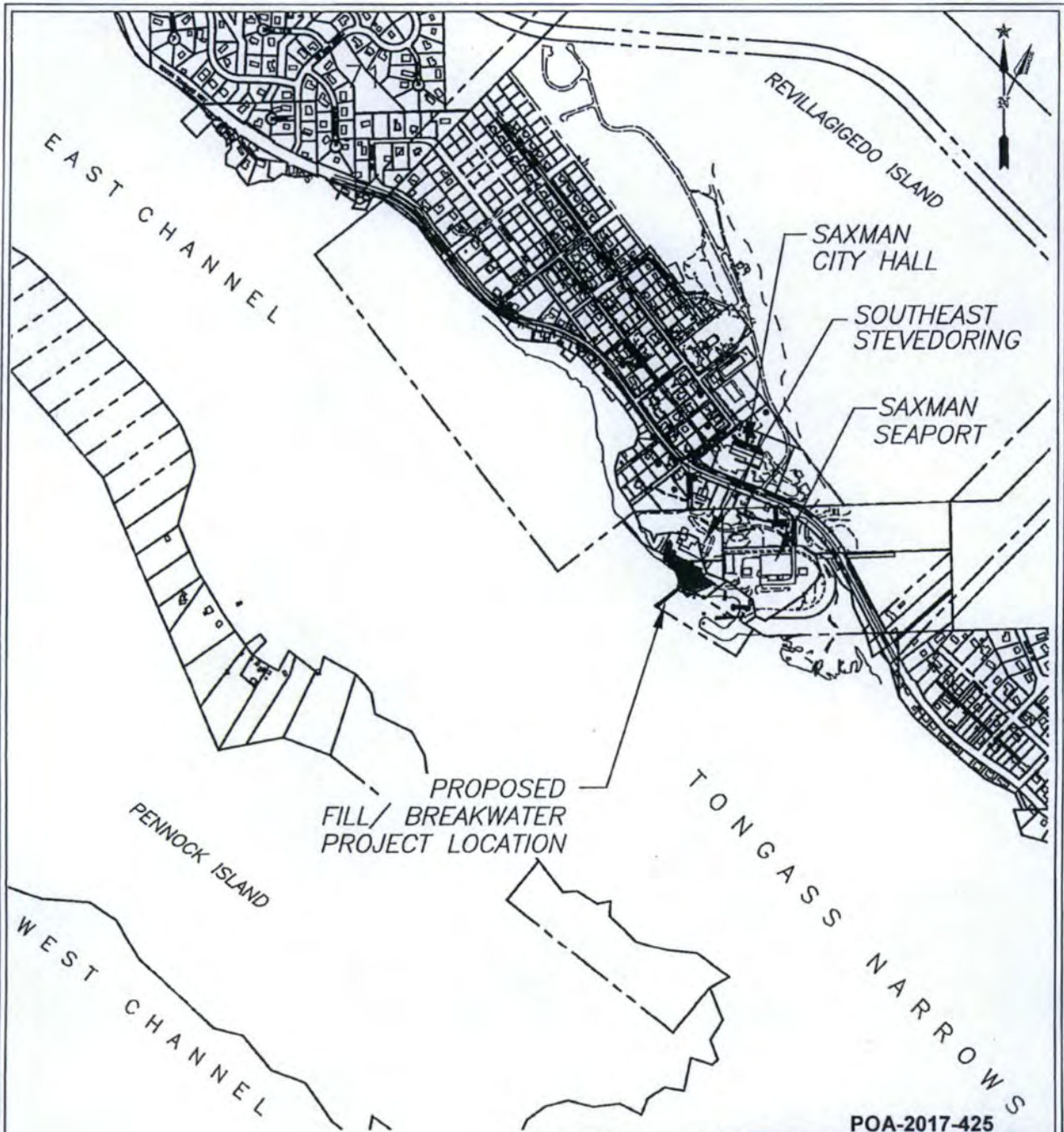


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PROJECT LOCATION:
 55°18.939N, 131°35.830"W
 T 76S, R 91E, SEC 33, CRM

SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
LOCATION MAP	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING--KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 1	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS



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SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS

SITE MAP

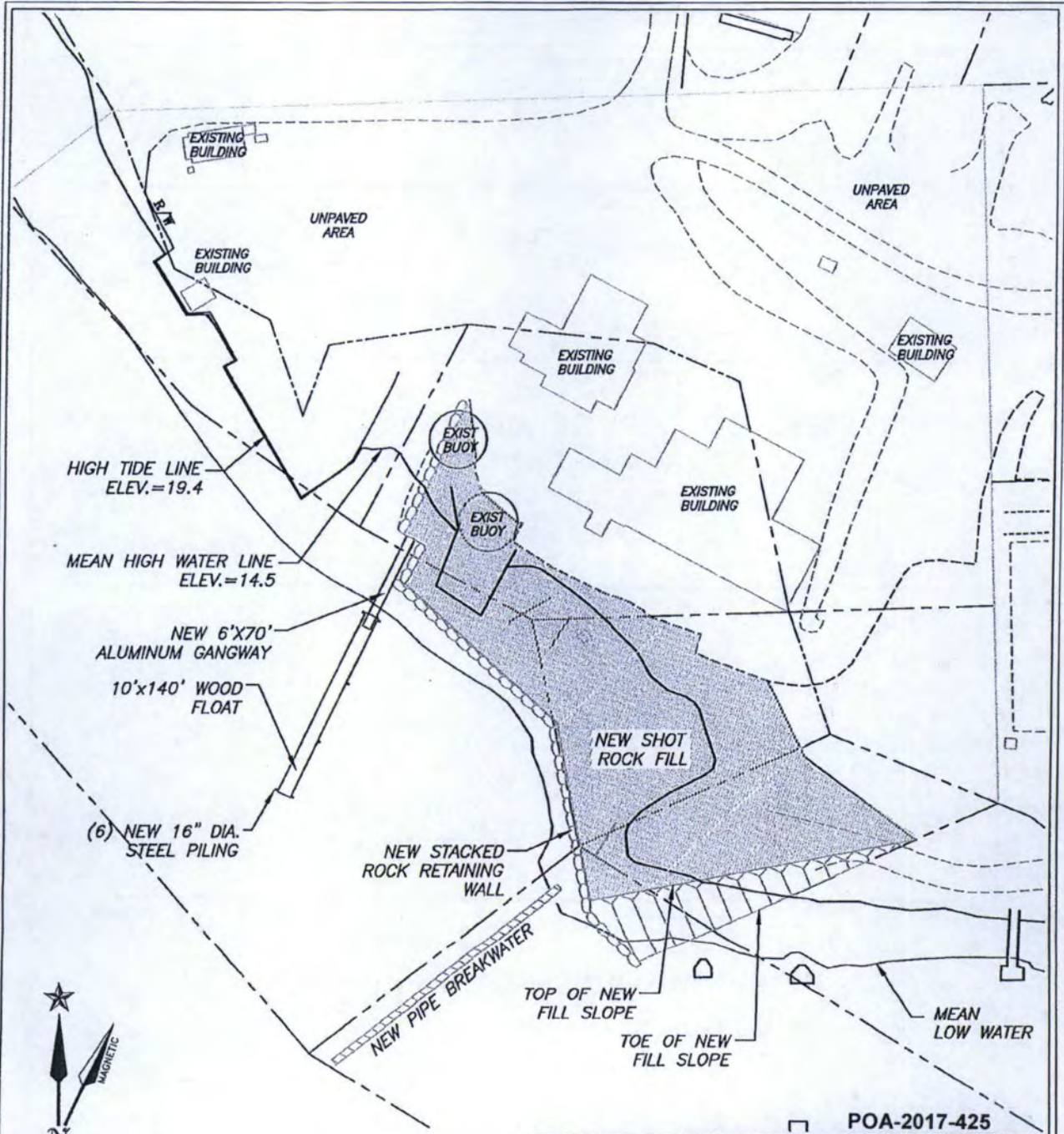
APPLICANT:
SOUTHEAST STEVEDORING
1429 TONGASS AVE
KETCHIKAN, AK 99901

AGENT:
R&M ENGINEERING-KETCHIKAN
355 CARLANNA LAKE ROAD
KETCHIKAN, AK 99901

DATE: 7/26/17
SHEET: 2

LOCATION: KETCHIKAN, ALASKA
WATER BODY: TONGASS NARROWS

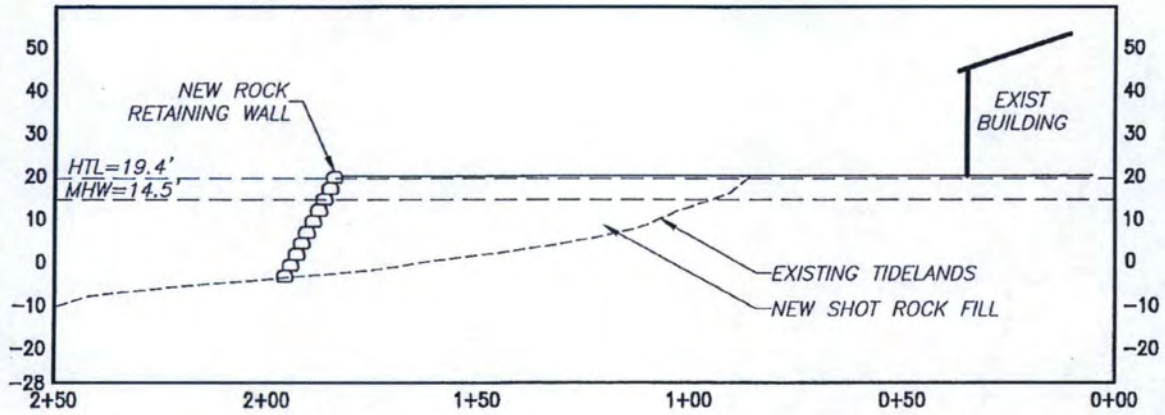
SCALE 1"=1000'



SCALE 1"=60'

