

GENERAL EARTHQUAKE DAMAGE INSPECTION CHECKLIST

G. RECOMENDACIÓN AL SECRETARIO

Departamento de Educación  
Dr. Eligio Hernández Pérez  
Secretario de Educación

Hora: 1:00 pm

Código: 70078

Escuela: Cacique Agueybaná

Fecha de Inspección: 13/enero/2020

Municipio: Bayamón

- Abrir Escuela (Verde)
- Abrir Parcialmente la Escuela (Amarillo)
- No Abrir la Escuela (Rojo)

Comentarios:

José L. Girona Márquez  
Nombre (Letra de Molde)

*José L. Girona Márquez*  
Firma



7236-P.E.  
# Licencia

Sello

13 de enero de 2020

## INFORME DE INSPECCION POR TERREMOTO

**Proyecto:** Escuela Cacique Agueybaná / AEP-8113  
**Dirección:** Calle 61, Esquina Sierra Bayamón, Bayamón  
**Director:** Sr. Ernesto Toro  
**Fecha de Inspección:** 13 de enero de 2020  
**Hora de Inspección:** 1:00 pm  
**Inspector:** Ing. José L. Girona Márquez, Licencia Núm. 7236 - PE

### COMENTARIOS Y OBSERVACIONES:

Escuela de tres (3) pisos – terreno semi llano:

1. Cubrir con madera tratada de ½" espesor laterales de las vigas en los pasillos.
2. Los techos son piezas pre-fabricados (Doble T)



3. "Jois" del final de la Doble "T", con grieta profunda frente al comedor, **NO** estructurales.

Se visitaron todos los salones, áreas de servicios, cancha y comedor. Además, se revisaron las líneas de gas en la cocina del comedor, no encontrando ningún liqueo de gas. Se aclara que la inspección realizada es visual de los elementos estructurales de los edificios existentes en relación únicamente a los efectos directos que el sismo pudo haber causado. Ningún análisis estructural ni cálculos han sido evaluados pertinentes a la construcción original de los edificios ni su cumplimiento con los códigos de construcción vigentes en Puerto Rico.

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**A. GENERAL INFORMATION**

1. Street Address of the School: Calle 61, Esquina Sierra Bayamón  
 City: Bayamón State: PR Zip: \_\_\_\_\_
2. School Name: Esc. Cacique Agueybaná
3. Date of inspection: 13/enero/2020 / 1:00pm
4. Inspector's Name: Ing. José L. Girona Márquez

**B. BUILDING SITE INSPECTION**

5. Utility Service Safety:

IMPORTANT—Immediately following an earthquake, check the entire property, especially near appliances, for the smell of gas. If gas odor is detected, turn off the gas at the meter where it enters the house. Locate and repair leaks before turning gas back on. If the gas odor persists after the gas has been shut off, vacate the building and contact the gas utility company immediately.

IMPORTANT—Before entering a damaged, vacant building verify that gas is off. Check the gas meter for damage and position of main gas valve, either a manual valve or a seismically-activated gas shut-off valve. Do not enter the building if gas odor is detected.

- a. Odor of natural gas leakage?  YES  NO      b. Downed powerlines?  YES  NO

6. Surrounding topography: (check one)

- Flat  
 Gently sloping (easily walkable)  
 Steeply sloping (difficult or impossible to walk in some areas)

7. Building pad: (check one)

- Flat  
 Terraced or multilevel  
 Gently sloping (less than 4-foot ground surface elevation difference across house)  
 Steeply sloping (greater than 4-foot ground surface elevation difference across house)

8. Geotechnical Issues: (if yes, provide description and photos)

- |   | YES                      | NO                                  |
|---|--------------------------|-------------------------------------|
| a. New cracks in the ground?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Signs of fresh cracking in or movement of hardscape?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. Signs of fresh cracking in or movement of retaining walls?                                     | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. Patterns of cracking that extend through the ground surface, hardscape, and improvements?      | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. Evidence of sand boils or other fresh-appearing deposits of sand or mud?                       | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. Unusual slumping, rising, or bulging of the ground surface?                                    | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g. Evidence of rock falls or slope instability above site?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h. Ground movement or wet areas indicating possible broken underground utility lines?             | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i. Other phenomena (e.g., septic tanks surfacing, differential settlement, ground consolidation)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## GENERAL EARTHQUAKE DAMAGE INSPECTION CHECKLIST

