CITY OF HOMER
E BUNNELL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
NOVEMBER 22, 2022

LOCATION MAP

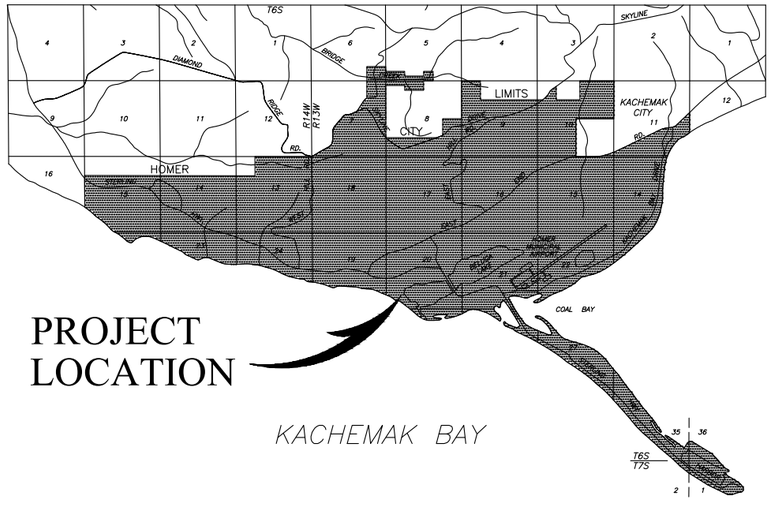
Homer City Council

Mayor
Ken Castner

Councilmembers
Donna Aderhold
Jason Davis
Storm Hansen–Cavasos
Rachel Lord
Shelly Erickson
Caroline Venuti

City Manager
Rob Dumouchel

Public Works Director
Janette Keiser, PE



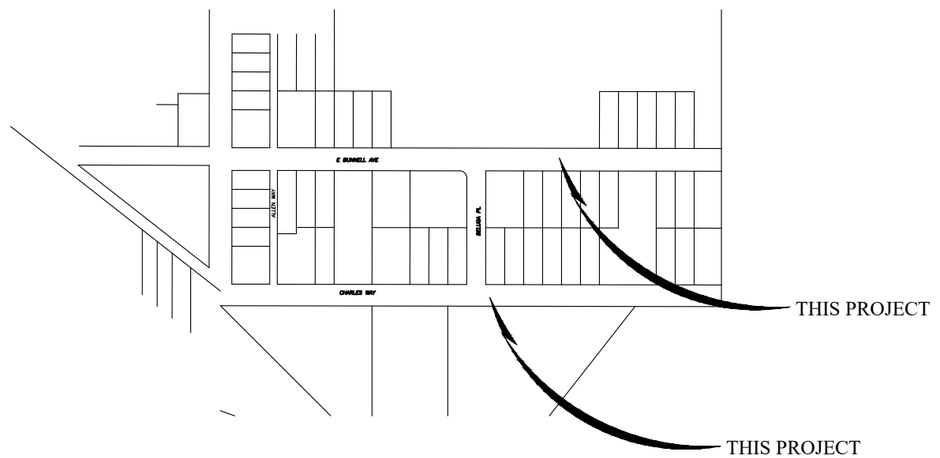
HOMER AREA MAP
SCALE: 1" = 1 MILE

INDEX TO DRAWINGS

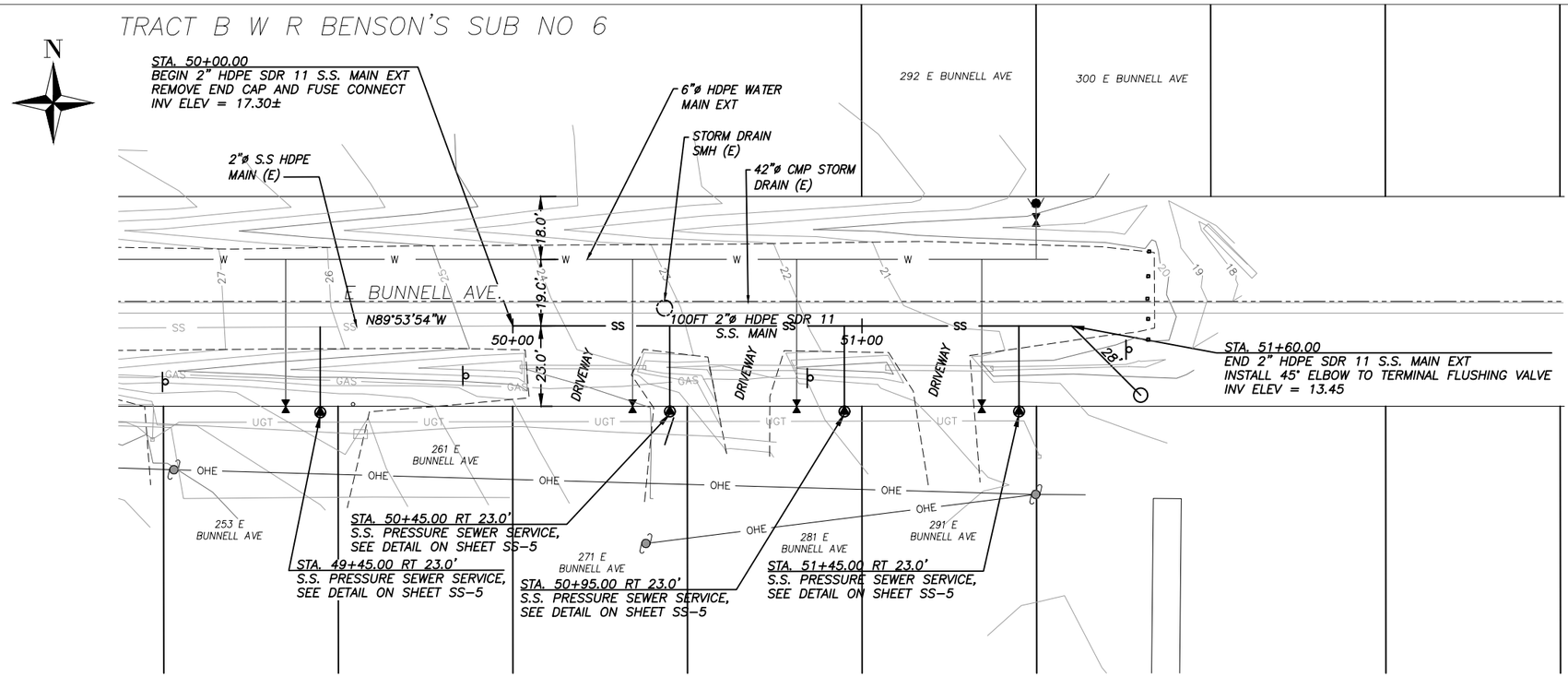
TITLE	SHEET
E BUNNEL AVENUE SANITARY SEWER MAIN PLAN + PROFILE 50+00.00 TO 51+60.00	SS–1
ALLEN WAY SANITARY SEWER MAIN PLAN + PROFILE 20+00.00 TO 21+88.53	SS–2
CHARLES WAY SANITARY SEWER MAIN PLAN + PROFILE 21+88.53 TO 27+20.00	SS–3
CHARLES WAY SANITARY SEWER MAIN PLAN + PROFILE 27+20.00 TO 30+00.00	SS–4
SANITARY SEWER CONSTRUCTION DETAILS	SS–5
SANITARY SEWER CONSTRUCTION NOTES	SS–6
SANITARY SEWER LIFT STATION DETAILS & NOTES	SS–7
EROSION CONTROL PLAN NO. 1	SS–8
EROSION CONTROL PLAN NO. 2	SS–9
EROSION CONTROL PLAN NO. 3	SS–10
EROSION CONTROL PLAN NO. 4	SS–11
EROSION CONTROL DETAILS	SS–12

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT: 811, (800) 478–3121, OR (907) 278–3121.
2. THESE PLANS SHALL BE USED IN CONJUNCTION THE CITY OF HOMER "STANDARD CONSTRUCTION DETAILS" IN ADOPTION ON NOVEMBER 22, 2022.



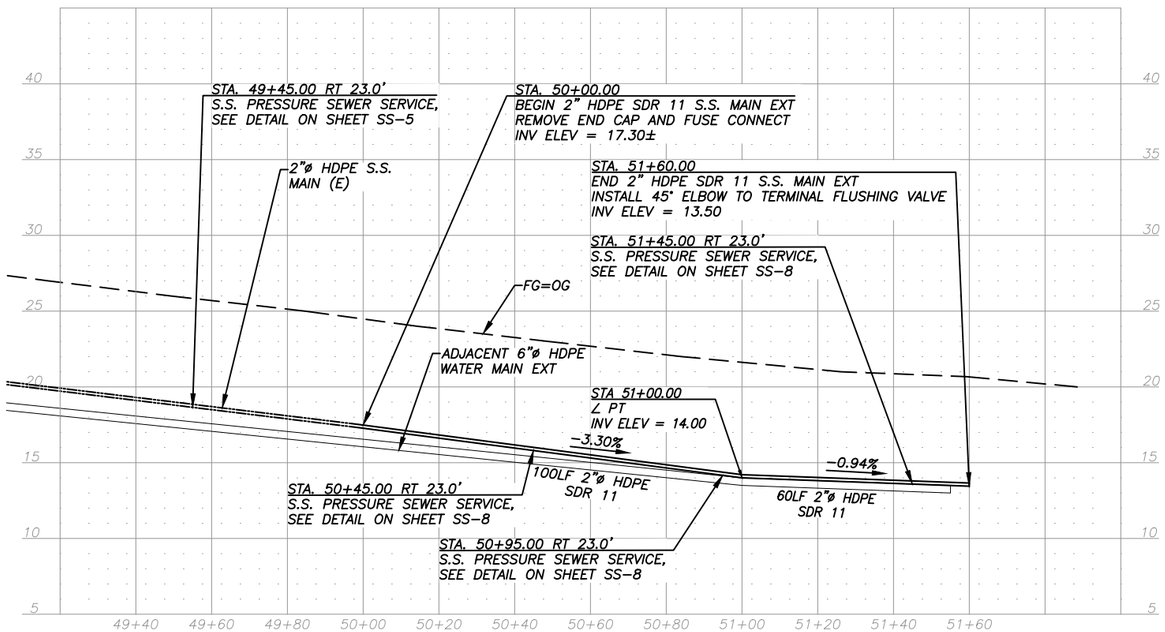
VICINITY MAP
SCALE: 1" = 200'



