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GEOTECHNICAL ENGINEERING INVESTIGATION

HAYMEADOW FILING 2,
LOTS 1, 3-12, 14-35, and 44-53
EAGLE, COLORADO

Prepared for:

Haymeadow Homes
P.O. Box 5540
Frisco, CO 80443

Attention:
Suzanne Allen-Sabo

CTL|T Project No. GS06765.005-120-R1

September 16, 2025

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SCOPE

CTL|Thompson, Inc. (CTL|T) has completed a geotechnical engineering investigation regarding residences planned on Lots 1, 3-12, 14-35, and 44-53 of Haymeadow Filing 2 in Eagle, Colorado. We conducted this investigation to evaluate subsurface conditions on the subject lots and provide geotechnical engineering recommendations for the proposed construction. The scope of our investigation was set forth in our Proposal No. GS 25-0142-CM1R1. Our report was prepared from data developed from our field exploration, laboratory testing, engineering analysis, and our experience with similar conditions. This report includes a description of subsurface conditions found in our exploratory borings and provides geotechnical engineering recommendations for design and construction of buildings on the lots. A summary of our conclusions is below.

SITE CONDITIONS

Residences are planned on Lots 1, 3-12, 14-35, and 44-53 within the Haymeadow Filing 2 subdivision in Eagle, Colorado. The site is located north of Sylvan Lake Road on Mount Hope Circle. A vicinity map with the location of the site is shown on Figure 1. Ground surface at the site generally slopes down to the south at grades of less than about 5 percent. Some overlot grading had been completed prior to our investigation. The area was historically used as flood irrigated hay fields. Multi-family residential buildings are on the lots to the west and single-family residences were under construction on the lots to the south. An aerial photograph of the site is provided on Figure 2.

PROPOSED CONSTRUCTION

We reviewed plans by Allen-Guerra Architecture (dated June 18, 2025) and structural plan by Resource Engineering Group (dated May 30, 2025) for a typical residence planned for the lots. The proposed development is included on Figure 3. Lower-level floors in the buildings are planned as slabs-on-grade. The plans indicate the residences will be constructed with micropile foundation systems and structural slab-on-grade floors. No below-grade areas, such as basements or crawl spaces, are planned. Exterior concrete flatwork, such as driveways and patios, is expected. Maximum excavation depths of about 6 feet are likely to accommodate subexcavation if a footing foundation system is selected. We expect foundation loads between 2,000 and 3,000 pounds per linear foot of foundation wall and column loads of less than 50 kips. CTL|T should be provided with revised architectural plans, if revisions occur, so we can provide geotechnical/geo-structural engineering input.

SITE GEOLOGY

As part of our geotechnical engineering investigation, we reviewed geologic mapping by the U.S. Geological Survey (USGS) titled, "Geologic Map of the Eagle Quadrangle, Eagle County, Colorado", by Lidke (dated 2002). The subject lot is in an area mapped as alluvium and colluvium or stream channel and flood-plain deposits along Brush Creek. The sandy silt encountered in our exploratory borings is consistent with the description for alluvium and colluvium. The silty gravel is consistent with stream channel and flood-plain deposits.

The mapping and our experience indicate the overburden soils may be underlain by bedrock of the Eagle Valley Evaporite Formation. This bedrock formation is prone to development of sinkholes in certain circumstances. The evaporite minerals in the evaporite bedrock can be dissolved and removed by groundwater, resulting in formation of solution cavities in the bedrock. When this occurs, overburden soils subsequently collapse into the cavities. When caving propagates to the ground surface, subsidence and/or sinkholes occur.

Formation of sinkholes is random and can occur anywhere and at any time in the geologic environment at this site. The degree of risk related to sinkholes cannot reasonably be quantified. During our subsurface investigation, we did not observe evidence of subsidence or sinkholes on or adjacent to the subject site. We are not aware of buildings in the immediate vicinity of the site that have experienced recent subsidence-related damage. We judge that the risk of subsidence and/or sinkholes is similar to, and no greater than, the risk at other nearby sites.

SUBSURFACE CONDITIONS

Subsurface conditions were investigated by drilling one exploratory boring at each of the 43 lots (Lots 1, 3-12, 14-35, and 44-53) on July 28 through 31, 2025. The borings were drilled at the approximate locations shown on Figures 2 and 3 with a truck-mounted drill rig and 4-inch diameter, solid-stem auger. Drilling operations were directed by our representatives, who logged subsurface conditions encountered and obtained representative samples of the soils. Graphic logs of subsurface conditions found in our exploratory borings are included as Figures 4 through 9.

Our exploratory borings generally encountered a thin layer of topsoil or nil to 6 feet of existing sandy silt fill over 14 to 42 feet of natural sandy silt and sandy clay with lenses of clayey to silty sand, underlain by silty gravel with cobbles to the maximum explored depth of 43 feet. Groundwater was encountered in 22 borings on the lots at depths of 15 to 34 feet.

Samples of the soils obtained from our exploratory borings were returned to our laboratory for pertinent testing. Laboratory testing included swell-consolidation testing, Atterberg limits, gradation analyses, and water-soluble sulfates. Samples of the sandy silt and silty sand soils exhibited liquid limits of not liquid to 38, plasticity indices of non-plastic to 15, and contained 10 to 96 percent silt and clay-sized particles (passing a No. 200 sieve), respectively. Samples of the natural, sandy silt and clay selected for one-dimensional, swell-consolidation testing exhibited 4.3 percent consolidation to 0.2 percent swell when wetted under an applied load of 1,000 psf. The majority of the samples exhibited consolidation of less than 2 percent. Swell-consolidation test results are included as Figures A-1 through A-13. Samples of the silty gravel contained 52 to 59 percent gravel, 26 to 30 percent sand, and 15 to 18 percent silt and clay-sized particles.

Gradation tests results are included as Figure A-14. Laboratory testing is summarized on Table A-I.

SITE EARTHWORK

Excavations

Maximum foundation excavation depths of about 6 feet are likely to construct the buildings and accommodate subexcavation, if performed. Our subsurface investigation indicates that excavations at the site can be accomplished using conventional, heavy-duty excavating equipment. Sides of excavations need to be sloped or retained to meet local, state, and federal safety regulations. The subsoils at the site will likely classify as Type B soils based on OSHA standards governing excavations. From a "trench" safety standpoint, temporary slopes deeper than 5 feet that are not retained should be no steeper than 1 to 1 (horizontal to vertical) in Type B soils. Contractors are responsible for determining the actual OSHA soil type when excavations are made and for maintaining safe excavations. Contractors should identify the soils encountered in excavations and ensure that OSHA standards are met.

We do not believe excavations to construct buildings on the subject lots will encounter a free groundwater table. Excavations should be sloped to a gravity discharge or be directed to a temporary sump where water from precipitation can be removed by pumping.

Subexcavation and Structural Fill

The natural soils below the subject lots have potential for volume change when wetted under building loads. Existing fill with unknown foundation support characteristics was encountered below some of the subject lots. Potential for differential movement and associated damage to the buildings will need to be mitigated. We judge the buildings can be constructed with footing foundations and slab-on-grade floors, provided existing fill is removed and the soils below the buildings are subexcavated to a depth of at least 2 feet and replaced with densely-compacted, structural fill.

In our opinion, a micropile and structural slab-on-grade system is a positive choice for the residences. With either foundation/floor system approach, the subexcavation and replacement process will be needed below exterior, non-structural slabs-on-grade. We recommend sub-excavation and replacement to a depth of at least 18 inches below exterior slabs-on-grade. CTL|T should be called to observe conditions in subexcavated areas prior to placement of structural fill.

The subexcavated soils can be moisture-treated and reused as structural fill, provided they are free of rocks larger than 3 inches in diameter, organic matter, and debris. The structural fill soil should be moisture-conditioned to within 2 percent of optimum moisture content, placed in loose lifts of 8 inches thick or less, and compacted to at least 98 percent of standard Proctor (ASTM D 698) maximum dry density. Moisture content and density of structural fill should be checked by CTL|T during placement. Observation of the compaction procedure is necessary.

Foundation Wall Backfill

Proper placement and compaction of foundation wall backfill soil is important to reduce infiltration of surface water and settlement from consolidation of backfill. This is especially important for backfill areas that will support exterior concrete flatwork, such as driveways and patios. The soils excavated from the site can be used as backfill, provided they are free of rocks larger than 4-inches in diameter, organics, and debris.

Backfill soil should be placed in loose lifts of approximately 10 inches thick or less, moisture-conditioned, and compacted. The backfill should be compacted to at least 95 percent of standard Proctor (ASTM D 698) maximum dry density. Moisture content and density of the backfill should be checked during placement by a representative of our firm. Observation of the compaction procedure is recommended.

FOUNDATIONS

The existing fill and natural soils below the subject lots have potential for volume change when wetted under building loads. Potential for differential movement and associated damage to the buildings will need to be mitigated. We judge buildings can be constructed on footing foundations with slab-on-grade floors, provided existing fill is removed and the soils below the buildings are subexcavated to a depth of at least 2 feet and replaced with densely-compacted, structural fill. Recommendations in the Subexcavation and Structural Fill section should be followed. CTL|T should be called to observe conditions in subexcavated areas prior to placement of structural fill.

A positive alternative to mitigate differential movement and associated building damage is to construct the residences on micropiles with structural slab-on-grade foundation systems. In the north-eastern part of the project the depth to gravel on some lots will be 42 feet or more. The structural engineer and micropile installer should consider if the depth to gravel will impact the feasibility of using micropiles at this site.

Recommended design and construction criteria for footings and micropile foundations are below. These criteria were developed based on our analysis of field and laboratory data, as well as our engineering experience.

Micropiles

1. We recommend micropiles be designed using ultimate grout-to-ground bond strength of about 10 psi in the gravel soils and 5 psi in the sandy silt soils. The installation contractor should verify these strengths are appropriate for their installation method and experience. Higher bond stresses may be appropriate, depending on the contractor's experience and load test results. Grout-to-ground bond strength should be neglected for the upper 5 feet of the micropiles.

2. The drilling contractor should utilize equipment capable of penetrating cobbles and boulders. Drilling methods and the selection of micropile type should be left to the discretion of the design/build contractor. Based on the soil and bedrock encountered in our borings, we suggest consideration of

Case I, Type B requirements as specified in FHWA-NHI-05-039 "Micropile Design and Construction". Grout is placed through casing under pressure during installation of Type B micropiles.

3. We recommend a minimum micropile boring diameter of 4 inches. Larger diameters are acceptable. Battered micropiles can be used to resist lateral loads and inclination can range from 0 to 45 degrees from vertical.

4. Micropiles should be reinforced full-length. The reinforcement should extend an adequate distance into grade beams and pile caps as specified by the structural engineer.

5. The top of micropiles should be capped with an anchor plate embedded in the concrete cap and sized to resist design structural loads. Effects of moment and load eccentricity should be accounted for during design.

6. Lateral loads should be evaluated considering the applied shear, moments, and axial forces along with the impacts of potential lateral movement of the concrete foundation pad.

7. Load testing should be performed on a sacrificial micropile to verify construction procedures and load capacity prior to installation of production micropiles. The purpose is to verify whether design assumptions concerning bond zone strength are appropriate and the adequacy of the contractor's installation method.

Footings on Structural Fill

1. Footings should be supported on a minimum 2-foot thickness of densely-compacted, structural fill in accordance with recommendations in the Subexcavation and Structural Fill section.

2. Footings on the structural fill can be designed for a maximum net allowable soil bearing pressure of 3,000 psf.

3. A friction factor of 0.35 can be used to calculate resistance to sliding between concrete footings and the recommended structural fill.

4. Continuous wall footings should have a minimum width of 16 inches. Foundations for isolated columns should have minimum dimensions of 24 inches by 24 inches. Larger sizes may be required, depending upon foundation loads.

5. Grade beams and foundation walls should be well-reinforced. We recommend reinforcement sufficient to span an unsupported distance of at least 12 feet.

6. The soils under exterior footings should be protected from freezing. We recommend the bottom of footings be constructed at least 48 inches below finished exterior grades. The Eagle County building department should be consulted regarding frost protection requirements.

SLAB-ON-GRADE CONSTRUCTION

The existing fill and natural soils below the subject site have potential for volume change when wetted under building loads. We judge buildings on the subject lots can be constructed with footings and slab-on-grade provided the soils below the buildings are subexcavated to a depth of at least 2 feet below bottom of footing elevations or 18 inches below bottom of exterior concrete slabs-on-grade, such as driveways and patios. Recommendations in the Subexcavation and Structural Fill section should be followed.

Based on our analysis of field and laboratory data, as well as our engineering experience, we recommend the following precautions for slab-on-grade construction at this site.

1. Slabs should be separated from wall footings and column pads with slip joints, which allow free vertical movement of the slabs.

2. Underslab plumbing should be pressure tested for leaks before the slabs are constructed. Plumbing and utilities which pass through slabs should be isolated from the slabs with sleeves and provided with flexible couplings to slab supported appliances.

3. Exterior concrete slabs, such as driveways and patios, should be isolated from the buildings. These slabs should be well-reinforced to function as independent units.

4. Frequent control joints should be provided, in accordance with American Concrete Institute (ACI) recommendations, to reduce problems associated with shrinkage and curling.

5. The International Building Code (IBC) may require a vapor retarder be placed between the base course or subgrade soils and the concrete slab-on-grade floors. The merits of installation of a vapor retarder below floor slabs depend on the sensitivity of floor coverings and building to moisture. A properly installed vapor retarder (10 mil minimum) is more beneficial below concrete slab-on-grade floors where floor coverings will be sensitive to moisture.

SURFACE DRAINAGE

Surface drainage is critical to the performance of foundations, floor slabs, and concrete flatwork. Site grading should be designed and constructed to rapidly convey surface water away from the buildings. Proper surface drainage and irrigation practices can help control the amount of surface water that penetrates to foundation levels and contributes to settlement of foundations. Positive drainage away from the foundations and avoidance of irrigation near foundations also help to avoid excessive wetting of backfill soils, which can lead to increased backfill settlement and possibly to higher lateral earth pressures, due to increased weight and reduced strength of the backfill. Recommendations in this report are based on effective drainage for the life of the structure and cannot be relied upon if effective drainage is not maintained. We recommend the following precautions be observed during construction and maintained at all times after construction is completed.

1. The ground surface surrounding the exterior of the buildings should be sloped to rapidly convey surface water away from the buildings in all directions. We recommend a constructed slope of at least 12 inches in the first 10 feet (10 percent) in landscaped areas around the buildings.

2. Backfill around the foundation walls should be moisture-treated and compacted pursuant to recommendations in the Foundation Wall Backfill section. Increases in the moisture content of the backfill soils after placement often results in settlement. Re-establishing proper slopes (owner maintenance) away from the building may be necessary.

3. We recommend that the buildings be provided with roof gutters and downspouts. The downspouts should discharge well beyond the limits of all backfill. Splash blocks and/or extensions should be provided at all down-

spouts so water discharges onto the ground beyond the backfill. We generally recommend against burial of downspout discharge pipes.

4. Landscaping should be carefully designed and maintained to minimize irrigation. Plants placed close to foundation walls should be limited to those with low moisture requirements. Irrigated grass should not be located within 5 feet of the foundations. Sprinklers should not discharge within 5 feet of foundations. Plastic sheeting should not be placed beneath landscaped areas adjacent to foundation walls. Geotextile fabric will inhibit weed growth and allow some evaporation to occur.

CONCRETE

Concrete in contact with soil can be subject to sulfate attack. We measured water-soluble sulfate concentrations of 0.01 and 1.46 percent in ten samples of the soils from the site (see Table A-I). Pursuant to ACI 332-20, these concentrations correspond to a sulfate exposure class of Severe (RS2) as indicated on the table below.

SULFATE EXPOSURE CLASSES PER ACI 332-20

Exposure Classes		Water-Soluble Sulfate (SO_4) in Soil [A] (%)
Not Applicable	RS0	< 0.10
Moderate	RS1	0.10 to 0.20
Severe	RS2	0.20 to 2.00
Very Severe	RS3	> 2.00

A) Percent sulfate by mass in soil determined by ASTM C1580

For these levels of sulfate concentration, ACI 332-20, "*Code Requirements for Residential Concrete*", indicates special cement type requirements for sulfate resistance as indicated on the table below.

CONCRETE DESIGN REQUIREMENTS FOR SULFATE EXPOSURE PER ACI 332-20

Exposure Class	Maximum Water/ Cement Ratio	Minimum Compressive Strength [A] (psi)	Cementitious Material Types [B]			Calcium Chloride Admixtures
			ASTM C150/ C150M	ASTM C595/ C595M	ASTM C1157/ C1157M	
RS0	N/A	2500	No Type Restrictions	No Type Restrictions	No Type Restrictions	No Restrictions
RS1	0.50	2500	II	Type with (MS) Designation	MS	No Restrictions
RS2	0.45	3000	V[C]	Type with (HS) Designation	HS	Not Permitted
RS3	0.45	3000	V + Pozzolan or Slag Cement [D]	Type with (HS) Designation plus Pozzolan or Slag Cement [E]	HS + Pozzolan or Slag Cement [E]	Not Permitted

A) Concrete compressive strength specified shall be based on 28-day tests per ASTM C39/C39M
B) Alternate combinations of cementitious materials of those listed in ACI 332-20 Table 5.4.2 shall be permitted when tested for sulfate resistance meeting the criteria in section 5.5.
C) Other available types of cement such as Type III or Type I are permitted in Exposure Classes RS1 or RS2 if the C3A contents are less than 8 or 5 percent, respectively.
D) The amount of the specific source of pozzolan or slag to be used shall not be less than the amount that has been determined by service record to improve sulfate resistance when used in concrete containing Type V cement. Alternatively, the amount of the specific source of the pozzolan or slab to be used shall not be less than the amount tested in accordance with ASTM C1012/C1012M and meeting the criteria in section 5.5.1 of ACI 332-20.
E) Water-soluble chloride ion content that is contributed from the ingredients including water aggregates, cementitious materials, and admixtures shall be determined on the concrete mixture ASTM C1218/C1218M between 29 and 42 days.

Superficial damage may occur to the exposed surfaces of highly permeable concrete, even when sulfate levels are relatively low. To control this risk and to resist freeze-thaw deterioration, the water-to-cementitious materials ratio should not exceed 0.50 for concrete in contact with soils that are likely to stay moist due to surface drainage or high-water tables. Concrete should have a total air content of 6 percent ± 1.5 percent. We advocate damp-proofing of all foundation walls and grade beams in contact with the subsoils (including the inside and outside faces of garage and crawl space grade beams).

CONSTRUCTION OBSERVATIONS

We recommend that CTL|T be retained to provide construction observation and materials testing services for the project. This would allow us the opportunity to verify whether soil conditions are consistent with those found during this investigation. If others perform these observations, they must accept responsibility to judge whether the recommendations in this report remain appropriate. It is also beneficial to projects, from economic and practical standpoints, when there is continuity between engineering consultation and the construction observation and materials testing phases.

