An Act of Translation:

A Manual for Creating Tactile Art Experiences at The Cheech Marin Center for Chicano Art and Culture of the Riverside Art Museum

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2022 Thesis Project

University of Washington Museology Graduate Program

Positionality of Author:

I do not identify as a member of the low or no vision community nor as an individual living with a disability. I acknowledge the social inequities that are enacted within museum spaces and my privilege that is upheld through these inequities.

This manual was a collaboration between myself, a sighted emerging museum professional and an advisory group made up of members from the low or no vision community who were compensated for their time and expertise. Through this collaboration, our group reflected many times on the lack of autonomy visitors with low or no vision have in museums and society at large. I recognize that the design of this museum experience does not allow for full visitor autonomy. While this manual expands access for visitors, it also perpetuates the existing power dynamic between museums and visitors with disabilities. This manual is a small starting point for one museum in the never-ending process that is access work.

A Note on Language:

This manual uses the term "low or no vision" when referring to any form or degree of vision loss a visitor may have. I do not identify as an individual living with a disability and use person first language throughout the manual so as not to impose or assume self-identification of any visitor. I recognize the validity and importance of identity first language ('Blind visitor', 'disabled visitor') and welcome both person first and identity first language. Contributors to this manual (advisory and thesis committee members) who have low or no vision use both person first and identity first language when self-identifying and identifying their community.

Advisory Committee	Thesis Committee	Special Thanks
Christine Davidson	Meena Selvakumar	Riverside Art Museum staff
Janet Escarcega	Pete Benavidez	Blindness Support Services
Joshua Polanco	Drew Oberjuerge	Fusion Signs & Design

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Introduction

In 2010, the U.S. Census Bureau released the report *Americans with Disabilities* which found that over 56 million Americans (more than 20 percent of the entire United States population) identify as living with some form of disability. Within 5 years of the report, this population increased by 2.2 million and is projected to continue increasing as the population of Americans over the age of 65 grows (Leist, Levinsky-Raskin, and Stemler, 2015). But a 2012 survey completed by the National Endowment for the Arts revealed that of all adults attending performance events or visiting art museum or galleries nationally, only 7 percent identified as living with some form of disability. Twenty-one percent of all adults nationally visited an art museum or gallery in 2012, but only 11 percent of all adults living with a disability made the same visit (Bienvenu, 2015).

Why are visitor numbers so low for individuals living with disabilities?

Art museums remain largely inaccessible for visitors with disabilities, making them unwelcome and difficult spaces to navigate and enjoy (Voon, 2019; Wong, 2020).

This is particularly true for visitors who have low or no vision. Visual arts present a fundamental information access barrier to this population as a medium that is not readily accessible through sight. Visual art museums are therefore uniquely positioned within their communities to positively impact art viewing experiences for individuals who have low or no vision by providing accessible and enjoyable interpretation of visual arts.

The purpose of this project was to develop an accessible art viewing experience and implementation manual for The Cheech Marin Center for Chicano Arts & Culture of the Riverside Art Museum in order to assist in the creation and sustainment of accessible art viewing experiences and interpretation for its visitors who have low or no vision.

The Cheech Marin Center for Chicano Arts & Culture of the Riverside Art Museum

The opening of The Cheech Marin Center for Chicano Arts & Culture of the Riverside Art Museum (widely referred to as "The Cheech") in June 2022 is the culmination of the public-private partnership between the Riverside Art Museum, the City of Riverside, and comedian Cheech Marin. The Cheech will be a national hub for Chicano arts and culture appreciation, exhibition and study. Quality art education and visitor engagement is a core tenet of The Cheech, which sits in the heart of downtown Riverside, California.

The Cheech is invested in broadening access to Chicano arts and culture for local and national populations, including the low or no vision community. Its sister organization, the Riverside Art Museum (RAM), has already made strides in providing visual art interpretation for its visitors who have low or no vision. This project at The Cheech builds on programming initially piloted at RAM.

Previous Work at the Riverside Art Museum

During the summer of 2021, the Riverside Art Museum (RAM) and this manual's author piloted a program that is the basis for the interpretation outlined in this manual. Central to this pilot program was the partnership between RAM and the local agency Blindness Support Services (BSS), which provides vocational training and promotes independence for the low or no vision community of the Inland Empire. BSS and RAM worked together in 2018 to create a tactile mural at the BSS offices. In 2021, when RAM received a grant to increase access to a photography exhibition for visitors who have low or no vision, BSS was invited to be a community collaborator on the project.

The 2021 summer project kicked off with a series of listening sessions with clients and students of Blindness Support Services in order to determine barriers they face when accessing arts and culture in the Inland Empire and the ways they would like to experience arts and culture offerings locally. From the information learned at the listening sessions and from a literature review, a format for interpretation was developed: tactile interpretations of original artworks paired with verbal descriptions offered as both a guided tour and recorded audio tour. Prototypes of the interpretation aids and drafts of verbal descriptions were

reviewed by BSS staff several times over the course of the summer. BSS marketed the program to the low or no vision community and RAM successfully held a series of tours before the conclusion of the exhibition.

The impact of this program was two-fold: RAM now has an understanding of the unique needs of this particular community when it comes to experiencing visual arts and the low or no vision community is beginning to think of RAM as a place that they are welcome and wanted. When the opportunity to continue this work at The Cheech through this Master's thesis project presented itself, both the Riverside Art Museum and Blindness Support Services pledged their support and resources.

Purpose of Manual

This manual provides a guide to:

- working with community members in an advisory capacity
- creating texture printed tactile interpretation aids from original artwork
- writing verbal descriptions to use with tactile interpretation aids
- hosting in-person tours
- offering recorded tours
- expanding access broadly in other areas of the museum

This work can be viewed as museum interpretation and more specifically as translation. Tactile aids and verbal description seek to translate a visual experience into a tactile and auditory experience.

The manual itself includes concrete steps, formats and activities for production and implementation, but also provides options and open considerations so this work can flex and bend to fit both the requirements of community and museum. **Underlying the creation of this manual is the need for practical and sustainable interpretation that is accessible to visitors and feasible for the museum.**

As a brand-new museum, trends in funding and the operating budget remain to be seen and changes to initial department structures, exhibition strategy and personnel should be expected as the museum learns and grows. Therefore, this experience was explicitly designed to be flexible along a spectrum of museum

resources. For example, there are high cost, mid-range cost and low-cost options for offering recorded tours. Providing options allows for variability in resources the museum might experience from year to year or exhibit to exhibit so that the museum can consistently offer interpretation in one form or another for its visitors who have low or no vision.