PLAN

0 40 80 120 160

GRAPHIC SCALE



PROFILE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478-3121, OR (907) 278-3121.
2. NO E-ONE UNITS INSTALLED FOR SERVICES SHOWN ON THIS SHEET.
3. SEE "DETAIL A – STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN GRAVEL SURFACED AREAS. TOTAL OF 193± LINEAR FEET THIS SHEET.
4. SEE "DETAIL B – NON-STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN NATIVE SURFACE SOIL AREAS. TOTAL OF 88± LINEAR FEET THIS SHEET.
5. INSTALL E-ONE LIFT STATIONS AT:
   - 5.1. 281 E. BUNNELL AVENUE
   - 5.2. 291 E. BUNNELL AVENUE

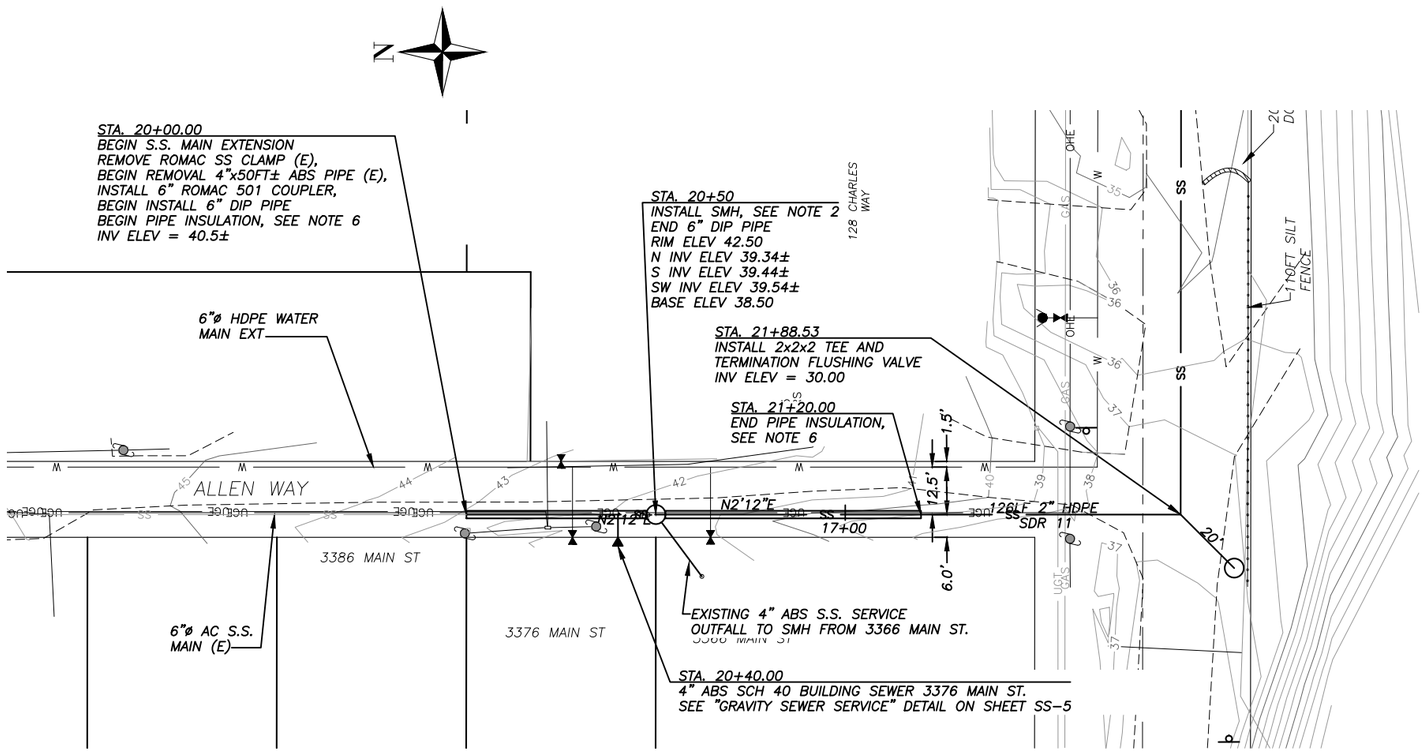
STATE OF ALASKA 49TH
John S. Bishop
CE 10991
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
E. BUNNELL AVENUE S.S. MAIN PLAN + PROFILE
STA 50+00.00 to 51+60.00

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

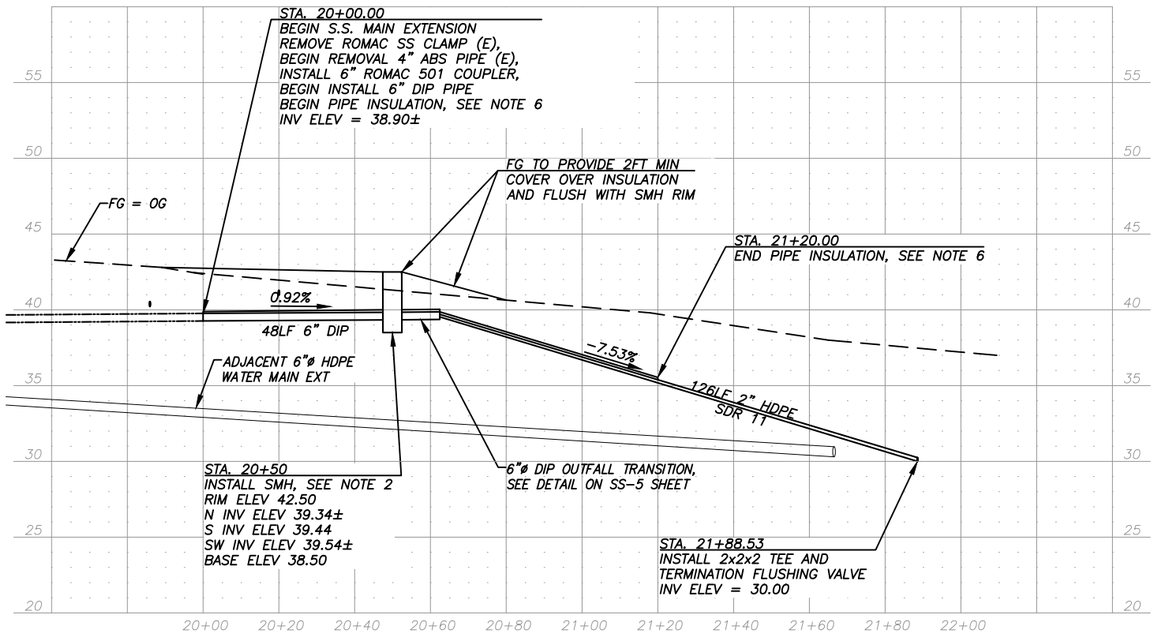
SHEET NO.:
SS-1



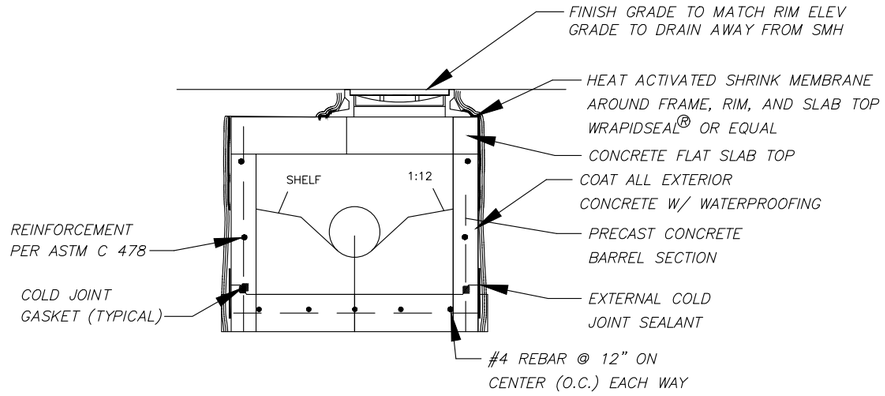
PLAN

0 40 80 120 160

GRAPHIC SCALE



PROFILE



NOTES:

A. FOR PLAN VIEW OF MANHOLE AND CONNECTIONS, SEE "SEWER MANHOLE INSTALLATION DETAILS" ON SHEET SS-6.
B. FOR DETAILS NOT SHOWN, SEE STD DETAILS, 500.02, 500.03, 500.05, 500.06, 500.08, 500.09, AND 500.12.
C. BACKFILL AROUND MANHOLE WITH NFS MATERIAL FULL DEPTH.
D. COATINGS AND WATERPROOFING
   D.1. EXTERNAL COLD JOINT SEALANT IS TO BE WRAPIDSEAL (18" WIDE), MANUFACTURED BY CCI PIPELINE SYSTEMS, VISCOTAQ, VISCOWRAP (12" WIDE) OR APPROVED EQUAL FOR EXTERNAL JOINT SEALING.
   D.2. EXTERIOR BURIED CONCRETE STRUCTURE WATERPROOFING SHALL BE GMX ULTRA-SHIELD WB, TUFF-N-DRY XTS, OR APPROVED EQUAL.
   D.3. CLEAR OR OPAQUE 8-MIL POLYETHYLENE TUBE OR SHEETING FOR ENCASEMENT.
   D.4. COLD JOINT GASKETS ARE BE BE RAM-NEK PREFORMED CONCRETE JOINT SEALANT BY HENRY COMPANY, INC., VISCOTAQ VISCOPASTE (½"X1" PROFILE) OR EQUAL.

