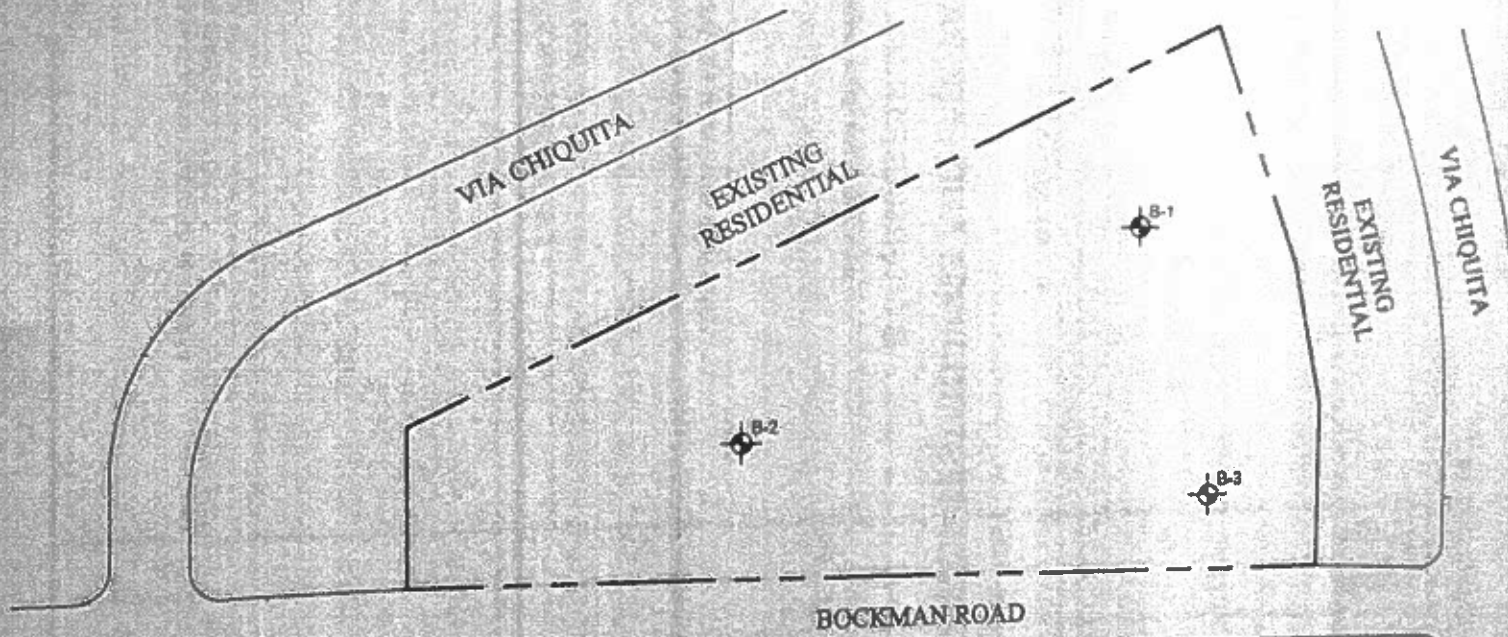
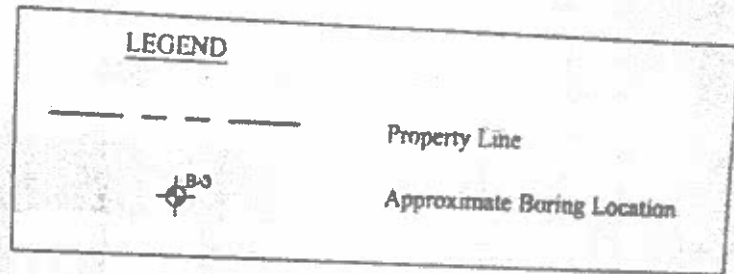


VICINITY MAP
(NTS)



SITE PLAN

GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRASEARCH INC.
 257 WRIGHT BROTHERS AVENUE, LIVERMORE, CALIFORNIA 94551 PHONE: (925) 243-8882

OLSON COMPANY
 BOCKMAN ROAD
 SAN LORENZO, CALIFORNIA

| | |
|------------------------|-----------------------|
| Project No. 10520.G | Drawn By E. PAGREM |
| Scale NTS | Date 11/2004 |

Figure No.

