



MEMORANDUM TO PLANNING COMMISSION

DATE: Planning Commission Meeting of January 26, 2023
FROM: Russ Holley, Senior Planner
SUBJECT: Continued PC 22-056 Mountainside Estates Amendment

Summary of the December 15th, 2022, Planning Commission Proceedings

PC 22-056 was continued because of a number of engineer concerns with storm water, utilities, site grading and construction and sequencing of retaining walls and homes. The applicant has provided geotechnical engineering reports and plans that suggest these lots can be developed but certain limitations and strategic construction methodology are required for safe and lasting development.

The applicant has provided some new plans and documents for consideration. The City Engineer and not yet taken a final position on this new information but is preparing to do so at the January 26th meeting.

Staff considers the originally staff report still applicable except for the above-mentioned issues.



Project #22-056
Mountainside Estates Subdivision Amendment
Located at 1200 East 1400 North

REPORT SUMMARY...

Project Name: Mountainside Estates Subdivision Amendment
Proponent/Owner: Brent Lawyer / Capstone Consulting LLC
Project Address: Approximately 1200 East 1400 North
Request: Subdivision Amendment w/ 4 additional lots
Current Zoning: NR-4
Date of Hearing: January 26th, 2023
Type of Action: Quasi-Judicial
Submitted By: Russ Holley, Senior Planner

RECOMMENDATION

Staff recommends that the Planning Commission **consider** a Subdivision Permit for project PC 22-056 Mountainside Estates Subdivision Amendment, located on ~26.14 acres at approximately 1200 East 1400 North: TIN #05-011-0006.

Land use adjoining the subject property

<i>North:</i>	MR-9 Attached Residential	<i>East:</i>	NR-4 Single Family Homes
<i>South:</i>	MR-20 Attached Residential	<i>West:</i>	PUB: Utah State University

Request

The proponent is requesting an amendment to the 64-lot Mountainside Estates Subdivision (PC-21-032). The proposal is to convert the southern-most 8 building lots into 12 new buildings for a net increase of 4 additional building lots. The property is currently being developed with new streets and other infrastructure currently under construction.

BACKGROUND INFORMATION

The overall 26.14 parcel was formerly used as a gravel pit. In 2016, while zoned NR-6, this 26.14-acre parcel was approved by the planning commission for a 76-lot subdivision which then expired prior to recordation. Since then, the parcel has been rezoned to NR-4 and in June of 2021 a 64-lot subdivision was approved by the Planning Commission. The 64-lot subdivision final plat was signed and recorded on May 20th, 2022.



Figure 1 shows the proposed amendment area highlighted in red

General Plan

The Future Land Use Plan (FLUP) adopted in 2008 identifies this property as Detached Residential (DR) and explains that designation as being areas for detached single-family homes developed at a density range of 4-6 units per acre of land. The adopted Hillcrest Neighborhood Plan also indicates this area as single-family residential.

Land Development Code (LDC) - Zoning

The current zoning designation is Suburban Neighborhood Residential (NR-4), which is a detached single-family zoning district with a maximum density of four (4) homes per acre. Minimum building lot sizes are 10,000 SF with minimum 90-foot lot widths. At 26.14 acres, and with the additional proposed 4 lots (original is 64 lots) the total lot count is 68 and at a density of 2.6 homes per acre. The proposed lots are all above the minimum 10,000 SF and wider than the minimum 90 feet. As submitted the subdivision complies with NR-4 density, lot size and lot width.

Street Grid Connectivity & Site Layout

The LDC 17.30 street connectivity requirement ensures equitable traffic distribution, efficient utility/infrastructure networks, better walkability and the continuation of Logan City's historic grid patterns. This proposal does not request any changes to the already approved street grid patterns. It does propose that six (6) of the amended single family lots will now gain access from the upper existing 1300 North Street. 1300 North does not currently have sidewalk and park-strip along the northern edge adjacent to these proposed lots.

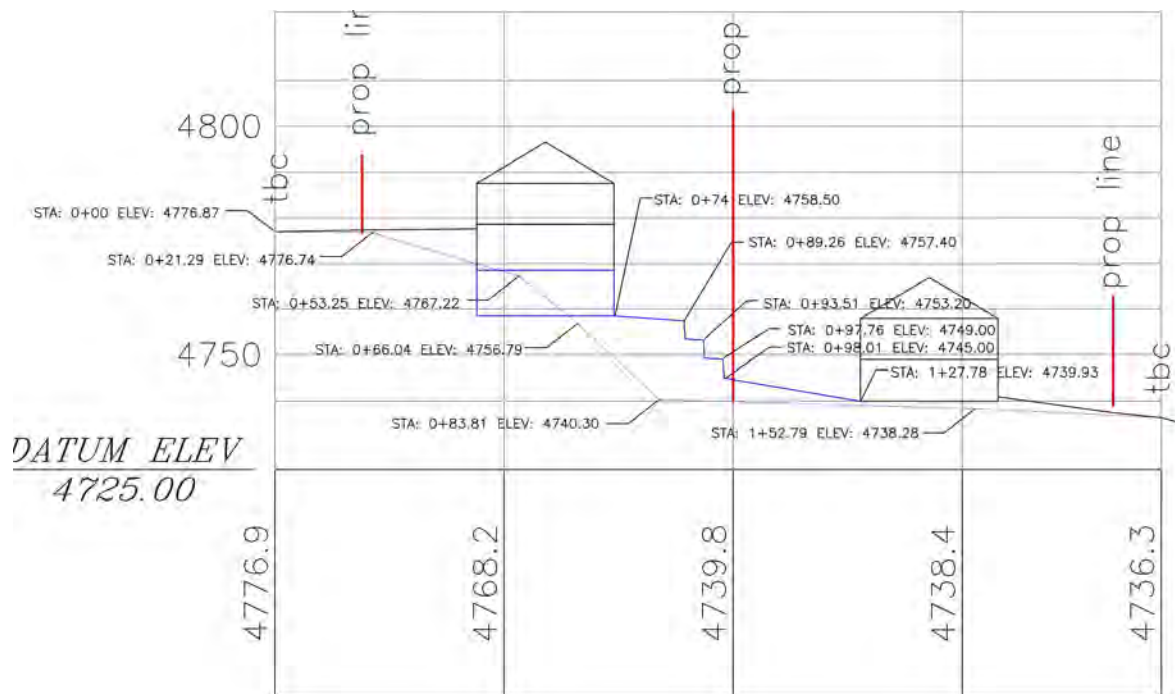


Figure 2 shows the proposed cross section of the upper and lower lots.

