

**PROJECT SUMMARY: TRAIL CONSTRUCTION 6015'**

**PROJECT SCOPE:** TO CONSTRUCT APPROXIMATELY 6015' OF EXISTING & NEW PEDESTRIAN TRAILS. THE TRAILS BEGIN AT THE END OF THE EXISTING BOARDWALK THAT IS APPROXIMATELY EAST 1000' FROM THE SANDY BEACH RECREATION AREA PARKING LOT ON THE SOUTH END. THE NEW TRAILS WILL BE A COMBINATION OF 8' WIDE GRAVEL TRAIL AND 8' WIDE RAISED WOODEN BOARDWALK ON STEEL PIPE PILE.

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
1.	TITLE SHEET	10.	DETAILS - BOARDWALK
2.	QUANTITIES & GENERAL NOTES	11.	DETAILS - BOARDWALK
3.	PLAN VIEW - 0+00 TO 12+50 & TRAIL "A"	12.	DETAILS - STREAM CROSSINGS
4.	PLAN VIEW - 12+50 TO 25+50 & TRAIL "B"	13.	DETAILS - BOARDWALK CURVES
5.	PLAN VIEW - MAIN TRAIL 25+50 TO 39+50	14.	DETAILS - CONCRETE STAIRS
6.	PLAN VIEW - 39+50 TO 49+00 & TYP SECT	15.	PROJECT SURVEY INFORMATION
7.	DETAILS - LOCATION OF BOARDWALK	16.	DETAILS - FREDERICK PT ROAD TURNOUT
8.	DETAILS - GRAVEL TRAIL	17.	DETAILS - BOARDWALK STAIR DETAILS
9.	DETAILS - BOARDWALK		

# PETERSBURG INDIAN ASSOCIATION

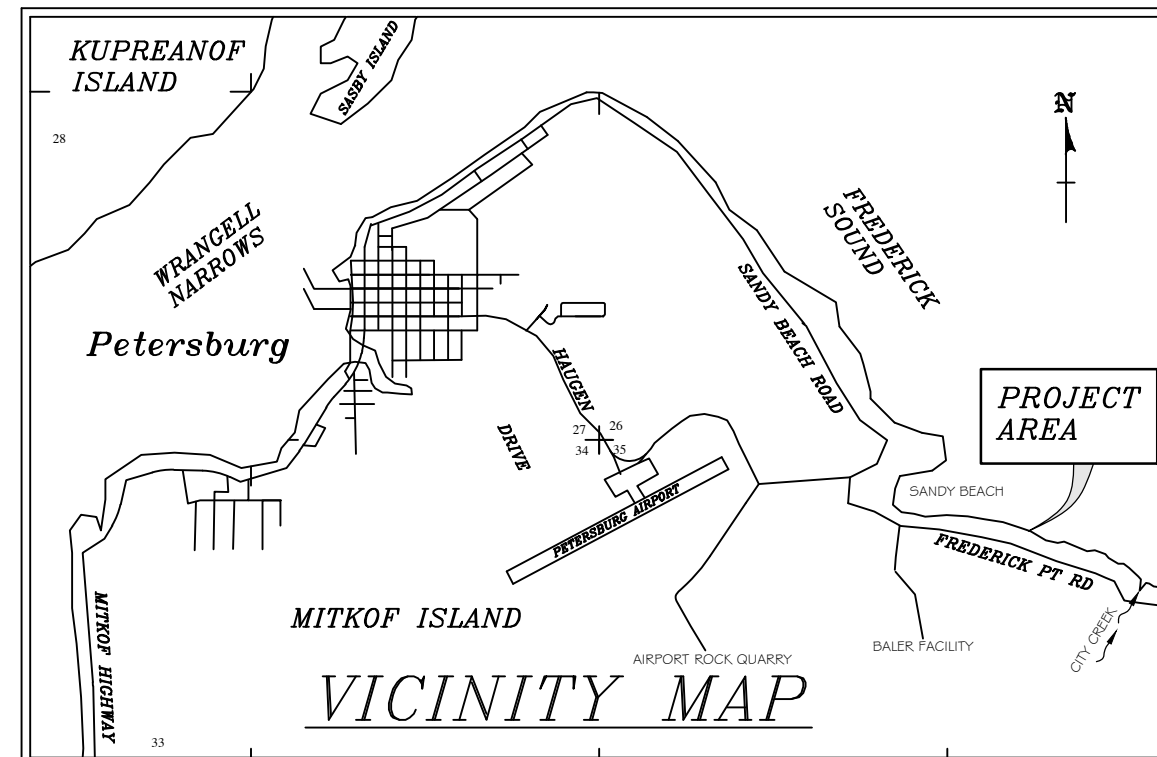
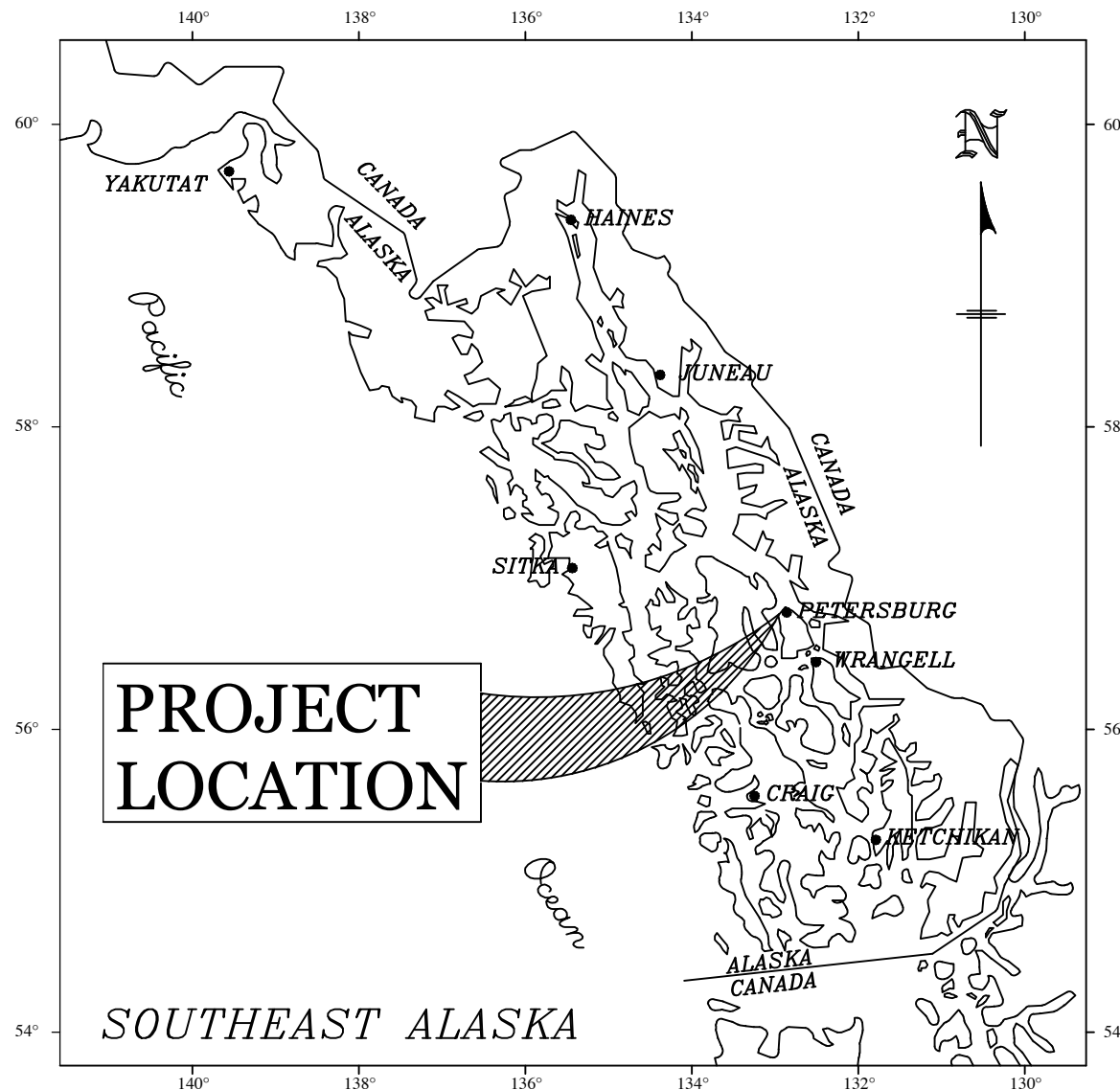
P.O. BOX 1410, PETERSBURG, ALASKA 99833, (907) 772-3636



## CITY CREEK TRAIL RECONSTRUCTION

PHASE II

~ 2023 ~



APPROVED: *Chris Morrison*  
 PIA PRESIDENT - Chris Morrison      DATE



DESIGNED BY:  
 HARAI & ASSOCIATES, INC  
 P.O. BOX 625  
 PETERSBURG, ALASKA 99833  
 MAY, 2023

**ESTIMATE OF QUANTITIES**

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	BID QUANTITY	ESTIMATED QUANTITY
1510.1	MOBILIZATION	LUMP SUM	ALL REQUIRED	
7040.1	MAIN TRAIL - WOODEN WALKWAY - ALONG BEACH	LUMP SUM	ALL REQUIRED	APPROXIMATELY 1789 LINEAL FEET
7040.2	STREAM CROSSINGS - WOODEN BOARDWALK	LUMP SUM	ALL REQUIRED	APPROXIMATELY 312 LINEAL FEET
7050.1	MAIN TRAIL - GRAVEL - ALONG BEACH	LUMP SUM	ALL REQUIRED	APPROXIMATELY 2778 LINEAL FEET - NOT INCLUDING 288' STREAM CROSSINGS & 45' CONCRETE STAIRS
7050.2	TRAIL "A" - GRAVEL - TO FREDERICK PT RD	LUMP SUM	ALL REQUIRED	APPROXIMATELY 477 LINEAL FEET
7050.3	TRAIL "B" - GRAVEL - TO FREDERICK PT RD	LUMP SUM	ALL REQUIRED	APPROXIMATELY 613 LINEAL FEET NOT INCLUDING 24' STREAM CROSSING
7060.1	6' WIDE CONCRETE STAIRS BETWEEN STA. 44+98 & 45+43	LUMP SUM	ALL REQUIRED	APPROXIMATELY 25 CONCRETE STAIR PANELS
7070.1	GRAVEL TURNOUTS ON FREDERICK PT ROAD	LUMP SUM	ALL REQUIRED	2 GRAVEL TURNOUTS
7085.1	EROSION & SEDIMENT CONTROL	LUMP SUM	ALL REQUIRED	
7530.1	COMPLETED PROJECT CLEAN UP	LUMP SUM	ALL REQUIRED	

**GENERAL NOTES**

- PETERSBURG BOROUGH STANDARD SPECIFICATIONS ~ 2012, APPLIES TO THESE PLANS AND SPECIFICATIONS. PETERSBURG INDIAN ASSOCIATION WILL BE THE ADMINISTRATIVE AUTHORITY, NOT PETERSBURG BOROUGH.
- THE CONTRACTOR WILL FURNISH TO THE ENGINEER A WORK PLAN THAT DETAILS CONSTRUCTION DATES, TRAFFIC AND SAFETY PLANS. CONTRACTOR WILL ALSO FURNISH TO THE ENGINEER MATERIAL CERTIFICATION SHEETS TO SHOW THAT ALL MATERIAL USED IN THIS PROJECT MEETS THE SPECIFICATIONS OF THESE PLANS AND PETERSBURG ENGINEER STANDARD SPECIFICATIONS ~ 2012.
- SAFETY AND PUBLIC ACCESS. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY SAFETY BARRIERS, SIGNAGE AND TRAFFIC CONTROL NECESSARY FOR SAFE OPERATION TO THE PUBLIC. THE AREA WILL REMAIN OPEN TO THE PUBLIC. THE CONTRACTOR MAY CLOSE OFF THE NEW TRAIL SYSTEM THAT IS TO BE CONSTRUCTED. FREDERICK POINT ROAD WILL REMAIN OPEN AT ALL TIMES.
- SITE CLEAN UP. CONTRACTOR SHALL CLEANUP SITE OF ALL CONSTRUCTION MATERIAL, WASTE CONCRETE SPILLS, AND CONSTRUCTION TRASH AND DISPOSE OF AT A SITE APPROVED BY THE ENGINEER.
- THE TRAIL SYSTEM OR ROAD THAT IS DAMAGED DURING CONSTRUCTION WILL BE REBUILT.
- HOURS OF CONSTRUCTION WORK WILL BE BETWEEN 7AM TILL 7 PM, MONDAY THROUGH SUNDAY.
- STAGING AREAS FOR THIS PROJECT WILL BE THE TWO NEW TURNOUTS TO BE CONSTRUCTED ON FREDERICK POINT ROAD. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF THESE STAGING AREAS. NO STAGED MATERIAL CAN ENCROACH INTO THE ROADWAY. TURNOUTS WILL BE RETURNED TO NEW AFTER COMPLETION OF THE PROJECT.
- MOTORIZED CONSTRUCTION EQUIPMENT MAY BE USED ON THE NEWLY CONSTRUCTED TRAILS AND BOARDWALK, THE EQUIPMENT ALLOWED ON NEW BOARDWALK WILL BE LIGHTWEIGHT ( 4 WHEELERS, SMALL ROCK WAGONS, SMALL BACKHOES, MAXIMUM AXLE WEIGHT WILL NOT EXCEED 2000 POUNDS & MAXIMUM OF 2 AXLES ALLOWED BETWEEN BEAM & PILE SETS - ABOUT 8' ) . DAMAGE CAUSED BY EQUIPMENT WILL BE AT THE CONTRACTORS EXPENSE TO REPAIR. NO MOTORIZED EQUIPMENT WILL BE ALLOWED ON THE EXISTING BOARDWALKS.
- EROSION CONTROL INCLUDES PREPARATION AND MAINTENANCE OF A STORM WATER POLLUTION PREVENTION PLAN ( SWPPP ) , CONTROL OF EROSION, SEDIMENTATION AND DISCHARGE OF POLLUTANTS, IN ACCORDANCE WITH THE ADEC CONSTRUCTION GENERAL PERMIT ( CGP ) FOR PROJECTS DISTURBING LESS THAN 1 ACRE. THE CONTRACTOR WILL OBTAIN THE SWPPP.

