ENGINEERS AND SURVEYORS INSTITUTE
"A public/private partnership"
LOUDOUN COUNTY, VIRGINIA
MINIMUM SUBMISSION REQUIREMENTS

GEOTECHNICAL REVIEW FOR STPL & CPAP SUBMISSIONS

NOTE: Please complete all sheet/page numbers when submitting for ESI and County Reviews

PROJECT NAME & NUMBER: _____

SUBMITTING FIRM: _____ PHONE #: _____

PROJ. COORD: _____ E-MAIL ADDRESS: _____

REVIEW DATE: _____ ESI TEAM: _____

Note: The following sheets and information are required for every submission. Additional sheets and information should be provided where necessary to demonstrate compliance with County requirements or conditions of approval.

(Column abbreviations: OK = Addressed; REV = Revisions Required; NA = Not Applicable)

Code Reference	Description:	Sheet	OK	REV	NA	Line
	Geotechnical Report					
FSM 6.150	Registered Design Professional (RDP) seal and signature applied to report					1
FSM 6.150 & 8.102	Report references previously completed Preliminary Soils Review (PSR) (applicable only if PSR is required for application)					2
FSM 6.152	Report references Soils Mapping Units (SMU) detailed in the Loudoun County "Interpretive Guide to the Use of Soils Maps"					3
Bldg. Official Tech. Memo. dated 08/10/04	Report contains the following: -Boring/Excavation Pit Logs					4
	-Project description					5
	-Area geology					6
	-Boring Location Plan/Soils Map					7
	-Laboratory test results, including Atterberg Limits					8
	-Any unique characteristics of the site					9
	-Engineering recommendations for foundation, slab, backfill, waterproofing, etc.					10
	-Loudoun County's guidelines for foundations in plastic soils					11
	-Typical foundation detail drawing, if applicable					12
IBC 2003 1802.2.1	Report contains engineering recommendations for the following onsite "Questionable" soil conditions that may exist according to the Loudoun County "Interpretive Guide to the Use of Soils Maps": -Site may have soils with Karst land formations, such as Soil Mapping Units (SMU) 13, 84, 90 or 91					13
	-Site may have soils with medium to very high expansion potential, such as SMU 38, 63, 66, 67, 68, 69 or 99					14

Comments:_____

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Code Reference	Description:	Sheet	OK	REV	NA	Line
	-Site may have soils with low soil/bearing strength such as SMU 13, 14, 17 or 78					15
	-Site may have soils with slippage potential, such as SMU 27, 59, 88 or 89					16
	-Site may have soils with seasonal high water tables, such as SMU 2, 4, 5, 6, 10, 12, 66, 69, 79, 82, 93 or 99					17
	-Site may have soils with Made Land (Non-Engineered Fills)					18
Soils Maps: Geotechnical Report & Civil Plans						
Geotechnical Report						
FSM 6.120 & 6.150	In the Geotech Report, identify or document Class III and IV soils if present on site					19
FSM 6.120, 6.152 & 8.101.A	In the Geotech Report, provide a legible Soils Map of entire site with the following: -At a scale of 1"=200' or larger					20
	-Existing & Proposed Topography					21
	-Soils Mapping Units boundaries in accordance with the PSR and the Loudoun County "Interpretive Guide to the Use of Soils Maps"					22
	-Existing Planimetric details, including swamps, marshes, ponds, wooded areas, buildings, roads, fence lines, utility structures, etc.					23
	-Approximate Coordinate Grid System, 1000' intervals min., with complete annotation					24
	-Location Map at 1"=2000' with North arrow and approximate grid coordinate information					25
FSM 6.130.C.5 & FSM 8.101.A.18	In the Geotech Report, RDP Seal and Signature applied to the Map Drawing, if not bound w/in the report					26
Civil Plans (from STPL/CPAP Plans Set referenced above)						
FSM 6.120	On the civil plans, provide a Soils Map Certification if site has Class III and IV soils present					27
FSM 6.120 & 6.150	On the civil plans, provide a legible Soils Map of entire site with the following: -At a scale of 1"=200' or larger					28
	-Soils Mapping Units boundaries in accordance with the PSR and the Loudoun County "Interpretive Guide to the Use of Soils Maps"					29
	-Proposed layout, including ponds, wooded areas, buildings, roads, etc.					30
FSM 8.101	On the civil plans, RDP Seal and Signature applied to the Soils Map Drawing sheet					31
FSM 6.160	On the civil plans, provide a written statement that the plans were prepared in accordance w/ the recommendations of the Geotechnical Report					32
Soil Boring & Investigation						
Roads & Streets						
FSM 6.153	Boring density as recommended by the Director at the time of preliminary subdivision or site plan for Class I and II soils has been met					33