Setbacks

The Land Development Code (LDC) requirements for setbacks in the NR-4 zone are as follows (as measured from property lines):

Front:	25'
Corner	20'
Side:	8'
Rear:	10'

Setbacks will be reviewed and approved with compliance to LDC standards by city Staff when building permit applications are submitted for new single-family homes.

Lot Coverage

The LDC 17.07.060 limits lot coverage at a maximum of 50% (building(s) footprint) in the NR-4 zone. Lot coverage will be reviewed and approved with compliance to LDC standards when building permit applications are submitted for new single-family homes.

Parking Stall Requirements

The LDC 17.31.040 requires two (2) parking stalls per every dwelling unit. The parking stalls must be located outside of building setbacks in either a garage, carport or paved parking lot. Driveway cuts are limited to 24-foot max width at the curb to preserve street character and limit ingress/egress onto public streets. Parking and driveways will be reviewed and approved with compliance to LDC standards when building permit applications are submitted for new single-family homes.

Fencing and Retaining Walls

The LDC 17.30.100 regulates fencing and walls in residential developments. Generally fencing is limited to 4 feet in height in front yard areas and 6 feet in height in side and rear yard areas. Retaining walls are limited to 4 feet in height. When more than 4 feet is needed to retain, a series of 4-foot-tall walls and 4-foot-wide landings may be established creating a terraced effect. Because of the approximate 38-foot drop in elevation across the ~84-foot-deep (property depth) lots proposed on the southern boundary, retaining walls will likely be needed in certain areas. As conditioned to compliance with fence and wall requirements, the proposed project meets the standards in the LDC.

Critical Lands

The LDC 17.24.070 regulates unstable slope areas. Areas with slope greater than 30% are limited in their cut and fill activities and vegetation disturbance. These areas must be reviewed and approved by certified and licensed Engineers specializing in slope stability and slope development (Geotechnical and Civil). The proposal shows new homes on the upper southern lots at the same finished top floor elevation as the adjacent 1300 North Street. The homes then show two lower levels with the lowest level exiting (walk-out basement) at finished grade in the rear yard (rear yards ~20 feet lower than the front yards). Four foot retaining walls are also shown on these lots to account for the approximate overall 38-foot elevation loss. As conditioned with adherence to the LDC and the inclusion of notes on the plats for individualized geotechnical and civil engineering certifications, the project meets the requirements in the LDC.

Open Space

The LDC does not require open space in the NR-4 zoning district. With generous setbacks and limited lot coverages, NR-4 projects contain larger areas between homes for private landscaping and vegetation. As subdivisions are approved and building permit impact fees collected, the Logan City Parks and Recreation Department acquires and develops lands for nearby neighborhood parks.

Staff Summary

The proposed subdivision complies with the LDC density, lot sizes and width for the NR-4 zone. 1300 North provides access to the newly proposed lots and only requires additional sidewalk and park strip. Being a former gravel pit and approximate 38 feet of elevation loss, well above the 30% slope steepness threshold, staffs biggest concern is the long-term stability of these lots. The attached documents from licensed geotechnical and civil engineers state that measures can be taken to ensure slope stability, storm water collection and on-site grading.

AGENCY AND CITY DEPARTMENT COMMENTS

Comments were solicited from the following departments or agencies:

• Environmental	• Water
• Fire	• Engineering
• Light and Power	

PUBLIC COMMENTS

Notices were mailed to property owners within 300 feet of the subject property. As of the time of this report, staff has received phone calls from a concerned neighbor but has not received any written comments.

PUBLIC NOTIFICATION

Legal notices were published in the Herald Journal on 12/03/22, posted on the City's website and the Utah Public Meeting website on 12/05/22 and mailed out to adjacent property owners within 300' on 11/28/22.

RECOMMENDED CONDITIONS OF APPROVAL

This project is subject to the proponent or property owner agreeing to comply with the following conditions as written, or as may be amended by the Planning Commission.

1. All standard conditions of approval will be recorded with the Design Review and are available in the Community Development Department.
2. The project is approved for 4 additional single family building lots and as conditioned below.
3. Based on new information provided to the City Engineer in January of 2023, additional conditions will be placed on this project prior to final plat by the City Engineer.
4. A note shall be added to the final plat stating that all 12 of these lots included in this amendment shall have stamped and certified geotechnical and civil engineering plans associated with each future home that assumes liability for any future slope failures.
5. Retaining walls on all 12 lots included with this amendment shall not exceed four (4) feet in height. Multiple wall terracing shall be utilized for retention of more than four vertical feet. These retaining walls shall also be designed by a licensed engineer with stamped plans submitted to the City for review and approval prior to construction.
6. Building setbacks, lot coverages, parking and driveway specifications shall be reviewed and approved on an individual basis and comply with the NR-4 requirements.
7. A performance landscaping plan, prepared in accordance with §17.32 of the LDC, shall be submitted for approval to the Community Development Department prior to the issuance of the building permit. The plan shall include the following:
 - a) Street trees along all streets provided every thirty (30) feet on center unless otherwise noted by the City Forrester.
8. All streets adjacent to or within the development shall be improved to current city standards and specifications. 1300 North shall have sidewalk and park-strip added to the north edge.
9. Exterior lighting, including gas canopy lighting, shall be concealed source, down-cast and shall not illuminate or cast light onto adjacent properties.
10. No signs are approved with this Design Review Permit. All signage shall be approved and permitted by staff in accordance with the Land Development Code.
11. No fences are approved with this Design Review Permit. All fences shall be approved and permitted by staff in accordance with the Land Development Code.
12. All critical lands, as defined in the Logan Land Development Code, shall be identified, and listed on the final plat.
13. HOA and CC&R's shall be submitted to the City for review and compliance with applicable maintenance and landscaping requirements.

