



# UNIVERSITA' DEGLI STUDI DI FERRARA

---

Eventi sismici del 20 e del 29 maggio 2012  
Rilievo fotografico del quadro fessurativo

Palazzo Renata di Francia - Ferrara, via Savonarola nn. 9 e 11  
-Rapporto preliminare-

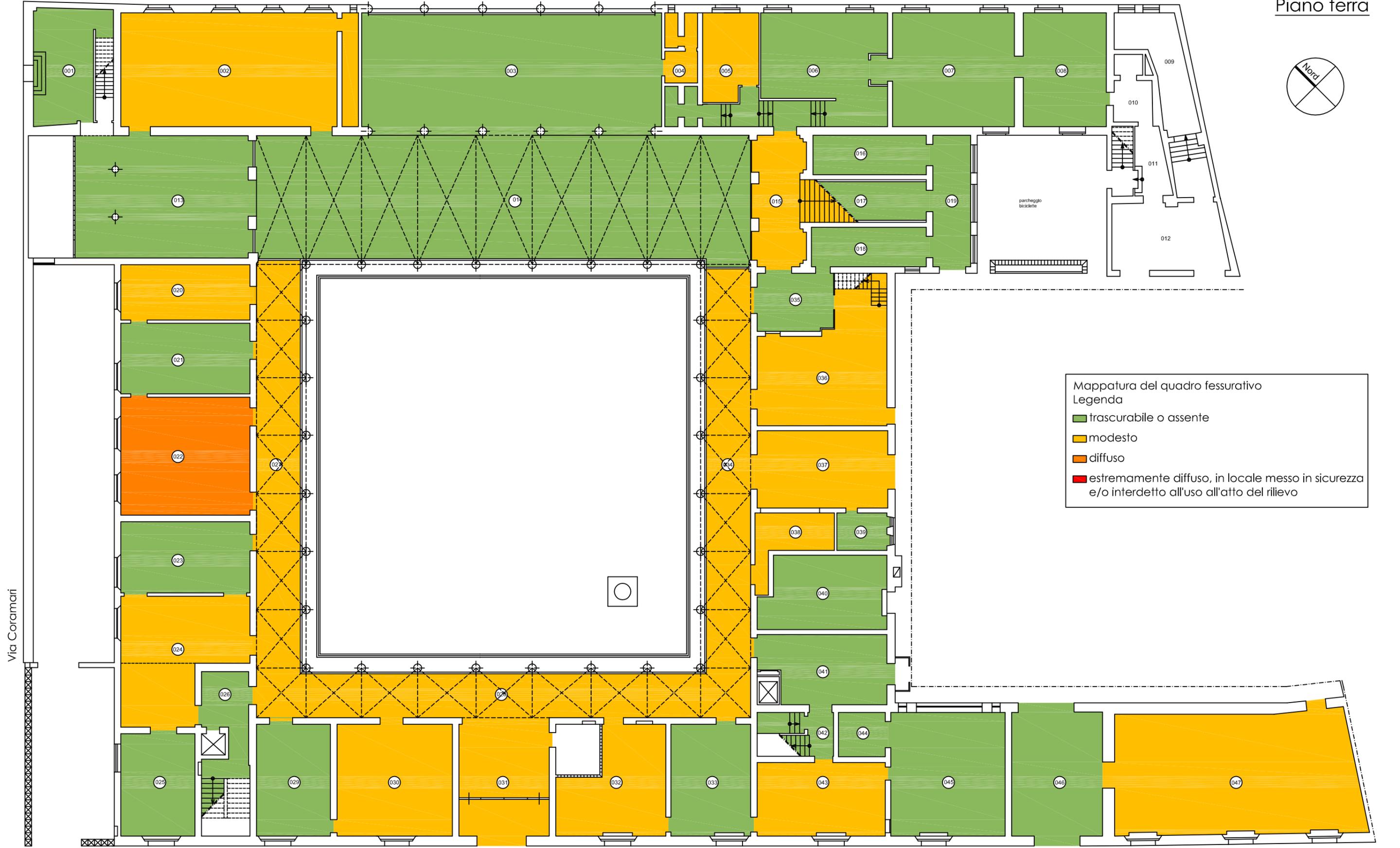
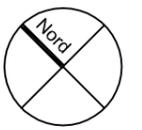


Laboratorio di Topografia e Fotogrammetria del Dipartimento di Ingegneria dell'Università di Ferrara.  
Zenith Ingegneria s.r.l. Impresa spin-off dell'Università di Ferrara





Piano terra



Mappatura del quadro fessurativo  
 Legenda

- trascurabile o assente
- modesto
- diffuso
- estremamente diffuso, in locale messo in sicurezza e/o interdetto all'uso all'atto del rilievo

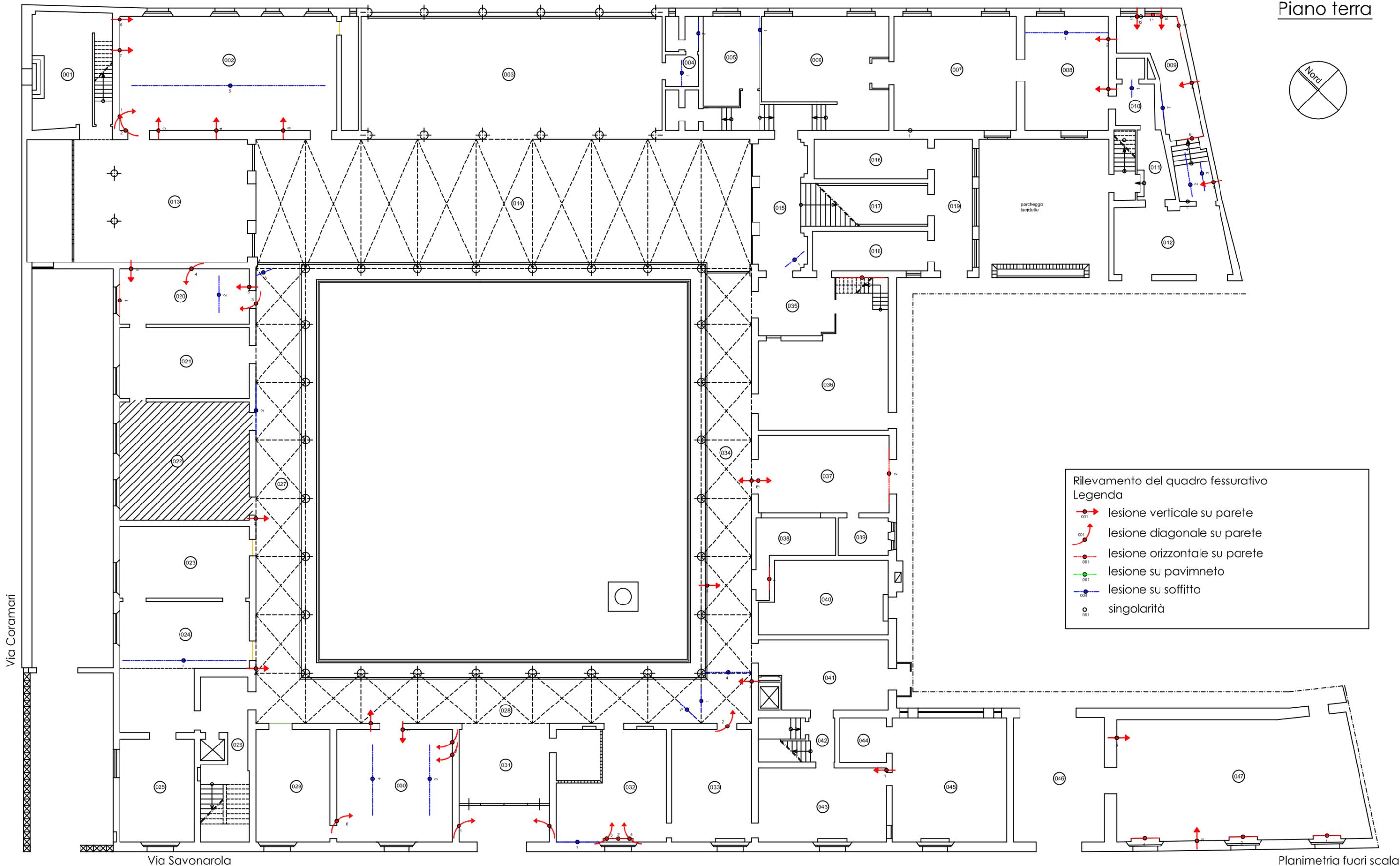
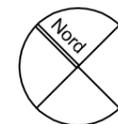
Via Coramari

Via Savonarola

Planimetria fuori scala



Piano terra



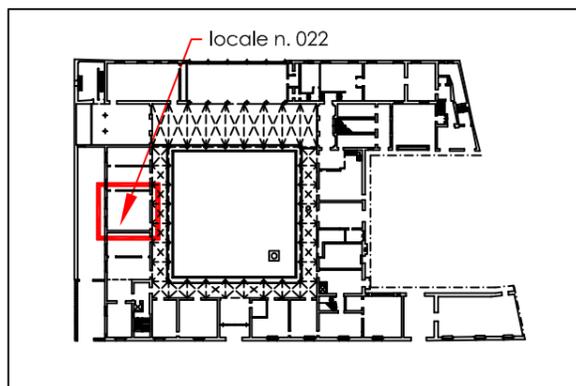
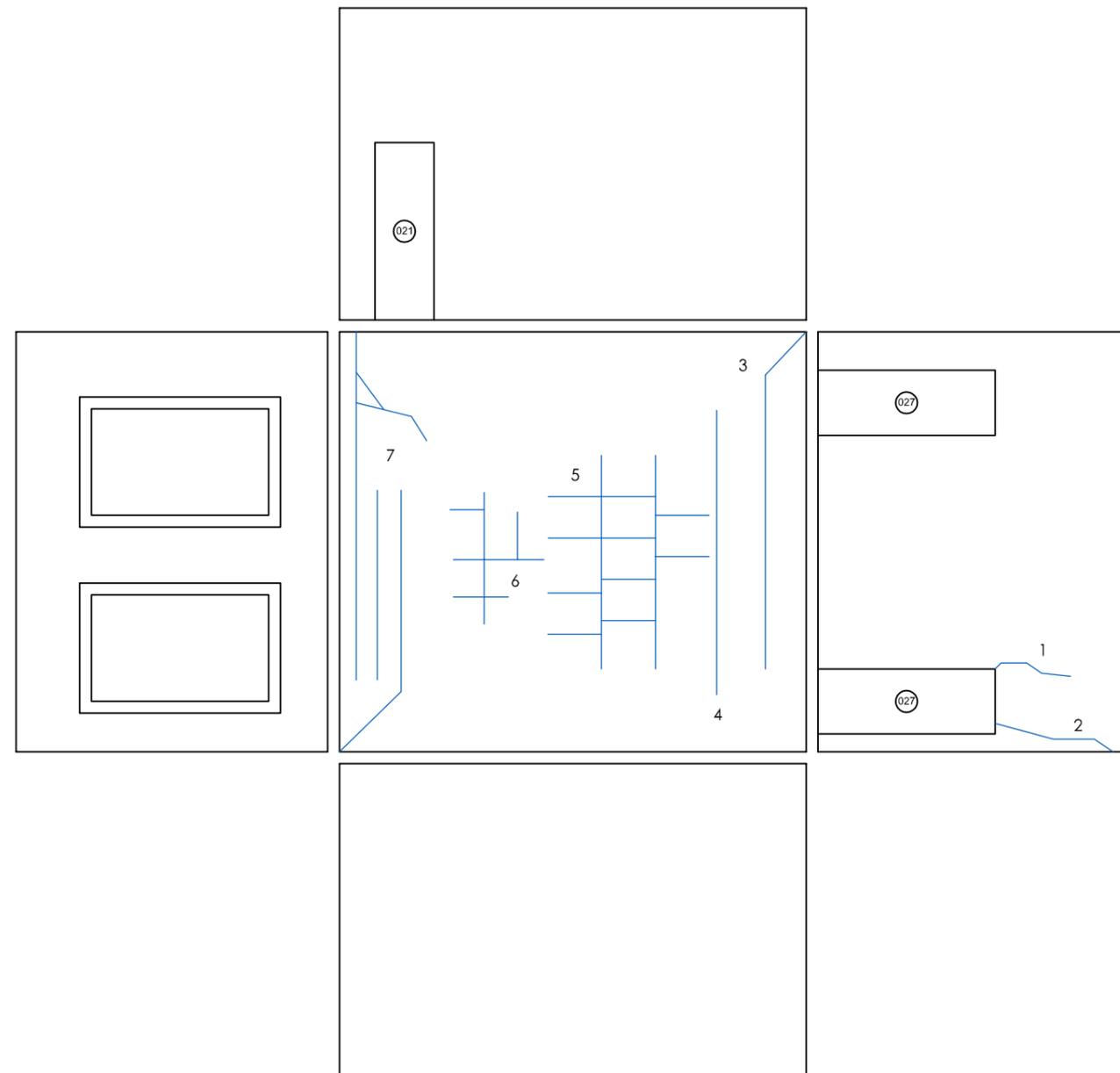
Rilevamento del quadro fessurativo  
Legenda

- lesione verticale su parete
- lesione diagonale su parete
- lesione orizzontale su parete
- lesione su pavimento
- lesione su soffitto
- singolarità

Via Coramari

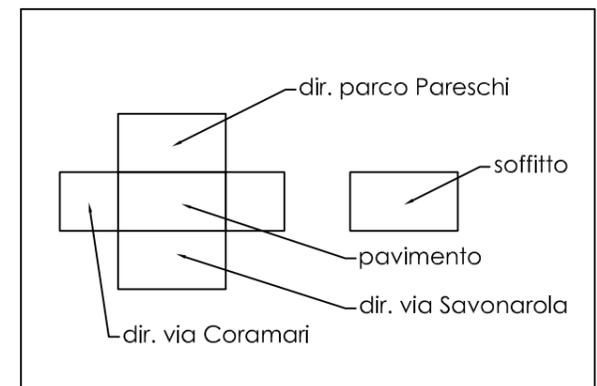
Via Savonarola

Planimetria fuori scala



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 022



Foto 1 Lesione 1 e 2



Foto 2 Lesione 3 e 4

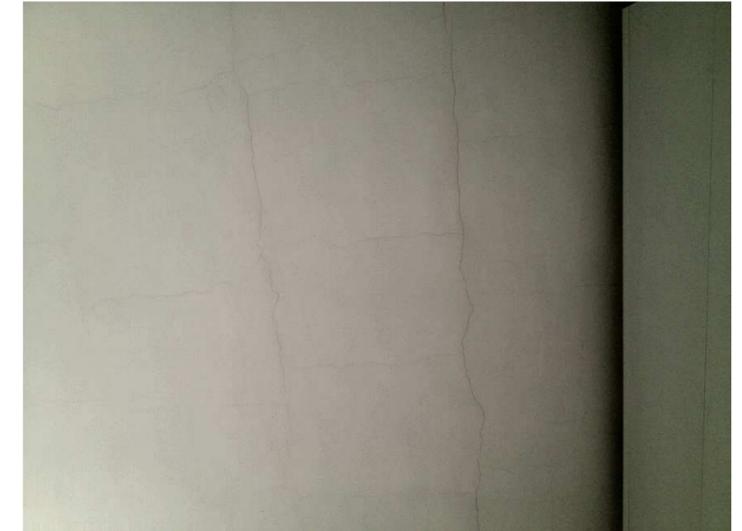


Foto 3 Lesione 3 e 4

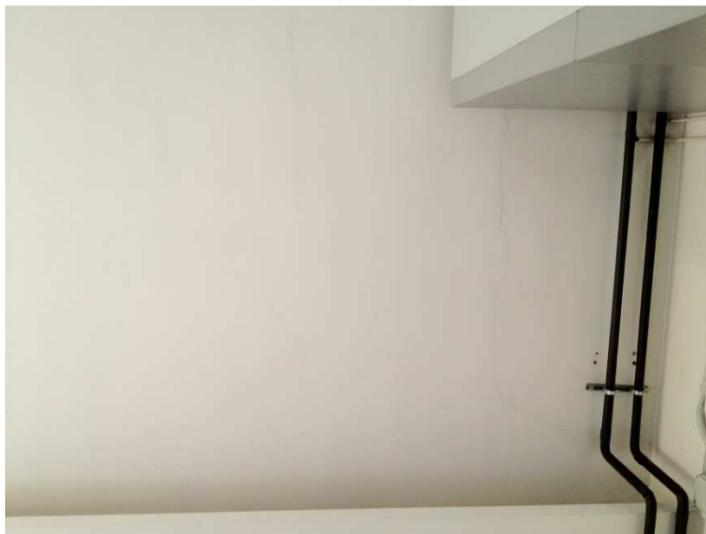


Foto 4 Lesione 3 e 4

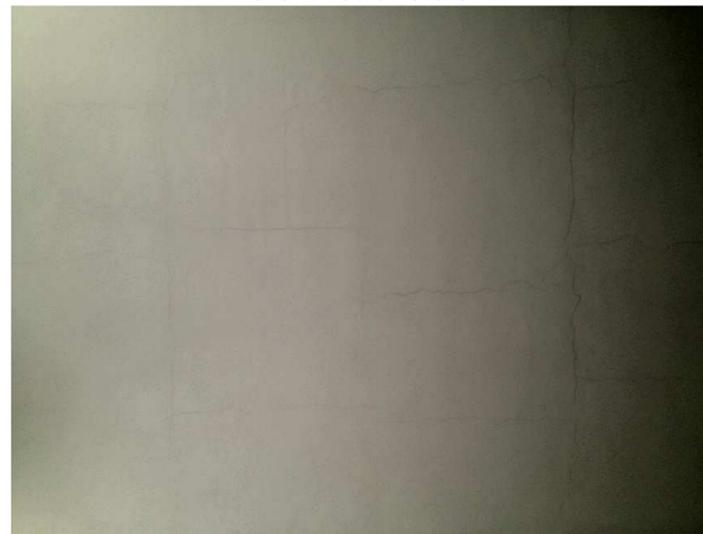


Foto 5 Lesione 5 e 6



Foto 6 Lesione 7

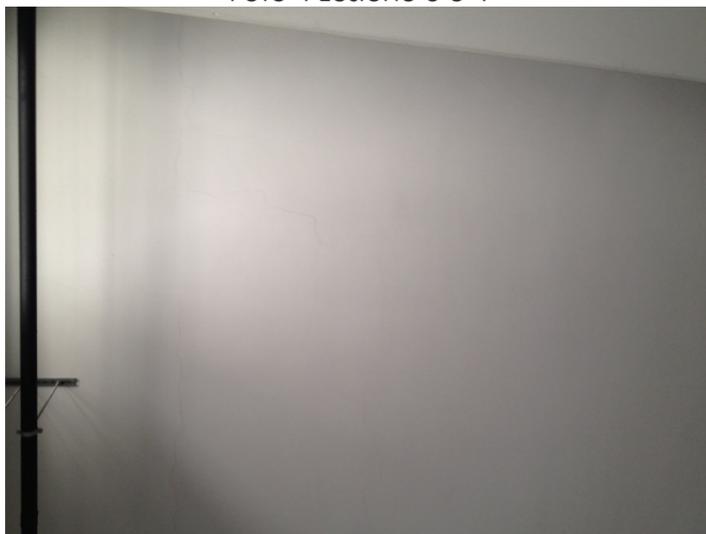
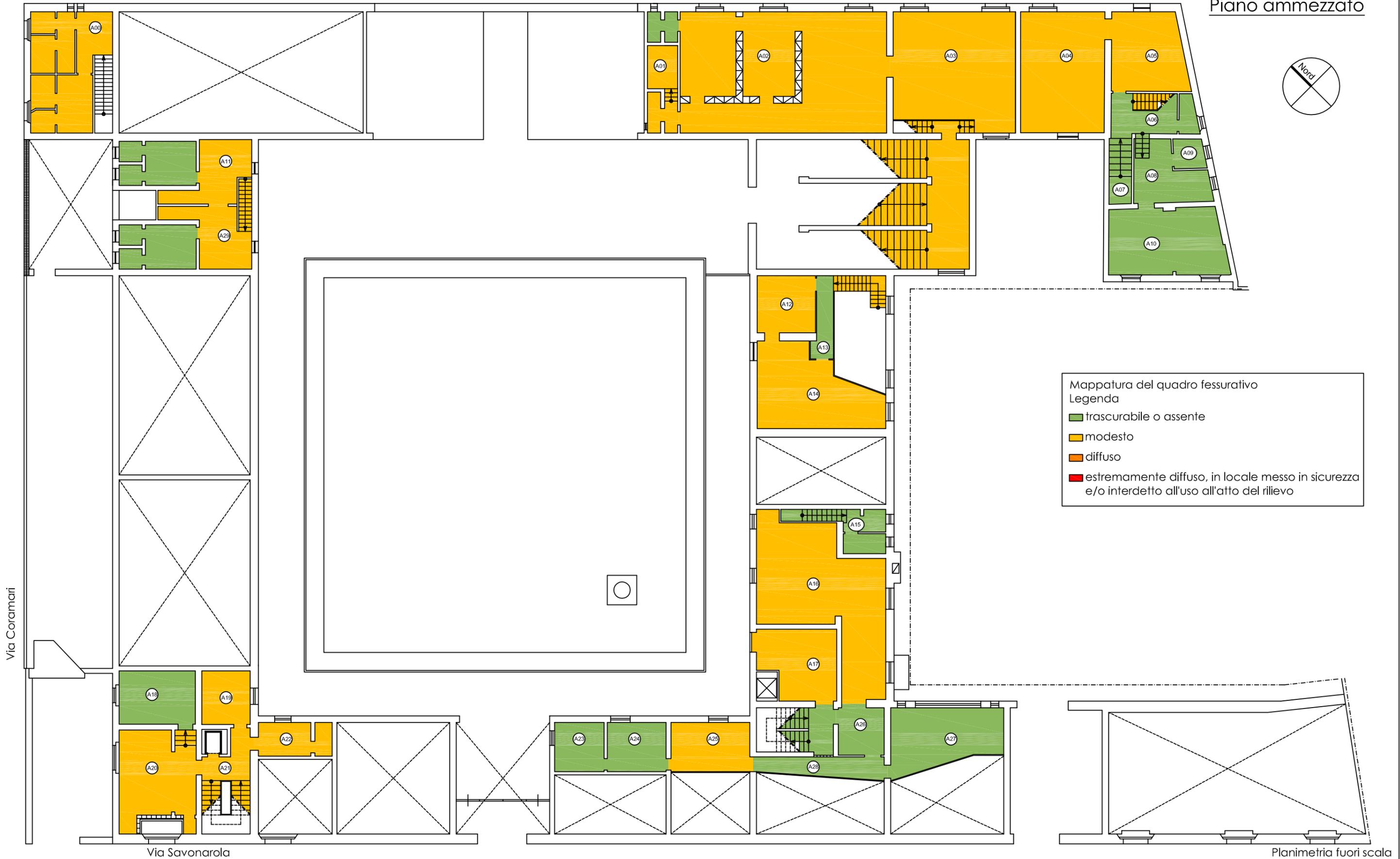
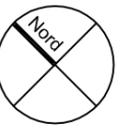


Foto 7 Lesione 7



Piano ammezzato



Mappatura del quadro fessurativo  
Legenda

- trascurabile o assente
- modesto
- diffuso
- estremamente diffuso, in locale messo in sicurezza e/o interdetto all'uso all'atto del rilievo

