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NOTIFICATION

No.B.13017/89/2017-UD&PA, the 4th July, 2017. In exercise of the powers conferred by Section 76 of the Mizoram Urban and Regional Development Act, 1990 (Act No. 12 of 1990), the Governor of Mizoram is pleased to notify "The Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017" for general information.

Dr. C. Vanlalramsanga,
Secretary to the Govt. of Mizoram,
Urban Development & Poverty Alleviation Department.

**THE MIZORAM URBAN AREAS (LAND DEVELOPMENT, LANDSLIDE
PREVENTION AND MITIGATION) RULES, 2017**

In exercise of the powers conferred by Sections 22, 23, 24 and 76 of the Mizoram Urban and Regional Development Act, 1990 (Act No.12 of 1990), the Governor of Mizoram is pleased make the following Rules, namely:

Chapter - 1

1. Short Title, Extent and Commencement:

- (1) These Rules may be called The Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017.
- (2) They shall apply to all the urban areas of Mizoram.
- (3) They shall come into force from the date of their publication in the Official Gazette.
- (4) These Rules shall apply to all site development works, including excavating, filling, leveling, land clearing and other earthwork construction operations and to the control of runoff from graded sites, unless such operations are specifically exempted by these Rules.

2. Definitions:

For the purpose of these Rules:

- (1) 'Accelerated erosion' means rapid erosion caused by artificially induced alteration of the vegetation, land surface topography or runoff patterns. Evidence of accelerated erosion is indicated by exposed soils, active gullies, rills, sediment deposits or slope failures caused by such artificial activities.
- (2) 'Access' means the means of an entry or exit to any plot/land or building/structure.
- (3) 'Act' means The Mizoram Urban and Regional Development Act, 1990 (Act. No.12 of 1990).
- (4) 'Building regulations' means rules for regulation of buildings as prescribed in the Mizoram Urban and Regional Development Rules, 1998 under the Act which shall extend to all the urban areas of Mizoram. 2
- (5) 'Approved' means approved by the Planning Authority or any officer or person to whom appropriate power has been delegated by the Government.
- (6) 'Bedrock' means in-place solid rock.
- (7) 'Bench' means a relatively level step excavated into earth material designed to receive fill and prevent its movement downhill, or to level a portion or portions of a sloping surface for the purpose of a construction pad or other usable level area.
- (8) 'Borrow' means and is synonymous with 'import': earth fill material acquired from an off-site location for use in site development on a site.
- (9) 'Building' means any structure constructed for whatsoever purpose and of whatever materials and every part thereof, whether used as human habitation or not and includes foundations, plinths, walls, floors, roofs, chimneys, plumbing, and building services, fixed platforms, verandah, balcony, cornice or projection, part of a building or anything affixed thereto or any wall enclosing or intended to enclose any land or space and signs and outdoor display structures, monuments, memorials or any contrivance of permanent nature/ stability built under or over ground.
- (10) 'Building line' means the line up to which the plinth of a building adjoining a street or an extension of a street or any future street may lawfully extend. It includes the lines prescribed in any development plan.

- (11) 'Building official' means Planning Authority or a person or persons authorized by the Government to carry out all activities necessary for regulating building construction and site development works.
- (12) 'Clearing' means and is synonymous with 'scarify': the removal of vegetation and debris down to bare soil by any method.
- (13) 'Civil engineer' means an engineer who has been given licence or recognized by the Government.
- (14) 'Compaction' means the densification of earth and solids or fill by mechanical means.
- (15) 'Cumulative site development' means total combined site development, including both excavation and fill, accomplished over a ten-year period.
- (16) 'Drain' means a conduit or channel for the carriage of storm water, sewage or other used water and includes all fittings and equipments, such as manhole, inspection chambers, traps, gullies and floor traps used for the drainage of a building. It also includes open channel used for conveying surface water. 3
- (17) 'Drainage' means a system constructed for the purpose of removal of waste and surface water.
- (18) 'Drainage course' means a well-defined, natural or artificial channel which conveys stormwater either year round or intermittently.
- (19) 'Earth material' means any rock, natural soil or fill, or any combination thereof.
- (20) 'Engineering geologist' means a geologist who has been given license or recognized by the Government to practice in the field of engineering geology.
- (21) 'Engineering geology' means the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.
- (22) 'Erosion' means the wearing away of the ground surface by the actions of water, wind, ice, gravity, or a combination thereof.
- (23) 'Erosion control specialist' means and shall be synonymous with soils engineer, geotechnical engineer, engineering geologist, civil engineer, or other such individual, who has been given licence or recognized by the Government.
- (24) 'Erosion hazard' means the susceptibility of a site to erosion, based on soils, conditions and steepness of a slope, rock type, vegetation, and other site factors.
- (25) 'Excavation' means the mechanical removal of earth material.
- (26) 'Fill' means the deposit of earth materials by artificial means.
- (27) 'Geotechnical engineer' see definition of 'Soils Engineer.'
- (28) 'Government' means Government of Mizoram.
- (29) 'Grade' means the vertical location of a point or elevation on a site. (refer to 'Slope' for the angle of the ground surface expressed as a ratio or percentage in relation to level ground.)
 - (a) 'Existing grade' means the grade prior to site development works.
 - (b) 'Rough grade' means the stage where the approximate elevation(s) of the ground surface match the approved plans.
 - (c) 'Finished grade' means the final grade of the site which conforms to the approved plans.
- (30) 'Grading' means any excavation, filling, leveling or combination thereof.
- (31) 'Key' means a designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope. 4
- (32) 'Lateral support' means and refers to the support that the land or soil receives from other land or soil around it. Support is lateral when the supported and supporting lands are divided by a vertical plane.
- (33) 'Master Plan' means the Master Plan/Development Plan for a particular town approved by the Government under the Act.

