

*The Panama Canal: a Triumph
Entrenched in Tragedy*

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Senior Group Exhibit

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The Panama Canal revolutionized commerce, inspired medical innovation, and redefined the global politics of the 20th century. Our school's curriculum largely ignored its construction by subsuming its tragic history under the title of American triumph, so we made it our project to expose this lesser-known history. Our initial fascination lay in the Canal's grandeur; our research revealed its immeasurable cost. We were attracted by the span of its impact on medicine and global trade, but we were enthralled when we learned of the particulars of the truth behind this architectural triumph. We focused our project on the delayed benefits that came to Panama from the Canal: while it contained the potential for worldwide gain upon completion in 1914, nearly a century passed before universal triumph (to Panama and to the world) began to emerge from the shadow of American imperialism.

Because of our limited background knowledge, we began with broad research. We used the San Diego Public Library to find books such as *The Canal Builders* by Julie Greene, a lucid history of labor on the Panama Canal. Then, we sought secondary sources—articles and journal entries—from databases such as *Britannica ImageQuest* and *Gale World History in Context*. As we dove into primary sources, we discovered myriad disparate perspectives and were challenged to narrow our focus. Our favorite source was an interview with Joanie McCoy, a third-generation occupant of the Canal Zone who further elucidated the complexity of its history by sharing family memories and political opinions. After the first stages of research, our group had uncovered unique perspectives that became the six foci of our project: the economic, political, and technological triumphs and tragedies of the Canal.

The construction of this exhibit required fewer hands but no less creative skill than did the Panama Canal. About four weeks before the competition, we purchased supplies and began

construction. It took one week to paint the boards, drill holes for the hinges, and cut the roof. Then, we raised the text and images on sheets of Plexiglass to emphasize the large physical map of Panama in the background. We hoped to use the visual impact of an exhibit to gain the viewer's sympathy—words are powerful, but photos of working conditions and sharp political cartoons capture the full sweep of this century-long saga. We also made a few changes for the state competition, as we added a mini-documentary and a timeline with special lighting.

The best historiography approximates truth; the worst obfuscates it. Our project strives to tie together disparate strands of the Panama Canal's history and recognizes the tragedy that accompanied technical triumph. The Canal represented the intersection of heroism and immorality, of opportunism and vulnerability, and of triumph and tragedy. It stands today as a symbol—not of American superiority, but of the true costs and benefits of awe-inspiring industrial development.

Bibliography

Primary Sources

Images

Battleship 'Ohio' / Panama Canal / Photo. Photograph. Britannica ImageQuest, Encyclopædia

Britannica, 25 May 2016. quest.eb.com/search/109_166276/1/109_166276/cite. Accessed 2 Feb 2019. This image shows the passage of American battleships through the Canal. It is included in the Facilitation of War section to demonstrate the chiefly military activity that took place during World War I.

Can science colonise the tropics? (colour litho). Illustration. Britannica ImageQuest,

Encyclopædia Britannica, 6 Dec 2017.

quest.eb.com/search/108_2387668/1/108_2387668/cite. Accessed 13 Feb 2019. This

illustration, created in 1913, depicts a man dressed in scholarly robes presenting the Panama, specifically the Canal Zone, to American workers and businessmen. It reveals the fear of yellow fever and malaria that many people had following the French attempt at building a canal in Panama. It also shows the attempt by the United States to make medical advancements in Panama. We used this drawing in the technological triumph section of the exhibit.

A Crown He Is Entitled to Wear. June 4. Photograph. Retrieved from the Library of Congress,

www.loc.gov/item/2002697705/. This is a political cartoon depicting a huge

accomplishment during President Roosevelt's presidency: the development of the Panama Canal. This cartoon gave us insight into the triumphant view of American politics and the

Panama Canal. We used this cartoon in our project to show this perceived triumph for many.

Department of State. Bureau of Inter-American Affairs. Office of Central American and Panamanian Affairs. 1958-ca. 1964. Photograph of Students holding a Panamanian Flag. 9 Jan. 1964. *National Archive Catalog*, catalog.archives.gov/id/45646388. Accessed 27 Jan. 2019. This image illustrates students protesting during the Flag Riots. It is important because it shows the gravity of the riots and how involved students were in facilitating the riots. It was used in the Flag Riots section of the exhibit.