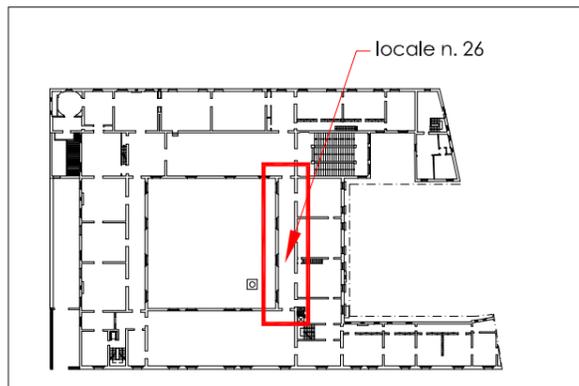
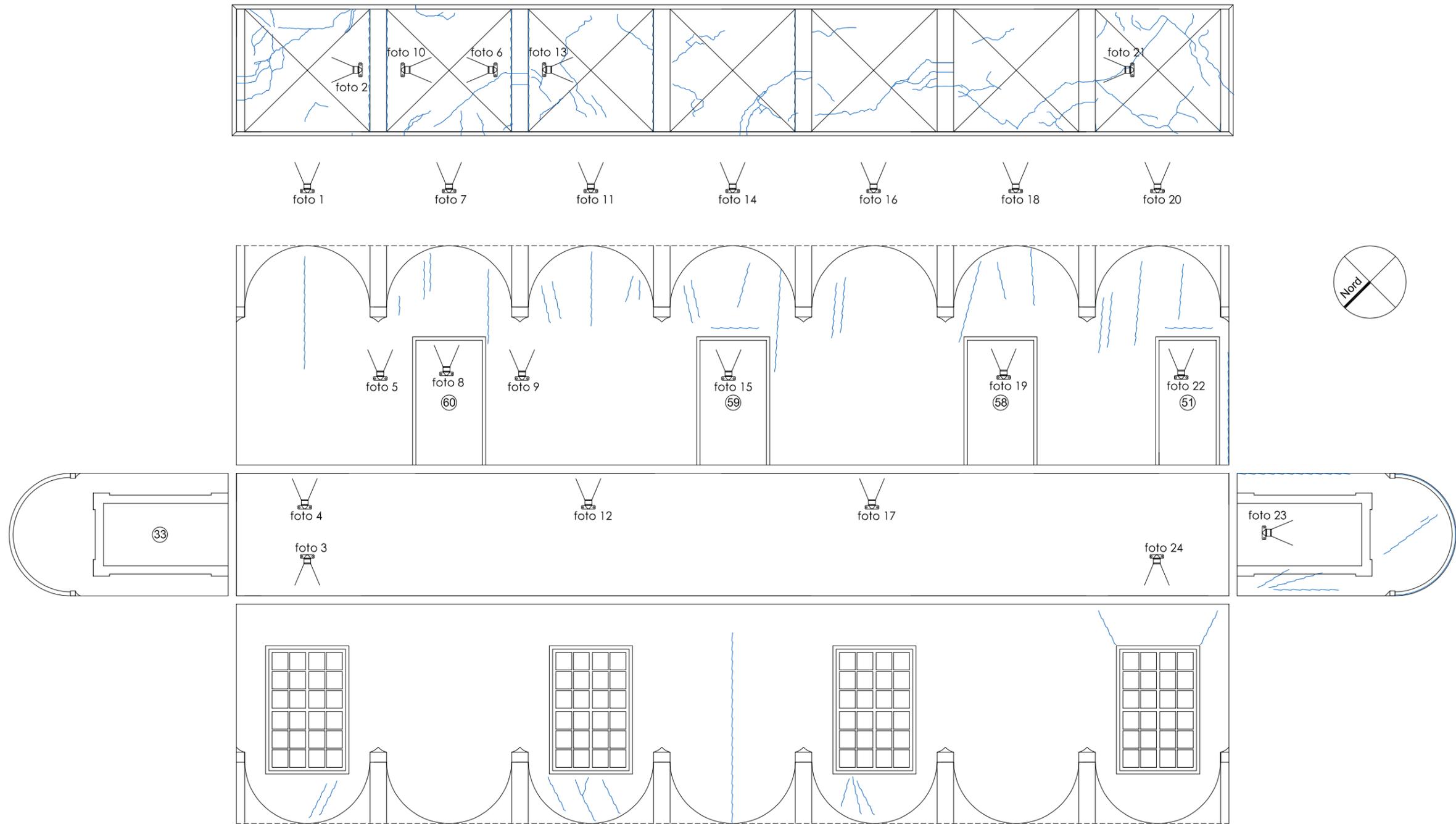
Via Coramari

Via Savonarola

Planimetria fuori scala

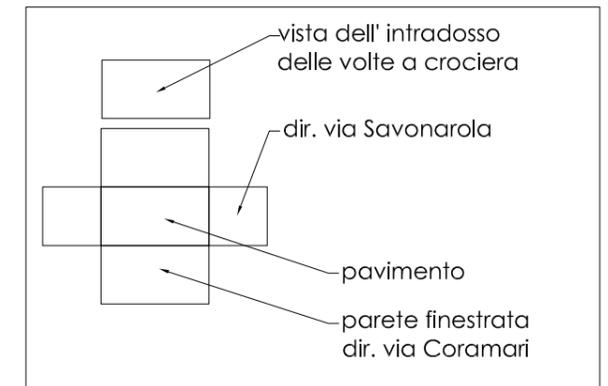


Locale n. 26 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

- fessurazione
- punto di presa della fotografia





Locale n. 26 - Selezione di alcune immagini



foto 1 - crociera



foto 2 - arco



foto 3 - arco e parete



foto 5 - arco



foto 7 - crociera



foto 9 - parete



Locale n. 26 - Selezione di alcune immagini



foto 9 - parete



foto 10 - arco



foto 13 - arco



foto 14 - crociera



foto 15 - parete



foto 16 - crociera



foto 18 - crociera



foto 20 - crociera



foto 21 - arco



foto 22 - parete

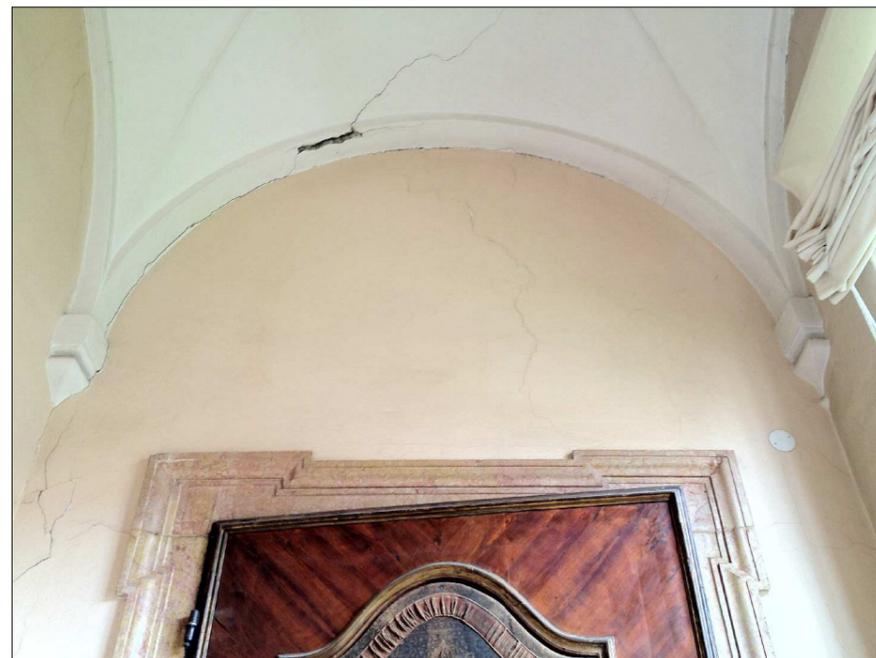


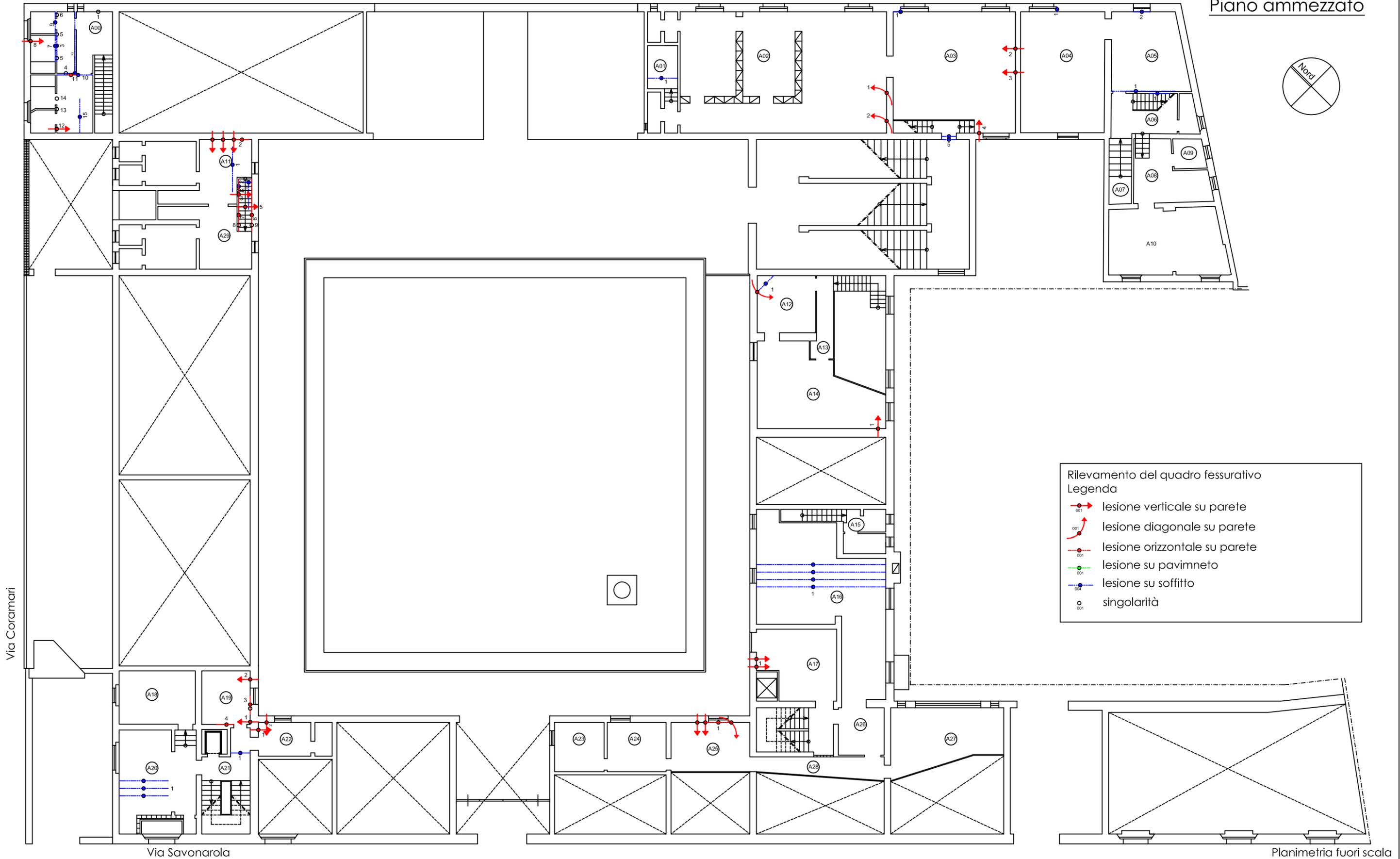
foto 23 - parete



foto 24 - arco e parete



Piano ammezzato



Rilevamento del quadro fessurativo  
Legenda

- lesione verticale su parete
- lesione diagonale su parete
- lesione orizzontale su parete
- lesione su pavimento
- lesione su soffitto
- singolarità

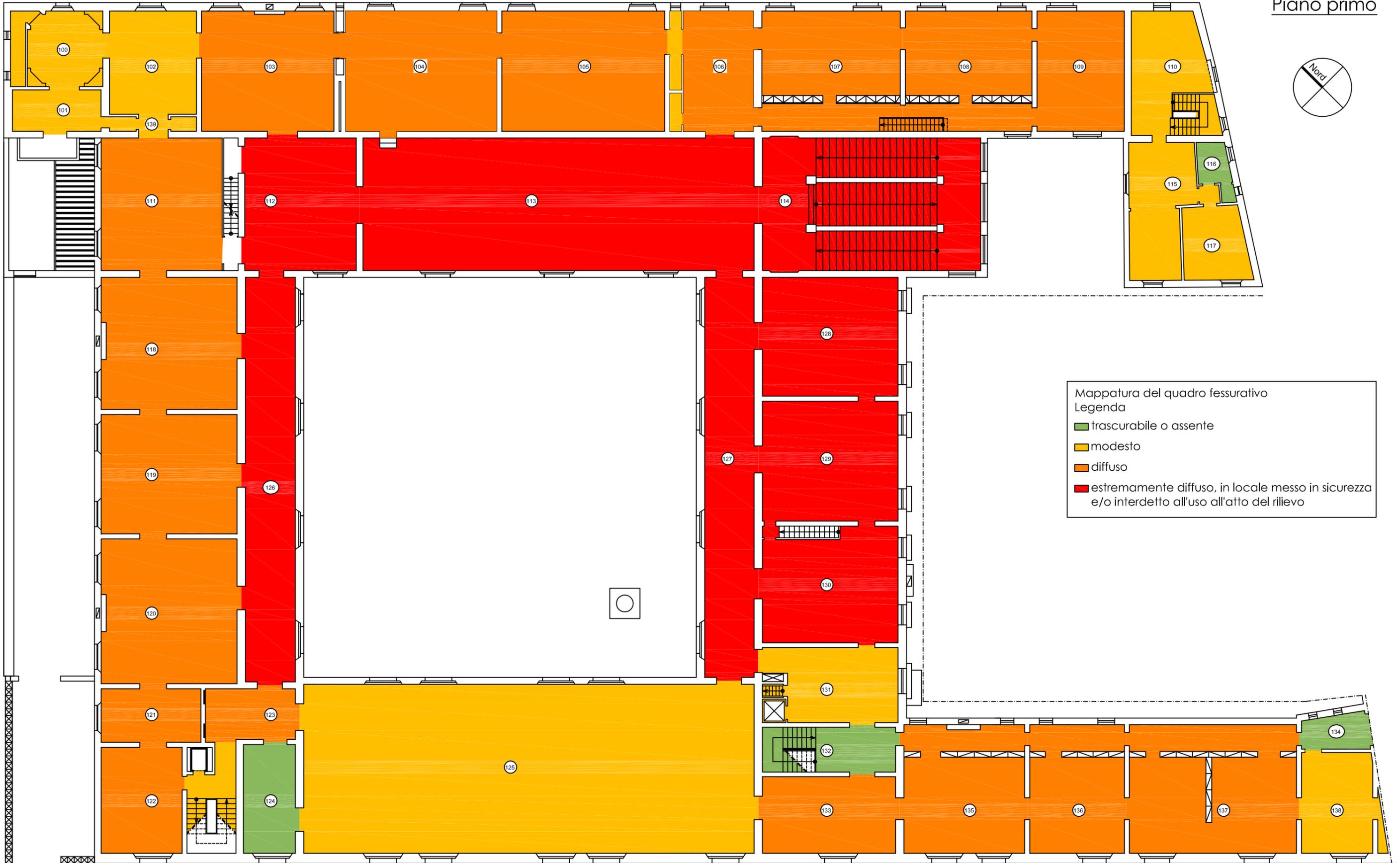
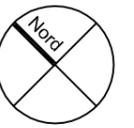
Via Coramari

Via Savonarola

Planimetria fuori scala



Piano primo



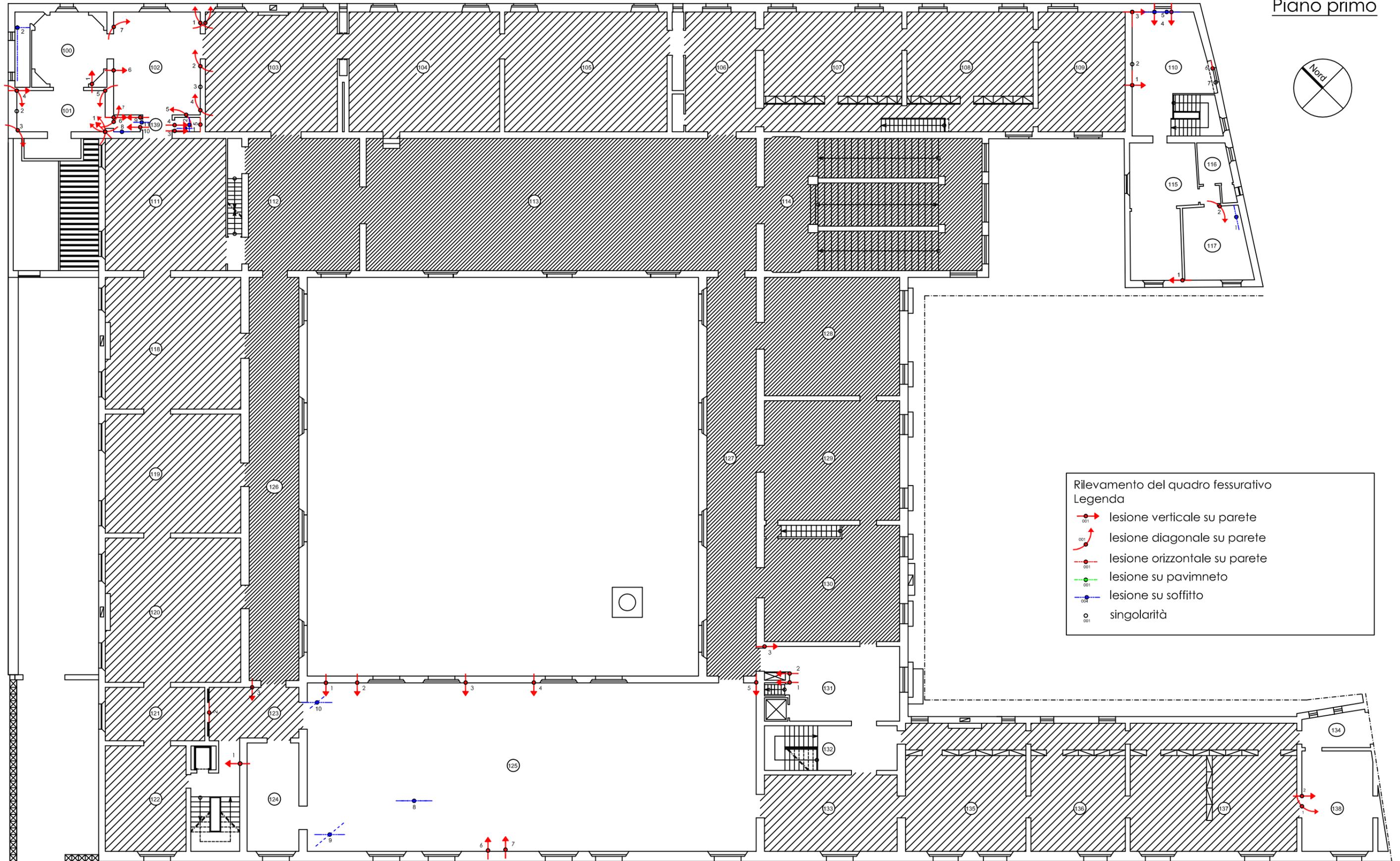
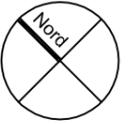
Mappatura del quadro fessurativo  
Legenda

- trascurabile o assente
- modesto
- diffuso
- estremamente diffuso, in locale messo in sicurezza e/o interdetto all'uso all'atto del rilievo

Planimetria fuori scala



Piano primo



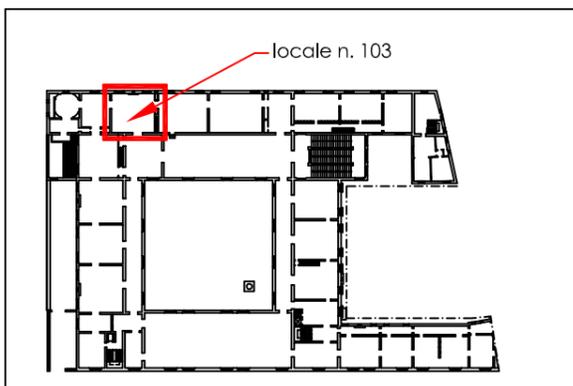
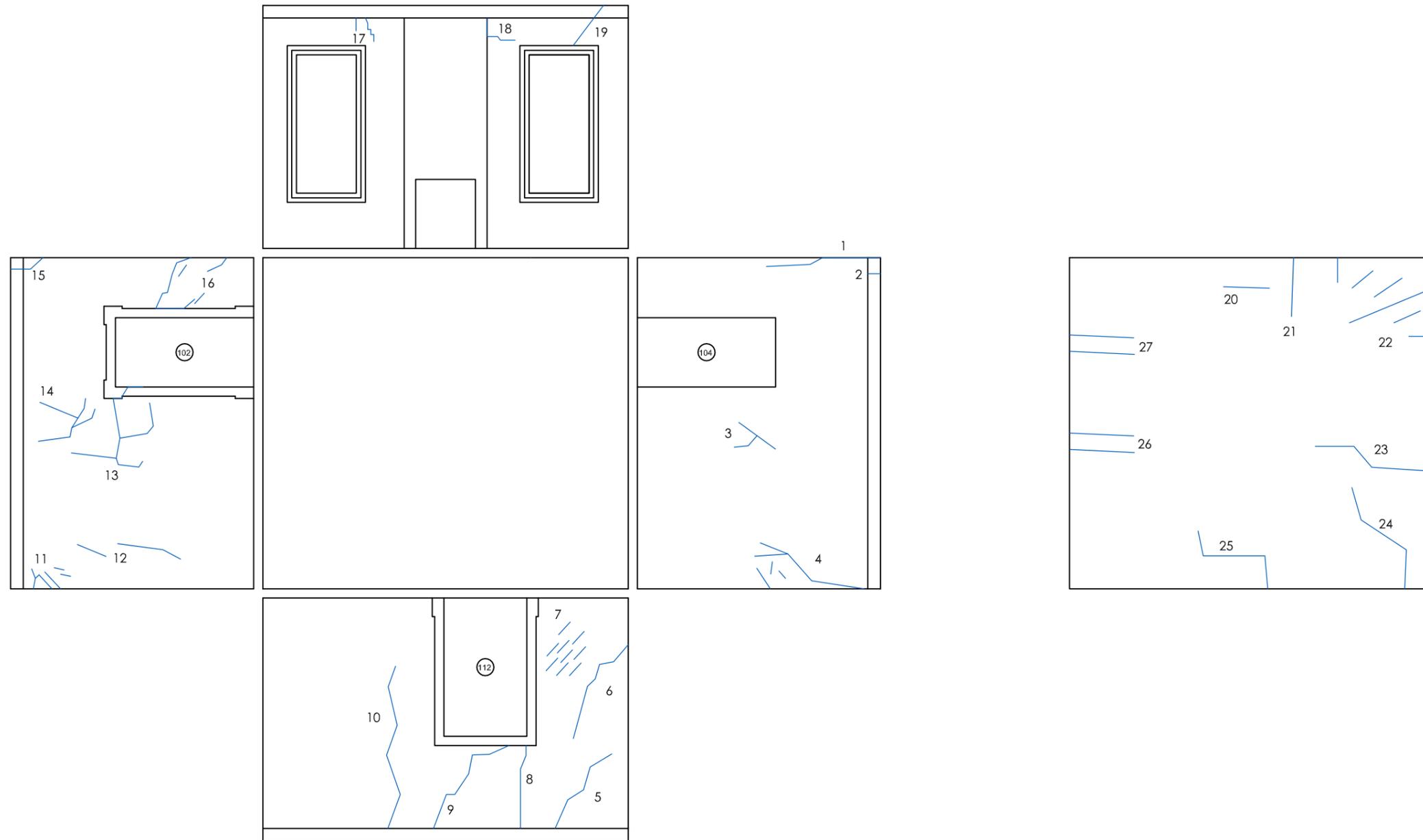
Rilevamento del quadro fessurativo  
Legenda

- lesione verticale su parete
- lesione diagonale su parete
- lesione orizzontale su parete
- lesione su pavimento
- lesione su soffitto
- singularità

