



US Army Corps
of Engineers
Alaska District

Regulatory Division (1145)
CEPOA-RD
Post Office Box 22270
Juneau, Alaska 99802-2270

Public Notice of Application for Permit

PUBLIC NOTICE DATE:	April 30, 2019
EXPIRATION DATE:	May 15, 2019
REFERENCE NUMBER:	POA-2018-00476
WATERWAY:	Mendenhall River

Interested parties are hereby notified that a Department of the Army permit application has been received for work in waters of the United States (U.S) as described below and shown on the enclosed project drawings.

All comments regarding this Public Notice (PN) should be sent to the address noted above. If you desire to submit your comments by email, you should send it to the Project Manager's email as listed below or to regpagemaster@usace.army.mil. All comments should include the PN reference number listed above.

All comments should reach this office no later than the expiration date of this PN to become part of the record and be considered in the decision. Please contact Matthew Brody at (907) 790-4493, by email at Matthew.T.Brody@usace.army.mil, or by mail at the address shown above if further information is desired concerning this notice.

APPLICANT: City and Borough of Juneau, Attention: Keri Williamson, 155 South Seward Street Juneau, Alaska 99801, (907) 586-5200, Keri.Williamson@juneau.org

LOCATION: The project site is located within Section 25, T. 40 S., R. 65 E., Copper River Meridian; USGS Quad Map Juneau B-2; Starting at Latitude 58.371057° N., Longitude -134.602786° W.; Ending at Latitude 58.375857° N., Longitude -134.601454° W.; Located at the Mendenhall Bridge Glacier Highway pullout, in Juneau, Alaska.

PURPOSE: The applicant's stated purpose is to re-route a portion of the Kaxdigoowu Heen Dei trail away from the Mendenhall River because of erosion.

PROPOSED WORK: The applicant requests authorization for the following work that would occur within waters of the U.S.:

1. The placement of 950-cubic yards of shot rock and useable excavation, 105-cubic yards of D-1 gravel, and 90-cubic yards of asphalt into 0.78-acres of wetlands along 2,005-linear feet of new trail,
2. The installation of a 28-foot long 18-inch diameter corrugated polyethylene pipe culvert,
3. The placement of a 38-foot long 24-inch diameter corrugated polyethylene pipe culvert,
4. The excavation and removal of approximately 975-cubic yards of existing trail along 1,970-linear feet from 0.36-acres of previously filled wetlands,
5. The re-vegetation of 0.36-acres previously filled with native vegetation to allow the area to return to its original conditions.
6. The temporary placement of 140-cubic yards of fill material into wetlands on top of geotextile fabric to facilitate the removal of the existing trail and the construction of the new trail.

All work would be performed in accordance with the enclosed plan (sheets 1-16), dated March 5, 2019.

ADDITIONAL INFORMATION: The proposed new trail would be constructed with geotextile laid on the existing ground, with excavation and filling in humps as needed to create an even surface for geotextile placement. A 16-inch deep embankment built out of shot rock and useable excavation from the removal of the existing trail would be placed on top of the geotextile fabric with an 8-foot wide asphalt surface would be placed on top of the shot rock embankment. The side slopes of the new trail would be covered with topsoil and seeded with native seed mix to promote re-vegetation. A 24-inch diameter and an 18-inch diameter corrugated polyethylene pipe culvert would provide drainage under the trail in two defined low spots where standing water would occur. The overall footprint of the new trail would result in the placement of fill material into 0.78-acres of palustrine emergent wetlands. The surface of the trail would be 10-feet wide containing an 8-foot wide ADA accessible asphalt finish.

The existing trail along the Mendenhall River, approximately 1,970-linear feet, would be removed down to original ground, and re-vegetated. Because the original trail was built by placing geotextile fabric directly on the surface, it is expected that re-vegetation would occur naturally, but the ground would be hydroseeded using a native seed mix. The removal of the existing trail would restore 0.36 acres of wetlands.

Temporary fills, up to 80-cubic yards in volume would be used to facilitate the removal of the existing trail along the riverbank, as some sections of the trail have fallen into the river and

construction equipment would need to be able to remove material safely. Temporary fills for removal of the existing trail would be located as needed for safe removal of material, built on a layer of geotextile fabric, and removed in their entirety after work is completed.

A temporary fill of up to 60-cubic yards would also be located as needed on the new trail to allow for an additional turn out for equipment. This would facilitate paving operations when trucks would need to turn around.

APPLICANT PROPOSED MITIGATION: The applicant proposes the following mitigation measures to avoid, minimize, and compensate for impacts to waters of the U.S. from activities involving discharges of dredged or fill material.

a. Avoidance: Avoidance of impacts to waters of the U.S. was not possible as the proposed trail re-route is designed to tie into existing trail from an existing pullout and the entire area between the pullout and tie-in is comprised entirely of wetlands.

b. Minimization: The applicant designed the proposed trail to minimized impacts to wetlands by aligning the initial 100-feet to run along the existing parking lot embankment. This reduced the wetland footprint and fill in the steepest area. The proposed trail would be paved, side slopes would be seeded to promote vegetation growth, and culverts would be installed along the length of the trail which would prevent erosion and deposition of sediments into surrounding wetlands. The trail route was designed to tie into the existing "Buckskin Road" at a different location than the existing trail resulting in a reduction of 180-linear feet of the new trail within wetlands. The trail width is the minimum necessary to accommodate the volume of use and maintain ADA accessibility.

c. Compensatory Mitigation: As part of the project, the applicant is proposing to remove the existing trail by removing 975-cubic yards of fill material from 0.36-acres of previously filled wetlands and the re-vegetation of the area to allow it to return to its pre-disturbance conditions.

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification, as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRs) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. There are no cultural resources in the permit area or within the vicinity of the permit area. The permit area has been determined to be the footprint of the proposed work within waters of the U.S. consisting of 1.14-acres. Consultation of the AHRs constitutes the extent of cultural resource investigations by the Corps of Engineers (Corps) at this time, and we are otherwise unaware of the presence of such resources. The Corps has made a No Historic Properties

Affected (No Effect) determination for the proposed project because no known historic or prehistoric sites are known to exist within the footprint and the area has been subject to historic erosion and disturbance from the Mendenhall River. This application is being coordinated with the State Historic Preservation Office (SHPO). Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work. The Corps is requesting the SHPO's concurrence with this determination.

ENDANGERED SPECIES: No threatened or endangered species are known to use the project area.

We have determined the described activity would have no effect on any listed threatened or endangered species and would have no effect on any designated or proposed critical habitat, under the Endangered Species Act of 1973 (87 Stat. 844). Therefore, no consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service (NMFS) is required. However, any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH).

No EFH is known to exist within the project area, therefore, we have determined the described activity would not adversely affect EFH in the project area.

TRIBAL CONSULTATION: The Alaska District fully supports tribal self-governance and government-to-government relations between Federally recognized Tribes and the Federal government. Tribes with protected rights or resources that could be significantly affected by a proposed Federal action (e.g., a permit decision) have the right to consult with the Alaska District on a government-to-government basis. Views of each Tribe regarding protected rights and resources will be accorded due consideration in this process. This PN serves as notification to the Tribes within the area potentially affected by the proposed work and invites their participation in the Federal decision-making process regarding the protected Tribal right or resource. Consultation may be initiated by the affected Tribe upon written request to the District Commander during the public comment period.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity and its intended use on the public interest. Evaluation of the probable impacts, which the proposed activity may

have on the public interest, requires a careful weighing of all the factors that become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The outcome of the general balancing process would determine whether to authorize a proposal, and if so, the conditions under which it will be allowed to occur. The decision should reflect the national concern for both protection and utilization of important resources. All factors, which may be relevant to the proposal, must be considered including the cumulative effects thereof. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b)(1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Commander determines that it would be contrary to the public interest.

The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

AUTHORITY: This permit will be issued or denied under the following authority:

(X) Discharge dredged or fill material into waters of the United States – Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).

Project drawings and a Notice of Application for State Water Quality Certification are enclosed with this Public Notice.

District Commander
U.S. Army, Corps of Engineers

Enclosures

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER

Wastewater Discharge Authorization Program (WDAP) / 401 Certification

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

WDAP/401 CERTIFICATION

555 CORDOVA STREET

ANCHORAGE, ALASKA 99501-2617

PHONE: (907) 269-6285 | EMAIL: dec-401cert@alaska.gov

**NOTICE OF APPLICATION
FOR
STATE WATER QUALITY CERTIFICATION**

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. By agreement between the U.S. Army Corps of Engineers and the Department of Environmental Conservation, application for a Department of the Army permit to discharge dredged or fill material into navigable waters under Section 404 of the Clean Water Act also may serve as application for State Water Quality Certification.

Notice is hereby given that the application for a Department of the Army Permit described in the Corps of Engineers' Public Notice (PN) Reference Number **POA-2018-476, Mendenhall River**, serves as application for State Water Quality Certification from the Department of Environmental Conservation.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the Clean Water Act, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

Any person desiring to comment on the project with respect to Water Quality Certification, may submit written comments to the address above or via email to dec-401cert@alaska.gov by the expiration date of the Corps of Engineer's Public Notice. All comments should include the PN reference number listed above. Mailed comments must be postmarked on or before the expiration date of the public notice.

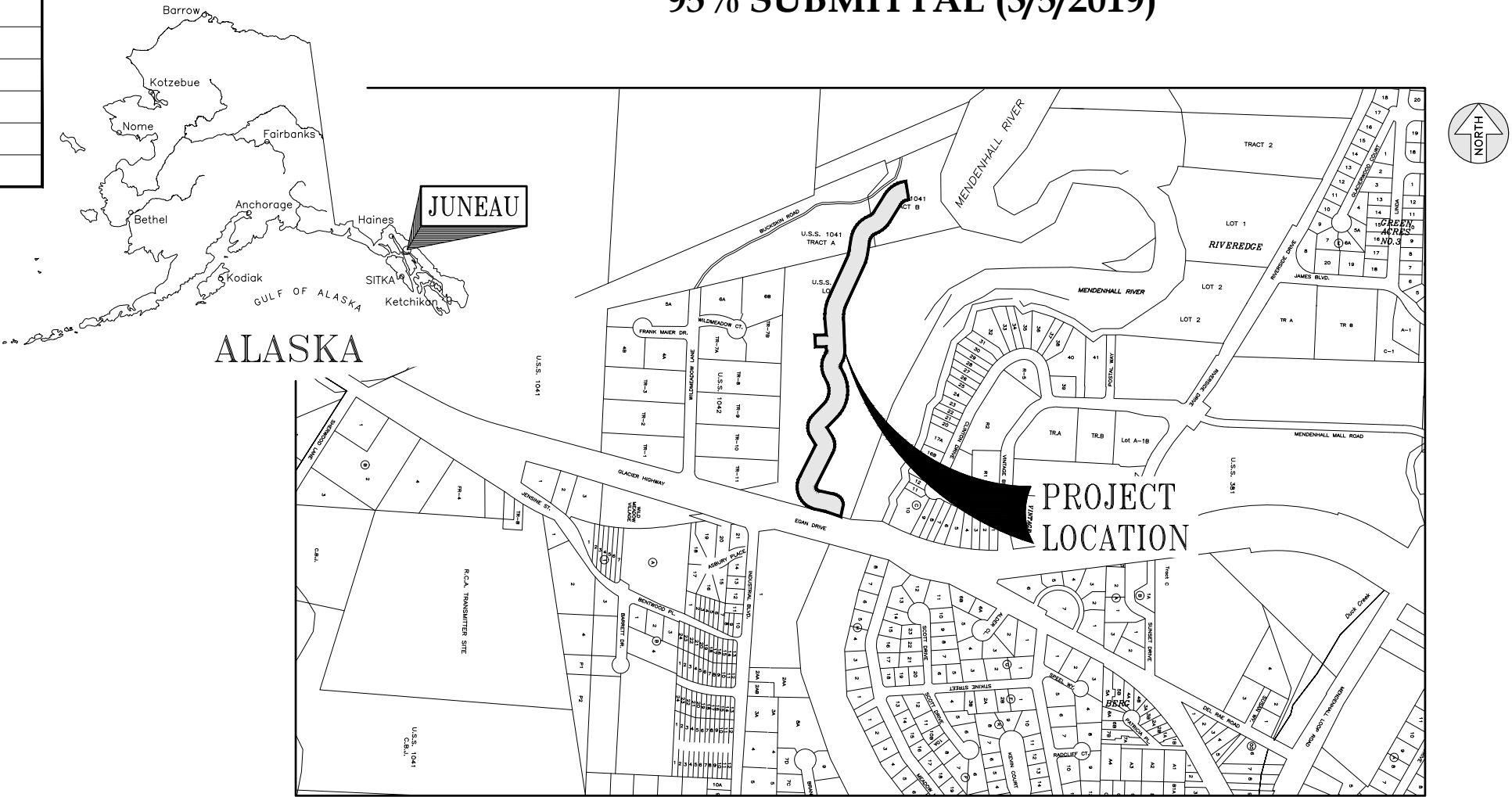
Disability Reasonable Accommodation Notice

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act of 1990. If you are a person with a disability who may need special accommodation in order to participate in this public process, please contact Theresa Zimmerman at 907-465-6171 or TDD Relay Service 1-800-770-8973/TTY or dial 711 within 5 days of the expiration date of this public notice to ensure that any necessary accommodations can be provided.

