Hills, TX 78746**

Dear Mr. Meisel:

We are applying for a set of variances for 3421 Bee Cave Rd to replace the 1970's house and shed for a new preschool building and construct a new fire lane and water detention facilities. The new building will be Type 1B non-combustible construction with a full fire-sprinkler and alarm systems.

A variance to sections 22.03.249(b)(2), 22.03.281(b), 22.03.304(a)(4), 22.03.241 and 22.03.281 IX of the Westlake Hills Code of Ordinances is hereby requested in conjunction with the proposed Clear Terra Group development located at 3421 Bee Caves Road. An overview and efforts to minimize requested variances are as followed:

• **Variance to Section 22.03.249(b)(2):**

- *To allow for the proposed driveway to encroach within the 25-foot driveway setback for O zoned properties located to the East of the development.*
- The long rectangular shape of the lot imposes a width limitation. We are constructing the fire lane as well and thus the driveway needs to extend within this setback area.

• **Variance to Section 22.03.281(b):** (minimum building setbacks from side lot lines for O zoned properties):

- *To allow for the proposed new building, to encroach within the limits of the building setback from side lot lines.*
- The long rectangular shape of the lot imposes a width limitation. To provide adequate building space for preschool operations, in tandem with minimizing as much impervious cover as feasible

for parking and driveway approaches, the proposed preschool building must encroach within the 25-foot minimum side setback that is required for O zoned properties that are located adjacent to O or B-1 zoned properties.

- **Variance to Section 22.03.304(a)(4)**

- To allow for the removal of 4 trees greater than or equal to 14 inches located onsite.
- In order to provide adequate access and placement of proposed facilities (fire lane and preschool building) we need to remove these 4 trees. The plan for development is to maintain the natural state of the property to the greatest extent possible while providing improvements to sufficiently meet the economic and physical needs of the proposed development.

- **Variance to Section 22.03.241**

- The required number of parking spaces for “O” office zoning is 1 space per 300 building square feet, i.e., 50 spaces for a 15,000-sf total building size.

The need to keep the impervious cover at a reasonable percentage requires us to provide 24 parking spaces onsite and complement extra spaces with a parking agreement with a nearby neighbor. We will have a total of parking available equal to 54 (24 onsite plus 30 per parking agreement -attached).

- **Variance to Section 22.03.281 IX.(a)(1)** (Impervious Cover for “O” office zoning):

- The maximum allowable base Impervious Cover for “O” office zoning is 30%, with a possible incentive of an additional 8% for providing an off-site public sewerage disposal system. This provides a total of the allowable **38%** impervious cover. **The layout and location of the proposed building and parking requires 58.8%** total impervious cover.

- **Variance to Section 22.03.252 (d) Buffer along Bee Cave Road and Capital of Texas Highway**

- 25 percent of the lot must remain in its natural state with one-half of that area located between the buildings and Bee Cave Road and Capital of Texas Highway.

We need to add a driveway that accommodates the fire department requirements and will be connecting utilities through this area. We will leave about 17% of the area between the building and Bee Cave Rd undeveloped and will add a landscaped buffer.

We trust that you will find this letter and accompanying materials acceptable for the intended purpose of approving the requested variances for the proposed project. Please do not hesitate to contact me should you have any questions or require additional information.

Respectfully submitted,

Ramon Aguirre

Clear Terra Group
Ramon Aguirre
Director of Operations

For Review Only.
Not for regulatory approval,
permit, or construction.
David Polkinghorn, Registered
Architect
Texas Registration #23473

