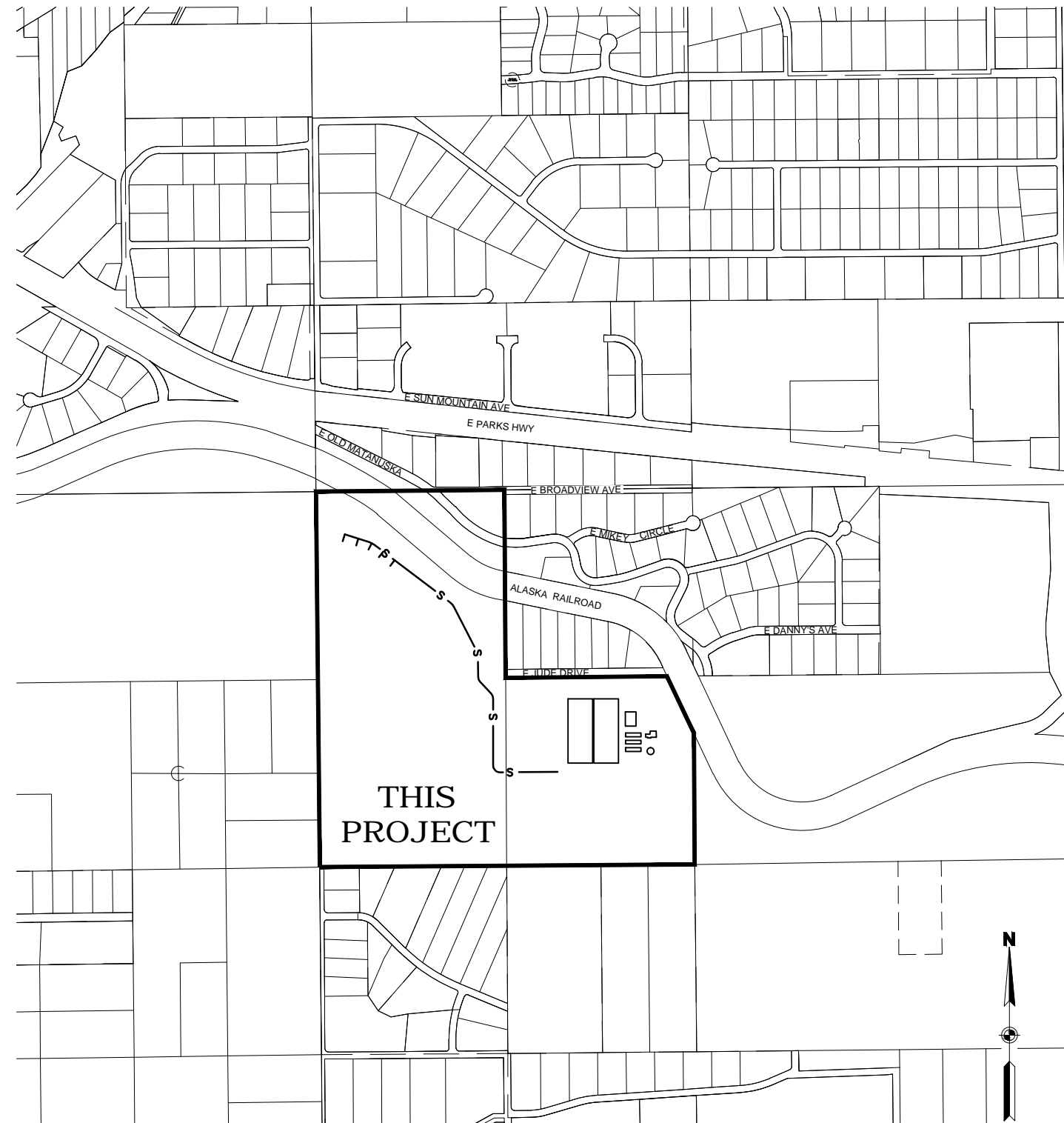


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Stantec Consulting Services Inc.
 725 East Fireweed Lane Suite 200
 Anchorage AK
 99503-2245
 Tel. (907) 276-4245
 Fax. (907) 258-4653
 www.stantec.com

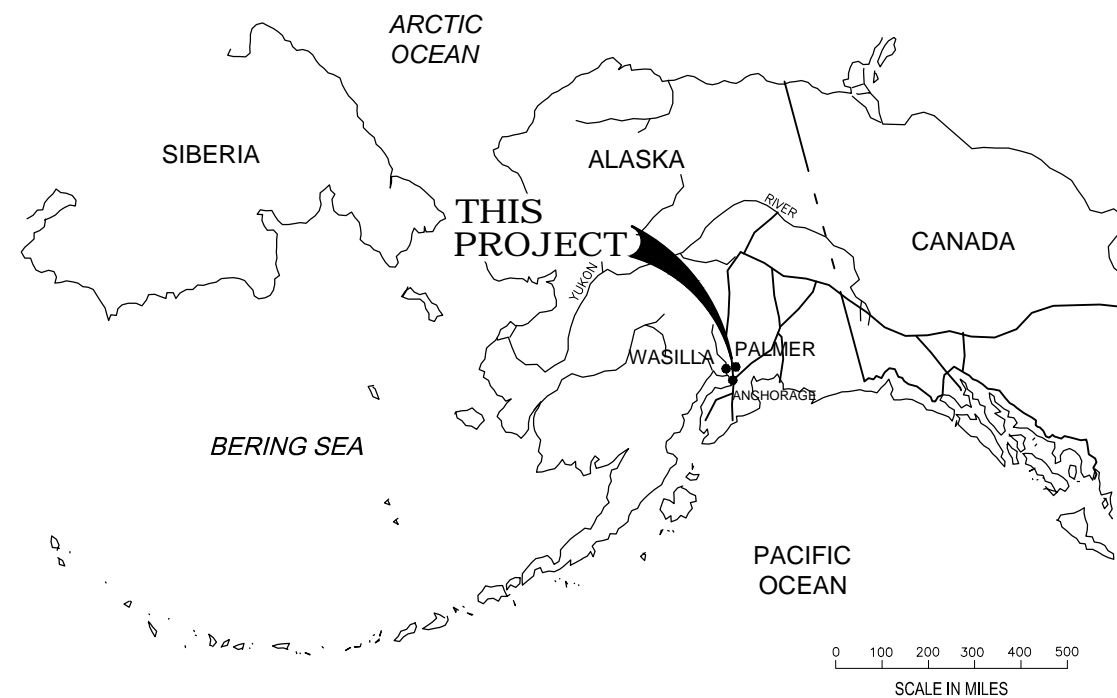


VICINITY MAP - WASILLA, ALASKA

SCALE: 1"=500'

SHEET INDEX

SHEET NUMBER	SHEET TITLE
1	COVER
2	LEGEND, ABBREVIATIONS & GENERAL NOTES
3	SURVEY CONTROL
4	HYDRAULIC PROFILE
5	PROJECT LAYOUT
6	PLAN & PROFILE - STA 100+00 TO STA 108+00
7	PLAN & PROFILE - STA 108+00 TO STA 116+00
8	PLAN & PROFILE - STA 116+00 TO STA 124+00
9	PLAN & PROFILE - STA 124+00 TO STA 131+00
10	PLAN & PROFILE - STA 200+00 TO STA 201+58
11	PLAN & PROFILE - STA 00+00 TO 09+00
12	DETAILS
13	DETAILS - VAULT MODIFICATIONS
14	DETAILS - SEWER MANHOLE & CLEANOUT
15	DETAILS
16	DETAILS - FENCE
17	DETAILS - SIGNS



LOCATION MAP - WASILLA, ALASKA

SCALE: N/A

ABBREVIATIONS

AC = ASBESTOS CEMENT
 ACM = ASBESTOS CONTAINING MATERIAL
 ACP = ASBESTOS CEMENT PIPE
 ADEC = ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 APPROX. = APPROXIMATE
 ATI = AT TIME OF INVESTIGATION
 B = BORING
 BM = BENCH MARK
 B.O.P. = BOTTOM OF PIPE
 C&G = CURB AND GUTTER
 CL = CLASS
 CONT = CONTINUOUS
 COND = CONDENSATE
 C.O. = CLEAN-OUT
 DIP = DUCTILE IRON PIPE
 DIA = DIAMETER
 DCW = DOMESTIC COLD WATER
 DPW = DEPARTMENT OF PUBLIC WORKS
 DU = DOYON UTILITIES
 E = ELECTRICAL
 EL = ELEVATION
 E.O.P. = END OF PROFILE
 ESMT = EASEMENT
 EXC. = EXCAVATION
 F&I = FURNISH AND INSTALL
 F.F. = FINISHED FLOOR (EL)
 F.L. = FLOW LINE (ELEV.)
 FL = FLANGED
 FOS = FUEL OIL SUPPLY
 FOR = FUEL OIL RETURN
 GALV. = GALVANIZED
 GRAV. S. = GRAVITY SEWER
 GB = GRADE BREAK
 GV = GATE VALVE
 H = HORIZONTAL
 HDPE = HIGH DENSITY POLYETHYLENE
 HT. = HEIGHT
 IE = INVERT ELEV.
 INV. = INVERT
 L = LENGTH
 LF = LINEAR FEET
 LONG. = LONGITUDINAL
 LT. = LEFT
 MAX = MAXIMUM
 ME = MATCH EXISTING (GRADE)
 MFR = MANUFACTURER
 MH = MANHOLE
 MIN = MINIMUM
 MJ = MECHANICAL JOINT
 N = NORTHING
 NC = NORMALLY CLOSED
 NFS = NON-FROST SUSCEPTIBLE
 NGS = NATIONAL GEODETIC SURVEY
 NIC. = NOT IN CONTRACT
 NO = NORMALLY CLOSED
 N.T.S. = NOT TO SCALE
 O.C. = ON CENTER
 OG = ORIGINAL GROUND (ELEV.)
 OSHA = OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
 PCC = PORTLAND CEMENT CONCRETE
 PCMP = PRE-COATED CMP
 PL = PROPERTY LINE
 PP = POWER POLE
 R = RADIUS (LENGTH)
 RC = REINFORCED CONCRETE
 RT. = RIGHT
 S = SEWER
 S = SLOPE
 STA = STATION
 STD = STANDARD
 STL = STEEL
 T = TANGENT (LENGTH)
 TBM = TEMPORARY BENCHMARK
 TCLP = TOTAL COMBINED LEACHING POTENTIAL
 TF = TRAFFIC FLANGE ELEVATION
 T.O.C. = TOP OF CONCRETE
 TYP = TYPICAL
 U/G = UNDER GROUND
 UGE = UNDERGROUND ELECTRIC
 UON = UNLESS OTHERWISE NOTED
 V = VENT
 VB = VALVE BOX
 WWF = WELDED WIRE FABRIC
 W = WATER
 WT = WATER TABLE
 > = GREATER THAN
 < = LESS THAN
 ≥ = GREATER THAN OR EQUAL TO
 ≤ = LESS THAN OR EQUAL TO

LEGEND

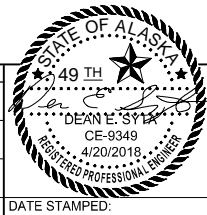
EXISTING (E)	PROPOSED (P)	
		BUILDING OUTLINE
		PROPERTY LINE
		WETLAND BOUNDARY
		GROUND CONTOURS
		GRADE BREAK
		EDGE OF ROAD
		FILL LIMITS
		CUT LIMITS
		DITCH BOTTOM
		WATER LEVEL
		FENCE
		CLEARING LIMITS
		WATER PIPE
		AERATION PIPE
		SEWER PIPE
		FUEL PIPE
		FORCE MAIN
		VALVE
		BURIED ELECTRIC
		OVERHEAD ELECTRIC (SEE NOTE 15)
		POWER POLE (SEE NOTE 15)
		GRAVEL
		SEWER CLEANOUT
		SEWER MANHOLE

GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE 2015 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS (MASS), APPLICABLE ADEC REGULATIONS, AND OTHER CODES TO THE EXTENT REFERENCED IN THE SPECIFICATIONS.
- SITE PLANS ARE BASED ON RECORD DRAWINGS AND LIMITED SURVEY BY STANTEC INC. VERIFY ALL PERTINENT EXISTING CONDITIONS AND LOCATION OF UTILITIES PRIOR TO BEGINNING EXCAVATION. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS ARE UNKNOWN. ALL FINISH GRADES SHALL BE VERIFIED AND FIELD ADJUSTED TO MATCH EXISTING CONDITIONS.
- VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE ASBUILT REDLINES.
- OBTAIN AND PAY FOR UTILITY LOCATES FOR ALL UNDER GROUND UTILITIES, INCLUDING PRIVATE FACILITIES PRIOR TO EXCAVATION.
- RECORD SURVEY NOTES FOR SUBMITTAL WITH ASBUILT REDLINE PLANS PRIOR TO CONTRACT FINAL PAYMENT.
- USE TECHNIQUES AS REQUIRED TO CONFINE DISTURBED AREAS TO THE STATED WORK LIMITS, INCLUDING BUT NOT LIMITED TO SHORING AND DEWATERING. DESIGN OF SUCH ITEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES. AT NO TIME SHALL EMERGENCY VEHICLES ACCESS BE BLOCKED.
- CONTRACTOR SHALL MAINTAIN "REDLINE" RECORD DRAWINGS ON A CLEAN SET OF CONSTRUCTION DRAWINGS. THE "RELINES" SHALL BE KEPT CURRENT ON A DAILY BASIS AND SHALL BE AVAILABLE FOR INSPECTION ON THE JOB SITE.
- DEWATERING, IF NECESSARY, SHALL BE REQUIRED THROUGHOUT THE WORK UNTIL THE PROJECT NO LONGER COLLECTS GROUND OR SURFACE WATERS.
- PROTECT UTILITIES AND DISCONNECT, RECONNECT, AND/OR RELOCATE UTILITIES WHERE NECESSARY; INCLUDE SHORING, TEMPORARY/NEW SERVICES AND ALL UTILITY COMPANY COORDINATION AND COSTS.
- RESTORE ALL DISTURBED PROPERTY, INCLUDING DRAINAGE SWALES, DISTURBED BY CONTRACT ACTIVITIES TO PRECONSTRUCTION CONDITION.
- INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, REQUIREMENTS THAT PROHIBIT UNPERMITTED DISCHARGE OF POLLUTANTS, INCLUDING SEDIMENTS. MEET ALL REQUIREMENTS SET FORTH UNDER THE ADEC GENERAL PERMIT, AND CONDUCT ALL WORK SO SEDIMENT IS NOT TRANSPORTED ONTO THE ROADWAY OR ADJACENT PROPERTY. AT A MINIMUM, SWEEP UP ANY SEDIMENT TRACKED ONTO PAVED SURFACES IN RIGHT-OF-WAY WITHIN 24 HOURS OF THE TRACKING.
- THRUST RESTRAINT SHALL BE PROVIDE BY USE OF FUSED HDPE, FLANGES, RESTRAINED MJ, FIELD-LOK GASKETS (OR EQUAL), THE USE OF THRUST BLOCKS WILL NOT BE ALLOWED UNLESS SHOWN.
- ALL HDPE PIPE SHALL BE DR 15.5. ALL DUCTILE IRON PIPE SHALL BE CLASS 50.
- TOP OF SEWER LINE TO BE MINIMUM OF 8 FEET BELOW FINISHED GRADE, UNLESS OTHERWISE SHOWN.
- PROVIDE 4", 60 PSI, RIGID INSULATION BOARD, 4' WIDE OVER ALL PIPE.
- NEW POWER LINE AND POLES ARE TO BE CONSTRUCTED BY OTHERS.

DRAWING NAME: U:\204700415\DRAWING\CS\SHETS\204700415_T0-1-COVER-TITLE.DWG PLOTTED: Apr 20, 2018 - 3:47:04 PM (Alward, Jb)k

REV.	DATE	BY	REVISIONS	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS	SCALE	DATA	DATE STAMPED:



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CITY OF WASILLA

CITY OF WASILLA
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LEGEND, ABBREVIATIONS & GENERAL NOTES

SHEET NO.
2
 W.O.NO. 204700415

THIS DRAWING IS HALF-SIZE AT 11"x17"

See PLAN & PROFILE sheets for alignment geometry.

