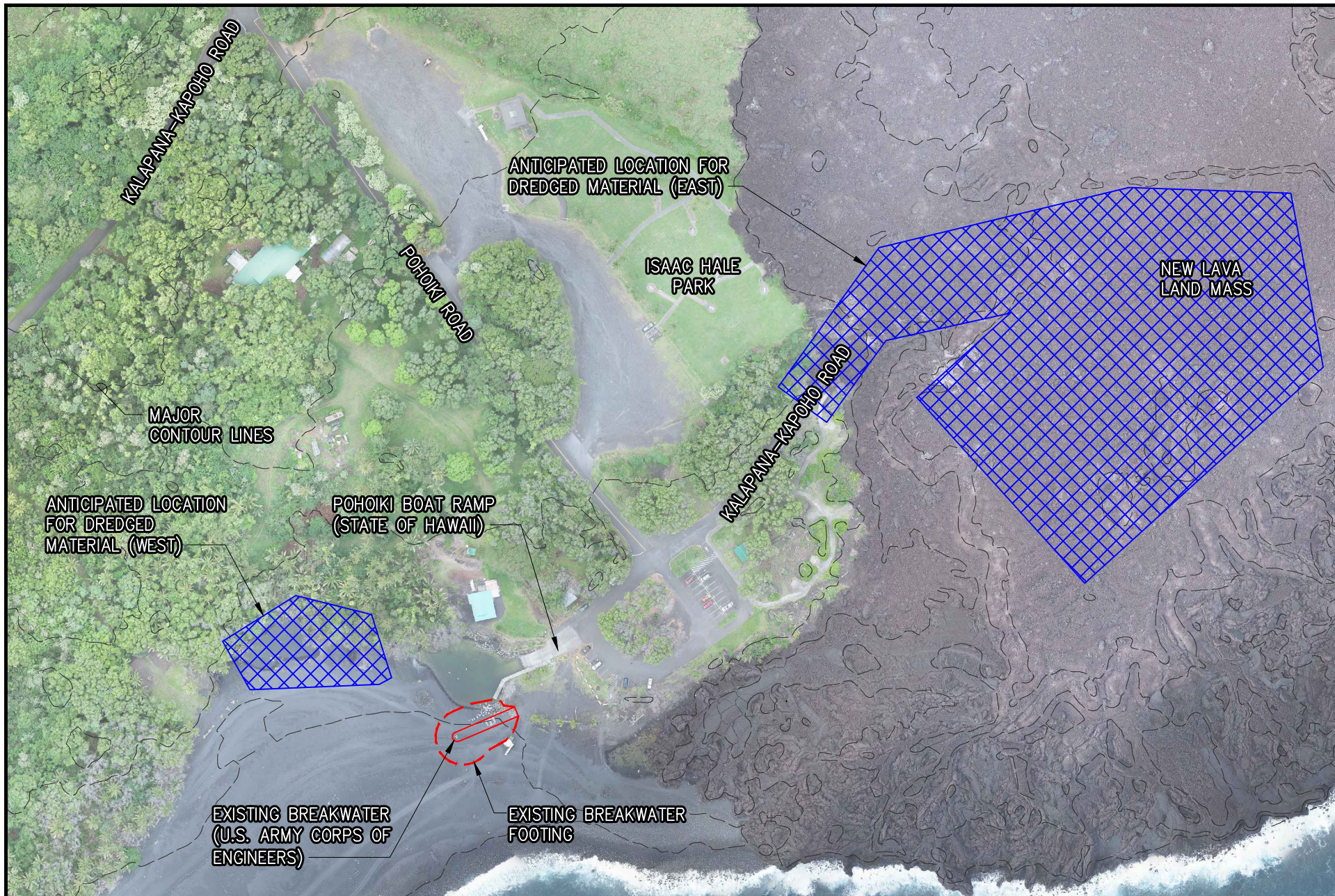


FIGURE 1
PRE AND POST ERUPTION CONDITIONS

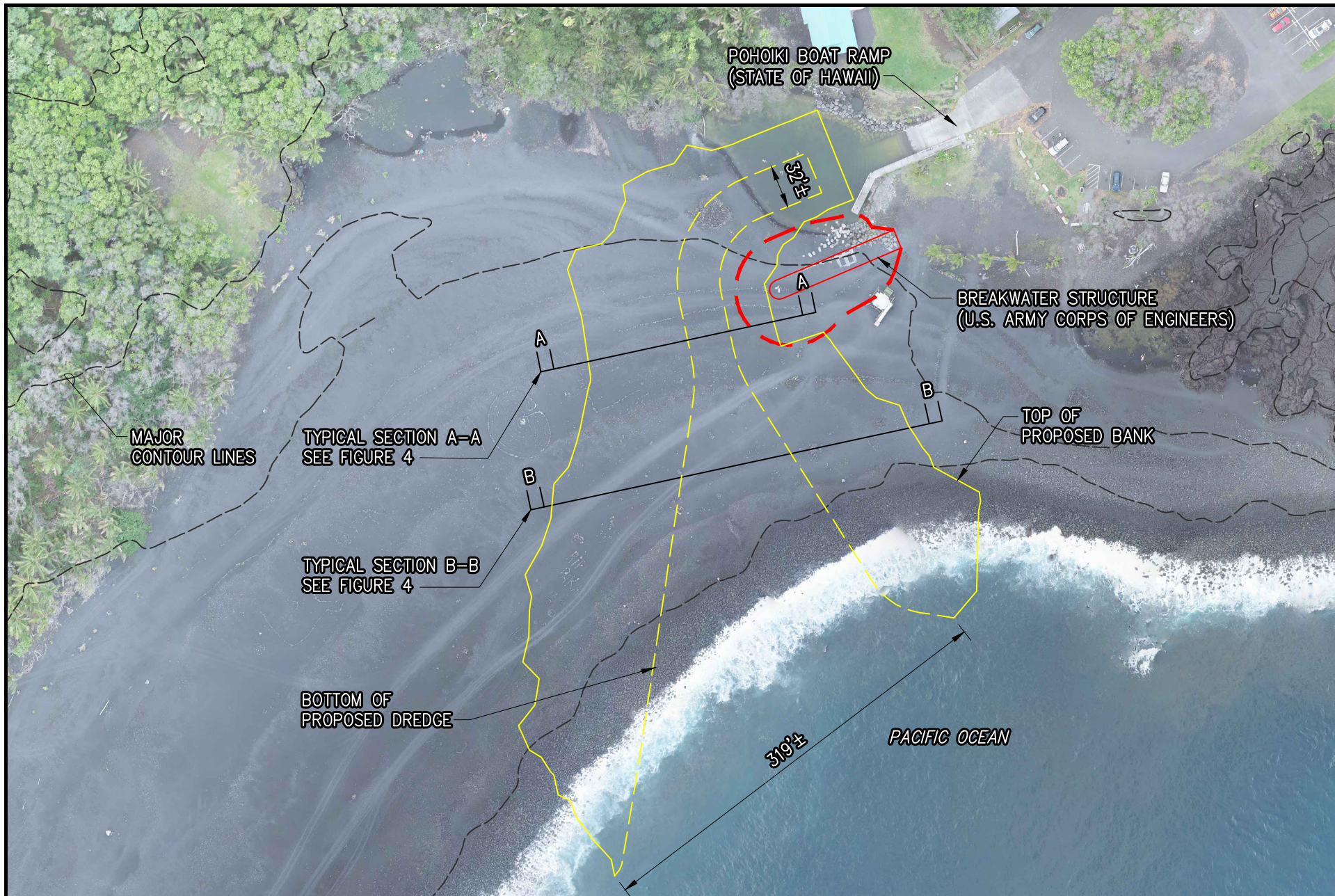
POHOIKI BOAT RAMP
DREDGING OF VOLCANIC DEBRIS



DUDEK LIDAR Imagery, May 2022

FIGURE 2
MATERIAL PLACEMENT LOCATIONS

POHOIKI BOAT RAMP
DREDGING OF VOLCANIC DEBRIS



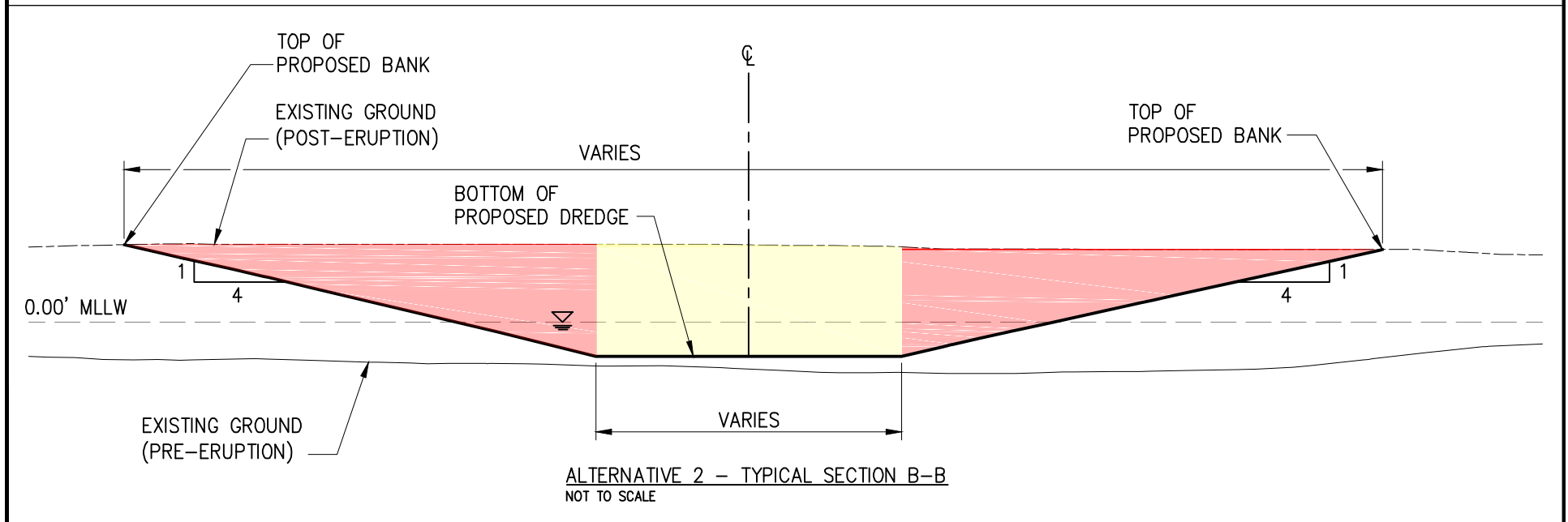
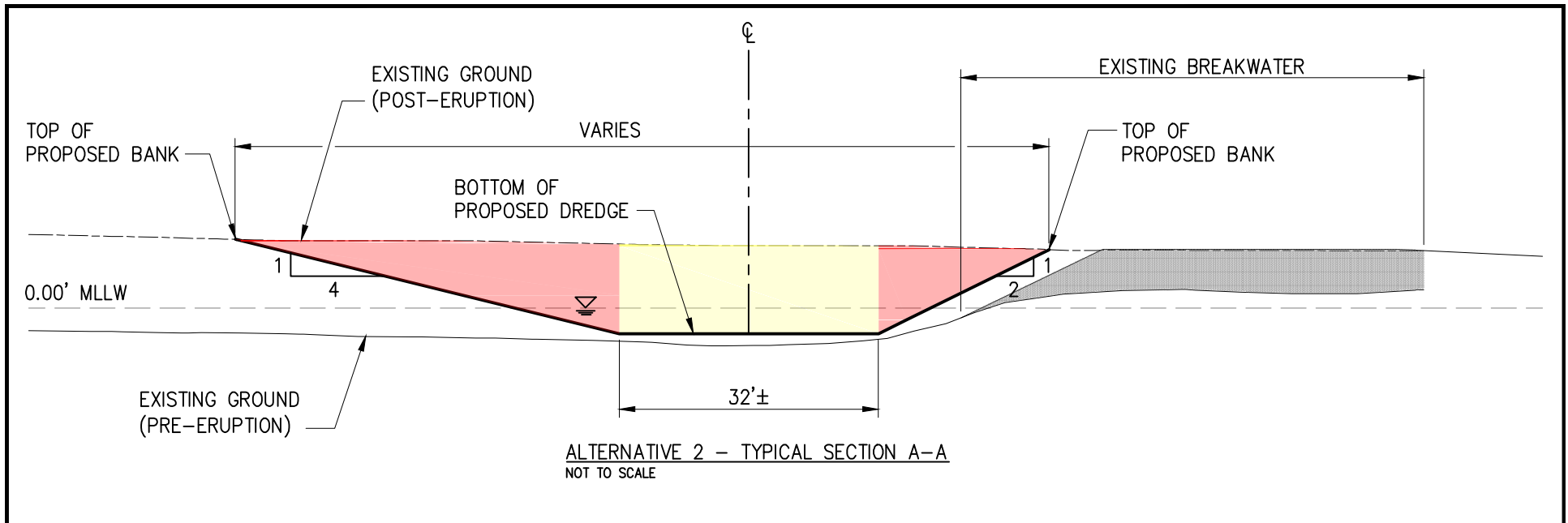


FIGURE 4
TYPICAL SECTIONS

POHOIKI BOAT RAMP
DREDGING OF VOLCANIC DEBRIS



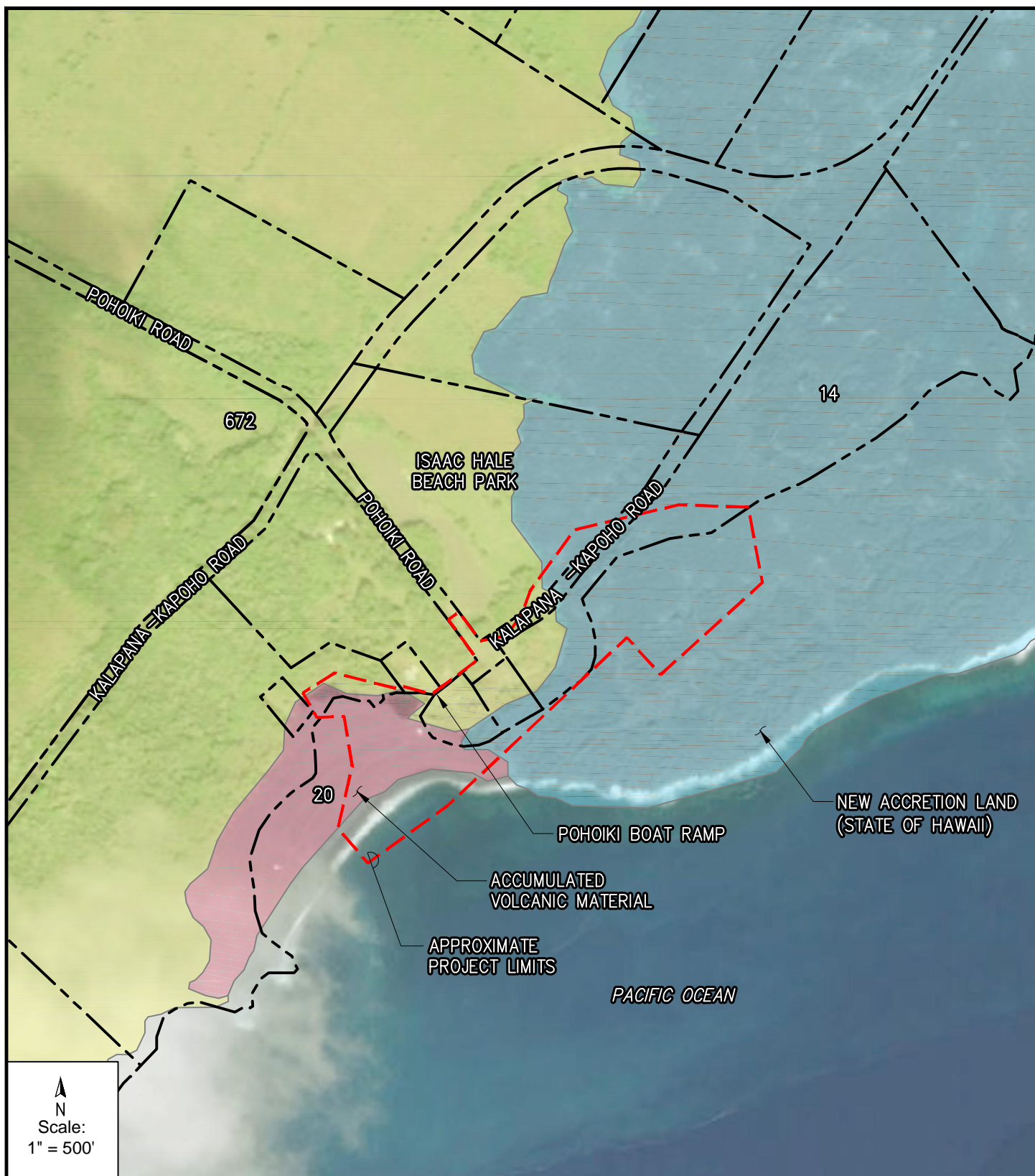


FIGURE 6
SOILS

POHOIKI BOAT RAMP
DREDGING OF VOLCANIC DEBRIS

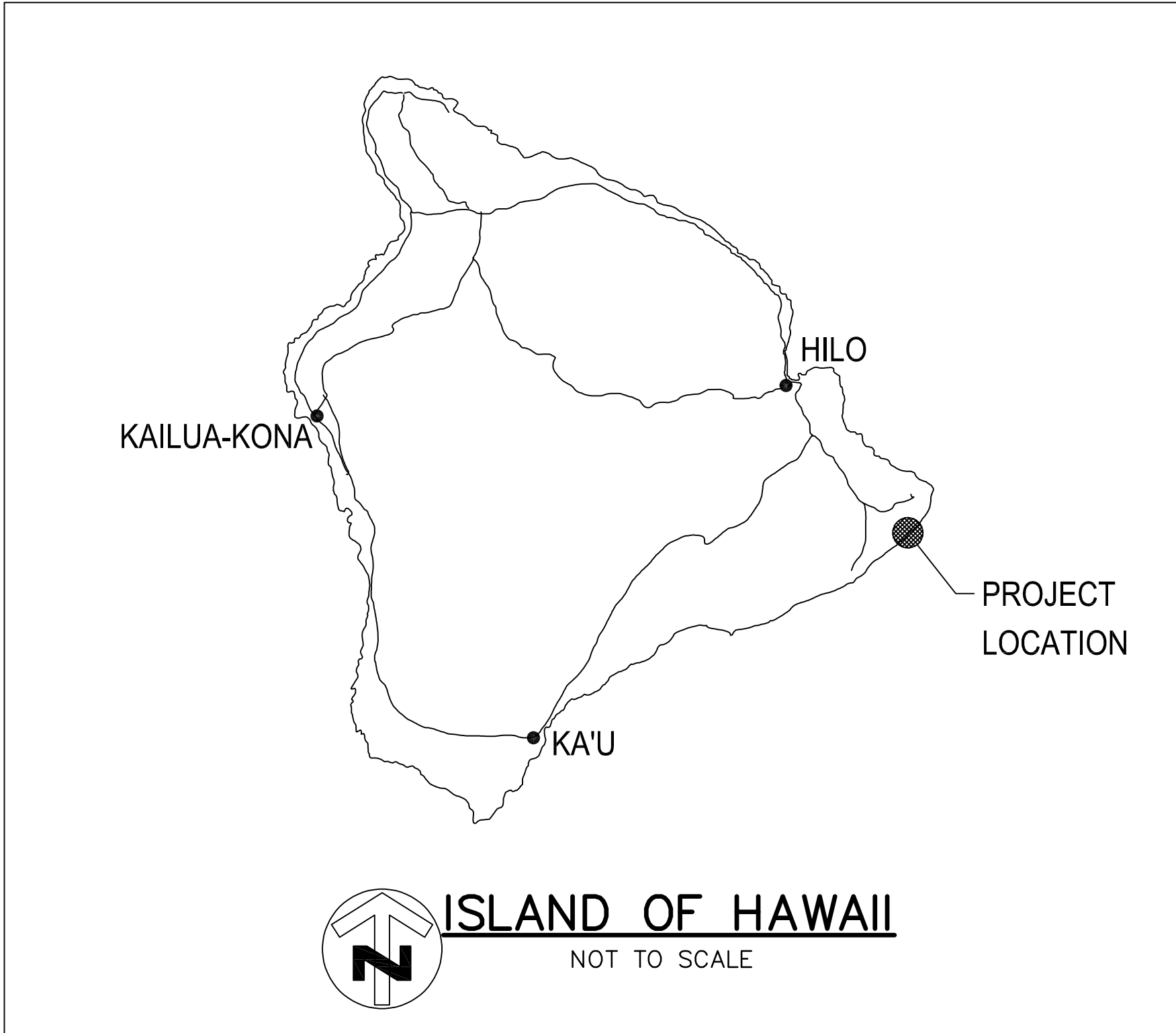
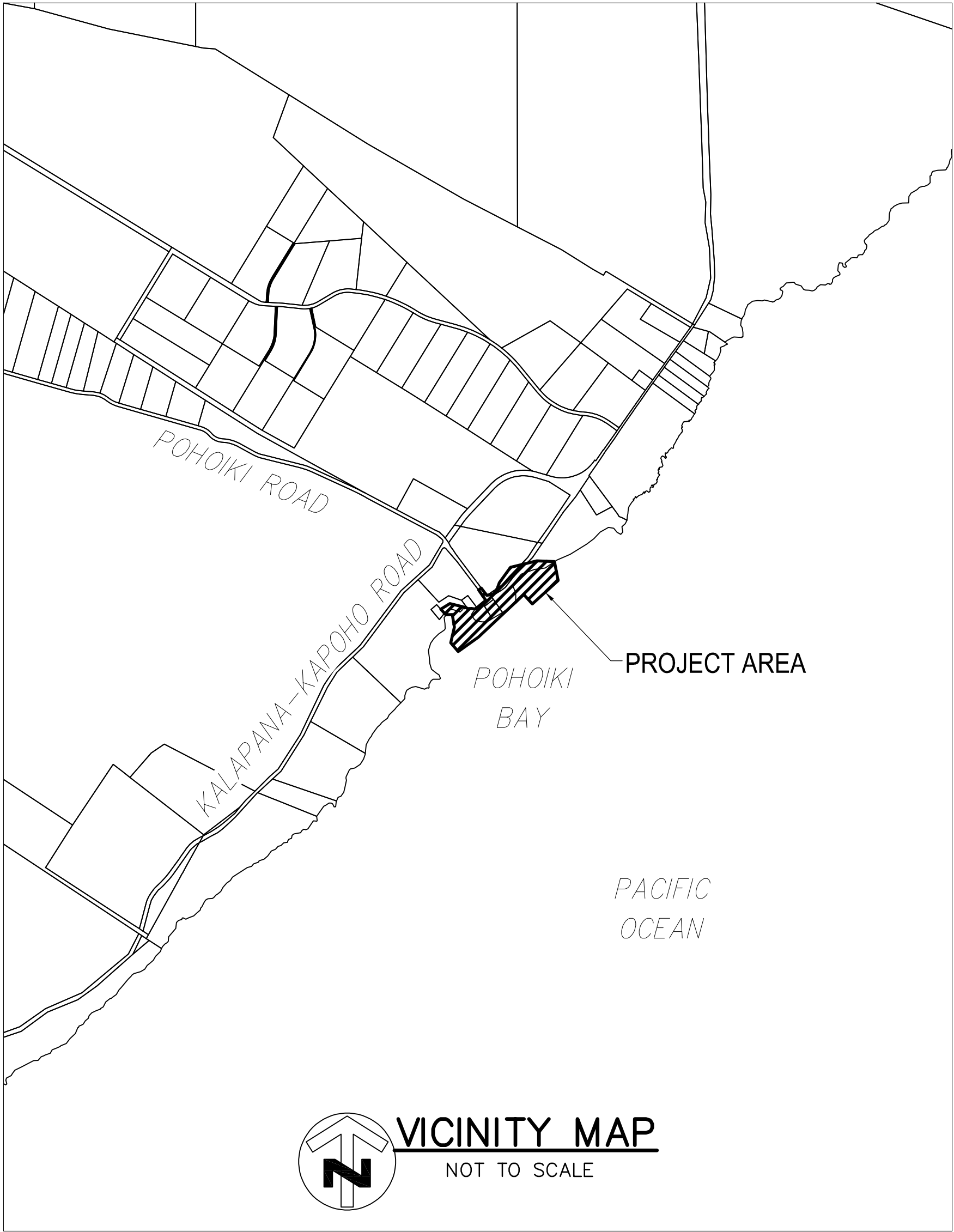
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION

JOB NO. B00CH80A

POHOIKI BOAT RAMP
EXCAVATION AND DREDGING
OF VOLCANIC DEBRIS

PUNA, HAWAII ISLAND, HAWAII

TMK: (3) 1-3-008:097, (3) 1-3-008:013, (3) 1-3-008:033,
(3) 1-3-008:034, (3) 1-3-008:086, (3) 1-3-008:014,
(3) 1-3-008:021, (3) 1-3-008:016, (3) 1-4-093:048,



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APPROVED:

EDWARD R. UNDERWOOD
ADMINISTRATOR
DIVISION OF BOATING AND OCEAN RECREATION
DEPARTMENT OF LAND AND NATURAL RESOURCES

DATE

DRAWING NO.