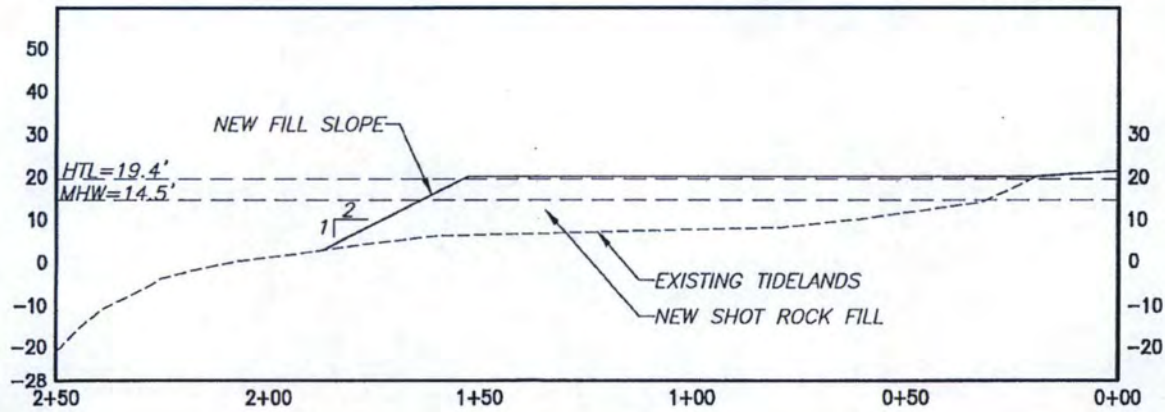
POA-2017-425

SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
SITE IMPROVEMENTS	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING-KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 3	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS



PROPOSED STACKED RETAINING WALL PROFILE

1"=40'