1

BOREHOLE LOG

Location: NA Elevation: NA Boring No.: B01
 Date Drilled - Start: 12/23/2004 Finished: 12/23/2004 Logged By: K. Pollak Sheet 1 of 1
 Drill Rig: B3500 Drilling Method: Solid Flight Drilling Contractor: Pacific Drilling
 Hammer: Boring Backfill Method: Native Total Depth of Boring: 30 ft.

| DEPTH | SAMPLE # | SAMPLE TYPE | BLOW COUNT | CHARTING LOG | MATERIAL DESCRIPTION | LAB TESTS | OTHER NOTES/REMARKS |
|-------|----------|-------------|------------|--------------|--|-----------|---------------------|
| 0 | | | | | 2.0" AC / 2.25" Sand and Gravel / 5.0" clayey Sand and Gravel | | |
| 1-1 | 16 | | | | CLAY (CL) some caliche, black, stiff, damp | 100 23 | PI = 39, LL = 58 |
| 1-2 | 15 | | | | Silty CLAY (CL-ML) some caliche, green mottled orange, stiff, damp | 107 19 | |
| 1-3 | 16 | | | | CLAY (CL), olive green, stiff, moist, plastic | 101 23 | |
| 1-4 | 13 | | | | Sandy CLAY (CL-S), slightly orange brown, stiff, moist | 100 23 | |
| 1-5 | 15 | | | | Decrease in sand content @ 18.0' below ground surface (bgs) | 105 22 | |
| 1-6 | 9 | | | | Silty CLAY (CL-ML), light olive green, firm, moist | 93 29 | |
| 30 | | | | | Boring terminated @ 30.0' (bgs). Groundwater encountered @ 11.0' (bgs), stabilized @ 8.5' (bgs) | | |

BOREHOLE LOG 10620.G GPJ TERRASEARCH (DOT) 12/28/06



GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRASEARCH INC.

257 Wright Brothers Ave. Livermore, Ca. 94551 Phone (925) 243-8882

Olson Company
 Bockman Road
 San Lorenzo California

Figure No.
2

| | | | |
|----------------|---------------------|---------------------|--------------------------|
| Date: 12/30/04 | Drawn by: E. Florin | Project No: 10620.G | Reviewed By: S. Madressi |
|----------------|---------------------|---------------------|--------------------------|

BOREHOLE LOG

Location: NA Elevation: NA Boring No.: B-2
 Date Drilled - Start: 12/23/2004 Finished: 12/23/2004 Logged By: R. Polak Sheet 1 of 1
 Drill Rig: B3500 Drilling Method: Solid Flight
 Hammer: Drilling Contractor: Pacific Drilling
 Boring Backfill Method: Native Total Depth of Boring: 25 ft.

| DEPTH (ft) | DEPTH (m) | LAB. NO. | SAMPLER TYPE | BUREAU CODE | HAMMER LOG | MATERIAL DESCRIPTION | LAB. TESTS | | OTHER NOTES/REMARKS |
|------------|-----------|----------|--------------|-------------|------------|--|------------|-------|---------------------|
| | | | | | | | SWAY | WATER | |
| 0 | 0 | | | | | 2' AC - 1' O' Sand and Gravel | | | |
| 1 | 0.3 | 71 | 10 | | | CLAY (CL) some calcic, black, stiff, damp | 96 | 24 | |
| 5 | 1.5 | 72 | 12 | | | CLAY (CH) some calcic, olive green, stiff, moist, plastic | 105 | 20 | |
| 10 | 3.0 | 23 | 15 | | | Sandy CLAY (CLC) light olive brown, stiff, moist | 104 | 22 | |
| 15 | 4.5 | 24 | 11 | | | Sandy CLAY (CLC), slightly orange brown, firm, moist | 97 | 28 | |
| 20 | 6.0 | 25 | 15 | | | Silty CLAY (CL-MC), light to medium brown, stiff, moist | 160 | 25 | |
| 25 | 7.5 | | | | | Boring terminated @ 25.0' below ground surface (bgs). Groundwater encountered @ 7.0' (bgs). | | | |

BOREHOLE LOG 10520 G DPJ TERRARESEARCH/ST-171008



GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRARESEARCH INC.

