TEATRO
SAN CASSIANO®
VENEZIA
1637

THE RECONSTRUCTION / REIMAGINING OF THE ORIGINAL TEATRO SAN CASSIANO OF 1637

Research Status: March 2019

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Teatro San Cassiano
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1. PHILOSOPHY AND PREMISE[1]

From the outset, we have to be clear: there is no definitive version of the Teatro San Cassiano of 1637 that can be reconstructed. There are no extant images, no plans and no description. To the best of our knowledge, unequivocal fact has been lost in time. What evidence (and we use the term with caution throughout) remains is limited. Nothing in this document pretends otherwise. But, that does not mean that our task is impossible. We must instead accept the premise that there are no absolute solutions, that we can never deliver a definitive version of the theatre and that, on the contrary, we should embrace the reality that it will be wrong, either in part or in whole. We should welcome the opportunities created (academic and otherwise) by what we hope will be a never-ending, on-going process of research and experimentation that will last long beyond its mere reconstruction.

This was (and is) the experience of the Globe (by which we mean Shakespeare's Globe and the Sam Wanamaker Playhouse, 'SWP'). By comparison, we have the advantage of a far greater font of primary and complimentary sources at our disposal. We also have the expertise of the Globe's key build team on board, which for this phase is being led by Jon Greenfield (who worked on both theatres, but specifically as the reconstruction architect for the SWP). But, it is the fact that we are able to profit from following a path trailblazed by the Globe that makes our task all the more achievable. It is, then, not without significance that we should take our lead from the Globe and understand precisely why it now favours the term 'reimagining' ahead of 'reconstruction', and why it has never made claim for the theatre as being anything more than being 'the "best guess" at Shakespeare's theatre'. We think both points have wisdom and we intend to be guided by them.

It is in this light that while we have confidence in our drawings for this stage of the process, we must impress that they remain an introductory first step and a snapshot of our research at the moment of print. They will be improved upon and they will each evolve before we have greater clarity by which to select a final model. Our research has barely commenced, let alone arrived at a position whereby we can state anything with authority. While we have indeed learned much in this time, we are fully aware that this project goes beyond academic study and the aforementioned sources. This is where experts like Peter McCurdy, Pavel Slavko, Martin White and our architect and build team are so important. Here, we are guided by Peter who, in sharing his experience of building both Globe theatres, has impressed upon us the 'absolute importance of finding and researching historical precedents, models and relevant extant buildings and structures etc., in order to help achieve historical accuracy'. We hope this will diminish any future need to rely on educated guesses, in terms of the theatre's concept, design and construction, but nonetheless we must accept certain scenarios will arise where there may well be no practical alternative. This should be embraced as the reality of reimaging the world's first opera house, which by definition has no direct historical precedent.

[1] My confidence in these drawings would not have been possible without the contribution of a number of key players who deserve mention. First, Stefano Patuzzi's absolute dedication to accuracy in the archives has clarified innumerable points of misinformation and confusion. Second, Jon Greenfield's genius as a reconstruction architect and experience of working on both the Globe and the more relevant Sam Wanamaker Playhouse has delivered designs for the theatre that are real and tangible, and which continually contribute to the ongoing research process. Third, our Venetian architect, build and research team of Eugenio Tranquilli, Giovanni Rubin de Cervin Albrizzi, Roberta Pellegriti and Giacomo Ceccato plus Marco Bizzarini has provided invaluable research and revealed significant insights into the build of the Teatro San Cassiano and of its original location. Fourth, the incomparable knowledge of Pavel Slavko in terms of theatre and stage reconstruction provided a level of expertise that we did not possess. These first designs are only that: first drafts, but it is as good of a start as one might have dared wish. For my part, I continue to collaborate with all parties and am already looking forward to working on practical build issues that will evolve directly from these drawings. Thank you to all. PA

2. THEATRE PLANS

We have three versions of the theatre ('snapshots of works-in-progress') to present for your kind attention, of which we would propose '153-U1.3' as our preferred model:

1. **'153-U1.3'**: 153 boxes – 'U'-shaped theatre, modified from 'U1'
2. **'153-U1'**: 153 boxes – 'U'-shaped theatre
3. **'153-C1'**: 153 boxes – horseshoe- / 'C'-shaped theatre.

Each supports a 153-box theatre over five tiers, with 29 boxes and two exits in the Pepiano ordine (first tier) and 31 boxes in the four tiers above (primo, secondo, terzo and quarto). While we also considered and prepared models of 98 and 102 boxes (probably over four tiers), the evidence is overwhelmingly in support of a 153-box theatre, and as such this is the model we shall pursue going forward, subject of course to contrary information coming to light.

We also present two new drawings of our preferred model purely for illustrative purposes:

4. **'153-U1.3'**: longitudinal section
5. **'153-U1.3'**: cross section.

All five designs are set out below and then again within the more detailed analysis of each model. Enlarged versions are then given in Appendix B.

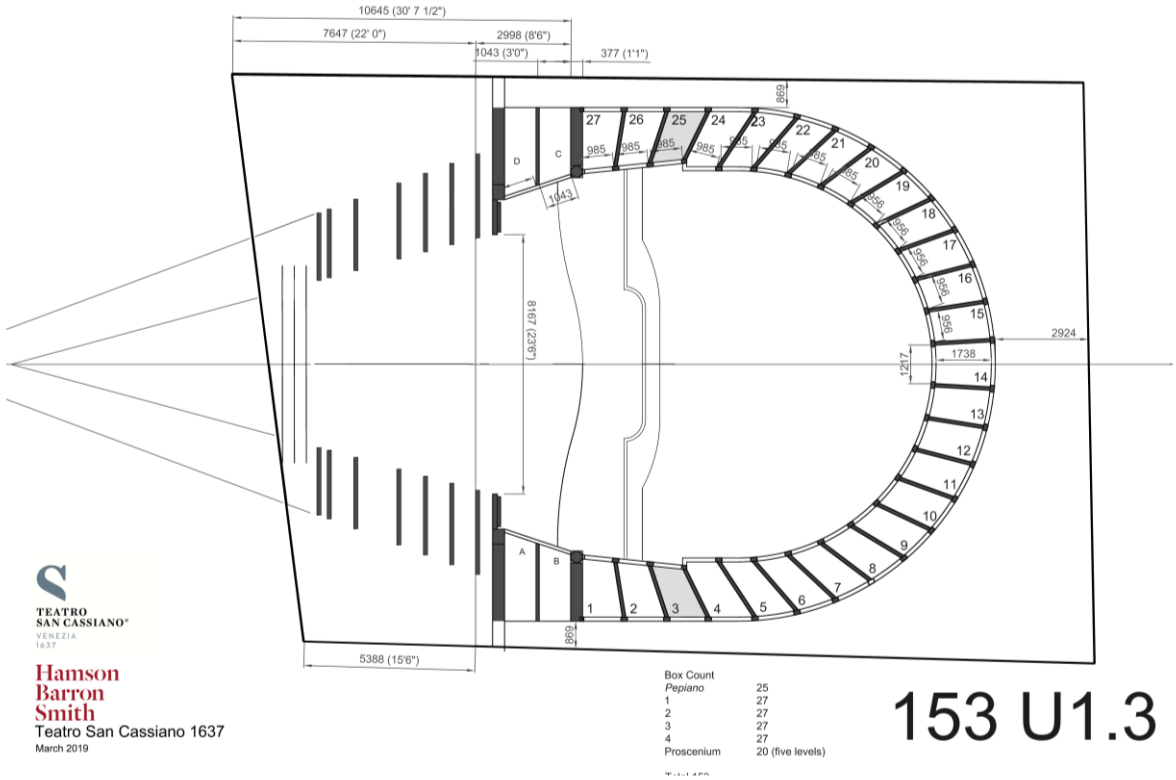
In this phase, the aim is to recreate the theatre as accurately as our research will allow. Later on, modern-day demands of health and safety may cause some measurements to be adjusted. This is inevitable, but such changes will be kept to an absolute minimum. Thus, all versions have been prepared from the precise measurements held in the Venetian archives for the Teatro San Cassiano as per the last point of historical evidence (in this case, probably 1695).[2] This data has then been applied precisely to plot out the two distinct 'U' and 'C' theatre shapes, but 'after' applying key technical details (proscenium arch and boxes etc.) from Tommaso Bezzi's drawing of the Teatro Santi Giovanni e Paolo (c. 1691-1693). This delivered 153-U1 and 153-C1 respectively, except 153-U1 was unable to agree the recorded corridor widths. This led to the evolution of 153-U1.3 as our preferred model on the basis that it then took 153-U1 and pointed it towards a realisation of how the 1637 theatre might have looked, were we to build into the drawings a wider proscenium arch and columns typical of the early seventeenth-century. This resolved the discrepancy for the corridors and increased the number of boxes in the main body of the auditorium.

While all data applied to the drawings thus has an historical basis, the nature of this process is to then test ideas, so as to understand better the narrative by which we work back to 1637. This is addressed in the main report, but, for example, 153-U1.3 developed out of 153-U1.2 when we explored the idea that Bezzi's trench-like 'busa' (see chapter 7) may have evolved with larger theatres for acoustic purposes, and so had no role in 1637. Even though for present purposes we have kept the 'busa' in place, the result was to bring the main auditorium forward and to deliver a more natural Roman semi-circular theatre design, a point we have found to be very prominent in the 'U'-shaped models.

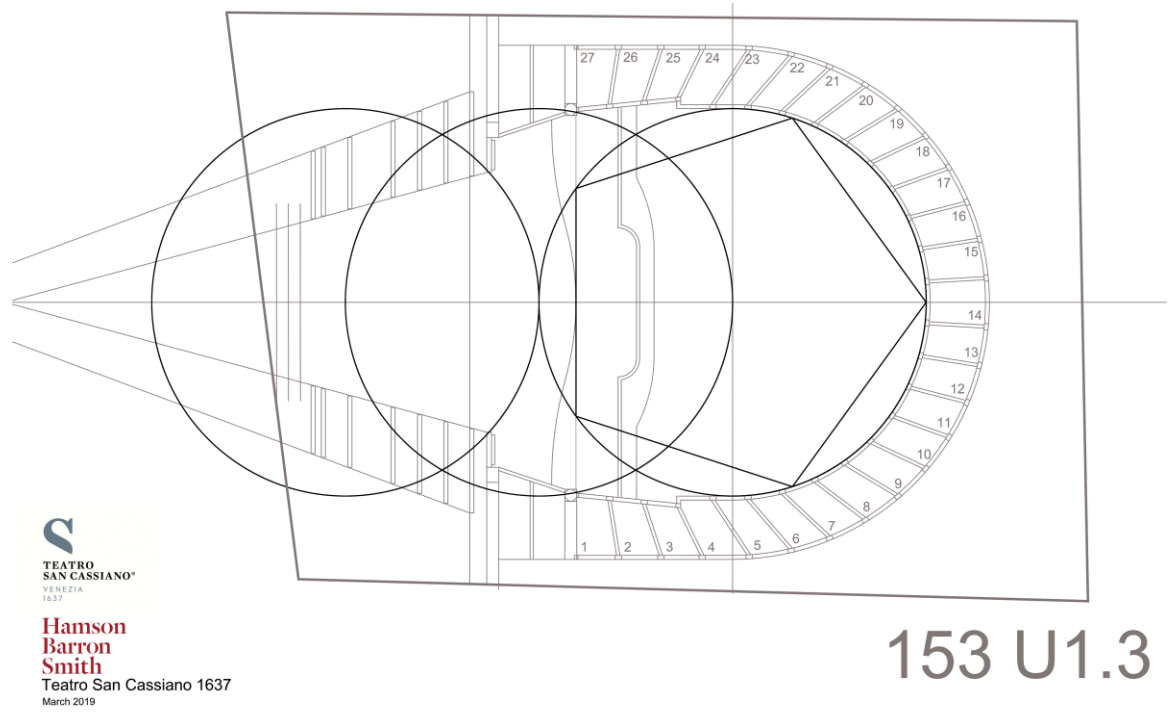
The process is thus continually evolving and as such the drawings shared here are designed to raise questions, not present completed theatres providing unequivocal answers.

[2] *Vas*, 'Giudici del Piovego, b.86 f.356'.

