US Army Corps of Engineers
Alaska District

ANCHORAGE
Regulatory Division (1145)
CEPOA-RD
Post Office Box 6898
JBER, Alaska 99506-0898

Public Notice of Application for Permit

PUBLIC NOTICE DATE:	**July 17, 2024**
EXPIRATION DATE:	**August 16, 2024**
REFERENCE NUMBER:	**POA-2003-00502-M21**
WATERWAY:	**Knik Arm**

Interested parties are hereby notified that a Department of the Army permit application has been received for work in waters of the United States as described below and shown on the enclosed project drawings.

All comments regarding this public notice should be sent to the address noted above. If you desire to submit your comments by email, you should send it to the project manager's email as listed below or to regpagemaster@usace.army.mil. All comments should include the public notice reference number listed above.

All comments should reach this office no later than the expiration date of this public notice to become part of the record and be considered in the decision. Please contact Kerri Hancock at (907) 753-2719, toll free from within Alaska at (800) 478-2712, or by email at kerri.c.hancock@usace.army.mil if further information is desired concerning this public notice.

APPLICANT: Municipality of Anchorage, Port of Alaska, 2000 Anchorage Port Road, Anchorage, Alaska 99501; Contact: Mr. Steve Ribuffo, 907-343-6201, steve.ribuffo@anchorageak.gov

AGENT: HDR, Incorporated, 582 E. 36th Avenue, Suite 500, Anchorage, Alaska 99503; Contact: Mr. Michiel Holley, 907-885-5798, Michiel.Holley@hdrinc.com

LOCATION: The project site is in Knik Arm, at the Port of Alaska, within Section 7, T. 13 N., R. 3 W., Seward Meridian; USGS Quad Map Anchorage A-8; Latitude 61.239267º N., Longitude 149.888970º W.; in Anchorage, Alaska.

SPECIAL AREA DESIGNATION: The project is located within the Port of Alaska and Anchorage Harbor. Anchorage Harbor is a federally maintained harbor in the Municipality of Anchorage, Alaska, near the confluence of the Knik Arm and Turnagain Arm of Cook Inlet, and is home to the Port of Alaska (Port), the state of Alaska's primary commercial port. Anchorage Harbor was authorized in 1958 and the U.S. Army Corps of Engineers (USACE) has dredged Anchorage Harbor annually since 1965 to maintain adequate depths for shipping. Dredging typically begins in April and ends in October. The harbor's main Federal feature is an authorized harbor depth of -45 feet mean lower low water (MLLW) along 10,860 feet of the Port. The project is currently maintained at -35 feet MLLW; as the funding for dredging to -45 feet mean lower low water has not been appropriated by Congress. Dredged materials are transported to the Anchorage Harbor in-water disposal site located 3,000 feet abeam the dock face. Annual maintenance dredging volumes vary substantially and have approached 2 million cubic yards.

PURPOSE: The applicant's stated purpose is to replace Anchorage's aging docks and related infrastructure before it fails, to: improve operational safety and efficiency; accommodate modern shipping operations; and improve resiliency – to survive extreme seismic events and sustain ongoing cargo operations.

PROPOSED WORK: The Port of Alaska proposes the removal of existing infrastructure and the construction of newly configured general cargo terminals including ground improvement for shoreline stabilization, shoreline expansion and protection, construction of general cargo terminals 1 and 2, demolition of the existing petroleum, oil, and lubricants terminal 1 (POL1), demolition of general cargo docks terminals 1, 2, and 3, construction of onshore utilities, and replacement of storm drain outfall.

Ground improvements for shoreline stabilization would consist of installation of five (5) work pads at the site of each of the five trestle abutments to mitigate the potential for slope failure. Ground improvements would create a block of treated soil extending from near the final surface grade down through the in-situ soil approximately 85-feet below the crest of the foreshore slope to the top of the Bootlegger Cove Formation clay layer. The five work pads would consist of a total of 61,100 cubic yards of fill material below the High Tide line into 3.6-acres of waters of the U.S.

Shoreline expansion and protection would consist of excavation of approximately 50,000 cubic yards of silt material to be disposed offshore in the Anchorage Harbor Open Water Disposal Site. The silt material is not suitable for shoreline protection and would be replaced by discharging 60,000 cubic yards of rip-rap material below the High Tide line into 3.7-acres of waters of the U.S. at select areas behind Terminals 1, 2, and 3 to protect the upland container storage area.

Installation of new Terminals 1 and 2 would be pile-supported structures and would be constructed as adjoining wharves on a continuous berthline located parallel and approximately 140-ft seaward of existing Terminals 1, 2, and 3. The continuous wharf face would be fixed at +44 ft mean-low-low-water (MLLW), and would provide flexibility for military, cruise/passenger ships, and cargo functions. Terminal 1 would consist of an 870-foot-long by 120-foot-wide

wharf and would be accessed from shore by two (2) 36-foot-wide trestles. The southern trestle would be 270-ft long, and the northern trestle would be 318-ft long. A144-inch-diameter mooring dolphin and catwalk would be constructed on the southern end of the terminal to help secure and control vessel movements while berthed. Terminal 1 wharf would be supported by 139 - 72-inch-diameter piles. The terminal would also include structural, in-deck, and surface features to support three cranes. Utilities, including electrical power and water, would be installed for terminal operations, and connected to the existing public utility infrastructure. Lighting, communications, and signal equipment would be added to support the terminal.

Terminal 2 would consist of a 938-foot-long by 120-foot-wide wharf with three (3) access trestles each approximately 300-foot-long. The southern and northern access trestles would be 36-foot-wide. The middle trestle would be 60-foot-wide to provide an additional emergency vehicle access lane. A 144-inch-diameter mooring dolphin and catwalk would be constructed on the northern end of the terminal to help secure and control the movements of the vessels while berthed. Terminal 2 wharf would be supported by 145 - 72-inch diameter piles. The terminal would include structural, in-deck, and surface features to support roll on, roll off, and load on, load off operations (rail-mounted gantry cranes and associated appurtenances). Power, lighting, communications, signal infrastructure, and water utilities would be installed to support terminal operations. The two Terminal 1 trestles would be supported by 21 - 72-inch-diameter piles and 6 - 48-inch-diameter piles. The 48-inch diameter piles would be installed in the dry. The three (3) access trestles for Terminal 2 would be supported by 40 - 72-inch-diameter piles and 10 – 48-inch-diameter piles. Sediment inside the first four (4) hollow steel piles per row of the access trestles would be hydraulically removed to a depth of 20 to 25-ft below mudline to allow for placement of reinforced concrete to start below the mudline and continue to the top of the pile once installation is complete. Approximately 1,000 cubic yards of fill material would be removed in this manner and discharged below High Tide line as side cast over a 4-acre area dispersed via strong tidal currents.

Construction of the wharves and trestles would require installation and removal of temporary steel pipe piles, including template piles, and installation of permanent steel pipe piles. During construction, approximately 690 – 24 to 36-inch-diameter temporary piles will be used to anchor templates for the driving of permanent piles and to support temporary access trestles. Vibratory and impact hammers would be used for installation of the larger, permanent piles. Vibratory drivers would be used for installation and removal of the temporary piles. Where conditions are possible, temporary and permanent steel pipe piles would be installed or removed in the dry, depending on construction sequencing and tide heights. During pile installation it may become necessary to remove relic anode sleds. The old anode sleds are currently buried in the sediment behind the existing terminals. If an old sled is encountered in the footprint of a new pile to be installed, the anode sled would be excavated and removed. The excavated anode sled(s) would be hauled to an appropriate disposal location in uplands. All other relic anode sleds would be abandoned in place.

After construction of the new Terminals 1 and 2 are complete the remaining existing Terminals 1, 2, and 3 and POL1 platforms and trestles would be removed. All temporary work structures would be removed. Existing and temporary piles would be cut and removed or left in place to avoid/minimize potential impacts on marine mammals. Demolition would take place above the

water, and demolished decking, pipes, and other superstructure materials would be contained before they fall into the water following best management practices. Demolished materials would be removed by barge or truck and stored or disposed properly in an approved landfill or salvage yard.

Onshore utilities and utility connections would be removed and replaced, including electrical, water, and gas. Additionally, shore stabilization activities would require the removal and replacement of up to four (4) existing storm drain outfalls and associated maintenance holes.

All work would be performed in accordance with the enclosed plan (sheets 1-29), dated July 2024.

ADDITIONAL INFORMATION: Other authorizations needed as identified by the applicant include an Incidental Take Authorization from National Marine Fisheries Service, a Flood Hazard Permit from the Municipality of Anchorage, and an Individual Water Quality Certification from the Alaska Department of Environmental Conservation.

The applicant states that they plan to pursue the demolition of Terminal 3, a separate and complete project from the proposed work, as the last phase of the Port of Alaska Modernization Project (PAMP) in 2032 or later.

ALTERATION OR OCCUPATION OF A FEDERAL CIVIL WORKS PROJECT: Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408), referred to as Section 408, authorizes the USACE to grant permission for the alteration, occupation or use of a Corps Civil Works Project provided it is determined that the activity will not be injurious to the public interest and will not impair the usefulness of the Federal project.

APPLICANT PROPOSED MITIGATION: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the United States from activities involving discharges of dredged or fill material.

a. Avoidance: Avoidance of impacts to waters of the United States (U.S.) was limited by geographic and logistic constraints. Given the physical requirements of locating a port on a waterbody, complete avoidance of waters of the U.S. was not feasible for the Cargo Terminals Replacement Project.

b. Minimization: Fill placement and work within waters of the U.S. was minimized through the use of a pile-supported structure for the cargo terminals instead of a coastline extension, which would have required extensive fill within the intertidal area to bring the area up to a usable grade. The number and size of piles was minimized to that necessary for constructing a seismically resilient replacement dock while maximizing the life of the structure to minimize the need for future in-water work.

c. Compensatory Mitigation: The Port of Alaska proposes no compensatory mitigation as the impacts to waters of the U.S. are not impacting wetlands. If compensatory mitigation is

required the Port of Alaska will purchase credits from an approved mitigation bank or in-lieu fee program.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. There are cultural resources in the permit area. The permit area has been determined to be the footprint of the proposed work in waters of the U.S. as well as adjacent upland work areas where equipment will be staged. Consultation of the AHRS constitutes the extent of cultural resource investigations by the U.S. Army Corps of Engineers (Corps) at this time. The Corps has made an Adverse Effect determination for the proposed project. This application is being coordinated with the State Historic Preservation Office (SHPO), Federally recognized Tribes, other consulting parties and the Advisory Council on Historic Preservation (ACHP). Any comments SHPO, Federally recognized Tribes, other consulting parties, and ACHP may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

ENDANGERED SPECIES: The project area is within the known or historic range of the endangered Cook Inlet beluga whales (*Delphinapterus leucas*), endangered western distinct population segment (DPS) Steller sea lions (*Eumetopias jubatus*), and endangered Western North Pacific DPS and threatened Mexico DPS humpback whale (*Megaptera novaeangliae*). The National Marine Fisheries Service (NMFS) have determined that the Port of Alaska is considered outside the range of the proposed threatened sunflower sea star (*Pycnopodia helianthoides*) (NMS consultation number AKRO-2022-03630).

The Corps has determined the described activity may affect the Cook Inlet beluga whales, Steller sea lions, humpback whales, and Cook Inlet beluga designated critical habitat. Consultation procedures under section 7 of the Endangered Species Act with NMFS will be initiated. Any comments they may have concerning endangered or threatened wildlife or plants or their designated critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

The project area is within the known range of the Chinook (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), sockeye (*O. nerka*), and pink salmon (*O. gorbuscha*). Groundfish

species with designated EFH within 1 mile of project include walleye pollock (*Theragra chalcogramma*), Pacific cod (*Gadus macrocephalus*), sablefish (*Anoplopoma fimbria*), yellowfin sole (*Limanda aspera*), [Northern] rock sole (*Lepidopsetta polyxystra*), Southern rock sole (*L. billineta*), Alaska plaice (*Pleuronectes quadrituberculatus*), Dover sole (*Microstomus pacificus*), rex sole (*Glyptocephalus zachirus*), flathead sole (*Hippoglossoides elassodon*), Kamchatka flounder (*Atheresthes evermanni*).

The Corps is currently gathering information regarding these species and have yet to make a determination of effect. Should we find that the described activity may affect the species listed above, we will follow the appropriate course of action under Section 305(b)(2) of the Magnuson-Stevens Act. Any comments the National Marine Fisheries Service may have concerning essential fish habitat will be considered in our final assessment of the described work.

TRIBAL CONSULTATION: The Corps fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Corps, Alaska District, on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This public notice serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal rights or resources. Consultation may be initiated by the affected Tribe upon written request to the District Commander. This application is being coordinated with federally recognized tribes and other consulting parties. Any comments federal recognized tribes and other consulting parties may have concerning presently unknown archeological or historic data that may be lost or destroyed by the work under the requested permit will be considered in the Corps final assessment of the described work.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy

needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

AUTHORITY: This permit will be issued or denied under the following authorities:

(X) Perform work in or affecting navigable waters of the United States – Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).

(X) Discharge dredged or fill material into waters of the United States – Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

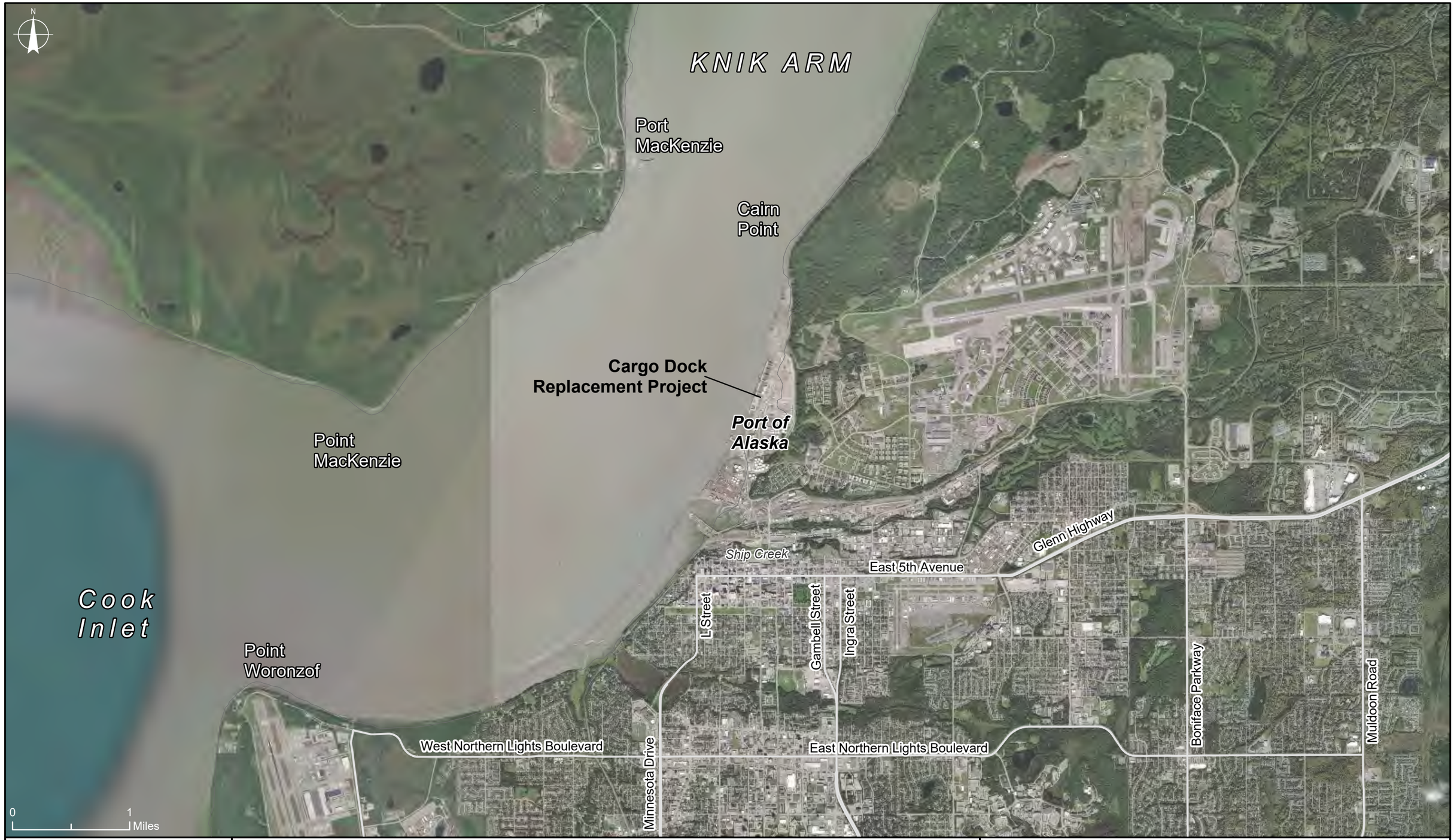
( ) Transport dredged material for the purpose of dumping it into ocean waters - Section 103 Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413). Therefore, our public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.

