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## PULSKE GRADSKE ZIDINE - PRIKAZ

## THE CITY WALLS OF PULA - REVIEW

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*Pulske gradske zidine važan su spomenik koji je aktivno živio u gradu od svog nastanka u antičko doba pa sve do danas kada od njega ostaju samo dvije dionice koje nikako ne mogu dočarati važnost i obrambenu svrhu koju su nekada imale. Kroz prikaz je prikupljena velika količina zapisa koje spominju zidine. Prikazana su sva do sada zabilježena arheološka istraživanja koja su se dotakla zidina kao i zahvati koji su na njih utjecali. Završno, prikazane su danas postojeće zidine kroz sva povijesna događanja koja su ih učinila onakvima kakve ih danas vidimo.*

**KLJUČNE RIJEČI:** Pula; gradske zidine; povijesno-arheološki izvori; zahvati; stanje očuvanosti

*The remarkable monument known as the city walls of Pula has been an active part of the city from the ancient period in which it was erected until today. With only two sections remaining, its appearance today cannot fully convey the importance and defensive purpose the monument once had. For the purpose of this review, multiple records mentioning the walls have been collected. All of the archaeological excavations involving the walls and the interventions that impacted their appearance are here composed. And finally, the existing walls are presented through all the historical events that shaped the monument that we see today.*

**KEY WORDS:** Pula; city walls; historical and archaeological sources; interventions; state of preservation

## UVOD

Pulske gradske zidine oduvijek su aktivan dio života grada. Od njihova nastanka sve do danas njihovo postojanje utjecalo je na stanovnike grada kao sredstvo obrane, kao predmet rasprave s Mletačkom Republikom, kao problem za razvoj bolesti, kao smetnja koju treba ukloniti te završno kao turistička atrakcija. Ipak tako važan i aktivno prisutan element gradskoga života nije do sada prikazan u svojoj cjelovitosti. Nažalost, od samih su zidina danas vidljiva tek dva dijela istočne dionice. Vizuru cjelovitih zidina dobivamo iz relativno velikog broja veduta koje ih prikazuju te iz katastarskih nacрта iz razdoblja austrijske vladavine, ali točne podatke o njihovu smještaju u odnosu na današnju strukturu grada dobivamo arheološkim istraživanjima koja svako malo doprinesu novim saznanjima. Također, gradske su se zidine kroz svoju povijest mijenjale, rušene su i podizane, ojačane pa ponovno rušene, a ostatci svih zahvata prisutni su u dionicama koje su i danas sačuvane. Namjera je objediniti izvore, kako povijesne tako i arheološke, u jedinstvenu cjelinu, kako bi se što točnije prikazalo originalno pružanje pulskih gradskih zidina. Pisani izvori često ne napominju na kakvim se istraživanjima temelje dobiveni zaključci te su zato odvojeni od arheoloških izvora koji nam iznose točne informacije o dokumentiranim situacijama. Završna je namjera, kroz usporedbu izvora i sagledavanjem današnje situacije, točno definirati i prikazati različite faze izgradnje na danas preostalim dionicama zidina.

## OD ANTIKE DO 19. STOLJEĆA - RAZVOJ, PRUŽANJE, RUŠENJE

Smatra se da su pulske gradske zidine (Sl. 1) dovršene u vrijeme Augustove vladavine, zbog činjenice da je grad bio nezaštićen od starosjedilačkih naroda koji su obitavali u središnjoj Istri (Del Cont Bernard 2006, 114-124). Izgrađene su od malih, pravilnih blokova kamena



Sl. 1 Detalj prikaza grada Pule sa zidinama iz De Villeova Descriptio portus et urbis Polae.

Fig. 1 Detail of the view of the city of Pula and its walls from the De Ville's Descriptio portus et urbis Polae.

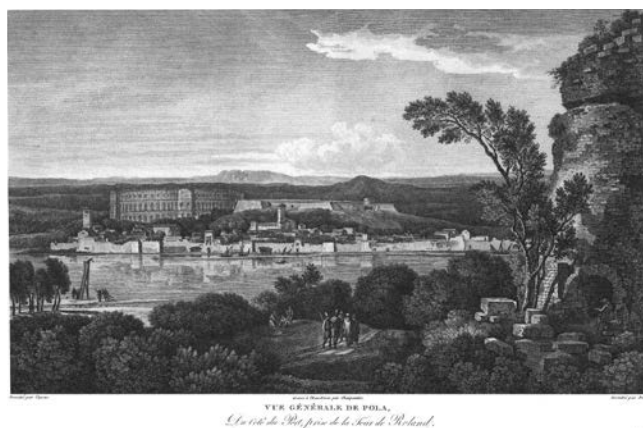
## INTRODUCTION

The city walls of Pula have always been an active segment of the city's life. From the moment of their construction until today, their existence has influenced the lives of the inhabitants of the city, serving as a means of defense, a subject of discussion with the Venetian Republic, a factor in the development of diseases, an obstacle to be removed, and, finally, a tourist attraction. Despite being such an important and actively present element of the city life, the monument has never been presented in its entirety. Today, unfortunately, only two parts of the eastern section of the walls are visible. A view of the former extension of the walls can be obtained through a relatively large number of vedutas depicting the walls and through cadastral drawings made during the Austrian rule. However, the accurate data on their position in relation to today's structure of the city is obtained from archaeological researches that sporadically introduce new insights. Furthermore, the city walls underwent numerous changes throughout their history. They have been demolished and erected, strengthened and demolished again, and the remains of all these interventions are present in the sections preserved today. The intention of this article is to bring together all the sources, both historical and archaeological, in order to show the original extension of the Pula's city walls as truthfully as possible. Written sources often do not state on which research the conclusions were based, and are therefore separated from the archaeological sources that provide accurate information on documented situations. By comparing sources and observing the current situation, the article will hopefully serve to accurately define and portray all the different phases of construction on today's remaining sections of the walls.

## FROM ANTIQUITY TO THE 19TH CENTURY - DEVELOPMENT, EXTENSION, DEMOLITION

The city walls of Pula (Fig. 1) were most likely completed during the reign of Augustus, due to the fact that the city was unprotected from the indigenous peoples who inhabited central Istria (Del Cont Bernard 2006, 114-124). They were built with small regular blocks of limestone connected with high-quality lime mortar, like the walls of the city of Trieste. In the same technique, two circular towers were built on the left and right sides of a gate shaped like an exedra (possibly a gate allegedly located behind the Double Gate), and the same technique was used for rectangular towers. There were other circular towers, built of polished blocks and dated to the Augustan

vapnenca, povezanih vrlo dobrim vapnenim mortom, iste vrste kao i zidine grada Trsta. U istoj su tehnici izgrađene i dvije kružne kule s lijeve i desne strane vrata u obliku egzedre (vjerojatno vrata koja su se pretpostavljeno nalazila iza Dvojnih vrata) te četverokutne kule, a postojale su i druge kružne kule, sigurno iz Augustova doba, izgrađene od poliranih blokova poput onih Herkulovih vrata (Stucchi 1945, 342–356). Gradski ulaz na poziciji Zlatnih vrata opisan je nakon istraživanja 1994. godine kada je definirano da su prva vrata bila izgrađena u trenutku nastanka kolonije, 40-ih godina 1. stoljeća pr. Kr. Bila su malih dimenzija, a s vanjske su ih strane štatile dvije četvrtaste kule. Širina vrata bila je 3 m, a pravac ulice od vrata išao je tangencijalno prema rubu padine. U Augustovo doba (krajem 1. st. pr. Kr. / početkom 1. st.) izgrađena su nova vrata, s obzirom na to da je od njih ulica vodila izravno do Forumu te je trebalo ispraviti pravac vrata prema crti bedema. U isto je doba izgrađen i Slavoluk Sergijevaca koji se oslanjao na gradska vrata. Ova su vrata bila oblikovana kao dugi natkriveni prolaz koji je završavao središnjim lučnim otvorom, a imala su i dva manja bočna prolaza. Sagrađene su tada i dvije kružne kule (Matijašić 1995, 37–46; Matijašić 2001, 91–100) (Sl. 2).



Sl. 2 Veduta Pule s kraja 18. stoljeća, otprilike 1782. (preuzeto iz Lavalée 2017).

Fig. 2 View of Pula from the end of the 18th century, around 1782 (from Lavalée 2017).

Krajem 2. stoljeća izgrađena su arhitektonski dekorativna Dvojna vrata (Matijašić, Buršić–Matijašić 1996, 61) koja pokazuju smanjenu obrambenu funkcionalnost radi trenutnog oslanjanja na dunavski limes i udaljenost neprijatelja. Kasnije, nakon 168. godine, markomanske navale predstavljaju veliku opasnost, godine 401. barbarske horde lako prelaze Alpe s namjerom osvajanja Rima, a rimska vojska ne djeluje više aktivno na zaštitu lokalnih gradova. Narod osjeća da je obrambena snaga zidina

era, like the towers of the Gate of Hercules (Stucchi 1945, 342–356). The research carried out in 1994 provided better insight regarding the appearance of the city entrance positioned at the Golden Gate. It has shown that the first gate was built in the 40s BC, when the city was elevated to colonial rank. The gate was small in size, and was sheltered on the outside by two rectangular towers. The width of the gate was 3 m, and the direction of the street from the gate went tangentially towards the edge of the city slope. During the period of Augustus (end of the 1st century BC – beginning of the 1st century AD) a new gate was built, since the street led directly from the gate to the Forum and thus the direction of the gate had to be redirected towards the rampart line. At the same time, the Arch of the Sergii was built, leaning against the city gate. This gate was shaped like a long covered passage ending in a central arched opening and had two smaller side passages. Two circular towers were also built at that time (Matijašić 1995, 37–46; Matijašić 2001, 91–100) (Fig. 2).

At the end of the 2nd century AD, the architecturally decorative Double Gate was built (Matijašić, Buršić–Matijašić 1996, 61). The gate shows reduced defensive functionality due to the then existing reliance on the Danube Limes and considerable distance of the enemy. After the year 168, the Marcomanni invasions became a serious threat. In 401, barbarian hordes easily crossed the Alps with the intention of conquering Rome, and, consequently, Roman army was no longer actively protecting local cities. The people felt that the defensive strength of the walls was insufficient and they had to fend for themselves by reconstructing dilapidated walls with accessible materials such as the remains of ancient monuments. The reconstructed walls were thinner, as they were added as reinforcement to the ancient ruined ones. They became the new outer face of the city walls (Stucchi 1945, 342–356).

At the beginning of the Byzantine rule in Istria (late 5th century AD), the city of Pula witnesses innovations regarding the city walls, when ordinary classical parapet merlons were replaced by “angular, re-entering merlons”, and towers were given openings due to the increased number of archers (Caprin 1905, 149–151)<sup>1</sup>.

<sup>1</sup> It is possible that Caprin refers to the L-shaped merlons described later (1936) by Mirabella Roberti (“... preziosi resti del cammino di ronda, del parapetto e dei pilastri, che provano l’esistenza di merli a L, forse alternati con merli semplici ...”), who bases the reconstruction of the southern section of the walls towards the Arch of the Sergii on the remains of a walkway, previously found remains near the polygonal tower, and cover stone for the merlons (Mirabella Roberti 1937, 295–307).

nedovoljna te se mora sam snalaziti rekonstruirajući dotrajale zidine s pristupačnim materijalima poput ostataka antičkih spomenika. Rekonstruirane se zidine nadograđuju na stare ruševne i tanje su od antičkih. One postaju novo vanjsko lice gradskih zidina (Stucchi 1945, 342-356).

Početak vladavine Bizanta u Istri (kraj 5. stoljeća) i u Pulu stižu inovacije u polju gradskih zidina, kada se obični klasični zupci grubozidani zamjenjuju "kutnim, povratnim zupcima", te se buše kule, s obzirom da je ratno umijeće povećalo broj strijelaca (Caprin 1905, 149-151)<sup>1</sup>.

Sve do 10. stoljeća nije bilo većih pomaka u definiranju gradske zaštite zidinama. Kada Venecija odlučuje osvojiti Istru, pa i Pulu sustavno napada i ruši gradske zidine 1150., 1190. i 1243., a kasnije 1318. traži da ih sami građani poruše. Ipak, čim bi se brodovi udaljili, građani Pule opet bi podizali zidine, koristeći, nažalost, kamen okolnih spomenika, pa i amfiteatra. Tom periodu pripadaju zidine izgrađene u slojevima među koje je nasut rasuti materijal povezan vapnom. Nakon što je preuzimaju mletačke vlasti, Puli je 1351. godine odobrena rekonstrukcija dijelova zidina, ali u visini ne većoj od 10 stopa. Kasnije, početkom 15. stoljeća, Venecija odlučuje kvalitetnije zaštititi Pulu i tada se ponovno dižu zidine koje bivaju pojačane šumom poligonalnih kula. Ove zidine nisu uvijek točno pratile

Up until the 10th century AD, there were no major shifts in defining the protection of the city by walls. When Venice decided to conquer Istria and Pula, it systematically attacked and demolished the walls in 1150, 1190 and 1243, and later in 1318 it demanded that the citizens demolish them themselves. However, as soon as their ships left, the citizens of Pula would build the walls again. Regrettably, they were using the stone of the surrounding monuments, including the amphitheater. To this period belong the walls built in layers and connected with poured bulk material mixed with lime. After it was taken over by the Venetian authorities, in 1351 Pula was allowed to reconstruct parts of the walls under the condition that their height did not surpass 10 feet. At the beginning of the 15th century, Venice decided to upgrade the protection of Pula, thus the walls were rebuilt and reinforced by numerous polygonal towers. These walls did not necessarily follow the ancient ones accurately and in some places they even increased the extent of the city, often fully covering the ancient gates. At that time, two sections of the walls were built that entered the port itself and were connected to the city walls. The crenellated parapets were also reinforced, and the openings for the archers were converted into embrasures. The new towers were more massive, built of rows of alternately stacked stone blocks to withstand cannon attacks (Fig. 3). Eight gates were also given openings to attack the enemy with hot oil. In the following decades of peace, however, the walls were neglected and covered with ivy. In 1585, Giacomo Renier writes about how he ordered the ivy to be removed from the walls, and the same is repeated by Marco Pasqualigo in 1608. In 1610, Marc'Antonio Trevisan reported that many houses and a large part of the walls had collapsed (Caprin 1905, 149-151).



Sl. 3 Pula, detalj zidina, 1757., C. L. Clerisseau (čuva se u *Bibliothèque historique de la Ville de Paris*, inv. oznaka 1-IC-0088).