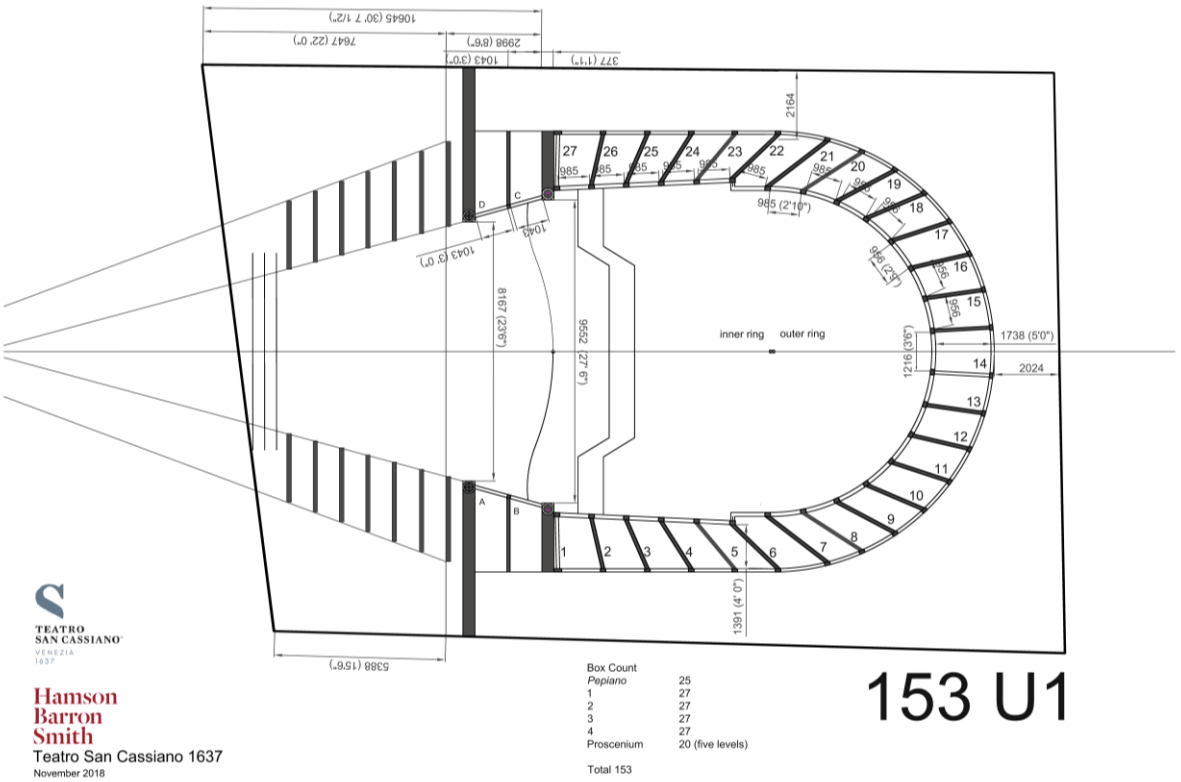
2.1 153-U1.3: 153 BOXES – 'U'-SHAPED THEATRE, MODIFIED FROM 'U1'



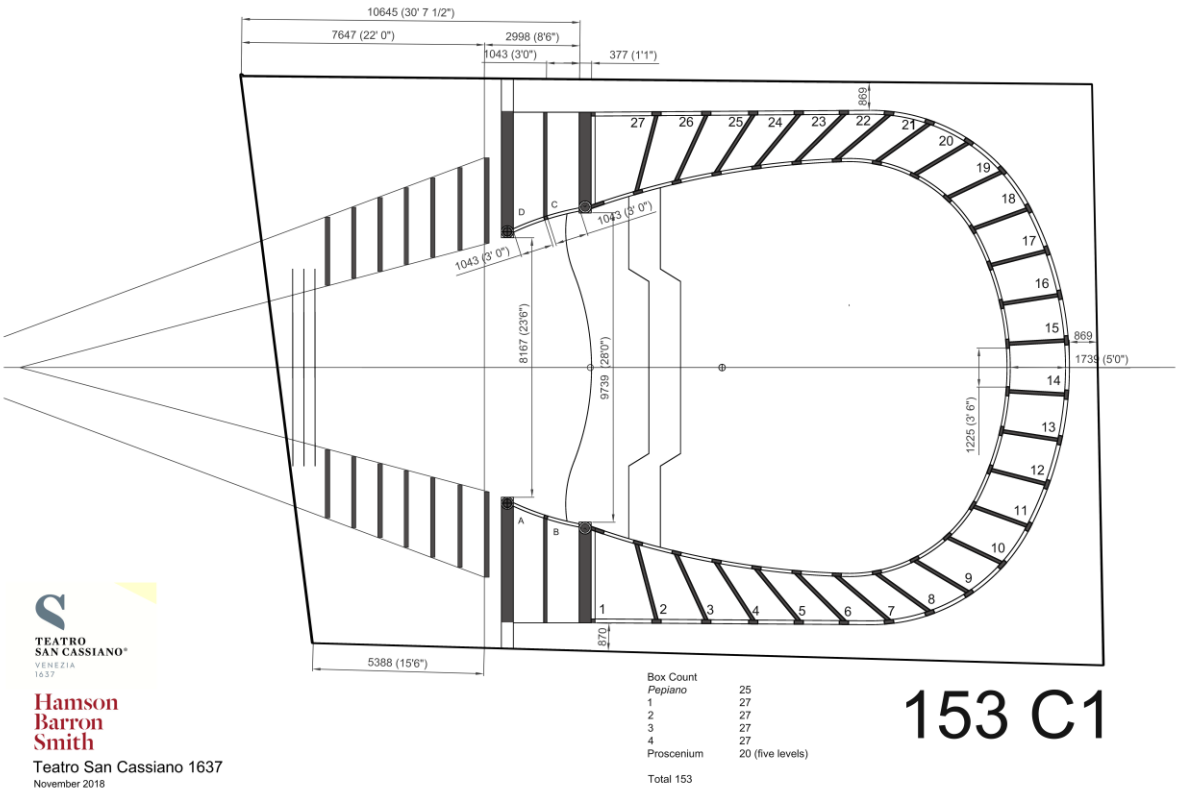
2.2 153-U1.3: 153 BOXES – 'U'-SHAPED THEATRE (GEOMETRY)



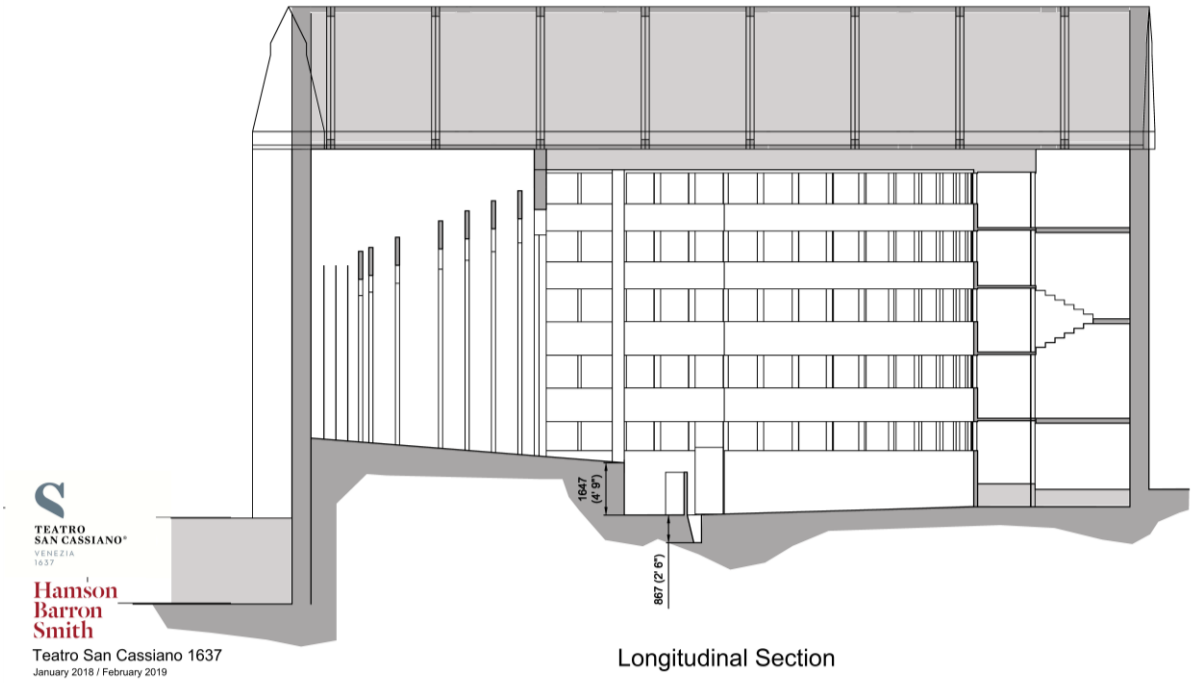
2.3 153-U1: 153 BOXES – 'U'-SHAPED THEATRE



2.4 153-C1: 153 BOXES – HORSESHOE- / 'C'-SHAPED THEATRE

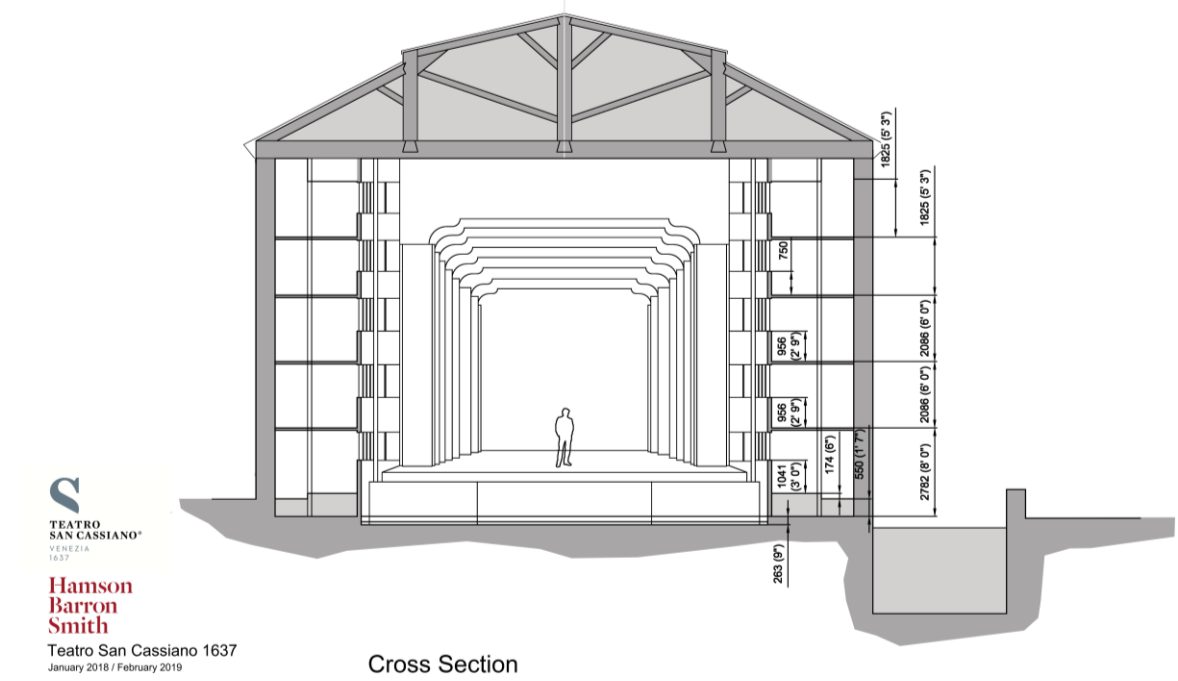


2.5 153-U1.3: 153 BOXES – LONGITUDINAL SECTION



Longitudinal Section

2.6 153-U1.3: 153 BOXES – CROSS SECTION



Cross Section

3. REPORT SUMMARY

As is well known, but sometimes overlooked, the evolution of the *teatro all'italiana* in Venice does not begin with public opera. Theatres with tiers of boxes for *commedia dell'arte* are well established long before 1637.[3] The Teatro San Cassiano documents having boxes from its outset in 1581.

With the theatre's broad structure clearly defined, we have then worked on the premise that theatre design is dictated by its social context, function and place of action, especially with regard sight and sound. Therein, it is to Venice that we have first looked and not immediately to other Italian states with varying traditions. They will become increasingly important when we start to mine more of the detail needed. Even the famed tiered-structure for *Ermiona* (Padua, 1636), itself a tournament theatre, might now be seen as more of a reflection of what had already been built in Venice rather than as an inspiration for the third incarnation of the Teatro San Cassiano, already established for fifty years by then.

The plans presented are a work-in-progress and only serve to mark the beginning of the process. They will change again, and again, as our research and consultations evolve. They are also strictly limited to setting out the basic plan and do not extend to reflect ongoing research on the more intimate details of the theatre's construction. Instead, they mark an historic moment in that (to the best of our knowledge) they represent the first academically produced visualisation of how the Teatro San Cassiano might have looked in 1637. We say 'might' because currently we have more questions than answers, but that is the joy of the research for such a process.

The evidence at hand suggests the five-tier, 153-box structure (possibly through varied theatre shapes and designs, possibly not) would have run from the theatre's beginning in 1637 until a final 197-box theatre was built in 1763 (32 boxes in the pepiano plus five tiers of 33). As for the stage itself, with much appreciation to Beth and Jonathan Glixon, an archive document identified that, at least in the early 1660s, there were seven flats/wings within the complete scene-set.[4] Our current reading suggests there is no reason not to accept that the stage area and layout broadly remained the same until the stage was enlarged in 1763. Note that the auditorium's floor plan does not appear to have been significantly increased at this time; instead, the theatre squeezed in another two boxes, closed off the two side exits and added a further tier; but it was the increase in stage size that pushed the theatre forward to stretch out beyond its foyer and required the purchase of additional land along the Rio de la Madoneta. There is no apparent evidence to say its width was ever increased.

To our good fortune, on 7 June 1765, the architect (Francesco Bognolo) recorded a number of key measurements from both the old and new Teatro San Cassiano. This gave us the measurements of both TSC04 (from at least 1695) and TSC05 (1763).[5] Our theatre of 1637 is TSC03.

Having sourced contemporary measurements for the 'old' theatre (TSC04), these were then plotted over the architect's plan of the entire Teatro San Cassiano plot (TSC05). This enabled us to quantify the measurements of the old theatre against the architect's own record and thus to establish a basis for verifying and applying the data now in hand. As a consequence, we were able to reconcile the size of the older auditorium to its original boundaries, to agree the reduced stage area and then to bring both stage and auditorium together by applying the data we had for the two proscenium boxes. This process allowed the reasonable conclusion that, given the consistency of the 153-box structure, the foundations and principle structure for the theatre have probably remained

[3] To note just two volumes: Franco Mancini, Maria Teresa Muraro, and Elena Povoledo, *I Teatri del Veneto*, Vols. I and II (Corbo e Fiore, 1995 and 1996), Eugene Johnson, *Inventing the Opera House* (OUP, 2018.

[4] Beth and Jonathan Glixon, *Inventing the Business of Opera* (OUP, 2006), p. 233.

[5] For ease of reference, our schedule at 'Teatro San Cassiano' (chapter 5) labels each of the five versions of the Teatro San Cassiano that we have identified from TSC01 to TSC05.

unchanged regardless of inner restorations and models. Indeed, Peter McCurdy has since supported the view that the theatre would have been able to carry out entire redesigns and restorations of the inner theatre without any implication for the outer shell.

With the help of our reconstruction architect (Jon Greenfield) we then plotted the old theatre (TSC04), setting out the exact same data in two distinct versions:

1. the assumed earlier 'U'-shaped model (ref. 153-U1), and
2. the assumed later horseshoe or 'C'-shaped theatre (ref. 153-C1).

In both cases, the data was rigidly applied, plotting all measurements given. The hope was that once set out, the theatres themselves would inform our reading, and critical differences would emerge that would direct our research going forward.