T01

CONSTRUCTION NOTES

- EXISTING TOPOGRAPHIC SURVEY WAS CONDUCTED ON MAY 2, 2022 BY DUKE & ASSOCIATES. THIS TOPOGRAPHIC SURVEY WAS BASED ON THE BEST AVAILABLE INFORMATION AND ACCURACY MUST BE VERIFIED PRIOR TO STARTING CONSTRUCTION.
- VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DIRECTION.
- AT ALL TIMES DURING PERFORMANCE OF THIS CONTRACT, ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE SITE SAFETY CONDITIONS FOR ALL PERSONS AND PROPERTY.
- HARD BOULDERS AND MEDIUM HARD TO HARD BASALT ROCK MAY BE ENCOUNTERED NEAR OR AT THE SITE. APPROPRIATE EQUIPMENT FOR EXCAVATING THE MEDIUM HARD TO HARD BASALT SHALL BE REQUIRED.
- NO BLASTING SHALL BE ALLOWED.
- IN THE EVENT HISTORIC REMAINS, SUCH AS ARTIFACTS, BURIALS, CONCENTRATIONS OF SHELL OR CHARCOAL, BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL IMMEDIATELY CEASE IN THE IMMEDIATE VICINITY OF THE ENCOUNTER. IMMEDIATELY NOTIFY THE STATE HISTORIC PRESERVATION DIVISION AT (808) 692–8015, WHO WILL ASSESS THE ENCOUNTER AND RECOMMEND THE APPROPRIATE MITIGATION MEASURES.
- CONSTRUCT TEMPORARY BARRICADES DURING CONSTRUCTION, FOR SAFETY AND THE PROTECTION OF LIFE AND PROPERTY.
- THE ISAAC HALE BEACH PARK SHALL REMAIN OPEN DURING THE CONSTRUCTION PERIOD. PROVIDE TEMPORARY BARRICADES AND WARNING SIGNS TO SAFETY AND PROTECT THE PUBLIC DURING THE CONSTRUCTION PERIOD. PROVIDE AND MAINTAIN FOR SAFE PEDESTRIAN ACCESS AND VEHICLE ACCESS TO THE FACILITY THROUGHOUT THE CONSTRUCTION PERIOD, AS REQUIRED.
- PROVIDE AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND TAKE NECESSARY PRECAUTIONS FOR THE PROTECTION CONVENIENCE AND SAFETY OF THE PUBLIC.
- EXISTING PEDESTRIAN WALKWAYS SHALL BE MAINTAINED IN A PASSABLE CONDITION OR PROVIDE FOR ALTERNATE/TEMPORARY ACCESSIBLE PEDESTRIAN ACCESS ROUTES AND FACILITIES PER THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN CHAPTER 2 AND ADAAG 201.3 AND ADAAG 206.1.
- NO PERFORMANCE OF ANY CONSTRUCTION ACTIVITIES THAT CAUSES FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATER COURSES. ALL COSTS INCURRED FOR VIOLATIONS PAID AND SUBSEQUENT REMEDIAL ACTION UNDERTAKEN AT NO ADDITIONAL COST TO THE STATE.
- COORDINATE CONSTRUCTION ACTIVITIES WITH ANY AND ALL ADJACENT OR RELATED CONSTRUCTION ACTIVITIES ON ANOTHER CONSTRUCTION SITE. AVOID DELAY OR HINDRANCE IN THE PERFORMANCE OF THEIR RESPECTIVE CONTRACTS.
- COORDINATE WITH ALL AGENCIES AND UTILITY COMPANIES TO VERIFY THE ACTUAL LOCATION OF ALL SITE UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING.
- NOTIFY AND COORINATE ALL SITE WORK WITH "THE ONE CALL CENTER" AT (866) 423–7287 AT LEAST 5 WORKING DAYS PRIOR TO THE START OF EXCAVATION OR TRENCHING.
- MAKE ARRANGEMENTS FOR TEMPORARY CONSTRUCTION SITE UTILITIES SUCH AS ELECTRICITY, WATER, ETC. AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING UTILITIES, SHOWN ON THE PLANS OR ENCOUNTERED, SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION AND ANY DAMAGED UTILITIES, AS RESULT OF CONTRCTOR OPERATIONS, SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO THE STATE.
- CONFORM WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL, OF TITLE 11, HAWAII ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH.
- PLAN, CONSTRUCT AND UTILIZE ALL BEST MANAGEMENT PRACTICES (BMP) AS REQUIRED TO COMPLY WITH THE LAWS, STANDARDS, RULES, AND/OR POLICIES OF THE COUNTY, STATE, OR FEDERAL REGULATORY AGENCIES.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES.
- RESTORE ALL AREAS DISTRUBED AS A RESULT OF ALL CONSTRUCTION ACTIVITIES, TO EQUAL OR BETTER CONDITION(S), INCLUDING BUT NOT LIMITED TO VEGETATION, PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALKWAYS, FENCES, ETC. UNLESS SPECIFICALLY OTHERWISE NOTED OTHERWISE.
- IF ONE (1) OR MORE ACRE OF LAND IS DISTURBED, DO NOT START ANY GROUND DISTURBANCE UNTIL A NPDES PERMIT IS OBTAINED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND HAS SATISFIED ALL APPLICABLE REQUIREMENTS OF THE NPDES PERMIT PROGRAM. FOR WORK ON COUNTY PROPERTY, PROVIDE A WRITTEN COPY OF THE NPDES PERMIT TO THE APPROPRIATE COUNTY OR GOVERNMENTAL AGENCY PER THEIR REQUIREMENTS.
- PROVIDE ALL INCIDENTAL AND NECESSARY MATERIALS AND WORK TO COMPLETE THE PROJECT.
- THE JOB SITE SHALL BE LEFT IN A SAFE AND SECURE CONDITION AT THE END OF EACH CONSTRUCTION WORKDAY. CLEAN UP AND REMOVE ALL RUBBISH. MAINTAIN THE WORK AREA AND PREMISES IN A CLEAN ORDERLY CONDITION AT ALL TIMES.
- UPON COMPLETION OF CONSTRUCTION, THE ENTIRE JOB SITE SHALL BE CLEANED OF ALL RUBBISH AND DEBRIS.

GRADING NOTES

- ALL GRADING WORK SHALL BE IN ACCORDANCE WITH CHAPTER 10 – "EROSION AND SEDIMENTATION CONTROL" OF THE HAWAII COUNTY CODE AND AS SHOWN ON THE APPROVED PLAN.
- THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS RESULTING FROM HIS WORK. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DPW SHALL BE PAYABLE BY THE CONTRACTOR.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL RULES OF THE STATE DEPARTMENT OF HEALTH, HAR 11–60.1, FUGITIVE DUST.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 55, WATER POLLUTION CONTROL AND CHAPTER 54, WATER QUALITY STANDARDS, AND TO THE EROSION AND SEDIMENTATION CONTROL STANDARDS AND GUIDELINES OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII.
- THE CONTRACTOR SHALL INFORM THE CONTRACTING OFFICER OF THE LOCATION OF THE DISPOSAL AND/OR BORROW SITE(S) REQUIRED FOR THIS PROJECT WHEN AN APPLICATION FOR A GRADING PERMIT IS MADE. THE DISPOSAL AND/OR BORROW SITE(S) MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- NO GRADING WORK SHALL BE DONE ON SATURDAY, SUNDAY AND HOLIDAYS ANYTIME WITHOUT PRIOR APPROVAL FROM THE CONTRACTING OFFICER, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH THE COMMUNITY NOISE CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL".

PUBLIC HEALTH SAFETY AND CONVENIENCE NOTES

- CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY MAY REQUIRE SUPPLEMENTARY MEASURES IF REQUIRED AT NO ADDITIONAL COST TO THE CITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND REMOVAL OF ALL SILT AND DEBRIS GENERATED BY HIS WORK AND DEPOSITED AND ACCUMULATED WITHIN DOWNSTREAM WATERWAYS, DITCHES AND DRAIN PIPES AND PUBLIC AND PRIVATE ROADWAYS. THE CONTRACTOR AGREES TO REIMBURSE THE CITY AND COUNTY OF HONOLULU FOR ALL COSTS EXPENDED IN PERFORMANCE OF ABOVE WORK IF REQUIRED FOR PUBLIC HEALTH AND SAFETY OR MADE NECESSARY BY NON–PERFORMANCE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
- THE CONTRACTOR’S ATTENTION IS DIRECTED TO CHAPTER 46, PUBLIC HEALTH REGULATIONS, DEPARTMENT OF HEALTH, STATE OF HAWAII, "COMMUNITY NOISE CONTROL," IN WHICH MAXIMUM PERMISSIBLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION WORK REQUIRES A PERMIT FROM THE DIRECTOR OF HEALTH, THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 46 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR THE CONSTRUCTION ACTIVITIES. APPLICATION AND INFORMATION ON VARIANCES ARE AVAILABLE FROM THE ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION, 99–945 HALAWA VALLEY STREET, HONOLULU, HI 96701 OR BY TELEPHONE (586–4400).

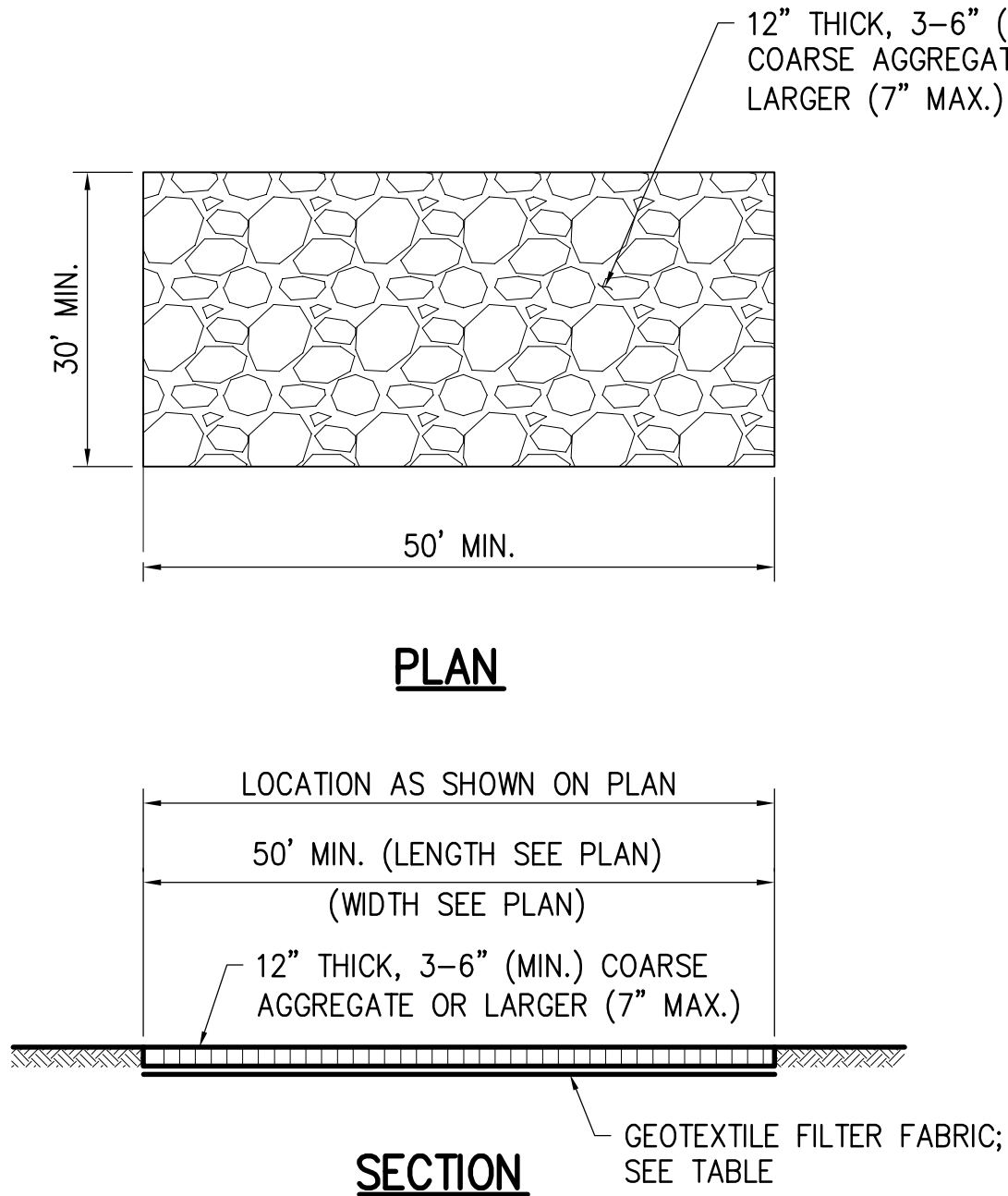
ARCHAEOLOGICAL NOTES

- PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HAWAII POLICE DEPARTMENT AND THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES, HISTORIC PRESERVATION DIVISION (692–8015).

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<div><div><div>TREYOR R. VAGY</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 14993–C</div><div>HAWAII U.S.A.</div></div><div>04/30/2024</div><div>EXP. DATE</div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</div><div>SignatureDate</div></div>		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION			
		POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS			
		NOTES			
		DESIGNED: TV		SUBMITTED: JULY 2023	
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: NOT TO SCALE			
APPROVED:			DRAWING NO.		
CHIEF ENGINEER			DATE		
			T02		

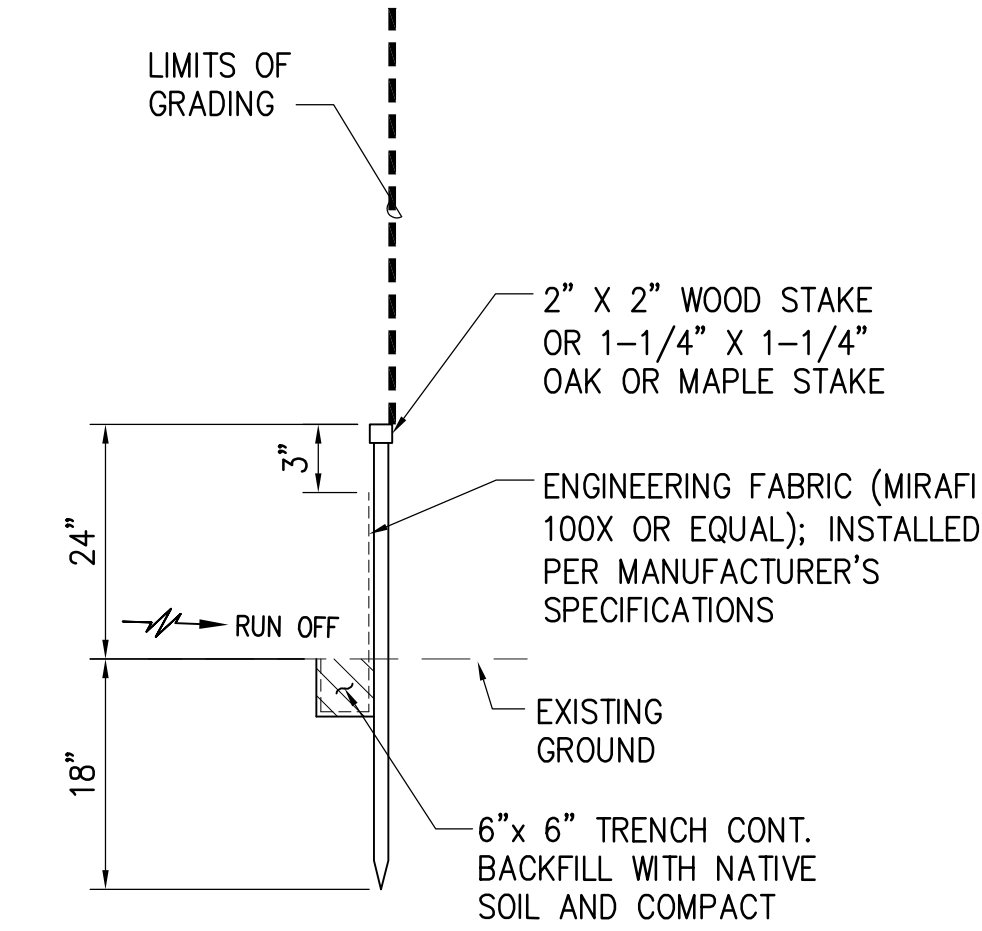
BEST MANAGEMENT PRACTICES (BMPs):

1. THE CONTRACTOR, AT THEIR OWN EXPENSE, SHALL KEEP THE PROJECT AREAS AND SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE DONE IN CONFORMANCE WITH AIR POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES: CHAPTER 11-60, "AIR POLLUTION CONTROL".
2. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY CONSTRUCTION IS INITIATED. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. CONTRACTOR SHALL OBSERVE AND COMPLY WITH THE STATE DEPARTMENT OF HEALTH REGULATIONS REGARDING STORMWATER DISCHARGE.
4. ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY, FOR EXAMPLE, WEEKLY IN DRY PERIODS AND WITHIN TWENTY-FOUR HOURS AFTER ANY RAINFALL OF 0.5 INCHES OR GREATER WITHIN A 24-HOUR PERIOD. DURING AN EVENT OF ABOVE NORMAL RAINFALL, THE CONTRACTOR SHALL REMOVE THE SEDIMENT AND DRAIN INLET FILTER AND REPLACE AFTER THE EVENT HAS PASSED. THE CONTRACTOR SHALL MAINTAIN RECORDS OF ALL CHECKS AND REPAIRS AND A COPY SHALL BE AVAILABLE IN THE FIELD OFFICE.
5. GOOD HOUSEKEEPING SHALL BE UTILIZED TO ENSURE PROTECTION OF ROADWAYS FROM MUD, DIRT, AND DEBRIS.
6. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES FOR THEIR CONSTRUCTION, STAGING, AND STORAGE AREAS AND SHALL INSPECT AND MONITOR THEIR CONSTRUCTION, STAGING, AND STORAGE AREAS TO ENSURE THAT NON-STORM WATER DISCHARGES ARE EMITTED. IF SUCH SOURCES ARE IDENTIFIED THE CONTRACTOR SHALL PROVIDE IMMEDIATE MITIGATIVE MEASURES.
7. NO SEDIMENT LADEN RUNOFF SHALL LEAVE THE SITE.
8. THE FINAL LIFT OF EACH DAYS WORK SHALL BE COMPACTED TO PREVENT EROSION OF FILL MATERIALS.
9. THE CONTRACTOR SHALL DISPOSE OF VEGETATION, EQUIPMENT, WASTE MATERIALS AND HYDRAULIC OILS OFF-SITE.
10. AT THE END OF CONSTRUCTION, THE EXISTING DRAIN SYSTEM SURROUNDING THE PROJECT SITE SHALL BE INSPECTED AND ANY ACCUMULATED SEDIMENT AND DEBRIS FOUND SHALL BE REMOVED. FLUSHING INTO THE DRAINAGE SYSTEM IS PROHIBITED.