CONSTRUCT MANHOLE
NOT TO SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478-3121, OR (907) 278-3121.
2. SEE "CONSTRUCT MANHOLE" DETAIL THIS SHEET AND "SEWER MANHOLE INSTALLATION DETAILS" ON SHEET SS-6.
3. NO E-ONE LIFT STATIONS INSTALLED WITH SERVICES SHOWN ON THIS SHEET.
4. SEE "DETAIL A – STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN GRAVEL SURFACED AREAS. TOTAL OF 24± LINEAR FEET THIS SHEET.
5. SEE "DETAIL B – NON-STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN NATIVE SURFACE SOIL AREAS. TOTAL OF 170± LINEAR FEET THIS SHEET.
6. SEE COH STANDARD PLAN 700.01 FOR DETAILS WITH B=1FT. INSTALL INSULATION DIRECTLY ON PIPE.

STATE OF ALASKA 49TH
John Bishop
11/22/2022
JOHN S. BISHOP
CE 10993
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
ALLEN WAY S.S. MAIN PLAN + PROFILE
STA 20+00.00 to 21+88.53

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
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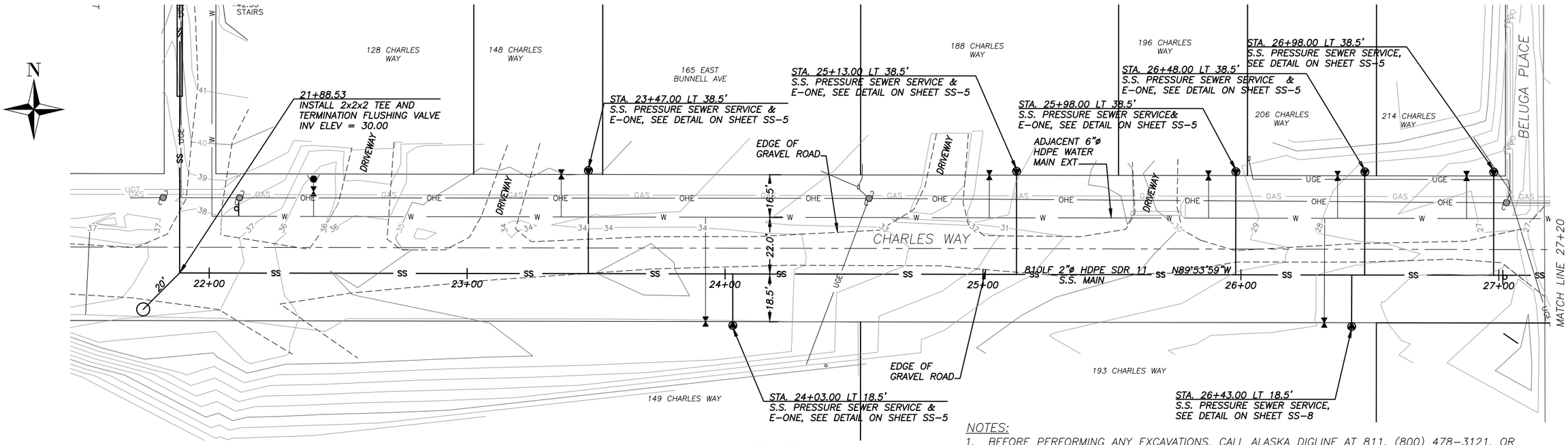
SHEET NO.:
SS-2



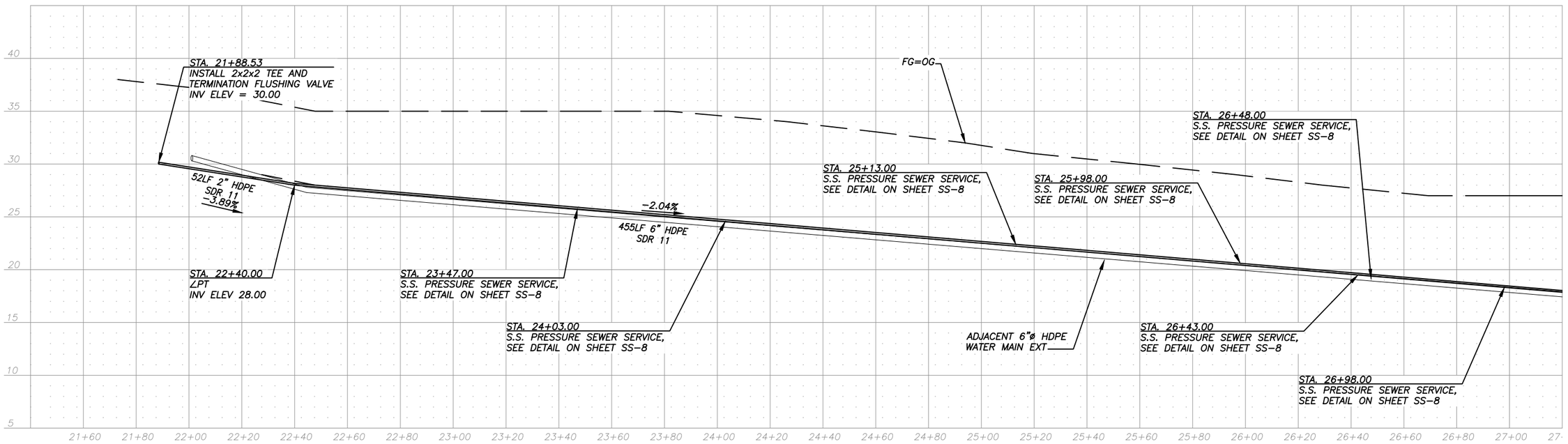
PLAN

0 40 80 120 160

GRAPHIC SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478-3121, OR (907) 278-3121.
2. INSTALL E-ONE LIFT STATIONS AT:
   - 2.1. 148 CHARLES WAY
   - 2.2. 149 CHARLES WAY
   - 2.3. 188 CHARLES WAY
   - 2.4. 196 CHARLES WAY
   - 2.5. 206 CHARLES WAY
3. UNITS INSTALLED FOR SERVICES SHOWN ON THIS SHEET. SEE SHEET SS-7 FOR E-ONE DETAILS. E-ONES TO BE INSTALLED WITHIN 20 FEET OF SERVICE STUBOUT.
4. SEE "DETAIL A – STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN GRAVEL SURFACED AREAS. TOTAL OF 332± LINEAR FEET THIS SHEET.
5. SEE "DETAIL B – NON-STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN NATIVE SURFACE SOIL AREAS. TOTAL OF 427± LINEAR FEET THIS SHEET.



PROFILE

STATE OF ALASKA 49TH
John S. Bishop
11/22/2022
CE 10991
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
CHARLES WAY S.S. MAIN PLAN + PROFILE
STA 21+88.53 to 27+20.00

