I. SITE DESCRIPTION

The site is located on East Mercer Way, about at SE 56th Street. The assessor lists the address as 5637 East Mercer Way, Tax Lot Number 192405-9312. The site is bounded on the north by Parkwood Ridge Open Space, on the east, south and west by single family residences. The zoning for all the properties in the vicinity is residential, R-15. The site is 37,554 square feet and is zoned for two lots.

There is an existing access-utility easement at the southwest corner of the property that provides access and utilities to the property as well as to the property directly south, 5645 East Mercer Way. There is a driveway in the easement paved with asphaltic paving, approximately 600 square feet in area that connects the street to the residence to the south. The driveway varies in width from 10' to 15'. The wider portion is where the driveway makes a sharp bend of over 90 degrees. The driveway slopes steeply up from the property line at approximately 20%. The driveway levels out in the ROW to street to allow safe access to East Mercer Way. A rockery approximately 62' long with a maximum height of eight feet was constructed along with the drive access. Twenty-two feet of the rockery is on this property and forty feet on the south property. Sometime in the past approximately 900 square feet of quarry spalls have been spread in the easement to allow equipment access to the site. See Plate #1.

The site contains a small perennial steam, stream "A", that flows easterly. It originates in seepage from the bordering slope wetlands, the Parkwood Ridge Open Space, and flows somewhat steeply to the east where it cascades over a bank into a catch basin and then through a culvert under Mercer Way discharging into Lake Washington. The stream flows through a 100' long culvert which is a barrier to any fish migration. As a result, this small channel has been mapped by the City as a Type 2 Watercourse. There is a second very small perennial steam, stream "B", that originates in seepage near the center of this site and flows easterly. It connects with the northerly stream offsite. It is also a Type 2 Watercourse. The buffers for both steams are 50'. See Plate #2.

The site contains two steep slope areas, one at the northwest corner approximately 2400 square feet. There is a second steep slope area, approximately 6400 square feet, along the south property line. See Plate #3. All of the site that is not classified as steep slope, steam or steam buffer is a Type 3 Wetland. See Plate #4.

II. REASONABLE USE EXCEPTION

The application of Mercer Island's development regulations to this property, as summarized above, precludes the property's development for any purpose whatsoever. Section 19.07.030B of the Mercer Island Municipal Code provides a process for the applicant to request the Hearing Examiner to determine whether to grant a "reasonable use exception" for a proposed development of the property. Section 19.07.030B,3

provides that "the hearing examiner will approve the application if it satisfies all of the following criteria", which are enumerated as A through F below.

A. Denial of Reasonable Use of Property.

The application of these regulations deny any reasonable use of the property. The hearing examiner will consider the amount and percentage of lost economic value to the property owner.

The subject property is severely impacted by a combination of environmental constraints and their resulting regulations and restrictions: steep slopes; Type 2 Watercourses; and Category III Wetlands. When these restrictions are applied to the site, none of the property can be developed for any purpose, as confirmed by the preliminary plans and wetland report submitted with the application. The proposed location of the house is strategically situated on the relatively small portion of the property which is considerably more level and less impacted by these factors. This represents the only portion of the property where a house can realistically be sited.

As a result of the application of development regulations the property has lost virtually all of its economic value because, as indicated, none of it can be developed for any purpose even though it's zoned for two legal lots. The restrictions further adversely impact the property because any potential development will necessarily result in the property being burdened by extraordinary high development costs. As detailed below, these include the construction of the house on piles, the necessity of building a "catchment wall" to prevent the impact of any soils instability in the event of a catastrophic seismic activity and the costs associated with mitigating the impact of any modification to the property's wetlands.

B. No Other Use would Be Less Impactful.

No other reasonable use of the property has less impact on critical areas. The hearing examiner may consider alternative reasonable uses in considering the application.

