

**Federal Highway Administration
Western Federal Lands Highway Division**

SCOPING REPORT

City and Borough of Sitka

Alaska



AK SITKA 2017(1)

Sitka Sea Walk Phase II Update

**Prepared By:
PND Engineers, Inc.**

September 24, 2020

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EXECUTIVE SUMMARY

Objective

The objective of this scoping report is to identify the available information, funding requirements, design criteria, and permitting requirements necessary to complete design and construction of **Section 2** of the Sitka Sea Walk Phase II. A previous scoping effort found that the cost estimate to design and construct the full Phase II scope exceeded the funding available to the Project; requiring reconsideration of project scope and refinement of the associated estimate. Various meetings were held between July 9, 2020 and July 16, 2020 to discuss an approach for moving forward with the Project. This reevaluation determined that the Phase II effort should focus on the portion of the alignment identified in the previous scoping effort as **Section 2**.

The intent of this scoping update is to improve initial estimates for design and construction of **Section 2**. This improvement included refining construction quantity estimates by developing a preliminary model of the project alignment. The model was developed using information from a survey of the existing area (performed in 2014) that was newly available to this scoping effort. Bathymetric data was also used based on tsunami modeling information published by Alaska Division of Geological & Geophysical Surveys (DGGGS). This report serves to update the information applicable to **Section 2** of the initial AK SITKA 2017(1): Sitka Sea Walk Phase II scoping report dated January 22, 2020; while also functioning as a standalone document focused on the **Section 2** portion of the Phase II alignment. This report was written by PND Engineers, Inc. and developed through coordination with the Federal Highway Administration – Western Federal Lands Highway Division (FHWA-WFL), the City and Borough of Sitka (CBS), and Professional and Technical Services, Inc. (PTS).

Project Description

The Sitka Sea Walk is a continuation of an effort to enhance visitor and resident accessibility to the Sitka National Historical Park (SNHP) and downtown Sitka while also improving safety. The Sitka Sea Walk will also function as a wayfinding system and guide for visitor traffic and simultaneously provide opportunities for exercise and recreation. The development of the Sitka Sea Walk has been divided into two separate phases. Phase I of the Sea Walk was completed in 2013 and extends from the SNHP boundary to the Harrigan Centennial Visitor Center and Sitka Public Library. Phase II will continue the Sea Walk from the Sitka Public Library to the O’Connell Lightering Facility and on to Totem Square and Lincoln Street while maintaining the “look and feel” of Phase I and improving ADA accessibility of the existing facilities.

The previous scoping effort broke down the Phase II alignment into three distinct sections. This report focuses on the portion of the alignment identified as **Section 2**; extending around the south side (seaward side) of the O’Connell Bridge Approach to the O’Connell Lightering Facility. This section of Sea Walk will consist of an asphalt paved pathway supported by a new fill embankment that expands the existing embankment to accommodate the full width of the Sea Walk.

Engineering disciplines required to complete design of the Project include:

- Civil Engineering
- Electrical Engineering
- Geotechnical Engineering

Delivery and Funding of Section 2

Delivery of the Project is expected in 2022 and will be performed by Alaska Department of Transportation & Public Facilities (AKDOT&PF). The total project cost (including construction contingency and engineering) is estimated as \$2,400,639 based on 2020 dollars. Estimates adjusted for inflation are presented in Appendix VIII – Construction Cost Estimate. The total funding currently available to the Project is \$2,049,141.89. Additionally, TAP (\$1,360,000) and Earmark funding (\$354,143.54) are set to expire at the end of the 2020 fiscal year.

Preliminary Engineering is estimated to be 35 weeks in duration (see Appendix VI – Preliminary Engineering Milestone Schedule and Estimate). Construction of this Project is expected to be completed within one construction season; in approximately 56 working days (see Appendix VII – Estimated Construction Schedule). The construction season will coincide with peak tourist season for CBS and will require coordination and traffic control that minimizes detrimental impact to tourist traffic.

Survey

An as-built survey of the project area was conducted following completion of Phase I construction and will be available for design. This survey was utilized in the development of this report for preliminary alignment modeling. Additional ground and bathymetric survey may be required to both verify that construction can be maintained within the ROW limits and identify the underwater toe of the existing O’Connell Bridge embankment.

Environmental and Permitting

This Project is expected to fall under multiple Categorical Exclusions within §717.117(c) for National Environmental Policy Act (NEPA) documentation. Additionally, the Project does not directly involve land owned by local tribes or native corporations but will require coordination and consultation to determine tribal significance of affected properties and for development of art installations. The Project is not expected to affect buildings or sites older than 50 years during construction. A cultural resource survey and a State Historic Preservation Office (SHPO) concurrence will be required for completion of NEPA.

No migratory bird or eagle nests were observed within the Project limits; however, humpback whales and Steller sea lions are known to be present near the Project area. The National Oceanic and Atmospheric Administration (NOAA) has proposed a rule to designate the waters encompassing the Project area as critical habitat for population segments of humpback whales. At the writing of this report the outcome regarding this decision is still pending. The final listing of critical habitat for humpback whales may require additional permitting/consultation effort.

Impacts to waters of the U.S. are expected to result in permitting under Section 10/404. The Project may qualify for one or more Nationwide Permits. In-water work will have to address essential fish habitat.

Utilities

A full set of utilities (including water, electrical, storm sewer, sanitary sewer and communications) exists within the Project area; however, minimal impact is anticipated.

Right-of-Way

The Project alignment mostly lies within an existing AKDOT&PF Right-of-Way (ROW) and will require a ROW permit. **Section 2** may require additional ROW for construction of the fill embankment. This ROW would be acquired from CBS tidelands.

Geotechnical

A geotechnical investigation for **Section 2** of the Phase II alignment would identify the quality of fill material used in the existing embankment as well as the depth and quality of bedrock below. However, it is unlikely the design of the proposed embankment alternative will be influenced by this data and the cost of the investigation may not be justified. Geotechnical drilling in this area may require coordination with the tide cycle and/or traffic control for roadway access. Any geotechnical investigation will require separate Endangered Species Act (ESA) consultation, wetlands/waters permitting, and cultural resource clearances investigation if performed before permitting is completed for the entire project.

Project Overview Diagram



I. PROJECT DESCRIPTION

A. PROJECT SUMMARY

<u>Description</u>	<u>Comment</u>
<p>General project description and nature of work</p>	<p>Sitka National Historical Park (SNHP) is located on the outer shore of Baranof Island in southeast Alaska. The goal of SNHP is to preserve the historically and culturally important sites and artifacts of the local region. Focus of the park’s initiatives include the Native people of Southeast Alaska, the Russian-American period of Alaskan history, and the 1804 Battle of Sitka between local Tlingit and foreign Russian forces.</p> <p>The focus of Sitka’s pathway developments is to enhance accessibility to the SNHP and downtown Sitka while improving safety. The long-term plan is to link the Sea Walk to the Sitka Multimodal Pathway System (SMPS) and Cross Trail Multimodal Pathway (TMP) via the SNHP trail system. The Sitka Sea Walk is one portion of this long-term plan and aims to create a pedestrian friendly thoroughfare that connects SNHP to Totem Square and downtown shopping.</p> <p>The Sea Walk will serve to enhance transportation for visitors and residents as it links downtown shopping areas with multiple visitor destinations along its alignment. Additionally, the Sea Walk will function as a wayfinding system and will guide visitor traffic within Sitka while simultaneously providing opportunities for exercise and recreation. Moreover, the safety of the travelling public will be improved with the development of the Sea Walk through accessibility enhancements and vehicle/pedestrian separations.</p> <p>SNHP and the City and Borough of Sitka (CBS) have partnered to plan, design and construct the Sitka Sea Walk. The development of the Sea Walk has been divided into two separate phases. Sitka Sea Walk Phase I extends from the SNHP boundary to the Harrigan Centennial Visitor Center and Sitka Public Library. Phase I was completed in October 2013.</p> <p>Phase II was planned to continue from the termination of Phase I at the Sitka Public Library and extend approximately 0.33 miles along the Sea Walk alignment to Totem Square. A previous scoping effort found that the cost to construct Phase II to these extents exceeded the funding available. These findings are summarized in the AK SITKA 2017(1): Sitka Sea Walk Phase II scoping report dated January 22, 2020. The alignment of the Sea Walk was reexamined to prioritize portions of the Phase II alignment. The portion of the alignment described in the previous scoping effort as “Section 2” was determined to be the highest priority and is the focus of this report.</p> <p>Section 2 includes the portion of the Sea Walk that proceeds around the seaward side of the O’Connell Bridge approach to the O’Connell Lightering Facility. This section of the Project does not have an existing sidewalk and will require new construction. Analysis has found that the most economical construction alternative for this portion of the alignment is to build out the existing embankment to a width that will support an 8-foot-wide pathway.</p>
<p>Major issues and concerns</p>	<p>No major issues that would preclude construction of the project are anticipated. There are a few items identified that may have schedule or cost impacts, which</p>