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
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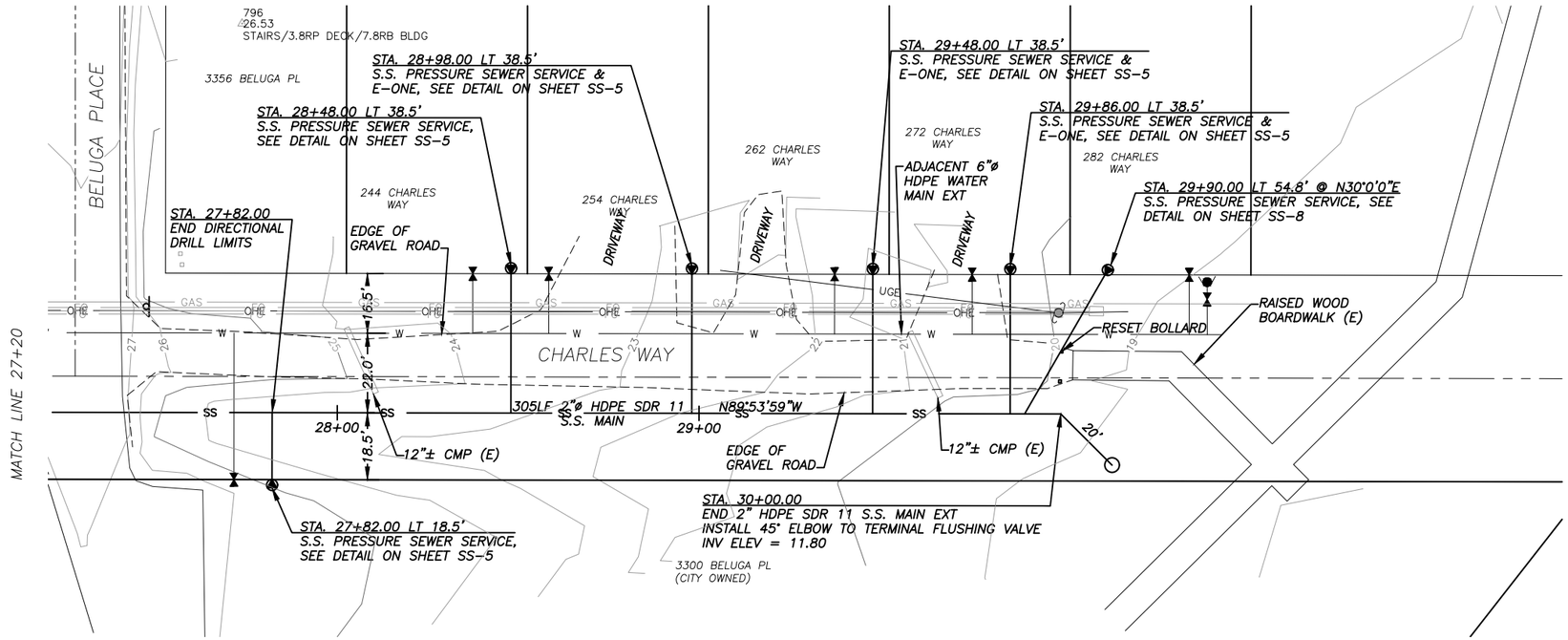
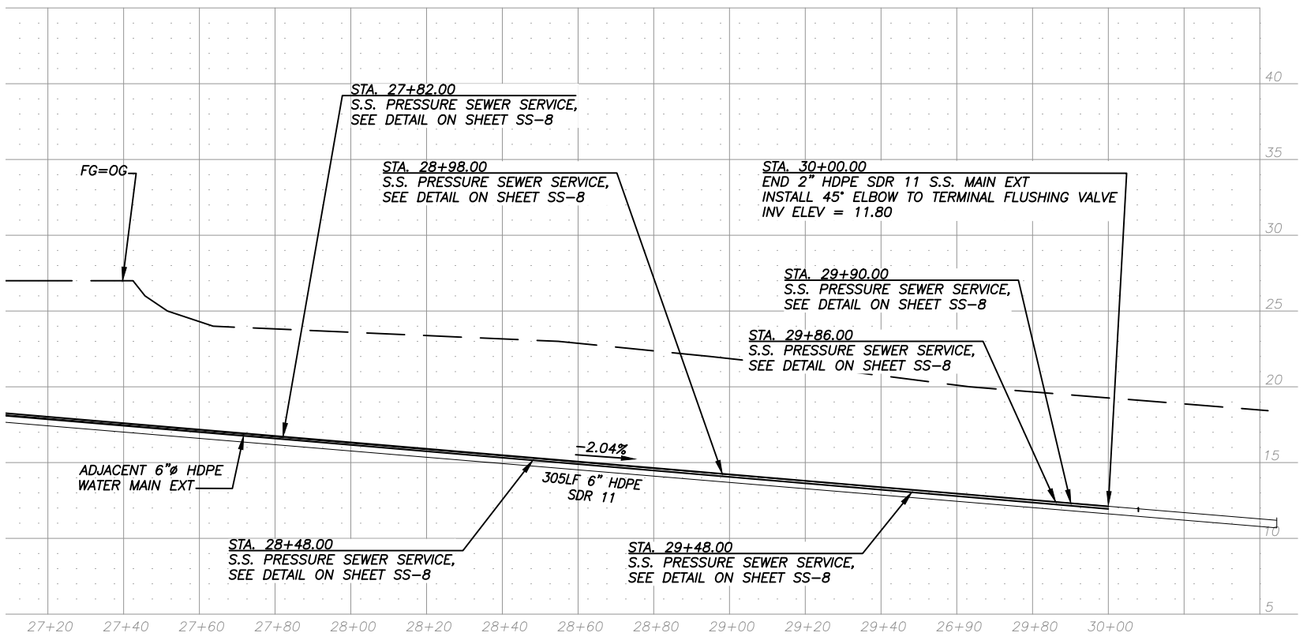
SHEET NO.:
SS-3



PLAN

0 40 80 120 160

GRAPHIC SCALE



PROFILE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478-3121, OR (907) 278-3121.
2. 3 E-ONE UNITS INSTALLED FOR SERVICES SHOWN ON THIS SHEET. SEE SHEET SS-7 FOR E-ONE DETAILS. E-ONES TO BE INSTALLED WITHIN 20 FEET OF SERVICE STUBOUT.
3. SEE "DETAIL A - STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN GRAVEL SURFACED AREAS. TOTAL OF 75± LINEAR FEET THIS SHEET.
4. SEE "DETAIL B - NON-STRUCTURAL TRENCH SECTION" ON SHEET SS-5 FOR WATER MAIN AND WATER SERVICE TRENCHES WITHIN NATIVE SURFACE SOIL AREAS. TOTAL OF 380± LINEAR FEET THIS SHEET.
5. INSTALL E-ONE LIFT STATIONS AT:
   - 5.1. 254 CHARLES WAY
   - 5.2. 262 CHARLES WAY
   - 5.3. 272 CHARLES WAY

STATE OF ALASKA 49TH
John S. Bishop
CE 10991
REGISTERED PROFESSIONAL ENGINEER
11/22/2022

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
CHARLES WAY S.S. MAIN PLAN + PROFILE
STA 27+20.00 to 30+00.00

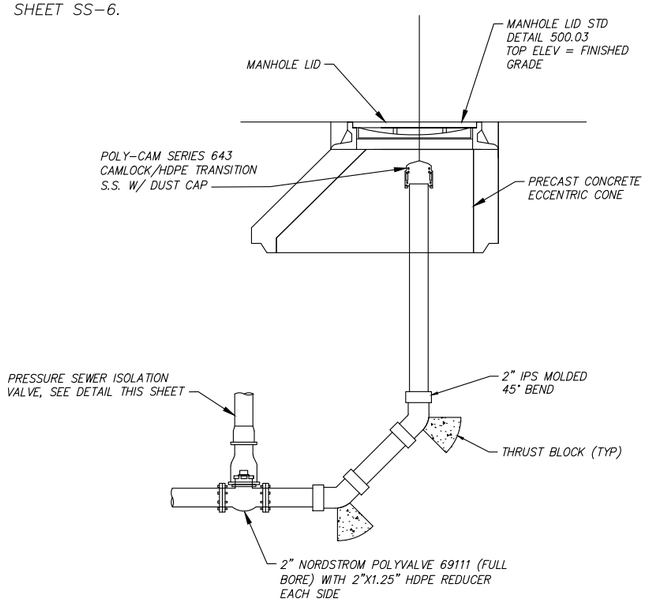
BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

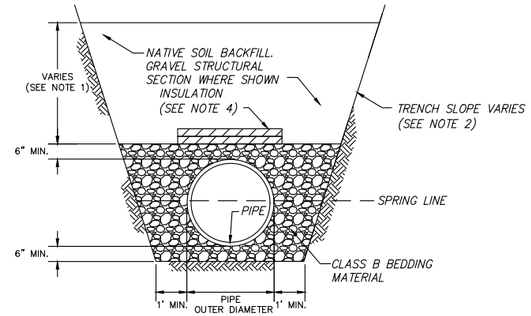
SHEET NO.:
SS-4

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.
2. FOR OTHER DETAILS AND CONSTRUCTION NOTES OF THE ALTERNATE PRESSURIZED SEWER SERVICE CONNECTION, SEE SHEET SS–6.



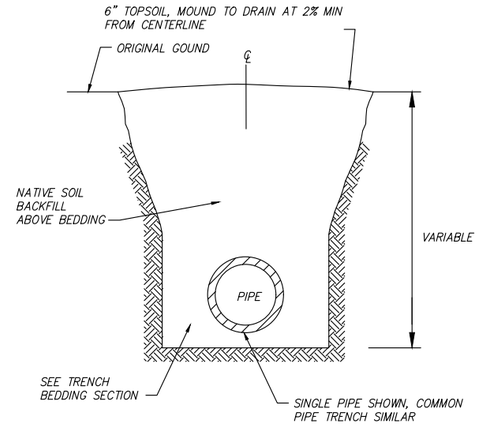
SANITARY SEWER TERMINAL FLUSHING VALVE
NOT TO SCALE



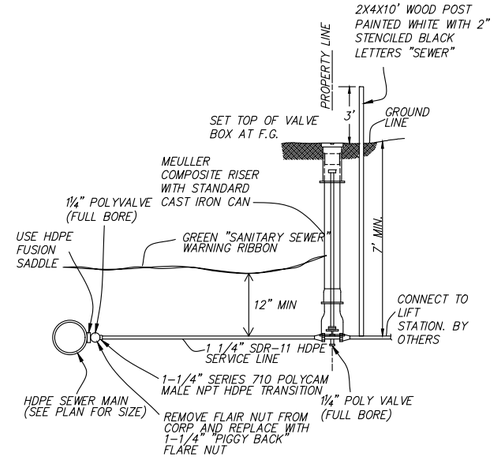
NOTES:

1. TRENCH BACKFILL MATERIAL PLACED AND COMPACTED TO DEPTHS SHOWN IN THE DRAWINGS OR AS DETERMINED BY ENGINEER. COMPACT TRENCH BACKFILL TO A MINIMUM OF 95% MAXIMUM DENSITY.
2. TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH AND CHARACTER. SLOPES SHALL CONFORM TO OSHA SAFETY STANDARDS.
3. BACKFILL SHALL BE FREE OF CLAYS AND ORGANIC MATERIALS.
4. WHEN SPECIFIED IN CONTRACT DOCUMENTS, SEE STANDARD DETAIL 20–9 FOR INSULATION DETAILS.

