Assessing Historic Sites as Tourism Attractions: Implications for Public Policy

Lorin K. Toepper
Johnson & Wales University

Follow this and additional works at: https://scholarworks.bgsu.edu/visions

Recommended Citation
Available at: https://scholarworks.bgsu.edu/visions/vol10/iss1/5

This Article is brought to you for free and open access by the Journals at ScholarWorks@BGSU. It has been accepted for inclusion in Visions in Leisure and Business by an authorized editor of ScholarWorks@BGSU.
Visiting historic sites is often a prime motivation for travel to New England states such as Rhode Island. The economic benefits associated with increased visitation to historical sites has led many states to study the current and future potential of the sites within its tourism industry. This paper develops a systematic process for analyzing the tourism potential of historical sites. In addition, the paper creates a "growth-management" matrix which was utilized by the Rhode Island Historic Preservation Commission to allocate increasingly scarce funds among those sites identified as offering the greatest return on investment.

For its size and population, the New England region ranks fairly high among U.S. regions as a popular tourism destination. In 1988, domestic travelers made an estimated 35.9 million trips to or within New England (1). When compared to other U.S. Census regions, New England ranks last. However, when these numbers are examined on a per capita basis, the New England region ranks third. Domestic travelers to New England spent an estimated $16.2 billion on tourism-related goods and services within the region, generating about $750 million in tax receipts and the equivalent of about 250,000 jobs. An additional $700 million in expenditures and another 25,000 jobs can be attributed to international visitors to New England (2).

Rhode Island, one of the six states within New England, received an estimated 27.8 million travelers from other states visiting Rhode Island
in 1988, which was an increase of nearly six percent over 1987 figures. These visitors stayed an average of 1.4 days each for a total of 39.1 million visitor days. The largest group of visitors to Rhode Island included in this statistic were travelers who were "passing through," accounting for 57% of all visitors to the state. "Day-trippers" accounted for 21% of the total visitors while business travelers and leisure travelers each accounted for seven percent. The total sales revenues estimated for 1988 from the visitors to Rhode Island was $1.3 billion, which was up 15.5% from the estimated 1987 sales revenues. These 1988 sales revenues generated $272.8 million in wages and supporting about 26,000 jobs (3).

HISTORIC SITES AS ATTRACTIONS

While the motivation to travel can vary widely among visitors to any region, four basic motivators (Table 1) have been identified by McIntosh and Goeldner (4, pp. 131-132). Physical motivators are those related to physical rest, beach recreation, and so on. Interpersonal motivators include such things as meeting new and interesting people, visiting family, etc. Status and prestige motivators are related to business, personal development, pursuits of hobbies, and conventions. Cultural motivators are identified by the desire to know about other areas and their culture (e.g., food, dance, art, etc.). The desire to visit historic sites can also be included within this latter motivational category and, for many states, a relatively large number of trips every year might be attributed to this desire.

The importance of historical attractions as a travel motivator to a state such as Rhode Island was documented in a recent study that the state conducted of its visitors (5). Tourists to Rhode Island identified historic and cultural attractions as the most important reason for visiting that state (20.4%), followed closely by natural or scenic beauty (19.4%). When asked to identify specific attractions, visitors to the state ranked the Newport mansions first (59.2%) and other historic sites ranked second (53.1%).

Historical sites and the events held at these sites contribute to the economic welfare of the communities in which they are located. For example, the total net direct revenue impact of the tenth annual Providence Preservation Society's Festival of Historic Houses was estimated to be $148,940 in 1989 (6). This event was held in three separate neighborhoods of Providence, Rhode Island, on June 2-4, 1989. Over 2,500 residents and 1,200 non-residents (from 22 different states) attended the event.

PURPOSE OF THE STUDY

Given the important role which historical sites could potentially play within the Rhode Island tourism industry, the Rhode Island Historical Preservation Commission determined that a comprehensive analysis of existing sites be undertaken to determine the current and
future potential of selected sites as viable tourism attractions. In March, 1989, the Rhode Island Historic Preservation Commission requested the submission of proposals for a comprehensive study of a number of the state's historical sites. The project was to entail an analysis of the opportunities and constraints historic sites possessed with respect to the Rhode Island tourism industry. The contract was awarded to Blackstone Valley Tourism Council, a regional tourism promotional organization within Rhode Island. The Council then formed and managed the research team.

Specifically, the study was to: 1) select sites to be included within the study; 2) collect information on the physical attributes, administration, and present levels of visitations at each site; 3) develop a collection of photographic color slides of each selected site; 4) develop site specific recommendations for physical improvements, marketing, and interpretive programming; and 5) suggest a growth-management planning strategy for each site. This paper summarizes the results of the study undertaken to satisfy the above objectives.

