Félix Candela Papers, 1767-2007 (bulk 1924-1997): Finding Aid

Summary Information

Call number: C1455
Repository: Princeton University Library. Special Collections. Manuscripts Division
One Washington Road Princeton, New Jersey 08544 USA
Size: 32.0 linear feet
37 archival boxes
Language(s) of Material: Spanish or Castilian
English
Abstract: Félix Candela was an influential Spanish-born architect and structural engineer, known for his innovative designs using reinforced thin-shell concrete to create the highly efficient hyperbolic paraboloid shapes used in his construction of many well-known churches, factories, and other buildings, primarily in and around Mexico City in the mid-20th century. The collection consists of professional and personal papers, including photographic files documenting his projects, architectural drawings and designs, drafts of lectures and published papers, correspondence, appointment books, student notebooks and artwork, personal photographs and albums, awards and certificates, architectural reference books and magazines, construction materials catalogs, and clippings on various
architecture and design topics and on Candela's own work.

Location: This collection is stored partially onsite (photographic materials and architectural drawings, boxes 1-11 and 14) at Firestone Library and partially offsite (boxes 12-13, 15-37) at the ReCAP facility.
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**Contents List**

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Félix Candela (1910-1997) was an influential Spanish-born architect, structural engineer, and builder, known for his innovative designs using reinforced thin-shell concrete to create the highly efficient hyperbolic paraboloid shapes used in his construction of many well-known churches, factories, and other buildings, primarily in and around Mexico City in the mid-20th century. His work is known for its unique shapes and forms as well as its highly efficient use of readily available materials. After gaining recognition for his early work in Mexico as a designer and master builder, Candela went on to serve as a structural consultant for projects around the world.

Born in Spain, Candela studied architecture at La Escuela Técnica Superior de Arquitectura de Madrid from 1927 to 1935. Just as he was leaving to pursue further formal education in Germany, his studies were quickly interrupted by the start of the Spanish Civil War in 1936, when Candela returned to Spain to fight with the Spanish Republic against Francisco Franco and the Nationalists. During the war, he gained pragmatic construction experience as the Republic's Captain of Engineers, working to restore buildings for military use. Candela was imprisoned in a internment camp in Perpignan, France, until the end of the war in 1939, at which point he moved to Mexico as an exile and adopted Mexican citizenship in 1941.

After gaining experience working as an architect, engineer, and builder of traditional beam and column construction in Mexico in the 1940s, Candela started his own company, Cubiertas Ala S.A., along with his siblings, Antonio and Julia Candela, in 1950. Their company, which specialized in reinforced concrete shell and laminar structures, flourished in the decades following the Mexican industrial boom, leading Candela to build over 300 works and participate in over 900 projects. Candela's 1950 design for the Pabellón de Rayos Cósmicos on the Universidad Nacional Autónoma de México campus was the first to employ his novel hypar shell structure, and remains one of his best-known works. Although he never formally studied shell design and construction, Candela developed his expertise in this area through self-education and hands-on experimentation.

Throughout the 1950s and 1960s, Candela built his reputation by designing and building many structures utilizing variations on the hyperbolic paraboloid shape, including the Iglesia de la Medalla Milagrosa (1953), Capilla Lomas de Cuernavaca (1958), Los Manantiales Restaurant at Xochimilco (1958), and the Bacardí Rum Factory in Cuautitlán (1960). His design was also chosen for the Sports Palace used in the 1968 Olympic Games in Mexico City. Beginning in the 1950s, Candela also made a point of regularly publishing papers and lecturing publicly at conferences and events around the world, arguing fervently against traditional means of structural analysis. His professional contributions afforded him a role as a leader in the field of thin-shell construction. Candela began working as a professor and academic lecturer in the early 1950s, including at the Universidad Nacional Autónoma de México (1953-1970), Harvard University (1961-1962), and the University of Illinois (1971-1978). He resided in the United States permanently after 1971, where he eventually became a citizen in 1978. He died in Raleigh, North Carolina in 1997.

The collection documents the professional and personal activities of Félix Candela over much of his lifetime and contains a diversity of materials ranging from his childhood photographs from the
1910s and notes from his school days in the early 1930s in Madrid, to photographs, architectural drawings, writings, and correspondence, representing his life and professional contributions to the field of architecture from 1950 until his death in 1997.

The papers contain a wide range of photographic media documenting Candela's buildings under construction and following completion, architectural drawings, plans, calculations, and notes for some of his famous churches, stadiums, and factories, typescripts, drafts, and clippings of lectures and published articles on various topics related to structural analysis and design, a group of professional and personal correspondence, as well as travel itineraries and receipts related to his participation in international architecture conferences and gatherings. Also included are Candela's appointment books and personal expense ledgers, student artwork, college course notebooks and study guides, awards and certificates honoring his work, personal and travel photographs, identification papers and official documents, reference files and clippings on different architectural styles and topics, clippings of writings by and about Candela, and several VHS tapes regarding his work.

Rather than serving as traditional project or business files, such as his Cubiertas Ala office files, which are held elsewhere, these papers provide a broader view of Candela's personal life and practice of architecture, including ample photographic documentation of his buildings and major structural achievements using hypars, fans, umbrellas, and other unique shapes. Also represented here are materials related to Candela's role as a lecturer and proponent of efficient thin-shell design at international architecture conferences and colleges, as well as materials demonstrating the relationship between his education and the trajectory of his professional career. The original arrangement of Candela's files was preserved when it was discernable, and often observes thematic relationships rather than strict chronological or other practical divisions.

Researchers should be aware that, in keeping with the bilingual nature of materials in this collection, Candela labeled some of his files in Spanish and others in English. Original folder titles were transcribed in the language in which they were found, and thus reflect this variation. Occasionally, a folder with a title in Spanish is followed by another folder with the same title in English. This practice reflects original divisions of some materials by language, and reflects Candela's international practice. When no original file labels were present, titles were generally supplied in English.

Access and Use

Access

This collection is stored partially onsite (photographic materials and architectural drawings, boxes 1-11 and 14) at Firestone Library and partially offsite (boxes 12-13, 15-37) at the ReCAP facility. Please consult with the Special Collections about having the collection recalled to Firestone Library for your use. This process normally requires 48-72 hours notice.

This collection is open for research.

Restrictions on Use and Copyright Information

Single photocopies may be made for research purposes. No further photoduplication of copies of material in the collection can be made when Princeton University Library does not own the original. Inquiries regarding publishing material from the collection should be directed to RBSC Public Services staff at rbsc@princeton.edu. The Trustees of Princeton University hold the copyright for materials in this collection that were created by Félix Candela.
Acquisition and Appraisal

Custodial History

Prior to their move to the Special Collections, the Félix Candela Papers were housed at the Department of Civil and Environmental Engineering, where they were used as research materials for Maria Garlock and David Billington’s book, Félix Candela: Engineer, Builder, Structural Artist (Princeton University Art Museum, 2008). Maria Garlock facilitated Dorothy Candela’s donation of these materials to Princeton University beginning in 2006-2007, as an addition to what was then referred to as the Maillart Archives.

Provenance and Acquisition

Gift of Dorothy Candela in 2006-2007, as confirmed in writing by her daughter, Jane Struble, in 2013 (AM 2014-6).

Appraisal

All materials were retained during 2014 processing, with the exception of a blank internal hard drive, which was discarded.

Related Materials

Related Archival Material

Additional architectural records and papers of Félix Candela, including his office files from Cubiertas Ala, are held in the Department of Drawings and Archives at the Avery Architecture and Fine Arts Library at Columbia University.

Processing and Other Information

Preferred Citation

Identification of specific item; Date (if known); Félix Candela Papers, Box and Folder Number; Manuscripts Division, Special Collections, Princeton University Library.

Encoding

This finding aid was produced using the Archivists' Toolkit 2014-08-19T13:02-0400

Descriptive Rules Used

Finding aid content adheres to that prescribed by Describing Archives: A Content Standard.

Subject Headings

• Architects -- Mexico -- 20th century.
• Architectural design -- Mexico -- 20th century.
• Architecture -- Mexico -- 20th century -- Designs and plans.
• Concrete construction -- Study and teaching -- 20th century.
• Engineers -- Mexico -- 20th century.
• Flexible structures -- 20th century.
• Roofs, Shell -- 20th century.
• Shells (Engineering) -- 20th century.
• Structural engineering -- Mexico -- 20th century.
• Architectural drawings (visual works) -- 20th century.
• Correspondence -- 20th century.
• Manuscripts--20th century.
• Notebooks -- 20th century.
• Photographs -- 20th century.
• Slides (photographs) -- 20th century.
• Architecture
• Latin American studies

Arrangement: This series is arranged into three subseries: Conceptual Files, Slides and Negatives, and Photographs for Félix Candela: Engineer, Builder, Structural Artist.

