

A primary cause of early pavement deterioration is water infiltration into the pavement system. The addition of moisture usually results in softening of untreated base course and subgrade and eventual failure of the pavement. We recommend drainage be designed for rapid removal of surface runoff. Curb and gutter should be backfilled and the backfill compacted to reduce ponding adjacent to pavements. Final grading of the subgrade should be carefully controlled so that design cross-slope is maintained and low spots in the subgrade which could trap water are eliminated. Seals should be provided between curb and pavement and at all joints to reduce moisture infiltration. Landscaped areas and detention ponds in pavements should be avoided.

We have included construction recommendations for flexible and rigid pavement construction in Appendix B. Routine maintenance, such as sealing and repair of cracks annually and overlays at 5 to 7-year intervals, are necessary to achieve the long-term life of an asphalt pavement system. If the design and construction recommendations cannot be followed or anticipated traffic loads change considerably, we should be contacted to review our recommendations.

CONCRETE

One soil sample (TP-3 at 2 foot depth) was tested in the laboratory for water soluble sulfate content. Test results indicate that the sample had a water soluble sulfate concentration of 1,300 ppm. Sulfate concentrations in this range are considered to have a moderate effect on concrete which comes into contact with the soils. Sulfate crystals were noted in several samples. In our experience this is indicative of sulfate concentrations that have a severe effect on concrete that comes into contact with the soils. We recommend a Type V cement be used for concrete that comes into contact with the subsoils. We understand a locally available Type I / II modified cement is typically used for similar conditions as Type V. In addition, concrete should have a maximum water-cement ratio of 0.45.

CONSTRUCTION MONITORING

Geotechnical Engineering Group, Inc. should be retained to provide general review of construction plans for compliance with our recommendations. Geotechnical Engineering Group, Inc. should be retained to provide construction monitoring services during all earthwork and foundation construction phases of the work. This is to observe the construction with respect to the geotechnical recommendations, to enable design changes in the event that subsurface

conditions differ from those anticipated prior to start of construction and to give the owner a greater degree of confidence that the proposed construction is constructed in accordance with the geotechnical recommendations.

LIMITATIONS

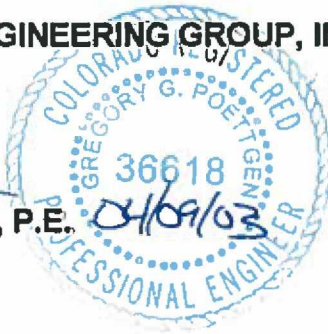
Seven exploratory test pits were observed; four in proposed residence areas and three in proposed pavement areas. The test pits are representative of conditions encountered only at the exact test pit locations. Variations in the subsoil conditions not indicated by the exploratory test pits are always possible. Subgrade soils compaction and fill (if any) compaction should be tested during construction. Pavement subgrade soils and construction materials should be tested during construction. Utility trench backfill compaction should be tested during placement. A design level foundation investigation should be performed in order to provide site specific foundation and floor construction recommendations, prior to construction.

We believe this investigation was conducted in a manner consistent with that level of care and skill ordinarily used by geotechnical engineers practicing in this area at this time. No other warranty, express or implied, is made. If we can be of further service in discussing the contents of this report or the analysis of the

influence of the subsurface conditions on the design of the proposed construction,
please call.

Sincerely,
GEOTECHNICAL ENGINEERING GROUP, INC.


Gregory G. Poettgen, P.E.
Project Engineer



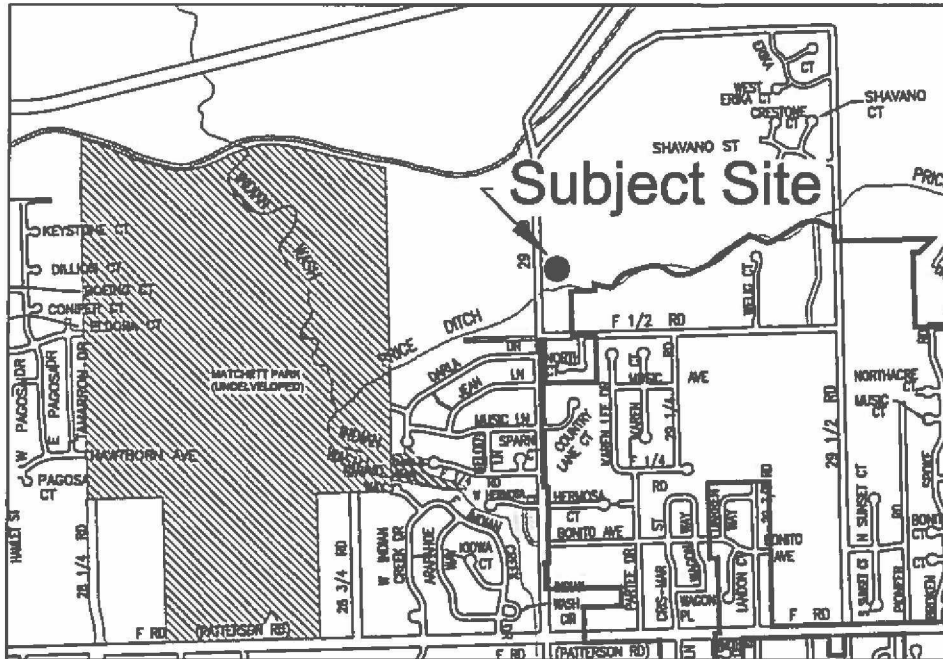
Reviewed by:



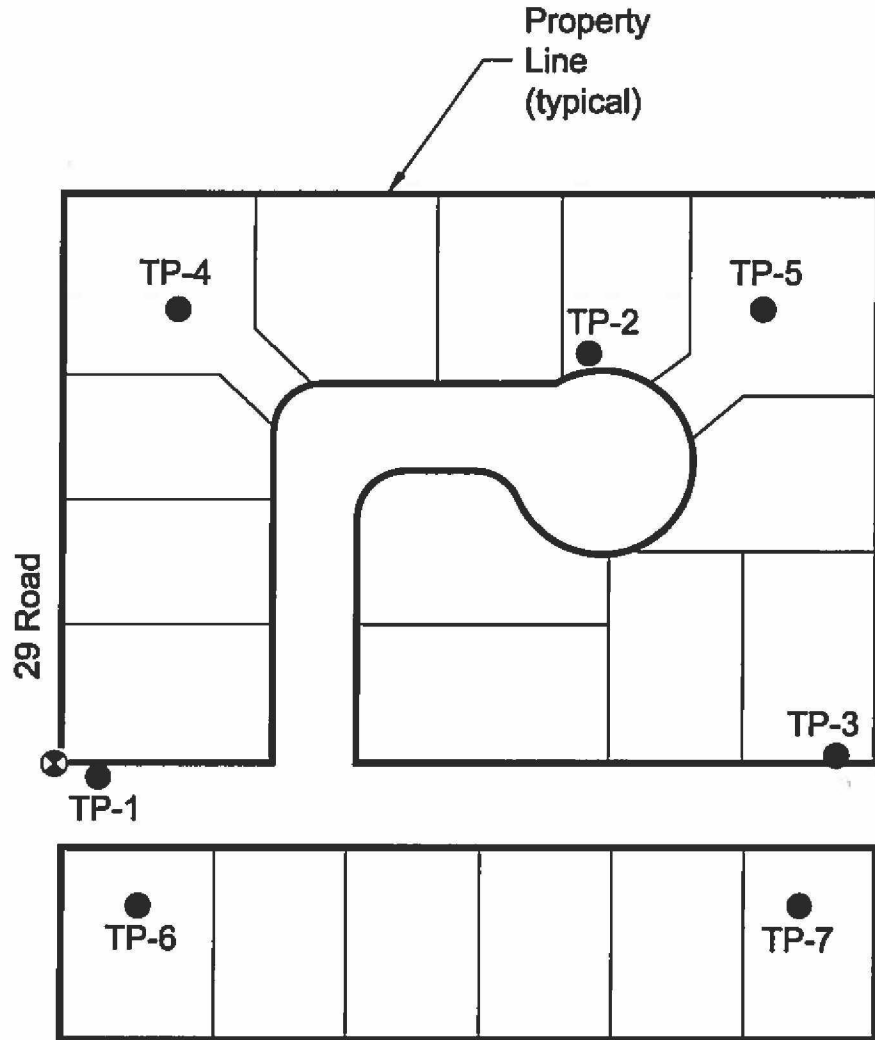
John P. Withers, P.E.
Principal Engineer

GGP:JPW:cd
(3 copies sent)

Geotechnical Investigation Forrest Glen Subdivision North and East of F 1/2 Road and 29 Road Grand Junction, Colorado