Planimetria fuori scala

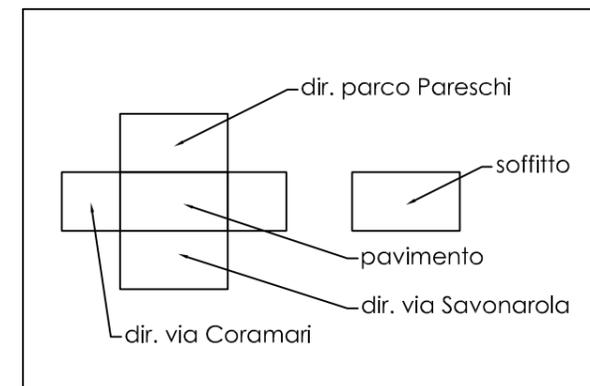


Locale n. 103 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 103



Foto 1 Lesione 2 e 19



Foto 2 Lesione 6 e 8



Foto 3 Lesione 10



Foto 4 Lesione 13



Foto 5 Lesione 16



Foto 6 Lesione 22

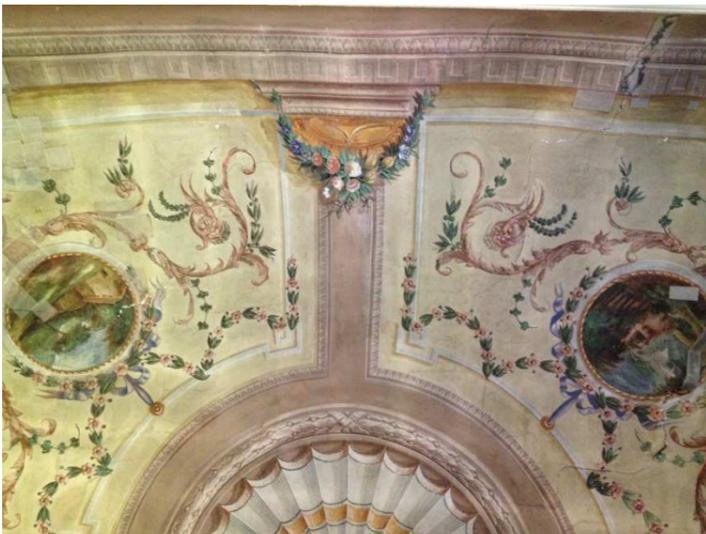


Foto 7 Lesione 24

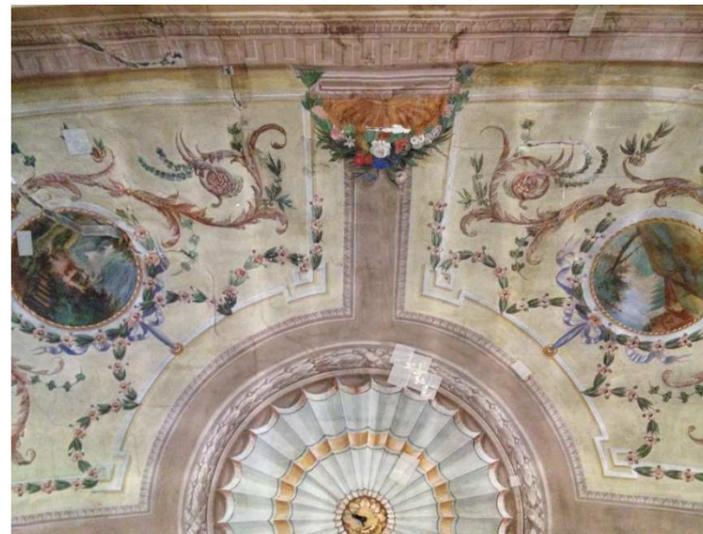


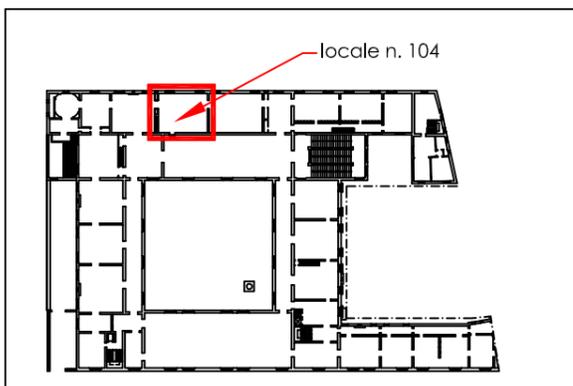
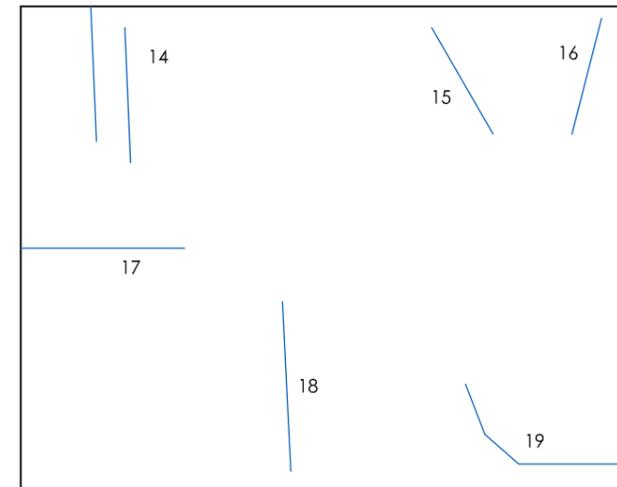
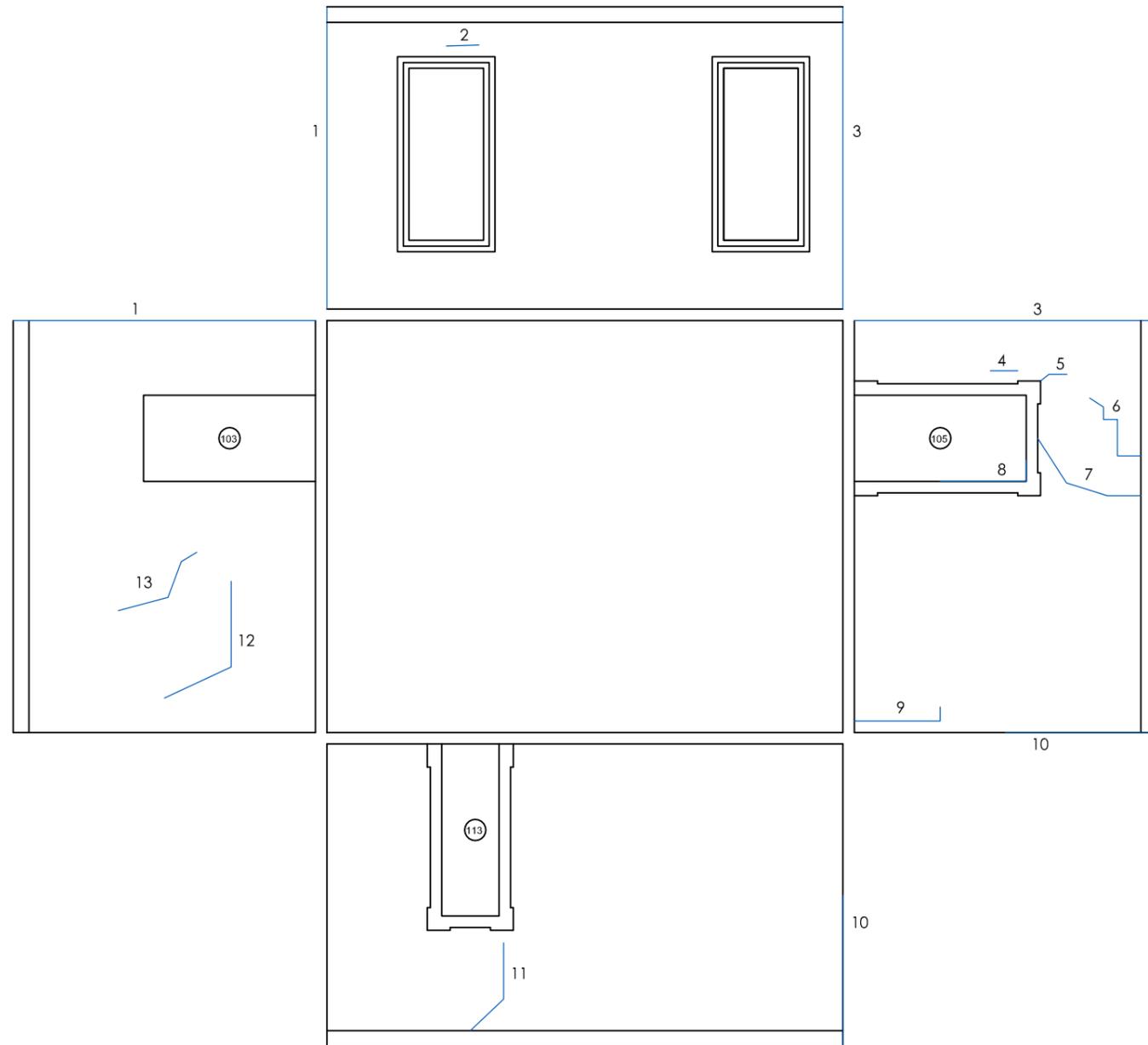
Foto 8 Lesione 25



Foto 9 Lesione 26

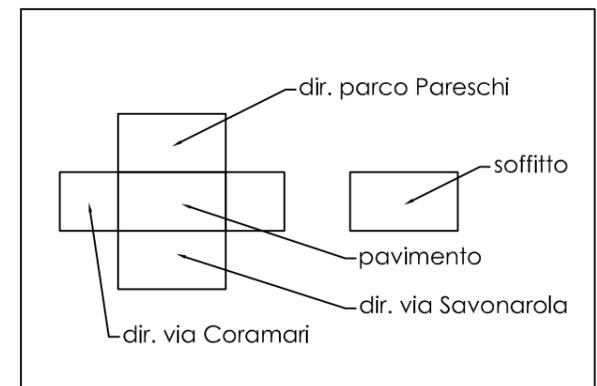


Locale n. 104 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

fessurazione



Locale 104



Foto 1 Lesione 2



Foto 2 Lesione 3 e 4



Foto 3 Lesione 6 e 7



Foto 4 Lesione 8



Foto 5 Lesione 12 e 13



Foto 6 Lesione 16

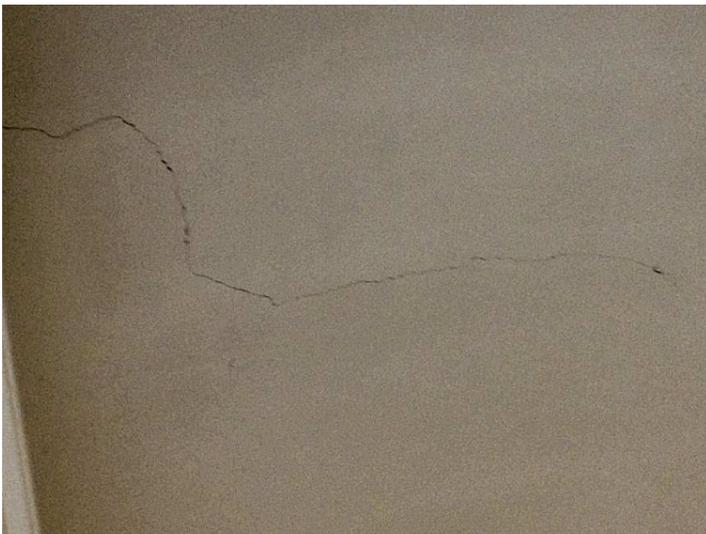


Foto 7 Lesione 17



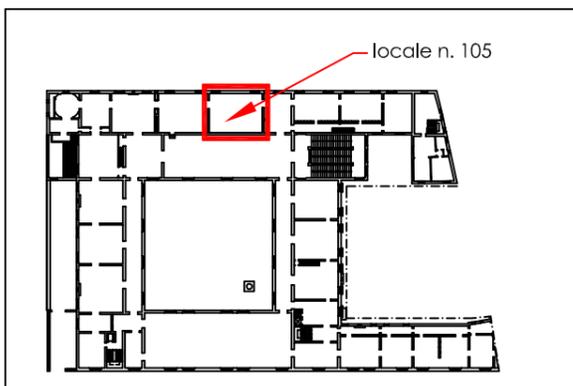
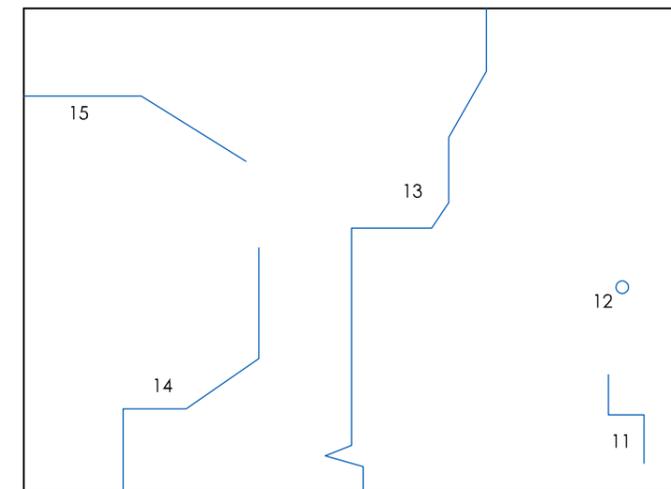
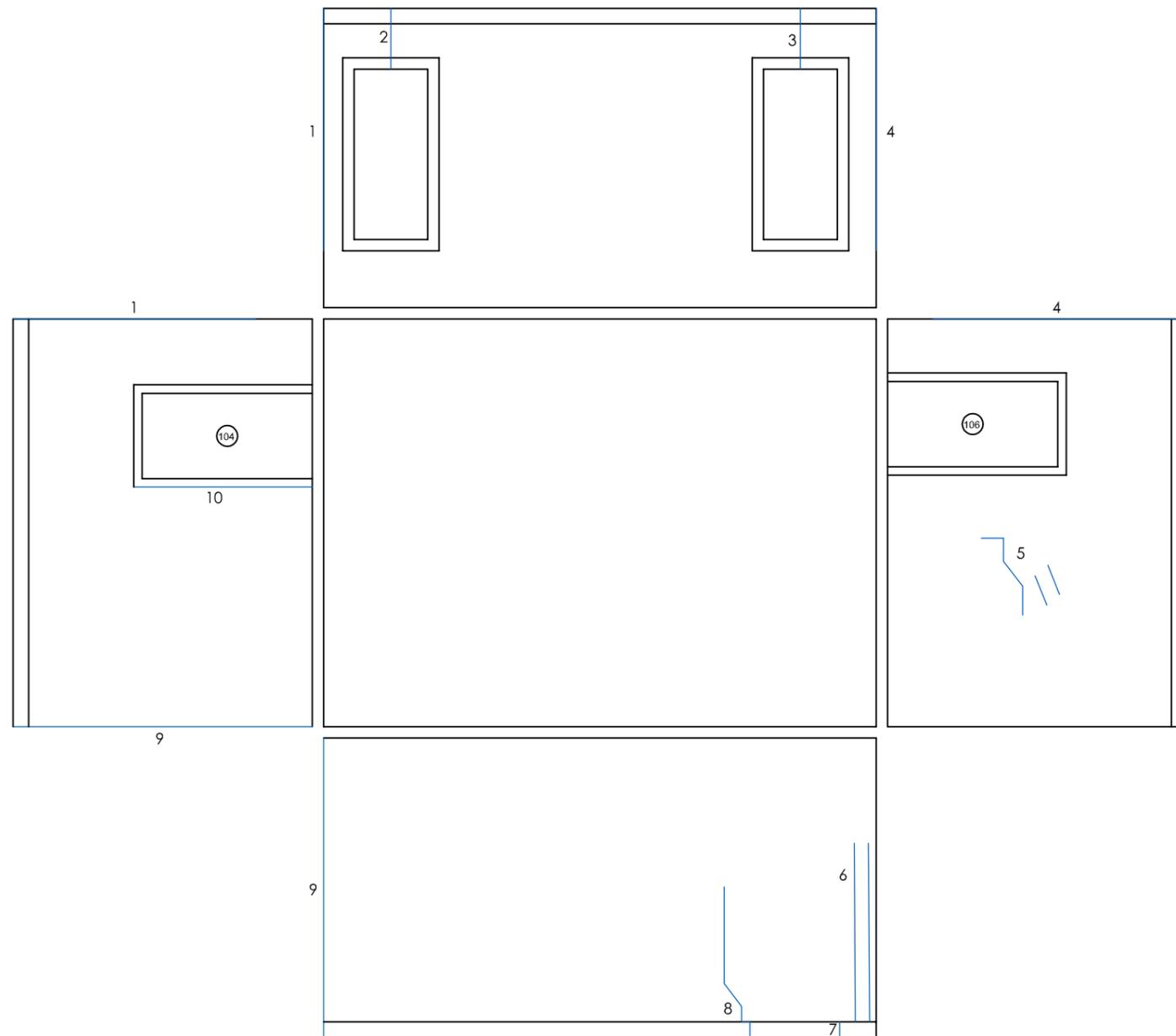
Foto 8 Lesione 18



Foto 9 Lesione 19

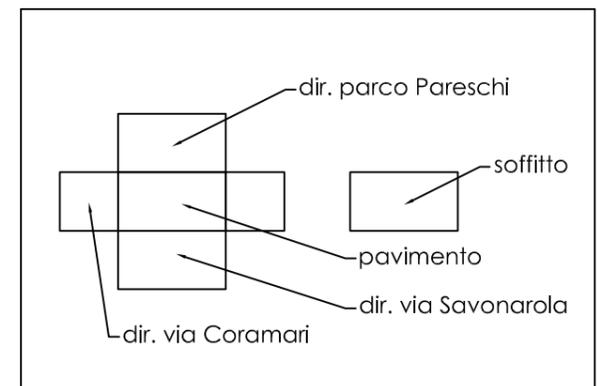


Locale n. 105 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 105



Foto 1 Lesione 1



Foto 2 Lesione 2

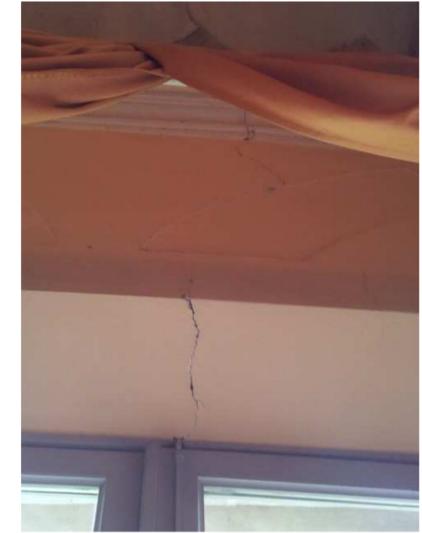


Foto 3 Lesione 3



Foto 4 Lesione 4



Foto 5 Lesione 5

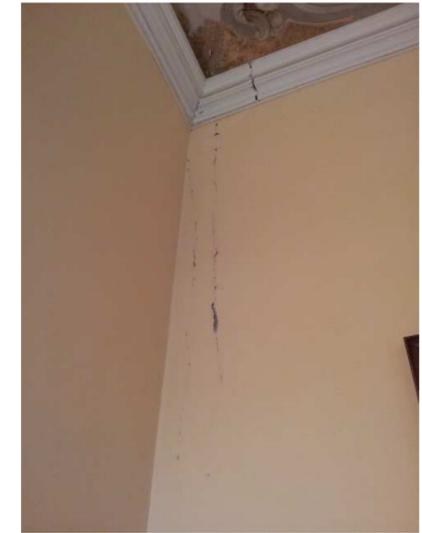


Foto 6 Lesione 6 e 7



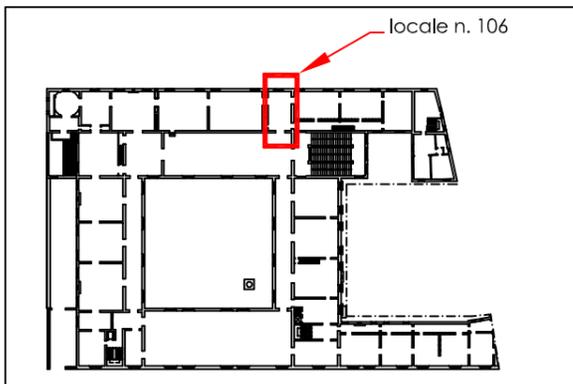
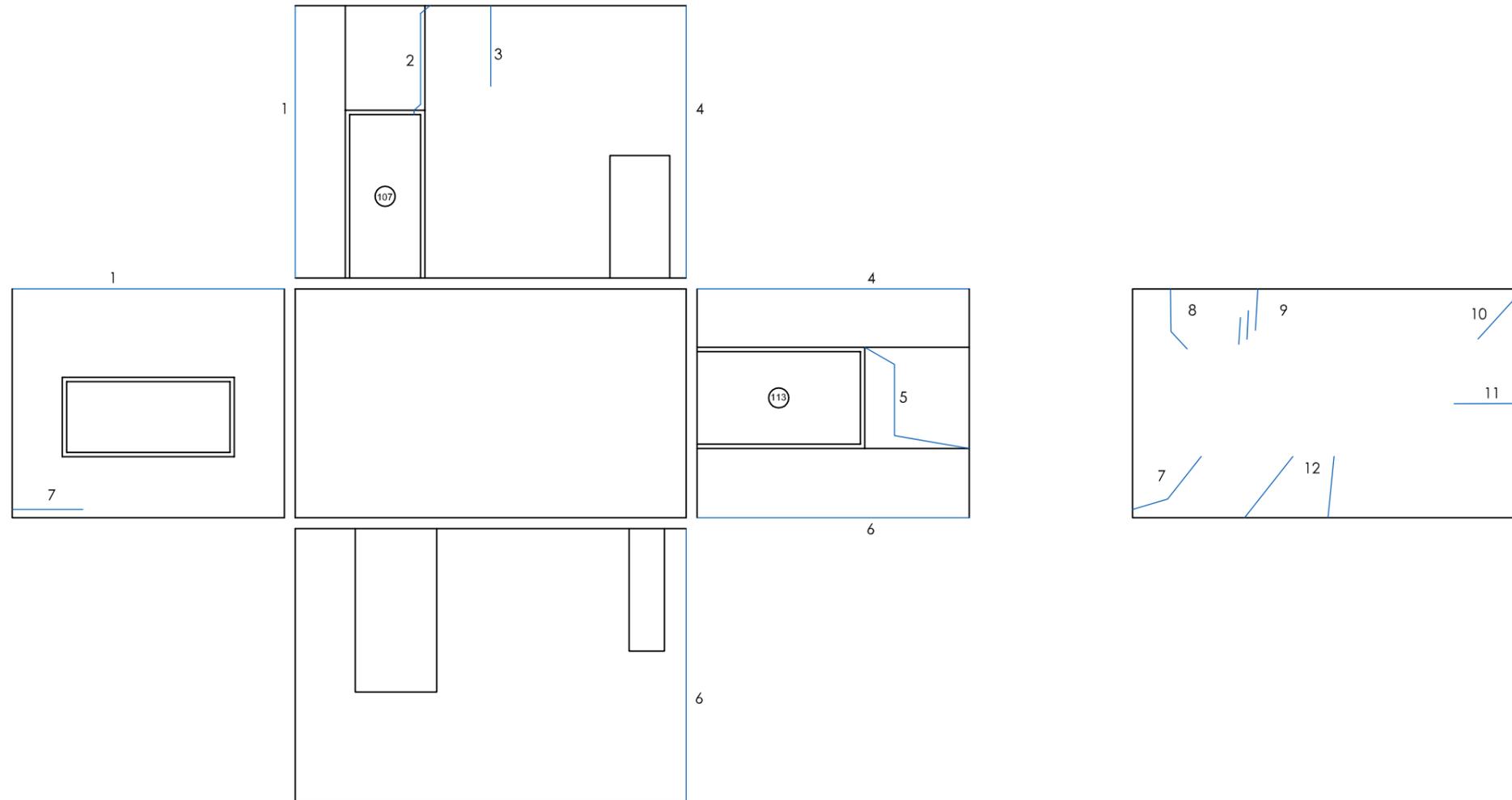
Foto 7 Lesione 8



Foto 8 Lesione 9

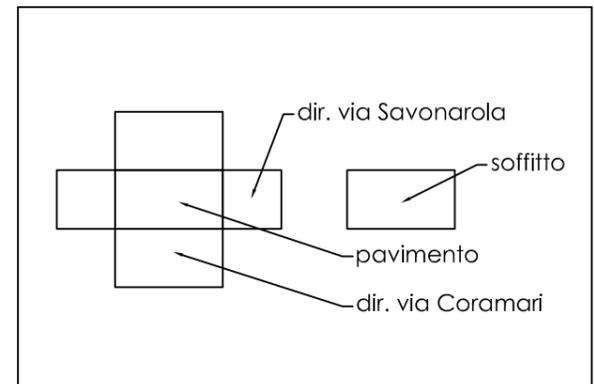


Foto 9 Lesione 11



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 106



Foto 1 Lesione 1



Foto 2 Lesione 2

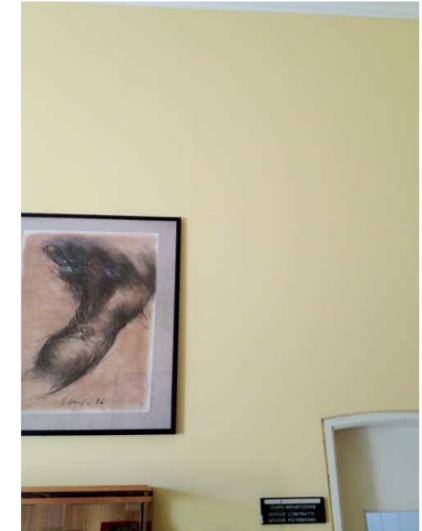


Foto 3 Lesione 3

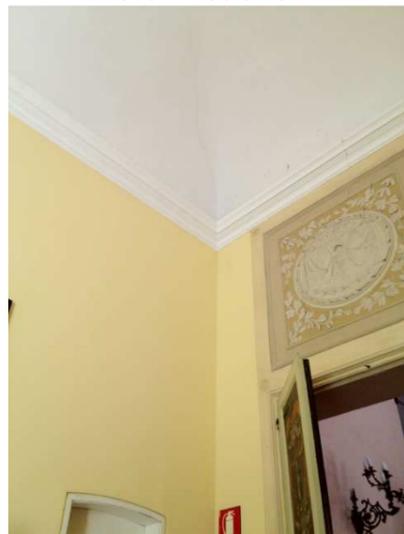


Foto 4 Lesione 4



Foto 5 Lesione 5



Foto 6 Lesione 7



Foto 7 Lesione 8

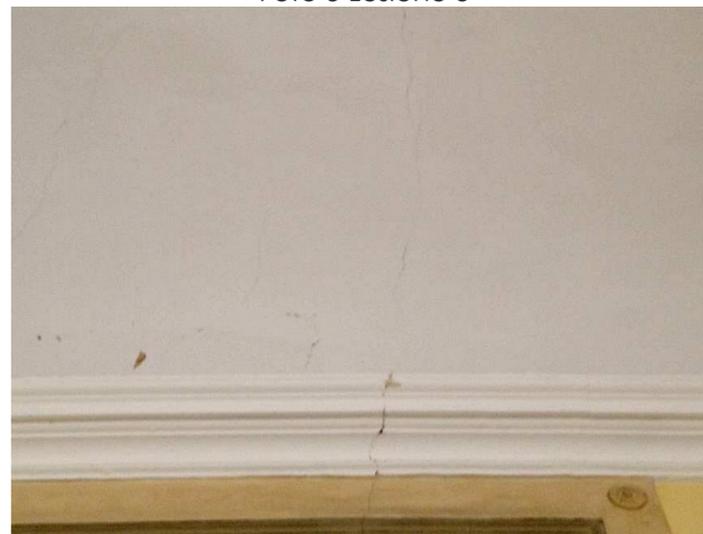
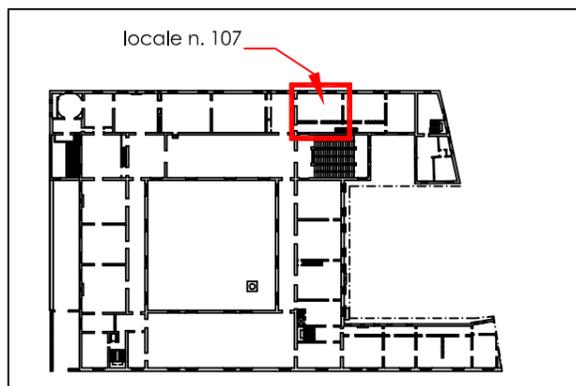
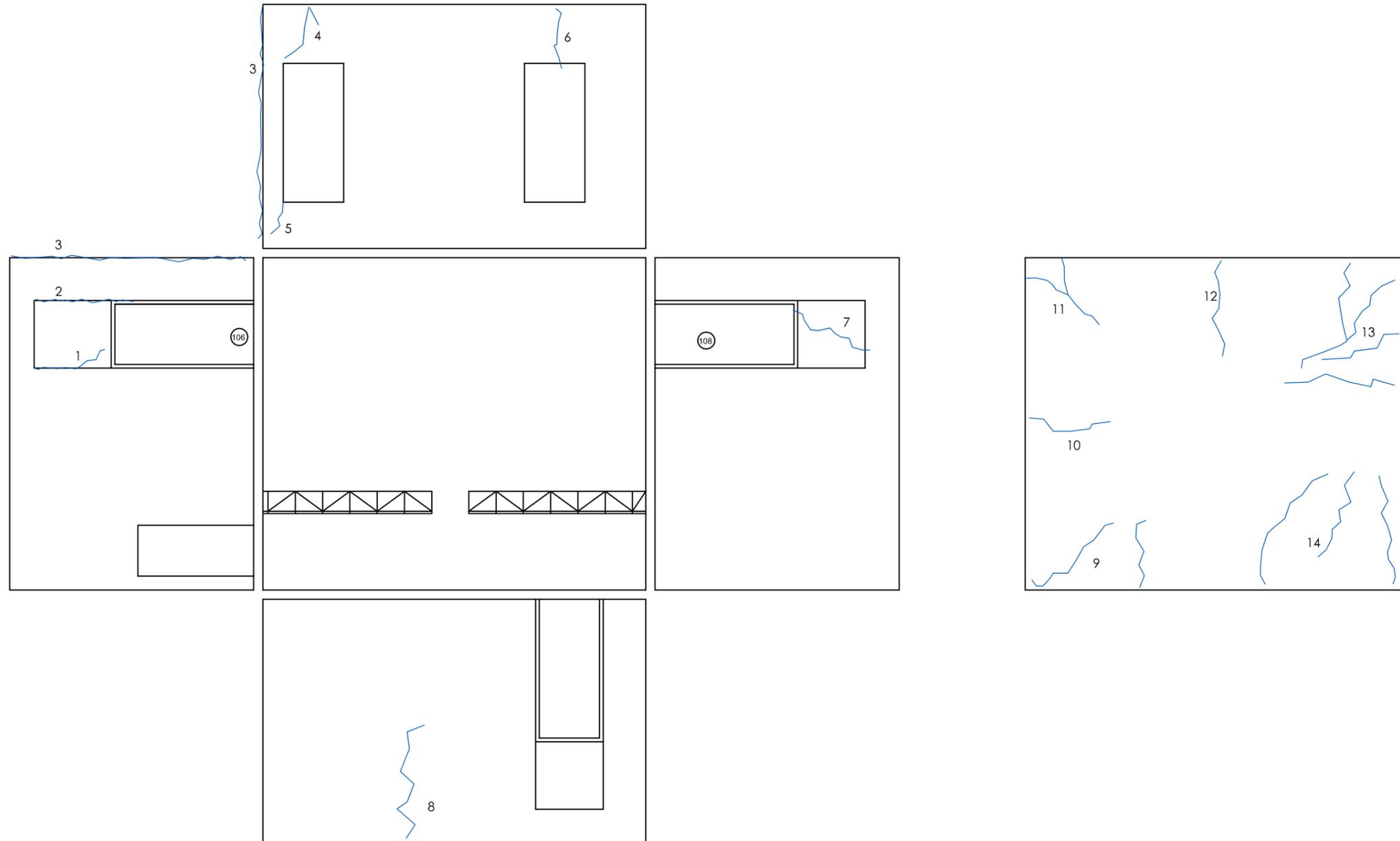