- (34) 'Ownership title' means an attested copy of the Land Settlement Certificate (LSC), house pass, or sale/lease deed.
- (35) 'Permit' means and shall be synonymous with 'Permission' : valid permission or authorisation in writing by the Planning Authority.
- (36) 'Planning Authority' means a committee or person or group of persons authorised by the Government to carry out the provisions under these Rules.
- (37) 'Plinth' means the portion of a structure between the level of the ground and the floor immediately above the ground.
- (38) 'Professional inspection' means inspections to be performed by the civil engineer, soils engineer, engineering geologist or erosion control specialist. Such inspections include those performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work.
- (39) 'Retaining wall or breast wall' means a wall constructed to maintain in position material capable of exerting lateral pressure.
- (40) 'Risk Classification Maps' means the currently adopted version of the Risk Classification Map prepared by the Government.
- (41) 'Runoff' means the movement of surface water over ground surface.
- (42) 'Sediment' means eroded earth material that is carried by water, wind, gravity or ice and deposited into channels, lakes, rivers and other areas.
- (43) 'Set back' means the distance from the toe or top of a slope, structure or property line where site development is to occur.
- (44) 'Shoring' means temporary structural support.
- (45) 'Site' means and shall be synonymous with 'Plot': a parcel or piece of land enclosed by definite boundaries, where site development is performed or permitted.
- (46) 'Site development' means any excavation, filling, levelling, land clearing, or earth movement works or any combination thereof which qualifies either as regular or engineered site development under the terms of these Rules. 5
- (47) 'Slope' means an inclined ground surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance, or in degrees measured from the horizontal. Slope is termed positive or negative depending on whether it rises or falls respectively from the point of observation.
- (48) 'Soil' means naturally occurring surficial deposits overlying bedrock.
- (49) 'Soils engineer (geotechnical engineer)' means an engineer who is given a licence or recognized by the Government.
- (50) 'Soils engineering' means the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and testing or the construction thereof.
- (51) 'Stream' means any natural watercourse as shown in the Master Plan.
 - (a) 'Perennial stream' means a stream or watercourse which runs generally year round.
 - (b) 'Intermittent stream' means a stream or watercourse which runs generally only during the rainy season and tends to dry up between seasons.
- (52) 'Technical personnel' means professionals licensed or recognized by the Government.
- (53) 'Terrace' means a relatively level step constructed in the face of a graded slope surface for erosion control, drainage and maintenance purposes.
- (54) 'Topsoil' means the first 400 to 800 mm of loose, friable, organic and fertile earth materials on top of a soil profile.

(55) 'Water break' means a ditch, dike, dip or combination.

3. General Provisions:

(1) Relationship to other rules

The technical regulations set forth in these rules shall be implemented in a manner consistent with the Master Plan/ Development Plan. Any person intending to construct a building requiring site development work, must obtain a site development permit in addition to a building permit, unless exempted by Rule 4.

(2) Protection of adjacent property

The permit holder and the owner of the property on which any site development works are performed shall be responsible for the prevention of damage to adjacent property. No person shall excavate on land sufficiently close to the property line to endanger any adjoining public street, sidewalk, pathway, stairway, alley, drain, or other public or private property without taking adequate measures to support and protect such property from settling, cracking or other damage that might result. The permit holder and owner of the property are responsible for repairing any damage caused to private or public property to the original or equivalent condition, to the satisfaction of the Planning Authority/Government.

4. Exemptions:

A site development permit is not required for the following:

- (1) An excavation below finished grade for basements and footings of an ordinary building, or of a semi-permanent or permanent building located in an area of low risk zone, defined as per the Risk Classification Map, which is authorized by a valid building permit. In areas not yet mapped to the standards, or for which such Risk Classification Maps are still under development, the exemption shall be granted at the discretion of the Government with due consideration to safety.

This provision shall not exempt any fill containing material from such excavation nor exempt any excavation having an unsupported height greater than one meter after completion of such structure.

This shall also not exempt any person from the requirements of Rule 3(2) requiring lateral and subjacent support to which each coterminous owner is entitled.

- (2) Building pads on grade and approach roads for which a valid building permit has been issued. However, while a separate site development permit is generally not required for approach roads unless a cut of more than 1m in height or 10m volume is proposed, the design standards as set forth in these Rules shall be adhered to.

Approach roads shall be designed incorporating existing contours to the maximum extent feasible. Access roads and garage entrance ways/driveways shall enter public/private roads in such a manner as to maintain adequate line of sight.

- (3) Individual cemetery graves.
 (4) Refuse disposal sites controlled by the city/town.
 (5) Exploratory excavations performed under the direction of a soils engineer or engineering geologist. Test bores shall be protected to prevent small children or animals from falling in, and no excavation shall be left unattended unless adequately shored to prevent failure

or relieved to a maximum slope of 1 horizontal to 1 vertical. All such sites shall be returned to their original condition within forty-five days unless extended under agreement with the Building Official. Test or monitoring wells established on occupied sites shall be protected by appropriate fencing or enclosure as determined by the Building Official.