The property is zoned single family (R-15) which allows its improvement with two residences, only one of which is proposed in this Application. All the adjacent properties are either open space or single family residential. The following is a comprehensive list of all the uses permitted in the R-15 zone:

Uses Permitted Outright:

1. Single-family dwelling.
2. Accessory buildings incidental to the main building.
3. Private recreational areas.

4. Public schools.
5. Home business as an accessory use to the residential use.
6. Public Park.
7. Semi-private waterfront recreation areas for use by 10 or fewer families.
8. One accessory dwelling unit.
9. Special needs group housing.
10. Social service transitional housing.
11. A state-licensed day care or preschool as an accessory use.
12. Places of worship may have a stage theater program as an accessory use.
13. One accessory building for the housing of domestic animals and fowl.

Uses Permitted as Conditional Uses:

1. Government services, public facilities, utilities, and museums and art exhibitions.
2. Private schools accredited or approved by the state for compulsory school attendance.
3. Places of worship.
4. Noncommercial recreational areas.
5. Semi-private waterfront recreation areas for use by more than 10 families.
6. Retirement homes located on property used primarily for a place of worship.
7. The use of a single-family dwelling as a bed and breakfast.
8. Non-school uses of school buildings.
9. A state-licensed day care or preschool.

All of the above uses are either clearly infeasible or more impactful than the single residence proposed in this Application. Consequently, no other reasonable use exists for the property.

C. Minimization of Alteration to Critical Areas.

Any alteration to critical areas is the minimum necessary to allow for reasonable use of the property.

The Applicant has striven to minimize to the maximum extent possible the inevitable disturbance to the site, resulting in work being performed in a small area located as close as possible to East Mercer Way. These efforts have included the following:

1. Sensitivity to the Siting of the Residence.

Since the entire site is encumbered by sensitive areas, the challenge is to determine where to place a structure on the property. Any structure would need to be accessed from the easement from East Mercer Way; there is no other place for access

and a second access to the street on this sharp corner would not be safe. Stream "A" has the most environmental value as a sensitive area, as well as the most value to the public. Steam "A"'s buffer has the second most value as a sensitive area and the most value to the public as it provides protection to Steam "A". Stream "B" is much smaller than stream "A", and is really just a drainage depression but it does have some minor value in draining the site. Most of the site is wetland which should be preserved as much as possible. The south steep slope which presents problems to construction is not a good place to build due to the inability to excavate into the bank and maintain slope stability. (Any cut over 5' would require the cut to be 1 vertical to 2.5 horizontal). The existing slope is up to 70%.

With all that in mind the best place to build a structure – actually the only logical place - would be as far as possible away from Stream "A", then as far as possible away from Stream "B", providing access from the easement while keeping away from excavation into the steep slope. It also needs to be as close as possible to the access easement to minimize driveway length. The slope of the existing drive cannot be altered and still allow access to the property to the south. Given that we start at the existing drive and slope a new driveway at a maximum slope of 15% and then flattening out prior to entering the garage, this locates the front of the house and creates the shortest driveway. Due to the slope of the driveway and the requirement for a minimum of three parking spaces, a parking and a turnaround is required as backing down the driveway is impractical.

The driveway slope sets the garage floor elevation. We would prefer it higher but increasing or reducing the driveway length only aggravates the site impact problem. To overcome the low garage floor elevation relative to existing grade around the building and to avoid extra grading, we have set the floor to floor from garage to main at 12'. (Not ideal but workable and more protective of the site). This combined with the new two story house does push the house above the 30' height limit. The ridge will be approximately 24" to 30" above the allowable building height. The height limit was the basis for or original one story version. The increased height is an acceptable variation to further reduce site disturbance. The ridge will be about 10' below the maximum grade on the site and roughly at the floor level of the house to the south. This should have no effect on any adjoining property.

2. Attention to Design Considerations.

To handle the vertical cut for the basement garage we are proposing the use of auger cast piles on the high side of the garage. This requires bringing in equipment to bore holes that will receive steel beams that will be encased with concrete. We can then excavate down the face of the steel columns. The steel columns will be bridged with cribbing to allow a vertical cut and minimize site disturbance. This wall will serve a double purpose as it will also be the catchment wall required by the Geotechnical engineer. To further reduce site disturbance, the garage occupies only a portion of the basement allowing the foundation to step with grade thereby reducing site grading.

