KEWALO BASIN JETTY REPAIRS

HAWAII COMMUNITY DEVELOPMENT AUTHORITY

KEWALO BASIN HARBOR
HONOLULU, HAWAII 96814
T.M.K.: (1) 2-1-058:128

Exhibit C

10/08/2015

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
T-1	TITLE, LOCATION MAP, VICINITY MAP, AND INDEX TO DRAWINGS
C-1	CIVIL – EXISTING CONDITIONS – SITE PLAN (1)
C-2	CIVIL – EXISTING CONDITIONS – SITE PLAN (2)
C-3	CIVIL – EXISTING CONDITIONS AND DEMOLITION
C-4	CIVIL – JETTY REPAIR PLAN, SECTIONS & DETAIL
S-1	STRUCTURAL GENERAL NOTES
S-2	STRUCTURAL – EXISTING JETTY CONDITIONS & CONCRETE CAP REMOVAL PLAN & SECTIONS
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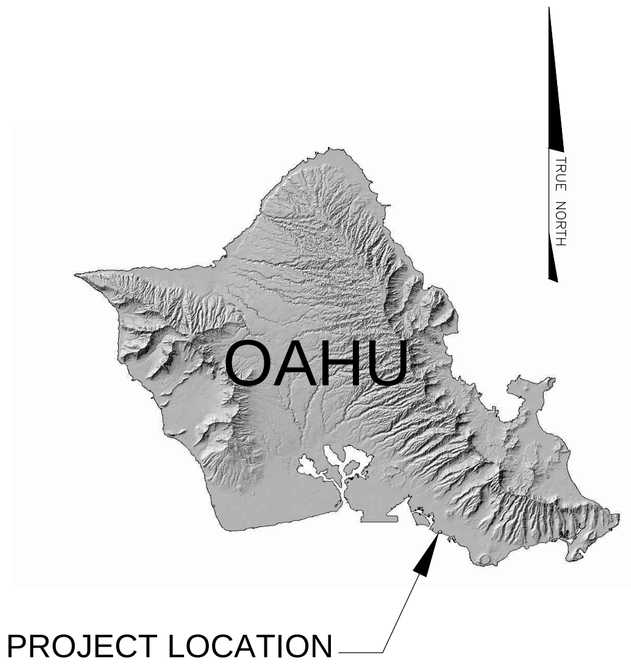
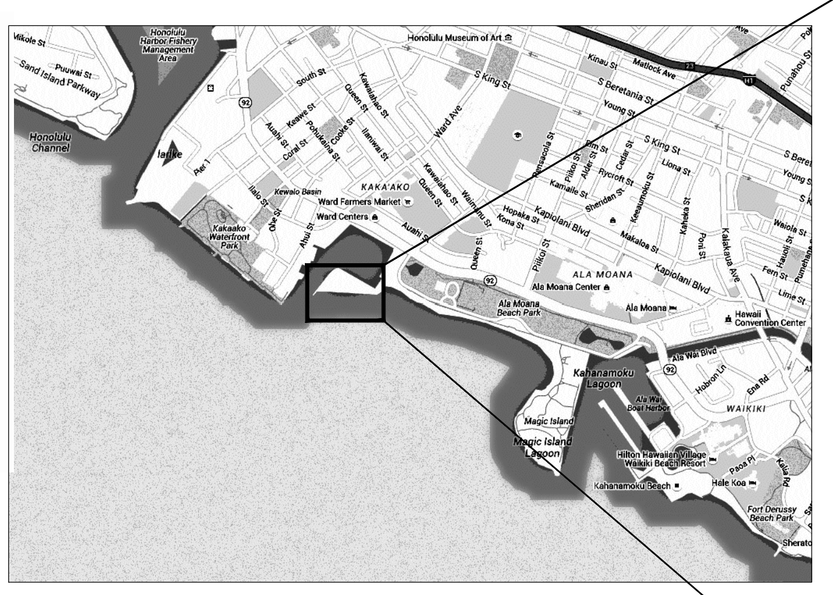
ABBREVIATIONS

', FT.	FEET	HCDA	HAWAII COMMUNITY DEVELOPMENT AUTHORITY
", IN.	INCHES	LBS	POUNDS
CONC.	CONCRETE	MIN.	MINIMUM
CRM	CONCRETE RUBBLE MASONRY	MLLW	MEAN LOWER LOW WATER
CW	CLOCKWISE	NOM.	NOMINAL
DET.	DETAIL	NTS	NOT TO SCALE
EL.	ELEVATION	O.C.	ON CENTER
E.W.	EACH WAY	SHT(S).	SHEET(S)
EXIST.	EXISTING	STA.	STATION
FIN.	FINISHED	MIN.	THICK
		TYP.	TYPICAL



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

SITE MAP
NOT TO SCALE

Sea Engineering, Inc.
MAKAI RESEARCH PIER
41-305 KALANIANAOLE HWY
WAIMANALO, HI 96795
808.259.7966
www.seaengineering.com

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HONOLULU, HAWAII, 96814
T.M.K.: (1) 2-1-058:128

TITLE SHEET

DESIGNED BY:	JB, AO
DRAWN BY:	JB, LC
CHECKED BY:	SS
SCALE:	AS SHOWN
SEI JOB NO:	25407
DATE:	12/21/2015
APPROVED:	

SHEET: T - 1

CONCRETE CORING NOTES

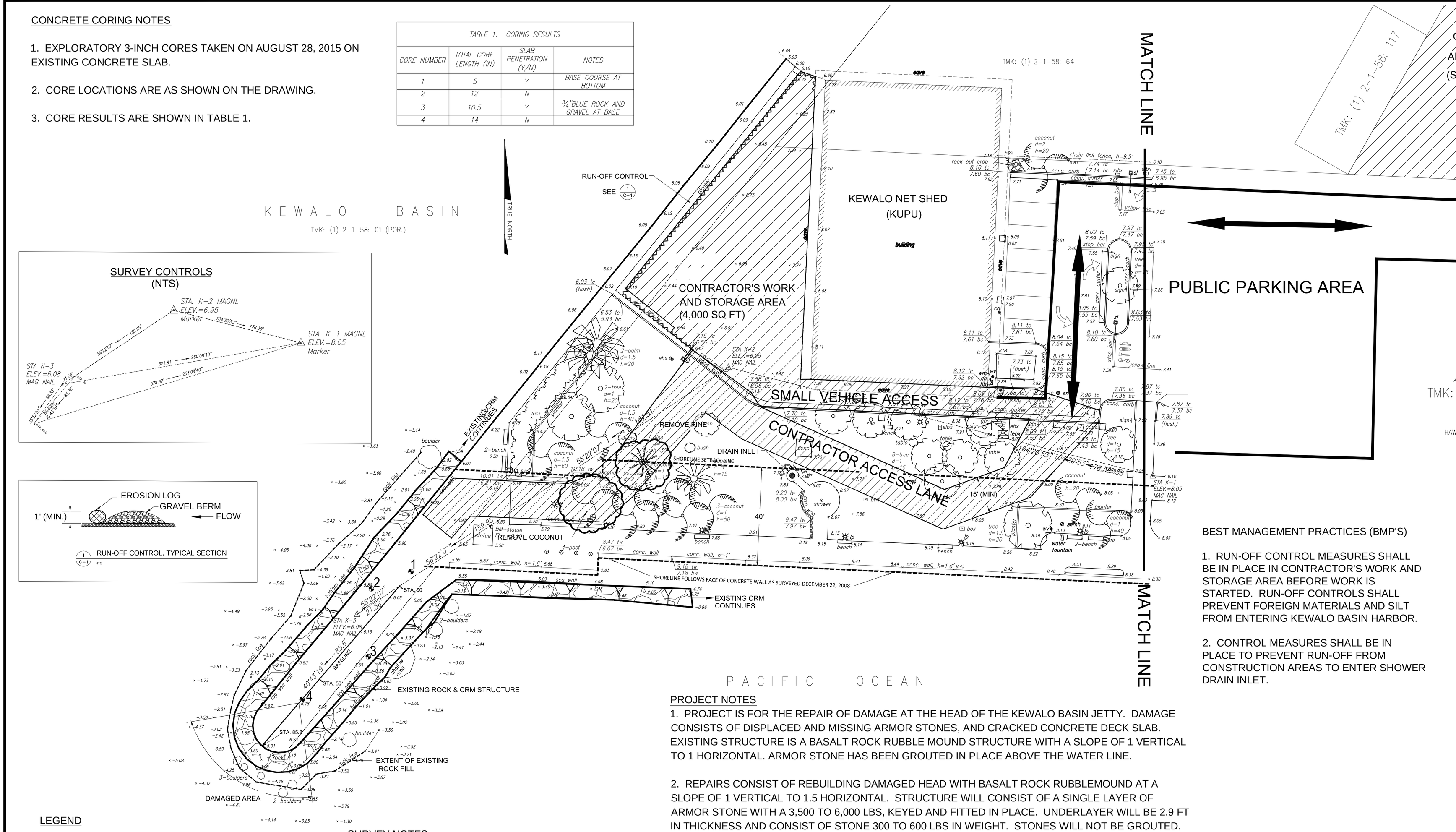
1. EXPLORATORY 3-INCH CORES TAKEN ON AUGUST 28, 2015 ON EXISTING CONCRETE SLAB.