- (6) An excavation which:
 - (a) is less than 1 meter in depth, or
 - (b) does not create a cut slope greater than one meter in height measured vertically from toe to top of slope and steeper than 1-1/2 horizontal to 1 vertical, or
 - (c) comprises less than ten cubic meters on any one plot.
- (7) A fill less than 30 centimeters in depth and placed on natural terrain with a slope flatter than 5 horizontal to 1 vertical, or less than 1 meter in depth, not intended to support structures, which does not exceed 30 cubic meters on any one lot, and does not obstruct any drainage course.
- (8) When approved by the Building Official, minor site development works in an isolated, self-contained area, if there is no danger to private or public property, except in stream or river corridors or other protected natural areas where permits shall be required for all site development operations.
- (9) Emergency work necessary to preserve life or property under imminent threat of excessive erosion, slope failure or flooding may occur as required, provided the person rendering such service reports all pertinent facts to the Building Official as soon as possible and no later than fifteen days after commencement of the work. Persons performing such emergency work shall thereafter obtain a permit pursuant to Rule 5. Any such work as may be deemed reasonably necessary to correct any erosion or slope failure, or conditions with a potential to cause erosion or slope failure as a result of such emergency work shall be performed as expeditiously as possible. An imminent threat shall not be construed to include known landslides or "sinking" areas, or ongoing erosion problems and is intended to refer to a sudden and unexpected alteration to slope stability or ponding due to natural occurrences such as heavy rain, earthquake, or other unusual circumstances. Exemption from the permit requirements of these rules shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of these rules or any other Acts or Rules of the State Government of Mizoram.

(c) No exemption shall be allowed within three meters of any slope of 24 degrees or more, including clearing (scarifying), which would tend to increase erosion potential and reduce average slope.

5. Requirements for site development permit applications:

(1) Requirements for all applications

Every person, including Central and State Government Departments and Semi-Government Departments/Organisations excluding the Defence Ministry, who intends to conduct any site development works not granted exemption under Rule 4, shall obtain a site development permit by giving an application to the Planning Authority in the prescribed form given in ANNEXURE-I. The application shall be accompanied by the prescribed fees and three copies each of the documents mentioned in Rules 5(3) and 5(4) below for the type of site development being performed. One copy each of these documents shall be returned to the applicant after issue of permit or refusal.

(2) Site development designation

(a) Engineered site development:

All site development that takes place in the map of Moderate, High or Very High Risk Zones as defined by the Risk Classification Maps, shall be designated as “Engineered Site Development”. In areas not yet mapped to the standards, or for which such Risk Classification Maps are still under development shall be designated as Engineered Site Development if the average slope of the plot is greater than or equal to 24 degrees.

In addition, site development in any area, including areas of Low Risk Zone as defined by the Risk Classification Maps, shall be designated as Engineered Site Development if any of the following conditions apply:

- (i) Height of any cuts/excavations is 3 meters or more –OR–
- (ii) Site development works are in excess of 200 cubic meters –
OR–
- (iii) Site development works are proposed to support any structure.

All Engineered Site Development shall be performed in accordance with an approved site development plan and specifications, which incorporates the findings and recommendations of the geotechnical report defined below in Rule 6, unless otherwise required by the Building Official.

(b) **Regular site development:**

Regular Site Development is allowed ONLY in Low Risk Zone as defined by the Risk Classification Maps. In areas not yet mapped to the standards, or for which such Risk Classification Maps are still under development, development is allowed only on slopes where the average slope of the plot is less than 24 degrees.

Site development in Low Risk Zones involving less than 200 cubic meters and that will not support any structure shall be designated “Regular Site Development” unless the permit holder chooses to have the site development be designated as Engineered Site Development, or the Building Official determines that, due to the existence of special conditions or unusual hazards, the site development should be designated as Engineered Site Development.

(3) **Requirements for regular site development permit applications**

An application for a regular site development permit (Form 1) shall be accompanied by the following supporting documentation:

- (a) Copy of ownership title.
- (b) No Objection Certificate from the concerned Local/Village Council, including No Objection from adjacent property owners to the plot 10 boundaries shown on the site plans. The Local/Village Council concern and the adjacent property owners shall base any refusals to issue a No Objection Certificate on verifiable concerns regarding unsafe or inappropriate site development, or on verifiable concerns that the plot boundaries are incorrectly defined.
- (c) Estimated quantities of excavation and fill, and a section drawing showing how quantities were determined.
- (d) Statement of proposed land use for the site on which the site development is to be performed.
- (e) Site plans in sufficient clarity to indicate the nature and extent of the work. A site development plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of these rules. The plans shall show the existing

grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of these rules. The maximum permissible scale of the site plan shall be as per Rule 5 of the Mizoram Urban and Regional Development Rules, 1998. The plans shall give the location of the work, the name of the owner, and the name of the person who prepared the plan. The plans shall include the following information:

- (i) General vicinity of the proposed site.
- (ii) Plot boundaries, delineated by length and bearing.
- (iii) Limits and depths of cut and fill.
- (iv) Location of any buildings, roads or other structures where work is to be executed, and the location of any buildings or structures within 5m of the proposed site development.
- (v) Contours, flow areas, elevations, or slopes, which define existing and proposed drainage patterns, including storm water provisions in accordance with the requirements of Rule 24.
- (vi) Location of existing and proposed utilities, drainage facilities, sewage/septic systems, and recorded public and private easements and restricted use areas within 5 m of the proposed site development.
- (vii) Location of any natural streams, riverine reserves or flood hazard areas as designated and defined by Planning Authority/Government.

