

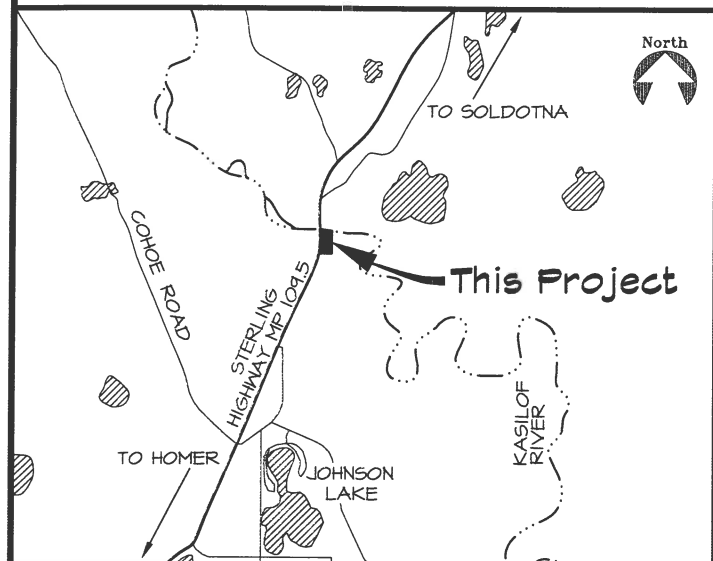
STATE OF ALASKA  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF PARKS  
 AND  
 OUTDOOR RECREATION

KASILOF RIVER SRS  
 RIVERBANK RESTORATION

PROJECT NO.  
 73057-1

This Project is Funded in Part by the Alaska Sustainable Salmon Fund Program

Vicinity Map



INDEX

- |   |  |
|---|--|
| 1. TITLE PAGE   | 8. ELP WALKWAY ELEVATION                 |
| 2. LEGEND, LIST OF ABBR., TABLE OF EST. FACTORS, & EST. OF QUANTITIES | 9. ELP WALKWAY & STAIRS FRAMING PLAN     |
| 3. SITE MAP   | 10. ALUMINUM STAIR DETAILS               |
| 4. EXISTING CONDITIONS  | 11. STEEL STAIR DETAILS                  |
| 5. SITE PLAN  | 12. PILE & A-FRAME DETAILS               |
| 6. ROOT WAD DETAILS   | 13. RAIL DETAILS                         |
| 7. ELP WALKWAY PILE LOCATIONS   | 14. ARTICULATED CONCRETE MAT DETAILS     |
|   | 15. AA#1 ARTICULATED CONCRETE MAT DETAIL |

The following Division of Parks & Outdoor Rec. standard drawings apply to this project: None  
 The following D.O.T.(Highways) standard drawings apply to this project: None

STATE OF ALASKA  
 Department of Natural Resources  
 Division of Parks & Outdoor Recreation

Recommended:

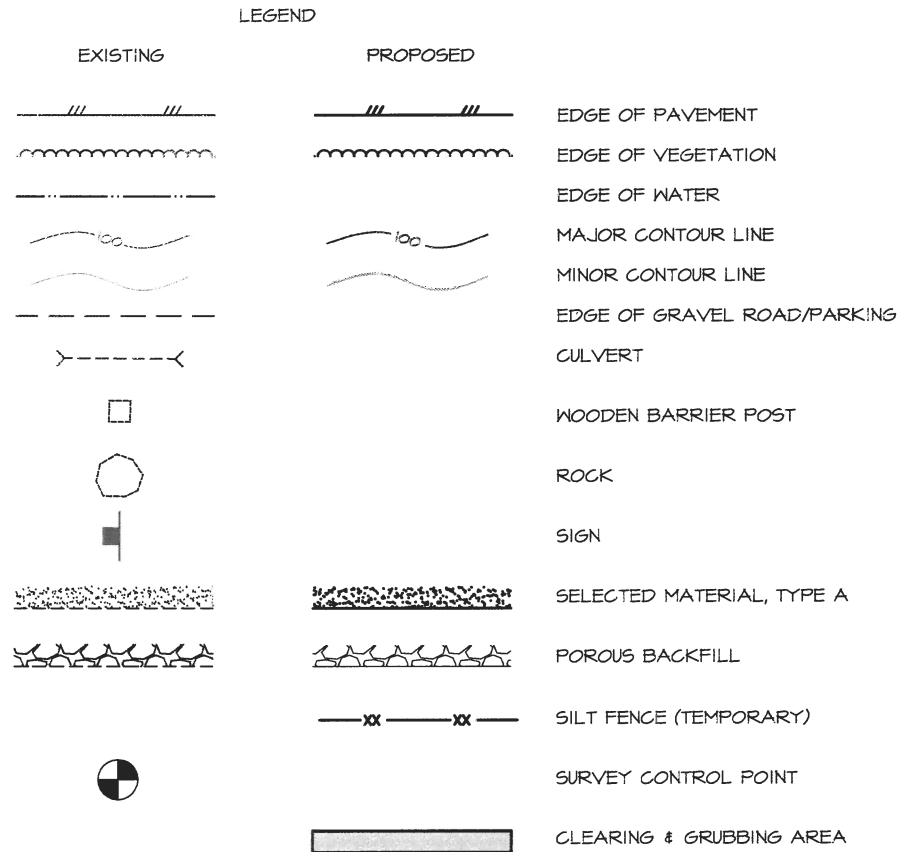
*Rys Miranda* 15. Mar. 2016  
 Rys Miranda, P.E. Date  
 Chief, Design and Construction

Approved:

*Ben Ellis* 3/15/16  
 Ben Ellis Date  
 Director, Alaska State Parks

BASIC BID - ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
201(3B)	CLEARING AND GRUBBING	L.S.	ALL REQ'D
505(5-6)	FURNISH 6 INCH STRUCTURAL STEEL PILE	L.F.	136
505(6-6)	DRIVE 6 INCH STRUCTURAL STEEL PILE	EACH	8
621(5)	VEGETATIVE MAT	S.Y.	160
621(6)	ROOT WAD REVETMENT	L.F.	100
621(7)	BRUSH LAYERING	L.F.	100
640(1)	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQ'D
641(1)	EROSION SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	L.S.	ALL REQ'D
641(2)	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	C.S.	ALL REQ'D
641(3)	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	C.S.	ALL REQ'D
642(2)	CONSTRUCTION SURVEYING	L.S.	ALL REQ'D
643(2)	TRAFFIC MAINTENANCE	L.S.	ALL REQ'D
647(6)	HYDRAULIC EXCAVATOR, 1 CY, 100 HP MINIMUM	HOUR	5
650(12)	ELP WALKWAY	L.S.	ALL REQ'D
650(12A)	STEEL STAIR TREAD	L.S.	ALL REQ'D
650(12B)	ALUMINUM STAIR TREAD	EACH	8
653(3)	ARTICULATED CONCRETE MAT	S.F.	435

ADDITIVE ALTERNATE NO. 1 - ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
AAI 650(65)	ROCK REMOVAL	L.S.	ALL REQ'D
AAI 653(3)	ARTICULATED CONCRETE MAT	S.F.	188



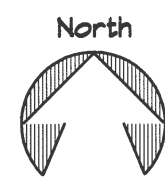
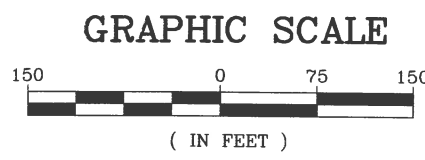
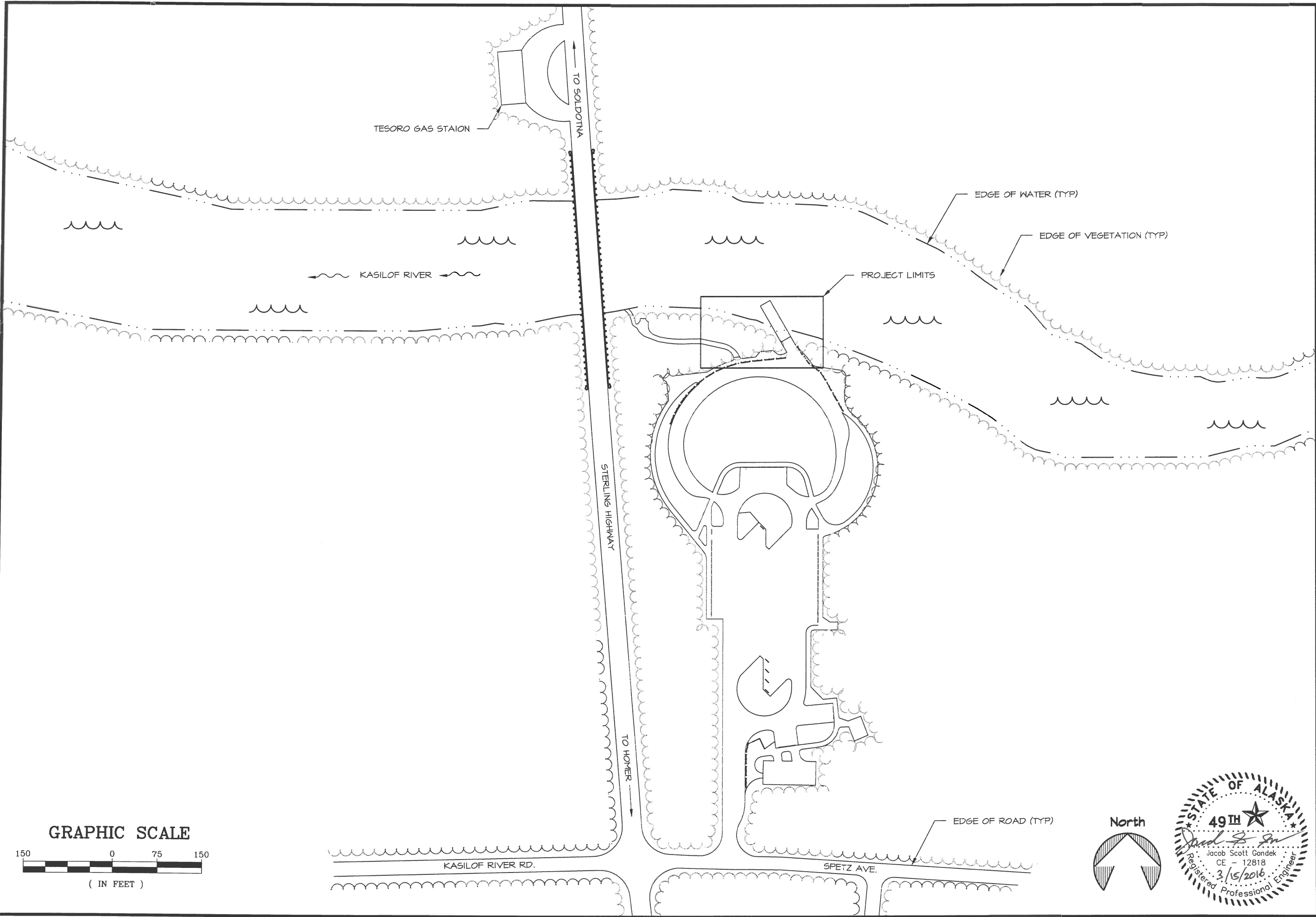
ABBREVIATIONS AND SYMBOLS

AA#1	ADDITIVE ALTERNATE 1
Ø	DIAMETER
€	CENTERLINE
C.S.	CONTINGENT SUM
E	EAST
ELEV.	ELEVATION
F.G.	FINISH GRADE
HSS	HOLLOW STRUCTURAL SECTIONS
INV	INVERT
L.S.	LUMP SUM
LB/LBS	POUND/POUNDS
MP	MILEPOST
N	NORTH
NE	NORTHEAST
NO.	NUMBER
NW	NORTHWEST
OC	ON CENTER
OHW	ORDINARY HIGH WATER
PCF	POUNDS PER CUBIC FOOT
PIP	PROTECT IN PLACE
REQ'D	REQUIRED
RT	RECTANGLE
SE	SOUTHEAST
S.F.	SQUARE FOOT
SQ	SQUARE
SRS	STATE RECREATION SITE
S.S.	STAINLESS STEEL
SW	SOUTHWEST
S.Y.	SQUARE YARD
TYP	TYPICAL
W	WEST

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
 KASILOF RIVER SRS  
 RIVERBANK RESTORATION  
 PROJECT NO. 73057-1  
 LEGEND, LIST OF ABBR., &  
 TABLE OF EST. FACTORS, &  
 EST. OF QUANTITIES