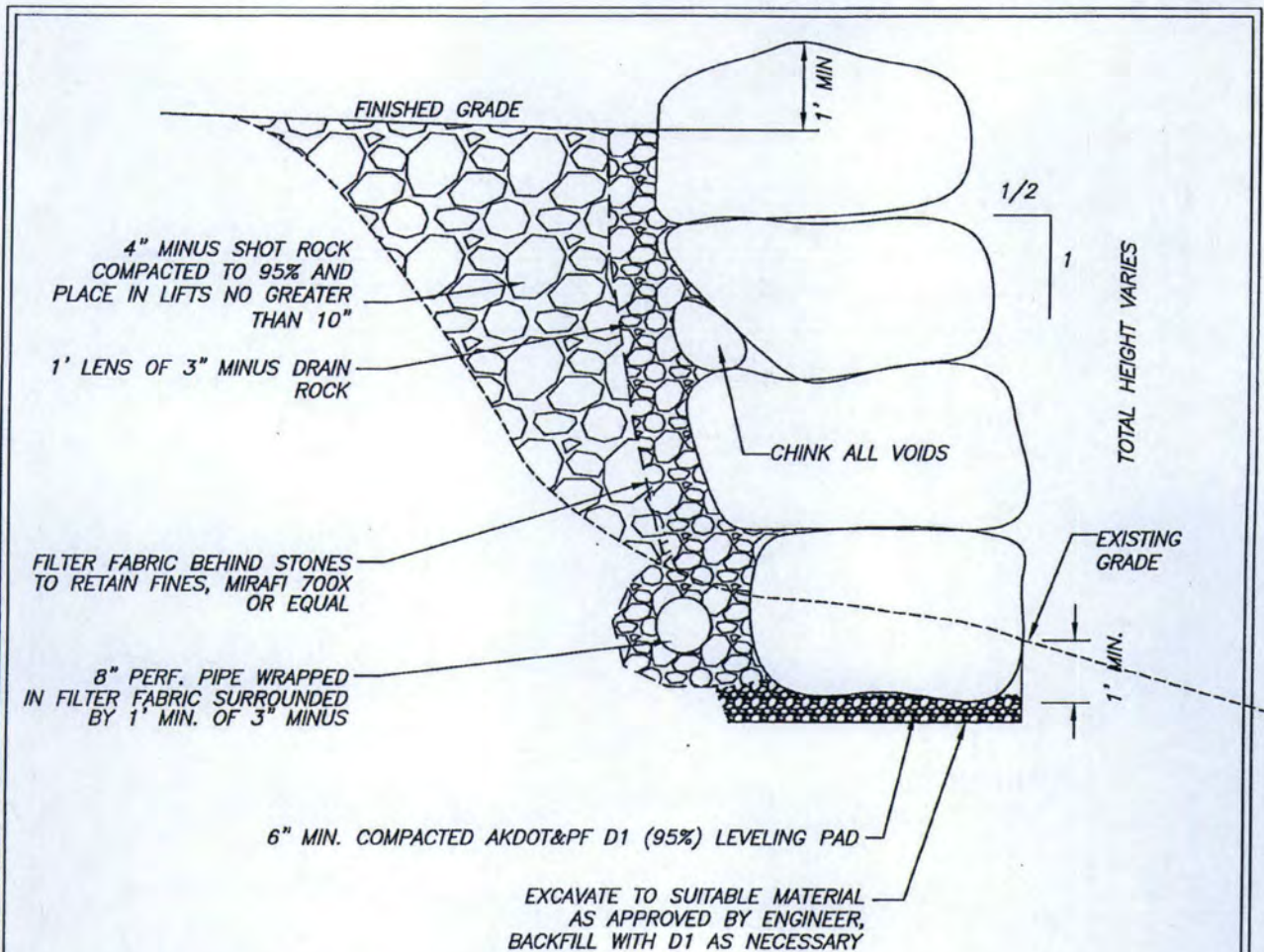


PROPOSED FILL SLOPE PROFILE

1"=40'

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SAXMAN MARINE SERVICE CENTER & BARGE IMPROVEMENTS	
PROFILES	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING-KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 4	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS

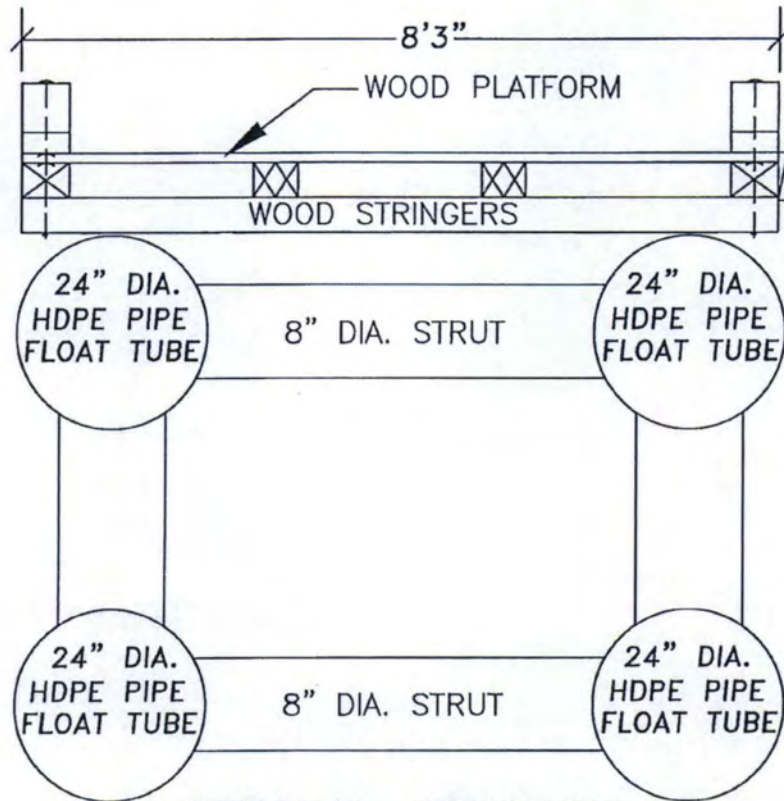


ROCKERY RETAINING WALL DETAIL NOTES:

- 1) THE LONG DIMENSION OF THE ROCKS SHALL EXTEND INTO THE EMBANKMENT TO PROVIDE MAXIMUM STABILITY.
- 2) THE ROCK SHALL BE PLACED SO AS TO LOCK INTO TWO ROCKS; STAGGER JOINTS.
- 3) CONSTRUCT ROCKERY OF 5 MAN TO 2 MAN ROCKS WITH DECREASING SIZE FROM BOTTOM TO TOP.
 - 2 MAN ROCKS 200 LBS MIN, 700 LBS MAX, SIZE 18" TO 28"
 - 2 MAN ROCK LOCATION - TOP 3 FEET
 - 3 MAN ROCKS 700 LBS MIN, 2000 LBS MAX, SIZE 28" TO 36"
 - 3 MAN ROCK LOCATION - 2 TO 6 FEET FROM TOP
 - 4 MAN ROCKS 2000 LBS MIN, 4000 LBS MAX, SIZE 36" TO 48"
 - 4 MAN ROCK LOCATION - 4 TO 8 FEET FROM TOP
 - 5 MAN ROCKS 4000 LBS MIN, 6000 LBS MAX, SIZE 48" TO 54"
 - 5 MAN ROCK LOCATION - BOTTOM TO 8 FEET BELOW TOP

