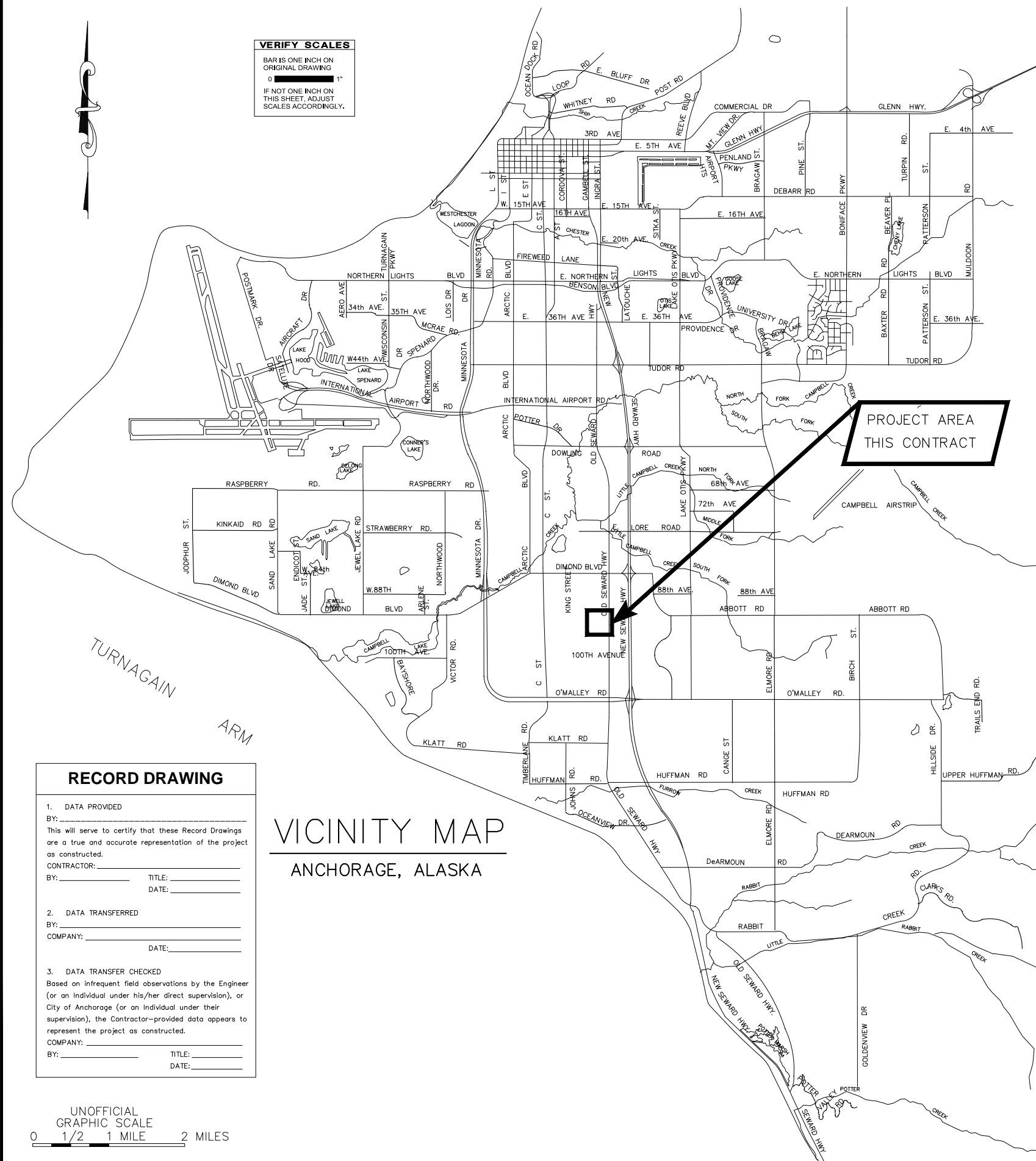




MUNICIPALITY OF ANCHORAGE WATER AND WASTEWATER UTILITY KING STREET CAMPUS EXPANSION E. 94TH AVENUE IMPROVEMENTS

AWWU PROJECT ID. NO. WW.00007 (WTR)
MAY 2020

95% DRAFT



VERIFY SCALES
BARS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PROJECT AREA
THIS CONTRACT

VICINITY MAP ANCHORAGE, ALASKA

RECORD DRAWING

1. DATA PROVIDED
BY: _____
This will serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.
CONTRACTOR: _____
BY: _____ TITLE: _____
DATE: _____

2. DATA TRANSFERRED
BY: _____
COMPANY: _____
DATE: _____

3. DATA TRANSFER CHECKED
Based on infrequent field observations by the Engineer (or an Individual under his/her direct supervision), or City of Anchorage (or an Individual under their supervision), the Contractor-provided data appears to represent the project as constructed.
COMPANY: _____
BY: _____ TITLE: _____
DATE: _____



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE INSTALLED AS SPECIFIED IN THE MOST CURRENT EDITION OF THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS FOR STREETS-DRAINAGE-UTILITIES-PARKS (MASS), THE AWWU DESIGN AND CONSTRUCTION PRACTICES MANUAL, AND THE SPECIAL PROVISIONS.
- MAINTAIN A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER MAINS AND SERVICES. A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES SHALL BE MAINTAINED AT ALL WATER/SEWER CROSSINGS.
- MAINTAIN A MINIMUM OF 36-INCHES OF VERTICAL SEPARATION BETWEEN ANY STORM SEWER (STORM DRAIN OR FOOTING DRAIN) AND WATERLINE (MAINS OR SERVICES) OR SANITARY SEWER (MAINS OR SERVICES). IF 36-INCHES CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4-INCH THICK INSULATION.
- ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE, MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.
- CONTRACTOR SHALL VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE CONTRACTOR RECORD DRAWINGS.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED PROPERTY, INCLUDING DRAINAGE SWALES, DISTURBED BY CONTRACT ACTIVITIES TO PRECONSTRUCTION CONDITION.
- IN CASE OF CONFLICT BETWEEN STATIONING LOCATION OF PIPE OR FITTINGS, USE DIMENSIONED LOCATIONS RELATIVE TO THE CENTERLINE OR PROPERTY LINE, THE DIMENSIONED LOCATIONS SHALL GOVERN.
- THE CONTRACTOR SHALL RECORD SURVEY NOTES FOR SUBMITTAL WITH RECORD DRAWING PLANS PRIOR TO CONTRACT FINAL PAYMENT.
- CONTRACTOR SHALL FIELD INSTALL "MEG-A-LUG" JOINT RESTRAINT ON ALL MECHANICAL JOINTS.
- CONTRACTOR SHALL USE DUCTILE IRON PIPE (DIP) LONG SOLID SLEEVES WITH RESTRAINED JOINTS TO FACILITATE CONNECTING DIP TO DIP OF SAME SIZE.
- ALL DUCTILE AND CAST IRON PIPE AND FITTINGS SHALL BE ENCASED IN 8-MILS OF POLYETHYLENE WRAP, AS PER MASS SECTION 60.07 "POLYETHYLENE ENCASEMENT."
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, AND MUNICIPAL LAWS THAT PROHIBIT UNPERMITTED DISCHARGE OF POLLUTANTS, INCLUDING SEDIMENTS, THAT ARE A RESULT OF EROSION AND OTHER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONDUCT ALL WORK SO SEDIMENT IS NOT TRANSPORTED ONTO THE ROADWAY OR ADJACENT PROPERTY. AT A MINIMUM, THE CONTRACTOR SHALL SWEEP UP ANY SEDIMENT TRACKED ONTO PAVED SURFACES IN PUBLIC RIGHT-OF-WAY WITHIN 24 HOURS OF THE TRACKING TO MINIMIZE THE WASH-OFF OF SEDIMENT INTO THE STORM DRAINS OR WATERWAYS.
- STATIONING SHALL BE PIPE CENTERLINE UNLESS NOTED OTHERWISE.
- PROPOSED CONTOURS ARE SHOWN AT 1-FT INTERVAL.

WATER NOTES

- AWWU, AFD AND EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF WATER SERVICE INTERRUPTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY WATER SERVICE TO THE EXISTING CUSTOMERS IF THE OUTAGE EXCEEDS 6-HOURS OR IF DEEMED NECESSARY BY THE ENGINEER. THE CONTRACTOR SHALL HAVE A TEMPORARY WATER SERVICE PLAN REVIEWED AND APPROVED BY ADEC.
- ALL WATER MAINS SHALL BE C900 PVC DR-18 RJIB PIPE.
- ALL BENDS, TEES, FIRE HYDRANTS AND DEAD-ENDS SHALL HAVE RESTRAINED FITTINGS.
- NO PIPE LENGTH LESS THAN EIGHT (8') FEET SHALL BE INCORPORATED IN THE WATER SYSTEM EXCEPT FOR THOSE NECESSARY FOR FIRE HYDRANTS OR VALVE LOCATIONS UNLESS RESTRAINED.
- THRUST RESTRAINT SHALL BE PROVIDED BY USE OF FIELD-LOK GASKETS (OR EQUAL) OR MEG-A-LUG FITTINGS (OR EQUAL) ON ALL MECHANICAL JOINTS. THE USE OF THRUST BLOCKS WILL NOT BE ALLOWED FOR NEW PIPE.
- WATER SERVICES SHALL BE 2" UNLESS NOTED ON PLANS.
- WATER SERVICES SHALL BE PLACED NO CLOSER THAN: 15 FEET HORIZONTALLY MEASURED TO ANY FIRE HYDRANT OR FIRE HYDRANT LEG; 10 FEET HORIZONTALLY MEASURED TO ANY SANITARY SEWER MAIN, SANITARY SEWER SERVICE, STORM SEWER, FOOTING DRAIN, STREET LIGHT, TRANSFORMER PAD, ELECTRICAL/TELEPHONE/CABLE BOX; AND 5 FEET HORIZONTALLY MEASURED TO ANY SIDE LOT LINE
- THE CONTRACTOR SHALL HAVE THE NEWLY INSTALLED WATER MAIN OPEN BORE FLUSHED BY AWWU PRIOR TO INSTALLATION OF WATER SERVICES. PROVIDE A MINIMUM OF 48 HOURS ADVANCE NOTICE.
- ALL WATER MAIN AND SERVICE TRENCHES AND BEDDING SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
- ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 10 FEET OF BURY AT ALL POINTS.
- MAXIMUM DEFLECTION OF PIPE PER JOINT SHALL NOT EXCEED 80% OF THE MANUFACTURERS RECOMMENDED DEFLECTION (4 DEGREES).
- ALL PIPE BEDDING SHALL BE TYPE II-A FOR DUCTILE IRON PIPE.
- THE CONTRACTOR SHALL RELOCATE ANY WATER SERVICE CONNECTIONS INSTALLED WITH LESS THAN MINIMUM STANDARD DISTANCES PRIOR TO ACCEPTANCE BY AWWU.
- THE DEAD END OF THE WATER MAIN SHALL BE RESTRAINED FOR A MINIMUM OF 40' FROM END.

