October 4, 2022

Ms. Molly McGuire
Assistant Planner
City of Mercer Island
Community Planning and Development
9611 SE 36th Street
Mercer Island, WA 98040

Re: Public Comment Overview - File No. 2207-019 / 6950 SE Maker Street / Parcel No. 9350900620

Hello Ms. McGuire -

My name is Jim Mattison and my wife Susan and I live at 7075 SE Maker Street directly across the street from proposed project at 6950.

We are commenting on this proposed project because we believe the GFA calculation and the existing grades designated by the applicant do not comply with the Mercer Island City Code (MICC). We also have several concerns and questions for the City that pertain to the geotechnical and storm drainage report of which we request be answered. Additionally, due to the complexity of the proposed project, site considerations by the geotechnical consultant, and tight confines of Maker Street, we are requesting the City require a Construction Management Plan be filed. And lastly, based upon our understanding, the MICC tree code may have been violated, and we've provided information pertaining to that issue.

(Please note, when we refer to *applicant* in our comments, we mean Jeffrey Almeter, Architect as identified on the permit application. And when we reference the "proposed project site" we may at times also refer to it as the "6950 site" for brevity and clarity.)

The proposed project (6950) site has an existing home slated for demolition which was built upon a steep sloping lot that was leveled extensively in the early 1950s with loose fills. The fill materials are retained by high rockery walls along the west and southwest property lines. The rockery height varies with the slope of the lot perimeter and can range from 13 feet up to 15.5 feet above surrounding grade at its apex.

Gross Floor Area (GFA) - (MICC 19.02.020 Development Standards / Appendix B - Basement Floor Area Calculation)

The GFA calculation for the basement/garage level of the home is incomplete and does not comply with the MICC. Furthermore, when the GFA is correctly and fully applied to all floors, it exceeds the MICC GFA coverage of 40% for R8.4 zoning, and therefore does not comply as well.

We have reviewed the proposed construction plans and noted that the project consists of a basement/garage and two wood-framed levels totaling approximately 5,073 sf. The maximum allowed GFA for this project is 40% or 3,500 sf (3,498 sf and 39.9% actual) as summarized on sheet A1.0. (There was not a basement floor plan drawn or GFA calculations included in the plans, only a summation of floor-by-floor totals was provided.)

The summary excluded 100% of the entire 1,575 sf basement/garage from the total GFA. We checked the applicant's MI Site Development Worksheet, and it also excludes the entire

basement/garage square footage from the GFA exclusion calculation netting out again at 3,498 sf. To better understand this, we researched the MICC and then ran our own GFA basement exclusion calculation based upon our understanding.

We determined that 51% or 803 sf of 1,575 sf basement/garage should be excluded from the GFA - not 100%. Our adjusted total is 3,498 + 772 basement inclusion = 4,270 sf which exceeds the 40% threshold.

Though the existing grade elevations were not shown on the three of the elevation drawings, existing elevations were used from the survey drawing to gain approximate grades. And where "proposed finished grades" were lower, as per Appendix B - Basement Floor Area Calculation, we used those at the garage front and entry and the basement patio door. A copy of our calculations are included in the attachments.

(Please note, we do not agree that most of the spot elevations and contours shown on Terrane sheet 1of 1 meet the MICC definition of existing grade, however we did use them to illustrate our points above.)

Designated Existing Grade - (MICC 19.02.020 Development Standards / 19.16 Definitions / Administrative Interpretation (AI) #04-04 / Administrative Interpretation (AI) #DCI12-04)

A majority of the spot elevations and contours on the survey plan, Terrane sheet 1 of 1, which are designated by the applicant for design of the proposed project, do not meet the MICC definition of *existing grade* and more extensively, *alteration* and therefore, do not comply with the MICC.

From MICC 19.16.010 Definitions:

> *"Alteration: Any human-induced actions which impacts the existing condition of the are, including but not limited to grading, filling,…paving (including construction and application of gravel.)"*

Maxine Allen and her husband built the existing home on the proposed project site around 1955. Their sloping lot was filled to provide for a level building site and yard. We know this because Maxine told us when we moved to the neighborhood in 1995.

Geotech Consultants, Inc. (GCI), in its Critical Area Study report for the proposed project, expanded on the extensive alteration of the site with these observations:

> *"This flat yard area appears to have been created by placing loose fill soils over the original ground surface during he original site development, which was confirmed by test borings conducted for our study."*
>
> *"On the eastern, upslope side of the property, the dense glacial till was revealed approximately 5 feet beneath the ground surface however, the two test borings conducted west of the existing house footprint encountered 5.5 to 11 feet of loose fill soils overlying the native silty sands below."*

The MICC, from our understanding, does not provide for residential development of a native sloping lot by significantly leveling it with fill material, retaining it with large rock or concrete and then shooting elevations from the improved position to then designate them as "existing grade" for the immediate purpose of design and construction. This scenario feels not unlike the proposed project site - with the exception that fill material was originally added for the construction of the existing house and yard.

In addition to GCI's field observations, the MICC Administrative Interpretations afford that other evidence that may be used to establish existing grade prior to alteration of the ground surface.

AI #DCI12-04 states the following:

> *"Portions of a property typically remain undeveloped during single family residential construction, and therefore, are likely to retain the contour present before the most recent development. While it may be impossible to establish grade prior to all lot alterations, it is feasible to interpolate the approximate topographic elevations of the lot previous to the most recent development."*

AI #0404 additionally allows for consideration of concrete evidence or verification:

> *"Thus the City will interpret the existing code language and definitions to mean that, without concrete evidence or verification from a previous survey document, as determined by the City Building Official…"*

Given this guidance from the Interpretations, we have gathered additional evidence that establishes the general topography and existing grades of the original sloped project site prior to leveling with fill material and construction of the retaining rockeries. The following are sources for our evidence:

- GCI field test borings/test hole excavation findings
- Parcel 9350900410 (7145 SE 35th St.) 1989 survey
- Contour interpolations from parcel 9350900410 across proposed project site to SE Maker St.

A total of three test bores and two test holes were performed. Two of the test bores were on the west side of the existing home where loose fill depths were significant. GCI's test boring logs summarized the amount of loose fills that lie overtop remnant topsoil original to the sloping grade:

- Boring 1 @ 231.0 - 5.5 feet loose fill (northern portion of west side of site)
- Boring 2 @ 230.0 - 11.5 feet loose fill (southern portion of west side of site)
- Boring 3 @ 233.0 - 2.0 feet loose fill (includes 6" concrete/gravel drive) (SE corner)
- Test Hole 1 @ 236.0 - 2.8 feet loose fill (NE corner
- Test Hole 2 @ 237.5 - 1.0 feet loose fill (SE corner)

The adjusted existing grades prior to the alteration of the ground surface are now (depth of loose fills removed from boring log):

- Boring 1 - 225.0
- Boring 2 - 218.5
- Boring 3 - 231.0
- Test Hole 1 - 233.0
- Test Hole 2 - 236.5

The extent of loose fill material is significant so much so that GCI commented in its report that:

"…several feet of over-excavation may still be necessary beneath the western perimeter of the new residence's foundation to reach the competent glacial till soils below."

And instructs twice in the report that:

"The western perimeter of the foundation wall of the residence should be designed as a retaining wall to retain the slab sub-grade soils beneath the residence."

"This western foundation wall will also need to be designed to retain loose soils located upslope of the foundation wall and beneath the new residence."

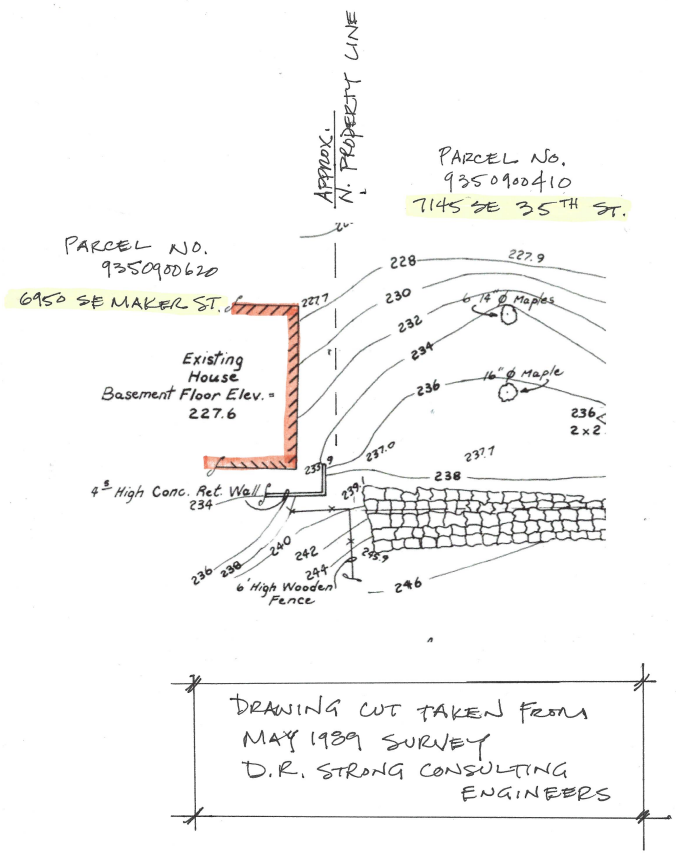
Given the information from the boring logs and GCI's observations about the extent of loose fills, the topography of the original sloping site begins to reveal itself. The adjusted elevations of these borings benchmark locations of a few of the original contours.