Description: This series contains materials related to Félix Candela's professional work as an architect, structural engineer, and master builder, both for his own company and as a technical advisor for other firms. Included are many black-and-white and color photographs, slides, negatives, and transparencies showing Candela's finished structures and works under construction, along with some architectural drawings, sketches, and designs, and a smaller quantity of maps, calculations, and project files pertaining to specific buildings. Rather than serving as traditional architectural project files, the materials in this series document the design, construction, and completed forms of many of Candela's buildings, primarily through photographs, and secondarily, through Candela's architectural drawings and specifications, which provide insight into his design process. This series includes an original run of conceptual files on specific buildings, arranged by architectural feature or theme, that contain both photographic materials and architectural drawings. Also present is a group of slides and negatives of Candela's work, along with microfilms of technical articles related to his projects, that he organized separately by medium, and additionally, a group of Candela's photographic materials, which were later arranged based on their use for research and publication in a book by Maria Garlock and David Billington, Félix Candela: Engineer, Builder, Structural Artist (Princeton University Art Museum, 2008). These divisions were preserved in order to maintain contextual evidence regarding use and original organization. Researchers looking for photographs of a specific building should note that relevant materials may therefore be present in all three subseries.

Candela's architecture practice focused on the design of roofs and enclosures for buildings. His drawings and papers reflect this practice in that they demonstrate the overall design principles and geometrical logic of the building, rather than provide detailed construction sets. Similarly, photographs of Candela's buildings under construction tend to depict the erection of the shell, along with any related scaffolding and concrete pouring, rather than any work on the interior of the building. While photographs and other materials related to most of Candela's major works and many of his smaller projects are included in this series, some of the most thoroughly represented include La Milagrosa (Iglesia de la Medalla de la Virgen Milagrosa), Los Manantiales Restaurant at Xochimilco, Capilla Abierta Lomas de Cuernavaca, the Bacardí Rum Factory, Palacio de los Deportes for the Mexico City Olympic Games, Bernabéu Real Madrid Stadium, and L'Oceanogràfic, an oceanarium and restaurant in Valencia.

Subseries 1A: Conceptual Files, 1935-1997

Arrangement: Arrangement follows original order, wherein files on individual building projects are organized into groups based on an architectural feature or theme, following a Roman numeral outline.

Description: This subseries contains photographs, negatives, transparencies, architectural drawings and reproductions, sketches, and calculations, along with occasional project files,
notes, and correspondence regarding a wide range of Félix Candela's building and design projects. Files on specific building projects are organized into twelve conceptual categories based on a topic, generally a specific architectural feature or theme, following their original organizational logic. Rather than providing complete project files, these files primarily visually document finished projects and projects under construction. Contents are mainly photographic in nature, accompanied by architectural drawings for some projects, and less often, paper files. Accordingly, materials in individual files are primarily photographic, unless otherwise noted at the file level.

While materials are listed in their intellectual order, they are boxed by size. Researchers should note that they may need to consult more than one box in order to view all materials related to a particular project. Oversize architectural drawings were stored flat in mylar when possible. Occasionally, large rolled architectural drawings that are too large or curled to store flat have been enclosed in mylar, wrapped around an archival tube for protection, and secured by a piece of cloth tape tied in a simple bow. Researchers consulting these drawings should take care to preserve this arrangement when returning these items to their containers.

0. Proyectos y Obras Anteriores a los Cascarones y Cubiertas ALA, 1935-1945

Physical Characteristics: Two photograph albums

Description: Albums include photographs of early projects, some completed and others under construction, including P.F.C Plaza de Toros, Hospital San Vicente, Hotel Catedral, as well as construction projects in Tepotzotlán, Cuernavaca, Guamúchil, and others. Some personal and family photographs are also included. Also present is a photocopied list of works that Candela included conceptually within this file group.

I. Primeros Intentos: Bóvedas, Conoides, Cúpulas, circa 1950s

Description: Includes a photocopied list of works that Candela included conceptually within this file group. It should be noted that not all works listed are represented in the collection.

I. Primeros Intentos: Fábrica de Fernández, Piñero Deportes, 1951

Physical Characteristics: Oversize photographs

II. Naves Con Paraguas: Almacenes Río, 1954

Description: Includes notes about the organization and contents of "II. Naves Con Paraguas".

II. Naves Con Paraguas: Encofrados de Tubo, Construcción, 1955

II. Naves Con Paraguas: Mueblería Frey, 1953

II. Naves Con Paraguas: Great Southwest Co. Dallas, Texas (Insignia), 1958

II. Naves Con Paraguas: Fábrica Herdez, circa 1955-1959

II. Naves Con Paraguas: Metro San Lázaro, circa 1966-1969
II. Naves Con Paraguas: Zapatas con Paraguas Invertidas, undated  
Box: 2 Folder: 9

II. Naves Con Paraguas: Viviendas Económicas en Monterrey, Paraguas Invertidos, circa 1955-1959  
Box: 2 Folder: 10

II. Naves Con Paraguas: Paraguas Otras Obras Clasificado y No Clasificado, circa 1955-1959  
Box: 2 Folder: 11

II. Naves Con Paraguas: Paraguas Cimbra Metálica, 1979-1987  
Description: Includes notes, drawings, and Xerox copies of photographs related to the feasibility of using the umbrella structure for buildings in Saudi Arabia.  
Box: 2 Folder: 12

II. Naves Con Paraguas: Dibujos Paraguas y Paraguas Experimental, circa 1987  
Box: 2 Folder: 13

II. Naves Con Paraguas: Mercado Jamaica, circa 1956-1957  
Box: 2 Folder: 14

II. Naves Con Paraguas: Almacén Cabero, 1956  
Box: 2 Folder: 15

III. Otras Variaciones a Paraguas y Abanicos: La Milagrosa, 1955  
Description: Includes notes about the organization and contents of "III. Otras Variaciones a Paraguas y Abanicos."  
Box: 4 Folder: 1

III. Otras Variaciones a Paraguas y Abanicos: La Milagrosa Architectural Plans and Drawings, 1967  
Physical Characteristics: 3 architectural drawings  
Description: Includes 3 small architectural drawings for the church, including a cross section view, a birds-eye view, and a detailed view of umbrella support structures.  
Box: 5 Item: 1-3

III. Otras Variaciones a Paraguas y Abanicos: La Milagrosa Architectural Plans and Drawings, 1967  
Physical Characteristics: 3 architectural drawings  
Description: Includes 3 large architectural drawings showing a longitudinal section view, the interior design of the church, and the building's facade.  
Box: 2 Folder: 17

III. Otras Variaciones a Paraguas y Abanicos: Iglesia Champagnat en Guatemala, circa 1950s  
Box: 2 Folder: 18

III. Otras Variaciones a Paraguas y Abanicos: Entrada Laboratorios Ciba, undated  
Box: 2 Folder: 19

Box: 2 Folder: 20

III. Otras Variaciones a Paraguas y Abanicos: Band Shell Santa Fe, 1956  
Box: 2 Folder: 21

III. Otras Variaciones a Paraguas y Abanicos: Tequesquitengo Signpost, 1957  
Box: 2 Folder: 21
III. Otras Variaciones a Paraguas y Abanicos: Tequesquitengo Signpost, 1957
   Physical Characteristics: Oversize photographs

III. Otras Variaciones a Paraguas y Abanicos: Tequesquitengo Signpost Architectural Drawing, 1957
   Description: 1 architectural drawing

III. Otras Variaciones a Paraguas y Abanicos: Obra en Guatemala, undated


III. Otras Variaciones a Paraguas y Abanicos: Bazar y Fuente de Los Abanicos, undated

III. Otras Variaciones a Paraguas y Abanicos: Formwork for a Typical Umbrella, undated
   Physical Characteristics: 1 architectural drawing

IV. Bordes Rectos: El Altillo, 1955
   Description: Includes notes about the organization and contents of "IV. Bordes Rectos."

IV. Bordes Rectos: El Altillo, circa 1956-1958
   Physical Characteristics: Oversize photographs

IV. Bordes Rectos: San José Obrero, 1959

IV. Bordes Rectos: San José Obrero, 1959
   Physical Characteristics: Oversize photographs

IV. Bordes Rectos: Saint Vincent de Paul, 1958-1959

IV. Bordes Rectos: Saint Vicente de Paul, 1959
   Physical Characteristics: Oversize photographs

IV. Bordes Rectos: Iglesia Divina Providencia, 1966

IV. Bordes Rectos: Iglesia Colonia Obrera, circa 1955-1965

IV. Bordes Rectos: San Pedro Mártir, 1963

IV. Bordes Rectos: Guadalupe Madrid, 1962-1963

V. Bordes Curvos: Rayos Cósmicos, 1951
   Description: Includes notes on the organization and contents of "V. Bordes Curvos."

