CHAPTER 12-A

HILLSIDE PRESERVATION
(Enumered 6/14/11; 11/12/13)

Section 12-A.010. Hillside Preservation Purpose and Intent.
Section 12-A.050. Dispute Resolution.

Section 12-A.010 Hillside Preservation Purpose and Intent.
To ensure that proposed development in hillside areas reflects the best interests of the City, its residents, and private property owners, all grading, excavation, filling or erection of any structure on land in any hillside area shall conform to the standards, guidelines, and criteria of this chapter. The purpose and intent of the Hillside Preservation ordinance is to:

A. Preserve hillside, mountain, and/or slope areas.
B. Encourage minimal grading, where possible, to maintain the natural contour of the land.
C. Promote quality development of hillside, mountain, and/or slope areas.
D. Promote grading which considers drainage, stability, safety, and sound engineering and construction practices.
E. Encourage responsible erosion control practices.
F. Protect natural drainage channels, except where otherwise approved by the City.
G. Preserve natural landmarks and prominent natural features including ridgelines, wildlife habitat and open space.
H. Minimize public exposure to geological and natural hazards, including but not limited to snow avalanche, rock slides, rock falls, debris flow, debris floods, land-sliding, surface fault rupturing, and hazards relating to ground water.

I. Prohibit activities and uses which would result in the degradation of fragile soils and steep slopes.
J. Encourage preservation of open space and natural terrain.

A. The hillside preservation standards contained in this Chapter shall be applied to all properties containing slopes of ten percent (10%) or greater. Any land or parcel having a slope of greater than ten (10%) percent shall be deemed to be land having a "steep slope" within the meaning of this Chapter.
B. In the event that any provisions of this chapter conflict with other sections of the Lehi City Development Code, the most restrictive provision shall apply.
C. Unless specifically stated by this chapter, the underlying zone shall determine density, minimum lot sizes, widths, frontages, etc.; except in the case of slopes exceeding thirty percent (30%) no density will be given. When determining density calculations, areas with slopes above thirty percent (30%) must be subtracted from the overall project area.
D. The City encourages the use of Planned Residential Developments, Planned Unit Developments, and Planned Communities in areas with steep slopes in order to preserve the natural terrain, and to maintain the steep slopes as open space.
E. Lands preserved as open space due to the presence of steep slopes may be offered to Lehi City, a private land trust, or to a non-profit agency in order to preserve and maintain the area in its natural state.
F. All buildings on steep slopes shall comply with the applicable sections of the International Building Code and International Residential Code, except where the recommendations of the soils report and/or the geologic report are more restrictive.

Section 12-A.030 Hillside Preservation Development Standards. (Amended 11/12/13)
These provisions are intended to minimize floods, erosion, and other environmental hazards relating to development in slope areas, to protect the natural scenic character of hillside areas, and to ensure that the development of hillside and slope areas reflects the best interests of Lehi City, its residents and private property owners. To ensure the safe development of hillsides and slopes within Lehi City, the
following standards shall apply to all development within Hillside Preservation areas:

A. No person shall be permitted to grade, excavate, fill, erect any structure, or otherwise disturb any slope over thirty percent (30%) unless appropriate engineering measures are taken to address any associated hazards, as recommended by an engineering analysis and accepted by the Lehi City Council.

B. Any person proposing to grade, excavate, fill or erect any structure on any slope or hillside with a slope greater than ten percent (10%) shall be required to submit the following documents to the City for review and approval. These documents shall be submitted for review in addition to the development requirements for site plan and/or subdivision (whichever is applicable):

1. Soils report. The soils report shall be prepared and stamped by a geotechnical engineer, licensed by the State of Utah and qualified to prepare such report, and must contain the following information:
   (a) Stability analysis for “steep slopes”;
   (b) Unified soil classification for the major horizons or layers of soil profile, or of the zone of the footing foundation;
   (c) Soils engineering tests to determine bearing capacity, settlement potential, and shrink/swell potential of the site soils;
   (d) Analysis of the soil suitabilities, constraints, and proposed methods of mitigating such constraints in implementing the proposed development;
   (e) Groundwater levels and flows that may affect the development and estimated elevation of groundwater levels;
   (f) Frost depth and potential frost action based upon material type and groundwater levels;
   (g) Irrigation, runoff, and surface flows that may affect the development;
   (h) Seismic considerations, including estimated peak ground accelerations, spectral accelerations and the appropriate Site Class in accordance with the International Building Code (for projects involving structures), and other potential seismic hazards relating to the proposed development. The report should address the potential impacts of seismic ground motions on slope stability;
   (i) Bearing capacities, compaction, and other applicable factors deemed relevant by the geotechnical engineer.; and
   (j) Recommended means to minimize any hazards and/or adverse impacts to the natural environment. Recommendations should address concerns identified in the soils report as well as the geologic report.

2. Geologic report. A geologic report and map shall be prepared and stamped by geologist, licensed by the State of Utah and qualified to prepare such report. Mapping shall reflect careful attention to the rock composition, structural elements, and distribution of earth materials, and shall be drawn at a scale of 1”=100’.

   The report should include the following:
   (a) Location and size of subject area and its general setting with respect to major geologic features;
   (b) Location and probability of landslide potential;
   (c) Discussion of other potential geologic hazards, including but not limited to avalanche, rock fall, debris flow, flooding, groundwater-related hazards, fault rupture, and other seismic hazards;
   (d) Topography and drainage in the subject area;
   (e) Estimated depth to bedrock and geologic characteristics of bedrock layers;
   (f) Reference to any State, Federal, and County reports covering the area (responding to issues/concerns identified in the reports); and
   (g) Conclusions and recommendations regarding the effect of geological conditions on the proposed development, and recommendations covering the adequacy of sites to be developed.