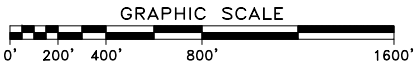
SHEET INDEX	
SHEET No.	DESCRIPTION
C001	COVER SHEET
C002	GENERAL NOTES, ABBREVIATIONS AND SYMBOLS
C100	EXISTING SITE CONDITIONS SURVEY
C101	EXISTING SITE CONDITIONS SURVEY
C200	TRAIL PLAN VIEW STA 10+00 to STA 16+67
C201	TRAIL PLAN VIEW STA 16+67 to STA 23+00
C202	TRAIL PLAN VIEW STA 23+00 to STA 29+58
C203	TRAIL PLAN VIEW STA 29+58 to STA 30+65
C300	TRAIL PROFILE VIEW STA 10+00 to STA 15+80
C301	TRAIL PROFILE VIEW STA 15+80 to STA 21+80
C302	TRAIL PROFILE VIEW STA 21+80 to STA 27+80
C303	TRAIL PROFILE VIEW STA 27+80 to STA 30+60
C400	TYPICAL SECTION AND CONSTRUCTION DETAILS
C401	EROSION AND SEDIMENT CONTROL DETAILS
C402	TRAFFIC CONTROL AND PEDESTRIAN PLANS
C500	EXISTING TRAIL RECLAMATION PLAN

KAXDIGOOWU HEEN DEI TRAIL RELOCATION CBJ CONTRACT No. BE19-177

CITY & BOROUGH OF JUNEAU, ALASKA
95% SUBMITTAL (3/5/2019)



PROJECT LOCATION MAP



DESIGN	ECR
DRAWN	ECR
CHECK	JMP
APPROVED	JMP

No.	DATE	REVISION
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95%
SUBMITTAL

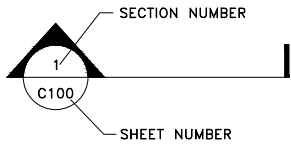
KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

COVER SHEET

DATE: March 5, 2019
PDC No. 19000JN
SHEET C001

GENERAL CONSTRUCTION NOTES

1. CBJ ENGINEERING STANDARD DETAILS BOOK FOR CIVIL ENGINEERING PROJECTS AND SUBDIVISION IMPROVEMENTS DATED AUGUST, 2011 AND CBJ ENGINEERING STANDARD SPECIFICATIONS DATED DECEMBER, 2003 ARE MADE A PART OF THIS CONTRACT, WITH CURRENT REVISIONS AS APPLICABLE.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
3. CONTRACTOR TO USE EXTREME CARE DURING CONSTRUCTION OF THE TRAIL TO TO MINIMIZE DAMAGE TO THE SURROUNDING WETLANDS AND VEGETATION.
4. CLEARING WORK SHALL CONSIST OF REMOVING VEGETATION AND DEBRIS ABOVE THE ORIGINAL GROUND SURFACE. TREES DESIGNATED TO BE REMOVED SHALL BE REMOVED COMPLETELY INCLUDING ROOT SYSTEMS. ANY OVERHANGING TREE LIMBS ABOVE THE PATH REMAINING AFTER CLEARING SHALL BE TRIMMED TO A HEIGHT OF 10' ABOVE THE TRAIL FINISH SURFACE.
5. DURING CONSTRUCTION THE KAXDIGOOWU HEEN DEI TRAIL WILL REMAIN CLOSED TO ALL PUBLIC PEDESTRIAN TRAFFIC. TRAIL CLOSURE SHALL BE POSTED BY THE CONTRACTOR WITH TYPE III BARRICADES AT THE ENTRANCE AND EXIT OF THE CONSTRUCTION AREA AND THE EXISTING TRAIL WITH R11-2 SIGNS READING "ROAD CLOSED", SEE SHEET C402 FOR ADDITIONAL INFORMATION.
6. TRAIL GRADES AND ALIGNMENTS SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS AS APPROVED BY THE ENGINEER.
7. CULVERT LENGTHS, LOCATIONS AND SLOPES ARE APPROXIMATE AND ARE SUBJECT TO FIELD REVISIONS AS APPROVED BY THE ENGINEER.
8. CONNECTIONS TO EXISTING TRAILS AND PAVED PATHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.
9. PROPERTY LINE LOCATIONS USED IN THESE PLANS WERE DERIVED FROM RECORD PLATS AND DO NOT REPRESENT A SUBDIVISION BOUNDARY SURVEY.
10. THE CONTRACTOR SHALL DELIVER ALL ASPHALT PAVEMENT REMOVED FROM THIS PROJECT TO A STOCKPILE AREA IN THE CBJ LEMON CREEK PIT TO BE DESIGNATED BY THE ENGINEER. CONTACT THE CBJ PIT MANAGER, ALEC VENECHUK 586-0874, FOR THE EXACT LOCATION OF THE STOCKPILE AREA.
11. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.
12. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT OR OPERATE EQUIPMENT WITH ITS TRACKS OR WHEELS PLACED ON PRIVATE PROPERTY WITHOUT THE WRITTEN APPROVAL OF THE PROPERTY OWNER.
13. CONTRACTOR SHALL REFERENCE ALL EXISTING PROPERTY CORNER MONUMENTS (I.E. BRASS CAP MONUMENTS, REBARS OR CHISELED X'S) PRIOR TO CONSTRUCTION THAT WILL BE DISTURBED DURING HIS WORK, AND REMONUMENT AFTER CONSTRUCTION OPERATIONS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR. ALL EXISTING PROPERTY CORNERS ARE NOT NECESSARILY SHOWN ON THE PLANS.
14. THE PLAN DRAWINGS DO NOT NECESSARILY SHOW ALL TREES AND VEGETATION THAT MAY BE ENCOUNTERED DURING TRAIL CONSTRUCTION ACTIVITIES. NO TREES OR VEGETATION ARE TO BE REMOVED OR DAMAGED, UNLESS SHOWN ON THE DRAWINGS OR DIRECTED BY THE ENGINEER.
15. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ENGINEER APPROVED EROSION CONTROL DEVICES DURING TRAIL CONSTRUCTION PER SECTION 01570 REQUIREMENTS.
16. THE CONTRACTOR'S HOURS OF OPERATION SHALL BE IN COMPLIANCE WITH THE CBJ NOISE ORDINANCE.
17. NO SUBSURFACE INVESTIGATION OF THE EXISTING SOIL CONDITIONS WAS PERFORMED FOR THIS PROJECT.
18. CBJ ENGINEERING DEPARTMENT HAS APPLIED FOR A U.S. ARMY CORPS OF ENGINEERS PERMIT FOR CONSTRUCTION OF THIS TRAIL.



REFERENCE BUBBLE EXPLANATION

N.T.S.

ABBREVIATIONS

APPROX	APPROXIMATE
BC	BACK OF CURB
BLVD	BOULEVARD
BOP	BEGINNING OF PROJECT
CB	CATCH BASIN
CBJ	CITY & BOROUGH OF JUNEAU
CHB	CHORD BEARING
CHL	CHORD LENGTH
C/L	CENTERLINE
CI	CAST IRON
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONT	CONTINUOUS
CPP	CORRUGATED POLYETHYLENE PIPE
CTE	CONNECT TO EXISTING
DIA	DIAMETER
E	EASTING
EG	EXISTING GRADE
EJW	EAST JORDAN IRON WORKS
EL	ELEVATION
EOP	END OF PROJECT
EP	EDGE OF PAVEMENT
EXIST	EXISTING
EXP	EXPANSION
FG	FINISH GRADE
FL	FLOW LINE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH PRESSURE
IE	INVERT ELEVATION
L	LENGTH
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
MTE	MATCH TO EXISTING
N	NORTHING
N/A	NOT APPLICABLE
NF	NEENAH FOUNDRY COMPANY
NFS	NON-FROST SUSCEPTIBLE
NTS	NOT TO SCALE
NVC	NO VERTICAL CURVE
OC	ON CENTER
OFCO	OLYMPIC FOUNDRY CO.
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PERF	PERFORATED
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POC	POINT ON CURVE
POL	POINT ON LINE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
ROW	RIGHT-OF-WAY
RP	RADIUS POINT
RT	RIGHT
STA	STATION
STD	STANDARD
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T	TANGENT
TBG	TOP BACK OF GUTTER
TBM	TEMPORARY BENCH MARK
TC	TOP OF CONCRETE
TOB	TOP OF BANK
TOP	TOP OF PIPE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VC	VERTICAL CURVE
VERT	VERTICAL
VPI	VERTICAL POINT OF INTERSECTION
W/	WITH

SYMBOLS

EXISTING	PROPOSED	
		PRIMARY MONUMENT (RECOVERED)
		MAG NAIL (ESTABLISHED)
		TEMPORARY BENCH MARK
		PROPERTY / BOUNDARY LINE
		PROJECT BASELINE
		TOP OF BANK
		TOE OF SLOPE
		DRAINAGE FLOW LINE
		TREE LINE
		1' WIDE SOCIAL PATH
		STORM DRAIN PIPE
		STORM DRAIN CATCH BASIN
		CURB & GUTTER, TYPE I
		ASPHALT SURFACE
		CONCRETE SURFACE
		POWER POLE
		SIGN
		ACCESSIBLE RAMP
		GROUND CONTOUR
		PARK BENCH

C:\Users\ethanrneling\AppData\Local\Temp\AsPublish_16808\AsPublish_19000JN_wk.dwg PLOT: March 05, 2019 at: 3:06pm

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No.	DATE	REVISION



KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

GENERAL NOTES,
ABBREVIATIONS AND SYMBOLS

DATE: March 5, 2019
PDC No. 19000JN
SHEET C002

C:\Users\ethan\OneDrive\Documents\Projects\Juneau\Kaxdigoowu Heen Dei Trail Relocation\19000JN_wk.dwg PLOT: March 05, 2019 at: 3:06pm