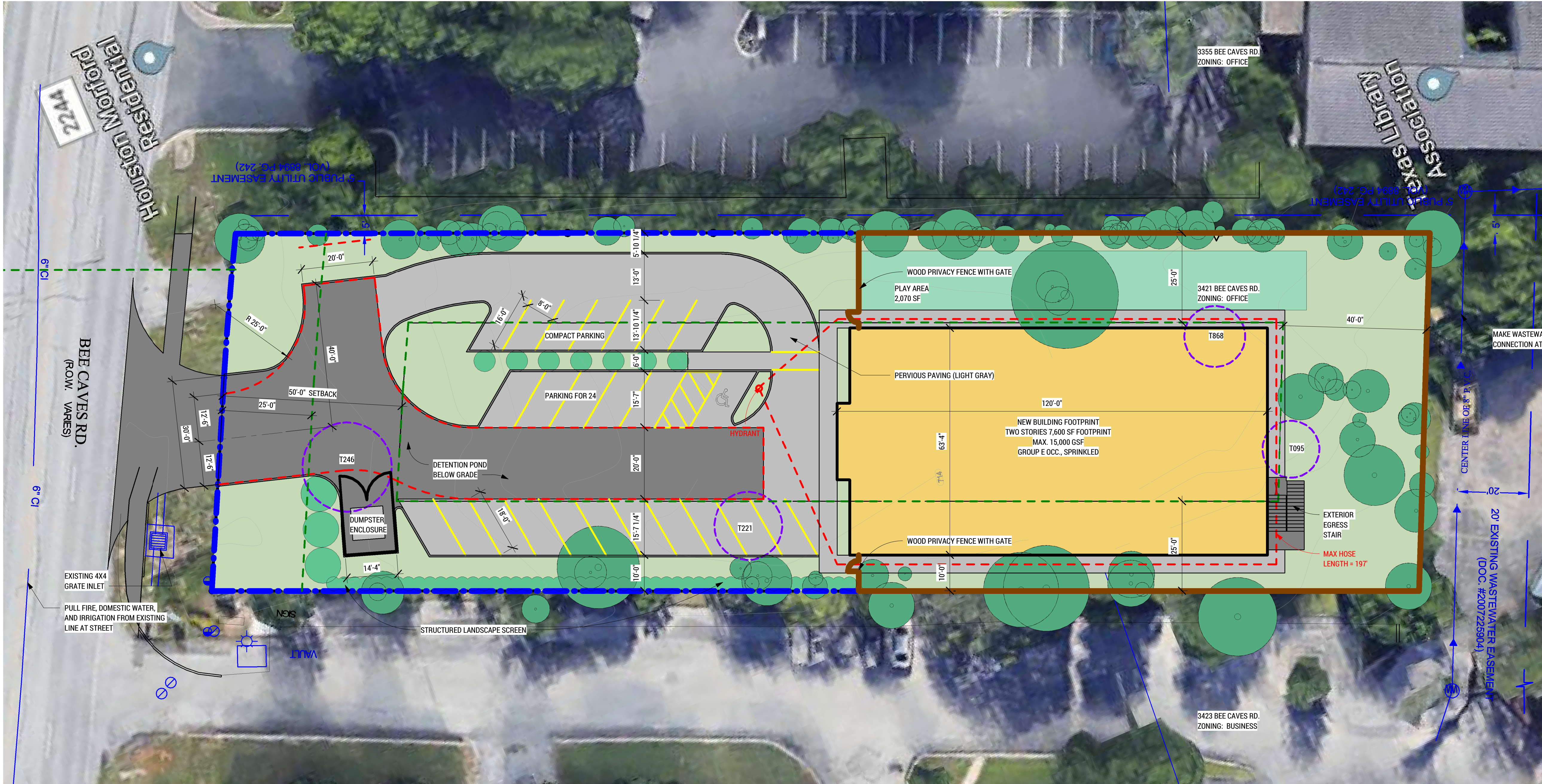
YPW Spanish Immersion School

3421 Bee Caves Rd
Westlake Hills, TX 78746

Sheet Information	
Edition	SCHEMATIC DESIGN
Date	8/31/2023
Revisions	

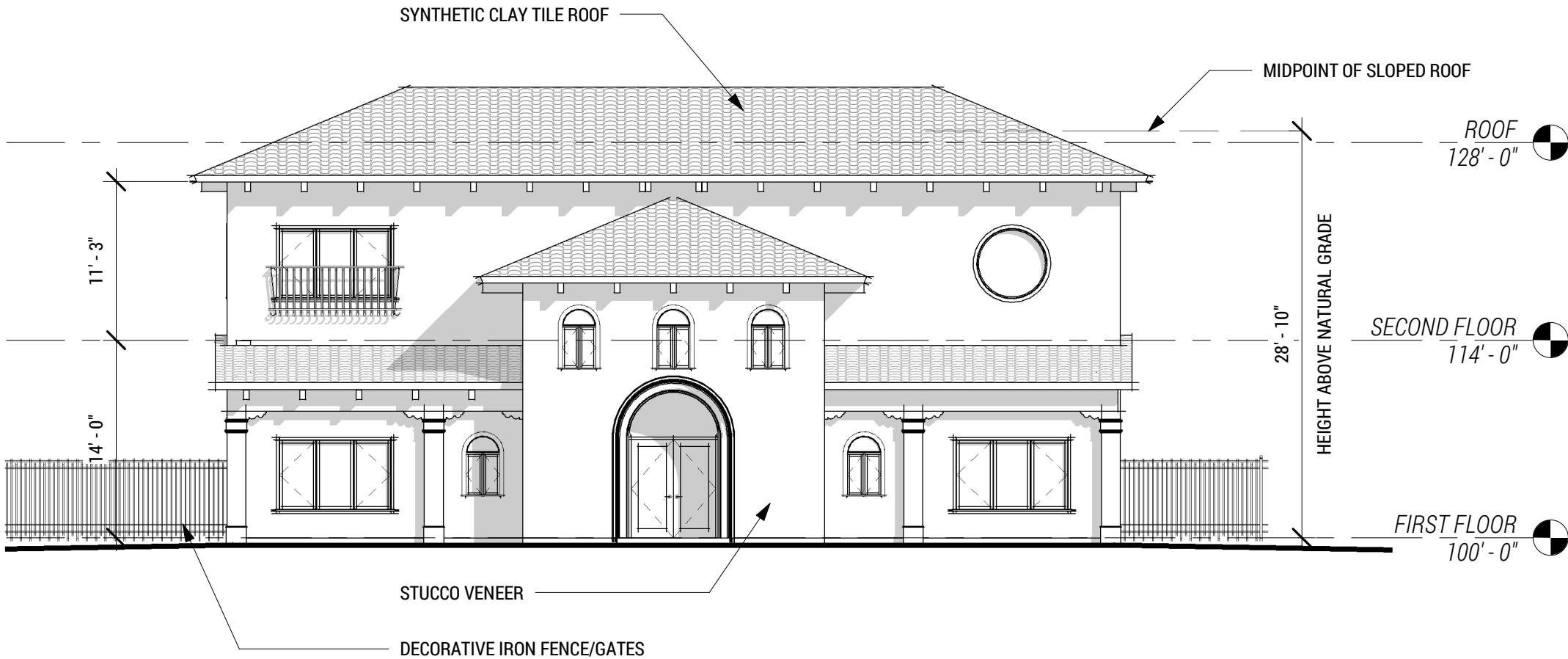
SITE DIAGRAM

SD1

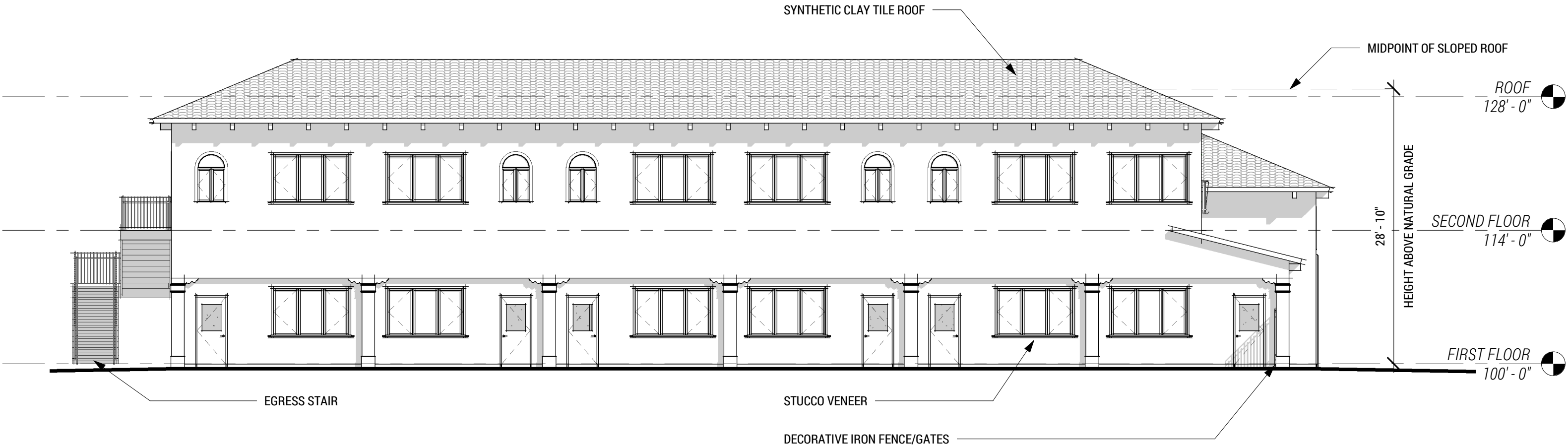


1 SITE PLAN
1/16" = 1'-0"

IMPERVIOUS COVER	
IMPERVIOUS DRIVES AND CURBS	5,027 SF
PERVIOUS PAVING (0.015 @ 75% +)	6,011 SF
PLAYGROUND (2,070 @ 50% +)	1,035 SF
BUILDING PAD	7,600 SF
TOTAL IMPERVIOUS (LOT SIZE 33,467 SF)	19,673 SF = 58.8%



1 PRELIMINARY NORTHEAST ELEVATION
1" = 10'-0"



1 PRELIMINARY SOUTHEAST ELEVATION
1" = 10'-0"

11/22/2023 8:49:47 PM

PROPERTY DESCRIPTION:

BEING A PORTION OF LOT 2A, FIRST RESUBDIVISION OF LOT 2, BRODIE KEENE SUBDIVISION, AN ADDITION TO TRAVIS COUNTY, TEXAS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 76, PAGE 158, PLAT RECORDS, TRAVIS COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD FOUND AT THE SOUTH CORNER OF SAID LOT 2A AND THE MOST SOUTHERLY EAST CORNER OF LOT 2B, BRODIE KEENE SUBDIVISION PHASE THREE, AN ADDITION TO TRAVIS COUNTY, TEXAS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 80, PAGE 265, SAID PLAT RECORDS, SAID IRON ROD BEING ON THE NORTHWEST LINE OF THAT CERTAIN TRACT OF LAND DESCRIBED IN DEED TO C. AUBREY SMITH, JR., AS RECORDED IN VOLUME 12843, PAGE 560, REAL PROPERTY RECORDS, TRAVIS COUNTY, TEXAS;

THENCE NORTH 63° 00' 00" WEST, A DISTANCE OF 100.00 FEET ALONG THE COMMON LINE OF SAID LOTS 2A AND 2B TO A 1/2-INCH IRON PIPE FOUND AT THE WEST CORNER OF SAID LOT 2A;

THENCE NORTH 25° 14' 00" EAST, A DISTANCE OF 336.44 FEET ALONG SAID COMMON LINE TO A 1/2-INCH IRON ROD FOUND ON THE SOUTHWEST LINE OF BEE CAVES ROAD (VARIABLE WIDTH RIGHT-OF-WAY);