	<p>include:</p> <ul style="list-style-type: none"> • ROW acquisition is not anticipated for this Project. However, it is not clear if the ROW in Section 2 is wide enough to accommodate the addition of fill required by in this area. This ROW would be acquired from CBS tidelands. .
<p>Relevant project history</p>	<p>2020, September 24 – Final Section 2 Update Scoping Report Submitted to CBS & FHWA-WFL</p> <p>2020, July 16 – Meeting for Discussing New Direction to Focus on Section 2</p> <p>2020, July 9 – Scoping Update Meeting</p> <p>2020, January 23 – Final Scoping Report Submitted to CBS & FWHA-WFL</p> <p>2019, November 20 – Scoping Meeting held in Sitka</p> <p>2019, April – Revised Federal Lands Access Program (FLAP) Project Memorandum of Agreement generated – remains unsigned at the time of this report</p> <p>2018, June – Match Agreement signed on June 4, 2018.</p> <p>2018, June – FLAP Project Memorandum of Agreement signed by City of Sitka for Sea Walk Phase II.</p> <p>2016 – Alaska Department of Transportation & Public Facilities (AKDOT&PF) selected Sea Walk Phase II for construction funding through the Alaska Transportation Alternatives Program (ATAP).</p> <p>2014, June – AKDOT&PF Program Decision Committee (PDC) approved Preliminary Engineering for this Project.</p>



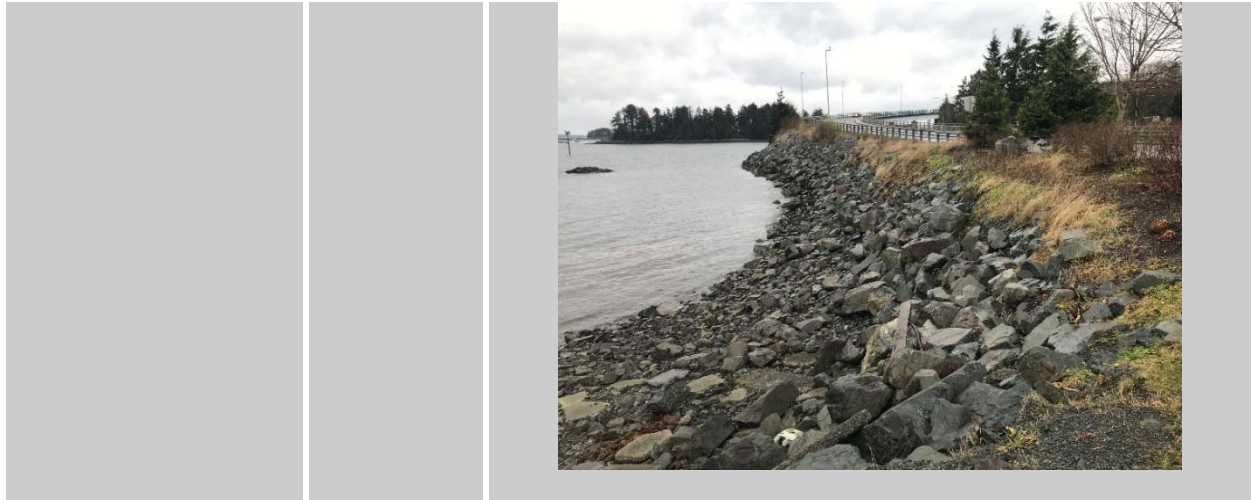
Figure 1: General Project Area and Approximate Original Alignment

B. ROUTE IDENTIFICATION & EXISTING CONDITIONS

1. SITKA SEA WALK PHASE II – SECTION 2

O’Connell Bridge Approach to O’Connell Lightering Facility

Description	Response	Comment
Trail Name:	Sitka Sea Walk Phase II – Section 2	
GPS Coordinates Start	57° 2'56.11"N, 135°20'8.65"W	
GPS Coordinates End	57° 2'52.34"N, 135°20'17.57"W	
Length	0.12 miles	
Functional Classification	N/A	No existing sidewalk in this section.
Existing Width	N/A	No existing sidewalk in this section.
Existing Clear Width	Varies	This section of the Sea Walk follows the south embankment of the O’Connell Bridge approach. This embankment increases in height and width towards the O’Connell Bridge. The southern edge of the embankment meets the ocean.
Major Roadways	Harbor Drive	
Current ADT	Harbor Drive: 4,231	This value is based on 2018 traffic data and includes traffic in both directions. Source: https://akdot.maps.arcgis.com/home/webmap/viewer.html?webmap=7c1e1029fdb64d7a86449d55ef05e21c
Photo 1	Existing Embankment in Section 2	



II. PROJECT SUMMARY, SCHEDULE, FUNDING, & CONTACTS

A. SUMMARY & SCHEDULE

<u>Description</u>	<u>Response</u>	<u>Description</u>	<u>Response</u>
Type	4R	Partner Agency	City and Borough of Sitka
Program Fiscal Year	2022	Maintaining Agency	City and Borough of Sitka
PS&E Delivery Year	2021	FLMA Unit Name	Sitka National Historical Park (SNHP)
State	Alaska	County	City and Borough of Sitka

B. FUNDING

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Main Funding Source	Transportation Alternatives Program (TAP)	TAP Funds – 90.97% CBS Local Match Requirement – 9.03%

<p>Program Amount</p>	<p><u>TAP Funding</u> <u>\$1,360,000</u></p> <p><u>Earmark Funding</u> <u>\$354,143.54</u></p> <p><u>FLAP Funding</u> <u>\$181,940</u></p> <p><u>Match Funding</u> <u>\$153,058.35</u></p> <p><u>Total: \$2,049,141.89</u></p>	<p>TAP Funding and FLAP Funding both require a 9.03% match.</p> <p>Earmark funding does not have a local match requirement.</p> <p>TAP funding is set to expire at the end of the 2020 fiscal year.</p> <p>Earmark funding must be obligated by the end of the 2020 fiscal year.</p> <p>Funding estimates shown are current at the writing of this report. Actual funding may vary depending on approved FLAP Project Memorandum of Agreement.</p>
<p>Preliminary Construction Estimate (CN)</p>	<p><u>Total CN:</u></p> <p>\$1,382,629</p>	<p>A preliminary construction cost estimate has been prepared for the project components identified in this scoping report. This is displayed in the appendix.</p> <p>Mobilization cost is based on 10% of construction costs. A 15% design contingency was applied to estimated cost to account for potential unknowns and changes to the design. An additional 10% contingency was added to the project cost (loaded with design contingency) to account for the accuracy of quantity take-off methods and variances in pricing.</p> <p>It is anticipated that construction will be completed within a single construction season.</p> <p>All costs given are based on 2020 dollars and does not directly consider inflation nor escalation.</p>
<p>Total Project Costs</p>	<p>To-Date Cost: \$85,000</p> <p>PE: \$282,600 CE: \$345,657 CM: \$276,526 ICAP: \$113,227 Total: \$2,400,639</p>	<p>To-date, FHWA-WFL has spent approximately \$85,000 towards the project. This includes internal labor, travel expenses and PND task orders.</p> <p>Additional project costs include Preliminary Engineering (PE), Construction Engineering (CE), Construction Modification (CM) Contingency, and Indirect Cost Allocation Plan (ICAP). Unless indicated otherwise, these costs are based on a percentage of the preliminary construction cost estimate (CN) provided above. The applied percentages were provided by AKDOT&PF based on the percentages typically experienced on AKDOT&PF delivered projects. Those percentages are:</p> <p>PE – Estimate based on resource loading (see Appendix</p>

		<p>VI) CE = 25% CN CM = 20% CN ICAP = 4.95% of CN + PE + CE + CM</p> <p>Total project costs include CN, PE, CE, CM, & ICAP and are based on 2020 dollars</p>
Other	N/A	
Prioritization of Funds	<p>CBS has provided the following list of priorities to assist in determining which features can be excluded to keep project costs within funding limits. The following is listed in order of decreasing importance.</p> <ol style="list-style-type: none"> 1. Maintain full 8-foot width 2. Maintain “look and feel” of Phase I Sea Walk 3. Maintain ADA accessibility 4. Safety lighting as Sea Walk wraps around O’Connell Bridge in Section 2 5. Opportunity for scenic lookouts and interpretive signage 	

C. PRINCIPAL CONTACTS

Contact and Title	Brandon Stokes, Project Manager
Agency	FHWA-WFL Highway Division
Phone Number	360-619-7813
Email Address	brandon.stokes@dot.gov

Contact and Title	Nichole Rehm, Project Manager
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Contact and Title	Brent Coe, Project Management Branch Chief
Agency	FHWA-WFL Highway Division
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Contact and Title	Christopher Goins, Design Group Chief
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Contact and Title	Paul Kendall, Project Manager
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Contact and Title	Michael Harmon, Director of Public Works
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III. AVAILABLE DATA, CRASH DATA, & WORK LIMITATIONS

A. AS-BUILTS AND REPORTS

<u>Data</u>	<u>Description</u>
Other (Explain)	
As-Builts	2006 AKDOT&PF Sit-Harbor Drive Lighting, Pedestrian & Bicycle Improvements as-built plan set.
As-Builts	2002 AKDOT&PF Sitka Harbor Bridge Rehabilitation as-built plan set
As-Builts	2001 AKDOT&PF Harbor Way Reconstruction – Harbor Drive to Lincoln Street as-built plan set with typical sections, drainage, utility, retaining wall, etc.
As-Builts	1984 AKDOT&PF Sitka Airport Parking Reconstruction and Paving – Airport Access, Japonski Bridge, Lake Street and Sawmill Creek Boulevard Pavement Overlay as-built plan set.
As-Builts	1970 AKDOT&PF Sitka to Japonski Island Grading, Drainage, Paving, Bridge, Illumination & Landscaping as-built plan set.