2. CORE LOCATIONS ARE AS SHOWN ON THE DRAWING.

3. CORE RESULTS ARE SHOWN IN TABLE 1.

TABLE 1. CORING RESULTS

CORE NUMBER	TOTAL CORE LENGTH (IN)	SLAB PENETRATION (Y/N)	NOTES
1	5	Y	BASE COURSE AT BOTTOM
2	12	N	
3	10.5	Y	¾"BLUE ROCK AND GRAVEL AT BASE
4	14	N	



SURVEY CONTROLS
(NTS)

1 C-1 RUN-OFF CONTROL, TYPICAL SECTION
NTS

LEGEND

- CONTRACTOR INGRESS / EGRESS
- 4 CONCRETE CORE
- RUN-OFF CONTROL
- SLOPE SYMBOL

SCALE: 1" = 20'
10 0 10 20 30 40 50

SURVEY NOTES
1. TOPOGRAPHIC SURVEY BY AUSTIN TSUTSUMI & ASSOCIATES, INC.
2. SURVEY DATE JUNE 5, 2014
3. HAWAII STATE PLANE COORDINATES (NAD83), ZONE 3 (FT)
4. DISTANCES AND ELEVATIONS IN FEET
5. ELEVATIONS REFERRED TO MLLW
6. AZIMUTHS MEASURED CW FROM SOUTH

PROJECT NOTES
1. PROJECT IS FOR THE REPAIR OF DAMAGE AT THE HEAD OF THE KEWALO BASIN JETTY. DAMAGE CONSISTS OF DISPLACED AND MISSING ARMOR STONES, AND CRACKED CONCRETE DECK SLAB. EXISTING STRUCTURE IS A BASALT ROCK RUBBLE MOUND STRUCTURE WITH A SLOPE OF 1 VERTICAL TO 1 HORIZONTAL. ARMOR STONE HAS BEEN GROUTED IN PLACE ABOVE THE WATER LINE.

2. REPAIRS CONSIST OF REBUILDING DAMAGED HEAD WITH BASALT ROCK RUBBLEMOUND AT A SLOPE OF 1 VERTICAL TO 1.5 HORIZONTAL. STRUCTURE WILL CONSIST OF A SINGLE LAYER OF ARMOR STONE WITH A 3,500 TO 6,000 LBS, KEYED AND FITTED IN PLACE. UNDERLAYER WILL BE 2.9 FT IN THICKNESS AND CONSIST OF STONE 300 TO 600 LBS IN WEIGHT. STONES WILL NOT BE GROUTED. CONCRETE CAP WILL BE REPLACED A MINIMUM OF 20 FT BACK FROM THE TIP OF THE NEW STRUCTURE.

3. CONTRACTOR WORK AND STORAGE AREA IS PARKING LOT BEHIND KEWALO NET SHED. CONTRACTOR SHALL COORDINATE WITH NET SHED TENANTS (KUPU) TO MINIMIZE DISRUPTIONS. OVERFLOW PARKING AND ADDITIONAL STORAGE IS AVAILABLE IF NECESSARY AT TMK (1) 2-1-58: 61 (SEE SHT C-2).

4. VEGETATION AND/OR MINOR STRUCTURES REMOVED FOR ACCESS TO THE WORK AREA SHALL BE REPLACED TO EXISTING CONDITIONS OR REMEDIAL MEASURES TAKEN IN CONSULTATION WITH HCDA

5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM HIS OPERATIONS.

BEST MANAGEMENT PRACTICES (BMP'S)

1. RUN-OFF CONTROL MEASURES SHALL BE IN PLACE IN CONTRACTOR'S WORK AND STORAGE AREA BEFORE WORK IS STARTED. RUN-OFF CONTROLS SHALL PREVENT FOREIGN MATERIALS AND SILT FROM ENTERING KEWALO BASIN HARBOR.

2. CONTROL MEASURES SHALL BE IN PLACE TO PREVENT RUN-OFF FROM CONSTRUCTION AREAS TO ENTER SHOWER DRAIN INLET.

JAMES H. BARRY
LICENSED PROFESSIONAL ENGINEER
No. 11909-C
HAWAII, U.S.A.

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Sea Engineering, Inc.
MAKAI RESEARCH PIER
41-305 KALANIANAOLE HWY
WAIMANALO, HI 96795
808.259.7966
www.seaengineering.com

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T.M.K.: (1) 2-1-058:128

EXISTING CONDITIONS AND SITE PLAN (1)

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DRAWN BY:	JB
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DATE:	12/21/2015
APPROVED:	

SHEET: C - 1
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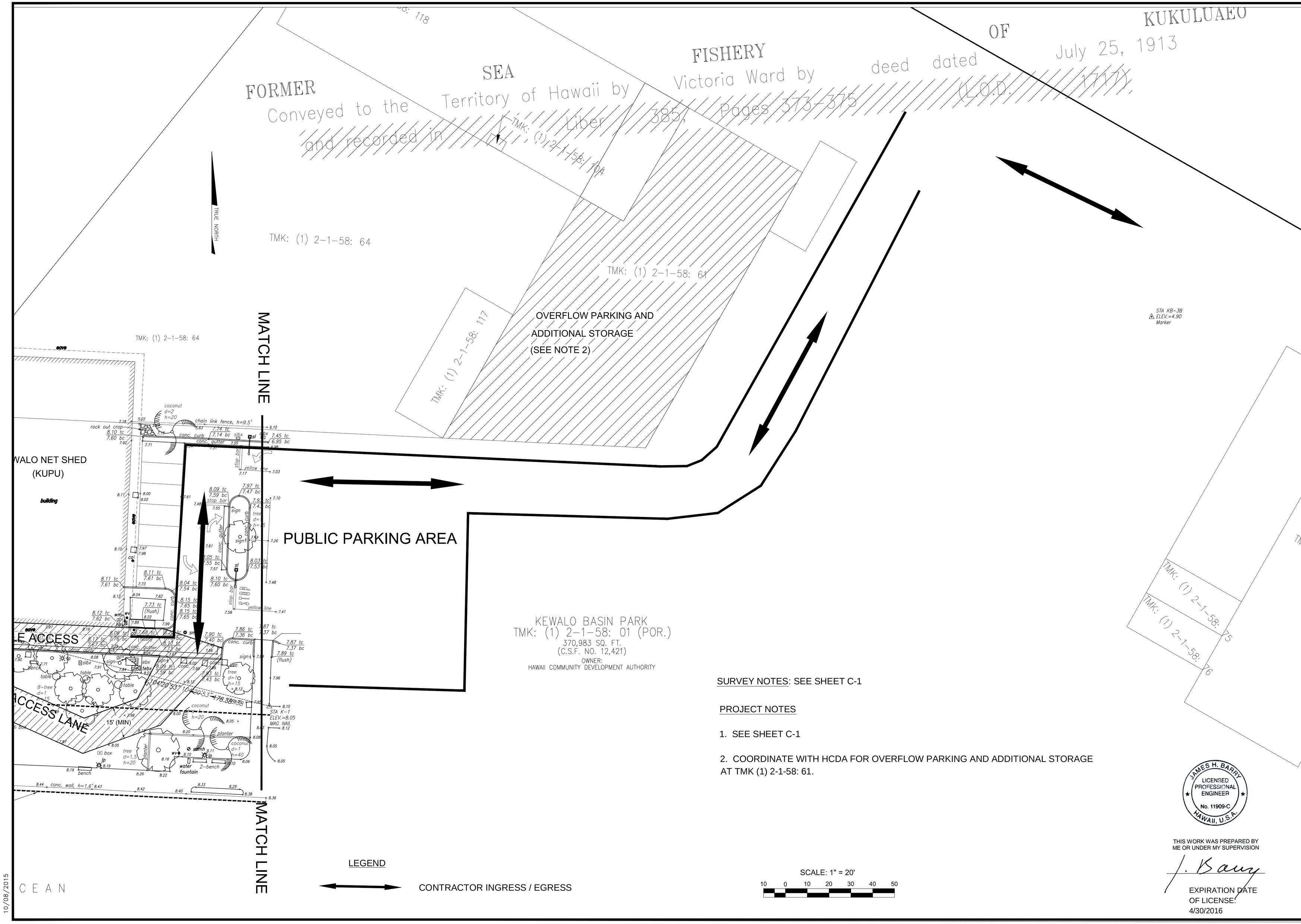
10/08/2015



LEGEND

CONTRACTOR INGRESS / EGRESS

SCALE: 1" = 20'

10 0 10 20 30 40 50

SURVEY NOTES: SEE SHEET C-1

PROJECT NOTES

1. SEE SHEET C-1

2. COORDINATE WITH HCDA FOR OVERFLOW PARKING AND ADDITIONAL STORAGE AT TMK (1) 2-1-58: 61.

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EXISTING CONDITIONS AND SITE PLAN (2)