Project Control						
Point #	Northing	Easting	Elevation	Description	Station	Offset
402	63737.9620	46736.2481		Rbr/RPC[USKH]: CONTROL POINT		
404	65219.4728	49090.3248	246.14	Rbr/RPC[USKH]: CONTROL POINT	118+44.65	980.11 Lt.
405	66744.0178	47100.2486		Rbr/RPC[USKH]: CONTROL POINT	100+41.23	548.38 Lt.
808	65170.5868	48052.2096		3-1/4 BC[4118-S]NW 1/16 1981	116+66.28	27.47 Lt.
813	65183.6150	49188.5661		3-1/4 AC[BLM/AKRR]:S9026 S13\C1 L2 N--N \C2 L1 1985	118+47.07	1070.84 Lt.

Temporary Benchmarks				
Point #	Northing	Easting	Elevation	Description
406	66469	47569	360.78	Fd Rbr/RPC[USKH]: Used as Leveling TBM
603	65233	48302	235.65	Set TBM: Spike in Power Pole
604	65241	48778	246.40	Set TBM: Spike in Power Pole
605	66713	47190	382.71	Set TBM: North Bolt on Top Flange of Fire Hydrant
606	66521	47541	361.33	Set TBM: Spike in Power Pole
607	64956	49294	249.47	Set TBM: Steel Bollard Just Outside WWTP Fence
614	64660	49258	251.94	Finished Floor at Clarifier Threshold: FF4

CONTROL SYMBOLS LEGEND

- POINT NUMBER IDENTIFIER
- PRIMARY BOUNDARY MONUMENT, BRASS OR ALUMINUM CAP
- SURVEY CONTROL POINT
- TEMPORARY BENCH MARK
- FINISHED FLOOR ELEVATION

PROJECT NOTES

- Survey Control information shown hereon is based on a field survey performed by Stantec Consulting Services Inc. during April 11-12, 2018 with limited exceptions. Elevations for TBMs 603-607 are based on a field survey performed by Stantec Consulting Services Inc. during September 11, 2014.
- Property information shown hereon is for general reference only.
- All dimensions, coordinates, and elevations shown are in U.S. Survey Feet unless otherwise noted.
- Horizontal control points shown on this sheet were surveyed using networked static GNSS techniques. GNSS measurements were acquired using Trimble R8-2 and R6-3 receivers and processed using Trimble Business Center v4.0 office software.
- Third order differential leveling was performed between control points 404, 406, TBMs, and Finished Floor Elevations shown hereon using a Trimble DINI digital level. Level Loops were adjusted by turn using Trimble Business Center v4.0 office software.

HORIZONTAL CONTROL

A local ground coordinate system, in U.S. Survey Feet as a modification to the Alaska State Plane Coordinate System, Zone 4, developed by Stantec Consulting, Inc for this project. The local ground coordinate system preserves a state plane bearing basis while providing ground distances at the project location.

BASIS OF COORDINATES

The geodetic basis is the NAD83(2011)[EPOCH 2010.00] position of Control Point 404 as determined by averaging two 4+ hour OPUS solutions from different days, using the following NGS CORS stations: AC48 (PID# D1809), AC51 (PID# D01812), and POT6 (PID# DJ3045). The resulting geodetic position of Control Point 404 is Lat=N61°34'01.38999", Long=W149°22'35.77710", Ellipsoid Height=283.146'.

CONVERSION PARAMETERS

To convert from the local ground coordinate system to NAD83(2011) (Epoch 2010.00) Alaska State Plane Zone 4, perform the following:
 1. Scale about 64491.754N, 46741.204E by 0.9998957156.
 2. Add 2700000.000N, 1700000.000E to the resulting coordinates.

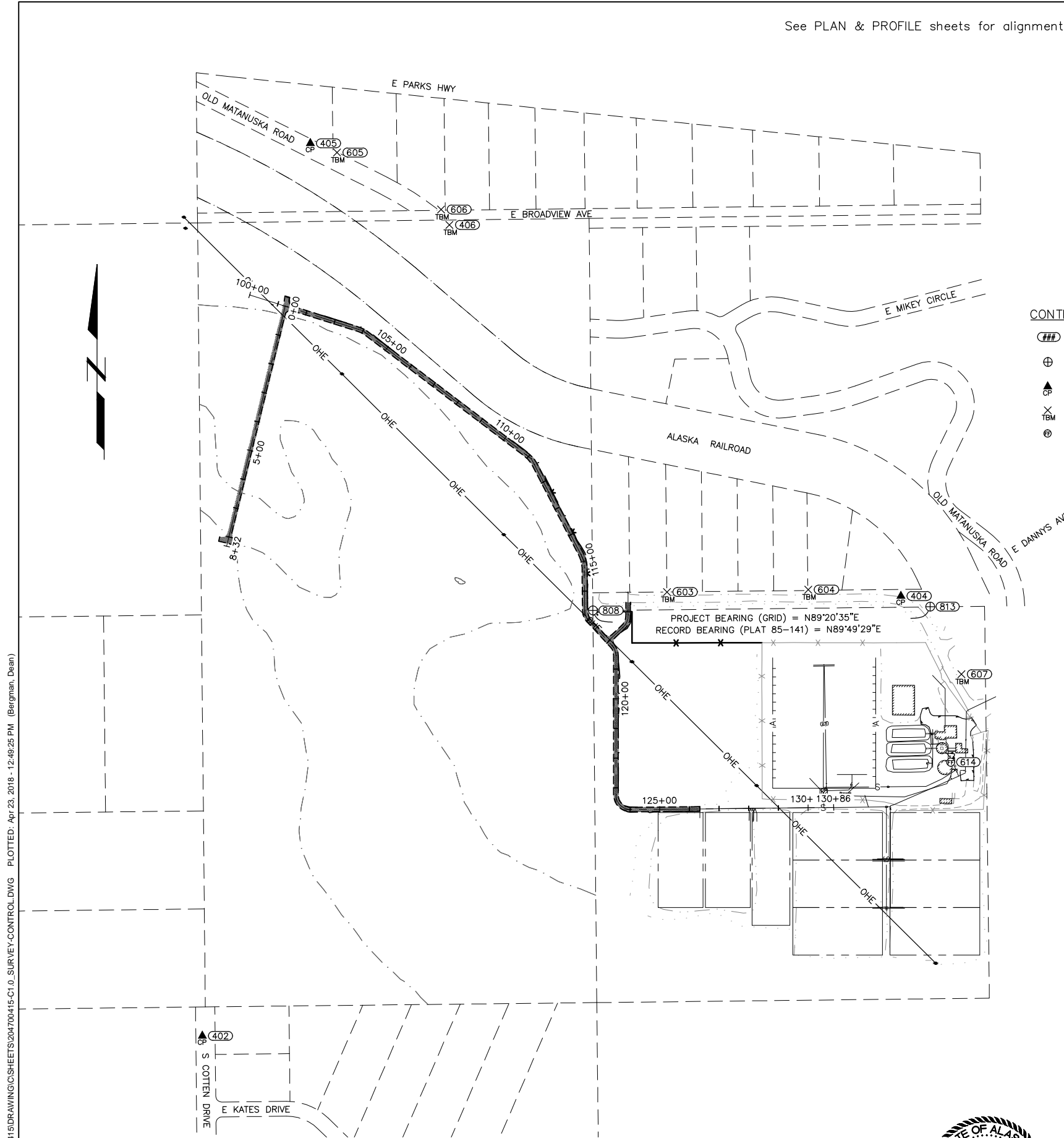
To convert from NAD83(2011) (Epoch 2010.00) Alaska State Plane Zone 4 to the ground coordinate system, perform the following:
 1. Subtract 2700000.000N, 1600000.000E from project coordinates.
 2. Scale about 64491.754N, 46741.204E by 1.0001042953.

VERTICAL CONTROL (PROJECT DATUM)

The Basis of Vertical Control for this survey is the Finish Floor elevation of the threshold of the Clarifier per a topographic survey drawing by Alaska Rim Engineering dated 7/24/96, said threshold has a record elevation of 251.94'.

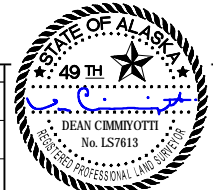
VERTICAL CONVERSION TO NAVD88

The GNSS derived NAVD88/GE01D12B Orthometric Height of Control Point 404 is 252.90'. The Project Datum Elevation of Control Point 404 is 246.14'. To convert from Project Datum to NAVD88 add 6.76' (246.14' + 6.76' = 252.90').



DRAWING NAME: U:\204700415\DRAWING\CS\204700415-C1-0_SURVEY-CONTROL.DWG PLOTTED: Apr 23, 2018 - 12:49:25 PM (Bergman, Dean)

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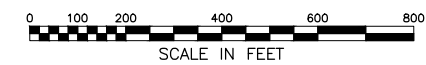
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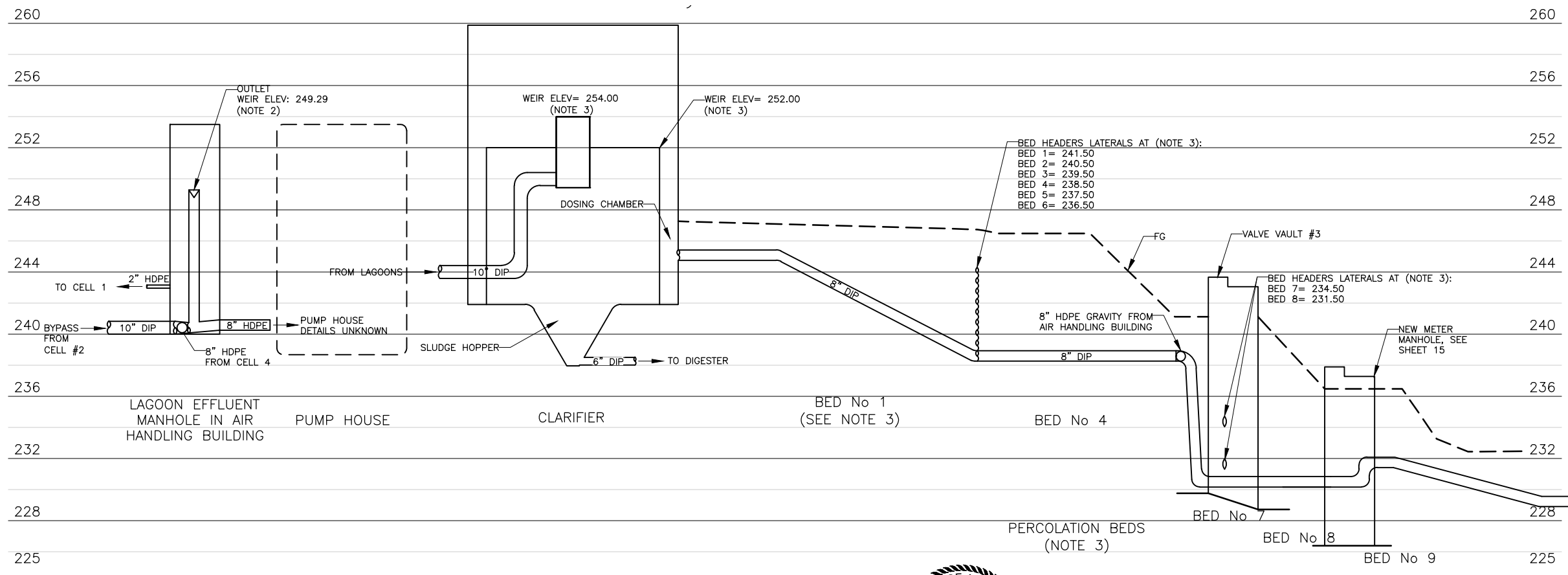
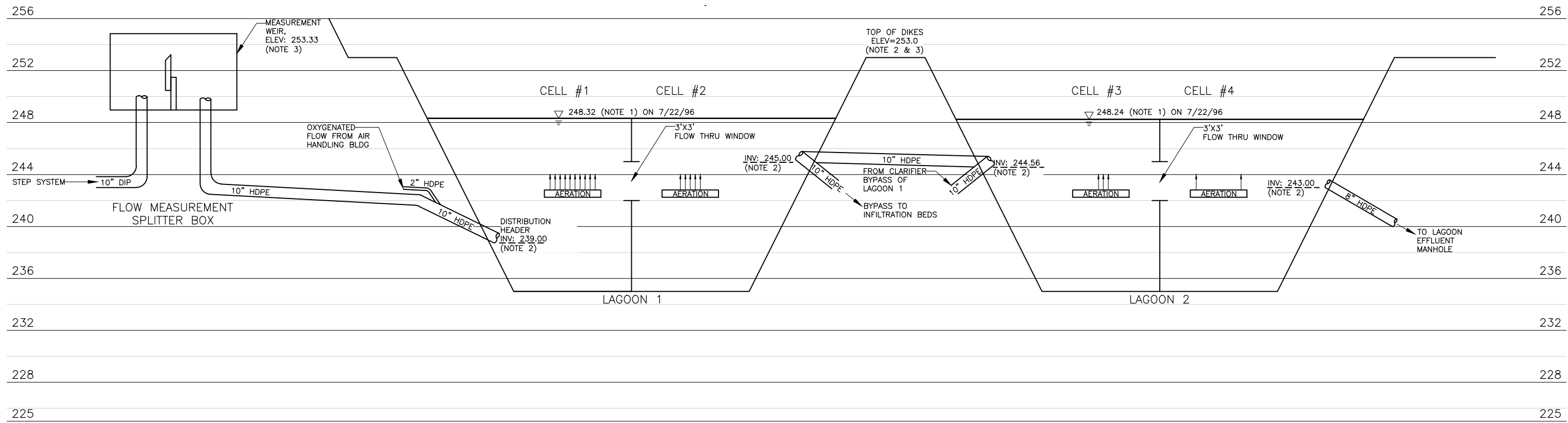
 OWNER:

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SURVEY CONTROL

SHEET NO.
3
 W.O.NO. 204700415



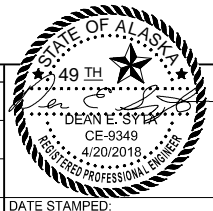
THIS DRAWING IS HALF-SIZE AT 11"x17"



- NOTES:**
1. BASED ON TOPOGRAPHIC SURVEY BY ALASKA RIM ENGINEERING, REVISION DATE 03/07/97.
 2. BASED ON WASILLA SEWERAGE FACILITIES TREATMENT SYSTEM DESIGN BY POLARCONSULT ALASKA, INC, DATED 03/15/93.
 3. BASED ON WASILLA SEWERAGE FACILITIES TREATMENT SYSTEM DESIGN BY CH2M HILL DATED JUNE 1984.
 4. TYPICAL BED SECTION CALLS FOR 6" OF FILTER ROCK BENEATH HEADER ELEVATION, SEE NOTE 3.