(X) Request to Alter or Occupy a Federal Civil Works Project – Section 14 Rivers and Harbors Act 1899 (33 U.S.C. 408)

Project drawings are enclosed with this public notice.

District Commander
U.S. Army, Corps

Enclosures

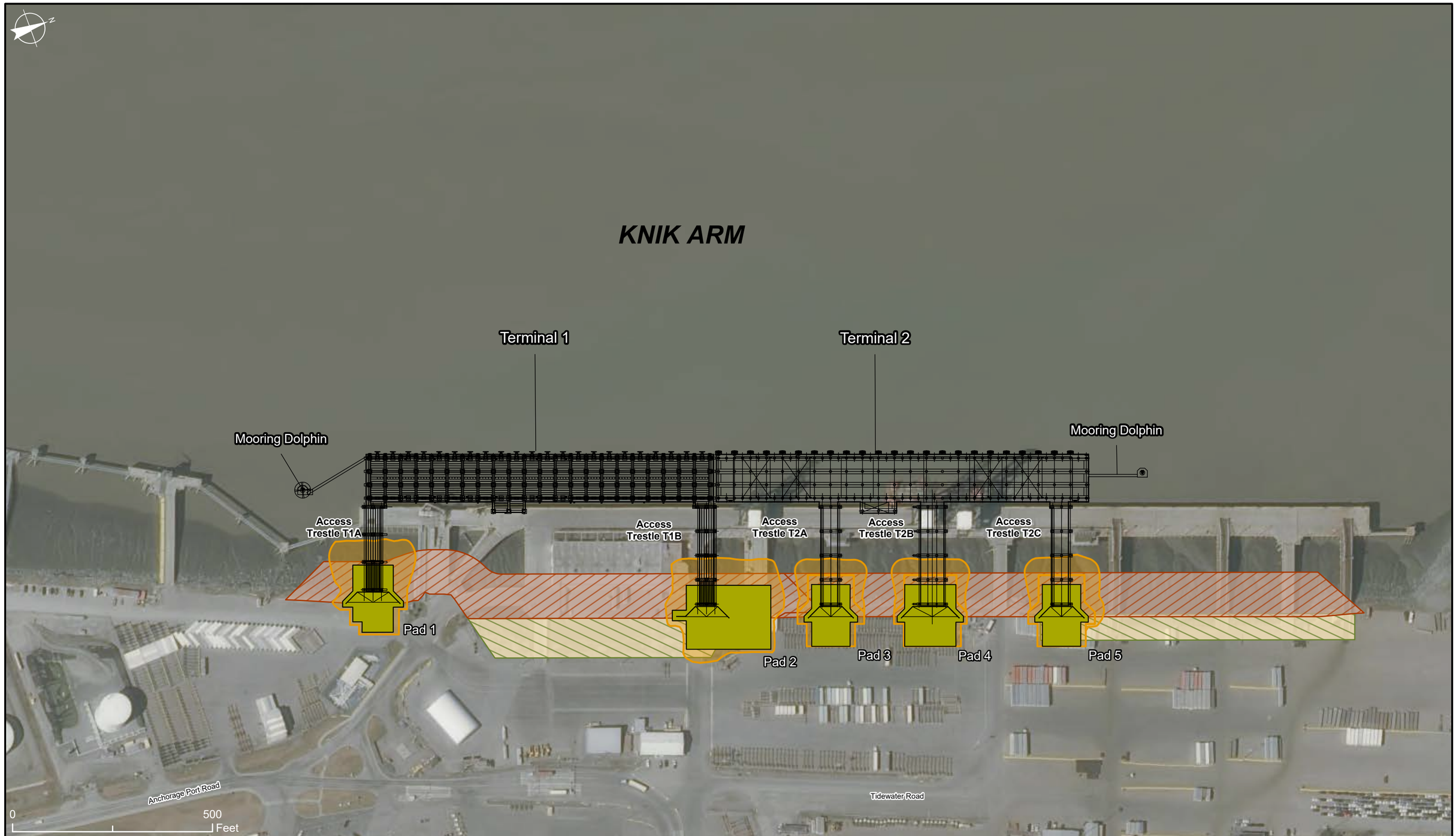


APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024
FIGURE 1 of 29 Site Location and Vicinity

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward
Meridian DATE: July 2024
FIGURE 2 of 29 Existing Facilities



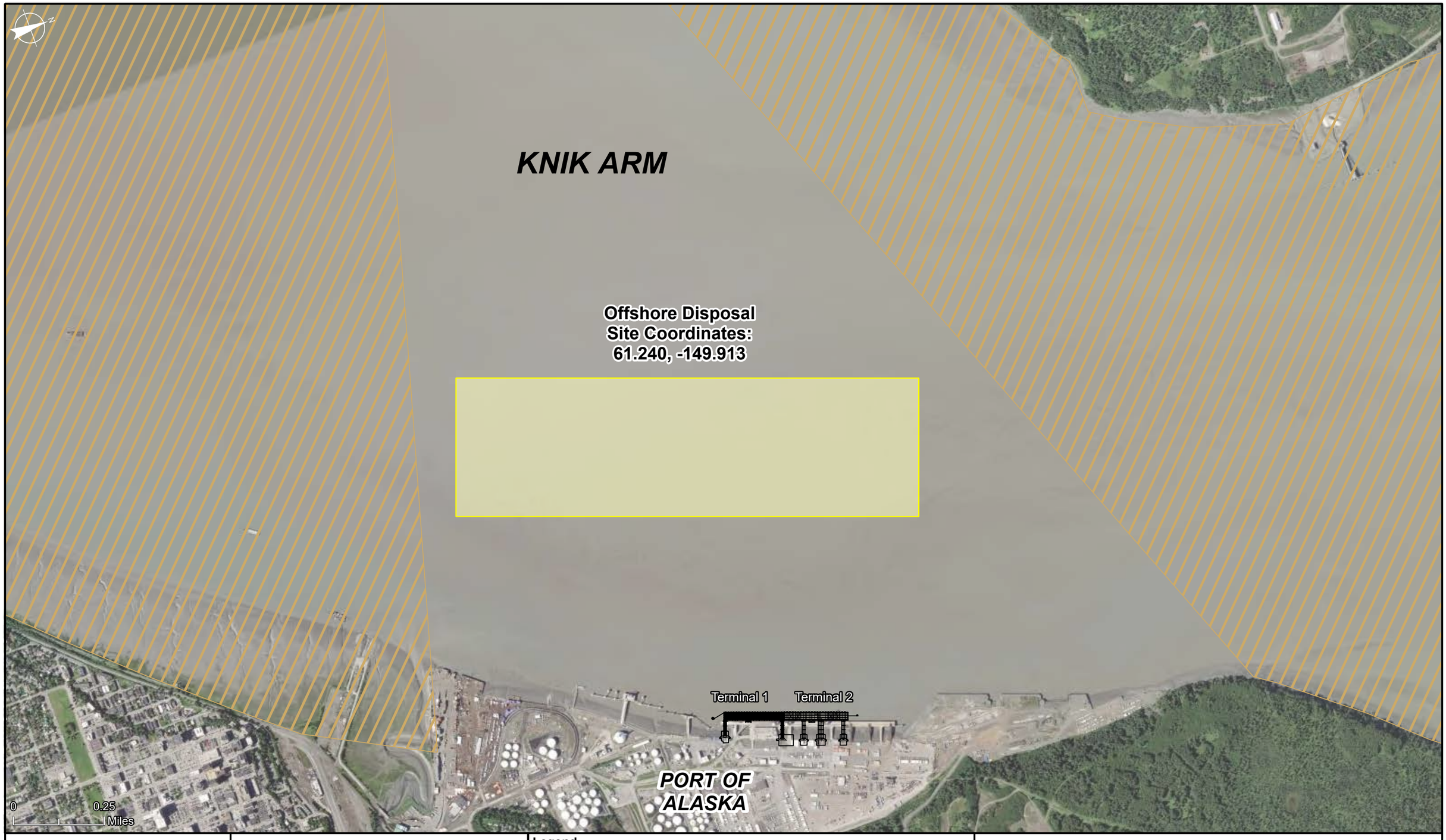
APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

Legend

- Project Components
- Shoreline Protection
- Shoreline Expansion Area
- Ground Improvements Area
- Approximate Ground Improvements Work Pad

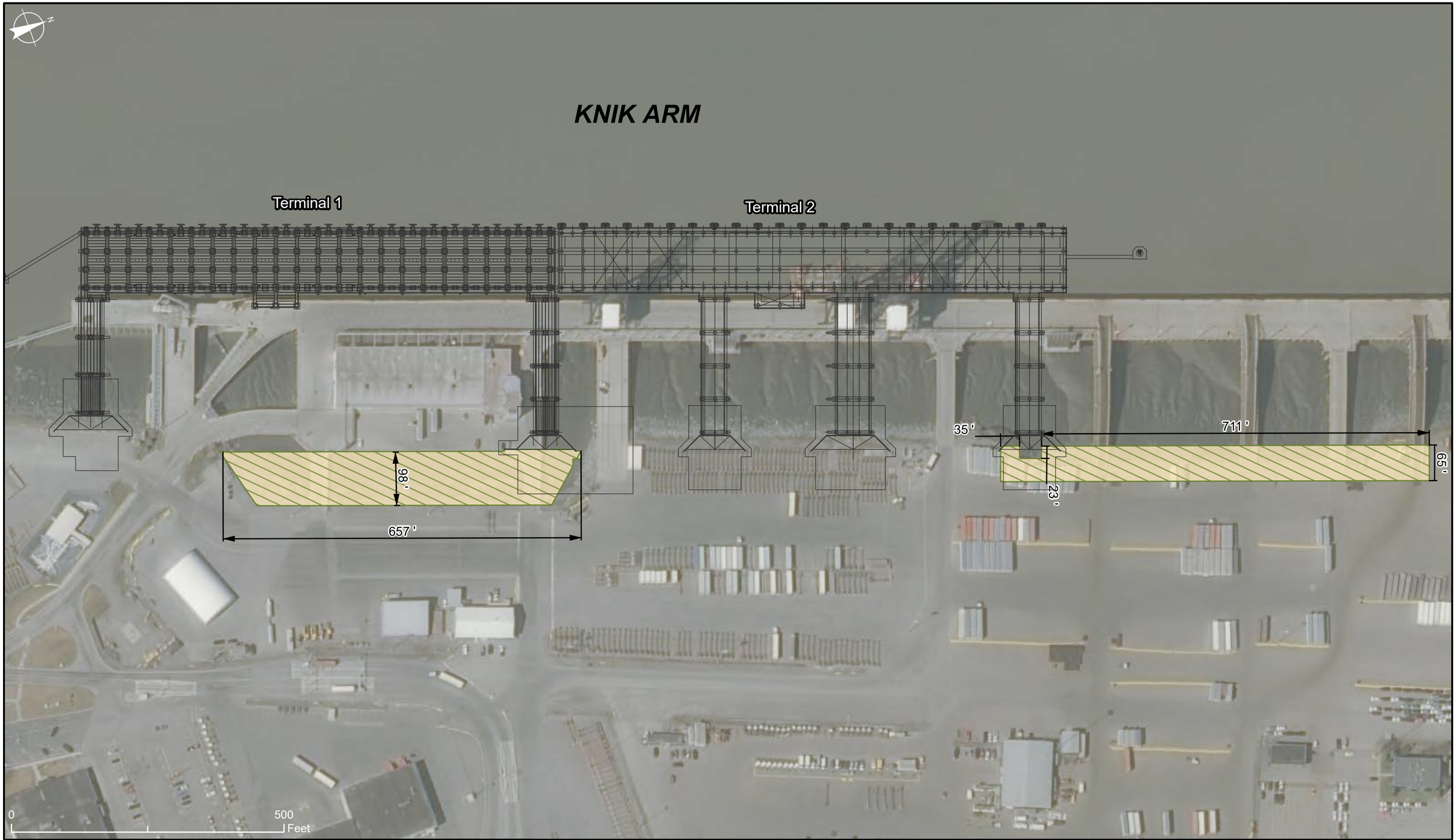
WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024
FIGURE 3 of 29 Facilities to be Constructed

PORT OF ALASKA MODERNIZATION PROGRAM	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Demolition Area	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 4 of 29 Structures to be Demolished



	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project Components Anchorage Dredged Material Disposal Area Beluga Critical Habitat	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 5 of 29 Offshore Disposal Site