Department of State. Bureau of Inter-American Affairs. Office of the Director for Panama. Photograph of Student with a Banner saying Fleming Go Home. 9 Jan. 1964. *National Archives Catalog*, catalog.archives.gov/id/35847607. Accessed 27 Jan. 2019. This image was taken during the Flag Riots, otherwise known as the Communist Riots. It was used in the Flag Riots section of the exhibit.

Photograph of Students on the balcony of Balboa High School. 9 Jan. 1964. *National Archives Catalog*, catalog.archives.gov/id/45646393. Accessed 27 Jan. 2019. This image is of American students holding up the United States flag. It shows the opposing side of the conflict against Panama for the zone and it also shows the importance of students during the riots. It is used in the flag riots section of the exhibit.

G. W. Goethals directs the building of the Panama Canal . Fine Art. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/108_262622/1/108_262622/cite. Accessed 7 Feb 2019. This primary

source illustration depicts the construction of the Panama Canal. We used this image in our Economic Tragedy section.

How the Bisection of a Continent Affects Trade Routes', from 'Wonder of Land and Sea', published in 1914 . Fine Art. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/108_265290/1/108_265290/cite. Accessed 10 Feb 2019. This illustration by G.F. Morelli shows the three most popular routes that used the Panama Canal. Liverpool and San Francisco, London and Honolulu, and New York and San Francisco were closely knit by commerce as the Canal eliminated an average of 6,000 miles from each destination to the next. We include this drawing in the Global Trade section to demonstrate the Canal's global benefits.

Kepler, Udo J., Artist. A revelation in revolutions / Kep. N.Y.: J. Ottmann Lith. Co., Puck Bldg. Photograph. Retrieved from the Library of Congress, <www.loc.gov/item/2010652322/>. This is a political cartoon that caricatures the roles of the United States and Panama in the planning and construction of the canal. From it, we were able to learn more about the argument that the United States used Panama selfishly. We used this cartoon in our project to show how what many Americans perceived to be a triumph ended up being a tragedy for Panama.

A Monster Weapon of the United States: a 16-Inch gun to guard the Panama Canal approaches, from 'The Illustrated War News', 1915 . Photograph. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/108_276149/1/108_276149/cite. Accessed 2 Feb 2019. Soon after the Canal's 1914 completion, which coincided with the start of World War I, the U.S.

realized that it had to defend its new creation. Thus, the Canal was equipped with large weapons such as the one depicted in this image. We include it in the Facilitation of War section to demonstrate America's commitment to defense (often of unnecessary proportions).

PANAMA CANAL CARTOON, 1912. - 'Uncle Sam's Canal.' An Irish cartoon of 1912 on British protests against free tolls for American ships passing through the Panama Canal, a toll regulation repealed by President Woodrow Wilson in 1914.. Fine Art. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/140_1633904/1/140_1633904/cite. Accessed 10 Feb 2019 In this cartoon, a lanky Uncle Sam towers over his stodgy British counterpart (most likely a politician). It demonstrates Britain's anxiety about the free passage of American ships through the Panama Canal and is included in the Global Trade section.

PANAMA CANAL CARTOON, 1904. - Death waiting in the fever-ridden swamps for the builders of the Panama Canal. American cartoon, 1904, by Joseph Keppler, Jr.. Fine Art. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/140_1641871/1/140_1641871/cite. Accessed 7 Feb 2019. This primary source illustration, depicts "Death" waiting at the Panama Canal. This drawing highlights the high mortality rates and unsafe conditions many workers faced when they migrated to Panama. This picture was used in our Economic Tragedy section.

Panama Protection. Photographer. Britannica ImageQuest, Encyclopædia Britannica, 25 May 2016. quest.eb.com/search/115_2741941/1/115_2741941/cite. Accessed 2 Feb 2019. This photograph shows one of the 14-inch guns that guarded the Panama Canal beginning in

1940. The U.S. doubled their defense of the Canal in the early 40s, an extension of their projects in 1915 to reinforce security during the first World War. The photo is included in the Facilitation of Tragedy section.

