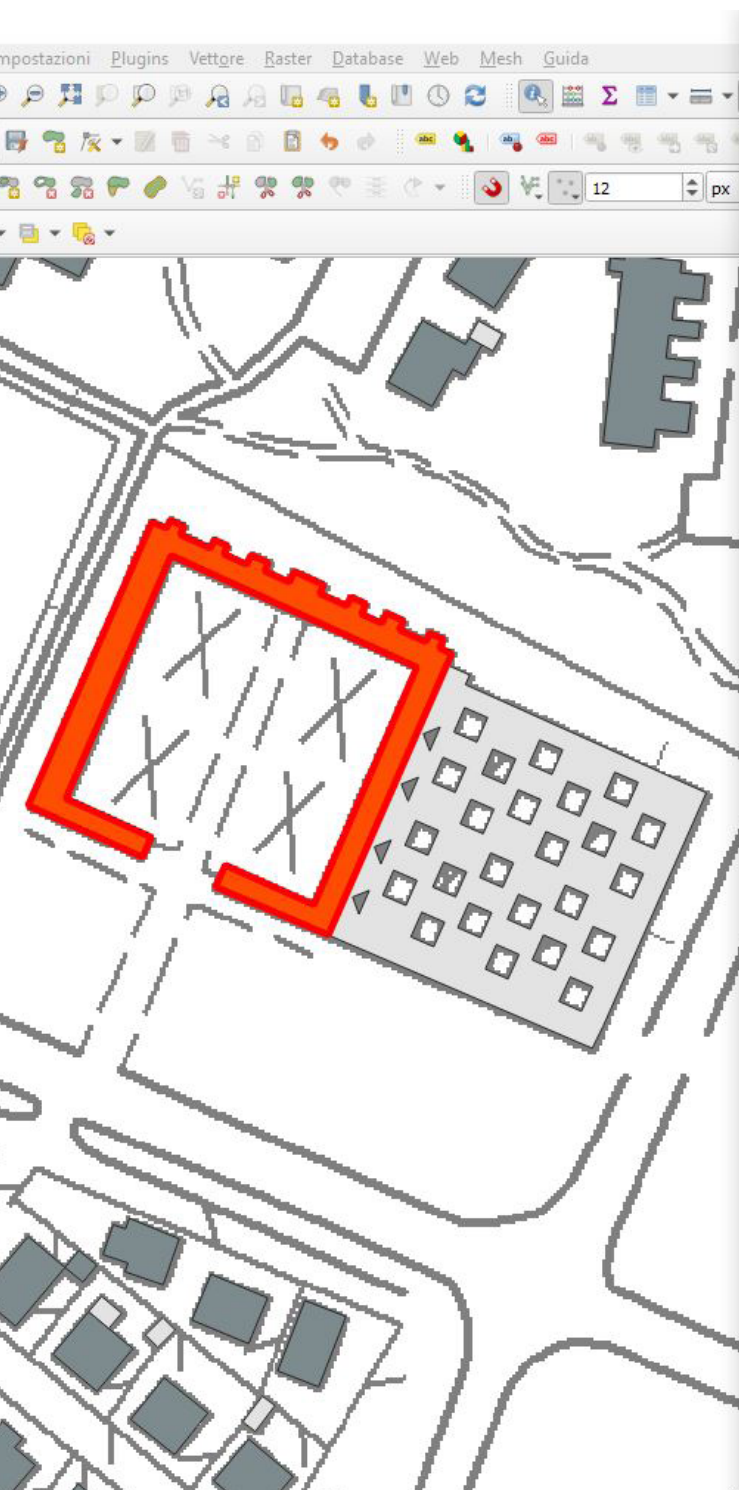


CHAPTER 6

Setting up of a new form for historical cemeteries



RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3

SCHEDA PER IL RILIEVO DEL DANNO

C1

Data 2021-02-10

N° progressivo

C2a - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO

Bene complesso

Denominazione bene complesso NULL

N° Schede beni componenti NULL

C2b - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO

Tipologia con cappella senza cappella con cappella

Pianta regolare a pianta libera

C3 -LOCALIZZAZIONE GEOGRAFICO AMMINISTRATIVA

Regione EMILIA-ROMAGNA

Provincia MODENA

Codice provincia 36

Comune CONCORDIA SULLA SECCHIA

Codice comune 10

Località CONCORDIA SULLA SECCHIA

C4 -OGGETTO

Denominazione Bene Cimitero Monumentale di Concordia sulla Secchia

Denominazione storica NULL

Datazione anno NULL secolo 19 epoca NULL

Proprietà COMUNE DI CONCORDIA

C5 -COMPILATORE SCHEDA

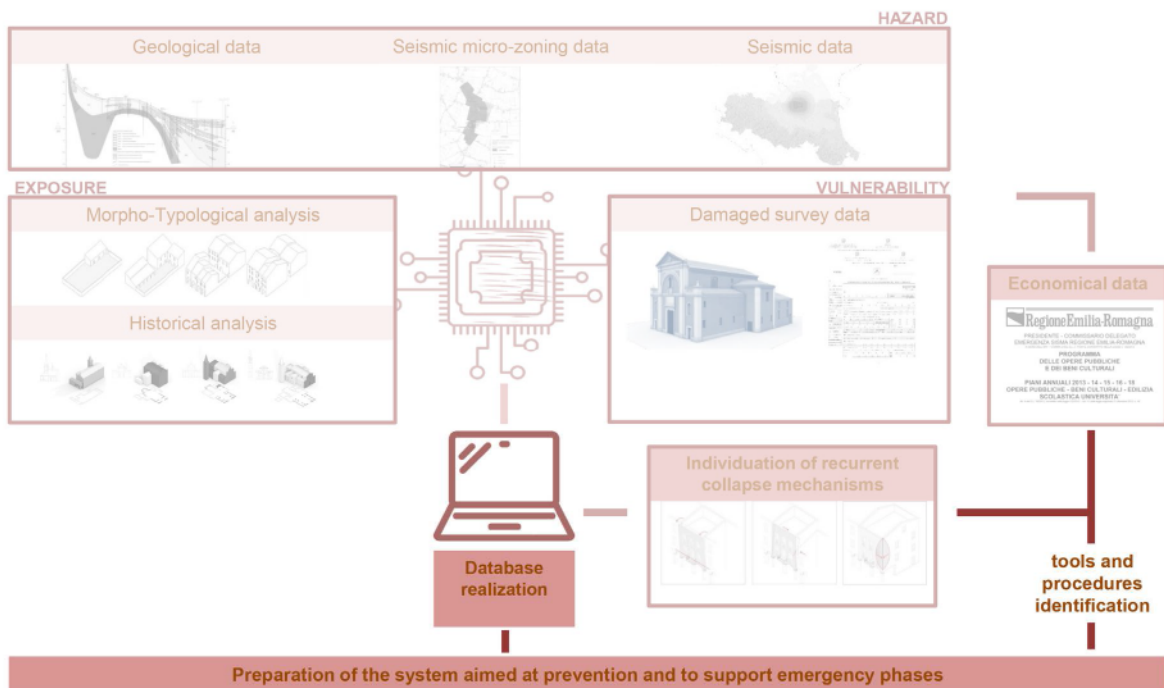
Cognome Vona

On the previous page the cemetery GIS project

6.1 Introduction

In the previous chapters, data of different categories were analysed with the final aim of identifying historical, typological, damage and vulnerability data that would allow a rich understanding of the cemeteries in their different features, starting from the Emilia investigation set. The analysis, as already expressed in section 2.3, aims to improve the damage survey procedures, both in the emergency phase and in terms of risk mitigation.

The data obtained are therefore included in a new first-level scheduling tool for the damage survey specifically designed for cemeteries. This tool is set up as a first-level analysis both for the damage assessment and the vulnerability assessment. Indeed, as presented in section 1.5, although damage assessment forms collect simpler and approximate data, they are also tools to assess vulnerability on a territorial or urban scale, according to the nature of the data. This feature is crucial for seismic risk mitigation, since it provides key indications to address possible seismic improvement policies.



According to the analysis of the existing tools, either applied to the types for which they have been designed (Section 1.3 and 1.4), or applied to different types (Section 2.2), the new tool has been developed to consider the following evaluation parameters for the damage assessment forms:

- Correspondence to type
- Concision
- Effectiveness
- Operability in both ordinary and emergency phases
- Speed of data acquisition

These are the parameters from which the simplest and most effective damage survey tools (AeDES and A-DC forms) are developed. Their use has enabled the investigation of many

issues related to damage and vulnerability. In addition, further parameters were considered that emerged more clearly following the 2012 earthquake:

- Formal correctness
- Division between damage parameters to be filled in on-situ and in the office

6.2 Technical choices and for criticality overcoming

- **Media Format choice**

GIS for historical architecture

We have already mentioned how the efforts of the Emilia-Romagna region following the 2012 earthquake have also pursued the reorganisation of cartography in digital GIS format (Section 4.2). Thus, all the main data concerning the restoration and damage recovery processes are collected and included in a Geographical Information System (GIS) that ensures the transparency of the region's work. Unfortunately, to date, if we exclude the seismic micro-zonation studies (not, however, usable by users in vector format) and the CLE, this effort has been directed mainly to the storage and maintenance of economic data on reconstruction.

However, in the field of restoration, GIS tools have become more relevant. GIS was first applied as a tool for data storage and conservation only, and then as a tool increasingly integrated within design or analysis operations. The common need for both approaches is undoubtedly to connect the information contained in a database to graphic information. Therefore, they are databases that collect information to store it and transmit it for further restoration. Initially focused on the territorial nature of the assets, they subsequently extend their field of interest to the architectural scale. They thus become part of the extensive knowledge base necessary for any restoration work to be well executed, a kind of 'Fascicolo del Fabbrica' in digital format for the restoration.

Subsequently, the first experiments with GIS on the architectural scale were carried out. They ranged from the experimentation on the Basilica of Collemaggio (Bartolomucci, 2004) in L'Aquila, to those related to specific GIS software test for the management of the restoration process such as ARKIS-NET (Salonia & Negri, 2005). These experiments aim to apply this knowledge for the planned preventative maintenance. These initial experiments will be structured for what is now well known as the ministerial system SICaR (Baracchini, 2005), the computer system for the documentation and management of restoration sites. Although the architectural scale is now the subject of new experiments with the introduction of 3D GIS and BIM, the territorial scale is undoubtedly the scale where the GIS system's application to cultural heritage has expressed its greatest potential.

Within this framework, it is necessary to mention the project "*Carta del Rischio del Patrimonio*". Launched at the beginning of the 1990s, the project envisaged the creation of an information system able to identify the heritage assets most at risk. The main issue for this project consisted of the idea of linking the single heritage to its territory, considering that the loss of heritage is attributable both to its state of preservation and the territory's risk (seismic, hydrogeological...).

From this, many territorial experiments, at different scales, have been carried out in the widest

fields of interest in cultural heritage (Accardo et al., 2005). For example, GIS systems arose that could analyse the thermal dispersion capacity of the historical building in its current state (Fig. 1) and in a project phase. The system's aim was to guide the renovation or restoration interventions towards a more conscious definition respecting conservation while improving energy performance requirements (Fabbri et al., 2012; Zuppiroli & Ambrogio, 2013).

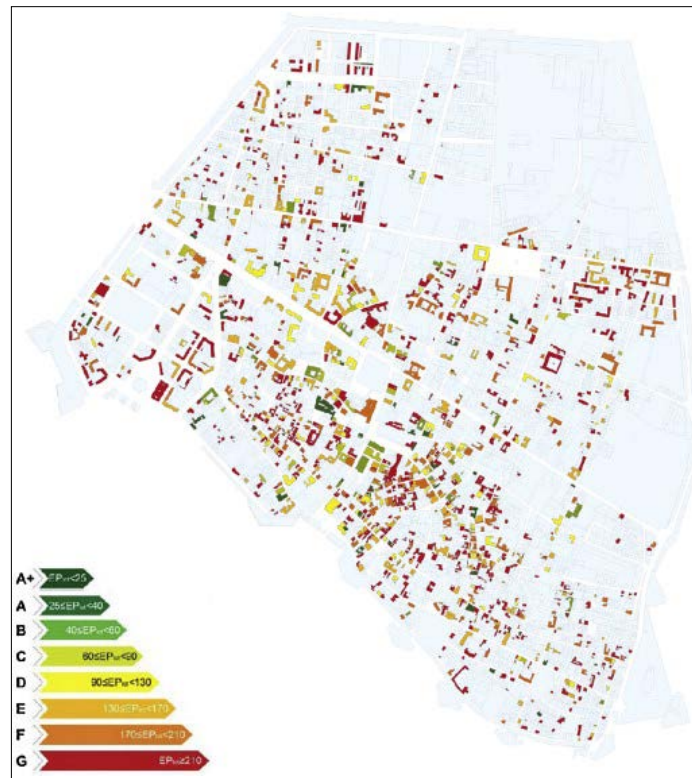


Fig.1. Ferrara: Old Town Energy Class map project with GIS – Database 2011 (Fabbri, et al., 2012).

Finally, GIS systems have been widely used for vulnerability analysis (Ferreira et al., 2013; Formisano et al., 2015; Fratino, 2015). This system enables buildings to be related to their vulnerability indices (however they are studied) on thematic maps (Fig. 2). The aim is to address intervention priorities according to the results.



Fig.2. Seixal: mapping results for collapse probability and number of inhabitants for a Macro-intensity=X (Ferreira et al., 2013).

GIS and on-site surveying

Technological developments now make many media available in any situation. Laser systems, once expensive and difficult to handle, are now widespread system and portable products. Moreover, merged data can now be visualized not only at a desk, but directly in situ. Similarly, even cameras with good resolution have become inexpensive and easy to find product. Digitalisation has allowed the indiscriminate acquisition of images. Finally, the same mobile phones once used only for phone calls are now multitasking tools, also equipped with increasingly powerful sensors that are almost more efficient than the cameras themselves.

GIS software has undergone a similar process of innovation. This process has followed two precise lines. The first introduced the 3D representation of objects. Since the advent of BIM project management software, and its developers' progressive attempt to structure it for the management of restoration projects (HBIM), GIS software has begun a concurrent process of innovation aiming to exceed 2D or 2.5D visualisation¹. Three-dimensional geometric primitives have therefore been inserted into the workspace, and this is now a subject of in several research institutes in deepening the restoration project theme (Bartolomucci et al., 2012; Parrinello et al., 2020; Zuppiroli et al., 2022).

The second line, on the other hand, focused on the improvement of software for on-site surveys linked to on-desk systems of management. They were introduced with the aim to update the database information quickly and easily, and in the fields of architecture, engineering and infrastructure, the need to carry out on-site surveys in tabular as well as geometric form. These software comprises so-called apps for mobile phones and tablets. These were already available in 2012, at the time of the Emilia earthquake, but were yet in their early stages. Their use in those years required high-performance tablets sometimes unavailable to institutions or companies. Today, after receiving the initial setting files, the surveyors are able to display simplified maps on mobile devices to fill in the tabular data directly on-site. Three main field devices in the GIS field are widely used. These devices have different characteristics in terms of the costs, the services offered and the software systems on which they can be installed. The following description summarises their main features:

- 1) Esri applications. A leader in the field of geographic information systems, Esri has created not a single tool but different applications that can be used in different contexts. Among them Survey123 is the application dedicated to surveying using a form decided and composed by the user. Featuring many customisations and based on form filling it allows for the capture of position and photos (Fig. 3). Undoubtedly Esri's applications are the most complete on market. Not only are they structured as a set of different apps for different streams, but they can be used by all operating systems, Windows for web pages, Android or IOS, for mobile applications. In particular, Survey123 is a module that is user-configurable and can also be used both offline and online, allowing for real-time data updating. This feature is highly beneficial, as it allows the user to check the data after it has been uploaded and not at

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¹ A 2.5D representation is defined as the ability of software, usually acquired through plug-ins, to create simple 3D representations based on a reference field for heights within the shapefile attribute table. It is therefore not a real 3D visualisation of objects, but a simplified representation (it is not possible to create inclined elements such as roof pitches or window openings).

the end of the teams' on-site working day. For its completeness and the opportunity to model it on your own needs, it is a closed-source service, like any Esri software.

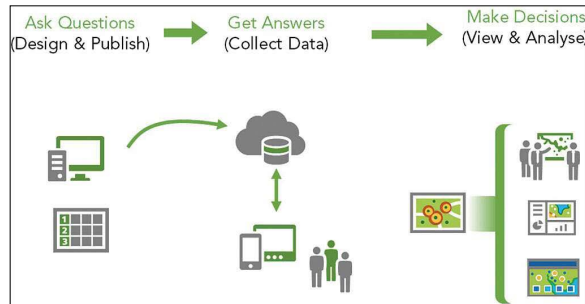


Fig.3. Survey123 workflow. Source: <https://gis.oneteam.it/index.php/2021/03/29/survey123-applicazione-per-il-rilievo>

- 2) Input App (Fig. 4). This app was created for integration with Qgis, the most widely available open-source GIS software. The application allows for the creation of survey forms associated once to a punctual feature, today extended to all the different shapes present in Qgis. Like the Esri apps, it allows for data to be uploaded to the server so that the survey campaign's progress can be monitored in real time. It is available for Windows, Android and IOS and is an open-source app in its basic form, but it requires a financial investment to access customised functions and server space. The app's main limitations are obviously economic, as with Esri apps.

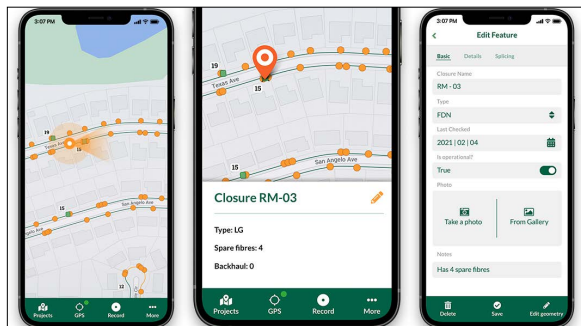


Fig.4. Commercial image of Input App. Source: <https://www.qgis.org/it/site/about/features.html>

- 3) Qfield App (Fig. 5). Like Input, Qfield is also based on Qgis. It also works online and offline, but, unlike the other applications, it is not based on the transmission of data to servers. This last feature is now under development and it is in its beta-test phase. Synchronisation therefore occurs through data being downloaded from the devices. Hence, it is impossible to manage data in real time. Unfortunately, the tool is currently unavailable for IOS media but several problems will be probably fixed.

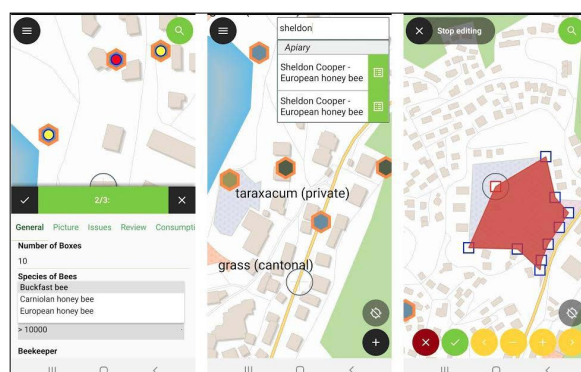


Fig.5. Commercial image of Qfield App. Source: <https://www.qgis.org/it/site/about/features.html>

Generally speaking, on-site architectural surveying using GIS apps is now becoming more widely and freely available. In addition to tabular data, all of the above also enable one to associate what is described with an image obtained through the camera of mobile devices. This feature is not secondary, as it allows for correspondence between the form filling and what is actually seen on site by the survey teams. A critical point emerging during the data analysis of the forms is exactly the inability to trace what is described in the damage forms to what is actually photographed. Matching these data is therefore highly relevant to the understanding of the survey.

Finally, considering the effort made by developers who have already improved or simplified specific features in recent years, we can consider the introduction of digitisation of surveys, also via app, as a type of support that will find increasing application.

Conclusions

The application of GIS to cultural heritage can now be considered a solid system at different scales, both architectural and territorial. Of particular interest are the applications calibrated for the study of building vulnerability. This well-established system is now flanked by the development of mobile digital media both in terms of hardware and software. When compared to the criticalities of the paper survey (including the confusion between digitalisation and digital archiving²), the promise of the tools has led to the decision to create a GIS digital form for the damage survey to cemeteries. On the one hand, this form will make it possible to create and update a database connected to already-existing regional or national maps almost simultaneously, and, on the other hand, it will also eliminate the problems connected with incorrect transmission and loss of data³ or problems of unreadability⁴.

- **Critical-operational choice**

The compilation of the 2012 earthquake damage assessment forms has revealed a series of critical issues only partially been solved by the regional administration. We refer in particular both to the removal of economic quantification from the on-site activities and to the removal of the damage index from the forms. Additionally, a further critical point was the lack of a proper instruction manual for the B-DP form. Operational choices were therefore made in relation to these three different aspects and were implemented in the new tool.

Economic damage assessment

Quantifying economic damage is among the final parameters required of surveyors during inspections. This quantification is linked to the need to understand economically the amount of damage to public property. Indeed, this is not a type of information required in the AeDES form since the restoration of private property is marginally subsidized, while public reconstruction is entirely the responsibility of state agencies. After the 2012 earthquake, the choice of the Emilia-Romagna UCCR was to establish a Validation Group that would remove

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2 In the first case the data is in an open and digitally editable format, in the second case it is a raster data capture that cannot therefore be used immediately for analysis.

3 In the case of only 100 cemeteries, for about a tenth of the sample, mistakes were found in data matching, incorrect scanning of paper formats and the loss of data. These mistakes are hardly removable, but actually increase exponentially as the amount of data collected grows because they are due to human error.

4 Erasing pencil writings, unclear handwriting - there are a lot of problems with paper reliefs.

the task of on-site economic assessment and redirect it to a working group able to provide a uniform economic estimate. The main risk of on-site economic quantification is that excessive resources are directed towards particular buildings. Damage assessment is by definition a subjective action, since it is based on human choices. This character can therefore create economic differences depending on the sensitivity and experience of the operators.

Given the innovation in terms of process and the simplification of the survey operations resulting from the elimination of these requests from the forms, it was decided to maintain this assessment as an element to be carried out on-desk and not on-site. This definition is also recommended to be carried out by a coordinated working group to consistently and objectively assess the damage value of cemeteries, as has been attempted in case of Emilia-Romagna.

Identification of the damage index

A crucial point, closely linked to economic assessment, is the identification of the damage index, which provides the economic range to be used for consolidation and restoration work. As already indicated in Section 4.3, precisely this index has been the subject of analysis in order to understand certain critical issues that emerged from the survey of cemeteries damaged by the 2012 Emilia earthquake. Although the formula for the identification of the index is simple ($Id= d/5N$), during the survey, several forms were filled out with mistakes in the calculation of the index. These mistakes were sometimes probably related to the difficulty of filling out a form not designed for cemeteries, and other times to the emergency situation. Although the mistakes related to the incapability of the B-DP form to capture the damage are acceptable, since they are the result of an instrument unsuitability, several errors occurred in the simple counting of d or N, increasing the quantity of badly calculated indices (Chart.1). These errors cannot be ignored.

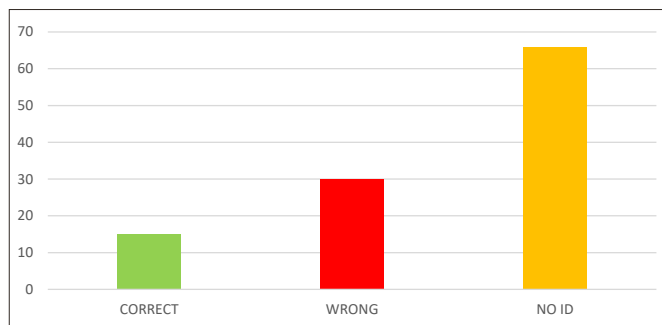


Chart 1. Correctness of damage index for the investigated set.

Evidently, during the emergency phase, external factors (e.g., risk of collapsing structures and need to visit numerous buildings in a day) resulted in operators paying less attention to that part which is actually a central point of the form. Mistakenly believing that it was essential only to identify the damage that occurred and not to qualify it in relation to all possible vulnerabilities, several simple miscalculations were committed. For such a simple formula, they cannot be considered either admissible or acceptable. These simple sums or multiplications can be calculated automatically by instruments, so it was deemed appropriate to remove this data from the on-site survey section and leave it to the software-calculation phase. The aim was to eliminate human error and was aligned with the above-mentioned decision to leave economic quantification to the office support team. Indeed, the office will verify the final damage index calculated by the software. This will then enable them to establish the economic range on which to carry out the financial quantification of the repair work.

Presence of a manual for filling in

A-DC form has been published together with its own filling-in manual. Even though it requires a training course run by the DPC, the AeDES form also has its own manual, now in its second edition. These forms are the oldest and undoubtedly the most complete. Their age has made them more widely known to generations that hardly need the manual at all. The situation differs for the B-DP form. In this case, the absence of a proper manual and the greater difficulty of the form have always produced poor results. Time spent reading and understanding how to complete the form is a further burden and factor delaying the survey work, given that during the emergency phase officials are challenged from the outset to reorganise their operational structures to effectively perform survey damages.

The objective of the damage survey forms, been pursued in the continuous refinements of the AeDES and A-DC forms, is to be 'talking'; in other words, they must guide the operator to choose the most correct answers regardless of whether or not he has actually read the manual. This characteristic was considered essential in setting up the cemetery buildings form, renamed C. Contrary to similar experiments carried out in other places or areas, it was therefore decided to eliminate the need for a manual and to concentrate on the form's comprehensibility. Each visual, graphic or descriptive device was used to simplify and to clarify the form even when used for the first time.

Conclusions

In conclusion, the inextricably linked data of the damage index and economic assessment are removed from the form to be filled in on-site and referred to a later phase. On site, the surveyors will therefore be charged only with describing the damage as they actually see it, without expressing any final assessment of it. The practicability evaluation is up to them, and it cannot and must not be left to another moment. The practicability or the necessary emergency measures must be identified at the time of the first inspection.

Finally, a compilation manual will not be produced, preferring the clearest possible formulation within the form.

6.3 Form structure of the first draft experimented

• Introduction

The new form divides into several sections and subsections. These sections contain the data from the analyses previously carried out Chapters 3, 4 and 5. The sections are designed to gradually lead from an identification of the general cemetery parameters to a progressive approach to the survey subject, the area of the historical cemetery.

The main sections are as follows:

- General information
- Identification of vulnerability parameters
- Damage identification
- Practicability evaluation and safety measures

- **Data preserved by existing tools**

Although the structure of the new form developed for cemeteries has been partially rearranged, some of the data from previous forms have been retained and, in some cases, slightly modified to better correspond to the cemetery type. Preserving as much data as possible from previous forms is of fundamental importance. Indeed, the presence on several forms of the same type of requested data enables it to be completed independently of the manual's presence, as they are part of the knowledge now acquired. Finally, the presence of familiar requests accelerates surveying times, as the codification is already known.

The first two pages and the last one (Sections 1 and 4), therefore contain data borrowed from existing forms. These data include general information defining the survey subject, the work team, and the practicability and emergency sections. The changes made to the fields borrowed from the other forms concern the following:

- Vertical reference (C2). The *type* parameters are modified with others more suitable for the cemetery structure. An evaluation must cover the presence of funeral chapel, columbaria and family tombs and whether the cemetery is a particular cemetery, e.g., English cemeteries or Jewish cemeteries, (parameters taken from Chapter 3).
- Geographical-administrative localisation (C3). The subsection is implemented with the inclusion of numerical codes for the univocal identification of the cemetery within the regional cartography. According to the damage survey forms for cultural heritage rules, this section is marked in grey to highlight that it should be filled in subsequently or, better, in advance. The code to be applied is taken from the coding rules of the DPC for CLE analyses according to what is already described in section 4.2. In addition, the ISTAT code indications are also moved to the fields to be completed advance. These simple data are available online to be applied systematically to each element, and they have only the purpose of geographical location. Their completion on-site neither benefits nor simplifies the survey.
- Infrastructure (C9). The exclusive-choice coding of access types is changed to multiple-choice coding. The exclusivity of pedestrian or vehicular accesses loses its meaning in the presence of such a complex and structured property, which can therefore have more than one type of access.
- Destination of use (C11). The main uses of cemetery buildings are listed. As in the case of churches, the reference to the spatial use is removed, but the possibility of indicating the crowding of the site remains.
- Typology of artistic heritage (C12). Compared to similar section in A-DC and B-DP forms, here the section is simplified due to less presence of artistic heritage. However, the ability to reinsert sections is allowed.
- Regularity and plan form (C15). The fields loggias and atriums are replaced by the more general terms related to the cemetery type, porches and passages.
- General dimensional data of the cemetery (C16). This section no longer requires specific measurements, but the identification of the number of historic and recent areas and certain basic dimensional data for the whole structures.

In addition, the subsection Macro-elements present in historical areas (C17) has been added. This section has a twofold purpose. Firstly, it introduces the subsequent sections focused on the historic area. It is indeed a damage survey form for cultural heritage and is therefore precisely designed to survey only those portions of the cemetery that qualify as protected. Secondly, it is a control section to check that the form has been completed correctly. By pre-marking which macro-elements are present, it is subsequently possible to identify which damage sections must be completed. The presence of a marked element but without any survey carried out is an indication that the form is incomplete and should be revised.

Finally, subsections of the cemeteries form C1, C4, C5, C6, C7, C8, C10, C13 and C14 are fully transferred from the existing forms. Similarly, no changes have been made to the subsections on the practicability evaluation.

- **• Tabs for first-level vulnerability assessment**

In Chapter 5, several general parameters for assessing cemetery vulnerability were analysed. Of these, six were identified as useful parameters to assess vulnerability on a territorial scale. The experiments presented in chapter 1 demonstrate how the opportunity to acquire vulnerability data also in the damage form allows for analyses that can be useful in the emergency phase. Moreover, if these data were collected in advance, on the one hand, they could simplify the above operations and, on the other hand, they could guide the administrations' or regional authorities' choices. In particular, the experimentation on the AeDES form carried out for the urban centre of Ferrara shows precisely how useful it would be to include these data specifically in the initial sections, allowing only partial compilation of the forms. The six parameters identified with their respective vulnerability classes have been included in the second section, in line with what has already been done for the AeDES form and in line with the objective of the research to not only improve damage survey procedures but also identify proactive tools.

In addition, due to the homogeneity of the investigation sample for those indicators whose vulnerability could not be assessed, some of the eliminated parameters were reintroduced to the form to arrange the data collection for subsequent experimentation. The instrument was, thus, already established for future studies and extensions. The reinserted data, in particular, comprise the geomorphologic characteristics of the site, the state of maintenance and the type of roofing; finally, it is requested to identify the geometric parameters for the slenderness characterisation of the portico's pillars and rear wall. Two of these data points overlapped with the data already present in the existing forms, so they were left within the first section as subsections C7 and C13, since they were not yet qualified within the vulnerability. This second section of the form also includes the metric indications to be recorded for the historical areas. In this case, differently from what was set out in A-DC and B-DP forms, measurements were not specified through simple written field (Fig. 6).

DATI DIMENSIONALI	Stimati <input type="radio"/>	rilevati <input type="radio"/>		
Larghezza media m. ┆┆┆┆	Lunghezza media m. ┆┆┆┆	Superficie media in pianta m ² . ┆┆┆┆┆┆	Altezza media in gronda m. ┆┆┆┆	Piani fuori terra ┆┆
				Piani interrati ┆┆

Fig.6. Extract from B-DP form: measurement fields.

Analysis of the damage forms produced for the cemetery in 2012 has disclosed a surveyors' tendency to write the measurements within a scheme created specifically for the cemetery (Fig. 7), rather than filling in the areas set out in the forms. In this case, more than the usual data was often listed.

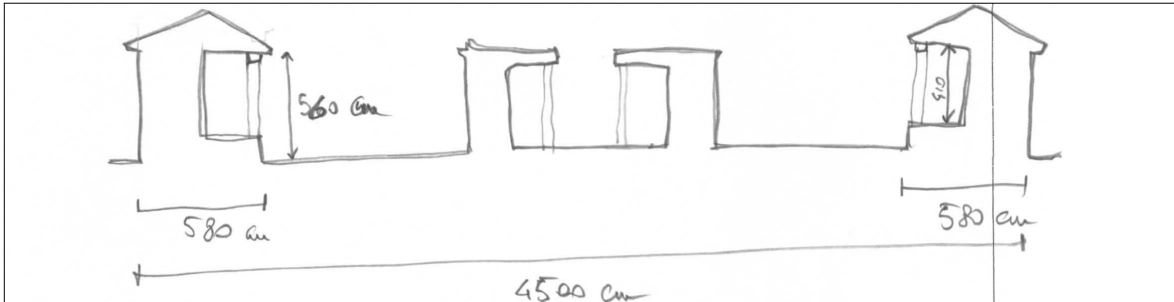


Fig.7. Extract from the file on the cemetery of Quarantoli: sketch with indications of the historic columbaria measurements.

Although in 2012 they were an unnecessary additional item, these measures also correspond to some of the details essential for the identification of certain geometric vulnerabilities, such as in the parameters in the in-plane index. For this reason, as the graphic support is more user-friendly than a written indication, the dimensional data information has been converted into a standard scheme within which the measurements can be entered (Fig. 8). This operational choice suits the line of action that envisages graphic support within the form for the simplification and clarification of requests, due to the absence of a manual.

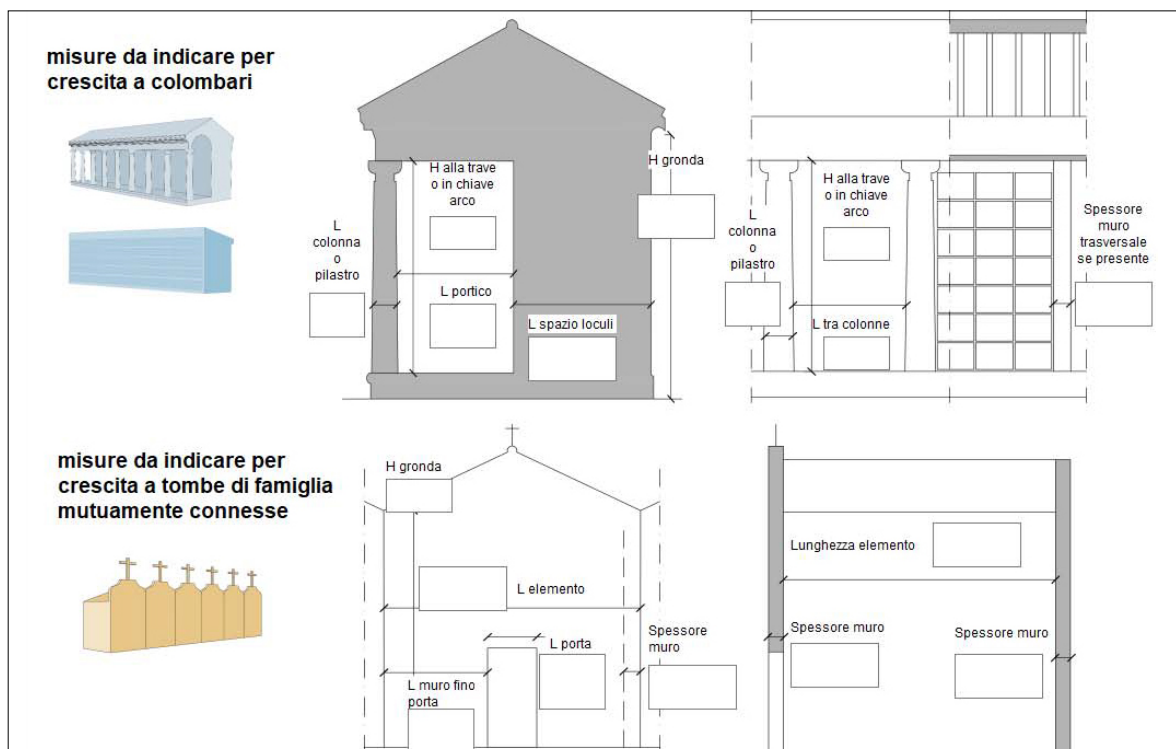


Fig.8. New experimental form: sample image for measurement acquisition.

As a final consideration, since cemeteries are complex structures with multiple elements, a subsequent distinction can be identified through the vulnerability of the funeral chapel when the burial area has the vulnerability index. Thereby, additional data have been reintroduced

into this section to assess the macro-scale vulnerability of the element. These parameters derive from research already exhaustively completed in the field of church vulnerability not only on an Italian scale, but also on a European scale, such as that of the Risk EU project (Lagomarsino & Podestà 2004a; 2004b; 2004c; Lagomarsino & Podestà 2005). In this case, requirements concerning the so-called behaviour modifiers to be applied to the typological vulnerability were included:

$$(1) \quad \cdot \quad V = V_0 + \sum V_K.$$

The already-identified and validated parameters of the modifiers were then removed and included within the form (Fig. 9) so that the vulnerability of the funeral chapel could be assessed separately.

DESCRIZIONE SINTETICA DELLA CAPPELLA FUNEBRE

Dati della cappella funebre			Copertura		
Tipo di cappella	pianta centrale <input type="radio"/>	aula unica <input type="radio"/>	3 o più navate <input type="radio"/>	Non spingente <input type="radio"/>	In Legno <input type="radio"/>
Posizione	Isolato <input type="radio"/>	Connesso con colombari <input type="radio"/>	su lati <input type="text"/>	Poco Spingente <input type="radio"/>	In Laterocemento <input type="radio"/>
Larghezza media	<input type="text"/>	Lunghezza media	<input type="text"/>	Spingente <input type="radio"/>	Mista legno ed elementi di sostituzione inCA <input type="radio"/>
	<input type="text"/>		<input type="text"/>	Non rilevabile <input type="radio"/>	

Fig.9. Behaviour modifier for churches coming from Risk-EU project.

• **Tabs for first-level damage survey**

The third and main section is the damage survey section. Here, the data collected in Chapter 4 were gathered. Damage identified as recurring was then classified in the respective subsections corresponding to the macro-elements. For this reason, five subsections were identified, one for each macro-element: enclosure, columbarium, passageway elements, family tombs and funerary chapel.

In this case, the presence of a complex and articulated building such as the cemetery does not allow damage and relative vulnerability classification, as it was introduced in the A-DC form and which is independent of the frequency of macro-element occurrence. While in churches macro-elements occur only marginally more than once, the situation in cemeteries is more similar to that of the B-DP form, where elements may occur several times. The structure of the B-DP form in this particular section, however, was difficult to plan, and the structure itself can be considered the cause of certain mistakes in the calculation of the damage index. Indeed, to speed up the completion of a very long and complex form, a same damage that occurred for several segments was grouped into a single string, but then it was also wrongly counted as a singular damage. The setup of the A-DC form where the macro-elements are listed with their damage level from 0–5 (Fig. 10), hardly provided any counting mistakes instead.

1	RIBALTAMENTO DELLA FACCIATA	<input type="checkbox"/>
danno	DISTACCO DELLA FACCIATA DALLE PARETI O EVIDENTI FUORI PIOMBO	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Fig.10. Damage survey graphic representation for A-DC form.

Consequently, this graphic choice is preferred to the B-DP layout, but in the cemetery’s case, this design is repeated to count each segment of the macro-elements. For every damage mechanism, a table was defined indicating the vulnerable segments (e.g. of the columbarium or of the perimeter wall) and their damage level according to the Seismic European scale (Fig. 11).

Num. Lato	Danno	Num. Lato	Danno	Num. Lato	Danno	Num. Lato	Danno
<input type="checkbox"/> lato 1	<input type="text"/>	<input type="checkbox"/> lato 5	<input type="text"/>	<input type="checkbox"/> lato 9	<input type="text"/>	<input type="checkbox"/> lato 13	<input type="text"/>
<input type="checkbox"/> lato 2	<input type="text"/>	<input type="checkbox"/> lato 6	<input type="text"/>	<input type="checkbox"/> lato 10	<input type="text"/>	<input type="checkbox"/> lato 14	<input type="text"/>
<input type="checkbox"/> lato 3	<input type="text"/>	<input type="checkbox"/> lato 7	<input type="text"/>	<input type="checkbox"/> lato 11	<input type="text"/>	<input type="checkbox"/> lato 15	<input type="text"/>
<input type="checkbox"/> lato 4	<input type="text"/>	<input type="checkbox"/> lato 8	<input type="text"/>	<input type="checkbox"/> lato 12	<input type="text"/>	<input type="checkbox"/> lato 16	<input type="text"/>

Fig.11. Damage survey graphic representation for experimental form.

In line with the choice of not proposing a manual, each type of damage was provided with a basic diagram, similar to the abacus prepared for A-DC and B-DP forms. Moreover, photographs were added illustrating typical cases (Fig. 12). This choice provides immediate support for damage assessment in cemeteries, specifically tailored to cemetery type.

MC1_RIBALTAMENTO DEL PORTICO



Fig.12. Examples of damage representation in damage survey section of experimental form.

For each instance of damage, spaces were set aside for the attachment of the most representative damage photographs to provide an immediate link between the tabular and photographic survey. Especially during the on-site survey, the opportunity to link the most relevant photos to the detected damage represents a useful parameter for the verification and validation of damage reports. To date, unlike the AeDES form, which is checked by the municipal offices, the damage forms are not submitted to a validation service, entrusting the entire process only to the surveyor's skill and experience. The Emilia-Romagna UCRR decision to entrust all the forms to a single economic assessment group should therefore be understood as a first attempt to verify the on-site work. Especially where the existing tools revealed their ineffectiveness, it was the photographic data that provided useful parameters for evaluation. However, as the photographic survey is also strongly subjective, the underlying meaning of the photos is often not understandable. This thing undoubtedly provided an additional complication to the process of economic evaluation. The request to attach the main images depicting the damage surveyed will therefore enable future awareness and knowledge of what the surveyor understood during the inspection, facilitating the verification operations necessary for the financial assessment.

Finally, in this section as well, action has been taken for possible future amendments and extensions. Openly compiled damage indications were introduced to identify damage that could not be detected with the indications provided. This was done for the main macro-elements where the morpho-typological and damage features in the investigated set of cemeteries did not allow an exhaustive analysis: columbaria and family tombs (Fig. 13).