GEOTECHNICAL RISK

The concept of risk is an important aspect of any geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. We never have complete knowledge of subsurface conditions. Our analysis must be tempered with engineering judgment and experience. Therefore, the recommendations presented in any geotechnical evaluation should not be considered risk-free. We cannot provide a guarantee that the interaction between the soils and the proposed buildings will lead to performance as desired or intended. Our recommendations represent our judgment of those measures that are necessary to increase the chances that the buildings will perform satisfactorily. It is critical that all recommendations in this report are followed.

LIMITATIONS

This report was prepared for the exclusive use of Haymeadow Homes. The information, conclusions, and recommendations provided herein are based upon consideration of many factors including, but not limited to, the type of structures proposed, the geologic setting, and the subsurface conditions encountered. The conclusions and recommendations contained in the report are not valid for use by others. Standards of practice continuously change in geotechnical engineering. The recommendations provided in this report are appropriate for about three years. If the proposed buildings are not constructed within three years, we should be contacted to determine if we should update this report.

Our exploratory borings provide a reasonable characterization of subsurface conditions at the site. Variations in subsurface conditions not indicated by the borings will occur.

This investigation was conducted in a manner consistent with that level of care and skill ordinarily exercised by geotechnical engineers currently practicing under similar conditions in the locality of this project. No warranty, express or implied, is made. If we can be of further service in discussing the contents of this report, please call.

CTL|THOMPSON, INC.

Craig A. Burger, P.E.
Principal Engineer
cburger@ctlthompson.com

COLORADO REGISTERED PROFESSIONAL ENGINEER CRAIG ALAN BURGER 36754 9-16-2025

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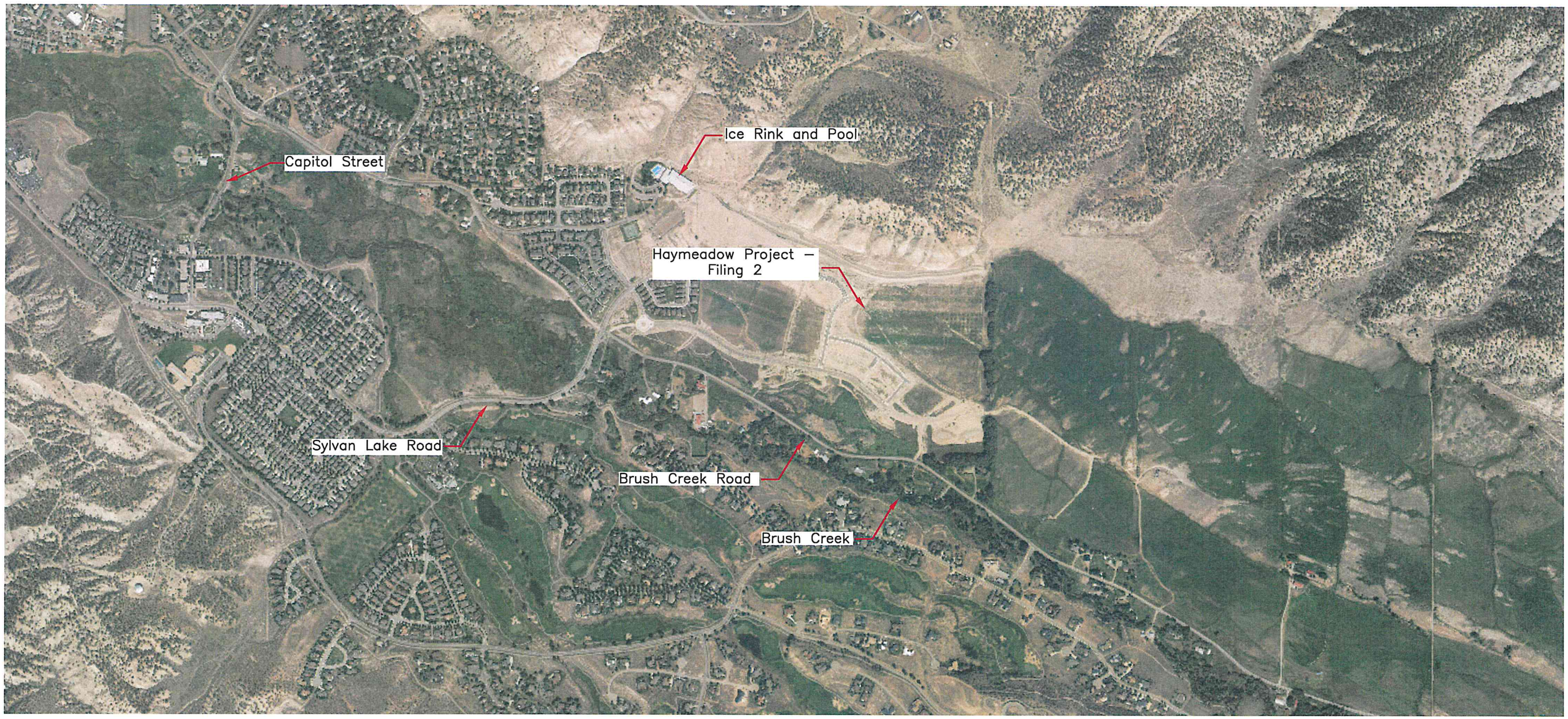
Division Manager
rbarbone@ctlthompson.com

COLORADO LICENSED PROFESSIONAL ENGINEER RYAN R. BARBONE 61683 9/16/2025

0 500 1000
SCALE: 1" = 1000'

NOTE: SATELLITE IMAGE FROM MAXAR
(COPYRIGHT 2022)



HAYMEADOW HOMES
HAYMEADOW PROJECT - FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
Project No. GS06765.005-120-R1

Vicinity Map

Fig. 1

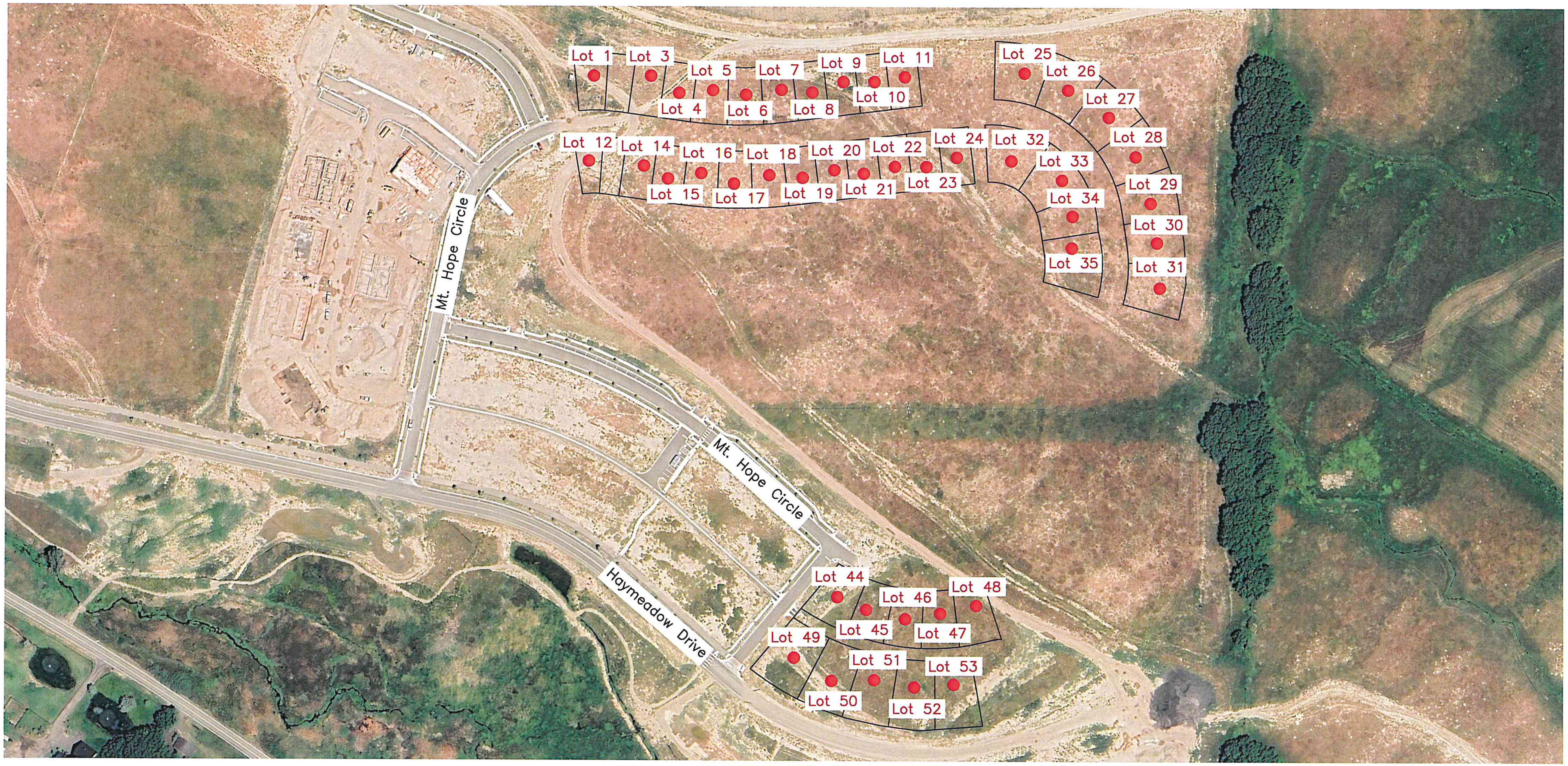
0 100 200

SCALE: 1" = 200'

LEGEND:

Lot 1 ● APPROXIMATE LOCATION OF EXPLORATORY BORING

NOTE: SATELLITE IMAGE FROM GOOGLE EARTH (DATED AUGUST 3, 2023)



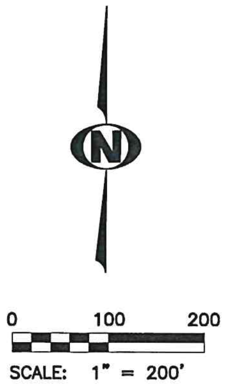
HAYMEADOW HOMES
HAYMEADOW PROJECT - FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
Project No. GS06765.005-120-R1

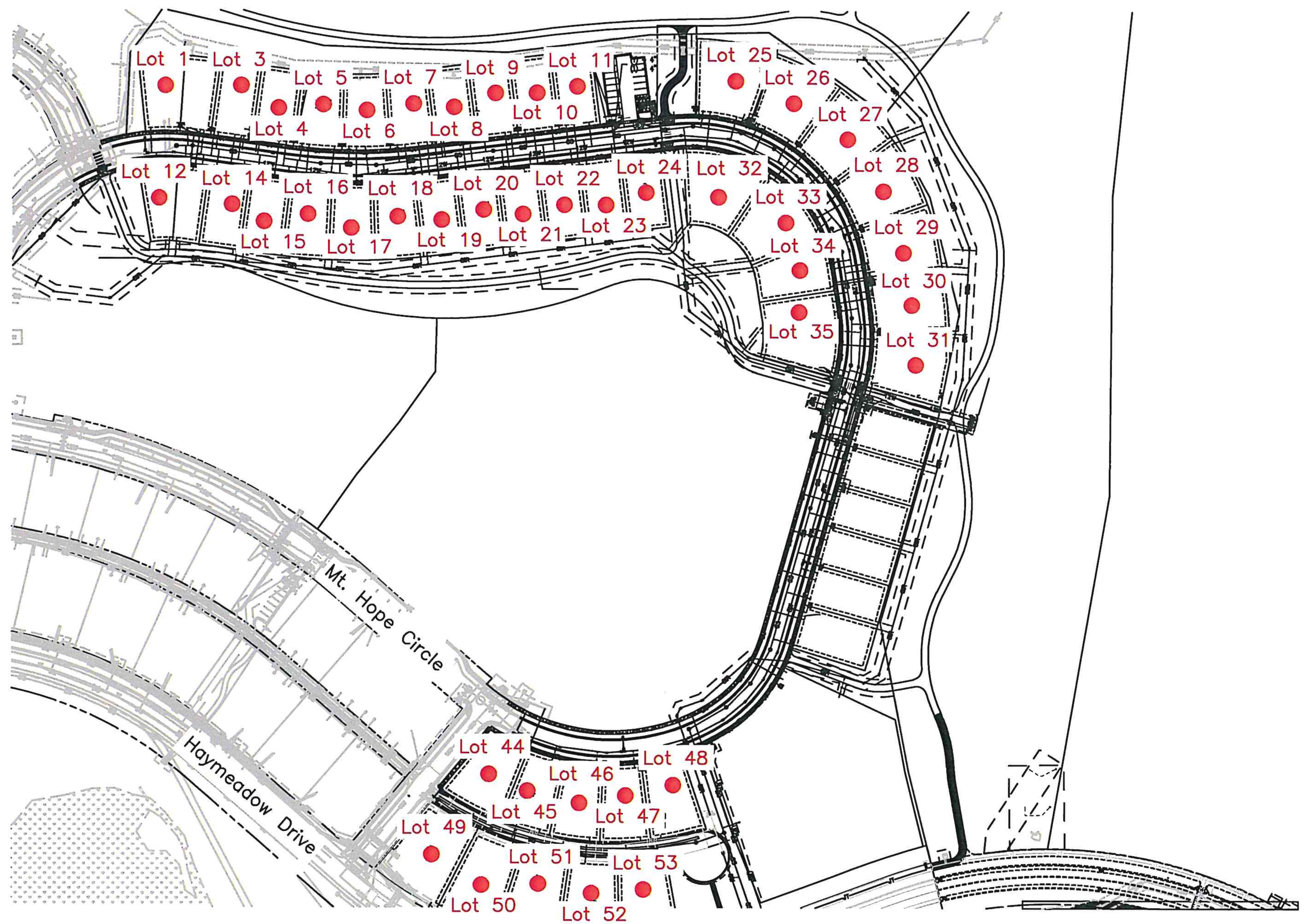
Aerial Photograph Fig. 2

LEGEND:

Lot 1 ● APPROXIMATE LOCATION OF EXPLORATORY BORING

NOTE: BASE IMAGE BY HARRIS KOCHER SMITH
(DATED NOVEMBER 19, 2024)





HAYMEADOW HOMES
HAYMEADOW PROJECT - FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
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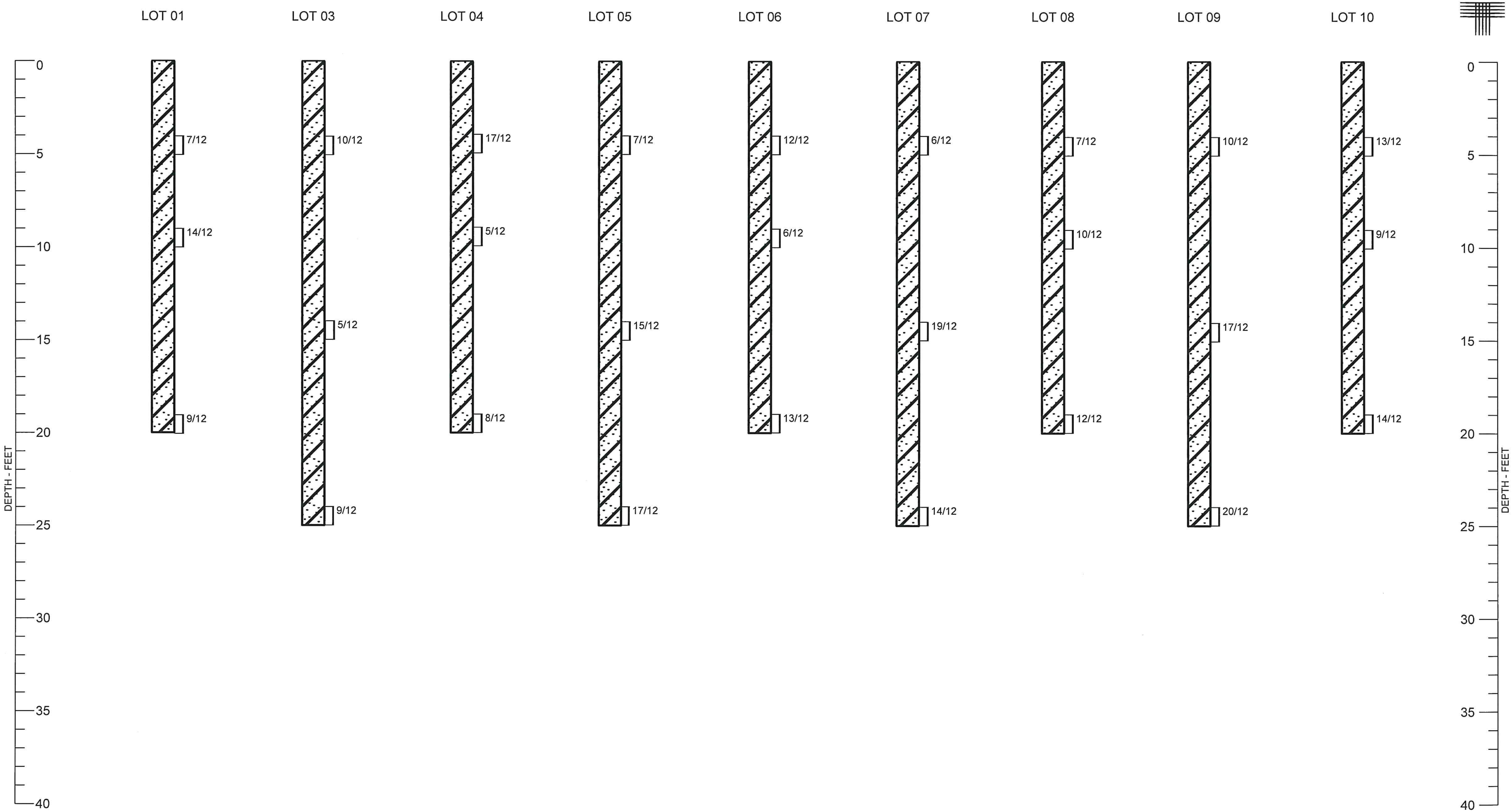
Proposed Development