DRAWING NAME: U:\204700415\DRAWING\CS\204700415-C2.0-HYDRAULIC_PROFILE.DWG PLOTTED: Apr 20, 2018 - 3:47:15 PM (Alward, Jake)

REV.	DATE	BY	REVISIONS	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS



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HYDRAULIC PROFILE
 OWNER:

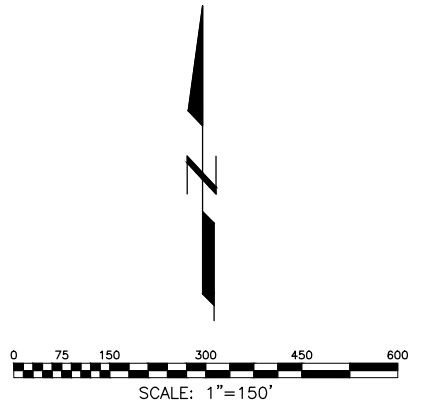
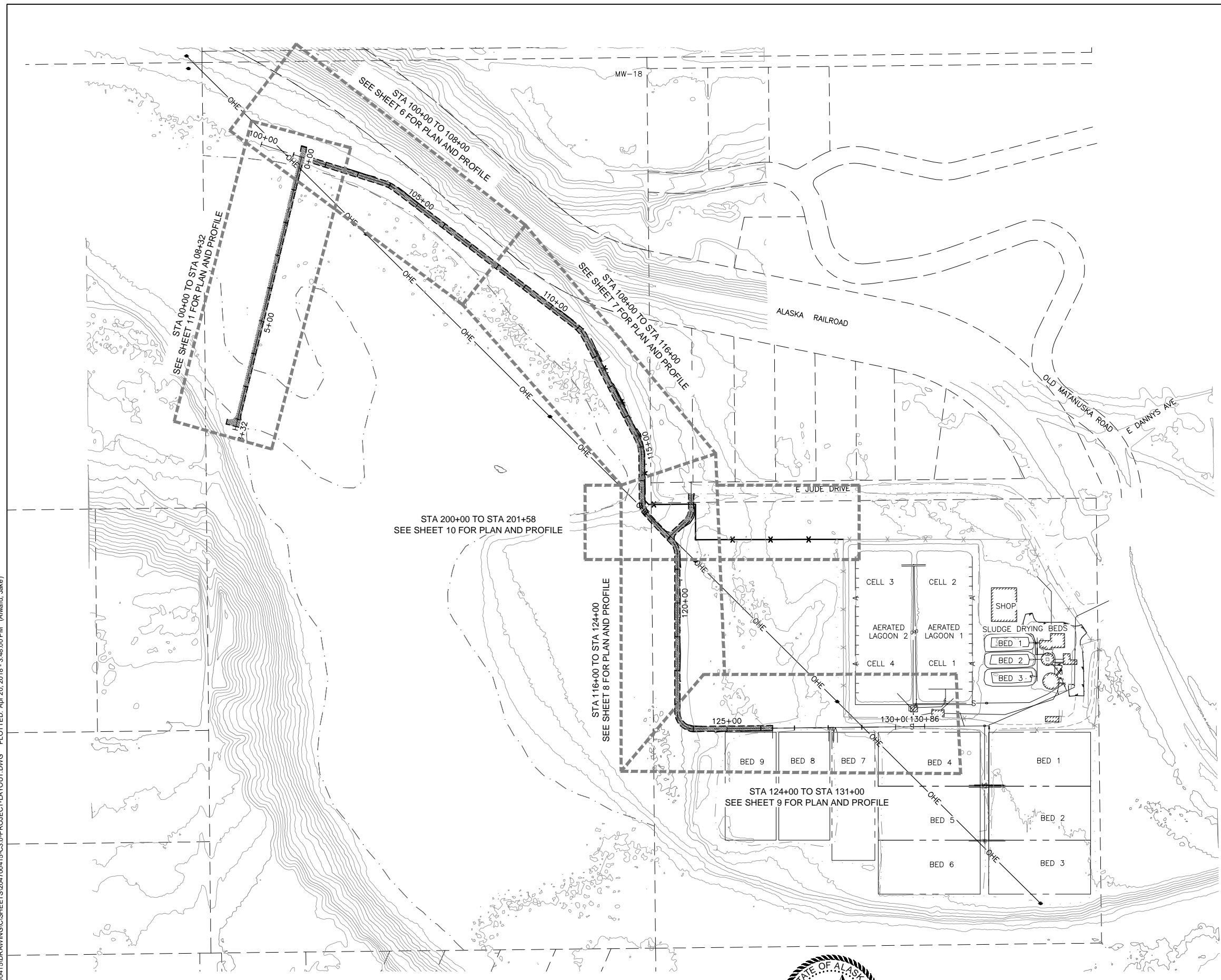
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W.O.NO. 204700415	

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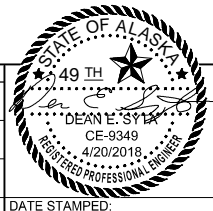
NOTES:

1. CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA AND SUPPLEMENTED WITH LIMITED SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.




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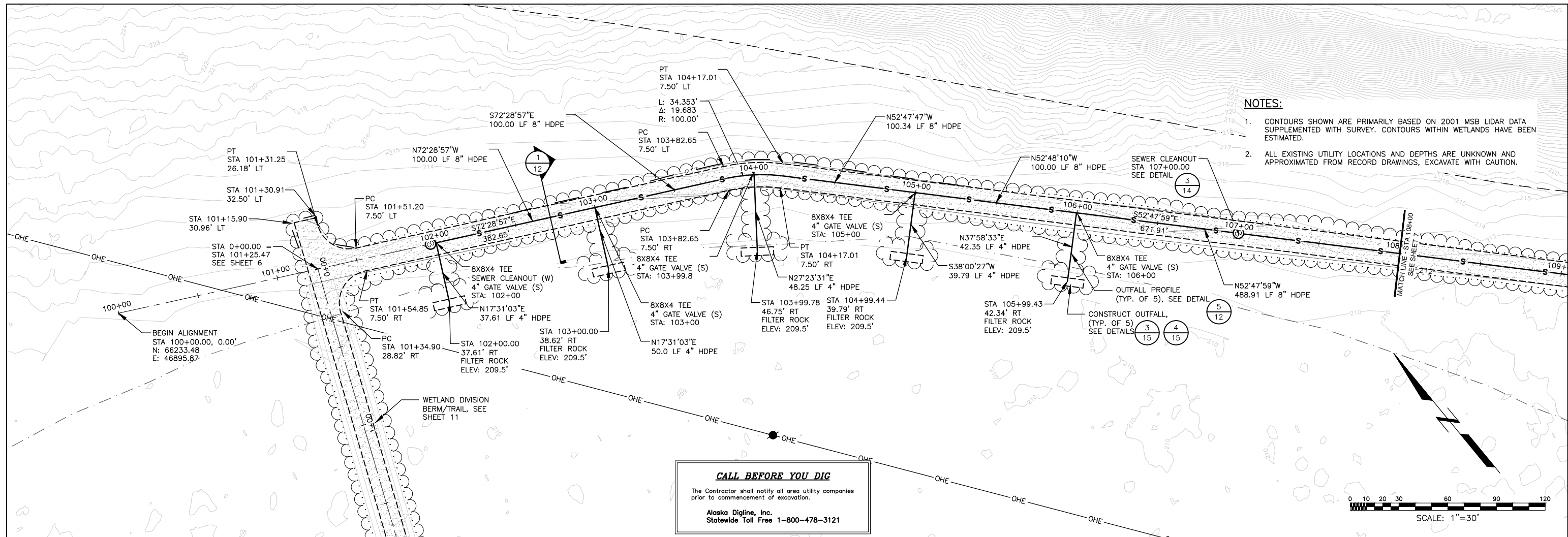
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 OWNER:

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PROJECT LAYOUT
 ISSUED FOR CONSTRUCTION

SHEET NO.
5
 W.O.NO. 204700415

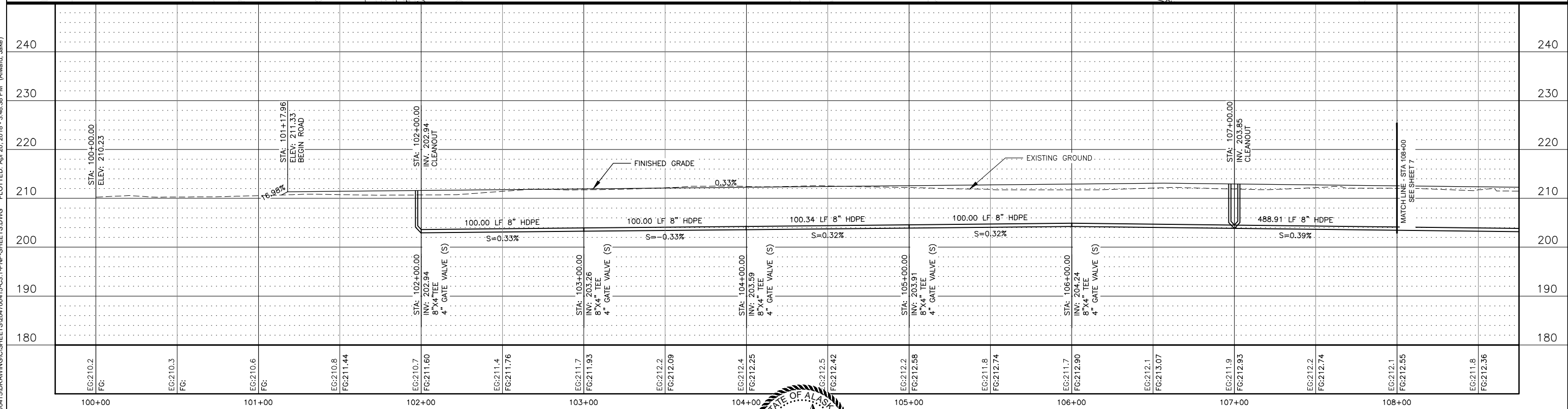
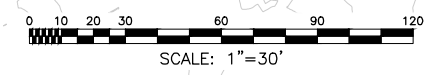
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- NOTES:**
1. CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA SUPPLEMENTED WITH SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
 2. ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.

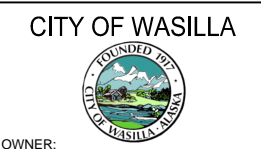
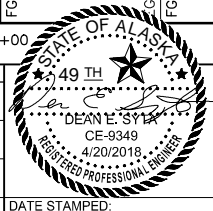
CALL BEFORE YOU DIG
 The Contractor shall notify all area utility companies prior to commencement of excavation.
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 Statewide Toll Free 1-800-478-3121



REV.	DATE	BY	REVISIONS	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS	SCALE	DATA	DATE STAMPED

EG-210.2 FG:	EG-210.3 FG:	EG-210.6 FG:	EG-210.8 FG-211.44	EG-210.7 FG-211.60	EG-211.4 FG-211.76	EG-211.7 FG-211.93	EG-212.2 FG-212.09	EG-212.4 FG-212.25	EG-212.5 FG-212.42	EG-212.2 FG-212.58	EG-211.8 FG-212.74	EG-211.7 FG-212.90	EG-212.1 FG-213.07	EG-211.9 FG-212.93	EG-212.2 FG-212.74	EG-212.1 FG-212.95	EG-211.8 FG-212.36
100+00	101+00	102+00	103+00	104+00	105+00	106+00	107+00	108+00									

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CITY OF WASILLA
 TREATED EFFLUENT DISCHARGE PILOT STUDY

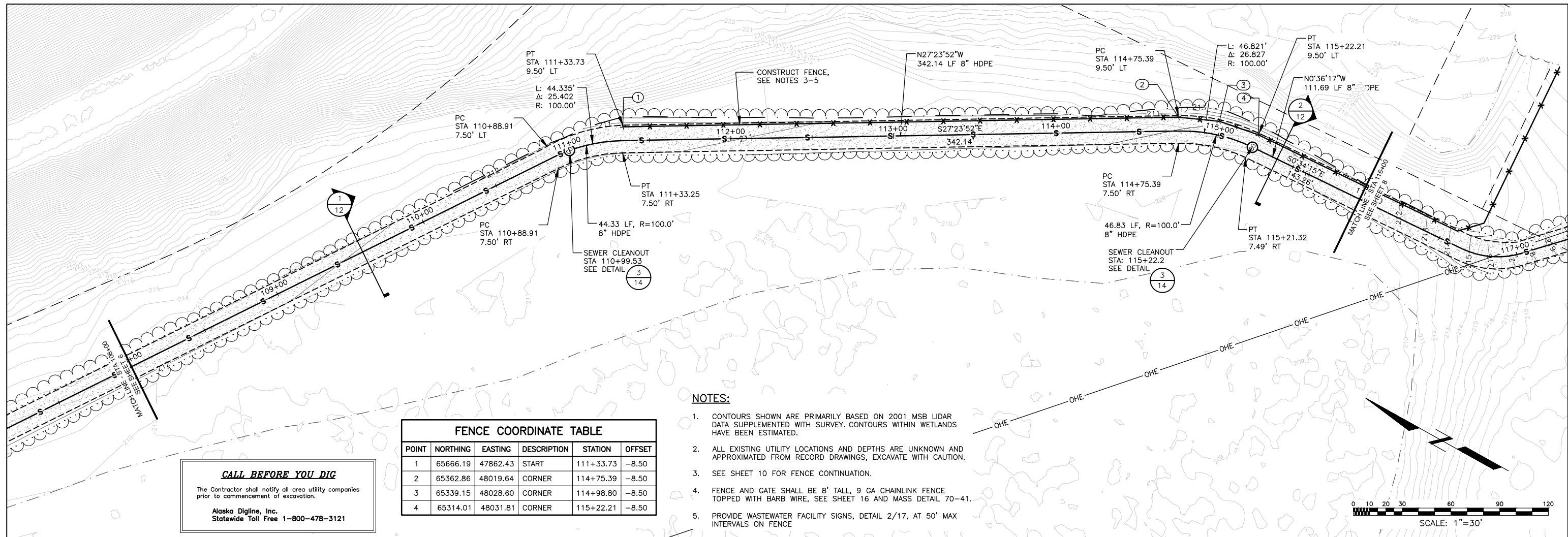
PLAN & PROFILE
 STA 100+00 TO STA 108+00

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SHEET NO.
6
 W.O.NO. 204700415

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DRAWING NAME: U:\204700415\DRAWING\CS\204700415-C3.1-PNP-SHEETS.DWG PLOTTED: Apr 20, 2018 - 3:48:54 PM (Alward, Jake)

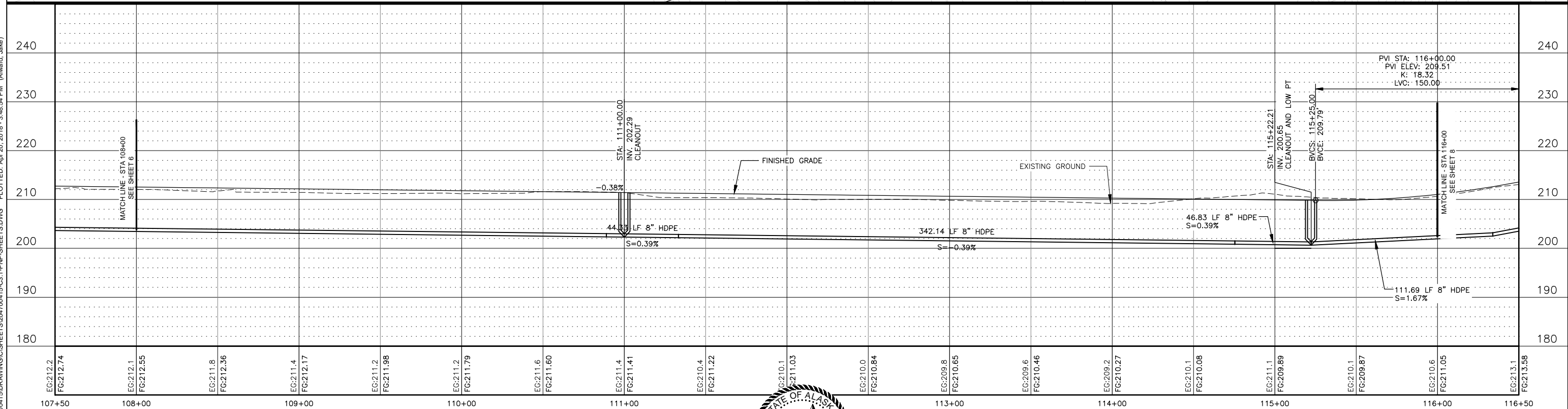


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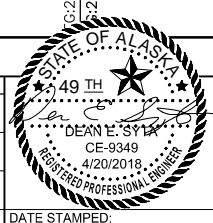
FENCE COORDINATE TABLE					
POINT	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
1	65666.19	47862.43	START	111+33.73	-8.50
2	65362.86	48019.64	CORNER	114+75.39	-8.50
3	65339.15	48028.60	CORNER	114+98.80	-8.50
4	65314.01	48031.81	CORNER	115+22.21	-8.50

NOTES:

- CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA SUPPLEMENTED WITH SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
- ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.
- SEE SHEET 10 FOR FENCE CONTINUATION.
- FENCE AND GATE SHALL BE 8' TALL, 9 GA CHAINLINK FENCE TOPPED WITH BARB WIRE, SEE SHEET 16 AND MASS DETAIL 70-41.
- PROVIDE WASTEWATER FACILITY SIGNS, DETAIL 2/17, AT 50' MAX INTERVALS ON FENCE