Comments:_____

Code Reference	Description:	Sheet	OK	REV	NA	Line
FSM 6.153	Boring density of one boring per 250' for Class III and IV soils has been met					34
FSM 6.153	Boring density sufficient to accurately estimate the location of the soil change between Class I/II and Class III/IV transition areas has been met					35
Impoundment Dams & other Public Improvements which require Performance Bonding						
FSM 6.153	Boring density sufficient to be representative of the variety of land forms and geologic formations contained within the specific development site has been met (minimum of one boring per SMU)					36
Roads, Bridges, Impoundment Dams, Retaining Walls & other Public Improvements that are VDOT projects or proposed for future acceptance into the VDOT road maintenance system						
VDOT Drain. Des. Man., Ch. 15 - DDM 1	Minimum culvert boring and foundation data requirements have been met, considering the single or multiple culvert installations that are in excess of 36" diameter or span, respectively					37
VDOT Drain. Des. Man., Ch. 15 - DDM 1	Impoundment boring density minimum of one (1) boring for the dam and one (1) boring for the area of the basin has been met					38
All Commercial Buildings & Additions; All Residential Subdivisions with 10 or more home sites; Every house in Karst formations shall meet or exceed the following provisions:						
Bldg. Official Tech. Memo. dated 08/10/2004	Minimum of one (1) boring per 5000 SF of building footprint for Commercial Structures					39
Bldg. Official Tech. Memo. dated 08/10/2004	Minimum of one (1) boring per 2500 SF of building footprint for Commercial Structures with the following conditions: -Located in Karst formations -Structures with >/= 4 Stories -Projects which propose to utilize float, mat or any type of deep foundation					40
Bldg. Official Tech. Memo. dated 08/10/2004	Residential Subdivisions: -Minimum of one (1) boring per footprint for each house located in a Karst formation -Geophysical testing may be substituted for borings in Karst formations -All other soils, the recommendation of the Geotechnical Engineer will be considered					41
Bldg. Official Tech. Memo. dated 08/10/2004	Borings shown in the report match borings referenced on the maps, and vice versa					42

Comments:_____

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"Detailed" Geotechnical/Geophysical Review Determination

A Detailed Geotechnical/Geophysical Review, completed by the Loudoun County Geotechnical Engineer upon completion of the Basic Geotechnical/Geophysical Review by the Engineer/Project Manager is required, considering the following apply:

-The use of or structures that are being proposed for placement on soils, that are proposed for Lime Modification or Stabilization

-The use of or structures are being proposed for placement on slippage potential soils, such as SMU 27, 59, 88 or 89

-According to the current Loudoun County Mapping System (Web Logis), a "Highly Sensitive" area of a Mountainside Development Overlay District is proposed for placement of structures, roads, drives and/or dwellings (1993 Zoning Ordinance, Rev. 06/17/1998, 4-1605)

-According to the current Loudoun County Mapping System (Web Logis), a "Very Steep Slope" area with slopes greater that 25% is proposed for placement of a structure, roads, drives and/or minor utility (1993 Zoning Ordinance, Rev. 01/07/2003, 5-1508)

-The use of or structures that are being proposed for placement on historical Made Land or Non-Engineered Fill soils

-The plans propose a non-agricultural water "Impoundment Structure" that is according to VA, DCR, Virginia Impounding Structures Regulations, § 4 VAC 50-20...

- -25' or greater in height and creates an impoundment capacity of 15 acre-feet or greater, or
- -6' or greater in height and creates an impoundment capacity of 50 acre-feet or greater

-The plans propose a structure 4 stories or greater, or propose to utilize float, mat or any type of deep foundation

Comments:_____

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