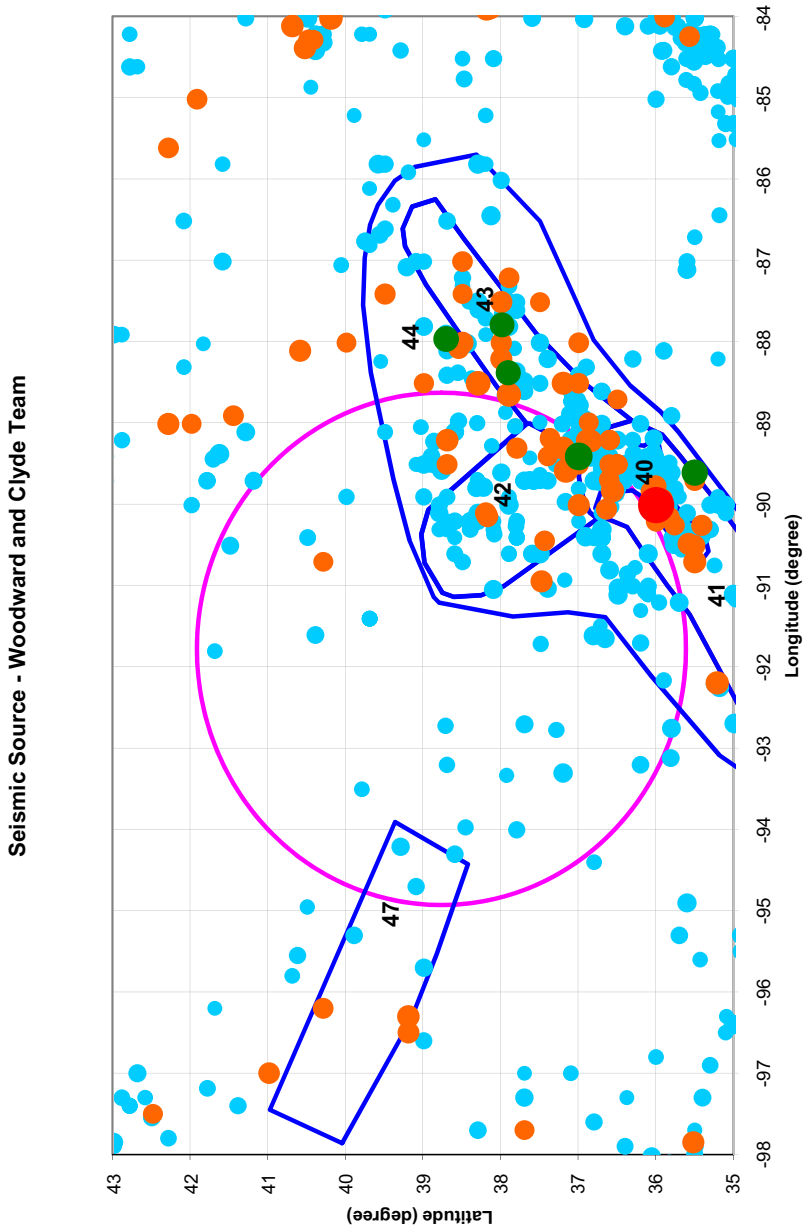
Figure 2.5-44—{Woodward-Clyde Consultants EPRI Source Zones}



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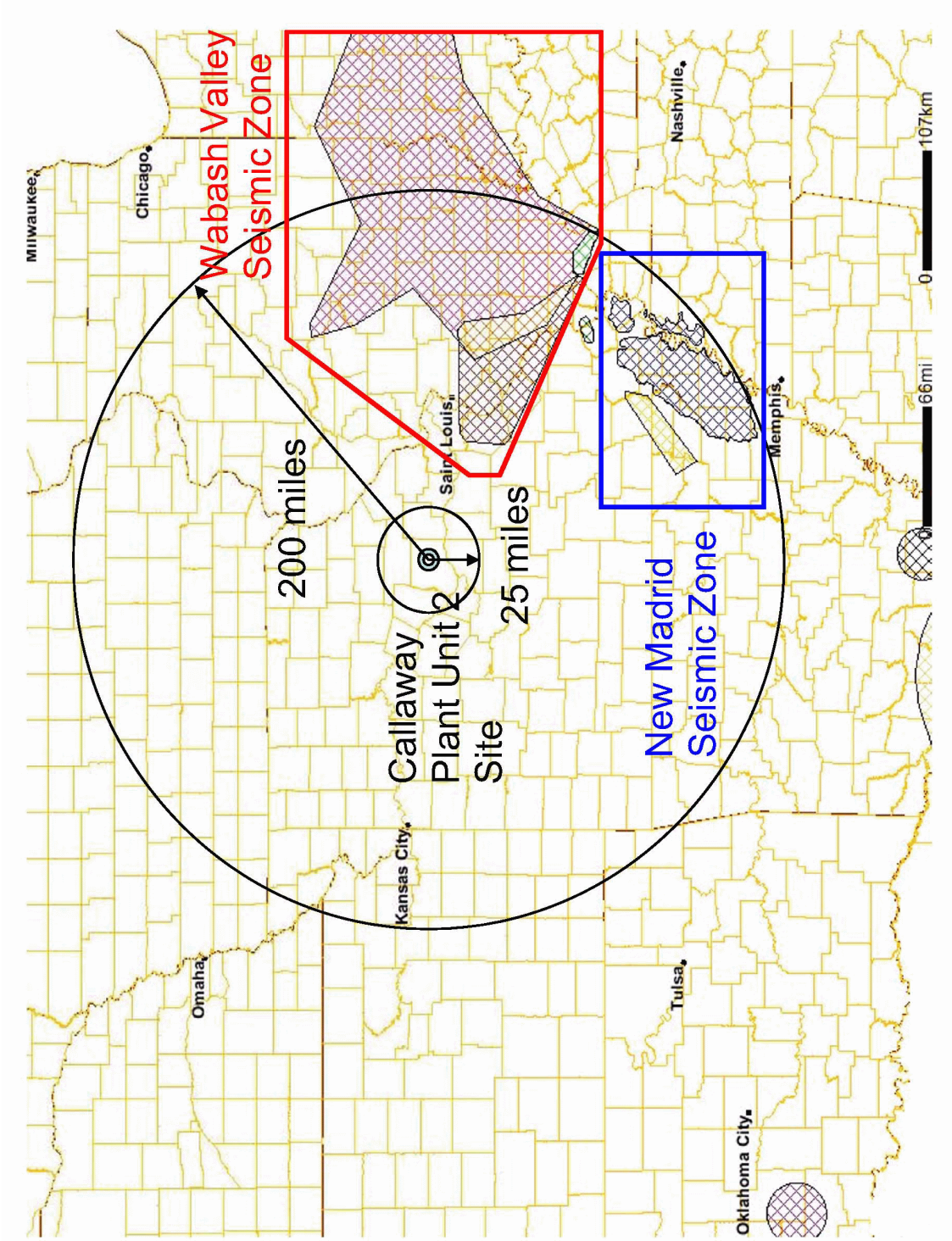

Figure 2.5-45—{Seismic Zones and Seismicity in CEUS}

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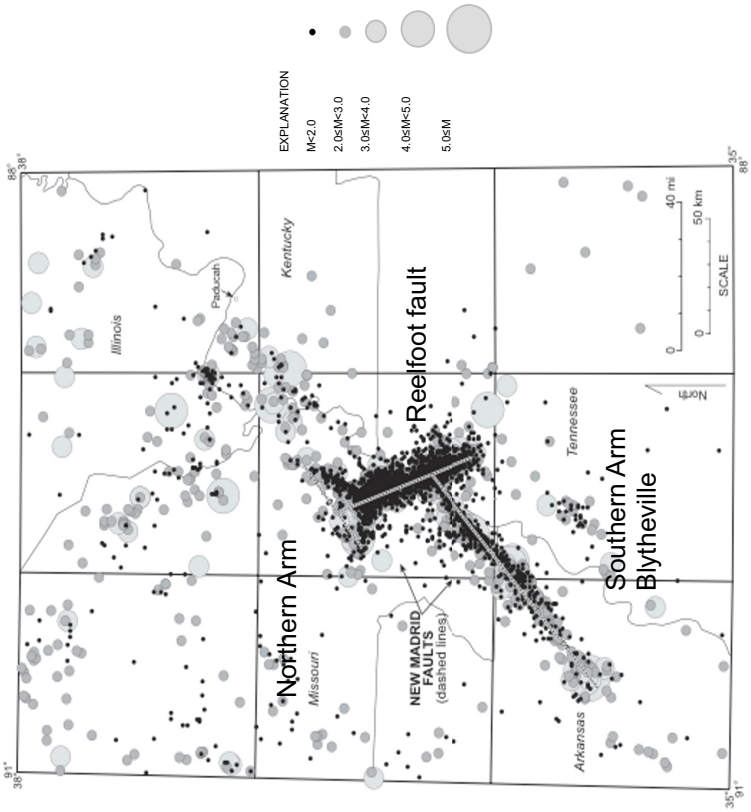
Figure 2.5-46—{System Activity at the New Madrid Fault System}



From USGS Preliminary Documentation for the 2007 Update of the US National Seismic (USGS 2007Hazard Maps)

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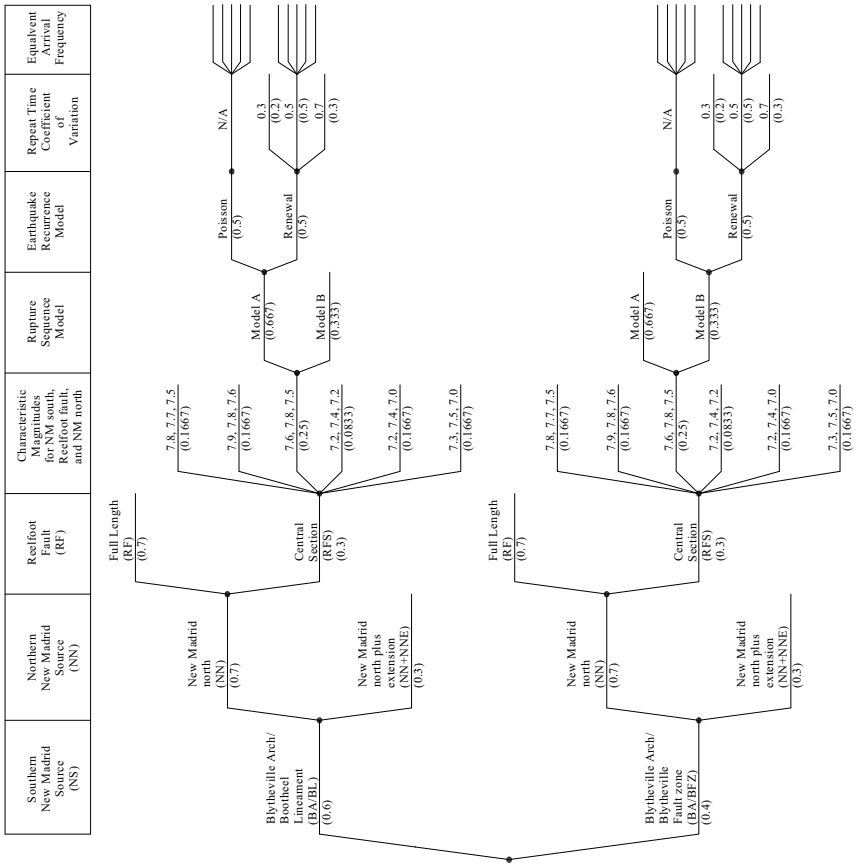
Figure 2.5-47—{Logic Tree of the New Madrid Fault System}



Adapted from the Seismic Hazards Report for the EGC ESP Site . See Figure 4.1-1 of Appendix B (EGC 2006)

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Figure 2.5-48—{Uniform Hazard Spectra for Rock Conditions at 7 Structural Frequencies for Which Ground Motion Equations are Available}

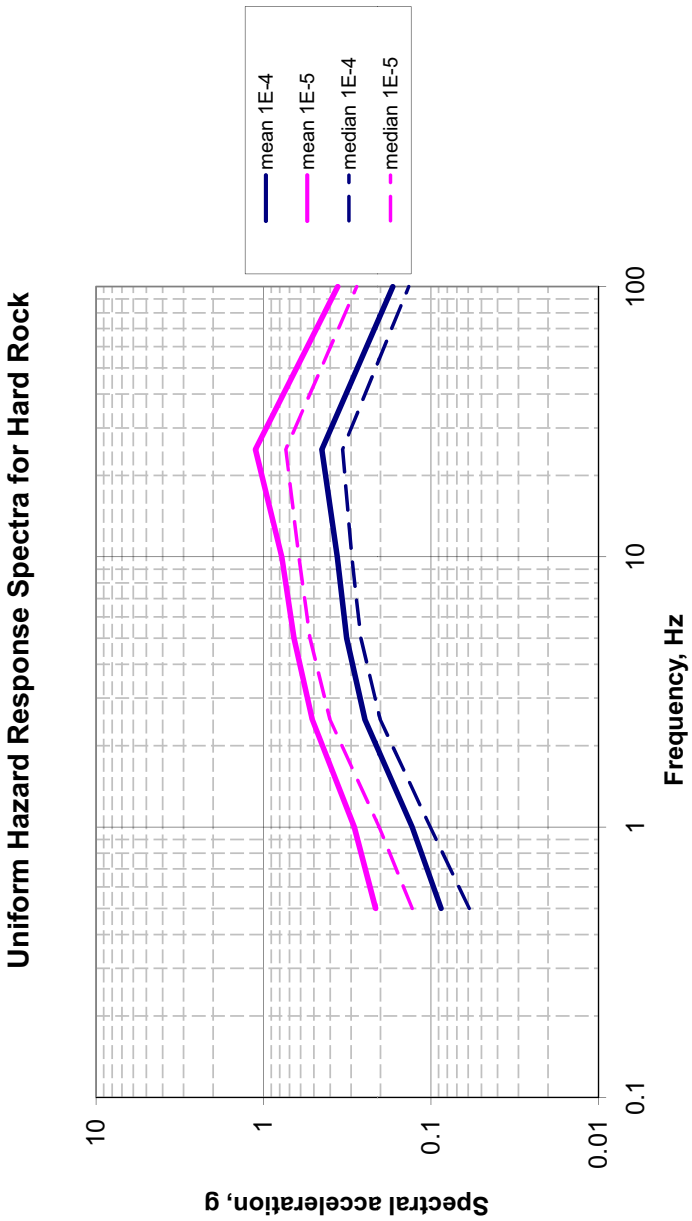

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Figure 2.5-49—{Mean 1E-4 Rock Deaggregation for 1 and 2.5 Hz}

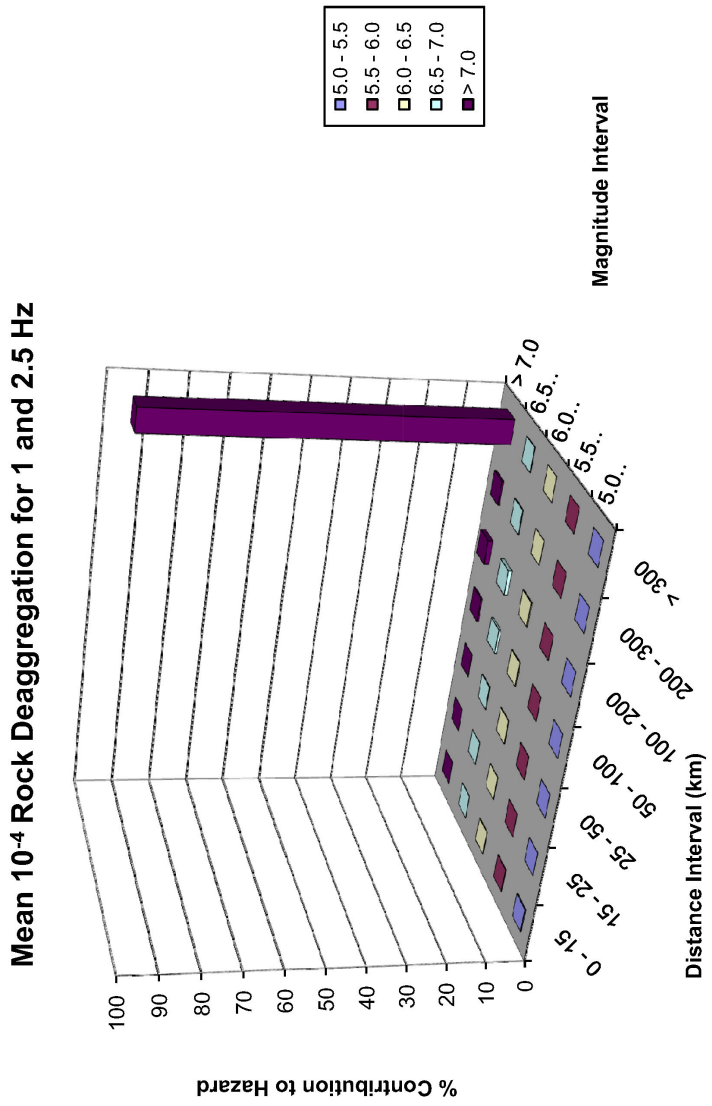

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Figure 2.5-50—{Mean 1E-4 Rock Deaggregation for 5 and 10 Hz}

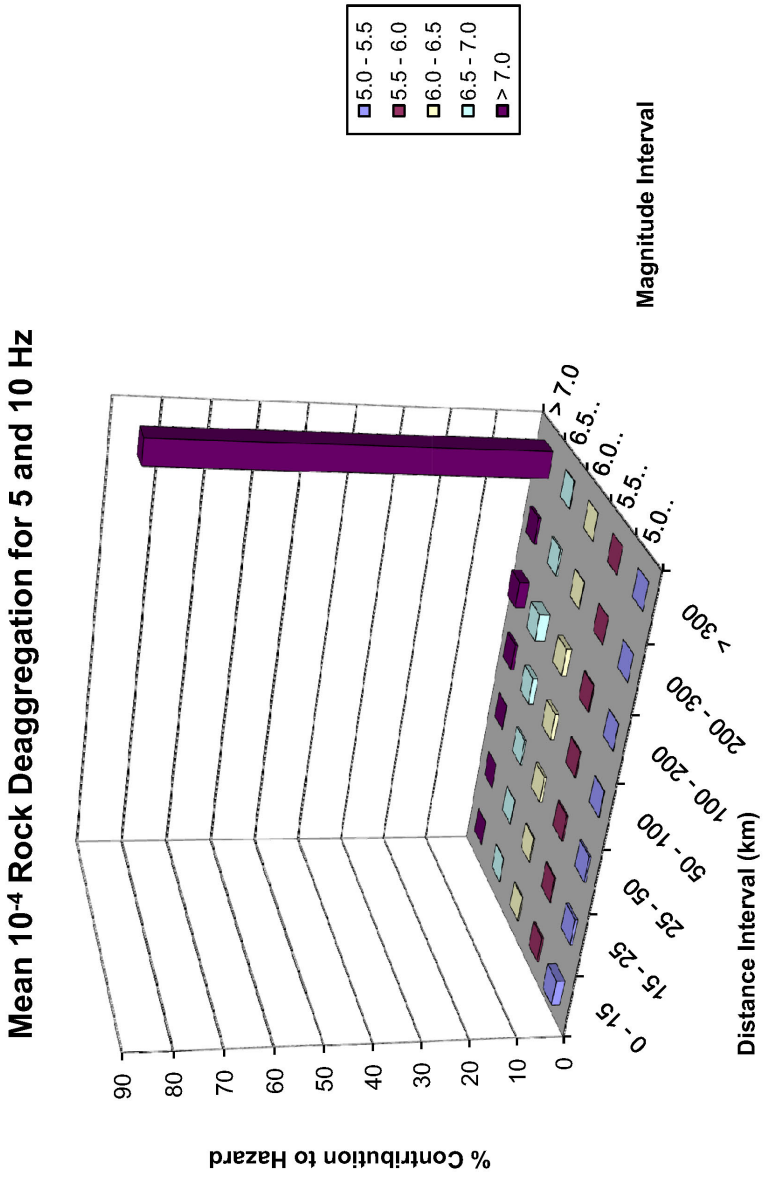

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Figure 2.5-51—{Mean 1E-5 Rock Deaggregation for 1 and 2.5 Hz}

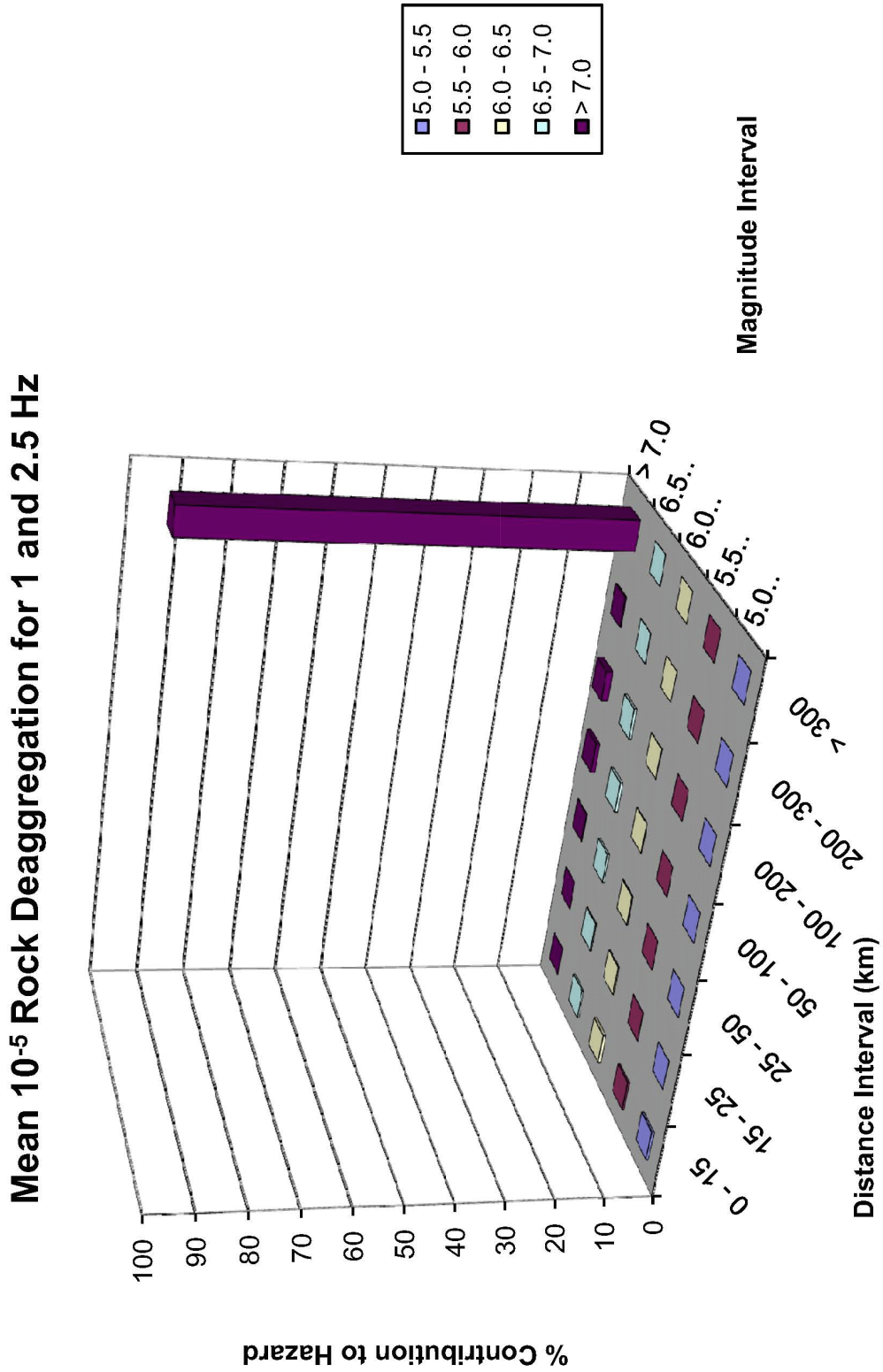

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Figure 2.5-52—{Mean 1E-5 Rock Deaggregation for 5 and 10 Hz}

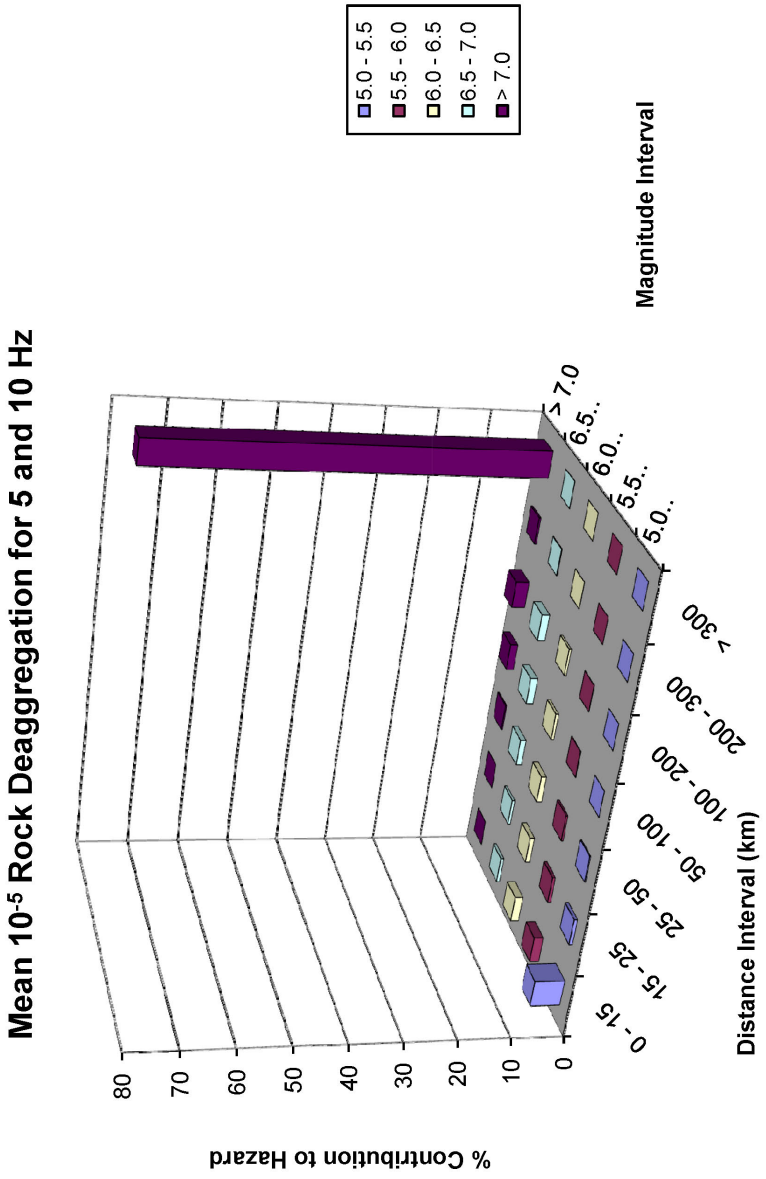

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Figure 2.5-53—{1E-4 Smooth Rock UHS Spectra}

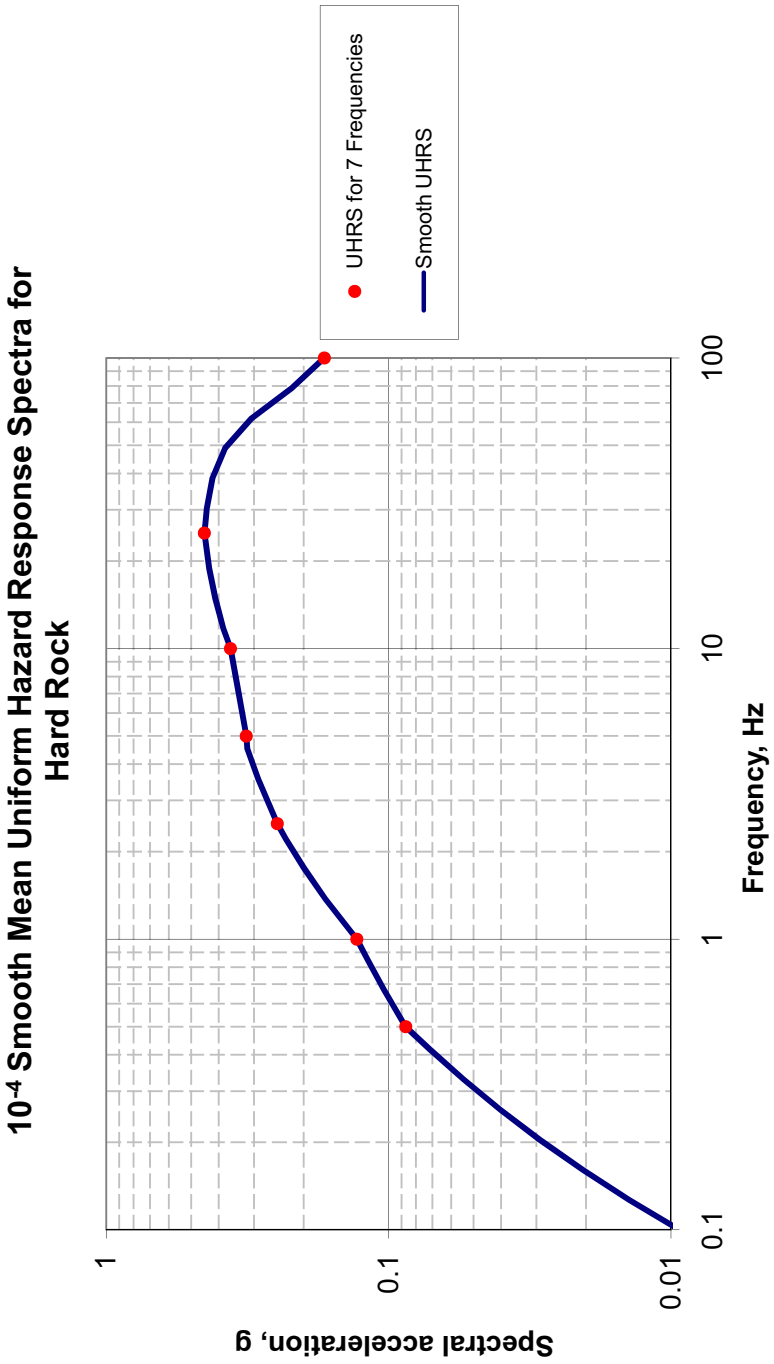

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Figure 2.5-54—{1E-5 Smooth Rock UHS Spectra}

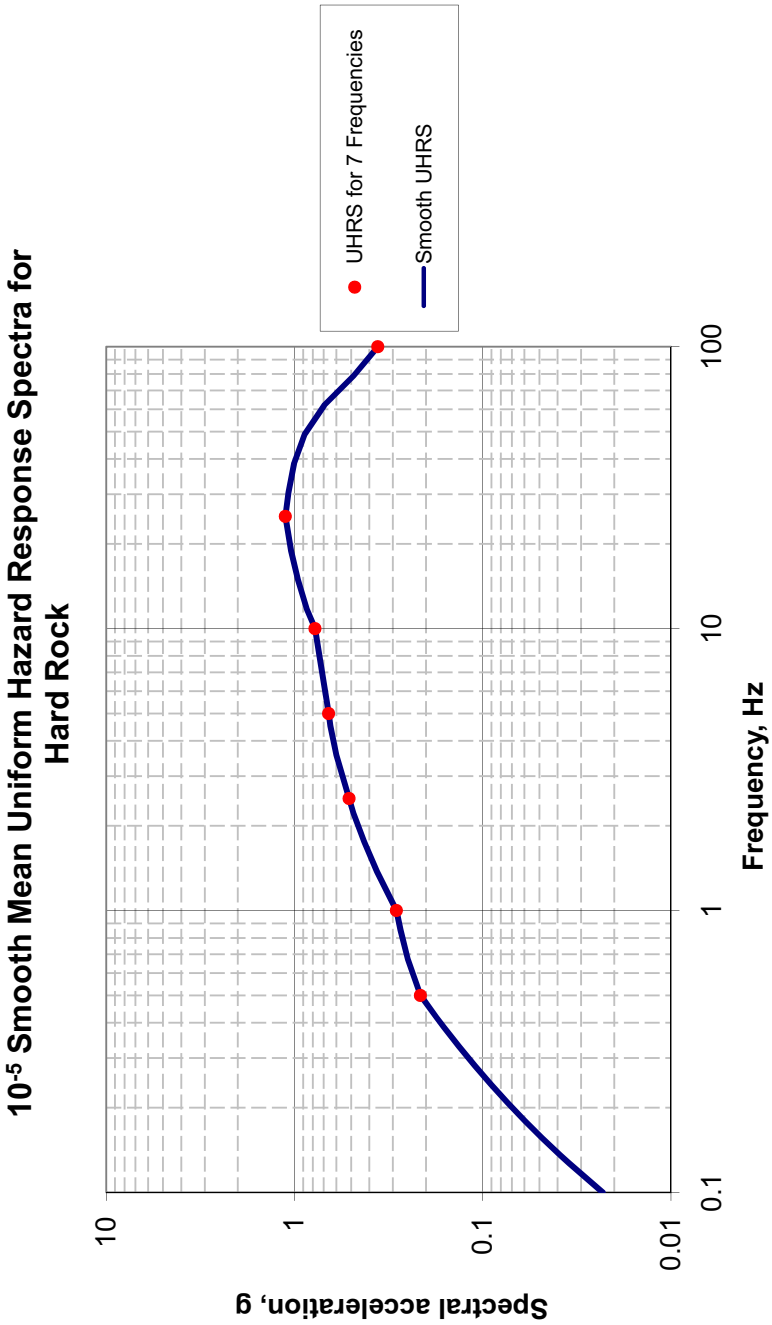

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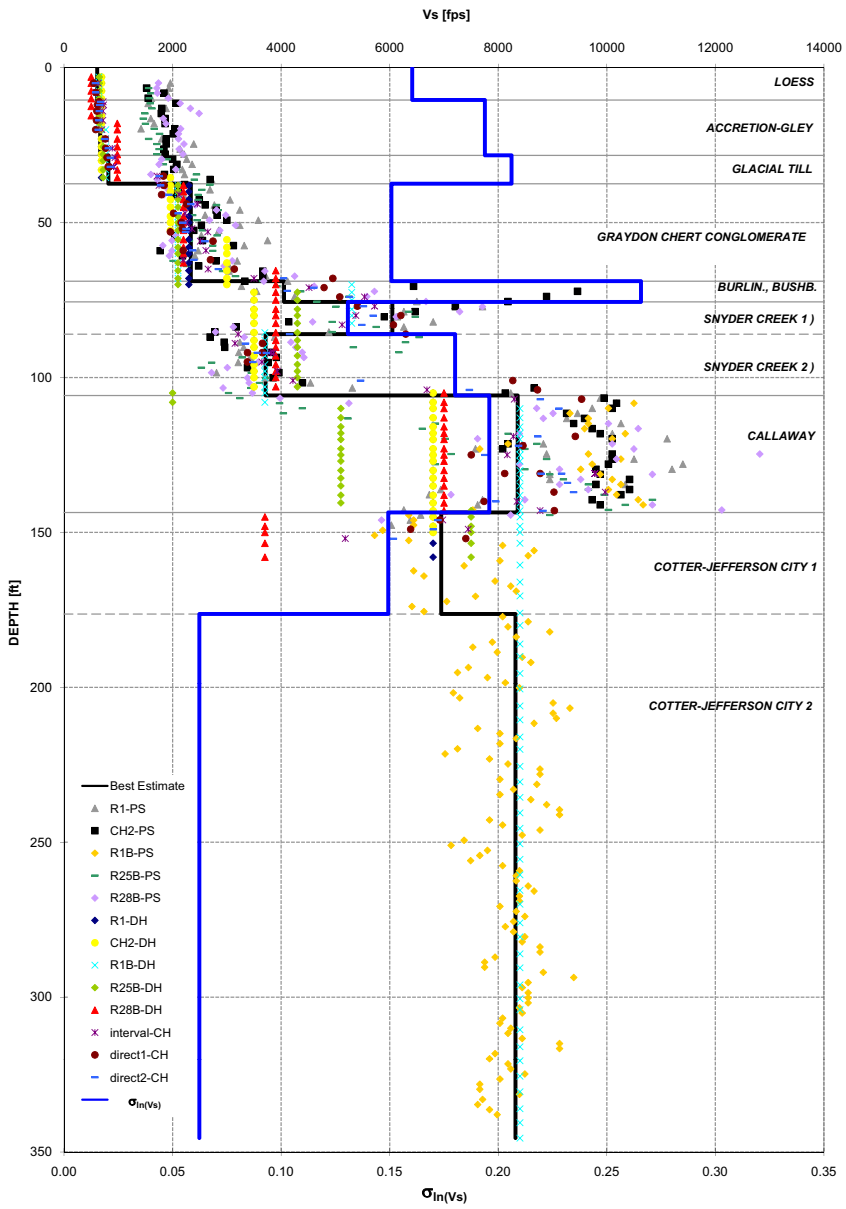
Figure 2.5-55—{Shear-Wave Velocity Vs and its Logarithmic Standard Deviation for the Top 350 ft (107 m)}



PS: PS-Suspension
DH: Downhole
CH: Crosshole

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Figure 2.5-56—{Shear-Wave Velocity Vs and its Coefficient of Variation for Depth to 2200 ft (671 m)}

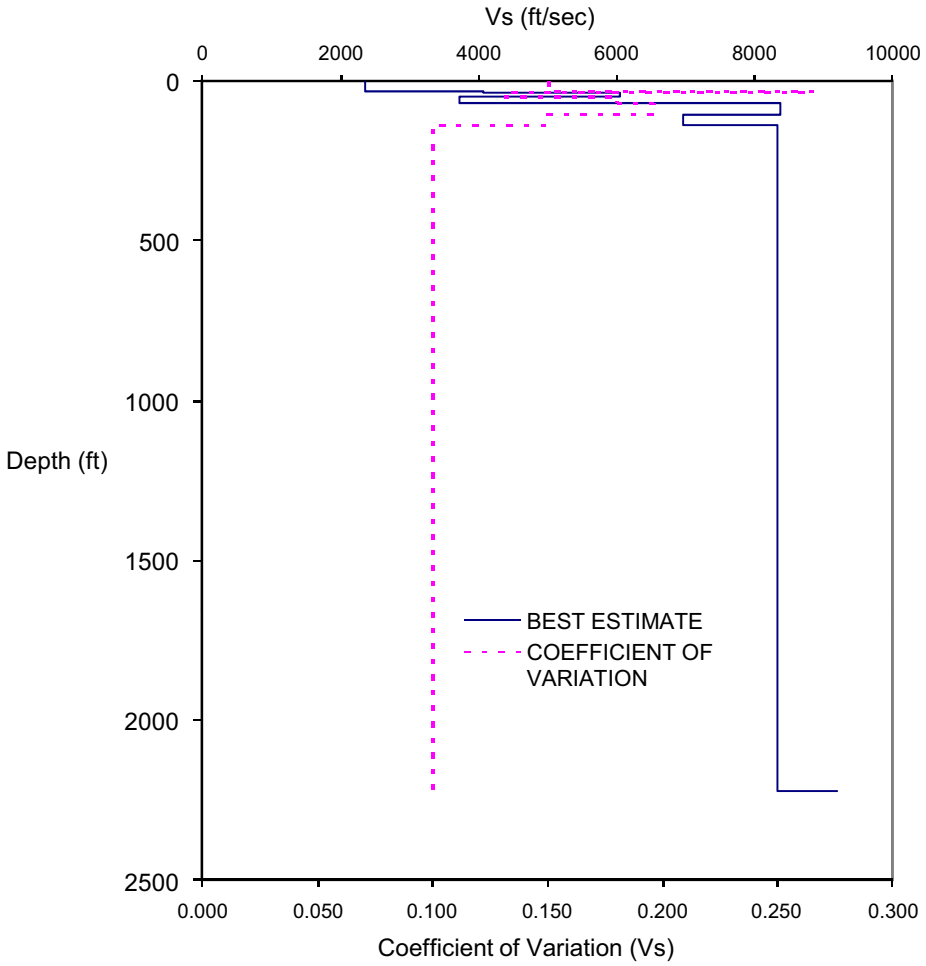

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Figure 2.5-57—{Shear-Wave Velocity Vs Depth for Profiles 1 through 60}