Tactile Interpretation Aids & Verbal Description

Holding listening sessions with Blindness Support Services in 2021 and a review of the literature revealed that access to visual information is one of the biggest barriers faced by this visitor population. Listening session participants said they needed alternative ways to access visual information and relied on both touch and sound in their everyday life to do this. Literature on tactile pieces in museums echo that touch is an important component of the museum experience for visitors who have low or no vision but should not be the only means of engagement (Ginley, 2013; Bacci & Pavani, 2014; Graven et al., 2020). Through piloting tactile aids and verbal descriptions during the summer of 2021 at the Riverside Art Museum, it was found that these two components contributed to a greater understanding of each other and the original artwork.

Several museums, domestic and abroad, offer touch tours at their organizations for visitors who have low or no vision (MoMA, n.d.; Victoria & Albert Museum, n.d.; The Whitney, n.d.). These touch tours explore art and cultural objects that lend themselves to a tactile experience, such as a sculpture, furniture or 3D artifacts. These are usually offered as guided tours once or twice a month with museum staff leading small groups through the museum. This model works well for exhibitions or objects that already exist in 3D space.

Museums have also ventured into creating tactile representations of 2D works of art (Museo del Prado, n.d.; Canadian Museum for Human Rights, 2018). While currently, best practices for creating 3D representations of 2D artworks do not exist, several publications have investigated varied means of production. (Furferi et al., 2014; Weisenberger, 2015; Cavazos Quero, Bartolomé, & Cho, 2021). One of the biggest challenges for producing impactful tactile representations or interpretation aids is cost. Manufacturers exist that produce large scale tactile interactives of art work for museums, but these are costly and The Cheech cannot afford to produce new pieces for each exhibition or show. By scaling down these

tactile interactives to handheld size and using texture printing, the cost for their production can be greatly lowered.

Much like tactile tours, verbal description has long been offered by museums as an alternative way for visitors who have low or no vision to interact with collections. Unlike tactile experiences, verbal description is a well-developed aspect of museum interpretation. Thorough guidelines exist within the literature to create verbal descriptions for art work (Axel et al., 1996). Some museums offer verbal description in specially offered guided tours (Academy Museum, n.d.; Brooklyn Museum, n.d.) while others have audio tours that include verbal description (National Gallery of Art, n.d.; Rubin Museum, n.d.). Key aspects of verbal descriptions include tombstone label information, identification of subject(s), form, style, color, scale and emotion or feel.

Texture Printing Technology

Texture printing is a form of printing that builds up layers of ink to create texture and relief. The software paired with the printer takes an image and creates a one-to-one height function of color. The printer prints by laying down one layer of ink at a time and building ink layers up- essentially creating a topography of the image that maps color. This produces an image that can be understood through touch. Texture printing was a good technology choice for producing tactile interpretation aids because they can be printed quickly from a digital image of original artwork and they are relatively low cost at $150 per print from a local Riverside printer.

Working with a Community Advisory Committee

Importance of Community Advisory Committees

A community advisory committee made up of community members who have low or no vision is an important component of developing tactile interpretation aids and verbal descriptions and for broader access projects at the museum. Community advisory committees bring expertise, perspectives and accountability to the development process that is crucial for creating an experience that is accessible and enjoyable for visitors who have low or no vision.

Community advisory committees are the third building block in John Salem's seminal manual *Everyone's Welcome: The Americans with Disabilities Act and Museums* (1998). These groups are part of a larger, overarching access system for museums and provide expertise on "institution's policies and practices regarding physical, programmatic, and communication accessibility and recommend specific action for increased accessibility" (Salem, 1998). Art Beyond Sight also provides its own handbook for working with community advisory committees, *Developing an Advisory Board*. Art Beyond Sight argues that the development of a community advisory committee that meets regularly is crucial to the long-term success of museum accessibility. Both Salem's manual and Art Beyond Sight's handbook are good references for the museum to follow in engaging with a community advisory committee.

Without community advisory committees, staff run the risk of creating an experience that has unforeseen barriers or is not enjoyable for visitors. Community advisory committees marry the expertise of community members and the expertise of museum professionals to create products, experiences and initiatives that are better informed than either group could produce on their own. This collaborative process can lead to innovation and progress at the museum.

This manual was created by working directly with a temporary community advisory committee to consider every aspect of the outlined museum experience, from formatting of the interpretation aid, descriptive language, spatial considerations, and access barriers, to navigational markers, website access,

visitor service experiences and frameworks for engagement. The museum can engage this group again to act as a longer-standing committee or develop a new committee following either Salem's manual or Art Beyond Sight's handbook.

Community Advisory Committee Considerations

While this manual does not outline the full process of creating and engaging with a community advisory committee (reference Art Beyond Sight for comprehensive step-by-step handbook), below are a few important considerations for working with community advisory committees:

Diversity: Disability communities are not monoliths and having several intersections of identity represented on the committee will greatly increase its diversity.

Compensation: Members of the committee should never be asked to contribute their time and expertise to the museum on a volunteer basis. Provide honorariums for committee members.

Purpose: The committee should have an explicit, agreed-upon purpose and work on specific and directed initiatives, projects and goals.

Trust and Connection: The importance of connection, respect and trust between committee and museum cannot be overstated. A committee should always feel like they are valued for their expertise and listened to by museum staff. Museum staff should be prepared to objectively consider conclusions and recommendations of a committee that may seem to criticize their personal work or contradict art museum conventions (i.e., this program is entirely inaccessible, this interactive is not a good design for visitors who have low or no vision, label text is too small, gallery lighting is too harsh, more money should be devoted to making physical spaces accessible). Ultimately, the committee is there because the museum has asked it to help make improvements, not commend existing work and efforts.

Selecting Artwork for Tactile Interpretation

The process of creating texture printed handheld tactile interpretation aids for two-dimensional artworks is an act of translation. The goal is not to create the same experience for a visitor who has low or no vision as that of a visitor experiencing the artwork through sight. Instead, the purpose of tactile interpretation aids is to translate the artwork from a visual medium to a tactile medium. In this process, preservation of information and artistic intent of the original piece is the priority. However, in translating a visual artwork to a tactile experience, some information is inevitably lost. This loss of information does not render the experience of the artwork meaningless, nor does it necessarily undermine artistic intent, for through this process of interpretation and translation, new information is created that allows new meaning and understanding to emerge.

