APPENDIX B

APPENDIX EXPERIMENTAL RESULTS FOR THE 5-STORY MODEL STRUCTURE SEISMICALLY ISOLATED WITH XY-FP ISOLATORS
Test IELH200A: El Centro S00E 200%, Isolators at θ=0°

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Base Shear / Weight

Isolation System Displacement (mm)

South Isolator Pair

North Isolator Pair

Weight = 106.5 kN
Test IELB200A: El Centro S00E+V 200%, Isolators at $\theta=0^\circ$
Test IP7H100A: Pacoima S74W 100%, Isolators at $\theta = 0^\circ$
Test IP7B100A: Pacoima S74W+V 100%, Isolators at $\theta=0^\circ$
Test IP1H100A: Pacoima S16E 100%, Isolators at $\theta=0^\circ$

Axial Force (kN)

1st-Story Shear / Weight

Isolation System Displacement (mm)

Base Shear / Weight

Time (sec)

Weight = 106.5 kN
Test IP1B100A: Pacoima S16E+V 100%, Isolators at $\theta=0^\circ$

- **Axial Force (kN):**
  - Range: -50 to 150

- **1st-Story Shear / Weight:**
  - Range: -0.3 to 0.3

- **Isolation System Displacement (mm):**
  - Range: -80 to 80

- **Isolation System Displacement (mm) vs. Time (sec):**
  - **South Isolator Pair**
  - **North Isolator Pair**

- **Weight = 106.5 kN**
Test ITFH400A: Taft N21E 400%, Isolators at θ=0°

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Isolation System Displacement (mm)

Base Shear / Weight

Weight = 106.5 kN
Test ITFB400A: Taft N21E+V 400%, Isolators at $\theta=0^\circ$

- Isolation System Displacement (mm)
- 1st-Story Shear / Weight
- Axial Force (kN)

Other graphs and data points are also shown, including base shear/weight and weight = 106.5 kN.
Test IHAH100A: Hachinohe N-S 100%, Isolators at $\theta=0^\circ$

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Time (sec)

South Isolator Pair

North Isolator Pair

Base Shear / Weight

Weight = 106.5 kN
Test ISYH100A: Sylmar 90 100%, Isolators at $\theta=0^\circ$

Isolation System Displacement (mm)

1st-Story Shear / Weight

Base Shear / Weight

Axial Force (kN)

Isolation System Displacement (mm)

Time (sec)
Test ISYB100A: Sylmar 90+V 100%, Isolators at $\theta=0^o$
Test IN9H100A: Newhall 90 100%, Isolators at $\theta=0^\circ$
Test IN9B100A: Newhall 90+V 100%, Isolators at $\theta=0^\circ$
Test IN3H100A: Newhall 360 100%, Isolators at $\theta=0^\circ$

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Isolation System Displacement (mm)

Base Shear / Weight

Weight = 106.5 kN

South Isolator Pair

North Isolator Pair

Time (sec)

TENSION
Test IN3B100A: Newhall 360+V 100%, Isolators at $\theta=0^\circ$
Test IELH200C: El Centro S00E 200%, Isolators at θ=90°

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Isolation System Displacement (mm)

Base Shear / Weight

Time (sec)

Weight = 106.5 kN

TENSION

TENSION

Weight = 106.5 kN
Test IELB200C: El Centro S00E+V 200%, Isolators at θ=90°
Test IP1H100C: Pacoima S16E 100%, Isolators at $\theta=90^\circ$

- **Isolation System Displacement (mm)**
  - Time (sec)
- **1st-Story Shear / Weight**
  - Time (sec)
- **Axial Force (kN)**
  - South Isolator Pair
  - North Isolator Pair
  - Time (sec)
- **Base Shear / Weight**
  - Isolation System Displacement (mm)

Weight = 106.5 kN
Test IP1B100C: Pacoima S16E+V 100%, Isolators at θ=90°

Isolation System Displacement (mm)

Axial Force (kN)

1st-Story Shear / Weight

Isolation System Displacement (mm)

Weight = 106.5 kN
Test ISYH100C: Sylmar 90 100%, Isolators at $\theta=90^\circ$
Test ISYB100C: Sylmar 90+V 100%, Isolators at $\theta=90^\circ$

- **Axial Force (kN)**
  - South Isolator Pair
  - North Isolator Pair

- **1st-Story Shear / Weight**

- **Isolation System Displacement (mm)**

- **Base Shear / Weight**

- **Time (sec)**
Test IN3H100C: Newhall 360 100%, Isolators at $\theta=90^\circ$

- Isolation System Displacement (mm)
- 1st-Story Shear / Weight
- Axial Force (kN)
- Isolation System Displacement (mm)
- Base Shear / Weight

Weight = 106.5 kN

South Isolator Pair

North Isolator Pair
Test IELH200G: El Centro S00E 200%, Isolators at $\theta=45^\circ$
Test IELB200G: El Centro S00E+V 200%, Isolators at $\theta=45^0$
Test IP1H100G: Pacoima S16E 100%, Isolators at \( \theta = 45^\circ \)

- **Isolation System Displacement (mm)**
- **1st-Story Shear / Weight**
- **Axial Force (kN)**
- **Base Shear / Weight**
- **South Isolator Pair**
- **North Isolator Pair**
- **Weight = 106.5 kN**
Test ISYH100G: Sylmar 90 100%, Isolators at $\theta=45^\circ$
Test ISYB100G: Sylmar 90+V 100%, Isolators at $\theta=45^\circ$

- **Isolation System Displacement (mm)**
- **Axial Force (kN)**
- **1st-Story Shear / Weight**
- **Isolation System Displacement (mm)**
- **Base Shear / Weight**

Weight = 106.5 kN
Test IN3H100G: Newhall 360 100%, Isolators at $\theta=45^\circ$

Isolation System Displacement (mm)

1st-Story Shear / Weight

Axial Force (kN)

Isolation System Displacement (mm)

Base Shear / Weight

Weight = 106.5 kN

South Isolator Pair

North Isolator Pair

TENSION

TENSION
Test IN3B100G: Newhall 360+V 100%, Isolators at θ=45°