Using the City's GIS mapping portal, we were able to locate a survey from parcel no. 9350900410 (7145 SE 35th St.) which is located directly north and adjacent to the project site. The survey is dated May 1989 and was prepared by D.R. Strong Consulting Engineers (Engineers / Planers / Surveyors), Kirkland, WA.

There are several things that are incredibly useful about this survey towards establishing the pre-existing contours and elevations for the proposed project site.

First of all, the contours run north and south - meaning they run laterally across the slope similar to the contours on Maker Street located on the south side of the project site. This is important for contour interpolation which will be covered shortly.

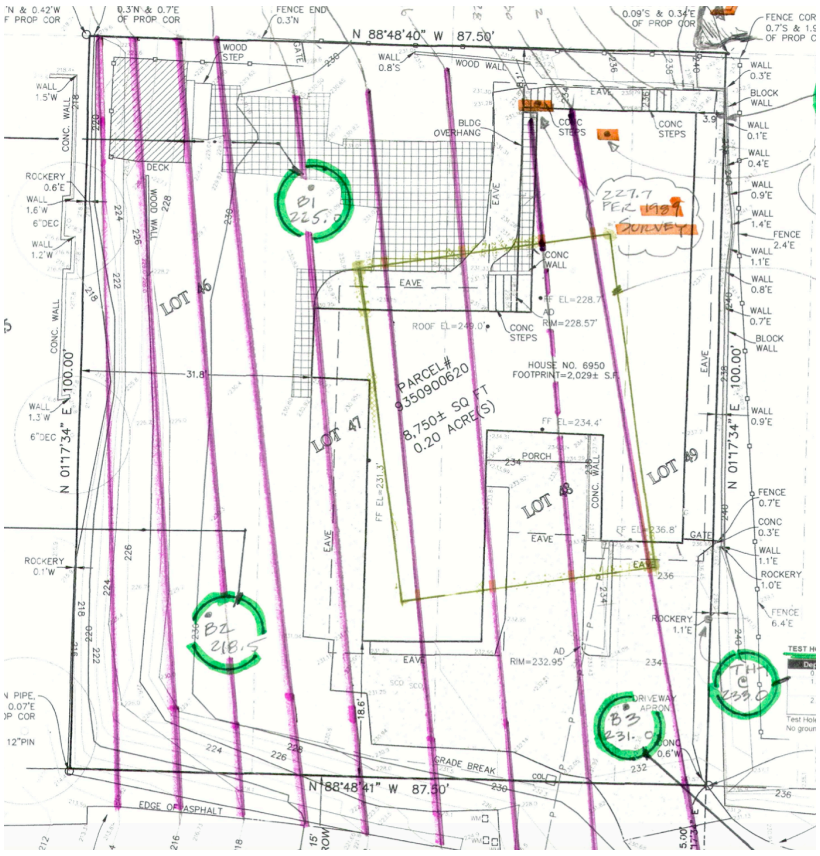
Second, there are numerous mature trees plotted on the survey which is indicative that the 7145 site was native for a long time. There exists a geotechnical report dated 1989 by GeoEngineers which reports in its test hole logs that the site was undisturbed and topped with 4 - 6" of forest duff and topsoil. This is underlaid by a layer of silty fine sand and small gravel followed by "dense glacially consolidated soil" which is not unlike the logs from the 6950 site - minus the loose fill that overlays the site.



Third, a portion of the 6950 site was in fact surveyed. There are three contour lines that originate from the north wall of the NE portion of the existing house and included are two spot elevations, 227.7 at the exterior wall and the “existing house basement floor elevation” of 227.6. Additionally, there are three others that terminate in the vicinity of the NE property corner. The remaining contours either cross southward past the 6950 site property lines or abut the rockery wall that 90s back into the toe of the slope in the NW corner.

Lastly, the contours from the survey can be straight line interpolated with the contours of Maker Street. Maker likely received very little grading and filling along this stretch because of its steep course westward. Its contours lie mostly perpendicular to the fall line indicating that the road follows the steep slope downward with very little alteration. (In fact, this was corroborated by comparing a 60 year-old topographical map of First Hill and a not yet paved Maker Street with the current Lidar imaging available on the City’s GIS mapping portal.)

From this simple interpolation, the original topography of the 6950 site really takes shape, and again, is what you might expect both on paper and if you were out on site. Yes, the linear contours (highlighted in pink) lack the natural meander one would get had several shots been taken for each contour. But by the same token, all three parcels are laterally aligned with respect to the steep slope orientation and the contours line up in way that is expected. The adjusted existing grade for the borings and test holes are markedly in the ballpark on the 6950 site. And the basement floor spot elevation is within a foot of the floor elevation taken in the 2021 survey.



Furthermore, our neighbor, Dan Grove who is commenting about the proposed project as well, has made additional contour and elevation interpolations including an instructive graphical interpolation that illuminates why the designated existing elevations need to be reset to the original topography of the steep slope. His detailed analyses can more accurately define where the original contours lie and therefore, what specific existing grades should be used for the proposed project.

Having researched and reviewed all of our data, including that of Dan Grove's, we believe there is enough concrete evidence to show that the designated existing elevations used for design and proposed construction do not fit the definition of *existing grade* and *altered* and thereby do not comply with the MICC. In addition, by virtue of the geotechnical and survey information we provided, we believe the existing grade, for example, on the west portion of the proposed structure lies many feet lower than the designated existing grades currently proposed. At a minimum, 224.0 - 225.0 seems highly plausible, but in all likelihood it could be much lower than that.

Geotechnical Concerns:

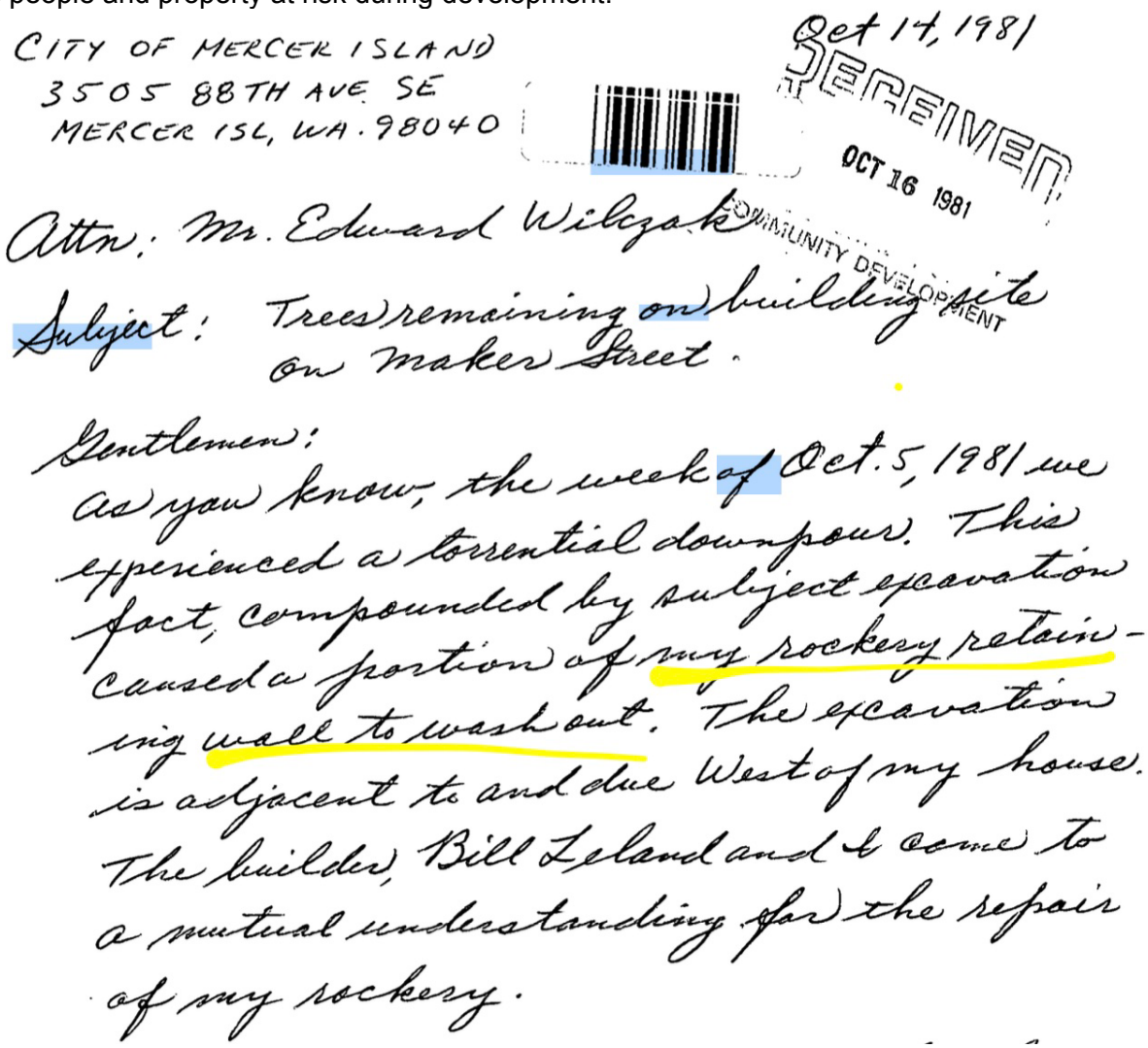
Background:

Per the City of Mercer Island GIS mapping, 6950 Maker Street is mapped as a **Landslide Hazard Area** and **Erosion Hazard Area**. There is also a mapped **Steep Slope** area on the west side of the parcel. Three-quarters of the site is also a **Seismic Hazard Area**. Because of these geologically hazardous areas, the City required conformance with MICC 19.07.160 which required a Critical Area Study of the property

In the Critical Area Study, Geotechnical Consultants determined that this steep slope was created by fill. Per Geotech Consultants, the "flat yard area that appears to have been created by placing loose fill soils over the original ground surface during the original site development which was confirmed by test borings conducted for our study". "Borings found 5.5 to 11 feet of loose silty sand beneath the relatively flat yard" which is contained by an immense rockery on the south and west borders, at the highest point reaching 15.5 feet.

This rockery is identified on the map by atypical square-shaped map contours surrounding the property which clearly outline the man-made rockery supporting the fill. Even the south side of the rockery adjacent to SE Maker Street is over 6 feet tall (per photo). Note that Jim is standing on top of the catch basin as described in the Storm Drainage Report as Photo 3.

We request that **Seasonal Development Limitations** be required which restrict land clearing, grading, filling and foundation work between October 1st and April 1st on lots due to the critical slopes or geologic hazard (MICC 19.07.060). It is our concern after learning that the existing rockery failed in 1981 on the west side after a "torrential downpour", that the current rockery puts people and property at risk during development.



CITY OF MERCER ISLAND
3505 88TH AVE SE
MERCER ISL, WA. 98040

Oct 14, 1981

RECEIVED
OCT 16 1981
COMMUNITY DEVELOPMENT

Attn: Mr. Edward Wilczak

Subject: Trees remaining on building site on Maker Street.

Gentlemen:
As you know, the week of Oct. 5, 1981 we experienced a torrential downpour. This fact, compounded by subject excavation caused a portion of my rockery retaining wall to wash out. The excavation is adjacent to and due West of my house. The builder, Bill Leland and I came to a mutual understanding for the repair of my rockery.

Per MICC 19.07.060, code waivers are allowed if:

> "*2. i. Geotechnical slope stability concerns, erosion and sedimentation impacts can be effectively controlled on site consistent with adopted storm water standards. And ii. The proposed construction work will not subject people or property, including areas off site, to an increased risk of associated impacts.*"

Therefore, we request that no code waivers be permitted, the Seasonal Development Limitations apply, and the following considerations be addressed:

1. Bank Stability and Future Use:

The geotechnical report has advised that no additional decks, patios or sprinkler systems (per Geotech report pg 4) are installed on the west side of the property by the current and **future** owners in order to avoid decreasing the stability of the filled area. And it was advised that no construction materials be staged west of the structure and that vegetation remains in place.

This is alarming. Given the more frequent "atmospheric river" rain events we've had over the last several years and the past failure of the wall, a waiver would place neighboring properties at significant risk if the property demolition, soil disturbance, and excavation is performed during our wet season. Therefore, we oppose the city issuing a waiver as it puts the neighboring property owners at risk and opens the City to liability.

Questions:

- Please clarify MICC 19.07.060 "*2.b. As a condition of the waiver, the code official may require erosion control measures, restoration plans, and indemnification, a release agreement and/or a performance bond."* If the City receives indemnification and provides the applicant a waiver for the Seasonal Development Limitations, how are neighboring properties protected in the case of damage or loss?

- How will the City protect neighbors from future owners of the property who could compromise the structural integrity of the hillside by installing a sprinkler system, additional topsoil, patios, or a sport court on the west side of the property?

- Given the risk due to the rockery, will the City require that the rockery be stabilized with an engineered solution as advised by the geotechnical report (Pg 5) to lower risk of failure during wet conditions and earthquakes? Per the report -"*Stability for these non-engineered rockeries would require the installation of a properly designed stabilization wall embedded into the underlying glacial till."*) This is a necessary and prudent requirement of any waiver to Seasonal Development Limitations.

2. **Stormwater Management:** The Geotech report states that *all stormwater should be directed away from west slope and tightlined to approved off-site discharge system*- Pg 7, Geotech Report.

The Storm Drainage report indicates that "*the roof runoff for the existing house is currently directed to a roof drain system connecting to the public storm drain system*. "

However, The Storm Drainage report states that, "*Runoff is currently discharged from the site to the storm system within SE Maker St. right-of-way. The system is a 12-inch pipe that runs west within SE Maker St.**, Photo 2, 3, and 4.*** **"**

The challenge for the subject property, 6950 SE Maker Street, is that **neither** catch basin in Photo 2 and Photo 3, catch runoff from the subject property or the street, SE Maker. The one

catch basin just east of the driveway (Photo 2) is at a higher elevation than the subject's driveway and SE Maker Street. It was completely grown over from nonuse and recently cleared from weeds, i.e. St. John's Wort and ivy. This culvert doesn't collect rainwater coming down Maker Street due to the location and elevation.

The standard flow of rainwater down Maker Street flows towards the berm/curb at the top of our driveway, 7075 SE Maker Street, and then down to a second berm/curb that directs all the stormwater flow to the culvert at the bottom west corner of the subject property, identified as Photo 4 in the Storm Drainage report.

Any runoff not collected by the culvert at the top of Maker Street, Photo 1, is funneled to the culverts located in front of 7030 SE Maker Street (Photos 4 & 5 in report).

The berm/curb along our driveway protects our house from storm water runoff coming from the top of Maker Street, and we are very concerned about the increased stormwater runoff during construction.

The catch basin in Photo 3 is elevated in the rockery. The only way for this basin to collect stormwater is if water collection was directed in pipes to this culvert/catch basin. This storm drain is located midway below the subject property but is not located at road grade.

Therefore, we believe that the subject property should be required to tightline/pipe all stormwater during construction and construction runoff into one of the unused storm drains. In that case there is less chance that the construction project stormwater would breach the existing berms/curbs and overwhelm the two functional culverts located at 7030 SE Maker Street. See photos below and Appendix.

Photo 2 and Photo 3 from Stormwater Drainage report below. Note: Due to elevations and slope, No stormwater run-off is able to reach either culvert.