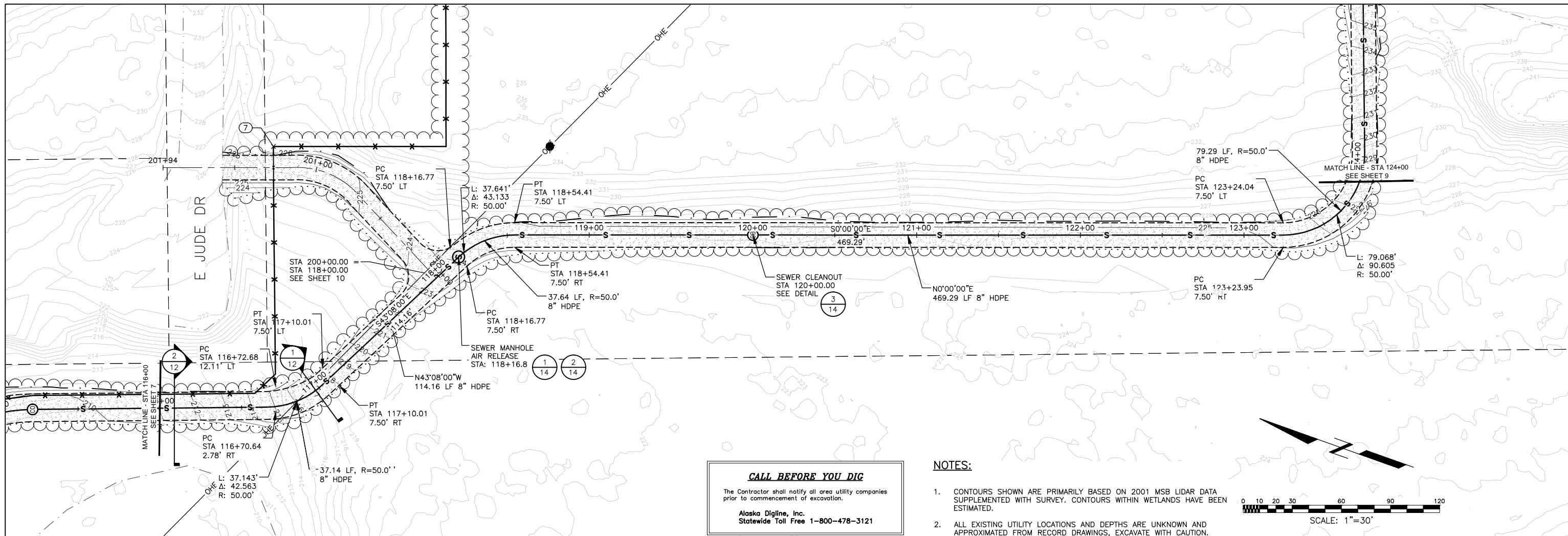
	EG:212.2 FG:212.74	EG:212.1 FG:212.55	EG:211.8 FG:212.36	EG:211.4 FG:212.17	EG:211.2 FG:211.98	EG:211.2 FG:211.79	EG:211.6 FG:211.60	EG:211.4 FG:211.41	EG:210.4 FG:211.22	EG:210.1 FG:210.84	EG:209.8 FG:210.65	EG:209.6 FG:210.46	EG:209.2 FG:210.27	EG:210.1 FG:210.08	EG:211.1 FG:209.89	EG:210.1 FG:209.87	EG:210.6 FG:211.05	EG:213.1 FG:213.58									
	107+50	108+00		109+00		110+00		111+00		113+00		114+00		115+00		116+00		116+50									
REV.	DATE	BY	REVISIONS			NO.	BASIS OF VERTICAL CONTROL		ELEV.	FIELD BOOKS	SCALE	DATA	DESIGN:	JAA	STAKING:	VER.	DRAWN:	RW	CHECKED:	DES	DATE STAMPED:	OWNER:	CITY OF WASILLA	CITY OF WASILLA TREATED EFFLUENT DISCHARGE PILOT STUDY	SHEET NO.	7	W.O.NO. 204700415



PLAN & PROFILE
 STA 108+00 TO STA 116+00

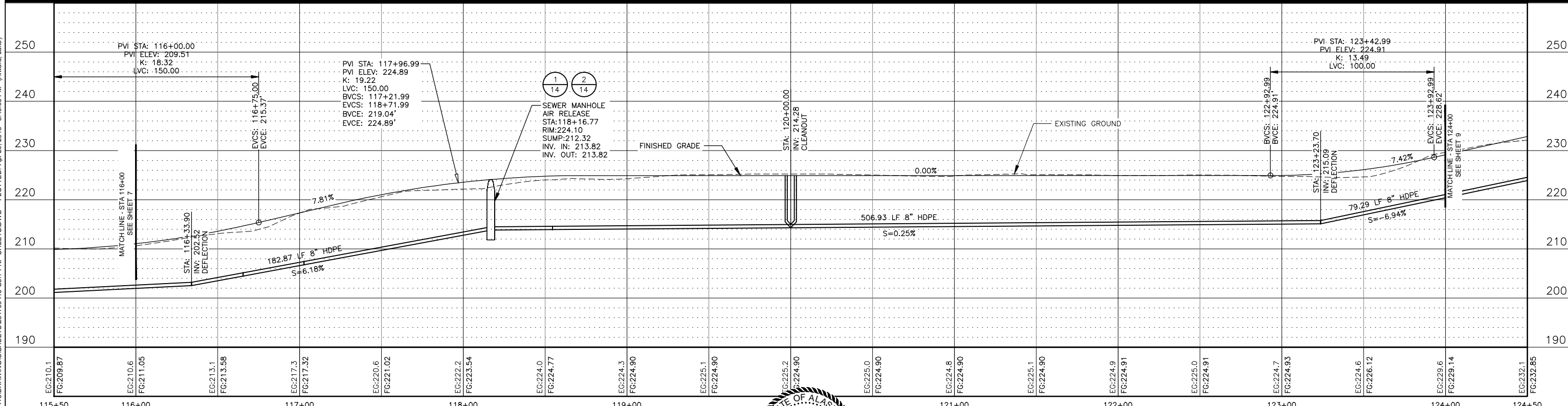
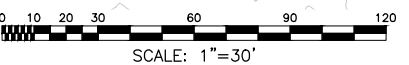
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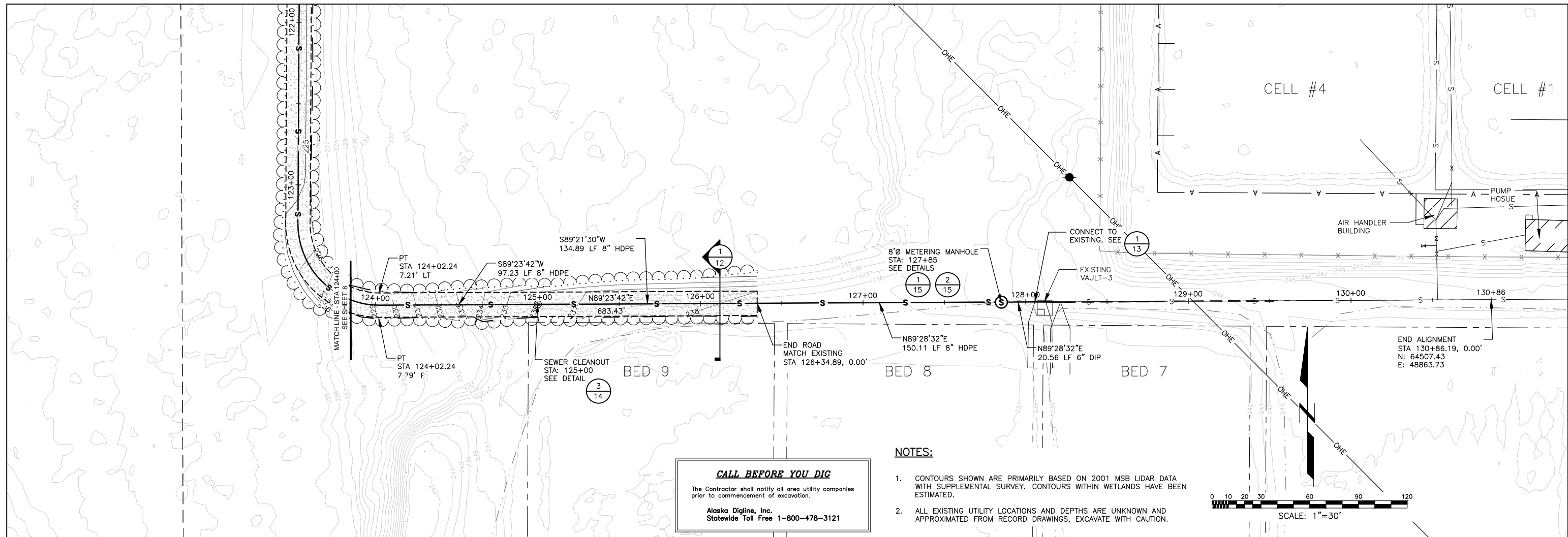
NOTES:

- CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA SUPPLEMENTED WITH SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
- ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.



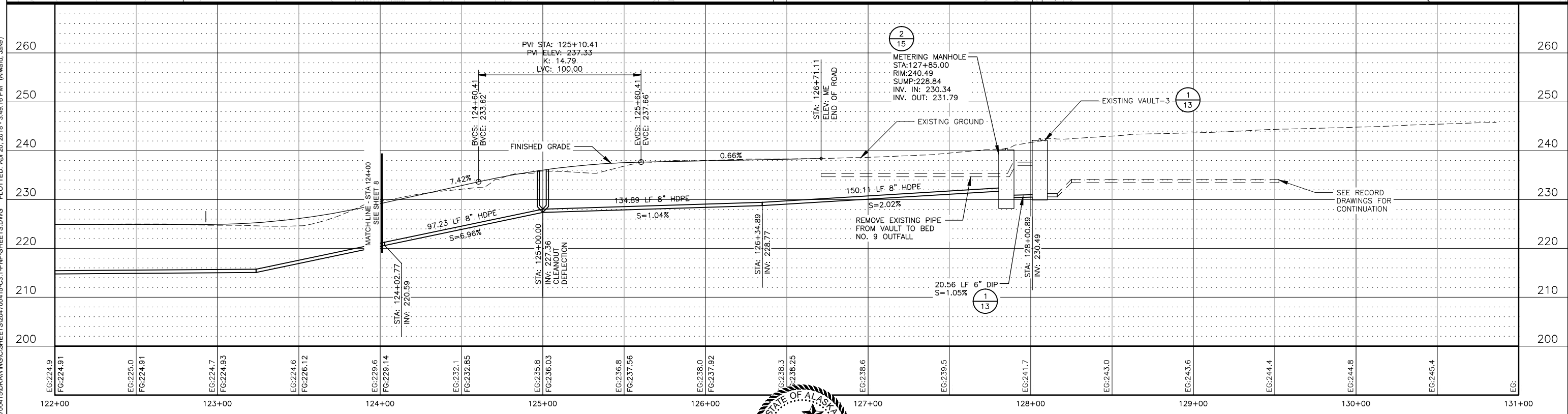
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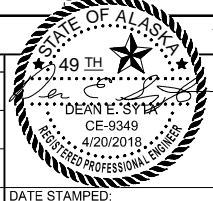


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- NOTES:**
- CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA WITH SUPPLEMENTAL SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
 - ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.



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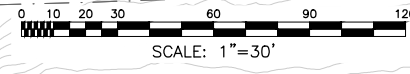
CITY OF WASILLA
 TREATED EFFLUENT DISCHARGE PILOT STUDY

PLAN & PROFILE
 STA 124+00 TO STA 131+00

SHEET NO.
9
 W.O.NO. 204700415

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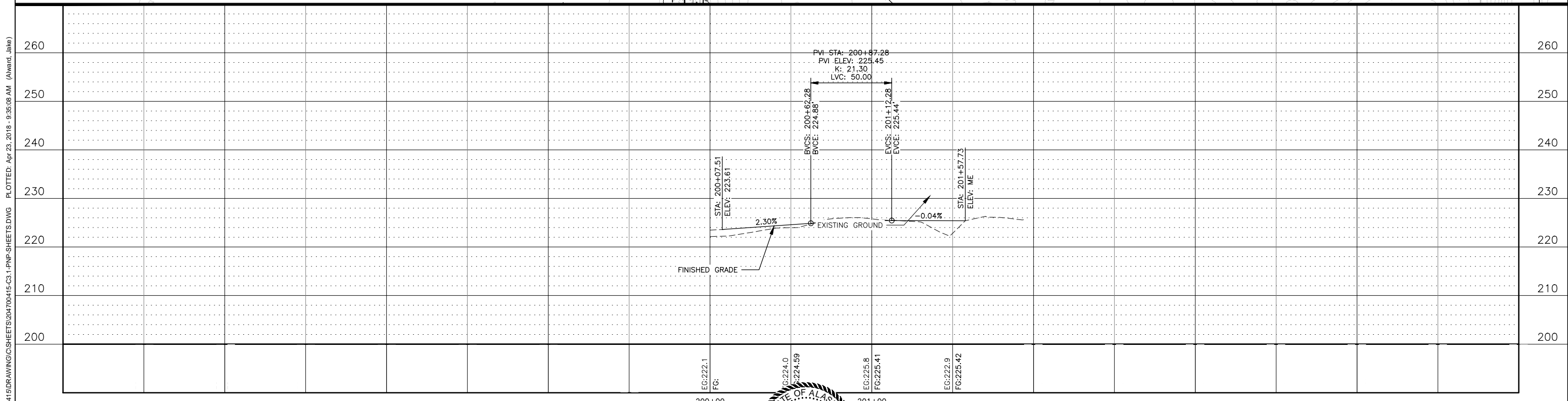


FENCE COORDINATE TABLE					
POINT	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
5	65178.07	48033.16	CORNER	116+58.16	-8.50
6	65165.63	48044.83	CORNER	116+74.14	-19.59
7	65166.80	48183.80	CORNER	117+80.38	-126.60
8	65061.36	48183.80	CORNER	118+35.28	-62.10
9	65062.22	48622.31	END	118+50.48	-494.18
10	65166.74	48163.00	GATE	117+66.20	-111.38
11	65166.80	48178.70	GATE	117+76.89	-122.87

NOTES:

1. CONTOURS SHOWN ARE PRIMARILY BASED ON 2001 MSB LIDAR DATA WITH SUPPLEMENTAL SURVEY. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
2. ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.
3. FENCE AND GATE SHALL BE 8' TALL, 9 GA CHAINLINK FENCE TOPPED WITH BARB WIRE, SEE SHEET 16 AND MASS DETAIL 70-41.
4. PROVIDE WASTEWATER FACILITY SIGNS, DETAIL 2/17, AT 50' MAX INTERVALS ON FENCE.
5. PROVIDE WASTEWATER FACILITY SIGN, DETAIL 2/17, ON GATE.

