NorthWest Colorado Consultants, Inc.

Geotechnical / Environmental Engineering • Materials Testing

January 20, 2023

Meredith & Martin Woodrow
31555 Greenridge Drive
Oak Creek, CO 80467

Job Number: 23-12920

Subject: Subsoil and Foundation Investigation Review and OWTS Recommendations, Proposed Woodrow Residence Addition, 31555 Greenridge Drive, Routt County, CO.

Meredith and Martin,

This report presents the results of the Subsoil and Foundation Investigation Review and On-site Wastewater Treatment System (OWTS) Recommendations for your proposed addition to be constructed onto your existing residence located at 31555 Greenridge Drive in Routt County, Colorado. A Subsoil and Foundation Investigation (S&FI) report was previously completed for the existing residence by NWCC, Inc. (NWCC) under our job number 07-7680, dated September 12, 2007. A copy of the original S&FI report is attached.

NWCC also completed the design of the existing On-site Wastewater Treatment System (OWTS) under our job number 07-7680, dated September 4, 2007. In addition, NWCC prepared an OWTS Observations report dated March 26, 2008.

This report has been completed in accordance with NWCC's recommendations outlined in the Limitations section of the previously prepared S&FI report.

Proposed Construction: NWCC understands that a one-story addition will be constructed onto the existing residence. We also understand that the existing OWTS was only designed for a total of three bedrooms and the residence currently has four bedrooms. north/northeast of the of the existing residence. NWCC understands that this building will have a bathroom but will not have a living unit. NWCC assumes the lower level of the addition will be constructed using a slab-on-grade floor system.

For design purposes, NWCC has assumed that building loads will be light to moderate typical of this type of construction. If loadings or conditions are significantly different from those above, NWCC should be notified to reevaluate recommendations in this report.

Previous Recommendations: Based on our review of the original S&FI report and OWTS Design report (NWCC, 2007), modifications to recommendations for the design and construction of foundations, floor slabs, foundation and retaining walls, underdrain system and surface drainage will not be required at this time for the design and construction of the proposed addition. However, NWCC has provided an alternate deep foundation recommendations, as well as OWTS recommendations, as discussed below.

Additional Foundation Recommendations: NWCC believes a foundation consisting of helical screw piles advanced into the natural sands and clays or gravels may be a feasible alternative to the shallow foundation system provided in original S&FI report. It should be noted that the helical pile foundation alternative will reduce the risk of differential foundation movement associated with the expansive sands and clays.

Utilizing this type of foundation, each column is supported on a single or group of screw piles and the structures are founded on grade beams or pier caps that are supported by a series of piles. Load applied to the piles is transmitted to the natural soils through the end bearing pressure at the helices of the screw pile. Foundation movement should be less than ½-inch if the following design and construction conditions are observed.

The helical screw pile foundation system should be designed by a qualified engineer, using industry standards and be installed by a licensed/certified installer. If pile groups are required, we recommend a minimum pile spacing of 3 times the largest helix to achieve the maximum capacity of each individual pile. Lateral loads should be resisted by the use of battered piles or tiebacks or through passive soil pressures against foundation walls or grade beams.

We strongly recommend that at least one test pile be advanced at the site so that the torque versus depth relationships can be established and the proper shaft and helix size and type can be determined. A representative of this office should observe the test pile installation, as well as observe the helical screw pile installations for the foundation system.

NWCC also recommends the following:

- Minimum 6-inch diameter helix;
- Minimum penetration of 8 feet from the upper helix to finished ground surface;
- Minimum installation torque of 4,000 ft-lbs;
- Full-time installation observation by a qualified special inspector;
- Review of the Contractor's quality control plan regarding instrumentation calibration and testing, materials QC, and pile installation procedures.

Based on the subsurface conditions encountered at the site and the laboratory test results, we recommend a Site Class C be used for the foundation designs in accordance with Table 20.1-1 in Chapter 20 of ASCE 7.

OWTS Recommendations: NWCC understands that the original OWTS was designed and constructed for three bedrooms and the residence currently has four bedrooms. Based on our understanding of the proposed construction and review of our observations of the construction of the existing OWTS system, it appears that it will be feasible to expand the existing system to accommodate the additional bedrooms.

At a minimum, a new 1,000 gallon, single-compartment septic tank will need to be installed between the existing septic tank and the residence. Additional chambers will also be required and the number of chambers will be dependent on the total number of bedrooms used in the design.

Feasibility of using the existing OWTS depends on current site conditions and current condition of the existing septic tank and STA. An evaluation of the existing system by NWCC after the snow melts is recommended prior to construction.

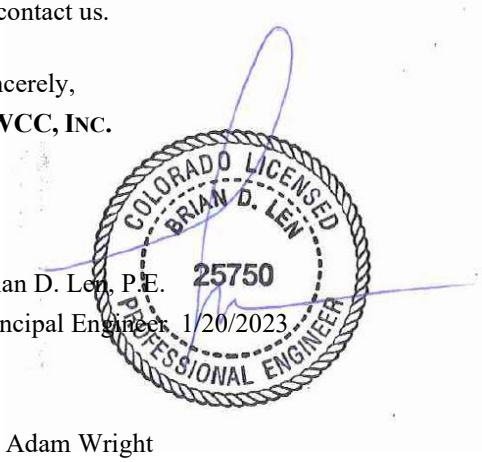
Limitations: The recommendations provided in this report are based on the soils encountered at this site and NWCC's understanding of the proposed construction. NWCC believes this information gives a high degree of reliability for anticipating behavior of the proposed structure; however, NWCC's recommendations are professional opinions and cannot control nature, nor can they assure the soils profiles beneath those or adjacent to those observed. No warranties expressed or implied are given on the content of this report.