B. CRASH HISTORY

<u>Data</u>	<u>Response</u>	<u>Comment</u>
Crash History Requested?	Yes	No crash history available.
Crash History Obtained and Analyzed?	No	No crash history available.
Anecdotal Crash History?	No	No crash history available.
Will alternate routes (detours/diversions) be provided for during construction?	Yes/No	Road closures are not anticipated during construction. If later it becomes apparent that alternate routes will be necessary, detour routes during construction and traffic control requirements will be evaluated and developed during design development.
Traffic restrictions during construction?	Yes	Sequencing of construction may be affected by schedule at O’Connell Lightering Facility.

C. WORK LIMITATIONS

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Season and/or Time Restrictions	Yes	<p>Work will be limited by seasonal construction window and migratory bird movements/presence. U.S. Fish and Wildlife Service recommends that no tree removal occurs between April 15th and July 15th.</p> <p>There are at least three known haulouts at the mouth of Sitka Sound (within 25 km of the project site) that could be affected by underwater noise sources. Fill placement is not anticipated to affect these haulout locations.</p> <p>The anticipated construction window coincides with peak</p>

		<p>tourist season. Construction of Section 2 is not expected to conflict with movement or tourists, although construction sequencing should consider the presence of tourists in the vicinity.</p>
Designated Staging Area(s)?	No	<p>Contractor would likely be able to stage equipment and materials at O’Connell Lightering Facility. Additionally, the area behind Centennial Hall and at the parking lot located west of Harbor Way and south of the Radio building may be available for staging.</p>
Designated Material Source?	No	<p>Material source may be available for the Project at a City quarry as well as the Indian River Uplands Rock Quarry operated by Baranof Island Housing Authority (BIHA). The City quarry is limited as a material source.</p>
Hauling or Load Restrictions	Yes	<p>Contractor hauling and load operations shall adhere to the requirements of the State of Alaska Department of Transportation Commercial Vehicle Size, Weight, and Permit Regulations. No additional hauling or load restrictions will be required by CBS.</p>
Potential Water Sources?	Yes	<p>CBS hydrants are available for water sources.</p>

IV. FUNCTIONAL CONSIDERATIONS

A. PATHWAY DESIGN & SAFETY

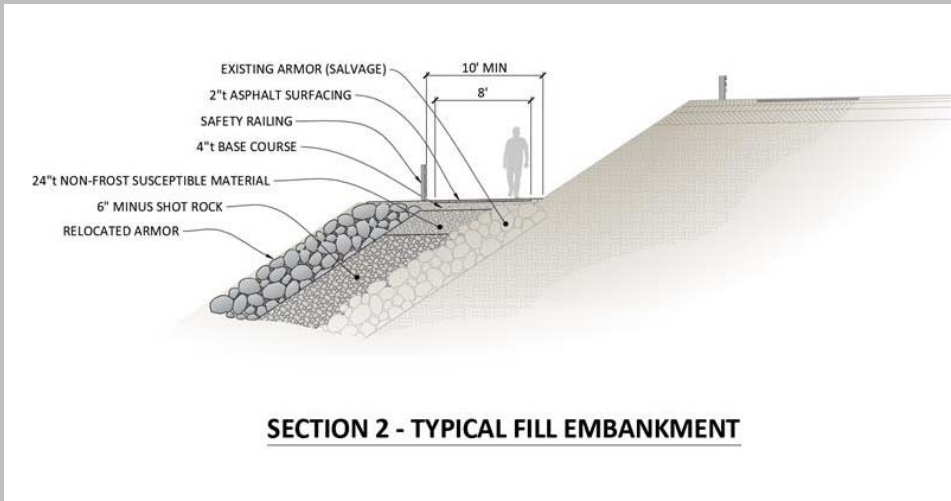
1. SITKA SEA WALK PHASE II – SECTION 2

O’Connell Bridge Approach to O’Connell Lightering Facility

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Pathway Name:	Sitka Sea Walk Phase II – Section 2	
PROPOSED DESIGN STANDARDS		
Design Use	Pedestrian	
Functional Classification	Other	Separated Pathway
Design Speed	3.5 ft/s	This is the pedestrian walking speed that should be used when calculating pedestrian clearance time per Section R306.2 of the 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way.
Design Load	H5 Design Vehicle	<p>The H5 Design Vehicle is required for maintenance with a vehicle live load per AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges Table 3.2-1. This design manual allows for alternative design criteria as specified by the Project Owner. CBS indicated that they typically use a Bobcat ATV weighing 2,900 lbs to maintain the Sea Walk; however, the H5 Design Vehicle provides a more critical loading and is recommended for use in design.</p> <p>Section 2 design should also consider constructability. Loading applied by construction equipment may exceed the design loads described by AASHTO and therefore may be a more critical loading. Section 2 design will need to account for the construction load accordingly.</p>
Travel Way Width	8 feet	Continuous clear width required by 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, Part R302.3 is 4 feet. However, the Sea Walk design is intended to allow opposing wheel chair traffic to safely pass. Therefore, maintaining a minimum 8-foot-wide travel way is the highest priority feature of the Sea Walk design.
Travel Way Type	Unknown	Cost considerations likely require that an asphalt surfacing is used for this section of the Sea Walk; although, a concrete surfacing is preferred by CBS to better maintain the “look and feel” of Phase 1. Additionally, CBS indicated that some of the surfacing utilized in Phase I was either slippery (timber) or was a potential tripping hazard (in-laid brick).
Shoulder Width	Varies	A minimum 2-foot shoulder is anticipated on the seaward side of the Sea Walk and a minimum 1-foot shoulder is expected for the embankment side of the Sea Walk.

Description	Response	Comment
Shoulder Type	Unpaved	
Min. Horizontal Radius	N/A	Minimum radius guidelines are not provided in the 2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way or the FHWA Designing Sidewalks and Trails for Access Part II: Best Practices Design Guide. AASHTO Guide for the Development of Bicycle Facilities, Table 5-3 recommends a minimum horizontal radius of 93 feet based on a design speed of 12 mph and anticipated cross slope.
Maximum Grade	5%	2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, Part R302.5. A reduced grade may be considered to improve traction associated with wet/icy surfacing.
Cross Slope	2%	2011 Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, Part R302.6
Horizontal Clearance to Structure	N/A	No other structures in this section of the Sea Walk alignment.
Min. Clear Zone	0 feet	
PROPOSED DESIGN FEATURES		
Realignment or grade change required?	Yes	Section 2 of the Sea Walk will construct a new facility and alignment around the south side of the eastern O’Connell Bridge approach and connects the end of Section 1 to the O’Connell Lightering Facility below the O’Connell Bridge. This section will be above existing grade.
Will profile be raised due to proposed pavement structural section?	No	Vertical realignment may be implemented for other reasons (see above).
Additional work required at intersections or driveways?	No	
Exist/Proposed Parking/Pullouts/Vistas?	Yes	Opportunities for overlook/lookouts should be pursued during design.
Exist/Proposed Pedestrian and/or Bicycle Facilities?	Yes	The project will construct a new pedestrian facility.
Exist/Proposed Roadside Features (gates, shelters, etc.)	No	
Exist/Proposed Fencing?	No	
ADA Accommodations?	Yes	See proposed design standards.
Seeding and Vegetation	Yes	Disturbed and exposed areas of soil shall be stabilized with topsoil and seed by the Contractor.