Many considerations must be made when choosing which artworks to include as texture printed handheld tactile interpretation aids for exhibition. The considerations outlined in this section are not ordered by importance or chronology in the artwork selection process. Many of these considerations will be made at the same time and may be revised several times throughout the selection process. Selection of pieces need to be made on a case-by-case basis as the considerations below do not provide definitive parameters with which to select artwork. It is beneficial to incorporate the production of these aids into the exhibition development timeline, rather than producing them after the exhibition has opened. Many of the production activities for the aids are complementary or mirror activities in exhibition development and production, such as digital imaging, printing, and drafting exhibit didactics.

Type of Artwork

This process encompasses art that is not readily understood in three dimensions. Artworks such as sculptures, dioramas, and reliefs may be better suited for durable, scaled 3D printed replications that can be handled by visitors. The process outlined in this manual is best suited for artworks that are viewed as “flat”, or in two dimensions and cannot be touched by visitors, like paintings,

photographs, drawings, prints, etc. In exhibitions that include both two-dimensional and three-dimensional artworks, consider including both 3D printed and texture printed tactile interpretation aids to create a multi-modal museum experience for visitors who have low or no vision.

Photographs, paintings, drawings, prints and other two-dimensional artworks that are representational, i.e., not abstract in nature, were the basis for the creation of this manual. More research and prototypes are needed to determine if this process has any benefit in conveying and interpreting abstract, non-representational artworks for visitors who have low or no vision.

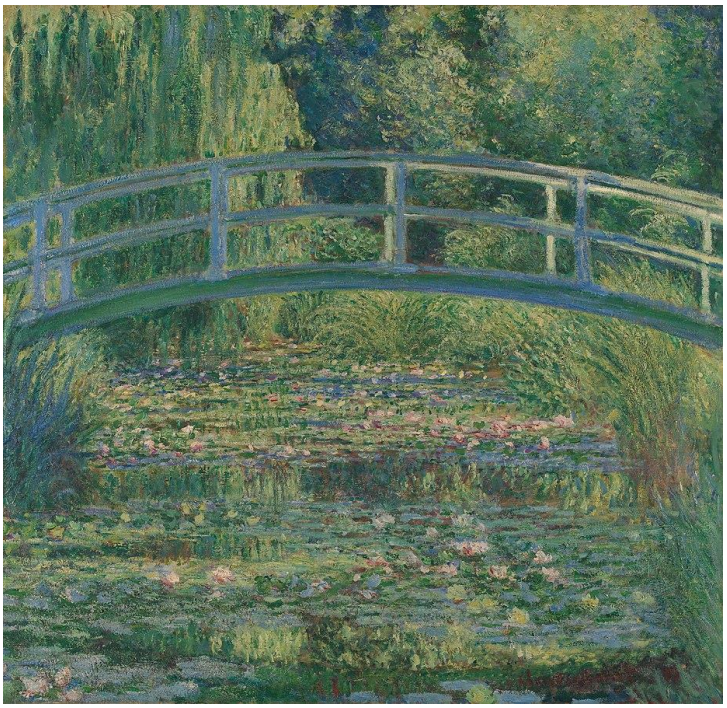
Medium, Color and Composition

The medium of the original artwork is less influential to the end product and tactile experience of visitors as is the individual technique and style of the artist. The information of art medium gets somewhat collapsed in this process of interpretation as a digital image of the individual artwork is used to print the tactile piece, regardless of if the original artwork is watercolor, acrylic, or charcoal. An understanding of medium can be regained or expanded through its verbal description (SEE *Formats & Strategies for Writing Verbal Descriptions*) or supplemental gallery materials.[1]

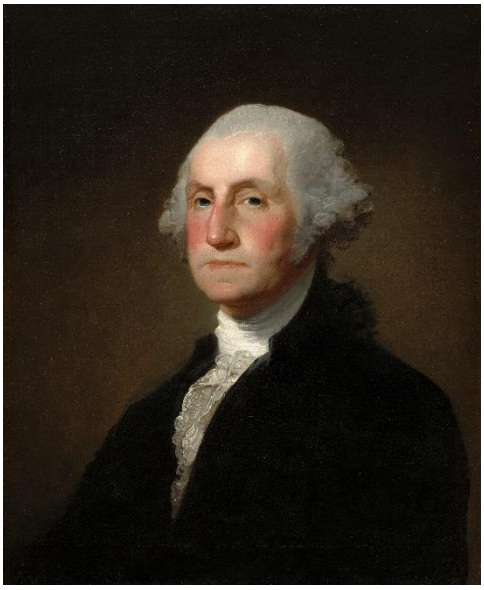
What is more impactful for a tactile experience is the technique used to create the piece. Does the artist use big bold brush strokes and confident lines to create shapes and texture? Is the photograph sharply in focus? Is stippling used to create shadow and shape? Much of this information is readily translated into tactile interpretation aids and understood through touch.

A note about medium and technique: Some artworks may provide too much texture without enough definition such that the tactile experience becomes incomprehensible. In such extreme cases, artworks can be altered digitally, with black outlines around subjects and areas of note, which will be raised in the final print so that shapes become distinct through touch, while the technique and feel of the artwork is simultaneously understood.

[1] A way to recapture this information would be to supplement the tactile experience with a touchable sample of mediums used to create the original piece.

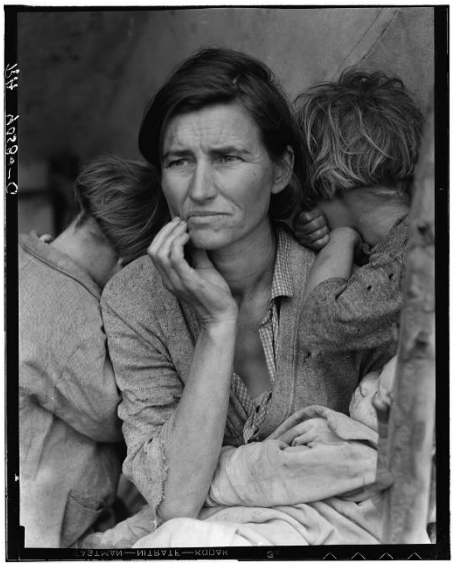


A work such as Claude Monet's 1899 oil painting, *The Water-Lily Pond* (above) may need to be digitally altered in order for the trees behind the bridge and the plants in the pond to feel distinct from each other in a tactile interpretation aid.



In Gilbert Stuart's 1800 oil painting, *George Washington* (above), Washington's jacket is too similar in color to the background, making the distinction between his jacket and the background difficult to discern without alteration.

High contrast colors will always translate better than gradients because the height difference in ink will be more pronounced, allowing the visitor to easily distinguish form and orient themselves within the piece. However, color can be manipulated on the digital image of the artwork to create a better contrast. Artworks that utilize low contrast color palettes can still be candidates for printing if areas of color have distinctive brush strokes or slight color variation within a single color as this creates a slight texture when printed, indicating the difference between two areas of color that can be experienced through touch.