GENERAL SURVEY NOTES

- THE FIELD SURVEY WAS PERFORMED BY PROFESSIONAL AND TECHNICAL SERVICES INC.(PTS) FROM OCTOBER 10 TO SEPTEMBER 16, 2018, AND DECEMBER 10, 2019. FIELD SURVEY INFORMATION FOR THIS PROJECT IS LOCATED IN PTS FIELD BOOK 18-102, PAGES 5 THROUGH 18.
- CONTOUR INTERVAL = 2 FOOT.
- MANHOLE LOCATIONS ARE SHOWN TO APPROXIMATE CENTER OF STRUCTURE.
- ALL ROADWAY SURFACES ARE ASPHALT UNLESS OTHERWISE NOTED.
- UNDERGROUND NATURAL GAS, TELEPHONE, ELECTRIC, AND CABLE TV LINES WERE FIELD LOCATED. PRIVATE SERVICE LINES WERE NOT FIELD LOCATED UNLESS SHOWN HEREON.
- AWWU AND STREET MAINTENANCE DID NOT RESPOND TO OUR LOCATE REQUEST.
- LOCATION OF WATER UTILITY LINES IS APPROXIMATE. THEY ARE DRAWN FROM VALVE TO VALVE USING ASBUILT INFORMATION AND WERE NOT FIELD LOCATED.
- UNDERGROUND STREET LIGHT LINES EXIST WITHIN THE PROJECT AREA.
- UNDERGROUND NATURAL GAS, TELEPHONE, ELECTRIC, AND CABLE TV LINE CROSSINGS IN THE PROFILE ARE SHOWN AT AN ASSUMED VERTICAL LOCATION. EXACT VERTICAL LOCATIONS SHOULD BE VERIFIED.
- A TITLE SEARCH WAS NOT PERFORMED, EASEMENTS OF RECORD OTHER THAN THOSE SHOWN ON THE RECORDED PLATS ARE NOT SHOWN HEREON.
- ALL DISTURBED PROPERTY CORNERS SHALL BE REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH SPECIAL PROVISION 65.02, ARTICLE 2.1 PROJECT CONTROL.
- ELEVATIONS ARE BASED ON THE M.O.A. VERTICAL DATUM 1972 N.G.S. ADJUSTMENT. BENCH MARK IS "MOA 13", ELEV.=141.28'. SEE M.O.A. BENCHMARK BOOK, DESCRIPTION PAGE D-60.

SOIL ABBREVIATIONS

- GW - WELL GRADED GRAVEL
- GP - POORLY GRADED GRAVEL
- GM - SILTY GRAVEL
- GC - CLAYEY GRAVEL
- SW - WELL GRADED SAND
- SP - POORLY GRADED SAND
- SM - SILTY SAND
- SC - CLAYEY SAND
- ML - INORGANIC SILT
- CL - INORGANIC CLAY
- OL - ORGANIC SILT
- MH - INORGANIC SILT
- CH - INORGANIC CLAY
- OH - ORGANIC CLAY

LEGEND - PROFILE

EXISTING	PROPOSED	DESCRIPTION
---	---	CENTERLINE GRADE
---	---	LEFT PROPERTY LINE GRADE
---	---	RIGHT PROPERTY LINE GRADE
---	---	INSULATION
---	---	PIPE REMOVAL
---	---	WATER LEVEL
---	---	UTILITY MAIN
---	---	STORM DRAIN/SEWER MANHOLE



CALL BEFORE YOU DIG !

Alaska Digline, Inc. Statewide _____	811
AFSC/ASIG Chevron Alaska Railroad Military Fuel Lines State Storm Drains	243-4322 258-2301 265-2520 552-3760 & 532-5342 333-2411

LEGEND - PLAN

EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY LINE
---	---	EASEMENT
---	---	CENTERLINE
---	---	CURB & GUTTER
---	---	EDGE OF PAVEMENT
--- W ---	--- W ---	WATER MAIN
--- S ---	---	SEWER MAIN
--- SD ---	---	STORM DRAIN MAIN
--- E/OH ---	---	OVERHEAD ELECTRIC
--- T/OH ---	---	OVERHEAD TELEPHONE
--- E/UG ---	--- E/UG ---	UNDERGROUND ELECTRIC
--- C/UG ---	---	UNDERGROUND CABLE
--- FO ---	--- FO ---	UNDERGROUND FIBER OPTIC
--- G ---	---	UNDERGROUND NATURAL GAS
--- X ---	---	FENCE
---	---	CHAINLINK FENCE
---	---	DRAINAGE ARROW
⊕	---	ELECTRICAL HAND HOLE
⊙	---	TELEPHONE HAND HOLE
⊞	---	ELECTRICAL VAULT
⊖	---	ELECTRICAL METER
⊞	---	UNDERGROUND ELECTRICAL PEDESTAL
⊞	---	UNDERGROUND TELEPHONE PEDESTAL
⊞	---	GAS METER
⊞	---	JUNCTION BOX
⊞	---	GAS VALVE
⊞	---	MAILBOX
⊞	---	STREET SIGN
⊞	---	IRON PIN OR REBAR
⊞	---	SECTION CORNER/SURVEY MONUMENT
⊞	---	LIGHT POLE
⊞	---	WATER KEYBOX
⊞	---	WATER VALVE
⊞	---	WATER END CAP / THRUST BLOCK
⊞	---	FIRE HYDRANT
⊞	---	SEWER MANHOLE
⊞	---	SEWER SERVICE
⊞	---	SEWER PLUG
⊞	---	CLEANOUT
⊞	---	STORM DRAIN MANHOLE
⊞	---	STORM DRAIN CATCH BASIN
⊞	---	STORM DRAIN CATCH BASIN MANHOLE
⊞	---	STORM DRAIN SERVICE
⊞	---	CULVERT
⊞	---	CONIFEROUS TREE
⊞	---	DECIDUOUS TREE
⊞	---	BOULDER
⊞	---	RETURN RADIUS
⊞	---	REMOVE EXISTING PAVEMENT
⊞	---	RAP SURFACE
⊞	---	TEST BORING OR TEST HOLE

ABBREVIATIONS

- AC - ASBESTOS CEMENT
- A.C. - ASPHALT CONCRETE
- AD - ALGEBRAIC DIFFERENCE
- AFD - ANCHORAGE FIRE DEPARTMENT
- AWWU - ANCHORAGE WATER & WASTEWATER
- BOH - BOTTOM OF HOLE
- BOP - BOTTOM OF PIPE
- BV - BUTTERFLY VALVE
- BVCE- BEGIN VERTICAL CURVE - ELEVATION
- BVCS- BEGIN VERTICAL CURVE - STATION
- CC - CURB CUT
- CIP - CAST IRON PIPE
- CL - CENTERLINE
- DIA - DIAMETER
- DIP - DUCTILE IRON PIPE
- EG - EXISTING GROUND
- EL - ELEVATION
- ELEV- ELEVATION
- EOP - EDGE OF PAVEMENT
- EVCE- END VERTICAL CURVE - ELEVATION
- EVCS- END VERTICAL CURVE - STATION
- F&I - FURNISH AND INSTALL
- FG - FINISHED GRADE
- FH - FIRE HYDRANT
- GV - GATE VALVE
- H - HORIZONTAL
- HDD - HORIZONTAL DIRECTIONAL DRILLING
- HDPE- HIGH DENSITY POLYETHYLENE
- IAW - IN ACCORDANCE WITH
- INV - INVERT
- K - SIGHT DISTANCE
- LF - LINEAR FEET
- LT - LEFT
- MASS- MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS
- M.E. - MATCH EXISTING
- MSL - MEAN SEA LEVEL
- NTS - NOT TO SCALE
- OFF - OFFSET
- OSHA- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- PL - PROPERTY LINE
- PC - POINT OF CURVATURE
- PRC - POINT OF REVERSE CURVE
- PT - POINT OF TANGENCY
- PTM- PILOT TUBE MICROTUNNELING
- PVC - POLYVINYL CHLORIDE
- PVI - POINT OF VERTICAL INTERSECTION
- RC - REINFORCED CONCRETE PIPE
- RED - REDUCER
- RS - RESILIENT SEATED
- RT - RIGHT
- ROW - RIGHT OF WAY
- RP - RADIUS POINT
- SI - STREET INTERSECTION
- SP - SINGLE PUMPER
- SSMH- SANITARY SEWER MANHOLE
- ST - STREET
- STA - STATION
- STD - STANDARD
- SY - SQUARE YARD
- TAP - TEMPORARY ACCESS PERMIT
- TB - THRUST BLOCK
- TBC - TOP BACK OF CURB
- TCE - TEMPORARY CONSTRUCTION EASEMENT
- TCP - TEMPORARY CONSTRUCTION PERMIT
- TOP - TOP OF PIPE
- TP - TOP OF PAVEMENT
- TYP - TYPICAL
- VB - VALVE BOX
- VC - VERTICAL CURVE
- WS - WOOD STAVE

E. 94TH AVENUE SHEET INDEX

SHEET	SUBJECT
C13	COVER SHEET
C14	NOTES, LEGEND, & SHEET INDEX
C15	KEY MAPS
C16	SURVEY CONTROL
C17	TEMPORARY CONSTRUCTION PERMIT INDEX (NOT INCLUDED AT 95%)
C18	TYPICAL SECTIONS I
C19	TYPICAL SECTIONS II
C20	PIPE DETAILS
C21	DEMOLITION
C22	ROAD IMPROVEMENTS
C23	CUL-DE-SAC GRADING PLAN
C24	CROSS SECTIONS
C25	WATER IMPROVEMENTS
C26	TRAFFIC CONTROL/PHASING DIAGRAM (DRAFT)
C27	ILLUMINATION PLAN

VERIFY SCALE THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
BASE				TELEPHONE	
TOPOGRAPHY				ELECTRIC	
PROFILE				CABLE TV	
SANITARY SEWER				TRAFFIC SIGNAL	
STORM SEWER				DESIGN	
WATER				QUANTITIES	
GAS				MUN. FINAL CHECK	
PLAN CHECK					REVISIONS

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

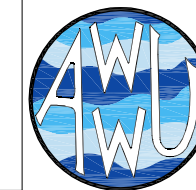
- DATA PROVIDED BY: _____
This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.
CONTRACTOR: _____
BY: _____ TITLE: _____
DATE: _____
- DATA TRANSFERRED BY: _____
COMPANY: _____
DATE: _____
- Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
DATA TRANSFER CHECKED BY: _____
COMPANY: _____
BY: _____ TITLE: _____
DATE: _____