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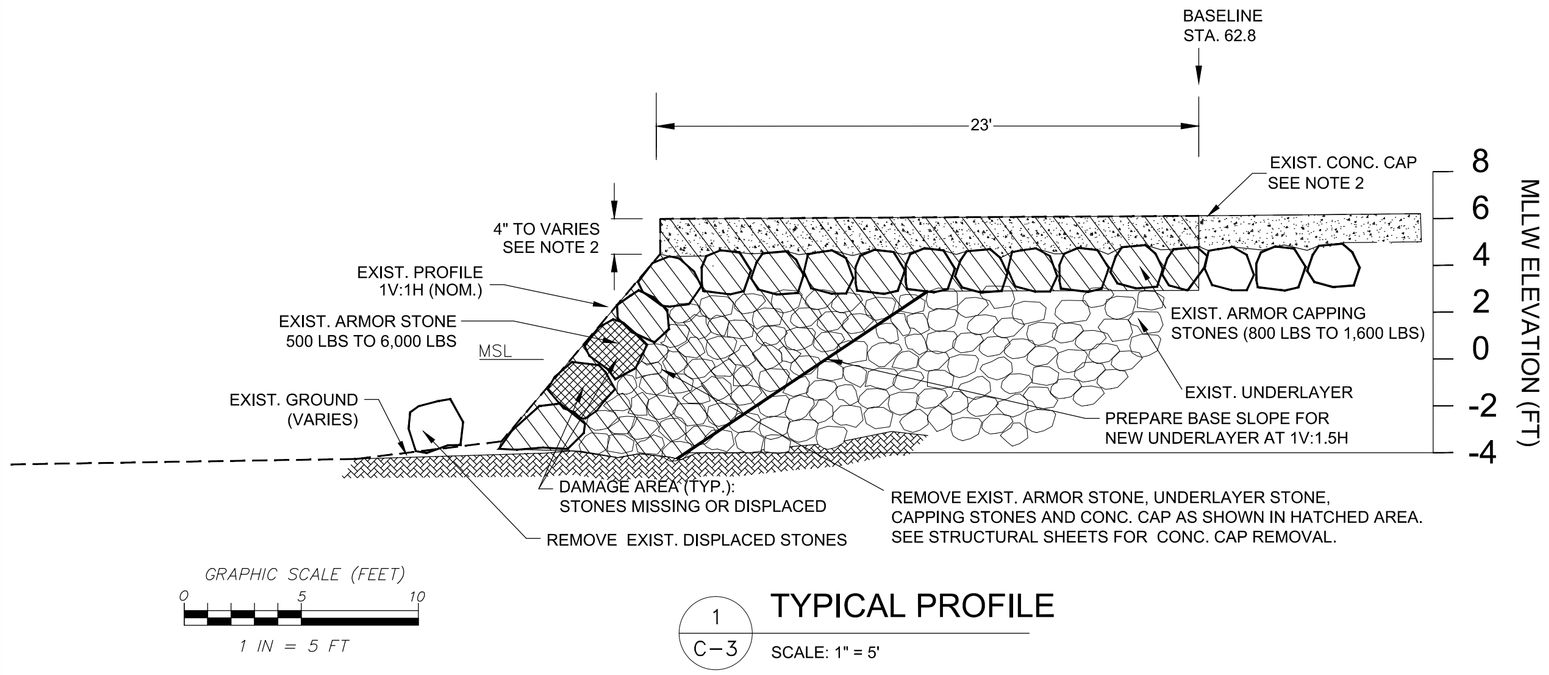


1 / C-3 TYPICAL PROFILE

SCALE: 1" = 5'

NOTES:

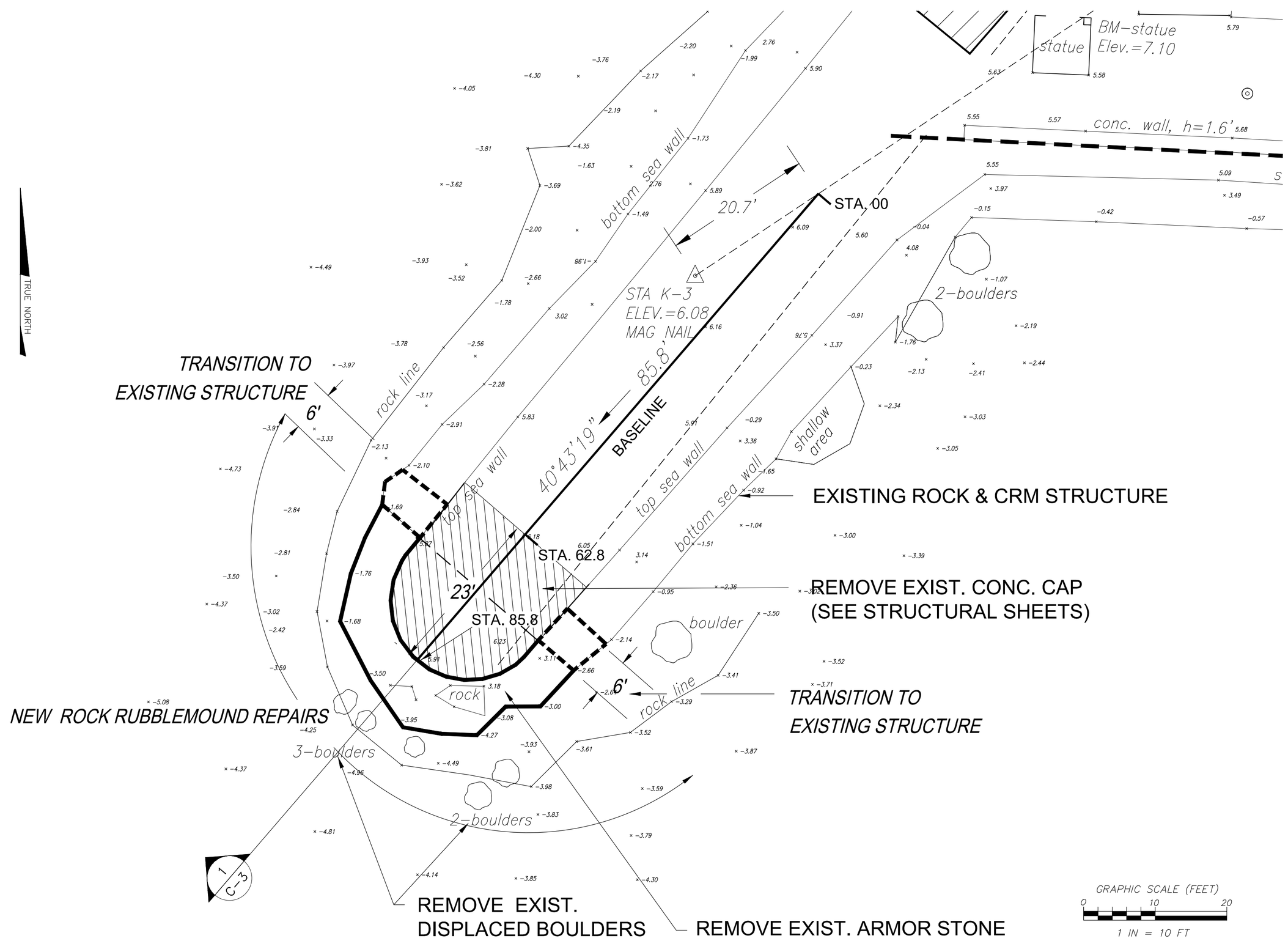
1. EXISTING CONDITIONS FROM AS-BUILT DRAWINGS DATED SEPTEMBER, 1971, AND NOVEMBER, 1989.

2. CONCRETE DECK THICKNESS MINIMUM 4" BASED ON 1989 AS-BUILT DRAWINGS. CONCRETE CORES TAKEN ON 8-28-2015 VARIED FROM 5" TO OVER 14".

3. REMOVE APPROX. 23' OF CONCRETE CAP AND STONE MATERIAL SEAWARD OF BASELINE STA. 2. REPAIRED STRUCTURE SHALL MEASURE 20' FROM BASELINE STA. 2 TO SEAWARD EDGE OF JETTY.

4. REMOVE CAPPING STONES IN REPAIR AREA AND REPLACE WITH NEW OR EXIST. UNDERLAYER STONE.

5. REMOVE AND RESET EXISTING ARMOR STONE IN 6' TRANSITION AREA AS NECESSARY FOR TRANSITION FROM NEW REPAIRS WITH SLOPE OF 1V:1.5H TO EXISTING STRUCTURE WITH NOM. SLOPE OF 1V:1H.



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KEWALO BASIN JETTY REPAIRS
KEWALO BASIN HARBOR
HONOLULU, HAWAII, 96814
T.M.K.: (1) 2-1-058:128

EXISTING CONDITIONS & DEMOLITION

JAMES H. BARRY
LICENSED PROFESSIONAL ENGINEER
No. 11909-C
HAWAII, U.S.A.

