DEPARTMENT OF THE ARMY PERMIT

Permittee: IPOP, LLC; Beau Epstein

Project Name: Bonanza Channel Placer Project
Permit Number: POA-2018-00123

Issuing Office: Pacific Ocean Division

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

To construct structures and/or conduct work in or affecting "navigable waters of the United States" pursuant to Section 10 of the Rivers and Harbors Act of 1899, and

To permanently discharge fill into 159.4 acres of waters of the U.S. pursuant to Section 404 of the Clean Water Act of 1972, in association with the Bonanza Channel Placer Project as shown on the attached drawings.

The proposed project consists of a multi-year phased dredging project associated with a placer gold mining operation within Bonanza Channel estuary. The proposed project would be implemented over a five-year period and involves dredging approximately 4.5 million cubic yards (CY) (estimated bulked volume of 4.9 million CY) based on 24-hour operations, processing the materials for gold extraction, concurrently reclaiming the dredged channel to its original bathymetry, and disposing of the excess processed materials at locations adjacent to the dredged area. No chemical processing of dredged materials would occur.

The activities requiring a permit consist of the total area affected by the dredging activity, reclamation of dredged materials, and disposal of excess dredged materials within jurisdictional waters. The total maximum area of affected jurisdictional waters is 159.4 acres.

The project includes establishment of a launch ramp, a man camp (temporary encampment for use by workers), and a staging area. The man camp and associated staging area would be sited in uplands above the High Tide Line (HTL).The launch

ramp consists of a triangular-shaped area approximately 0.87 acre in area. The ramp extends from the upland area into jurisdictional waters and is part of the dredging footprint. The ramp would be maintained in place during the entire project. The man camp and staging area would not be located within jurisdictional waters.

Table A summarizes the quantities of materials to be dredged, reclaimed, and disposed of. The dredging/mining phase would consist of dredging and processing materials for gold extraction from within a trapezoidal cross-section dredged channel and concurrently reclaiming the dredged channel. Excess materials would be disposed of in areas adjacent to the dredged channel. The mining channel would be dredged in five approximately equal-sized stages over a five-year period.

Table A. Summary of Proposed IPOP, LLC Operations at Bonanza Channel

Item Description	**Acres**	**Storage Capacity (CY)**	**Dredged Volume (CY)**	**Bulked Dredged Volume* (CY)**
Access trench	4.2	0	33,200	35,690
Year 1	21.7	957,346	900,000	964,404
Year 2	21.7	957,346	900,000	964,404
Year 3	21.7	957,346	900,000	964,404
Year 4	21.7	957,346	900,000	964,404
Year 5	21.7	957,346	900,000	964,404
Dredge Disposal Site A	14.6	13,666		
Dredge Disposal Site B	7.1	7,019		
Dredge Disposal Site C	18.7	23,008		
Dredge Disposal Site Years 2-5	6.3	7,356		
Totals	**159.4**	**4,837,779**	**4,533,200**	**4,857,710**
* Bulked volume estimated based on bulking factor of 1.075 by the Applicant				

The project would be conducted during ice-free periods when the channel can be accessed by dredging equipment (approximately June 1st through November 1st depending on seasonal conditions each year). At the end of the operational season, the Applicant would cease operations and shut down and secure the man camp until the following operational season.

Two access channels would be constructed and maintained during dredging operations. One access channel would be constructed between the launch ramp and the edge of the full-scale mining channel to provide access for dredging equipment. The second

access channel would be created along the south side of the full-scale mining channel to provide access for dredging equipment. The two access channels would connect at the edge of the full-scale mining footprint. The depth of the access channels would be ten feet. The two access channels would be backfilled to pre-project bathymetry by the end of project operations.

The access channel between the launch ramp and the full-scale mining area would be maintained at ten feet deep and would be approximately 2,200 feet long and 85 feet wide. The full-scale trapezoidal mining channel would be 31 feet deep with a top width of about 360 to 365 feet and a bottom width of about 200 feet. The total length of this mining channel is approximately 13,000 feet. The access channel along the entire length of the full-scale mining channel would be maintained after initial reclamation to allow for access to the full-scale mining channel by dredging equipment.

Equipment proposed for the project includes a single engine dredge vessel (dimensions: 50 feet long x 24 feet wide) with a 36-inch diameter Vosta cutterhead, a 10-inch diameter dredge nozzle, two small tender boats (dimensions: 25 feet long x 12 feet wide) and a processing barge (dimensions: 64 feet long x 40 feet wide). The dredge vessel would be connected to the processing barge by a 300 to 600-foot-long floating pipe.

By the time the mining operation is complete, the Applicant would fully reclaim the dredged areas with processed dredged materials (after gold extraction). Dredged materials would be placed within shallow water areas approximately adjacent to the dredged areas up to the mean lower low water (MLLW) line. Four DMDSs have been proposed by the Applicant. By placing appropriate dredged materials up to the MLLW, the DMDSs are expected to function as mudflats along the edges of the Bonanza Channel. The designated DMDSs will be used for temporary storage of dredged materials to be used in final reclamation activities and for permanent storage of excess dredged materials.

Project Location: The project site is located approximately 25 miles east of Nome, Alaska within the Bonanza Channel estuary and at approximately Mile Post 28.5 along the Nome-Council Road, between approximately Latitude 64.5044°N., Longitude 164.6169°W., on the western limit and Latitude 64.52866°N., and Longitude 164.5447°W. on the eastern limit.

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on March 20, 2030. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

7. You must notify this office as to the dates of commencement (within 10 days prior to the start of construction) and completion of the activity (within 10 days following the end of construction) using the enclosed forms.

Special Conditions:

1. Within 60 days of permit issuance and prior to the start of the regulated activity, provide the Corps with a revised and updated Reclamation Plan that matches the On-Site Alternative 2a project description. This plan provides the basis for the monitoring and reporting activities that will be required of the Permittee. The revised Reclamation Plan will address completing harvesting, storage, and installment of SAV starting from Year One and continuing through Year 5 of full-scale mining.

2. The Permittee shall implement their April 18, 2022, narrative (previously provided to Alaska Department of Environmental Conservation) regarding prevention of unplanned releases in their work area to address contingent actions needed in the event of a silt curtain failure.

3. The Permittee shall only use dredged materials to cover the surface areas of restored DMDSs that are appropriate for mudflat creation (organic muds and fine-grained materials).

4. The Permittee shall comply with such terms and conditions of the Clean Water Act Section 401 Water Quality Certification (WQC) dated April 6, 2022, issued by the Alaska Department of Environmental Conservation as remain in force.

5. The permittee shall ensure that both access channels are fully reclaimed to pre-project bathymetry prior to the final shutdown of the project.

6. The Permittee shall comply with the following measures required by the U.S. Fish and Wildlife Service (USFWS) to minimize impacts to listed species and their critical habitat:

    a. A type III Ruffwater Screen Turbidity Curtain, or its functional equivalent, shall be deployed at all times during dredging operations as described in the Permittee's Plan of Operations.

    b. The Permittee shall have fuel spill and oil spill emergency response kits on hand and a self-certified Tier 1 Spill Prevention Control and Countermeasure Plan (SPCC) as required by 40 CFR Section 112.6. in place at all times during operations to minimize risks of petroleum spills that may impact marine mammals.

    c. A Polar Bear Avoidance and Interaction Plan shall be available before project operations begin. The plan shall be followed by the Permittee and their contractors to protect workers from potentially dangerous wildlife that may be encountered in the Bonanza Channel area. The plan shall address applicable federal, state, and local regulations related to wildlife interactions associated the Endangered Species Act and the Marine Mammal Protection Act. The plan shall include discussion of field training requirements for project workers and their contractors, food and waste management, regulatory requirements, and species-specific avoidance and reporting procedures.

    d. The project shall not generate hazardous waste during operations. A Waste Management Plan shall be developed and implemented to manage domestic waste generated by camp operations to minimize the potential for attracting wildlife, including marine mammals.

7. The Permittee shall comply with the following measures required by the National Marine Fisheries Service (NMFS) to minimize impacts to listed species and their critical habitat:

General Mitigation Measures

a. The Permittee shall inform the Corps and NMFS of impending in-water activities a minimum of one week prior to the onset of those activities.

b. If construction activities shall occur outside of the June 1st to November 1st time window specified in this permit, the Permittee shall provide prior notification to the Corps and NMFS to allow for re-initiation of consultation, if required.

c. Project-associated staff shall cut all materials that form closed loops (e.g., plastic packing bands, rubber bands, and all other loops) prior to proper disposal in a closed and secured trash bin. Trash bins shall be properly secured with locked or secured lids that cannot blow open, preventing trash from entering the environment, thus reducing the risk of entanglement in the event that waste enters marine waters.

d. Project-associated staff shall properly secure all ropes, nets, and other materials that could blow or wash overboard.

e. All trash shall be immediately placed in trash bins and bins shall be properly secured with locked or secured lids that cannot blow open and disperse trash into the environment.

Protected Species Observer (PSO)-related Measures

f. One or more PSOs shall perform PSO duties onsite throughout dredging operations.

g. For all dredging activity, PSOs shall monitor all marine waters within a 300-meter shutdown zone radius.

h. PSOs shall be positioned such that they shall collectively be able to monitor the entirety of each activity's shutdown zone, along with adjacent waters. The Permittee shall coordinate with NMFS on the placement of PSOs prior to commencing in-water work.

i. Prior to commencing dredging, PSOs shall scan waters within the 300-meter shutdown zone and confirm no listed species are within the shutdown zone for at least 30 minutes immediately prior to initiation of the in-water activity. If one or more listed species are observed within the shutdown zone, the in-water activity shall not begin until the listed species exit the shutdown zone of their own accord,

or the shutdown zone has remained clear of listed species for 30 minutes immediately prior to dredging.

j. The on-duty PSOs shall continuously monitor the shutdown zone and adjacent waters during dredging operations for the presence of listed species.

k. In-water activities shall take place only:

- between civil dawn and civil dusk when PSOs can effectively monitor for the presence of marine mammals.
- during conditions with a Beaufort Sea State of 4 or less within the Bonanza Channel, and
- when the entire shutdown zone and adjacent waters are visible (e.g., monitoring effectiveness is not reduced due to rain, fog, snow, volcanic ash).

l. If visibility degrades to where the PSO cannot ensure that the shutdown zone remains devoid of listed species during dredging, the crew shall cease in-water work until the entire shutdown zone is visible and the PSO has indicated that the zone has remained devoid of listed species for 30 minutes.

m. The PSO shall order the dredging activities to immediately cease if one or more listed species has entered, or appears likely to enter, the associated shutdown zone.

n. If dredging activities are shut down for less than 30 minutes due to the presence of listed species in the shutdown zone, dredging may commence when the PSO provides assurance that listed species were observed exiting the shutdown zone. Otherwise, the activities may only commence after the PSO provides assurance that listed species have not been seen in the shutdown zone for 30 minutes.

o. Following a lapse of dredging activities of more than 30 minutes, the PSO shall authorize resumption of activities only after the PSO provides assurance that listed species have not been present in the shutdown zone for at least 30 minutes immediately prior to resumption of operations.

p. If a listed species is observed within a shutdown zone or is otherwise harassed, harmed, injured, or disturbed, PSOs shall immediately report that occurrence to NMFS.

<u>Protected Species Observer Requirements</u>

q. PSOs must be independent from dredging operations, have no other assigned tasks during monitoring periods, and meet the conditions listed below.

r. The Permittee shall provide resumes of PSO candidates to the NMFS consultation biologist or Section 7 coordinator for approval at least one week prior to in-water work. NMFS will provide a brief explanation of lack of approval in instances where an individual is not approved.

s. At least one PSO shall have prior experience performing the duties of a PSO during construction activity. Other PSOs may substitute other relevant experience, education (degree in biological science or related field), or training.

t. At least one PSO shall complete PSO training prior to deployment. The training shall include:

- field identification of marine mammals and marine mammal behavior,
- ecological information on Alaska's marine mammals and specifics on the ecology and management concerns of those marine mammals,
- ESA and MMPA regulations,
- mitigation measures outlined in the biological assessment and NMFS concurrence letter,
- proper equipment use,
- methodologies in marine mammal observation and data recording and proper reporting protocols, and
- an overview of PSO roles and responsibilities.

u. PSOs shall:

- have vision correctable to 20-20,
- have the ability to effectively communicate orally, by radio and in person, with project personnel,
- have prior experience collecting field observations and recording field data accurately and in accordance with project protocols,
- be able to identify to species all marine mammals that are endemic to the action area,
- be able to record marine mammal behavior, and
- have technical writing skills sufficient to create understandable reports of observations.

v. PSOs shall work in shifts lasting no longer than 4 hours with at least a 1-hour break from monitoring duties between shifts. PSOs shall not perform PSO duties for more than 12 hours in a 24-hour period.

w. PSOs shall have the ability to effectively communicate orally, by radio and in person, with project personnel to provide real-time information on listed species.

x. PSOs shall have the ability and authority to order appropriate mitigation response, including shutdowns, to avoid takes of all listed species.

y. The PSOs shall have the following equipment to address their duties:

- tools which enable them to accurately determine the position of a marine mammal in relationship to the shutdown zone,
- two-way radio communication, or equivalent, with onsite project manager,
- tide tables for the project area,
- watch or chronometer,
- binoculars (7x50 or higher magnification) with built-in rangefinder or reticles (rangefinder may be provided separately),
- global positioning system,
- a legible copy of this DA permit and all appendices, and
- legible and fillable observation record form allowing for required PSO data entry.

z. Prior to commencing in-water work or at changes in watch, PSOs shall establish a point of contact with the construction crew. The PSO shall brief the point of contact as to the shutdown procedures if listed species are observed likely to enter or within the shutdown zone and shall request that the point of contact instruct the crew to notify the PSO when a marine mammal is observed. If the point of contact goes "off shift" and delegates his duties, the PSO must be informed and brief the new point of contact.