14. Prior to issuance of a Building Permit, the Director of Community Development shall receive a written memorandum from each of the following departments or agencies indicating that their requirements have been satisfied:

a. Environmental—contact 716-9760

- Residential cart/cans will be provided.
- Place all carts at or above the minimum separation distance and clear of all overhead obstacles.

b. Water—contact 716-9622

- All landscape irrigation system's fed from Logan City water must have a high hazard rated backflow assembly installed and tested. All backflow assemblies must be tested within 10 days of turning water into them and annually thereafter.
All points of use of water must comply with the 2018 IPC and State of Utah Amendments and the Utah Admin Code 309-305 during and after construction.
- Project shall comply with all current plumbing codes, Utah State Amendments and the Utah Division of Drinking Water rules and regulations including, but not limited to, those pertaining to backflow protection and cross connection prevention.

c. Engineering – contact 716-9160

Critical Lands as identified in chapter 17.24 and specifically part 070 of the City's Land Development Code identifies that slopes in excess of 30% is a factor in determining that lands are geologically unstable. Slopes identified on this site reach and may exceed 70%. Per section 13.14.200.C of the City Code, "Stormwater discharges to Critical Areas may be subject to additional performance criteria ..." Given that the proposed lot layout would site higher elevation homes directly above lower elevation homes across a very steep condition; and given the plan proposes a lot line configuration in which stormwater runoff from an upper lots will drain down slope onto lower lots and has a high potential of damaging the lower lot properties; the City Engineer does not recommend approval of the proposed subdivision.

If approval is granted the applicant shall satisfactorily provide to the City and, or adhere to the following requirements:

1. A geotechnical study containing at a minimum the parts identified in City Code 17.24 along with other relevant information as may be required by the City Engineer to satisfy safety related concerns (such as stormwater management).
 - a. The study or addendum thereto needs to include a statement that identifies that the lots as planned are suitable for development from a geologic standpoint.
 - b. The study or addendum thereto needs to provide recommendations for seepage and drainage control. It shall specifically reference the proposed stormwater management plan (sumps and lower drainage as required herein) and certify that the proposed plan does not affect the geotechnical design.
 - c. The final report shall include a map that identifies the buildable envelopes of each lot from a geotechnical perspective which in turn shall be used for developing the required information on the final plat. Specifically, in addition to the proposed rear yard terracing, it shall reference the minimum side yard terracing / slopes / treatment necessary to meet City Standards and geotechnical requirements.
 - d. The cost of the report and any City expenditures for outside review shall be born by the applicant.
 - e. All other requirements of the City standards shall apply.
2. A gap in property ownership exists between the proposed lots and the 1300 North City right of way over which the boundaries of this property do not appear to have ever extended. As a condition of approval, the gap or portion

thereof shall be dedicated to the City by way of a Warranty Deed such that a minimum 66 foot right of way is achieved and properties are contiguous with the City's right-of-way.

3. A minimum 8 inch water shall be constructed in 1300 North such that it ties into the City's existing water line to the east. The line will dead end at 1200 East with a hydrant. An additional hydrant shall be constructed on the east end of the frontage to maintain the minimum City standard hydrant spacing.
4. The north side of 1300 North shall be improved with park strip improvements and sidewalk pursuant to the dimensions in the City's Gridded/Connection/Residential Collector Street Cross Section and the City's design and land use standards.
5. Per section 17.29.060.A.2 only one driveway is permitted on a single-family residential lot. As such, the proposed 16' access easement identified east of lot 103 shall be removed. If there is an existing easement exists through this area, a description of the easement, width, and recording information shall be included on the Final Plat and construction plans.
6. Current stormwater calculations do not accurately reflect City stormwater standards, approved stormwater management calculations shall comply with City standards.
7. Construction plans shall be designed such that the 100-year 24-hour stormwater event does not pass from an upper property to a lower residential lot but is rather collected and routed to a designated storage facility of adequate capacity per City standards. The storage facility and storm drain conveyance facilities (pipes, swales, etc.) from the upper lots shall be owned and maintained by a homeowner's association created for the subdivision. The project shall provide storm water detention/retention for site per City Storm Water Design Standards. This includes the onsite retention of the 90th percent storm using Low Impact Design methods.
8. Provide a Storm Water Maintenance Agreement for review and approval by the City and recorded with County Recorder
9. Dedicate a 10' public utility easement along all property frontages to existing and planned City roads and a 5' public utility easement along all other property lines.
10. Sewer services shall be extended to lots 103, and 110 – 114 from 1200 E. and all homes shall be equipped with sewer pumps.
11. Provide City with water shares or in-lieu fee for increased demand to City system. This requirement shall be per City Code and Utah Administrative Rule R509-519-7

d. Fire & Light and Power– contact 716-9515/9722

- 1300 North Street from 1200 East to 1300 East has no existing fire hydrants will need to have fire hydrants installed.
- Logan City Light and Power; Requires A New digital Site Plan In AutoCad format, with PUE's for the new lots.

RECOMMENDED FINDINGS FOR APPROVAL FOR THE SUBDIVISION PERMIT

The Planning Commission bases its decisions on the following findings supported in the administrative record for this project:

1. The proposed project is compatible with surrounding land uses and will not interfere with the use and enjoyment of adjacent properties because of the conditioned building design, site layout, materials, landscaping, building orientation, heights and setbacks.
2. The Design Review Permit conforms to the requirements of Title 17 of the Logan Municipal Code.
3. The proposed project provides adequate open space and useable outdoor space in conformance with Title 17.
4. The proposed project provides off-street parking in compliance with the LDC.
5. The project meets the goals and objectives of the Neighborhood Residential designation within the Logan General Plan by providing high quality projects designed in way for easy circulation of both pedestrian and vehicles.
6. The proposed project complies with maximum height, density and building design standards and is in conformance with Title 17.
7. The project met the minimum public noticing requirements of the Land Development Code and the Municipal Code.
8. The surrounding streets provide access, utilities and are adequate in size and design to sufficiently handle all traffic modes and infrastructure related to the land use.

This staff report is an analysis of the application based on adopted city documents, standard city development practices, and available information. The report is to be used to review and consider the merits of the application prior to and during the course of the Planning Commission meeting. Additional information may be revealed by participants at the Planning Commission meeting which may modify the staff report and become the Certificate of Decision. The Director of Community Development reserves the right to supplement the material in the report with additional information at the Planning Commission meeting.