Expansive sands and clays were encountered at this site. These soils are stable at their natural moisture content but can shrink or swell with changes in moisture. The behavior of expansive soils is not fully understood. The swell or consolidation potential of any site can change erratically both in lateral and vertical extent. Moisture changes also occur erratically, resulting in conditions, which cannot always be predicted. Recommendations presented in this report and the previously completed report are based on the current state of the art for foundations and floor slabs on expansive soils. As noted previously, the owner must be made aware there is a risk in construction on these types of soil. Performance of the structures will depend on following the recommendations and in proper maintenance after construction is complete. As water is the main cause for volume change in the soils, it is necessary that the changes in moisture content be kept to a minimum. This requires judicious irrigation and providing positive surface drainage away from the structures. Any distress noted in the structures should be brought to the attention of NWCC.

This report is based on the previous investigations at the described site and on specific anticipated construction as stated herein. If either of these conditions is changed, the results would also most likely change. Therefore, NWCC strongly recommends that our firm be contacted prior to finalizing the construction plans so that we can verify our recommendations are being properly incorporated into the construction plans. Man-made or natural changes in the conditions of a property can also occur over time. In addition, changes in requirements due to state-of-the-art knowledge and/or legislation do from time to time occur. As a result, the findings of this report may become invalid due to these changes. Therefore, this report is subject to review and not considered valid after a period of 3 years or if conditions as stated above are altered. It is the responsibility of the owner or his representative to ensure that the information in this report is incorporated into the plans and/or specifications and construction of the project.

If you have any questions regarding this report or if NWCC may be of further service, please do not hesitate to contact us.

Sincerely,
NWCC, INC.



Brian D. Len, P.E.
Principal Engineer, 1/20/2023

cc: Adam Wright

NorthWest Colorado Consultants, Inc.

Geotechnical / Environmental Engineering • Materials Testing

September 12, 2007

Tom & Marylen Lyons
P.O. Box 880040
Steamboat Springs, CO 80488

Job Number: 07-7680

Subject: Subsoil and Foundation Investigation, Proposed Lyons Residence, Lot 4, The Meadows at Stagecoach, Routt County, Colorado.

Ladies and Gentlemen:

This report presents the results of a Subsoil and Foundation Investigation for the proposed Lyons Residence to be constructed within Lot 4 of The Meadows at Stagecoach Subdivision located in Routt County, Colorado. The approximate location of the project site is shown in Figure #1.

The scope of our work included obtaining data from cursory observations made at the site, the logging of three test pits, the sampling of the probable foundation soils and the laboratory testing of the samples obtained. This report presents recommendations for economically feasible and safe type foundations, as well as allowable soil pressures and other design and construction considerations that are advisable, but not necessarily routine to quality design and building practices.

Proposed Construction: It is our understanding that the proposed residence will consist of a two-story wood framed structure constructed over a crawl space and with an attached garage. The garage will be constructed with a concrete slab-on-grade floor system placed near or slightly above the existing ground surface.

For design purposes, we have assumed that the building loads will be light to moderate, typical of this type of residential construction. If loadings or conditions are significantly different from those above, we should be notified to reevaluate the recommendations in this report.

Site Conditions: The project site is situated off the south side of Greenridge Drive in The Meadows at Stagecoach Subdivision in Routt County, Colorado. The site was vacant and undisturbed at the time of our investigation and is generally well vegetated with natural grasses, weeds, deciduous brush and scattered aspen and pine trees.

The topography of the proposed building site is fairly consistent and slopes gently to moderately down to the northeast on the order of 3 to 5 percent. It appeared that there was approximately 3 to 5 feet of elevation difference present across the proposed building site.

Subsurface Conditions: To investigate the subsurface conditions at the site, three test pits were excavated on July 31, 2007 with a trackhoe. The approximate test pit locations are shown in Figure #2.

The subsurface conditions encountered were variable and generally consisted of a layer of topsoil and organic materials overlying natural sands and clays or gravels to the maximum depth investigated, 8 feet. Graphic logs of the exploratory test pits, along with the associated Legend and Notes, are presented in Figure #3.

A layer of topsoil and organic materials was encountered at the ground surface in the test pits and varied from approximately 6 to 12 inches in thickness. Natural sands and clays were encountered beneath the topsoil and organics in test pits 1 and 2. The sands and clays were a mixture to interbedded, low to moderately plastic, stiff to medium dense, fine to coarse grained and gravelly with occasional cobbles, moist and brown in color. Samples of the sands and clays classified as CL to SC soils in accordance with the Unified Soil Classification System. Natural gravels were encountered below the topsoil and organic materials in the profile pit. The gravels were sandy and silty with cobbles and occasional boulders, non-plastic, medium dense slightly moist and brown in color.

A swell-consolidation test conducted on a sample of the sands and clays indicates that the material tested will exhibit a low to moderate swell consolidation potential when wetted under a constant load. The swell-consolidation test results are shown in Figure #4 and all of the other laboratory test results are summarized in the attached Table 1.

Groundwater seepage was not encountered in the test pits at the time of excavation. It should be noted that the groundwater conditions at the site can be expected to fluctuate with changes in precipitation and runoff.

Foundation Recommendations: Based on the soils encountered in the test pits, the results of the field and laboratory investigations and our understanding of the proposed construction, we believe an economically feasible and safe type of foundation system is spread footings or individual pads with grade beams founded on the natural sands and clays. Foundation movement should be within tolerable limits if the following design and construction precautions are observed.

1) The footings placed on the bedrock materials should be designed using an allowable soil bearing pressure of 3,000 psf. A minimum dead load of 800 psf is also required for the footings.

2) The footings or pad sizes should be computed using the above soil pressures and placed on the undisturbed natural sands and clays.

3) Any topsoil and organic materials, loose and soft natural soils encountered within the foundation excavations should be removed prior to structural fill or concrete placement.

4) The foundation walls should be designed and reinforced to span an unsupported distance of 10 feet or the length between pads, whichever is greater.

5) The footings or pads should be placed well enough below final backfill grades to protect them from frost heave. Forty-eight (48) inches is typical for this location considering normal snow cover and other winter factors.

6) Based on experience, we estimate the total settlement for footings and pads designed and constructed as discussed in this section will be approximately 1 inch. Additional bearing capacity values along with the associated settlements are presented in Figure #5.