KNIK ARM



PORT OF ALASKA MODERNIZATION PROGRAM

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

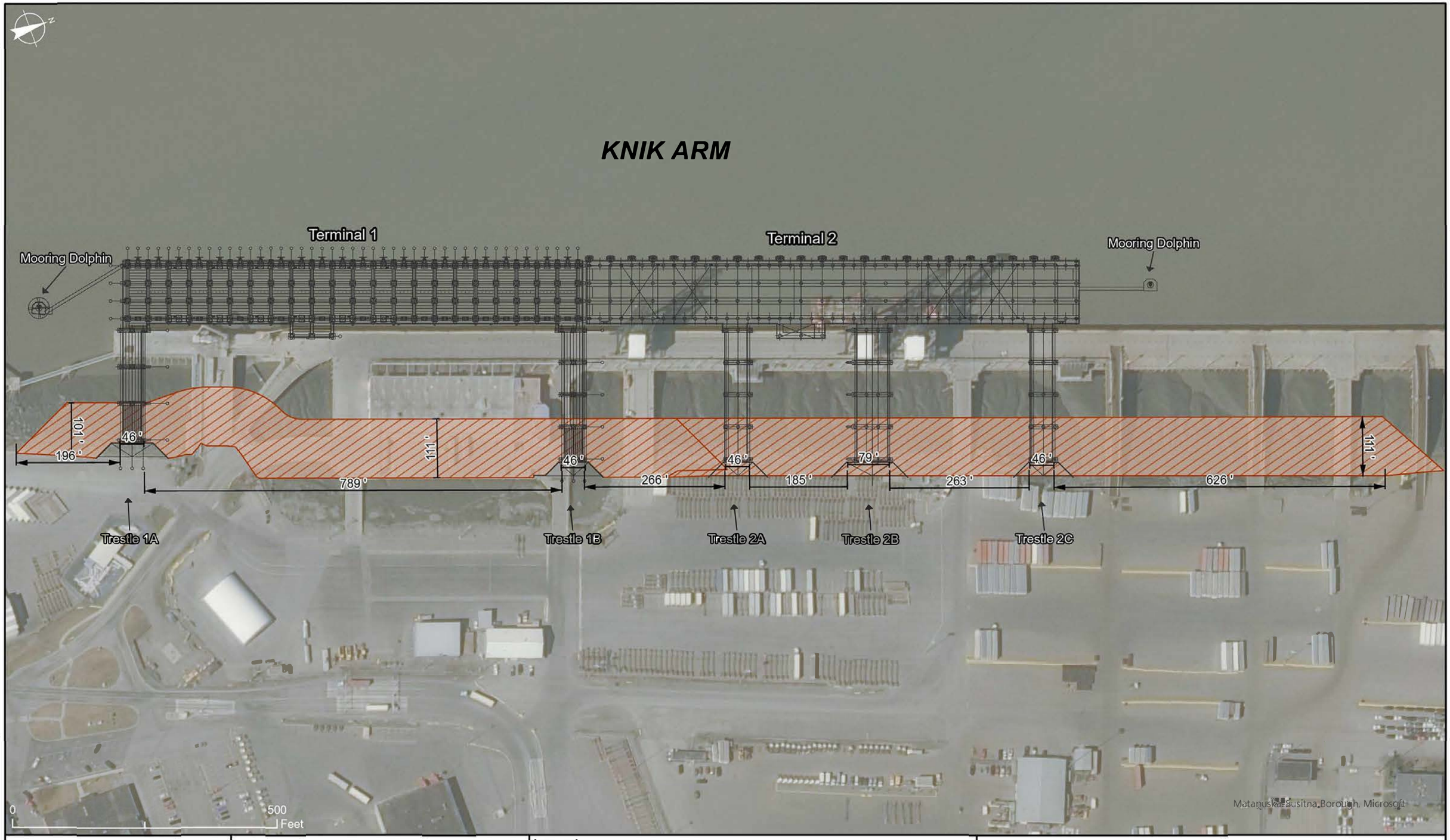
Legend

Project Components

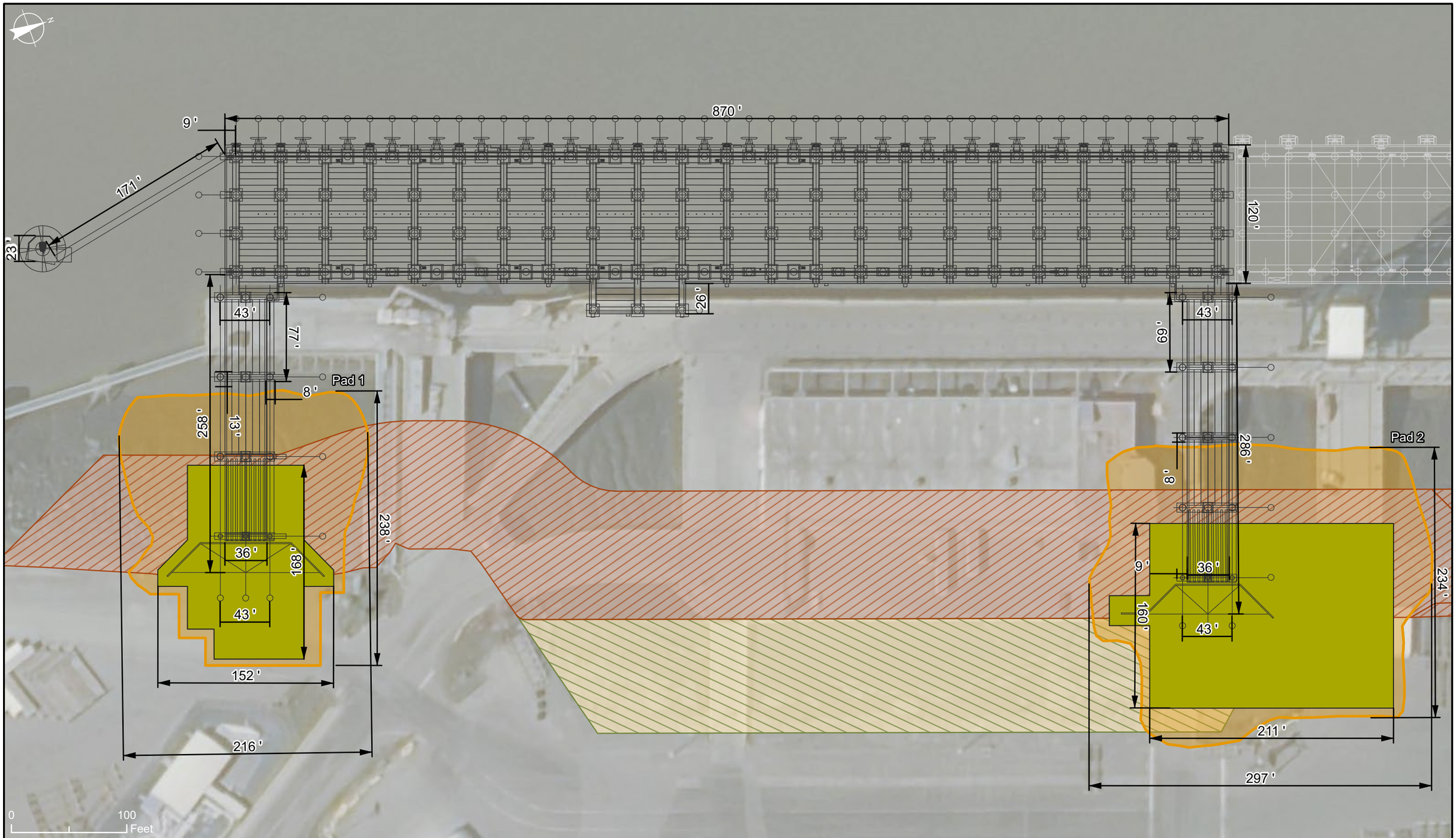
Shoreline Expansion Area

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward
Meridian DATE: July 2024
FIGURE 6 of 29 Shoreline Expansion Area

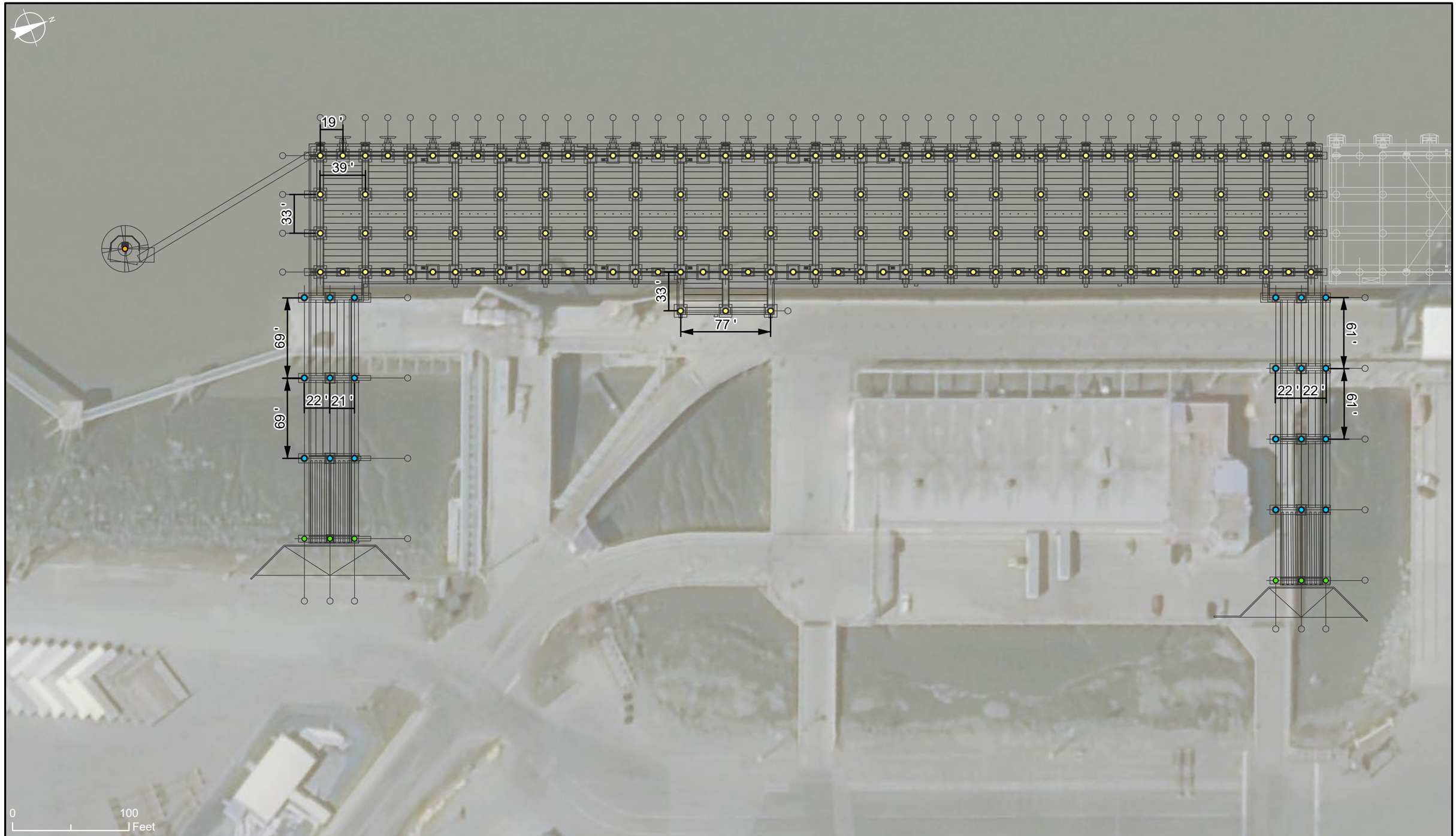
KNIK ARM



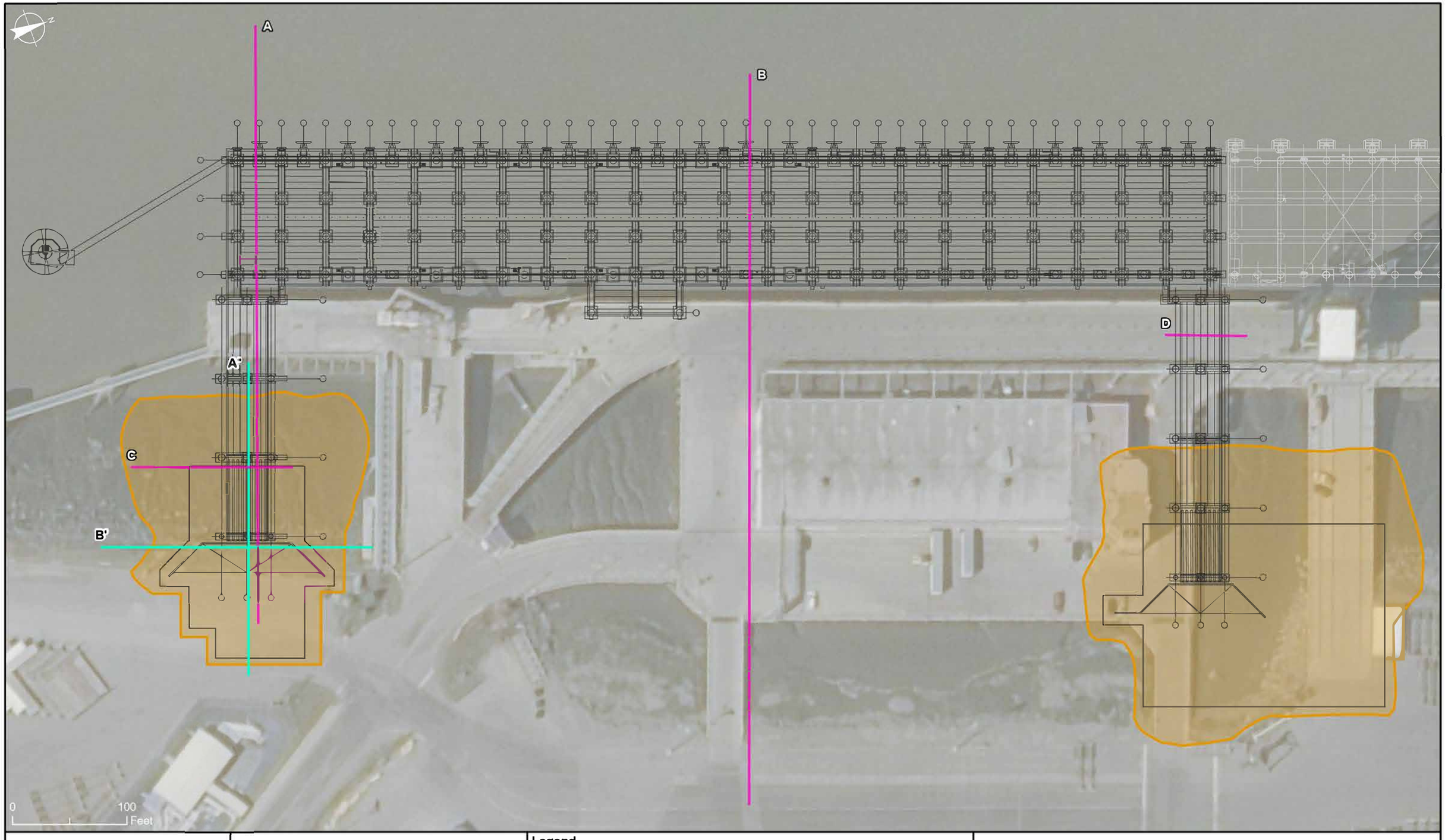
	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project Components Shoreline Protection	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 7 of 29 Shoreline Protection



	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project — Components Shoreline — Protection Shoreline — Expansion Area Ground Improvements Area Approximate Ground Improvements Work Pad	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 8 of 29 Terminal 1 Site Figure* **Figure based on 30% design drawings*



	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project Components 48" Pile - Trestle 72" Pile - Wharf 72" Pile - Trestle 144" Dolphin Monopile	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 9 of 29 Terminal 1 Pile Locations* **Figure based on 30% design drawings*