Description	Response	Comment
Special Features (Railroad Crossings, etc.)	No	
Architectural or decorative aspects to be incorporated (stone masonry, stone curb, rock facing, etc.)	Yes	Elements of traditional Tlingit art will be incorporated into the Project to match Sea Walk Phase I architectural or decorative aspects, particularly the “red brick road” path style and ovoids at confluence locations where possible.
SAFETY CONSIDERATIONS		
Clear Zone and Roadside Hazards	Yes	This section will require steep slopes and will create a falling hazard that must be mitigated.
Existing/Proposed Barrier?	Yes	A full height railing will be required to mitigate hazards associated with the steep slopes of the fill embankment.
Proposed signing and supports?	Yes	Opportunities for incorporating interpretive signage should be pursued as budget/space allows.
Proposed Pavement Markings	No	
Proposed Lighting	Yes	Safety lighting is recommended for this portion of the Sea Walk. Lighting should be similar to that used as part of Phase I including recessed lighting in railing supports or overhead lighting.
Exist/Proposed permanent traffic control (special signs, markings, rumble strips, etc.)	No	
Additional work required to address Sight Distance Issues?	No	
Construction Problems from Previous Projects?	No	
Will alternate routes (detours/diversions) be provided for during construction?	Yes/No	Traffic control may be necessary depending on access requirements to the Section 2 area during construction. Detour routes during construction and traffic control requirements will be evaluated and developed during design development.
Temporary traffic control/traffic restrictions during construction	Yes	Standard traffic maintenance and control measures are anticipated in this section.
Can the road be closed for construction?	No	
Potential Major Impacts to Cost or Schedule	Yes	At the time of this writing it is unknown if the proposed embankment for Section 2 will extend outside the AKDOT&PF ROW for Harbor Drive. If this occurs, CBS

<u>Description</u>	<u>Response</u>	<u>Comment</u>
		<p>tidelands will be affected and may have an impact on Project schedule.</p> <p>There are no major cost concerns.</p>
Constructability Concerns	No	
Typical Section	 <p style="text-align: center;">SECTION 2 - TYPICAL FILL EMBANKMENT</p>	

B. SURVEY

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Existing survey, mapping, and/or control?	Yes	<p>An as-built survey, performed in 2014 after completion of Phase I, is available. A survey of the existing ground along the proposed alignment is required to verify that construction can be maintained within the ROW limits. Survey will also be used for design; including modeling, quantity determination, and developing Construction Drawings.</p> <p>Additionally, a bathymetric model created for tsunami inundation mapping by DGGs exists and can be found at http://dgg.s.alaska.gov/pubs/id/23964. This information is based on MHHW and will have to be adjusted accordingly to the appropriate design datum.</p>
Special features requiring survey	Yes/No	<p>The southern edge of the bridge approach is partially submerged and will require a bathymetric survey to locate the toe of the embankment. Survey activities in this area will generally require coordination with the tides. All other survey tasks are expected to be routine.</p>
Seasonal restrictions?	Yes	<p>Survey should be conducted during summer months, to prevent additional efforts associated with snow coverage.</p>

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Describe terrain (slopes, vegetation, etc.)	Section 2 of the Sea Walk is composed of an existing steep embankment that makes up the eastern O’Connell Bridge approach. This embankment was constructed at an approximate 1.5:1 slope and is partially submerged. Vegetation in the Project area varies from grasses, shrubs, and evergreen trees. There are few trees in the project area and most of the vegetated areas are composed of grasses. Areas that are not vegetated are either paved or large shot rock (in the area of the O’Connell Bridge embankment).	

Existing Terrain Photos	 <p style="text-align: center;">Typical vegetation and features of Section 2.</p>	
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Is field survey required?	Yes	
Recommended survey	Other	Ground Survey and Bathymetric Survey

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	No	

C. ENVIRONMENT

<u>Description</u>	<u>Response</u>	<u>Comment</u>
SUMMARY		
Type of NEPA document anticipated	CE	The project is anticipated to fall under multiple Categorical Exclusions (CE) within §717.117(c) for NEPA documentation.
CEQA required (CA Projects)?	No	
NPS – Environmental Screening Form (ESF) required?	No	

Description	Response	Comment
Potential use of programmatic agreements?	No	Programmatic Agreements are unlikely to apply to this Project.
Public involvement required?	Yes	CBS indicated that the City generally experiences a high-level of public interest during project development. Public involvement is expected for Phase II at each of the design deliverables. The successful completion of Phase I indicates that Phase II will also be popular with the public. The Project is consistent with the 2011 Sitka Outdoor Recreation Action Plan, the 2007 Sitka Comprehensive Plan, the 2002 Sitka Non-Motorized Plan, the 2006 Sitka Visitor's Plan V1 and V2, and the 2010 Sitka Passenger Fee Fund Downtown Master Plan. Ongoing public involvement will be helpful for educating and minimizing impacts to the public.

AIR QUALITY

Non-attainment or maintenance area?	No	This project area is not located within a non-attainment or maintenance area according to the EPA. https://www3.epa.gov/airquality/greenbook/anayo_ak.html
Exempt from conformity requirements?	No	
If conformity applies, is the project included in the STIP or regional TIP?	No	
Adding or removing lanes, signalization, and/or alignment changes?	Yes	Section 2 of this Project is adding an alignment that extends the existing sidewalk on the south side of Harbor Drive from its terminus at the O'Connell Bridge to the lightering facility below the bridge. This alignment will wrap around the south side of the bridge approach to the lightering facility.
State or local air quality studies required?	No	

Description	Response	Comment
BIOLOGICAL RESOURCES		
Local knowledge of federal T&E or candidate species in the area?	Yes	Humpback whales and Steller sea lions are known to be present near the project area. The project is also within the range of fin whales, North Pacific right whales, and sperm whales. Although they are typically found further offshore, consultation may be required regarding any potential marine impacts.
Potential for suitable habitat of any listed species in/near the project area?	Yes	Humpback whales and Steller sea lions are known to be present near the project area. Additionally, in-water work may have to address essential fish habitat (EFH).
Designated critical habitat in the project area?	Unknown	NOAA has proposed a rule to designate the waters encompassing the project area as critical habitat for population segments of humpback whales. This outcome regarding the proposed rule is still pending at the time of writing this report. Consultation regarding proposed critical habitat may still be

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Local knowledge of state protected species in the area?	Yes	<p>required until the rule is finalized.</p> <p>Humpback whales are known to be present near the project area. It should be noted that few trees exist in the Project corridor and no bird nests were observed during the scoping meeting field review. Additionally, the Alaska State Wildlife Action Plan lists a number of species found in the project area that may be in need of conservation but don't formally require protection.</p>
Adjacent to BLM or USFS land?	No	
BLM or USFS sensitive species the FLMA is concerned about?	No	<p>There are 15 plant species, one lichen species, and 4 bird species that appear on the 2009 USFS Alaska Region Sensitive Species List that are found within the Tongass National Forest. There are no BLM sensitive species found within the project area.</p>
Migratory bird nest observed in the project area?	No	<p>No migratory bird or eagle nests are present in the Project location to the knowledge of CBS and no nests were observed during the scoping meeting field review. It should also be noted that few trees exist in the Project location. According to the USFWS Land Clearing Timing Guidance for Alaska, the recommended time period for avoiding vegetation clearing is between April 15th and July 15th.</p>
Wildlife or aquatic organism passage issues?	No	<p>Due to the location adjacent to urban development, limited wildlife passage is anticipated. However, the Project is also within and adjacent to beach and nearshore aquatic habitat and has the potential to impact access to adjacent aquatic habitat.</p>
Located within 100 miles of the coast?	Yes	<p>Project alignment will follow the coastline around the south side of the O'Connell Bridge to the O'Connell Lightering Facility. Level of impact resulting from this alignment is dependent on engineering solution utilized for construction of the Sea Walk.</p>
Known noxious weed occurrences or concerns regarding noxious weeds?	Yes	<p>Mapping from the Alaska Exotic Plants Information Clearinghouse (AKEPIC) indicates that 17 non-native or invasive plants have been reported within the Project corridor or harbor area. The Sitka National Historical Park conducts annual surveys and coordinates community events to support noxious weed removal, including creeping buttercup (<i>Ranunculus repens</i>) and marine tunicate removal in Crescent Harbor.</p>
Biological resource surveys required?	No	
Is a BA/BE required?	Unknown	<p>A BE may be required to determine whether the project has the potential to affect any ESA-listed species. If the lead agency determines that there is a potential to affect any listed species, a BA may be required. For this project, effects to listed species may be triggered by the placement of materials in aquatic habitat or by pile driving activities.</p>
CULTURAL RESOURCES		
New ground disturbance	Yes	<p>The fill embankment proposed for Section 2 will widen the existing approach embankment by a minimum of 11' within the</p>

Description	Response	Comment
outside the existing roadway prism?		tidelands.
Previously surveyed for cultural resources?	No	The area has not been surveyed.
Evaluated for eligibility for the National Register of Historic Places (NRHP)?	No	The proposed alignment is nearby but not immediately adjacent to several buildings and sites of historic interest. Nearby sites listed in the NRHP include the American Flag Raising Site on Castle Hill; Cable House and Station; and Sitka US Post Office and Court House.
Properties (buildings, bridges, trails, etc.) thought to be older than 50 years?	No	Several buildings and sites older than 50 years exist near the proposed alignment but will not be affected by the construction of this Project. The O’Connell Bridge will be older than 50 years in 2021.
Apparent / unique / suspect structures of possible historical interest?	No	No structures exist in proposed alignment corridor. Several building and sites listed in the NRHP exist near the project corridor.
Tribes who will have an interest in the project?	No	This project does not directly involve land owned by local tribes or other native corporations. Tribal consultation may be required to determine tribal significance of affected properties and will likely occur for art installations. Quarterly meetings occur between CBS and Sitka Tribe of Alaska.
Traditional Cultural Properties (TCPs) in the area?	No	
Cultural resource surveys required?	Yes	A cultural resource survey and SHPO concurrence are required for completion of NEPA.
ENERGY		
Affect energy use as a result of changes to traffic patterns or volumes, or involve speed zone changes?	No	
GEOLOGY		
Do discussions with Geotechnical staff indicate any concerns?	No	
Is drilling / exploration anticipated?	Yes	Drilling may be conducted as part of a geotechnical investigation protocol.
HAZARDOUS MATERIAL		
Hazardous sites in the project area?	Yes	The project area is within 500’ of two remediated sites with institutional controls, including the requirement to consult with ADEC prior to excavation or removal of soils or groundwater.
Known or possible hazardous waste on the project ()?	Unknown	An assessment of the potential for historic sources of hazardous waste has not been conducted. There are no known existing wastes or sources of hazardous waste on the project.