(4) **Requirements for engineered site development permit applications**

An application for a permit for engineered site development (FORM 2) shall be accompanied by the following supporting documentation:

- (a) Copy of ownership title.
- (b) No Objection Certificate from the concerned Local/Village Council, including No Objection from adjacent property owners to the plot boundaries shown on the site plans. The Local/Village Council concern shall base any refusals to issue a No Objection Certificate on verifiable concerns regarding unsafe or inappropriate site development, or on verifiable concerns that the plot boundaries are incorrectly defined.
- (c) A statement of the quantities of material to be excavated and/or filled, and a section drawing showing how quantities were determined. Earthwork quantities shall include quantities for geotechnical and geological remediation. In addition, a statement of the quantities of material to be imported or exported from the site.
- (d) A geotechnical report prepared by an engineering geologist or geotechnical engineer registered/licenced by the Government and containing the information in Rule 6, and including the date of the report together with the names, addresses, and phone numbers of the firms or individuals who prepared the report.
- (e) A statement of the estimated starting and completion dates for proposed work.
- (f) Specifications containing information covering construction and material requirements.
- (g) Site plans of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the proposed work will conform to the provisions of these rules and all relevant laws, rules, and regulations. The maximum permissible scale of the site plan shall be as per Rule 5 of the Mizoram Urban and Regional Development Rules, 1998. The plans shall include or be accompanied by the following information:

- (i) First sheet depicting the location of the proposed work, the name and address of the owner, and the person by whom the plans were prepared.
- (ii) Property limits and accurate contours of existing ground and details of terrain and area drainage.
- (iii) Location of any buildings or other structures on the site where work is to be performed, and the location of any buildings or structures within 5 m of the proposed site development.
- (iv) Location of existing utilities, roads, road reserves, recorded public and private easements, restricted use areas, septic systems, drains, natural streams, riverine reserves or flood hazard areas on the site where work is to be performed and within 5 m of the proposed site development.
- (v) Limiting dimensions, elevations, or finish contours to be achieved by the site development, proposed drainage channels including storm water provisions in accordance with Rule 24, and related construction.
- (vi) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work. A map showing the drainage area and the estimated runoff of the area served by any drains shall also be provided.
- (vii) A drainage plan, including elevations of floors with respect to finish site grade and locations of proposed steps, slabs and fences that may affect drainage.
- (viii) Location and type of any proposed utilities and proposed private sewage disposal system or septic system, including the location of the soak pit/expan sion area.

Recommendations in the geotechnical report shall be incorporated into the site development plans or specifications. When approved by the Building Official, specific recommendations contained in the geotechnical report, which are applicable to site development, may be included by reference.

(5) Competence of technical personnel

The permit holder is responsible for employing competent personnel for all designing and constructing all site development works. Qualifications and competence of the technical personnel and licence fees shall be as given in ANNEXURE-VII.

6. Contents of geotechnical reports:

The geotechnical report required by Rule 5(4) above shall include the following:

- (1) An adequate description of the geology of the site, including a geologic map and cross sections utilizing the most recent site development plan as a base.
- (2) Data regarding the nature, distribution and strength of existing soils.
- (3) Conclusions and recommendations regarding the effect of geologic and geotechnical conditions on the proposed development.
- (4) An opinion on the adequacy for the intended use of sites to be developed by the proposed site development, as affected by geologic and geotechnical factors, including the stability of slopes.
- (5) Recommendations for site development procedures and design criteria for corrective measures, including buttress fills, when necessary.
- (6) Identification of potential effects on adjacent property and recommendations for preventive measures, including drainage measures, slope stabilization measures, and shoring of excavations during construction.

All reports shall be subject to review by the Planning Authority/Government. Recommendations included in the reports and approved by the Building Official shall be incorporated in the site development plan or specifications.

7. Rainy season site development restrictions:

Site development during the rainy season, as may be declared by the Planning Authority/Government, may present additional landslide and erosion hazards, and is subject to more stringent review. During the monsoon season, proposed site development may proceed with restrictions and additional measures as prescribed by the Planning Authority. In some cases, proposed site development may not be allowed to proceed during the monsoon season.

8. Notification of adjacent plot owners:

Owners of plots adjacent to the plot where the proposed site development would take place shall be notified by the officials of Local/Village Council concern during the process of obtaining the No Objection Certificate from the Local/Village Council concern.

9. Withdrawal of application:

The applicant may withdraw his or her application at any time prior to the approval, and such withdrawal shall terminate all proceedings with respect to such application but the fees paid shall not be refunded.

10. Expiration of permits:

Site development permits shall be valid for a period of 12 (twelve) months from the date the permit is granted. The period of validity of such permit shall be determined by the Planning Authority/Government based on the proposed start of site development operations, the type of site development, and the time remaining before the onset of the rainy season.

11. Permit granting, refusals and prohibited site development areas:

The Planning Authority/Government may either grant or refuse a permit, or may grant a permit after modification(s), based on conformity with these rules and shall communicate its decision to the applicant in the prescribed form given in FORM No. 3. A copy thereof shall be endorsed to the Local/Village Council concern.

Factors considered in the refusal shall include, but not be limited to, subsurface conditions such as the rock strata and faults; nature and type of soil or rock that when disturbed by the proposed site development may create earth movement, possible saturation of fill and unsupported cuts by water, both natural and domestic; surface runoff that produces erosion; potential for damage to neighbouring public or private property by proposed site development itself or by potential earth movement or erosion; and adequacy of protective measures.

No site development permit shall be issued for a project located in an area with slopes greater than 60 degrees.

12. Appeals of permit granting or refusal:

Any person aggrieved by either granting or refusal of a permit may appeal to the Director, Urban Development & Poverty Alleviation or any other person/body authorised by the Government within 30 days from the date of the order granting or denying the site development permit. The decision of the Director, Urban Development & Poverty Alleviation or person or body so authorised shall be final and binding.

13. Inspection:**(1) General**

Site development operations for which a permit is required shall be subject to inspection by the Building Official. Professional inspection of site development operations shall be provided by the civil engineer, geotechnical engineer and/or the engineering geologist retained to provide such services as required by the Building Official.

(2) Engineering geologist

The engineering geologist shall provide professional inspection which shall include inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved geotechnical report shall be submitted to the permit holder, the Building Official, and the civil or geotechnical engineer (if any).

(3) Geotechnical engineer

The geotechnical engineer shall provide professional inspection which shall include observation during fill placement and testing for required compaction. The geotechnical engineer shall provide sufficient observation during the preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of these regulations. Revised recommendations relating to conditions differing from the approved geotechnical report shall be submitted to the permit holder, the Building Official, engineering geologist, and the civil engineer (if any).