ALTRO		ALTRO		ALTRO		ALTRO		ALTRO		ALTRO	
Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

Fig.13. Field created in order to acquire data non currently individuated.

- **Form Digitalization**

At the end of the content definition operations, the associated GIS support was created (Fig. 14).

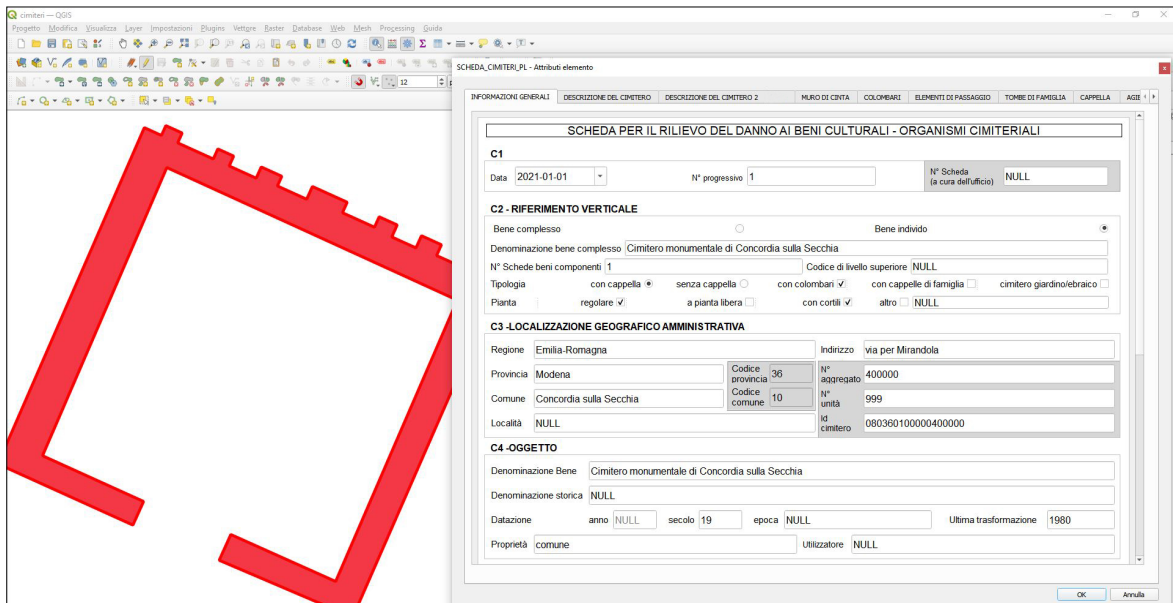


Fig. 14. Extract of the database created for the cemetery damaged by earthquake.

The database was also provided with the necessary relations between the vulnerability parameters and the respective classes (in the case of parameters that have not yet been validated, Fig. 15) or scores, to simplify the calculation of the respective vulnerability index. For the damage index, the calculation was also automatised. This automatic process tries to eliminate some of those human errors which cannot otherwise be eliminated.

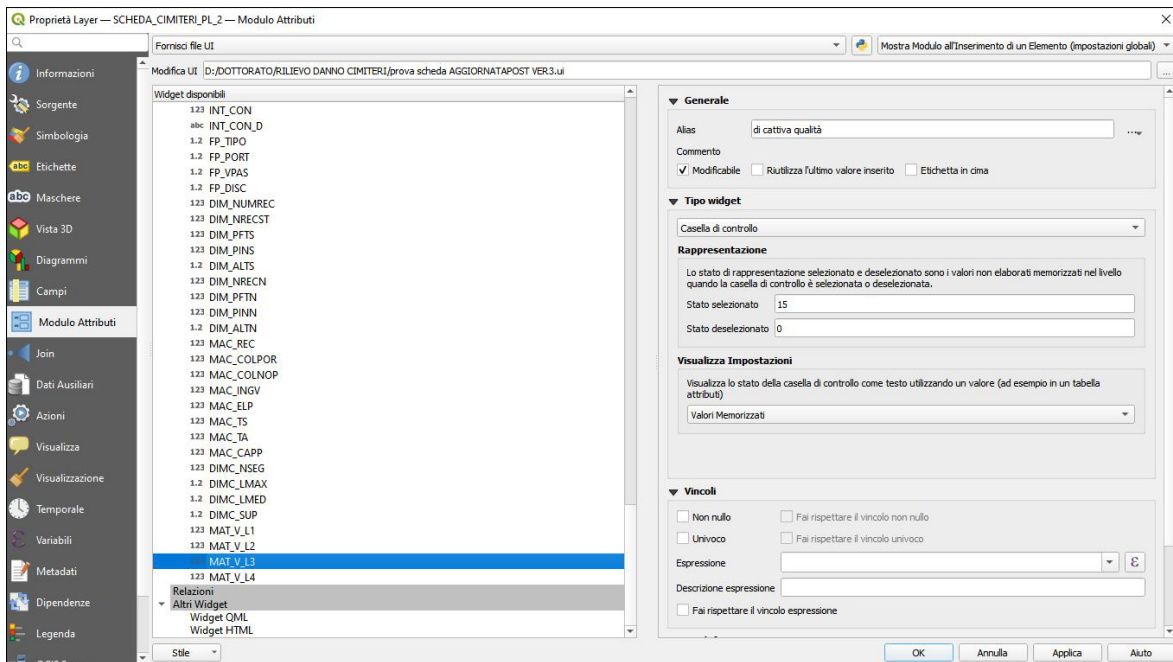


Fig. 15. Relation between vulnerability class and GIS widgets in the experimental forms.

At the end of the database structuring process, a project was created containing basic cartography and the new database to be loaded into the app for the on-site survey. Starting

from the next relevant seismic event, it will therefore be possible to carry out the survey campaign also by software applications that enable data acquisition and relation with the main photographic images simultaneously.

The project was also partially populated with data on the cemeteries damaged by the 2012 Emilia earthquake. Indeed, although it is impossible for all components of the set of cemeteries investigated to fill in the new form developed for the damage, it was still possible to populate the data up to the vulnerability survey. Unfortunately, in the case of damage, the gaps and unclear indications within the existing forms, and the relative photographic data⁵, did not allow for a univocal filling of the new form in this section. It was not possible to have an accurate match between the damage and the different macro-elements' sections. Nevertheless, it was possible to populate the vulnerability section due to the parameters previously collected for the study and through on-site surveys.

The data population from only the first two sections of the form, as stated, has a significant impact in relation to prevention policies for these buildings. Indeed, the vulnerability assessment protocol associated with these sections enables scenario analyses that can identify the average damage expected in relation to a given seismic event.

For example, it is possible to obtain the expected mean damage by applying the maximum historical macroseismic intensity occurred at least in one of the municipalities in an area (for the crater area this would correspond to I= IX - Fig. 16). In this case, it is possible to estimate the expected average damage for even higher events than those expected, such as those that occurred in the 2016 Central Italy earthquake, and perform assessments for catastrophic scenarios.

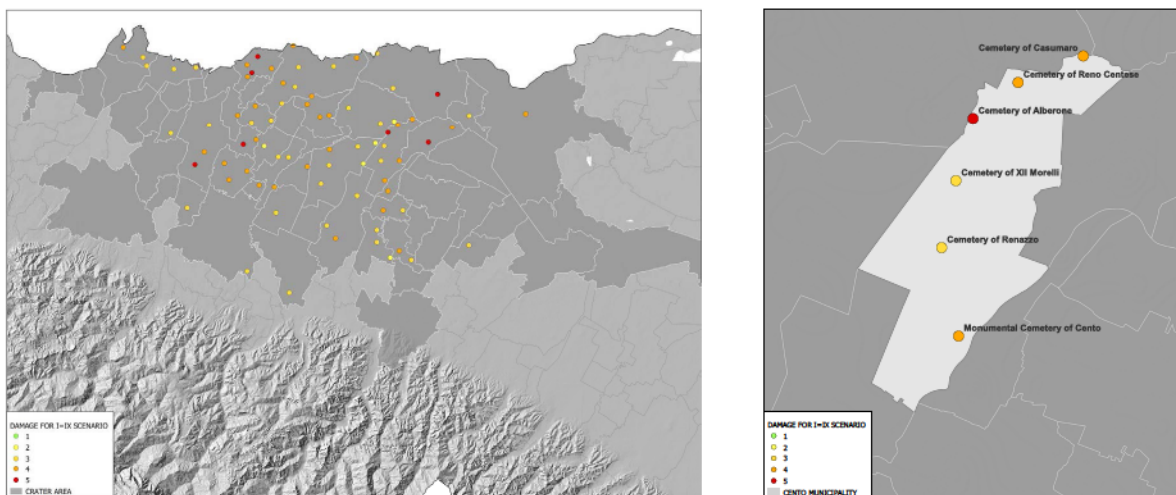


Fig. 16. Mean damage expected for I=IX scenario: crater area - regional level - and in Cento municipality - municipality level.

Or alternatively it is possible to estimate the mean damage by applying the maximum macroseismic intensity ever occurred in each individual municipality (Fig 18). Indeed, the data related to macroseismic intensities are easily available for any Italian area from the INGV website or through publications already made. In this case, the more probabilistic mean damage would be estimated (Fig. 17).

●●●●●●●●●●

5 Walls detected as damaged but with no associated collapse mechanism, damage only partially detected, and photographs without plan referencing...

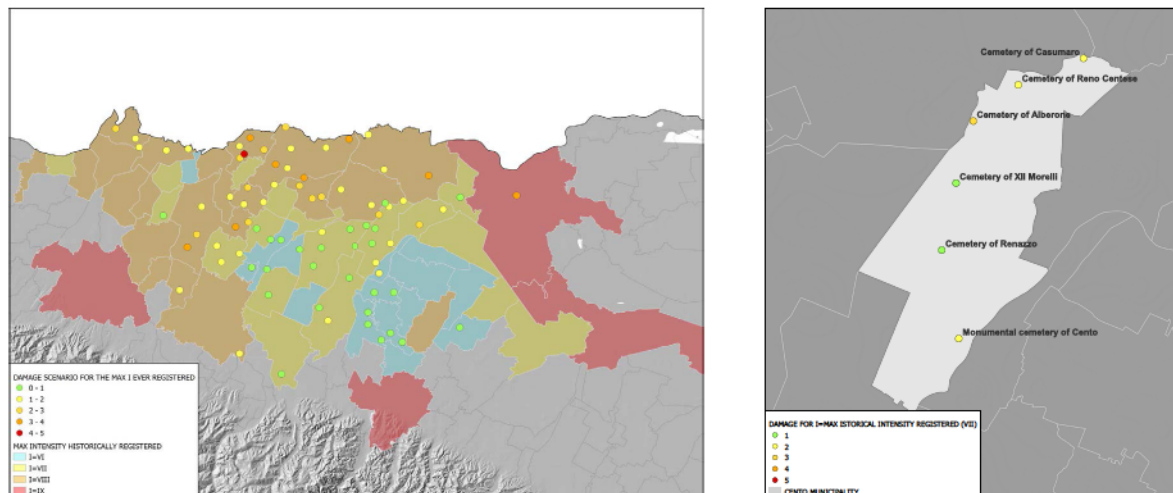


Fig.17. Mean damage expected for I=max I ever registered: crater area - regional level - and in Cento municipality - municipality level.

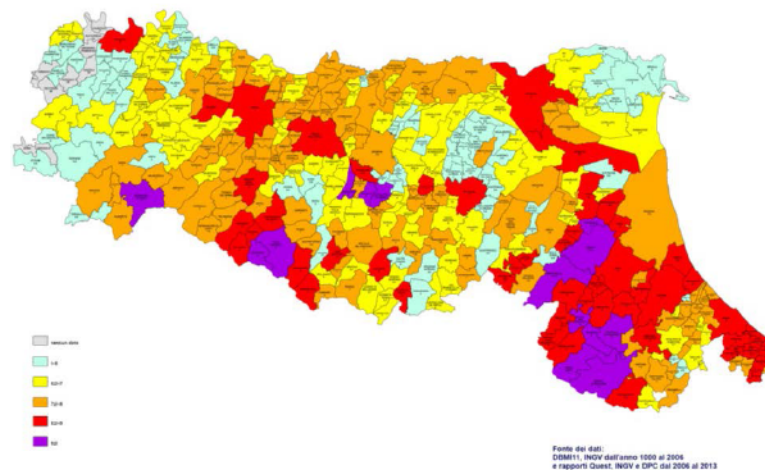


Fig.18. Max I registered in Emilia-Romagna. Image published in <https://webbook.arpae.it/indicatore/Eventi-sismici-osservati-00001/> and created starting from different data such as INGV or DPC data.

Accordingly, both regional and municipal or provincial policies can make the corresponding judgements as to the priorities for intervention in earthquake risk mitigation within their designated areas in relation to the greater or lesser expected damage. Indeed, the tool becomes a support for the decision-making process by helping to distribute resources and funding in a targeted approach to solving critical issues in order of their actual hazard.

Finally, the regional codes used to establish both databases, that of the form compiled in 2012 and that of the new damage form, will allow for possible relationships between them. This will also allow queries with data collected in different ways and with different contents over time, enabling future dialogue between the systems. This is a further advantage of the project. As mentioned in section 1.1, the restoration project is grounded on the knowledge of both historical events occurred over the ages and recent events and interventions. The defined GIS project therefore makes it possible to easily identify data on damage and intervention projects arranged by the region in 2012, as well as new data following further earthquakes. In addition, these same codes ensure future implementation within the supra-regional systems responsible for risk analysis. In fact, as previously mentioned, these derive from the DPC codes associated with AEDES form, CLE forms and used for vulnerability analyses.

CHAPTER 7

Experimentations



On the previous page an image of the on-site experimentation

7.1 Introduction

The form drafted in the previous chapter has been tested to verify its correspondence to real requirements. This verification has followed two different directions.

In the first case, an ex-post compilation of one of the damaged cemeteries in Emilia-Romagna was carried out. The objective of this test was not that of validating the developed form but that of verifying the average cost assigned to the classes. Indeed, in this case, no evaluation of the form layout can be considered valuable, since it was filled in by the same person who created it and therefore knows its interpretation. Instead, the correspondence between estimated and real cost is assessed. For this purpose, in particular, we have chosen to fill in the new form for a cemetery of which the current damage survey form has been lost but for which the restoration and reconstruction site has already been carried out. Therefore, the Cemetery of Concordia sulla Secchia has been chosen. In fact, being one of the cemeteries most damaged by the 2012 earthquake, the restoration of this cemetery was a priority. Divided into three successive packages, the construction site was officially completed in 2017, and on April 25 of the same year, the cemetery officially reopened. An erroneous digitization of the card was made of this cemetery. In fact, only the odd-numbered pages were scanned, so all the information about the damage index was lost. As such, on the one hand, there are no prejudices regarding the damage index of the cemetery attributed in 2012, since it is unknown. On the other hand, the required cost for the reconstruction is now defined, as the construction site is completed.

The second trial was carried out on site. The purpose of this experiment was to understand whether, from a technical and content point of view, the form could be suitable for emergency surveys in wider contexts than the crater. In the previous chapters, in fact, the necessity of widening the research field has often been discussed to compensate for the lack of data in some areas. However, within the limits of what was possible, the main fields concerning features that could not be investigated through the surveyed cemeteries group have been included in the form. The purpose was to set the instrument up for future development. Therefore, several professionals were recruited from the construction field and requested to attempt the compilation of the forms on cemeteries identified in advance. These professionals were virtually divided into two subgroups. The first subgroup tested the form on cemeteries belonging to the 2012 crater area. In this case, since the form was designed by studying these cemeteries, the main purpose was to test the ability of the operators to complete it without the presence of a manual. In other words, this group mainly focused on identifying formal features that made the form not easily understandable and editable. In contrast, the second subgroup tested the form in cemeteries outside the crater area. In this case, in addition to formal issues, the correspondence of the form with cemeteries outside the survey area were also tested. At the end of the on-site survey, the surveyors filled out a final interview indicating the critical points they had found and the time spent according to a pre-established scale. Following these tests, a new version of the cemetery damage survey form was redefined.

Once the contents of the form were established, a final experimentation was carried out. The developed project was loaded into some of the GIS Apps described in section 6.2 and its operation was verified.

7.1 Experimentation on-desk: Concordia sulla Secchia cemetery – Emilia-Romagna damaged cemetery, economical assessment validation

- **Brief description**

Following the cemetery reformation, the current cemetery of Concordia sulla Secchia was built only at the end of the nineteenth century. As happened all over Europe, before the period of the reformation, the corpses were buried inside or near a church. In the case of Concordia, the burial space was therefore placed near the church of what was called “*contrada della Molinella*”. Here it remained until 1599, when it was displaced at the Church of San Paolo Apostolo, inside the historical nucleus of the city. This situation did not change until the extension of the edict of Saint Cloud on Italian land in 1806. Starting from this date, the cemetery space was rethought. A first new cemetery was built in 1824 at a site still close to the historical centre, but just outside of it. It corresponded to an area near the kindergarten Edgardo Muratori. However, the growth of the urban centre led to a new reconsideration, and the site was transferred even more externally, on the current position (Fig. 1).



Fig.1. Scheme of the cemetery location among ages.

At the end of the nineteenth century, the construction of the present building began, and it was blessed in June 1899. As with other cemeteries, also in this case the construction of the cemetery occurred through successive enlargements that progressively filled the consecrated enclosure. These enlargements lasted for a long time. From a panoramic photo taken of the area of the cemetery, in fact, we can see that still in 1949 the enclosure was only half saturated with the monumental entrance connected only to the surrounding wall (Fig. 2).



Fig.2. Detail of the 1949 Panoramic photo towards Concordia sulla Secchia cemetery. The cemetery is not yet entirely built up at this date. Source available at: <https://www.comune.concordia.mo.it>

Among the main intrinsic criticalities of the building are the construction in successive eras with heterogeneous materials and the heavy renovation works carried out later. The cemetery looks like a structure in neo-Romanesque style, with signs of neo-Gothic found mainly in the funeral chapel, where there are windows with round arches and an emphasis on verticality through the use of gables and projections (Fig. 3).



Fig.3. Image of Cemetery of Concordia sulla Secchia. It is possible to observe both the use of round arch of Neo-Romanic style and the research of verticality of Neo-gothic style.

Starting from the central chapel placed in axis with the monumental entrance, the cemetery develops through the construction of porticoed columbaria in brick with a two-headed supporting structure. The portico, which the columbarium overlooks, is characterized by reinforced concrete pillars and cross vaults in masonry, made of gypsum mortar, and without tie. Although at first glance the pitch of the colonnade may seem constant, it differs, as the cemetery was constructed by enlargements. In fact, the architectural rhythmic of the inner façades displays asymmetries, especially between the right and left sides.

The roof structures, with a single pitch, have been strongly modified during maintenance interventions. For this reason, before the earthquake of 2012, they were characterized by different materials, with different weights, and different frames that locally modified the thrust applied on the masonry. This ranged from zero to low thrust depending on the areas of intervention.

Also related to the presence of several projecting elements along the entire perimeter, this situation caused the negative response of the structure to the seismic action applied in 2012. Some of the structures of this cemetery therefore collapsed to the ground, including a total loss of the monumental entrance (Fig. 4).



Fig.4. Cemetery of Concordia after the 2012 earthquake. Ph Arch. Pedrini

- **Data collected**

Representing one of the most damaged cemeteries in the crater area, since the beginning there has been progressive access to different data for this one. Unfortunately, due to the urgency of the restoration works, the documentation was produced during a moment of reorganization of the regional technical structure, so it is only stored in printed format and archived in different offices. As indicated in section 4.6, this practice has made it impossible to access the final economic data for the cemetery reconstruction. Nevertheless, it has been possible to collect several data that have allowed for the total filling of the new damage form and the computation of the relative average cost of intervention.

The collected data refer to different categories (damage survey, municipal evaluations and emergency requests, final project...) and allow an exhaustive understanding of the damage that occurred to the structure in all its components.

In particular, the data collected and used are as follows:

- Photographic data obtained from the damage survey activity. During the survey, 125 images were collected. All are representative of the level of damage of the cemetery and of the annexed chapel, both inside and outside. The images start with a general outline of the damage and then progressively go deeper into the details and acquire several data on the damage in the different parts that comprise the building.
- Causal nexus report. This report is among the documents specifically required by the Agency to obtain funding for restoration work¹. It is an essay where the relationship between the damage observed inside a building and the earthquake must be expressed in a systematic and accurate way. The report is necessary to distinguish those damages not directly related to the earthquake, but resulting from lack of maintenance or previous problems. This report is also supported by further images that have completed the photographic picture.
- Survey of the cracking framework. The cracks survey is undoubtedly among the first elements produced to clearly identify the state of damage. It should provide the localization of the cracks and their cataloguing. This is a useful instrument for the identification of collapse mechanisms. In the particular case under investigation, in reality, it is a rather simplified survey (i.e. without the crack classification). They are therefore graphically reported, but their nature is not identified according to the coding used since the Umbria-Marche earthquake of 1997 (Scientific-Technical Committee established by Ministerial Order No. 2668/97, 1997:1). However, to simplify the reading of the damages and to relate them as clearly as possible to the cause nexus, several schemes based on an area/colour coding have been realized. These schemes aim to identify multiple collapses and a relative damage scale (Fig. 5).
- Economic evaluation carried out after the earthquake, correction of the economic evaluation and report for the estimation of the restoration works of the cemetery in 2012. Although these data do not allow the acquisition of the state of damage of the

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1 Ordinance 14 of 2014 of President Errani as Delegated Commissioner, annual plans 2013–14 –15–16–18 public works - cultural heritage - schools, buildings, university. Art. 4 of D.L. 74/2012, converted into Law 122/2012, art. 11 of Regional Law no. 16 of 21 December 2012, Annex “E”, Regulations, Art. 4, paragraph 6.

building, they are very useful to confirm the considerations reported in Chapter 4.6 regarding the economic evaluation of cemeteries.

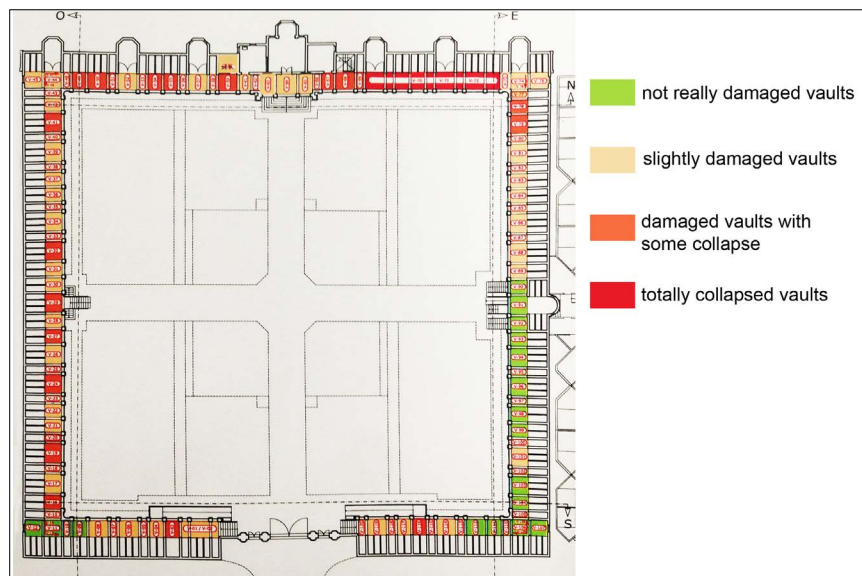


Fig.5. Concordia sulla Secchia Cemetery: plan with damage vaults identification. Property of Politecnica Company.

- **Fulfilment of the new cemeteries form: damage index definition.**

From a macro-element subdivision point of view, Concordia cemetery can be divided into three distinct elements: simple entrances, columbaria and funeral chapel. These elements were all heavily damaged by the 2012 earthquake. The following is a brief description of the damages that occurred to the different macro-elements analysed included in that have led to the compilation of the form.

Simple entry elements. The entrance of the cemetery of Concordia was composed of a simple sail-shaped element that was totally lost after the earthquake. It is tilted to the ground, and it is possible to clearly interpret from the images the realization of a horizontal hinge starting from the point where it was connected to other macro elements (Figs. 6 and 7).



Fig. 6-7. Details of the entrance overturning. Ph Arch. Pedrini.

Columbaria. The cemetery is characterized by columbaria with portico. An arm is totally collapsed (Fig. 8) probably due to recent renovations. These renovations, indeed, have replaced the low-trussing roofs with prefabricated beams in CA constituting a further load factor on the structure. In addition, in another section the whole upper area is overturned. Although then the CA columns endured the out-of-plane actions, the overturning of the porch was activated for all segments of the cemetery. For several pillars, it is possible to find press-flexion cracks for the overturning attempt of the porch (Fig. 9). The vaults, as correctly detected during the restoration phase, are extremely damaged and have local collapses in all the segments of the portico (Fig. 10).



Fig.8. Collapse of a part of cemetery structure. Ph Arch. Pedrini

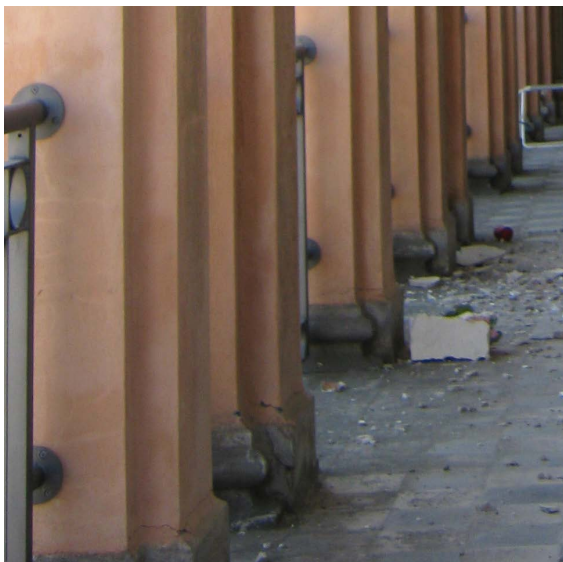


Fig.9. Cracks of the pillars. Ph Arch. Pedrini

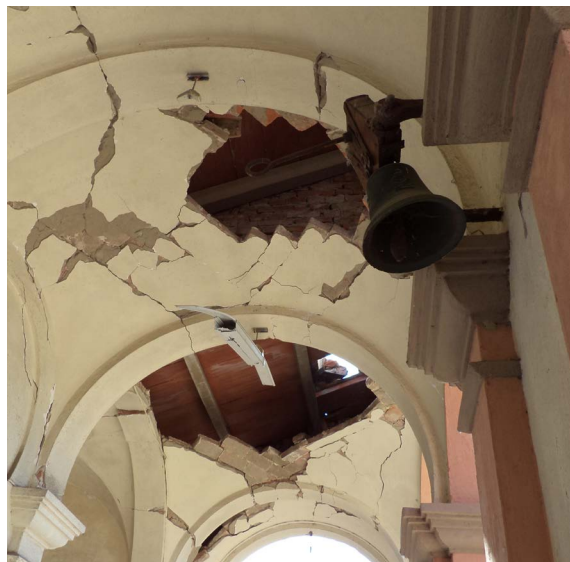


Fig.10. Damage to vaults. Ph Arch. Pedrini

Additionally, the irregularity of the construction and the materials have led to the activation of many damages inside the cemetery. In the entrance area, since due to successive additions it was not fixed to the structures, the back wall has turned outwards (Fig. 11), and there are several cracks in the external face that reveal relative movement between non-coeval parts. In the corner areas, both inside and outside the cemetery, one can identify many injuries caused by the cemetery shape and the presence of loads concentrated on specific

points. They revealed themselves with particularly relevant cracks in the corner vaults, the windows (located in the corner area), and the inner corners. Finally, there were important collapses in the projecting areas. The two lateral gables have collapsed, alongside many small projections. These elements (gables and projections) collapsed outwards on the right side and inwards on the left side (Fig. 12), causing further damage to the roof structure, to the vaults and to the floor between the basement and the external walking surface. Finally, important collapses of the covering structures also occurred.



Fig. 11. Rear wall collapse. Ph Arch. Pedrini



Fig. 12. Projection elements collapse. Ph Arch. Pedrini

Funeral chapel. The funeral chapel is also considerably damaged. The exonarthex suffered important damages: the vaults are injured, and the gable that hid the chapel facade is overturned, similarly to the gables of the columbarium (Fig. 13). Inside the chapel, the total collapse of the barrel vault can be seen (Fig. 14), as well as widespread cracks on the triumphal arch and on the side walls due to the movement of the latter. The vault of the apse is also damaged, and from the outside, it is also possible to identify overturning injuries in the apse and shear cracks in the side walls and in the apse (Fig. 15). Moreover, the survey of the cracking framework, covering more thoroughly the upper area, also identified injuries on the external walls caused by the roofing, which had been recently replaced.



Fig. 13. Gable collapse. Ph Arch. Pedrini



Fig.14. Damage to the vault. Ph Arch. Pedrini



Fig.15. Shear in the apse. Ph Arch. Pedrini

The combined use of both the photographic material and the descriptive drawings of the project enabled the completion of the new damage survey form. The most important damages were already clear in the photographic survey. However, the opportunity to verify the existence of additional cracks in areas where no images were available, even if only in graphic form, allowed the realization of a complete and exhaustive survey of the damage in 2012 (Fig. 16).

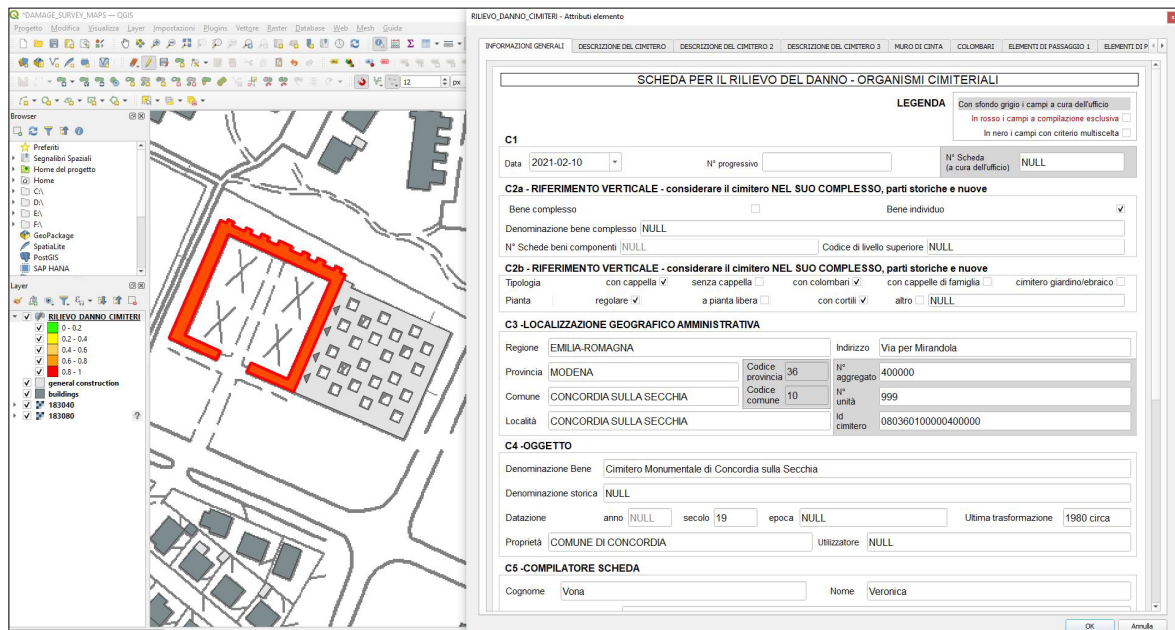


Fig.16. Extract of the cemetery GIS project: Concordia sulla Secchia form. It is possible to see the cemetery shape and the first tab fulfilled.

Following this task, the system automatically calculated a damage index corresponding to 0.8. This index seems to be consistent with the European macro-seismic scale. Indeed, 0.8

corresponds to a damage range between 4 and 5. Such a range is usually characterized by the presence of relevant collapses both of walls and horizontal structures. The classification is effectively in line with the summary description of the damage structure, as carried out above. The correctness of the damage index calculation associated with the new collapse mechanisms can therefore be considered verified.

- **Economical validation through the new form**

Economically, the cemetery of Concordia sulla Secchia belongs to the category of buildings for which the underestimation of works exceeded 20%, precisely amounting to 30%. Although it may seem comforting, the analysis of this result actually between highlights the extent to which the economic evaluation parameters associated with the A-DC and B-DP forms are incorrect for cemetery buildings. The form for Economic Evaluation (hereinafter VE) has in fact suffered a considerable amendment following further evaluations carried out both by the Validation Group (hereinafter GV) and by the competent municipal technician, arch. Dotti.

The initially completed model estimated €400,000 for the consolidation works and € 100,000 for both restoration and safety works. This analysis was probably carried out by the survey team directly during the inspection on the basis of the tables for the other buildings. With an original amount foreseen of € 500,000, the consolidation and restoration work of the Cemetery of Concordia sulla Secchia had been initially underestimated at about 70% of the real cost.

Subsequently, the GV corrected the forecast firstly to € 600,000 for the first category and €800,000 for the second, then to € 630,000 and € 815,000. This change effectively reduced the underestimate from 70% to 33%, and then to 30%, a figure that remains unacceptable but more realistic¹. However, this change in the estimate emphatically does not depend on the GV's ability to evaluate cemetery works. Rather, it stems from the presence of a report on the cost estimate for safety measures with a first draft of the cemetery reconstruction work. This report grounded the new evaluation. Otherwise, in fact, we would have obtained a substantially almost correct estimate of the works for all the cemeteries, something that did not occur (see Section 4.6).

The VE is dated August 9, 2012. On July 7 of the same year, before the cemetery was surveyed by the officials, the municipality had sent to the UCRR a document providing the first economic assessment for the cemetery. The estimated total cost of € 1,780,000, of which only € 112,000 were foreseen for safety works. Therefore, it turned out to be a very similar indication to the € 2,084,957.84 actually required, falling within the 20% tolerance if it had been fully applied. Detailed analysis of the single items identified in the report suggests they are generally consistent with the minimum interventions necessary to restore the cemetery, except for the works related to the particular function of the cemetery. In this case, since no price lists or other elements from which to draw the necessary indications were available, the report identified a lump sum resulting in the underestimation of the works, although with an excellent tolerance factor.

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 1 In Chapter 4 a variation inside the 20% both in increase and in detraction has been identified as a tolerance threshold in the economic appraisal. This type of miscalculation is indeed reabsorbed within the physiological shifts of costs in the OOPP and BBCC Program through the Annual Operating Plans.

Finally, in dividing structural works and related finishing works, the ratio between them within the report is again 60% for structural works and 40% for restoration works. This finding reinforces the preliminary indication observed in Section 4.6.

One of the final objectives of the damage survey sheet is to try to improve the cost of intervention in cemeteries and to make it correspond to reality without necessarily having to make an estimate from a draft project. For this purpose, initial parametric costs to be applied to the cemeteries' buildings have been identified (in section 4.6). Considering a damage index $ID = 0.8$, as previously stated we are within the damage range of 4–5, according to the European macro-seismic standard. On this standard, an average cost equalling 1650 €/sqm divided in 812.5 €/sqm and 437.5 €/sqm has been therefore determined (Tab.1).

	General average cost per sqm	Structural average cost per sqm	Architectural average cost per sqm
D4-5	1 650.00 €	1 072.50 €	577.50 €
D3-4	1 250.00 €	812.50 €	437.50 €
D2-3	1 100.00 €	880.00 €	220.00 €
D1-2	600.00 €	480.00 €	120.00 €
D0-1	250.00 €	200.00 €	50.00 €

Tab. 1. Cost for cemetery renovation according to the damage class

The covered surface area of the building in the GIS database is equal to 1450 m². Therefore, the result of the preliminary estimate made with the realized damage form is equal to the following:

Total cost = 1450 m² X 1650 €/sqm = €2,392,500.

This cost is subdividable by area:

Cost structural works = 1450 sqm × 812.5 €/sqm = €1,178,125

Cost of related finishing works = 1450 sqm × 437.5 €/sqm = €634,375.

Fig.17. Extract of the cemetery GIS project: Concordia sulla Secchia form: final section - damage index and costs.

The cost calculated in this measure overestimates by 15%. Therefore, this value aligns with what was previously indicated. Considering also the uncertainty arising from the assessment of the area through national cartography, not only can the damage index be considered correct, but also the parametric cost identified.

7.2 On-site experimentation: Second draft setting up

- **Aim of the experimentation and identification of the test group characteristics**

From the earliest formulations, the damage form for cemetery structures was set up for integration through GIS software. This integration has been achieved through the creation of an interface to associate the fields of the cemetery database to those expressed in the card. It has been realized focusing on the connection necessary to make between the two systems. Among the other objectives, at the basis of the form is its compilation without the aid of a manual guide.

In contrast to many of the experiments carried out in this research field, this choice resulted from the observation that the activities have been executed systematically and effectively when the training of volunteers has been completed in the ordinary management phases (AeDES form). On the contrary, in the case of the cultural heritage forms, such training is carried out during the emergency phase and does not always lead to similar results. For this reason, it was decided to structure a protocol that would require the minimum data common to that provided for existing forms¹.

The experience gained in the field of damage surveying has shown to be fundamentally for a correct application to real cases to understand the criticalities that the surveyors encounter during the inspections. These can be structural (i.e. the form is not suitable to detect that type of object) or formal. In this case, the graphic and terminological setting of the form represents the critical issue to be resolved. If from a structural point of view, we are already aware of the current limits of the form, from a formal point of view, only its practical application can indicate changes and improvements that will facilitate its use. For this reason, during the instrument drafting, from the point of view of content, as fields as possible were inserted that could manage elements and damages absent in the set of cemeteries investigated. In other words, we have included all prerequisites for the acquisition of data for cemetery configurations not properly represented in Emilia-Romagna damaged cemeteries. As far as the design is concerned, on the other hand, we have included as many written and photographic indications as possible in the instrument.

To validate the tool's design according to these principles, we started a preliminary phase of survey testing on different cemeteries. This survey aimed to verify the effective use of the tool in cemeteries other than those of the 2012 Emilia earthquake crater area on which it was configured. It also aimed to identify ambiguities or confusing elements within the form. The testing phase was therefore carried out by 16 subjects, different in terms of training, profession and location within the Italian context. They were assigned at least one cemetery to be surveyed and asked to complete an interview. This interview was used to understand the group characteristics, in terms of training and background, and to allow the surveyor to communicate the critical issues they found.

Although the number of surveyors seems small, it was calibrated on the basis of the number of surveyors actually used in the 2012 damage survey to cemeteries. The identified sample

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¹ We refer to data such as awareness of the damage scale to be applied, and fields such as temporal use or judgment of practicability.

therefore corresponds to 60% of the people used in 2012, a good sample for a preliminary test phase aimed to understand only whether the instrument can actually be launched in an on-site trial on a large scale or needs reconsideration.

Given the training of the subjects involved, it was decided to carry out a test with subjects mainly related to the area of architecture and with a marginal number associated with neighbouring disciplines. Indeed, in the case of the cemeteries of Emilia-Romagna, only three of the 27 officials were not architects. For the test, therefore, two subjects from different professions were involved: an archaeologist and a junior urban planner (Chart 1). They represented more than the average number of subjects from different professions who surveyed the cemeteries in 2012.

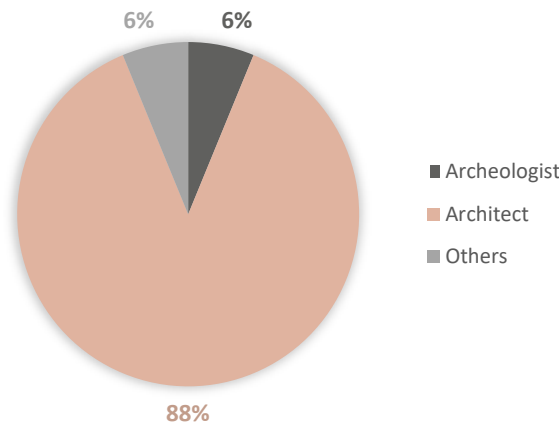


Chart 1. Subdivision per career of the surveyor.

Moreover, despite that the survey forms of damage to cultural heritage can be completed only by superintendence officials, to understand the prevailing criticality and uncertainty of the form, subjects with different levels of education have been involved. In this case, subjects with only a bachelor’s degree and subjects with a postgraduate level education were involved. Furthermore, the latter kind of training was connected to that required to enter the above-mentioned state agencies. Therefore, 44% of the sample was composed only of subject with first-level qualification, and the remaining 55% of subjects had specific competences in cultural heritage. Further, within this set, 33% of the surveyors held more than one enabling title (2nd level Specializing Master – Postgraduate diploma course - PhD) (Charts 2 and 3).

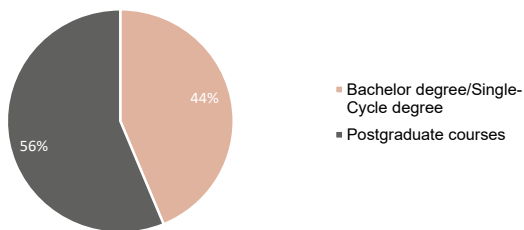


Chart 2. Subdivisions per education of the surveyor.

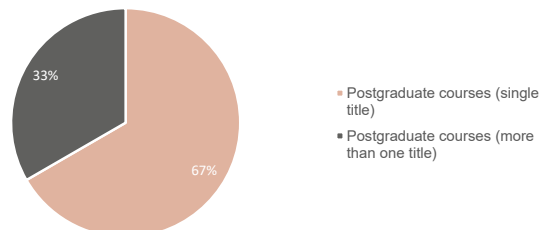


Chart 3. Number of postgraduate course titles held.

Finally, to understand the effective ability to complete the forms, the selected group was asked to declare previous experience with respect to the topics of damage and seismic vulnerability surveys. In this case, the situation was more diversified, since even among the only graduates were people who had previous experience on the subject (Chart 4). These experiences, however, were often academic in nature (i.e., presentation of the

topics in courses). Generally speaking, except for two cases, it was always an academic experience and not a direct one.