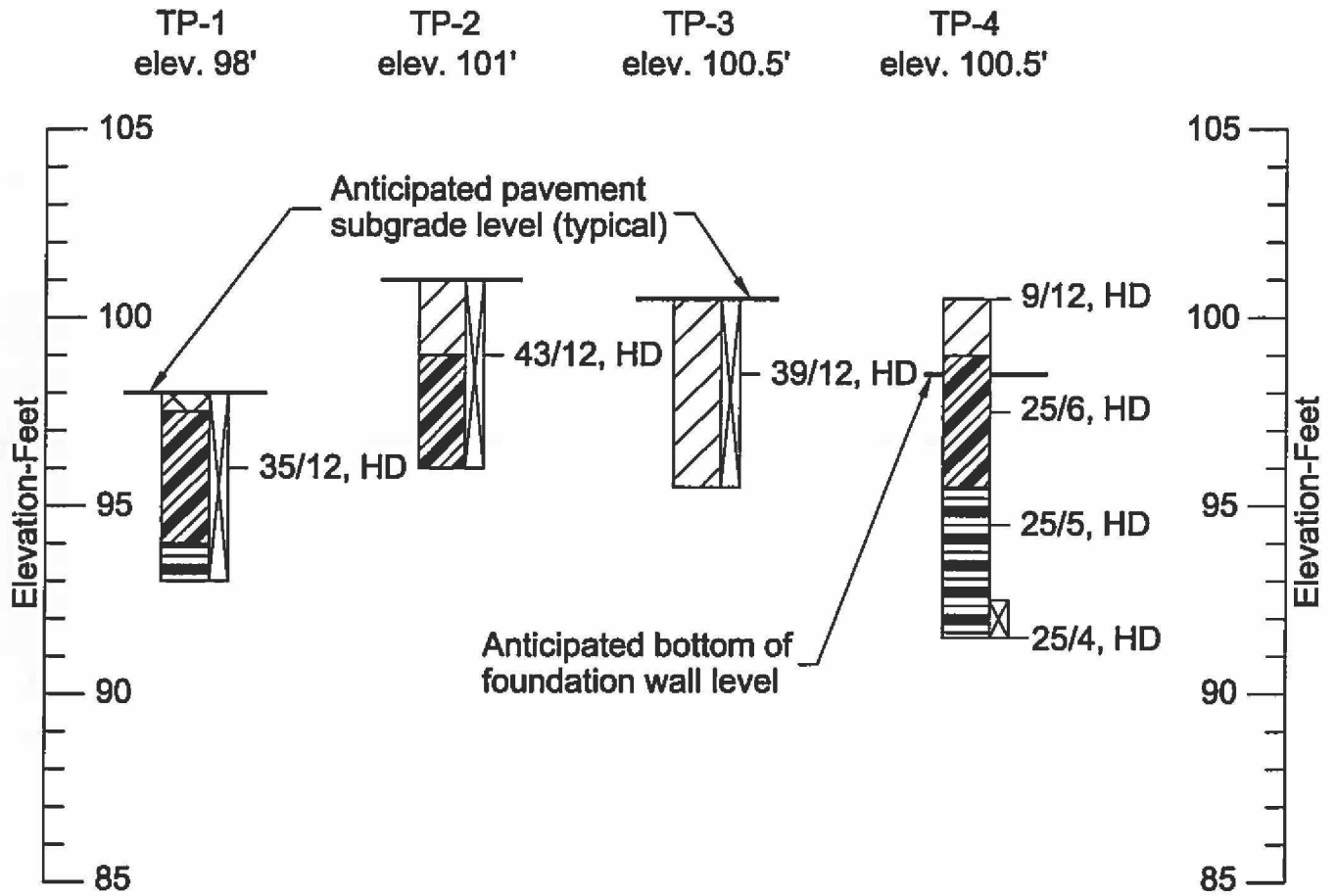


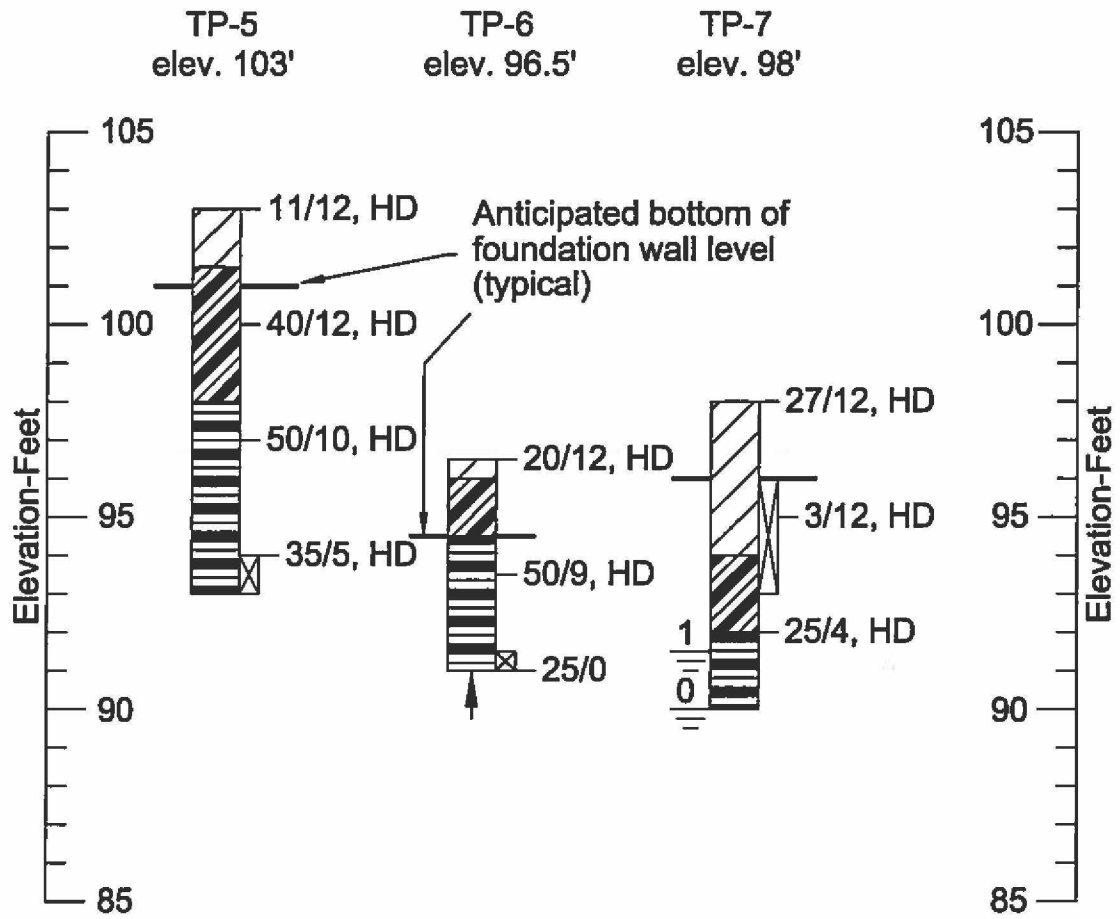
Note: This figure was prepared based on a site plan provided by MDY Consulting Engineers, Inc.



Legend

- Indicates location of exploratory test pit.
- ⊗ TBM: Corner of water meter cover in South West portion of site. Datum= 100.0'





Legend



Existing fill material, variable, gravel and sand, dry, tan, gray



Clay, very soft to very stiff, dry to moist, tan, brown, gray (CL,CH)



Extremely weathered shale, clayey, very stiff to medium hard, dry to moist, brown, gray, layered, fractured, sulfates noted



Shale, medium hard to hard, dry to moist, brown, gray, fractured, layered



Indicates location of penetration test. The symbol 35/12 indicates that 35 blows of a 15 pound hammer falling 26 inches were required to drive a 1.0 inch diameter penetrometer 12 inches. The symbol HD indicates hand drive using modified California (2.0-inch O.D.) liner.



Indicates location of bulk sample collected from test pit walls.

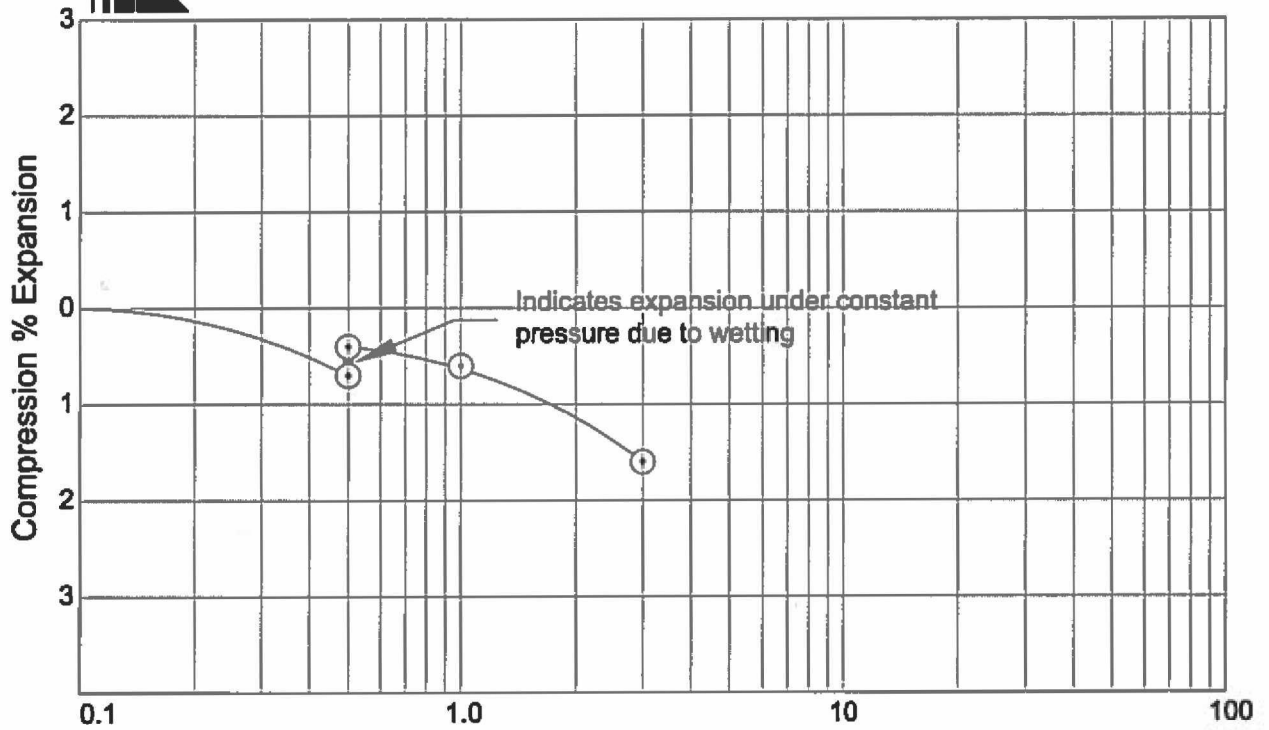


Indicates practical backhoe refusal. Test pits terminated.

Notes

1. Test pits were excavated and observed December 2, 2002.
2. Elevations of borings were determined using an automatic level and the temporary benchmark (TBM) shown on Fig. 2.
3. These logs are subject to the explanations, limitations and conclusions as contained in this report.