(4) Civil engineer

The civil engineer shall provide professional inspection within such engineer's area of technical expertise, which shall consist of observation and review as to the establishment of line, grade and drainage of the development area.

(5) Permit holder

The permit holder shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of these regulations. The permit holder shall act as a coordinator between the masons and labourers constructing the building, any professional consultants involved in ensuring that the work is as per the approved plans, and the Building Official. In the event of changed conditions, the permit holder shall be responsible for informing the Building Official of such change and shall provide revised plans for approval.

(6) Building Official

The Building Official may inspect the project at the various stages of work requiring approval to determine that adequate control is being exercised by the professional consultants.

(7) Site development inspection at site

Prior to the completion of any site development project, the Building Official may, at his discretion, inspect the site to determine that the site development has been completed according to the plans and specifications submitted for the permit.

The permit holder shall notify the Building Official for the purpose of inspection:

- (a) Fourteen days prior to the beginning of the work authorized by the permit, using FORM No.4;
- (b) When all work, including installation of all appurtenant structures (except any building being constructed under the permit), and other protective devices, has been completed, but prior to the construction of the building above plinth level.

14. Cancellation of permit:

If, at any time after the issuance of the development permit, the Planning Authority/Government is satisfied that such permit was granted in consequence of any material misrepresentation or fraudulent statement contained in the application given or information furnished, the Planning Authority/Government has the right to cancel the permit and any work done or rendered shall be deemed to have been done without permission.

15. Suspension of permit:

If, at any stage of the development work, the engineering geologist, civil engineer or geotechnical engineer resigns or is unable to continue supervision of the work, the permit holder shall suspend all development activity until a new technical person licensed by the Government is appointed. During the intervening period, no development work shall be undertaken and any work shall be treated as unauthorised development.

16. Completion certificate:

On completion of the development, the permit holder through the licensed professional who has supervised the construction shall provide a completion certificate to the Planning Authority using FORM NO.5.

17. Violations:

(1) Notification

Whenever the Building Official determines that the provisions of these rules have been violated, the Building Official shall give written notice thereof to the owner of the property. In addition, the Local/Village Council concern is, by virtue of this provision, empowered to give a stay of construction of site development works within its jurisdiction, for any violation of the provisions of these Rules or the Master Plan/ Development Plan or violation of the conditions of the site development permit. The Local/Village Council concern shall give written notice thereof to the owner of the property. If a stay is given by the Local Council, a copy of the stay order shall immediately be forwarded to the Planning Authority/Government which may confirm or cancel the stay after necessary enquiry and verification.

(2) Abatement

The owner and permit holder are responsible for correcting any violations to the satisfaction of the Building Official. If the Building Official determines after investigation that adjacent or other nearby property has been damaged by the violation, the owner shall be required to pay for the damages, or to restore the property to its original or equivalent condition, to the satisfaction of the Planning Authority.

(3) Offences, penalties and enforcement

Contravention of any of these Rules shall be dealt with as per the provisions of Sections 57, 59, 61, 62, 63, 64 and 65 of the Mizoram Urban and Regional Development Act, 1990.

18. Correcting unsafe conditions:

Whenever the Building Official determines that any existing excavation, embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the Building Official may give written notice thereof to the owner of the property upon which the excavation, embankment or fill is located, or other person or agent in control of said property. Upon receipt of said notice, the owner or other person or agent in control of the property shall repair or eliminate such excavation, embankment or fill so as to eliminate the hazard, in conformity with the requirements of these rules, within the period specified in said notice.

If the owner fails to comply with the direction of the Building Official provided in the said notice, the Planning Authority/Government can itself repair or remove any development/structure or cause it to be removed and realise the cost of such repair, demolition or removal as arrears of land revenue.

19. Fees for site development permit:

Fees for site development permit may be fixed and determined by the Government from time to time.

Chapter 2

[Specific Site Development Requirements]

20. Construction safety precautions and procedures:**(1) Safety precautions to protect adjacent public and private property**

During the entire time from the date of issuance of the permit to the date of final approval for all site development operations, the permit holder shall take all appropriate and necessary precautions to protect adjacent public and private property from any damage that may result from the construction of site development works. This includes temporary measures identified as necessary by the geotechnical report or required by the Building Official, which may include shoring of excavations, timely construction of retaining walls, control of surface runoff and erosion, or other protective measures.

(2) Ability to stop work / unsafe conditions

If at any stage of the work the Building Official determines by inspection that further site development as authorized is likely to endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course, the Building Official may order the work stopped by notice in writing served on any persons engaged in doing or causing such work to be done, and any such person shall immediately stop such work. The Building Official may authorize the work to proceed if the Building Official finds adequate safety precautions will be taken or corrective measures incorporated in the work to avoid likelihood of such danger, deposition or interference. If the site development work as done has created or resulted in an unsafe condition, the Building Official shall give written notice requiring correction thereof as specified in Rule 18.

(3) Documents at site

The person to whom the site development permit is issued shall, during the site development work, keep a copy of the approved layout plan, drawings and specifications at the site.

21. Cuts/Excavations:**(1) General**

For engineered site development, the geotechnical report must prescribe all proposed cuts, stating the site has been investigated and giving an opinion that the proposed cut slope will be stable and not create a hazard to public or private property. For regular site development, cuts shall conform to the provisions of this rule.

(2) Cut slopes

The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than one horizontal to one vertical, unless the permit holder furnishes a geotechnical report stating the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property.