Mountainside Estates Amendment

1200 East 1400 North



Existing Zoning

December 15, 2022



APPLICATION FOR PROJECT REVIEW

For Staff Only				
<input type="checkbox"/> Planning Commission		<input type="checkbox"/> Land Use Appeal Board		<input type="checkbox"/> Administrative Review
Date Received 9/2/22	Planner	Zone/Neighborhood NR-4 / Hillcrest	Scheduled Meeting Date Oct. 13	Application Number PC 22-056
Type of Application (Check all that apply):				
<input type="checkbox"/> Design Review <input type="checkbox"/> Conditional Use <input checked="" type="checkbox"/> Subdivision <input type="checkbox"/> Administrative Design Review <input type="checkbox"/> Code Amendment <input type="checkbox"/> Appeal <input type="checkbox"/> Zone Change <input type="checkbox"/> Other				
PROJECT NAME Mountain Side Estates Amendment				
PROJECT ADDRESS 1200 E 1400 N, Logan			COUNTY PLAT TAX ID # 05-011-0006	
AUTHORIZED PROJECT REPRESENTATIVE FOR OWNER Brent Lawyer			PHONE # 435-770-8396	
MAILING ADDRESS		CITY	STATE	ZIP
1755 N 1780 E, N Logan		ut	84341	
EMAIL ADDRESS brent@capfundng.net				
PROPERTY OWNER OF RECORD Capstone Consulting, LLC & Steve T. Inc			PHONE # 435-770-8396	
MAILING ADDRESS		CITY	STATE	ZIP
1755 N 1780 E, N Logan		ut	84341	
EMAIL ADDRESS brent@capfundng.net				
DESCRIBE THE PROPOSED PROJECT AS IT SHOULD BE NOTICED AND PRESENTED (Include as much detail as possible - attach a separate sheet if needed)			Total Lot Size (acres)	
Amendment to Mountain Side Estates plat - Add extra lots on south side - modifying 8 existing lots into 12 lots. Note: Foothill lofts north property survey			Size of Proposed New Building (square feet)	
			n/a	
			Number of Proposed New Units/Lots	
			+4 additional	
I certify that the information contained in this application and all supporting plans are correct and accurate. I also certify that I am authorized to sign all further legal documents and permit on behalf of the property owner.			Signature of Property Owner's Authorized Project Representative [Signature] to adjust sub. south	
I certify that I am the property owner on record of the subject property and that I consent to the submittal of this project. I understand that all further legal documents and permits will be sent to my authorized agent listed above.			Signature of Property Owner [Signature]	

APPLICATION MUST BE ACCURATE AND COMPLETE
NO SITE ACTIVITY MAY OCCUR UNTIL AFTER APPROPRIATE COMMITTEE APPROVAL -

MOUNTAINSIDE ESTATES

Plat Amendment Narrative

Mountainside Estates consists of 64 Single Family residential lots, zoned NR-4. Proponent is requesting an amendment to the 64-lot subdivision, to convert the southern-most 8 building lots into 12 new building lots for a net increase of 4 additional building lots. The property is currently being developed with new streets and other infrastructure currently under construction.

The amendment was previously considered at the December 2022 Planning Commission meeting. At that time, certain concerns were raised that the Planning Commission requested additional information in regards to, as follows:

Groundwater collection and distribution

Catchbasins/sumps for stormwater collection were originally proposed. Concerns were raised regarding long term maintenance of the sumps, and also a concern regarding the effect of water stored in sumps behind retaining walls. There was some concern that, left to the homeowners, a potential lack of maintenance could result in failure and harm to the lower properties.

In an effort to err on the side of caution, the proposal now shows the stormwater being collected and directed via the side PUE to the existing stormwater system in the development. Utilities located in side PUEs will be subject to periodic inspections by the HOA, which will also be responsible for any maintenance for the same.

Sewer collection and distribution

Sewer now shows using the side PUE to run sewer for the upper (new South lots) to existing sewer lines on 1320 North, thus eliminating the need for sump pumps on the part of homeowners on the upper lots. Utilities located in side PUEs will be subject to periodic inspections by the HOA, which will also be responsible for any maintenance for the same.

Geotechnical considerations

Slope Stability

The additional addendum by the geotechnical engineer determined that the existing slopes are stable, and that use of home foundations and accompanying retaining walls would be sufficient to address any slope stability concerns.

Construction Grading

Access to the upper lots for construction purposes will be dependent on location and availability of access through adjacent and lower lots. Access can come from above via ramps, from below and from the west via adjacent lots. The developer will preserve access by retaining lots as necessary.

Finish Grading

Proposed Finish Grade shall typically follow the proposed grading on the Phase 2 plat submitted, as well as attached Exhibit A, with lower retaining walls to be located at the back of

the upper lots, and upper retaining walls to be dependent on the home designs and location. Tie-in of adjacent retaining walls is detailed below.

For each lot a detailed finished grading, utility and retaining wall plan that adequately demonstrates how grading on the lot addresses erosion, and prevents stormwater discharge onto other lots shall be provided; the plan will be reviewed and approved by the Logan City Engineering Division prior to starting construction.

Retaining walls

Upper lot side retaining walls

Retaining walls between homes on the upper lots, will be coordinated by the architectural and control committee of the HOA and Logan City Engineering. The Committee and Logan City Engineering are responsible for reviewing and approving any and all plans proposed for construction in the development. As such, the placement, elevation, type and other details of proposed retaining walls shall be controlled by the Committee and Logan City Engineering in such a manner as to ensure a continuous aesthetic, as well as tie retaining walls together from adjacent lots to ensure both wall and slope stability.

Upper lot lower retaining walls (between lots)

Retaining walls and the installation thereof, between upper and lower lots, will be coordinated by the architectural and control committee of the HOA (the Committee), Logan City Engineering, the developer, and homeowners. The Committee and Logan City Engineering are responsible for reviewing and approving any and all plans proposed for construction in the development. As such, the placement, elevation, type and other details of proposed retaining walls shall be controlled by the Committee and Logan City Engineering in such a manner as to ensure a continuous aesthetic, as well as tie retaining walls together from adjacent lots to ensure both wall and slope stability.

Installation of the lower retaining wall on any upper lot shall occur prior to building construction on the upper lot.

Inspections and Maintenance

The HOA shall have a professional geotechnical engineer inspect any retaining walls placed in the development, including in the area of the plat amendment, to ensure ongoing structural integrity, and shall maintain the same or require lot owners to do so where not required by the HOA. Inspections shall be on the following schedule: annually for the first two years in the spring, followed by every 5 years thereafter. This is the schedule recommended by CMT, the geotechnical firm that provided the existing geotechnical reports on the site.

Maintenance or repairs on any retaining walls shall be done by a licensed and bonded contractor.