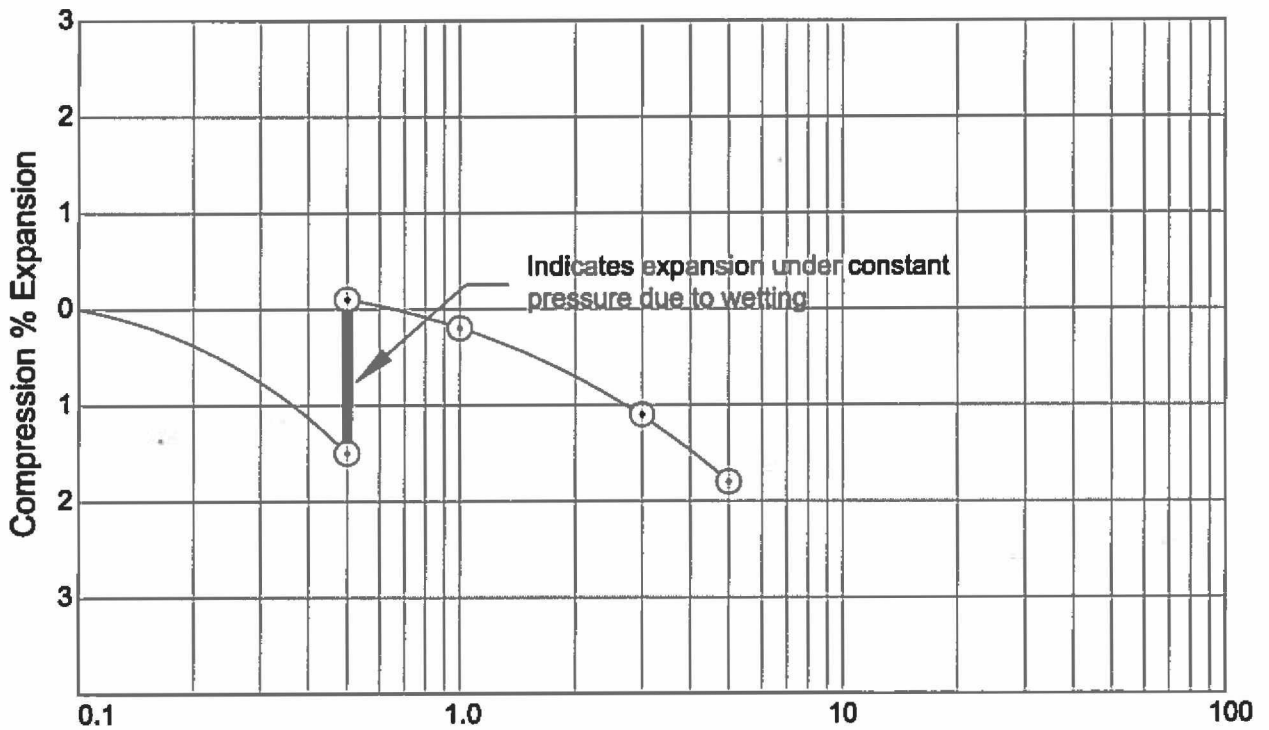
Legend of Logs of Exploratory Test Pits



Applied Pressure - KSF

Sample of: Extremely Weathered Shale
From: TP-4 @ 3 feet depth

Dry Unit Weight= 116 PCF
Moisture Content= 14.7 %

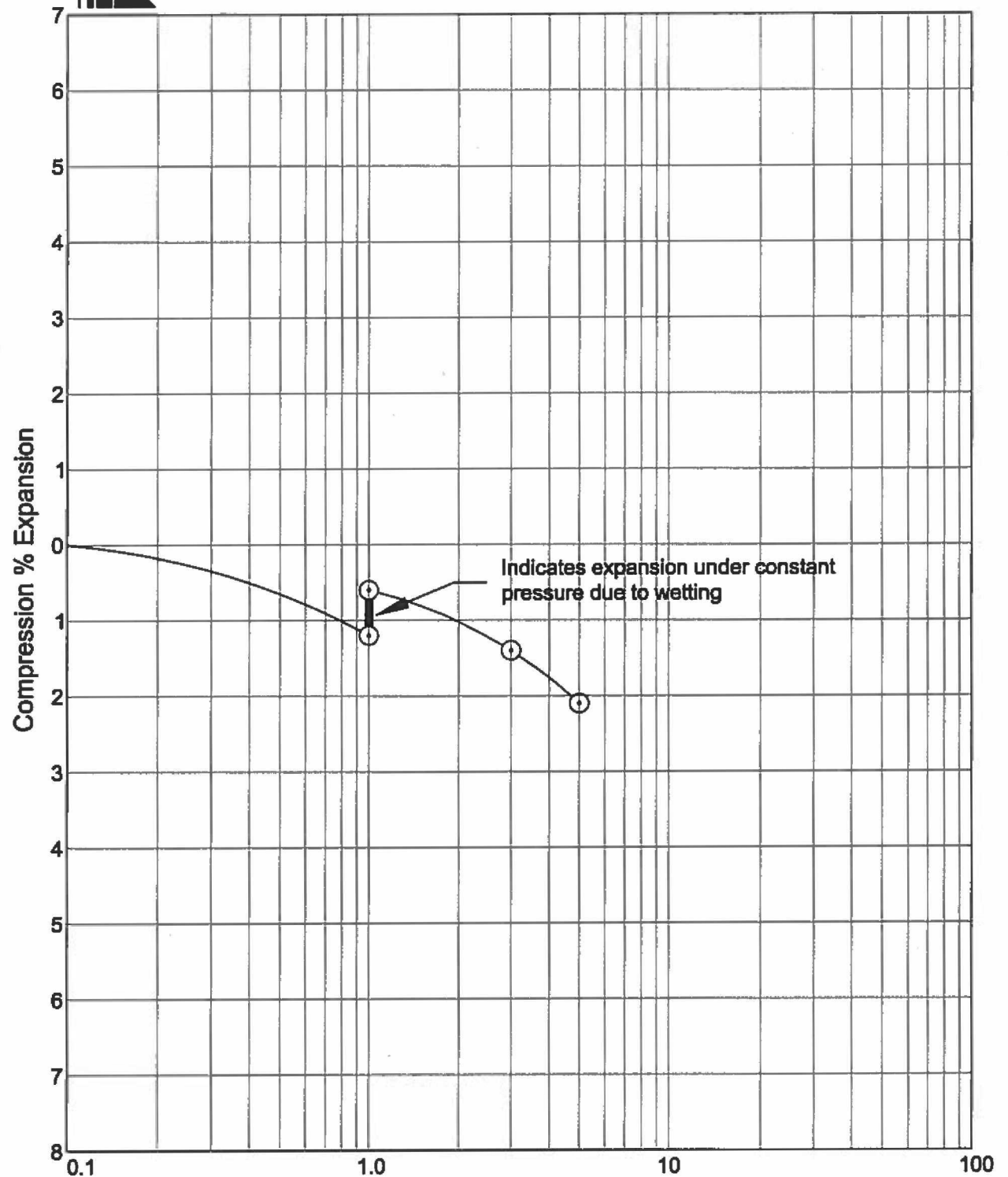


Applied Pressure - KSF

Sample of: Extremely Weathered Shale
From: TP-5 @ 3 feet depth

Dry Unit Weight= 111 PCF
Moisture Content= 18.8 %

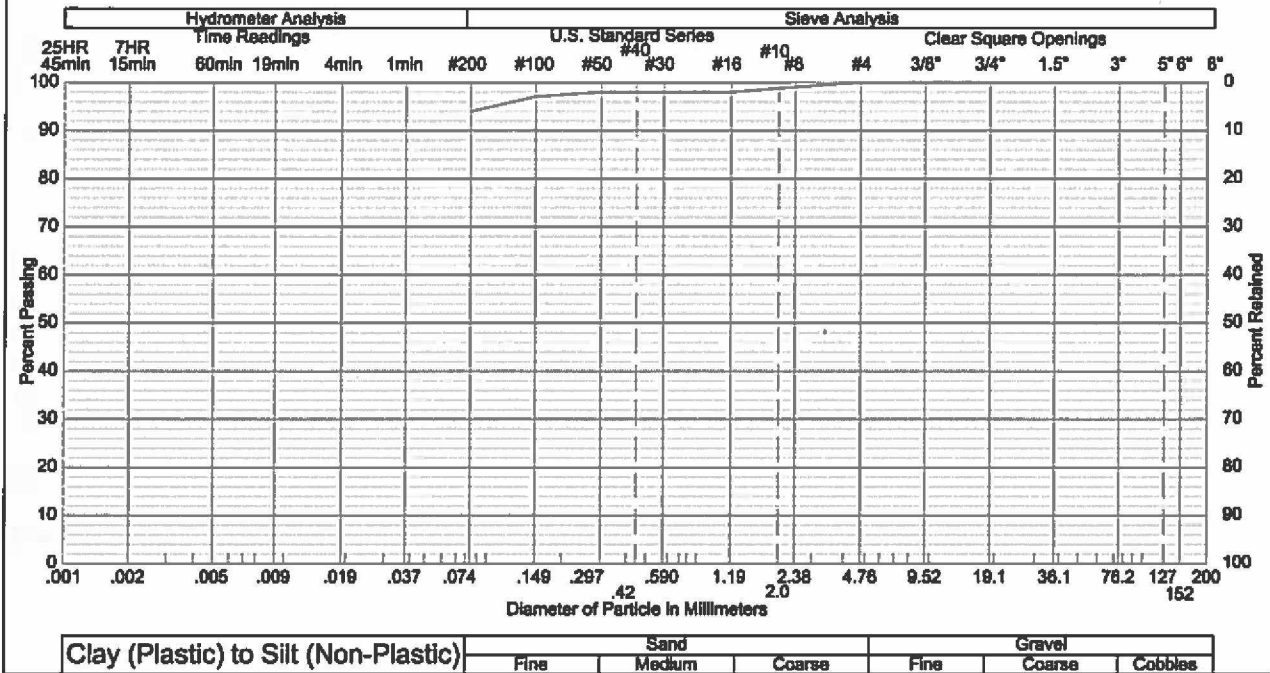
Geotechnical Engineering Group, Inc.



Applied Pressure - KSF

Sample of: Shale, clayey
From: TP-7 @ 6 feet depth

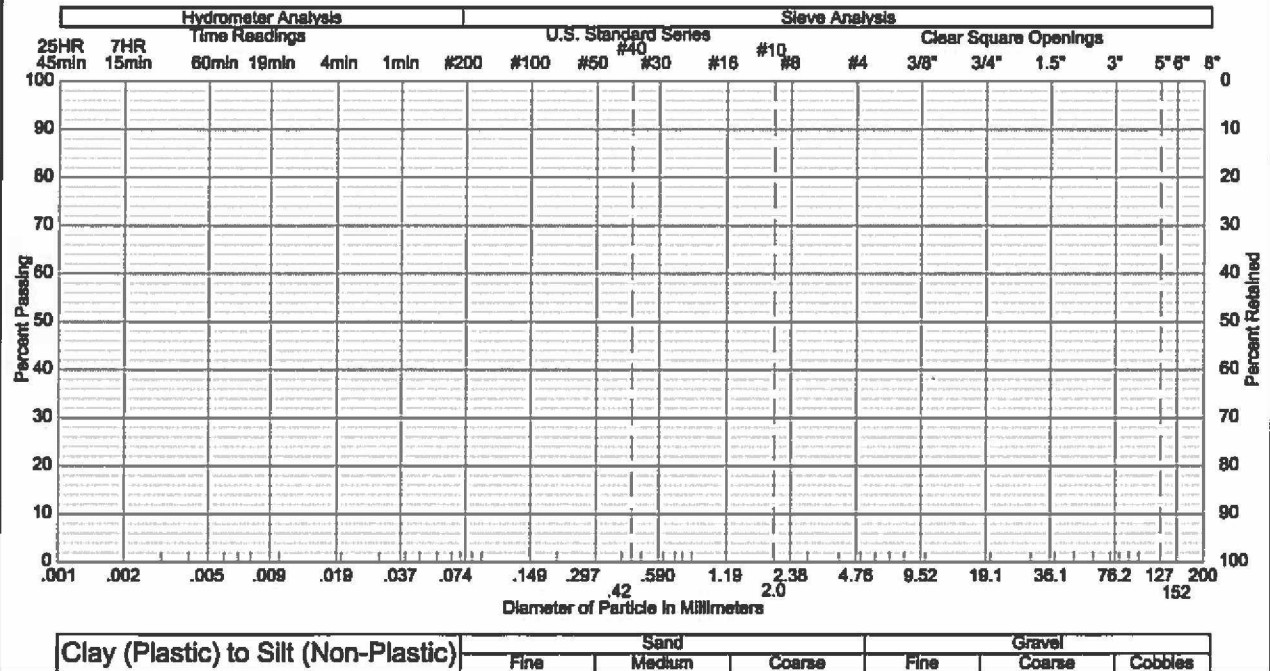
Dry Unit Weight= 113 PCF
Moisture Content= 14.1 %



Sample of: Clay, extremely weathered shale and shale
 From: TP-1 and 2 @ 0 to 5 feet, bulk combined

Gravel: 0 %
 Silt & Clay: 94 %
 Plasticity Index: 18

Sand: 6 %
 Liquid Limit: 42



Sample of:
 From:

Gravel: %
 Silt & Clay: %
 Plasticity Index:

Sand: %
 Liquid Limit:

Gradation Test Results

Job No. 1,317



Date: April, 2003

Fig. 8



TABLE I

SUMMARY OF LABORATORY TEST RESULTS

| HOLE | DEPTH (FEET) | NATURAL MOISTURE (%) | DRY DENSITY (PCF) | Atterberg Limits | | Swell / Consolidation | | PASSING NO. 200 SIEVE (%) | WATER SOLUBLE SULFATES (ppm) | SOIL TYPE |
|--------|-----------------|----------------------------|-------------------------|------------------------|----------------------------|-----------------------|--------------------------------|------------------------------------|---------------------------------------|--|
| | | | | LIQUID LIMIT (%) | PLASTICITY INDEX (%) | SWELL (%) | CONFINING PRESSURE (PSF) | | | |
| TP-1&2 | 0-5 | 12.7 | -- | 42 | 18 | | | 94 | | Extremely weathered shale, clay and shale |
| TP-3 | 2 | 12.6 | -- | | | | | | 1,300 | Clay (CL) |
| TP-4 | 3 | 14.7 | 116 | | | +0.3 | 500 | | | Extremely weathered shale |
| TP-5 | 3 | 18.8 | 111 | | | +1.6 | 500 | | | Extremely weathered shale |
| | 6 | 13.5 | 111 | 39 | 15 | | | 69 | | Shale, clayey |
| TP-6 | 3 | 12.2 | -- | 41 | 17 | | | 59 | | Shale, clayey |
| TP-7 | 3 | 14.9 | 88 | 59 | 34 | | | 96 | | Clay (CH) |
| | 6 | 14.1 | 113 | | | +0.6 | 1,000 | | | Shale, clayey |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

APPENDIX A

PAVEMENT DESIGN CALCULATIONS

Geotechnical Engineering Group, Inc.