3. Grading and drainage plan. A grading and drainage plan shall be prepared by an engineer, licensed by the State of Utah and qualified to prepare such report. The plan must be sufficient to determine erosion control measures necessary to prevent soil loss during construction. The plan shall also include the following information:
   (a) A map of the entire site showing existing details and contours of the property as well as proposed modifications. Map shall be prepared using a scale of one inch equals one hundred feet (1”= 100’);
   (b) Map of areas to be graded, showing existing details and contours at five-foot (5’) intervals where terrain is to be modified;
   (c) A drainage report, including a narrative and calculations. The report shall include
an investigation of the effects of a 100-
storm and an evaluation of how the pro-
posed drainage system will handle predict-
ed flows for the areas within development
and for areas outside of the development
but drain through the subject area. This re-
port shall address the effects on down-
stream development;
(d) The history, including frequency and
duration of flooding; any additional permits
required for floodplain and/or wetland are-
as; as well as any mitigation efforts pro-
posed as a part of the plan; and
(e) A plan for the prevention and control
of erosion and sedimentation during con-
struction and during the period before the
landscaping is established.

4. Vegetation Plan. A vegetation plan and re-
port shall be prepared by a person or firm qual-
ified by training and experience to have expert
knowledge of the subject, including any appli-
cable State licensing. The Vegetation Plan shall
include the following:
(a) A survey of the existing vegetation and
ground cover;
(b) A plan of the proposed re-vegetation of
the site, including existing vegetation to be
preserved and/or modified. This plan
should disturb as little native vegetation as
possible;
(c) A maintenance program for existing
vegetation and new plantings; and
(d) A written statement by the person or
firm preparing the vegetation plan and re-
port, identifying any vegetation problems
and stating the ability of the proposed plan
to eliminate any potential problems, to pre-
vent hazards or adverse effects.

C. Any development of property deemed to be a
“steep slope” shall also conform to the following
provisions:

1. Grading. No grading, filling, or excavation
of any kind shall be accomplished without first
obtaining a grading permit as required by the
Grading Permit requirements of Chapter 12-B
of this Code.

2. Drainage:
(a) Required storm water runoff collection
facilities shall be designed to retain storm
water runoff and landscape irrigation flows
on development sites for a sufficient length
of time so as to prevent flooding and/or
erosion.
(b) Required storm water collection facili-
ties shall be designed to divert surface and
irrigation water away from cut faces or slop-
ing surfaces of a fill. French drains are
not acceptable.
(c) Curb, gutter, and pavement designs
shall be such that water on roadways is pre-
vented from flowing off the roadways.
(d) Natural drainage, open channel drain-
age and culvert discharge points, shall be
ripped for a distance sufficient to con-
voy the discharge without channel erosion.
(e) Sediment catchment ponds shall be
constructed downstream from each devel-
opment, unless sediment retention facilities
are otherwise provided.

3. Vegetation and Re-vegetation:
(a) Conserve topsoil removed during con-
struction for later use on disturbed areas as
needed, and as approved by the City.
(b) All disturbed soil surfaces shall be sta-
bilized before final acceptance of the de-
velopment by the City. Stabilization shall
include, at a minimum, six (6) inches of
topsoil and native seed mix.
(c) In all areas under ownership and con-
trol of the Developer, the Developer shall
be fully responsible for any destruction of
native vegetation required to be retained,
and shall be responsible for replacing de-
stroyed vegetation.

4. Fire Protection:
(a) Lot size and potential placement of
buildings thereon shall be such that ade-
quate clearance of hazardous, flammable
vegetative cover may be accomplished to
comply with the Urban Wildlife Interface
Code.
(b) Recorded easements for firebreaks
shall be required with all developments.

5. Incorporation of Geotechnical and Geologic
Recommendations. A written review of the de-
velopment plans shall be performed by the per-
son or firm preparing the soils and geologic re-
ports to determine if the recommendations from
the reports have been incorporated and to re-
commend changes to the development plans if
needed.

Section 12-A.040 Hillside Preservation Building
Standards
The following standards shall apply to all construction within the Hillside Preservation Overlay Zone.

A. No dwelling or other structure used for human habitation shall be constructed on fill material, unless such material shall have been compacted as directed by a geotechnical engineer licensed in the State of Utah.

B. No building permit shall be issued until all of the items required by this ordinance have been reviewed and approved by the appropriate body within the City.

C. A building permit issued from the Lehi City Building Department is required for all retaining walls, as defined by the International Building Code or International Residential Code.

D. The final building inspection on any structure cannot be scheduled by the Lehi City Building Department until all landscaping (required during the development process), including landscaping on private lots and any retaining walls, are installed. In the case where landscaping cannot be installed because of seasonal and/or weather constraints, the bond for the landscaping shall not be released until the landscaping is installed in a manner acceptable to the City.

E. In the event that the International Building Code or International Residential Code has differing requirements, the more restrictive provisions shall apply.

Section 12-A.050 Dispute Resolution
To insure sound engineering practices and analysis are implemented, any disputes between the city and developers engineering consultants shall be resolved per the requirements in Title 10 Chapter 9a of the Utah State Code.