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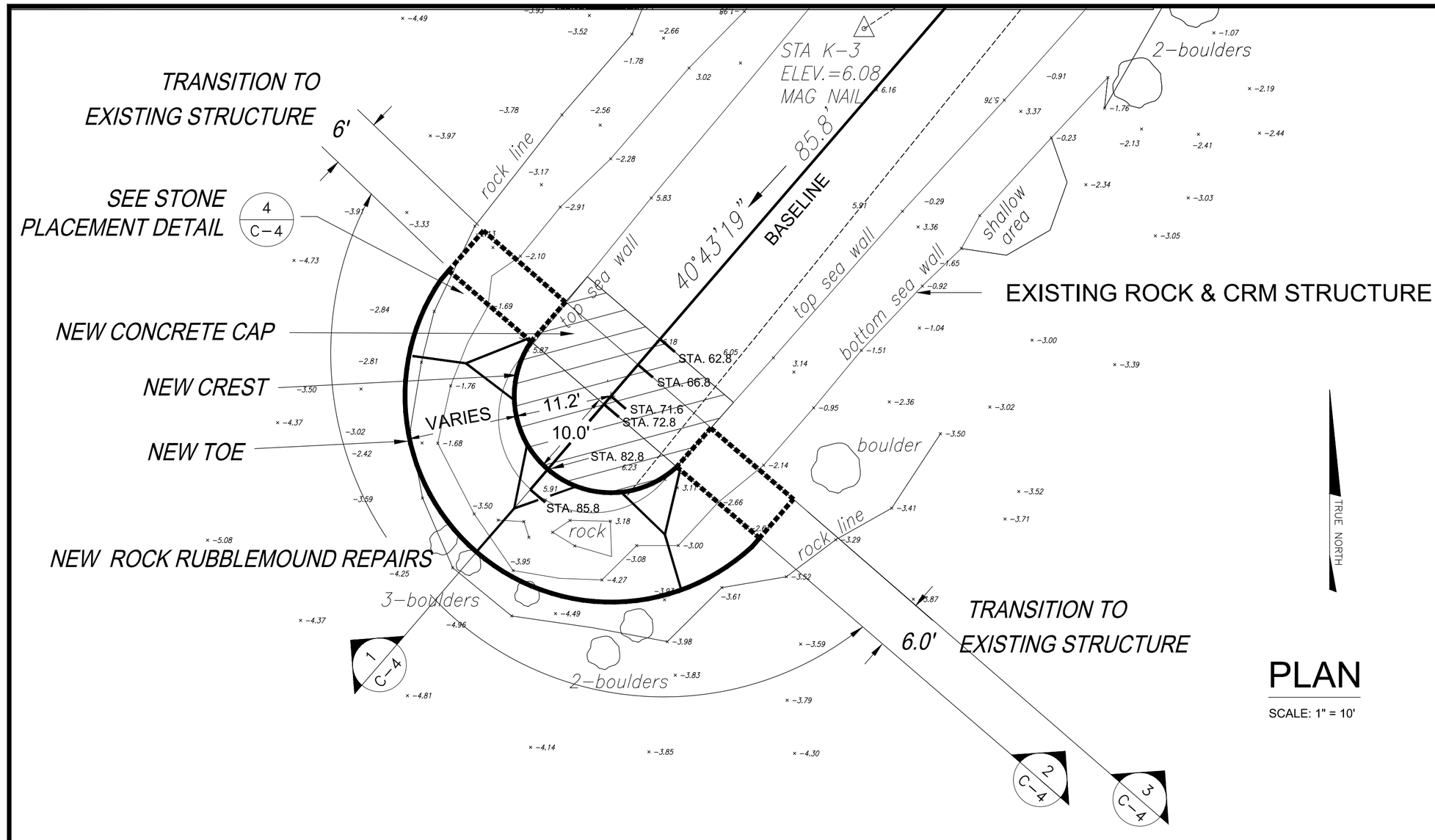
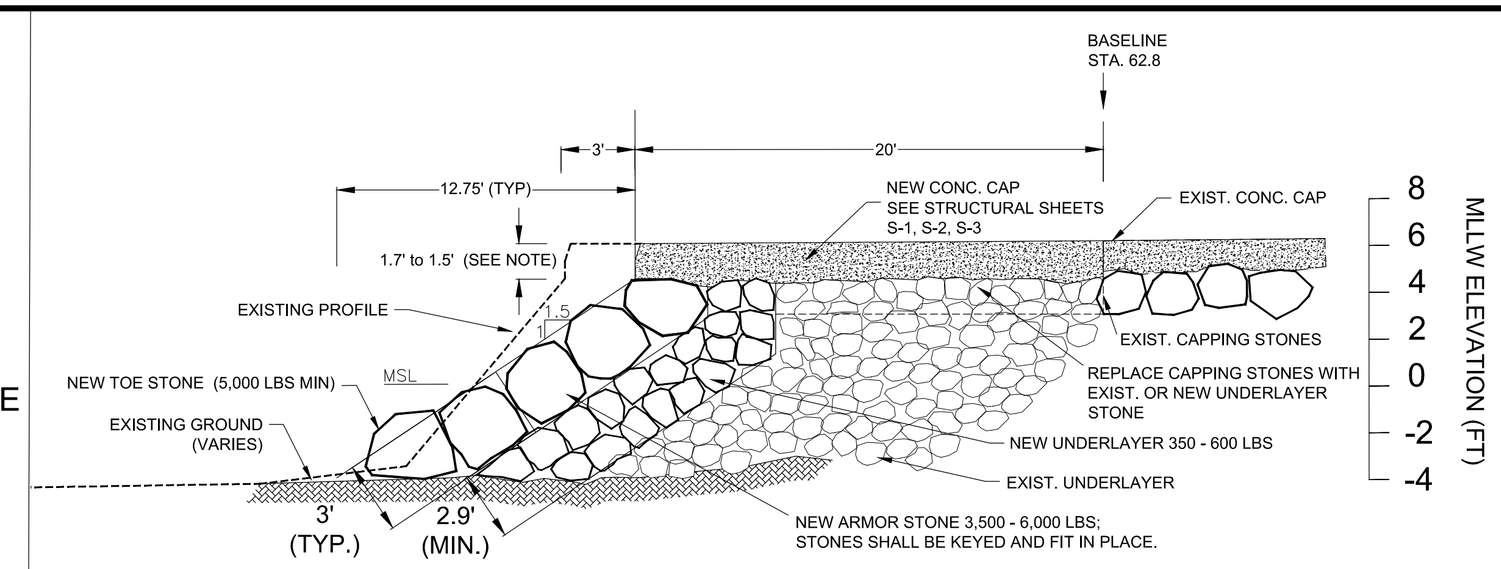


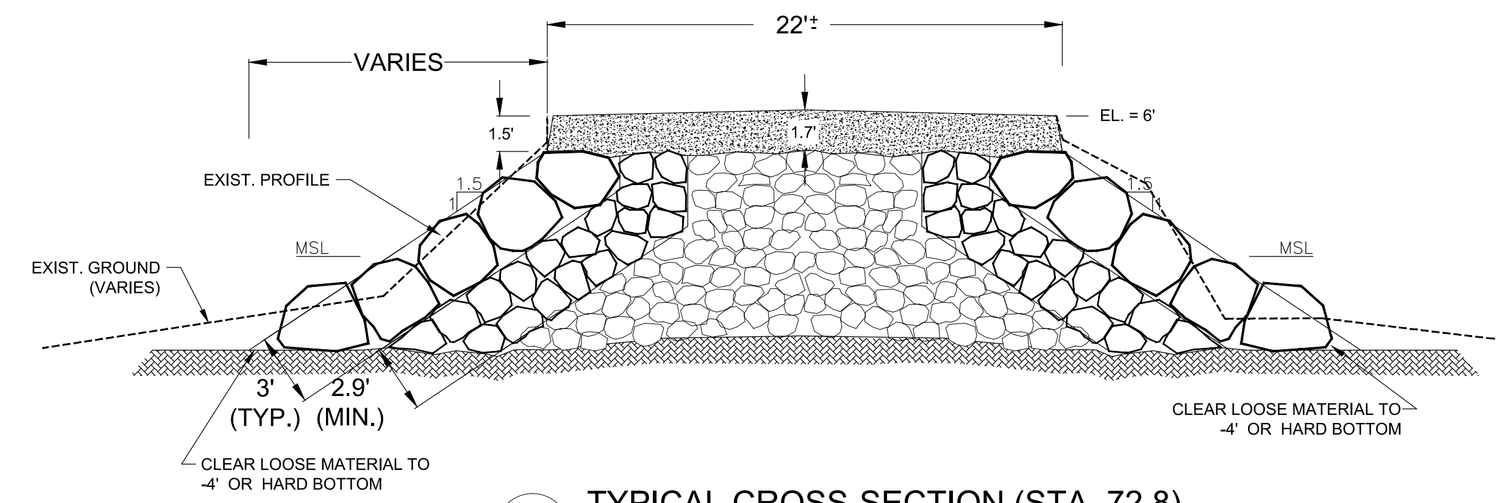
PLAN

SCALE: 1" = 10'



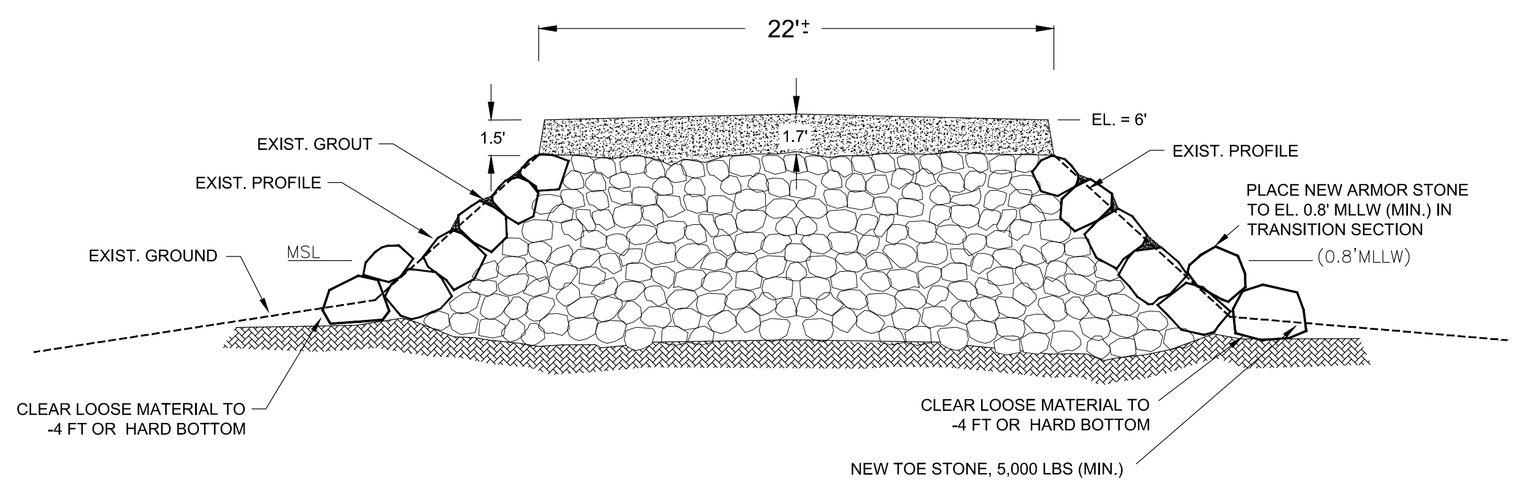
1 C-4 PROFILE

SCALE: 1" = 5'



2 C-4 TYPICAL CROSS-SECTION (STA. 72.8)

SCALE: 1" = 5'



3 C-4 TYPICAL CROSS-SECTION (STA. 66.8)

SCALE: 1" = 5'