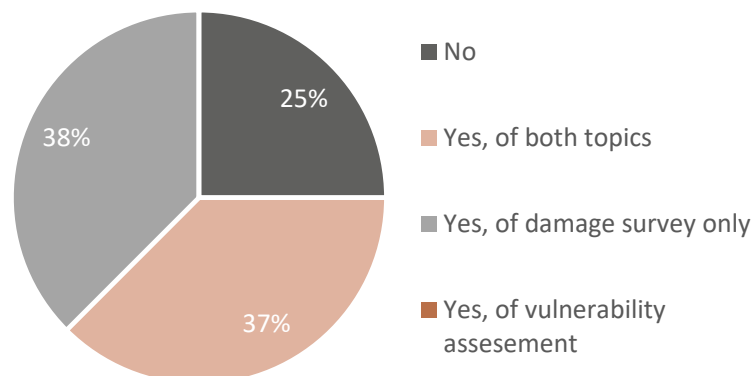


Chart 4. Previous experience of surveyors in the investigated field.

Eventually, the involved subjects were asked to complete at least one card each, with the exception of the three who surveyed two or three cemeteries. In this case, the surveyors were asked to evaluate whether the completion of a second card was easier than that of the first. Analysis of the 2012 earthquake damage forms on cemeteries had shown a greater understanding of the buildings and their damage when surveyors filled out a high number of forms (at least 10). On average, a surveyor has completed no more than two cards, so with this request we wanted to assess how much the implementation of forms specifically developed on cemeteries would allow for a greater understanding of the buildings and how it changes the survey activities performed by surveyors who already have little experience.

The results of the test and consequent implementation of the tool are reported below.

- **Cemeteries surveyed**

The cemeteries surveyed with the first prototype form were located in different regional contexts according to a precise survey choice. In particular, half of the operators surveyed cemeteries damaged by the 2012 Emilia earthquake, while the other half tested the card on cemeteries outside this area, both in the same region and in different regions.

This choice is common to both groups' objectives and to other specific objectives. Indeed, the common objective was to identify all problems related to uncertainty or unclear fields to be completed. All 16 surveyors were asked to express, in their interview them, all critical points and suggestions connected with the form's completion.

The first group surveyed cemeteries belonging to the crater area, but damaged by the 2012 Emilia earthquake only slightly. In this case, the reparations work allowed for a clear interpretation of the signs of seismic damage and for a complete survey with the form. On the basis of the opportunity to detect the seismic damage the cemeteries of Mirabello, Vigarano Mainarda and Granarolo have been chosen. The first two of these medium-sized cemeteries are located in the Ferrara area, and the third, in the Bologna area. They are very different buildings. Mirabello is a very compact L-shaped cemetery. Vigarano Mainarda is composed of two long sticks bordering the historical enclosure from the recent enlargements.

Finally, the cemetery of Granarolo is built through many unconnected segments that make a U, then enclosed by the surrounding wall with a simple entrance with service annexes. All three were damaged by the 2012 earthquake, but only the first two were subject to request for access to funding for reconstruction. The cemetery of Granarolo, on the other hand, having been damaged slightly and mainly only in the service annexes, did not have a grant application, but rather the restoration of the historical part within the planned project of redevelopment and expansion of the cemetery has been included, now upgrading from feasibility to final project.

These three cemeteries, for which the damage was still visible (Figs. 18 and 19), were chosen to understand whether the associated damage survey schemes and images were suitable to guide the detectors to recognize the damage.



Fig.18. Mirabello cemetery in Emilia Crater area. Damage to projecting elements. Ph. Arch. Luca Cei



Fig.19. Mirabello cemetery in Emilia Crater area. Damage for constructive irregularities. Ph. Arch. Luca Cei

Therefore, eight detectors with different education were sent to survey these three cemeteries on different days. The responses obtained were then compared to see whether all damage was recorded.

Instead, the second group analysed cemeteries outside the crater area. In this case the detection of seismic damage was not expected, but for a small number of cemeteries located within the Central Italy earthquake crater area, the objective was to understand whether the cemeteries features and macro-elements identified thorough the investigated set were suitable to detect cemeteries in different contexts. In other words, under evaluation was the initial content and its potential for further expansion.

In this case, the analysed cemeteries were varied:

- Two cemeteries located outside the crater but in Emilia-Romagna: Santa Giustina near Rimini (small size) and the monumental cemetery of Forlimpopoli (medium size).
- Two cemeteries located in the Marche hinterland affected by the 2016 earthquake: Poggio Cupro and Apiro, both small. These cemeteries were built on sloping land and

therefore have structures adapted to the natural context. They presented different characteristics with the presence both of columbarium with porch and without it or family tombs in aggregate form (Fig. 20).



Fig.20. Cemetery of Airo (AN). Family tomb in aggregate. Ph. Arch. Marta Zannotti

- Two cemeteries also in the Marche region, but outside the crater area: Pallino near Urbino and Fermignano, both in the province of Pesaro-Urbino. The first is a small cemetery, and the second is of medium size. In this case, to differentiate from Emilia-Romagna, damaged cemeteries are the types of constituent elements, as the first was built through columbarium without a porch, while the second consists of family tombs emulating a porticoed columbarium. Differing from the previous cemeteries of Marche, the presence of sloping ground in this area is solved through excavation where the cemeteries were to be housed.

A further feature of Marche cemeteries is that they are also made of materials other than brick (Fig. 21), a homogeneous construction characteristic in the investigated set.



Fig.21. Cemetery of Pallino (PU). Masonry in brick and stone. Ph Archaeologist Siegfried Vona

- Three cemeteries located in northern Italy, in the Vicenza area and with different degrees of historicity and importance. Two of these were of medium-large size, and one was medium-small. The first cemetery examined was the Monumental Cemetery of Vicenza, a historical cemetery built for columbaria where, however, there are historical family tombs, such as Palladio's chapel. The second was the non-Catholic cemetery of Vicenza (Fig. 22), a large Jewish cemetery and, therefore, slightly different from the damaged Jewish cemeteries in Emilia, and finally a medium-sized cemetery in one of the neighbouring towns: the cemetery of Nove.



Fig.22. Non-Catholic cemetery of Vicenza. Ph Arch. Stefano Tessarolo

Once the cemeteries and working groups had been identified, the actual testing phase was completed, and interesting data emerged to implement the proposed scheduling tool.

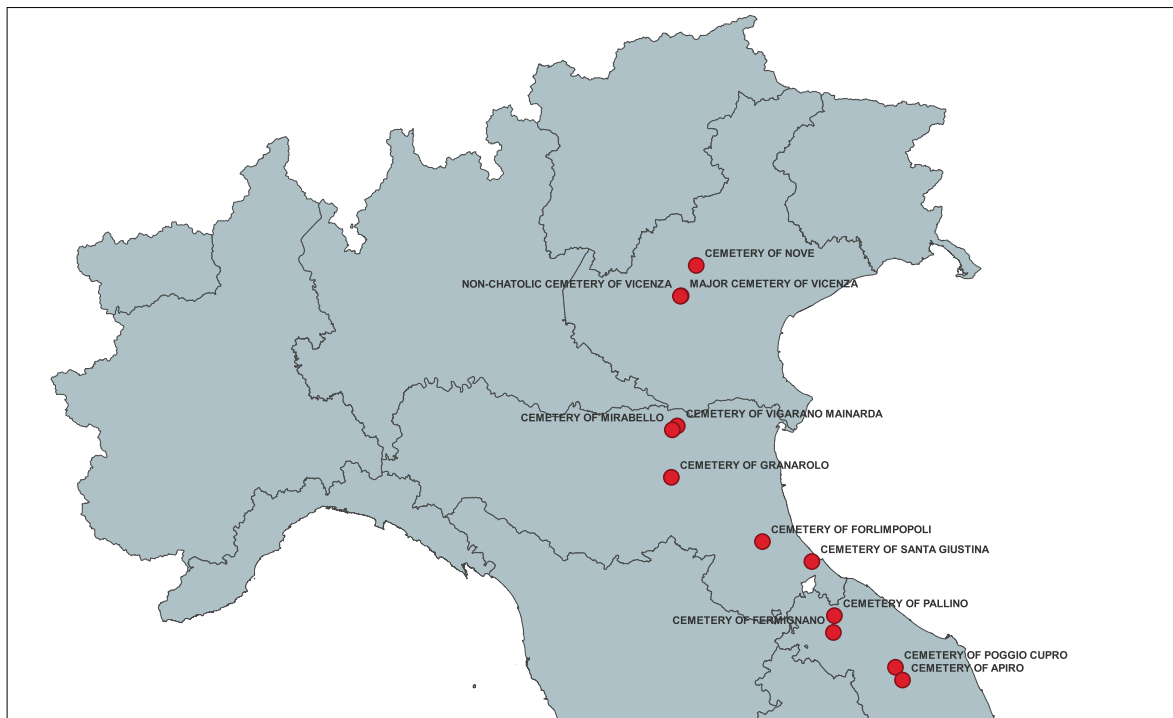


Fig.23. Location of the surveyed cemeteries.

• **Analysis of the results**

From a general point of view, the results of the test were quite encouraging. Indeed, all 16 surveyors stated that they had identified critical points in the design of the form and not in the content, but 50% also declared difficulties filling in the form (Chart 5).

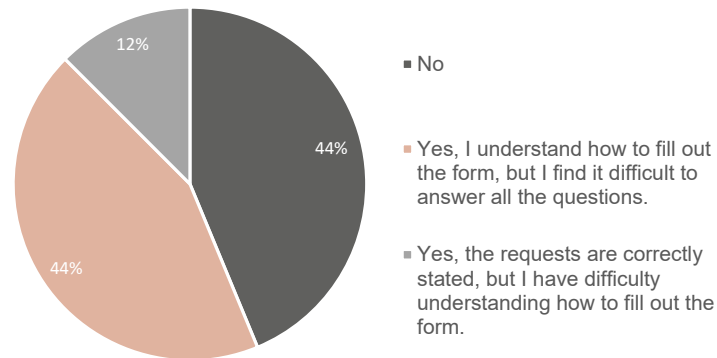


Chart 5. Difficulties in filling in the form during the test phase.

The reported difficulties were of two types. A small number did not understand how the damage section was to be completed so correctly stated that they understood the requirements but not how to complete the form. Indeed, the subsequent analysis of the forms verified that the surveyors had correctly identified the vulnerabilities or damages in their assigned cemeteries, but not how they should be counted (Figs. 24 and 25).

Fig.24. Non-Catholic Cemetery of Vicenza damage survey form. The surveyor has identified the vulnerability but not the number of elements affected.

Fig.25. Monumental Cemetery of Forlimpopoli damage survey form. The surveyor has correctly identified the vulnerability, the number of element affected, but not the level of damage.

The remaining percentage, on the other hand, affirmed that they understood how to fill out the form, but that they had doubts about how to interpret the form's layout. Moreover, the analysis of the forms realized on the same cemeteries of the Emilian crater has constituted a first control on the descriptive form's ability. On a critical interpretation, all the surveyors have indicated the damages and the identifiable vulnerabilities, leading to a similar damage index¹. Indeed, certain damages in liminal zones have been catalogued as damages of shape or of constructive irregularity. This different sensitivity, however, did not lead to a real alteration of the final index.

We then proceeded to analyse the factors that the surveyors indicated to be critical.

Two surveyors in the group assigned to cemeteries outside the crater indicated that a main problem they faced was matching schemes with reality, as is consistent with the type of cemetery surveyed. In fact, some operators were put under specific stress in terms of cemetery element recognition and vulnerability. Indeed, the non-Catholic cemetery of Vicenza and the municipal cemetery of Fermignano represented cemeteries with boundary features within their typological variants, while the cemetery of Santa Giustina was identified regardless of its recent renovation. Despite being a Jewish cemetery and therefore generally composed only of the surrounding wall, the non-Catholic cemetery presented additional macro-elements (entrances and funerary chapel - Fig. 26), all of which were correctly recognised and whose vulnerability was also correctly identified.



Fig.26. Non-Catholic Cemetery of Vicenza, the macro-element correctly surveyed. Ph Arch. Stefano Tessarolo

In conclusion, although in certain cases there are liminal situations, the tool has proven suitable to detect and transfer the architectural and vulnerability features of cemeteries. These situations, however, may be subject to review after further survey campaigns to simplify the choices to be made in the survey campaign. The remaining surveyors all identified critical graphic features that can be grouped according to two main themes: the general area and the damage area.

As regards the general section for the cemetery description, the main request was to specify

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¹ It is not possible to define a perfect correspondence because the attribution of the damage class is, and always will be, a subjective evaluation based on experience. For this reason, when the same damage occurs, there may be slight modifications of the index for the second decimal place.

more clearly the division between the fields to be completed as a vertical reference (i.e. valid for the whole cemetery), whether or not it is under restriction, as well as the fields for the surveyed area only. Further requests concerned a clearer division into sub-sections to better explain the data to be identified. As regards the damage section, instead, requests were mainly aimed to identify more clearly the changes between the different damage sections by macro elements. About 30% of surveyors also requested more specificity regarding the subdivision in sub-elements of the different macro elements. In particular, it was difficult to understand that such a division should not be reported in any section, and among the suggestions was the provision of a preparatory sketch where the segments could be numbered. The non-architect surveyors also stated that they experienced certain minor terminological problems, while all the surveyors found the graphic aids spread throughout the form to aid comprehension. These various comments were considered, leading to a revision of the form.

A final test element of the form was the time spent surveying a cemetery. The whole group was asked to time themselves and to indicate the time needed to survey their assigned cemetery. In the interview, this time was divided into three different classes according to a time prediction.

Indeed, a main criterion that damage survey instruments must satisfy is that of quickness. It is precisely its absence that causes the objections often raised against the B-DP form, as identified in the previous chapters. Since these are cemetery buildings, it is impossible to expect the survey to be executed in the same timeframe as the A-DC form. The dimensions of cemeteries cannot always be considered comparable to those of a church. On the contrary, they may cover the space not of a building but of an entire neighbourhood. Considering the size and dispersion of the cemetery elements, it was assumed that the survey of small to medium-sized cemeteries could not exceed one survey hour, and that it would take an average of one to two hours for more extensive structures. Times of more than two hours were expected for the bigger cemeteries. For this reason, the working group was asked to indicate the range of values within which their time ranged. The results have confirmed the hypothesis. Only the monumental cemetery in Vicenza took more than two hours. In this case, however, it was a very monumental cemetery (Fig. 27).



Fig.27. Monumental cemetery of Vicenza. Ph Arch. Stefano Tessarolo

Medium-sized cemeteries were all surveyed between one and two hours (Chart 6). In addition, those who surveyed more than one cemetery also reported taking the same amount of time to survey larger cemeteries and less time to survey cemeteries of similar or smaller sizes.

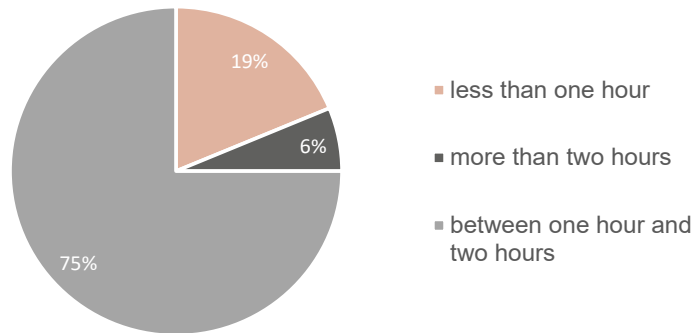


Chart 6. Timing for the cemetery survey during the test phase.

In conclusion, considering that the 40-minute survey time of the AeDES and A-DC forms is not achievable in a cemetery survey, the result, which in terms of time make lower performance than that of the B-DP form, can be considered an excellent first result.

- **Revision of first set up: The new form for the cemetery type**

The critical points and suggestions analysed led to a review of the first model. To avoid further problems in understanding the compilation, explanations were added at the beginning of each section of the damage survey. These explanations indicate that each segment/element present must be marked with a cross in an appropriate space. In addition, the same explanation also states that a damage level of 0–5 must always be indicated. This requirement emphasises the need to also indicate the lack of damage, also displayed in each individual section of possible damage (Fig. 28).

Num. Lato	Danno (da 0 a 5)
<input type="checkbox"/> lato 5	<input type="text"/>
<input type="checkbox"/> lato 6	<input type="text"/>
<input type="checkbox"/> lato 7	<input type="text"/>
<input type="checkbox"/> lato 8	<input type="text"/>

Fig.28. Second draft of the experimental form: the damage scale expressed in the tabs.

An alert sign has also been added to emphasise the relevance of the guidelines at the beginning of the section. These indications also appear at each change of macro-element analysed. This choice acts as a supplementary separation indicator for the sections. Furthermore, the analysed macro-element was repeated in the same area. In addition, the macro-element passage divided into two subsections to improve its interpretation (Fig. 30).

Again, with the aim to improve the form’s usability, the initial sections were modified, making explicit the sections in which to indicate general data concerning the whole cemetery and those in which to indicate only those concerning the historical areas (Fig. 29).

To control the damage survey sections, always within this macro-section it has been declared that the data indicated in the macro-elements must correspond to what was detected in the relative damage section. On this point, notably, no errors were recorded in the test phase. The macro-elements identified are those that have actually been detected. However, this

clarification should underline the transition from general to specific data on the historical areas at the same time as it comprises a check for the surveyors about their work.


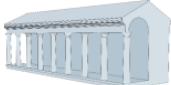
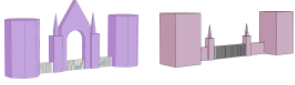

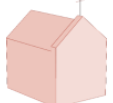
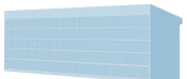

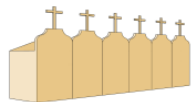
C16 - DATI DIMENSIONALI GENERALI DEL CIMITERO

Numero aree sacre/recinti compresi ampliamenti recenti <input type="text"/>	RECINTI STORICI		RECINTI RECENTI	
	Numero recinti storici <input type="text"/>		Numero recinti recenti <input type="text"/>	
	Piani fuori terra <input type="text"/>		Piani fuori terra <input type="text"/>	
	Piani interrati <input type="text"/>		Piani interrati <input type="text"/>	
	Altezza media in gronda <input type="text"/>		Altezza media in gronda <input type="text"/>	

C15 - REGOLARITA', FORMA PLANIMETRICA DELLE SOLE AREE STORICHE

Forma in pianta Presenza di Porticati Vani passanti Discontinuità costruttive e del materiale

C17 - ELEMENTI COSTITUTIVI PRESENTI NELLE SOLE AREE STORICHE

MURO PERIMETRALE <input type="checkbox"/>	COLOMBARIO CON PORTICO <input type="checkbox"/>	INGRESSI A VELA O PILASTRI CON O SENZA ANNESSI <input type="checkbox"/>	TOMBE DI FAMIGLIA SINGOLE <input type="checkbox"/>	CAPPELLA FUNERARIA <input type="checkbox"/>
				
	COLOMBARIO SENZA PORTICO <input type="checkbox"/>	ELEMENTI A VANO PASSANTE <input type="checkbox"/>	TOMBE IN AGGREGATO <input type="checkbox"/>	
				

NB: GLI ELEMENTI QUI INDIVIDUATI DEVONO CORRISPONDERE ALLE SEZIONI RILEVATE NEL DANNO!

Fig.29. Second draft of the experimental form: the headings explain what are fields of a general or specific data of the cemetery.

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI INGRESSI A VELA

C24A - DANNO AGLI ELEMENTI DI PASSAGGIO

INGRESSI CON ELEMENTI A MENSOLA 

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

 NB. Effettuare una virtuale numerazione degli ingressi che compongono il cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto

Ogni ingresso o vano va selezionato (num ingresso, num vano) se il meccanismo di collasso in esame è possibile in quell'ingresso o vano

Il livello di danno va segnato per ogni elemento selezionato. Segnare 0 in presenza di danno nullo ma di sola vulnerabilità

INI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI ELEMENTI DI PASSAGGIO

C24B - DANNO AGLI ELEMENTI DI PASSAGGIO

ELEMENTI DI PASSAGGIO 

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

 NB. Effettuare una virtuale numerazione degli elementi di passaggio che compongono il cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto

Ogni elemento va selezionato (num el. pass) se il meccanismo di collasso in esame è possibile in quel elemento

Il livello di danno va segnato per ogni elemento selezionato. Segnare 0 in presenza di danno nullo e di sola vulnerabilità

Fig.30. Second draft of the experimental form. On the left it is possible to observe that the macro-element crossing point is divided into two subsection according to the different configurations displayed. On the right the instructions for the survey are inserted in the head of every damage section with an alert signal.

With regard to the request to include a field for possible preparatory sketch, this field is not strictly necessary for the survey and it depends on the device adopted for surveying. The critical understanding regards the general state of the cemetery, not the location of the damage. Indeed, it must be remembered that this instrument is a first-level tool to gather

the data required for the definition of practicability and financial estimates. Due to the inaccessibility of areas, closed lesions on the exposed side, and so forth, some damage can initially remain undetected without compromising the overall assessment. The designer will be then required to better understand the damage and therefore the repair areas. The identification of the areas of cracks during the survey phase, therefore, cannot be made and must instead be done in a more detailed analysis. In this case considering the devices not supporting the free drawing task, the initial explanation of each macro-element specifies how to number the segments or elements of which they are composed. It is a standardized order that will allow subsequently to link the damage to each cemetery area.

Finally, the picture stock was enlarged, and the terminology was revised to simplify the understanding of the requests. All these changes were aimed to increase the comprehensibility of the peculiarities of conformation, vulnerability and damage in the cemetery form.

At the end of the modification, the new tool was therefore set up.

7.3 Form for cemetery type

Below the final cemetery form realised in a .ui file extension (file for the Qgis "Attribute form configuration).

INFORMAZIONI GENERALI | DESCRIZIONE DEL CIMITERO | DESCRIZIONE DEL CIMITERO 2 | DESCRIZIONE DEL CIMITERO 3 | MURO DI CINTA | COLONBARI | ELEMENTI DI PASSAGGIO 1 | ELEMENTI DI PASSAGGIO 2

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI

LEGENDA

- Con sfondo grigio i campi a cura dell'ufficio
- In rosso i campi a compilazione esclusiva
- In nero i campi con criterio multisceita

C1

Data: 01/01/2000 | N° progressivo: | N° Scheda (a cura dell'ufficio):

C2a - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO COMPLESSO, parti storiche e nuove

Bene complesso | Bene individuo

Denominazione bene complesso: | N° Schede beni componenti: | Codice di livello superiore: |

C2b - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO COMPLESSO, parti storiche e nuove

Tipologia: con cappella senza cappella con colombari con cappelle di famiglia cimitero giardino/ebraico

Pianta: regolare a pianta libera con cortili altro |

C3 - LOCALIZZAZIONE GEOGRAFICO AMMINISTRATIVA

Regione: | Indirizzo: |

Provincia: | Codice provincia: | N° aggregato: |

Comune: | Codice comune: | N° unità: |

Località: | Id cimitero: |

C4 - OGGETTO

Denominazione Bene: |

Denominazione storica: |

Datazione: anno: | secolo: | epoca: | Ultima trasformazione: |

Proprietà: | Utilizzatore: |

C5 - COMPILATORE SCHEDA

Cognome: | Nome: |

Ente/ufficio di appartenenza: |

C6 - DOCUMENTAZIONE FOTOGRAFICA

Documentazione fotografica | Realizzata da: |

C7 - CARATTERISTICHE DEL SITO

in piano | su rilievo/su cresta/su vetta | su riporto | in pendio/su versante | Avvallamento

C8 - CONTESTO URBANO E POSIZIONE

Centro urbano | Periferia urbana | Area industriale - commerciale | Area agricola | Centro storico

Isolato | Connesso con altri edifici su lati: | altro |

C9 - INFRASTRUTTURE

Accesso pedonale | Accesso con altezza inferiore a 4 metri | Rete viaria idonea in relazione al rischio | Spazi aperti a disposizione

Accesso carrabile | Accesso con mezzi pesanti | Altro | Parcheggio nelle vicinanze

C10 - PRESENZA DI RISCHIO

Insedimento minacciato da frana |

Insedimento in zona alluvionabile |

Insedimento soggetto a minacce di tipo industriale |

Insedimento soggetto ad altre minacce naturali |

OK | Cancel

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI

C11 - DESTINAZIONE D'USO ATTUALE

Uso	Utilizzazione temporale (apertura al pubblico)	Affollamento
Cimitero <input type="checkbox"/>	<input type="text"/>	A <input type="checkbox"/>
Parco <input type="checkbox"/>	<input type="text"/>	A <input type="checkbox"/>
Altro <input type="checkbox"/>	<input type="text"/>	A <input type="checkbox"/>

C12 - TIPOLOGIA DEI BENI ARTISTICI PRESENTI

Tipologia	num	superficie	Tipologia	num	superficie
Affreschi <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Dipinti su vario supporto <input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Stucchi <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Decorazioni plastiche mobili <input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Altari/statue inamovibili <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Altro <input type="checkbox"/>	<input type="text"/>	<input type="text"/>
Arredi (soffitti, amboni, pulpito, etc....) <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Altro <input type="checkbox"/>	<input type="text"/>	<input type="text"/>

C13 - STATO DI MANUTENZIONE GENERALE

Livello generale della manutenzione lavori in corso

C14 - INTERVENTI

Ampliamento
 Sopraelevazione
 Manutenzione straordinaria
 Consolidamento


C16 - DATI DIMENSIONALI GENERALI DEL CIMITERO


	RECINTI STORICI	RECINTI RECENTI
Numero aree sacre/recinti compresi ampliamenti recenti <input type="text"/>	Numero recinti storici <input type="text"/>	Numero recinti recenti <input type="text"/>
	Piani fuori terra <input type="text"/>	Piani fuori terra <input type="text"/>
	Piani interrati <input type="text"/>	Piani interrati <input type="text"/>
	Altezza media in gronda <input type="text"/>	Altezza media in gronda <input type="text"/>

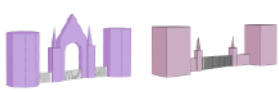
C15 - REGOLARITA', FORMA PLANIMETRICA DELLE SOLE AREE STORICHE


Forma in pianta
 Presenza di
 Porticati
 Vani passanti
 Discontinuità costruttive e del materiale

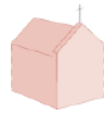
C17 - ELEMENTI COSTITUTIVI PRESENTI NELLE SOLE AREE STORICHE

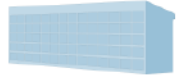
MURO PERIMETRALE



COLOMBARIO CON PORTICO


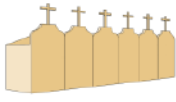
INGRESSI A VELA O PILASTRI CON O SENZA ANNESSI


TOMBE DI FAMIGLIA SINGOLE


CAPPELLA FUNERARIA


COLOMBARIO SENZA PORTICO


ELEMENTI A VANO PASSANTE


TOMBE IN AGGREGATO


NB: GLI ELEMENTI QUI INDIVIDUATI DEVONO CORRISPONDERE ALLE SEZIONI RILEVATE NEL DANNO!

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - PARAMETRI DI VULNERABILITA'

C18 - DESCRIZIONE SINTETICA DELLE ALI STORICHE DEI CIMITERI

Dati dimensionali dei colombari

Numero segmenti realizzati con schema a colombario

Lunghezza massima colombari Lunghezza media colombari Superficie costruita media

Crescita dei colombari storici

(utilizzare notizie storiche o visive. In questo caso le discontinuità costruttive si manifestano causa del sistema e/o sono visibili valutando i muri dei colombari esternamente al cimitero)

Nessuna aggiunta (elementi rettangolari semplici) Aggiunte successive miste di aree piccole e grandi

Aggiunte successive con poche, ampie aree costruite Aggiunte successive con tante, piccole aree costruite

Materiale delle strutture verticali (indicare il materiale prevalente)

MURATURA IN LATERIZIO	MURATURA IN PETREME O TUFO	MURATURA A SACCO
di buona qualità omogenea <input type="checkbox"/>	ben squadrate ad omogenei <input type="checkbox"/>	ben intessuta, omogenea o con collegamenti tra i fogli <input type="checkbox"/>
di buona qualità non omogenea <input type="checkbox"/>	ben squadrate non omogenei <input type="checkbox"/>	en intessuta, non omogenea o con collegamenti <input type="checkbox"/>
di cattiva qualità <input type="checkbox"/>	grossolanamente sbazzato <input type="checkbox"/>	ben intessuta, senza collegamenti tra i fogli <input type="checkbox"/>
di cattiva qualità con ciottoli o altro <input type="checkbox"/>	irregolare <input type="checkbox"/>	male intessuta, senza collegamenti tra i fogli <input type="checkbox"/>

Presenza elementi decorativi svettanti

Nessun elemento svettante Soluzioni ad attico allo di qualsiasi forma con o senza elementi svettanti puntuali

Elementi decorativi (frontoni, vasi etc.) svettanti presenti limitato numero ed estensione Elementi svettanti puntuali (guglie, vasi, etc...) presenti in modo estensivo insieme o no ad attici svettanti bassi

Soluzioni ad attico svettante (mensola libera) basso

Materiale del solaio

NON PRESENTE IGNOTO

senza catene SOLAI A SOLETTA DEFORMABILE O SEMIRIGIDA

VOLTE IN LATERIZIO con catene almeno in una direzione

travi in legno con tavolato semplice o tavole, travi e voline...

travi in legno con tavolato doppio o tavoloni

SOLAI A SOLETTA RIGIDA solaio in c.a. travi ben collegate a solette di c.a.

soffi di laterizi armati, tipo SAP o putrelle e tavole...

Aggiunte più recenti con elementi a colombario o altro

Da indicare solo se costruite IN ADIACENZA/IN CONNESSIONE alle strutture storiche NON INDICARE AMPLIAMENTI SUCCESSIVI COSTRUITI SEPARATI

nessuno

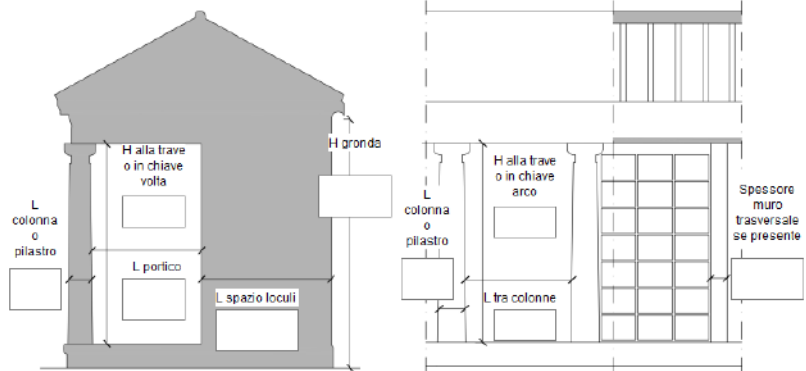
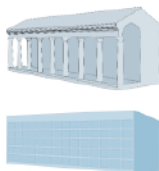
nuovi e/o diversi materiali con stessi materiali e tecniche costruttive

stessi materiali ma tecniche costruttive peggiori stessi materiali ma tecniche costruttive migliori

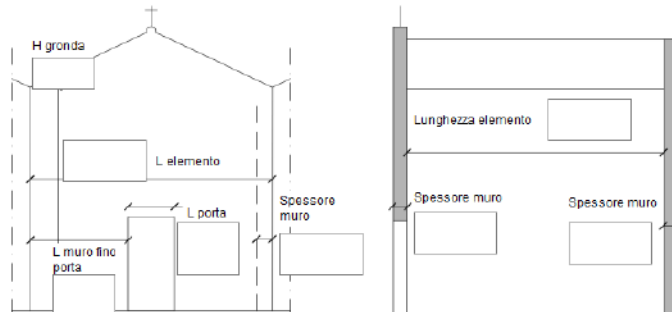
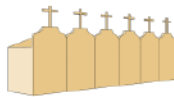
Copertura

TIPOLOGIA	MATERIALE
Non spingente <input type="checkbox"/>	In Legno <input type="checkbox"/>
Poco spingente <input type="checkbox"/>	In Laterocemento <input type="checkbox"/>
Spingente <input type="checkbox"/>	Mista legno ed elementi di sostituzione in CA <input type="checkbox"/>
Non rilevabile <input type="checkbox"/>	

misure da indicare per elementi a colombari



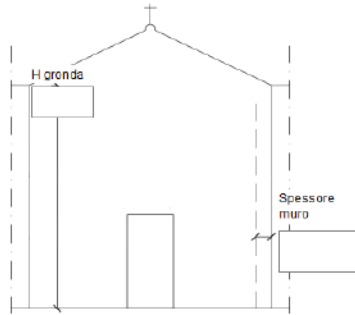
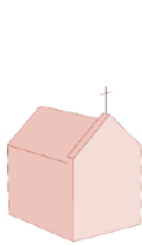
misure da indicare per aree costruite con tombe di famiglia mutuamente connesse



SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - PARAMETRI DI VULNERABILITA'

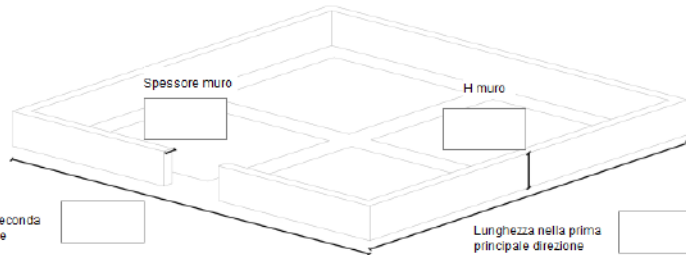
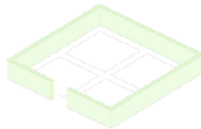
C19 - DESCRIZIONE SINTETICA DELLA CAPPELLA FUNEBRE STORICA

Dati generali Tipo di cappella pianta centrale <input type="checkbox"/> aula unica <input type="checkbox"/> 3 o più navate <input type="checkbox"/>		Posizione isolato <input type="checkbox"/> Connesso con colombari <input type="checkbox"/> su lati <input type="text"/>		Altezza muri laterali bassa (<6m) <input type="checkbox"/> media (tra 6 e 12m) <input type="checkbox"/> alta (>12m) <input type="checkbox"/>	
Caratteristiche della fabbrica facciata a vela <input type="checkbox"/> elementi svettanti <input type="checkbox"/> presenza di archivolto <input type="checkbox"/>		Materiali costruttivi buona qualità <input type="checkbox"/> cattiva qualità <input type="checkbox"/>		Trasformazioni trasformazioni architettoniche storiche <input type="checkbox"/> interventi recenti <input type="checkbox"/>	
Stato di manutenzione della cappella buono <input type="checkbox"/> medio <input type="checkbox"/> scadente <input type="checkbox"/>					



C20 - DESCRIZIONE SINTETICA DEL MURO DI CINTA STORICO

Materiali muratura in laterizio <input type="checkbox"/> muratura in pietrame o tufo <input type="checkbox"/>		Caratteristiche presenza di speroni, contrafforti, pilastri <input type="checkbox"/> non connesso a colombari <input type="checkbox"/>		Dati dimensionali Numero segmenti <input type="text"/>	
Caratteristiche costruttive cattiva qualità <input type="checkbox"/> buona qualità <input type="checkbox"/>		Stato di manutenzione buono <input type="checkbox"/> medio <input type="checkbox"/> scadente <input type="checkbox"/>		Lunghezza libera massima tra pilastri o angoli <input type="text"/>	
Lunghezza libera media tra pilastri o angoli <input type="text"/>					



SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AL MURO DI CINTA

C22 - DANNO AL MURO DI CINTA

RECINTO



NB. Effettuare una virtuale numerazione dei segmenti che compongono le ali del cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto

Ogni segmento va selezionato (num segmento) se il meccanismo di collasso in esame è possibile in quel segmento

Il livello di danno va segnato per ogni segmento selezionato. Segnare 0 in presenza di danno nullo ma di scarsa vulnerabilità

IL NUMERO ASSEGNATO AD OGNI LATO DEL MURO DI CINTA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

22_MM1_RIBALTAMENTO DEL MURO DI CINTA



Num. Lato Danno (da 0 a 5)

lato 1

lato 2

lato 3

lato 4

foto 1

Num. Lato Danno (da 0 a 5)

lato 5

lato 6

lato 7

lato 8

foto 2

Num. Lato Danno (da 0 a 5)

lato 9

lato 10

lato 11

lato 12

foto 3

Num. Lato Danno (da 0 a 5)

lato 13

lato 14

lato 15

lato 16

foto 4

...

22_MM2_ESPULSIONE DEL CANTONALE



Num. Angolo Danno (da 0 a 5)

1

2

3

4

foto 1

Num. Angolo Danno (da 0 a 5)

5

6

7

8

foto 2

Num. Angolo Danno (da 0 a 5)

9

10

11

12

foto 3

Num. Angolo Danno (da 0 a 5)

13

14

15

16

foto 4

...

ALTRO

Num. Lato Danno (da 0 a 5)

lato 1

lato 2

lato 3

lato 4

foto 1

Num. Lato Danno (da 0 a 5)

lato 5

lato 6

lato 7

lato 8

foto 2

Num. Lato Danno (da 0 a 5)

lato 9

lato 10

lato 11

lato 12

foto 3

Num. Lato Danno (da 0 a 5)

lato 13

lato 14

lato 15

lato 16

foto 4

...

OK

Cancel

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AI COLOMBARI

C23 - DANNO AI COLOMBARI

COLOMBARIO



Valutare tutti i meccanismi

Non considerare:
MC1;MC4;MC5;MC6;MC8; MC9



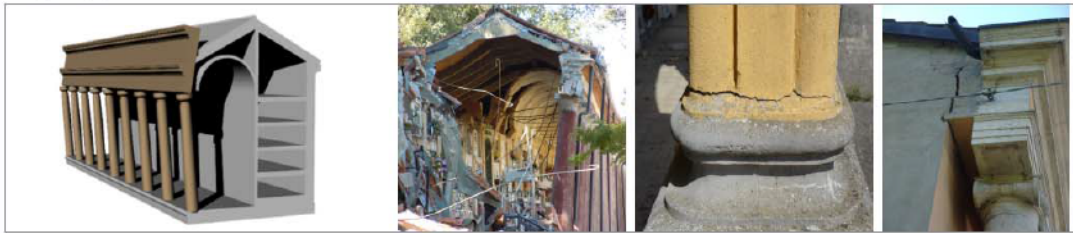
NB. Effettuare una virtuale numerazione dei segmenti che compongono le ali del cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto

Ogni braccio va selezionato (num braccio) se il meccanismo di collasso in esame è possibile in quel braccio

Il livello di danno va segnato per ogni braccio selezionato. Segnare 0 in presenza di danno nullo ma di sola vulnerabilità

NB IL NUMERO ASSEGNATO AD 1 BRACCIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

23_MC1_RIBALTAMENTO DEL PORTICO



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

...

23_MC2_RIBALTAMENTO DELLE SOLUZIONI D'ATTICO E DEI FRONTONI



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AI COLOMBARI

C23 - DANNO AI COLOMBARI

23_MC3_RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI/SVETTANTI



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

...

23_MC4_DANNO DA SCHIACCIAMENTO AGLI ELEMENTI PUNTUALI (COLONNE/PILASTRI)

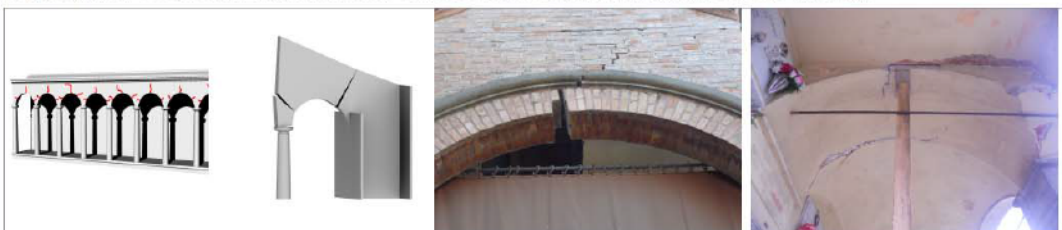


Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

...

23_MC5_RISPOSTA DELLE ARCADE DEL PORTICO (da considerarsi in entrambe le sue direzioni)



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AI COLOMBARI

C23 - DANNO AI COLOMBARI
23_MC12_DANNO DA INTERAZIONE



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

...

23_MC13_ALTRO

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

...

23_MC14_ALTRO

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

...

23_MC15_ALTRO

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

...

23_MC16_ALTRO

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI ELEMENTI DI PASSAGGIO

C24B - DANNO AGLI ELEMENTI DI PASSAGGIO

ELEMENTI DI PASSAGGIO



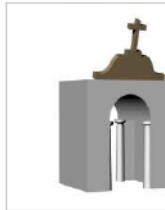
NB. Effettuare una virtuale numerazione degli elementi di passaggio che compongono il cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto.

Ogni elemento va selezionato (num. el. pass) se il meccanismo di collasso in esame è possibile in quel elemento.

Il livello di danno va segnalato per ogni elemento selezionato. Segnare 0 in presenza di danno nullo e di sola vulnerabilità.

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

23_ME1_RIBALTAMENTO DELLE FACCIATE EL. DI PASS 23_ME2_RIBALTAMENTO DEGLI ELEMENTI SVETTANTI



Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

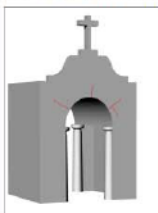
foto 2

foto 1

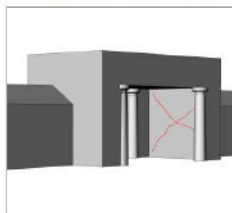
foto 2

...

23_ME3_DANNI AD ARCHI ED ARCHITRAVI



23_ME4_EFFETTI DI TAGLIO NELLE PARETI



Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

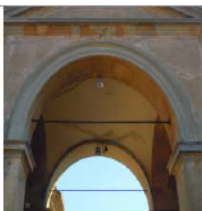
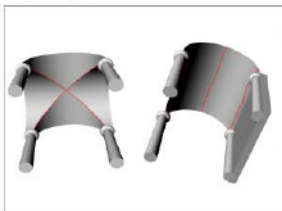
foto 2

foto 1

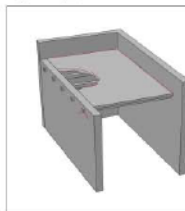
foto 2

...