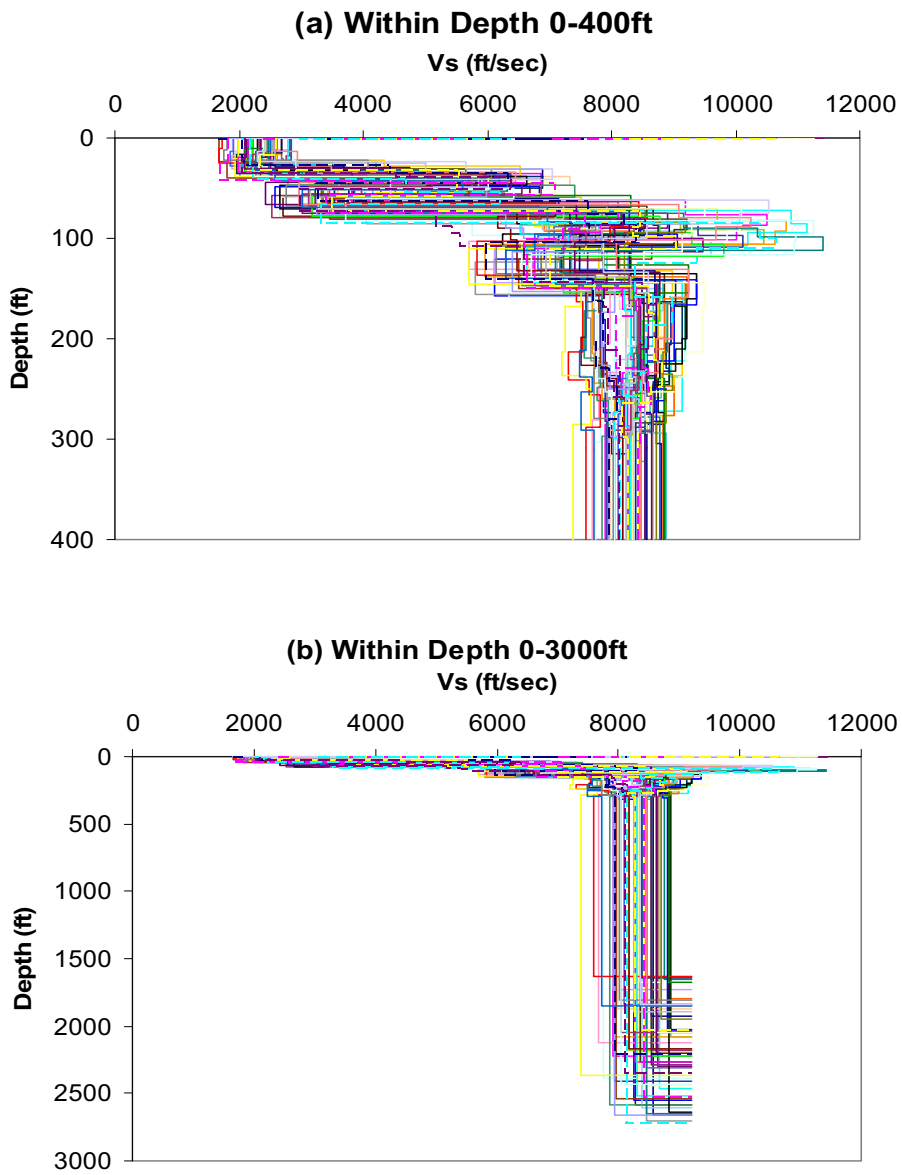

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Figure 2.5-58—{Median +/- Standard Deviation of Shear-Wave Velocity [Vs] Vs. Depth for all 60 Profiles, Compared to Best Estimate Profile Described in Section 2.5.2.5.1.2}

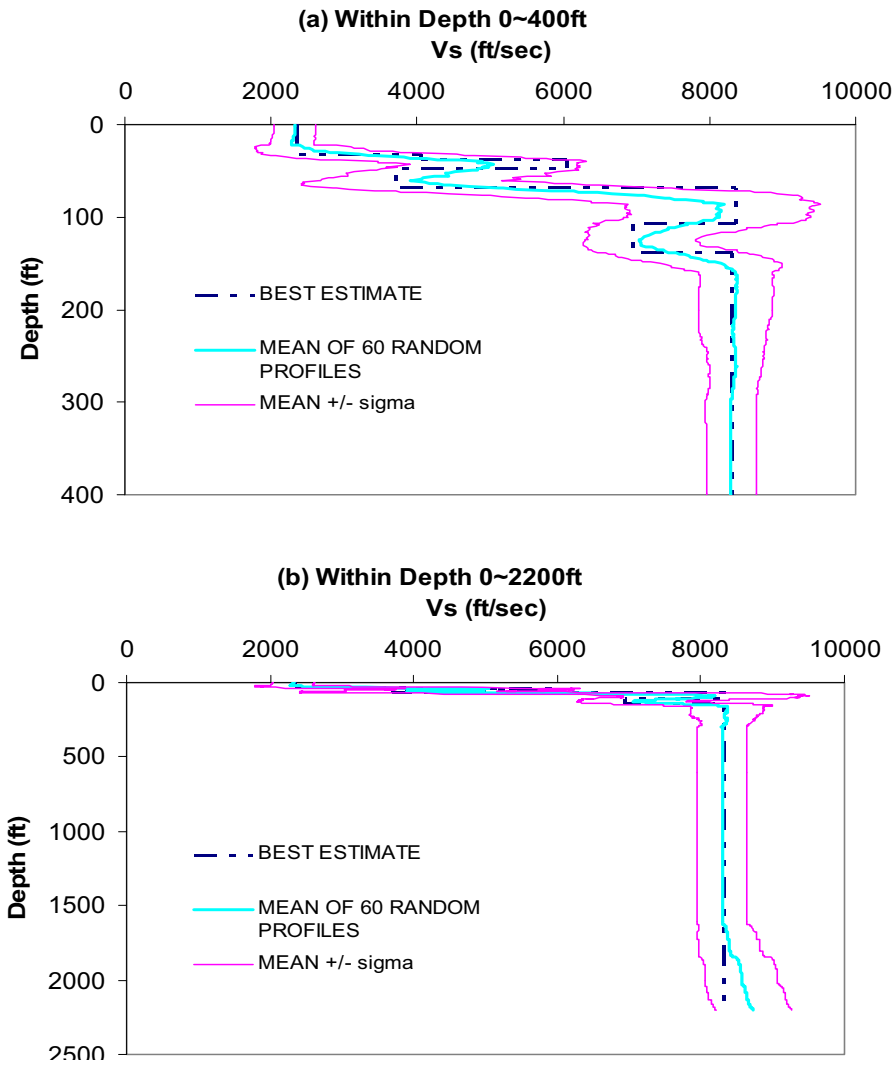

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Figure 2.5-59—{G/Gmax Curves Representing Uncertainty in Shear Stiffness for Layer: Graydon Chert Conglomerate}

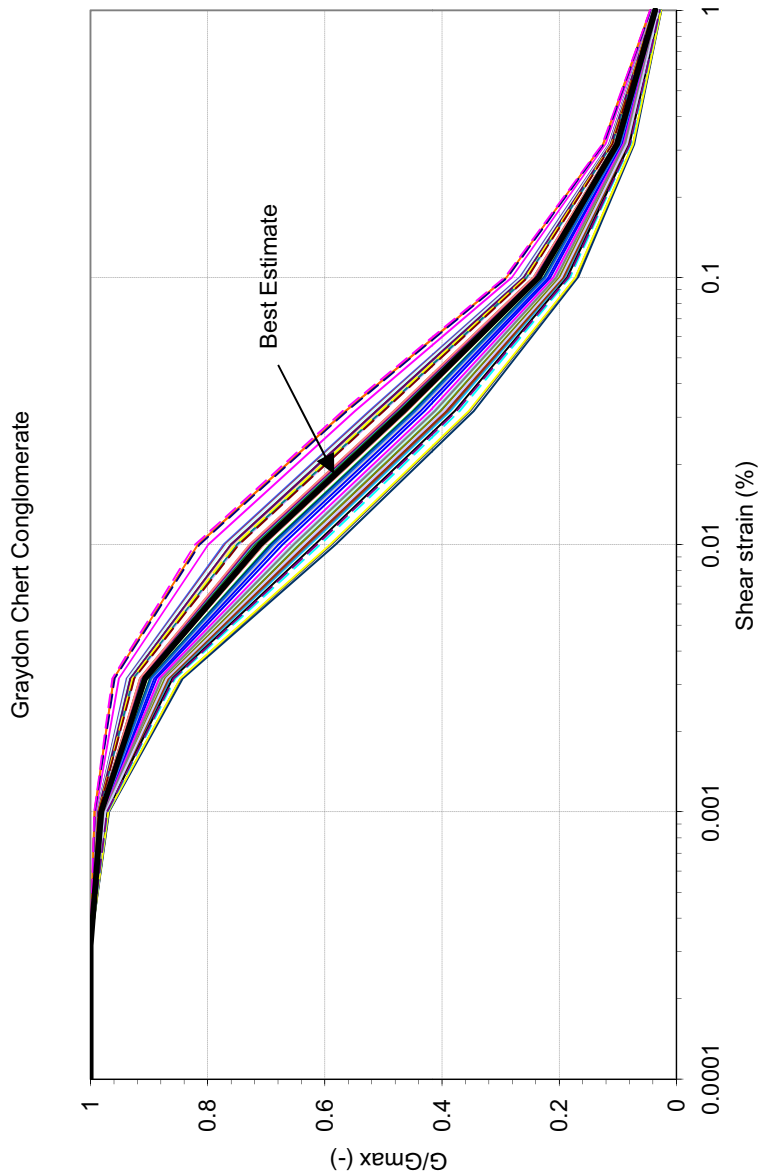

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Figure 2.5-60—{Damping Curves Representing Uncertainty in Damping for Layer: Graydon Chert Conglomerate}

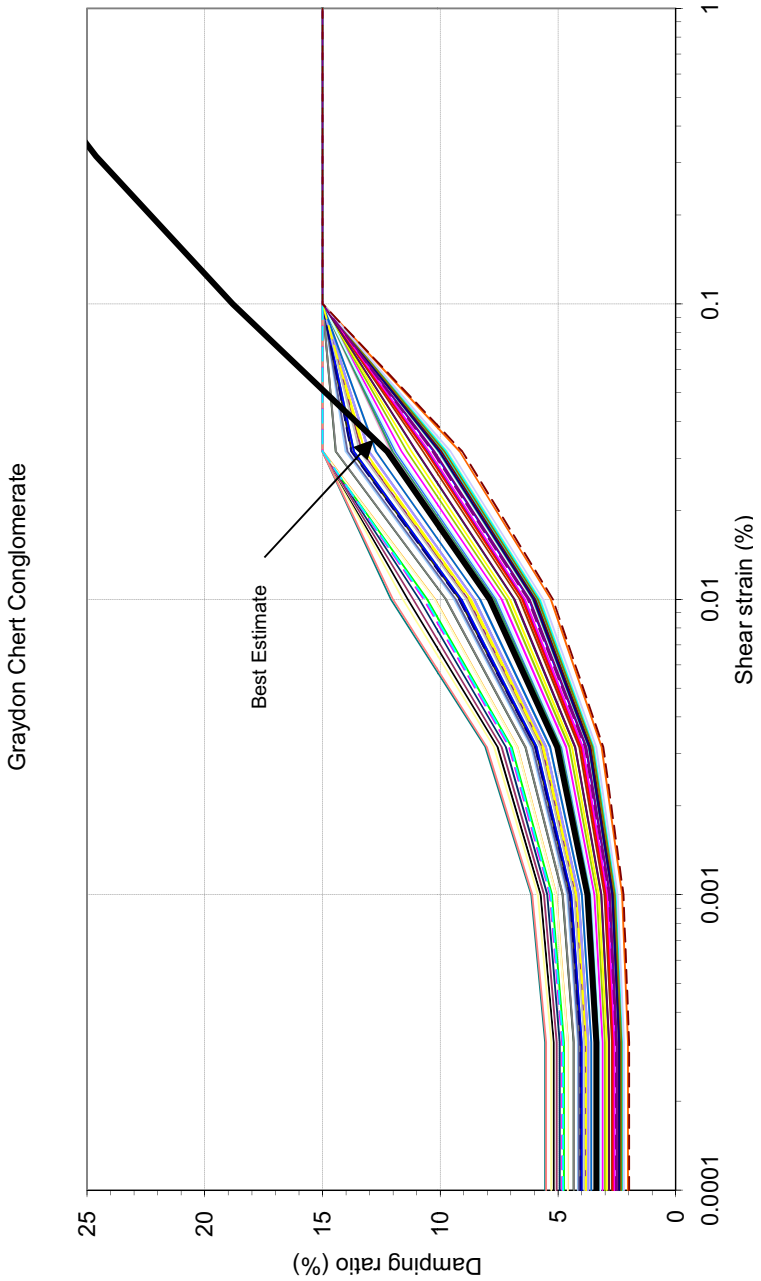

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Figure 2.5-61—{Mean Site Amplification Factor and Coefficient of Variation at 37.5 ft (11.4 m) Depth for 1E-4 HF DEM Input Motion}

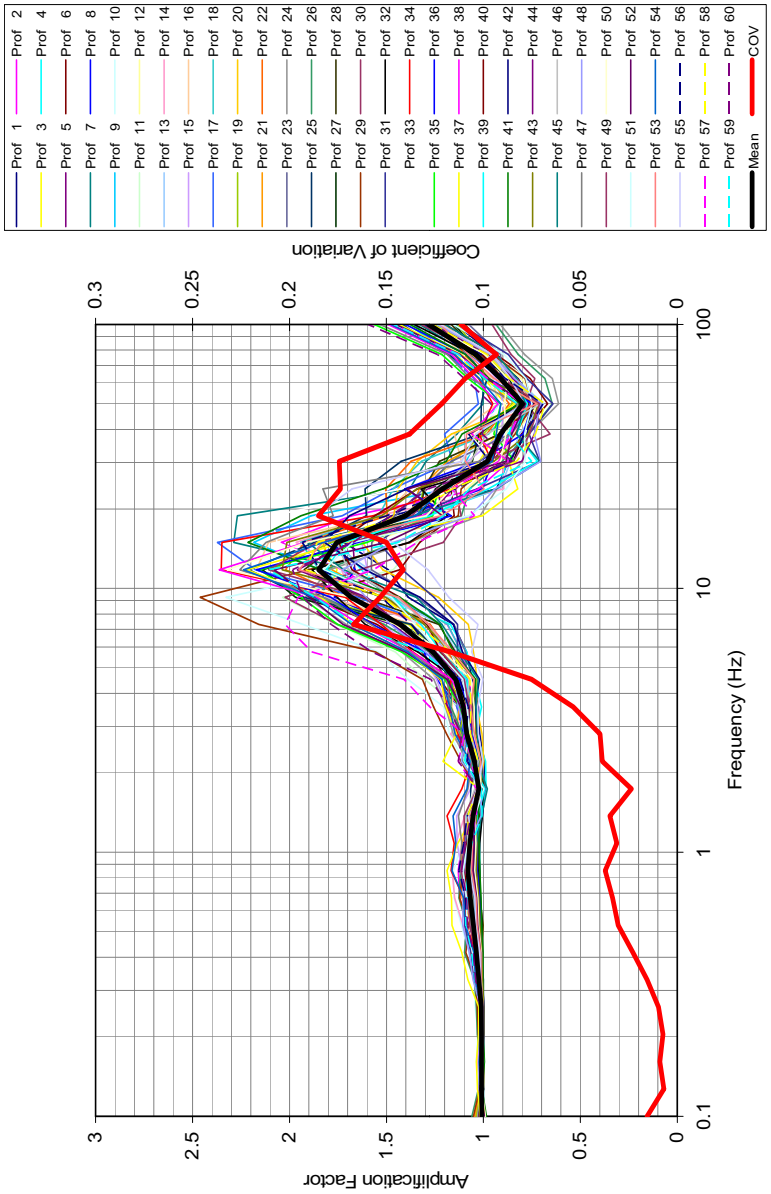

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Figure 2.5-62—{Maximum Strains Vs. Depth for 1E-4 HF DEM Input Motion}

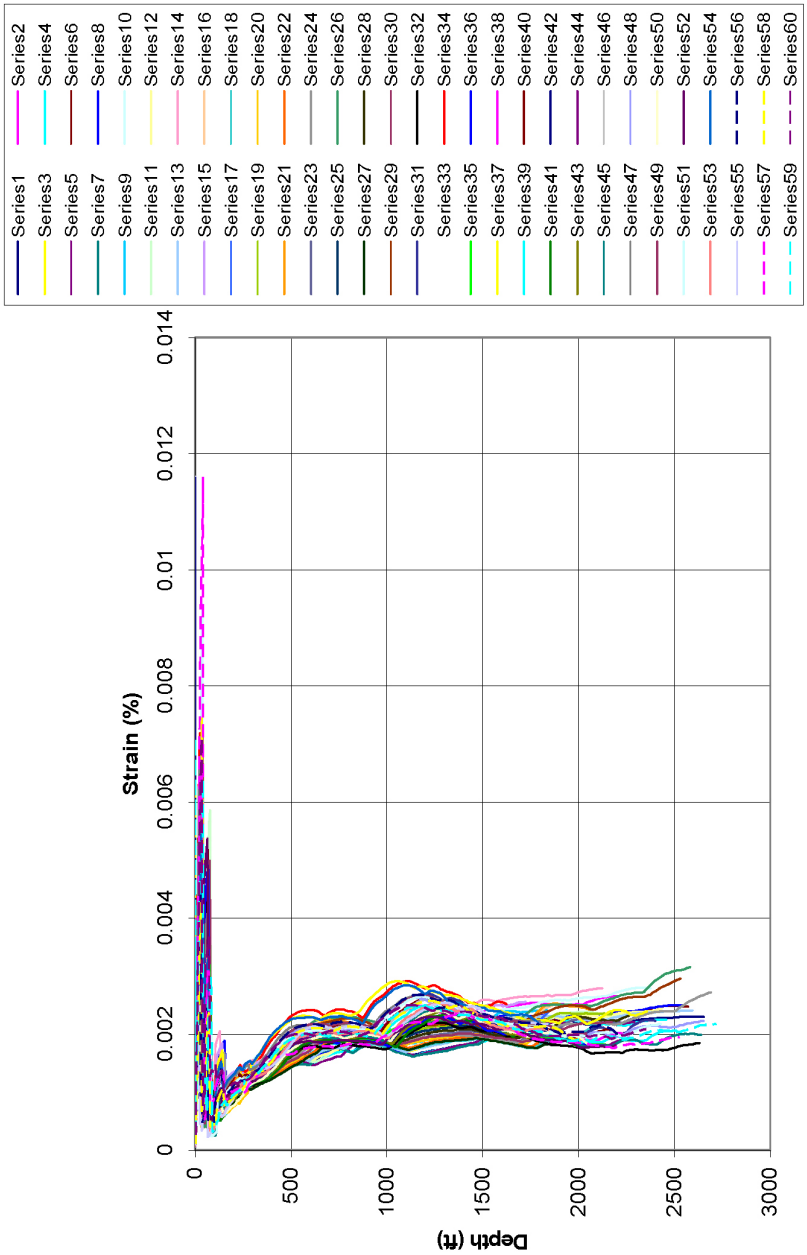

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Figure 2.5-63—{Mean Site Amplification Factor and Coefficient of Variation at 37.5 ft (11.4 m) Depth for 1E-4 LF DEM Input Motion}

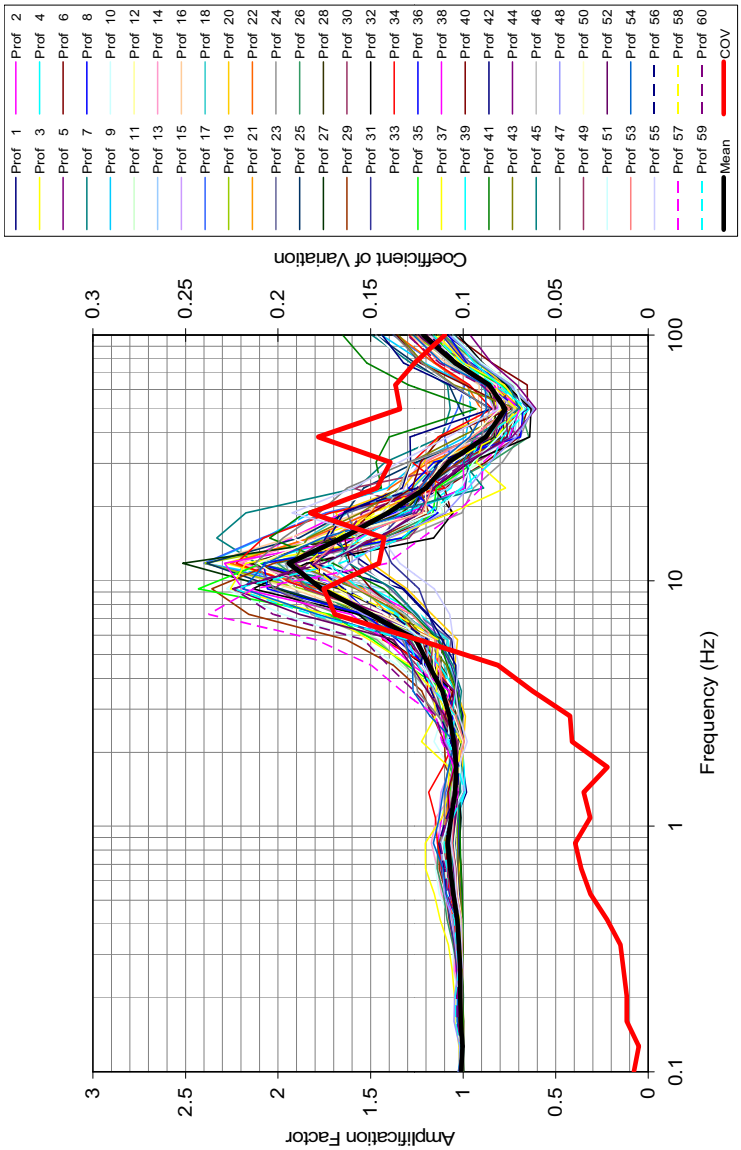

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Figure 2.5-64—{Maximum Strains Vs. Depth for 1E-4 LF DEM Input Motion}

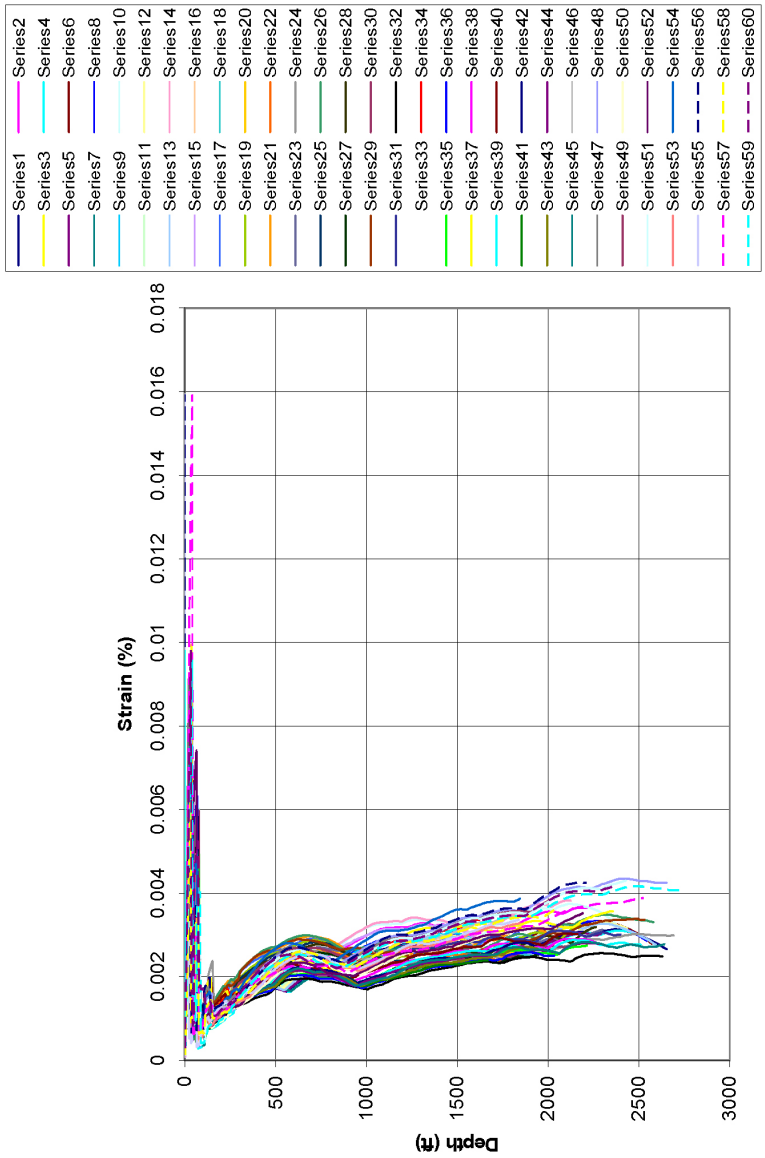

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Figure 2.5-65—{Mean Site Amplification Factor and Coefficient of Variation at 37.5 ft (11.4 m) Depth for 1E-5 HF DEM Input Motion}

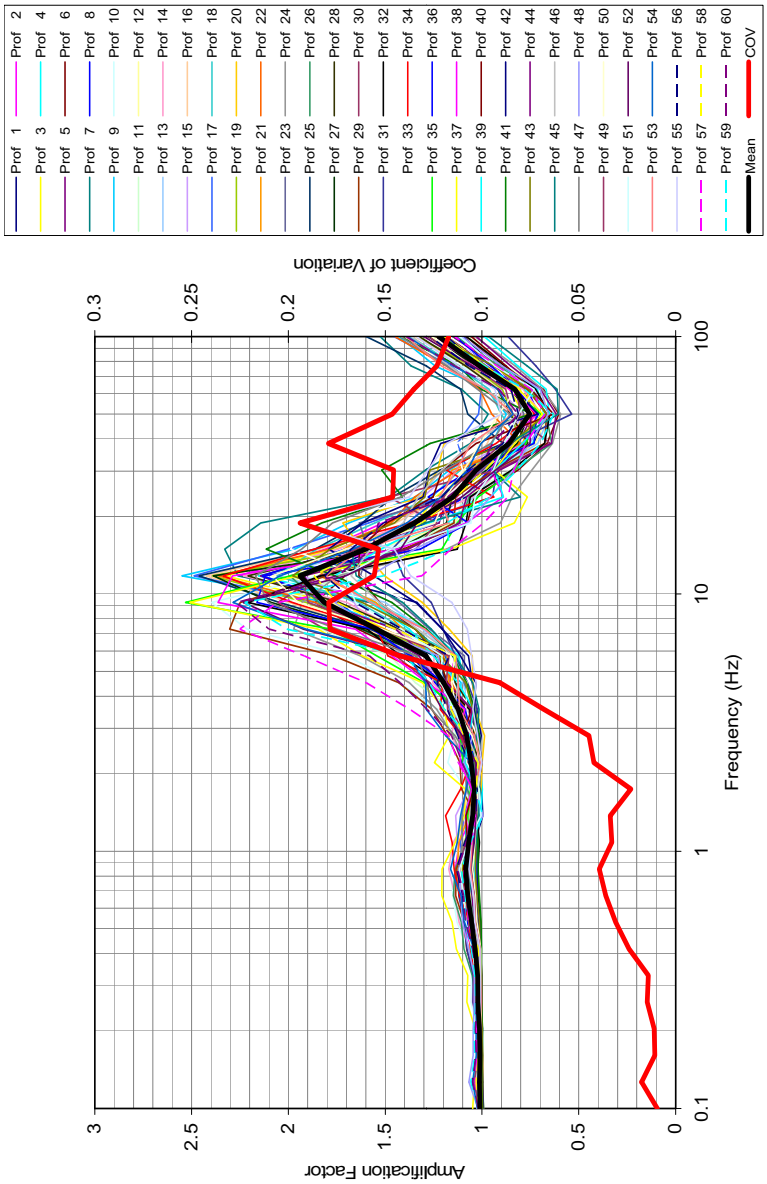

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Figure 2.5-66—{Maximum Strains Vs. Depth for 1E-5 HF DEM Input Motion}

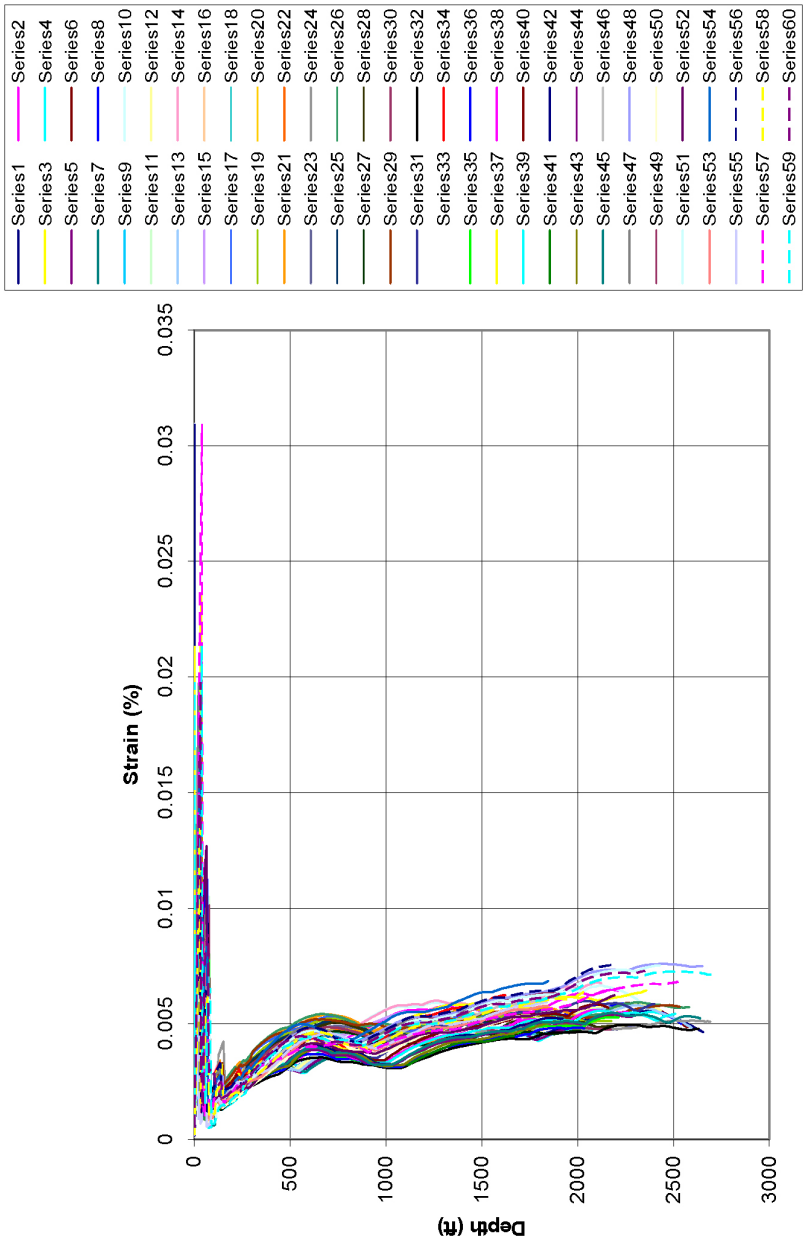

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Figure 2.5-67—{Mean Site Amplification Factor and Coefficient of Variation at 37.5 ft (11.4 m) Depth for 1E-5 LF DEM Input Motion}

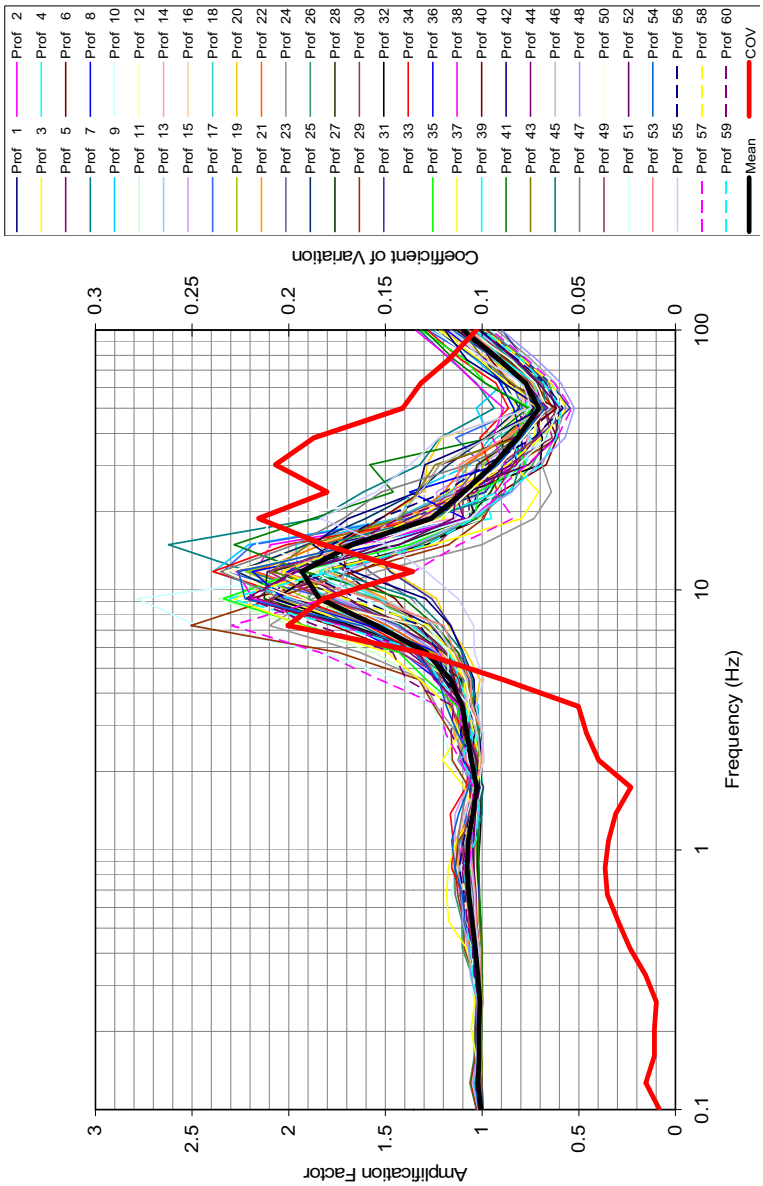

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Figure 2.5-68—{Maximum Strains Vs. Depth for 1E-5 LF DEM Input Motion}

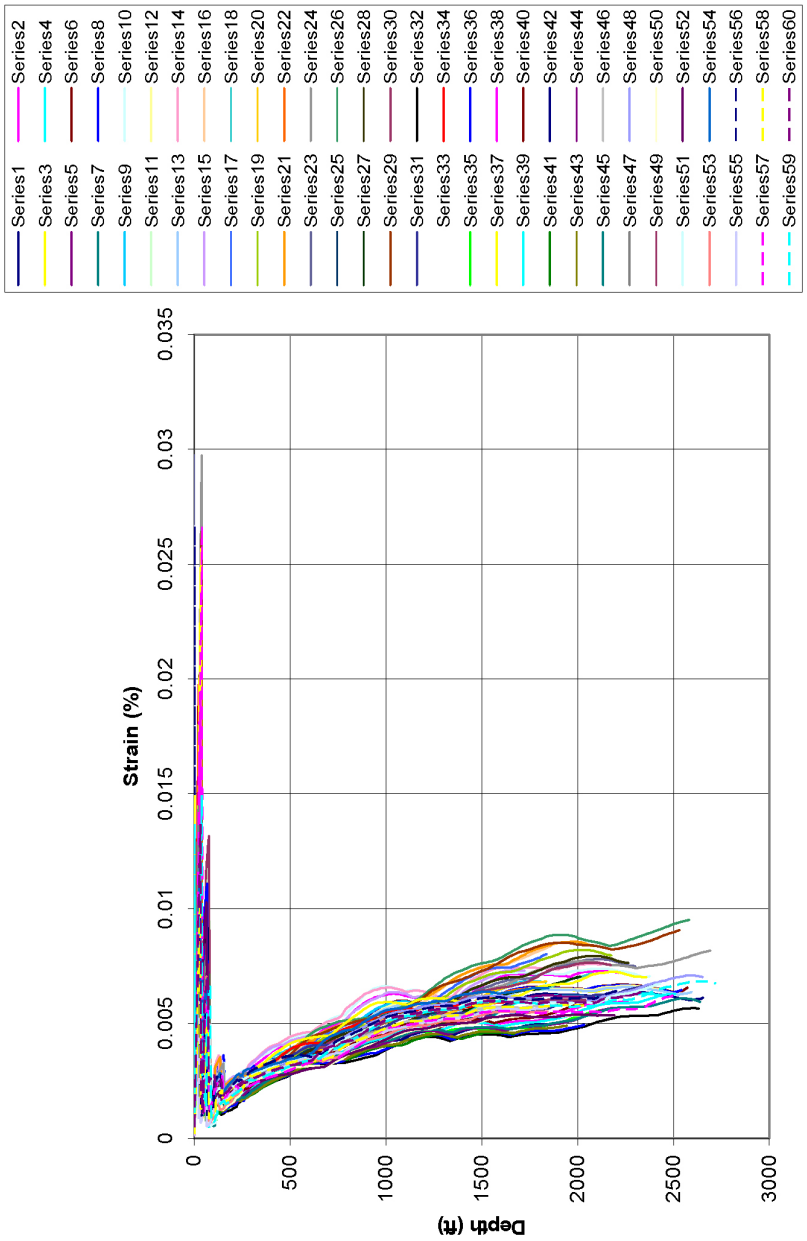

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Figure 2.5-69—{HF and LF Spectra, and Envelopes for 1E-4 and 1E-5}

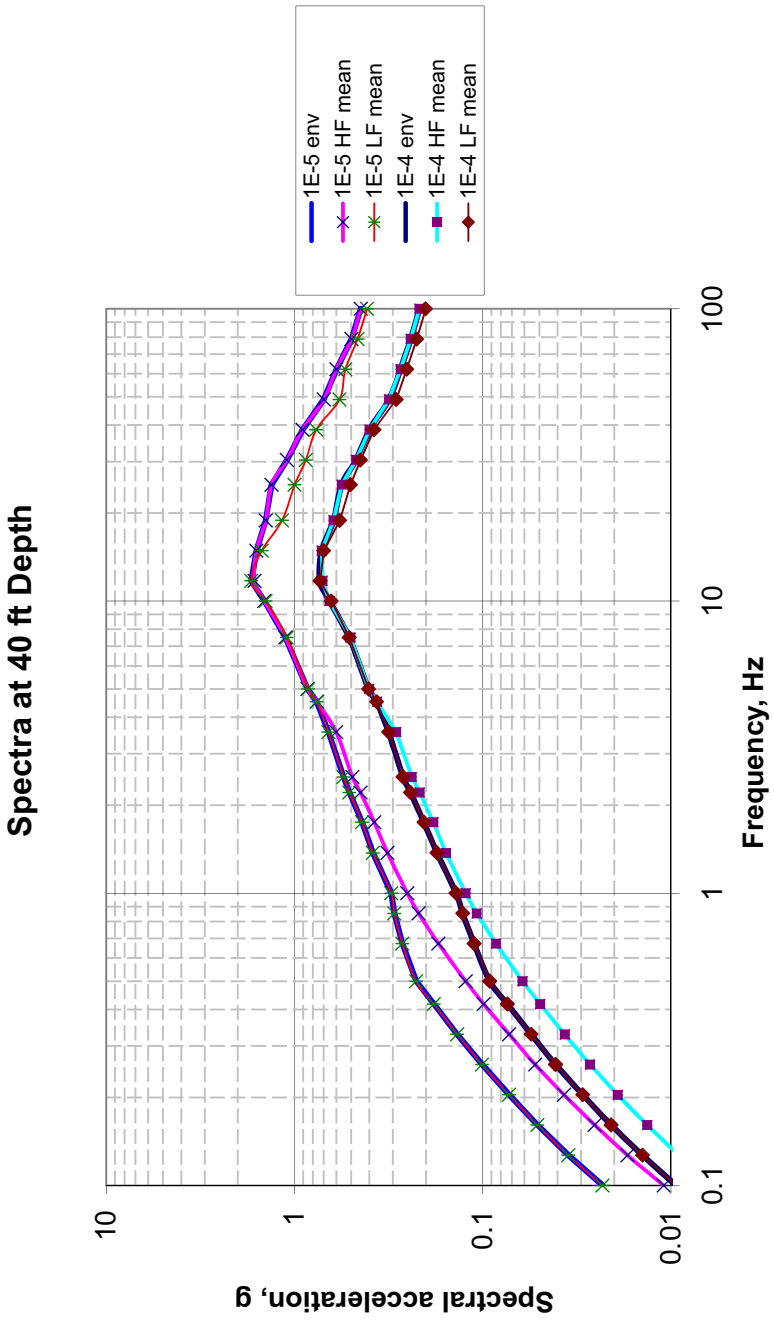

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Figure 2.5-70—{Recommended Horizontal and Vertical SSE Spectra}

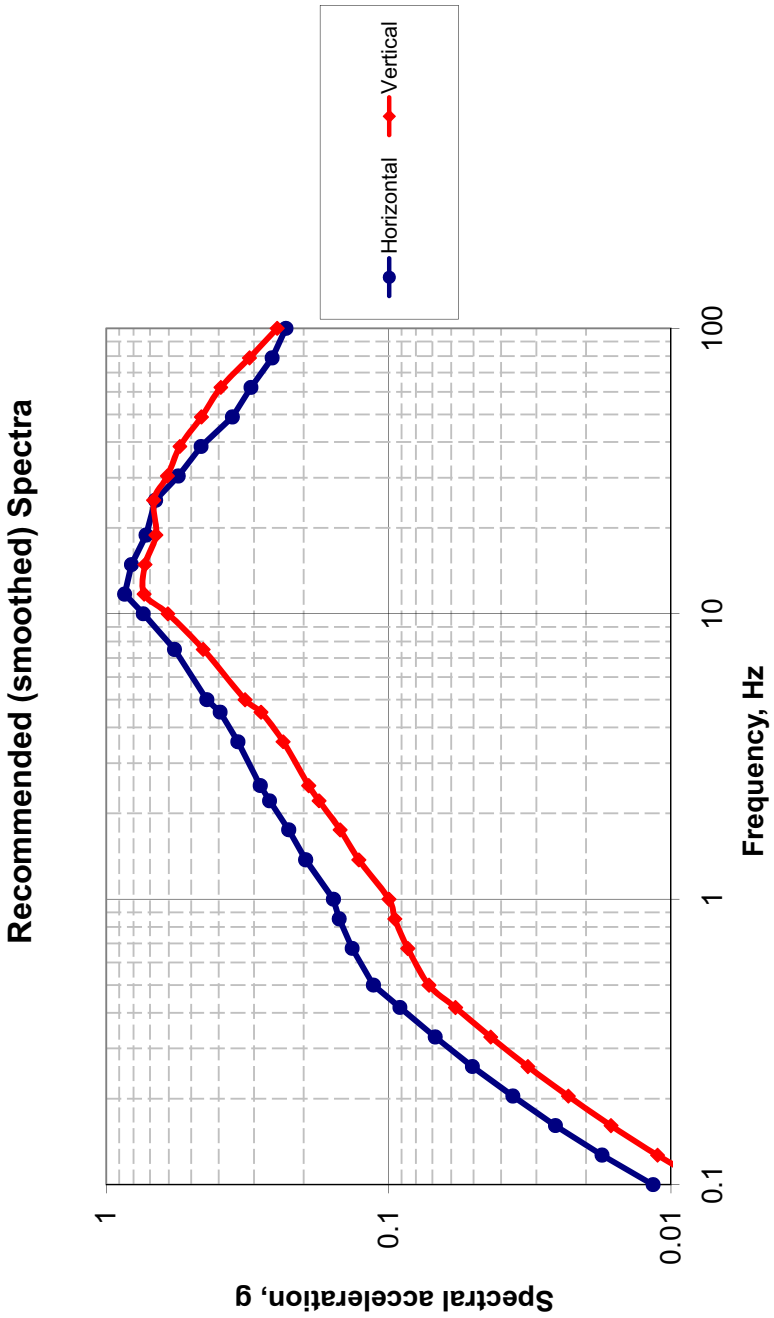

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Figure 2.5-71—{V/H Ratios from Publications and Recommended V/H Ratios}