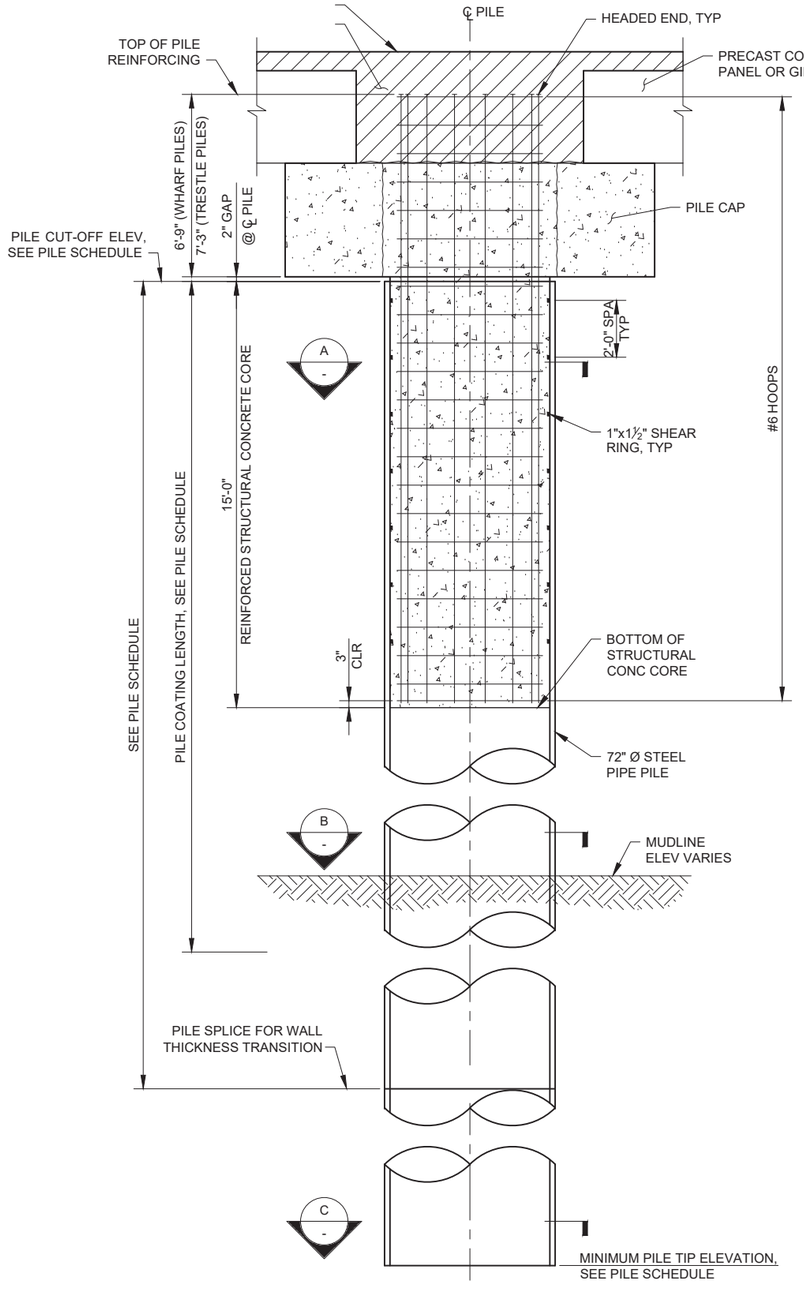
Legend

- Project Components
- Terminal 1 Cross Section
- Ground Improvements Work Pad Cross Section
- Approximate Ground Improvements Work Pad

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

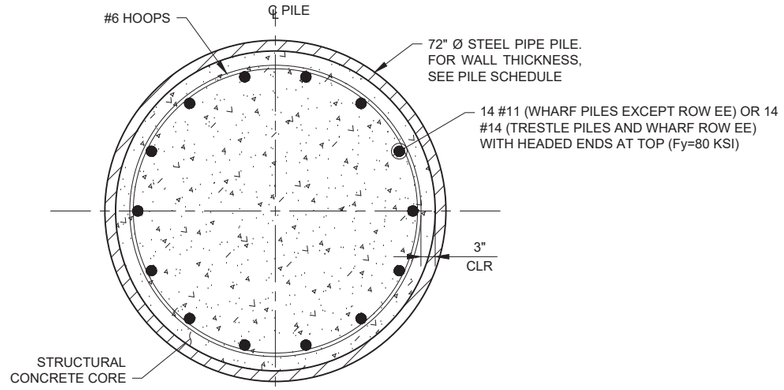
WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: July 2024
FIGURE 10 of 29 Terminal 1 Structural - General Layout*

**Figure based on 30% design drawings*



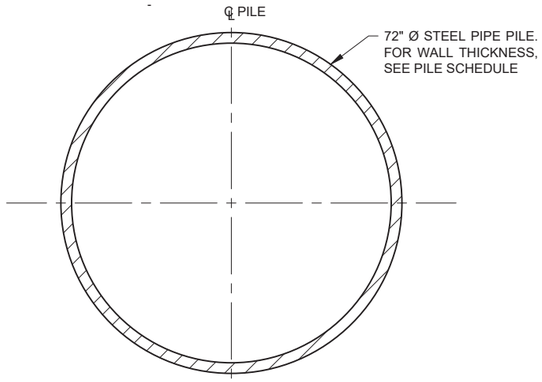
TYPICAL PILE ELEVATION

SCALE: 3/8" = 1'-0"



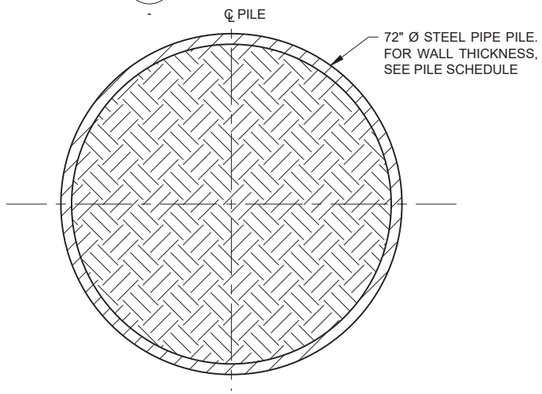
A PILE SECTION

SCALE: 3/4" = 1'-0"



B PILE SECTION

SCALE: 3/4" = 1'-0"



C PILE SECTION

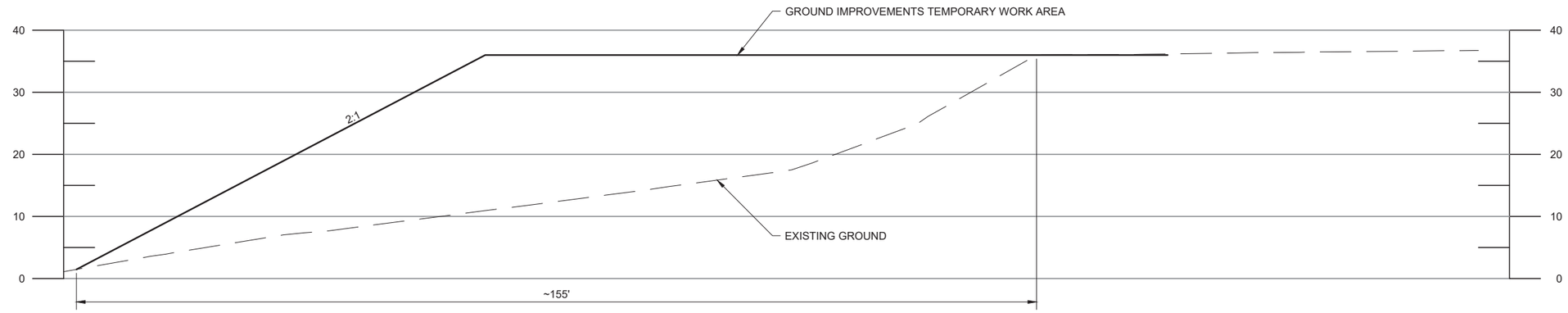
SCALE: 3/4" = 1'-0"

30% DESIGN - NOT FOR CONSTRUCTION

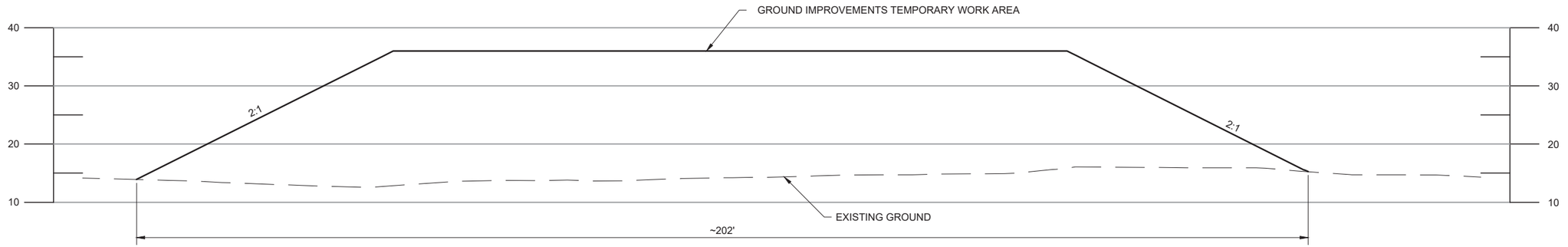
CONCEPTUAL

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward
Meridian DATE: July 2024
FIGURE 11 of 29 Pile Details



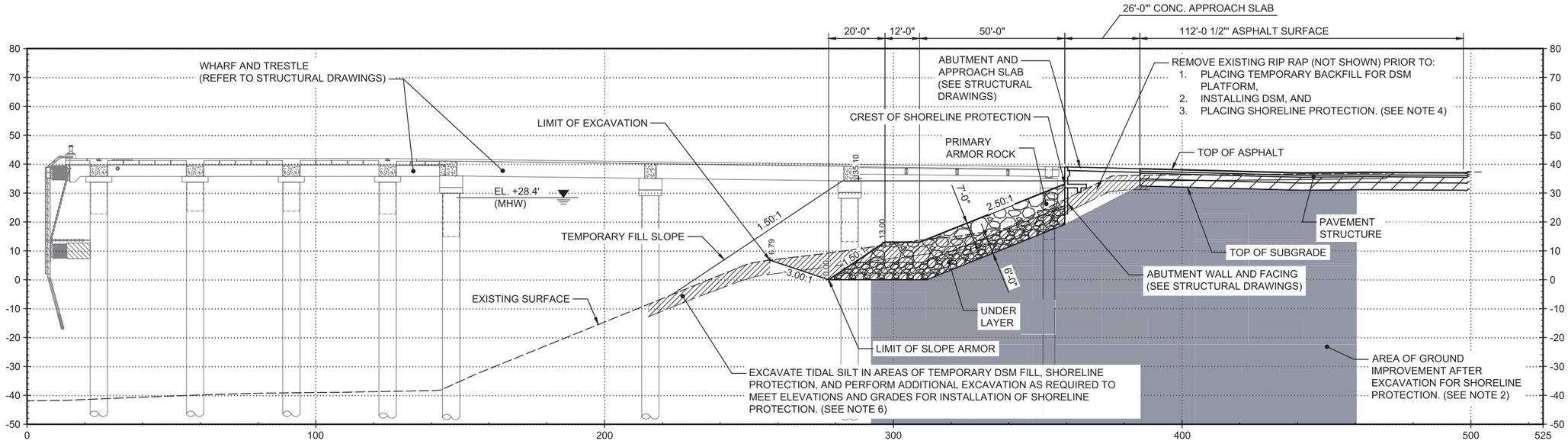
SECTION A'



SECTION B'

CONCEPTUAL

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 12 of 29 Ground Improvements Work Pad Cross Sections



A TERMINAL 1

T1-C-2001, T1-C-2801

1" = 20' scale 20 0 20 40 feet

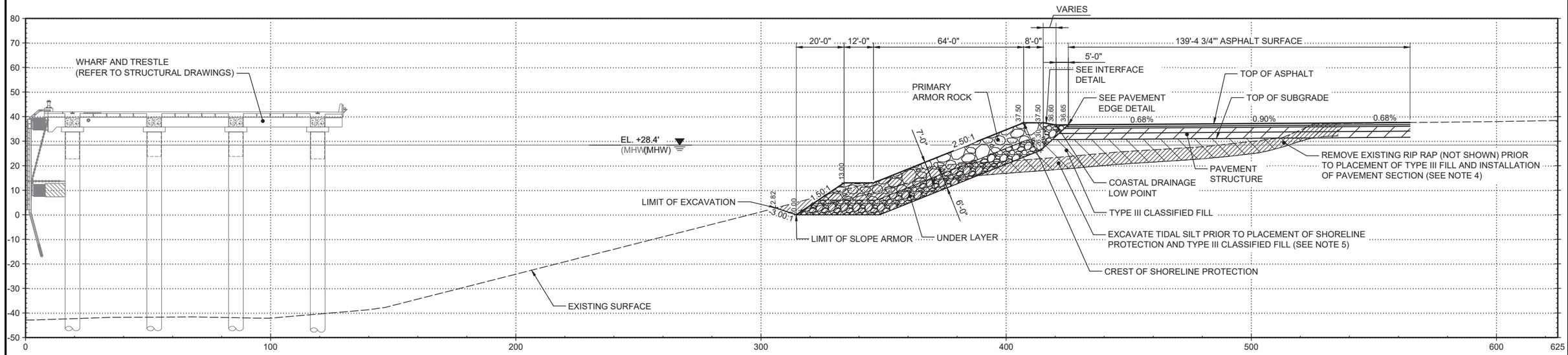
GENERAL CIVIL NOTES

1. UNSUITABLE MATERIAL (ORGANICS OR SILT) WITHIN THE AREA OF THE SHORELINE INFILL ARE TO BE EXCAVATED, REMOVED, AND DISPOSED OF.
2. REFER TO GROUND IMPROVEMENTS DESIGN DRAWINGS (T1-B-301, T1-B-302, T1-B-303).
3. REFER TO SHEET T1-W-543 FOR ICCP CATHODE CABLE INSTALLATION.
4. NES1 STOCKPILE IS ASSUMED TO BE SUITABLE FOR USE AS TYPE III FILL.
5. REMOVE AND DISPOSE OR RECYCLE EXISTING RIP RAP (IN ITS ENTIRETY) IN AREA OF SHORELINE PROTECTION AND AREA OF DSM INSTALLATION. EXTENT OF EXISTING RIP RAP AREA IS NOT FULLY VISIBLE DUE TO SILT COVERING EXISTING ROCK, AND DEPTH OF RIP RAP VARIES (OVER 5-FT IN PLACES). IN AREAS OUTSIDE OF DSM BOUNDARIES, FIELD VERIFY FULL EXTENT OF RIP RAP AND COMPLETELY REMOVE. WITHIN DSM BOUNDARIES, REFER TO DRAWINGS T1-B-202 AND T1-B-203. FOR BASIS OF BID, ASSUME 10,000 CY OF EXISTING RIP RAP TO BE REMOVED.
6. THE OWNER'S GEOTECHNICAL REPRESENTATIVE MUST BE PRESENT ONSITE DURING EXCAVATION OF TIDAL SILT AND WILL DETERMINE THE EXCAVATION DEPTH REQUIRED BASED ON MATERIAL WITNESSED IN THE FIELD. NOTIFY OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING OF WORK. DEPTH OF TIDAL SILT VARIES ALONG THE SHORELINE (OVER 5-FT IN AREAS). FOR BASIS OF BID, ASSUME 50,000 CY OF EXISTING TIDAL SILT TO BE EXCAVATED. THIS MATERIAL MAY BE DISPOSED OFFSHORE (NOT DEEP WATER) IF ALLOWED BY PERMITS.

PORT OF ALASKA MODERNIZATION PROGRAM	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 13 of 29 Terminal 1 Typical Section

GENERAL CIVIL NOTES

1. UNSUITABLE MATERIAL (ORGANICS OR SILT) WITHIN THE AREA OF THE SHORELINE INFILL ARE TO BE EXCAVATED, REMOVED, AND DISPOSED OF.
2. REFER TO DRAWING T1-W-543 FOR ICCP CATHODE CABLES INSTALLATION.
3. NES1 STOCKPILE IS ASSUMED TO BE SUITABLE FOR USE AS TYPE III FILL.
4. REMOVE AND DISPOSE OR RECYCLE EXISTING RIP RAP (IN ITS ENTIRETY) IN AREA OF SHORELINE PROTECTION AND AREA OF DSM INSTALLATION. EXTENT OF EXISTING RIP RAP AREA IS NOT FULLY VISIBLE DUE TO SILT COVERING EXISTING ROCK, AND DEPTH OF RIP RAP VARIES (OVER 5-FT IN PLACES). IN AREAS OUTSIDE OF DSM BOUNDARIES, FIELD VERIFY FULL EXTENT OF RIP RAP AND COMPLETELY REMOVE. WITHIN DSM BOUNDARIES, REFER TO DRAWINGS T1-B-202 AND T1-B-203. FOR BASIS OF BID, ASSUME 10,000 CY OF EXISTING RIP RAP TO BE REMOVED.
5. THE OWNER'S GEOTECHNICAL REPRESENTATIVE MUST BE PRESENT ONSITE DURING EXCAVATION OF TIDAL SILT AND WILL DETERMINE THE EXCAVATION DEPTH REQUIRED BASED ON MATERIAL WITNESSED IN THE FIELD. NOTIFY OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING OF WORK. DEPTH OF TIDAL SILT VARIES ALONG THE SHORELINE (OVER 5-FT IN AREAS). FOR BASIS OF BID, ASSUME 50,000 CY OF EXISTING TIDAL SILT TO BE EXCAVATED. THIS MATERIAL MAY BE DISPOSED OFFSHORE (NOT DEEP WATER) IF ALLOWED BY PERMITS.