Foto 8 Lesione 11

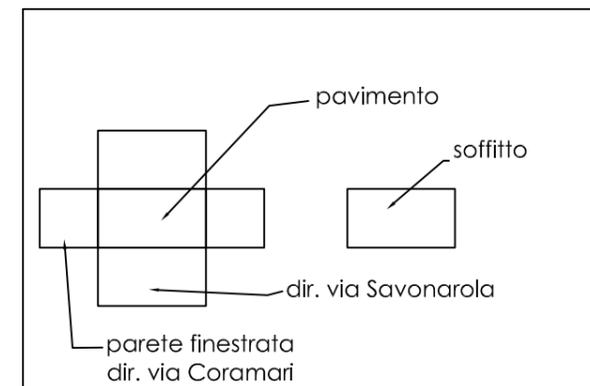


Foto 9 Lesione 12



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 107



Foto 1 Lesione 1



Foto 2 Lesione 3



Foto 3 Lesione 6



Foto 4 Lesione 8



Foto 5 Lesione 9



Foto 6 Lesione 10

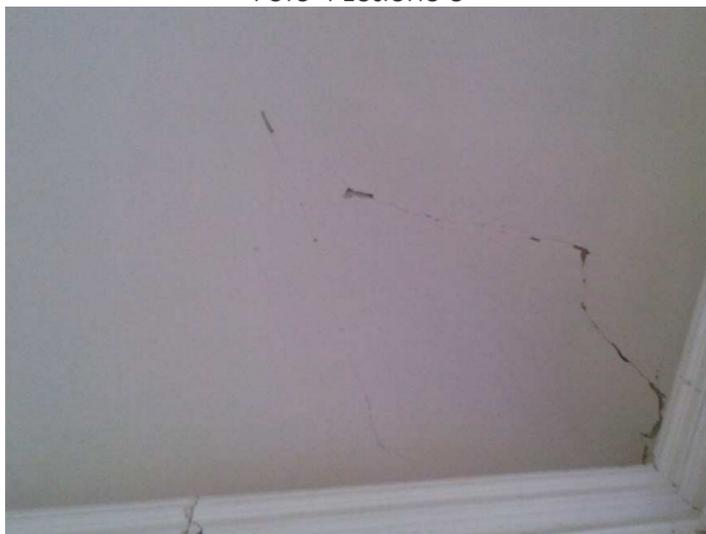


Foto 7 Lesione 11



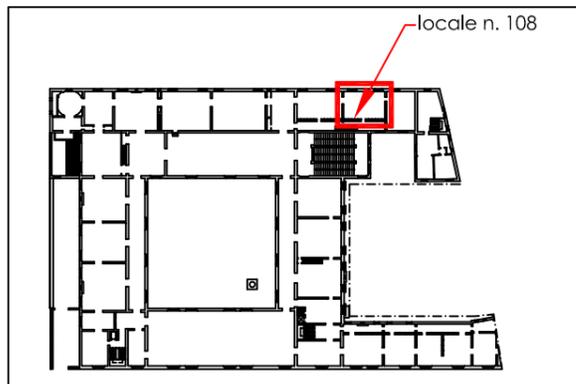
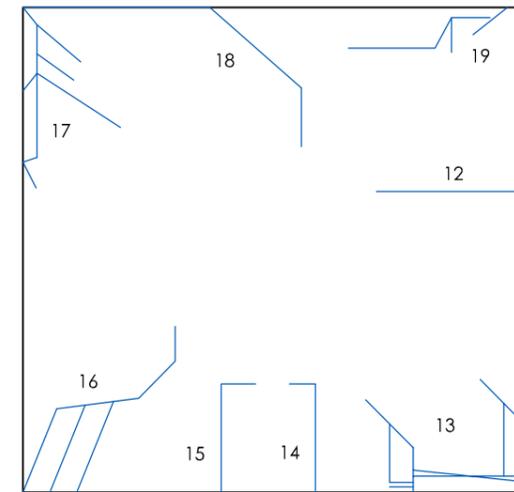
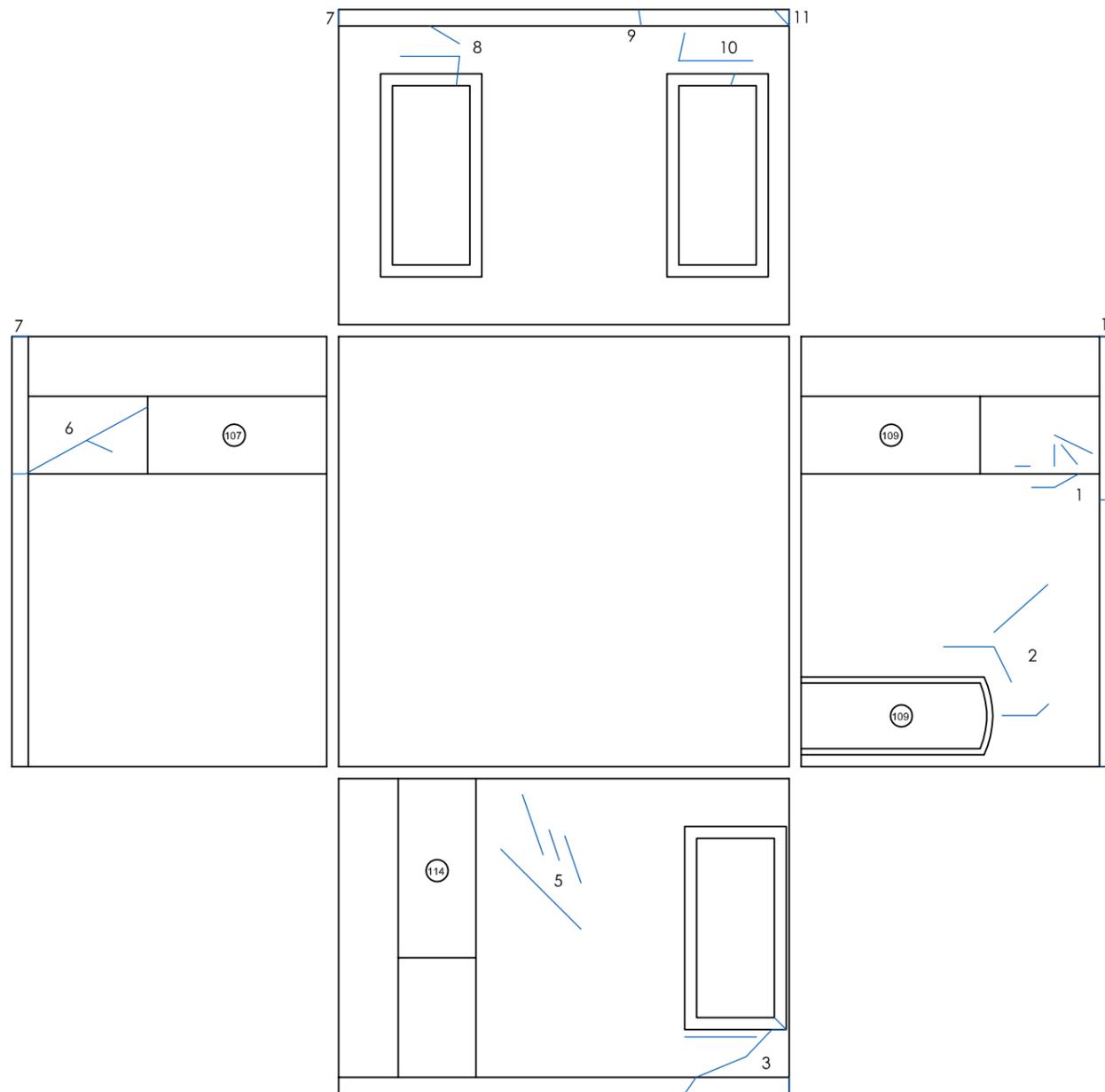
Foto 8 Lesione 13



Foto 9 Lesione 14

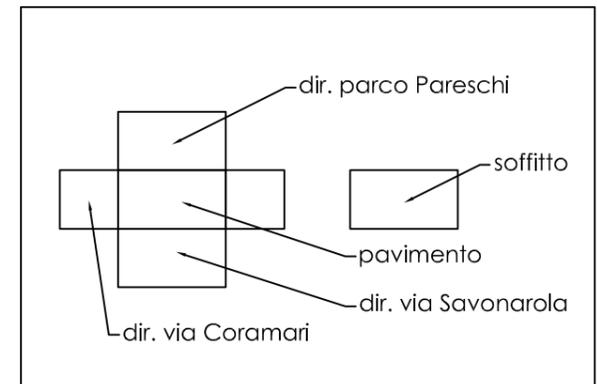


Locale n. 108 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 108



Foto 1 Lesione 1



Foto 2 Lesione 3



Foto 3 Lesione 6



Foto 4 Lesione 8



Foto 5 Lesione 10

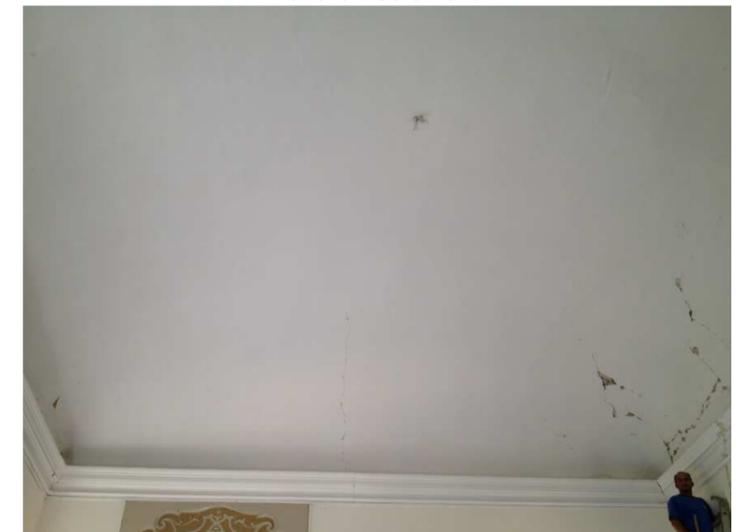


Foto 6 Lesione 13

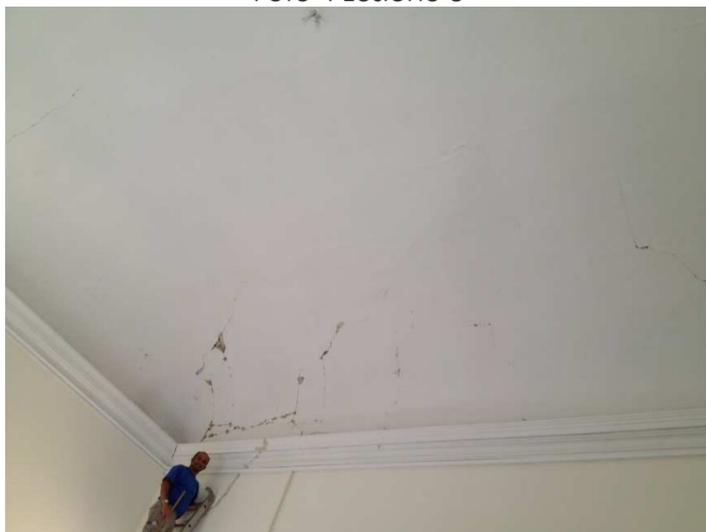


Foto 7 Lesione 14 e 15



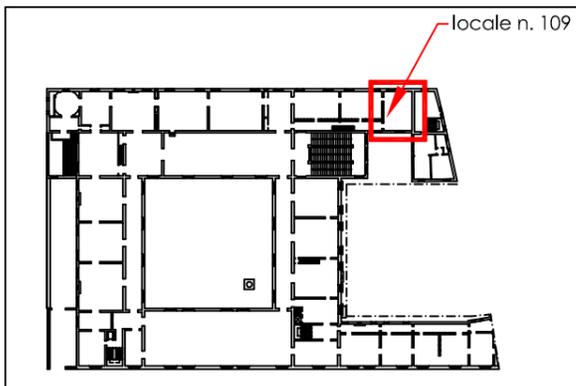
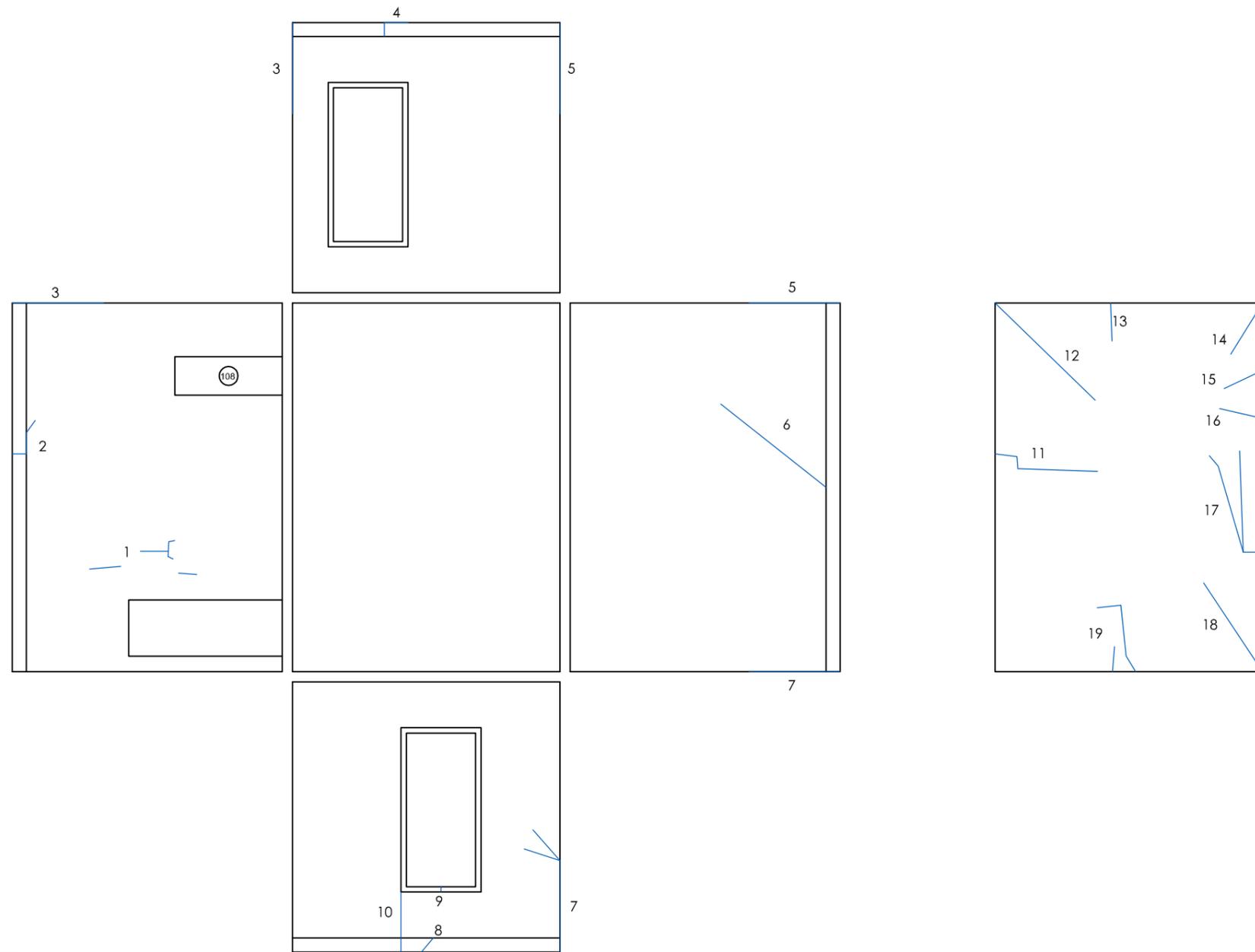
Foto 8 Lesione 16



Foto 9 Lesione 17

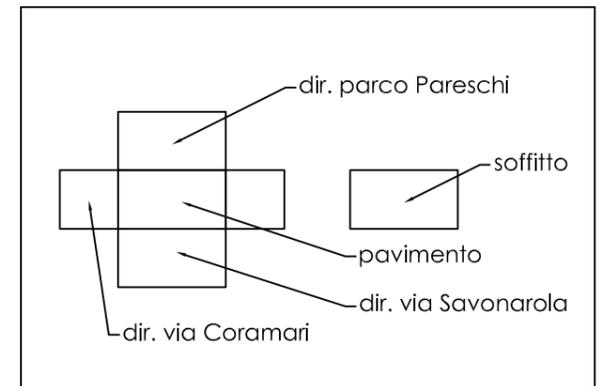


Locale n. 109 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 109



Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 3



Foto 4 Lesione 8



Foto 5 Lesione 9



Foto 6 Lesione 11

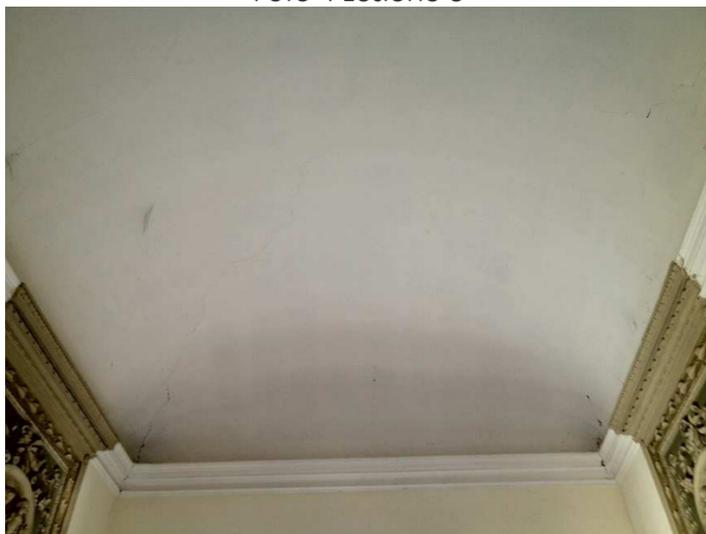


Foto 7 Lesione 12 e 14

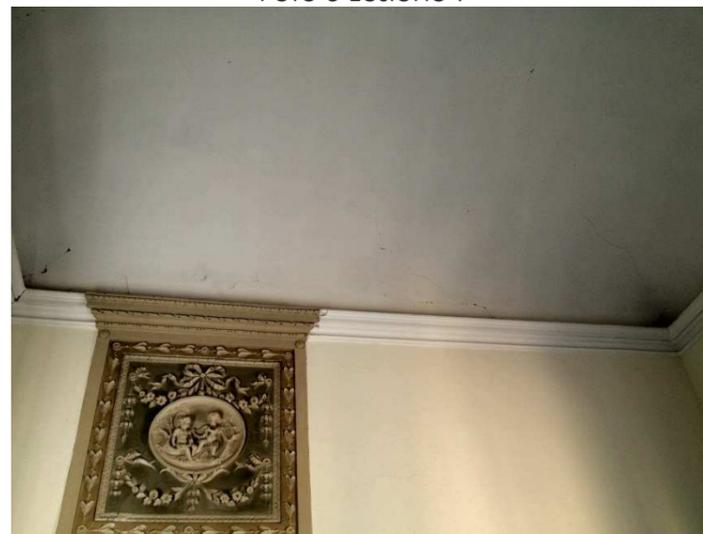
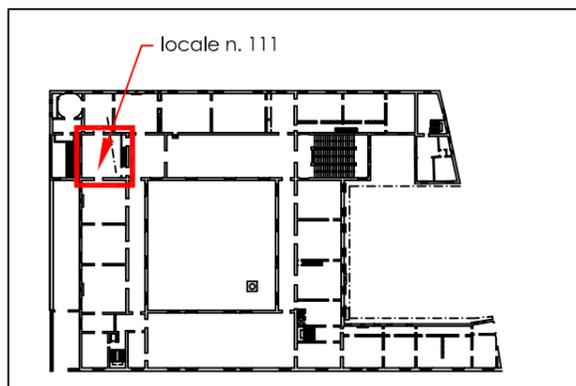
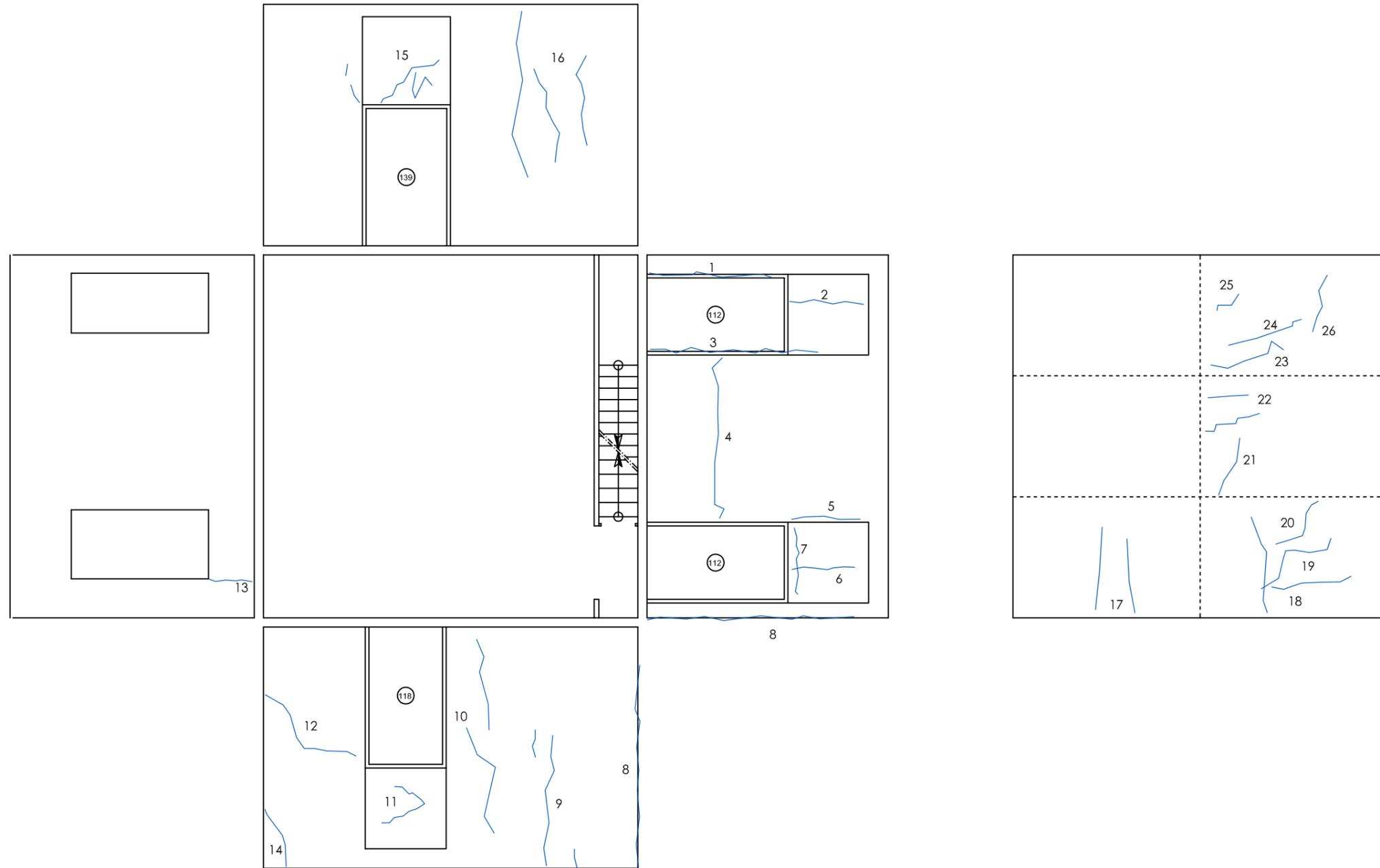