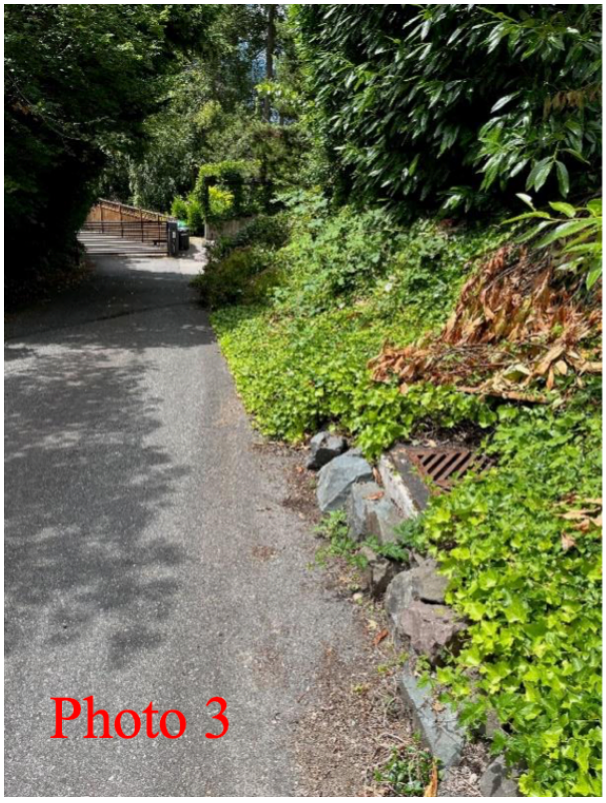


Photo of elevated catch basin on Maker Street (same culvert referred to per Photo 3 in Storm Drainage Report).

Photo of Maker Street: Looking up from house on 7030 Maker Street to adjacent uphill property, 6950 SE Maker Street. Arrows point to operational culvert and berm/curb that directs Maker Street runoff to culvert.

Mercer Island Tree Code Violation:

It is our belief that the Mercer Island Tree Code was violated when Ms. Strand cut her next door neighbor's Exceptional Tree on a Critical Slope without a tree permit. Furthermore, it is evident that planning was already in the works to redevelop the 6950 property and the Exceptional Tree (Red Oak Tree with 46" base) was cut where it crossed the eastern property line for the benefit of that project.

On October 11, 2021, the applicant submitted a Site Development Information worksheet for a single family residential development. It was stated that "no large trees with a diameter of greater than or equal to 10" would be removed as a result of this development activity". The two branches cut were much greater than 10".

In advance of the cutting, surrounding neighbors engaged Ms. Strand both in conversation and writing requesting she reconsider plans to cut the tree and advised that this legacy tree was a neighborhood asset that provides visual beauty, shade, ecological benefits and structural integrity to the critical slope.

On November 9, 2021, P'n'D Logging and Tree Service cut a significant portion of her neighbor's Exceptional tree. One week after cutting this Exceptional Tree, a Pre-Application Meeting (PRE21- 053) was held with the City (November 16, 2021) for the express intention to either remodel the house and add 1,000 sq ft., or tear down the house and rebuild.

Per Mercer Island Code, A tree permit is required in the following situations:

1. Construction work (MICC 19.10.060) – A tree permit with full application is required to cut any Large Tree, Exceptional Tree, or tree in a Critical Area as a result of construction work. A Large Tree is any tree that is 10" in diameter or greater measured at a point 4-1/2 feet above the ground.

Per Mercer Island Code: Tree, exceptional:

"*A tree or group of trees that because of its unique historical, ecological, or aesthetic value constitutes an important community resource. An exceptional tree is a tree that is rare or exceptional by virtue of its size, species, condition, cultural/historic importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table, are considered exceptional trees: An Exceptional Red Oak is defined as a tree with a base of over 2'6"."*

This Red Oak has a diameter of 46 Inches (measured by owner) or 3' 10" and is located on a mapped critical area (indicated in green on map) on neighbor's property (3515), adjacent to (6950) as shown on the map below:


P n D TREE SERVICE • 425-432-763

The cutting was severe resulting in a tree that was imbalanced and significantly damaged.

Per Mercer Island Code 19.10, Tree Frequently Asked Questions are the following pruning guidelines:

https://www.mercerisland.gov/sites/default/files/fileattachments/community_planning_amp_development/page/1811/treepruning.pdf

Per Mercer Island Tree FAQ's, *https://www.mercerisland.gov/sites/default/files/fileattachments/community_planning_amp_develop ment/page/1811/treefaqs.pdf*

1. Normal pruning and maintenance – does not require a permit provided the pruning is limited to not more than 25% of the tree's total leaf area and the pruning conforms to the limitations described within the Definitions section at the end of this document. Also, see the "Pruning Basics" brochure for more detailed information about pruning.

But in this case, we contend that this was not "Pruning", but meets the MICC definition of "Cutting".

Prune or Pruning is defined in Mercer Island Code 19.16.010 as: The pruning of a tree through crown thinning, crown cleaning, windowing or crown raising but not including crown topping of trees or any other practice or act which is likely to result in the death of or significant damage to the tree.

This cutting was an act which is likely to result in the death of or significant damage to the tree.

(This Red Oak Tree had been lightly pruned by her neighbor's arborist in 2020. His arborist advised against any major pruning on the Red Oak tree because additional significant pruning could lead to death or significant damage to the tree.)

A pre-construction assessment was prepared by Superior NW Enterprises on August 16 2022 to "evaluate the health of existing trees and establish criteria for the preservation of those to be retained. The report by Superior NW Enterprises states in the description of the property that:

> *"the previous owners owned the home for at least 20 years and made few changes to the home for at least twenty years.... Just prior to selling the property they removed one small tree on the west side of their yard and arranged to have the neighbor's large tree pruned back from over their roof".*

This is completely **incorrect**.

The home at 6950 was built and owned by the same family for close to 70 years, and they did not remove the trees.

Per the Superior NW Enterprises, Arborist report,

> "*The current owner purchased the subject property in Spring of 2021 and began working with RKK Construction on a plan to tear down the existing house and replace it with another as shown in Figures 1 and 2. They didn't make a tree preservation plan initially as they had no trees on their parcel."*

This is **misleading**.

The Exceptional Tree was cut after the house was sold to Ms. Strand in April 2021 and prior to the November 16, 2021 Pre-Application Meeting with the City.

As stated in the tree report:

> *"The City of Mercer Island requested a tree protection plan because of large trees on the neighboring properties. Superior NW Enterprises was contacted and requested to assess the tree situation. "*

Unfortunately this assessment was prepared **after** the trees had been cut.

Per Superior NW Enterprises report below, the Red Oak is now "*exhibiting signs of stress in the upper canopy"* where the cut the tree. *And there is "heavy epicormic response growth present in the lower canopy*". The stress and heavy epicormic response is due to the recent aggressive cutting.

> 5. Red oak (*Quercus rubra*) easily 40" DSH, 50' tall in the highest reaches, spreads as much as 45' north and south, around 35' east, but was cut back quite hard on the west and extends no more than 18' to that side (Figure 6). The base of the tree is 25' S of the NE corner and 10' on center east of the east line. It sits on top of a large stone retaining wall that is near 5' tall and fully on the neighbor's lot (Figure 7). The stone wall sits above a Keystone block retaining wall that is 5.5' tall and runs along the whole east side of the existing house and 5' E of it (Figure 8). The roots from the oak have interwoven with the stones and likely have entered the soil beneath but primarily they have to have spread toward the east side neighbor's house. There are no indications that the oak's roots have disrupted the Keystone blocks. The oak appears to be fair condition overall but is exhibiting signs of stress in the upper canopy. Heavy epicormic response growth is present in the lower canopy.

This tree cutting violated MICC 19.10.060 and should be addressed by the City.

Per MICC Code 19.10.060, "Retention of exceptional trees."

> *Exceptional trees with a diameter of 24 inches or more that are retained shall be credited towards compliance with the retention requirements of subsection (A)(2) of this section. Removal of Development proposals specified under subsection (a)(1) of this section shall retain exceptional trees with a diameter of 24 inches or more. exceptional trees with a diameter of 24 inches or more, shall be limited to the following circumstances: a) Retention of an exceptional tree(s) with a diameter of 24 inches or more will result in an unavoidable hazardous situation; or b) Retention of an exceptional tree(s) with a diameter of 24 inches or more will limit the constructible gross floor area to less than 85 percent of the maximum gross floor area allowed under MICC chapter 19.02; or, c) Retention of an exceptional tree(s) with a diameter of 24 inches or more will prevent creation of a residential lot through a subdivision or short subdivision that is otherwise allowed by this title.*

Construction Management Plan Request - (MICC 17.14)

The proposed project has a lot of moving parts that have to come together to ensure it is successful, safe and at minimal risk to surrounding property owners. Along with that, we are not going to sleep on our rights as neighbors. The smoothest running and most well planned projects all have challenges. That is a fact. And challenges can become big problems when not properly dealt with.