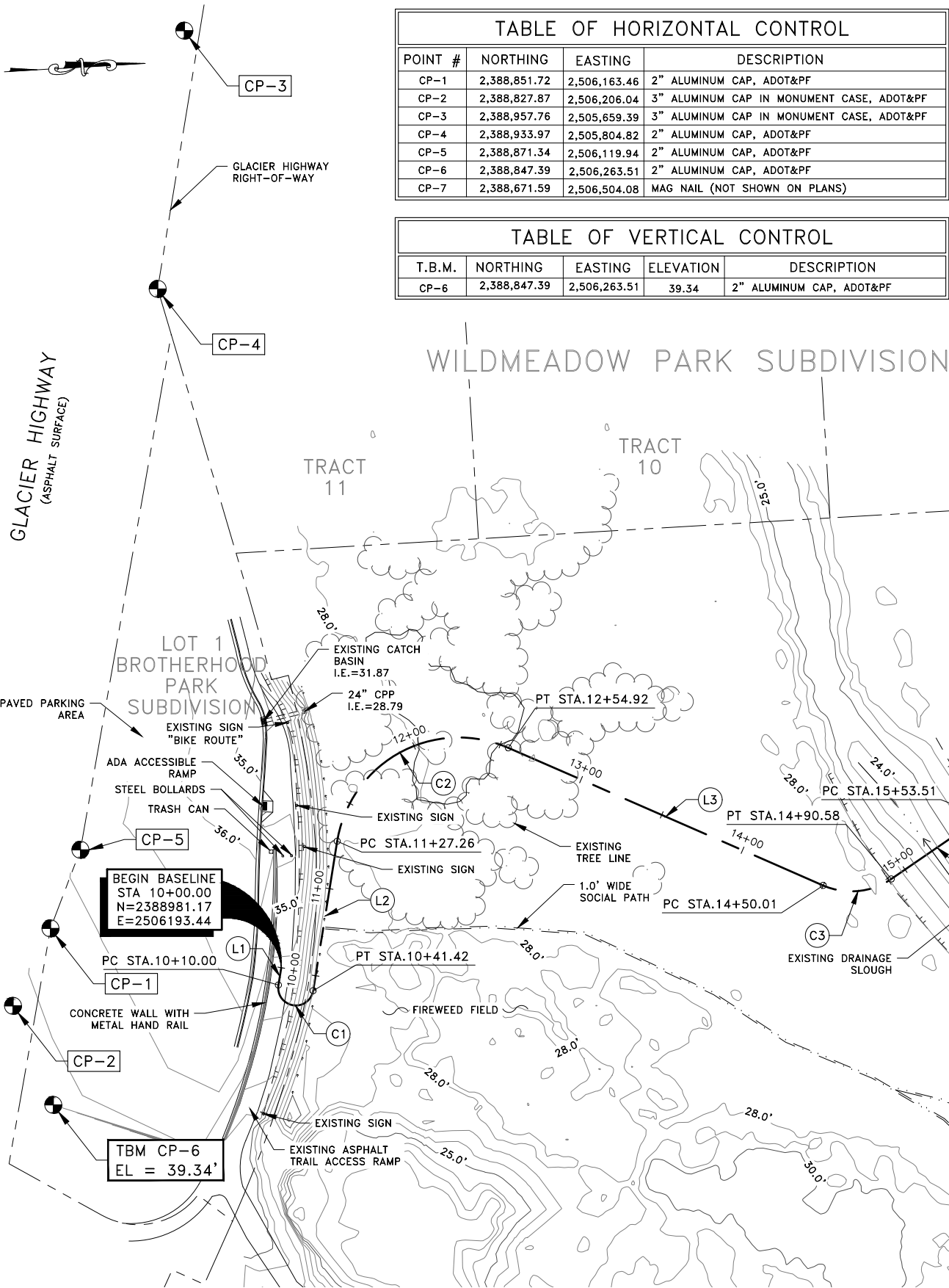


TABLE OF HORIZONTAL CONTROL				
POINT #	NORTHING	EASTING	DESCRIPTION	
CP-1	2,388,851.72	2,506,163.46	2" ALUMINUM CAP, ADOT&PF	
CP-2	2,388,827.87	2,506,206.04	3" ALUMINUM CAP IN MONUMENT CASE, ADOT&PF	
CP-3	2,388,957.76	2,505,659.39	3" ALUMINUM CAP IN MONUMENT CASE, ADOT&PF	
CP-4	2,388,933.97	2,505,804.82	2" ALUMINUM CAP, ADOT&PF	
CP-5	2,388,871.34	2,506,119.94	2" ALUMINUM CAP, ADOT&PF	
CP-6	2,388,847.39	2,506,263.51	2" ALUMINUM CAP, ADOT&PF	
CP-7	2,388,671.59	2,506,504.08	MAG NAIL (NOT SHOWN ON PLANS)	

TABLE OF VERTICAL CONTROL				
T.B.M.	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-6	2,388,847.39	2,506,263.51	39.34	2" ALUMINUM CAP, ADOT&PF

GENERAL SURVEY NOTES:

- AUTHORIZATION TO CONDUCT THIS TOPOGRAPHIC SURVEY WAS BY CBJ, JANUARY 2, 2019.
- THE BASIS OF HORIZONTAL CONTROL IS BASED ON GNSS STATIC OBSERVATIONS AND IS IN NORTH AMERICAN DATUM 1983 AK. STATE PLANE COORDINATE, ZONE 1 HORIZONTAL DATUM.
- THE BASIS OF VERTICAL CONTROL IS DIFFERENTIAL LEVELING AND IS ON MLLW VERTICAL DATUM.
- THIS SURVEY MEETS A 95% GNSS RTK CONFIDENCE LEVEL.
- DATE OF FIELD SURVEY WAS JANUARY 4, 2019.
- TOPOGRAPHIC MAPPING WAS DEVELOPED USING A COMBINATION OF THE FOLLOWING METHODS:
 - FIELD SURVEY USING TRIMBLE R8-2 GNSS RECEIVERS.
 - LIDAR DATA COLLECTED IN 2013 BY QUANTUM SPATIAL, CONTRACTED BY CBJ, AND PUBLISHED BY UNITED STATES GEODETIC SURVEY.
- THIS SURVEY DOES NOT CONSTITUTE A SUBDIVISION, AS PER A.S. 40.15.900 (5)(a).
- NO BOUNDARY RETRACEMENT WAS PERFORMED DURING THE COURSE OF THIS SURVEY. BOUNDARIES, SHOWN HEREON, ARE FOR REFERENCE ONLY.
- SOME VERTICAL ERRORS WERE IDENTIFIED WHILE UTILIZING THE CBJ LIDAR DATA. THESE ERRORS DID NOT EXCEED ONE FOOT OF VERTICAL ERROR, AND ARE LIKELY RESULTING FROM LOW LEVEL VEGETATION CAPTURED DURING LIDAR ACQUISITION, VERSUS ON-THE-GROUND SURVEYING PERFORMED DURING THE COURSE OF THIS SURVEY. PDC DOES NOT ASSUME LIABILITY FOR ANY ERRORS THAT MAY ARISE FROM THE USE OF THIS DATA.

CURVE TABLE						
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	180°00'00"	10.00'	31.42'	-	N12°31'12"E	20.00'
C2	104°29'14"	70.00'	127.66'	90.39'	N25°14'11"W	110.69'
C3	58°06'10"	40.00'	40.56'	22.22'	N02°02'39"W	38.85'
C4	75°27'02"	40.00'	52.67'	30.94'	N06°37'47"E	48.95'
C5	69°38'29"	150.00'	182.32'	104.33'	N09°32'03"E	171.30'
C6	58°34'12"	70.00'	71.56'	39.26'	N03°59'54"E	68.48'
C7	35°20'55"	70.00'	43.19'	22.31'	N15°36'33"E	42.50'
C8	26°58'05"	200.00'	94.14'	47.96'	N11°25'08"E	93.27'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S77°28'46"E	10.00'
L2	N77°28'48"W	85.85'
L3	N27°00'26"E	195.09'
L4	N31°05'44"W	62.93'
L5	N44°21'18"E	85.02'
L6	N25°17'12"W	42.18'
L7	N02°03'55"W	178.03'

DESIGN ECR
DRAWN ECR
CHECK JMP
APPROVED JMP

No.	DATE	REVISION



95%
SUBMITTAL

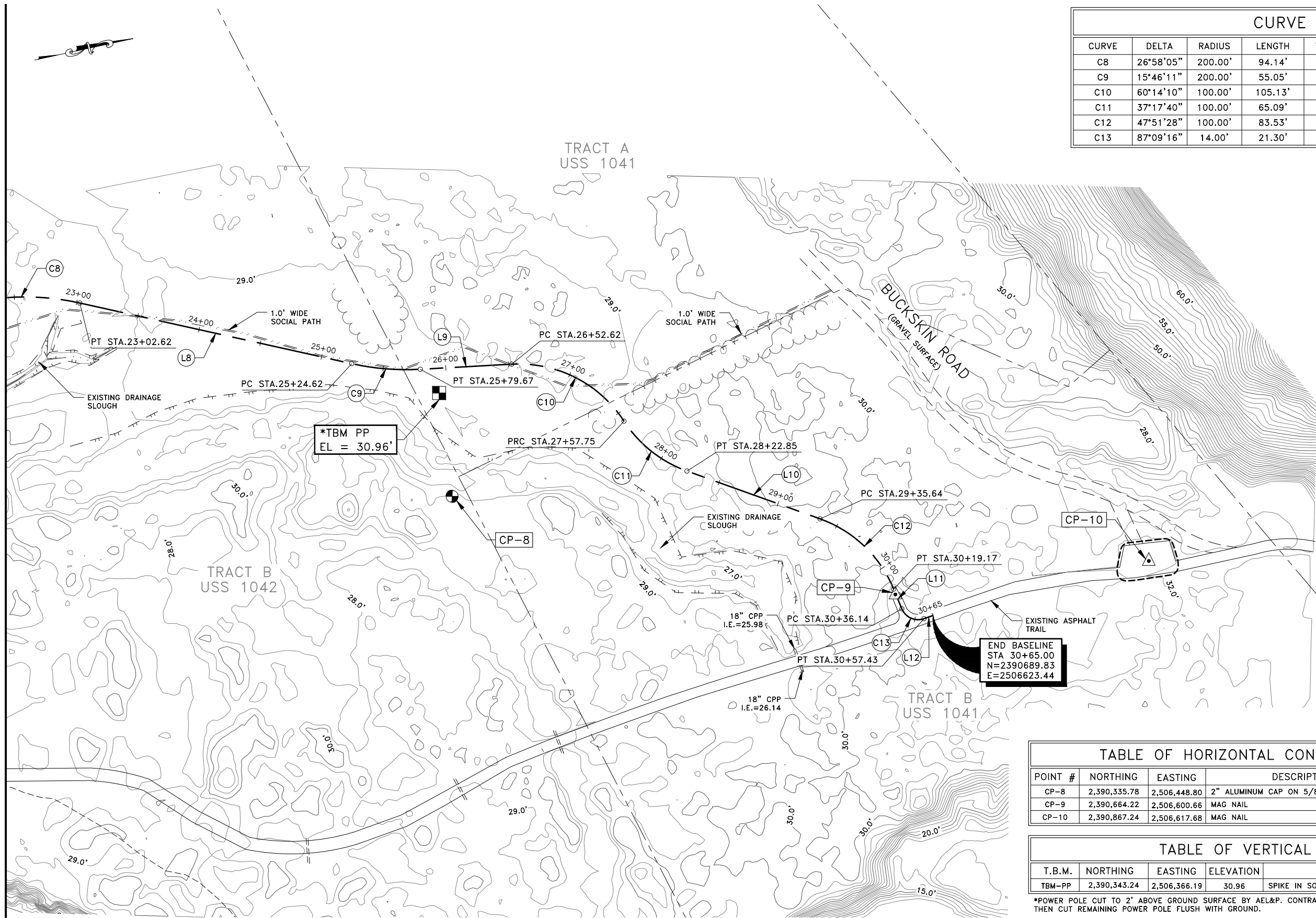
KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