STUDY METHOD

In order to satisfy the objectives of the study, the authors met with the Rhode Island Historical Preservation Commission to determine which of the historical sites would be included within the scope of the study. The selection of these sites was based upon the following factors: geographic representation, existing tourism levels, hypothesized tourism potential. Of the approximate 200 historical sites located within Rhode Island, a total of 57 sites were selected for analysis (A map of the historic sites surveyed is provided in Appendix A and the sites are listed in Appendix B).

Next, a detailed questionnaire was developed to extract information from the historical site administrators and/or staff. The 16-page questionnaire sought information on the following categories: (1) general information about the site; (2) classification of the site; (3) marketing methods currently used; (4) access to the site; (5) the physical condition of the site; (6) the tour and interpretive program; (7) administration of the site; and (8) visitor information related to the site. The researchers personally toured the historical sites, interviewed the administrators and/or site staff, and obtained any relevant collateral material and photographic color slides.

A total of 143 site variables were analyzed utilizing descriptive statistical procedures including mean and frequency distribution. This analysis allowed the authors to then compare each specific site to an "industry average" and better determine the future potential of that specific site. An additional benefit of this step resulted in the generation of a series of recommendations for historical sites across-the-board.

During the statistical analysis, six individual sites were dropped and resulted in the total number of sites equalling 51. The six sites were dropped because the information obtained from the administrator
during the interview was for the total of seven sites and reported in its aggregate form. As a result, the authors decided to drop six of the seven sites in an attempt to remove as much of the bias as possible. (The six sites dropped from the statistical analysis were: #30, 31, 33, 34, 35, and 36.)

Each of the sites were then individually analyzed in an attempt to make site-specific recommendations concerning the physical, marketing, and interpretive improvements required. Last, a historical site "growth-management" matrix was constructed to assist Rhode Island Historical Preservation Commission in making any resource allocation decisions.

The growth-management matrix developed within this study plots the authors' perceptions of each site's potential as a viable tourism attraction and its relative financial need to become a viable tourism attraction. It is based upon the more-familiar importance-performance analysis method which examines both the perceived importance and performance of certain attributes. The results can then be plotted on an action grid which can be useful in developing strategies (7).

LIMITATIONS OF THE STUDY

The first and major limitation of the study was the limited number of sites which could actually be included within the study. Given the resource constraints, a comprehensive site analysis and industry-level analysis was completed with information obtained from a relatively small proportion of Rhode Island sites. The interviews with representatives from each site, as well as the authors' knowledge and experience in both historical- and tourism-related disciplines formed the basis of the attempts at forecasting the future potential of the selected sites within the Rhode Island tourism industry. Any final recommendation concerning the allocation of financial resources to specific sites may warrant further investigation.

An additional limitation includes the scope of the study. Unfortunately, the study only involves interviews with administrators and their staff as well as site analyses conducted by the interviewers at the selected historical sites. While a great deal of information was obtained with respect to the potential for tourism at each site, a survey of actual site visitors would have been very useful in aiding the authors' ability to forecast future demand and was subsequently recommended.

RESULTS

The following section summarizes the major findings of the study.
CLASSIFICATION OF THE HISTORICAL SITES

The majority of the sites use a variety of approaches in their interpretation of their site, including antiquarian, historical, and cultural. The type of attraction which each site stated that they considered themselves to be most was that of an historical museum (86%), architectural features (86%), and restoration (83%). Over 80% of the sites are included within the National Register of Historic Places.

MARKETING OF THE HISTORICAL SITES

The study revealed that the most popular target market which the sites are attempting to attract are residents, followed closely by tourists, tour groups, and school-age children. With respect to specific marketing activities conducted in order to attract those markets identified, seventy-six percent of the sites indicated that they were not represented at any travel show and only one-half indicated that their site was included on any group travel tour. Historic sites spend, on average, $8,500 on direct mail marketing, $7,500 on brochures, and only $170 on cooperative advertising efforts. Only 58% of the sites provide a directional map on their brochure.

ACCESS TO THE HISTORICAL SITES

Parking at the historical sites ranged considerably from site-to-site and included on-street and off-street parking. Some of the parking surfaces were judged to be inadequate and in need of repair. In addition, during peak seasons additional parking is often required. Sixty percent of the historical sites visited are accessible through public transportation. Sixty-five percent of the sites were judged to have adequate turn-around space for tour buses.