V. Bordes Curvos: Capilla Abierta Lomas de Cuernavaca, 1958-1959

V. Bordes Curvos: Capilla Abierta Lomas de Cuernavaca, 1958-1959
   Physical Characteristics: Oversize photographs
<table>
<thead>
<tr>
<th>Subseries 1A: Conceptual Files ... (Continued)</th>
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<tbody>
<tr>
<td>V. Bordes Curvos: Garaje Almada, circa 1955-1965</td>
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<tr>
<td>V. Bordes Curvos: Capilla en Guatemala (Bordes Curvos y Rectos), 1959</td>
</tr>
<tr>
<td>VI. Bóvedas Por Arista: Bolsa, 1955</td>
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<tr>
<td>Description: Includes notes about the organization and contents of &quot;VI. Bóvedas Por Arista.&quot;</td>
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<tr>
<td>VI. Bóvedas Por Arista: San Antonio de las Huertas, 1956</td>
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<tr>
<td>VI. Bóvedas Por Arista: San Antonio de las Huertas, 1956</td>
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<td>Physical Characteristics: Oversize photographs</td>
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<tr>
<td>VI. Bóvedas Por Arista: Jacaranda Night Club, Acapulco, 1957</td>
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<td>VI. Bóvedas Por Arista: Xochimilco Los Manantiales Restaurant, 1957-1958</td>
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<tr>
<td>VI. Bóvedas Por Arista: Xochimilco Los Manantiales Restaurant, 1957-1958</td>
</tr>
<tr>
<td>Physical Characteristics: Oversize photographs</td>
</tr>
<tr>
<td>VI. Bóvedas Por Arista: Bacardí, 1958</td>
</tr>
<tr>
<td>VI. Bóvedas Por Arista: Iglesia la Florida, 1961-1988</td>
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<tr>
<td>VI. Bóvedas Por Arista: Iglesia de la Florida Hypar Shell Roof Drawings, circa 1963</td>
</tr>
<tr>
<td>Physical Characteristics: 2 architectural drawings</td>
</tr>
<tr>
<td>Description: Includes two small preliminary sketches on tracing paper for the roof of the church.</td>
</tr>
<tr>
<td>VI. Bóvedas Por Arista: Iglesia de la Florida Hypar Shell Roof Drawings, circa 1963</td>
</tr>
<tr>
<td>Physical Characteristics: 2 architectural drawings</td>
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<tr>
<td>Description: Includes two large sketches on tracing paper.</td>
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<tr>
<td>VI. Bóvedas Por Arista: Oficinas Venta de Verde Valle, Guadalajara, 1959</td>
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<tr>
<td>VI. Bóvedas Por Arista: Oslo, 1962</td>
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<tr>
<td>VI. Bóvedas Por Arista: Mercado de la Merced, 1956-1957</td>
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<tr>
<td>VI. Bóvedas Por Arista: Rest y Cine en Hotel Casino de la Selva, 1956</td>
</tr>
<tr>
<td>VII. Otras Combinaciones de Hypars: Santa Mónica, 1966</td>
</tr>
<tr>
<td>Description: Includes notes about the contents and organization of &quot;VII. Otras Combinaciones de Hypars.&quot;</td>
</tr>
<tr>
<td>VII. Otras Combinaciones de Hypars: Santa Mónica, 1966</td>
</tr>
<tr>
<td>Physical Characteristics: Oversize photograph</td>
</tr>
<tr>
<td>VII. Otras Combinaciones de Hypars: San Antonio de Padua, Xotepingo, circa 1960s</td>
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<td>Subseries 1A: Conceptual Files ... (Continued)</td>
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<tr>
<td>VII. Otras Combinaciones de Hypars: Metro Balderas, circa 1960s</td>
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<tr>
<td>VII. Otras Combinaciones de Hypars: Estructura Abierta en Chapultepec (Violin), undated</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Notes, 1966-1968</td>
</tr>
<tr>
<td>Description: Contains empty folders with notes about the contents and organization of &quot;VIII. Palacio de Los Deportes.&quot;</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Original Sketch, 1966-1968</td>
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<tr>
<td>VIII. Palacio de Los Deportes: Concurso Plano I, 1966-1968</td>
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<td>VIII. Palacio de Los Deportes: Concurso Plano III, 1966-1968</td>
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<td>VIII. Palacio de Los Deportes: Concurso Plano IV, 1966-1968</td>
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<td>VIII. Palacio de Los Deportes: Concurso Plano V, 1966-1968</td>
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<tr>
<td>VIII. Palacio de Los Deportes: Concurso Plano VI, 1966-1968</td>
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<tr>
<td>VIII. Palacio de Los Deportes: Concurso Plano IX, 1966-1968</td>
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<tr>
<td>VIII. Palacio de Los Deportes: Concurso Plano, 1966-1968</td>
</tr>
<tr>
<td>Physical Characteristics: Oversize architectural plans</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Photographs of Model, 1966-1968</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Miscellaneous, 1966-1968</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Copias de Planos De Proyecto, 1967</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Obra Terminada, 1968</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Fotos Interiores, 1968-1971</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Copper Roof, 1968 May-August</td>
</tr>
<tr>
<td>Description: Includes correspondence and writings regarding cleaning and coating methods for the copper roof of the Palacio de Los Deportes.</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Análisis Cubierto, 1966</td>
</tr>
<tr>
<td>Description: Includes early writings and calculations for the roof of the Palacio de Los Deportes.</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Contracts, 1966-1968</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Memoria Descriptiva, 1968</td>
</tr>
<tr>
<td>VIII. Palacio de Los Deportes: Facade Drawing, 1967-1968</td>
</tr>
</tbody>
</table>
Subseries 1A: Conceptual Files ... (Continued)

Physical Characteristics: 1 rolled architectural drawing

Description: Large architectural drawing showing the side view or facade of the Palacio de Los Deportes.

VIII. Palacio de Los Deportes: Roof Drawings, 1967-1968

Physical Characteristics: 3 architectural drawings

Description: Drawings in various levels of completion, from a simple sketch outline to a finished drawing in full color, depict the same view of the stadium roof.


Description: Includes notes on the organization and contents of "IX. Proyectos Hypar Como la Estructura Secundaria." The original folder contains an earlier name for this file group, "Proyetos No Construidos," which was later crossed out and replaced with the current title.

IX. Proyectos Hypar Como la Estructura Secundaria: Estadio Azteca, Calzada de Tlalpam Design, 1961

Physical Characteristics: Oversize architectural drawing

IX. Proyectos Hypar Como la Estructura Secundaria: Brown University, 1967

IX. Proyectos Hypar Como la Estructura Secundaria: Kuwait Competition, 1958-1969

IX. Proyectos Hypar Como la Estructura Secundaria: Isogonal Domes, undated

IX. Proyectos Hypar Como la Estructura Secundaria: Bernabéu Real Madrid Stadium, circa 1970-1973

Description: Second folder contains photocopies.

IX. Proyectos Hypar Como la Estructura Secundaria: Bernabéu Real Madrid Stadium Design, 1972-1973

Description: Oversize architectural design

IX. Proyectos Hypar Como la Estructura Secundaria: Bernabéu Real Madrid Stadium and Area Plans, 1973

Physical Characteristics: 2 oversize rolled architectural plans

IX. Proyectos Hypar Como la Estructura Secundaria: University of Riyadh Stadium, 1980-1983

IX. Proyectos Hypar Como la Estructura Secundaria: University of Riyadh Stadium Roof Plans, 1985

Physical Characteristics: 3 rolled architectural designs
Description: Plans for a sports stadium on the campus of Imam Mohammed Ben Saud Islamic University in Riyadh, Saudi Arabia.

IX. Proyectos Hypar Como la Estructura Secundaria: Estadios, 1982-1997
Description: Includes calculation tables and sketches.

Box: 6 Folder: 6

IX. Proyectos Hypar Como la Estructura Secundaria: Photocopies, undated

Box: 8 Folder: 7

X. Otras Cosas: Otras Estructuras Metálicas, Maquetas, Estadios, 1967-1977

Box: 8 Folder: 8

X. Otras Cosas: Commonwealth Games Stadium, 1973-1975
Description: Includes a copy of the "Commonwealth Games Management Financial Feasability Study", drafted by Associated Engineering Services Ltd. (Canada), along with related correspondence.

Box: 8 Folder: 9

X. Otras Cosas: Asociación Praeger-Kavanagh-Waterbury-Candela, 1971
Description: Includes correspondence, studies, calculations, and brochures regarding various stadium projects on which Candela worked in collaboration with the Praeger-Kavanagh-Waterbury firm, including materials regarding the Pontiac Metropolitan Stadium in Detroit.

Box: 8 Folder: 10-12

X. Otras Cosas: IDEA Center Yanbu, 1979-1984
Description: Includes project and personnel files.

Box: 8 Folder: 13-14

X. Otras Cosas: L'Oceanogràfic, circa 1997
Description: Includes calculations and photocopies of small drawings and sketches for the oceanarium and restaurant in the Ciutat de les Arts i de les Ciències in Valencia, Spain, along with some photographs and ephemera collected by Dorothy Candela following the structure's completion.

Box: 8 Folder: 15

Physical Characteristics: Architectural drawings and copies
Description: Includes 6 original small pencil sketches on tracing paper, along with several photocopies of sketches, computer-generated designs, and landscape drawings for the restaurant. Also contains one newspaper clipping that was originally stored with these materials.

