


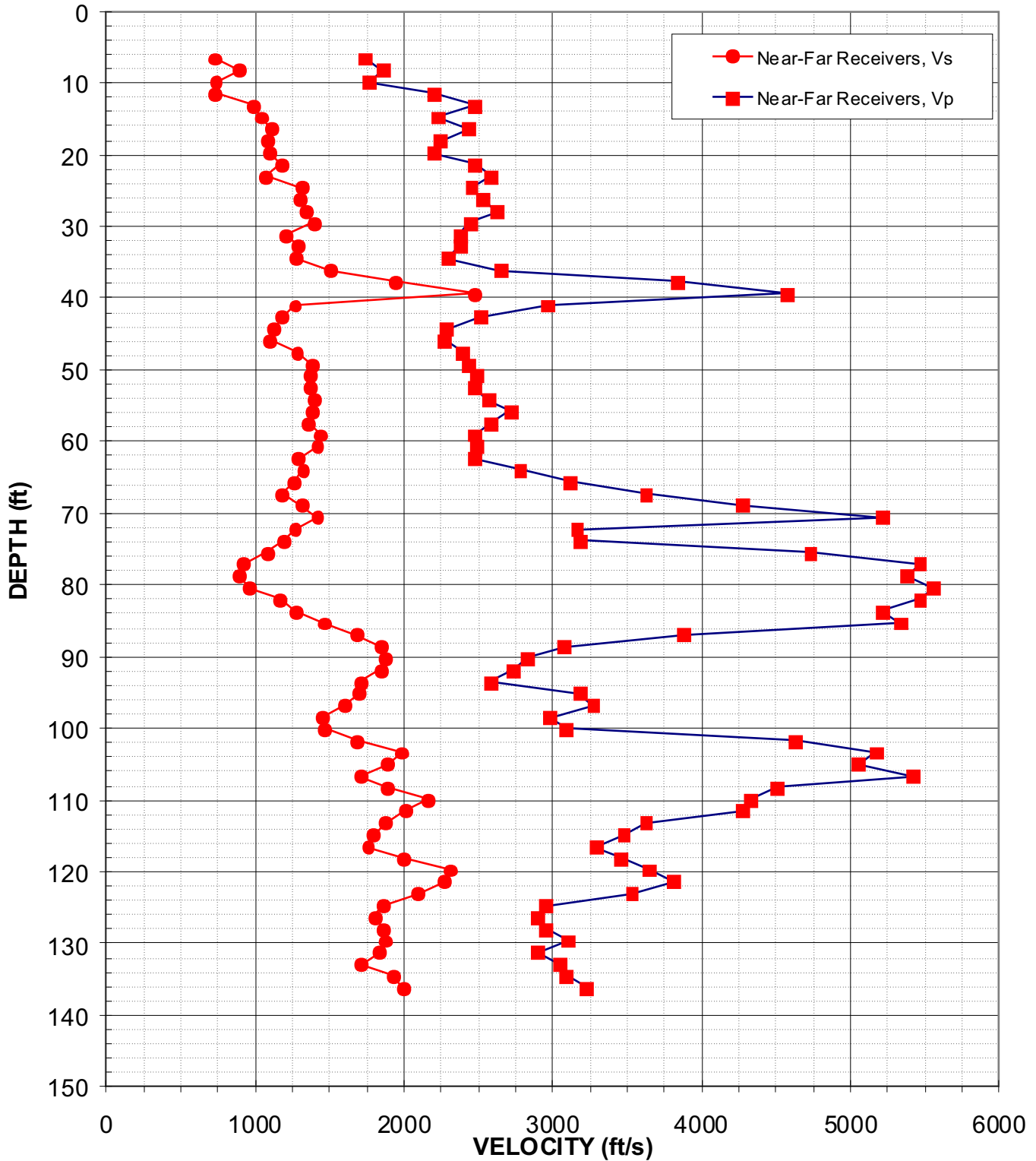
LEGEND

- T3-B3 — P-S Logging Borehole Location
- T3-B2 — Borehole Location

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.

	FIGURE 23 TRANSECT 3 - P-WAVE MIGRATED SEISMIC SECTION WITHOUT INTERPRETATION
Project # 10500 Date: SEPT 8, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony Moten</i> <small>File C:\GVPROJECTS\10500\F23.cdr</small>	MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE

WSE BOREHOLE T3-B3 Receiver to Receiver V_s and V_p Analysis

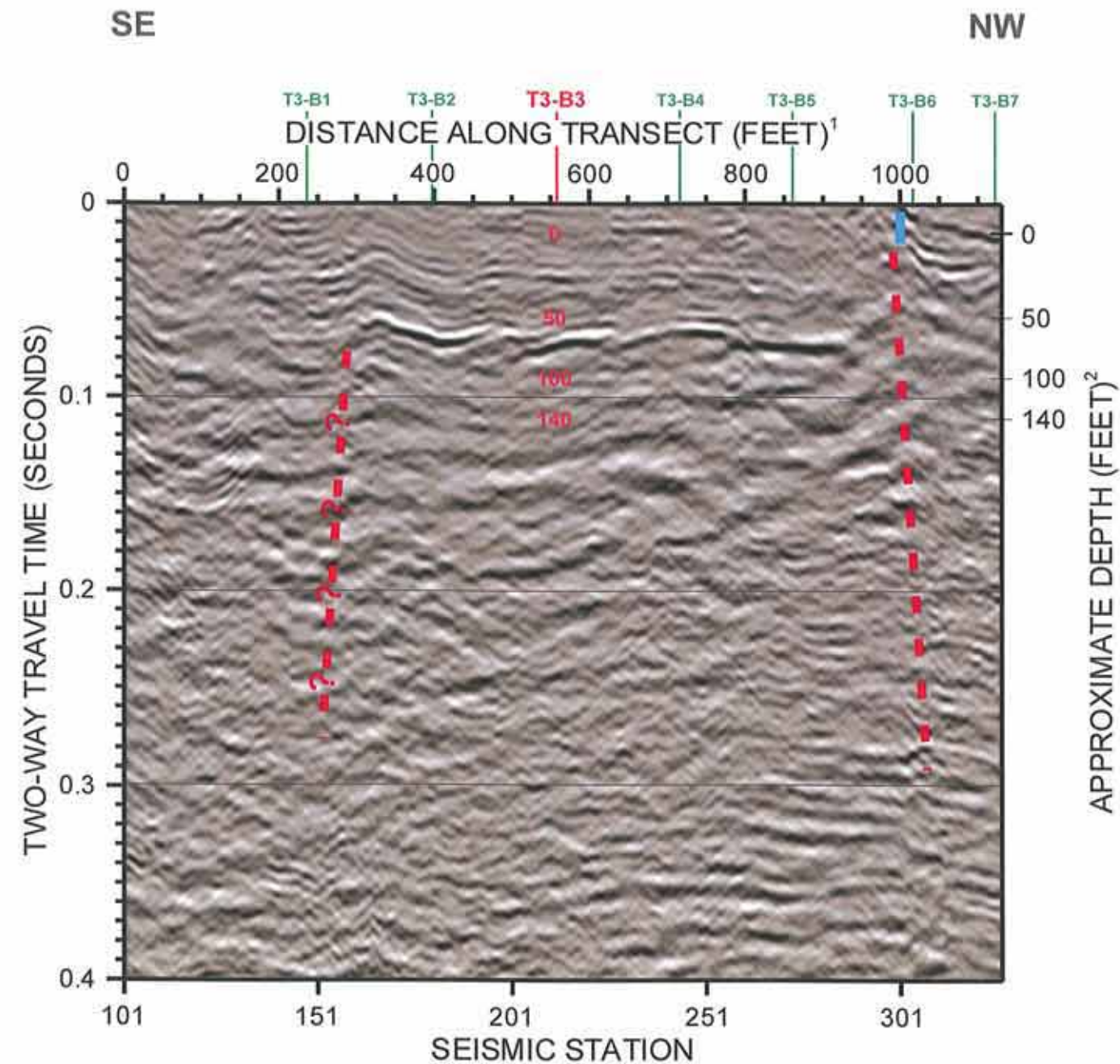


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 Approved By: *Anthony J. Martin*
 File C:\GVPROJECTS\10500\F24.cdr