257 Whitt Brothers Ave. Livermore, Ca. 94551 Phone (925) 243-6662

Osborn Company
 Bookman Road
 San Lorenzo, California

Figure No.

3

| | | | |
|------------------|--------------------|----------------------|--------------------------|
| Date: 12/23/2004 | Drawn by: E. Polak | Project No.: 10520 G | Reviewed By: S. Mikdashi |
|------------------|--------------------|----------------------|--------------------------|

BOREHOLE LOG

Location: NA Elevation: NA Boring No.: B-3
 Date Drilled - Start: 12/23/2004 Finished: 12/23/2004 Logged By: R. Pollak Sheet 1 of 1
 Drill Rig: B3500 Drilling Method: Solid Flight
 Hammer: Drilling Contractor: Pacific Drilling
 Boring Backfill Method: Native Total Depth of Boring: 20 ft.

| DEPTH | SAMPLE NO. | SAMPLE TYPE | BLOW COUNT | GEOTECH. LOG | MATERIAL DESCRIPTION | LAB TESTS | | OTHER NOTES/REMARKS |
|---------------|------------|-------------|------------|--------------|--|-------------------|---------------|---------------------|
| | | | | | | WATER CONTENT (%) | SHRINKAGE (%) | |
| 0 - 4.5' | 1-1 | | 14 | | 4.5' AC 74.0" Sand and Gravel CLAY (CL), black, stiff, damp | 99 | 23 | |
| 4.5 - 10.4' | 3-2 | | 7 | | CLAY (CL), olive green, firm to stiff, moist | 104 | 20 | |
| 10.4 - 15.97' | 3-3 | | 10 | | Sandy CLAY (CLS), olive green, stiff, moist | 97 | 26 | |
| 15.97 - 20.0' | 3-4 | | 13 | | Boring terminated @ 20.0' below ground surface (bgs). Groundwater encountered @ 8.0' (bgs). | | | |

BOREHOLE LOG 10520.G.G.P.J. TERRARESEARCH GDT 12/23/04



GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRARESEARCH INC.

257 Wright Brothers Ave., Livermore, Ca. 94551 Phone (925) 243-8882

Olson Company
 Bookman Road
 San Lorenzo/California

Figure No.

4

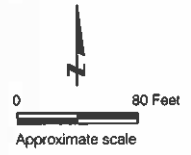
| | | | |
|------------------|---------------------|---------------------|-------------------------|
| Date: 12/20/2004 | Drawn by: E. Paquet | Project No: 10520.G | Reviewed By: S. Rakobos |
|------------------|---------------------|---------------------|-------------------------|

\langan.com\Info\USA\del\770625801\Cadd\Info - 770625801 - 3D - Design\Plan\Construction\770625801 - B - SP0102.dwg 9/24/15



EXPLANATION

- B-1 Approximate location of boring by Langan Treadwell Rollo, August 2015
- CPT-1 Approximate location of Cone Penetration Test, by Langan Treadwell Rollo, August 2015
- TS-1A Approximate location of boring by Terrasearch, December 2004
- Approximate limits of proposed development
- Approximate footprint of previous building (demolished)



| | | |
|---|-----------------------|----------|
| 1233 BOCKMAN ROAD San Lorenzo, California | | |
| SITE PLAN | | |
| Date 08/18/15 | Project No. 770625801 | Figure 2 |
| LANGAN TREADWELL ROLLO | | |

Reference: Base map from a electronic file titled "ACAD2010-151072-BASE.dwg" received on 09/15/15, and "Bockman Road," by Tetra Tech dated 05/11/15.