PREPARED: RDR  
 DRAWN: RDR  
 REVIEWED: JEG  
 DATE: MAR. 2016  
 SHEET  
 2  
 OF 15 SHEETS



STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

KASILOF RIVER SRS  
RIVERBANK RESTORATION  
PROJECT No. 73057-1

SITE MAP



PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JSG  
DATE: MAR. 2016

SHEET  
3  
OF 15 SHEETS

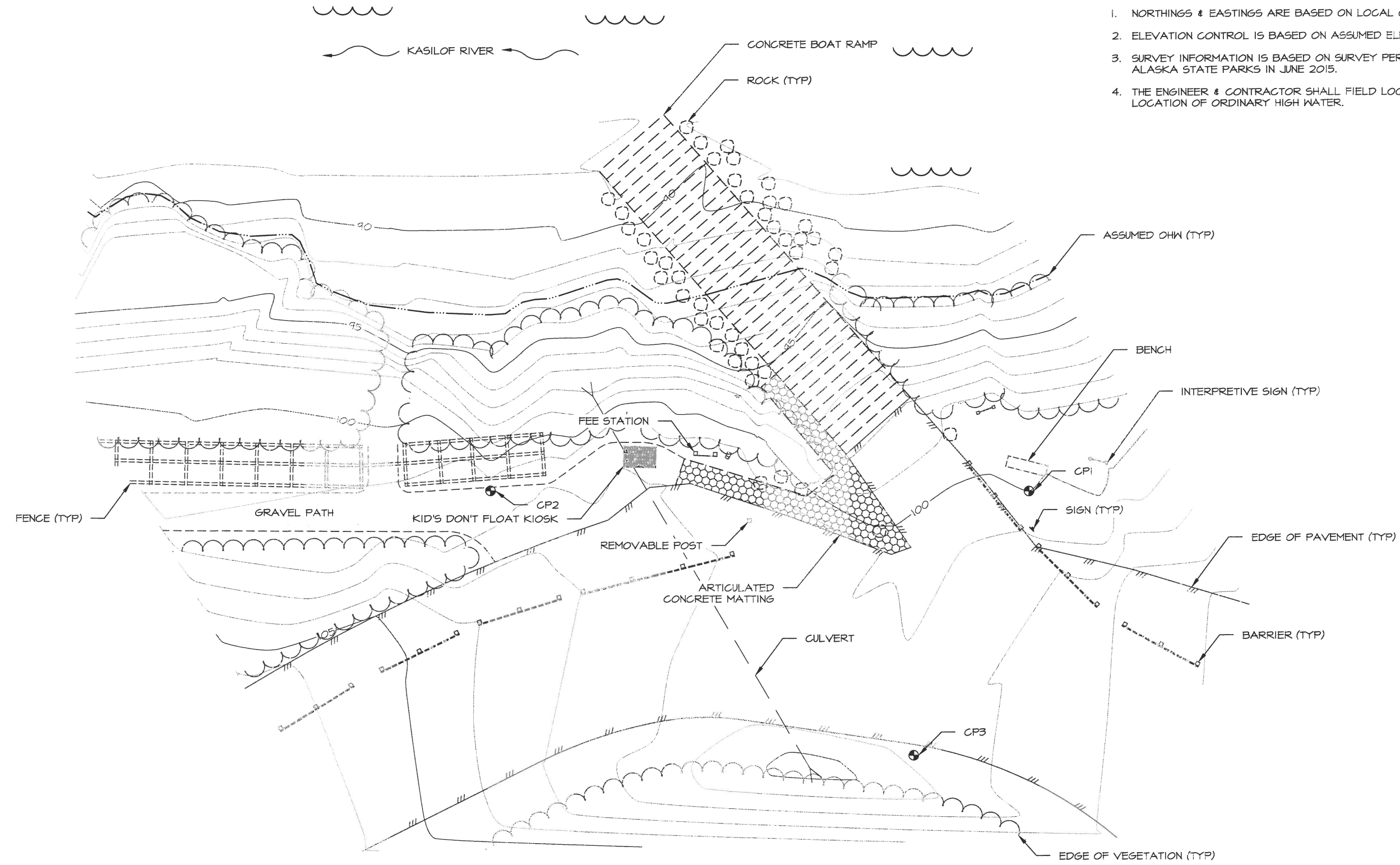


PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JEG  
DATE: MAR. 2016

SHEET  
4  
OF 15 SHEETS

SURVEY NOTES:

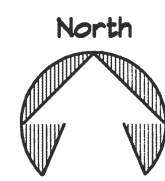
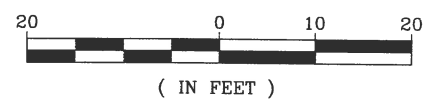
1. NORTHINGS & EASTINGS ARE BASED ON LOCAL COORDINATES.
2. ELEVATION CONTROL IS BASED ON ASSUMED ELEVATION.
3. SURVEY INFORMATION IS BASED ON SURVEY PERFORMED BY ALASKA STATE PARKS IN JUNE 2015.
4. THE ENGINEER & CONTRACTOR SHALL FIELD LOCATE THE LOCATION OF ORDINARY HIGH WATER.



SURVEY CONTROL POINT SUMMARY - COORDINATE SYSTEM

CONTROL POINT	NORTHING	EASTING	ASSUMED ELEVATION	DESCRIPTION
CP1	10,000.00	5,000.00	100.00'	REBAR
CP2	10,100.11	4,999.96	101.72'	REBAR
CP3	10,021.30	4,950.99	101.26'	REBAR

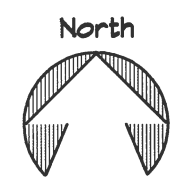
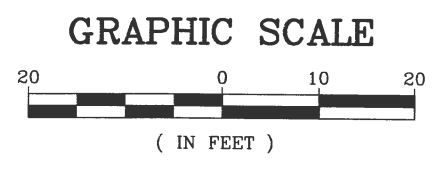
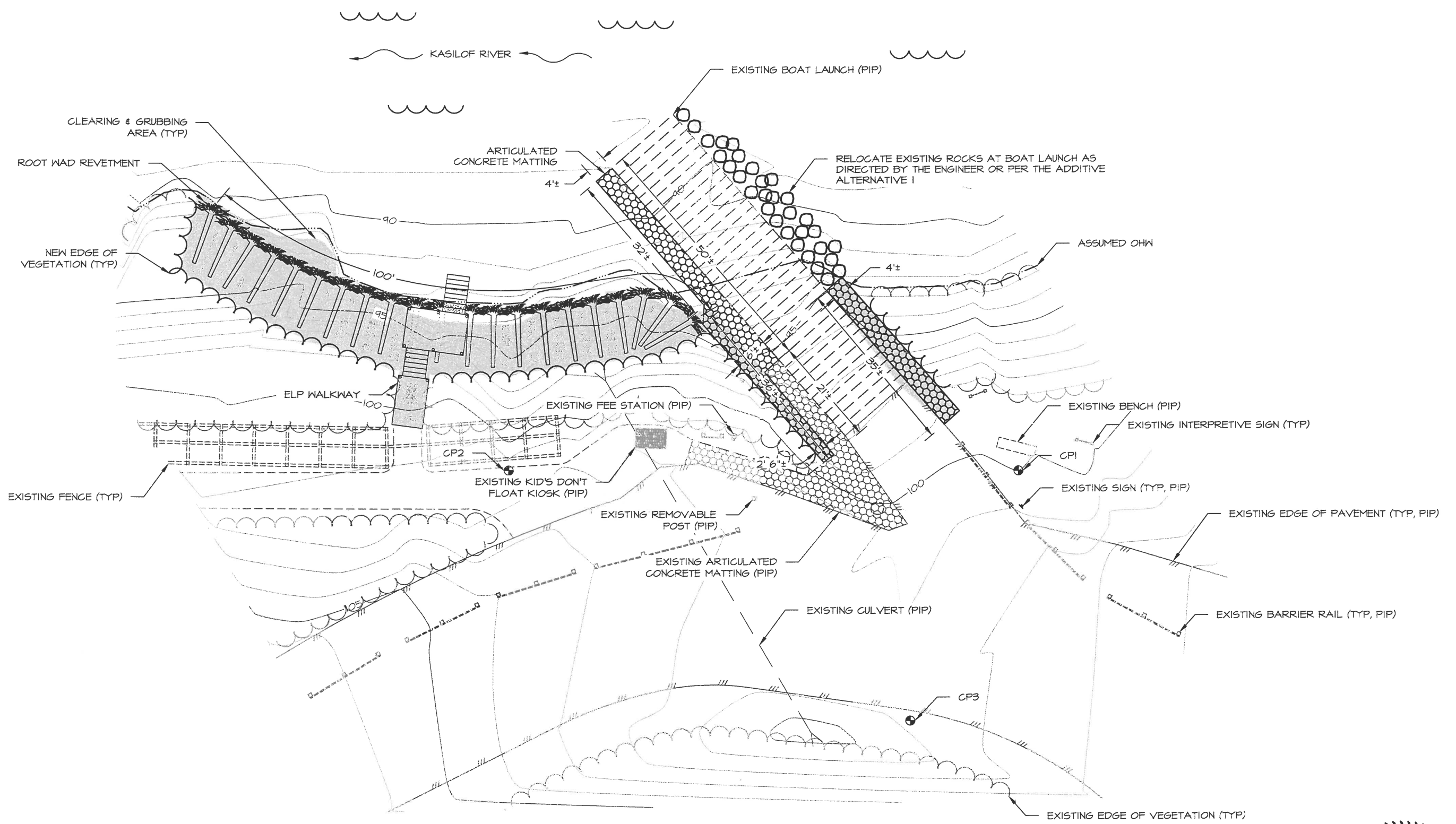
GRAPHIC SCALE





PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JSG  
DATE: MAR. 2016

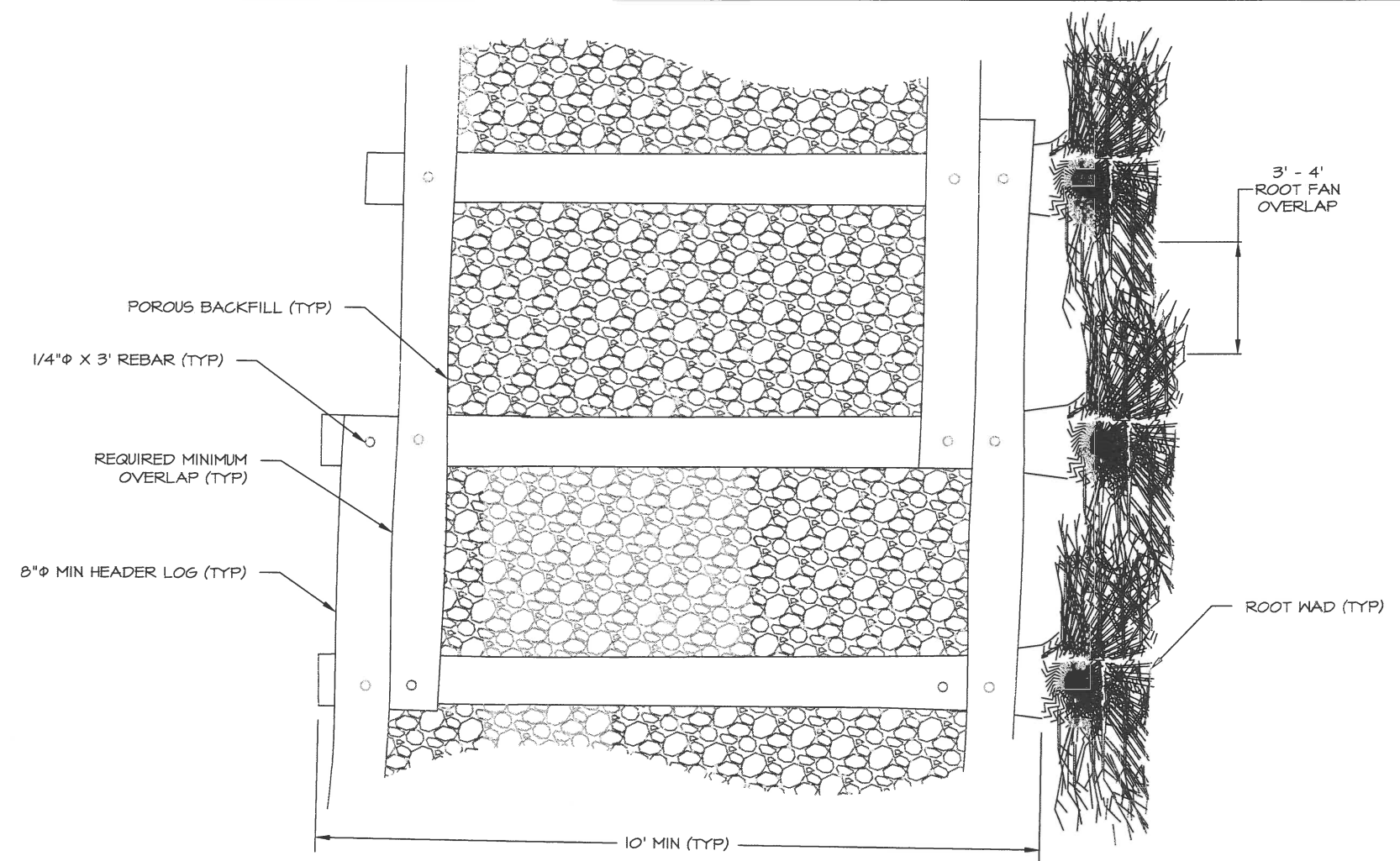
SHEET  
5  
OF 15 SHEETS



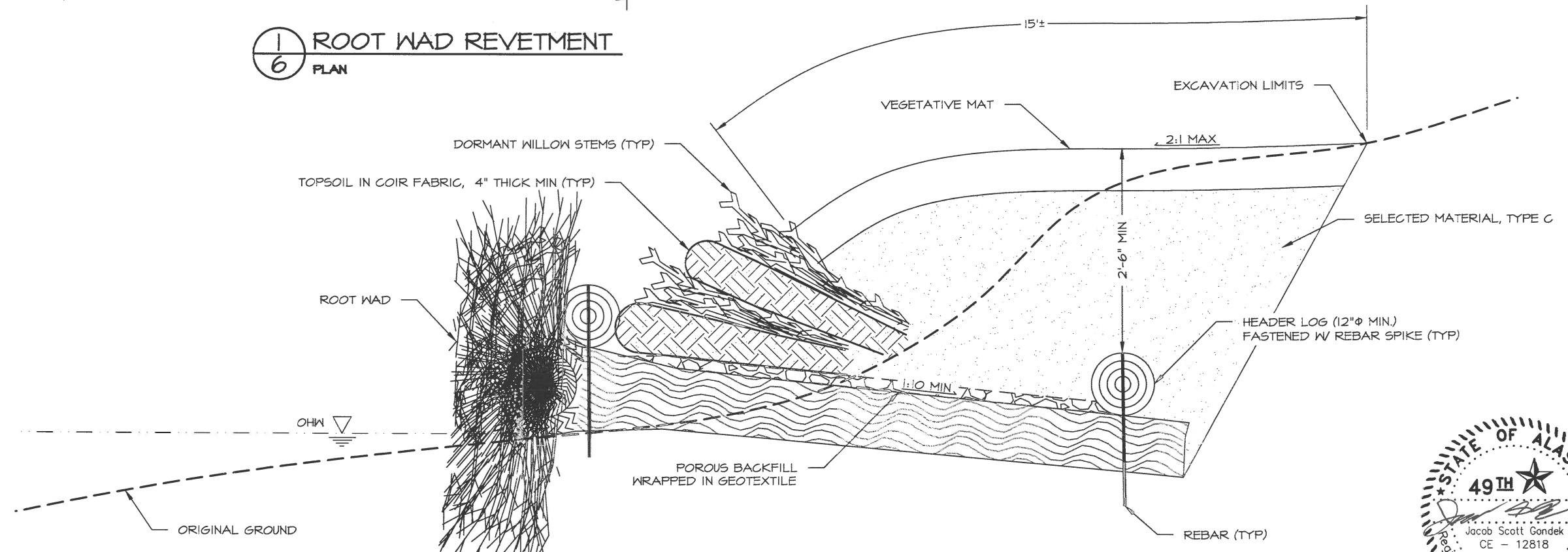


PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JSG  
DATE: MAR. 2016

SHEET  
6  
OF 15 SHEETS



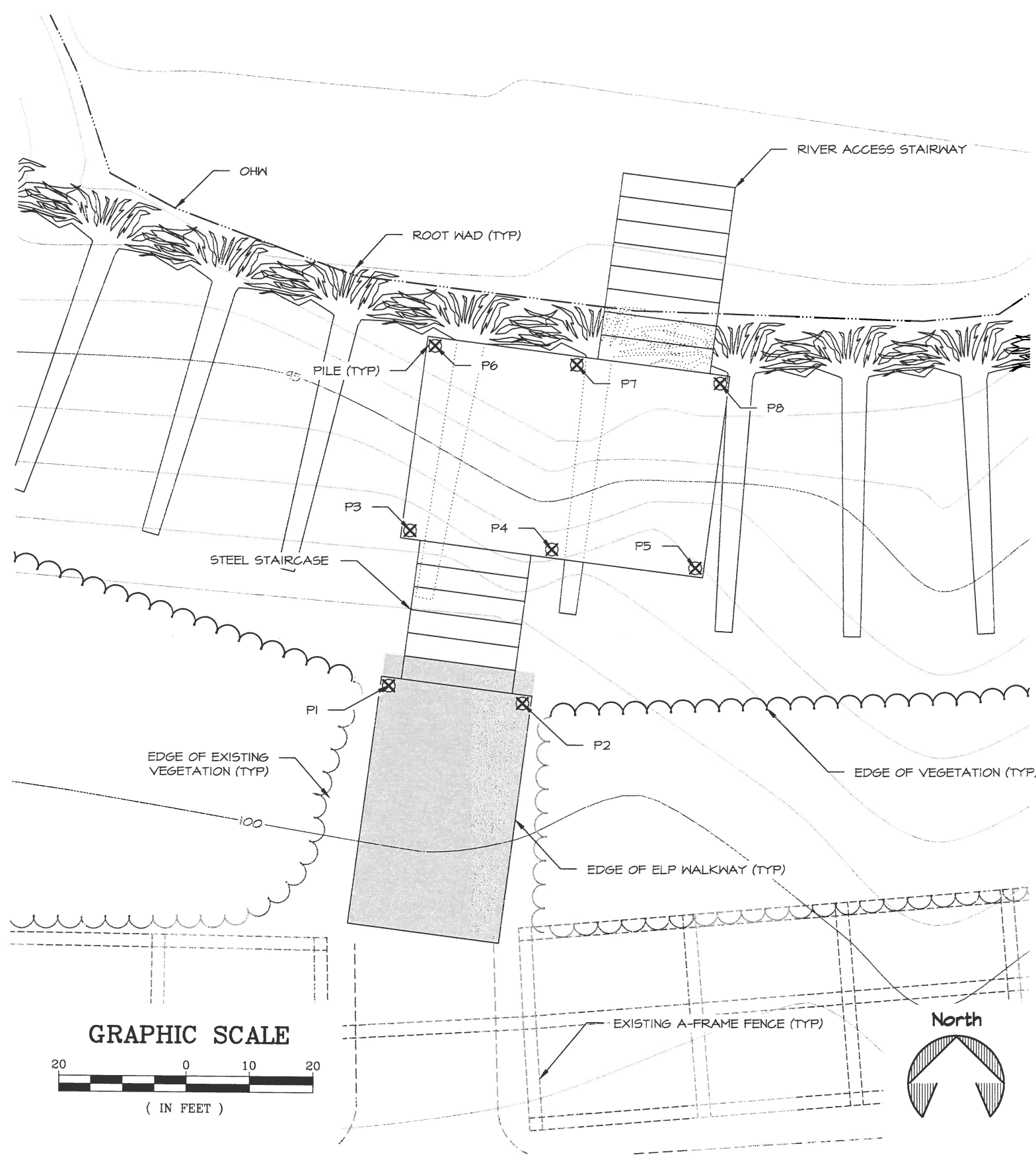
1  
6 ROOT WAD REVETMENT  
PLAN



2  
6 ROOT WAD REVETMENT  
TYPICAL SECTION

- NOTES:
1. NOT TO SCALE.
  2. ENGINEER & CONTRACTOR SHALL CONFIRM OHW ELEVATION PRIOR TO COMMENCING WITH ROOT WAD REVETMENT WORK.





PILE COORDINATES			
POINT #	NORTHING	EASTING	ELEVATION
P1	10121.46	5018.29	99.86
P2	10116.17	5017.60	99.86
P3	10120.66	5024.41	96.36
P4	10115.04	5023.68	96.36
P5	10109.42	5022.95	96.36
P6	10119.72	5031.68	96.36
P7	10114.10	5030.95	96.36
P8	10108.48	5030.22	96.36

- NOTES:
1. NORTHINGS, EASTINGS, AND ELEVATIONS ARE BASED ON AN ASSUMED COORDINATE SYSTEM SEE PAGE 4 FOR SURVEY CONTROL POINTS.
  2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS.
  3. TOPO SHOWS ORIGINAL GROUND ONLY.
  4. ELEVATIONS IN TABLE ARE PILE CUTOFF ELEVATIONS.

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
 KASILOF RIVER SRS  
 RIVERBANK RESTORATION  
 PROJECT NO. 73057-1  
 ELP WALKWAY PILE  
 LOCATIONS



PREPARED: RDR  
 DRAWN: RDR  
 REVIEWED: JSG  
 DATE: MAR. 2016

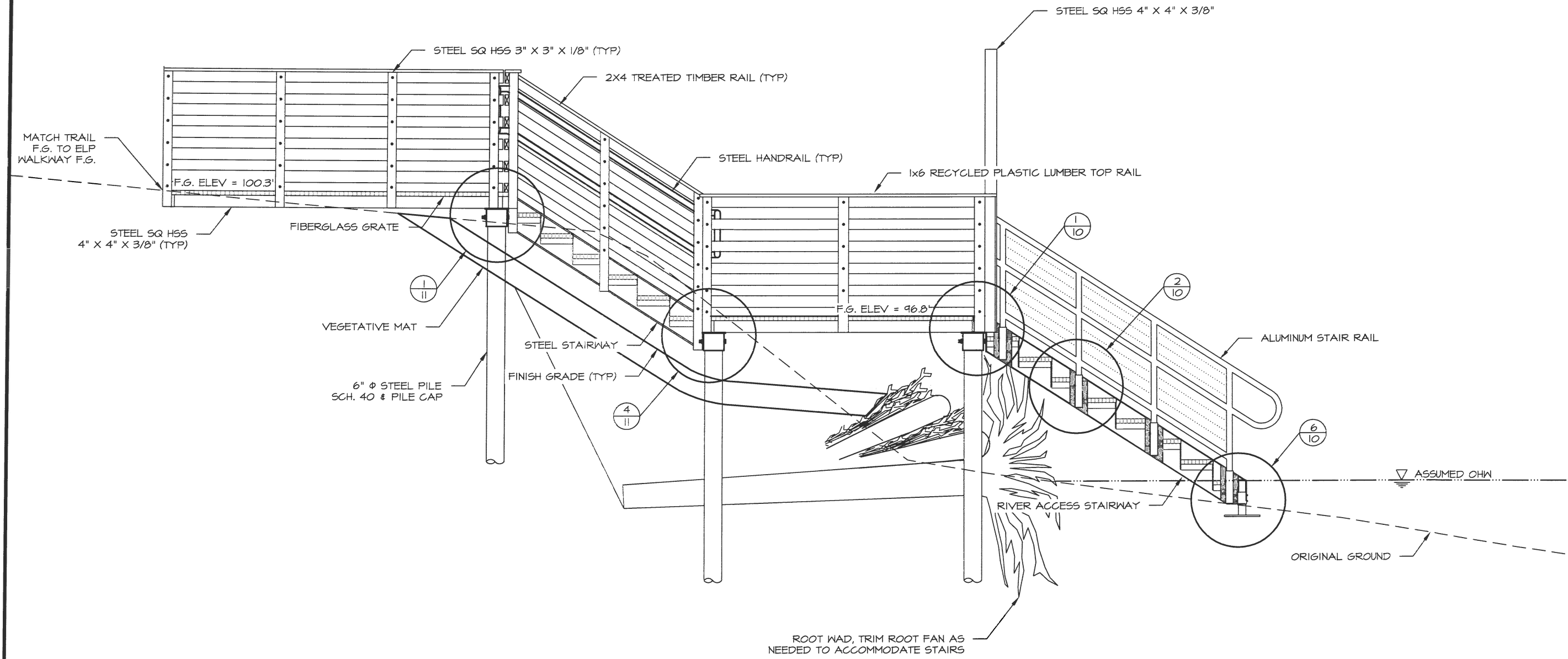


SHEET  
 7  
 OF 15 SHEETS



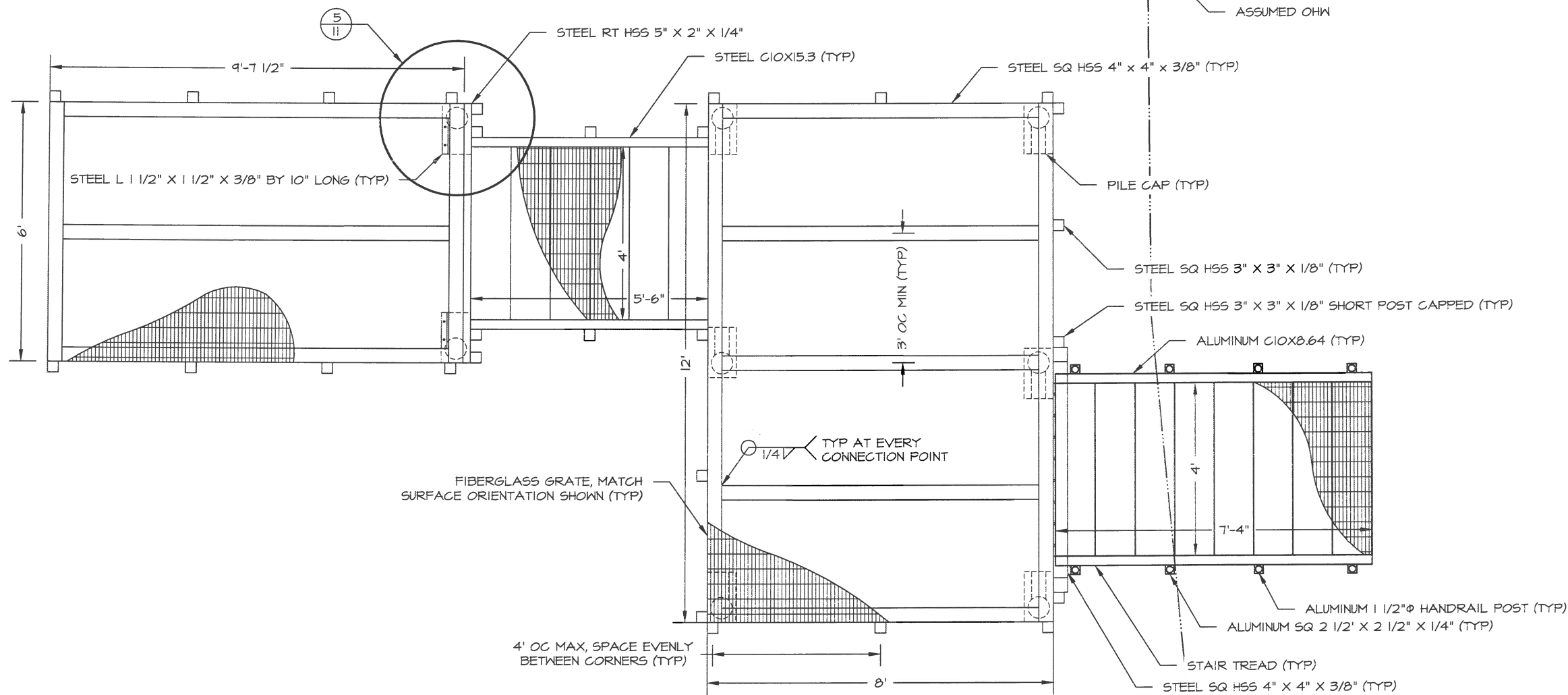
PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JEG  
DATE: MAR. 2016

SHEET  
8  
OF 15 SHEETS



NOTE: PILE HEIGHTS ARE APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY DISTANCES. SEE PAGE 7 FOR SURVEY ELEVATION DATA.





NOTES:  
 1. RAILING OMITTED FOR CLARITY.