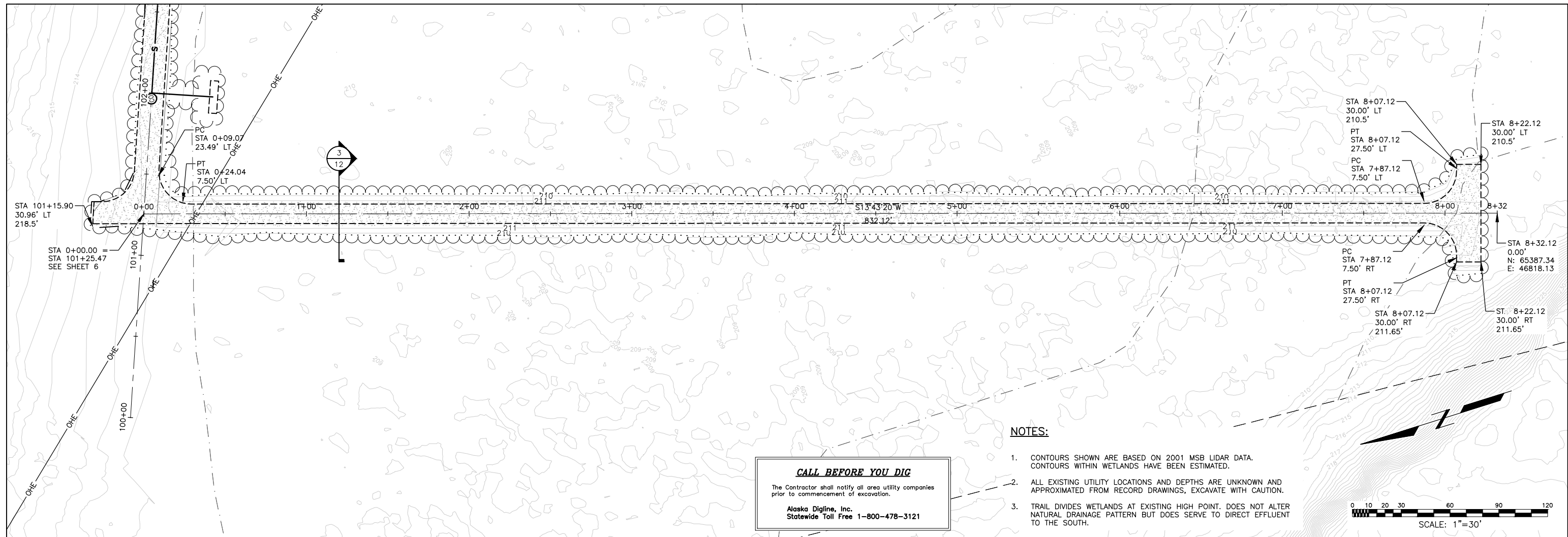
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DRAWING NAME: U:\204700415\DRAWING\CS\204700415-C3.1-PNP-SHEETS.DWG PLOTTED: Apr 23, 2018 - 9:35:08 AM (Alward, Jake)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	REV.	DATE	BY	REVISIONS					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>BY</th> <th>NO.</th> <th>BASIS OF VERTICAL CONTROL</th> <th>ELEV.</th> <th>FIELD BOOKS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	DATE	BY	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS							<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SCALE</th> <th>DATA</th> </tr> <tr> <td>HOR.</td> <td>DESIGN: JAA</td> </tr> <tr> <td>VER.</td> <td>DRAWN: RW</td> </tr> <tr> <td>GRID</td> <td>CHECKED: DES</td> </tr> <tr> <td> </td> <td>DATE STAMPED: 4/20/2018</td> </tr> </table>	SCALE	DATA	HOR.	DESIGN: JAA	VER.	DRAWN: RW	GRID	CHECKED: DES		DATE STAMPED: 4/20/2018	<div style="text-align: center;"> </div>	<div style="text-align: center;"> <p>STANTEC CONSULTING SERVICES INC. 725 East Fireweed Lane Suite 200 Anchorage, Ak 99503 PH (907) 276-4245 Certificate of Authorization # 126386 www.stantec.com</p> </div>	<div style="text-align: center;"> <p>CITY OF WASILLA TREATED EFFLUENT DISCHARGE PILOT STUDY</p> </div>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>SHEET NO.</th> </tr> <tr> <td style="text-align: center; font-size: 24pt;">10</td> </tr> <tr> <td style="font-size: 8pt;">W.O.NO. 204700415</td> </tr> </table>	SHEET NO.	10	W.O.NO. 204700415
REV.	DATE	BY	REVISIONS																																					
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PLAN & PROFILE
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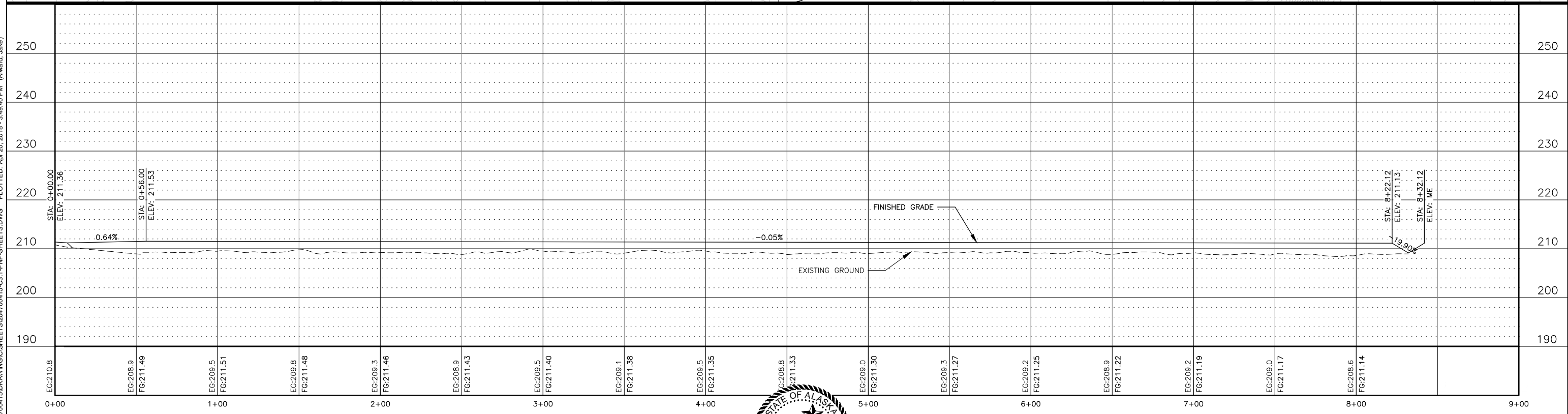
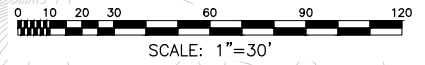
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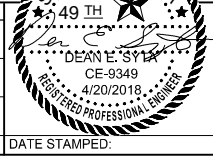
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NOTES:

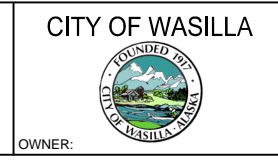
1. CONTOURS SHOWN ARE BASED ON 2001 MSB LIDAR DATA. CONTOURS WITHIN WETLANDS HAVE BEEN ESTIMATED.
2. ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE UNKNOWN AND APPROXIMATED FROM RECORD DRAWINGS, EXCAVATE WITH CAUTION.
3. TRAIL DIVIDES WETLANDS AT EXISTING HIGH POINT. DOES NOT ALTER NATURAL DRAINAGE PATTERN BUT DOES SERVE TO DIRECT EFFLUENT TO THE SOUTH.



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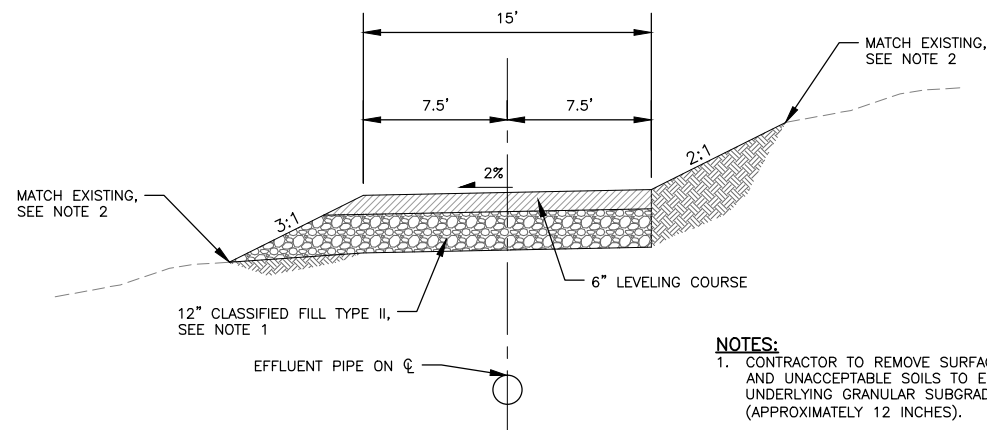
CITY OF WASILLA
 TREATED EFFLUENT DISCHARGE PILOT STUDY

PLAN & PROFILE
 STA 00+00 TO STA 09+00

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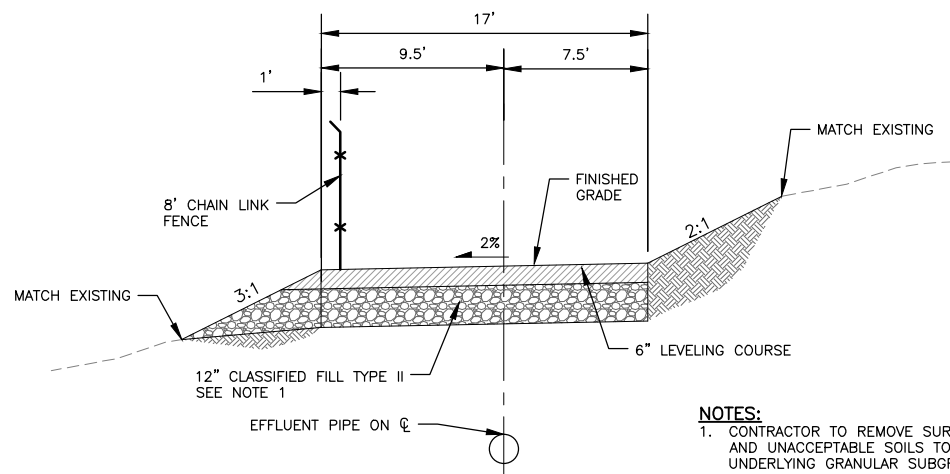
SHEET NO.	11
W.O.NO. 204700415	

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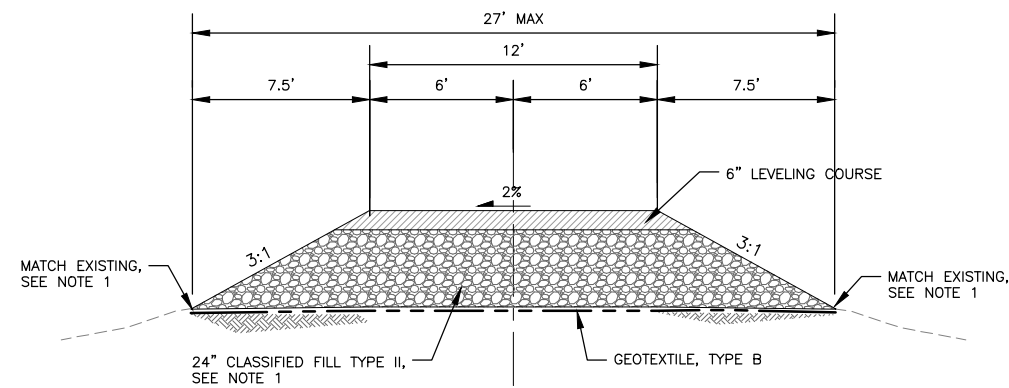
- NOTES:**
- CONTRACTOR TO REMOVE SURFACE ORGANICS AND UNACCEPTABLE SOILS TO EXPOSE THE UNDERLYING GRANULAR SUBGRADE (APPROXIMATELY 12 INCHES).
 - CLEAR BETWEEN CUT/FILL LIMITS.

1
12 TYPICAL ACCESS ROAD CROSS SECTION
SCALE: NTS



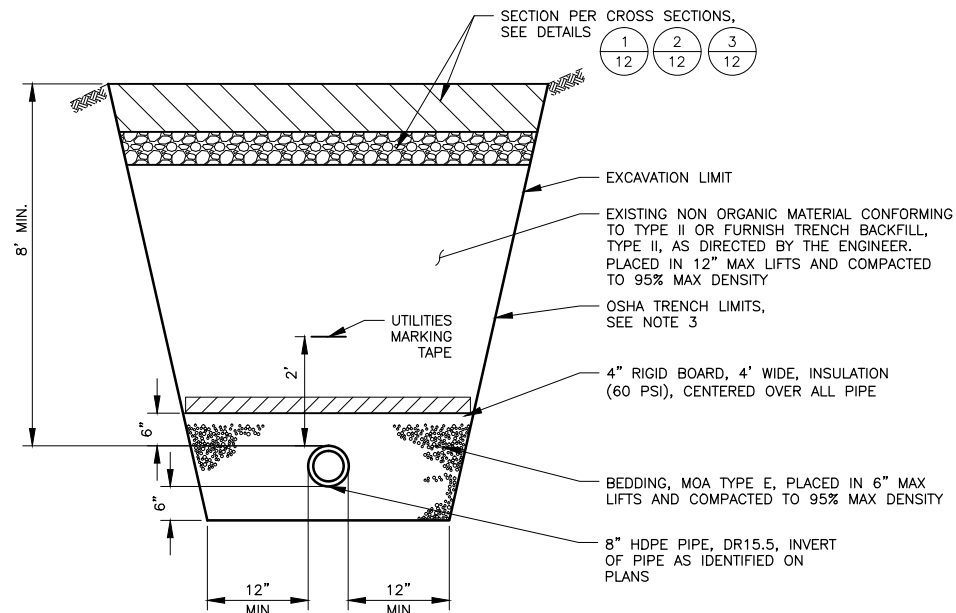
- NOTES:**
- CONTRACTOR TO REMOVE SURFACE ORGANICS AND UNACCEPTABLE SOILS TO EXPOSE THE UNDERLYING GRANULAR SUBGRADE (APPROXIMATELY 12 INCHES).
 - CLEAR BETWEEN CUT/FILL LIMITS.

2
12 TYPICAL ACCESS ROAD W/ FENCE CROSS SECTION
SCALE: NTS



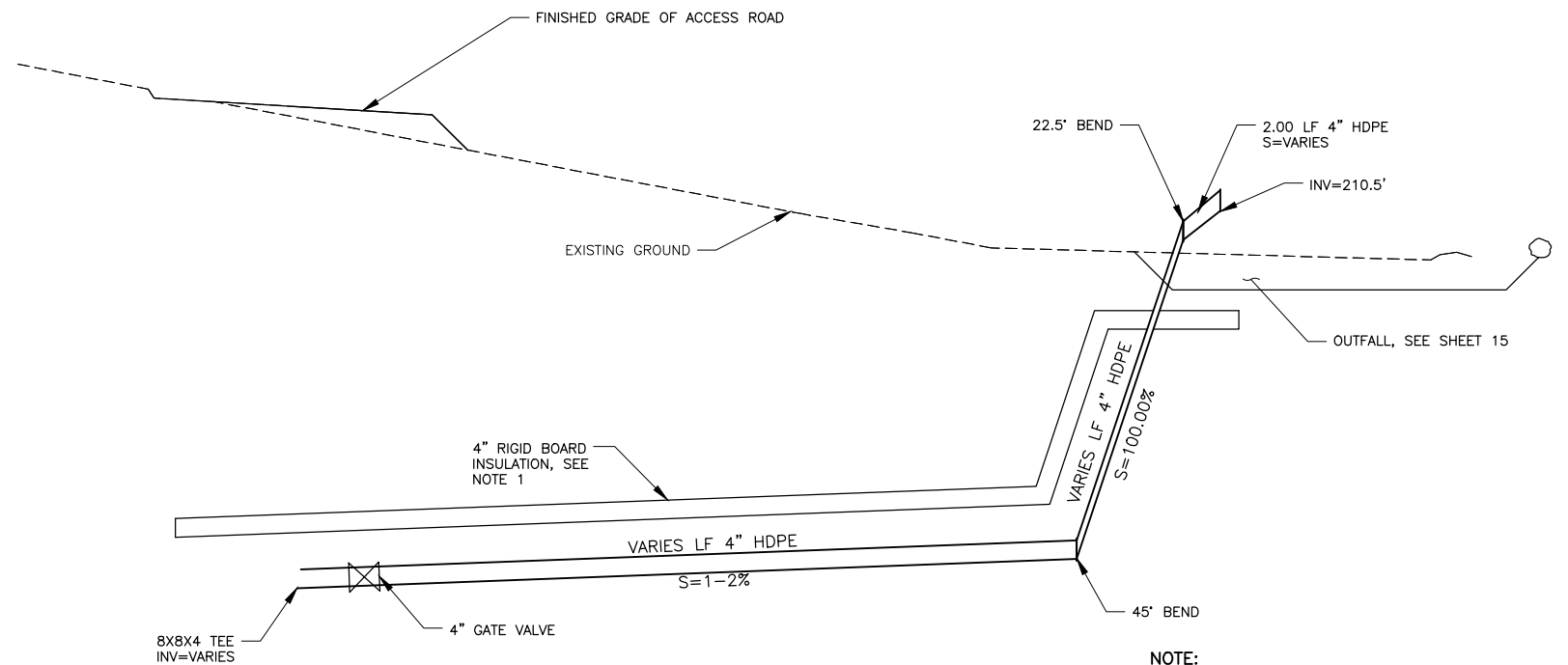
- NOTE:**
- CLEAR BETWEEN CUT/FILL LIMITS.