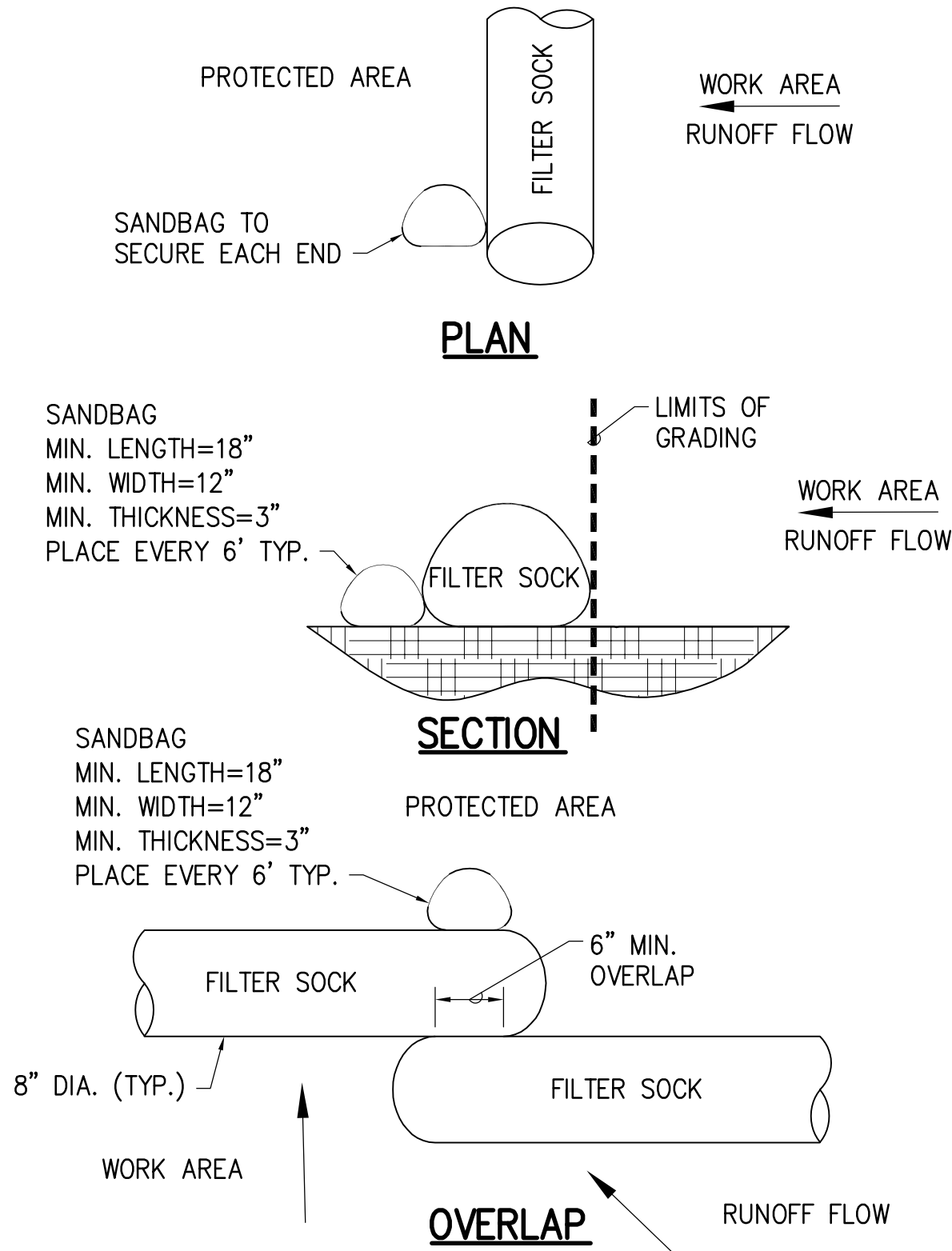


1 CONSTRUCTION ENTRANCE DETAIL
T03 NOT TO SCALE

GEOTEXTILE REQUIREMENTS	
PHYSICAL PROPERTY	REQUIREMENTS
GRAB TENSILE STRENGTH	220 LB (ASTM D1682)
ELONGATION FAILURE	60% (ASTM D1682)
MULLEN BURST STRENGTH	430 LB (ASTM D3768)
PUNCTURE STRENGTH	125 LB (ASTM D751, MODIFIED)
EQUIVALENT OPENING	SIZE 40-80 (U.S. STD. SIEVE, CW-02215)



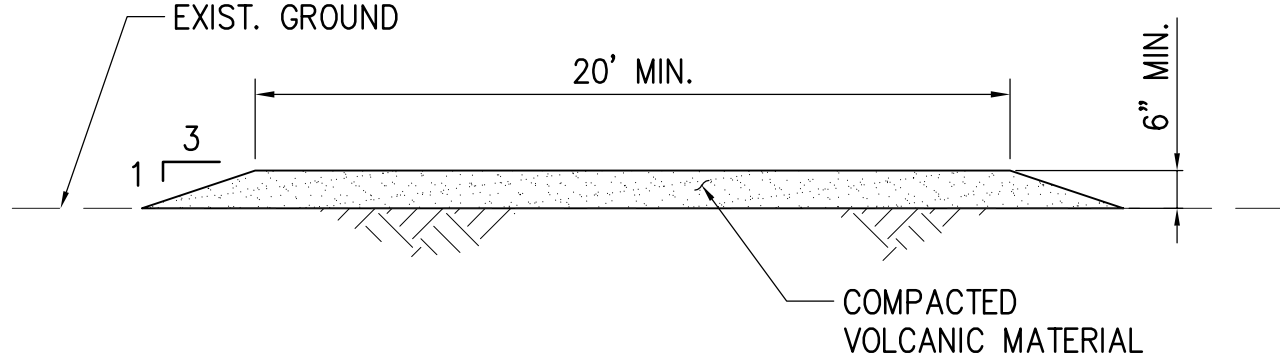
2 SILT FENCE DETAIL
T03 NOT TO SCALE



3 FILTER SOCK DETAIL
T03 NOT TO SCALE

NOTES:

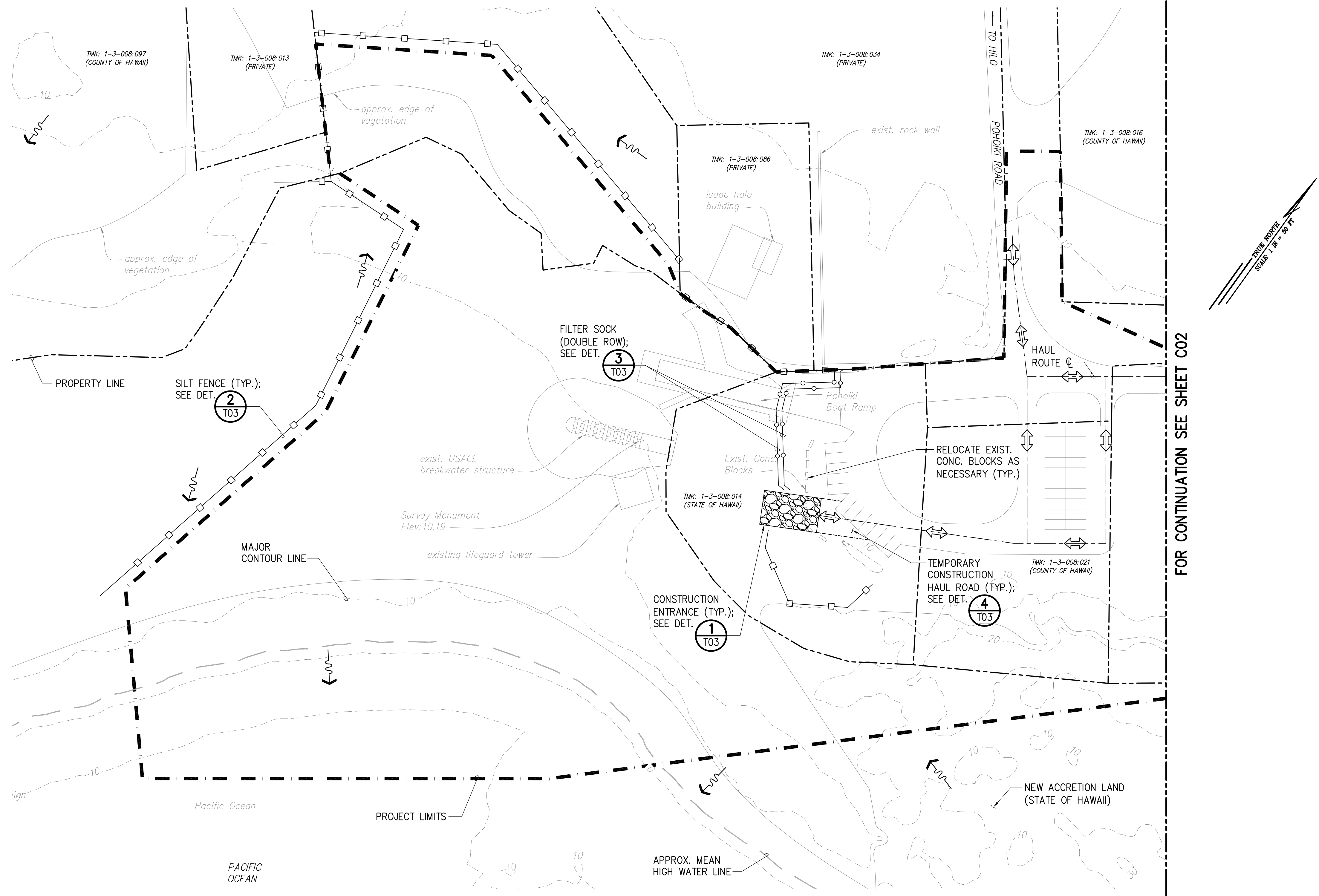
1. REMOVE ACCUMULATED SEDIMENT WHEN DEPTH REACHES 1/3 THE BARRIER HEIGHT.
2. AT COMPLETION OF PROJECT, FILTER SOCKS MATERIAL INCLUDING THE COMPOST SHALL BE REMOVED FROM SITE & DISPOSED OF PROPERLY.
3. FILTER SOCK SHALL MEET THE REQUIREMENTS OF THE STATE CONSTRUCTION BMP FIELD MANUAL, SC-6 COMPOST FILTER BERM.
4. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.
5. CONTRACTOR IS NOT REQUIRED TO STAKE COMPOST FILTER SOCKS BUT SHALL ENSURE FILTER SOCKS REMAIN IN PLACE TO PROVIDE ADEQUATE PROTECTION.



NOTE:
COMPACTED VOLCANIC MATERIAL SHALL BE PLACED ON NON-PAVED AREAS ONLY.

4 TEMPORARY CONSTRUCTION HAUL ROAD
T03 NOT TO SCALE

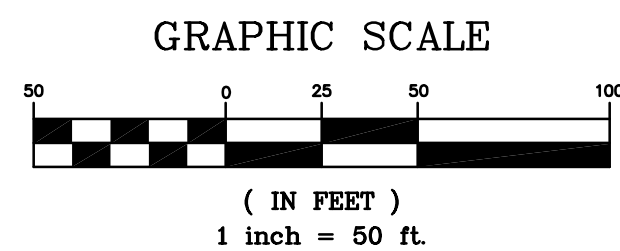
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<div><div>TREVOR R. VAGY</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 14993-C</div><div>HAWAII U.S.A.</div><div>04/30/2024</div><div>EXP. DATE</div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</div><div>Signature</div><div>Date</div></div>		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION			
		POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS			
		EROSION AND SEDIMENT CONTROL NOTES AND DETAILS			
		DESIGNED: TV		SUBMITTED: JULY 2023	
		DRAWN: IE		DATE: JULY 2023	
CHECKED: KK		SCALE: NOT TO SCALE			
APPROVED:		DRAWING NO.			
CHIEF ENGINEER		T03			
DATE					



NOTES:
1. ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.

EROSION AND SEDIMENT CONTROL PLAN 1
SCALE: 1"=50'

- LEGEND**
- | | | | |
|----------|---------------------------|---------|---|
| --- | PROPERTY LINE | ----- | TEMPORARY CONSTRUCTION HAUL ROAD LIMITS |
| --- | PROJECT LIMITS | ---○--- | TEMP. FILTER SOCK |
| --- | MEAN HIGH WATER LINE | ---□--- | SILT FENCE |
| ---10--- | EXIST. MAJOR CONTOUR LINE | --->--- | DIRECTION OF SURFACE RUNOFF |
| --- | HAUL ROUTE CENTERLINE | ---X--- | CONSTRUCTION ENTRANCE |



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STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

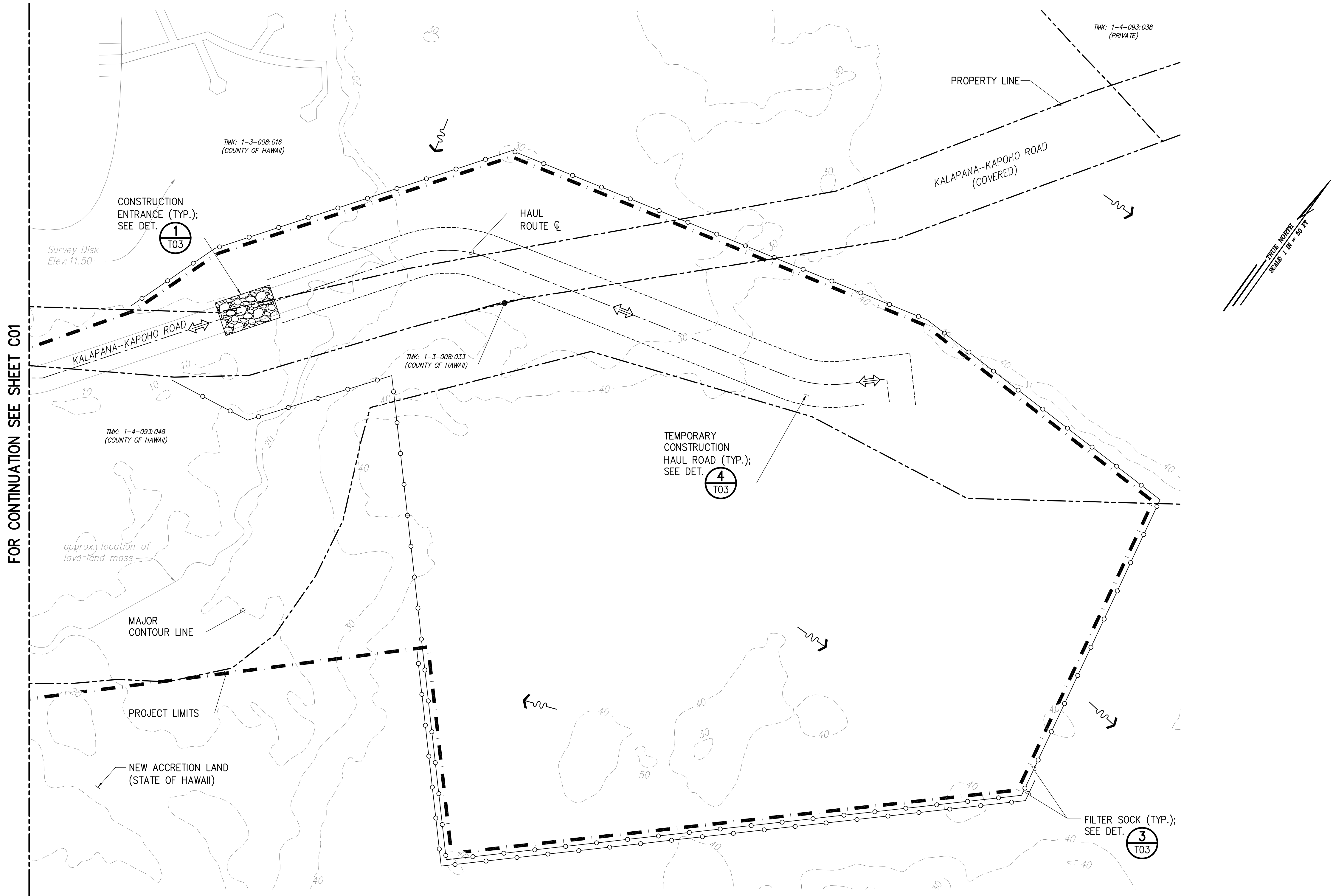
DIVISION OF BOATING AND OCEAN RECREATION

POHOIKI BOAT RAMP

DREDGING AND EXCAVATION

OF VOLCANIC DEBRIS

EROSION AND SEDIMENT CONTROL PLAN 1



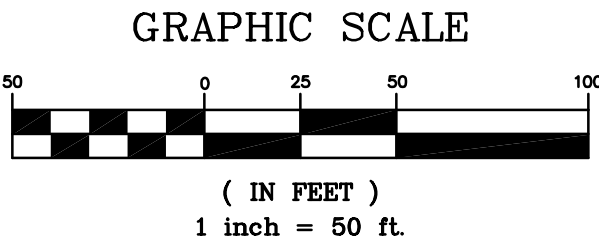
NOTES:
1. ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.

EROSION AND SEDIMENT CONTROL PLAN 2

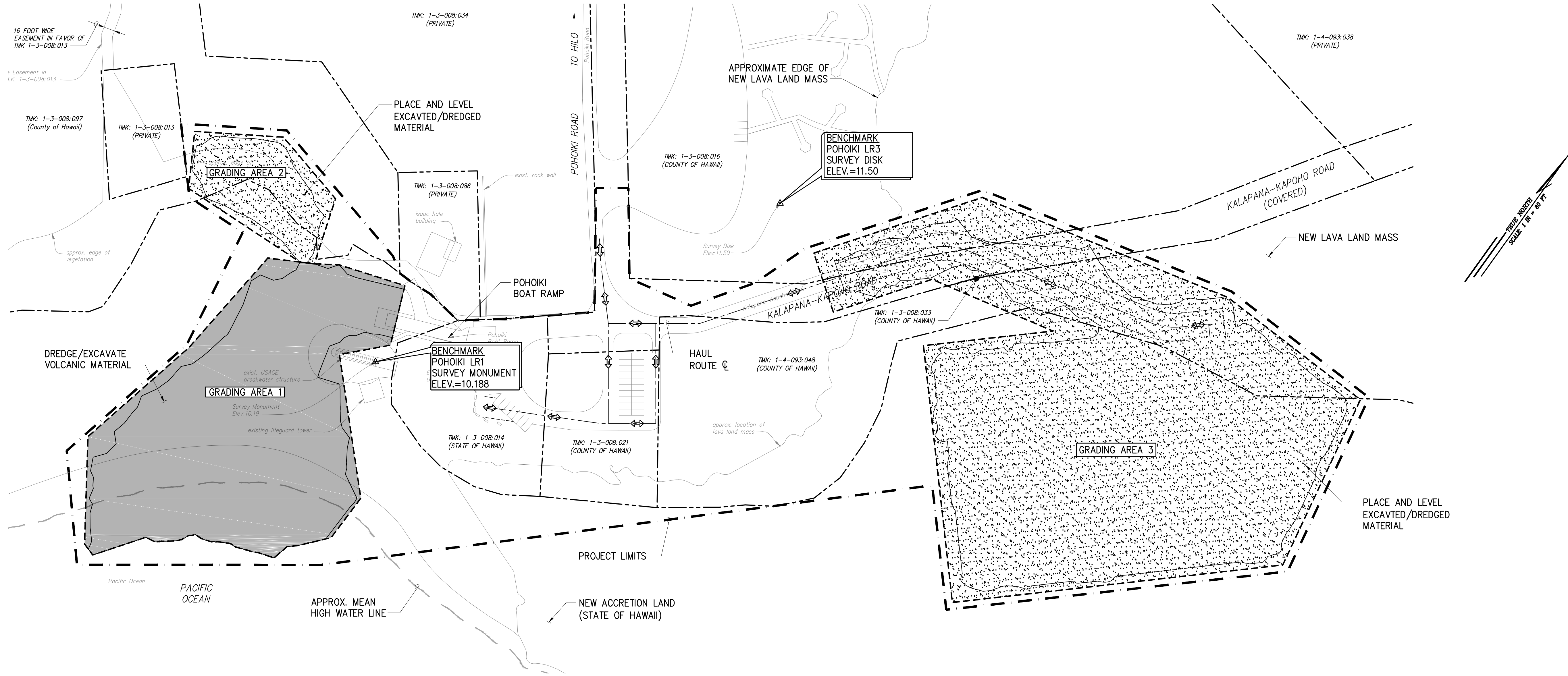
SCALE: 1"=50'

LEGEND

- | | | | |
|----------|---------------------------|---------|---|
| --- | PROPERTY LINE | ----- | TEMPORARY CONSTRUCTION HAUL ROAD LIMITS |
| --- | PROJECT LIMITS | ---o--- | TEMP. FILTER SOCK |
| --- | MEAN HIGH WATER LINE | ---□--- | SILT FENCE |
| ---10--- | EXIST. MAJOR CONTOUR LINE | ---w--- | DIRECTION OF SURFACE RUNOFF |
| --- | HAUL ROUTE CENTERLINE | ---x--- | CONSTRUCTION ENTRANCE |



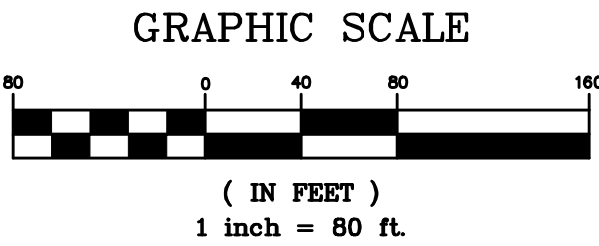
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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS					
EROSION AND SEDIMENT CONTROL PLAN 2					
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: 1"=50'			
APPROVED:		CHIEF ENGINEER		DATE	DRAWING NO. C02



GENERAL SITE PLAN
SCALE: 1"=80'

NOTE:
1. ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.

- LEGEND**
- DREDGING/EXCAVATION AREA
 - FILL AREA
 - PROJECT LIMITS
 - GRADING LIMITS
 - MEAN HIGH WATER LINE
 - TEMPORARY CONSTRUCTION HAUL ROAD LIMITS
 - HAUL ROUTE CENTERLINE



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			POHOIKI BOAT RAMP			
			DREDGING AND EXCAVATION OF VOLCANIC DEBRIS			
GENERAL SITE PLAN						
DESIGNED: TV				SUBMITTED: JULY 2023		
DRAWN: IE				DATE: JULY 2023		
CHECKED: KK				SCALE: 1"=80'		
APPROVED:					DRAWING NO.	
CHIEF ENGINEER					C03	

CURVE DATA						
○	Δ	Δ/2	R	T	C	L
1	80°12'12"	40°06'06"	66'	55.58'	85.03'	92.39'
2	80°12'18"	40°06'09"	82'	69.05'	105.64'	114.78'
3	80°12'12"	40°06'06"	50'	42.12'	64.41'	70.00'

COORDINATE CONTROL			
□	AZIMUTH	DISTANCE	DESCRIPTION
1	170°23'43"	71.04'	BENCHMARK LR1 TO CHANNEL BASELINE STA. 0+00
2	184°36'10"	412.26'	CHANNEL BASELINE STA. 5+50 TO BENCHMARK LR1
3	97°21'03"	361.84'	BENCHMARK LR1 TO EDGE OF GRADING AREA 2
4	310°30'56"	243.54'	EDGE OF GRADING AREA 2 TO BENCHMARK LR1

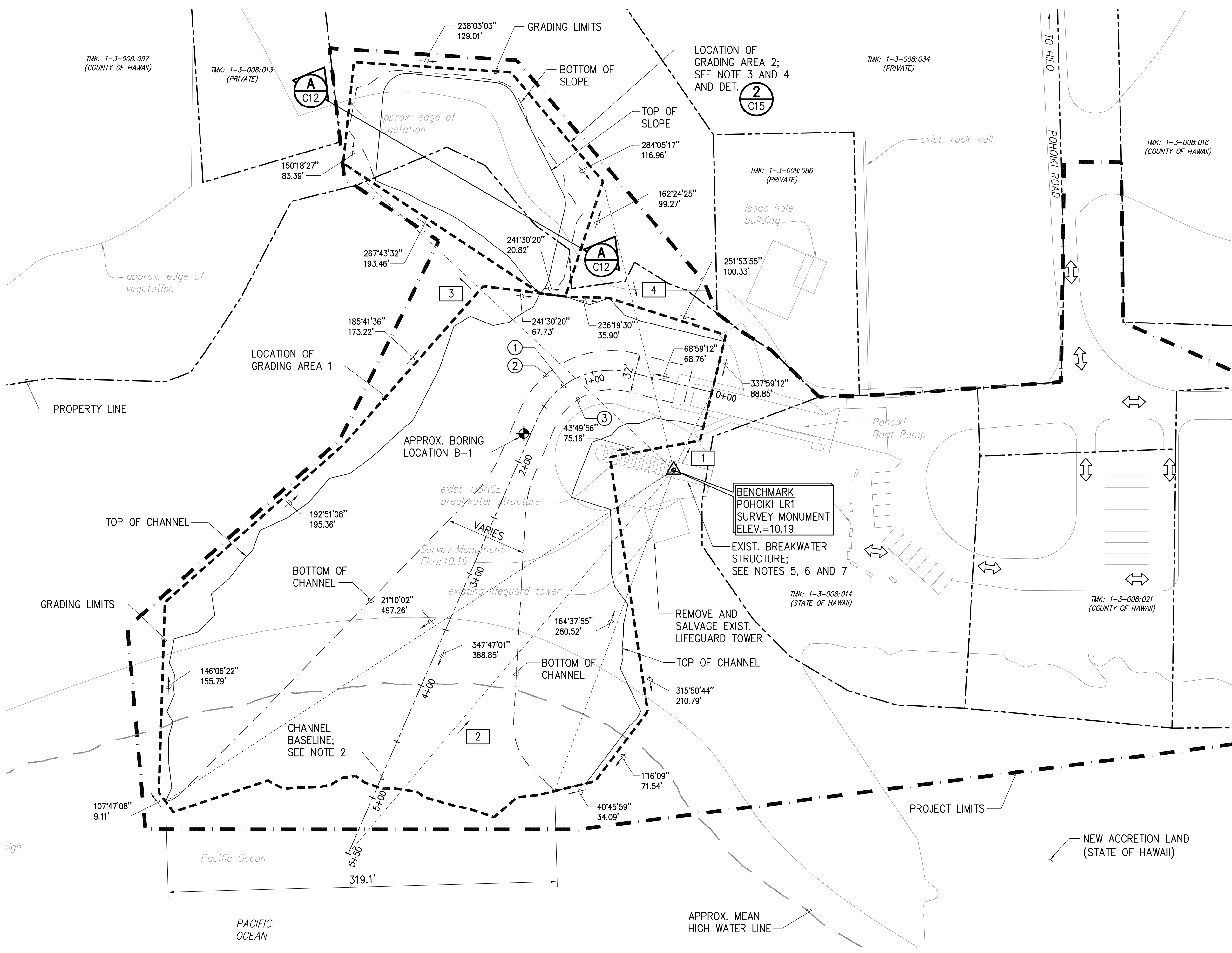
NOTES:

- ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.
- SEE SHEET C08 FOR CHANNEL PROFILE VIEW AND SHEETS C09 TO C11 FOR CHANNEL BASELINE SECTION VIEWS.
- SEE SHEET C12 FOR GRADING AREA 2 BASELINE SITE SECTION.
- EXCAVATED/DREDGED VOLCANIC MATERIAL SHALL BE PLACED IN GRADING AREAS 2 AND 3. CONTRACTOR IS TO COORDINATE WITH ENGINEER IN FINAL PLACEMENT OF FILL.
- ANY DAMAGE TO THE EXIST. BREAKWATER STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF THE U.S. ARMY CORPS OF ENGINEERS AT NO ADDITIONAL COST TO THE STATE.
- SETTLED SAND AND COBBLES ON AND/OR THE BREAKWATER STRUCTURE SHALL BE MANUALLY REMOVED WITH THE USE OF HAND TOOLS.
- HEAVY EQUIPMENT UTILIZED FOR THE PROJECT SHALL BE PROHIBITED FROM TRAVELING OVER AND NEAR THE EXISTING BREAKWATER FOOTPRINT. SEE DET.