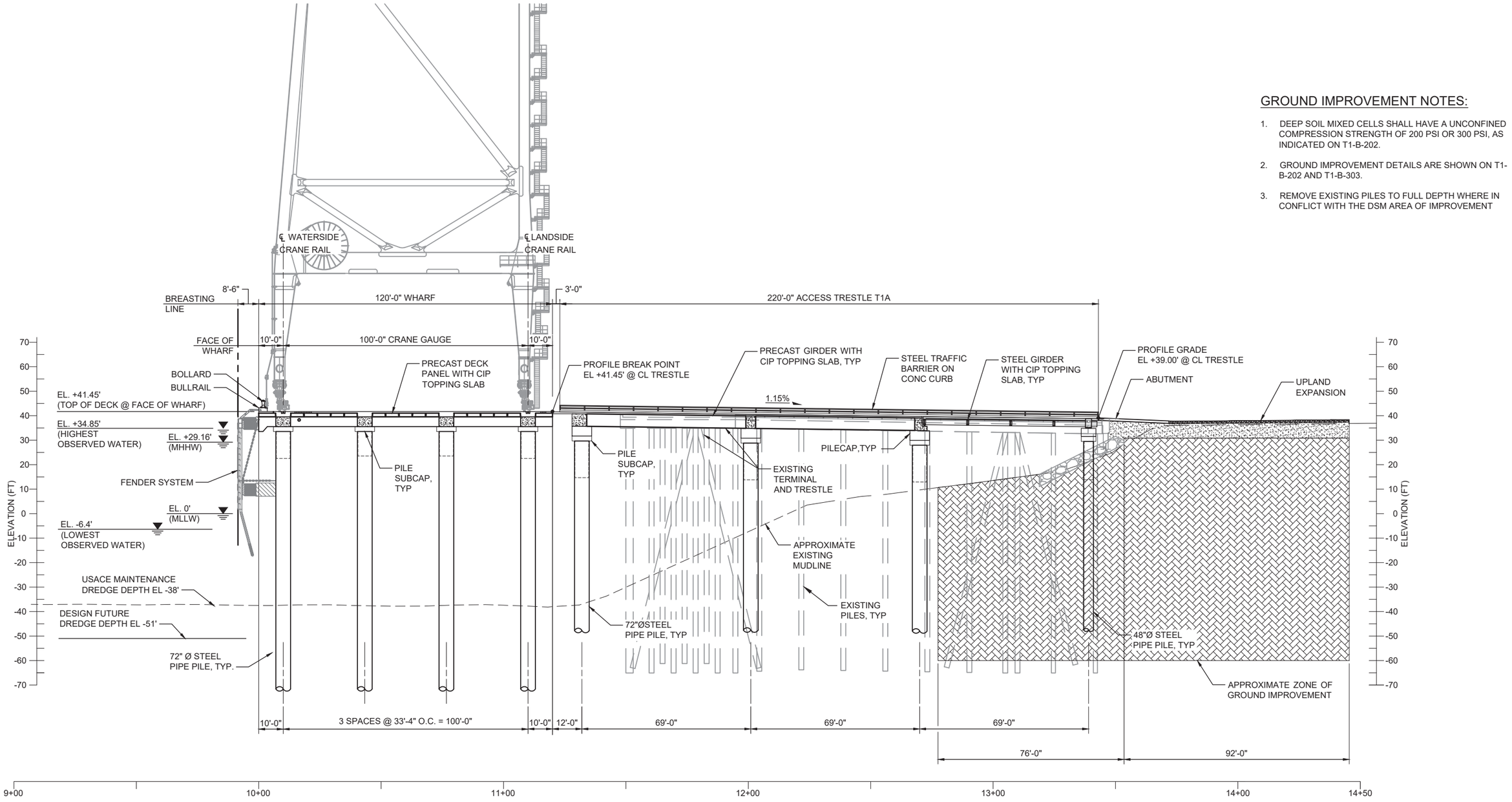
B SECTION - UPLAND EXPANSION

1" = 20' scale 20 0 20 40 feet

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 14 of 29 Upland Expansion Typical Section

GROUND IMPROVEMENT NOTES:

1. DEEP SOIL MIXED CELLS SHALL HAVE A UNCONFINED COMPRESSION STRENGTH OF 200 PSI OR 300 PSI, AS INDICATED ON T1-B-202.
2. GROUND IMPROVEMENT DETAILS ARE SHOWN ON T1-B-202 AND T1-B-303.
3. REMOVE EXISTING PILES TO FULL DEPTH WHERE IN CONFLICT WITH THE DSM AREA OF IMPROVEMENT



TYPICAL ELEVATION - TRESTLE 1A

SCALE: 1" = 20' T1-B-201

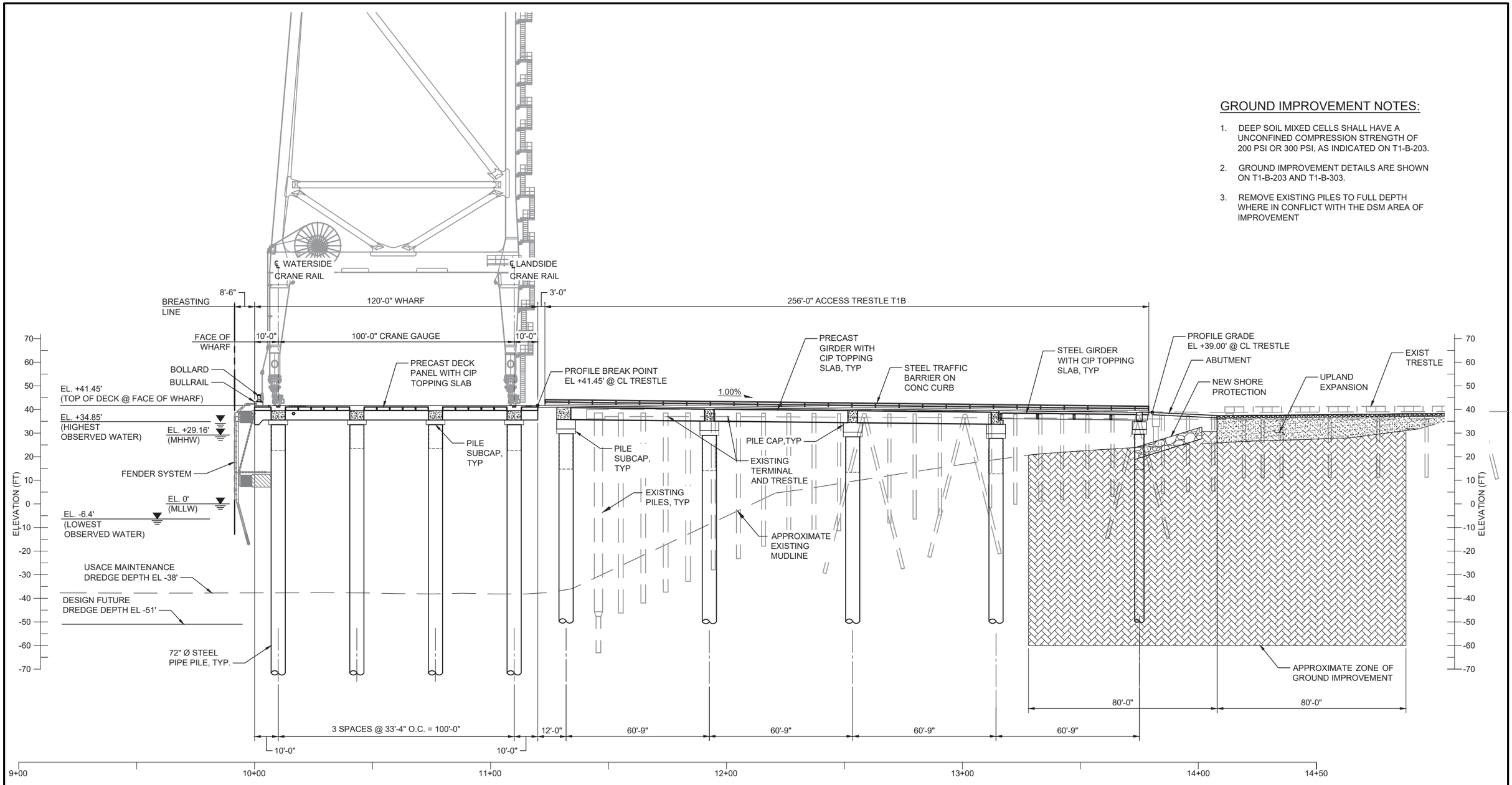
1" = 20' scale 20 0 20 40 feet

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: July 2024
FIGURE 15 of 29 Terminal 1 Typical Elevation - Access Trestle T1A

GROUND IMPROVEMENT NOTES:

1. DEEP SOIL MIXED CELLS SHALL HAVE A UNCONFINED COMPRESSION STRENGTH OF 200 PSI OR 300 PSI, AS INDICATED ON T1-B-203.
2. GROUND IMPROVEMENT DETAILS ARE SHOWN ON T1-B-203 AND T1-B-303.
3. REMOVE EXISTING PILES TO FULL DEPTH WHERE IN CONFLICT WITH THE DSM AREA OF IMPROVEMENT

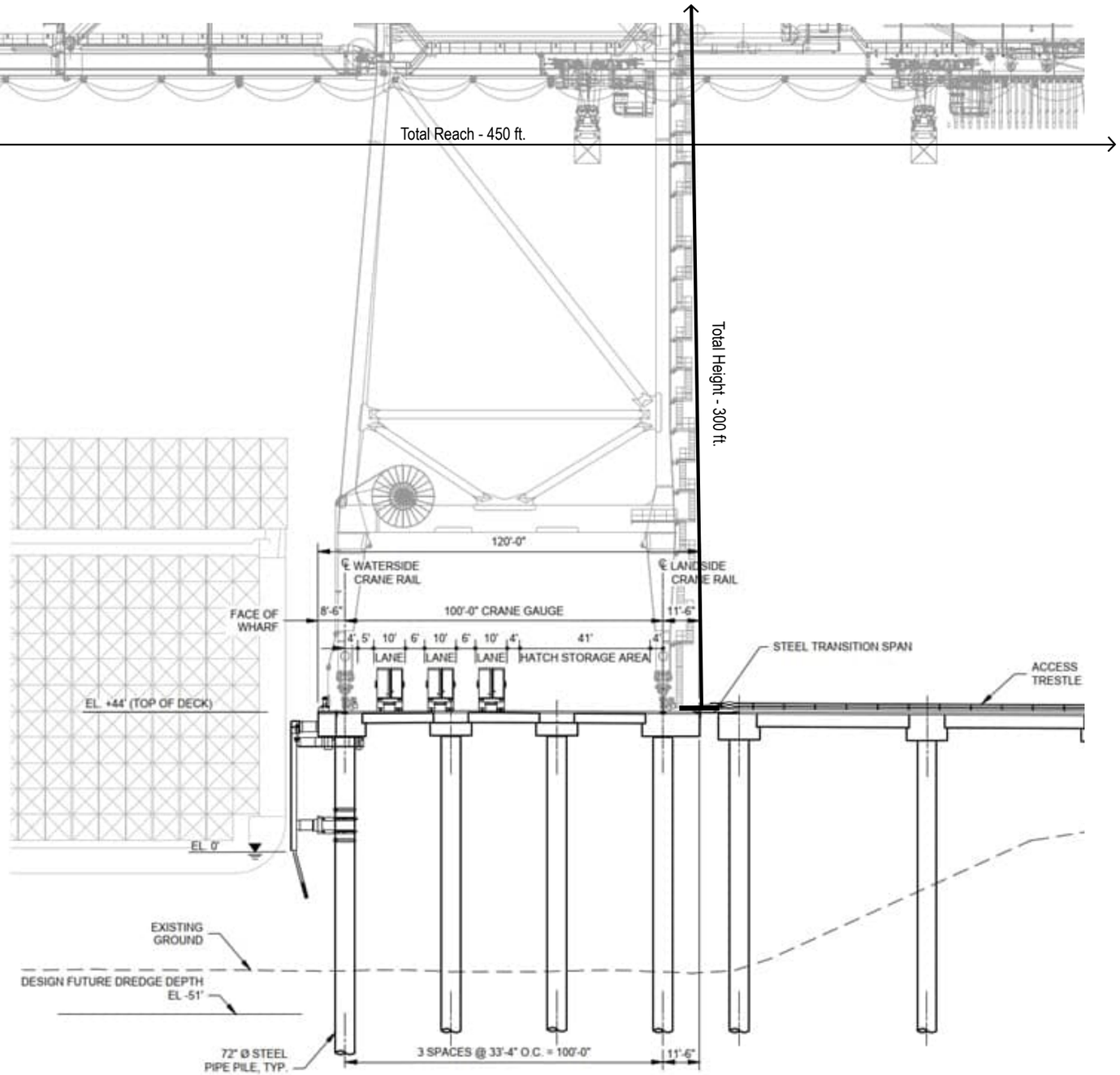


TYPICAL ELEVATION - TRESTLE 1B
SCALE: 1" = 20' T1-B-201

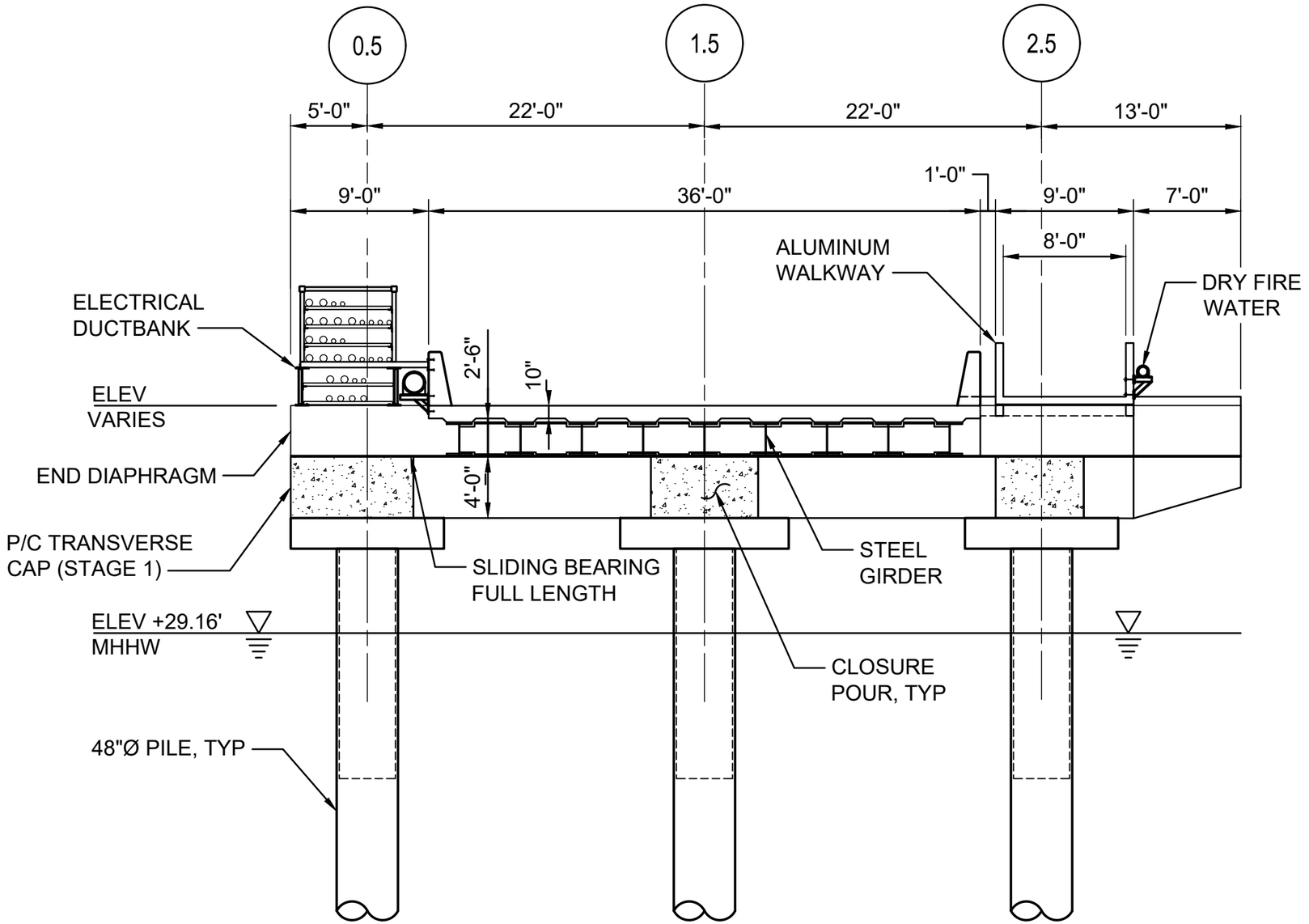
1" = 20' scale 20 0 20 40 feet

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: July 2024
FIGURE 16 of 29 Terminal 1 Typical Elevation - Access Trestle T1B