(3) Retained cuts

Retaining walls not over one meter in height measured from the bottom of the footing to the top of the wall are exempt from permit requirements. If such a wall is subjected to a surcharge, such as a structure or vehicle load, sufficient engineering shall be provided to demonstrate the adequacy of such a retaining wall to perform the function as designed and either a site development permit or building permit must be obtained depending upon the amount and depth of soil moved. Cuts, regardless of height, which tend to alter the natural drainage of property and accelerate erosion, concentrate runoff, or otherwise create a hazardous condition, shall be reviewed by an engineer and permits obtained as provided for in these regulations. Cuts which will be retained must be adequately shored/supported during construction in order to protect adjacent public and private property.

22. Fills:

For engineered site development, all fills shall be designed by an engineer, and fill designs shall be examined by the Planning Authority. For regular site development, the following general guidelines shall apply:

(1) Fill slopes

Fill slopes shall not be constructed on natural slopes steeper than 2 to 1. The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials, scarifying to provide a bond with the new fill and, where slopes are steeper than 2 to 1 and the height is greater than 1.5 meters, by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of a fill on a slope steeper than 5 to 1 shall be at least three meters wide. The area beyond the toe of the fill shall be sloped for sheet overflow or a paved drain shall be provided. Such drains shall be constructed with energy dissipaters and shall discharge into an approved area. When fill is to be placed over a cut, the bench under the toe of fill shall be at least three meters wide, but the cut shall be made before placing the fill and acceptance by the soils engineer or engineering geologist or both as a suitable foundation for fill.

(2) Fill material

Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the Building Official, no rock, broken concrete, asphalt, or similar irreducible materials with a maximum dimension greater than 300 millimeters shall be

buried or placed in fills. No soils containing hazardous or toxic material of any kind may be used as fill.

Exception: The Building Official may permit placement of larger rock when the soils engineer devises a method of placement and continuously inspects its placement and approves the fill stability. The following shall also apply:

- (a) Prior to issuance of a site development permit, provisions shall be made to separate organic materials, such as tree stumps and brush, as well as large rocks. An area for stockpiling shall be delineated on the site development plans as well as provisions for their disposition.
- (b) Rock greater than 300 mm in size may be placed a minimum of 3 meters under the surface of the finish grade. Soils shall be compacted in short lifts around such materials to assure adequate filling around the large rock and preventing voids.

(3) **Compaction**

All fills shall be compacted to a minimum relative density of 90%. The top 450 mm may be excepted when no load is expected, and the slope does not exceed 2 horizontal to 1 vertical.

(4) **Slope**

The maximum slope of fill surfaces shall not exceed 2 horizontal to 1 vertical or steeper than is safe, whatever occurs first. The above prescribed slope may be exceeded if a proper engineered batter wall using only large aggregates is provided.

23. Set-backs:

Cut-and-fill slopes shall be set back from site boundaries in accordance with this section, but in no case shall the amount of set-back be less than that prescribed by Rule 37 of the Mizoram Urban and Regional Development Rules, 1998. Set back dimensions shall be horizontal distances measured perpendicular to the site boundary.

For engineered site development, the amount of set-back shall be determined by the geologist or soils engineer and included in the geotechnical report. For regular site development, the following provisions apply:

(1) **Top of cut slope**

The top of cut slopes shall not be made nearer to a site boundary line than one-fifth of the vertical height of the cut, with a minimum of 0.6 meters and a maximum of three meters. The setback may need to be increased for any required interceptor drains.

(2) **Toe of fill slope**

The toe of a fill slope shall be made not nearer to the site boundary line than one-half the height of the slope, with a minimum of 0.6 meters and a maximum of 6 meters. Where a fill slope is to be located near the site boundary and the adjacent off-site property is developed, special precautions shall be incorporated in the work as the Building Official deems necessary to protect the adjoining property from damage as a result of such site development. These precautions may include, but are not limited to:

- (a) Additional set-backs;
- (b) Provision for retaining or slough walls;
- (c) Mechanical or chemical treatment of the fill slope to minimize erosion;
- (d) Provisions for the control of both surface water and subsurface water, such as springs, which may exert undesirable pressures on the fill slope.

(3) **Modification of slope location**

The Planning Authority may approve alternative set-backs. The Building Official may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate that the intent of this provision has been satisfied.

24. Drainage:

Drainage plans that provide for control of surface runoff, sewage, sillage and seepage from septic systems shall be prepared according to the following provisions.

(1) Terraces

For engineered site development, all terraces shall be prescribed by the geotechnical engineer or engineering geologist and described in the geotechnical report and on the site development plans, and reviewed by the Building Official. However, the following minimum restrictions apply for both engineered site development and regular site development. Terraces at least 2 meters in width shall be established at not more than 10 meter intervals on all cut or fill slopes to control surface drainage and debris, except that where only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than 20 meters and up to 40 meters in vertical height, one terrace at approximately mid-height shall be four meters in width. Terrace widths and spacing for cut-and-fill slopes greater than 40 meters in height shall be designated by the civil engineer and approved by the Building Official. Suitable access shall be provided to permit proper cleaning and maintenance.

Swales or ditches on terraces shall have a minimum gradient of 1 vertical to 20 horizontal and must be paved with reinforced concrete not less than 75 mm in thickness or an approved equal paving. They shall have a minimum depth at the deepest point of 300 mm and a minimum paved area of 0.7 square meters. A single run of swale or ditch shall not collect runoff from a tributary area exceeding 400 square meters (projected horizontally) without discharging into a down drain.

(2) Subsurface drainage

Cut-and-fill slopes shall be provided with subsurface drainage as necessary for stability.

(3) Disposal of drainage

Sites developed downhill of existing sites shall convey drainage, sewage or seepage from the adjacent site uphill, as well as from the site being developed, in a safe manner to the nearest practicable drainage way or sewer approved by the appropriate jurisdiction as a safe place to deposit such waters or sewage. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down-drains and other devices. "Building pads shall have a minimum drainage gradient of 1 vertical to 50 horizontal toward approved drainage facilities unless waived by the Building Official."