Moisture-Density Relationship

Project Name: Sneddon Subdivision

Sample Location: TP-1 and TP-2 @ 0 to 5 feet depth, bulk combined

Sample Description: Clay, extremely weathered shale and clayey shale

Test Method: ASTM D698, method A

Maximum Dry Density: 106.5 pcf

Optimum Moisture: 20.0 %

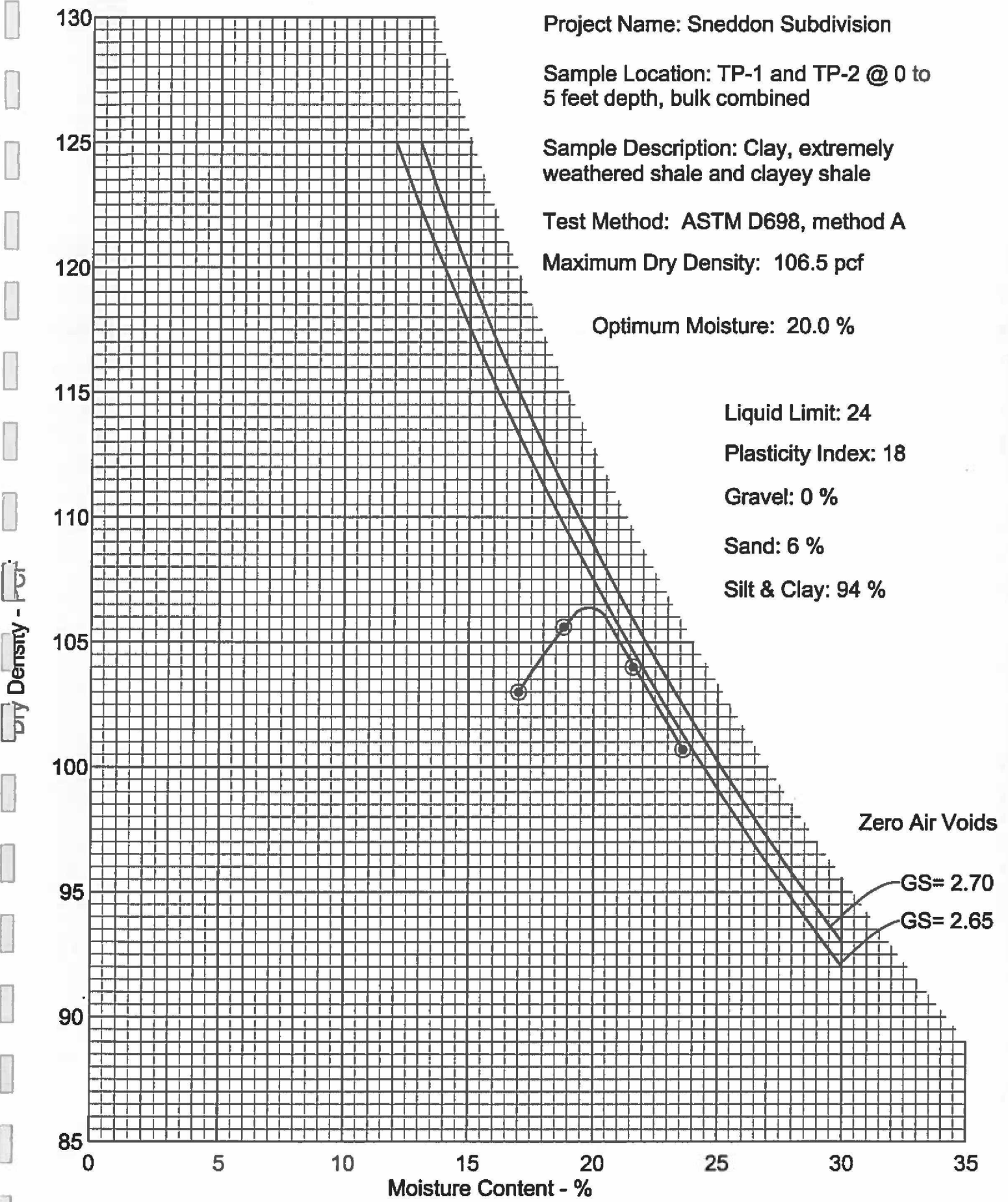
Liquid Limit: 24

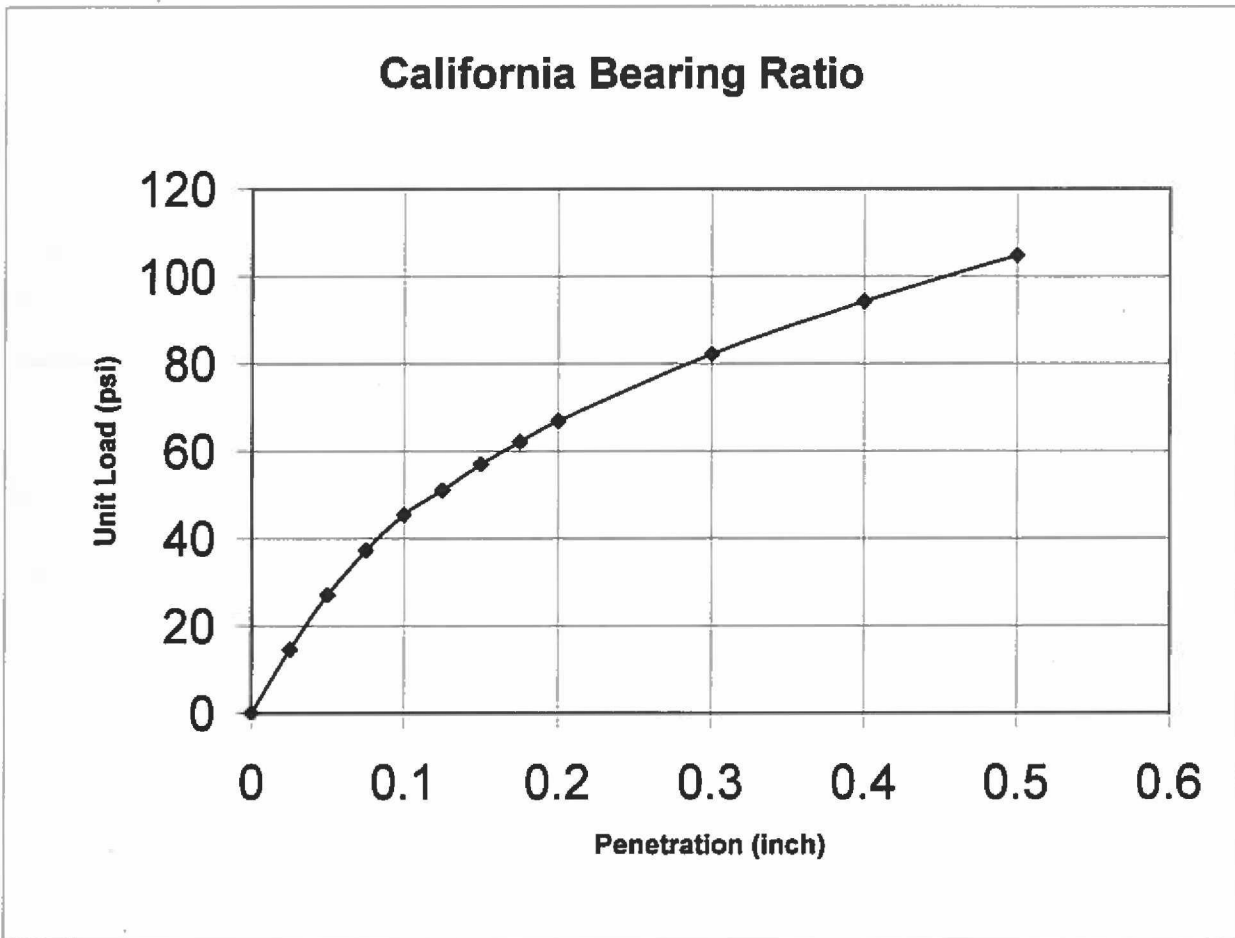
Plasticity Index: 18

Gravel: 0 %

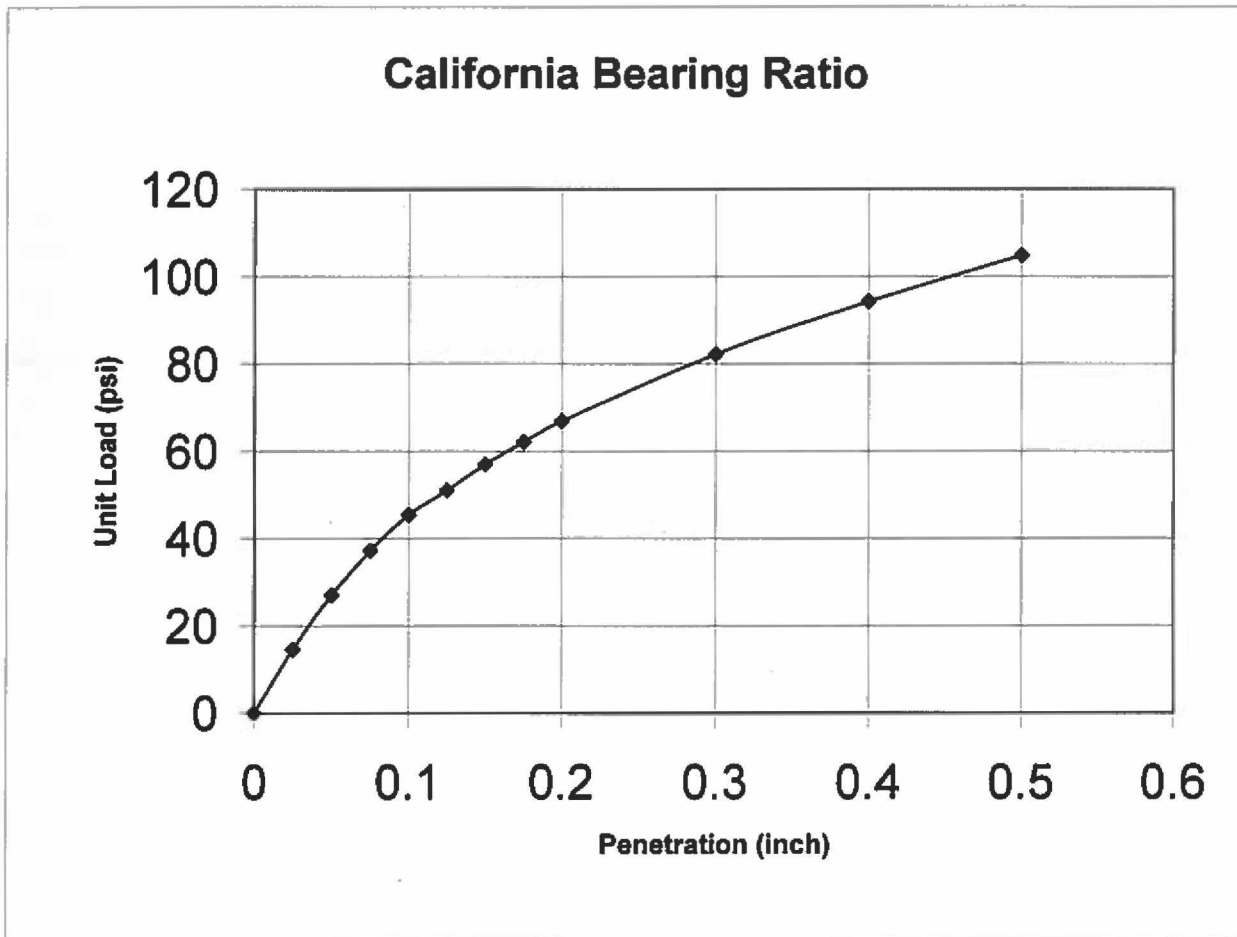
Sand: 6 %

Silt & Clay: 94 %





| | |
|--|-------|
| CBR @ 0.1" Penetration | 4.5 |
| CBR @ 0.2" Penetration | 4.5 |
| Maximum Dry Density (pcf) | 106.5 |
| Optimum Moisture Content (%) | 20.0 |
| Dry Density (pcf) | 99.0 |
| Dry Density (% Maximum) | 93.0 |
| Surcharge Weight (lbs) | 10.0 |
| Swell (%) | |
| Before Soaking Moisture Content | 19.5 |
| After Soaking Moisture Content: | |
| Top Inch | 25.7 |
| Average | 23.5 |



| | |
|--|-------|
| CBR @ 0.1" Penetration | 4.5 |
| CBR @ 0.2" Penetration | 4.5 |
| Maximum Dry Density (pcf) | 106.5 |
| Optimum Moisture Content (%) | 20.0 |
| Dry Density (pcf) | 99.0 |
| Dry Density (% Maximum) | 93.0 |
| Surcharge Weight (lbs) | 10.0 |
| Swell (%) | |
| Before Soaking Moisture Content | 19.5 |
| After Soaking Moisture Content: | |
| Top Inch | 25.7 |
| Average | 23.5 |

WinPAS

Pavement Thickness Design According to
1993 AASHTO Guide for Design of Pavements Structures
American Concrete Pavement Association

Flexible Design Inputs

Agency:
Company: Job No. 1,317
Contractor:
Project Description: Forrest Glen Subdivision
Location: North and East of F 1/2 Road and 29 1/2 Road

Flexible Pavement Design/Evaluation

| | | | | |
|-------------------|-----------|-------------------------|----------|-----|
| Structural Number | 2.68 | Soil Resilient Modulus | 3,120.20 | psi |
| Design ESALs | 54,750.00 | Initial Serviceability | 4.50 | |
| Reliability | 80.00 | Terminal Serviceability | 2.00 | |
| Overall Deviation | 0.45 | | | |

Layer Pavement Design/Evaluation

| Layer Material | Layer Coefficient | Drainage Coefficient | Layer Thickness | Layer SN |
|-------------------------|-------------------|----------------------|-----------------|----------|
| Asphalt Cement Concrete | 0.40 | 1.00 | 3.00 | 1.20 |
| Crushed Stone Base | 0.12 | 1.00 | 12.37 | 1.48 |
| | 0.10 | 1.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Σ SN | 2.68 |

WinPAS

Pavement Thickness Design According to
1993 AASHTO Guide for Design of Pavements Structures
American Concrete Pavement Association

Flexible Design Inputs

Agency:
Company: Job No. 1,317
Contractor:
Project Description: Forrest Glen Subdivison
Location: North and East of F 1/2 Road and 29 1/2 Road

Flexible Pavement Design/Evaluation

| | | | | |
|-------------------|-----------|-------------------------|----------|-----|
| Structural Number | 2.68 | Soil Resilient Modulus | 3,120.20 | psi |
| Design ESALs | 54,750.00 | Initial Serviceability | 4.50 | |
| Reliability | 80.00 | Terminal Serviceability | 2.00 | |
| Overall Deviation | 0.45 | | | |

Layer Pavement Design/Evaluation

| Layer Material | Layer Coefficient | Drainage Coefficient | Layer Thickness | Layer SN |
|-------------------------|-------------------|----------------------|-----------------|----------|
| Asphalt Cement Concrete | 0.40 | 1.00 | 6.71 | 2.68 |
| Crushed Stone Base | 0.12 | 1.00 | 0.00 | 0.00 |
| | 0.10 | 1.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Σ SN | 2.68 |

WinPAS

Pavement Thickness Design According to
1993 AASHTO Guide for Design of Pavements Structures
American Concrete Pavement Association

Flexible Design Inputs

Agency:
Company: Job No. 1,317
Contractor:
Project Description: Forrest Glen Subdivison
Location: North and East of F 1/2 Road and 29 1/2 Road

Flexible Pavement Design/Evaluation

| | | | | |
|-------------------|---------------|-------------------------|----------|-----|
| Structural Number | 2.68 | Soil Resilient Modulus | 3,120.20 | psi |
| Design ESALs | 54,750.00 | Initial Serviceability | 4.50 | |
| Reliability | 80.00 percent | Terminal Serviceability | 2.00 | |
| Overall Deviation | 0.45 | | | |

Layer Pavement Design/Evaluation

| Layer Material | Layer Coefficient | Drainage Coefficient | Layer Thickness | Layer SN |
|-------------------------|-------------------|----------------------|-----------------|----------|
| Asphalt Cement Concrete | 0.40 | 1.00 | 4.00 | 1.60 |
| Crushed Stone Base | 0.12 | 1.00 | 9.04 | 1.08 |
| | 0.10 | 1.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Σ SN | 2.68 |

WinPAS

Pavement Thickness Design According to
1993 AASHTO Guide for Design of Pavements Structures
American Concrete Pavement Association

Flexible Design Inputs

Agency:
Company: Job No. 1,317
Contractor:
Project Description: Forrest Glen Subdivison
Location: North and East of F 1/2 Road and 29 1/2 Road

Flexible Pavement Design/Evaluation

| | | | | |
|--------------------------|-----------|--------------------------------|----------|-----|
| Structural Number | 2.68 | Soil Resilient Modulus | 3,120.20 | psi |
| Design ESALs | 54,750.00 | Initial Serviceability | 4.50 | |
| Reliability | 80.00 | Terminal Serviceability | 2.00 | |
| Overall Deviation | 0.45 | | | |

Layer Pavement Design/Evaluation

| Layer Material | Layer Coefficient | Drainage Coefficient | Layer Thickness | Layer SN |
|-------------------------|-------------------|----------------------|-----------------|----------|
| Asphalt Cement Concrete | 0.40 | 1.00 | 3.00 | 1.20 |
| Crushed Stone Base | 0.12 | 1.00 | 4.00 | 0.48 |
| | 0.10 | 1.00 | 10.04 | 1.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Σ SN | 2.68 |

WinPAS

Pavement Thickness Design According to 1993 AASHTO Guide for Design of Pavements Structures American Concrete Pavement Association

Rigid Design Inputs

Agency:
Company: Job No. 1,317
Contractor:
Project Description: Forrest Glen Subdivison
Location: North and East of F 1/2 Road and 29 1/2 Road

Rigid Pavement Design/Evaluation

| | | | | | |
|-----------------------|-----------|---------|---------------------------|------|--------|
| PCC Thickness | 4.09 | Inches | Load Transfer, J | 3.20 | |
| Design ESALs | 54,750.00 | | Mod. Subgrade Reaction, k | 161 | psi/in |
| Reliability | 80.00 | percent | Drainage Coefficient, Cd | 1.00 | |
| Overall Deviation | 0.35 | | Initial Serviceability | 4.50 | |
| Modulus of Rupture | 500 | psi | Terminal Serviceability | 2.50 | |
| Modulus of Elasticity | 3,375,000 | psi | | | |