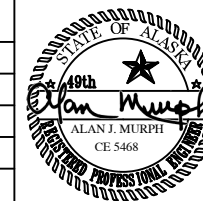
**DRAWING:  
PROJECT  
QUANTITIES**

**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN  
ASSOCIATION**  
P.O. BOX 1410, PETERSBURG, AK. 99833  
(907) 772-3636

REVISIONS

REV	DATE	DESCRIPTION



DESIGNED BY:  
HARAI & ASSOCIATES, INC  
P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023  
**SHEET NUMBER** 2 **TOTAL SHEETS** 17

**PROPOSED TRAIL DESCRIPTION:**

THE PROPOSED CITY CREEK TRAIL RECONSTRUCTION - PHASE II WILL BE REBUILDING OF 3,111' OF EXISTING TRAIL WITH GRAVEL TO A NEW WIDTH OF 8'. IN ADDITION 1,789' OF NEW ELEVATED WOODEN BOARDWALK ON STEEL PIPE PILE WILL BE BUILT ALONG THE 19' - 20' ELEVATION TIDELINE FOR IMPROVED VIEWING - REPLACING THE SAME AMOUNT EXISTING TRAIL THAT WILL BE ABANDONED. TWO NEW 8' WIDE GRAVEL TRAILS WILL BE BUILT FROM FREDERICK POINT ROAD DOWN TO THE MAIN TRAIL. THESE TRAIL LENGTHS ARE APPROXIMATELY 447' AND 637'. TOTAL LENGTHS OF TRAIL AND BOARDWALK ARE APPROXIMATE AND MAY VARY.

CONNECT NEW 8' GRAVEL TRAIL TO EXISTING BOARDWALK  
SEE DETAIL PAGE 12 - PT#464

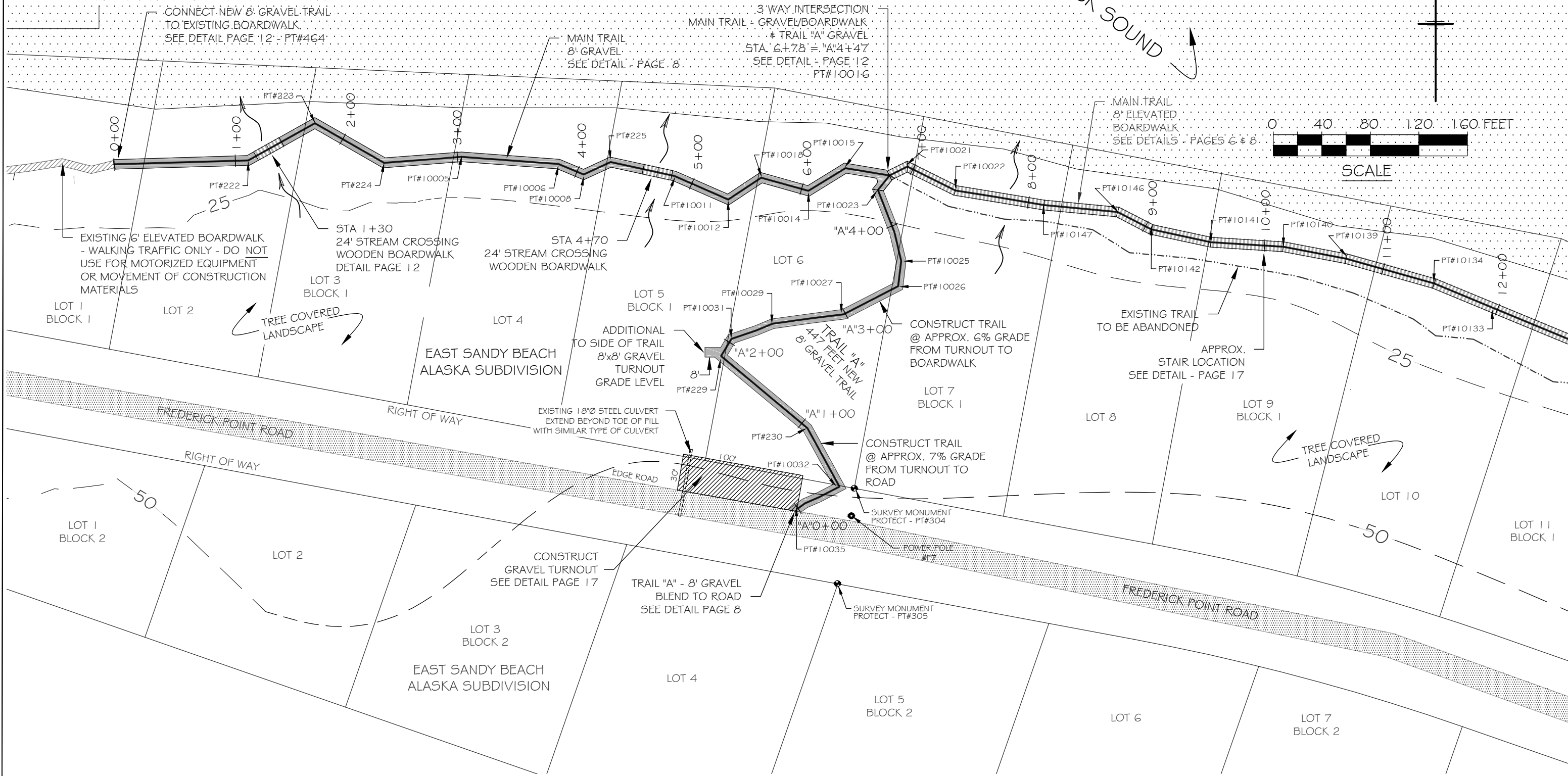
MAIN TRAIL - 8' GRAVEL  
SEE DETAIL - PAGE 8

3-WAY INTERSECTION  
MAIN TRAIL - GRAVEL/BOARDWALK & TRAIL "A" GRAVEL  
STA. 6+78 = "A"4+47  
SEE DETAIL - PAGE 12  
PT#10016

MAIN TRAIL - 8' ELEVATED BOARDWALK  
SEE DETAILS - PAGES 6 & 8

0 40 80 120 160 FEET

SCALE

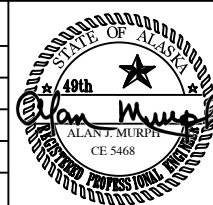


**DRAWING:**  
PLAN VIEW  
0+00 to 12+50  
"A"0+00 to "A"4+47

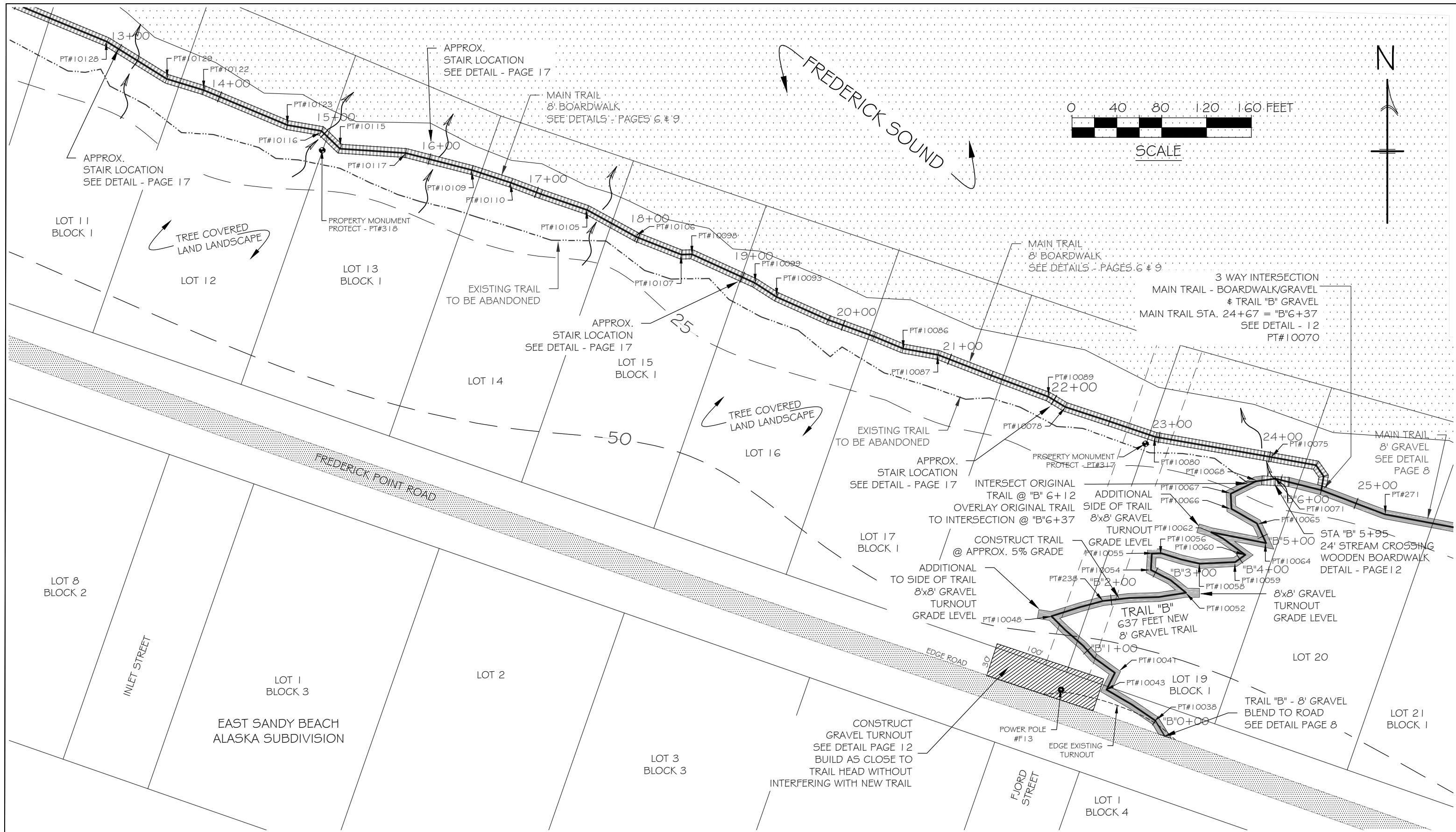
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Location  
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P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023  
SHEET NUMBER 3 TOTAL SHEETS 17

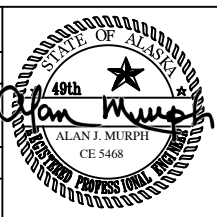


**DRAWING:**  
**PLAN VIEW**  
 12+50 to 25+50  
 "B"0+00 to "B"6+37

**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
 Sand Beach Recreation Area to City Creek  
 Location  
 ~PETERSBURG, ALASKA~

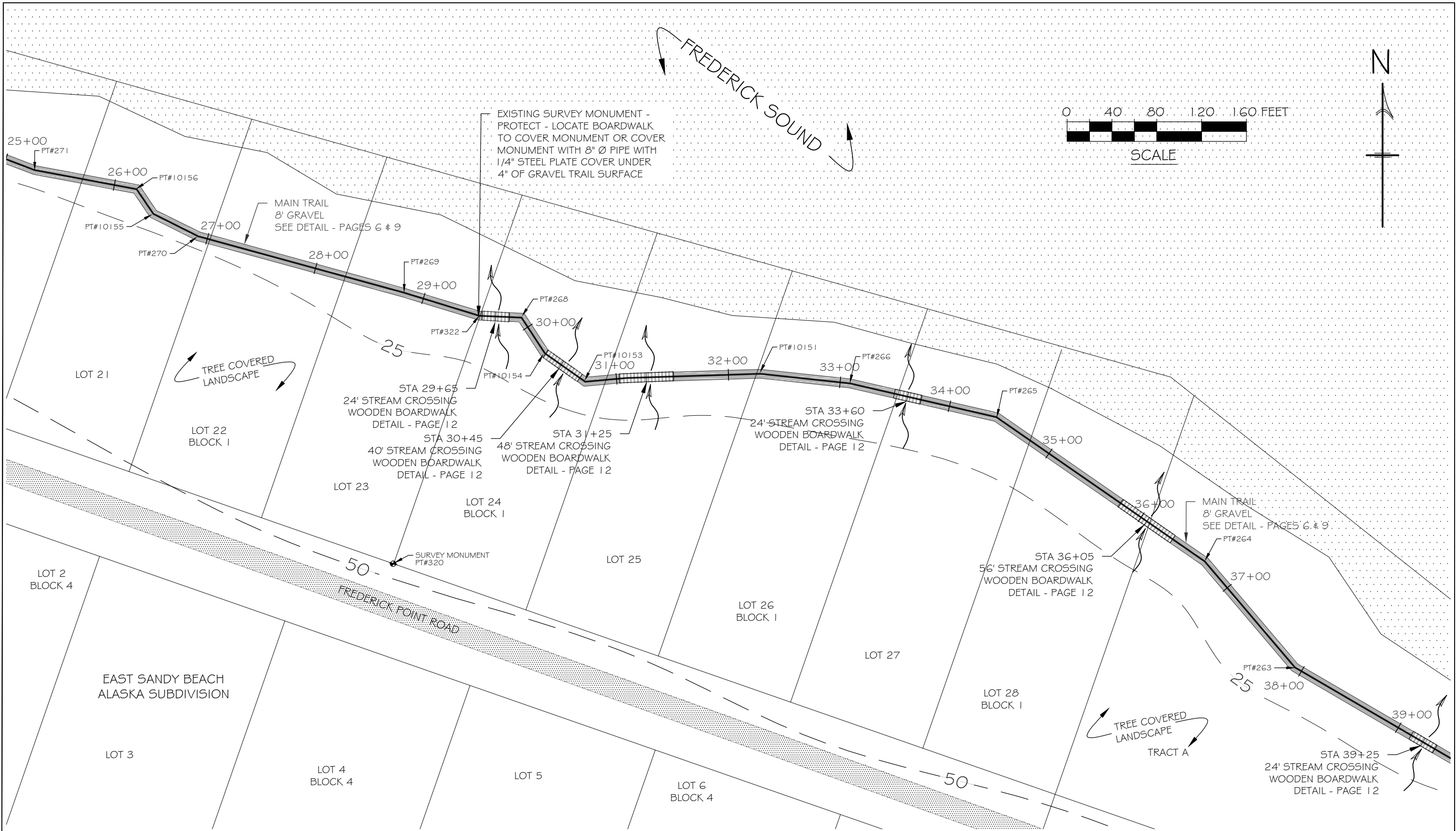
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 P.O. BOX 625, PETERSBURG, ALASKA 99833  
 DATE: MAY, 2023