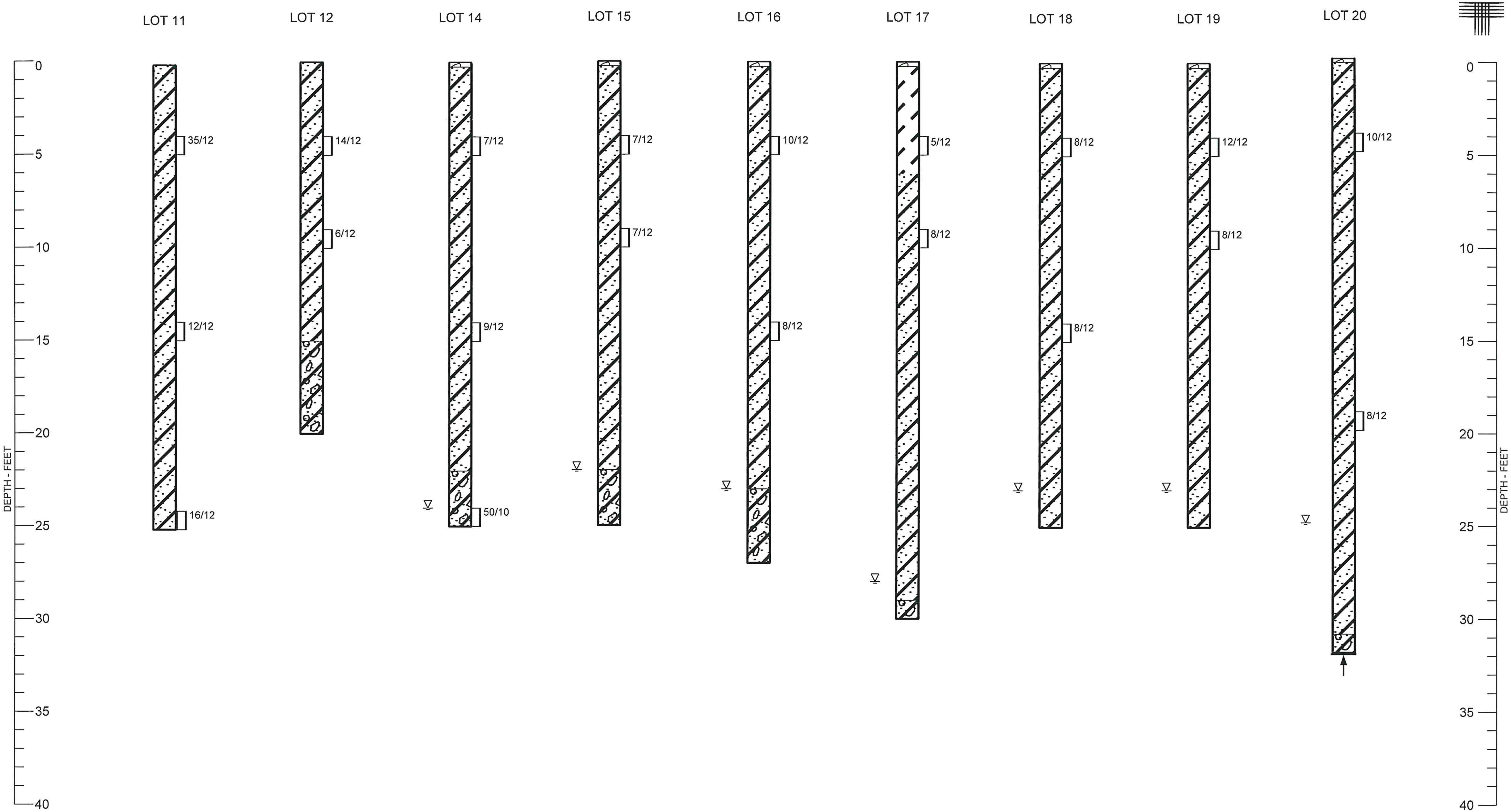
Fig. 3



SUMMARY LOG OF EXPLORATORY BORINGS

HAYMEADOW HOMES
HAYMEADOW FILING 2 - LOTS 1, 3-12, 14-35 AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

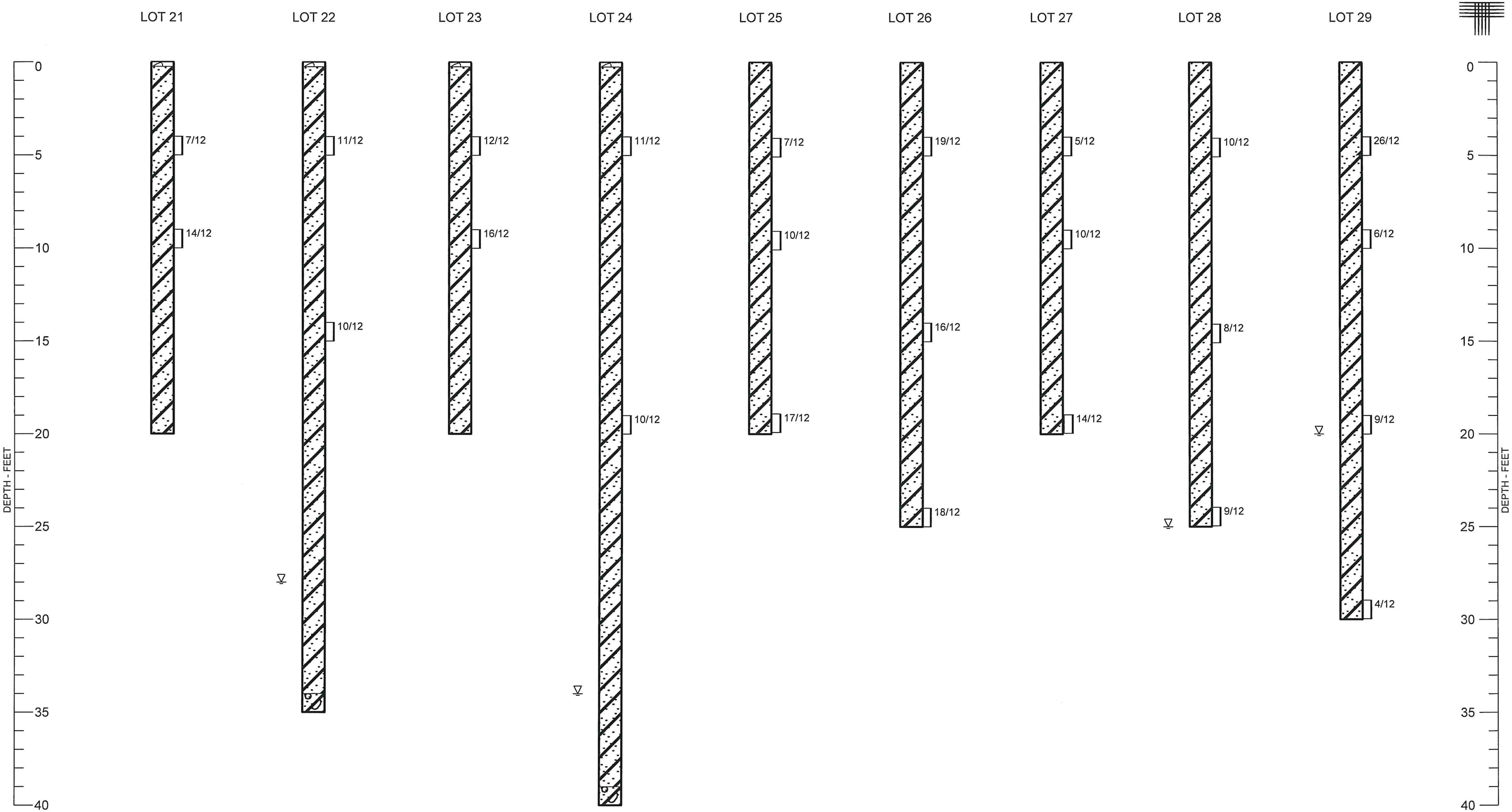
FIG. 4



SUMMARY LOG OF EXPLORATORY BORINGS

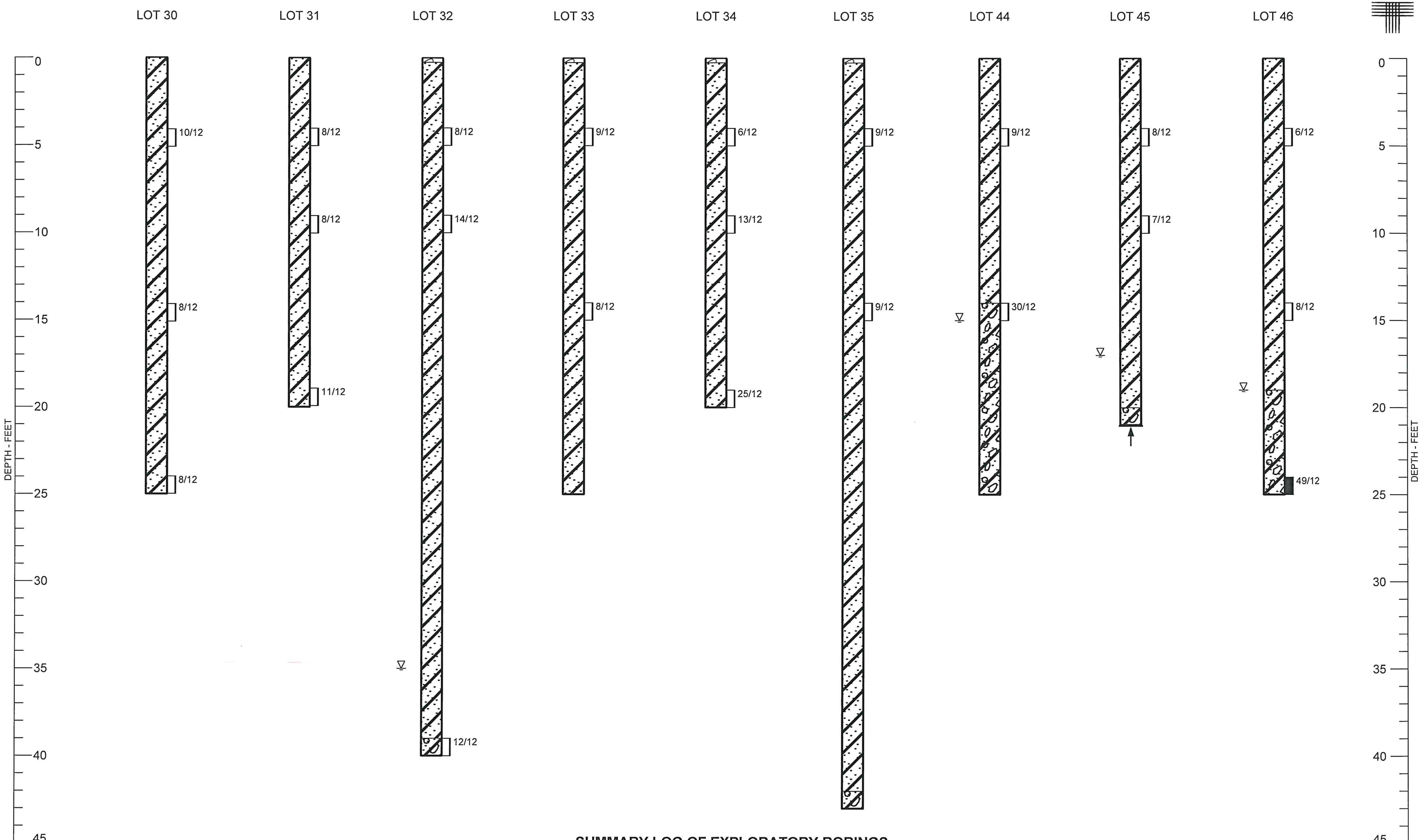
HAYMEADOW HOMES
HAYMEADOW FILING 2 - LOTS 1, 3-12, 14-35 AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

FIG. 5



SUMMARY LOG OF EXPLORATORY BORINGS

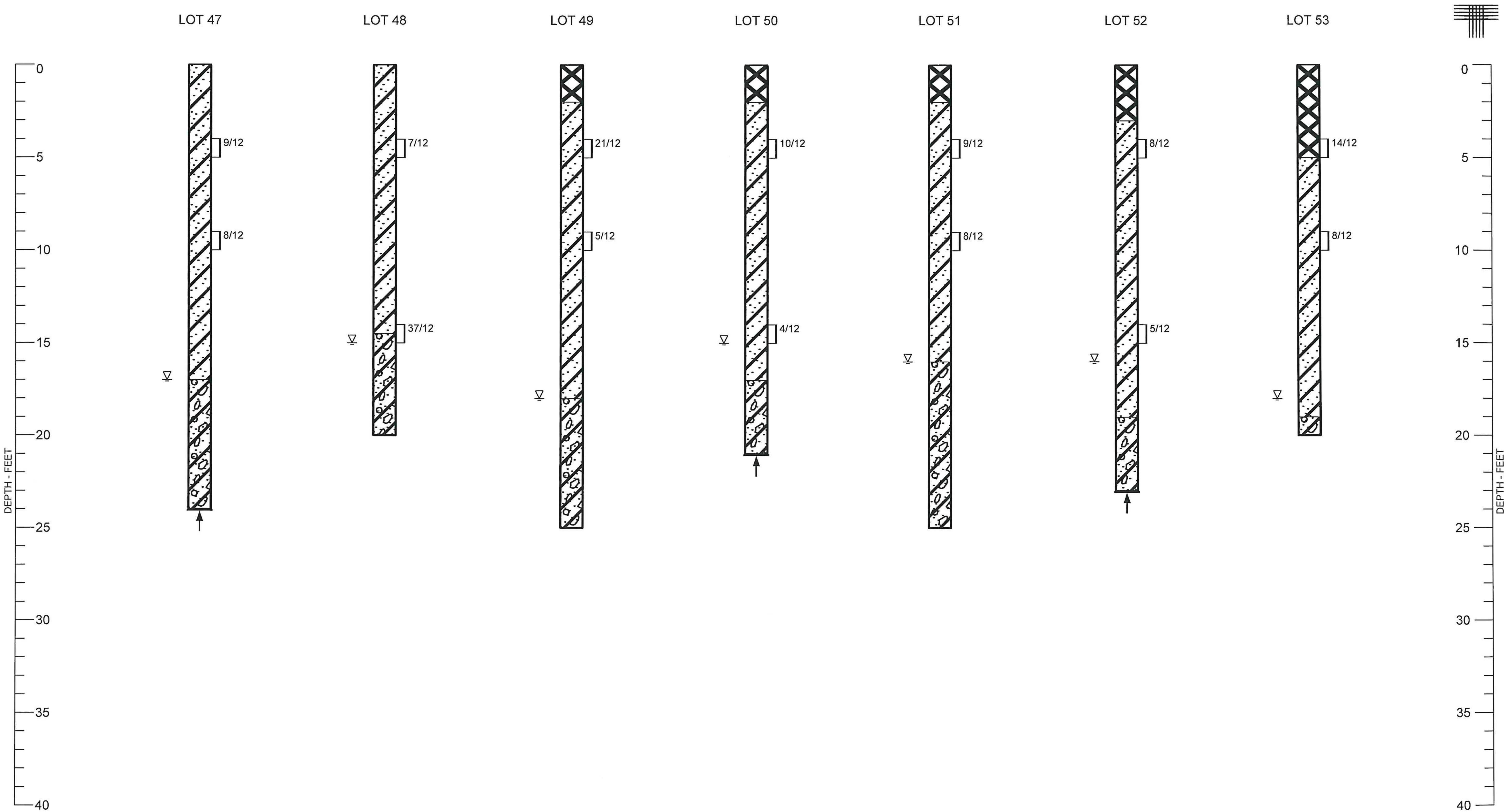
HAYMEADOW HOMES
HAYMEADOW FILING 2 - LOTS 1, 3-12, 14-35 AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1



SUMMARY LOG OF EXPLORATORY BORINGS

HAYMEADOW HOMES
HAYMEADOW FILING 2 - LOTS 1, 3-12, 14-35 AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

FIG. 7



SUMMARY LOG OF EXPLORATORY BORINGS

HAYMEADOW HOMES
HAYMEADOW FILING 2 - LOTS 1, 3-12, 14-35 AND 44-53
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FIG. 8

LEGEND:

TOPSOIL, SILT, SANDY, ORGANICS, MOIST, SOFT, BROWN.

FILL, SAND, CLAYEY, AREAS OF COBBLES AND GRAVELS, MEDIUM DENSE, MOIST, GRAY, TAN, BROWN.

SILT, SANDY AND SAND, SILTY, SLIGHTLY GRAVELLY, MEDIUM DENSE TO DENSE, MOIST, DARK BROWN, BROWN (ML, CL, CL-ML, SM).

GRAVEL, SILTY, CLAY, SAND, COBBLES, MEDIUM DENSE TO VERY DENSE, MOIST TO WET, GRAY, RUST, TAN, BROWN (GM, GC).

THE SYMBOL 7/12 INDICATES 7 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE A 2.5-INCH O.D. MODIFIED CALIFORNIA-BARREL SAMPLER 12 INCHES.

THE SYMBOL 10/12 INDICATES 10 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE A 2.0-INCH O.D. SPLIT-SPOON SAMPLER 12 INCHES.

GROUNDWATER LEVEL MEASURED AT TIME OF DRILLING.

PRACTICAL AUGER REFUSAL.

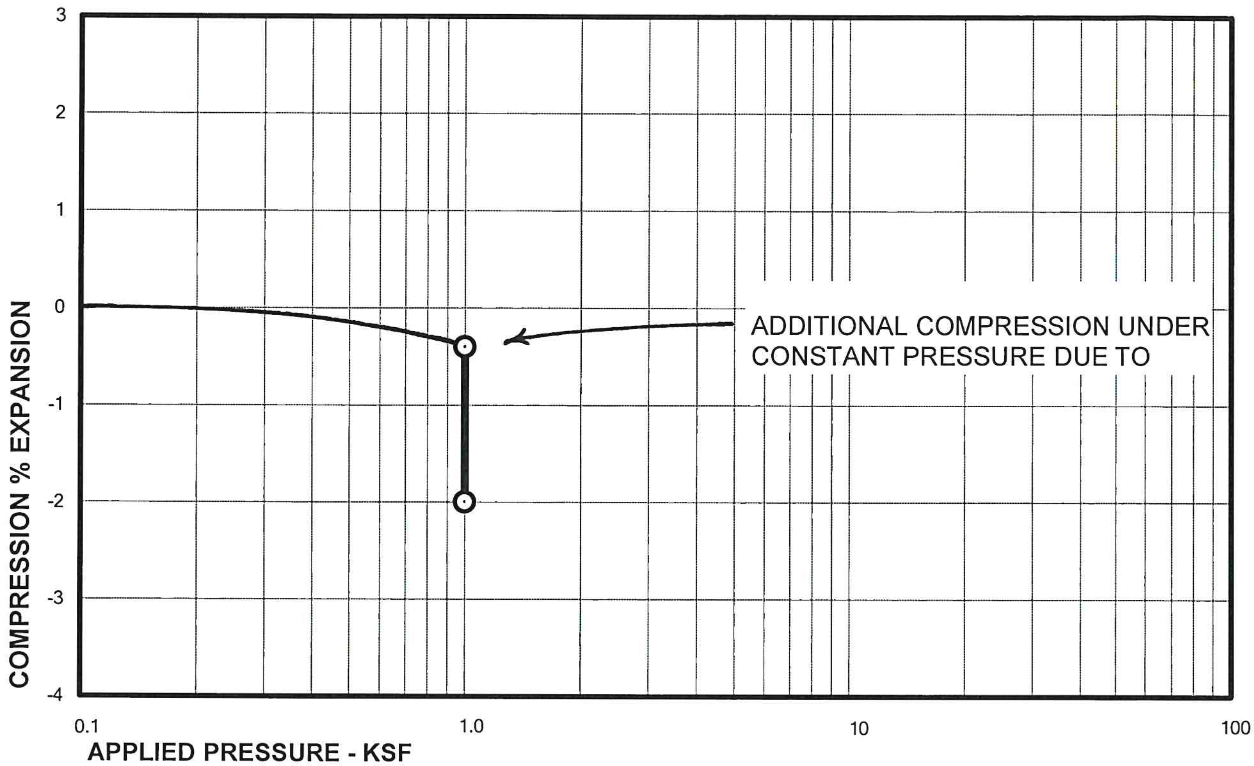
NOTES:

1. EXPLORATORY BORINGS WERE DRILLED WITH A TRACK-MOUNTED DRILL RIG BETWEEN JULY 28 AND 30, 2025 WITH ODEX DRILLING METHODS THAT UTILIZE A DOWN-HOLE PNEUMATIC HAMMER TO ADVANCE A CASED BORING.
2. GROUNDWATER WAS ENCOUNTERED IN OUR BORINGS FROM 15 TO 35 FEET AT THE TIME OF DRILLING. BORINGS WERE BACKFILLED IMMEDIATLEY AFTER EXPLORATORY DRILLING OPERATIONS WERE COMPLETED.
3. THESE LOGS ARE SUBJECT TO THE EXPLANATIONS, LIMITATIONS AND CONCLUSIONS IN THIS REPORT.