FIGURE 24
 BOREHOLE T3-B3
 P-S SUSPENSION LOG

MTA-WESTSIDE EXTENSION
 CENTURY PARK WEST
 LOS ANGELES, CALIFORNIA

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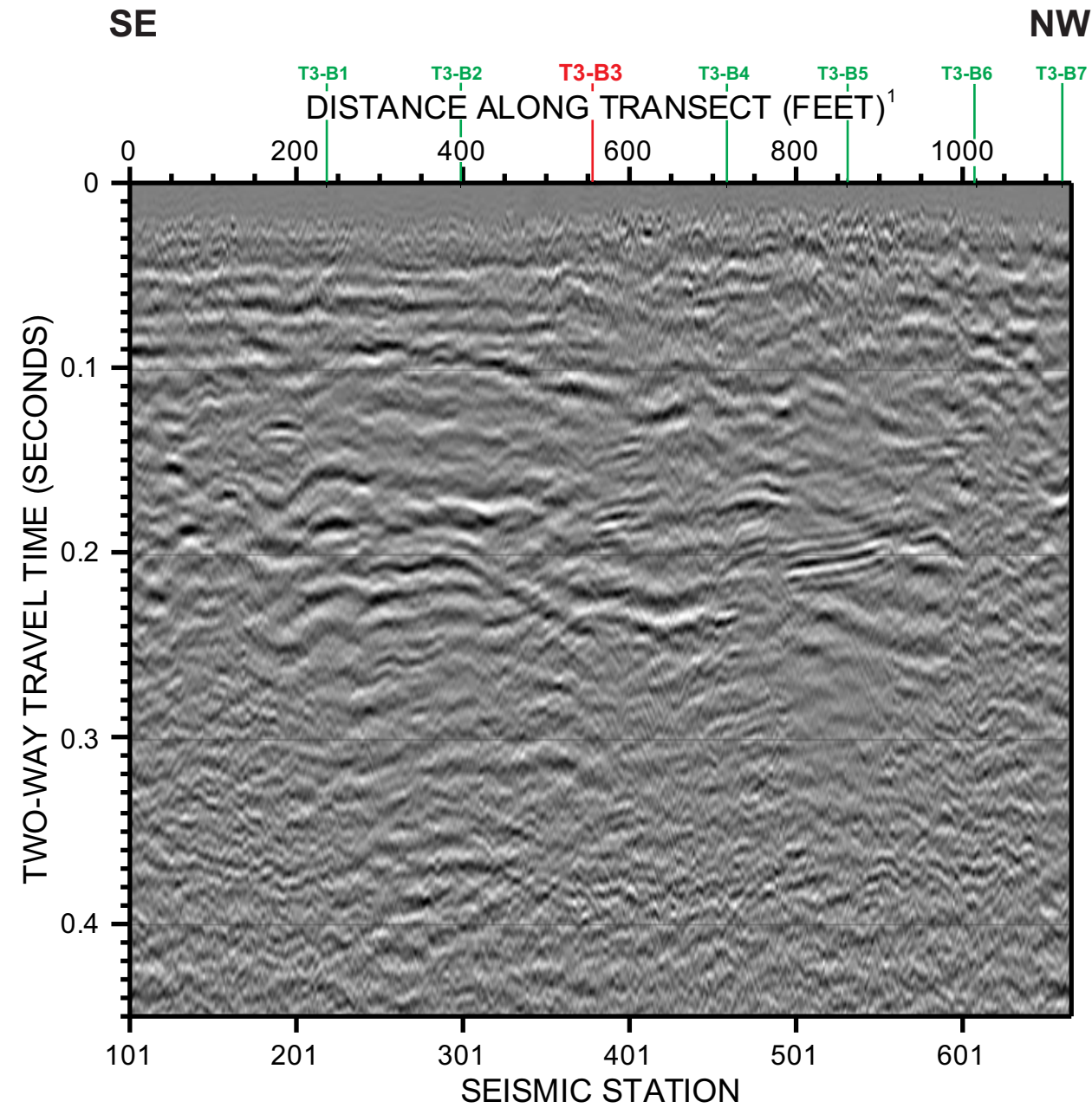
LEGEND

- T3-B3 P-S Logging Borehole Location and Estimated Depths
- T3-B2 Borehole Location
- - ? Fault Inferred on Basis of Reflector Truncations, Vertical Offsets of Major Reflectors, and/or Significant Lateral Changes in Reflector Amplitude (dashed where approximate, queried where uncertain)
- | Significant Groundwater Barrier

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.
 2. Depths are approximate and may vary by 20%.
 3. Depths not applicable on the NW side of the groundwater barrier. See report for details.

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Approved By:	<i>Anthony Martin</i>
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FIGURE 25 TRANSECT 3 - P-WAVE SEISMIC SECTION WITH INTERPRETATION
MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA
PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE

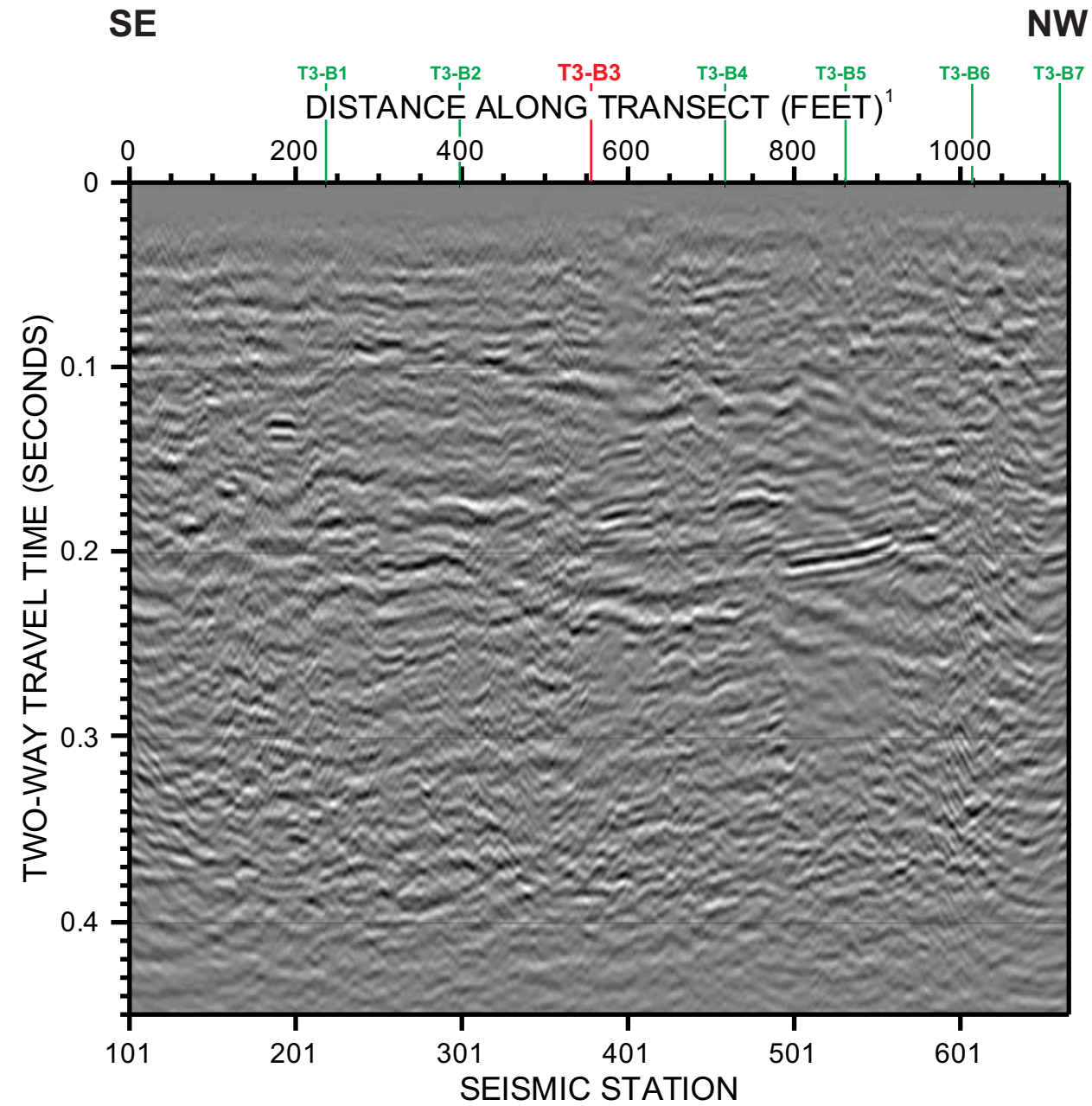


LEGEND

- T3-B3 — P-S Logging Borehole Location
- T3-B2 — Borehole Location

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.