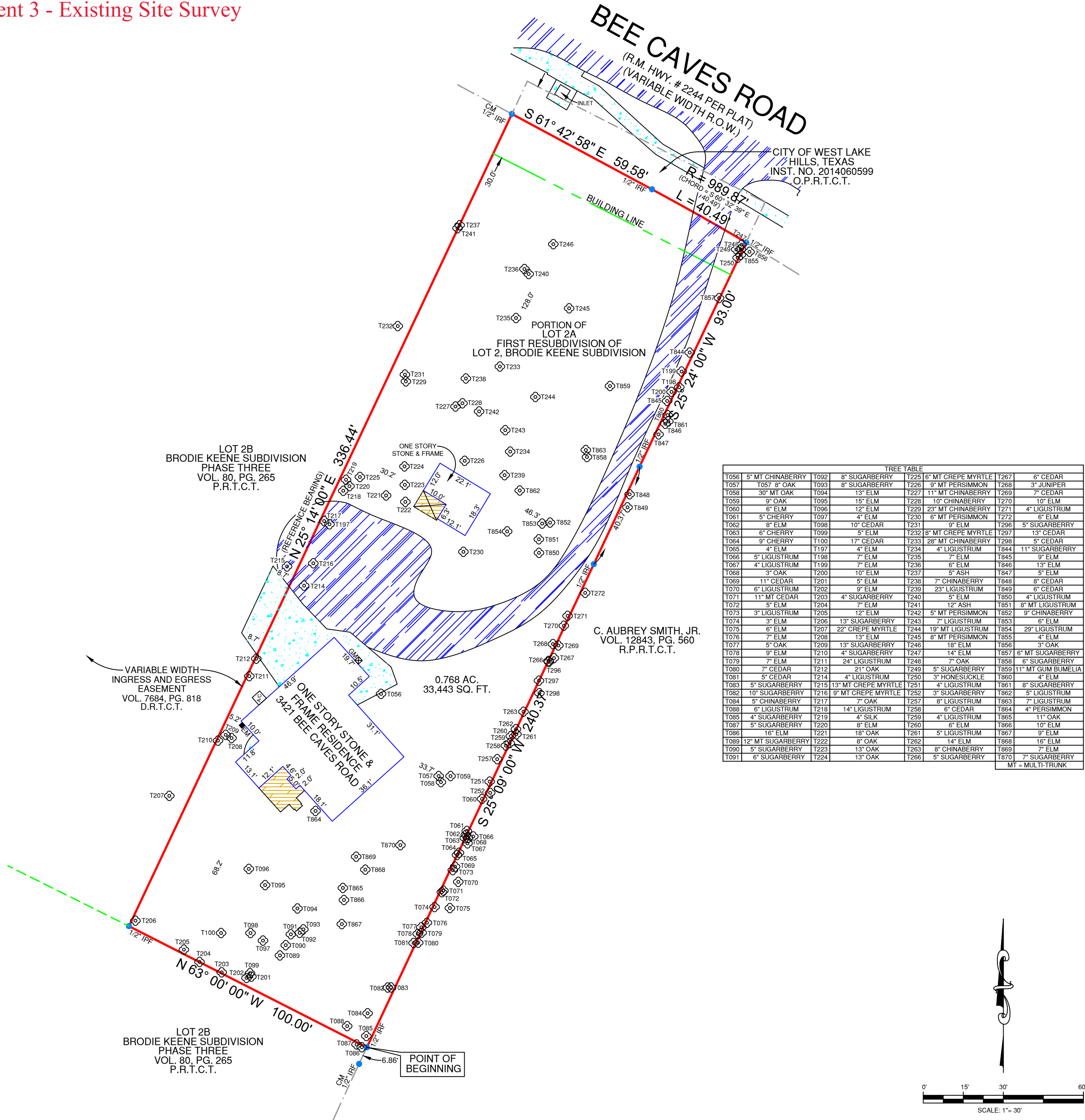
THENCE SOUTH 61° 42' 58" EAST, A DISTANCE OF 59.58 FEET ALONG SAID SOUTHWEST LINE TO A 1/2-INCH IRON ROD FOUND AT THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS OF 989.87 FEET;

THENCE ALONG SAID SOUTHWEST LINE AND SAID CURVE AN ARC DISTANCE OF 40.49 FEET, HAVING A CHORD BEARING AND DISTANCE OF SOUTH 60° 32' 39" EAST - 40.49 FEET TO A 1/2-INCH IRON ROD FOUND ON THE COMMON LINE OF AFORESAID LOT 2A AND AFORESAID SMITH TRACT;

THENCE SOUTH 25° 24' 00" WEST, A DISTANCE OF 93.00 FEET ALONG SAID COMMON LINE TO A 1/2-INCH IRON ROD FOUND;

THENCE SOUTH 25° 09' 00" WEST, PASSING A 1/2-INCH IRON ROD FOUND AT A DISTANCE OF 40.37 FEET AND CONTINUING A TOTAL DISTANCE OF 240.37 FEET ALONG SAID COMMON LINE TO THE POINT OF BEGINNING AND CONTAINING 33,443 SQUARE FEET OR 0.768 OF ONE ACRE OF LAND.

Attachment 3 - Existing Site Survey



THIS PROPERTY IS AFFECTED BY THE FOLLOWING:
AGREEMENT, VOL. 9901, PG. 596, R.P.R.T.C.T.

FEMA NOTE

FLOOD INFORMATION:
THE SUBJECT PROPERTY DOES NOT APPEAR TO LIE WITHIN THE LIMITS OF A 100-YEAR FLOOD HAZARD ZONE ACCORDING TO THE MAP PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, AND HAS A ZONE "X" RATING AS SHOWN BY MAP NO. 48453C0445 K, DATED JANUARY 22, 2020.

SURVEYOR'S CERTIFICATION:
THIS IS TO CERTIFY THAT ON THIS DATE A SURVEY WAS MADE ON THE GROUND, UNDER MY SUPERVISION AND REFLECTS A TRUE AND CORRECT REPRESENTATION OF THE DIMENSIONS AND CALLS OF PROPERTY LINES AND LOCATION AND TYPE OF IMPROVEMENTS. THERE ARE NO VISIBLE AND APPARENT EASEMENTS, CONFLICTS, INTRUSIONS OR PROTRUSIONS, EXCEPT AS SHOWN. THIS SURVEY IS NOT TO BE USED FOR CONSTRUCTION PURPOSES AND WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT PROVIDED BY A TITLE COMPANY. THERE MAY BE EASEMENTS AND OTHER MATTERS OF RECORD AFFECTING THE PROPERTY SHOWN HEREON THAT ONLY A PROPER TITLE SEARCH WOULD REVEAL. THIS SURVEY IS SUBJECT TO ANY AND ALL COVENANTS AND RESTRICTIONS PERTAINING TO THE RECORDED PLAT REFERENCED HEREON.

GENERAL NOTES

- 1.) THE BASIS OF BEARINGS FOR THIS SURVEY WAS DERIVED FROM DATA PROVIDED ON THE RECORDED PLAT.
- 2.) THERE ARE NO VISIBLE CONFLICTS OR PROTRUSIONS, EXCEPT AS SHOWN. FENCES MAY BE MEANDERING.
- 3.) THIS SURVEY IS FOR THE EXCLUSIVE USE OF THE NAMED CLIENT, MORTGAGE COMPANY, TITLE COMPANY, OR OTHER.
- 4.) AS OF THIS DATE, ALL EASEMENTS, RIGHTS-OF-WAY OR OTHER LOCATABLE MATTERS OF RECORD SHOWN OR NOTED HEREON WERE DERIVED FROM THE RECORDED PLAT, THE VESTING DEED, OR THE TITLE REPORT AND SUPPORTING DOCUMENTS. ALL SUCH ITEMS WERE OBTAINED DURING THE RESEARCH PHASE OF THIS SURVEY OR PROVIDED BY THE CLIENT/TITLE COMPANY LISTED HEREON. PREMIER SURVEYING MAKES NO REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF SUCH ITEMS AND HAS MADE NO ATTEMPTS TO OBTAIN OR SHOW ANY ADDITIONAL RESTRICTIONS ON OR NEAR THIS PROPERTY PUT IN PLACE BY LOCAL MUNICIPALITIES OR ASSOCIATIONS.
- 5.) THIS SURVEY IS NOT INTENDED TO ADDRESS OR IDENTIFY WETLANDS, FAULT LINES, TOXIC OR HAZARDOUS WASTE AREAS, SUBSIDENCE OR ANY OTHER ENVIRONMENTAL OR GEOLOGICAL ISSUE.
- 6.) THE EXISTING UTILITIES DEPICTED HEREON ARE BASED ON FIELD LOCATION OF VISIBLE, ABOVE GROUND EVIDENCE. UTILITIES AND OTHER MINOR IMPROVEMENTS MAY EXIST THAT ARE NOT SHOWN ON THIS SURVEY. PREMIER SURVEYING IS NOT RESPONSIBLE FOR THE EXACT LOCATION OF SUBSURFACE UTILITIES, NOR FOR ANY DAMAGES BY ANY CONSTRUCTION OR EXCAVATION ON OR NEAR SAID UTILITIES.
- 7.) SYMBOLS AS SHOWN IN THE LEGEND ARE NOT TO SCALE AND MAY HAVE BEEN MOVED FROM THE ACTUAL HORIZONTAL LOCATION FOR CLARITY.