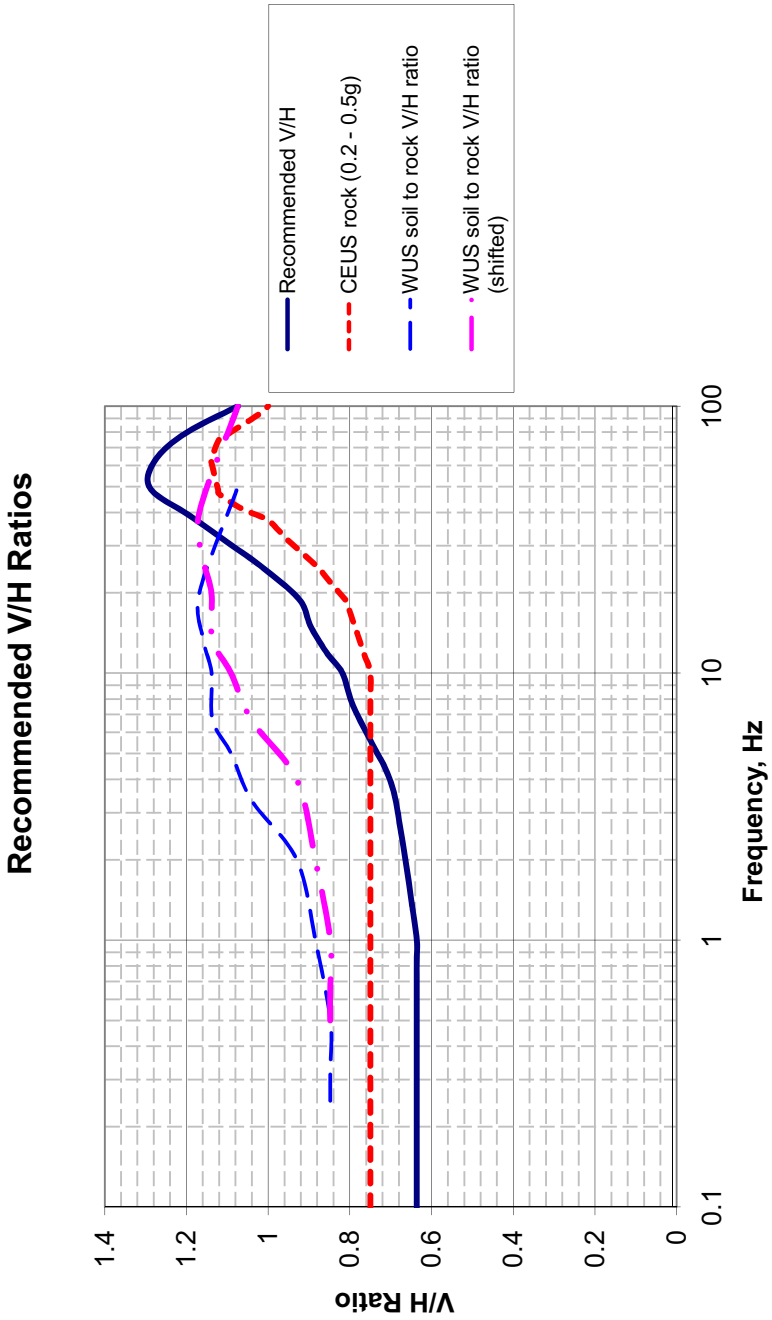

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Figure 2.5-72—{Mean and Fractile Rock Hazard Curves for PGA}

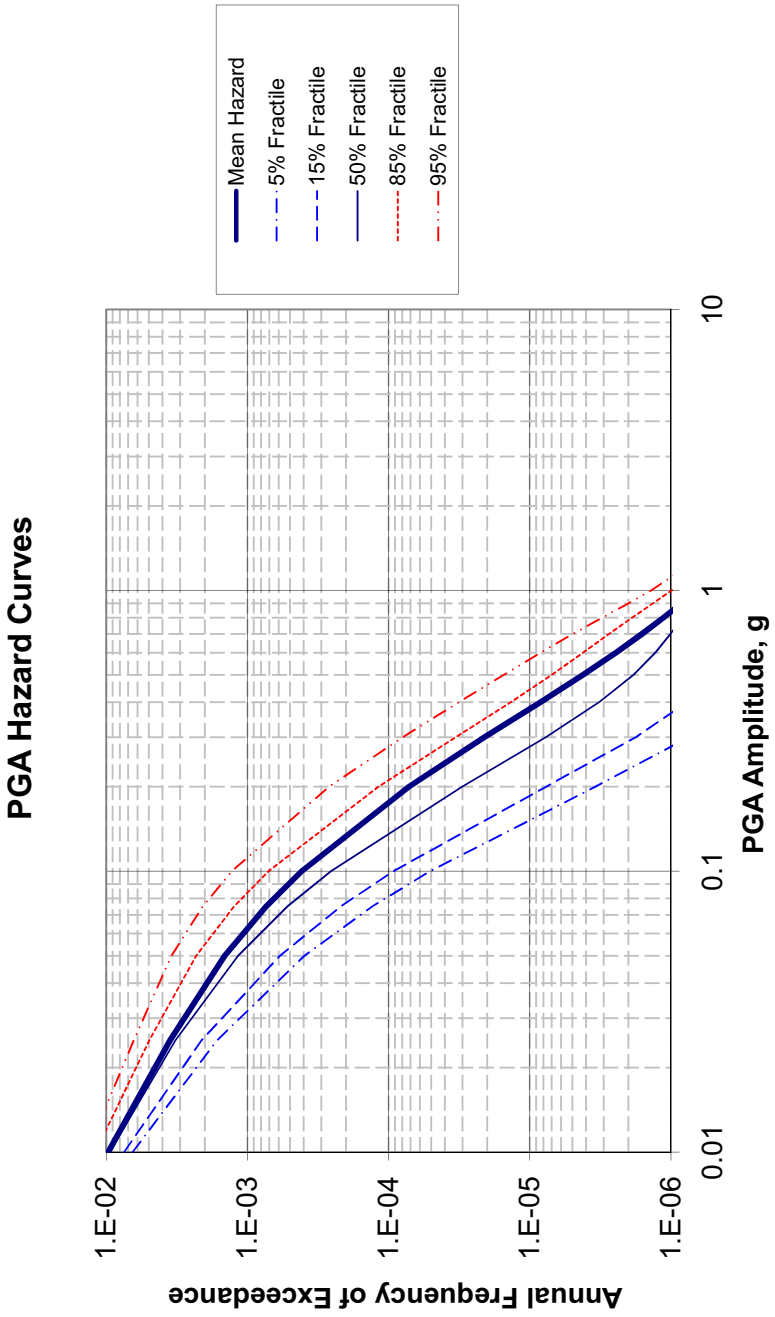

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Figure 2.5-73—{Mean and Fractile Rock Hazard Curves for 25 Hz}

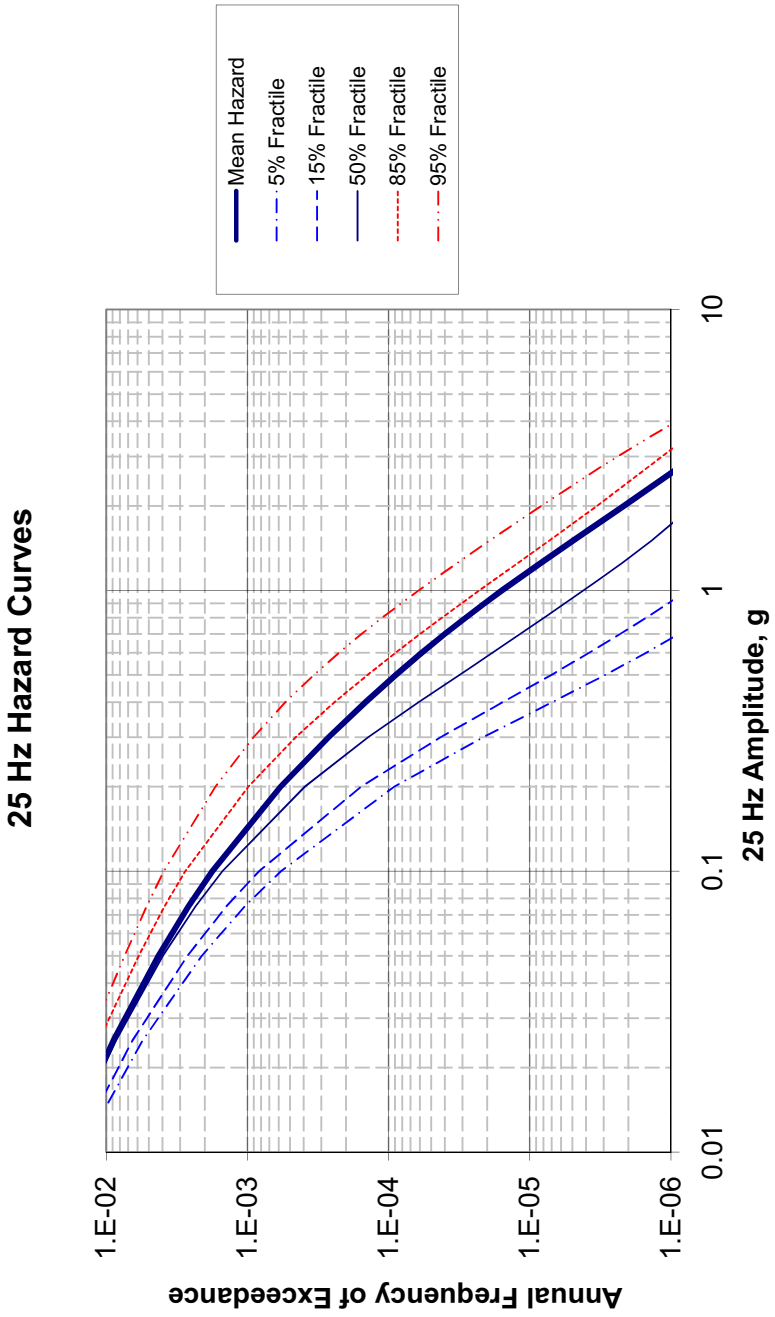

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Figure 2.5-74—{Mean and Fractile Rock Hazard Curves for 10 Hz}

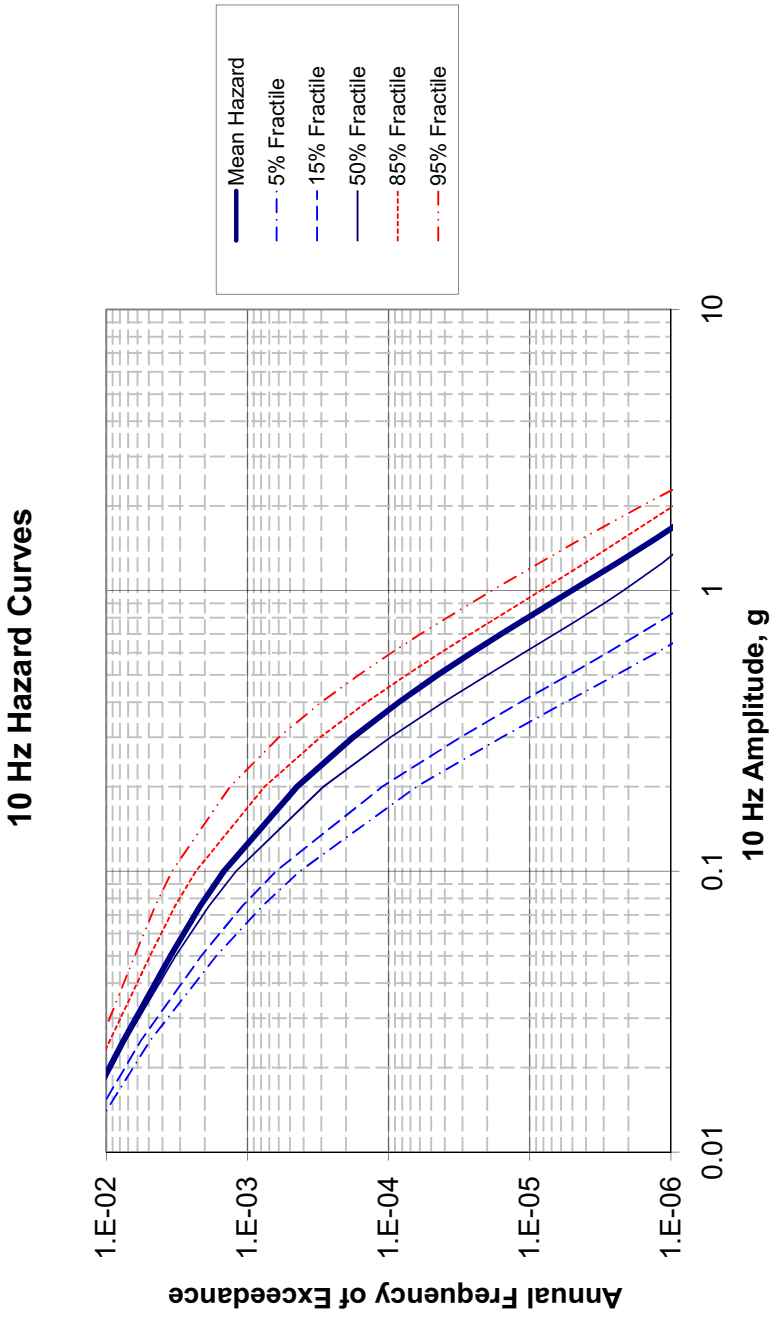

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Figure 2.5-75—{Mean and Fractile Rock Hazard Curves for 5 Hz}

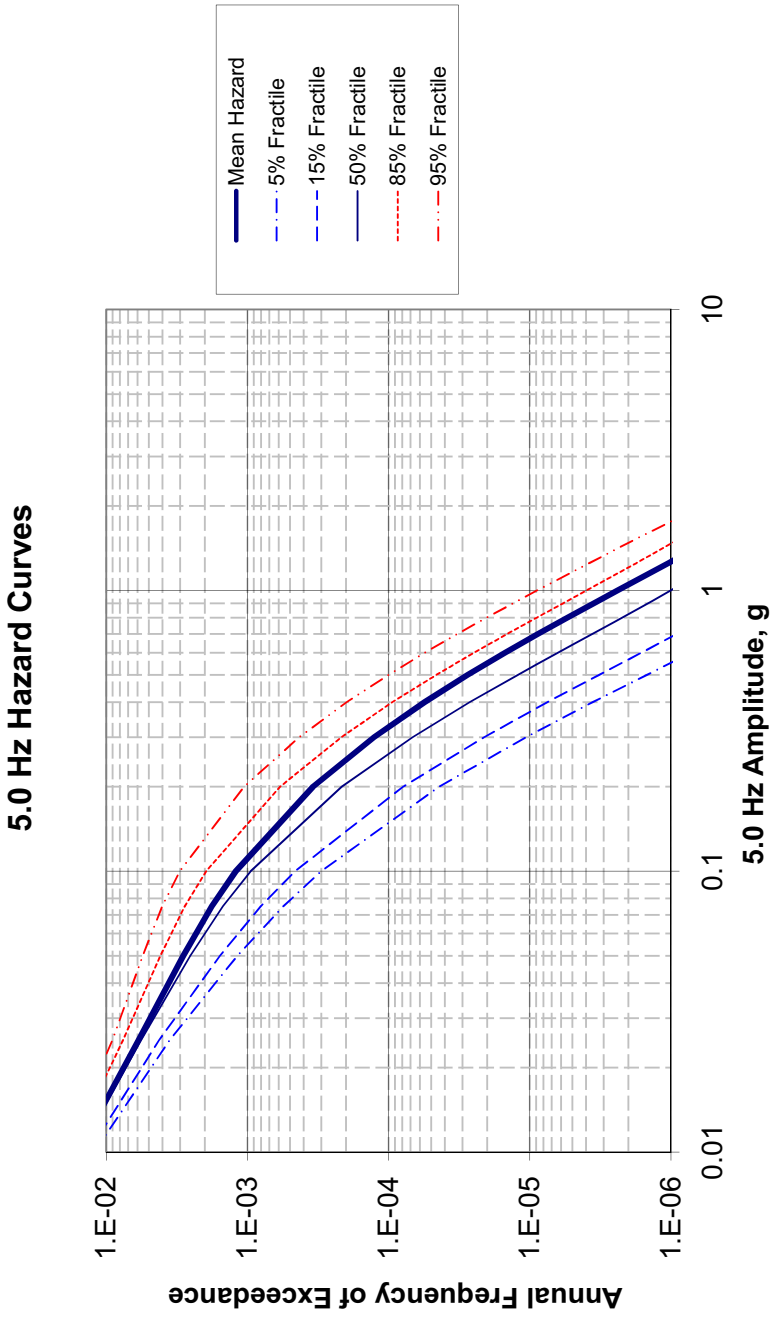

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Figure 2.5-76—{Mean and Fractile Rock Hazard Curves for 2.5 Hz}

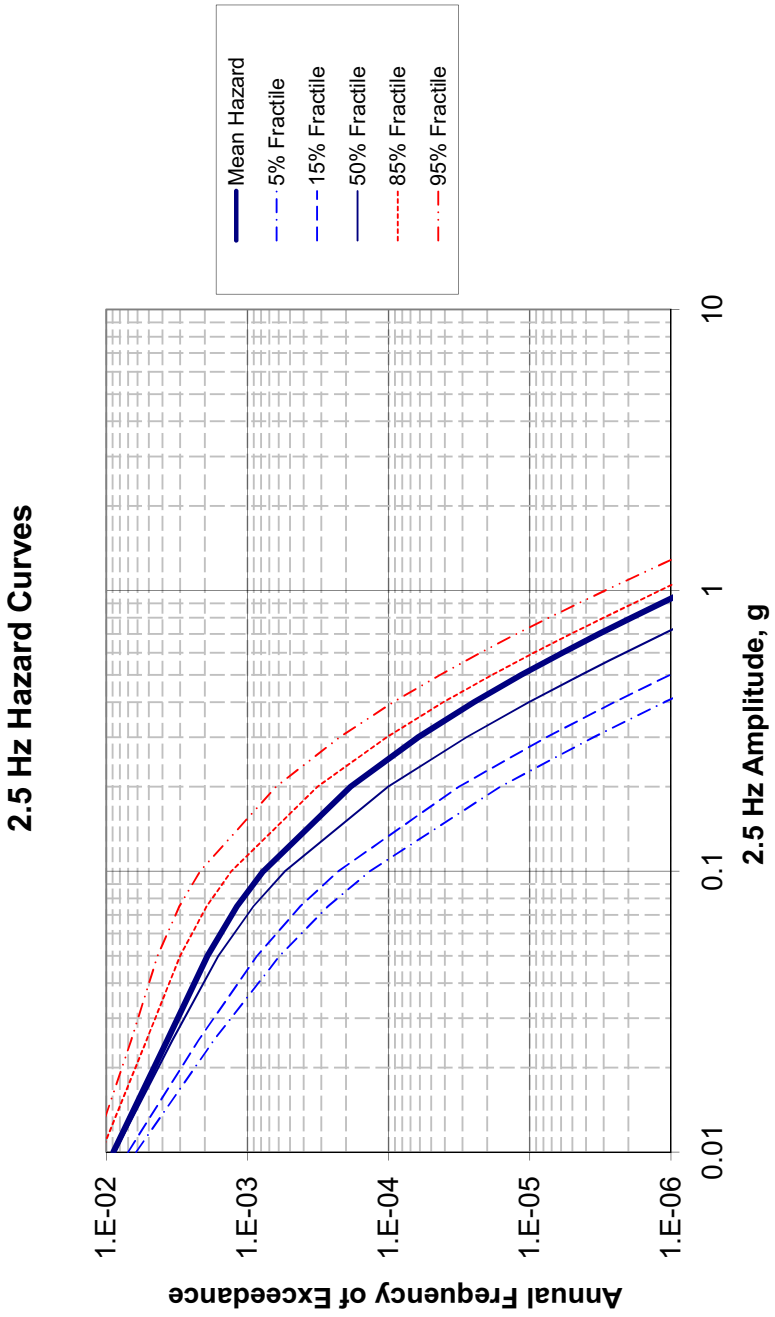

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Figure 2.5-77—{Mean and Fractile Rock Hazard Curves for 1 Hz}

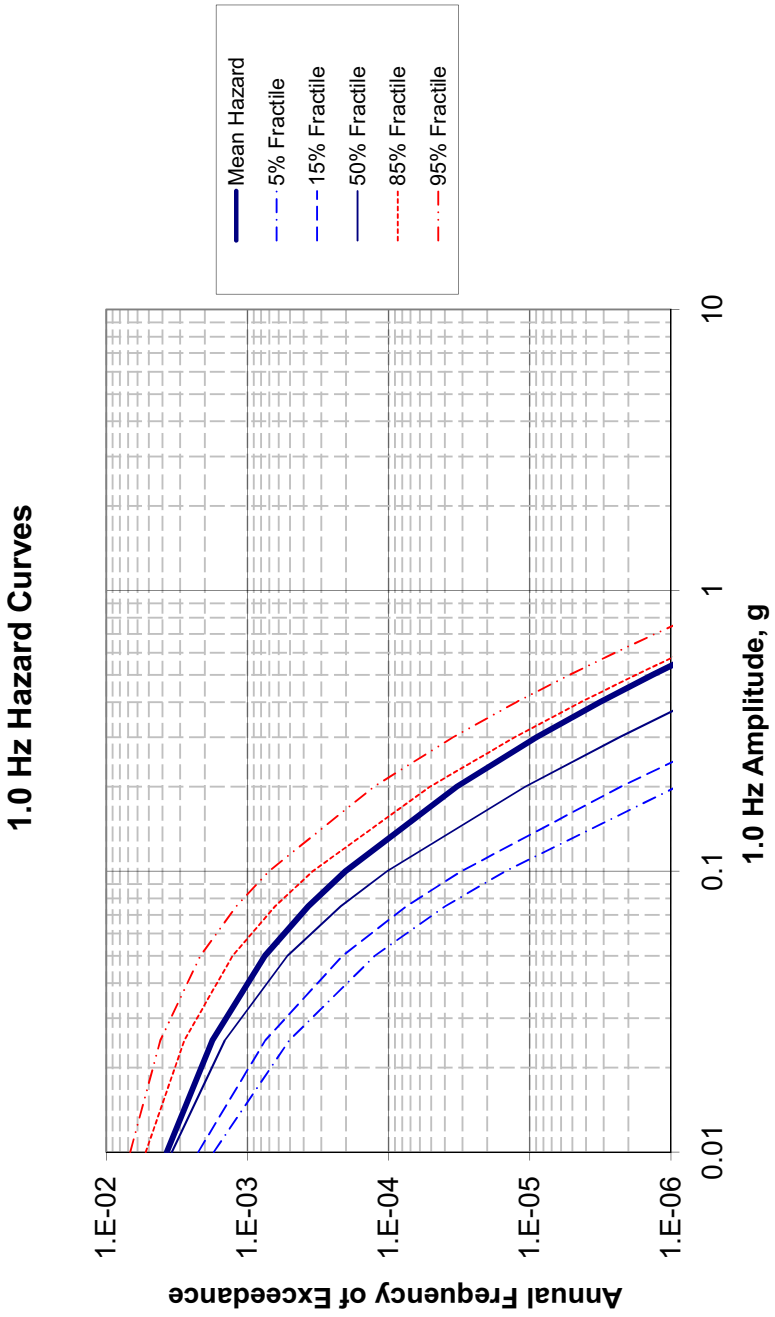

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Figure 2.5-78—{Mean and Fractile Rock Hazard Curves for 0.5 Hz}

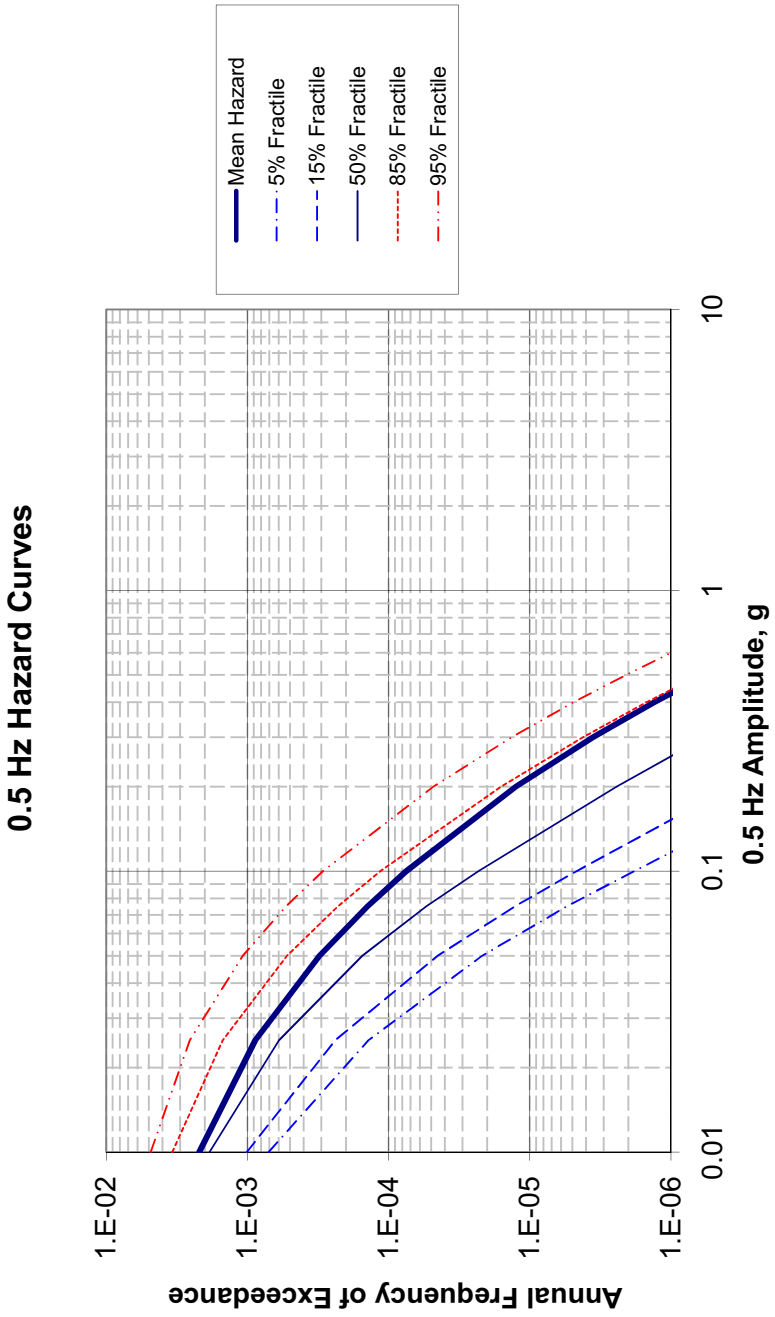

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Figure 2.5-79—{Location of the Arms of the New Madrid Fault System}

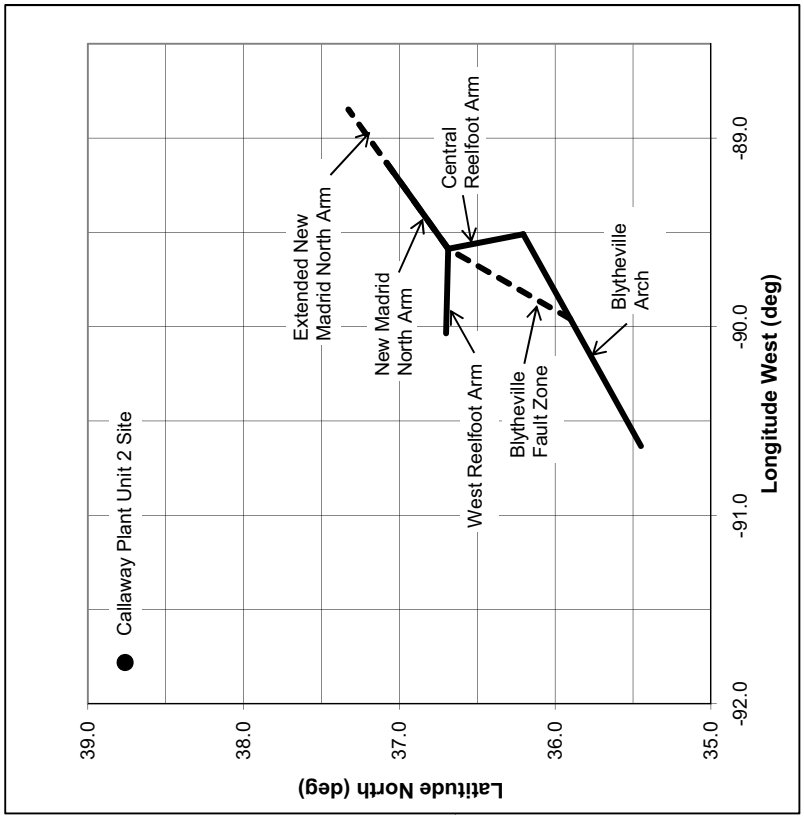

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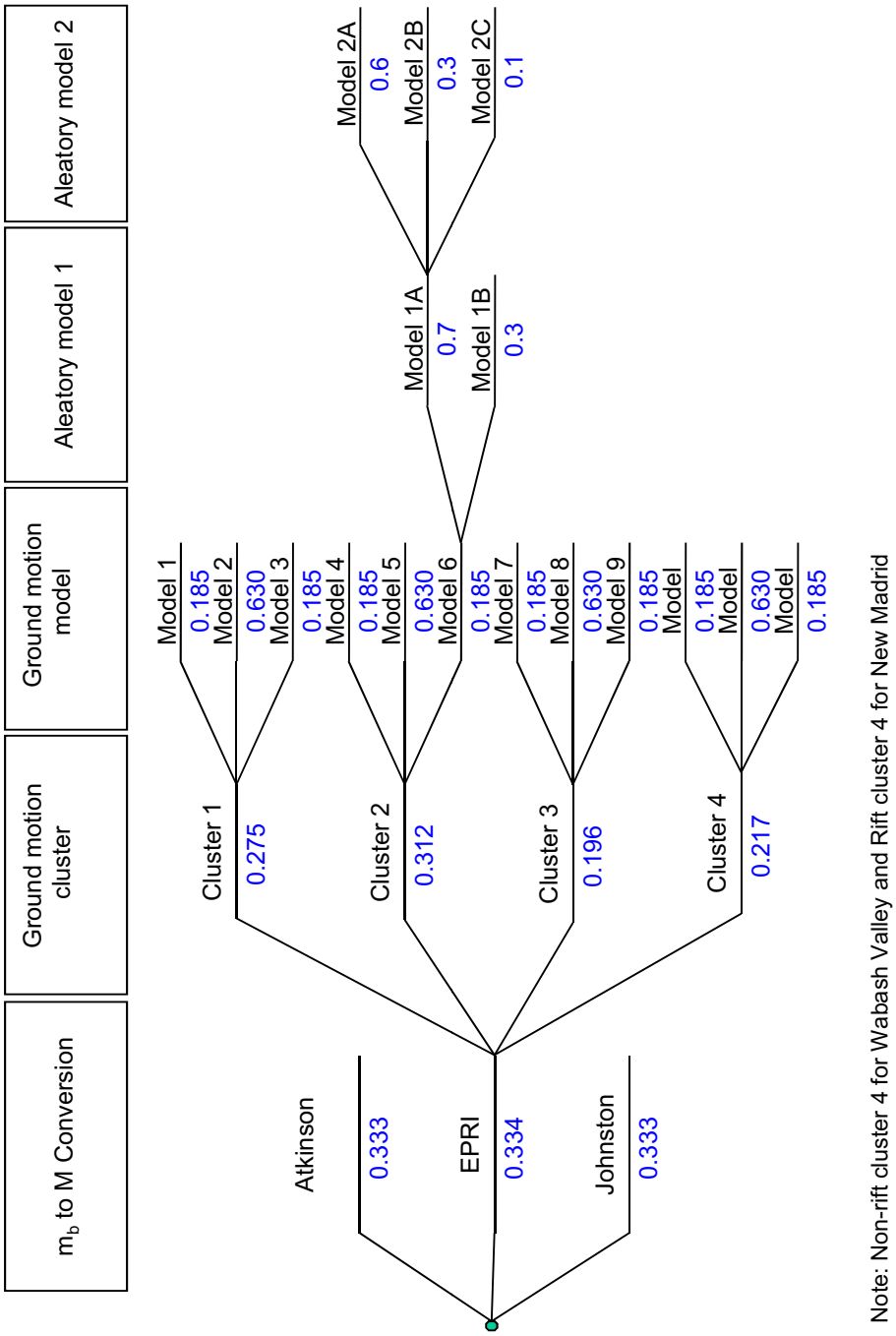
Figure 2.5-80—{Logic Tree of Ground Motion Models for Non-General Sources}



Note: Non-rift cluster 4 for Wabash Valley and Rift cluster 4 for New Madrid

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Figure 2.5-81—{Logic Tree of Ground Motion Models for General Area Sources}

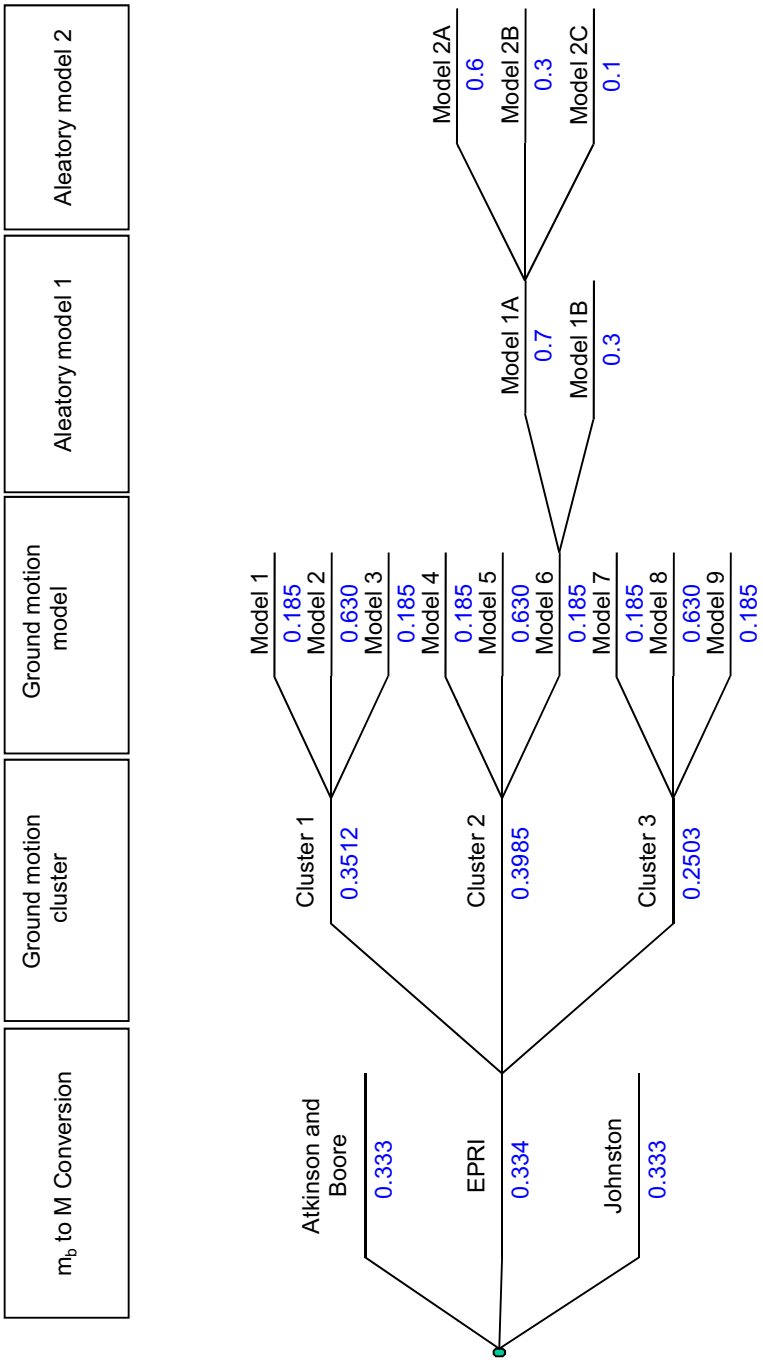

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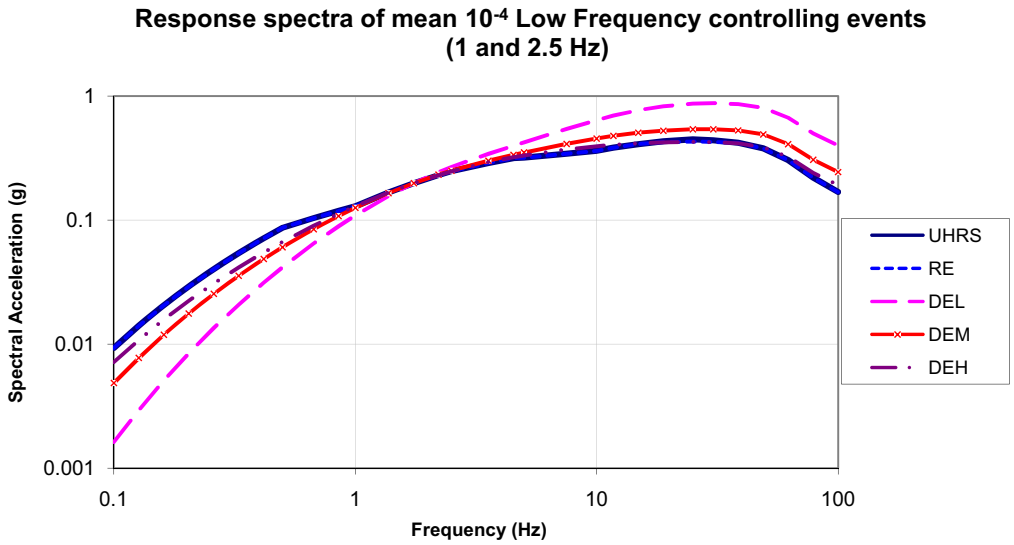
Figure 2.5-82—{1E-4 Response Spectra of Controlling Events at Callaway Plant Site}



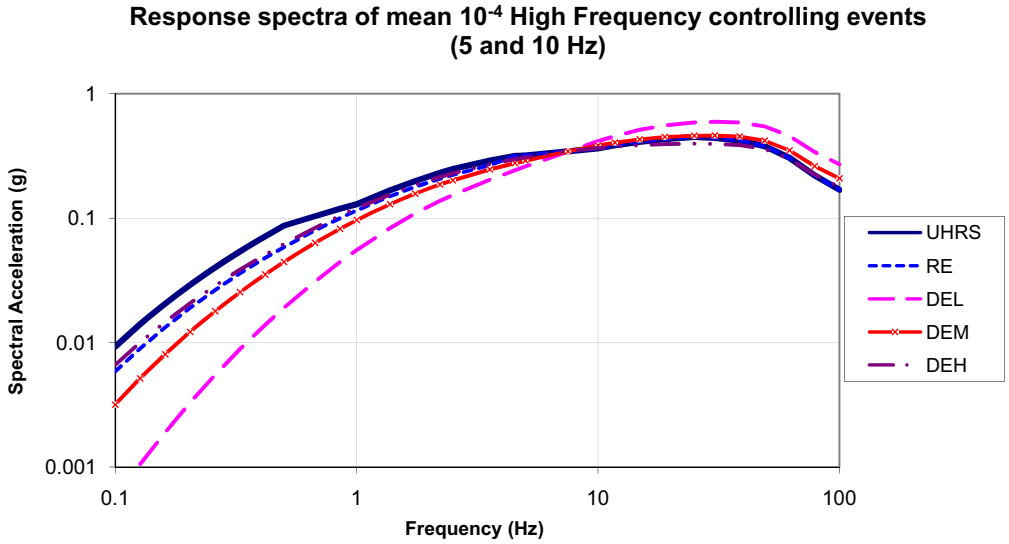


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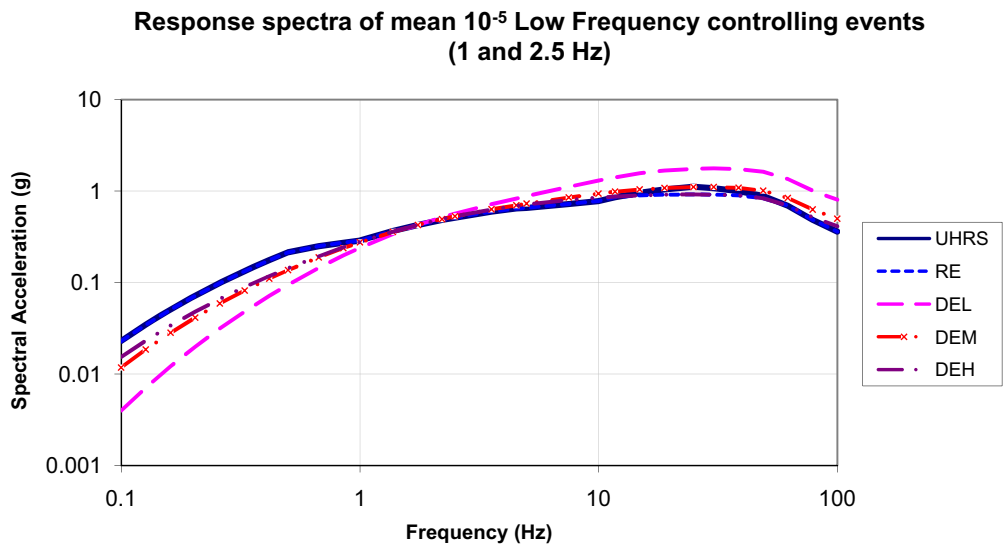
Figure 2.5-83—{1E-5 Response Spectra of Controlling Events at Callaway Plant Site}