3
12 TYPICAL TRAIL CROSS SECTION
SCALE: NTS



- NOTES:**
- SECTION APPLIES TO OPEN EXCAVATIONS FOR SEWER DISCHARGE LINE.
 - TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH AND CHARACTERISTICS. SLOPES SHALL CONFORM TO OSHA SAFETY STANDARDS. PROVIDE ENGINEERED SHORING AS REQUIRED TO PROTECT WORKERS AND EXISTING FEATURES.
 - ALL BACKFILL SHALL ACHIEVE A MINIMUM OF 95% COMPACTION AS DETERMINED BY ASTM D-1557.
 - EXISTING SOIL MATERIALS SHALL BE SALVAGED AND REUSED TO EXTENT POSSIBLE. NO MATERIAL MAY BE DISPOSED OF WITHOUT THE APPROVAL OF THE ENGINEER.
 - THE CONTRACTOR SHALL NOTIFY ALL AREA UTILITY COMPANIES PRIOR TO EXCAVATION, ALASKA DIGLINE, INC. 1-800-478-3121.

4
12 EFFLUENT DISCHARGE TRENCH SECTION
SCALE: NTS

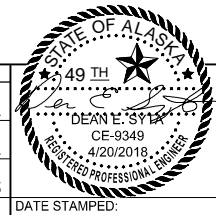


- NOTE:**
- PROVIDE 4" RIGID BOARD INSULATION 6" ABOVE PIPE, 4' WIDE ABOVE PIPE.
 - PIPE LENGTHS MAY VARY. OUTFALL INVERT TO REMAIN CONSTANT AT 210.5'.

5
12 OUTFALL PIPE TYPICAL PROFILE
SCALE: NTS

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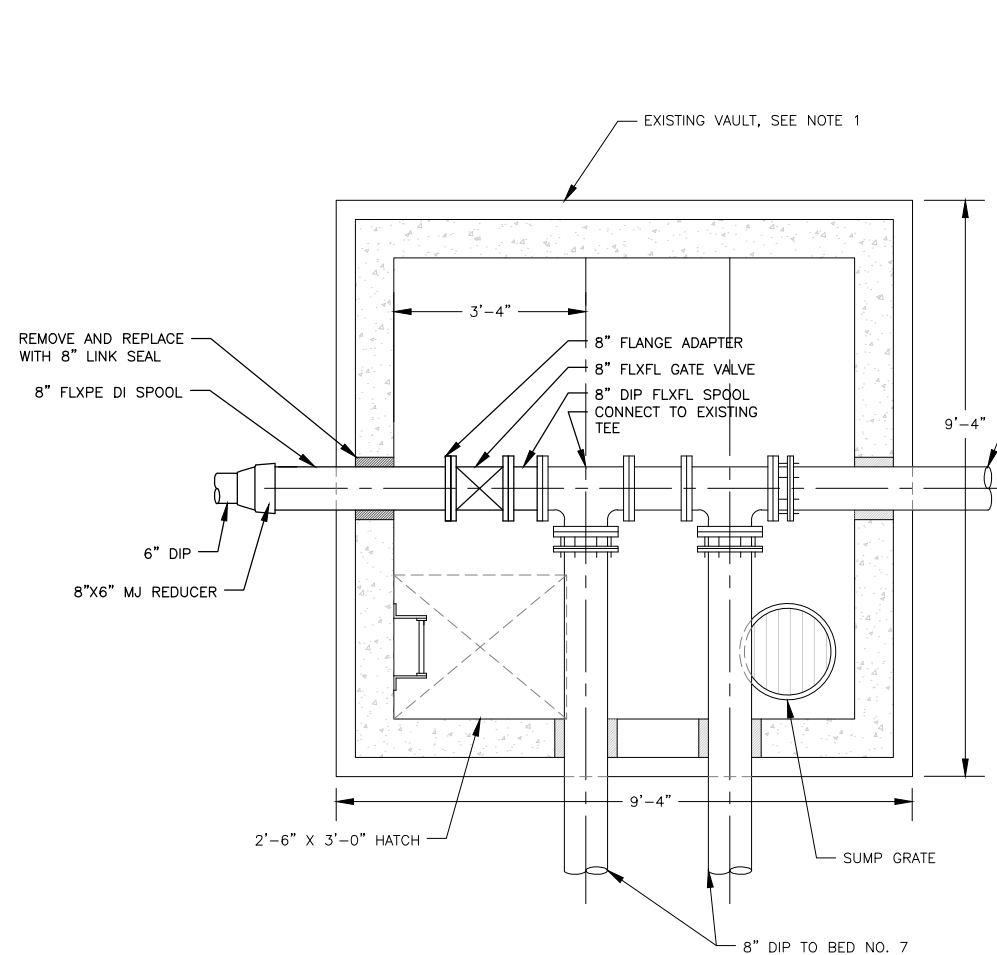
CITY OF WASILLA
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DETAILS

SHEET NO.
12
W.O.NO. 204700415

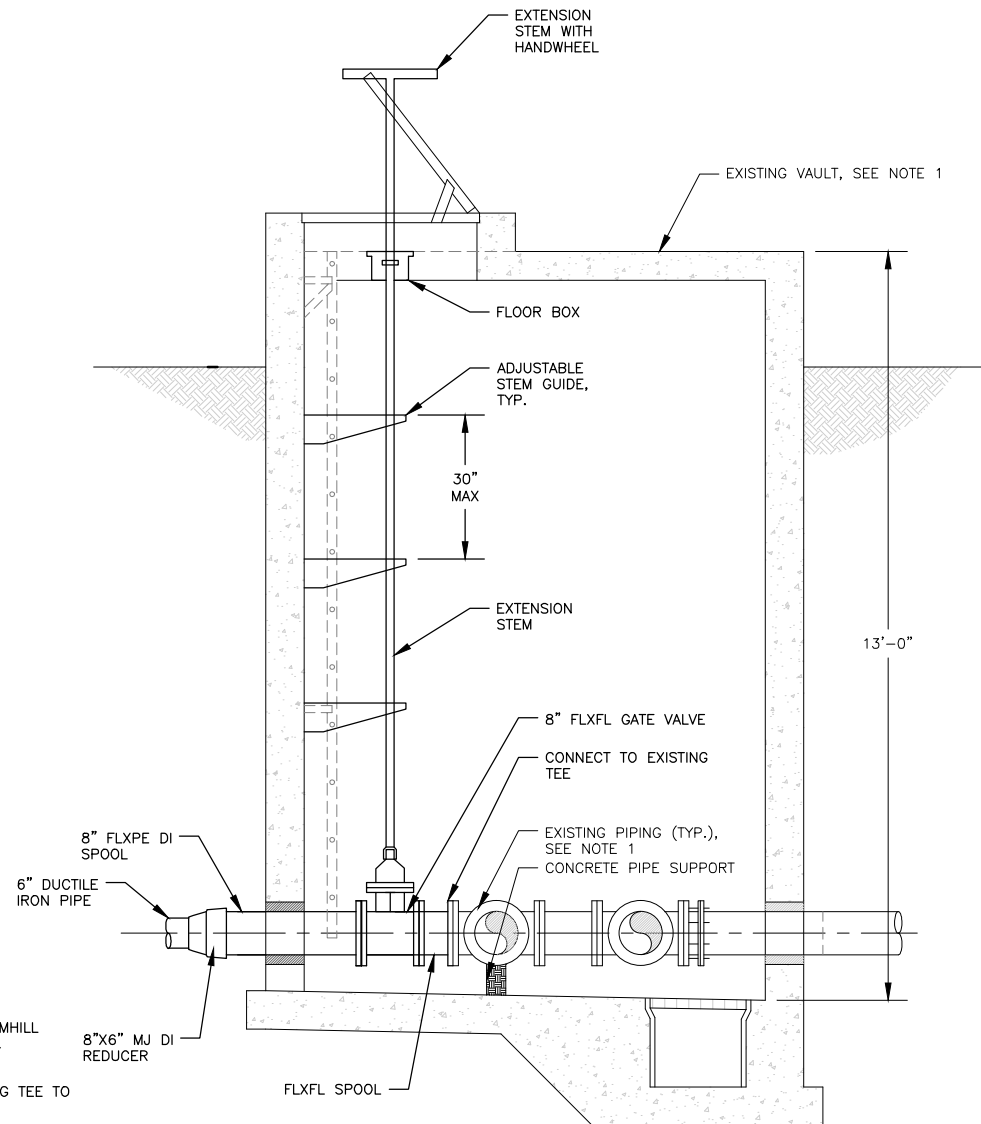
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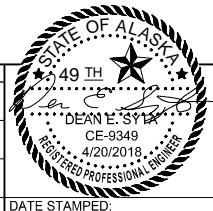
PLAN



SECTION

- NOTES:**
1. EXISTING CONDITIONS BASED ON CH2MHILL DESIGN DRAWINGS DATED JUNE 1984. CONTRACTOR TO VERIFY.
 2. REMOVE EXISTING PIPE FROM EXISTING TEE TO BED NO. 9 OUTFALL.
 3. INSULATE ALL NEW AND EXISTING PIPES AND APPURTENANCES WITH 2" NEOPRENE INSULATION, ARMAFLEX OR EQUAL (NOT SHOWN FOR CLARITY).

1
13 **EXISTING VAULT MODIFICATION DETAIL**
SCALE: NTS



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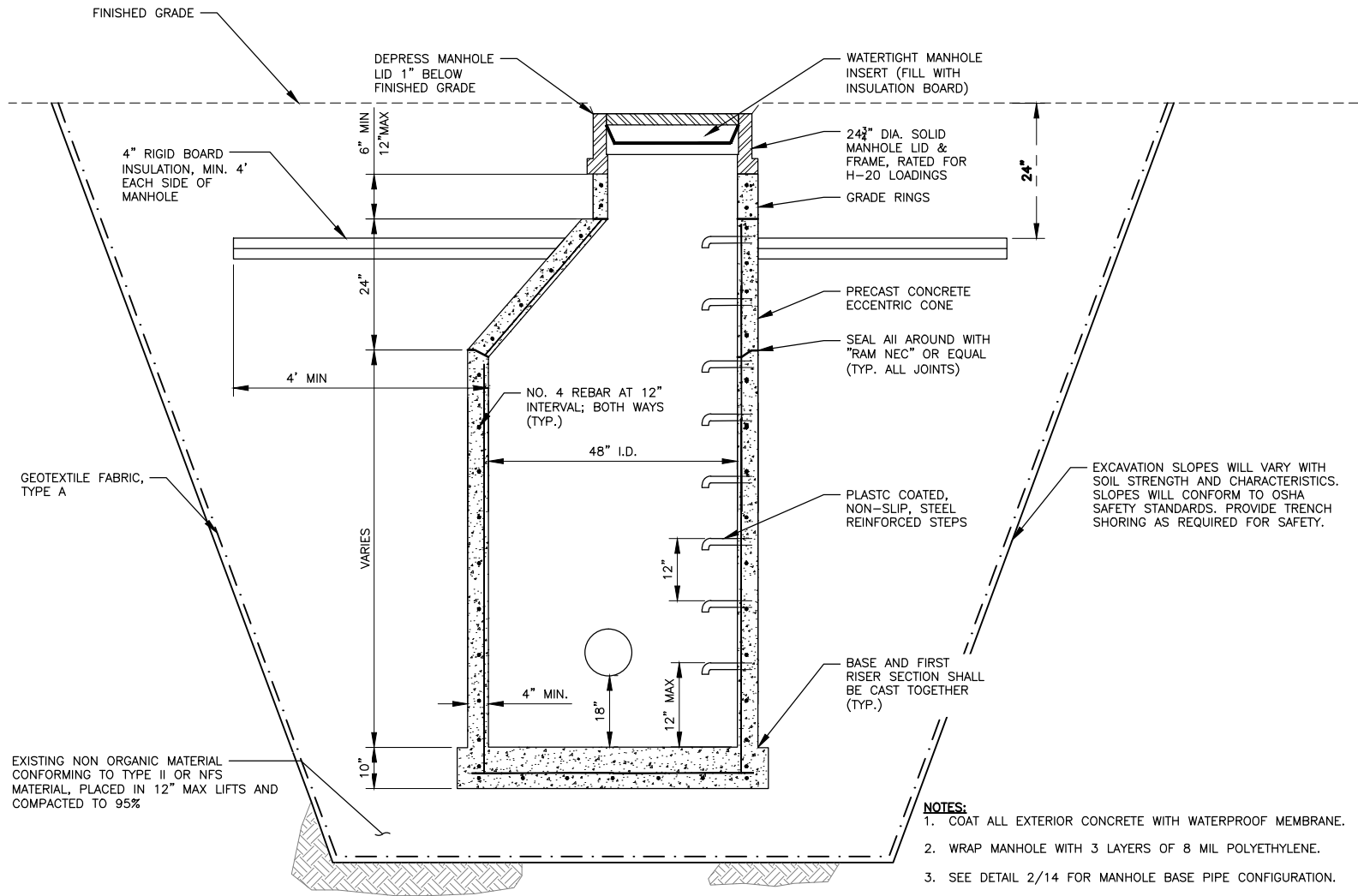
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TREATED EFFLUENT DISCHARGE PILOT STUDY
DETAILS - VAULT MODIFICATIONS

SHEET NO.
13
W.O.NO. 204700415

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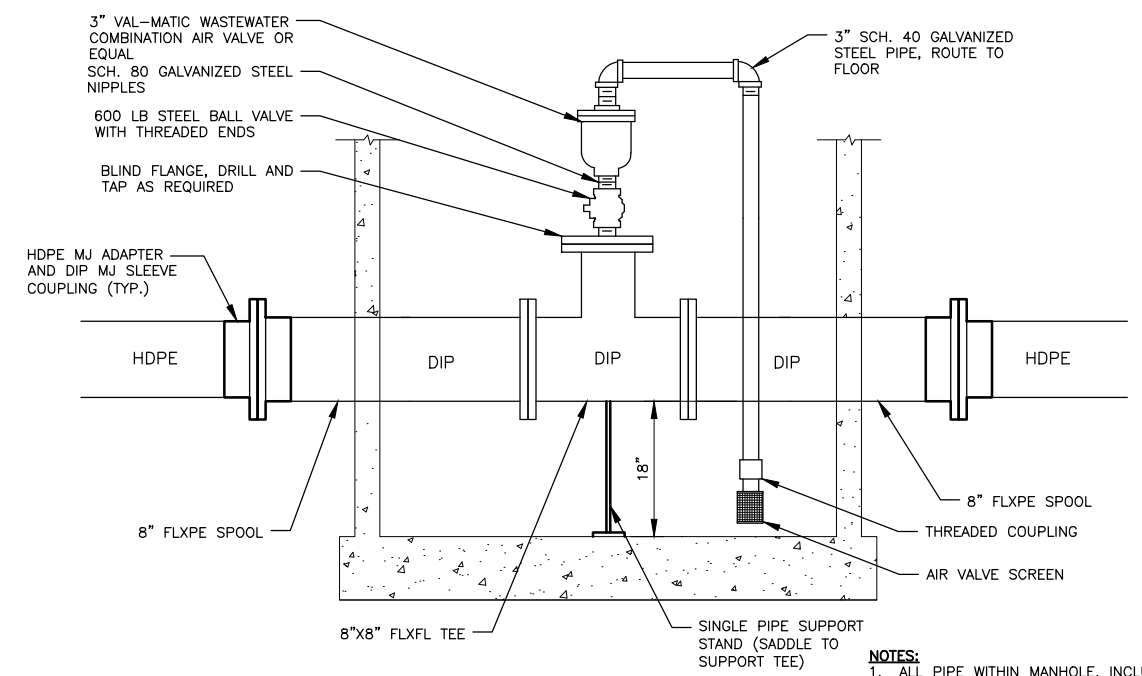
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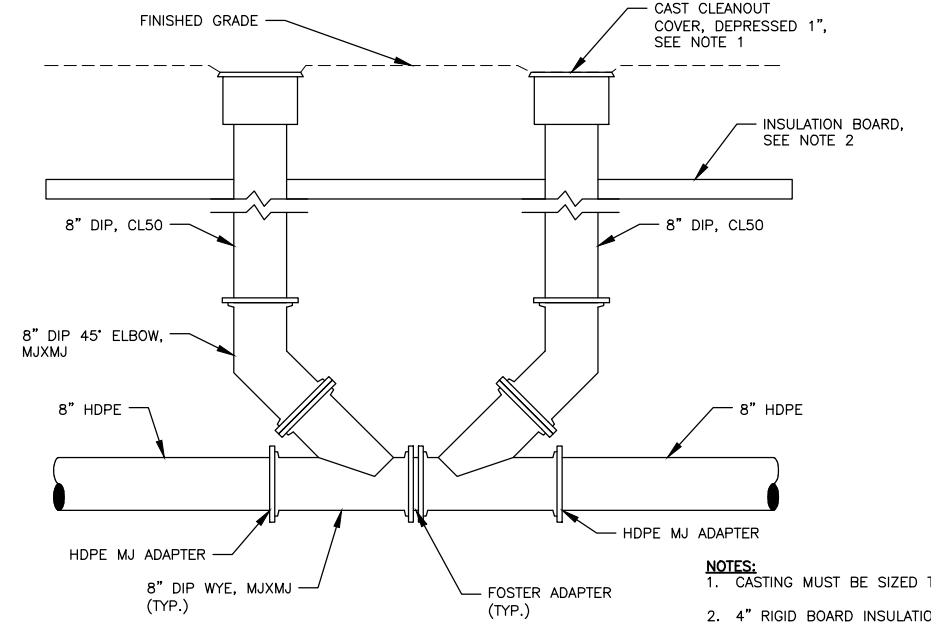
1
14 **48" TYPE I MANHOLE**
SCALE: NTS