REUSE OF DOCUMENTS

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95% DRAFT



MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY

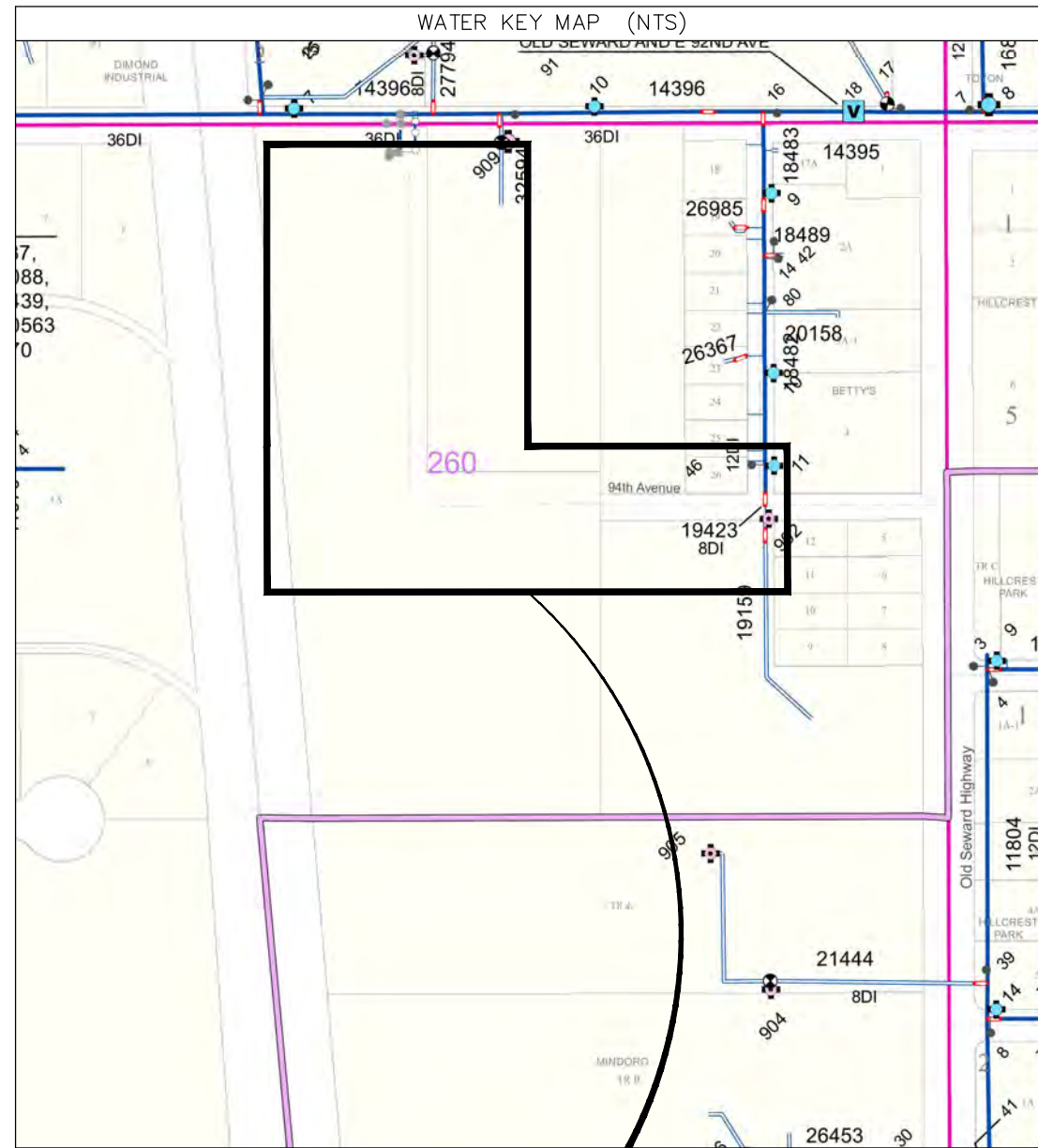
KING STREET CAMPUS EXPANSION

NOTES, LEGEND, SHEET INDEX E. 94TH AVENUE

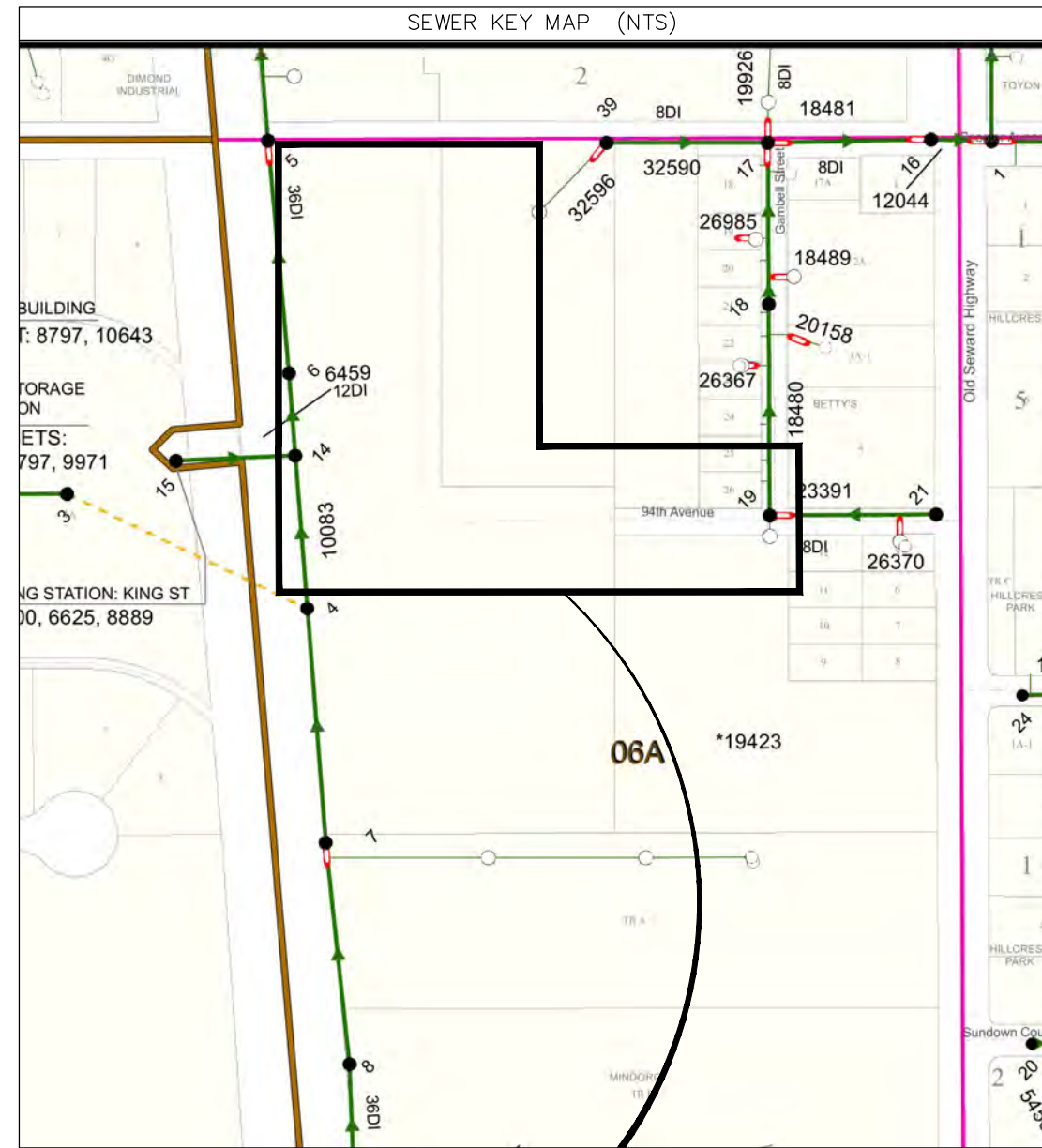
HORIZ SCALE: N/A	DATE: 5/2020	GRID: SW2431	SHEET C14 of C27
VERT SCALE: N/A	PROJ. ID.: WW 00007		

2019/10/02 2:08 PM By: Pat Butler Z:\KS-03.dwg Active\0007 King Street CP 94th.dwg

AWWU PLAN SET NO. XXXX



THIS PROJECT



THIS PROJECT

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
BASE					
TOPOGRAPHY					
PROFILE					
SANITARY SEWER					
STORM SEWER					
WATER					
GAS					
PLAN CHECK				REVISIONS	

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: _____
 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.
 CONTRACTOR: _____
 BY: _____ TITLE: _____
 DATE: _____

2. DATA TRANSFERRED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
 DATA TRANSFER CHECKED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

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95% DRAFT

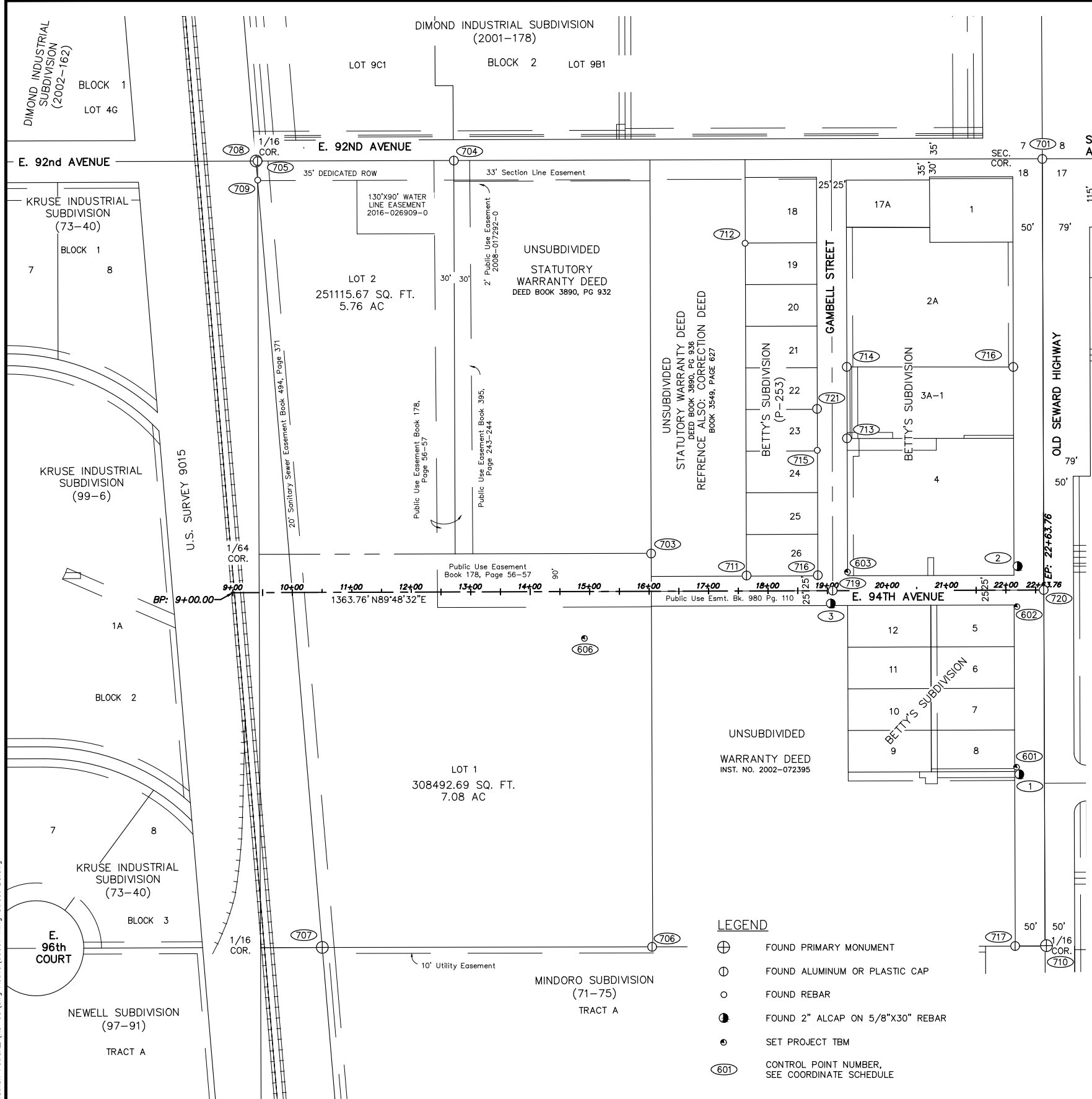


MUNICIPALITY OF ANCHORAGE
 WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

**KEY MAPS
 E. 94TH AVENUE**

HORIZ SCALE: N/A
 VERT SCALE: N/A
 DATE: 5/2020
 GRID: SW2431
 SHEET C15 of C27
 PROJ. ID.: WW 00007



COORDINATE SCHEDULE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
3	19+05.50	21.68 RT	2606952.5528	1664104.8135	FOUND ALUMINUM CAP
2	22+19.86	40.10 LT	2607015.3764	1664418.9636	FOUND ALUMINUM CAP
1	22+21.43	309.95 RT	2606665.3340	1664421.7020	FOUND ALUMINUM CAP

TBM COORDINATE SCHEDULE						
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
606	14+90.84	79.00 RT	2606894	1663690	124.53	"X" SCRIBED ON FOOTING OF GATE POST
603	19+33.64	31.20 LT	2607006	1664133	130.37	TOP OF SW CORNER CONC PAD
601	22+16.94	297.99 RT	2606677	1664417	135.83	"X" SCRIBED ON EAST BOLT OF LUMINARE
602	22+18.44	27.85 RT	2606947	1664418	135.01	"X" SCRIBED ON EAST BOLT OF LUMINARE