We need to provide guest parking and a turnaround area to avoid backing down the driveway. We have accomplished this by utilizing the auger cast piles to allow excavation into the steep slope which has less environment value than the wetlands and provides stability of the slope. To minimize site disturbance on the downhill side of the driveway, we will utilize keystone blocks that can be hand stacked and can be vertical or a 1" offset every 8". This block requires only a 4' work space at the bottom side.

As mention, the structure is close to the south creek. In order to minimize disturbance to the steam and the portion of the site that drains to it, we have placed a portion of the dining room and all the deck supports on columns that will allow water to flow around them.

Steps have been taken to minimize people impact to the site as well. Instead of a yard which would be reasonable, a large pervious deck is provided. The deck is high enough above grade to allow the wetland to thrive under it. We also have provided a storage area in the garage for garbage containers and yard equipment that would normally be stored outside.

Storm detention is required for the site. Storm water will be collected and stored in a vault placed under the driveway which will provide for the controlled release of stormwater. Placement of the vault under the drive will further minimize impacts to the greatest extent reasonably possible.

3. Minimization of the Residence Size.

As indicated, instead of proposing the construction of two residences, the Applicant is proposing a single structure. Even though 13,439 square feet of lot coverage is allowed, the proposal is based on only 1,631 square feet of coverage i.e. only 4.3%. The total areas of impervious surfaces on site (including the structure, decks, waterways and driveway) have been reduced to only 3,908 square feet of additional impervious surface, which is only 12.2% (whereas 35% is allowed).

4. Complete Redesign of the Residence.

Most significantly, the Applicant's original plan contemplated building a single-story house (over a garage). Following the staff's guidance, the Applicant, at considerable additional cost, completely redesigned the house to make it two-stories, resulting in a substantial reduction in site disturbance by over 27%. Specifically, as a result of this design change, the following impact minimizations have been achieved:

	One-Story (Original)	**Two-Story (Revised)**	**Impact Reduction %**
Roof Area	3,140 sq. ft.	2,238 sq. ft.	22.6%
House Footprint	2,228 sq. ft.	1,631 sq. ft.	26.8%
Driveway	1,659 sq. ft.	1,463 sq. ft.	11.8%

Site Disturbance	8,562 sq. ft.	6,318 sq. ft.	26.2%
Impervious Surface	4,945 sq. ft.	3,908 sq. ft.	20.1%

D. Mitigation of Adverse Impacts.

Impacts to Critical Areas Are Mitigated to the Greatest Extent Reasonably Feasible Consistent With Best Available Science.

Any change to the property will necessarily impact various areas classified as critical. In addition to expending maximum efforts to minimize the development's impact to the site, as summarized above in considerable detail, the Applicant is committed to reducing any resulting environmental impacts to the maximum extent reasonably possible. These mitigation measures, it should be emphasized, will substantially increase the cost of developing the property.

Specifically, the Applicant is proposing to implement the following measures in order to minimize (or completely eliminate) any adverse environmental impacts resulting from the proposed development:

1. Foundation Supported by Piles.

In order to significantly reduce disturbance to the site, the structure's foundation will be based on piles, whether pin piles or auger cast. Additionally, such a foundation system will also serve the purpose of stabilizing the house in the event of earth movement or slides caused by catastrophic seismic activity.

2. Construction of Catchment Wall.

In addition, a structural catchment wall will be integrated into the design of the house's south foundation wall, which is adjacent and relatively close to the property's steep slope. This wall, which will be approximately eight feet above grade, is designed to restrict or "catch" any soils and other materials that could result from the upper soil becoming unstable, even though there has been no evidence of this having occurred in the past. This protective structural wall is intended to insulate the residence from damage caused by slide activity which is not anticipated to occur except in the event of a significant earthquake. (Few houses on Mercer Island that have been built on a slope, it should be noted, will be similarly protected).

3. Wetland Mitigation.

Approximately 1,800 square feet of wetland located on the property will be impacted as a result of this development. The Applicant is prepared to compensate for the impact of this disturbance by making a substantial cash contribution to King County's wetland mitigation bank. It is estimated that this contribution will be in the range of $150,000. (It's simply not feasible to provide for on-site mitigation; further, the United States Corps of Engineers strongly prefers this approach to wetland mitigation).

