

**Submittal Review Response**

Project Name: Hilo WWTP Rehabilitation and Replacement Project Phase 1
Submittal No.: 02370-001.1
Date: 8/15/2025

Client: County of Hawai'i **Carollo Project No.:** 203975
Contractor: Nan, Inc.
Submittal Name: RIPRAP
Reviewed By: Ewing

SUBMITTAL REVIEW

Review is for general compliance with contract documents. No responsibility is assumed by Carollo for correctness of quantities, dimensions, and details. No deviation or variation is approved unless specifically addressed in these review comments. Refer to Section 01330 for additional requirements. The Contractor shall assume full responsibility for coordination with all other trades and deviations from contract requirements.

Approved	<input checked="" type="checkbox"/>	No Exceptions
	<input type="checkbox"/>	Make Corrections Noted - See Comments
	<input type="checkbox"/>	Make Corrections Noted - Confirm
Not Approved	<input type="checkbox"/>	Correct and Resubmit
	<input type="checkbox"/>	Rejected - See Remarks
Receipt Acknowledged	<input type="checkbox"/>	Filed for Record
	<input type="checkbox"/>	With Comments - Resubmit

Review Comments:

1. Please provide a table of typical size distribution (rock dimension or weight vs percent) for information only.

CONTRACTOR SUBMITTAL TRANSMITTAL FORM REV. A

Owner: County of Hawaii
Contractor: Nan, Inc. **Project No.:** WW-4705R
Project Name: Hilo WWTP Phase 1 **Submittal Number:**
Submittal Title: For Information Only
TO:
From: Nan Inc.

Specification No. and Subject of Submittal / Equipment Supplier	
Spec:	Paragraph:
Authored By:	Date Submitted:

Submittal Certification	
Check Either (A) or (B):	
<input type="checkbox"/> (A)	We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings with <u>no exceptions</u> .
<input type="checkbox"/> (B)	We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings <u>except</u> for the deviations listed.
Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements.	
General Contractor's Reviewer's Signature:	
Printed Name and Title:	
In the event, Contractor believes the Submittal response does or will cause a change to the requirements of the Contract, Contractor shall immediately give written notice stating that Contractor considers the response to be a Change Order.	
Firm:	Signature: Date Returned:

PM/CM Office Use
Date Received GC to PM/CM:
Date Received PM/CM to Reviewer:
Date Received Reviewer to PM/CM:
Date Sent PM/CM to GC:

Nan, Inc


PROJECT: HILO WWTP REHABILITATION
AND REPLACEMENT PROJECT - PHASE 1

JOB NO. WW-4705R

THIS SUBMITTAL HAS BEEN CHECKED BY
THIS CONTRACTOR. IT IS CERTIFIED
CORRECT, COMPLETE, AND IN
COMPLIANCE WITH CONTRACT
DRAWINGS AND SPECIFICATIONS. ALL
AFFECTED CONTRACTORS AND
SUPPLIERS ARE AWARE OF, AND WILL
INTEGRATE THIS SUBMITTAL (UPON
APPROVAL) INTO THEIR OWN WORK.

DATE RECEIVED _____
 SPECIFICATION SECTION # _____
 SPECIFICATION _____
 PARAGRAPH _____
 DRAWING _____
 SUBCONTRACTOR _____
 SUPPLIER _____
 MANUFACTURER _____

CERTIFIED BY CQCM or Designee : _____

PROJECT NAME		HILO WWTP REHABILITATION & REPLACEMENT PROJECT PHASE 1	
PROJECT NUMBER		WW-4705R	
SUBMITTAL #		02370-001.0	
SPECIFICATION SECTION		02370	
SHOP DRAWING REVIEW			
ENGINEER'S REVIEW		CONTRACTOR'S ACTION	
<input type="checkbox"/>	No Exceptions	<input type="checkbox"/>	Confirm
<input type="checkbox"/>	Make Corrections Noted	X	Resubmit
X	Rejected		
<input type="checkbox"/>	Comments Attached	<input type="checkbox"/>	
<p>Engineer's review is for general conformance with the design concept and the contract requirements. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans, specifications nor departure therefrom. The Contractor remains responsible for details and accuracy, for conforming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.</p>			
R.M. TOWILL CORPORATION		Date	04/15/2025
		By	 Michael S. Hong – Construction Manager

