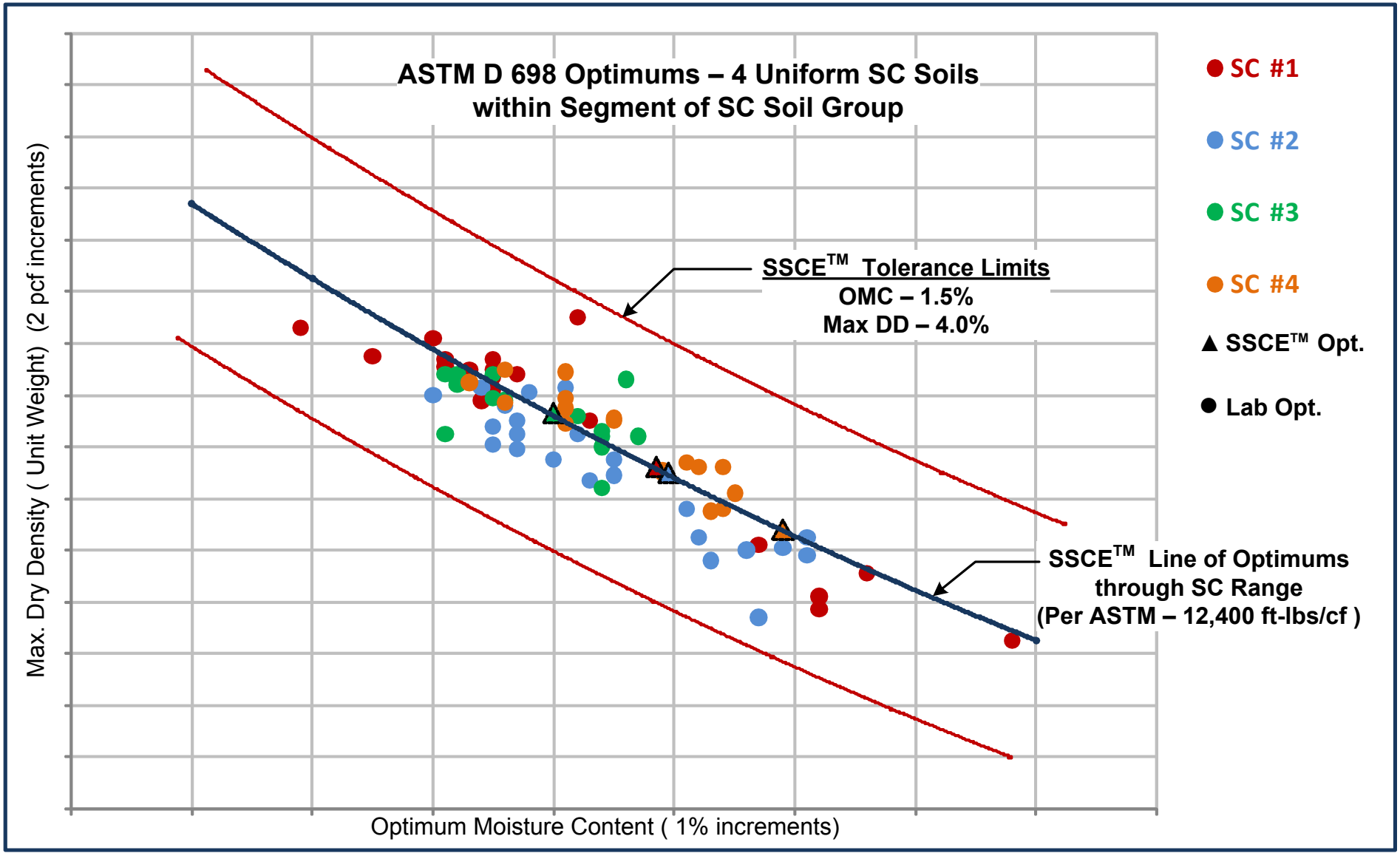
Comparison: SSCE™ vs. Typical Lab Optimums