<b>SHEET NUMBER</b> 4	<b>TOTAL SHEETS</b> 17
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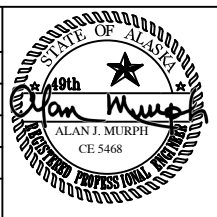


**DRAWING:**  
**PLAN VIEW**  
 25+50 to 39+50

**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
 Sand Beach Recreation Area to City Creek  
 Location  
 ~PETERSBURG, ALASKA~

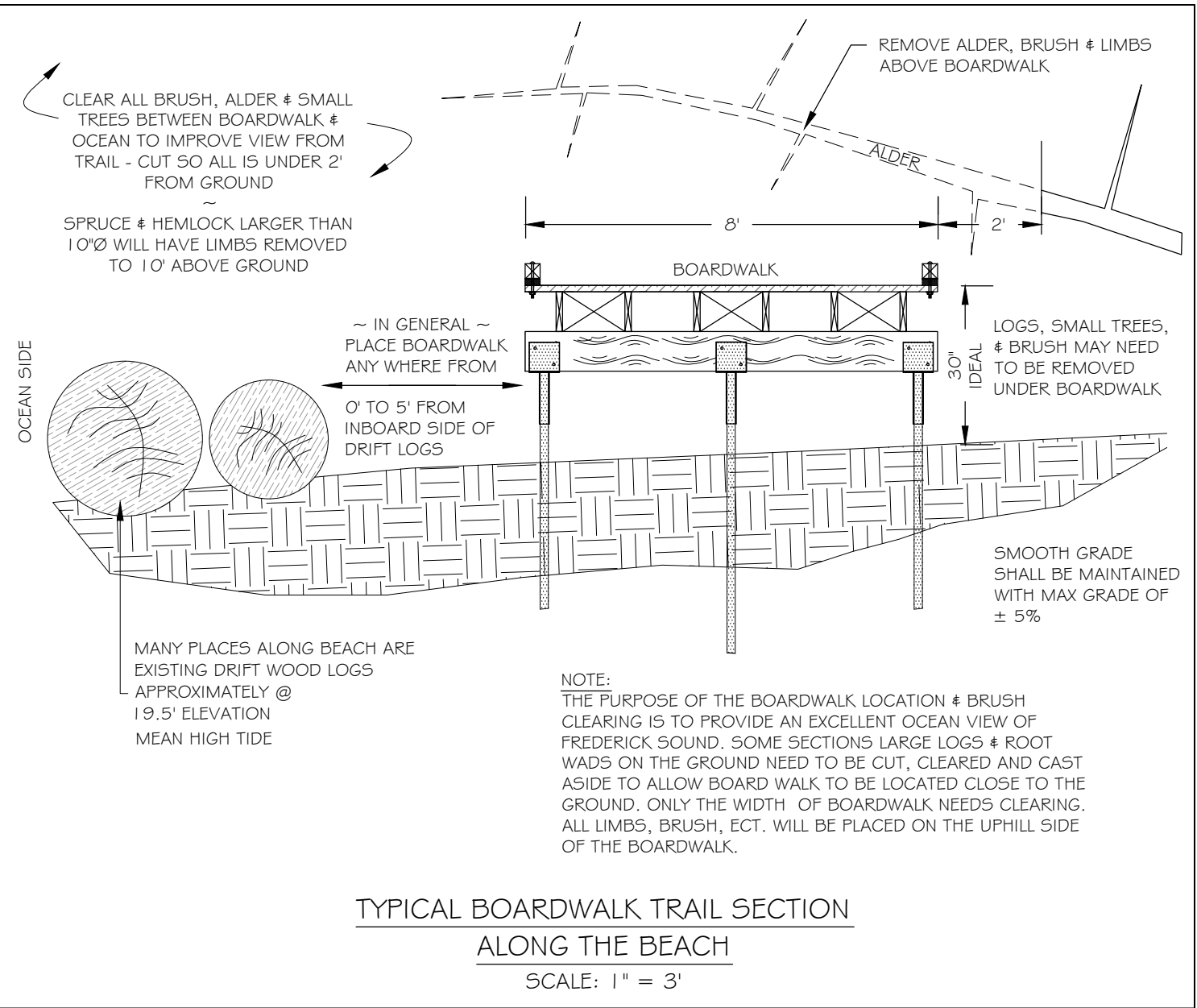
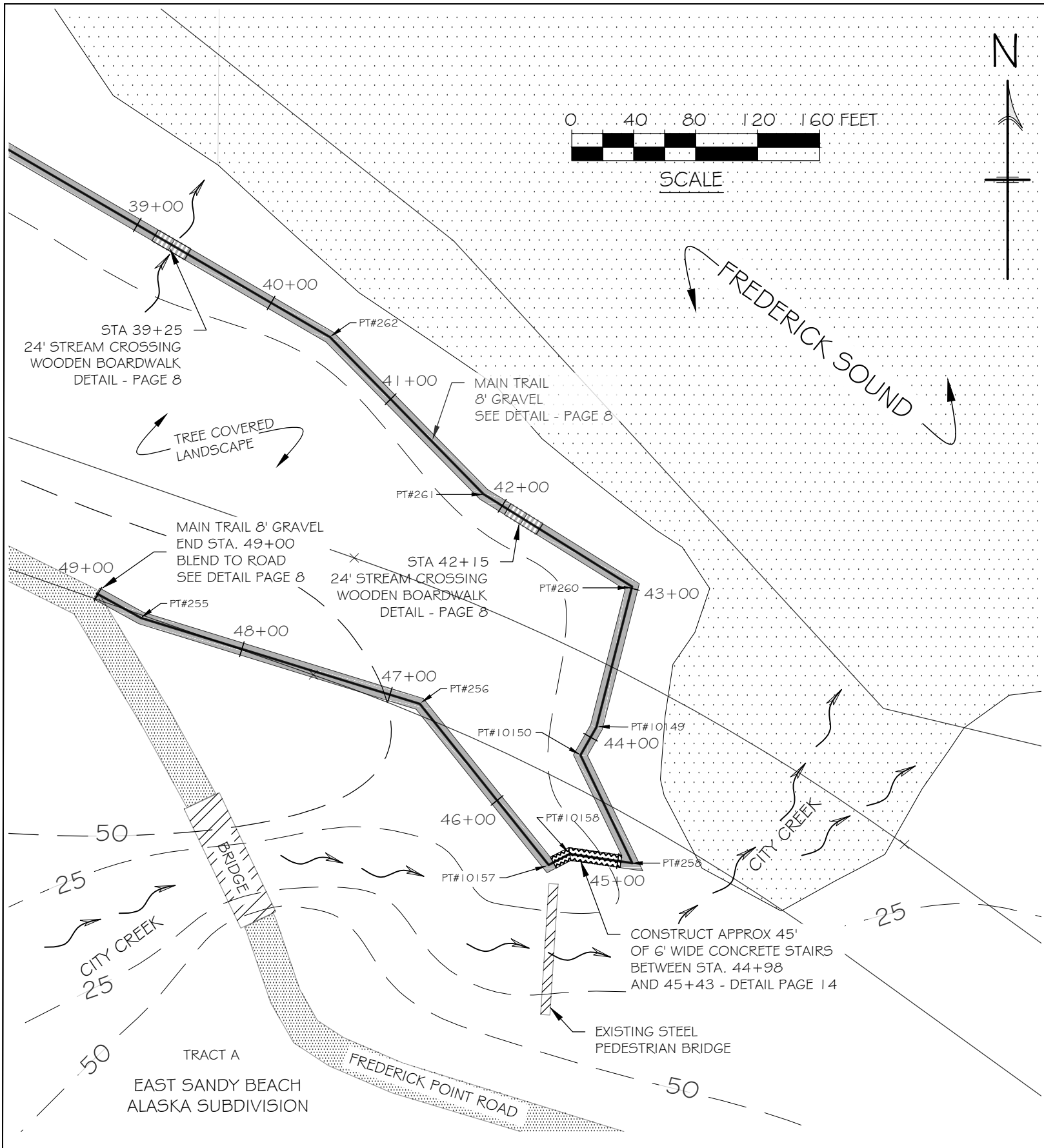
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<b>SHEET NUMBER</b> 5	<b>TOTAL SHEETS</b> 17
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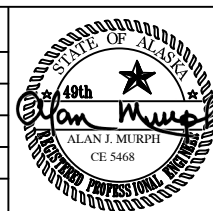
**TYPICAL BOARDWALK TRAIL SECTION  
ALONG THE BEACH**  
SCALE: 1" = 3'

**DRAWING:**  
**PLAN VIEW**  
39+50 to 49+00

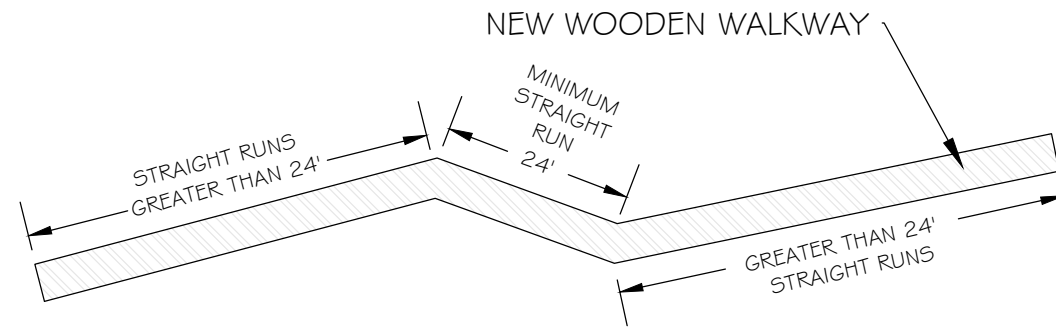
**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

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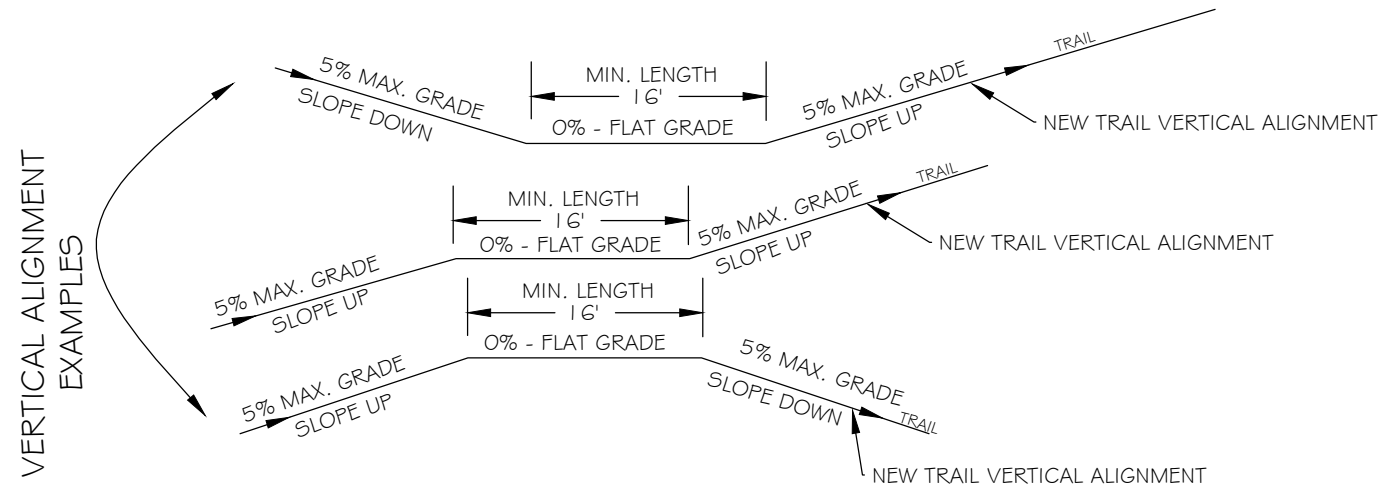
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DATE: MAY, 2023  
**SHEET NUMBER** 6 **TOTAL SHEETS** 17



## NEW BOARDWALK HORIZONTAL ALIGNMENT



## NEW BOARDWALK VERTICAL ALIGNMENT

### BOARDWALK & GRAVEL TRAILS FINAL LOCATION NOTES :

NEW TRAIL BOARDWALK ALONG OCEAN MAY BE FIELD LOCATED WITHIN 10' INLAND SIDE OF THE DRIFT LOGS @ APPROXIMATELY THE 19.5' TIDELINE. THE MAIN GRAVEL TRAIL WILL FOLLOW THE EXISTING OLD TRAIL. GRAVEL TRAILS "A" AND "B" THAT CONNECT TO FREDERICK POINT ROAD ARE LOCATED ON THE SURVEY LINES SHOWN ON PAGES 3&4. TREES AND BRUSH CUTTING WILL BE KEEP AT A MINIMUM.

### BOARDWALK HORIZONTAL ALIGNMENT NOTES:

NEW BOARDWALK HORIZONTAL ALIGNMENT RUNS MUST BE GREATER THAT 16' IN LENGTH. THIS WILL PROVIDE FOR EASIER PEDESTRIAN WALKING WITHOUT SHORT CHANGES OF DIRECTION.

### BOARDWALK VERTICAL ALIGNMENT NOTES:

NEW TRAIL VERTICAL ALIGNMENT RUNS OF THE SAME GRADE WILL BE AS LONG AS POSSIBLE BUT GREATER THAN 16'. ANY GRADE CHANGES GREATER THAN 1% WILL HAVE A TRANSITION RUN OF 0% BEFORE NEXT GRADE CHANGE. THIS WILL PROVIDE FOR EASIER PEDESTRIAN WALKING WITHOUT SHORT GRADE CHANGES. WOODEN BOARDWALK WILL BE CONSTRUCTED AS CLOSE TO GROUND AS POSSIBLE. WALKING SURFACE WILL BE AT A MINIMUM OF 22' ELEVATION. RECOMMEND USE OF A STRING LINE FOR VERTICAL ALIGNMENT LAYOUT.

### BOARDWALK CONSTRUCTION NOTES:

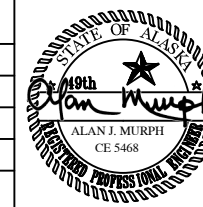
SURROUNDING GROUND WILL BE PROTECTED DURING CONSTRUCTION OF THE TRAIL. MINIMUM AREA POSSIBLE WILL BE DISTURBED DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR CLEANUP OF AREA AND RESTORING DISTURBED AREAS TO NATURAL CONDITIONS.