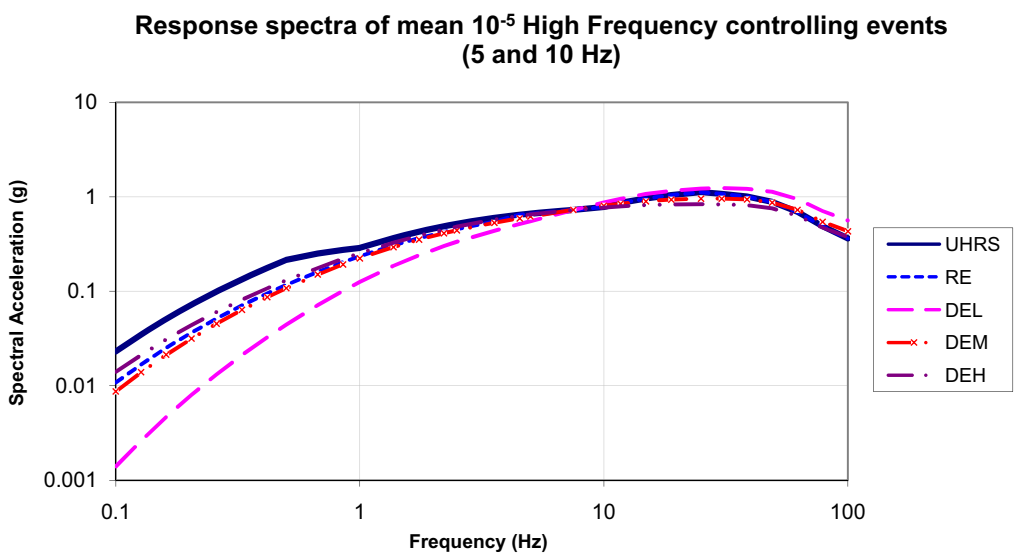


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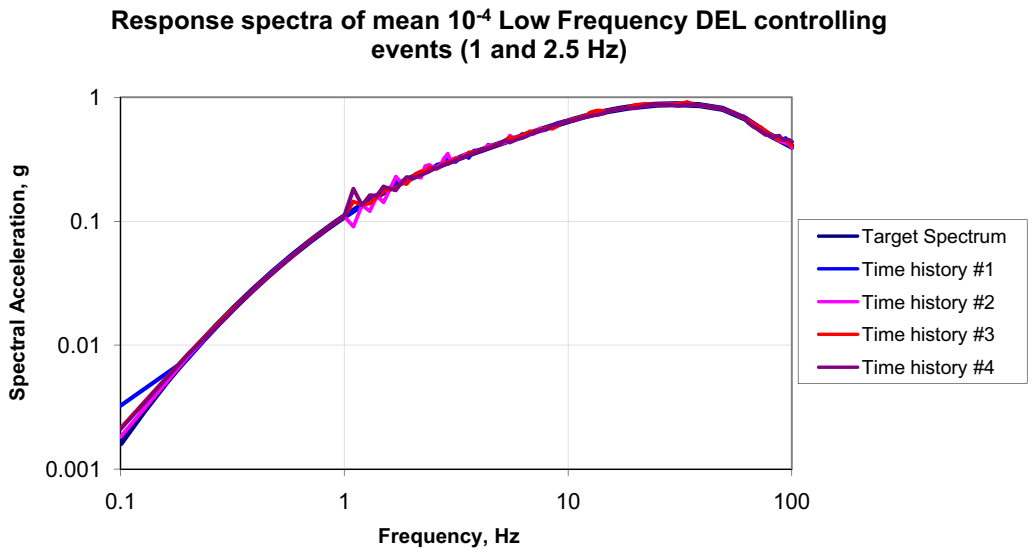
Figure 2.5-84—{Response Spectra of Selected Time Histories for 1E-4 Controlling Event LF, DEL and DEH after Spectral Matching}



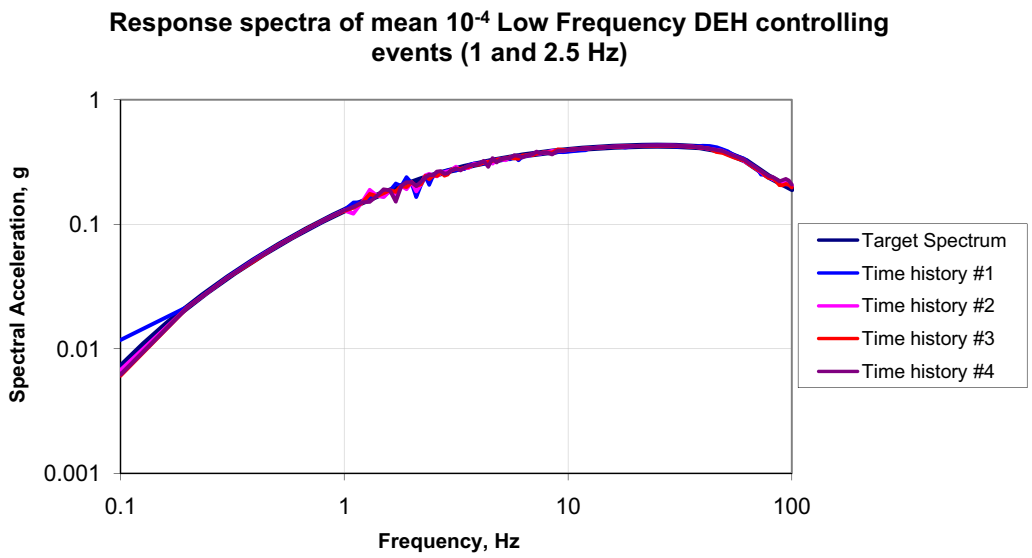


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Figure 2.5-85—{1E-4 Smooth Rock Reference Spectra}

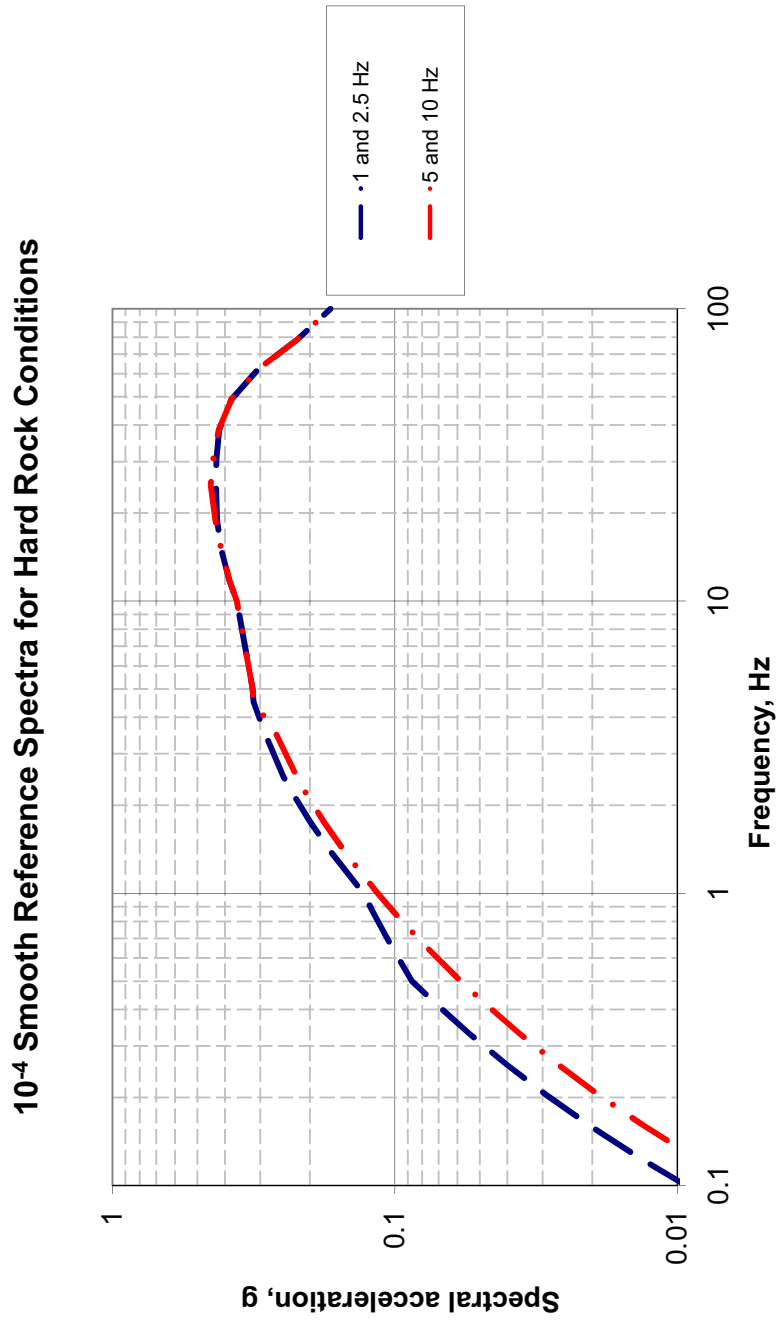

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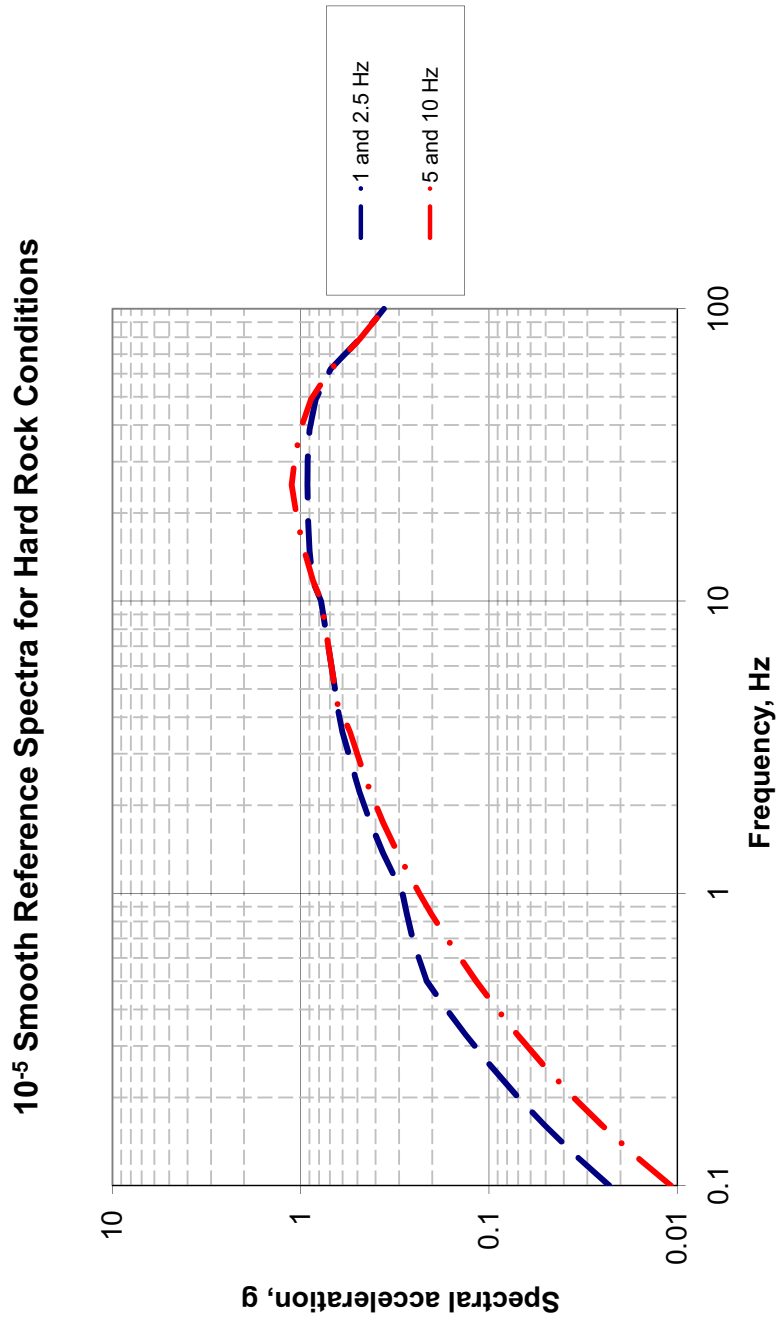
Figure 2.5-86—{1E-5 Smooth Rock Reference Spectra}



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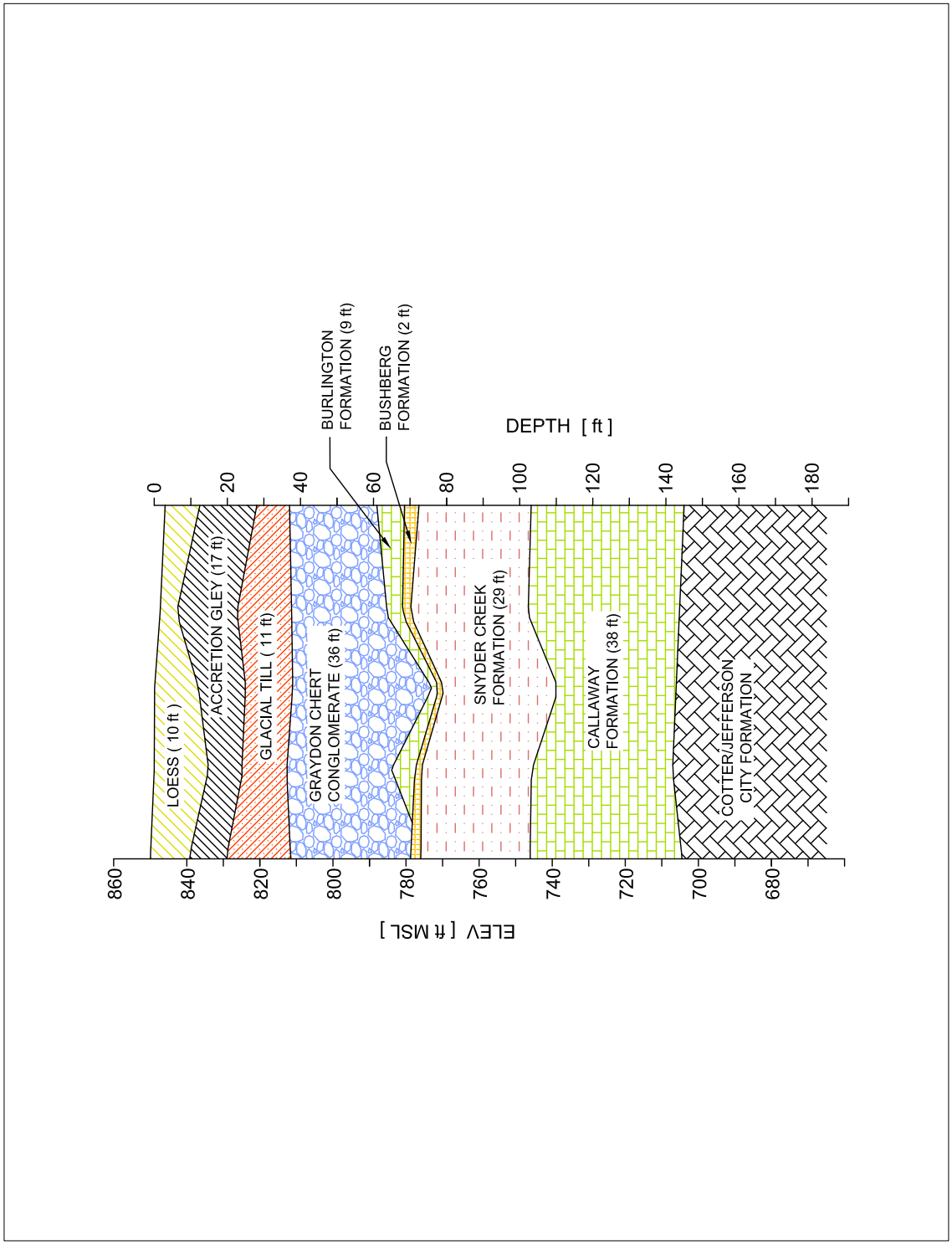

Figure 2.5-87—{Generic Soil Profile}

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Figure 2.5-88—{Boring Layout Plan}

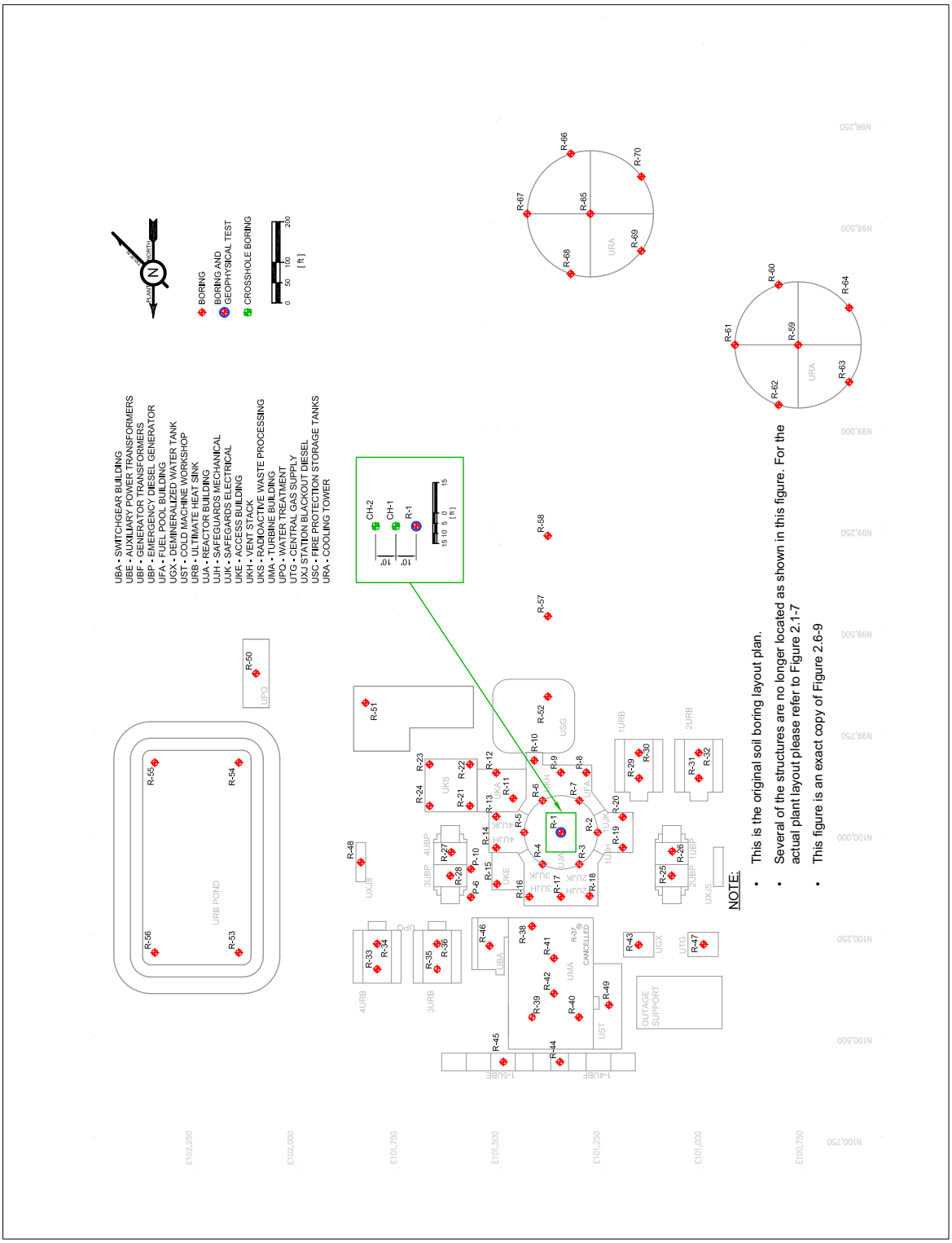

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Figure 2.5-89—{Geophysical Exploration Locations}

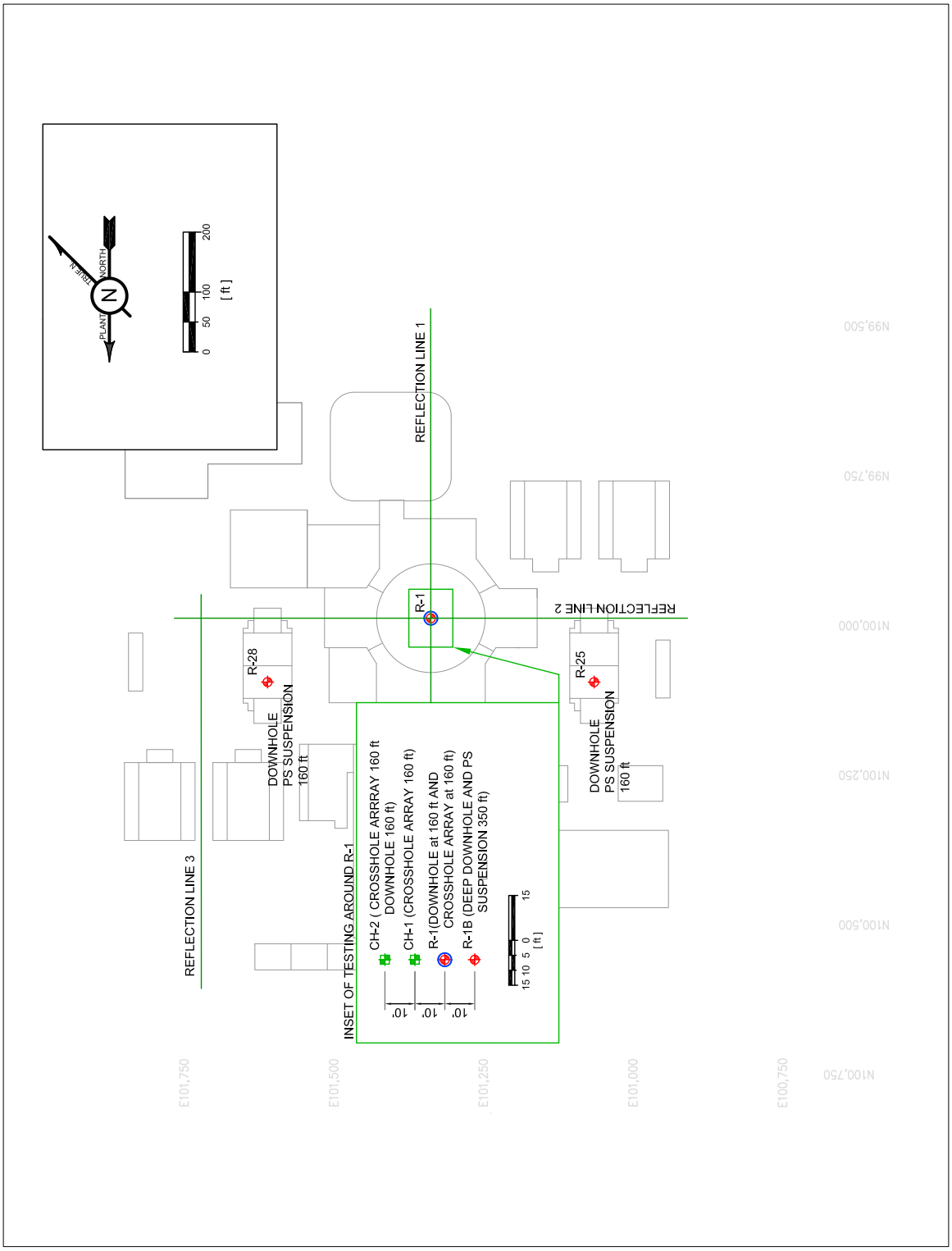

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Figure 2.5-90—{Subsurface Investigation Section AA'}

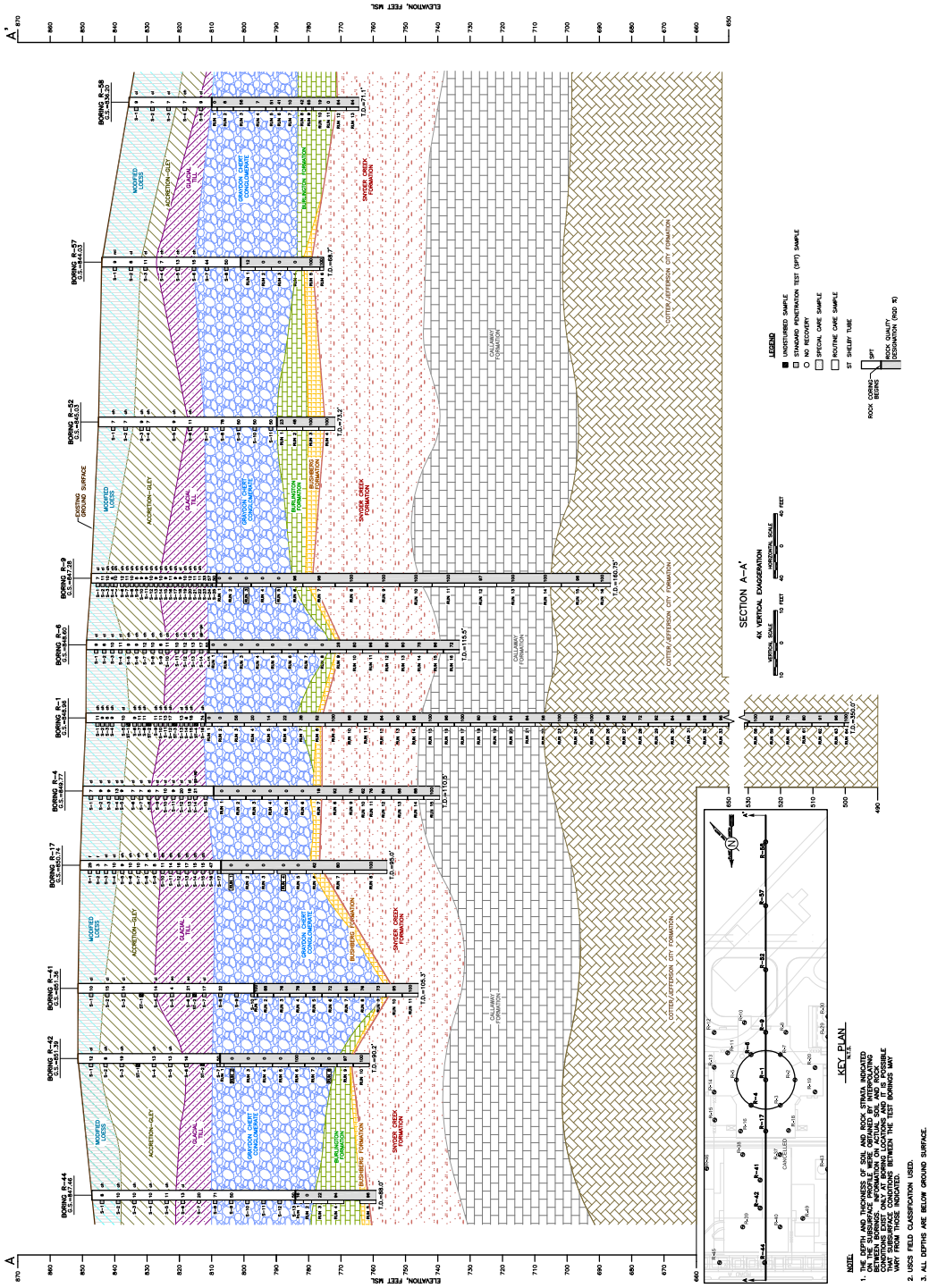

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Figure 2.5-91—{Geotechnical Subsurface Section B-B'}

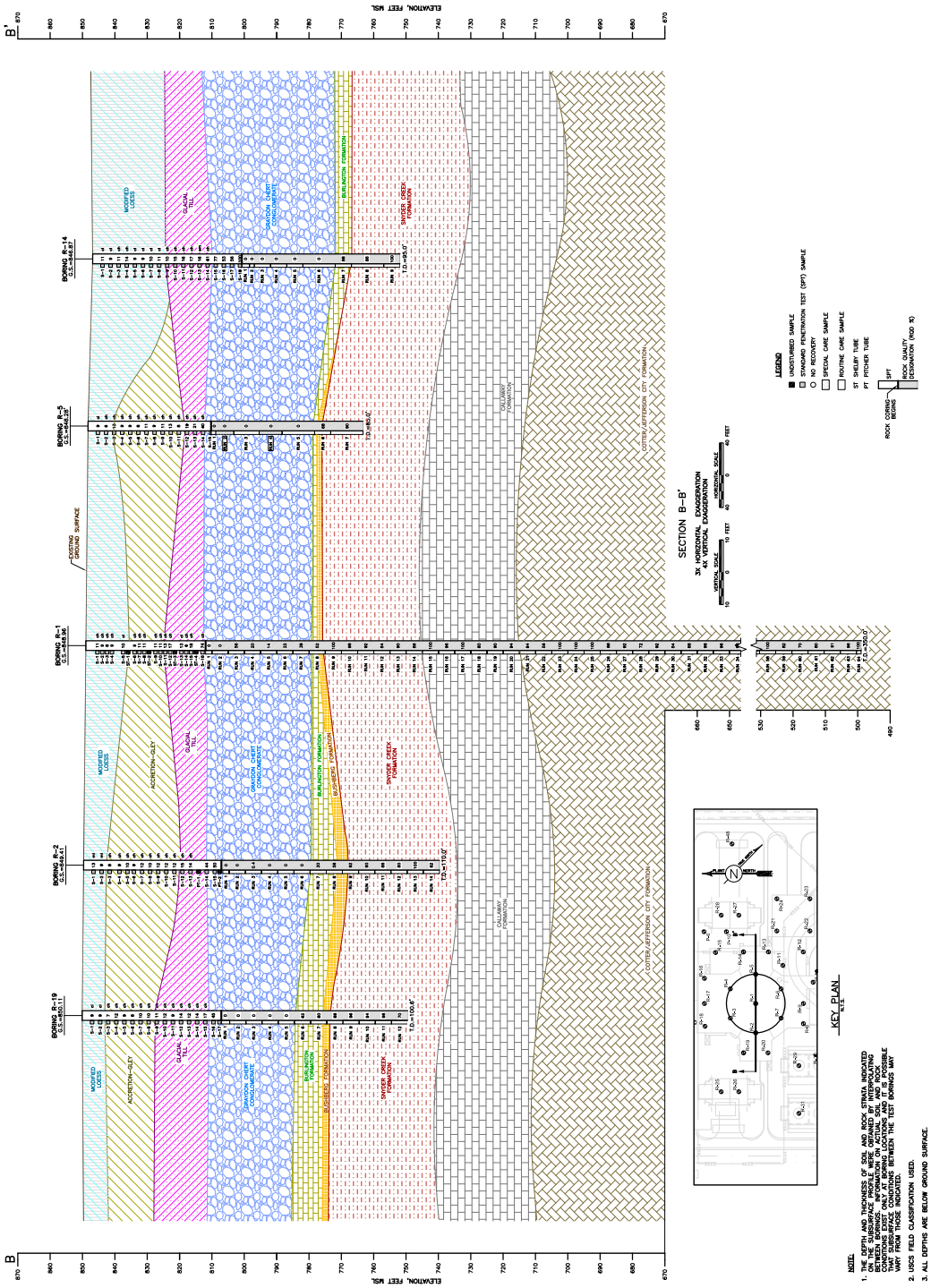

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Figure 2.5-92—{Geotechnical Subsurface Section C-C'}

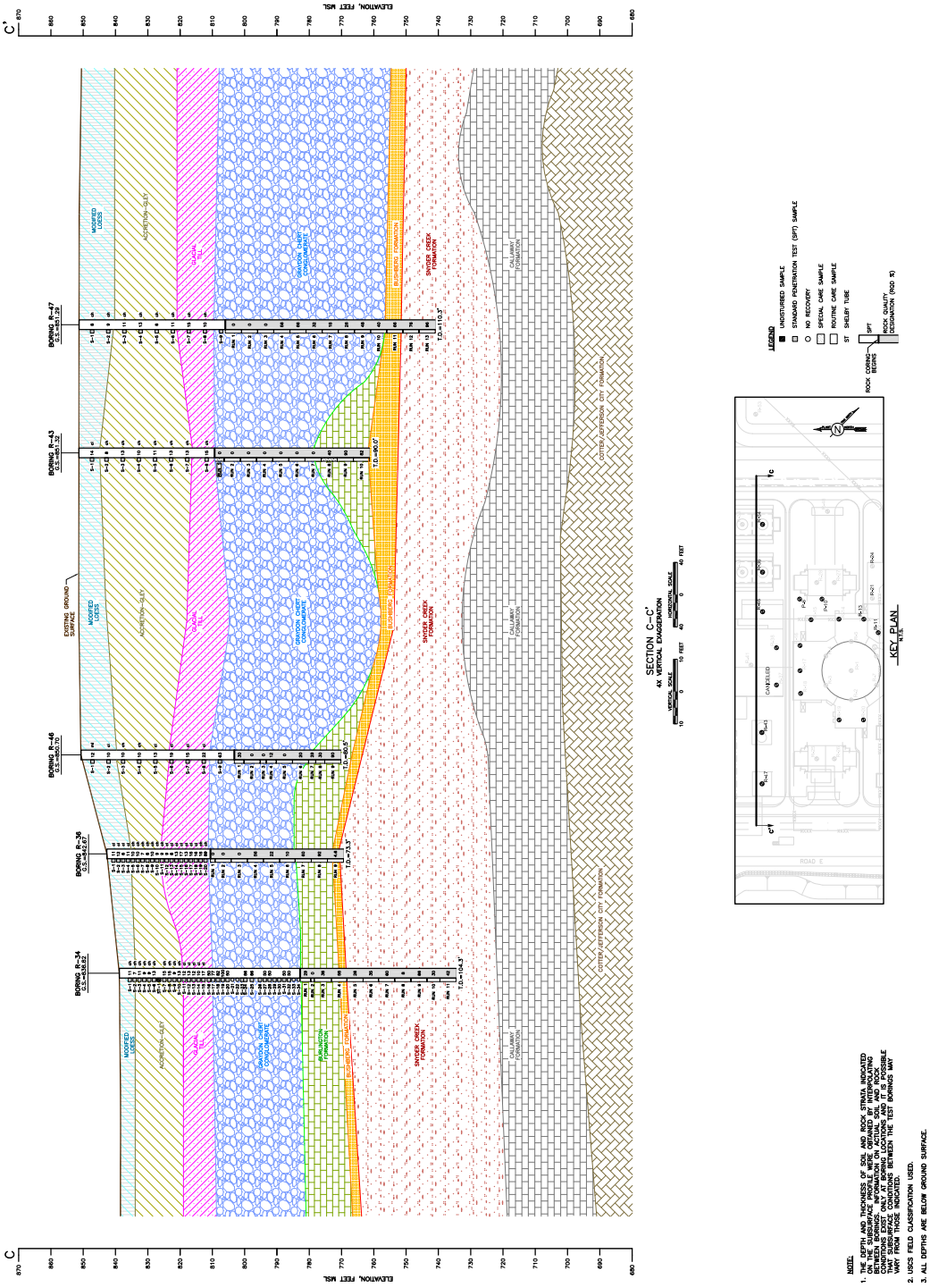

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Figure 2.5-93—{Geotechnical Subsurface Section D-D'}

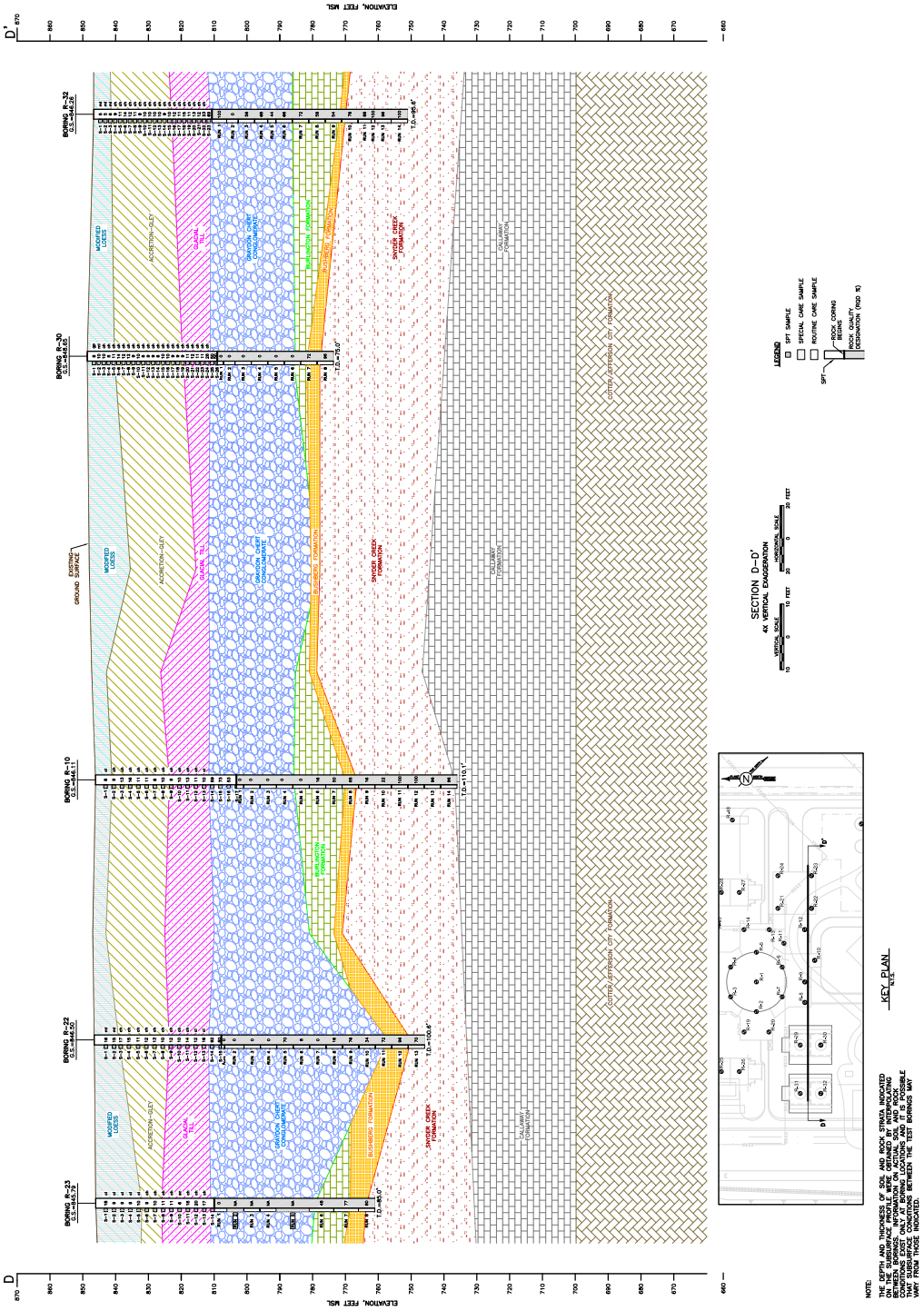

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Figure 2.5-94—{Surface Elevation Contours}