	FIGURE 26 TRANSECT 3 - S-WAVE SEISMIC SECTION WITHOUT INTERPRETATION
	MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA
	PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE
	Project # 10500 Date: SEPT 8, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony Moten</i> <small>File C:\GVPROJECTS\10500\F26.cdr</small>

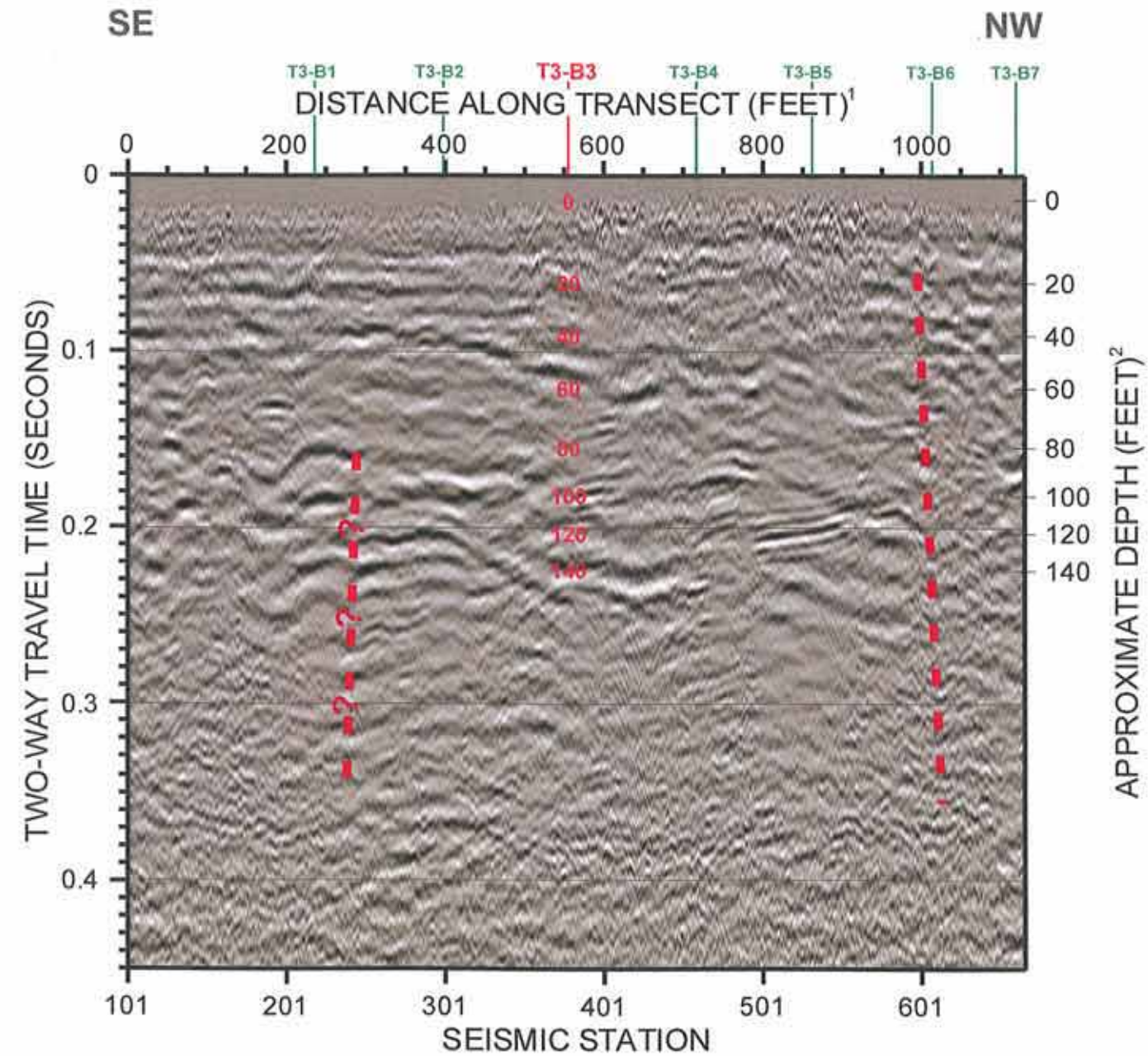


LEGEND

- T3-B3 P-S Logging Borehole Location
- T3-B2 Borehole Location

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.

	<p>FIGURE 27 TRANSECT 3 - S-WAVE MIGRATED SEISMIC SECTION WITHOUT INTERPRETATION</p>
<p>Project # 10500</p> <p>Date: SEPT 8, 2011</p> <p>Drawn By: DALRYMPLE</p> <p>Approved By: <i>Anthony Moten</i></p> <p><small>File C:\GVPROJECTS\10500\F27.cdr</small></p>	<p>MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA</p>
<p>PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE</p>	

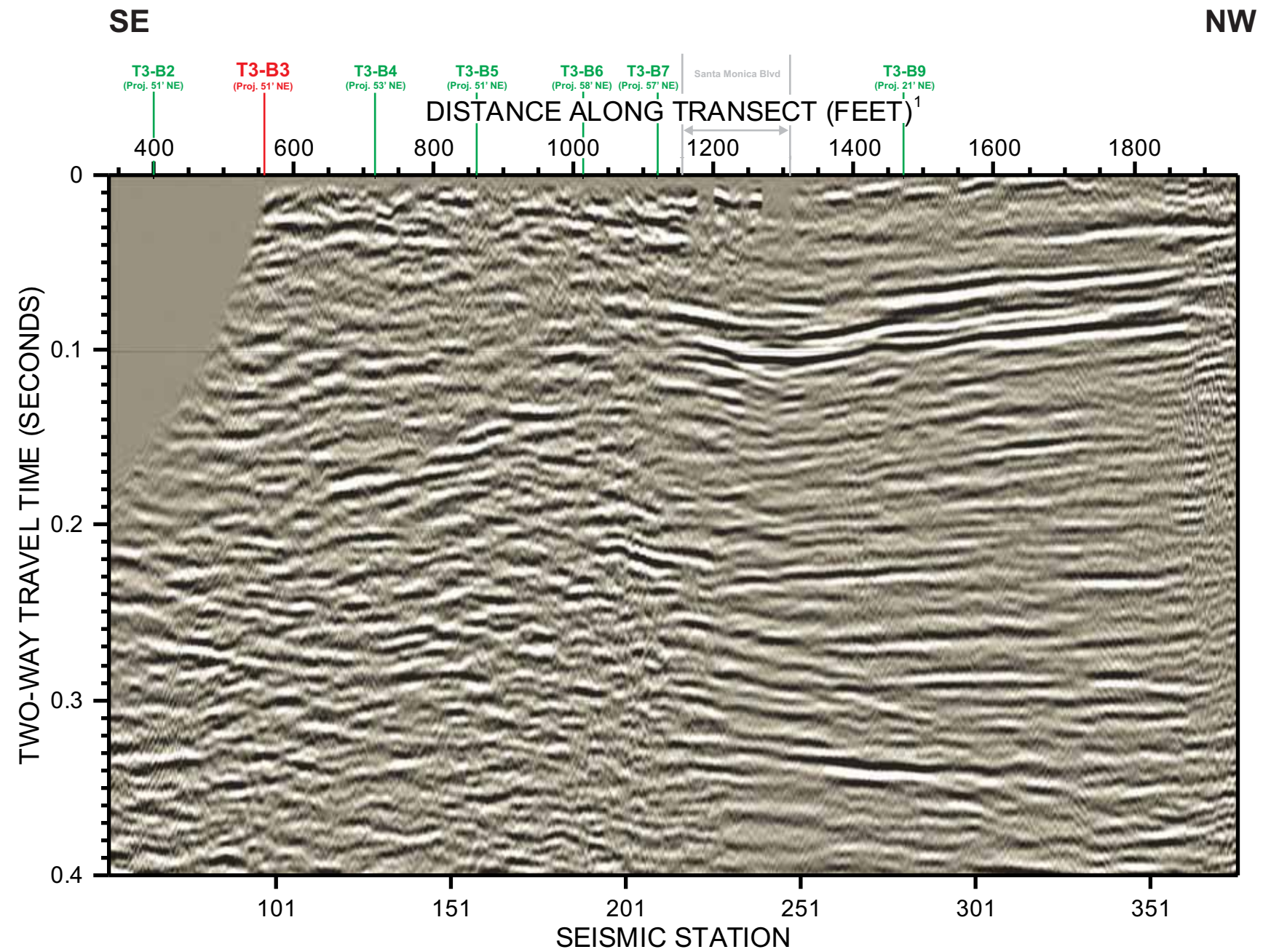


LEGEND

- T3-B3 P-S Logging Borehole Location and Estimated Depths
- T3-B2 Borehole Location
- - ? Fault Inferred on Basis of Reflector Truncations, Vertical Offsets of Major Reflectors, and/or Significant Lateral Changes in Reflector Amplitude (dashed where approximate, queried where uncertain)

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.
 2. Depths are approximate and may vary by 20%.