Modulus of Subgrade Reaction (k-value) Determination

Resilient Modulus of the Subgrade 3,120.20 psi
Resilient Modulus of the Subbase 0.0 psi
Subbase Thickness 0.0 inches
Depth to Rigid Foundation 0.0 feet
Loss of Support Value (0,1,2,3) 0.0

| | | |
|------------------------------|--------|--------|
| Modulus of Subgrade Reaction | 160.80 | psi/in |
|------------------------------|--------|--------|

APPENDIX B
CONSTRUCTION RECOMMENDATIONS
FOR FLEXIBLE AND RIGID PAVEMENT

FLEXIBLE PAVEMENT CONSTRUCTION RECOMMENDATIONS

Experience has shown that construction methods can have a significant effect on the life and serviceability of a pavement system. We recommend the proposed pavement be constructed in the following manner:

1. The subgrade should be stripped of organic matter and deleterious materials, scarified, moisture treated and compacted. Soils should be scarified a minimum 10-inches depth, moisture treated to within 1 percent below to 3 percent above optimum moisture content and compacted to at least 95 percent of maximum standard Proctor dry density (ASTM D 698).
2. After final subgrade elevation has been reached and the subgrade compacted, the area should be proof-rolled with a heavy pneumatic-tired vehicle (i.e., a loaded 10-wheel dump truck). Subgrade that is pumping or deforming excessively should be stabilized.
3. If areas of soft or wet subgrade are encountered, the material should be subexcavated and replaced with properly compacted structural backfill. Where extensively soft, yielding subgrade is encountered, we recommend the excavation be inspected by a representative of our office.
4. Aggregate base course should be laid in thin, loose lifts, moisture treated to within 2 percent of optimum moisture content, and compacted to at least 95 percent of maximum modified Proctor dry density (ASTM D 1557, AASHTO T 180).
5. Aggregate sub base course should be laid in thin, loose lifts, moisture treated to within 2 percent of optimum moisture content, and compacted to at least 95 percent of maximum modified Proctor dry density (ASTM D 1557, AASHTO T 180).
6. Asphaltic concrete should be hot plant-mixed material compacted to between 92 and 96 percent of maximum theoretical density. The temperature at laydown time should be at least 235 degrees F. The maximum compacted lift should be 3.0 inches and joints should be staggered.
7. The subgrade preparation and the placement and compaction of all pavement material should be observed and tested. Compaction criteria should be met prior to the placement of the next paving lift. The additional requirements of the Colorado Department of Transportation and City of Grand Junction Specifications should apply.

RIGID PAVEMENT CONSTRUCTION RECOMMENDATIONS

Rigid pavement sections are not as sensitive to subgrade support characteristics as flexible pavement. Due to the strength of the concrete, wheel loads from traffic are distributed over a large area and the resulting subgrade stresses are relatively low. The critical factors affecting the performance of a rigid pavement are the strength and quality of the concrete, and the uniformity of the subgrade. We recommend subgrade preparation and construction of the rigid pavement section be completed in accordance with the following recommendations:

1. Subgrade areas should be stripped of organics and deleterious materials. The pavement subgrade should be scarified a minimum 10-inches depth, moisture conditioned to within 1 percent below to 3 percent above optimum moisture content and compacted to at least 95% of maximum standard Proctor dry density (ASTM D 698). Moisture treatment and compaction recommendations also apply where additional fill is necessary.
3. The resulting subgrade shall be checked for uniformity and all soft or yielding materials should be replaced prior to paving. Concrete should not be placed on soft, spongy, frozen, or otherwise unsuitable subgrade.
4. The subgrade shall be kept moist prior to paving.
5. Concrete should not be placed in cold weather nor on frozen subgrade.
6. Curing procedures should protect the concrete against moisture loss, rapid temperature change, freezing, and mechanical injury for at least 3 days after placement. Traffic should not be allowed on the pavement for at least one week.
7. A white, liquid membrane curing compound, applied at the rate of 1 gallon per 150 square feet, should be used.
8. Construction joints, including longitudinal joints and transverse joints, should be formed during construction or should be sawed shortly after the concrete has begun to set, but prior to uncontrolled cracking. All joints should be sealed.
9. Construction control and inspection shall be carried out during the subgrade preparation and paving procedures. Concrete shall be carefully monitored for quality control. The additional requirements of the City of Grand Junction and Colorado Department of Transportation Specifications should apply.
10. Deicing salts should not be used for the first year after placement.



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02-716 *WJY*

**TRANSACTION SCREEN ENVIRONMENTAL SITE ASSESSMENT
Forrest Glen Subdivision
658 29 Road
North and East of F ½ Road and 29 Road
Grand Junction, Colorado**

Prepared for:

**MDY Consulting Engineers, Inc.
743 Horizon Court, Suite 311
Grand Junction, CO 81506**

Attention: Mr. Mark Young, P.E.

Job No. 1,297

February 13, 2003

Geotechnical, Environmental and Materials Testing Consultants

**(970) 245-4078 • fax (970) 245-7115 • geotechnicalgroup.com
2308 Interstate Avenue, Grand Junction, Colorado 81505**

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FIGURE 1 – VICINITY MAP

FIGURE 2 – SITE MAP

APPENDIX A – MESA COUNTY RECORDS

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APPENDIX H – PUBLIC AGENCY REQUEST LETTERS

SCOPE

This report presents the results of a Transaction Screen Environmental Site Assessment for an approximately 4.3-acre parcel (subject site) located on the property known as 658 29 Road in Grand Junction, Mesa County, Colorado. The subject site is located north and east of the intersection of F ½ Road and 29 Road (Fig. 1). The purpose of the assessment was to investigate whether evidence exists to suggest the subject site or sites within the American Society of Testing and Materials (ASTM)- specified search radii meet the ASTM definition of a "recognized environmental condition." Our scope did not include chemical testing of soils or groundwater, or investigation of wetlands, mineral rights, radon, or utility easements. We did not inspect or test building materials.

This report presents discussions on site hydrogeology and site history; information from documents including those obtained from an independent agency review of local, State, and Federal databases; and our opinions of whether identified sites meet the ASTM definition of a "recognized environmental condition," and/or the need for additional study. The Transaction Screen portion of this report was prepared in general conformance with the specifications for a Transaction Screen Environmental Site Assessment by ASTM E 1528-00.

SUMMARY OF CONCLUSIONS

1. At the time of our investigation, the subject site was occupied by a mobile home and vacant land. The mobile home was reported to be served by municipal water, natural gas, and electric power. We were informed by the Site Owner, Mr.

Max Sneddon that domestic waste was directed to an on-site septic field. We believe it would be a prudent measure to remove and properly dispose of the septic field, prior to development. We observed construction debris. We did not smell noxious odors or observe staining on the ground during the site visit. In our opinion, no recognized environmental conditions were observed on the subject site and no recognized environmental conditions were observed on the agricultural land adjoining the site.

2. Historic uses of the subject site include vacant land and agricultural activities. We do not believe that past agricultural uses of the subject site or adjacent properties meet the definition of a recognized environmental condition.
3. Public records we reviewed indicated no sites with recognized environmental conditions within the ASTM-specified distances from the subject site.
4. We obtained a Colorado Department of Public Health and Environment (CDPHE) mill tailings report for the subject site. No indication of tailings were identified on the survey report.
5. We contacted the Grand Junction Fire Department requesting knowledge of hazardous or toxic spills, or underground storage tank releases that have occurred on or adjacent to the subject site. If we are supplied with information that affects the recommendations within this report, we will notify you at that time.
6. We performed a Transaction Screen in general conformance with the scope and limitations of the ASTM Standard. This investigation identified no evidence of recognized environmental conditions associated with this property. We therefore conclude that no further investigation is warranted.

SITE CONDITIONS

The subject site is an approximately 4.3-acre parcel located at 658 29 Road in Grand Junction, Mesa County, Colorado (Fig. 1). The subject site (Fig. 2) is located northeast of the intersection of F ½ Road and 29 Road. United States Geologic Survey (USGS) data indicate the site is located within the Southwest ¼ of the Northwest ¼ of Section 5, Township 1 South, Range 1 East of the Ute Principal Meridian. Mesa County

records and property legal description are provided in Appendix A. The subject site is located approximately 3.4 miles north-northeast of the Colorado River, at an elevation of approximately 4,750 feet.

At the time of our investigation, the subject site was occupied by a mobile home and vacant land (Appendix B, Photographs 1 and 2). The mobile home was reported to be served by municipal water, natural gas, and electric power. We were informed by the Site Owner, Mr. Max Sneddon, that domestic waste was directed to an on-site leach field.

Surface vegetation included weeds and grasses. We observed construction debris (Appendix B, Photograph 3). We did not smell noxious odors or observe staining on the ground during the site visit. We noted north/south furrows across the field. An irrigation canal was located south of the subject site and near the south property line in the western portion of the site. The canal was approximately 6 to 8 feet in depth and no water was flowing at the time of site visit (Appendix B, Photograph 4). A barbed-wire fence surrounded the subject site. The ground surface on site had a very gentle slope to the south. No recognized environmental conditions were observed on the subject site.

The surrounding areas were generally flat, sloping down toward the southwest at a gradient of approximately 1 to 3 percent (USGS). Agricultural land adjoined the subject site to the north (Appendix B, Photograph 5), east, and south (Appendix B,

Photograph 6). Adjoining the subject site to the west was 29 Road and agricultural land.

In our opinion, no recognized environmental conditions were observed on the agricultural land adjoining the site.

HYDROGEOLOGIC SETTING

The subject site is located about 165 feet higher in elevation and approximately 3.4 miles north-northeast of the Colorado River. The Colorado River flows toward the west in this portion of Mesa County. Subsurface conditions found during a January 2003 geotechnical investigation included up to 5 feet of clay and up to 3.5 feet of extremely weathered shale underlain by clayey shale to the maximum depth of 5 to 10 feet below the existing ground surface. Free groundwater was not encountered to a depth of 6.5 feet below the ground surface at the time of excavation. No obvious evidence of environmental impact was revealed in the test pits.

SITE HISTORY

To determine the site-use history, we:

- reviewed the USGS Grand Junction, Colorado topographic map from 1962, photorevised in 1973 (Figure 1),
- reviewed the 1954 (Appendix C, Figure C-1) aerial photograph of the subject site,
- requested Sanborn Fire Insurance maps (Appendix D)
- interviewed the Property Owner (Mr. Maxwell Sneddon), and
- visited the site.

The 1954 aerial photograph (Appendix C, Figure C-1) illustrates the subject site as undeveloped land. The 1962 (photo revised 1973) topographic map, (Figure 1) shows the subject site as vacant and shows a structure adjoining the subject site to the east.

Mr. Maxwell Sneddon served as the Property Owner for the subject site. Mr. Sneddon's knowledge of the subject site was consistent with the subject site history discussed above. Mr. Sneddon was unaware of environmentally detrimental activities being conducted on the subject site (Appendix E). However, we believe it would be a prudent measure to remove and properly dispose of the septic field, prior to development.

Mr. Sneddon pointed out an on-site septic field for residential waste disposal. Based on our experience, residential septic fields do not meet the ASTM definition of a recognized environmental condition. However, we believe it would be a prudent measure to remove and properly dispose of the septic field, prior to development.

We believe that the subject site history suggests agricultural use. Pesticides and herbicides may have been applied in the past due to a potential agricultural usage. The concentration of these types of chemicals is generally reduced through the passage of time, natural degradation, aeration, and dilution. Aboveground storage tanks (ASTs) are commonly used on farms for equipment fuel storage. Leakage or spills from ASTs and equipment maintenance can impact soils and groundwater. During our site inspection, no ASTs were observed on the subject site. We did not see evidence of

ASTs on the subject site in the historical photographs.

PUBLIC RECORDS

We requested a public records search from Environmental Data Resources Inc., (EDR) in an attempt to identify NPL/Superfund sites, CERCLA sites, registered UST, AST, leaking UST, RCRA, ERNS sites, and landfill sites on or in the vicinity of the subject site. Requested search radii were equal to that required by the ASTM Transaction Screen standard. We did not consider all sites identified as "orphan sites". The EDR report is included in Appendix F.

Sites Located Within 1/8 Mile of the Subject Site

No sites were found by EDR within 1/8 mile of the subject site.

Sites Located Within 1/8 to 1/4 Mile of the Subject Site

The EDR records search identified two sites within 1/8 to 1/4 mile of the subject site. Upon further review of the EDR data (see Appendix F), two site shown within 1/4 mile of the subject site were determined to be plotted incorrectly. The actual locations of these two sites were outside the ASTM specified search radii (greater than 1/2 mile radius). Therefore, these sites do not meet the ASTM definition of a recognized environmental condition.

Sites Located Within 1/4 to 1 Mile of the Subject Site

No sites were found by EDR within 1/4 to 1 mile of the subject site.