Foto 8 Lesione 17

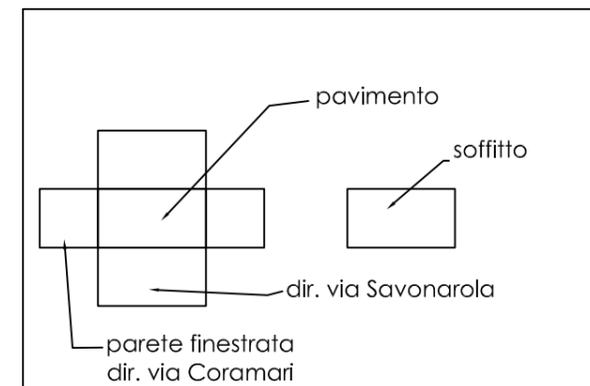


Locale n. 111 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 111



Foto 1 Lesione 2



Foto 2 Lesione 4



Foto 3 Lesione 5 e 6



Foto 4 Lesione 11



Foto 5 Lesione 12



Foto 6 Lesione 13



Foto 7 Lesione 15



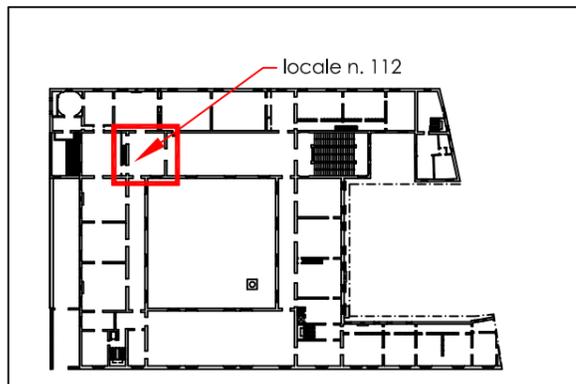
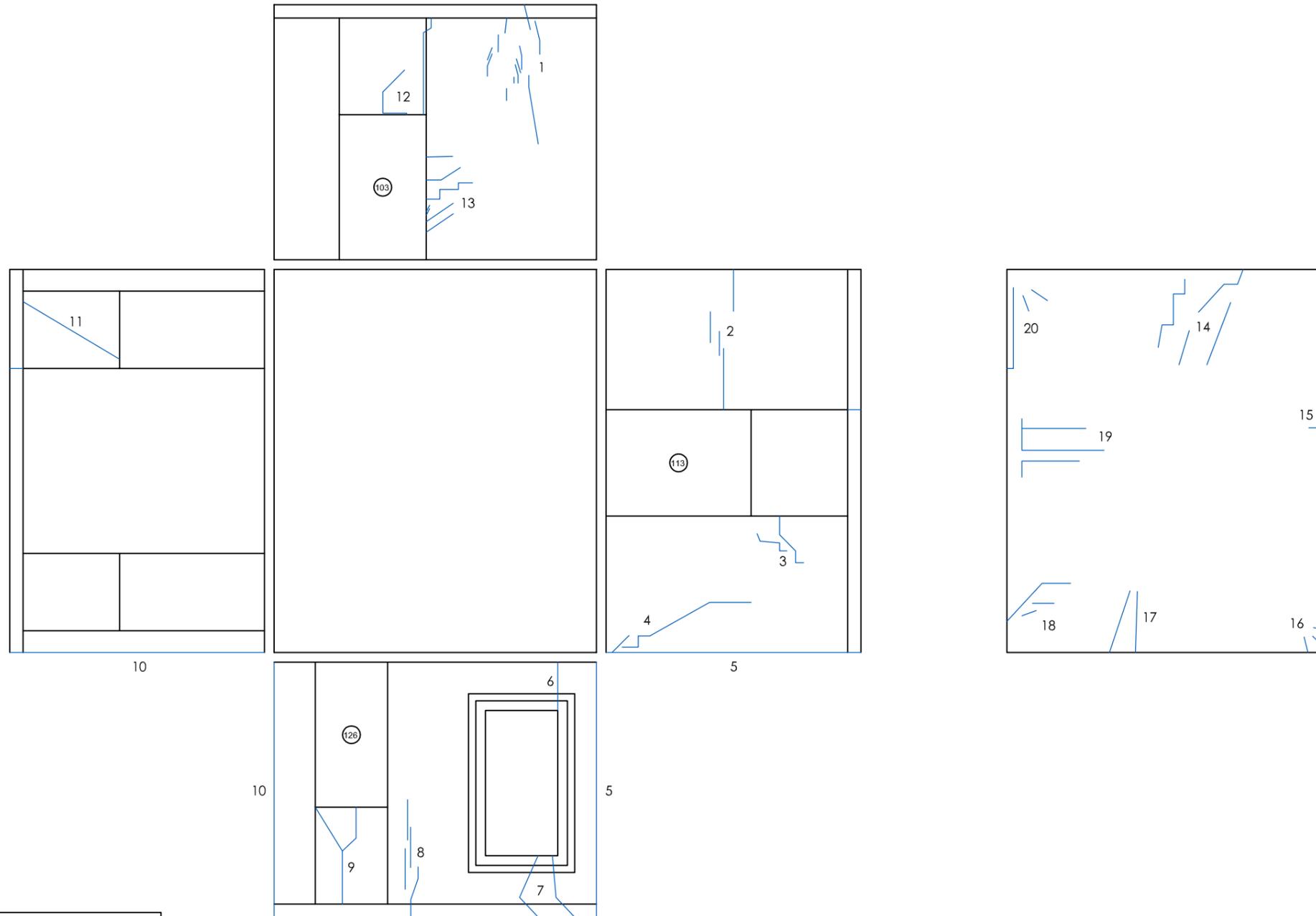
Foto 8 Lesione 24



Foto 9 Lesione 19

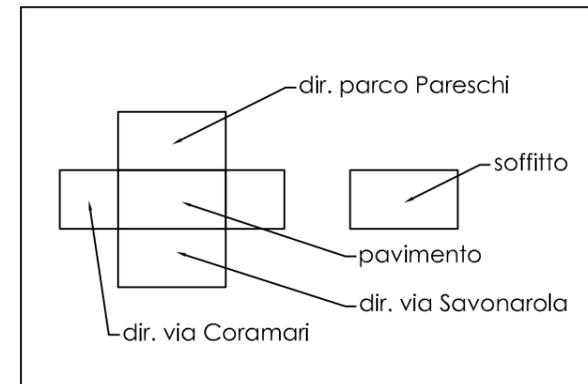


Locale n. 112 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 112



Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 5



Foto 4 Lesione 8



Foto 5 Lesione 9



Foto 6 Lesione 10



Foto 7 Lesione 16



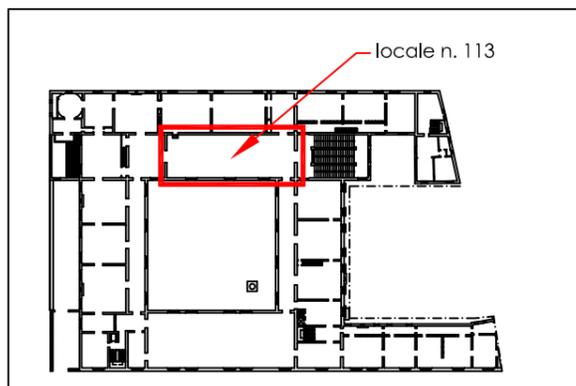
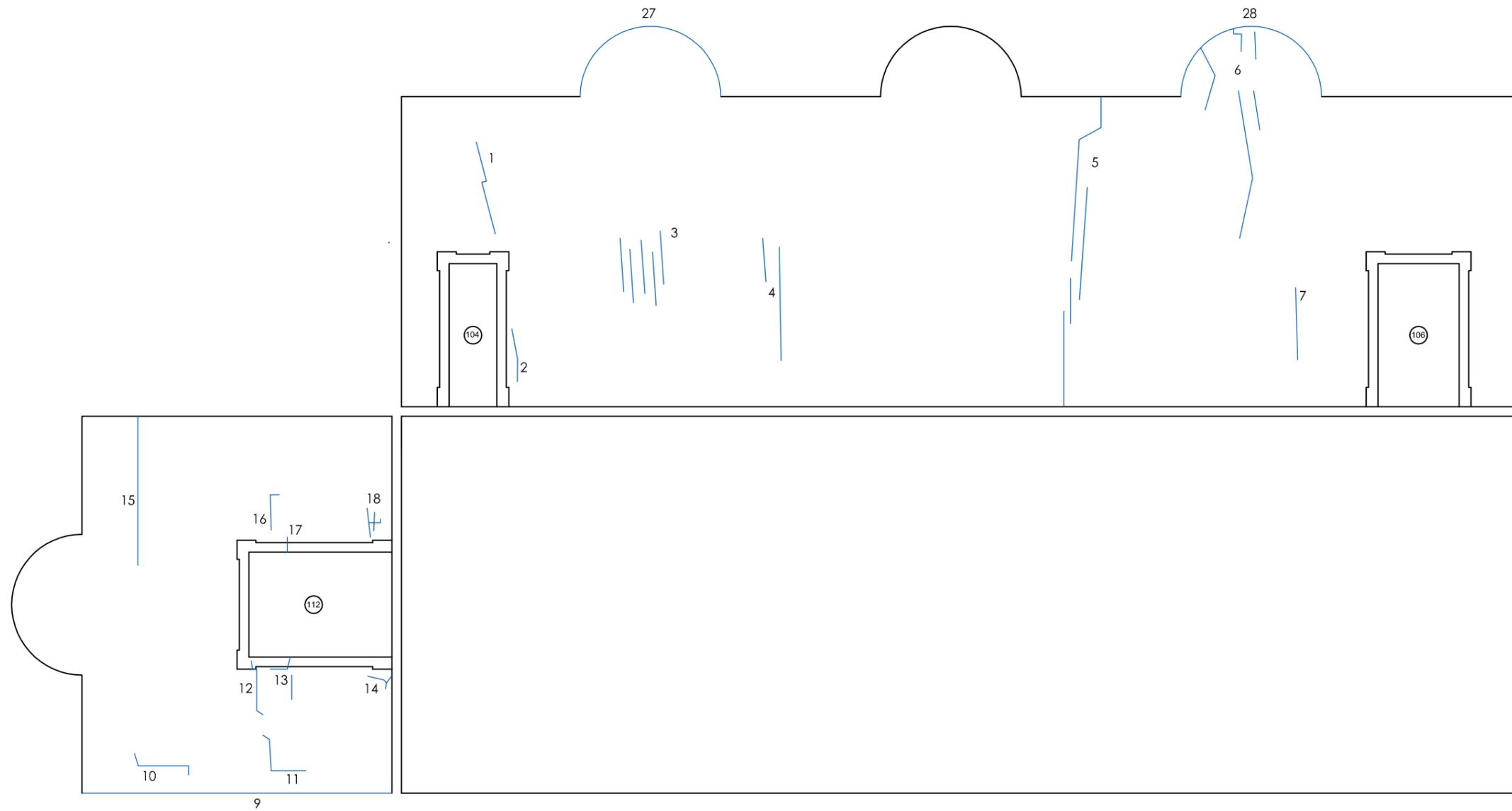
Foto 8 Lesione 18



Foto 9 Lesione 20

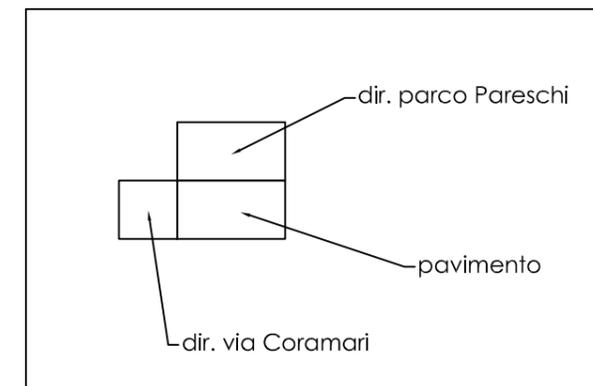


Locale n. 113 - Posizione delle lesioni



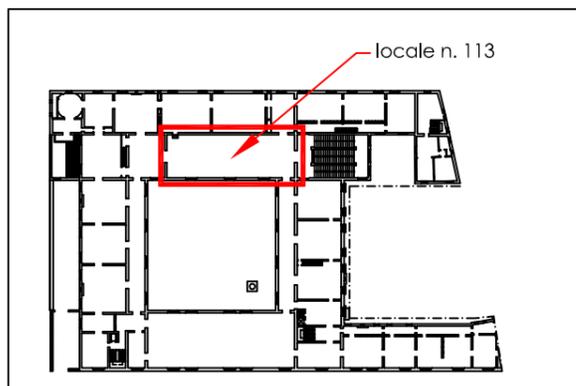
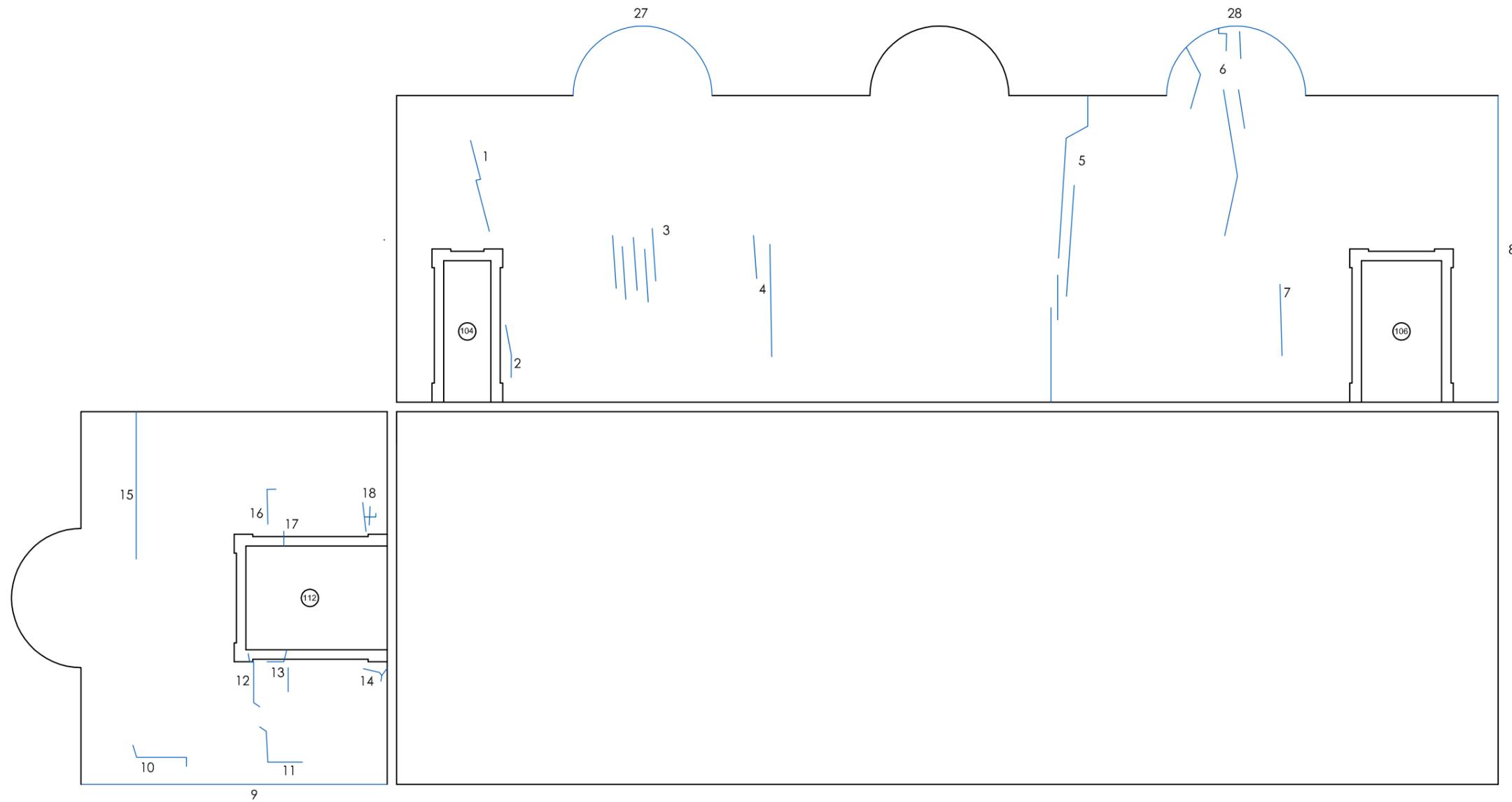
Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



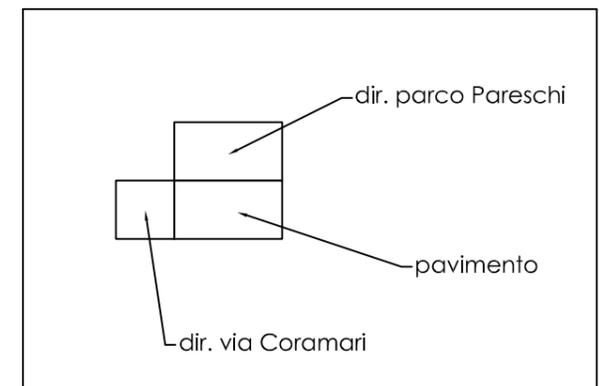


Locale n. 113 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 113



Foto 1 Lesione 1



Foto 2 Lesione 5



Foto 3 Lesione 6



Foto 4 Lesione 8



Foto 5 Lesione 9

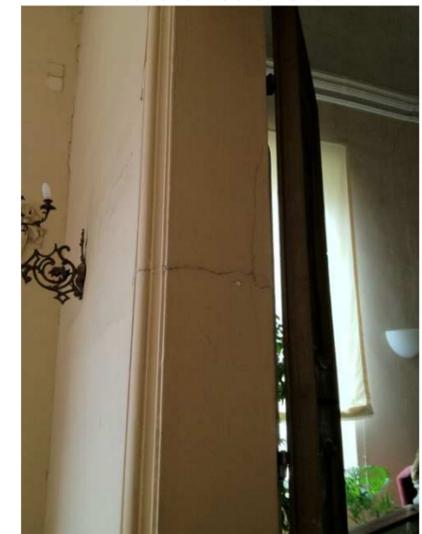


Foto 6 Lesione 13



Foto 7 Lesione 14

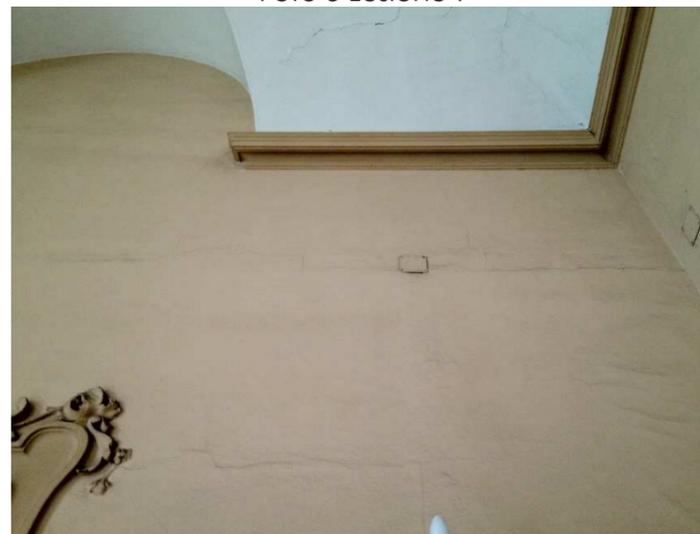


Foto 8 Lesione 15



Foto 9 Lesione 17

Locale 113



Foto 1 Lesione 20



Foto 2 Lesione 25



Foto 3 Lesione 29



Foto 4 Lesione 31



Foto 5 Lesione 34

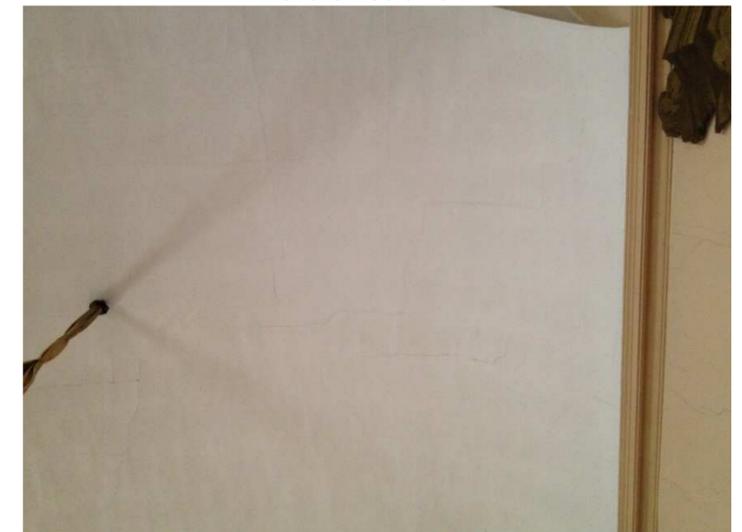


Foto 6 Lesione 36



Foto 7 Lesione 37 e 38



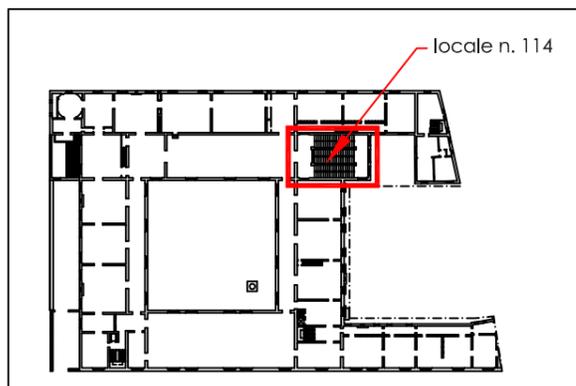
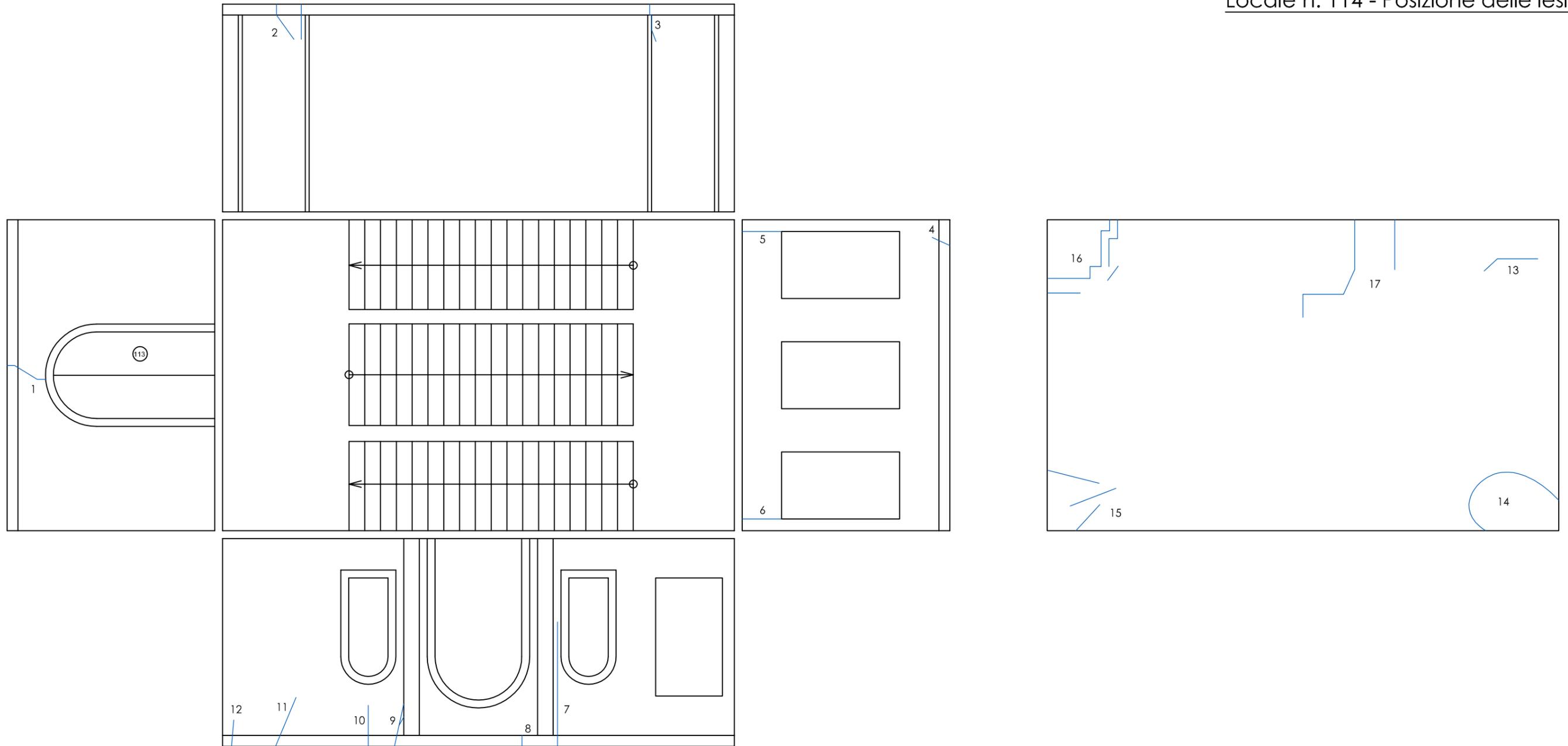
Foto 8 Lesione 41