DRAWING:  
LOCATION  
DETAILS

PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN  
ASSOCIATION**  
P.O. BOX 1410, PETERSBURG, AK. 99833  
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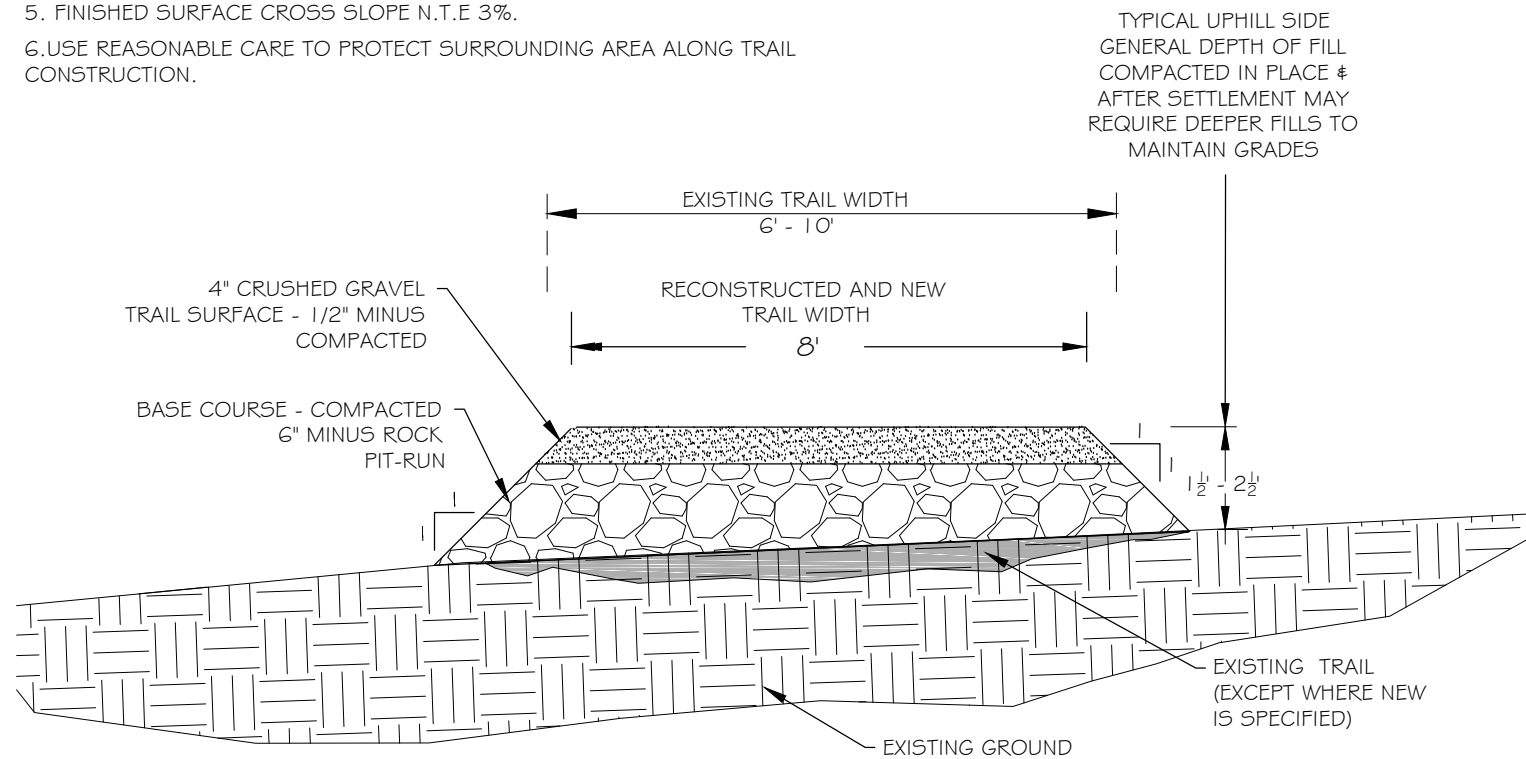
REVISIONS		
REV	DATE	DESCRIPTION



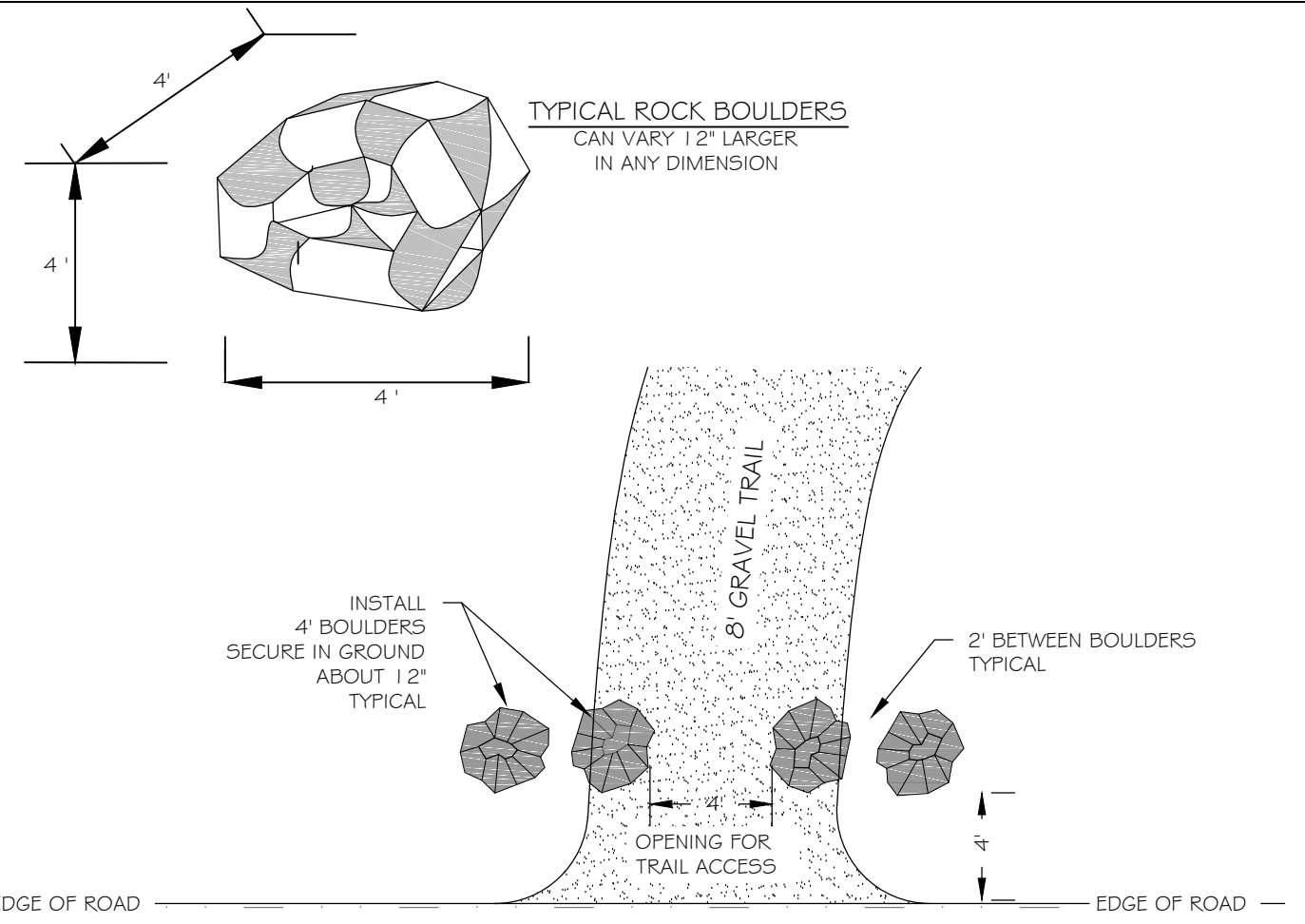
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HARAI & ASSOCIATES, INC  
P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023  
SHEET NUMBER 7 TOTAL SHEETS 17

**NOTES:**

1. CLEAN CRUSHED ROCK AND SHOTROCK FILL WILL BE USED IN THIS PROJECT.
2. CLEAR & CUT SMALL TREES (1 2"Ø OR LESS) AND BRUSH TO GROUND LEVEL BEFORE INSTALLING SHOTROCK & GRAVEL. SOME OLD LOGS ON THE GROUND MAY HAVE TO BE TRIMMED TO GAIN FULL WIDTH OF NEW TRAIL.
3. CONTRACTOR MAY REROUTE TRAIL + 10' FROM ORIGINAL TRAIL WITH ENGINEERS PERMISSION TO SAVE LARGE TREES BY RELOCATING TRAIL AROUND THESE TREES.
4. FINISHED CENTERLINE GRADE NOT TO EXCEED 5% EXCEPT WHERE SPECIFIED. FILL LOW SPOTS TO PROVIDE SMOOTH PROFILE.
5. FINISHED SURFACE CROSS SLOPE N.T.E 3%.
6. USE REASONABLE CARE TO PROTECT SURROUNDING AREA ALONG TRAIL CONSTRUCTION.



**TYPICAL GRAVEL TRAIL SECTION**  
SCALE: 1" = 3'



**NOTE:**  
INSTALL BOULDERS TO BLOCK  
MOTORIZED VEHICLE TRAFFIC BUT  
TO ALLOW PEDESTRIAN ACCESS

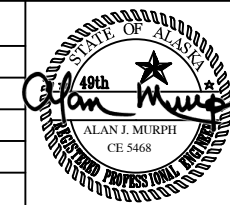
**TYPICAL GRAVEL TRAIL & ROAD INTERSECTION**  
**ENTRANCE BLOCKADE FOR VEHICLES**  
SCALE: 1" = 6'

**DRAWING:**  
**DETAILS**  
**GRAVEL TRAIL**

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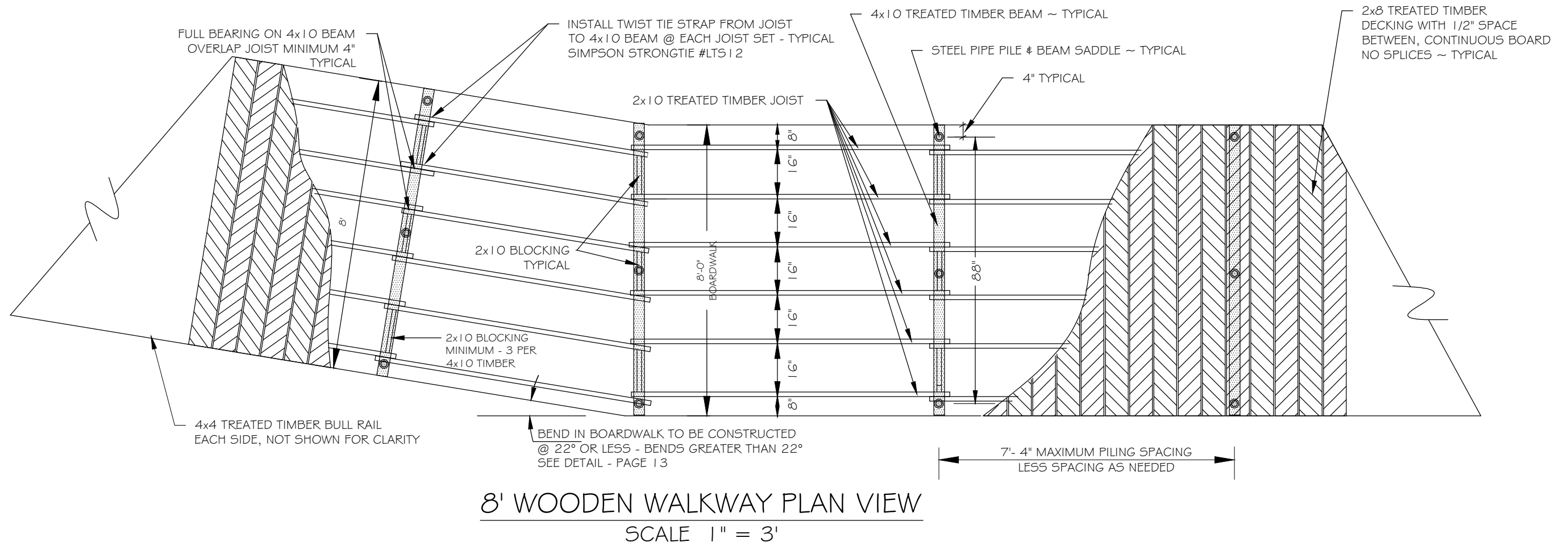
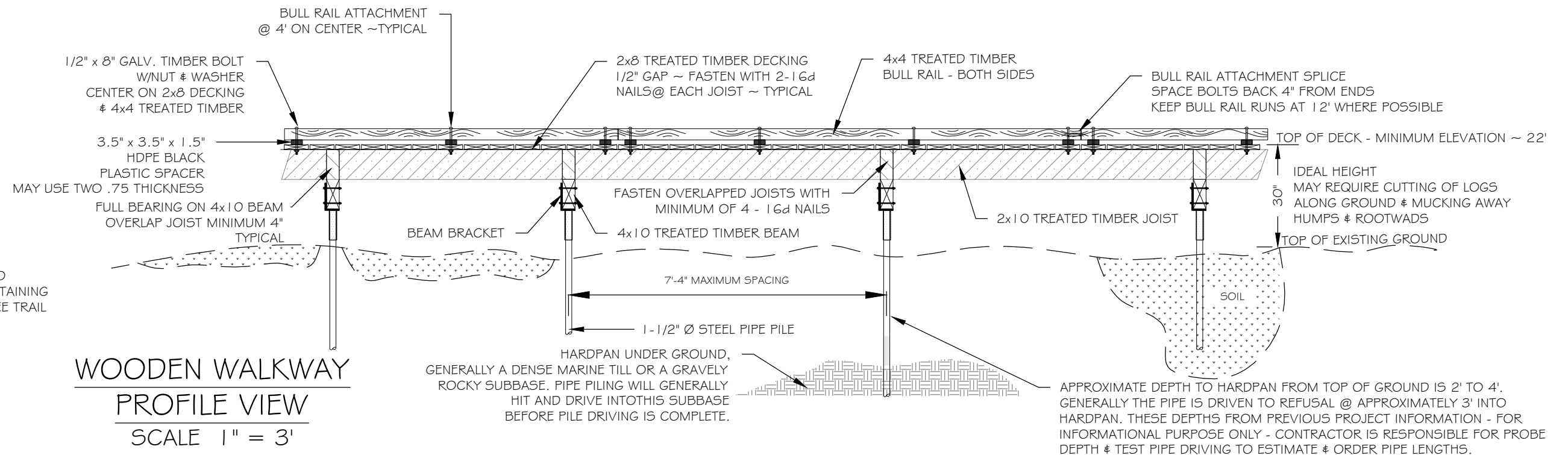
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REV	DATE	DESCRIPTION