COORDINATE SCHEDULE					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
708	9+41.31	725.78 LT	2607696.7900	1663138.1320	FOUND ALUMINUM MONUMENT
709	9+43.88	693.55 LT	2607664.5650	1663140.8160	FOUND REBAR
705	9+43.94	725.53 LT	2607696.5530	1663140.7640	FOUND ALUMINUM CAP
707	10+48.29	597.11 RT	2606374.2630	1663249.5230	FOUND ALUMINUM MONUMENT
704	12+73.86	725.34 LT	2607697.4620	1663470.6800	FOUND ALUMINUM CAP
706	16+02.98	597.84 RT	2606375.3860	1663804.2110	FOUND ALUMINUM CAP
703	16+03.54	63.58 LT	2607036.8020	1663802.5700	FOUND ALUMINUM CAP
712	17+63.34	584.63 LT	2607558.3860	1663960.6270	FOUND REBAR
711	17+63.91	25.89 LT	2606999.6530	1663963.0670	FOUND PLASTIC CAP
721	18+83.32	305.76 LT	2607279.9140	1664081.5410	FOUND PLASTIC CAP
715	18+83.41	236.00 LT	2607210.1580	1664081.8620	FOUND REBAR
716	18+83.75	26.05 LT	2607000.2070	1664082.9030	FOUND PLASTIC CAP
3	19+05.50	21.68 RT	2606952.5528	1664104.8135	FOUND ALUMINUM CAP
719	19+08.60	0.07 LT	2606974.3160	1664107.8400	FOUND ALUMINUM CAP
714	19+33.55	376.25 LT	2607350.5710	1664131.5340	FOUND ALUMINUM MONUMENT
713	19+33.56	256.02 LT	2607230.3400	1664131.9420	FOUND ALUMINUM MONUMENT
717	22+13.51	598.59 RT	2606376.6680	1664414.7430	FOUND ALUMINUM MONUMENT
718	22+13.53	375.21 LT	2607350.4640	1664411.5210	FOUND ALUMINUM CAP
2	22+19.86	40.10 LT	2607015.3764	1664418.9636	FOUND ALUMINUM CAP
1	22+21.43	309.95 RT	2606665.3340	1664421.7020	FOUND ALUMINUM CAP
720	22+63.51	0.01 LT	2606975.4400	1664462.7430	FOUND ALUMINUM CAP
701	22+63.62	724.91 LT	2607700.3280	1664460.4430	FOUND ALUMINUM CAP
* 723	22+63.70	1920.95 RT	2605054.4848	1664469.3455	FOUND REBAR
* 702	-	-	2607692.6730	1661821.2680	FOUND ALUMINUM CAP
710	-	-	2606377.2850	1664467.4660	FOUND BRASS CAP
* 722	-	-	2605048.4675	1661832.3502	FOUND ALUMINUM CAP

* INDICATES NOT SHOWN HEREIN

SURVEY NOTES:

- THE FIELD SURVEY WAS PERFORMED BY PROFESSIONAL AND TECHNICAL SERVICES INC.(PTS). FROM OCTOBER 10 TO SEPTEMBER 16, 2018, AND DECEMBER 10, 2019. FIELD SURVEY INFORMATION FOR THIS PROJECT IS LOCATED IN PTS FIELD BOOK 18-102, PAGES 5 THROUGH 18.
- A TITLE SEARCH WAS NOT PERFORMED, EASEMENTS OF RECORD OTHER THAN THOSE SHOWN ON THE RECORDED PLATS ARE NOT SHOWN HEREON. RECORD REFERENCE INFORMATION FOR EASEMENTS IS NOT SHOWN HERON.
- ALL DISTURBED PROPERTY CORNERS SHALL BE REPLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE M.O.A. STANDARD SPECIFICATIONS, SECTION 65.02 CONSTRUCTION SURVEYING, ARTICLE 2.1 PROJECT CONTROL.
- THE BASIS OF BEARINGS IS NAD83 (2011) EPOCH:2010.00 ALASKA STATE PLANE ZONE 4 GRID FROM GPS OBSERVATIONS.
- COORDINATES ARE NAD83 (2011) EPOCH:2010.00 ALASKA STATE PLANE ZONE 4 EXPRESSED IN U.S. SURVEY FEET. THE BASIS OF COORDINATES IS POINT NUMBER 1 PER AN N.G.S OPUS SOLUTION.
- TO CONVERT STATE PLANE COORDINATES TO ADOT&PF BOWL 2000 COORDINATES, SCALE USING 1.0001089930 AND TRANSLATE USING -2,296,869.1995 N, -1,312,517.2322 E.
- ELEVATIONS ARE BASED ON THE M.O.A. VERTICAL DATUM 1972 N.G.S. ADJUSTMENT. BENCH MARK IS "MOA 13", ELEV.=141.28'. SEE M.O.A. BENCHMARK BOOK, DESCRIPTION PAGE D-60.

LEGEND

- ⊕ FOUND PRIMARY MONUMENT
- ⊙ FOUND ALUMINUM OR PLASTIC CAP
- FOUND REBAR
- FOUND 2" ALCAP ON 5/8"x30" REBAR
- SET PROJECT TBM
- ⓪ CONTROL POINT NUMBER, SEE COORDINATE SCHEDULE

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE			TELEPHONE		
TOPOGRAPHY			ELECTRIC		
PROFILE			CABLE TV		
SANITARY SEWER			TRAFFIC SIGNAL		
STORM SEWER			DESIGN		
WATER			QUANTITIES		
GAS			MUN. FINAL CHECK		
PLAN CHECK			REVISIONS		

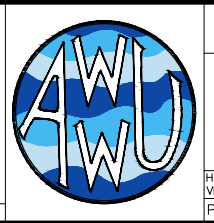
RECORD DRAWING		Note: To be filled out on original drawings upon project completion.	
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This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.		CONTRACTOR:	
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DATE:		COMPANY:	
2. DATA TRANSFERRED BY:		BY:	TITLE:
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MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY			
KING STREET CAMPUS EXPANSION			
SURVEY CONTROL SHEET E. 94TH AVENUE			
HORIZ SCALE: 1" = 100'	DATE: 5/2020	GRID: SW2431	SHEET C16 of C27
VERT SCALE: N/A	PROJ. ID.: WW 00007		

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street BS.dwg



TEMPORARY CONSTRUCTION PERMIT INDEX TO BE INCLUDED AT BID

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0  1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE			TELEPHONE				
TOPOGRAPHY			ELECTRIC				
PROFILE			CABLE TV				
SANITARY SEWER			TRAFFIC SIGNAL				
STORM SEWER			DESIGN				
WATER			QUANTITIES				
GAS			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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MUNICIPALITY OF ANCHORAGE
 WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