Considerations for lot owners

Potential buyers of both upper and lower lots shall be informed, in writing, prior to any purchase, by the developer and the HOA, of any potential impacts to their lots as a result of a) the requirement for access to be maintained on or through their lots to adjacent lots for inspections, access for construction (if necessary), and of any requirements on the part of the HOA for maintenance of improvements on their property, including retaining walls. Sewer services, stormwater collection boxes, fittings and pipes on the upper lots and in between the lower lots will be the responsibility of the HOA to provide regular and long-term maintenance.

Geotechnical Requirements

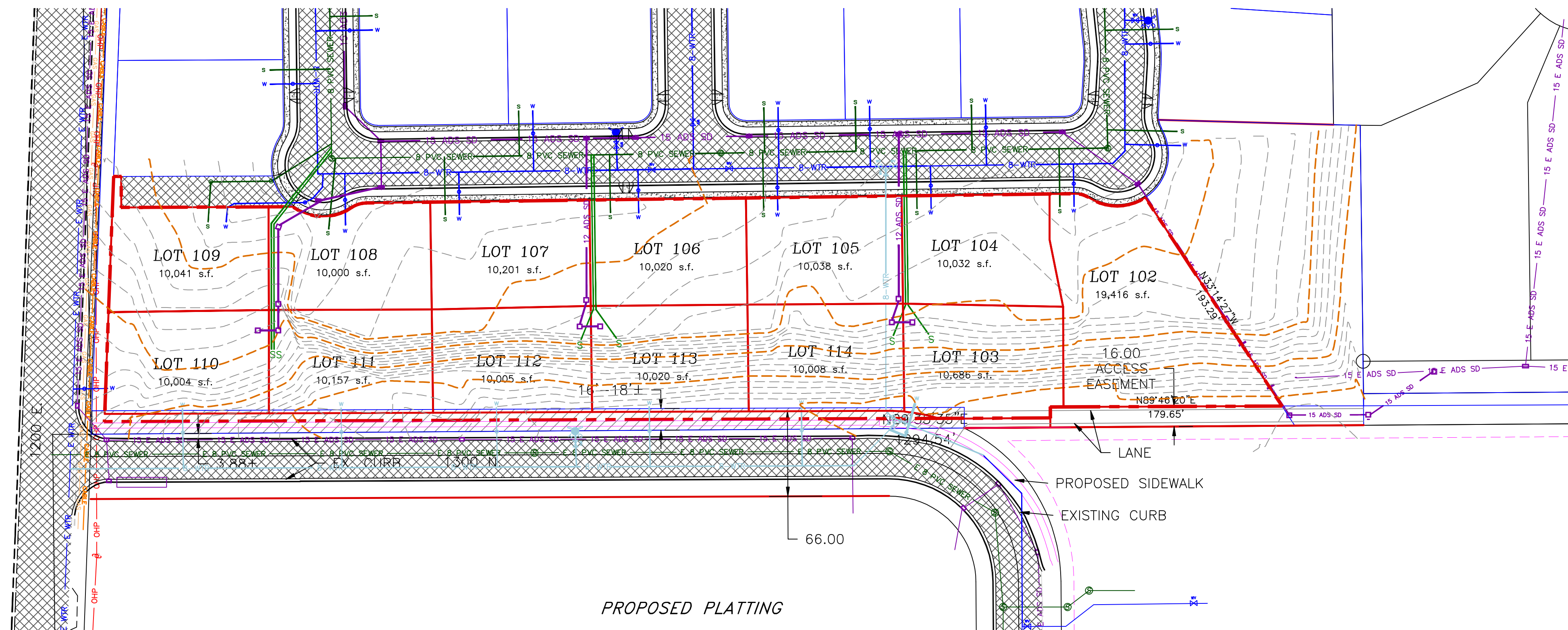
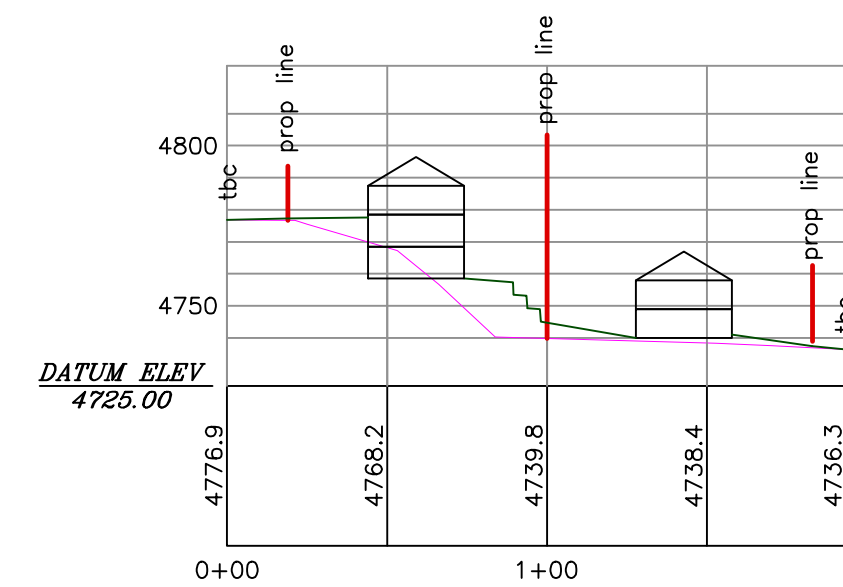
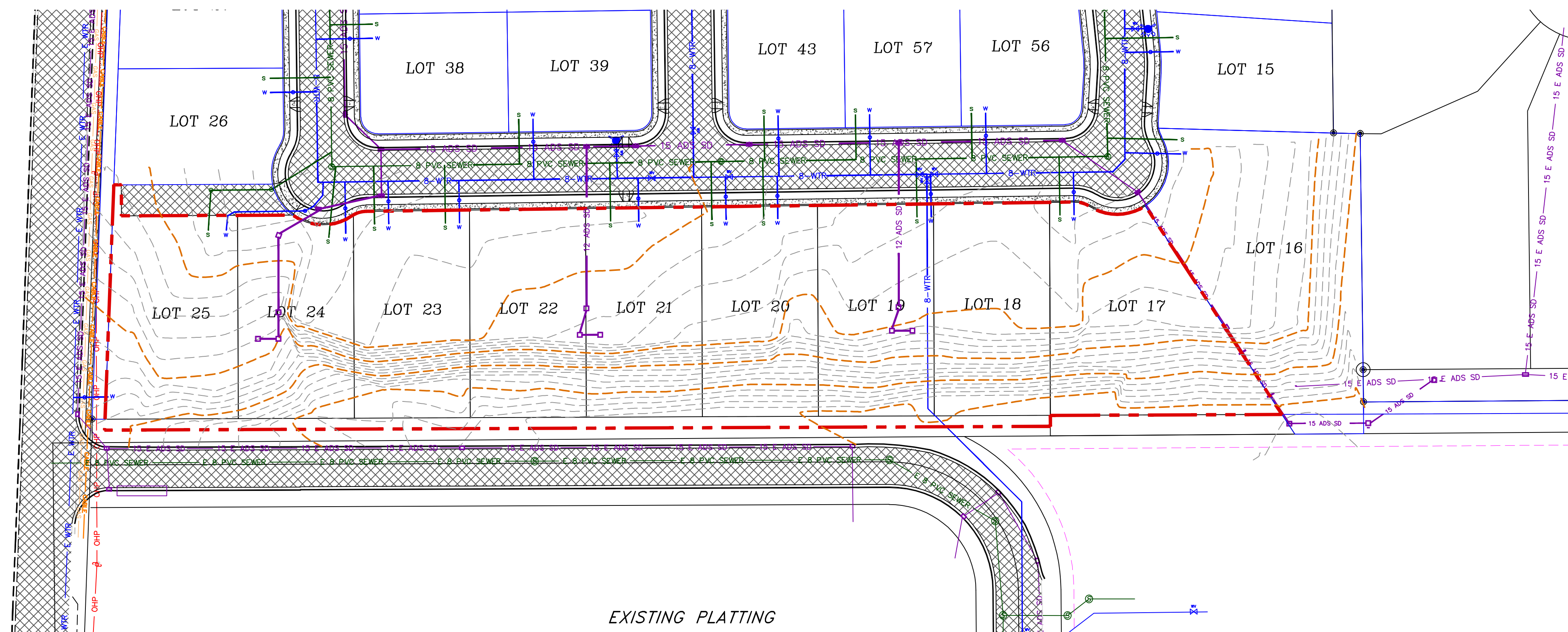
A geotechnical report shall be provided and approved by the City Engineering Division for the construction of each home on any upper lot.