PBS, director. *Panama Canal*. PBS, Public Broadcasting Service, 24 Jan. 2011,

www.pbs.org/wgbh/americanexperience/films/panama/. This film by PBS gives an overview of the Panama Canal and its history from the French attempts at construction to today. While we benefited from the information contained in the documentary, we mostly used this film for its primary source images and video for our media.

U.S. Trade Routed Through the Panama Canal. Caulderwood, Kathleen, and Marcus Baram.

"Panama Canal Anniversary 2014: The World-Changing Economic Impact Of The Canal." *International Business Times*, 6 Dec. 2015,

www.ibtimes.com/panama-canal-anniversary-2014-world-changing-economic-impact-canal-1656834. This image depicts the myriad trade routes that intersected at the Panama Canal. The article that contained it, a tribute to the Canal's 100th anniversary, provided much useful knowledge about the economic impact and compared the project to the seismic shift from "the Pony Express to Gmail." Both the image and the information were useful in constructing the Global Trade section.

Worker deaths on the Panama Canal. Fine Art. Britannica ImageQuest, Encyclopædia

Britannica, 25 May 2016.

quest.eb.com/search/108_254438/1/108_254438/cite. Accessed 7 Feb 2019. This primary source illustration depicts the environment of the Panama Canal which was largely characterized by the deaths of many of the workers. This source explains that

underdeveloped technology and diseases caused the deaths of many people. This image was used in our Economic Tragedy section.

"Worker Oiling Standing Water with a Knapsack on His Shoulder." 1905. *The Panama Canal: A Triumph of American Medicine*, The University of Kansas Medical Center, 2019. *The University of Kansas Medical Center*, www.kumc.edu/school-of-medicine/history-and-philosophy-of-medicine/clendening-history-of-medicine-library/special-collections/panama-canal/sanitation-of-panama.html. Accessed 16 Feb. 2019. This photograph of an working oiling water shows the implementation of the sanitation program in the canal zone to eliminate yellow fever and malaria. This image is in the technological triumph section.

Books

Bullard, Arthur. *Panama, The Canal, The Country and The People*. New York, The Macmillan Company, 1914. *Internet Archive*, archive.org/details/panamacanalcount00bulluoft/page/n8. Accessed 16 Feb. 2019. This book, from the perspective of the author, recounts his experiences traveling to and working on the Panama Canal. His perspectives are accompanied by photographs that he took. Quotations from the novel were used in the flag riots section to show the tensions between Panama and America; photographs and quotations were used in the economic tragedy side to show the commodification of people.

Ewing Mears, James. *The Triumph of American Medicine in the Construction of the Panama Canal*. WM J. Dornan, 1913. *Harvard Library*, WM J. Dornan, nrs.harvard.edu/urn-3:HMS.COUNT:962667. Accessed 10 Feb. 2019. This book written

in 1913, just before the canal was opened, is about the construction of the canal. This source also had pictures of the canal during its construction. Ewing Mears talked about the advanced engineering and sanitation efforts in the construction of the canal like it was a great American triumph. We used this source to show American pride in the technological triumphs that occurred.

Gorgas, William Crawford. *Sanitation in Panama*. D. Appleton and Company, 1915. *Harvard Library*, D. Appleton and Company, nrs.harvard.edu/urn-3:HMS.COUNT:961066.

Accessed 6 Feb. 2019. This book written by the Chief Sanitary Officer, William Crawford Gorgas, talks about the efforts to prevent yellow fever and malaria in Panama. His writing showed how the sanitation program reduced worker deaths from these diseases. We used quotations and pictures from this book in the technological triumph section.

Newspapers

By, MICHAEL M. "Big Ditch Debate." *New York Times* (1923-Current file), Feb 19, 1978, pp.

1. ProQuest, <https://search.proquest.com/docview/123806762?accountid=84567>. This is an American newspaper article about the question of ownership of the canal written in 1978, a rocky time for Panama-U.S. relations over the Panama Canal. This newspaper offered us an American perspective on whether or not the U.S. should keep the canal or hand it over to Panama. We used this article to inform ourselves on the argument of keeping the Canal as evidence of American Power, and also to make connections between the canal and other major U.S. matters of the time (for example, the Vietnam War).