<u>General Data Collection and Reporting</u>

aa. PSOs shall record observations on data forms or into electronic data sheets.

bb. The Permittee shall ensure that PSO data will be submitted electronically in a format that can be queried such as a spreadsheet or database (i.e. digital images of data sheets are not sufficient).

cc. PSOs shall record the following:

- the date, shift start time, shift stop time, and PSO identifier,
- date and time of each reportable event (e.g., a marine mammal observation, operation shutdown, reason for operation shutdown, change in weather),
- weather parameters (e.g., percent cloud cover, percent glare, visibility) and sea state of the Bonanza Channel where the Beaufort Scale wave characteristics shall be used to determine sea-state (https://www.weather.gov/mfl/beaufort),
- species, numbers, and, if possible, sex and age class of observed marine mammals, along with the date, time, and location of the observation,

- the predominant sound-producing activities occurring during each marine mammal observation,
- marine mammal behavior patterns observed, including bearing and direction of travel,
- behavioral reactions of marine mammals just prior to, or during sound producing activities,
- initial, closest, and last location of marine mammals, including distance from observer to the marine mammal, and minimum distance from the predominant sound-producing activity or activities to marine mammals,
- whether the presence of marine mammals necessitated the implementation of mitigation measures to avoid acoustic impact, and the duration of time that normal operations were affected by the presence of marine mammals, and
- geographic coordinates for the observed animals, with the position recorded by using the most precise coordinates practicable (coordinates shall be recorded in decimal degrees, or similar standard and defined coordinate system).

Unauthorized Take

dd. If a listed marine mammal is determined by the PSO to have been disturbed, harassed, harmed, injured, or killed (e.g., a listed marine mammal(s) is observed entering a shutdown zone before operations can be shut down, or is injured or killed as a direct or indirect result of this action), the PSO shall report the incident to NMFS within one business day, with information submitted to akr.section7@noaa.gov. These PSO records shall include all information to be provided in the final report (see measures under Final Report heading below):

- number of animals of each threatened and endangered species affected,
- the date, time, and location of each event (provide geographic coordinates),
- description of the event,
- the time the animal(s) was first observed or entered the shutdown zone, and, if known, the time the animal was last seen or exited the zone, and the fate of the animal,
- mitigation measures implemented prior to and after the animal was taken; and if a vessel struck a marine mammal, the contact information for the PSO on duty, or the contact information for the individual piloting the vessel if there was no PSO on duty, and
- Photographs or video footage of the animal(s) (if available).

Stranded, Injured, Sick or Dead Marine Mammal (not associated with the project)

ee. If PSOs observe an injured, sick, or dead marine mammal (i.e., stranded marine mammal), they shall notify the Alaska Marine Mammal Stranding Hotline at 877-925- 7773. The PSOs shall submit photos and available data to aid NMFS in

determining how to respond to the stranded animal. If possible, data submitted to NMFS in response to stranded marine mammals shall include date/time, location of stranded marine mammal, species and number of stranded marine mammals, description of the stranded marine mammal's condition, event type (e.g., entanglement, dead, floating), and behavior of live- stranded marine mammals.

Illegal Activities

ff. If PSOs observe marine mammals being disturbed, harassed, harmed, injured, or killed (e.g., feeding or unauthorized harassment), these activities shall be reported to NMFS Alaska Region Office of Law Enforcement at (1-800-853-1964).

gg. Data submitted to NMFS shall include date/time, location, description of the event, and any photos or videos taken.

Monthly Report

hh. Submit interim monthly PSO monitoring reports, including data sheets. These reports shall include a summary of marine mammal species and behavioral observations, shutdowns or delays, and work completed.

ii. Monthly reports shall be submitted to AKR.section7@noaa.gov by the 15th day of the month following the reporting period. For example, the report for activities conducted in June 2023 shall be submitted by July 15th, 2023.

Final Report

jj. A final report shall be submitted to NMFS within 90 calendar days of the completion of the project summarizing the data recorded and submitted to AKR.section7@noaa.gov. The report shall summarize all in-water activities associated with the proposed action, and results of PSO monitoring conducted during the in-water project activities.

kk. The final report shall include:

- summaries of monitoring efforts including total hours, and marine mammal distribution through the study period, accounting for sea state and other factors that affect visibility and detectability of marine mammals;
- analyses on the effects from various factors that may have influenced detectability of marine mammals (e.g., sea state, number of observers, fog, glare, and other factors as determined by the PSOs);
- species composition, occurrence, and distribution of marine mammal observations, including date, water depth, numbers, age/size/gender categories (if determinable), group sizes, and ice cover;

- number of marine mammals observed (by species) during periods with and without project activities (and other variables that could affect detectability);
- initial, closest, and last marine mammal observation distances versus project activity at time of observation;
- observed marine mammal behaviors and movement types versus project activity at time of observation;
- numbers of marine mammal observations/individuals seen versus project activity at time of observation
- distribution of marine mammals around the action area versus project activity at time of observation.
- digital, query-able documents containing PSO observations and records, and digital, query-able reports.

8. To ensure safety for trail users along the Iditarod National Historic Trail, at the end of each mining season and prior to shutdown of the man camp for the winter, the Permittee shall contact the Iditarod National Historic Trail Coordinator ((b) (6), BLM Anchorage Field Office, (b) (6)) to provide location and overwintered equipment information for the man camp and coordinate on ways to maximize safety for trail users during the winter months.

9. The Permittee shall comply with the following measures required by the National Marine Fisheries Service to minimize impacts to Essential Fish Habitat:

   a. Maintain drainage patterns of the surrounding wetlands and mud flats in their natural state.

   b. The dredge material should be graded each work shift to prevent the creation of pools on the fill surface that could trap out-migrating salmon and other marine fishes between high tides.

   c. Maintain the sediment curtains in place until the suspended sediment concentrations within the sediment curtain are within 5% or less of the suspended sediment outside of the sediment curtain.

10. At the completion of the project, the Permittee shall restore the man camp area to its original condition. No unsecured trash or equipment shall be left onsite within the man camp or in any part of the project vicinity at the end of each mining season. No trash or equipment will be left on the site at the end of the final mining season. The permittee shall provide the Corps with notification in writing or via email when the project has been completed. Photo documentation of post-project site conditions shall be provided with this notification.

11. No trespassing is permitted on AMNWR lands, Indian allotments, private lands, or any other properties not included within the Permittee's mining claims. The boundaries of

the State-owned parcel used for access by the Permittee shall be clearly marked to prevent accidental intrusion by the Permittee's personnel or equipment.

12. The Permittee shall maintain a copy of the Department of the Army permit on-site at times.

13. Within 60 days from the end of each mining season, the Permittee shall submit an annual report to the Corps, with copies to NMFS, USFWS, Alaska Department of Environmental Conservation, and ADF&G that provides documentation of all dredging operations completed from the preceding mining season and all monitoring data collected under the Permittee's Reclamation Plan relevant to the dredged/mined areas. This includes the following components:

    - Summary of dredging actions completed during the mining season just completed, including any variances from the operations plan and any noteworthy events or difficulties that occurred
    - Confirmation of operations scheduled for the next mining season
    - Bathymetric Surveying and Monitoring
    - SAV and Benthic Macroinvertebrate Monitoring
    - Water Quality, Meteorology, and Visual Monitoring
    - Bird Monitoring
    - Fish Monitoring
    - Wildlife Monitoring
    - Sediment Testing
    - Recommended adaptive management measures to address any performance standards that indicate additional actions are needed.

    A typical monitoring cycle each season shall consist of recording baseline conditions for referencing purposes prior to the start of dredging and collection of data during, and at the end of, the dredging season as appropriate for the mining footprint to be dredged. During successive mining seasons, the Permittee shall also review site conditions for the previously dredged operational footprint along with the footprint for the current season. Thus, each mining season will require monitoring on successively larger areas as the mined footprint cumulatively increases each year. The final monitoring report will be submitted in the Fall of Year seven, two years after the fifth

mining season for the full-scale mining channel, to document conditions at the end of the second summer season after project completion.

14. The Permittee shall contact the Village of Solomon Tribal Council prior to the start of dredging activities each year and provide them with a point of contact (name, email address, and phone number) that can be contacted as needed to resolve any issues affecting tribal activities that may occur during operations. The Permittee shall notify the Corps regarding any contacts with the Council.

15. To minimize noise levels from powered equipment used on-site, the Permittee shall ensure that all equipment that is designed for the use of a noise muffler by the equipment's manufacturer is equipped with a muffling device during use on-site.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

PERMITTEE

PRESIDENT, IPOP LLC
BEAU EPSTEIN

03-20-2024
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Kirk E. Gibbs
Brigadier General, USA
Commander, Pacific Ocean Division
U.S. Army Corps of Engineers

20 March 2024
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

DATE

U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMMENCEMENT OF WORK
DEPARTMENT OF THE ARMY PERMIT

Permit Number: *POA-2018-00123*
Name of Permittee: *Beau Epstein, IPOP LLC*
Date of Issuance: *March 20, 2024*

Date work in waters of the U.S. will commence: _____

Estimated construction period (in weeks): _____

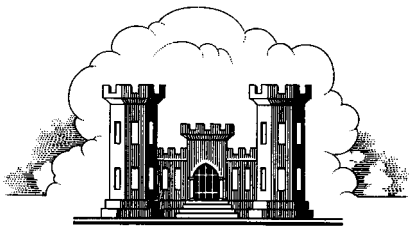
Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

_____
Signature of Permittee Date

At least ten (10) days prior to the commencement of the activity authorized by this permit, sign this certification and email it to regpagemaster@usace.army.mil.



ALASKA DISTRICT
U.S. ARMY CORPS OF ENGINEERS

NOTIFICATION OF COMPLETION OF WORK AND CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: *POA-2018-00123*
Name of Permittee: *Beau Epstein, IPOP LLC*
Date of Issuance: *March 20, 2024*

Date work in waters of the U.S. completed: _____

Construction period (in weeks): _____

Name & phone of contractor (if any): _____

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation.

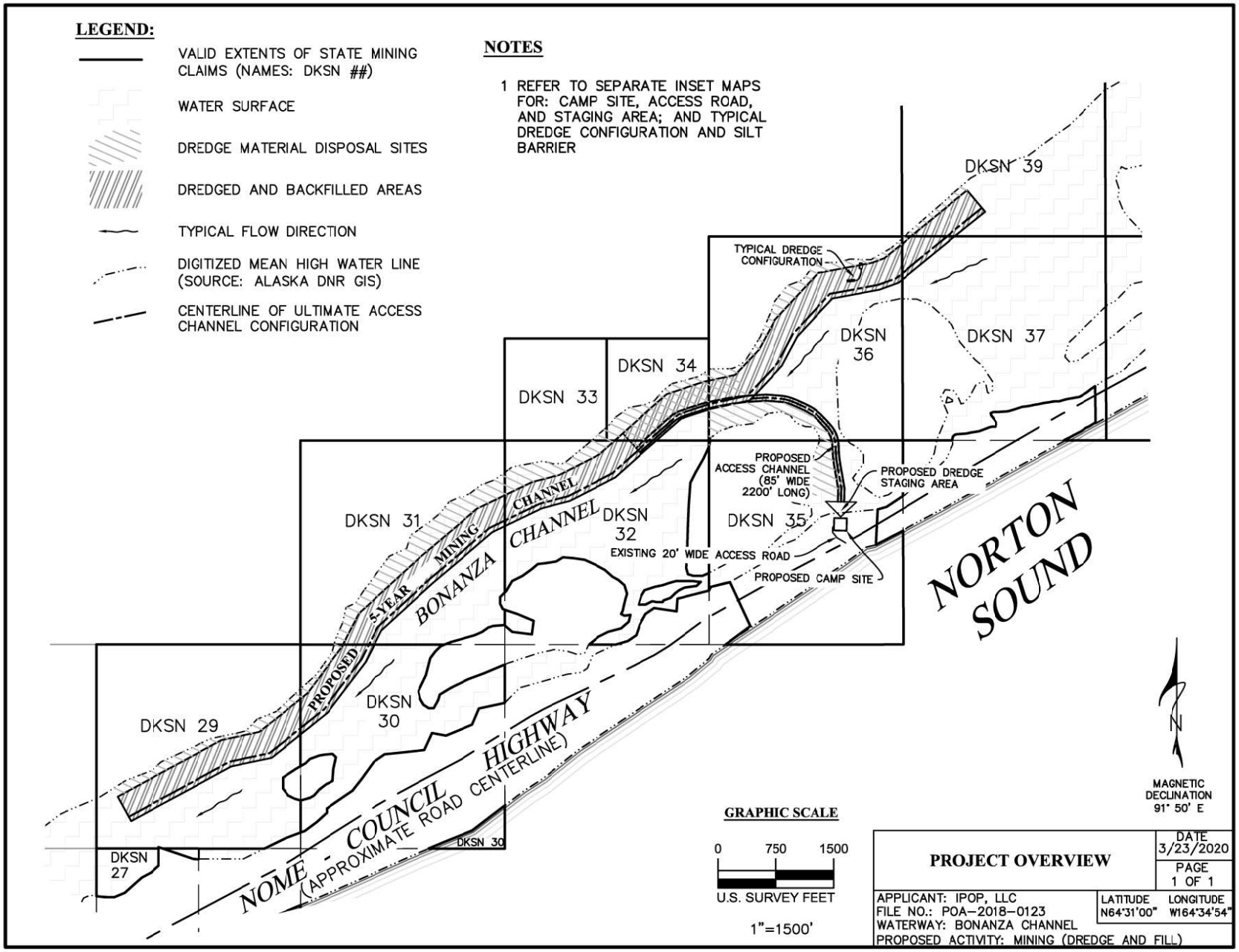
I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit.