E. Threat to Health, Safety and Welfare.

The proposal does not pose an unreasonable threat to the public health, safety, or welfare.

Especially based on the Applicant's efforts to reduce the project's scope as much as possible, combined with the extensive mitigation measures proposed by the Applicant, no threat to public health, safety or welfare has been identified or can be reasonably foreseen.

F. Applicant's Actions.

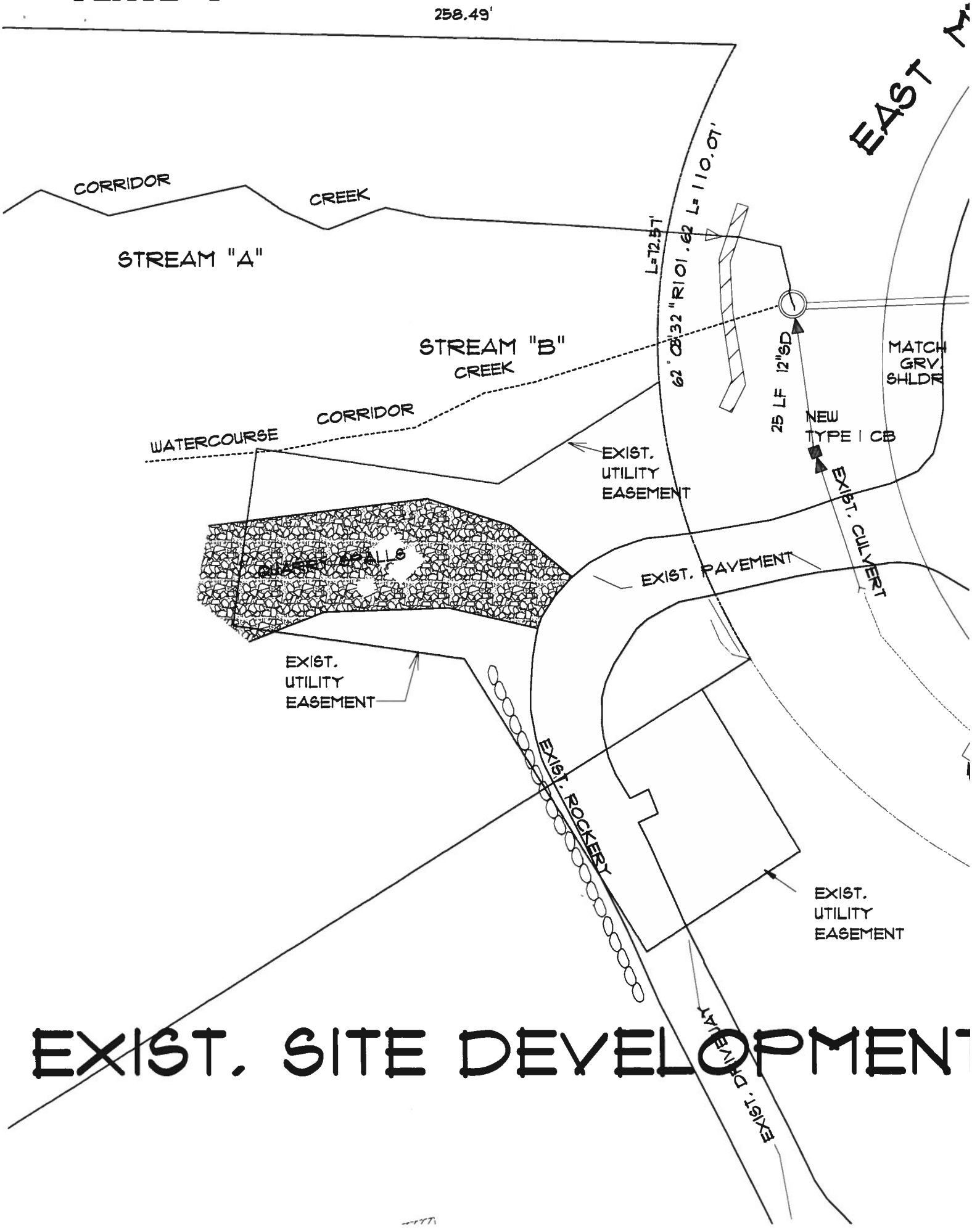
The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant after the effective date of this chapter.