Description	Response	Comment
Structure with potential to contain hazardous material be altered or demolished?	No	No structures exist within the project footprint.
LAND USE / PLANNING		
Require land use actions from FLMA or local jurisdictions?	No	Sea Walk Phase II construction will occur within an AKDOT&PF ROW and will require a ROW permit.
Concerns regarding consistency with federal, state, or local land use policies or plans?	No	The improvements included in this project were developed and included in the 2007 Sitka Comprehensive Plan, the 2002 Sitka Non-Motorized Plan, the 2006 Sitka Visitor’s Plan V1 and V2, and the 2010 Sitka Passenger Fee Fund Downtown Master Plan.
Coastal Zone Management Act apply?	No	The State of Alaska does not participate in the Coastal Zone Management Program.
Result in the conversion of prime farmland, unique farmland, or land of statewide or local importance as defined by Farmland Protection Policy Act?	No	There is no farmland within the Project footprint.
Any other specially designated or protected lands that may be affected?	Yes	Tidelands within the project area are owned by the City and Borough of Sitka and may be affected by construction activities. Castle Hill, noted as a “U.S. Reserve for Agricultural Investigations and Weather Service” within Tract A of U.S. Survey 1474, is now a State park designated as Baranof Castle State Historic Site and National Historic Landmark. The park is not within the project footprint, but may be affected by construction activities and by increased visitor access as a result of the Project.
NOISE		
Will there be any shift in horizontal or vertical alignment?	Yes	See Section IV, Part A, of this Scoping Report for proposed alignment and improvements information.
Does project increase the number of through travel lanes?	No	
Pathway located on a new alignment?	Yes	Section 2 of the pathway will be a newly constructed alignment. See Section IV, Part A of this Scoping Report for proposed alignment and improvements information.
Removal of topographical features which currently shield receptors?	No	

Description	Response	Comment
Are there buildings/ activity areas within 200 feet of proposed right of way line:	Yes	A variety of structures are located within the vicinity of the proposed pathway including the O’Connell Bridge, O’Connell Lightering Facility, and various shops and commercial spaces.
SECTION 4(f)		
Parks, wildlife refuges, historic properties, recreational areas, campgrounds, trails, etc. that may be impacted?	Yes/No	Submission will be required if Project uses public land, public recreational area, or historic properties such as Totem Square (including use of area for staging). However, as currently envisioned, the project will not require use of those lands.
SECTION 6(f)		
Land & Water Conservation Funds used to acquire parks, or to make improvements, etc.?	No	The project is within existing public right-of-way for roadways and CBS was not aware of any LWCF-funded improvements in the corridor.
SOCIOECONOMICS		
Building displacements or relocations?	No	
Right of way be required for the project?	Yes/No	The project will be constructed within existing public right-of-way. Portions of the project will require a ROW permit with AKDOT&PF to use ROW owned by the State. Section 2 may require additional ROW on CBS tidelands.
Divide or disrupt an established community, or affect neighborhood character or stability?	Yes/No	The project does not divide any existing communities or disrupt any planned uses. There is a potential to increase foot traffic on Harbor Drive and visitors to the downtown commercial/industrial area. The CBS has identified that the project may indirectly improve the commercial/industrial area along Harbor Drive with the increased exposure to businesses in the area, particularly those related to recreational and tourism activities.
Affect minority, elderly, handicapped, low income, transit-dependent, or other specific interest group?	Yes	The project includes ADA improvements and will improve access for the handicapped and elderly.
VISUAL		
Designated state or federal scenic route?	No	
Major cuts/fills associated with this project?	Yes/No	Section 2 will require construction of an embankment along the existing bridge approach embankments.
Bridges or large retaining walls anticipated?	No	
Affect waterways designated as National Wild and Scenic Rivers?	No	

<u>Description</u>	<u>Response</u>	<u>Comment</u>
WATERWAYS / WATER QUALITY		
Within FEMA 100-year floodplain?	Yes	Section 2 construction will occur within the FEMA flood plain due to the project’s location along a coastal shore.
Within FEMA regulated floodway?	No	
Water quality impaired stream (303(d) listed) impacted?	No	
Outstanding Resource Waters affected?	No	
Active well impacted?	No	
Navigable waterway(s) within the project area?	Yes	The project adjoins Sitka Sound and Sitka Harbor. The proposed alignment for Section 2 will impact these waterbodies by construction of a fill embankment or pile installation.
Irrigation ditches impacted?	No	
State or National Wild and Scenic River?	No	
WETLANDS AND WATERS OF THE U.S.		
Intermittent streams, ephemeral drainages, or perennial rivers/streams?	No	
Wetlands mapped on the National Wetlands Inventory (NWI)?	No	The NWI mapper indicates the Sea Walk route may be within Estuarine and Marine Deepwater habitat. Similar shoreline in the area is mapped as Estuarine and Marine Wetland habitat.
Blue line features from the National Hydrographic Dataset (NHD)?	No	No such features exist along the proposed route. Neighboring features outside the project area include Swan Lake and Indian River.
Riparian or wetland vegetation evident from visual inspection?	No	Visual observation during the field walkthrough did not find vegetation that indicated the presence of wetlands; however, databases of species identified in the area suggest the potential for wetland vegetation, including <i>Phalaris arundinacea</i> (reed canarygrass), <i>Plantago maritima</i>, and <i>Sagina maxima</i>.
Delineation of waters of the U.S. including wetlands and other special aquatic sites need to be completed for the project area?	Yes/No	It is unknown if a formal delineation has been performed for the Project corridor. Section 2 of the project abuts Sitka Sound and will require that fill is placed below High Tide Line (HTL). HTL appears readily identifiable from the presence/lack of vegetation along the embankment and may not warrant a formal delineation. Visual observation during the field walkthrough did not find vegetation that indicated the presence of wetlands; however, databases of species identified in the area suggest the potential for wetland vegetation, including <i>Phalaris arundinacea</i> (reed canarygrass), <i>Plantago maritima</i>, and <i>Sagina maxima</i>.

<u>Description</u>	<u>Response</u>	<u>Comment</u>
WILDERNESS		
Occur in or near designated wilderness?	No	South Baranof Wilderness is located approximately 20 miles south of the project area, and is a designated wilderness as part of Tongass National Forest.

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	Yes/No	Impacts to waters of the US will result in permitting under Section 404 to construct the fill embankment. Furthermore, the pending listing of critical habitat for the humpback whales may result in additional permitting/consultation effort depending on the final listing.
Constructability Concerns	No	No significant concerns. The work proposed is typical of previous improvements constructed in Phase I. However, construction of Section 2 will require careful planning and execution due to limited access.

D. PERMITS

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Section 404 / 401 Permit		
Discharge of dredge or fill into a water of the U.S.	Yes	Section 2 of the project construction will entail fill placement in Waters of the U.S. (WOTUS). This will require CWA Section 404/401 permitting.
Discharge of fill into a perennial river/stream, intermittent stream, or ephemeral drainage?	No	
Discharge of fill into a pond or lake?	No	
Discharge of fill into a special aquatic site including:?	Yes	Section 2 of the Sea Walk alignment may require work in wetlands or vegetated shallows.
Water diversion needed?	No	
Channelization, channel realignment, or channel armoring required?	No	
Qualify for a Nationwide Permit (NWP)?	Unknown	This project may fall under one or more of several NWPs, including but not limited to: 14) Linear Transportation Projects, and 13) Bank Stabilization. However, 13) Bank Stabilization is fairly limited in allowable dimensions. If design requirements prohibit the use of an NWP, an individual permit will be required.
Comply with NWP general conditions?	Yes/No	It currently appears a NWP would be possible, but additional design of Section 2 is required to verify this.
Comply with NWP regional conditions?	Yes/No	It currently appears a NWP would be possible, but additional design of Section 2 is required to verify this.