23_ME5_DANNO ALLE VOLTE



23_ME6_DANNO AGLI IMPALCATI PIANI



Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

foto 2

foto 1

foto 2

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI ELEMENTI DI PASSAGGIO

C24B - DANNO AGLI ELEMENTI DI PASSAGGIO

23_ME7_DANNO ALLE CUPOLE



foto 1

foto 2

_____ ... _____ ...

Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

23_EP1_ALTRO

23_EP2_ALTRO

Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

foto 2

foto 1

foto 2

_____ ... _____ ... _____ ... _____ ...

23_EP3_ALTRO

23_EP4_ALTRO

Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

foto 2

foto 1

foto 2

_____ ... _____ ... _____ ... _____ ...

23_EP5_ALTRO

23_EP6_ALTRO

Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5) Num. el. pass Danno (da 0 a 5)

<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1

foto 2

foto 1

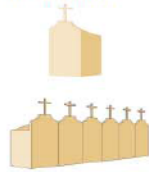
foto 2

_____ ... _____ ... _____ ... _____ ...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLE TOMBE DI FAMIGLIA

C25 - DANNO ALLE TOMBE DI FAMIGLIA

TOMBE DI FAMIGLIA



NB. Effettuare una virtuale numerazione degli elementi di passaggio che compongono il cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolti verso il cimitero da destra a sinistra per ogni recinto.

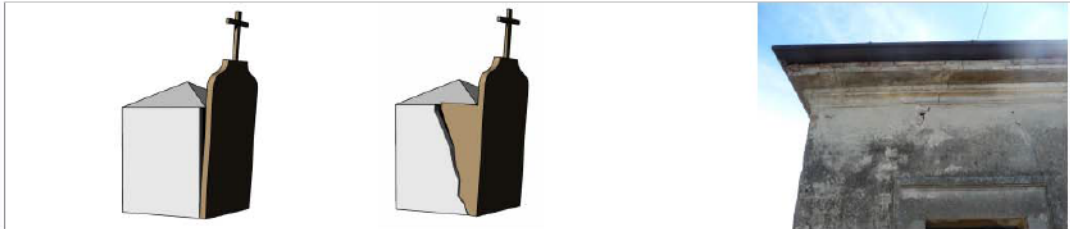
Selezionare le tombe (num tomba fam) solo se effettivamente danneggiate ma indicare preliminarmente il numero di tombe totali.

Il livello di danno va segnato per ogni elemento selezionato. Segnare 0 in presenza di danno nullo e di sola vulnerabilità.

NUMERO TOTALE DI TOMBE PRESENTI

NB IL NUMERO ASSEGNATO AD OGNI TOMBA DI FAMIGLIA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

23_MT1_RIBALTAMENTO DELLE PARETI PERIMI



Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1	<input type="text"/>	<input type="checkbox"/> t. 5	<input type="text"/>	<input type="checkbox"/> t. 9	<input type="text"/>	<input type="checkbox"/> t. 13	<input type="text"/>	<input type="checkbox"/> t. 17	<input type="text"/>	<input type="checkbox"/> t. 21	<input type="text"/>	<input type="checkbox"/> t. 25	<input type="text"/>
<input type="checkbox"/> t. 2	<input type="text"/>	<input type="checkbox"/> t. 6	<input type="text"/>	<input type="checkbox"/> t. 10	<input type="text"/>	<input type="checkbox"/> t. 14	<input type="text"/>	<input type="checkbox"/> t. 18	<input type="text"/>	<input type="checkbox"/> t. 22	<input type="text"/>	<input type="checkbox"/> t. 26	<input type="text"/>
<input type="checkbox"/> t. 3	<input type="text"/>	<input type="checkbox"/> t. 7	<input type="text"/>	<input type="checkbox"/> t. 11	<input type="text"/>	<input type="checkbox"/> t. 15	<input type="text"/>	<input type="checkbox"/> t. 19	<input type="text"/>	<input type="checkbox"/> t. 23	<input type="text"/>	<input type="checkbox"/> t. 27	<input type="text"/>
<input type="checkbox"/> t. 4	<input type="text"/>	<input type="checkbox"/> t. 8	<input type="text"/>	<input type="checkbox"/> t. 12	<input type="text"/>	<input type="checkbox"/> t. 16	<input type="text"/>	<input type="checkbox"/> t. 20	<input type="text"/>	<input type="checkbox"/> t. 24	<input type="text"/>	<input type="checkbox"/> t. 28	<input type="text"/>

[foto 1]

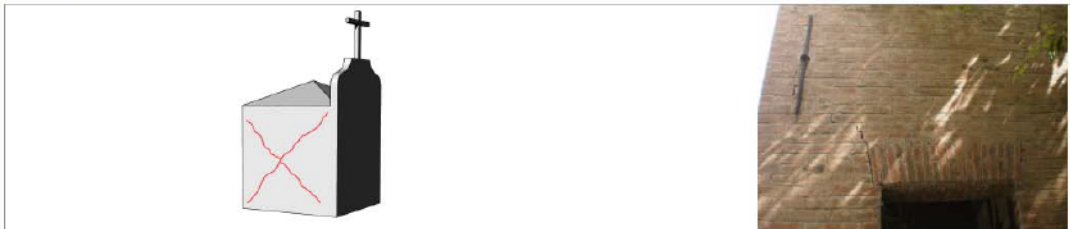
[foto 2]

[foto 3]

[foto 4]

...

23_MT2_MECCANISMI DI TAGLIO NELLE PARETI PERIM



Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1	<input type="text"/>	<input type="checkbox"/> t. 5	<input type="text"/>	<input type="checkbox"/> t. 9	<input type="text"/>	<input type="checkbox"/> t. 13	<input type="text"/>	<input type="checkbox"/> t. 17	<input type="text"/>	<input type="checkbox"/> t. 21	<input type="text"/>	<input type="checkbox"/> t. 25	<input type="text"/>
<input type="checkbox"/> t. 2	<input type="text"/>	<input type="checkbox"/> t. 6	<input type="text"/>	<input type="checkbox"/> t. 10	<input type="text"/>	<input type="checkbox"/> t. 14	<input type="text"/>	<input type="checkbox"/> t. 18	<input type="text"/>	<input type="checkbox"/> t. 22	<input type="text"/>	<input type="checkbox"/> t. 26	<input type="text"/>
<input type="checkbox"/> t. 3	<input type="text"/>	<input type="checkbox"/> t. 7	<input type="text"/>	<input type="checkbox"/> t. 11	<input type="text"/>	<input type="checkbox"/> t. 15	<input type="text"/>	<input type="checkbox"/> t. 19	<input type="text"/>	<input type="checkbox"/> t. 23	<input type="text"/>	<input type="checkbox"/> t. 27	<input type="text"/>
<input type="checkbox"/> t. 4	<input type="text"/>	<input type="checkbox"/> t. 8	<input type="text"/>	<input type="checkbox"/> t. 12	<input type="text"/>	<input type="checkbox"/> t. 16	<input type="text"/>	<input type="checkbox"/> t. 20	<input type="text"/>	<input type="checkbox"/> t. 24	<input type="text"/>	<input type="checkbox"/> t. 28	<input type="text"/>

[foto 1]

[foto 2]

[foto 3]

[foto 4]

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLE TOMBE DI FAMIGLIA

C25 - DANNO ALLE TOMBE DI FAMIGLIA

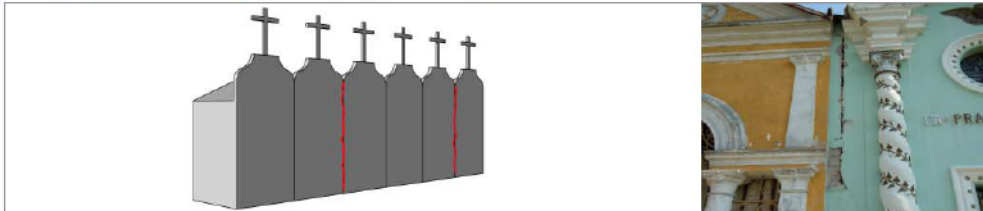
23_MT3_RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI



Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1		<input type="checkbox"/> t. 5		<input type="checkbox"/> t. 9		<input type="checkbox"/> t. 13		<input type="checkbox"/> t. 17		<input type="checkbox"/> t. 21		<input type="checkbox"/> t. 25	
<input type="checkbox"/> t. 2		<input type="checkbox"/> t. 6		<input type="checkbox"/> t. 10		<input type="checkbox"/> t. 14		<input type="checkbox"/> t. 18		<input type="checkbox"/> t. 22		<input type="checkbox"/> t. 26	
<input type="checkbox"/> t. 3		<input type="checkbox"/> t. 7		<input type="checkbox"/> t. 11		<input type="checkbox"/> t. 15		<input type="checkbox"/> t. 19		<input type="checkbox"/> t. 23		<input type="checkbox"/> t. 27	
<input type="checkbox"/> t. 4		<input type="checkbox"/> t. 8		<input type="checkbox"/> t. 12		<input type="checkbox"/> t. 16		<input type="checkbox"/> t. 20		<input type="checkbox"/> t. 24		<input type="checkbox"/> t. 28	

[foto 1] [foto 2] [foto 3] [foto 4]

23_MT4_INTERAZIONI TRA TOMBE DI FAMIGLIA ACCOSTATE



Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1		<input type="checkbox"/> t. 5		<input type="checkbox"/> t. 9		<input type="checkbox"/> t. 13		<input type="checkbox"/> t. 17		<input type="checkbox"/> t. 21		<input type="checkbox"/> t. 25	
<input type="checkbox"/> t. 2		<input type="checkbox"/> t. 6		<input type="checkbox"/> t. 10		<input type="checkbox"/> t. 14		<input type="checkbox"/> t. 18		<input type="checkbox"/> t. 22		<input type="checkbox"/> t. 26	
<input type="checkbox"/> t. 3		<input type="checkbox"/> t. 7		<input type="checkbox"/> t. 11		<input type="checkbox"/> t. 15		<input type="checkbox"/> t. 19		<input type="checkbox"/> t. 23		<input type="checkbox"/> t. 27	
<input type="checkbox"/> t. 4		<input type="checkbox"/> t. 8		<input type="checkbox"/> t. 12		<input type="checkbox"/> t. 16		<input type="checkbox"/> t. 20		<input type="checkbox"/> t. 24		<input type="checkbox"/> t. 28	

[foto 1] [foto 2] [foto 3] [foto 4]

23_MT5_ALTRO

Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1		<input type="checkbox"/> t. 5		<input type="checkbox"/> t. 9		<input type="checkbox"/> t. 13		<input type="checkbox"/> t. 17		<input type="checkbox"/> t. 21		<input type="checkbox"/> t. 25	
<input type="checkbox"/> t. 2		<input type="checkbox"/> t. 6		<input type="checkbox"/> t. 10		<input type="checkbox"/> t. 14		<input type="checkbox"/> t. 18		<input type="checkbox"/> t. 22		<input type="checkbox"/> t. 26	
<input type="checkbox"/> t. 3		<input type="checkbox"/> t. 7		<input type="checkbox"/> t. 11		<input type="checkbox"/> t. 15		<input type="checkbox"/> t. 19		<input type="checkbox"/> t. 23		<input type="checkbox"/> t. 27	
<input type="checkbox"/> t. 4		<input type="checkbox"/> t. 8		<input type="checkbox"/> t. 12		<input type="checkbox"/> t. 16		<input type="checkbox"/> t. 20		<input type="checkbox"/> t. 24		<input type="checkbox"/> t. 28	

[foto 1] [foto 2] [foto 3] [foto 4]

23_MT6_ALTRO

Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)	Num. tomba fam	Danno (da 0 a 5)
<input type="checkbox"/> t. 1		<input type="checkbox"/> t. 5		<input type="checkbox"/> t. 9		<input type="checkbox"/> t. 13		<input type="checkbox"/> t. 17		<input type="checkbox"/> t. 21		<input type="checkbox"/> t. 25	
<input type="checkbox"/> t. 2		<input type="checkbox"/> t. 6		<input type="checkbox"/> t. 10		<input type="checkbox"/> t. 14		<input type="checkbox"/> t. 18		<input type="checkbox"/> t. 22		<input type="checkbox"/> t. 26	
<input type="checkbox"/> t. 3		<input type="checkbox"/> t. 7		<input type="checkbox"/> t. 11		<input type="checkbox"/> t. 15		<input type="checkbox"/> t. 19		<input type="checkbox"/> t. 23		<input type="checkbox"/> t. 27	
<input type="checkbox"/> t. 4		<input type="checkbox"/> t. 8		<input type="checkbox"/> t. 12		<input type="checkbox"/> t. 16		<input type="checkbox"/> t. 20		<input type="checkbox"/> t. 24		<input type="checkbox"/> t. 28	

[foto 1] [foto 2] [foto 3] [foto 4]

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLA CAPPELLA FUNEBRE

C26 - DANNO ALLA CAPPELLA FUNEBRE

CAPPELLA FUNEBRE



I DANNI DELLA CAPPELLA FUNEBRE SONO ESTRATTI DALL'ABACO DEI MECCANISMI DI COLLASSO DELLE CHIESE

LA MODALITA' DI COMPILAZIONE E' ANALOGAA QUELLA DELLA RISPETTIVA SCHEDA

23_MF1_RIBALTAMENTO FACCIATA

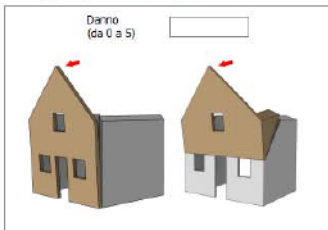


foto 1

...

23_MF2_MECCANISMI DI SOMMITA' FACCIATA

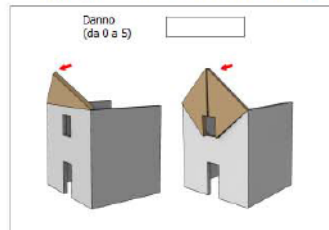


foto 1

...

23_MF3_MECCANISMI NEL PIANO FACCIATA

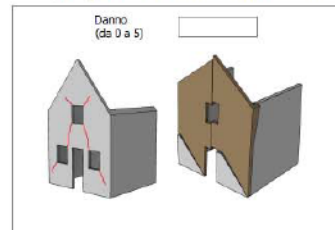


foto 1

...

23_MF4_PROTIRO/NARTECE

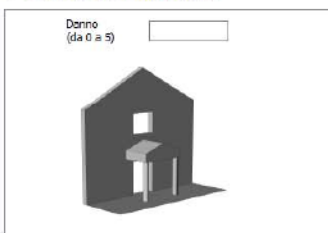


foto 1

...

23_MF5_RISPOSTA TRASVERSALE DELL'AULA

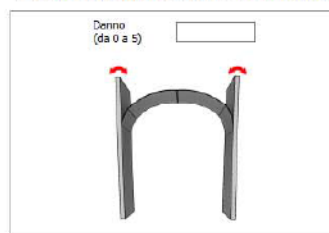


foto 1

...

23_MF6_TAGLIO PARETI LATERALI

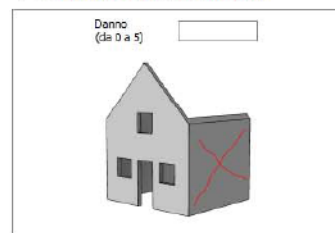


foto 1

...

23_MF7_VOLITE AULA / NAVATA CENTRALE

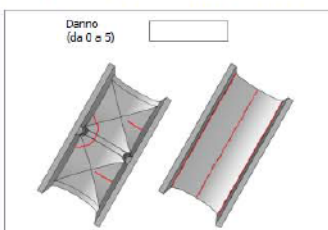


foto 1

...

23_MF8_ARCHI TRIONFAU

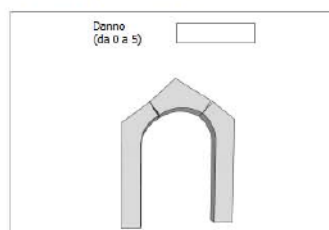


foto 1

...

23_MF9_CUPOLA E TAMBURO / TIBURIO

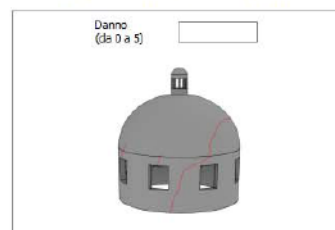


foto 1

...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLA CAPPELLA FUNEBRE

C26 - DANNO ALLA CAPPELLA FUNEBRE

23_MF10_LANTERNA

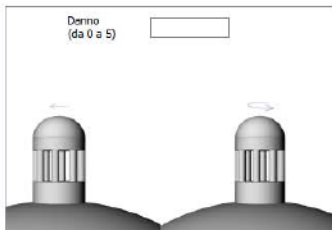


foto 1

23_MF11_RIBALTAMENTO ABSIDE

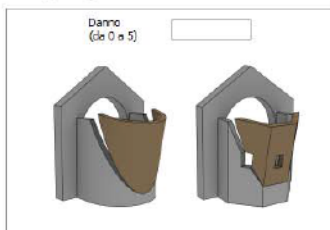


foto 1

23_MF12_MECCANISMI DI TAGLIO NELL'ABSIDE

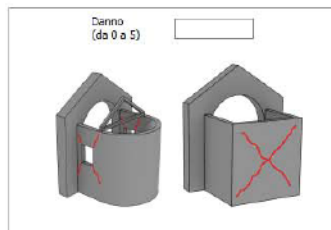


foto 1

23_MF13_VOLTE DEL PRESSBITERIO / ABSIDE

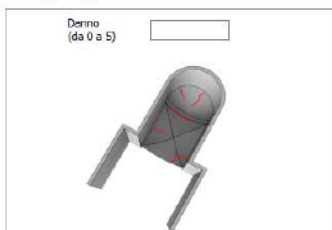


foto 1

23_MF14_ELEMENTI DI COPERTURA: AULA

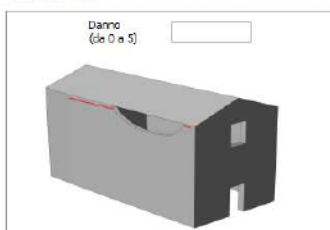


foto 1

23_MF15_ELEMENTI DI COPERTURA: ABSIDE

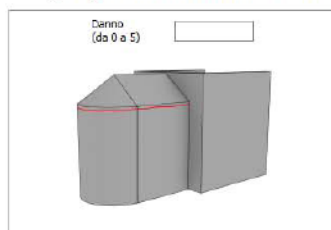


foto 1

23_MF16_AGGETTI (VELA, GUGLIE, PINNACOLI, STATUE)

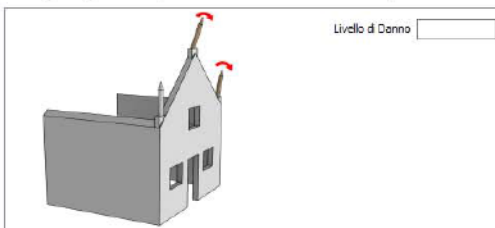


foto 1

23_MF17_INTERAZIONI IN PROSSIMITA' DI IRREGOLARITÀ

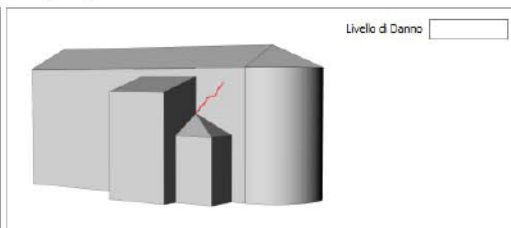


foto 1

ALTRO

- RISPOSTA LONGITUDINALE COLONNATO
- VOLTE DELLE NAVATE LATERALI
- RIBALTAMENTO PARETI DEL TRANSETTO
- MECCANISMI DI TAGLIO DEL TRANSETTO
- VOLTE DEL TRANSETTO
- ELEMENTI DI COPERTURA: TRANSETTO

DANNO

ALTRO DESCRIZIONE

DANNO

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - AGIBILITÀ

C27 - AGIBILITÀ

AGIBILE <input type="radio"/> INAGIBILE <input type="radio"/> Indicare le parti agibili	PARZIALMENTE AGIBILE <input type="radio"/> Indicare le parti agibili	AGIBILE CON PROVVEDIMENTI <input type="radio"/> Señalare i provvedimenti anche indicandoli nella tabella sottostante	TEMPORANEAMENTE INAGIBILE <input type="radio"/> Indicare operazioni aggiuntive (visita più accurata, vista di esperti ...)	INAGIBILE PER CAUSE ESTERNE <input type="radio"/> Indicare le cause esterne
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

C28 - PROVVEDIMENTI DI P.I. SUGGERITI (interventi limitati/ interventi estesi)

Revisione manto di copertura	<input type="text"/>	Ricristallo smaltimento delle acque meteoriche	<input type="text"/>
Copertura provvisoria	<input type="text"/>	Monitoraggio	<input type="text"/>
Puntellamenti	<input type="text"/>	Protezioni o consolidamenti su opere d'arte fisse	<input type="text"/>
Rimozione delle macerie	<input type="text"/>	Catalogazione e smontaggio delle parti pericolanti	<input type="text"/>
Transennamenti / recinzioni / protezioni	<input type="text"/>	Sgombero opere d'arte mobili	<input type="text"/>
Consolidamenti localizzati	<input type="text"/>	Raccolta sistematica dei frammenti	<input type="text"/>
Messa in opera di cerchiatura e/o tiranti	<input type="text"/>	Ricovero e protezione dei frammenti	<input type="text"/>

C29 - TIPO DI VISITA

COMPLETA PARZIALE SOLO DALL'ESTERNO MOTIVI OSTATIVI

C - 30 NOTE

Indicare, eventualmente, altri danni non rilevabili dalla scheda (es. soffi di capsetto, pavimentazioni ecc.)

A CURA DELL'UFFICIO

INDICE DI DANNO	<input type="text"/>	QUANTIFICAZIONE OPERE DI CONSOLIDAMENTO E MIGLIORAMENTO SISMICO	<input type="text"/>
INDICE DI VULNERABILITÀ	<input type="text"/>	QUANTIFICAZIONE OPERE DI RESTAURO	<input type="text"/>
		QUANTIFICAZIONE OPERE DI PRONTO INTERVENTO	<input type="text"/>

7.4 On-site survey optimization: Survey123 vs Qfield

- **Introduction**

Once the structure and the fields which were necessary for the construction of the damage form had been defined, we optimized them for the on-site survey through specific apps interfacing with GIS systems.

The main approach to GIS system involved management through open-source software that does not tie the usage and distribution of the form to a purchase licence. Nonetheless, the opportunities for optimization in app were explored through both the Survey123 app of Arcgis, a licensed system, and the Qfield app, one of the two open-source apps designed for Qgis. The Input app was not considered, since the methods of optimization are similar to those for the Qfield app regarding the same GIS software support – with the restriction, however, of using limited free server space for data transmission through the cloud (100 mega). Furthermore, one of the shortcomings of Qfield is the absence of data transmission via the cloud; therefore, in March 2022, Qfield launched a beta version aimed at solving this issue.

We then explored the potential of the two instruments mentioned above. The aim was not to verify the feasibility of on-site surveying on digital media but rather to assess each app's ability to satisfy the fundamental requirement of usability (Krug, 2000). More generally, we wanted to gain insight into the kind of User Experience (UX)¹ the apps can offer when used to convey the content previously outlined. Indeed, the Internet of Services (IoS), one of the four main components that represent the key points in the development of Industry 4.0 (Hermann et al., 2016), through web technologies enables the use of services² that are enriched with “*new added values*” (Hofmann& Rüsçh, 2017).

As early as 2016, GIS systems adapted to this new business paradigm and started to develop applications and systems that could expand their offerings. Since 1982, the market has moved toward services increasingly customer-oriented. In such a context, the SaaS producers have steered their services partly towards the field of support for on-site survey operations, providing applications for improving the process in terms of efficiency and effectiveness (Peruzzini & Pellicciari, 2017). However, since these services can be used in many areas (planning, architecture, risk analysis, dissemination...), the same application can generate various human responses regarding the three levels of design (Norman, 2004). In this case it is not only a question of tool usability but also of the interaction with the tool.

In relation to the above point, the form digitalization acquires real meaning within the process only if the effectiveness of the tool - in communicating the content of the form, in

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 1 ISO 9241-210 defines user experience as “a person’s perceptions and responses that result from the use or anticipated use of a product, system or service”.

2 Meaning by the term service: “a commercial transaction where one party grants temporary access to the resources of another party in order to perform a prescribed function and a related benefit. Resources may be human workforce and skills, technical systems, information, consumables, land and others” (Barros & Oberle, 2012).

orienting the decision-making process (Presidenza del Consiglio dei Ministri, 2009: 11), and in being an agile tool (Lagomarsino et al., 1997) - is improved, or at least maintained, with the transposition of the project from paper to device. Consequently, if the digitalization of the form does not result in a UX that makes the process effective, the prerequisite for considering it as an improvement is not fulfilled.

Finally, considering the shift in design toward human-centred designs, one might think that the implementation of an app, or a system, specifically created for damage survey by ministry officials may represent the best solution. However, while this option may be considered for the short term, the actual use of the app over a long period makes this solution the least suitable. By making operating systems quickly obsolete, technological progress in the mobile device sphere requires continuous updating and maintenance of applications by the developers. This maintenance is already included in the terms of use in the case of the investigated software. In the end, in the balance between the application's UX and its long-term use, the prevalence of the former would result in subsequent difficulties with the latter. For these reasons, the outcomes and main design choices that were implemented in the transposition of the form within the selected GIS app were as listed below.

- **Survey123**

Project via app setup

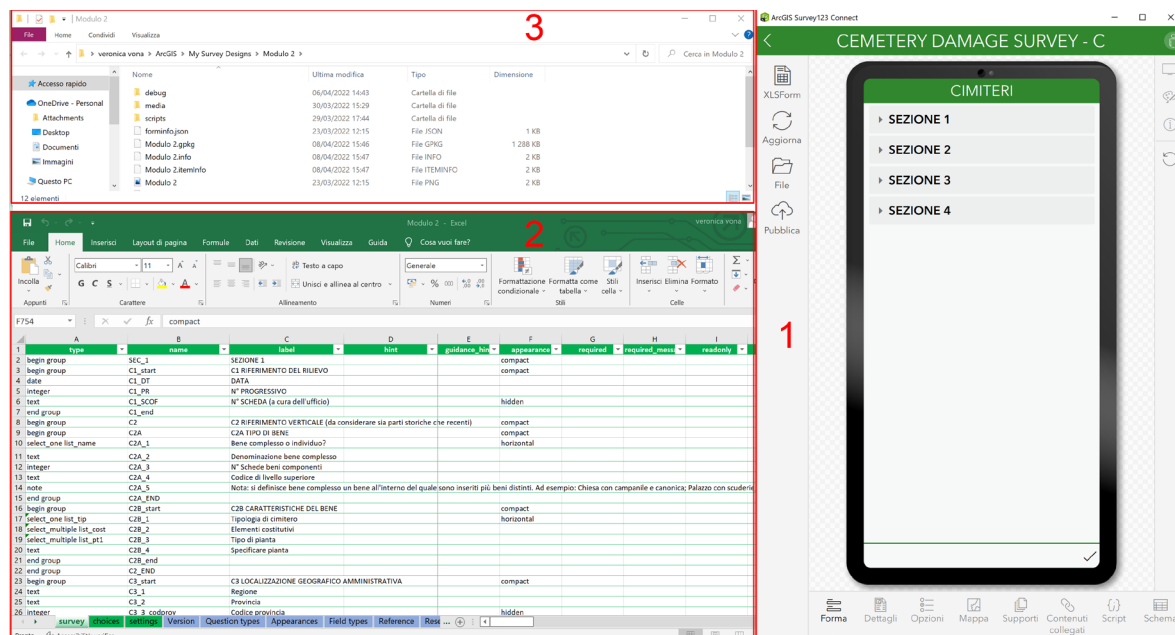


Fig.31. Setting up work in the Survey123 Connect app. In addition to the application window (1), the excel file to be filled in for complex surveys (2) and the storage folder created by the software (3) are shown.

The app is designed to carry out simple surveys through the user's own web account or, where necessary, to prepare more complex forms. In the first case, through an immediately manageable web interface, it is now possible to group the questions one intends to submit within the form and other simple functions. In the second case, dealing with more complex questionnaires, it is necessary to use a desktop app called Survey123 Connect, which is linked to an Excel sheet specifically designed to configure a form readable by the app. The

connection between the survey form and the Excel sheet is immediate, and when the Excel sheet is updated, the form is automatically refreshed, and the result can be viewed.

Although the sheet requires knowledge of specific syntax, once the basic rules are understood it is possible to create complex surveys – which even enable the inclusion of audio notes to help the compilation. To facilitate the integration of external formats, when a new survey module is created, the program sets up a folder in which all the files must be inserted that will be used to create the survey questionnaire, including the Excel file. This choice ensures an immediate and efficient transmission of the project to all users, thus eliminating the risk of loss or incorrect transmission of data enabling the project.

App layout for section and sub-section management

From the outset the cemetery form has been defined through four macro sections: general data, parameters for vulnerability, damage, and judgement of practicability. These sections are themselves divided into sub-sections. Through the provision of 'group' fields, the application is enabled to make elements and sub-elements easily distinguishable by the user. Once one of the macro sections displayed at the start of the survey is opened, the different questions appear to be embedded within blocks, headed with the topic of the questions. Each block can be expanded and minimized again as needed.

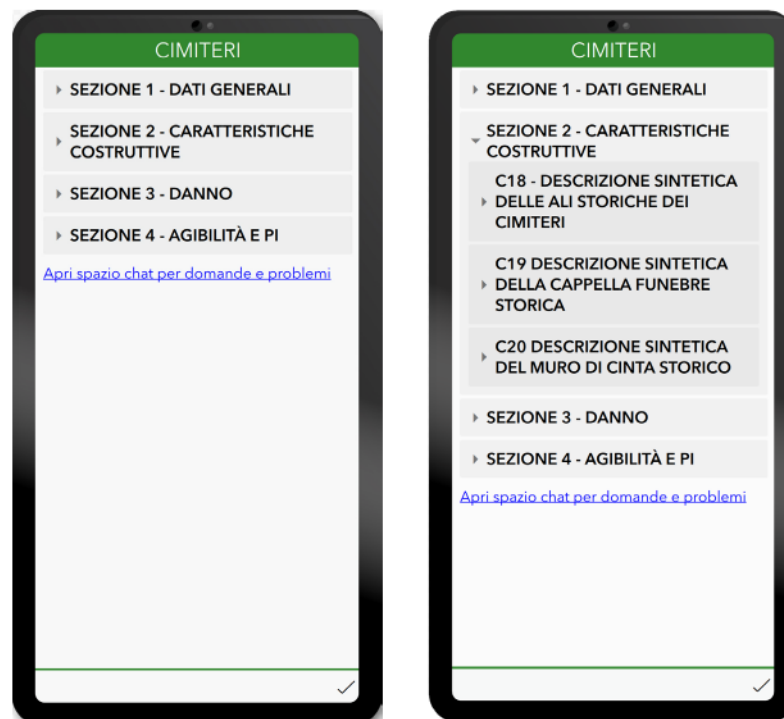


Fig.32. Section and subsection appearance in Survey123.

Graphics management of single-choice and multi-choice questions

Survey123 implements in its structure the typical graphical design that distinguishes single-choice criteria (round symbols) and multi-choice criteria (square symbols) . It retranslates the classic checkbox or map-value elements of a GIS projects into this current and well-known coding.

Fig.33. Typical coding of survey forms: circles for single-choice and squares for multiple-choice answers.

Creation of cascading modules

To simplify the survey, the software enables the introduction of constraints necessary for the activation of so-called cascading elements. These are mathematical expressions in SQL language that trigger the visualization of a field only in connection with a particular answer in a previous question. This opportunity was used to streamline the survey by not showing all questions unless necessary. For example, regarding macro section 3, which is dedicated to damage, if it is opened at the beginning of the survey, it will appear empty. In fact, the damage modules are only intended to be opened according to the macro elements identified in section C17 of the General Data Macro section. In this manner, only damage sections that are consistent with the components present in the cemetery under investigation will be displayed.

Fig.34. Image of a cascade module. On the left the section is empty as there is no item selected in field C17. On the right, the section is populated according to the elements identified in C17.

Georeferencing

Survey123 is mainly focused on the questionnaire to be answered rather than on a GIS project and therefore does not display any map below it. The georeferencing of the element during the on-site surveying is achieved by filling in a field generated through the Excel format, which, depending on the definition (geopoint – geotrace – geoshape), will enable generating the geometrical entity in the database. In relation to the type of format chosen, a map then is opened in which the operator can place a point, a line or an area. Due to the nature of the data, this field was included in sub-section C3, which corresponds to the sub-section of geographic–administrative location in all existing forms.

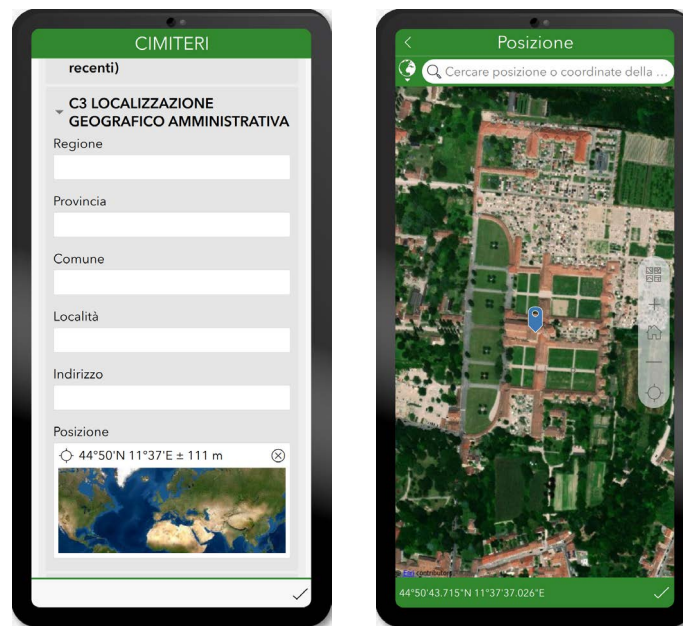


Fig.35. Section C3, in the field "Position" is included the geolocalization of the surveyed elements. It could be a point, a line and an area according to the possible shapes in the GIS systems.

Image data as an integrated and functional element of the survey form

Survey 123 allows extremely versatile management of the images supporting the survey form. The images can be incorporated to complete and support the tasks in two ways. The first is the direct inclusion of images as 'notes' fields through the dedicated space ('media:image'). In this way, it was possible to insert both schemes of typical damages and example images that can help surveyors in classifying the damages. The images were then directly displayed within the questionnaire when filling it out.

Another option for including images is to insert them as media icons for multi-choice criteria questions. In this case, again, it is possible to include images associated with the single elements of the multi-choice criteria through the compilation of a special field always named 'media:image', but positioned within the sheet designated for the definition of multi-choice criteria.

There are two cautionary notes to consider when entering images into Survey123. The first concerns the storage system. The images to be inserted within the survey must be contained within the project's 'media' folder so that they can be read within the survey questionnaire. Second, although it is possible to use any image format (such as. jpeg or

.tiff), the visualization is achieved through the viewer system of the device on which the application is installed. For this reason, images with transparencies or certain other formats may not be displayed on mobiles and tablets although they appear visible on a PC.



Fig.36. Examples of image use in the form.

On-site photo acquisition

The app provides for the acquisition of different types of images during survey operations. Setting the field as an image enables the developer to decide, through the 'appearance' attribute, what type of image is to be acquired. By leaving the field blank, Survey123 Connect automatically translates the field into the application as images captured from the camera of the device. Besides that, no further settings are required since the images are automatically saved within the project folder once captured.



Fig.37. Photo capturing appearance in Survey123.

Support to the survey form by implementing freehand drawings

Another option is the ability to use the image field not only from capturing photos but also to use it for other purposes. For example, there is an interesting opportunity to use freehand drawing through an image type field. This option enabled us to add a freehand-drawn sketch field for the survey as requested by some tester. This was designed as a field to be filled in as a support for the numbering of the different elements for that damage section. For example, once the participant opens the columbarium damage survey section, a blank page can be opened where a sketch of the building can be drawn and the numbering of the various elements can be noted.



Fig.38. The free-hand drawing field included in the Survey123 project.

Management of repeated questions

The damage survey form for complex building structures requires the repetition of the same group of questions – the damage questions – for a variable number of times, depending on the size of the surveyed buildings. This is a variable design feature of the app that can be managed by creating a number of fields for each repeating question judged suitable for describing the buildings, or alternatively a so-called ‘repeat’ form can be implemented. A ‘repeat’ field type enables the description of highly complex buildings without numbering and decomposition constraints, significantly simplifying the design definition and the on-site surveying.

In this case, by including questions that must be repeated within a ‘repeat’ type group, Survey123 is able to multiply almost indefinitely the number of times these may be repeated. In addition, the app enables a constraint on the number of repetitions depending on previous fields. Therefore, to avoid repeats in greater or lower numbers than the number of elements present in the cemetery, an additional survey field was included to provide a restriction on the repetitions. Following the field that allows the user to perform a sketch, the user is asked to enter the number of elements detected, which automatically determines the number of repetitions to be performed. To force the completion of this field, a restriction was introduced whereby the repeat module for every damage mechanism is not activated until a number is

entered in the field. This setting was duly marked in the description. However, it should be noted that a repeat-type module is not included in the cemetery feature layer, but it is a table layer or another feature layer (when a geotag is inserted in the repeat module) connected to the main layer through a special relationship. Thus, it is not a record inside the main layer but attached to it, and it is automatically generated by the application when the survey is uploaded to the server.

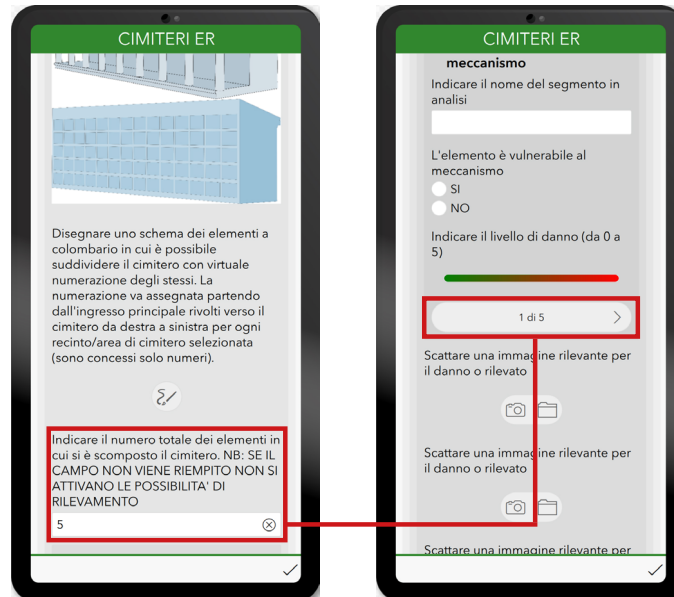


Fig.39. The restriction field included for the management of the repetition modules.

Customizations

From a general point of view, not much customization of the survey form is possible. Background or text colours can be changed, but without deriving any real advantage in the UX. However, among the customizations that use colour, there is an interesting opportunity involving range-type fields.

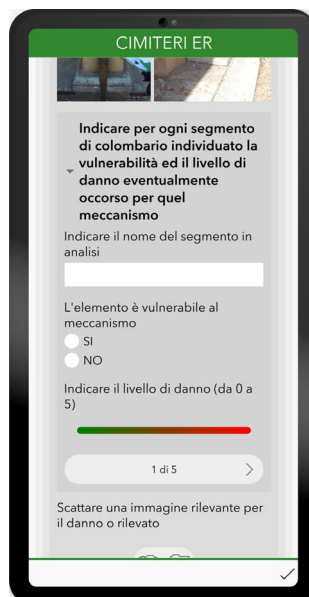


Fig.40. The damage level displayed through a colour scale from green (level 0) to red (level 5).

Survey123 additionally allows the display of a field such as a scale-bar, which can also be customized by assigning a scale-colour. This option is useful during damage level assessment, where it has been set up as a scale-bar supported by the colour to emphasise a higher or lower level of damage.

Connection to external elements for managing incidental issues

Survey123 is already set up to collaborate with other Esri applications dedicated to monitoring the activities of survey teams. For example, it can connect with Arcgis Workforce, Arcgis Field Maps and Arcgis Dashboard. In addition, in the settings of Survey123, the option to automatically send an email reporting the conclusion of the survey can be activated. However, the possibility of opening rapid communication channels within the Esri web space – which would be a highly useful element for solving problems or special issues during the on-site survey – is not yet provided. Nonetheless, within the app this option can be implemented through the ability to connect with additional external applications. It is also possible to set up a 'notes' field, which – through a simple Python language expression – is able to launch another element that opens. In this case there are various linking options. For example, a link can be made to an external website with a chat service available as well. The site could be an institutional website, such as that of a municipality or ministry, if it has instant messaging chat. Alternatively, the possibility of creating a private chat space within the chat spaces of institutional emails was tested, and a link to this area was made. Accordingly, surveyors can be invited to the private space and have access to the messaging service by being able to ask questions or verify whether the question has already been asked and the solution is already available. The link can be placed anywhere in the form. In this case, for example, it is a field outside all sections that can be activated as needed.

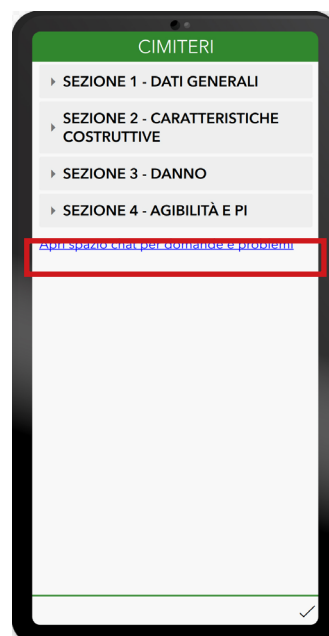


Fig.41. Link to an external spaces for chatting.