Landscaping Requirements

All final grading and landscaping improvements around the home shall be 100% completed prior to issuance of a Certificate of Occupancy and the landscaping plan will specifically certify that the improvements are sufficient to prevent erosion.

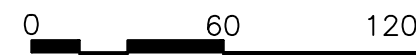
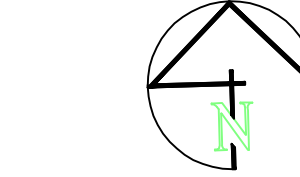
Insurance

The HOA shall maintain an insurance policy sufficient to provide coverage for any issues or other items in relation to the above.









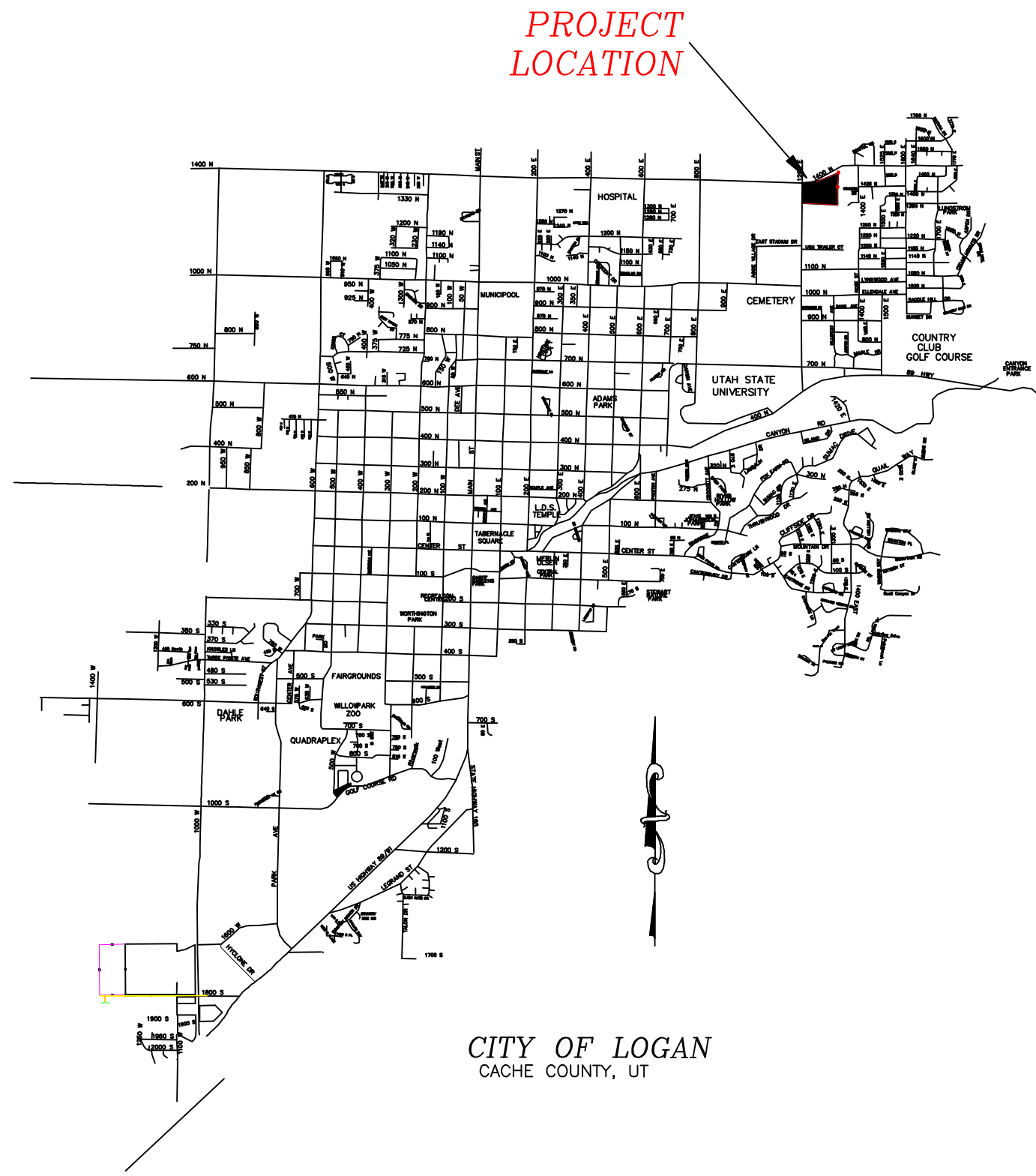
*MOUNTAINSIDE ESTATES
PHASE 2*

PART OF THE NORTHEAST QUARTER OF SECTION 26
TOWNSHIP 11 NORTH, RANGE 1 EAST
SALT LAKE BASELINE AND MERIDIAN
LOGAN, UTAH



- Notes:
1. Number of Lots: 12
 2. Open Spaces: 0
 3. Acres=2,845± acres
 4. The overall datum for this project is the Logan City GPS Station UTLN with an Elevation of 4566.935
 5. The project is not located within a 100 yr flood plain.
 6. Proposed setback lines:
 - Front: 25'
 - Back: 10'
 - Side: 8' -- 20' around corners
 7. Proposed 10' utility easements
 8. Project to be completed in one phase.

- Legend:**
-  BOUNDARY LINE
 -  SETBACK LINES
 -  EXISTING CONCRETE
 -  EXISTING ASPHALT
 -  MAJOR CONTOUR EXISTING (10')
 -  MINOR CONTOUR EXISTING (2')