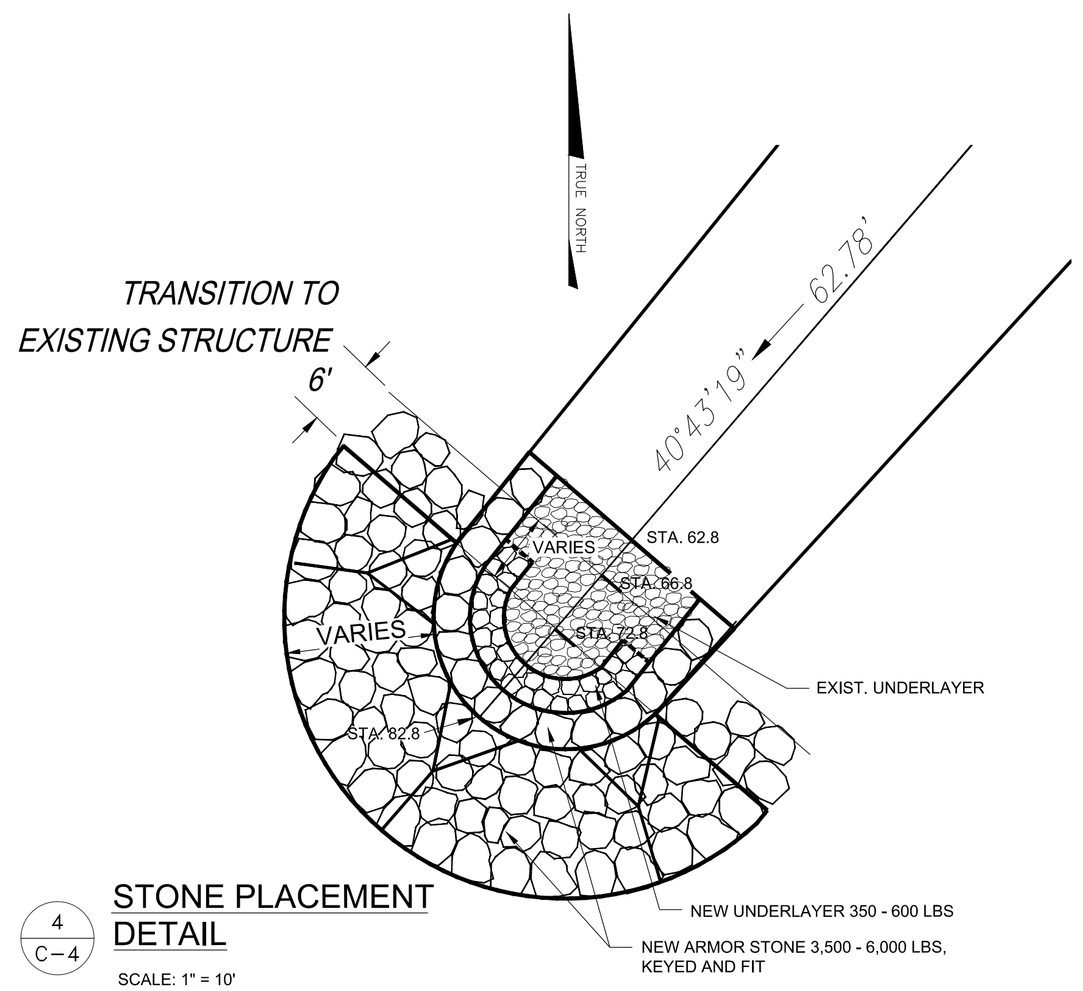
NOTES:

1. REPAIRS CONSIST OF REBUILDING DAMAGED HEAD WITH BASALT ROCK RUBBLEMOUND AT A SLOPE OF 1V : 1.5H. STRUCTURE WILL CONSIST OF A SINGLE LAYER OF ARMOR STONES, 3,500 TO 6,000 LBS. A MINIMUM OF FIFTY PERCENT (50%) OF ARMOR STONE SHALL BE GREATER THAN 4,500 LBS BY VOLUME. UNDERLAYER WILL BE 2.9 FT (MIN.) IN THICKNESS AND CONSIST OF STONE 350 TO 600 LBS IN WEIGHT. STONES SHALL NOT BE GROUTED.

2. CLEAR EXIST. ROCK AND LOOSE MATERIAL UNDER TOE STONES TO A DEPTH OF 4' MLLW OR UNTIL HARD BOTTOM IS ENCOUNTERED.

3. TOE PLACEMENT SHOWN IS BASED ON A NOMINAL DEPTH OF 4' MLLW. DEPTHS TO HARD BOTTOM MAY VARY, AND TOE PLACEMENT SHALL BE MODIFIED ACCORDINGLY TO MAINTAIN THE CREST ALIGNMENT AND A 1V : 1.5H STRUCTURE SLOPE.

4. TRANSITION TO EXISTING STRUCTURE AT1V :1H NOM. SLOPE WITH CLOSELY FIT ARMOR STONES TO PREVENT LOSS OF UNDERLAYER. NEW ARMOR STONES SHALL HAVE BEDDING OF NEW UNDERLAYER STONES. REMOVE AND RESET EXISTING ARMOR STONE AS NECESSARY TO ACHIEVE A SMOOTH TRANSITION.



4 C-4 STONE PLACEMENT DETAIL

SCALE: 1" = 10'

LEGEND

GRAPHIC SCALE (FEET)
0 5 10
1 IN = 5 FT

GRAPHIC SCALE (FEET)
0 10 20
1 IN = 10 FT

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HAWAII, U.S.A.

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JETTY REPAIR PLAN, SECTIONS & DETAIL

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10/08/2015

A. GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THAT SHOWN OF THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN, DURING THE LIFE OF THE CONTRACT, ENVIRONMENTAL PROTECTION AS DEFINED. PLAN FOR AND PROVIDE ENVIRONMENTAL PROTECTIVE MEASURES TO CONTROL POLLUTION THAT DEVELOPS DURING NORMAL CONSTRUCTION PRACTICE. PLAN FOR AND PROVIDE ENVIRONMENTAL PROTECTIVE MEASURES REQUIRED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION OF PERMANENT OR TEMPORARY ENVIRONMENTAL FEATURES ASSOCIATED WITH THE PROJECT. COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO WATER, AIR, AND NOISE POLLUTION.
3. THE CONTRACTOR SHALL NOT BLOCK THE HARBOR ENTRANCE.
4. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION WORK PLAN TO THE ENGINEER, FOR THE REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION.
5. THE WORK PLAN SHALL INCLUDE ALL AREAS OF WORK INDICATED IN THIS CONSTRUCTION DRAWING SET.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER BEFORE COMMENCING WORK.
7. DETAILS ON DRAWINGS SHALL BE TYPICAL FOR ALL SIMILAR CONDITIONS. MODIFY DETAILS FOR SPECIAL CONDITIONS AS DIRECTED BY THE ENGINEER.
8. ALL WORK CALLED FOR ON THE PLANS AND NOT ITEMIZED IN THE PROPOSAL AND ALL WORK NOT CALLED FOR BUT REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT, SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEMS.
9. CONTRACTOR SHALL PROVIDE ALL VEHICLE AND PEDESTRIAN SAFETY BARRICADES FOR AREA UNDER CONSTRUCTION. SAFETY BARRICADE MEASURES SHALL BE ABLE TO BE SEEN AT NIGHT AND DURING THE DAY.
10. ALL WORK OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, COMMUNITY NOISE CONTROL.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER HANDLING, STORAGE AND/OR DISPOSAL OF ALL WASTE GENERATED BY THIS CONSTRUCTION. WASTE MATERIAL SHALL NOT BE DEPOSITED AT ANY OF THE COUNTY TRANSFER STATIONS, BUT SHALL BE TRANSPORTED FOR DISPOSAL TO THE LANDFILL.
12. CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION", DATED 1994 AND THE "STANDARD PLANS", DATED 1986, AS AMENDED, OF THE HIGHWAYS DIVISION, DEPARTMENT OF TRANSPORTATION, AND THE CONSTRUCTION DRAWINGS AND DETAILED SPECIFICATIONS PREPARED FOR THIS PROJECT.
13. CONTRACTOR SHALL PROTECT TREES AND SHRUBS NOT CALLED FOR REMOVAL ON THE DRAWINGS AND MAKE PROVISIONS TO RESTORE AND/OR REPLACE DAMAGED TREES AT HIS OWN EXPENSE.
14. NO CONSTRUCTION EQUIPMENT SHALL BE PARKED WITHIN THE ROAD RIGHT-OF-WAY IN SUCH A MANNER THAT THE EQUIPMENT WILL OBSTRUCT THE NORMAL MOVEMENT AND SIGHT DISTANCE OF THE DRIVING MOTORIST, EXCEPT DURING ACTUAL WORKING HOURS.
15. EXCEPT DURING ACTUAL WORKING HOURS, ALL SIGNS WHICH DO NOT PERTAIN TO THE CONSTRUCTION ACTIVITY, SUCH AS "MEN WORKING" AND "FLAGMEN AHEAD" SHALL BE COVERED OR LAID DOWN. HOWEVER, ALL SIGNS NECESSARY FOR THE SAFETY OF THE PUBLIC SHALL BE MAINTAINED.
16. THE CONTRACTOR SHALL EMPLOY A HAWAII REGISTERED PROFESSIONAL SURVEYOR TO PERFORM ALL CONSTRUCTION STAKEOUTS, THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR.
17. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR, AND PAY FOR ALL TEMPORARY UTILITIES REQUIRED FOR HIS WORK.