Fig. 3 Pula, detail of the city walls, 1757, C. L. Clerisseau (kept at the *Bibliothèque historique de la Ville de Paris*, inv. no. 1-IC-0088).

<sup>1</sup> Moguće je da se Caprin referira na zupce L oblika koje kasnije (1936.) opisuje Mirabella Roberti ("...preziosi resti del cammino di ronda, del parapetto e dei pilastri, che provano l'esistenza di merli a L, forse alternati con merli semplici...") i koji rekonstrukciju južne dionice zidina prema Slavoluku Sergijevaca temelji na ostacima hodne staze i prethodno pronađenim ostacima kod poligonalne kule i pokrovnim kamenim pločama za zupce (Mirabella Roberti 1937, 295-307).

In 1629, the Senate accepted to help the city of Pula by sending two military protection experts who defined the need to strengthen the city castle, the entrance to the port, the islands "degli Olivi" and St Andrew, and the signal tower. It was during this period that the planning and construction of De Ville's fortified castle began. In 1711, Pula had 6 gates pointing towards the harbor and two towards the inland - all without drawbridges, as well as 24 almost completely different and neglected towers. These posed no challenge for the French who easily entered the city in 1796 (Caprin 1905, 160-161). The French government recognized the value of the port of Pula, which was described by the French hydrographer Beautemps-Beaupré: "... the port deserves ... special attention, and should be considered one of the most beautiful and best known ports" (Kozličić 2006, 69-79).

antičke već su ponegdje povećavale opseg grada, ali su često u potpunosti prekrivale antička vrata. Izgrađene su tada i dvije dionice zidina koje su ulazile u samu luku, a vezivale su se na gradske zidine. Zupčasti su grudobrani također pojačani, a otvori za strijelce pretvoreni su u puškarnice. Nove su kule bile masivnije, izgrađene od redova naizmjenično složenih kamenih blokova kako bi izdržale napade topovima (Sl. 3). Osam je vrata dobilo i otvore za napad neprijatelja vrućim uljem. Međutim, u sljedećim desetljećima mira zidine bivaju zapuštene i prekrivene bršljanom. Giacomo Renier 1585. piše da je naložio da se bršljan odstrani sa zidina, a isto ponavlja Marco Pasqualigo 1608. godine. Marc'Antonio Trevisan 1610. godine obavještava da su urušene mnoge kuće i veliki dio zidina (Caprin 1905, 149-151).

The situation was confirmed in 1798 by a letter from Vincenzo Benini, a doctor who was ordered to study the public health situation in Pula, especially malaria, and to comment on possible causes and solutions. For the purposes of the report, Benini consults with doctor Arduino from Pula, who shared his belief that among the causes of bad air in Pula are "... the city walls that block unhealthy air or at least make it harder to dissipate" and adds that everyone should be allowed to demolish the city walls to make the city more airy. Benini agrees with his thoughts and states in his report that in order to better aerate the city, he would suggest that the walls be lowered, but not demolished, so that the complete destruction of the walls would not contribute to the already poor condition of the city and its monuments.



Sl. 4 Pula na katastarskom prikazu iz 1820. godine (Arhiv grada Splita).  
Fig. 4 Pula on a cadastral view from 1820 (Archive of the city of Split).

Godine 1629. Senat prihvaća pomoći gradu Puli te šalje dva stručnjaka vojne zaštite koji definiraju potrebu ojačanja gradskog kaštela, ulaz u luku, otoke "degli Olivi" i Sv. Andrija te signalni toranj. Vrijeme je to kada započinje projektiranje i gradnja De Villeova utvrđenog kaštela. Godine 1711. Pula je imala 6 vrata prema luci, a dvojica prema unutrašnjosti, bez podiznih mostova, te 24 kule, koje su gotovo sve međusobno različite i u potpunosti zapuštene, tako da 1796. ne predstavljaju nikakav izazov Francuzima koji lako ulaze u grad (Caprin 1905, 160-161). Francuska je vlast prepoznala vrijednost pulske luke koju opisuje francuski hidrograf Beautemps-Beaupré "...luka zaslužuje...osobitu pozornost, te je treba ubrajati među najljepše i najbolje poznate luke" (Kozličić 2006, 69-79).

Opisana je situacija potvrđena 1798. godine dopisom Vincenza Beninija, liječnika koji je dobio nalog da prouči situaciju javnoga zdravlja u Puli, a posebno malarije, te da se očituje o mogućim uzrocima i rješenjima. Benini se za potrebe izvještaja konzultira s pulskim liječnikom Arduinom koji mu prenosi da smatra da su jedan od uzročnika lošega zraka u Puli "...gradske zidine koje zatvaraju nezdravi zrak ili barem otežavaju njegovo rasipanje" te dodaje da bi trebalo svakome dozvoliti da ruši gradske zidine kako bi grad postao prozračniji. S njegovim se promišljanjima Benini slaže te u svojem izvještaju kaže da bi u svrhu boljeg zračenja grada predložio da se zidine snize, ali ne i poruše, kako se već jednoj situaciji grada i njegovih spomenika ne bi još doprinijelo i potpunim uništavanjem zidina. Benini čak naglašava da bi u tim zahvatima snižavanja zidina pošteđio one s južne strane grada s obzirom da je za zdravlje bolje da se grad zaštiti od južnih vjetrova (Benini 1849, 61-63).

Početak 19. stoljeća, 1816., potez zidina s Dvojnim i Herkulovim vratima nalazio se pod nasipom. Godine 1818. od Herkulovih se i Dvojnih vrata nazirao tek vrh lukova. Otkopana su 1818. godine po nalogu Pietra Nobilea koji je za te zahvate iskoristio dio novca koji je dobio za iskopavanja u amfiteatru. U tek nekoliko dana Herkulova su vrata otkopana do baze, dok su zahvati na Dvojnim vratima zaustavljeni prije dovršetka (Rusconi 1926, 343-358; Pavan 1998, 377-433) (Sl. 4).

U istom periodu, početkom 19. stoljeća, Pietro Nobile u Puli bilježi stanje spomenika. Tijekom svog boravka u Puli on izrađuje crteže i vedute Pule, gradskih zidina i gradskih vrata te doprinosi poznavanju izgleda istih početkom 19. stoljeća. Posebno je važno što su crteži vjerojatno bili izrađeni radi dobivanja sredstava za istraživanje i restauraciju spomenika koje prikazuju (Bradanović 2012). Tom prilikom, promišljajući o stanju Slavoluka Sergijevaca, piše da nije siguran jesu li zidine koje spajaju slavoluk s

Benini even points out that during the interventions he would spare the walls located on the south side of the city since it is better for health to protect the city from southern winds (Benini 1849, 61-63).

In the early 19th century, in 1816, a stretch of walls that included the Double Gate and the Gate of Hercules was under an embankment. In 1818, only the top parts of the arches belonging to those two gates could be seen. They were excavated in 1818 by order of Pietro Nobile, for which he used part of the money he received for the excavations in the amphitheater. In just a few days, the Gate of Hercules was excavated to the base, while interventions on the Double Gate have been terminated before completion (Rusconi 1926, 343-358; Pavan 1998, 377-433) (Fig. 4).

In the same period, at the beginning of the 19th century, Pietro Nobile records the condition of monuments in Pula. During his stay in Pula, he made drawings and vedutas of the city with its walls and gates, thus providing an insight into their appearance at the beginning of the 19th century. It is especially significant to notice that the drawings were most likely made in order to obtain funds for the research and restoration of the represented monuments (Bradanović 2012). On that occasion, reflecting on the condition of the Arch of the Sergii, he writes about his doubts on whether or not the walls connecting the triumphal arch with the city gate belong to the Roman period since they are messily built, and yet are connected to the pre-space built of large neatly arranged blocks that continues to the outside walls made of neatly arranged small stone blocks. As early as 1816, Nobile planned the restoration of the triumphal arch, during which the arch was to be freed from the walls and the gate that suffocated it and from residential buildings located in its immediate vicinity. For this purpose, the area around the triumphal arch was to become state-owned, that is, it was to be purchased from private owners. In 1818, Nobile demolished part of the gate that was in direct contact with the triumphal arch only to reveal that it was not completed on the east side, and that the gate did not rely on the arch but rather the arch was adhered to the already existing gate (Rusconi 1926, 343-358). It is known that in the period between 1824 and 1826, the state provided funds for the purchase of the land and the initiation of works, although the actual interventions began much later (Pavan 1998, 377-433; Mader 2011, 5-90). Despite the records claiming that the gate has been demolished in 1826 (Caprin 1905, 160-161), in a document from October 3<sup>rd</sup> 1838, sent

gradskim vratima iz rimskog razdoblja jer su neuredno građene, ali se vezuju uz pred-prostor vrata izgrađen od velikih blokova, uredno složenih na koji se nastavlja vanjski dio izrađen od uredno složenih malih kamenih blokova. Već od 1816. Nobile planira restauraciju slavoluka za koju smatra bitnim i oslobađanje slavoluka od zidina i vrata koja ga guše, kao i od stambenih zgrada koje su postojale u njegovoj neposrednoj blizini. U tu svrhu područje oko slavoluka trebalo je postati državno, odnosno trebalo ga je otkupiti od privatnih vlasnika. Godine 1818. Nobile ruši dio vrata koja su u direktnom kontaktu sa slavolukom kako bi otkrio da isti s istočne strane nije dovršen, te da se vrata nisu oslonila na njega, već slavoluk na prethodno postojeća vrata (Rusconi 1926, 343-358). Poznato je da je država u periodu između 1824. i 1826. godine omogućila sredstva za otkup zemljišta i početak radova, ali zahvati su započeti tek mnogo kasnije (Pavan 1998, 377-433; Mader 2011, 5-90). Iako postoje zapisi da su gradska vrata srušena 1826. (Caprin 1905, 160-161), u dokumentu F. Bruyna prema Imp. Reg. Governo od 3. listopada 1838. stoji: "Poslu zidara... dodana je i restauracija nedostajućih i ruševnih dijelova zidina, koje se oslanjaju na stražnji dio Zlatnih vrata: dodatni posao koji je neophodan jer doprinosi dostojanstvu samoga spomenika." (Pavan 1998, 377-433). Ovakva je situacija realistična s obzirom da Cesare Cantù 1847. prilikom obilaska Pule bilježi da su prva vrata na koja je naišao Zlatna vrata s tri lučna ulaza (Cantù 1847). Međutim, u vrijeme rušenja gradskih zidina, 1857. godine, komisija za zaštitu spomenika utvrdila je da Slavoluk Sergijevaca nije u opasnosti s obzirom da je od zidina udaljen "5° - 3" klaftera (Mader 2011, 5-90). Rušenje dijela vrata moguće je postaviti u period između 1838. kada Bruyn dokumentom potvrđuje da su još postojeća i 1843. kada Francesco Carrara posjećuje Pulu i utvrđuje da su vrata "nedavno porušena" (Šimunković, Bralić 2010, 25) dok je dio vrata sigurno zaostao obzirom da ih Cesare Cantù vidi 1847. godine (Cantù 1847). Moguće je da je dio gradskih vrata koji je spajao zidine i Slavoluk Sergijevaca srušen u periodu između 1838. i 1843. godine dok je ostatak srušen u doba kompletnog rušenja gradskih zidina odnosno, 1857. godine.

Početak 19. stoljeća, kako je moguće vidjeti na mnogim vedutama, pulske su gradske zidine uglavnom bile očuvane u gotovo čitavom svojem potezu. Međutim, u želji da Pula bude strukturirana u skladu s tadašnjom koncepcijom modernizacije urbanističke strukture koja je zahtijevala velike, otvorene prostore, godine 1856. donesena je odluka o rušenju svih gradskih zidina, a zahvati su započeli 1857. godine. Tada su i potezi zidina od Zlatnih do Dvojnih vrata prekriveni zakošenim nasipom (Mader 2011, 5-90; Starac 2001, 61-68). S obzirom da

by F. Bruyn's to Imp. Reg. Governo, it states as follows: "The restoration of the missing and dilapidated parts of the walls, which rest on the back of the Golden Gate, has been added to the work of masons: the additional work that is necessary because it contributes to the dignity of the monument itself." (Pavan 1998, 377-433). This situation is realistic given that Cesare Cantù in 1847, while touring Pula, notes that the first gate he encountered was the Golden Gate with three arched entrances (Cantù 1847). However, at the time of the demolition of the city walls, in 1857, the Commission for the Preservation of Monuments determined that the Arch of the Sergii was not in danger, given that it was "5° - 3" klafters away from the walls (Mader 2011, 5-90). The demolition of a part of the gate can be set in the period between 1838, when Bruyn confirmed that they still exist, and 1843, when Francesco Carrara visited Pula and determined that the gate was "recently demolished" (Šimunković, Bralić 2010, 25). Still, part of the gate was surely left intact, since Cesare Cantù saw it in 1847 (Cantù 1847). It is possible that the part of the city gate that connected the walls and the Arch of the Sergii was demolished between 1838 and 1843, while the rest was demolished at the time of the complete demolition of the city walls in 1857.

At the beginning of the 19th century, as seen in numerous vedutas, the city walls of Pula were preserved in almost their entire length. However, in the desire for the city to be structured in accordance with the-then concept of modernization of urban structure, which required large open spaces, in 1856, a decision was made to demolish all city walls. The interventions were initiated in 1857, and during the process, the partition of the walls leading from the Golden Gate to the Double Gate was covered with a sloping embankment (Mader 2011, 5-90; Starac 2001, 61-68). Since parts of the city walls were already covered at that time, only the parts that rose above the slope were removed during the demolition project. The situation that archaeologists came upon during research in 1932, which is still visible today, shows the walls and towers cut obliquely in order to create grassy slopes between the higher and lower levels of the roads.

## **CITY WALLS THROUGH ARCHAEOLOGICAL EVIDENCE - A CHRONOLOGICAL OVERVIEW**

Archaeological excavations and finds that indicate the directions of the original city walls and construction interventions help gain better understanding of their

su već tada dijelovi gradskih zidina bili nasuti, tijekom zahvata rušenja odstranjeni su samo dijelovi koji su se izdizali iznad pokosa. Situacija koju su arheolozi zatekli tijekom istraživanja 1932. godine, ali koju možemo vidjeti i danas, pokazuje koso rezane zidine i kule toliko koliko je bilo potrebno da se realiziraju travnate padine između viših i nižih razina puteva.