Requiring the applicant/contractor to file a Construction Management Plan (CMP) and convene a pre-construction meeting (prior to demolition) attended by a City code compliance officer, contractor representative, architect, and neighbors will go along way to opening up lines of communication so that when challenges do present themselves, there's a pathway to address them. Additionally, we anticipate this project taking longer than 12 months, and knowing the construction timeline will go a long way towards keeping us informed and what to expect.

Specifically, here are some reasons why a CMP is essential:

- The geotechnical report makes it real clear that on-site water management is critical for maintaining the stability of the steep west slope of the site. Our take from the report is, extraordinary oversight must be taken if demolition, excavation and foundation work occur during the wet season.
- The site must be monitored to ensure construction materials staging and parking do not occur on the west side of the project. For example, where will the contractor lay down the structural steel beams that are needed?
- Maker Street is a dead end. Three driveways converge at the same point at the proposed project site. As such, road blockages, closures, subcontractor parking, and deliveries must be well communicated and planned. (There will be excavation equipment, concrete trucks, structural steel deliveries, boom trucks/forklifts to set the steel and wood beams, lumber trucks, and on an on.)
- Parking on the Maker Street and 72nd Ave SE is very limited - in fact many of the homes use them for additional parking. Our preference is that construction personnel park off site as much as possible away from the immediate neighborhood.
- We also expect the contractor, prior to the start of demolition, to have filed a Notice of Intent to Perform Demolition with the Puget Sound Clean Air Agency and to have identified any asbestos in the work area. Having and including the City's Asbestos Policy Guidelines in the CMP and discussing at a pre-construction meeting should be required.

If you have any questions pertaining to the complexity of the site or logistic challenges germane to the proposed project, we would encourage you (and other staff) to visit the immediate neighborhood and site and see for yourself.

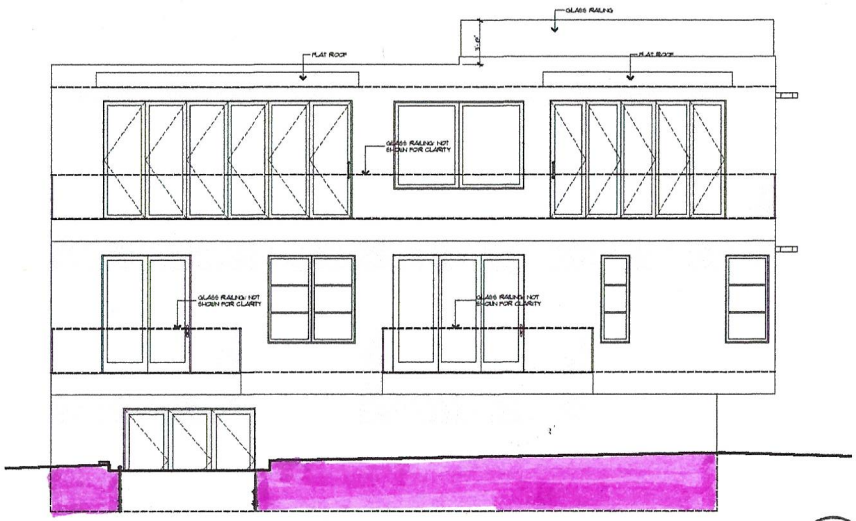
Thank you for reading our comments and providing us an opportunity to weigh in on the proposed project.

Sincere Regards,

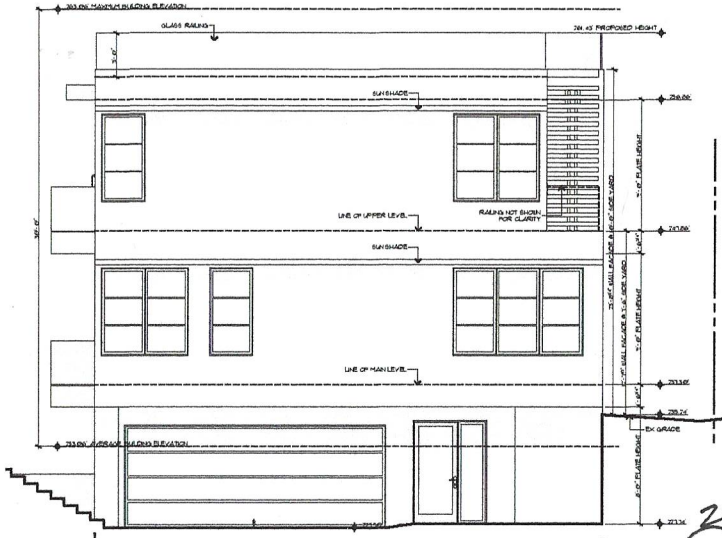
Jim and Susan Mattison
7075 SE Maker Street
jim@mattison.me

Enclosures:
GFA calc worksheet; 7145 SE 35th survey partial; 7145 SE 35th survey full 8.5x11); Terrane survey modified (full size plan); 7145 SE 35th survey (full size plan); thumb drive w/ltr and docs

APPENDIX B: A. A TOPOGRAPHIC MAP OF THE EXG. GRADES & PROPOSED FINISHED GRADES
B. BLDG. PLANS SHOWING DIMS. OF ALL EXTERIOR WALL SEGMENTS & FLOOR AREAS.
C. BLDG. ELEVATIONS SHOWING LOCTN. OF EXISTING & PROPOSED FINISHED GRADES IN RELATION TO BSMT LEVEL.



WEST ELEVATION (2)
SCALE: 1/4" = 1'-0"



SOUTH ELEVATION (1)
SCALE: 1/4" = 1'-0"

AVERAGE BUILDING ELEVATION CALCS:

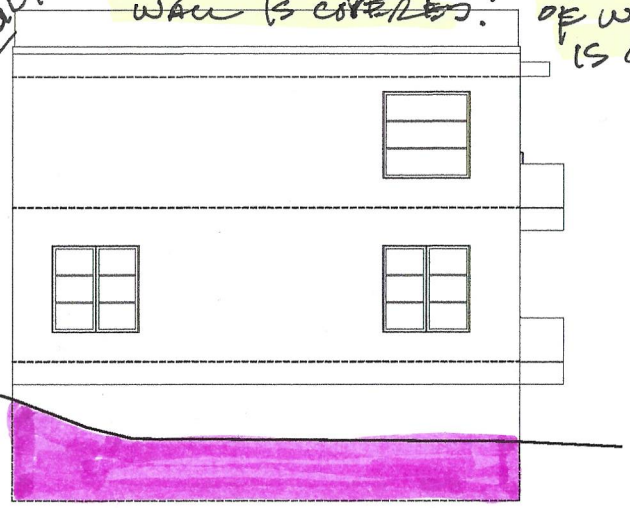
SEGMENT "A" ELEVATION:	233.00'
SEGMENT "A" LENGTH:	35'
SEGMENT "A" ELEVATION x LENGTH:	8,155.00 FT²
SEGMENT "B" ELEVATION:	231.25'
SEGMENT "B" LENGTH:	50'
SEGMENT "B" ELEVATION x LENGTH:	11,562.50 FT²
SEGMENT "C" ELEVATION:	228.5'
SEGMENT "C" LENGTH:	35'
SEGMENT "C" ELEVATION x LENGTH:	8,002.50 FT²
SEGMENT "D" ELEVATION:	235'
SEGMENT "D" LENGTH:	50'
SEGMENT "D" ELEVATION x LENGTH:	11,800.00 FT²
TOTAL OF AGGREGATE ELEVATION:	39,630'
TOTAL OF SEGMENT LENGTHS:	170'
AVERAGE BUILDING ELEVATION	233.04'

227.74 PROPOSED FINISH. GRADE

10'-0 | 45'-0 | APPROX. | 35'-0

- 0% OF 10'-0 WALL IS COVERED.
- 50% OF 35'-0 OF WALL IS COVERED
- NONE OF WALL 1 IS BELOW FF + EXIST. GRADE (COVERED)

WALL	LENGTH	COVERAGE	RESULT
1	35	0	0%
2 ~~35~~	45	50	17.5%
3	45	100	45
4	35	55	19%
2 TOTAL	10	0	0
	=		81.5%



NORTH ELEVATION (4)
SCALE: 1/4" = 1'-0"

EAST ELEVATION (3)
SCALE: 1/4" = 1'-0"

- ≃ 55% COVERED

$$\frac{81.5}{35+45+45+35} = 51\% \text{ COVERAGE}$$

1575 ϕ
X .51
803 ϕ

- FOR SAKE OF BREVITY — 100% OF BSMT WALL COVERED MAY BE EXCLUDED

∴ 1575 ϕ − 803 = ADD TO 772 ϕ AREA

MERCER RESIDENCE
6950 SE MERCER ST MERCER ISLAND, WA

BUILDING ELEVATIONS

RELEASE
21 MARCH 2022

A3.1

MAKER AVE

TOPOGRAPHIC & BOUNDARY SURVEY

STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

(IN FEET)
1 INCH = 10 FT.