- NOTES:**
1. COAT ALL EXTERIOR CONCRETE WITH WATERPROOF MEMBRANE.
 2. WRAP MANHOLE WITH 3 LAYERS OF 8 MIL POLYETHYLENE.
 3. SEE DETAIL 2/14 FOR MANHOLE BASE PIPE CONFIGURATION.
 4. REINFORCE CONCRETE PER ASTM C478.



2
14 **COMBINATION AIR VALVE**
SCALE: NTS

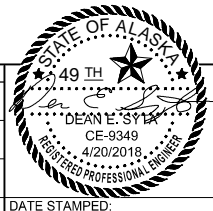
- NOTES:**
1. ALL PIPE WITHIN MANHOLE, INCLUDING AIRVALVE, TO BE INSULATED WITH 2" NEOPRENE INSULATION, ARMAFLEX OR EQUAL (NOT SHOWN FOR CLARITY).



3
14 **SEWER CLEANOUT**
SCALE: NTS

- NOTES:**
1. CASTING MUST BE SIZED TO FIT 8-INCH DIP
 2. 4" RIGID BOARD INSULATION 4' MIN ALL AROUND CLEANOUT

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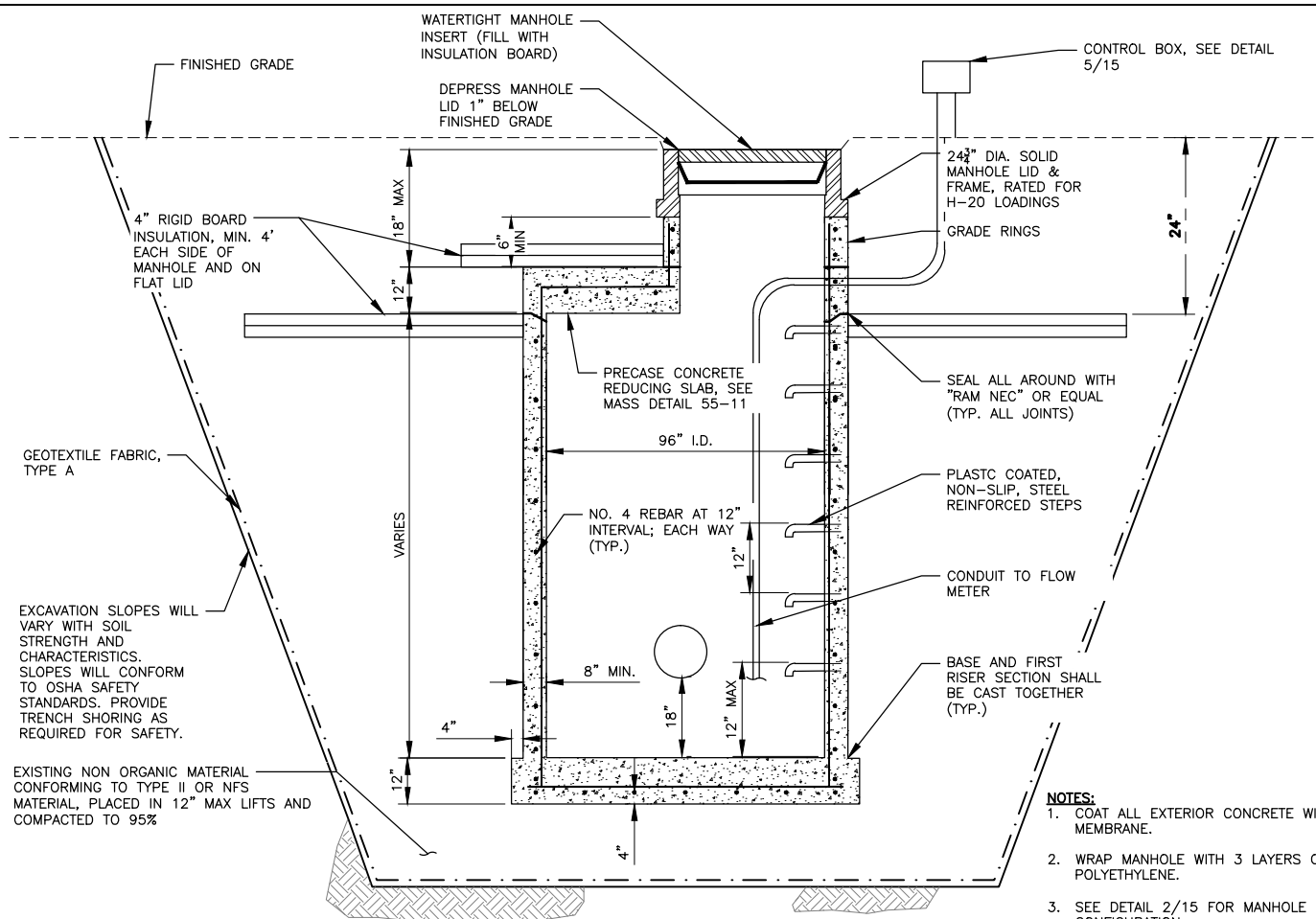
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CITY OF WASILLA
TREATED EFFLUENT DISCHARGE PILOT STUDY
DETAILS - SEWER MANHOLE & CLEANOUT

SHEET NO.
14
W.O.NO. 204700415

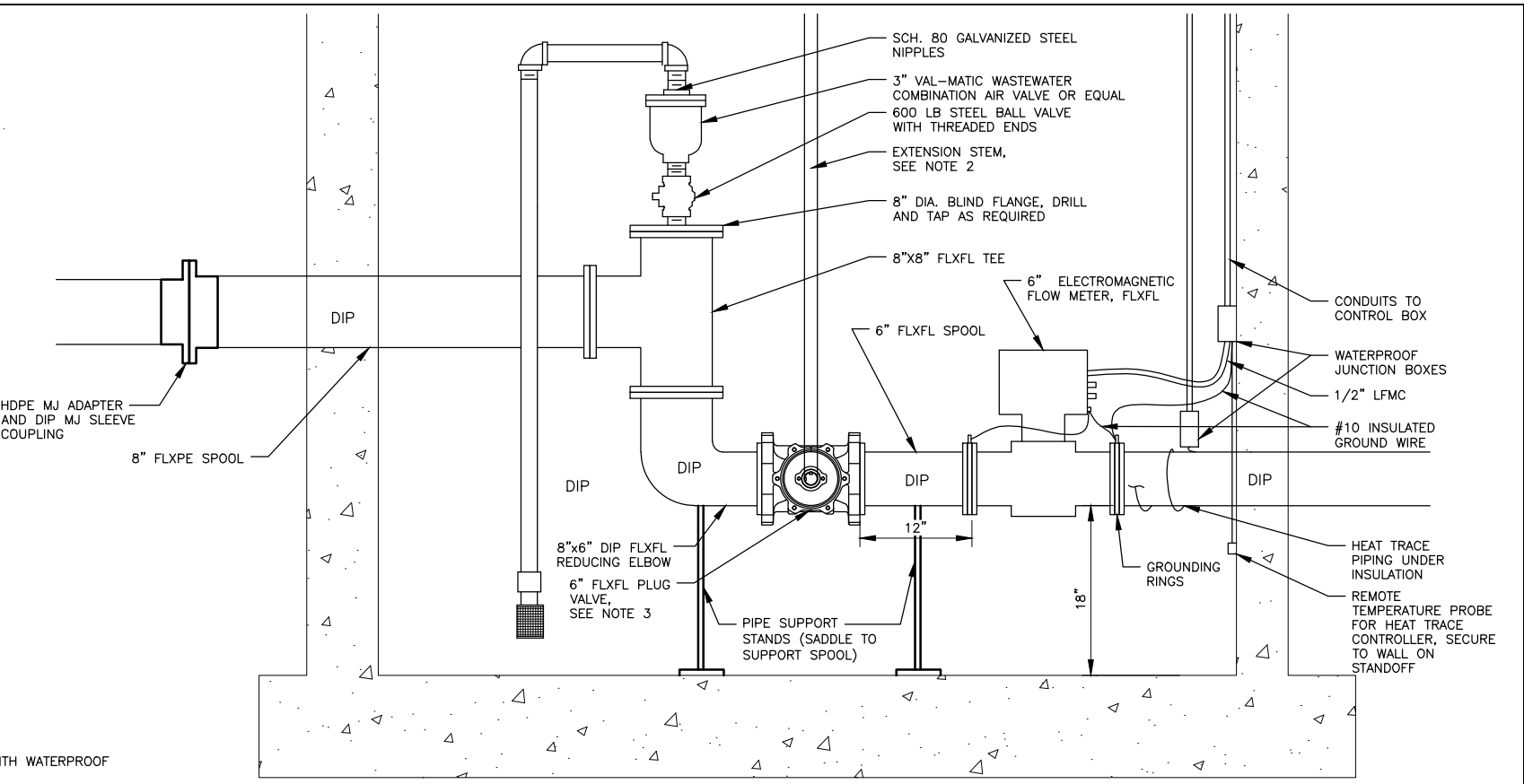
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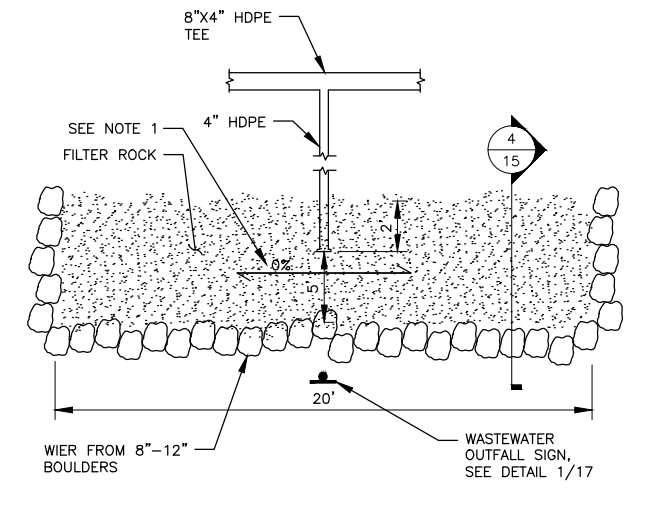
1 96" TYPE III MANHOLE
SCALE: NTS

- NOTES:**
1. COAT ALL EXTERIOR CONCRETE WITH WATERPROOF MEMBRANE.
 2. WRAP MANHOLE WITH 3 LAYERS OF 8 MIL POLYETHYLENE.
 3. SEE DETAIL 2/15 FOR MANHOLE BASE PIPE CONFIGURATION.
 4. REINFORCE CONCRETE PER ASTM C478



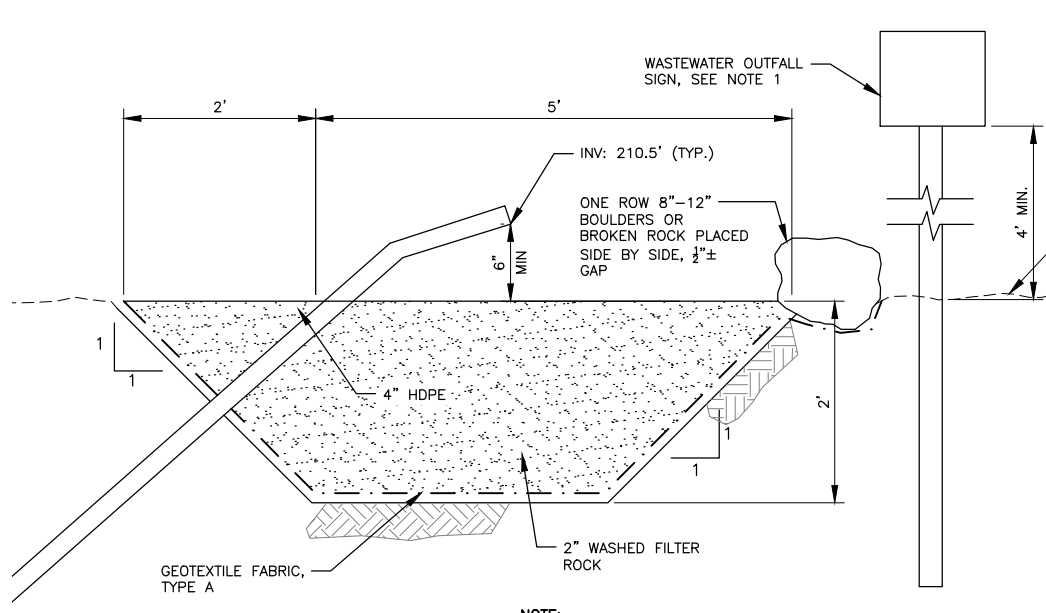
- NOTES:**
1. ALL PIPE WITHIN MANHOLE, INCLUDING METER, VALVE, AND AIR VALVE, TO BE INSULATED WITH 2" NEOPRENE INSULATION, ARMAFLEX OR EQUAL (NOT SHOWN FOR CLARITY) AND WRAPPED WITH HEAT TRACE. HEAT TRACE SHALL BE SELF-REGULATING WITH OUTER-JACKET, RATED 8 W/LF, 120V. HEAT TRACE EXTENTS TO MATCH INSULATION.
 2. EXTEND STEM TO SURFACE AND TERMINATE IN FLOOR BOX OR VALVE BOX. PROVIDE EXTENSION STEM, STEM GUIDES, AND HAND WHEEL TO OPERATE.
 3. PLUG SHALL ROTATE AROUND HORIZONTAL ACCESS.
 4. MAGNETIC FLOW METER CAPABLE OF BI-DIRECTIONAL FLOW RATES TO 0.04FT/SEC. CARBON STEEL METERING TUBE, 150 PSI, CLASS 150 FLANGES. SELF-CLEANING ELECTRODES. LINER PER MANUFACTURERS RECOMMENDATION FOR SEWER SERVICE. REMOTE MOUNTED TRANSMITTER WITH OPERATOR INTERFACE AND DISPLAY FOR FLOW AND TOTALIZER, DATA RETENTION OF 5 YEARS. HOUSING SHALL BE TYPE 4X, IP66. POWER SUPPLY 120 VAC. OPERATE AT -20 DEGREES F. ACCURACY SHALL BE ±0.5%. FLOW METER SHALL BE ROSEMOUNT 8750W MAGNETIC FLOW METER, OR EQUAL.

