

CRITERIA FOR SUBSURFACE INVESTIGATION

(Updated 2/9/96)

1. The purpose of subsurface investigation is to determine the suitability of the proposed site located in ----- for building a new ----- for the Department of Veterans Affairs.
2. A site reconnaissance should be made by an engineering firm with geotechnical consultants to locate any surface conditions which would indicate specific areas of concern toward building the proposed structure.
3. Make subsurface test borings at ----- locations indicated in the attached Boring Location Plan.
4. All borings shall be carried to a depth of ----- meter(s) (----- ft.) or refusal. If refusal occurs at a depth of less than ----- meter(s) (----- ft.), core rock with a diamond core drill for a minimum 1500 mm (5 ft.).
5. Conduct "Standard Penetration Tests" and obtain samples at each change in stratum with a maximum interval of 1500 mm (5 ft.). The Standard Penetration Test shall be performed in accordance with ASTM-D1586.
6. Laboratory examination/verification and testing shall be made of the representative portions of the samples to establish moisture content, density, atterberg limits, grain size and distribution, and unconfined compressive strength as applicable to the soil type encountered.
7. Chemical analysis shall be performed to determine if site conditions exist which might be detrimental to buried concrete, steel, cast iron, or ductile iron, such as the presence of sulfates or carbon dioxide.
8. Soil Report: The results of the subsurface investigation and related testing, together with interpretations, discussions, and foundation recommendations shall be presented in the form of a detailed soil report. The report shall include:
 - a) A boring location plan showing the exact location of each boring with reference to the proposed Building No. ----- .
 - b) Boring profile showing:
 - i) Ground elevations.
 - ii) Classification of soils encountered with depth.

- iii) Detailed description of any fill material encountered.
 - iv) Ground water elevation at least 24 hours after boring is completed.
 - v) Rock classification and elevation of bed rock.
 - vi) Number of blows required for each 150 mm (6 in.).
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- c) Comment on applicable foundations to support the proposed structure and determine the allowable soil bearing value at the recommended depth. Discuss the influence of water table on design values. If deep foundations are recommended, include the allowable skin friction and bearing values for the acceptable deep foundations.
 - d) If the use of deep foundations is warranted, recommendations shall include installation and testing requirements. Potential construction problems associated with deep foundations, suggested installation methods and equipment shall also be discussed. Criteria for lateral load shall be discussed in the report.
 - e) Recommend the value of active and passive soil pressures on structures retaining earth.
 - f) Determine depth required for protection from frost.
 - g) Site and rock removal methods, equipment and difficulties anticipated during excavation shall be discussed.
 - h) Recommendations for site improvements, ground water control, and treatment of in-place soils for the support of slab on grade.
9. Perform tests as required to comment on the control of ground water during the construction phase and for the completed building.
10. Include within the report any other factors, i.e. underground utilities, that could influence the design of the proposed construction.