Year: 1996~2016 (20yrs)
Length: 555m (east bound)
560m (west bound)
Superstructure: single cell box girder
Substructure: 13 piers
Foundation: pile group

Provincial Highway 86, Bridge No.24
Epicenter distance (23.9km)

TELES predicted
PGA: 250 gal
Sas: 500 gal
Sa1: 323 gal
地震資訊
發震時間：2016/02/06 03:57:27
震央位置：東經120.54度，北緯22.93度
深度：16.7公里，芮氏規模：6.4

測站資訊
波源起始時間：2016/02/06 03:57:15
測站位置：東經120.21度，北緯22.99度
震央距：35公里，方位角：102.31度

Z Max
82.49 gal

NS Max
152.17 gal

EW Max
233.82 gal
Fault distance (11.9km)
Structural system #1 (A1~P7)
Structural system #2 (P7~A2)

EAST BOUND (blocked)
Type of pot bearing

HINGE (uni-dir.)

MOVEABLE (two-dirs.)

RIGID
Residual lateral displacement

<table>
<thead>
<tr>
<th>EXP.</th>
<th>M</th>
<th>M</th>
<th>M</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>PR1</td>
<td>PR2</td>
<td>PR3</td>
<td>PR4</td>
</tr>
</tbody>
</table>

Provided by Fifth maintenance office, Directorate General of Highways, M.O.T.C
Gap between two bounds @ Exp. Joint
GROUND LIDA

HANDHELD LIDA

UAV

TAPE MEASURE
Remarks

• The damage patterns of bridge No.24 are related to arrangement of bearing system within the vibration unit, and the seismic wave propagation roughly perpendicular to the longitudinal axis of the bridge.
Remarks

• Failure of bearings provides a **sliding mechanism** to protect the piers without hinge mechanism; however, the allowance of **permanent displacement** as well as the **pounding effect** should be identified by nonlinear time history analysis in design stage.
Suggestions

• 落實橋梁設計審查、施工計畫審查與施工監造及查核。

• 全面加裝橋梁防落裝置。

• 儘速進行橋梁耐震能力評估與補強。
Thanks for your attention!