PROJECT SUMMARY: TRAIL CONSTRUCTION 1,345’

PROJECT SCOPE: TO CONSTRUCT APPROXIMATELY 1,345’ OF NEW PEDESTRIAN TRAIL. THE NEW BOARDWALK TRAIL WILL CONNECT TO THE EXISTING MUNOY POINT BOARDWALK. THE NEW TRAIL WILL BE A 5” WIDE RAISED WOODEN BOARDWALK ON STEEL PIPE PILE.

INDEX OF SHEETS
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2. PROJECT PLAN VIEW
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4. TRAIL LOCATION DETAILS
5. WOODEN WALKWAY DETAILS AND GENERAL NOTES
6. WOODEN WALKWAY DETAILS
7. WOODEN WALKWAY SUPPORT DETAILS

CONSTRUCTION PROJECT
MOUNTAIN VIEW MANOR TRAIL
~ 2019 ~

NEW TRAIL QUANTITIES
RAISED WOODEN BOARD WALK ~ 1,345 LINEAR FEET

APPROVED 7/1/2019

DESIGNED BY:
HARAI & ASSOCIATES, INC
P.O. BOX 625
PETERSBURG, ALASKA 99833
JULY 2016
CONSTRUCT WALKWAY AS CLOSE TO GROUND AS POSSIBLE, IDEALLY THERE WOULD BE A 1" GAP BETWEEN JOIST AND GROUND WHILE MAINTAINING SMOOTH GRADE LESS THAN 5%. SEE TRAIL ALIGNMENT NOTES ON PAGE 7.

WOODEN WALKWAY
PROFILE VIEW
SCALE 1" = 2'

FULL BEARING ON 4x10 BEAM OVERLAP JOIST MINIMUM 4" TYPICAL
4x10 TREATED TIMBER BEAM
BEAM BRACKET
1-1/2" Ø STEEL PIPE PILE
9 MAXIMUM SPACINGS
1/2" x 6" CALV. TIMBER BOLT W/ NUT & WASHER CENTER ON 2x8 DECKING & 4x4 TREATED TIMBER
3.5" x 3.5" x 1.5" SQUARE BLACK PLASTIC SPACER

FASTEN OVERLAPPED JOISTS WITH MINIMUM OF 6 - 150 NAILS
4x10 TREATED TIMBER JOIST
4x4 TREATED TIMBER BULL RAIL - BOTH SIDES
BULL RAIL ATTACHMENT SPLICE SPACE BOLTS BACK 4" FROM ENDS KEEP BULL RAIL RUNS AT 12 WHERE POSSIBLE

PILE DRIVING REFUSAL WILL PROBABLY DRIVE THE PIPE ABOUT 2" INTO THE HARDSPAN. APPROXIMATE HARDSPAN DEPTH IN MUSKEG IS SHOWN IN TABLE ON PAGE 3, "MUSKEG PROFILE".

TOP OF EXISTING GROUND
HARDSPAN UNDER MUSKEG, GENERALLY A DENSE MARINE TILL. PIPE PLACING WILL HIT AND DRIVE INTO THIS SOIL BEFORE PILE DRIVING IS COMPLETE.

FULL BEARING ON 4x10 BEAM OVERLAP JOIST MINIMUM 4" TYPICAL
4x10 TREATED TIMBER JOIST
STEEL PIPE PILE & BEAM SADDLE - TYPICAL
2x10 TREATED TIMBER JOIST
INSTALL TWIST TIE STRAP FROM JOIST TO 4x10 BEAM @ EACH JOIST SET - TYPICAL
SIMPSON STRONGTIE #LTS12

WOODEN WALKWAY PLAN VIEW
SCALE 1" = 2'

2x10 TREATED TIMBER
DECKING WITH 1/2" SPACE BETWEEN, CONTINUOUS BOARD NO SPACES - TYPICAL

4x4 TREATED TIMBER BULL RAIL
EACH SIDE, NOT SHOWN FOR CLARITY

4x4 TREATED TIMBER BULL RAIL - BOTH SIDES
BULL RAIL ATTACHMENT SPLICE SPACE BOLTS BACK 4" FROM ENDS KEEP BULL RAIL RUNS AT 12 WHERE POSSIBLE

DRAWING:
WOODEN WALKWAY
PLAN & PROFILE

PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

PETERSBURG INDIAN
ASSOCIATION
P.O. BOX 1418, PETERSBURG, AK. 99833
(907) 772-5636

DATE: MAY 2018

REVISIONS

SHEET NUMBER 3
TOTAL SHEETS 7
NEW TRAIL HORIZONTAL ALIGNMENT

NEW TRAIL VERTICAL ALIGNMENT

TRAIL FINAL LOCATION NOTES:
NEW TRAIL MAY BE "NELD" LOCATED WITHIN 20' EITHER SIDE OF THE SURVEY LINE THAT IS STAKED IN THE FIELD. THE TRAIL LOCATION WILL VARY DUE TO ROUTING AROUND MUSKEG HOLES, TREES, AESTHETICS, AND MAINTAINING A GRADE LESS THAN 5%. TRAIL AND BRUSH CUTTING WILL BE KEPT AT A MINIMUM.

TRAIL HORIZONTAL ALIGNMENT NOTES:
NEW TRAIL, HORIZONTAL ALIGNMENT RUNS MUST BE GREATER THAN 2/4 IN. 2500 FT. THIS WILL PROVIDE FOR EASIER PILOTING WITHOUT SHORT CHANGES IN DIRECTION.