This has proven to be the case. While both the 'U' and 'C' shapes were relatively easy to deliver, the one factor missing from the 'U' shape was our inability to agree the precise measurements given for the corridors between the inner exterior wall and the outer ring of the auditorium. By contrast, the act of moving the outer line of the auditorium to agree the measurements of the corridors meant that only the 'C'-shape model (153-C1) delivered every detail of Bognolo's tabella (see Appendix A). This suggested that TSC04 itself may well have been a typical horseshoe shape long since established in the late seventeenth century.[6] However, again, the consistency of the box structure throughout this period, does not of itself preclude this model from continuing down to 1637. Please note when viewing this design, that the precise shape of the horseshoe itself is very much a point to be addressed later. There are many applications of the data which would deliver the key co-ordinates. This is just one. The function here was to establish the principle of a 'C'-shaped theatre, not define it.

By contrast, while appearing as a convincing model of what we might expect of an early seventeenth-century theatre, 153-U1 was left with very reasonable corridors, but not those given for TSC04. This does not exclude it from being our theatre in 1637. It is quite possible that the boxes and corridors were constructed as one integrated frame within the theatre, and thus the measurements refer to the build specification of the corridors within the framework, and not a record of the gap from end of box to inner wall, as we might envisage today. In any event, restorations in 1657, 1670 and 1695 might, or might not, have changed its original shape. We simply do not know at this stage.

It was this point that we looked again at the narrow proscenium arch and columns suggested by the Teatro Santi Giovanni e Paolo (TSSGP) and re-introduced the wider style more associated with the early seventeenth century. After due consultation with Jon Greenfield, our final preferred option of 153-U1.3 emerged. Here the wider proscenium columns push out width of the auditorium so that all the measurements of the theatre are delivered, including those of the corridors.

This is the version, which as of today, we tentatively suggest most accurately reflects how we might 'reimagine' the Teatro San Cassiano of 1637. It supports our data in terms of stage, delivers a 'U'-shaped theatre but with a traditional Roman auditorium as its main body (see 'Consequences and tentative proposals') and agrees the model of 153 boxes over five tiers that our research suggests was present from 1637 onwards.[7] Again, it is important to reiterate that the reality at this early point as new data emerges literally on a weekly basis is one of almost endless speculation. Nonetheless, we hope the direction of travel is clear.

[6] *Vas*, 'Giudici del Piovego, b.86 f.356', 32*r*.

[7] We should once more acknowledge Beth and Jonathan Glixon, *Inventing the Business of Opera* (OUP, 2006).

As such, the truth is that we cannot yet say with confidence and certainty (if we ever can) that this version was indeed the Teatro San Cassiano of 1637. What we do know, is that we have the strongest basis in recent history to move the research forward to get ever closer to the original model.

4. STATE OF RESEARCH

The main objective of this project is of course the reconstruction, in Venice, of the Teatro San Cassiano as it was in 1637, the year in which—for the first time—an opera house opened its doors to a paying public.

From a methodological point of view it goes without saying that, once the objective has been established, each research project is strongly conditioned and governed both by the primary sources (archival, etc.) that have survived, and thus are known at the start of any new independent research, and by secondary sources (monographs, essays, and so on) dedicated to the subject.

With regard Venetian theatres, a particularly authoritative overview, and one still fundamental today (which we cite as representative of the secondary sources at hand), is given by the two pertinent volumes of *I Teatri del Veneto*, written by Franco Mancini, Maria Teresa Muraro and Elena Povoledo and published in Venice in 1995 and 1996; the chapter dedicated to San Cassiano formed the basis from which our initial research departed.

From the beginning, in 2015, it became clear that to date no plan or other graphic representation of the Teatro San Cassiano, as it was in 1637, is known to have survived and that the only extant seventeenth-century plan of a Venetian theatre is that of the Teatro Santi Giovanni e Paolo, as drawn by Tommaso Bezzi in the early 1690s.

Against this, there does exist a primary source of extraordinary importance which contains a good number of key measurements of some Venetian theatres, recorded at the latest in 1765 by the architect Francesco Bognolo, to whom the planning and construction of the theatre inaugurated in 1763 had been entrusted by the Tron family, the historical owners of the Teatro San Cassiano. Among these key measurements are those relating to the 'Teatro di S. Cassan vecchio' (the 'old' Teatro San Cassiano, as it is notated by Bognolo himself). These detail the width of the *imboccatura della scena* (thus the inner width of the 'proscenium arch'), the width of the main stage, the length of the stage's two unequal sides, the width and number of the proscenium boxes, the width of the 'side' boxes and those of the *pergoletto di mezzo* (i.e., the central box, exactly in front of the stage), the length of the 'front-facing' boxes , the number of boxes for each tier, the width of the corridors and the length of the four sides of the ground on which the Teatro San Cassiano stood. Significantly, the 'old Teatro San Cassiano', as far as we know today, was the theatre built in 1670 and partially remodelled in 1695. These measurements, in addition to various significant documents dating back to the seventeenth century, of which many were already known to the authors of *I Teatri del Veneto*, thus formed the starting point of our research.[8]

However, on careful examination, some fundamental transcriptions given in *I Teatri del Veneto* were revealed as partly incorrect. It therefore proved necessary and fruitful to re-read the original texts, preserved in the Archivio di Stato of Venice, within the file 'Giudici del Piovego', and thus to compile a definitive record of the measurements noted by Bognolo and the 'objects' to which they refer (for example the width of the stage, the length of the 'front-facing' boxes, etc.). These measurements, now correctly interpreted, formed the basis of the design phase as we then sought to realise a credible version of the Teatro San Cassiano of 1637 (see Appendix A); a phase made possible thanks to Jon Greenfield, the reconstruction architect of the Sam Wanamaker Playhouse in London.

In the absence of documentation to the contrary, Bognolo's measurements of the four sides of the land on which stood the Teatro San Cassiano, were therefore held as equally applicable to the theatre in 1637. This same plot, among other things, is still preserved today as a private garden at

[8] Franco Mancini, Maria Teresa Muraro, and Elena Povoledo, *I Teatri del Veneto*, Vols. I and II (Corbo e Fiore, 1995 and 1996).

the confluence of the Rio de la Madoneta and the Rio di San Cassan. As for the essential elements of the internal structure of the theatre (how many tiers of boxes? How many boxes per tier?), these were based from the outset on the measurements provided by Francesco Bognolo and from a sketch (undated) of the theatre from the late-seventeenth-century, which was also preserved within the same 'Giudici del Piovego' file at the Archivio in Venice. Having arrived at this point, other documents proved to be of extraordinary importance, which allowed us to retrace backwards—sometimes in broad terms, sometimes in detail—to key moments in the architectural history of the Teatro San Cassiano, up to and including viable hypotheses of the theatre's plan, as it might have appeared in 1637.

Among these, two essential documents allowed us to verify the total number of the boxes in 1683 and 1658. First, a report by Jacques Chassebras de Cremailles published in 1683 in the *Mercure Galant*, a French journal, and, second, a notarial document dated 12 February 1657 *more veneto* (i.e., 1658) written by the Notary Alessandro Pariglia. The first, in 1683, records that 'even the theatre of S. Cassian is painted and gilded like the others, it has five tiers of boxes and 31 in each tier'. The second, from 1658, states that the total number of boxes, before 1658, was 153. So, if we therefore assume two exits at the Pepiano level and 31 boxes for each order, we agree the total of 153, which can be seen to occur both in the 1650s and in the early 1680s. This total number of boxes is thus a recurrent feature for the Teatro San Cassiano in the seventeenth century.

At the same time, and so as to explore all other possible solutions, versions of both 98- and 102-box theatres have been developed, given that some archival documents refer (albeit in a generic or non-univocal way) to these numbers of boxes. It is essential to underline, with regard to the setting out of the plans, that these 'working' models are the best hypotheses that, in this moment, are considered possible to draw in the light of the primary sources known to us today, of what has been formulated by historians in the relevant secondary sources, and given the technical-architectural considerations in the graphic elaboration phase of the possible plans.

To return to the 153-box structure, which is currently the most probable in light of the known documentation, both hypotheses of a 'C' shape and of a 'U' shape theatre were explored. The authors of *I Teatri del Veneto*, in fact, refer to the authoritative source *Venetia città nobilissima et singolare* (1581),[9] hold that the referenced theatre 'in an oval form' (a non-univocal expression that could refer to 'horseshoe' form) was precisely the Teatro San Cassiano. In addition, the aforementioned sketch (undated) preserved in the 'Giudici del Piovego' file and relating to TSC04 outlines a 'horseshoe-shaped' auditorium.

Moreover, the information we have on a good number of Italian theatres of the seventeenth century would tend to favour a 'U' shape, while the 'C' shape would appear as a later solution, evolved in the light of different considerations, including from the acoustic point of view. Furthermore, the 'U' shape would better explain the evolution of theatres with a semi-circular *cavea* (such as the Teatro Olimpico in Vicenza, or the Teatro all'antica in Sabbioneta). A possible interpretation is that the commercial need to maximise the number of boxes—a key element of the so-called *teatro all'italiana*—is achieved, so to say, by pulling the semi-circular structure away from the stage, thus creating space along two parallel lines for the boxes on either sides of the *platea*. A further element in favour of the U-shaped model is the aforementioned seventeenth-century plan of the Venetian theatre, Teatro Santi Giovanni e Paolo, which portrays the U-shaped form of that theatre in the early 1690s.

[9] Francesco Sansovino, *Venetia città nobilissima et singolare* (appresso Iacomo Sansovino, 1581).

5. TEATRO SAN CASSIANO

I Teatri del Veneto sets out five clear versions of the Teatro San Cassiano, which we have then numbered 'TSC01' and so on. This provides a useful overview of the lifespan of the theatre and an easy point of reference for present purposes.

Summarised history of the Teatro San Cassiano[10]

TSC01 (1581-c.1629)	cited in 1581 by Sansovino as 'in forma ovata'.[11]
1610	re-opening of the theatre, proposed by Johnson, *Inventing the Opera House*, as a rebuild; the known archival documents support no unequivocal conclusion, as yet.[12]
TSC02 (c.1631-1633)	built post fire of 1629: 'su pianta ovale'.
TSC03 (1637-c.1669)	built post fire of 1633: 'su pianta ovale'; with a reference at 12 February 1657 *m.v.* to 153 boxes (thus 5 tiers: 29, 31x4).
1657 *m.v.*	'si restaurò la sala e si ampliò il palcoscenico', but full rebuild c.1670.
TSC04 (1670-1762)	by Polo Boldù: 'teatro all'italiana con platea su pianta ovale", cited in 1683 as 153 boxes (29, 31x4) and 5 tiers.
1696 *m.v.*	'il teatro venne sottoposto ad un nuovo restauro nel corso del quale il numero dei palchi sarebbe stato aumentato a scapito della larghezza e della visibilità'.
TSC05 (1763-1812)	by Francesco Bognolo: seemingly planned as 183 boxes (28, 31x5) and 6 tiers, but finally executed as 197 boxes (32, 33x5) and 6 tiers.

Notes:

1. The assignment of 'TSC' to an incarnation of the theatre denotes a major structural reconstruction or entire rebuild of the theatre, but not necessarily of the external shell or its structure. We also cautiously note that there appears to be a broad pattern of a c.20+ year period between restorations/rebuilds from 1581 to 1670 and possibly beyond (though further research is required). On his tour of the Castle Theatre in Český Krumlov (September 2018), Dr Slavko explained that the lifespan of the wood in the theatre was c.20 years or less, if not properly maintained (or presumably in a hostile environment such as Venice). Here we have restorations in just over that time frame which may or may not point to a necessary maintenance program. It is, therefore, impossible to be certain that the theatre did not undergo significant internal modification within each of its incarnations, which may have changed the size of stage, and shape and size of the theatre.
2. The generic use of 'in forma ovata' / 'su pianta ovale' (for which there appears to be no primary source evidence for these later secondary source attributions) cannot be taken as a clear decisive confirmation of either a horseshoe- or a 'U'-shaped auditorium. We are at an early stage, but our research is currently asking the question as to whether such terminology might be better understood if read to identify theatres with a 'semi-circular curve' at the head of the theatre? If so, it might suggest that these theatres originated out of the traditional Roman theatre model, which, in turn, was thus the source of the *teatro all'italiana* design that later evolved (see below).

[10] After Franco Mancini, Maria Teresa Muraro, and Elena Povoledo, *I Teatri del Veneto*, Vol. I (Corbo e Fiore, 1995) p. 97, citing first its unattributed descriptions of each theatre incarnation, followed by our own primary source citations of capacity: *Vas*, 'Giudici del Piovego, b.86 f.356'. Please note the data listed here is subject to ongoing verification and is by no means presented as confirmed.

[11] This first theatre is sometimes attributed to Palladio, though we have seen no documentation to substantiate such a claim. *I Teatri del Veneto*, p. 97, cite 'autore del progetto: 1580, sconosciuto'.

[12] Eugene Johnson, *Inventing the Opera House* (CUP, 2018), p. 208 records the theatre of 1637 as being the fourth version, detailing a second construction in c.1610. This will be pursued, but for current purposes we have relied upon *I Teatri del Veneto*, which refers to a reopening of the theatre rather than a rebuilding.

6. 'REIMAGINING' THE 1637 THEATRE

Whatever the later dictates of Venetian Planning law and Health and Safety regulations (with which we shall naturally comply), the policy for 'reimagining' the Teatro San Cassiano of 1637 for this phase of the project has been to create plans for the theatre that are as historically accurate as is possible. To do so, we have relied first and foremost upon primary sources. Here, there is a far greater wealth of data from later versions of the theatre and so the process has naturally been to work backwards to 1637 (or in effect post 1633), seeking the last point of historical evidence and applying rigidly the data and measurements collated as we do so. This means that, at best and barring undocumented major structural changes to TSC04 through the course of its lifespan, our data probably stops at 1695. Even within this context, so little evidence is available that there is no guarantee that this data survives back to this date. We have to accept that the number of boxes might have varied within incarnations of the theatre and that what Chassebras reports in 1683 (again confirming 153 boxes over five tiers) might not have been the same as Bognolo records in 1763, or to which the notary refers in 1657 *more veneto*. The vision is unquestionably murky. Nonetheless, the consistency in the number of boxes and of tiers does give some encouragement. It remains the clearest indication we hold and allows a narrative back to TSC03, which regardless of the variant models now presented is at least based entirely upon measurements from historically documented sources. In reality, the boxes recorded by Bognolo are so tight (less than a metre wide) that if their number has remained consistent over this period, then on the basis of available evidence it is difficult to propose narrower boxes, and practically impossible to sustain wider widths.