The Applicant has done nothing to negatively impact the property's development potential; rather, all impediments occur naturally and are inherent to the nature of the site.

III. CONCLUSION

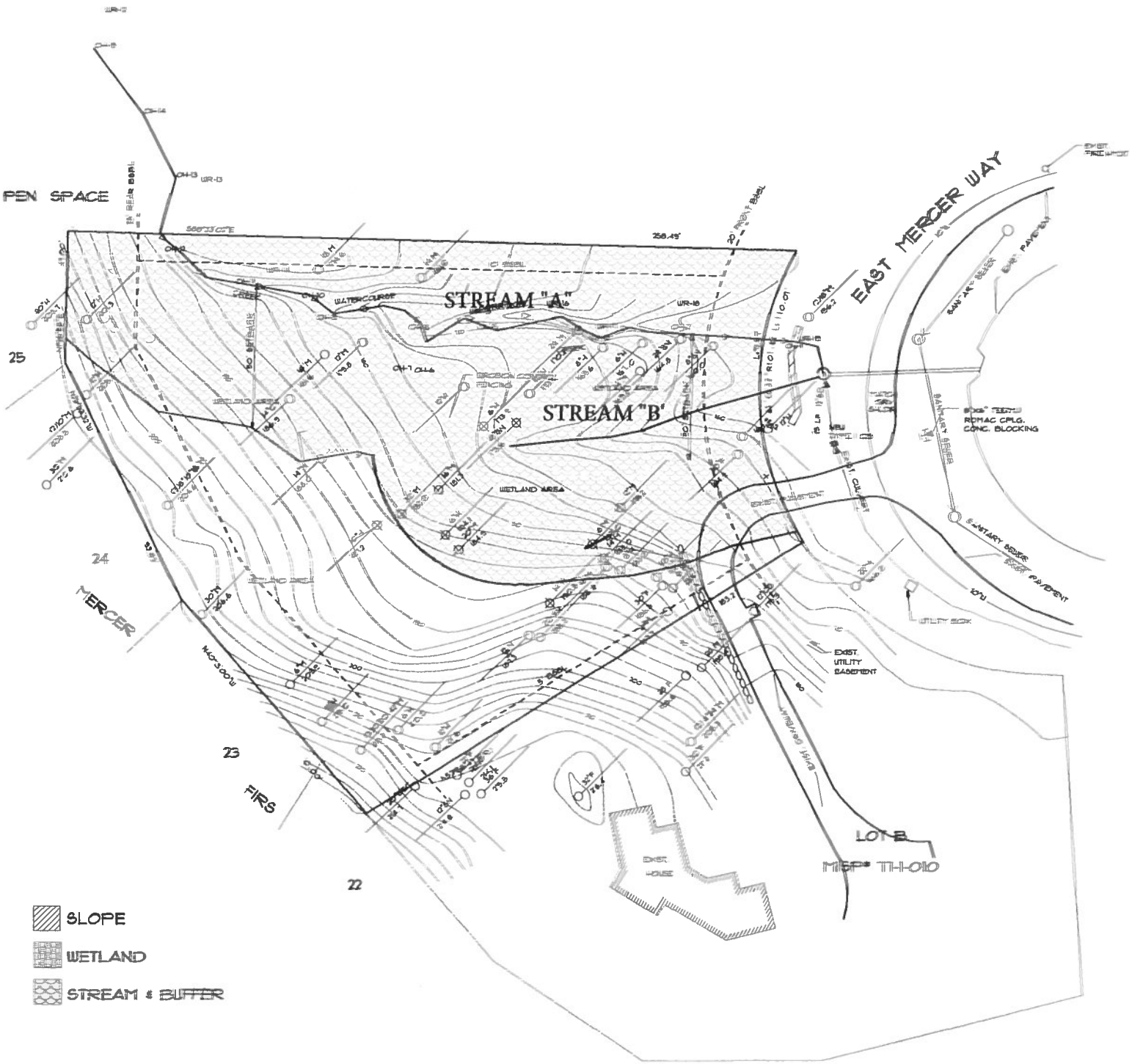
The Applicant has clearly established that the proposed development satisfies all the criteria to allow the Hearing Examiner to grant a reasonable use exception for the property's development as proposed and restricted in the Application.