_____

Signature of Permittee Date

Upon completion of the activity authorized by this permit, sign this certification and email it to regpagemaster@usace.army.mil.

Figure 5-1. Bonanza Channel Placer Project overview map (graphic scale is accurate, verbal scale refers to full size printed map)



NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

Figure 5-2. Camp Location (graphic scale is accurate, verbal scale refers to full size printed map)

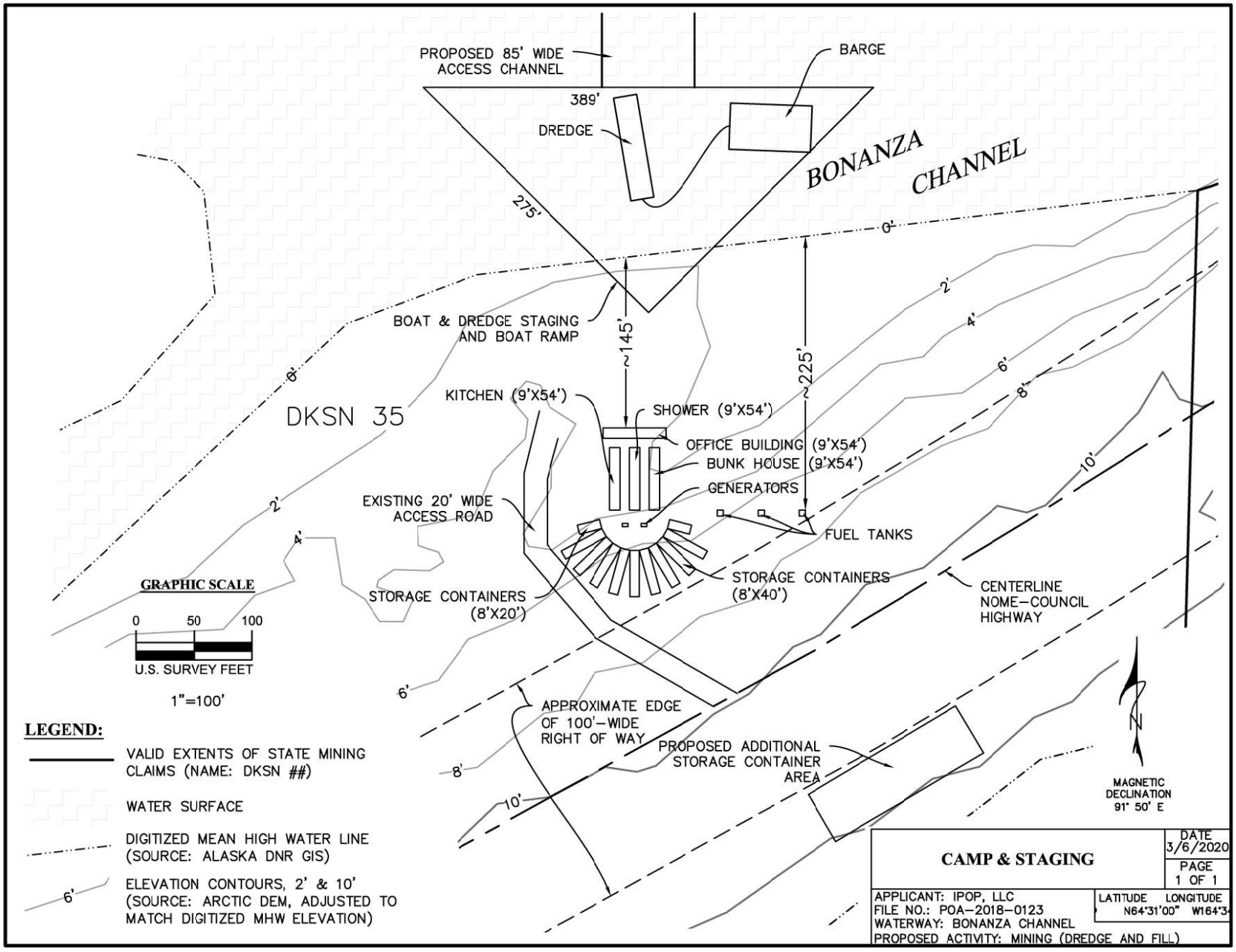
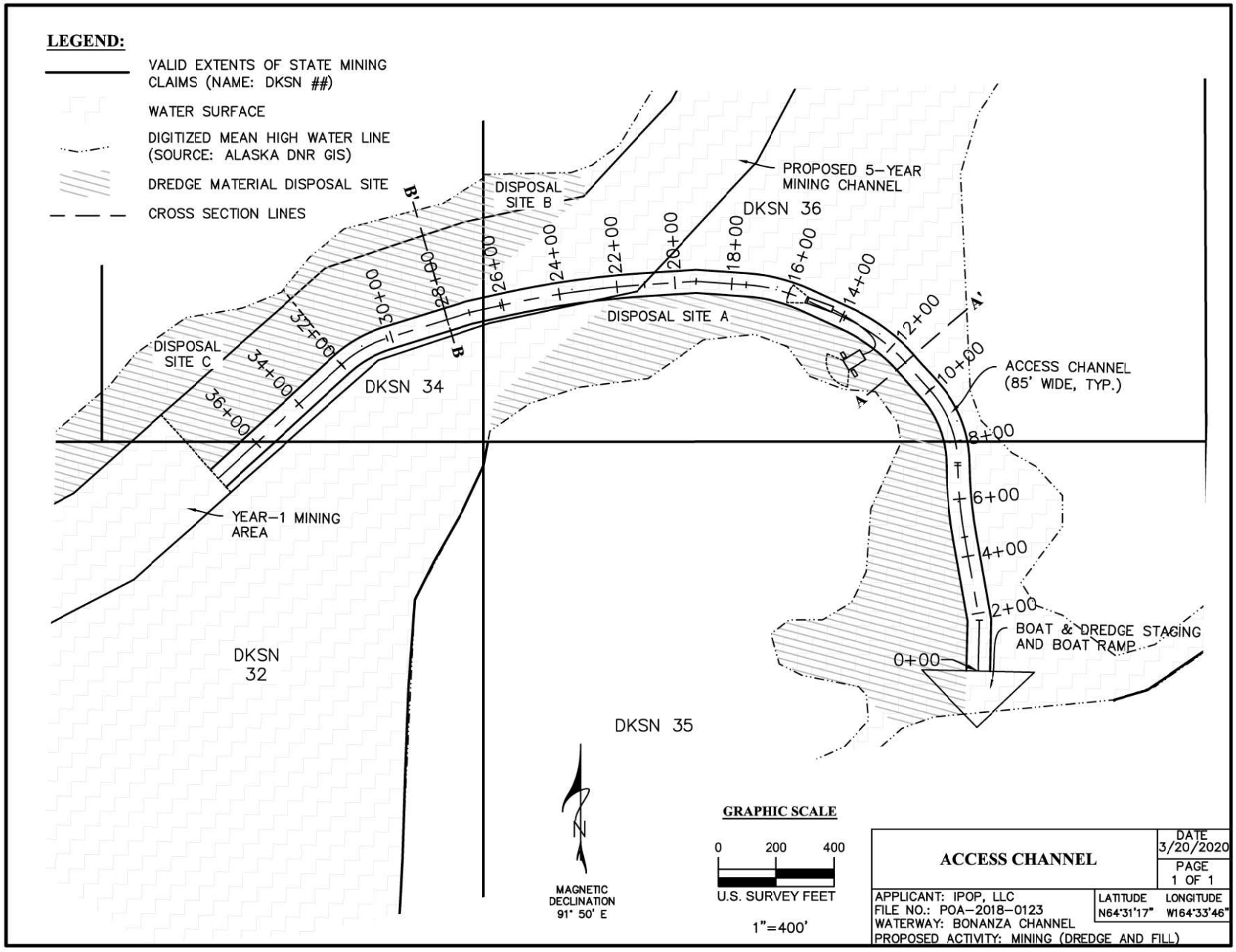
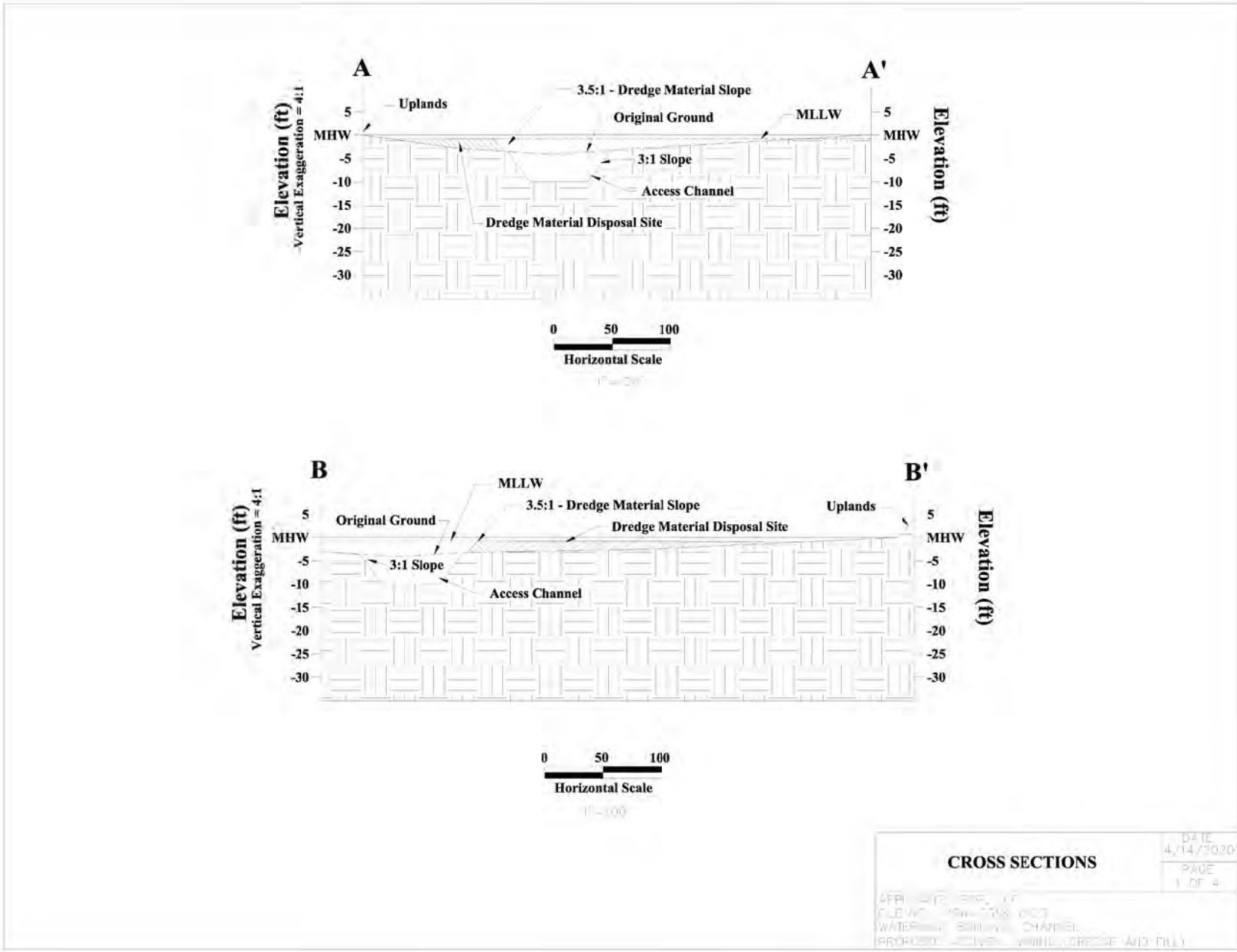