Dorothea Lange's 1936 photograph *Migrant Mother* (left) has areas of high contrast that translate well when texture printed, such as the deep worry lines and facial features of the mother.

Vincent Van Gogh's *Starry Night* (1899) (right) has bold brush strokes that have contrast, variation and texture that visitors will be able to feel through texture printing.

The digital alteration of an artwork for printing creates room for a broader discussion about misrepresentations of the artist and intent. Copyright provides parameters to approach this question on a case-by-case basis. If the artwork is in the public domain, the museum can freely use and alter a digital image of the artwork. Here, the idea of interpretation is argued again. What information is important to come across? The subject of the piece? The technique of production? The texture of the medium? If the artwork has copyright restrictions,

the museum should adhere to these restrictions. The artist or the artist's estate or trust can be brought into this conversation and potentially extend the use of the artwork to tactile interpretations. If the artist is living and agrees to include their artwork in this process, they can provide crucial feedback on how to approach thinking about their artwork in this context. If the artist is deceased, consult curators, literature and the artist's estate or trust to make the decision of whether to include the piece as a tactile interpretation aid and how to alter (or not alter) the piece before printing.

Tactile interpretation still does not have a best practice or model within the museum field and different museums may translate the same artwork in different ways. Just as broader interpretation techniques, models and frameworks change from museum to museum, so too will tactile interpretation. The most important piece of tactile interpretation is the underlying need of the community. Before standardizing one tactile interpretation model across the field, the field should work widely with the low and no vision community and researchers to understand completely what this visitor population needs, how they use museums and the way they understand art through touch. Large scale, foundational work needs to be completed before a best practice can emerge. For now, The Cheech should follow the model outlined in this guide as it is rooted in both a consideration of museum specific resources and in collaboration with the local low and no vision community the museum serves.

Producing Tactile Interpretation Aids

Working with Vendors

The production of texture printed interpretation aids requires the use of a texture printer which means museums will likely need to outsource this service to a vendor. Exhibit fabrication companies may be able to offer this service as well as companies producing signs for businesses, government and corporations. The Riverside Art Museum worked closely with a local sign manufacturer that had a texture printer in order to create tactile pieces for the museum. This process is certainly collaborative between the vendor and museum, like any other component of exhibit fabrication. Because these pieces are designed to be handheld and printed from digital files, it is possible to work with producers that are not local and have pieces mailed to the museum, keeping in mind that this is an iterative process and several prototypes may need to be reviewed before printing the final product.

Format

The format of these pieces has been standardized through rigorous review by a community advisory committee. The aids are designed to be handheld and easily used within gallery spaces. Ink should be printed on a plastic, like acrylic, fiberglass or polycarbonate. The specific dimensions of the aids will depend on the original dimensions of the artwork. Both landscape, portrait and nonuniform orientations are permissible. The tactile piece should not be large enough so that it cannot be held in the hand or the lap while in use. The components of the interpretation aid are:

1) The tactile artwork. This should be scaled proportionally from the original artwork to a handheld size.
2) Large, raised print, high contrast English text of the artwork label. This is printed below the tactile artwork.
3) High contrast, Unified English Braille (UEB) text of the artwork label. This is printed below the raised text English label.
4) A grid system of letters and numbers. Along the left-hand border runs a series of numbers beginning with “1” in the upper left-hand corner and

increasing by whole numbers at regularly spaced intervals down the left-hand border. Along the upper top border of the artwork, include a series of letters beginning with the letter "A" in the upper left-hand corner and progressing alphabetically at regularly spaced intervals. These numbers and letters should also be raised print and high contrast. This grid creates anchor points that can be referenced within the verbal description to locate areas of interest and orient visitors within the work (SEE *Formats & Strategies for Writing Verbal Descriptions*).

Copyrights and Digital Images

Copyrights for image reproduction for interpretation and accessibility purposes must be obtained from the artist or artist's estate or trust. As this will likely be a new proposition for the artist, it is important to be transparent and clear about the technology used to create these aids and the use of them within the gallery space. Once an agreement has been established between artist and museum, high-resolution digital images or scans need to be obtained for printing. The artist may already have a digital image of their work to provide for printing or the museum may need to photograph or scan the piece in-house. Undertaking this process during exhibit development and installation is useful as artworks are normally photographed during this time for promotional materials and the catalogue.

Review by Community Members

An important process in the production of interpretation aids is their review by community members or museum staff who have low or no vision to test for clarity of the image. Sighted museum staff cannot approximate the experience themselves by closing their eyes and using the tactile aid. As this is an iterative process, this review will likely have to happen a few times before an aid can be used in-gallery. See *Working with a Community Advisory Committee* for how to work with community members during this process.

Formats & Strategies for Writing Verbal Descriptions

What is Verbal Description?

Verbal description has long been available to museums as an interpretation tool for visitors with low or no vision to experience museum spaces and offerings. Verbal description is a well-developed aspect of museum interpretation. One of the leading organizations creating literature on verbal description within museum contexts is Art Beyond Sight. Art Beyond Sight defines verbal description as "non-visual language [used] to convey the visual world. It can navigate a visitor through a museum, orient a listener to a work of art, or provide access to the visual aspects of a performance."

In implementation, some museums offer verbal description in specially offered guided tours while others have audio tours that include verbal description. Key aspects of verbal descriptions include tombstone label information, identification of subject(s), form, style, color, scale and emotion or feel.

This manual will review Art Beyond Sight's fieldwide guidelines for writing verbal descriptions and then provide a specific format for verbal descriptions to be used in conjunction with tactile interpretation aids.

Art Beyond Sight Literature

Art Beyond Sight is a leader in the field of museum accessibility for visitors who have low or no vision and has created robust guidelines, trainings and literature for developing verbal descriptions in an art viewing context. Below is a condensed version of important concepts from Art Beyond Sight's "Guidelines for Verbal Description". Also see Art Beyond Sight's "Writing Verbal Descriptions for Audio Guides" and "Verbal Description Training" for more information, examples and resources.

- **Label Information:** Begin description with the tombstone information from the artwork label, usually artist, nationality, title, date, mediums,

dimensions, and the custodian or location of the work. Include size of the artwork if important and relevant.