B. CONCRETE

1. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH (fc') AS FOLLOWS:

   ALL CAST-IN-PLACE CONCRETE
   EXCEPT AS NOTED . . . . . fc' = 4,000 PSI
2. CHAMFER ALL EXPOSED EDGES OF PILE CAPS, WALLS, AND CURBS 3/4" x 3/4" UNLESS OTHERWISE NOTED ON THE PLANS.
3. UNLESS OTHERWISE NOTED ON THE DRAWINGS, MINIMUM CLEAR CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS:

   CAST-IN-PLACE . . . . . 3"

C. CONCRETE REINFORCEMENT

1. REBARS SHALL BE GLASS FIBER REINFORCED POLYMER (GFRP) BARS FOR CONCRETE REINFORCEMENT.

D. CONSTRUCTION NOTES

1. ALL CONSTRUCTION LINES, GRADES, AND SURVEY MONUMENT STAKEOUTS SHALL BE MADE BY LICENSED SURVEYORS.
2. REMOVE AND REINSTALL ALL OBSTACLES AND OBSTRUCTIONS AS REQUIRED TO FACILITATE CONSTRUCTION WORK. ALL DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPLACED TO MATCH EXISTING ITEM AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE ENGINEER.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION AND BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND, SURFACE, AND OVERHEAD UTILITIES, LANDSCAPING AND TIES WITHIN AND ADJACENT TO THE PROJECT SITE DURING CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE TO THE ORIGINAL, OR BETTER CONDITION.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS SHOWN PRIOR TO CONSTRUCTION AND FABRICATION OF ALL MEMBERS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE STARTING WORK.
6. THE CONTRACTOR SHALL NOT DISPOSE ANY CONCRETE, STEEL, WOOD, AND ANY OTHER DEBRIS INTO MARINA WATERS. ANY DEBRIS THAT FALLS INTO THE HARBOR WATER SHALL BE REMOVED AT THE CONTRACTOR'S OWN EXPENSE.
7. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES BEFORE STARTING ANY CONSTRUCTIONS.
8. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, ANCHORS, ETC. RELATING TO THE GENERAL WORK BEFORE COMMENCING WORK.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, BOLT LAYOUTS, DETAILS INDICATED ON THE PLANS PRIOR TO ORDERING OF THE BUILDING MATERIALS.
10. ALL CONSTRUCTION WORK NOT SPECIFIED BY THE PLANS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS IN THE IBC 2003 INTERNATIONAL BUILDING CODE.
11. WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" DATED SEPTEMBER 1984, "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" DATED SEPTEMBER 1986, AS AMENDED, BY THE DEPARTMENT OF PUBLIC WORKS, CITY & COUNTY OF HONOLULU AND THE "HAWAII SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION", DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, STATE OF HAWAII, 1994.
12. VERIFY THE LOCATION OF EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, AND BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF CHANGES DUE TO HIS CONSTRUCTION PRACTICES. COORDINATE THE WORK WITH RESPECTIVE UTILITY COMPANIES.
13. EXISTING PAVEMENTS, WALKS, UTILITIES, AND OTHER FACILITIES WHETHER SHOWN OR NOT, WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE RECONSTRUCTED OR REPLACED AT CONTRACTOR'S EXPENSE TO THE ORIGINAL UNDAMAGED CONDITION.
14. ELEVATIONS SHOWN ARE REFERENCED TO MSL = 0.00.
15. DIMENSIONS SHALL BE FIELD VERIFIED BY A SURVEY TO BE CONDUCTED BY THE CONTRACTOR WITHIN THREE WEEKS AFTER NOTICE TO PROCEED.
16. ENGINEER SHALL BE GIVEN THREE DAY ADVANCE NOTICE OF STARTING TIME OF CONCRETE POURS.
17. THE CONTRACTOR SHALL NOT BLOCK THE KEWALO BASIN HARBOR ENTRANCE.
18. THE CONTRACTOR SHALL DETAIL, FURNISH, AND INSTALL ALL MEMBERS, CONNECTIONS, AND ACCESSORIES NOT SHOWN BUT WHICH ARE REQUIRED TO COMPLETE THE WORK AND SHALL SUBMIT THEM TO THE ENGINEER FOR APPROVAL. COST OF THESE MEMBERS, CONNECTIONS, AND ACCESSORIES SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE. THE CONTRACTOR SHALL PERFORM HIS WORK IN A WORKMANLIKE MANNER.

E. DEMOLITION NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGING THE EXISTING STRUCTURES AND UTILITY LINES TO REMAIN AND ADJACENT IMPROVEMENTS. WHEN DOING THE DEMOLITION AND REMOVAL WORK THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY HIS OPERATION AT NO ADDITIONAL COST TO THE OWNER.
2. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL MATERIAL NOT DESIGNATED TO BE SALVAGED TO AN APPROVED LAND DISPOSAL SITE.
3. ANY DISCREPANCIES BETWEEN THE CONTRACT PLANS AND/OR SPECIFICATIONS AND THE EXISTING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE DEMOLITION WORK.

F. SHOP DRAWING SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS FOR REINFORCING BARS, CONCRETE MIX AND CONCRETE REPAIR MATERIALS. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO FABRICATION.

Sea Engineering, Inc.
MAKAI RESEARCH PIER
41-305 KALANIANAOLE HWY
WAIMANALO, HI 96795
808.259.7966
www.seaengineering.com

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KEWALO BASIN JETTY REPAIRS
KEWALO BASIN HARBOR
HONOLULU, HAWAII, 96814
T.M.K.: (1) 2-1-058:128

GENERAL NOTES

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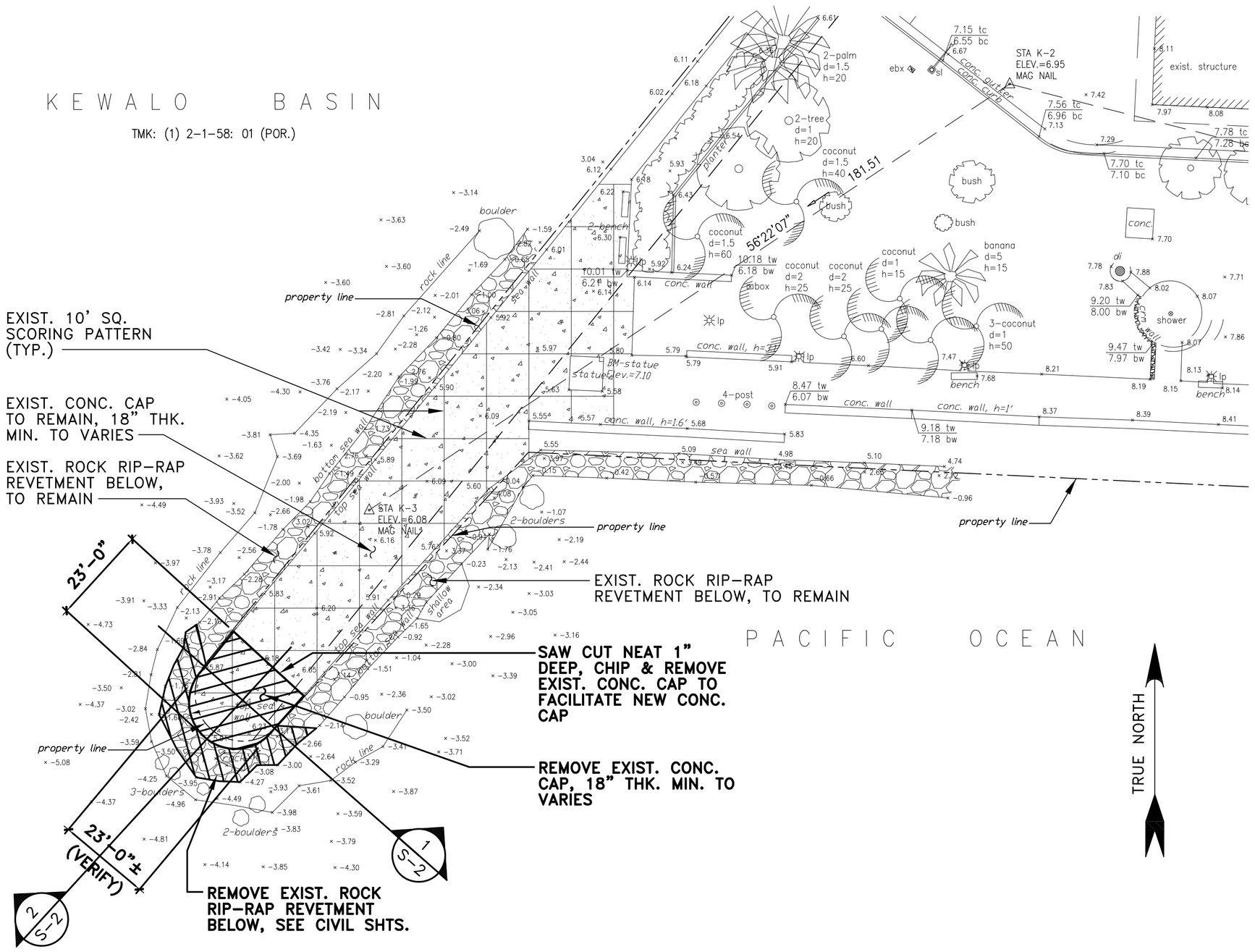
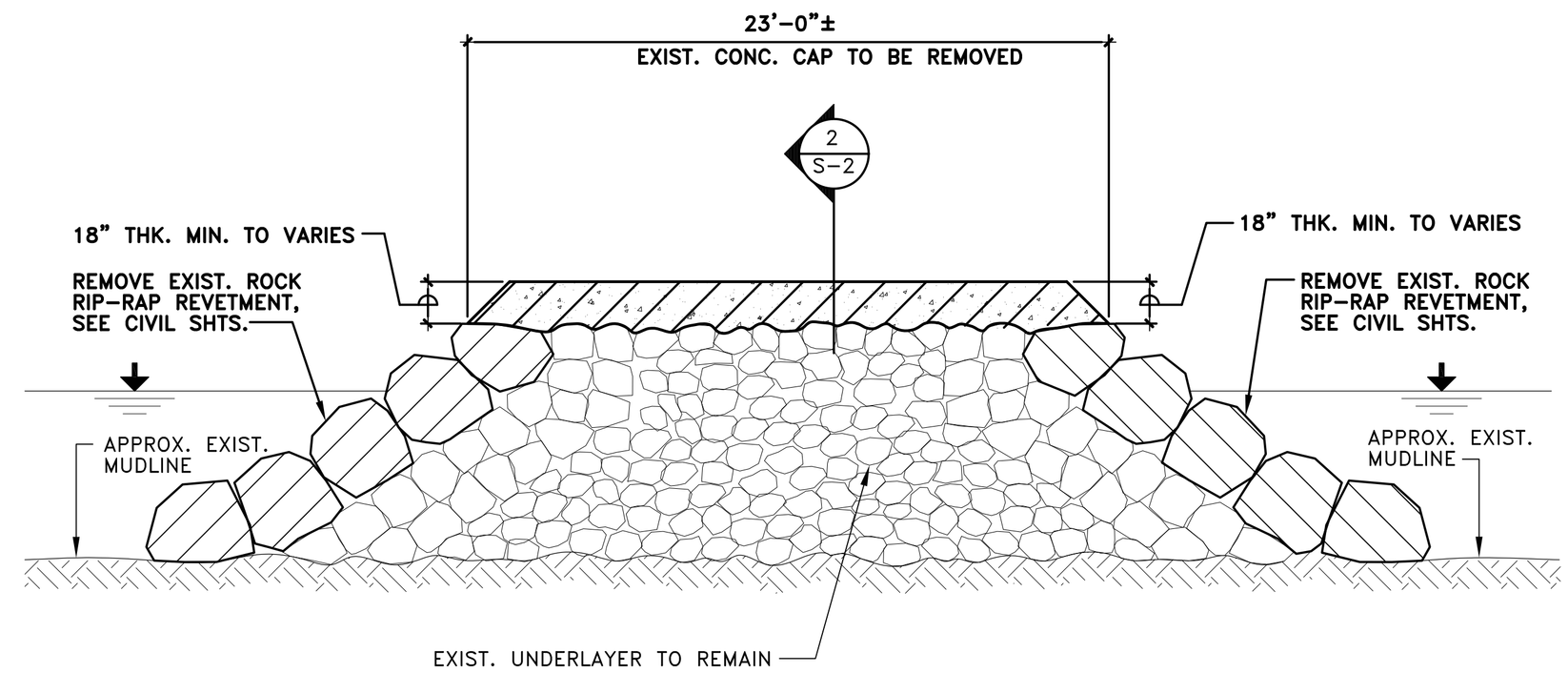
Of Sheets