By FRANK L KLUCKHOHN Special to THE NEW YORK TIMES. "AIR BASES PLEDGED BY THREE NATIONS TO DEFEND CANAL." *New York Times (1923-Current file)*, Mar 04, 1940, pp. 1. *ProQuest*, <https://search.proquest.com/docview/105450066?accountid=84567>. This newspaper provided an article about Roosevelt's successful request to patrol the airways above Panama during World War II. This period was the Canal's most active military moment. A callout from the beginning of the article is included in the Facilitation of War section.

Morrow, James B. "Col. William Crawford Gorgas, The Army Surgeon Who Made the Panama Canal Possible." *The Washington Post* [Washington, D.C.], 13 Oct. 1907. *ProQuest*, search.proquest.com/docview/144757758?accountid=84567. Accessed 18 Feb. 2019. This newspaper article about William Crawford Gorgas discussed the work he did in the Canal Zone. This helped show the American perspective on the medical triumphs and glorification of Gorgas as an "American hero". We used this source in the technological triumph section of our project.

"The Panama Canal and the Conflict Surrounding It; Panama Blow-up." *The New York Times* [New York], 12 Jan. 1964, sec. 4, p. 1. *The New York Times*, www.nytimes.com/1964/01/12/archives/the-panama-canal-and-the-conflict-surrounding-it-panama-blowup.html. Accessed 20 Feb. 2019. The article excerpt from the newspaper spoke about a various range of topics from life on the Zone, to the conflicts between Panama and the United States over who has control. This article was the backbone of the flag riots research and gave an American perspective to the tensions in the canal zone.

"PANAMA CANAL PROBLEMS." *Scientific American*, vol. 91, no. 25, 1904, pp. 426–426.

JSTOR, www.jstor.org/stable/26003305 This primary source journal, published by *Scientific American* in 1904, offers insight to the problems of the Panama canal, specifically the high mortality rate. This source argues that diseases greatly affected the workers at the Canal, yet little was done to remedy this problem. This information is included in our Economic Tragedy section.

Patton, Blaine. " Digging the Panama Canal: THE GREATEST ENGINEERING FEAT EVER UNDERTAKEN BY MAN IS NEARING COMPLETION." *Los Angeles Times (1886-1922)*, Jun 12, 1910, pp. 1. *ProQuest*, <https://search.proquest.com/docview/159548429?accountid=84567>. Accessed 12 Feb. 2019. This black and white newspaper graphic depicts the amount of soil dug for the Culebra Cut. We used this image in the technological triumph section to show the progress of the canal construction.

Rogers, W. A. , Artist. Held up the wrong man / W. A. Rogers. Photograph. Retrieved from the Library of Congress, <www.loc.gov/item/2010645505/>. This is a cartoon showing the responsibility the United States felt for Panamanian independence after the Hay-Bunau-Varilla treaty. By depicting Colombia as a bandit, while Roosevelt is shown heroically, it gives off an feeling of American superiority, which was common at the time of construction of the canal. We used this image in our project to show early Panamanian-American relations and how those were influenced by the people of Panama and the Zonians.

Roger W Babson of, Wellesley Hills. "PANAMA CANAL'S EFFECT ON

TRANSCONTINENTAL ROADS." *New York Times (1857-1922)*, Sep 17, 1911, pp. 2.

ProQuest, <https://search.proquest.com/docview/97178658?accountid=84567>. Accessed

20 Jan. 2019. This article discussed the predicted impact the Panama Canal could have on

railroad costs. This was helpful in learning about the opinions about the economic impact

of the Canal on the use of the Panama Railroad. We used this source to develop more

ideas about the economic triumphs of the Canal.

Periodicals (other)

Brooks, Vivian. Through my Uncle's Panama Canal I'll Sail. Library of Congress, 1914. World

Digital Library, www.wdl.org/en/item/16924/. This song, written by Vivian Brooks, was

published around the time of the opening of the Panama Canal. It is one of many songs

written on this subject, and represents the excited American attitude toward this canal.

We used this song to learn more about the emotional American perspective of the Canal

and we printed out a copy of the score for display on our exhibit.