Description	Response	Comment
Cause the loss of less than ½ acre of non-tidal waters of the U.S. or 1/3 acre of tidal waters of the U.S.?	Yes/No	Estimated impact of fill embankment is expected to be greater than 1/3 acre of WOTUS.
Does the project require compensatory mitigation?	Yes	
Would the project cause the loss of less than 1/10 acre of wetlands?	Unknown	Unknown whether there are coastal wetlands within the Project area.
Does the project require a LOP or IP for authorization?	Yes/No	Individual permitting may be required if the Section 2 alternative does not fit the requirements of an NWP.
Any Corps-approved mitigation bank or in-lieu fee programs that service the project area?	Unknown	There are currently no wetland mitigation banks or in-lieu fee programs with credits available within the Project’s watershed. It is unknown whether an alternative bank would be approved by USACE or whether permittee-responsible mitigation would be required, in the event that impacts necessitate compensatory mitigation.
NPDES Permit		
Amount of acreage disturbed?	Approx. 1 acre	The fill embankment constructed in Section 2 is anticipated to disturb approximately 0.75 acres.
Subject to any state, county or local sediment/erosion management plan (MS4)?	Yes	The project area falls under the State’s jurisdiction. The EPA has delegated authority to Alaska Department of Environmental Conservation (ADEC) to manage discharges through the Alaska Pollutant Discharge Elimination System (APDES) program. The Project area is not subject to a local MS4 plan.
Subject to a state or basin sediment/erosion management plan?	Yes	See response above.
Cooperator willing to assume responsibility for the NPDES Permit upon completion of construction?	No	A Notice of Termination will be filed after project completion and transfer of the permit will not be necessary.
Post-construction BMP requirements?	Yes/No	Certain types of permanent BMPs (e.g. seeding) may require post-construction monitoring.
Other Permits / Authorizations		
FLMA special use permit	No	
Staging area permit?	No	Staging area to be selected/permitted by Contractor. Contractor would likely be able to stage equipment and materials at O’Connell Lightering Facility. Additionally, the area behind Centennial Hall and at the parking lot located west of Harbor Way and south of the Radio building may be available for staging. Staging areas may be subject to APDES requirements and would contribute to minimum footprint thresholds.

Description	Response	Comment
Disposal/waste area permit?	No	CBS has disposal sites available for the Contractor, and previously developed private disposal sites available.
Material source permit?	No	Material source may be available for the Project at the CBS quarry or the Indian River Uplands Rock Quarry operated by the Baranof Island Housing Authority (BIHA). The City quarry is limited as a material source. Any new material sources may require additional environmental evaluation.
Asphalt or concrete batch plant permit?	No	Established asphalt and concrete plants would provide asphalt and concrete required for the Project.
Utility line or buried pipe permit?	No	
Dewatering permit?	No	
Water rights or appropriation approval?	No	
Local, County or State air quality permit	No	
County road access or ROW permit?	No	
State highway access or ROW permit?	Yes	A large portion of the Project alignment falls within the AKDOT&PF right of way along Harbor Drive. AKDOT&PF expressed concern regarding existing encroachments and new encroachments associated with this Project. AKDOT&PF would like to regularize all encroachments to clarify associated permittees in the area. No encroachment fees will be charged for government-to-government use; however, encroachment fees are applicable if permittee is paid-for use (i.e., tour operator).
Stream alteration permit?	No	
Other	Yes	CBS may require a Grading and Fill permit. Potential impacts to fish habitat or anadromous fish may require review by ADF&G. This would be conducted as part of the USACE permitting process, if needed.

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	Yes	<p>At the time of this writing it is unknown if the proposed fill embankment will extend outside the AKDOT&PF ROW for Harbor Drive. If this occurs, land ownership and ROW acquisition may have an impact on Project schedule.</p> <p>USACE Section 10/404 permitting may impact the design development schedule but is unlikely to create significant delays.</p> <p>There are no major cost concerns.</p>
Constructability Concerns	No	Work is typical of work previously completed in this area and has been successfully permitted in the past.

E. UTILITIES

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Known utilities within project area?	Yes	A full set of utilities including but not limited to water, electrical, and sewer, exist in the surrounding area but are not expected to be affected by this work. Storm drain pipe extensions are expected to be required for construction of the proposed embankment
Anticipated utility impacts?	Yes	
Existing utility agreements or easements?	Unknown	All utilities (except telecom) to be coordinated with CBS Public Works Department. Telecom coordination will be with ACS and GCI. Ownership and functionality of satellite dish below O’Connell Bridge is unknown. Street lighting ownership is also unknown and is to be determined by CBS.
Special considerations or utility impact or relocation?	Unknown	<p>Utility impact will be dependent on final alignment. It is anticipated that storm drain pipe extensions or stormwater catch basin relocation will be required regardless of alignment.</p> <p>There is an existing waterline that is currently leaking below the O’Connell Bridge and may require repair. The repair/removal of this waterline must be coordinated with Bureau of Indian Affairs (BIA) – task is outside current Project scope.</p>
Irrigation ditches?	No	

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	No	
Constructability Concerns	No	

F. RIGHT OF WAY

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Existing ROW?	Yes	

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Additional ROW Required?	Unknown	It is also possible that additional ROW may be required to construct the fill embankment in Section 2 depending on final design elevation and side slope of the proposed embankment and existing ROW extents.
FLMA Transfer?	No	
Private Parcel Acquisition?	No	Any ROW required would be acquired from CBS tidelands.
ROW Fence Requirements?	No	
Maintaining Agency involved with Permit to Enter process for field work?	Yes	A majority of the Project alignment is within AKDOT&PF and CBS ROW and lands.
Potential Major Impacts to Cost or Schedule	Yes/No	Cost and schedule impacts due to ROW are unlikely. However, there is some risk of schedule impacts if ROW acquisition is required to construct the proposed embankment.
Constructability Concerns	No	

G. GEOTECHNICAL

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Regional and Local Geological Setting?	Yes	<p>The proposed Sitka Sea Walk alignment is located within the Sitka A-5 SE mapped unit. The project area geologic setting is classified primarily as stratified rocks being of unconsolidated deposits, undivided (quaternary) nature. Poorly sorted to well sorted, massive, lenticular, and laminated clay, silt, sand, gravel, and boulders locally covered bedrock, sometimes to depths of many meters. Sediments include tidal mudflat, alluvial, colluvial, and glacial deposits, undivided. Glacial outwash deposits, peat, and unsorted till locally include thin layers of volcanic ash and lapilli tuff.</p> <p>This surrounding area (Sitka general) primarily consists of the Baranof Accretionary Complex – sedimentary and volcanic rocks that were derived from oceanic crust that was subducting beneath an arc, mixed with debris from the arc, and accreted beneath the arc.</p>
Existing and potential geological hazards	Yes	The project area is located near active seismic faults which may cause large earthquake and tsunami events.
Nearby faults and seismicity design parameters	Yes	<p>Analysis was performed using the USGS Earthquake Hazards Program Unified Hazard Tool – Dynamic: Alaska 2007 (v2.1.1). The site is classified as Site Class B/C with a Maximum Moment Magnitude of 7.7g and peak ground acceleration of 0.319g using a return period of 2,475 years (2% probability in 50 years).</p> <p>The Sitka area is located east of the nearby Fairweather-Queen Charlotte Fault system which has ruptured in several large strike-slip earthquakes over the last century. The Fairweather Fault System runs nearly the entire length of southeast Alaska and British Columbia. Other nearby mapped faults include the Neva Strait Fault and Border Ranges Fault to the west and the</p>

<u>Description</u>	<u>Response</u>	<u>Comment</u>
		Silver Bay Fault, Peril Strait Fault, and Chatham Strait Fault to the east of Sitka.
Existing geotechnical structures?	No	
Geotechnical Repair Areas	No	
Surface or groundwater problem areas?	No	
Subsurface investigation requirements and access	Yes	<p>For the purposes of the rock fill embankment, an extensive geotechnical investigation would be an inefficient use of funding and would not be of benefit to the project. As-built drawings from AKDOT&PF Project F-099-3(7) – Sitka to Japonski Island Grading, Drainage, Paving, Bridge, Illumination & Landscaping Project indicate an existing embankment constructed of shot rock. Field observations confirm these materials. Such an embankment would provide adequate support an expanded rock fill section as described in this report.</p> <p>However, if a geotechnical investigation is performed, the following guidelines are recommended: Based on the overall proposed length of the Section 2 alignment, four (4) borings are anticipated. Borings in this area shall be spaced at 100 to 200 feet apart to produce a representative subsurface cross section of the area.</p> <p>The subsurface investigation along Crescent Bay adjacent to the Sitka Harbor Bridge approach may be best completed during a peak low tide with track-mounted equipment when the area will remain dry for an adequate length of time to complete geotechnical drilling activities. However, if drilling is not possible due to tides, drilling will have to be conducted from either the revetment slope above or the roadway. Track-mounted geotechnical drilling equipment, possibly anchored to the revetment slope above, will likely be required when working along the Sitka Harbor Bridge rock revetment.</p> <p>The primary focus of the geotechnical investigation will be to characterize the depth of the bedrock below the existing Sitka Harbor Bridge rock revetment. Strength and other physical properties of the existing rock revetment may also be analyzed.</p> <p>Additionally, previous geotechnical studies have been completed within the project area for the construction of the Sitka Harbor Bridge and Harbor Drive both owned by AKDOT&PF. This data may be insufficient and too outdated to meet the needs of this Project. However, this data may be used for supplemental information, if needed.</p>
NPS – Wall Inventory Program recommendations?	No	