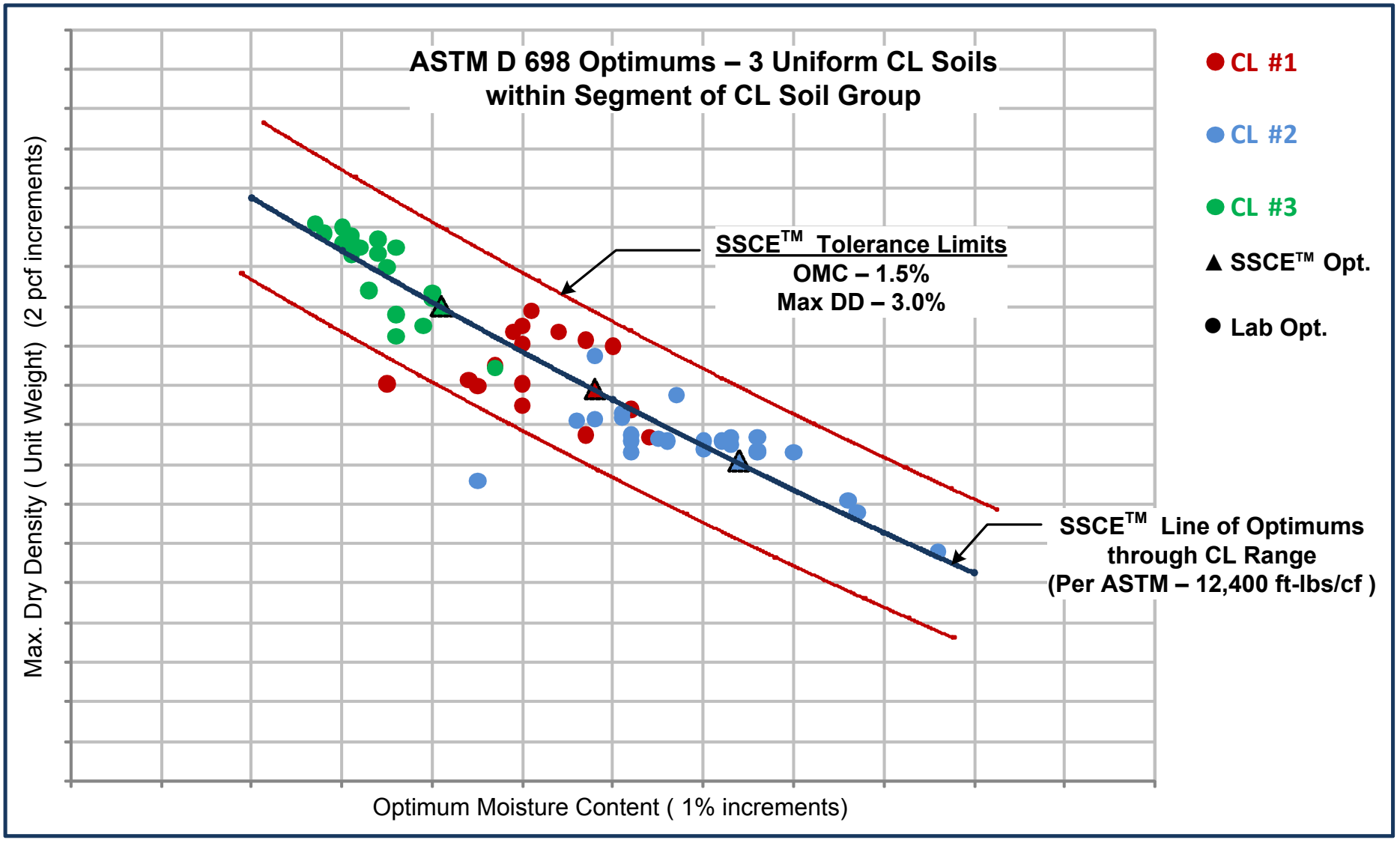
Typical ASTM Lab Compaction Test Results



- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

Comparison: SSCE™ vs. Typical Lab Optimums

Typical ASTM Lab Compaction Test Results

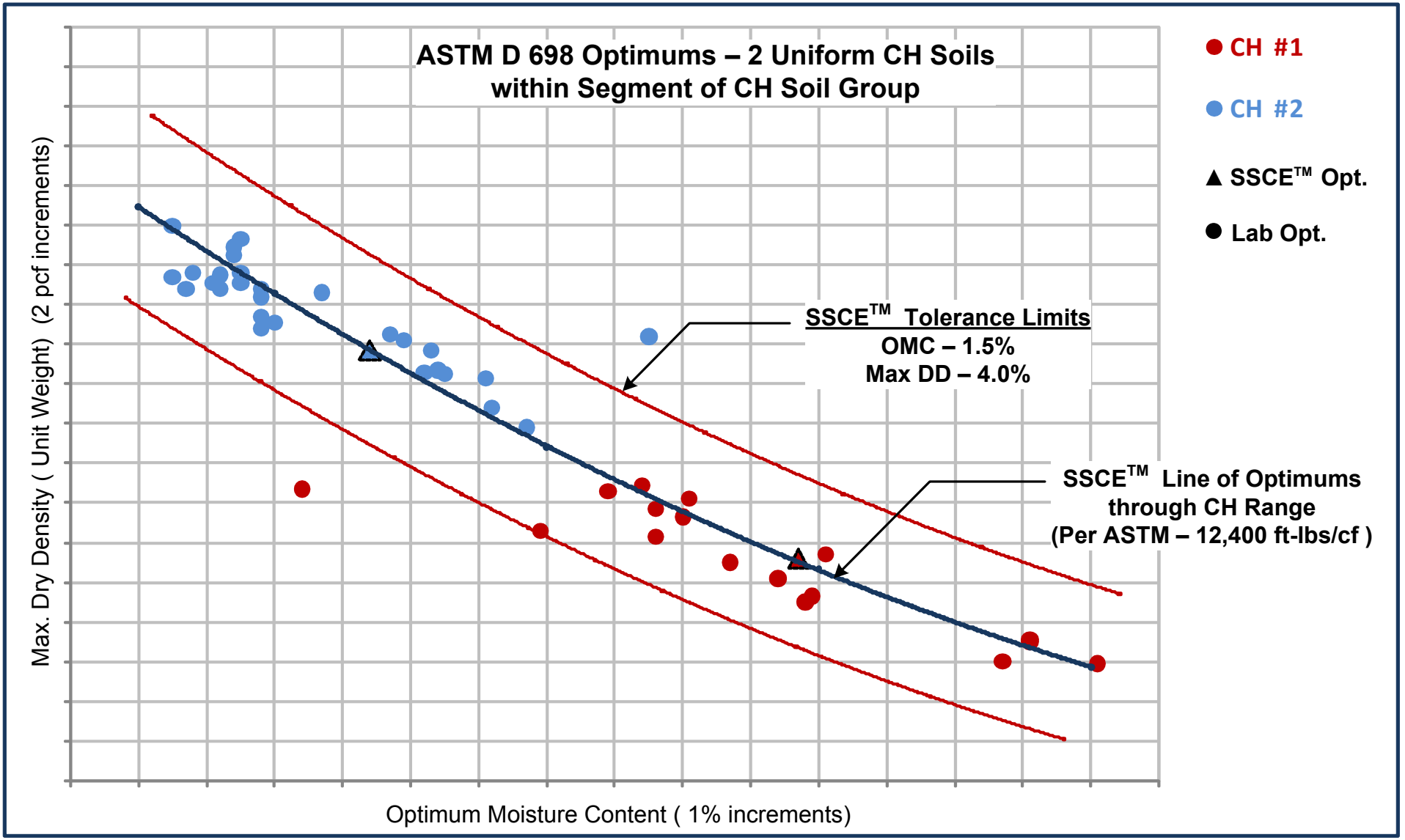


- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

ESOL

Comparison: SSCE™ vs. Typical Lab Optimums

Typical ASTM Lab Compaction Test Results

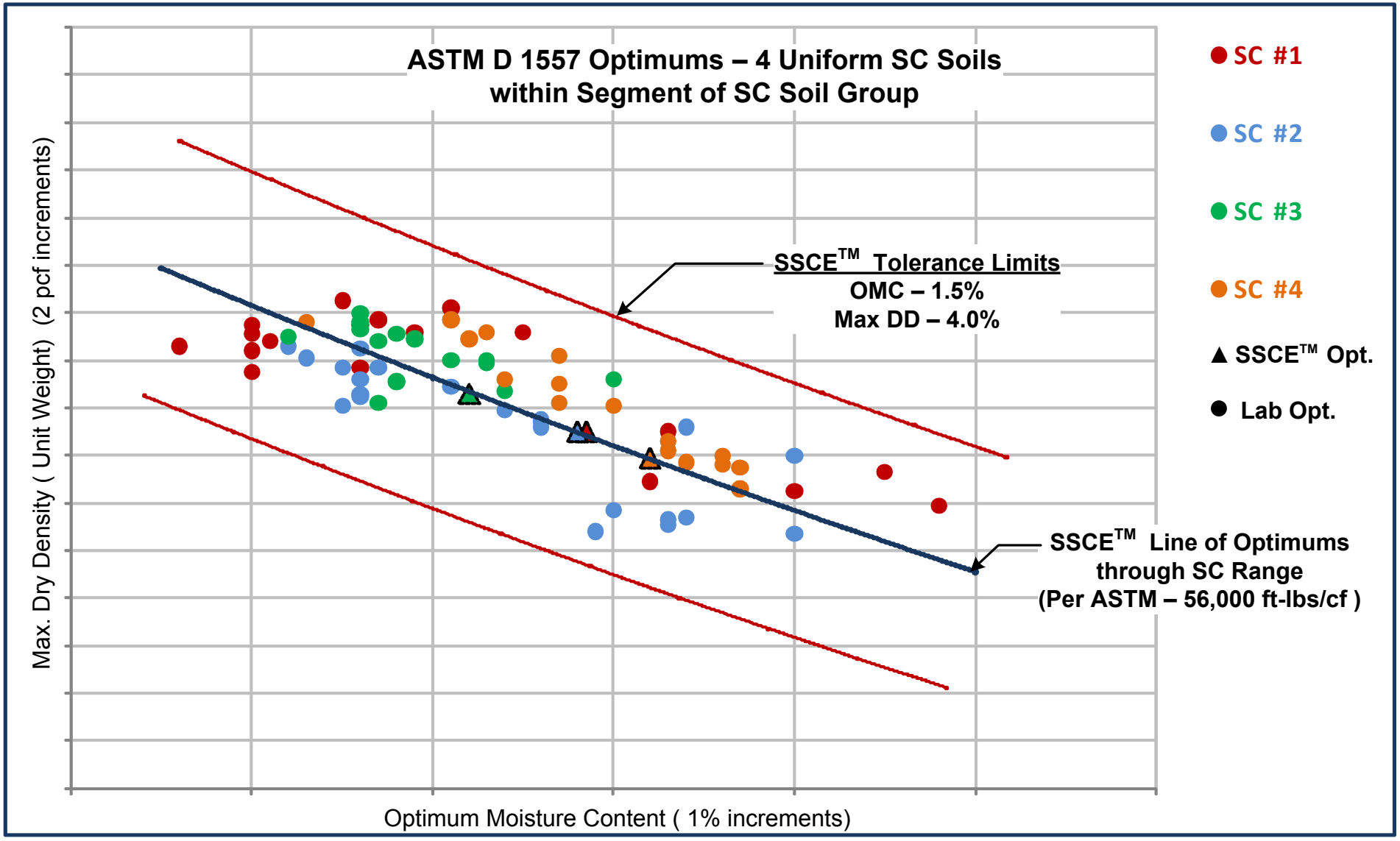


- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

ESOL

Comparison: SSCE™ vs. Typical Lab Optimums

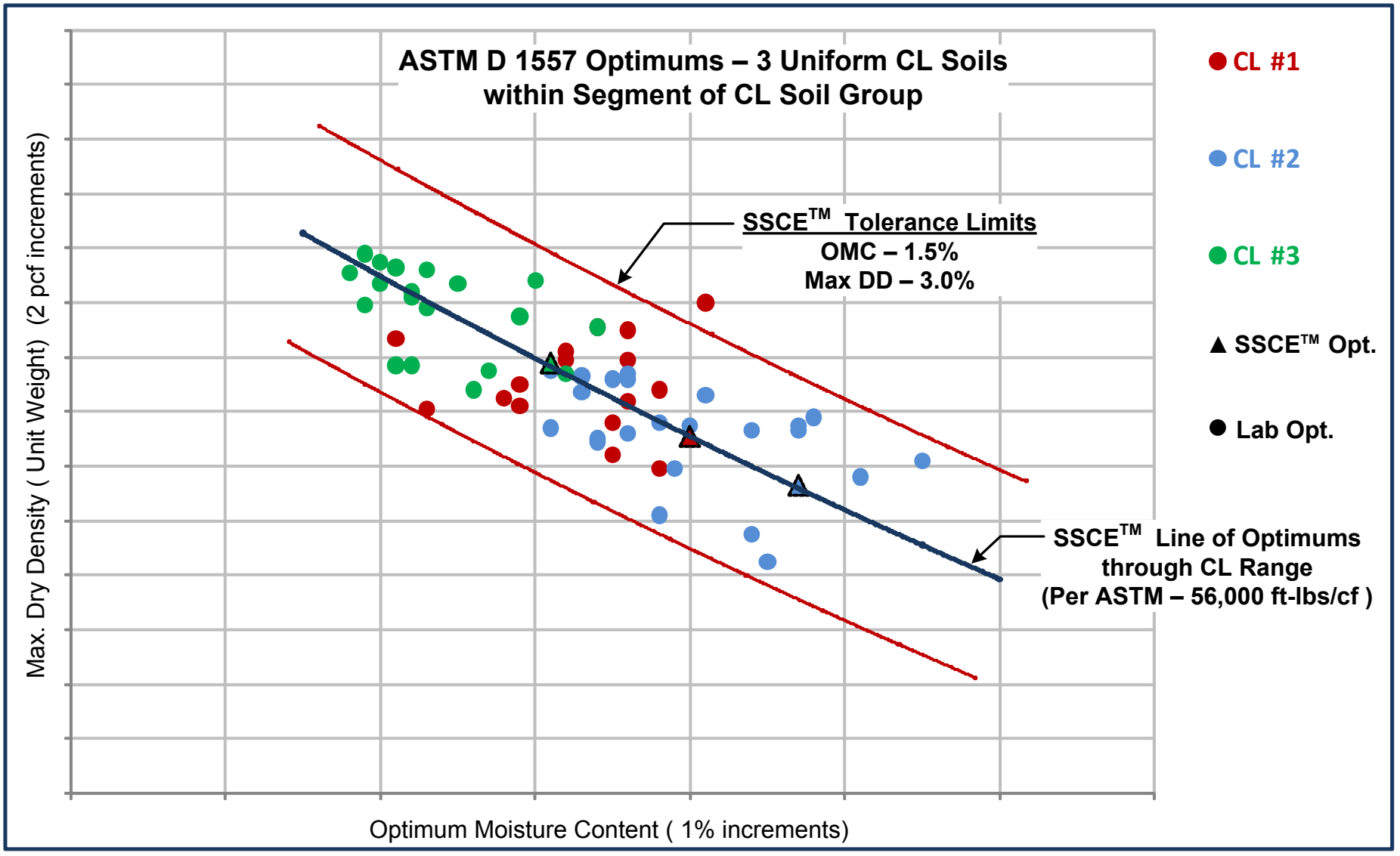
Typical ASTM Lab Compaction Test Results



- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

Comparison: SSCE™ vs. Typical Lab Optimums

Typical ASTM Lab Compaction Test Results

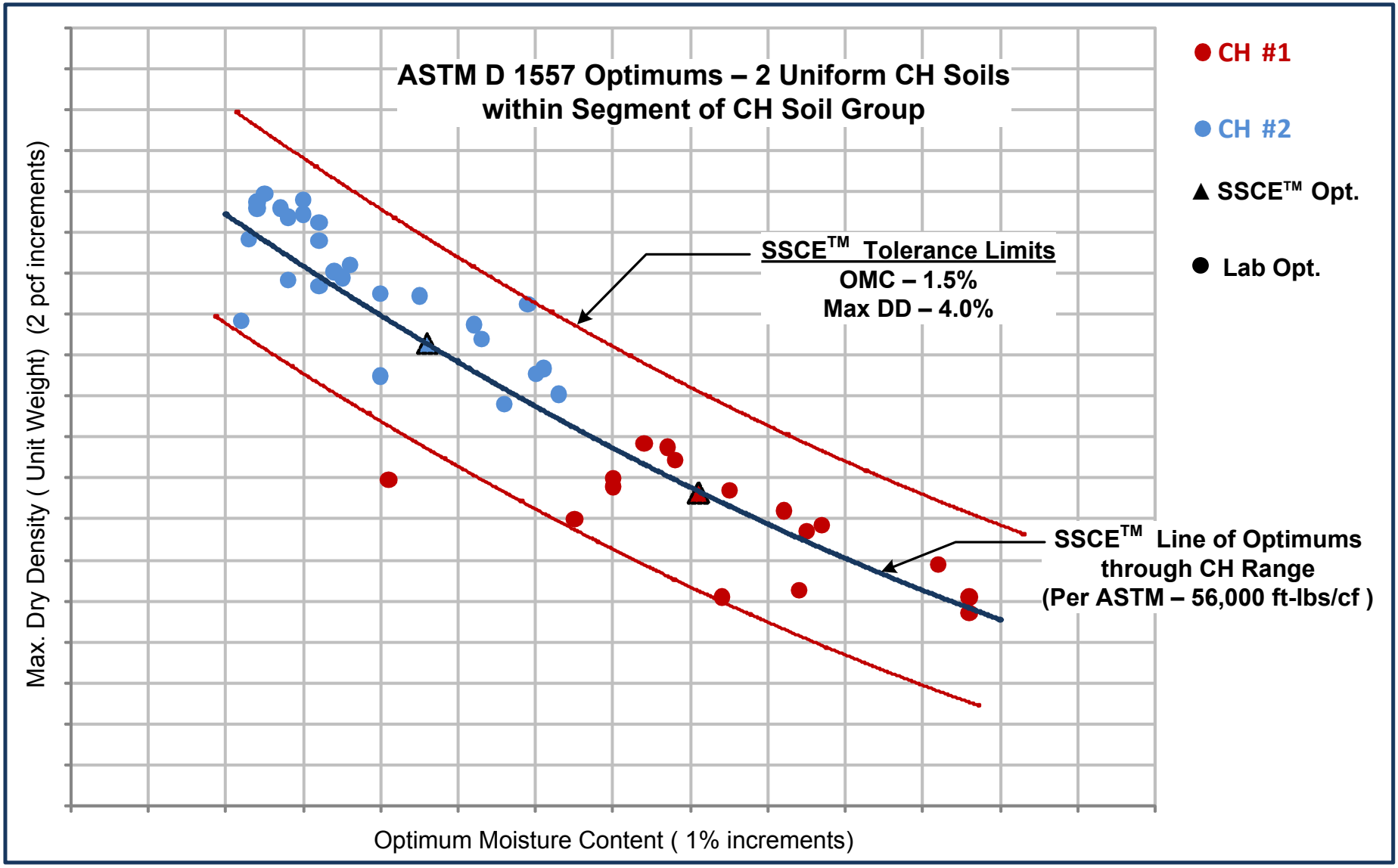


- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

ESOL

Comparison: SSCE™ vs. Typical Lab Optimums

Typical ASTM Lab Compaction Test Results



- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- Each soil type is homogenous based on monitored sampling and voluminous index property testing including multiple, specific gravity, sieve anlaysis, and Atterbergs tests.