	FIGURE 28 TRANSECT 3 - S-WAVE SEISMIC SECTION WITH INTERPRETATION
	MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA
Project # 10500 Date: rev OCT 14, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony M. [Signature]</i> <small>File C:\GVPROJECTS\10500\F28.cdr</small>	PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE



LEGEND

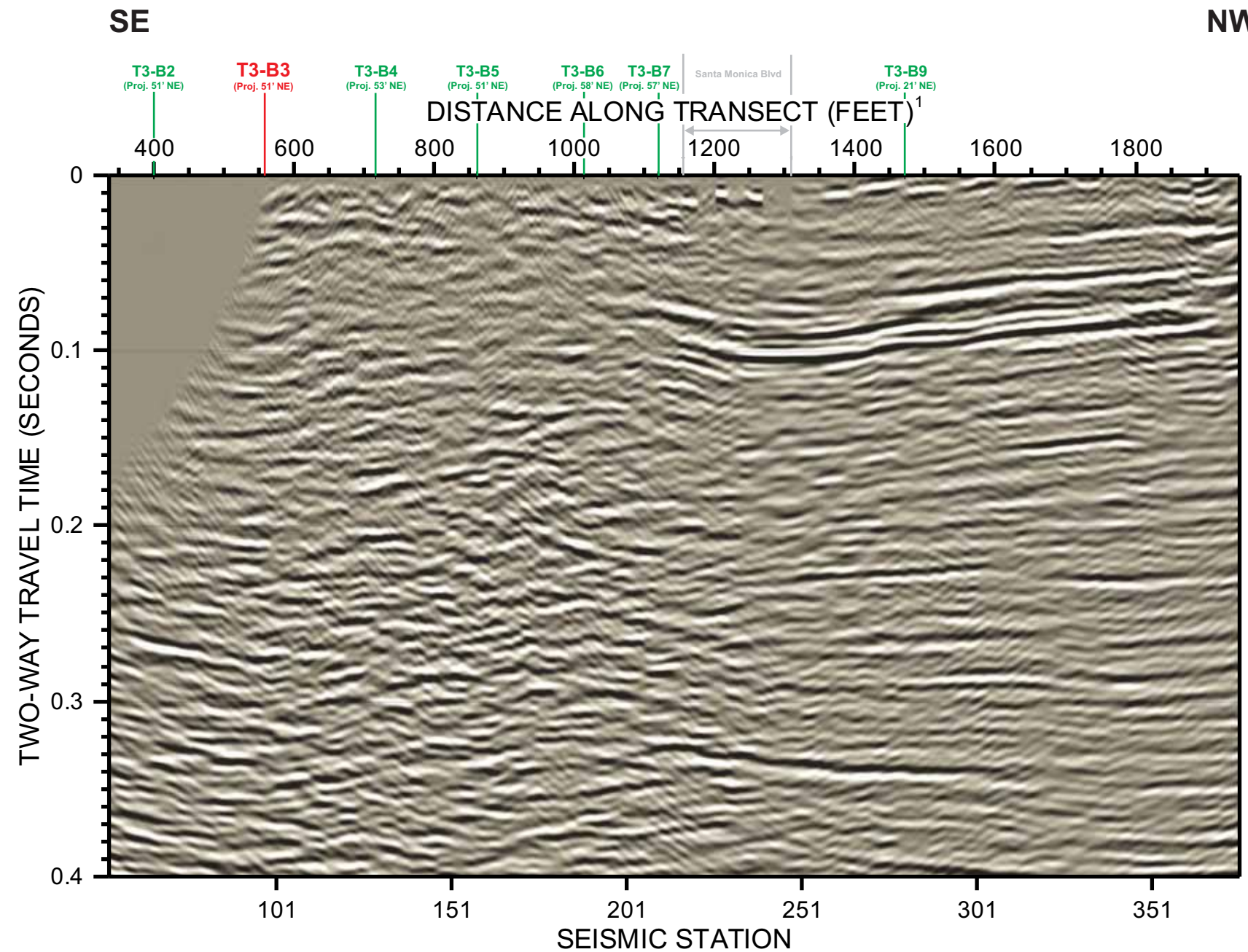
- T3-B3
(Proj. 51' NE) — P-S Logging Borehole Location
- T3-B2
(Proj. 51' NE) — Borehole Location
- Santa Monica Blvd — Street Intersection

Note:
1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.



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Approved By: *Anthony Moten*
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FIGURE 29
9464 LINE 1 - P-WAVE SEISMIC SECTION
WITHOUT INTERPRETATION
MTA-WESTSIDE EXTENSION
CENTURY PARK WEST
LOS ANGELES, CALIFORNIA
PREPARED FOR
AMEC ENVIRONMENT & INFRASTRUCTURE

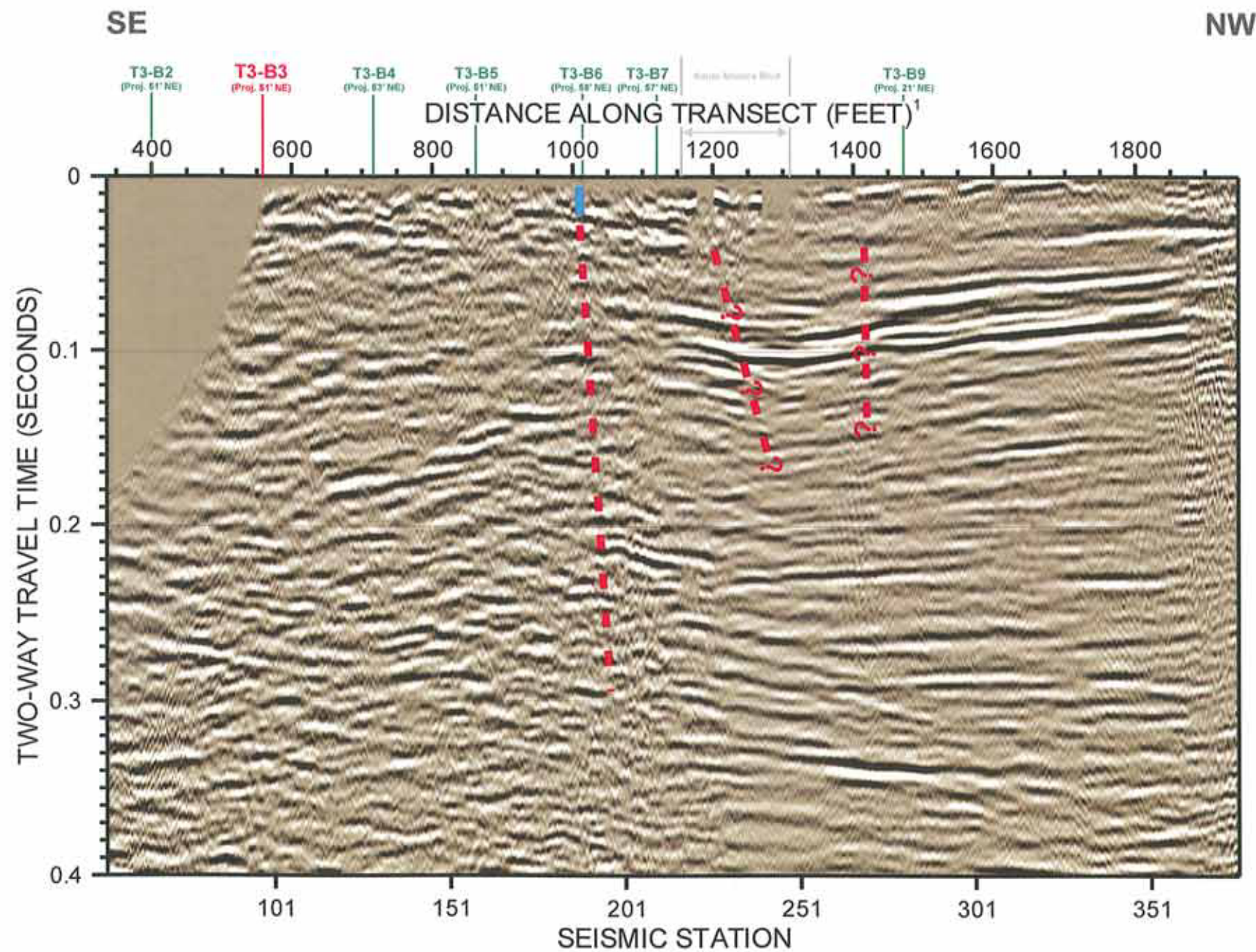


LEGEND

- T3-B3
(Proj. 51' NE) — P-S Logging Borehole Location
- T3-B2
(Proj. 51' NE) — Borehole Location
- Santa Monica Blvd — Street Intersection

Note:
1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.

	FIGURE 30 9464 LINE 1 - P-WAVE MIGRATED SEISMIC SECTION WITHOUT INTERPRETATION
	MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA
	PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE
	<small>Project # 10500 Date: SEPT 15, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony Moten</i> File C:\GVPROJECTS\10500\F30.cdr</small>



LEGEND

- T3-B3 P-S Logging Borehole Location and Estimated Depths
- T2-B2 Borehole Location
- - ? Fault Inferred on Basis of Reflector Truncations, Vertical Offsets of Major Reflectors, and/or Significant Lateral Changes in Reflector Amplitude (dashed where approximate, queried where uncertain)
- | Significant Groundwater Barrier

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.
 2. Depths not applicable on the NW side of the groundwater barrier. See report for details.