7) We recommend the client retain our firm to observe the foundation excavations when they are near completion to identify the bearing soils and confirm the recommendations in this report, as well as test the fill materials placed under the foundations for compaction.

Floor Slabs: We understand that the garage will be constructed utilizing concrete a slab-on-grade floor system. The on-site soils, with the exception of the topsoil and organic materials, will provide adequate support for slab-on-grade construction. However, floor slabs present a difficult problem where swelling materials are present near floor slab elevation because sufficient dead load cannot be imposed on them to resist the uplift pressure generated when the materials are wetted and expand. Based on the moisture-volume change characteristics of the natural sands and clays encountered at this site, we believe slab-on-grade construction may be used, provided the risk of distress resulting from slab movement is recognized and special design precautions are followed.

The following measures should be taken to reduce the damage, which could result from movement should the underslab soils be subjected to moisture changes.

1) The floor slabs should be separated from all bearing walls, columns and their foundation supports with a positive slip joint. We recommend the use of ½-inch thick cellotex or impregnated felt.

2) Interior non-bearing partition walls resting on the floor slabs should be provided with a slip joint, preferably at the bottom, so that in the event the floor slab moves, this movement is not transmitted to the upper structure. This detail is also important for wallboard and doorframes and is shown in Figure #6.

3) A minimum 6-inch gravel layer should be provided beneath all floor slabs to act as a capillary break and to help distribute pressures. Prior to placing the gravel, the excavation should be shaped so that if water does get under the slab, it will flow to the low point of the excavation. In addition, all of the topsoil and organic materials should be removed prior to placement of the underslab gravels or new fill materials.

4) The floor slabs should be provided with control joints placed a maximum of 12 feet on center in each direction to help control shrinkage cracking. The location of the joints should be carefully checked to assure that the natural, unavoidable cracking will be controlled. The depth of the control joints should be a minimum of ¼ of the thickness of the slab.

5) The underslab soils should be kept as close as possible to their in-situ moisture content. Excessive wetting or drying of these soils prior to placement of the floor slab could result in differential movement after the slabs are constructed.

6) If fills are required to bring the underslab soils to the desired grade, the fill should consist of non-expansive, granular materials. The fill should be uniformly placed and compacted in 6 to 8 inch loose lifts to at least 95% of the maximum standard Proctor density at or near the optimum moisture content, as determined by ASTM D-698/AASHTO T-99.

The above precautions and recommendations will not prevent floor slab movement in the event the sands and clays beneath the floor slabs undergo moisture changes. However, they should reduce the amount of damage if such movement occurs. The only way to eliminate the risk of all floor slab movement is to construct a structural floor over a well-vented crawl space.

Underdrain System: Any floor level or crawl space areas that are constructed below the existing or finished ground surfaces should be protected by underdrain systems to help reduce the problems associated with surface and subsurface drainage during high runoff periods. Localized perched water or runoff can infiltrate the lower levels of the structure at the foundation level. This water can be one of the primary causes of differential foundation and slab movement, especially when expansive soils have been encountered. In addition, moisture in crawl spaces or lower levels can lead to rotting and mildewing of wooden structural members and the formation of mold and mold spores. The formation of mold and mold spores could have detrimental effects on the air quality in these areas, which in turn can lead to potential adverse health effects.

The drains should be located around the entire perimeter of the lower levels and be placed and at least 12 inches below any floor slab or crawl space level and at least 6 inches below the bottom of the footings. We recommend the use of perforated PVC pipe for the drainpipe that meets or exceeds ASTM D-2729 requirements, to minimize the potential for crushing the pipe during backfill operations. The holes in the drainpipe should be oriented down between 4 o'clock and 8 o'clock to promote rapid runoff of the water. The drainpipe should be surrounded with at least 12 inches of free draining gravel and should be protected from contamination by a filter covering of Mirafi 140N subsurface drainage fabric or an equivalent product. The drain should have a minimum slope of 1/8 inch per foot and should be day lighted at a positive outfall protected from freezing, or be led to a sump from which the water can be pumped. Multiple daylights are recommended for larger structures. Caution should be taken when backfilling so as not to damage or disturb the installed underdrain. We recommend the drainage system include at least one cleanout, be protected against intrusion by animals at the outfall and be tested prior to backfilling. We also recommend that the client retain this firm to observe the underdrain system during construction to verify

that it is being installed in accordance with our recommendations and observe a flow test prior to backfilling the system.

In addition, we recommend that an impervious barrier be constructed to keep water from flowing under the footings. The barrier should be constructed of an impervious material, which is approved by this office and placed below the perimeter drain and up against the sides of the foundation walls. A typical perimeter/underdrain detail is shown in Figure #6. The placement of the impervious membrane and properly compacted clays in the crawl space areas to the top of the footings or at least 12 inches above the bottom of the foundation walls will help reduce the moisture problems in these areas.

Foundation Walls and Retaining Structures: Foundation walls and retaining structures, which are laterally supported and can be expected to undergo only a moderate amount of deflection, may be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of 45 pcf for imported, free draining granular backfill and 55 pcf for the on-site materials.

Cantilevered retaining structures on the site can be expected to deflect sufficiently to mobilize the full active earth pressure condition. Therefore, cantilevered structures may be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of 35 pcf for imported, free draining granular backfill and 45 pcf for the on-site materials.

The foundation walls and retaining structures should be designed for appropriate hydrostatic and surcharge pressures such as adjacent buildings, traffic and construction materials. An upward sloping backfill and/or natural slope will also significantly increase the earth pressures on foundation walls and retaining structures and the structural engineer should carefully evaluate these additional lateral loads when designing the foundation and retaining walls.

The lateral resistance of retaining wall foundations placed on undisturbed natural soils at the site will be a combination of the sliding resistance of the footings on the foundation materials and the passive pressure against the sides of the footings. Sliding friction can be taken as 0.4 times the vertical dead load. Passive pressure against the sides of the footing can be calculated using an equivalent fluid pressure of 250 pcf. The fill placed against the sides of the footings to resist lateral loads should be compacted to at least 100% of the maximum standard Proctor density, near the optimum moisture content.