ESOL

Summary - Comparison: SSCE™ vs. Typical Lab Optimums

SELECT SOILS IN SOIL GROUP SEGMENTS	No. of Proctor Tests	Max. γ_D Range	O.M.C. Range
SC Soil #1 (Index Tests - Atterbergs: 38, Sieves: 19, Gs: 57)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	19	**12.5** pcf	**5.9**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	18	**8.3** pcf	**4.2**%
Difference Between Mean of Standard and Modified Optimums		8.8 pcf	3.0%
SC Soil #2 (Index Tests - Atterbergs: 46, Sieves: 23, Gs: 69)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	23	**8.9** pcf	**3.1**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	23	**7.9** pcf	**2.8**%
Difference Between Mean of Standard and Modified Optimums		8.2 pcf	3.0%
SC Soil #3 (Index Tests - Atterbergs: 30, Sieves: 15, Gs: 45)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	15	**4.4** pcf	1.6%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	14	3.4 pcf	1.8%
Difference Between Mean of Standard and Modified Optimums		8.9 pcf	2.9%
SC Soil #4 (Index Tests - Atterbergs: 34, Sieves: 17, Gs: 51)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	17	**5.5** pcf	**2.1**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	16	**6.2** pcf	**2.4**%
Difference Between Mean of Standard and Modified Optimums		7.8 pcf	2.6%
CL Soil #1 (Index Tests - Atterbergs: 32, Sieves: 16, Gs: 48)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	16	**6.4** pcf	**2.9**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	16	**6.1** pcf	**2.0**%
Difference Between Mean of Standard and Modified Optimums		8.3 pcf	2.8%
CL Soil #2 (Index Tests - Atterbergs: 48, Sieves: 24, Gs: 72)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	24	**9.9** pcf	**5.1**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	23	**7.0** pcf	**2.4**%
Difference Between Mean of Standard and Modified Optimums		10.2 pcf	3.9%
CL Soil #3 (Index Tests - Atterbergs: 38, Sieves: 19, Gs: 57)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	19	**7.3** pcf	**1.9**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	19	**4.4** pcf	1.6%
Difference Between Mean of Standard and Modified Optimums		**5.9** pcf	2.0%
CH Soil #1 (Index Tests - Atterbergs: 34, Sieves: 17, Gs: 51)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	17	**9.0** pcf	**11.7**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	16	**8.3** pcf	**7.5**%
Difference Between Mean of Standard and Modified Optimums		12.9 pcf	6.6%
CH Soil #2 (Index Tests - Atterbergs: 56, Sieves: 28, Gs: 84)			
Range of ASTM D 698 Optimums (12,400 ft-lbs / cu.ft.)	28	**10.2** pcf	**7.0**%
Range of ASTM D 1557 Optimums (56,000 ft-lbs / cu.ft.)	28	**10.3** pcf	**4.1**%
Difference Between Mean of Standard and Modified Optimums		12.0 pcf	4.8%

- Laboratory compaction test results shown were performed by a fully accredited professional geotechnical testing laboratory.
- Oversight and review of testing results was performed by a third party accredited institution.
- Laboratory compaction testing was completed independently, and the results were compared after the development of the SSCE™ information system.
- All soil types are homogenous as verified by volume of index tests shown.
- Red values denote obvious error in typical lab testing, where the scatter range of results from the same fixed energy lab test, vary as much as that between two tests that vary in energy by 43,600 ft-lbs/cu.ft.