EXISTING SITE CONDITIONS
SURVEY
40' 0 20' 40' 80'
SCALE: 1"= 40'
CONTOUR INTERVAL = 1 FOOT

DATE: March 5, 2019
PDC No. 19000JN
SHEET C100

C:\Users\ethan\OneDrive\Documents\Projects\Juneau\Kaxdigoowu Heen Dei Trail Relocation\Kaxdigoowu Heen Dei Trail Relocation.dwg PLOT: March 05, 2019 at: 3:06pm

MATCH LINE SHEET C100



CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD DIRECTION	CHORD LENGTH
C8	26°58'05"	200.00'	94.14'	47.96'	N11°25'08"E	93.27'
C9	15°46'11"	200.00'	55.05'	27.70'	N17°01'05"E	54.87'
C10	60°14'10"	100.00'	105.13'	58.01'	N39°15'05"E	100.36'
C11	37°17'40"	100.00'	65.09'	33.75'	N50°43'19"E	63.95'
C12	47°51'28"	100.00'	83.53'	44.37'	N56°00'13"E	81.12'
C13	87°09'16"	14.00'	21.30'	13.32'	N36°21'20"E	19.30'

LINE TABLE

LINE	BEARING	DISTANCE
L8	N24°54'10"E	222.01'
L9	N09°07'59"E	72.95'
L10	N32°04'29"E	112.80'
L11	N79°55'58"E	16.96'
L12	N07°13'18"W	7.57'

TABLE OF HORIZONTAL CONTROL

POINT #	NORTHING	EASTING	DESCRIPTION
CP-8	2,390,335.78	2,506,448.80	2" ALUMINUM CAP ON 5/8" # REBAR, CBJ
CP-9	2,390,664.22	2,506,600.66	MAG NAIL
CP-10	2,390,867.24	2,506,617.68	MAG NAIL

TABLE OF VERTICAL CONTROL

T.B.M.	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM-PP	2,390,343.24	2,506,366.19	30.96	SPIKE IN SOUTH SIDE OF WOOD POWER POLE, 1.05' FROM GROUND

*POWER POLE CUT TO 2' ABOVE GROUND SURFACE BY AEL&P. CONTRACTOR TO ESTABLISH NEW VERTICAL CONTROL AND THEN CUT REMAINING POWER POLE FLUSH WITH GROUND.

DESIGN ECR
DRAWN ECR
CHECK JMP
APPROVED JMP

No.	DATE	REVISION



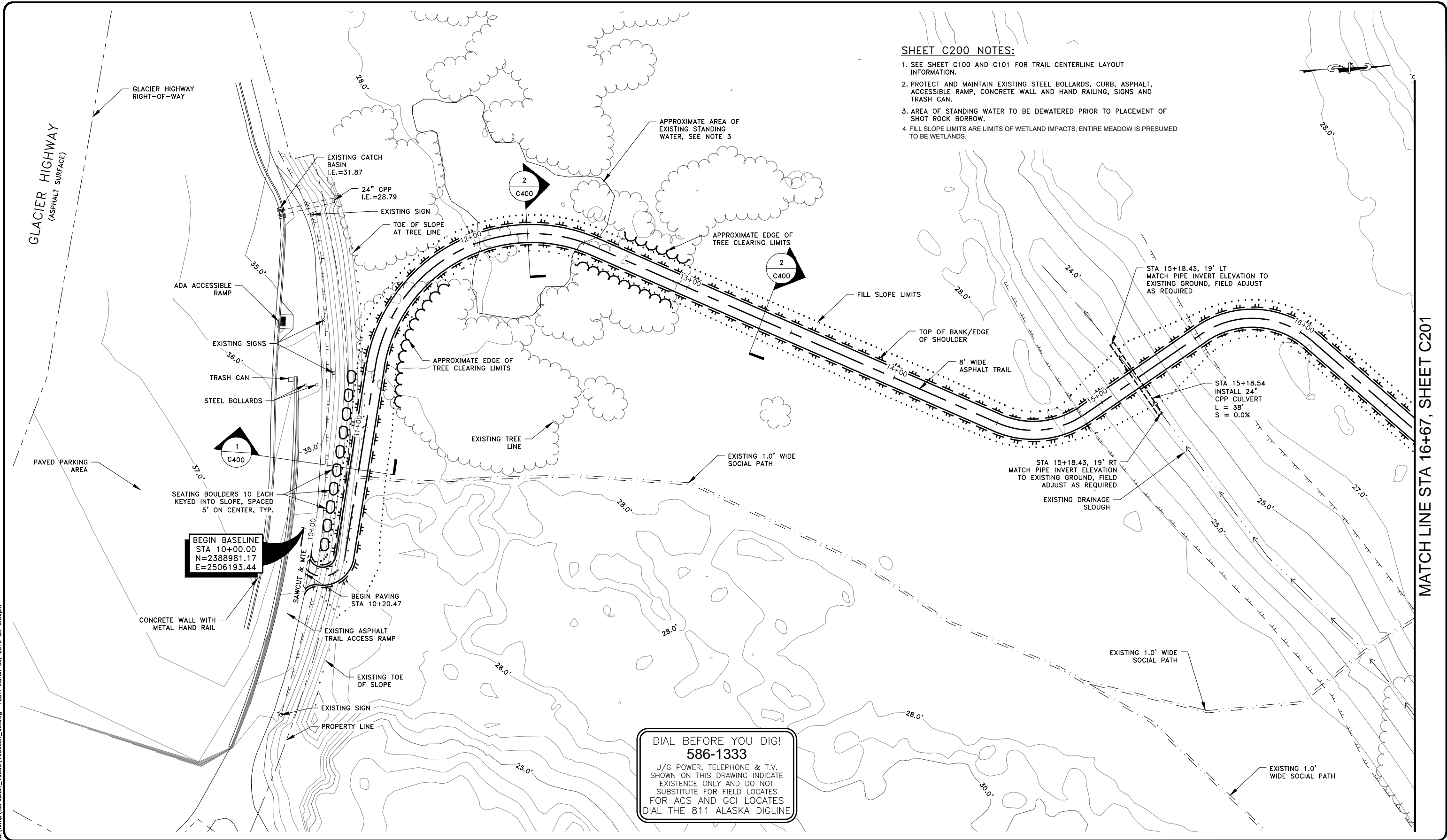
95%
SUBMITTAL

KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

EXISTING SITE CONDITIONS
SURVEY
40' 0 20' 40' 80'
SCALE: 1"= 40'
CONTOUR INTERVAL = 1 FOOT

DATE: March 5, 2019
PDC No. 19000JN
SHEET C101

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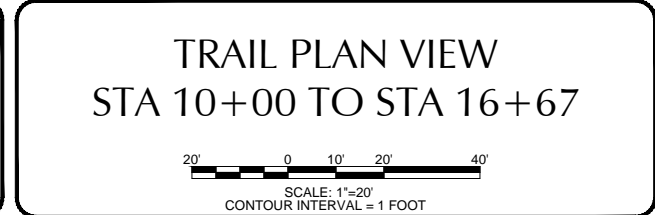


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CHECK	JMP
APPROVED	JMP

No.	DATE	REVISION

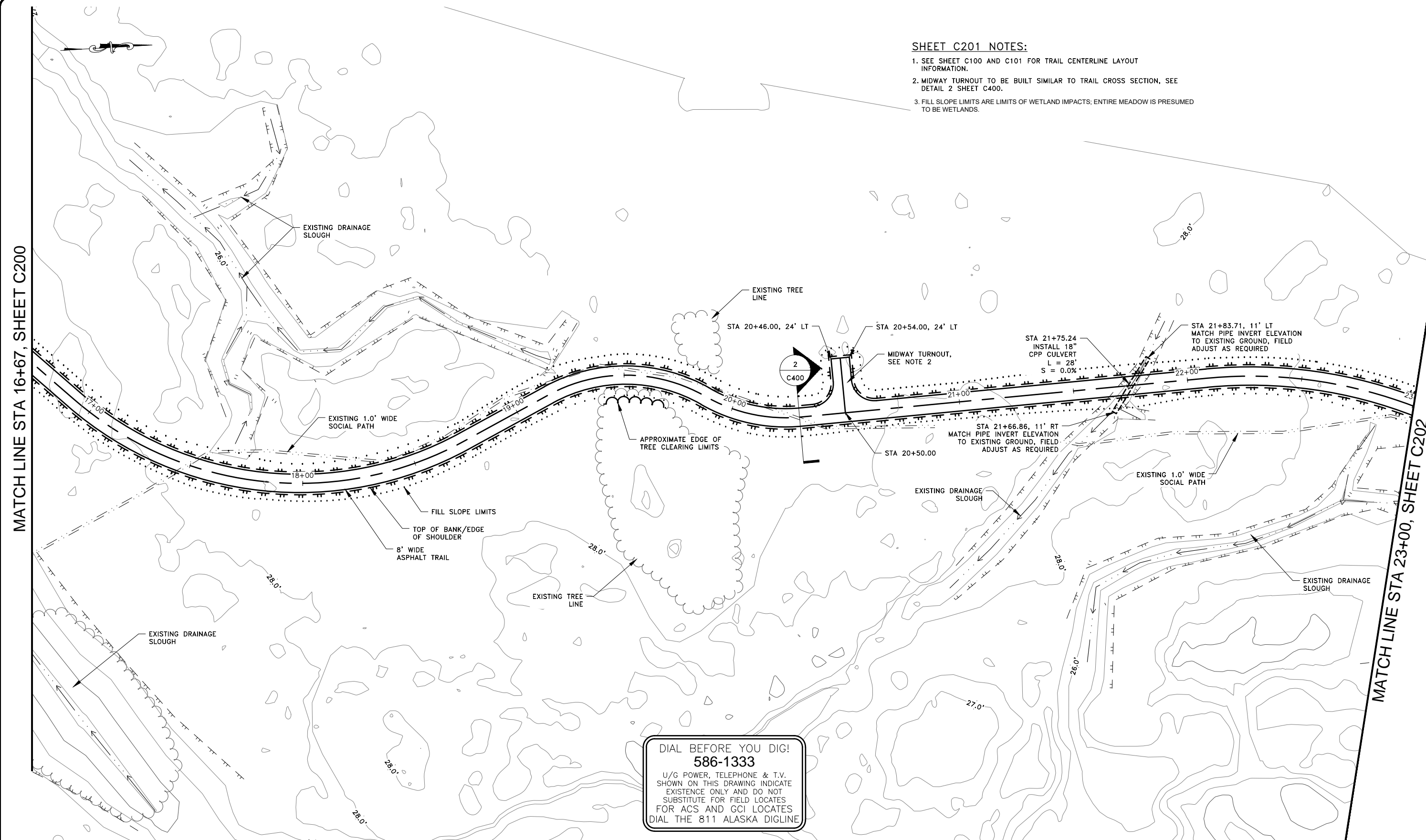
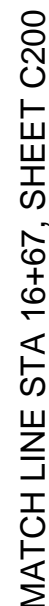


KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA



DATE: March 5, 2019
PDC No. 19000JN
SHEET C200

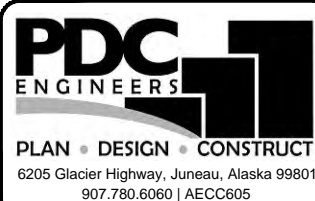
1. SEE SHEET C100 AND C101 FOR TRAIL CENTERLINE LAYOUT INFORMATION.
2. MIDWAY TURNOUT TO BE BUILT SIMILAR TO TRAIL CROSS SECTION, SEE DETAIL 2 SHEET C400.
3. FILL SLOPE LIMITS ARE LIMITS OF WETLAND IMPACTS; ENTIRE MEADOW IS PRESUMED TO BE WETLANDS.