## GRADSKÉ ZIDINE KROZ ARHEOLOŠKE DOKAZE - KRONOLOŠKI PRIKAZ

Arheološka istraživanja i nalazi koji ukazuju na smjerove pružanja originalnih pulskih gradskih zidina te na zahvate dogradnje važan su doprinos poznavanju strukture istih. Nažalost, prvi zabilježeni nalazi nisu u potpunosti dokumentirani, ali je s vremenom sve više rasla svijest o važnosti bilježenja svih podataka koji se vezuju za ove važne strukture.

Godine 1873. zbog potrebe izgradnje carske i kraljevske Pješadijske i topničke vojarne istražen je sjeverni ugao antičkoga grada. Otkriveni su tada temelji antičkih i kasnoantičkih zidina koje su iz smjera Dvojnih i Herkulovih vrata išle prema moru (Gnirs 2009, 91-108).

Zbog potreba izgradnje novih zgrada, 1898. godine čisti se teren između Dvojnih vrata i Kandlerove ulice. Tom prilikom ruše se posljednji, ruševni ostaci gradskih zidina na tom potezu (Mader 2011, 5-90). Godine 1906. Gnirs vrši iskopavanja u blizini Dvojnih vrata, na prethodno navedenom potezu, i ima priliku vidjeti kasnoantičke temelje gradskih zidina, izgrađene od mnogobrojnih antičkih spolija, na dva metra ispod razine ceste, položene izravno na sloj zemlje crvenice. Iznad sloja spolija zidine se nastavljaju u grubom neobrađenom kamenu. Ovom prilikom Gnirs ističe kako je mort ovih zidina loše kvalitete. Temelji kasnoantičkih<sup>2</sup> gradskih zidina u blizini Dvojnih vrata istraženi su do dubine od 2 m te je potvrđena njihova širina od 6 m. S gradske je strane pronađeno, također u temeljima, i ojačanje zidina debljine 3 m izvedeno od kamenih ulomaka (Gnirs 1906, 197-208). Pretpostavka je da su ostaci zidina zatim porušeni, s obzirom na Gnirsovu bilješku da su ostaci antičkih spomenika preuzeti kako bi bili pohranjeni u muzeju.

Tijekom kopanja na dionici između pulskog kaštela i Via Circonvallazione (današnji Giardini) 1907. godine, Gnirs je imao mogućnost vidjeti dijelove gradskih zidina koje su bile u vrlo lošem stanju očuvanosti te su srušene (Gnirs 1907, 77).

<sup>2</sup> Točnije bi bilo definirati ovu fazu zidina kao "kasnoantičke - ranosrednjovjekovne".

structure. Unfortunately, the first recorded findings were not fully documented. Still, the awareness of the importance of recording all data related to these important structures grew with time.

In 1873, for the purpose of construction of the imperial and royal Infantry and Artillery Barracks, the northern corner of the ancient city has been explored. The foundations of the ancient and late antique walls were discovered that stretched from the direction of the Double Gate and the Gate of Hercules towards the sea (Gnirs 2009, 91-108).

In order to make room for new buildings, in 1898 the terrain between the Double Gate and Kandlerova street has been cleared. On that occasion, the last, ruined remains of the city walls on that stretch have been demolished (Mader 2011, 5-90). In 1906, Gnirs performed excavations in the vicinity of the Double Gate, on the aforementioned stretch, and had the opportunity to identify late antique foundations of the city walls, built of numerous ancient spolia. The foundations were located two meters below the road level and were laid directly on a layer of red soil. Above the layer of ancient spolia, the walls continued in rough stone. On this occasion, Gnirs pointed out that the mortar used on these walls was of poor quality. The foundations of the late antique<sup>2</sup> city walls near the Double Gate have been excavated to a depth of 2 m and their width has been confirmed to amount to 6 m. On the side of the city, in the foundations, a 3 m thick wall reinforcement made of stone fragments was also confirmed (Gnirs 1906, 197-208). It is assumed that the remains of the walls were then demolished, given the note made by Gnirs about the remains of ancient monuments being taken to be stored in the museum.

During the excavations on the section between Pula's Castle and Via Circonvallazione (today's Giardini) in 1907, Gnirs saw parts of the city walls that were in such an extremely poor state of preservation that they had to be demolished (Gnirs 1907, 77).

Somewhat later, in 1909, in the course of excavations carried out during the realization of the park between the cathedral and the sea bank, a section of the city walls extending to about 60 m has been found (Mader 2011, 5-90).

In 1912, Gnirs conducted a trial excavation of the late antique city walls on the section between the Golden Gate and the Double Gate, finding that their foundations were mostly made of ancient spolia. At the same time, the

<sup>2</sup> It would be more accurate to define this phase of the walls as "late antique - early medieval".



Nešto kasnije, 1909. godine, tijekom kopanja za realizaciju parka između katedrale i rive pronađena je dionica gradskih zidina u dužini od oko 60 m (Mader 2011, 5-90).

Godine 1912. Gnirs vrši testna istraživanja kasnoantičkih gradskih zidina na dionici između Zlatnih vrata i Dvojnih vrata, čime je utvrdio da su njihovi temelji uglavnom bili izrađeni od antičkih spolija. U isto je vrijeme istraženo i područje oko Herkulovih vrata kada je ispred samih vrata, s njihove sjeverne strane, otkriveno postojanje vanjskog plašta gradskog utvrđenja koje je obavijalo postojeće antičke bedeme i kružnu kulu (Gnirs 1912, 268-270).

U jesen 1913. godine vrše se iskopavanja za izgradnju radionice za proizvodnju topničkog oružja. Pronađeni su tada ostatci antičke ceste koja vodi od sjevernih padina gradskog brežuljka prema luci. Malo kasnije, u svibnju 1914. nastavljeni su radovi na trasi antičke ceste kada su otkriveni i ostatci antičkih zidina i antička vrata širine 2,58 m. Primijećeno je da zapadno od vrata zidine lagano lučno skreću prema kopnu. Zidna je konstrukcija bila izvedena od dobro obrađenog lomljenog kamena te je s vanjske strane bila ravnomjerno obložena debelim slojem morta koji je na velikim površinama još uvijek bio očuvan. Središte zida činila je ispunjena proizvedena od sirovog lomljenog kamena uronjenog u debeli sloj žbuke. Širina zida u podnožju iznosila je 2,06 m, a na mjestu gdje podnožje završava 2,04 m te se prema gore smanjila na 2,02 m. Nadzemni dio zidina najbolje je bio očuvan u području vrata. Sama su vrata bila sasvim jednostavna, s jednim lukom, čiji su dovratnici izrađeni od istog lomljenog kamena kao i gradske zidine (Gnirs 2009, 149-166).

Tridesetih godina 20. stoljeća vršena su arheološka istraživanja za potrebe uređenja ceste Viale Carrara. U sklopu zahvata ruši se pristupna rampa prema Kraljevskom muzeju jer se planira pristup muzeju omogućiti kroz Dvojna vrata (Sl. 5). Tada na vidjelo izlaze ostatci gradskih zidina od Dvojnih vrata do ulice Largo Oberdan. Uz sama Dvojna vrata pronađeni su ostatci četverokutne kule nakon koje se zidine usmjeravaju dijagonalno prema pozadini vrata. Tijekom druge faze oko kule je izgrađena vrsta obloge same kule, ali kružnog tlocrta, a kasnije još jedna vanjska kula, moguće četverokutnog tlocrta. Prva se četverokutna kula nadovezuje na zidine čija širina varira od 2,40 do 2,80 m. Druga, kružna kula nadovezuje se na zidine koje se oslanjaju na prve na način da su uz Dvojna vrata pripojene prvim zidinama, ali se zatim, nastavljajući prema jugoistoku, udaljuju do maksimalne udaljenosti od 1,50 m.

area around the Gate of Hercules was explored as well. In front of the gate, on its northern side, an outer layer of city fortification was discovered that used to envelop the ancient walls and the circular tower (Gnirs 1912, 268-270).

In the fall of 1913, excavations were carried out during the construction of a workshop for the production of artillery weapons. Remains of an ancient road leading from the northern slopes of the city hill to the port were then found. Sometime later, in May 1914, research was continued on the route of the ancient road during which the remains of ancient walls and a 2.58 m wide ancient gate were discovered. It was revealed that, west of the gate, the walls arched slightly towards the mainland. The wall construction was made of well-worked crushed stone and was evenly covered on the outside with a thick layer of mortar that was still preserved on large areas. The center of the wall consisted of a filling made of raw crushed stone immersed in a thick layer of mortar. The width of the wall at the base measured 2.06 m, while at the end of the base the width was 2.04 m and then narrowed upwards to 2.02 m. The above-ground part of the walls was best preserved in the area of the gate. The gate itself was quite simple, with a single arch, the jambs of which were made of the same stone as the city walls (Gnirs 2009, 149-166).

In the 1930s, archaeological research was carried out for the purpose of renovating the Viale Carrara road. The access ramp to the Royal Museum was demolished so as to enable the access to the museum through the Double Gate (Fig. 5). During the project, the remains of the city walls leading from the Double Gate to the Largo Oberdan street came to light. Remains of a rectangular tower were found next to the Double Gate itself, from which the



Sl. 5 Dvojna vrata oko 1935. godine, nakon rekonstrukcije gradskih zidina (Dokumentacijski odjel AMI, R-1722).

Fig. 5 The Double Gate around 1935, after the reconstruction of the city walls (Documentation Department of the Archaeological Museum of Istria, R-1722).

Nakon prve kule pronađena je druga četverokutna kula koje se vezivala uz prvi sloj gradskih zidina, zatim još dvije kružne kule ispunjene unutrašnjosti, s pravilnim četvrtastim kamenim blokovima s vanjske strane (s lijeve i desne strane Herkulovih vrata), te završno, kružna kula šuplje unutrašnjosti koja je obložena s poligonalnim vanjskim zidom.

Strukturno, prve su zidine i kružne kule izgrađene od malenih ulomaka kamena povezanih čvrstim mortom te su sigurno bile ožbukane što je vidljivo iz mnogobrojnih ostataka. U njihovim najvišim dijelovima vidljivi su ostatci grudobrana (Sl. 6).



Sl. 6 Gradske zidine, dio sjevernog sektora, oko 1935. godine (Dokumentacijski odjel AMI, R-120).

Fig. 6 The city walls, part of the northern sector, around 1935 (Documentation Department of the Archaeological Museum of Istria, R-120).

Druge su zidine u svojem nižem dijelu sastavljene od antičkih ulomaka kao i vanjska obloga četverokutnih i poligonalnih obzida kružnih kula, dok su u gornjem dijelu izgrađene od malih pravokutnih ulomaka, izuzetno pravilno posloženih (Forlati Tamaro 1932, 325–328). Što se tiče datacije zidina, Forlati Tamaro smatra da se prve zidine mogu datirati u Augustovo doba, posebno prema činjenici da je vidljivo da su Herkulova vrata strukturalno integrirana s prvim zidinama, odnosno da su zajedno nastali u isto vrijeme (Forlati Tamaro 1932, 325–328). Novija istraživanja datiraju nastanak Herkulovih vrata u Cezarovo doba, odnosno u 40-e godine 1. st. pr. Kr. (Fraschetti, 1983, 70–101). Također je vidljivo da su Dvojna vrata nastala kasnije, s obzirom da je pilon vrata smješten na završni dio prve četverokutne kule u dijelu gdje se ova spaja na zidine. Drugi je niz zidina, onaj građen antičkim ulomcima, izgleda izgrađen na brzinu, uslijed velike opasnosti. S obzirom da se u Akvileji nalaze vrlo slične zidine koje Brusin datira u 4.–5. stoljeće, Forlati Tamaro smatra da bi se i ove pulske druge zidine mogle datirati u isti period (Forlati Tamaro 1932, 325–328).

walls continued diagonally towards the rear end of the gate. During the second phase, a cladding of sort was built around the tower, but with a circular ground plan and later another outer tower, possibly with a rectangular ground plan, was built. The first rectangular tower is connected to the walls, the width of which varies from 2.40 to 2.80 m. The second, circular tower is connected to the walls that are attached to the first walls along the Double Gate, but in their continuation southeast they deviate from the first walls to a maximum distance of 1.50 m.

After the first one, another rectangular tower connected to the first layer of the city walls has been revealed. This discovery was followed by the discovery of two circular towers with filled interior and regular square stone blocks on the outer side (left and right of the Gate of Hercules), and one circular tower with a hollow interior lined with a polygonal outer wall.

Structurally, the first walls and circular towers were built of small fragments of stone connected with solid mortar and were surely plastered, as can be seen in numerous remains. In their highest parts, the remains of a parapet are visible (Fig. 6).

In their lower part, the second walls are composed of ancient fragments, just as the outer lining of the quadrangular and polygonal external walls of circular towers, while in the upper part they are built of extremely accurately arranged small rectangular fragments (Forlati Tamaro 1932, 325–328). Speaking of datation, Forlati Tamaro believes that the first walls can be dated to the period of Augustus, given the fact that the Gate of Hercules is structurally integrated with the first walls, that is, they were constructed at the same time (Forlati Tamaro 1932, 325–328). Recent research places the origin of the Gate of Hercules during the period of Caesar, in the 40s of the 1st century BC (Fraschetti, 1983, 70–101). Moreover, it is evident that the Double Gate was built at a later time, since the pylon of the gate is placed upon the final segment of the first rectangular tower at the section where the tower joins the walls. The second row of walls, the one built of ancient fragments, seems to have been built in haste, probably due to great danger. Given that in Aquileia there are very similar walls that Brusin dates to the 4th–5th century, Forlati Tamaro believes that these other walls in Pula could be dated to the same period (Forlati Tamaro 1932, 325–328).

In 1934, the Viale Carrara road underwent another renovation during which unexplored sections of the walls together with those previously explored by Forlati Tamaro were excavated and cleaned. Although the research did not contribute with new insights, Degrassi dated the

Malo kasnije, 1934. godine, ponovno se uređuje Viale Carrara te se iskopavaju i čiste i dionice zidina koje je prethodno istražila Forlati Tamaro. Iako istraživanje ne doprinosi novim saznanjima, Degrassi drugi sloj zidina datira u 5.–6. stoljeće što se malo razlikuje od prethodne datacije Forlati Tamaro (Degrassi 1934, 394–397).