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-1

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: R. Ward

Date started: 8/14/15

Date finished: 8/14/15

Drilling method: Hollow Stem Auger (B40 rig)

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Safety Downhole Wireline

LABORATORY TEST DATA

Samplers: Sprague & Henwood (S&H)

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % | Dry Density Lbs/Cu Ft |
|--|-----------------|--------|----------|-----------------------------|-----------|---|-----------------------------|------------------------------------|-----------------------------|------------|-----------------------------------|--------------------------|
| | Sampler Type | Sample | Blows/6' | SPT N-Value ¹ | | | | | | | | |
| Ground Surface Elevation: 16.6 feet ² | | | | | | | | | | | | |
| 1 | BULK | ⊗ | | | | 2 inches asphalt concrete (AC) | | | | | | |
| 2 | | | | | | 5 inches aggregate base (AB) | | | | | | |
| 3 | S&H | ■ | 5 | 6 | CH | CLAY (CH) black, very stiff, moist, with some sand R-Value Test, see Figure D-7 | PP | | 3,800 | | 25.3 | 98 |
| 4 | BULK | ⊗ | | | | | | | | | | |
| 5 | | | | | | CLAYEY SILT with SAND (CL-ML) yellow-brown, medium stiff, moist, fine sand, trace fine gravel | | | | 71 | | |
| 6 | S&H | ■ | 5 | 4 | CL- ML | Hydrometer Analysis, see Figure D-2 | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | S&H | ■ | 5 | 4 | | CLAY with SAND (CL) olive-brown, medium stiff, moist to wet, fine sand | TxUU | 1,050 | 830 | | 23.4 | 101 |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | S&H | ■ | 7 | 6 | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | CL | ∇ (08/14/15, 8:00 a.m.) | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | stiff | | | | | | |
| 16 | S&H | ■ | 9 | 10 | | Consolidation Test, see Figure D-1 | | | | | 19.8 | 107 |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | CLAY (CL) yellow-brown, hard, wet, trace fine sand | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | S&H | ■ | 6 | 9 | CL | | PP | | 5,000 | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | SAND with CLAY (SC) olive-gray, wet | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | S&H | ■ | 7 | 7 | | CLAY (CL) olive-gray, medium stiff, wet | | | | 87.3 | 31.5 | |
| 27 | | | | | CL | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | SANDY CLAY (CL) gray-brown, stiff, wet | | | | | | |
| 30 | | | | | | | | | | | | |

LANGAN TREADWELL ROLLO

Project No.:
770625801

Figure:
B-1a

TEST GEOTECH LOG 770625801.GPJ TR.GDT 10/1/15

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-1

PAGE 2 OF 2

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | LABORATORY TEST DATA | | | | |
|-----------------|--------------|--------|-----------|--------------------------|-----------|--|-----------------------|------------------------------|--------------------------|---------|-----------------------------|
| | Sampler Type | Sample | Blows/ 6' | SPT N-Value ¹ | | | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % |
| 31 | S&H | | 12 | 12 | CL | SANDY CLAY (CL) (continued) occasional weak cementation | | | | | |
| 32 | | | 14 | | | | | | | | |
| 33 | | | 15 | | | | | | | | |
| 34 | | | | | CL | SANDY CLAY (CL) olive-gray, medium stiff, wet | | | | | |
| 35 | | | 5 | | | | | | | | |
| 36 | S&H | | 6 | 5 | | | | | | | |
| 37 | | | 6 | | | | | | | | |
| 38 | | | | | PP | stiff | PP | 2,000 | | | |
| 39 | S&H | | 7 | 7 | | | | | | | |
| 40 | | | 7 | 7 | | | | | | | |
| 41 | | | 11 | | | | | | | | |
| 42 | | | | | | | | | | | |
| 43 | | | | | | | | | | | |
| 44 | | | | | | | | | | | |
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| 58 | | | | | | | | | | | |
| 59 | | | | | | | | | | | |
| 60 | | | | | | | | | | | |

TEST-GEOTECH-LOG 770625801.GPJ TR.GDT 10/17/15

Boring terminated at a depth of 40 feet below ground surface.
Boring backfilled with cement grout under the observation of ACPWA.
Groundwater encountered at 13.4 feet below ground surface during drilling.
PP = pocket penetrometer.

¹ S&H blowcounts for the last two increments were converted to SPT N-Values using a factor of 0.4, to account for sampler type and hammer energy.
² Elevations based on NAVD 88 Datum.