SUMMARY LEGEND OF EXPLORATORY BORINGS

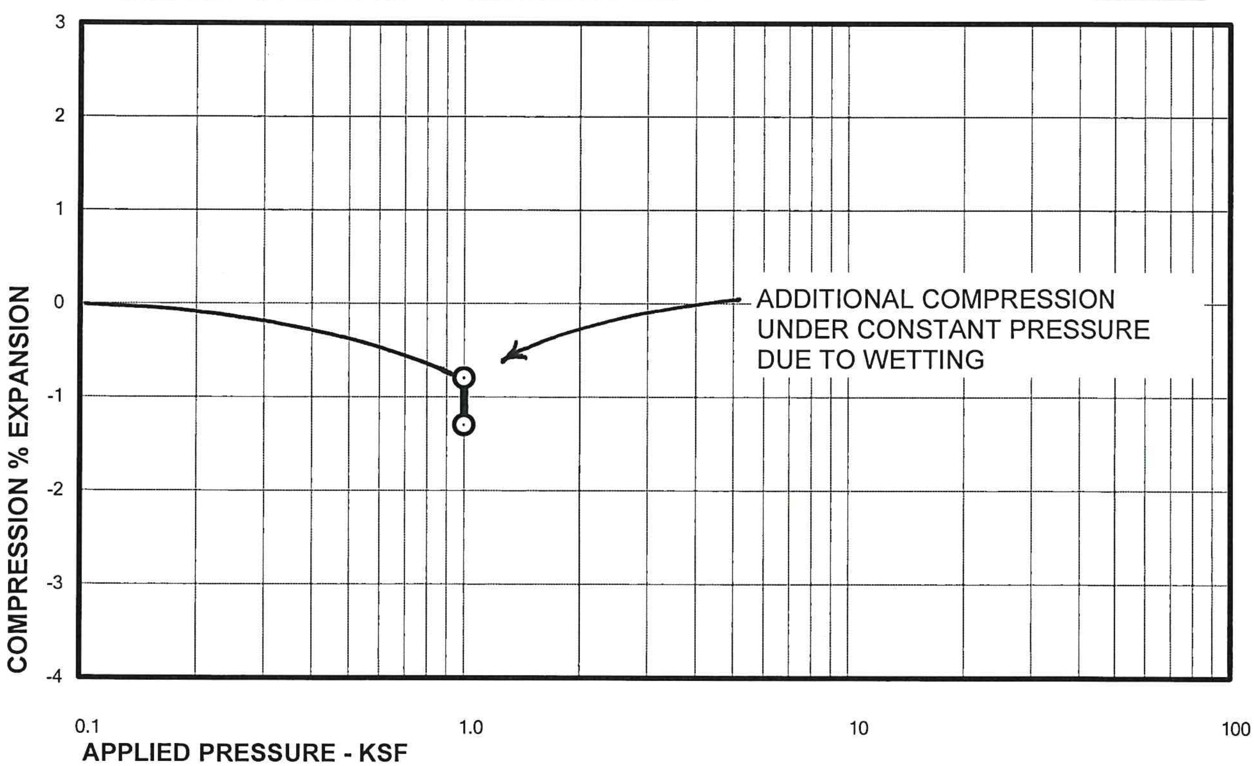
APPENDIX A

LABORATORY TEST RESULTS



Sample of CLAY, SANDY (CL)
From LOT 1 AT 4 FEET

DRY UNIT WEIGHT= 91 PCF
MOISTURE CONTENT= 11.3 %



Sample of SILT, SANDY (ML)
From LOT 3 AT 14 FEET

DRY UNIT WEIGHT= 92 PCF
MOISTURE CONTENT= 19.6 %

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
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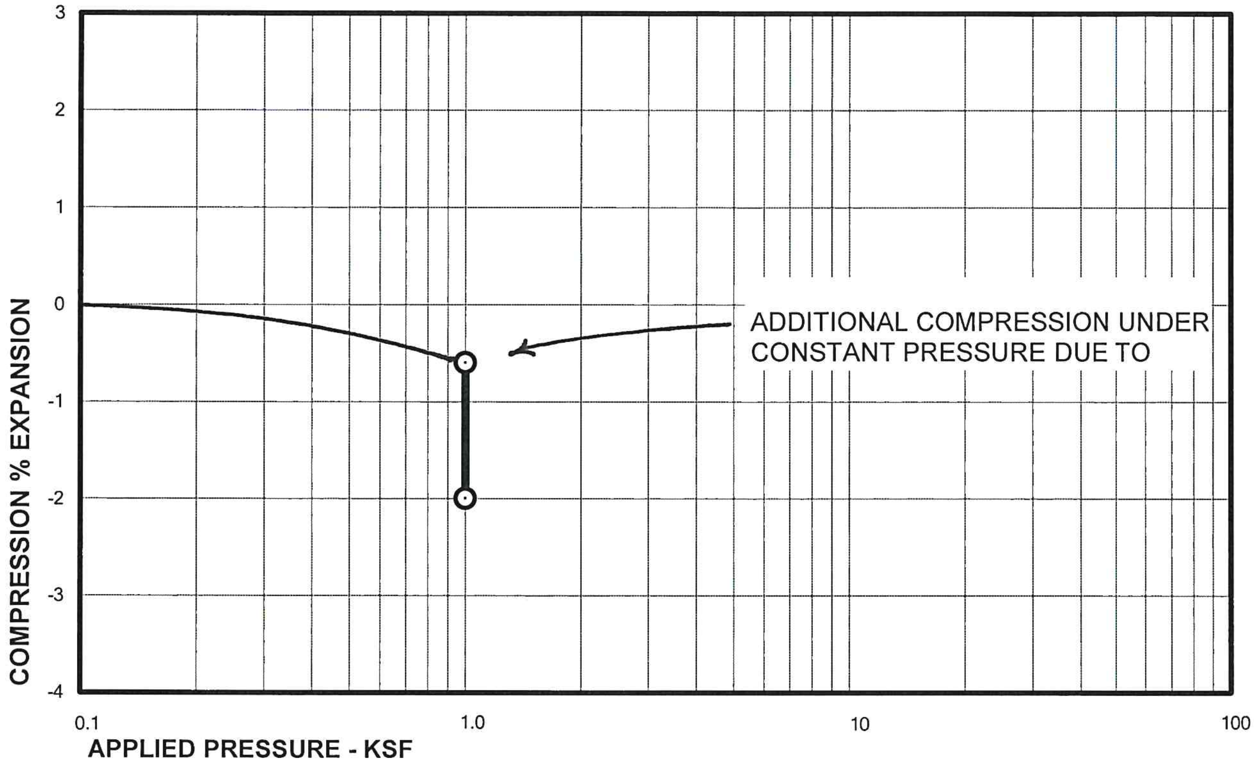
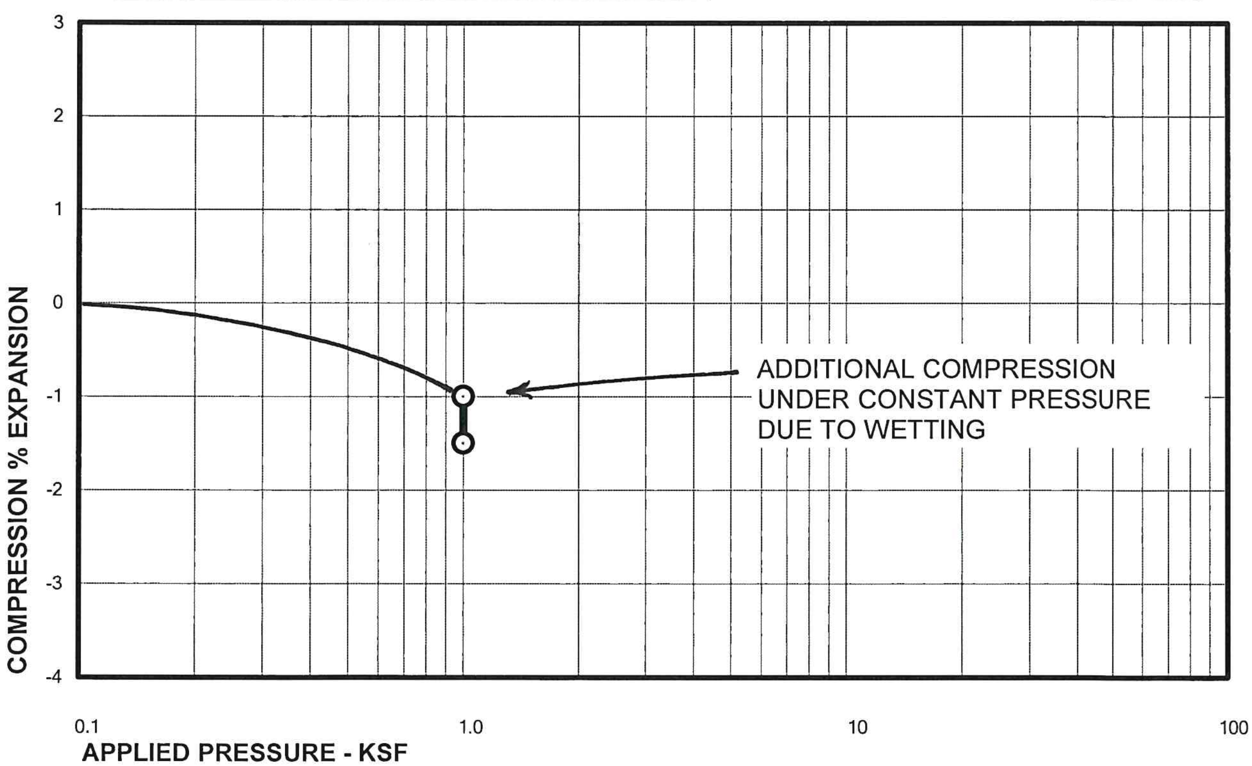
Swell-Consolidation Test Results

FIG. A-1



Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	94	PCF
From	LOT 4 AT 4 FEET	MOISTURE CONTENT=	5.6	%

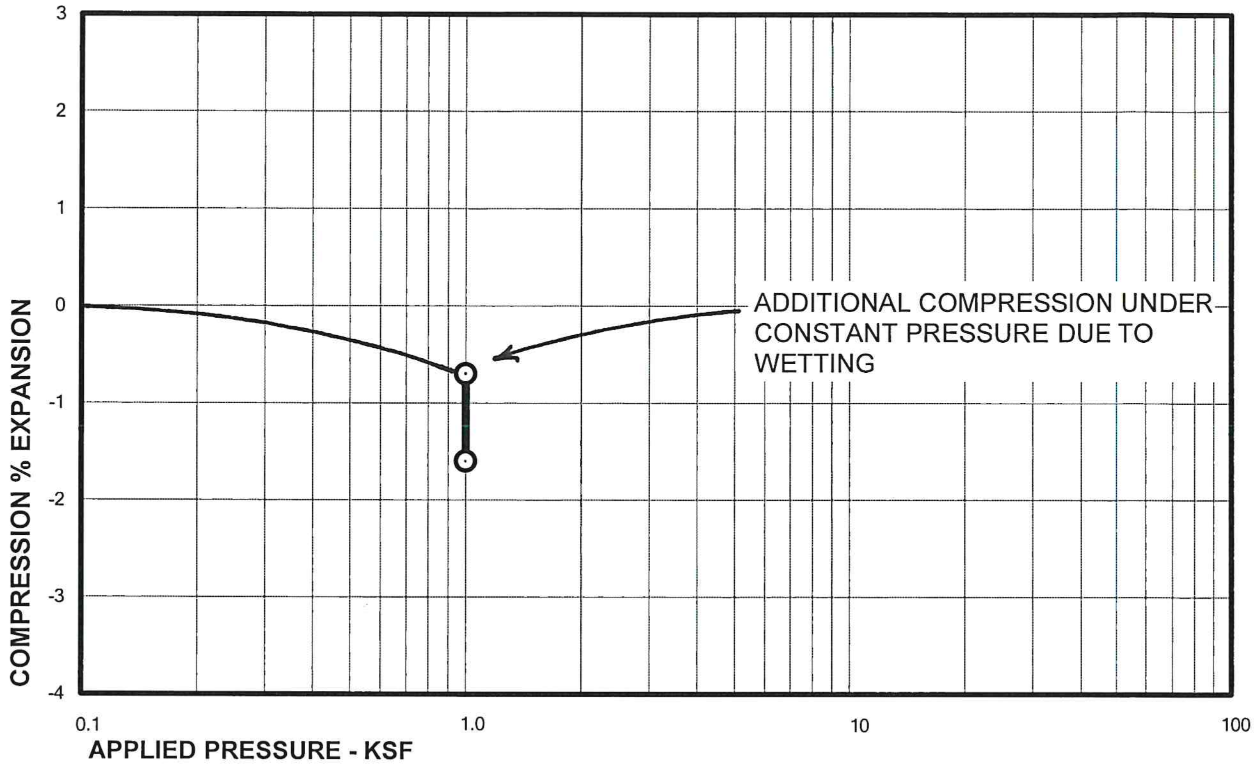


Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	101	PCF
From	LOT 5 AT 14 FEET	MOISTURE CONTENT=	14.4	%

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

Swell-Consolidation Test Results

FIG. A-2

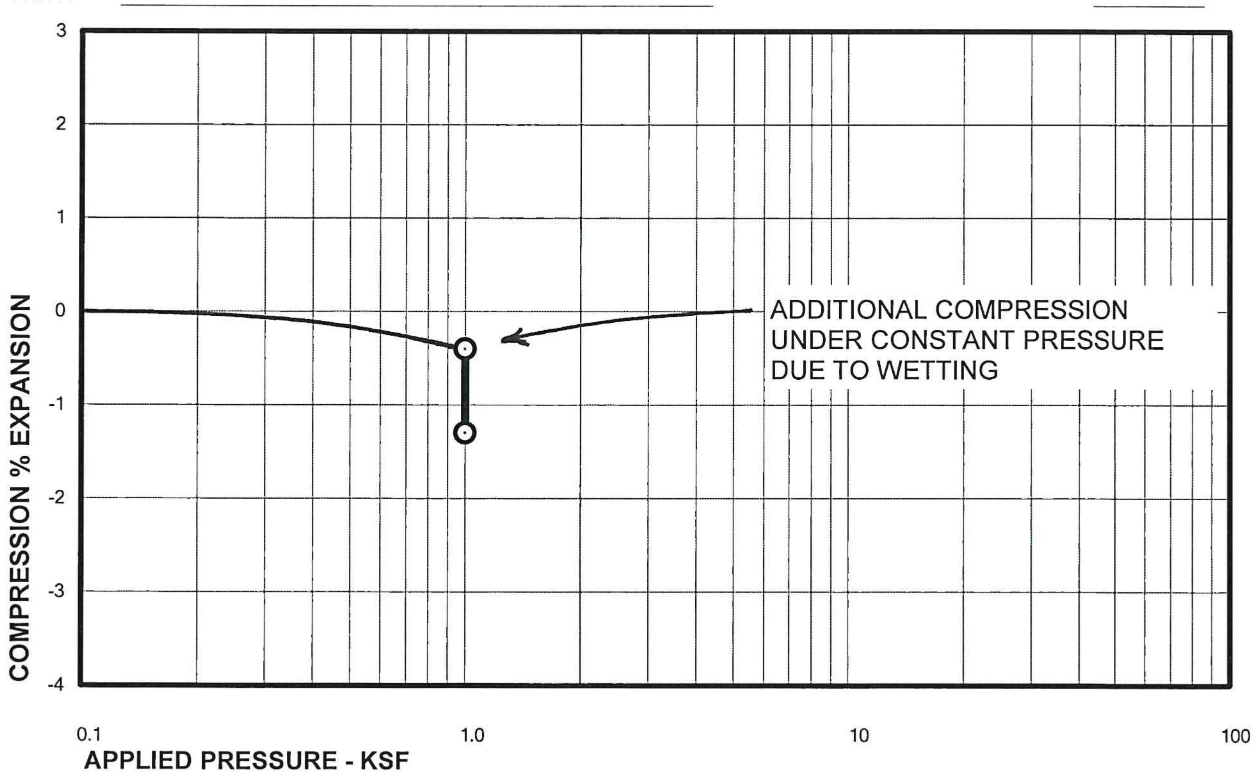


Sample of SILT, SANDY (ML)

From LOT 6 AT 19 FEET

DRY UNIT WEIGHT= 95 PCF

MOISTURE CONTENT= 19.0 %



Sample of SILT, SANDY (ML)