Exception: The gradient from the building pad may be 1 vertical to 100 horizontal if all of the following conditions exist throughout the permit boundary area:

- (a) No proposed fill area is greater than three meters in maximum depth;
- (b) No proposed finish cut or fill slope faces have a vertical height in excess of three meters;
- (c) No existing slope faces that have a slope face steeper than 10 horizontal to 1 vertical have a vertical height in excess of three meters.

(4) Interceptor drains

Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above the slopes that drains toward the cut, has a drainage path greater than 10 meters measured horizontally. Interceptor drains shall be paved with a minimum of 75m of concrete or gunite and reinforced. They shall have a minimum depth of 300mm and a minimum paved width of 800 mm, measured horizontally across the drain. The slope of the drain shall be approved by the Building Official.

(5) **Maintenance of drainage**

The owner shall be responsible for maintaining drainage facilities installed under their permit.

25. Erosion control:

The following shall apply to all cut-and-fill slopes –

The faces of cut-and-fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting, use of armor rock, terracing, water breaks, check dams, cribbing, riprap, or combinations thereof. The protection for the slopes shall be installed as soon as practicable and prior to calling for final inspection. During the approach of the rainy season, the contractor performing the work shall be prepared to install temporary measures as required to protect exposed areas until permanent measures can be taken. Where cut slopes are not subject to erosion, due to the erosion resistant character of the materials, such protection may be omitted with the permission of the Building Official. For plots adjacent to or including natural streams, the riverine reserve shall be maintained, and measures shall be taken to prevent erosion of materials or sediment from the site into the stream or riverine reserve.

26. Disposal of excavated material:

Any person performing any site development that involves imported or exported materials shall take special precautions, as approved by the Building Official, to prevent such materials from being deposited on the adjacent public way, and/or drainage courses or riverine reserves. Dispose of excavated material not used at the site at a location approved by the Planning Authority.

FORM NO. I

APPLICATION FOR REGULAR SITE DEVELOPMENT OF LAND
[Rule 5 of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017]

To

Sir,

I/We _____ [Name(s)] in full, owner(s)/lessee(s) of the land the particulars of which are given below, hereby apply for permission to conduct site development works on the Land of L.S.C. No. _____ on/in Plot No. _____ in _____ Veng and in accordance with Rule 6 of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017. I/we forward herewith the following documents in triplicate duly signed by me/us and the Licensed Geologist/Geotechnical Engineer/Civil Engineer/Supervisor/Group/Firm :

- (1) *Site Plan as prescribed in Rule 5.3.*
- (2) *Estimated quantities of excavation and fill.*
- (3) *Statement of proposed land use for the site on which the site development is to be performed.*
- (4) *Ownership title.*
- (5) *Attested copy of receipt of application fee.*
- (6) *No Objection Certificate (NOC) from the concerned Local Council.*

I request that the construction be approved and site development permit be issued to me.

Yours faithfully,

Signature : _____

NAME (in block letters) : _____

Address : _____

(Indicate House No.) : _____

Phone : _____

FORM NO. 2

APPLICATION FOR ENGINEERED SITE DEVELOPMENT OF LAND
[Rule 5(4) of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017]

To

Sir,

I/We _____ [Name(s) in full], owner(s)/lessee(s) of the land the particulars of which are given below, hereby apply for permission to conduct site development works on the Land of L.S.C. No. _____ on/in Plot No. _____ in _____ Veng and in accordance with Rule 5 of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017. I/we forward herewith the following documents in triplicate duly signed by me/us and the Licensed Geologist/ Geotechnical Engineer/Civil Engineer/Supervisor/Group/Firm:

- (1) Geotechnical report as prescribed in Rules 5(4) and 6.
- (2) Site Plan as prescribed in Rule 5(4).
- (3) Estimated quantities of excavation and fill.
- (4) Estimated starting and completion dates for proposed work.
- (5) Specifications
- (6) Ownership title.
- (7) Attested copy of receipt of application fee.
- (8) No Objection Certificate (NOC) from the concerned Local/Village Council.

I request that the construction be approved and site development permit issued to me.

Yours faithfully,

Signature : _____

NAME (in block letters) : _____

Address : _____

(Indicate House No.) : _____

Phone : _____

FORM NO. 3

GRANT OR REFUSAL OF DEVELOPMENT PERMIT
[Rule 11 of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017]

No. _____

Dated _____

To

Sir,

With reference to your application No. _____ Dated _____ for site development of the Land of L.S.C.

No. _____ on/in Plot No. _____ in _____ Veng, I have the honour to inform you that permission has been granted/permission has been granted with the following modifications/conditions/permission cannot be granted on the following grounds:

Modifications/Conditions/Grounds for rejection of the application:

(1) _____

(2) _____

Office Seal

Yours faithfully.

(_____)

Memo No _____ :

Dated Aizawl, the _____

Copy to :

i) *The President, Local/Village Council* _____

Planning Authority/Authorised Personnel

ANNEXURE-IV

FORM NO. 4

NOTICE FOR COMMENCEMENT OF DEVELOPMENT WORK
[Rule 13 (7) of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017]

To

Sir,

I have the honour to inform you that site development works on the Land of L.S.C. No. _____ on/in Plot No. _____ in _____ Veng will be commenced on _____ as per your permission given vide No. _____ dated _____.

I request that the construction be approved and site development permit issued to me.