PHYSICAL ATTRIBUTES OF THE HISTORICAL SITES

Less than 50% of the historic sites are accessible for each of the following handicaps: sight, hearing, and physical. The average year in which the original building on the site was constructed was 1799, and ranged from 1668 to 1984. Seventy percent of the sites have had alterations made. Over 70% of the sites provide benches for visitors to rest upon, 53% provide an area for picnicking, and less than 50% provide trash receptacles. Seventy-five percent of the sites provide public restroom facilities. Less than 10% have a vending machine on the premises and only 14% have public telephones. Over 90% of the facilities received a very satisfactory rating by the research team for their housekeeping and cleanliness.
The majority of the sites present their interpretive program through living history and include visitor participation and interaction. Re-enactments and folklore activities are used the least. Ninety-two percent of the sites were judged to have an adequate waiting area for tours prior to their commencement and 76% designed their tour for the ease of flow for large groups. All of the sites received a very satisfactory rating for their tour guides' guest relations skills.

Most sites analyzed in the study are only open seasonally (late Spring, Summer, and early Fall) and the hours of operation vary tremendously. Only 35% of the sites are open on Mondays, 55% on Tuesdays, 57% on Wednesdays, 59% on Thursdays, 55% on Fridays, 71% on Saturdays, and 63% on Sundays. About 50% of sites require appointments and 88% of the sites can handle large groups of visitors at any time throughout the day. Seventy-eight percent of the sites require large groups to be pre-scheduled. Only 65% of the sites collect a fee for their tour and that fee averaged only $2.50. Over 50% do offer a group discount. Future plans for the tours at all the sites were split evenly between expanding the tour or keeping at current levels.

Only 33% of the sites have a gift shop and most of those are considered to be a profit center for the site. The majority (70%) of the tours are guided by volunteers. Some of these guides even serve as language interpreters. The interpretive program is most often told verbally and augmented with appropriate literature and sometimes audio-visual aids. Only 60% of the sites offer a special children's program or event. Over 90% of the guides were judged to be familiar with area attractions.

The process of preservation plays a large role within the interpretive program. Over 90% responded that their tours cover why the site was preserved, how it was saved, who saved it, and what restoration, if any, has occurred.

ADMINISTRATION OF THE HISTORICAL SITES

Eighty-eight percent of the historical sites examined in this study are publicly owned and operated by primary non-profit organizations. Only 63% receive outside funding from either federal (27%), state (39%), and other (25%) sources. Ninety-two percent of the sites indicated that tourism was a desired vehicle for increased revenue and only 16% indicated that there were limitations to an increase in visitation.

The average number of members within the organizations which operate or own the historical sites was 826 and ranged from a low of only 4 members to a high of 3,400 members. Seventy-three percent of these organizations collect membership dues, 55% conduct other fund-raising activities, ad 59% receive some endowments.
INFORMATION ON VISITORS TO THE HISTORICAL SITES

Over 90% of the sites keep records of their visitors but only 88% of those keep such records by name and address. About 50% of the visitors are from out-of-state, 49% from in-state, and the remaining 1% are from other countries. Only 16% of the visitors to these sites are from a group tour package and 84% are individual visitors. May and August are the busiest months for visitation; January and February are the least. On average, there were 71,592 visitors at each site in 1988. However, some sites received as few as 10 visitors and some as many as 1.2 million. The majority (41%) of the sites indicted that 1988 visitation had increased from 1987 an average of 17%. Fifteen percent responded that visitation had decreased and 18% responded that visitation remained the same. Only 53% of the sites attempt to measure visitor response to the interpretive presentation and only 35% use comment cards.

GENERAL RECOMMENDATIONS

Based upon the personal interviews and site inspections, the following general recommendations were made by the researchers. (This list only contains some of the major recommendations.)

(1) Additional sites should be surveyed. This study only examined 50 sites. The remaining 150 sites should also be studied. It was recommended that a survey of 50 sites be conducted annually over the next three years.

(2) A state-wide training seminar should be conducted to provide operators of the historic sites with much needed skills in strategic marketing, effective interpretation, and guest relations.

(3) A comprehensive, four-color guide to historic sites in Rhode Island needs to be developed.

(4) A state-supported fund should be established and used for seed money for development and improvement projects relating to the historic sites.

(5) Every site should actively seek to attract the motor coach tour market.

(6) A comprehensive state-wide marketing and economic impact study should be conducted. Information on the historical site visitor would be beneficial to the site operators for marketing and management purposes. In addition, estimating how much these sites generate (directly and indirectly) in sales revenues, taxes, and jobs would help identify more clearly the importance of the sites to the state's economy.