Donovan, C. The Panama Swim. Library of Congress, 1914. World Digital Library,

www.wdl.org/en/item/16917/. This song, written by C Donovan, was published about the

unification of the world because of the opening of the Panama Canal. It is one of many

songs written on this subject, and represents the excited American attitude toward this

canal. We used this song to learn more about the American perspective of the Canal and

we printed out a copy of the score for display on our exhibit.

Flaherty, Tom. "Inside an Ugly Fight." *LIFE*, pp. 22-31. *University of Florida*,

ufdc.ufl.edu/AA00064120/00001/1j. Accessed 27 Jan. 2019. This cover page article is a

journalist's perspective on the flag riots that broke out in Panama. It has nice primary source quotations and images that were used in the flag riots section.

Green, Gladys. *The Panama Swim*. Library of Congress, 1914. World Digital Library, www.wdl.org/en/item/16921/. This song, written by Gladys Green, was published around the time of the opening of the Panama Canal. It is one of many songs written on this subject, and represents the excited American attitude toward this canal. We used this song to learn more about the American perspective of the Canal and we printed out a copy of the score for display on our exhibit.

"The Panama Canal Treaties of 1977: Extracts from a Communique Dated April 25, 1978 from the Panamanian Foreign Ministry, on the United States Reservations to the Treaties." *The International Lawyer*, vol. 12, no. 4, 1978, pp. 899–911. JSTOR, www.jstor.org/stable/40706703. This piece demonstrates Panamanian perspective, through the voice of Panama's foreign ministry. The excerpts from correspondence between the United States and Panama show how Panama resented the United State's control of the canal. Quotations from this article supplemented the flag riots section.

Interviews

Maurer, Noel, and Steve Inskeep. "Panama Canal Symbolizes U.S. Geopolitical, Technological Power." *NPR.org*, 15 Aug. 2014, www.npr.org/2014/08/15/340562917/panama-canal-symbolizes-u-s-geopolitical-technological-power. Accessed 26 Feb. 2019. This interview deepened our understanding of Noel Maurer's paper, "What Roosevelt Took", by explaining the largest and most

immediate benefits of the canal to the U.S. We included a quote about the shift from overseas to overland trade after World War II caused a dip in the cost of diesel.

McCoy, Joanie. Interview. 7 Feb. 2019. We interviewed Joanie McCoy, the California representative for the Panama Canal Society. Joanie's family lived in Panama from 1908 to 1973. Her grandfather helped build the canal, and her father helped operate it, and she grew up there until college. Joanie offered us invaluable insight into the life of a "Zonian", and how that impacted her opinions on the canal and relations between Americans and Panamanians. She offered us a lot of information on the Flag Riots, harsh treatment of Panamanian workers, and the passing of control of the canal to Panama from the United States.

"Theodore Roosevelt." *Internet Archive*, Universal Studios, 1 Jan. 1970, [archive.org/details/1934-07-02_Roosevelt_Sails_On_10000_Mile_Trip](https://www.archive.org/details/1934-07-02_Roosevelt_Sails_On_10000_Mile_Trip). This video of an interview with Roosevelt demonstrates his enthusiasm for the project. We watched it to gain insight about his personal attachment to the project. As anticipated, his enthusiasm is effusive.

Witkin, Michael. "Interview with Michael Witkin, 2015 July 5." 2019. *University of Florida Digital Collections*, Accessed 9 May 2019. This interview with Michael Witkin highlighted the life of someone living in the Canal Zone during the period of time in between construction and the passing of the Canal to Panama. Witkin's interview taught us a lot about life in "the Zone" and the relationship between Zonians and Panamanians. We used audio clips from this interview in our media.

Government Reports and Documents

Mason, Chas F. "Statistical Tables." *Report of the Department of Health of the Panama Canal for the Year 1914*, Washington, 1915, pp. 22-54. *Hathitrust*, babel.hathitrust.org/cgi/pt?id=nyp.33433075974489;view=1up;seq=6. Accessed 16 Feb. 2019. This report is a summation of data made by the health officials located in the Panama Canal. The statistical tables and charts were used as images in the economic tragedy section to show the human lives that were lost in one year, at the canal.