GEOS <i>geophysical services</i>	
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Date:	rev OCT 14, 2011
Drawn By:	DALRYMPLE
Approved By:	<i>Autry Moten</i>
File C:\GVPROJECTS\10500\F31.cdf	

FIGURE 31 9464 LINE 1 - P-WAVE SEISMIC SECTION WITH INTERPRETATION
MTA-WESTSIDE EXTENSION CENTURY PARK WEST LOS ANGELES, CALIFORNIA
PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE

5.5 *Transect 4*

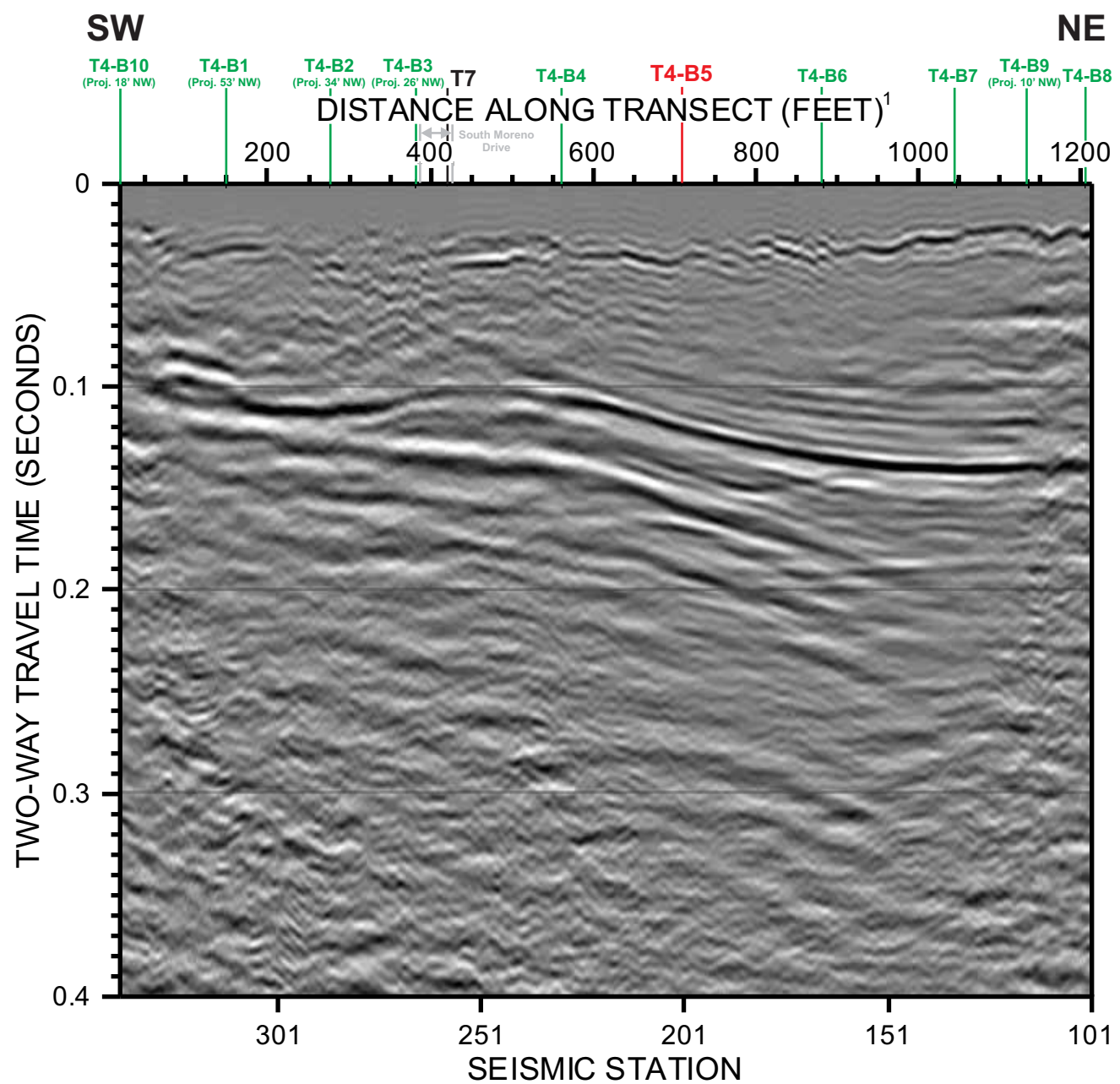
The location of the Transect 4 P- and S-wave seismic profile, which was acquired along Durant Drive, is shown on Figure 1. Unmigrated and migrated P-wave seismic sections for Transect 4, with post stack processing, are presented as Figures 32 and 33, respectively. The borehole T4-B5 P-S suspension log and S-wave synthetic seismogram are included as Figure 34. The interpreted unmigrated P-wave seismic section for Transect 4 is presented as Figure 35. Unmigrated and migrated S-wave seismic sections for Transect 4 are presented as Figures 36 and 37, respectively and the interpreted S-wave seismic section is presented as Figure 38.

The P-S suspension log for borehole T4-B5 (Figure 34) presents P- and S-wave velocity to a depth of about 137 ft. P-wave velocity increases abruptly at the top of the saturated zone at a depth of about 30 ft. In the saturated zone P-wave velocity varies from about 5,250 to 6,750 ft/s and generally increases with depth with the upper and lower bounds likely associated with fine- and coarse-grained soils, respectively. The borehole was not advanced to great enough depth to determine if the unsaturated sand layers encountered in boreholes along Transect 2 are present beneath this line. S-wave velocity generally increases gradually with depth from about 750 ft/s at a depth of 8 ft to 1,350 ft/s at 135 ft. There are higher velocity zones between 47 and 62 ft and 93 and 103 ft that are likely associated with sand layers. An S-wave synthetic seismogram was generated from the S-wave velocity log and is included on Figure 34. A P-wave synthetic seismogram is not presented as the borehole did not penetrate the more significant P-wave reflectors.

The P-wave seismic section for Transect 4 (Figures 32, 33 and 35) has excellent reflectivity with multiple continuous reflectors between 0.08 and 0.2 seconds corresponding to approximate depths in the 140 to 500 ft range. The S-wave seismic section for Transect 4 (Figures 36 to 38) generally has good reflectivity between 0.05 and 0.4 s corresponding to approximate depths of 20 ft to greater than 140 ft. The northeasterly dipping reflector at about 0.25 s at a relative position of 450 ft and 0.4 s at a relative position of 1,200 ft likely corresponds to the P-wave reflector between 0.1 and 0.14 s over the same range. The P-wave seismic section does not exhibit much reflectivity in the upper 100 ft and, therefore, the P- and S-wave datasets are complimentary.

Interpretation of the seismic reflection data were generally limited to the identification of discontinuities caused by offset geologic layers or termination of geologic units that could be tracked through the seismic section and, thereby, possibly associated with faulting. The excellent reflectivity on both the P-wave and S-wave seismic sections permitted interpretation of potential fault-like structures common to both data sets. Multiple possible fault-like structures are interpreted over a wide zone between about 125 and 500 ft on the seismic sections (Figures 35 and 38). Interpretation of these structures is primarily based on minor disruptions and termination of reflectors in the 0.08 to 0.15 second range on the P-wave section and 0.07 to 0.3 s range on the S-wave section. There may be other geologic explanations for some of these small structures and multiple closely spaced seismic lines would be required to determine if the structures are linear and definitively fault related. Alternate interpretations of the P- and S-wave seismic sections are possible and future geologic investigations may lead to revision of the interpretation. Northeast of a relative position of 550 ft, the dipping P-wave reflector between

0.1 and 0.14 s (Figure 35) is continuous with no discontinuities, thereby indicating that faulting is not present beneath this portion of the line.