Uranium Mill Tailings

Historically, in the Mesa County area, uranium mill tailings were an inexpensive and plentiful fill material used in building foundations, under sidewalks, and even as a soil amendment to improve drainage in orchards and gardens. The use of this material is reported to span the period of 1952 to 1965 (interview, Colorado Department of Public Health and Environment (CDPHE)). We requested a CDPHE mill tailings report for the subject site. The report (Appendix G) states that "No Indication of Tailings Were Found on Date of Survey." Therefore, we believe that uranium mill tailings do not represent a recognized environmental condition for the subject site.

PUBLIC AGENCY REQUEST

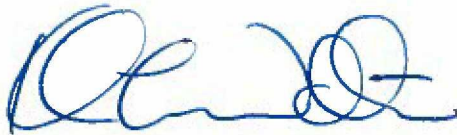
We contacted the Grand Junction Fire Department requesting knowledge of hazardous or toxic spills, or underground storage tank releases that have occurred on or adjacent to the project site. A copy of the request letters is included in Appendix H. At this time, we have not received a response from the Grand Junction Fire Department. If we are supplied with information from the Grand Junction Fire Department that affects the recommendations within this report, we will notify you at that time.

LIMITATIONS

The opinions presented in this report were developed from review of aerial photographs, topographic maps; site visit, and information supplied by interviews and independent, local, State and Federal Agencies. Due to latent conditions and other contingencies that may become evident in the future, the current assessment does not result in any guarantee the subject site is free and clear of hazardous materials. Should additional surface, subsurface or chemical data become available, the conclusions and recommendations contained in this report shall not be considered valid unless the data are reviewed and the conclusions of this report are modified or approved in writing by our firm.

If we can clarify our opinions or be of further service, please call.

GEOTECHNICAL ENGINEERING GROUP, INC.



Kenneth L. Walter
Environmental Hydrogeologist

KLW:JPW:cd
(3 copies sent)

Reviewed by:



John P. Withers, P.E.
Principal Engineer



BIBLIOGRAPHY OF REFERENCES

Aerial Photograph, 1954, City of Grand Junction.

City of Grand Junction Web Site <http://www.ci.grandjct.co.us/>

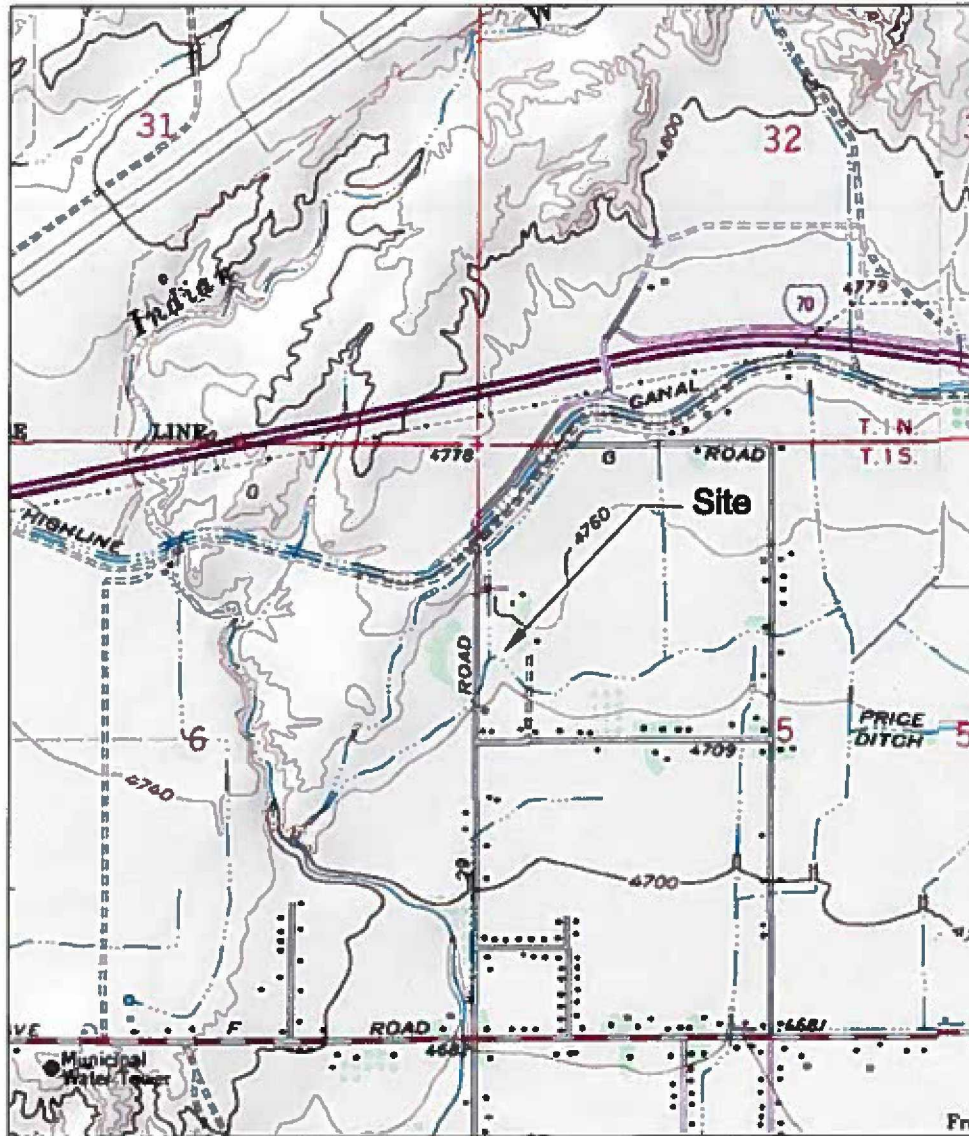
Mesa County Web Site <http://www.co.mesa.co.us/Assessor>

"The EDR Radius Map" Proposed Forrest Glen Subdivision, 658 29 Road, Grand Junction, CO 81504, dated February 04, 2003 by Environmental Data Resources, Inc.

United States Geologic Survey, Grand Junction, Colorado Quadrangle, 1962, photorevised 1973.

FIGURES

Environmental Investigation Forrest Glen Subdivision North and East of F 1/2 Road and 29 Road Grand Junction, Colorado



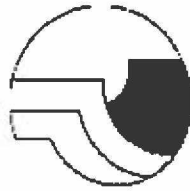
Source: USGS Grand Junction, Colorado Quadrangle, 1962

**Environmental Investigation
Forrest Glen Subdivision
North and East of F 1/2 Road
and 29 Road
Grand Junction, Colorado**



Source: 2002 Mesa County Aerial Photograph

APPENDIX A
MESA COUNTY RECORDS



Mesa County

Property Search Results

The Mesa County Assessor's Office makes every effort to collect and maintain accurate data. However, the Mesa County Assessor's Office is unable to warrant any of the information contained herein.

| Parcel Number | Name | Address | Legal Description | Actual Value | Map It |
|-----------------|--|-----------|--|----------------|------------|
| 2943-052-00-077 | SNEDDON, MAXWELL and CAROLE M SNEDDON | 658 29 RD | W 3/8 OF SW4NW4 SEC 5 1S 1E EXC S 390FT + ALSO EXC N495.91FT + ALSO EXC W 30FT FOR RD | <u>\$5,590</u> | <u>MAP</u> |

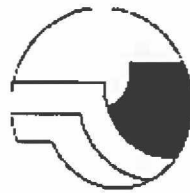
For more information, double click on the underlined text.


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Page Design Last Modified: 03 Jan 2003



Mesa County

Property Search Results *(Continued)*

The Mesa County Assessor's Office makes every effort to collect and maintain accurate data. However, the Mesa County Assessor's Office is unable to warrant any of the information contained herein.

| | |
|--------------------|--|
| Owner's Name: | SNEDDON, MAXWELL and CAROLE M SNEDDON |
| Mailing Address: | 895 24 1/2 RD GRAND JUNCTION, CO 81505 |
| Parcel Identifier: | 2943-052-00-077 |
| Associated Par: | 7008-051-30-526 |
| Legal Description: | W 3/8 OF SW4NW4 SEC 5 1S 1E EXC S 390FT + ALSO EXC N495.91FT + ALSO EXC W 30FT FOR RD |
| Property Address: | 658 29 RD |
| NeighborHood: | AREA 30 |
| Land Unit 1: | |
| Schedule Type: | MANUF HOUSING |
| Units: | 3.0 |
| Unit Type: | Acres |
| Land Unit 2: | |
| Schedule Type: | MANUF HOUSING |
| Units: | 1.35 |
| Unit Type: | Acres |
| | Building Characteristics (Including Drawings and Information) |

Tax Information

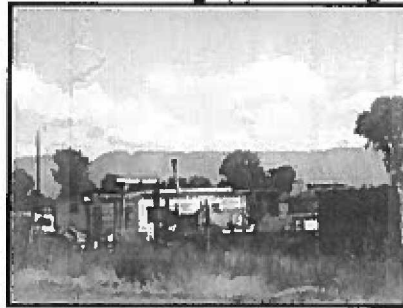
| | | | | |
|------|-------------------------------|--------------|---------|----------|
| 2003 | Tac 18200 | Improvements | Land | Total |
| | Actual | \$3,490 | \$2,100 | \$5,590 |
| | Assessed | \$1,010 | \$610 | \$1,620 |
| | Mill Levy | | | 0.075519 |
| | Special Asmt | | | \$92.01 |
| | Property Taxes + Special Asmt | | | \$214.35 |
| 2002 | Tac 18200 | Improvements | Land | Total |
| | Actual | \$3,490 | \$2,100 | \$5,590 |
| | Assessed | \$1,010 | \$610 | \$1,620 |
| | Mill Levy | | | 0.075519 |
| | Special Asmt | | | \$92.01 |
| | Property Taxes + Special Asmt | | | \$214.35 |
| 2001 | Tac 18200 | Improvements | Land | Total |
| | Actual | \$3,490 | \$2,100 | \$5,590 |
| | Assessed | \$1,010 | \$610 | \$1,620 |
| | Mill Levy | | | 0.071441 |
| | Special Asmt | | | \$92.01 |
| | Property Taxes + Special Asmt | | | \$207.74 |

Sales Activity (if any)

| Date | Amount | Book | Page | Instrument Type |
|------|--------|------|------|-----------------|
| | | | | |

| | | | | |
|------------|-----------|------|---------|-----------|
| 8/10/2000 | \$0 | 2746 | 640 | DEATH CER |
| 6/11/1970 | \$5,500 | 1110 | 323 | WDJT |
| 12/13/2001 | \$112,000 | 2985 | 866 | WD |
| 10/23/2002 | \$152,000 | 3198 | 502/503 | WDJT |

Click on Image(s) to Enlarge



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Mesa County

Building Characteristics

The Mesa County Assessor's Office makes every effort to collect and maintain accurate data. However, the Mesa County Assessor's Office is unable to warrant any of the information contained herein.

| | |
|------------------|---------------------------------------|
| Owner's Name: | SNEDDON, MAXWELL and CAROLE M SNEDDON |
| Parcel Number: | 2943-052-00-077 |
| Location: | 658 29 RD |
| Miscellaneous: 1 | D EQUIP SHED-AV/BRD |
| Miscellaneous: 2 | D EQUIP SHED-AV/BRD |
| Miscellaneous: 3 | D EQUIP SHED-AV/BRD |



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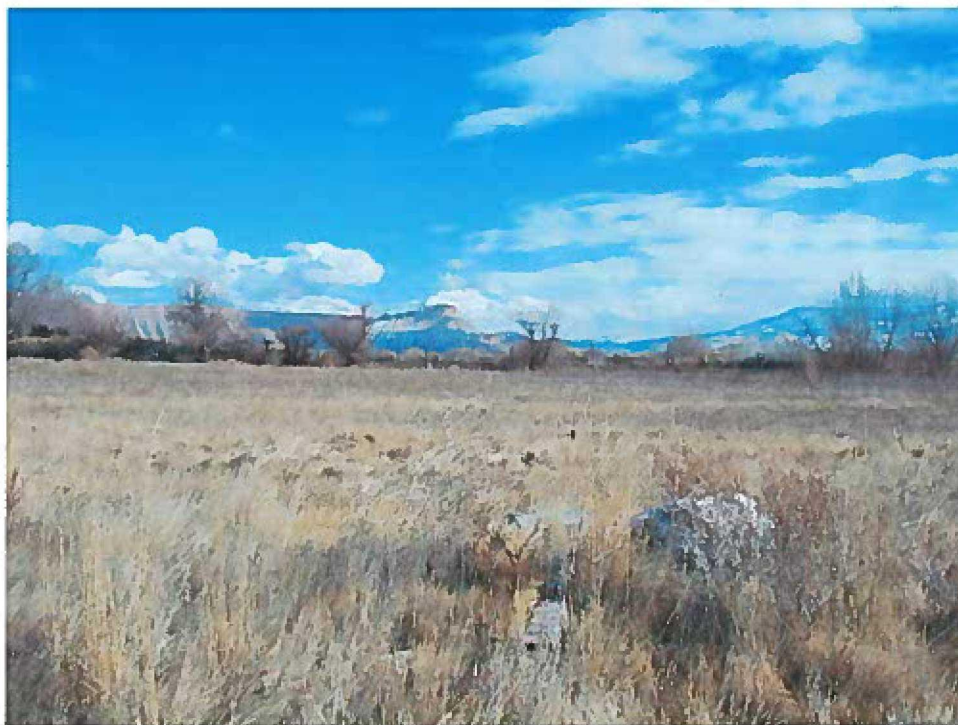
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APPENDIX B
SITE PHOTOGRAPHS



Photograph 1 – Mobile Home. View to the west-southwest.