2 96" MANHOLE BASE PIPE CONFIGURATION
SCALE: NTS



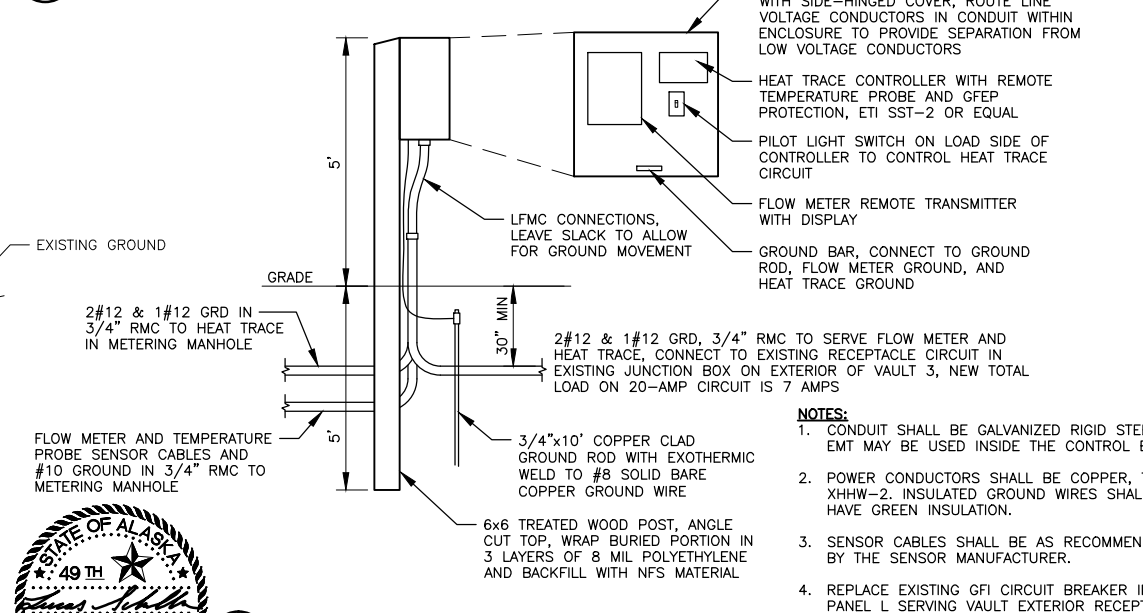
- NOTE:**
1. TOP OF DRAIN ROCK TO BE LEVEL IN ALL DIRECTIONS. NO SLOPE.

3 OUTFALL - PLAN
SCALE: NTS



- NOTE:**
1. MOUNT WASTEWATER OUTFALL SIGN, DETAIL 1/17, ON PERFORATED STEEL TUBING

4 OUTFALL - SECTION
SCALE: NTS

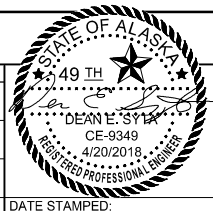


- NOTES:**
1. CONDUIT SHALL BE GALVANIZED RIGID STEEL. EMT MAY BE USED INSIDE THE CONTROL BOX.
 2. POWER CONDUCTORS SHALL BE COPPER, TYPE XHHW-2. INSULATED GROUND WIRES SHALL HAVE GREEN INSULATION.
 3. SENSOR CABLES SHALL BE AS RECOMMENDED BY THE SENSOR MANUFACTURER.
 4. REPLACE EXISTING GFI CIRCUIT BREAKER IN PANEL L SERVING VAULT EXTERIOR RECEPTACLES WITH 20/1 NON-GFI CIRCUIT BREAKER.
 5. REPLACE EXISTING EXTERIOR RECEPTACLES ON VAULTS 1, 2 AND 3 WITH GFI RECEPTACLES WITH WEATHERPROOF IN-USE COVERS.

5 CONTROL BOX DETAIL
SCALE: NTS

DRAWING NAME: U:\204700415\DRAWING\CS\SHEETS\204700415-Cs.1.DWG PLOTTED: Apr 20, 2018 - 12:45:50 PM (Schmeller, Lucas)

REV.	DATE	BY	REVISIONS	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS	SCALE	DATA	DATE STAMPED



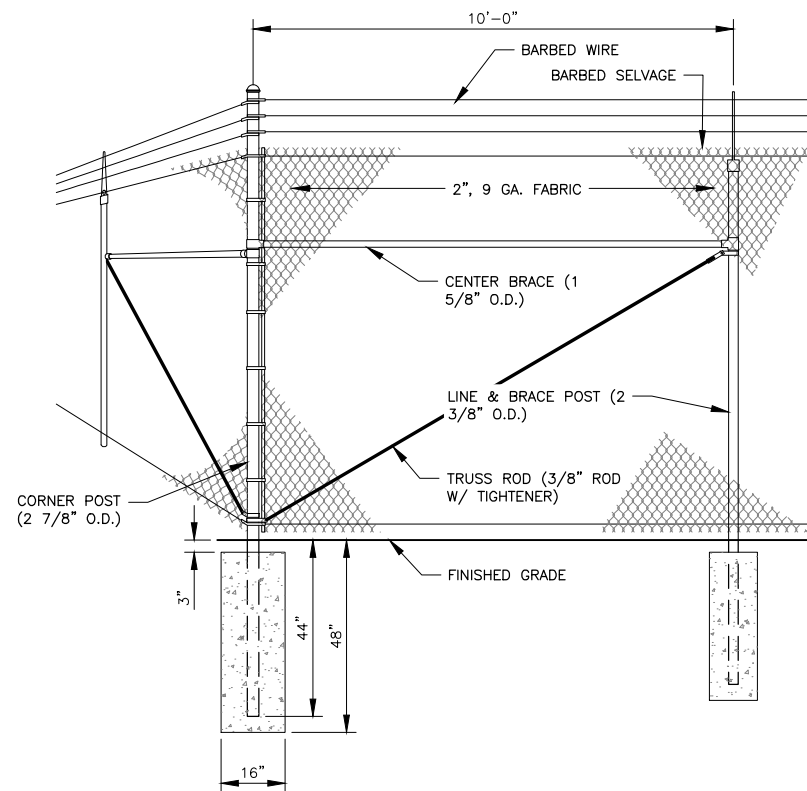
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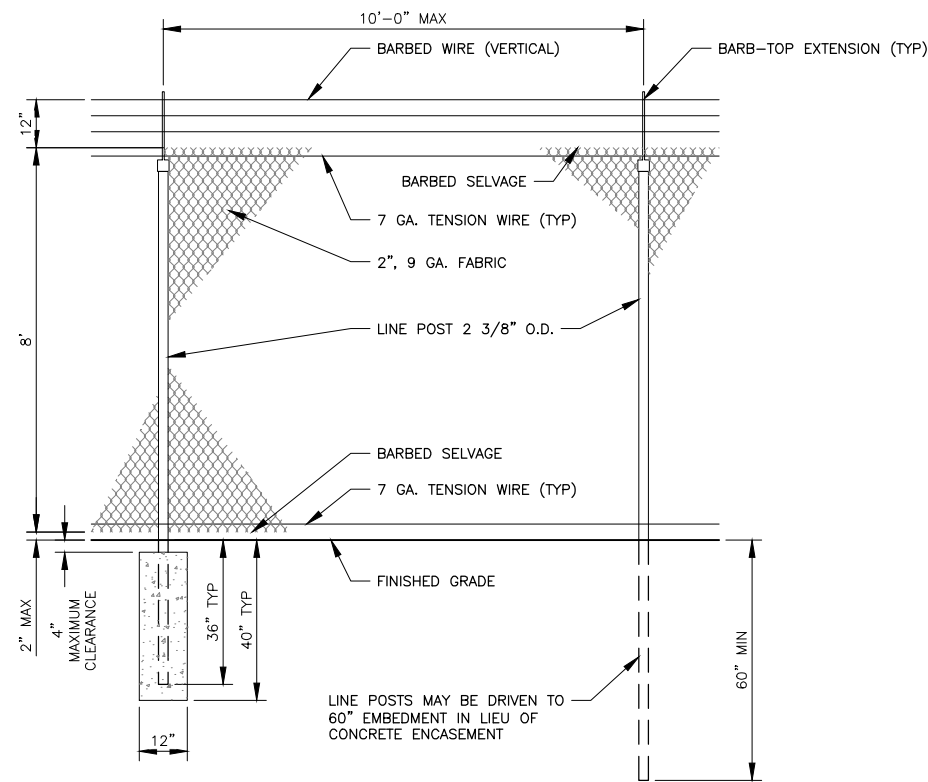
CITY OF WASILLA
TREATED EFFLUENT DISCHARGE PILOT STUDY
DETAILS

SHEET NO.
15
W.O.NO. 204700415

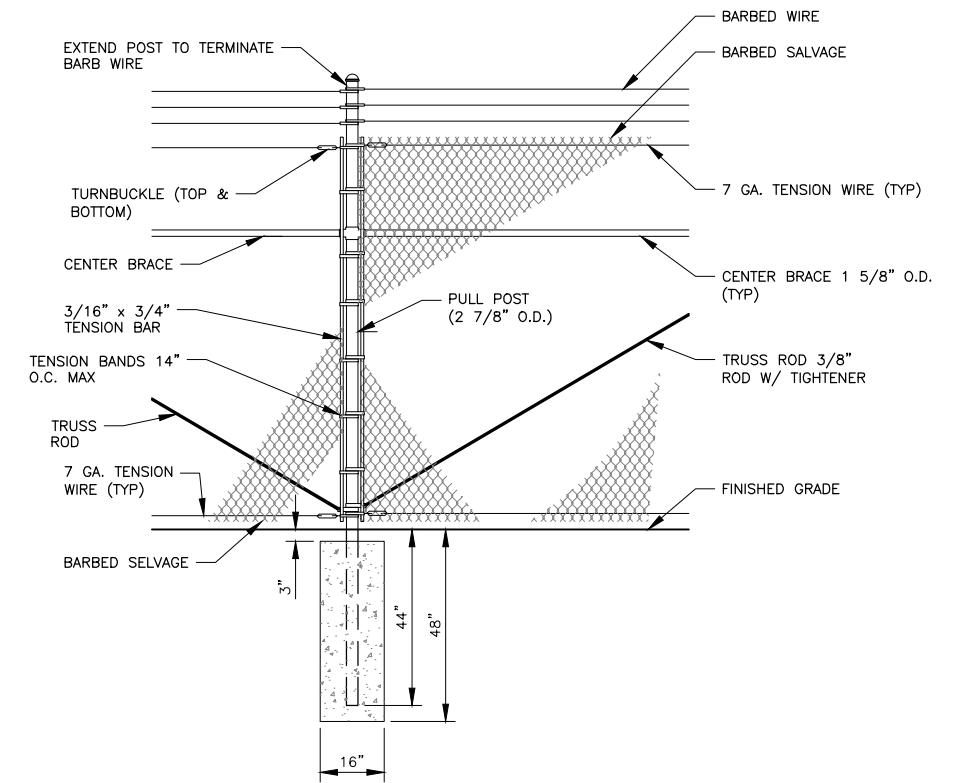
THIS DRAWING IS HALF-SIZE AT 11"x17"



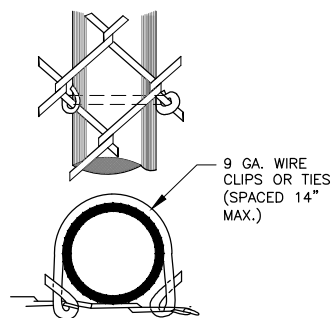
1
16
TYPICAL CORNER TERMINAL
SCALE: NTS



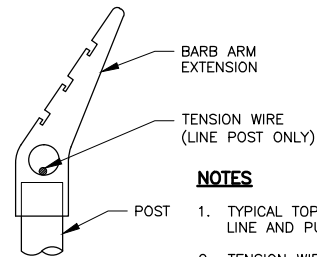
2
16
TYPICAL FENCE SECTION
SCALE: NTS



3
16
TYPICAL PULL / TERMINAL POST
SCALE: NTS

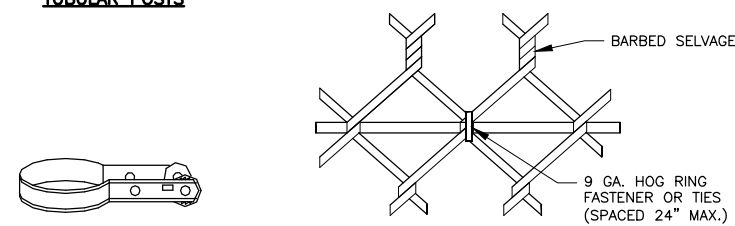


TYPICAL METHOD OF TYING FABRIC TO TUBULAR POSTS

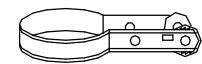


TYPICAL EYE-TOP BARB-TOP EXTENSION

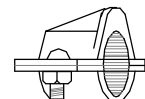
- NOTES**
1. TYPICAL TOP FOR ALL LINE AND PULL POST.
 2. TENSION WIRE TO BE THREADED THROUGH EYE-TOP, AS SHOWN, ON ALL POST.



TYPICAL METHOD OF TYING FABRIC TO TENSION WIRE



BARB WIRE BAND WITH RACHET No. 60



BACK STOP C-2

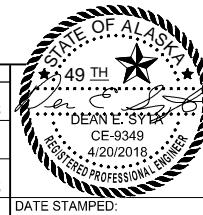
GENERAL FENCE NOTES

1. ALL CONCRETE USED FOR FENCE FOOTINGS SHALL BE 3000 PSI MINIMUM.
2. FINISHED CONCRETE TO BE RECESSED BELOW THE GROUND LINE. BACKFILL AND COMPACT AROUND RECESSED CONCRETE WITH EXCAVATED MATERIAL (TYPICAL ALL CONCRETE POSTS IN GROUND).
3. FINISHED CONCRETE TO BE FLUSH WITH PAVEMENT (TYPICAL ALL CONCRETE POSTS IN PAVEMENT).

4
16
MISCELLANEOUS FENCE DETAILS
SCALE: NTS

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CITY OF WASILLA


CITY OF WASILLA
 TREATED EFFLUENT DISCHARGE PILOT STUDY
DETAILS - FENCE

SHEET NO.
16
 W.O.NO. 204700415

THIS DRAWING IS HALF-SIZE AT 11"X17"



NOTES:

1. WHITE BACKGROUND WITH RED LETTERING. LETTERING SIZE SHALL BE A MINIMUM OF 3/4" HIGH.
2. MOUNT NEAR OUTFALLS, AS DIRECTED, SEE CIVIL. CONFIRM PLACEMENT WITH OWNER.

1
17
WASTEWATER OUTFALL SIGN
SCALE: NTS



NOTES:

1. WHITE BACKGROUND WITH RED LETTERING. LETTERING SIZE SHALL BE A MINIMUM OF 3/4" HIGH.
2. MOUNT ON FENCE AS DIRECTED, SEE CIVIL.

2
17
WASTEWATER FACILITY SIGN
SCALE: NTS

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REV.	DATE	BY	REVISIONS	NO.	BASIS OF VERTICAL CONTROL	ELEV.	FIELD BOOKS	SCALE	DATA	DATE STAMPED:		<p>STANTEC CONSULTING SERVICES INC. 725 East Fireweed Lane Suite 200 Anchorage, Ak 99503 PH (907) 276-4245 Certificate of Authorization # 126386 www.stantec.com</p>	<p>CITY OF WASILLA OWNER:</p>	<p>CITY OF WASILLA TREATED EFFLUENT DISCHARGE PILOT STUDY</p> <p>DETAILS - SIGNS</p>	SHEET NO.
							FIELD BOOKS	SCALE	DATA	17					
							DESIGN/TOPO:	HOR.	DESIGN:	LRG					
							STAKING:	VER.	DRAWN:						
							ASBUILT:	GRID	CHECKED:	DES					

ISSUED FOR CONSTRUCTION

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