Figure 5-20. Access channel with cross section locations (graphic scale is accurate, verbal scale refers to full size printed map)



NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

Figure 5-21. Typical cross sections of access channel dredge and fill: A-A' and B-B'



NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures. AR003549

Figure 5-22. Access channel development stages (graphic scale is accurate, verbal scale re. printed map)

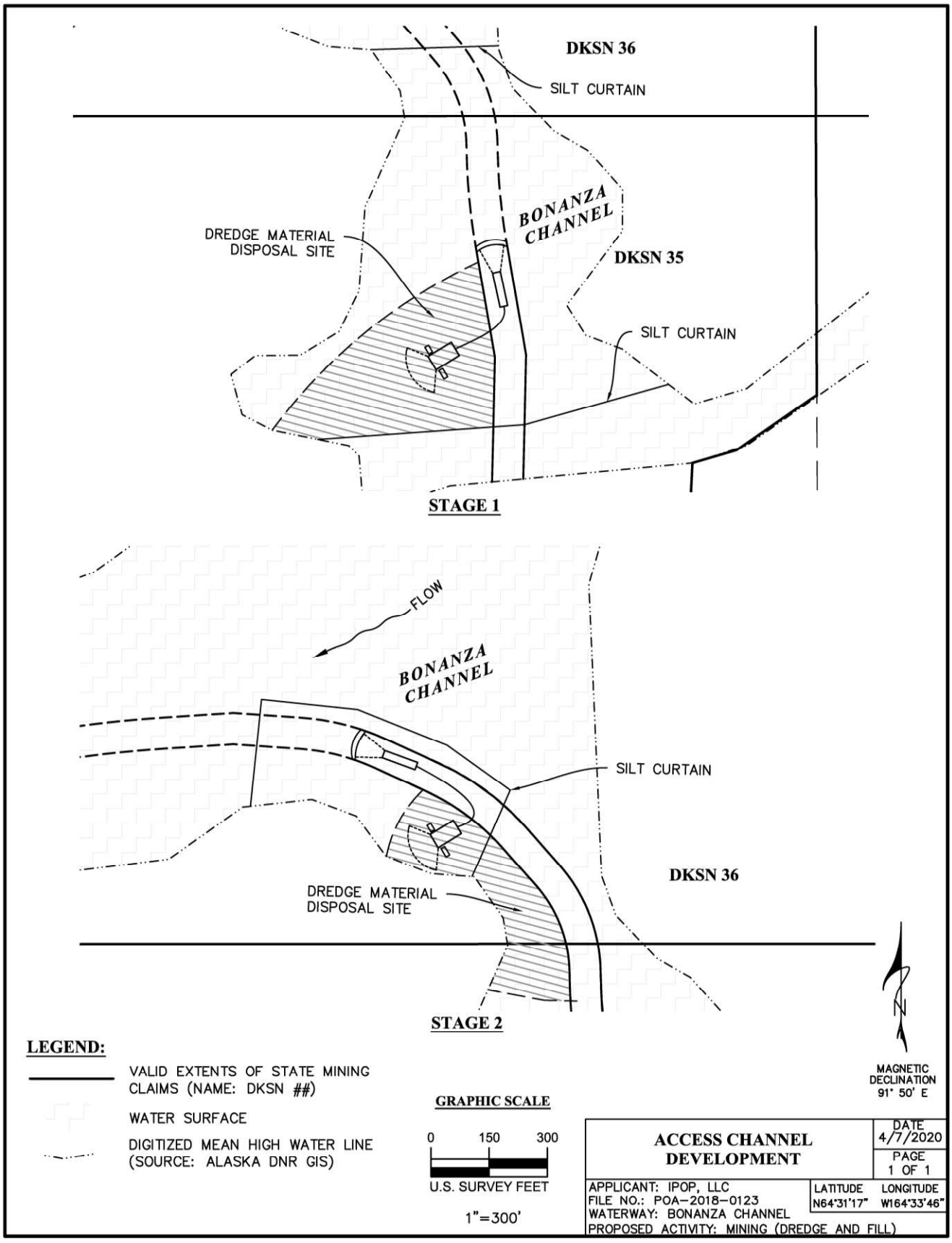
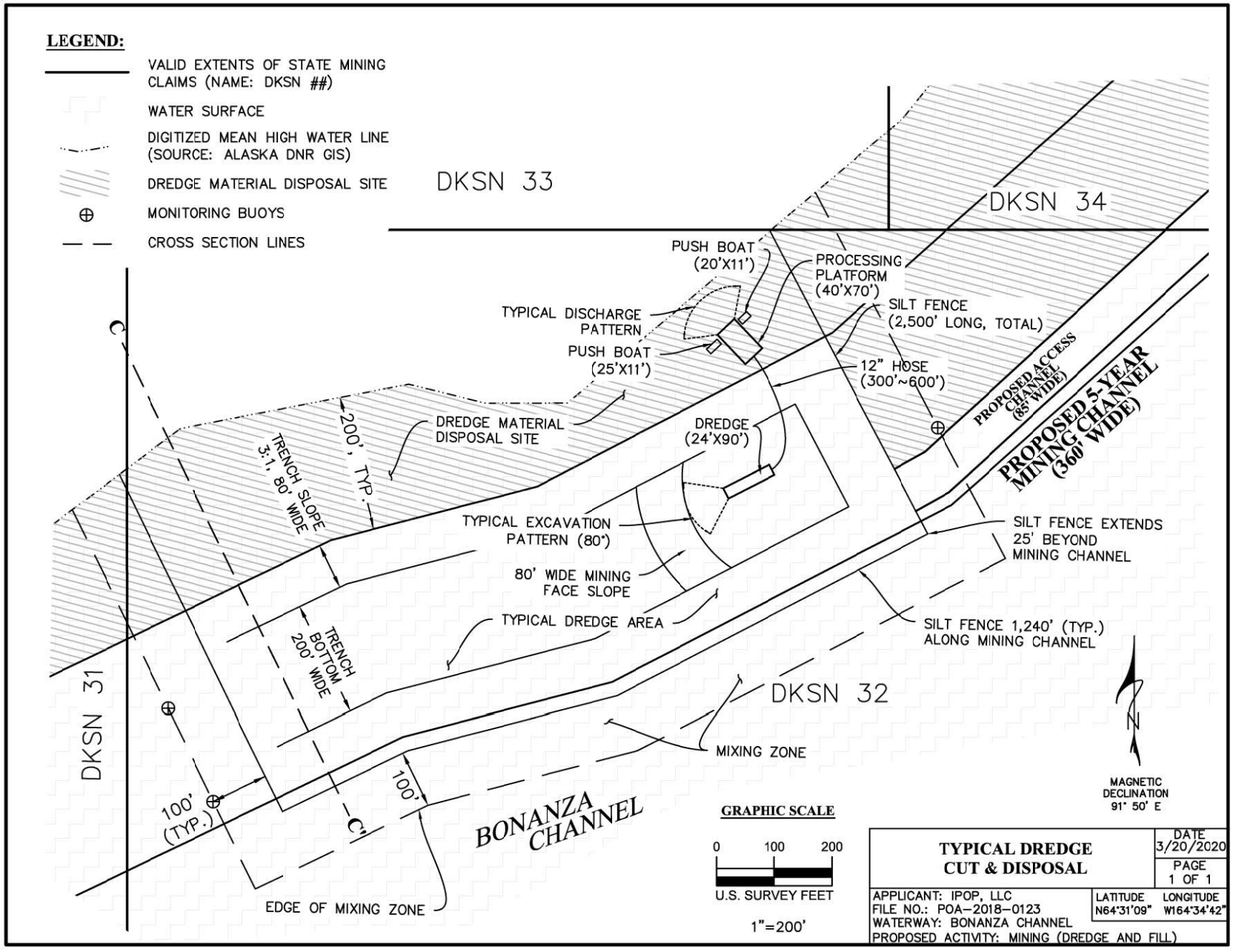


Figure 5-23. Typical dredging layout map showing typical BMP layouts, cut and disposal (graphic scale is accurate)



NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

Figure 5-24. Five-year mine layout for IPA (graphic scale is accurate, verbal scale refers to full size printed map)

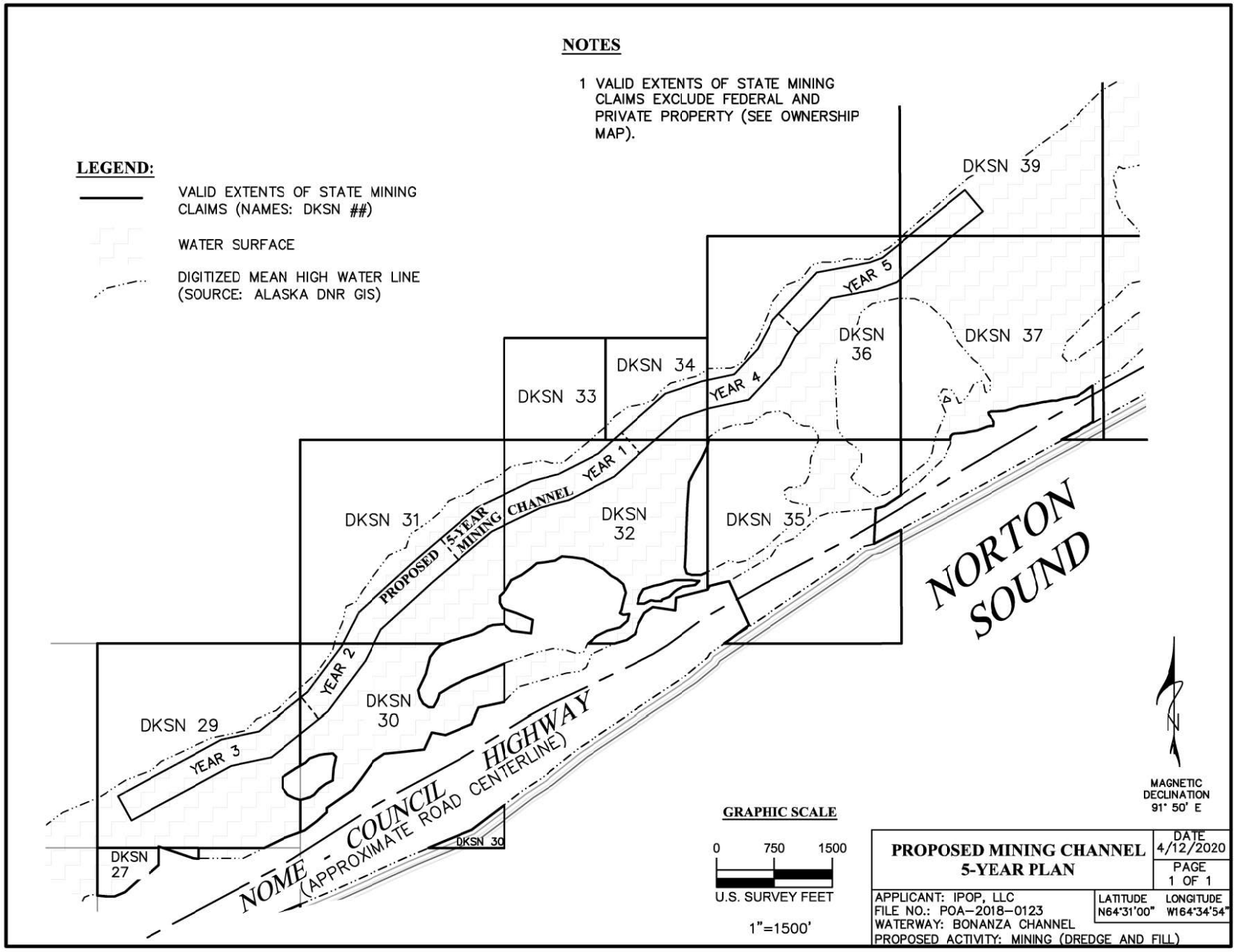


Figure 5-26. Typical dredging and filling stages (part 1) (graphic scale accurate)