Foto 9 Lesione 44

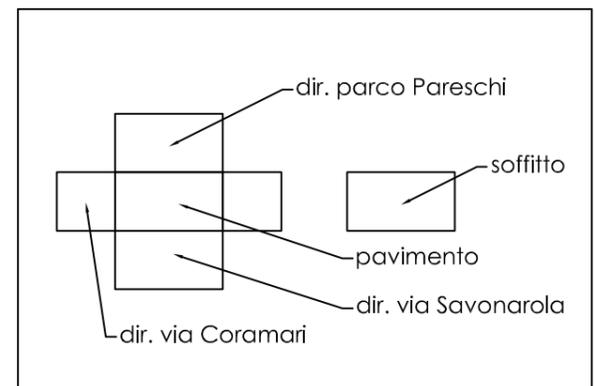


Locale n. 114 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 114



Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 3



Foto 4 Lesione 5



Foto 5 Lesione 6



Foto 6 Lesione 7

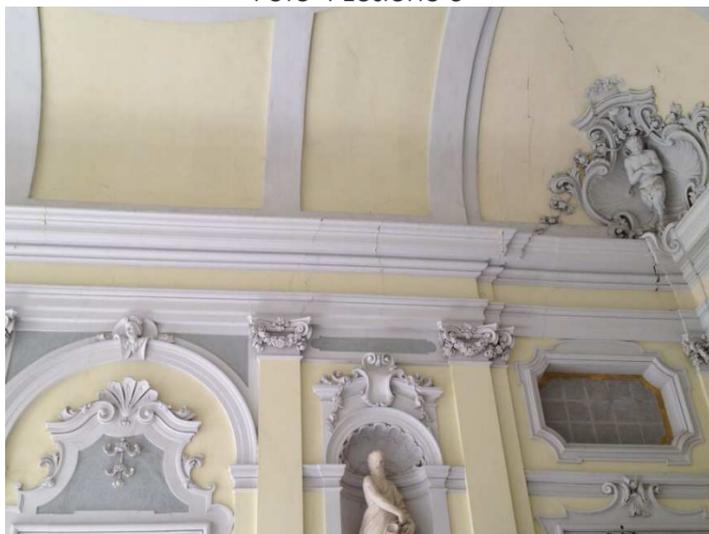


Foto 7 Lesione 9 e 10

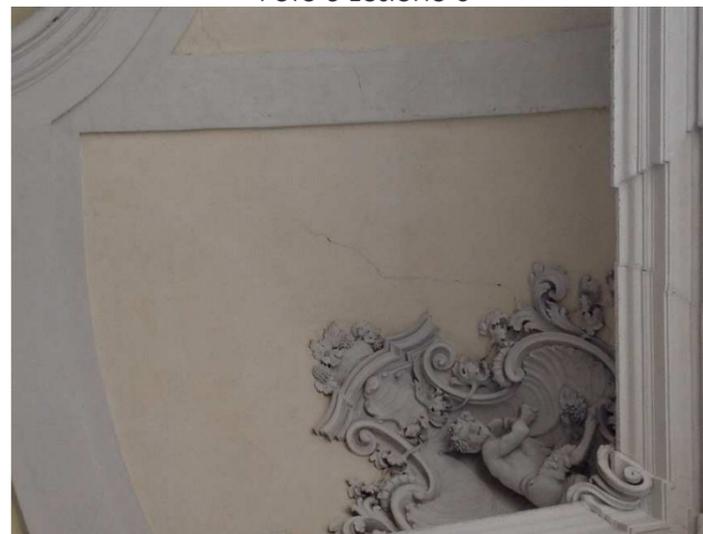


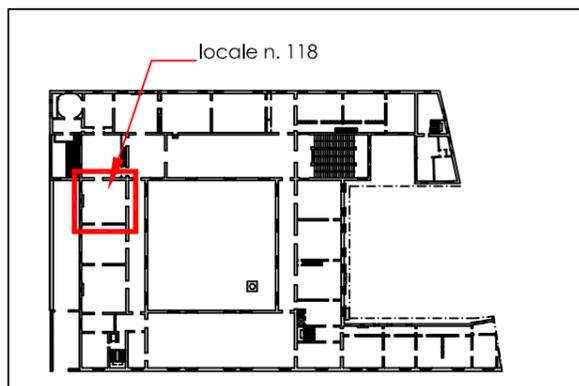
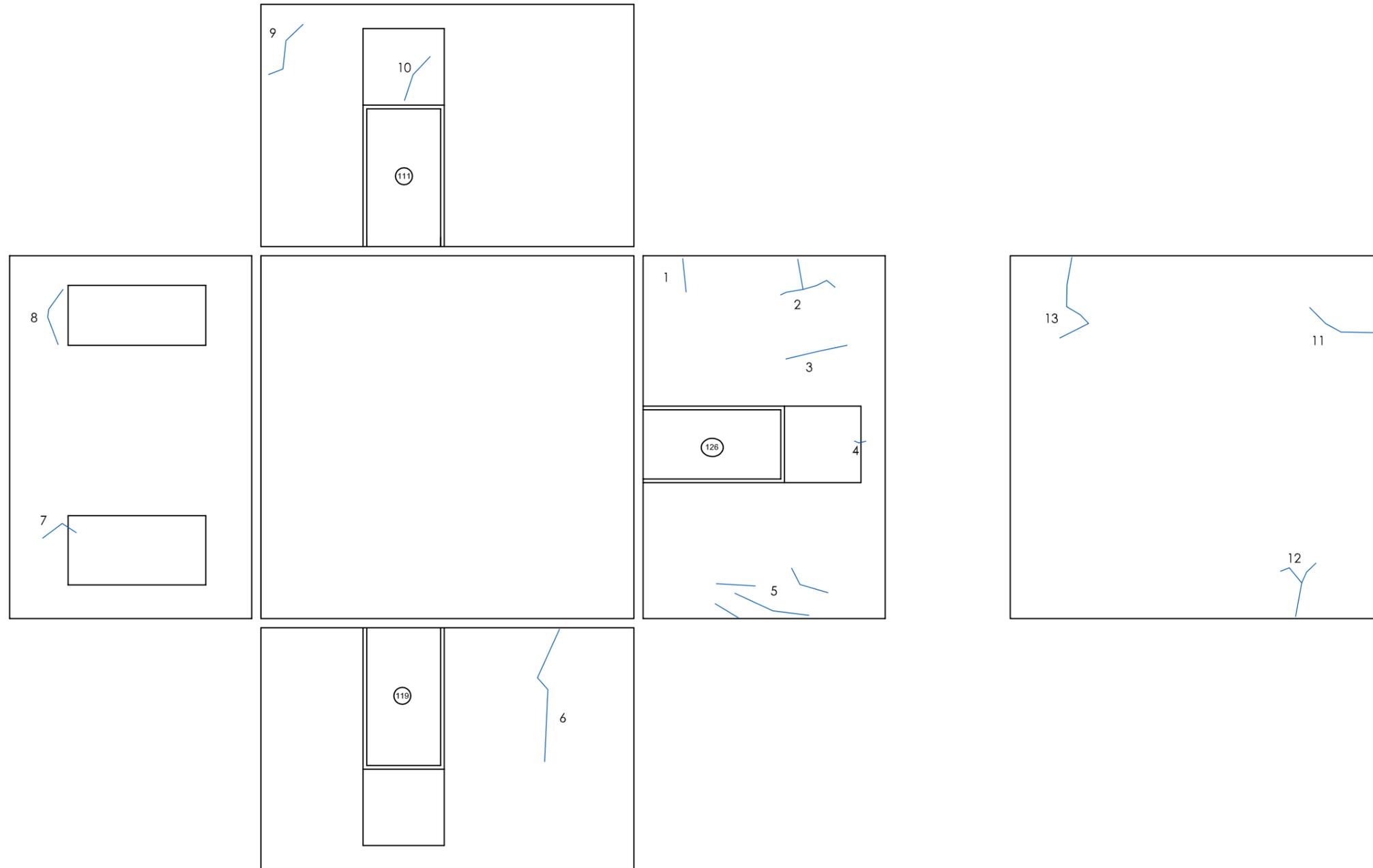
Foto 8 Lesione 13



Foto 9 Lesione 15

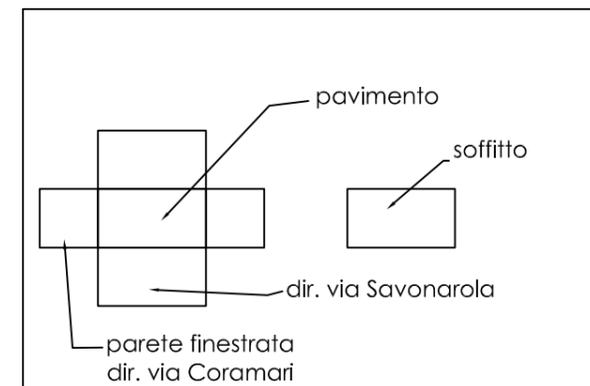


Locale n. 118 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 118



Foto 1 Lesione 2



Foto 2 Lesione 4



Foto 3 Lesione 5



Foto 4 Lesione 6



Foto 5 Lesione 7



Foto 6 Lesione 8



Foto 7 Lesione 10



Foto 8 Lesione 11



Foto 9 Lesione 13



Locale 119



Foto 1 Lesione 1



Foto 2 Lesione 2

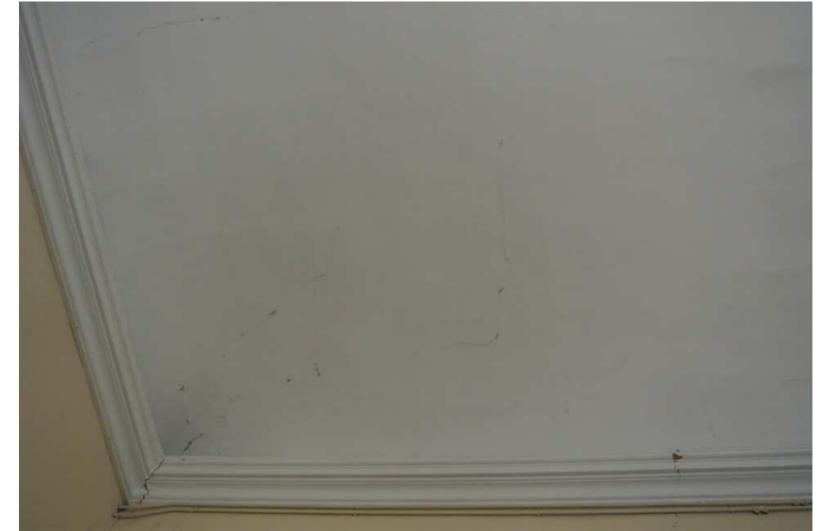


Foto 3 Lesione 3



Foto 4 Lesione 5



Foto 5 Lesione 8



Foto 6 Lesione 11



Foto 7 Lesione 13



Foto 8 Lesione 14

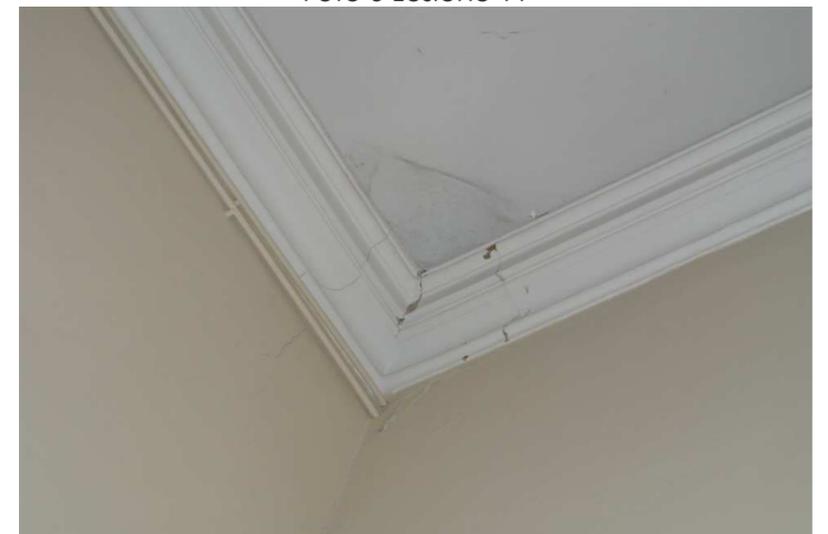
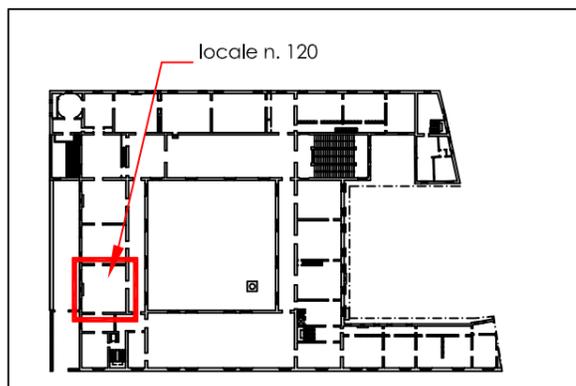
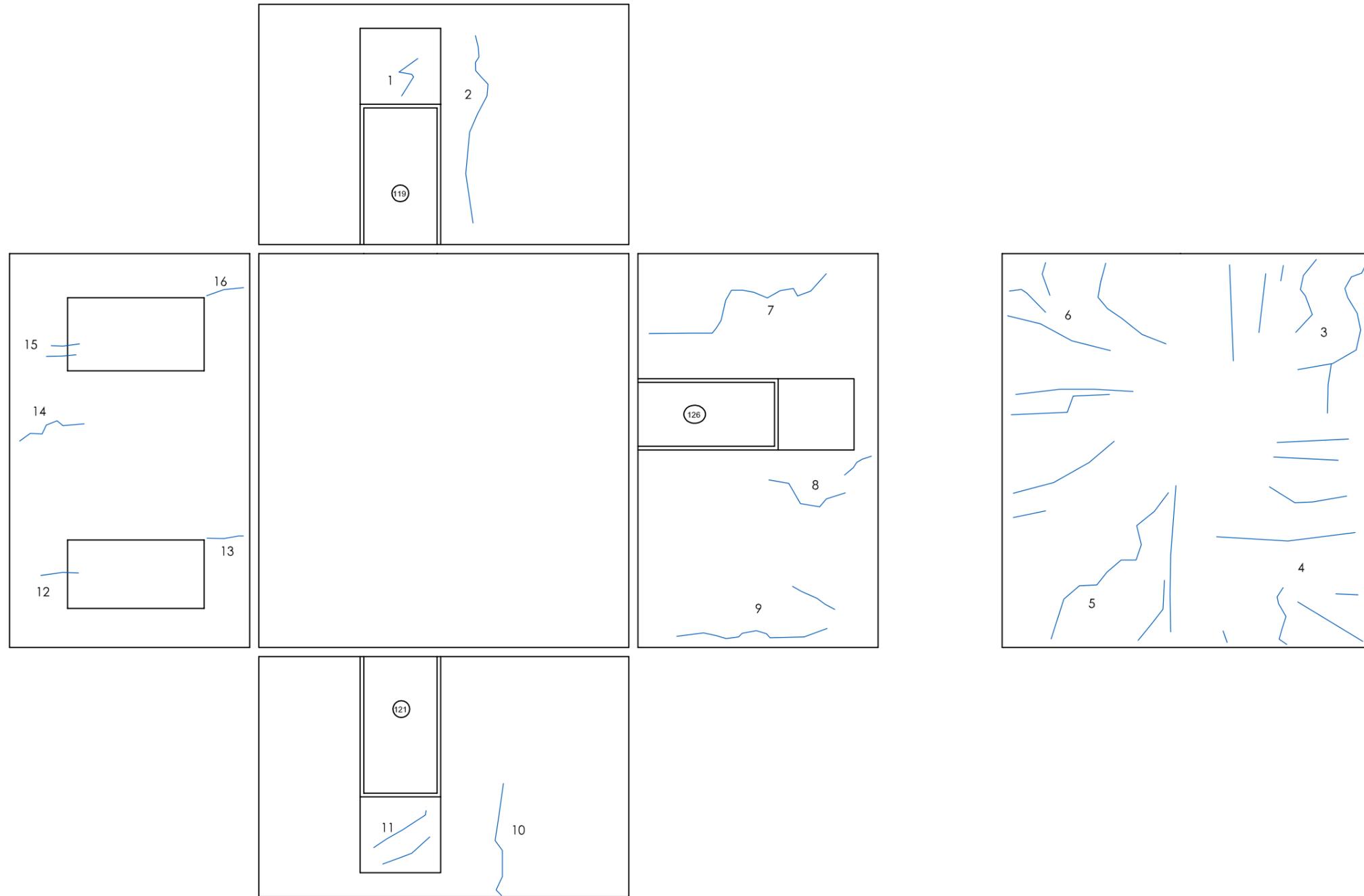
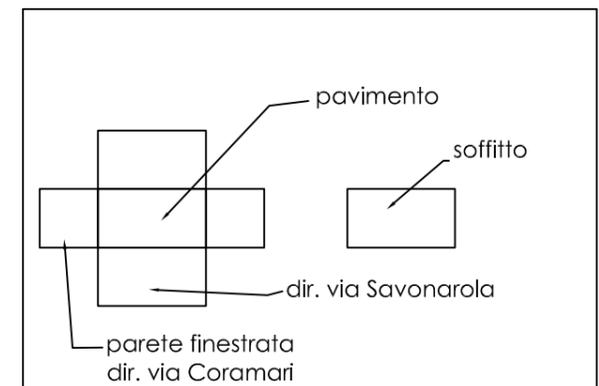


Foto 9 Lesione 15



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 120



Foto 1 Lesione 1



Foto 2 Lesione 3



Foto 3 Lesione 5



Foto 4 Lesione 7



Foto 5 Lesione 8



Foto 6 Lesione 9



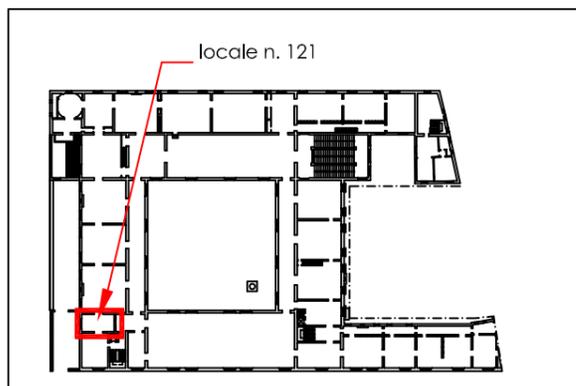
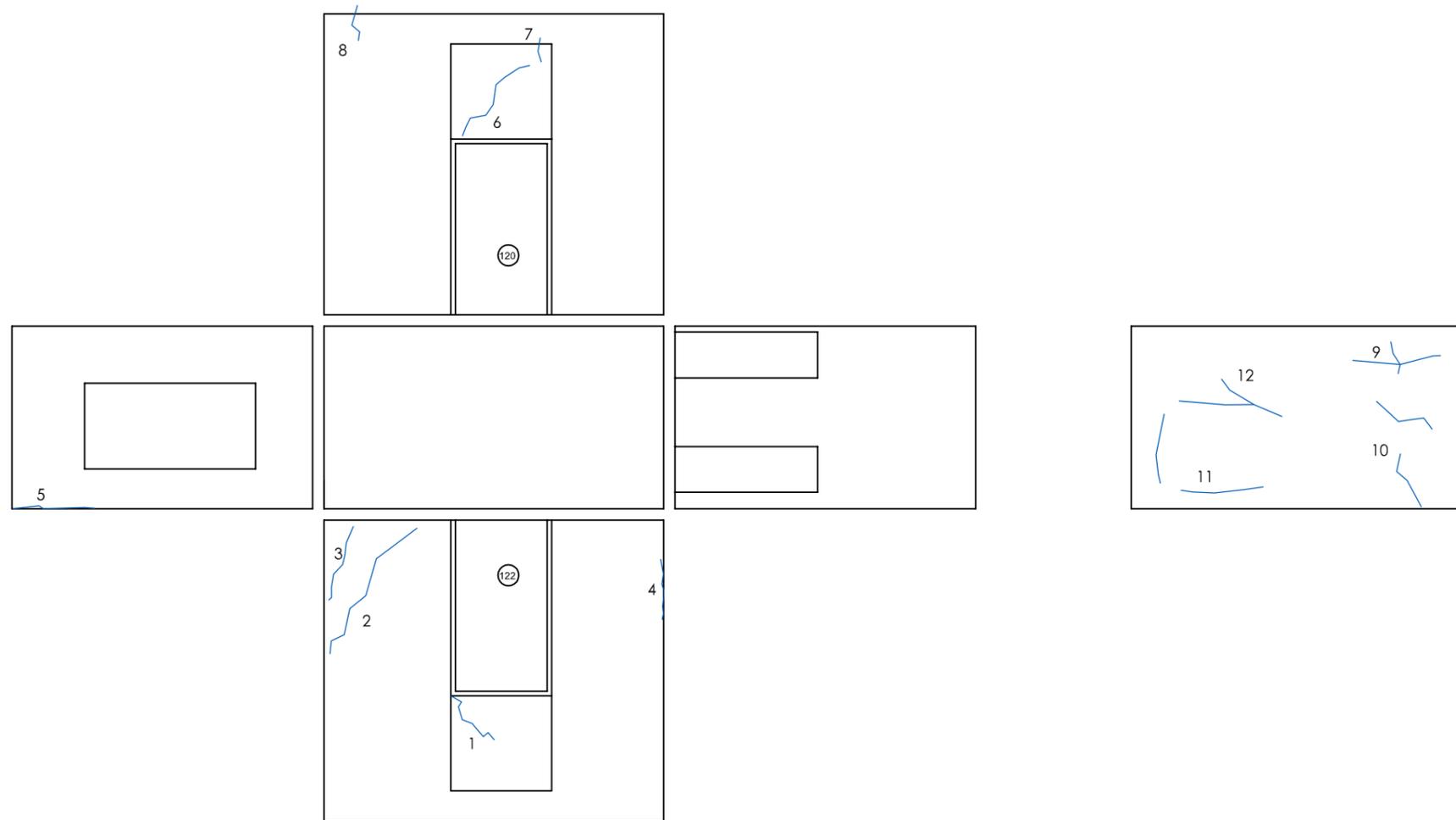
Foto 7 Lesione 11