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DATE: MAY, 2023

<b>SHEET NUMBER</b> 8	<b>TOTAL SHEETS</b> 17
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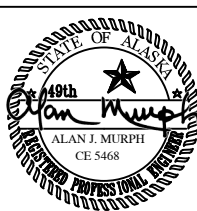


DRAWING:  
**DETAILS  
BOARDWALK**

**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

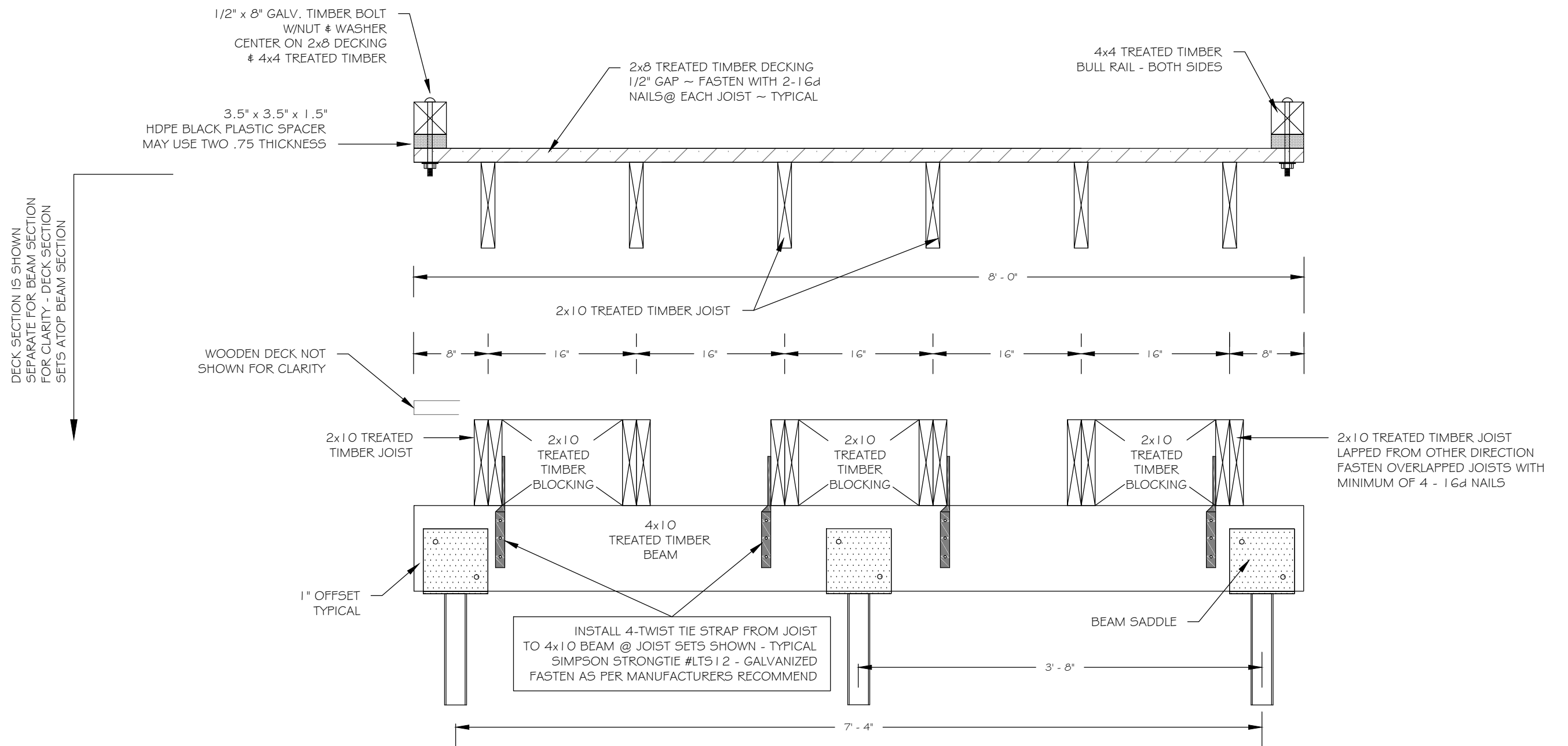
**PETERSBURG INDIAN  
ASSOCIATION**  
P.O. BOX 1410, PETERSBURG, AK. 99833  
(907) 772-3636

REVISIONS		
REV	DATE	DESCRIPTION



DESIGNED BY:  
HARAI & ASSOCIATES, INC.  
P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023

<b>SHEET NUMBER</b> 9	<b>TOTAL SHEETS</b> 17
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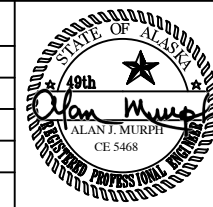
WOODEN WALKWAY BEAM DETAIL  
SCALE 1" = 1'

DRAWING:  
DETAILS  
BOARDWALK

PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN  
ASSOCIATION**  
P.O. BOX 1418, PETERSBURG, AK. 99833  
(907) 772-3636

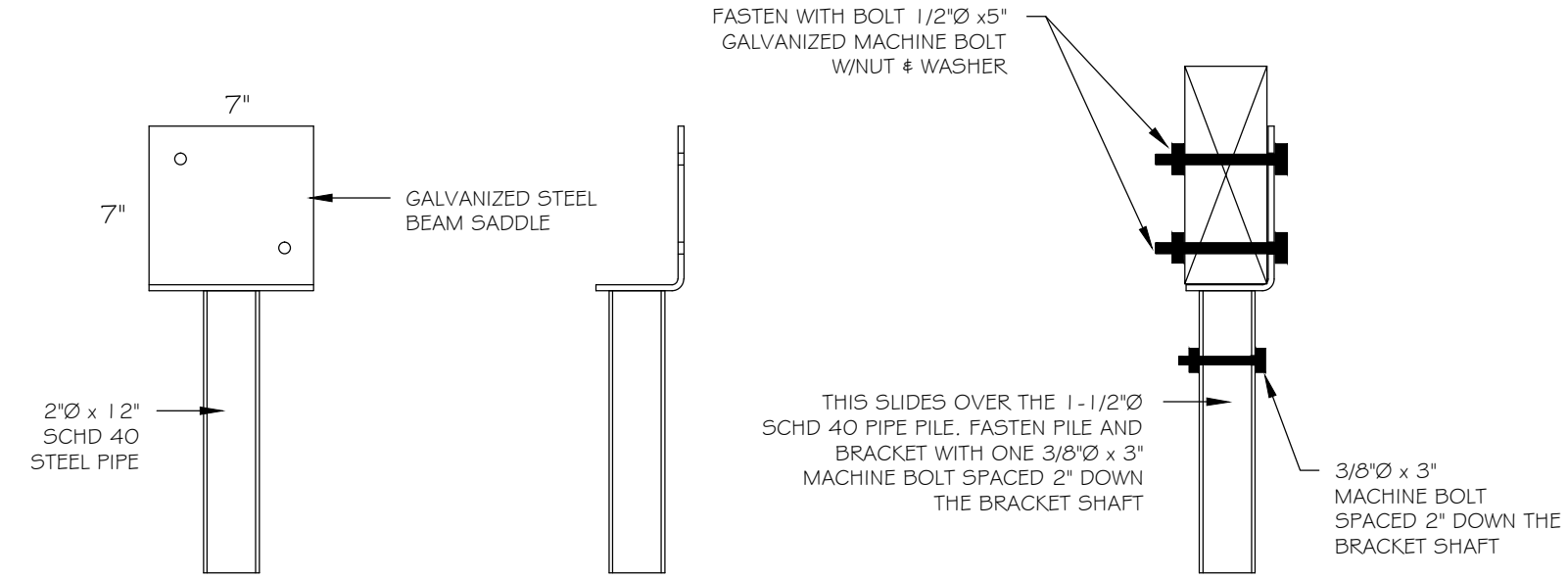
REVISIONS		
REV	DATE	DESCRIPTION



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HARAI & ASSOCIATES, INC.  
P.O. BOX 625, PETERSBURG, ALASKA 99833

DATE: MAY, 2023

SHEET NUMBER 10	TOTAL SHEETS 17
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**STANDARD TIMBER BEAM SUPPORT BRACKET**

**GENERAL NOTES WOODEN BOARDWALK**

**HARDWARE:**

- ALL HARDWARE GALVANIZED AS PER ASTM 153
- NAILS SHALL BE 16d COMMON
- BOLTS ASTM A307
- NUTS ASTM A563 OR ASTM A194 GRADE 2H
- WASHERS (FLAT OR BEVELED) ASTM F436

**GALVANIZING TREATMENT:** ALL NAILS, BOLTS, NUTS, WASHERS, SHALL BE HOT DIPPED GALVANIZED PER ASTM A153. STEEL CONNECTORS MAY ALSO BE GALVANIZED PER ASTM A653 (ZMAX-G185)

**STEEL PIPE & PILING:** 1-1/2" Ø SCHEDULE 40, A500, GALVANIZED

**WOOD TIMBERS:**

**MATERIALS:** SAWN LUMBER SHALL BE PRESERVATIVE-TREATED, HEM-FIR NO. 2 OR BETTER. ALL TIMBERS SHALL BE S4S FINISHED.

**PRESERVATIVE-TREATMENT:** ACZA OR CCA TO 0.60 RETENTION, LP-22. TREAT PER AWPA SECTION C2 FOR 'SOIL AND FRESH WATER USE'. USE BEST MANAGEMENT PRACTICES FOR USE IN AQUATIC ENVIRONMENTS AS PER WWPI. ALL TREATMENT WILL BE COMPATIBLE WITH GALVANIZED HARDWARE OR IF REQUIRED USE STAINLESS STEEL FASTENERS. TREAT ALL CUTS AS PER AWPA STANDARDS OR 1 COAT OF PRESERVATIVE.

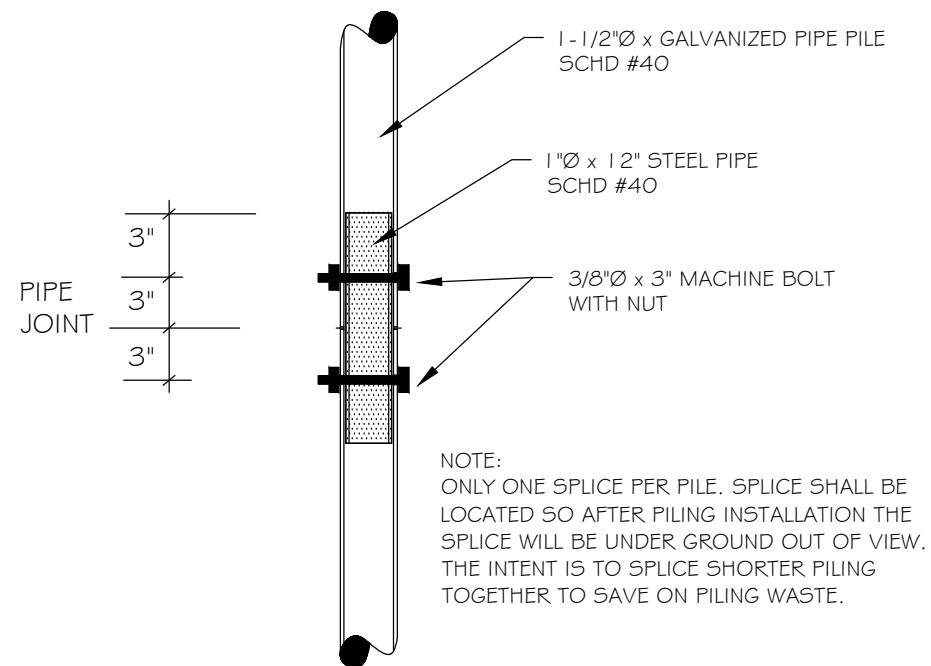
**JOIST TIE DOWN STRAPS:** SIMPSON STRONG TIE (OR APPROVED EQUAL), TIE DOWN STRAP #LTS12. STRAPS WILL BE HOT DIP GALVANIZED.

**BEAM SADDLES:** CHANCE CIVIL CONSTRUCTION, WALKWAY SUPPORT BRACKET, #CT10-0682, HOT DIP GALVANIZED. OR APPROVED EQUAL.

**PILE DRIVING:** PILING WILL BE DRIVEN TO REFUSAL BY HAND OR MACHINE. IF HAND DRIVEN, A MINIMUM OF A 50 POUND SLIDE HAMMER DROPPING 3' WILL BE ACCEPTABLE. IF MACHINE DRIVEN, A MINIMUM ENERGY RATING OF 300 FOOT/POUNDS IS REQUIRED. GAS ENGINE POWERED POST DRIVER OR 90 POUND PAVEMENT BREAKER OR JACK HAMMER CLASS IS ACCEPTABLE. REFUSAL IS DEFINED AS MORE THAN 20 BLOWS TO THE INCH WITH SLIDE HAMMER. REFUSAL IS DEFINED AS NO VISIBLE MOVEMENT WITH A MACHINE. ENGINEER TO BE PRESENT AT ALL INSTALLATIONS OF PILING.

**REQUIRED DOCUMENTATION:**

CONTRACTOR WILL PROVIDE THE ENGINEER WITH ALL MATERIAL LIST, MANUFACTURERS INFORMATION AND CUT SHEETS OF ALL MATERIAL PRIOR TO ORDERING. ENGINEER'S APPROVAL IS REQUIRED BEFORE PROCEEDING WITH ORDERING MATERIALS AND SUPPLIES. THE ENGINEER WILL NEED TWO WEEKS LEAD TIME BEFORE APPROVE/DISAPPROVE CONSTRUCTION MATERIALS.