- **Broad Overview:** Provide a general overview of the work sequentially so that the visitor can paint a mental picture. Begin with subject and move to composition. Include color, tone and mood.
- Directional Orientation: Orient the visitor to the specific location of objects or figures within the art work. Numbers on a clock provide recognizable reference points.
- **Discuss Medium and Technique:** These are often important discussion points for interpretation of artworks. Call out the relationship between medium and technique and its importance to the meaning of the artwork if relevant.
- **Highlight Artwork Style:** Focus on the facets of the artwork that convey its style, like school, movement, period or area of the world and how these all interact to create the artwork.
- **Use Specific Words:** Figurative language will not hold much information or meaning. Art terms (perspective, focal point, foreground, etc.) should be defined when they become relevant points of discussion and description.
- **Provide Vivid Details:** After orienting the visitor to the artwork, the description can move into creating a vivid mental picture in the visitor's mind. Objective references provide description in a way that lets the visitor come to their own conclusions and interpretations about the art.
- **Call Out Artwork Position in the Gallery:** Giving a description of the gallery space and the relative location of the artwork can indicate information about its meaning and connection to the surrounding artworks.
- **Use Analogies to Explain Intangible Concepts and to Compare other Senses to Vision:** Analogies are powerful ways to translate a visual experience into touch, hearing, or smell and to describe phenomena that are not easily visually described.
- **Use Reenactment to Foster Understanding:** Provide instructions so that the visitor is physically mirroring a pose, posture or form of the artwork subject with their own body.

- **Contextualize the artwork with historical and social information:** Provide information that a general, sighted tour would introduce visitors to in order to understand the work's function, meaning and role in the world.

Format for Verbal Descriptions Paired with Tactile Interpretation Aids

This section refers to verbal descriptions written specifically for use with tactile interpretation aids. Verbal descriptions when recorded should be between 5 and 7 minutes long. If the verbal description is used by a docent or staff member on a tour, it may be much longer as there will be room for discussion about the piece. The verbal description should follow the following format for clarity of information:

- **Label Information:** Read word for word the wall label next to the artwork. This information is included as both raised English text and Braille on the interpretation aid. Explicitly call out that the text on the interpretation aid is label text.
- **General Description:** In this next section, describe the artwork generally, beginning with subject, move into composition and other details of the piece. This paints a mental image in the visitor's mind that primes them for the use of the interpretation aid. Without this section, visitors easily become lost within the interpretation aid because they do not have a mental map or expectations for what they should be feeling.
- **Description with use of tactile aid:** This section makes use of the tactile image as a way to feel the artwork. The verbal description will describe the artwork again in more detail, with reference to specific texture changes, shapes and forms, locations on the artwork using the grid system and a discussion of the medium, use of color and technique. In this section, the guide (in-person or recorded) should lead visitors around the tactile piece fluidly from one area to the other, keeping the need to pick up and move hands from one part of the piece to the other to a minimum.
- **Interpretation:** Provide interpretation of the artwork such as how it fits into larger exhibition themes, its historical, social or cultural significance and information on the artist. This information can be thought of as information

that would be included in the catalogue, exhibit didactics or on a tour for sighted visitors.

Incorporating Tactile Interpretation Aids into The Cheech Center

There are several different ways to incorporate tactile interpretation aids and their accompanying verbal descriptions into the museum itself. Each possibility has its strengths and weaknesses for both visitor and museum. The best option for the museum depends on museum resources and capacity, exhibition strategy and gallery lay-out. This experience is designed to be flexible in its application to fit the museum's needs at different points in time. For example, at times when the museum cannot hold any tours because docents are low in numbers, docent-led tours will not be possible and recorded audio tours may be necessary. Providing this museum experience in several different ways at one time also allows visitors to choose the experience they want to have with the tactile interpretation aids and verbal description. This manual provides several different options and their considerations for implementation.

Visitors can experience the tactile aids and verbal descriptions through both recorded audio guides and through guided tours with docents or staff. Offering both of these experiences at the museum so guests can choose their preferred mode is ideal, but not always practical. Below are the resources needed for both modes, their strengths and weaknesses and practical considerations.

Guided Tours

Visitors participate in a guided tour with a docent or museum staff. In this experience, the guide describes the piece live to visitors (this can be from a pre-written description) and provides interpretation, discussion points and direction. Visitors can sign up for this experience prior to their visit.

Resources needed: Docents or museum staff trained in giving tours to visitors with low or no vision, reliable sign-up mechanism via phone and website, marketing materials directed at the low or no vision community of the Inland Empire

Strengths: Museum visitors are able to ask clarifying questions to their tour guide, participate in discussions that deepen understanding and meaning, can rely on

tour guide to navigate them through the gallery space safely, does not require additional technology (low tech), visitors can participate in this experience without the assistance of a family or friend

Weaknesses: Required sign-up prior to visit can hinder participation, standardized and consistent training for docents and staff requires time and effort

Sign-Up

Holding guided tours requires prior sign-up with the museum before the visitor's arrival to the museum. The museum can also offer tours on a set date at a frequency that is feasible for staff (i.e., two times a month, once a week.) Sign up should be through the museum's website if the website itself is accessible to community members who have low or no vision (SEE *Website Accessibility*). Interested parties should not have to email the museum personally or toggle to a different screen or site. They should be able to input their name and contact information directly on the museum website in order to keep the barrier to participation at a minimum. Interested persons should also be able to call the museum during operating hours and schedule a tour over the phone.

Marketing

Marketing should be in accessible formats (see the University of Washington's resources for Checking PDFs for Accessibility and Accessible Technology: Documents for more information). Connecting with local organizations that serve or market to community members who have low or no vision can be beneficial in reaching an audience that has reason to distrust museums. Local organizations can also coordinate with the museum to offer tours together (i.e., "Blindness Support Services is offering a guided tour at the Riverside Art Museum. This tour includes verbal descriptions of artworks and tactile aids for visitors to use. Sign up at Blindness Support Services' front desk or by calling Blindness Support Services")

Number of Visitors

The maximum number of people in any given tour will depend on the number of copies of tactile interpretation aids the museum produces. In general, this number should not exceed 6 or 7 visitors to allow for organic discussion that does not exceed time limits.

Tour Length

Tours normally last between one to two hours, depending on the number of artworks in the tour. Guided tours that include verbal descriptions will always be longer than guided tours without verbal descriptions due to the additional time spent describing the art.

Introductions

Staff or docents welcome the visitors at a predetermined meeting location, such as the visitor services desk or the gallery where the tour will take place. Be sure to introduce yourself and your role in the museum and offer navigational assistance to anyone that wants it. Offering an elbow or shoulder when walking down stairs, when in a crowded room, hazardous pathway or for a long walk is acceptable and courteous. Some visitors may not want or need assistance and will decline the offer, others may prefer their own navigational assistance such as a cane, a guide dog or a family member, and some may request a different form of assistance. Never touch a visitor without their explicit consent, even if they appear to you to need help. Always extend your assistance verbally first.