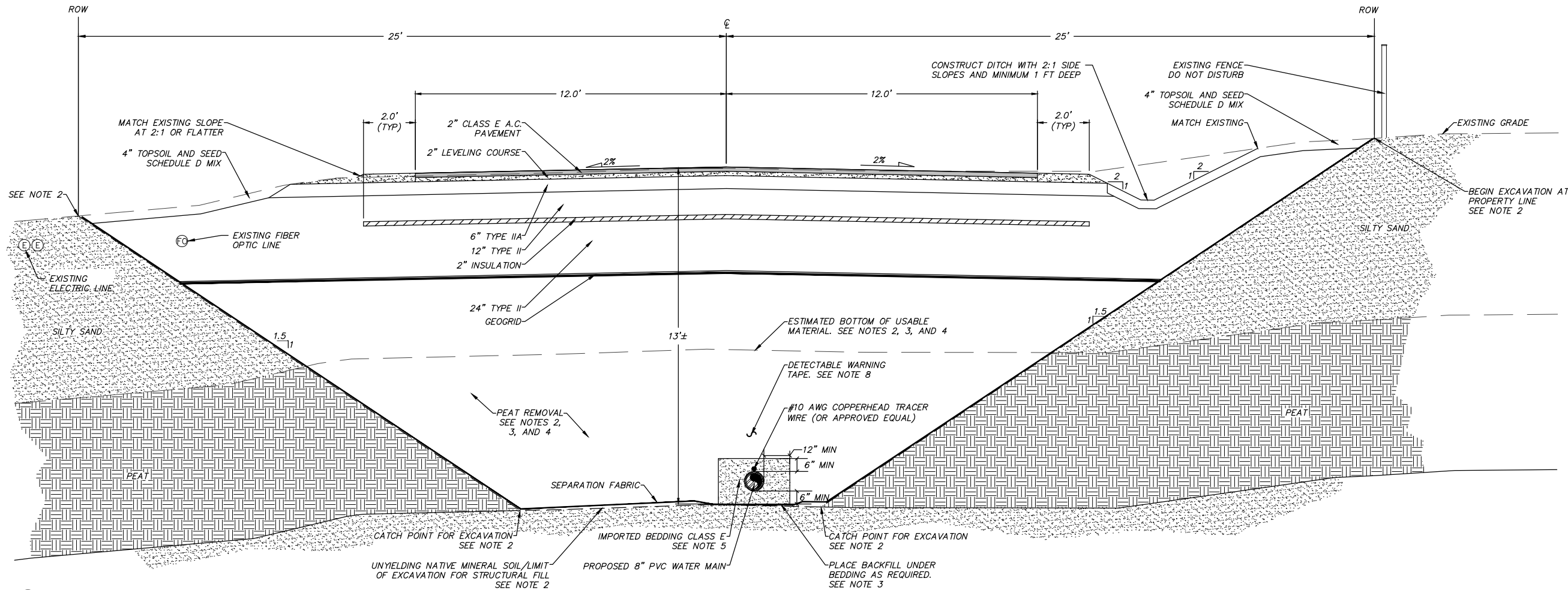
**TEMPORARY CONSTRUCTION PERMIT
 INDEX E. 94TH AVENUE**

HORIZ SCALE: 1" = 30'
 VERT SCALE: N/A

DATE: 5/2020 GRID: SW2431

PROJ. ID.: WW 00007

SHEET C17 of C27

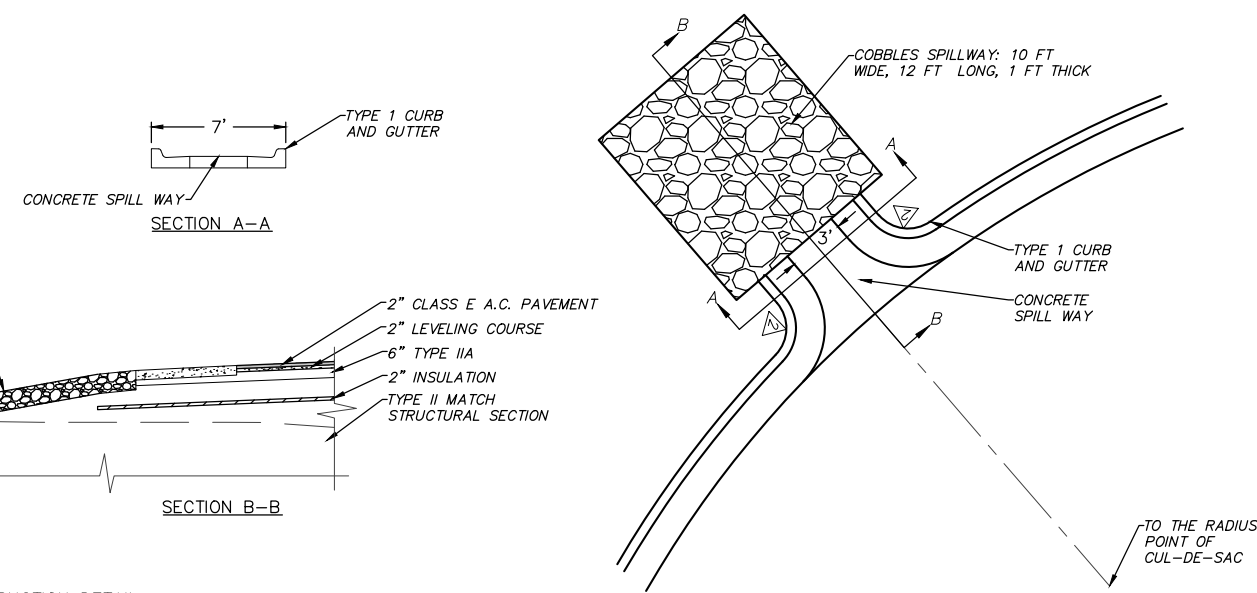


A
C18 TYPICAL ROAD EXCAVATION AND STRUCTURAL SECTION
STATION 16+00 TO EOP

NOT TO SCALE

ROAD RECONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. SAFETY STANDARDS BASED ON SOIL CHARACTERISTICS AND MASS SECTION 10.06, ARTICLE 6.8-SAFETY.
2. REMOVAL OF EXISTING ORGANIC SOILS AS SHOWN ON THE TYPICAL SECTIONS IS NECESSARY TO COMPLY WITH THE DCM. BEGIN EXCAVATION AT THE PROPERTY LINE AND CONTINUE DOWN AT A 1.5 H TO 1.0 V SLOPE TO BOTTOM OF ORGANIC SOILS.
3. USABLE MATERIAL WILL BE ENCOUNTERED AS INDICATED IN THE TYPICAL SECTIONS. THIS USABLE MATERIAL SHALL BE REPLACED AT THE BOTTOM OF THE EXCAVATION. CONTRACTOR WILL STORE THE USABLE MATERIAL AS REQUIRED TO BE USED ONCE THE SITE IS EXCAVATED TO GRADE AND APPROVED FOR BACKFILLING. NO SEPARATE PAYMENT SHALL BE MADE FOR STORAGE OR HANDLING OF THE MATERIAL.
4. BACKFILL SHALL BE USABLE NATIVE MATERIAL CONFORMING TO TYPE III SPECIFICATIONS OR IMPORTED TYPE III CLASSIFIED FILL & BACKFILL AS DETERMINED BY THE ENGINEER IN THE FIELD. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS MAXIMUM DENSITY.
5. COMPACTION SHALL BE TO 95% OF MAXIMUM DENSITY FOR ALL BEDDING MATERIAL.
6. IN PREPARATION FOR AND IMMEDIATELY PRIOR TO PAVING, CONTRACTOR SHALL SAW CUT AND REMOVE AN ADDITIONAL 12-INCHES BEYOND THE DISTURBED, EXISTING PAVEMENT EDGE. THE ENGINEER MAY REQUIRE MORE THAN A 12-INCH ADDITIONAL CUT IF THE PAVEMENT HAS BEEN LIFTED IN THE REMOVAL PROCESS, IF THE JOINT DOES NOT OCCUR ON UNDISTURBED MATERIAL, OR IF THE JOINT IS LOCATED WITHIN THE TRAVEL LANE. CUTS SHALL BE MADE WITH A SAW, AND SHALL BE SMOOTH AND STRAIGHT.
7. CONTRACTOR SHALL UTILIZE A PORTABLE STEEL SHIELD (MINIMUM 8' HEIGHT) DURING CONSTRUCTION ACTIVITIES FOR THE INSTALLATION OF PROPOSED WATER MAINS AND SERVICES.
8. DETECTABLE WARNING TAPE SHALL BE LOCATED BETWEEN 24" AND 36" ABOVE THE TOP OF PVC PIPE. TRACER WIRE IS TO BE INSTALLED PER MASS SECTION 60.02.
9. PROTECT EXISTING VEGETATION (TREES, SHRUBS, AND GRASS) TO THE GREATEST EXTENT POSSIBLE. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT. CONTRACTOR SHALL RESTORE ALL LANDSCAPING AND IMPROVEMENTS TO ORIGINAL CONDITION IN KIND WITH NEW MATERIALS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
10. THE HORIZONTAL AND VERTICAL LOCATION OF BURIED DEEP UTILITIES ARE BASED UPON SURVEY AND RECORD DRAWING INFORMATION. UNDERGROUND GAS, FIBER OPTIC, AND ELECTRICAL UTILITY LOCATIONS ARE BASED UPON FIELD LOCATES WITH AN ASSUMED DEPTH OF BURIAL. THE CONTRACTOR SHALL CALL FOR FIELD LOCATES TO VERIFY UTILITY LOCATIONS, AND SHALL COORDINATE WITH UTILITY COMPANIES AS REQUIRED. COORDINATION IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.



B
C18 CUL-DE-SAC SCUPPER CONSTRUCTION DETAIL

NOT TO SCALE

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

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DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
BASE					
TOPOGRAPHY					
PROFILE					
SANITARY SEWER					
STORM SEWER					
WATER					
GAS					
PLAN CHECK		REVISIONS			

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BY:	TITLE:	DATA TRANSFER CHECKED BY:	
DATE:		COMPANY:	
2. DATA TRANSFERRED BY:		BY:	TITLE:
COMPANY:		DATE:	

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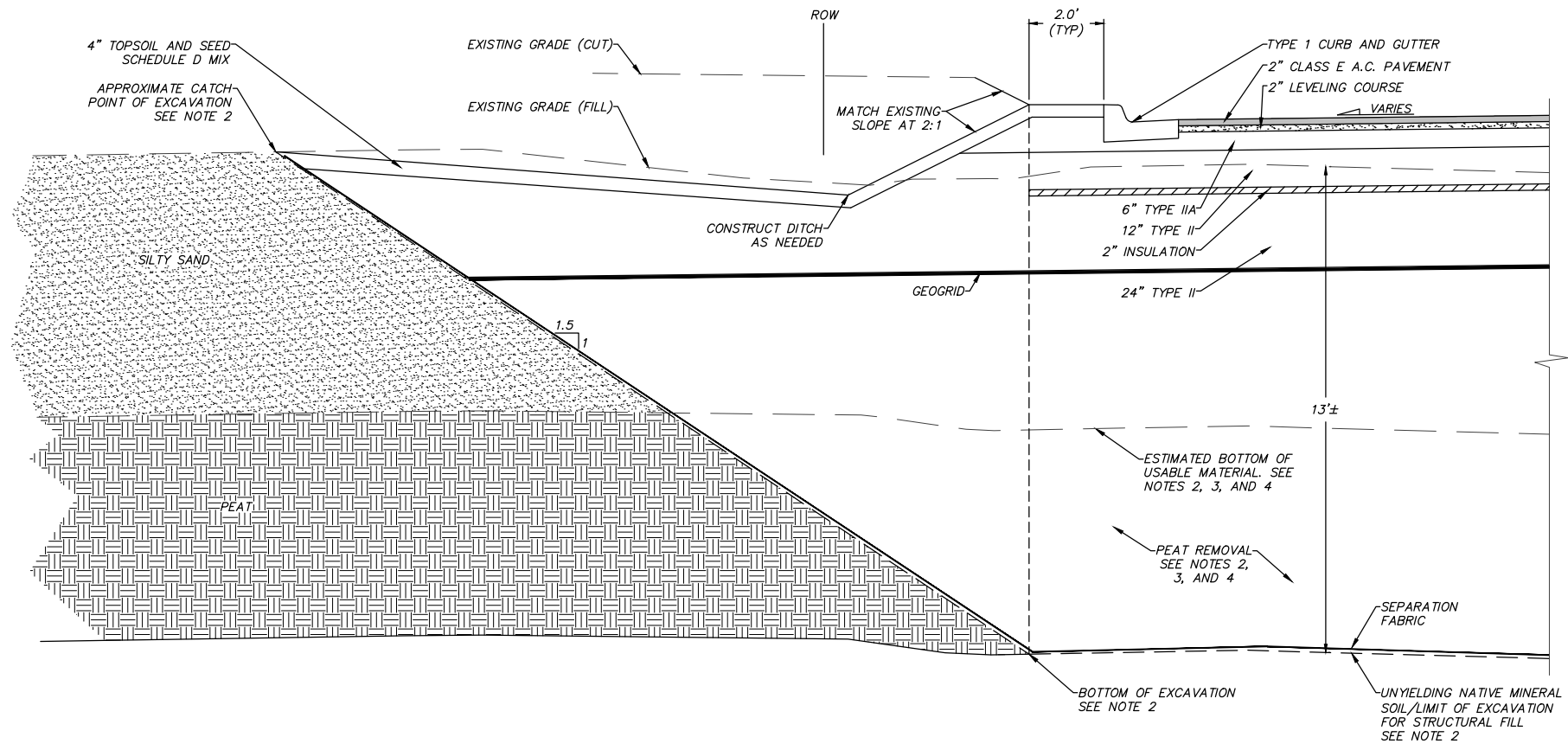
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MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY			
KING STREET CAMPUS EXPANSION			
TYPICAL SECTIONS I E. 94TH AVENUE			
HORIZ SCALE: N/A	DATE: 5/2020	GRID: SW2431	SHEET C18 of C27
VERT SCALE: N/A	PROJ. ID.: WW 00007		



ROAD RECONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. SAFETY STANDARDS BASED ON SOIL CHARACTERISTICS AND MASS SECTION 10.06, ARTICLE 6.8-SAFETY.
2. REMOVAL OF EXISTING ORGANIC SOILS AS SHOWN ON THE TYPICAL SECTIONS IS NECESSARY TO COMPLY WITH THE DCM. ORGANIC SOILS SHALL BE REMOVED WITHIN THE ROAD PRISM FROM DIRECTLY BELOW A POINT 2' BEHIND THE PROPOSED CURB.
3. USABLE MATERIAL WILL BE ENCOUNTERED AS INDICATED IN THE TYPICAL SECTIONS. THIS USABLE MATERIAL SHALL BE REPLACED AT THE BOTTOM OF THE EXCAVATION. CONTRACTOR WILL STORE THE USABLE MATERIAL AS REQUIRED TO BE USED ONCE THE SITE IS EXCAVATED TO GRADE AND APPROVED FOR BACKFILLING. NO SEPARATE PAYMENT SHALL BE MADE FOR STORAGE OR HANDLING OF THE MATERIAL.
4. BACKFILL SHALL BE USABLE NATIVE MATERIAL CONFORMING TO TYPE III SPECIFICATIONS OR IMPORTED TYPE III CLASSIFIED FILL & BACKFILL AS DETERMINED BY THE ENGINEER IN THE FIELD. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% OF ITS MAXIMUM DENSITY.
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7. CONTRACTOR SHALL UTILIZE A PORTABLE STEEL SHIELD (MINIMUM 8' HEIGHT) DURING CONSTRUCTION ACTIVITIES FOR THE INSTALLATION OF PROPOSED WATER MAINS AND SERVICES.
8. DETECTABLE WARNING TAPE SHALL BE LOCATED BETWEEN 24" AND 36" ABOVE THE TOP OF PVC PIPE. TRACER WIRE IS TO BE INSTALLED PER MASS SECTION 60.02.
9. PROTECT EXISTING VEGETATION (TREES, SHRUBS, AND GRASS) TO THE GREATEST EXTENT POSSIBLE. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT. CONTRACTOR SHALL RESTORE ALL LANDSCAPING AND IMPROVEMENTS TO ORIGINAL CONDITION IN KIND WITH NEW MATERIALS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
10. THE HORIZONTAL AND VERTICAL LOCATION OF BURIED DEEP UTILITIES ARE BASED UPON SURVEY AND RECORD DRAWING INFORMATION. UNDERGROUND GAS, FIBER OPTIC, AND ELECTRICAL UTILITY LOCATIONS ARE BASED UPON FIELD LOCATES WITH AN ASSUMED DEPTH OF BURIAL. THE CONTRACTOR SHALL CALL FOR FIELD LOCATES TO VERIFY UTILITY LOCATIONS, AND SHALL COORDINATE WITH UTILITY COMPANIES AS REQUIRED. COORDINATION IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.