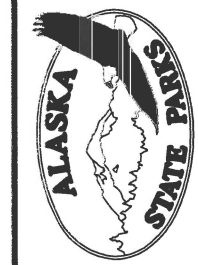
STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
 KASILOF RIVER SRS  
 RIVERBANK RESTORATION  
 PROJECT NO. 73057-1



PREPARED: RDR  
 DRAWN: RDR  
 REVIEWED: JSG  
 DATE: MAR. 2016

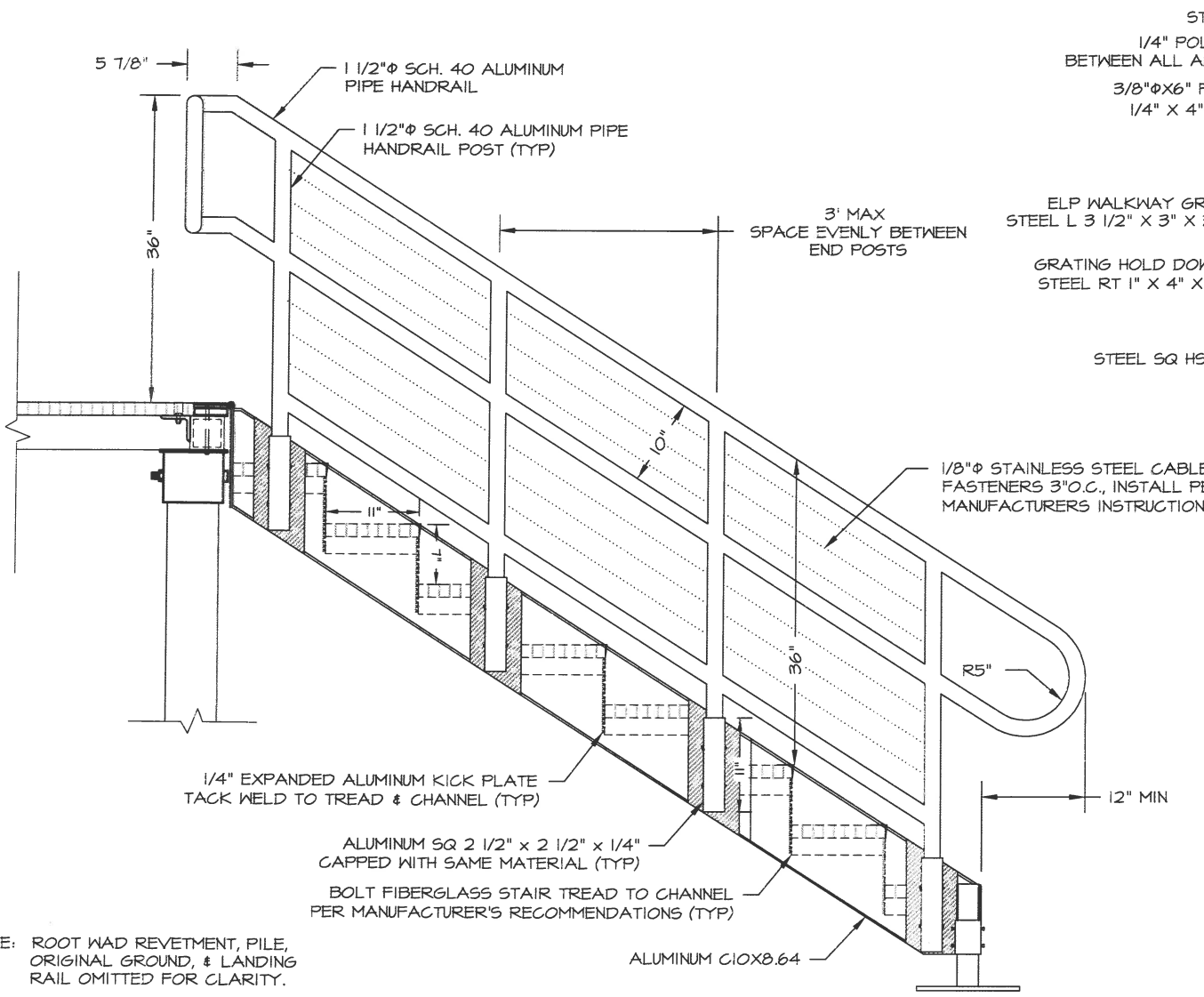
SHEET  
 9  
 OF 15 SHEETS

ELP WALKWAY & STAIRS  
 FRAMING PLAN

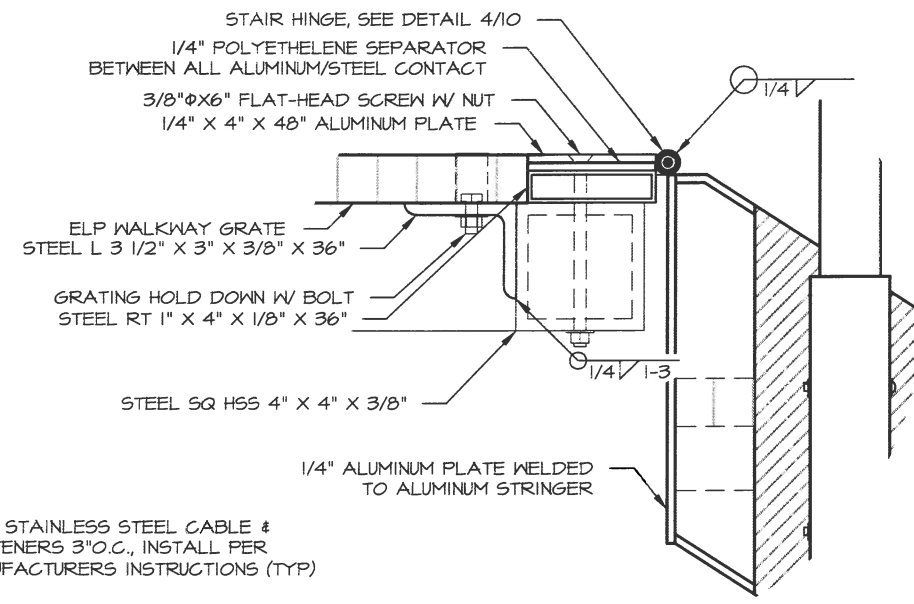


PREPARED: RDR  
 DRAWN: RDR  
 REVIEWED: JSG  
 DATE: MAR. 2016

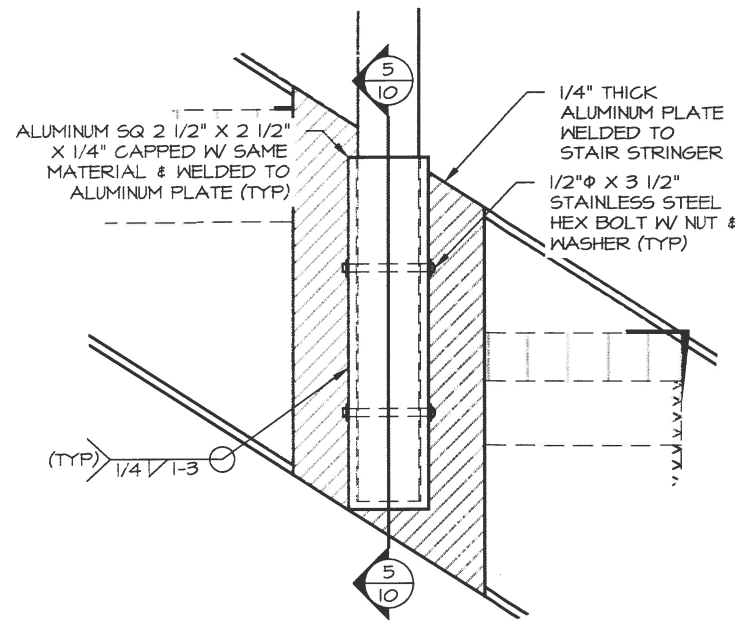
SHEET  
 10  
 OF 15 SHEETS



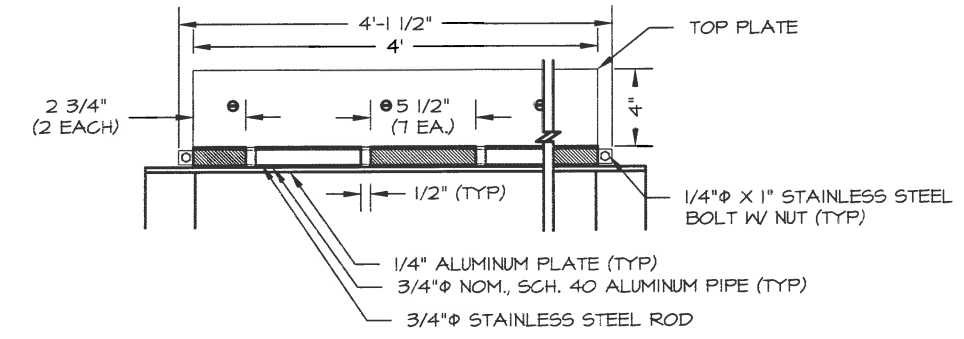
3 ALUMINUM STAIR ASSEMBLY  
 10 ELEVATION



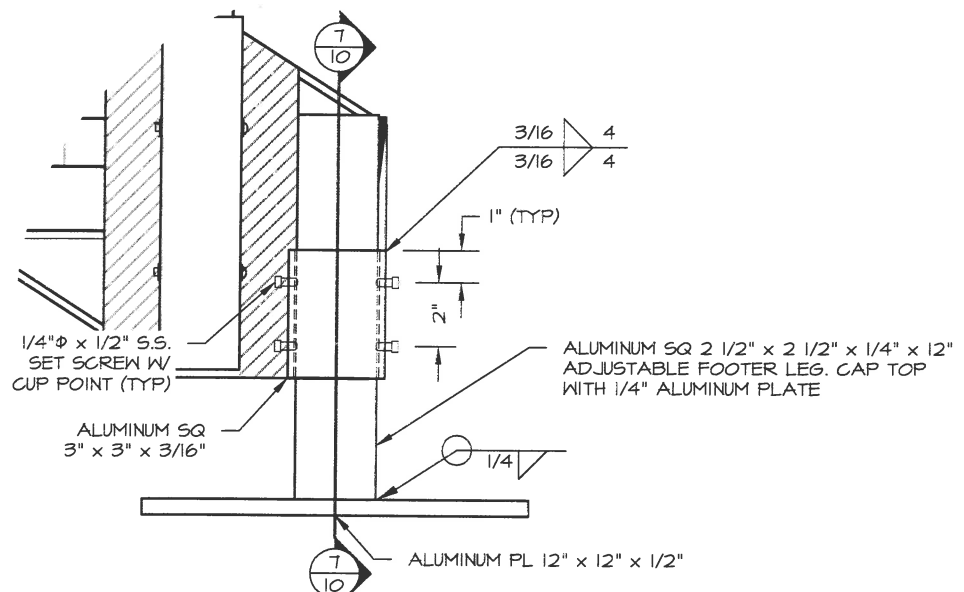
1 ALUMINUM TOP CONNECTION  
 10 DETAIL



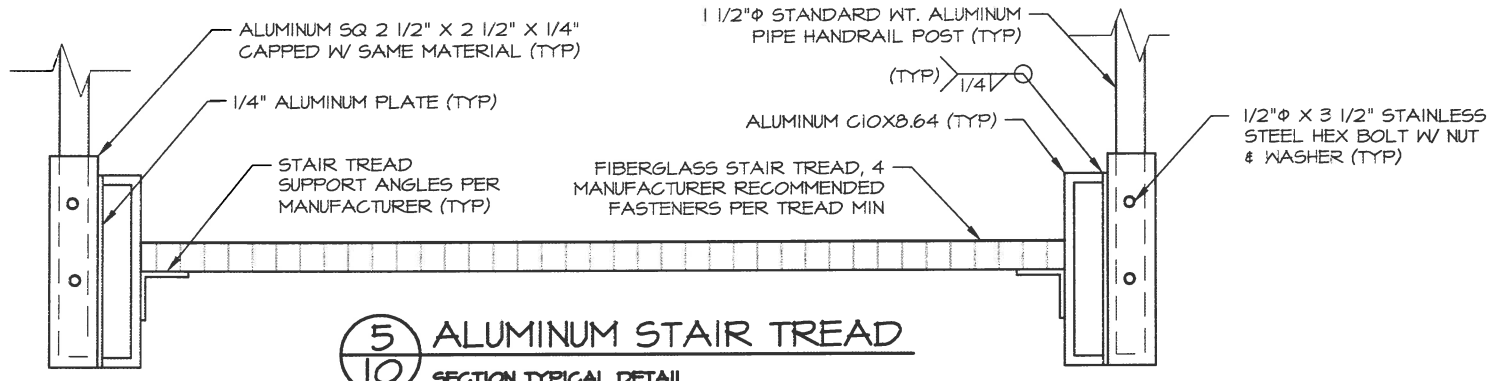
2 ALUMINUM STAIR RAIL BASE  
 10 TYPICAL DETAIL



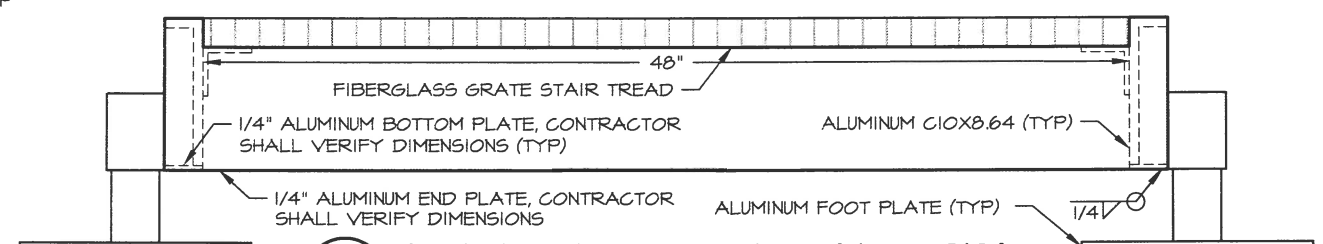
4 ALUMINUM STAIR TO STEEL BOARDWALK HINGE  
 10 DETAIL