LANGAN TREADWELL ROLLO

Project No.: 770625801 Figure: B-1b

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-2

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: R. Ward

Date started: 8/14/15

Date finished: 8/14/15

Drilling method: Hollow Stem Auger (B40 rig)

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Safety Downhole Wireline

LABORATORY TEST DATA

Samplers: Sprague & Herwood (S&H)

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % | Dry Density Lbs/Cu Ft |
|-----------------|-----------------|--------|----------------------------|---|-----------|--|-----------------------------|------------------------------------|-----------------------------|------------|-----------------------------------|--------------------------|
| | Sampler Type | Sample | Blows/6" SPT N-Value | | | | | | | | | |
| | | | | | | Ground Surface Elevation: 18 feet ² | | | | | | |
| 1 | | | | | CH | 2 inches topsoil SANDY CLAY (CH) black, moist, fine sand, with some gravel | | | | | | |
| 2 | S&H | | 6 | | | | | | | | | |
| 3 | | | 7 | 6 | | | | | | | | |
| 4 | | | 8 | | CL | CLAY with SAND (CL) dark gray, hard, moist grades with increasing sand content | PP | | 8,000 | | | |
| 5 | S&H | | 4 | | | | | | | | | |
| 6 | | | 8 | 6 | | | | | | | | |
| 7 | | | 7 | | SP | SAND (SP) olive-gray, loose, moist, fine-grained, trace silt | | | | | | |
| 8 | S&H | | 3 | | | | | | | | | |
| 9 | | | 4 | 4 | | | | | | | | |
| 10 | | | 7 | | | | | | | | | |
| 11 | S&H | | 5 | 6 | CL | CLAY with SAND (CL) olive-gray, stiff, moist, fine sand | PP | | 2,500 | | | |
| 12 | | | 7 | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | SANDY CLAY (CL) gray-brown, medium stiff, wet, fine sand | | | | | | |
| 16 | S&H | | 4 | | | | | | | | 25.0 | |
| 17 | | | 5 | 4 | | | | | | | | |
| 18 | | | 5 | | | | | | | | | |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | S&H | | 5 | | | | | | | | | |
| 22 | | | 6 | 5 | | | | | | | | |
| 23 | | | 6 | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | S&H | | 5 | | | | | | | | | |
| 27 | | | 7 | 7 | | CLAY (CL) gray, medium stiff, wet | PP | | 1,000 | | | |
| 28 | | | 10 | | CL | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | CL | | | | | | | |

LANGAN TREADWELL ROLLO

Project No.:

770625801

Figure:

B-2a

TEST GEOTECH LOG 770625801.GPJ TR.GDT 10/1/15

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-2

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | LABORATORY TEST DATA | | | | |
|-----------------|--------------|--------|----------|--------------------------|-----------|--|-----------------------|------------------------------|--------------------------|---------|-----------------------------|
| | Sampler Type | Sample | Blows/6' | SPT N-Value ¹ | | | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % |
| 31 | S&H | | 5 | 11 | CL | SANDY CLAY (CL) gray to light gray, hard, wet, fine sand, occasional weak cementation | PP | 5,500 | | | |
| 32 | | | 9 | | | | | | | | |
| 33 | | | 18 | | | | | | | | |
| 34 | | | | | | | | | | | |
| 35 | | | 4 | 7 | | medium stiff | | | | | |
| 36 | S&H | | 6 | | | | | | | | |
| 37 | | | 11 | | | | | | | | |
| 38 | | | | 8 | CL | CLAY with SAND (CL) olive-gray, stiff, wet, fine sand | | | | | |
| 39 | S&H | | 6 | | | | | | | | |
| 40 | | | 9 | | | | | | | | |
| 41 | | | 12 | | | | | | | | |
| 42 | | | | | | | | | | | |
| 43 | | | | | | | | | | | |
| 44 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
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| 57 | | | | | | | | | | | |
| 58 | | | | | | | | | | | |
| 59 | | | | | | | | | | | |
| 60 | | | | | | | | | | | |

TEST GEOTECH LOG 770625801.GPJ TR.GDT 10/1/15

Boring terminated at a depth of 40 feet below ground surface.
Boring backfilled with cement grout.
Groundwater not encountered during drilling.
PP = pocket penetrometer.

¹ S&H blowcounts for the last two increments were converted to SPT N-Values using a factor of 0.4, to account for sampler type and hammer energy.
² Elevations based on NAVD 88 Datum.