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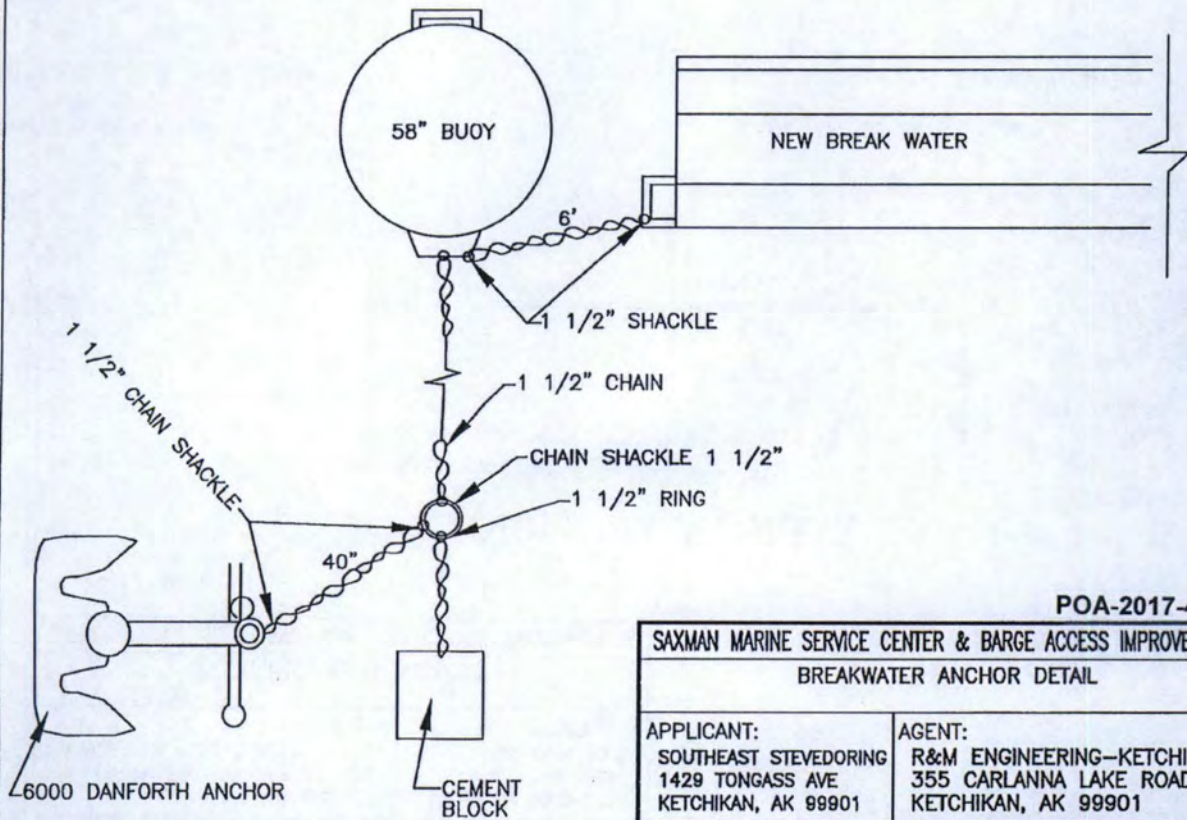
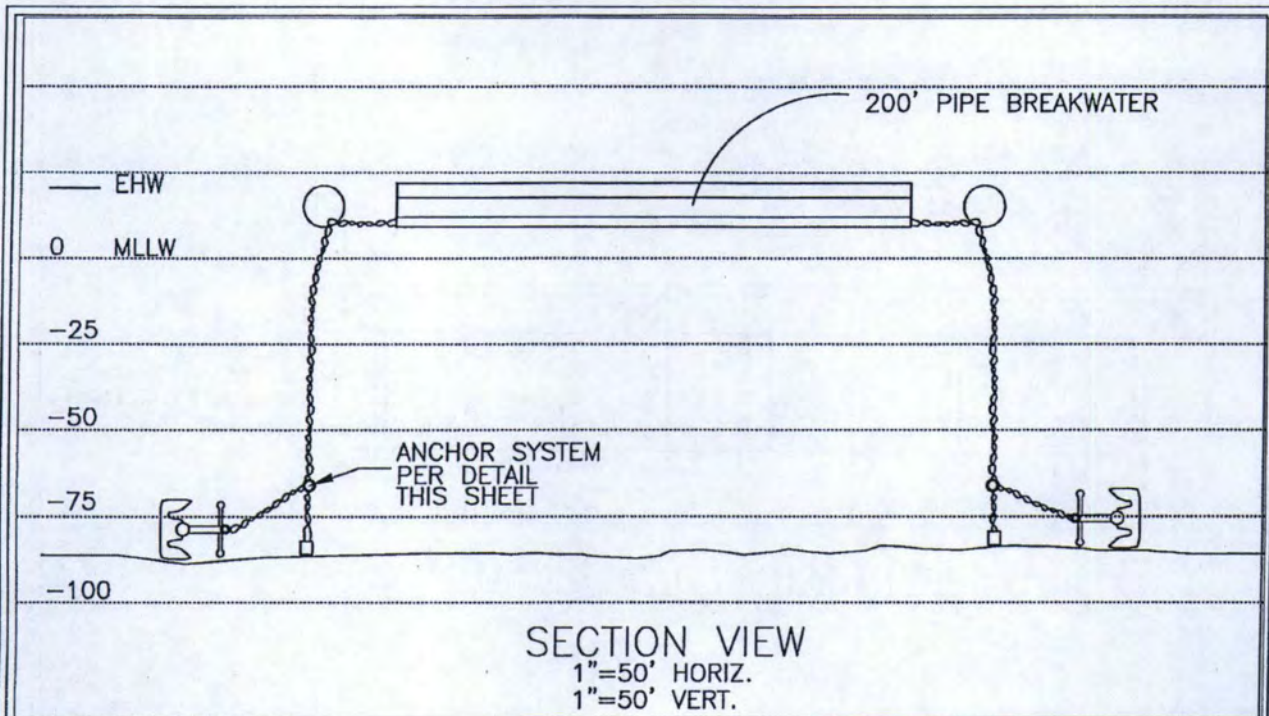
SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
STACKED ROCK DETAIL	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING-KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 5	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS



TYPICAL SECTION
1"=4'

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SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
BREAKWATER TYPICAL SECTION	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING-KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 6	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS



ANCHOR DETAIL

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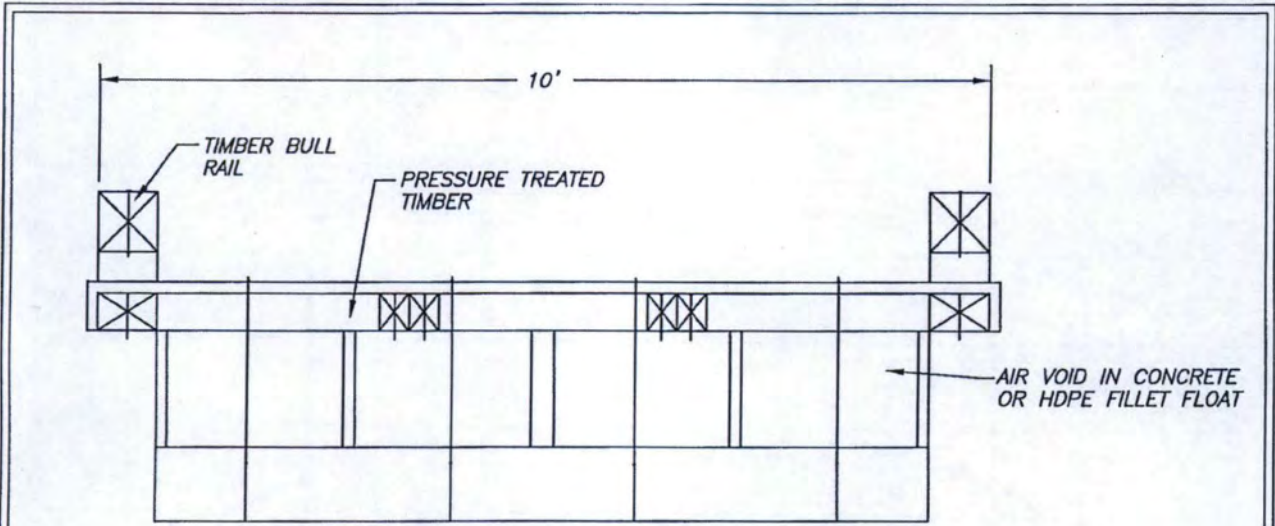
SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS
BREAKWATER ANCHOR DETAIL