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### B. BUILDING SITE INSPECTION (continued)

YES      NO

9. Evidence of earthquake-induced permanent ground deformation in the immediate vicinity of the property?  YES       NO

### C. GENERAL BUILDING INFORMATION

10. Safety Assessment Tag: ( check one)       None       Green       Yellow       Red  
 (others):       Yellow       Red

11. a) Year of original construction (best estimate): 1975  
 b) Total square footage (best estimate): 112,000 Ft.<sup>2</sup>

12. Have any repairs, modifications, or demolition been performed since the earthquake? YES      NO  
 If yes, describe \_\_\_\_\_  YES       NO

13. Building configuration:
- a. Single story
  - b. Combination one and two story
  - c. Full two story
  - d. Three story
  - e. Split level
  - f. Typical
  - g. Other, describe \_\_\_\_\_

16. Sill bolting:
- a. Structure bolted to foundation
  - b. Structure not bolted to foundation
  - c. Don't know

14. Exterior wall finish:
- a. Stucco
  - b. Panel siding
  - c. Metal siding
  - d. Masonry veneer
  - e. Other, describe \_\_\_\_\_

17. Roof configuration:
- a. Gable
  - b. Hip
  - c. Flat or very low slope
  - d. Shed
  - e. Other, describe \_\_\_\_\_

15. Foundation configuration:
- a. Slab-on-grade
  - b. Crawlspace without cripple walls
  - c. Crawlspace with cripple walls
  - d. Exposed piers or posts
  - e. Typical
  - f. Metal
  - g. Other, describe \_\_\_\_\_

18. Roof covering:
- a. Asphaltic membrane
  - b. Wood shingle or shake
  - c. Concrete
  - d. Metal
  - e. Elastomeric
  - f. Other, describe \_\_\_\_\_

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### D. EXTERIOR BUILDING INSPECTION

	YES	NO	N/A
<b>19. General: (if yes, provide description and photos)</b>			
a. Collapse, partial collapse, or building off foundation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Obvious lean in any story?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>20. Exterior walls: (if yes, provide description and photos)</b>			
a. Fresh cracking at corners of door and window openings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Fresh cracking at building corners?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Door or window openings racked out of square?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Broken glass in windows or doors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Wall leaning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Bulging or delamination of stucco?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
g. Pattern of cracking that extends from the ground surface, through foundation, and wall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
h. Evidence of recent relative movement at mudsill line?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
i. . . . At locations where the exterior stucco is continuous from the framing down over the foundation, is there cracking of stucco along the mudsill level accompanied by indications of permanent displacement (sliding) of the building relative to the foundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Collapse, partial collapse, or separation of masonry veneer?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
k. Severe cracking, separations, or offsets at building irregularities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>21. Foundation: (if yes, provide description and photos)</b>			
a. Fresh cracking of exposed perimeter foundation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Relative movement between slab and footing in "two-pour" slab-on-grade foundations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Ask homeowner if any earthquake retrofits have been done to the home?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If Y describe: _____			
d. If the answer to c is Y, were bolts added to connect the home to the foundation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. If the answer to c is Y, were plywood or sheathing added to any cripple walls under the home?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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### D. EXTERIOR BUILDING INSPECTION (continued)

	YES	NO	N/A
<b>22. Kitchen Hook (if yes, provide description and photos)</b>			
a. Present on external wall?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Present at internal location?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Collapse or partial collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Visible damage or cracking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
e. Visible tilting or separation from building?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Shifted or loose and displaced	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Deterioration or deformation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>23. Roof: (if yes, provide description and photos)</b>			
a. Shifted or dislodged or concrete damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Impact damage to roof from falling object?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Displaced rooftop HVAC units?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Significantly sagging roof ridgelines?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Signs of movement between rafter tails and wall finishes at eaves?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Buckled/dislodged flashing or tearing of roof membrane, roof/wall intersections in split level buildings, additions, or other building irregularities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Tearing of roof membrane or deck waterproofing at re-entrant corners?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Toppling, shifting, or damage/leakage at refrigerant and electrical lines of rooftop mechanical equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. Shifting of or damage to solar panels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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### D. EXTERIOR BUILDING INSPECTION (continued)