6 ALUMINUM FOOT PLATE  
 10 DETAIL

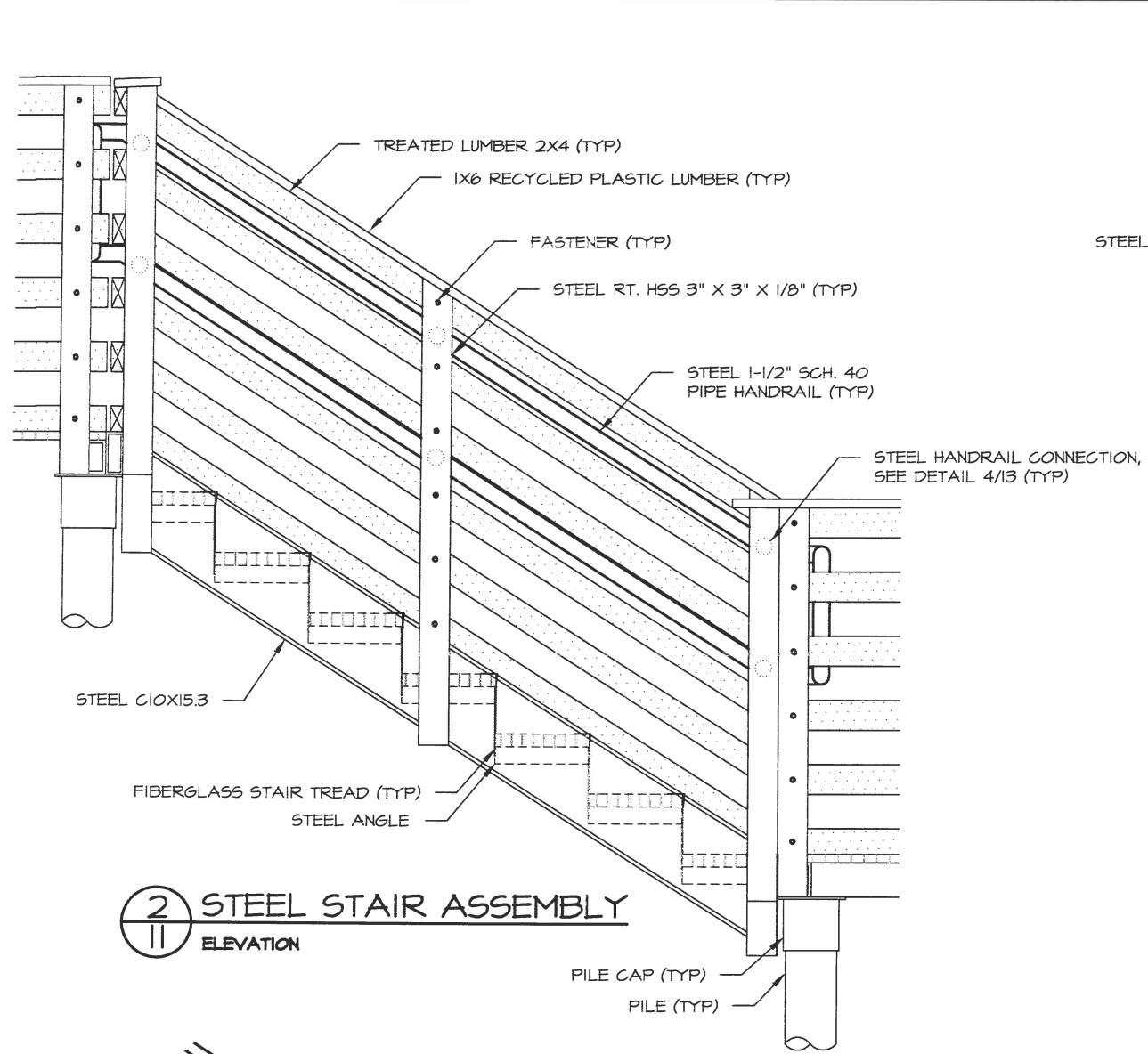


5 ALUMINUM STAIR TREAD  
 10 SECTION TYPICAL DETAIL

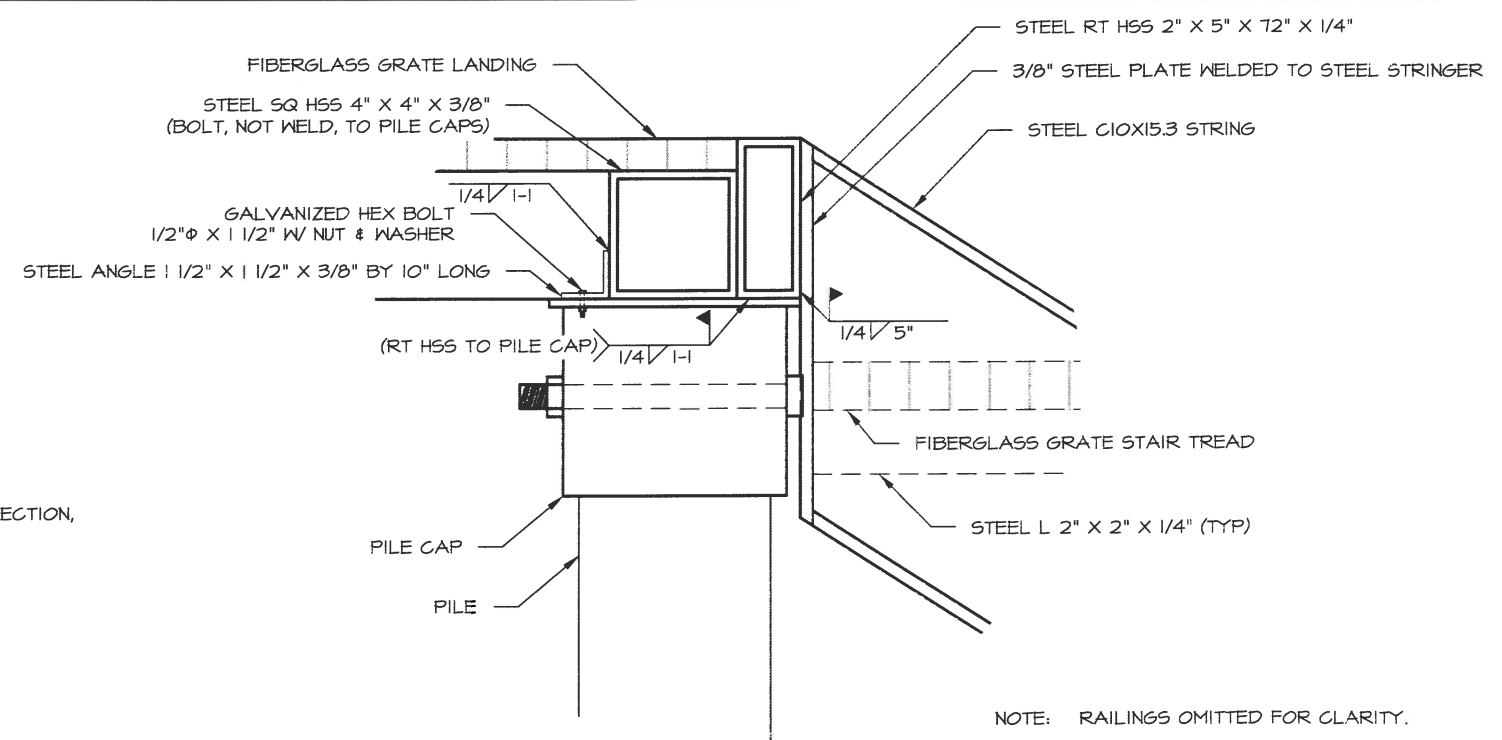


7 ALUMINUM BOTTOM STAIR TREAD  
 10 DETAIL

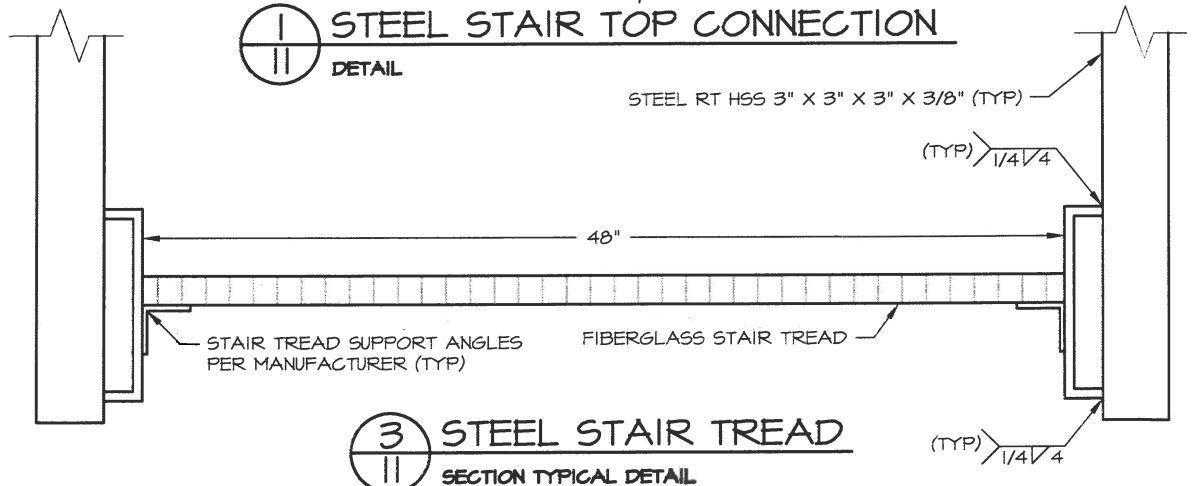




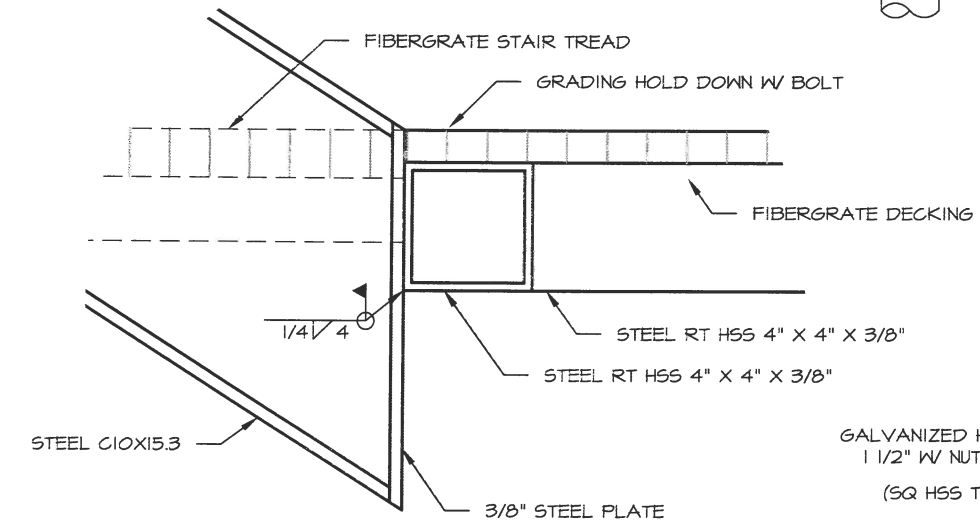
**2 STEEL STAIR ASSEMBLY**  
ELEVATION



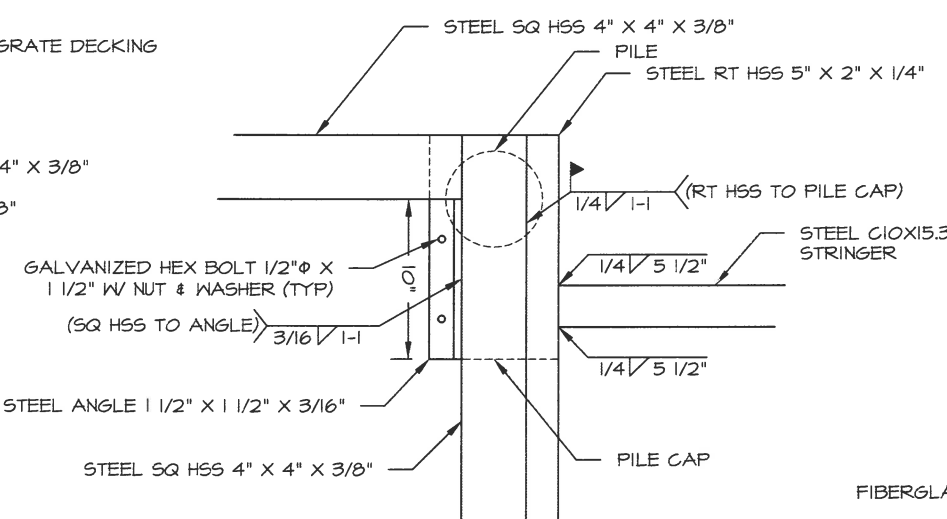
**1 STEEL STAIR TOP CONNECTION**  
DETAIL



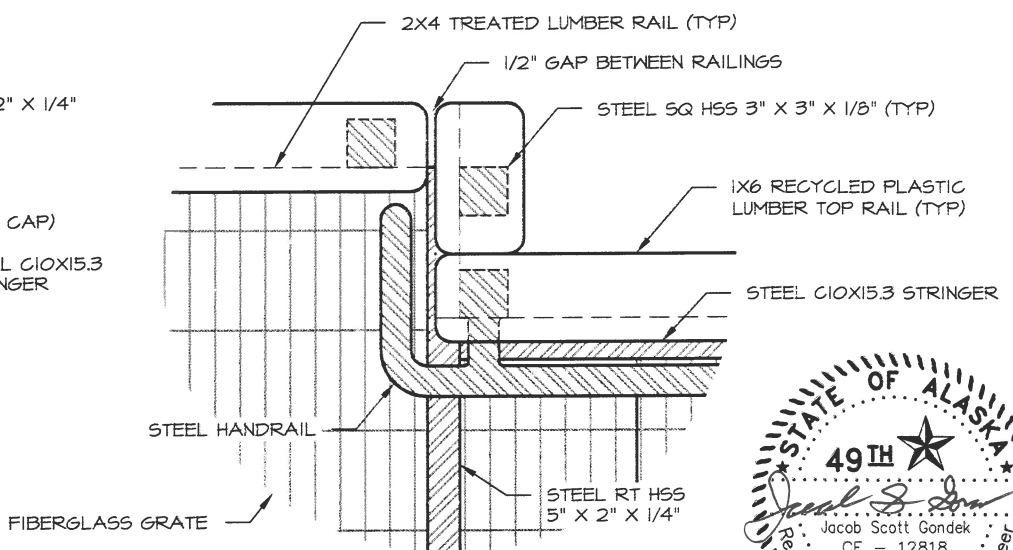
**3 STEEL STAIR TREAD**  
SECTION TYPICAL DETAIL



**4 STEEL STAIR BOTTOM CONNECTION**  
ELEVATION DETAIL



**5 STEEL STAIR CORNER FRAME**  
PLAN DETAIL



**6 STEEL STAIR CORNER OVERVIEW**  
PLAN DETAIL

NOTE: RAILINGS OMITTED FOR CLARITY.

NOTE: RAILINGS OMITTED FOR CLARITY.



STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES

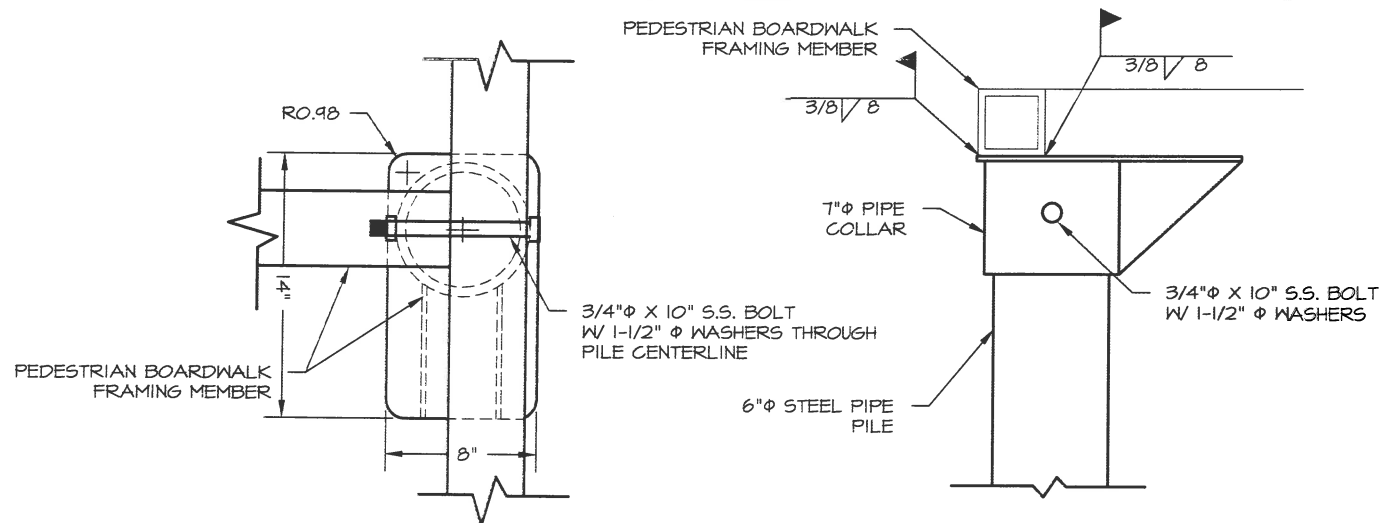
KASILOF RIVER SRS  
RIVERBANK RESTORATION  
PROJECT No. 73057-1

STEEL STAIR DETAILS



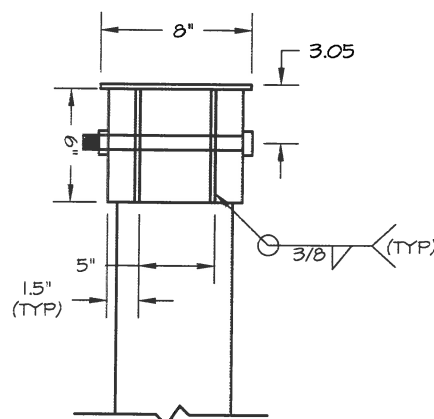
PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JSG  
DATE: MAR. 2016

SHEET  
OF 15 SHEETS

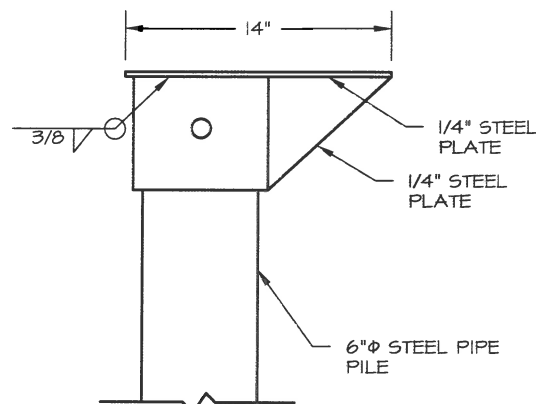


1 PILE CAP TYPICAL  
12 DETAIL

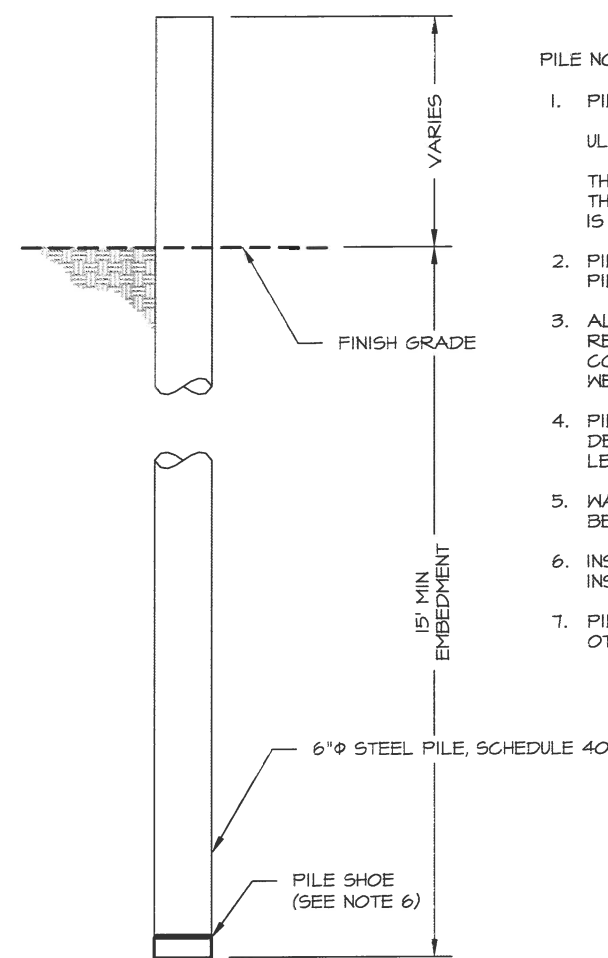
2 PILE CAP TYPICAL  
12 DETAIL



3 PILE CAP TYPICAL  
12 DETAIL



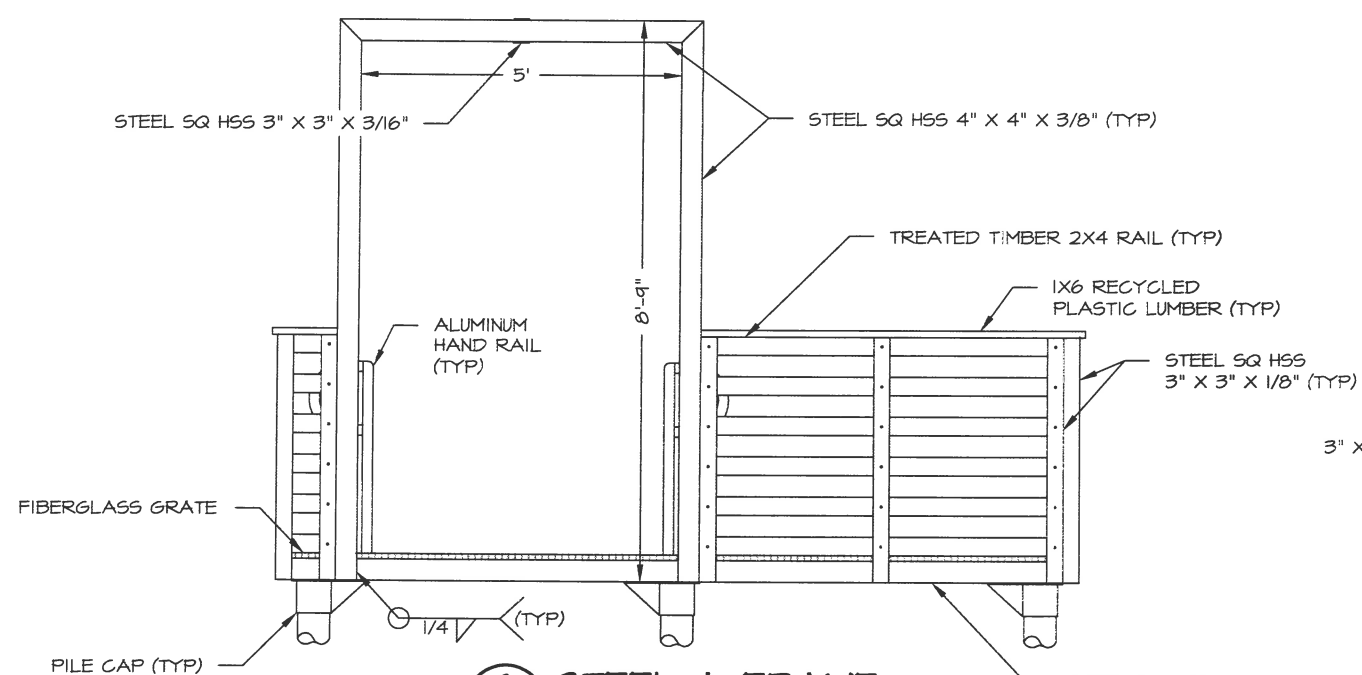
4 PILE CAP TYPICAL  
12 DETAIL



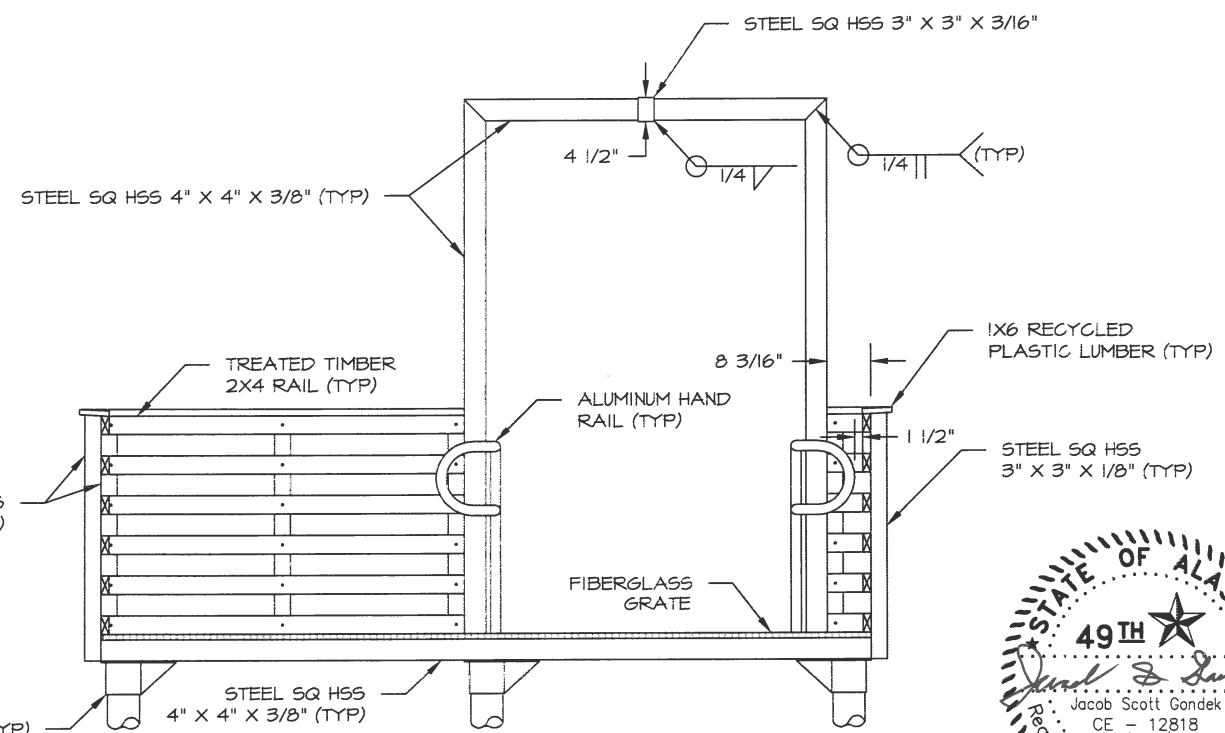
5 STEEL PILE  
12 PROFILE

PILE NOTES:

1. PILE DESIGN LOADS (UNFACTORED):  
ULTIMATE BEARING CAPACITY = 8,000 LBS.  
THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF THE ACTUAL PILE LOADS ARE GREATER THAN WHAT IS INDICATED.
2. PILES SHALL BE DRIVEN AN ENGINEER APPROVED PILE DRIVER.
3. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AWS STRUCTURAL WELDING CODE, AWS D1.1 PUBLISHED BY THE AMERICAN WELDING SOCIETY.
4. PILES SHALL BE DRIVEN TO A MINIMUM OF 15 FT DEPTH & AN ULTIMATE BEARING CAPACITY OF 8,000 LBS.
5. WAIT 72 HOURS MINIMUM AFTER PILE INSTALLATION BEFORE APPLYING LOADS TO THE PILE.
6. INSTALL PILE SHOE PER MANUFACTURERS INSTRUCTIONS.
7. PILES SHALL BE DRIVEN OPEN ENDED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