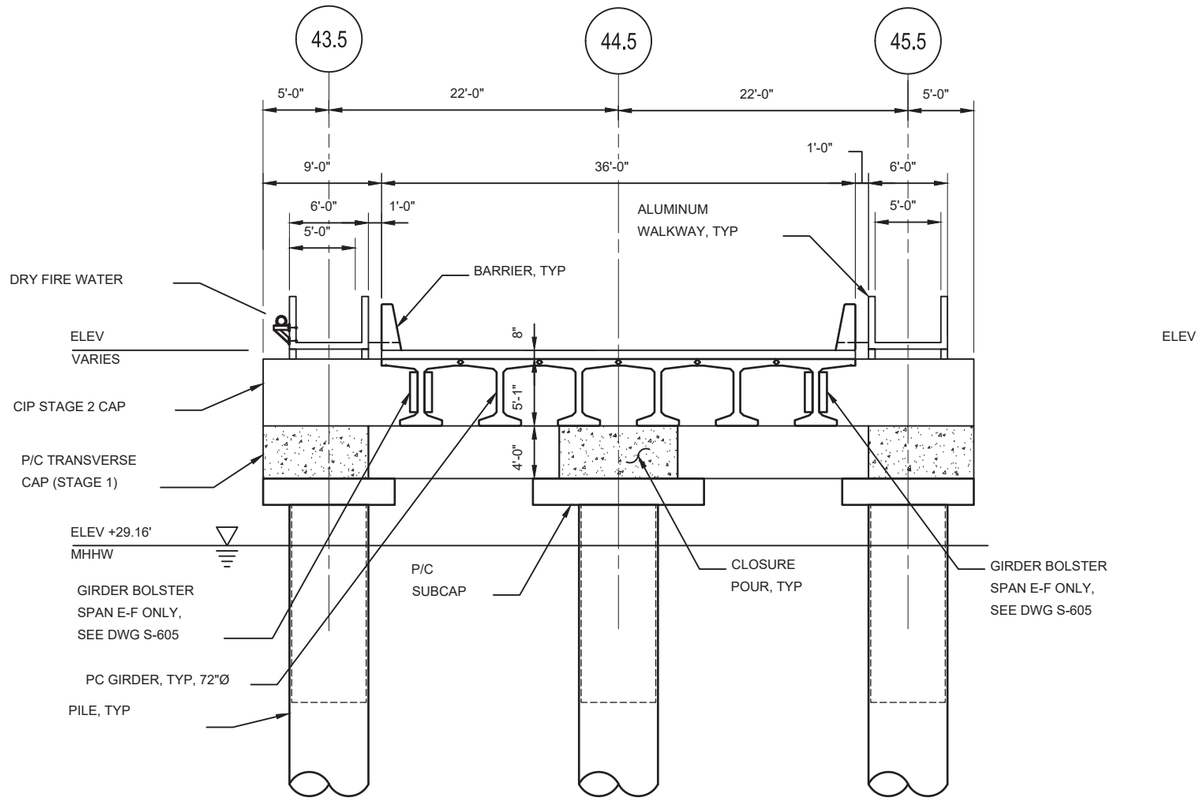


	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July, 2024 FIGURE 17 of 29 Height and Reach of Crane



C **SECTION - TRESTLE 1A**
SCALE: 1/8" = 1'-0"

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 18 of 29 Terminal 1 Access Trestle Typical Section C

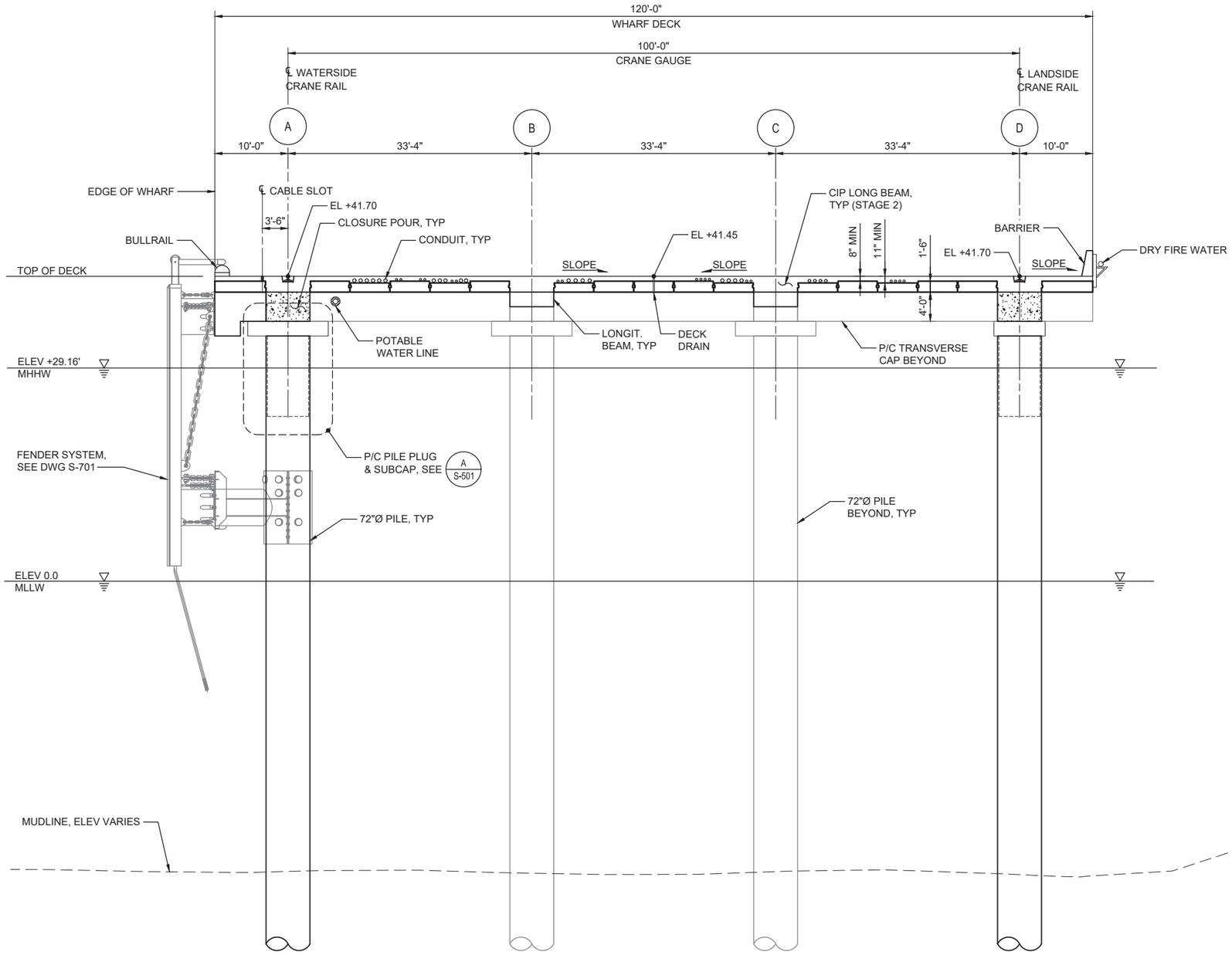


ELEV

D SECTION - TRESTLE 1B

SCALE: 1/8" = 1'-0"

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 19 of 29 Terminal 1 Access Trestle Typical Section D

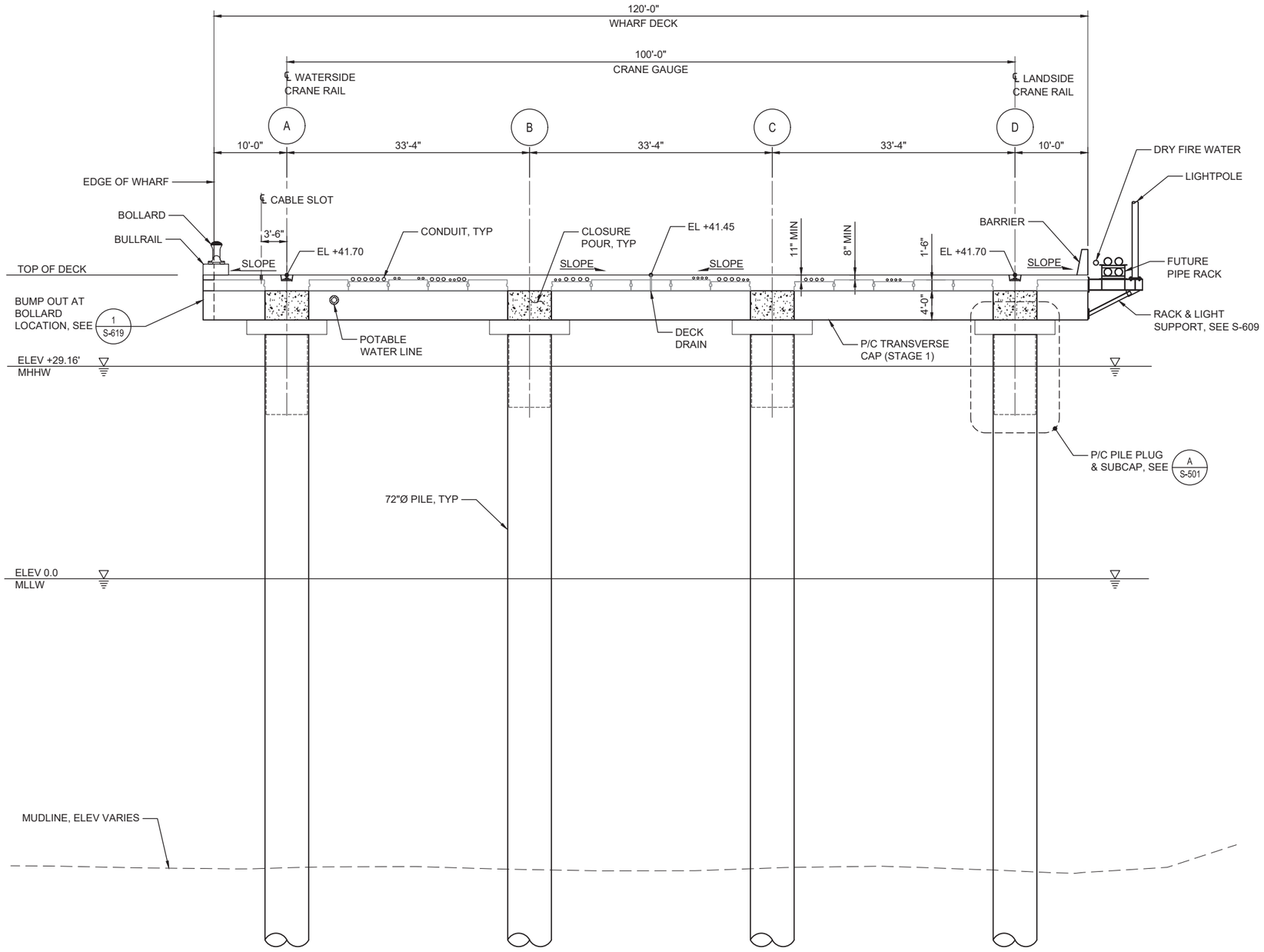


TYPICAL SECTION - WHARF @ FENDER LOCATIONS

SCALE: 1/8" = 1'-0"

1/8" = 1'-0" scale 8 0 8 16 feet

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 20 of 29 Terminal 1 Wharf Deck Typical Cross Section



TYPICAL SECTION - WHARF @ BOLLARD LOCATIONS

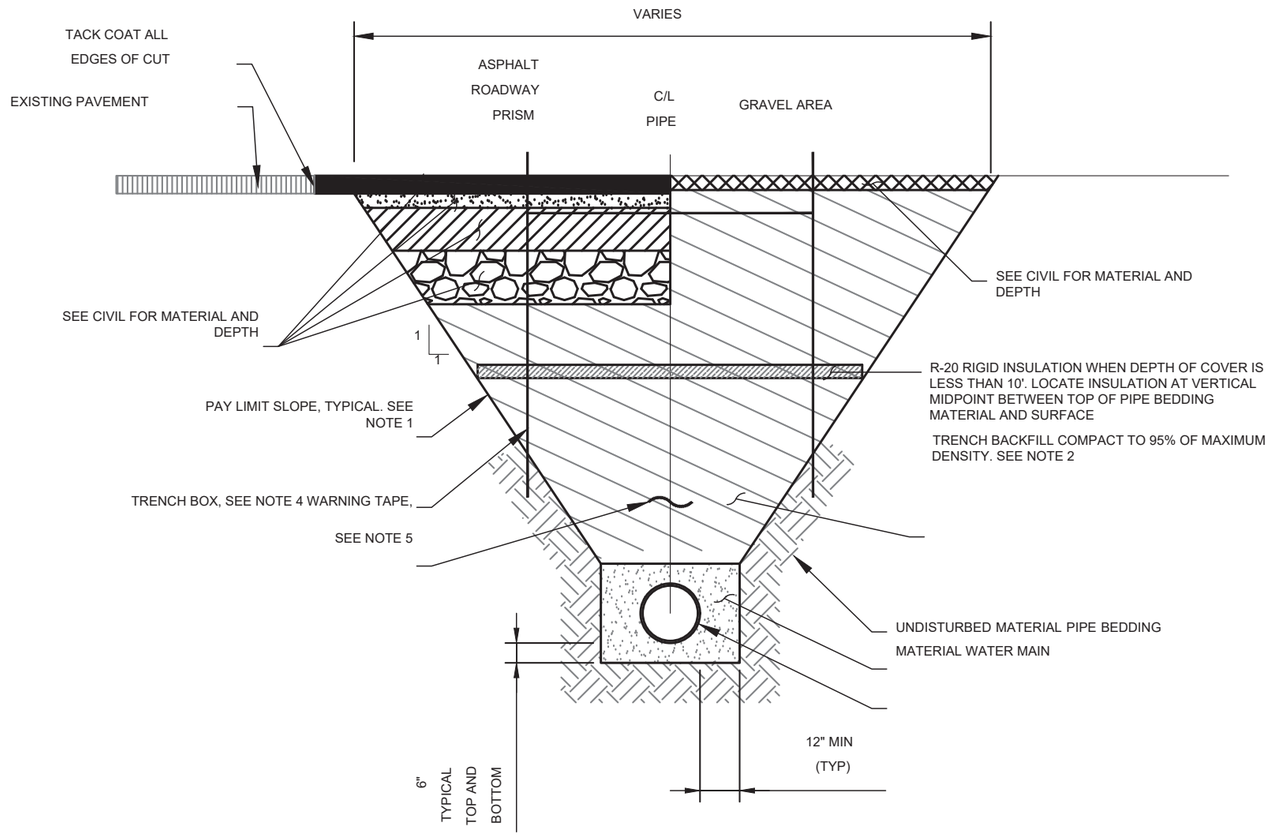
SCALE: 1/8" = 1'-0"

1/8" = 1'-0" scale 8 0 8 16 feet

CONSTRUCTION SEQUENCE NOTES:

1. DRIVE PILES AS INDICATED IN PLANS AND IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS
2. INSTALL PRECAST PILE PLUGS & SUBCAPS
3. SET PRECAST PILE CAPS AND BEAMS
4. POUR STAGE 1 CLOSURE POURS
5. SET PRECAST DECK PANELS
6. POUR STAGE 2 CLOSURE POURS
7. POUR TOPPING SLAB, BARRIERS, BULLRAIL
8. INSTALL APPURTENANCES AND SURFACE MOUNT FEATURES.