Transfer from PC to mobile device

The use of Survey123 in each of its components, from the Survey123 Connect PC application to the Survey123 for mobile device, requires the activation of an Arcgis account. This setup

simplifies PC-to-device transfer operations. In fact, transferring a project to Survey123 is accomplished entirely via the web. Once the project has been set up and verified on the PC, it is then possible to publish the survey form. This action triggers the transfer of the project within the web space connected to the account. During this step, the PC software generates all the feature layers which will be filled during on-site surveying; for this reason, the software advises that no further changes should be applied to the form structure once the transfer is finished.

The published form becomes an Arcgis Online item and can be downloaded to mobile devices when entering the Download Surveys section from mobile app. Once this is done, it is possible to begin surveying operations by selecting the form the user intends to complete and dragging the bar labelled 'collect'. After completing the survey, when the user attempts to exit, the application asks whether to proceed to send the completed form immediately or to save it locally and transmit it later. Finally, the submitted surveys always enter the web space as Arcgis Online items; they can later be downloaded for desktop and offline use in whatever formats are deemed appropriate, from shapefiles to reports.

- **Qfield**

Project via app setup

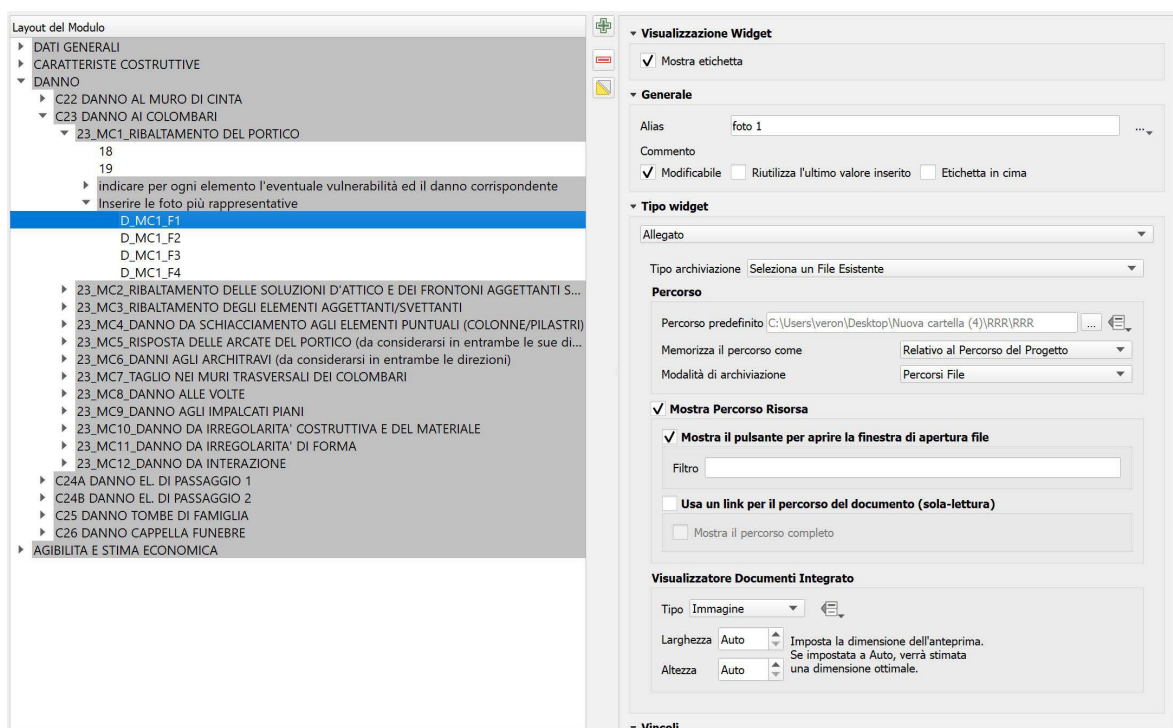


Fig.42. Setting up work in the Qfield app. The app use the attribute form of Qgis.

Qfield is based on the creation of the Qgis project with the necessary elements for the survey. This approach to the realization of the on-site survey module prefers the definition of the geopackage and the base-map to the survey data. It is therefore necessary to indicate at least one base-map, which cannot be edited during the survey operations, as well as the other layers to be loaded in the project. With the basic setting of the Qgis project established, the survey from the app should then be configured through the designer of the 'attributes form' properties inside Qgis.

Hence, the field definitions of the geopackage related to the survey module configure its appearance on external digital media. From this interface it is possible to set up the macro-sections and sections, the field types (text, multiline text, number, image, checkbox, value map etc) and in general the different data related to the visualization of the module on the device. This work approach requires not only a clear definition of the content of the survey but also good knowledge of the Qgis software.

App layout for sections and sub-sections management

The app is capable of interpreting the creation of the first level of grouping as macro-sections. However, within each of the four macro-sections of the form, the basic graphic of Qfield – which is rigid and rather chaotic – does not allow the creation of sub-groupings. The contents of the latter are placed together and separated only by a grey label which indicates the transition from one sub-grouping to another.

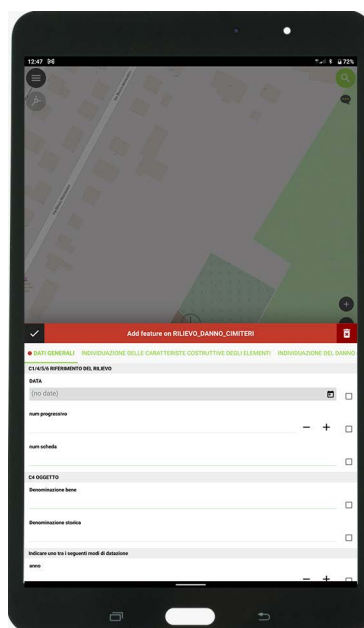


Fig.43. Section and subsection appearance in Qfield (in light green the section and in grey the subsection).

Graphics management of single-choice and multi-choice questions

Initially, Qfield enabled the creation of multi-choice items by defining a 'value relation' box or allowed checkboxes to detect single-choice items. However, from the first version to the second, the application had a definite setback. Nowadays, multi-select viewing is no longer possible, and fields set in the widget as checkboxes are displayed through bars that can be dragged to change the value that is intended. These values are either the possible values for the field or the words 'true/false.'



Fig.44. Check box appearance in Qfield.

This graphical choice is not a particularly effective solution, for several reasons. First, the values intended to be displayed as checkboxes in GIS projects are usually realized through a 1-length number type field whose compilation is based on a binary code, indicating with 1

the selected state and with 0 the deselected state. By using this value as a formal aspect, the meaning may not be immediately understood by the surveyors. In addition, the 'true/false' answer is not always relevant to the questions in the survey, and even where it is, clear communication is not always guaranteed. A further downside is dependence upon the checkbox symbol used by the developers as an item that is automatically generated next to each question in the survey, which shows whether a question has been answered or not. During the app testing, it was possible to verify that in the presence of a field thought to be a checkbox, several times the 'item-answer' box was incorrectly selected instead of dragging the bar to change the field from 'false' to 'true'.

Creation of cascading modules

Qfield implements cascading modules. These are achieved by inserting the necessary expressions in SQL within the 'visibility control through expression' box of the attribute form. Again, all the related modules are set up to make the surveying operations effective and streamlined.

Georeferencing

Strictly depending on Qgis project, in Qfield the cartography is the first thing displayed when the file is opened. Only once the editing of the feature layer has been accessed is it possible to operate using both the tabular and geometric data. First, the user must define the area of the survey - the geometric entity of the database - modifying it if already preloaded or creating it. Only then is it possible to access the compilation of tabular data (i.e., the associated survey form).

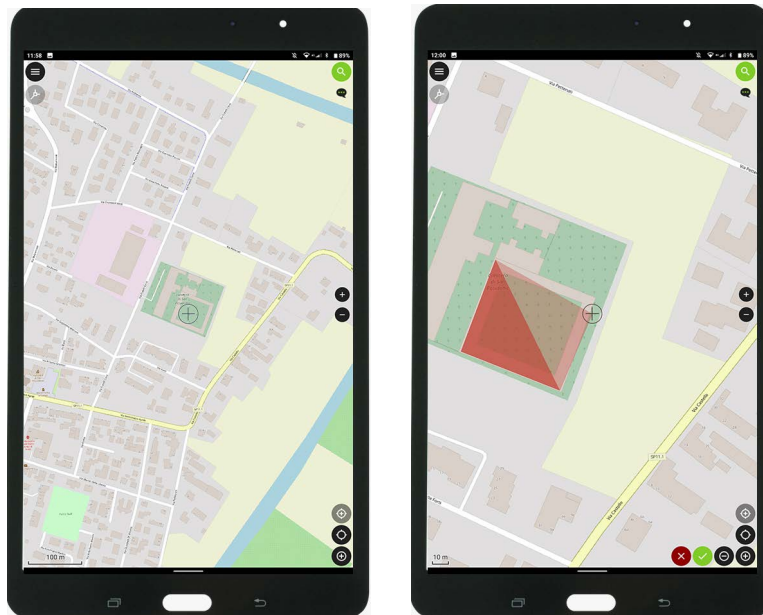


Fig.45. The georeferencing is the first action required by the app.

Image data as an integrated and functional element of the survey form

On Qfield, as already mentioned, the management of the attributes form on Qgis defines the settings of the survey form. In this case, the creation of fixed-content fields is the only way to ensure that for each new feature added, the app automatically re-populates the attribute table with identical content, such as images supporting the form. This section of

the attributes form does not support multimedia content but only textual or numeric content. Therefore, to achieve the inclusion of images within the GIS project, it was necessary on the one hand to create a table layer for managing image data, and on the other hand to act on the cemeteries layer. Accordingly, a table layer was generated containing only two fields: the image field and an ID field. Once the support layer was populated with all the images, the editing ability was disabled, and an attribute form was created displaying only the image field. Moreover, on the layer created for the on-site survey, further fields were added to those already arranged for the desktop project. For each new element designed, they generated (as a fixed value) the value of an image ID as encoded in the table layer. Finally, a 1-N relationship was created and included in the attributes form. In this way, every time new data is collected, the fixed-value fields are populated with the ID values of the images from which the relation fields can refer to display the corresponding image.

However, once the project is imported to the mobile device, the image data is displayed inside the survey as a string, and it is necessary to click on it to see the content. This requirement leads to a lack of effectiveness in the immediate communication of the content. By contrast, on the desktop project, the images are displayed as soon as the layer is opened.



Fig.46. The image visualization in Qfield for the pre-uploaded elements.

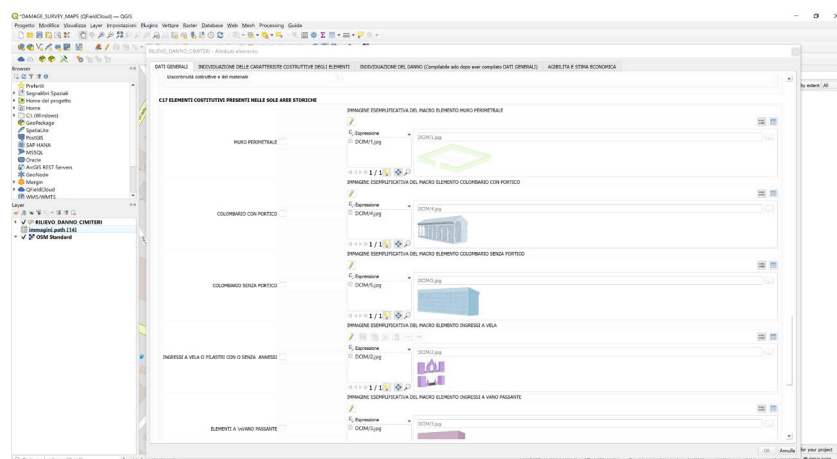


Fig.47. The image visualization in QGIS.

On-site photo acquisition

The application is able to transform the 'attachment' widget for the text fields selectable in the attributes form into an image capture field during damage survey operations. However, for the acquired photos to be retransmitted when the survey is completed, it is necessary to set up the requisite arrangements, from defining the path as 'relative' to displaying the field as an image within the widget. The work folder in which the elements are collected must also be set from the beginning and recalled whenever the widget of a field is changed in 'attached'.

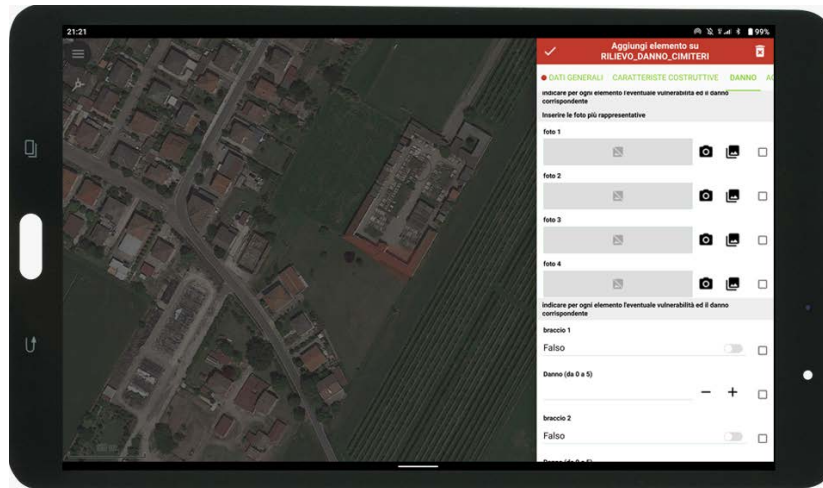


Fig.48. Photo capturing appearance in Qfield.

Support for the survey form through freehand drawings

Qfield does not support the integration of images drawn on the device within its system.

Management of repeated questions

The generation of repeated modules is possible within Qfield and is realized, similarly to Survey123, as external tabular data. In Survey123 it is sufficient to indicate in the Excel file the creation of a repetition module, and once the data is published the application automatically creates this module into a table layer linked to the main feature layer. By contrast, in Qfield, it is necessary to create the table layer and the relationship with the feature layer. Similar to image management, the relationship of the 'repeat' modules is also 1-N type.

Customizations

Qfield does not support within its system any customizations that can be configured in the attributes form of Qgis, whether colour or any other.

Connection to external elements for managing incidental issues

To date, Qfield is not connected or linkable with other applications that would enable monitoring of survey operations. While Qgis is able to link to external sites through the use of 'Actions' commands that can be attributed to each individual layer, Qfield has not implemented the reading of such commands within its own system. Indeed, we observed that whereas the link field to a messaging area could be activated through the desktop, this

field was not retranslated and displayed on Qfield.

PC to mobile device transfer

Qfield is designed for manual transfer of the work folder. However, in recent months the software developers have launched a version for server-based transfer. We tested both the Qfield apps, namely the app in use and its beta version (called QfieldCloud). The latter, indeed, as Input app, allows the user to perform the transfer through the server after having subscribed, currently without limitations in storage capacity. In both cases, it is first necessary to download and install the Qfield plugin within Qgis. Then, it is necessary to convert the project from a Qgis project to a Qfield project, an operation that modifies the storage standard in geopackage, if needed. In the beta application, using the plugin on Qgis makes it possible to upload the project on the server through an internet connection and download it on the device using the same server account.

Alternatively, it is possible to use the traditional method, that is, sending the project by email or on a personal cloud and then downloading it. In its new version, Qfield is able to read projects from zipped files, so that once the zipped folder is downloaded, the project can still be opened. Finally, should be noted that in the current project, the transfer via server did not produce the expected results. Because it is designed only for transfer via mail, if Survey123 automatically creates a folder containing all the necessary data (including those related to images), thereby ensuring the preservation of all the links, QfieldCloud will create the folder of images only after the collection of these on the app. As a result, it becomes difficult to preserve the links created for the supporting images. Moreover, when transforming data, QfieldCloud tends not to modify and transfer any folder prepared by the user. Hence, it is possible to verify the presence of the image collection folder and its correct transfer only by proceeding to the manual transfer of the project. Since Qfield Cloud is still in beta testing, this problem will probably be solved in due course.

Once the project is on the device, the user can collect data. This step is triggered by selecting the layers icon at the top of the screen (showing the available feature layers) and then changing the setting from the map icon to the pen icon. Thereafter, the user is able to draw or edit the geometry of the object and fill out the form.

- **Conclusions**

The two apps for on-site survey optimization differ markedly from each other in their settings and in the survey outcomes. Some elements – such as the camera image collection or the implementation of the ‘repeat’ modules – lead to the same results in terms of streamlining, agility and communication of the mobile device survey project. However, in many other respects the results demonstrated that one of the two software applications is more suitable and responsive to the research requirements stated above. The ability to convey the communicative instances and language typical of survey forms within its own structure makes Survey123 more suited to the purpose of a damage survey. Moreover, this is combined with connectivity to other applications, which created an efficient network to support activities, both surveying and communication, and an ease of web-based form transmission not yet fully achieved by Qfield. In addition, the graphical layout for modules and sub-modules of Survey123 provided more immediate identification of thematic groups

of questions by simplifying the responses, whereas Qfield's graphics, in the presence of complex questionnaires, complicates the reading of the form.

The single critical reflection on the settings of Survey123 arises from the georeferencing field. As already explained, the project is translated into a feature layer only upon publication. The coding of the feature type depends on the inclusion of a geopoint, geotrace or geoshape field within the Excel form. The risk is that survey forms may be prepared which overlook the purpose of a GIS system, which is to connect geometric-spatial data to information data to perform spatial or tabular analysis. This can happen by accidentally omitting that type of field in the structure. When one subtracts from a questionnaire the ability to relate spatial information to a table, one generates a system that is no longer a GIS system but is instead a simple database – such as an Access or Excel document. In this case one would still obtain a useful database for economic quantification or damage assessment, but it would become more challenging to display the results of damage scenario analysis.

Overall, Qfield is not expected to reach the levels of customization of Survey123 in the short term. Some rethinking (such as the restoration of the classic view of the combo box) and improvements (such as a simpler image management) can be achieved; however, even with those adjustments, until the basic graphics are improved, Survey123 will remain the most suitable tool for digital surveying in the GIS application scenario for on-site activities. Moreover, the result obtained with Survey123 in terms of the optimization of survey procedures outweighed the economic outlay required to purchase a licence, although the level of customization is not comprehensive.

In conclusion, it is not by chance that Arcgis online applications are already being used by some Italian institutions, such as INGV. The software provides a UX well calibrated to the kind of data these institutions have to collect and transmit.

Finally, a further implementation that would be worth striving for is the verification of the form by the OUs in the office during on-site activities. The Survey123 system today provides for the survey to be viewed only once it has been submitted. This is equivalent to the team having already left the survey site, thus not allowing them to make verification and changes to the form if needed. The chat channel included during the study had as its starting point a request for support from the survey team; indeed, it is this request which initiates the chat. The potential to turn this into a dual-flow path would further the achievement of the goal of a survey that is as correct and homogeneous as possible, simultaneously improving the proper distribution of resources.

CHAPTER 8

Conclusion



On the previous page the cemetery of Cerreto d'Esi (Marche region)

8.1 Summary of the present work

This research presents an contribution to the improvement of damage survey procedures both in terms of response in seismic emergencies and in terms of a proactive approach for more conscious seismic risk mitigation. Starting from the analysis of the data from the Emilia-Romagna 2012 earthquake, the research focused on a specific building type: the cemetery type.

The Emilia-Romagna region, severely affected by the 2012 earthquake, has undoubtedly had a great critical ability to react, despite the unexpected calamity¹. Not only did it complete the emergency management launched by the DPC, but it also set up and maintained an impressive technical and administrative machine to manage the reconstruction. Within this machine, all the criticalities of the previous phase come to light and generate problems delaying building reconstruction. Nevertheless, in 10 years Emilia-Romagna has been able to reach almost the end of its work due to its ability to critically analyse its activities and its policies to solve them. It is precisely from this analytical capacity that the framework of this study emerged. Indeed, among the activities of the emergency phase, the damage survey of cultural heritage is the most critical, due to the inadequacy of existing tools. This was true in 2012 and again in 2016, after the Central Italy earthquake. The study and analysis of the application of these tools has revealed, in fact, the need both to rethink some of the operating tools and to seek alternative solutions in the case of buildings that differ typologically from those for which the tools were designed.

The analysis of several factors led to the identification of the historical cemetery type as the topic of study. This particular type has been identified as the most sensitive to problems of damage assessment. Widely investigated from an anthropological point of view, cemeteries have rarely been the subject of architectural or structural studies. Even when present, these studies have mainly focused on the relationship between cemeteries and cities and on the role the former have played in the development of the latter. From the point of view of seismic damage, however, it is no longer possible to postpone studies on this type of building, for which seismic damage is compounded by health and functional problems that cannot be resolved with the tools normally available for other cultural heritage.

The type was therefore initially framed from a historical, anthropological and morphological point of view, then also typologically. These analyses were reinterpreted from a structural point of view to arrive at the definition of homogeneous areas both structurally and architecturally, so as to identify what Doglioni calls macro-elements (Doglioni et al., 1994) for cemeteries. Starting from the cemeteries damaged in the 2012 earthquake, for which the regional agencies provided their available material, the collapse mechanisms that occurred following the 2012 earthquake were identified and their occurrence was also analysed. These operations have led to the definition of the minimum elements necessary for the creation of a survey tool for damage only, specifically designed for cemetery buildings.

To identify the data required to carry out vulnerability analyses with a territorial approach, the relationship between the constructive features of the cemeteries and the damage that

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¹ The area had not been hit by such a strong earthquake since the one that destroyed the city of Ferrara in 1570. Other events had occurred over time, but all of minor importance and with less damage.

occurred was subsequently investigated. This process initially examined the scientific literature for vulnerability analyses, which were lacking in the context of cemeteries (Fig. 1).

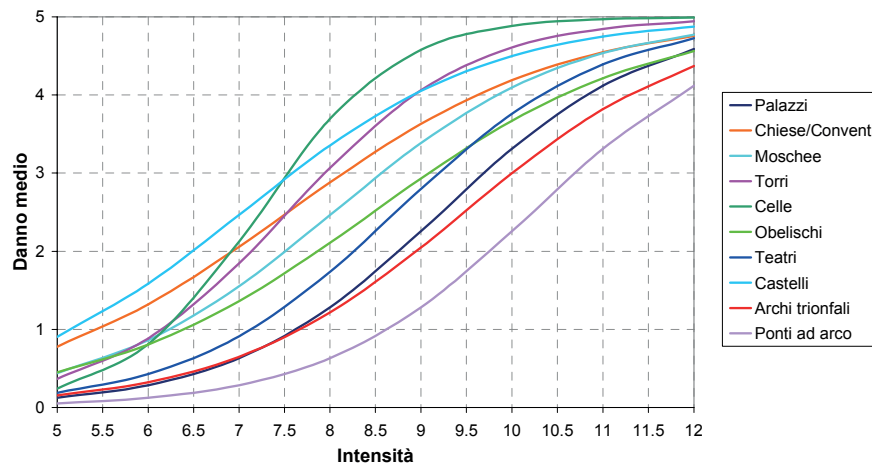


Fig.1. Fragility curves for several types (Lagomarsino & Podestà, 2005). The cemetery is not included in the previous studies

On the basis of methodological approaches already widespread and shared by the scientific community, a study was carried out to analyse seismic vulnerability also for this type of building. The results provided a further element for the preparation of a scheduling tool aimed not only at the survey of the damage but also providing useful support in decision-making processes for seismic risk mitigation. Indeed, it is in land governance that vulnerability analyses on a territorial scale have their greatest potential. A more conscious understanding of vulnerability at a large scale is among the most important tools to address seismic risk mitigation policies, which are now the basis of almost every intervention on existing buildings.

The collected data allowed a new first-level form for cultural heritage to be structured which would satisfy both the aims of this study. In line with other similar tools, the proposed new form was designed to address territorial surveys on vulnerability, as well as the quantification of damage in structural and economic terms, the basic principle of damage assessment tools.

In accordance with the twofold objective of this research, the form was integrated into GIS tools for the management of digital cartography. On the one hand, this integration allows certain human mistakes typical of survey forms such as miscalculations to be overcome. On the other hand, the structuring in a GIS environment also allows for an easy interface with the cartography of Emilia-Romagna and, in particular, with the cartography linked to the post-earthquake reconstruction works. This tool, the result of several analyses, should nevertheless be understood as an initial, albeit advanced, step in the development of cemetery knowledge. Many limitations to the analyses have in fact emerged over time. These limitations have often been accepted and integrated within the proposed form from the perspective of future development. Thereby, it can be considered a tool in development. However, a tool open to modification is natural for any first iteration. Twenty years were necessary to permanently adopt the tool for the damage survey of churches, and the same number of years can also be applied to the AeDES forms for the survey of ordinary buildings. Undoubtedly, the long refinement process of these tools means that certain errors that troubled the processes yesterday will not be repeated today.

Eventually, as for every tool in the field of seismic damage, even in the case of the damage survey form for historic cemeteries, only further investigation and real use in the emergency phase will reveal additional directions for progressive improvement.

8.2 Future developments

During the development of the tool, limitations to the research emerged on several occasions, due generally to the territorially circumscribed nature of the cemeteries that could be closely investigated. These were expressed in the identification of both the data for the damage assessment and for vulnerability analyses. The produced results were then collected in the form, drafted with the awareness that further steps can still be taken to develop the elements not appropriately represented within the set of cemeteries investigated. This improvement can be achieved only by expanding the number of cemeteries analysed/detected, especially if they are located in other contexts.

From the point of view of the damage section, further studies can be completed on the macro-elements that suffered the least damage, the family tombs in both single and aggregate form, or on those not represented by a sufficient number of elements, such as columbaria without porticoes. The presence of these macro-elements was also correctly identified in the survey set, but the low percentage of recurrence of both damage and macro-element itself did not allow a real definition. These elements, however, are more relevant than what is actually displayed by the investigated set, especially in different geographical areas for which they could also present different constructive features (Figs. 2-4)



Fig.2. Cemetery of Poggio Cupro (AN). Columbaria without porch built on sloping ground. Ph Arch. Marta Zannotti



Fig.3. Cemetery of Grottaglie (TA). Family tomb with non-trusting roof but high projecting elements. Ph Riccardo Annicchiarico



Fig.4. Cemetery of Nove (VI). Family tomb with dome. Ph Arch. Stefano Tessarolo

The enlargement of the damaged cemeteries will also offer a chance to revise the vulnerability analysis protocol. In this sense, the form already allows for the acquisition of the most important vulnerability features among those found to be irrelevant for the investigated cemeteries. Data such as the ground morphology, the state of maintenance and, above all, the roofing type, currently not included in the vulnerability index, are nevertheless included among the data to be collected. The use of the form in other contexts will therefore allow for a widened and refined curve of the expected mean damage through which evaluations in the field of risk mitigation can be executed. Currently, the curve identified fits well for high intensity earthquake damage estimates, but is rougher at medium–low intensities. This difference is largely caused by the density of the survey clusters. The inclusion of parameters for other damaged cemetery types through further analysis could significantly change the predictive capacity of the current curve.

A final consideration may concern the technical aspect of the form's development. The proposed tool has been developed on two-dimensional GIS software, currently managed by all the Italian territorial authorities. However, in the future the evolution to Open GML systems may constitute a further development of the form. This kind of software, as applied to the urban scale², can create three-dimensional representations of the built environment based on different levels of detail. These can also be implemented through specific attributes that can collect particular information: ADEs³. One of the first ADEs developed was that for energy building analysis, known as Energy ADE (Agugiaro et al., 2018), but ADEs have also been studied for the representation of cultural heritage (Noardo, 2016).

From this point of view, an interesting implication may be the study and the setup of an ontology created specifically for damage surveys and vulnerability analyses. The definition of an ADE aimed to collect all those data related to these topics could generate standards allowing the association of specific attributes according to the macro-elements' identification. This development, for example, could simplify the survey tasks by allowing for the activation of specific vulnerabilities, once a microelement is recognised and assigned. The surveyor would then have only to indicate the damage. Such a definition would still be strongly based on the judgement of the surveyor, but would tend to limit mistakes such as failure to detect intrinsic vulnerabilities. It also would facilitate operations. Furthermore, the level of detail to be identified for the preparation of the basic GML should not be higher than the first two LODs⁴. Indeed, the aim would not be the real representation of the building but the implementation of an open data transmission system to interface with different tools, from GIS to BIM.

Finally, this operation could be applied to all existing damage survey forms, for cultural heritage (A-DC and B-DP form), and for basic buildings (AeDES).

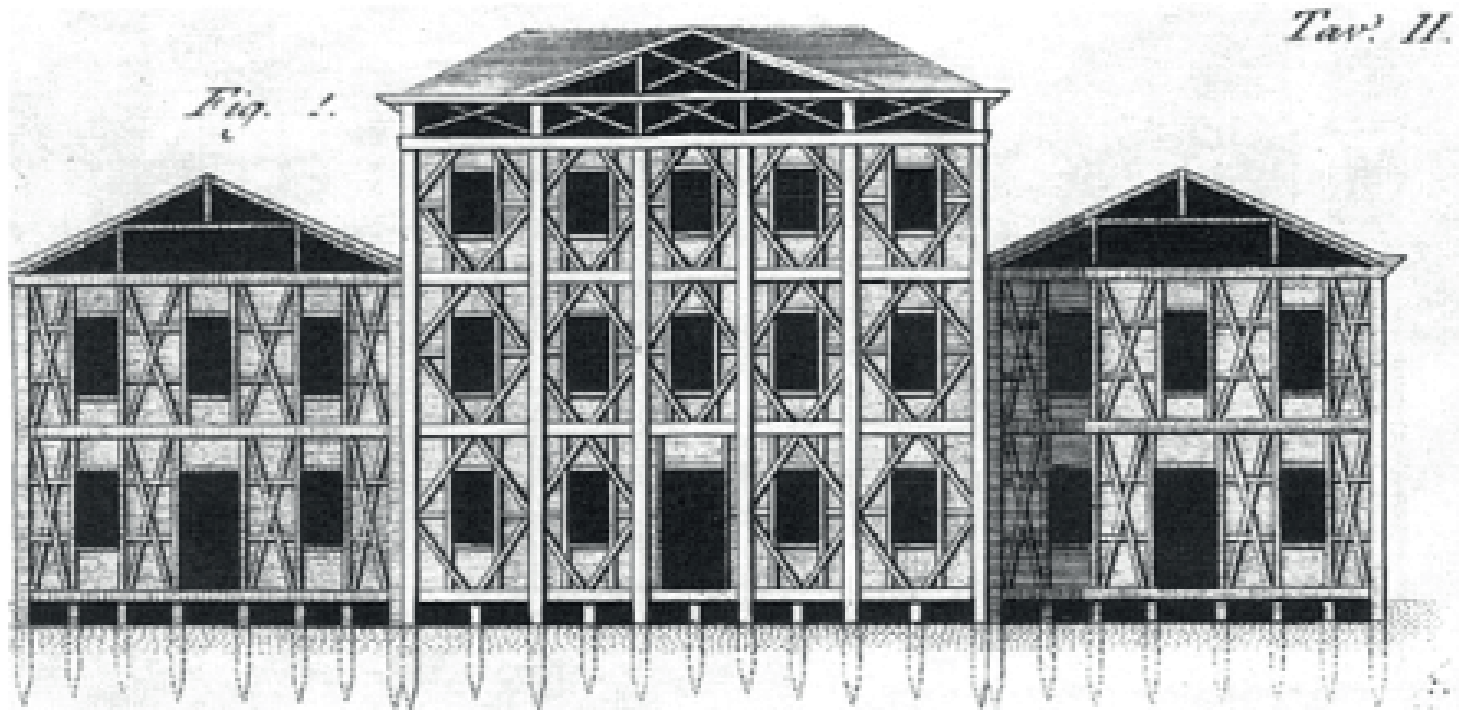
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² We therefore refer to a standard such as OGC CityGML, open standard for 3D city models intended to foster interoperability among application

³ The Application Domain Extension (ADE) is a built-in mechanism created to augment the data model with additional concepts required by particular use cases.

⁴ Level of Development, The LOD represent the degrees of detail that are achievable in a representation. In the case of CityGML there are 5 LODs.

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Excerpts of Vivenzio, 1783.

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R.2 *Webliography - essential websites*

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<https://ingv.it/>

<https://emidius.mi.ingv.it/>

Annexes

ANN 1

Classes for each parameter which were associated to the cemetery cluster

ANN 2

Studies of the classes

ANN 3

Form fulfilled for Concordia sulla Secchia Cemetery

ANN 4

First Cemetery form prototype used during the experimentation

ANN 5

Interview model submitted to surveyors

On the previous page the cemetery of Scheggia (Marche region)

Ann.1. Classes for each parameter which were associated to the cemetery cluster

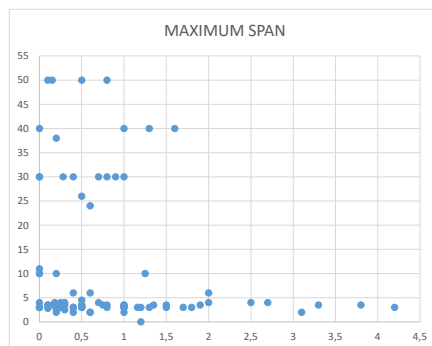
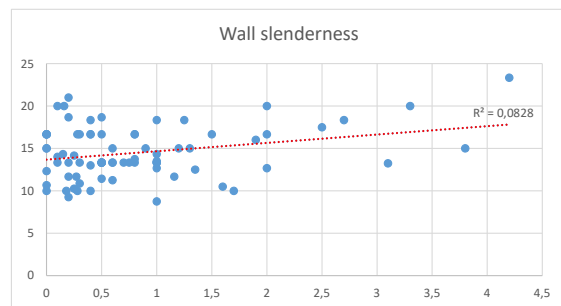
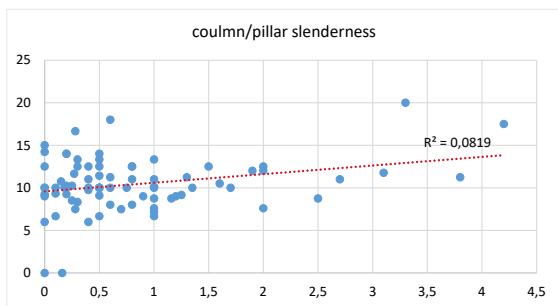
NOME CIMITERO	P1	P2A	P2B	P3	P4	P5	P6	P7	P8	P9	P10	P11	D	lms
CIMITERO DI BONDENO	4	2	2	3	1	4	3	3	3	3	1	3	3,8	5/6
CIMITERO DI PILASTRI	2	4	2	1	1	1	4	3	2	4	2	3	0,6	5/6
CIMITERO DI SCORTICHIINO	1	3	1	1	1	1	2	3	3	3	1	1	0,2	5/6
CIMITERO DI BASTIGLIA	2	2	2	3	1	4	1	2	2	3	1	3	0,5	5
CIMITERO DI SOLARA	4	2	3	2	1	3	1	2	2	3	2	3	0,4	5
CIMITERO DI BONPORTO	4	2	2	1	1	3	1	3	2	3	2	3	1	5
cimitero di santa croce (carpi)	4	2	1	2	1	4	2	2	4	4	1	3	1,16	6
CIMITERO DI SAN NICOLA CARPI	4	2	2	3	1	3	1	3	2	4	1	3	0,8	6
CIMITERO DI CORTILE	2	4	3	3	1	2	2	3	3	3	3	3	3,3	6
CIMITERO DI FOSSOLI	2	2	1	2	1	2	2	2	3	2	1	3	0,5	6
CIMITERO DI PIUMAZZO	4	2	1	4	1	2	1	2	2	3	1	3	0,6	4
CIMITERO DI CAVEZZO	4	2	1	3	1	4	2	1	2	4	1	2	0,18	7
CIMITERO DI DISVETRO	4	3	3	2	1	2	1	3	4	3	1	3	1,8	5
CIMITERO DI MOTTA	1	2	3	4	1	2	1	2	3	4	2	3	0,4	5/6
CIMITERO DI FOSSA	2	3	3	2	1	2	2	2	2	3	4	3	0,8	5/6
CIMITERO DI CONCORDIA SULLA SECCHIA	2	4	4	2	1	4	2	2	4	4	4	3	4,2	7
CIMITERO DI VALLALTA	4	2	2	2	1	2	2	2	4	3	4	3	1,3	5/6
CIMITERO DI SAN GIOVANNI	2	2	2	2	1	2	2	2	4	3	1	3	1	7
SANTA CATERINA	2	2	2	4	1	2	2	2	2	3	4	2	2	7
MASSA FINALESE	2	2	3	3	1	2	2	3	2	4	1	3	2,7	5/6
MIRANDOLA	1	3	2	2	1	3	2	2	3	4	1	3	3,1	7
CIMITERO DI NONANTOLA	4	3	2	2	1	2	2	2	2	4	3	2	0,27	5
CIMITERO DI RAVARINO	4	2	1	2	1	2	4	3	2	4	3	3	0,28	5
CIMITERO DI SAN FELICE SUL PANARO lotto storico	2	3	3	3	1	4	2	2	2	4	1	2	2	7
CIMITERO DI SAN FELICE SUL PANARO lotti più recenti	2	4	3	3	1	1	2	2	2	3	4	3	0,7	7
SAN PIETRO IN ELDA	2	2	3	3	1	2	1	3	2	2	1	3	0,1	6
SAN PROSPERO	1	1	3	3	1	2	1	2	1	4	1	1	0,16	5
SAN PIETRO IN VINCOLI	1	2	2	1	1	2	2	4	3	4	1	3	0,5	5
CIMITERO DI SOLIERA	2	2	2	1	1	2	2	4	3	4	1	3	1,3	
CIMITERO DI SOZZIGALLI	4	2	2	1	1	2	2	3	4	4	3	3	0,9	5
CIMITERO DI CENTO	2	3	3	2	1	3	2	3	2	2	1	3	1,5	6
CIMITERO DI SANT'AGOSTINO	4	2	3	2	1	4	1	2	2	4	4	3	2,5	6
CIMITERO DI DOSSO	2	2	2	1	1	2	3	3	2	3	4	3	0,8	5
cimitero di vigarano mainarda	2	3	1	1	1	1	2	4	2	3	3	3	0,5	5/6
REGGIOLO	1	3	1	1	1	2	2	4	1	3	1	3	0	7
CIMITERO DI REGGIOLO	1	2	1	1	1	2	2	3	2	2	1	3	1,6	7
CIMITERO DI CASADIO	4	2	3	3	1	4	2	2	4	3	1	2	0,3	5
CIMITERO DI FUNO	2	3	3	2	1	1	2	2	2	2	4	2	0,4	5
CIMITERO DI VENEZZANO MASCARINO	1	2	2	2	1	2	3	2	2	4	1	2	0,1	5
CIMITERO DI CREVALCORE	2	2	2	3	1	2	2	2	2	2	1	2	1,35	6
CIMITERO DI GALLIERA	2	2	1	1	1	1	1	3	4	3	3	3	0	5/6
CIMITERO DI MINERBIO	4	2	2	2	1	3	3	2	2	4	1	3	0,5	5
CIMITERO VECCHIO DI	3	2	2	3	1	4	1	2	3	4	1	2	1	5
CMITERO DI PIEVE DI CENTO	4	2	1	2	1	4	2	1	2	4	3	3	1	5/6
CIMITERO DI BONCONVENTO	4	2	2	1	1	1	2	3	2	4	1	2	0	5
CIMITERO DI BAGNO DI PIANO	2	4	3	1	1	1	2	2	4	2	1	3	0,28	5
CIMITERO DI AMOLA	1	2	2	3	1	3	3	2	2	2	1	3	0,75	5
CIMITERO DI SAN MATTEO DELLA DECIMA	2	3	2	3	1	3	2	2	2	2	1	2	0,5	5
CIMITERO DI SAN GIOVANNI IN PERSICETO	2	3	2	3	1	3	2	2	4	2	1	3	1,9	5
CIMITERO DI RENAZZO	4	2	2	2	1	3	2	2	2	3	1	3	1	5
CIMITERO DI CASUMARO	4	3	3	2	1	3	1	2	2	3	4	3	1,5	5/6
CIMITERO DI RENO CENTESE	1	3	2	1	1	2	2	4	2	3	3	3	1	5
CIMITERO DI ALBERONE	4	2	2	1	1	4	2	2	2	3	3	3	0,7	5/6
CIMITERO XII MORELLI	4	2	1	1	1	2	2	3	1	3	3	2	0,2	5
CIMITERO DI MIRABELLO	4	2	1	2	1	2	2	3	2	3	4	3	1,7	6