10/08/2015



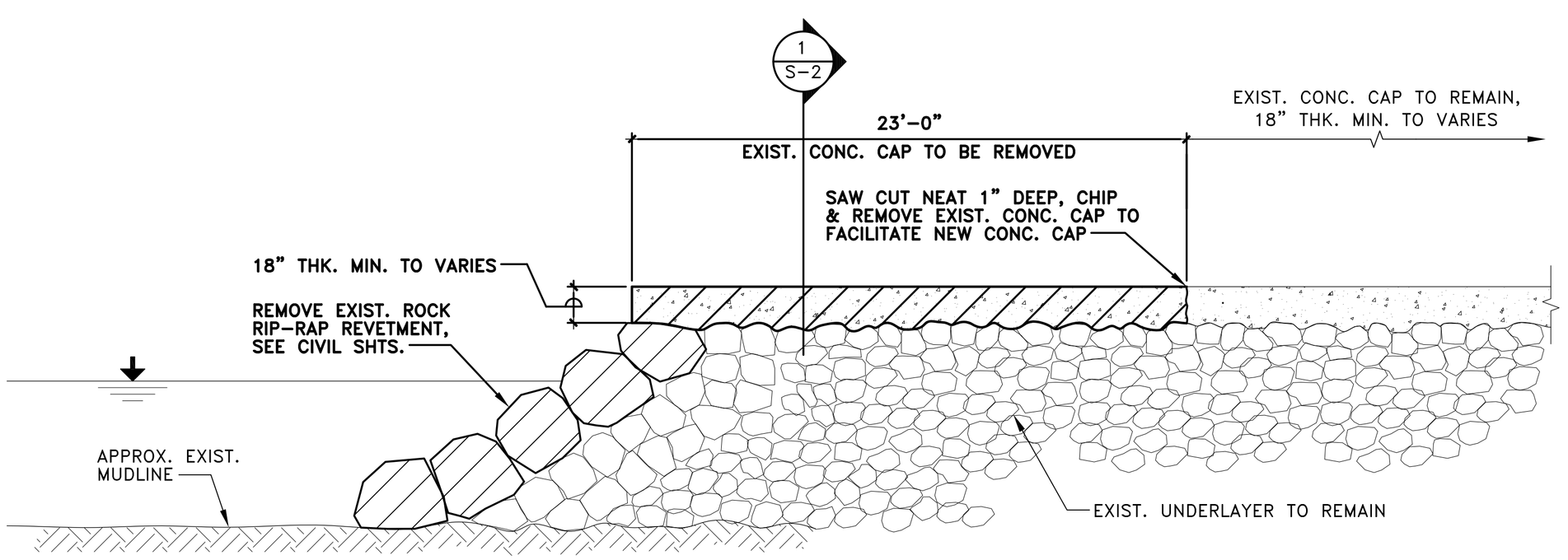
A / S-2 EXISTING JETTY CONDITION & CONCRETE CAP REMOVAL PLAN

SCALE: 1" = 20'



1 / S-2 SECTION

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



2 / S-2 SECTION

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

GRAPHIC SCALE:

10' 0 10' 20' 30' 40' 50'
SCALE: 1" = 20'

1' 0 2' 4' 6' 8' 10'
SCALE: 1/4" = 1'-0"

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HONOLULU, HAWAII, 96814
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EXISTING JETTY CONDITION & CONCRETE CAP REMOVAL PLAN & SECTIONS