LANGAN TREADWELL ROLLO

Project No.: 770625801 Figure: B-2b

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-3

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: R. Ward

Date started: 8/14/15

Date finished: 8/14/15

Drilling method: Hollow Stem Auger (B40 rig)

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Safety Downhole Wireline

LABORATORY TEST DATA

Samplers: Sprague & Henwood (S&H)

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % | Dry Density Lbs/Cu Ft |
|-----------------|-----------------|--------|------------------|----------------------|-----------|---|-----------------------------|------------------------------------|-----------------------------|------------|-----------------------------------|--------------------------|
| | Sampler Type | Sample | Blows/ 6" SPT | N-Value ¹ | | | | | | | | |
| | | | | | | Ground Surface Elevation: 18.5 feet ² | | | | | | |
| 1 | BULK | ⊗ | | | | 6 inches topsoil | | | | | | |
| 2 | S&H | ■ | 7 | 7 | CH | CLAY (CH) black, hard, moist, with silt, trace fine sand Hydrometer Analysis, see Figure D-3 Triaxial Test, see Figure D-5 | PP | 5,000 | | | | |
| 3 | | | 8 | | | | TxUU | 3,690 | 90 | 18.1 | 98 | |
| 4 | BULK | ⊗ | | | | stiff | | | | | | |
| 5 | S&H | ■ | 10 | 12 | CL | SANDY CLAY (CL) gray-brown, very stiff, moist, fine sand | PP | 3,000 | | | | |
| 6 | | | 12 | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | S&H | ■ | 4 | 5 | CH | CLAY (CH) gray-brown, medium stiff, moist LL = 52, PI = 29, see Figure D-6 | | | | 30.4 | 92 | |
| 9 | | | 5 | | | | | | | | | |
| 10 | S&H | ■ | 6 | 7 | CL | CLAY with SAND (CL) olive-gray, very stiff, moist, fine sand | PP | 3,500 | | | | |
| 11 | | | 7 | | | | | | | | | |
| 12 | | | | | | SANDY CLAY (CL) olive, stiff, wet, fine sand | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | ▽ (08/14/15, 1:25 p.m.) | | | | | | |
| 15 | S&H | ■ | 5 | 8 | CL | hard | PP | 8,500 | | | | |
| 16 | | | 8 | | | | | | | | | |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | CLAY (CL) olive, hard, wet | | | | | | |
| 20 | S&H | ■ | 5 | 6 | CL | | PP | 5,000 | | | | |
| 21 | | | 6 | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | SILTY CLAY (CL-ML) brown, medium stiff, wet | | | | | | |
| 25 | S&H | ■ | 3 | 5 | CL- ML | LL = 31, PI = 8, see Figure D-6 | PP | 500 | 91 | 30.4 | 92 | |
| 26 | | | 5 | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | CL | SANDY CLAY (CL) gray-brown, medium stiff, wet, fine sand | | | | | | |
| 30 | | | | | | | | | | | | |

LANGAN TREADWELL ROLLO

Project No.:
770625801Figure:
B-3a

TEST GEOTECH LOG 770625801.GPJ TR.GDT 10/1/15

PROJECT:

1233 BOCKMAN ROAD
San Lorenzo, California

Log of Boring B-3

PAGE 2 OF 2

| DEPTH (feet) | SAMPLES | | | | LITHOLOGY | MATERIAL DESCRIPTION | LABORATORY TEST DATA | | | | |
|-----------------|--------------|--------|----------|--------------------------|-----------|--|-----------------------|------------------------------|--------------------------|---------|-----------------------------|
| | Sampler Type | Sample | Blows/6" | SPT N-Value ¹ | | | Type of Strength Test | Confining Pressure Lbs/Sq Ft | Shear Strength Lbs/Sq Ft | Fines % | Natural Moisture Content, % |
| 31 | S&H | | 4 | 7 | CL | SANDY CLAY (CL) (continued) occasional strong cementation | PP | 5,500 | | | |
| 32 | | | 6 | | | | | | | | |
| 33 | | | | | | | | | | | |
| 34 | S&H | | 18 | 17 | | hard, trace coarse sand | | | | | |
| 35 | | | 19 | | | | | | | | |
| 36 | | | 23 | | | | | | | | |
| 37 | | | | | | | | | | | |
| 38 | | | | | | | | | | | |
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| 56 | | | | | | | | | | | |
| 57 | | | | | | | | | | | |
| 58 | | | | | | | | | | | |
| 59 | | | | | | | | | | | |
| 60 | | | | | | | | | | | |