From LOT 8 AT 4 FEET

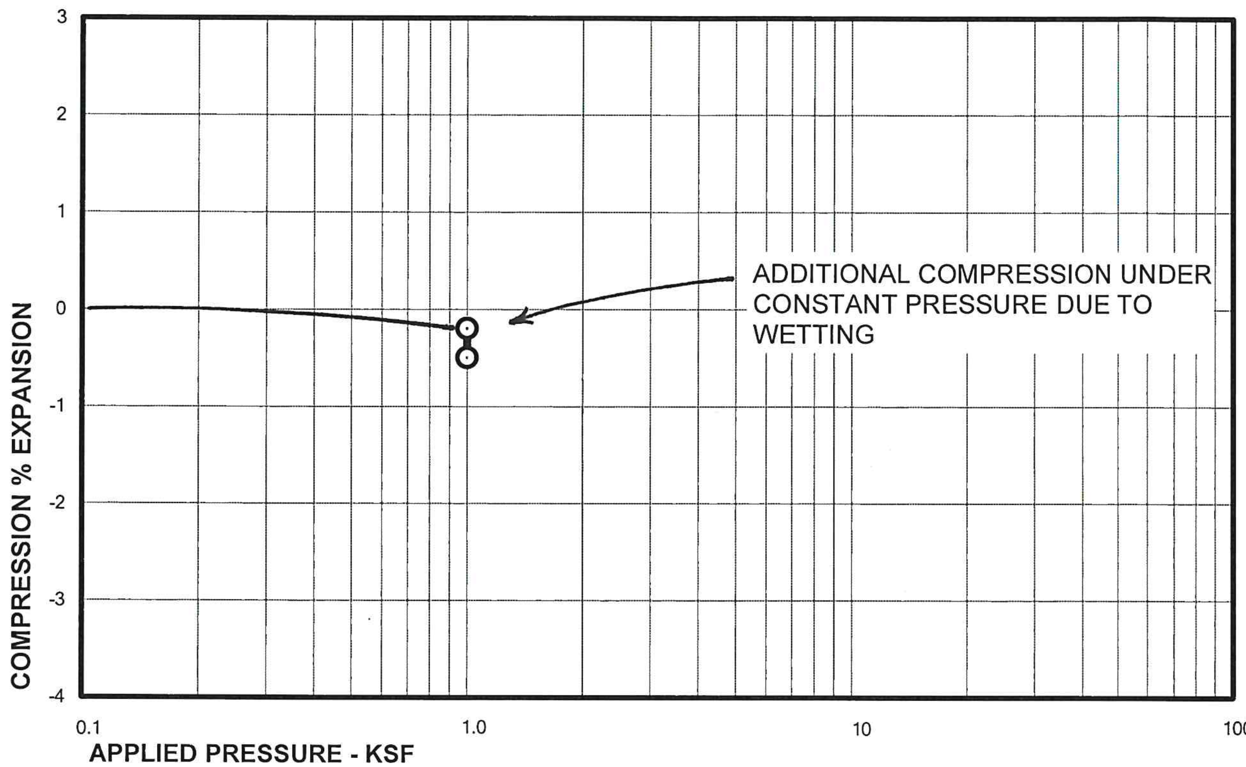
DRY UNIT WEIGHT= 90 PCF

MOISTURE CONTENT= 10.6 %

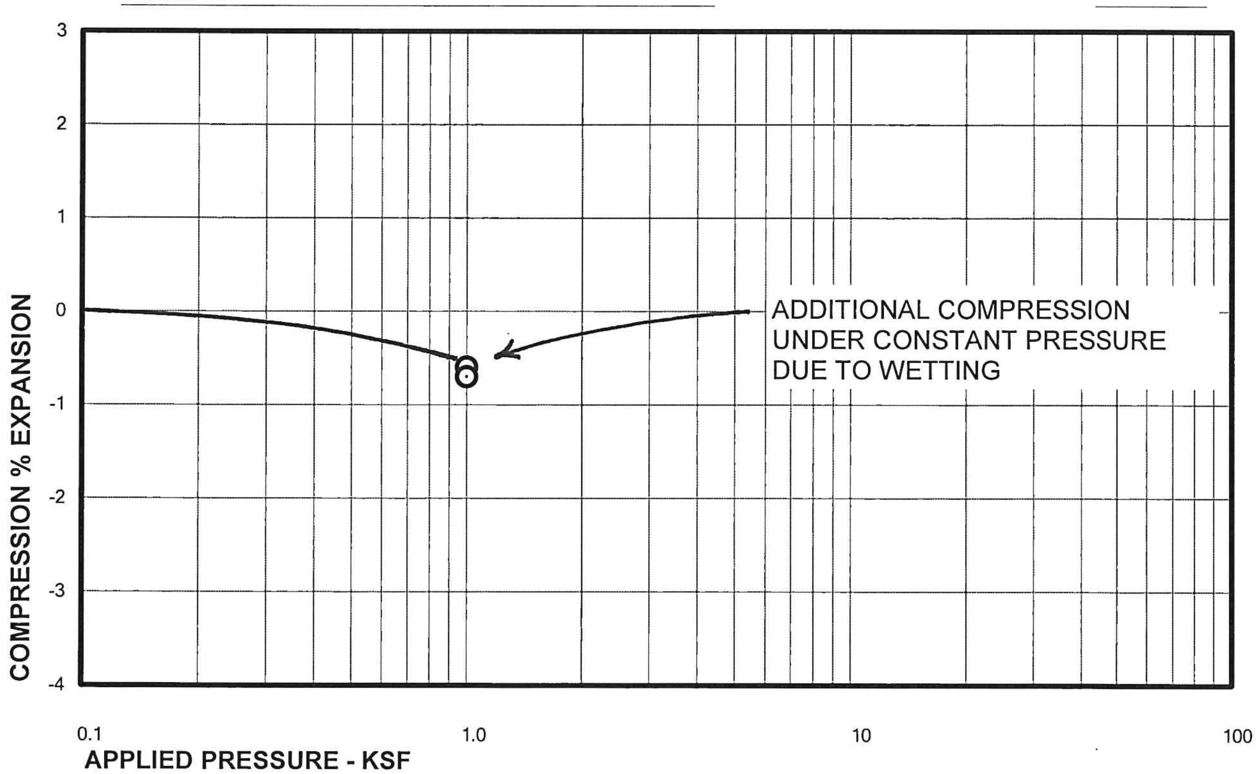
HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

Swell-Consolidation Test Results

FIG. A-3

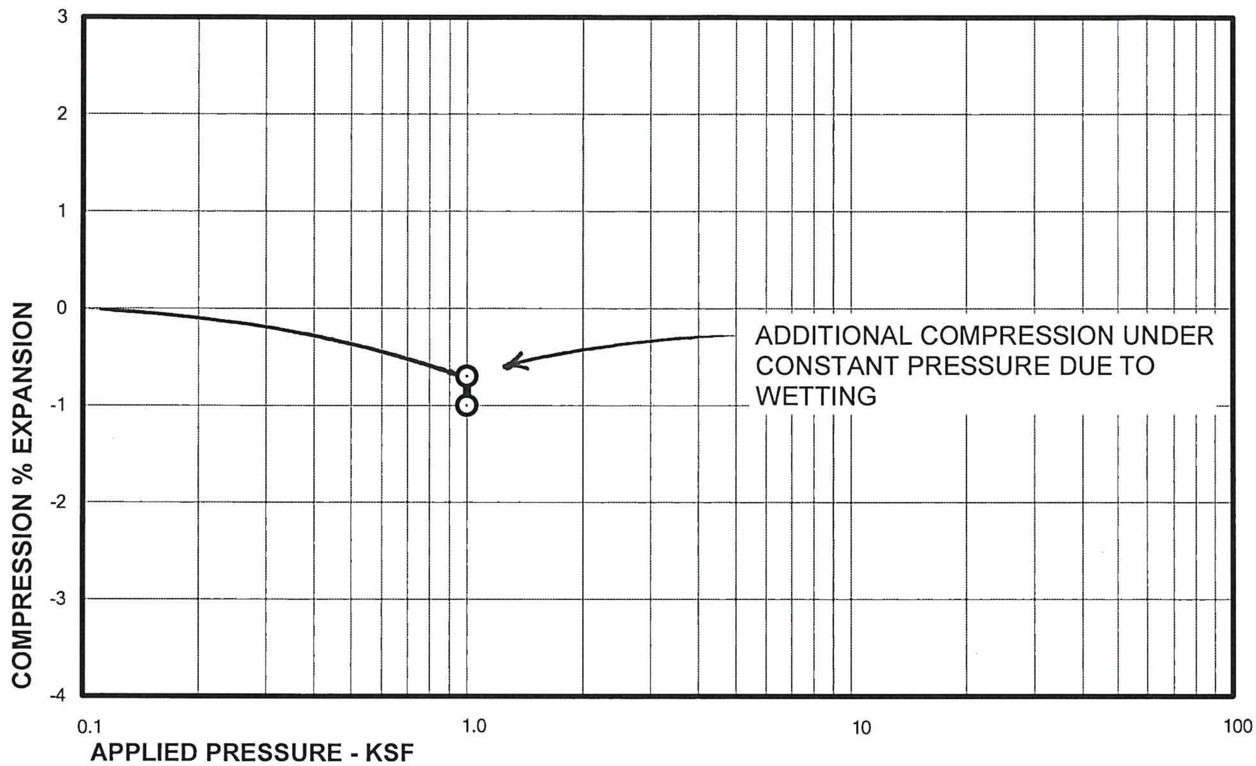


Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	94	PCF
From	LOT 9 AT 14 FEET	MOISTURE CONTENT=	14.5	%



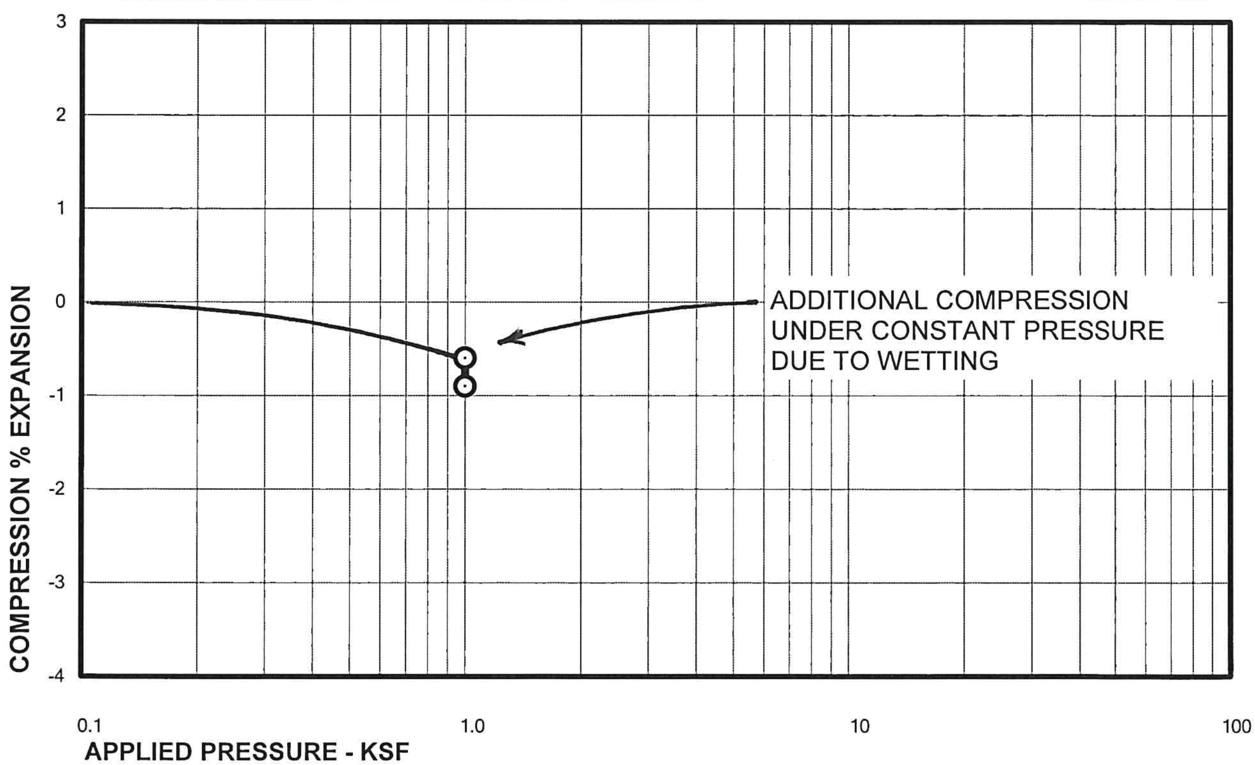
Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	97	PCF
From	LOT 10 AT 9 FEET	MOISTURE CONTENT=	18.9	%

Swell-Consolidation Test Results



Sample of SILT, SANDY (ML)
From LOT 11 AT 14 FEET

DRY UNIT WEIGHT= 94 PCF
MOISTURE CONTENT= 20.6 %

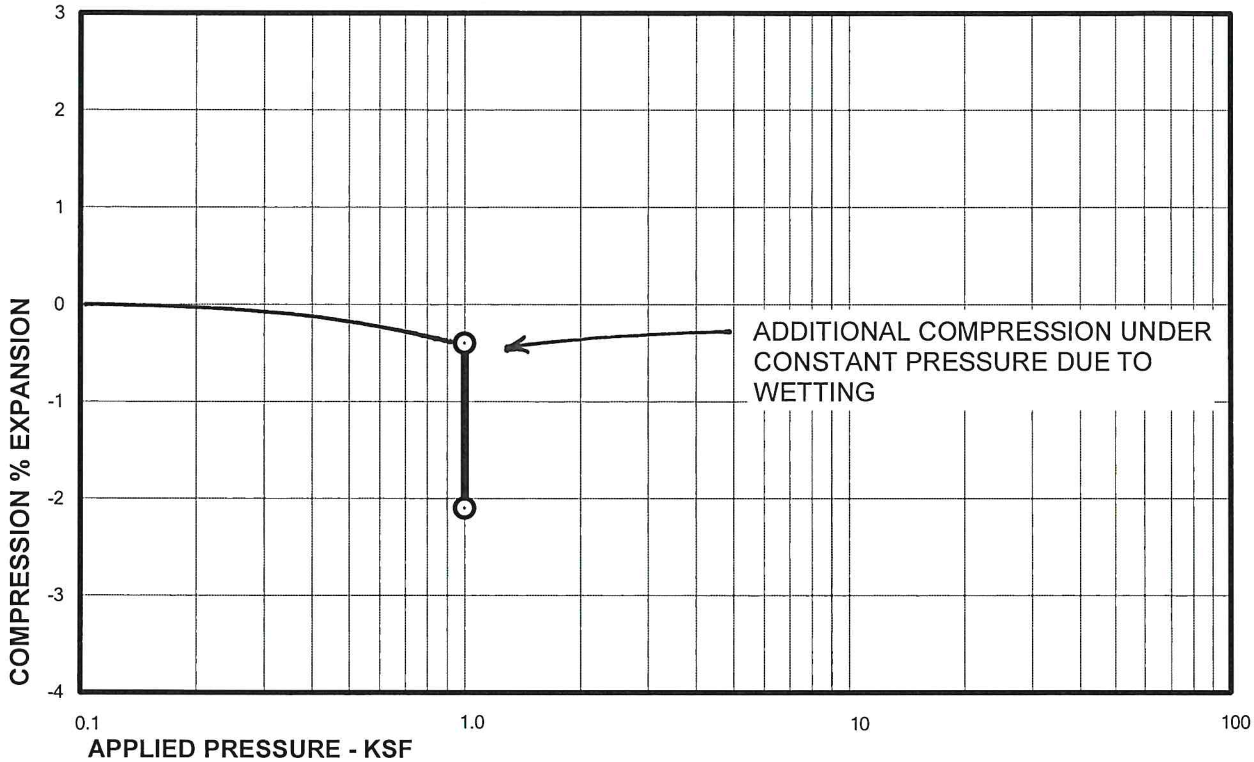


Sample of SILT, SANDY (ML)
From LOT 12 AT 4 FEET

DRY UNIT WEIGHT= 95 PCF
MOISTURE CONTENT= 9.8 %

Swell-Consolidation Test Results

FIG. A-5

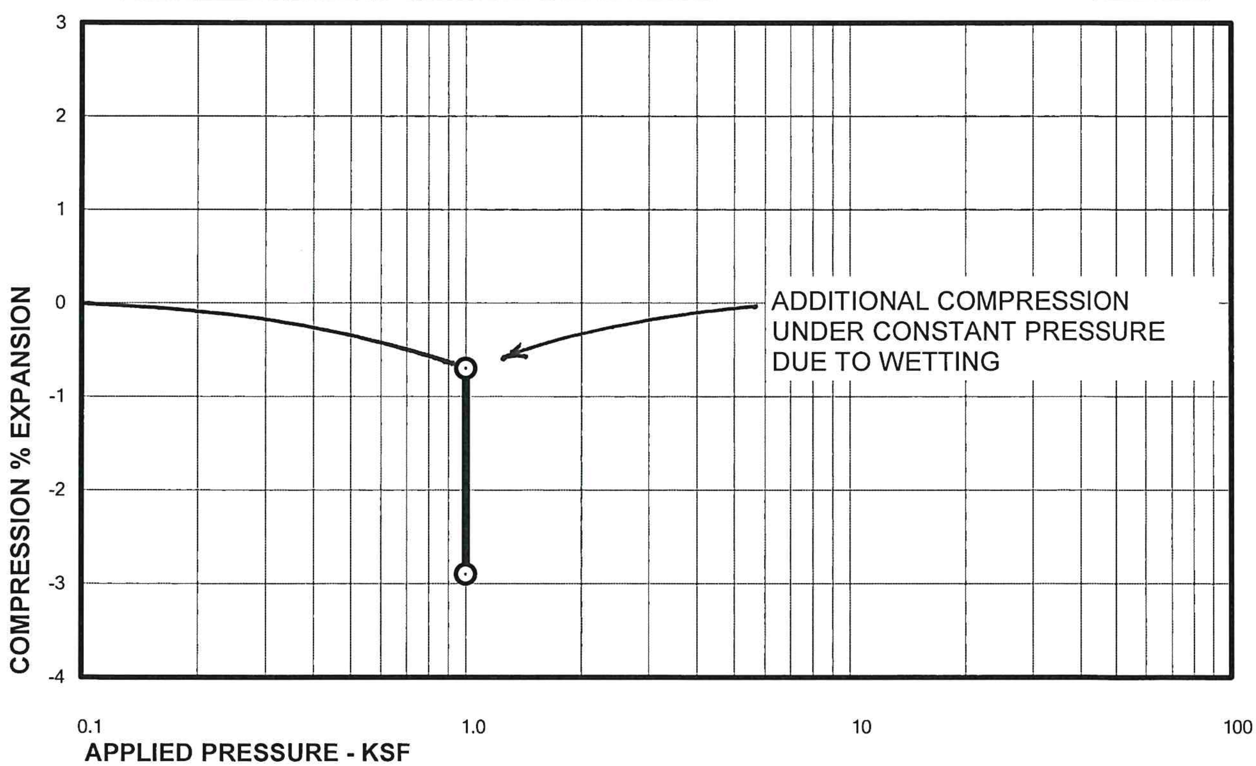


Sample of CLAY, SANDY (CL)

From LOT 16 AT 4 FEET

DRY UNIT WEIGHT= 88 PCF

MOISTURE CONTENT= 4.5 %



Sample of SILT, SANDY (ML)