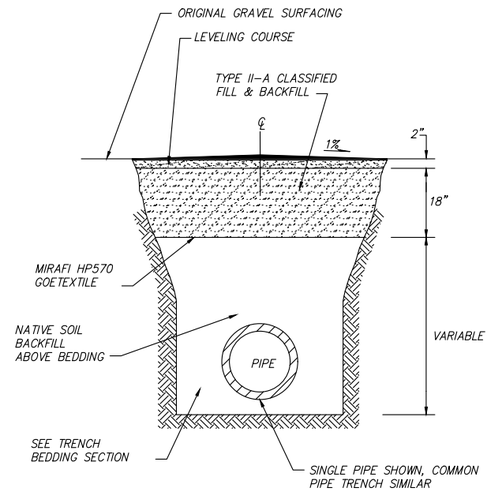
TRENCH BEDDING SECTION
NOT TO SCALE



DETAIL B – NON–STRUCTURAL TRENCH SECTION
NOT TO SCALE



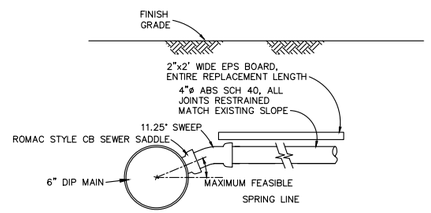
PRESSURIZED SANITARY SEWER CONNECTION
NOT TO SCALE



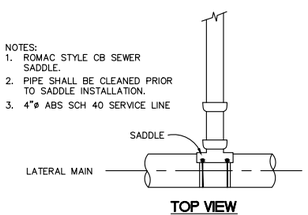
NOTE:

1. CONTRACTOR SHALL CONSTRUCT A 1% CROWN WITH THE PEAK CENTERED OVER THE CENTERLINE OF THE EXCAVATION.

DETAIL A – STRUCTURAL TRENCH SECTION
NOT TO SCALE



SIDE VIEW



TOP VIEW

GRAVITY SEWER SERVICE CONNECTION
NOT TO SCALE

SANITARY SEWER CONSTRUCTION NOTES:

1. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES CLEAR VERTICAL SEPARATION BETWEEN SEWER AND WATER MAINS AT ANY POINT.
2. MINIMUM BURIAL DEPTH WITHOUT INSULATION FOR PRESSURIZED SEWER SHALL BE 7 FEET. ALL SEWER SERVICES WILL BE FROST PROTECTED WITH A MINIMUM OF 2–INCH THICK BY 2–FOOT WIDE CLOSED CELL POLYSTYRENE FOAM INSULATION WITH MINIMUM COMPRESSIVE STRENGTH OF 35 PSI. ALL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOMER SPECIFICATION SECTION 704.
3. INSTALLATION OF SEWER SERVICE FROM RESIDENCES TO THE ONSITE RESIDENTIAL LIFT STATION SHALL BE AT A MINIMUM SLOPE OF 1%.
4. THE SEWER LIFT STATION APPROVED FOR ATTACHMENT TO THIS FORCE MAIN ARE E/ONE SERIES GRINDER PUMPS (OR EQUIVALENT PRODUCT).
5. ALL LIFT STATIONS WILL BE THERMALLY INSULATED BY A 3–INCH COATING OF POLYURETHANE AND WITH 40–MLOF POLYUREA COATING FOR AT LEAST THE FIRST 6 FEET BELOW THE GROUND SURFACE. THE MINIMUM DEPTH OF BURY OF THE DISCHARGE PIPE AS IT EXITS THE LIFT STATION SHALL BE 82 INCHES. MINIMUM BURY OF THE 1.25–INCH DISCHARGE PIPE SHALL BE 7 FEET.
6. LIFT STATION PUMP IS MODEL SPD FOR THE DH071 GRINDER PUMP (OR EQUIVALENT) OR LARGER FOR OTHER E/ONE GRINDER PUMP MODELS. PUMP SHALL BE SINGLE PHASE, 120/240V UL LISTED AND EQUIPPED WITH A SIMPLEX CONTROL WITH VISUAL AND AUDIBLE ALARM PANEL SET IN A NEMA 4X ENCLOSURE. LIFT STATION WILL INCLUDE A THREE FLOAT SYSTEM: OFF, ON, AND HIGH LEVEL ALARM. (NOTE: E/ONE SYSTEMS HAVE PRESSURE SWITCHES, NO FLOATS.)
7. LIFT STATION SHALL BE EXCAVATED INTO AND BEDDED ON NATIVE AND IF POSSIBLE UNDISTURBED SOIL. IF BEDDING IS DISTURBED OR IMPORTED IT WILL BE COMPACTED TO 90% MAXIMUM DENSITY. THE LIFT STATION SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DETAILED INSTRUCTIONS AND WILL INCLUDE CONCRETE BALLAST TO PREVENT FLOATING IN THE EVENT OF HIGH GROUNDWATER CONDITIONS. LIFT STATION BACKFILL WILL CONSIST OF NATIVE SOIL COMPACTED IN ONE FOOT LIFTS.
8. OWNERS OF E/ONE LIFT STATIONS SHALL RETAIN AN ANNUAL MAINTENANCE CONTRACT WITH A LOCAL CONTRACTOR QUALIFIED TO SERVICE THE LIFT STATION AND RESPOND TO ALARM CONDITIONS.
9. PIPES SHALL BE BEDDED IN UNDISTURBED NATIVE SOIL OR CLASS B BEDDING. IMPORTED PIPE BEDDING AND SUB–GRADE WILL BE COMPACTED TO 90% MAXIMUM DENSITY. TRENCH BACKFILL SHALL BE NON–ORGANIC FILL AND COMPACTION WILL OCCUR IN ONE FOOT LIFTS.
10. SEWER LINES SHALL BE AIR PRESSURE TESTED IN ACCORDANCE WITH CITY OF HOMER SPECIFICATION 502.3 (f).

STATE OF ALASKA 49TH — JOHN S. BISHOP — 11/22/2022 — CE 10993 — REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
SANITARY SEWER CONSTRUCTION DETAILS

BISHOP ENGINEERING, LLC
PO BOX 2501, HOMER, ALASKA 99603
(907) 299–7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
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SHEET NO.:
SS–5

CITY OF HOMER STANDARD DRAWINGS INDEX

200.03	STANDARD LOCATION FOR NEW UTILITIES
200.04	TYPICAL UTILITY LOCATIONS
200.05	TYPICAL WATER AND SEWER LOCATIONS
200.06	COMPACTION OF BACKFILL WITHIN RIGHT-OF-WAY
200.07	CLASS B AND C BEDDING
200.08	TRENCH BACKFILL
400.02	RESURFACING DETAIL TYPICAL GRAVEL SECTION
500.02	SANITARY SEWER TYPE A AND BE MANHOLE BASE PLAN
500.03	SANITARY SEWER MANHOLE HEIGHTS
500.05	SANITARY SEWER MANHOLE STEP
500.06	SANITARY SEWER MANHGOLE STEP (ALTERNATE)
500.08	SANITARY SEWER MANHOLE COVER
500.09	SANITARY SEWER MANHOLE FRAME
500.12	SANITARY SEWER TYPICAL BEAVER SLIDE TYPE A + B MANHOLE
500.13	SANITARY SEWER SERVICE CONNECTION
500.15	SANITARY SEWER CLEANOUT
500.16	SANITARY SEWER CLEANOUT COVER

LEGEND & SYMBOLS

EDGE EXISTING GRAVEL

CUT CATCH LINE

FILL CATCH LINE

CENTERLINE (7+00)

UNDERGROUND ELECTRIC (UGE)

OVERHEAD ELECTRIC (OHE)

UNDERGROUND TELEPHONE (UGT)

WATER MAIN (W)

SANITARY SEWER (SS)

CONTOURS MAJOR (85)

CONTOURS MINOR

TEST PIT LOCATION (TP-1)

SIGN

PIPE CULVERT W/ END SECTION

FIRE HYDRANT

VALVE OR RISER

EXISTING VALVE OR RISER

PRESSURIZED SEWER SERVICE POLY VALVE

NOTES:

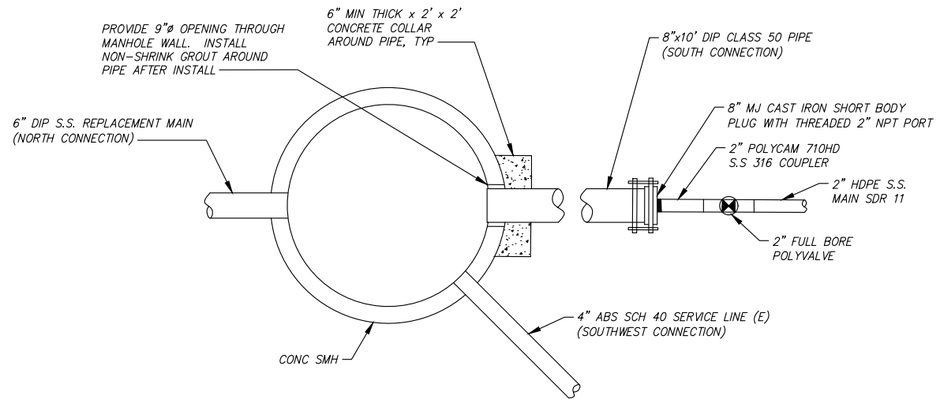
1. *Before performing any excavations, call Alaska Digline at 811, (800) 478-3121, or (907) 278-3121.*

ABBREVIATIONS

AKDOT&PF	ALASKA DEPT. OF TRANSPORTATION & PUBLIC FACILITIES
ARV	AIR RELEASE VALVE
APDES	ALASKA POLLUTION DISCHARGE ELIMINATION SYSTEM
△	DELTA / CENTRAL ANGLE OF CURVE
BP	BEGIN PROJECT
C/L	CENTERLINE
CMP	CORREGATED METAL PIPE
CO	CONTRACTING OFFICER
COH	CITY OF HOMER
CY	CUBIC YARD
DIA	DIAMETER
DIST	DISTANCE
E	EASTING
EL	ELEVATION
ELEV	ELEVATION
EP	END PROJECT
ESMT	EASEMENT
(E)	EXISTING
FL	FLANGE
FT	FOOT
GV	GATE VALVE
HDPE	HIGH-DENSITY POLYETHYLENE
IN	INCH
INV	INVERT
L	LENGTH OF CURVE
LF	LINEAR FOOT
LT	LEFT
MIN	MINIMUM
MAX	MAXIMUM
MJ	MECHANICAL JOINT
MPH	MILES PER HOUR
MSF	1000 SQUARE FEET
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTHING
OHE	OVERHEAD ELECTRIC
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PT	POINT OF TANGENCY
R	RADIUS
RT	RIGHT
R/W	RIGHT-OF-WAY
SEC	SECTION
SI	STREET INTERSECTION
SF	SQUARE FOOT
SMH	SEWER MANHOLE
S.S.	SANITARY SEWER
SS	STAINLESS STEEL
STA.	STATION
STD	STANDARD
SY	SQUARE YARD
TRANS	TRANSMISSION YARD
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UTIL	UTILITY
TYP.	TYPICAL
W	WATER MAIN OR SERVICE