We recommend imported granular soils for backfilling foundation walls and retaining structures because their use results in lower lateral earth pressures. The imported granular materials should be placed to within 2 to 3 feet of the ground surface. Imported granular soils should be free draining and have less than 7 percent passing the No. 200 sieve. The upper 2 to 3 feet of fill should be a relatively impervious soil or pavement structure to prevent surface water infiltration into the backfill.

The wall backfill should be carefully placed in uniform lifts and compacted to a minimum of 95 percent of the maximum standard Proctor density, near the optimum moisture content. Care should be taken not to overcompact the backfill since this could cause excessive lateral pressure on the walls. Some settlement of deep foundation wall backfill materials will occur even if the material is placed correctly.

Surface Drainage: Proper surface drainage at this site is of paramount importance for minimizing the infiltration of surface drainage into the wall backfill and bearing soils, which could result in increased wall pressures, differential foundation and slab movement. The following drainage precautions should be observed during construction and at all times after the structure has been completed:

1) The ground surface surrounding the structure should be sloped (minimum of 1.0 inch per foot) to drain away from the structure in all directions to a minimum of 10 feet. Ponding must be avoided. If necessary, raising the top of foundation walls to achieve a better surface grade is advisable.

2) Non-structural backfill placed around the structure should be compacted to at least 95% of the maximum standard Proctor density at or near the optimum moisture content in order to minimize future settlement of the fill. The backfill should be placed immediately after the braced foundation walls are able to structurally support the fill. Puddling or sluicing must be avoided.

3) The top 2 to 3 feet of soil placed within 10 feet of the foundation should be impervious in nature to minimize infiltration of surface water into the wall backfill.

4) Roof downspouts and drains should discharge well beyond the limits of all backfill. Roof overhangs, which project two to three feet beyond the foundation, should be considered if gutters are not used.

5) Landscaping, which requires excessive watering and lawn sprinkler heads, should be located a minimum of 10 feet from the foundation walls of the structure.

6) Plastic membranes should not be used to cover the ground surface adjacent to foundation walls.

Limitations: The recommendations given in this report are based on the soils encountered at this site and our understanding of the proposed construction. We believe that this information gives a high degree of reliability for anticipating the behavior of the proposed structure; however, our recommendations are professional opinions and cannot control nature, nor can they assure the soils profiles beneath those or adjacent to those observed. No warranties expressed or implied are given on the content of this report.

This report is based on the investigation at the described site and on the specific anticipated construction as stated herein. If either of these conditions is changed, the results would also most likely change. Therefore, we strongly recommend that our firm be contacted prior to finalizing the construction plans so that we can verify that our recommendations are being properly incorporated into the construction plans. Man-made or natural changes in the conditions of a property can also occur over a period of time. In addition, changes in requirements due to state of the art knowledge and/or legislation do from time to time occur. As a result, the findings of this report may become invalid due to these changes. Therefore, this report is subject to review and not considered valid after a period of 3 years or if conditions as stated above are altered.

It is the responsibility of the owner or his representative to insure that the information in this report is incorporated into the plans and/or specifications and construction of the project. It is advisable that a contractor familiar with construction details typically used to dealing with the local subsoils and climatic conditions be retained to build the structure. If you have any questions regarding this report or if we may be of further service, please do not hesitate to contact us.

Sincerely,
NWCC, INC.

Harold N, Schlicht, P.E.

Reviewed by Brian D. Len, P.E.