Photograph 2 – Subject Site. View to the east.



Photograph 3 – Mobile Home. View to the east. Note construction debris.



Photograph 4 – Irrigation Canal. View to the west.



Photograph 5 – Subject site and vacant land adjoining the site to the north.



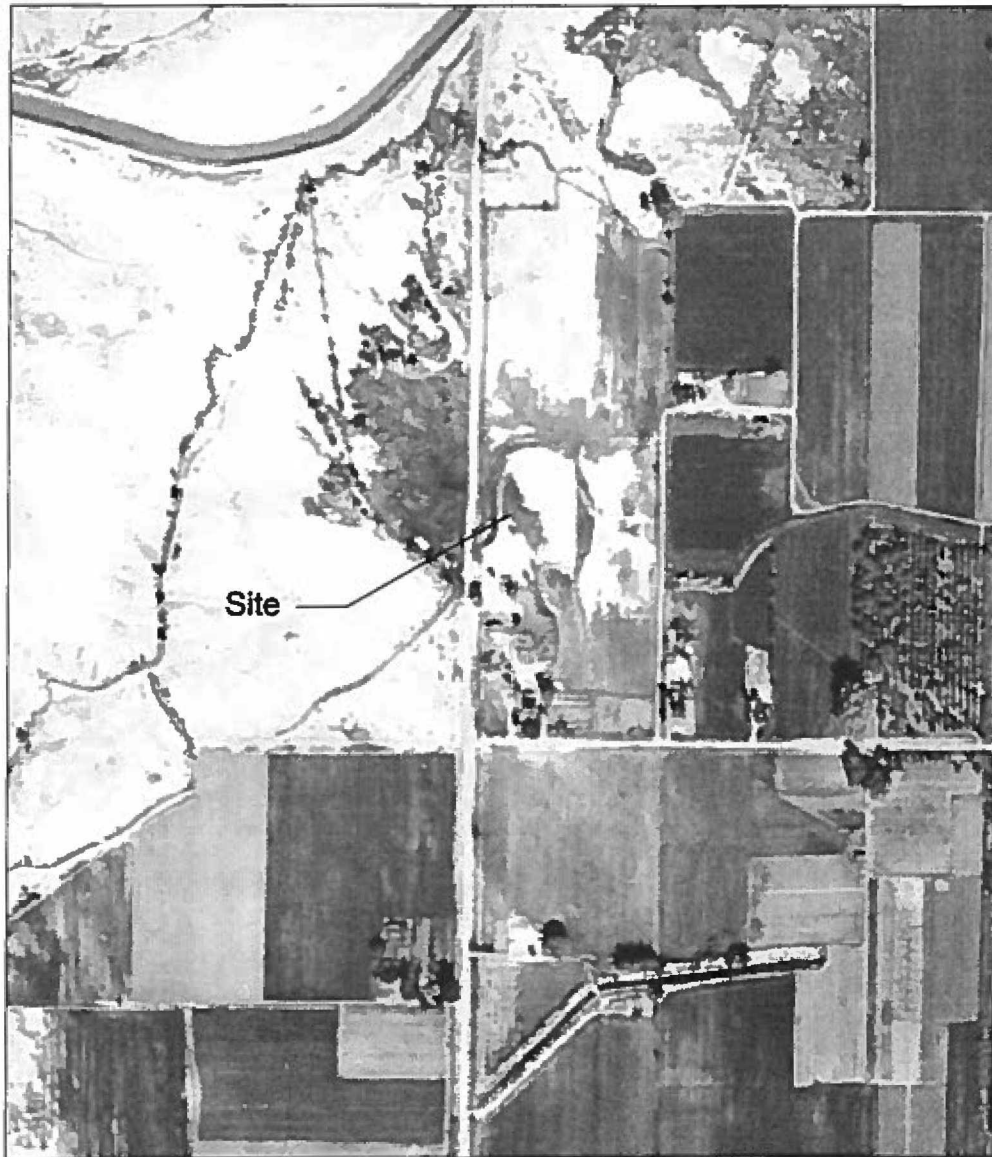
Photograph 6 – Subject Site. View to the south.

APPENDIX C

AERIAL PHOTOGRAPH

Note: Due to inaccuracies in reproduction, the scales are not reported. The photographs are provided for the viewer to identify the site and landmarks, and are not intended for design use.

Environmental Investigation
Forrest Glen Subdivision
North and East of F 1/2 Road
and 29 Road
Grand Junction, Colorado



Source: 1954 Grand Junction Aerial Photograph

APPENDIX D

SANBORN FIRE INSURANCE MAP SEARCH RESULTS



"Linking Technology with Tradition"

Sanborn® Map Report

Order Date: 2/4/2003 **Completion Date:** 02/05/2003

Inquiry #: 921630.2S

P.O. #: NA

Site Name: Proposed Forrest Glen Subdivision

Address: 65829 Road

City/State: Grand Junction, CO 81504

Cross Streets:

2010461LUC

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client-supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

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APPENDIX E
TRANSACTION SCREEN QUESTIONNAIRE

ASTM Transaction Screen Questionnaire / Phase I ESA Questionnaire

Property Owner

Name: **MAXUEDDON**
 Title: **OWNER**
 Years associated with subject property: **2**
 Street Address:
 City/State/Zip:
 TEL:
 FAX:

Key Site Manager (if different than property owner)

Name:
 Title:
 Years associated with subject property:
 Street Address:
 City/State/Zip:
 TEL:
 FAX:

Site Description or Address:

**PROPOSED FORREST GLEN SUBDIVISION
 NORTH AND EAST OF F 1/2 ROAD AND 29 ROAD
 AKA 658 29 ROAD**

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|--|-------|-------------------------------------|-----|-----------|----|-----|----------------------------|-------------------------------------|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 1a. Is the property used for an industrial use? | | <input checked="" type="checkbox"/> | | | | | | <input checked="" type="checkbox"/> | |
| 1b. Is any adjoining property used for an industrial use? | | <input checked="" type="checkbox"/> | | | | | | <input checked="" type="checkbox"/> | |
| 2a. Did you observe evidence or do you have any prior knowledge that the property has been used for an industrial use in the past? | | <input checked="" type="checkbox"/> | | | | | | <input checked="" type="checkbox"/> | |

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|---|-------|----|-----|-----------|----|-----|----------------------------|----|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 2b. Did you observe evidence or do you have any prior knowledge that any adjoining property has been used for an industrial use in the past? | | X | | | | | | X | |
| 3a. Is the property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)? | | X | | | | | | X | |
| 3b. Is any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photodeveloping laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)? | | X | | | | | | X | |
| 4a. Did you observe evidence or do you have any prior knowledge that the property has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)? | | X | | | | | | X | |
| 4b. Did you observe evidence or do you have prior knowledge that any adjoining property has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)? | | X | | | | | | X | |
| 5a. Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints or other chemicals in individual containers of >5 gal in volume or 50 gal in the aggregate, stored on or used at the property or at the facility? | | X | | | | | | X | |

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|---|-------|----|-----|-----------|----|-----|----------------------------|----|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 5b. Did you observe evidence or do you have any prior knowledge that there have been previously any damaged or discarded automotive or industrial batteries, or pesticides, paints or other chemicals in individual containers of >5 gal in volume or 50 gal in the aggregate, stored on or used at the property or facility? | | X | | | | | | X | |
| 6a. Are there currently any industrial drums (typically 55 gal) or sacks of chemicals located on the property or at the facility? | | X | | | | | | X | |
| 6b. Did you observe evidence or do you have any prior knowledge that there have been previously any industrial drums (typically 55 gal) or sacks of chemicals located on the property or at the facility? | | X | | | | | | X | |
| 7a. Did you observe evidence or do you have any prior knowledge that fill dirt has been brought onto the property that originated from a contaminated site? | | X | | | | | | X | |
| 7b. Did you observe evidence or do you have any prior knowledge that fill dirt has been brought onto the property that is of an unknown origin? | | X | | | | | | X | |
| 8a. Are there currently any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal? | | X | | | | | | X | |
| 8b. Did you observe evidence or do you have any prior knowledge that there have been previously any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal? | | X | | | | | | X | |
| 9a. Is there currently any stained soil on the property? | | X | | | | | | X | |

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|--|-------|----|-----|-----------|----|-----|----------------------------|----|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 9b. Did you observe evidence or do you have any prior knowledge that there has been previously, any stained soil on the property? | | X | | | | | | X | |
| 10a. Are there currently any registered or unregistered storage tanks (above or underground) located on the property? | | X | | | | | | X | |
| 10b. Did you observe evidence or do you have any prior knowledge that there have been previously, any registered or unregistered storage tanks (above or underground) located on the property? | | X | | | | | | X | |
| 11a. Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? | | X | | | | | | X | |
| 11b. Did you observe evidence or do you have any prior knowledge that there have been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property? | | X | | | | | | X | |
| 12a. Are there currently any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors? | | X | | | | | | X | |
| 12b. Did you observe evidence or do you have any prior knowledge that there have been previously, any flooring, drains, or walls located within the facility that were stained by substances other than water or were emitting foul odors? | | X | | | | | | X | |

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|--|-------|----|-----|-----------|----|-----|----------------------------|----|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 13a. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system? | | NA | | | | | | NA | |
| 13b. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that the well has been designated as contaminated by any government environmental/health agency? | | NA | | | | | | NA | |
| 14. Does the owner or occupant of the property have any knowledge of environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property? | | X | | | | | | NA | |
| 15a. Has the owner or occupant of the property been informed of the past existence of hazardous substances or petroleum products with respect to the property or any facility located on the property? | | X | | | | | | NA | |
| 15b. Has the owner or occupant of the property been informed of the current existence of hazardous substances or petroleum products with respect to the property or any facility located on the property? | | X | | | | | | NA | |
| 15c. Has the owner or occupant of the property been informed of the past existence of environmental violations with respect to the property or any facility located on the property? | | X | | | | | | NA | |
| 15d. Has the owner or occupant of the property been informed of the current existence of environmental violations with respect to the property or any facility located on the property? | | X | | | | | | NA | |

| Question | Owner | | | Occupants | | | Observed During Site Visit | | |
|---|-------|----|-----|-----------|----|-----|----------------------------|----|-----|
| | Yes | No | Unk | Yes | No | Unk | Yes | No | Unk |
| 16. Does the owner or occupant of the property have any knowledge of any environmental site assessment of the property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property? | | X | | | | | | NA | |
| 17. Does the owner or occupant of the property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property? | | X | | | | | | NA | |
| 18a. Does the property discharge waste water, on or adjacent to the property, other than storm water, into a storm water sewer system? | | X | | | | | | X | |
| 18b. Does the property discharge waste water, on or adjacent to the property, other than storm water, into a sanitary sewer system? | | X | | | | | | X | |
| 19. Did you observe evidence or do you have any prior knowledge that any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the property? | | X | | | | | | X | |
| 20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs? | | X | | | | | | X | |

APPENDIX F
EDR RADIUS MAP REPORT



The EDR Radius Map with GeoCheck[®]

**Proposed Forrest Glen Subdivision
65829 Road
Grand Junction, CO 81504**

Inquiry Number: 921630.1s

February 04, 2003

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06890

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

65829 ROAD
GRAND JUNCTION, CO 81504

COORDINATES

Latitude (North): 39.101100 - 39° 6' 4.0"
Longitude (West): 108.514600 - 108° 30' 52.6"
Universal Transverse Mercator: Zone 12
UTM X (Meters): 714928.0
UTM Y (Meters): 4330728.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 2439108-A5 GRAND JUNCTION, CO
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
RCRIS-SQG..... Resource Conservation and Recovery Information System
ERNS..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list.
SWF/IF..... Solid Waste Sites & Facilities
CO TRUST..... Lust Trust Sites
INDIAN UST..... Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

VCP..... Voluntary Cleanup & Redevelopment Act Application Tracking Report

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
Dellsted NPL..... National Priority List Deletions
FINDS..... Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS..... Hazardous Materials Information Reporting System
MLTS..... Material Licensing Tracking System
MINES..... Mines Master Index File
NPL Liens..... Federal Superfund Liens
PADS..... PCB Activity Database System
RAATS..... RCRA Administrative Action Tracking System
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
SSTS..... Section 7 Tracking Systems
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

HISTORICAL LANDFILL..... Historical Landfill List
AST..... Aboveground Tank List
CO ERNS..... Spills Database
METHANE SITE..... Methane Site Investigations - Jefferson County 1980
Methane Investigation..... Methane Gas & Swamp Findings

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

VCP..... Voluntary Cleanup & Redevelopment Act Application Tracking Report

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in *bold italics* are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STATE ASTM STANDARD

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Leaking Underground Storage Tank List.

A review of the LUST list, as provided by EDR, and dated 01/06/2003 has revealed that there are 2 LUST sites within approximately 0.625 miles of the target property.

| <u>Lower Elevation</u> | <u>Address</u> | <u>Dist / Dir</u> | <u>Map ID</u> | <u>Page</u> |
|--------------------------------|-----------------------|----------------------|---------------|-------------|
| <i>U-HAUL OF NORTH AVE #56</i> | <i>2949 NORTH AVE</i> | <i>1/8 - 1/4 SSE</i> | <i>1</i> | <i>6</i> |
| <i>LOCO FOOD STORE #14</i> | <i>2902 F RD</i> | <i>1/8 - 1/4 S</i> | <i>2</i> | <i>6</i> |

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The source is the State Oil Inspector's Office's Tank List.