"Memorandum to Drafting Office on Canal Treaty discussions." 3 Mar. 1964. *National Archives Catalog*, catalog.archives.gov/id/23813182. Accessed 27 Jan. 2019. This memorandum spoke about the conflicts that were occurring in Panama, and it contained the United State's response to the conflicts. It is important because it shows how the United States thought they were negotiating enough, whereas Panama felt like there were not enough conversations. This information was helpful in crafting the flag riots section.

"Theodore Roosevelt's Corollary to the Monroe Doctrine (1905)." *Our Documents - Interstate Commerce Act (1887)*, www.ourdocuments.gov/doc.php?flash=false&doc=56#. This document is President Theodore Roosevelt's Corollary to the Monroe Doctrine. Roosevelt's statement in this document essentially expanded the statement made by the Monroe Doctrine to include the United State's role as a police force in the Western Hemisphere, a declaration that was essential to the justification of U.S. affairs in Panama. We used a quotation from this document in our project to demonstrate the responsibility the United States felt for Panama.

United States, Congress. *Hay-Bunau-Varilla Treaty*. Government Publishing Office, 19 Nov. 1903. *National Archives Catalog*, catalog.archives.gov/. Accessed 28 Feb. 2019. The Hay-Bunau-Varilla Treaty was the original treaty made between the United States and Panama about the possibility of a canal. This treaty established joint control over the canal and secured future independence for Panama from Colombia with help from the U.S. We used this treaty for direct quotations in our project and as a primary source documenting the early stages of relations between the United States and Panama.

---, U.S. Government. Panama Canal Treaty of 1977. *Code of Federal Regulations*, vol. . U.S. Department of State Archive, 2001-2009.state.gov/p/wha/rlnks/11936.htm. Accessed 27 Feb. 2019. This treaty was signed in 1977 by President Jimmy Carter and Chief Omar Torrijos. It emphasizes the canal's transfer from the U.S. to Panama and shows how long it took for Panama to realize its benefit. We selected an excerpt from the "Property Transfer and Economic Participation by the Republic of Panama" to feature in our Economics

section.

United States Army. *Report of the Health Department of the Panama Canal for the Year 1914*. By Chas F. Mason, Washington, 1915. *HathiTrust*, babel.hathitrust.org/cgi/pt?id=nyp.33433075974489;view=1up;seq=3. Accessed 27 Jan. 2019. This report is of the health and sanitation conditions of the Canal Zone during the year 1914. While the death rate decreased from when the canal was first being built, it shows the disparity between the black and white workers. This report had graphs that were used in the economic tragedy section.

United States Department of State. *Papers Relating to the Foreign Relations of the United States*. U.S. Government Printing Office, 1882. This is a publication from the United States about their foreign relations around the late 19th century. It offers insight into the imperialist attitude of the U.S. and many other countries in the time leading up to the planning and construction of the Panama Canal. We used it to understand more about the reasons behind the canal and the justification of affairs in Panama.

Secondary Sources

Books

Greene, Julie. *The Canal Builders: Making America's Empire at the Panama Canal*. Penguin Books, 2010. Not only did this book emphasize the perspective of laborers on the Panama Canal, but it also described the social movements inspired by World War II. We included a quote about postwar tensions between America and Panama about sovereignty and control of the canal.

McCullough, David. *Path Between the Seas*. Simon and Schuster, 1977. This book offered insight to the poor working conditions and high mortality rates at the canal. We used this information in our Economic Tragedy section.

Web Sites

Bogdanich, Walt, et al. "The New Panama Canal: A Risky Bet." *The New York Times*, 22 June 2016, www.nytimes.com/interactive/2016/06/22/world/americas/panama-canal.html. Accessed 20 Feb. 2019. This article explains the complexities of the new portion of the Panama Canal that was completed in 2016. The article makes important connections to

the original canal. The information was used when looking at the legacy and modern-day connections of the Panama Canal.

Byrne, Ashley. "50 years ago this week, riots determined the fate of the Panama Canal." *PRI*, 10 Jan. 2014,

www.pri.org/stories/2014-01-10/50-years-ago-week-riots-determined-fate-panama-canal.