1
C15

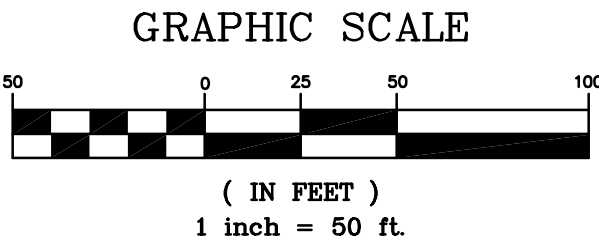
LEGEND

- PROPERTY LINE ——— TOP OF SLOPE
- · — PROJECT LIMITS
- GRADING LIMITS
- — — MEAN HIGH WATER LINE
- - - - - BOTTOM OF SLOPE/CHANNEL



SITE PLAN 1

SCALE: 1"=50'



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS					
SITE PLAN 1					
DESIGNED: TV					
SUBMITTED: JULY 2023					
DRAWN: IE					
DATE: JULY 2023					
CHECKED: KK					
SCALE: 1"=50'					
APPROVED:					
CHIEF ENGINEER					
DATE					
DRAWING NO. C04					

CURVE DATA						
○	Δ	Δ/2	R	T	C	L
4	39°51'52"	19°55'56"	100'	36.26'	68.18'	69.58'
5	28°00'14"	14°00'07"	100'	24.94'	48.39'	48.88'

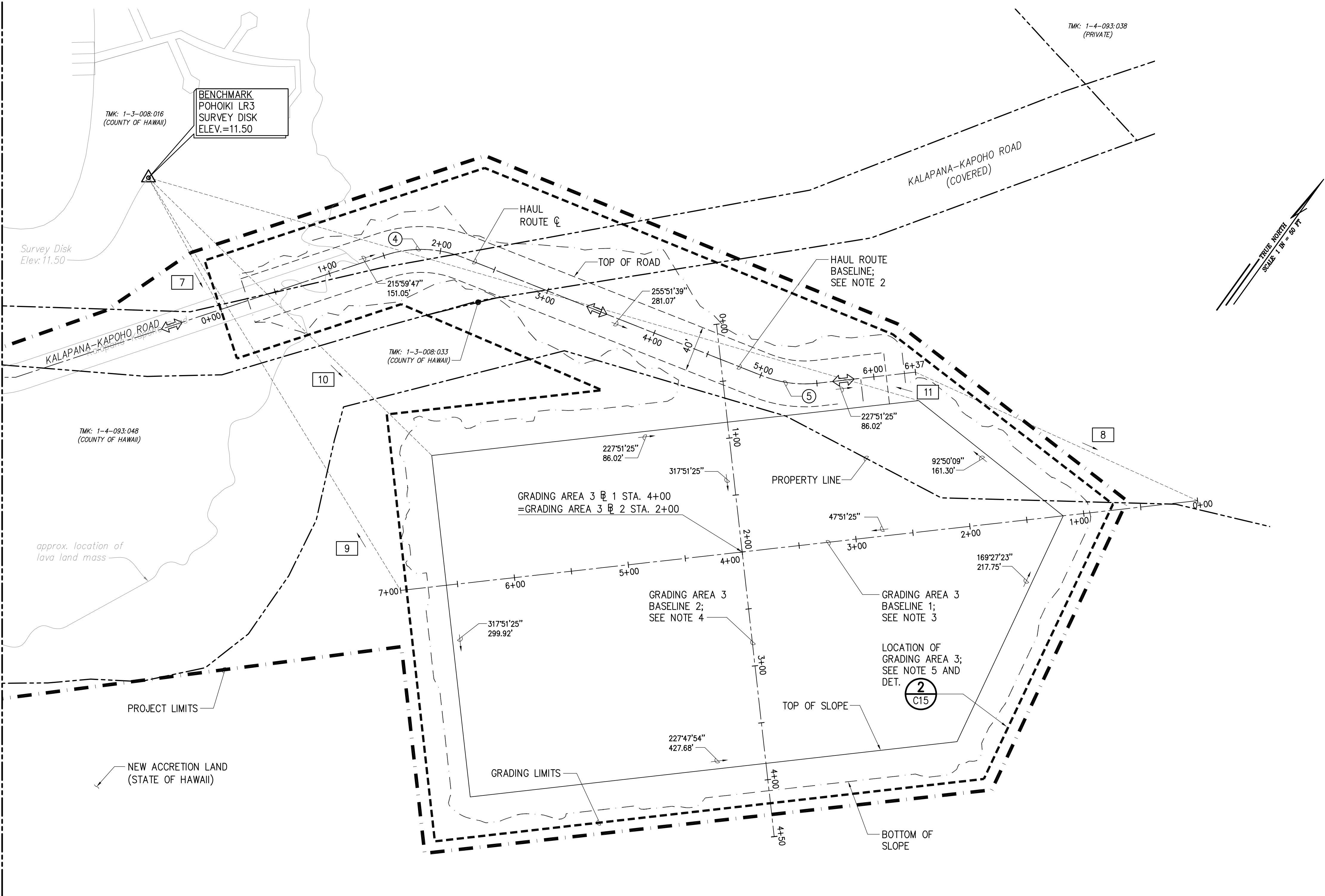
COORDINATE CONTROL			
□	AZIMUTH	DISTANCE	DESCRIPTION
7	295°32'02"	131.14'	BENCHMARK LR3 TO HAUL ROUTE BASELINE STA. 0+00
8	258°46'25"	270.56'	HAUL ROUTE BASELINE STA. 6+37 TO GRADING AREA 3 BASELINE 1 STA. 0+00
9	112°51'19"	422.09'	GRADING AREA 3 BASELINE 1 STA. 7+00 TO TO BENCHMARK LR3
10	278°42'32"	346.25'	BENCHMARK LR3 TO EDGE OF GRADING AREA 3
11	70°25'10"	699.84'	EDGE OF GRADING AREA 3 TO BENCHMARK LR3

- NOTES:
- ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.
 - SEE SHEET C08 FOR HAUL ROUTE PROFILE VIEW AND SHEET C12 FOR HAUL ROUTE SECTION VIEWS.
 - SEE SHEET C13 FOR GRADING AREA 3 BASELINE 1 SECTION VIEWS.
 - SEE SHEET C14 FOR GRADING AREA 3 BASELINE 2 SECTION VIEWS.
 - EXCAVATED/DREDGED VOLCANIC MATERIAL SHALL BE PLACED IN GRADING AREAS 2 AND 3. CONTRACTOR IS TO COORDINATE WITH ENGINEER IN FINAL PLACEMENT OF FILL.

LEGEND

- PROPERTY LINE
- PROJECT LIMITS
- GRADING LIMITS
- MEAN HIGH WATER LINE
- HAUL ROUTE CENTERLINE
- BOTTOM OF SLOPE
- TOP OF SLOPE

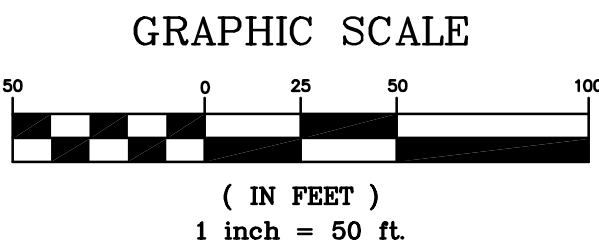
FOR CONTINUATION SEE SHEET C04



SITE PLAN 2

SCALE: 1"=50'

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
TREVOR R. VAGY LICENSED PROFESSIONAL ENGINEER No. 14993-C HAWAII U.S.A.		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS SITE PLAN 2			
04/30/2024 EXP. DATE					
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION					
Signature		Date		DRAWING NO. C05	
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: 1"=50'			
APPROVED:		CHIEF ENGINEER		DATE	



GRADING QUANTITY SUMMARY	
EXCAVATION	42,000 C.Y.
EMBANKMENT	42,000 C.Y.

- NOTES:
- ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.
 - ANY DAMAGE TO THE EXIST. BREAKWATER STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF THE U.S. ARMY CORPS OF ENGINEERS AT THE CONTRACTOR'S EXPENSE.
 - SETTLED SAND AND COBBLES ON AND/OR OVER THE BREAKWATER STRUCTURE MAY BE MANUALLY REMOVED WITH THE USE OF HAND TOOLS.
 - HEAVY EQUIPMENT UTILIZED FOR THE PROJECT SHALL BE PROHIBITED FROM TRAVELING OVER AND NEAR THE EXISTING BREAKWATER FOOTPRINT. SEE DET.
 - THE CONTRACTOR SHALL ONLY EXCAVATE ACCUMULATED VOLCANIC DEBRIS. PRE ERUPTION MATERIAL SHALL REMAIN UNDISTURBED IF ENCOUNTERED DURING CONSTRUCTION.

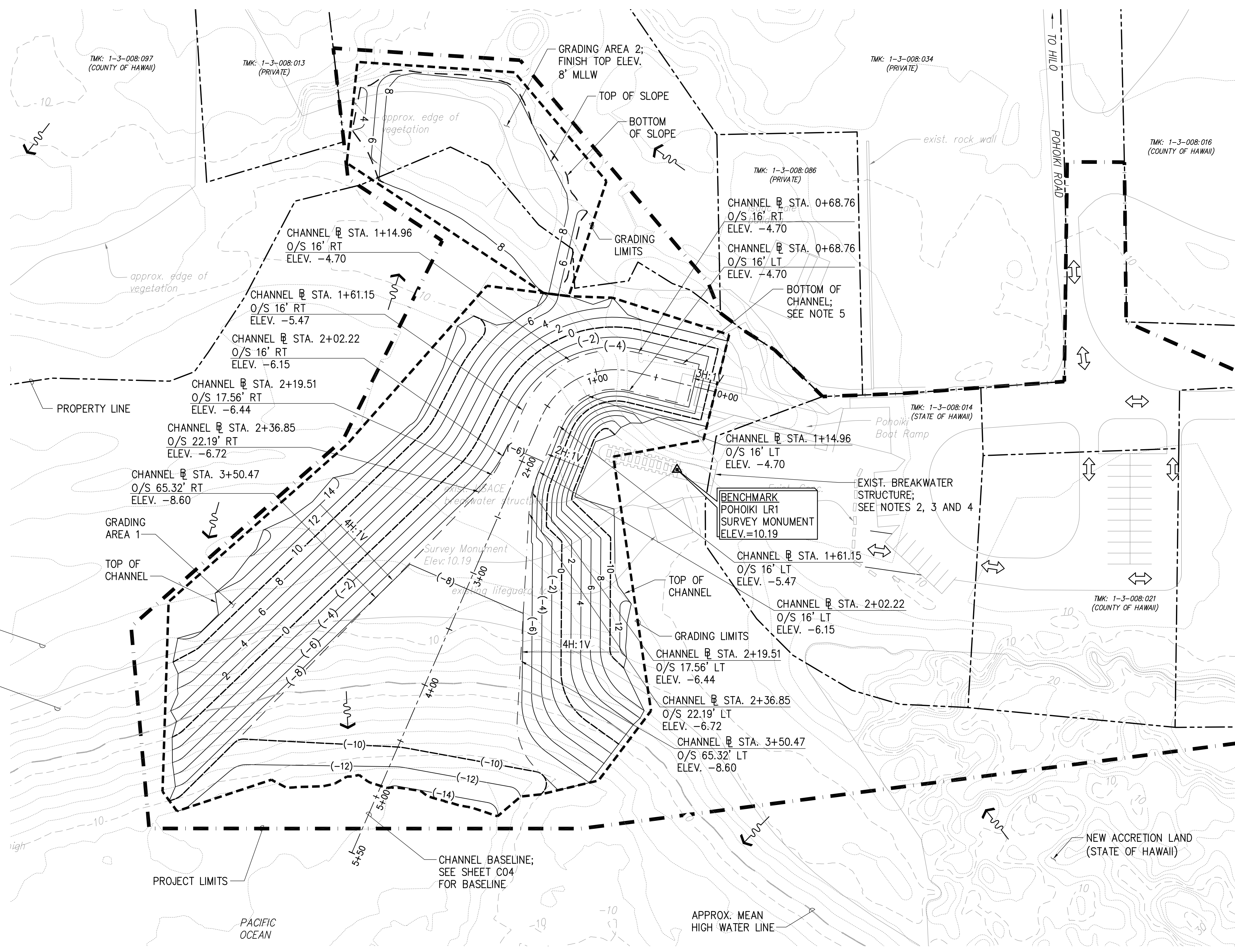
1
C13

LEGEND

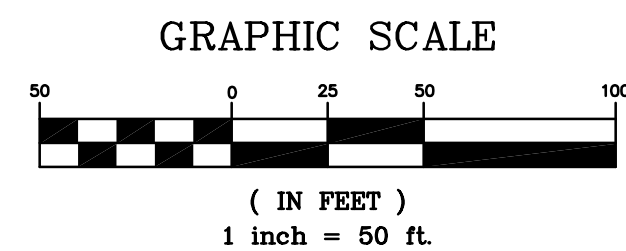
- | | | | |
|------------|---------------------------|------------|-----------------------------|
| ----- | PROPERTY LINE | ----- | EXIST. MINOR CONTOUR LINE |
| ----- | PROJECT LIMITS | --- 10 --- | NEW MAJOR CONTOUR LINE |
| ----- | GRADING LIMITS | --- 8 --- | NEW MINOR CONTOUR LINE |
| ----- | HAUL ROUTE CENTERLINE | --->--- | DIRECTION OF SURFACE RUNOFF |
| --- 10 --- | EXIST. MAJOR CONTOUR LINE | ----- | BOTTOM OF SLOPE |
| | | ----- | TOP OF SLOPE |

MINOR
CONTOUR LINE

MAJOR
CONTOUR LINE



GRADING PLAN 1
SCALE: 1"=50'



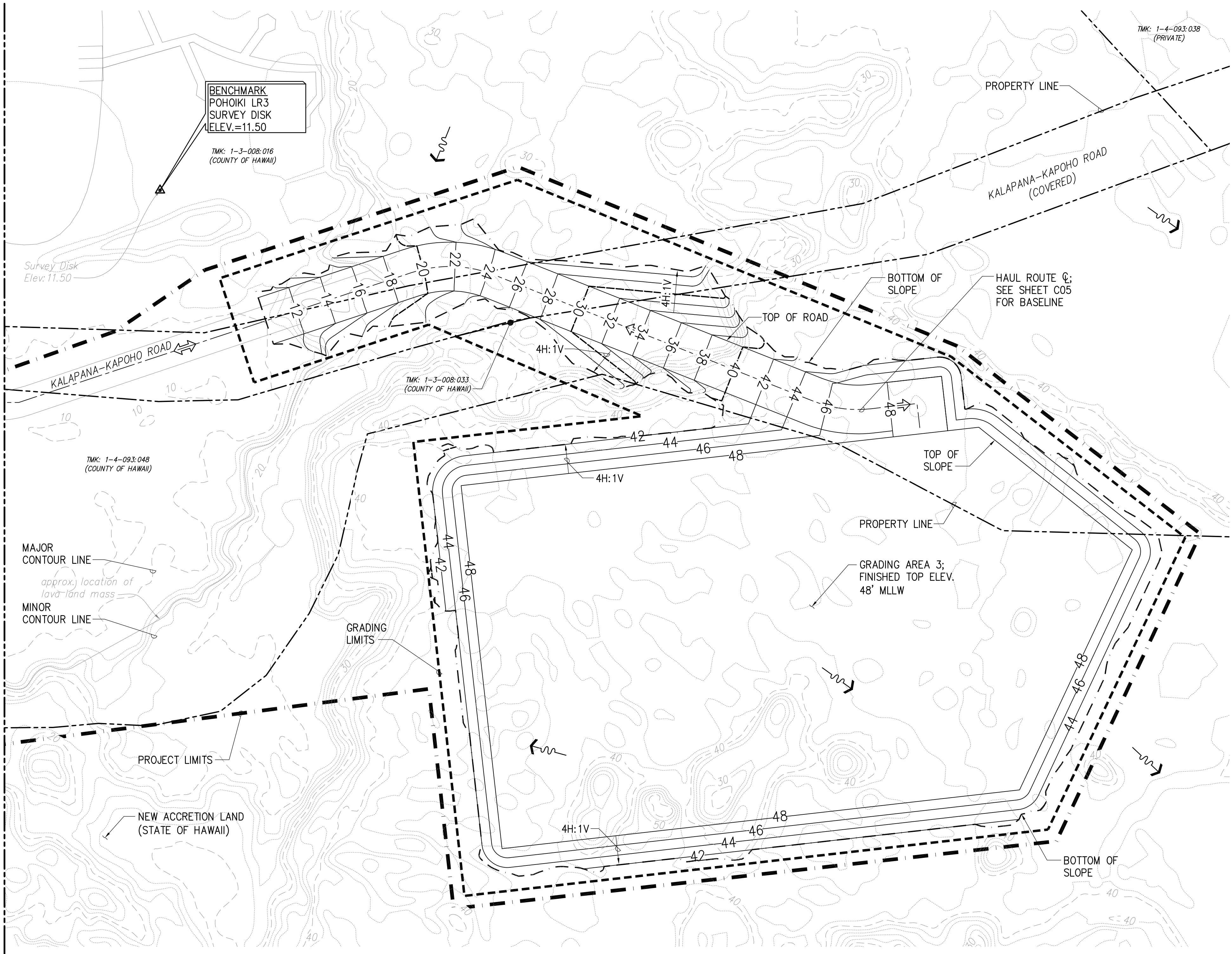
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS					
GRADING PLAN 1					
DESIGNED: TV					
SUBMITTED: JULY 2023					
DRAWN: IE					
DATE: JULY 2023					
CHECKED: KK					
SCALE: 1"=50'					
APPROVED:					
CHIEF ENGINEER					
DATE					
DRAWING NO. C06					

FOR CONTINUATION SEE SHEET C06

NOTES:
1. ELEVATIONS SHOWN USE THE LOCAL MEAN LOWER LOW WATER (MLLW) ELEVATION AS THEIR DATUM.

LEGEND

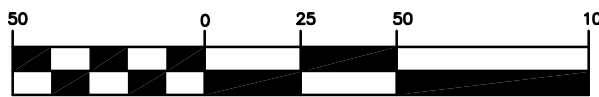
- | | | | |
|------------|---------------------------|------------|-----------------------------|
| ----- | PROPERTY LINE | | EXIST. MINOR CONTOUR LINE |
| --- | PROJECT LIMITS | --- 10 --- | NEW MAJOR CONTOUR LINE |
| ----- | GRADING LIMITS | --- 8 --- | NEW MINOR CONTOUR LINE |
| --- | HAUL ROUTE CENTERLINE | ~> | DIRECTION OF SURFACE RUNOFF |
| --- 10 --- | EXIST. MAJOR CONTOUR LINE | - - - - | BOTTOM OF SLOPE |
| | | ----- | TOP OF SLOPE |



GRADING PLAN 2

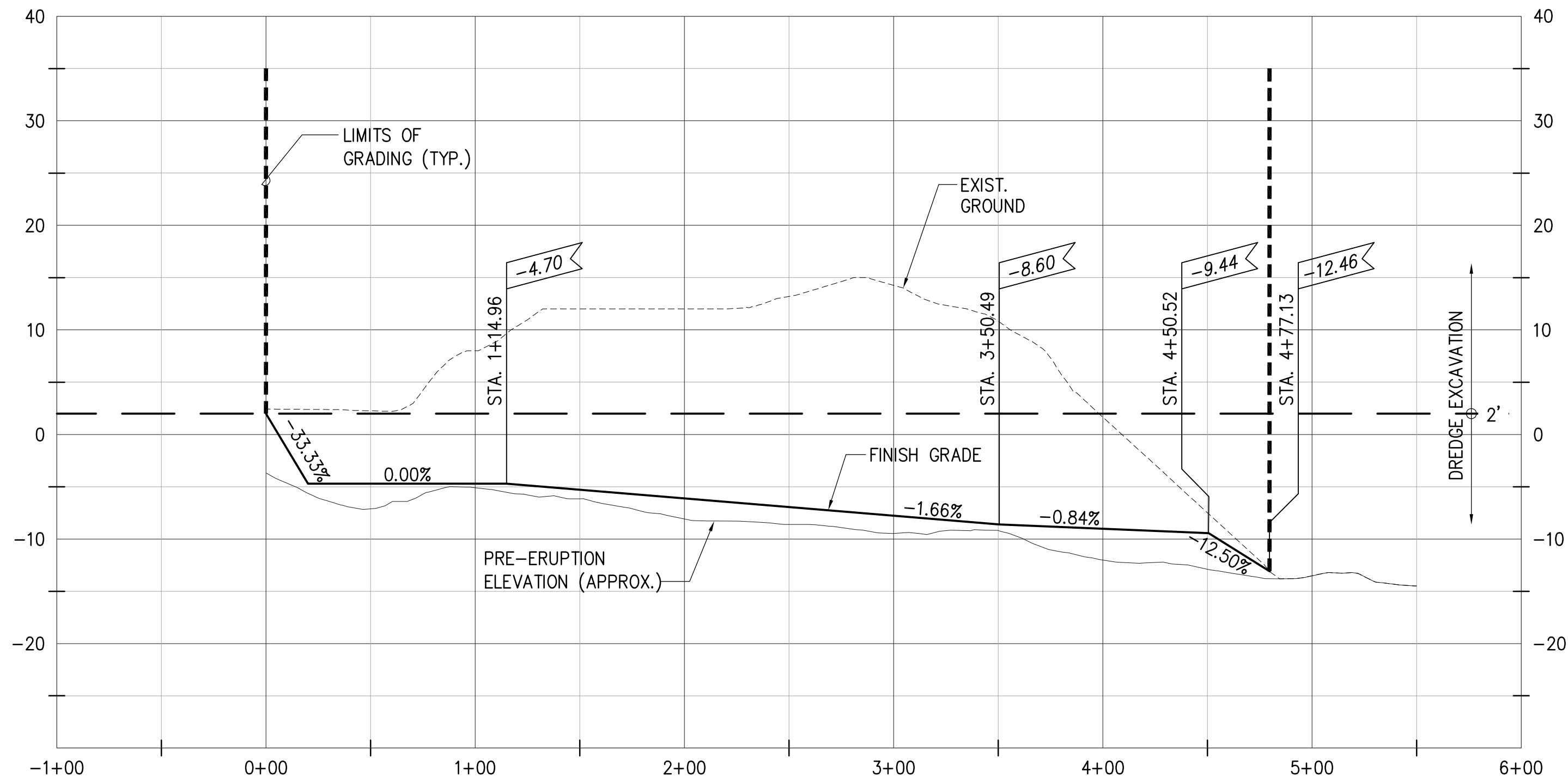
SCALE: 1"=50'