xc: Ed Becker – Mountain Architecture Design Group

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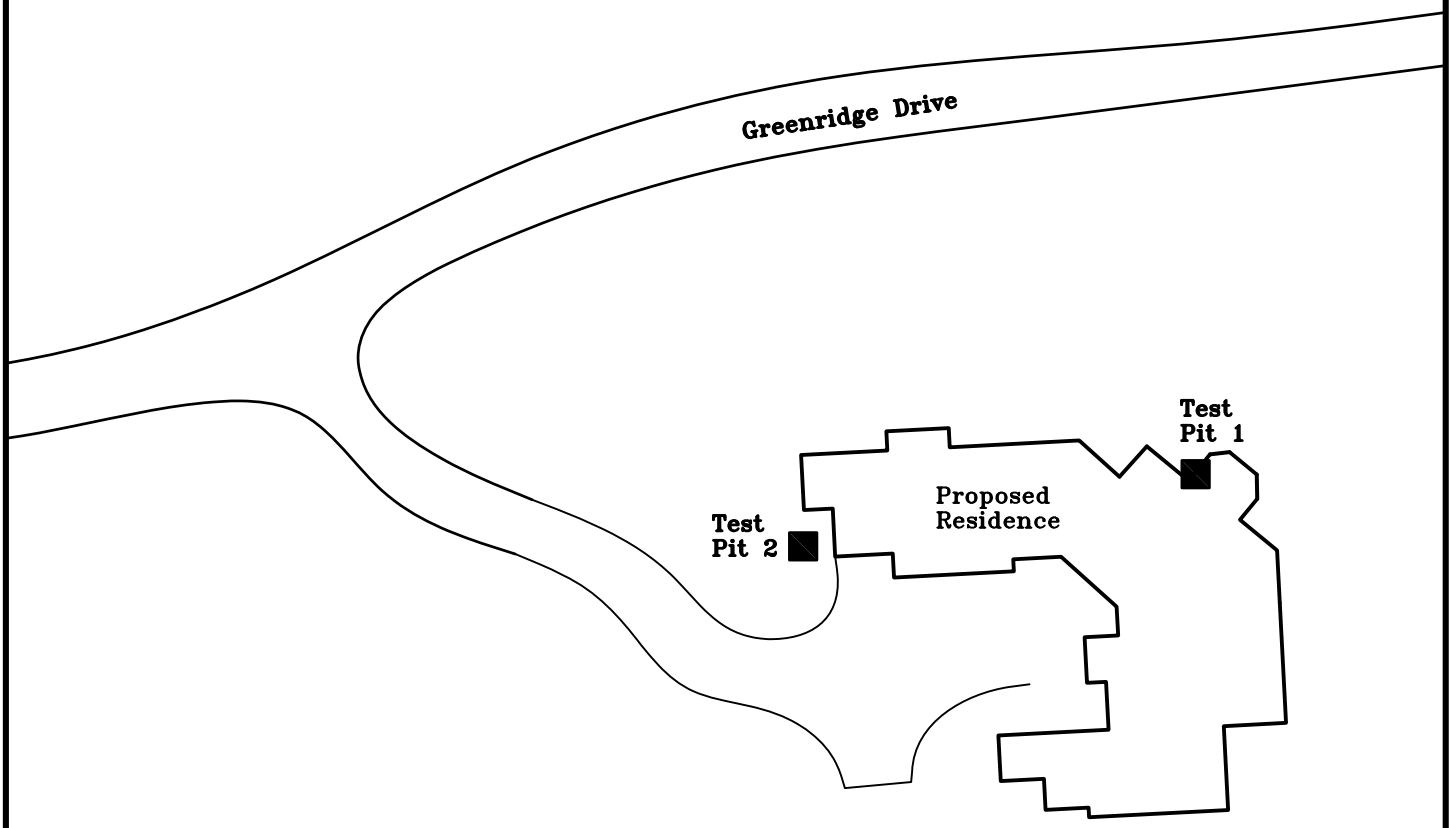
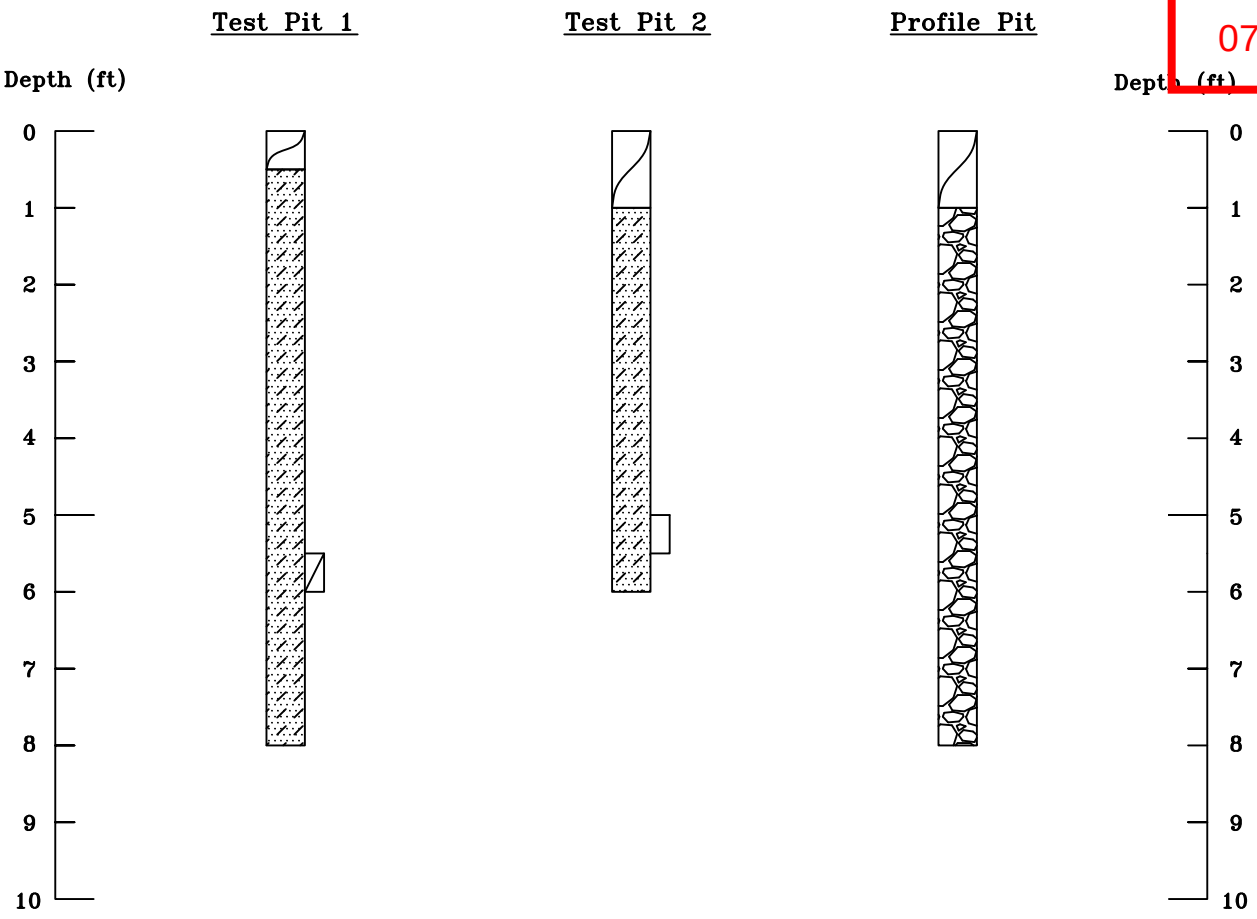
NOT TO SCALE



Profile
Pit

Title: SITE PLAN–LOCATION OF TEST PITS	Date: 9/12/07	NWCC North West Colorado Consultants, Inc.
Job Name: Proposed Lyons Residence	Job No. 07–7680	Geotechnical / Environmental Engineering · Materials Testing
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO	Figure #2	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477



LEGEND:

Topsoil and Organics.

SANDS & CLAYS: Mixture to interbedded, low to moderately plastic, stiff to medium dense, fine to coarse grained and gravelly with occasional cobbles, moist and brown

GRAVELS: Sandy and silty, non-plastic, medium dense, cobbles and occasional boulders, slightly moist and brown.

Hand Drive Sample-2" California Liner.

Small Disturbed Bag Sample.

