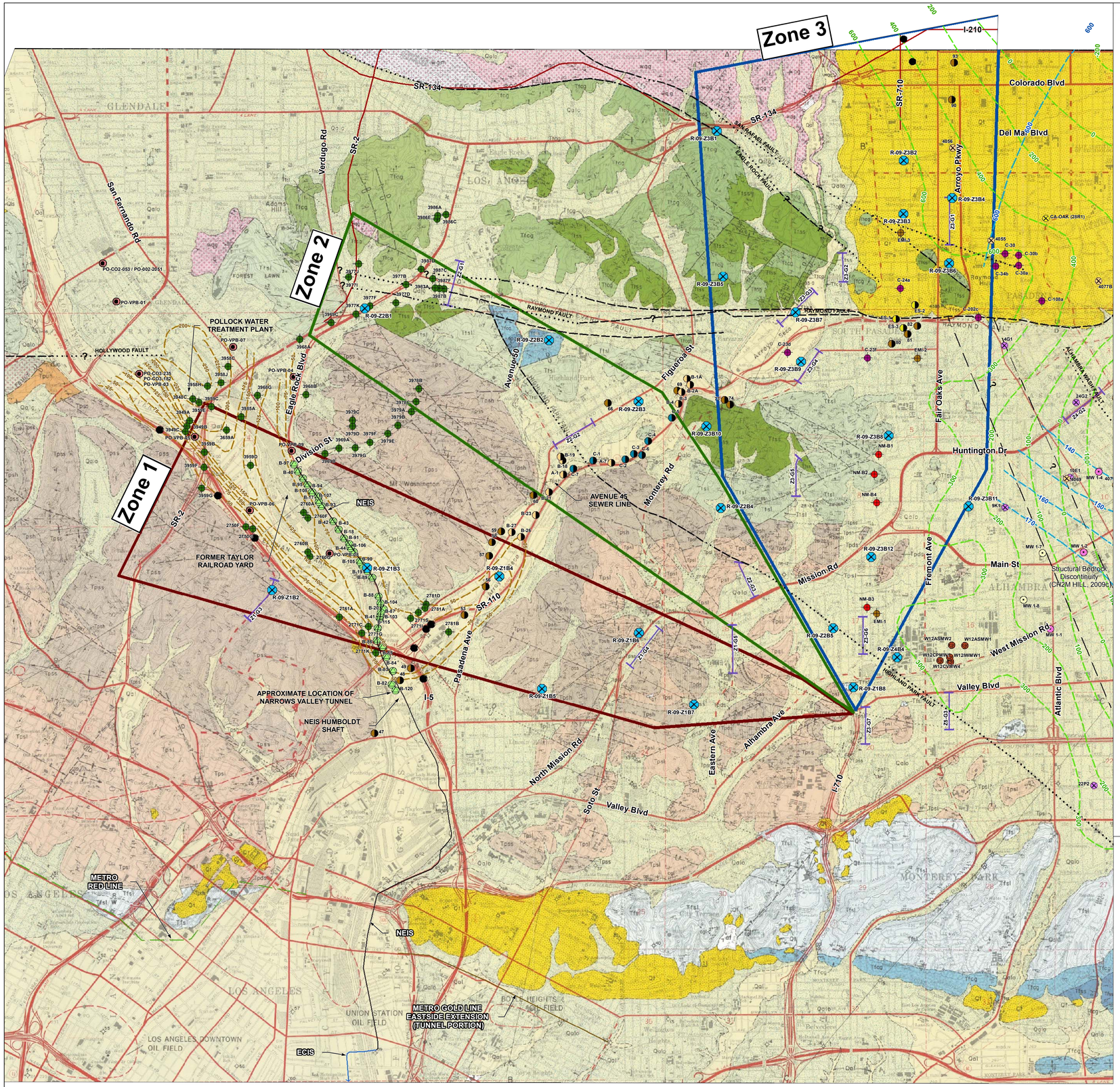

EXPLANATION From Lamar, 1970

RECENT

af — Artificial fill

Qal — Alluvium: Silt, sand and gravel.

Qls — Landslide debris

Qalo — Old alluvium: Silt, sand and gravel forming dissected alluvial plain and alluvial terrace deposits.

Qt — Terrace Deposits: Silt, sand and gravel forming alluvial terrace and dissected alluvial plain deposits.

PLEISTOCENE

PLIOCENE

Tfcg, Tfss, Tfsl — Fernando Formation
Tfcg: conglomerate, light to red brown; Tfss: sandstone, fine- to medium-grained, light tan and brown; Tfsl: siltstone, massive, light gray; R/W: Repettian–Wheelerian Stage boundary

UPPER MIOCENE

Tpsl, Tpsh, Tpds, Tpss, Tpsn — Puente Formation
Tpsl: siltstone, well bedded, light brown and light gray; Tpsh: shale, well bedded, light gray, siliceous; Tpds: diatomaceous shale, punky, dull white; Tpss: sandstone, well bedded, medium- to coarse-grained, light brown to gray; Tpsn: undifferentiated siltstone, shale, sandstone, and conglomerate.