GRAPHIC SCALE

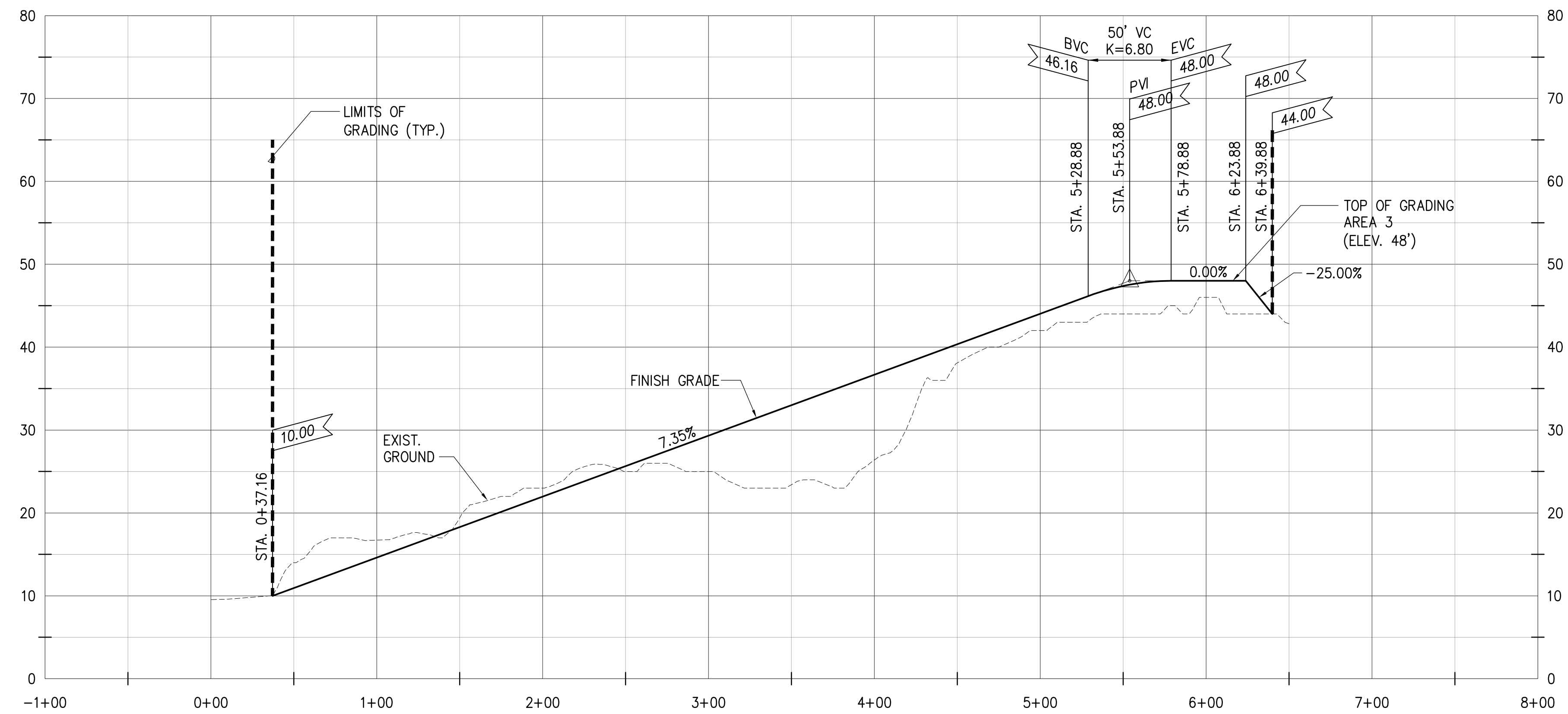


(IN FEET)
1 inch = 50 ft.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS					
GRADING PLAN 2					
DESIGNED: TV					
SUBMITTED: JULY 2023					
DRAWN: IE					
DATE: JULY 2023					
CHECKED: KK					
SCALE: 1"=50'					
APPROVED:					
CHIEF ENGINEER					
DATE					
DRAWING NO. C07					

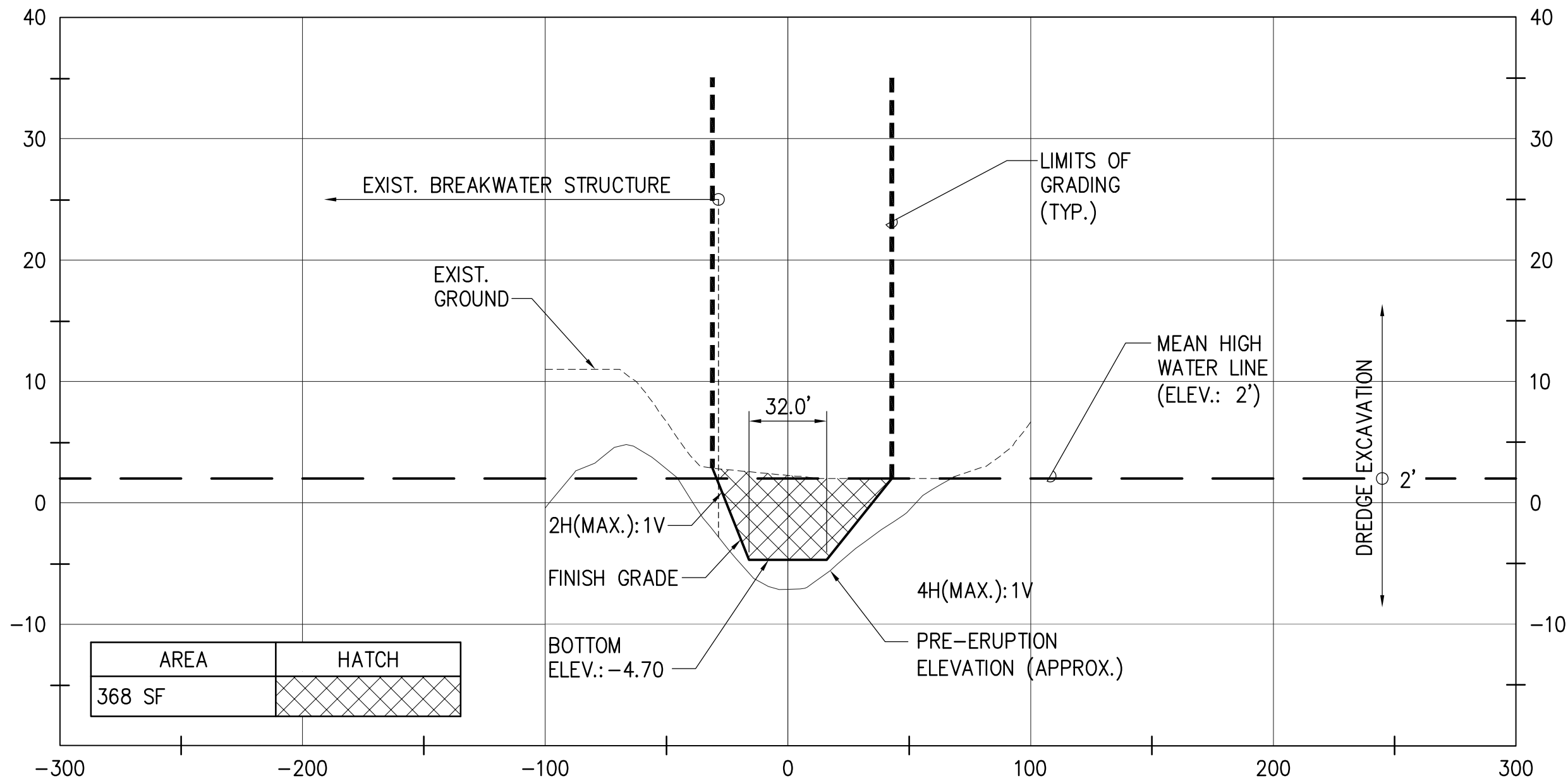


CHANNEL BASELINE PROFILE VIEW
SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=10'



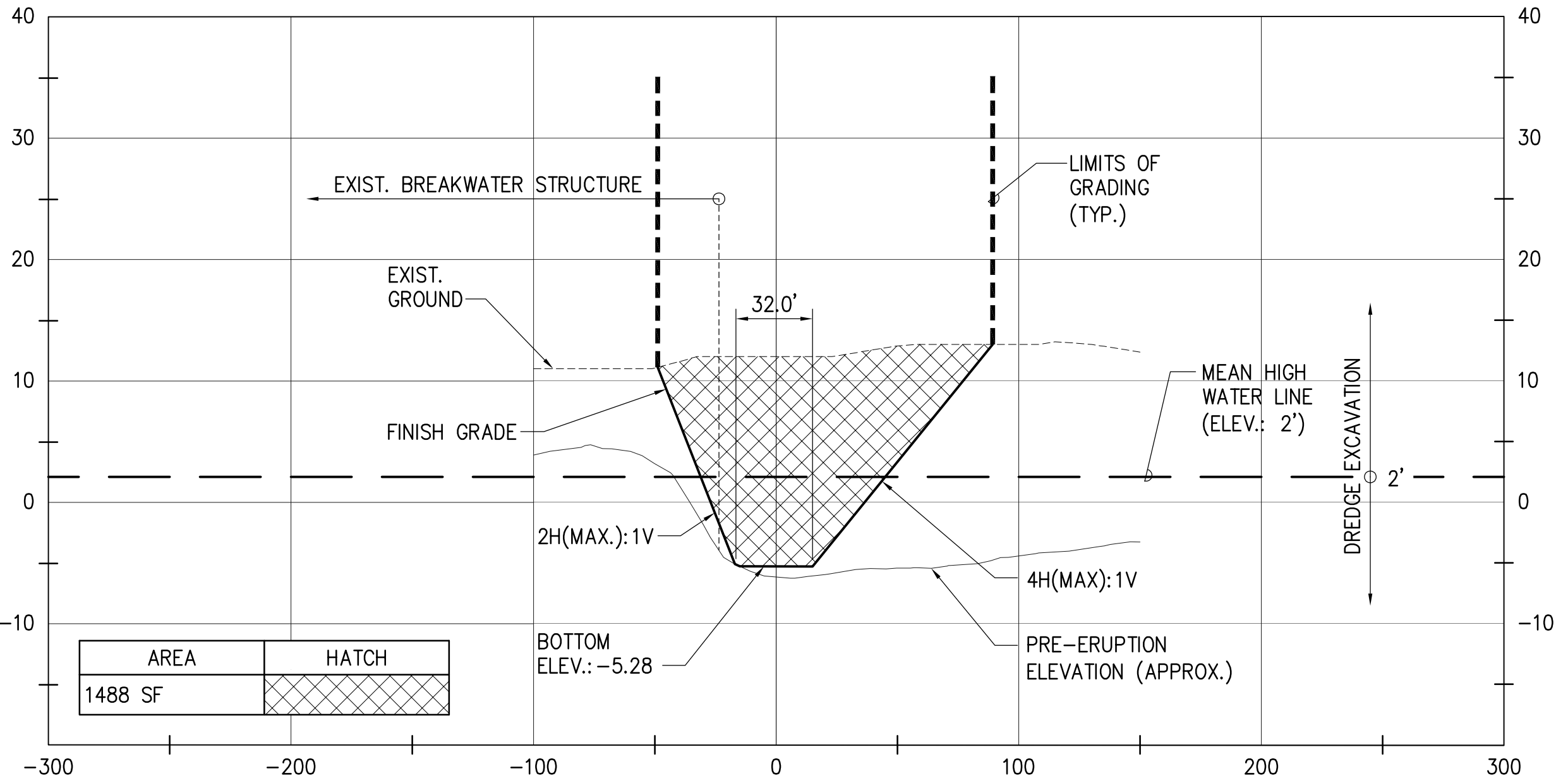
HAUL ROAD BASELINE PROFILE VIEW
SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=10'

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		<div><div><div>TREYOR R. VAGLEY</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 14993-C</div><div>HAWAII U.S.A.</div></div><div>04/30/2024</div><div>EXP. DATE</div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</div><div>SignatureDate</div></div>	STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION		
POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS					
CHANNEL AND HAUL ROAD PROFILES					
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: AS NOTED			
APPROVED:		CHIEF ENGINEER		DATE	DRAWING NO. C08



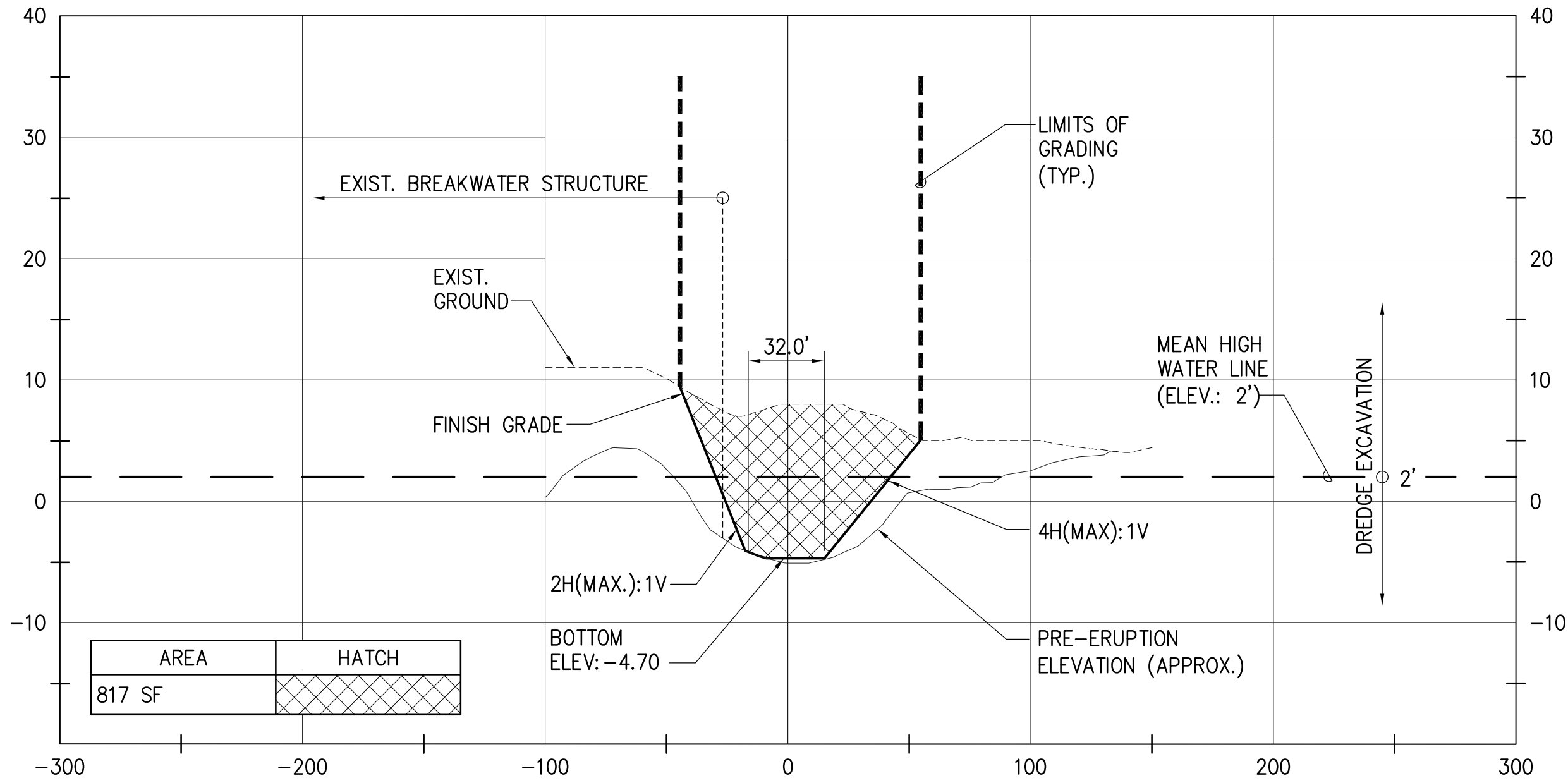
CHANNEL BASELINE SECTION VIEW – STA. 0+50

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



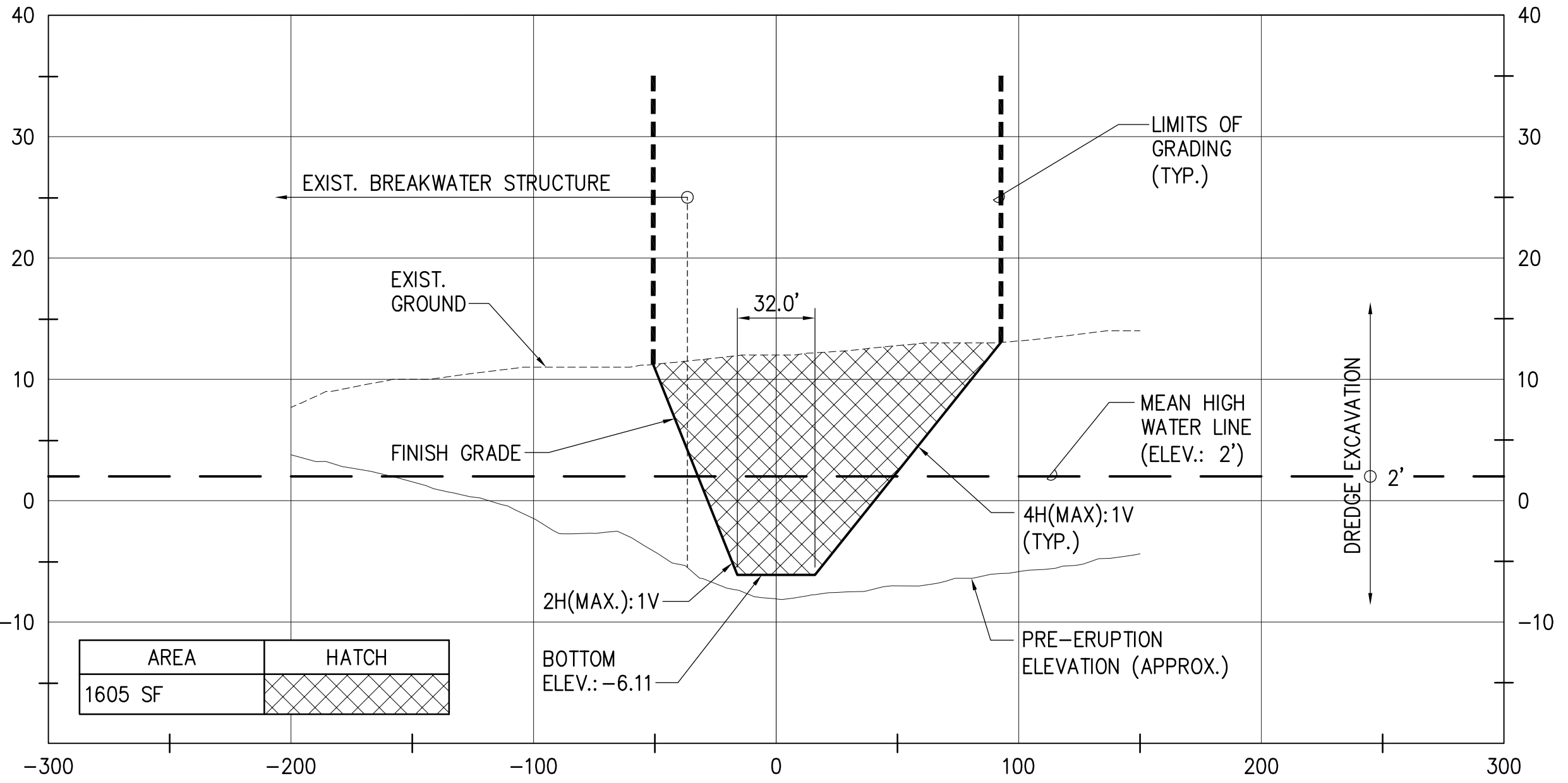
CHANNEL BASELINE SECTION VIEW – STA. 1+50

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



CHANNEL BASELINE SECTION VIEW – STA. 1+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

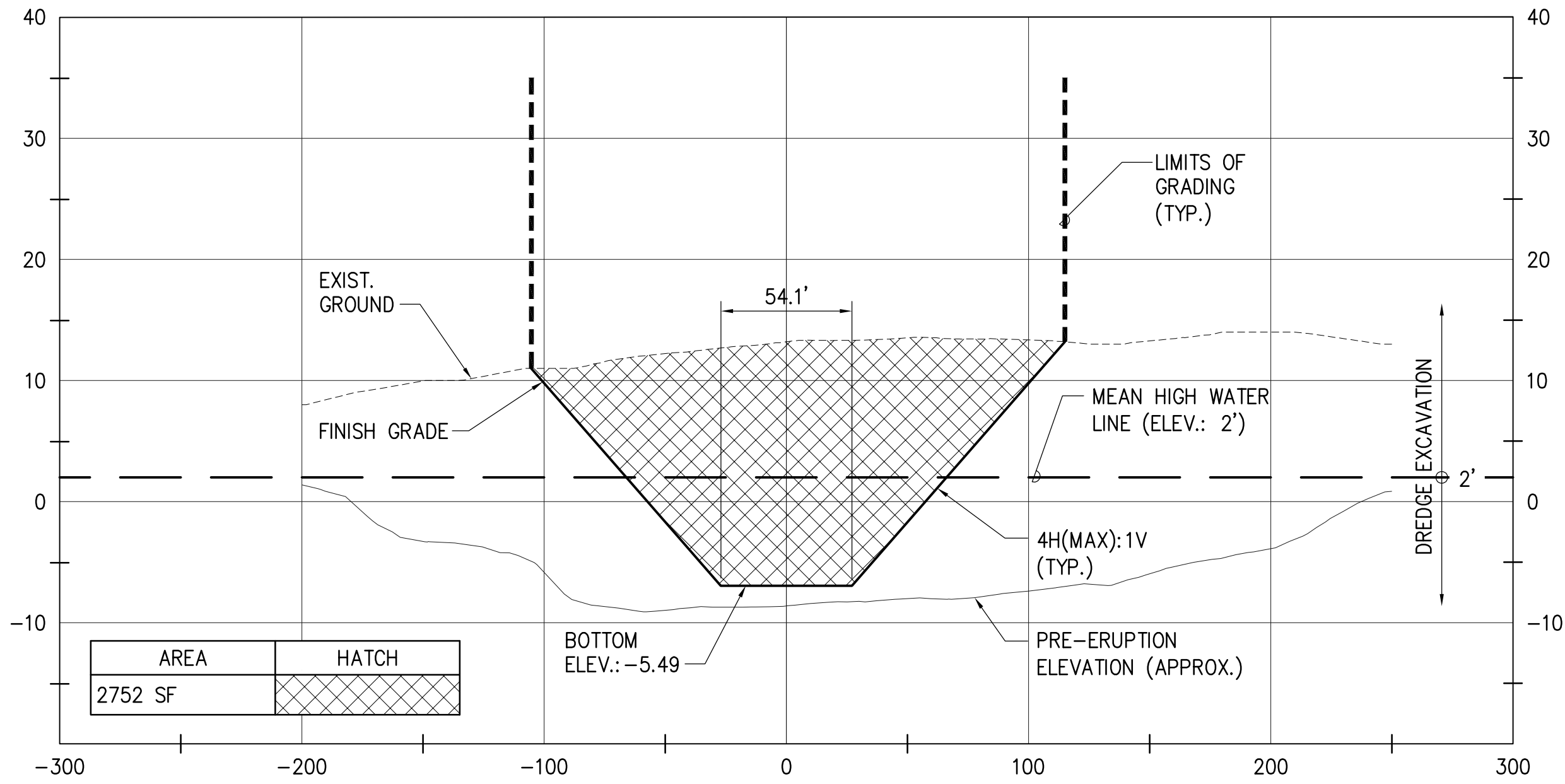


CHANNEL BASELINE SECTION VIEW – STA. 2+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