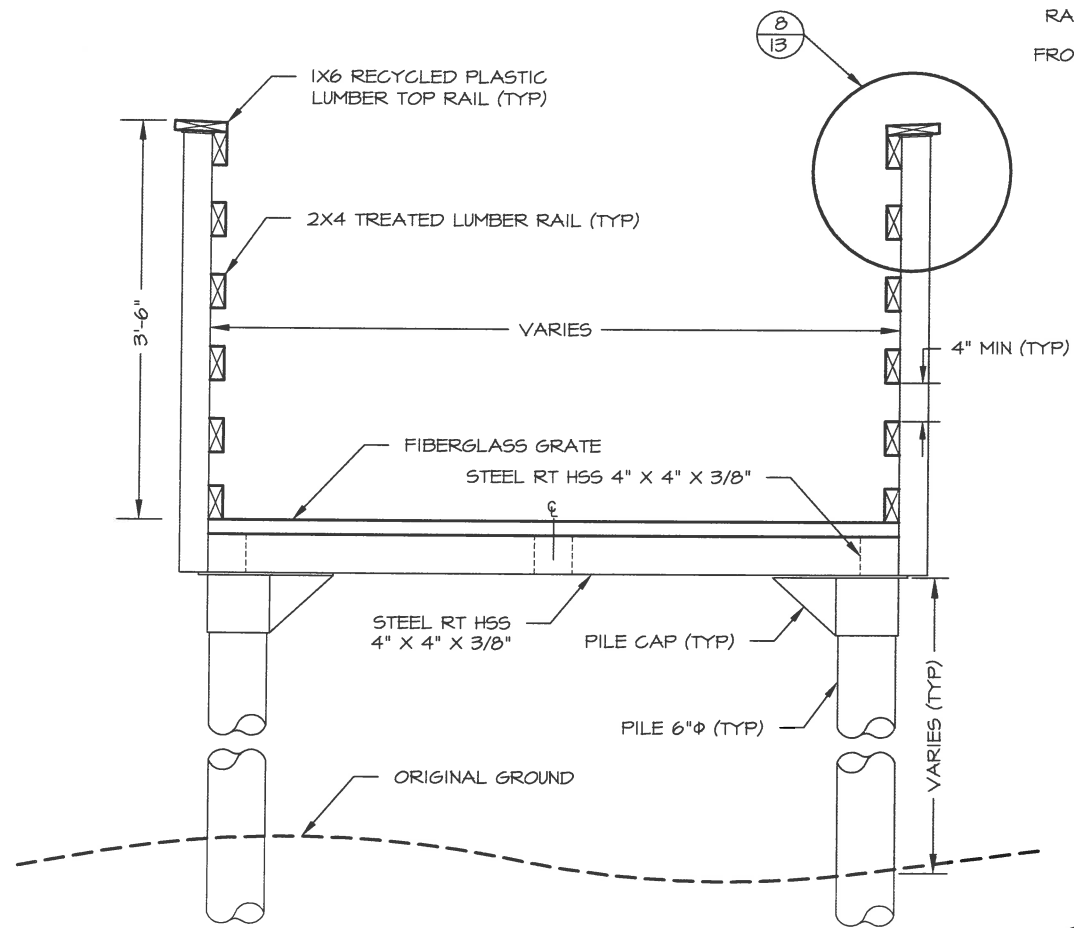


6 STEEL A-FRAME  
12 ELEVATION FACING EXTERIOR

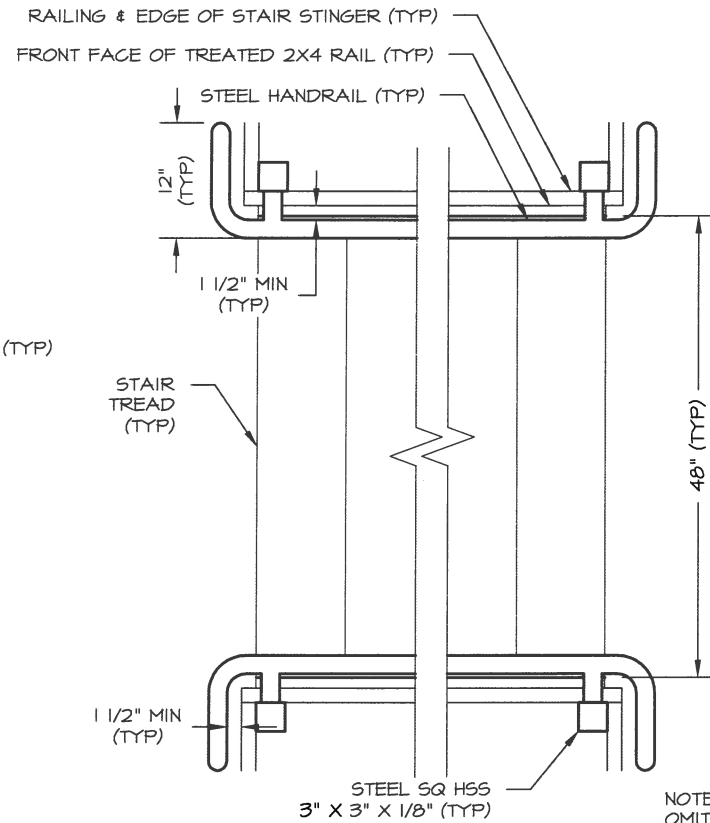


7 STEEL A-FRAME  
12 ELEVATION FACING INTERIOR

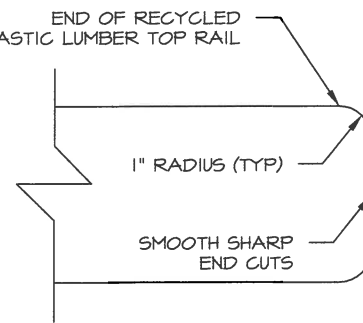




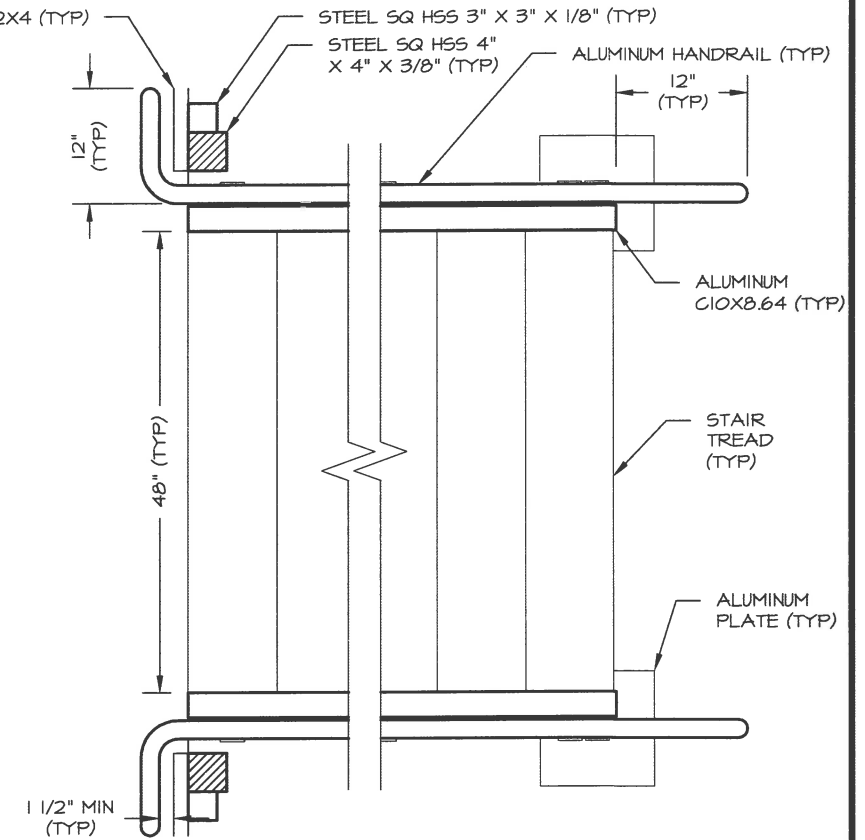
**1**  
**13** ELP WALKWAY FRAME  
DETAIL



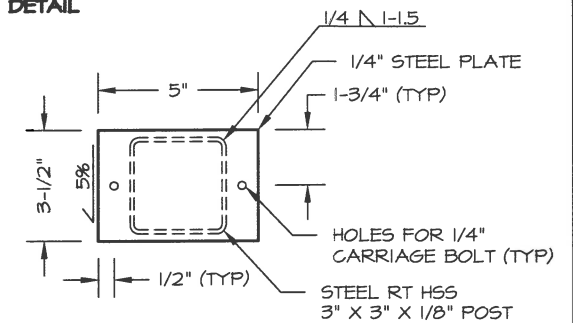
**2**  
**13** STEEL STAIR RAIL  
DETAIL



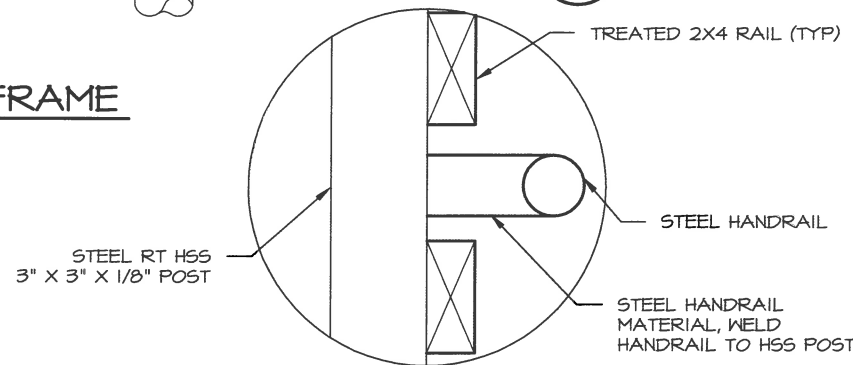
**5**  
**13** TOP RAIL ENDS  
DETAIL



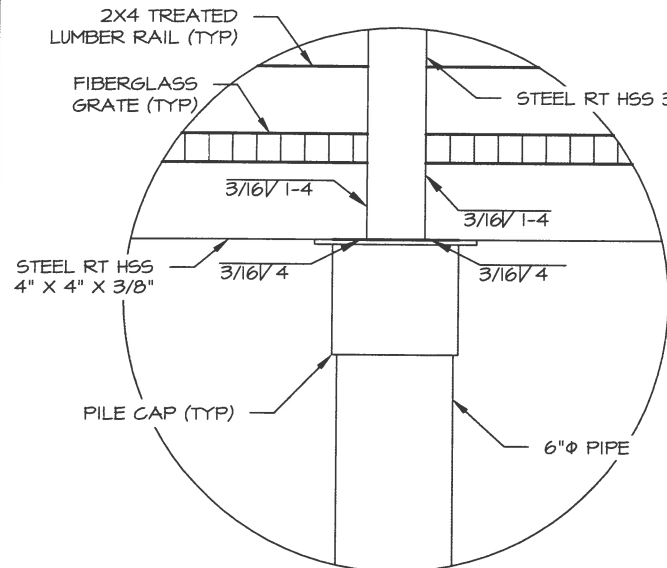
**3**  
**13** ALUMINUM STAIR RAIL  
DETAIL



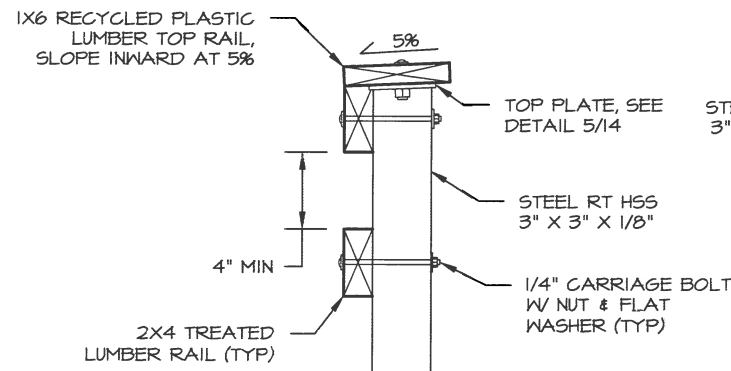
**6**  
**13** STEEL HSS POST CAP  
DETAIL



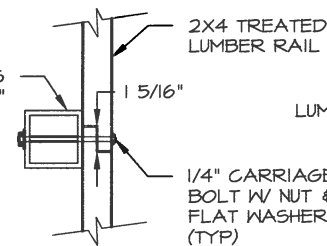
**4**  
**13** STEEL HANDRAIL CONNECTION  
ELEVATION SECTION DETAIL



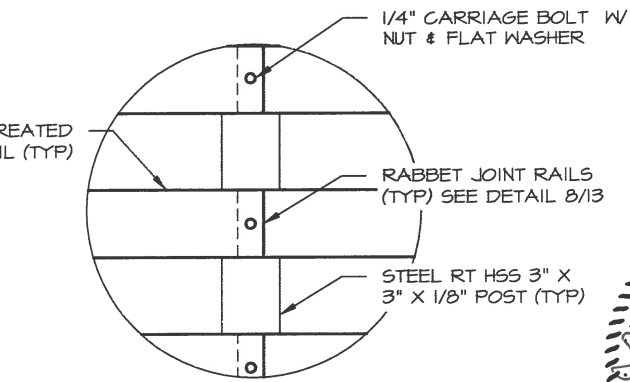
**7**  
**13** ELP WALKWAY FRAME  
DETAIL