CIMITERO DI CAMPOGALLIANO	4	2	1	1	1	2	2	3	2	4	1	2	0,4	5
SAN MARTINO SULLA SECCHIA	4	2	1	2	1	4	2	2	1	3	1	3	0	6
CIMITERO DI FINALE EMILIA	2	3	4	3	1	3	1	3	2	4	1	2	0,2	6/7
CIMITERO DI RENO FINALESE	1	3	2	3	1	1	3	2	2	4	1	2	0,3	5/6
CIMITERO DI MORTIZZUOLO	4	2	3	2	1	4	2	1	4	3	1	2	1	6/7
CIMITERO DI TRAMUSCHIO	1	2	2	2	1	2	2	2	4	3	1	3	0,5	5/6
CIMITERO DI GAVELLO	2	2	2	2	1	2	1	2	4	3	1	2	0,6	7
CIMITERO DI QUARANTOLI	1	2	3	2	1	2	1	2	3	4	1	2	0,2	5
CIMITERO DI SAN DONNINO	1	1	3	2	1	2	2	1	2	3	1	3	0	5
CIMITERO DI RIVARA	2	2	3	3	1	2	2	2	2	3	4	3	0	6
CIMITERO DI SAN BIAGIO	2	2	2	1	1	2	2	3	2	3	4	3	0,15	6
CIMITERO DI VILLAROTTA	3	2	3	1	1	1	2	3	1	3	1	3	0	6
CIMITERO DI CASONI	2	3	3	1	1	1	2	4	1	3	1	3	0	6
CIMITERO DI LUZZARA	1	3	1	2	1	2	2	2	2	4	4	3	0,3	6
CIMITERO MASSENZATICO	3	2	3	1	1	3	3	3	2	3	1	3	1,25	
CIMITERO DI RIO SALICETO	3	2	2	2	1	3	3	2	2	3	1	3	1,2	5
CASTELLO D'ARGILE	1	2	2	2	1	3	1	2	3	3	1	3	0,25	5
PALATA PEPOLI	2	2	2	3	1	2	2	2	1	3	1	3	0,1	5
SAMMARTINI	2	2	2	3	1	2	2	3	1	3	1	3	1	5
CASELLE	2	3	3	3	1	2	3	3	4	3	1	3	0,5	5
BEVILACQUA	2	2	1	3	1	1	3	2	1	3	1	3	0,25	5
GALEAZZA	2	3	2	2	1	2	2	3	2	3	1	2	0	5
PADULLE	2	3	3	2	1	2	2	3	2	3	1	3	0,8	5
SAN GIACOMO RONCOLE	1	2	2	2	1	2	1	2	3	3	1	2	0,6	5/6
CIVIDALE	1	2	2	2	1	2	2	2	2	3	1	2	0,4	7
SAN MARTINO SPINO 1	1	2	2	2	1	2	2	2	4	3	1	3	0,2	7

Ann.2. *Studies of the classes*

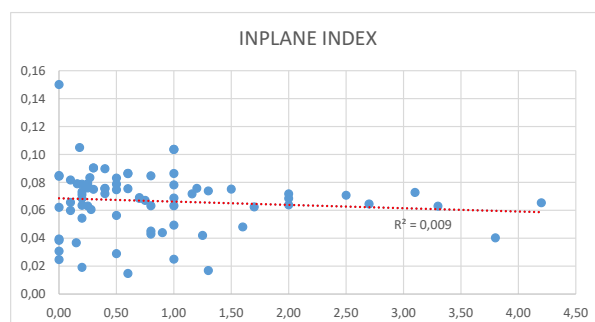
PARAMETERS FOR FORCES DISTRIBUTION IN PLAN						
nome cimitero	SNELLEZZA PILASTRO	P2A	SNELLEZZA MURO	PBB	INTERASSE TRA MURI TRASVERSALI (m)	P3
CIMITERO DI BONDENO	11	B	15	B	4	C
CIMITERO DI PILASTRI	18	D	15	B	24	A
CIMITERO DI SCORTICHIINO	14	C	12	A	10	A
CIMITERO DI BASTIGLIA	10	B	13	B	5	C
CIMITERO DI SOLARA	11	B	18	C	3	B
CIMITERO DI BONPORTO	7	A	13	B	35-40	A
cimitero di santa croce (carpi)	9	A	12	A	3	B
CIMITERO DI SAN NICOLA CARPI	11	B	14	B	4	C
CIMITERO DI CORTILE	20	D	20	D	4	C
CIMITERO DI FOSSOLI	11	B	11	A	3	B
CIMITERO DI PIUMAZZO	11	B	11	A	3-6	C
CIMITERO DI CAVEZZO	10	B	10	A	4	C
CIMITERO DI DISVETRO	13	C	17	C	3	B
CIMITERO DI MOTTA	10	B	17	C	6	D
CIMITERO DI FOSSA	13	C	17	C	3	B
CIMITERO DI CONCORDIA SULLA SECCHIA	18	D	23	D	3	B
CIMITERO DI VALLALTA	11	B	15	B	3	B
CIMITERO DI SAN GIOVANNI	8	B	13	B	3	B
SANTA CATERINA	8	B	13	B	6	D
MASSA FINALESE	11	B	18	C	4	C
MIRANDOLA	12	C	13	B	2	B
CIMITERO DI NONANTOLA	12	C	12	A	3	B
CIMITERO DI RAVARINO	8	B	10	A	3	B
CIMITERO DI SAN FELICE SUL PANARO lotto storico	12	C	20	C	4	C
CIMITERO DI SAN FELICE SUL PANARO lotti più recenti	20	D	20	C	4	C
SAN PIETRO IN ELDA	10	B	20	C	4	C
SAN PROSPERO	0	A	20	C	4	C
SAN PIETRO IN VINCOLI	9	B	13	B	26	A
CIMITERO DI SOLIERA	11	B	15	B	40	A
CIMITERO DI SOZZIGALLI	9	B	15	B	30	A
CIMITERO DI CENTO	13	C	17	C	4	C
CIMITERO DI SANT'AGOSTINO	9	B	18	C	50	A
CIMITERO DI DOSSO	8	B	13	B	50	A
cimitero di vigarano mainarda	13	C	17	C	11	A
CIMITERO DI VILLANOVA DI REGGIOLO	14	C	11	A	40	A
CIMITERO DI REGGIOLO	11	B	11	A	50	A
CIMITERO DI REGGIO EMILIA	14	B	17	C	4	C
CIMITERO DI CASADIO	8	C	17	C	3	B
CIMITERO DI FUNO	13	B	17	B	3	B
CIMITERO DI VENEZZANO MASCARINO	7	B	13	C	4	C
CIMITERO DI CREVALCORE	10	B	13	C	40	A
CIMITERO DI GALLIERA	8	B	10	A	3	B
CIMITERO DI MINERBIO	7	B	13	B	3	B
CIMITERO VECCHIO DI MOLINELLA	7	B	14	B	3	B
CIMITERO DI PIEVE DI CENTO	9	B	9	A	10	A
CIMITERO DI BONCONVENTO	9	D	15	B	30	A
CIMITERO DI BAGNO DI PIANO	17	B	17	C	4	C
CIMITERO DI AMOLA	10	C	13	B	4	C
CIMITERO DI SAN MATTEO DELLA DECIMA	13	C	13	B	4	C
CIMITERO DI SAN GIOVANNI IN REGGIOLO	12	B	16	B	4	C
CIMITERO DI RENAZZO	10	C	13	B	3	B
CIMITERO DI CASUMARO	13	B	17	C	30	A
CIMITERO DI RENO CENTESE	13	B	13	B	30	A
CIMITERO DI ALBERONE	8	B	13	B	38	A

CIMITERO XII MORELLI	9	B	9	A	3	B
CIMITERO DI MIRABELLO	11	B	11	A	3	B
CIMITERO DI CAMPOGALLIANO	6	C	10	A	3	B
SAN MARTINO SULLA SECCHIA	6	B	10	A	3	B
SAN MARINO A CARPI		B			4	C
CIMITERO DI FINALE EMILIA	14	B	21	D	4	C
CIMITERO DI RENO FINALESE	13	B	13	B	2	B
CIMITERO DI MORTIZZUOLO	11	A	18	C	3	B
CIMITERO DI TRAMUSCHIO	10	B	13	B	2	B
CIMITERO DI GAVELLO	10	B	13	B	2	B
CIMITERO DI QUARANTOLI	10	B	19	C	4	C
CIMITERO DI SAN DONNINO	0	C	17	C	3	B
CIMITERO DI RIVARA	10	C	17	C	50	A
CIMITERO DI SAN BIAGIO	11	B	14	B	50	A
CIMITERO DI SAN MICHELE A SOLIERA	10	B	13	B	40	A
CIMITERO DI VILLAROTTA	10	B	17	C	30	A
CIMITERO DI CASONI	13	B	17	C	10	A
CIMITERO DI LUZZARA	13	C	11	A	3	B
CIMITERO MASSENZATICO	9	B	18	C	30	A
CIMITERO DI RIO SALICETO	9	C	15	B	3	B
CASTELLO D'ARGILE	9	C	14	B	4	C
PALATA PEPOLI	9	B	14	B	4	C
SAMMARTINI	10	B	14	B	4	C
CASELLE	14	B	19	C	3,5	C
BEVILACQUA	10	A	10	A	4	C
GALEAZZA	15	C	15	B	3	B
PADULLE	15	C	15	B	30	A
SAN GIACOMO RONCOLE	8	A	13	B	2	B
CIVIDALE	10	A	13	B	2	B
SAN MARTINO SPINO 1	10	A	13	B	3	B
SAN MARTINO SPINO 2	10	A	13	B	2,5	B



IN PLANE INDEX				
nome cimitero	IN PLANE INDEX DEL MODULO y	IN PLANE INDEX DEL MODULO x	INPLANE (PEGGIORE TRA I DUE)	INPLANE (PEGGIORE TRA I DUE)
CIMITERO DI BONDENO	0,04	0,09	0,04	0,09
CIMITERO DI PILASTRI	0,01	0,07	0,01	0,07
CIMITERO DI SCORTICHINO	0,02	0,07	0,02	0,07
CIMITRO DI BASTIGLIA	0,09	0,07	0,07	0,07
CIMITERO DI SOLARA	0,13	0,09	0,09	0,09
CIMITERO DI BONPORTO	0,05	0,10	0,05	0,10
cimitero di santa croce (carpi)	0,11	0,07	0,07	0,07
CIMITERO DI SAN NICOLA CARPI	0,11	0,06	0,06	0,06
CIMITERO DI CORTILE	0,09	0,06	0,06	0,06
CIMITERO DI FOSSOLI	0,16	0,08	0,08	0,08
CIMITERO DI PIUMAZZO	0,09	0,09	0,09	0,09
CIMITERO DI CAVEZZO	0,11	0,13	0,11	0,13
CIMITERO DI DISVETRO	0,12	0,06	0,06	0,06
CIMITERO DI MOTTA	0,17	0,07	0,07	0,07
CIMITERO DI FOSSA	0,08	0,12	0,08	0,12
CIMITERO DI CONCORDIA SULLA SECCHIA	0,11	0,07	0,07	0,07
CIMITERO DI VALLALTA	0,13	0,07	0,07	0,07
CIMITERO DI SAN GIOVANNI	0,14	0,09	0,09	0,09
SANTA CATERINA	0,07	0,07	0,07	0,07
MASSA FINALESE	0,10	0,06	0,06	0,06
MIRANDOLA	0,13	0,07	0,07	0,07
CIMITERO DI NONANTOLA	0,12	0,08	0,08	0,08
CIMITERO DI RAVARINO	0,12	0,06	0,06	0,06
CIMITERO DI SAN FELICE SUL PANARO lotto storico	0,08	0,07	0,07	0,07
CIMITERO DI SAN FELICE SUL PANARO lotti più recenti	0,08	0,07	0,07	0,07
SAN PIETRO IN ELDA	0,12	0,06	0,06	0,06
SAN PROSPERO	0,29	0,08	0,08	0,08
SAN PIETRO IN VINCOLI	0,03	0,07	0,03	0,07
CIMITERO DI SOLIERA	0,02	0,06	0,02	0,06
CIMITERO DI SOZZIGALLI	0,04	0,08	0,04	0,08
CIMITERO DI CENTO	0,10	0,05	0,05	0,05
CIMITERO DI SANT'AGOSTINO	0,10	0,07	0,07	0,07
CIMITERO DI DOSSO	0,04	0,08	0,04	0,08
cimitero di vigarano mainarda	0,03	0,06	0,03	0,06
CIMITERO DI VILLANOVA DI REGGIOLO	0,02	0,05	0,02	0,05
CIMITERO DI REGGIOLO	0,05	0,09	0,05	0,09
CIMITERO DI CASADIO	0,11	0,09	0,09	0,09
CIMITERO DI FUNO	0,16	0,08	0,08	0,08
CIMITERO DI VENEZZANO MASCARINO	0,18	0,08	0,08	0,08
CIMITERO DI CREVALCORE	0,14	0,07	0,07	0,07
CIMITERO DI GALLIERA	0,05	7,31	0,05	7,31
CIMITERO DI MINERBIO	0,12	0,08	0,08	0,08
CIMITERO VECCHIO DI MOLINELLA	0,14	0,08	0,08	0,08
CIMITERO DI PIEVE DI CENTO	0,13	0,10	0,10	0,10

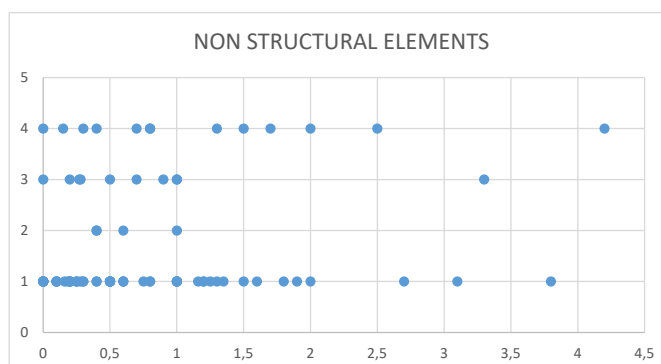
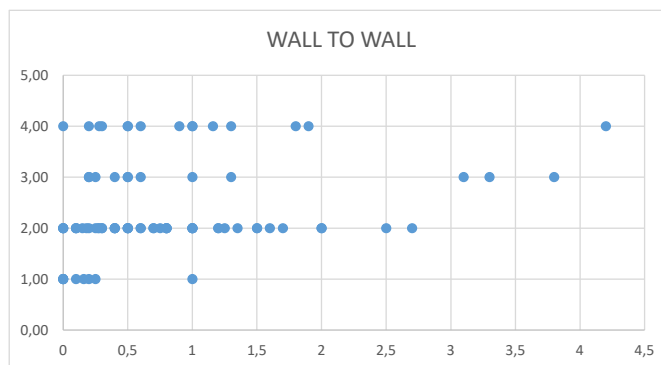
CIMITERO DI BONCONVENTO	0,04	0,08	0,04	0,08
CIMITERO DI BAGNO DI PIANO	0,09	0,09	0,09	0,09
CIMITERO DI AMOLA	0,10	0,07	0,07	0,07
CIMITERO DI SAN MATTEO DELLA DECIMA	0,15	0,07	0,07	0,07
CIMITERO DI SAN GIOVANNI IN PERSICETO	0,10	0,07	0,07	0,07
CIMITERO DI RENZAZZO	0,12	0,07	0,07	0,07
CIMITERO DI CASUMARO	0,13	0,08	0,08	0,08
CIMITERO DI RENO CENTESE	0,03	0,06	0,03	0,06
CIMITERO DI ALBERONE	0,07	0,08	0,07	0,08
CIMITERO XII MORELLI	0,05	0,07	0,05	0,07
CIMITERO DI MIRABELLO	0,09	0,06	0,06	0,06
CIMITERO DI CAMPOGALLIANO	0,05	0,08	0,05	0,08
SAN MARTINO SULLA SECCHIA	0,12	0,08	0,08	0,08
SAN MARINO A CARPI	0,10	0,06	0,06	0,06
CIMITERO DI FINALE EMILIA	0,09	0,07	0,07	0,07
CIMITERO DI RENO FINALESE	0,10	0,08	0,08	0,08
CIMITERO DI MORTIZZUOLO	0,21	0,10	0,10	0,10
CIMITERO DI TRAMUSCHIO	0,17	0,08	0,08	0,08
CIMITERO DI GAVELLO	0,18	0,08	0,08	0,08
CIMITERO DI QUARANTOLI	0,18	0,07	0,07	0,07
CIMITERO DI SAN DONNINO	0,27	0,15	0,15	0,15
CIMITERO DI RIVARA	0,10	0,09	0,09	0,09
CIMITERO DI SAN BIAGIO	0,04	0,07	0,04	0,07
CIMITERO DI VILLAROTTA	0,04	0,07	0,04	0,07
CIMITERO DI CASONI	0,03	0,07	0,03	0,07
CIMITERO DI LUZZARA	0,17	0,09	0,09	0,09
CIMITERO MASSENZATICO	0,04	0,08	0,04	0,08
CIMITERO DI RIO SALICETO	0,11	0,08	0,08	0,08
CASTELLO D'ARGILE	0,17	0,08	0,08	0,08
PALATA PEPOLI	0,10	0,07	0,07	0,07
SAMMARTINI	0,09	0,06	0,06	0,06
CASELLE	0,09	0,06	0,06	0,06
BEVILACQUA	0,09	0,08	0,08	0,08
GALEAZZA	0,13	0,06	0,06	0,06
PADULLE	0,05	0,10	0,05	0,10
SAN GIACOMO RONCOLE	0,17	0,09	0,09	0,09
CIVIDALE	0,16	0,08	0,08	0,08
SAN MARTINO SPINO 1	0,13	0,07	0,07	0,07
SAN MARTINO SPINO 2	0,13	0,08	0,08	0,08
rovereto	0,23	0,07	0,07	0,07
GARGALLO	0,26	0,06	0,06	0,06
CERTOSA	0,11	0,05	0,05	0,05



ROOFING STRUCTURES								
nome cimitero	VOLTE IN MATTONI	CATENE	SOLAIO FLESSIBILE (legno, sap etc..)	LATEROCEMENTO	CAMORCANNIA	P4	TIPO DI COPERTURA	P6(SVIVA)
CIMITERO DI BONDENO	1					D	poco spingente leggera, inclinata poco	B
CIMITERO DI PILASTRI				1		A	spingente leggera, inclinata poco	c
CIMITERO DI SCORTICHIANO				1		A	Spingente pesante media inclinazione	d
CIMITERO DI BASTIGLIA	1					D	Poco spingente o non spingente pesante media inclinazione	c
CIMITERO DI SOLARA	1	1		1		C	poco spingente forse leggera, inclinata poco	b
CIMITERO DI BONPORTO	1	1	1			C	poco spingente e poco inclinata pesante	c
cimitero di santa croce (carpi)	1		1			D	poco spingente poco inclinato pesante	c
CIMITERO DI CORTILE			1			B	spingente LEGGERa media inclinazione	C
CIMITERO DI FOSSOLI			1			B	poco spingente, pesante, media inclinazione	c
CIMITERO DI PIUMAZZO				1		A	non spingente leggero	a
CIMITERO DI CAVEZZO				1		A	poco spingente pesante con inclinazione media	c
CIMITERO DI DISVETRO						C	spingente leggera a media inclinazione	c
CIMITERO DI MOTTA			1			B	poco spingente leggero medio inclinato	b
CIMITERO DI FOSSA				1		A	spingente leggera a media inclinazione	c
CIMITERO DI CONCORDIA SULLA SECCHIA	1					D	poco spingente, pesante, media inclinazione	c
CIMITERO DI VALLALTA			1			B	spingente pesante media inclinazione	D
CIMITERO DI SAN GIOVANNI			1			B	poco spingente pesante media inclinazione	C
SANTA CATERINA			1			B	poco spingente pesante media inclinazione	C
MASSA FINALESE			1			B	poco spingente pesante media inclinazione	C
MIRANDOLA	1	1	1			C	spingente pesante media inclinazione	D
CIMITERO DI SAN CATALDO	1	1	1			C	spingente pesante media inclinazione	D
CIMITERO DI NONANTOLA			1			B	spingente leggera, inclinata media	c
CIMITERO DI RAVARINO			1	1		A	spingente pesante media inclinazione	D
CIMITERO DI SAN FELICE SUL PANARO lotto storico	1					D	spingente pesante media inclinazione	d
CIMITERO DI SAN FELICE SUL PANARO lotti più recenti				1		A	spingente leggero medio inclinato	b
SAN PIETRO IN ELDA	1					D	poco spingente pesante media inclinazione	c
SAN PROSPERO						A	non spingente pesante con media inclinazione	a
SAN PIETRO IN VINCOLI			1			B	spingente leggera media inclinazione	c
CIMITERO DI SOLIERA			1			B	spingente pesante media inclinazione	D
CIMITERO DI SOZZIGALLI			1			B	spingente pesante media inclinazione	D
CIMITERO DI CENTO	1	1	1			B	spingente pesante media inclinazione	D
CIMITERO DI SANT'AGOSTINO				1	1	A	non spingente leggero	A
CIMITERO DI DOSSO				1		A	spingente leggero media inclinazione	b
cimitero di vigarano mainarda				1		A	poco spingente pesante - spingente leggera	c
CIMITERO DI VILLANOVA DI REGGIOLO				1		A	poco spingente pesante media inclinazione	C
CIMITERO DI REGGIOLO	1			1		D	spingente leggero o pocospingente leggero	c
CIMITERO DI REGGIO EMILIA				1		A	Non spingente leggera	a
CIMITERO DI CASADIO	1					D	non spingente pesante con media inclinazione	a
CIMITERO DI FUNO				1		A	SEMISPINGENTE LEGGERO - semispingente pesante	c
CIMITERO DI VENEZZANO MASCARINO				1		A	non spingente pesante con media inclinazione	a
CIMITERO DI CREVALCORE			1			B	spingente pesante media inclinazione	d
CIMITERO DI GALLIERA				1		A	non spingente leggero	a
CIMITERO DI MINERBIO	1	1				C	poco spingente pesante	c
CIMITERO VECCHIO DI MOLINELLA	1					D	spingente leggero	c
CIMITERO DI PIEVE DI CENTO	1			1		D	spingente leggero	c
CIMITERO DI BONCONVENTO				1		A	spingente leggero	C
CIMITERO DI BAGNO DI PIANO				1		A	spingente leggero	c
CIMITERO DI AMOLA	1	1				C	non spingente pesante con media inclinazione	A
CIMITERO DI SAN MATTEO DELLA DECIMA	1	1		1		C	NON SPINGENTE LEGGERO	A
CIMITERO DI SAN GIOVANNI IN PERSICETO	1	1			1	C	Non spingente leggero	A
CIMITERO DI RENAZZO	1	1		1		C	non spingente leggera	a
CIMITERO DI CASUMARO	1	1		1		C	Poco spingente leggero	c
CIMITERO DI RENO CENTESE			1			B	non lo capisco quindi POCO spingente pesante	c
CIMITERO DI ALBERONE				1		A	non lo capisco quindi POCO spingente pesante	c
CIMITERO XII MORELLI				1		A	non lo capisco quindi POCO spingente pesante	c
CIMITERO DI MIRABELLO			1			B	non lo capisco quindi POCO spingente pesante	c
CIMITERO DI CAMPOGALLIANO			1			B	poco spingente pesante	c
SAN MARTINO SULLA SECCHIA	1			1		D	spingente pesante	d
SAN MARINO A CARPI			1	1		B	poco spingente leggero	b
CIMITERO DI FINALE EMILIA	1	1				D	non spingente o poco spingente leggero	b
CIMITERO DI RENO FINALESE				1		A	spingente leggero	b
CIMITERO DI MORTIZZUOLO	1			1		C	spingente leggero	b
CIMITERO DI TRAMUSCHIO				1		C	poco spingente pesante	C
CIMITERO DI GAVELLO			1	1		A	poco spingente pesante	C
CIMITERO DI QUARANTOLI			1			C	poco spingente pesante	c
CIMITERO DI SAN DONNINO				1		A	spingente pesante	D
CIMITERO DI RIVARA				1		A	poco spingente leggero	c
CIMITERO DI SAN BIAGIO			1	1		B	poco spingente pesante	C
CIMITERO DI SAN MICHELE A SOLIERA			1			B	poco spingente leggero	c
CIMITERO DI VILLAROTTA				1		A	Spingente pesante	d
CIMITERO DI CASONI				1		A	poco spingente pesante	C
CIMITERO DI LUZZARA				1		A	poco spingente pesante	C
CIMITERO MASSENZATICO	1	1				C	Spingente pesante	D
CIMITERO DI RIO SALICETO	1	1	1			C	poco spingente leggero	b
CASTELLO D'ARGILE	1	1				C	poco spingente pesante	b
PALATA PEPOLI			1			B	poco spingente pesante	C
SAMMARTINI			1			B	poco spingente pesante	C
CASELLE			1			B	Poco spingente leggero	b
BEVILACQUA				1		A	Poco spingente leggero	B
GALEAZZA			1			B	Poco spingente leggero	b
PADULLE				1		A	poco spingente pesante	c
SAN GIACOMO RONCOLE				1		A	poco spingente pesante	c
CIVIDALE			1			B	poco spingente pesante	c
SAN MARTINO SPINO 1				1		B	poco spingente leggero	B
SAN MARTINO SPINO 2			1			B	poco spingente leggero	b

OTHER PARAMETERS									
nome cimitero	ELEMENTI NON STRUTTURALI	ESTENSIONE	PIANI SFALSATI NEI COLOMBARI	P9	H EDIFICI ADIACENTI	P10	P4 (from existing form)	muri trasversali	P7
CIMITERO DI BONDENO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	mixed large and little addition	D
CIMITERO DI PILASTRI	SI	LIMITATA	SI	B	PRESENZA MACROELEMENTI PIU ALTI	C	D	grandi campate cielo-terra	B
CIMITERO DI SCORTICHIANO	NO		SI	A	PRESENZA MACROEL PIU BASSO E PIU ALTO (C)	D	B	mixed large and little addition	D
CIMITERO DI BASTIGLIA	NO		NO	A	MACROEL STESSA H	C	A	few large addition	B
CIMITERO DI SOLARA	SI	LIMITATA	NO	B	MACROEL STESSA H	C	A	few large addition	B
CIMITERO DI BONPORTO	SI	LIMITATA	NO	B	MACROEL STESSA H	C	A	few large addition	B
cimitero di santa croce (carpi)	NO		SI	A	PRESENZA MACROEL PIU BASSO E PIU ALTO (C)	C	B	lot little addition	C
CIMITERO DI SAN NICOLA CARPI	SI	LIMITATA	NO	A	MACRO PIU ALTO E MACRO STESSA ALTEZZA	C	A	few large addition	B
CIMITERO DI CORTILE	SI	ESTESO	NO	F	PRESENZA MACROELEMENTI PIU ALTI	C	B	mixed large and little addition	D
CIMITERO DI FOSSOLI	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	mixed large and little addition	D
CIMITERO DI PIUMAZZO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	A	few large addition	B
CIMITERO DI CAVEZZO	NO		NO	A	MACROEL STESSA H	B	B	few large addition	B
CIMITERO DI DISVETRO	NO		NO	A	MACROEL STESSA H	C	A	lot little addition	C
CIMITERO DI MOTTA	NO		NO	B	PRESENZA MACROELEMENTI PIU ALTI	C	A	mixed large and little addition	D
CIMITERO DI FOSSA	SI	LIMITATA	NO	C	MACROEL STESSA H	C	B	few large addition	B
CIMITERO DI CONCORDIA SULLA SECCHIA	SI	ESTESO	NO	C	PIU ALTI	C	B	lot little addition	C
CIMITERO DI VALLALTA	SI	LIMITATA	NO	C	MACROEL STESSA H	C	B	lot little addition	C
CIMITERO DI SAN GIOVANNI	NO		NO	A	MACROEL STESSA H	C	B	lot little addition	C
SANTA CATERINA	SI	LIMITATI	NO	C	MACROEL STESSA H	B	B	non a vista	B
MASSA FINALESE	NO		NO	A	PRESENZA MACROEL PIU ALTI	C	B	grandi campate cielo terra	B
MIRANDOLA	SI	LIMITATI	SI	A	PRESENZA MACROEL PIU BASSO E PIU ALTO (C)	C	B	mixed large and little addition	D
CIMITERO DI SAN CATALDO	NO		NO	A	MACROEL STESSA H	C	B	few large addition	B
CIMITERO DI NONANTOLA	SI	ESTESO	NO	F	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addition	B
CIMITERO DI RAVARINO	SI	ESTESO	NO	D	MACROEL STESSA H	C	D	few large addition	B
CIMITERO DI SAN FELICE SUL PANARO lotto storico	SI	LIMITATA	SI	A	MACROEL STESSA H	D	B	few large addition	B
CIMITERO DI SAN FELICE SUL PANARO lotti più recenti	NO		NO	C	MACROEL STESSA H	C	B	few large addition	B
SAN PIETRO IN ELDA	NO		NO	A	MACROEL STESSA H	C	A	few large addition	B
SAN PROSPERO	NO			A	PRESENZA MACROELEMENTI PIU ALTI	A	A	none addition	A
SAN PIETRO IN VINCOLI	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	mixed large and little addition	D
CIMITERO DI SOLIERA	NO		SI	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	mixed large and little addition	D
CIMITERO DI SOZZIGALLI	SI	ESTESO	NO	D	PRESENZA MACROELEMENTI PIU ALTI	C	B	lot little addition	C
CIMITERO DI CENTO	NO		NO	A	MACROEL STESSA H	C	B	few large addition	B
CIMITERO DI SANT'AGOSTINO	SI	ESTESO	NO	C	PRESENZA MACROELEMENTI PIU ALTI	C	A	few large addition	B
CIMITERO DI DOSSO	SI	ESTESO	SI	C	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addition	B
cimitero di vigarano mainarda	SI	ESTESO	NO	D	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI VILLANOVA DI REGGIOLO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	none addition	A
CIMITERO DI REGGIOLO	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI REGGIO EMILIA	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI CASADIO	SI	LIMITATA	NO	A	MACROEL STESSA H	B	B	lot little addition	C
CIMITERO DI FUNO	SI	ESTESO	NO	D	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addition	B
CIMITERO DI VENEZZANO MASCARINO	NO			A	MACROEL STESSA H	B	C	few large addition	B
CIMITERO DI CREVALCORE	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addition	B
CIMITERO DI GALLIERA	SI	LIMITATA	NO	D	PRESENZA MACROELEMENTI PIU ALTI	C	A	lot little addition	C
CIMITERO DI MINERBIO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addition	B
CIMITERO VECCHIO DI MOINELLA	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	A	mixed large and little addition	D
CIMITERO DI PIEVE DI CENTO	SI	ESTESO	NO	D	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI BONCONVENTO	NO			A	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addition	B
CIMITERO DI BAGNO DI PIANO	NO		SI	A	MACROEL STESSA H	C	B	lot little addition	C
CIMITERO DI AMOLA	SI	LIMITATA	SI	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addition	B
CIMITERO DI SAN MATTEO DELLA DECIMA	SI	LIMITATA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addition	B
CIMITERO DI SAN GIOVANNI IN PERSICETO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	lot little addition	C
CIMITERO DI RENAZZO	SI	ESTESA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI CASUMARO	SI	LIMITATI	SI	C	PRESENZA MACROELEMENTI PIU ALTI	C	A	few large addition	B
CIMITERO DI RENO CENTESE	SI	ESTESA	SI	F	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO DI ALBERONE	SI	ESTESA	SI	F	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addition	B
CIMITERO XII MORELLI	SI	ESTESA	NO	D	PRESENZA MACROELEMENTI PIU ALTI	B	B	none addition	A

CIMITERO DI MIRABELLO	SI	ESTESA	NO	C	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addiction	B
CIMITERO DI CAMPOGALLIANO	SI	LIMITATI	NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	B	nessuna campata aggiunta	B
SAN MARTINO SULLA SECCHIA	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	none addiction	A
SAN MARINO A CARPI	SI	LIMITATI	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addiction	B
CIMITERO DI FINALE EMILIA	NO			A	PRESENZA MACROELEMENTI PIU ALTI	B	A	few large addiction	B
CIMITERO DI RENO FINALESE	NO		NO	A	MACROEL STESSA H	B	C	few large addiction	B
CIMITERO DI MORTIZUOLO	SI	LIMITATI	NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	B	lot little addiction	C
CIMITERO DI TRAMUSCHIO	NO		NO	A	MACROEL STESSA H	C	B	lot little addiction	C
CIMITERO DI GAVELLO	NO		NO	A	MACROEL STESSA H	B	A	lot little addiction	C
CIMITERO DI QUARANTOLI	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	A	mixed large and little addiction	D
CIMITERO DI SAN DONNINO	NO		NO	A	MACROEL STESSA H	C	B	few large addiction	B
CIMITERO DI RIVARA	SI	ESTESA	NO	C	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addiction	B
CIMITERO DI SAN BIAGIO	SI	ESTESA	NO	C	MACROEL STESSA H	C	B	few large addiction	B
CIMITERO DI VILLAROTTA	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	none addiction	A
CIMITERO DI CASONI	SI	LIMITATI	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	none addiction	A
CIMITERO DI LUZZARA	SI	ESTESA	NO	C	MACROEL STESSA H	C	B	few large addiction	B
CIMITERO MASSENZATICO	SI	ESTESA	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addiction	B
CIMITERO DI RIO SALICETO	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	few large addiction	B
CASTELLO D'ARGILE	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	A	mixed large and little addiction	D
PALATA PEPOLI	NO		NO	A	MACROEL STESSA H	C	B	none addiction	A
SAMMARTINI	SI	LIMITATO	NO	A	MACROEL STESSA H	C	B	none addiction	A
CASELLE	SI	LIMITATO	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	lot little addiction	C
BEVILACQUA	SI	LIMITATO	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	C	none addiction	A
GALEAZZA	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	B	few large addiction	B
PADULLE	NO		SI	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	few large addiction	B
SAN GIACOMO RONCOLE	NO		NO	A	PRESENZA MACROELEMENTI PIU ALTI	B	A	mixed large and little addiction	D
CIVIDALE	SI	LIMITATO	NO	A	MACROEL STESSA H	B	B	few large addiction	B
SAN MARTINO SPINO 1	SI	LIMITATO	NO	A	PRESENZA MACROELEMENTI PIU ALTI	C	B	lot little addiction	C
SAN MARTINO SPINO 2	SI	LIMITATO		A	PRESENZA MACROELEMENTI PIU ALTI	C	B	lot little addiction	C



Ann.3. Form fulfilled for Concordia sulla Secchia Cemetery

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI

LEGENDA
 Con sfondo grigio i campi a cura dell'ufficio
 In rosso i campi a compilazione esclusiva
 In nero i campi con criterio multiscelta

C1
 Data: 2021-02-10 N° progressivo: N° Scheda (a cura dell'ufficio): NULL

C2a - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO COMPLESSO, parti storiche e nuove
 Bene complesso: Bene individuo:
 Denominazione bene complesso: NULL
 N° Schede beni componenti: NULL Codice di livello superiore: NULL

C2b - RIFERIMENTO VERTICALE - considerare il cimitero NEL SUO COMPLESSO, parti storiche e nuove
 Tipologia: con cappella senza cappella con colombari con cappelle di famiglia cimitero giardino/ebraico
 Pianta: regolare a pianta libera con cortili altro NULL

C3 -LOCALIZZAZIONE GEOGRAFICO AMMINISTRATIVA
 Regione: EMILIA-ROMAGNA Indirizzo: Via per Mirandola
 Provincia: MODENA Codice provincia: 36 N° aggregato: 400000
 Comune: CONCORDIA SULLA SECCHIA Codice comune: 10 N° unità: 999
 Località: CONCORDIA SULLA SECCHIA Id cimitero: 080360100000400000

C4 -OGGETTO
 Denominazione Bene: Cimitero Monumentale di Concordia sulla Secchia
 Denominazione storica: NULL
 Datazione: anno: NULL secolo: 19 epoca: NULL Ultima trasformazione: 1980 circa
 Proprietà: COMUNE DI CONCORDIA Utilizzatore: NULL

C5 -COMPILATORE SCHEDA
 Cognome: Vona Nome: Veronica

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

Comune: CONCORDIA SULLA SECCHIA Località: CONCORDIA SULLA SECCHIA unità: 999 Id cimitero: 080360100000400000

C4 -OGGETTO
 Denominazione Bene: Cimitero Monumentale di Concordia sulla Secchia
 Denominazione storica: NULL
 Datazione: anno: NULL secolo: 19 epoca: NULL Ultima trasformazione: 1980 circa
 Proprietà: COMUNE DI CONCORDIA Utilizzatore: NULL

C5 -COMPILATORE SCHEDA
 Cognome: Vona Nome: Veronica
 Ente/ufficio di appartenenza: NULL

C6 -DOCUMENTAZIONE FOTOGRAFICA
 Documentazione fotografica: Realizzata da: NULL

C7 -CARATTERISTICHE DEL SITO
 in piano su rilievo/su cresta/su vetta su riporto in pendio/su versante Avvallamento

C8 -CONTESTO URBANO E POSIZIONE
 Centro urbano Periferia urbana Area industriale - commerciale Area agricola Centro storico
 Isolato Connesso con altri edifici su lati: NULL altro NULL

C9 -INFRASTRUTTURE
 Accesso pedonale Accesso con altezza inferiore a 4 metri Rete viaria idonea in relazione al rischio Spazi aperti a disposizione
 Accesso carrabile Accesso con mezzi pesanti Altro NULL Parcheggio nelle vicinanze

C10 -PRESENZA DI RISCHIO
 Insediamento minacciato da frana (NULL)
 Insediamento in zona alluvionabile Rilevazione diretta
 Insediamento soggetto a minacce di tipo industriale (NULL)
 Insediamento soggetto ad altre minacce naturali (NULL)

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI

C11 - DESTINAZIONE D'USO ATTUALE

Uso	Utilizzazione temporale (apertura al pubblico)	Affollamento
Cimitero <input checked="" type="checkbox"/> >65%		A <input type="checkbox"/>
Parco <input type="checkbox"/>		A <input type="checkbox"/>
Altro <input type="checkbox"/>		A <input type="checkbox"/>

C12 - TIPOLOGIA DEI BENI ARTISTICI PRESENTI

Tipologia	num	superficie	Tipologia	num	superficie
Affreschi <input checked="" type="checkbox"/>	NULL	12.000	Dipinti su vario supporto <input type="checkbox"/>	NULL	NULL
Stucchi <input type="checkbox"/>	NULL	NULL	Decorazioni plastiche mobili <input type="checkbox"/>	NULL	NULL
Altari/statue inamovibili <input type="checkbox"/>	NULL	NULL	Altro <input type="checkbox"/>	NULL	NULL
Arredi (soffitti, amboni,pulpito,etc....) <input type="checkbox"/>	NULL	NULL	Altro <input type="checkbox"/>	NULL	NULL

C13 - STATO DI MANUTENZIONE GENERALE

Livello generale della manutenzione: PESSIMO lavori in corso

C14 - INTERVENTI

<input checked="" type="checkbox"/> Ampliamento	<input type="checkbox"/> Sopraelevazione	<input checked="" type="checkbox"/> Manutenzione straordinaria	<input type="checkbox"/> Consolidamento
Numerosi ampliamenti nel tempo	NULL	Revisione coperture, con sostituzione elementi	NULL

C16 - DATI DIMENSIONALI GENERALI DEL CIMITERO

	RECINTI STORICI	RECINTI RECENTI
Numero aree sacre/recinti compresi ampliamenti recenti	Numero recinti storici: 1	Numero recinti recenti: 1
	Piani fuori terra: 1	Piani fuori terra: 1
	Piani interrati: 1	Piani interrati: 0
	Altezza media in gronda: 6	Altezza media in gronda: 7.000

C15 - REGOLARITA', FORMA PLANIMETRICA DELLE SOLE AREE STORICHE

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

C14 - INTERVENTI

<input checked="" type="checkbox"/> Ampliamento	<input type="checkbox"/> Sopraelevazione	<input checked="" type="checkbox"/> Manutenzione straordinaria	<input type="checkbox"/> Consolidamento
Numerosi ampliamenti nel tempo	NULL	Revisione coperture, con sostituzione elementi	NULL






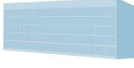

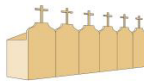
C16 - DATI DIMENSIONALI GENERALI DEL CIMITERO

	RECINTI STORICI	RECINTI RECENTI
Numero aree sacre/recinti compresi ampliamenti recenti	Numero recinti storici: 1	Numero recinti recenti: 1
	Piani fuori terra: 1	Piani fuori terra: 1
	Piani interrati: 1	Piani interrati: 0
	Altezza media in gronda: 6	Altezza media in gronda: 7.000

C15 - REGOLARITA', FORMA PLANIMETRICA DELLE SOLE AREE STORICHE

Forma in pianta: (0) Presenza di Porticati Vani passanti Discontinuità costruttive e del materiale

C17 - ELEMENTI COSTITUTIVI PRESENTI NELLE SOLE AREE STORICHE

MURO PERIMETRALE <input type="checkbox"/>	COLOMBARIO CON PORTICO <input checked="" type="checkbox"/>	INGRESSI A VELA O PILASTRI CON O SENZA ANNESSI <input checked="" type="checkbox"/>	TOMBE DI FAMIGLIA SINGOLE <input type="checkbox"/>	CAPPELLA FUNERARIA <input checked="" type="checkbox"/>
				
	COLOMBARIO SENZA PORTICO <input type="checkbox"/>	ELEMENTI A VANO PASSANTE <input type="checkbox"/>	TOMBE IN AGGREGATO <input type="checkbox"/>	
				

NB: GLI ELEMENTI QUI INDIVIDUATI DEVONO CORRISPONDERE ALLE SEZIONI RILEVATE NEL DANNO!

OK Annulla

RILEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - PARAMETRI DI VULNERABILITA'

C18 - DESCRIZIONE SINTETICA DELLE ALI STORICHE DEI CIMITERI

Dati dimensionali dei colombari

Numero segmenti realizzati con schema a colombario:

Lunghezza massima colombari: Lunghezza media colombari: Superficie costruita media:

Crescita dei colombari storici
(utilizzare notizie storiche o visive. In questo caso le discontinuità costruttive si manifestano causa del sisma e/o sono visibili valutando i muri dei colombari esternamente al cimitero)

Nessuna aggiunta (elementi rettangolari semplici) Aggiunzioni successive miste di aree piccole e grandi
 Aggiunzioni successive con poche, ampie aree costruite Aggiunzioni successive con tante, piccole aree costruite

Materiale delle strutture verticali (indicare il materiale prevalente)

MURATURA IN LATERIZIO: di buona qualità omogenea di buona qualità non omogenea di cattiva qualità di cattiva qualità con cottoi o altro

MURATURA IN PIETREME O TUFO: ben squadri ed omogenei ben squadri non omogenei grossolanamente sbazzato irregolare

MURATURA A SACCO: ben intessuta, omogenea e con collegamenti tra i fogli ben intessuta, non omogenea e con collegamenti ben intessuta, senza collegamenti tra i fogli male intessuta, senza collegamenti tra i fogli

Materiale del solaio

NON PRESENTE IGNOTO

senza catene SOLAI A SOLETTA DEFORMABILE O SEMIRIGIDA: SOLAI A SOLETTA RIGIDA: SOLAI in c.a., travi ben collegate a solette di c.a....

travi in legno con tavolato semplice o tavelle, travi e voltine... travi in legno con tavolato doppio o tavelloni SOLAI in c.a., travi ben collegate a solette di c.a....

travi in legno con tavolato doppio o tavelloni SOLAI in c.a., travi ben collegate a solette di c.a....

solai di laterizi armati tipo SAP o putrelle e tavelle...