NOTES:

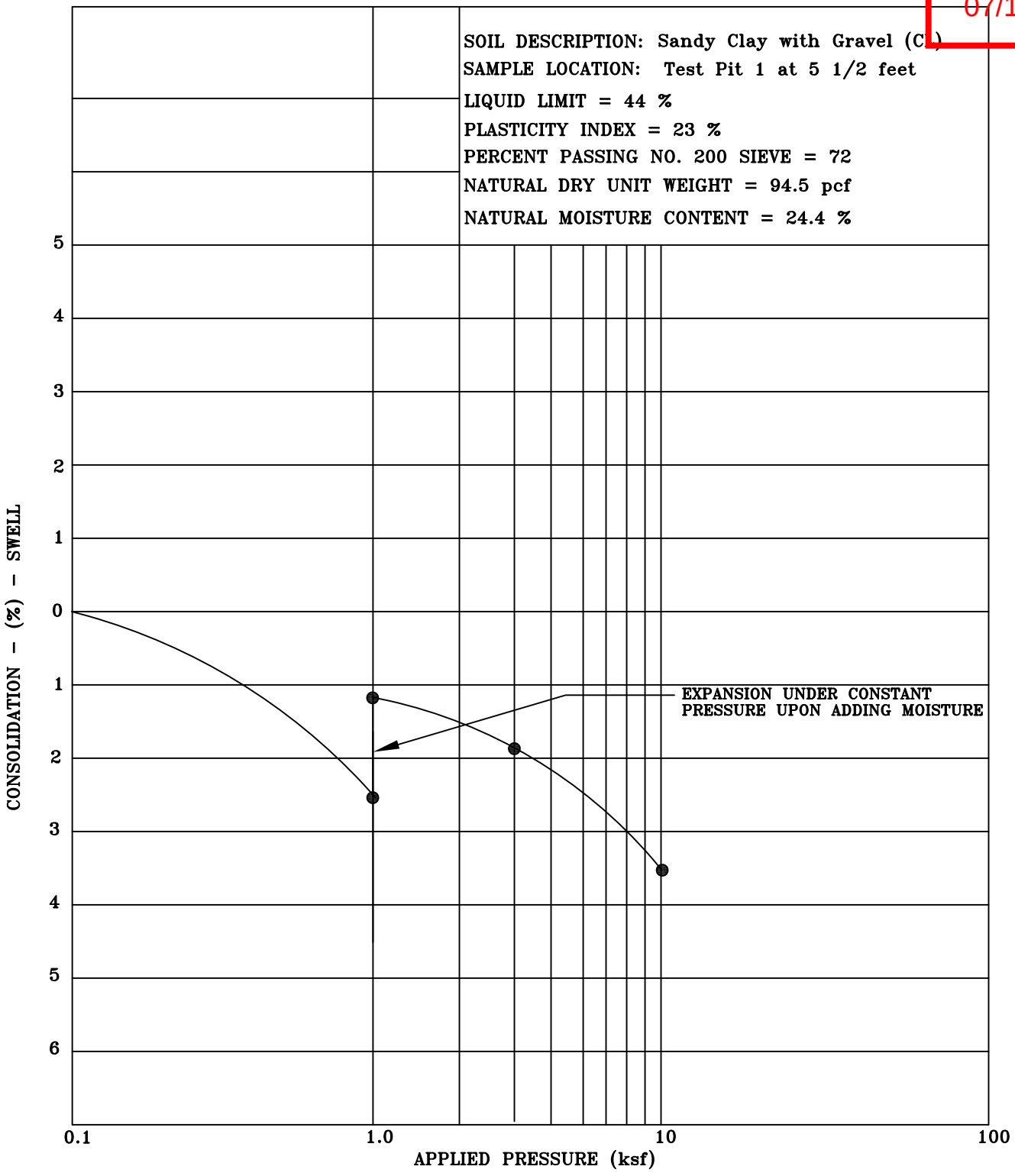
1) Test pits were excavated on July 31, 2007 with a Link Belt trackhoe.

2) Test pit locations were determined by pacing from proposed features as shown on the site plan provided.

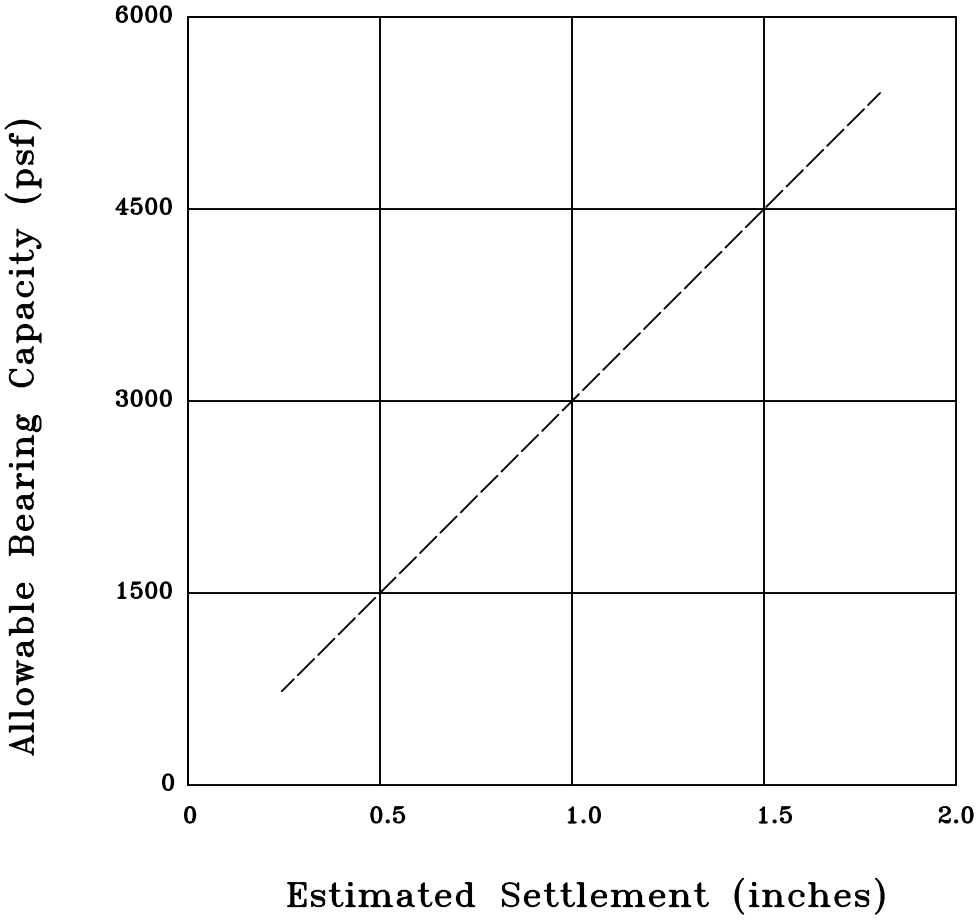
3) Elevations of the test pits were not measured and the logs are drawn to the depths investigated.