PLATE #1



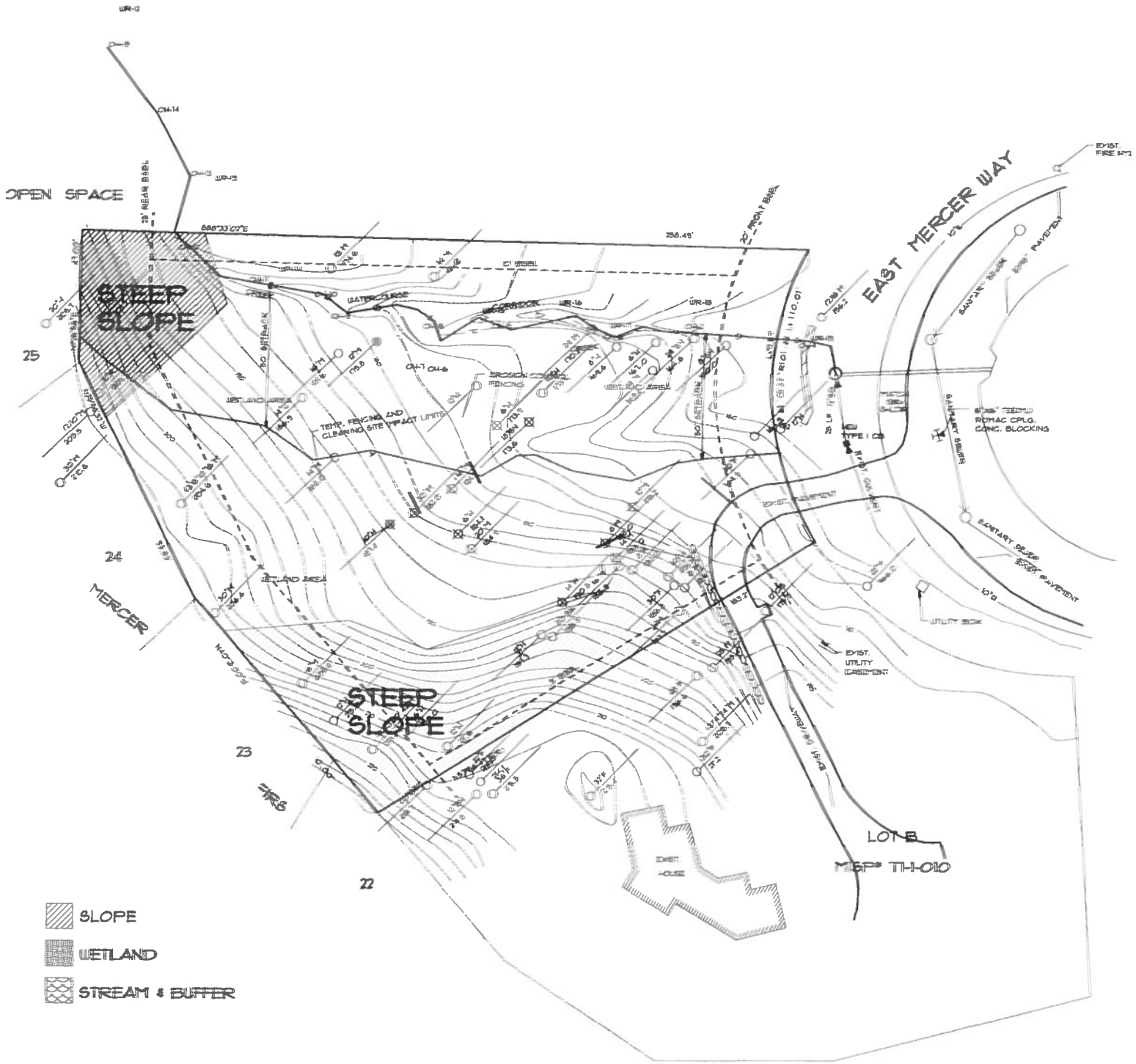
EXIST. SITE DEVELOPMENT

PLATE #2