3421 BEE CAVES ROAD
CITY OF WEST LAKE HILLS
TRAVIS COUNTY, TEXAS

PREMIER JOB #: 23-04226TS

TECH: MSP DATE: 06/14/23 REV.: 10/16/23

FIELD: MW FIELD DATE: 06/13/23



CONCRETE	WOOD FENCE
BRICK	CHAIN LINK FENCE
ASPHALT	WROUGHT IRON FENCE
WOOD	BARB WIRE FENCE
STONE	R.R. TIE RETAINING WALL
GRAVEL	BRICK WALL
COVERED AREA	STONE WALL
CM = CONTROLLING MONUMENT	OVERHEAD TELEPHONE LINE
	OVERHEAD ELECTRIC LINE
	IRF = IRON ROD FOUND
	IPF = IRON PIPE FOUND
	IRS = IRON ROD SET
	MFCP = METAL FENCE COR POST
	WFPC = WOOD FENCE COR POST

Premier
Surveying LLC

5700 W. Plano Parkway
Suite 1200
Plano, Texas 75093
972-612-3601 (O) | 855-892-0468 (F)
www.premiersurveying.com
premierorders@premiersurveying.com

Premier
Surveying LLC
5700 W. Plano Parkway
Suite 1200
Plano, Texas 75093
Office: 972-612-3601
Fax: 855-892-0468
Firm Registration No. 10146200





November 8, 2023

**YPW Spanish Immersion School
3640 Bee Caves Rd
West Lake Hills, TX 78746**

Attn: Monica Moreno, YPW General Director

Subject: Request for parking spot access during YPW school hours

Dear Monica,

Thank you for your request for the use of parking on our campus at Shepherd of the Hills Lutheran Church ("Shephills"). Shephills is pleased to offer as part of our ministry support of education the use of parking under the following conditions:

1. YPW may only use the Shephills parking spaces located in the rear south area up to a maximum of 30 spots at any given time;
2. Shephills parking spaces would be available Monday through Friday, 7AM to 6PM;
3. No YPW vehicle may be left overnight or abandoned in place due to safety reasons. Shephills reserves the right to remove any vehicle improperly parked whether by location or time at YPW or owner's expense;
4. Shephills may preempt the parking spaces as required by Shephills for special occasions (such as church services or special events);
5. The Shephills parking spaces are available subject to regulatory authority requirements;
6. Shephills intends on making such parking spaces herein on an ongoing basis to YPW but may revoke the use of these parking spaces at any time in its sole discretion;
7. YPW agrees to hold harmless and indemnify ShepHills for any loss, claim or otherwise for any loss or damage to YPW or vehicle owner's property or individuals when such parking spaces are in use by YPW.
8. YPW's users will use its best efforts to convey safe driving practices when parking or entering or leaving Shephills campus.

Thank you for partnering with Shephills. Please contact me if there are any questions.

Prayerfully yours,

Bill Dawson

Executive Director, Shepherd of the Hills Lutheran Church



Nov. 27, 2023

The City Council of West Lake Hills
911 Westlake Dr.
West Lake Hills, TX 78746

Dear Council Members:

This letter supports approval of a Planned Development District (PDD) for the Young Peoples Workshop (YPW) Spanish Immersion School, so the school can build and relocate to a new campus at 3421 Bee Caves Rd. in West Lake Hills. Our support for this project is conditional on YPW's expressed commitment to not pursue creating a K-5 charter or private school at this location.

With its current focus on pre-school and after-school programs, the YPW Spanish Immersion School is an asset to the Eanes community because it complements – *and does not compete with* – the traditional K-5 curriculum and format provided by Eanes ISD.

Many YPW graduating students enroll in our K-5 "Futuro" Spanish immersion program. This synergy has the potential to grow once YPW relocates to an expanded campus that can accommodate more students for pre-school and after-school programming

We are pleased with YPW Spanish Immersion School's proposed plans and the opportunity to partner with its programs to benefit the students of Eanes ISD whose families desire a multilingual education for their children.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Jeff Arnett'.

Jeff Arnett, Ed.D.
Superintendent of Schools



City Council of the City of West Lake Hills, TX 911
911 Westlake Dr.
West Lake Hills, TX 78746

To Whom It May Concern:

We would like to express our support for the approval of the site development plan for Young Peoples Workshops (YPW) Spanish Immersion School, so they can build and relocate to a new school campus at 3421 Bee Caves Rd. in West Lake Hills, TX.

YPW Spanish Immersion School is a member of the Westlake Chamber of Commerce and has been a member of the Westlake Hills community since 2005 providing preschool services to residents and families who work in Westlake. They have been a unique partner with the Eanes Independent School, readying their students for the Spanish Immersion programs that are offered on EISD elementary school campuses.

We are excited for the building of a new preschool campus in our community and hope their development plans meet with your approval.

Sincerely,

A handwritten signature in blue ink that reads "Cathy Hoover". The signature is fluid and cursive, with the first name "Cathy" and last name "Hoover" clearly distinguishable.

Cathy Hoover
Executive Director,
Westlake Chamber of Commerce

November 1st, 2023

Hill Country Specialists
701 S Lamar Blvd Suite C
Austin, TX 78704

RE: 3421 Bee Cave Rd new building project for YPW Spanish Immersion Pre-School relocation.

West Lake Hills Zoning and Planning Commission, City Council:

As the Owner of the property at 3423 Bee Caves Rd that is adjacent to this address, I am writing in support of the proposed development at 3421 Bee Caves Road. I believe that this preschool building will be additive to the West Lake Hills community and complementary to surrounding businesses.

3421 Bee Caves is in the commercial corridor of desirable Westlake Hills. The proposed project will be a new modern preschool building that will replace the existing old house and shed.

The back of the property will be left undeveloped and in its natural state, where a good number of trees and vegetation screen it from the businesses behind it.

In conclusion, I believe this project will enhance the commercial corridor of the City and has my full support.

Thank you for your consideration.



Daryl Kunik
Manager

Rodgers & Reichle, Inc.

1112 West 9th Street
Austin, TX 78703
(512) 328-6161

November 28, 2023

Zoning and Planning Commission
City Council
City of West Lake Hills
911 Westlake Drive
West Lake Hills, Texas 78746

RE: 3421 Bee Cave Rd new building project for YPW Spanish Immersion Pre-School

Dear Zoning and Planning Commission, City Council:

Thirty years ago, I purchased the Bee Cave Center at 3425 Bee Cave Road with my business partner, Kevin Reichle. Over the years, we've always had cordial, cooperative and harmonious relations with the property owners at 3421 Bee Caves Road. As their immediate neighbor, the Bee Cave Center would be the most affected from the proposed preschool building at 3421 Bee Cave Road. We fully support the project.

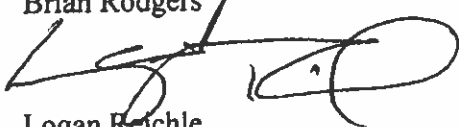
We believe in supporting local businesses and local owners. This seems to us to be the exact kind of improvement we would want to see on Bee Cave Road, the commercial corridor of Westlake Hills. The proposed use is something that is needed in a growing community with our demographics.

This project has our full support. We hope you vote in its favor.

Sincerely,

Bee Cave Center LLC


Brian Rodgers


Logan Reichle



PO BOX 160775
Austin TX 78716-0775

December 4, 2023

**Re: Storm Water Management Discussion for the proposed development of:
3421 Bee Cave Road
West Lake Hills, TX 78746**

Please see the attached drainage report for more details on Storm Water management.