4) The lines between materials shown on the test pit logs represent the approximate boundaries between material types and transitions may be gradual.

Title: LOGS, LEGEND AND NOTES	Date: 9/12/07	NWCC North West Colorado Consultants, Inc.
Job Name: Proposed Lyons Residence	Job No. 07-7680	Geotechnical / Environmental Engineering · Materials Testing
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO	Figure #3	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477

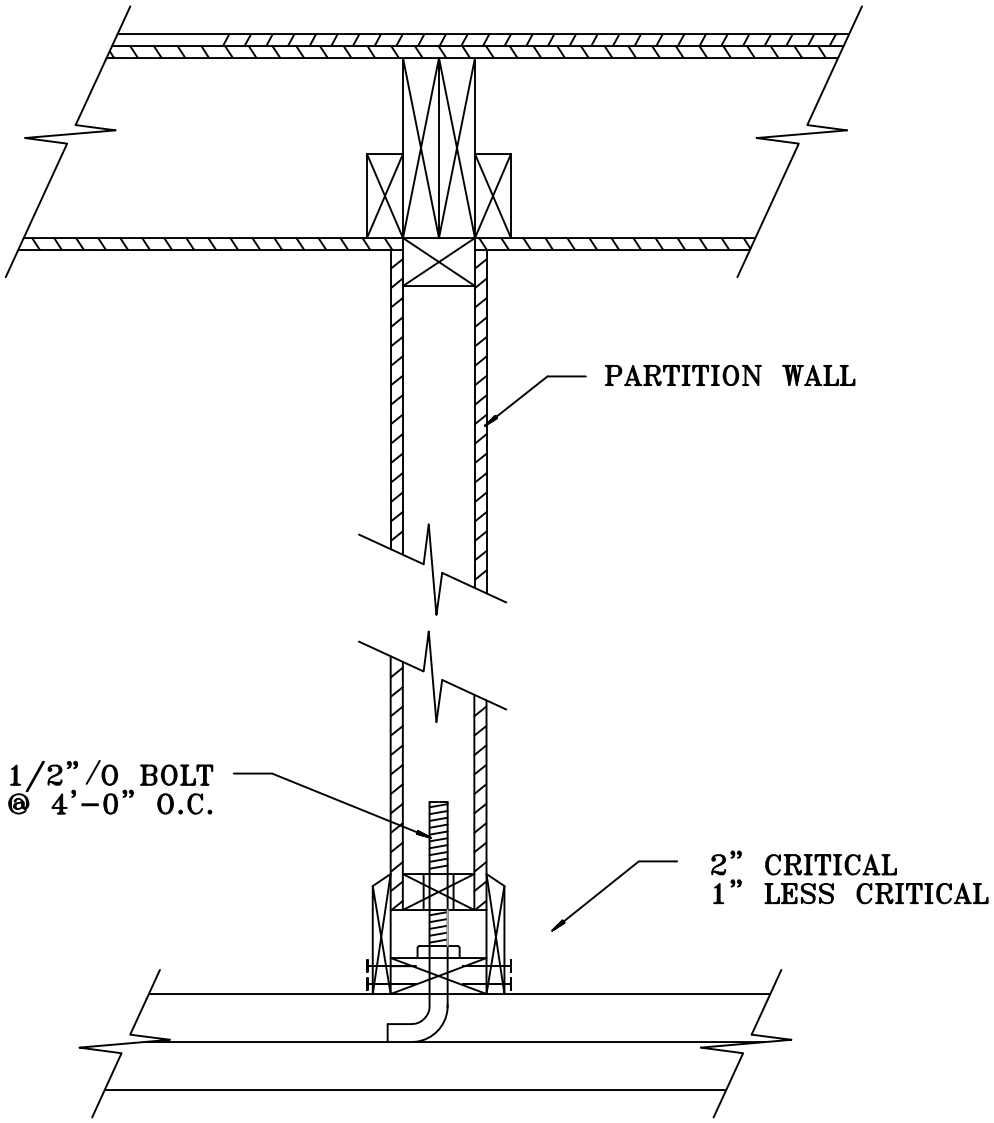


Title: SWELL–CONSOLIDATION TEST RESULTS		Date: 9/12/07	NWCC North West Colorado Consultants, Inc. Geotechnical / Environmental Engineering · Materials Testing
Job Name: Proposed Lyons Residence		Job No. 07–7680	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO		Figure #4	