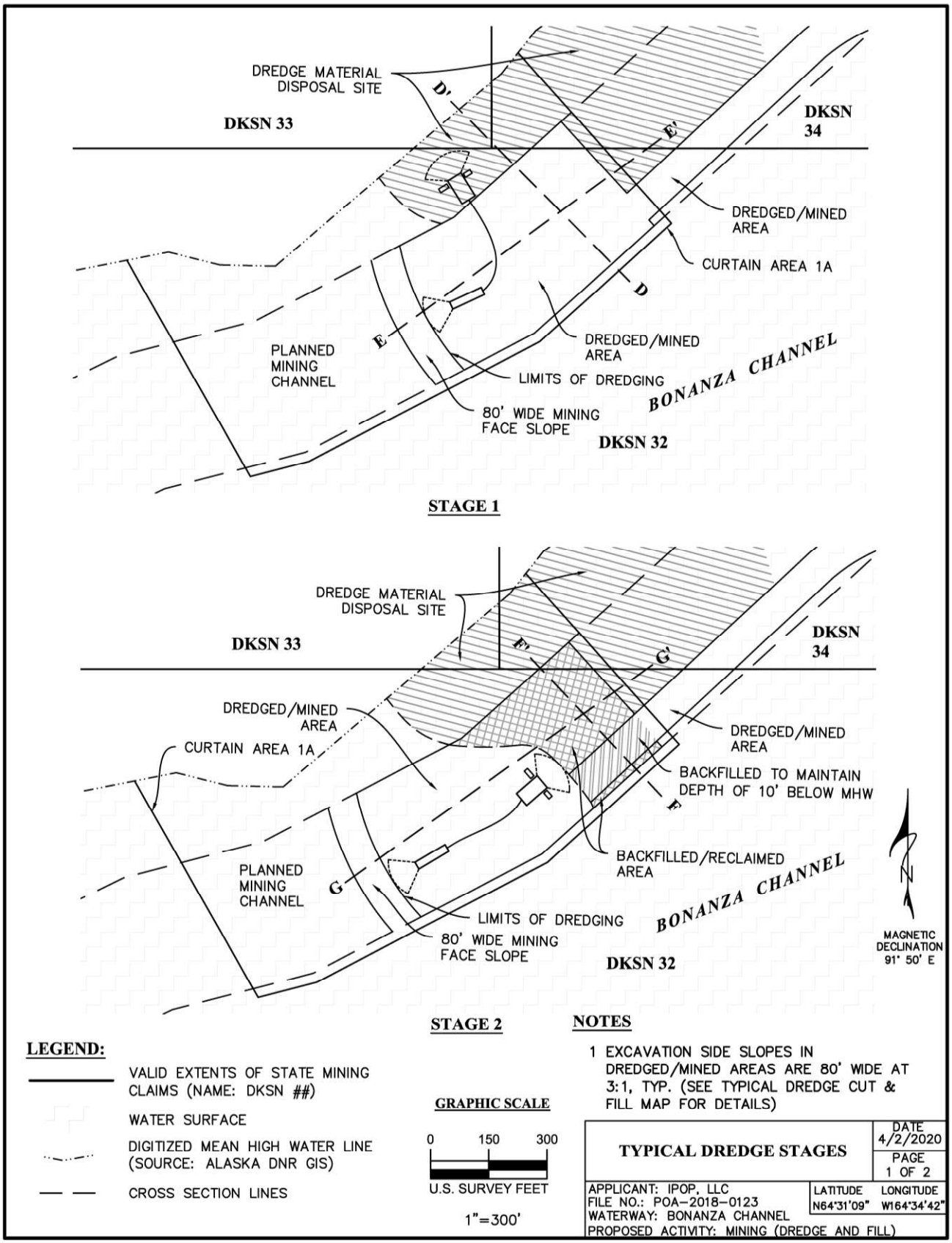
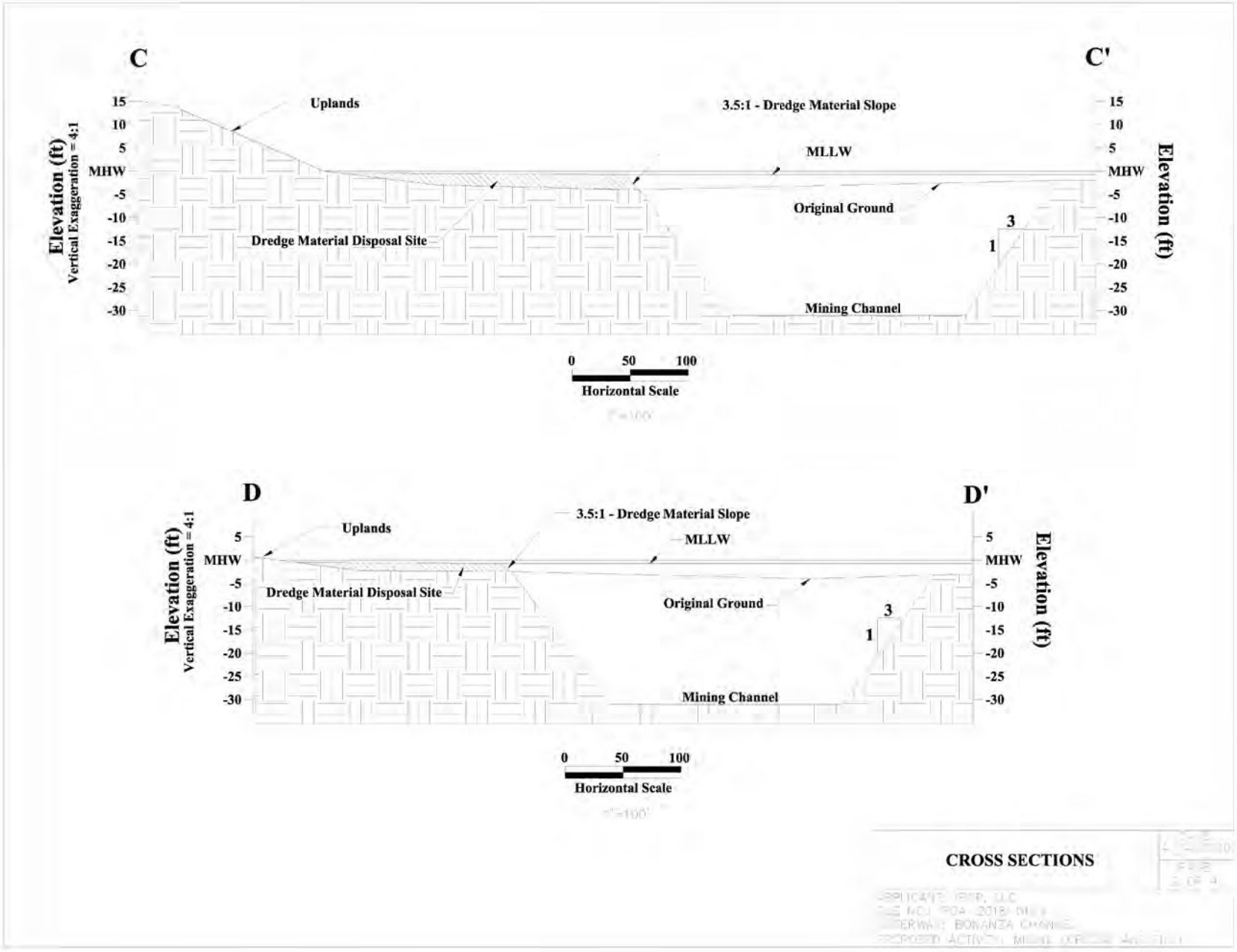
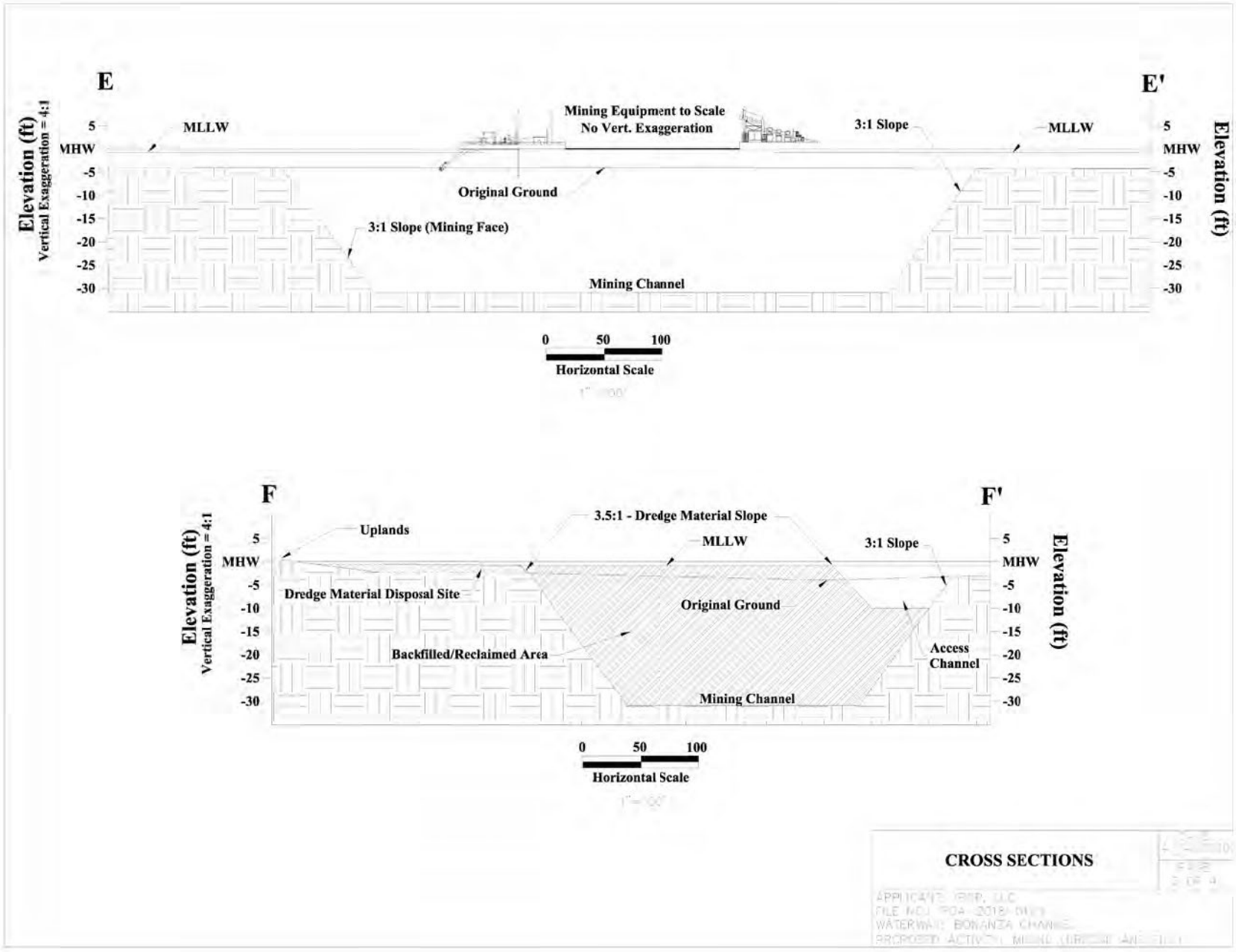


Figure 5-28. Cross sections of typical dredge and fill: C-C' and D-D'

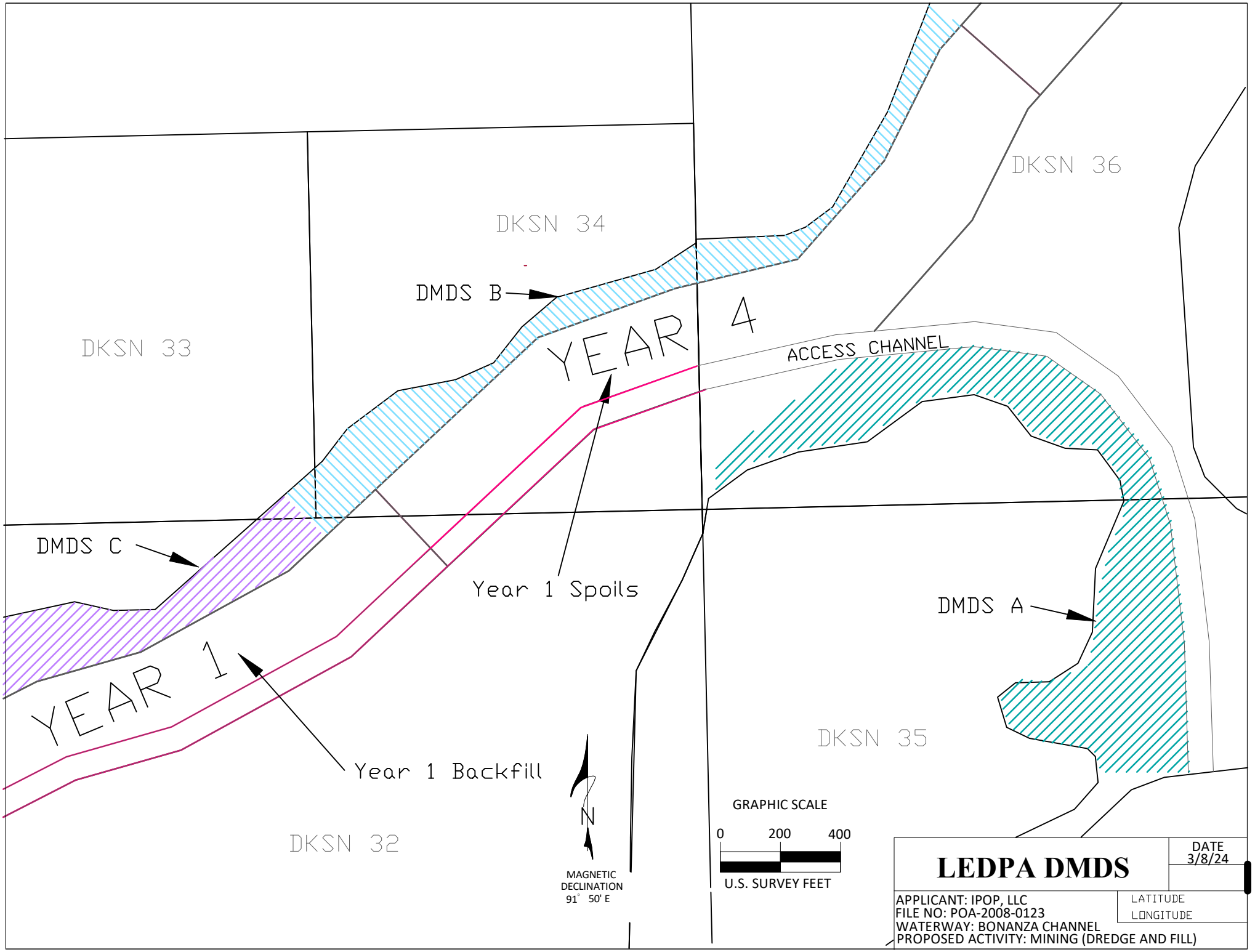


NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

Figure 5-29. Cross sections of typical dredge and fill: E-E' and F-F'



NOTE: Any DMDS locations shown have been revised and are shown in revised figures at the end of the permit figures.