231.0
- 6.0 FILL MATERIAL
225.0 ADJUSTED ELEVATION

BORING 1
Description — Elevation ±231 feet

Depth (ft)	Material	Water Table	Blows Per Foot	Sample	USCS	Description
0					FILL	Gray-brown silty SAND with gravel; fine- to medium-grained, moist, loose (FILL)
5						Remnant Topsoil: Brown silty SAND with gravel, fine- to medium-grained, moist, loose; becomes fine- to coarse-grained, with occasional sandy lenses
10					SM	becomes gray-brown, clayey, gravelly, dense (Glacial Till)
15					SP	Gray-brown SAND with silt and gravel, fine- to medium-grained, moist, medium-dense
20					SM	Brownish gray silty clayey SAND with gravel, fine- to medium-grained, moist, very dense

* Test boring was terminated at 19.4 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

230.0
- 11.5 FILL MATRL
218.5 ADJUSTED ELEV.

BORING 2
Description — Elevation ±230 feet

Depth (ft)	Material	Water Table	Blows Per Foot	Sample	USCS	Description
0					FILL	Dark-brown silty SAND with gravel and organics; fine- to medium-grained, moist, loose
5						with trace burnt wood and concrete debris
10						becomes gray-brown, no wood or concrete debris
15						becomes dark-brown, with abundant organics and decomposed wood
20						Remnant Topsoil
					SM	Gray-brown silty clayey SAND with gravel and occasional sandy seams, fine- to medium-grained, moist, medium-dense
						becomes very dense

* Test boring was terminated at 21.5 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

GEOTECH CONSULTANTS, INC.

TEST BORING LOG
6950 Southeast Maker Street
Mercer Island, Washington

Job No.	Date:	Logged by:	Plate:
22007	Mar. 2022	ASM	4

FOUND IRON PIPE, 0.21'N & 0.42'W OF PROP COR
ROCKERY 0.37'N & 0.7'E OF PROP COR
FENCE END 0.3'N
FOUND PK NAIL 0.09'S & 0.34'E OF PROP COR
FENCE COR 0.7'S & 1.9'E OF PROP COR
N 88°48'40" W 87.56'
WOOD STEP
WOOD WALL
WALL 0.8'S
WALL 1.5'W
CONC WALL
DECK
ROCKERY 0.6'E
WALL 1.6'W
6"DEC
WALL 1.2'W
ROCKERY 0.1'W
WALL 1.3'W
6"DEC
BLDG OVERHANG
CONC STEPS
EAVE
B1 225.0
227.7 PER 1989 SURVEY
CONC WALL
FF EL=228.7
AD
RIM=228.57'
ROOF EL=249.0'
HOUSE NO. 6950
FOOTPRINT=2,029± S.F.
PARCEL # 3350900620
8,750± SQ FT
0.20 ACRE(S)
LOT 46
LOT 47
LOT 48
LOT 49
LOT 50
LOT 45
N 01°17'34" E 100.00'
FF EL=234.4'
PORCH
FF EL=236.8'
GATE
FF EL=231.5'
B2 218.5
RIM=232.95
DRIVEWAY APRON
B3 231.0
CONC 0.6'W
GRADE BREAK
EDGE OF ASPHALT
N 88°48'41" W 87.50'
N 88°48'41" W 419.50'
MAKER AVE
15' ROW
15.00'
89.00'
CB (TYPE 1) RIM=213.66' IE(E.) 12"DI=211.31' IE(W.) 12"CONC=211.26'
SSMH RIM=226.83' IE(E./W.) 8"CONC=221.33'(C.C.)
CB (TYPE 1) RIM=230.98' IE(E.) 15"PVC=229.48' IE(W.) 12"DI=223.48'
FOUND IRON PIPE, 0.33'S & 0.07'E OF PROP COR
12"PIN
FOUND IRON PIPE, LS# 28764 0.35'E OF PROP COR
WALL 0.3'E
BLOCK WALL
WALL 0.1'E
WALL 0.4'E
WALL 0.9'E
WALL 1.4'E
FENCE 2.4'E
WALL 1.1'E
WALL 0.8'E
WALL 0.7'E
BLOCK WALL
WALL 0.9'E
FENCE 0.7'E
CONC 0.3'E
WALL 1.1'E
ROCKERY 1.0'E
FENCE 6.4'E
ROCKERY 1.1'E
TH-2 236.5
TH-1 229.0
TEST HOLE 2

Depth (Feet)	Soil Description
0.0 – 1.0	Gray-brown silty SAND with gravel, fine- to medium-grained, moist, loose (FILL)
1.0 – 3.2	Rust-brown silty SAND with gravel, fine- to medium-grained, moist, loose (SM) at 3 feet, becomes gray-brown
3.2 – 4.0	Gray-brown gravelly SAND with silt, fine- to coarse-grained, moist, loose to medium-dense (SW)

Test Hole was terminated at 4.0 feet due to refusal on gravels on February 4, 2022.
No groundwater seepage was encountered in the test hole.

TEST HOLE 1

Depth (feet)	Soil Description
0.0 – 1.5	Topsoil
1.5 – 2.8	Gray-brown silty clayey SAND with gravel, fine- to medium-grained, moist, loose (FILL)
2.8 – 3.0	Gray-brown silty clayey SAND with gravel, fine- to medium-grained, moist, medium-dense (SM)

Test Hole was terminated at 3.0 feet on February 4, 2022.
No groundwater seepage was encountered in the test hole.

231.5
1.0 FILL MTRL.
230.5 ADJ. ELEV.

236.0
- 5.0 FILL MTRL.
231.0 ADJUSTED ELEVATION

BORING 3
Description — Elevation ±233 feet

Depth (ft)	Material	Water Table	Blows Per Foot	Sample	USCS	Description
0					FILL	Gray-brown gravelly silty SAND; fine- to medium-grained, dry, loose (FILL)
5						Gray-brown with rust mottling, silty clayey SAND with gravel and occasional sand seams, fine- to medium-grained, moist, medium-dense
10					SM	becomes gray-brown, dense (Glacial Till)
						becomes very dense
						becomes fine grained, no sand seams

* Test boring was terminated at 10.9 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

233.0
- 1.5 FILL
1.5 CONC.
231.0 ADJUSTED ELEVATION

PLAN INFO OBSCURED BY BORING LOG CUT.

N 01°17'34" E 1217.50'
460.00' HELD PLAT
72ND AVE SE

BASIS OF BEARINGS
N 88°48'41" W 1343.02' MEAS. (1342.95' R1)
SE 32ND ST
FOUND MON IN CASE BRASS DISK, DOWN 1.85'
89°35'45" HELD R2
757.50' HELD R2
90°06'15" HELD R2
N 88°48'41" W
SE ALLEN ST

DRAWN CONTOURS TAKEN FROM: MAY 1989 SURVEY] DR STRONG CONSULTING PARCEL NO. 9350900410 ENG'S. 7145 SE 35TH ST, MERCER ISLAND, WA

NEW HOME'S FOOTPRINT OF BASEMENT WALL LINES 35'-0" X 45'-0 W/OUT WOOD FRAME CANTILEVERED FLOORS, DECKS OR ROOF EAVES.

EXISTING HOUSE BASEMENT FLOOR ELEVATION 227.6 1989 SURVEY

MATURE TREES (TYP.)

PARCEL NO. 9350900410

FOUND SURFACE MON VISITED 06-20-13

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 9350900620

STRAND RESIDENCE
6950 SE MAKER STREET
MERCER ISLAND, WA 98040

measure success

Terrane
Street, Suite 102, Bellevue, WA 98004
p: 425.458.4488 support@terrane.net
www.terrane.net

5/27/2021
JOB NO.
210007

SHEET NUMBER
1 OF 1

TOPOGRAPHIC & BOUNDARY SURVEY

STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

10 0 5 10
(IN FEET)
1 INCH = 10 FT.