Bognolo's record of both the old and new theatres—thus TSC04 (1670-1762) and the original, but unexecuted plans of 1763 (i.e., before the larger executed TSC05)—gives us limited, but precise data going back at least to 1695, and possibly to 1670 given that the number of boxes seemingly remains at 153. Before this, the notary records 153 boxes prior to 1657 *more veneto*, but does not specify when. Nonetheless, he reduces that difference to 21 years as a maximum gap, but with reasonable anticipation of an unspecified date downwards towards 1637. Thus, regardless of various apparent inconsistencies we are thus able to trace back a consistent structure of 153 boxes over five tiers from 1763 back to 1657 (and before), and thus from the first plans of TSC05, through TSC04 and into our targeted model of TSC03.

This consistency across three versions of the theatre and 106 years encourages the view that without evidence to the contrary then is no reasonable hypothesis that any significant change must have occurred in the 21 years back to its opening in 1637. Indeed, the notary's report on the theatre confirms that only 102 of the 153 boxes remained, not that 153 had been newly constructed; and while it is possible the full complement of boxes was only fully restored in 1670, from the perspective of 1637 it points towards an original construction of 153 boxes, and thus a viable and consistent basis for the theatre's reconstruction emerges.

Moreover, we know that the temporary theatre constructed for the production of *Ermiona* (Padua 1636) was itself a five-tiered circular auditorium of boxes stacked upon each other.[13] Similarly, we know that the Teatro del Palazzo del Podestà (Bologna, 1639) repeated the same tier structure albeit with a straighter line. Both support the view that the five-tiered theatre was a well set and the logical model to follow, but more significantly we suspect that the more likely scenario is that both were reflections of what was already well established in Venice by theatres built for *commedie*, as noted in chapter 3. Indeed, if we can accept that the application by Ettore e Francesco Tron to rebuild the Teatro San Cassiano for opera was approved on 2 May 1636, then we are left with less than a month

[13] Nicolò Enea Bartolini, *L'Ermiona del S. Marchese Pio Enea*, p. 8. 'Giravano d'intorno intorno cinque file di loggie l'una sovrapposta all'altra con parapetti avanti a balaustri di marmo, distinguevano li Spazi commodi a sedeci spettatori alcuni tramezi, che terminavano nella parte esteriore a forgia di colonne'; Ellen Rosand, *Opera in Seventeenth-Century Venice*, p. 41.

after *Ermiona was* given on 11 April 1636.[14] Thus, rather than being inspired by Padua, we would tentatively suggest a more likely scenario is that plans and legal applications had long since been set in motion. Of course, we do not know. Naturally, this point is being pursued.

It should be noted at this point that 98-box and 102-box versions of theatre have also been explored to comply with three sources that suggest a smaller first home for opera. In fact, on current evidence none seriously challenge the 153-box model. The earliest reference of 'cento palchi' is a common enough use of 'cento' to imply 'many' or 'several' boxes;[15] the careful re-reading of the aforementioned 102 boxes in 1658 suggests a state of disrepair to the confirmed 153, which is restored in 1670, or later;[16] and Giazotto's citation in reference to the boxes available to rent in this period, of which 98 out of 102 would suggest a cautious reading that allowed four boxes to have been withheld.[17] On this basis, there is insufficient data to challenge the primary source premise of a 153-box theatre in 1637. Nonetheless, drawings of 98- and 102-box models have been prepared, but they have been parked until new evidence comes forward to challenge this narrative. The remainder of this document will thus focus on the 153-box model and the three potential variations therein.

In then setting these models out, and in continuing the same philosophy of taking the last point of historical evidence, a central process has then been applied. This is in two parts:

First, we prepared a tabella (see Appendix A) of the measurements recorded for both the old and new theatres (thus, TSC04 and TSC05 'first draft'). Additionally, further details have been mined from the files and various sources. These too have been filtered into a 'build specification' which then becomes absolute for the next step. For example, this means it was possible to confirm exact box widths within TSC04 along the side flanks of the theatre, on the curve and in the *pergoletto di mezzo*. The box lengths too were documented but as they vary from box to box one can only pin certain points where the measurements are exact. Thus some boxes are subject to varying lengths as they gently modulate to the next point of measurement.

Second, these fixed measurements were applied to our two theatre models for 1637 and set out within the precise parameters for the original site: thus, the assumed earlier 'U'-shaped model associated generally with the early seventeenth-century theatres and the assumed later horseshoe, or 'C'-shaped theatres, historically seen as belonging to the late seventeenth- centuries onwards.

The starting point was Bognolo's drawing of the unrealised first draft of 1763 (TSC05).

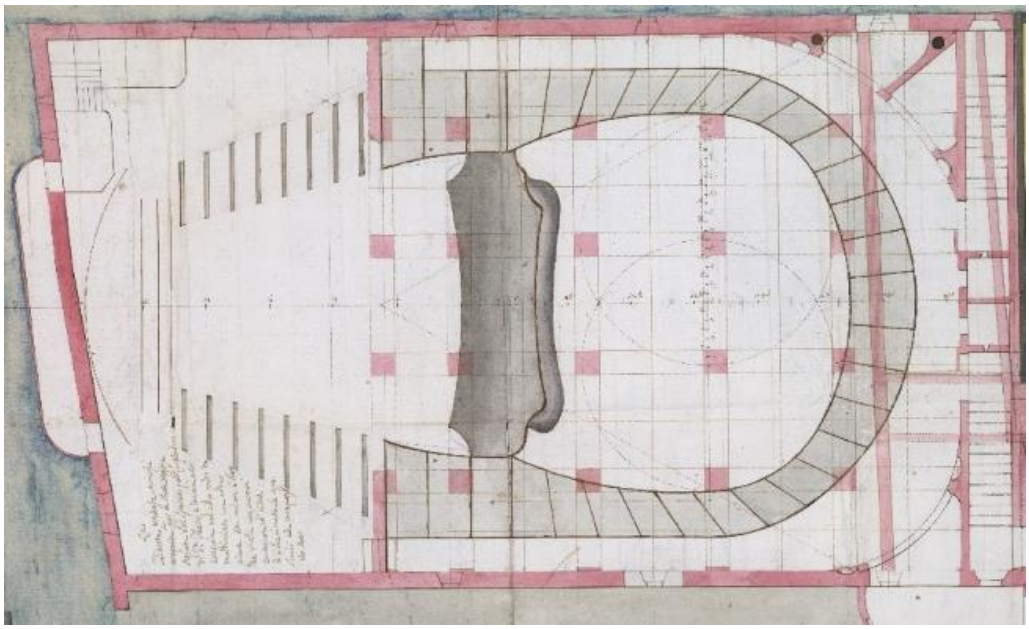
[14] Eugene Johnson, *Inventing the Opera House*, (OUP, 2018), p.209, correctly notes that the document does not exist in the place cited by Remo Giazotto, *La guerra dei palchi* (NRMI, 1967), p. 253.

[15] Franco Mancini, Maria Teresa Muraro, and Elena Povoledo, *I Teatri del Veneto*, Vol. I (Corbo e Fiore, 1995) page 126, cite a letter by Piermaria Cecchini, dated, 29 August 1613: 'i qualli hanno cento palchetti ad affito per loro et per le sue donne'.

[16] Alessandro Pariglia, Notary, legal document of 1658, *Vas*, Notarile, Atti, busta 10864, cc. 123r-124r.

[17] Remo Giazotto, *La guerra dei palchi* (RMI, 1967), p. 260.

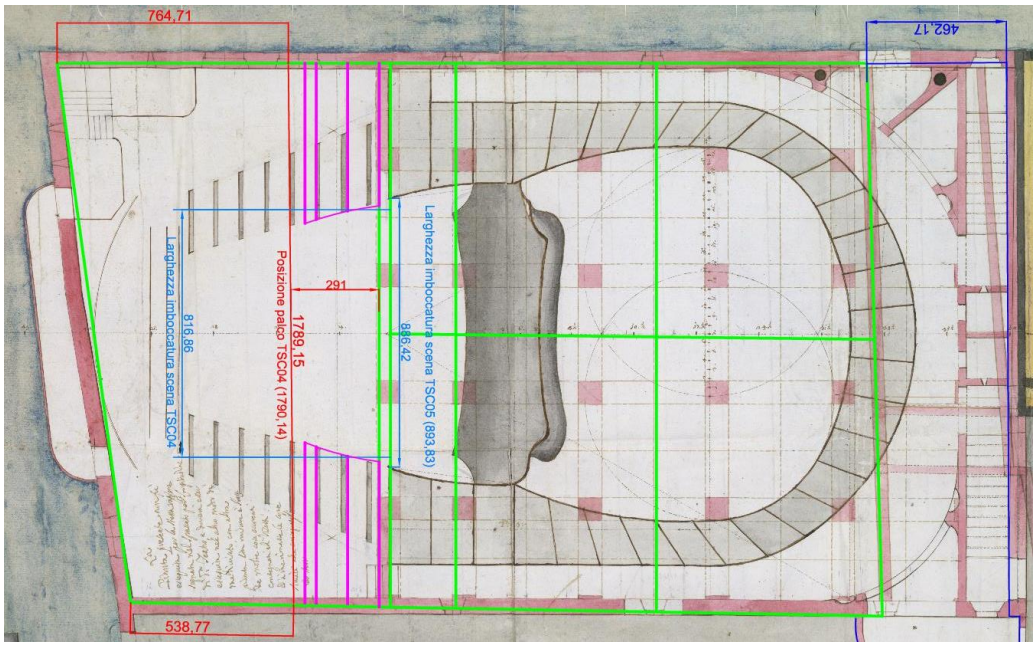
Bognolo, TSC05 (1763, unrealised)



Your attention is drawn to the pink foundation wall running around the theatre, but especially the second vertical line from the right, which runs under the curve of the boxes facing the stage. This marks the perimeter wall of the original theatre (thus TSC04 and presumably before). Note also the two vertical pink inserts that separate the stage from the auditorium. These are load-bearing walls supporting what the 'proscenium walls', where you will note the space left at the head of each is for the insertion of the proscenium arch.

Giacomo Ceccato (architect, Equilibri Srl), then took this plan and superimposed over it the measurements given for the old theatre (TSC04).

TSC04 imposed over TSC05



This not only allowed us to quantify the measurements of both theatres, but identified two key points:

1. Bognolo's main auditorium, when measured from the pink proscenium walls (to the left of the proscenium boxes) through the theatre to the original end wall (green) fitted perfectly with the agreed measurements of TSC04. This allowed TSC04 when measured from the proscenium walls to fit perfectly within the same front of house space as marked by the original foundations.
2. TSC04's stage measurements (red) left a shortfall of 8' 6½" before the aforementioned pink proscenium walls.[18] This was critical in that in conjunction with point 1 it allowed the hypothesis that the basic theatre structure remained consistent from at least 1695 (if not 1637) onwards and that the documented two proscenium boxes of TSC04 (purple) together with a second inner proscenium wall (essentially to frame and support the two standalone boxes) might therefore have fitted in between the outer proscenium wall (green) and the end of the old stage (here in red). Indeed, the fit was perfect, mirroring precisely the gap between inner proscenium wall and first scene flat/wing evident on TSC05. Once this 'gap' was filled, and the remaining old TSC04 measurements applied, the auditorium was again brought within the theatre's original end wall. Above all, the *imboccatura della scena* of TSC04 (blue) and the remaining wings as marked for TSC05 fitted so precisely within this structure that it was not unreasonable to accept that these too had not changed substantially between TSC04 and TSC05, other than the evident expansion of the stage which had been fundamental to the rebuild. In fact, as noted above, when our assumption of five flats/wings was later modified to seven, the plan was still able to accommodate this change without difficulty, as is evident from the plans now shared (all of which fit the above model). However, even with this adjustment there is no obvious indication to suggest that the stage for TSC05 had not evolved out of the positioning of TSC04, and this in turn allowed the model to go forward without strategic alteration both to the stage and to the key structural foundations of the main theatre. We do not know that this was the case, but again it seems logical to take the information to hand at face value rather than to invent an undocumented change.

This presented a narrative for the evolution of TSC05 out of TSC04, which registered the recorded increase in stage length, and simultaneous original decision not to increase the number of boxes in the auditorium, despite its repositioning 8' in from the Rio de San Cassan (to the left of the above plan) and thus through into the new property (after the original pink end-wall). Instead, an increased capacity was achieved by the addition of a sixth tier. More importantly, if we reverse this evolution, then it gave a reasonable model by which to take our last point of historical evidence back from 1763 to 1695, and critically without any need to alter the clearly marked foundations for TSC04.

Having now established a structural basis dating back to 1695 and with the number of boxes also agreed as the same prior to 1657 (thus TSC03) as in 1670 (TSC04), there was no available evidence to promote a change to the theatre's key measurements regardless of whether the model might (or might not) have evolved from 'U' to 'C', as is possible. This gave a cautious premise by which to approach TSC03. In making this point, we are fully aware that the entire building, structure, stage and box positioning might in part, or all, have been destroyed between 1637 and 1695 (or at any other undocumented point), but again we would have to invent these events rather than accepting a model

[18] All work has been undertaken in Venetian feet and inches, but also converted to metric.

that aligned itself with the historical data to hand. The only detail came from the notary in 1657 *more veneto* and this is one of a loss of precisely 1/3 capacity, before its restoration later. We do not know if the theatre shape was changed at any point, but the indication (albeit inconsistent at times) is that over time boxes and tier numbers remained the same. Instead, regardless of changes to the auditorium's shape, the restorations noted in the archives tentatively pointed towards an evolution without the need of major structural change.

Thus, TSC03 was approached on the basis of sharing the key measurements of the back-stage and of the boxes as per TSC04, and of maintaining the two proscenium boxes on either side of the front-stage.