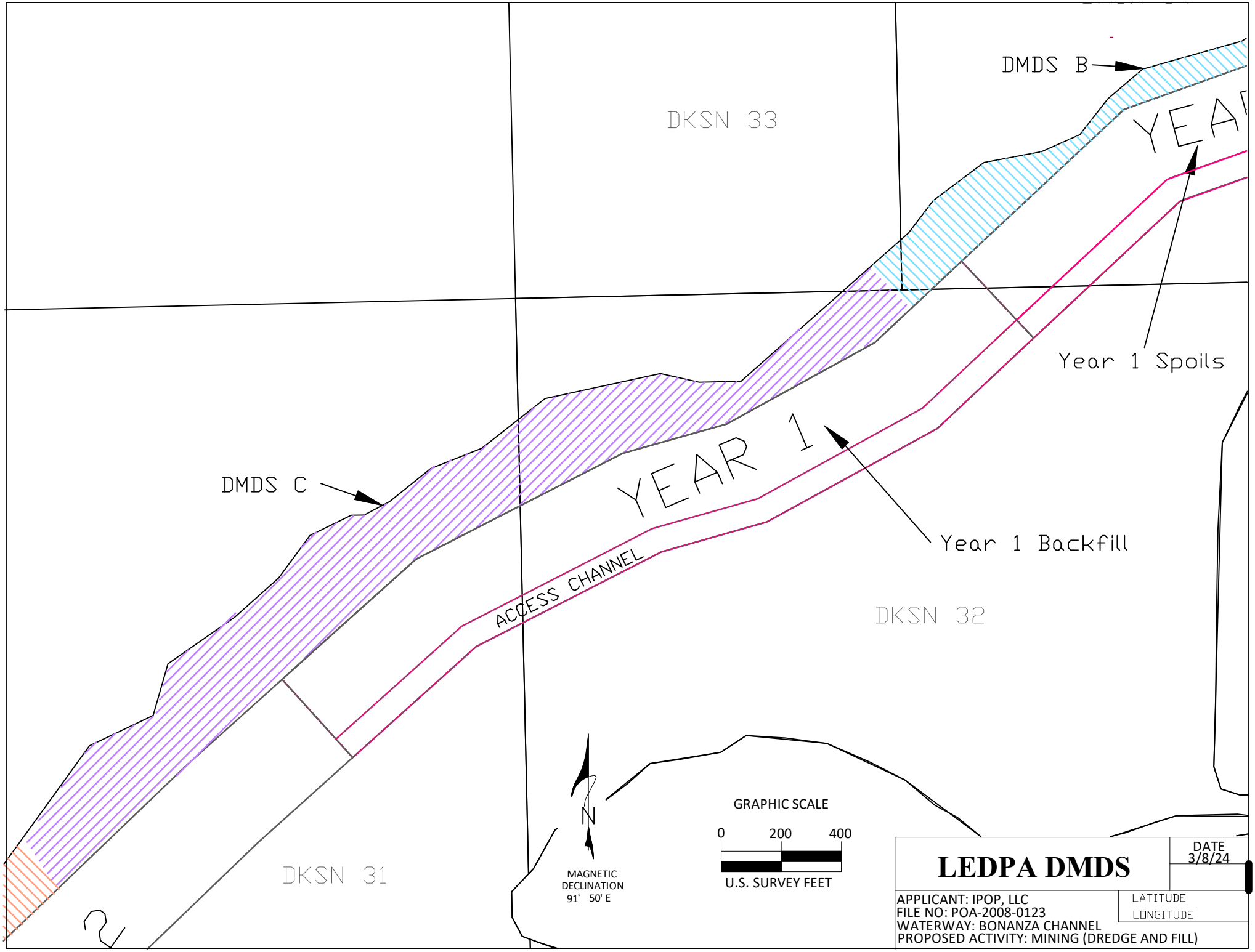


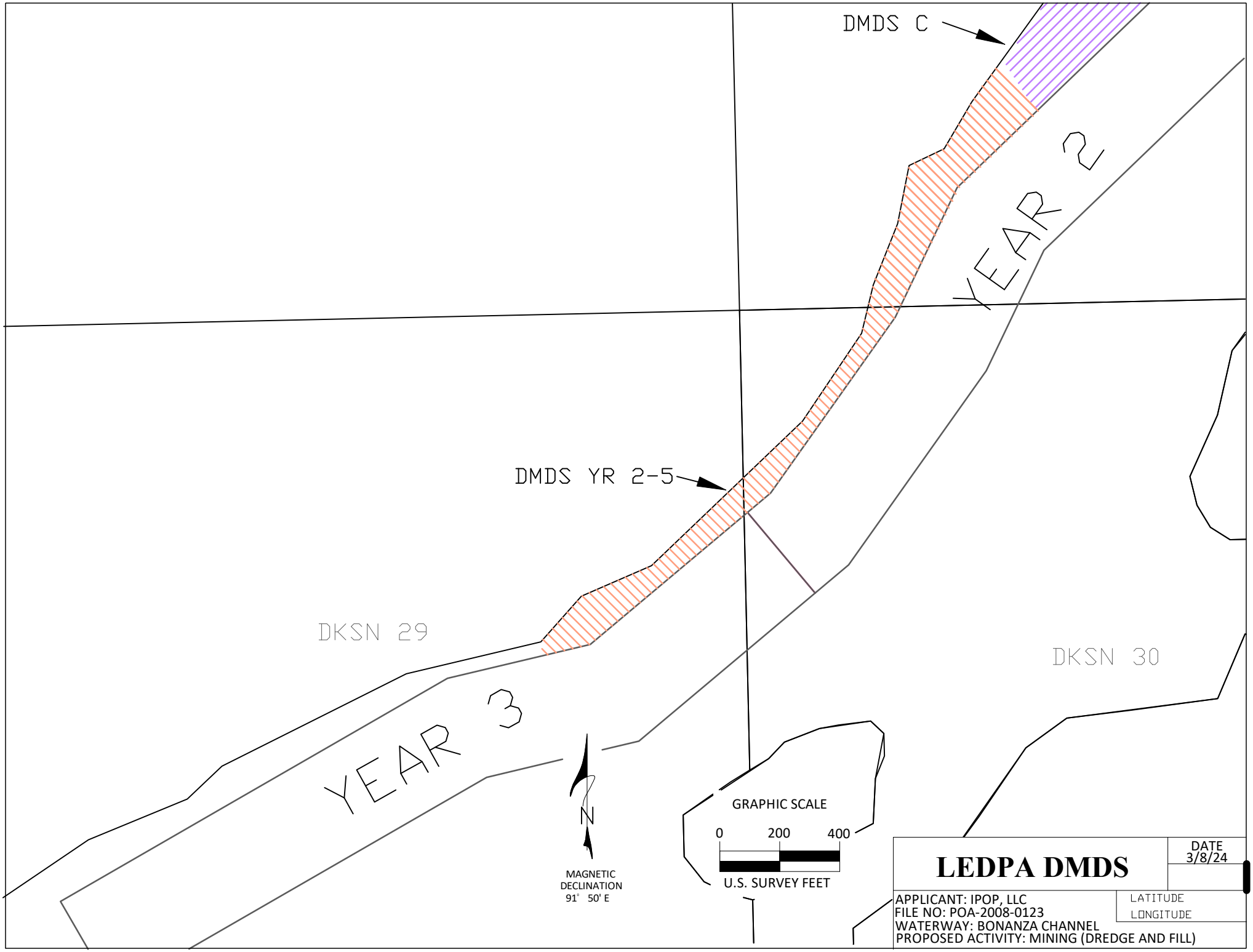
LEDPA DMDS

DATE 3/8/24

APPLICANT: IPOP, LLC
FILE NO: POA-2008-0123
WATERWAY: BONANZA CHANNEL
PROPOSED ACTIVITY: MINING (DREDGE AND FILL)

LATITUDE
LONGITUDE


DMDS B
DKSN 33
YEAR
Year 1 Spoils
DMDS C
YEAR 1
Year 1 Backfill
ACCESS CHANNEL
DKSN 32
DKSN 31
N
MAGNETIC
DECLINATION
91° 50' E
GRAPHIC SCALE
0 200 400
U.S. SURVEY FEET
LEDPA DMDS
DATE
3/8/24
APPLICANT: IPOP, LLC
FILE NO: POA-2008-0123
WATERWAY: BONANZA CHANNEL
PROPOSED ACTIVITY: MINING (DREDGE AND FILL)
LATITUDE
LONGITUDE

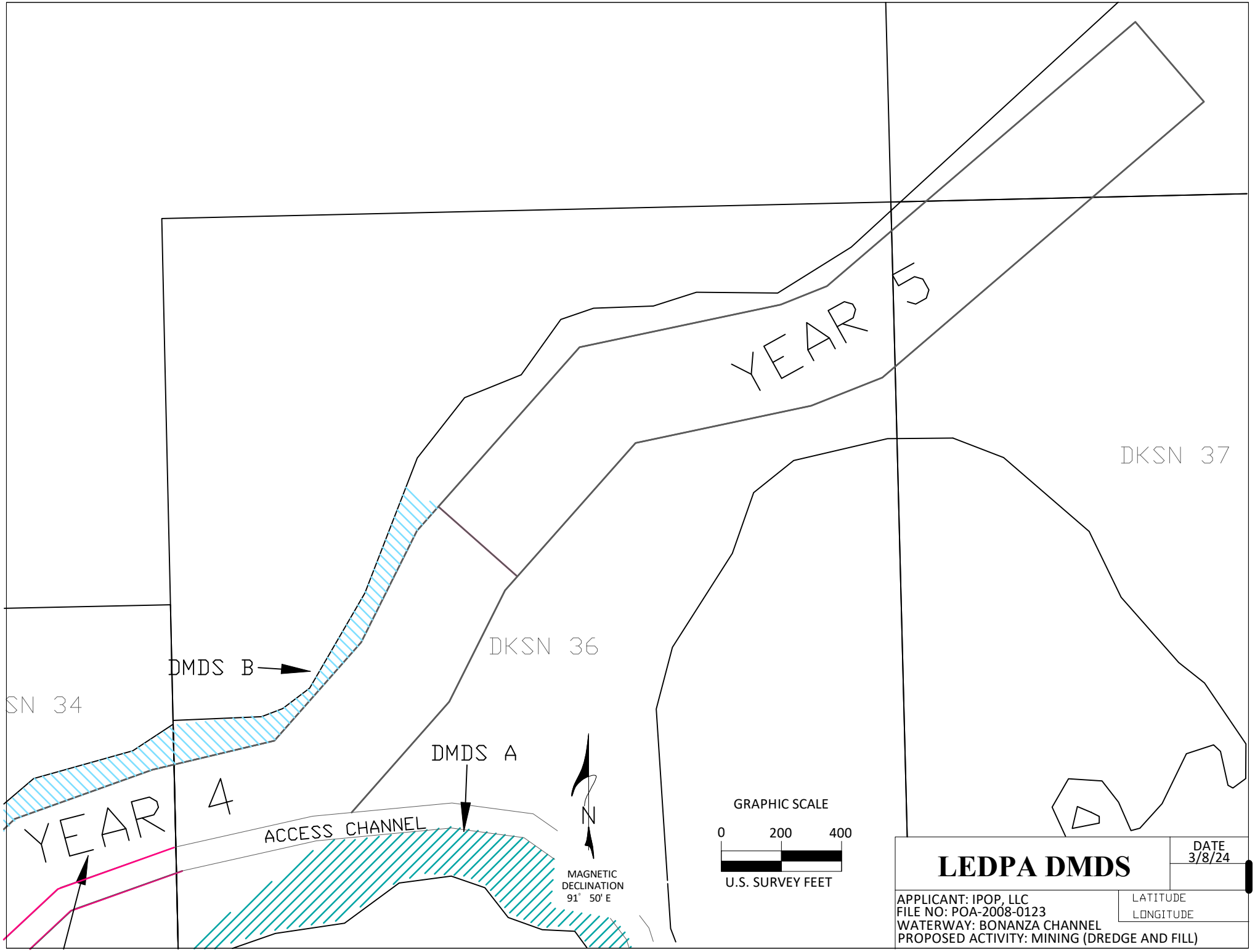


LEDPA DMDS

DATE 3/8/24

APPLICANT: IPOP, LLC
FILE NO: POA-2008-0123
WATERWAY: BONANZA CHANNEL
PROPOSED ACTIVITY: MINING (DREDGE AND FILL)

LATITUDE
LONGITUDE



LEDPA DMDS

DATE 3/8/24

APPLICANT: IPOP, LLC
FILE NO: POA-2008-0123
WATERWAY: BONANZA CHANNEL
PROPOSED ACTIVITY: MINING (DREDGE AND FILL)

LATITUDE
LONGITUDE

From: James Buchal
To: Nakanishi, Allan S (DEC); Charron, David L (DNR)
Subject: Additional Special Condition for IPOP"s Federal Permit
Date: Monday, June 17, 2024 9:33:48 AM
Attachments: 20240612 Permit Modification DQM Special Condition Executed.pdf

Attached is an additional Special Condition that has been added to IPOP's Permit No. POA-2018-00123, addressing some operational monitoring requirements with no effect on planned operations.