Gallery Description and Layout

When inside the gallery, give a brief description of the space such as the length, width and height of the room, the color of the walls and floors, the light and the artwork in the space. For example:

> "We are currently standing in the Member Gallery which is about 100 feet by 40 feet with very tall ceilings. The floors under our feet are hardwood and have a golden honey color. They are close to 100 years old and show a beautiful wear and tear from usage over the years. The gallery walls are painted a dark slate gray. Photographs are on all four of the walls. Some photographs are clustered together and some stand alone."

Provide an introduction to the exhibition or gallery, like the purpose, themes and artists in the show. Announce how long you expect the tour to take and how many pieces will be included in the tour. Walk the group over to the first piece in the tour. If gallery furniture is not sufficient enough to accommodate everyone, you can set up folding chairs prior to the tour so visitors can sit and use the tactile interpretation aids.

Conducting the Tour

Hand out the aids to visitors and begin orating the pre-written verbal description following the format outlined in the section *Formats & Strategies for Writing Verbal Descriptions*. When giving the verbal description, pause after describing the artwork and ask if there is anything that the visitors would like you to describe again or expand upon. Move into the description of the piece that references the tactile aids. If visitors need help finding a shape or object on the aid, ask them if you can direct their hand over the piece. A strength of the guided tour is the ability to flex to meet the particular needs of individual visitors. Provide discussion questions between sections of the description, or simply room for the visitors to discuss their thoughts regarding the piece. Repeat for each piece on the tour.

Recorded Audio Guide

Visitors utilize recordings of the verbal descriptions on their own within the gallery space. Visitors can enter the museum at any time and experience this museum offering.

Resources Needed*:* Additional technology within gallery or museum space for visitors to listen to recordings, equipment to record verbal description, directional and orientation markers within gallery or museum space

Strengths: Visitors do not need to schedule ahead of time with the museum; offers greater autonomy and choice for viewing artwork on the visitors' own time and interest level

Weaknesses: Although there is the potential to be low tech, low cost and low effort, additional technology is still required in order for visitors to use a recorded audio guide. In-gallery orientation to artworks with tactile images is also difficult for visitors who have low or no vision even if the museum provides directional markers.

See the next section, *Creating Recorded Audio Tours* for how to use audio tours in the museum space.

Where to Keep Tactile Interpretation Aids for Use with Recorded Audio Guide

A recorded audio guide means the visitor is free to engage with this offering on their own time. Therefore, the interpretation aids will need to be readily available for visitors to access when they desire. There are two options for where to keep the tactile interpretation aids inside the museum for use with a recorded audio guide: at the visitor services desk and in-gallery.

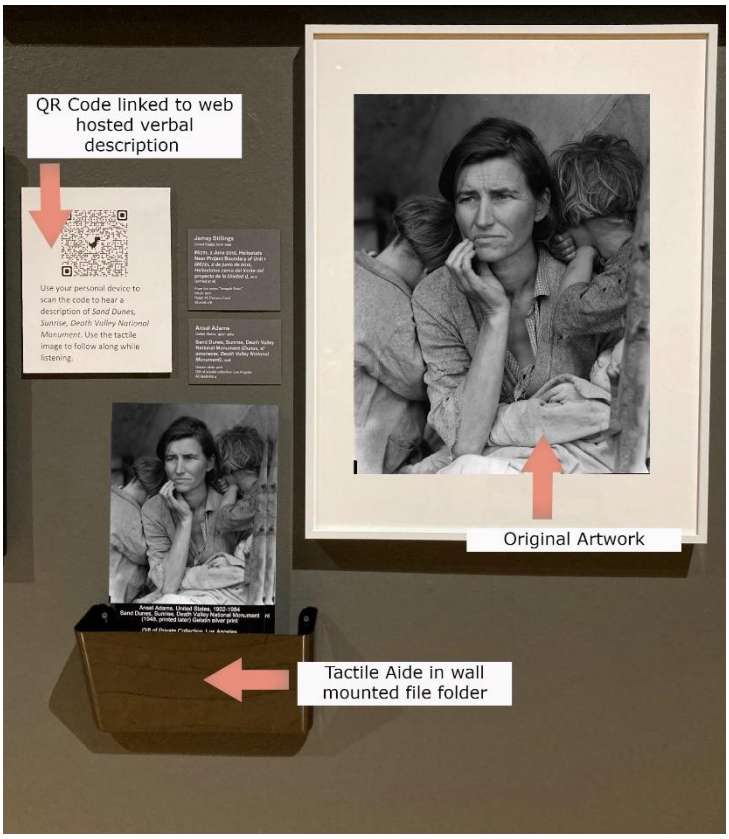
Visitor Services Desk: Interpretation aids may be kept at the visitor services desk at the entrance to the museum. Visitor service staff have the opportunity to speak with visitors requesting the aids and discuss their use and answer questions. A downside to this option is that the visitor will need to carry the aids with them to the gallery space which can be taxing for the visitor. While these are made to be handheld and mobile, the aids are still too large to be carried around for an entire museum visit. It is preferable to have a staff member or docent deliver the pieces to the visitor at an agreed upon time when they plan on visiting a gallery that includes tactile aids and verbal descriptions.

In-gallery: Housing tactile interpretation aids inside the gallery space or exhibition solves the issue of visitors needing to carry the aids with them through the museum. However, this option also presents its own unique challenges.

The most practical and user-friendly way to house these in-gallery is keeping the tactile aid with its original artwork. This can be achieved by creating a sleeve on the wall next to the original artwork that houses the piece. This can be very low cost. Security considerations need to be made to determine if housing pieces with their original artwork endangers that particular artwork. If it is too dangerous to have aids directly on the wall, these pieces can be kept in small open vitrines or pillars with an opening, close to the original artwork.

A secondary option for keeping pieces within the gallery is placing them at the entrance of the exhibit in something like an open vitrine or pillar with an opening in the top. This creates a problem for visitors trying to locate which interpretation aids belong to specific pieces on the wall. Visitors will need to depend on other people within the museum space, like family, friends and docents, when locating artwork. Developing “accessible” offerings that create dependencies is never ideal and should be avoided, if possible. This option can be implemented with the

understanding that it is the first step to better access and the museum will work to create increasingly better experiences for their visitors.



Above photo: An example of how tactile aids can be kept inside the gallery, on the wall next to original artwork in a hanging file folder.

Additional Necessary Components

Determining whether to keep pieces at the visitor services desk or in-gallery depends on the particulars of the exhibit space, the artwork, staff capacity and budget. In both cases, two components are necessary to include in the gallery space: museum furniture and artwork indicators.