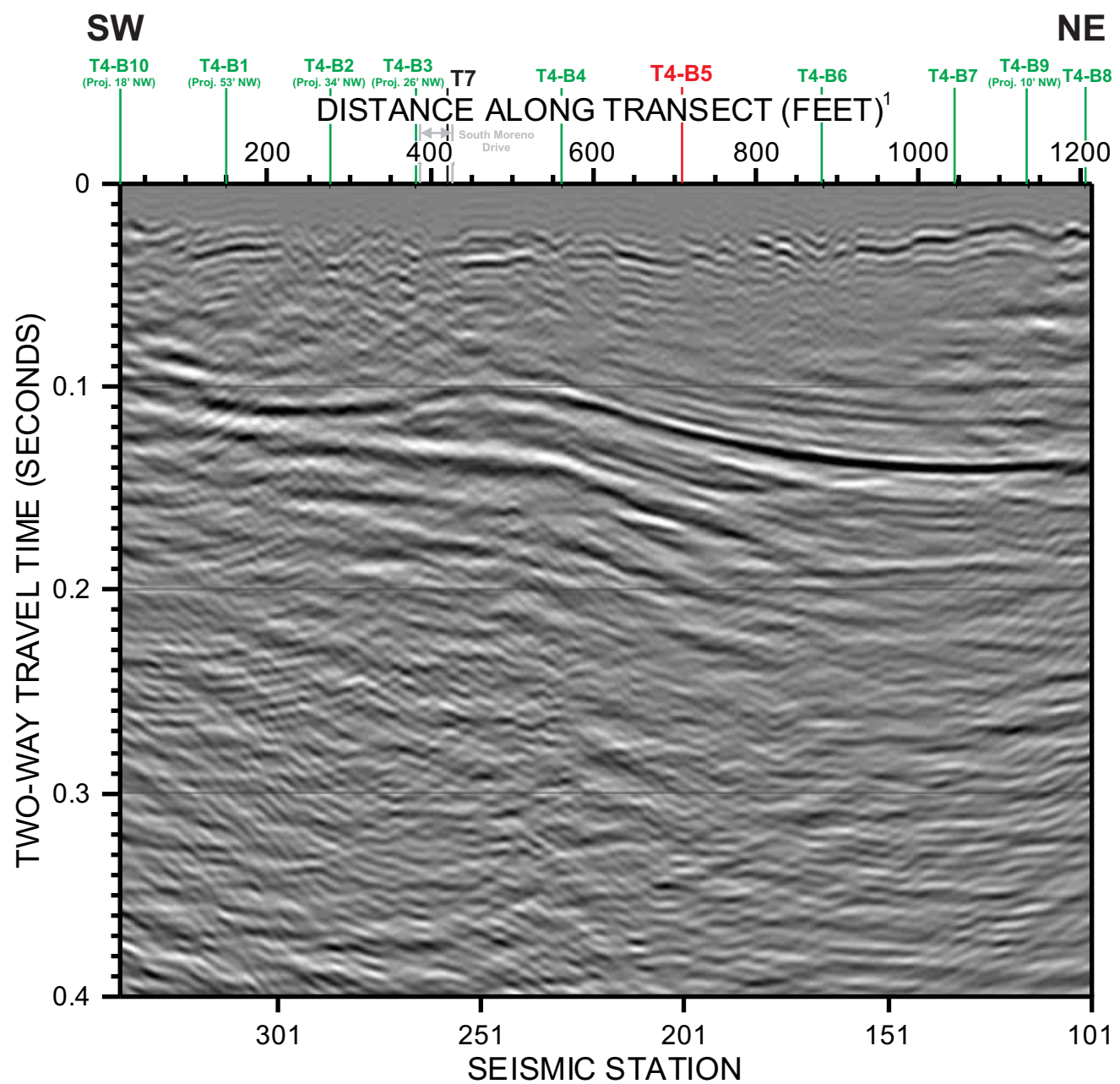


LEGEND

- T4-B5** P-S Logging Borehole Location
- T4-B1** Borehole Location
- T7** Line Intersection
- South Moreno Drive** Street Intersection

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.

	<p>FIGURE 32 TRANSECT 4 - P-WAVE SEISMIC SECTION WITHOUT INTERPRETATION</p>
	<p>Project # 10500</p>
	<p>Date: SEPT 15, 2011</p>
	<p>Drawn By: DALRYMPLE</p>
<p>Approved By: <i>Anthony Moten</i></p>	<p>MTA-WESTSIDE EXTENSION DURANT DRIVE LOS ANGELES, CALIFORNIA</p>
<p>File C:\GVPROJECTS\10500\F32.cdr</p>	<p>PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE</p>



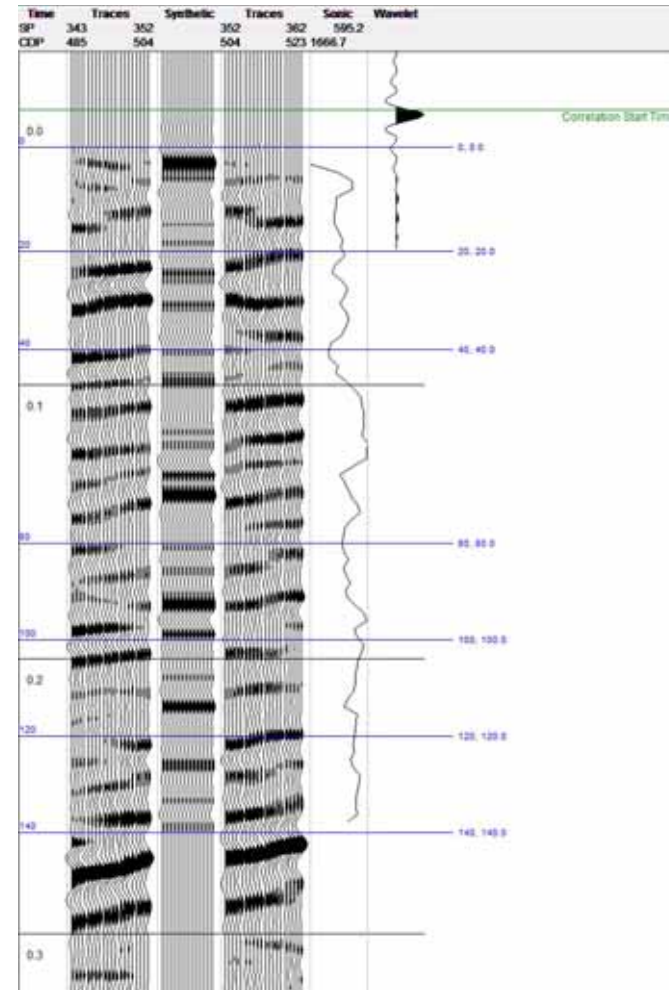
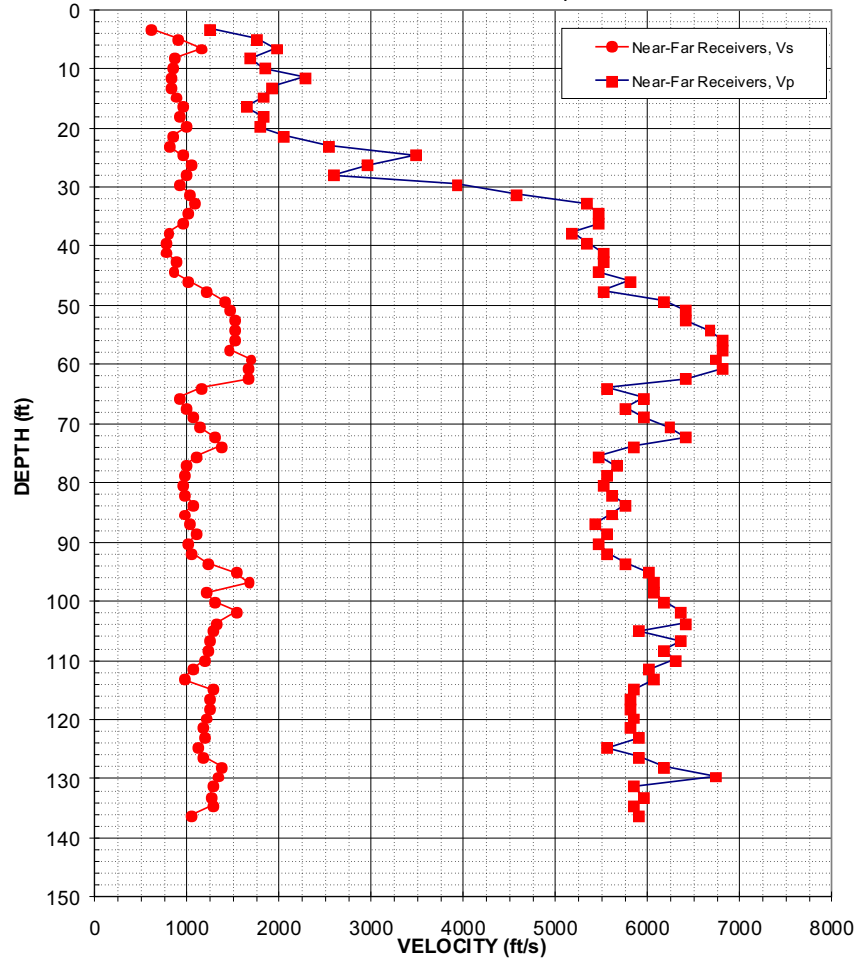
LEGEND

- T4-B5 — P-S Logging Borehole Location
- T4-B1
(Proj. 53' NW) — Borehole Location
- T7** — Line Intersection
- South Moreno Drive — Street Intersection

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.