DISCUSSION:

The project post-development drainage area map (see drainage report) depicts four (4) drainage areas located on-site, PR-A, BYP-A, PR-B, and PR-C. Drainage area PR-A will be comprised of the majority of improvements associated with this development, and the runoff generated from this area will be routed to the TCEQ approved 8'x6' Contech Jellyfish Filter $\pm 5'$ below grade and then to an $\pm 130' \times 48'$ underground detention facility $\pm 5'$ below grade by a series of on-site inlets and storm sewer Pipes.

Both of the below grade systems (Jellyfish Filter and underground detention facility) will be placed outside the 25-foot frontage right-of-way along Bee Cave Rd.



Southwest Engineers

Civil | Environmental | Land Development

ENGINEERING REPORT

FOR

3421 BEE CAVES ROAD
YPW SPANISH IMMERSION SCHOOL
WEST LAKE HILLS, TX 78746

Prepared For:

CLEAR TERRA GROUP, LLC
3305 HICKORY CREEK COVE
AUSTIN, TEXAS 78735

Prepared By:

SOUTHWEST ENGINEERS, INC

205 CIMARRON PARK LOOP, SUITE B
BUDA, TX 78610

P: 512.312.4336 | F: 830.672.2034

www.swengineers.com | TBPE NO. F-1909

HS/LG/LS

NOVEMBER 2023

SWE Project #: 0906-003-22



11/17/2023

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<u>SECTION DESCRIPTION</u>	<u>PAGE</u>
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IMPERVIOUS COVER.....	2
TOPOGRAPHY.....	2
DRAINAGE ANALYSIS.....	2

EXHIBITS

- A. LOCATION MAP
- B. FEMA FLOOD INSURANCE RATE MAP (FIRM - PANEL #48453C0605K)
- C. DRAINAGE PLAN
- D. NRCS SOIL SURVEY

Engineering Report for 3421 BEE CAVES ROAD

INTRODUCTION

This report, calculations, and preliminary drainage plan are submitted in support of the proposed development for the property located at 3421 Bee Cave Road (RM 2244), in the City of West Lake Hills (COWLH). The purpose of this report is to summarize the methodologies used to analyze the existing and proposed runoff from the site. The proposed development will comply with the regulations set in place by the COWLH in regards to stormwater management per the proposed drainage plan and design. As required by the COWLH, runoff will be collected, detained, and then released in a manner that is equal to or less than what is currently considered existing conditions. Additionally, any runoff generated by the proposed improvements will first be treated by water quality control measures according to the Texas Commission on Environmental Quality (TCEQ) requirements before being detained.

The property is a ± 0.77 acre tract located at 3421 Bee Caves Road in the Full Purposed Jurisdiction of the COWLH, in Travis County, Texas, and is currently comprised of two vacant one-story buildings with associated driveway and parking area. The proposed development consists of a $\pm 7,600$ square-foot (sf) new school building with surface parking, associated drop-off area, as well as corresponding driveway and utilities. Please refer to Location Map in **Exhibit A**.

Access to the development will be provided through Bee Caves Road, in a similar fashion to what currently exists, with a single driveway located on the northeast side of the property. The site is located within the Sanderling Trail Service Area of the COWLH's Wastewater Collection System, and service is to be provided via an existing 8" Polyvinyl Chloride (PVC) gravity fed wastewater main located along the rear of the property. Water supply is to be provided by Travis County Water District 10 via an existing 6" Cast Iron (CI) main located within the Bee Caves Road R.O.W.

FLOODPLAIN

No portion of the site is located within a mapped FEMA Floodplain according to the FEMA Map Panel No. 48453C0445K, effective January 22, 2020. Please refer to the FEMA FIRMETTE in **Exhibit B**.

WATERSHED AND EDWARDS AQUIFER

The property lies within the Eanes Creek watershed, which is classified as a Suburban Watershed. Per the City of Austin GIS information, the site does lie within the Edwards Aquifer Recharge Zone. As such, a Water Pollution Abatement Plan (WPAP) must be submitted and reviewed by TCEQ prior to construction of the proposed improvements.

IMPERVIOUS COVER

The property is currently zoned as Office (O) based on the Official Zoning Map of the COWLH. The zoning designation of this property allows for 30% impervious cover, according to the schedule of regulations described in Section 22.03.281(b)(IX) of the COWLH Code of Ordinances. Also stated in Section 22.03.281(b)(IX), are impervious cover incentives to increase the maximum allowable impervious coverage to 65%, which will be requested. The total amount of on-site impervious cover proposed with this development is approximately $\pm 20,080$ sf, or $\pm 60\%$. Please note the drop-off loop, sidewalks, and parking areas all use pervious pavers, which allows for a 25% impervious area reduction per Section 1.01.003(2) of the COWLH Code of Ordinances.

TOPOGRAPHY

Topographic information for the site was obtained from Crichton and Associates, Inc. by a survey performed on October 11, 2019. The site generally drains away to the north and south directions from a centrally located high point via overland sheet flow, with the northern half being conveyed toward the Bee Caves Road Right-of-Way (ROW), and the southern half draining towards the property's rear boundary, as seen on the Drainage Plan (*Exhibit C*).

DRAINAGE ANALYSIS

Under existing conditions, the project pre-development drainage area map consists of three (3) on-site drainage areas, EX-A, EX-B, and EX-C. Additionally, an off-site drainage area conveying runoff toward the northwestern property boundary has been identified and listed at OS-A. Runoff from drainage areas EX-A and OS-A converge and are ultimately calculated together at the Point-of-Analysis A (POA-A), which then is captured by an existing Texas Department of Transportation (TxDOT) 4'x4' grate inlet, and furthermore conveyed via a 24" storm sewer main located within the Bee Caves Road ROW. Drainage area EX-B drains off-site in a northeast fashion, with runoff directed to the Bee Caves Road ROW as well, and calculated at POA-B, and ultimately collected by another TxDOT 4'x4' grate inlet located downstream of the property to the east. Runoff originating from drainage area EX-C flows downhill towards the southern property line and is calculated at POA-C, which eventually drains to a downstream storm water detention facility, located to the southwest, that serves the surrounding area.

In proposed conditions, the project post-development drainage area map depicts four (4) drainage areas located on-site, PR-A, BYP-A, PR-B, and PR-C. Drainage area PR-A will be comprised of the majority of improvements associated with this development, and the runoff generated from this area will be routed to the TCEQ approved 8'x6' Contech Jellyfish Filter $\pm 5'$ below grade and then to an $\pm 130'$ x48' underground detention facility $\pm 5'$ below grade by a series of on-site inlets and storm sewer pipes. After treatment and detention, runoff will be released into the Bee Caves Road ROW and captured by the existing TxDOT 4'x4' grate inlet, along with the runoff produced from drainage areas OS-A and BYP-A, which bypasses the proposed water quality and detention controls. POA-A in proposed conditions consists of the runoff from drainage areas OS-A and BYP-A, and the controlled discharge of the detention facility belonging to drainage area PR-A. Drainage area PR-C consists of less area than present in existing conditions (EX-C) and has some proposed development, with runoff draining at a rate less than existing conditions. Calculations for this area are taken at POA-C. Drainage area PR-B consists of less area than present in existing conditions (EX-B), with runoff flowing off-site, uncontrolled via sheet flow at a rate less than existing conditions. Calculations for this area are taken at POA-B. All runoff for off-site flows (OS-A) will remain unchanged from existing conditions after the site related improvements proposed with this project. The use and design of temporary and possible permanent erosion control measures, in accordance with the COWLH Drainage and Erosion Control Design Manual (DECDM), will achieve sheet flow conditions for any bypassing off-site flows.

Development runoff calculations, based on peak flow rates equal to the 2-yr, 10-yr, 25-yr, and 100-yr frequency storm events (based on NOAA Atlas 14 rainfall data for the City of West Lake Hills), and defined by the COWLH DECDM, are shown in existing and proposed conditions on the Drainage Area Maps in **Exhibit C**. Drainage analysis has been completed using Bentley PondPack (V10.02.00.01) Software. The *Urban Hydrology for Small Watersheds Technical Release 55*, was used to determine the CN and Tc values for each drainage area. The CN values used for existing and proposed conditions were based on the hydrologic soil group rating from the SCS Soils Conservation Survey for Travis County, Texas and existing and proposed impervious cover. According to the survey, the soils within the drainage areas predominately have a hydrologic soil group rating D, as seen in **Exhibit D**.