32
In order to assist the Rhode Island Historical Preservation Commission in its attempt to assess the opportunities and constraints of individual historical sites as viable tourism attractions, a growth-management matrix was constructed. The growth-management matrix plots two variables: estimated tourism potential of a specific site and its relative financial need. These two variables were selected by the researchers because they are the best available indicators of the site's ability to capitalize upon the state's growing tourism-related demand.

In order to determine each site's perceived tourism potential, the researchers examined responses to several specific questions obtained through the site visits and interviews with site managers. Included in assessing tourism potential were the site's maximum capacity; the hours of operation, including the days of the week and months of the year open; any fees charged; the guides' knowledge of surrounding attractions; the proximity of the site to surrounding attractions and facilities; whether tourism was explicitly stated by the managers as being a desired vehicle for increased funding; any limitations to increased visitation at the site; the impact of increased visitation upon the site and the surrounding area; existing visitor demand, including the in-state and out-of-state composition; and any fluctuations in existing demand. For assessing each site's financial need, the researchers examined responses to questions addressing such items as the site's receiving any outside funding assistance and its source; the number of members within their site-related organization; fundraising activities; endowments; plans to either expand the interpretive program or keep it at existing levels; as well as the existence and profitability of a site gift shop.

The researchers then rated each site on a scale from one to five for each site's perceived tourism potential and financial need. A five point scale was used because it allows for easy differentiation from an "average" site. For tourism potential, a rating of one was equated with little or no potential, two with less-than-average potential, three with average tourism potential, four with above average potential, and five with great potential as a tourism attraction. For rating each site's relative financial need, the researchers assigned a score of one to that site which had little or no relative financial need, two was equated with less-than-average financial need, three with average financial need, four with above average relative financial need, and a score of five was equated with great financial need.

With respect to tourism potential, the majority (82%) of the sites received a rating of above average or having great potential (Table 2). The majority of the sites (28%), however, were rated by the researchers as having little or no financial need. This was closely followed by 23% of the sites ranked as having average financial need and 22% as having above average financial need. Indeed, only 12% of the sites were ranked by the researchers as having great financial need (Table 3).

Once the scores were assigned for each site they were plotted upon the resulting historical site growth-management matrix. This growth-management matrix has tourism potential on the horizontal axis and
financial need upon the vertical axis. Since a five-point scale was used for both perceived tourism potential and financial need, a 5x5 matrix containing 25 cells was generated (Figure 1). Historic site number 37, for example, received a score of 1 for financial need and 2 for tourism potential. It is then placed in the row labeled 1 (financial need) and the column labeled 2 (tourism potential).

The 25-cell matrix can be divided into four quadrants using the "average" ranking category for financial need (row 3) and tourism potential (column 3). As illustrated in Figure 2, the bold lines outline the "average" column and row and four quadrants can now be easily seen. The resulting quadrants containing the historical sites can then be utilized by the Rhode Island Historical Preservation Commission to quickly identify those historical sites with greater than average tourism potential and greater than average financial need.

As noted above, over 80% of the sites received a rating for tourism potential of about average or great. In addition, the researchers rated many (28%) sites as having little financial need. Given the potential for bias in assigning the scores for each historical site, the rankings should be "normalized" by dividing the growth-management matrix into quadrants using the mean ranking awarded for both tourism potential (4.2) and financial need (2.7). These means form the midpoint for constructing the new "average" column and row, which are shown in Figure 3. As a result of "normalizing" the matrix to account for any positive or negative bias on the part of the researchers, the matrix quadrants change considerably. It can now be seen that the upper right-hand quadrant (high financial need and high tourism potential) is more narrow with respect to tourism potential and much longer with respect to financial need. Accordingly, many of these sites previously included are now excluded and three new sites emerge. As compared to the results illustrated in Figure 2, only nine sites now are perceived by the researchers as having relatively high tourism potential and financial need.

LIMITATIONS OF THE STUDY

The first and major limitation of the study was the limited number of sites which could actually be included within the study. Given the resource constraints, a comprehensive site analysis and industry-level analysis was completed with information obtained from a relatively small proportion of Rhode Island sites. The interviews with representatives from each site, as well as the author's knowledge and experience in both historical- and tourism-related disciplines formed the basis of the attempts at forecasting the future potential of the selected sites within the Rhode Island tourism industry. Any final recommendation concerning the allocation of financial resources to specific sites may warrant further investigation.

An additional limitation includes the scope of the study. Unfortunately, the study only involves interviews with administrators and their staff as well as site analyses conducted by the interviewers at the selected historical sites. While a great deal of information was
obtained with respect to the potential for tourism at each site, a survey of actual site visitors would have been very useful in aiding the author's ability to forecast future demand and was subsequently recommended.