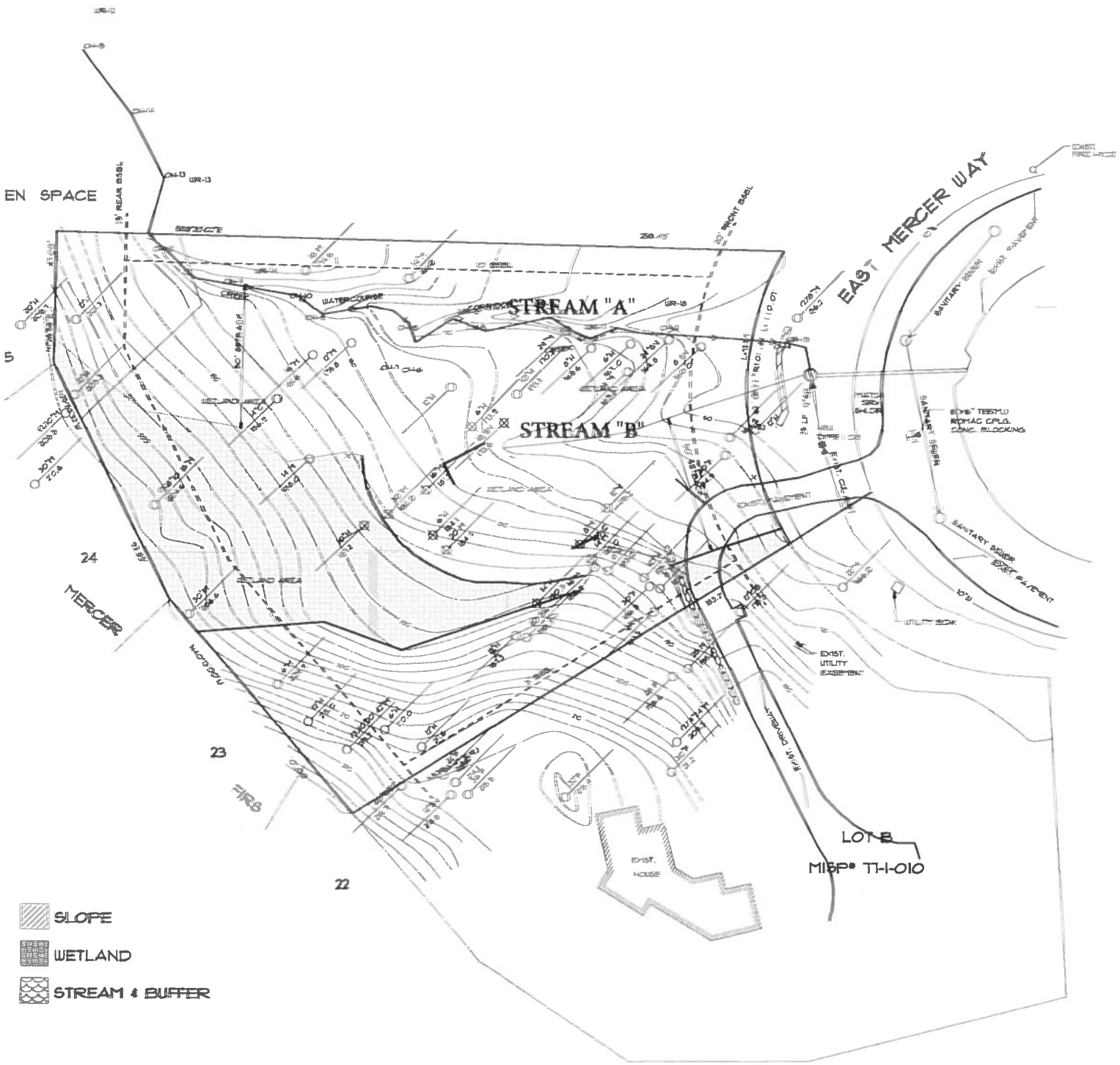
STREAM AND BUFFER

PLATE #3



STEEP SLOPE

PLATE #4



WETLAND OUTSIDE OF
STREAM & BUFFER