DIAL BEFORE YOU DIG!
586-1333
U/G POWER, TELEPHONE & T.V.
SHOWN ON THIS DRAWING INDICATE
EXISTENCE ONLY AND DO NOT
SUBSTITUTE FOR FIELD LOCATES
FOR ACS AND GCI LOCATES
DIAL THE 811 ALASKA DIGLINE

DESIGN ECR
DRAWN ECR
CHECK JMP
APPROVED JMP

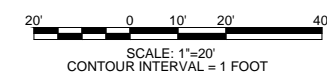
No.	DATE	REVISION
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SUBMITTAL

KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PLAN VIEW
STA 16+67 TO STA 23+00



DATE: March 5, 2019
PDC No. 19000JN

SHEET **C201**

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MATCH LINE STA 23+00, SHEET C201

MATCH LINE STA 29+58, SHEET C203

TEMPORARY FILL TO BE LOCATED AS
NEEDED FOR CONSTRUCTION OF TRAIL.
TEMPORARY FILL QUANTITY : UP TO
60 CY

SHEET C202 NOTES:

1. SEE SHEET C100 AND C101 FOR TRAIL CENTERLINE LAYOUT INFORMATION.
2. LOCATION OF TBM PP, CONTRACTOR TO ESTABLISH NEW VERTICAL CONTROL AND THEN CUT REMAINING POWER POLE FLUSH WITH GROUND AND DISPOSE OF CUT POWER POLE OFF SITE.
3. FILL SLOPE LIMITS ARE LIMITS OF WETLAND IMPACTS; ENTIRE MEADOW IS PRESUMED TO BE WETLANDS.

BUCKSKIN ROAD
10.0' WIDE
GRAVEL ROAD

EXISTING 1.0' WIDE
SOCIAL PATH

EXISTING 1.0' WIDE
SOCIAL PATH

FILL SLOPE LIMITS
TOP OF BANK/EDGE
OF SHOULDER
8' WIDE
ASPHALT TRAIL

EXISTING TREE LINE

EXISTING DRAINAGE
SLOUGH

SEE NOTE 2

EXISTING TREE LINE

EXISTING DRAINAGE
SLOUGH

EXISTING ASPHALT
TRAIL

18" CPP
I.E.=25.98

18" CPP
I.E.=26.14

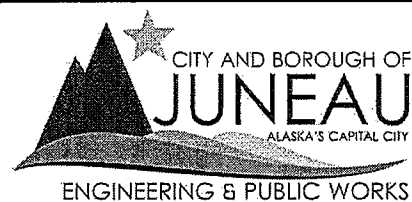
DIAL BEFORE YOU DIG!
586-1333

U/G POWER, TELEPHONE & T.V.
SHOWN ON THIS DRAWING INDICATE
EXISTENCE ONLY AND DO NOT
SUBSTITUTE FOR FIELD LOCATES
FOR ACS AND GCI LOCATES
DIAL THE 811 ALASKA DIGLINE

PA 2019 19000JN-CBJ_Kop_Tra_Sheet5a 19000JN_wk.dwg PLOT: March 05, 2019 at: 3:10pm

DESIGN ECR
DRAWN ECR
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APPROVED JMP

No. DATE REVISION



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KAXDIGOOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PLAN VIEW
STA 23+00 TO STA 29+58

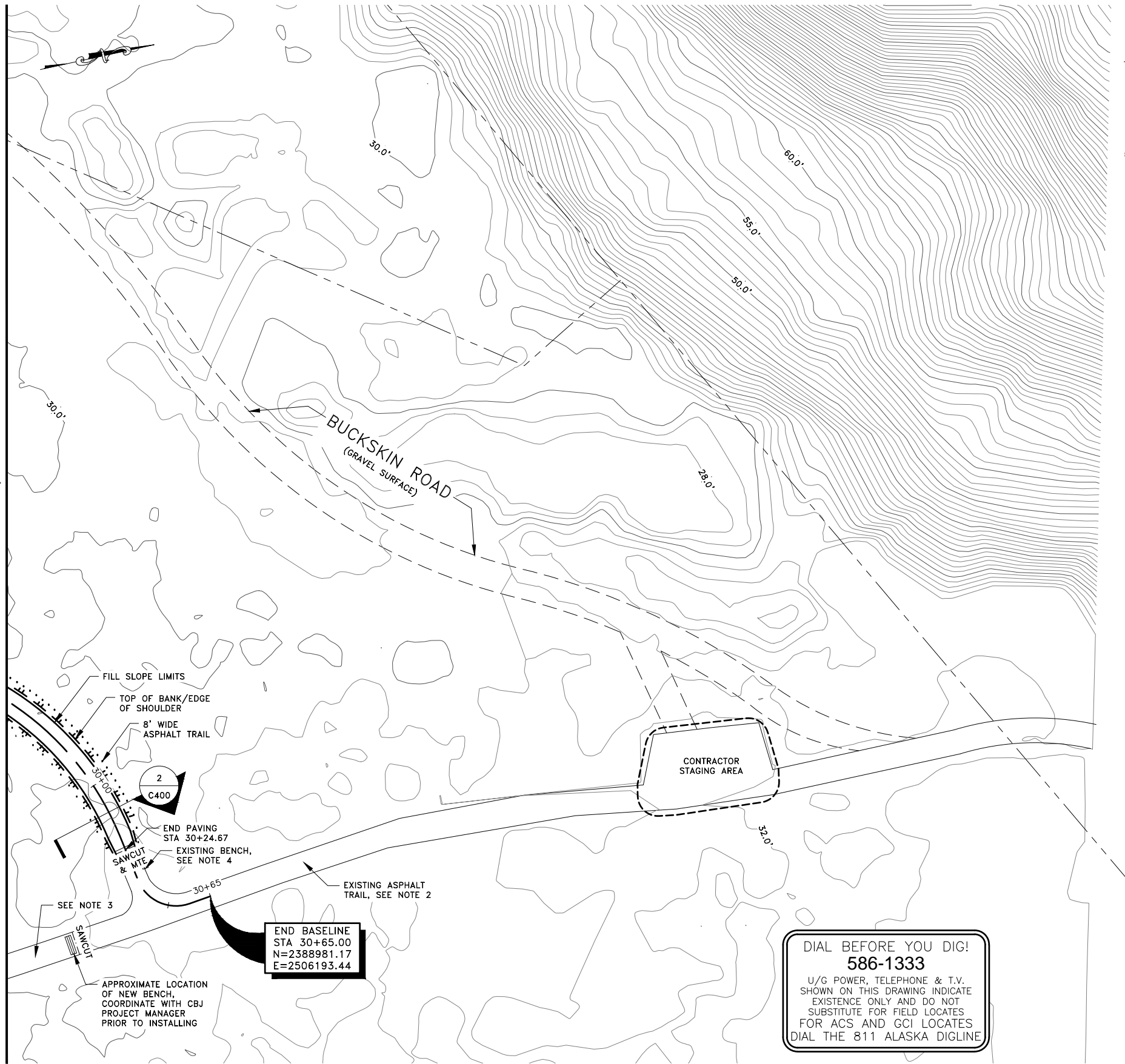
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CONTOUR INTERVAL = 1 FOOT

DATE: March 5, 2019
PDC No. 19000JN

SHEET
C202

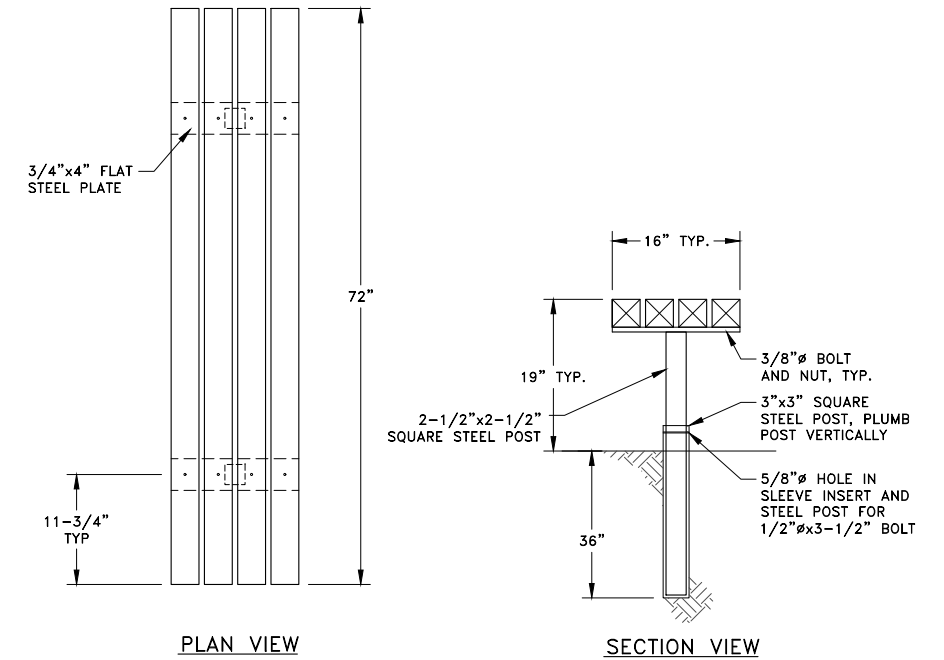
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MATCH LINE STA 29+58, SHEET C202



SHEET C203 NOTES:

1. SEE SHEET C100 AND C101 FOR TRAIL CENTERLINE LAYOUT INFORMATION.
2. PROTECT AND MAINTAIN EXISTING ASPHALT TRAIL.
3. SEE SHEET C500 FOR EXISTING TRAIL RECLAMATION PLAN.
4. SALVAGE EXISTING BENCH AND RELOCATE BENCH TO STA 30+40, 30.4 RT. SEE DETAIL 1 THIS SHEET.
5. FILL SLOPE LIMITS ARE LIMITS OF WETLAND IMPACTS; ENTIRE MEADOW IS PRESUMED TO BE WETLANDS.