**8**  
**13** RAILING  
DETAIL

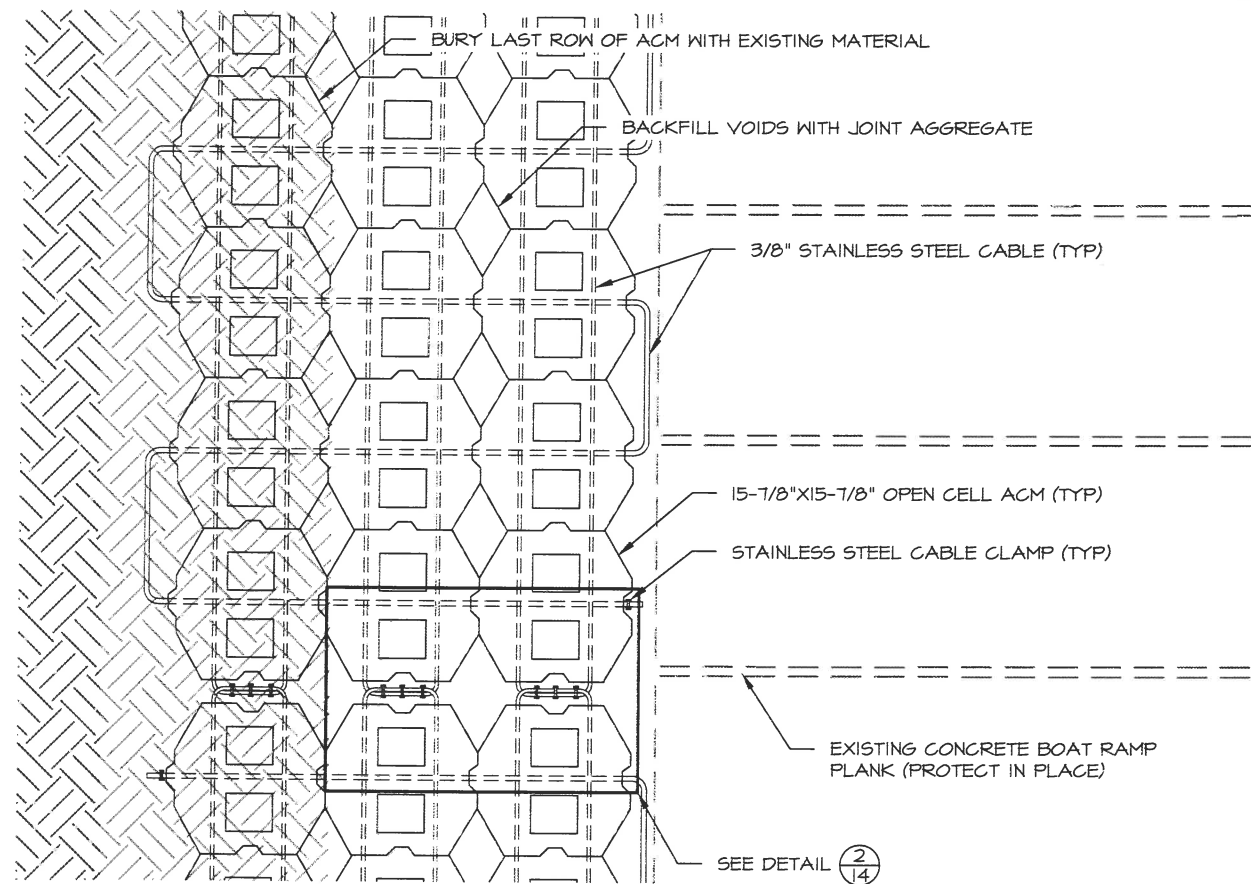


**9**  
**13** RABBET JOINT  
DETAIL

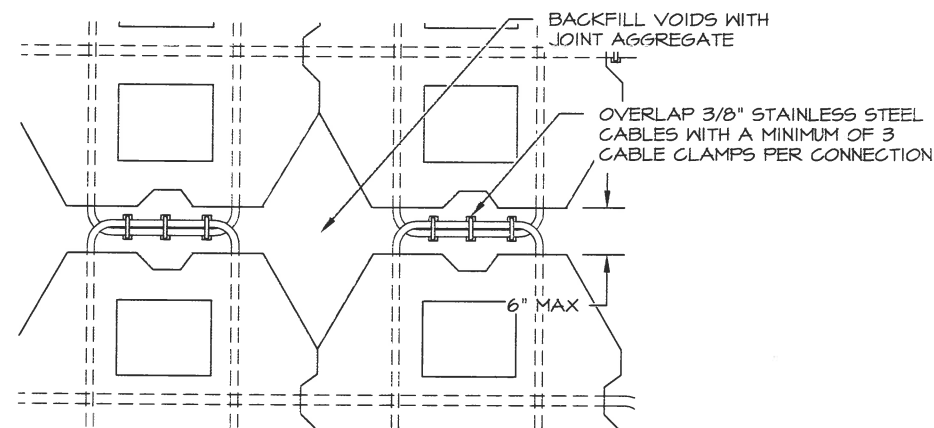


**10**  
**13** RAILING CONNECTIONS  
DETAIL

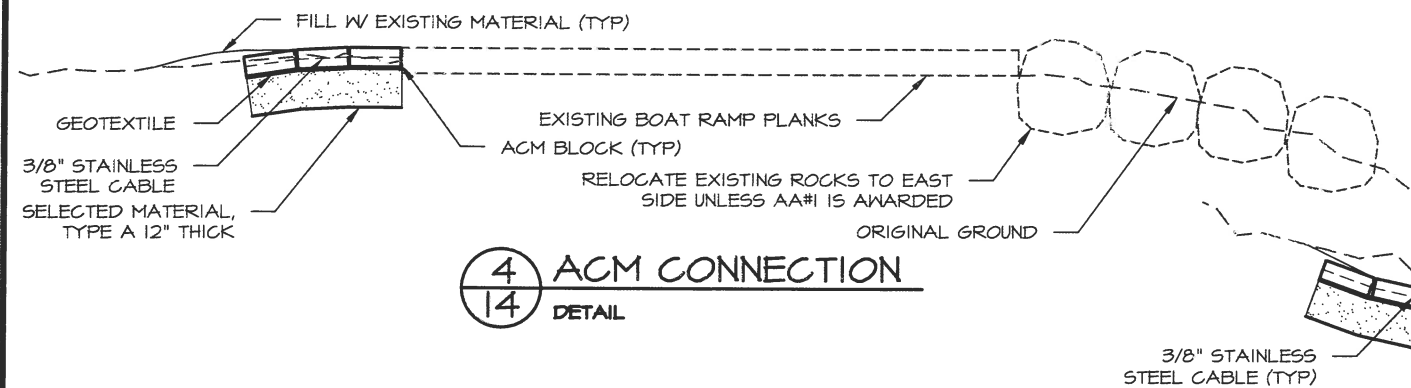




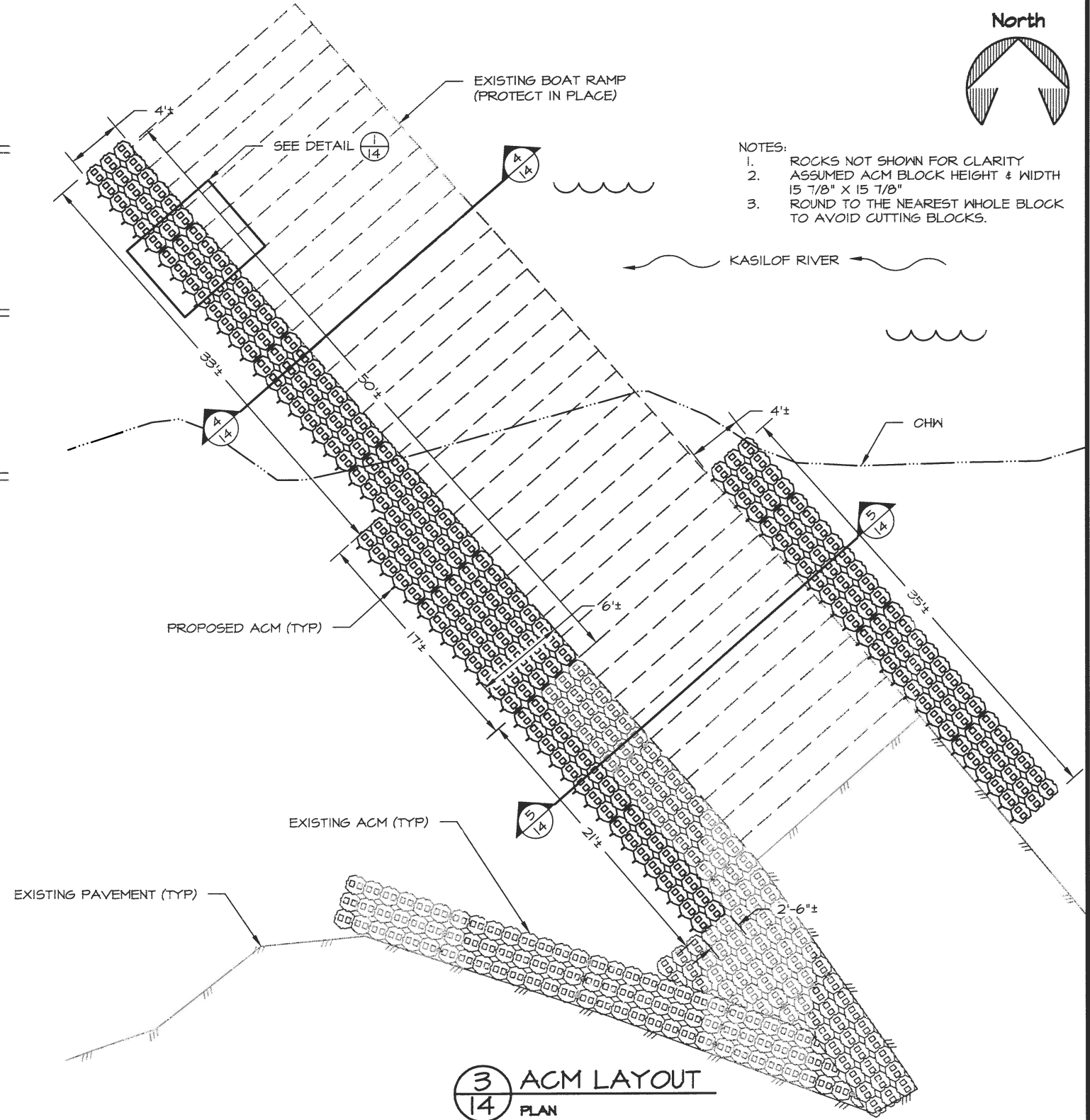
1 ACM ARMORING  
14 PLAN



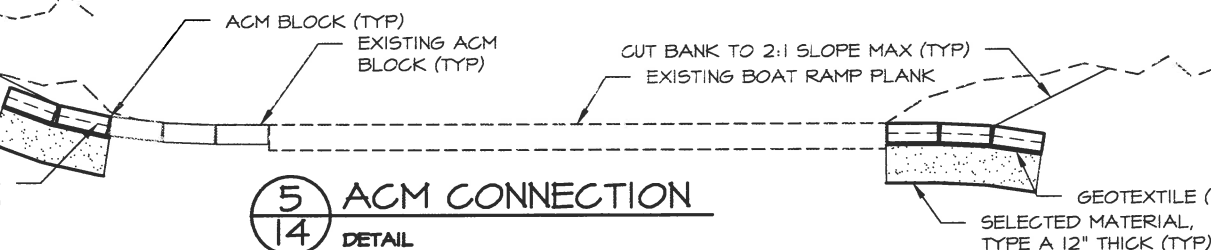
2 ACM CONNECTION  
14 DETAIL



4 ACM CONNECTION  
14 DETAIL



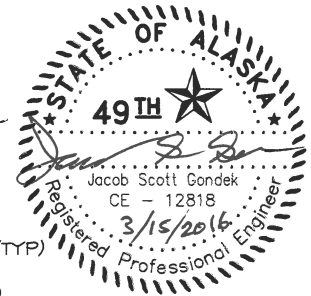
3 ACM LAYOUT  
14 PLAN



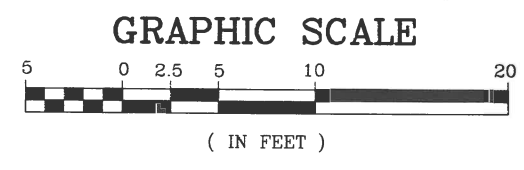
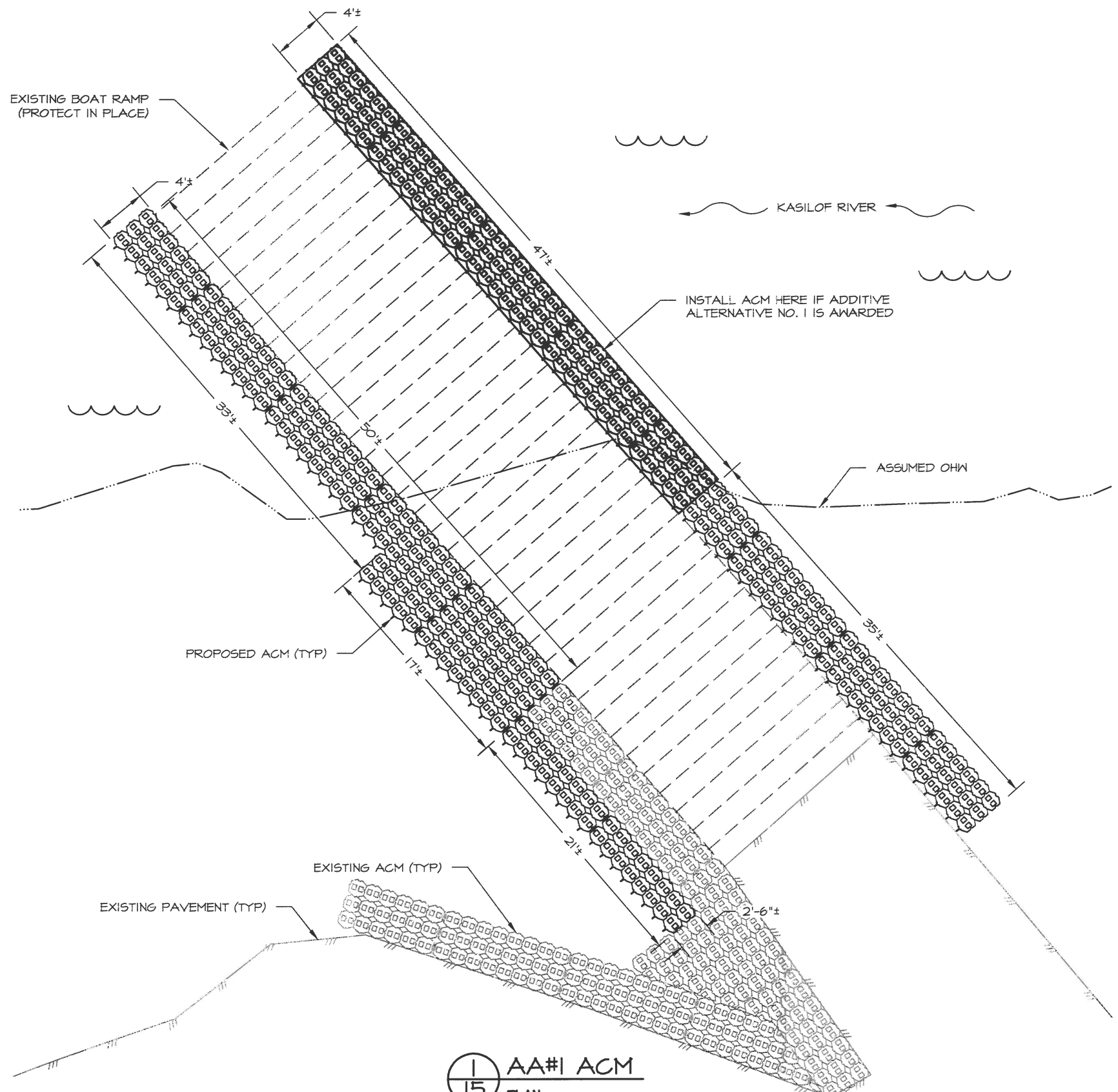
5 ACM CONNECTION  
14 DETAIL

- NOTES:
1. ROCKS NOT SHOWN FOR CLARITY
  2. ASSUMED ACM BLOCK HEIGHT & WIDTH 15 7/8" X 15 7/8"
  3. ROUND TO THE NEAREST WHOLE BLOCK TO AVOID CUTTING BLOCKS.

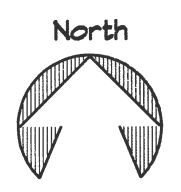
STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
KASILOF RIVER SRS  
RIVERBANK RESTORATION  
PROJECT NO. 73057-1



PREPARED: RDR  
DRAWN: RDR  
REVIEWED: JSG  
DATE: MAR. 2016  
SHEET  
14  
OF 15 SHEETS



1  
15  
AA#1 ACM  
PLAN



STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
 AA#1  
 KASILOF RIVER SRS  
 RIVERBANK RESTORATION  
 PROJECT NO. 73057-1  
 ARTICULATED CONCRETE MAT  
 DETAIL



PREPARED: RDR  
 DRAWN: RDR  
 REVIEWED: JSG  
 DATE: MAR. 2016

SHEET  
 15  
 OF 15 SHEETS