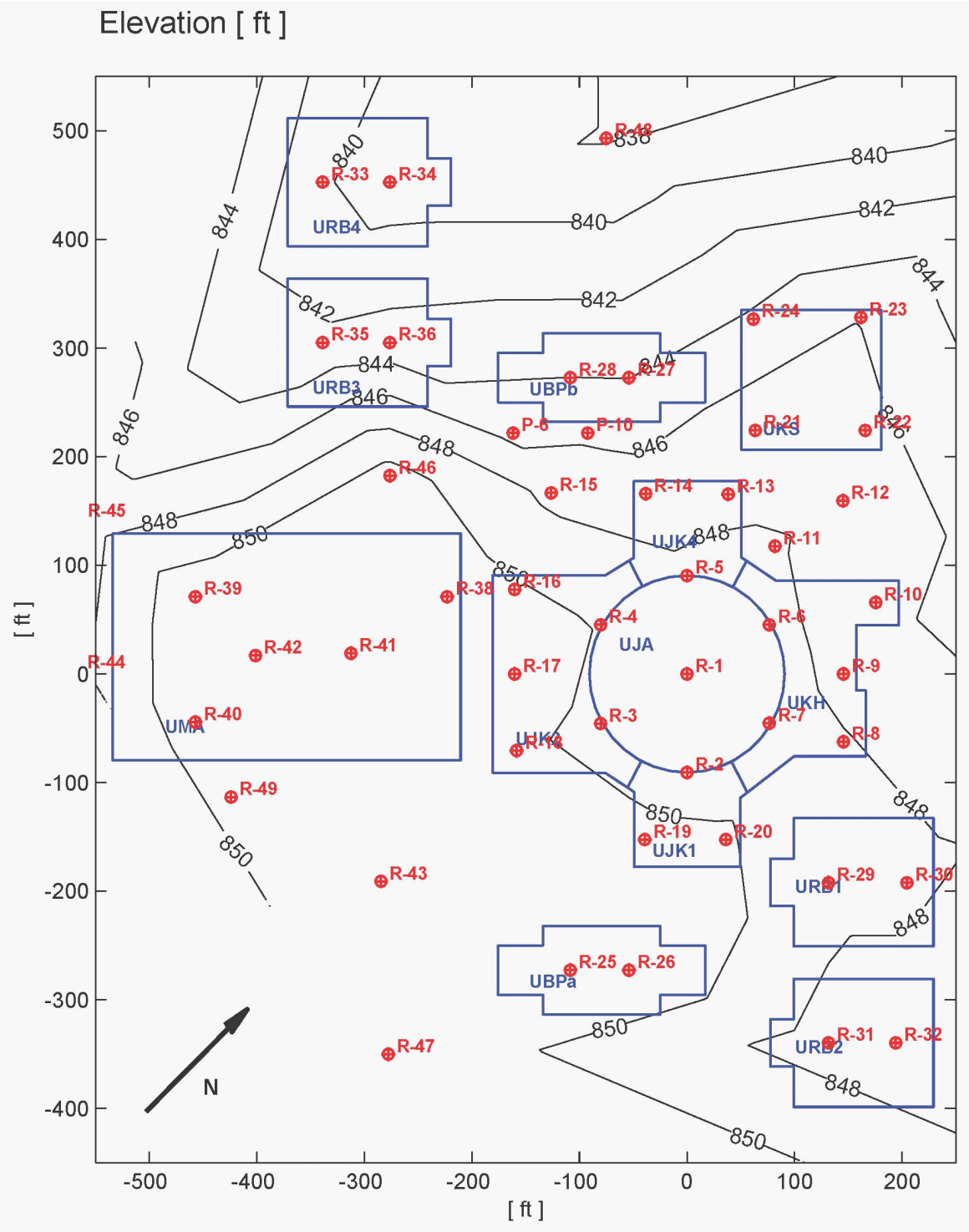

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Figure 2.5-95—{Depth to Graydon Chert Conglomerate}

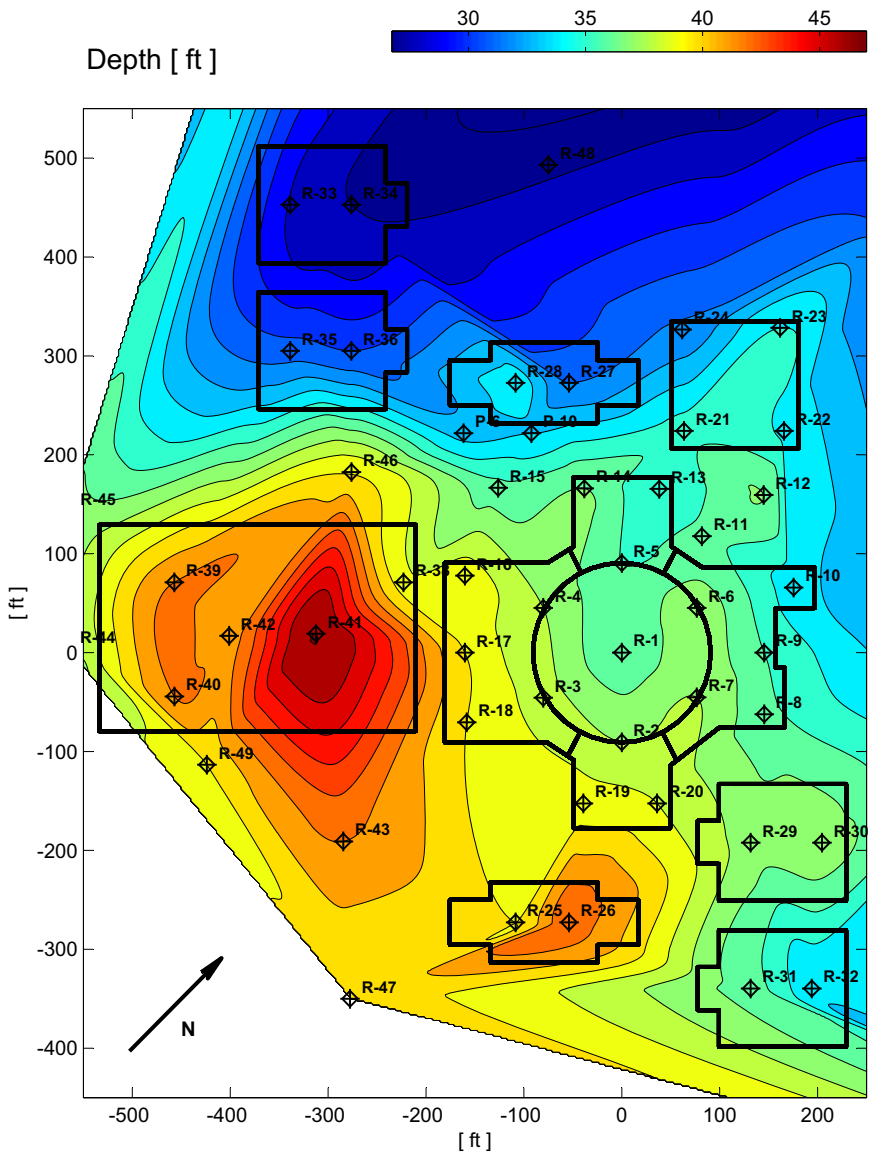

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Figure 2.5-96—{Graydon Chert Conglomerate (Elevation of Top Surface)}

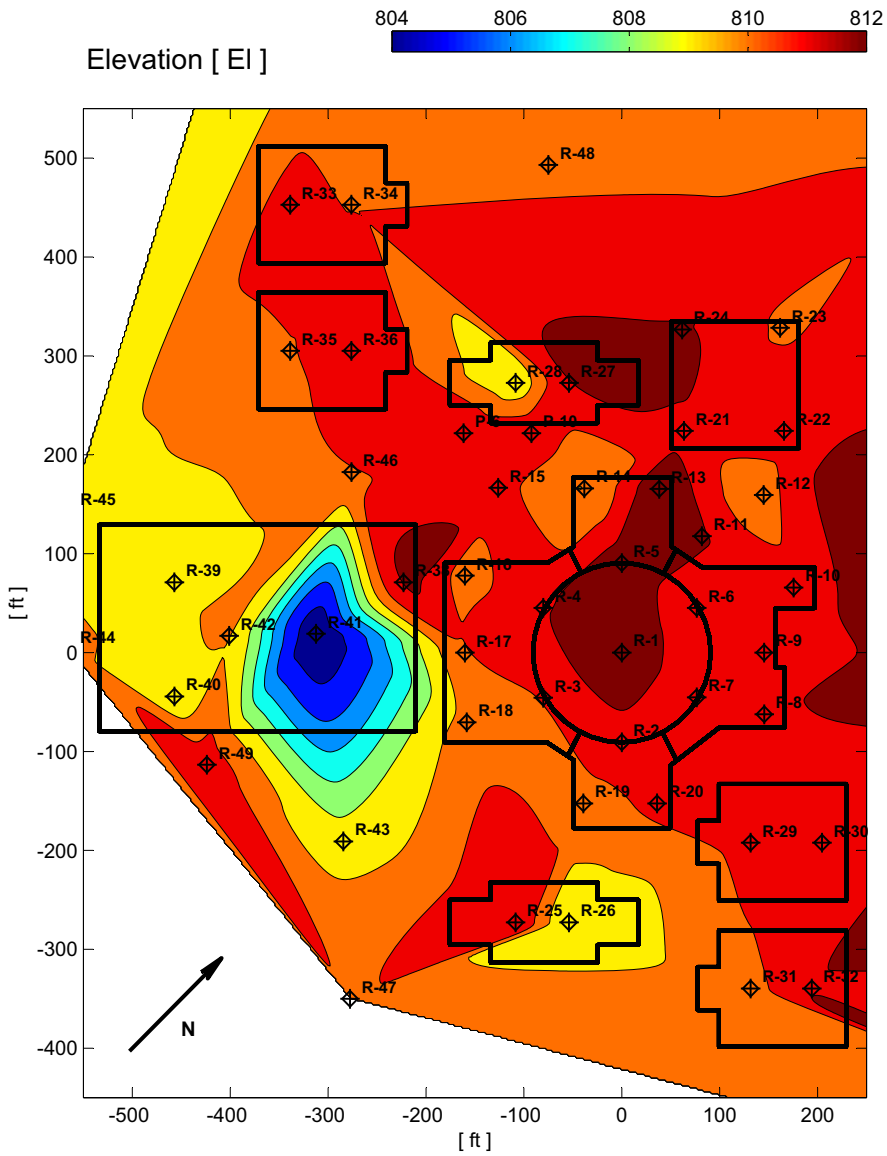

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Figure 2.5-97—{Graydon Chert Conglomerate (Thickness)}

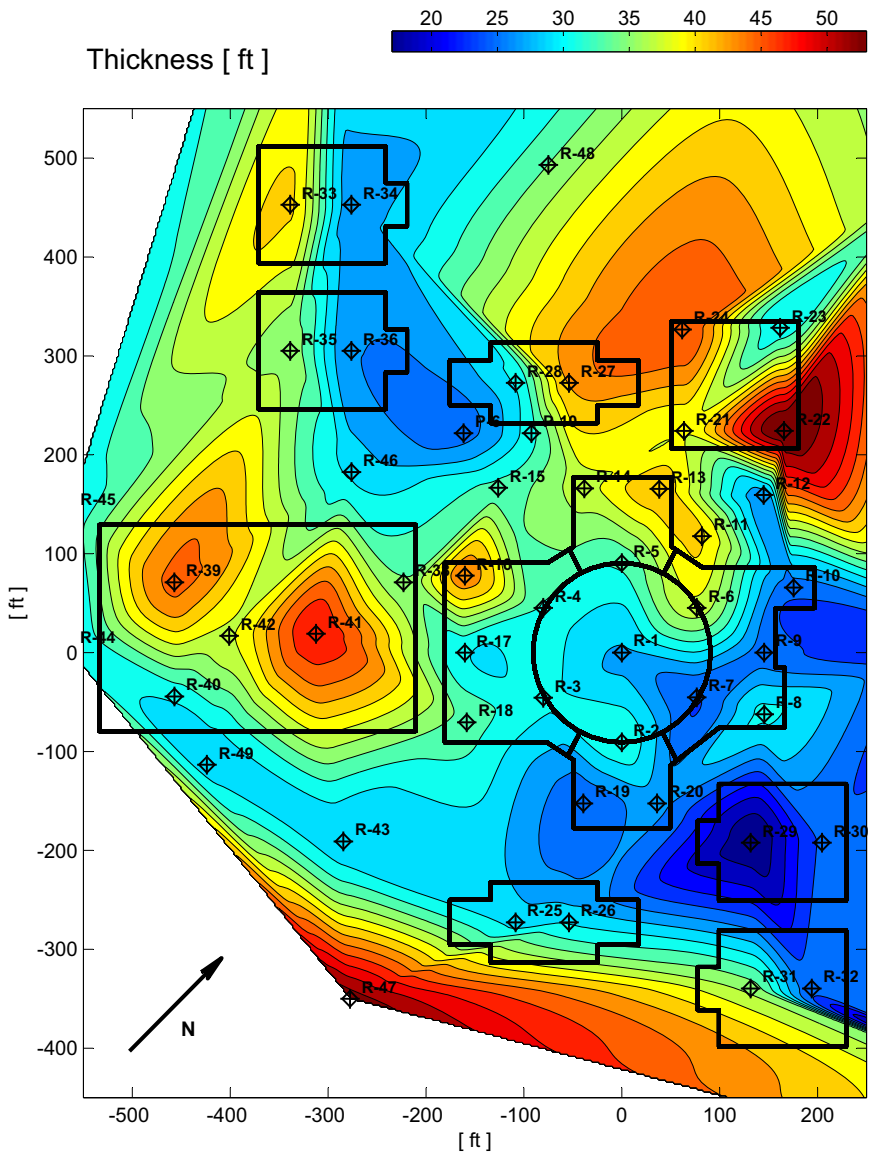

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Figure 2.5-98—{Depth to Bottom of Graydon Chert Conglomerate}

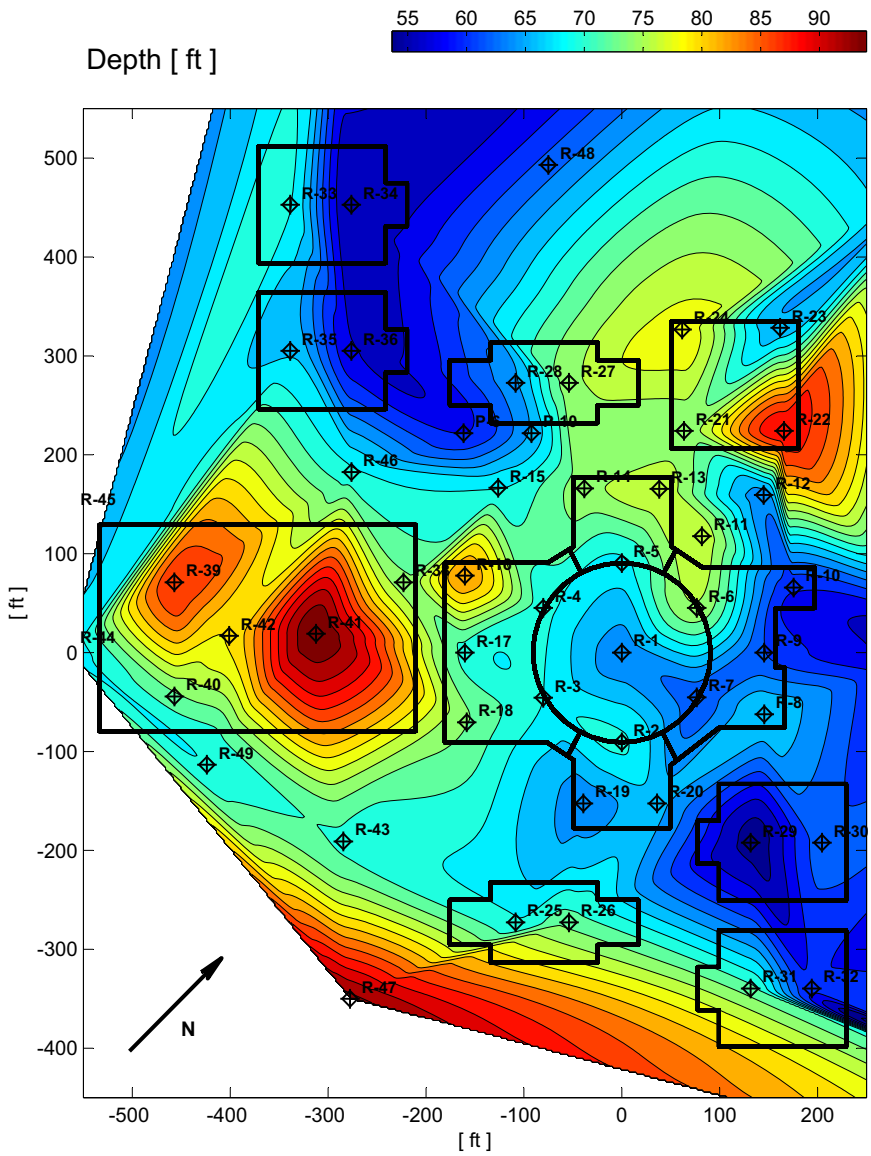

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Figure 2.5-99—{Burlington Formation (Thickness)}

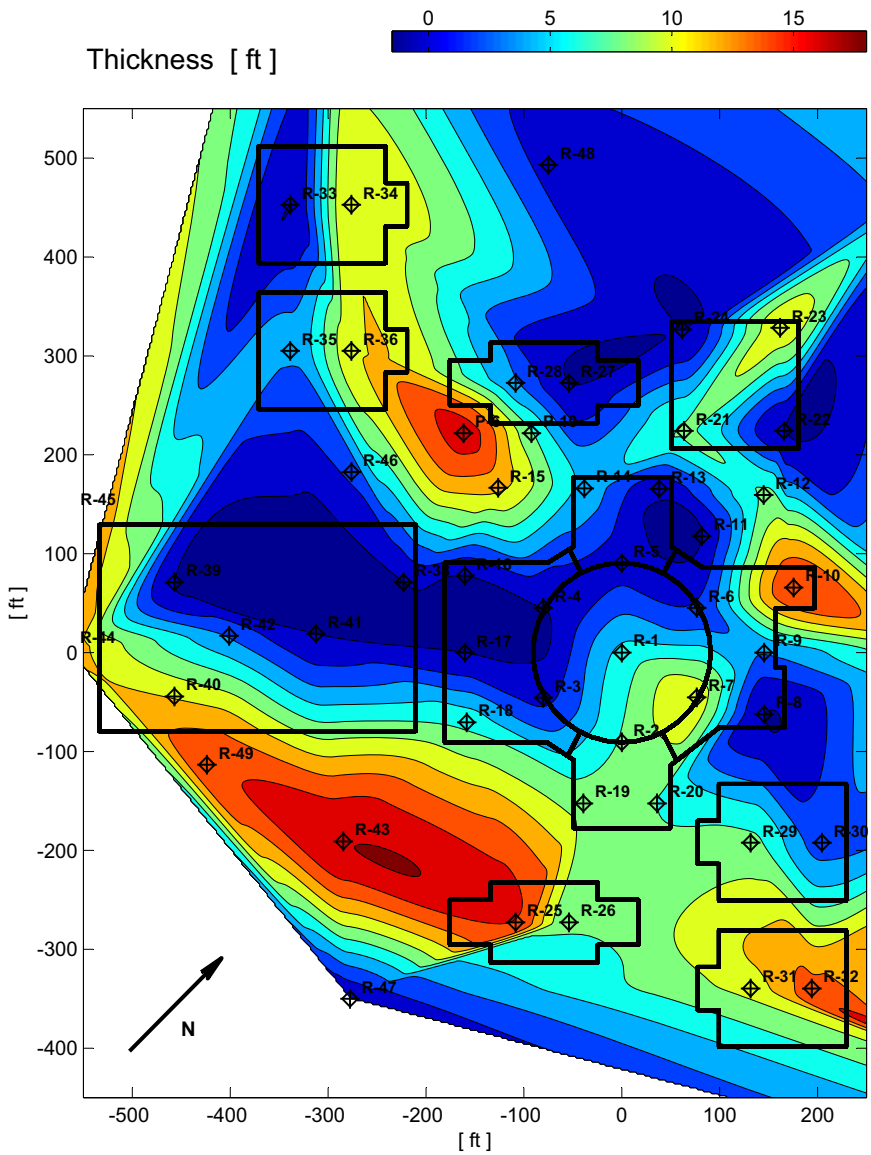

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Figure 2.5-100—{Bushberg Formation (Depth to Top Surface)}

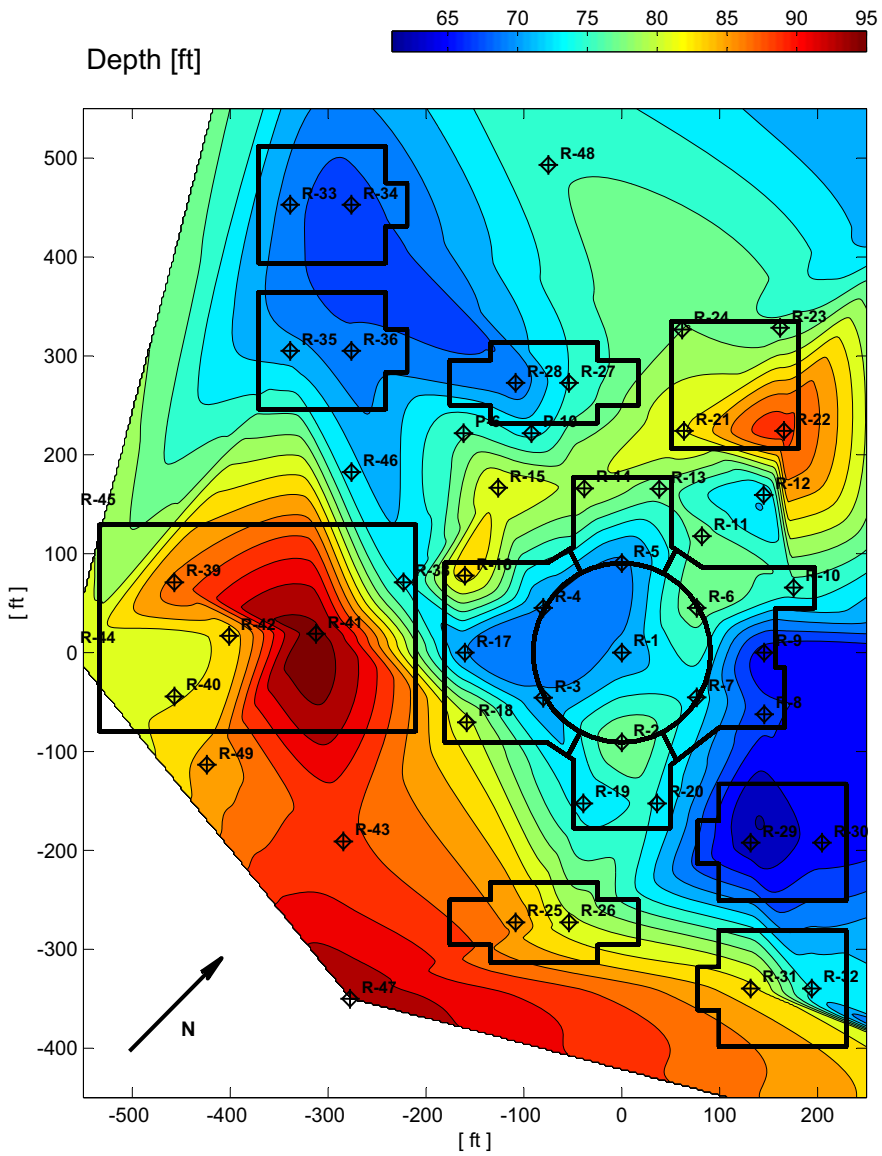

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Figure 2.5-101—{Bushberg Formation (Thickness)}

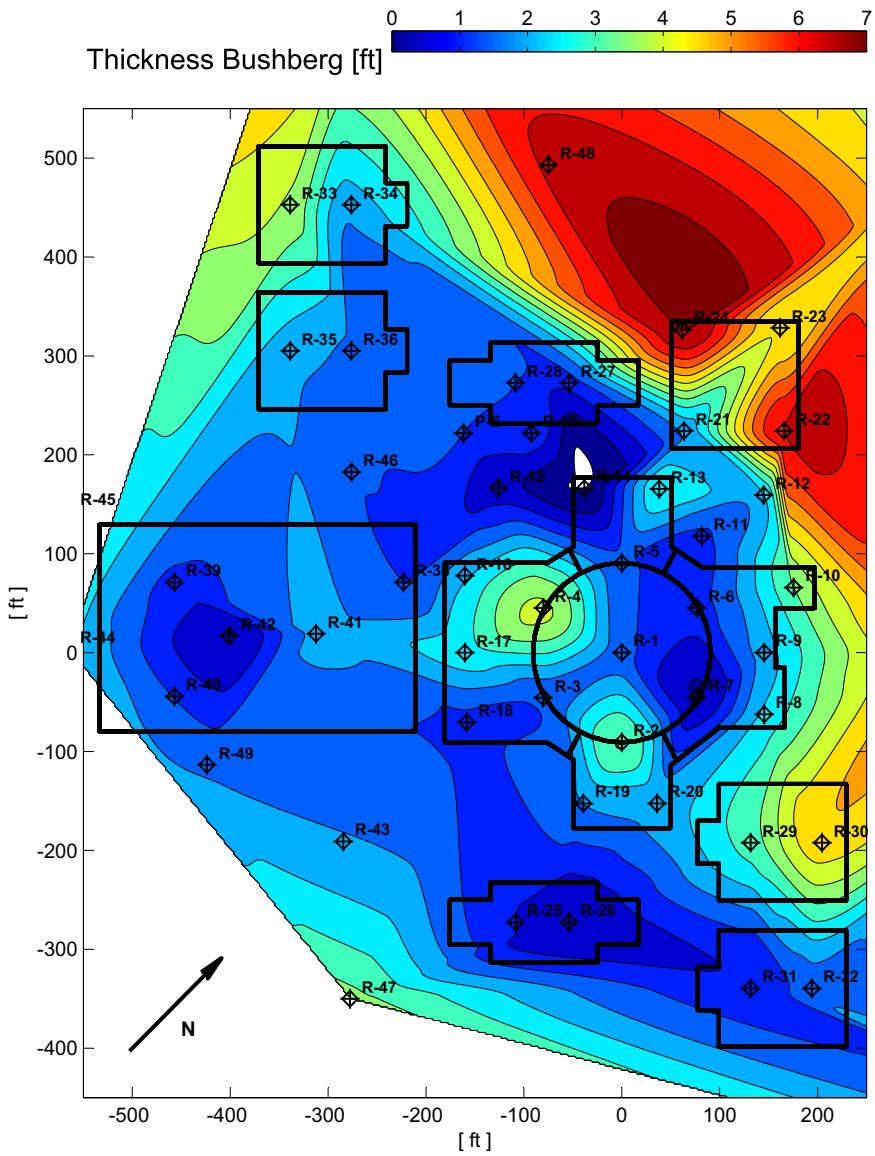

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Figure 2.5-102—{Snyder Creek Formation (Depth to Top Surface)}

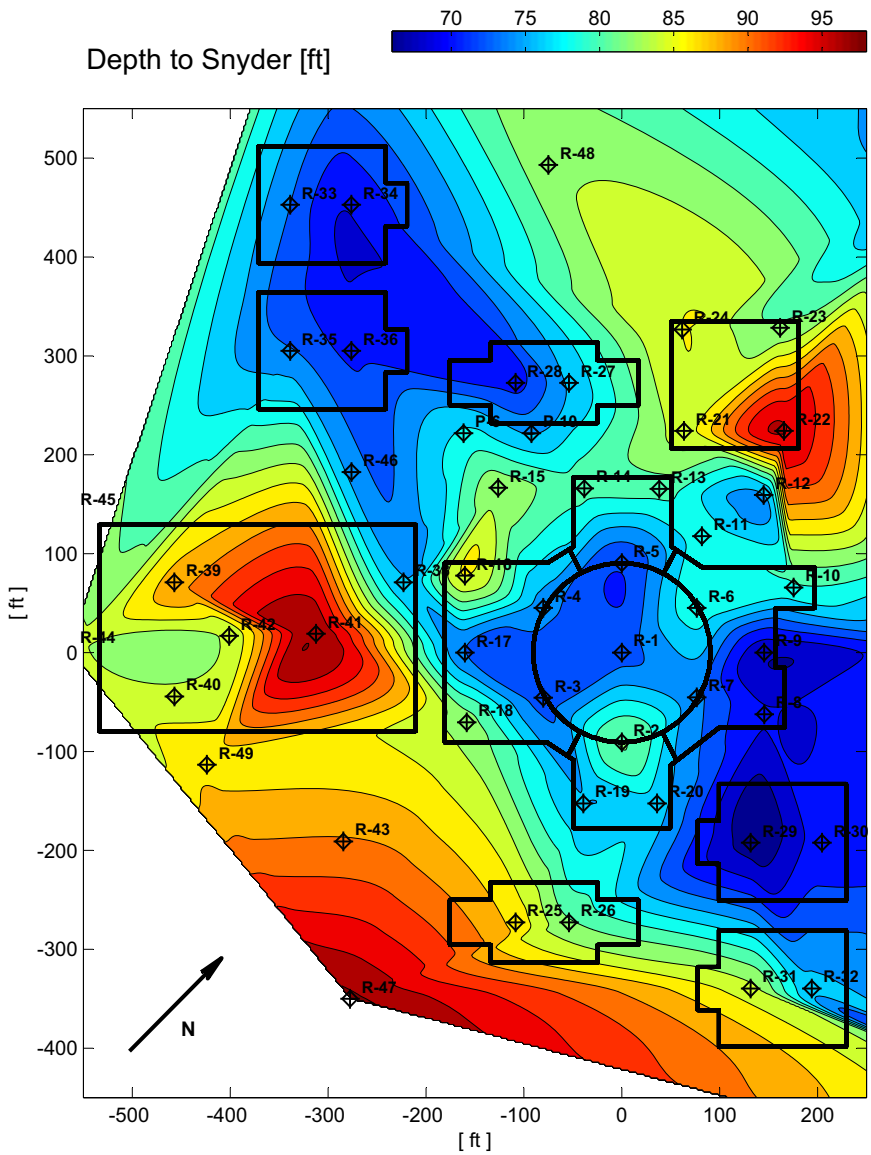

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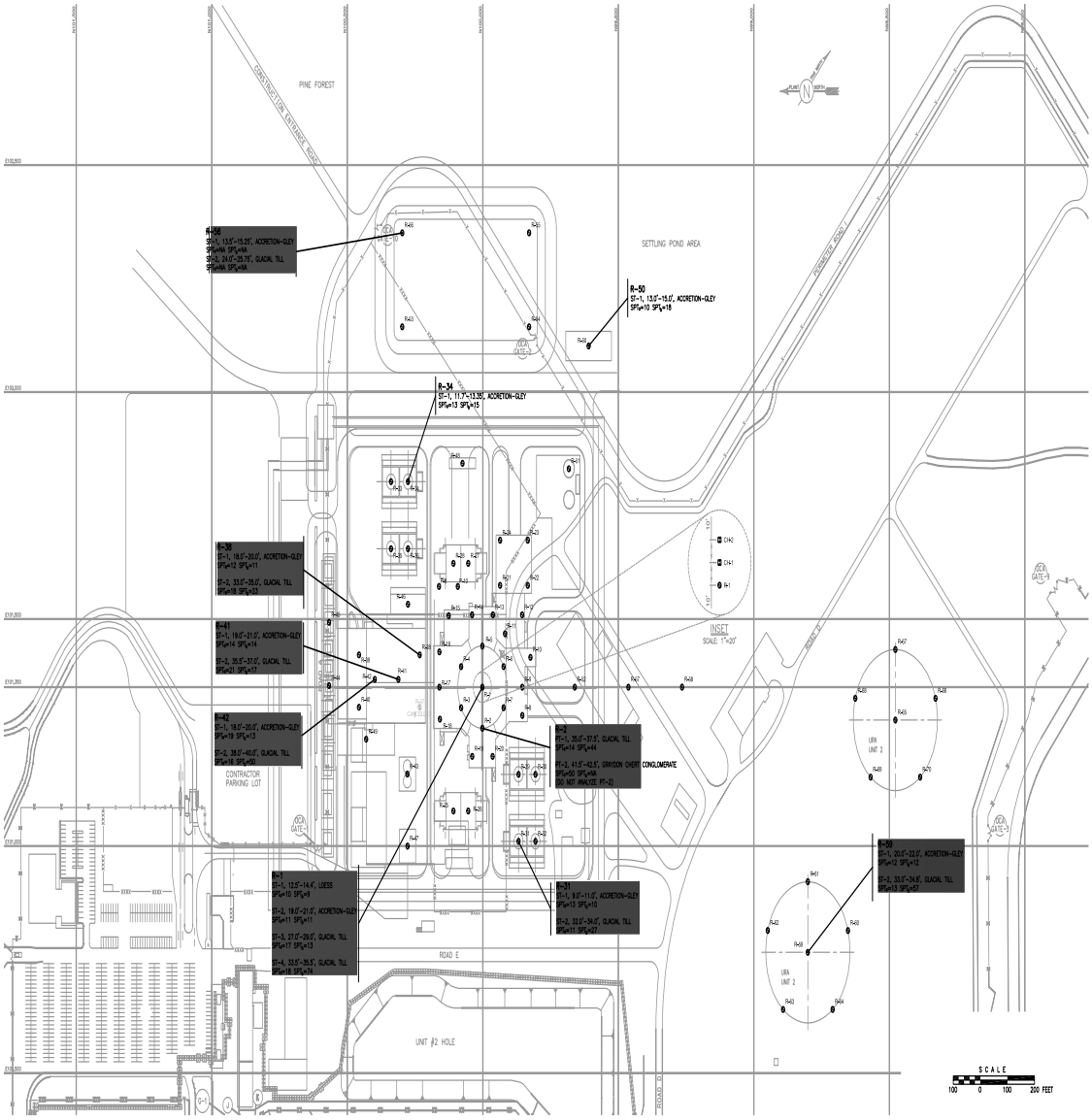
Figure 2.5-103—{Location of Undisturbed Samples}



NOTE:

- Original boring plan depicted. Final site layout is provided in FSAR Chapters 1 and 2.

LEGEND

PT PITCHER TUBE
ST SHELBY TUBE
SPT N-VALUE ABOVE ST SAMPLE
SPT N-VALUE BELOW ST SAMPLE
NA NONE AVAILABLE

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Figure 2.5-104—{Location of Special Care Samples}

NOTE:

- Original boring plan depicted. Final site layout is provided in FSAR Chapters 1 and 2.

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Figure 2.5-105—{SPT Variability}

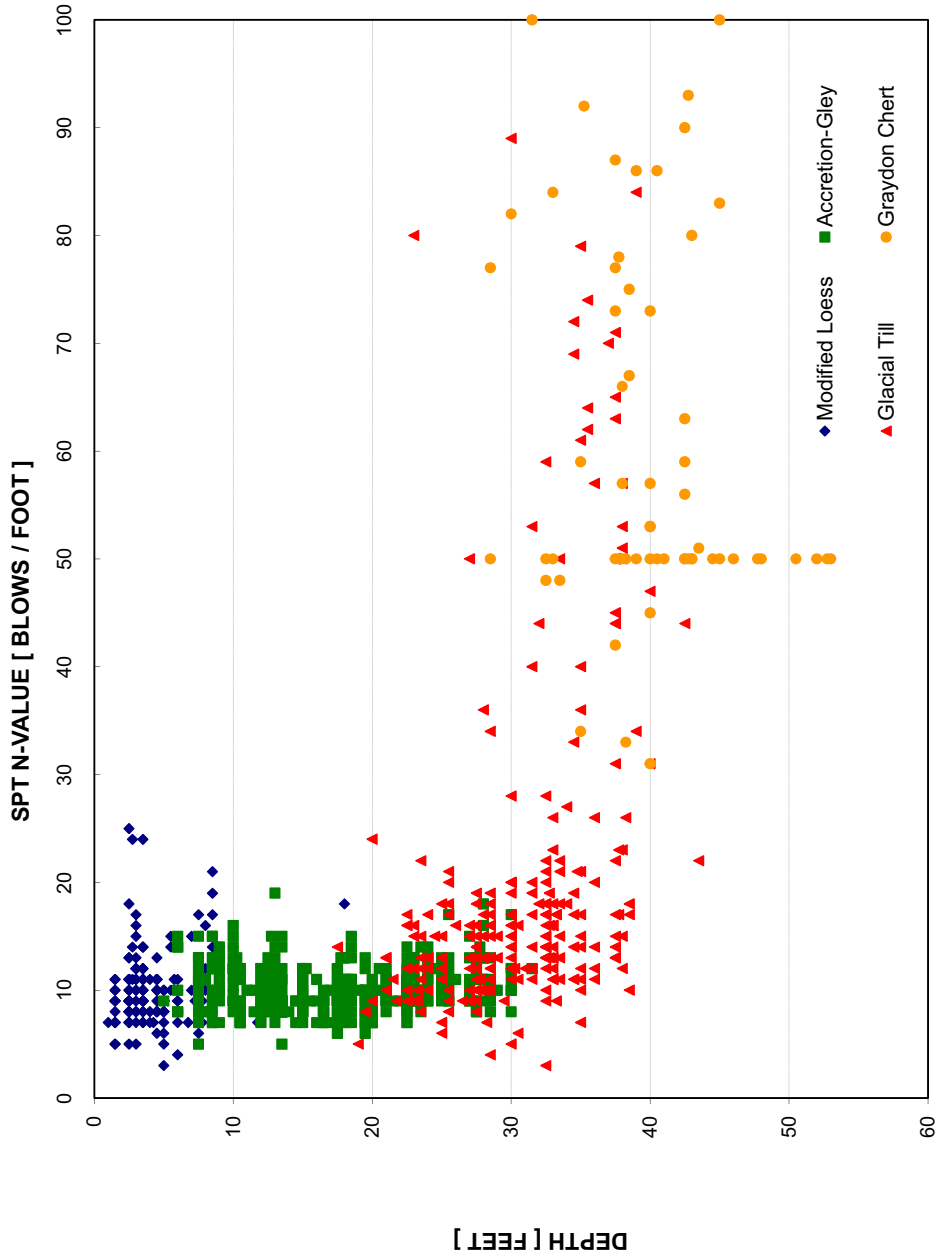

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Figure 2.5-106—{Pressuremeter Test Results}

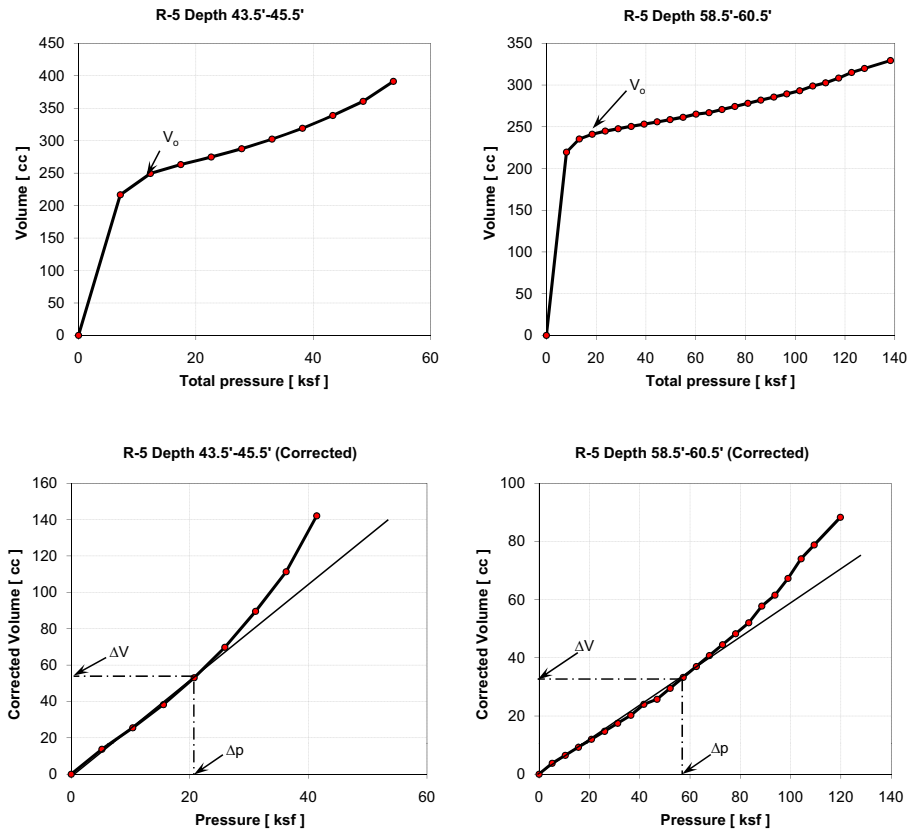

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Figure 2.5-107—{Pressuremeter Test Results}

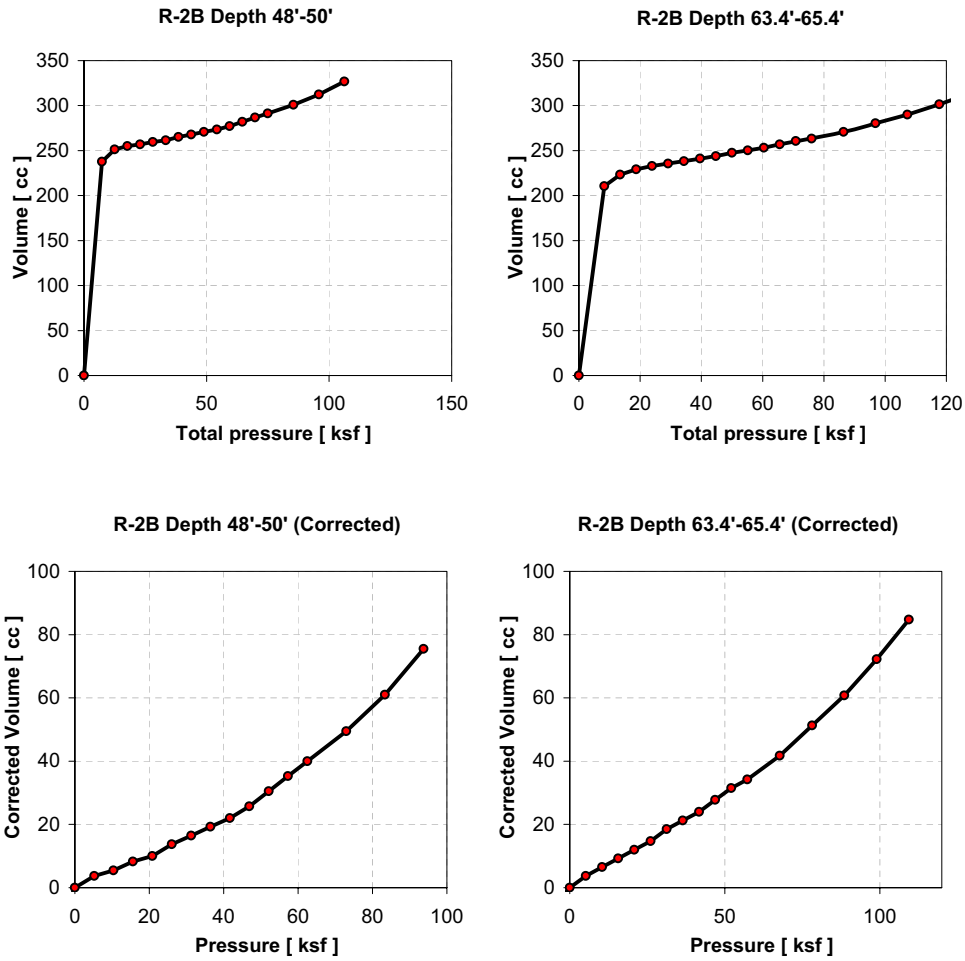

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Figure 2.5-108—{Geophysical Testing (Cross-Hole)}