MIDDLE MIOCENE

Ttss, Ttcg, Ttsl — Topanga Formation
Ttss: sandstone, medium- to coarse-grained, well bedded, brown; conglomeratic north of York Boulevard fault; Ttcg: conglomerate, massive to well bedded, light brown; breccia at base north of York Boulevard fault; Ttsl: siltstone, well bedded, medium to dark brown, with interbedded sandstone, shale and chert.

Td — Diabase: Dark red brown, deeply weathered.

CRETACEOUS (?)

wqm, wqg — Wilson Quartz Diorite
wqm: massive, medium- to coarse-grained, light brown; wqg: gneissic, minor amounts of schist. Includes unmapped granodiorite dikes.

vqd — Vermont Quartz Diorite: Fine- to medium-grained, massive, brown.

fqd — Feliz Granodiorite: Fine- to medium-grained, massive, light gray to light brown.

Lithologic symbols for individual beds and small areas of exposure:
cgl: conglomerate
ss: sandstone
t: tuff

QUATERNARY

Contact: Dashed where approximately located, querried where inferred.

Fault, showing dip: Dashed where approximately located, querried where inferred or hypothetical, dotted where concealed. U: up-thrown side; D: down-thrown side; arrows indicate relative movement. Only horizontal separation demonstrated by offset of structures within map area are indicated. See text for discussion of possible magnitude and direction of horizontal movement on major faults based on regional distribution of rocks.

Anticline / Syncline: Axial planes of folds; arrows indicate dip direction on flanks and plunge; dashed where approximately located.

Strike and dip of beds

Strike and dip of beds inferred to be overturned.

Horizontal beds

Vertical beds

Component of dip, strike unknown.

Strike and dip of beds with grading or other sedimentary structures indicating tops.

Strike and dip of foliation

Dry hole / Producer

Numbers refer to list of wells drilled for oil in text. Circle indicates surface location of directed wells. Not all old wells and wells in oil fields are shown.

Limits of oil field

Fossil locality

Legend

(All Locations are Approximate)

- R-09-Z1B8 — Continuous Core Boring (CH2M HILL, this study)
- W12ASMW2 — Facility Monitoring Well (CH2M HILL, 2009)
- Caltrans As-built LOTB's (Various Locations)
- 4077B — Water Production Well; Location for which only Groundwater Data in Available (LACDPW, 2009)
- EMI-1 — Continuous Core Boring (EMI, 2006)
- A-1 and B-3 — Geotechnical Boring (City of Los Angeles, 2000, 2006a, and 2006b)
- C-1 — Geotechnical Boring (URS, 2006)
- MW-17 — Groundwater Monitoring Well (CH2M HILL, 2006)
- CA-DSW — Water Production Well (Geosyntec, 2004)
- MW1-4 — Groundwater Monitoring Well (CH2M HILL, 2003)
- B-90 — Geotechnical Boring (City of Los Angeles, 2001)
- NM-B1 — Boring (Ninyo and Moore, 1999)
- 80 — Geotechnical Boring (Law/Crandall, 1993)
- PO-103-182 — Monitoring Well, (JMMI, 1992 and CH2M HILL, 2007)
- 2760c — Boring (Yerkes, et al, 1977)
- C-65/C-23f — Boring (Caltrans, 1974a)
- ES-1 — Geotechnical Boring (Caltrans, 1974b)
- 9D2 — Water Production Well (CDWR, 1966)
- -200- — Depth to Bedrock in Feet Below Existing Ground Surface (Yerkes, et al, 1977)
- -1400- — Structural Contour Line, Elevation at Top of Bedrock in Feet (MSL) (CDWR, 1966 and Geoscience, 2004)
- -220- — Groundwater Elevation in Feet (MSL) (San Gabriel Basin - MSGW, 2006 and Raymond Basin - RBMB, 2006 and 2007)
- Z2-G2 — Seismic Reflection Line (CH2M HILL, this study)
- Zone 1 Limits
- Zone 2 Limits
- Zone 3 Limits
- NEIS
- ECIS
- Metro Red Line
- Metro Gold Line Eastside Extension (Tunnel Portion)
- Existing Street, Road, or Highway

Source of Base Map: Lamar, 1970

N

0 2,000 4,000 Feet

0 750 1,500 Meters

Plate 1
Geotechnical Map
Zones 1, 2 and 3

SR-710 Tunnel Technical Study
Los Angeles County, California

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