CONSTRUCTION NOTES

1. DIRECTIONAL DRILLING SHALL BE UTILIZED TO INSTALL HDPE MAIN PIPE WHEREVER OPEN TRENCH INSTALLATION IS NOT REQUIRED TO PLACE HARDWARE FITTINGS AND ASSEMBLIES, VALVES, TEES, INSULATION BOARD, MANHOLES, AND CASINGS.
2. MAINTAIN A MINIMUM OF TEN FEET HORIZONTAL AND EIGHTEEN INCHES VERTICAL SEPARATION BETWEEN SEWER AND WATER MAINS AT ANY POINT. IF POSSIBLE, THE SEWER MAIN WILL BE SITUATED BELOW THE WATER MAIN AT ALL CROSSINGS.
3. ALL PRIVATE WELLS WITHIN 100 FEET OF THE SANITARY SEWER MAIN SHALL BE DECOMMISSIONED PER ADEC REGULATIONS.
4. ALL EXISTING SEPTIC TANKS AND BIOCYCLE UNITS FOR PARCELS CONNECTING TO THE COH SEWER SYSTEM SHALL BE DECOMMISSIONED BY PUMPING THE TNAKS OF WASTE CONTENTS AND REMOVING AND DISPOSING OF THOSE TNAKS AT AN APPROVED ADEC SITE. BACKFILL THE PITS WITH CLASSIFIED FILL TYPE IV COMPACTED TO 90% RELATIVE COMPACTION.
5. BUILDING SEWER EXTENSIONS FROM SERVICE STUBS TO EXISTING CLEANOUTS SHALL BE 2%. EXISTING CLEANOUTS SHALL BE RECONSTRUCTED WITH ALL NECESSARY SWEEPS WHERE THE BUILDING SEWER EXTENSION IS NOT IN ALIGNMENT WITH THE EXISTING CLEANOUT SWEEP DIRECTION.
6. CONTRACTOR SHALL COMPLETE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF HOMER STANDARD SPECIFICATIONS 2011 EDITION INCLUDING ITEMS. DRAWINGS, TECHNICAL SPECIFICATIONS, AND SPECIAL PROVISIONS TAKE PRECEDENCE OVER THE STANDARD SPECIFICATIONS.
7. THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS CONTAINED IN LOCAL, STATE AND FEDERAL PERMITS OBTAINED BY THE CITY FOR CONSTRUCTION OF THIS PROJECT. COPIES OF THE PERMITS SHALL BE MAINTAINED AT THE JOB SITE.
8. LOCATIONS DEPICTED FOR THE UTILITIES AND OTHER EXISTING FEATURES ARE APPROXIMATE. SOME UTILITIES HAVE BEEN LOCATED FROM RECORD DRAWINGS AND UTILITY COMPANY LOCATES. CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
9. UNDERGROUND ELECTRICAL AND TELECOMMUNICATIONS LINES OCCUR WITHIN THE PROJECT AREA: CONTRACTOR SHALL COORDINATE WORK ACCORDINGLY. ALL WORK IN CLOSE PROXIMITY TO EXISTING UNDERGROUND LINES SHALL COMPLY WITH THE APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES AND GUIDELINES, AND THE ELECTRICAL FACILITY CLEARANCE REQUIREMENTS OF THE GOVERNING UTILITY. CONTRACTOR SHALL HAND DIG WITHIN TWO FEET OF BURIED ELECTRICAL CABLE.
10. THIS PROJECT IS REQUIRED TO BE CONSTRUCTED IN ACCORDANCE WITH THE APDES GENERAL CONSTRUCTION PERMIT FOR STORM WATER POLLUTION. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE PERMIT.
11. CONTRACTOR SHALL SEED ALL DISTURBED AREAS WHERE OTHER SURFACE IS NOT SPECIFIED.
12. IF CONTAMINATED SOIL, GROUNDWATER, OR FREE-PRODUCT ARE ENCOUNTERED, THE CONSTRUCTION CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER WHO WILL IMMEDIATELY CONTACT THE ADEC PREVENTION AND EMERGENCY RESPONSE (PERP) OFFICE STAFF AT (907) 465-5340 / FAX (907) 465-2237 IN ACCORDANCE WITH SPILL REPORTING REQUIREMENTS UNDER 18 AAC 75.300, AND COORDINATE MANAGEMENT OF ALL CONTAMINATED MEDIA WITH EMERGENCY RESPONSE PERSONNEL.



SEWER MANHOLE INSTALLATION DETAILS

NOT TO SCALE

STATE OF ALASKA — 49TH — JOHN S. BISHOP — 11/22/2022 — CE 10953 — REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
SANITARY SEWER CONSTRUCTION NOTES

BISHOP ENGINEERING, LLC
PO BOX 2501, HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:
SS-6

ALTERNATE PRESSURIZED SEWER SERVICE CONNECTION NOTES

1. MINIMUM BURIAL DEPTH WITHOUT INSULATION FOR PRESURIZED SEWER SHALL BE 7 FEET. ALL SEWER SERVICES WILL BE FROST PROTECTED WITH A MINIMUM OF TWO–INCH THICK BY TWO TO FOUR FOOT WIDE CLOSED CELL POLYSTYRENE FOAM INSULATION WITH MINIMUM COMPRESSIVE STRENGTH OF 35 PSI. ALL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOMER SPECIFICATION SECTION 704.

2. INSTALLATION OF SEWER SERVICE FROM RESIDENCES TO AN ONSITE RESIDENTIAL LIFT STATION SHALL BE AT A MINIMUM SLOPE OF 1%.

3. INDIVIDUAL RESIDENCE SEWER LIFT STATIONS WILL CONSIST OF AN NSF APPROVED E/ONE MODEL DH071 FACTORY ASSEMBLED 30–INCH DIAMETER HDPE 70–GALLON BASINS EQUIPPED WITH A 1 HP GRINDER PUMP (OR EQUIVALENT PRODUCT).

4. EACH LIFT STATION WILL BE THERMALLY INSULATED BY 3–INCHES OF SPRAY ON POLYURETHANE AND WITH 40–MLOF POLYUREA COATING FOR AT LEAST THE FIRST 6 FEET BELOW GROUND SURFACE. THE MINIMUM DEPTH LIFT STATION WILL BE E/ONE MODEL DH071–129 PROVIDING A 82–INCH DEPTH OF BURY OF THE DISCHARGE PIPE AS IT EXITS THE LIFT STATION. LIFT STATION 1.25 INCH HDPE SERVICE CONNECTION TO THE GRAVITY SEWER SHALL BE GRADED TO A MINIMUM DEPTH OF BURY OF 7 FT BGS WITHIN 10 FEET OF LIFT STATION DISCHARGE.

5. LIFT STATION PUMPS ARE MODEL DH071 GRINDER PUMPS (OR EQUIVALENT). PUMPS ARE TO BE SINGLE PHASE, 120/240 V UL LISTED AND EQUIPPED WITH A SIMPLEX CONTROL WITH VISUAL AND AUDIBLE ALARM PANEL SET IN A NEMA 4X ENCLOSURE. LIFT STATION WILL INCLUDE A THREE FLOAT SYSTEM: OFF, ON, AND HIGH LEVEL ALARM (NOTE: E–ONE SYSTEMS HAVE PRESSURE SWITCHES, NO FLOATS).

6. LIFT STATIONS ARE TO BE EXCAVATED INTO AND BEDDED ON NATIVE AND IF POSSIBLE UNDISTURBED SOIL. IF BEDDING IS DISTURBED OR IMPORTED IT WILL BE COMPACTED TO 90% MAXIMUM DENSITY. LIFT STATIONS WILL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DETAILED INSTRUCTIONS AND WILL INCLUDE CONCRETE BALLAST TO PREVENT FLOATING IN THE EVENT OF HIGH GROUNDWATER CONDITIONS. LIFT STATION BACKFILL WILL CONSIST OF NATIVE SOIL COMPACTED IN ONE FOOT LIFTS.

7. RESIDENCES WITH A LIFT STATION MUST RETAIN AN ANNUAL MAINTENANCE CONTRACT WITH A LOCAL CONTRACTOR QUALIFIED TO SERVICE THE LIFT STATION AND RESPOND TO ALARM CONDITIONS.