Box: 4 Folder: 3-4

Physical Characteristics: Oversize architectural drawings and copies

Box: 5 Item: 16-28

X. Otras Cosas: Catenary Hypar Structures, 1972-1973
Description: Includes notes and photocopies of architectural plans for umbrella structures used as supports in various metro stations, including San Lázaro and Metro Candelaria.

Box: 8 Folder: 16
X. Otras Cosas: Photocopies, undated  Box: 8 Folder: 17

XI. Obras Otros Arquitectos Amigos y Colaboradores, 1966-1988  Box: 8 Folder: 18

Description: Includes images of works by Florentino del Pozo, Emilio Perez Piñero, Fernando Higueras, as well as a CD-ROM containing Higueras's curriculum vitae.

Some Examples of the Work of Félix Candela, 1954-1962  Box: 8 Folder: 19

Description: Contains captioned color photographs, showing various churches Candela designed in Mexico and the United States in the 1950s and 1960s.

Architectural Support Drawings, undated  Box: 5 Item: 29-30

Physical Characteristics: 2 architectural drawings

Unidentified Architectural Drawings, undated  Box: 4 Folder: 5

Physical Characteristics: 4 architectural drawings

Description: Includes two drawings of two different versions of a church, and two geometrical drawings of angles.

Map of Buildings by Cubiertas Ala in Mexico City, circa 1960s-1970s  Box: 36

Description: An additional Xerox copy of the map is located in Box 4, Folder 6.

Topographical Map of Madrid, 1986  Box: 5 Item: 31

Subseries 1B: Slides and Negatives, bulk 1950-1980, 1930s-2002

Arrangement: Numerically arranged slides are followed by slides arranged alphabetically by subject, then negatives arranged alphabetically by subject.

Description: This subseries includes slides and negatives documenting Candela's work that he arranged by medium type and kept separately from the photographic materials included in his conceptual files. The largest group of slides follows an original numerical order that corresponds to an accompanying inventory, which can be found in Box 8, Folder 20. Researchers should consult this inventory when searching the numerical slides for images of specific buildings. Although most slide sheets include pictures of several different buildings, their original order was maintained to preserve context. Also present are slides that Candela kept by topic, arranged alphabetically, as well as a group of photographic negatives of works by Candela and microfilmed copies of technical articles on various structural engineering concepts. Slides are primarily in color and often individually marked with their location, while negatives are mainly in black-and-white and occasionally in color. Negatives were often unmarked with any identifying information, although this information was preserved when it existed. While most slides and negatives were sleeved in archival preservers, a group of unsorted negatives that were too curled to be unrolled safely were stored separately in small bags within an artifact box. A small amount of nitrate film was segregated for cold storage.
It should be noted that slides used for research or publication in Félix Candela: Engineer, Builder, Structural Artist, which were physically removed from Candela's original arrangement, can be found in Subseries 1C.

**Numerical Slide Inventory, undated**

- **Description:** This inventory was received with the collection and provides a list of images that appear on each sheet of numerical slides.

**Numerical Slides: Sheet 1.2-1.10, 1950s-1980s**

**Numerical Slides: Sheet 1.11-1.20, 1950s-1980s**

**Numerical Slides: Sheet 1.21-1.30, 1950s-1980s**

**Numerical Slides: Sheet 1.32-1.40, 1950s-1980s**

**Numerical Slides: Sheet 1.41-1.50, 1950s-1980s**

**Numerical Slides: Sheet 1.51-1.60, 1950s-1980s**

**Numerical Slides: Sheet 1.61-1.70, 1950s-1980s**

**Numerical Slides: Sheet 1.71-1.80, 1950s-1980s**

**Numerical Slides: Sheet 1.81-1.90, 1950s-1980s**

**Numerical Slides: Sheet 1.91-1.100, 1950s-1980s**

**Numerical Slides: Sheet 1.101-1.110, 1950s-1980s**

**Numerical Slides: Sheet 1.111-1.120, 1950s-1980s**

**Numerical Slides: Sheet 1.121-1.130, 1950s-1980s**

**Numerical Slides: Sheet 1.131-1.140, 1950s-1980s**

**Numerical Slides: Sheet 1.141-1.150, 1950s-1980s**

**Numerical Slides: Sheet 1.151-1.160, 1950s-1980s**

**Numerical Slides: Sheet 1.161-1.170, 1950s-1980s**

**Numerical Slides: Sheet 1.171-1.182, 1950s-1980s**

**Numerical Slides, Sheet 2.1-2.10, 1950s-1980s**

**Numerical Slides, Sheet 2.11-2.20, 1950s-1980s**

**Favorite Slides, 1950-2002**

- **Description:** Includes a group of "favorite" slides numbered 1-247, showing Candela's professional work, along with 5 corresponding CD-ROMs from 2002 containing the digital image files. An accompanying inventory contains a caption for each slide. Slides missing from the sequence are labeled "Vacío."

**Alhambra Granada, Alcázar, Sevilla Slides, 1980**

**Alpujarra, Madrid Towers Slides, 1981**
Altillo Slides, undated Box: 10 Folder: 18
American Concrete Institute Conference, New York Slides, 1970 Box: 10 Folder: 19
Bernabéu Slides, circa 1973 Box: 10 Folder: 20-21
Brown University Model Garage Slides, 1968 June Box: 10 Folder: 22
Bulgaria Slides, 1983 June Box: 11 Folder: 1
Canadian Rockies Slides, undated Box: 11 Folder: 2
Chufas Slides, undated Box: 11 Folder: 3
CIBA Slides, undated Box: 11 Folder: 4
Colombia, Cali Slides, undated Box: 11 Folder: 5
Compostela Slides, 1975 Box: 11 Folder: 6
Cuba, Lonarias Slides, undated Box: 11 Folder: 7
Gaudí Slides, undated Box: 11 Folder: 8
Juan de Haro Slides, 1975 Box: 11 Folder: 9
Kuwait, Abu-Sitta Slides, 1966 June-1968 January Box: 11 Folder: 10
Lanzarote Slides, 1975 Box: 11 Folder: 11-12
Lecturing Slides, undated Box: 11 Folder: 13
Machu Picchu Slides, 1977 December Box: 11 Folder: 14
Marbella Project Slides, 1975 Box: 11 Folder: 15-16
Marché de Royan Slides, 1956 September Box: 11 Folder: 17
Mexico Travel and Mayan Ruins Slides, 1965 Box: 11 Folder: 18
Palacio Regulares, Steimbomer Slides, 1967 Box: 11 Folder: 19
Pasadena Slides, 1971 December Box: 11 Folder: 20
Pasadena Rose Bowl Parade Slides, 1971 December Box: 11 Folder: 21
Peru Slides, 1977 December Box: 11 Folder: 22
Peru, Lima Slides, 1977 Box: 11 Folder: 23
Peru, Pisac Marquet Slides, 1977 December Box: 11 Folder: 24
San Francisco Slides, 1969 Box: 11 Folder: 25
Sports Palace Helicopter Slides, 1968 Box: 11 Folder: 26
Sports Palace, Palacio Time and Copies Slides, 1968 Box: 11 Folder: 27
Sports Palace, Planos Entrega Slides, 1968 Box: 11 Folder: 28

Arrangement: Photographic materials are arranged topically, following the order in which they were arranged for the book.

Description: This subseries contains photographs, slides, and negatives that are arranged based on their use as research materials or published images for Félix Candela: Engineer, Builder, Structural Artist, a scholarly book on Candela and his work by Princeton professors Maria Garlock and David Billington, which was published by the Princeton University Art Museum in 2008, in conjunction with an exhibition of the same title that ran from October 10, 2008 through February 22, 2009. While materials in this subseries also depict the construction and completion of many of Candela's major building projects, their arrangement reflects their use in the book rather than their original order in Candela's personal papers. This subseries includes a group of images published in the book, arranged by its authors by chapter and marked with the corresponding figure number. Occasionally, images are accompanied by notes about their location in the original arrangement. Also present are topical photographic files based on major projects or types of structures, which formed focal points for the book.

Félix Candela Book Original Images, 1910s-2007

Description: Contains a set of slides, photographs, and negatives from Candela's collection of personal and professional photographs that were
Series 2: Talks and Articles, 1937-1997

Arrangement: This series is arranged into three file groups, following original order: Lectures and Papers, Travels, and Articles.