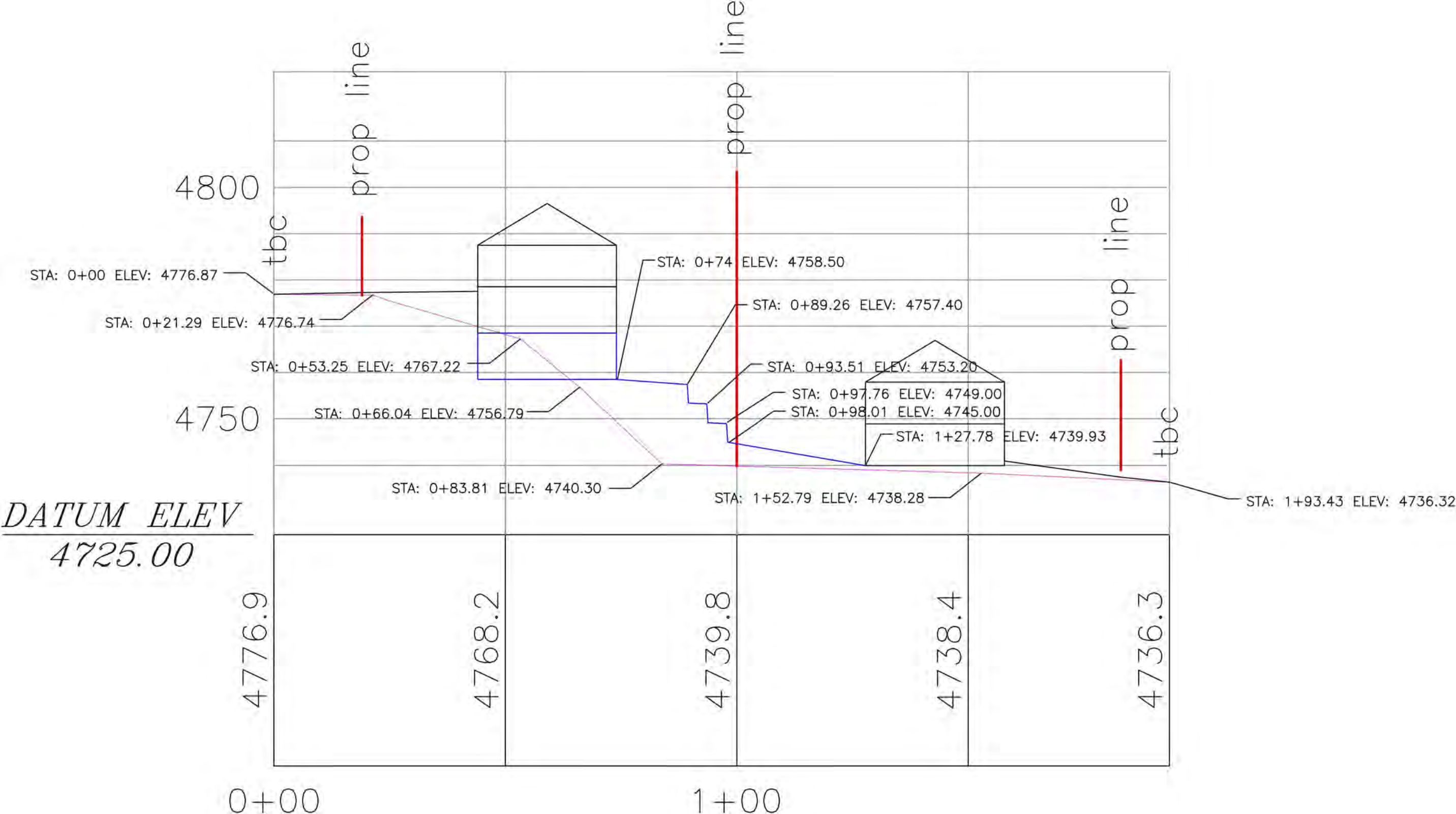


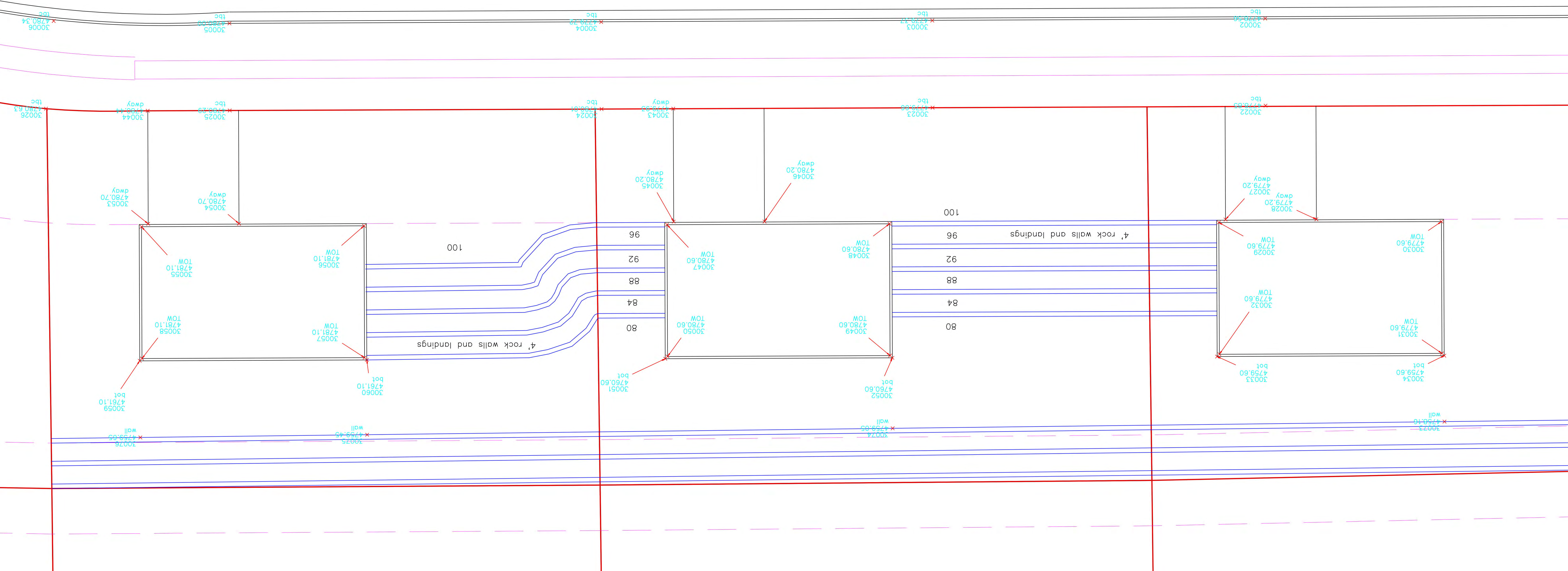
PROPOSED STORM CONTROL

1. Additional storm water from the new lots/houses to be controlled with sumps, owners will be required to tie the rain gutters from the houses to the installed sumps as shown below. The calculation proposed capturing all of the runoff from the impervious surfaces created from the new lots. The pervious areas will continue to flow to the pond in the northwest corner per the original design.

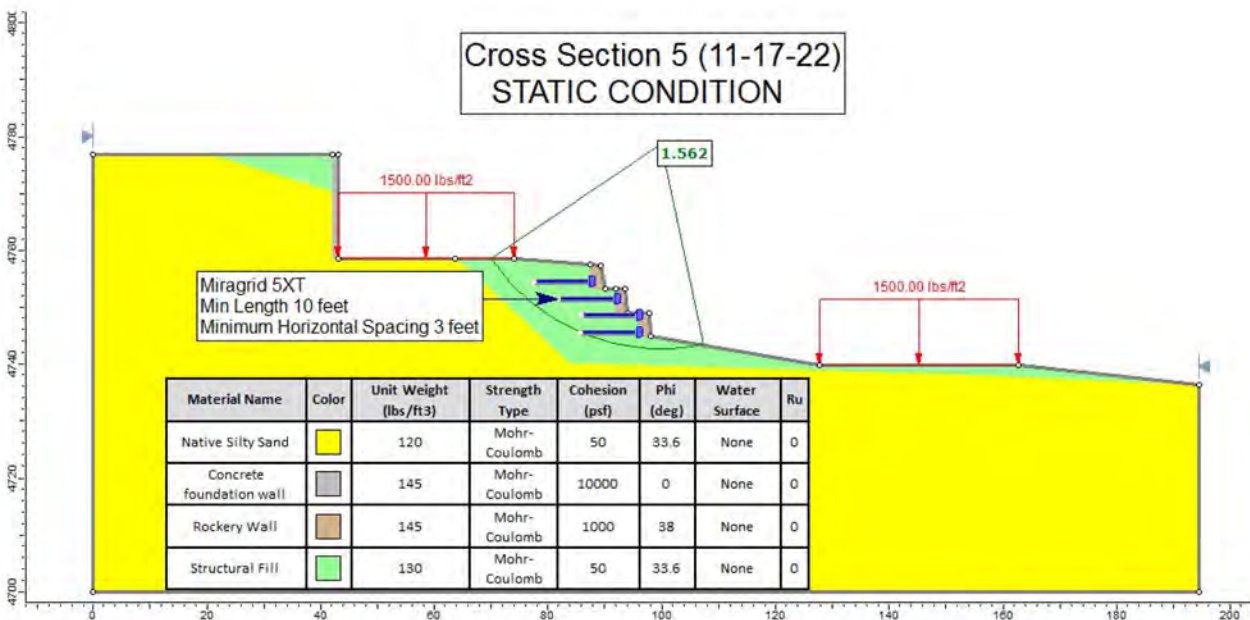
House: 2,250 sf
Driveway: 600 sf
Rainfall: 3.02 inches

Description	Area (sq ft)	Area (ac)	CN	Area*CN
Imperious Area	0	0	99	0
Commercial	0	0	92	0
Open Space	0	0	39	0
Residential	2850	0.065427	58	3.79476584
Mixed Use/Institutional	0	0	92	0
Pre Development	2850	0.065427	49	3.205922865
Average CN		0.065427	58.0	
Initial Abstraction		1.45	inches	
for pre dev		2.08	inches	
Watershed Storage		7.24	inches	
for pre dev		10.41	inches	
Precipitation (10 Yr)	24 hour storm	2.04	inches	precipitation
Precipitation (25 Yr)	24 hour storm	4.22	inches	
Precipitation (100 Yr)	24 hour storm	3.02	inches	
Direct Runoff (10 Yr)	24 hour storm	0.04	total runoff depth	
for pre dev (10 Yr)	24 hour storm	0.00	total runoff depth	
Direct Runoff (25 Yr)	24 hour storm	0.11	total runoff depth	
for pre dev (25 Yr)	24 hour storm	0.01	total runoff depth	
Direct Runoff (100 Yr)	24 hour storm	0.28	total runoff depth	
for pre dev (100 Yr)	24 hour storm	0.08	total runoff depth	
Post Development				
10-Year Direct Runoff		0.00	acre-ft	10.81618121 ft³
25-Year Direct Runoff		0.00	acre-ft	27.30500766 ft³
100-Year Direct Runoff		0.00	acre-ft	66.57135427 ft³





Cross Section 5 (11-17-22) STATIC CONDITION



Cross section 5 (11-17-22) SEISMIC CONDITION