James L. Buchal
Murphy & Buchal LLP
P.O. Box 86620
Portland, OR 97286

Cell Phone: 503-314-6597
Phone: 503-227-1011
Fax: 503-573-1939

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, U.S. ARMY CORPS OF ENGINEERS
573 BONNEY LOOP, BUILDING 525
FORT SHAFTER, HAWAII 96858-5440

CE-POD-PDC

11 June 2024

Mr. James Buchal
Murray & Buchal LLP
P.O. Box 86620
Portland, OR 97286

SUBJECT: Modification of Standard Individual Permit for IPOP Bonanza Channel Placer Dredge Project (Permit No. POA-2018-00123)

Dear Mr. Buchal:

On March 20, 2024, IPOP LLC was issued a Department of the Army permit for the above-referenced project. The permit authorized you to discharge fill into waters of the U.S. and to conduct work in or affecting "navigable waters of the United States", in association with the project located near Nome, Alaska between approximately Latitude 64.5044° North, Longitude 164.6169° West on the western limit and Longitude 64.52866° North, Longitude 164.5447° West on the eastern limit. Since the issuance of this permit, Pacific Ocean Division (POD) staff have become aware of an additional regulatory requirement involving the Dredge Quality Management (DQM) Program that was not taken into account and needs to be addressed in the permit special conditions.

The DQM Program is an automated dredge project monitoring system developed by the Corps to monitor numerous dredging parameters for dredging projects conducted by the Corps. Regulatory Guidance Letter (RGL) 23-01 was issued in May 2023 to require incorporation of the DQM Program requirements for dredging operations that require issuance of a Section 10 permit. Compliance with this RGL requires inclusion of a special condition to the permit to ensure participation in the DQM Program.

POD staff have consulted with DQM Program staff to determine the applicability of this program to this dredging project and how it could be reasonably applied in a manner that accomplishes the purpose of the RGL while avoiding creating an undue hardship for the Permittee. Our staff have communicated with your team about the DQM requirement, and you have provided us with information supporting your position that this requirement creates an undue hardship for your project.

After reviewing the information you provided and consulting further with DQM program staff on ways to tailor DQM to your project, under the provisions of 33 Code of Federal Regulations 325.7(b), I have determined it is in the public interest to modify your permit by adding the following special condition:

16. Dredging and monitoring of the project using the Dredging Quality Management (DQM) system shall be implemented for this permit when the project activity is using dredging equipment in accordance with the modified Pipeline Hydraulic Dredge Specification provided as Attachment 1 of this permit [see enclosure of this letter].

a. The Permittee's DQM system be certified by the National DQM Support Center (DQM Center) within one calendar year of the initiation of dredging. Permittee shall at a minimum receive an interim certification from the DQM Center prior to commencement of dredging activities. The permittee is responsible for ensuring that the DQM system is operational throughout dredging, and that the project data is submitted to the DQM Center in accordance with the specifications provided at the DQM website.

b. The preferred means of data communication is via maintaining a full-time internet connection (via satellite phone, satellite internet, or similar system) to allow for automatic real-time upload to DQM; however, provisions have been made in the specification for minimum weekly manual uploading of data, if necessary.

The terms and conditions of Permit No. POA-2018-00123, except as modified herein, remain in full force and effect.

I request that you provide written or email confirmation of receipt of this letter at your earliest convenience. In addition, please indicate whether you intend to accept and comply with this permit modification by signing and returning this letter.

CE-POD-PDC
SUBJECT: (Modification of Standard Individual Permit for IPOP Bonanza Channel Placer Dredge Project (Permit No. POA-2018-00123)

Thank you for participating in the Regulatory Program. If you have any questions, please contact Kate Bliss at (808) 835-4626 or via email at Kate.M.Bliss@usace.army.mil.

Sincerely,

KIRK E. GIBBS
Brigadier General, USA
Commanding

Enclosure

Copies to:

Kate Bliss, POD Program Manager
Quinn Yang, POD Office of Counsel
Sara Longan, POA Regulatory
Janet Post, POA Regulatory
Tyler Marye, POA Regulatory

Permit Condition Agreed and Accepted

By: _____ Date: 6-12-24

Title: PRESIDENT, IPOP LLC

This permit modification becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

_____ 6-12-24

Kirk E. Gibbs
Brigadier General, USA
Commander, Pacific Ocean Division
U.S. Army Corps of Engineers

DATE

ATTACHMENT 1 to Permit No. POA-2018-00123

ENCLOSURE 1 to SUBJECT: (Modification of Standard Individual Permit for IPOP Bonanza Channel Placer Dredge Project (Permit No. POA-2018-00123)

NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM
PIPELINE HYDRAULIC DREDGE SPECIFICATION
08-04-2023

PART 1 GENERAL

1.1 DESCRIPTION

This permit requires use of the US Army Corps of Engineers (USACE) National Dredging Quality Management Program (DQM) to monitor the dredge's status at all times during this permit and manage data history.

This performance-based specification section identifies the minimum required output as well as the precision and instrumentation requirements. The requirements may be satisfied using equipment and technical procedures selected by the Permittee.

1.2 SUBMITTALS

- Dredge Plant Instrumentation Plan, paragraph DREDGE PLANT INSTRUMENTATION PLAN (DPIP)

- National Dredging Quality Management Program Certification

1.3 PAYMENT

Reserved.

1.4 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM CERTIFICATION

The Permittee is required to have a current certification from the DQM Program for the cutter/suction head hydraulic dredge instrumentation system to be used under this permit. Standard Operating Procedures (SOP) and criteria for certification are presented on the DQM website (https://dqm.usace.army.mil).

1.5 DREDGE PLANT INSTRUMENTATION PLAN (DPIP)

The Permittee must have a digital copy of the Dredge Plant Instrumentation Plan (DPIP) on file with the DQM Support Center. While working on site, the Permittee must also maintain on the dredge a copy of the DPIP, which is easily accessible to Government personnel at all times. This document must accurately describe the sensors used, the configuration of the system, how sensor data will be collected, how quality control on the data will be performed, and how the sensors/data-reporting equipment will be calibrated and repaired if it fails. A description of the computed dredge-specific data and how the sensor data will be transmitted to the DQM database must also be included. Prior to the start of work, the Permittee must submit to the DQM Support Center any addendum or modifications made to the plan subsequent to its original submission. Requirements and a template for the DPIP are available on the DQM website (https://dqm.usace.army.mil).

PART 2 PRODUCTS

Reserved.

PART 3 EXECUTION

3.1 REQUIREMENTS FOR REPORTED DATA

Provide, operate, and maintain all hardware and software to meet these specifications. The Permittee is also responsible for the replacement, repair, and calibration of the sensors and other necessary data acquisition equipment needed to supply the required data.

Document and complete the procedure to complete a repair as soon as practical. If repair is not possible within two business days of any sensor failure, submit a plan and timeline to complete the repair. Upon completion of a repair, replacement, installation, modification, or calibration, notify the Permit Project Manager. In consultation with the DQM Support Center, the Permit Project Manager may request recalibration of the sensors or other hardware components at any time during the permit as deemed necessary.

Keep a log of sensor repair, replacement, installation, modification, and calibration in the dredge's onboard copy of the DPIP. The log must contain a three-year history of sensor maintenance, including the time of the sensor failures (and subsequent repairs), the time and results of sensor calibrations, the time of sensor replacements, and the time that backup sensor systems were initiated to provide the required data. It must also contain the name of the person responsible for the sensor work.

Install sensors that are capable of collecting parameters within the specified accuracies and resolutions indicated in the following subparagraphs and transmit these parameters to the DQM database. Transmit all data in JSON message bundles. Each bundle can contain multiple message types. Transmit sensor data as work event messages, and transmit data which relates to the operational state of the dredge or its sensors as state event messages. (See paragraph PARAMETER TRANSMISSION TO THE WEB SERVICE.)

3.1.1 Message Bundle Data

Every message bundle must contain descriptive data that relates the message to a given dredge plant and date/time. Identify the start of a message bundle by the tag "DQM_data".

3.1.1.1 Messages

Messages contain operational data that populates the DQM database for a dredge plant. A message must consist of an event type and its associated data (as defined in paragraph DREDGE EVENTS—WORK EVENTS), a date/time stamp indicating when the event occurred or started, and a comment providing clarification or metadata about the situation. There are multiple event types, but they all fall into one of two categories—work events and state events.

3.1.1.1.1 Message Time

In a work event message, message time is the date and time that the data is collected from the sensors; in a state event message, message time is the date and time that the state event begins. Report the message time to the nearest second, and reference it to Coordinated Universal Time (UTC) time based on a 24-hour format (YYYY-MM-DD HH:MM:SS). In order to ensure accuracy and reliability, synchronize the time stamp to UTC format from an accurate, unchangeable source (for example, a GPS National Marine Electronics Association [NMEA] datastring). Identify message time by the tag "msg_time".

3.1.1.1.2 Comment

Comments concerning the work event or state event messages being transmitted provide descriptive information that relates to the data. An example of a comment for work event data is information about a sensor issue; an example of a comment for state event data is a description of operations. Identify a comment by the introductory tag "comment", and limit it to no more than 250 characters.

3.1.1.2 Dredge Events—Work Event

There are two types of dredge event messages—work event messages and state event messages. Work event messages contain data that are instantaneously collected or calculated from sensors and are logged as a series of events.

Work events are triggered by a time interval change (as described in paragraph WORK EVENT MESSAGES). Initiate all work event messages by the header tag "work_event".

3.1.1.2.1 Vertical Correction

Obtain the variation of the water level from the vertical datum for the river stage or tidal gage described in the state events using appropriate equipment to give the water level with an accuracy of ± 0.1 foot. Enter vertical correction values above project datum

described in the dredging specification with a positive sign and those below with a negative sign. The tag for vertical correction is “vert_correction”.

3.1.1.2.2 Cutter/Suction Head Location and Movement

Monitor the X, Y, and Z components of the cutter/suction head location. Additional calculations made from the observed values determine the rates of movement to track the progress of the dredge.

3.1.1.2.2.1 Cutter/Suction Head Horizontal Position

Obtain the forwardmost point of the cutter/suction head using a positioning system operating with a minimum accuracy level of 3-10 feet horizontal Circular Error Probable (CEP). Report it as Latitude/Longitude WGS 84 in decimal degrees with West Longitude and South Latitude values reported as negative. Identify position values by the tags “ch_latitude” and “ch_longitude”.

3.1.1.2.2.2 Cutter/Suction Invert Depth

Cutter/suction invert depth is the depth of the invert of the suction mouth relative to the surface of the water. Instrumentation must be capable of reporting to an accuracy of ± 0.5 foot and a resolution to the nearest 0.1 foot with no tidal adjustments. Minimum accuracies are conditional to relatively calm water. Use the tag “ch_depth” to identify the cutter/suction head depth.

3.1.1.2.2.3 Cutter/Suction Head Heading

The cutter/suction head heading is the angle of the centerline of the cutter/suction head and dredge ladder measured relative to true north. Provide all headings using industry-standard equipment. The heading must be accurate to within 5 degrees and reported to the nearest whole degree with values from 000 (true north) to 359 degrees referenced to a clockwise positive direction convention. Use the tag “ch_heading” to identify the cutter/suction head heading.

3.1.1.2.3 Dredge Activity

Monitor dredge activity using a combination of the following parameters.

3.1.1.2.3.1 Slurry Velocity

Reserved.

3.1.1.2.3.2 Slurry Density

Reserved.