In-gallery museum furniture is crucial for visitors who have low or no vision. The tactile aids are made to be used with both hands, meaning that visitors will set them in their lap or next to them on a bench when using the aids. Additionally, visitors may be using a cane or a guide dog and need to set these aside in order to

use the tactile aids. Recorded verbal descriptions are several minutes long, meaning visitors will likely want to sit while listening to the recording.

Artwork indicators are also important for visitors who have low or no vision. Explicitly inform visitors what these indicators are either at the visitor services desk or at the beginning of the recorded audio description so they can be aware of them during their visit. Indicators can be things such as gritted tape on the floor in front of artworks with tactile aids. This provides a difference in texture from the smooth gallery floor, which can be felt via the visitors' own feet or a cane. Small posts in front of artwork can also indicate stops along the guided audio tour. These posts can also be spots to paste QRs codes or a raised number indicating which artwork this is on the tour. The use of QR codes is discussed in the section, *Technology for Hosting Guided Audio Tours*.

Creating Recorded Audio Tours

Offering a recorded audio guide to be used as part of the museum experience can decrease barriers to access for visitors who have low or no vision. In this section, several different possibilities for including recorded audio guides in the museum are presented to offer flexibility to the museum in terms of cost, time, expertise, ease of use and applicability. Offering any access point for historically excluded museum visitors is preferred to a completely inaccessible museum experience, however, access work is a process and should progress over time. As the museum builds this work into its core activities, innovations in technology and museum offerings can be explored and prioritized.

Recording Verbal Descriptions

No high-tech recording equipment is necessary to record verbal descriptions for audio guide tours. A computer or phone is acceptable. Tips for recording:

- record in a small room with minimal echo, background noise, or interruptions
- read clearly from the scripted verbal description and keep a steady pace
- keep the same distance from the recording device throughout the entire description
- take a short pause between each section of the verbal description so visitors can pause their recording and rewind if desired.
- avoid both a monotonous tone and speaking too quickly or excitedly

Technology for Hosting Guided Audio Tours

As with many other components in this manual, there are different options to choose from when it comes to selecting technology to host the verbal description recordings. This enables the museum to continue offering points of access to visitors consistently.

Using technology that interfaces with the visitor's personal smart device (phone, tablet, etc.) is preferred. Smart devices are an indispensable tool for many visitors

who have low or no vision. Smart devices have built in accessibility features which visitors will likely know well. Providing a museum headset as the only option to access audio creates a barrier because visitors will need to learn how to use a new technology.

Location-Aware Audio

Location-aware audio guides are app-based audio guides that use beacons (like Bluetooth technology) to interact between the museum space and the visitor's smartphone. Audio is contextualized in physical space and is automatically triggered based on a visitor's location within the museum. This option is the most accessible for visitors who have low or no vision because they can be directed through the museum reliably by audio and know when they are in front of artworks that have tactile aids and verbal descriptions. A location-aware museum app with location triggered audio would allow visitors to have a higher level of autonomy within the museum space.

While this technology would greatly increase accessibility for visitors with low or no vision, this option is also the most resource intensive. Companies exist that assist in the creation of location-aware audio (like Museum Anywhere), but at the time of writing this manual, no ready-made, user-friendly platform exists for museums to create location-aware audio tours. The museum would need to work with a software developer to create an app.

Many museums have this technology in the form of a bespoke museum app. The San Francisco Museum of Modern Art is one of the pioneering museums in this technology.

Ready Made Apps

Several platforms and providers exist that eliminate the need to build a museum app from scratch. While these apps are not location-aware, again creating a navigational barrier within the museum space, they do increase access for visitors who have low or no vision. Additionally, they are user-friendly for museums who do not have technical expertise and are reasonably priced.

Recordings made by the museum are uploaded onto the app and can be arranged in chronological order, named and have thumbnails. This creates an easy-to-use sequential listing of verbal descriptions for visitors and eliminates the need for building software.

Guide-ID and Gesso are great examples of ready-made museum tour apps that are compatible with accessibility features on most smartphones. The Walt Disney Museum created a guided descriptive tour through Gesso that is sequential and easy to use.

Web-Based Audio Sharing Site + QR codes

A low-tech, low-cost, low-effort option is housing the recordings on a web-based audio sharing website and accessing them via QR codes. Platforms like SoundCloud and Bandcamp are DIY, self-publishing audio websites where users can upload their own audio files for free or at a low cost and share them publicly. As opposed to a museum specific app that aggregates audio files into a unified museum experience, using a DIY audio sharing site creates isolated audio files that have to be separately accessed.

This issue is easily fixed by using scannable QR codes to auto generate a linked website on the visitor's phone. QR codes can be generated for free online, like through Google's free generator. Within the gallery, each artwork that has a verbal description file that has been uploaded to an audio sharing site will also have a unique QR code next to the artwork that links to the online file. Once scanned with the visitor's device's camera app, the device will open the file link in the device's web browser. At this point the visitor can hit play and listen to the verbal description.

This option creates dependencies on people in the visitor's party or staff and docents. Visitors may have difficulties locating the QR and lining their phone up to scan the code and may need assistance in doing so. Additionally, some web-based audio sites are not fully compatible with accessibility features on smart devices. For example, the play button on SoundCloud's website cannot be selected when using the Tab feature on an iPhone. Some visitors may need people in their party to hit play for them.

Museum Headsets

Traditional museum headsets rented from visitor services still remain a good resource for any museum visitor. Not having one or two headsets on hand with recorded verbal descriptions could alienate and further exclude visitors who have low or no vision that do not own or use a smart device. Headsets again present navigational problems within the gallery and require a dependency on family and

friends. Bluehertz Audioguide is an example of a company making traditional headset technology.

Partnering with AIRA

AIRA is a service and app that provides access to visual information through live, human-to-human interpretation of visual information using the camera of a smart device. Users call in to AIRA to receive on-demand interpretation in any context. Individuals can use the service for a fee, but AIRA also partners with organizations to offer AIRA for free to employees, consumers and visitors of those organizations.

AIRA has already partnered with museums both nationally and internationally to offer this interpretation service for free to visitors. The Smithsonian has free interpretation services in all of its museums through AIRA. Offering this service for free to museum visitors could eliminate many or all of the navigational barriers discussed in this manual.