	FIGURE 33 TRANSECT 4 - P-WAVE MIGRATED SEISMIC SECTION WITHOUT INTERPRETATION
	MTA-WESTSIDE EXTENSION DURANT DRIVE LOS ANGELES, CALIFORNIA
	PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE
	Project # 10500 Date: SEPT 15, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony Moten</i> <small>File C:\GVPROJECTS\10500\F33.cdr</small>

WSE BOREHOLE T4-B5
Receiver to Receiver V_s and V_p Analysis

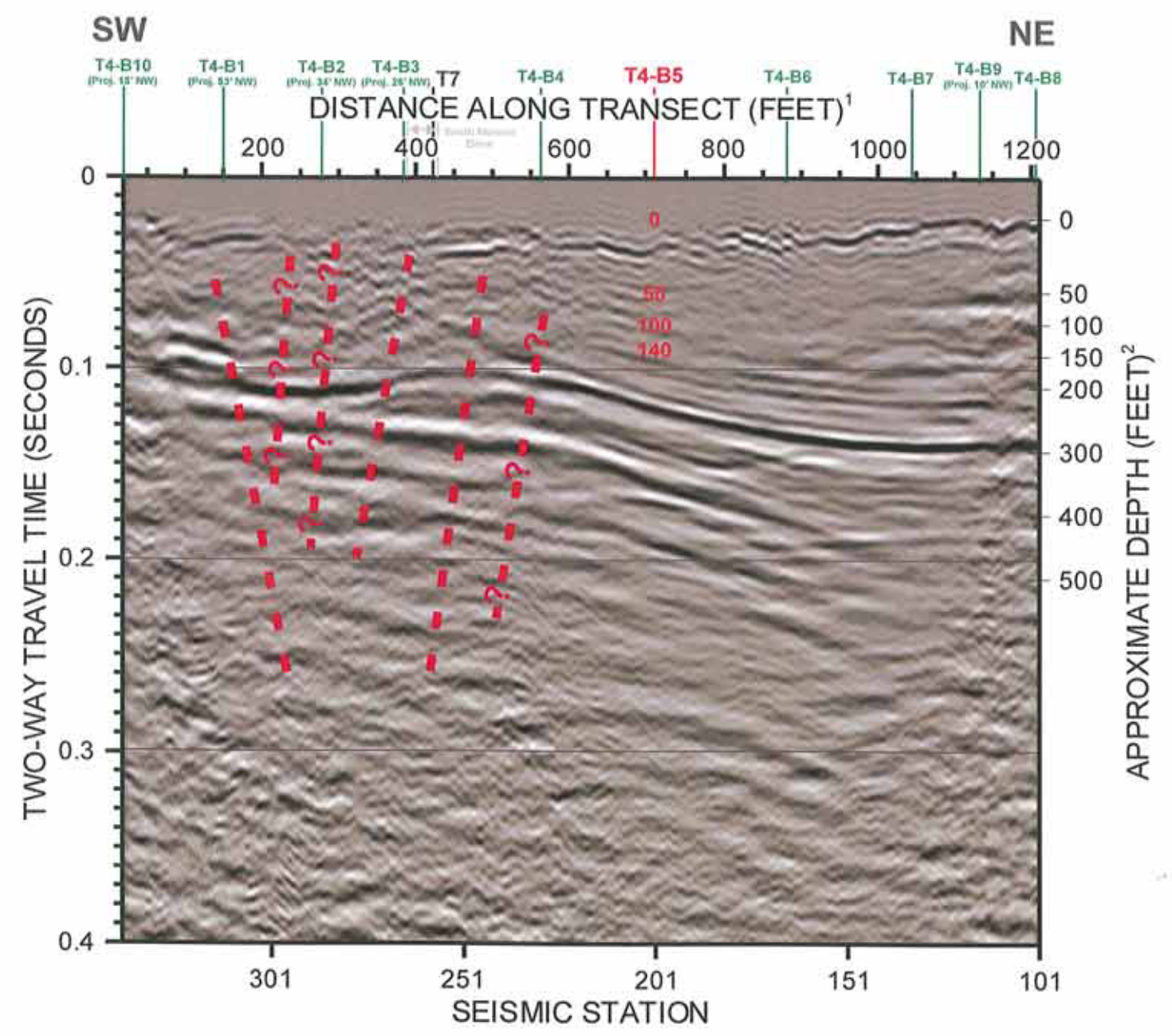


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Approved By: *Anthony Motin*
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FIGURE 34
BOREHOLE T4-B5 P-S SUSPENSION LOG
AND S-WAVE SYNTHETIC SEISMIC SECTION

MTA-WESTSIDE EXTENSION
DURANT DRIVE
LOS ANGELES, CALIFORNIA

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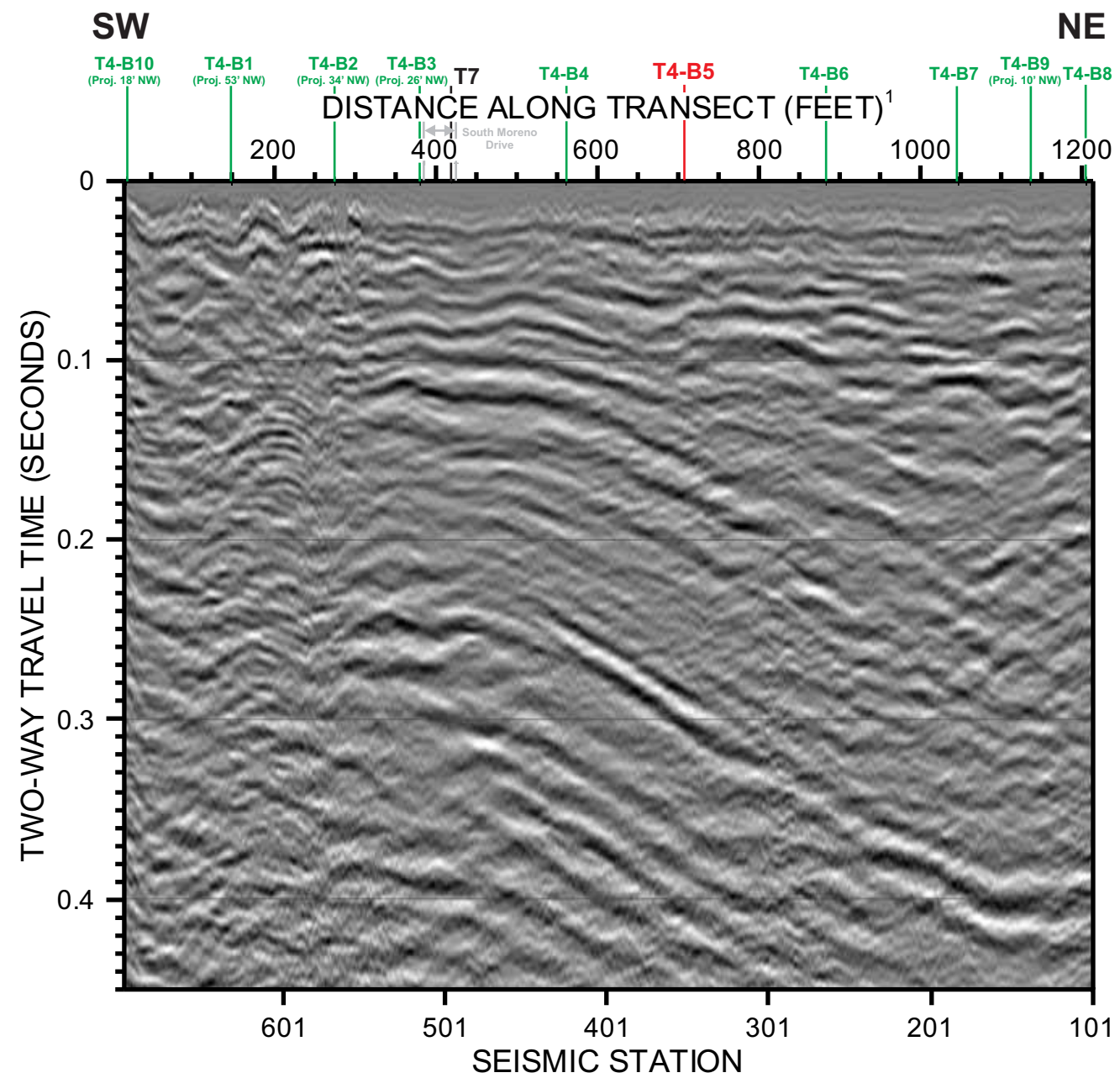


LEGEND

- T4-B5** P-S Logging Borehole Location with Estimated Depths
- T4-B1** Borehole Location
- T7** Line Intersection
- Street** Street Intersection
- - ?** Fault Inferred on Basis of Reflector Truncations, Vertical Offsets of Major Reflectors, and/or Significant Lateral Changes in Reflector Amplitude (dashed where approximate, queried where uncertain)

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.
 2. Depths are approximate and may vary by 20%.