231.0 - 6.0 FILL MATERIAL = 225.0 ADJUSTED ELEVATION

BORING 1 — Elevation ±231 feet

Depth (ft)	Material	Water Table	Blows per Foot	Sample	USCS	Description
5	6	1			FILL	Gray-brown silty SAND with gravel, fine- to medium-grained, moist, loose **(FILL)**
	4	2				Remnant Topsoil: Brown silty SAND with gravel, fine- to medium-grained, moist, loose
10	12	3				becomes fine- to coarse-grained, with occasional sandy lenses
	45	4			SM	becomes gray-brown, clayey, gravelly, dense (Glacial Till)
15	16	5			SP	Gray-brown SAND with silt and gravel, fine- to medium-grained, moist, medium dense
	50/4"	6			SM	Brownish gray silty clayey SAND with gravel, fine- to medium-grained, moist, very dense
20						

* Test boring was terminated at 19.4 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

230.0 - 11.5 FILL MATRL = 218.5 ADJUSTED ELEV.

BORING 2 — Elevation ±230 feet

Depth (ft)	Material	Water Table	Blows per Foot	Sample	USCS	Description
5	3	1			FILL	Dark brown silty SAND with gravel and organics, fine- to medium-grained, moist, loose
	5	2				with trace burnt wood and concrete debris
10	9	3				becomes gray-brown, no wood or concrete debris
	5	4				becomes dark brown, with abundant organics and decomposed wood
15	24	5				Remnant Topsoil: Gray-brown silty clayey SAND with gravel and occasional sandy seams, fine- to medium-grained, moist, medium-dense
	60	6			SM	becomes very dense
20	64	7				

* Test boring was terminated at 21.5 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

GEOTECH CONSULTANTS, INC.

TEST BORING LOG
6950 Southeast Maker Street
Mercer Island, Washington

Job No.	Date	Logged by	Plate
22007	Mar. 2022	ASM	4

DRAWN CONTOURS TAKEN FROM: MAY 1989 SURVEY BY STRONIA CONSULTING ENG'S. PARCEL NO. 9350900410 7145 SE 35TH ST, MERCER ISLAND, WA

BASIS OF BEARINGS
N 88°48'41" W 1343.02' MEAS. (1342.95' R1)

FOUND SURFACE MON VISITED 06-20-13

FOUND MON IN CASE BRASS DISK, DOWN 1.85'

SE 32ND ST

89°53'45" HELD R2

757.50' HELD R2

90°06'15" HELD R2

N 88°48'41" W

SE ALLEN ST

PARCEL NO. 9350900410

MATURE TREES (TYP)

ROCKERY

FOUND IRON PIPE, 0.21'N & 0.42'W OF PROP COR

ROCKERY 0.3'N & 0.7'E OF PROP COR

FENCE END 0.3'N

FOUND PK NAIL 0.09'S & 0.34'E OF PROP COR

FENCE COR 0.7'S & 1.9'E OF PROP COR

N 88°48'40" W 87.50'

WOOD STEP

WALL 0.8'S

WOOD WALL

EAVE

WALL 0.3'E
BLOCK WALL 0.1'E
WALL 0.1'E
WALL 0.4'E
WALL 0.9'E
WALL 1.4'E
FENCE 2.4'E
WALL 1.1'E
WALL 0.8'E
WALL 0.7'E
BLOCK WALL
WALL 0.9'E
FENCE 0.7'E
CONC 0.3'E
WALL 1.1'E
ROCKERY 1.0'E
FENCE 6.4'E
ROCKERY 1.1'E

WALL 1.5'W
CONC. WALL
ROCKERY 0.6'E
WALL 1.6'W 6"DEC
WALL 1.2'W
WALL 1.3'W 6"DEC
ROCKERY 0.1'W

DECK

BLDG OVERHANG

CONC STEPS

CONC WALL

B1 225.5

B2 218.5

B3 231.0

TH-2 236.5

TEST HOLE 2

Depth (feet)	Soil Description
0.0 - 1.0	Gray-brown silty SAND with gravel, fine- to medium-grained, moist, loose **(FILL)**
1.0 - 3.2	Rust-brown silty SAND with gravel, fine- to medium-grained, moist, loose **(SM)** - at 3 feet, becomes gray-brown
3.2 - 4.0	Gray-brown gravelly SAND with silt, fine- to coarse-grained, moist, loose to medium-dense **(SW)**

Test Hole was terminated at 4.0 feet due to refusal on gravels on February 4, 2022
No groundwater seepage was encountered in the test hole

231.5 - 1.0 FILL MTRL. = 230.5 ADJ. ELEV.

EXISTING HOUSE BASEMENT FLOOR ELEVATION 227.6 1989 SURVEY

227.7 PER 1989 SURVEY

NEW HOME: FOOTPRINT OF BASEMENT WALL LINES 35'-0" X 45'-0" W/OUT WOOD FRAME CANTILEVERED FLOORS, DECKS OR ROOF EAVES.

PARCEL # 9350900620
8,750± SQ FT
0.20 ACRE(S)

HOUSE NO. 6950
FOOTPRINT=2,029± S.F.

LOT 46 | LOT 47 | LOT 48 | LOT 49 | LOT 50 | LOT 45

N 01°17'34" E 100.00'

31.8

18.6

FF EL=228.7
AD RIM=228.57'
ROOF EL=249.0'
CONC STEPS

FF EL=234.4'
PORCH 234
FF EL=231.4'
FF EL=236.8'
GATE
AD RIM=232.95'

TEST HOLE 1

Depth (feet)	Soil Description
0.0 - 1.5	Topsoil
1.5 - 2.8	Gray-brown silty clayey SAND with gravel, fine- to medium-grained, moist, loose **(FILL)**
2.8 - 3.0	Gray-brown silty clayey SAND with gravel, fine- to medium-grained, moist, medium-dense **(SM)**

Test Hole was terminated at 3.0 feet on February 4, 2022
No groundwater seepage was encountered in the test hole

TH-1 239.0

231.0 - 3.0 FILL MTRL. = 228.0 ADJ. ELEVATION

DRIVEWAY APRON

FOUND IRON PIPE, 0.33'S & 0.07'E OF PROP COR

12"PIN

GRADE BREAK

EDGE OF ASPHALT

15' ROW

N 88°48'41" W 419.50'

MAKER AVE

CB (TYPE 1)
RIM=213.66'
IE(E.) 12"DI=211.31'
IE(W.) 12"CONC=211.26'

SSMH
RIM=226.83'
IE(E./W.) 8"CONC=221.33'(C.C.)

FOUND IRON PIPE, LS# 28764 0.35'E OF PROP COR

CB (TYPE 1)
RIM=230.98'
IE(E.) 12"PVC=229.48'
IE(W.) 12"DI=223.48'

N 01°17'34" E 100.00'

89.00'

460.00' HELD PLAT
N 01°17'34" E 1217.50'

72ND AVE

BORING 3 — Elevation ±233 feet

Depth (ft)	Material	Water Table	Blows per Foot	Sample	USCS	Description
					FILL	Gray-brown gravelly silty SAND, fine- to medium-grained, dry, loose **(FILL)**
5	20	1				Gray-brown with rust mottling, silty clayey SAND with gravel and occasional sand seams, fine- to medium grained, moist, medium-dense
	39	2			SM	becomes gray-brown, dense (Glacial Till)
10	78/11"	3				becomes very dense
	50/6"	4				becomes fine grained, no sand seams
	50/5"	5				

* Test boring was terminated at 10.9 feet due to refusal on February 4, 2022.
* No groundwater was encountered during drilling.

233.0 - 1.5 FILL - .5 CONC. = 231.0 ADJUSTED ELEVATN.

PLAN INFO OBSCURED BY BORING LOG CUT.