Yours faithfully,

Signature : _____

NAME (in block letters) : _____

Address : _____

(Indicate House No.) _____

Phone : _____

FORM NO. 5

COMPLETION CERTIFICATE:

[Rule 16 of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017]

To

Sir,

I have the honour to inform you that the site development works on the Land of L.S.C.No. _____ on/in Plot No. _____ in _____ Veng has been completed in accordance with permit No. _____ dated _____. The work has been completed on _____.

The work has been executed in accordance with the permit given and no provisions of the Site Development Regulations have been violated.

Yours faithfully,

Signature : _____
Name of Permit Holder : _____
Address : _____

CERTIFICATE

I hereby certify that the work has been supervised by me and completed in accordance with the plans and specifications approved by the Planning Authority/Government and that no provisions of the Mizoram Urban Areas (Land Development, Landslide Prevention and Mitigation) Rules, 2017 have been violated.

Date:

Address : _____
Signature : _____
Name of Technical Personnel : _____
Licence/Registration No. : _____

**DUTIES AND RESPONSIBILITIES OF TECHNICAL PERSONNEL AND
APPLICANT/OWNER**

I. Duties and responsibilities of Engineers, Structural Engineers, Architects, Supervisors and Groups/Firms:

- (1) *They shall be well-conversant with the provisions of the Act, all relevant Rules made under the Act.*
- (2) *They shall submit all reports, estimates, plans or drawings, as may be necessary, together with all documents and other details which are required to be submitted under these Regulations.*
- (3) *They shall comply with all directions of the Planning Authority/Government in connection with the site development work, for which they have prepared reports, estimates, plans or drawings, expeditiously and fully. When they do not agree with such directions, they shall state their objections in writing within the stipulated time.*
- (4) *They shall immediately intimate corrections or other changes made by them in the reports, estimates, plans or drawings, as per direction from the Planning Authority/Government to the owner.*
- (5) *They shall not take up preparation of reports, estimates, plans or drawings, if the same are intended to be executed in contravention of the provisions of these Rules.*
- (6) *They shall give all facilities to Building Official, Planning Authority and the Government to inspect and examine the work in progress.*
- (7) *They shall be held responsible for any work executed on site in contravention of the provisions of these Rules.*
- (8) *They shall not deviate or allow any deviation from the sanctioned Permit in the execution of work at site.*
- (9) *They shall submit certificates in regard to commencement of work at site, and completion certificate within 15 days after the work is completed.*
- (10) *They shall be deemed to have continued their supervision of the site development work unless they have intimated the Planning Authority, in writing, that they have ceased to serve as the technical personnel for the site development work, and shall be held responsible for the work executed up to the date of intimation.*
- (10) *The Planning Authority or the Government or any other person so authorised, in the case of violation of any of the provisions of the Act and these Rules, take action against any technical personnel in accordance with the provisions of these Rules.*

II. Duties and Responsibilities of Applicant/Owner:

- (1) *Permit holder shall engage technical personnel as required under these Regulations.*
- (2) *He shall provide safety of workers and others during construction, from commencement to completion.*
- (3) *He shall ensure that no undue inconvenience is caused to others in the course of the construction activities.*
- (4) *He shall observe and perform directions of the Planning Authority/Government/authorized personnel, as issued from time to time, and all terms and conditions of the site development permit and the provisions of the Act, Rules relating to site development/slope modification work.*
- (5) *He shall be responsible for non-compliance of instructions, details and specifications supplied by the technical personnel during site development work.*
- (6) *He shall not allow any deviation from the sanctioned site development permit in the course of site development work.*
- (7) *Any expenditure for demolition, repairs, or restoration work arising out of damage to neighbouring property/land, shall be borne by the owner/ permit holder.*

ANNEXURE - VII

**REQUIREMENTS FOR REGISTRATION AND COMPETENCE OF PROFESSIONAL,
AND PROFESSIONAL LICENCE FEES**

Sl.No.	Professional Licensee	Qualification Requirement	Competency Fee	Licence	Annual Renewal Fee
1	Engineering Geologist	<p>At least four year degree in Geology from a recognized university, or member of the Indian Society of Engineering Geology or equivalent overseas institution with minimum 3 years relevant experience in professional geology practice with site investigation field work:</p> <p>i) under a qualified geologist - OR - ii) passing of the examination prescribed by the Government for engineering geologists.</p>	<p>a) Preparation of geotechnical report in support of a site development permit. b) Inspection of construction excavation. c) Issuing of certificate of supervision.</p>	Rs.500.00	Rs. 250.00
2.	Civil Engineer	<p>Degree in Civil Engineering from a recognized Indian or foreign university, or the Member of Civil Engineering Division of the Institute of Engineers (India) of the statutory body governing such profession, as and when established.</p>	<p>a) Preparation of all site, grading and drainage plans and related information connected with site development permit; b) Design of drainage structures, including hydrology and hydraulic calculations; c) Inspection of civil works excluding stability of excavations; and</p>	Rs.500.00	Rs. 250.00

			d) Issuing certificate of supervision and completion for site development works.		
3	Soils/Geotechnical Engineer	Degree in Civil Engineering from a recognized university, and (i) Post-graduate degree in soil/Geotechnical Engineering from a recognized Indian or foreign university - OR - (ii) Minimum 3 years relevant experience in professional soil/geotechnical engineering practice with design work under a qualified soil/geotechnical - OR - (iii) Minimum of 3 years relevant experience in professional soil/geotechnical engineering practice with design work and passing of an examination prescribed by the Government for soils/geotechnical engineers.	a) Preparation of geotechnical report in support of a site development permit. b) Inspection of fills and excavations in soil. c) Issuing of certificate of completion for site development works.	Rs.500.00	Rs. 250.00
4.	Group/Firm	As given under sl.no. 1 through sl.no. 4.	As given under sl.no. 1 through sl.no. 4.	Rs.1000.00	Rs. 500.00