From LOT 22 AT 4 FEET

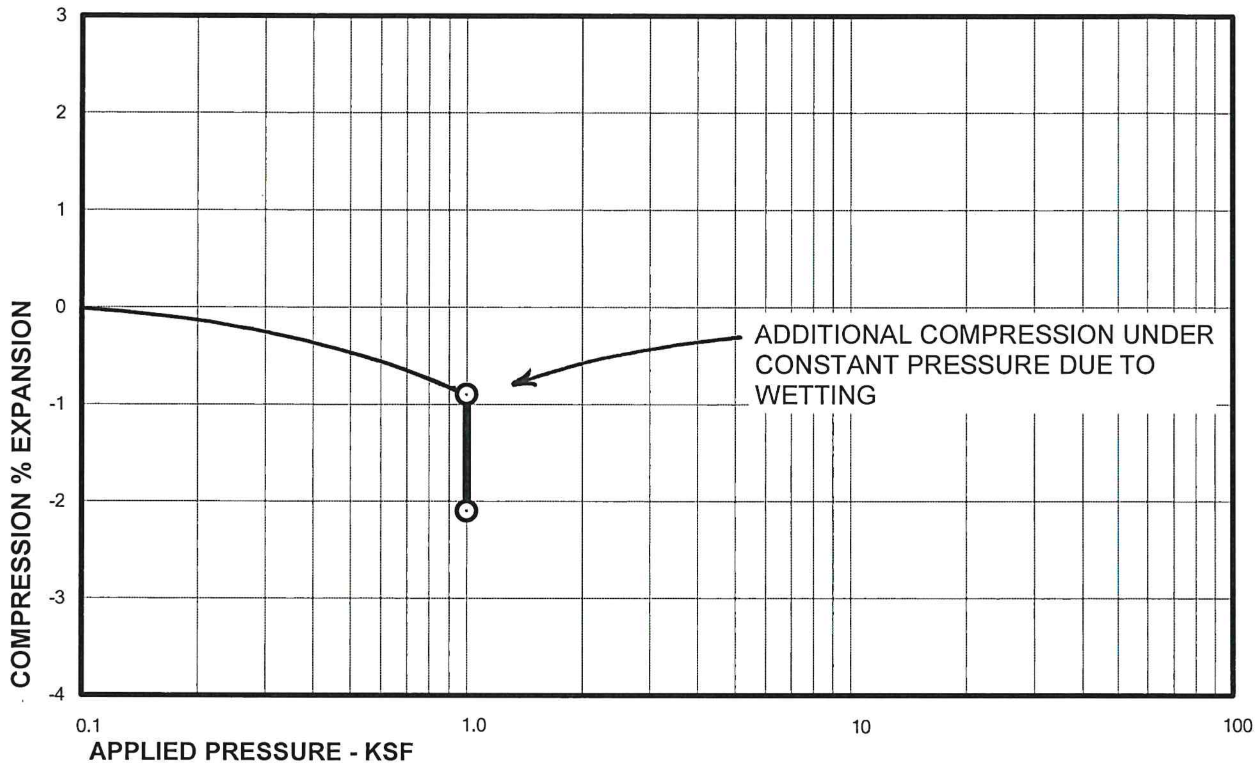
DRY UNIT WEIGHT= 93 PCF

MOISTURE CONTENT= 4.9 %

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

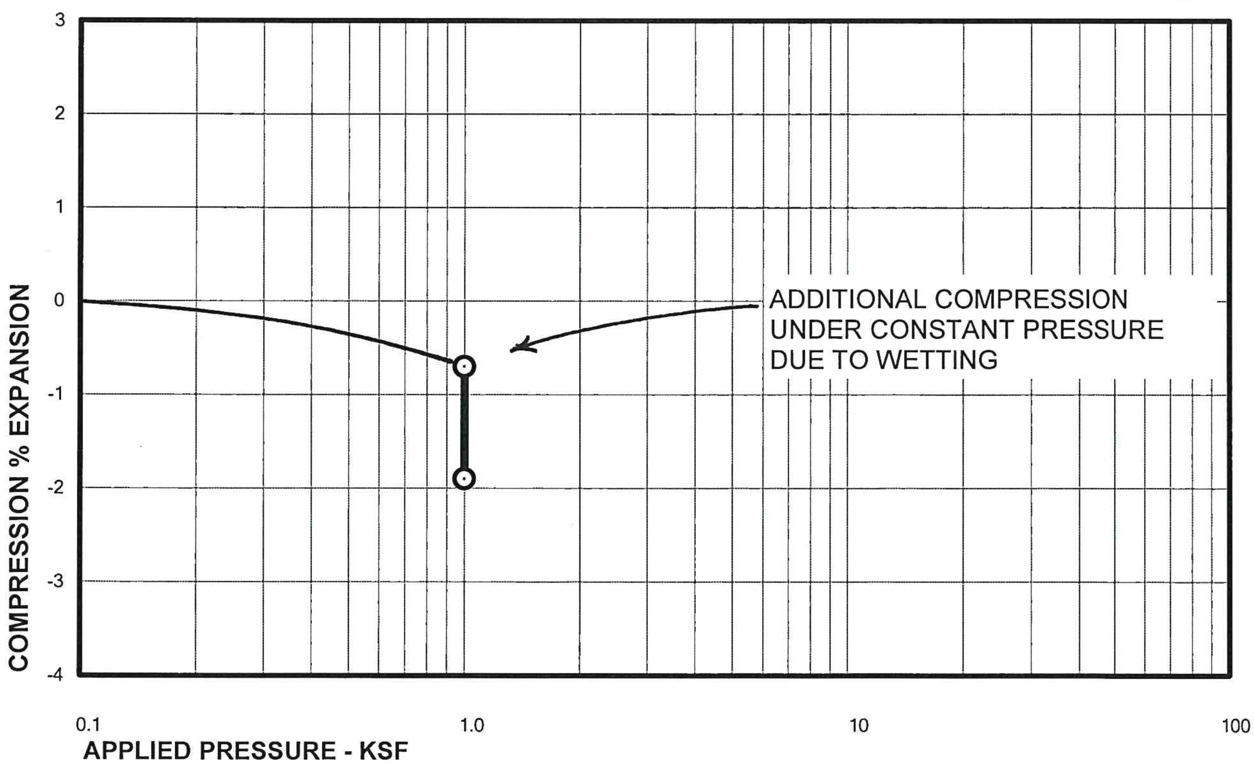
Swell-Consolidation Test Results

FIG. A-6



Sample of SILT, SANDY (ML)
From LOT 24 AT 4 FEET

DRY UNIT WEIGHT= 90 PCF
MOISTURE CONTENT= 5.8 %



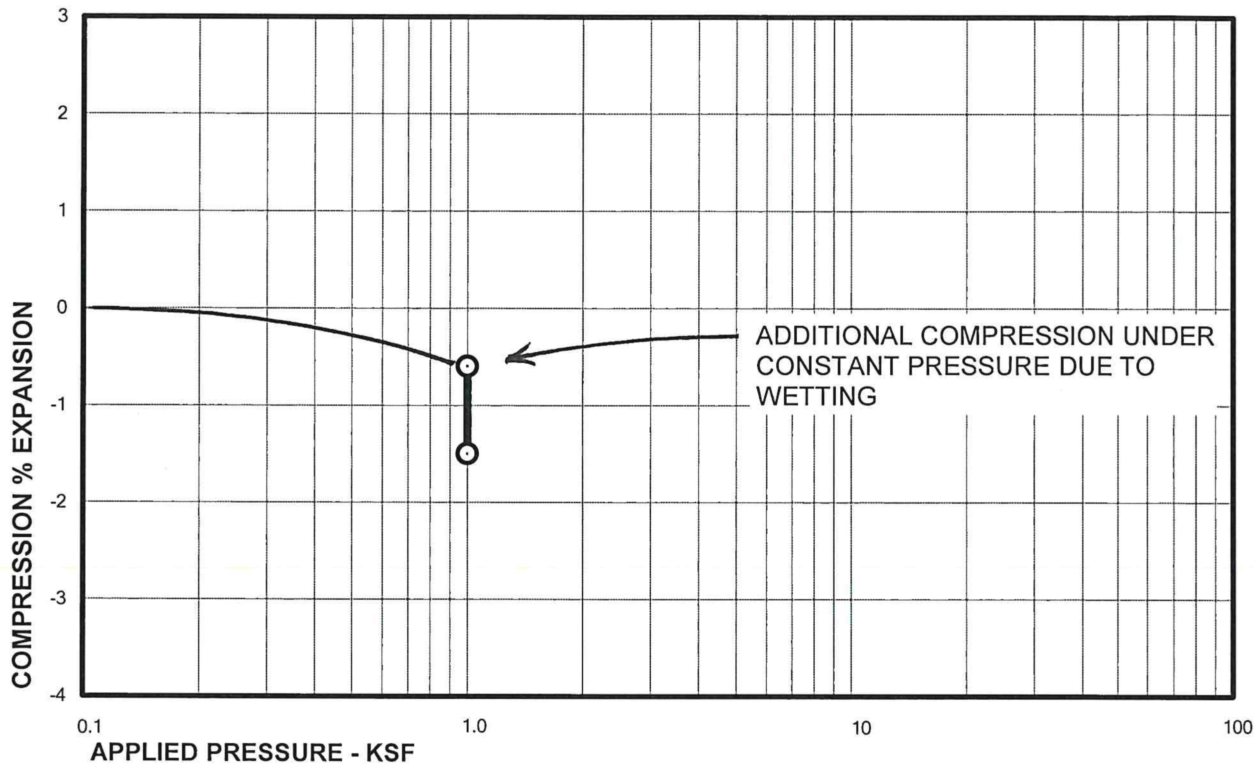
Sample of SILT, SANDY (ML)
From LOT 25 AT 4 FEET

DRY UNIT WEIGHT= 92 PCF
MOISTURE CONTENT= 9.1 %

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

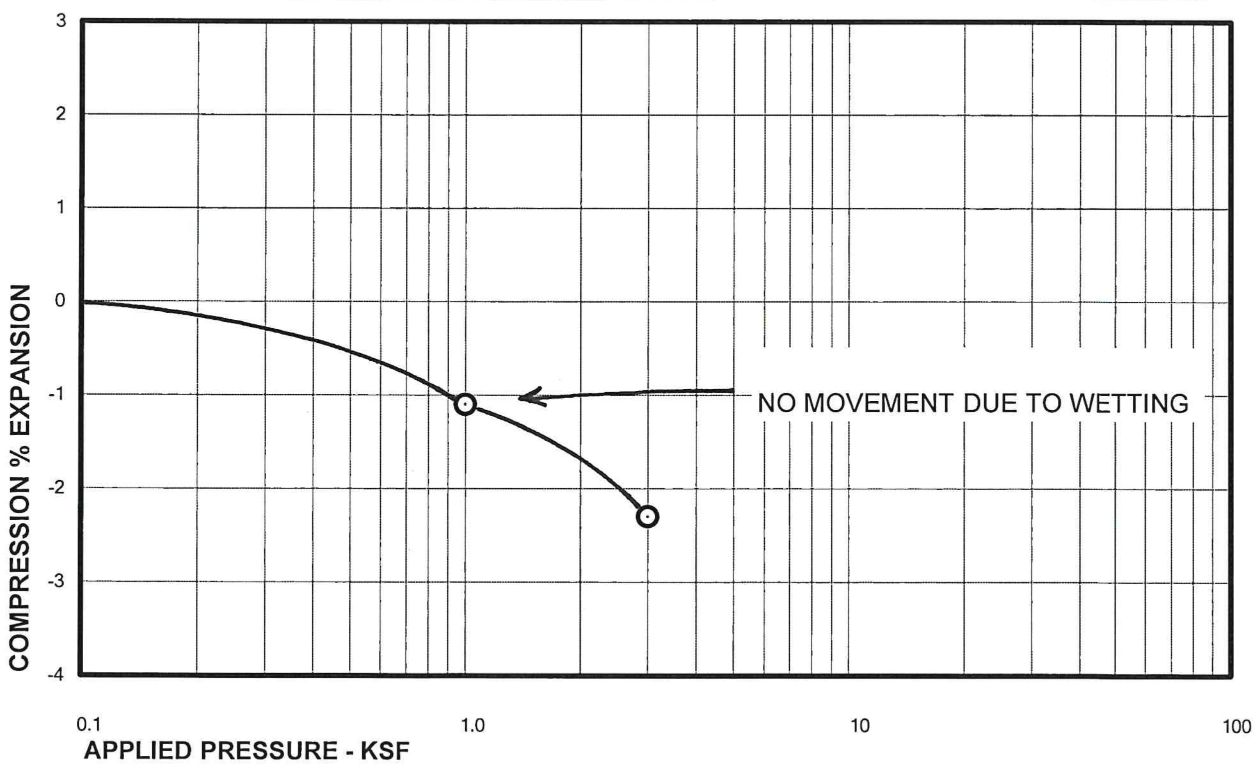
Swell-Consolidation Test Results

FIG. A-7



Sample of SILT, SANDY (ML)
From LOT 27 AT 4 FEET

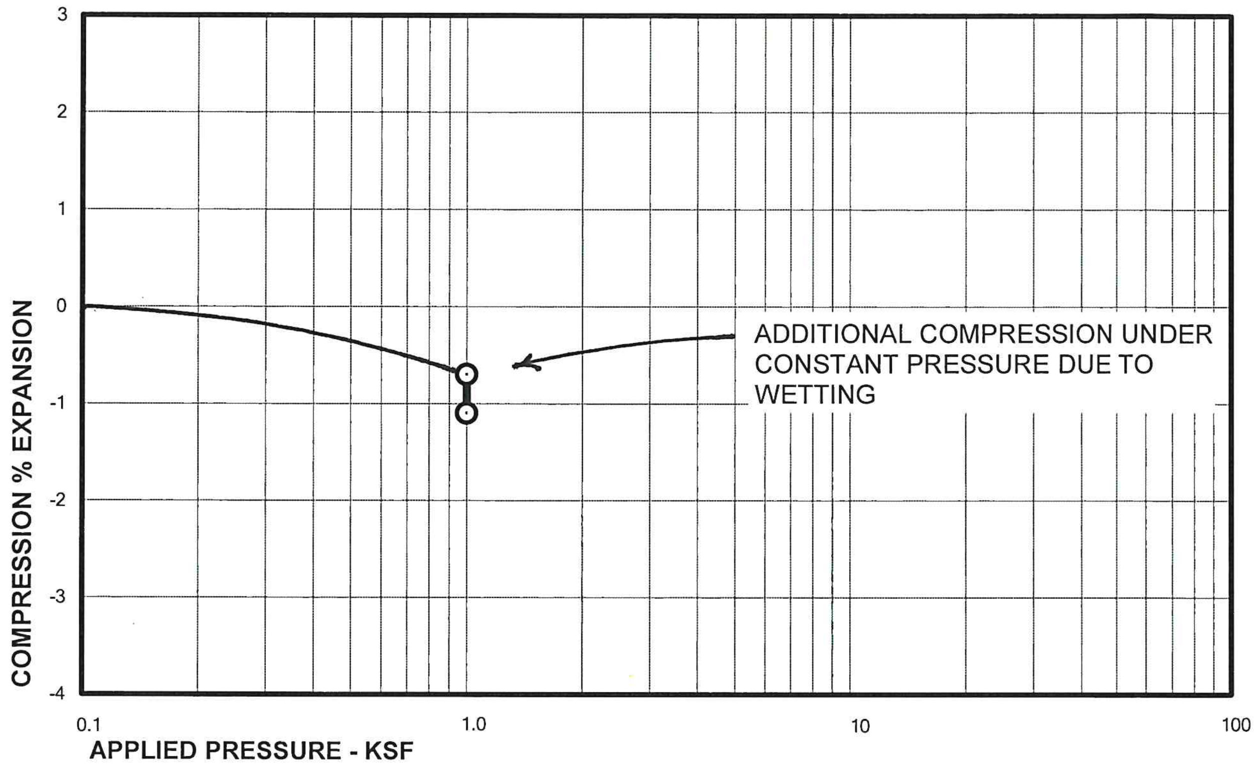
DRY UNIT WEIGHT= 92 PCF
MOISTURE CONTENT= 13.7 %



Sample of SILT, SANDY (ML)
From LOT 28 AT 14 FEET

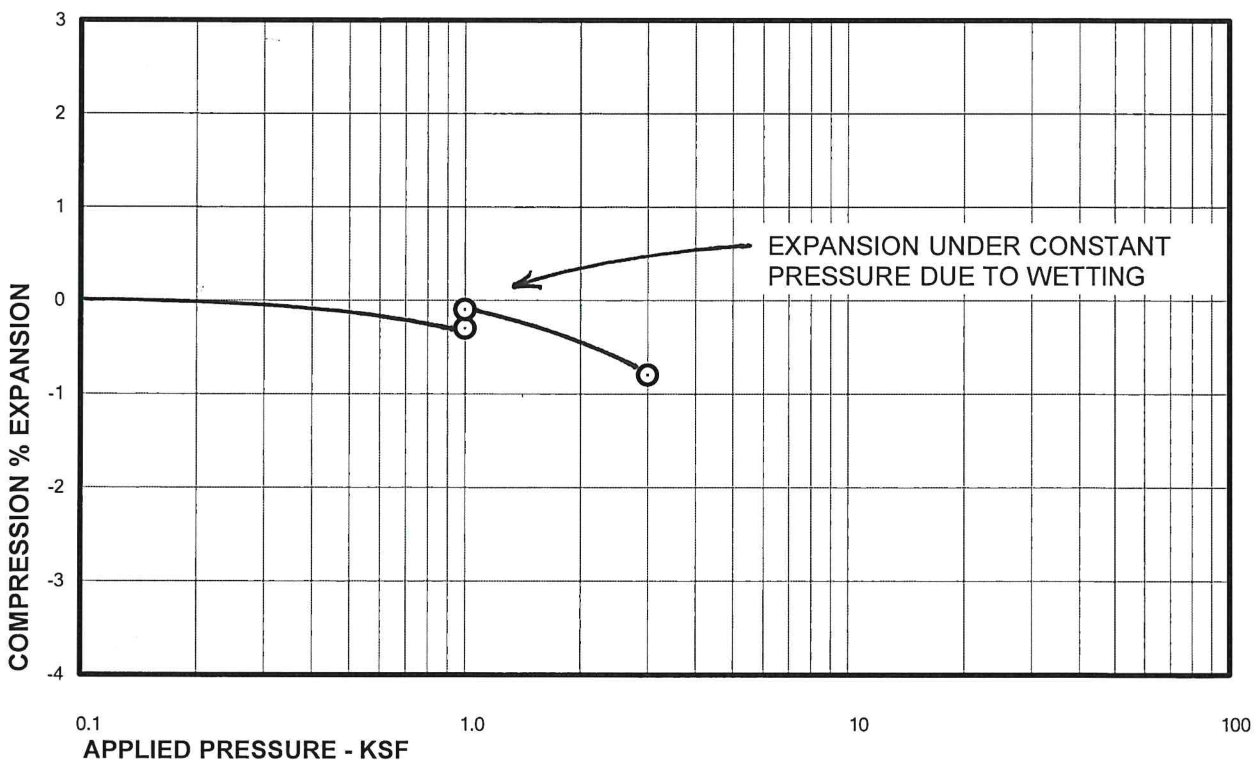
DRY UNIT WEIGHT= 100 PCF
MOISTURE CONTENT= 20.9 %