A review of the UST list, as provided by EDR, and dated 01/10/2003 has revealed that there are 2 UST sites within approximately 0.375 miles of the target property.

| <u>Lower Elevation</u> | <u>Address</u> | <u>Dist / Dir</u> | <u>Map ID</u> | <u>Page</u> |
|--------------------------------|-----------------------|----------------------|---------------|-------------|
| <i>U-HAUL OF NORTH AVE #56</i> | <i>2949 NORTH AVE</i> | <i>1/8 - 1/4 SSE</i> | <i>1</i> | <i>6</i> |
| <i>LOCO FOOD STORE #14</i> | <i>2902 F RD</i> | <i>1/8 - 1/4 S</i> | <i>2</i> | <i>6</i> |

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name

GEORGE DUNHAM REAL ESTATE
MORAN REAL ESTATE
DALE REALTY
DEER PARK SOLID WASTE FACILITY
BROAD CANYON LANDFILL
DALES BROOMES RV CENTER
C R BROWN OIL CO
JOBSITE INC.

Database(s)

FTTS
FTTS
FINDS, FTTS
SWF/LF
SWF/LF
LUST
UST
RCRIS-SQG, FINDS

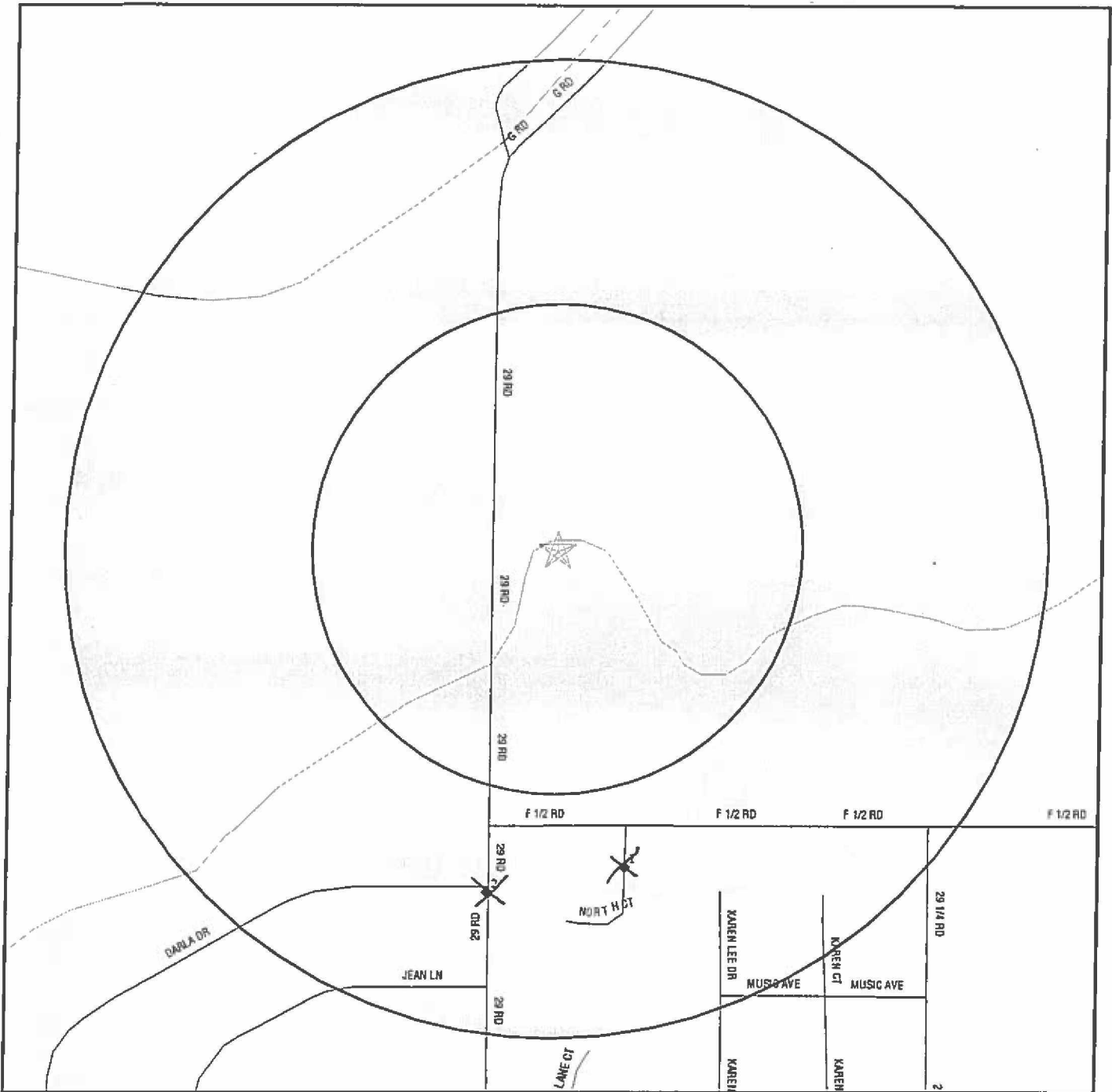
OVERVIEW MAP - 921630.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ▣ National Priority List Sites
- ▣ Landfill Sites
- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines

| | |
|---|---|
| TARGET PROPERTY: ADDRESS: Proposed Forrest Glen Subdivision CITY/STATE/ZIP: 65829 Road LAT/LONG: Grand Junction CO 81504 39.1011 / 108.5146 | DATE: February 04, 2003 5:41 pm <small>Copyright © 2003 EDR, Inc. © 2003 GDT, Inc. Rel. 07/2002. All Rights Reserved.</small> |
|---|---|

DETAIL MAP - 921630.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites

⚡ Power transmission lines
 ⚡ Oil & Gas pipelines



TARGET PROPERTY: Proposed Forrest Glen Subdivision
 ADDRESS: 65829 Road
 CITY/STATE/ZIP: Grand Junction CO 81504
 LAT/LONG: 39.1011 / 108.5146

DATE: February 04, 2003 5:42 pm

MAP FINDINGS SUMMARY

| <u>Database</u> | <u>Target Property</u> | <u>Search Distance (Miles)</u> | <u>< 1/8</u> | <u>1/8 - 1/4</u> | <u>1/4 - 1/2</u> | <u>1/2 - 1</u> | <u>> 1</u> | <u>Total Plotted</u> |
|--|------------------------|--------------------------------|-----------------|------------------|------------------|----------------|---------------|----------------------|
| <u>FEDERAL ASTM STANDARD</u> | | | | | | | | |
| NPL | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| Proposed NPL | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| CERCLIS | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| CERC-NFRAP | | 0.375 | 0 | 0 | 0 | NR | NR | 0 |
| CORRACTS | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| RCRIS-TSD | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| RCRIS Lg. Quan. Gen. | | 0.375 | 0 | 0 | 0 | NR | NR | 0 |
| RCRIS Sm. Quan. Gen. | | 0.375 | 0 | 0 | 0 | NR | NR | 0 |
| ERNS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| <u>STATE ASTM STANDARD</u> | | | | | | | | |
| State Haz. Waste | | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| State Landfill | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| LUST | | 0.625 | 0 | 2 | 0 | 0 | NR | 2 |
| CO TRUST | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| UST | | 0.375 | 0 | 2 | 0 | NR | NR | 2 |
| INDIAN UST | | 0.375 | 0 | 0 | 0 | NR | NR | 0 |
| VCP | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| <u>FEDERAL ASTM SUPPLEMENTAL</u> | | | | | | | | |
| CONSENT | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| ROD | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delisted NPL | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| FINDS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| HMIRS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| MLTS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| MINES | | 0.375 | 0 | 0 | 0 | NR | NR | 0 |
| NPL Liens | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| PADS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| RAATS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| TRIS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| TSCA | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| SSTS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| FTTS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| <u>STATE OR LOCAL ASTM SUPPLEMENTAL</u> | | | | | | | | |
| Historical Landfill | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |
| AST | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| CO ERNS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| Methane Site | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| Methane Investigation | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| <u>EDR PROPRIETARY HISTORICAL DATABASES</u> | | | | | | | | |
| Coal Gas | | 1.125 | 0 | 0 | 0 | 0 | 0 | 0 |

MAP FINDINGS SUMMARY

| <u>Database</u> | <u>Target Property</u> | <u>Search Distance (Miles)</u> | <u>< 1/8</u> | <u>1/8 - 1/4</u> | <u>1/4 - 1/2</u> | <u>1/2 - 1</u> | <u>> 1</u> | <u>Total Plotted</u> |
|-------------------------------------|------------------------|--------------------------------|-----------------|------------------|------------------|----------------|---------------|----------------------|
| <u>BROWNFIELDS DATABASES</u> | | | | | | | | |
| VCP | | 0.625 | 0 | 0 | 0 | 0 | NR | 0 |

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1
SSE
1/8-1/4
878 ft.
Lower

U-HAUL OF NORTH AVE #56
2949 NORTH AVE
GRAND JUNCTION, CO 81503

LUST U003117743
UST N/A

LUST:
Log Date: 9/12/95
Event ID: 4096
Status: Closed

UST:
Facility ID: 3402
Owner Name: U-HAUL CO OF COLORADO,
Owner Address: 7540 YORK ST
DENVER, CO 80229
Owner ID: 5434
Tank ID: 9493
Tank Status: CLOSED
Tank Count: 21544
Tank Tag Date: 3402-1
Tank Capacity: 6000
Tank Chemical: Gasoline

Facility ID: 3402
Owner Name: U-HAUL CO OF COLORADO,
Owner Address: 7540 YORK ST
DENVER, CO 80229
Owner ID: 5434
Tank ID: 9494
Tank Status: CLOSED
Tank Count: 21544
Tank Tag Date: 3402-2
Tank Capacity: 6000
Tank Chemical: Diesel

Facility ID: 3402
Owner Name: U-HAUL CO OF COLORADO,
Owner Address: 7540 YORK ST
DENVER, CO 80229
Owner ID: 5434
Tank ID: 9495
Tank Status: CLOSED
Tank Count: 21544
Tank Tag Date: 3402-3
Tank Capacity: 6000
Tank Chemical: Diesel

2
South
1/8-1/4
942 ft.
Lower

LOCO FOOD STORE #14
2902 F RD
GRAND JUNCTION, CO 81504

LUST U003116507
UST N/A

LUST:
Log Date: 5/10/93
Event ID: 1391

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

LOCO FOOD STORE #14 (Continued)

U003116507

Status: Open

UST:

Facility ID: 9988
Owner Name: LOCO INC,
Owner Address: 2249 BROADWAY STE 8
GRAND JUNCTION, CO 81503
Owner ID: 3436
Tank ID: 26837
Tank Status: OPEN
Tank Count: 11625
Tank Tag Date: 9988-3
Tank Capacity: 10000
Tank Chemical: Gasoline

Facility ID: 9988
Owner Name: LOCO INC,
Owner Address: 2249 BROADWAY STE 8
GRAND JUNCTION, CO 81503
Owner ID: 3436
Tank ID: 26835
Tank Status: OPEN
Tank Count: 11625
Tank Tag Date: 9988-1
Tank Capacity: 10000
Tank Chemical: Gasoline

Facility ID: 9988
Owner Name: LOCO INC,
Owner Address: 2249 BROADWAY STE 8
GRAND JUNCTION, CO 81503
Owner ID: 3436
Tank ID: 26836
Tank Status: OPEN
Tank Count: 11625
Tank Tag Date: 9988-2
Tank Capacity: 10000
Tank Chemical: Gasoline

ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|----------------|------------|--------------------------------|-----------------------|-------|------------------|
| GRAND JUNCTION | S103485592 | DEER PARK SOLID WASTE FACILITY | 661 24 1/2 ROAD | | SWF/LF |
| GRAND JUNCTION | S104232532 | DALES BROOMES RV CENTER | 2474 HWY 6 / 50 WEST | 81506 | LUST |
| GRAND JUNCTION | S105542645 | BROAD CANYON LANDFILL | 2 1 MI SE OF NATURITA | | SWF/LF |
| GRAND JUNCTION | 1006349156 | GEORGE DUNHAM REAL ESTATE | 608 26.5 ROAD | 81506 | FTTS |
| GRAND JUNCTION | 1006357109 | MORAN REAL ESTATE | 823 28 ROAD | 81506 | FTTS |
| GRAND JUNCTION | 1004680242 | JOBSITE INC. | 545 31 ROAD | 81504 | RCRIS-SQG, FINDS |
| GRAND JUNCTION | 1005833017 | DALE REALTY | 3039 F ROAD | 81504 | FINDS, FTTS |
| GRAND JUNCTION | U003122743 | C R BROWN OIL CO | 3000 NORTH ST | 81504 | UST |

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List

Source: EPA
Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/24/02
Date Made Active at EDR: 12/09/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/04/02
Elapsed ASTM days: 35
Date of Last EDR Contact: 11/04/02

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Source: EPA
Telephone: N/A

Date of Government Version: 10/24/02
Date Made Active at EDR: 12/09/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/04/02
Elapsed ASTM days: 35
Date of Last EDR Contact: 11/04/02

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA
Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/13/02
Date Made Active at EDR: 01/15/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/02
Elapsed ASTM days: 20
Date of Last EDR Contact: 12/26/02

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Source: EPA
Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.