Description: This series includes drafts, typescripts, handwritten notes, and clippings of Candela's lectures and published papers, itineraries, receipts, and correspondence related to his international travels and participation in conferences worldwide, along with drafts and clippings of his published articles and translations. These materials, which Candela filed together, pertain broadly to his role as a leader in the field of architecture and as an advocate for innovative methods of thin-shell concrete design. Beginning in the 1950s, Candela became an outspoken proponent of a new type of structural analysis that de-emphasized overly complex mathematical calculations in favor of a more thorough theoretical understanding of forms based on principles of geometry. His public lectures and writings promoted an economy of design that was not divorced from aesthetic concerns, made strong arguments against

<table>
<thead>
<tr>
<th>Sub-Series</th>
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</thead>
<tbody>
<tr>
<td>Personal Photographs, 1910s-1990s</td>
<td>14 Folder: 3</td>
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<tr>
<td>Cosmic Rays Photographs, 1950-1952</td>
<td>14 Folder: 4</td>
</tr>
<tr>
<td>Description: Includes several negatives.</td>
<td></td>
</tr>
<tr>
<td>Xochimilco Photographs, 1957-1958</td>
<td>14 Folder: 5</td>
</tr>
<tr>
<td>Description: Includes some negatives and drawings.</td>
<td></td>
</tr>
<tr>
<td>Cuernavaca Photographs, 1958-1959</td>
<td>14 Folder: 6</td>
</tr>
<tr>
<td>Description: Includes several negatives.</td>
<td></td>
</tr>
<tr>
<td>Bacardí Photographs, 1959-1960</td>
<td>14 Folder: 7</td>
</tr>
<tr>
<td>Description: Includes several negatives.</td>
<td></td>
</tr>
<tr>
<td>Milagrosa Photographs, 1953-1955</td>
<td>14 Folder: 8</td>
</tr>
<tr>
<td>Description: Includes several slides, negatives, and drawings.</td>
<td></td>
</tr>
<tr>
<td>Umbrellas Photographs, circa 1954</td>
<td>14 Folder: 9</td>
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<tr>
<td>Special Structures Photographs, circa 1960s</td>
<td>14 Folder: 10</td>
</tr>
<tr>
<td>Candelaria Photographs, 1968-1969</td>
<td>14 Folder: 11</td>
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<tr>
<td>Description: Includes several negative strips.</td>
<td></td>
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<tr>
<td>Miscellaneous Photographs, circa 1950s-1960</td>
<td>14 Folder: 12</td>
</tr>
<tr>
<td>Scanned Slides, circa 1960s-1970s</td>
<td>14 Folder: 13-14</td>
</tr>
<tr>
<td>Scanned Negatives, circa 1952-1954</td>
<td>14 Folder: 15-16</td>
</tr>
</tbody>
</table>
classical structural analysis, and at the same time, attracted attention and publicity to his firm, Cubiertas Ala. Materials in this series reflect Candela's regular participation in international professional conferences, meetings, and publications related to architecture and structural design, and the viewpoints he promoted. Some writings and typescripts of Candela's lectures regarding topics tangential to architecture, such as politics and urban planning, are also included.

File groups in this series reflect Candela's original organization of the materials, and his original folder titles were retained when they were present. Researchers looking for drafts of articles by Candela should note that many of his published articles originated as lectures, and are filed as such, sometimes alongside clippings of the resultant article in print. It should also be noted that materials filed under travels often contain correspondence, receipts, and notes related to conferences and other events at which Candela presented papers, drafts of which are filed separately with his lectures and papers. While materials in this series are the most comprehensive for Candela's activities from 1950 through the early 1970s, some earlier and later materials are also present.


*Size: 3 archival boxes (1 partial)*

*Arrangement: Files are arranged chronologically, following their original order.*

*Description: This file group includes drafts, typescripts, and notes for lectures and papers given at various conferences and public events, and occasionally, clippings of later published versions of these works. Sometimes two files with the same title, one in English and one in Spanish, are present. This arrangement is original and reflects Candela's filing system, wherein he often kept his writings in Spanish separate from their English translations, and vice versa.*

Cubierta Prismática Arquitectura, Madrid, 1950  
Box: 14 Folder: 17

Conferencia en La Sociedad de Arquitectos, 1950 November  
Box: 14 Folder: 18

Considerations On Design of Reinforced Concrete Structures, American Concrete Institute, 1951  
Box: 14 Folder: 19

Description: Note on folder says "not published."

Hacia una Nueva Filosofía de las Estructuras, Congreso Científico México, 1951  
Box: 14 Folder: 20

Simple Concrete Shell Structure, American Concrete Institute, 1951 December  
Box: 14 Folder: 21

Texas Structural Engineering Conference, University of Texas, 1952  
Box: 14 Folder: 22-23

Espacios, 1953  
Box: 14 Folder: 24

Espacios: Cubiertas Laminares en la Arquitectura Industrial, 1953  
Box: 14 Folder: 25

Espacios: Cubiertas Laminares de Concreto para Naves Industriales, 1953  
Box: 14 Folder: 26
<table>
<thead>
<tr>
<th>Title</th>
<th>Box and Folder</th>
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<tbody>
<tr>
<td>Espacios: Hangares de Marsella, 1953</td>
<td>15 Folder: 1</td>
</tr>
<tr>
<td>Espacios: Divagaciones en Torno al Estilo, 1953</td>
<td>15 Folder: 2</td>
</tr>
<tr>
<td>Structural Digressions Around Style In Architecture, 1953</td>
<td>15 Folder: 3</td>
</tr>
<tr>
<td>Estereoestructuras Mexico, 1953</td>
<td>15 Folder: 4</td>
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<tr>
<td>Stereo-Structures, Progressive Architecture, 1954 June</td>
<td>15 Folder: 5</td>
</tr>
<tr>
<td>Structural Applications of Hyperbolic Paraboloids, 1953-1954</td>
<td>15 Folder: 6</td>
</tr>
<tr>
<td>Concrete Shell Footings, Progressive Architecture, 1954</td>
<td>15 Folder: 7</td>
</tr>
<tr>
<td>Warped Surfaces: The Hyperbolic Paraboloid, MIT, 1954</td>
<td>15 Folder: 8</td>
</tr>
<tr>
<td>The Shell as a Space Encloser, MIT, 1954</td>
<td>15 Folder: 9</td>
</tr>
<tr>
<td>Conference on Thin Concrete Shells Proceedings, MIT, 1954 June 21-23</td>
<td>15 Folder: 10</td>
</tr>
<tr>
<td>Hyperbolic Paraboloidical Shells, 1954</td>
<td>15 Folder: 11</td>
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<tr>
<td>La Estructura de Concreto en la Arquitectura, 1954</td>
<td>15 Folder: 12</td>
</tr>
<tr>
<td>Notes on the Design of Hyperbolic Paraboloid Concrete Shells, 1955</td>
<td>15 Folder: 13</td>
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<td>Encuesta Espacios, 1955</td>
<td>15 Folder: 14</td>
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<tr>
<td>La Milagrosa, 1955-1956</td>
<td>15 Folder: 15</td>
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<tr>
<td>El Cascarón como Delimitador de Espacio, MIT, 1955 July</td>
<td>15 Folder: 16</td>
</tr>
<tr>
<td>Dos Nuevas Iglesias en México: En Defensa del Formalismo, 1956</td>
<td>15 Folder: 17</td>
</tr>
<tr>
<td>Understanding the Hyperbolic Paraboloid, 1957-1958</td>
<td>15 Folder: 18-20</td>
</tr>
<tr>
<td>Description: Originals and photocopies.</td>
<td></td>
</tr>
<tr>
<td>Cascarones de Concreto Armado, II Congreso Mexicano de la Construcción, 1958</td>
<td>15 Folder: 21-22</td>
</tr>
<tr>
<td>Description: Originals and photocopies.</td>
<td></td>
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<tr>
<td>General Formulas for Hyperbolic Paraboloids, American Concrete Institute, 1959</td>
<td>15 Folder: 23-24</td>
</tr>
<tr>
<td>Description: Originals and photocopies.</td>
<td></td>
</tr>
<tr>
<td>Bóveda por Arista Para Artículo del ACI, 1959</td>
<td>15 Folder: 25-26</td>
</tr>
<tr>
<td>Description: Originals and photocopies.</td>
<td></td>
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<tr>
<td>Lecture in London, 1959</td>
<td>15 Folder: 27</td>
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<td>Bacardi Embotellado, 1959</td>
<td>15 Folder: 28</td>
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<tr>
<td>Strutture e Strutturalismo, Casabella, 1959 October</td>
<td>6 Folder: 5</td>
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<tr>
<td>Comentarios Acerca de la Colaboración Entre Arquitectos e Ingenieros - UNAM, 1961</td>
<td>15 Folder: 29</td>
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<td>Event</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Havard Norton Lectures, 1961-1962</td>
<td>15 Folder: 30-33</td>
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<tr>
<td>Pier Liugi Nervi, UIA London, 1961</td>
<td>16 Folder: 1</td>
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<tr>
<td>Arquitectura y Estructuralismo, UIA México, 1963</td>
<td>16 Folder: 2</td>
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<tr>
<td>Conferencia Sobre Pier Luigi Nervi Ciclo Bellas Artes, 1963</td>
<td>16 Folder: 3</td>
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<tr>
<td>Structural Form in the Service of Eloquent Architecture, Dallas, 1963-1964</td>
<td>16 Folder: 4</td>
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<tr>
<td>La Forma Estructural Al Servicio de una Elocuente Arquitectura Religiosa, Dallas, 1964</td>
<td>16 Folder: 5</td>
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<td>Prólogo I. Pilarski, 1964</td>
<td>16 Folder: 6</td>
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<td>Las Construcciones Industriales en México, UIA Budapest, 1964</td>
<td>16 Folder: 7</td>
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<tr>
<td>Convención AIA Washington, 1965</td>
<td>16 Folder: 8</td>
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<tr>
<td>Prólogo Frei Otto, 1965</td>
<td>16 Folder: 9</td>
</tr>
<tr>
<td>Man and His Environment, Toronto, 1966</td>
<td>16 Folder: 10</td>
</tr>
<tr>
<td>Simposio ENAM, 1965 December-1966</td>
<td>16 Folder: 11</td>
</tr>
<tr>
<td>Congreso IASS México, 1967</td>
<td>16 Folder: 12</td>
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<tr>
<td>Congreso de Lima DIC, 1967</td>
<td>16 Folder: 13</td>
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<tr>
<td>El Escándalo de la Opera de Sidney, Arquitectura México y España, 1967</td>
<td>16 Folder: 14</td>
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<tr>
<td>Siempre, 1968 July 12</td>
<td>16 Folder: 15</td>
</tr>
<tr>
<td>Encuesta de la Revista Arquitectura, México, 1968 April</td>
<td>16 Folder: 16</td>
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<tr>
<td>Palacio de Los Deportes, 1968</td>
<td>16 Folder: 17</td>
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<tr>
<td>Conferencia Deportes Madrid and World Aquatic Conference, 1969</td>
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<td>El Arquitecto Del Futuro, Conferencia UNAM, 1969</td>
<td>16 Folder: 19</td>
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<tr>
<td>Emilio Perez Piñero, Chicago, 1972 July</td>
<td>16 Folder: 20</td>
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<tr>
<td>Influencia de la Tecnología en la Creatividad Arquitectónica, 1974-1975</td>
<td>16 Folder: 21</td>
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<tr>
<td>Valencia Exposicion Opening, 1994</td>
<td>16 Folder: 22</td>
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<tr>
<td>Notas Várias, 1958-1965</td>
<td>16 Folder: 23</td>
</tr>
<tr>
<td>Publicity Materials, circa 1960s-1990s</td>
<td>16 Folder: 24</td>
</tr>
<tr>
<td>Notebook, 1960-1961</td>
<td>37 Folder: 1</td>
</tr>
</tbody>
</table>