A final detention pond design, using the SCS/NRCS Routing Methodology, will be required to show all release flow rates for proposed conditions to be less than flows in existing conditions.

EXISTING TIME OF CONCENTRATION																				
DRAINAGE AREA	SHEET FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)			Total Tc (MIN.)
	SLOPE (FT/FT)	L FT	n	Tc Sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Yor N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Yor N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Yor N	Tc Shallow (MIN.)	Vavg (FT/S)	L	Tc Channel (MIN.)	
EX-A	0.040	100	0.24	9.5	0.037	84	N	0.5	0.000	0	N	0.0	0.000	0	N	0.0	4.0	0	0.0	10.0
EX-B	0.018	100	0.24	13.0	0.007	70	N	0.8	0.041	50	Y	0.2	0.043	46	N	0.2	4.0	0	0.0	14.3
EX-C	0.032	100	0.24	10.4	0.049	59	N	0.3	0.000	0	N	0.0	0.000	0	N	0.0	4.0	0	0.0	10.7
OS-A	0.050	100	0.013	0.8	0.068	162	Y	0.5	0.000	0	N	0.0	0.000	0	N	0.0	4.0	0	0.0	10.0

PROPOSED TIME OF CONCENTRATION												
DRAINAGE AREA	SHEET FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)			Total Tc (MIN.)
	SLOPE (FT/FT)	L FT	n	Tc Sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L	Tc Channel (MIN.)	
PR-A	0.040	10	0.013	0.1	0.030	182	Y	0.9	4.0	35	0.1	10.0
BYP-A	0.051	100	0.24	8.6	0.021	51	N	0.4	4.0	0	0.0	10.0
PR-B	0.017	100	0.24	13.4	0.035	122	N	0.7	4.0	0	0.0	14.1
PR-C	0.030	100	0.013	1.0	0.203	15	N	0.0	4.0	0	0.0	10.0
OS-A	0.050	100	0.013	0.8	0.068	162	Y	0.5	4.0	0.0	0.0	10.0

EXISTING HYDROLOGIC SUMMARY TABLE (SCS METHOD)					
AREA NAME	EX-A	OS-A	EX-A + OS-A (POA-A)	EX-B (POA-B)	EX-C (POA-C)
Drainage Area (ac.)	0.22	0.28	---	0.20	0.35
CN #	81	95	---	84	86
% Impervious	4.32%	82.18%	---	19.82%	35.90%
Tc (min)	10.0	10.0	---	14.3	10.7
2 year Discharge (cfs)	0.66	1.27	1.93	0.59	1.24
10 year Discharge (cfs)	1.23	1.97	3.20	1.06	2.16
25 year Discharge (cfs)	1.61	2.44	4.05	1.37	2.76
100 year Discharge (cfs)	2.24	3.19	5.42	1.87	3.73

PROPOSED HYDROLOGIC SUMMARY TABLE (SCS METHOD)						
AREA NAME	PR-A (DETENTION PROVIDED)	BYP-A	OS-A	PR-A + BYP-A + OS-A (POA-A)	PR-B (POA-B)	PR-C (POA-C)
Drainage Area (ac.)	0.52	0.04	0.28	---	0.07	0.24
CN #	97	80	95	---	80	88
% Impervious	93.13%	0.00%	82.18%	---	0.00%	0.00%
Tc (min)	10.0	10.0	10.0	---	14.1	10.0
2 year Discharge (cfs)	2.38	0.11	1.27	1.61	0.18	0.41
10 year Discharge (cfs)	3.64	0.21	1.97	2.59	0.34	0.78
25 year Discharge (cfs)	4.47	0.27	2.44	3.24	0.45	1.03
100 year Discharge (cfs)	5.83	0.38	3.19	4.29	0.63	1.44

HYDROLOGIC & DETENTION SUMMARY TABLE					
A (DETENTION PROVIDED)					
AREA NAME	PR-A (TO POND)	DETENTION POND (WSE)	DETENTION POND RELEASE	POND RELEASE + BYP-A + OS-A (PR POA-A)	EX-A + OS-A (EX POA-A)
Drainage Area (ac.)	0.52	---	---	---	---
CN #	97	---	---	---	---
% Impervious	93.13%	---	---	---	---
Tc (min)	10.0	---	---	---	---
2 year	2.38 cfs	706.59 (msl)	0.63 cfs	1.61 cfs	1.93 cfs
10 year	3.64 cfs	707.45 (msl)	1.35 cfs	2.59 cfs	3.20 cfs
25 year	4.47 cfs	708.04 (msl)	1.66 cfs	3.24 cfs	4.05 cfs
100 year	5.83 cfs	709.30 (msl)	2.00 cfs	4.29 cfs	5.42 cfs

EXHIBIT A
LOCATION MAP



Southwest Engineers



Civil
Environmental
Planning

TBPE No.: 1909
www.swengineers.com

205 Cimarron Park Lp.
Suite B
Buda, Texas 78610
(512) 312-4336

LOCATION MAP

**SPANISH IMMERSION SCHOOL
3421 BEE CAVES ROAD
WEST LAKE HILLS, TX 78746**

Date: 10/11/2023
File: Exhibit
Scale: N.T.S.
Tech: H S
Project No.: 0906-003-22

EXHIBIT B

**FEMA FLOOD INSURANCE RATE MAP
(FIRMETTE – PANEL #48453C0605K)**

0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes, <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS	NO SCREEN	Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
OTHER FEATURES	---	Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped
		

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

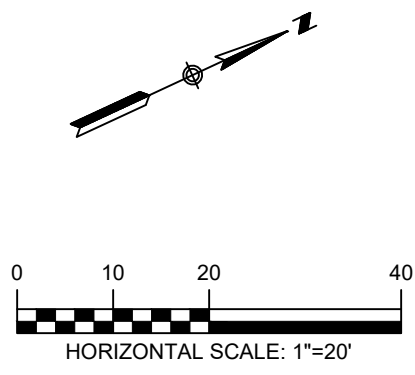
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/16/2021 at 11:27 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

EXHIBIT C
DRAINAGE PLANS

C:\CompanyData\Clients\0906 - Bee Caves Office\0906-003-22_3421 Bee Caves Office\CAD [com] Sheets\0906-003-22_3421.dwg -- Fri, Nov 17, 2023, 1:54pm, By: rathenaleja