1 PARK BENCH DETAIL
N.T.S.

DESIGN ECR
DRAWN ECR
CHECK JMP
APPROVED JMP

No.	DATE	REVISION



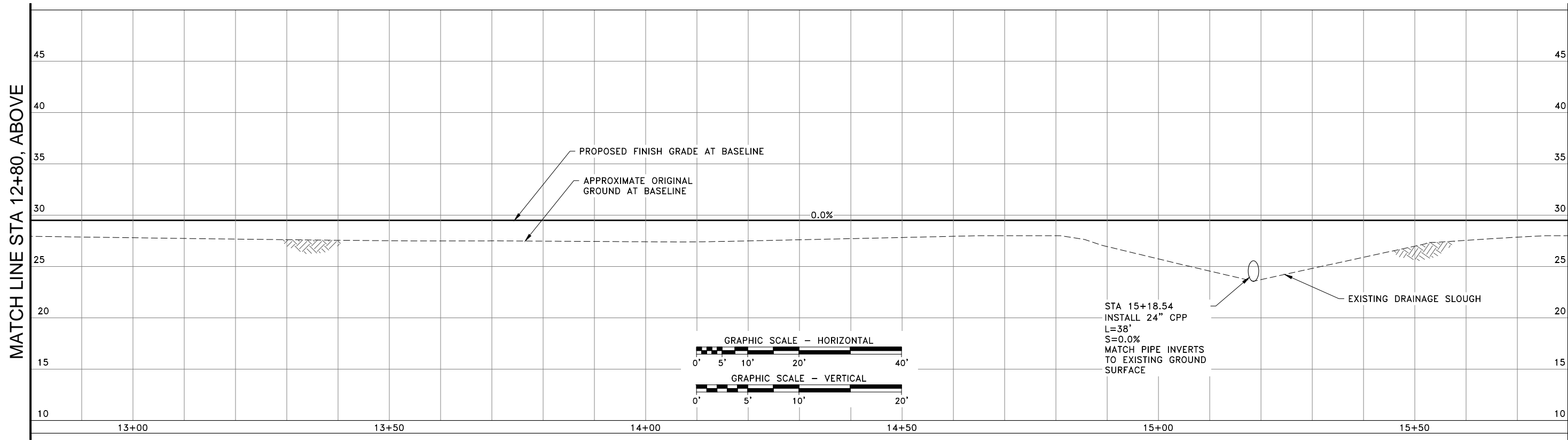
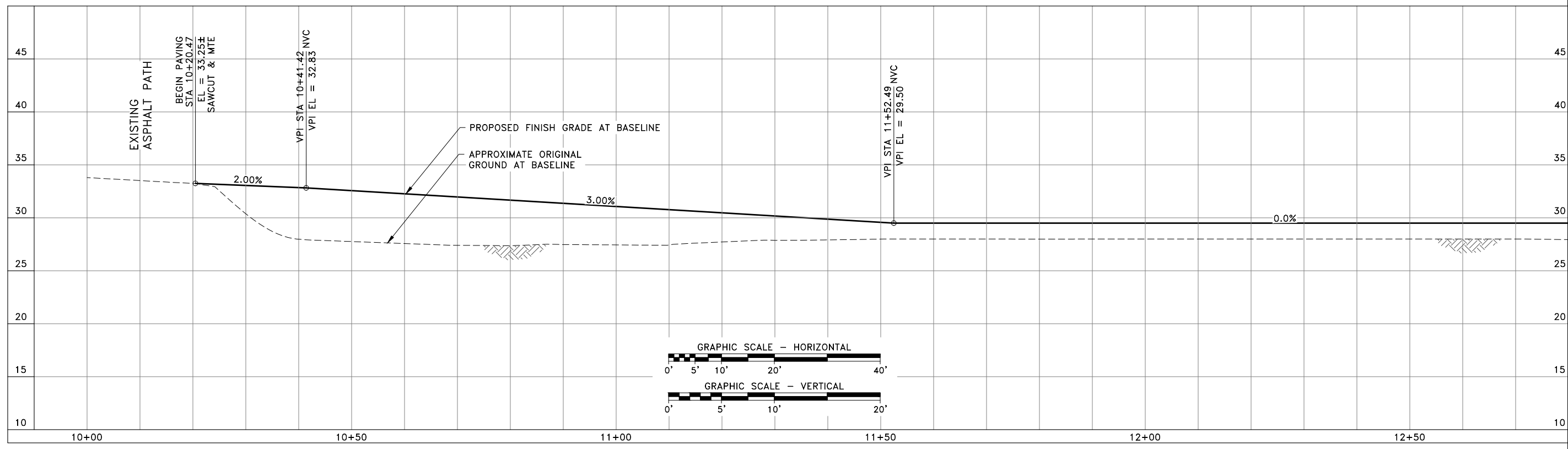
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KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PLAN VIEW
STA 29+58 TO STA 30+65
20' 0 10' 20' 40'
SCALE: 1"=20'
CONTOUR INTERVAL = 1 FOOT

DATE: March 5, 2019
PDC No. 19000JN
SHEET C203

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DESIGN ECR
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CHECK JMP
APPROVED JMP

No.	DATE	REVISION



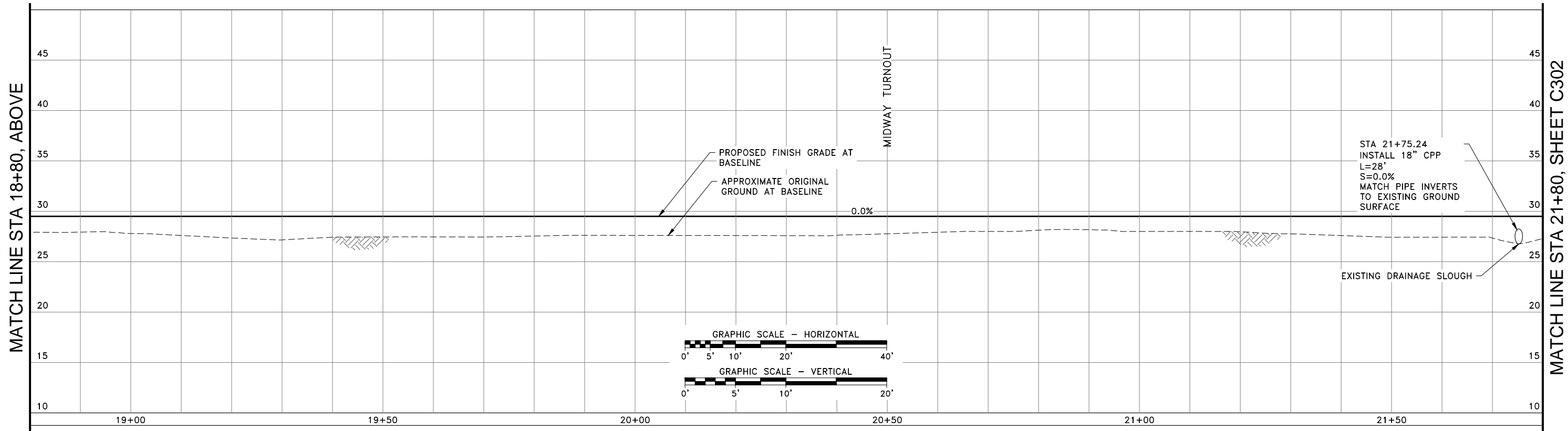
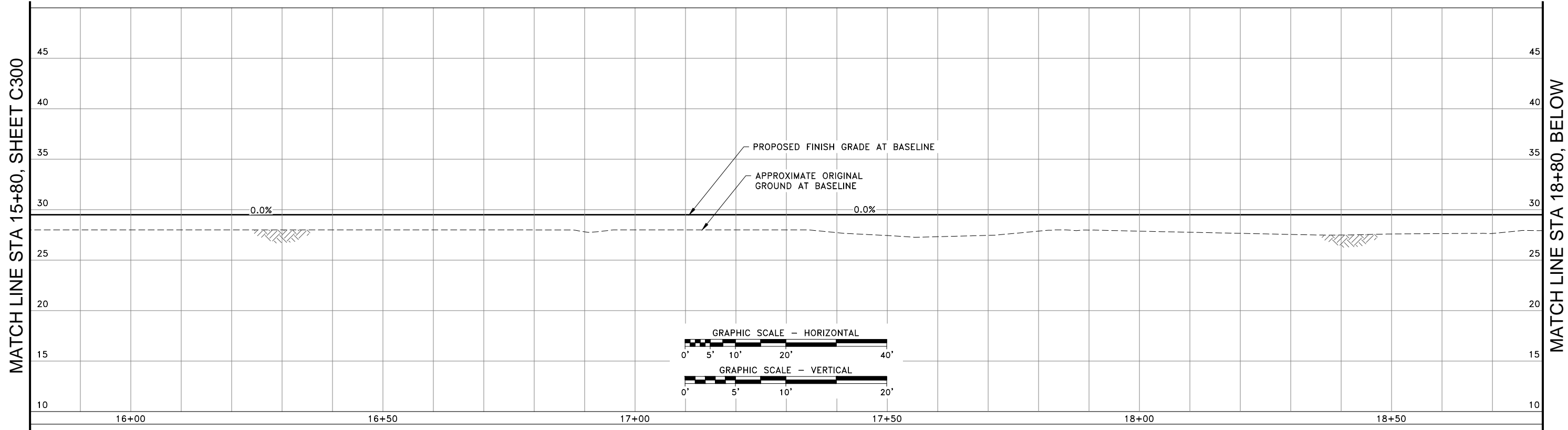
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KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PROFILE VIEW
STA 10+00 TO STA 15+80

DATE: March 5, 2019
PDC No. 19000JN
SHEET C300

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APPROVED JMP

No.	DATE	REVISION



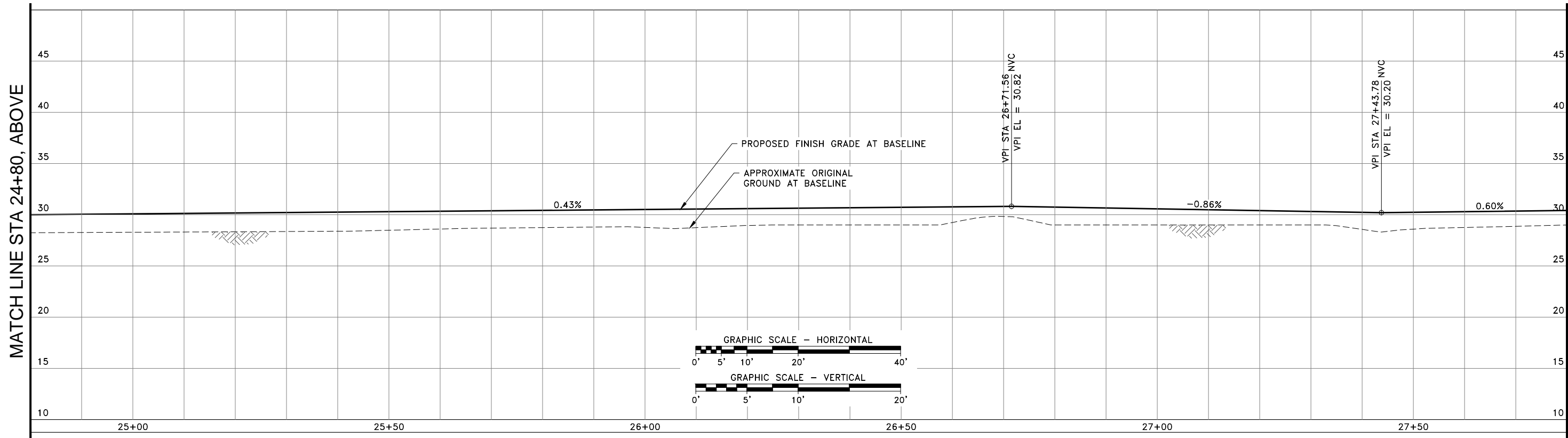
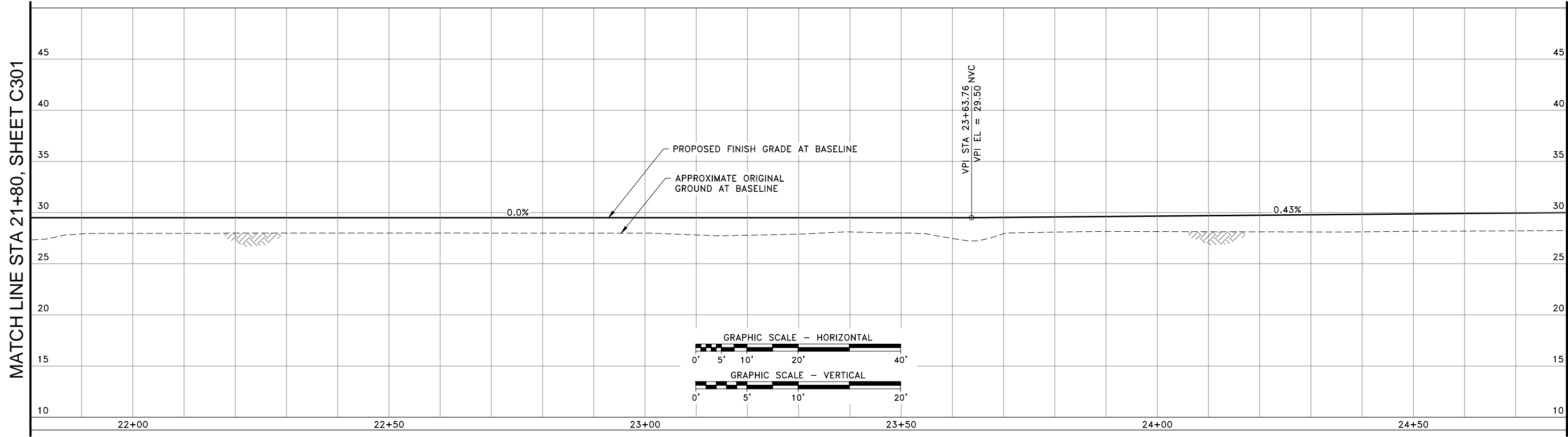
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KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PROFILE VIEW
STA 15+80 TO STA 21+80