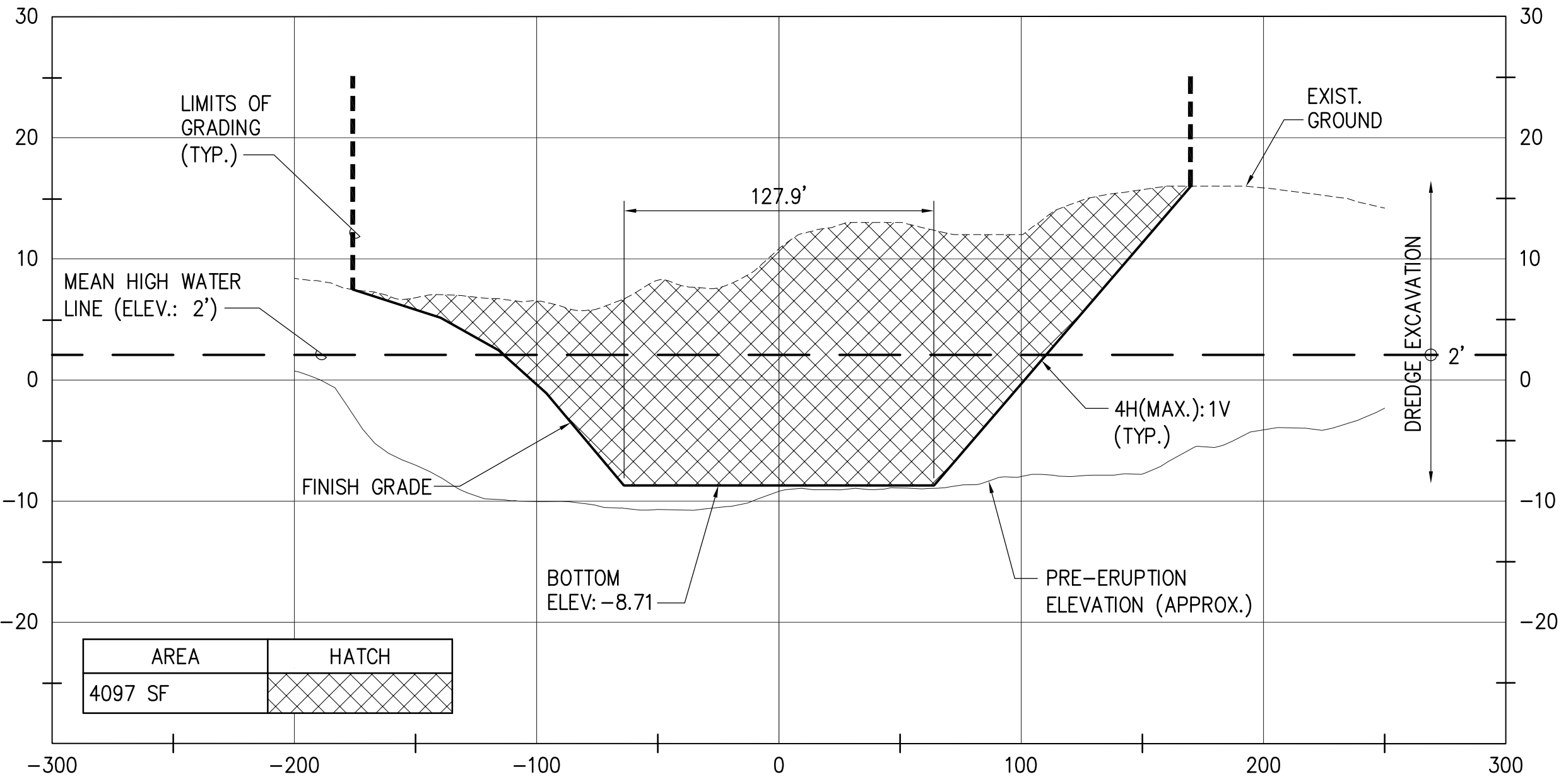
NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
TREVOR R. VAGY LICENSED PROFESSIONAL ENGINEER No. 14993-C HAWAII U.S.A. 04/30/2024 EXP. DATE		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS SECTION VIEWS 1			
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: AS NOTED			
APPROVED:		CHIEF ENGINEER		DRAWING NO. C09	
Signature		Date		DATE	



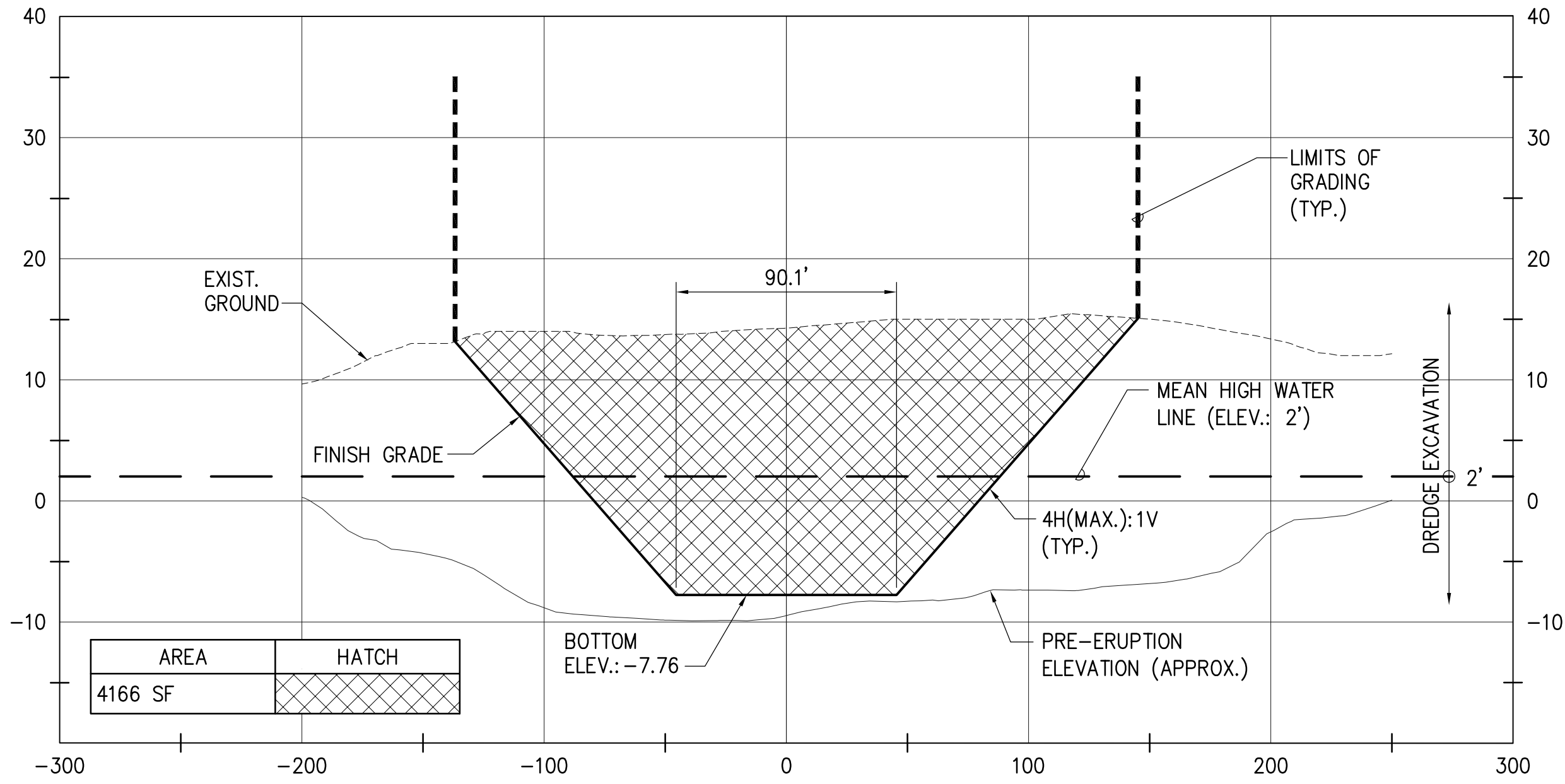
CHANNEL BASELINE SECTION VIEW – STA. 2+50

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



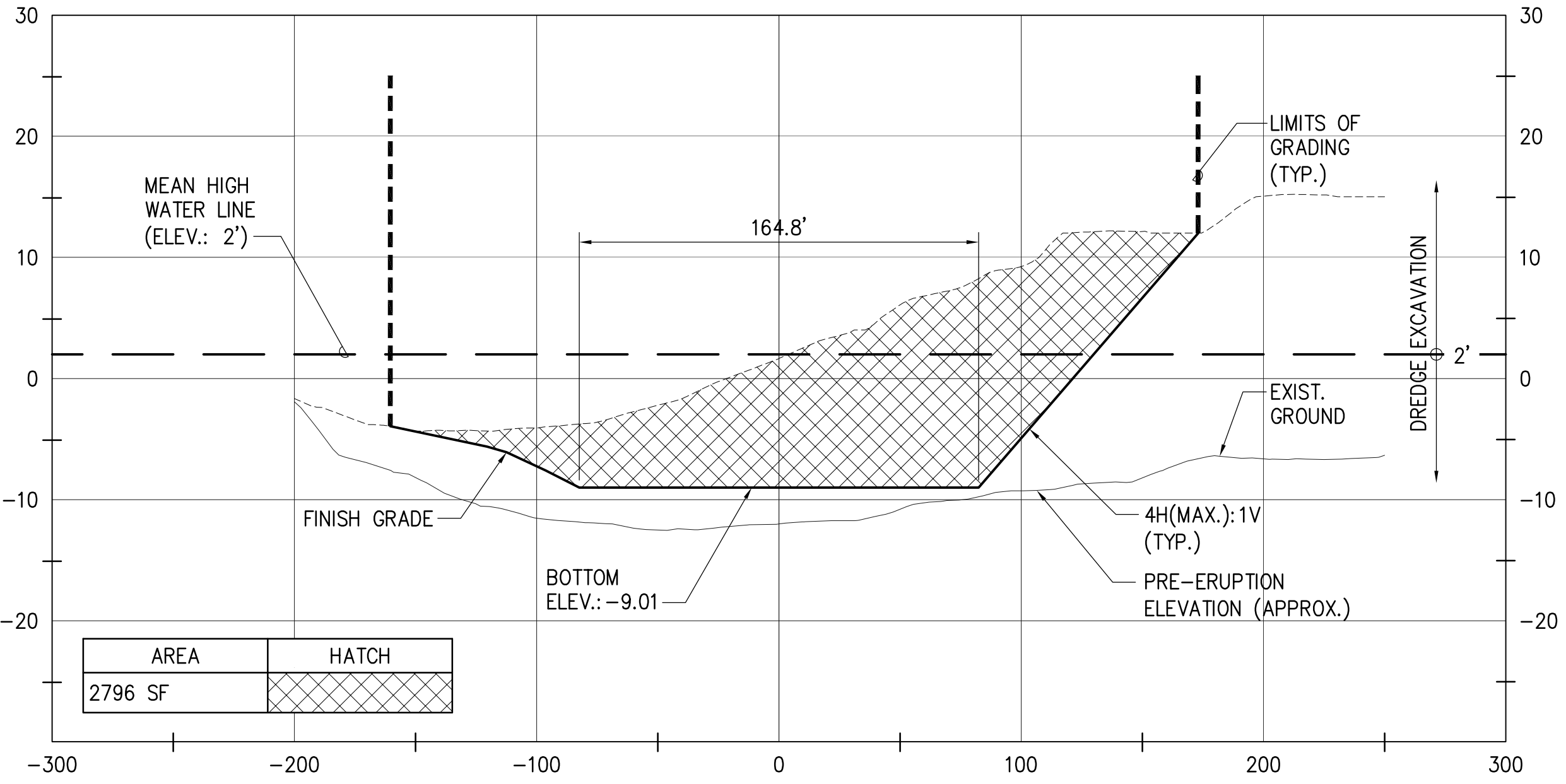
CHANNEL BASELINE SECTION VIEW – STA. 3+50

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



CHANNEL BASELINE SECTION VIEW – STA. 3+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

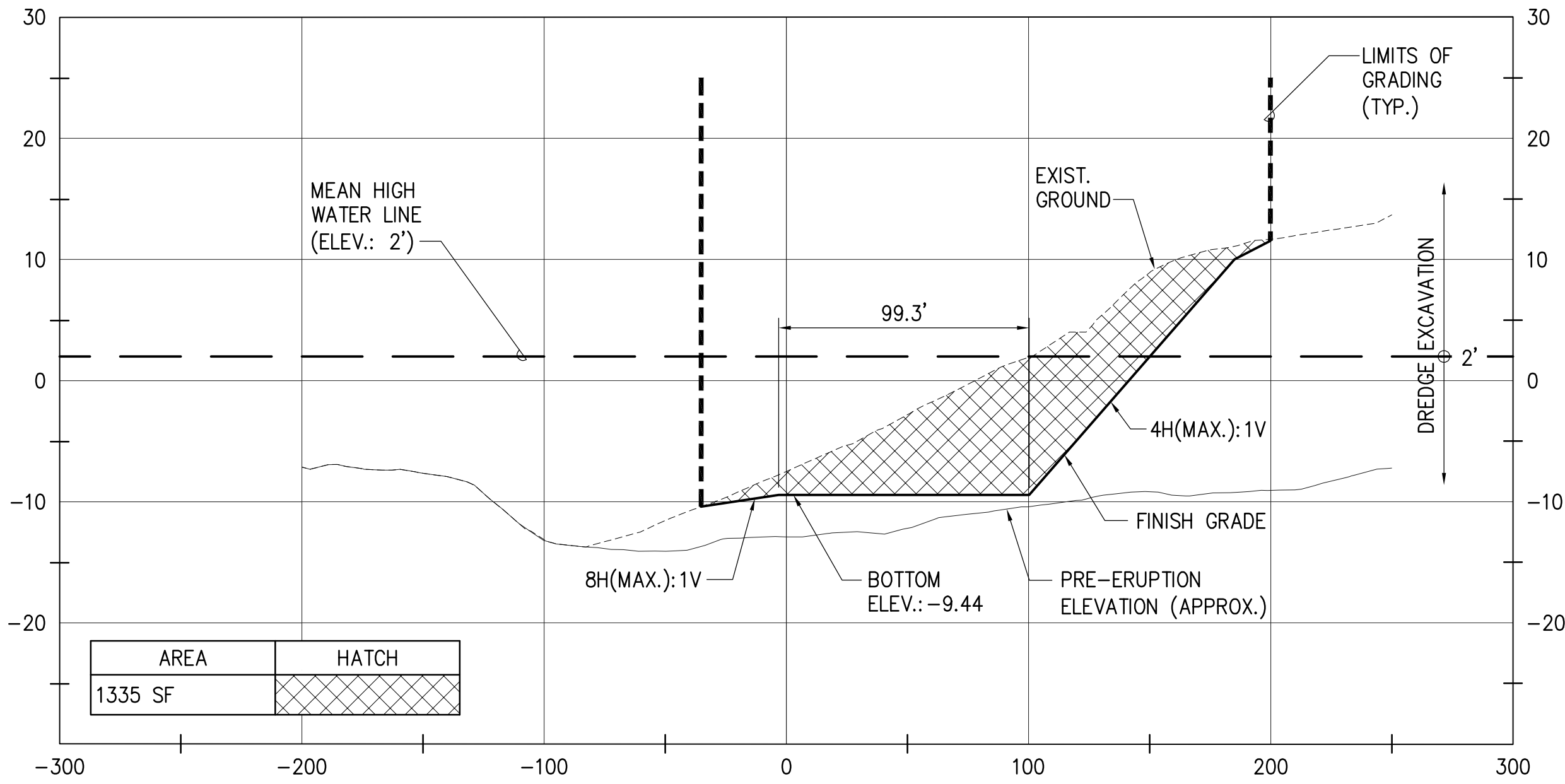


CHANNEL BASELINE SECTION VIEW – STA. 4+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

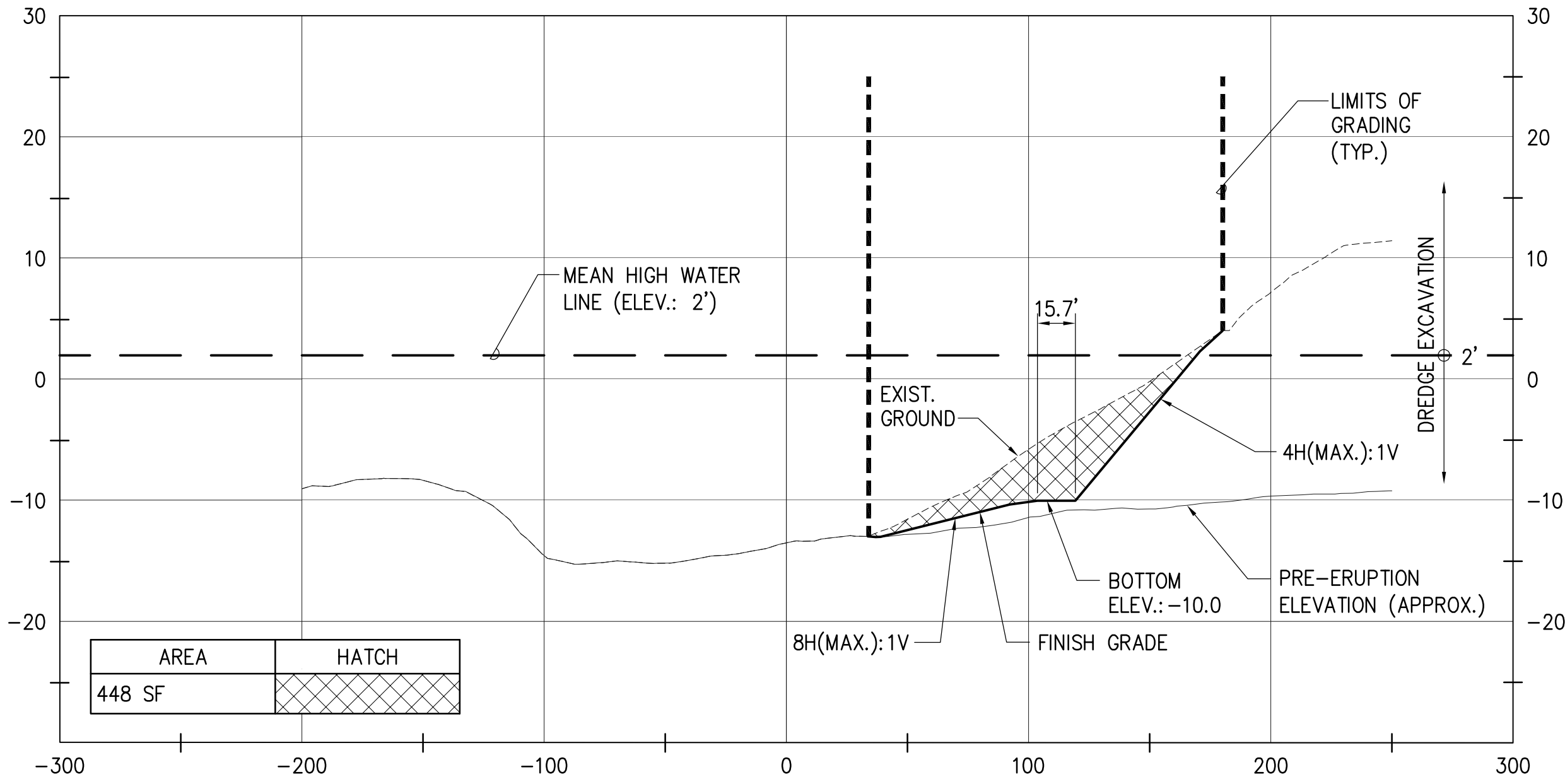
NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
TREVOR R. VAGY LICENSED PROFESSIONAL ENGINEER No. 14993-C HAWAII U.S.A. 04/30/2024 EXP. DATE		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS SECTION VIEWS 2			
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: AS NOTED			
APPROVED:		CHIEF ENGINEER		DRAWING NO. C10	
Signature		Date		DATE	



CHANNEL BASELINE SECTION VIEW – STA. 4+50

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

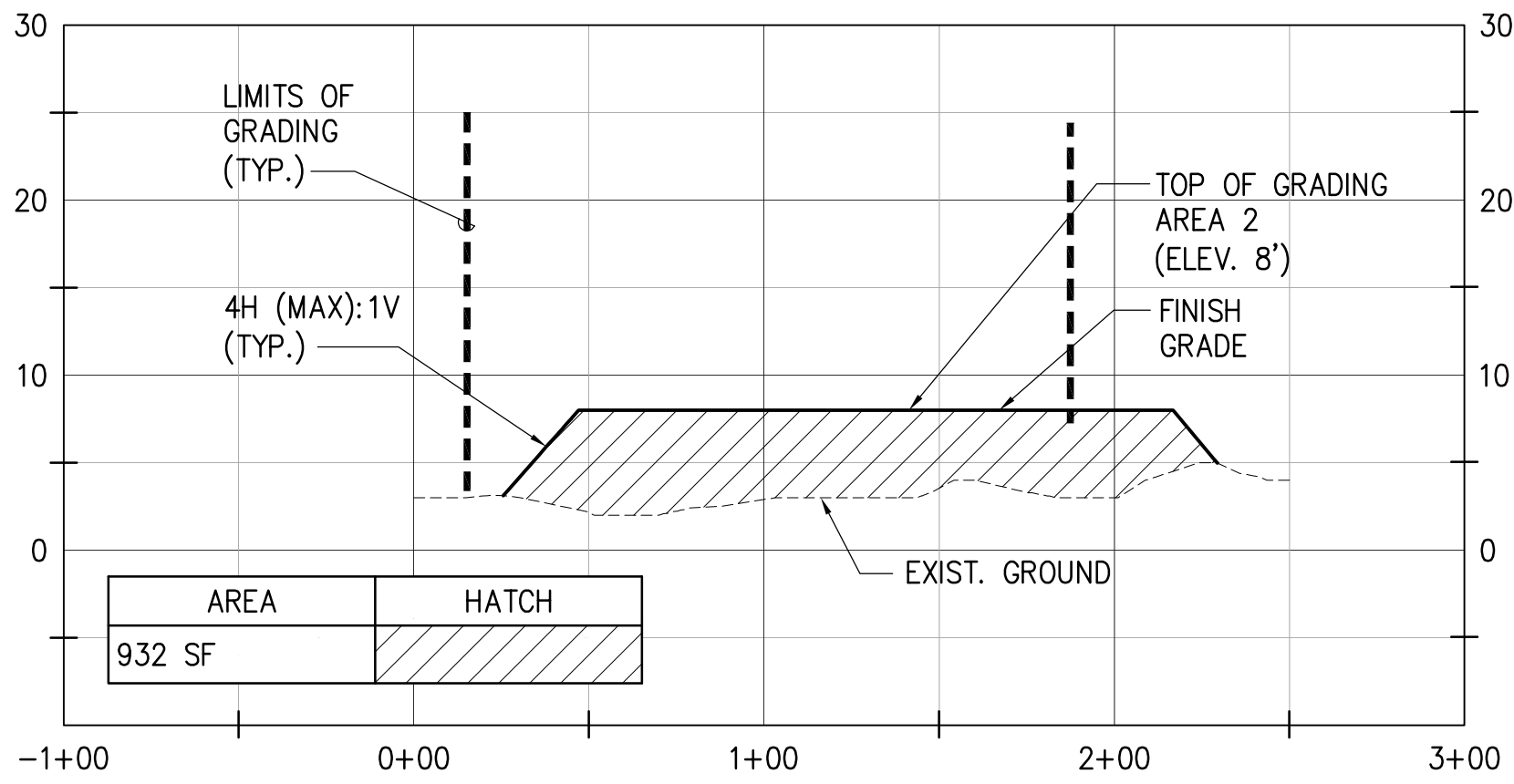


CHANNEL BASELINE SECTION VIEW – STA. 5+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