PORT OF ALASKA MODERNIZATION PROGRAM	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 21 of 29 Terminal 1 Wharf Dock Typical Cross Section

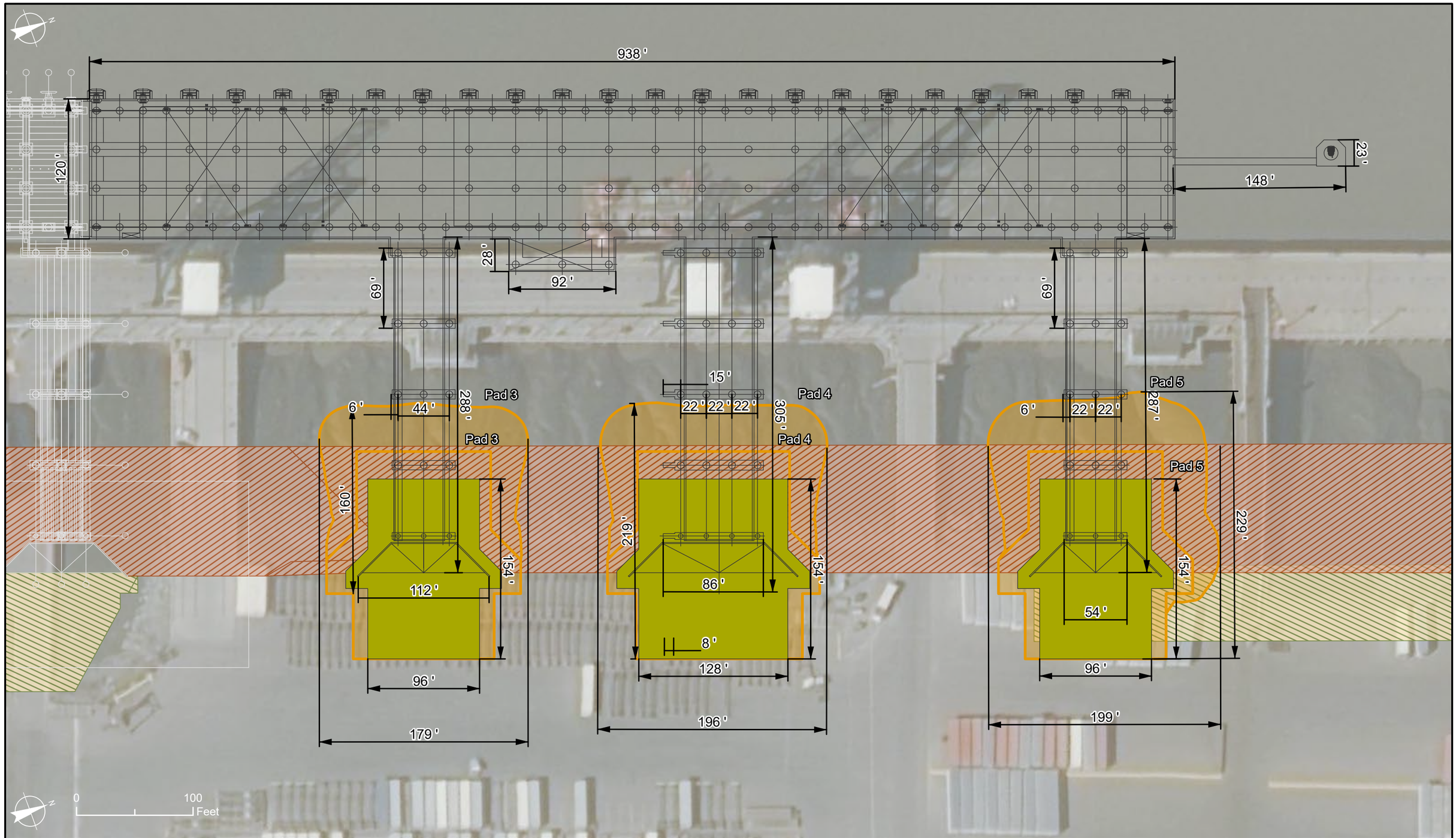


2 TYPICAL UTILITY TRENCH SECTION

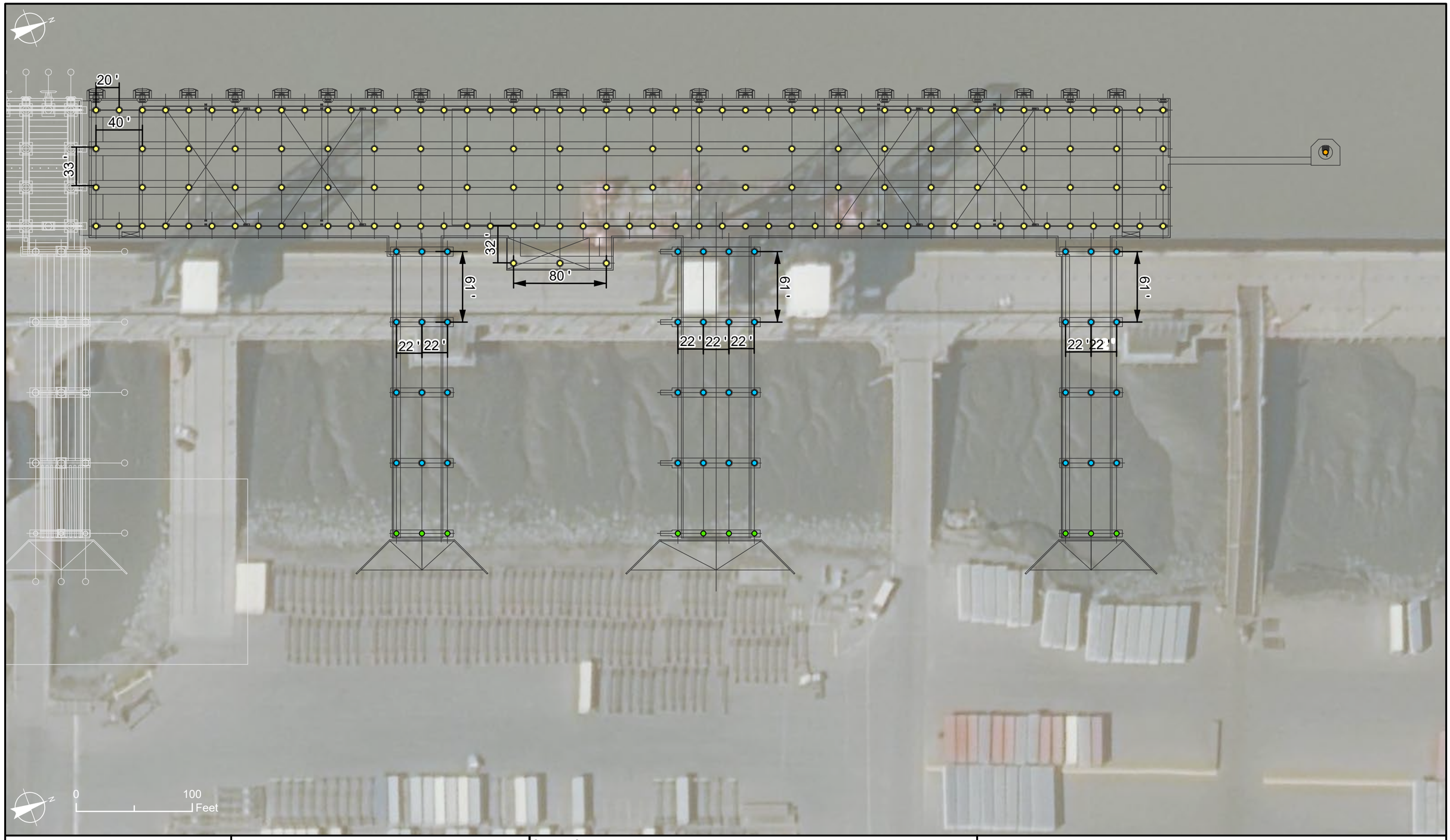
SCALE:

TRENCH SECTION NOTES:

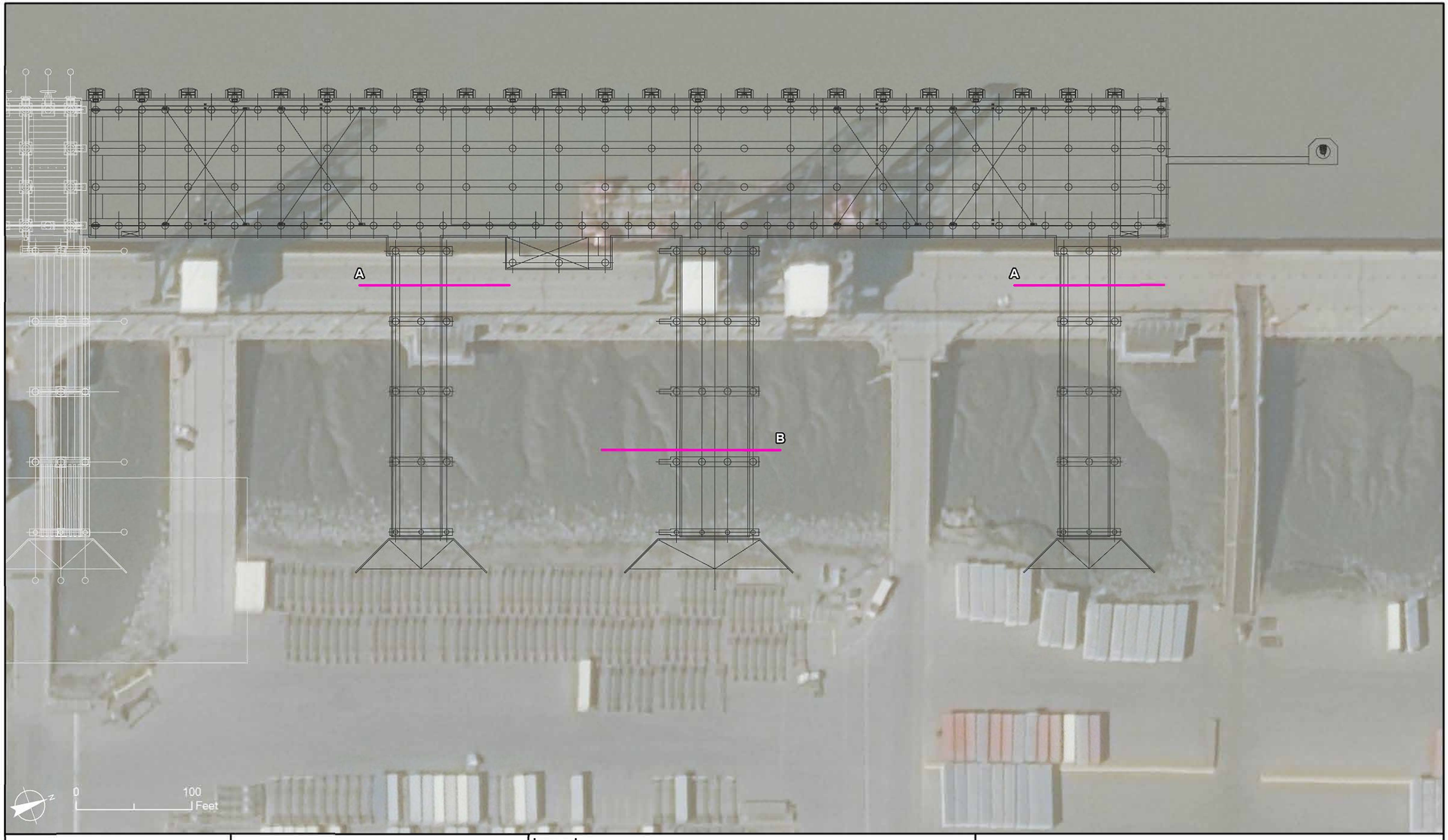
1. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATIONS ONLY. CONTRACTOR SHALL SHORE EXCAVATIONS AS NECESSARY TO KEEP EXCAVATIONS WITHIN EXISTING RIGHT-OF-WAY AND EASEMENTS AND TO PROTECT EXISTING UTILITIES AND STRUCTURES.
2. TRENCH BACKFILL SHALL BE EXISTING NATIVE MATERIAL MEETING TYPE III CLASSIFIED FILL AND BACKFILL CLASSIFICATION (MINIMUM) AS APPROVED BY ENGINEER. NATIVE MATERIAL MOT MEETING TYPE III CLASSIFIED FILL AND BACKFILL CLASSIFICATION SHALL BE REMOVED AND REPLACED WITH TYPE IIA CLASSIFIED FILL AND BACKFILL. REUSING MATERIAL IS CONSIDERED INCIDENTAL TO CONTRACT. CONTRACTOR MAY NEED TO HAUL AND STORE EXISTING MATERIAL AT SOIL STOCKPILE AREA.
3. REMOVE AND PROPERLY DISPOSE OF ALL ORGANIC MATERIALS IN ACCORDANCE WITH MASS SECTION 20.13.
4. TRENCH BOX SHALL BE UTILIZED TO MINIMIZE TRENCH WIDTH, REDUCE IMPACTS TO ADJACENT PROPERTIES AND TO REMAIN WITHIN EXISTING ROW OR EASEMENTS.
5. INSTALL DETECTABLE WARNING TAPE AT LEAST 18 INCHES BUT NO MORE THAN 36 INCHES ABOVE THE CROWN OF THE PIPE.
6. CONTRACTOR SHALL COMPLY WITH OSHA SAFETY STANDARDS BASED ON SOIL CHARACTERISTICS AND MASS SECTION 10.06 ARTICLE 6.8 - SAFETY.
7. FOUNDATION BACKFILL SHALL BE PLACED IN AREAS WHERE EXISTING SOILS DO NOT PROVIDE SUITABLE SUPPORT OF BEDDING MATERIAL AS DIRECTED BY THE ENGINEER, DEPTH MAY VARY.
8. SUITABLE CONTAMINATED SOIL MEETING THE REQUIREMENTS OF EXISTING NATIVE MATERIAL DEFINED IN NOTE 2 WILL BE ALLOWED TO BE REUSED AS TRENCH BACKFILL. UNSUITABLE CONTAMINATED SOIL SHALL BE HANDLED AND DISPOSED OF AS SPECIFIED IN THE SPECIFICATIONS.
9. A DEWATERING PLAN MUST BE AUTHORIZED PRIOR TO ANY EXCAVATION.