Accessed 20 Feb. 2019. This article shares how the Panama Flag Riots are commemorated today as Martyr's day. It shows the lasting impact that the riots had and also has quotations from Panamanians that experienced the riots. A quotation from the interview found in the article is used in the Flag Riots section of the exhibit.

Child, Lt. Colonel Jack. "Military Aspects of the Panama Canal Issue." U.S. Naval Institute,

Military Aspects of the Panama Canal Issue, 1 Jan. 1980,

www.usni.org/magazines/proceedings/1980/january/military-aspects-panama-canal-issue.

This article was written by a Lieutenant Colonel in the U.S. military and provided descriptions of the military functions of the canal. Most interestingly, it hypothesizes what would have happened during wartime had the Panama Canal never been completed.

We included a quote about this subject in our Technological Tragedy section.

Kahn, Carrie. "The \$5 Billion Panama Canal Expansion Opens Sunday, Amidst Shipping Concerns." *NPR*, National Public Radio, 25 June 2016,

www.npr.org/2016/06/25/483523910/the-5-billion-panama-canal-expansion-opens-sunday-amidst-shipping-concerns.

Accessed 6 May 2019. This source discusses the new expansion of the Panama Canal, its benefits and potential problems. It also provided

images of the new Gatun Locks. This article was useful in understanding the modern connections of our project.

Lieffers, Caroline. "How the Panama Canal Took a Huge Toll On the Contract Workers Who Built It." *Smithsonian.com*, Smithsonian Institution, 18 Apr. 2018, www.smithsonianmag.com/history/how-panama-canal-took-huge-toll-on-contract-workers-who-built-it-180968822/. Accessed 16 Jan. 2019. This article by Caroline Lieffers shows the effect of lack of regulation during the creation of the Panama Canal. The working conditions and the diseases in the Canal Zone caused the deaths of the workers in the French and American canal projects. This source contained quotations from workers in Panama. We used this information to learn more about the toll these conditions had on the hard laborers.

Maurer, Noel, and Carlos Yu. *What Roosevelt Took: the Economic Impact of the Panama Canal*. "www.hbs.edu/faculty/Publication%20Files/06-041.pdf. This was, by far, the most informative article we found in our initial research. It focused upon the economic impact of the Panama Canal, from its shadowy start in the hands of Wall Street tycoons and French engineers to its "net positive social benefit." We included a few quotes about the global impact of the canal in the Economic Triumph section.

Miles, Tom. "WTO warns of global trade slowdown as indicator hits nine-year low." *Reuters*, 19 Feb. 2019, www.reuters.com/article/us-trade-wto/wto-warns-of-global-trade-slowdown-as-indicator-hits-nine-year-low-idUSKCN1Q812U. Accessed 4 Apr. 2019. This article explains and interprets the World Trade Organization's quarterly outlook indicator data. The article

states that there is a decrease in global trade due to the policies that are being made between China and the United States, however, there are some exceptions such as international air freight. This information was helpful in the modern connection section of the exhibit.

"Spotlight: Social Effects Of The Panama Canal." *WMOT*, WMOT, 13 May 2017, www.wmot.org/post/spotlight-social-effects-panama-canal#stream/0. Accessed 23 Jan. 2019. This podcast highlighted the influence of the Canal's construction on the surrounding environment and Panamanian opinions on the effect of the Canal on their economy. This was useful to learn about the grand impact the Panama Canal has on the economy today. We used this source to understand the modern influence and legacy of the Canal's construction.

Stern, Alexandra Minna. "The Public Health Service in the Panama Canal: A Forgotten Chapter of U.S. Public Health." *U.S. National Library of Medicine*, Association of Schools of Public Health, 2005, www.ncbi.nlm.nih.gov/pmc/articles/PMC1497783/. Accessed 29 Jan. 2019. This article by Alexandra Minna Stern talks about the role of the Public Health Service in Panama. This source was important to our project because it talked about the more long term effects of the sanitation efforts in Panama and the role of William Gorgas in the prevention of yellow fever and malaria in the Canal Zone. We used this information to construct the technological triumph side of the exhibit.