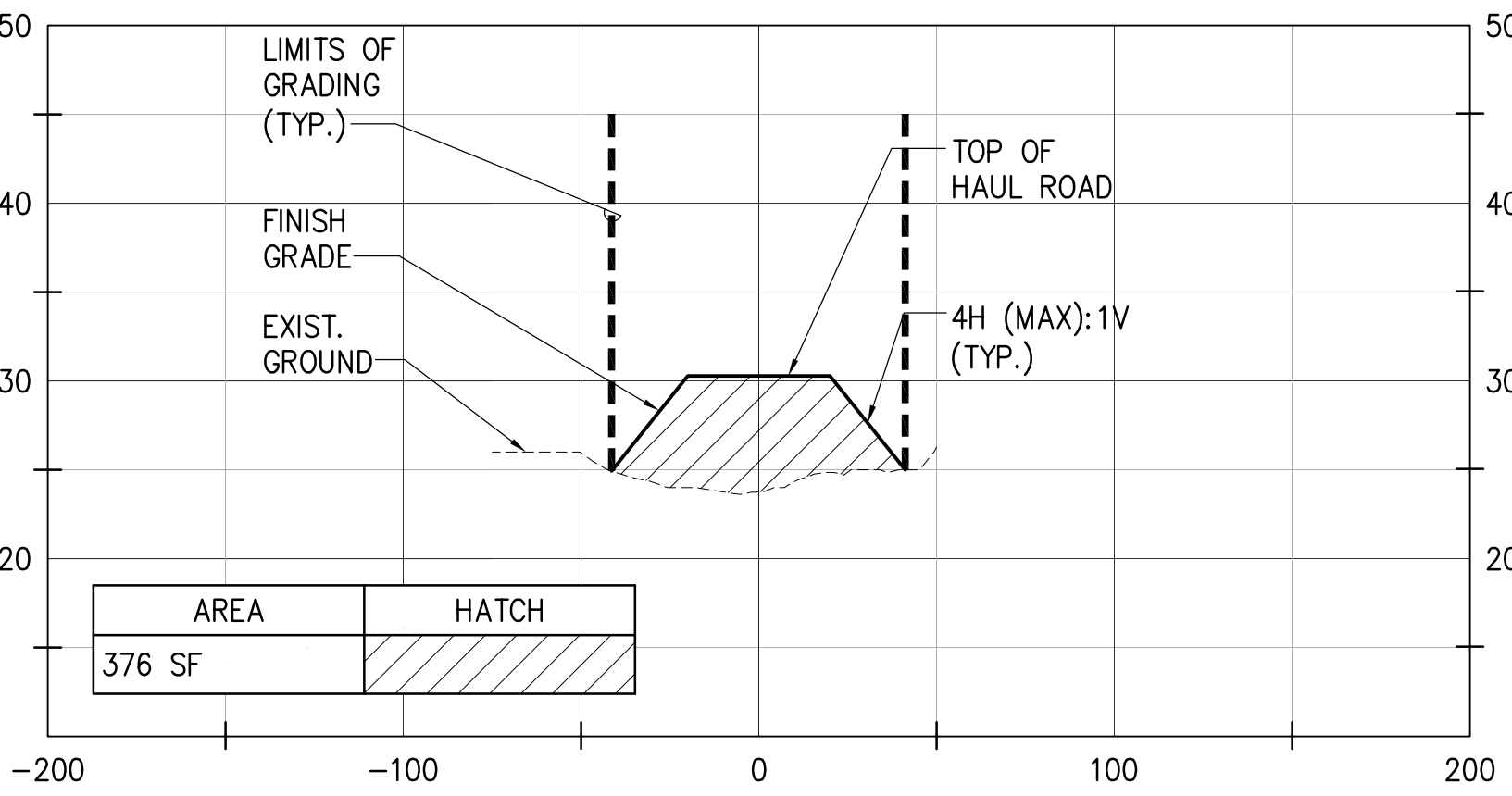
NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION			
		POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS			
		SECTIONS VIEWS 3			
		DESIGNED: TV	SUBMITTED: JULY 2023		
		DRAWN: IE	DATE: JULY 2023		
		CHECKED: KK	SCALE: AS NOTED		
		APPROVED:			DRAWING NO.
		CHIEF ENGINEER	DATE		C11



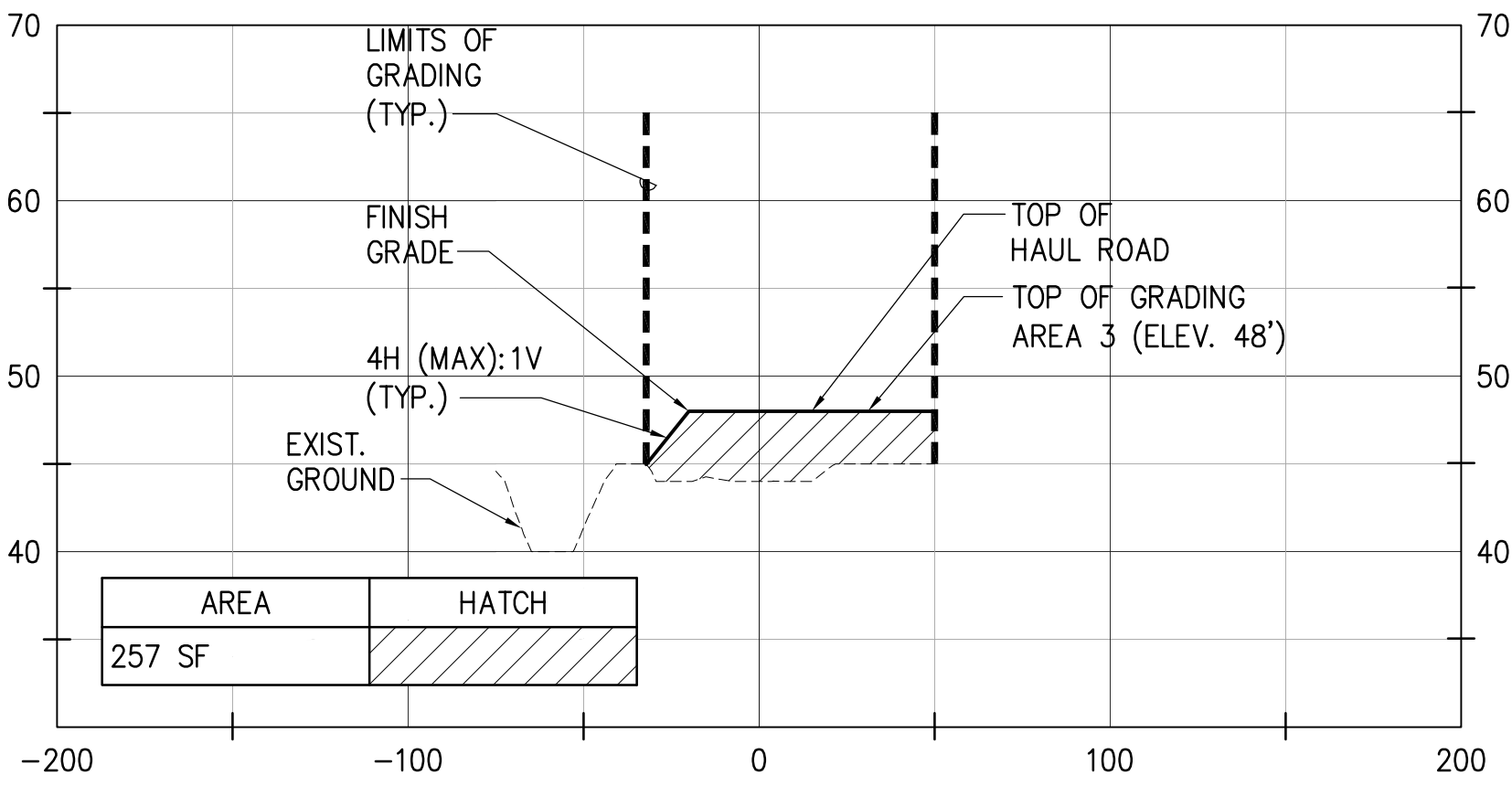
GRADING AREA 2 BASELINE SITE SECTION A-A

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



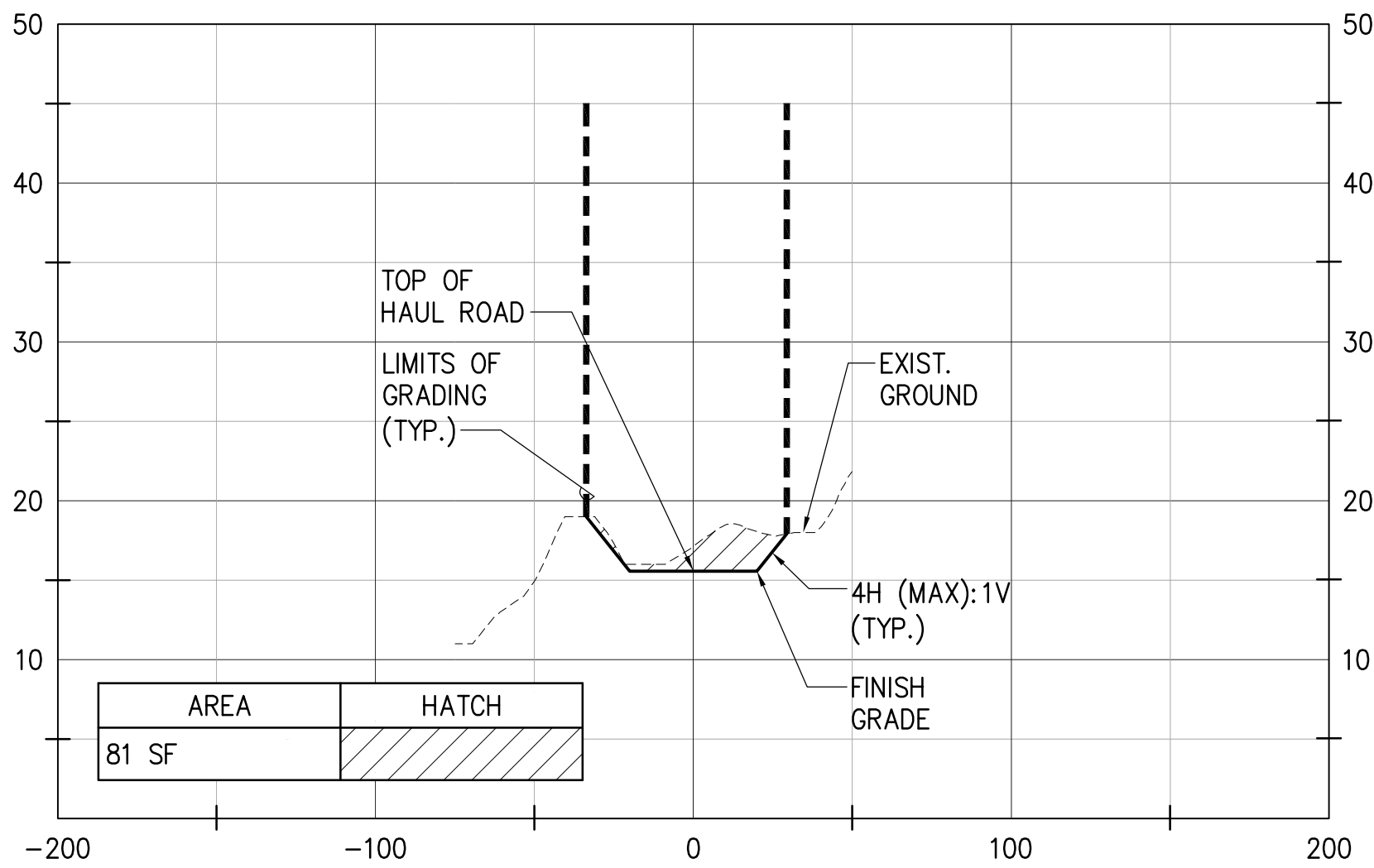
**HAUL ROAD BASELINE
SECTION VIEW - STA. 3+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



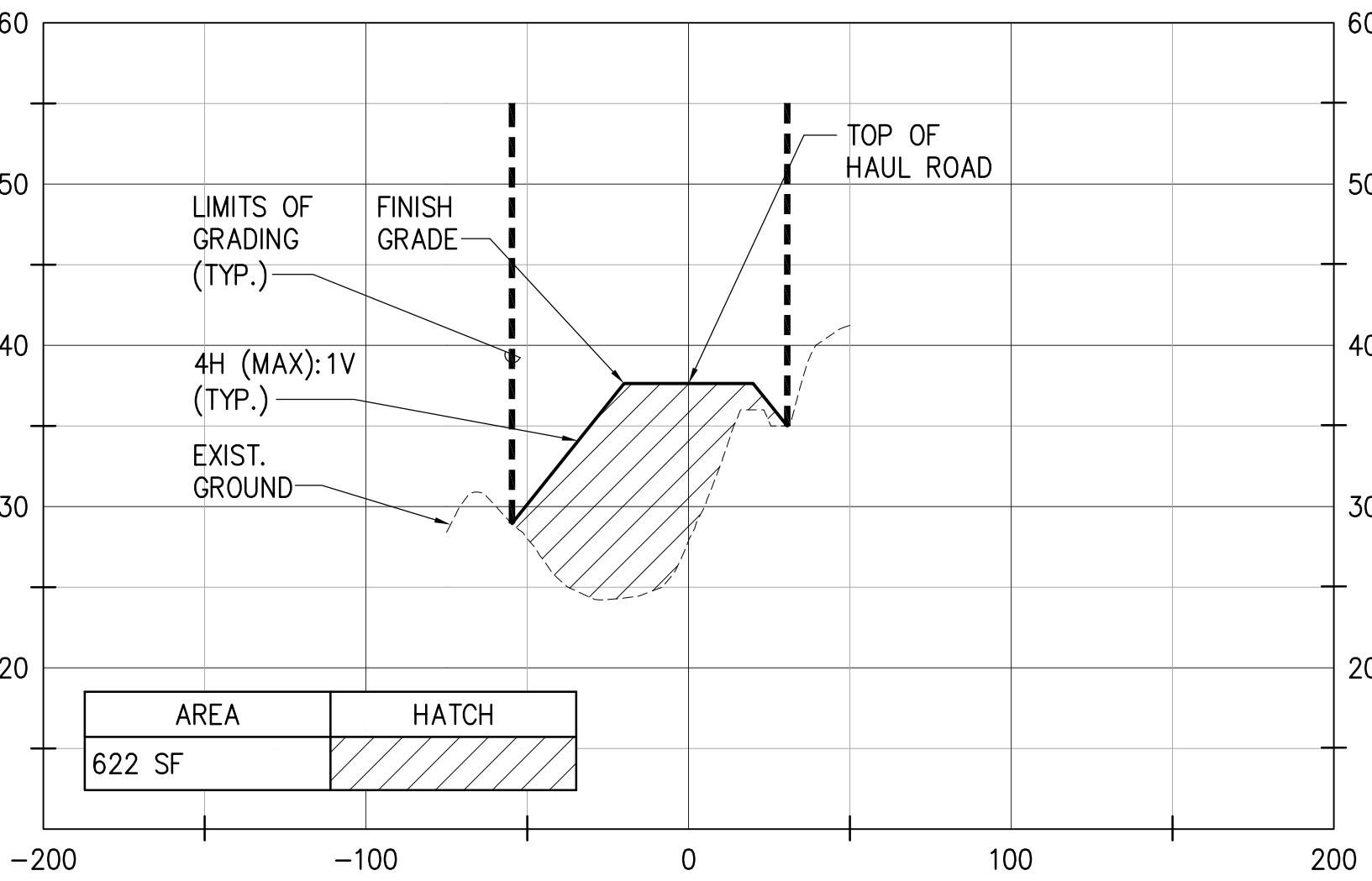
**HAUL ROAD BASELINE
SECTION VIEW - STA. 6+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



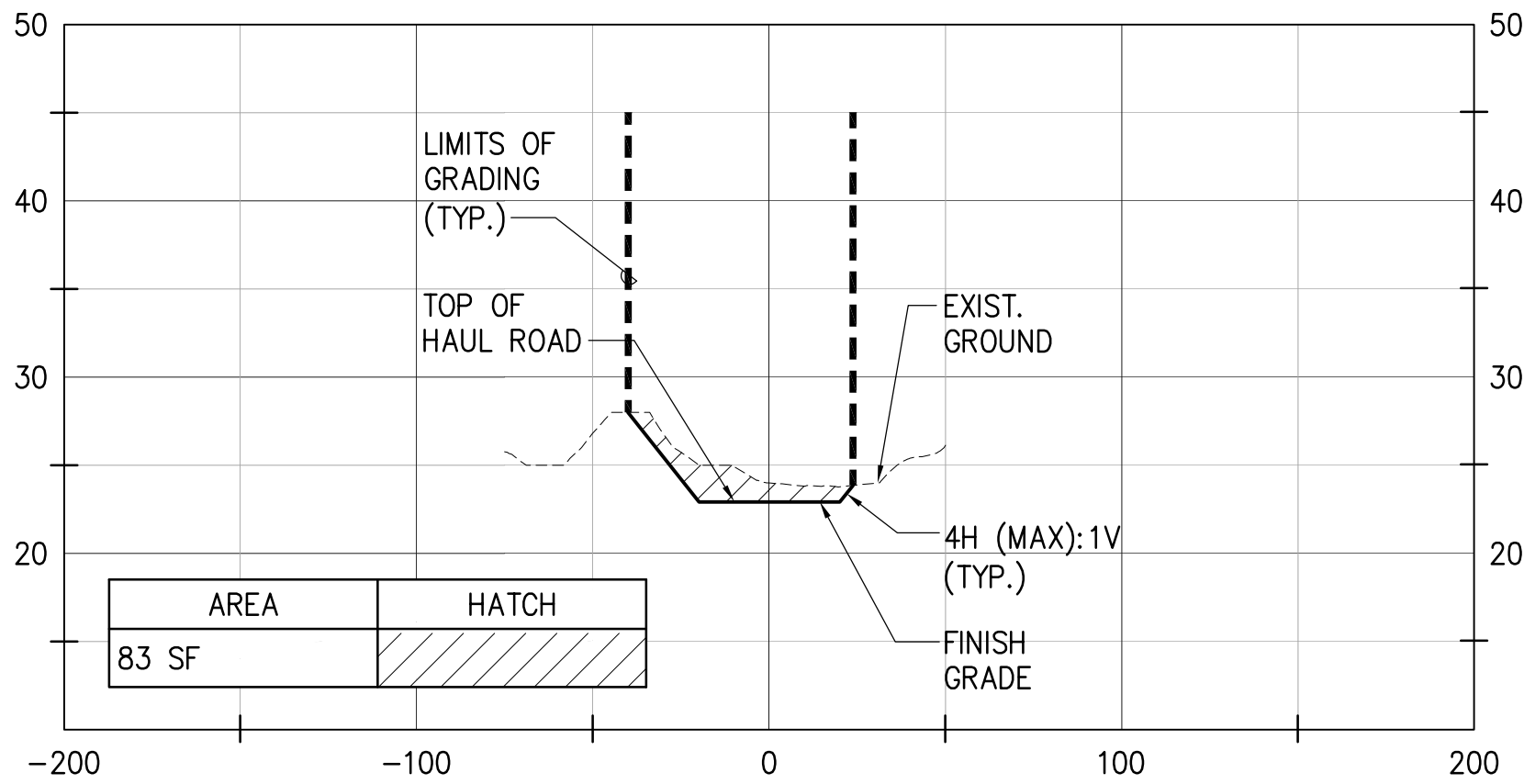
**HAUL ROAD BASELINE
SECTION VIEW - STA. 1+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



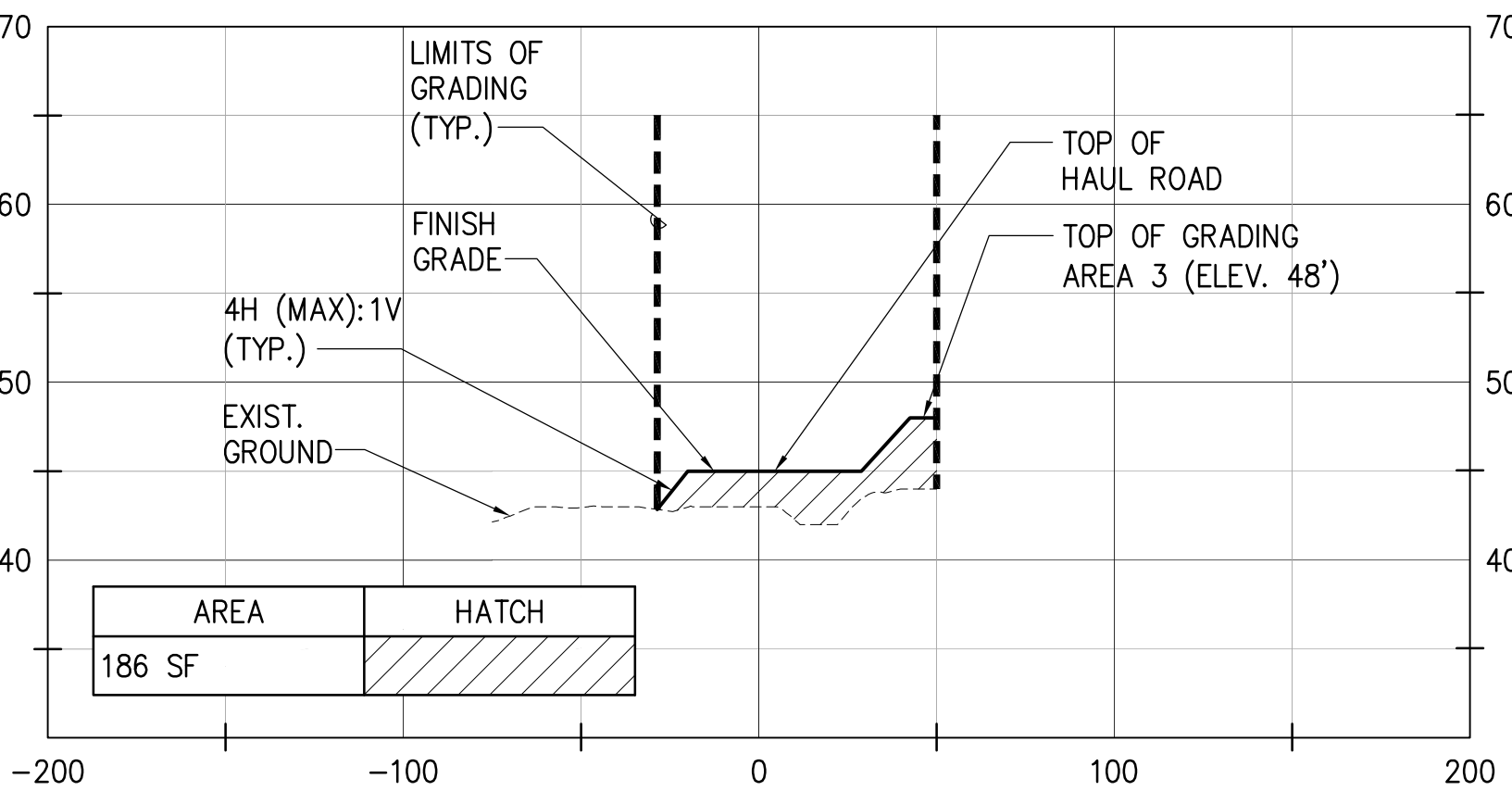
**HAUL ROAD BASELINE
SECTION VIEW - STA. 4+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