Tijekom istraživanja oko Herkulovih vrata, 1936. godine, izvršeno je i manje istraživanje u zoni poligonalne kule koju su tom prilikom ispraznili od nasutih materijala. Zaključeno je da je kula dozidana na originalne zidine malo nakon njihova građenja. U originalu je bila kružnog oblika koji je nalijegao na četverokutne temelje, a zatim je u 5. stoljeće obavijena poligonalnom kulom i povezana sa slojem vanjskih zidina koji je tada nadograđen na one starije. Tijekom iskopavanja unutar kule pronađen je i kameni blok s dva sliva za koji se pretpostavlja da je mogao biti krovni kamen zubaca grudobrana zidina (Mirabella Roberti 1937, 295–307).

Godine 1937., tijekom radova za uređenje ceste kod Trga sv. Ivana, izvršena su i arheološka istraživanja. Utvrđeno je tada postojanje četiriju vrata, jedna iznad drugih, koja su predstavljala ulaz u grad, u smjeru današnje Ulice Castropole. Najmlađa vrata bila su 3,20 m široka, jednostavna i datirana su u kraj 18. stoljeća. Ispod ovih vrata i njima pripadajućih podnih ploča pronađena su druga vrata, robusnije izgradnje, široka 3,45 m, a zid uz ta vrata bio je izrađen od antičkih spolija. Pretpostavka je da se radi o vratima iz 14. stoljeća, tzv. Vratima sv. Ivana. Ispod podnih ploča ovih vrata pronađena su treća vrata s pragom označenim dubokim tragovima kola. Ova su vrata, pretpostavlja se, bila široka 2,50 m. Radi se o antičkim vratima, ali nije moguća točna datacija. No, i četvrti je prag pronađen ispod prethodnog, vrlo mu je sličan, ali manje istrošen. Na vrata su se nastavljale zidine izgrađene od malih kamenih blokova, uredno složenih. S vanjske strane zidina izvršena su sondažna istraživanja i s desne strane vrata pronađeni su ostatci obrambene utvrde koja nije bila organski povezana sa zidinama, a na većoj su dubini pronađeni ostatci kružne kule rimske gradnje, promjera 7,40 m. S lijeve strane vrata nisu pronađeni ostatci kula. Širina zidina u najvišem je dijelu iznosila 4 m, te je pretpostavljeno da su u dijelu vrata antičke zidine imale debljinu od 4 m koja se zatim sužavala do uobičajenih 2,5 m. Nažalost, veći je dio zidina i područja oko vrata uništen prekopavanjima za razne infrastrukturne potrebe rasta grada još od doba Austrije. Nalazi koji su ostavljeni *in situ* zaštićeni su cementnim zidom koji ujedno omogućava olakšani pregled u slučaju budućih iskopavanja (Mirabella Roberti 1940, 243–264).

Iste godine, prilikom uređenja današnjeg Uspona svetog Stjepana (tada Clivo Grion), pronađen je manji

second layer of the walls to the 5th–6th century, which differs slightly from the previous dating by Forlati Tamaro (Degrassi 1934, 394–397).

During the research conducted in the vicinity of the Gate of Hercules in 1936, a small-scale excavation was carried out in the area of the polygonal tower, which was cleared of bulk material. It was concluded that the tower was added to the original walls shortly after their construction. Originally, it was circular in shape, resting on a quadrangular foundation, and later, in the 5th century, it was surrounded by a polygonal tower and connected to the layer of external walls added to the ancient ones. During excavations inside the tower, a stone block with two slopes was found, which was presumed to have served as the roof stone for the merlons of the parapet (Mirabella Roberti 1937, 295–307).

In 1937, during the works on the improvement of the road near Trg sv. Ivana square, archaeological excavations were carried out. The existence of four gates, one above the other, which represented the entrance to the city, in the direction of today's Castropola street, was established at that time. The most recent gate was 3.20 m wide, simple and dated to the end of the 18th century. Underneath this gate and the attached floor tiles, another gate was unearthed. This was a gate of more robust construction, 3.45 m wide, with the adjoining wall made of ancient spolia. It is assumed that it belongs to the 14th century, and is the so-called Gate of St. John (Vrata sv. Ivana). Underneath the floor tiles attached to this gate, the third gate with a threshold marked by deep carriage traces was found. This gate, it is assumed, was 2.50 m wide. It belongs to the ancient period, but exact dating is not possible. Then the fourth threshold was found below the previous one to which it was very similar except this one was less worn out. The gate was connected to the walls built of small, neatly stacked stone blocks. On the outside of the walls, probe excavations were carried out during which remains of a defensive fortification were found on the right side of the gate that was not organically connected to the walls. At an even greater depth, the remains of a circular tower of ancient construction, 7.40 m in diameter, were revealed. There were no remains of towers found on the left side. The width of the walls was 4 m at the highest part, and it was assumed that in the section of the gate the ancient walls were 4 m thick, and then narrowed to the standard 2.5 m. Unfortunately, most of the walls and the area around the gates were destroyed by excavations done for various infrastructural needs of the city ever since the time of Austria. The finds left *in situ* were protected by a concrete wall which also allows for easier inspection in

dio gradskih zidina, koje "...još uvijek postoje ispod uređenih gredica i koje bi se uskoro moglo otvoriti bez ikakvih smetnji trenutnoj organizaciji ulica" (Mirabella Roberti 1940, 243-264) (Sl. 7).

Za potrebe produženja podzemnih kanala, skloništa, ispod gradskog kaštela, godine 1943. odlučeno je da se napravi ulaz u tunel probijajući gradske zidine na predjelu između Herkulovih vrata i poligonalne kule. Najprije je probijen sloj zidina nadograđen u kasnoantičko doba, povezan s poligonalnom kulom, širine 1,75 m. Zatim je uslijedilo probijanje antičkih zidina koje su povezane s kružnom kulom širine 2,75 m (Mirabella Roberti 1949, 242-275).

Južnji dio zidina, prema Slavoluku Sergijevaca, dodatno je istražen 1944. godine kada je nekoliko bombi palo na 20-ak metara od samog slavoluka, na padini Uspona sv. Stjepana. Iskopavanjima je utvrđen do tada nepoznat dio zidina u dužini od 76 m, visine 6 m. I u ovom slučaju zidine izrađene u dva sloja. Vanjski je širine 1,60 m dok je unutarnji širine 2,60 m te se lagano sužava u gornjem dijelu. Oba su sloja zidina izgrađena od malih kamenih blokova, a donji dio kasnoantičkih zidina

case of any future excavations (Mirabella Roberti 1940, 243-264).

In the same year, during the renovation of the present day Uspon svetog Stjepana alley (then Clivo Grion), a small section of the city walls was found, which "... still exist under the arranged flowerbeds and could soon be opened without any obstacles to the current organization of the streets" (Mirabella Roberti 1940, 243-264) (Fig. 7).

In order to extend the underground tunnels and shelters located under the city castle, in 1943 a decision was made to create an entrance to the tunnel by breaking through the city walls in the section between the Gate of Hercules and the polygonal tower. Firstly, the layer of walls added in the Late Roman period and connected to a 1.75 m wide polygonal tower was breached. Then followed the breakage of ancient walls connected to a 2.75 m wide circular tower (Mirabella Roberti 1949, 242-275).

The southern part of the walls continuing towards the Arch of the Sergii was further explored in 1944, when several bombs fell about 20 meters from the arch itself, at the slope of the Uspon svetog Stjepana alley. Excavations



Sl. 7 Gradski Giardini na razglednici, oko 1910. godine (Iz digitalnog fundusa Gradske knjižnice i čitaonice u Puli, inv. oznaka G-R4/50).

Fig. 7 The city's Giardini Square on a postcard, around 1910 (From the digital holdings of the Municipal Library and Reading Room in Pula, inv. no. G-R4/50).

od reutiliziranih antičkih ulomaka. Na unutrašnji sloj vezuje se polukružna kula, promjera 3,50 m, izrađena od velikih kamenih blokova, također reutiliziranih i naknadno ponovno obrađenih, u redovima dviju različitih visina koje se izmjenjuju, a sve je položeno na temelje izrađene elementima okvira kružnog mauzoleja. Istražena je i četverokutna kula, također povezana s unutarnjim slojem zidina, dimenzija 3,20 x 6,50 m, izrađena od malih kamenih ulomaka. Između dviju kula, na vrhu unutarnjih zidina, sačuvan je dio hodne staze čuvara. Ovdje je zid širok 1 m, a grudobran hodne staze je širine 50 cm te ima malene pilastre, veličine 45 x 55 cm, međusobno udaljene 3,50 m. Mirabella Roberti pretpostavlja da je parapet bio nazubljen te da su se izmjenjivali jednostavni zupci sa zupcima u L obliku (Mirabella Roberti 1949, 242-275) (Sl. 8).



Sl. 8 Gradske zidine, južni sektor 1970-ih godina (Ostavština Alojza Orela, Povijesni i pomorski muzej Istre).

Fig. 8 The city walls, southern sector in the 1970s (Inheritance of Alojz Orel, Historical and Maritime Museum of Istria).

U periodu od 1994. do 1996. godine vršena su arheološka istraživanja na Trgu Portarata i zapadnom uglu trga Giardini kako bi se došlo do novih saznanja o izgledu i stanju ostataka antičkih i kasnoantičkih vrata, te spoju s gradskim zidinama prema sjeveru, a u svrhu preuređenja prostora Trga Portarata. Istraživanjima su utvrđeni ostatci okruglih kula koje sa sjeverne strane flankiraju gradska vrata. Sjeverna kula bila je teško oštećena cijevima za vodu i plin te zidanim betonskim kanalom kanalizacije. Izvan kule utvrđen je ugao konstrukcije za koju se pretpostavilo da je četvrtasta kula odnosno faza prije okrugle kule. Južna kula bila je bolje sačuvana od sjeverne, a zidovi su se nastavljali ispod temelja Stare robne kuće. Utvrđeno je ovdje i kasnoantičko ojačanje te je prepoznata fuga koja se odnosila na stariji ravni završetak bedema prije gradnje trojnog prolaza. Također je pronađen zid koji bi mogao pripadati prethodnoj četvrtastoj kuli. Spoj sjeverne kule i bedema prekinut je instalacijama, ali je

uncovered a previously unknown section of the walls, 76 m long and 6 m high. Here the walls were also made in two layers. The outer layer is 1.60 m wide, while the inner one is 2.60 m wide and narrows slightly in the upper section. Both layers were built of small stone blocks, while the lower part of the late antique walls was made of reutilized ancient fragments. Attached to the inner layer is a semicircular tower, 3.50 m in diameter. The tower is made of large stone blocks, also reutilized and subsequently reworked, in rows of two different interchanging heights, all laid on a foundation made of frame elements of a circular mausoleum. A rectangular tower, also connected to the inner layer of the walls, measuring 3.20 x 6.50 m and made of small stone fragments, was also explored. Between the two towers, at the top of the inner walls, a section of the guard's walkway has been preserved. Here the wall is 1 m wide, while the parapet of the walkway is 50 cm wide and has small pilasters, measuring 45 x 55 cm, that are placed 3.50 m apart. Mirabella Roberti assumed that the parapet was crenellated and that simple merlons alternated with the L-shaped ones (Mirabella Roberti 1949, 242-275) (Fig. 8).

In the period from 1994 to 1996, the Trg Portarata square underwent renovation, during which archaeological excavations were carried out at the Trg Portarata square and the western corner of the trg Giardini square. The purpose of the excavations was to achieve new information on the appearance and state of the remains of the antique and late antique gates, and their connection to the city walls towards the north. The research exposed the remains of round towers that flanked the city gate on the north side. The north tower was severely damaged by water tubes, gas pipes and a masonry concrete sewer. Outside the tower, a corner of a structure was found that was assumed to have belonged to a rectangular tower preceding the round tower. The south tower was better preserved than the north one, and the walls continued beneath the foundations of the Old Department Store. Late antique reinforcement, as well as a joint that belonged to the older flat end of the ramparts preceding the construction of the triple passage, have been identified. A wall that might have belonged to the previous rectangular tower was also found. The connection between the north tower and the ramparts was interrupted by contemporary installations, but it is possible to assume that the tower was only tangentially connected to the ramparts. The remains of the walls located to the north (next to the Giardini Square) show double-faced construction with rough infill and some plaster. Other towers to the north were also explored. It was confirmed that the bases of the towers were filled with a compact layer of tossed stones connected

moguće pretpostaviti da se kula tek tangencijalno vezivala uz bedeme. Ostatci zidina koji postoje prema sjeveru (uz Giardine) građeni su zidanjem dvaju lica s grubom ispunom i malo žbuke. Istražene su i ostale kule prema sjeveru te je ustanovljeno da su dna kula ispunjena tvrdim nabojem od nabacanog kamenja povezanog žbukom, zidovi kula uglavnom su rekonstruirani te je unutrašnjost ispunjena nasipnim materijalom. Tijekom istraživanja oko četvrtaste kule ustanovljeno je da je ista rekonstruirana za potrebe organiziranja ulice te je izveden podzid koji je kasnije uvjetovao talijansku rekonstrukciju koja je kulu pokazivala manjom nego što je stvarno bila. Oslobođanjem, kula je prezentirana u svojoj realnoj veličini. Uzdužni zidovi koji su spajali gradska vrata sa slavolukom bili su vrlo slabo očuvani, uglavnom samo u jednom redu sitnoga kamenja, a na zapadnom su dijelu na očuvanim podnim pločama bili vidljivi otisci završetaka unutrašnjih zidova. Utvrđeno je također višefazno popločenje gradskih vrata od različitih vrsta kamena i različite izvedbe. Najstariji, izvorni sloj najbolje je očuvan. Na velikim pravilnim i fino izrađenim blokovima vidljivi su otisci okomitih blokova od kojih su bili sazidani bočni prolazi gradskih vrata (Matijašić 2001, 91-100).

Također 1995. godine vršeno je arheološko istraživanje u parku pored pulske Katedrale (Park J. Dobrile) gdje je potvrđeno postojanje ostataka antičkih gradskih bedema građenih od pravilno klesanih, manjih blokova kamena. Bedem je praćen u dužini od 14 metara, paralelno s perimetralnim zidom Katedrale od koje je udaljen 6 m (Mihovilić 1995). Kasnije, 2005. godine, tijekom istraživanja u istom parku, nailazi se na ostatke građevine koja je interpretirana kao "kula koja je pripadala kasnoantičkim zidinama" (Juroš Monfardin 2005).