TRAIL VERTICAL ALIGNMENT NOTES:
NEW TRAIL VERTICAL ALIGNMENT RUNS OF THE SAME GRADE WILL BE AS LONG AS POSSIBLE BUT GREATER THAN 1/4"/8'. ANY GRADE CHANGES GREATER THAN 1 WILL HAVE A TRANSITION RUN OF 0% BEFORE THE NEXT GRADE CHANGE. THIS WILL PROVIDE FOR SMOOTHER PEDESTRIAN WALKING WITHOUT SHORTプレゼンテーション CHANGES. WOODEN BOARDWALK WILL BE CONSTRUCTED AS CLOSE TO GROUND AS POSSIBLE BUT NO GREATER THAN DECK 30" ABOVE EXISTING GROUND. IDEALLY THE BOTTOM OF THE JOIST WILL BE 1/4 ABOVE THE GRADE. RECOMMEND USE OF A STRING LINE FOR VERTICAL ALIGNMENT, AYOT.

TRAIL CONSTRUCTION NOTES:
SURROUNDING MUSKEG WILL BE PROTECTED DURING CONSTRUCTION OF THE TRAIL, 4" X 8" PLYWOOD PANELS 3/4" THICK WILL BE USED IN AREAS OF CONSTRUCTION FOR MACHINERY, ATVS, AND WORKERS AS STAGING AREA TO KEEP OFF THE MUSKEG AND PROTECT THE AREA. PLYWOOD PANELS WILL BE REMOVED WITHIN 4 WEEK TO KEEP PLANTS UNDERNEATH FROM DRYING.

LOCATION DETAILS

Mountain View Manor Trail
~PETERSBURG, ALASKA~
GENERAL NOTES WOODEN BOARDWALK

HARDWARE:
- ALL HARDWARE GALVANIZED AS PER ASTM 153
- NAILS SHALL BE 16D COMMON - DECKING
- NAILS SHALL BE 10D COMMON - JOIST TIE DOWN STRAP (4x10 BEAM)
- NAILS SHALL BE 15D x 1.5” - JOIST TIE DOWN STRAP (2x10 JOIST)
- BOLTS ASTM A570
- NUTS ASTM A563 OR ASTM A194 GRADE 2H
- WASHERS (FLAT OR BEVELED) ASTM F436
- ALL THREAD ROD SHALL BE GALVANIZED STEEL (ASTM A325)

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, A650, GALVANIZED

Wood Timbers:
- MATERIALS: SAWN LUMBER SHALL BE PRESERVATIVE-TREATED, HEM-FIR NO. 2 OR BETTER. ALL TIMBERS SHALL BE 945 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 Downs:
- INSTALL TWIST TIE STRAP FROM JOIST TO 4x10 BEAM AT EACH JOIST SET. SIMPSON STRONG TIE # LTS12. BRACKETS WILL BE HOT DIP GALVANIZED.

Beam Saddles:
- CHANCE CIVIL CONSTRUCTION, WALKWAY SUPPORT BRACKET, # ICT10-06B2, 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 DROP 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.

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.
WOODEN WALKWAY BEAM DETAIL

SCALE 1' = 1'

INSTALL TIE STRAP FROM JOIST TO 4x12 BEAM @ EACH JOIST SET - TYPICAL SIMPSON STRONG TIE #TS12

1/2" x 8" DALK. "TIMBER BOLT W/NL T WASHER CENTER ON 2x12 DECKING & 4x10 TREATED TIMBER

5.5" x 3.5" x 1.5" HEDGE BLOCK PLASTIC SPIKE

2x12 TREATED TIMBER DECKING
12" GAP = FASTEN WITH 2-16D NAILS @ EACH JOIST - TYPICAL

2x10 TREATED TIMBER JOIST

2x10 TREATED TIMBER JOIST
LAPPED FROM OTHER DIRECTION FASTEN OVERLAPPED JOISTS WITH MINIMUM OF 3 - 16D NAILS

WOODEN JEDK NO" SHOWN FOR CLARITY

1" OFFSET TYPICAL

2x10 TREATED TIMBER JOISTS

2x12 TREATED TIMBER BLOCKING

BEAM SADDLE

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WOODEN WALKWAY DETAILS

PROJECT:
Mountain View Manor Trail
PETERSBURG, ALASKA

DRAWING:

REVISIONS

DESIGNER:
HERRMANN & ASSOCIATES, INC.
P.O. BOX 420, PETERSBURG, AK 99833

DATE: MAY 2019

SHEET: 1
TOTAL SHEETS: 7

REV DATE DESCRIPTION
WOODEN WALKWAY TURNOUT

SCALE: 1" = 3'

INSTALL WOODEN WALKWAY TURNOUT SECTION
ON STANDARD WOODEN WALKWAY

CONSTRUCTION NOTE:
The location of the turnout will be specified by the
engineer.
In general, the additional width is constructed the same as
the standard wooden walkway design. The additional pipe
piles are spaced the same as the standard walkway design.
The difference is the 4x10 beam on the pile saddles is a
continuous 12' beam and the cut-off joist on the adjoining
walkway is a 4x10 beam instead of the standard design 2x10.
Specifications and fastening requirements for the turnout
are the same as the standard wooden walkway.

DRWING:
WOODEN
WALKWAY
DETAILS

PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

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REVISIONS

DRAWN BY
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DATE:
MAY 2019

SHEET NUMBER
7
TOTAL SHEETS
7