	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project Shoreline Protection Components Shoreline Expansion Area Ground Improvements Area Approximate Ground Improvements Work Pad	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 23 of 29 Terminal 2 Site Figure* **Figure based on 15% design drawings*



PORT OF ALASKA MODERNIZATION PROGRAM	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	**Legend** Project Components 48" Pile - Trestle 72" Pile - Wharf 72" Pile - Trestle 144" Dolphin Monopile	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 24 of 29 Terminal 2 Pile Locations* **Figure based on 15% design drawings*



APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

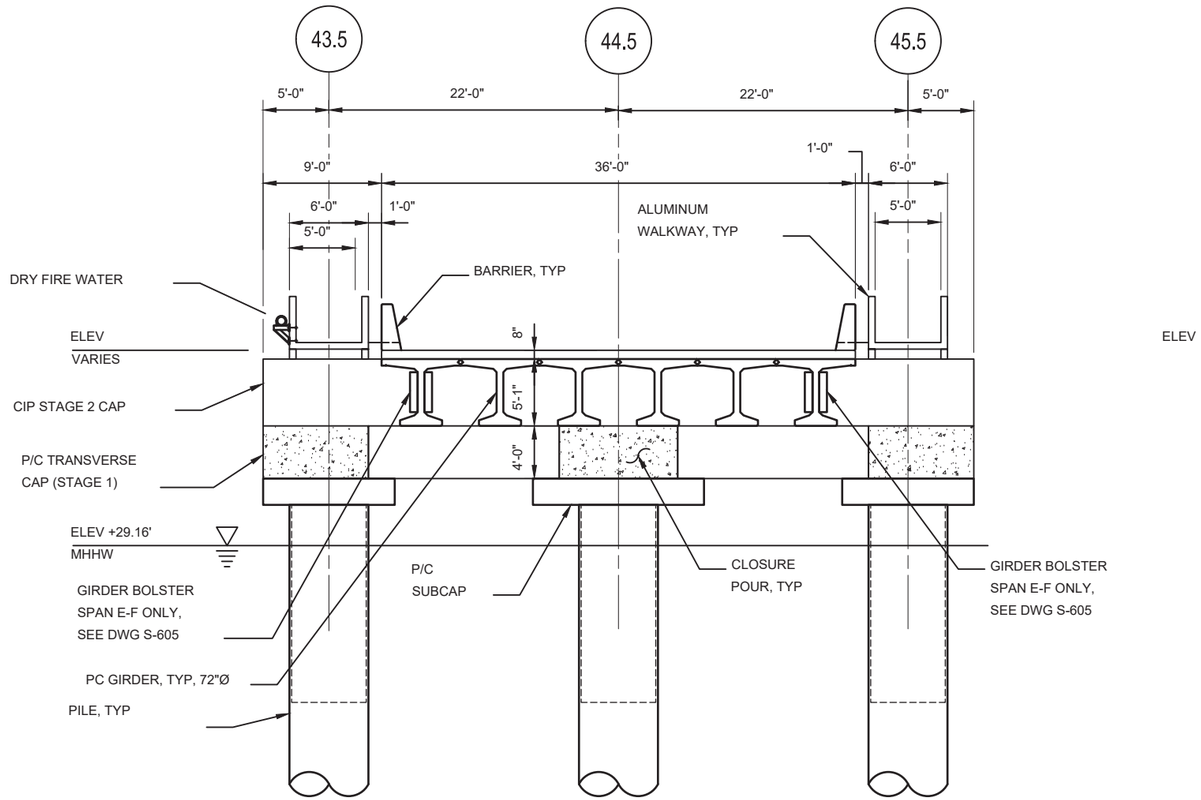
Legend

Project Components

Cross Section

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: July 2024
FIGURE 25 of 29 Terminal 2 Structural - General Layout*

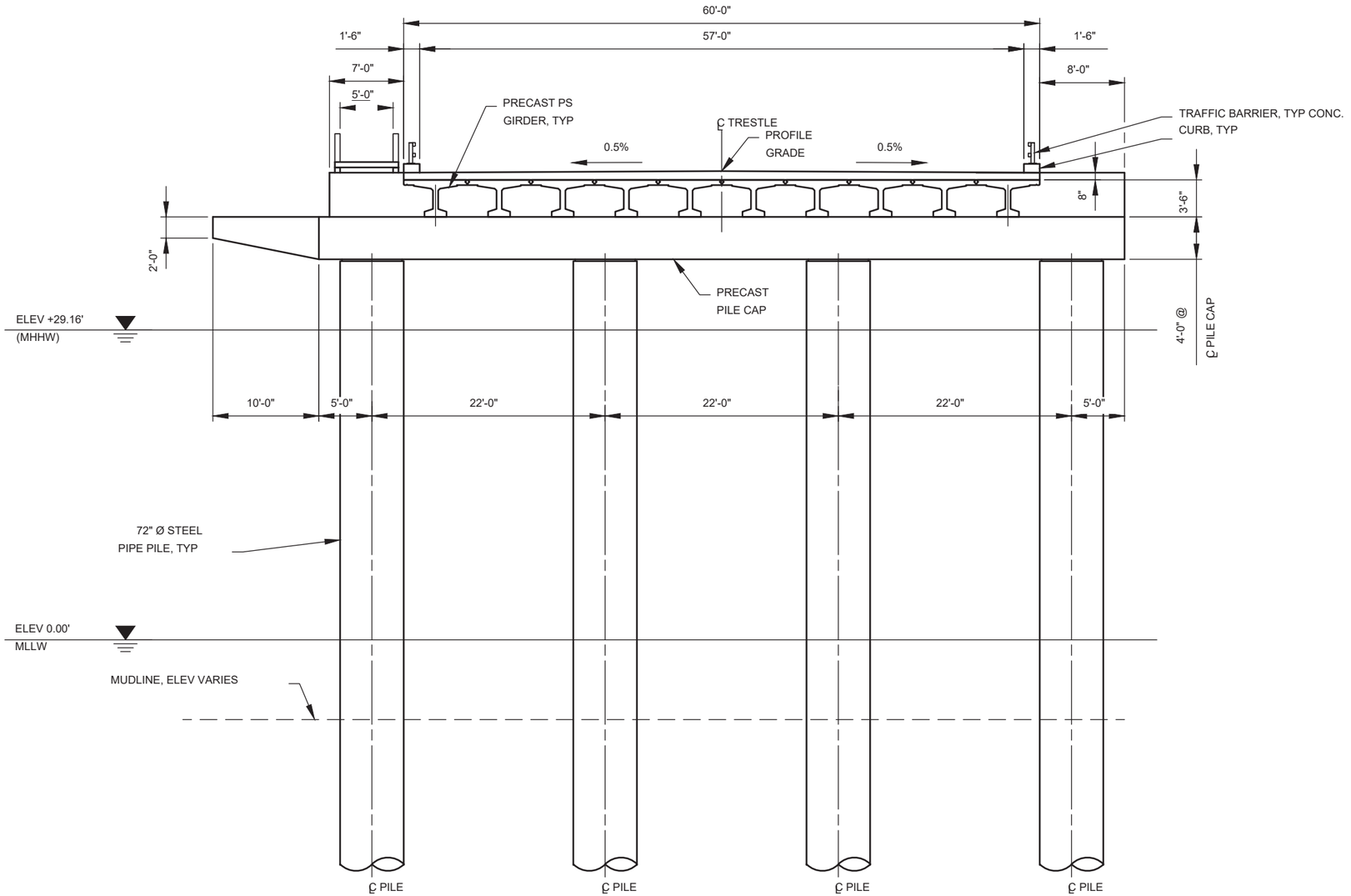
**Figure based on 15% design drawings*



ELEV

A **SECTION - Trestles 2A and 2C**
SCALE: 1/8" = 1'-0"
T2-S-011

	APPLICANT: Municipality of Anchorage, Port of Alaska Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm	WATERWAY: Knik Arm LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024 FIGURE 26 of 29 Terminal 2 Access Trestle Section A - Trestles T2A & T2C



B **TYPICAL SECTION - TRESTLE T2B**

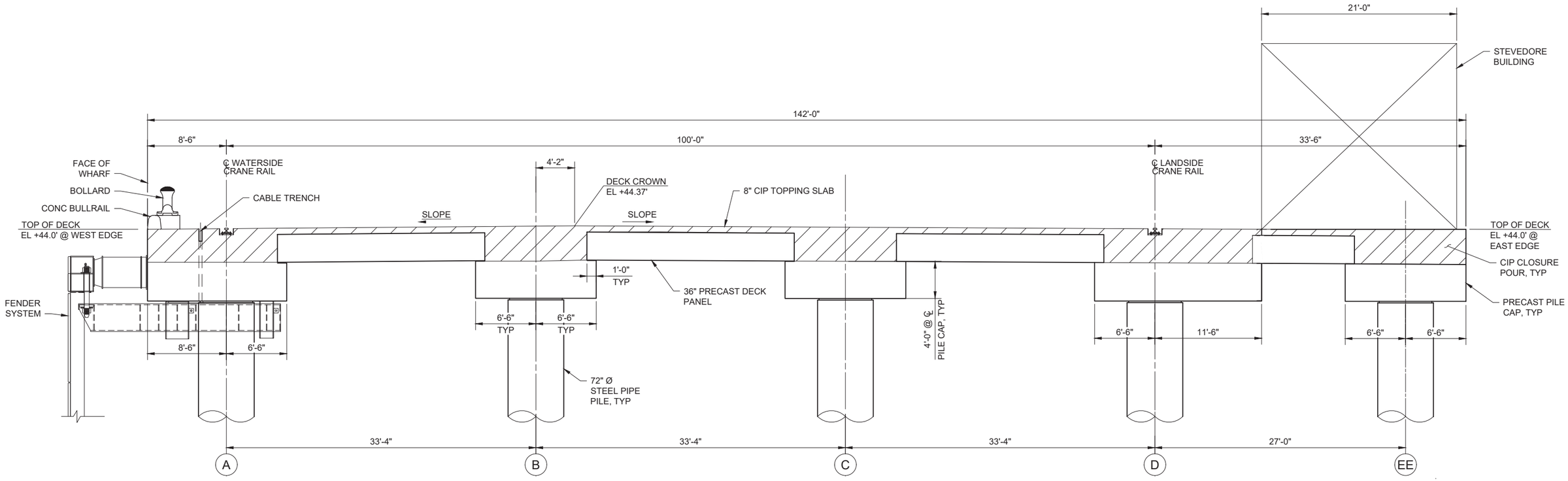
SCALE: 1/8" = 1'-0"

15% DESIGN - NOT FOR CONSTRUCTION

CONCEPTUAL

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024
FIGURE 27 of 29 Terminal 2 Access Trestle Typical Section
B - Trestle 2B



TYPICAL SECTION @ STEVEDORE BUILDING

3/16" = 1'-0"

15% DESIGN - NOT FOR CONSTRUCTION

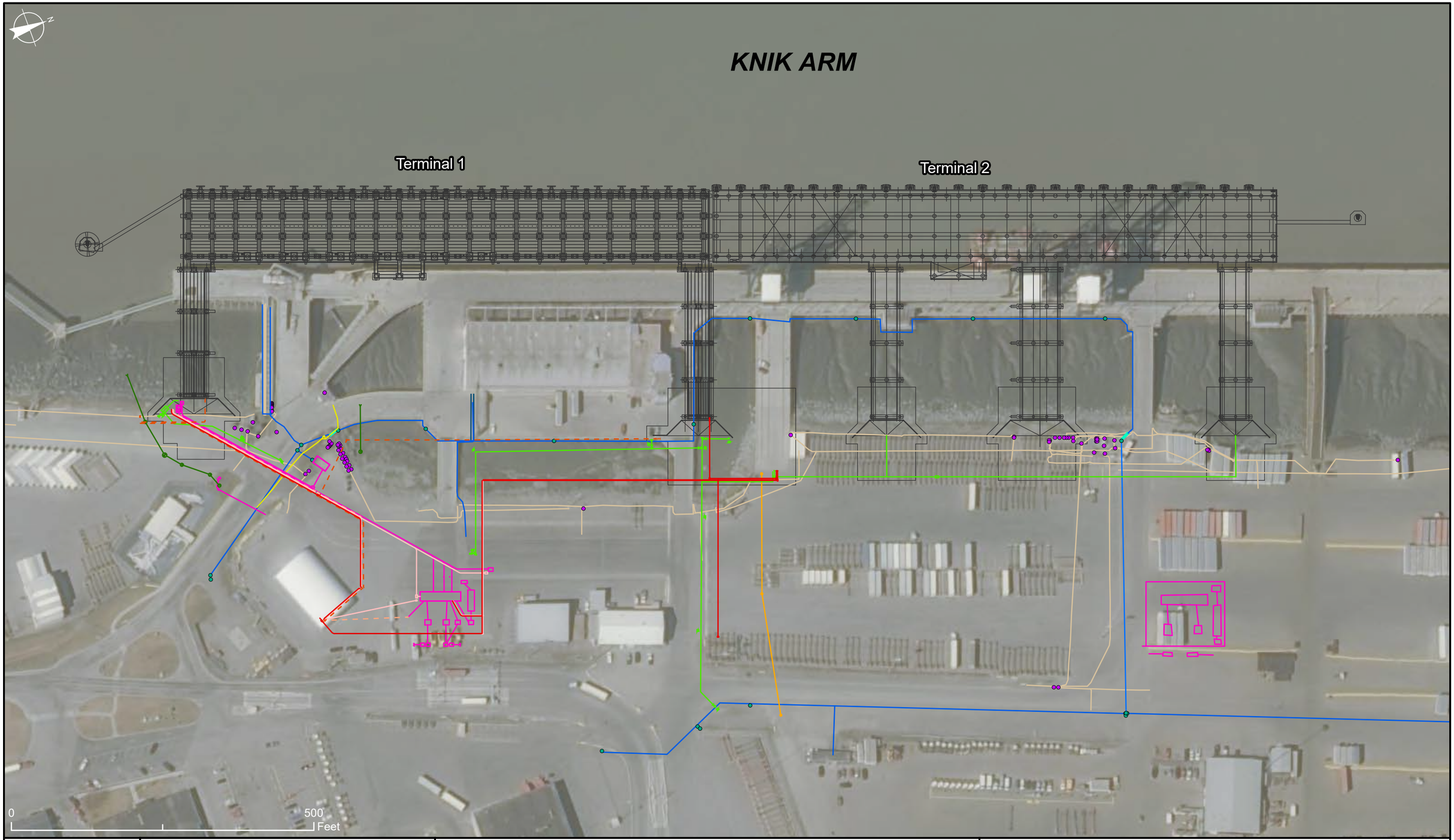
T2-S-011

CONCEPTUAL

APPLICANT: Municipality of Anchorage,
Port of Alaska
Cargo Dock Replacement Project
FILE NO: POA-2003-00502-M21, Knik Arm

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024
FIGURE 28 of 29 , Terminal 2 Wharf Deck Typical Sections

KNIK ARM



APPLICANT: Municipality of Anchorage, Port of Alaska
Cargo Dock Replacement Project FILE NO: POA-2003-00502-M21, Knik Arm

Legend

- Project Components
- Proposed
  - Fiber Optic
  - CC TV
  - Data Comm
  - Communication
  - Storm Water
  - Water Line
  - Sewer Line
- Existing
  - Electric
  - Natural Gas Line
  - Water Utility Feature
  - Water Pipe
  - Water Line
  - Electric Underground Line
  - Electric Overhead Line

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian DATE: July 2024
FIGURE 29 of 29, T1 and T2 Utility Plan