Godina 1997. i 1998. Arheološki muzej Istre izvršio je zaštitno arheološko istraživanje kod Herkulovih vrata te su dobivene i nove informacije o samim zidinama. Utvrđeno je da su s unutrašnje strane vrata ojačana utvrđenim hodnikom koji je pratio cestu penjući se uzbrdo koso u odnosu na bedeme. Iako nije organski povezan s konstrukcijom bedema, tehnika gradnje utvrđenog hodnika ne razlikuje se od tehnike gradnje kasnorepublikanskog bedema. Vidljivo je da je u vrijeme obnove zidina antičkim spolijama stari utvrđeni hodnik bio urušen (Mihovilić, Starac 2001).

Godine 2001. izvršeno je testno arheološko istraživanje u području južne kule kod Zlatnih vrata vezano uz zahvate na obližnjoj privatnoj zgradi. Tom je prilikom dokumentirana situacija južne, kružne kule čiji su ostatci prisutni u temeljima zgrade. Istraživanje temelja kule utvrdilo je postojanje dviju do triju faza naknadnih

with plaster, their walls were mostly renovated and their interior filled with bulk material. The research done in the area surrounding the rectangular tower revealed that it was reconstructed for the purpose of organizing the street. During reconstruction, a sub-wall was built that later conditioned Italian reconstruction, which made the tower seem smaller than it actually was. Once the sub-wall was removed, the tower was presented in its full size. The longitudinal walls connecting the city gate with the Arch of the Sergii were preserved very poorly, mostly in a single row of small stones, while the preserved floor slabs in the western part show traces of inner walls. The gate underwent numerous phases of pavement renewal, in which different types of stone and construction were used. The oldest, original layer is best preserved. Large, evenly cut, finely made blocks show marks made by vertical blocks that were used for the construction of the side passages of the gate (Matijašić 2001, 91-100).

In 1995, archaeological research was carried out in the park next to the Pula Cathedral (J. Dobrila Park), where the existence of the remains of ancient city walls built of evenly carved, smaller blocks of stone was confirmed. The rampart was explored in the length of 14 meters, in parallel with the perimeter wall of the Cathedral, which is 6 m away (Mihovilić 1995). Later, in 2005, during the research carried out at the same location, the remains of a building that was interpreted as a "tower that belonged to the late antique walls" were discovered (Juroš Monfardin 2005).

In 1997 and 1998, the Archaeological Museum of Istria carried out a rescue archaeological excavation at the Gate of Hercules, during which new information was obtained about the walls themselves. The gate was found to be reinforced on the inside with a fortified corridor that followed the road, ascending uphill obliquely in relation to the ramparts. Although it was not organically connected to the structure of the ramparts, the construction technique used in making the fortified corridor does not differ from the one used in constructing the Late Republican rampart. It is evident that at the time of the reconstruction of the walls using ancient spolia, the old fortified corridor was already in ruins (Mihovilić, Starac 2001).

In 2001, a trial archaeological excavation was carried out in the area of the south tower near the Golden Gate due to the interventions on a nearby private building. On that occasion, the situation of the southern, circular tower whose remains are present in the foundations of the building was documented. Investigation of the foundations of the tower established the existence of 2 to 3 phases of subsequent reinforcement of the tower, of

ojačanja iste, te da posljednji sloj zida nije organski vezan uz zidine (Džin 2001, 101-106).

Iste godine vršen je i arheološki nadzor iskopa trase TK mreže u Carrarinoj ulici ispred kućnih brojeva 5 - 7 kada je utvrđeno postojanje antičkog zida masivne gradnje od monolitnih kamenih blokova, utvrđene visine 3,5 m, a tlocrtnih dimenzija 2,4 x 2,3 m. Smatra se da pronađeni ostatci monolitne strukture ukazuju na postojanje segmenta poligonalne kule ispred sektora antičkih gradskih zidina ili pak funeralnog objekta uz same zidine (Džin, Zlatunić 2001). Pretpostavka poligonalne kule moguća je u usporedbi s katastarskim planom grada iz 1820. godine.

Tijekom arheološkog nadzora 2012. godine na Kapitolinskom trgu (iza Augustova hrama) pronađen je gradski bedem koji je čitavom širinom očuvan do visine popločenja trga. Bedem je širok 4,44 m, a donji mu je dio u morskoj vodi već na 0,70 m dubine iskopa. S vanjskih je strana zidan od velikih kamenih blokova, dok je unutrašnjost ispunjena kamenjem povezanim debelim slojem vapna. Dio bedema, u širini od 0,5 m i dubini od 0,3-0,5 m, trebalo je ukloniti radi postavljanja instalacija električnih kablova (Orlić 2012).

Još jedan nalaz ostataka gradskih zidina utvrđen je tijekom zahvata plinifikacije 2016. godine, kada je vršen i arheološki nadzor, na križanju Kandlerove ulice i Ulice Castropola gdje su utvrđeni ostatci vanjskog lica antičke fortifikacije. Bedem je istražen u dužini od 4,90 m i širini od 2 m, a utvrđen je i nastavak zida koji se spajao pod pravim kutom na prethodni, što bi moglo upućivati na postojanje kule kvadratnog oblika (Zlatunić 2016).

Recentnije utvrđivanje situacije gradskih zidina jest nadzor proveden u studenom 2019. godine pri izvođenju radova na izgradnji elektroormara na lokaciji sjeverno od ulaza u Zerostrasse, nasuprot glavnom ulazu u prostore FINA-e. Istražena je površina od 2,65 x 1,1 m, maksimalne dubine 0,85 m. Na toj je poziciji otkriven i dokumentiran niži dio kasnoantičkog bedema koji se nastavlja i ispod dubine iskopa. Bedem se na tom dijelu sastoji od manjeg, pravilno uslojenog kamenja te od većih, klesanih monolitnih blokova povezanih sivo-bijelom žbukom. Prije betoniranja temelja elektroormara i nasipavanja iskopa bedem je zaštićen geotekstilom (Šopar 2019).

## ZIDINE U POVJESNIM TEKSTOVIMA I PRIKAZIMA

Među prvim zapisima u kojima se spominju zidine je onaj Marina Sanuta koji 1483. godine posjećuje Pulu.

which the last layer was not organically attached to the walls (Džin 2001, 101-106).

In the same year, archaeological supervision was carried out during the excavation of the telecommunication network route in the Carrarina street in front of house numbers 5 - 7, when the existence of an ancient wall of massive construction made of monolithic stone blocks was confirmed. The established height of the wall was 3.5 m and its floor-plan dimensions 2.4 x 2.3 m. It is believed that the remains either belonged to a section of a polygonal tower in front of the area of the ancient city walls or a funerary construction alongside the walls (Džin, Zlatunić 2001). When taking into account the cadastral plan of the city from 1820, the assumption of the existence of a polygonal tower seems more likely.

During the archaeological supervision in 2012, executed on the Kapitolinski trg square (behind the Temple of Augustus), the city wall was found, the entire width of which has been preserved to the height of the paving of the square. The rampart was 4.44 m wide, and its lower part was submerged in sea water already at a depth of 0.70 m. On the outside it was built of large stone blocks, while the inside was filled with stones connected by a thick layer of lime. Part of the ramparts, 0.5 m wide and 0.3-0.5 m deep, was removed during installation of electrical cables (Orlić 2012).

Another discovery of the remains of the city walls was established during the construction of a gas supply system in 2016, when archaeological supervision was carried out at the intersection of the Kandlerova and Castropola streets, where the remains of the outer face of the ancient fortification were found. The rampart was investigated in the length of 4.90 m and the width of 2 m, and the continuation of the wall that connected at right angles to the previous one was determined, indicating the possible existence of a rectangular tower (Zlatunić 2016).

A more recent study of the situation of the city walls was enabled by the archaeological supervision carried out in November 2019, during the construction of an electrical cabinet north of the entrance to the Zerostrasse and opposite the main entrance to the Financial Agency (Fina) premises. An area of 2.65 x 1.1 m, with a maximum depth of 0.85 m, was excavated. At this position, the lower part of the late antique rampart was discovered and documented, which continues below the excavation depth. The rampart in this part consists of smaller, properly layered stones and larger, carved monolithic blocks connected by grey-white plaster. Before laying the foundation of the electrical cabinet and filling the excavation, the rampart was protected with geotextile (Šopar 2019).

“Pola...è murada con mure antiche debelissime, et uno colleto in alto, ne la cita circondato, dove di sopra e caxe ruinade et dirupte. A porte n.o 9 in tutto: la porta Rata, San Zuane, S.ta Uliana, de Olmo, la Becaria, Nuova, Portelo, Stavagnaga, de lo Domo.” (Sanuto 1847, 153-155).

Pietro Marcello u svojoj “Vite de’ principi di Vinegia” iz 1557. godine spominje kako su za vrijeme dužda Arriga Dandola, 1192. godine, brodovi iz Pise u svojoj namjeri da napadnu Veneciju najprije ušli u pulsku luku te osvojili grad i zapalili neke toskanske brodove. Tada su pulske zidine uništene kako se Pizani na tom mjestu ne bi mogli više skrivati. Godine 1228., za vladavine dužda Giacoma Tiepola, spominje se pokušaj odvajanja Pule od Venecije te njezino ponovno osvajanje, pri čemu je, za kaznu, Andrea Tiepolo (duždev sin) opljačkao i zapalio gotovo čitav grad. Kasnije se Pula spominje još samo vezano uz dužda Andreu Contarinija kada je 1368. osvojena od strane Genove i većim dijelom spaljena (Marcello, 1557).

Drugi autor isti događaj opisuje na sličan način dodajući “Perilche rouinate le mura di Pola, non tanto per odio de Terrazzani quanto perchè i Pisani quiui non potessero hauer piu ricetta...” (Sebellico, 1668).

Poznati arhitekt Antoine De Ville oko 1633. godine kaže da Pulu “...opasuju slabašne zidine koje ni po čemu ne zrače starinom: sklon sam misliti da ih ili u doba Rimljana nije bilo, ili da su češće rušene jer im se ne vide nikakvi onovremeni tragovi. Dio grada prema kopnu ograđen je dvostrukim zidom: ipak je vanjski mnogo niži od unutrašnjega i od njega odmaknut šest koračaja... Na tom se zidu uzdiže nekoliko kula porazmještenih bez ikakva reda. Oblik im ne podsjeća ni na starinu ni na naše doba: slutim da su građene otkako su ušli u uporabu topovi, jer se na njima vidi i nekoliko prozora za izbacivanje zrna i kruništa i otvori za pridržavanje obrambenih košara, pa će se svatko složiti da pripadaju i jednomu i drugomu vremenu.

Prema moru su četvera vrata, nejednako udaljena jedna od drugih, a jedna druga, ona na strani rjeđe pristupa, ostaju zatvorena.

Prema kopnu su dvojica vrata: ona blizu izvora i ona zvana Rata, bolje da kažem Aurata, Zlatna.” (De Ville, 1633/1991).

Krajem 13. stoljeća Jadransko je more bilo otvoreno denoveškim brodovima koji su prijeli primorskim

## CITY WALLS IN HISTORICAL TEXTS AND DEPICTIONS

Among the first records to mention the walls is that of Marino Sanuto who visited Pula in 1483. “Pola...è murada con mure antiche debelissime, et uno colleto in alto, ne la cita circondato, dove di sopra e caxe ruinade et dirupte. A porte n.o 9 in tutto: la porta Rata, San Zuane, S.ta Uliana, de Olmo, la Becaria, Nuova, Portelo, Stavagnaga, de lo Domo.” (Sanuto 1847, 153-155).

In his “Vite de ‘principi di Vinegia’” from 1557, Pietro Marcello states that during the reign of the doge Arrigo Dandolo, in 1192, ships from Pisa, in their intention to attack Venice, first entered the port of Pula and conquered the city, setting fire to some Tuscan ships. The walls of Pula were then destroyed so that the Pisans could no longer hide there. In 1228, during the reign of the doge Giacomo Tiepolo, an attempt was made to separate Pula from Venice and reconquer it, for which Andrea Tiepolo (the doge’s son) retaliated by plundering the city and almost burning it to the ground. Later, Pula is mentioned only in connection with the doge Andrea Contarini when it was conquered by Genoa in 1368 and mostly burned (Marcello, 1557).

Another author describes the same event in a similar way, adding “Perilche rouinate le mura di Pola, non tanto per odio de Terrazzani quanto perchè i Pisani quiui non potessero hauer piu ricetta ...” (Sebellico, 1668).

The famous architect Antoine De Ville around 1633 writes that Pula “... is surrounded by weak walls that do not radiate antiquity in any way: I tend to think that they either did not exist in Roman times, or that they were often demolished because one cannot see any traces of those times. The part of the city towards the mainland is surrounded by a double wall: but the outer one is much lower than the inner one and six steps away from it ... On this wall rise several towers arranged in no order. Their form refers nor to ancient nor to our times: I suspect that they have been built since the cannons came into use, because they also show several windows for ejecting bullets, and parapets and openings for holding defensive drop boxes, so everyone will agree that they belong to both times.

Towards the sea are four gates, unequally spaced one from another. There is an additional gate located on the less frequented side access, which remains closed. Towards the mainland there are two gates: the one near the spring and the one called Rata, better to say Aurata, or Golden.” (De Ville, 1633/1991).



gradovima Dalmacije i Istre. Tako su početkom 1299.<sup>3</sup> građani Pule, plašeći se novih napada, odlučili rekonstruirati i dovršiti gradske zidine prema moru i ojačati ih dodatnim zaštitnim konstrukcijama. Već 1300. obećaju duždu da će na njegov zahtjev porušiti nove dijelove zidina, iako kasnije Republika popušta i dozvoljava da zidine budu privremeno sačuvane, ali su se građani morali pismeno obvezati da će ih porušiti u roku od 15 dana od zahtjeva dužda (De Franceschi 1902, 168-212).

U svojem dijelu "Itinerario d'Italia" iz 1837., Giuseppe Vallardi opisuje pulske zidine: "Grad je opasan modernim zidinama, s četiri vrata prema moru, i gotovo usred stambenih kuća ima utvrđeni kaštel s četiri izbačena bedema. Tri su puta rekonstruirane pulske zidine nakon pada grada, i sva su tri sloja vidljiva u tragovima koji dokazuju barbarski način na koji su rekonstruirane, koristeći lijepe dijelove antičkih građevina kako bi uzdignuli ružne zidine." (Vallardi 1837, 190).