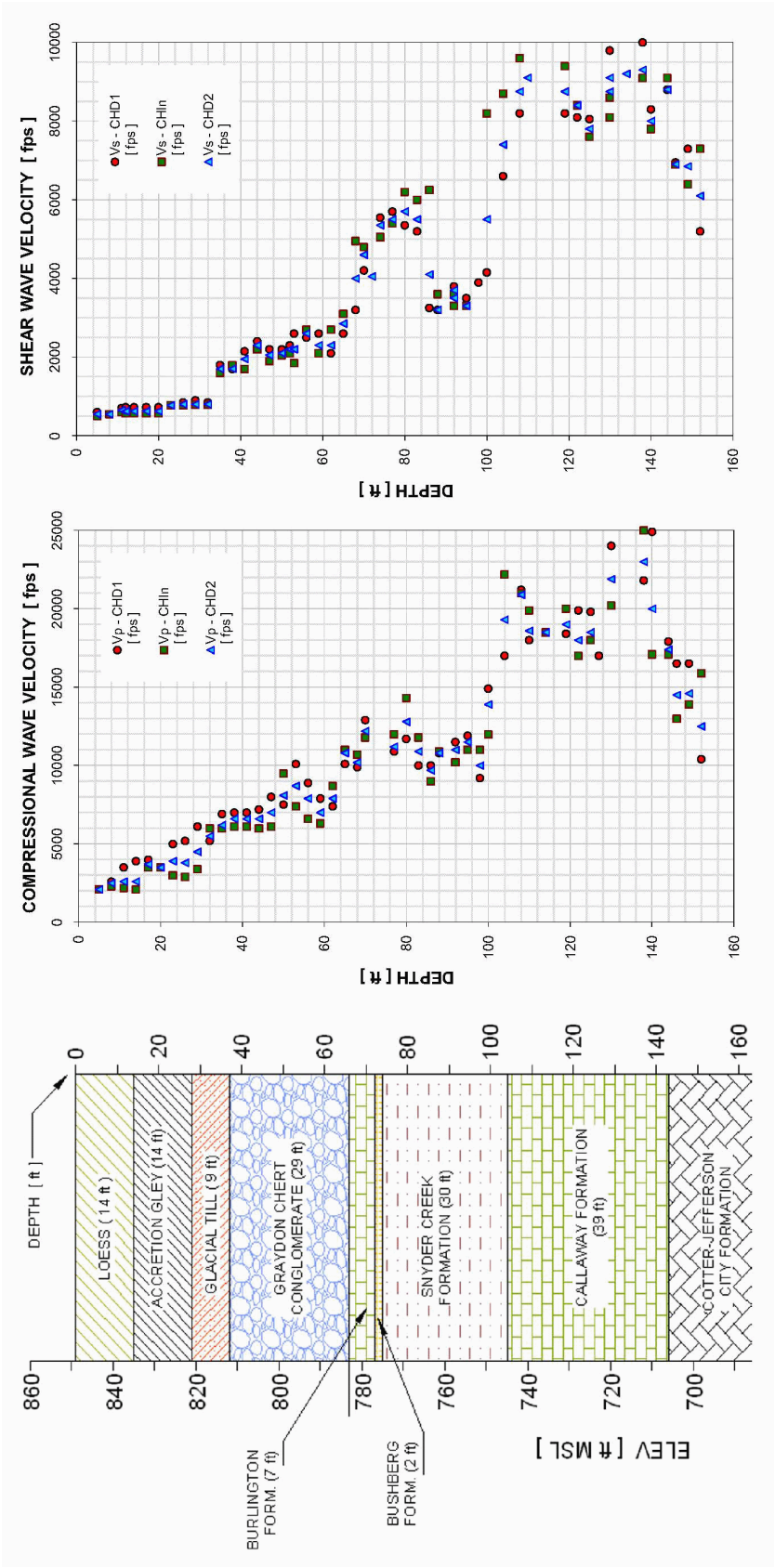

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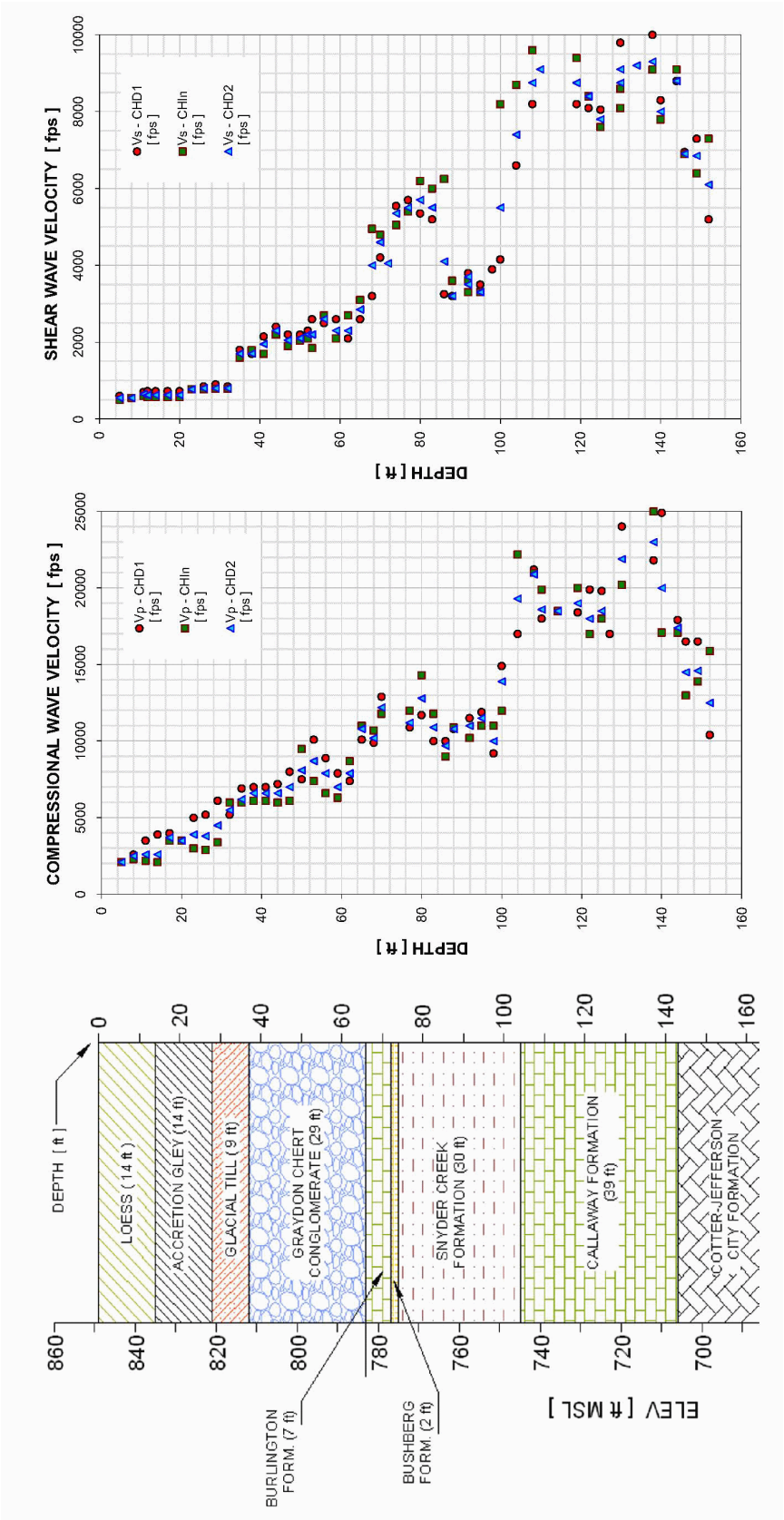
Figure 2.5-109—{Geophysical Testing at CH-2}



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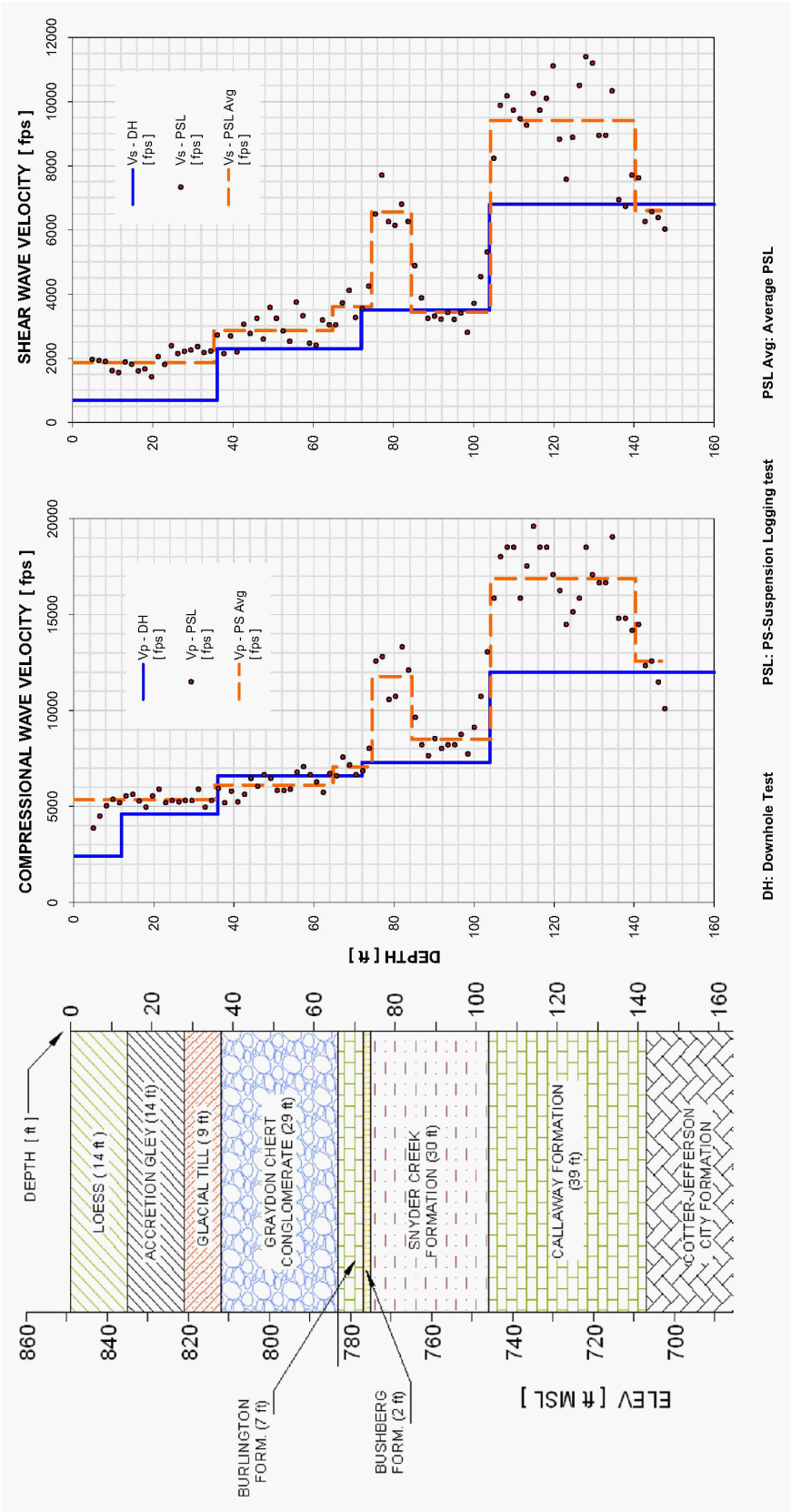

Figure 2.5-110—{Geophysical Testing at R1}

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Figure 2.5-111—{Geophysical Testing at R1-B}

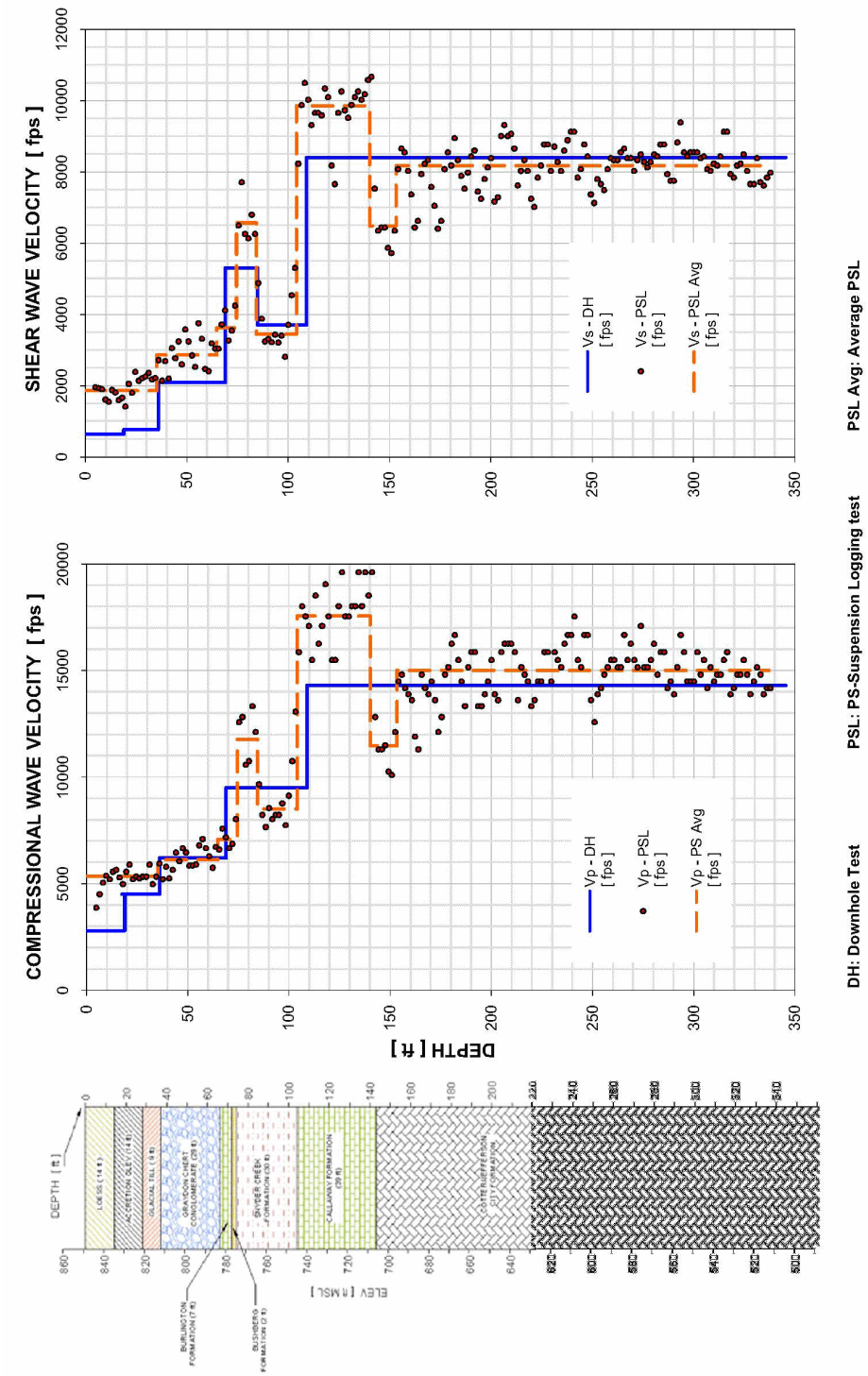

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Figure 2.5-112—{Geophysical Testing at R-25}

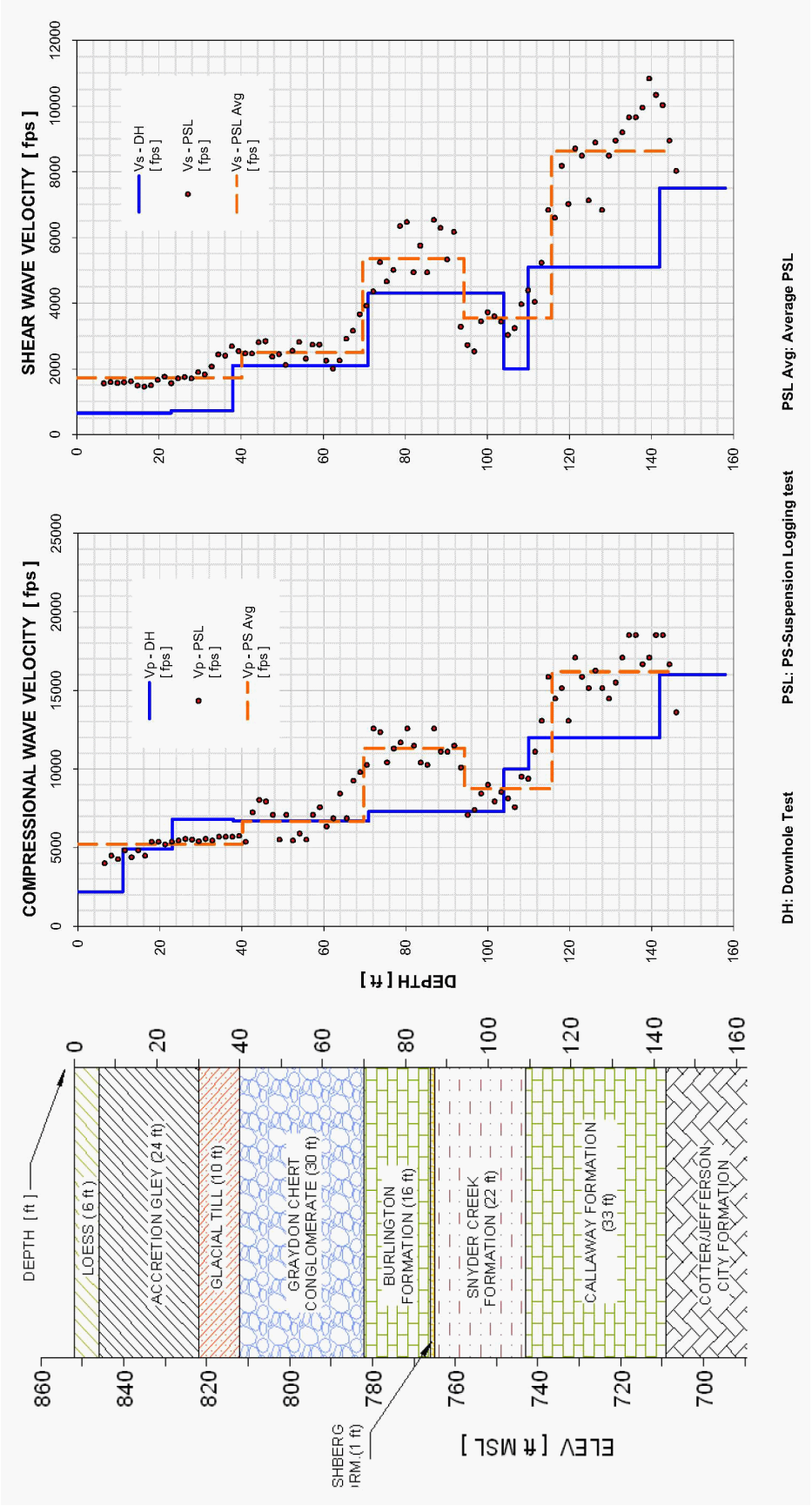

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Figure 2.5-113—{Geophysical Testing at R-28}

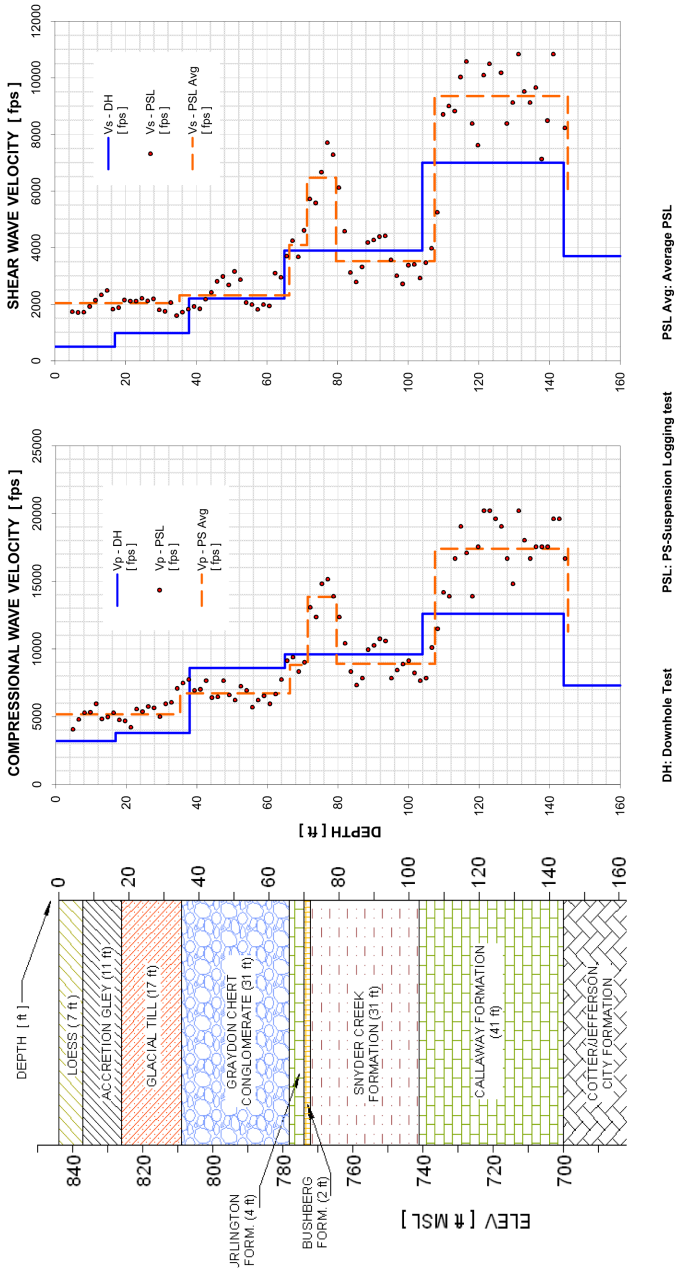

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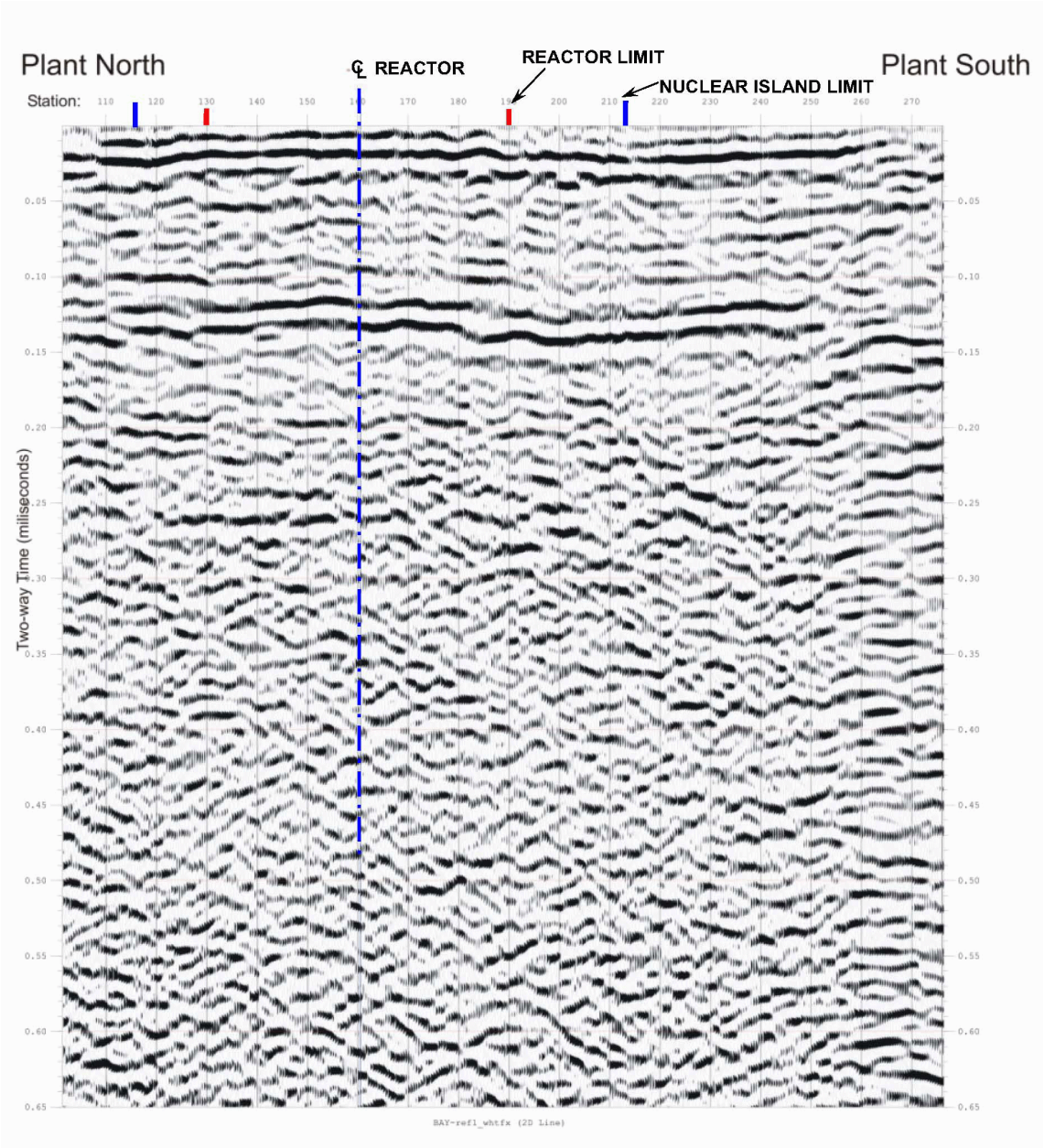
Figure 2.5-114—{Reflection Survey (1 of 3)}



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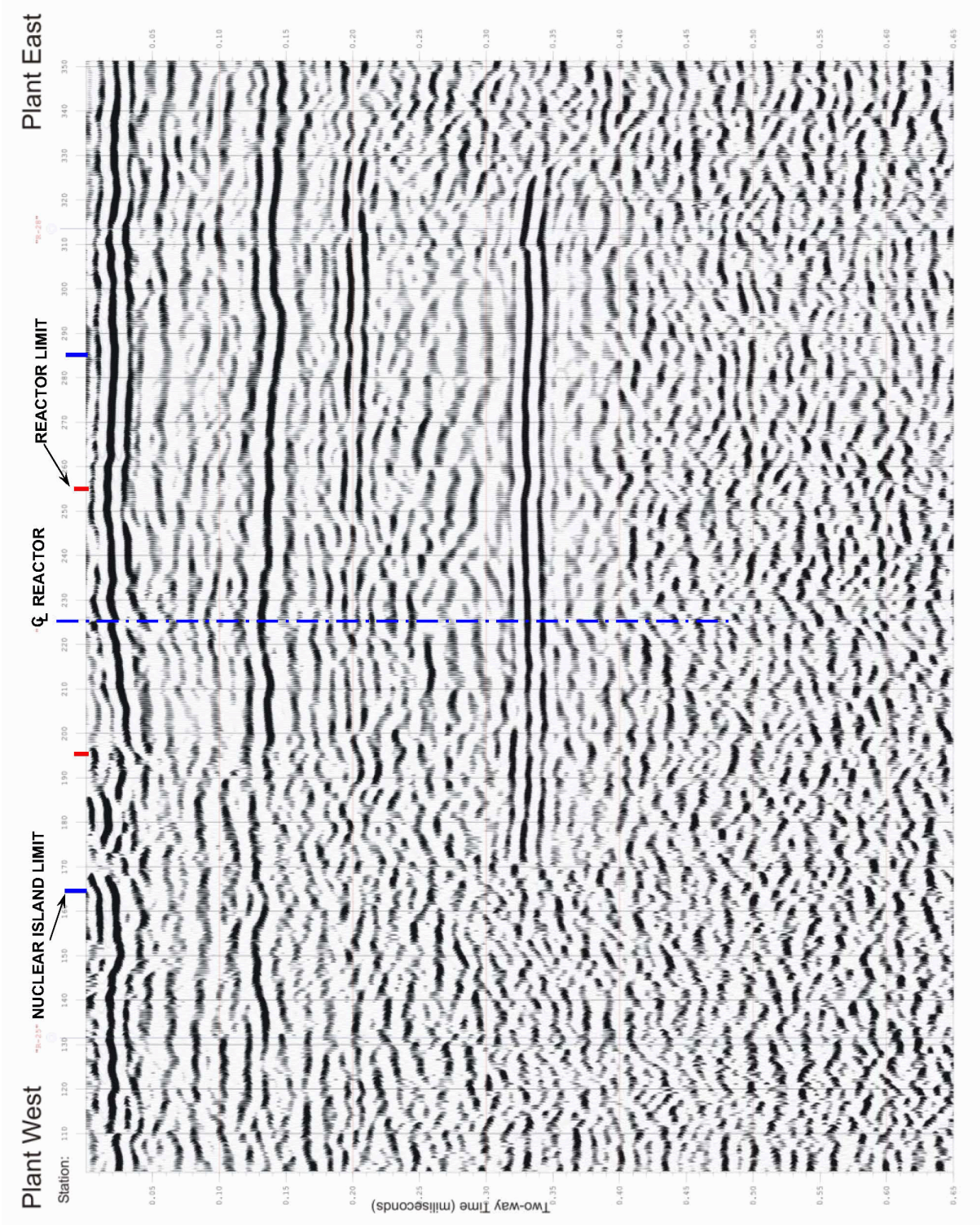

Figure 2.5-115—{Reflection Survey (2 of 3)}

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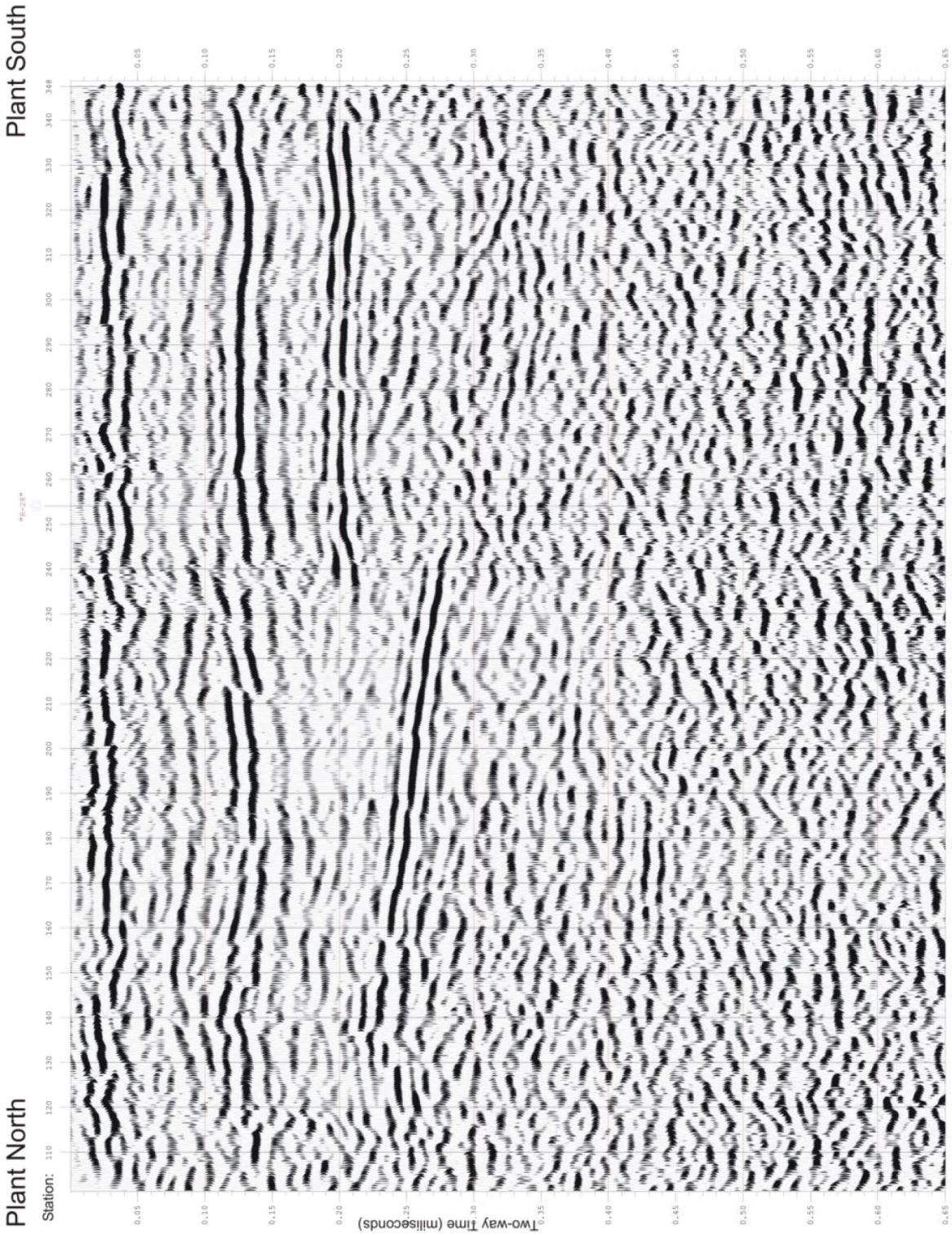

Figure 2.5-116—{Reflection Survey (3 of 3)}

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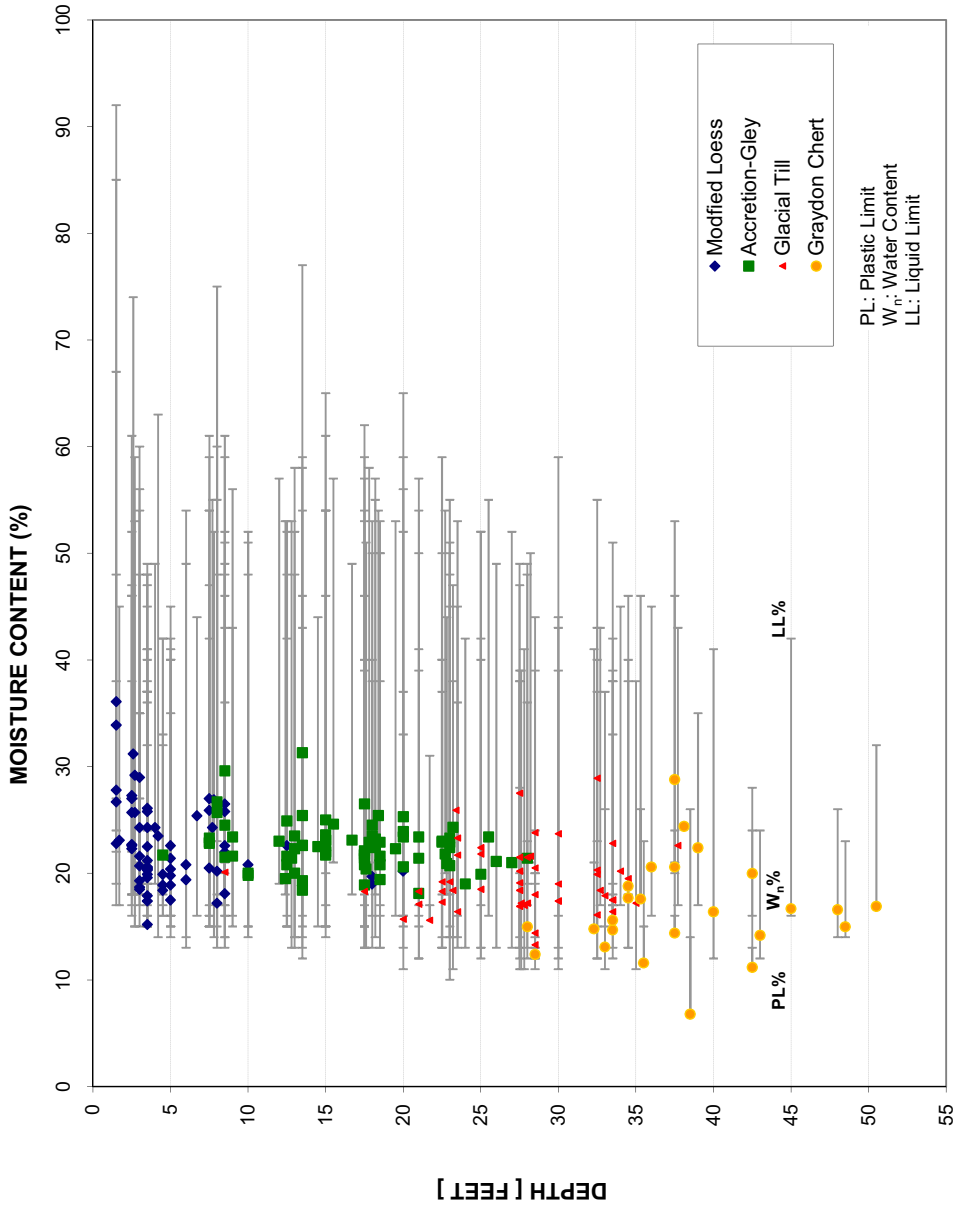
Figure 2.5-117—{Atterberg Limits and Moisture Content}



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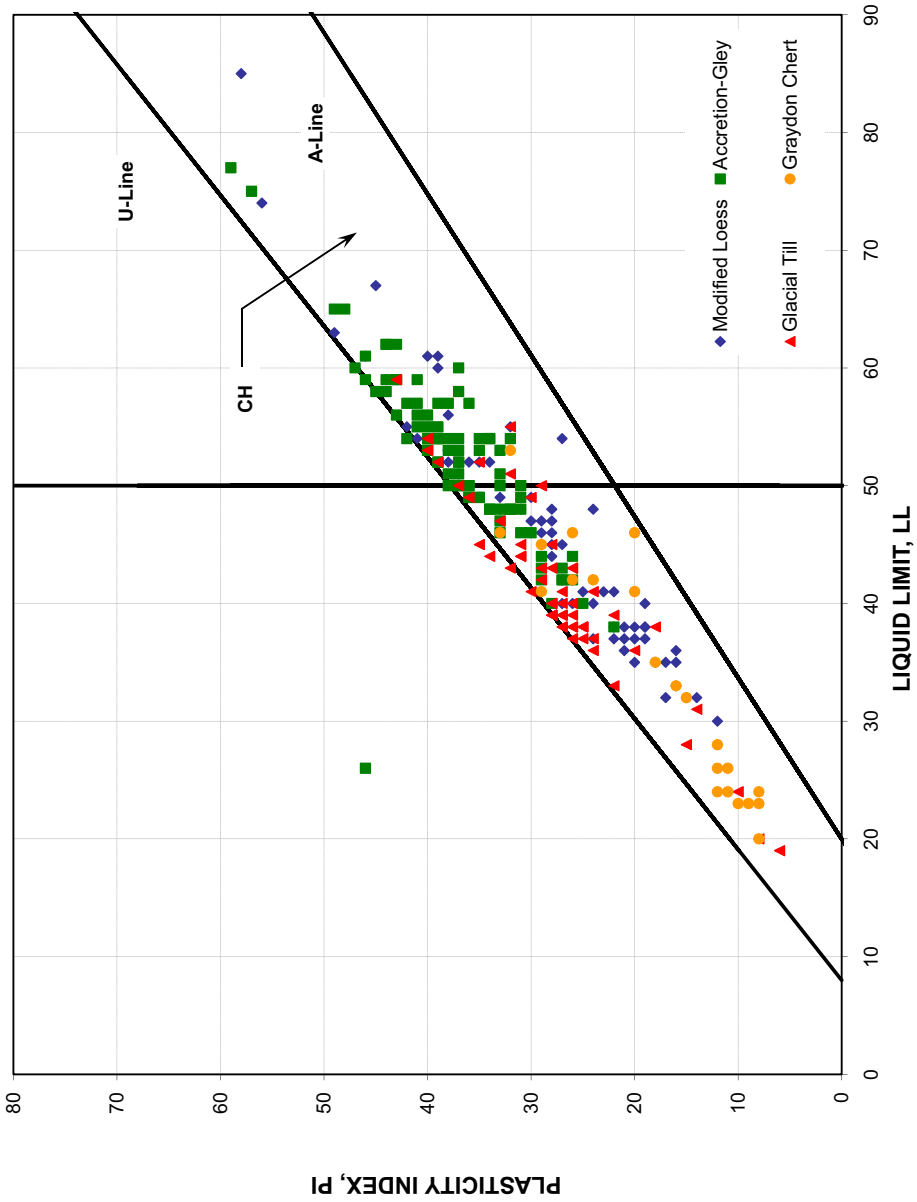