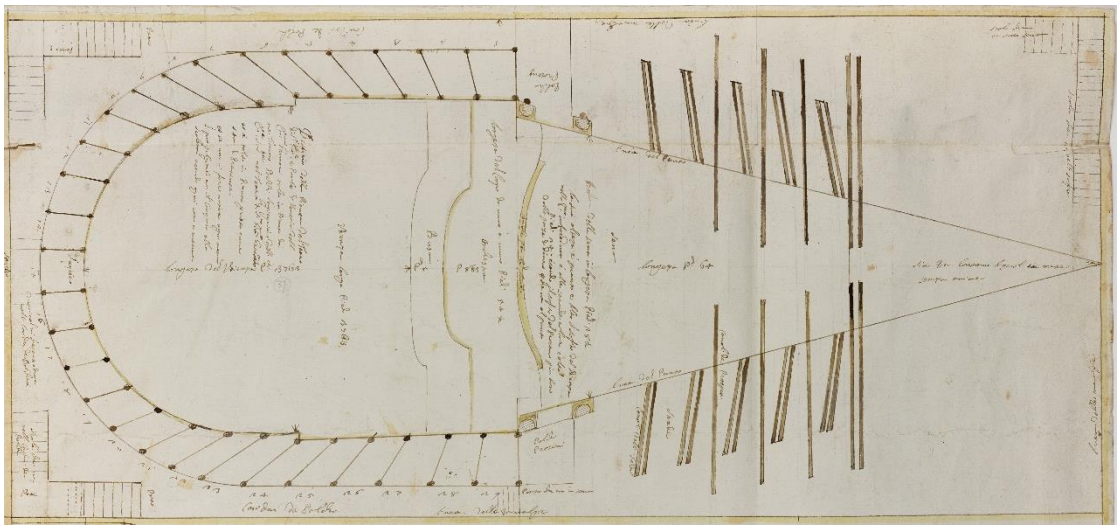
It should be noted at this point that for TSC04 we do not possess the measurements for the length or width of the platea (stalls).

7. DEFINING 'TSC03'

Having established a reasonable narrative for the structure of the theatre, we then came to the issue of shape: 'U' or 'C'?

Bognolo's plan of TSC05 was clearly 'C', but there remain questions as to when this shape first came into practice and if it existed in the early seventeenth century: the general assumption is that it first appears later, though the evidence is frankly inconclusive. The obvious alternative to the 'C' shape is the 'U', as documented by the Teatro Santi Giovanni e Paolo (TSSGP), and less convincingly by the sketch of the Teatro San Giovanni Grisostomo (its seemingly never-ending straight sides have become the subject of some concern in this process).

Tommaso Bezzi: Teatro Santi Giovanni e Paolo (c. 1691-1693)

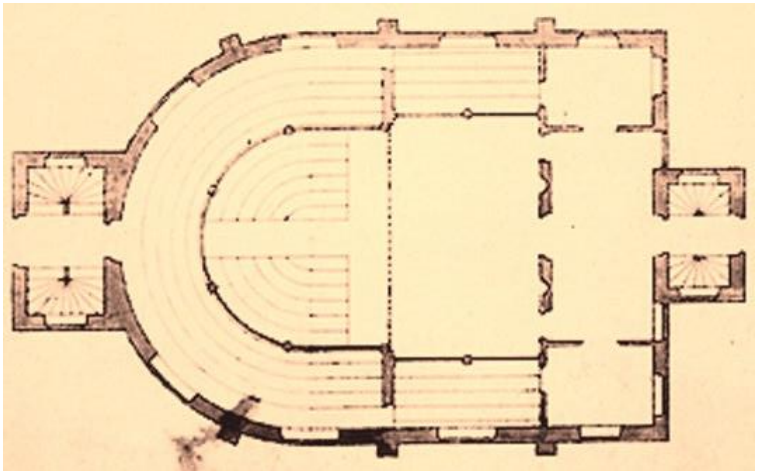


As the only extant plan of a Venetian seventeenth-century opera theatre, the TSSGP has been central to our considerations. Moreover, as its first incarnation was probably built within two years of TSC03 (which at that point we understand would have been the only example of a purposely built opera house on which to draw in Venice), then we should not ignore the possibility that it was itself a copy either in whole or in part. Thus, the natural course of action was to seek to replicate the general design of TSSGP, but by applying the measurements of TSC04.

An aside (for now) to the argument for a 'U'-shaped theatre comes in the pursuit of a royal patent obtained in London by Sir William Davenant in 1639 to build a new theatre in Fleet Street, whereby 'its model, apparently, was the Teatro San Cassiano in Venice, for the patent states that Davenant was permitted to build a playhouse like that built in Venice two years before'.[19] This plan itself was lost during the English Civil War, but John Webb's later 1660 drawing (the same which became the basis of the design for the SWP) was rumoured to have been a copy of the original. In fact, there is no reference to Venice within the patent and the claim has proven entirely unsustainable (at least for now, though the matter is still being pursued). Nonetheless, it is clear when we compare both drawings that they are unquestionably cousins.

[19] Donald Mullin, *The Development of the Playhouse* (UCP, 1970), p. 41,

John Webb, theatre plan (c. 1660)



Despite their very different functional construction clearly reflecting their English and Italian heritage, both theatres share similar key structural features: the indent at the mid-way point, the straight sides, the unequivocal 'U' shape. The indent becomes important when we note the dotted line marking the end of the stage above and compare it to 153-U1.3 and consider TSSGP as an elongated version of both. On 153-U1.3, the orchestra pit and *busa* similarly fills the same area as Webb's design, especially when we note its side exits before the main auditorium begins. In both plans, we might then consider that the design of the main auditorium to which the action is directed is in essence after a Roman semi-circular theatre and that this is the base from which the *teatro all'italiana* thus evolves? We return to this later.

This noted, having agreed a 153-box structure, a stable stage area, and two proscenium boxes, both 153-U1 and 153-C1 were drawn to comply with key features of TSSGP, specifically the treatment of the lines of perspective (although we maintained those identified by Bognolo for TSC05), the layout and curve of the front of stage, the orchestra pit and *busa*. The stage measurements, the position of the scene-sets and their lines of perspective remained at all times compliant with the model for TSC.

All three versions of the theatre are consistent throughout. Each comprises of four proscenium boxes on all five levels. The Pepiano ordine has two exits (one on either side), each positioned where the next whole box following the orchestra pit and *busa* would have been and, indeed, is on each of the tiers above. Thus, on the Pepiano ordine we have 29 boxes of which four are on the stage and 25 above the orchestra and in the main auditorium, of which more when we discuss the individual examples). The primo to quarto ordini all have 31 boxes (four proscenium and 27 in the main auditorium). All measurements of all boxes comply with Bognolo's note for the 'old' theatre (TSC04).

Naturally, the purpose of this exercise is to invite your comments on any issue relating to the readings we now share. However, in doing please note that the plans you now see are not definitive final versions: they are starting points, especially principles not design. The fine-tuning of the ideal shapes will follow in due course as will certain issues of detail which have not yet been addressed. For example, the proscenium boxes drawn in our three examples currently respect the line of perspective that continues through the wings as per Bezzi's drawing of TSSGP; however, we could just as easily have drawn the boxes with a straight right-angle line to the proscenium walls, or with concave or convex fronts. These details will come later, but please feel free to share any thoughts on any point.

On a much more significant level, the same applies to the horseshoe auditorium and even to the 'U'-shaped theatre (though to a lesser extent). The function of the 'C' in this example is not to define

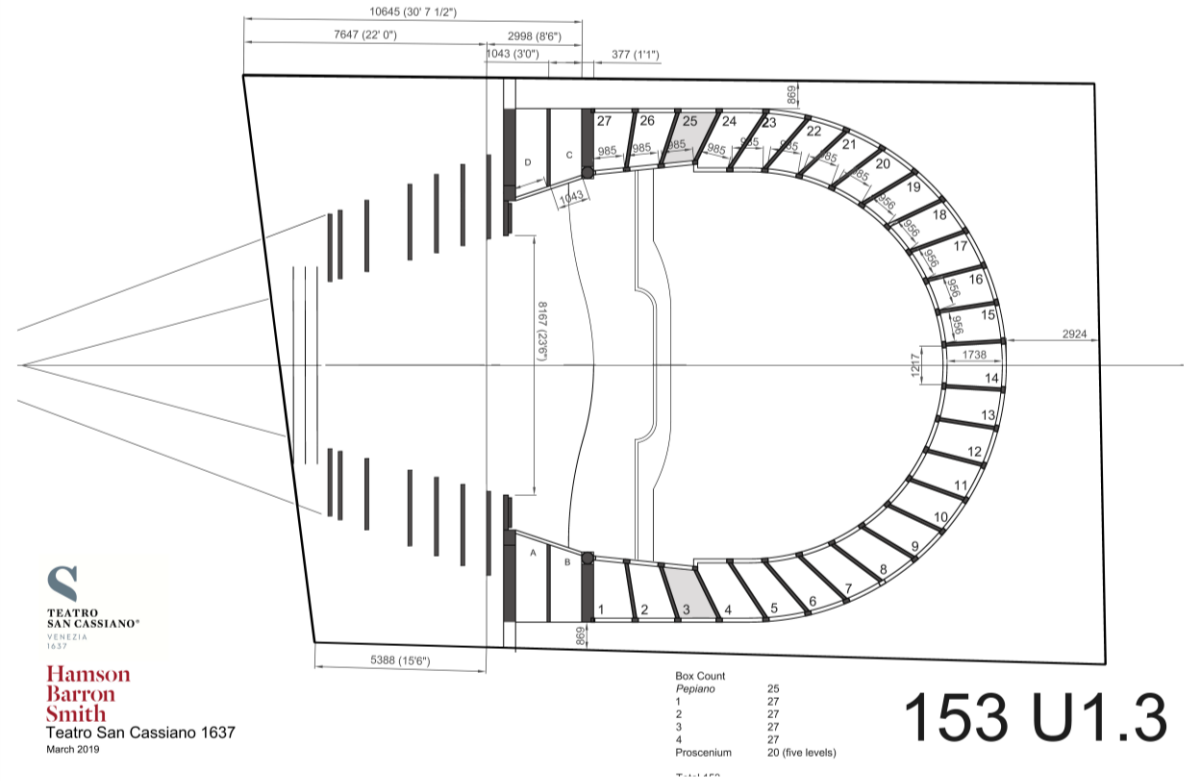
precisely its shape, but to agree the corridor widths along the outer line of the boxes, as detailed in Bognolo's measurements. The issue of how we shape the inner line of the auditorium is a matter for another day, just so long as we honour Bognolo's measurements. In fact, working out from the fixed points of the *imboccatura della scena* to the narrowest point of the corridor allows simply too many variants when drawing the 'C' to be addressed at this stage. The obvious option would have been to consider replicating TSC05, if only on the principle of last historical point of evidence; however, the distinct reference to two (for TSC04) and not three (TSC05) proscenium boxes was sufficient to support the view that the model had changed and thus the plan could not be taken backwards.

It should also be noted that every aspect is itself open to ongoing research and discussion. It is perfectly possible to have a clear measurement, but to then debate its application. A good example is the measurement of 22' for the 'scena larga' of TSC04. We would expect to read this measurement as the inside of the exterior wall to the inside of the proscenium wall, thus to equate to the depth of the stage; however, when we applied TSC04 over TSC05 (see above), the line of this measurement cut precisely through the first wing of the scene-set. We then explored the potential that on this occasion that measurement might have been taken from the rear wall to the point of the first flat, as would have been marked in the stage floor. In doing so, it not only allowed for the stage from that point to its rear to have remained unchanged from TSC05 back to TSC04 (thus suggesting no fundamental resetting of the back-stage area other than the extension of the stage forward evident in TSC05), but it also created an identical gap from the front flat to the inserted proscenium wall as seen on Bognolo's drawing. Thus, in applying this reading, the measurement and positioning of the first flat of the scene-set to the proscenium wall is the same for TSC05 as it can be seen to have existed on TSC04. Thus, the narrative created by this interpretation was pursued over our perceived technical reading for the sake of exploration, even though the probability is that we shall yet return to what we would read as the more conventional reading. In short, it is an ongoing experiment.

Having thus settled upon an agreed stage specification, every plan delivers the documented measurements (with the potential exception of the corridors for 153-U1), so that the core components of the theatre are based on historical data, at least back to TSC04. No adjustment to the measurements have been made to the TSC03 version, though a significant 'reading' of adding an early seventeenth-century proscenium arch and column was put forward to result in 153-U1.3.

8. PREFERRED MODEL: 153-U1.3

(153 boxes over 5 tiers, Pepiano: 29 boxes with 2 exits, plus four tiers x 31 boxes)



153-U1.3 is the preferred model at the end of the first phase of our work with Jon Greenfield. It delivers on every aspect addressed above. It agrees every single measurement we have for the old theatre. It evolved out of 153-U1 (via 153-U1.2) as we sought to resolve the single anomaly of 153-U1: its model agreed all measurements, but delivered corridors that (while perfectly fine) were significantly wider than recorded for TSC04 (see chapter 9). Up to this point, we had followed the relatively narrow proscenium arch and columns indicated by both TSC05 and TSSGP for both 153-U1 and 153-C1. However, with this problem highlighted, we re-introduced a key feature of early seventeenth-century theatre design: the addition of a larger proscenium arch and side columns. These are very well documented, not least in drawings from *Ermiona* (Padua, 1636) and also libretto cover for *La maga fulminata* (Teatro San Cassiano, 1638) where the principal characters stand on columns and within a setting which *I Teatri del Veneto* note might have represented the proscenium arch.[20] Whether this is the case or not, once we consulted with Jon Greenfield we found that the introduction of standard column widths for this time resolved perfectly our difficulty. This enabled us to deliver a 'U'-shaped theatre in the style of a seventeenth-century design, but agreeing all of Bognolo's measurements.

If we now examine the plan for 153-U1.3 the following points are worthy of note:

1. The heights of the seven flats/wings dating from the c.1660s reduce in size as we move towards the rear of stage. Collectively, their positioning within the overall scene-set and its line of perspective appears to mirror that of TSC05, albeit that the later version moves the stage forward by 8' and the number of flats/wings are increased to eight together with an

[20] Franco Mancini, Maria Teresa Muraro, and Elena Povoledo, *I Teatri del Veneto* (Corbo e Fiore, 1995) p. 119, 'La cornice del frontespizio simula un prospetto scenico'.

added acoustic back curve. However, individually, their spacing is purposeful and anything but even. To this end, we have worked with Jon Greenfield to apply the measurements of the heights of the flats/wings precisely to comply within the line of perspective as they reduce in height. The results achieve a spacing of the flats/wings which marries perfectly with the later scene-sets of Torelli in that there is a notably wider gap between the fourth and fifth flats, which would have allowed any stage apparatus entrance onto and off the stage. The plan of the longitudinal section of the theatre illustrates this perfectly.