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	Yes	<p>Major impacts are not anticipated at the time of this Scoping Report. However, costs may be impacted by the difficult nature of drilling equipment access and hard drilling through both rock fill and bedrock. Project costs and schedule duration may also be impacted based on the outcomes of the geotechnical investigation. These impacts may affect the structural section or earthwork requirements.</p> <p>Impacts to the schedule may also occur if the geotechnical investigation is delayed due to permitting. A geotechnical investigation will require separate ESA consultation, wetlands/waters permitting, and cultural resource clearances if the investigation is to occur before permitting is complete for the Project.</p>
Constructability Concerns	No	No constructability concerns are identified at the time of writing this report.
Summary of geotechnical features/design	Geotechnical and design features found on the Project include an embankment fill up to 20 feet in height along the existing O’Connell Bridge approach at a 1.5:1 slope requiring slope stability evaluation.	

H. PAVEMENTS AND MATERIALS

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Construction or maintenance history known?	Yes	<p>Construction history in the Project corridor includes the following AKDOT&PF projects:</p> <ul style="list-style-type: none"> • Project F-099-3(7)/AA-0993(1) – Sitka to Japonski Island Grading, Drainage, Paving, Bridge, Illumination, & Landscaping (1970) • AKSAS No. 67572 – Harbor Way Reconstruction – Harbor Drive to Lincoln Street (2000) • Project NH-99-3(7)~68350 – Harbor Drive Lighting, Pedestrian and Bicycle Improvements (2003)
Concrete distress?	No	
Are preservation treatments appropriate for segments or the entire project?	Yes/No	Preservation treatments may be appropriate depending on final surfacing materials used for the Project.
Is pavement/concrete rehabilitation appropriate for segments or the entire project?	No	
Is concrete reconstruction appropriate for segments or the entire project?	No	
Will segments or areas of the project have unbound surfacing material (i.e. gravel)?	Yes/No	The main pathway will be paved; however, the pathway will have a minimum 1-foot-wide gravel shoulder.

Description	Response	Comment
Areas of special concern for material selection, and/or follow-up field investigation?	Yes	<p>The use of timber or concrete is generally not anticipated for this section of the Sea Walk. Cost considerations will likely require asphalt surfacing in this area. However, if timber or concrete is used, CBS would like to use local or culturally significant materials to the extent possible. Examples include yellow cedar construction for elevated boardwalks such as those built in Phase I. CBS is pleased with the aesthetics of the yellow cedar material; however, the surface tends to be slippery while wet. Methods for mitigating the slippery nature of this material (such as alternative finishing techniques) should be investigated during Project design. It is a higher priority of CBS that the final surfacing provides safe traction than providing pleasing aesthetics.</p> <p>In addition, Phase I construction of the “red brick road” consisted of inlaying brick pavers between two separate areas of concrete. This division of features has resulted in minor differential settlement in areas of Phase I construction. CBS would like Phase II to maintain the “look and feel” of Phase I and incorporate the artistic features and intent of the “red brick road” while also investigating alternative methods of incorporating these features to mitigate differential settlement. Alternatives may include stamped concrete rather than brick inlays.</p>
Concrete depths known or estimated?	No	Not applicable to this section of the Sea Walk.
WFL standard specifications and SCRs expected to be used for all material?	No	Pavement, base course and subgrade materials may require special consideration for cold-weather. Additionally, a majority of the Project elements are non-standard. These include the potential for architectural elements and lighting, railings, and the inclusion of non-standard features for ADA compliant surfacing within Section 2 construction.
Description	Response	Comment
Potential Major Impacts to Cost or Schedule	No	Major impacts are not anticipated at the time of this Scoping Report. However, costs may be impacted by the findings of the pavements and geotechnical investigation. These impacts may affect the structural section or earthwork requirements. Impacts to the schedule may occur if the geotechnical and pavement investigation is delayed due to permitting.
Constructability Concerns	No	No concerns at the time of this Scoping Report.
Summary of Preliminary Pavement & Materials Recommendations (including unbound surfacing and pavement preservation treatments)		<p>For the purpose of estimating, the following structural sections are assumed:</p> <p>Section 2:</p> <ul style="list-style-type: none"> - 2” asphalt sidewalk, 4” crushed aggregate base course, 24” of non-frost susceptible subbase, 6”-minus shot rock fill embankment constructed at a slope of 1.5:1.

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Photos: Typical pavement condition as well as areas of concern.		Not Applicable

I. HYDROLOGY/HYDRAULICS

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Specific state or local design standards/requirements	Unknown	Standard design requires structures to be installed above the flood elevation.
Condition or performance problems with minor drainage structures?	No	No washout/drainage issues have been known to occur along project corridor.
Existing major culvert structures (over 48" rise) being retained?	No	
Exist/Proposed LWCs?	No	
Existing bridge/open bottom structure on project?	No	
Proposed major structure? (Culvert >48" or bridge)	No	
Proposed open bottom structures?	No	
Proposed geotechnical walls located within or adjacent to channels?	No	
Fish passage concerns?	No	
Channel migration concerns?	No	
Within designated FEMA floodplain?	Yes	Section 2 construction will occur within the FEMA flood plain.
Channel degradation or aggradation concerns?	No	
Scour, erosion, deposition of sediment or debris, abrasion or corrosion of structure material at culvert inlets or outlets	No	
Describe channel bed and bank material	N/A	
Within 100 miles of West coastline?	Yes	

<u>Description</u>	<u>Response</u>	<u>Comment</u>
Potential Major Impacts to Cost or Schedule	Yes	<p>Phase II design may have to account for stormwater catch basin relocation and stormwater pipe extension depending on final alignment.</p> <p>A metocean analysis will be required in the vicinity of Section 2 to determine minimum design elevation of the Sea Walk in this area.</p>
Constructability Concerns	No	<p>No constructability concerns are anticipated.</p> <p>Washout/drainage issues are not known to occur along the project corridor.</p>

V. TECHNOLOGY AND INNOVATION INITIATIVES

Complete the following table and discuss Every Day Counts technology and innovation initiatives (www.fhwa.dot.gov/everydaycounts/) that can be suitably deployed on this project. Provide justification for those EDC initiatives that do not apply or were not considered

BRIDGES (http://www.fhwa.dot.gov/accelerating/innovation.cfm)		
<u>Description</u>	<u>Applicable to Project?</u>	<u>Justification</u>
Geosynthetic Reinforced Soil – Integrated Bridge System (EDC-1/2)	No	No bridges.
Prefabricated Bridge Elements and Systems (EDC-1/2)	No	No bridges.
Slide-in Bridge Construction (EDC-2)	No	No bridges.
Composite bridge decking for moveable bridges (Highways for Life)	No	No bridges.
Fully precast bridge bents for use in seismic regions (Highways for Life)	No	No bridges.
Full depth ultra-high performance concrete waffle bridge panels (Highways for Life)	No	No bridges.

CONSTRUCTION (http://www.fhwa.dot.gov/accelerating/innovation.cfm)		
<u>Description</u>	<u>Applicable to Project?</u>	<u>Justification</u>
Three-Dimensional Modeling (EDC-2)	Yes/No	Could be applied, but project can be well defined from typical 2-D methods.
Alternative Technical Concepts (EDC-2)	Yes/No	Could be applied, but there isn't clear benefit for this project.
Construction Manager/General Contractor (EDC-1/2)	Yes/No	Could be applied, but project is well suited to traditional Design-Bid-Build with few constructability concerns.
Design Build (EDC-1/2)	Yes/No	Could be applied, but project is small for design-build. Also, it is not clear that the complexity, schedule, or quality requirements of this work indicate the consideration of DB.

PAVEMENT (http://www.fhwa.dot.gov/accelerating/innovation.cfm)		
<u>Description</u>	<u>Applicable to Project?</u>	<u>Justification</u>
Aggregate Image Measurement System 2 (Highways for Life)	No	Project size does not warrant consideration.