DATE: March 5, 2019
PDC No. 19000JN
SHEET C301

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DESIGN ECR
DRAWN ECR
CHECK JMP
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No.	DATE	REVISION



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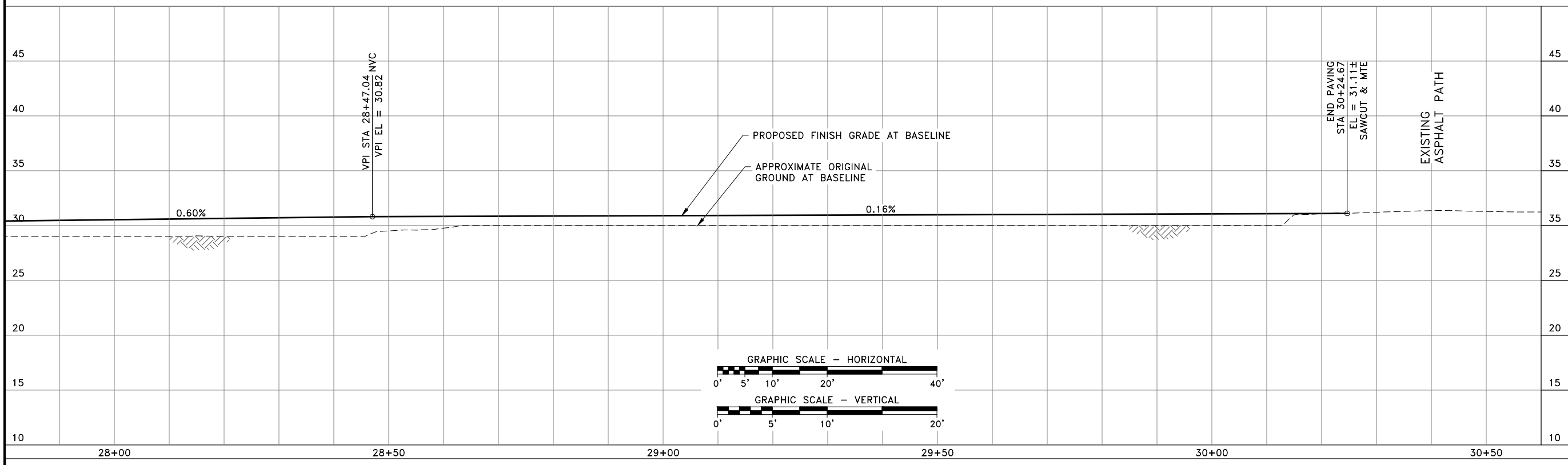
KAXDIGOOWU HEEN DEI
TRAIL RELOCATION
CBJ CONTRACT No. BE19-177
CITY & BOROUGH OF JUNEAU, ALASKA

TRAIL PROFILE VIEW
STA 21+80 TO STA 27+80

DATE: March 5, 2019
PDC No. 19000JN
SHEET C302

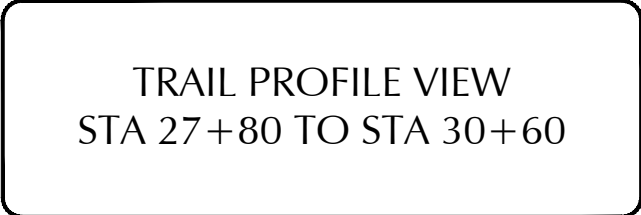
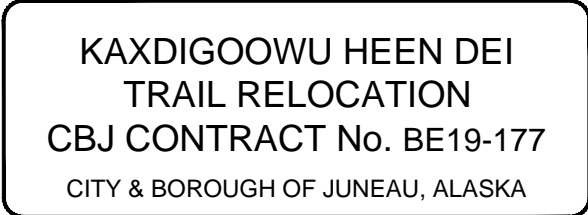
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MATCH LINE STA 27+80, SHEET C302



DESIGN	ECR
DRAWN	ECR
CHECK	JMP
APPROVED	JMP

No.	DATE	REVISION



DATE: March 5, 2019
PDC No. 19000JN
SHEET C303



- TYPICAL TRAIL SECTION
STA 10+20 TO STA 11+40

N.T.S.



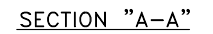
N.T.S.



N.T.S.



N.T.S.



1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2"-3" DEEP x 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPHILL FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT EACH OTHER.
3. SECURE THE WATTLE WITH 24" STAKES EVERY 3'-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 3"-4" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.
4. STRAW WATTLE FOR NON IN GROUND CONDITIONS SHALL LAY ON SURFACE.

N.T.S.

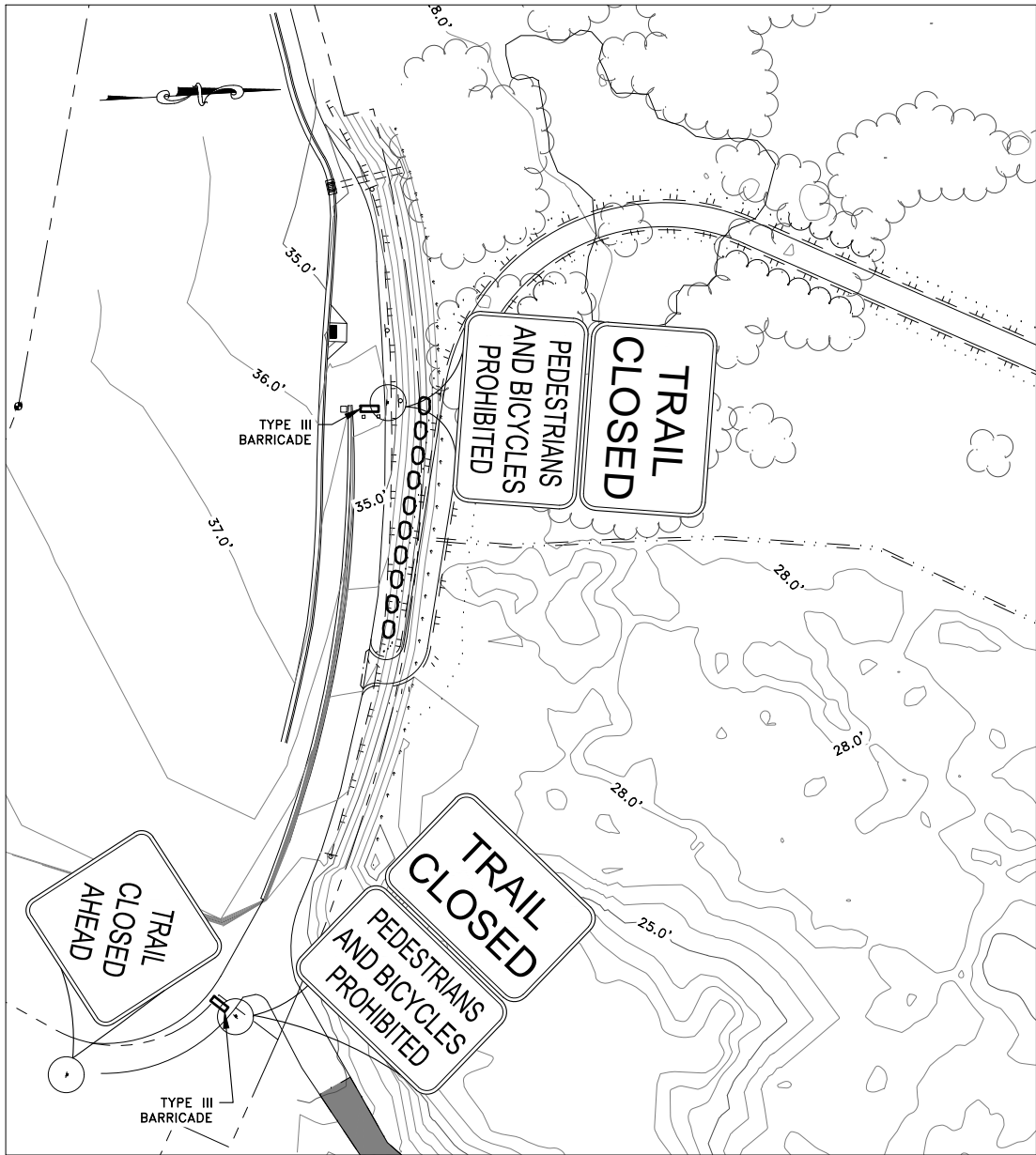


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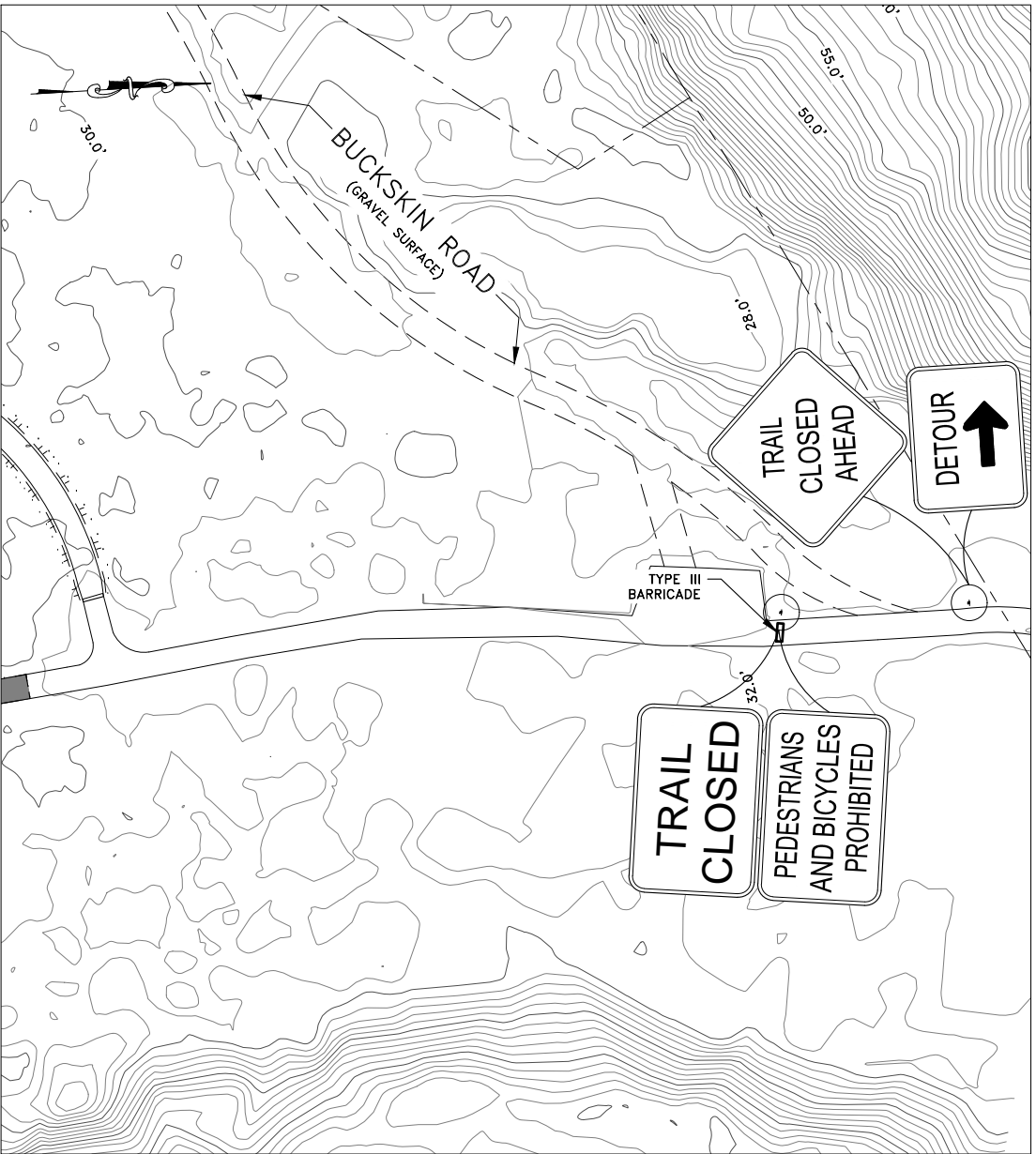
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1 TRAFFIC CONTROL AND
PEDESTRIAN PLANS - SOUTH TIE-IN
N.T.S.