Pietro Kandler, poznati konzervator istarskog područja, u svojem djelu "Cenni al forestiero che visita Pola" iz 1845. godine, osim što opisuje gradske zidine s kulama, prenosi direktan uvid: "Iz amfiteatra se stranac može uputiti prema Zlatnim vratima i pratiti antičke zidine kako bi u njima vidio i vrata. Prva na koju se naiđe su Dvojna vrata ...zatim Herkulova vrata... Zidine između vrata sv. Ivana i Zlatnih vrata pripadaju različitim periodima kroz koja su prekrivene i maskirane antičke zidine kako bi se neprijatelju prikrila nezaštićenost samih vrata... Posljednja zemljana vrata jesu ona trostruka, Zlatna vrata, osim centralnog ulaza namijenjenog kolima, postojala su i dva manja za pješake...". Kandler također smatra da je kamen s velikog kazališta korišten za rekonstrukciju uništenih dijelova zidina sa strane samoga kazališta (Kandler 1876, 40-74).

At the end of the 13th century, the Adriatic Sea was open to Genoese ships that threatened the coastal cities of Dalmatia and Istria. Thus, at the beginning of 1299<sup>3</sup>, the citizens of Pula, fearing new attacks, decided to reconstruct and complete the city walls towards the sea and strengthen them with additional protective structures. As early as 1300, they promised the doge that they would demolish the new parts of the walls at his request, although later the Republic relented and allowed the walls to be temporarily preserved, but citizens had to make a written commitment to demolish them within 15 days of the doge's request (De Franceschi 1902, 168-212).

In his "Itinerario d'Italia" from 1837, Giuseppe Vallardi describes Pula's walls: "The city is surrounded by modern walls, with four gates to the sea, and almost in the middle of the residential houses there is a fortified castle with four protruding ramparts. The city walls were reconstructed three times after the fall of the city, and all three layers are visible in traces, attesting to barbaric way in which they were reconstructed, by using beautiful parts of ancient buildings to erect ugly walls." (Vallardi 1837, 190).

Pietro Kandler, a well-known conservator of the Istrian area, in his work "Cenni al forestiero che visita Pola" from 1845, in addition to describing the city walls with towers, conveys a direct insight: "From the amphitheater a stranger can head in the direction of the Golden Gate and follow the ancient walls to see the gates. The first gate he comes across is the Double Gate ... then the Gate of Hercules ... The walls between the Gate of St. John and the Golden Gate witnessed different periods during which ancient walls were covered and disguised to conceal the feebleness of the gates themselves ... The last one, the Golden Gate is a triple gate, since the central entrance intended for vehicles was accompanied by two smaller entrances for pedestrians ...". Kandler also believes that

<sup>3</sup> Pravni dokumenti iz razdoblja venecijanske vladavine koji se vezuju uz pulske gradske zidine navedeni su u Kandlerovu "Codice diplomatico Istriano", pod Regesti. Iz popisa izdvajamo:

· 473. 1299. 10 Febbraio, Indizione XIII. Venezia.

Doge Pietro Gradenigo col Consiglio dei Quaranta permette a quelli di Pola di conservare le mura della città, sino ad ordine del Doge.

Llib. IV Pactorum dell'Archivio Veneto.

· 474. 1299. 15 Marzo. - Pola.

Nicolò Soranzo, Vice-Podestà di Pola, giustifica il ritardo nel diroccamento delle mura di Pola.

Lib. IV Pactorum dell'Archivio Veneto.

· 481. 1300. IX. exeuntis Februarii, Indictione XIII. Pola.

· Il Comune di Pola promette ai Veneziani di non alzare le mura diroccate dal lato di mare.

Liber Pactorum.

(dostupno na <https://www.scriniumadriae.it/#>, pristupljeno 23.9.2019.)

<sup>3</sup> Legal documents from the period of Venetian rule related to Pula's city walls are listed in Kandler's "Codice diplomatico Istriano", under Regesta. From the list we single out:

· 473. 1299. 10 Febbraio, Indizione XIII. Venezia.

Doge Pietro Gradenigo col Consiglio dei Quaranta permette a quelli di Pola di conservare le mura della città, sino ad ordine del Doge.

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Liber Pactorum.

(available at <https://www.scriniumadriae.it/#>, accessed 23 September 2019)

Nešto kasnije, 1846., izvode se iskopavanja na mnogim pulskim lokalitetima u potražnji za svjedočanstvima o antičkom izgledu. Kopa se tada kod ruševina zidina crkve sv. Stjepana, ali istraživanja nisu osobito uspješna. Nakon što su odstranjene vanjske zidine naišlo se na mješovitu ispunu te na nove moderne zidine koje su potpuno zatvarale antičke. Među materijalom zida bilo je moguće vidjeti pet kamenih blokova, grubo obrađenih "a bugna" sa zaglađenim sljubnicama, koji su bili dijelom luka i pretpostavljeno je da su pripadali nekadašnjim vratima sv. Stjepana koja su na tom mjestu trebala postojati. Veličina blokova omogućila je okvirni izračun veličine vrata koji je trebao iznositi 11 rimskih stopa, odnosno 3,26 m (Kandler 1847, 322).

Cesare Cantù 1847. godine posjećuje Pulu te opisuje put od Venecije do Pule. "Čitav je grad danas otvoren; unutar samih zidina, koje je Venecija obnovila 1630., nalaze se antički spomenici, zakopani, ali ne uništeni, koji se sada vraćaju na svjetlo. Prva vrata s kojima se susrećemo su Zlatna, s tri otvora, a na koja se vezuje slavluk..." "... postoji zapuštena u zidinama i peterokutna kula, koju je možda moguće datirati u doba Teodozija II., i koja predstavlja stari način ojačanja poligonalnih fortifikacija...". Nije jasno je li riječ o poligonalnoj kuli gradskih zidina, ali Kandler rečenicu povezuje upravo s tom kulom (Kandler 1847, 322; Cantù 1847).

G. F. Camotio prikazao je Pulu s okolicom iz perioda 1571.-1572. u relativno netočnom i površnom prikazu na kojemu su vidljive i zidine. J. Stuart i N. Revett krajem 18. stoljeća prikazuju zidine na veduti grada s amfiteatrom te na prikazu Slavoluka Sergijevaca. G. Piranesi, također krajem 18. stoljeća, prikazuje idealističke prikaze antičkih ruševina među kojima je i prikaz Slavoluka Sergijevaca s pripadajućim ostatcima zidina i gradskih vrata. U istom periodu L. F. Cassas i J. Lavallée realiziraju pejzaže i vedute antičke Pule s mnoštvom prikaza zidina iz različitih perspektiva (Kečkemet 1969, 549-590). Završno, početkom 19. stoljeća arhitekt Pietro Nobile koji je imao vrlo značajnu ulogu u zaštiti, očuvanju i konzervaciji pulskih antičkih spomenika izrađuje niz crteža koji prikazuju zidine u njihovim različitim potezima (Bradanović 2012).

## ZAHVATI NA ZIDINAMA I NJIHOVO OČUVANJE

Zahvati na zidinama vršeni su već u antici, dogradnjama i ojačanjima. Kasnije su zidine rušene te ponovno rekonstruirane u vrijeme Venecije. Međutim, tek u 20. stoljeću možemo naići na podatke o zahvatima

the stone from the large theatre was used to reconstruct the destroyed parts of the walls at the side of the theatre itself (Kandler 1876, 40-74).

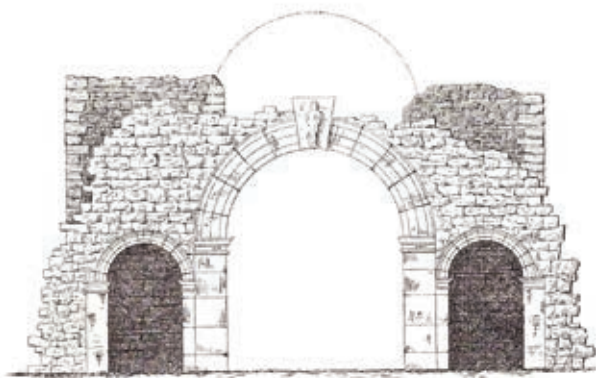
In 1846, numerous excavations were executed in Pula in order to help define its ancient appearance. Among others, research was carried out near the dilapidated walls of the Church of St. Stephen (crkva sv. Stjepana), but it was not particularly successful. Once the outer walls were removed, a mixed infill and new modern walls completely enclosing the ancient ones became visible. Among the material used for the wall were five stone blocks, coarsely worked in "a bugna" style with smoothed joints. The blocks were part of the arch and were presumed to have belonged to the former Gate of St. Stephen (Vrata sv. Stjepana) that supposedly existed at that location. The size of the blocks provided an approximate calculation of the size of the gate, which was assumed to be 11 Roman feet, or 3.26 m (Kandler 1847, 322).

Cesare Cantù visited Pula in 1847 and described the journey from Venice to Pula. "The whole city is open today; within the walls themselves, which Venice rebuilt in 1630, there are ancient monuments, buried but not destroyed, which are now returning to light. The first gate we encounter is the Golden Gate, with three openings, and to which the triumphal arch is attached ..." "... there is a neglected pentagonal tower in the walls, which may be dated to the time of Theodosius II, and which shows an old-fashioned way of strengthening polygonal fortifications ...". Although it is not clear whether the tower in question is the polygonal tower of the city walls, Kandler associates the statement specifically with that tower (Kandler 1847, 322; Cantù 1847).

G. F. Camotio portrayed Pula and its surroundings from the period from 1571-1572 in a relatively inaccurate and superficial depiction in which the walls are also visible. At the end of the 18th century, J. Stuart and N. Revett portray the walls on a veduta of the city with the amphitheater and on the depiction of the Arch of the Sergii. G. Piranesi, also in the late 18th century, shows idealistic depictions of ancient ruins, including a depiction of the Arch of the Sergii with the remnants of walls and city gate. In the same period L.F. Cassas and J. Lavallée create landscapes and vedutas of ancient Pula with numerous depictions of the walls seen from different perspectives (Kečkemet 1969, 549-590). Finally, at the beginning of the 19th century, the architect Pietro Nobile, who played a very important role in the protection, preservation and conservation of Pula's ancient monuments, made a series of drawings depicting various parts of the walls (Bradanović 2012).

koji su pulske gradske zidine učinili onakvima kakve ih danas vidimo.

Kako je već prethodno izneseno, početkom 19. stoljeća pulske su gradske zidine uglavnom bile očuvane. Međutim, u želji da Pula dobije oblik sličniji austrijskim gradovima poput Beča, 1856. godine donesena je odluka o rušenju svih gradskih zidina, a zahvati su počeli 1857. godine. Ipak, postojala je direktiva da se rušenje zidina zaustavi na određenoj udaljenosti od važnih spomenika kako ih se ne bi oštetilo. S obzirom da je početak rušenja planiran upravo na sjeveroistočnom dijelu grada, gdje je postojao najveći broj antičkih spomenika povezanih sa zidinama imenovana je osoba za kontrolu, inženjer Comelli, kako bi izvidio situaciju i nadzirao zahvate u svrhu očuvanja spomenika. Comelli nije bio siguran da će vojska, koja je trebala vršiti rušenja, realno paziti da ne ošteti spomenike te je utvrdio komisiju koja će nadzirati zahvate. Zahvati su uspješno dovršeni, a spomenici nisu oštećeni (Mader 2011, 5-90) (Sl. 9).



Sl. 9 Zlatna vrata prije rušenja (preuzeto iz Caprin 1905).  
Fig. 9 The Golden Gate before demolition (from Caprin 1905).

Godine 1909. prijavljene su štete koje je na Herkulovim vratima uzrokovao vlasnik restorana montirajući oglasne ploče izravno na spomenik čavlima te ugrađujući ogradu od drvenih greda i žice, također je učvršćujući izravno na vrata. Prema Gnirsovu izvještaju iz 1911. godine, vlasnik restorana popravio je učinjenu štetu, a u istom periodu se po Gnirsovoj odluci saniraju i sama gradska vrata cementnim fugiranjem sljubnica koje su bile otvorene curenju vode. Kako su godine 1912. Herkulova vrata napokon postala državnim vlasništvom, propisane su smjernice prema kojima je bilo zabranjeno graditi u blizini vrata (Mader 2011, 5-90).

Dvojna su vrata u potpunosti oslobođena od zemljanog nasipa koji ih je pokrivao 1831. godine. Kasnije inženjer Natale Tommasi, koji je bio zadužen za izgradnju zgrade Gimnazije i koji je smatrao da bi Dvojna vrata trebala

## INTERVENTIONS ON THE WALLS AND THEIR PRESERVATION

Interventions on the walls have been carried out since antiquity through additions and reinforcements. Later the walls were demolished and were again reconstructed during the Venetian rule. However, the earliest data on the interventions that made Pula's city walls what they are today stem from the 20th century.

As previously described, at the beginning of the 19th century, the city walls of Pula were mostly preserved. However, in order to give Pula a shape more similar to Austrian cities such as Vienna, in 1856 a decision was made to demolish all city walls, and the interventions began in 1857. Nevertheless, there was a directive to stop the demolition of the walls at a certain distance from important monuments so as not to damage them. Since the demolition was planned to start in the north-eastern part of the city, where most of the ancient monuments were attached to the walls, a supervisor was to be appointed. Engineer Comelli was chosen to investigate the situation and supervise interventions to preserve the monuments. Since the army was supposed to carry out the demolitions, Comelli had his doubts about them being careful with the monuments, so he set up a commission to monitor the interventions. The demolitions were successfully completed and the monuments were not damaged (Mader 2011, 5-90) (Fig. 9).

In 1909, damage was reported at the Gate of Hercules, caused by the restaurant owner who used nails to mount billboards directly on the monument and installed a wooden beam and wire fence, also fixing it directly to the gate. According to Gnirs' report from 1911, the owner of the restaurant repaired the damage. In the same period, by Gnirs' decision, the gate itself was repaired by grouting the joints that were open to water leaks with cement mortar. As Gate of Hercules finally became state property in 1912, guidelines were prescribed according to which it was forbidden to build near the gate (Mader 2011, 5-90).