Presenza elementi decorativi svettanti

Nessun elemento svettante Soluzioni ad attico alto di qualsiasi forma con o senza elementi svettanti puntuali
 Elementi decorativi (frontoni, vasi etc.) svettanti presenti in modo estensivo insieme o no ad attici svettanti bassi
 Soluzioni ad attico svettante (mensola libera) basso

Aggiunzioni più recenti con elementi a colombario o altro
 Da indicare solo se costruite IN ADIACENZA/IN CONNESSIONE alle strutture storiche NON INDICARE AMPLIAMENTI SUCCESSIVI COSTRUITI SEPARATI

nessuno nuovi e/o diversi materiali con stessi materiali e tecniche costruttive
 stessi materiali ma tecniche costruttive peggiori stessi materiali ma tecniche costruttive migliori

Copertura

TIPOLOGIA: Non spingente Spingente Poco Spingente Non rilevabile

MATERIALE: In Legno In Laterocemento Mista legno ed elementi di sostituzione in CA

misure da indicare per elementi a colombari

OK Annulla

RILEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

direzione: solai di laterizi armati tipo SAP o putrelle e tavelle... stessi materiali ma tecniche costruttive peggiori stessi materiali ma tecniche costruttive migliori

Copertura

TIPOLOGIA: Non spingente Spingente Poco Spingente Non rilevabile

MATERIALE: In Legno In Laterocemento Mista legno ed elementi di sostituzione in CA

misure da indicare per elementi a colombari

misure da indicare per aree costruite con tombe di famiglia mutuamente connesse

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - PARAMETRI DI VULNERABILITA'

C19 - DESCRIZIONE SINTETICA DELLA CAPPELLA FUNEBRE STORICA

Dati generali
 Tipo di cappella: pianta centrale aula unica 3 o più navate

Posizione
 isolato Connesso con colombari su lati: 1

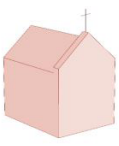
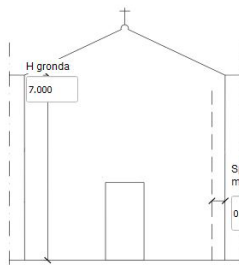
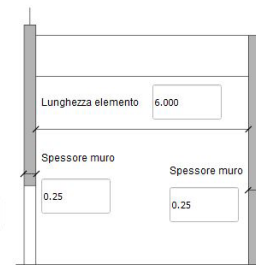
Altezza muri laterali
 bassa (<6m) media (tra 6 e 12m) alta (>12m)

Trasformazioni
 trasformazioni architettoniche storiche interventi recenti

Caratteristiche della fabbrica
 facciata a vela elementi svettanti presenza di archi/volte

Materie costruttive
 buona qualità cattiva qualità

Stato di manutenzione della cappella
 buono medio scadente

C20 - DESCRIZIONE SINTETICA DEL MURO DI CINTA STORICO

Materie
 muratura in laterizio presenza di speroni, contrafforti, pilastri
 muratura in pietrame o tufo non connesso a colombari

Caratteristiche costruttive
 cattiva qualità buona qualità

Stato di manutenzione
 buono medio scadente

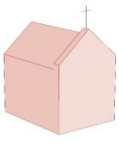
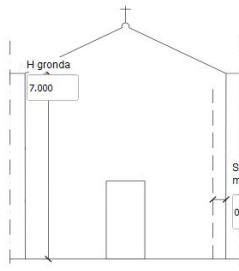
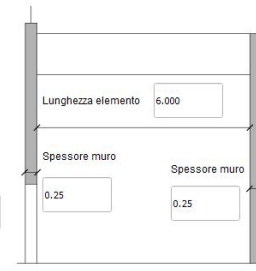
Dati dimensionali
 Numero segmenti: NULL
 Lunghezza libera massima tra pilastri o angoli: NULL
 Lunghezza libera media tra pilastri o angoli: NULL

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

facciata a vela elementi svettanti presenza di archi/volte buona qualità cattiva qualità buono medio scadente

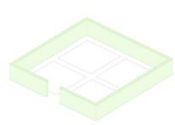
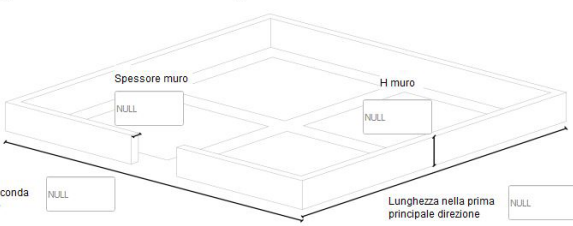
C20 - DESCRIZIONE SINTETICA DEL MURO DI CINTA STORICO

Materie
 muratura in laterizio presenza di speroni, contrafforti, pilastri
 muratura in pietrame o tufo non connesso a colombari

Caratteristiche costruttive
 cattiva qualità buona qualità

Stato di manutenzione
 buono medio scadente

Dati dimensionali
 Numero segmenti: NULL
 Lunghezza libera massima tra pilastri o angoli: NULL
 Lunghezza libera media tra pilastri o angoli: NULL

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AL MURO DI CINTA

C22 - DANNO AL MURO DI CINTA

RECINTO 

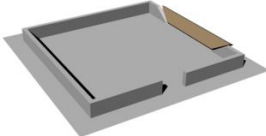
 NB. Effettuare una virtuale numerazione dei segmenti che compongono le ali del cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolti verso il cimitero da destra a sinistra per ogni recinto

Ogni segmento va selezionato (num segmento) se il meccanismo di collasso in esame è possibile in quel segmento

Il livello di danno va segnato per ogni segmento selezionato. Segnare 0 in presenza di danno nullo ma di sola vulnerabilità

IL NUMERO ASSEGNATO AD OGNI LATO DEL MURO DI CINTA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

22_MM1_RIBALTAMENTO DEL MURO DI CINTA





Num. Lato	Danno (da 0 a 5)	Num. Lato	Danno (da 0 a 5)	Num. Lato	Danno (da 0 a 5)	Num. Lato	Danno (da 0 a 5)
<input type="checkbox"/> lato 1	<input type="text"/>	<input type="checkbox"/> lato 5	<input type="text"/>	<input type="checkbox"/> lato 9	<input type="text"/>	<input type="checkbox"/> lato 13	<input type="text"/>
<input type="checkbox"/> lato 2	<input type="text"/>	<input type="checkbox"/> lato 6	<input type="text"/>	<input type="checkbox"/> lato 10	<input type="text"/>	<input type="checkbox"/> lato 14	<input type="text"/>
<input type="checkbox"/> lato 3	<input type="text"/>	<input type="checkbox"/> lato 7	<input type="text"/>	<input type="checkbox"/> lato 11	<input type="text"/>	<input type="checkbox"/> lato 15	<input type="text"/>
<input type="checkbox"/> lato 4	<input type="text"/>	<input type="checkbox"/> lato 8	<input type="text"/>	<input type="checkbox"/> lato 12	<input type="text"/>	<input type="checkbox"/> lato 16	<input type="text"/>
foto 1	<input type="text"/>	foto 2	<input type="text"/>	foto 3	<input type="text"/>	foto 4	<input type="text"/>

22_MM2_ESPULSIONE DEL CANTONALE

OK Annulla

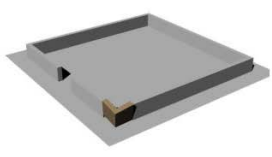


RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P

lato 4 lato 8 lato 12 lato 16

foto 1 foto 2 foto 3 foto 4

22_MM2_ESPULSIONE DEL CANTONALE

Num. Angolo	Danno (da 0 a 5)	Num. Angolo	Danno (da 0 a 5)	Num. Angolo	Danno (da 0 a 5)	Num. Angolo	Danno (da 0 a 5)
<input type="checkbox"/> 1	<input type="text"/>	<input type="checkbox"/> 5	<input type="text"/>	<input type="checkbox"/> 9	<input type="text"/>	<input type="checkbox"/> 13	<input type="text"/>
<input type="checkbox"/> 2	<input type="text"/>	<input type="checkbox"/> 6	<input type="text"/>	<input type="checkbox"/> 10	<input type="text"/>	<input type="checkbox"/> 14	<input type="text"/>
<input type="checkbox"/> 3	<input type="text"/>	<input type="checkbox"/> 7	<input type="text"/>	<input type="checkbox"/> 11	<input type="text"/>	<input type="checkbox"/> 15	<input type="text"/>
<input type="checkbox"/> 4	<input type="text"/>	<input type="checkbox"/> 8	<input type="text"/>	<input type="checkbox"/> 12	<input type="text"/>	<input type="checkbox"/> 16	<input type="text"/>
foto 1	<input type="text"/>	foto 2	<input type="text"/>	foto 3	<input type="text"/>	foto 4	<input type="text"/>

22_MM2_ESPULSIONE DEL CANTONALE


OK Annulla


RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AI COLOMBARI

C23 - DANNO AI COLOMBARI

COLOMBARIO  Valutare tutti i meccanismi

Non considerare: MC1, MC4, MC5, MC6, MC8, MC9 





NB Effettuare una virtuale numerazione dei segmenti che compongono le ali del cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto.

Ogni braccio va selezionato (num braccio) se il meccanismo di collasso in esame è possibile in quel braccio

Il livello di danno va segnato per ogni braccio selezionato. Segnare 0 in presenza di danno nullo ma di sola vulnerabilità

NB IL NUMERO ASSEGNATO AD 1 BRACCIO NON DEVE VARIARE DA UN MECCANISMO DI COLASSO ALL'ALTRO

23_MC1_RIBALTAMENTO DEL PORTICO

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	4	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9	NULL	<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	4	<input checked="" type="checkbox"/> br. 6	4	<input type="checkbox"/> br. 10	NULL	<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7	NULL	<input type="checkbox"/> br. 11	NULL	<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	4	<input type="checkbox"/> br. 8	NULL	<input type="checkbox"/> br. 12	NULL	<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	


foto 1  [ricordria sulla Secchia-MO-1.JPG](#)


foto 2  [ricordria sulla Secchia-MO-74.JPG](#)



foto 3  [ricordria sulla Secchia-MO-83.JPG](#)

foto 4  [ricordria sulla Secchia-MO-16.JPG](#)




23_MC2_RIBALTAMENTO DELLE SOLUZIONI D'ATTICO E DEI FRONTONI

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC2_RIBALTAMENTO DELLE SOLUZIONI D'ATTICO E DEI FRONTONI

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	NULL	<input checked="" type="checkbox"/> br. 5	5	<input type="checkbox"/> br. 9	NULL	<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	5	<input type="checkbox"/> br. 6	NULL	<input type="checkbox"/> br. 10	NULL	<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3	NULL	<input type="checkbox"/> br. 7	NULL	<input type="checkbox"/> br. 11	NULL	<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4	NULL	<input type="checkbox"/> br. 8	NULL	<input type="checkbox"/> br. 12	NULL	<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	


foto 1  [ricordria sulla Secchia-MO-9.JPG](#)


foto 2  [ricordria sulla Secchia-MO-83.JPG](#)


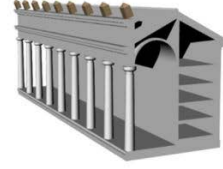


foto 3  [ricordria sulla Secchia-MO-69.JPG](#)

foto 4

23_MC3_RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI/SVETTANTI




Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC3_RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI/SVETTANTI








Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	3	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	5	<input checked="" type="checkbox"/> br. 6	3	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7	NULL	<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	3	<input type="checkbox"/> br. 8	NULL	<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4

NULL NULL NULL NULL

23_MC4_DANNO DA SCHIACCIAMENTO AGLI ELEMENTI PUNTUALI (COLONNE/PILASTRI)

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	NULL	<input type="checkbox"/> br. 5	NULL	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2	NULL	<input type="checkbox"/> br. 6	NULL	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3	NULL	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4	NULL	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4




NULL NULL NULL NULL

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC4_DANNO DA SCHIACCIAMENTO AGLI ELEMENTI PUNTUALI (COLONNE/PILASTRI)








Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	NULL	<input type="checkbox"/> br. 5	NULL	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2	NULL	<input type="checkbox"/> br. 6	NULL	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3	NULL	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4	NULL	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4

NULL NULL NULL NULL

23_MC5_RISPOSTA DELLE ARCATI DEL PORTICO (da considerarsi in entrambe le sue direzioni)

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4


NULL NULL NULL NULL

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P


23_MC5_RISPOSTA DELLE ARCADE DEL PORTICO (da considerarsi in entrambe le sue direzioni)



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	4	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	4	<input checked="" type="checkbox"/> br. 6	4	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	4	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1: Corrida sulla Secchia-MO-32.JPG foto 2: Corrida sulla Secchia-MO-97.JPG foto 3: Corrida sulla Secchia-MO-110.JPG foto 4: NULL

23_MC6_DANNI AGLI ARCHITRAVI (da considerarsi in entrambe le direzioni)




Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P


23_MC6_DANNI AGLI ARCHITRAVI (da considerarsi in entrambe le direzioni)



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1: foto 2: foto 3: foto 4:

23_MC7_TAGLIO NEI MURI TRASVERSALI DEI COLOMBARI



NB Il meccanismo si manifesta con questa configurazione di danno in presenza di strutture miste muratura e travi in CA con alto spessore.

Nelle murature a vista possono essere visualizzate invece le classiche lesioni a croce

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

OK Annulla




RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC7_TAGLIO NEI MURI TRASVERSALI DEI COLOMBARI

NB Il meccanismo si manifesta con questa configurazione di danno in presenza di strutture miste muratura e travi in CA con alto spessore.





Nelle murature a vista possono essere visualizzate invece le classiche lesioni a croce

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

23_MC8_DANNO ALLE VOLTE





Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...




23_MC8_DANNO ALLE VOLTE

Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	4	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input checked="" type="checkbox"/> br. 2	3	<input checked="" type="checkbox"/> br. 6	4	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input checked="" type="checkbox"/> br. 4	4	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

23_MC9_DANNO AGLI IMPALCATI PIANI


Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1	<input type="text"/>	<input type="checkbox"/> br. 5	<input type="text"/>	<input type="checkbox"/> br. 9	<input type="text"/>	<input type="checkbox"/> br. 13	<input type="text"/>	<input type="checkbox"/> br. 17	<input type="text"/>	<input type="checkbox"/> br. 21	<input type="text"/>
<input type="checkbox"/> br. 2	<input type="text"/>	<input type="checkbox"/> br. 6	<input type="text"/>	<input type="checkbox"/> br. 10	<input type="text"/>	<input type="checkbox"/> br. 14	<input type="text"/>	<input type="checkbox"/> br. 18	<input type="text"/>	<input type="checkbox"/> br. 22	<input type="text"/>
<input type="checkbox"/> br. 3	<input type="text"/>	<input type="checkbox"/> br. 7	<input type="text"/>	<input type="checkbox"/> br. 11	<input type="text"/>	<input type="checkbox"/> br. 15	<input type="text"/>	<input type="checkbox"/> br. 19	<input type="text"/>	<input type="checkbox"/> br. 23	<input type="text"/>
<input type="checkbox"/> br. 4	<input type="text"/>	<input type="checkbox"/> br. 8	<input type="text"/>	<input type="checkbox"/> br. 12	<input type="text"/>	<input type="checkbox"/> br. 16	<input type="text"/>	<input type="checkbox"/> br. 20	<input type="text"/>	<input type="checkbox"/> br. 24	<input type="text"/>

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...


23_MC9_DANNO AGLI IMPALCATI PIANI



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input type="checkbox"/> br. 3		<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input type="checkbox"/> br. 4		<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4

23_MC10_DANNO DA IRREGOLARITA' COSTRUTTIVA E DEL MATERIALE




Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	4	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	3	<input checked="" type="checkbox"/> br. 6	4	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	3	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC10_DANNO DA IRREGOLARITA' COSTRUTTIVA E DEL MATERIALE




Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input checked="" type="checkbox"/> br. 1	4	<input checked="" type="checkbox"/> br. 5	4	<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input checked="" type="checkbox"/> br. 2	3	<input checked="" type="checkbox"/> br. 6	4	<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	5	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	3	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1 foto 2 foto 3 foto 4

W:\C\ricordia sulla Secchia-MO-125.JPG foto 2 W:\C\ricordia sulla Secchia-MO-70.JPG foto 3

NULL NULL

23_MC11_DANNO DA IRREGOLARITA' DI FORMA




Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)
<input checked="" type="checkbox"/> an. 1	5	<input type="checkbox"/> an. 5		<input type="checkbox"/> an. 9		<input type="checkbox"/> an. 13		<input type="checkbox"/> an. 17		<input type="checkbox"/> an. 21	

OK Annulla

RILIEVO_DANNO_CIMITERI - Atributi elemento


INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MC11_DANNO DA IRREGOLARITA' DI FORMA




Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)
<input checked="" type="checkbox"/> an. 1	2	<input type="checkbox"/> an. 5	NULL	<input type="checkbox"/> an. 9		<input type="checkbox"/> an. 13		<input type="checkbox"/> an. 17		<input type="checkbox"/> an. 21	
<input checked="" type="checkbox"/> an. 2	5	<input type="checkbox"/> an. 6	NULL	<input type="checkbox"/> an. 10		<input type="checkbox"/> an. 14		<input type="checkbox"/> an. 18		<input type="checkbox"/> an. 22	
<input checked="" type="checkbox"/> an. 3	4	<input type="checkbox"/> an. 7		<input type="checkbox"/> an. 11		<input type="checkbox"/> an. 15		<input type="checkbox"/> an. 19		<input type="checkbox"/> an. 23	
<input checked="" type="checkbox"/> an. 4	3	<input type="checkbox"/> an. 8		<input type="checkbox"/> an. 12		<input type="checkbox"/> an. 16		<input type="checkbox"/> an. 20		<input type="checkbox"/> an. 24	

foto 1: cordia sulla Secchia-MO-56.JPG foto 2: cordia sulla Secchia-MO-118.JPG foto 3: NULL foto 4: NULL



23_MC12_DANNO DA INTERAZIONE



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	3	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	3	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1: cordia sulla Secchia-MO-56.JPG foto 2: cordia sulla Secchia-MO-118.JPG foto 3: NULL foto 4: NULL


OK Annulla

RILIEVO_DANNO_CIMITERI - Atributi elemento


INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)	Num. angolo	Danno (da 0 a 5)
<input checked="" type="checkbox"/> an. 2	5	<input type="checkbox"/> an. 6	NULL	<input type="checkbox"/> an. 10		<input type="checkbox"/> an. 14		<input type="checkbox"/> an. 18		<input type="checkbox"/> an. 22	
<input checked="" type="checkbox"/> an. 3	4	<input type="checkbox"/> an. 7		<input type="checkbox"/> an. 11		<input type="checkbox"/> an. 15		<input type="checkbox"/> an. 19		<input type="checkbox"/> an. 23	
<input checked="" type="checkbox"/> an. 4	3	<input type="checkbox"/> an. 8		<input type="checkbox"/> an. 12		<input type="checkbox"/> an. 16		<input type="checkbox"/> an. 20		<input type="checkbox"/> an. 24	

foto 1: cordia sulla Secchia-MO-56.JPG foto 2: cordia sulla Secchia-MO-118.JPG foto 3: NULL foto 4: NULL



23_MC12_DANNO DA INTERAZIONE



Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)	Num. Braccio	Danno (da 0 a 5)
<input type="checkbox"/> br. 1		<input type="checkbox"/> br. 5		<input type="checkbox"/> br. 9		<input type="checkbox"/> br. 13		<input type="checkbox"/> br. 17		<input type="checkbox"/> br. 21	
<input type="checkbox"/> br. 2		<input type="checkbox"/> br. 6		<input type="checkbox"/> br. 10		<input type="checkbox"/> br. 14		<input type="checkbox"/> br. 18		<input type="checkbox"/> br. 22	
<input checked="" type="checkbox"/> br. 3	3	<input type="checkbox"/> br. 7		<input type="checkbox"/> br. 11		<input type="checkbox"/> br. 15		<input type="checkbox"/> br. 19		<input type="checkbox"/> br. 23	
<input checked="" type="checkbox"/> br. 4	3	<input type="checkbox"/> br. 8		<input type="checkbox"/> br. 12		<input type="checkbox"/> br. 16		<input type="checkbox"/> br. 20		<input type="checkbox"/> br. 24	

foto 1: NULL foto 2: NULL foto 3: NULL foto 4: NULL

OK Annulla


RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI INGRESSI A VELA



C24A - DANNO AGLI ELEMENTI DI PASSAGGIO

INGRESSI CON ELEMENTI A MENSOLA





NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

23_MI1_RIBALTAMENTO DEGLI INGRESSI A VELA

23_MI2_RIBALTAMENTO DEGLI ELEMENTI SVETTANTI

Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5)



ing. 1 5 ing. 5 ing. 9 ing. 1 ing. 5 ing. 9

ing. 2 ing. 6 ing. 10 ing. 2 ing. 6 ing. 10

ing. 3 ing. 7 ing. 11 ing. 3 ing. 7 ing. 11

ing. 4 ing. 8 ing. 12 ing. 4 ing. 8 ing. 12

foto 1 foto 2

23_MI3_DANNI AD ARCHI ED ARCHITRAVI

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI P...

23_MI3_DANNI AD ARCHI ED ARCHITRAVI






foto 1 foto 2

Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5) Num. ingresso Danno (da 0 a 5)

ing. 1 5 ing. 5 ing. 9 ing. 1 ing. 5 ing. 9

ing. 2 ing. 6 ing. 10 ing. 2 ing. 6 ing. 10

ing. 3 ing. 7 ing. 11 ing. 3 ing. 7 ing. 11

ing. 4 ing. 8 ing. 12 ing. 4 ing. 8 ing. 12

foto 1 foto 2

23_MI4_RIBALTAMENTO PARETI VANI ACCESSORI






foto 1 foto 2

Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5)

V. 1 V. 4 V. 7 V. 10 V. 1 V. 4 V. 7 V. 10

V. 2 V. 5 V. 8 V. 11 V. 2 V. 5 V. 8 V. 11

V. 3 V. 6 V. 9 V. 12 V. 3 V. 6 V. 9 V. 12

foto 1 foto 2

23_MI4_MECCANISMI NEL PIANO DEI VANI ACCESSORI

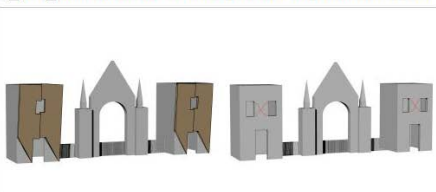


foto 1 foto 2

Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5) Vano Danno (da 0 a 5)

V. 1 V. 4 V. 7 V. 10 V. 1 V. 4 V. 7 V. 10

V. 2 V. 5 V. 8 V. 11 V. 2 V. 5 V. 8 V. 11

V. 3 V. 6 V. 9 V. 12 V. 3 V. 6 V. 9 V. 12

foto 1 foto 2


OK Annulla


RILIEVO_DANNO_CIMITERI - Attributi elemento

INI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO AGLI ELEMENTI DI PASSAGGIO

C24B - DANNO AGLI ELEMENTI DI PASSAGGIO

ELEMENTI DI PASSAGGIO 





 NB. Effettuare una virtuale numerazione degli elementi di passaggio che compongono il cimitero. La numerazione va assegnata partendo dall'ingresso principale rivolto verso il cimitero da destra a sinistra per ogni recinto

Ogni elemento va selezionato (num el. pass) se il meccanismo di collasso in esame è possibile in quel elemento

Il livello di danno va segnato per ogni elemento selezionato. Segnare 0 in presenza di danno nullo e di sola vulnerabilità

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

23_ME1_RIBALTAMENTO DELLE FACCIATE EL. DI PASS **23_ME2_RIBALTAMENTO DEGLI ELEMENTI SVETTANTI**

Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)
<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1 foto 2 foto 1 foto 2

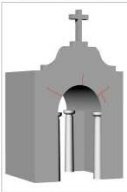

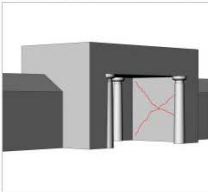

23_ME3_DANNI AD ARCHI ED ARCHITRAVI 23_ME4_EFFETTI DI TAGLIO NELLE PARETI

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2

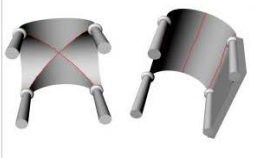



23_ME3_DANNI AD ARCHI ED ARCHITRAVI **23_ME4_EFFETTI DI TAGLIO NELLE PARETI**

Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)
<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

foto 1 foto 2 foto 1 foto 2

23_ME5_DANNO ALLE VOLTE 23_ME6_DANNO AGLI IMPALCATI PIANI

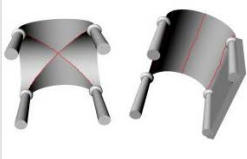

   



OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INI GENERALI
 DESCRIZIONE DEL CIMITERO
 DESCRIZIONE DEL CIMITERO 2
 DESCRIZIONE DEL CIMITERO 3
 MURO DI CINTA
 COLOMBARI
 ELEMENTI DI PASSAGGIO 1
 ELEMENTI DI PASSAGGIO 2

23_ME5_DANNO ALLE VOLTE **23_ME6_DANNO AGLI IMPALCATI PIANI**

Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)
<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>
foto 1		foto 2		foto 1		foto 2		foto 1		foto 2	

...

23_ME7_DANNO ALLE CUPOLE

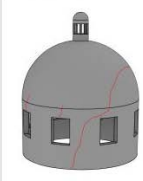




foto 1

foto 2

... ...

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

INI GENERALI
 DESCRIZIONE DEL CIMITERO
 DESCRIZIONE DEL CIMITERO 2
 DESCRIZIONE DEL CIMITERO 3
 MURO DI CINTA
 COLOMBARI
 ELEMENTI DI PASSAGGIO 1
 ELEMENTI DI PASSAGGIO 2

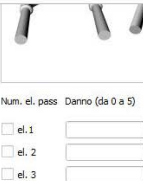
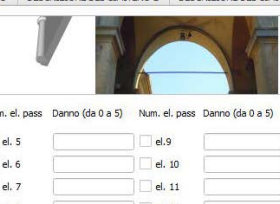



foto 1

foto 2

... ...

Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)
<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

...

23_ME7_DANNO ALLE CUPOLE

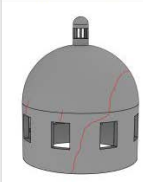




foto 1

foto 2

... ...

Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)	Num. el. pass	Danno (da 0 a 5)
<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>	<input type="checkbox"/> el. 1	<input type="text"/>	<input type="checkbox"/> el. 5	<input type="text"/>	<input type="checkbox"/> el. 9	<input type="text"/>
<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>	<input type="checkbox"/> el. 2	<input type="text"/>	<input type="checkbox"/> el. 6	<input type="text"/>	<input type="checkbox"/> el. 10	<input type="text"/>
<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>	<input type="checkbox"/> el. 3	<input type="text"/>	<input type="checkbox"/> el. 7	<input type="text"/>	<input type="checkbox"/> el. 11	<input type="text"/>
<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>	<input type="checkbox"/> el. 4	<input type="text"/>	<input type="checkbox"/> el. 8	<input type="text"/>	<input type="checkbox"/> el. 12	<input type="text"/>

...


OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2 TOMBE DI FAMIGLIA CAPPELLA FUNEBRE AGIBILITA

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLA CAPPELLA FUNEBRE

C26 - DANNO ALLA CAPPELLA FUNEBRE

CAPELLA FUNEBRE 

I DANNI DELLA CAPPELLA FUNEBRE SONO ESTRATTI DALL'ABACO DEI MECCANISMI DI COLLASSO DELLE CHIESE
LA MODALITA' DI COMPILAZIONE E' ANALOGAA QUELLA DELLA RISPETTIVA SCHEDA

23_MF1_RIBALTAMENTO FACCIATA

Danno (da 0 a 5)




foto 1

23_MF2_MECCANISMI DI SOMMITA' FACCIATA

Danno (da 0 a 5)

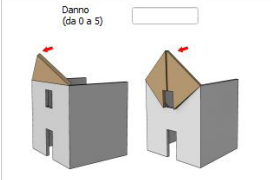


foto 1

23_MF3_MECCANISMI NEL PIANO FACCIATA

Danno (da 0 a 5)

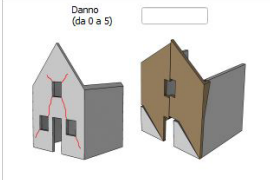
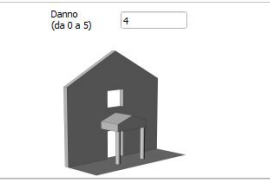


foto 1

23_MF4_PROTIRO/INARTECE

Danno (da 0 a 5)



23_MF5_RISPOSTA TRASVERSALE DELL'AULA

Danno (da 0 a 5)

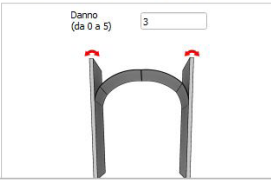


foto 1

23_MF6_TAGLIO PARETI LATERALI

Danno (da 0 a 5)

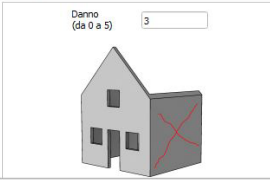


foto 1

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2 TOMBE DI FAMIGLIA CAPPELLA FUNEBRE AGIBILITA

23_MF4_PROTIRO/INARTECE

Danno (da 0 a 5)

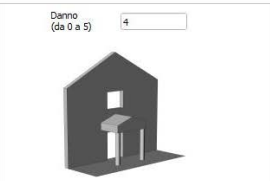



foto 1



23_MF5_RISPOSTA TRASVERSALE DELL'AULA

Danno (da 0 a 5)

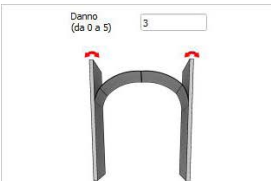



foto 1



23_MF6_TAGLIO PARETI LATERALI

Danno (da 0 a 5)

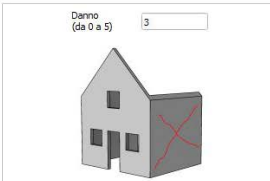



foto 1



23_MF7_VOLTE AULA / NAVATA CENTRALE

Danno (da 0 a 5)

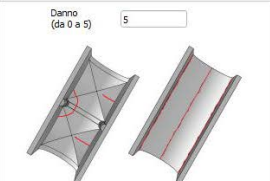



foto 1



23_MF8_ARCHI TRIONFALI

Danno (da 0 a 5)

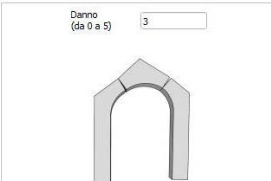



foto 1



23_MF9_CUPOLA E TAMBURO / TIBURIO

Danno (da 0 a 5)




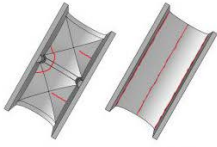

foto 1



OK Annulla



RILIEVO_DANNO_CIMITERI - Attributi elemento

E DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2 TOMBE DI FAMIGLIA CAPPELLA FUNEBRE AGIBILITA



23_MF7_VOLTE AULA / NAVATA CENTRALE 23_MF8_ARCHI TRIONFALI 23_MF9_CUPOLA E TAMBURO / TIBURIO

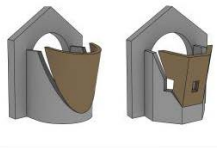

Danno (da 0 a 5) 5   foto 1
 foto 1 Concordia sulla Secchia-MO-23.JPG

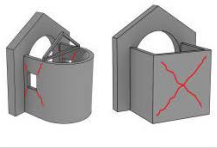

Danno (da 0 a 5) 3   foto 1
 foto 1 Concordia sulla Secchia-MO-25.JPG

Danno (da 0 a 5)   foto 1
 foto 1

23_MF10_LANTERNA 23_MF11_RIBALTAMENTO ABSIDE 23_MF12_MECCANISMI DI TAGLIO NELL'ABSIDE

Danno (da 0 a 5)   foto 1
 foto 1

Danno (da 0 a 5) 3   foto 1
 foto 1 Concordia sulla Secchia-MO-60.JPG


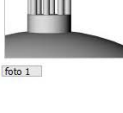
Danno (da 0 a 5) 4   foto 1
 foto 1 Concordia sulla Secchia-MO-63.JPG


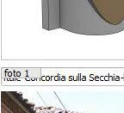
OK Annulla


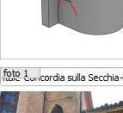
RILIEVO_DANNO_CIMITERI - Attributi elemento

E DEL CIMITERO 2 DESCRIZIONE DEL CIMITERO 3 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2 TOMBE DI FAMIGLIA CAPPELLA FUNEBRE AGIBILITA



23_MF10_LANTERNA 23_MF11_RIBALTAMENTO ABSIDE 23_MF12_MECCANISMI DI TAGLIO NELL'ABSIDE

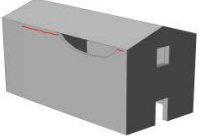

Danno (da 0 a 5)   foto 1
 foto 1

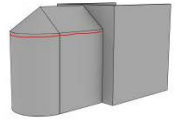

Danno (da 0 a 5) 3   foto 1
 foto 1 Concordia sulla Secchia-MO-60.JPG

Danno (da 0 a 5) 4   foto 1
 foto 1 Concordia sulla Secchia-MO-63.JPG

23_MF13_VOLTE DEL PRESBITERIO / ABSIDE 23_MF14_ELEMENTI DI COPERTURA: AULA 23_MF15_ELEMENTI DI COPERTURA: ABSIDE

Danno (da 0 a 5) 3   foto 1
 foto 1

Danno (da 0 a 5) 3   foto 1
 foto 1 3


Danno (da 0 a 5) 3   foto 1
 foto 1 3

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

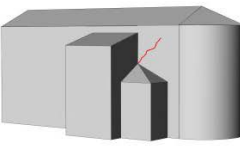
DEL CIMITERO 2 | DESCRIZIONE DEL CIMITERO 3 | MURO DI CINTA | COLOMBARI | ELEMENTI DI PASSAGGIO 1 | ELEMENTI DI PASSAGGIO 2 | TOMBE DI FAMIGLIA | CAPPELLA FUNEBRE | AGIBILITA'

23_MF16_AGGETTI (VELA, GUGLIE, PINNACOLI, STATUE) 23_MF17_INTERAZIONI IN PROSSIMITA' DI IRREGOLARITA'



Livello di Danno

foto 1



Livello di Danno

foto 1

<p>ALTRO</p> <p><input type="checkbox"/> RISPOSTA LONGITUDINALE COLONNATO</p> <p><input type="checkbox"/> VOLTE DELLE NAVATE LATERALI</p> <p><input type="checkbox"/> RIBALTAMENTO PARETI DEL TRANSETTO</p> <p><input type="checkbox"/> MECCANISMI DI TAGLIO DEL TRANSETTO</p> <p><input type="checkbox"/> VOLTE DEL TRANSETTO</p> <p><input type="checkbox"/> ELEMENTI DI COPERTURA: TRANSETTO</p>	<p>DANNO</p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p>	<p>ALTRO DESCRIZIONE</p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p>	<p>DANNO</p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p> <p><input type="text"/></p>
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OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

DEL CIMITERO 2 | DESCRIZIONE DEL CIMITERO 3 | MURO DI CINTA | COLOMBARI | ELEMENTI DI PASSAGGIO 1 | ELEMENTI DI PASSAGGIO 2 | TOMBE DI FAMIGLIA | CAPPELLA FUNEBRE | AGIBILITA'

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - AGIBILITA'

C27 - AGIBILITA'

AGIBILE
 INAGIBILE
 PARZIALMENTE AGIBILE
 AGIBILE CON PROVVEDIMENTI
 TEMPORANEAMENTE INAGIBILE
 INAGIBILE PER CAUSE ESTERNE

Indicare le parti agibili Segnalare i provvedimenti anche indicandoli nella tabella sottostante Indicare operazioni aggiuntive (visita più accurata, visita di esperti ...) Indicare le cause esterne

dNULL	NULL	NULL	NULL
-------	------	------	------

C28 - PROVVEDIMENTI DI P.I. SUGGERITI (interventi limitati / interventi estesi)

Revisione manto di copertura	INTERVENTO ESTESO	Ripristino smaltimento delle acque meteoriche	[]
Copertura provvisoria	INTERVENTO LIMITATO	Monitoraggio	[]
Puntellamenti	INTERVENTO ESTESO	Protezioni o consolidamenti su opere d'arte fisse	[]
Rimozione delle macerie	INTERVENTO LIMITATO	Catalogazione e smontaggio delle parti pericolanti	[]
Transennamenti / recinzioni / protezioni	INTERVENTO ESTESO	Sgombero opere d'arte mobili	[]
Consolidamenti localizzati	[]	Raccolta sistematica dei frammenti	[]
Messa in opera di cerchiatura e/o tiranti	[]	Ricovero e protezione dei frammenti	[]

C29 - TIPO DI VISITA

COMPLETA
 PARZIALE
 SOLO DALL'ESTERNO
 MOTIVI OSTATIVI

C - 30 NOTE

OK Annulla

RILIEVO_DANNO_CIMITERI - Attributi elemento

È DEL CIMITERO 2
 DESCRIZIONE DEL CIMITERO 3
 MURO DI CINTA
 COLOMBARI
 ELEMENTI DI PASSAGGIO 1
 ELEMENTI DI PASSAGGIO 2
 TOMBE DI FAMIGLIA
 CAPPELLA FUNEBRE
 AGIBILITÀ

Rimozione delle macerie	INTERVENTO LIMITATO	Catalogazione e smontaggio delle parti pericolanti	
Transennamenti / recinzioni / protezioni	(0)	Sgombero opere d'arte mobili	
Consolidamenti localizzati		Raccolta sistematica dei frammenti	
Messa in opera di cerchiatura e/o tiranti		Ricovero e protezione dei frammenti	

C29 - TIPO DI VISITA

COMPLETA
 PARZIALE
 SOLO DALL'ESTERNO
 MOTIVI OSTATIVI

C - 30 NOTE

Indicare, eventualmente, altri danni non rilevabili dalla scheda (es. solai di calpestio, pavimentazioni ecc.)