2. The measurement to the front flat/wing is 22', but as noted there is good reason to take this measurement to the first inner proscenium wall. This is under review, although the eventual outcome will not affect the plan materially.
3. The layout of the scene-sets leads to the perfect positioning of the front flat before the inner proscenium wall and mirrors the same gap as per TSC05. The layout also delivers the narrower *imboccatura della scena* recorded for TSC04.
4. The addition of a proscenium arch and side columns at this point pushes the boxes out sufficiently to enable the measurements for the corridors along the outer line of the auditorium to agree with those clearly notated on the single extant sketch of TSC04.[21]
5. We have positioned the proscenium arch and columns on the inner proscenium wall, allowing the front of the stage to protrude forward directly in front of the proscenium boxes. It is possible that they might have been placed on the outer proscenium wall; however, this would have created much weaker viewing positions at boxes 1 and 27, separated the inner line running along the boxes (which generally seems to flow along a singular line in most theatres) and placed the proscenium arch ahead of the front of the sides of the stage. On balance, it was felt that the proscenium arch is more accurately represented here. The view from the proscenium boxes is naturally inhibited, but it would have allowed sight of all singers at the front of the stage, where it also appears that the acoustic was at its best. Moreover, the positioning of the performers towards the front of the stage (if only for reasons of perspective) is duly supported in *Il corago*.[22] More generally, the viewing difficulties of a wider proscenium arch at the point where stage and auditorium meet might provide a narrative as to why the TSSGP and TSC05 (and theatre design in general) moved to the single proscenium arches and narrower models still prevalent today. It was agreed that there was no basis for the sort of tournament theatre seen elsewhere in Italy where the boxes might have been free-standing and ending before the stage. Not least, because the design of the orchestra pit creates its own requirements (see below).
6. The proscenium boxes are marked A-D and are unnumbered as appears to have been the custom; note, however, that we have been able to confirm their inclusion in the total boxes counted: thus 153 includes the proscenium boxes. Following the layout of TSSGP, these 'palchi prosceni' cover the protruding front stage to about one and a half of the boxes, before the orchestra pit begins.
7. The outer proscenium wall (i.e., before the numbered boxes) sits on exactly the same foundation line as the new proscenium arch on Bognolo's plan of 1763 (as indicated by two small lines in pink at the *imboccatura della scena*). As such, the front edge of the old stage now aligns with the beginning of the newly extended front of stage. More significantly,

[21] *Vas*, 'Giudici del Piovego, b.86 f.356', 32r.

[22] Paolo Fabbri and Angelo Pompilio (eds.), *Il corago* (Olschki, 1983), pp. 27 and 92.

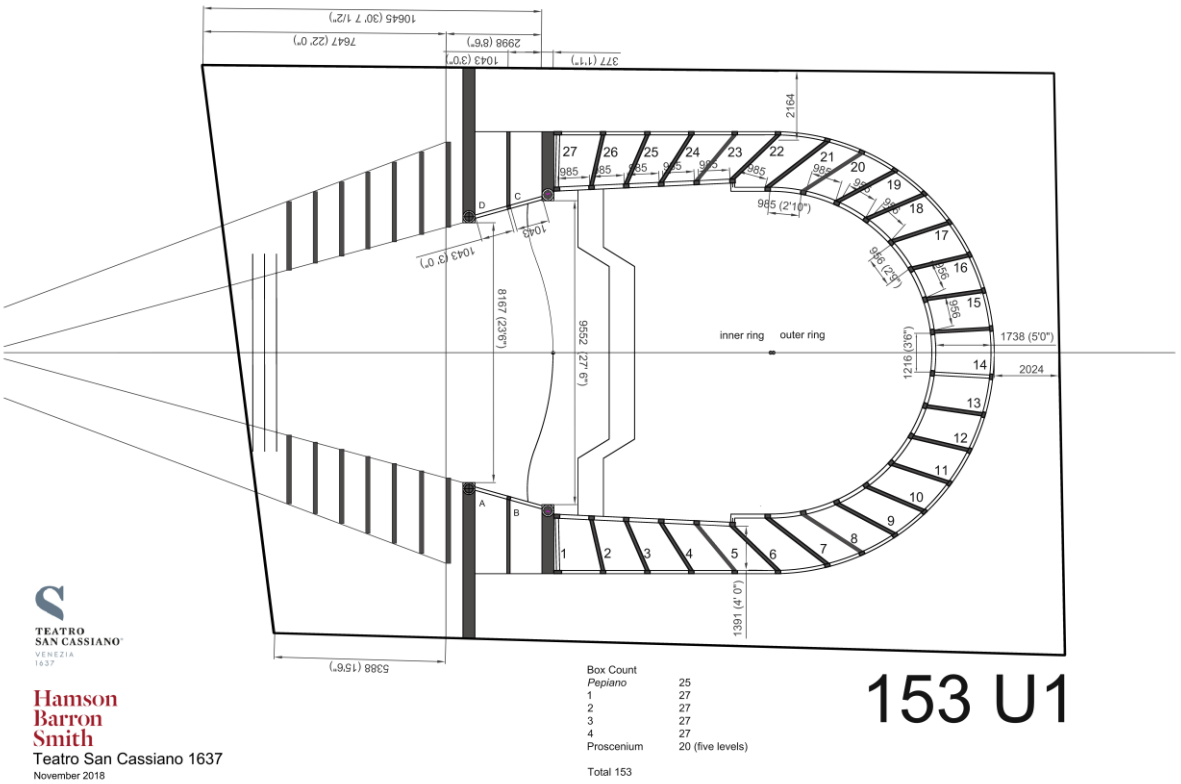
whether or not our reading is correct, it agrees with the same structural foundations of the theatre and its exterior. This does not preclude internal restorations of the boxes and structure within the shell of the theatre, but equally it does not require the entire building to be rebuilt as part of each restoration.

8. The orchestra pit is set out after TSSGP. It is not impossible that originally a smaller pit might have been contained centrally, broadly as indicated by the bulge and thus without extending across the theatre; however, first, we have relied upon the TSSGP model ahead of images from earlier court-theatres where this occurs; second, we need to allow for larger orchestras of the eighteenth century. Naturally, this issue will be monitored.
9. The *busa* is also marked as per TSSGP rather than the more modern style seen in TSC05. The *busa* has proven of great interest to our entire build-team. The agreed consensus is that its primary function was probably acoustic, as opposed being a protective barrier; however, as it is only documented in the larger theatres of TSSGP and TSC05, before then dying out, there might be reason to revisit this at a later point. It might yet be an addition relevant to the deeper (thus larger) models of TSC04 and TSC05, but not necessarily present for the smaller TSC03. For now, there is no reason to ignore the last point of historical reference.
10. Exits appear at boxes 3 and 25. These agree the box numbers to 153 and reflect the position of other models. TSSGP, however, had a central entrance at the *pergoletto di mezzo*, as did TSC05.
11. After the exits, we have the same indents which mark the semi-circular curve of the main body of the theatre. We would guardedly propose that this traditional Roman theatre design is intrinsic to the evolution of the *teatro all'italiana* and thus the 'pianta ovale' regularly cited. We address the issue below under 'CONSEQUENCES AND TENTATIVE PROPOSALS'. The same Roman theatre marking is repeated in both TSSGP and John Webb's English plan, as discussed above. However, for 153-U1.3, note that the wider line caused by the proscenium columns means that the main auditorium consists of 21 boxes on the semi-circle, not 17 on the slimmer 153-U1 and on TSSGP. This has the effect of drawing in the theatre closer to the stage and creating a more intimate setting (hence the consideration given to the value of the *busa* in this version). Note also a possible build significance at point 15.
12. If, then, after the pit, *busa* and exit, the main theatre starts with the Roman semi-circle, then this would suggest it was its primary design feature, and that consequently the side boxes may have come into existence to maximise all commercial space. If so, then they become a secondary feature of the theatre's design. This would question the view that 'U'-shaped theatre was itself a deliberate break with tradition in theatre design, and ask the question as to whether the *teatro all'italiana* evolved directly out of the Roman theatre model as it was essentially stretched out and the *platee* enlarged, thus repeating the need to insert further side boxes and maximise commercial opportunity.
13. The theatre ends just under three metres short of the original wall. This remains a tight space for an entrance foyer, but consistent with later models and a better solution than offered currently by 153-U1 and 153-C1 (although these could yet be modified). Entrances which correspond to the exit box 3 and at the head of the theatre are noted in the archives.
14. The angles of the inner line of the side boxes appear more extreme than the longer sides of TSSGP, but in actual fact they are the same. Again, this is a detail which can be revisited.
15. As research moves forward, 153-U1.3 is evolving. There is the option to remove the *busa* completely. Indeed, U1.3 itself developed out of U1.2 when our original investigation of this

possibility had the effect of drawing the semi-circle auditorium closer to the stage and thus increased the number of boxes in the main body of the theatre to 21, as can now be seen in U1.3. Interestingly (and possibly with or without relevance) 21 boxes allows a bay-type construction whereby each bay supports the main structural weight and houses within it three boxes of a lighter build. This would mean the main auditorium of 21 boxes would have been made of seven bays with its central box convincingly on the *pergoletto di mezzo*, with a bay of three boxes on each flank (thus six boxes) ending with a pair of two proscenium boxes (thus four to give a total of 31 boxes). In these structural terms, the theatre might then be seen as essentially that of a Roman semi-circular auditorium.

9. 'U'-SHAPED MODEL: 153-U1

(153 boxes over 5 tiers, Pepiano: 29 boxes with 2 exits, plus four tiers x 31 boxes)



This version delivers all of Bognolo's measurements for the old theatre (except point 4) but laid out in a format to mirror that of Bezzi's 'U'-shaped drawing of the TSSGP. The following points are worthy of note:

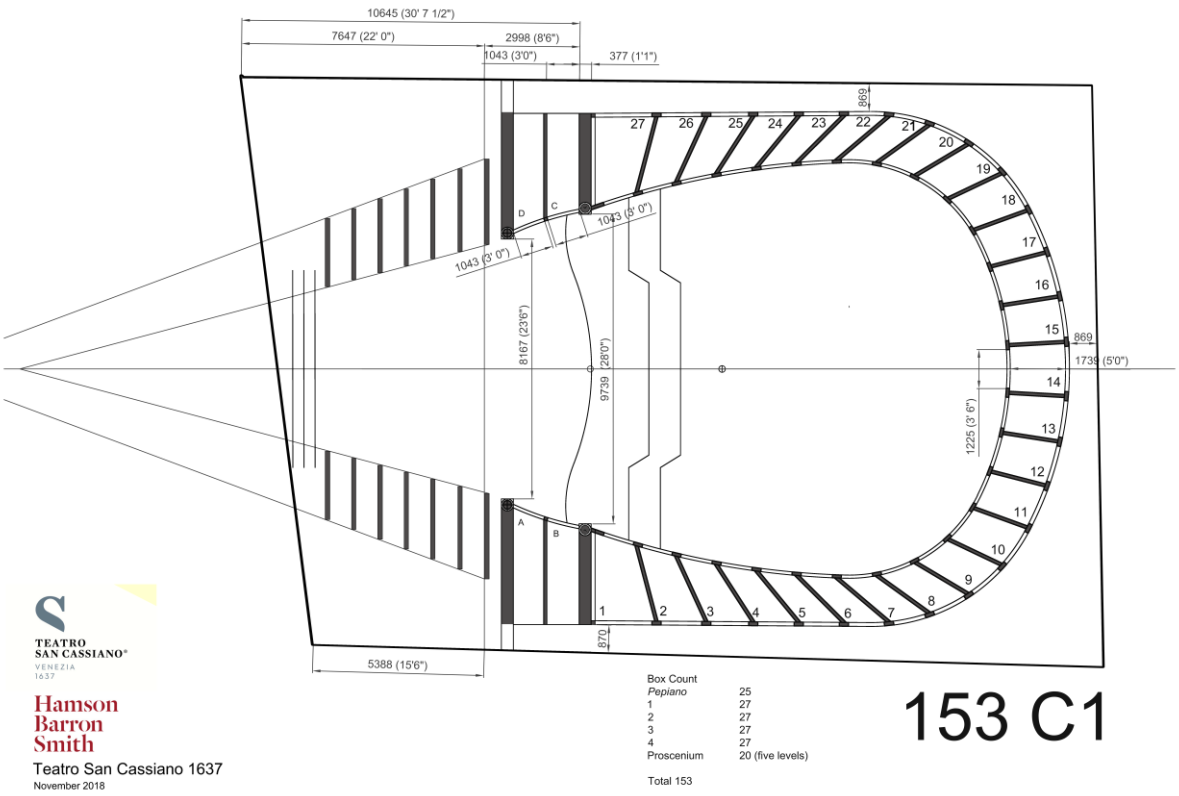
1. The stage, model, general points and measurements re 153-U1.3 apply equally here.
2. The major difference is that the inner proscenium wall has a narrower proscenium arch and column in accordance with the plan for TSSGP. This is the same for 153-C1.
3. This creates a narrower theatre, and as a consequence the main Roman auditorium agrees with TSSGP's total of 17 boxes. In turn, this requires an additional box being inserted on each of the sides thus extending the theatre to resemble more the traditional 'U' shape as associated with TSSGP.
4. The theatre presents an almost perfect model of what we might perceive as an early seventeenth-century theatre; however, the widths of the corridors along the two outer sides of the theatre are notably greater than those recorded for the old theatre (TSC04) and so create an anomaly that is addressed with the introduction of a proscenium column either side of the stage, and thus seemingly more in line with the early seventeenth century.
5. This noted, we should not forget the point made earlier about how we interpret data. If we return to the corridors, but now read them as an internal measurement within the theatre's wooden framework (now constructed as an integrated whole, so that both the boxes and corridors belong within the same singular frame, itself free-standing within the theatre's shell), then we might simply wrap a single corridor at the measurement of 2' 6" around the

outer line of the boxes now recorded and allow for them both to stand freely as one entity within the original shell of TSC03. It is a point we shall continue to explore.