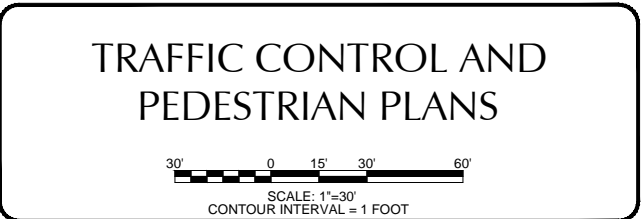
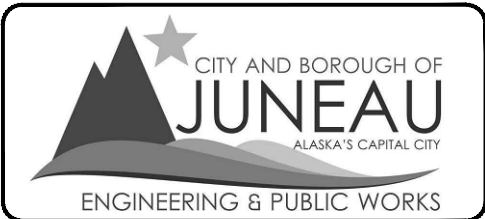
- SHEET 402 NOTES:
1. WITH THE EXCEPTION OF PAVING OPERATIONS THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND BICYCLE TRAFFIC FLOW FROM THE DETOUR ALONG BUCKSKIN ROAD TO THE REMAINDER OF THE KAXDIGOOWU HEEN DEI TRAIL NORTH OF THIS PROJECT.
 2. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SIGNAGE AS NECESSARY FOR MAINTAINING A SAFE WORK ZONE AND ALLOWING PEDESTRIANS TO SAFELY TRAVEL ALONG BUCKSKIN ROAD TO ACCESS THE KAXDIGOOWU HEEN DEI TRAIL NORTH OF THE WORK ZONE.
 3. INSTALL AND MAINTAIN CONSTRUCTION WARNING SIGNS AS SHOWN AND AS APPROVED BY THE ENGINEER.



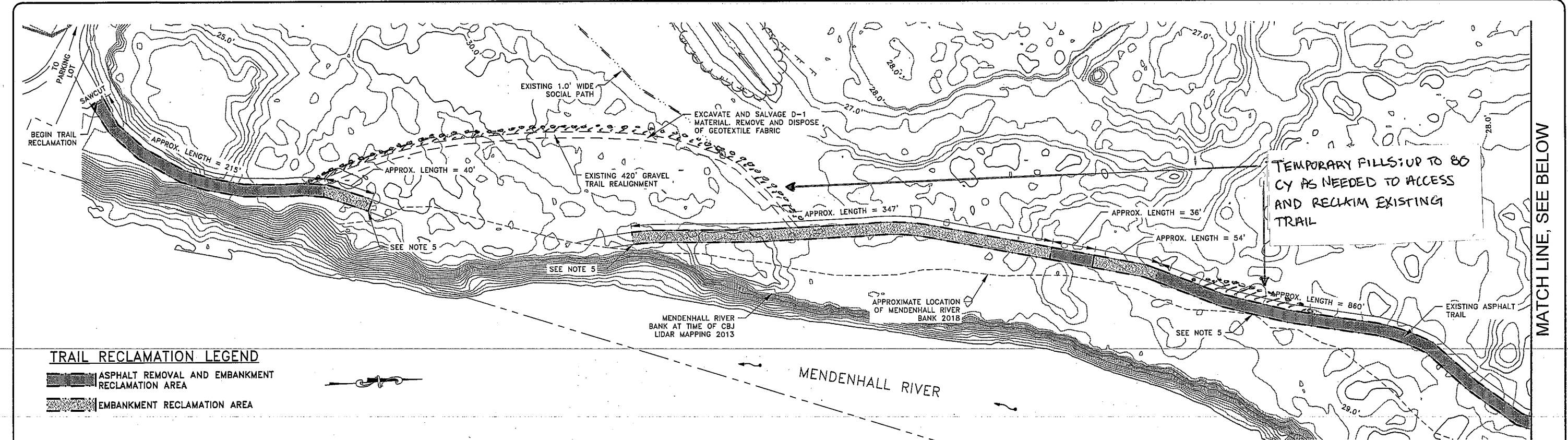
2 TRAFFIC CONTROL AND
PEDESTRIAN PLANS - NORTH TIE-IN
N.T.S.

DESIGN	ECR
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APPROVED	JMP

No.	DATE	REVISION
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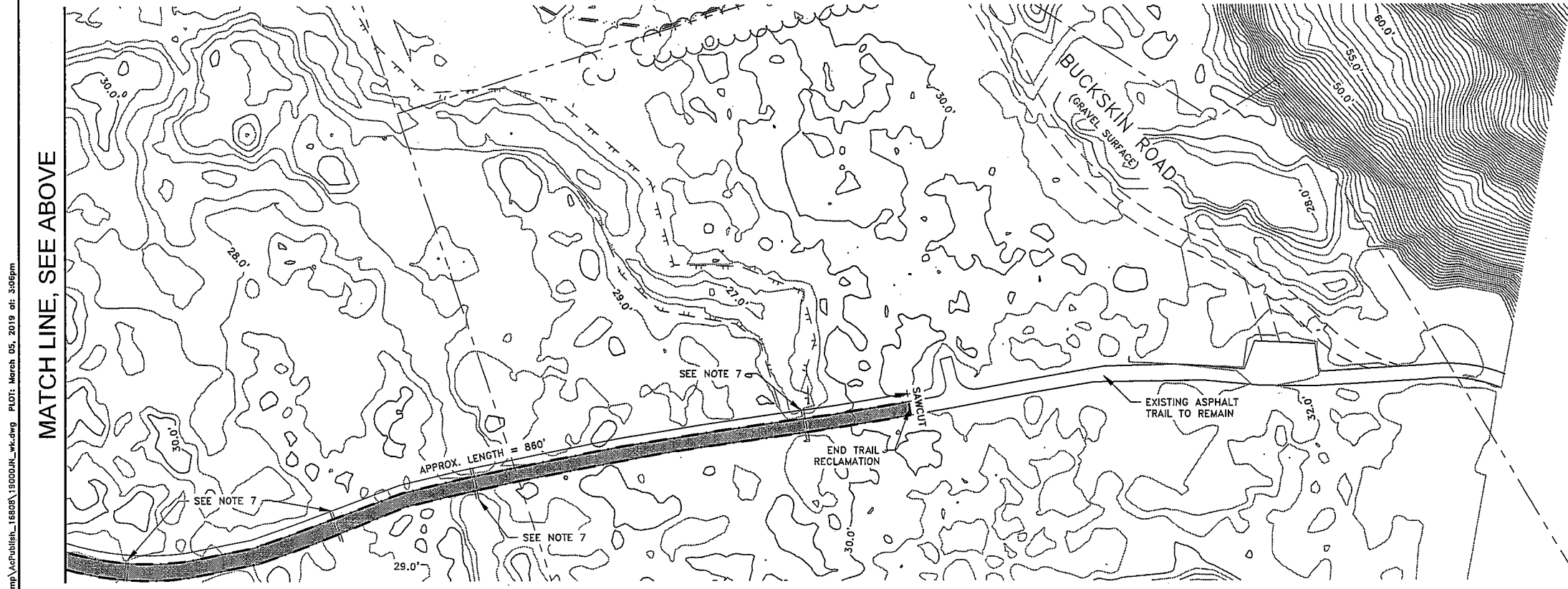
DATE: March 5, 2019
PDC No. 19000JN
SHEET C402



TRAIL RECLAMATION LEGEND

ASPHALT REMOVAL AND EMBANKMENT RECLAMATION AREA

EMBANKMENT RECLAMATION AREA



- TRAIL RECLAMATION NOTES:**
1. TRAIL RECLAMATION WORK WILL INCLUDE REMOVAL AND DISPOSAL OF EXISTING ASPHALT PAVEMENT. DELIVER REMOVED ASPHALT SURFACING MATERIAL TO THE ASPHALT DISPOSAL STOCKPILE IN THE CBJ LEMON CREEK GRAVEL PIT.
 2. EXISTING TRAIL EMBANKMENT MATERIAL TO BE EXCAVATED AND REUSED ON NORTH SECTION OF PROPOSED TRAIL. EXISTING MATERIAL IS SHOT ROCK AND ASSUMED TO BE ACCEPTABLE FOR BORROW MATERIAL FOR THE NEW TRAIL. TYPICAL SECTION SEE SHEET C400.
 3. ALL GEOTEXTILE AND CORDUROY FOUNDATION LOGS TO BE REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL SITE.
 4. INVASIVE SPECIES HAVE BEEN IDENTIFIED TO EXIST ALONG THE ENTIRE LENGTH OF THE EXISTING TRAIL. WHEN WORKING IN THIS AREA, THE TOP 6" OF EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS. REMOVE ANY DIRT CLODS 3" OR LARGER IN SIZE FROM EQUIPMENT PRIOR TO WORKING IN OTHER AREAS OF THE PROJECT.
 5. MENDENHALL RIVER BANKS ARE UNSTABLE, CONTRACTOR TO USE EXTREME CAUTION WHEN WORKING NEAR THE TOP OF BANK.
 6. AFTER EXISTING EMBANKMENT OR D-1 MATERIAL HAS BEEN REMOVED AND AFTER GEOTEXTILE MATERIAL REMOVED/DISPOSED THE GROUND SURFACE SHALL BE MULCHED AND HYDROSEEDDED.
 7. REMOVE AND DISPOSE OF EXISTING 20' LONG 18" CMP CULVERT, RESTORE DRAINAGE AFTER RECLAMATION.

DESIGN ECR	 <p>CITY AND BOROUGH OF JUNEAU ALASKA'S CAPITAL CITY ENGINEERING & PUBLIC WORKS</p>	 <p>PDC ENGINEERS PLAN • DESIGN • CONSTRUCT 6205 Glacier Highway, Juneau, Alaska 99801 907.780.6060 AECC605</p>	95% SUBMITTAL	KAXDIGOOWU HEEN DEI TRAIL RELOCATION CBJ CONTRACT No. BE19-177 CITY & BOROUGH OF JUNEAU, ALASKA	EXISTING TRAIL RECLAMATION PLAN 40' 0 20' 40' 80' SCALE: 1"= 40' CONTOUR INTERVAL = 1 FOOT	DATE: March 5, 2019 PDC No. 19000JN
DRAWN ECR						SHEET C500
CHECK JMP						
APPROVED JMP						
No. DATE REVISION						