A CURA DELL'UFFICIO

INDICE DI DANNO	0,8	QUANTIFICAZIONE OPERE DI CONSOLIDAMENTO E MIGLIORAMENTO SISMICO	1178125.000
INDICE DI VULNERABILITÀ*	58.000	QUANTIFICAZIONE OPERE DI RESTAURO	634375.000
		QUANTIFICAZIONE OPERE DI PRONTO INTERVENTO	100000

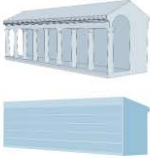
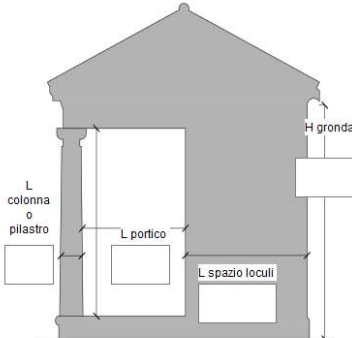
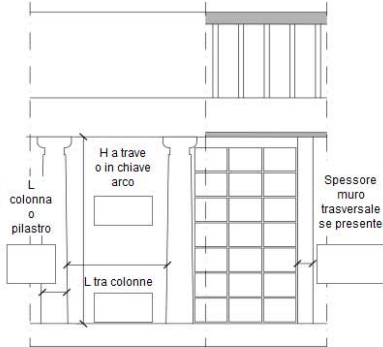
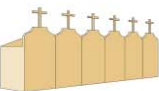
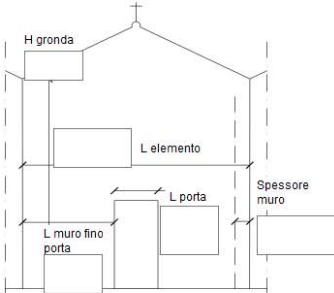
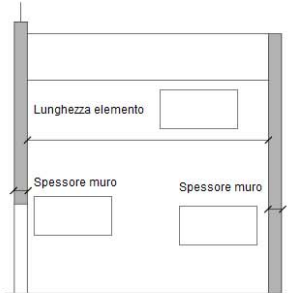
OK Annulla

Ann.4. First Cemetery form prototype used during the experimentation

INFORMAZIONI GENERALI	DESCRIZIONE DEL CIMITERO	DESCRIZIONE DEL CIMITERO 2	MURO DI CINTA	COLOMBARI	ELEMENTI DI PASSAGGIO	TOMBE DI FAMIGLIA	CAPELLA	AGIBILITÀ
SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI								
C1								
Data	01/01/2000	N° progressivo		N° Scheda (a cura dell'ufficio)				
C2 - RIFERIMENTO VERTICALE								
Bene complesso <input type="radio"/>			Bene indiviso <input type="radio"/>					
Denominazione bene complesso <input type="text"/>								
N° Schede beni componenti <input type="text"/>			Codice di livello superiore <input type="text"/>					
Tipologia <input type="checkbox"/> con cappella <input type="checkbox"/> senza cappella <input type="checkbox"/> con colombari <input type="checkbox"/> con cappelle di famiglia <input type="checkbox"/> cimitero giardino/ebraico <input type="checkbox"/>								
Pianta <input type="checkbox"/> regolare <input type="checkbox"/> a pianta libera <input type="checkbox"/> con cortili <input type="checkbox"/> altro <input type="checkbox"/> <input type="text"/>								
C3 - LOCALIZZAZIONE GEOGRAFICA AMMINISTRATIVA								
Regione <input type="text"/>			Indirizzo <input type="text"/>					
Provincia <input type="text"/>		Codice provincia <input type="text"/>	N° aggregato <input type="text"/>					
Comune <input type="text"/>		Codice comune <input type="text"/>	N° unità <input type="text"/>					
Località <input type="text"/>			Id cimitero <input type="text"/>					
C4 - OGGETTO								
Denominazione Bene <input type="text"/>								
Denominazione storica <input type="text"/>								
Datazione anno <input type="text"/> secolo <input type="text"/> epoca <input type="text"/> Ultima trasformazione <input type="text"/>								
Proprietà <input type="text"/>			Utilizzatore <input type="text"/>					
C5 - COMPILATORE SCHEDA								
Cognome <input type="text"/>			Nome <input type="text"/>					
Ente/ufficio di appartenenza <input type="text"/>								
C6 - DOCUMENTAZIONE FOTOGRAFICA								
Documentazione fotografica <input type="checkbox"/>			Realizzata da <input type="text"/>					
C7 - CARATTERISTICHE DEL SITO								
<input type="radio"/> in piano <input type="radio"/> su rilievo/su cresta/su vetta <input type="radio"/> su riporto <input type="radio"/> in pendio/su versante <input type="radio"/> Avvallamento <input type="radio"/>								
C8 - CONTESTO URBANO E POSIZIONE								
<input type="radio"/> Centro urbano <input type="radio"/> Periferia urbana <input type="radio"/> Area industriale - commerciale <input type="radio"/> Area agricola <input type="radio"/> Centro storico <input type="radio"/>								
<input type="radio"/> Isolato <input type="radio"/> Connesso con altri edifici <input type="radio"/> su lati <input type="text"/> altro <input type="radio"/> <input type="text"/>								
C9 - INFRASTRUTTURE								
<input type="checkbox"/> Accesso pedonale <input type="checkbox"/> Accesso con altezza inferiore a 4 metri <input type="checkbox"/>			<input type="checkbox"/> Rete viaria idonea in relazione al rischio <input type="checkbox"/> Spazi aperti a disposizione <input type="checkbox"/>					
<input type="checkbox"/> Accesso carrabile <input type="checkbox"/> Accesso con mezzi pesanti <input type="checkbox"/>			Altro <input type="checkbox"/> <input type="text"/> Parcheggio nelle vicinanze <input type="checkbox"/>					
C10 - PRESENZA DI RISCHIO								
<input type="checkbox"/> Insedimento minacciato da frana			<input type="text"/>					
<input type="checkbox"/> Insedimento in zona alluvionabile			<input type="text"/>					
<input type="checkbox"/> Insedimento soggetto a minacce di tipo industriale			<input type="text"/>					
<input type="checkbox"/> Insedimento soggetto ad altre minacce naturali			<input type="text"/>					
OK								Cancel

INFORMAZIONI GENERALI	DESCRIZIONE DEL CIMITERO	DESCRIZIONE DEL CIMITERO 2	MURO DI CINTA	COLOMBARI	ELEMENTI DI PASSAGGIO	TOMBE DI FAMIGLIA	CAPPELLA	AGIBILITA
SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI								
C11 - DESTINAZIONE D'USO ATTUALE								
Uso			Utilizzazione temporale			Affollamento		
Cimitero	<input type="checkbox"/>					A	<input type="checkbox"/>	
Parco	<input type="checkbox"/>					A	<input type="checkbox"/>	
Altro	<input type="checkbox"/>					A	<input type="checkbox"/>	
C12 - TIPOLOGIA DEI BENI ARTISTICI PRESENTI								
Tipologia			num	superficie		Tipologia		
Affreschi <input type="checkbox"/>			<input type="text"/>	<input type="text"/>		Dipinti su vario supporto <input type="checkbox"/>		
Stucchi <input type="checkbox"/>			<input type="text"/>	<input type="text"/>		Decorazioni plastiche mobili <input type="checkbox"/>		
Altari/statue <input type="checkbox"/>			<input type="text"/>	<input type="text"/>		Altro <input type="checkbox"/>		
Arredi (soffitti, amboni, pulpito, etc.....) <input type="checkbox"/>			<input type="text"/>	<input type="text"/>		Altro <input type="checkbox"/>		
C13 - STATO DI MANUTENZIONE GENERALE								
Livello generale della manutenzione						<input type="text"/>	lavori in corso <input type="checkbox"/>	
C14 - INTERVENTI								
<input type="checkbox"/> Ampliamento		<input type="checkbox"/> Sopraelevazione		<input type="checkbox"/> Manutenzione straordinaria		<input type="checkbox"/> Consolidamento		
<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>		
C15 - REGOLARITA', FORMA PLANIMETRICA E DATI DIMENSIONALI								
Forma in pianta			<input type="text"/>					
Presenza di			<input type="checkbox"/> Porticati		<input type="checkbox"/> Vani passanti			
Discontinuità costruttive e del materiale			<input type="checkbox"/>					
C16 - DATI DIMENSIONALI GENERALI DEL CIMITERO								
Numero recinti compresi gli ampliamenti recenti			<input type="text"/>		Numero recinti storici		<input type="text"/>	
					Numero recinti recenti		<input type="text"/>	
					Piani fuori terra		<input type="text"/>	
					Piani interrati		<input type="text"/>	
					Altezza media in gronda		<input type="text"/>	
					Altezza media in gronda		<input type="text"/>	
C17 - MAROELEMENTI PRESENTI								
<input type="checkbox"/> RECINTO		<input type="checkbox"/> COLOMBARIO SENZA PORTICO		<input type="checkbox"/> INGRESSI A VELA		<input type="checkbox"/> TOMBE SINGOLE		<input type="checkbox"/> CAPPELLA FUNERARIA
								
		<input type="checkbox"/> COLOMBARIO CON PORTICO		<input type="checkbox"/> ELEMENTI A VANO PASSANTE		<input type="checkbox"/> TOMBE IN AGGREGATO		
								

OK Cancel

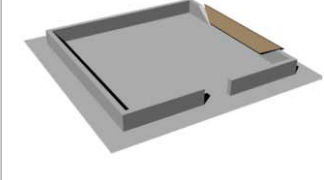
SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI										
DESCRIZIONE SINTETICA DELLE ALI STORICHE DEI CIMITERI										
Dati dimensionali dei colombari numero segmenti realizzati con schema a colombario <input type="text"/> Numero totale recinti <input type="text"/> Larghezza media <input type="text"/> Lunghezza media <input type="text"/> Superficie costruita media in pianta <input type="text"/> Piani fuori terra <input type="text"/> Profondità totale del colombario <input type="text"/> Spessore muratura <input type="text"/> Piani interrati <input type="text"/>				Presenza elementi decorativi aggettanti Nessun elemento aggettante <input type="radio"/> Soluzioni ad attico alto di qualsiasi forma <input type="radio"/> Elementi decorativi (timpani o frontoni) presenti in limitato numero ed estensione <input type="radio"/> Elementi aggettanti puntuali (guglie, aggetti singoli etc.) ma presenti in modo estensivo <input type="radio"/> Soluzioni ad attico basso <input type="radio"/>						
Forma e regolarità dei colombari RETTANGOLARE <input type="checkbox"/> RETT. ALLUNGATA <input type="checkbox"/> a C <input type="checkbox"/> a L <input type="checkbox"/> a CORTI <input type="checkbox"/> ALTRO <input type="checkbox"/> Descrizione sintetica: per ogni recinto indicare le forme costituenti <input style="width: 100%; height: 40px;" type="text"/>				Crescita dei colombari storici (utilizzare notizie storiche o visive. In questo caso le discontinuità costruttive si manifestano causa del sisma e/o sono visibili valutando i muri dei colombari esternamente al cimitero) Nessuna aggiunta (elementi rettangolari semplici) <input type="radio"/> Addizioni successive miste di aree piccole e grandi <input type="radio"/> Addizioni successive con poche, ampie aree costruite <input type="radio"/> Addizioni successive con tante, piccole aree costruite <input type="radio"/>						
Materiale delle strutture verticali <table style="width:100%; border: none;"> <tr> <td style="width: 33%; border: none;"> MURATURA IN LATERIZIO di buona qualità omogenea <input type="radio"/> di buona qualità non omogenea <input type="radio"/> di cattiva qualità <input type="radio"/> di cattiva qualità con ciottoli o altro <input type="radio"/> </td> <td style="width: 33%; border: none;"> MURATURA IN PIETREME O TUFO ben squadri ed omogenei <input type="radio"/> ben squadri non omogenei <input type="radio"/> grossolanamente sbozzato <input type="radio"/> irregolare <input type="radio"/> </td> <td style="width: 33%; border: none;"> MURATURA A SACCO ben intessuta, omogenea e con collegamenti tra i fogli <input type="radio"/> ben intessuta, non omogenea e con collegamenti <input type="radio"/> ben intessuta, senza collegamenti tra i fogli <input type="radio"/> male intessuta, senza collegamenti tra i fogli <input type="radio"/> </td> </tr> </table>				MURATURA IN LATERIZIO di buona qualità omogenea <input type="radio"/> di buona qualità non omogenea <input type="radio"/> di cattiva qualità <input type="radio"/> di cattiva qualità con ciottoli o altro <input type="radio"/>	MURATURA IN PIETREME O TUFO ben squadri ed omogenei <input type="radio"/> ben squadri non omogenei <input type="radio"/> grossolanamente sbozzato <input type="radio"/> irregolare <input type="radio"/>	MURATURA A SACCO ben intessuta, omogenea e con collegamenti tra i fogli <input type="radio"/> ben intessuta, non omogenea e con collegamenti <input type="radio"/> ben intessuta, senza collegamenti tra i fogli <input type="radio"/> male intessuta, senza collegamenti tra i fogli <input type="radio"/>	Copertura Non spingente <input type="radio"/> In Legno <input type="radio"/> Poco Spingente <input type="radio"/> In Laterocemento <input type="radio"/> Spingente <input type="radio"/> Mista legno ed elementi di sostituzione inCA <input type="radio"/> Non rilevabile <input type="radio"/>			
MURATURA IN LATERIZIO di buona qualità omogenea <input type="radio"/> di buona qualità non omogenea <input type="radio"/> di cattiva qualità <input type="radio"/> di cattiva qualità con ciottoli o altro <input type="radio"/>	MURATURA IN PIETREME O TUFO ben squadri ed omogenei <input type="radio"/> ben squadri non omogenei <input type="radio"/> grossolanamente sbozzato <input type="radio"/> irregolare <input type="radio"/>	MURATURA A SACCO ben intessuta, omogenea e con collegamenti tra i fogli <input type="radio"/> ben intessuta, non omogenea e con collegamenti <input type="radio"/> ben intessuta, senza collegamenti tra i fogli <input type="radio"/> male intessuta, senza collegamenti tra i fogli <input type="radio"/>								
Materiale delle solette NON PRESENTE <input type="radio"/> IGNOTO <input type="radio"/> senza catene <input type="radio"/> SOLAI A SOLETTA DEFORMABILE O SEMIRIGIDA <input type="radio"/> con catene <input type="radio"/> SOLAI A SOLETTA RIGIDA <input type="radio"/> travi in legno con tavolato semplice o tavole, travi e volteine... <input type="radio"/> travi in legno con tavolato doppio o tavelloni <input type="radio"/> solai di laterizi armati, solai tipo SAP <input type="radio"/> solaio in c.a., travi ben collegate a solette di c.a.,... <input type="radio"/>				Addizioni più recenti con elementi a colombario o altro con stessi materiali e tecniche costruttive <input type="radio"/> stessi materiali ma tecniche costruttive migliori <input type="radio"/> stessi materiali ma tecniche costruttive peggiori <input type="radio"/> nuovi e/o diversi materiali <input type="radio"/>						
misure da indicare per crescita a colombari 										
misure da indicare per crescita a tombe di famiglia mutuamente connesse 										
DESCRIZIONE SINTETICA DELLA CAPPELLA FUNEBRE										
Dati della cappella funebre Tipo di cappella <input type="radio"/> pianta centrale <input type="radio"/> aula unica <input type="radio"/> 3 o più navate <input type="radio"/> Posizione <input type="radio"/> isolato <input type="radio"/> Connesso con colombari <input type="radio"/> su lati <input type="text"/> Larghezza media <input type="text"/> Lunghezza media <input type="text"/> Altezza media in gronda <input type="text"/>				Copertura Non spingente <input type="radio"/> In Legno <input type="radio"/> Poco Spingente <input type="radio"/> In Laterocemento <input type="radio"/> Spingente <input type="radio"/> Mista legno ed elementi di sostituzione inCA <input type="radio"/> Non rilevabile <input type="radio"/>						
Elementi stilistico - costruttivi facciata a vela <input type="checkbox"/> elementi aggettanti <input type="checkbox"/> presenza di archi/volte <input type="checkbox"/>		Trasformazioni trasformazioni architettoniche <input type="checkbox"/> interventi recenti <input type="checkbox"/>		Materiali costruttivi buona qualità <input type="radio"/> cattiva qualità <input type="radio"/>		Stato di manutenzione della cappella buono <input type="radio"/> medio <input type="radio"/> scadente <input type="radio"/>				
<input type="button" value="OK"/> <input type="button" value="Cancel"/>										

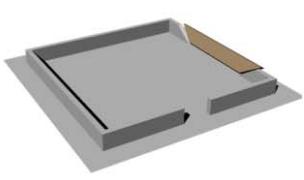
INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI ELEMENTI DI PASSAGGIO TOMBE DI FAMIGLIA CAPPELLA AGIBILITÀ


SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD OGNI LATO DEL MURO DI CINTA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

MM1_RIBALTAMENTO DEL MURO DI CINTA







Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 1 <input type="text"/> <input type="checkbox"/> lato 2 <input type="text"/> <input type="checkbox"/> lato 3 <input type="text"/> <input type="checkbox"/> lato 4 <input type="text"/> foto 1 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 5 <input type="text"/> <input type="checkbox"/> lato 6 <input type="text"/> <input type="checkbox"/> lato 7 <input type="text"/> <input type="checkbox"/> lato 8 <input type="text"/> foto 2 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 9 <input type="text"/> <input type="checkbox"/> lato 10 <input type="text"/> <input type="checkbox"/> lato 11 <input type="text"/> <input type="checkbox"/> lato 12 <input type="text"/> foto 3 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 13 <input type="text"/> <input type="checkbox"/> lato 14 <input type="text"/> <input type="checkbox"/> lato 15 <input type="text"/> <input type="checkbox"/> lato 16 <input type="text"/> foto 4 <input type="text"/>
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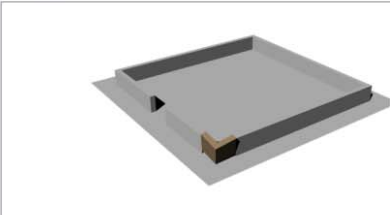
...


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...

...

MM2_ESPULSIONE DEL CANTONALE







Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 1 <input type="text"/> <input type="checkbox"/> lato 2 <input type="text"/> <input type="checkbox"/> lato 3 <input type="text"/> <input type="checkbox"/> lato 4 <input type="text"/> foto 1 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 5 <input type="text"/> <input type="checkbox"/> lato 6 <input type="text"/> <input type="checkbox"/> lato 7 <input type="text"/> <input type="checkbox"/> lato 8 <input type="text"/> foto 2 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 9 <input type="text"/> <input type="checkbox"/> lato 10 <input type="text"/> <input type="checkbox"/> lato 11 <input type="text"/> <input type="checkbox"/> lato 12 <input type="text"/> foto 3 <input type="text"/>	Num. Lato Danno (da 1 a 5) <input type="checkbox"/> lato 13 <input type="text"/> <input type="checkbox"/> lato 14 <input type="text"/> <input type="checkbox"/> lato 15 <input type="text"/> <input type="checkbox"/> lato 16 <input type="text"/> foto 4 <input type="text"/>
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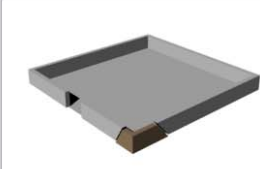
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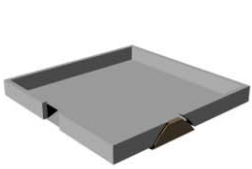
...

...

...

MM3_CEDIMENTI FONDALI








foto 1 <input type="text"/>	foto 2 <input type="text"/>	foto 3 <input type="text"/>	foto 4 <input type="text"/>
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...

...

...

...

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 ELEMENTI DI PASSAGGIO TOMBE DI FAMIGLIA

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD 1 BRACCIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

MC4_DANNO DA SCHIACCIAMENTO AGLI ELEMENTI PUNTUALI (COLONNE/PILASTRI)





Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4

MC5_RISPOSTA DELLE ARCATI DEL POTICO (da considerarsi in entrambe le sue direzioni)






Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4

MC6_DANNI AGLI ARCHITRAVI





Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4

OK
Cancel

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 ELEMENTI DI PASSAGGIO TOMBE DI FAMIGLIA

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD 1 BRACCIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

MC7_TAGLIO NEI MURI TRASVERSALI DEI COLOMBARI



NB Il meccanismo si manifesta con questa configurazione di danno in presenza di strutture miste muratura e travi in CA con alto spessore.

Nelle murature a vista possono essere visualizzate invece le classiche lesioni a croce



Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

MC8_DANNO ALLE VOLTE





Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

MC9_DANNO AGLI IMPALCATI PIANI





Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

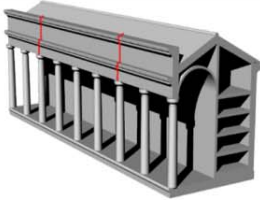


OK Cancel

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 COLOMBARI 4 ELEMENTI DI PASSAGGIO

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD 1 BRACCIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

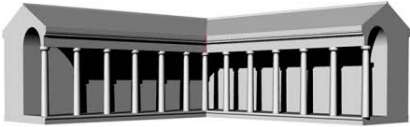


MC10_DANNO DA IRREGOLARITA' COSTRUTTIVA

Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4




MC11_DANNO DA IRREGOLARITA' DI FORMA

Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4

MC12_DANNO DA INTERAZIONE

Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno	Num. Braccio	Danno
<input type="checkbox"/> braccio 1	<input type="text"/>	<input type="checkbox"/> braccio 6	<input type="text"/>	<input type="checkbox"/> braccio 11	<input type="text"/>	<input type="checkbox"/> braccio 16	<input type="text"/>	<input type="checkbox"/> braccio 21	<input type="text"/>
<input type="checkbox"/> braccio 2	<input type="text"/>	<input type="checkbox"/> braccio 7	<input type="text"/>	<input type="checkbox"/> braccio 12	<input type="text"/>	<input type="checkbox"/> braccio 17	<input type="text"/>	<input type="checkbox"/> braccio 22	<input type="text"/>
<input type="checkbox"/> braccio 3	<input type="text"/>	<input type="checkbox"/> braccio 8	<input type="text"/>	<input type="checkbox"/> braccio 13	<input type="text"/>	<input type="checkbox"/> braccio 18	<input type="text"/>	<input type="checkbox"/> braccio 23	<input type="text"/>
<input type="checkbox"/> braccio 4	<input type="text"/>	<input type="checkbox"/> braccio 9	<input type="text"/>	<input type="checkbox"/> braccio 14	<input type="text"/>	<input type="checkbox"/> braccio 19	<input type="text"/>	<input type="checkbox"/> braccio 24	<input type="text"/>
<input type="checkbox"/> braccio 5	<input type="text"/>	<input type="checkbox"/> braccio 10	<input type="text"/>	<input type="checkbox"/> braccio 15	<input type="text"/>	<input type="checkbox"/> braccio 20	<input type="text"/>	<input type="checkbox"/> braccio 25	<input type="text"/>

foto 1
foto 2
foto 3
foto 4


OK
Cancel

INFORMAZIONI GENERALI DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 COLOMBARI 4 ELEMENTI DI PASSAGGIO


SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

RIBALTAMENTO DEGLI INGRESSI A VELA




RIBALTAMENTO DELLE FACCIATE EL. DI PASSAGGIO



Num. ingresso	Danno	Num. ingresso	Danno	Num. ingresso	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> ingresso 1	<input type="text"/>	<input type="checkbox"/> ingresso 5	<input type="text"/>	<input type="checkbox"/> ingresso 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> ingresso 2	<input type="text"/>	<input type="checkbox"/> ingresso 6	<input type="text"/>	<input type="checkbox"/> ingresso 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> ingresso 3	<input type="text"/>	<input type="checkbox"/> ingresso 7	<input type="text"/>	<input type="checkbox"/> ingresso 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> ingresso 4	<input type="text"/>	<input type="checkbox"/> ingresso 8	<input type="text"/>	<input type="checkbox"/> ingresso 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1 foto 2 foto 1 foto 2


RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI



Num. ingresso	Livello di Danno	Num. ingresso	Livello di Danno	Num. ingresso	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno
<input type="checkbox"/> ingresso 1	<input type="text"/>	<input type="checkbox"/> ingresso 5	<input type="text"/>	<input type="checkbox"/> ingresso 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> ingresso 2	<input type="text"/>	<input type="checkbox"/> ingresso 6	<input type="text"/>	<input type="checkbox"/> ingresso 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> ingresso 3	<input type="text"/>	<input type="checkbox"/> ingresso 7	<input type="text"/>	<input type="checkbox"/> ingresso 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> ingresso 4	<input type="text"/>	<input type="checkbox"/> ingresso 8	<input type="text"/>	<input type="checkbox"/> ingresso 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1 foto 2 foto 1 foto 2

DANNI AD ARCHI ED ARCHITRAVI



Num. ingresso	Livello di Danno	Num. ingresso	Livello di Danno	Num. ingresso	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno
<input type="checkbox"/> ingresso 1	<input type="text"/>	<input type="checkbox"/> ingresso 5	<input type="text"/>	<input type="checkbox"/> ingresso 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> ingresso 2	<input type="text"/>	<input type="checkbox"/> ingresso 6	<input type="text"/>	<input type="checkbox"/> ingresso 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> ingresso 3	<input type="text"/>	<input type="checkbox"/> ingresso 7	<input type="text"/>	<input type="checkbox"/> ingresso 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> ingresso 4	<input type="text"/>	<input type="checkbox"/> ingresso 8	<input type="text"/>	<input type="checkbox"/> ingresso 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1 foto 2 foto 3 foto 4

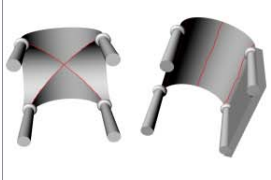

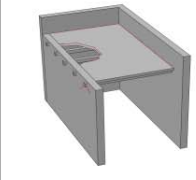

OK Cancel

DESCRIZIONE DEL CIMITERO DESCRIZIONE DEL CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 COLOMBARI 4 ELEMENTI DI PASSAGGIO ELEMENTI DI PASSAGGIO 2

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO DANNO ALLE VOLTE

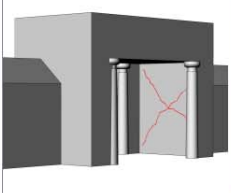

DANNO AGLI IMPALCATI PIANI

Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1
foto 2
foto 3
foto 4

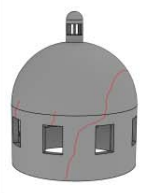

EFFETTI DI TAGLIO NELLE PARETI

Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1
foto 2

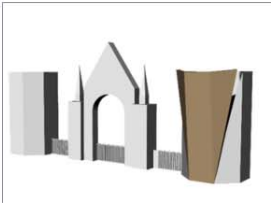

DANNO ALLE CUPOLE

Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>

foto 1
foto 2

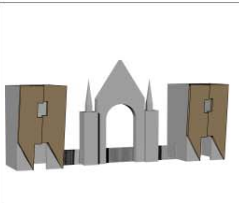
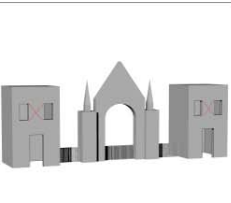
RIBALTAMENTO PARETI VANI ACCESSORI

Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno
<input type="checkbox"/> Vano 1	<input type="text"/>	<input type="checkbox"/> Vano 4	<input type="text"/>	<input type="checkbox"/> Vano 7	<input type="text"/>	<input type="checkbox"/> Vano 10	<input type="text"/>	<input type="checkbox"/> Vano 1	<input type="text"/>	<input type="checkbox"/> Vano 4	<input type="text"/>
<input type="checkbox"/> Vano 2	<input type="text"/>	<input type="checkbox"/> Vano 5	<input type="text"/>	<input type="checkbox"/> Vano 8	<input type="text"/>	<input type="checkbox"/> Vano 11	<input type="text"/>	<input type="checkbox"/> Vano 2	<input type="text"/>	<input type="checkbox"/> Vano 5	<input type="text"/>
<input type="checkbox"/> Vano 3	<input type="text"/>	<input type="checkbox"/> Vano 6	<input type="text"/>	<input type="checkbox"/> Vano 9	<input type="text"/>	<input type="checkbox"/> Vano 12	<input type="text"/>	<input type="checkbox"/> Vano 3	<input type="text"/>	<input type="checkbox"/> Vano 6	<input type="text"/>

foto 1
foto 2

MECCANISMI NEL PIANO DEI VANI ACCESSORI

Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno	Vano	Danno
<input type="checkbox"/> Vano 1	<input type="text"/>	<input type="checkbox"/> Vano 4	<input type="text"/>	<input type="checkbox"/> Vano 7	<input type="text"/>	<input type="checkbox"/> Vano 10	<input type="text"/>	<input type="checkbox"/> Vano 1	<input type="text"/>	<input type="checkbox"/> Vano 4	<input type="text"/>
<input type="checkbox"/> Vano 2	<input type="text"/>	<input type="checkbox"/> Vano 5	<input type="text"/>	<input type="checkbox"/> Vano 8	<input type="text"/>	<input type="checkbox"/> Vano 11	<input type="text"/>	<input type="checkbox"/> Vano 2	<input type="text"/>	<input type="checkbox"/> Vano 5	<input type="text"/>
<input type="checkbox"/> Vano 3	<input type="text"/>	<input type="checkbox"/> Vano 6	<input type="text"/>	<input type="checkbox"/> Vano 9	<input type="text"/>	<input type="checkbox"/> Vano 12	<input type="text"/>	<input type="checkbox"/> Vano 3	<input type="text"/>	<input type="checkbox"/> Vano 6	<input type="text"/>

foto 1
foto 2

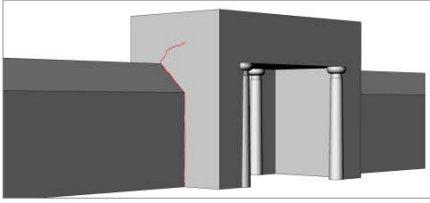

OK Cancel

3. CIMITERO 2 MURO DI CINTA COLOMBARI COLOMBARI 2 COLOMBARI 3 COLOMBARI 4 COLOMBARI 5 ELEMENTI DI PASSAGGIO ELEMENTI DI PASSAGGIO 2 ELEMENTI DI PASSAGGIO 3

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD OGNI ELEMENTO DI PASSAGGIO NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

DANNO DA INTERAZIONE CON ALTRI MACROELEMENTI

Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno	Num.passaggio	Livello di Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>
foto 1			foto 2			foto 3			foto 4		

...

ALTRO **ALTRO**

Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>
foto 1			foto 2			foto 1			foto 2		

...

ALTRO **ALTRO**

Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno	Num.passaggio	Danno
<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>	<input type="checkbox"/> passaggio 1	<input type="text"/>	<input type="checkbox"/> passaggio 5	<input type="text"/>	<input type="checkbox"/> passaggio 9	<input type="text"/>
<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>	<input type="checkbox"/> passaggio 2	<input type="text"/>	<input type="checkbox"/> passaggio 6	<input type="text"/>	<input type="checkbox"/> passaggio 10	<input type="text"/>
<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>	<input type="checkbox"/> passaggio 3	<input type="text"/>	<input type="checkbox"/> passaggio 7	<input type="text"/>	<input type="checkbox"/> passaggio 11	<input type="text"/>
<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>	<input type="checkbox"/> passaggio 4	<input type="text"/>	<input type="checkbox"/> passaggio 8	<input type="text"/>	<input type="checkbox"/> passaggio 12	<input type="text"/>
foto 1			foto 2			foto 1			foto 2		

...




OK Cancel

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD TOMBA DI FAMIGLIA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

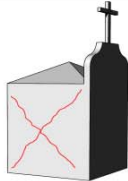

NUMERO TOTALE DI TOMBE PRESENTI

RIBALTAMENTO DELLE PARETI PERIMETRALI




Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>

MECCANISMI DI TAGLIO NELLE PARETI PERIMETRALI

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>

RIBALTAMENTO DEGLI ELEMENTI AGGETTANTI

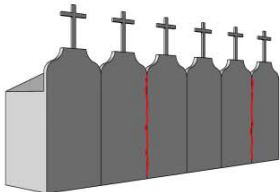

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>

COLOMBARI 2 COLOMBARI 3 COLOMBARI 4 COLOMBARI 5 ELEMENTI DI PASSAGGIO ELEMENTI DI PASSAGGIO 2 ELEMENTI DI PASSAGGIO 3 TOMBE DI FAMIGLIA TOMBE DI FAMIGLIA 2

SCHEDA PER IL RILIEVO DEL DANNO AI BENI CULTURALI - ORGANISMI CIMITERIALI

NB IL NUMERO ASSEGNATO AD TOMBA DI FAMIGLIA NON DEVE VARIARE DA UN MECCANISMO DI COLLASSO ALL'ALTRO

INTERAZIONI TRA TOMBE DI FAMIGLIA ACCOSTATE

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>
[foto 1]		[foto 2]		[foto 3]		[foto 4]							
[...]		[...]		[...]		[...]		[...]		[...]		[...]	

ALTRO [_____]

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>
[foto 1]		[foto 2]		[foto 3]		[foto 4]							
[...]		[...]		[...]		[...]		[...]		[...]		[...]	



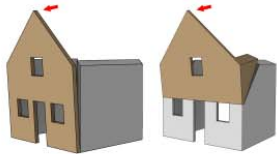
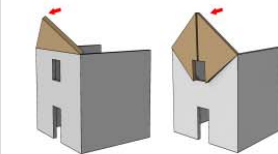
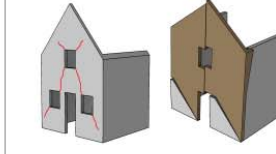

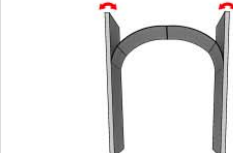

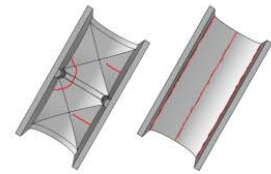
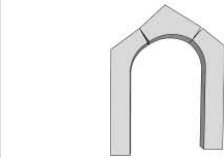
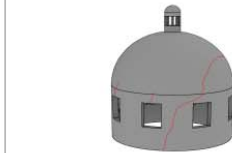
ALTRO [_____]

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>
[foto 1]		[foto 2]		[foto 3]		[foto 4]							
[...]		[...]		[...]		[...]		[...]		[...]		[...]	

ALTRO [_____]

Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno	Num. tomba familiare	Danno
<input type="checkbox"/> tomba 1	<input type="text"/>	<input type="checkbox"/> tomba 5	<input type="text"/>	<input type="checkbox"/> tomba 9	<input type="text"/>	<input type="checkbox"/> tomba 13	<input type="text"/>	<input type="checkbox"/> tomba 17	<input type="text"/>	<input type="checkbox"/> tomba 21	<input type="text"/>	<input type="checkbox"/> tomba 25	<input type="text"/>
<input type="checkbox"/> tomba 2	<input type="text"/>	<input type="checkbox"/> tomba 6	<input type="text"/>	<input type="checkbox"/> tomba 10	<input type="text"/>	<input type="checkbox"/> tomba 14	<input type="text"/>	<input type="checkbox"/> tomba 18	<input type="text"/>	<input type="checkbox"/> tomba 22	<input type="text"/>	<input type="checkbox"/> tomba 26	<input type="text"/>
<input type="checkbox"/> tomba 3	<input type="text"/>	<input type="checkbox"/> tomba 7	<input type="text"/>	<input type="checkbox"/> tomba 11	<input type="text"/>	<input type="checkbox"/> tomba 15	<input type="text"/>	<input type="checkbox"/> tomba 19	<input type="text"/>	<input type="checkbox"/> tomba 23	<input type="text"/>	<input type="checkbox"/> tomba 27	<input type="text"/>
<input type="checkbox"/> tomba 4	<input type="text"/>	<input type="checkbox"/> tomba 8	<input type="text"/>	<input type="checkbox"/> tomba 12	<input type="text"/>	<input type="checkbox"/> tomba 16	<input type="text"/>	<input type="checkbox"/> tomba 20	<input type="text"/>	<input type="checkbox"/> tomba 24	<input type="text"/>	<input type="checkbox"/> tomba 28	<input type="text"/>
[foto 1]		[foto 2]		[foto 3]		[foto 4]							
[...]		[...]		[...]		[...]		[...]		[...]		[...]	

OK Cancel

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLA CAPPELLA FUNEBRE		
C26 - DANNO ALLA CAPPELLA FUNEBRE CAPPELLA FUNEBRE 		 I DANNI DELLA CAPPELLA FUNEBRE SONO ESTRATTI DALL'ABACO DEI MECCANISMI DI COLLASSO DELLE CHIESE LA MODALITA' DI COMPILAZIONE E' ANALOGAA QUELLA DELLA RISPETTIVA SCHEDA
<input type="checkbox"/> 23_MF1_RIBALTAMENTO FACCIATA Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF2_MECCANISMI DI SOMMITA' FACCIATA Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF3_MECCANISMI NEL PIANO FACCIATA Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>
<input type="checkbox"/> 23_MF4_PROTIRO/NARTECE Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF5_RISPOSTA TRASVERSALE DELL'AULA Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF6_TAGLIO PARETI LATERALI Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>
<input type="checkbox"/> 23_MF7_VOLTE AULA / NAVATA CENTRALE Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF8_ARCHI TRIONFALI Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>	<input type="checkbox"/> 23_MF9_CUPOLA E TAMBURO / TIBURIO Danno (da 0 a 5) <input type="text"/>  foto 1 <input type="text"/>

3 COLOMBARI 4 ELEMENTI DI PASSAGGIO 1 ELEMENTI DI PASSAGGIO 2 ELEMENTI DI PASSAGGIO 3 TOMBE DI FAMIGLIA TOMBE DI FAMIGLIA 2 CAPPELLA FUNEBRE CAPPELLA FUNEBRE 2

SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - DANNO ALLA CAPPELLA FUNEBRE

C26 - DANNO ALLA CAPPELLA FUNEBRE

23_MF10_LANTERNA

Danno (da 0 a 5)



foto 1

23_MF11_RIBALTAMENTO ABSIDE

Danno (da 0 a 5)



foto 1

23_MF12_MECCANISMI DI TAGLIO NELL'ABSIDE

Danno (da 0 a 5)



foto 1

23_MF13_VOLTE DEL PRESBITERIO / ABSIDE

Danno (da 0 a 5)



foto 1

23_MF14_ELEMENTI DI COPERTURA: AULA

Danno (da 0 a 5)



foto 1

23_MF15_ELEMENTI DI COPERTURA: ABSIDE

Danno (da 0 a 5)



foto 1

23_MF16_AGGETTI (VELA, GUGLIE, PINNACOLI, STATUE)

Livello di Danno



foto 1

23_MF17_INTERAZIONI IN PROSSIMITA' DI IRREGOLARITÀ

Livello di Danno



foto 1

ALTRO	DANNO	ALTRO DESCRIZIONE	DANNO
<input type="checkbox"/> RISPOSTA LONGITUDINALE COLONNATO	<input type="text"/>	<input type="checkbox"/> ...	<input type="text"/>
<input type="checkbox"/> VOLTE DELLE NAVATE LATERALI	<input type="text"/>	<input type="checkbox"/> ...	<input type="text"/>
<input type="checkbox"/> RIBALTAMENTO PARETI DEL TRANSETTO	<input type="text"/>	<input type="checkbox"/> ...	<input type="text"/>
<input type="checkbox"/> MECCANISMI DI TAGLIO DEL TRANSETTO	<input type="text"/>	<input type="checkbox"/> ...	<input type="text"/>
<input type="checkbox"/> VOLTE DEL TRANSETTO	<input type="text"/>		
<input type="checkbox"/> ELEMENTI DI COPERTURA: TRANSETTO	<input type="text"/>		

OK Cancel

ARI 4	ELEMENTI DI PASSAGGIO 1	ELEMENTI DI PASSAGGIO 2	ELEMENTI DI PASSAGGIO 3	TOMBE DI FAMIGLIA	TOMBE DI FAMIGLIA 2	CAPPELLA FUNEBRE	CAPPELLA FUNEBRE 2	AGIBILITA'
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SCHEDA PER IL RILIEVO DEL DANNO - ORGANISMI CIMITERIALI - AGIBILITA'

C27 - AGIBILITA'

AGIBILE INAGIBILE
 PARZIALMENTE AGIBILE
 AGIBILE CON PROVVEDIMENTI
 TEMPORANEAMENTE INAGIBILE
 INAGIBILE PER CAUSE ESTERNE

Indicare le parti agibili
 Segnalare i provvedimenti anche indicandoli nella tabella sottostante
 Indicare operazioni aggiuntive (visita più accurata, visita di esperti ...)
 Indicare le cause esterne

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C28 - PROVVEDIMENTI DI P.I. SUGGERITI (interventi limitati/ interventi estesi)

Revisione manto di copertura	<input type="checkbox"/>	Ripristino smaltimento delle acque meteoriche	<input type="checkbox"/>
Copertura provvisoria	<input type="checkbox"/>	Monitoraggio	<input type="checkbox"/>
Puntellamenti	<input type="checkbox"/>	Protezioni o consolidamenti su opere d'arte fisse	<input type="checkbox"/>
Rimozione delle macerie	<input type="checkbox"/>	Catalogazione e smontaggio delle parti pericolanti	<input type="checkbox"/>
Transennamenti / recinzioni / protezioni	<input type="checkbox"/>	Sgombero opere d'arte mobili	<input type="checkbox"/>
Consolidamenti localizzati	<input type="checkbox"/>	Raccolta sistematica dei frammenti	<input type="checkbox"/>
Messa in opera di cerchiatura e/o tiranti	<input type="checkbox"/>	Ricovero e protezione dei frammenti	<input type="checkbox"/>

C29 - TIPO DI VISITA

COMPLETA
 PARZIALE
 SOLO DALL'ESTERNO
 MOTIVI OSTATIVI

C - 30 NOTE

Indicare, eventualmente, altri danni non rilevabili dalla scheda (es. solai di calpestio, pavimentazioni ecc.)

A CURA DELL'UFFICIO

INDICE DI DANNO	<input type="text"/>	QUANTIFICAZIONE OPERE DI CONSOLIDAMENTO E MIGLIORAMENTO SISMICO	<input type="text"/>
INDICE DI VULNERABILITA'	<input type="text"/>	QUANTIFICAZIONE OPERE DI RESTAURO	<input type="text"/>
		QUANTIFICAZIONE OPERE DI PRONTO INTERVENTO	<input type="text"/>

OK Cancel

Ann.5. Interview form submitted to surveyors

TEST COMPILAZIONE SCHEDA

Da compilare immediatamente dopo il sopralluogo

*Campo obbligatorio

1. Email *

2. Professione *

Seleziona tutte le voci applicabili.

- Architetto
 Ingegnere
 Archeologo
 Storico dell'arte

Altro: _____

3. ISTRUZIONE *

Contrassegna solo un ovale.

- Laurea
 Master di 2 livello
 Scuola di Specializzazione
 Dottorato
 Altro: _____

4. Hai già avuto esperienza di qualsiasi genere (didattica, esperienza professionale etc..) sull'identificazione dei danni sismici o della vulnerabilità? *

Seleziona tutte le voci applicabili.

- Sì di entrambi
 Sì ma solo del rilievo del danno
 Sì ma solo di rilievo della vulnerabilità
 No

5. Se sì, quale?

6. Ha testato la scheda su cimiteri di:

Contrassegna solo un ovale.

- piccole dimensioni
 medie dimensioni
 grandi dimensioni
 Cimiteri ebraici, acattolici o protestanti
 Cimiteri di guerra

7. Hai riscontrato difficoltà nel comprendere e compilare il contenuto della scheda?

*

Contrassegna solo un ovale.

- Sì, ho compreso le richieste ma trovo difficile compilare la scheda
 Sì, ho compreso la scheda ma trovo difficile rispondere alle richieste
 No

8. Se sì, da cosa dipendevano?

Contrassegna solo un ovale.

- La scheda non corrisponde al tipo di cimitero
 La scheda corrisponde al cimitero ma i dati sono insufficienti a descrivere questo caso
 La scheda corrisponde al cimitero ma le domande sono ambigue
 La scheda corrisponde al cimitero parzialmente e non so come compilarla
 Altro: _____

9. Le immagini ti hanno aiutato a comprendere le richieste delle diverse sezioni?

Contrassegna solo un ovale.

- SÌ
 NO
 non ne ho avuto bisogno, conoscevo già il danno su cimiteri

10. Quanto tempo ha impiegato per visitare e compilare la scheda *

Contrassegna solo un ovale.

- meno di un'ora
 tra un'ora e due ore
 più di due ore

11. Hai compilato più di una scheda?

Seleziona tutte le voci applicabili.

- Sì
 No

12. Se sì, hai trovato più facile compilare la scheda la seconda volta?

Seleziona tutte le voci applicabili.

- Sì
 No

13. Se ha compilato la scheda più di una volta quanto tempo le è mediamente servito la seconda volta

Contrassegna solo un ovale.

- più o meno uguale
 di più
 di più ma il cimitero era più grande
 di meno
 di meno ma il cimitero era più piccolo

14. Indichi tutte le criticità che ha riscontrato nel compilare la scheda (si tratta di un test di applicabilità, quindi è importante che siano identificate tutte le difficoltà, se non ci sono stati problemi indicare nulla) *

15. Ora sintetizzi le criticità principali mettendole in ordine di importanza *

16. Ritiene che le criticità siano di ordine strutturale (non corrispondenza tra le richieste del modello e la realtà) o di forma

17. Indichi eventuali suggerimenti per migliorare la scheda

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Google Moduli

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