APPLICANT:
SOUTHEAST STEVEDORING
1429 TONGASS AVE
KETCHIKAN, AK 99901

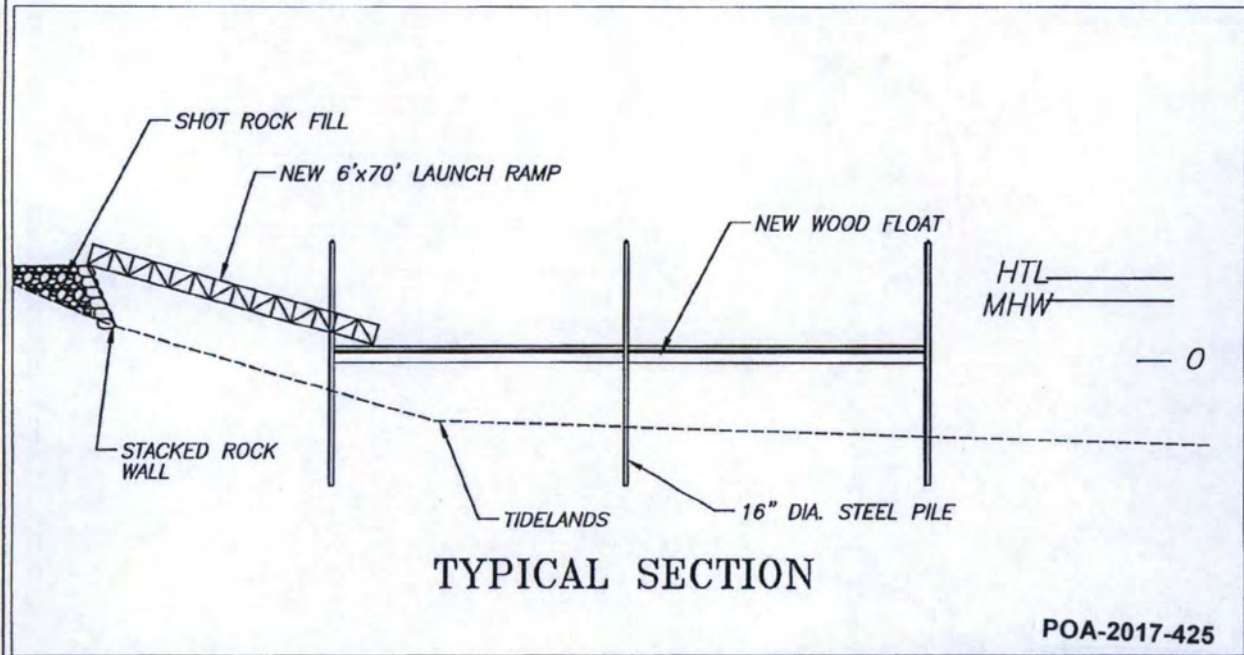
AGENT:
R&M ENGINEERING—KETCHIKAN
355 CARLANNA LAKE ROAD
KETCHIKAN, AK 99901

DATE: 7/26/17
SHEET: 7

LOCATION: KETCHIKAN, ALASKA
WATER BODY: TONGASS NARROWS



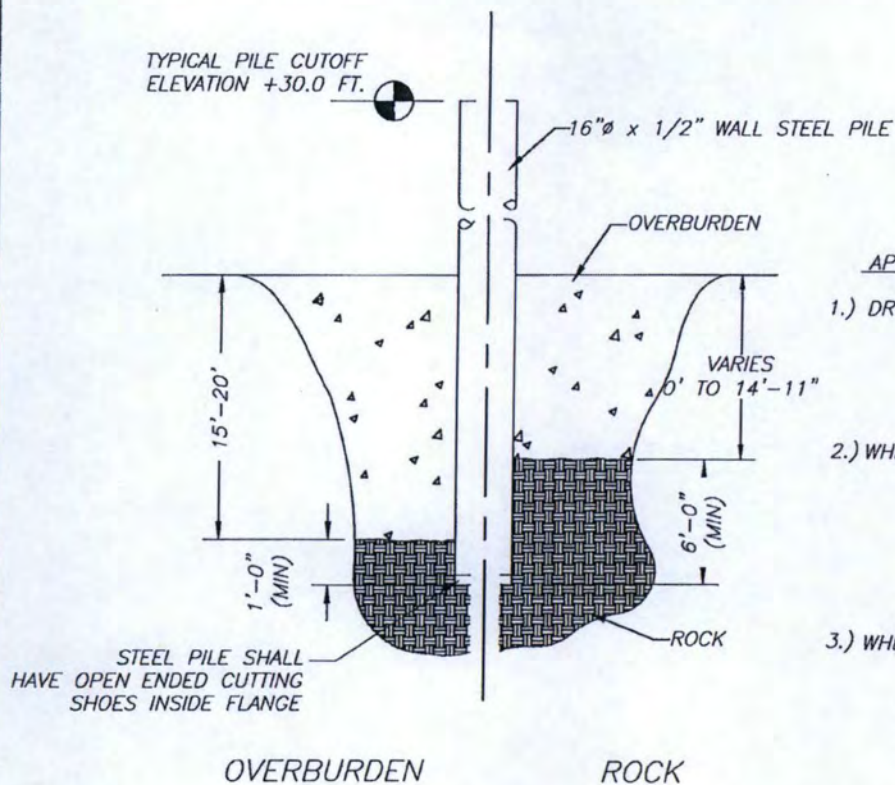
TYPICAL FLOAT DETAIL



TYPICAL SECTION

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SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
BREAKWATER ANCHOR DETAIL	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING—KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 8	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS



APPROVED PLACEMENT

- 1.) DRIVE PILES THROUGH OVERBURDEN TO 20'-0" IF POSSIBLE. PILES MAY BE DRIVEN WITH ANY SIZE HAMMER.
- 2.) WHEN 20'-0" EMBEDMENT IS NOT ACHIEVED AND PILES EMBEDMENT IS GREATER THAN 15'-0", PILES SHALL BE DRIVEN 6" TO 12" INTO BEDROCK USING A MINIMUM 15,000 FT-LB HAMMER.
- 3.) WHEN 15'-0" EMBEDMENT IS NOT ACHIEVED, PILES SHALL BE SOCKETED 6'-0" INTO ROCK USING THE PILE AS A CASING.

DETAIL - STEEL PILE INSTALLATION

N.T.S.

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SAXMAN MARINE SERVICE CENTER & BARGE ACCESS IMPROVEMENTS	
BREAKWATER ANCHOR DETAIL	
APPLICANT: SOUTHEAST STEVEDORING 1429 TONGASS AVE KETCHIKAN, AK 99901	AGENT: R&M ENGINEERING-KETCHIKAN 355 CARLANNA LAKE ROAD KETCHIKAN, AK 99901
DATE: 7/26/17 SHEET: 9	LOCATION: KETCHIKAN, ALASKA WATER BODY: TONGASS NARROWS