In 1831, the Double Gate was completely freed from the earthen embankment that covered it. Later, engineer Natale Tommasi, who was in charge of the construction of the secondary school building and who believed that the gate should one day serve as entrance to the school itself, described the door as dilapidated and in poor condition. In 1890, a decision was made to initiate the restoration on the Double Gate. Unfortunately, the interventions were not executed in accordance with the

jednog dana služiti u svrhu ulaza prema samoj Gimnaziji, opisuje vrata kao trošna i u lošem stanju očuvanosti. Kasnije, 1890. godine, odlučeno je da se provede projekt restauracije Dvojnih vrata. Međutim zahvati su provedeni u suprotnosti s preporukama Centralne komisije<sup>4</sup>, tako da su u sama vrata ugrađeni mnogi novi kameni blokovi, što je posebno vidljivo kod blokova kruništa s bogato ukrašenim frizom. S obzirom da su u trenutku prosvjeda protiv pretjeranih zahvata vrata već bila nadograđena, Centralna je komisija donijela samo odluku da se kameni blok s natpisom, koji nije dio vrata, a postavljen je na sami vrh kruništa, odstrani i pohrani u muzeju.<sup>5</sup> Godine 1892. Centralna je komisija postavila točne uvjete kako da se vrata restauriraju kroz 4 osnovne točke: 1.) nedostajući dijelovi lukova, poput kapitela i greda mogu biti nadograđeni; 2.) ključni blokovi lukova moraju ostati kakvi jesu; 3.) strukturu je potrebno s krovne strane prekriti cementnim pokrovom; 4.) izvedba novog friza treba biti zaustavljena. Godine 1893. Weisshäupl obavještava Centralnu komisiju da je Tommasi započeo zahvate i da su barem uspjeli utjecati na boju novih blokova koja je slična originalnoj boji kamena, a ne “oker-zlatna poput blokova korištenih prošle godine”. Godine 1900. Weisshäupl obavještava Centralnu komisiju da su uspješno dovršeni zahvati restauracije uskog dijela Dvojnih vrata prema moru (Mader 2011, 5-90) (Sl. 10).



Sl. 10 Dvojna vrata na razglednici, s još postojećim pokosom, prije rekonstrukcije gradskih zidina (Dokumentacijski odjel AMI, R-821).

Fig. 10 The Double Gate on a postcard with the still existing slope, before the reconstruction of the city walls (Documentation Department of the Archaeological Museum of Istria, R-821).

Nakon istraživanja pulskih gradskih zidina te Herkulovih i Dvojnih vrata, 1932. godine izvršeni su i prvi zahvati konzervacije i rekonstrukcije zidina. Po završenim

recommendations of the Central Commission<sup>4</sup>, resulting in numerous new stone blocks being installed into the gate itself, which is especially evident at the top section with a richly decorated frieze. Since the protests against excessive interventions came late due to the fact that the reconstruction was already finished, the Central Commission made one single decision to remove the inscription stone block from the top of the gate and store it at the museum.<sup>5</sup> In 1892, the Central Commission established exact conditions for the restoration of the gate through 4 elementary points: (1) missing parts of the arches, such as capitals and beams can be reconstructed; (2) key stones belonging to arches must remain as they are; (3) the structure must be covered with concrete on the upper side; (4) construction of a new frieze must be stopped. In 1893, Weisshäupl informed the Central Commission that Tommasi had begun interventions and that this time the color of the new blocks is similar to the original stone color, unlike the “ochre-gold blocks used last year.” In 1900, Weisshäupl informed the Central Commission that the restoration of the narrow part of the Double Gate towards the sea had been successfully completed (Mader 2011, 5-90) (Fig. 10).

Upon completion of the research of the city walls of Pula, the Gate of Hercules and the Double Gate in 1932, the walls underwent first conservation and reconstruction procedures. Once the interventions were completed, in agreement with the city administration it has been decided for all investigated layers to remain visible in order to keep their history legible and understandable, and enable their study. Several rows were added to the walls so as to preserve the top sections, and these additions were retracted by a few centimeters in relation to the original. Unfortunately, the polygonal and rectangular linings of the foundations of circular towers have been demolished since they disrupted the direction of the street, while their outlines were marked on the sidewalk. This intervention was not well received by either the archaeologists or conservation department, but the city considered it to be necessary (Forlati Tamaro 1932, 325-328).

After the research in 1936, Mirabella Roberti regulated and determined the interventions on the walls, presumably executed in the area between the polygonal tower and the Gate of Hercules. He only briefly states that “... he had better arranged the remains of the walkway, the parapet and small pilasters attesting to the existence of a parapet with merlons ...” (Mirabella Roberti 1937, 295-307).

<sup>4</sup> K. K. Zentralkommission für Erforschung und Erhaltung der Kunst- und historischen Denkmale.

<sup>5</sup> Odluka nije provedena, natpisni se kamen još uvijek nalazi na kruništu vrata.

<sup>4</sup> K. K. Zentralkommission für Erforschung und Erhaltung der Kunst- und historischen Denkmale.

<sup>5</sup> The decision was not implemented, and the inscription stone still lies on top of the gate.

zahvatima odlučeno je, u dogovoru s gradskom upravom, da svi istraženi slojevi zidina ostanu vidljivi kako bi njihova povijest bila čitka i razumljiva u svrhu njihova proučavanja. Zidine su tada nadograđene s nekoliko redova kako bi se kruništa konzervirala, te su nadogradnje uvučene u odnosu na original nekoliko centimetara. Nažalost, poligonalne i pravokutne obloge temelja kružnih kula srušene su jer su previše ulazile u smjer kretanja ulice, tek je njihov oblik označen na kolniku. Ovaj zahvat nije dobro prihvaćen ni od arheologa ni od konzervatorskog odjela, ali ga je grad smatrao nužnim (Forlati Tamaro 1932, 325–328).

Nakon istraživanja 1936. godine Mirabella Roberti regulira i određuje zahvate na zidinama, pretpostavlja se u predjelu između poligonalne kule i Herkulovih vrata. Tek ukratko kaže da je "...dao bolje urediti ostatke šetnice, grudobrana i malenih pilastara koji dokazuju prisutnost grudobrana sa zupcima..." (Mirabella Roberti 1937, 295–307).

Nakon probijanja gradskih zidina 1943. godine za potrebe realizacije tunela na predjelu između Herkulovih vrata i poligonalne kule (Mirabella Roberti 1949, 242–275) realiziran je i ulaz u tunel kakvim ga danas vidimo. Kopanje i rušenje zidina rezultiralo je i djelomičnim urušavanjem rubnih dijelova. Iako ne postoji dokumentacija o zahvatima koji su tada vršeni, očigledno je da su rubni dijelovi kasnoantičkih zidina rekonstruirani cementnim mortom, moguće djelomično originalnim kamenom. Svod iznad ulaza danas je lučno prežbukano cementnim mortom, u dijelu je izvedena i mala niša za rasvjetu, a donji, ravni dio ulaza nanovo je izgrađen kamenim blokovima romboidnog oblika i cementnim mortom. Nije moguće vidjeti u kojoj se mjeri svod antičkih zidina urušio prilikom ovih zahvata.

Nakon istraživanja dionice gradskih zidina prema Slavoluku Sergijevaca, 1944. godine izvršeni su zahvati konzervacije i rekonstrukcije istih. S obzirom na svoje pretpostavke, Mirabella Roberti odlučuje rekonstruirati zupčasti grudobran s jednostavnim, ravnim zupcima koji se izmjenjuju sa zupcima u obliku slova L na udaljenosti od 1 metra. Nadogradnja kruništa i grudobrana izvedena je na način da je nekoliko centimetara uvučena u odnosu na original. I dvije su kule u istom periodu nadograđene do visine ceste, unutar četverokutne izrađene su stube koje spajaju nivo današnjih Giardina s gornjom ulicom, dok je kružna kula trebala služiti kao odmorište s pogledom na Giardine. Kako bi unutarnji, antički dio bedema između dviju navedenih kula, koji je bio u dobrom stanju očuvanosti, ostao bolje vidljiv, srušene su dionice kasnoantičkih zidina koje su, po riječima Mirabelle Robertija, bile u lošem stanju očuvanosti. Teren ispred

In 1943, city walls were breached in order to construct a tunnel in the section between the Gate of Hercules and the polygonal tower (Mirabella Roberti 1949, 242–275), and the entrance to the tunnel still present today has been created. The digging and demolition of the walls caused a partial collapse of the marginal sections. Although there is no documentation of the interventions, it is obvious that the marginal parts of the late antique walls have been reconstructed with cement mortar, possibly partly using the original stone. Today, the vault above the entrance has an arch-like shape constructed with cement mortar, a small niche for lighting has been inserted and the lower, flat part of the entrance has been rebuilt using rhomboid-shaped stone blocks and cement mortar. It is not possible to tell the extent to which the vault of the ancient walls had collapsed during these interventions.

After researching the section of the city walls towards the Arch of the Sergii, in 1944, conservation and reconstruction works were carried out. Following his assumptions, Mirabella Roberti decided to reconstruct the crenellation with simple, upright merlons that alternate with the L-shaped merlons at a distance of 1 meter. The reconstruction of the top part and parapet was executed in such a way that it was retracted a few centimeters in relation to the original. During the same period, both towers were reconstructed to the height of the road. The rectangular tower was given stairs that connect the level of today's Giardini with the upper street, while the circular tower was meant to serve as a rest stop overlooking the Giardini. The inner, ancient part of the rampart between the two towers was in good condition. In order to make it more visible, sections of the late antique walls that Mirabella Roberti testified were in poor condition, have been demolished. The terrain in front of the walls was



Sl. 11 Gradske zidine, južni sektor 1970-ih godina (Ostavština Alojza Orele, Povijesni i pomorski muzej Istre).

Fig. 11 The city walls, southern sector in the 1970s (Inheritance of Alojz Orel, Historical and Maritime Museum of Istria).

zidina iskopan je radi mogućnosti prezentacije temeljne baze okrugle kule (Mirabella Roberti 1949, 242-275) (Sl. 11).

Nakon izvršenih arheoloških istraživanja područja Trga Portarata 1996. godine započeli su zahvati preuređenja trga, koji su dovršeni 1997. godine. Idejno rješenje, koje je bilo prihvaćeno od Grada Pule, modificirano je kako bi se prilagodilo novootkrivenim elementima struktura gradskih zidina koji su utvrđeni arheološkim istraživanjima. Otkriveni temelji gradskih zidina prezentirani su na dva načina: obrambene kule i dio zidina izdignuti su nad izvornom strukturom kamenom iz okolnih kamenoloma kamenoloma, a trojni je prolaz ulaza u grad ocrtan u obrisima u opločenju trga kamenom Kirmenjakom. Originalni su arheološki nalazi sanirani opšavima te zaštićeni pijeskom, a infrastruktura, koja je prolazila kroz zidine, pomaknuta je na način da ukoliko joj budu potrebni popravci, više ne dolazi do oštećenja povijesnih ostataka arhitekture (Arhiva Upravnog odjela za prostorno uređenje, komunalni sustav i imovinu Grada Pule).

U isto su vrijeme i prema istim modalitetima nadograđene završne dionice gradskih zidina prema Trgu Portarata te je porušen završni dio rekonstrukcije iz 1944. godine, onaj od kraja antičkih zidina pa do četverokutne kule, te je i za nekoliko redova kamena podignut nivo rekonstrukcije po čitavoj dužini zidina sve do kružne kule. Zidine i četverokutna kula nadograđeni su iznad pronađenih arheoloških ostataka. Sve su nadogradnje i rekonstrukcije izvedene kamenim klesancima i cementnim mortom. Dionice koje su nadograđene na stare rekonstrukcije izvedene su bez oznake koja bi ih diferencirala, a fugiranje sljubnica izvedeno je kompletno na svim dionicama rekonstrukcije, čak i preko starih rekonstrukcija iz 1944. godine, tako da je nemoguće golim okom primijetiti da se radi o dvjema fazama izrađenim u odmaku od oko 50 godina. Vjerojatno u istom periodu izvršeno je i zapunjavanje sljubnica antičkih zidina na dionici od novo rekonstruirane četverokutne kule do kružne kule.

Tijekom ovih zahvata rekonstrukcije, kruništa zidina izvedena su završnim grubim izgledom koji imitira porušene zidine, a zanimljivo je da su novo nadograđeni dijelovi sa stražnje strane zidina diferencirani od nadogradnje iz 40-ih godina 20. stoljeća uvučenom fugom.

Po završetku arheoloških istraživanja oko Herkulovih vrata 1998. godine, kruništa istraženih dionica zidina konzervirana su na način da su nadograđena kamenim

excavated in order to expose the foundation of the round tower (Mirabella Roberti 1949, 242-275) (Fig. 11).

Once the archeological excavations in the area of the Trg Portarata square were completed in 1996, the renovation of the square was initiated and was finalized in 1997. The conceptual design, which was accepted by the City of Pula, was modified to adapt to the newly discovered elements of the city wall structures determined by archaeological research. The uncovered foundations of the city walls were presented in two ways: the defensive towers and part of the walls were raised above the original structure using stone from the surrounding quarries while the triple passage of the city entrance has been outlined in the paving of the square using Kirmenjak stone. The original archeological finds have undergone conservation and have been protected with sand, and the infrastructure, which passed through the walls, has been moved so that in case of repair works historical remains of architecture would remain intact (Archive of the Administrative Department for Physical Planning, Communal System and Property, City of Pula).

At the same time, the final sections of the city walls towards Trg Portarata square were reconstructed according to the same modalities. The final segment of the reconstruction executed in 1944, extending from the end of the ancient walls to the rectangular tower, was demolished. Also, the level of reconstruction has been raised with several new rows of stone in full length of the walls ending with the circular tower. The walls and the rectangular tower were reconstructed above the discovered archeological remains. All the reconstructions were performed using hewn stones and cement mortar. The sections that were added to the old reconstructions were built without markings to differentiate them and the grouting of the joints was performed fully on all sections of the reconstructions, including those from 1944, making it impossible to effortlessly discern between these two phases despite approximately 50 years of time difference. Probably in the same period, the joints of the ancient walls in the section from the newly reconstructed rectangular tower to the circular tower have been grouted.

During the reconstruction works, the crowns of the walls were completed with a rough finish that imitates the demolished walls, and interestingly, the newly reconstructed parts at the back side of the walls were differentiated from the reconstructions made in the 1940s by the implementation of a recessed joint.

Upon completion of archaeological excavations carried out around the Gate of Hercules in 1998, the crowns of

klesancima povezanim cementnim mortom. Zahvat je vjerojatno vršen radi postizanja visine i horizontalne ujednačenosti ograde s unutarnje strane zidina, odnosno za potrebe pripadajuće terase. Nadogradnja je vršena ukošeno prema terasi. U istom su razdoblju izvršeni manji zahvati na temeljnom dijelu sjeverne strane Herkulovih vrata. Naime, uspoređujući stare prikaze vrata i fotodokumentaciju zahvata vidljivo je da je temeljni dio vrata bio obložen kamenim pločama kako bi izgledao kao da je izrađen od monolitnih blokova. Nakon zahvata 1998. obloge su uklonjene i vidljiva je samo struktura zidana od manjih blokova kamena vapnenca povezanih cementnim mortom (Dokumentacijski odjel AMI) koji je vjerojatno nanesen samo u svrhu zapunjavanja sljubnica, dok se u unutrašnjosti nalazi vapneni mort.