- Provide additional information regarding whether the Riprap submitted product meets the following specifications:

- Specification Section 02370 paragraph 2.01B

- "Size and weight: 5 to 25 pounds, except small stones and spalls used to chink interstices. At least 50 percent of pieces shall weigh not less than 15 pounds."

- Specification Section 02370 paragraph 2.01C

- "Material shapes:

- 1. Capable of forming stable protection structure of required depth.
- 2. Angular.
- 3. Flat or needle shapes with thickness less than 1/3 length shall not be used."

- Specification Section 02370 paragraph 2.01D

- "Aggregate:

- 1. Fine: Sand.
- 2. Coarse: Gravel passing 3/8-inch square mesh screen."

Incorporated: Please see the Puna Rock submittal data

Incorporated: Please see the Puna Rock submittal information

Incorporated: Please see the Puna Rock submittal data

SECTION 02370

RIPRAP

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Plain riprap.

1.02 SUBMITTALS

- ✓ A. Product data.

PART 2 PRODUCTS

✓ 2.01 PLAIN RIPRAP

- ✓ A. Material: Rock.
- ✓ B. Size and weight: 5 to 25 pounds, except small stones and spalls used to chink interstices. At least 50 percent of pieces shall weigh not less than 15 pounds.
- ✓ C. Material shapes:
 - 1. Capable of forming stable protection structure of required depth.
 - 2. Angular.
 - 3. Flat or needle shapes with thickness less than 1/3 length shall not be used.
- D. Aggregate:
 - 1. Fine: Sand.
 - 2. Coarse: Gravel passing 3/8-inch square mesh screen.
- E. Water: Clean.

PART 3 EXECUTION

3.01 PREPARATION

- A. Shape and trim bed for riprap as required to provide even surface which at no point is higher than design surface.
- B. Excavate footing trench along toe and cutoff trench at top of slope.
- C. Provide a smooth, compact layer of sand or fine crushed rock subgrade at least 6 inches deep.

- D. Overlay the subgrade with filter fabric per Section 02620 - Filter Fabric.
- E. Provide a 4- to 6-inch layer of fine crushed rock over the fabric layer.

3.02 PLACING PLAIN RIPRAP

- A. When required riprap is less than 20 inches in depth, place material by hand.
- B. Place material to provide minimum of voids.
- C. Place larger pieces in toe of trench, foundation course, and near the bottom of the channel.
- D. Place pieces with their longitudinal axis normal to face of embankment and so arranged that each piece above the foundation course has minimum 3-point bearing on underlying stones.
 - 1. Bearing on smaller pieces used to fill voids will not be acceptable.
- E. Fill interstices between pieces with small pieces and spalls.

3.03 TOLERANCES

- A. Finished surfaces of riprap for plain riprap: Within 3 inches per foot of depth.

END OF SECTION



PO Box 566 Keaau, HI 96749
Tel (808) 966-7625 Fax (808) 959-9408

Date: June 25, 2025

RE: Submittal Data For Riprap

Based on our Specific Gravity, particle size should be approximately 2" to 6" (5 to 25 lbs) with at least 50% of the pieces not less than 3-1/2" (15 lbs). Riprap is hydraulically hammered, crushed and screened from oversized rocks forming an angular shape with a thickness not less than 1/3 of length. The rock characteristics are based on materials manufactured and tested with the same parent rock material as follows:

SSD Specific Gravity:	2.72
Absorption:	2.6%
LA Abrasion:	25.3

If you have any questions, please contact me at rkuwaye@gmail.com or (808) 896-5246.

Respectfully submitted,

A handwritten signature in cursive script that reads "Russell Kuwaye".

Russell Y. Kuwaye
It's President