6. This aside, we must not forget that the measurements refer to TSC04 and thus to potential internal changes made at some point after 1637. Thus, for TSC03 there might be a very good (and as yet undetected) reason for this discrepancy and that this model might yet deliver the perfect solution. Therefore, the model remains very much under consideration.

10. 'C'-SHAPED MODEL: 153-C1

(153 boxes over 5 tiers, Pepiano: 29 boxes with 2 exits, plus four tiers x 31 boxes)



This version delivers all of Bognolo's measurements for the old theatre but within a horseshoe design. The following points are worthy of note:

1. The stage, model, general points and measurements re 153-U1.3 apply equally here, but again with a narrower proscenium column matching that of TSSGP.
2. The difference is that Jon Greenfield was able to plot the start of the boxes at the *imboccatura della scena*, and then the correct width of the corridors along the theatre's side, so that all measurements were delivered.
3. In turn, this facilitated a gentle curve for the inner line of 'C' shape, which as noted, can be revisited once we have more data. The key point is that the adherence of all measurements within this format confirm that TSC04 could very well have been a horseshoe shape.
4. The only concern would be just how narrow the foyer space is as a result; however, this can again be adjusted to pull the theatre inwards by manipulating the curve of the horseshoe shape.
5. The design of a 'C'-shaped theatre also removes the direct link with a Roman auditorium design and thus encourages the faster evolution of the *teatro all'italiana*. Indeed, noting that all measurements are for TSC04, the possibility remains that if 153-U1.3 recreates TSC03 that this version might in turn reimagine the later style which would be more easily reconciled with TSC04. Of course, we do not know.
6. Alternatively, we should note that the 'C'-shaped model relies on a narrower *imboccatura della scena* to allow it space to create a wider width in the main auditorium and thus to

deliver its horseshoe shape. By implication, this would argue against the 'C'-shaped theatre having a wider proscenium arch and columns as we have shown in 153-U1.3.

7. Nonetheless, this is a viable model for TSC03, if one agrees to the principle of a horseshoe shape as early as 1637. This is supported (at least in theory) by the consistency of the 153-box model from 1637 onwards, but clearly needs further exploration.

11. CONSEQUENCES AND TENTATIVE PROPOSALS

The reimagining of TSC03 as identified at 153-U1.3 raises the possibility that we might now need to rethink the evolution of the *teatro all'italiana* through the re-incarnations of TSC, from its use as a comedy theatre, through its extension to accommodate opera, leading to the more famous 'U' shapes identified by TSSGP, the evolved horseshoe of TSC04 and to a final incarnation as seen by Bognolo's image of TSC05. Moreover, such a theory (if correct) would increase the historical value of the original site in that one could arguably plot the key elements of the evolution of the *teatro all'italiana* within one single location.

If so, this would lead us to tentatively propose that the *teatro all'italiana* did not leap to a 'U'-design as a direct break from tradition, as we have thought until now, but rather that the traditional Roman semi-circular auditorium slowly evolved from the kind of theatre suggested by the Teatro Olimpico to a five-tiered version following the same semi-circular footprint and possibly witnessed as early as the 'in forma ovata' design of 'TSC01'. The key point of development comes in its rebuild to stage opera in 1637, which inevitably results in the pushing back of the main auditorium to allow for the insertion of an orchestra pit, a *busa* (if indeed one was required for TSC03) and for the side exits before the theatre proper could begin. It is only when we follow the line of the *busa* across the width of the theatre, note the necessary exits that occur immediately, and then recognise the indentation marking the beginning of the main auditorium that:

1. we can see that the main body of the theatre remains as it might always have been: a semi-circular Roman theatre.
2. the indentations (evident in both TSSGP and John Webb's copied plan with allegedly Venetian origins) finally appear to have some logic and reason for their inclusion within the plans: on this basis, they mark the beginning of the main auditorium, and thus were not dissimilar to those early tournament theatres with curved edges to allow a better end view.
3. the question is then raised as to whether the side boxes (1-3, 25-27) served more from a design perspective of filling in the gap between the main theatre and the stage? If so, their function becomes a secondary one, caused as a consequence of the theatre being adapted to give opera, of resolving the problem caused by the new positioning of the main Roman theatre, of providing an end point of the pit and *busa*, and of course of maximising all commercial opportunities. This would mean they were not a primary initiative leading a new philosophy of theatre design, but a natural development and the result of pushing the main auditorium back to allow for the orchestra pit and *busa*. It is only thereafter, as theatres were enlarged, thus creating deeper *platee*—as seen by TSSGP—that the sides were then further extended to fit the longer stretched out models.

If this reading is correct, then within the original site of the Teatro San Cassiano we might yet witness the evolution of the *teatro all'italiana* through at least four versions of the same theatre:

- **TSC01/02**: 'in forma ovata' / 'su pianta ovale'
- **TSC03**: pushed back Roman model to create first opera theatre
- **TSC04**: probable horseshoe- / 'C'-shaped theatre
- **TSC05**: distinct Venetian horseshoe with second curve on three proscenium boxes.

It is, of course, far too early to draw any conclusions on any point within this document. It merely serves to share our findings to date, the questions they raise and to invite any comment which might add to the process.

APPENDIX A

Foot	34.76	centimetres
Inch	2.89667	centimetres

TSC04: MEASUREMENTS OF THE 'OLD' TEATRO SAN CASSIANO (1695)

Boxes (no. 31 per tier)	ft	in	fraction /7	no. of in	mm	
Width of the proscenium boxes (2 per side)	3				1,042.80	
Length of the boxes on the sides	4				1,390.40	
Width of the boxes on the sides	2	10			984.90	
Length of the boxes in front of the stage *(circa)*	5				1,738.00	
Width of the boxes in front of the stage	2	9			955.90	
Width of the central box	3	6			1,216.60	
Height of the boxes on the 2nd tier (Primo ordine)	6				2,085.60	
Height of the boxes on the 4th tier (Terzo ordine)	5	3			1,824.90	

Stage						
Width of the stage: at widest point - wall to wall	51	6			17,901.40	
Length (opposite Rio de la Madoneta) - proscenium to wall	15	6			5,387.80	
Length (side Rio de la Madoneta) - proscenium to wall	22				7,647.20	
Proscenium (=imboccatura della scena)	23	6			8,168.60	

Front of House (proscenium to wall)						
Length of the theatre, stage excluded (opp. Rio de la Madoneta)	56				19,465.60	
Length of the theatre, stage excluded (Rio de la Madoneta)	55				19,118.00	

Plot of Land (wall to wall)						
Side Rio de la Madoneta	77				26,765.20	
Opposite Rio de la Madoneta	71	6			24,853.40	
Side Rio San Cassan	51	4			17,843.50	
Opposite Rio San Cassan (muro consortivo)	52	6			18,249.00	

Steps	(IMG 037+043)					
3 steps from the level of the road (Sotto portico)	3	2.5			1,115.20	371.73 per step
4 steps to reach the pepiano	2	8			926.90	231.73 per step
Total	5	10.5			2,042.20	
3 steps from the level of the road (Corte)	1	8			579.30	193.10 per step

Corridors						
The widest one	2	9			955.90	
The narrowest ones	2	6			869.00	

TSC05: MEASUREMENTS OF THE 'NEW' TEATRO SAN CASSIANO (1763)

Boxes	ft	in	fraction /7	no. of in	mm
Width of the proscenium boxes (3 per side)	4				1,390.40
Length of the shortest among the proscenium boxes	7	8			2,664.90
Length of the boxes on the sides	4	6			1,564.20
Width of the boxes on the sides	3	3			1,129.70

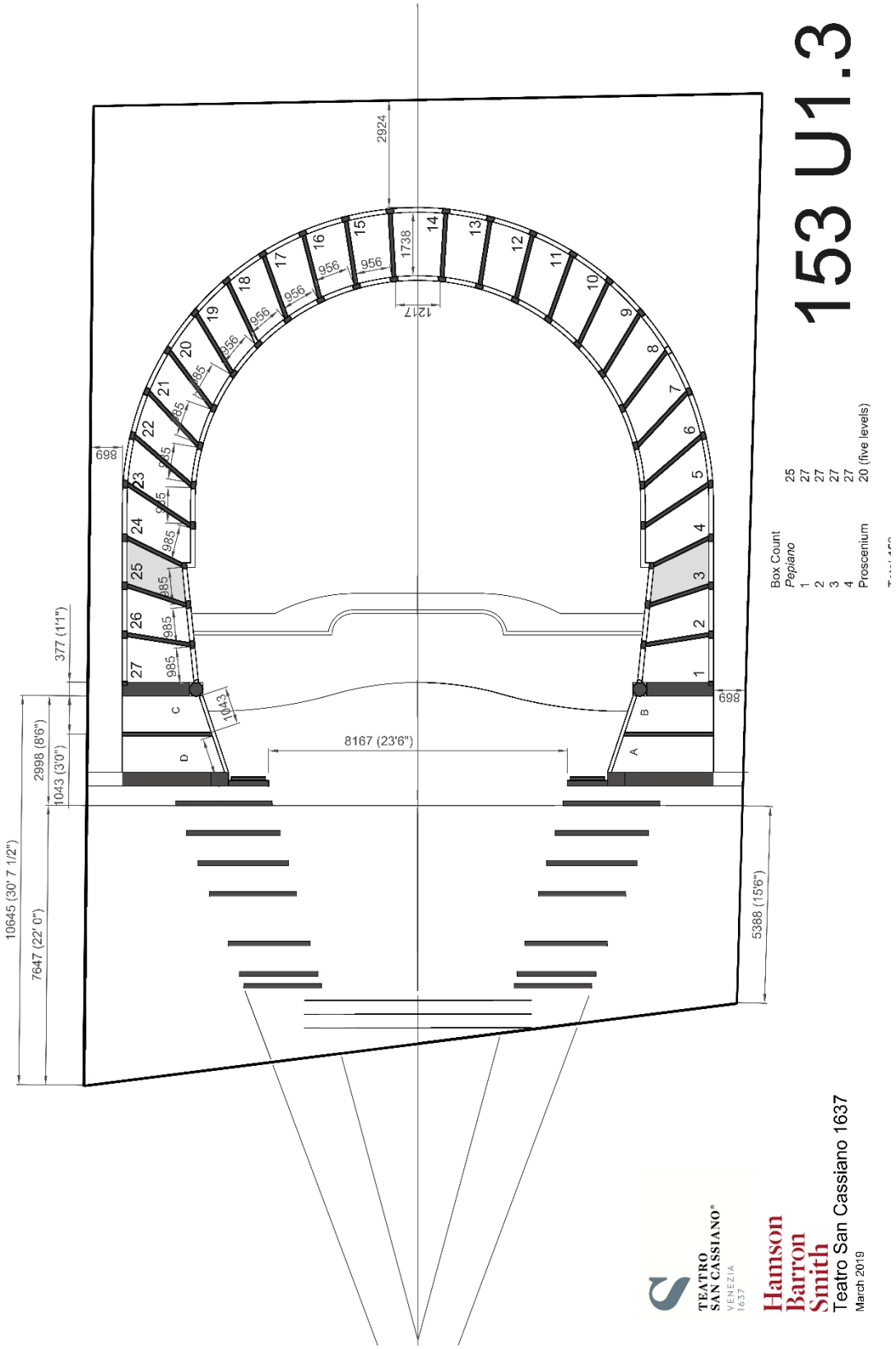
Stage					
Width of the stage: at widest point - wall to wall	51	6			17,901.40
Length of the stage (side opposite Rio de la Madoneta)	23	7.5			8,212.10
Length of the stage (side Rio de la Madoneta) (IMG 026 + 027)	30	7.5			10,645.30
Proscenium (IMG 033 + 034) (=imboccatura della scena)	25	8	2	2	8,938.30
Terrace on Rio San Cassan (IMG 026; average)	3	3			1,129.70
From the candles up to the wall at the back of the stage	36	6			12,687.40

Platea (stalls area)					
Width of the 'platea'	36				12,513.60
Length of the 'platea' (from 'pergoletto' to start of '3 proscenium boxes')	31	8	2	1	11,015.60
Width of the orchestra pit	7				2,433.20