Description: Includes mixed notes and drawings, including pages labeled "Notas para Harvard."

Travels, 1959-1997

Arrangement: Original topical files were arranged chronologically.
Series 2: Talks and Articles … (Continued)

Description: This file group includes itineraries, receipts, correspondence, brochures, and other documents related to Candela's international travels to attend various architecture conferences, professional meetings, and other events.

Viaje a Inglaterra, 1959 May
Box: 16 Folder: 25

Viaje Scandinavia y Austria, 1964 October
Box: 16 Folder: 26

Trips and Conferences, 1963-1970
Box: 16 Folder: 27-28

Viaje a Stuttgart e Italia, 1970
Box: 16 Folder: 29

Maillart Conferencia, 1972 October-November
Box: 16 Folder: 30

La Carta de Machu-Pichu, 1977 December
Box: 17 Folder: 1-2

Trips and Conferences, 1980s-1997
Box: 17 Folder: 3

Invitaciones Conferencias, 1965-1980
Box: 17 Folder: 4

Articles, 1937-1982

Arrangement: Original order was maintained and does not follow any strict arrangement scheme.

Description: This file group primarily contains drafts and typescripts of articles written or translated by Candela, which he kept alongside microfilm reproductions and copies of articles that he translated. Also included are some of his political writings, as well as copies of journals and clippings of magazine articles written by Candela.

Book Translation, 1951 May
Box: 17 Folder: 5

Description: For La Nueva Teoría Del Concreto Armado by Dr. Ing. Rudolf Saliger.

Superficies Alabeadas, 1950-1981
Box: 17 Folder: 6

Description: Includes technical articles about warped surfaces translated by Candela.

Estudio del Paraboloide Hiperbólico Sometido a su Propio Peso, circa 1950s-1970
Box: 17 Folder: 7

Description: Includes writings by Candela, with his English translations.

Artículos Traducción por Félix Candela, 1937-1973
Box: 17 Folder: 8-9

Description: Original folder was retained and includes a detailed list of contents.

Artículos con Cálculos y Demostraciones por Félix Candela, circa 1949-1975
Box: 17 Folder: 10
Series 3: Correspondence, 1953-2000

Arrangement: Alphabetical correspondence files, arranged by topic or correspondent, are followed by chronological professional correspondence files, then chronological personal correspondence files.

Description: This series includes a group of professional and personal correspondence of Félix Candela, beginning in the 1950s. Professional correspondence primarily regards Candela's participation in several professional associations and committees, his various awards and appointments, teaching and lecturing opportunities, inquiries from graduate students writing about his work, and occasionally, building projects. Correspondence is organized in two ways, following the original groupings of materials. Professional correspondence files that Candela
kept by topic or correspondent retain their original folder titles when present. Both professional
and personal correspondence files that Candela grouped chronologically retain that order. In
addition to letters to and from his family and friends, personal correspondence also includes
some letters between Dorothy Candela and others following the death of Félix Candela in
1997.
Researchers looking for correspondence files related to specific lectures, travels, conferences,
or articles should also consult relevant files in Series 2, as Candela often kept additional
correspondence within his topical files on various events and projects. It should also be
noted that the correspondence files in this series are not comprehensive. Much of Candela's
professional correspondence, especially files regarding specific building projects, resides at
the Avery Architectural and Fine Arts Library at Columbia University, with the papers from his
company, Cubiertas Ala. The correspondence files in this series represent those he retained
separately with his own papers.

American Concrete Institute Committee, 1957-1960  Box: 18 Folder: 1
   Description: Includes meeting minutes, memoranda, and reports.

Awards and Appointments, 1961-1984  Box: 18 Folder: 2

Billington, David P., 1973-1991  Box: 18 Folder: 3
   Description: Also includes typescripts and translations of Billington's writings
   on Candela, as well as several articles and lectures by Candela.

Congreso Nacional de Tecnología en la Arquitectura, 1994  Box: 18 Folder: 4

Cueto Ruiz-Funes, Juan Ignacio, 1996  Box: 18 Folder: 5-6
   Description: Consists of a copy of Cueto Ruiz-Funes's doctoral thesis,
titled Arquitectos Españoles Exiliados en México: Su Labor en la España
Republicana (1931-1939) y Su Integración en México, which he sent to
Candela.

Happold, Burlo, 1992-1995  Box: 18 Folder: 7

Idea Center, 1978  Box: 18 Folder: 8

Indiana Concrete Conference, 1971  Box: 18 Folder: 9

Isler, Heinz, 1992-1993  Box: 18 Folder: 10

Mangus, Alfred, 1977-1983  Box: 18 Folder: 11
   Description: Includes a photocopy of Mangus's master's thesis, titled Review
   Games, along with a letter addressed to Candela and several architectural
   journals and clippings used as sources.

Parsons School of Design Structures Course, 1983  Box: 18 Folder: 12
   Description: Includes correspondence and class notes.

Royal Institute of British Architects, 1992  Box: 18 Folder: 13

Arrangement: This series is arranged into five subseries: Appointment Books, Student Work, Autobiography Materials, Personal Photographs, and Awards.

Description: This series contains materials primarily related to Candela's personal life and activities, including appointment books, financial ledgers, address books, student notebooks, drawing portfolios, study guides, autobiographical writings with related clippings and documents, personal photographs of Candela traveling with his family, and various awards and honorary certificates he received throughout his career. Contents range from school work and black-and-white photographs from Candela's early education and athletic career in Spain to contemporary color photographs of Candela in his later years traveling in Europe and South America alongside his wife, Dorothy Candela. A complete run of appointment books spanning from 1968 until 1997 is also present, containing a great deal of information about his daily activities and interactions.

While materials in this series are primarily personal in nature, some also shed light on aspects of Candela's professional career, including his school notebooks and copies of study guides he wrote for structural engineering courses in college, autobiography drafts that detail his professional activities, and certain notes in his appointment books that trace his meetings with collaborators, work habits, construction schedules, travel plans, and lecture and conference participation. Of note is a draft copy of Candela's unfinished autobiography, written in the mid-1990s, which contains a lengthy and thorough narrative of his architectural career and his personal history leading up to it. Also included with the notes for his autobiography are several
original personal documents and identification papers, such as passports and immigration
documents from the various countries in which he held citizenship during his lifetime.


Arrangement: Appointment books are arranged chronologically, with financial ledgers and
address books at the end.

Description: From 1968 until his death in 1997, Candela scrupulously kept daily appointment
books, in which he often took notes in great detail on his day-to-day activities, primarily
regarding his personal life, but also pertaining to some professional meetings and events.
This subseries contains a comprehensive set of these appointment books covering a
span of almost 30 years. While appointment books for some years contain more sparse
notes, most contain frequent and detailed descriptions of Candela's meals, travels, phone
conversations, progress with construction and renovation work on his home, personal
relationships, and other matters. Also included are occasional notes about his travels
to give lectures and presentations at universities and conferences around the world, his
deadlines for providing drawings for design projects and collaborations, and financial
matters regarding payment for his work. In addition to appointment books, this subseries
also includes two expense ledgers that Candela kept alongside his daily planners, regarding
his properties and his children, as well as several address books and loose pages from
address books, which are filled with information about his personal and professional
contacts.