**HAUL ROAD BASELINE
SECTION VIEW - STA. 2+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

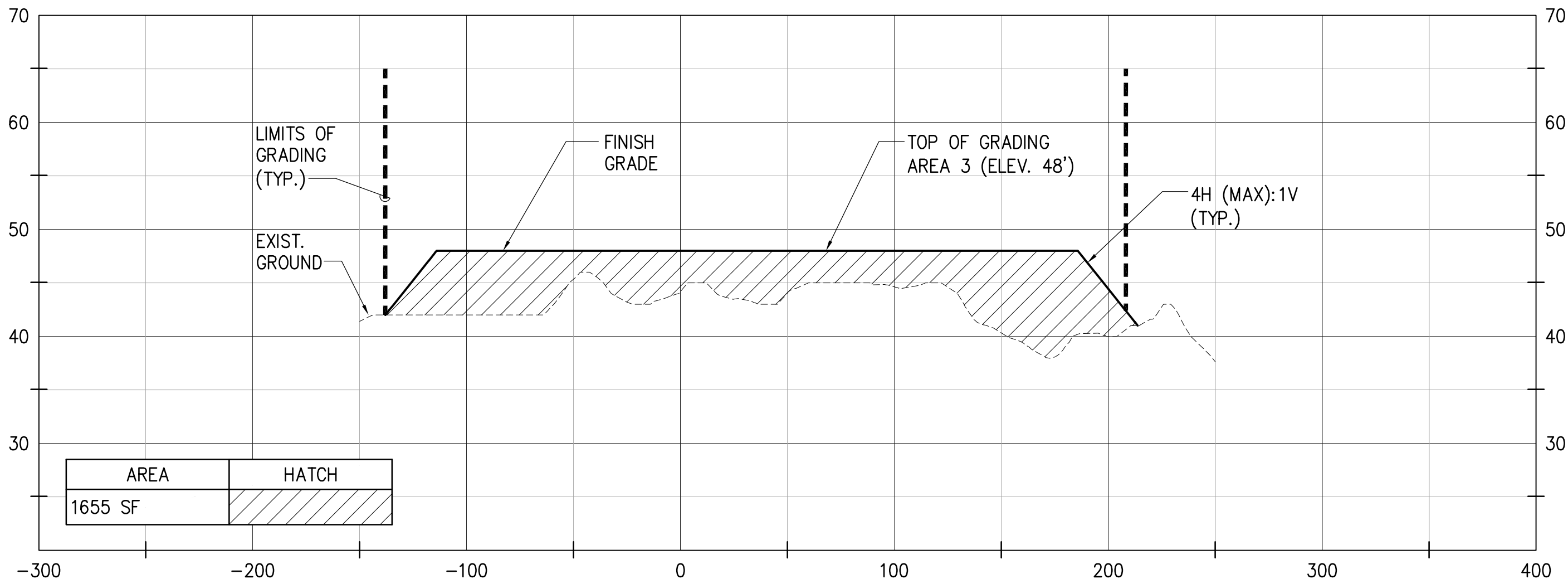


**HAUL ROAD BASELINE
SECTION VIEW - STA. 5+00**

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

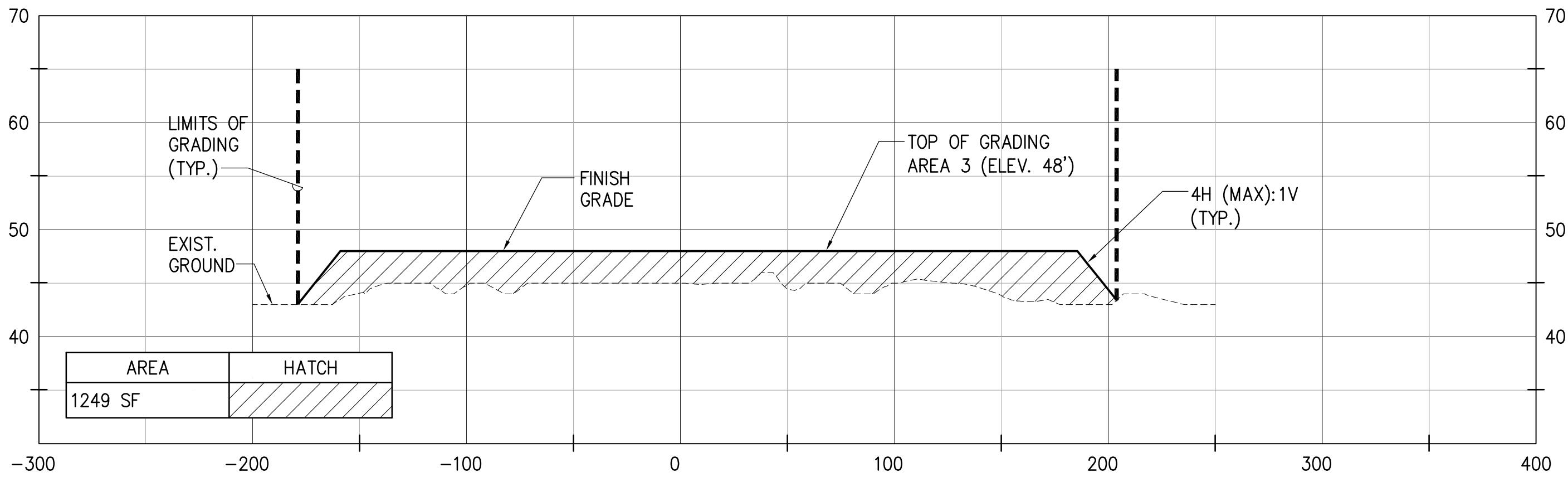
NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION			
		POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS			
		SECTION VIEWS 4			
		DESIGNED: TV DRAWN: IE CHECKED: KK APPROVED: _____ CHIEF ENGINEER			
		SUBMITTED: JULY 2023 DATE: JULY 2023 SCALE: AS NOTED DRAWING NO. C12			



GRADING AREA 3 BASELINE 1 SECTION VIEW – STA. 2+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

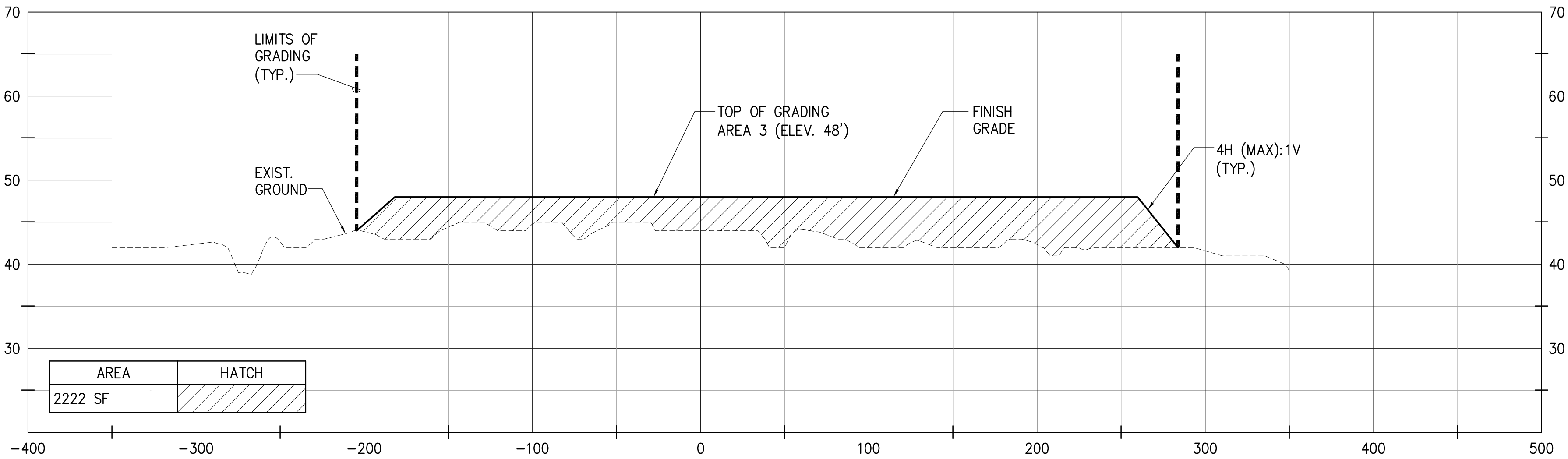


GRADING AREA 3 BASELINE 1 SECTION VIEW – STA. 4+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

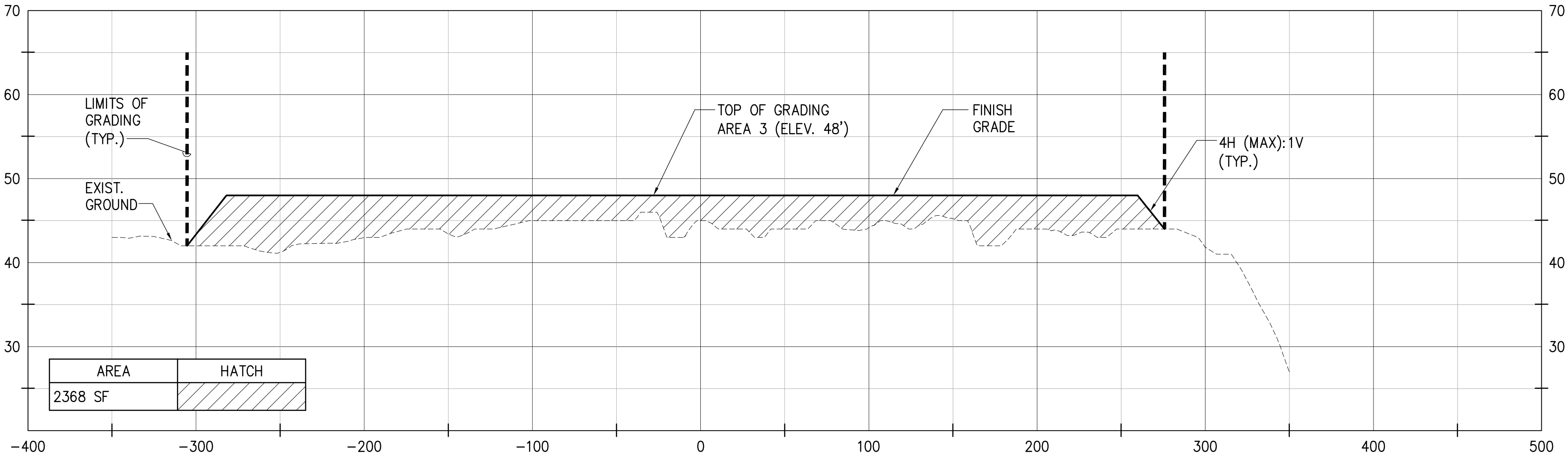
NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		<div><div><div>TREVOR R. VAGLEY</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 14993-C</div><div>HAWAII U.S.A.</div></div><div>04/30/2024</div><div>EXP. DATE</div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</div><div>SignatureDate</div></div>	STATE OF HAWAII		
DEPARTMENT OF LAND AND NATURAL RESOURCES					
DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP					
DREDGING AND EXCAVATION					
OF VOLCANIC DEBRIS					
SECTION VIEWS 5					
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: AS NOTED			
APPROVED:		DRAWING NO.			
CHIEF ENGINEER		DATE		C13	



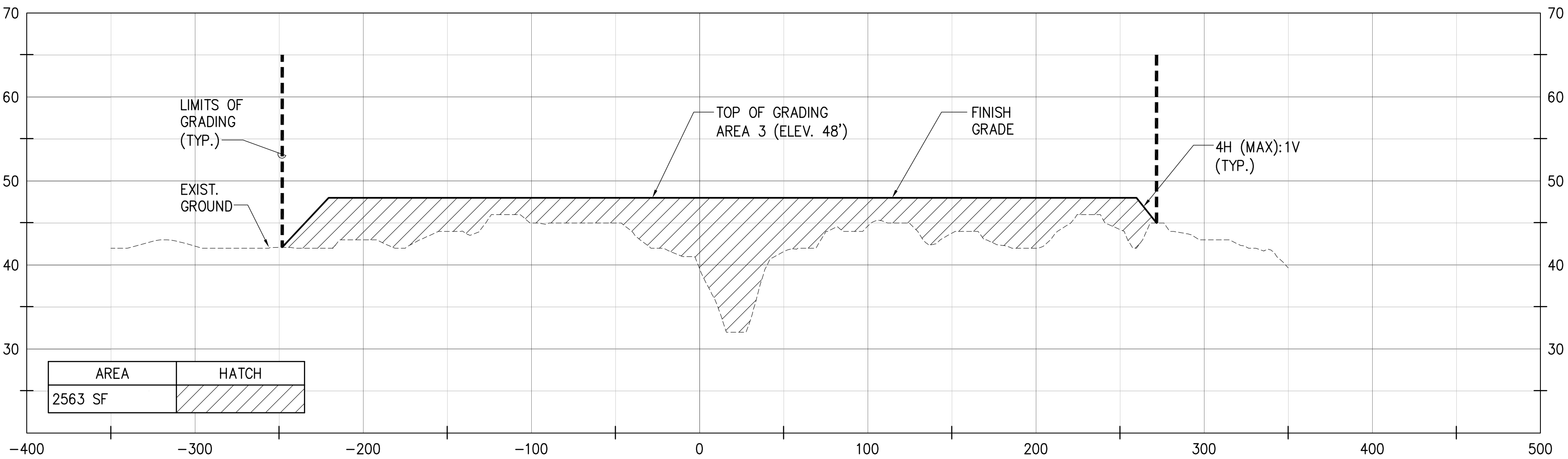
GRADING AREA 3 BASELINE 2 SECTION VIEW – STA. 1+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'



GRADING AREA 3 BASELINE 2 SECTION VIEW – STA. 2+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

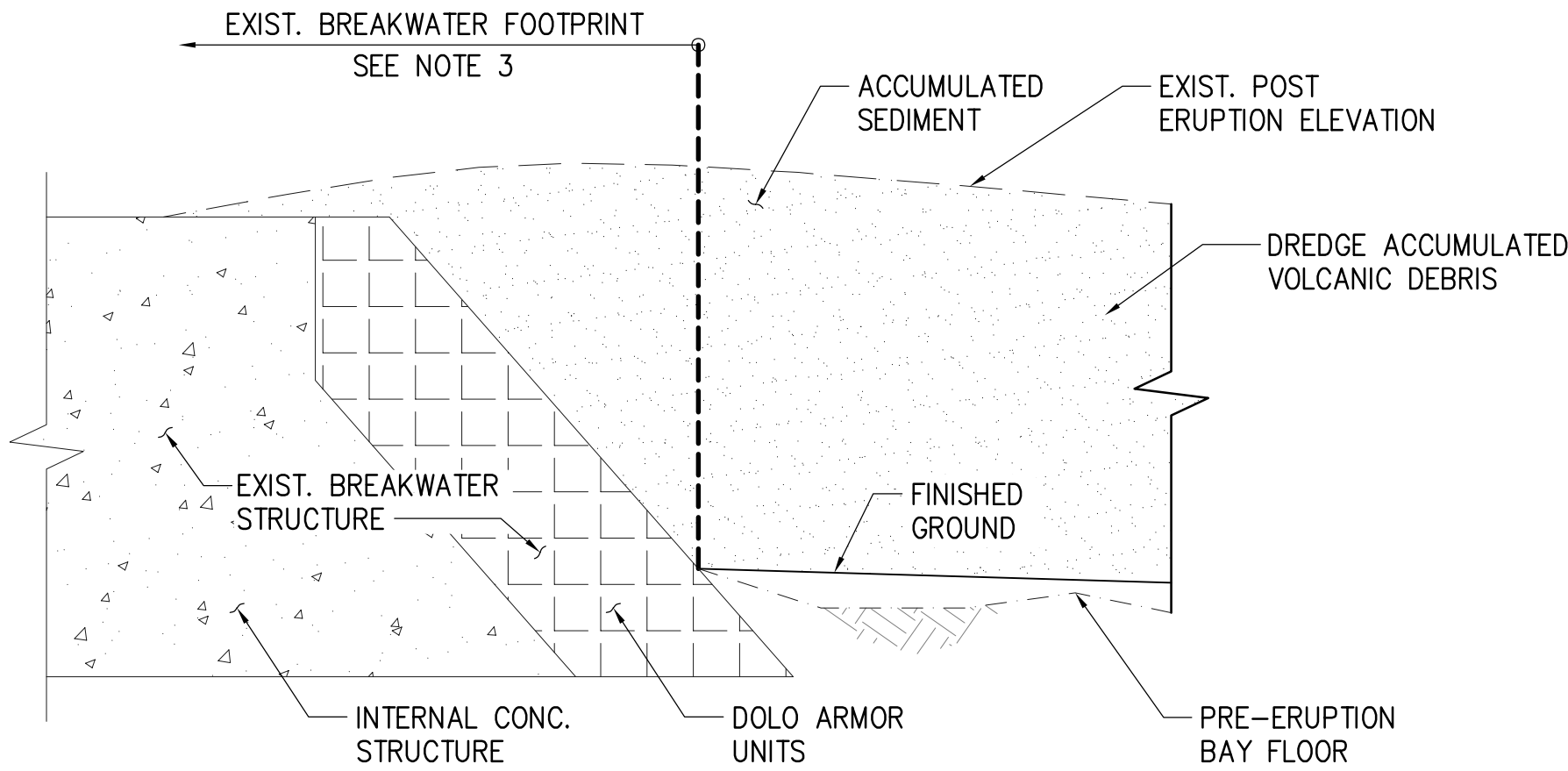


GRADING AREA 3 BASELINE 2 SECTION VIEW – STA. 3+00

SCALE: HORIZ. 1"=50'
VERT. 1"=10'

NOTE:
1. ELEVATIONS SHOWN USE THE
LOCAL MEAN LOWER LOW WATER
(MLLW) ELEVATION AS THEIR DATUM.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		<div><div><div>TREVOR R. VAGLEY</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 14993-C</div><div>HAWAII U.S.A.</div></div><div>04/30/2024</div><div>EXP. DATE</div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</div><div>Signature</div><div>Date</div></div> <div>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF BOATING AND OCEAN RECREATION POHOIKI BOAT RAMP DREDGING AND EXCAVATION OF VOLCANIC DEBRIS SECTION VIEWS 6 DESIGNED: TV DRAWN: IE CHECKED: KK APPROVED: CHIEF ENGINEER</div> <div>SUBMITTED: JULY 2023 DATE: JULY 2023 SCALE: AS NOTED DRAWING NO. C14 DATE</div>			



NOTES:

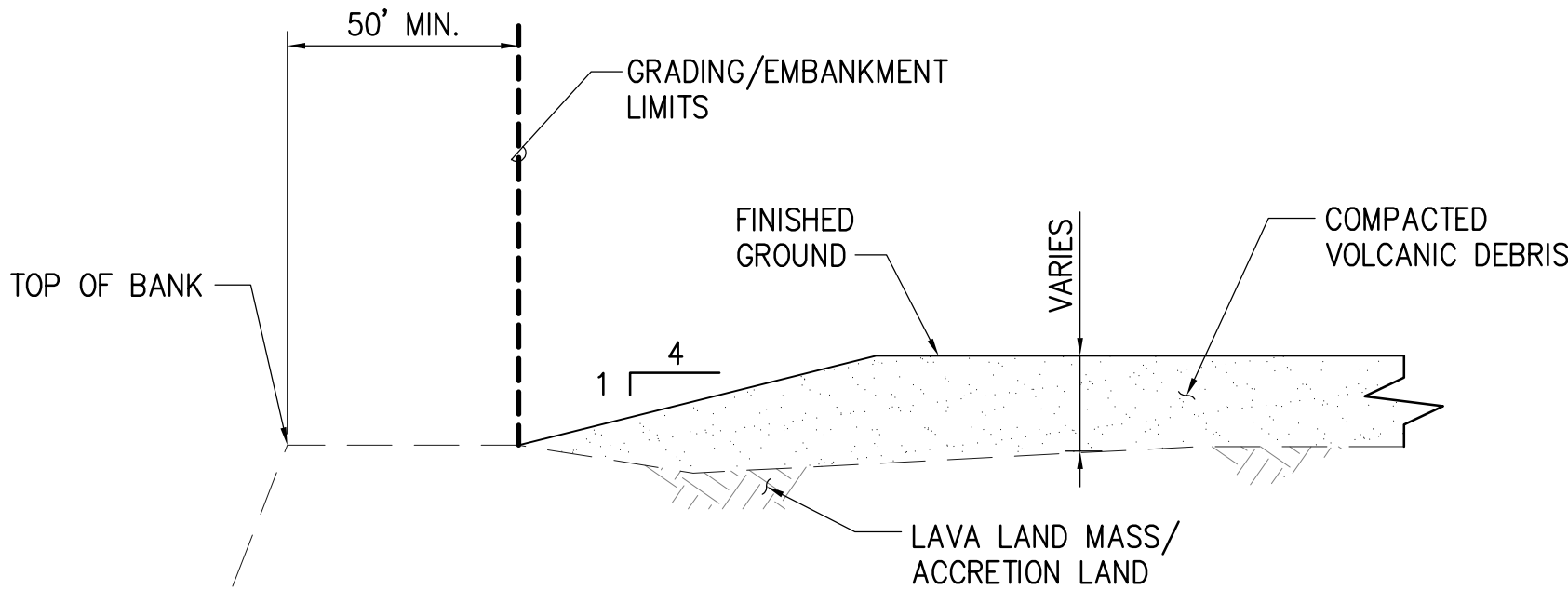
1. THE CONTRACTOR SHALL ENSURE EXISTING BREAKWATER STRUCTURE IS PROTECTED FROM DAMAGE DURING CONSTRUCTION.
2. HEAVY EQUIPMENT UTILIZED FOR THE PROJECT SHALL BE PROHIBITED FROM TRAVELING OVER AND NEAR THE EXISTING BREAKWATER FOOTPRINT.
3. SETTLED SAND AND COBBLES ON AND/OR OVER THE BREAKWATER STRUCTURE MAY BE MANUALLY REMOVED WITH THE USE OF HAND TOOLS.
4. ANY DAMAGE TO THE EXISTING BREAKWATER STRUCTURE SHALL BE REPAIRED TO THE SATISFACTION OF U.S. ARMY COPRS OF ENGINEERS AT THE CONTRACTOR'S EXPENSE.

1

C15

TYPICAL BREAKWATER DREDGE SECTION

NOT TO SCALE



2

C15

TYPICAL FILL AREA SECTION

NOT TO SCALE

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DEPARTMENT OF LAND AND NATURAL RESOURCES					
DIVISION OF BOATING AND OCEAN RECREATION					
POHOIKI BOAT RAMP					
DREDGING AND EXCAVATION					
OF VOLCANIC DEBRIS					
DETAILS					
DESIGNED: TV		SUBMITTED: JULY 2023			
DRAWN: IE		DATE: JULY 2023			
CHECKED: KK		SCALE: AS NOTED			
APPROVED:		DRAWING NO.			
CHIEF ENGINEER		DATE		C15	