A
C19 TYPICAL SECTION CUL-DE-SAC
STA 14+60 TO 16+00

NOT TO SCALE

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

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BASE			TELEPHONE		
TOPOGRAPHY			ELECTRIC		
PROFILE			CABLE TV		
SANITARY SEWER			TRAFFIC SIGNAL		
STORM SEWER			DESIGN		
WATER			QUANTITIES		
GAS			MUN. FINAL CHECK		
PLAN CHECK				REVISIONS	

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MUNICIPALITY OF ANCHORAGE
WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

TYPICAL SECTION II
E. 94TH AVENUE

HORIZ SCALE: N/A
VERT SCALE: N/A
DATE: 5/2020
GRID: SW2431
PROJ. ID.: WW 00007

SHEET C19 of C27

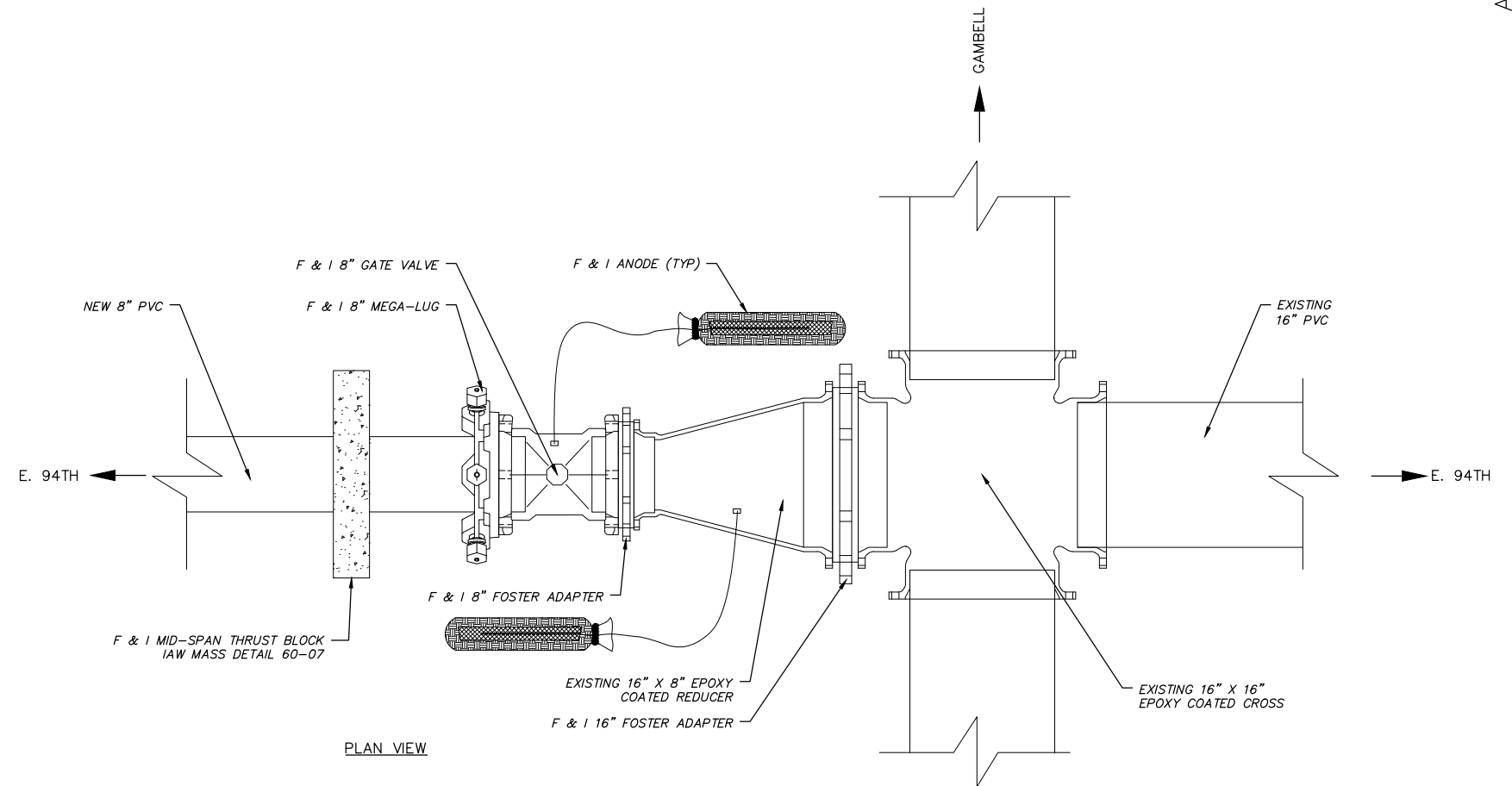


WATER SERVICE SCHEDULE									
TCP PARCEL #	ADDRESS	LEGAL DESCRIPTION	SERVICE SIZE	MATERIAL TYPE	WATER SERVICE STA @ MAIN	DIST. FROM MAIN TO R	*OFFSET FROM ADJ. PROP LINE	*DEPTH @ MAIN (APPROX.)	*DEPTH @ R
1	CEA LOT	SUBDIVISION	2"	TYPE K COPPER	1+07.70 (PIPE)	64.6'			

WATER SERVICE NOTES:

- WHERE REQUIRED SEPARATION BETWEEN WATER AND SEWER SERVICES DO NOT MEET STANDARDS, WATER SERVICE SHALL BE RELOCATED FROM THE MAIN TO THE PROPERTY LINE TO MEET MINIMUM SEPARATION. A 3/4" TYPE K COPPER EXTENSION SHALL BE ROUTED FROM THE NEW KEY BOX TO THE EXISTING ON-PROPERTY SERVICE AND CONNECTED VIA A SILVER SOLDER COUPLING. THE EXISTING KEY BOX VALVE SHALL BE LEFT OPEN, THE TOP 18" OF THE KEY CUT, PLUGGED, AND BURIED.
- KEY BOXES INSTALLED IN A.C. PAVEMENT OR P.C.C. SHALL BE INSTALLED IAW MASS DETAIL 60.16.
- REMOVE EXISTING KEY BOX IF WITHIN THE ROW OR WITHIN 5 FEET OF THE PROPERTY LINE IN ACCORDANCE WITH SECTION 60.05 OF THE SPECIAL PROVISIONS.

ANODE SCHEDULE	
STA (PIPE)	OFFSET SIDE



(A) WATER TIE-IN SCHEMATIC STA 5+16.88 (E. 94TH PIPE)
C20

NOT TO SCALE

NOTES:

- VALVE LAYOUT, BENDS, FITTINGS, ANODE PLACEMENT, ANODE LEADS AND BONDING SHOWN IS SCHEMATIC AND MAY VARY IN THE FIELD. ADDITIONAL ANODES AND BONDING MAY BE REQUIRED. SEE MASS SECTION 60.06 AND DETAILS 60-20 AND 60-21 FOR ANODE INSTALLATION REQUIREMENTS. SEE DETAIL 60-04 FOR JOINT BONDING DETAILS.
- IN ADDITION TO ANODES, ALL VALVES, JOINTS AND MECHANICAL FITTING ASSEMBLIES WILL BE FIELD COATED WITH DENSO WRAP SYSTEM OR APPROVED EQUAL PER MASS SECTION 60.02, SUB SECTION H, FIELD APPLIED COATINGS. THIS WORK IS INCIDENTAL TO MASS SECTION 60.02, FURNISH AND INSTALL PIPE.

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TOPOGRAPHY			ELECTRIC		
PROFILE			CABLE TV		
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STORM SEWER			DESIGN		
WATER			QUANTITIES		
GAS			MUN. FINAL CHECK		
PLAN CHECK			REVISIONS		

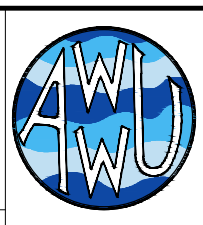
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COMPANY: _____	DATE: _____	

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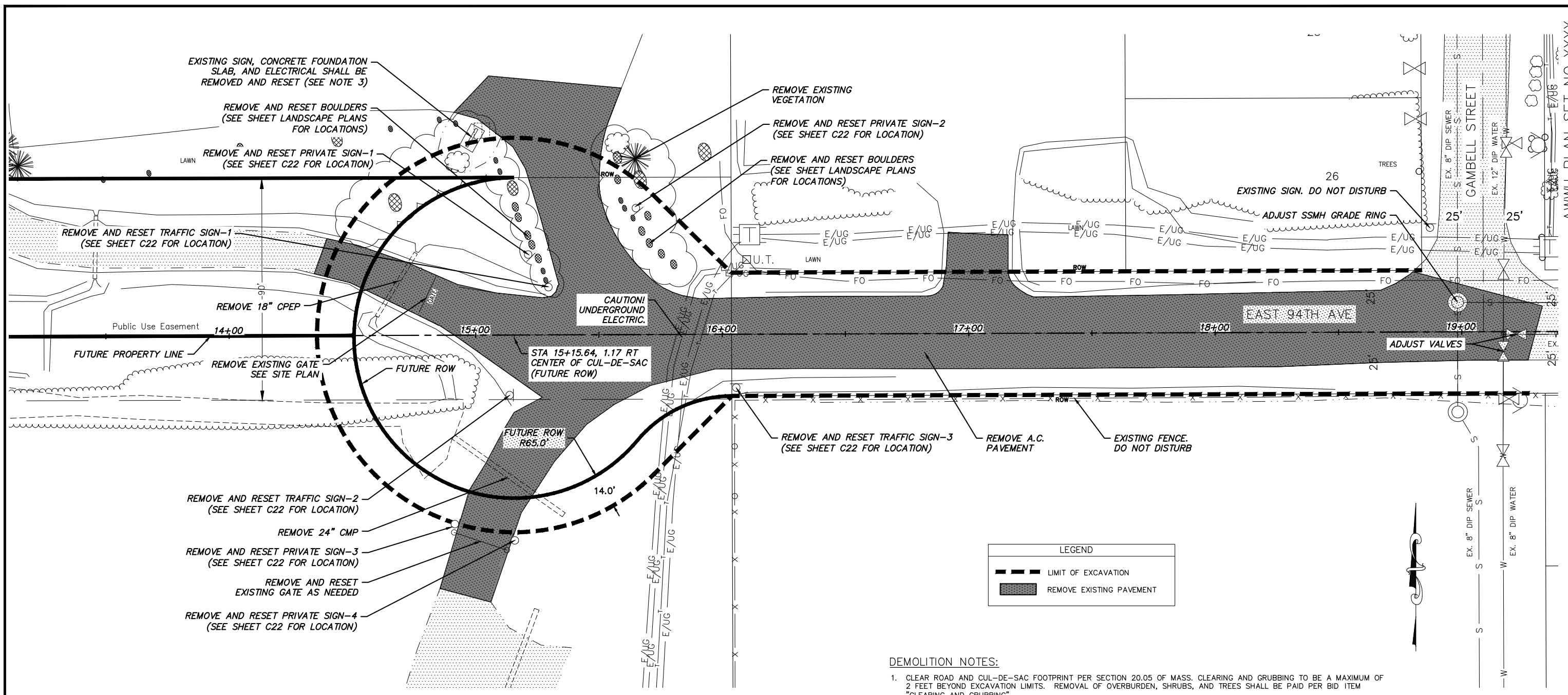
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MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY			
KING STREET CAMPUS EXPANSION			
PIPE DETAILS E. 94TH AVENUE			
HORIZ SCALE: N/A	DATE: 5/2020	GRID: SW2431	SHEET C20 of C27
VERT SCALE: N/A	PROJ. ID.: WW 00007		



LEGEND	
	LIMIT OF EXCAVATION
	REMOVE EXISTING PAVEMENT

DEMOLITION NOTES:

- CLEAR ROAD AND CUL-DE-SAC FOOTPRINT PER SECTION 20.05 OF MASS. CLEARING AND GRUBBING TO BE A MAXIMUM OF 2 FEET BEYOND EXCAVATION LIMITS. REMOVAL OF OVERBURDEN, SHRUBS, AND TREES SHALL BE PAID PER BID ITEM "CLEARING AND GRUBBING".
- CONTRACTOR SHALL MINIMIZE IMPACTS TO ON-PROPERTY IMPROVEMENTS OUTSIDE TRENCH SECTION (I.E. PLACING SEPARATION FABRIC BETWEEN EXISTING GRASS AND MATERIAL STOCKPILE).
- REMOVE EXISTING VEGETATION WITHIN EXCAVATION LIMITS. REMOVE AND RESET EXISTING PRIVATE TRAFFIC SIGNS PER SECTION 70.11 - STANDARD SIGNS. REMOVE AND RESET EXISTING BOULDERS PER LOCATIONS SHOWN ON LANDSCAPE PLANS. EXISTING BAKER HUGHES SIGN SHALL BE REMOVED AND RESET AT THE LOCATION SHOWN ON SHEET C22. THE CONTRACTOR SHALL PROTECT AND PRESERVE EXISTING ELECTRICAL INFRASTRUCTURE, PROVIDE 24-INCH DEPTH TYPE-IIA BASE, REPLACE EXISTING CONCRETE BASE, JUNCTION BOX, AND REESTABLISH ELECTRICAL SERVICE FOR THE BAKER HUGHES SIGN. ALL WORK, COORDINATION, MATERIALS, LABOR, AND INSPECTIONS ASSOCIATED WITH THIS TASK SHALL BE PERFORMED IN ACCORDANCE WITH MASS AND SECTION 20.31 OF THE SPECIAL PROVISIONS.
- PROTECT EXISTING VEGETATION (TREES, SHRUBS, AND GRASS) TO THE GREATEST EXTENT POSSIBLE. PROTECTION OF VEGETATION SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- THE HORIZONTAL AND VERTICAL LOCATION OF BURIED DEEP UTILITIES ARE BASED UPON SURVEY AND RECORD DRAWING INFORMATION. UNDERGROUND GAS, FIBER OPTIC, AND ELECTRICAL UTILITY LOCATIONS ARE BASED UPON FIELD LOCATES WITH AN ASSUMED DEPTH OF BURIAL. THE CONTRACTOR SHALL CALL FOR FIELD LOCATES TO VERIFY UTILITY LOCATIONS AND SHALL COORDINATE WITH UTILITY COMPANIES AS REQUIRED. COORDINATION IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- NO CLEARING, GRUBBING, OR GROUND DISTURBING ACTIVITIES SHALL BE PERMITTED UNTIL PERTINENT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) BEST MANAGEMENT PRACTICES (BMP's) HAVE BEEN INSTALLED.