U drugoj polovici 20. stoljeća vršena su zapunjavanja sljubnica na dijelu sjeverne dionice zidina, na potezu između ostataka kružne kule kod Dvojnih vrata do otprilike sredine ravne dionice zidina, te je zapunjen i dio sljubnica antičkog dijela sljedeće, četverokutne kule. Ova su zapunjavanja izvedena cementnim mortom, no nema arhivskih podataka o zahvatima.

Posljednji zahvati koji su vršeni na južnoj dionici gradskih zidina, točnije na polukružnoj kuli prema Slavoluku Sergijevaca, izvedeni su 2015. godine. Polukružna je kula u to vrijeme bila djelomično ispražnjena i šuplja te je predstavljala opasnost. U dogovoru s nadležnim konzervatorskim odjelom odlučeno je da se kula zapuni nasipom te da se izradi armirano-betonska ploča na vrhu. Dio kruništa obrađen je na način da se olakša pristup kuli dok su ostale dionice kruništa izvedene grubom, nedovršenom obradom koja otežava hodanje (Dokumentacijski odjel AMI).

Današnji izgled gradskih zidina kombinacija je svih povijesnih događanja i zahvata koji su na njima vršeni, a grafički je prikazan u Tabli 1.

## ZAKLJUČNA RIJEČ

Nedostatak pisanih izvora povezan s raznim događanjima koja su utjecala na nastanak, razvoj, mutaciju i propadanje pulskih gradskih zidina otežava njihovo iscrpno i detaljno opisivanje. Ovaj izuzetno važan spomenik i nezaobilazan dio svakodnevice grada kroz gotovo čitavo njegovo postojanje danas je tek detalj u perspektivi. No, grad koji raste ima i stalnu potrebu za kopanjem pa time i za arheološkim istraživanjem. Iz godine u godinu sigurno će postojati istraživanja i nadzori koji će konstantno doprinosti malim, ali važnim

the excavated sections of the walls have been preserved by adding hewn blocks joined together by cement mortar. The most likely reason for the interventions was to achieve the height and horizontal uniformity of the barrier on the inner side of the walls, to enable construction of an accompanying terrace. The addition was done obliquely towards the terrace. During the same period, minor interventions were made on the base of the north side of the Gate of Hercules. Namely, it is evident from the old depictions of the gate and the photo documentation of the project that the base of the gate was lined with stone slabs to make it look as if it was made of monolithic blocks. After the 1998 interventions, the cladding was removed and only a structure made of smaller blocks of limestone connected by cement mortar is now visible (Documentation Department AMI). The cement mortar was most likely only used for the purpose of filling joints, while lime mortar can be found within the structure.

In the second half of the 20th century, the joints between stone blocks were filled in a part of the northern section of the walls, between the remains of the circular tower by the Double Gate to about the middle of the flat section of the walls, as well as part of the joints of the ancient section of the rectangular tower. The fillings were performed using cement mortar, though no archival data on the interventions can be found.

The most recent interventions on the southern section of the city walls, more precisely on the semicircular tower towards the Arch of the Sergii, have been carried out in 2015. The semicircular tower was at that time partially emptied and hollow and thus posed a danger. In agreement with the conservation department in charge, it was decided for the tower to be filled in with bulk material and then covered with a reinforced concrete slab. Part of the crown was worked in a way to facilitate access to the tower while the other sections of the crown were executed by rough, unfinished processing that made walking difficult (Documentation Department AMI).

Present day appearance of the city walls is a combination of all historical events and interventions that were performed on them, and is graphically shown in Table 1.

## CONCLUDING REMARKS

The lack of written sources regarding various events that influenced the construction, development, mutation and decay of the city walls of Pula prevents a more exhaustive and detailed interpretation. This extremely important monument has been an essential part of the city's everyday life through almost its entire existence and

novim saznanjima o točnom pružanju gradskih zidina, o njihovu stanju očuvanosti i o događanjima koja su se za njih vezala. Sakupljanje svih dobivenih situacija omogućiti će proširenje činjenica iznesenih u ovom članku i dobivanje nove i bogatije vizure originalne veličanstvenosti obrambene strukture grada Pule.\*

today it is only a detail in perspective. Nevertheless, the city grows continually, thus encouraging the constant need for excavation and archaeological research. In years to come, future researches and supervisions will give their constant contribution through slight but crucial new insights regarding the exact layout of the city walls, the state of their preservation and related events. All the information thus obtained will serve to expand on the knowledge presented in this article, enabling a new and richer vision of the original magnificence of the defensive structure of the city of Pula.\*

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\* Prijevod na engleski jezik: Đeni Gobić-Bravar

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\* English translation: Đeni Gobić-Bravar



Tabla 1

Faze izgradnje pulskih gradskih zidina

Legenda

- Antičke zidine
- Kasnoantička/srednjovjekovne zidine
- Rekonstrukcija iz 30-ih godina 20. stoljeća
- Zahvati iz 40-ih godina 20. stoljeća
- Rekonstrukcija/konzervacija iz 1968. godine
- Rekonstrukcija iz 1944. godine
- Rekonstrukcija iz 1996./97. godine

Sjeverna dionica A



Sjeverna dionica B



Južna dionica



**LITERATURA / LITERATURE**

- BENINI, G. V. 1849. Sulla Malaria di Pola. *L'Istria*, god. IV, svezak 16, 61-63.
- BENUSSI, B. 2002. *Povijest Pule u svjetlu municipalnih ustanova do 1918. godine*, Pula.
- BRADANOVIĆ, M. 2012. *Istra iz putnih mapa Pietra Nobilea*, Koper.
- CAMOCCIO, G. F. 1574. *Isole famose porti, fortezze e terre marittime sottoposte alla Ser.ma Sig.ria di Venetia, ed altri Principi Christiani, et al Sig.or Turco, novamente poste in luce*, Venezia.
- CANTÙ, C. 1847. Tragitto da Venezia a Pola. *Il mondo illustrato*, 11.12.1847., vol. 50.
- CAPRIN, G. 1905. *L'Istria nobilissima*, Trieste.
- DE FRANCESCHI, C. 1902. Il comune polese e la signoria dei Castropola. *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 18, Parenzo, 168-212.
- DEGRASSI, A. 1934. Notiziario archeologico (1932-1933). *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 45, Parenzo, 394-397.
- DEL CONT BERNARD, L. 2006. Le città istriane tra la tarda Antichità e l'Alto Medioevo. Il problema della continuità e della trasformazione dei siti urbani nell'arco Adriatico. *Quaderni Giuliani di Storia*, Anno XXVII, vol. 1, 114-124.
- DE VILLE, A. 1991. Opis luke i grada Pule, u prijevodu Mate Križmana. *Istra*, broj 119, Pula, 16-26.
- DŽIN, K. 2001. New research results on the city wall near Portarata square in Pula. *Histria Antiqua*, vol. 7, 101-106.
- DŽIN, K., ZLATUNIĆ, R. 2001. Izvješće o zaštitnom arheološkom nadzoru iskopa trase TK mreže u Puli, Carrarina 5-7, Ur. broj 601/2001, Dokumentacijski odjel Arheološkog muzeja Istre.
- FORLATI TAMARO, B. 1932. Cenni preliminari sulle recenti scoperte archeologiche a Pola e Trieste. *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 44, Parenzo, 325-328.
- FRASCHETTI, A. 1983. La Pietas di Cesare e la colonia di Pola. *Annali del seminario di studi del mondo classico, Archeologia e storia antica*, vol. 5, 77-101.
- GNIRS, A. 1902. Die Basilica St. Maria Formosa oder del Canneto in Pola. *Mitteilungen der K. K. Zentralkommission für Erforschung und Erhaltung der Kunst- und historischen Denkmale*, vol. 28, Wien, 57-62.
- GNIRS, A. 1906. Vorrömische und römische Funde nächst der porta gemina in Pola. *Mitteilungen der K. K. Zentralkommission für Erforschung und Erhaltung der Kunst- und historischen Denkmale*, sv. 3 vol. 5, Wien, 197-208.
- GNIRS, A. 1907. Izvještaj u *Mitteilungen der K. K. Zentralkommission für Erforschung und Erhaltung der Kunst- und historischen Denkmale*, sv. 3 vol. 6, Wien, 77.
- GNIRS, A. 1912. Grabungen und antike Denkmale in Pola. *Jahreshefte des Österreichischen Archäologischen Institute*, Beiblatt, Wien, 268-270.
- GNIRS, A. 2009. O topografiji antičke Pule / Sjeverni ugao rimskih gradskih utvrda. *Anton Gnirs arheološki tekstovi*, Pula, 91-108
- GNIRS, A. 2009. Istraživanja u Puli i okolici. *Anton Gnirs arheološki tekstovi*, Pula, 149-166.
- JUROŠ MONFARDIN, F. 2005. Završni izvještaj nastavka zaštitnog arheološkog istraživanja u Puli - Park kod Katedrale (ex. Park Jurja Dobrile), Ur. broj 911/2005, Dokumentacijski odjel Arheološkog muzeja Istre.
- KANDLER, P. 1876. Monografia storica, tratta dai "Cenni al forestiero che visita Pola" editi dal Dott. Pietro Kandler nell'anno 1845, coi tipi del Lloyd Austriaco. *Notizie storiche di Pola edite per cura del municipio e dedicate agli onorevoli membri della società agraria istriana*, Parenzo, 40-74.
- KANDLER, P. 1847. Delle mura di Pola. *L'Istria*, vol 79-80, 322.

- KEČKEMET, D. 1969. Antički spomenici Pule na slikama i u opisima stranih autora od XVI do XIX stoljeća. *Jadranski zbornik VII*, Rijeka, 549-590.
- KOZLIČIĆ, M. 2006. *Istočni Jadran u djelu Beauteemps-Beaupréa*, Split, 69-79.
- LAVALLÉE, J. 2017. *Viaggio pittoresco e storico nell'Istria e nella Dalmazia redatto secondo l'itinerario di L. F. Cassas, da Joseph Lavallée*, Trieste.
- MADER, B. 2011. Die österreichische Denkmalpflege in Pola 1816-1818. *Anzeiger der philosophisch-historischen Klasse 146. Jahrgang, 1. Halbband*, Wien, Wien, 5-90.
- MARCELLO, P., 1558. *Vite de' principi di Vinegia*, Venezia, 55-163.
- MATIJAŠIĆ, R. 1995. Urbana arheologija u Puli. *Histria Antiqua*, vol. 1, 37-46.
- MATIJAŠIĆ, R., BURŠIĆ-MATIJAŠIĆ, K. 1996. *Antička Pula*, Pula, 61.
- MATIJAŠIĆ, R. 2001. Pred-Augustejski gradski ulaz na području trga Portarata u Puli. *Histria Antiqua*, vol. 7, 91-100.
- MIHOVILIĆ, K. 1995. Izvještaj o zaključnom dijelu pokusnog arheološkog istraživanja u Puli, park J. Dobrile 4.-18.7.1995., Ur. broj 872/95, Dokumentacijski odjel Arheološkog muzeja Istre.
- MIHOVILIĆ, K., STARAC, A. 2001. *Pula iza Herkulovih vrata, Arheološka istraživanja 1997. - 1998. godine*, Katalog br. 60, Arheološki muzej Istre, Pula.
- MIRABELLA ROBERTI, M. 1937. Notiziario archeologico (1935-1936). *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 47, Parenzo, 295-307.
- MIRABELLA ROBERTI, M. 1940. Notiziario archeologico (1937-1938-1939). *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 50, Parenzo, 243-264.
- MIRABELLA ROBERTI, M. 1949. Notiziario archeologico. *Atti e Memorie della Società Istriana di Archeologia e Storia Patria*, vol. 1 N. S., Parenzo, 242-275.
- ORLIĆ, L. 2012. Izvještaj o arheološkom nadzoru kod iskopa kanala radi postavljanja cijevi za električne kablove u ulicama Riva, Flaciusova i Kapitolinski trg u Puli, Ur. broj 1556/2012, Dokumentacijski odjel Arheološkog muzeja Istre.
- PARIS, L. 2012. Alcune vedute delle Antichità di Pola di Anton August Tischbein. *Arte in Friuli Arte a Trieste* vol. 31, 303-321.
- PAVAN, G. 1998. Architetto conservatore di monumenti antichi. *Pietro Nobile architetto*, Gorizia, 377-433.
- RUSCONI, L. 1926. Pietro Nobile e i monumenti romani di Pola. *Archeografo Triestino*, vol. 13, serie 3, 343-358.
- SABELLICO, M. A. 1668. *Dell'Historia Venetiana di Marco Antonio Sabellico, Libri XXXIII*, Venezia, 102.
- SANUTO, M. 1847. *Itinerario di Marin Sanuto per la terraferma Veneziana nell'anno 1483*, Padova, 153-155.
- STARAC, A. 2001. Neke spoznaje o bedemima Pule. *Histria Antiqua*, vol. 7, 61-68.
- STUCCHI, S. 1945. Le difese romane alla porta orientale d'Italia e il vallo delle Alpi Giulie. *Aevum*, vol. 3/4, 342-356.
- ŠIMUNKOVIĆ, Lj., BRALIĆ, S. 2010. *Francesco Carrara. Dnevnici s putovanja 1843.-1848.*, Split, 25.
- ŠOPAR, A. 2019. Preliminarno izvješće o provedenom arheološkom nadzoru prilikom izgradnje TS 10(20)/0,4 kV na lokaciji Arheološki muzej Istre - Zerostrasse u Puli (k.č. 84, \*424/1, 88/1, 94/1, 94/2, 94/3, 94/4), Ur. broj 863/2019, Dokumentacijski odjel Arheološkog muzeja Istre.
- VALLARDI, G. 1937. *Itinerario d'Italia*, Milano, 190.
- ZLATUNIĆ, R. 2016. Izvještaj o arheološkom nadzoru nad građevinskim radovima oko plinifikacije dijela ulice Kapitolinskog trga u Puli, Ur. broj 506/2016, Dokumentacijski odjel Arheološkog muzeja Istre.