Figure 2.5-118—{Casagrande Plasticity Chart}

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Figure 2.5-119—{Resonant Column Test, UTA-56-A (1E) Loess / Acretion Gley}

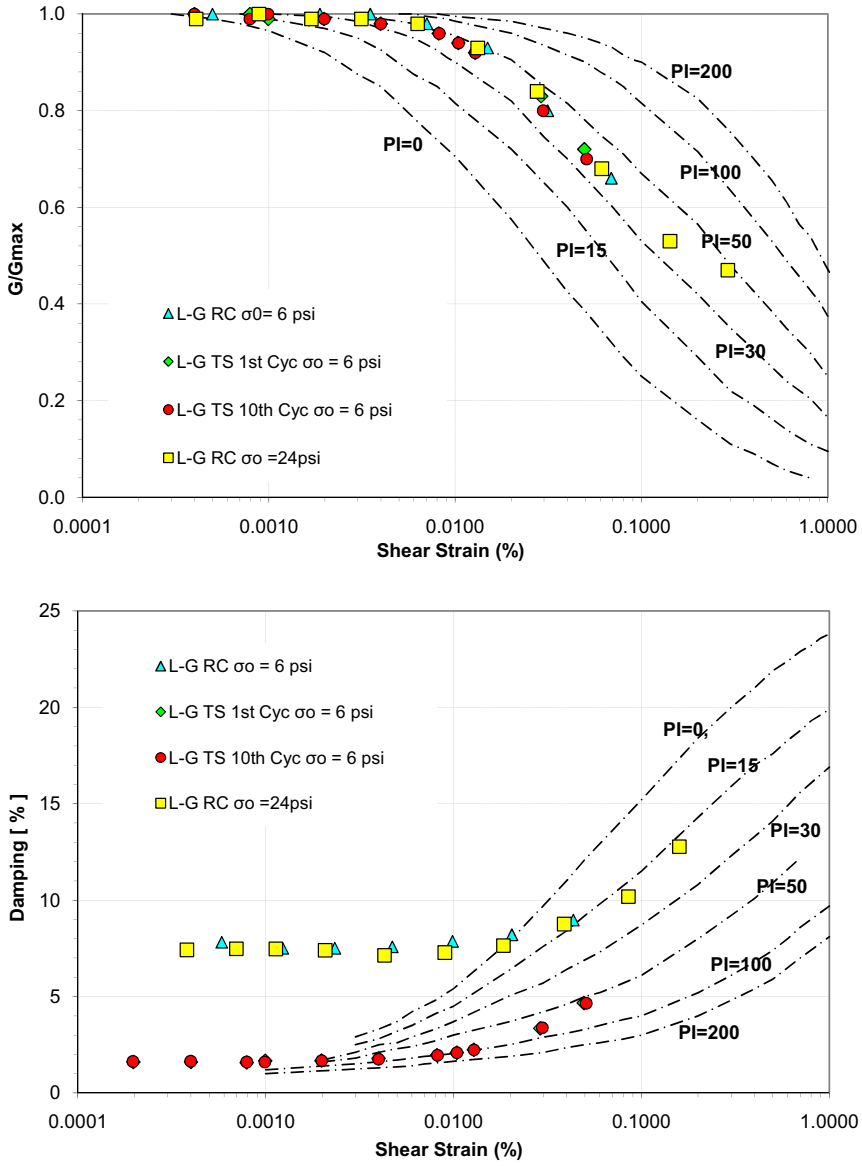

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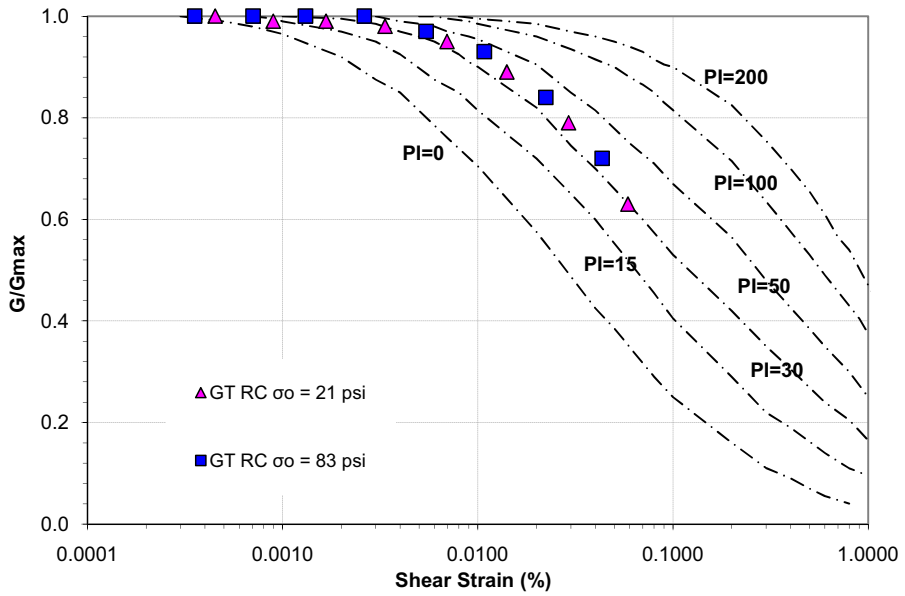
Figure 2.5-120—{Resonant Column Test, UTA-56-B (2C) Glacial Till}



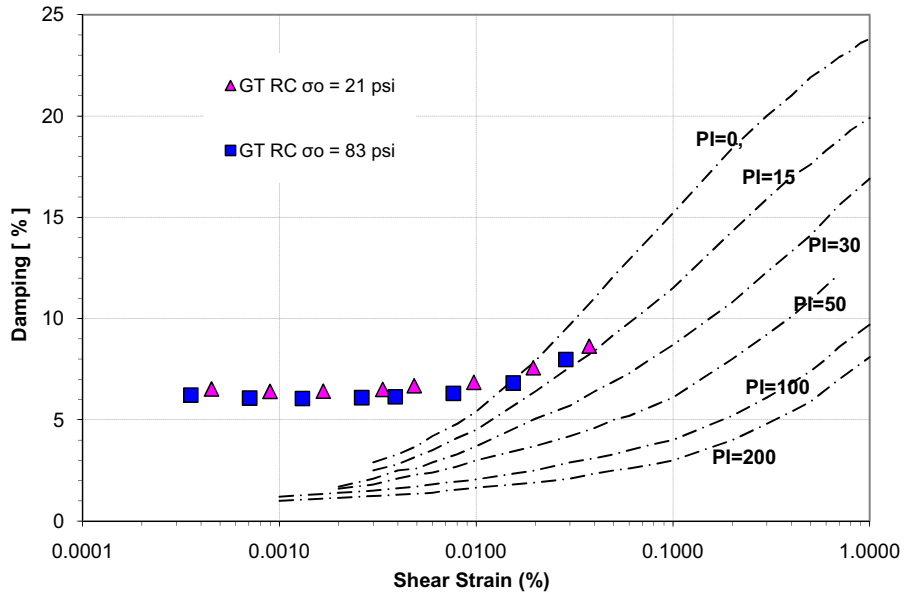


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Figure 2.5-121—{Resonant Column Test, UTA-56-C (3C) Graydon Chert Conglomerate}

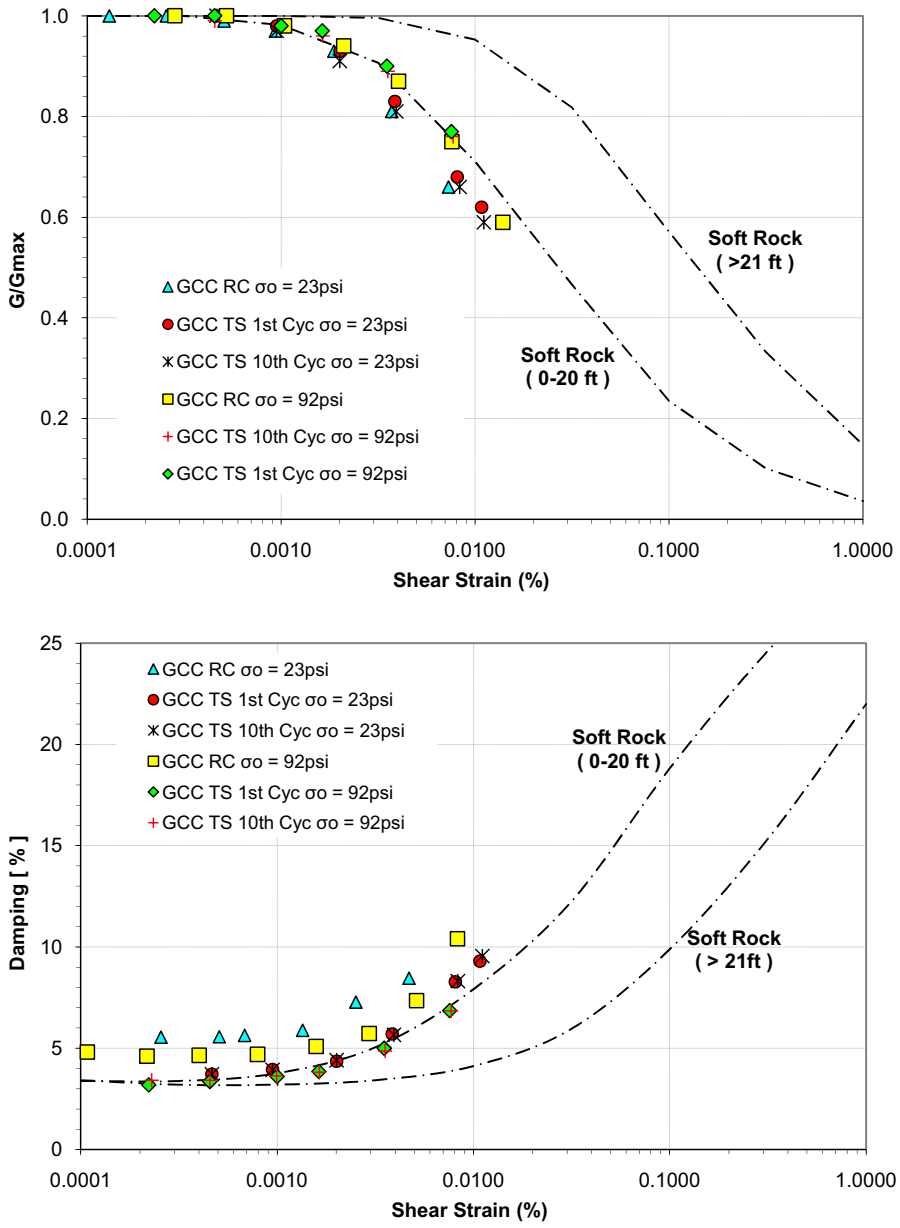

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Figure 2.5-122—{Resonant Column Test, UTA-56-D (4C) Graydon Chert Conglomerate (FWC)}

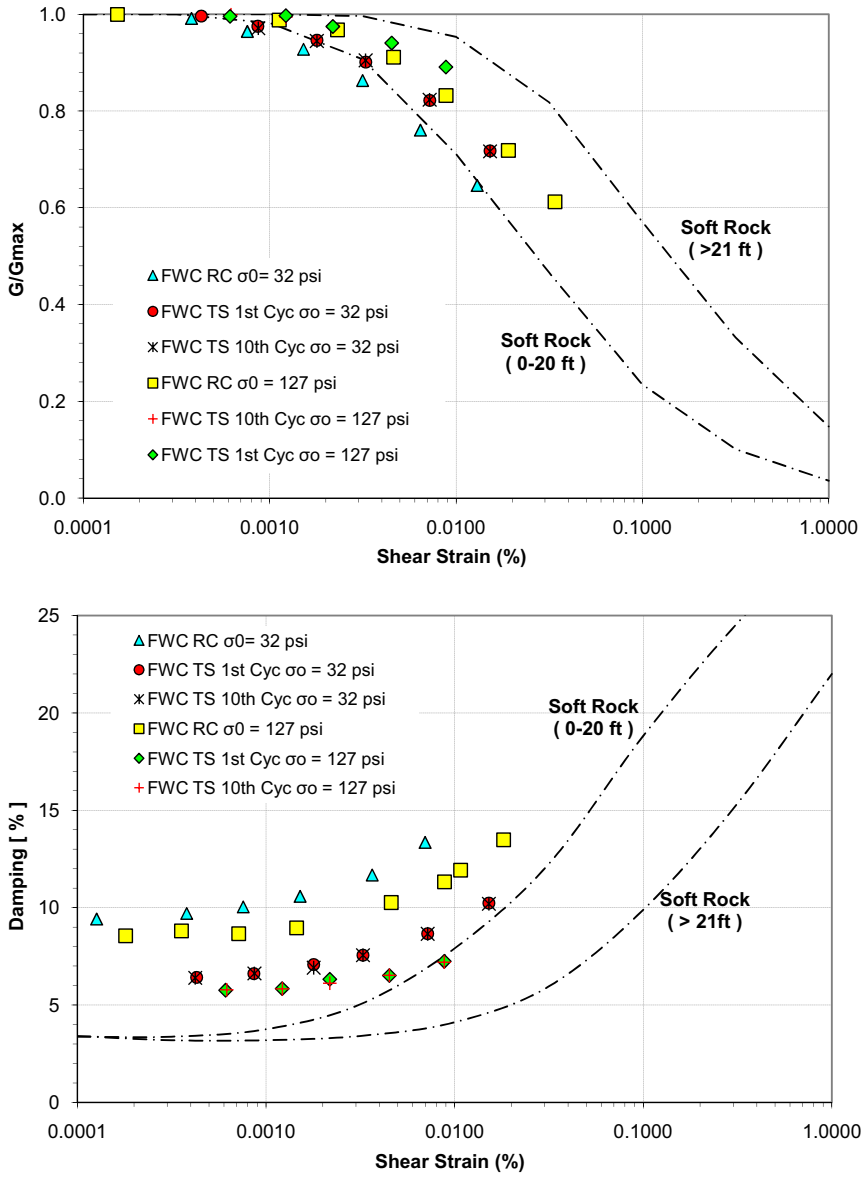

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Figure 2.5-123—{Resonant Column Test, UTA-56-E (5C) Graydon Chert Conglomerate (CB)}

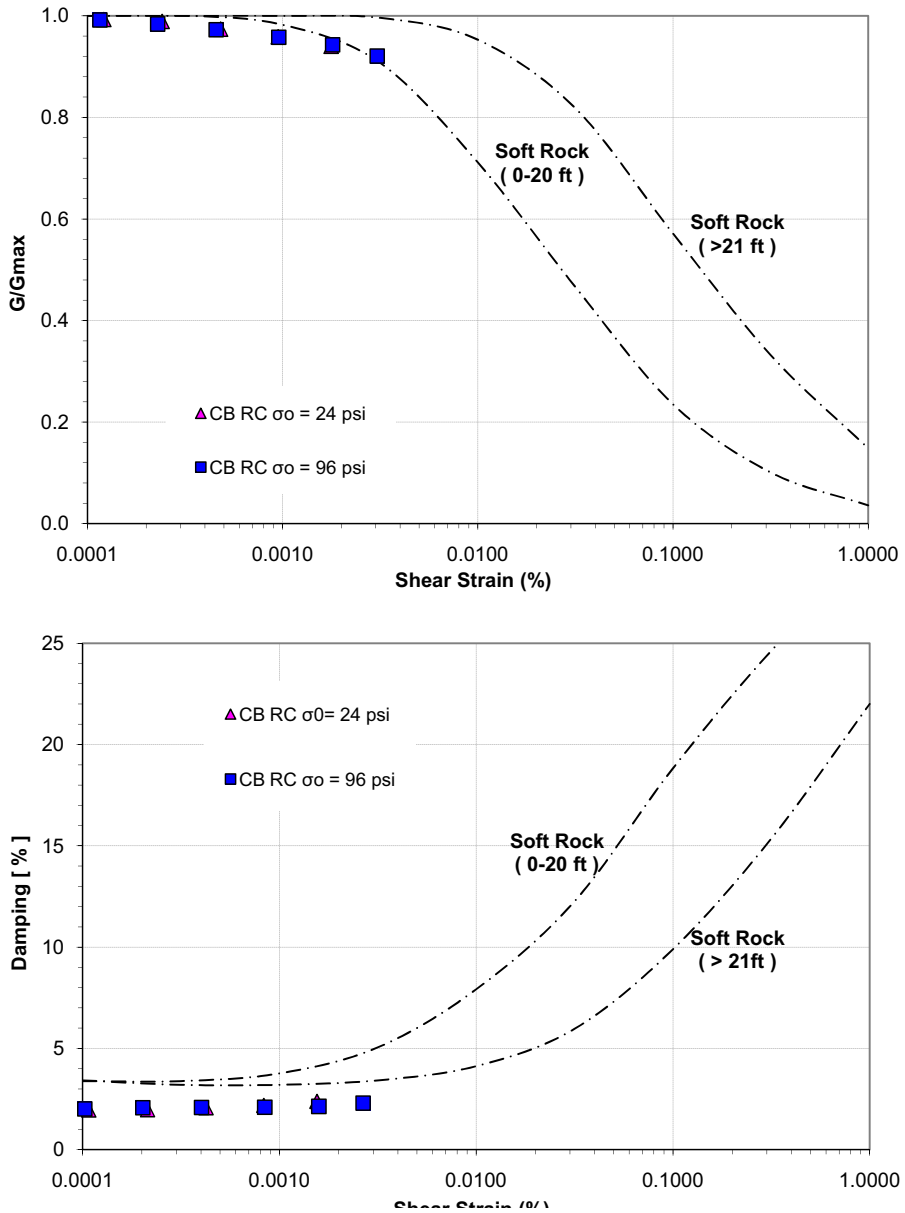

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Figure 2.5-124—{Resonant Column Test, UTA-56-B (2G) Glacial Till}

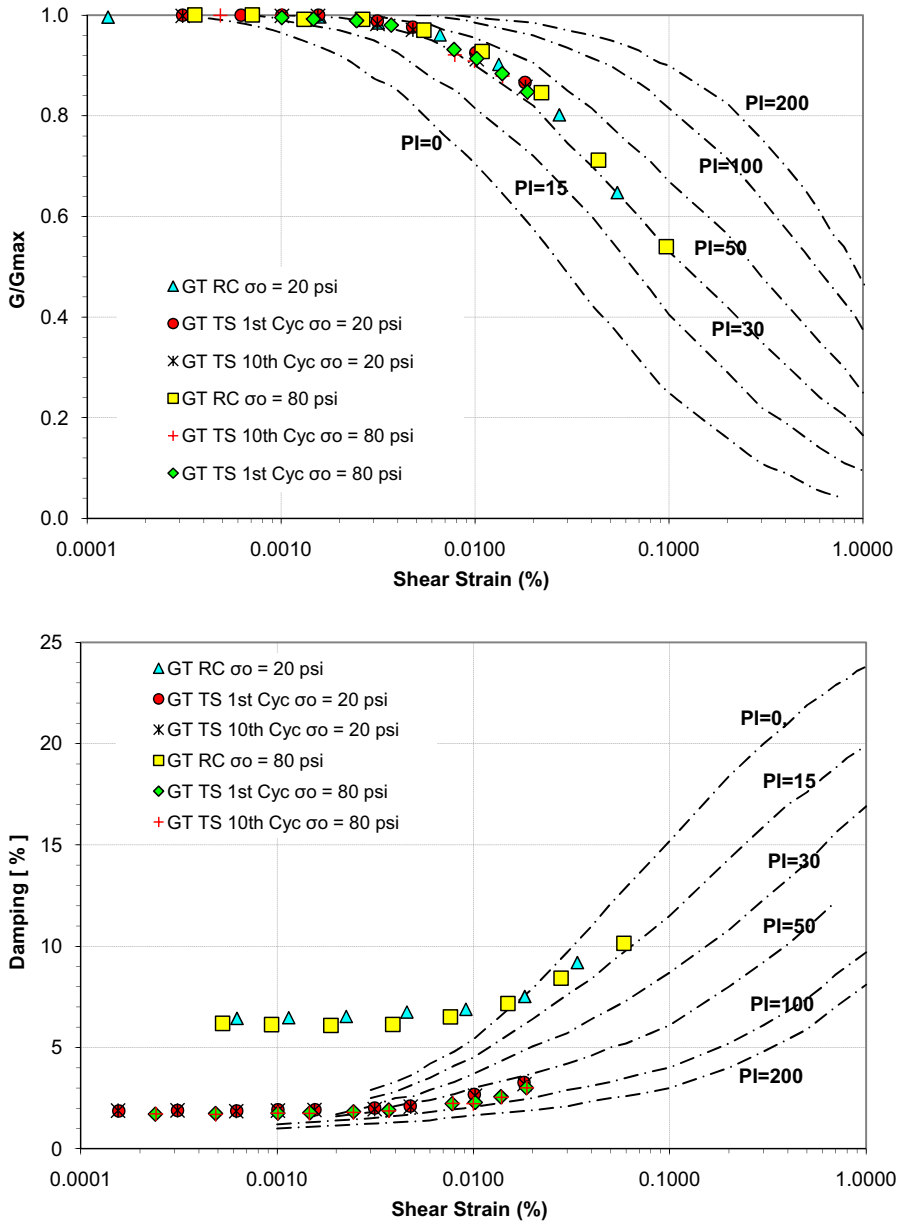

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Figure 2.5-125—{Seismic Wave Velocity Profiles Soil Velocity Profile}

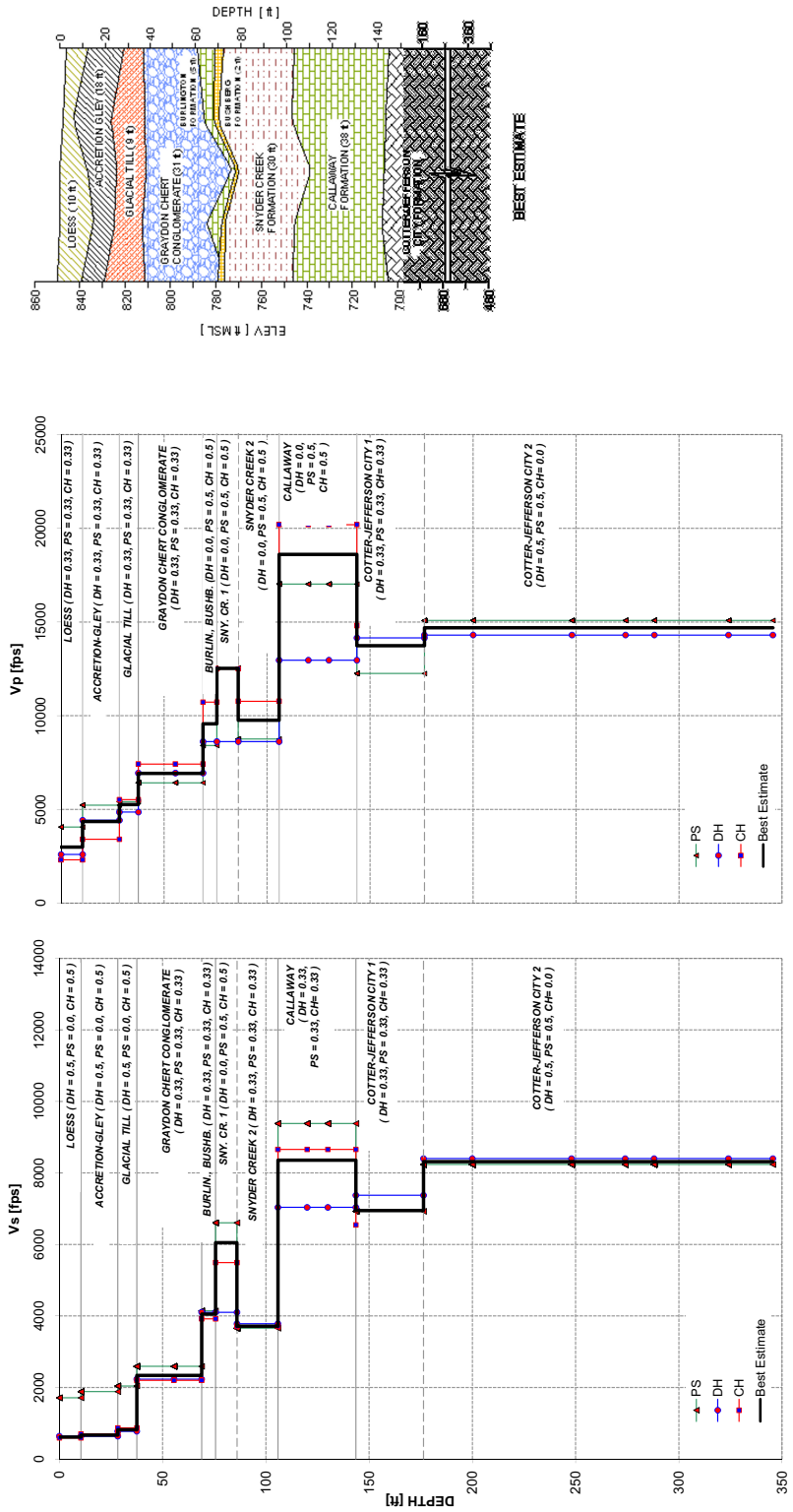

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Figure 2.5-126—{Strain Dependent Properties for the Overburden Soils}

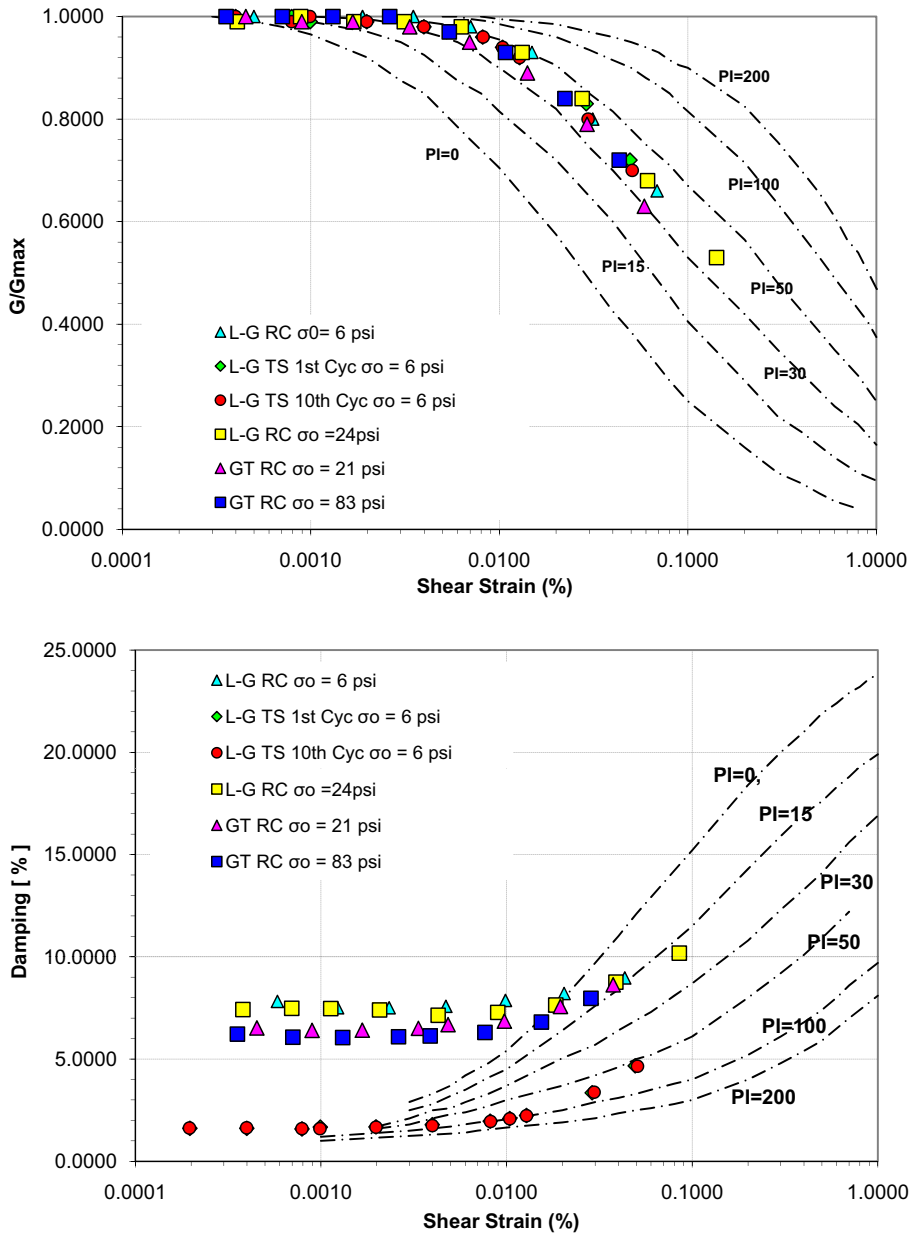

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Figure 2.5-127—{Recommended Strain Dependent Properties for the Graydon Chert Conglomerate}

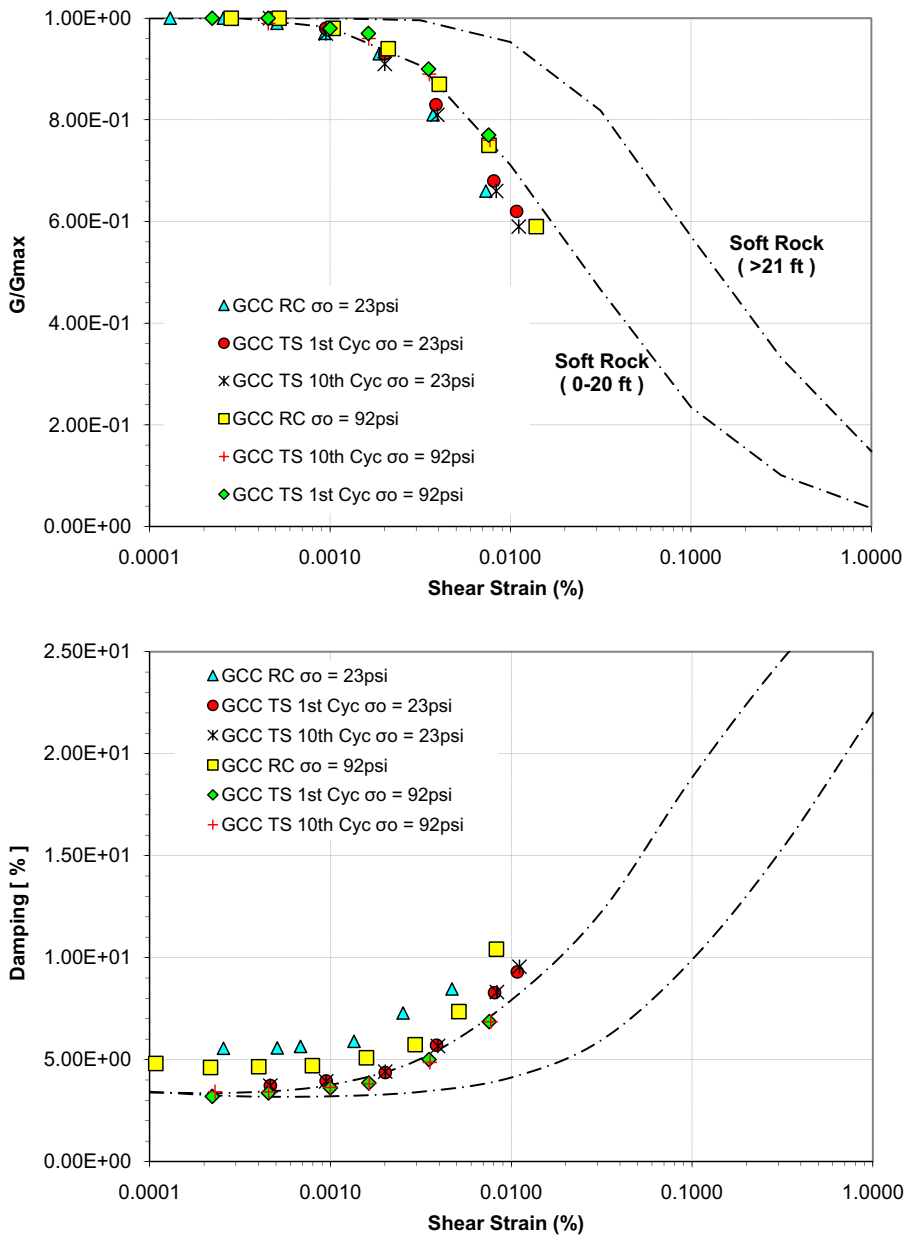

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Figure 2.5-128—{Foundation Interface Profiles}

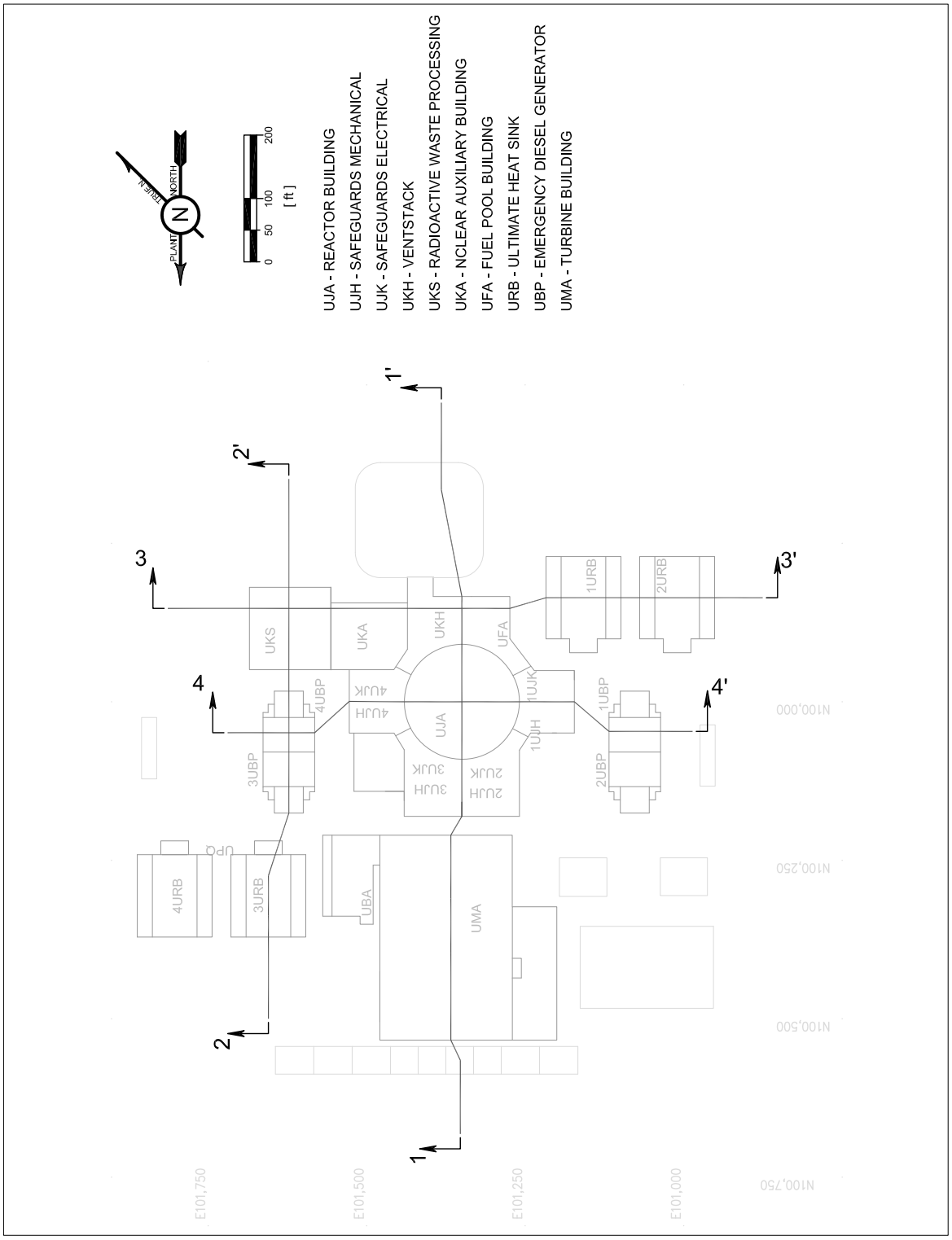

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Figure 2.5-129—{Foundation Interface Cross Section 1-1'}

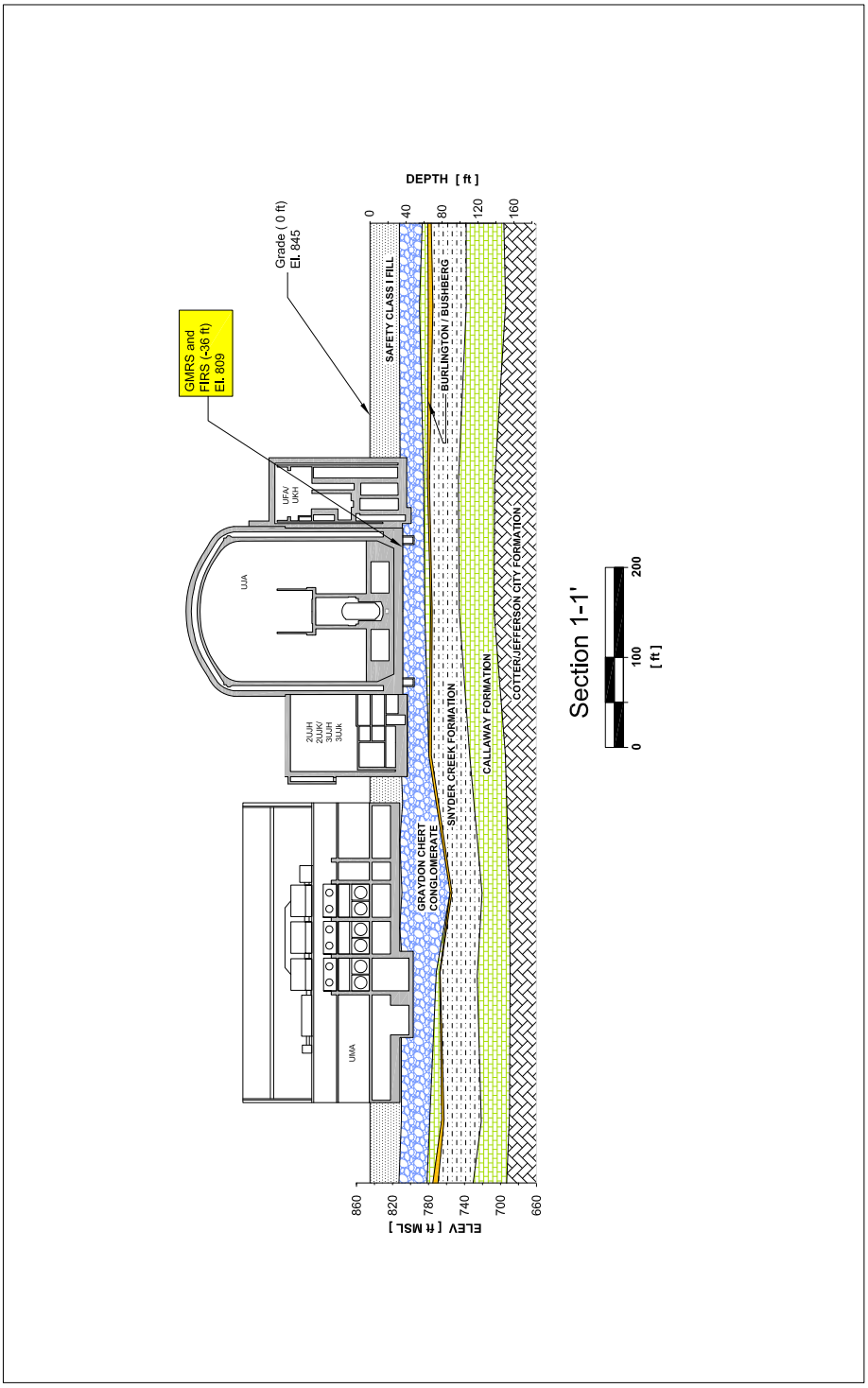

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Figure 2.5-130—{Foundation Interface Cross Section 2-2'}

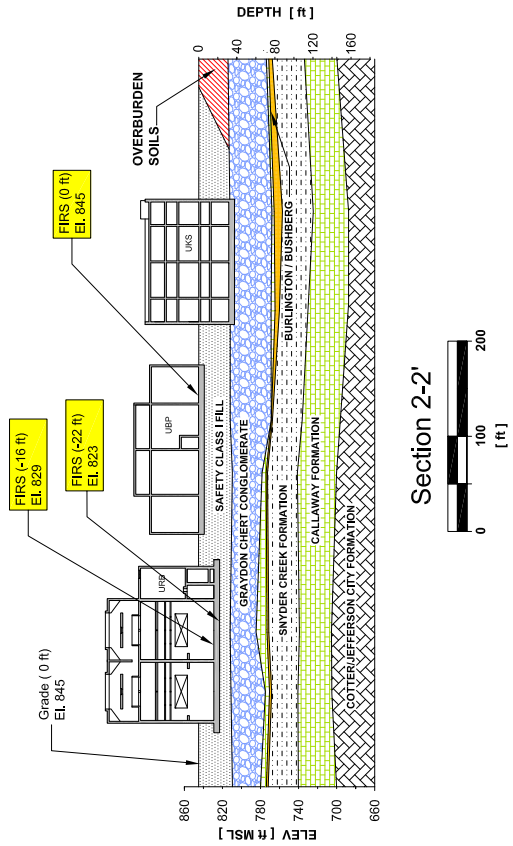

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Figure 2.5-131—{Foundation Interface Cross Section 3-3'}