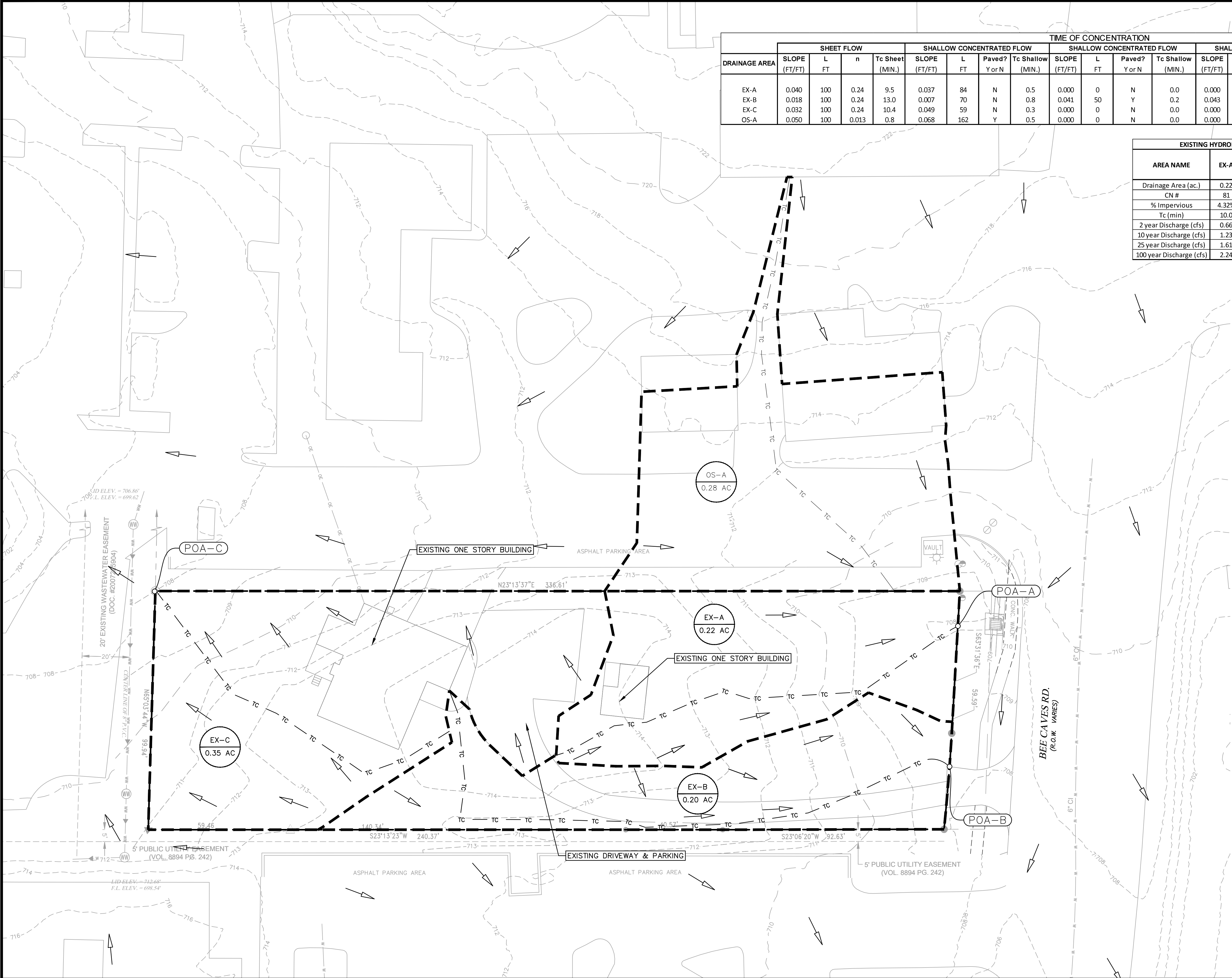
DRAINAGE AREA	TIME OF CONCENTRATION																			
	SHEET FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)			
	SLOPE (FT/FT)	L FT	n	Tc Sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	L	Tc Channel (MIN.)	Total Tc (MIN.)
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EX-C	0.032	100	0.24	10.4	0.049	59	N	0.3	0.000	0	N	0.0	0.000	0	N	0.0	4.0	0	0.0	10.7
OS-A	0.050	100	0.013	0.8	0.068	162	Y	0.5	0.000	0	N	0.0	0.000	0	N	0.0	4.0	0	0.0	10.0



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100 year Discharge (cfs)	2.24	3.19	5.42	1.87	3.73

- LEGEND
- 700 --- EXISTING CONTOURS
 - 700 --- PROPOSED CONTOURS
 - DRAINAGE AREA
 - TC --- TIME OF CONCENTRATION
 - A-1 POINT OF ANALYSIS
 - ← DRAINAGE FLOW DIRECTION
 - DA ACRES DRAINAGE AREA LABEL
 - # INLET LABEL

- NOTES:
- ON-SITE SURVEY TOPOGRAPHIC INFORMATION PROVIDED BY ORIGHTON AND ASSOCIATES, INC. OBTAINED ON OCTOBER, 11, 2019.
 - OFF-SITE TOPOGRAPHIC INFORMATION OBTAINED FROM CITY OF AUSTIN 2017 GIS CONTOURS.



TEXAS ONE CALL SYSTEM
1-800-245-4545
UNDER PENALTY OF LAW, THE CONTRACTOR IS
REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM
AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

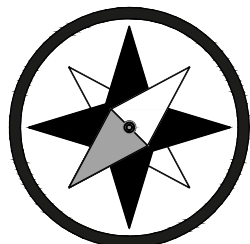
CAUTION - ELECTRICITY PRESENT

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS THAT ENTER OR WORK ON THIS PROJECT ARE RESPONSIBLE FOR LOCATING, USING ONE-CALL OR THE ELECTRIC UTILITIES THEMSELVES, ALL OVERHEAD AND UNDERGROUND ELECTRICAL OF ANY NATURE AND FOR SAFEGUARDING ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK AREAS SHOWN ON THE PLAN, FROM ANY INTERFERENCE WITH THE ELECTRIC LINES OR FROM DAMAGING, DIGGING UP OR UNCOVERING THE ELECTRIC LINES, GETTING A LADDER IN HARM'S WAY OR ANY OTHER ACTIVITY OF ANY NATURE THAT COULD HARM ANY INDIVIDUAL IN ANY MANNER. THIS RESPONSIBILITY HEREBY REMOVES THE ENGINEER AND THE OWNER FROM ANY LIABILITY OF ANY NATURE.

NO.	REVISION	DATE



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MIGUEL GONZALES, JR., PE # 95681 ON THE DATE INDICATED. ANY ALTERATIONS OF THIS SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



**Southwest
Engineers**

TBPE NO. F-1909
www.swengineers.com

HEADQUARTERS

307 Saint Lawrence Street, Gonzales TX 78629
P: 830.672.7546 F: 830.672.2034

CENTRAL TEXAS

205 Cimarron Park Loop, Ste. B, Buda TX 78610
P: 512.312.4330

WARNING

IF THIS BAR DOES NOT MEASURE 1",
THE DRAWING IS NOT TO SCALE

DRAWN BY: DGT/LS/HS

CHECKED BY: AG

EXISTING DRAINAGE AREA MAP

YPW SPANISH IMMERSION SCHOOL

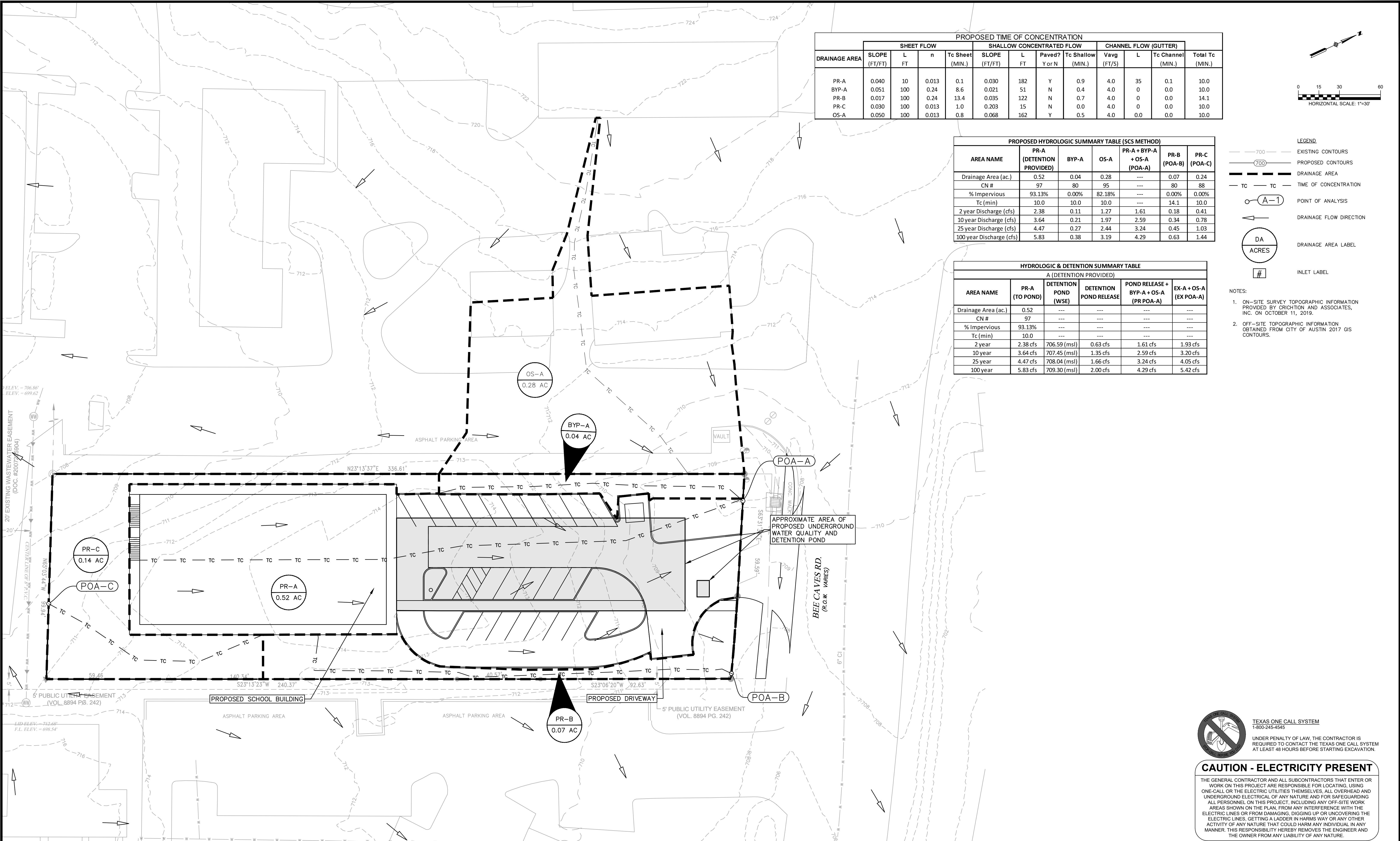
3421 BEE CAVE ROAD, WEST LAKE HILLS, TEXAS, 78746