Appointment Books, 1968 Box: 19 Folder: 1
Appointment Books, 1971-1972 Box: 19 Folder: 3
Appointment Books, 1973-1974 Box: 19 Folder: 4
Appointment Books, 1974 May-December Box: 19 Folder: 5
Appointment Books, 1975 January-September Box: 19 Folder: 6
Appointment Books, 1976 April-November Box: 19 Folder: 8
Appointment Books, 1977 August-1978 March Box: 19 Folder: 10
Appointment Books, 1978 April-November Box: 19 Folder: 11
Appointment Books, 1980 March-October Box: 19 Folder: 14
Appointment Books, 1981 July-1982 February Box: 20 Folder: 1
### Subseries 4B: Student Work, 1924-1936

**Arrangement:** Arranged chronologically.

**Description:** This subseries includes materials related to Candela's education in architecture and structural engineering, including his preparatory drawing examinations along with notes and study guides for college courses that he took in Spain in the early 1930s. Of note are Candela's class notebooks, which contain his calculations and transcriptions from D. Luis Vegas's "Resistance of Materials" course on the theory of elasticity, which Candela took in his third year of study at La Escuela Técnica Superior de Arquitectura de Madrid. He was an
exceedingly successful student in the class and later served as an assistant to the professor for the same class the following year. He also tutored other students on topics from his "Descriptive Geometry" class. Candela's notes from some of these university courses are included in this subseries, as well as study guides that he wrote based on Vegas's curriculum for "Resistance of Materials", in collaboration with his classmate, Alejandro Herrero. Also included is a portfolio of statue and figure drawings in charcoal that Candela completed as part of a preliminary examination required for entry into the architecture college, which display his artistic abilities.

<table>
<thead>
<tr>
<th>Description</th>
<th>Box: 22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ejercicios de Dibujo por el Alumno Félix Candela, 1924-1925</strong></td>
<td></td>
</tr>
<tr>
<td>Description: Includes a portfolio of 27 charcoal still life drawings of people and statues by Félix Candela for an examination at the Colegio de San Ignacio in Madrid.</td>
<td></td>
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<tr>
<td><strong>Resistencia, Construcción, Conocimiento Notebook, 1931-1932</strong></td>
<td>Box: 21 Folder: 11</td>
</tr>
<tr>
<td><strong>Construcción, Teoría del Arte Notebook, 1932</strong></td>
<td>Box: 37 Folder: 3</td>
</tr>
<tr>
<td><strong>Resistencia, Electrocnicia Notebook, 1932-1933</strong></td>
<td>Box: 21 Folder: 12</td>
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<tr>
<td><strong>Resistencia, Luminotecnia Notebook, 1932-1933</strong></td>
<td>Box: 21 Folder: 13</td>
</tr>
<tr>
<td><strong>Mecánica Elástica Notebook, 1932-1933</strong></td>
<td>Box: 21 Folder: 14</td>
</tr>
<tr>
<td><strong>Untitled Architecture Notebook, 1932-1933</strong></td>
<td>Box: 21 Folder: 15</td>
</tr>
<tr>
<td><strong>Construcción Apoyos Notebook, 1933</strong></td>
<td>Box: 21 Folder: 16</td>
</tr>
<tr>
<td><strong>Construcción Hierro, Teoría Notebook, 1933</strong></td>
<td>Box: 21 Folder: 17</td>
</tr>
<tr>
<td><strong>Resistencia Notebook, 1933</strong></td>
<td>Box: 37 Folder: 4</td>
</tr>
<tr>
<td><strong>Estabilidad Notes, 1933-1936</strong></td>
<td>Box: 21 Folder: 18</td>
</tr>
<tr>
<td><strong>Urbanología Notebook, 1934-1935</strong></td>
<td>Box: 21 Folder: 19</td>
</tr>
<tr>
<td><strong>Urbanización Notebook, 1935</strong></td>
<td>Box: 21 Folder: 20</td>
</tr>
<tr>
<td><strong>General Architecture Notes, circa 1932-1935</strong></td>
<td>Box: 21 Folder: 21</td>
</tr>
<tr>
<td><strong>Apuntes del Primer Curso de Resistencia de Materiales, Tomo 1, circa 1932-1935</strong></td>
<td>Box: 21 Folder: 22</td>
</tr>
<tr>
<td><strong>Apuntes del Primer Curso de Resistencia de Materiales, Tomo 2, circa 1932-1935</strong></td>
<td>Box: 21 Folder: 23</td>
</tr>
<tr>
<td><strong>Apuntes del Primer Curso de Resistencia de Materiales, Tomo 3, circa 1932-1935</strong></td>
<td>Box: 21 Folder: 24</td>
</tr>
<tr>
<td><strong>Apuntes del Primer Curso de Resistencia de Materiales, 1 Parte, circa 1932-1935</strong></td>
<td>Box: 37 Folder: 5</td>
</tr>
<tr>
<td><strong>Apuntes de Saneamiento de Edificios y de Poblaciones, circa 1932-1935</strong></td>
<td>Box: 21 Folder: 25</td>
</tr>
<tr>
<td><strong>ASCE Meeting Notes, 1935</strong></td>
<td>Box: 37 Folder: 6</td>
</tr>
</tbody>
</table>

Arrangement: Files are not arranged according to any arrangement scheme.

Description: Félix Candela wrote an autobiography in the 1990s, which was never finished. This subseries contains a copy of the complete draft of the existing autobiography, along with preliminary materials, including detailed chronologies of life events and professional projects, early chapter drafts, selected bibliographies of writings by and about Candela, lists of completed architectural works, and clippings regarding Candela and his life's work. Autobiography drafts are primarily print-outs of documents typed on a computer, for which the corresponding digital files are not a part of the collection. Also present are a transcript of an extensive recorded interview with Rafael López Palanco in 1985, several unattributed cartoon sketches of Candela, and a group of identification papers, including passports, citizenship papers, and other official documents and copies. Researchers should note that these materials are primarily in Spanish.

- Complete Autobiography Draft, circa 1994
  Box: 23 Folder: 1-2
- Chronologies and Chapter Drafts, 1990-1994
  Box: 23 Folder: 3-6
  Description: Includes a few pieces of related correspondence.
- Selected Bibliography and Clippings, 1950s-1997
  Box: 23 Folder: 7
- Professional Work List and Clippings, 1970-1996
  Box: 23 Folder: 8
  Box: 23 Folder: 9
  Description: Includes typescripts, Xerox copies, and clippings of articles and interviews, likely gathered together as reference materials for Candela's autobiography.
- Recorded Interviews with Rafael López Palanco, 1985 December
  Box: 23 Folder: 10
- Sketches of Félix Candela, 1969
  Box: 23 Folder: 11
- Identification Papers, 1938-1980
  Box: 23 Folder: 12
  Description: Includes originals and Xerox copies of Candela's passports, naturalization certificates, and other legal documents.

Subseries 4D: Personal Photographs, circa 1915-2000

Arrangement: Arranged chronologically by topic, with general categories at the end.

Description: This subseries contains personal and travel photographs of Félix Candela, often with his family, including early black-and-white photographs, contemporary color photographs, occasional negatives and slides, and several photograph albums. Early photographs albums from the 1920s-1940s show Candela as a young athlete during his school days in Spain, as well as his trips throughout Spain and Mexico with his first wife, Eladia Martín, and their family. Prior to the Spanish Civil War, Candela was a competitive athlete in Spain, playing for the national rugby team and winning championships in both pole-vaulting and ski-jumping. Of note in this subseries is a group of photographs
showing Candela competing in these and other sports, including skiing, mountain-climbing, pole-vaulting, and rugby. Also present are travel shots of Candela in later years, often accompanied by his wife, Dorothy Candela, also an architect, in locations such as British Guiana, the United States, Spain, Iran, Peru, Argentina, Armenia, Bulgaria, and England. Candela's interest in regional design styles is also reflected in his travel photographs, which include many shots of local architecture, ruins, and churches in the various countries he visited. Photographs of Candela at several gallery openings and exhibitions are also present, along with photographs of him with other architects, including Fernando Higueras.

Youth and Sports Photographs, circa 1915-1930s
Box: 23 Folder: 13

Spain: Sports Photographs, 1922-1934
Box: 24 Folder: 1

Physical Characteristics: Photograph album

Description: Photographs primarily depict Candela's early career as a student and athlete in the years prior to the Spanish Civil War. Images show Candela skiing, pole vaulting, and playing rugby.

Valencia and Ibiza: Travel and Architecture Photographs, 1934
Box: 24 Folder: 2

Physical Characteristics: Photograph album

Mexican Churches and Mayan Ruins Photographs, circa 1940s
Box: 24 Folder: 3

Physical Characteristics: Photograph album

Description: Includes a sleeve of related loose photographs.

