

**MAXIMUM DRY DENSITY
 (ASTM D 698 & 1557)**

| | |
|------------------|-----------------|
| PROJECT NAME: | Joy Engineering |
| LOCATION: | USA Parkway Pit |
| SOURCE: | |
| MATERIAL (USCS): | TECH: GB |

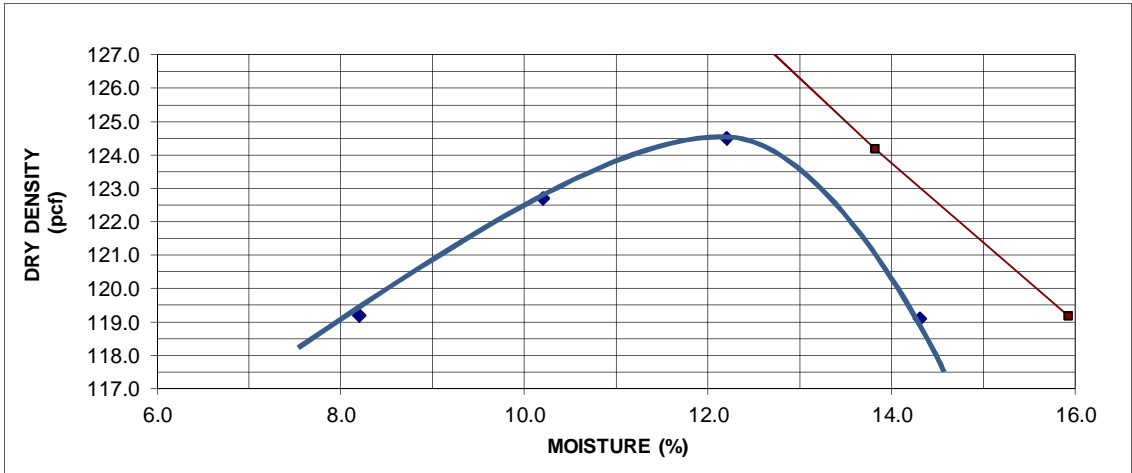
| | |
|-----------------|-----------|
| PROJECT NUMBER: | 2892.040 |
| LAB LOG NO: | 2974 |
| DATE SAMPLED: | 3/19/2015 |

| CURVE SIZE (IN): | 6 | | | | METHOD: | C |
|-------------------------|--------|--------|--------|--------|---------|---|
| MOISTURE CHANGE (+ %): | 0 | 2 | 4 | 6 | | |
| MOLD + WET WEIGHT (GS): | 7219.4 | 7430.6 | 7580.4 | 7461.3 | | |
| MOLD WEIGHT (GS): | 2830.4 | 2830.4 | 2830.4 | 2830.4 | 0 | |
| WET WEIGHT (GS): | 4389 | 4600.2 | 4750 | 4630.9 | 0 | |
| CONVERSION (GS): | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0294 | |
| WET DENSITY (PCF): | 129.0 | 135.2 | 139.7 | 136.1 | 0.0 | |
| WEIGHT WET SOIL (GS): | 949.3 | 1136.5 | 1361.2 | 1218.6 | | |
| WEIGHT DRY SOIL (GS): | 877.3 | 1031.3 | 1213.5 | 1066.3 | | |
| MOISTURE CONTENT (%): | 8.2 | 10.2 | 12.2 | 14.3 | #DIV/0! | |
| DRY DENSITY (PCF): | 119.2 | 122.7 | 124.5 | 119.1 | #DIV/0! | |

| SCREENED OVER | +3/4" | | FINE | COARSE |
|----------------------------|------------------|-------------------|---------|---------|
| WEIGHT RETAINED: | | WET WGT: | | |
| WEIGHT PASSING: | | DRY WGT: | | |
| TOTAL: | 0.0 | % MOISTURE | #DIV/0! | #DIV/0! |
| | | % RETAINED | #DIV/0! | #DIV/0! |
| +3/4" WEIGHT DRY (GS) | | +3/4" BULK DRY SG | | #DIV/0! |
| +3/4" WEIGHT SSD (GS) | | +3/4" BULK SSD SG | | #DIV/0! |
| +3/4" WEIGHT IN WATER (GS) | | +3/4" APPARENT SG | | #DIV/0! |
| | +3/4" ABSORPTION | | #DIV/0! | |

W ROCK CORRECTION

| | | |
|-------------------------------------|--------------|----------------|
| MAXIMUM DRY DENSITY (PCF) | 124.6 | #DIV/0! |
| OPTIMUM MOISTURE CONTENT (%) | 12.2 | #DIV/0! |