CONCLUSIONS

One of the major contributions of this study was the creation of a systematic process of analyzing the tourism potential of individual historic sites. The first step when attempting to evaluate the relative attractiveness of any historic site is the identification of critical variables such as maximum visitor capacity, access to major transportation routes, marketing methods utilized, etc. The questionnaire developed and implemented in this study is an example of how to accomplish this goal. Since the instrument was utilized at each site, it affords a unique opportunity to compare similar variables across all the historic sites surveyed. This process has been adopted by the Rhode Island Historic Preservation Commission and will be used in assessing the tourism potential of the remaining 150 sites.

The end result of implementing such a systematic process yields a complete inventory of historic sites and the identification of which of these sites have tourism potential. As a result of this study, the Rhode Island Historic Preservation Commission has a detailed inventory of 50 historic sites located throughout the state and knows which of those 50 sites have the most tourism potential. This collection of information has already been included by one of the regional tourism promotional organizations (Blackstone Valley Tourism Council) in the creation of its comprehensive community plan. In addition, it has been recommended that other regional tourism promotional organizations also include the inventory in their comprehensive community plans in a similar manner.

Another major result of this study was the creation of the "growth-management" matrix. It is well-recognized that the entire New England region is facing an economic recession and that already scarce tax dollars are becoming even more scarce. Public agencies such as the Rhode Island Historic Preservation Commission are charged with the management and distribution of increasingly smaller budgets and greater requests for financial assistance. As a result, these public organizations must develop and implement sound policies if they are to satisfy their constituencies as well as stay within their budgets. One way to assist such agencies is by conducting extensive research designed to assess the relative financial need and potential tourism attractiveness of historic sites as was completed in this study.

By constructing the historic site "growth-management" matrix, this study has taken the next step and provided the Historic Preservation Commission with a tool which can be used within the decision-making process. Its function is to help systematically narrow down the range of viable investments to those most financially qualified and likely to return the highest investment through increased visitation. The "growth-management" matrix identified nine historic sites which were perceived as having high tourism potential and financial need. While
this process is certainly subject to a given degree of bias it can be reduced by the process of "normalizing," which takes such bias into consideration.

This results of this study have also helped build the case for a separate marketing-oriented organization which would focus on the promotion historical sites as tourism attractions. Subsequent studies provide additional evidence that no existing tourism organization actively promotes these historical sites.

Finally, this study has shown that further research into the role of historical attractions within the tourism industry is sorely needed. A comprehensive economic impact study of these historical sites as tourism attractions needs to be conducted to determine their net contribution to the state's economy. Marketing studies need to be conducted for each site in order to build successful marketing programs. The use of the historical site "growth-management" matrix as a management tool also needs more research and testing. Unfortunately, in times of scarce government dollars, research programs such as those proposed are often the first items dropped from public agency budgets. The potential benefits from research projects such as those listed, however, may prove to be extremely important, particularly for the Rhode Island tourism industry and the individual historic sites.

REFERENCES


Table 1

Travel Motivators

* physical
* interpersonal
* status and prestige
* cultural

Table 2

Tourism Potential

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>12.3</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>36.8</td>
</tr>
<tr>
<td>5</td>
<td>26</td>
<td>45.6</td>
</tr>
</tbody>
</table>
Table 3

Financial Need

<table>
<thead>
<tr>
<th>Rating</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>28.1</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>15.8</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>22.8</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>21.1</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>12.3</td>
</tr>
</tbody>
</table>
Table 4

Major Recommendations

* survey remaining sites
* sponsor a state-wide training seminar
* develop a promotional guide to historic sites
* create seed money for development and improvement projects
* encourage sites to target the motor coach market
* conduct a state-wide marketing and economic impact study
Figure 1
Historic Site Growth-Management Matrix

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tourism Potential

Financial Need

1  2  3  4  5

Historic Site Growth-Management Matrix

1  2  3  4  5

Tourism Potential
Figure 2
Historic Site Growth-Management Matrix

<table>
<thead>
<tr>
<th>Financial Need</th>
<th>Tourism Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>55</td>
<td>42</td>
<td>46</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>49</td>
<td>7</td>
<td>13</td>
<td>35</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>24</td>
<td>5</td>
<td>13</td>
<td>57</td>
</tr>
</tbody>
</table>
Figure 3
Normalized Growth-Management Matrix

Financial Need

Tourism Potential

5
4
3
2
1

1 2 3 4 5

57 49
65
42
54
29
17
21
19
9
3

54 41 22
26 8 5 3
48 63
45 32
48 60 1

52 36 43
14 51
38 12
18 2

10 24
27 8 28 30
47 23 38 31
16 34 44 33