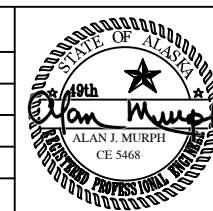
**TYPICAL PILE SPLICE**

**DRAWING:**  
**DETAILS**  
**BOARDWALK**

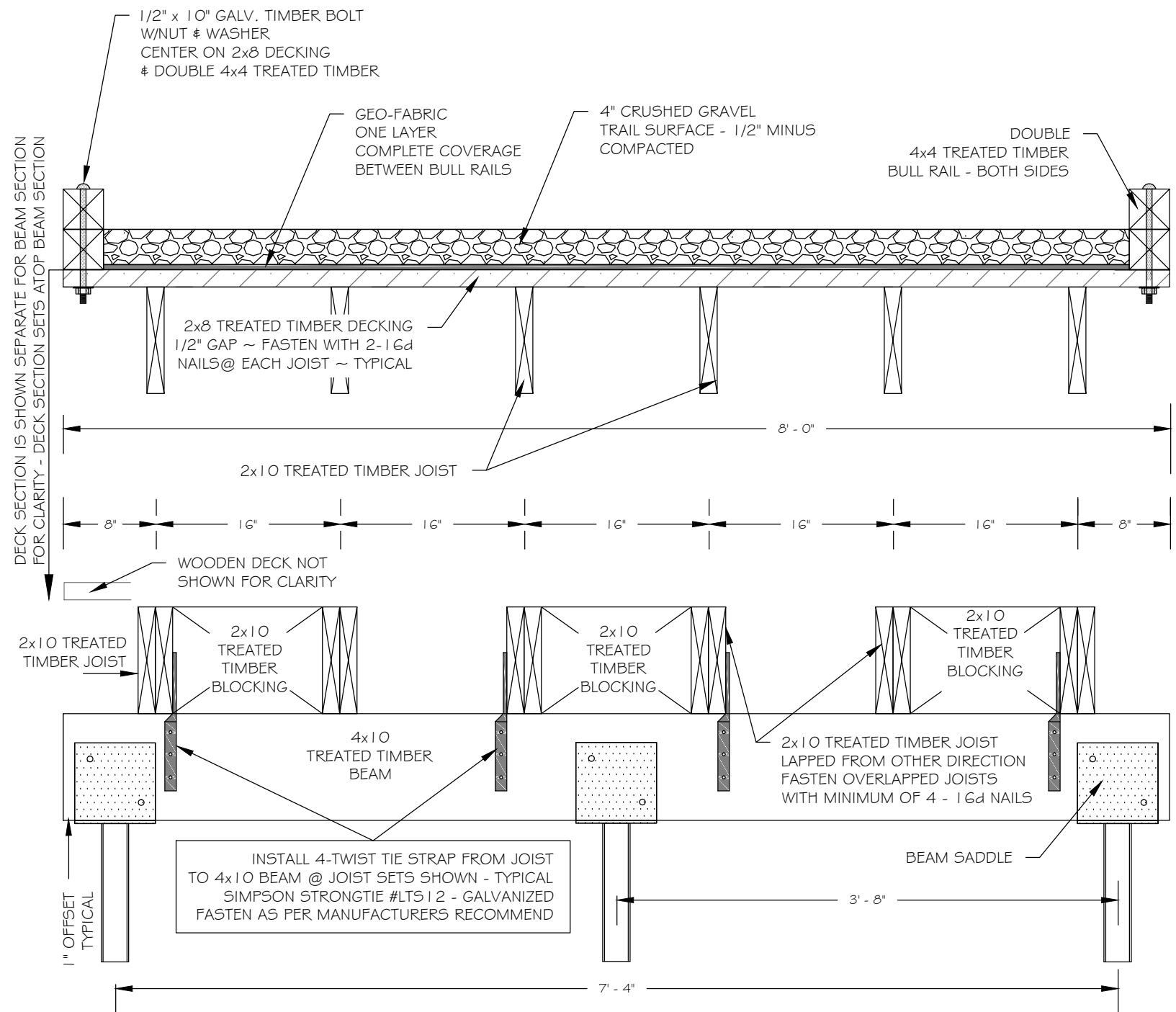
**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN ASSOCIATION**  
P.O. BOX 1410, PETERSBURG, AK. 99833  
(907) 772-3636

REVISIONS		
REV	DATE	DESCRIPTION



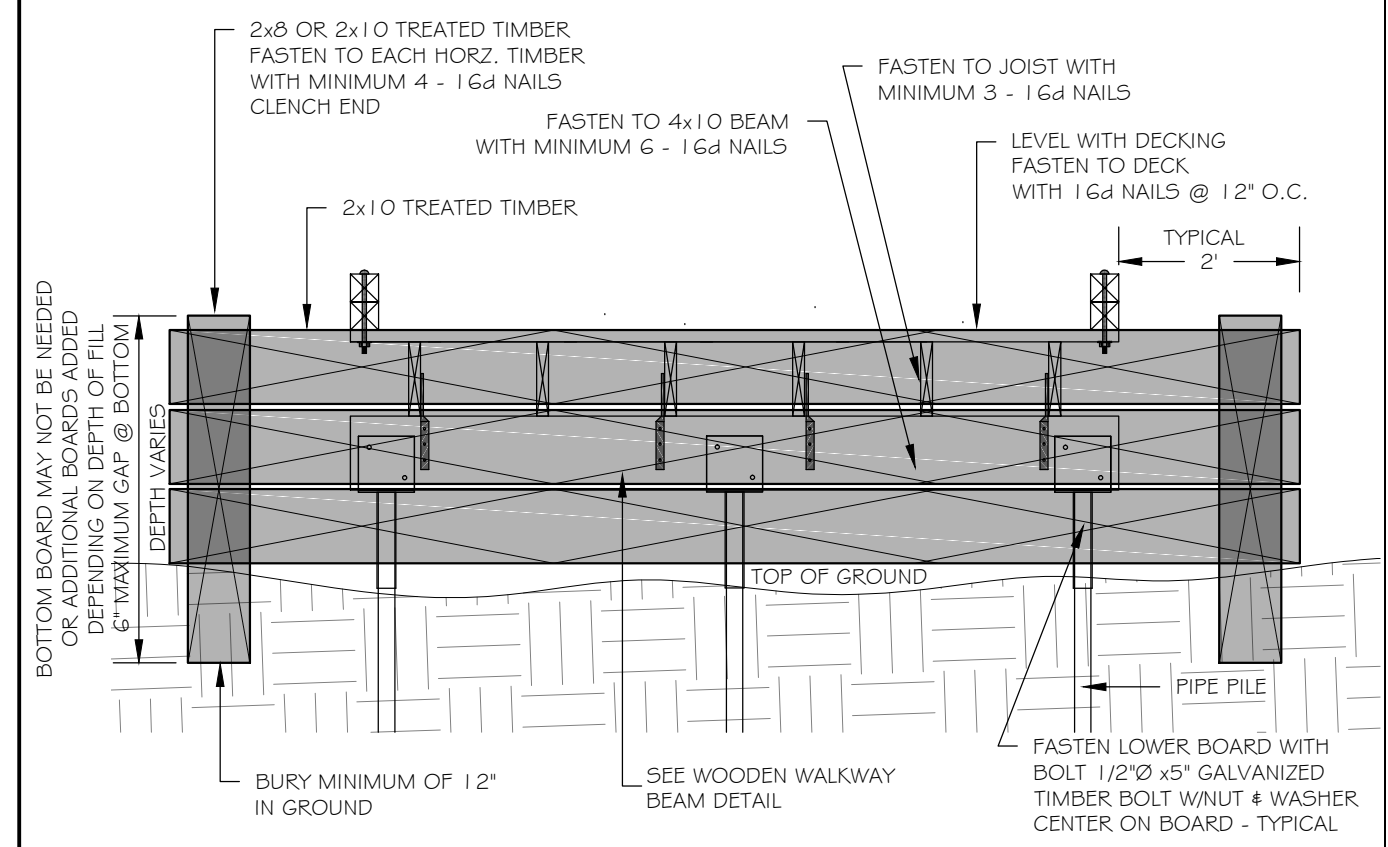
DESIGNED BY:  
HARAI & ASSOCIATES, INC  
P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023  
**SHEET NUMBER** 11 **TOTAL SHEETS** 17



**STREAM CROSSING BOARDWALK  
WOODEN WALKWAY BEAM DETAIL**  
SCALE 1" = 1'

NOTE:  
STREAM CROSSINGS BOARDWALKS ARE LONGER THAN THE STREAM WIDTH. THIS IS DUE TO THE AREA AROUND THE STREAM IS MARSHY & HAS ACTIVE SEEPAGES. GENERALLY CENTER THE STREAM CROSSING BOARDWALK OVER THE MOST ACTIVE STREAM CHANNEL.

**RETAINING WALL  
LOCATED @ BOTH ENDS OF BOARDWALK  
TO HOLD ROCK & GRAVEL BACK**



**TRANSITION - GRAVEL TO BOARDWALK TRAIL  
ELEVATION VIEW**  
SCALE 1/2" = 1'

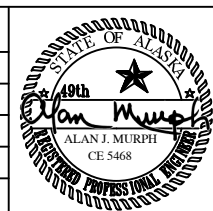
NOTE:  
THIS DETAIL APPLIES TO BOTH THE STANDARD BOARDWALK AND THE STREAM CROSSING BOARDWALK.

DRAWING:  
**DETAILS  
BOARDWALK  
STREAM CROSSING**

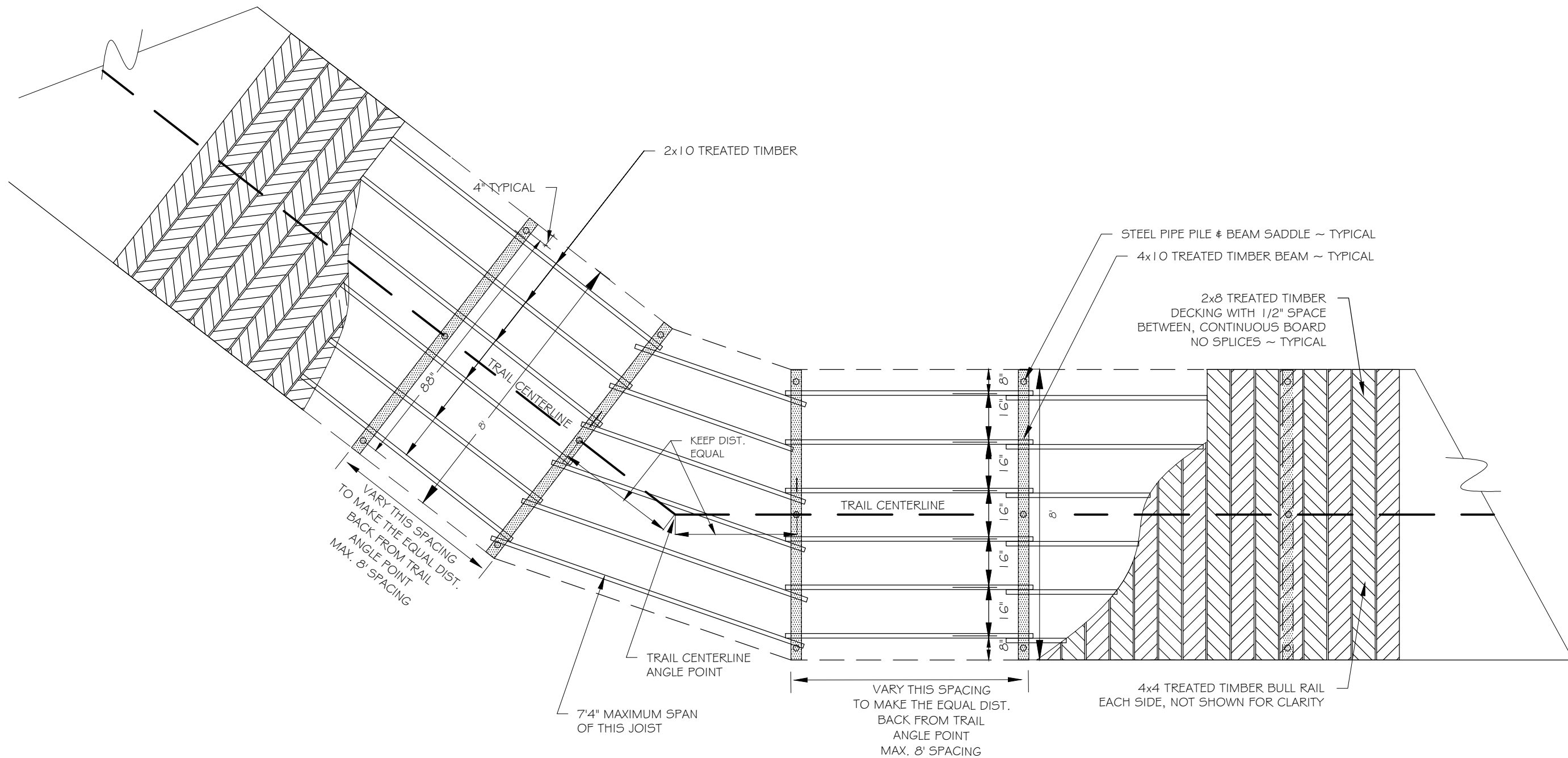
PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
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SHEET NUMBER 12 TOTAL SHEETS 17



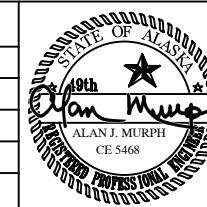
CURVE MADE WITH WOODEN WALKWAY  
 BETWEEN 22° - 45°  
 PLAN VIEW  
 SCALE 1" = 3'

DRAWING:  
 DETAILS  
 BOARDWALK  
 CURVES

PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
 Sand Beach Recreation Area to City Creek  
 Location  
 ~PETERSBURG, ALASKA~