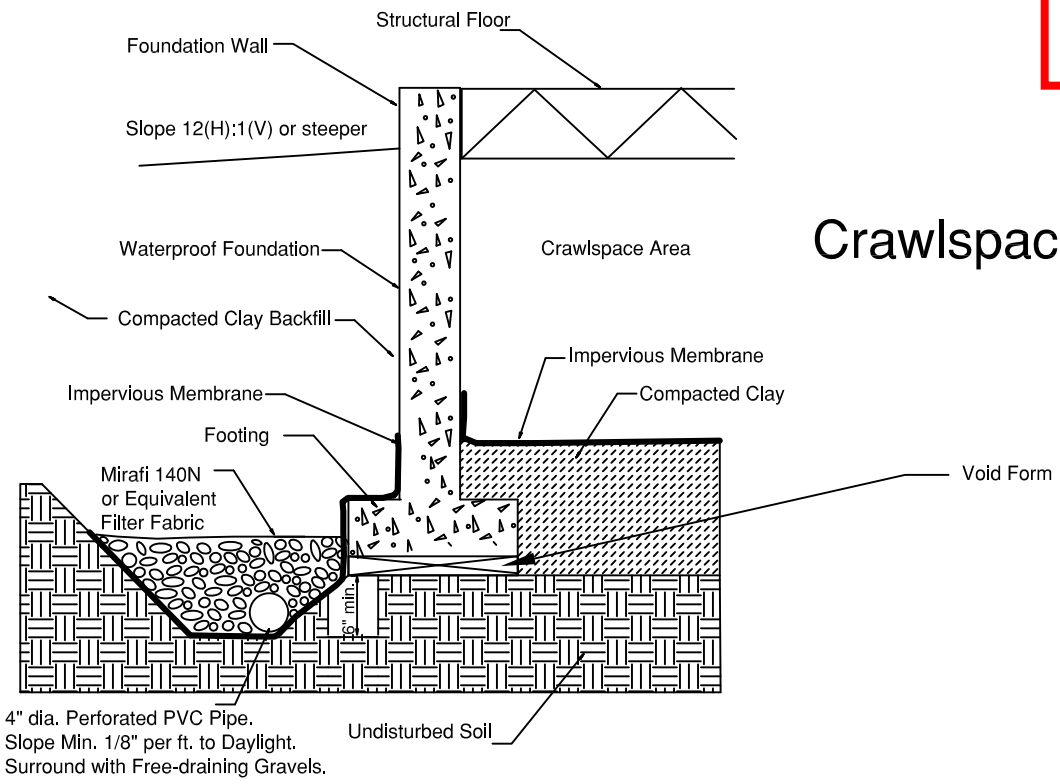


Note: These values are based on footing widths of 1 to 4 feet. If the footing width is to be greater than 4 feet in width, then we should be notified to re-evaluate these recommendations.

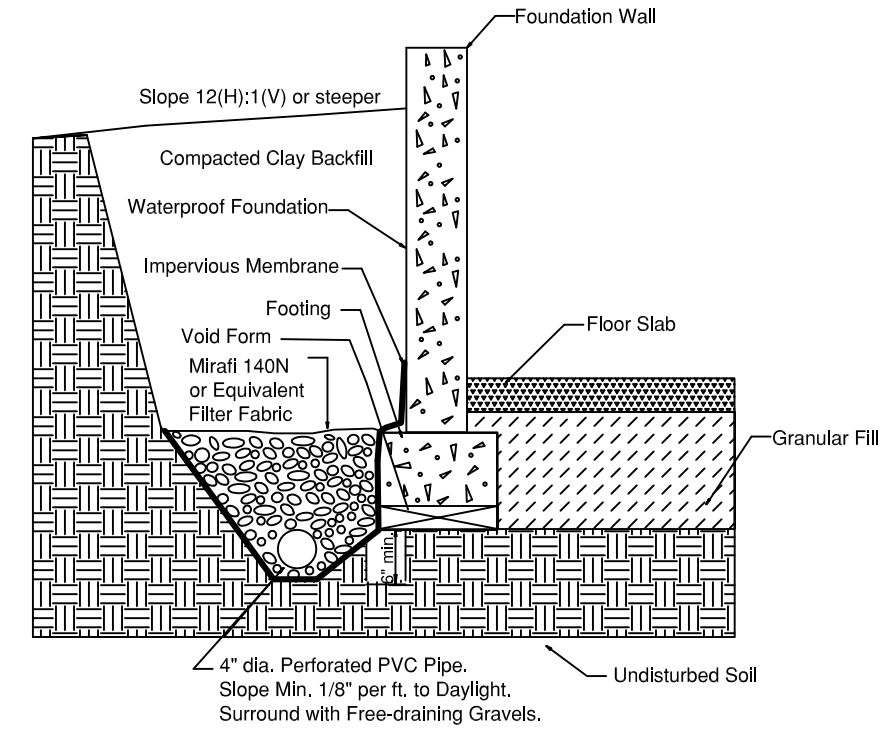
Title: BEARING CAPACITY CHART	Date: 9/12/07	NWCC North West Colorado Consultants, Inc.
Job Name: Proposed Lyons Residence	Job No. 07-7680	Geotechnical / Environmental Engineering · Materials Testing
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO	Figure #5	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477



Title: HUNG PARTITION WALL DETAIL		Date: 9/12/07	NWCC North West Colorado Consultants, Inc. Geotechnical / Environmental Engineering · Materials Testing
Job Name: Proposed Lyons Residence		Job No. 07-7680	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO		Figure #6	



Crawlspace Area



Floor Slab

Title: PERIMETER/UNDERDRAIN DETAIL	**Date:** 9/12/07	NWCC North West Colorado Consultants, Inc. Geotechnical / Environmental Engineering · Materials Testing
Job Name: Proposed Lyons Residence	**Job No.** 07-7680	(970)879-7888 · Fax (970)879-7891 2580 Copper Ridge Drive · P.O. Box 775226 Steamboat Springs, Colorado 80477
Location: Lot 4, The Meadows at Stagecoach, Routt County, CO	**Figure** #7	

NORTHWEST COLORADO CONSULTANTS

TABLE 1

SUMMARY OF LABORATORY TEST RESULTS

SAMPLE LOCATION		NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (pcf)	ATTERBERG LIMITS		GRADATION		PERCENT PASSING No. 200 SIEVE	UNCONFINED COMPRESSIVE STRENGTH (psf)	SOIL or BEDROCK DESCRIPTION	UNIFIED SOIL CLASS.
TEST PIT	DEPTH (feet)			LIQUID LIMIT (%)	PLASTICITY INDEX (%)	GRAVEL (%)	SAND (%)				
1	5 1/2	24.4	94.5	44	23	5	23	72		Sandy Clay with Gravel	CL
2	5–6	8.6	104.4	28	12	23	51	26		Gravelly, Clayey Sand	SC

JOB NUMBER: 07–7680