TEST GEOTECH LOG 770625801.GPJ TR.GDT 10/1/15

¹ Boring terminated at a depth of 35 feet below ground surface.
 Boring backfilled with cement grout.
 Groundwater encountered at 13.8 feet below ground surface during drilling.
 PP = pocket penetrometer.

² S&H blow counts for the last two increments were converted to SPT N-Values using a factor of 0.4, to account for sampler type and hammer energy.
³ Elevations based on NAVD 88 Datum.









LANGAN TREADWELL ROLLO



Project No.: 770625801 Figure: B-3b

| UNIFIED SOIL CLASSIFICATION SYSTEM | | | |
|---|--|---|---|
| Major Divisions | Symbols | Typical Names | |
| Coarse-Grained Soils (more than half of soil > no. 200 sieve size) | Gravels (More than half of coarse fraction > no. 4 sieve size) | GW | Well-graded gravels or gravel-sand mixtures, little or no fines |
| | | GP | Poorly-graded gravels or gravel-sand mixtures, little or no fines |
| | | GM | Silty gravels, gravel-sand-silt mixtures |
| | | GC | Clayey gravels, gravel-sand-clay mixtures |
| | Sands (More than half of coarse fraction < no. 4 sieve size) | SW | Well-graded sands or gravelly sands, little or no fines |
| | | SP | Poorly-graded sands or gravelly sands, little or no fines |
| | | SM | Silty sands, sand-silt mixtures |
| | | SC | Clayey sands, sand-clay mixtures |
| | | Fine-Grained Soils (more than half of soil < no. 200 sieve size) | Silts and Clays LL = < 50 |
| CL | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays | | |
| OL | Organic silts and organic silt-clays of low plasticity | | |
| Silts and Clays LL = > 50 | MH | | Inorganic silts of high plasticity |
| | CH | | Inorganic clays of high plasticity, fat clays |
| | OH | | Organic silts and clays of high plasticity |
| Highly Organic Soils | PT | Peat and other highly organic soils | |

SAMPLE DESIGNATIONS/SYMBOLS

| GRAIN SIZE CHART | | |
|----------------------------------|--------------------------|---------------------------|
| Classification | Range of Grain Sizes | |
| | U.S. Standard Sieve Size | Grain Size in Millimeters |
| Boulders | Above 12" | Above 305 |
| Cobbles | 12" to 3" | 305 to 76.2 |
| Gravel coarse fine | 3" to No. 4 | 76.2 to 4.76 |
| | 3" to 3/4" | 76.2 to 19.1 |
| Sand coarse medium fine | 3/4" to No. 4 | 19.1 to 4.76 |
| | No. 4 to No. 200 | 4.76 to 0.075 |
| | No. 4 to No. 10 | 4.76 to 2.00 |
| | No. 10 to No. 40 | 2.00 to 0.420 |
| | No. 40 to No. 200 | 0.420 to 0.075 |
| Silt and Clay | Below No. 200 | Below 0.075 |

-  Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered
-  Classification sample taken with Standard Penetration Test sampler
-  Undisturbed sample taken with thin-walled tube
-  Disturbed sample
-  Sampling attempted with no recovery
-  Core sample
-  Analytical laboratory sample
-  Sample taken with Direct Push or Drive sampler

-  Unstabilized groundwater level
-  Stabilized groundwater level

SAMPLER TYPE

- | | | | |
|-----|--|-----|--|
| C | Core barrel | PT | Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube |
| CA | California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter | S&H | Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter |
| D&M | Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube | SPT | Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter |
| O | Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube | ST | Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure |

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San Lorenzo, California

CLASSIFICATION CHART

LANGAN TREADWELL ROLLO

Date 08/18/15 | Project No. 770625801 | Figure B-4