"Wider Impact - The Panama Canal." *The Economist*, 18 July 2016, www.economist.com/business/2016/06/18/wider-impact. Accessed 20 Feb. 2019. This article is about the economic impact that the new Panama canal locks has. This

information can be applied and compared to the influence that the first set of locks had on the economy. This information was helpful in understanding the modern day importance of the Panama Canal.

Caulderwood, Kathleen, and Marcus Baram. "Panama Canal Anniversary 2014: The World-Changing Economic Impact Of The Canal." *International Business Times*, 6 Dec. 2015, www.ibtimes.com/panama-canal-anniversary-2014-world-changing-economic-impact-canal-1656834. This article described the impact of the Panama Canal on global commerce: from California to Chile, the canal lowered transportation costs for governments and citizens worldwide. We include a quote about Chilean iron in the Global Trade section to demonstrate one immediate benefit to a country other than America.

Detmer, Jennifer. "The Republic of Panama: Past, Present, and Future Regarding the Panama Canal." *Ethics of Development in a Global Environment*, Stanford University, 23 Aug. 1999, web.stanford.edu/class/e297c/war_peace/americas/hpanama.html. This journal article provided specific information about the Treaties of 1977 and 1979, both of which are crucial to our explanation of the delayed benefits to Panama. We included a quote about the Neutrality Treaty of 1979 in the Technological Tragedy section to demonstrate America's continued military presence in the canal.

Anthologies/Collections

Alfaro, Luis D. "World Book Online Reference Center | Online Reference Book| Online Encyclopedia." *World Book Online*, www.worldbookonline.com/advanced/article?id=ar412440&st=panama%2Bcanal%2Bco

mpany#tab=homepage. This article provided a general overview of the canal's history, from the Culebra cut to the Hay-Herrán Treaty. We found information about the canal's wartime activity and decided to include it in our Technological Tragedy section. We included a quote in this section about the materials and troops that passed through the canal during three major wars.

Arbena, Joseph L. "Colombian Reactions to the Independence of Panama, 1903-1904." *The Americas*, vol. 33, no. 1, 1976, pp. 130–148. JSTOR, www.jstor.org/stable/979991. This journal provided an article that touches on Panama's secession from the perspective of Colombians. It shows how integral the United States was in the leaving of Panama and shows the non-violent nature of the event. It was helpful in formulating ideas for the historical context section of the exhibit.

Grieb, Kenneth J. "Panama Canal, Flag Riots." *Encyclopedia of Latin American History and Culture*, edited by Jay Kinsbruner and Erick D. Langer, 2nd ed., vol. 5, Charles Scribner's Sons, 2008, p. 33. *World History in Context*, <http://link.galegroup.com/apps/doc/CX3078904126/WHIC?u=san66643&sid=WHIC&xid=69e52bbc>. Accessed 28 Feb. 2019. This source provided us with a detailed overview of the Flag Riots. We used this information to inform us when writing our Political Tragedy section.

U.S. Department of State, U.S. Department of State, history.state.gov/milestones/1801-1829/monroe. This article about the Monroe Doctrine highlighted the main arguments of the publication. It was very useful in gaining context

for our project and supplementing what we know about American imperialist values of the 19th and 20th centuries.

Tertiary Sources

Brinkley, Alan. *Unfinished Nation*. McGraw-Hill Education, 2013. This textbook by historian Alan Brinkley, offers insight to the acquisition and creation of the Canal by America. We used this information in our section of American Imperialism to demonstrate America's strong-armed tactics to acquire the Canal.

"Building the Panama Canal." *Science and Its Times*, edited by Neil Schlager and Josh Lauer, vol. 6, Gale, 2001. *World History in Context*, <http://link.galegroup.com/apps/doc/CV2643450615/WHIC?u=san66643&sid=WHIC&xid=9cd89943>. Accessed 28 Feb. 2019. This source provided us with a general overview of the history of the Panama Canal from its construction to its later impact. We used this source to inform us when writing our Historical Context section.

"Panama Canal." Britannica School, Encyclopædia Britannica, 11 Oct. 2016. school.eb.com/levels/high/article/Panama-Canal/110730. Accessed 16 Jan. 2019. This source outlined the history of the Panama Canal. It talked about the French attempts to build a canal and the United States' efforts. With this information we constructed ideas for our project and learn about the historical context.