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

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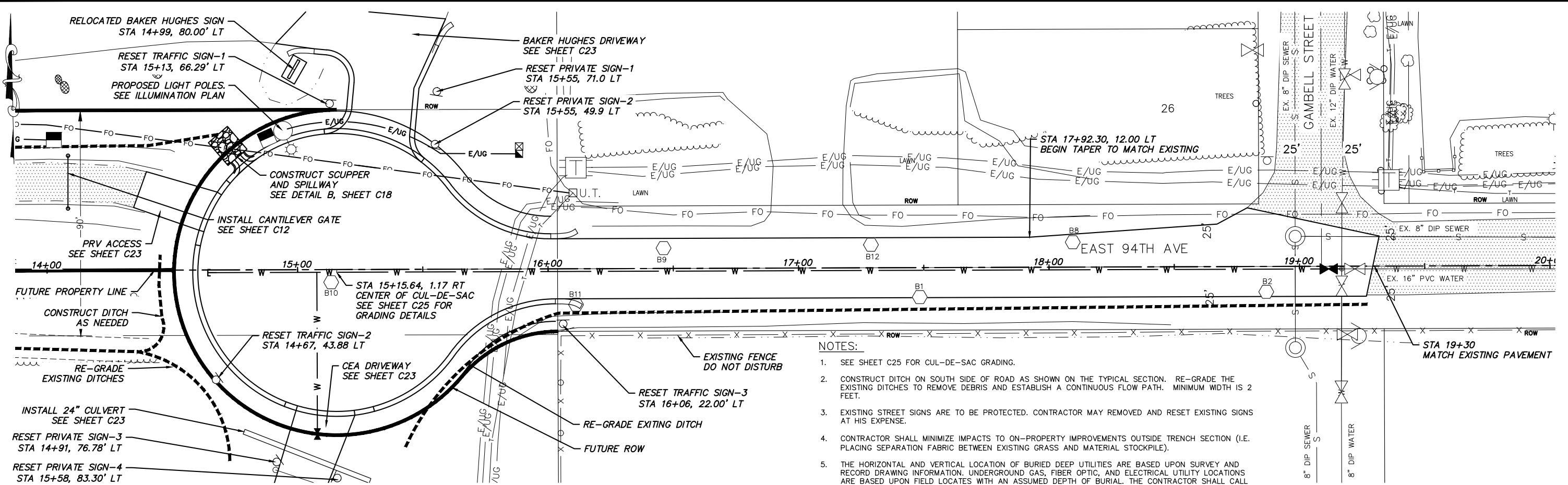
KING STREET CAMPUS EXPANSION

**DEMOLITION
 E. 94TH AVENUE**

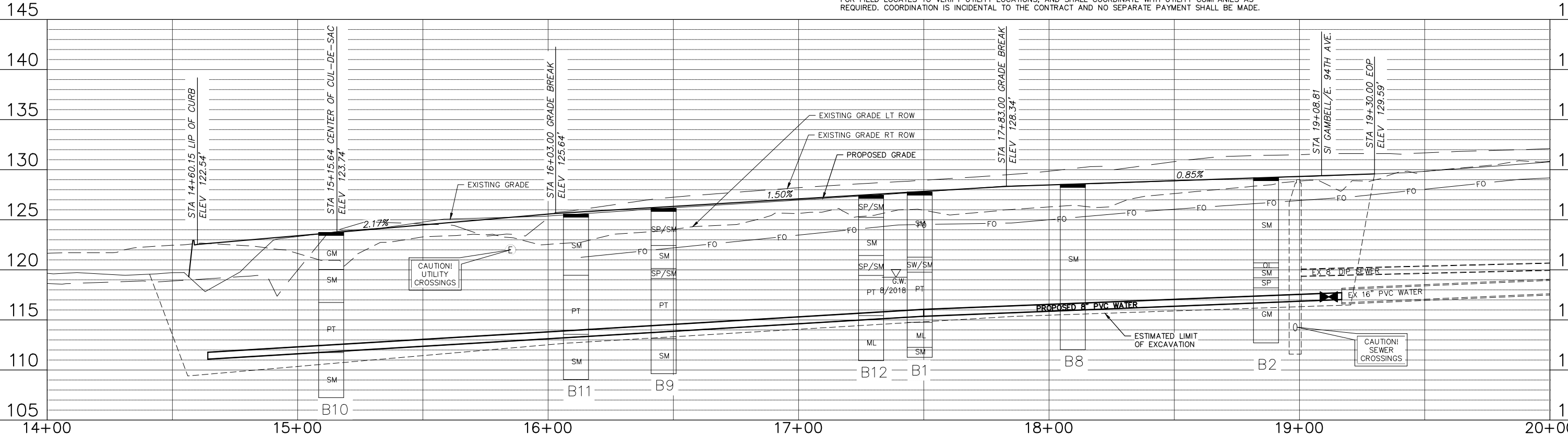
HORIZ SCALE: 1" = 20'
 VERT SCALE: N/A
 PROJ. ID.: WW 00007

DATE: 5/2020
 GRID: SW2431

SHEET C21 of C27



- NOTES:**
- SEE SHEET C25 FOR CUL-DE-SAC GRADING.
 - CONSTRUCT DITCH ON SOUTH SIDE OF ROAD AS SHOWN ON THE TYPICAL SECTION. RE-GRADE THE EXISTING DITCHES TO REMOVE DEBRIS AND ESTABLISH A CONTINUOUS FLOW PATH. MINIMUM WIDTH IS 2 FEET.
 - EXISTING STREET SIGNS ARE TO BE PROTECTED. CONTRACTOR MAY REMOVE AND RESET EXISTING SIGNS AT HIS EXPENSE.
 - CONTRACTOR SHALL MINIMIZE IMPACTS TO ON-PROPERTY IMPROVEMENTS OUTSIDE TRENCH SECTION (I.E. PLACING SEPARATION FABRIC BETWEEN EXISTING GRASS AND MATERIAL STOCKPILE).
 - THE HORIZONTAL AND VERTICAL LOCATION OF BURIED DEEP UTILITIES ARE BASED UPON SURVEY AND RECORD DRAWING INFORMATION. UNDERGROUND GAS, FIBER OPTIC, AND ELECTRICAL UTILITY LOCATIONS ARE BASED UPON FIELD LOCATES WITH AN ASSUMED DEPTH OF BURIAL. THE CONTRACTOR SHALL CALL FOR FIELD LOCATES TO VERIFY UTILITY LOCATIONS, AND SHALL COORDINATE WITH UTILITY COMPANIES AS REQUIRED. COORDINATION IS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.



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BASE			TELEPHONE						
TOPOGRAPHY			ELECTRIC						
PROFILE			CABLE TV						
SANITARY SEWER			TRAFFIC SIGNAL						
STORM SEWER			DESIGN						
WATER			QUANTITIES						
GAS			MUN. FINAL CHECK						
			PLAN CHECK						
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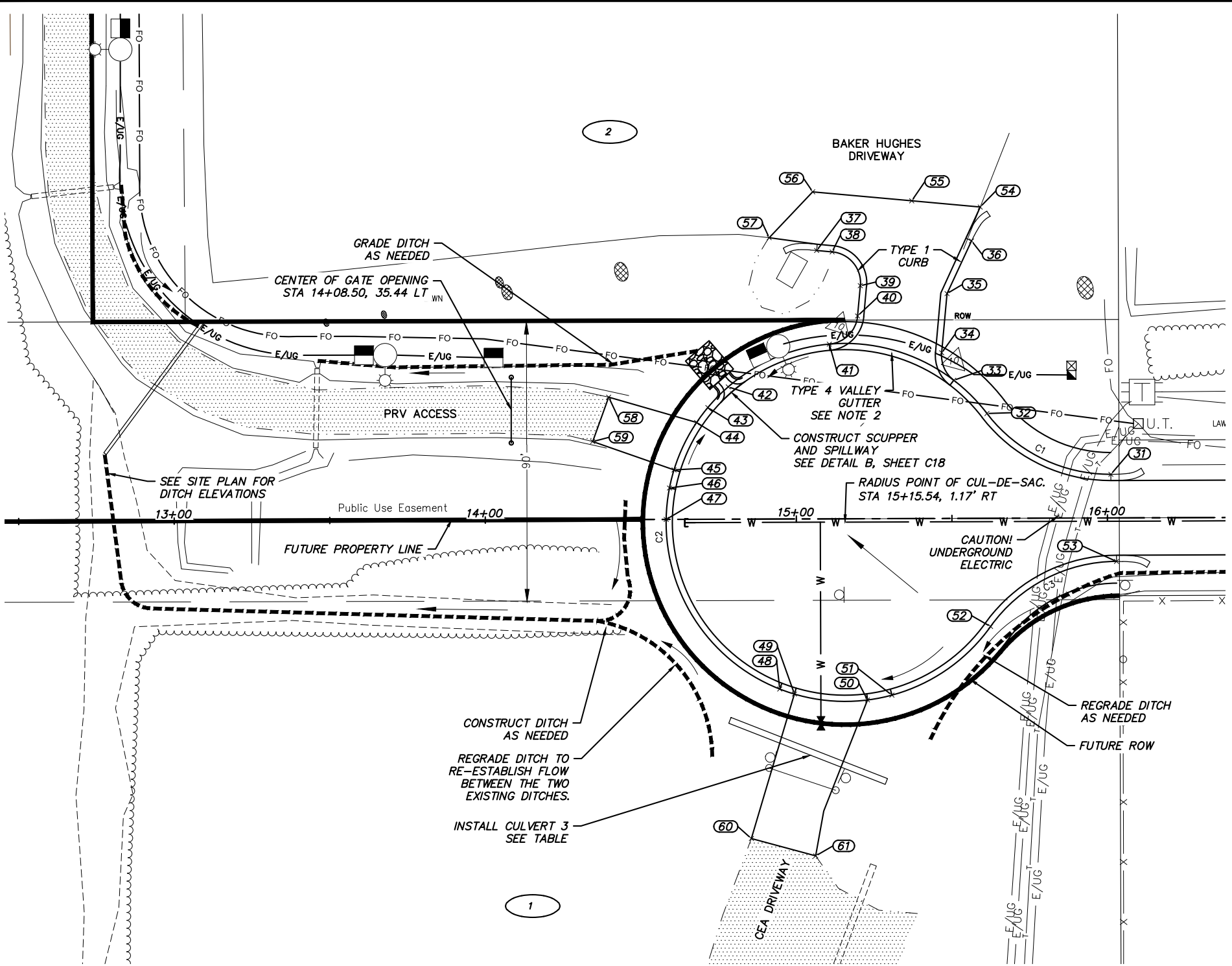
MUNICIPALITY OF ANCHORAGE
 WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

**ROAD IMPROVEMENTS
 E. 94TH AVENUE**

HORIZ SCALE: 1" = 20'
 VERT SCALE: 1" = 5'
 DATE: 5/2020
 GRID: SW2431
 SHEET C22 of C27

2019/10/02 2:08 PM By: Jonathan Petrunik\KS-03.dwg Active\00007 King Street CP 94th.dwg