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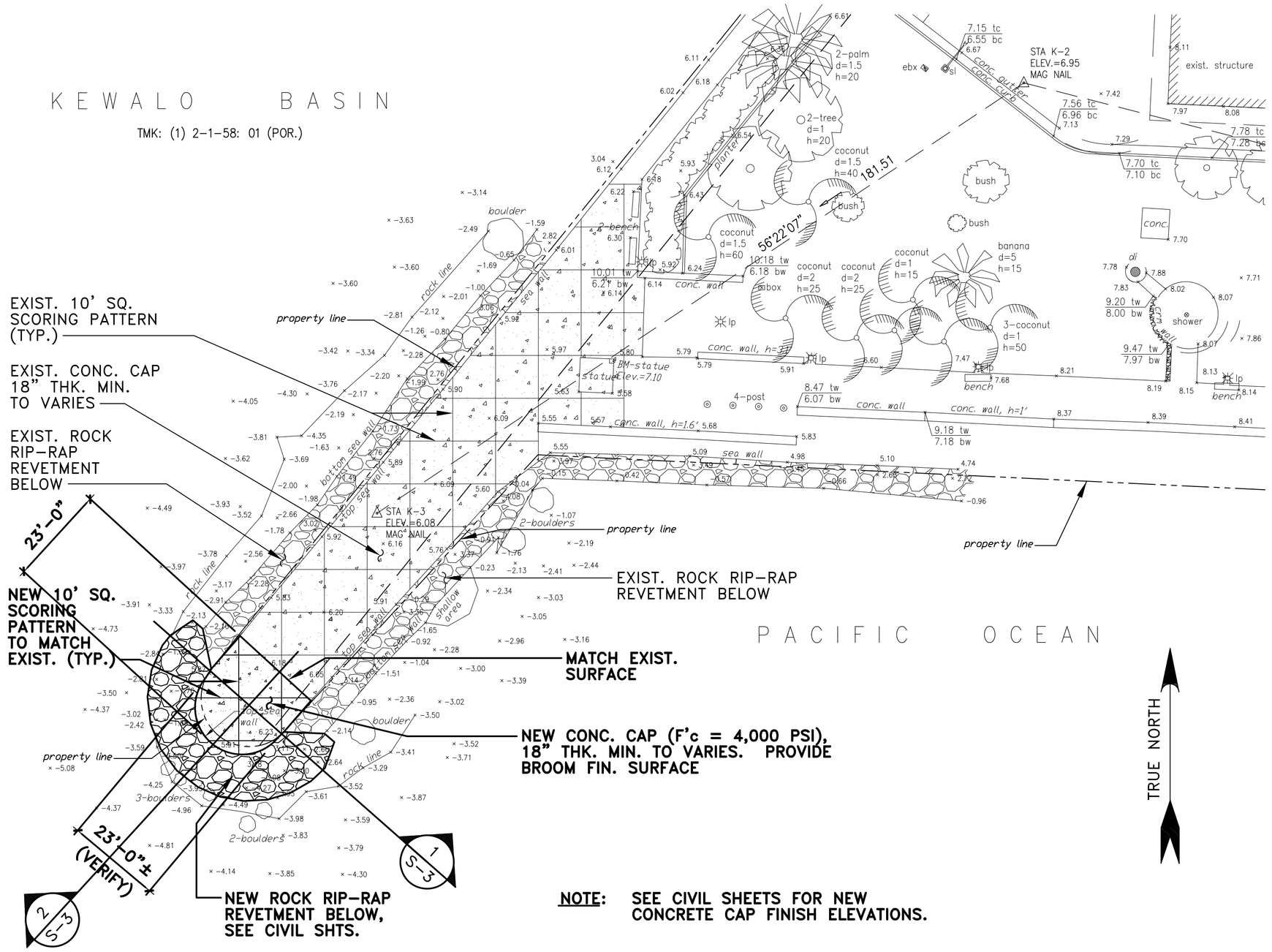
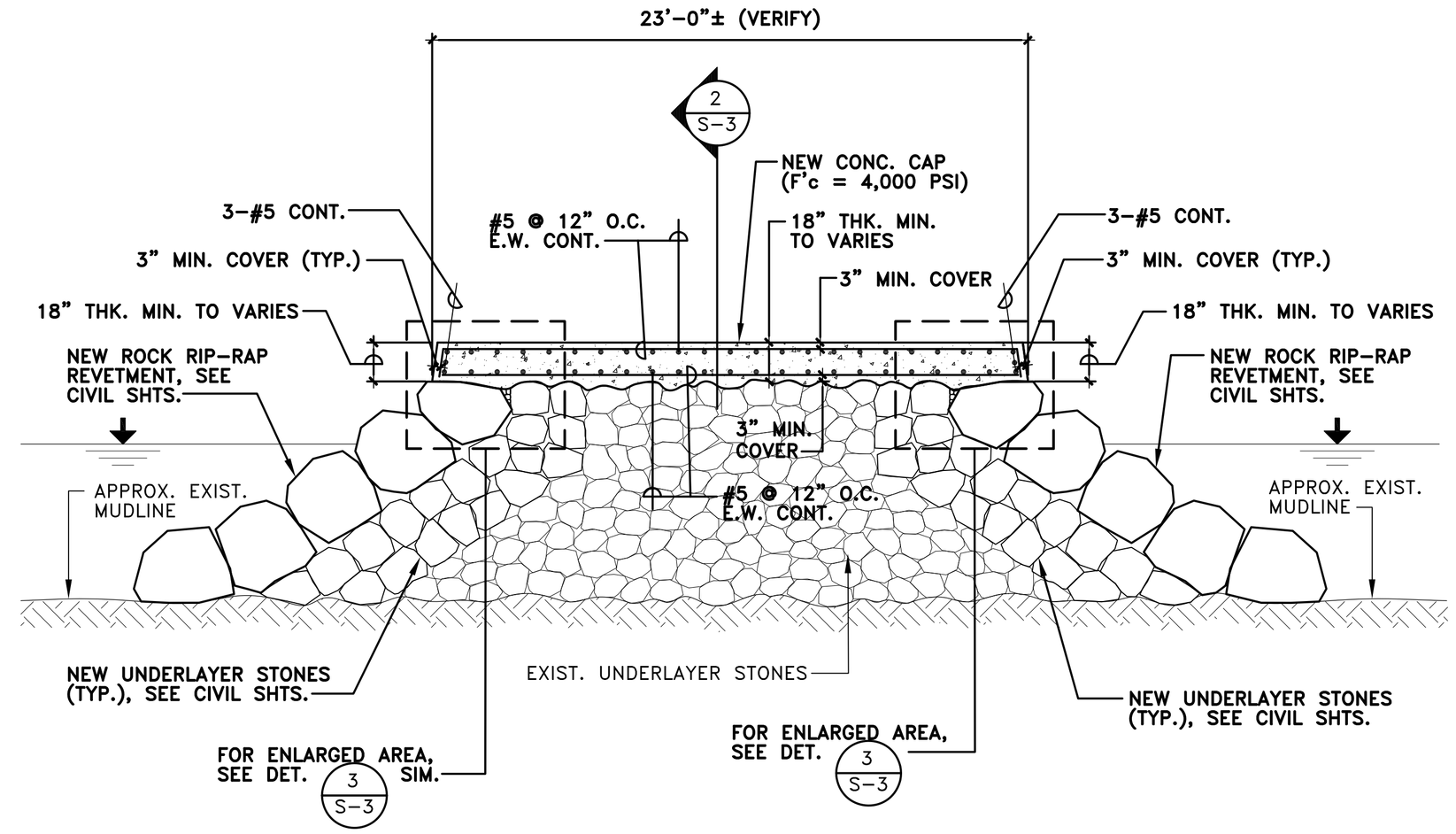
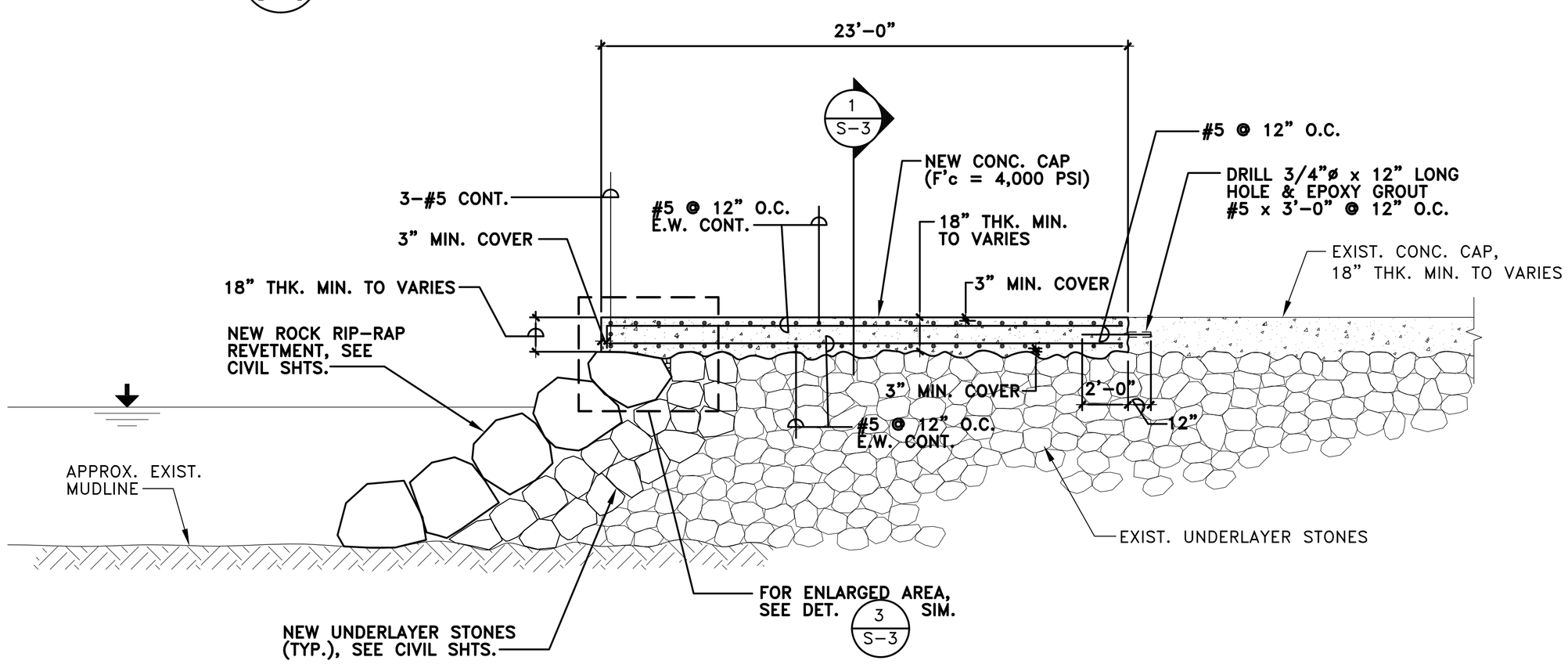


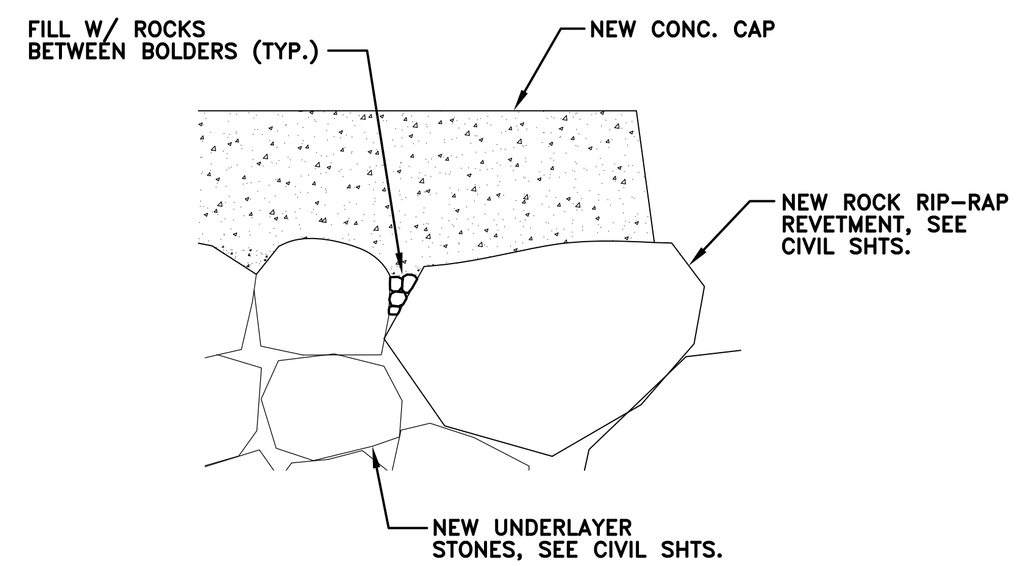
A / S-3 EXISTING JETTY – REPAIR PLAN
SCALE: 1" = 20'



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



2 / S-3 SECTION
SCALE: 1/4" = 1'-0"



3 / S-3 DETAIL
NOT TO SCALE

GRAPHIC SCALE:

10' 0 10' 20' 30' 40' 50'
SCALE: 1" = 20'

1' 0 2' 4' 6' 8' 10'
SCALE: 1/4" = 1'-0"

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EXISTING JETTY – REPAIR PLAN, SECTIONS, & DETAIL

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Of Sheets

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