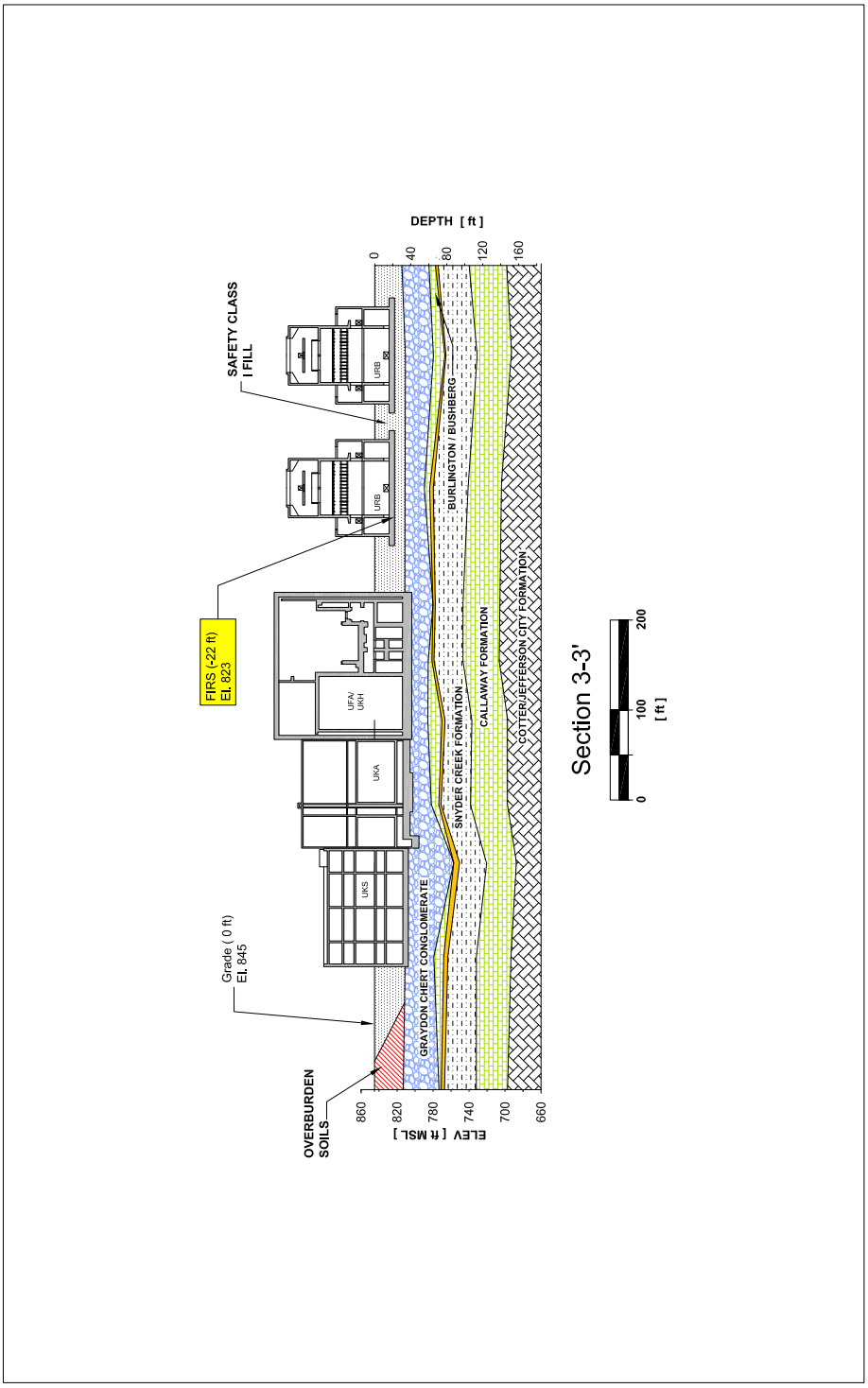

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Figure 2.5-132—{Foundation Interface Cross Section 4-4'}

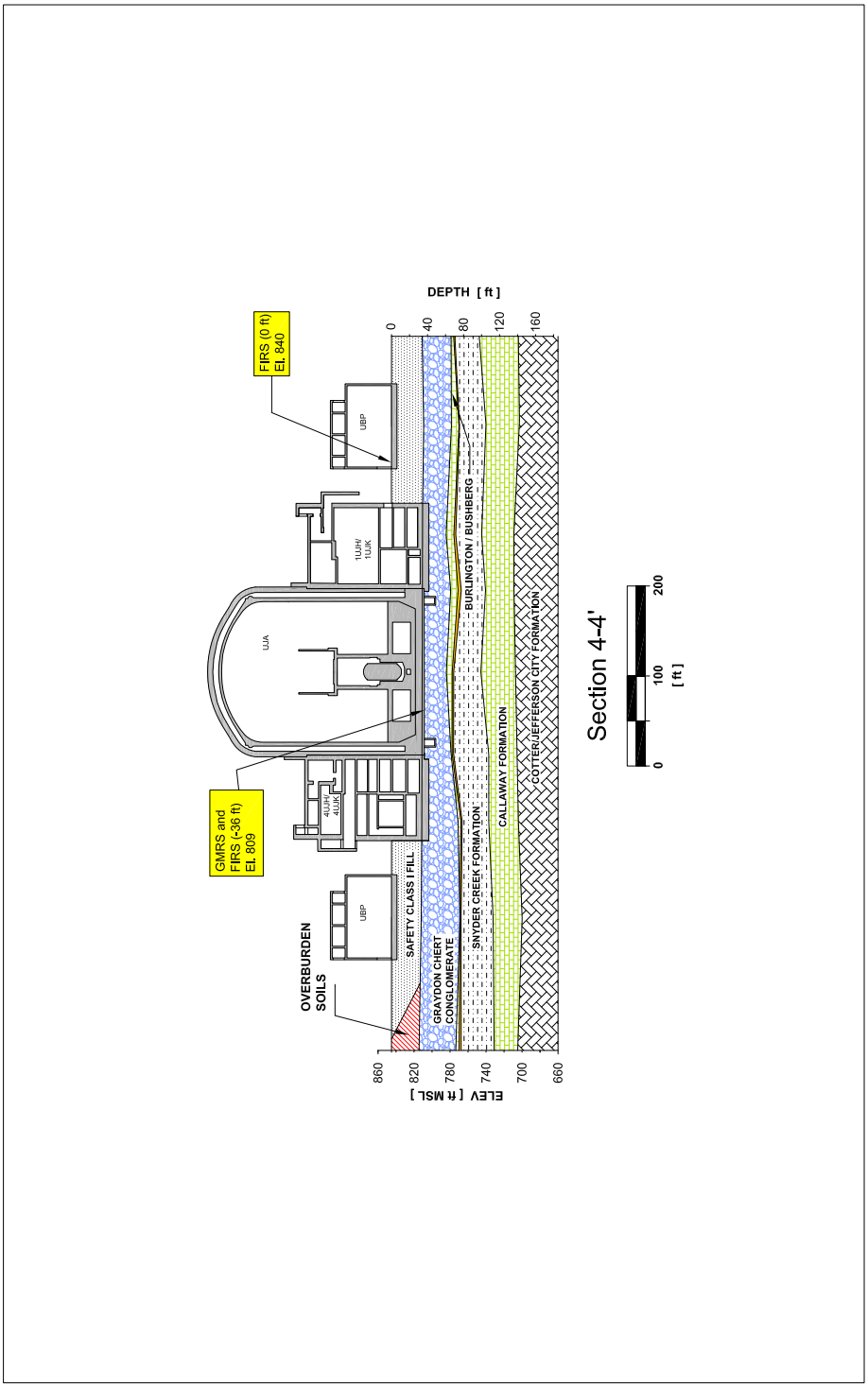

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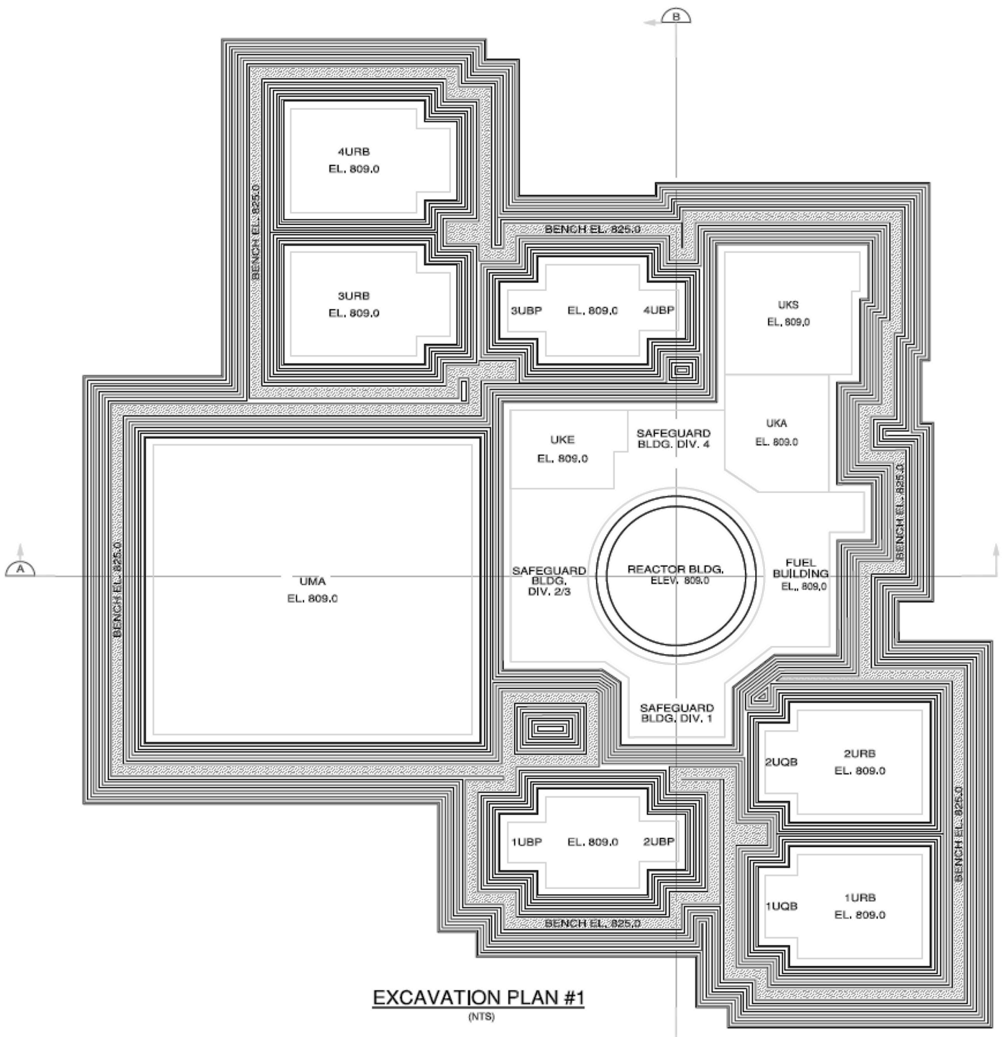
Figure 2.5-133—{Excavation Plan}



Bottom of Excavation: El. 809
Plant Grade: El. 845
Estimated Excavation Volume: 600,000 yd^3
Cross Sections A and B provided in
Figure 2.5-131

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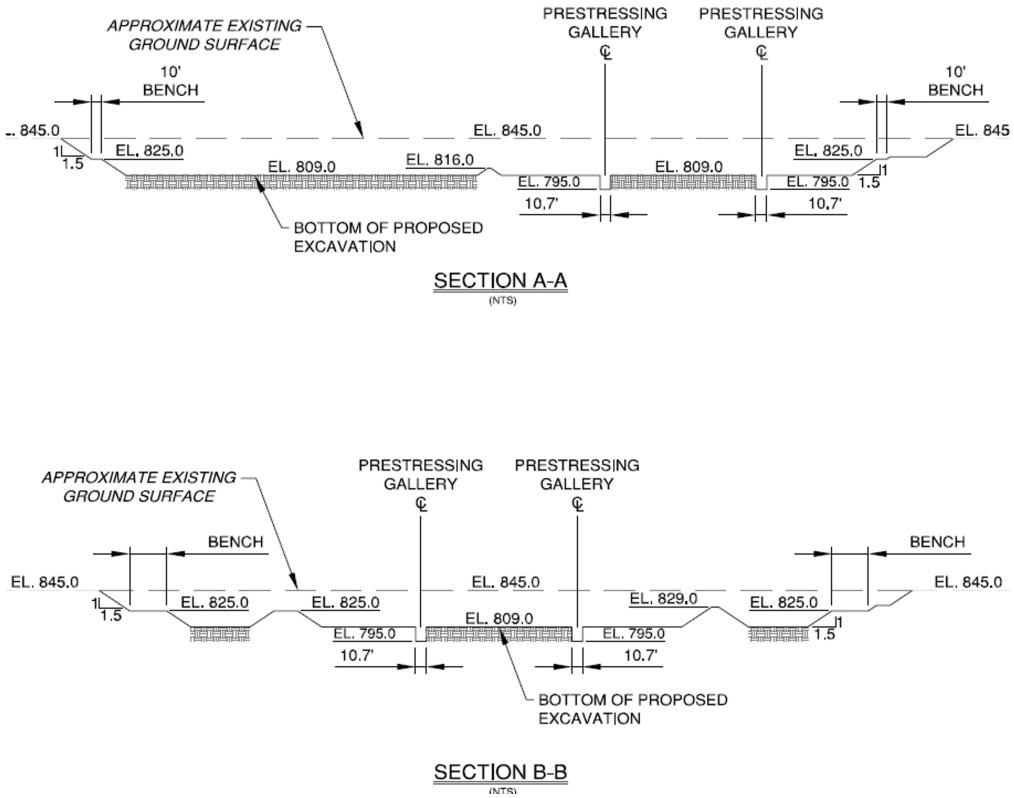
Figure 2.5-134—{Excavation Cross Sections}



Bottom of Excavation: El. 809
Plant Grade: El. 845
Estimated Excavation Volume: 600,000 yd^3

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Figure 2.5-135—{Liquefaction Potential}

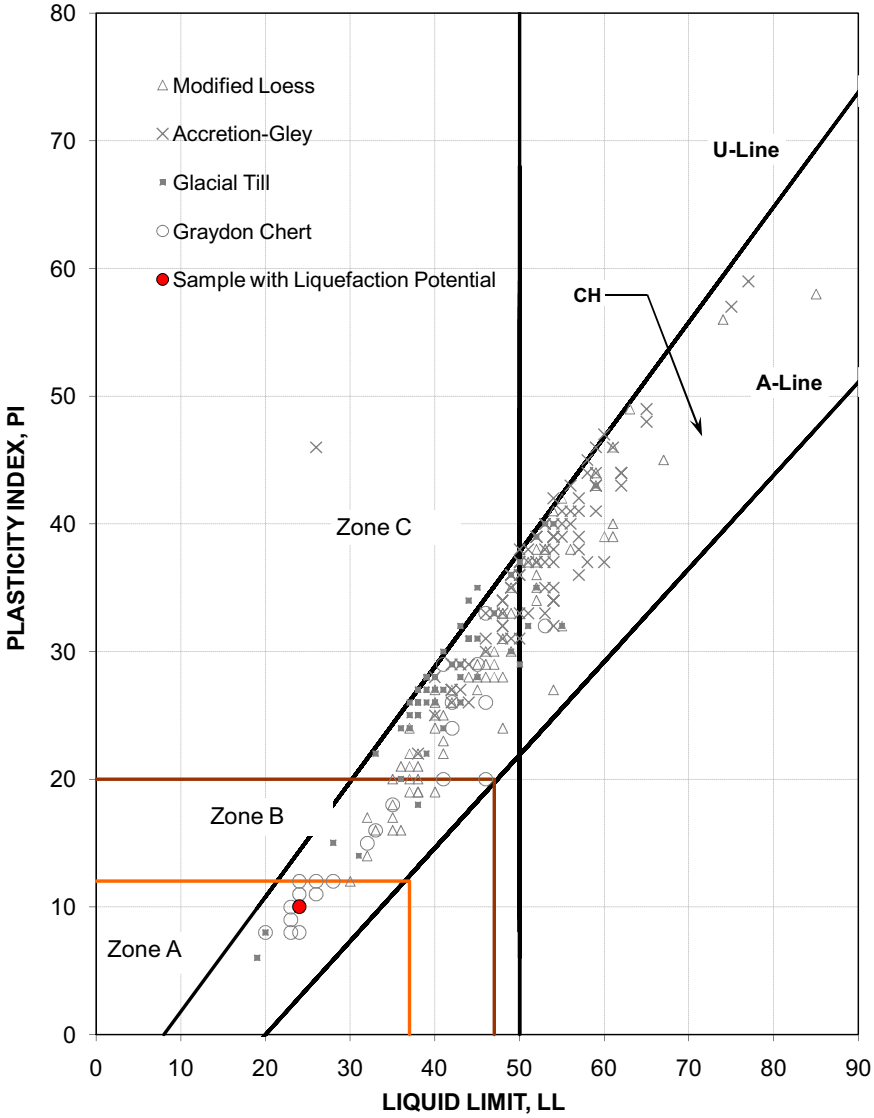

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Figure 2.5-136—{NI Settlement Analysis Service Loads}

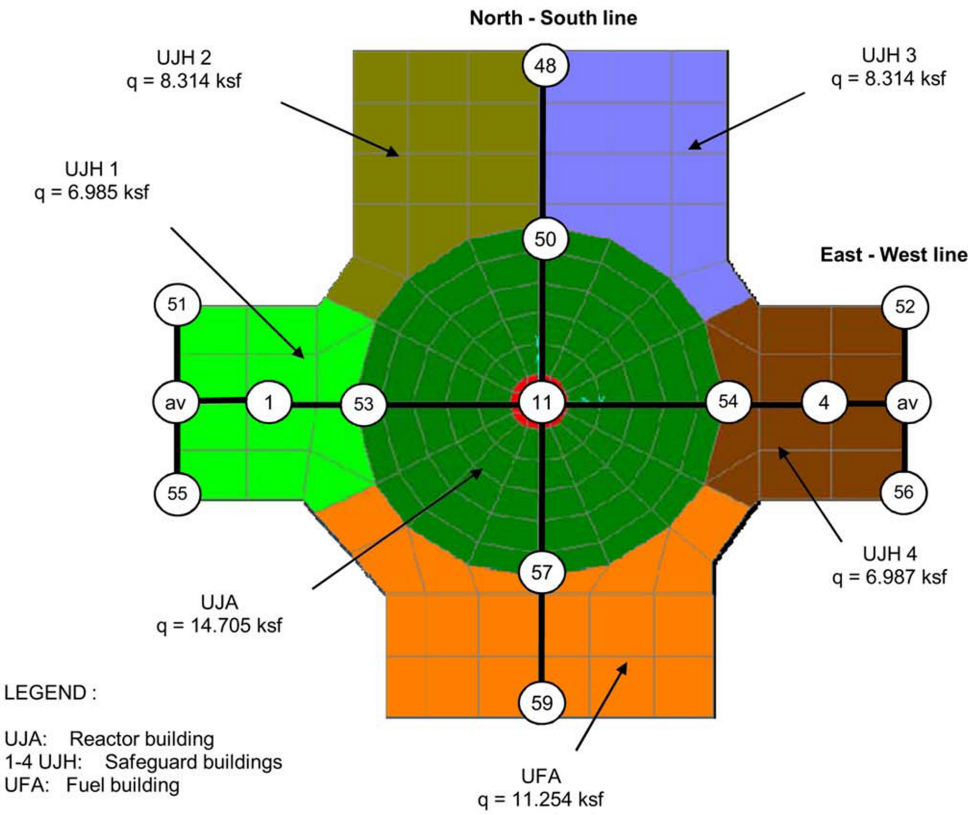

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Figure 2.5-137—{NI Settlement Analysis East West Section}

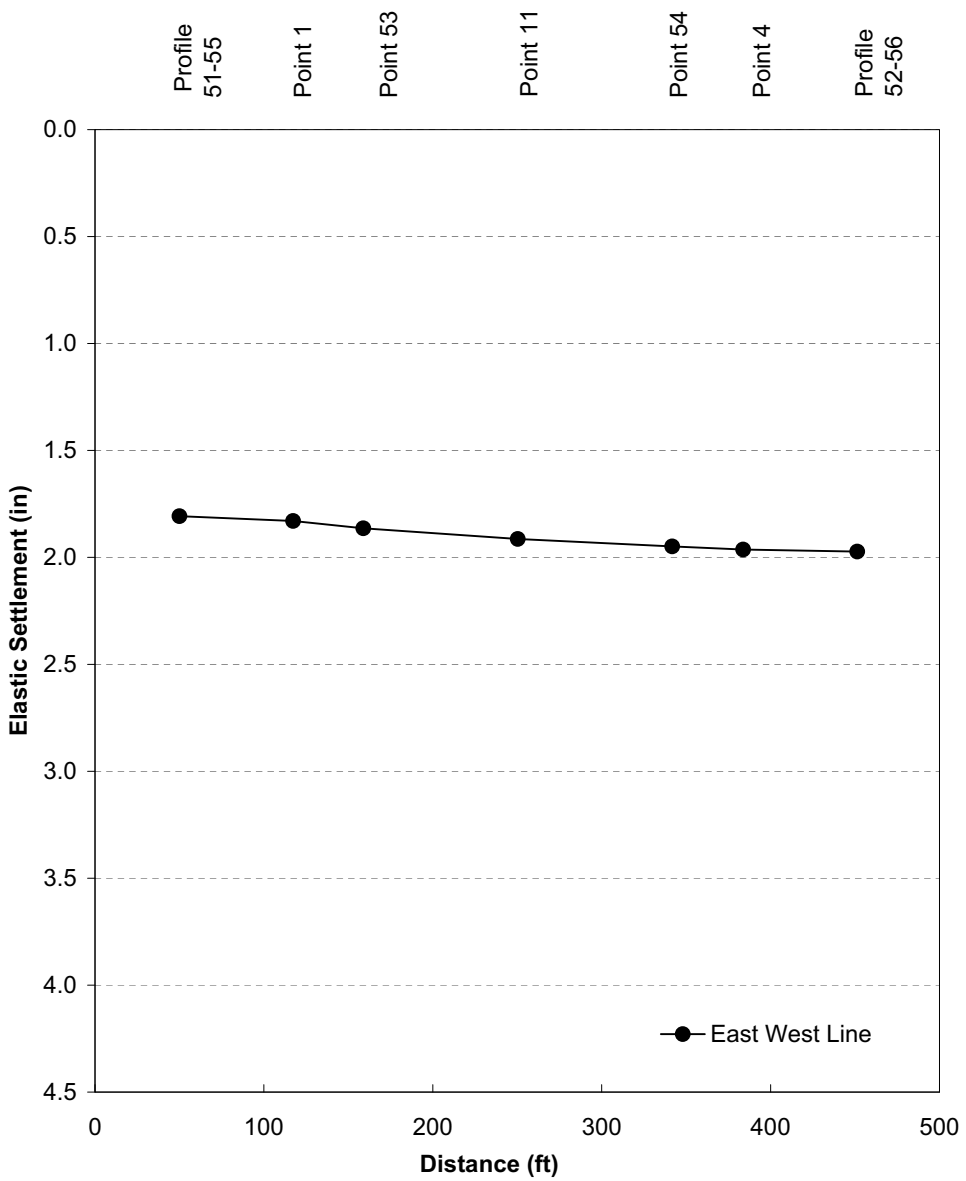

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Figure 2.5-138—{NI Settlement Analysis North South Section}

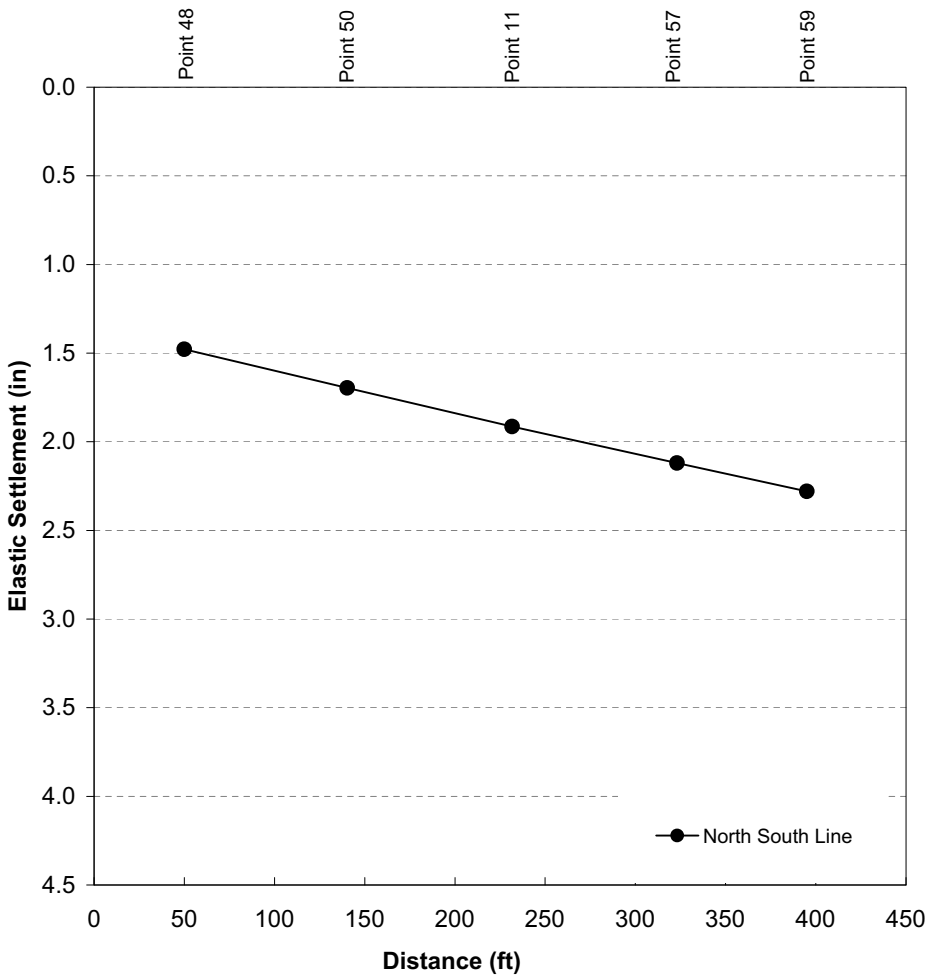

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Figure 2.5-139—{Examples of Earth Pressure Diagrams}

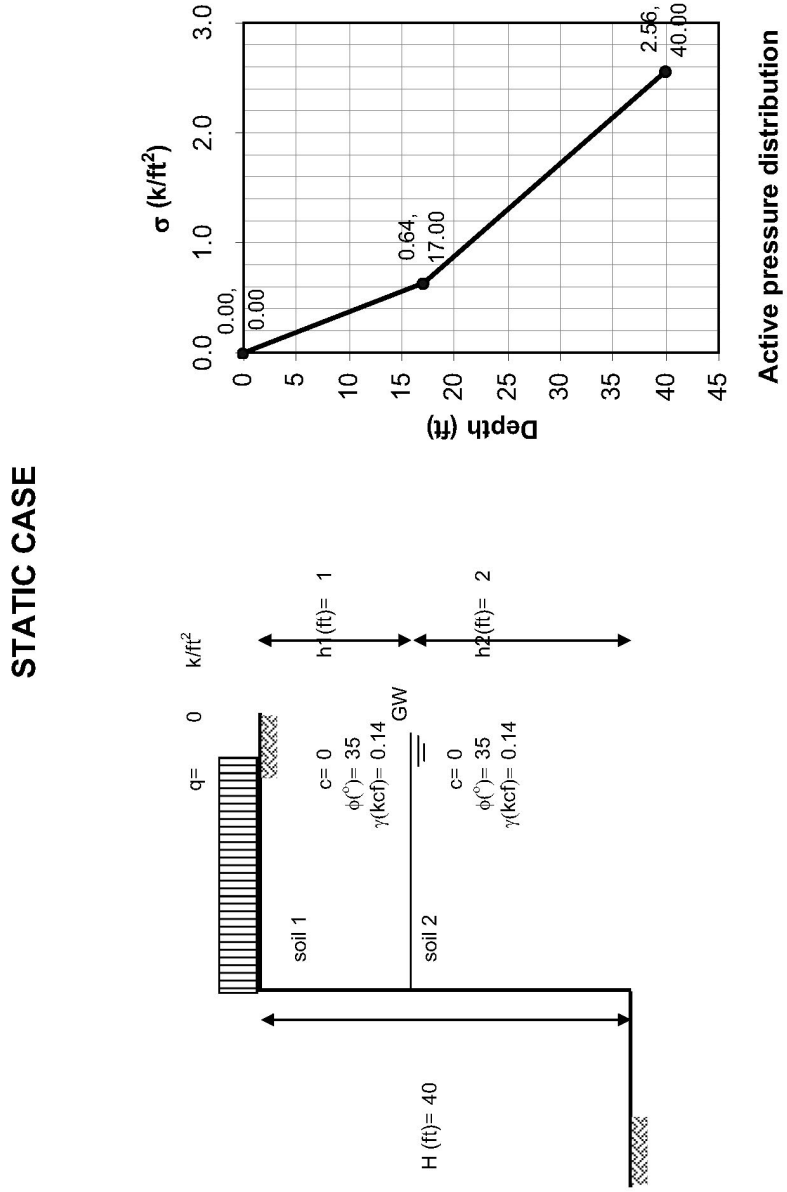

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Figure 2.5-140—{Permanent Slope Cross Sections and Failure Surfaces}

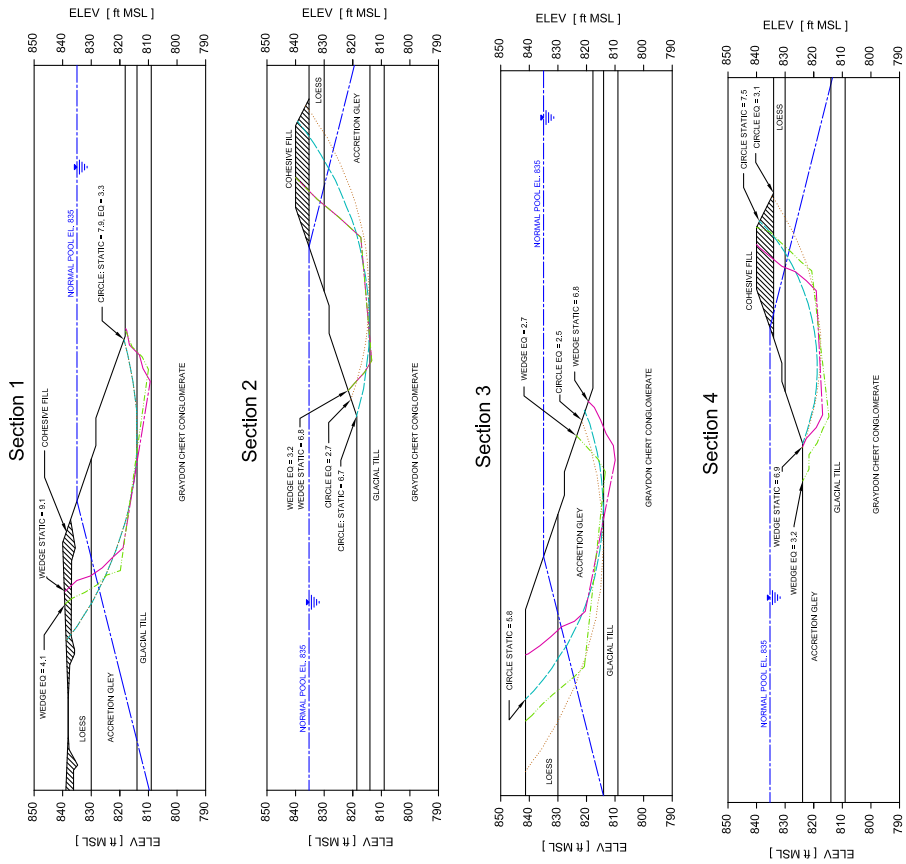

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Figure 2.5-141—{Temporary Slope Cross Sections and Failure Surfaces}

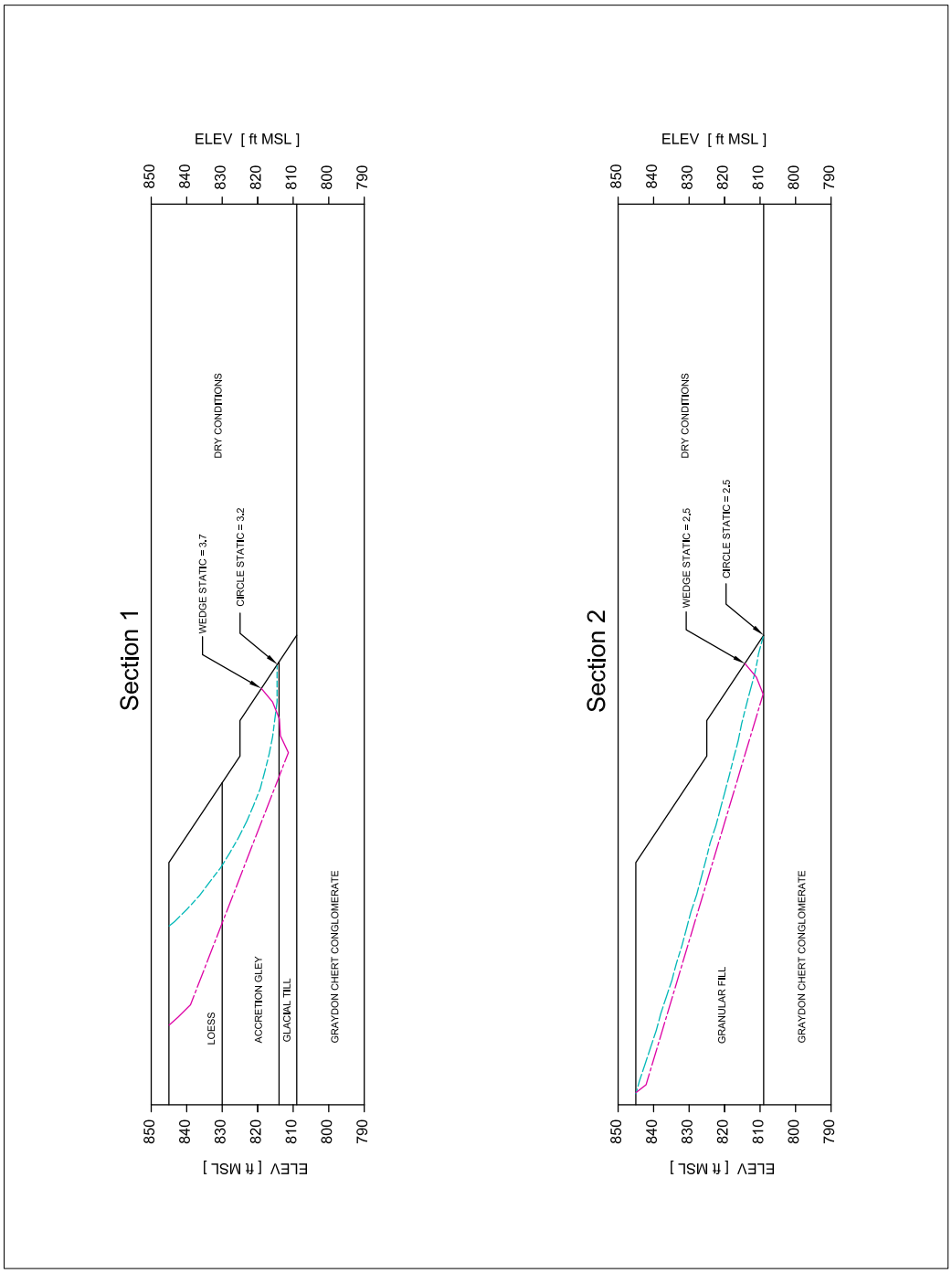

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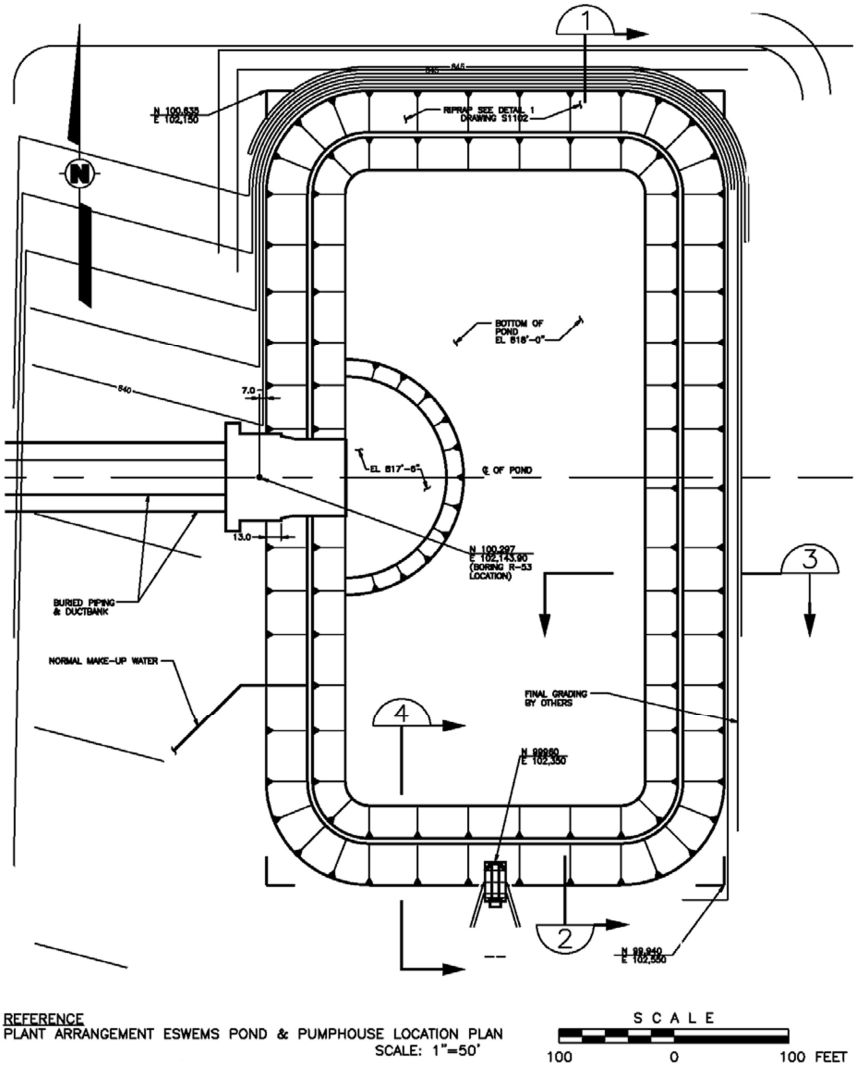
Figure 2.5-142—{ESWEMS Pond Plan View}



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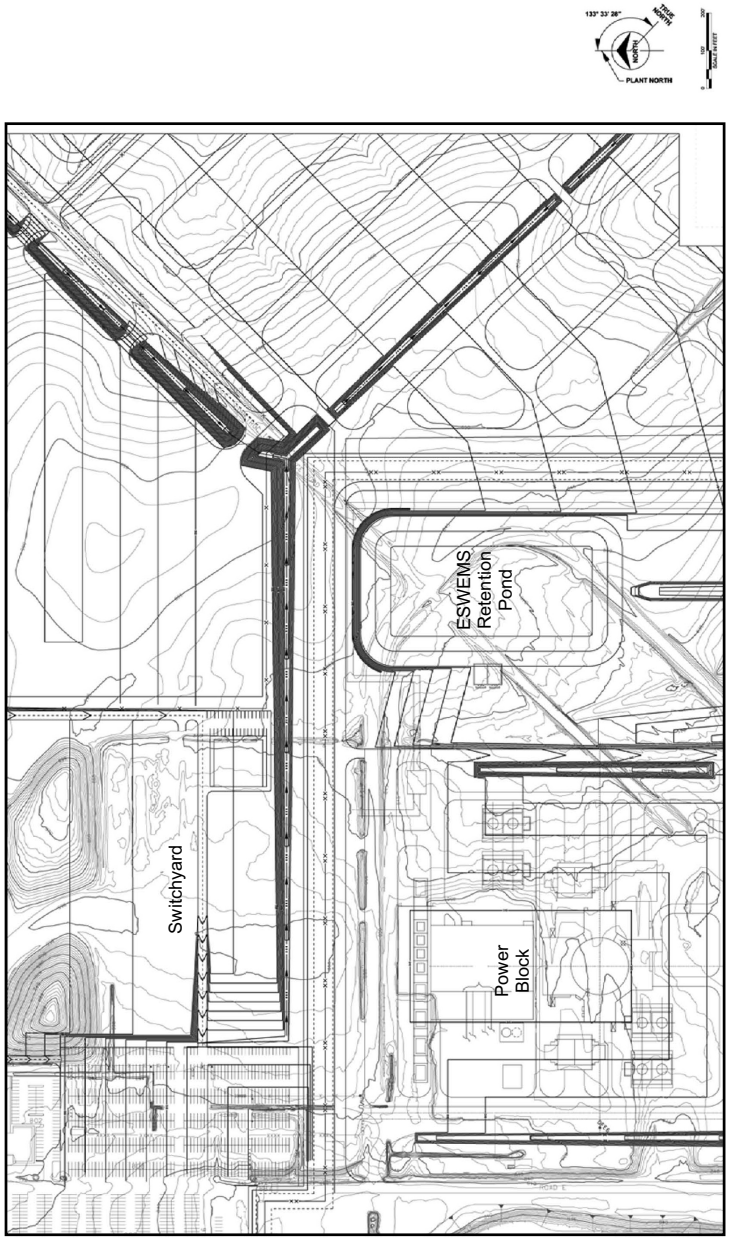

Figure 2.5-143—{Site Grading Plan}

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