	YES	NO	N/A
<b>24. Attached or abutting improvements: (if yes, provide description and photos)</b>			
a. Collapse, partial collapse, or separation of attached porches, carports, Gazebos, or awnings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Evidence of recent settlement or displacement of exterior steps, patios, or walkways relative to the building?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c. Signs of movement between building floor and/ or exterior hardscape or retaining wall along the uphill side of non steeply sloping sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Toppling, shifting, or damage/leakage at refrigerant and electrical lines of air conditioning condenser unit(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>25. Independent exterior improvements: (if yes, provide description and photos)</b>			
a. Damaged detached gazebo?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Damage to fences / privacy walls?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Damage to retaining walls?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Damage to walkway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Evidence of leakage from water supply lines?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Toppling, shifting, or damage/leakage at fuel connection of propane tanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Others damage	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### E. INTERIOR INSPECTION

#### 26. General information

a. If interior access not possible, identify reason

- i. Red tag
- ii. Hazardous materials
- iii. Other hazardous condition, describe \_\_\_\_\_
- iv. Other, describe \_\_\_\_\_

b. Typical wall and ceiling finish

- i. Drywall
- ii. Plaster on gypsum lath
- iii. Plaster on wood lath
- iv. Other, describe CMU

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### E. INTERIOR INSPECTION (continued)

	YES	NO	N/A
<b>27. Walls: (if yes, provide description and photos)</b>			
a. Fresh cracking, buckling, spalling, or detachment of interior wall finish at corners of door and window openings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Fresh cracking of wall finishes at wall corners or wall/ceiling intersections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Door or window openings racked out of square?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Wall leaning?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Pattern of cracking that extends from the floor slab through the wall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
f. Movement or sliding of walls relative to the floor?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
g. Severe cracking, separations, or offsets at building irregularities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Doors damaged, difficult to operate, or inoperable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Windows damaged, difficult to operate, or inoperable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>28. Ceilings: (if yes, provide description and photos)</b>			
a. Collapse of ceiling finish?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Fresh cracking of ceiling finishes, especially at re-entrant corners; cracks along corner bead at stairwell openings; cracking or tearing of finishes at ceiling/wall juncture; or multiple "nail pops"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Damage to ceiling finishes in vicinity of corridors or commons places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Separations or cracks in ceiling finishes at split-levels, re-entrant corners, additions, appendages, or other building discontinuities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Water damage or evidence of recent leakage from plumbing lines or roofing?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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### E. INTERIOR INSPECTION (continued)

		YES	NO	N/A
29.	<b>Floors: (if yes, provide description and photos)</b>			
	a. Evidence of recent sloping, sagging, settlement or displacement of floors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b. In slab-on-grade locations, fresh cracking of floor slab or floor finishes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c. Significant sagging or unusual bounciness of floors frames?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	d. Separations or cracks in floor finishes at split-levels, re-entrant corners, additions, appendages, or other building discontinuities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	e. Signs of movement between floor and exterior hardscape or retaining wall along the uphill side of homes on steeply sloping sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	f. A pattern of fresh cracks, gaps, or joint separations in floor finishes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	g. Impact damage to floor finishes from falling contents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30.	<b>Mechanical systems: (if yes, provide description and photos)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	a. Displaced connection of appliance flues connected to chimneys?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b. Toppling, shifting, leakage from tank, leakage from water connections displaced flue connection or damage/leakage at gas line or electrical connection of water heater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c. Shifting, damage/leakage at gas line, flue connection, electrical connection, refrigerant line, and condensate drain connection of furnace or air conditioning fan-coil unit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	d. Damage to gas line of gas stoves or gas fueled clothes dryers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	e. Damage to toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	f. Decreased or restricted water pressure at appliances, faucets, or toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	g. Toppling or shifting of free-standing wood stove and/or flue?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	h. Toppling, shifting, damage/leakage at fuel connection of fuel oil tank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	i. Other Damage in the dining room	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	j. Damage near the gas tank	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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### E. INTERIOR INSPECTION (continued)

	YES	NO	N/A
31. Architectural woodwork and special finishes: (if yes, provide description and photos)			
a. Shifting of or damage to kitchen or bathroom cabinetry?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Impact damage to countertops from falling objects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Cracking of ceramic tile in showers or tub/shower enclosures consistent with earthquake damage to adjacent wall finishes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### F. CONTINGENT INSPECTIONS

	YES	NO	N/A
32. Retaining Tank Wall damage?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33. Water tank or other field subterranean structure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>