**SOIL CLASSIFICATION
ASTM D 1140 & 4318**

5440 Reno Corporate Drive, Reno, NV 89511
Phone 775.823.4068 Fax 775.823.4066

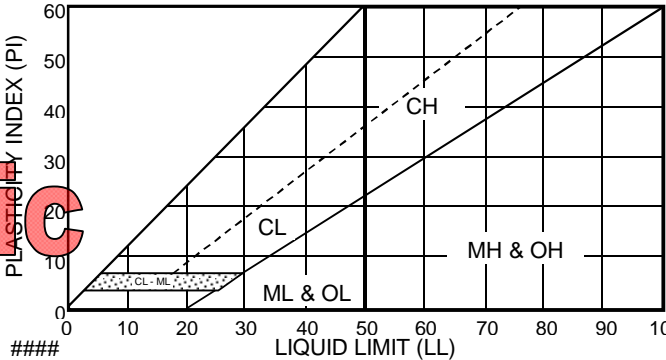
| | |
|------------------|-----------------|
| PROJECT NAME: | Joy Engineering |
| SOURCE: | 3/4 Agg Base |
| MATERIAL (USCS): | |

| | |
|-----------------|-----------|
| PROJECT NUMBER: | 2892.040 |
| LAB LOG NO: | 2974 |
| DATE SAMPLED: | 3/20/2015 |

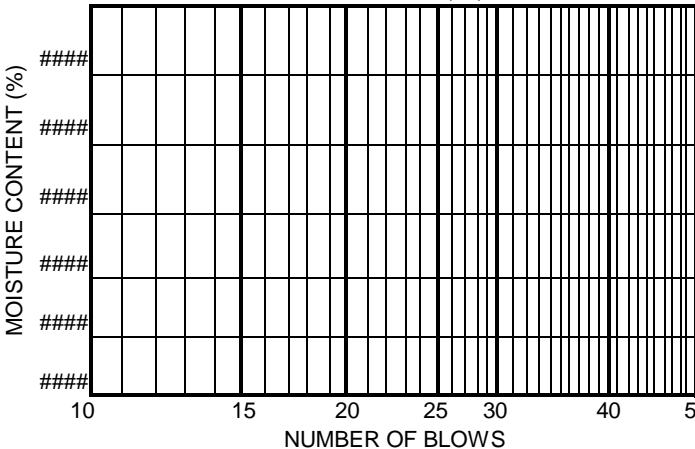
| | Grams | Pounds | | |
|-------------|---------------|---------|-----------------|--------|
| WET WEIGHT: | 5464.4 | 0 | WGT BEFORE WASH | 5021.8 |
| DRY WEIGHT: | 5021.8 | 0 | WGT AFTER WASH | 4690.7 |
| % MOISTURE | 8.8 | 100.0 | % -#200 | 6.6 |
| | WEIGHT COARSE | #DIV/0! | | |
| | WEIGHT FINE | 1 | | |

| GRADATION | | | | | | | | | |
|------------|----------------------------|------------------|-----------------|------------------|------------|----------------------------|------------------|-----------------|------------------|
| SIEVE SIZE | CUMULATIVE WEIGHT RETAINED | PERCENT RETAINED | PERCENT PASSING | ADJUST FOR SPLIT | SIEVE SIZE | CUMULATIVE WEIGHT RETAINED | PERCENT RETAINED | PERCENT PASSING | ADJUST FOR SPLIT |
| 3 | | | | | # 4 | 1834.4 | 36.5 | 63 | 63 |
| 2 | | | | | # 10 | 3220.9 | 64.1 | 36 | 36 |
| 1 1/2 | | | | | # 16 | 3750.9 | 74.7 | 25 | 25 |
| 1 | | | | | # 40 | 4296.2 | 85.6 | 14 | 14 |
| 3/4 | 0 | 0.0 | 100.0 | 100 | # 100 | 4570.7 | 91.0 | 9 | 9 |
| 1/2 | 70.6 | 1.4 | 98.6 | 99 | # 200 | 4671.8 | 93.0 | 7.0 | 7.0 |
| 3/8 | 360.8 | 7.2 | 92.8 | 93 | PAN | 4691 | 93 | | |

| ATTERBERG LIMITS | | | |
|------------------|---------|---------|---------|
| LIQUID LIMIT | | | |
| Can No. | | | |
| Can + Wet Wt. | | | |
| Can + Dry Wt. | | | |
| Wt. Water | 0 | 0 | 0 |
| Wt. Tare | | | |
| Dry Soil Wt. | 0 | 0 | 0 |
| % Moisture | #DIV/0! | #DIV/0! | #DIV/0! |
| No. Blows | | | |
| LIQUID LIMIT | #DIV/0! | #DIV/0! | #DIV/0! |



| PLASTIC LIMIT | | | |
|---------------|---------|---------|--|
| Can No. | | | |
| Can + Wet Wt. | | | |
| Can + Dry Wt. | | | |
| Wt. Water | 0.00 | 0.00 | |
| Wt. Tare | | | |
| Dry Soil Wt. | 0.00 | 0.00 | |
| % Moisture | #DIV/0! | #DIV/0! | |



LL= ##### PL= ##### PI= #####