Foto 8 Lesione 12

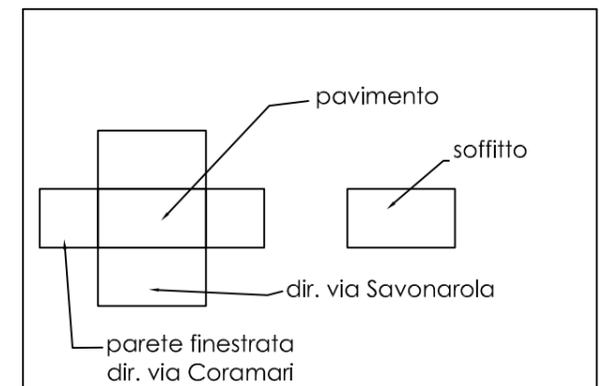


Foto 9 Lesione 13



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 121



Foto 1 Lesione 1

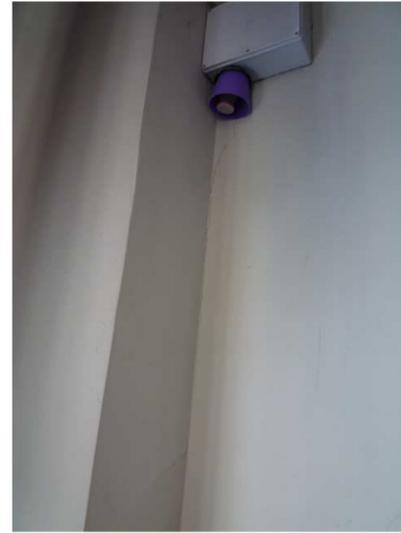


Foto 2 Lesione 3

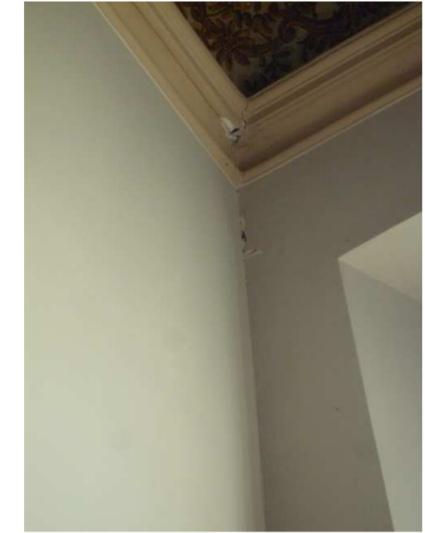


Foto 3 Lesione 5



Foto 4 Lesione 6



Foto 5 Lesione 8



Foto 6 Lesione 9 e 10



Foto 7 Lesione 11



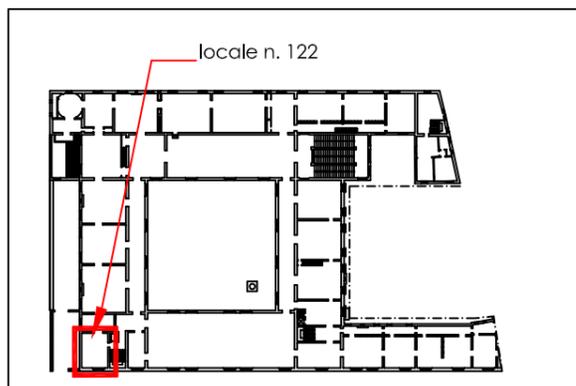
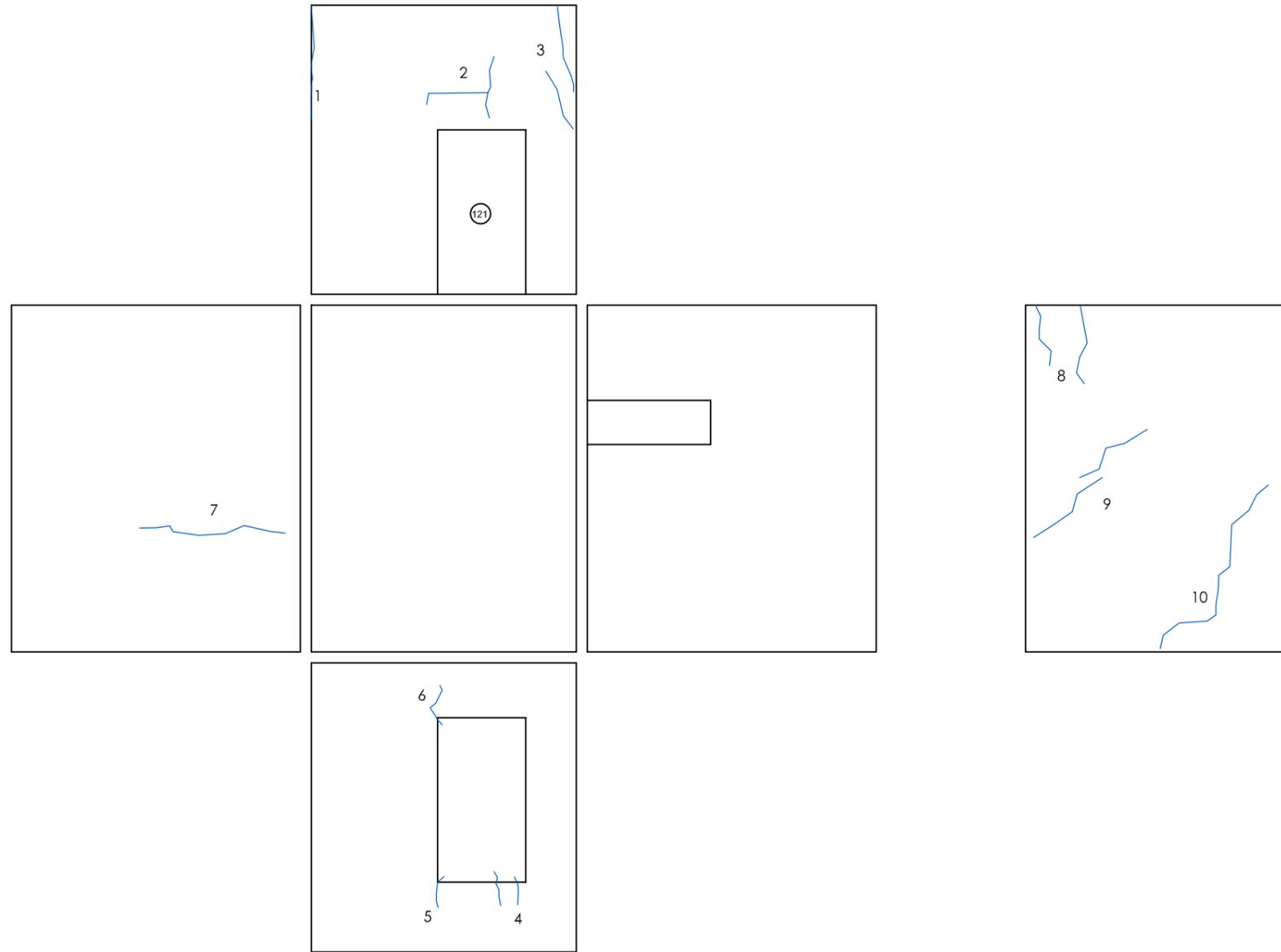
Foto 8 Lesione 12



Foto 9

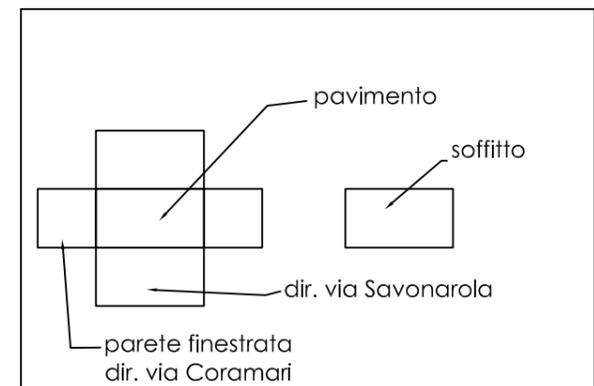


Locale n. 122 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 122



Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 3



Foto 4 Lesione 4 e 5



Foto 5 Lesione 7



Foto 6 Lesione 8

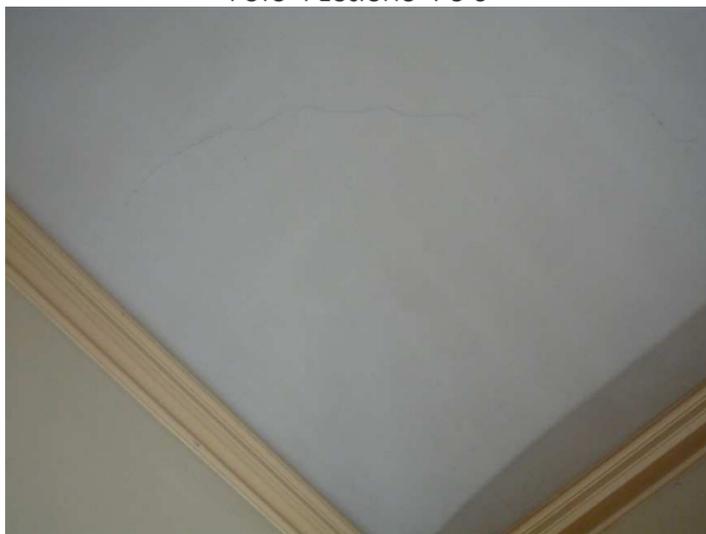


Foto 7 Lesione 9

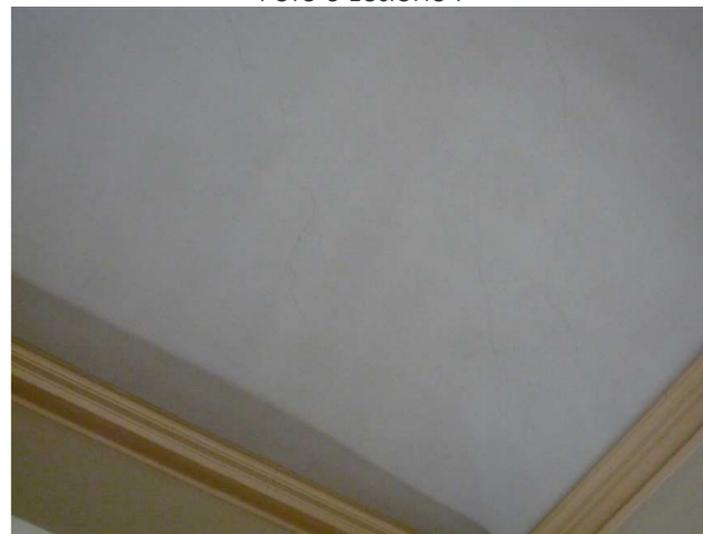
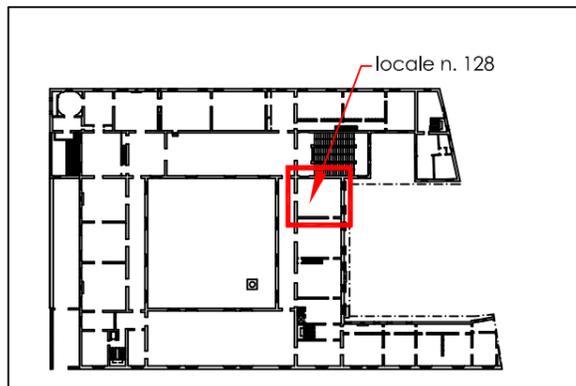
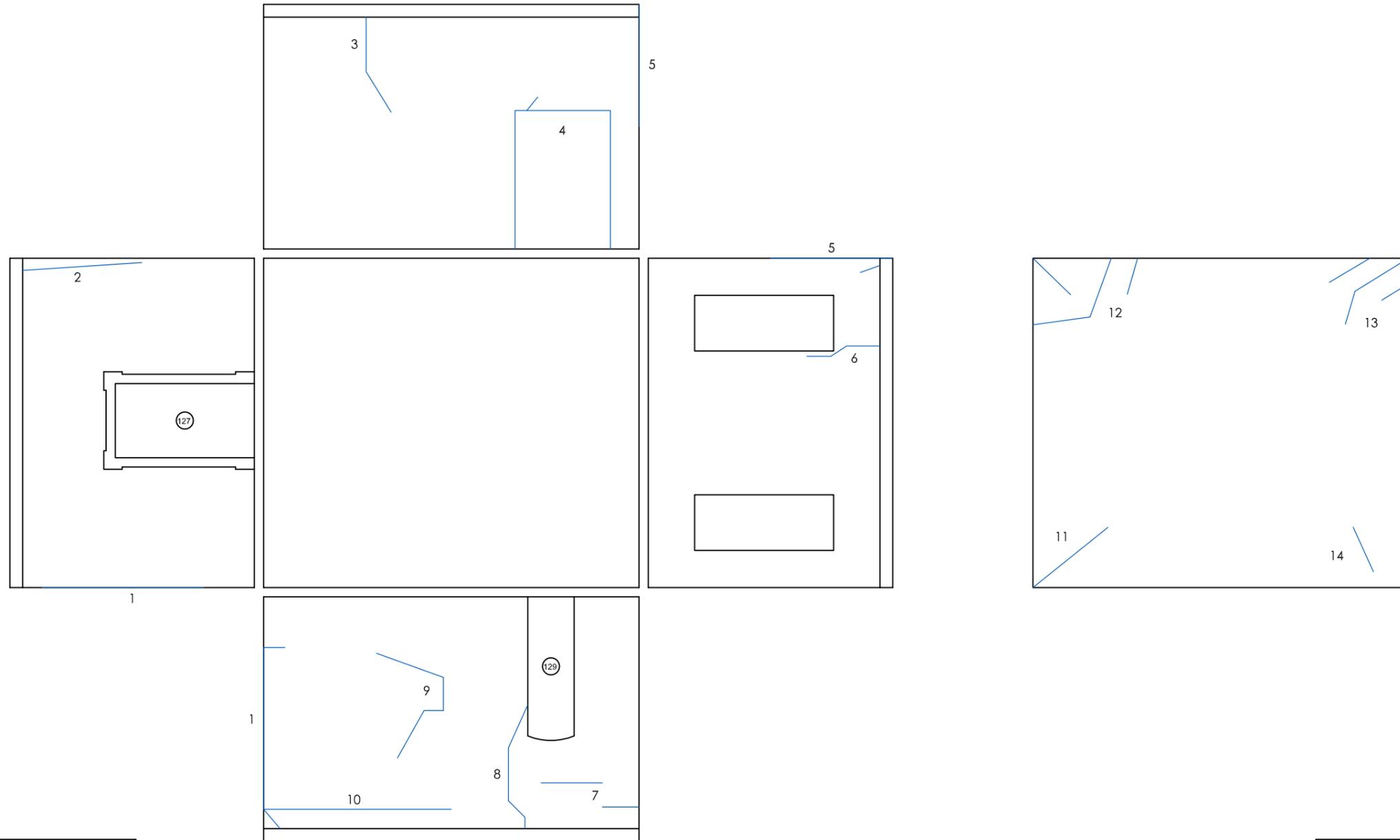


Foto 8 Lesione 10

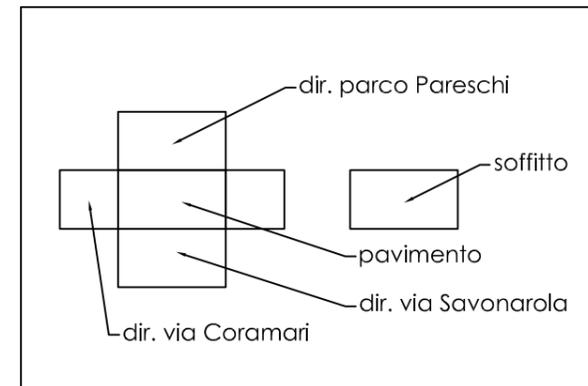


Locale n. 128 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 128



Foto 1 Lesione 2

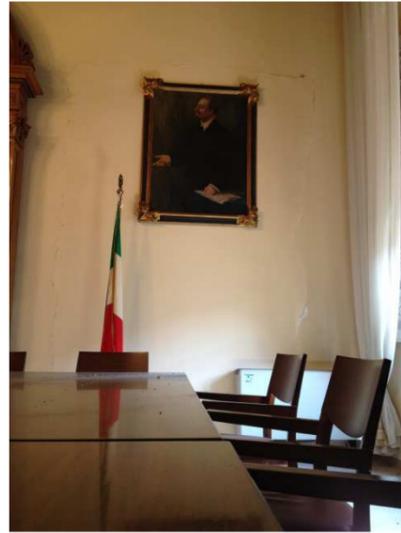


Foto 2 Lesione 4



Foto 3 Lesione 5



Foto 4 Lesione 6



Foto 5 Lesione 7



Foto 6 Lesione 10



Foto 7 Lesione 13



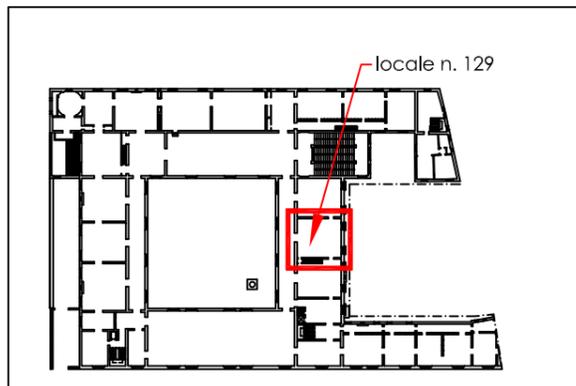
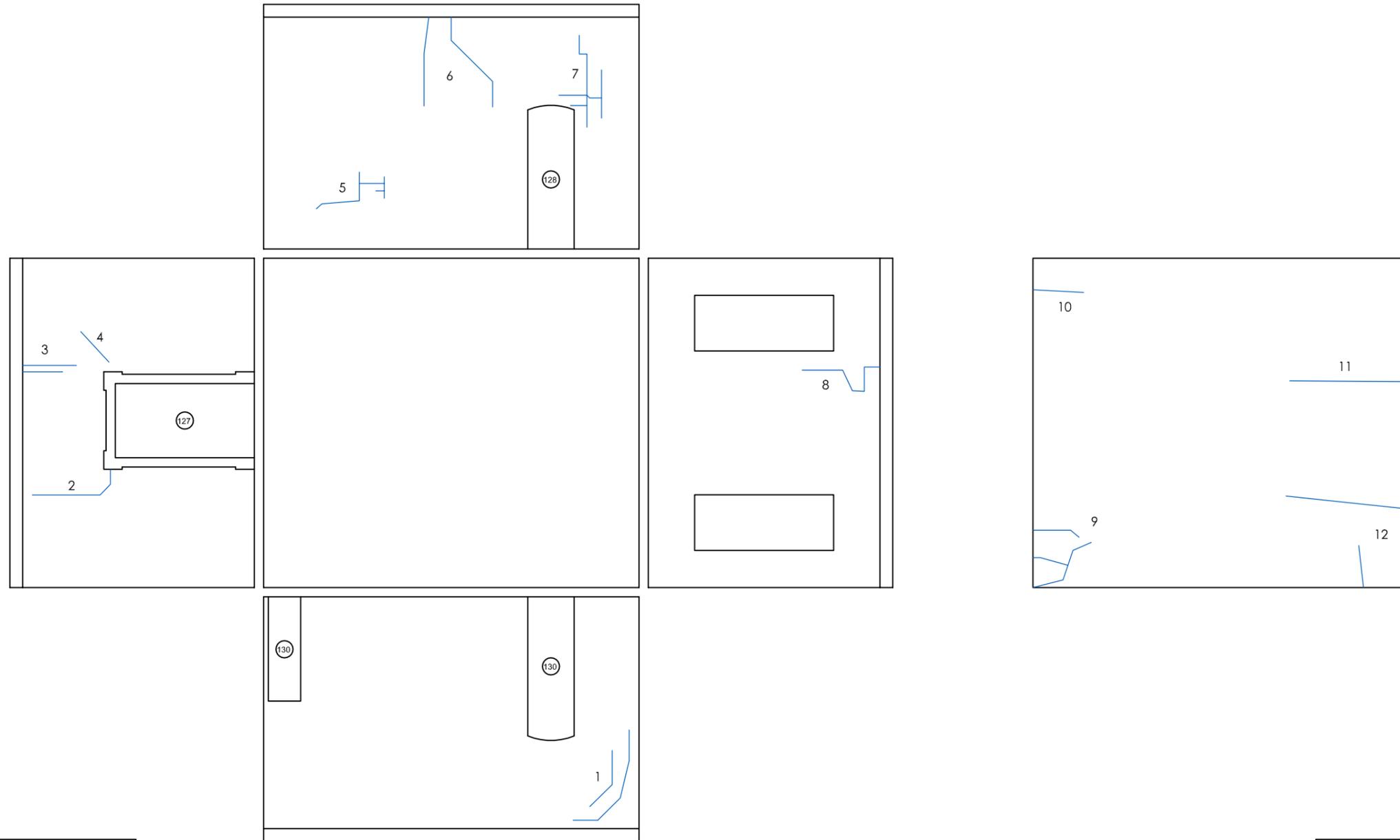
Foto 8 Lesione 14



Foto 9 Lesione 11

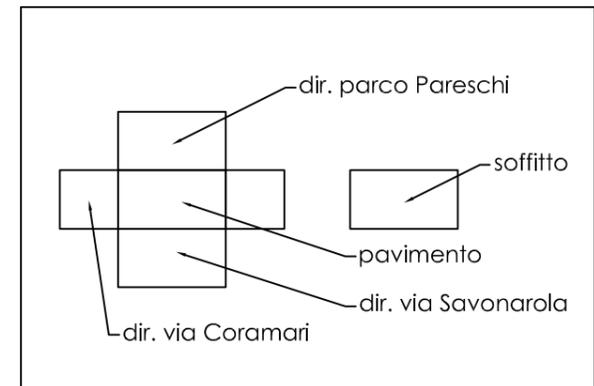


Locale n. 129 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 129



Foto 1 Lesione 2



Foto 2 Lesione 4



Foto 3 Lesione 5



Foto 4 Lesione 6



Foto 5 Lesione 7



Foto 6 Lesione 8



Foto 7 Lesione 9



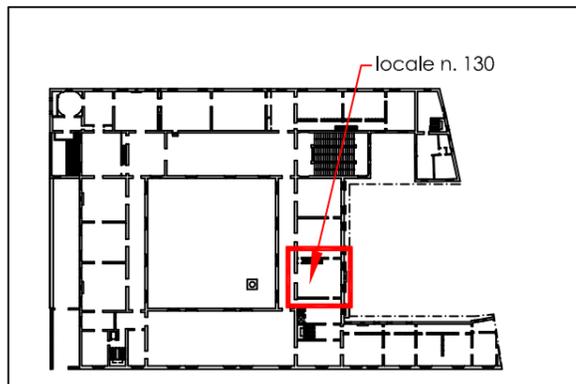
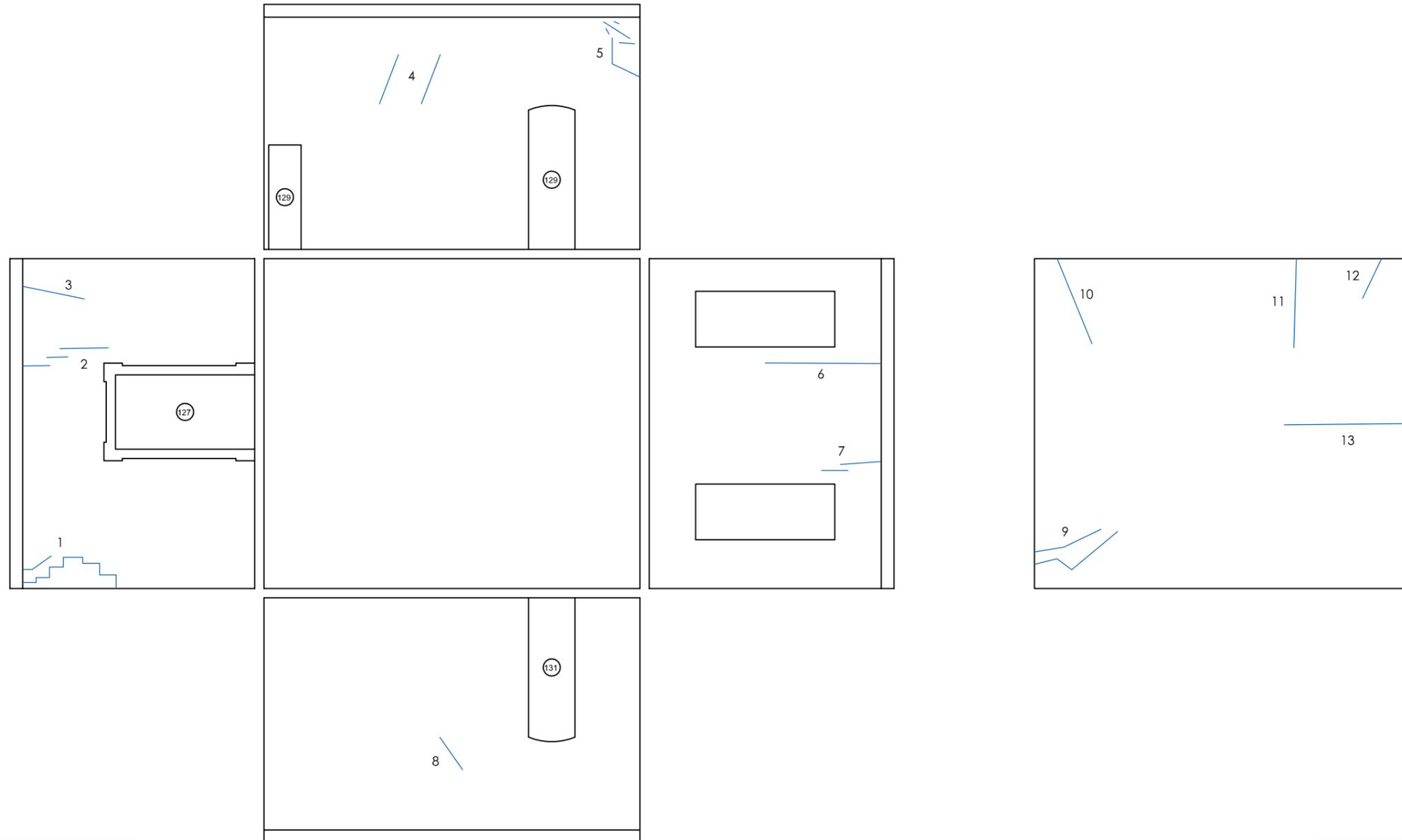
Foto 8 Lesione 10