Corridors					
Width of the corridors on the sides	3	3			1,129.70

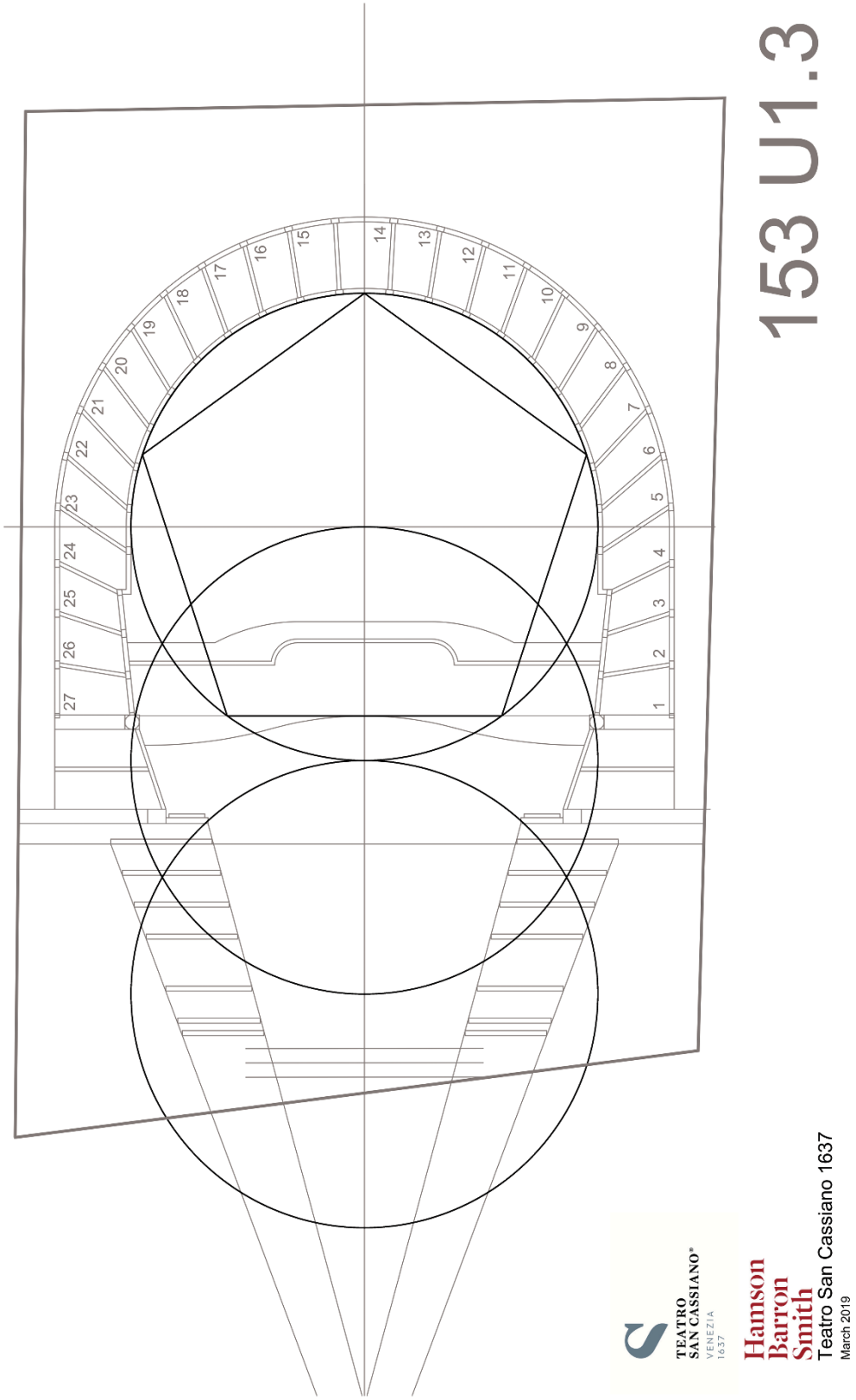
APPENDIX B – ENLARGED VERSIONS OF THE PLANS

PREFERRED MODEL: 153-U1.3



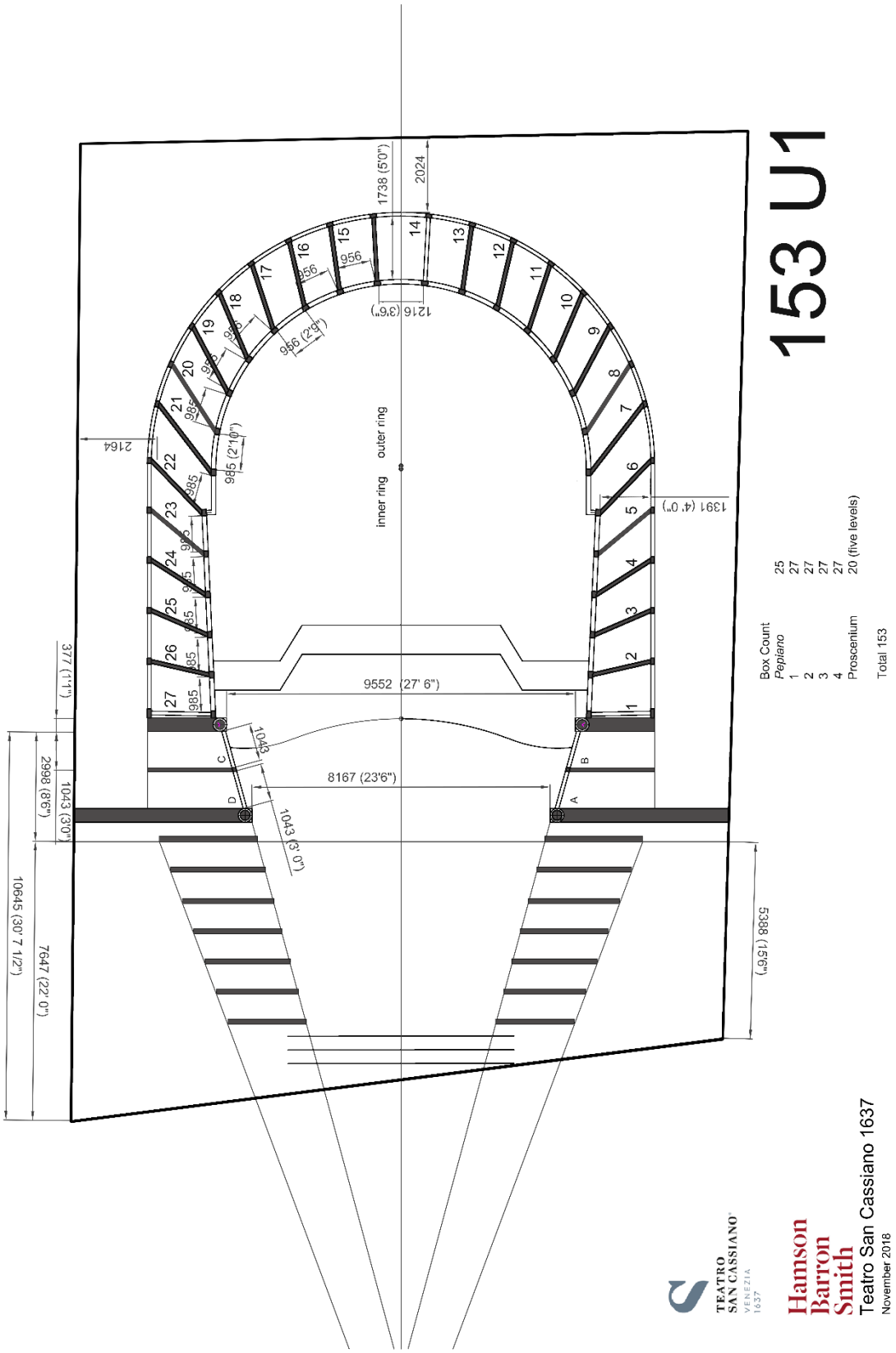
APPENDIX B – ENLARGED VERSIONS OF THE PLANS

PREFERRED MODEL: 153-U1.3 (GEOMETRY)



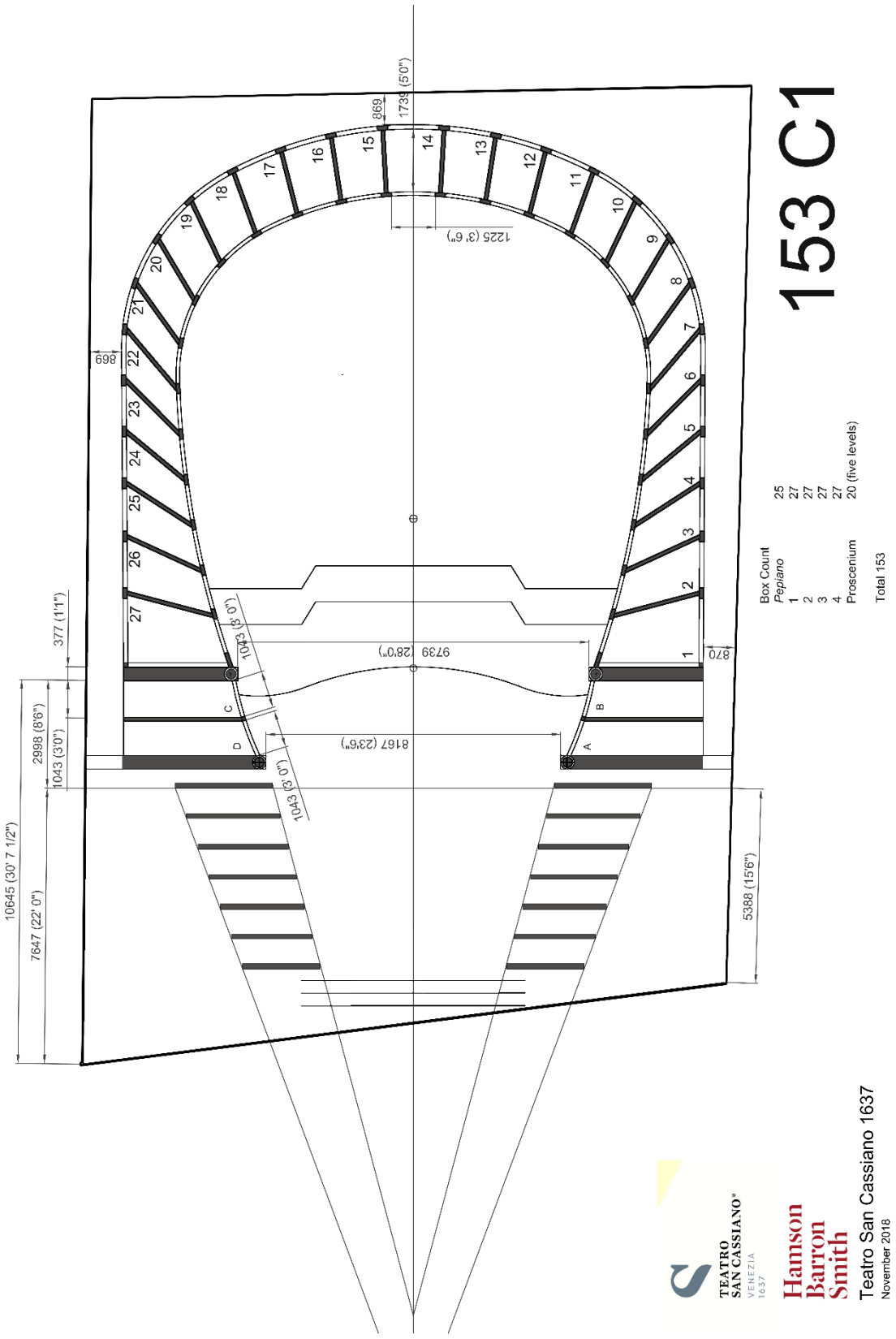
APPENDIX B – ENLARGED VERSIONS OF THE PLANS

'U'-SHAPED MODEL: 153-U1



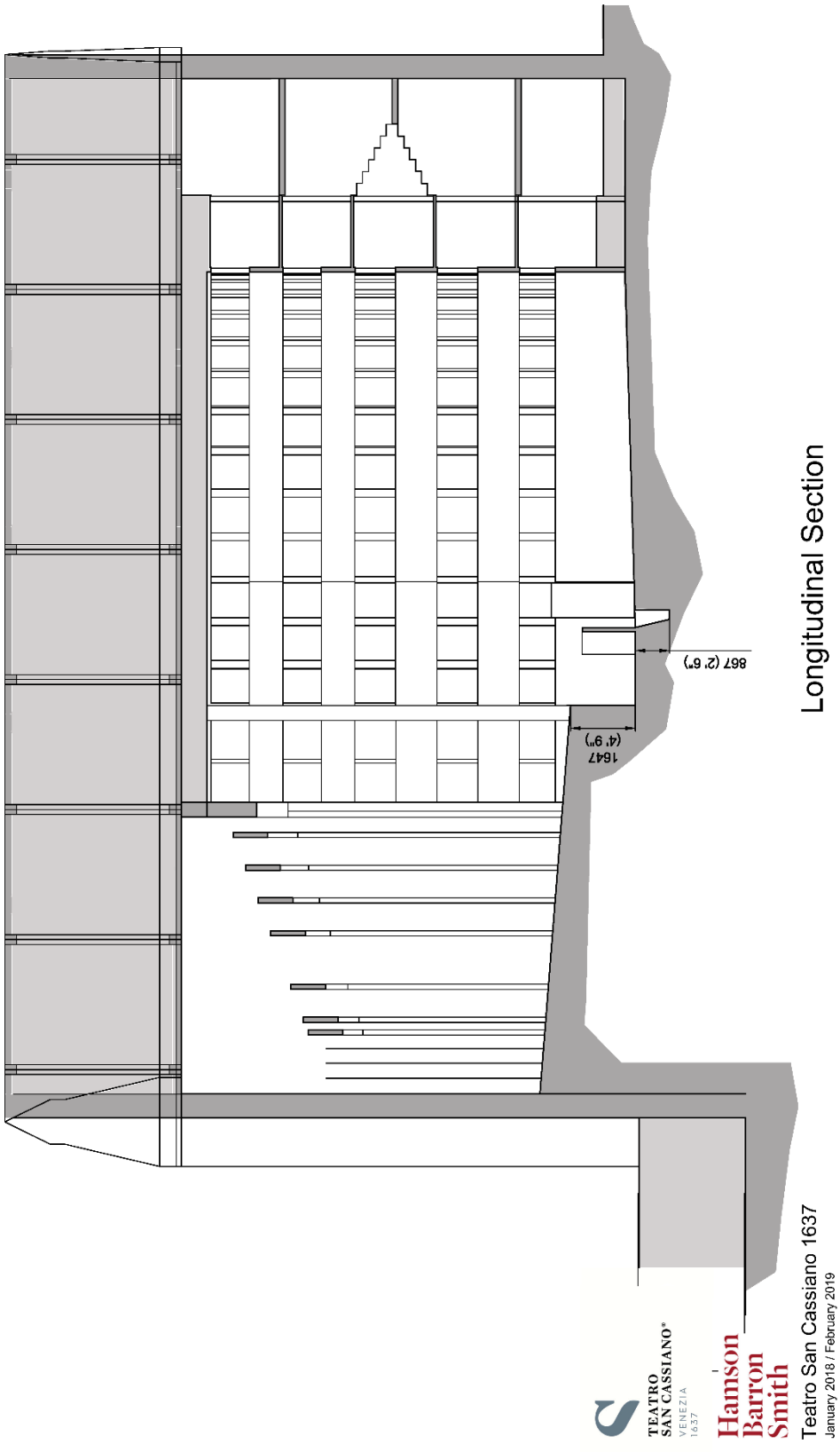
APPENDIX B – ENLARGED VERSIONS OF THE PLANS

'C'-SHAPED MODEL: 153-C1



APPENDIX B – ENLARGED VERSIONS OF THE PLANS

PREFERRED MODEL: 153-U1.3 – LONGITUDINAL SECTION



APPENDIX B – ENLARGED VERSIONS OF THE PLANS

PREFERRED MODEL: 153-U1.3 – CROSS SECTION