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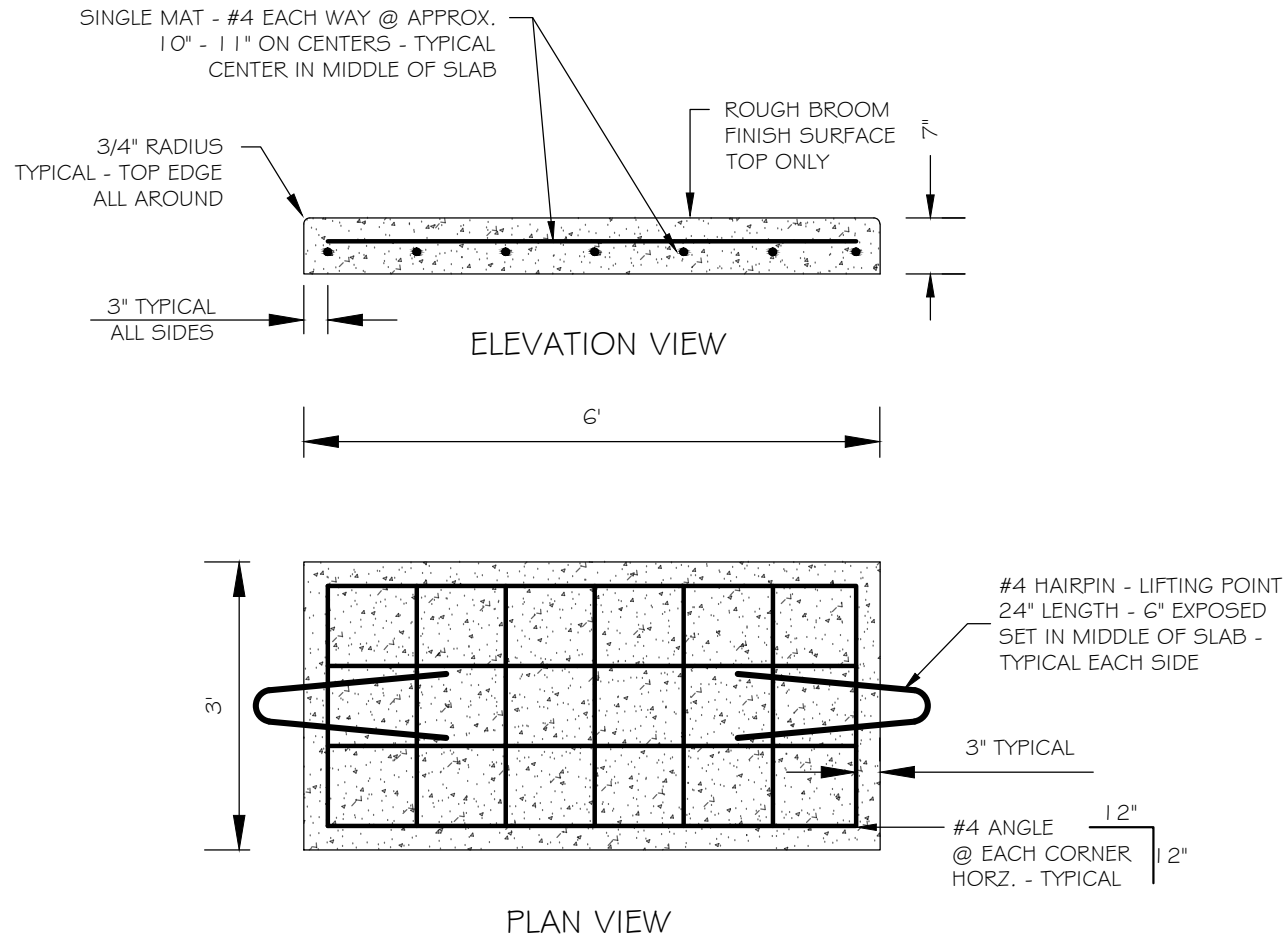
SHEET NUMBER	TOTAL SHEETS
13	17

**NOTES:**

1. PREFABRICATE CONCRETE STAIR PANELS OFF PROJECT SIDE.
2. CAST-IN-PLACE CONCRETE  
CONCRETE MIXTURES: CONFORM TO ACI 301 SEC. 4 "CONCRETE MIXTURES" AND MEET THE FOLLOWING REQUIREMENTS:
  - 5 SACKS OF CEMENT PER CUBIC YARD
  - 3500 PSI @ 28 DAYS
  - 3/4" MAXIMUM AGGREGATE SIZE
  - 6% AIR CONTENT PER ASTM C 260
  - .45 MAXIMUM WATER/CEMENT RATIO
  - 4" MAXIMUM SLUMP
3. REINFORCING STEEL: GRADE 60 STEEL PER ASTM A 615

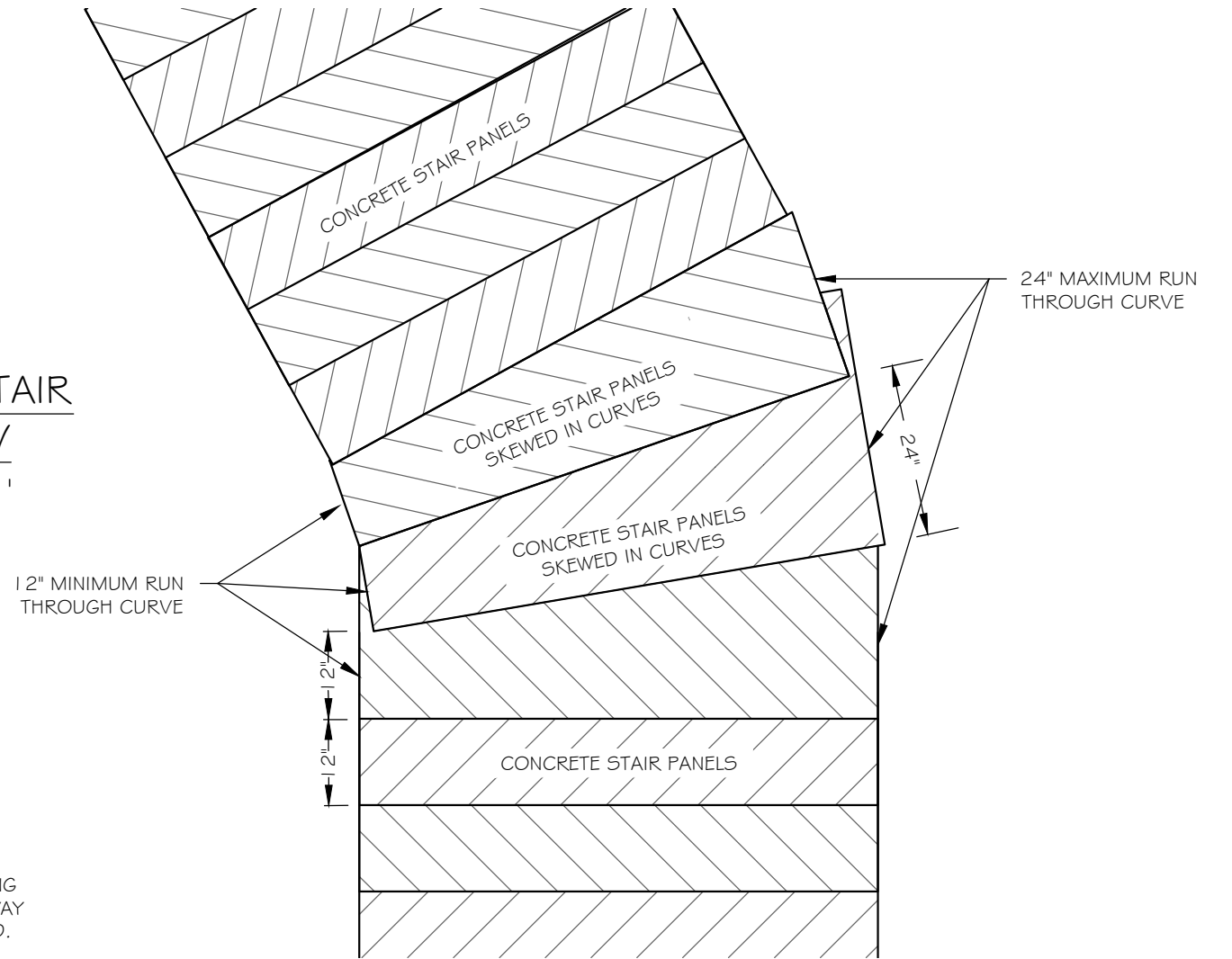
**CONCRETE STAIR PANELS**

SCALE 1/2" = 1'



**CONCRETE STAIR PLAN VIEW**

SCALE 1/2" = 1'

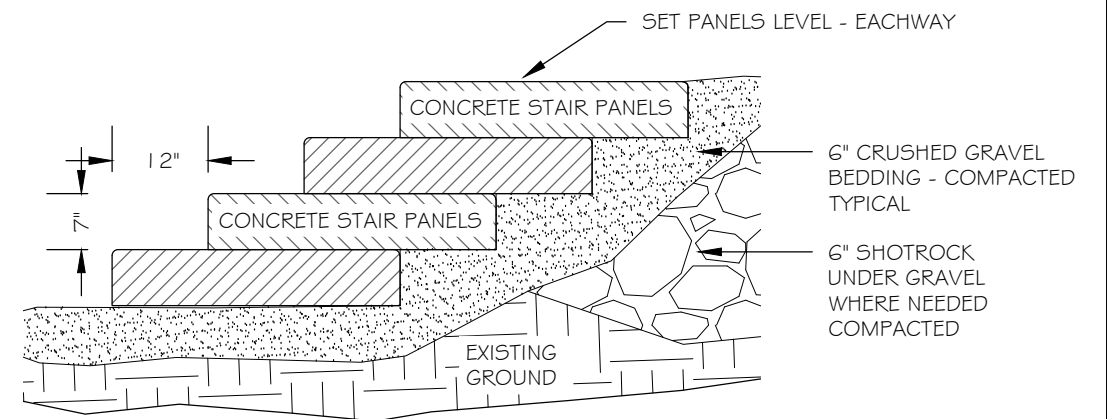


**NOTES:**

1. FINAL LOCATION, BEGINNING & ENDING POINTS OF STAIRWAY WILL BE DETERMINED IN FIELD.
2. STAIRS MAY NOT BE CONTINUOUS - SHORT LENGTHS OF GRAVEL TRAIL MAY BE INTERMIXED. BUILT TO TYPICAL GRAVEL TRAIL DETAIL.
3. MAXIMUM OF 25 CONCRETE STAIR PANELS WILL BE NEEDED.

**6' WIDE CONCRETE STAIRS  
BETWEEN STA. 44+98 & 45+43  
ELEVATION VIEW**

SCALE 1/2" = 1'



**CONCRETE STAIR X-SECTION**

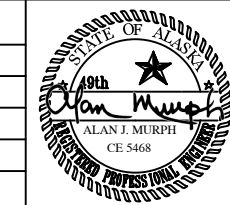
SCALE 1/2" = 1'

DRAWING:  
**DETAILS**  
CONCRETE STAIRS

PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
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REVISIONS		
REV	DATE	DESCRIPTION



DESIGNED BY:  
HARAI & ASSOCIATES, INC  
P.O. BOX 625, PETERSBURG, ALASKA 99833  
DATE: MAY, 2023

<b>SHEET NUMBER</b> 14	<b>TOTAL SHEETS</b> 17
---------------------------	---------------------------

MAIN TRAIL				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
464	10132.1	10730.9	26.2	END EXISTING BOARDWALK - BEGIN NEW TRAIL
222	10135.4	10841.5	25.4	TRAIL POINT OF INTERSECTION
223	10166.1	10896.4	21.1	TRAIL POINT OF INTERSECTION
224	10133.4	10953.5	25.3	TRAIL POINT OF INTERSECTION
10005	10138.3	11017.4	23.4	TRAIL POINT OF INTERSECTION
10006	10132.4	11097.2	25.0	TRAIL POINT OF INTERSECTION
10008	10123.8	11118.0	23.9	TRAIL POINT OF INTERSECTION
225	10133.4	10953.5	25.3	TRAIL POINT OF INTERSECTION
10011	10122.6	11192.9	23.2	TRAIL POINT OF INTERSECTION
10012	10103.1	11237.2	24.8	TRAIL POINT OF INTERSECTION
10018	10138.7	11273.2	19.6	TRAIL POINT OF INTERSECTION
10014	10110.3	11303.4	22.5	TRAIL POINT OF INTERSECTION
10015	10129.0	11333.9	21.4	TRAIL POINT OF INTERSECTION
10016	10123.0	11370.2	21.0	END GRAVEL - BEGIN BOARDWALK
10021	10130.3	11385.0	19.6	TRAIL POINT OF INTERSECTION
10022	10110.6	11424.6	20.3	TRAIL POINT OF INTERSECTION
10147	10098.6	11497.5	20.6	TRAIL POINT OF INTERSECTION
10146	10092.9	11558.3	20.2	TRAIL POINT OF INTERSECTION
10142	10078.6	11585.9	21.6	TRAIL POINT OF INTERSECTION
10141	10067.9	11635.2	21.3	TRAIL POINT OF INTERSECTION
10140	10064.2	11694.9	20.8	TRAIL POINT OF INTERSECTION
10139	10054.4	11746.8	20.9	TRAIL POINT OF INTERSECTION
10134	10033.9	11819.4	20.5	TRAIL POINT OF INTERSECTION
10133	10013.7	11868.1	20.4	TRAIL POINT OF INTERSECTION
10128	9979.0	11952.0	20.6	TRAIL POINT OF INTERSECTION
10129	9945.8	12005.6	20.5	TRAIL POINT OF INTERSECTION
10122	9935.8	12038.6	20.5	TRAIL POINT OF INTERSECTION
10123	9904.5	12113.3	20.4	TRAIL POINT OF INTERSECTION
10116	9899.4	12143.6	19.9	TRAIL POINT OF INTERSECTION
10115	9883.5	12160.1	19.3	TRAIL POINT OF INTERSECTION
10117	9879.7	12218.8	20.2	TRAIL POINT OF INTERSECTION
10109	9864.5	12278.0	19.6	TRAIL POINT OF INTERSECTION
10110	9853.3	12312.4	20.4	TRAIL POINT OF INTERSECTION
10105	9828.9	12380.8	20.6	TRAIL POINT OF INTERSECTION
10106	9804.9	12424.6	20.2	TRAIL POINT OF INTERSECTION
10107	9788.5	12646.9	20.5	TRAIL POINT OF INTERSECTION
10098	9789.4	12474.1	20.1	TRAIL POINT OF INTERSECTION
10099	9763.9	12530.2	20.5	TRAIL POINT OF INTERSECTION
10093	9751.5	12549.6	21.1	TRAIL POINT OF INTERSECTION
10086	9705.3	12662.7	24.0	TRAIL POINT OF INTERSECTION
10087	9699.6	12693.9	20.3	TRAIL POINT OF INTERSECTION
10089	9662.3	12792.2	20.7	TRAIL POINT OF INTERSECTION
10078	9653.3	12807.1	21.6	TRAIL POINT OF INTERSECTION
10080	9625.4	12887.7	22.3	TRAIL POINT OF INTERSECTION
10075	9608.3	12991.8	21.2	TRAIL POINT OF INTERSECTION
10070	9578.9	13035.7	23.8	END BOARDWALK /BEGIN GRAVEL - INT. TR. "B"
271	9557.4	13092.5	23.8	TRAIL POINT OF INTERSECTION
10156	9540.4	13183.5	22.5	TRAIL POINT OF INTERSECTION
10155	9518.3	13198.4	22.3	TRAIL POINT OF INTERSECTION
270	9498.4	13238.4	24.9	TRAIL POINT OF INTERSECTION
269	9441.0	12419.4	22.6	TRAIL POINT OF INTERSECTION
322	9427.4	13489.4	22.9	TRAIL POINT OF INTERSECTION
268	9425.8	13527.0	21.9	TRAIL POINT OF INTERSECTION
10154	9393.9	13547.8	23.0	TRAIL POINT OF INTERSECTION
10153	9368.6	13583.8	23.1	TRAIL POINT OF INTERSECTION
10151	9375.7	13740.0	23.24	TRAIL POINT OF INTERSECTION
266	9367.1	13819.8	21.3	TRAIL POINT OF INTERSECTION
265	9337.0	13950.7	22.5	TRAIL POINT OF INTERSECTION
264	9208.2	13136.6	23.8	TRAIL POINT OF INTERSECTION
263	9113.8	14216.9	23.5	TRAIL POINT OF INTERSECTION
262	8987.5	14433.6	27.5	TRAIL POINT OF INTERSECTION
261	8886.2	14532.8	24.6	TRAIL POINT OF INTERSECTION
260	8826.5	14628.8	22.7	TRAIL POINT OF INTERSECTION