Welcoming Visitors Who Have Low or No Vision

Providing this museum experience requires two types of training for museum staff:

Docent and Tour Staff

Staff that lead tours at the museum will need to train themselves in giving the guided descriptive tour (*SEE Guided Tours*). If docents will also lead tours, standardized training for them by the museum will also need to take place regularly. See The National Docent Symposium Handbook for information on creating a docent program. Incorporate both disability awareness training (SEE *Disability Awareness Training for Visitor Facing Staff & Docents*) and verbal description training (SEE *Formats & Strategies for Writing Verbal Descriptions*) in the docent program.

Disability Awareness Training for Visitor Facing Staff & Docents

For visitor facing staff and docents, like those staff members that work at the visitor services desk, disability awareness training is another step they can take to make sure they are welcoming and helpful to visitors at the museum. Disability awareness training encompasses concepts like definitions of disability, communication strategies, questioning internal biases, accommodations and assistance and universal design.

Art Beyond Sight has a user-friendly, easy-to-understand slideshow for welcoming and accommodating visitors with diverse disabilities. Staff can read this on their own time and come together to discuss and answer questions or hold a half-day retreat and go through this slideshow and training together. Blindness Support Services has also offered to provide awareness training to museum staff for welcoming visitors who have low or no vision.[2]

Two of the most important things that visitor service staff can do to welcome visitors with disabilities are:

[2] This is not a stand-in for a broader training on welcoming visitors with diverse disabilities.

1) Become well acquainted with all of the accessible experiences, accommodations and assistance available at the museum. Consider keeping a reference document that lists and describes the accommodations and accessible experiences the museum offers. Keep this reference document easy to access (both online and physically at the visitor services desk) and update it frequently so staff can reference when needed. With a deep understanding of these components at the museum, staff can easily direct any visitor to what they want and need.
2) Always approach a visitor and ask if there is anything they need from the museum to make their visit enjoyable and accessible. Be proactive in this interaction, do not wait for visitors to tell you they need assistance because not all visitors will be aware that the museum can offer them accommodations.

Below are several more important takeaways for welcoming visitors who have low or no vision from Art Beyond Sight's *Disability and Inclusion Training for Museums and Cultural Institutions* (2014):

Never assume a visitor requires your assistance: Always ask before helping a visitor.

Never touch a visitor without their explicit permission: Ask first if the visitor would like to be guided or assisted physically.

Do not shout: Visitors who have low or no vision should not be assumed to also be D/deaf or hard of hearing.

Introduce yourself and use your first name when speaking in a group setting: After introducing yourself initially, say "This is [Your Name]" prior to talking in subsequent interactions.

Indicate when you are entering and leaving a room: Let the visitor know you have entered a room or gallery they are in and when you are leaving to avoid startling or confusing visitors.

Do not suddenly leave a visitor out in an open space: This can be dangerous and anxiety-inducing for the visitor. Direct them to a wall they can follow with their hand or cane or to a place to sit or stand that is safe.

Use ordinal direction when providing directions: Use left, right, north, east, south and west or the numbers on a clock to indicate direction.

Do not use non-verbal gestures: Do not nod or shake your head without also verbally indicating your intent. Do not point to give directions or use hand signals.

Website Accessibility

The museum website is often an introduction to the museum and an initial resource visitors will use before their visit. The website can be thought of as a part of the museum visit and its accessibility is equally as important as physical space and access to information within the museum itself.

This manual highlights key components of website accessibility that can increase the access of information on the museum's website for visitors who have low or no vision but does not provide a comprehensive resource for building a fully accessible website for all visitors. The World Wide Web Consortium (W3C) has an on-going Web Accessibility Initiative (WAI) that develops standards for website accessibility and provides support and how-to material for creating an accessible website. W3C also has free foundational classes hosted online.

Headings: Creating a hierarchical organization of information via headers makes for easier navigation for those that navigate using the keyboard or a screen reader. These headers should be marked up, or encoded in the pages HTML. Below is an example of header hierarchy provided by W3C.

- Heading Level 1 <h1>
    - Heading Level 2 <h2>
        - Heading Level 3 <h3>
        - Heading Level 3 <h3>
    - Heading Level 2 <h2>
        - Heading Level 3 <h3>
            - Heading Level 4 <h4>
            - Heading Level 4 <h4>
    - Heading Level 2 <h2>

Color Contrast: Providing high contrasting text colors (like black text on white background) with a contrast ratio of at least 4.5:1 for normal-size text is preferred.

Alt-text: Alt-text, or text alternatives, is a way to provide information of a visual through text, making these visuals accessible for screen readers. All visuals on a website should have alt-text that describes or conveys their visual information.

Resize text: Users should be able to resize text manually through changing their preferences on their browser, through zooming in on the webpage itself or through zooming in on text only. When zooming in, text should not overlap or become disproportionate. Text should wrap to fit the webpage when enlarged. (The museum website does this well when viewing on a computer or mobile device.)

An Accessibility Page

Creating an "Accessibility" page on the museum website can greatly increase the accessibility of a museum visit for visitors who have low or no vision and for all visitors with disabilities. Place the header for this page close to the top of the page so that visitors do not have to navigate the entire page with a screen reader or keyboard until they reach this header or search for the header in a long list of menus.

The Accessibility page should include the following components:

- Directions for how to get to the museum (written directions and visual maps), including public transit options.
- A description of the inside of the building, including the number of stories, how to navigate to the visitor's services desk, where to find elevators and bathrooms, and areas of intense bright light or dim light
- Description and availability of accessible museum programming, like guided descriptive tours, tactile images, recorded audio tours, etc.
- Sign-up mechanism for requesting tour or contact information for inquiring about and securing accommodations
- Where to find Braille labels or ask for large format text
- Information on the use of Guide Dogs within the museum
- Partnership with AIRA or other technology to be used on a visitor's personal device for navigation, interpretation or information

Resources

Formats & Strategies for Writing Verbal Descriptions

Art Beyond Site

Guidelines for Verbal Description

Writing Verbal Descriptions for Audio Guides

Verbal Description Training

Creating Recorded Audio Tours

SFMOMA

SFMOMA Audio App

Making a Location Aware Audio Guide for SFMOMA

Ready-Made Museum Tour Apps

Gesso

Guide-ID

Examples of Recorded Audio Tours with Verbal Description

Walt Disney Museum Audio Described Tour

The Met Art in Motion (Audio Description)

Tate Modern Audio Description Tour

Working with a Community Advisory Committee

Art Beyond Site

Developing an Advisory Board

Welcoming Visitors Who have Low and No Vision

Art Beyond Site

Disability and Inclusion Training for Museums and Cultural Institutions

Website Accessibility

The World Wide Web Consortium (W3C)

Web Accessibility Initiative

Digital Accessibility Foundations Free Online Courses

Examples of Accessibility Pages on Museum Websites

The British Museum

MoMA

The Getty Center

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