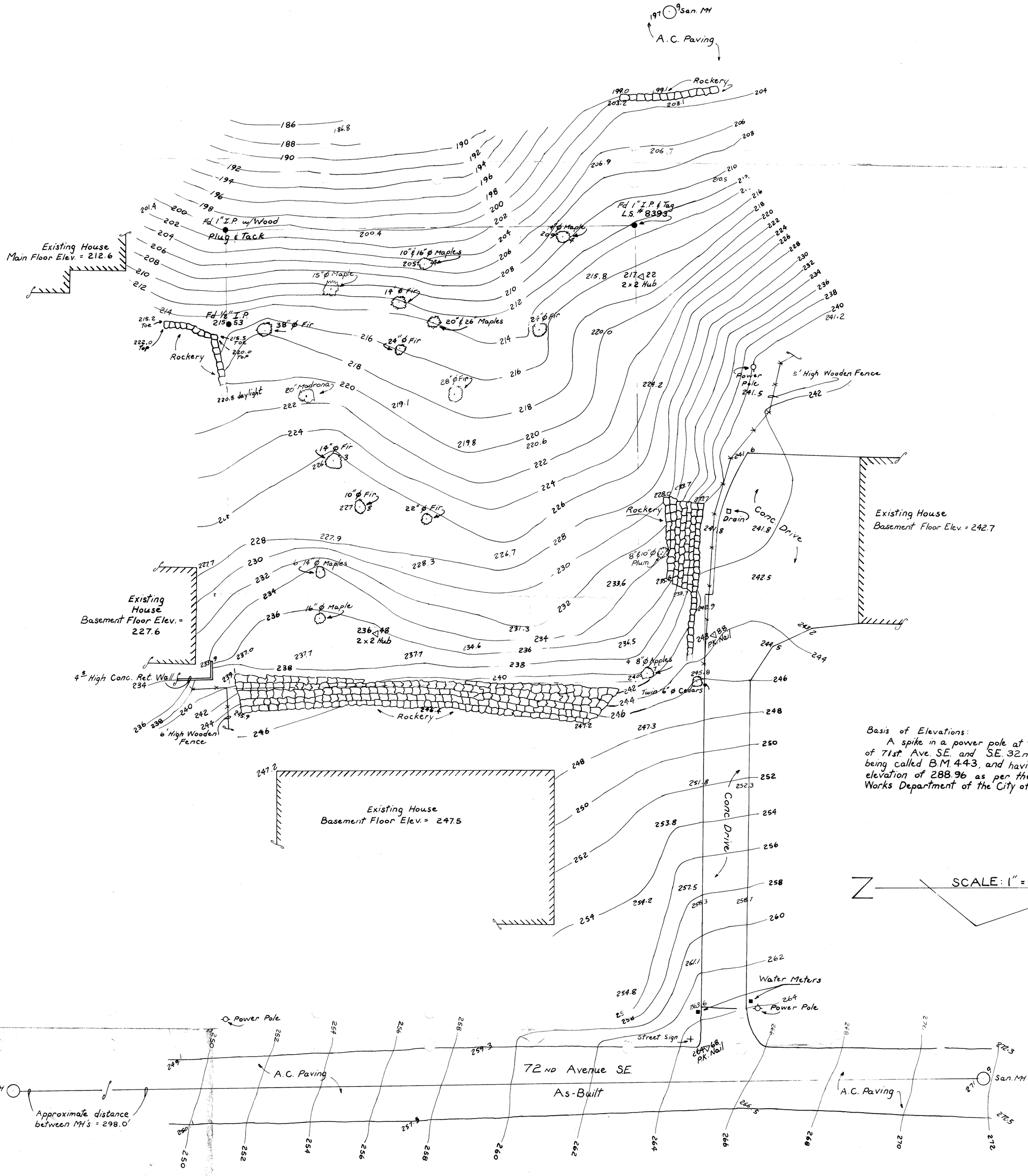
TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 9350900620

STRAND RESIDENCE
6950 SE MAKER STREET
MERCER ISLAND, WA 98040

GOODMAN MILLER PROFESSIONAL LAND SURVEYOR STATE OF WASHINGTON 5/27/21

Terrane
Current, Suite 102, Bellevue, WA 98004
425.458.4488 support@terrane.net
www.terrane.net

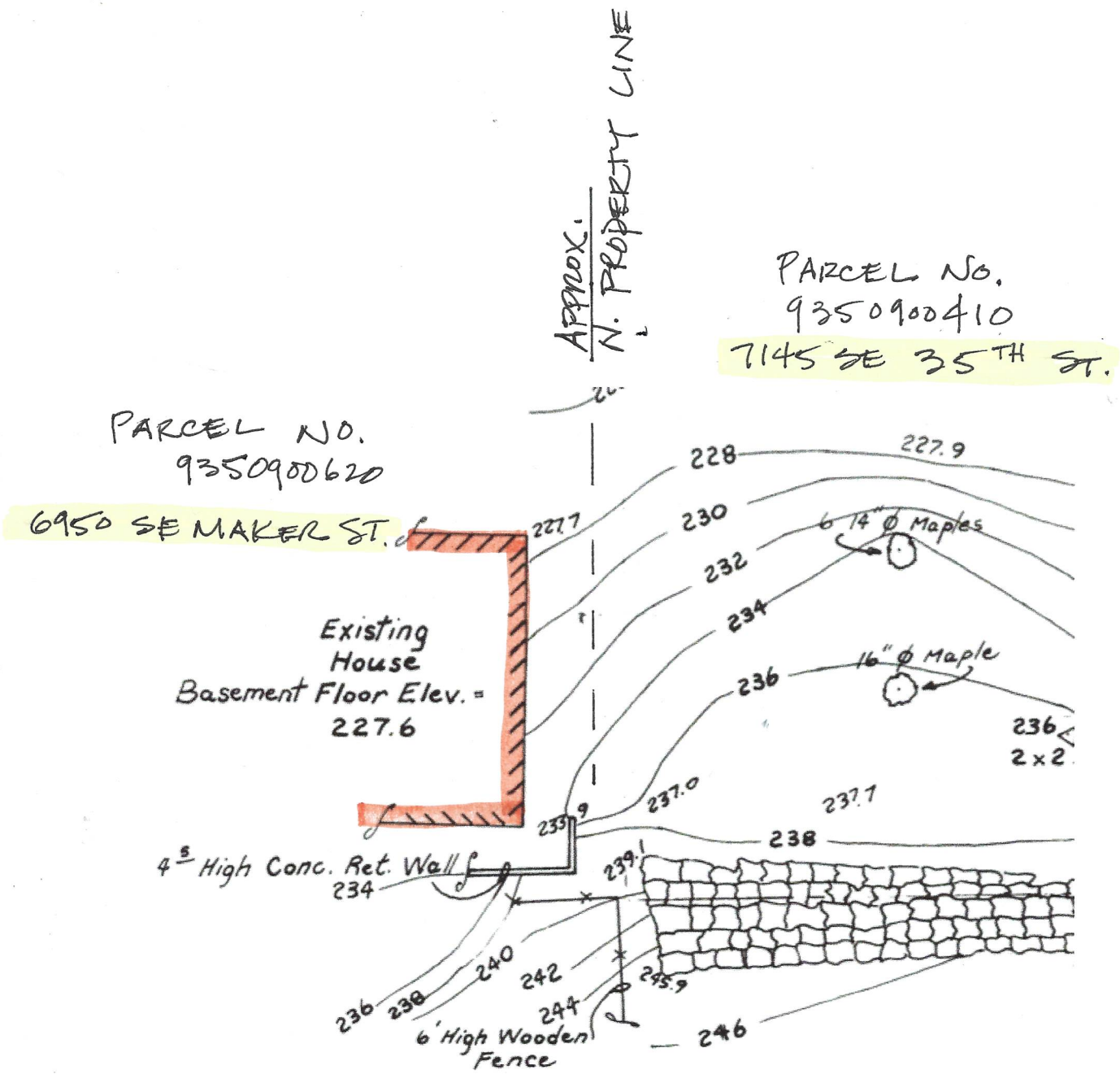
5/27/2021
JOB NO. 210007
SHEET NUMBER
1 OF 1



Basis of Elevations:
A spike in a power pole at the intersection of 71st Ave. S.E. and S.E. 32nd Street, being called B.M. 443, and having an elevation of 288.96 as per the Public Works Department of the City of Mercer Island.

SCALE: 1" = 10'

Topographic Survey	CLIENT: Myrvang Architects	PROJECT: Pederson Residence	Gerald S. Strong	D.R. STRONG Consulting Engineers Inc. 10602 N.E. 38th PLACE, SUITE 101 • KIRKLAND, WA. 98033 (206) 827-3063 ENGINEERS • PLANNERS • SURVEYORS (206) 652-9331 DRAWN J.M.R. DATE May 1989 DRAWING NO. 89-848 CHECKED GES SCALE 1" = 10' SHEET



DRAWING CUT TAKEN FROM MAY 1989 SURVEY D.R. STRONG CONSULTING ENGINEERS