Foto 9 Lesione 11

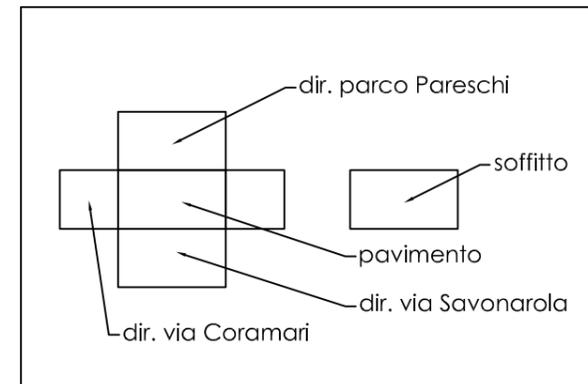


Locale n. 130 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

fessurazione



Locale 130

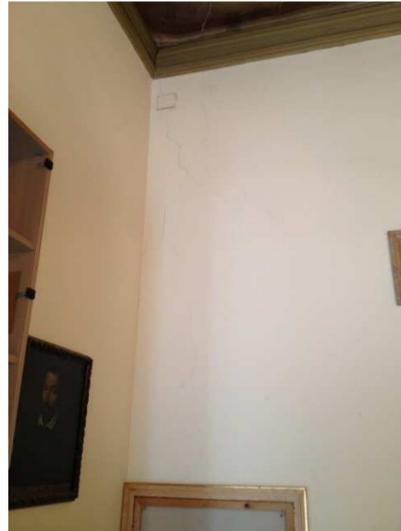


Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 4



Foto 4 Lesione 5



Foto 5 Lesione 6



Foto 6 Lesione 8



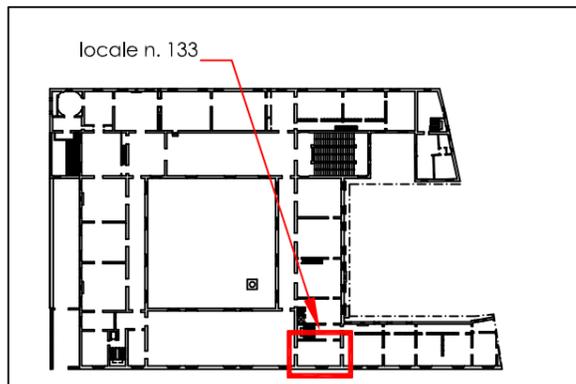
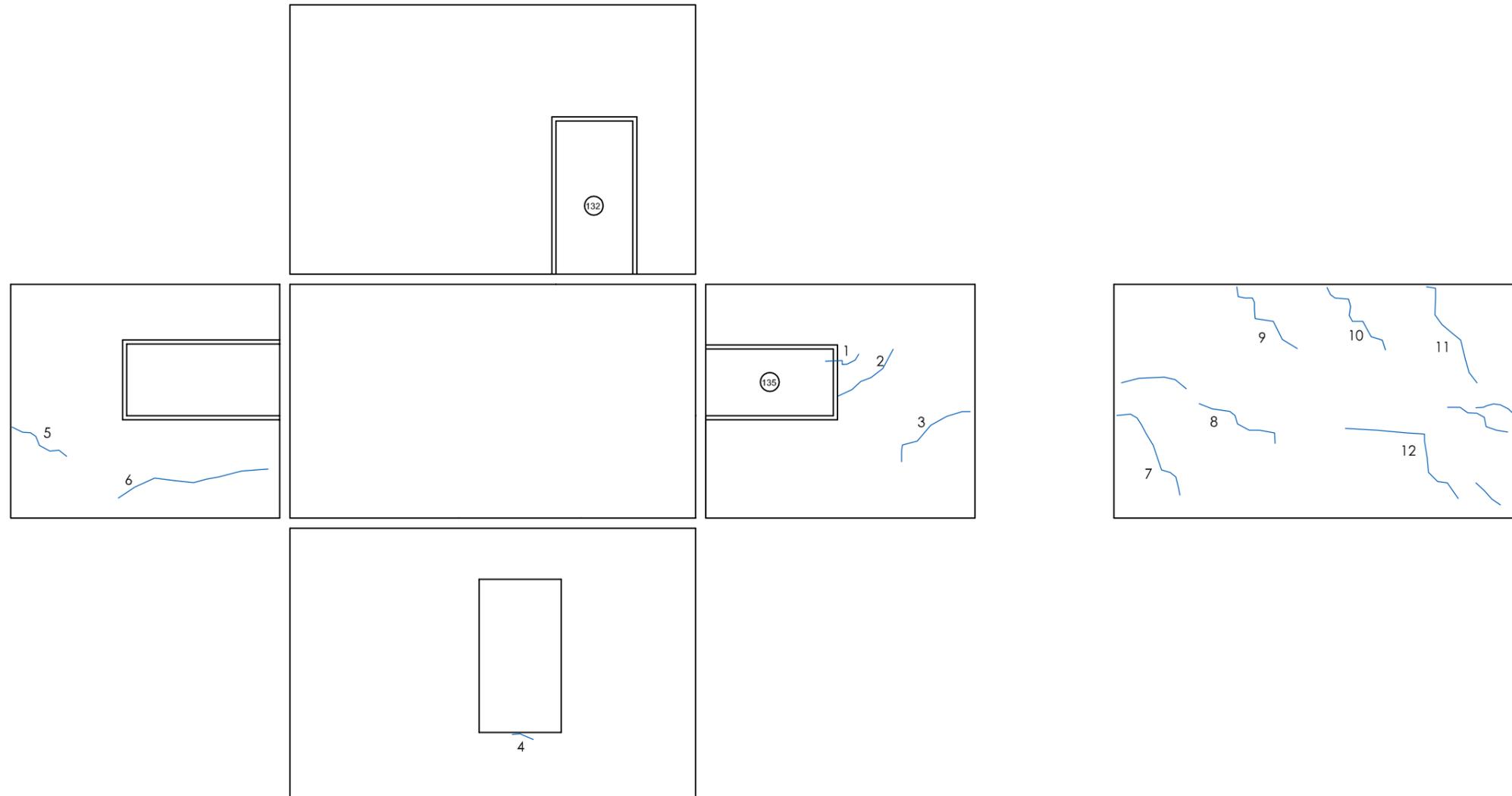
Foto 7 Lesione 9



Foto 8 Lesione 10

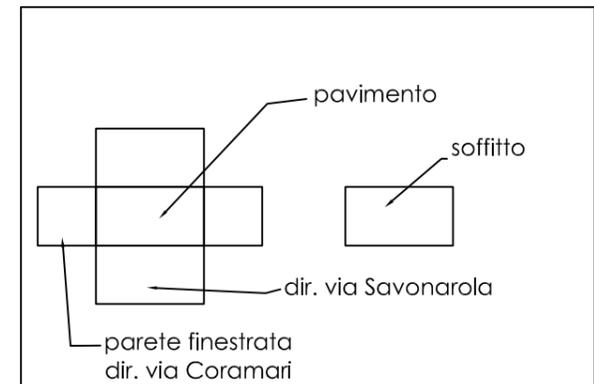


Foto 9 Lesione 11



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 133



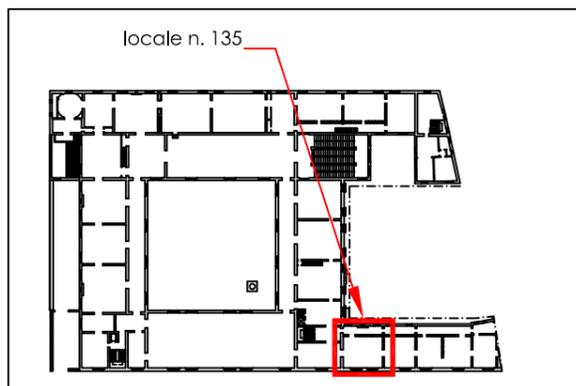
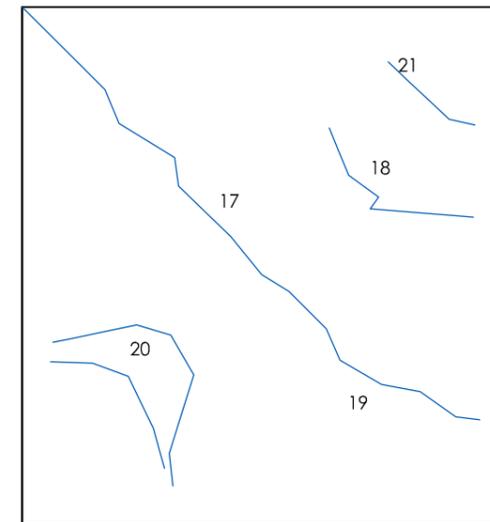
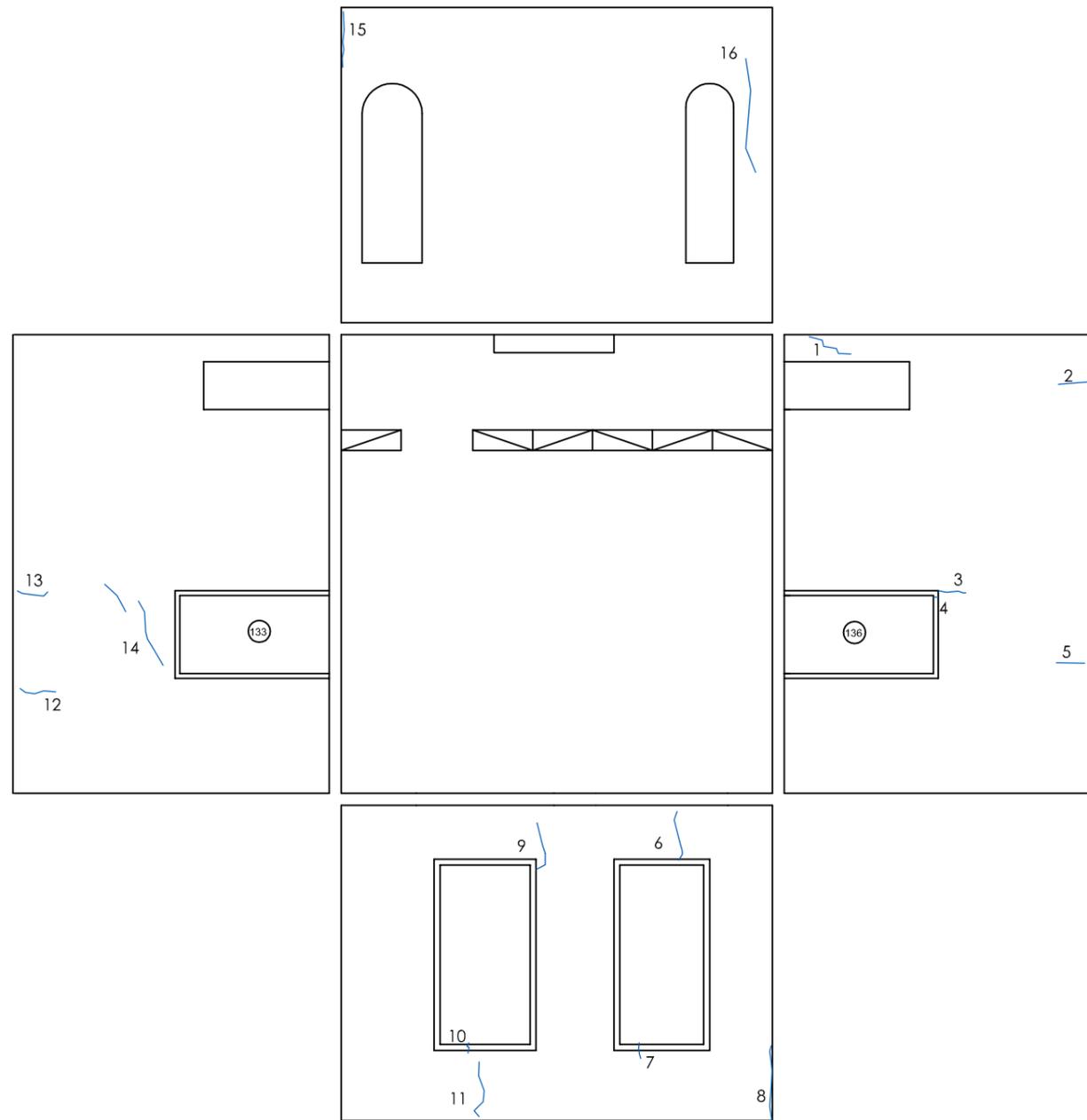
Foto 1 Lesione 4



Foto 2 Lesione 7 e 8

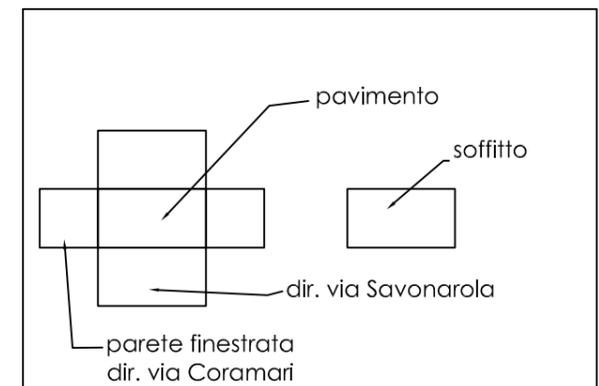


Foto 3 Lesione 9



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 135



Foto 1 Lesione 1



Foto 2 Lesione 4



Foto 3 Lesione 7



Foto 4 Lesione 9



Foto 5 Lesione 10



Foto 6 Lesione 14



Foto 7 Lesione 15



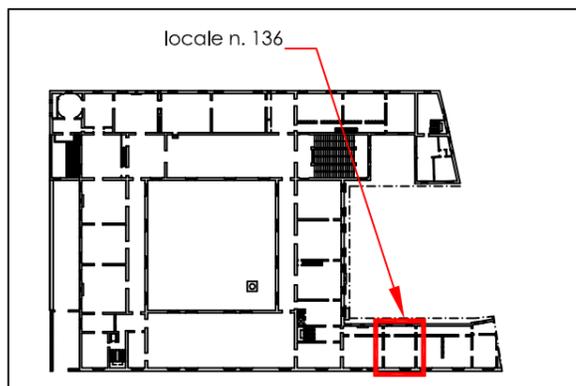
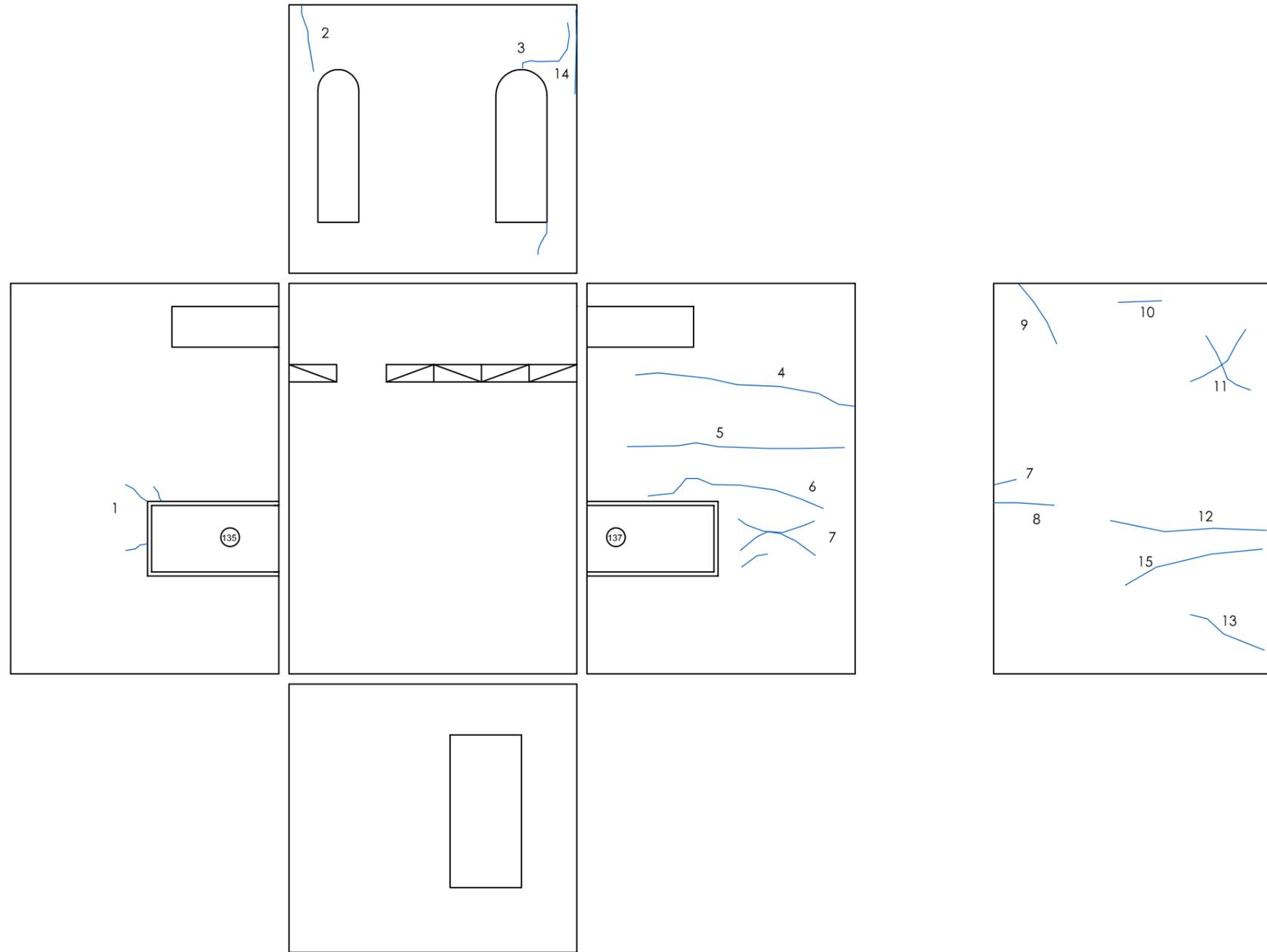
Foto 8 Lesione 17



Foto 9 Lesione 20

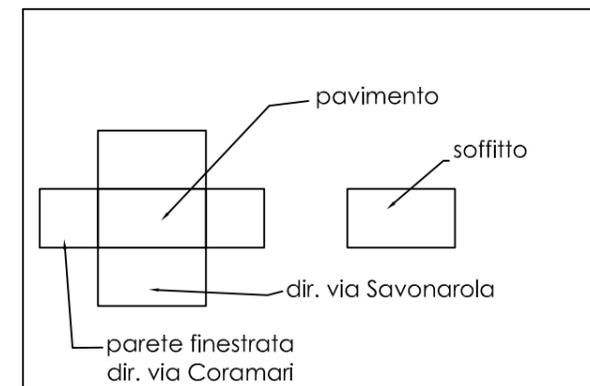


Locale n. 136 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 136



Foto 1 Lesione 1



Foto 2 Lesione 2



Foto 3 Lesione 3



Foto 4 Lesione 5 e 6



Foto 5 Lesione 5 e 6

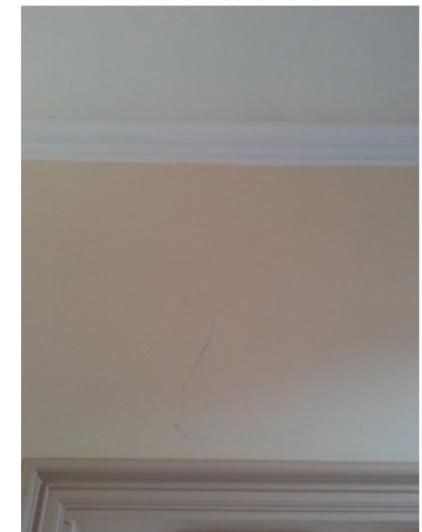


Foto 6 Lesione 7



Foto 7 Lesione 9



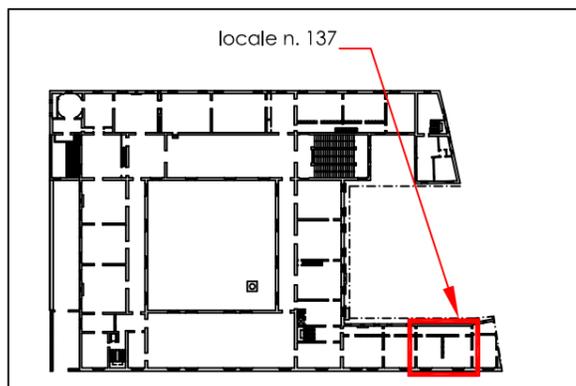
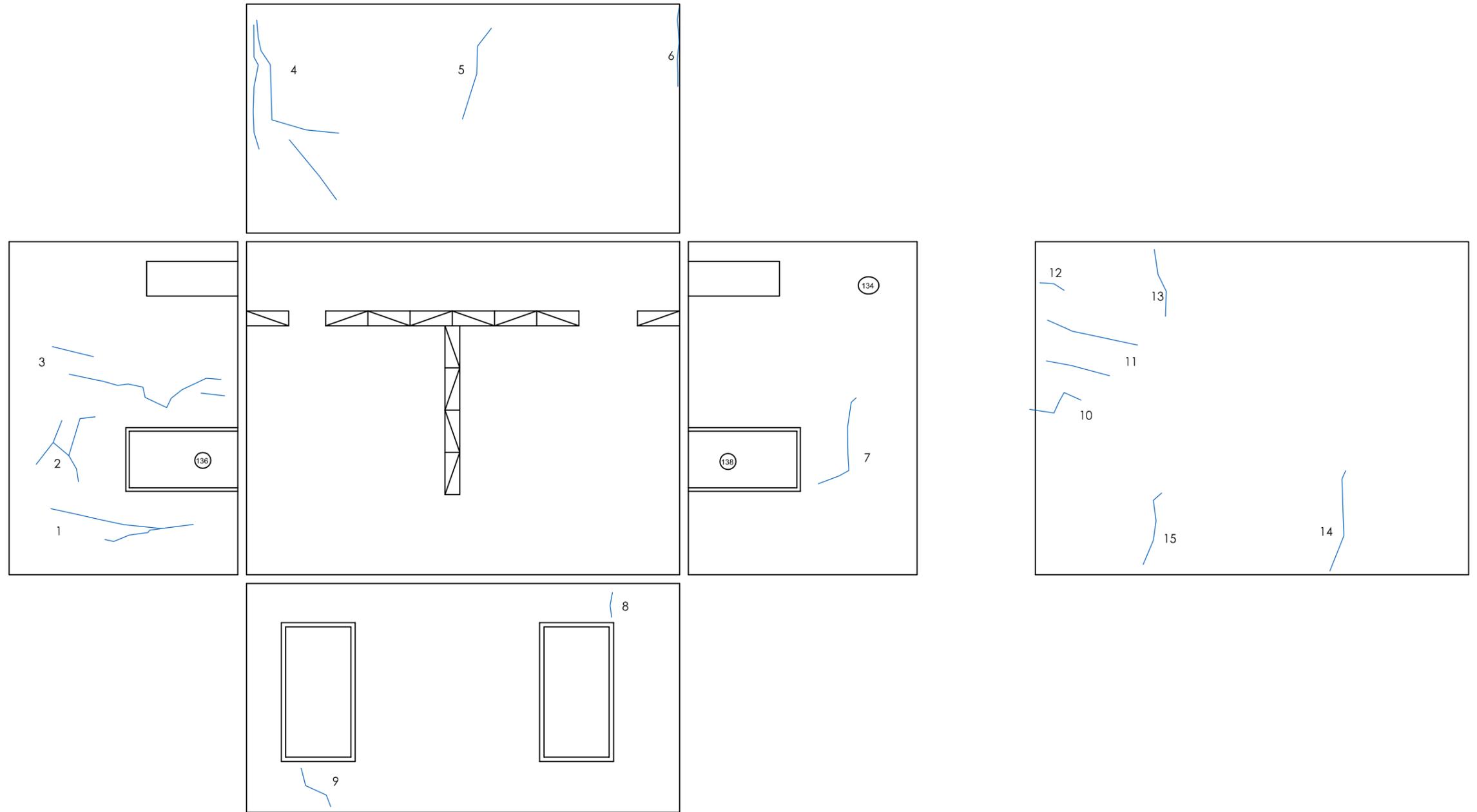
Foto 8 Lesione 10



Foto 9 Lesione 11

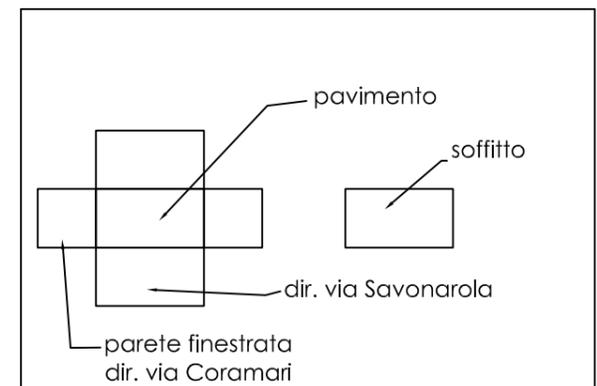


Locale n. 137 - Posizione delle lesioni



Rilievo fotografico del quadro fessurativo  
Legenda

 fessurazione



Locale 137



Foto 1 Lesione 2



Foto 2 Lesione 4

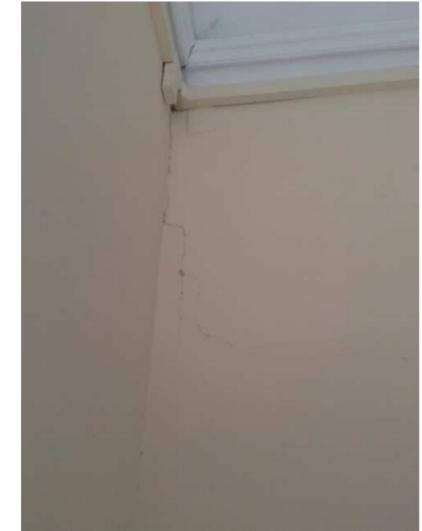


Foto 3 Lesione 6



Foto 4 Lesione 7



Foto 5 Lesione 8



Foto 6 Lesione 9



Foto 7 Lesione 11



Foto 8 Lesione 12

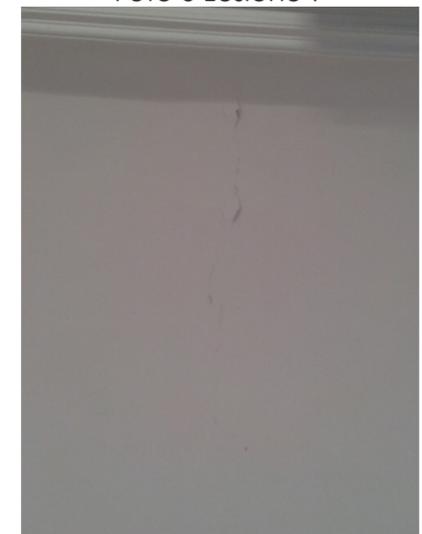


Foto 9 Lesione 14