3.1.1.2.3.3 Pump RPM

The pump rpm is the number of revolutions per minute measured for the slurry pump shaft. Measure the shaft revolution rate (rev/min) with the highest level of accuracy that is standard on the vessel's operational displays either at the bridge or in the engine room. Identify this value by the tag "rpm".

3.1.1.2.3.4 Pump Vacuum

Measure the vacuum pressure of the dredge pump(s) (inches of mercury) as near to the eye as practicable in the pump's suction pipe with the highest level of accuracy that is standard on the vessel's operational displays either at the leverman's controls or in the engine room. Identify vacuum pressure by the tag "vacuum".

3.1.1.2.3.5 Pump Outlet Pressure

Measure the pump outlet pressure in the discharge line on the pump side of the flap valve in terms of pounds per square inch (psi) on a gauge. Identify pump outlet pressure by the tag "outlet_psi".

3.1.1.2.4 Outfall Information (Open Water/Spill Barge Disposal)

Reserved.

3.1.1.2.4.1 Discharge Horizontal Position

Reserved.

3.1.1.3 Dredge Events—State Event

Reserved.

3.1.1.3.1 Message Time

Reserved.

3.1.1.3.2 Contract Event

Reserved.

3.1.1.3.2.1 Contract Number

Reserved.

3.1.1.3.2.2 Contract Start and End

Reserved.

3.1.1.3.3 Tide Station/River Stage Gage Event

Reserved.

3.1.1.3.3.1 Station Name

Reserved.

3.1.1.3.4 Length of Pipe Event

Reserved.

3.1.1.3.4.1 Floating Pipe

Reserved.

3.1.1.3.4.2 Submerged Pipe

Reserved.

3.1.1.3.4.3 Shore Pipe

Reserved.

3.1.1.3.5 Booster Pump Event

Reserved.

3.1.1.3.5.1 Number of Booster Pumps

Reserved.

3.1.1.3.6 Dredge Advance

Reserved.

3.1.1.3.7 Outfall Information

Reserved.

3.1.1.3.7.1 Discharge Location

Reserved.

3.1.1.3.7.2 Discharge Horizontal Position

Reserved.

3.1.1.3.7.3 Discharge Outfall Heading

Reserved.

3.1.1.3.7.4 Discharge Pipe Elevation

Reserved.

3.1.1.3.8 Non-effective Work Event

Reserved.

3.1.1.3.8.1 Non-effective Work Interval

Reserved.

3.1.1.3.8.2 Dredge Function Code

Reserved.

3.1.1.3.8.3 Additional Comments

Reserved,

3.2 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM REQUIREMENTS

The Permittee's DQM system must be capable of collecting and transmitting information to the DQM system. Record the applicable parameters from paragraph REQUIREMENTS FOR REPORTED DATA as local events and transmit continuously to the DQM database anytime an Internet connection is available.

To accomplish this transmission, there are two options.

The first option is to equip the vessel with a DQM computer system consisting of a computer, monitor, keyboard, mouse, data modem, Universal Power Supply (UPS), and network hub. The required system is outlined in paragraphs OPTION 1: COMPUTER REQUIREMENTS, SOFTWARE, and UPS. Provide a standalone computer system, exclusive to the DQM monitoring system, with USACE DQM software installed on it. The second option is to send data directly to DQM's web endpoint as outlined in paragraph OPTION 2: DIRECT DATA TRANSMISSIONS TO THE DQM WEB SERVICE. If a hardware problem occurs, or if a part of the system is physically damaged, the Permittee is responsible for repairing it within two business days of the determination

of the condition or submitting a plan and timeline for repair if the repair will take more than two business days.

3.2.1 Option 1: Computer Requirements

Reserved.

3.2.2 Software

Reserved.

3.2.3 UPS

Reserved.

3.2.4 Option 2: Direct Data Transmissions to the DQM Web Service

Use a web service to report sensor data to the DQM database. Transmit data as it is collected in real time, and push it to the DQM web service. If the web service is not available or returns an error message, store the data in a queue, and transmit it upon re-establishment of the connection, starting with the oldest data in the queue and continuing until real-time transmission is restored. Due to the remote location of the project site, sensor data shall be transmitted to the DQM web service at a minimum of once a week.

Contact dqm-support@usace.army.mil to obtain the web service URL and the appropriate key credentials and communication protocol.

If this option is chosen, a display of the raw data being transmitted to DQM must be easily accessible and visible onboard the dredge.

3.2.5 Internet Access

Maintain an Internet connection capable of transmitting real-time data to the DQM server as well as enough additional bandwidth to clear historically queued data when a connection is re-established. If connectivity is lost, queue and transmit unsent data upon restoration of connectivity. Delays in pushing real-time data to the DQM database should not exceed four hours. Exceptions to these requirements may be granted by the DQM Support Center on a case-by-case basis with consideration for contract-specific requirements, site-specific conditions, and extreme weather events.

Acquire and install all necessary hardware and software to make the Internet connection available for data transmission to the DQM web service. Configure the hardware and software to allow the DQM Support Center remote access to this computer. The telemetry system must be capable of meeting these minimum reporting requirements in all operating conditions.

In areas with poor cellular service and at the local District's discretion, it may be required to manually download the data on a weekly basis using the protocol for retrieving and

submitting backup files provided by the DQM Support Center. This method of data transmission should be used only if Internet connectivity is unavailable at the dredging site.

3.2.6 Data Routing Requirements

Reserved.

3.3 DREDGE MONITORING DATA

3.3.1 General

Onboard sensors continuously collect dredging data in support of the dredge Permittee's operations. Store and transmit portions of this Permittee-collected information, as described in this specification, and calculations based on them to the DQM database on a near real-time basis. Additionally, digitally log and transmit information regarding the state of the dredge.

3.3.2 Data Measurement Frequency

The frequency of data transmission is dependent on the type of message being sent. Work Event messages contain data that are instantaneously collected or calculated from sensors and are logged as a series of events. State event messages are activated by a change in the dredge state.

3.3.2.1 Work Event Messages

Log data as a series of events. Each event must consist of a dataset containing dredge information (as defined in paragraph REQUIREMENTS FOR REPORTED DATA). Consider each set of measurements (for example, time and position) an event, with a 6-12 second interval between work events. This interval must remain consistent across event types for the dredge plant.

Record a standard data string within one second of an event trigger with the time stamp and all parameters reflecting when the event happened.

3.3.2.2 State Event Messages

Reserved.

3.3.3 Parameter Transmission to the Web Service

Format the data as JSON (JavaScript Object Notation, as defined at http://www.json.org) strings of arbitrary length. These JSON strings represent a hierarchical data structure consisting of a message bundle which may contain 0-3 automatic data messages and any number of manual data messages.

A tag/parameter is reported only when it contains a value. Do not include “Null” value strings in a message bundle.

```
**************************
Message bundle
**************************

{
    "DQM_Data": {
        "plant_identifier":                          <integer value 0000-9999>,
        "transmission_time":                         <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
        "messages": [
            {
                "work_event": {
                "msg_time":                          <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                           "vert_correction”:        <floating point 100th decimal place>,
                           "ch_latitude”:            <decimal to 6 decimal places>,
                           "ch_longitude”:           <decimal to 6 decimal places>,
                           "ch_depth":               <floating point 100th decimal place>,
                           "ch_heading":             <integer value 000-359>,
                           "slurry_velocity":        <floating point 100th decimal place>,
                           "slurry_density":         <floating point 100th decimal place>,
                           "pump_rpm":               <integer>,
                           "vacuum":                 <floating point 100th decimal place>,
                           "outlet_psi":             <floating point 100th decimal place>,
                           "comment":                <string>},
                }
            },
            {
                "contract_event": {
                           "msg_time":             <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                           "contract_number":      <string>,
                           "event_type":           <string - "start" or "end">,
                           "comment":              <string>
                }
            },
            {
                "station_event": {
                           "msg_time":             <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                           "station_name":         <string>,
                           "comment":              <string>
                }
            },
            {
                "pipe_length_event": {
                           "msg_time":             <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                           "length_floating":      <integer>,
                           "length_submerged":     <integer>,
                           "length_land":          <integer>,
                           "comment":              <string>
                }
            },
            {
                "booster_pump_event": {
                           "msg_time":             <24-hour UTC time YYYY-MM-DDHH:MM:SS>,
                           "booster_total":        <integer>,
                           "comment":              <string>
                }
```

```
            },
            {
                "advance_Event": {
                            “msg_time”:             <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                            “advance_daily”:        <integer>,
                            “comment”:              <string>
                }
            },
            {
                "outfall_position": {
                            "msg_time":             <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                            “outfall_location”:     <string-"upland", "beach", "scow", "open water">
                            "outfall_latitude":     <decimal to 6 decimal places>,
                            "outfall_longitude":    <decimal to 6 decimal places>,
                            "outfall_heading":      <integer value 000-359>,
                            "outfall_elevation":    <floating point 10th decimal place>,
                            "comment":              <string>
                }
            },
            {
                "non_eff_event": {
                            "msg_start_time":       <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                            “msg_end_time”:         <24-hour UTC time YYYY-MM-DD HH:MM:SS>,
                            "function_code":        <string - 1 to 4 characters>,
                            "comment":              <string>

                }
            }
        ]
    }
}
```

3.3.4 Permittee Data Backup

Maintain an archive of all data sent to the DQM computer during the permit. The Permit Project Manager may require that the Permittee provide a copy of these data covering specified time periods. Provide the data in the same JSON format as would have been transmitted to the DQM computer. There must be no line breaks between the parameters, and each record string must be on a separate line. The naming convention for the files must be <*dredgename*>_<*StartYYYYMMddhhmmss*>_<*EndYYYYMMddhhmmss*>.txt. Data submission must be via a storage medium acceptable to the Permit Project Manager.

At the end of the permit period, call the DQM Support Center prior to discarding the data. The DQM Support Center will verify that all data has been received and appropriately archived before giving the Permittee discard permission. Record the following information in a separate section at the end of the dredge’s onboard copy of the DPIP:

- Person who called the DQM Support Center
- Date of the call
- DQM representative who gave permission to discard the data

3.4 PERFORMANCE REQUIREMENTS

The Permittee's National Dredging Quality Management Program data transmission must be fully operational at the start of dredging operations. To meet specification requirements for operability, the Permittee's system must provide an accurate data string return and be compliant with hardware requirements. Data string return is defined as the number of quality records within an event or state tag sent by the Permittee's system to the DQM database. Quality data strings are considered to be those providing accurate values for all parameters reported when operating according to the specification. Make repairs necessary to restore data return compliance within two business days, or submit a plan and timeline for repair if the repair will take more than two business days. Failure by the Permittee to report quality data within the specified time window for dredge measurements as stated in the specifications (see paragraphs INTERNET ACCESS, DATA MEASUREMENT FREQUENCY, and PARAMETER TRANSMISSION TO THE WEB SERVICE) will result in suspension of the permit.

3.5 LIST OF ITEMS TO BE PROVIDED BY THE PERMITTEE

DPIP	https://dqm.usace.army.mil
DQM System	Paragraph NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM REQUIREMENTS, including all subparagraphs
Dredge Data	Paragraph DREDGE MONITORING DATA

From: James Buchal
To: Charron, David L (DNR)
Cc: Buckley, Stephen N (DNR); "Mac Shoulders"
Subject: FW: Revised Reclamation Plan for the IPOP Bonanza Channel Placer Dredging Project
Date: Wednesday, June 12, 2024 12:18:55 PM

Dear Mr. Charron,

We have received the written approval correspondence from the USACE regarding the revised reclamation plan you had sought by letter of June 7, 2024; it appears below this message.

We remain ready, willing and able to schedule a Zoom or Teams meeting at your earliest convenience, which we hope is very soon.

Sincerely,

James L. Buchal
Murphy & Buchal LLP
P.O. Box 86620
Portland, OR 97286

Cell Phone: 503-314-6597
Phone: 503-227-1011
Fax: 503-573-1939

From: Langley, Michael W CIV USARMY CESPL (USA) <Michael.W.Langley@usace.army.mil>
Sent: Wednesday, June 12, 2024 12:10 PM
To: James Buchal <jbuchal@mbllp.com>
Cc: Yang, Quinn H CIV USARMY CEHQ (USA) <Quinn.H.Yang@usace.army.mil>
Subject: Revised Reclamation Plan for the IPOP Bonanza Channel Placer Dredging Project

Mr. Buchal,

I have reviewed the revised Reclamation Plan (Revision 3 dated April 2024) and it meets the intent of the requirement contained in Special Condition #1 in IPOP's Department of the Army permit issued on March 20, 2024. I have forwarded this plan to Alaska District regulatory staff for their use in compliance-related activities for this permit.

Thank you,

Michael W. Langley, Senior Regulatory Project Manager
Regulatory Division, Arizona Branch

Phoenix, AZ
Los Angeles District, U.S. Army Corps of Engineers
Michael.w.langley@usace.army.mil
Office: (602) 230-6953 (direct)

Assist us in better serving you! Please complete our brief customer survey, located at the following link:
https://regulatory.ops.usace.army.mil/customer-service-survey/