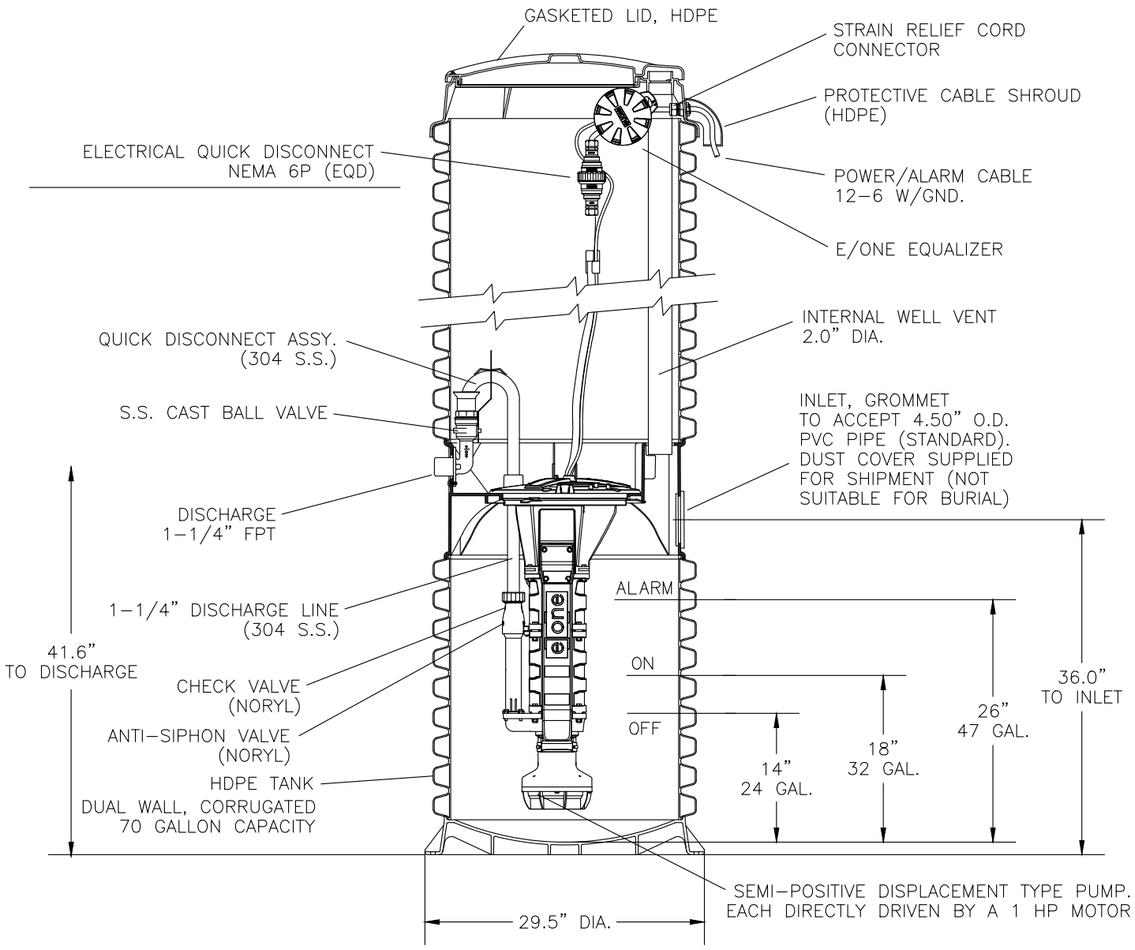
8. ALTERNATIVE EQUIVALENT ENGINEERED LIFT STATIONS MAY BE USED UPON APPROVAL OF THE CITY OF HOMER.

9. INDIVIDUAL RESIDENCE PRESSURIZED SEWER SERVICES CONSISTS OF 1.25–INCH DIAMETER SDR 11 HIGH DENSITY POLYETHYLENE PIPE. PRESSURIZED SEWER SERVICES WILL BE EQUIPPED WITH A 1.25–INCH POLY VALVE INSTALLED WITH A VALVE BOX AT THE PROPERTY LINE. THE PRESSURIZED SEWER WILL BE INSULATED WITH TWO INCHES OF INSULATION AND A MINIMUM DEPTH OF BURY OF 7 FEET BELOW GROUND SURFACE.

10. PIPE WILL BE BEDDED IN UNDISTURBED NATIVE SOIL OR CLASS B BEDDING. IMPORTED PIPE BEDDING AND SUB–GRADE WILL BE COMPACTED TO 90% MAXIMUM DENSITY. TRENCH BACKFILL SHALL BE NON–ORGANIC FILL AND COMPACTION WILL OCCUR IN ONE FOOT LIFTS.

11. SEWER LINES ARE TO BE AIR PRESSURE TESTED IN ACCORDANCE WITH CITY OF HOMER SPECIFICATION 502.3 (f).

12. NO WELLS ARE KNOWN TO BE LOCATED WITHIN 200 FEET OF ANY SANITARY SEWER MAINS OR SERVICE CONNECTIONS.



NOTES: 1. DIMENSIONS ARE FOR REFERENCE ONLY.
2. CONCRETE BALLAST MAY BE REQUIRED (SEE INSTALLATION INSTRUCTIONS)

E–ONE D–SERIES PRESSURE SANITARY SEWER LIFT STATION DETAIL
NOT TO SCALE

NOTES:

1. *BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.*

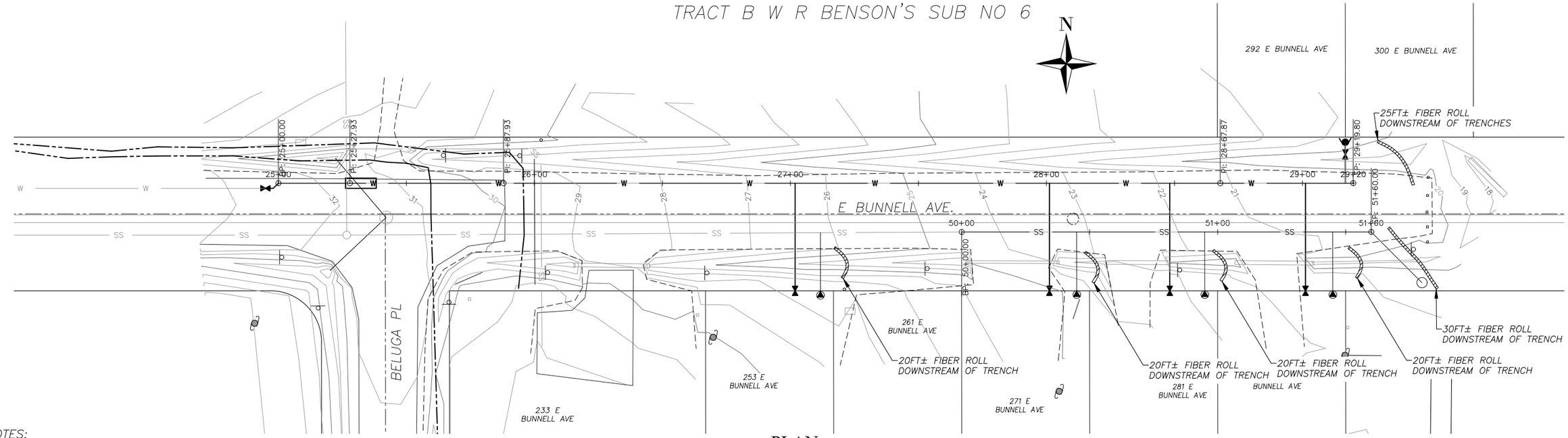
STATE OF ALASKA 49TH — John S. Bishop — 11/30/22 — CE 10991 — REGISTERED PROFESSIONAL ENGINEER

E. BUNNELL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
SANITARY SEWER LIFT STATION DETAILS + NOTES

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299–7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:
SS–7



PLAN

0 40 80 120 160

GRAPHIC SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.

STATE OF ALASKA 49TH
John S. Bishop
CERTIFICATE NUMBER
CE 10991
REGISTERED PROFESSIONAL ENGINEER

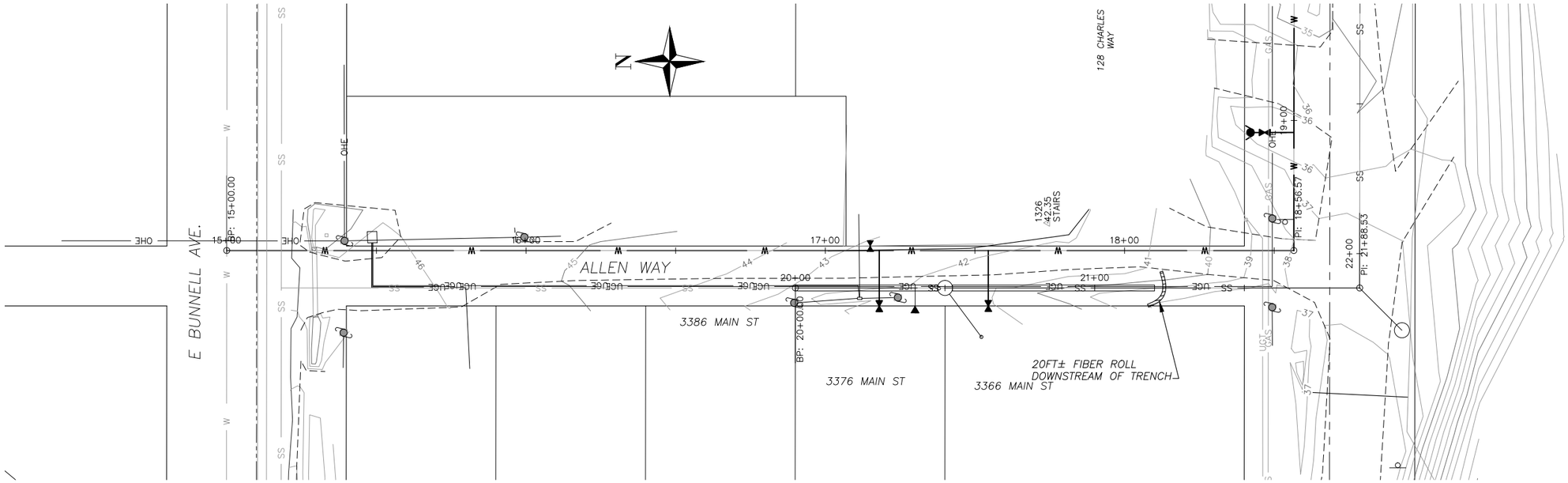
E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
EROSION CONTROL PLAN NO. 1

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:

SS-8



PLAN

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GRAPHIC SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.