MAIN TRAIL				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
10149	8735.6	14605.6	21.3	TRAIL POINT OF INTERSECTION
10150	8717.6	14595.4	23.1	TRAIL POINT OF INTERSECTION
258	8647.9	14628.8	21.9	TRAIL POINT OF INTERSECTION
10158	8653.8	14588.3	32.1	TRAIL POINT OF INTERSECTION
10157	8646.8	14574.9	34.6	TRAIL POINT OF INTERSECTION
256	8750.7	14491.6	46.3	TRAIL POINT OF INTERSECTION
255	8806.2	14311.7	58.4	TRAIL POINT OF INTERSECTION

TRAIL - "A"				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
10035	9852.7	11300.5	52.4	INTERSECTION TRAIL "A" - ROAD
10032	9866.4	11329.0	49.7	TRAIL POINT OF INTERSECTION
230	9914.7	11302.5	44.4	TRAIL POINT OF INTERSECTION
229	9974.1	11231.3	39.2	TRAIL POINT - 8'x8' TRAIL TURNOUT
10031	9988.2	11239.9	37.8	TRAIL POINT OF INTERSECTION
10029	10000.7	11273.7	35.3	TRAIL POINT OF INTERSECTION
10027	10008.5	11332.4	31.7	TRAIL POINT OF INTERSECTION
10026	10031.6	11377.4	28.3	TRAIL POINT OF INTERSECTION
10025	10052.5	11379.9	27.2	TRAIL POINT OF INTERSECTION
10023	10111.0	11360.7	22.8	TRAIL POINT OF INTERSECTION
10016	10123.0	11370.2	21.0	INTERSECTION TRAIL "A" # MAIN TRAIL

TRAIL - "B"				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
10038	9373.5	12887.7	56.0	INTERSECTION TRAIL "B" - ROAD
10043	9391.1	12843.5	58.4	TRAIL POINT OF INTERSECTION
10048	9466.7	12794.9	48.5	TRAIL POINT - 8'x8' TRAIL TURNOUT
238	9480.1	12840.5	45.2	TRAIL POINT OF INTERSECTION
10052	9487.6	12915.0	39.1	TRAIL POINT OF INTERSECTION
10054	9507.8	12883.7	39.2	TRAIL POINT OF INTERSECTION
10055	9522.5	12884.5	37.9	TRAIL POINT OF INTERSECTION
10058	9513.4	12927.3	36.1	TRAIL POINT OF INTERSECTION
10059	9514.9	12959.0	34.9	TRAIL POINT OF INTERSECTION
10060	9521.3	12968.0	32.8	TRAIL POINT OF INTERSECTION
10062	9541.5	129937.2	31.9	TRAIL POINT - 8'x8' TRAIL TURNOUT
10064	9531.8	12986.5	30.6	TRAIL POINT OF INTERSECTION
10065	9549.4	12978.2	29.0	TRAIL POINT OF INTERSECTION
10066	9562.4	12955.5	30.2	TRAIL POINT OF INTERSECTION
10067	9575.8	12954.9	29.9	TRAIL POINT OF INTERSECTION
10068	9586.9	12977.4	23.5	TRAIL POINT OF INTERSECTION
10071	9589.3	12994.8	22.2	TRAIL POINT OF INTERSECTION
10070	9578.9	13035.7	23.8	INTERSECTION TRAIL "B" # MAIN TRAIL

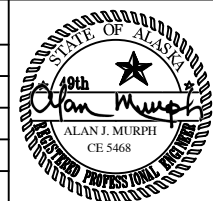
EXISTING MONUMENTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
304	9865.2	11341.3		L6/BK1 (fnd)
305	9786.4	11327.4		L4/BK2 (fnd)
318	9882.0	12144.4	22.3	WC C3 L12/BK1 (fnd)
317	9620.4	12878.9	23.1	L18/19 BK1 (fnd)
322	9427.4	13489.4	22.9	C1L24 BK1 (fnd)
320	9206.3	13412.4		WC C3L23 C2L24 BK1 (fnd)

**DRAWING:**  
**SURVEY**  
**COORDINATES**  
**PROJECT**

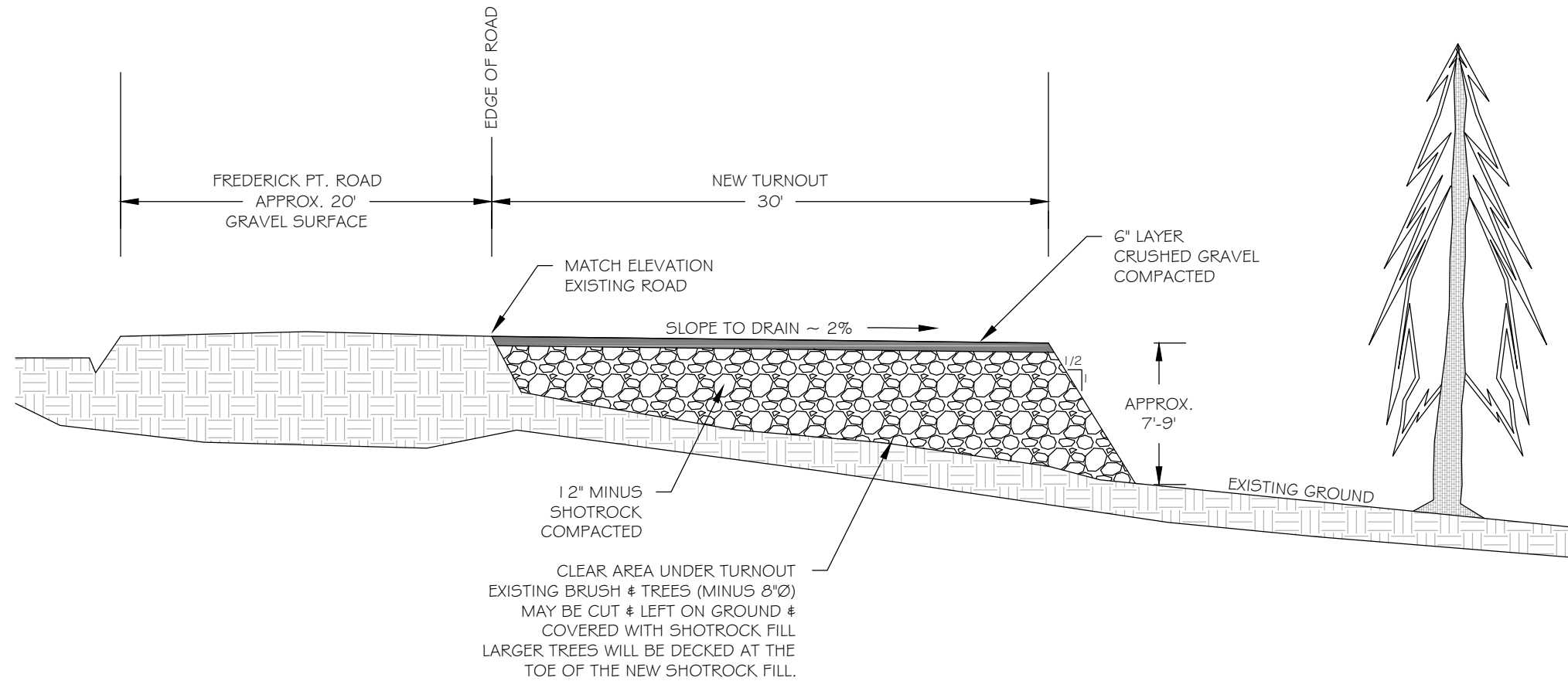
**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
Location  
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN**  
**ASSOCIATION**  
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SHEET NUMBER 15 TOTAL SHEETS 17



## FREDERICK PT ROAD GRAVEL TURNOUT

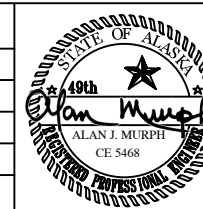
SCALE: 1" = 8'

**DRAWING:**  
FREDERICK PT  
ROAD  
TURNOUT

**PROJECT:**  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
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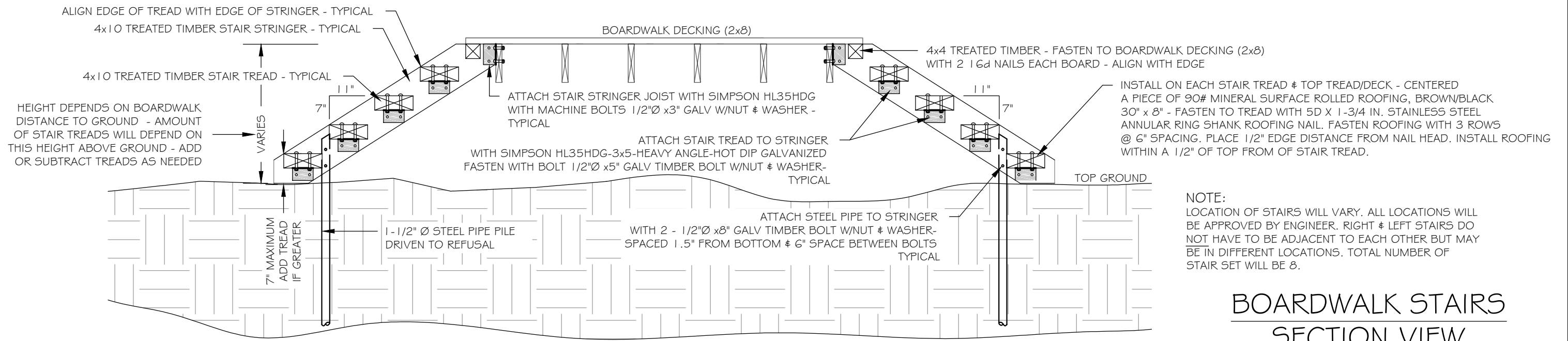


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<b>SHEET NUMBER</b> 16	<b>TOTAL SHEETS</b> 17
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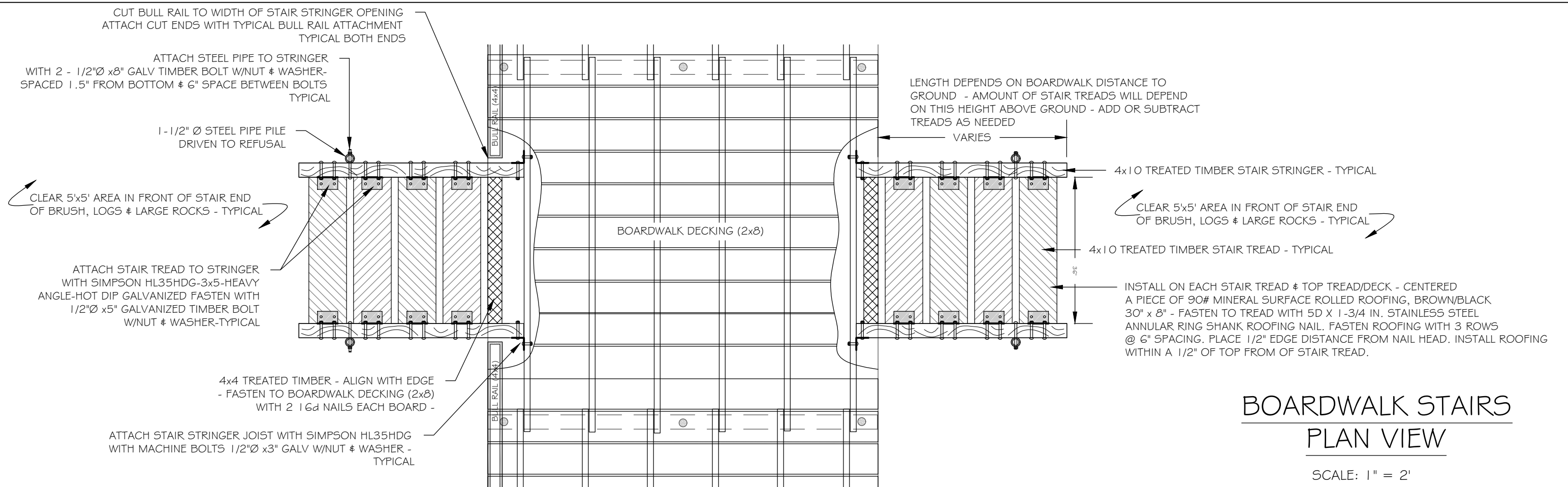




NOTE:  
LOCATION OF STAIRS WILL VARY. ALL LOCATIONS WILL BE APPROVED BY ENGINEER. RIGHT & LEFT STAIRS DO NOT HAVE TO BE ADJACENT TO EACH OTHER BUT MAY BE IN DIFFERENT LOCATIONS. TOTAL NUMBER OF STAIR SET WILL BE 8.

## BOARDWALK STAIRS SECTION VIEW

SCALE: 1" = 2'



## BOARDWALK STAIRS PLAN VIEW

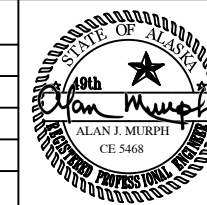
SCALE: 1" = 2'

DRAWING:  
**BOARDWALK  
STAIRS**

PROJECT:  
**City Creek Trail Reconstruction ~ Phase II**  
Sand Beach Recreation Area to City Creek  
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SHEET NUMBER 17	TOTAL SHEETS 17
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