PROJECT NO. 0906-003-22

DRAWING NO. _____

SHEET 1 OF 2

C:\CompanyData\Clients\0906 - Bee Caves Office\CAD [com] Sheets\0906-003_DRNG.dwg -- Layout: "PROP DA MAP" -- Fri, Nov 17, 2023, 1:49pm, By: nothenlelp



PROPOSED TIME OF CONCENTRATION											
DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW				CHANNEL FLOW (GUTTER)			Total Tc (MIN.)
	SLOPE (FT/FT)	L FT	n	Tc Sheet (MIN.)	SLOPE (FT/FT)	L FT	Paved? Y or N	Tc Shallow (MIN.)	Vavg (FT/S)	Tc Channel (MIN.)	
PR-A	0.040	10	0.013	0.1	0.030	182	Y	0.9	4.0	35	10.0
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PROPOSED HYDROLOGIC SUMMARY TABLE (SCS METHOD)						
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2 year Discharge (cfs)	2.38	0.11	1.27	1.61	0.18	0.41
10 year Discharge (cfs)	3.64	0.21	1.97	2.59	0.34	0.78
25 year Discharge (cfs)	4.47	0.27	2.44	3.24	0.45	1.03
100 year Discharge (cfs)	5.83	0.38	3.19	4.29	0.63	1.44

HYDROLOGIC & DETENTION SUMMARY TABLE					
A (DETENTION PROVIDED)					
AREA NAME	PR-A (TO POND)	DETENTION POND (WSE)	DETENTION POND RELEASE	POND RELEASE + BYP-A + OS-A (PR POA-A)	EX-A + OS-A (EX POA-A)
Drainage Area (ac.)	0.52	---	---	---	---
CN #	97	---	---	---	---
% Impervious	93.13%	---	---	---	---
Tc (min)	10.0	---	---	---	---
2 year	2.38 cfs	706.59 (msl)	0.63 cfs	1.61 cfs	1.93 cfs
10 year	3.64 cfs	707.45 (msl)	1.35 cfs	2.59 cfs	3.20 cfs
25 year	4.47 cfs	708.04 (msl)	1.66 cfs	3.24 cfs	4.05 cfs
100 year	5.83 cfs	709.30 (msl)	2.00 cfs	4.29 cfs	5.42 cfs

- NOTES:
- ON-SITE SURVEY TOPOGRAPHIC INFORMATION PROVIDED BY ORIGHTON AND ASSOCIATES, INC. ON OCTOBER 11, 2019.
 - OFF-SITE TOPOGRAPHIC INFORMATION OBTAINED FROM CITY OF AUSTIN 2017 GIS CONTOURS.



UNDER PENALTY OF LAW, THE CONTRACTOR IS REQUIRED TO CONTACT THE TEXAS ONE CALL SYSTEM AT LEAST 48 HOURS BEFORE STARTING EXCAVATION.

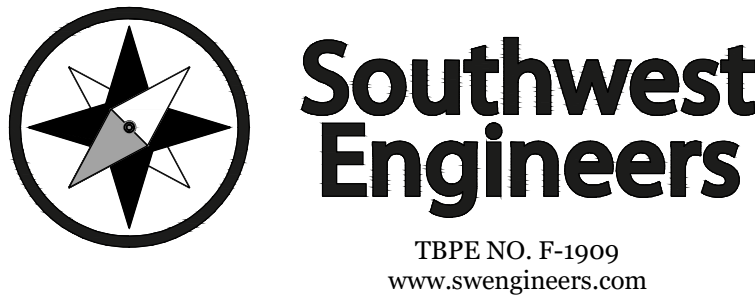
CAUTION - ELECTRICITY PRESENT

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS THAT ENTER OR WORK ON THIS PROJECT ARE RESPONSIBLE FOR LOCATING, USING ONE-CALL OR THE ELECTRIC UTILITIES THEMSELVES, ALL OVERHEAD AND UNDERGROUND ELECTRICAL OF ANY NATURE AND FOR SAFEGUARDING ALL PERSONNEL ON THIS PROJECT, INCLUDING ANY OFF-SITE WORK AREAS SHOWN ON THE PLAN, FROM ANY INTERFERENCE WITH THE ELECTRIC LINES OR FROM DAMAGING, DIGGING UP OR UNCOVERING THE ELECTRIC LINES, GETTING A LADDER IN HARMS WAY OR ANY OTHER ACTIVITY OF ANY NATURE THAT COULD HARM ANY INDIVIDUAL IN ANY MANNER. THIS RESPONSIBILITY HEREBY REMOVES THE ENGINEER AND THE OWNER FROM ANY LIABILITY OF ANY NATURE.

NO.	REVISION	DATE



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CENTRAL TEXAS
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WARNING	
IF THIS BAR DOES NOT MEASURE 1", THE DRAWING IS NOT TO SCALE	
DRAWN BY:	DGT/LS/HS
CHECKED BY:	AG

PROPOSED DRAINAGE AREA MAP	
YPW SPANISH IMMERSION SCHOOL 3421 BEE CAVE ROAD, WEST LAKE HILLS, TEXAS, 78746	

PROJECT NO.	0906-003-22
DRAWING NO.	
SHEET	2 OF 2

EXHIBIT D

**NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
SOIL SURVEY**



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Travis County, Texas

3421 Bee Caves Rd



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Travis County, Texas
Survey Area Data: Version 23, Sep 10, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 27, 2018—Nov 16, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PuC	Purves clay, 1 to 5 percent slopes	0.8	100.0%
Totals for Area of Interest		0.8	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Travis County, Texas

PuC—Purves clay, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ylvf
Elevation: 400 to 1,800 feet
Mean annual precipitation: 33 to 37 inches
Mean annual air temperature: 65 to 69 degrees F
Frost-free period: 220 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Purves and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Purves

Setting

Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from limestone

Typical profile

Ak1 - 0 to 10 inches: clay
Ak2 - 10 to 16 inches: clay
Bk - 16 to 19 inches: clay
R - 19 to 40 inches: bedrock

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: 8 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Minor Components

Eckrant

Percent of map unit: 4 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY360TX - Low Stony Hill 29-35 PZ
Hydric soil rating: No

Brackett

Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R081CY355TX - Adobe 29-35 PZ
Hydric soil rating: No

Doss

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R081CY574TX - Shallow 29-35 PZ
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

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