Swell-Consolidation Test Results



Sample of SILT, SANDY (ML)
From LOT 29 AT 9 FEET

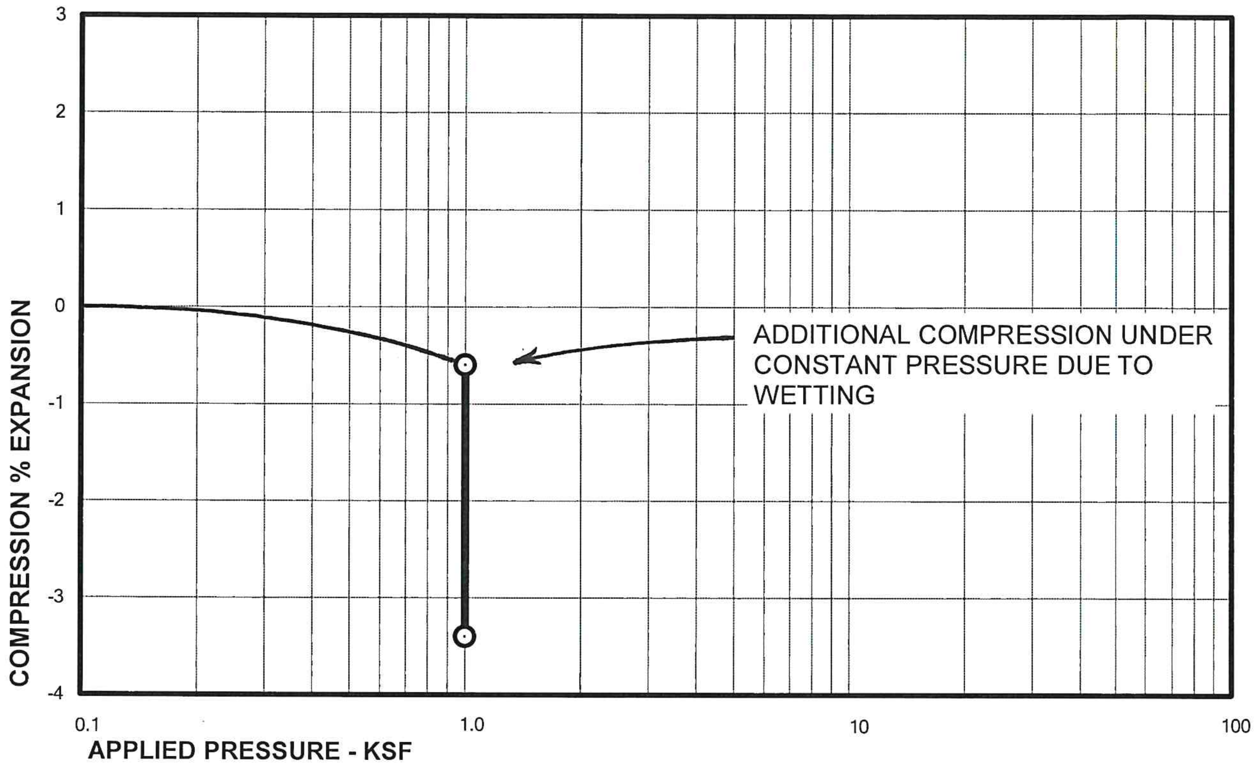
DRY UNIT WEIGHT= 97 PCF
MOISTURE CONTENT= 15.9 %



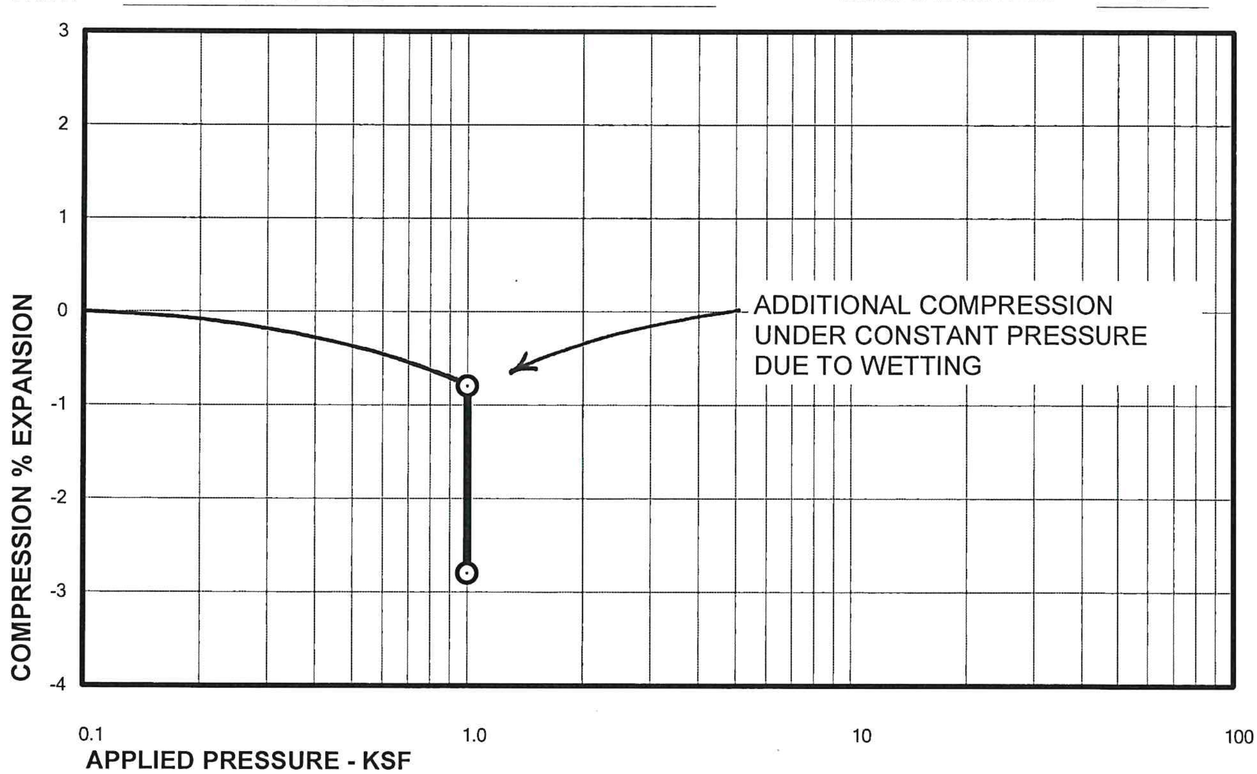
Sample of SILT, SANDY (ML)
From LOT 30 AT 4 FEET

DRY UNIT WEIGHT= 99 PCF
MOISTURE CONTENT= 6.5 %

Swell-Consolidation Test Results

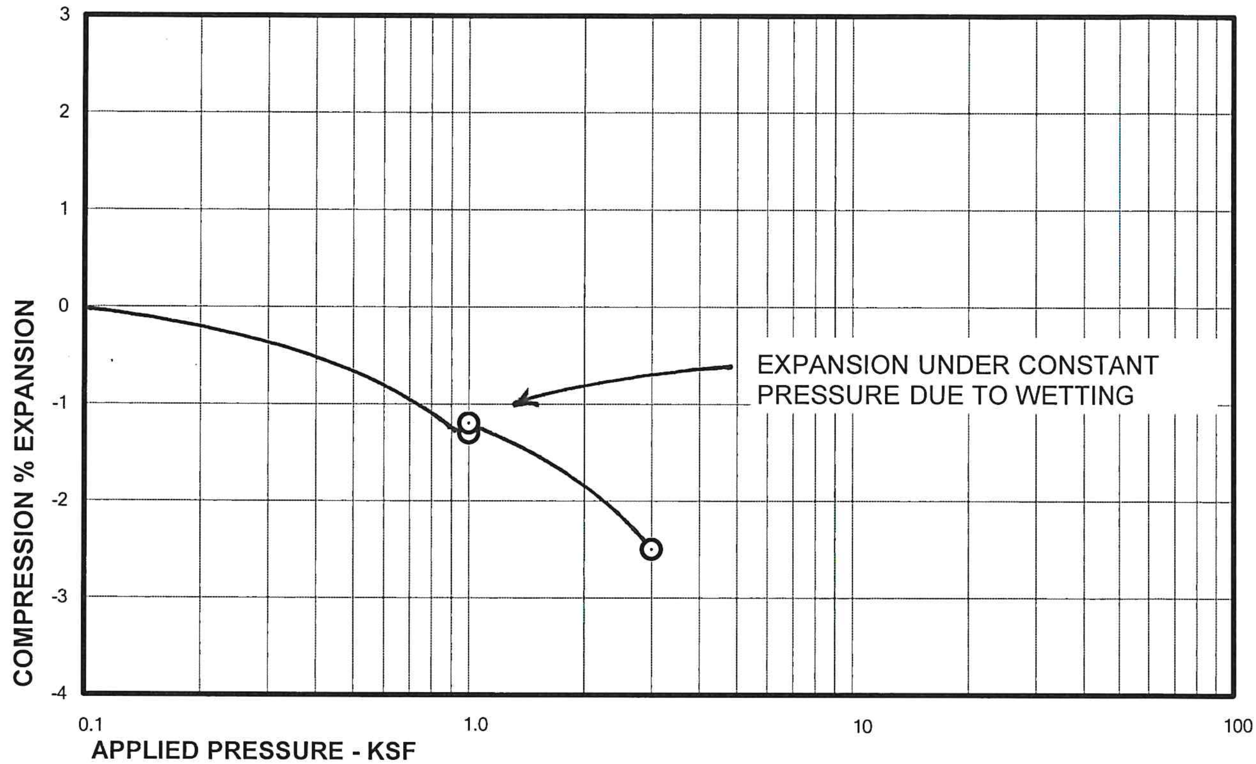


Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	88	PCF
From	LOT 32 AT 4 FEET	MOISTURE CONTENT=	8.3	%