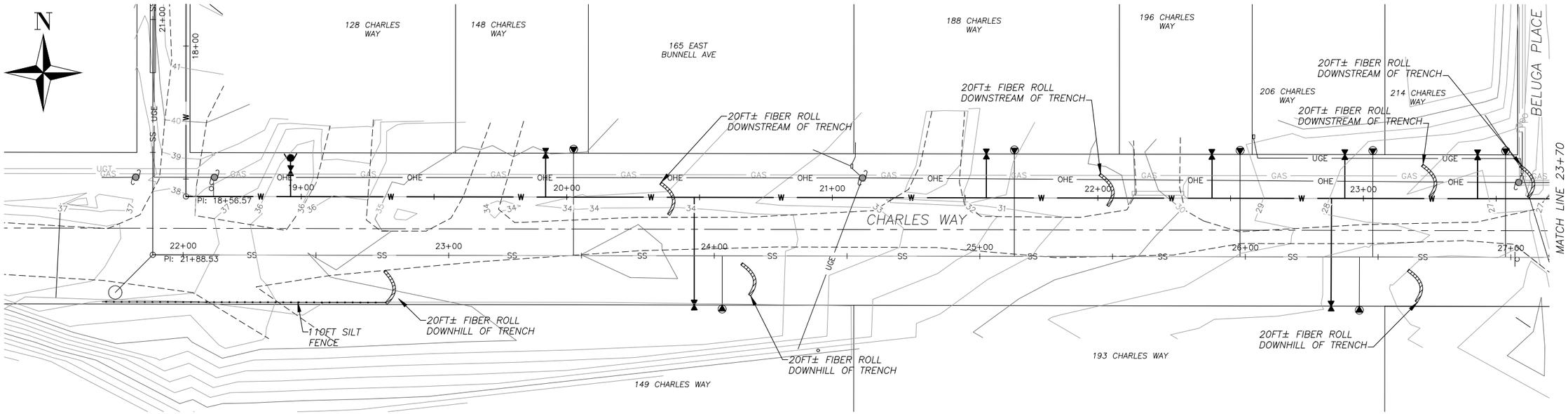
STATE OF ALASKA 49TH
John S. Bishop
11/22/2022
CE 10991
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
EROSION CONTROL PLAN NO. 2

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:
SS-9



PLAN

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GRAPHIC SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.

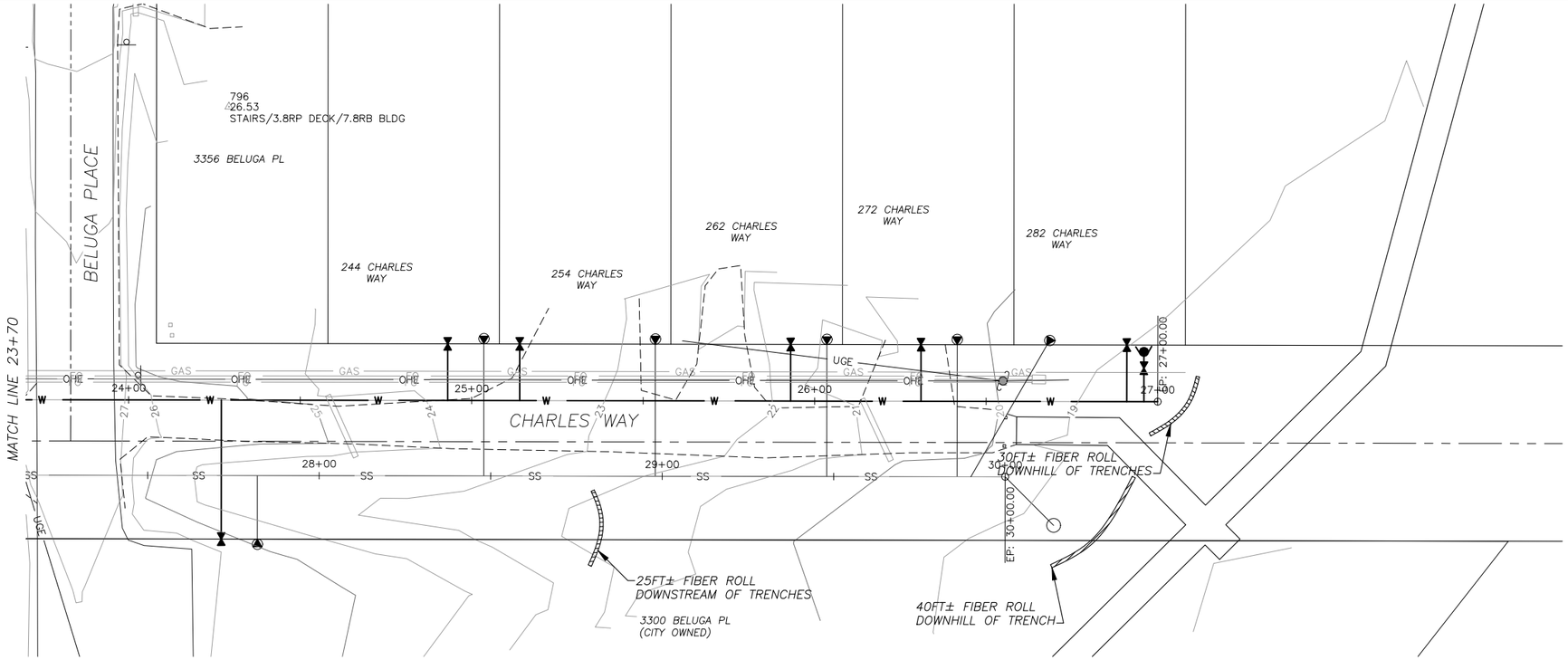
STATE OF ALASKA 49TH
John S. Bishop
11/22/2022
CE 13991
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
EROSION CONTROL PLAN NO. 3

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:
SS–10



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PLAN

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GRAPHIC SCALE

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.

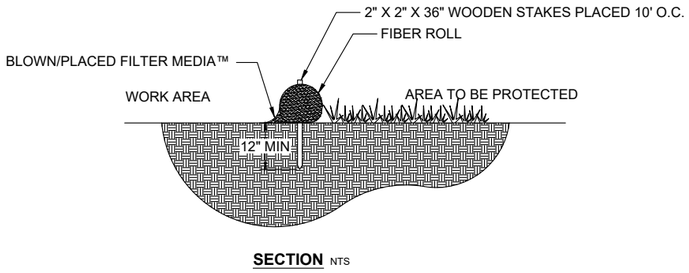
STATE OF ALASKA 49TH
John S. Bishop
11/30/22
CE 11893
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
EROSION CONTROL PLAN NO. 4

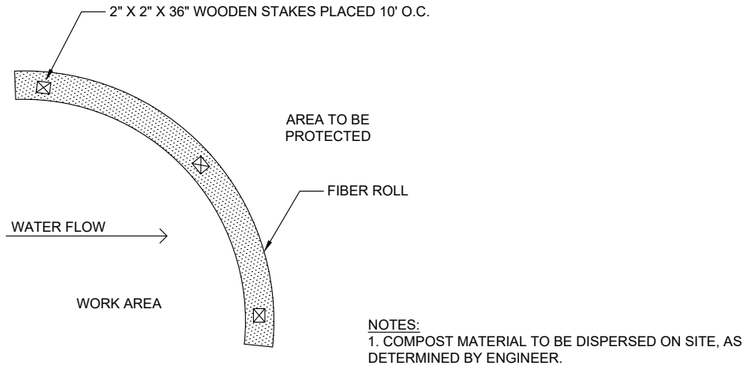
BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
(907) 299-7609

DATE: 11/22/2022
CHK'D: JSB
SCALE: AS NOTED
PROJ. NO.: 2022019

SHEET NO.:
SS–11



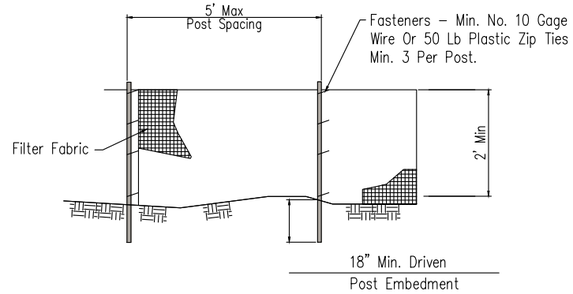
SECTION NTS



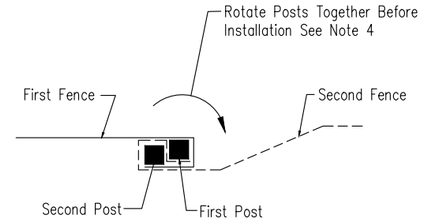
NOTES:
1. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

PLAN NTS

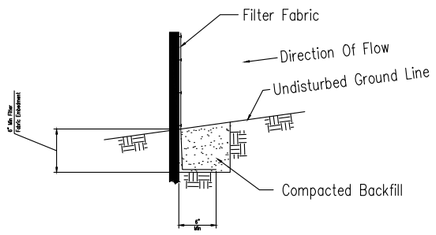
FIBER ROLL SEDIMENT CONTROL
NTS



ELEVATION



SPLICE DETAIL–PLAN VIEW



FABRIC ANCHOR DETAIL

NOTES:
1. Temporary silt fence shall be installed prior to any grading work in the area to be protected. Fence shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either wood post with a minimum cross–sectional area of 1.5" X 1.5" or a standard steel post.
4. When splices are necessary make splice at post according to splice detail. Place the end post of the second fence inside the end post of the first fence. Rotate both posts together at least 180 degrees to create a tight seal with the fabric material. Cut the fabric near the bottom of the posts to accommodate the 6 inch flap. Then drive both posts and bury the flap. Compact backfill well.

SIILT FENCE PROJECT BORDER
NTS

NOTES:

1. BEFORE PERFORMING ANY EXCAVATIONS, CALL ALASKA DIGLINE AT 811, (800) 478–3121, OR (907) 278–3121.

STATE OF ALASKA 49TH
John S Bishop
11/22/2022
CE 10993
REGISTERED PROFESSIONAL ENGINEER

E. BUNNEL AVENUE / CHARLES WAY / ALLEN WAY
SANITARY SEWER MAIN EXTENSION
EROSION CONTROL DETAILS

BISHOP ENGINEERING, LLC
PO BOX 2501 HOMER, ALASKA 99603
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DATE: 11/22/2022
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SHEET NO.:
SS–12