PAVEMENT http://www.fhwa.dot.gov/accelerating/innovation.cfm		
Description	Applicable to Project?	Justification
Asphalt Binder Cracking Device (Highways for Life)	No	Project size does not warrant consideration.
Intelligent Asphalt Compaction Analyzer (Highways for Life)	No	Specialty equipment would be cost prohibitive.
Intelligent Compaction and Construction (EDC-2)	No	Specialty equipment would be cost prohibitive.
Precast Concrete Pavement Systems (Highways for Life)	No	The limited potential pavement on the project is asphalt which is consistent with pavements throughout the area.
Warm Mix Asphalt (EDC-1)	Yes	Warm mix could be used to improve working time of asphalt and/or to reduce emissions.

PLANNING / ENVIRONMENT http://www.fhwa.dot.gov/accelerating/innovation.cfm		
Description	Applicable to Project?	Justification
Expanding the Use of Programmatic Agreements (EDC-1)	No	No applicable agreements.
Implementing Quality Environmental Documentation (EDC-2)	Yes	Can be integrated into NEPA documentation for the project.
Programmatic Agreements (EDC-2)	No	No applicable agreements.

SAFETY http://www.fhwa.dot.gov/accelerating/innovation.cfm		
Description	Applicable to Project?	Justification
All Weather Pavement Marking System (Highways for Life)	No	
Automated Pavement Marker (Highways for Life)	No	
High Friction Surfaces (EDC-2)	No	
Intersection and Interchange Geometrics (EDC-2)	Yes/No	Intersection and Interchange Geometric improvements may be investigated for the end of project intersection at Harbor Way and Lincoln Street. In addition, crosswalks should be evaluated for potential improvements in accordance with EDC STEP Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations.
Road Safety Audits (FHWA Safety)	No	N/A
Safety Edge (EDC-1)	No	N/A

SAFETY PRODUCT PERFORMANCE EVALUATIONS http://www.fhwa.dot.gov/accelerating/innovation.cfm		
<u>Description</u>	<u>Applicable to Project?</u>	<u>Justification</u>
Sequential Dynamic Curve Warning System (Highways for Life)	No	N/A

VI. PRELIMINARY ENGINEERING MILESTONE SCHEDULE AND ESTIMATE

Sitka Sea Walk Phase II, Section 2 Scoping Report

PE MILESTONE SCHEDULE

Task	Task/Deliverable	Duration	Total Labor Hours	Total Expenses	Total Cost
V.B	PRELIMINARY DESIGN (30%)				
V.B.1	Preliminary Design (30%) PS&E Package	10 weeks	240	\$2,300	\$28,400
V.B.2	Environment	12 weeks	500	\$0	\$61,400
V.B.2.a	Resource Surveys (Bio, Cultural,	12 weeks			
V.B.2.b	404 Permit Application	4 weeks			
V.B.3	Survey	3 weeks	80	\$10,000	\$25,800
V.B.3.a	Bathymetric and Topographic Survey	3 weeks			
V.B.4	Geotechnical	8 weeks	148	\$35,000	\$50,000
V.B.4.a	Field investigation	1 week			
V.B.4.b	Geotechnical Report – Draft	7 weeks			
V.B.5	Hydraulics	3 weeks	100	\$0	\$10,800
V.B.5.a	Hydraulic/Metoccean Report - Draft	3 weeks			
TOTAL DURATION/HOURS/COST		12 weeks	1068	\$47,300	\$176,400
PERMITTING & NEPA					
TOTAL DURATION		8 weeks	-	-	-
V.C	PLANS-IN-HAND DESIGN (70%)				
V.C.1	Plans-in-Hand Design (70%) PS&E	8 weeks	300	\$0	\$32,600
V.C.2	Environment	4 weeks	250	\$0	\$29,600
	Permit Applications & SWPPP	4 weeks			
	Categorical Exclusion	4 weeks			
V.C.3	Geotechnical Engineering	2 weeks	22	\$0	\$2,100
	Geotechnical Report - Final	2 weeks			
V.C.4	Hydraulics	1 weeks	20	\$0	\$2,400
	Hydraulic/Metoccean Report - Final	1 week			
TOTAL DURATION/HOURS/COST		8 weeks	492	\$0	\$66,700
V.D	FINAL DESIGN (95%)				
V.D.1	Final Design (95% PS&E) Package	5 weeks	260	\$0	\$27,800
TOTAL DURATION/HOURS/COST		5 weeks	260	\$0	\$27,800
V.E	PS&E SIGN-OFF				
V.E.1	PS&E Sign-Off Design (100% PS&E) Package	4 weeks	124	\$0	\$11,700
TOTAL DURATION/HOURS/COST		4 weeks	124	\$0	\$11,700
TOTAL PROJECT DURATION/HOURS/COST		37 weeks	1,944	\$47,300	\$282,600

Note: NEPA and Permitting process may be able to start prior to completion of the Preliminary Design Phase; however, the schedule displays a start date after completion.

VII. ESTIMATED CONSTRUCTION SCHEDULE

VIII. CONSTRUCTION COST ESTIMATE

Prelim Construction Estimate	
AK COS SITKA(1)	PND #: 191154
Sitka Sea Walk Phase II - Update Section 2	Estimate By: MJG
Rock and Borrow Fill Raised Pathway Bridge to O'Connell Lightering Facility	Checked By: PK
	Printed: 9/24/2020

Basic Bid

<i>Item Number</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Price</i>	<i>Amount</i>
1	Shot Rock Fill, 6" Minus	TON	15850	30.00	475,500.00
2	Selected Material, Type A	TON	1100	25.00	27,500.00
3	Salvage Existing Armor Rock (Excavate & Place)	CY	2,500	40.00	100,000.00
4	Aggregate Base Course, Grading D-1	TON	175	55.00	9,625.00
5	Geotextile	SY	850	3.00	2,550.00
6	HMA Sidewalk Surfacing	SY	565	50.00	28,250.00
7	2' Gravel Pathway Shoulder, D-1 Surfacing, Each Side	TON	45	60.00	2,700.00
8	Interpretive Signs	EA	2	5,000.00	10,000.00
9	Protective Railing	LF	575	100.00	57,500.00
10	Lighting & Electrical	LUMP SUM	ALL REQUIRED	125,000.00	125,000.00
11	Mobilization	LUMP SUM	ALL REQUIRED	10.0%	99,362.50
12	Marine Mammal Observation	LUMP SUM	ALL REQUIRED	25,000.00	25,000.00
13	Erosion & Sediment Control	LUMP SUM	ALL REQUIRED	30,000.00	30,000.00
14	Construction Surveying	LUMP SUM	ALL REQUIRED	30,000.00	30,000.00
15	Traffic Maintenance	LUMP SUM	ALL REQUIRED	20,000.00	20,000.00
16	Traffic Control	LUMP SUM	ALL REQUIRED	15,000.00	15,000.00
17	Field Office	LUMP SUM	ALL REQUIRED	10,000.00	10,000.00
18	Other CE Items	LUMP SUM	ALL REQUIRED	25,000.00	25,000.00
PROJECT Summary	Pay Items:	18 Items		Subtotal:	1,092,987.50
	DESIGN CONTINGENCY	15%			163,948.13
	ESTIMATING CONTINGENCY	10%			125,693.56
	PROJECT TOTAL CONSTRUCTION BUDGET				1,382,629.19

Total Cost with Inflation	
AK COS SITKA(1)	PND #: 191154
Sitka Sea Walk Phase II - Update	Estimate By: MJG
Total Cost with Inflation Over a 5-year Period	Checked By: PK
	Printed: 9/24/2020

Section 2 - Fill Embankment

Item Number	Item Description	2020	2021	2022	2023	2024
		Year 1	Year 2	Year 3	Year 4	Year 5
1	Construction Cost Estimate	\$ 1,382,629	\$ 1,432,404	\$ 1,483,971	\$ 1,537,394	\$ 1,592,740
2	Preliminary Engineering	\$ 282,600	\$ 292,774	\$ 303,314	\$ 314,233	\$ 325,545
3	Construction Engineering (CE - 25% of the Construction Cost Estimate)	\$ 345,657	\$ 358,101	\$ 370,993	\$ 384,349	\$ 398,186
4	Construction Modification (CM - 20% of the Construction Cost Estimate)	\$ 276,526	\$ 286,481	\$ 296,794	\$ 307,479	\$ 318,548
5	Indirect Cost Allocation Plan (4.95% of CN, PE, CE, & CM)	\$ 113,227	\$ 117,303	\$ 121,526	\$ 125,901	\$ 130,433
PROJECT TOTAL COST ESTIMATE:		\$ 2,400,639	\$ 2,487,063	\$ 2,576,598	\$ 2,669,356	\$ 2,765,452

Estimated Inflation rate of 3.6%. This rate is derived from the Alaska 10-year average Consumer Price Index inflation rate factored to account for typical non-residential construction.

Sources: <http://labor.state.ak.us/trends/jul20.pdf>
<https://edzarenski.com/2020/01/28/construction-inflation-2020/#:~:text=Long%2Dterm%20construction%20cost%20inflation,any%2Fall%20recession%20years%20included.>