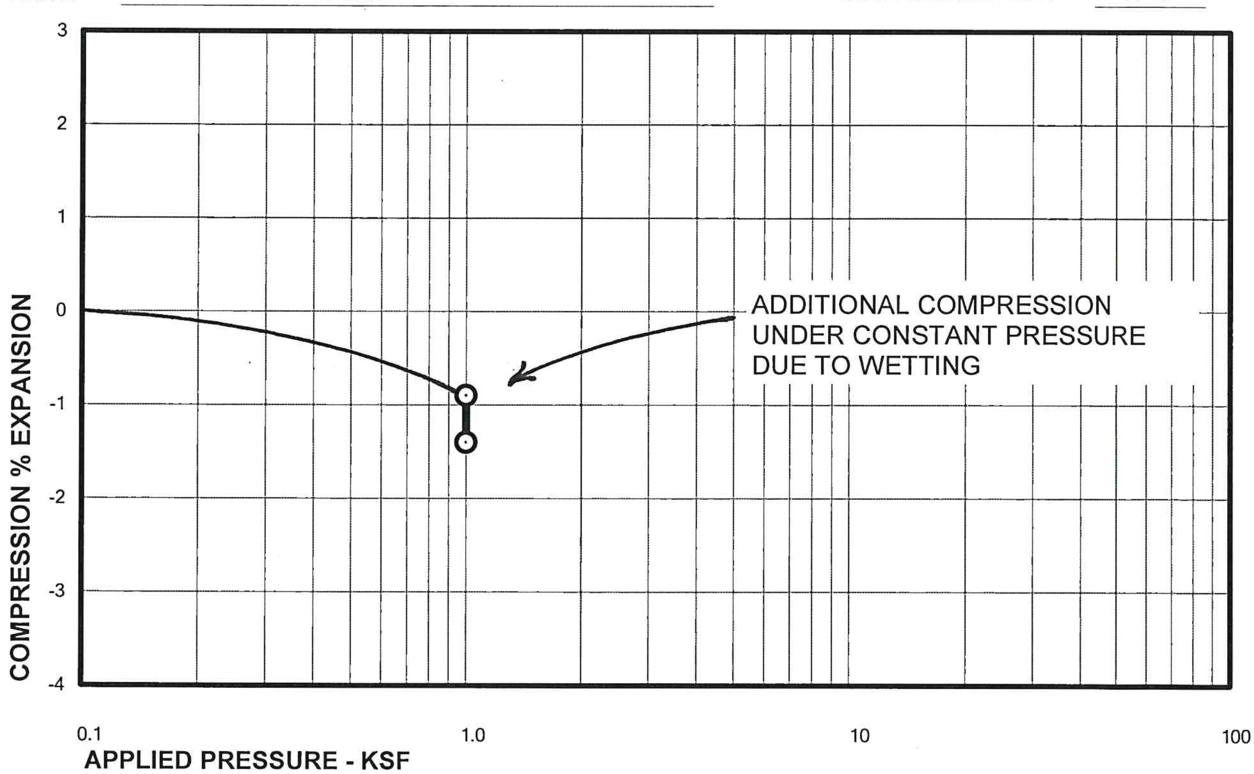


Sample of	SILT, SANDY (ML)	DRY UNIT WEIGHT=	94	PCF
From	LOT 33 AT 4 FEET	MOISTURE CONTENT=	6.9	%

Swell-Consolidation Test Results



Sample of	CLAY, SANDY (CL)	DRY UNIT WEIGHT=	95	PCF
From	LOT 44 AT 4 FEET	MOISTURE CONTENT=	22.5	%

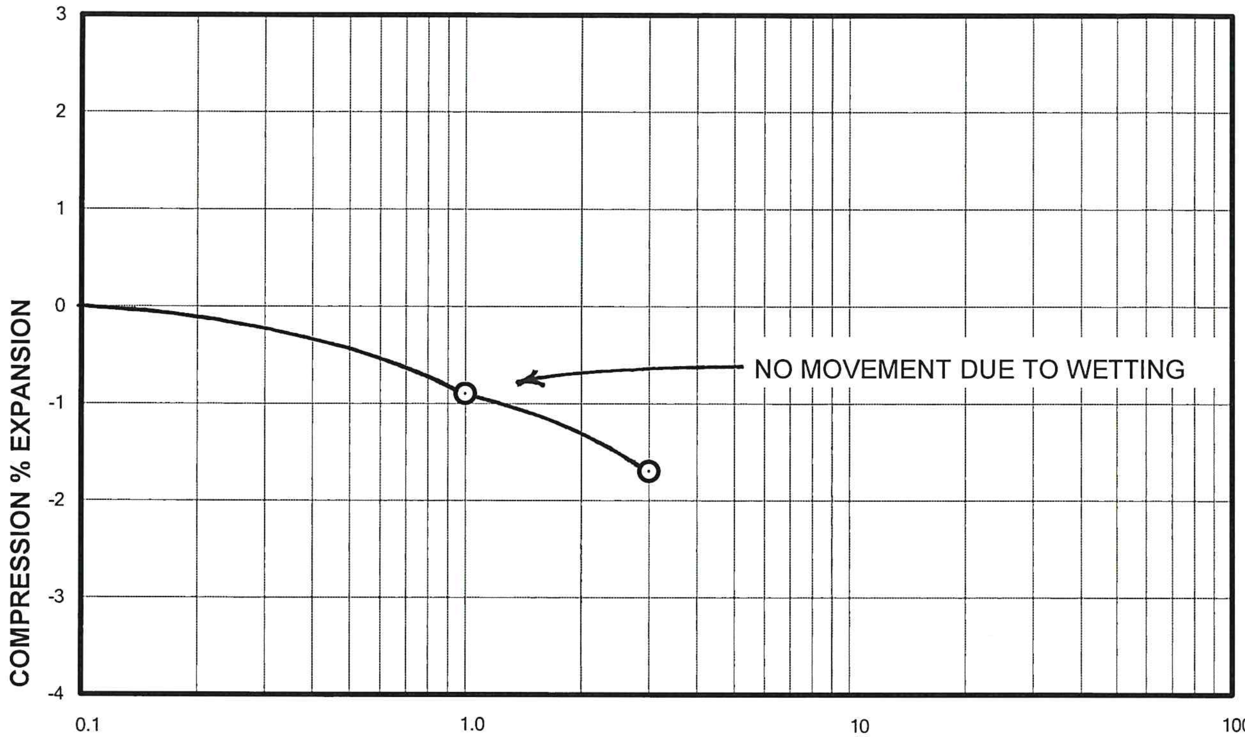


Sample of	CLAY, SANDY (CL)	DRY UNIT WEIGHT=	93	PCF
From	LOT 47 AT 4 FEET	MOISTURE CONTENT=	16.3	%

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

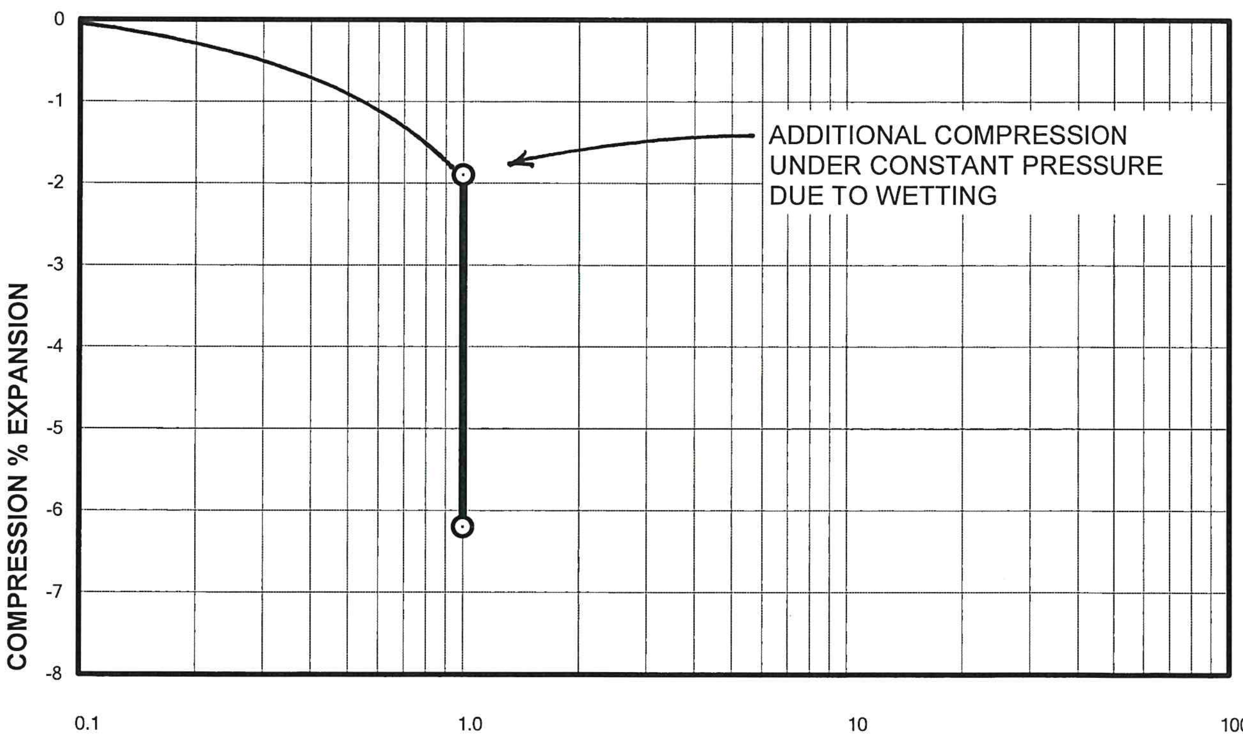
Swell-Consolidation Test Results

FIG. A-11



APPLIED PRESSURE - KSF

Sample of	CLAY, SANDY (CL)	DRY UNIT WEIGHT=		PCF
From	LOT 48 AT 4 FEET	MOISTURE CONTENT=		%



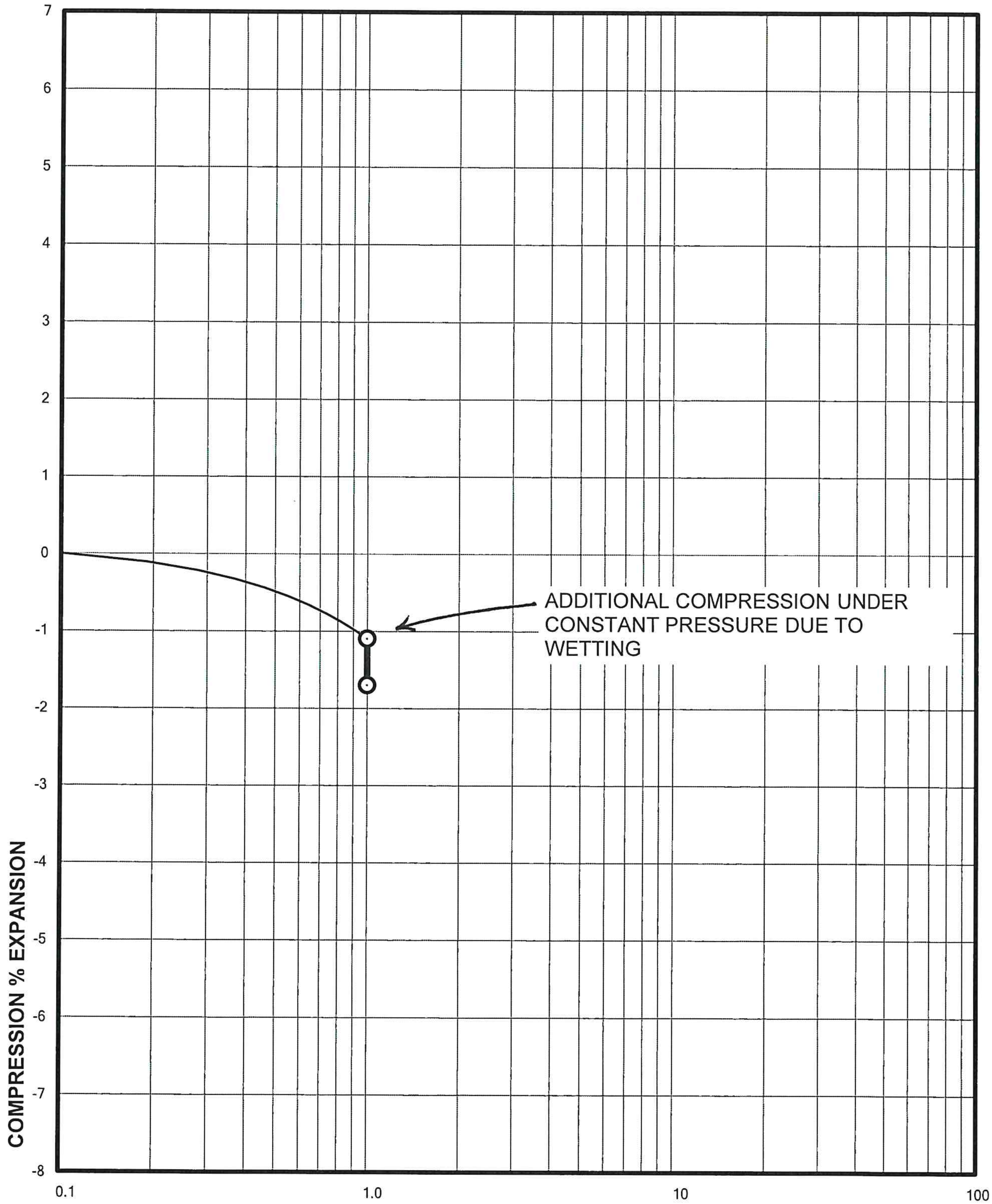
APPLIED PRESSURE - KSF

Sample of	CLAY, SANDY (CL)	DRY UNIT WEIGHT=	82	PCF
From	LOT 50 AT 4 FEET	MOISTURE CONTENT=	16.2	%

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

Swell-Consolidation Test Results

FIG. A-12



Sample of CLAY, SANDY (CL)

From LOT 52 AT 4 FEET

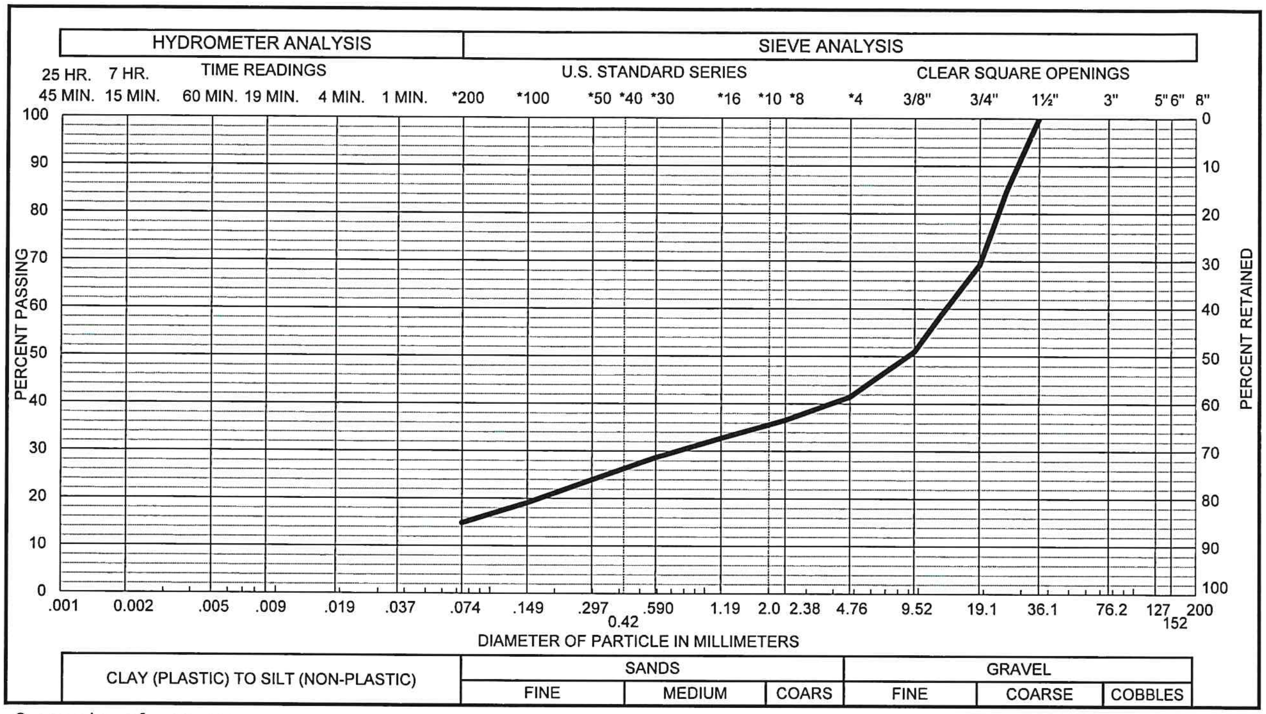
DRY UNIT WEIGHT= 87 PCF

MOISTURE CONTENT= 16.0 %

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

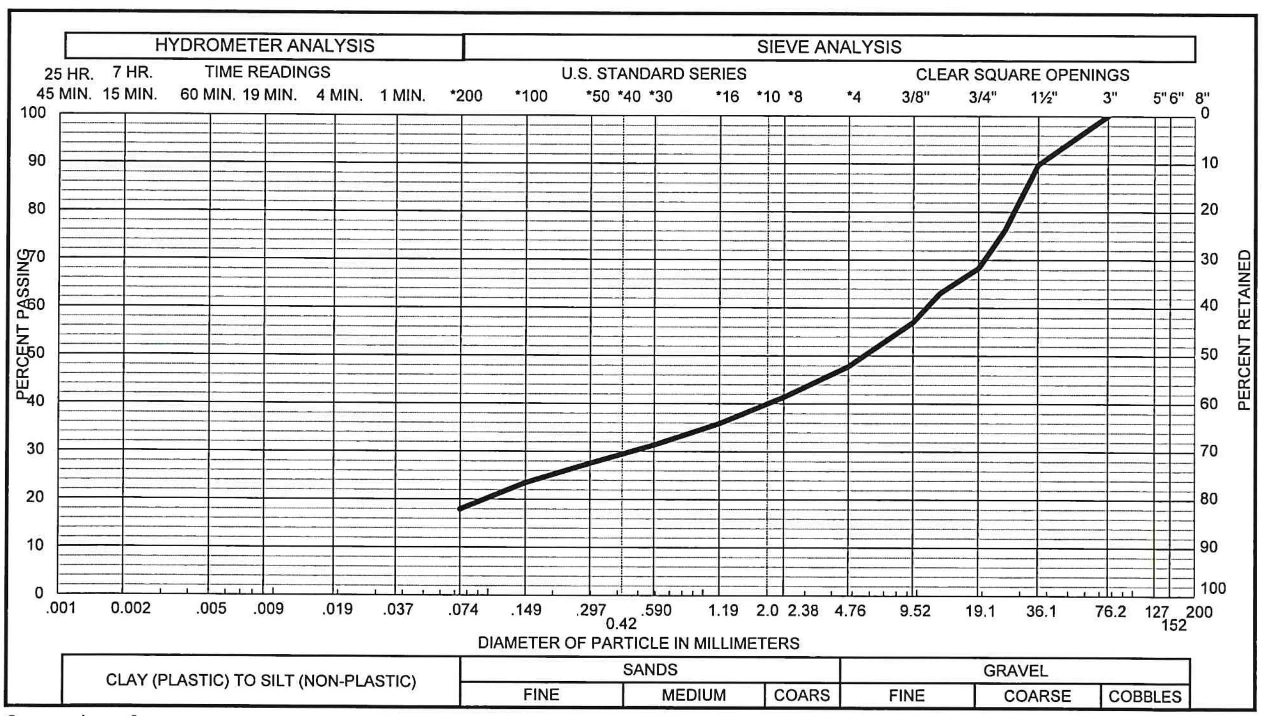
Swell-Consolidation Test Results

FIG. A-13



Sample of GRAVEL, SILTY (GM)
From LOT 14 AT 24 FEET

GRAVEL 59 % SAND 26 %
SILT & CLAY 15 % LIQUID LIMIT %
PLASTICITY INDEX %



Sample of GRAVEL, CLAYEY (GC)
From LOT 48 AT 14 FEET

GRAVEL 52 % SAND 30 %
SILT & CLAY 18 % LIQUID LIMIT %
PLASTICITY INDEX %

HAYMEADOW HOMES
HAYMEADOW FILING 2, LOTS 1, 3-12, 14-35, AND 44-53
CTL|T PROJECT NO. GS06765.005-120-R1

Gradation Test Results

FIG. A-14

TABLE A-I

SUMMARY OF LABORATORY TESTING
CTL|T PROJECT NO. GS06765.005-120

EXPLORATORY BORING(LOTS)	DEPTH (FEET)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	ATTERBERG LIMITS LIQUID LIMIT (%)	ATTERBERG LIMITS PLASTICITY INDEX (%)	*SWELL (%)	SOLUBLE SULFATES (%)	PERCENT GRAVEL (%)	PERCENT SAND (%)	PASSING NO. 200 SIEVE (%)	DESCRIPTION
Lot 1	4	11.3	91			-1.6					CLAY, SANDY (CL)
Lot 1	9	17.2	106	29	8					86	CLAY, SANDY (CL)
Lot 3	4	8.4	96	22	1					77	SILT, SANDY (ML)
Lot 3	14	19.6	92			-0.5					SILT, SANDY (ML)
Lot 4	4	5.6	94			-1.4					SILT, SANDY (ML)
Lot 4	9	15.5	99	27	2					53	SILT, SANDY (ML)
Lot 5	4	8.3	92				1.28				SILT, SANDY (ML)
Lot 5	14	14.4	101			-0.5					SILT, SANDY (ML)
Lot 6	4	6.5	93				1.46				SILT, SANDY (ML)
Lot 6	19	19.0	95			-0.9					SILT, SANDY (ML)
Lot 7	4	7.8	94				0.06				SILT, SANDY (ML)
Lot 7	24	26.5	99	25	1					63	SILT, SANDY (ML)
Lot 8	4	10.6	90			-0.9					SILT, SANDY (ML)
Lot 8	9	13.3	106	NL	NP					61	SILT, SANDY (ML)
Lot 9	4	8.0	100				0.03				SILT, SANDY (ML)
Lot 9	14	14.5	94			-0.3					SILT, SANDY (ML)
Lot 10	9	18.9	97			-0.1					SILT, SANDY (ML)
Lot 10	19	16.8	107	24	1					85	SILT, SANDY (ML)
Lot 11	14	20.6	94			-0.3					SILT, SANDY (ML)
Lot 12	4	9.8	95			-0.3					SILT, SANDY (ML)
Lot 14	14	13.2	102	26	7					85	CLAY, SILTY (CL-ML)
Lot 14	24	9.7						59	26	15	GRAVEL, SILTY (GM)
Lot 15	4	9.6					0.07				SILT, SANDY (ML)

* SWELL MEASURED UNDER 1,000 PSF APPLIED PRESSURE.
NEGATIVE VALUE INDICATES CONSOLIDATION.

TABLE A-I

SUMMARY OF LABORATORY TESTING
CTL|T PROJECT NO. GS06765.005-120

EXPLORATORY BORING(LOTS)	DEPTH (FEET)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	ATTERBERG LIMITS LIQUID LIMIT (%)	ATTERBERG LIMITS PLASTICITY INDEX (%)	*SWELL (%)	SOLUBLE SULFATES (%)	PERCENT GRAVEL (%)	PERCENT SAND (%)	PASSING NO. 200 SIEVE (%)	DESCRIPTION
Lot 16	4	4.5	88			-1.7					CLAY, SANDY (CL)
Lot 16	14	29.6	91	38	15					96	CLAY, SANDY (CL)
Lot 17	4	8.2					0.09				CLAY, SANDY (CL)
Lot 17	9	23.0	96	32	10					90	CLAY, SANDY (CL)
Lot 18	4	8.8	82								SILT, SANDY (ML)
Lot 19	9	18.8	104	30	10					90	CLAY, SANDY (CL)
Lot 20	4	6.6					0.02				SILT, SANDY (ML)
Lot 20	19	17.8		23	3					82	SILT, SANDY (ML)
Lot 21	4	9.2	93	23	1					52	SILT, SANDY (ML)
Lot 21	9	9.4		NL	NP					36	SAND, SILTY (SM)
Lot 22	4	4.9	93			-2.2					SILT, SANDY (ML)
Lot 23	9	6.3					0.01			10	SAND, SILTY (SM)
Lot 24	4	5.8	90			-1.2					SILT, SANDY (ML)
Lot 25	4	9.1	92			-1.2					SILT, SANDY (ML)
Lot 25	9	10.4	106	25	3					31	SAND, SILTY (SM)
Lot 26	14	8.0	101	NL	NP					22	SAND, SILTY (SM)
Lot 27	4	13.7	92			-0.9					SILT, SANDY (ML)
Lot 28	14	20.9	100			0.0					SILT, SANDY (ML)
Lot 29	4	3.8					0.01				SILT, SANDY (ML)
Lot 29	9	15.9	97			-0.4					SILT, SANDY (ML)
Lot 30	4	6.5	99			0.2					SILT, SANDY (ML)

* SWELL MEASURED UNDER 1,000 PSF APPLIED PRESSURE.
NEGATIVE VALUE INDICATES CONSOLIDATION.

TABLE A-I

SUMMARY OF LABORATORY TESTING
CTL|T PROJECT NO. GS06765.005-120

EXPLORATORY BORING(LOTS)	DEPTH (FEET)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	ATTERBERG LIMITS LIQUID LIMIT (%)	ATTERBERG LIMITS PLASTICITY INDEX (%)	*SWELL (%)	SOLUBLE SULFATES (%)	PERCENT GRAVEL (%)	PERCENT SAND (%)	PASSING NO. 200 SIEVE (%)	DESCRIPTION
Lot 31	4	8.4	94	24	1					60	SILT, SANDY (ML)
Lot 31	9	15.8	101								SILT, SANDY (ML)
Lot 32	4	8.3	88			-2.8					SILT, SANDY (ML)
Lot 33	4	6.9	94			-2.0					SILT, SANDY (ML)
Lot 34	9	8.4		NL	NP					34	SAND, SILTY (SM)
Lot 35	4	8.3									SILT, SANDY (ML)
Lot 44	4	22.5	95			0.1					CLAY, SANDY (CL)
Lot 45	9	22.5	88	31	10					87	CLAY, SANDY (CL)
Lot 46	4	16.3									CLAY, SANDY (CL)
Lot 47	4	16.3	93			-0.5					CLAY, SANDY (CL)
Lot 48	4					0.0					CLAY, SANDY (CL)
Lot 48	14	9.3						52	30	18	GRAVEL, CLAYEY (GC)
Lot 49	9	28.0	92	37	15					96	CLAY, SANDY (CL)
Lot 50	4	16.2	82			-4.3					CLAY, SANDY (CL)
Lot 51	4	12.5					0.08				CLAY, SANDY (CL)
Lot 52	4	16.0	87			-0.6					CLAY, SANDY (CL)

* SWELL MEASURED UNDER 1,000 PSF APPLIED PRESSURE.
NEGATIVE VALUE INDICATES CONSOLIDATION.