	<p>FIGURE 35 TRANSECT 4 - P-WAVE SEISMIC SECTION WITH INTERPRETATION</p>
	<p>MTA-WESTSIDE EXTENSION DURANT DRIVE LOS ANGELES, CALIFORNIA</p>
	<p>PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE</p>
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LEGEND

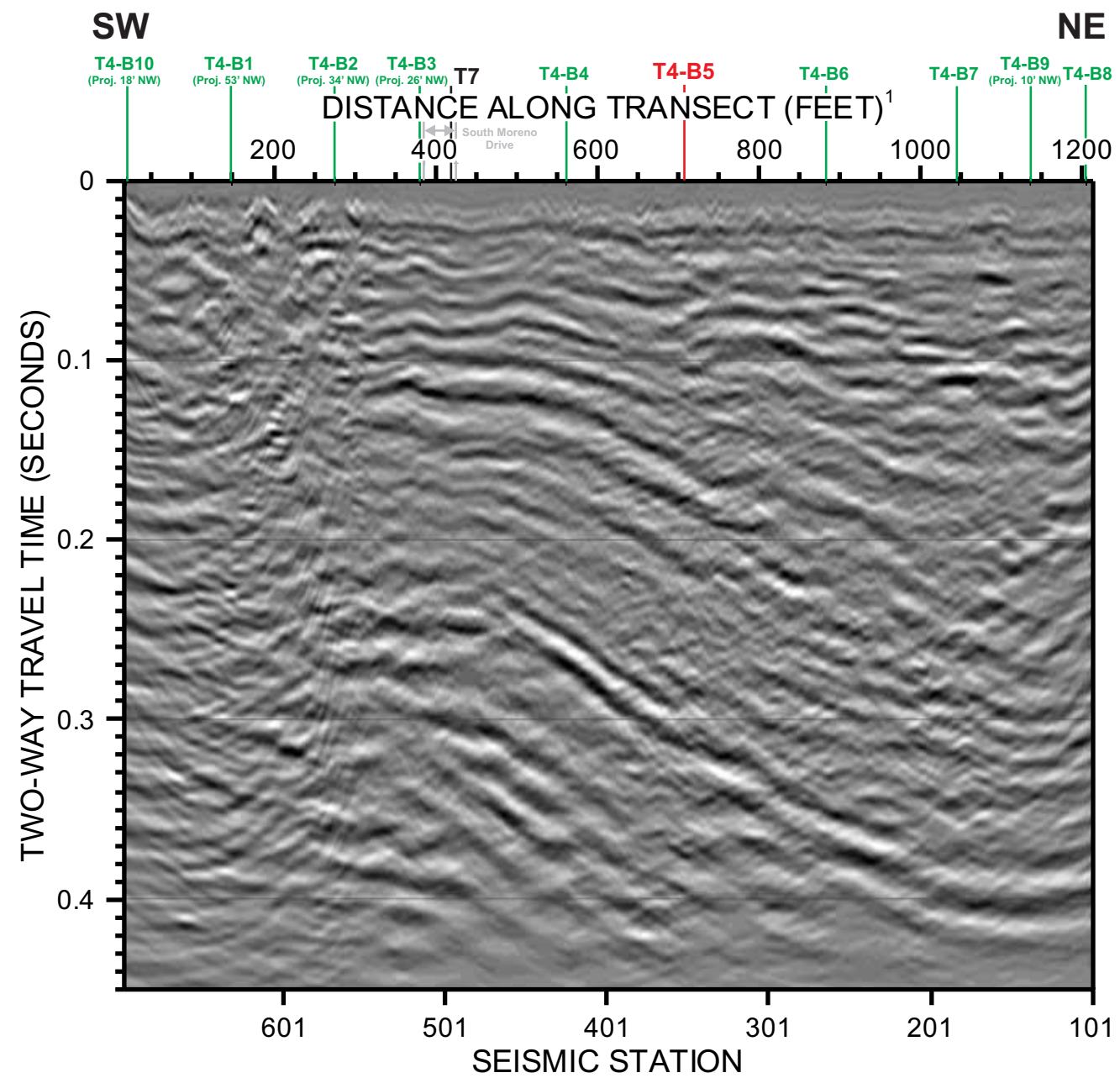
- T4-B5 P-S Logging Borehole Location
- T4-B1
(Proj. 53' NW) Borehole Location
- T7** Line Intersection
- South Moreno Drive Street Intersection

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.



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FIGURE 36
 TRANSECT 4 - S-WAVE SEISMIC SECTION
 WITHOUT INTERPRETATION
 MTA-WESTSIDE EXTENSION
 DURANT DRIVE
 LOS ANGELES, CALIFORNIA
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LEGEND

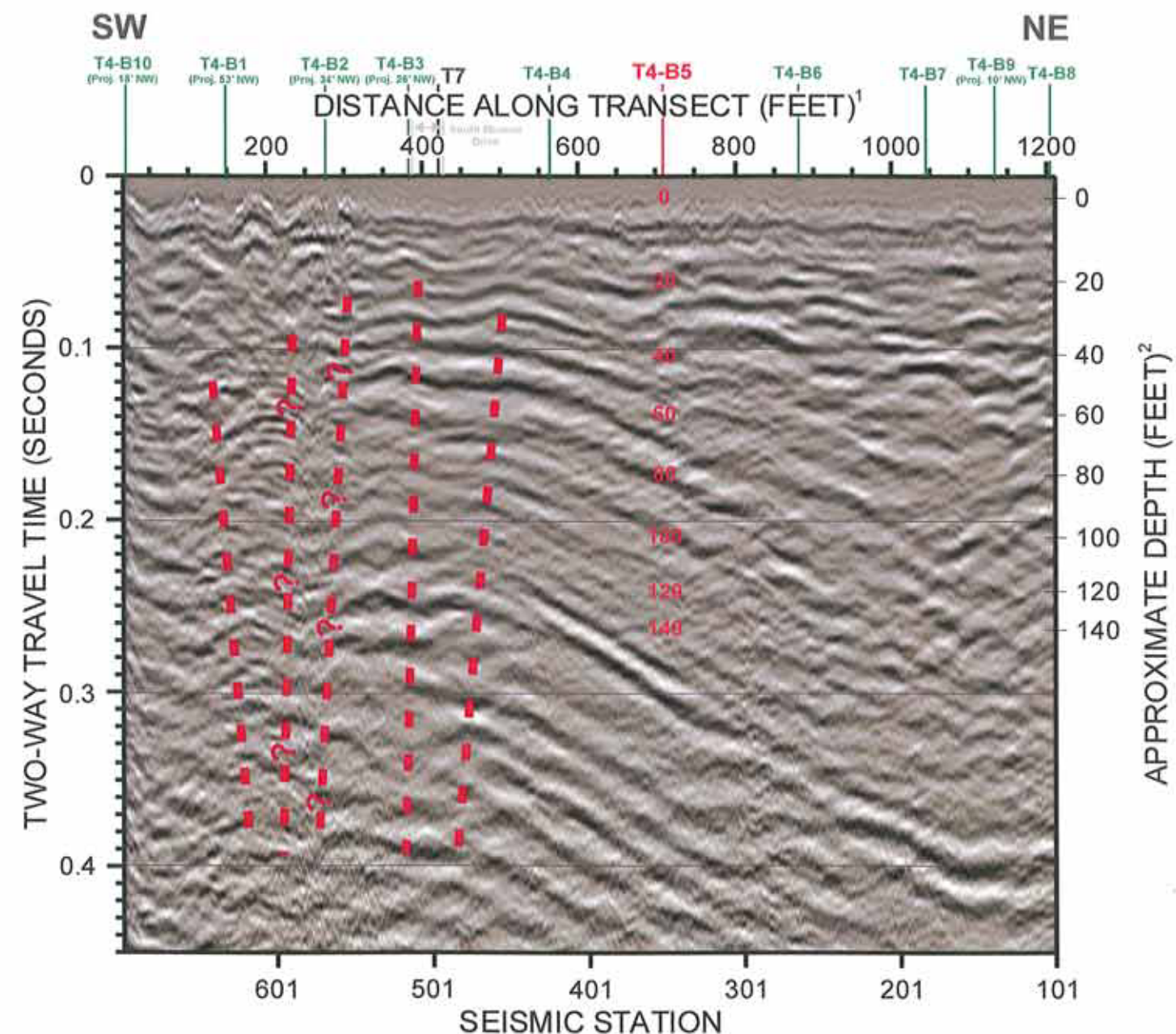
- T4-B5** P-S Logging Borehole Location
- T4-B1** Borehole Location
(Proj. 53' NW)
- T7** Line Intersection
- South Moreno Drive Street Intersection

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.



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 Approved By: *Anthony Moten*
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FIGURE 37
TRANSECT 4 - S-WAVE MIGRATED SEISMIC SECTION WITHOUT INTERPRETATION
 MTA-WESTSIDE EXTENSION
 DURANT DRIVE
 LOS ANGELES, CALIFORNIA
 PREPARED FOR
 AMEC ENVIRONMENT & INFRASTRUCTURE



LEGEND

- T4-B5** P-S Logging Borehole Location with Estimated Depths
- T4-B1** Borehole Location
- T7** Line Intersection
- South Boulevard Drive** Street Intersection
- - ?** Fault Inferred on Basis of Reflector Truncations, Vertical Offsets of Major Reflectors, and/or Significant Lateral Changes in Reflector Amplitude (dashed where approximate, queried where uncertain)

Note:
 1. Distances approximately tied to the geologic cross section where coincident with the seismic line. See report for details.
 2. Depths are approximate and may vary by 20%.

	<p>FIGURE 38 TRANSECT 4 - S-WAVE SEISMIC SECTION WITH INTERPRETATION</p>
	<p>MTA-WESTSIDE EXTENSION DURANT DRIVE LOS ANGELES, CALIFORNIA</p>
	<p>PREPARED FOR AMEC ENVIRONMENT & INFRASTRUCTURE</p>
	<p>Project # 10500 Date: rev OCT 14, 2011 Drawn By: DALRYMPLE Approved By: <i>Anthony Moten</i> File C:\GVPROJECTS\10500\F38.cdr</p>