ANNEX A

PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 EARLY STAGE GRANT LASTING 24 MONTHS FOR CONDUCTING RESEARCH PURSUANT TO ART. 22 OF LAW NO. 240/2010 AT THE DEPARTMENT OF ENGINEERING AND APPLIED SCIENCES (ARF 08/B3 - AD ICAR/09) - RESEARCH PROJECT "*SISTEMA DI MONITORAGGIO INTELLIGENTE PER LA SICUREZZA DELLE INFRASTRUTTURE URBANE – INSIST*" PRESENTED IN THE PON "*RICERCA E INNOVAZIONE*" 2014–2020 E FSC AVVISO PER LA PRESENTAZIONE DI PROGETTI DI RICERCA INDUSTRIALE E SVILUPPO SPERIMENTALE NELLE 12 AREE DI SPECIALIZZAZIONE INDIVIDUATE DAL PNR 2015-2020 (DD 13/7/2017 n. 1735) – CUP: F14E18000100005 - CODE PROJECT INSISTPRIVA19 - TYPE B

PICA CODE: 19AR002

announced with decree of the Chancellor Rep. no. 749/2019 of 15.11.2019 and posted on the official registry of the University on 21.11.2019

RESEARCH PROJECT
"Evaluation and analysis of structural health monitoring systems in reinforced concrete multi-storey buildings"

Research structure: Department of Engineering and applied sciences
Duration of the grant: 24 months
Scientific Area: 08 - Civil engineering and architecture
Academic recruitment field: 08/B3 – Structural engineering
Academic discipline: ICAR/09 – Structural engineering
Scientific Director: Prof. Paolo Riva

The project specifically involves the analysis of reinforced concrete multi-storey buildings with a frame structure, typical of the second post-war period and vulnerable to seismic actions. These buildings are generally characterized by the presence of infills interacting with the structure. The activities initially include the evaluation of the possible monitoring systems for the evaluation of the damage of these buildings due to the earthquake and the instrumentation typically used for the dynamic identification of buildings. Following this comparison, the physical quantities that can be extracted from the sensor registrations developed within the project will be investigated in order to assess the continuous degradation of the structures and the damage following exceptional events such as the earthquake. At this regard, possible algorithms for estimating damage indices and damage thresholds for the investigated structural type will also be tested and specifically developed. This phase will also include numerical simulations of finite elements in a non-linear context including infill-structure interaction.