Mexico Teaching Photographs, circa 1940s-1950s
Box: 23 Folder: 14

Event Photographs, 1950s-1960s
Box: 23 Folder: 15

California Photographs, 1962
Box: 23 Folder: 16

British Guiana Photographs, 1968
Box: 23 Folder: 17

Spain Photographs, 1968-1986
Box: 23 Folder: 18

Novelty Photographs, circa 1960s-1970s
Box: 23 Folder: 19

Iran Photographs, 1974
Box: 23 Folder: 20

Congreso de la U.I.A. Photographs, 1975
Box: 23 Folder: 21-22

Description: Second folder includes newspaper clippings, articles, and loose photographs, which were tucked inside the original photograph album.

Machu Picchu Photographs, 1977
Box: 25 Folder: 1

South America Photographs, circa 1970s-1997
Box: 25 Folder: 2

MoMA Ricardo Bofill Exhibit Photographs, 1985
Box: 25 Folder: 3

Description: Includes photographs of Candela with fellow architect, Fernando Higueras.
Buenos Aires Conference Photographs, 1987 November  
Armenia and Bulgaria Photographs, 1987-1989  
Armenia Earthquake Photographs, 1988-1989  
Bath and Spain Photographs, 1992  
Gallery M. A. Photographs, 1996 

Description: Includes photographs of models of Candela's designs.

Félix Candela Headshots and Portraits, 1950s-1990s  
Félix and Dorothy Candela Photographs, 1960s-1993  
Félix Candela with Other Architects Photographs, 1960s-1993  
Personal Travel Photographs, 1983-1994  

Description: Includes photographs, primarily uncaptioned contemporary color photographs, showing Candela's travels throughout Europe and the Middle East in the 1980s and 1990s, including images of Candela at various conferences, as well as general travel photographs and photographs of local architecture in Switzerland, Armenia, Persia, and Bulgaria. These photographs were removed from unmarked photograph albums, with internal folders preserving their original order.

Miscellaneous Photographs, undated  
Photocopies, undated  
Slides, circa 1967  

Description: Includes slides of Candela with his siblings in 1967, as well as undated slides of the Monastery of Daphni in Greece.

Subseries 4E: Awards, 1941-1994  

Arrangement: Arranged chronologically.

Description: This subseries includes awards, certificates, honorary diplomas, and plaques that Candela received throughout his career recognizing his contributions to the field of architecture. Beginning in the 1960s, Candela garnered an increasing amount of attention and publicity for his work in thin-shell concrete design that lasted throughout his life as he continued to travel and lecture publicly. Although Candela never managed to continue his formal studies following his years in Madrid, he received honorary doctorates from the University of New Mexico, the University of Illinois, and Universidad de Sevilla, as well as an honorary plaque in the 1990s, recognizing his achievements, from La Escuela Técnica Superior de Arquitectura de Madrid, where he completed his education in the 1930s. Most awards and certificates on paper are described at the folder level, with three-dimensional wooden and stone plaques, requiring separate housing due to their size and
weight, described individually. A partial inventory of awards present in these files, which was received with the collection, can be found in Box 4, Folder 7.

Awards and Certificates, 1941-1965  
Description: Includes a partial inventory of awards that was received with the collection.

University of New Mexico Honorary Doctorate, 1964  
Box: 26 Folder: 1

American Concrete Institute Alfred E. Lindau Award Plaque, 1964  
Box: 27

Concrete Industry Board Special Award Plaque, 1965  
Box: 28

Awards and Certificates, 1966-1970  
Box: 4 Folder: 8

Awards and Certificates, 1971-1980  
Box: 4 Folder: 9

Universidad Nacional de San Antonio Abad del Cusco Honorary Degree, 1977  
Box: 28

University of Illinois Honorary Doctorate, 1979  
Box: 26 Folder: 2

University of Illinois Retirement Certificate, 1979  
Box: 26 Folder: 3

Awards and Certificates, 1981-1987  
Box: 4 Folder: 10

Federación de Colegios de Arquitectos de la República Mexicana  
Testimonio de Reconocimiento, 1989  
Box: 27

Universidad de Sevilla Honorary Doctorate Materials, 1990  
Box: 26 Folder: 4-5

Escuela Técnica Superior de Arquitectura de Madrid Plaque, 1994 May 11  
Box: 29

Awards and Certificates, undated  
Box: 4 Folder: 11

Honor from the City of Buenos Aires, undated  
Box: 28

Series 5: Reference and Clippings Files, bulk 1939-1997, 1767-2005

Arrangement: Alphabetical subject files are followed by general architectural reference, then clippings on Candela and his work.

Description: This series includes clippings and print materials related to architecture in general, as well as to Candela's own work, that he collected along with his papers as reference materials. After his exile from Spain following the Spanish Civil War, Candela never continued his formal study of architecture. Instead, during his early years in Mexico, he educated himself on the topic of thin-shell construction through independent reading and subscribing to various architectural journals and reviews, some of which he retained and are included in this series. An original run of subject files includes clippings from magazines and newspapers organized topically in folders by building function, architectural style, architect, or geographical location. These files, which retain their original titles, document Candela's design influences while conceptualizing his iconic stadiums, churches, and other buildings, as well as his interest in fellow architects, including Frank Lloyd Wright, Antoni Gaudí, Pier Luigi Nervi, and Eduardo Torroja. Also included in this series are books, magazines, pamphlets, and clippings about
architecture and structural design in general, along with catalogs and brochures for various construction materials and tools. Some clippings and print materials contain handwritten notes by Candela. Clippings from magazines, newspapers, and architectural journals with articles regarding Candela and his work are also present, along with some photocopies of writing about Candela, clippings of obituaries, and VHS tapes about Candela's work.

Subject Files, 1939-1980s

Arrangement: Subject files are arranged alphabetically by topic.

Description: Includes topical reference clippings on various architectural themes and styles.

Arquitectura Estadios de Deportes, 1959-1973 Box: 26 Folder: 6
Arquitecturas Nacionales, 1949-1965 Box: 31 Folder: 1

Description: Includes architecture in Morocco and South Africa.

Arquitectura Textil, 1960-1972 Box: 26 Folder: 7-8
Castles and Palaces, 1955-1966 Box: 26 Folder: 9
Churches, 1954-1963 Box: 26 Folder: 10
Exposiciones Generales, 1939-1954 Box: 26 Folder: 11
Fantastic Architecture, 1960-1970 Box: 31 Folder: 2
Generalidades Sobre Cubiertas de Concreto, 1941-1948 Box: 26 Folder: 12
Mediterráneo, 1947-1966 Box: 31 Folder: 3
Nervi and Torroja, 1958-1978 Box: 26 Folder: 13
Otras Construcciones en México Olimpiadas, circa 1968 Box: 26 Folder: 14
Parques Zoológicos y de Recreo, Ferias, Circos, 1947-1951 Box: 32 Folder: 1
Puentes, 1943-1973 Box: 32 Folder: 2
Roads and Bridges, 1952-1966 Box: 26 Folder: 15
Structural Design: H.P. Roofs, Geodesics, Big Span Domes, 1955-1967 Box: 26 Folder: 16
Structure and Design, 1949-1964 Box: 26 Folder: 17
F. L. Wright, El Expresionismo, Gaudí, circa 1950s-1980s Box: 26 Folder: 18
Catálogos y Folletos de Propaganda Sobre Construcción, 1946-1983 Box: 26 Folder: 19-21
Architectural Reference Books, bulk 1919-1952, 1767-1952 Box: 33
Description: Includes 7 bound volumes on architecture and related subjects, many of which are signed and notated by Félix Candela. Of note is a 1767 copy of El Arquitecto Práctico by Antonio Plo y Camín and Jean Minguet.

Architectural Magazines and Clippings, 1937-1975
Box: 34 Folder: 1-16

Arquitectura y Nueva Forma Clippings, circa 1968
Box: 34 Folder: 17

Bernabéu Clippings, 1968-1973
Box: 34 Folder: 18

Iglesia de la Medalla Milagrosa Booklets, circa 1956-1960
Box: 34 Folder: 19

Palacio de Los Deportes Clippings, 1968
Box: 35 Folder: 1

Clippings and Magazines Featuring Candela, 1950-2005
Box: 35 Folder: 2-11

Colin Faber En Defensa Del Formalismo Photocopies, circa 1963
Box: 35 Folder: 12

Juan Antonio Tonda Book Photocopies, 2000
Box: 35 Folder: 13

Writings and Clippings on Candela, 1956-1990s
Box: 35 Folder: 14

Oversize Clippings on Candela, 1967-1968
Box: 32 Folder: 3

Clippings of Candela Obituaries, 1997-1999
Box: 35 Folder: 15

Videos About Félix Candela, 1996-2002
Box: 35

Physical Characteristics: 9 VHS tapes

Description: Includes videos related to Valencia Ciudad de las Artes de Las Ciencias, Gallery M.A., Restaurante Submarino, as well as videos about the life and work of Félix Candela.

International Association for Bridge and Structural Engineering, 1932
Box: 37 Folder: 7

Description: Printed copy of Publications, First Volume, with annotations and notes by Candela.