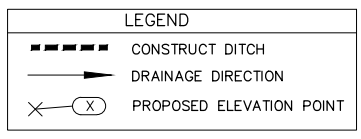


CURB TABLE					
Point #	Station, Offset	Elevation	Northing	Easting	Notes
31	16+01.14 14.00LT	125.75	2606987.22	1663800.33	TBC TYPE 1 - CURB TERMINATION
32	15+61.37 33.69LT	124.54	2607006.77	1663760.50	TBC TYPE 1
33	15+50.74 44.38LT	124.16	2607017.43	1663749.83	TBC TYPE 1 (BEGIN VALLEY GUTTER)
34	15+46.89 53.24LT	123.87	2607026.27	1663745.95	TBC TYPE 1
35	15+48.68 72.25LT	123.40	2607045.29	1663747.68	TBC TYPE 1
36	15+56.61 89.15LT	122.41	2607062.22	1663755.55	TBC TYPE 1-CURB TERMINATION
37	15+06.81 86.24LT	122.39	2607059.14	1663705.76	TBC TYPE 1 -CURB TERMINATION
38	15+11.78 85.77LT	122.55	2607058.69	1663710.74	TBC TYPE 1
39	15+20.80 74.88LT	123.16	2607047.83	1663719.79	TBC TYPE 1
40	15+19.89 65.15LT	123.15	2607038.10	1663718.91	TBC TYPE 1
41	15+10.78 56.13LT	123.12	2607029.04	1663709.83	TBC TYPE 1 (END VALLEY GUTTER)
42	14+78.25 42.52LT	121.84	2607015.32	1663677.35	CENTER LINE OF SCUPPER
43	14+71.67 35.88LT	122.36	2607008.66	1663670.79	TBC TYPE 1 - TOP OF CURB CUT
44	14+68.05 31.10LT	122.46	2607003.87	1663667.18	TBC TYPE 4 - CURB CUT
45	14+60.73 15.89LT	122.71	2606988.64	1663659.92	TBC TYPE 4 - CURB CUT
46	14+59.25 10.07LT	122.79	2606982.82	1663658.46	TBC TYPE 1 -TOP OF CURB CUT
47	14+58.15 0.00RT	122.94	2606972.74	1663657.40	TBC TYPE 1
48	14+94.47 54.62RT	123.95	2606918.24	1663693.89	TBC TYPE 1 - TOP OF CURB CUT
49	14+99.19 56.26RT	124.03	2606916.61	1663698.62	TBC TYPE 4 - CURB CUT
50	15+22.68 58.23RT	124.37	2606914.72	1663722.12	TBC TYPE 4 - CURB CUT
51	15+30.53 56.70RT	124.49	2606916.28	1663729.96	TBC TYPE 1 -TOP OF CURB CUT
52	15+62.30 34.77RT	125.06	2606938.31	1663761.65	TBC TYPE 1
53	16+02.87 14.00RT	125.80	2606959.22	1663802.15	TBC TYPE 1 -CURB TERMINATION

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	45.98	50.00	52.69	N63° 50' 55"W	44.37
C2	287.94	57.50	286.92	S0° 57' 52"E	68.47
C3	47.33	50.00	54.23	N62° 41' 34"E	45.58

EDGE OF DRIVEWAY PAVEMENT TABLE					
Point #	Station, Offset	Elevation	Northing	Easting	Notes
54	15+59.43 100.02LT	121.44	2607073.10	1663758.34	MATCH EXISTING
55	15+37.43 102.10LT	121.42	2607075.10	1663736.33	MATCH EXISTING
56	15+05.60 105.10LT	121.71	2607077.99	1663704.49	MATCH EXISTING
57	14+91.56 90.39LT	121.95	2607063.24	1663690.50	MATCH EXISTING
58	14+39.79 39.34LT	122.24	2607012.02	1663638.90	MATCH EXISTING
59	14+34.61 25.08LT	122.21	2606997.74	1663633.77	MATCH EXISTING
60	14+85.21 102.65RT	123.64	2606870.18	1663684.79	MATCH EXISTING
61	15+05.85 108.27RT	123.54	2606864.63	1663705.46	MATCH EXISTING

PIPE TABLE										
PIPE NAME	BEARING	PIPE	LENGTH	SLOPE	INVERT ELEV.	START NORTHING	START EASTING	INVERT ELEV	END NORTHING	END EASTING
CULVERT 3	N68° 41' 30"W	24" CPEP	54.00	0.93%	116.40'	2606888.53	1663728.17	115.90'	2606908.16	1663677.87



- NOTES:**
- DRIVEWAYS SHALL BE RECONSTRUCTED WITH 2" CLASS E ASPHALT TO LIMITS SHOWN IN ACCORDANCE WITH MASS DETAIL 20.07.
 - CONSTRUCT VALLEY GUTTER IN ACCORDANCE WITH MASS DETAIL 30.03

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VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DATE	DESCRIPTION	BY
BASE							
TOPOGRAPHY							
PROFILE							
SANITARY SEWER							
STORM SEWER							
WATER							
GAS							
PLAN CHECK							REVISIONS

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

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 CONTRACTOR: _____
 BY: _____ TITLE: _____
 DATE: _____

2. DATA TRANSFERRED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

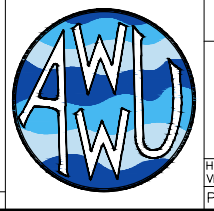
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
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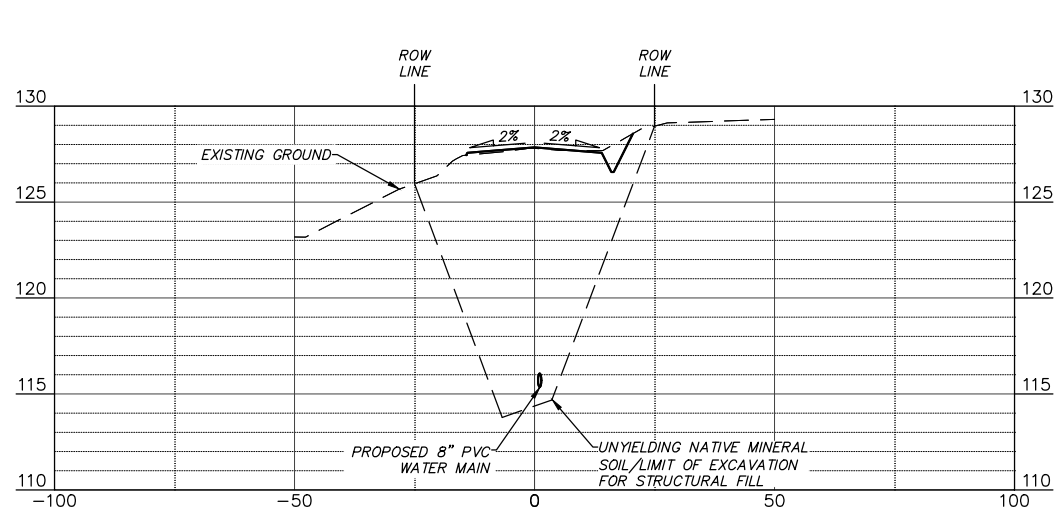


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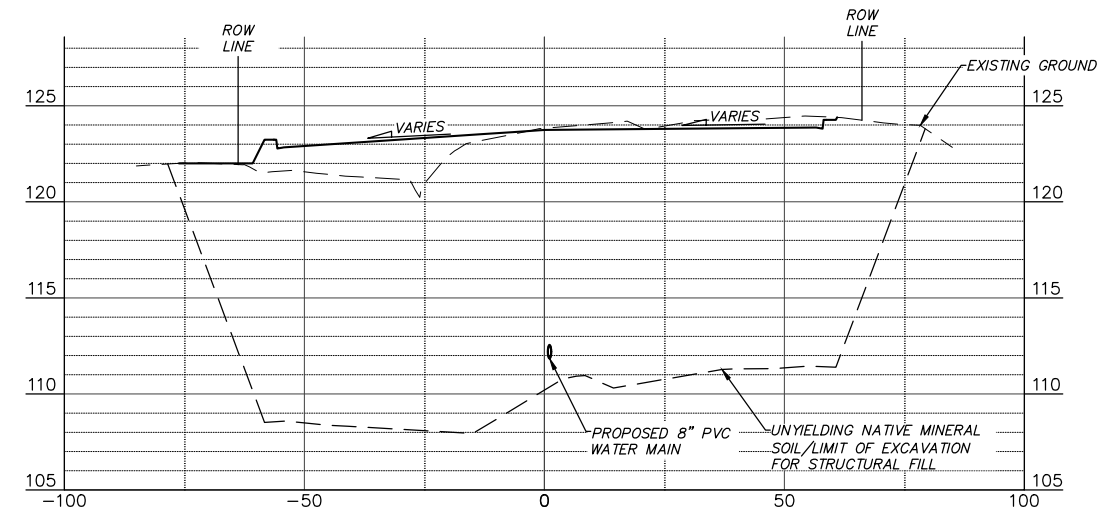
KING STREET CAMPUS EXPANSION

**CUL-DE-SAC GRADING
 E. 94TH AVENUE**

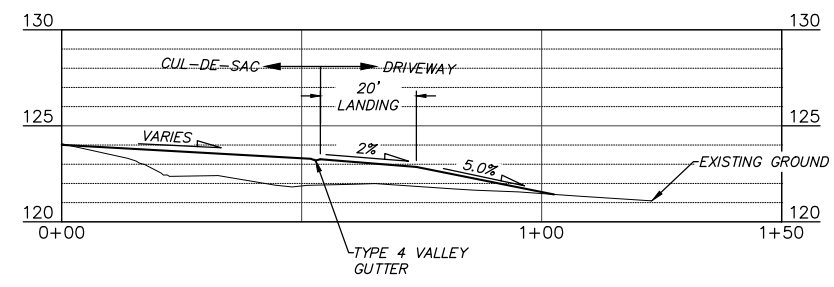
HORIZ SCALE: 1" = 20'
 VERT SCALE: N/A
 DATE: 5/2020
 GRID: SW2431
 SHEET C23 of C27



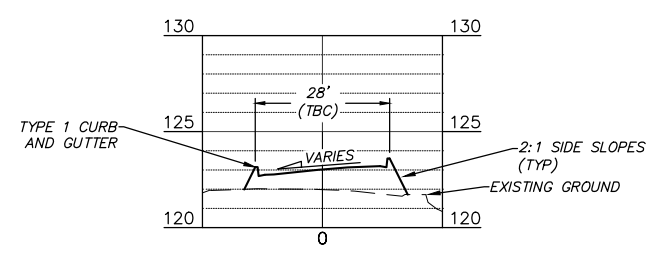
A
C24 ROAD CROSS SECTION STA 17+50 NOT TO SCALE



B
C24 CUL-DE-SAC CROSS SECTION STA 15+15 NOT TO SCALE



C
C24 BAKER HUGHES DRIVEWAY PROFILE SECTION NOT TO SCALE



D
C24 BAKER HUGHES DRIVEWAY CROSS SECTION NOT TO SCALE

CONSTRUCTION NOTES:

1. SLOPES ARE APPROXIMATE AT THE CROSS SECTIONS SHOWN AND ARE FOR GENERAL INFORMATION. SEE GRADING AND DRAINAGE PLAN FOR CUL-DE-SAC AND DRIVEWAY ELEVATIONS.
2. SEE TYPICAL SECTIONS FOR EXCAVATION LIMITS.
3. CLEAR ROAD AND CUL-DE-SAC FOOTPRINT PER SECTION 20.05 OF MASS. CLEARING AND GRUBBING TO BE A MAXIMUM OF 2 FEET BEYOND EXCAVATION LIMITS. REMOVAL OF OVERBURDEN, SHRUBS AND TREES SHALL BE PAID PER BID ITEM CLEARING AND GRUBBING.

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION
BASE		TELEPHONE			
TOPOGRAPHY		ELECTRIC			
PROFILE		CABLE TV			
SANITARY SEWER		TRAFFIC SIGNAL			
STORM SEWER		DESIGN			
WATER		QUANTITIES			
GAS		MUN. FINAL CHECK			
PLAN CHECK			REVISIONS		

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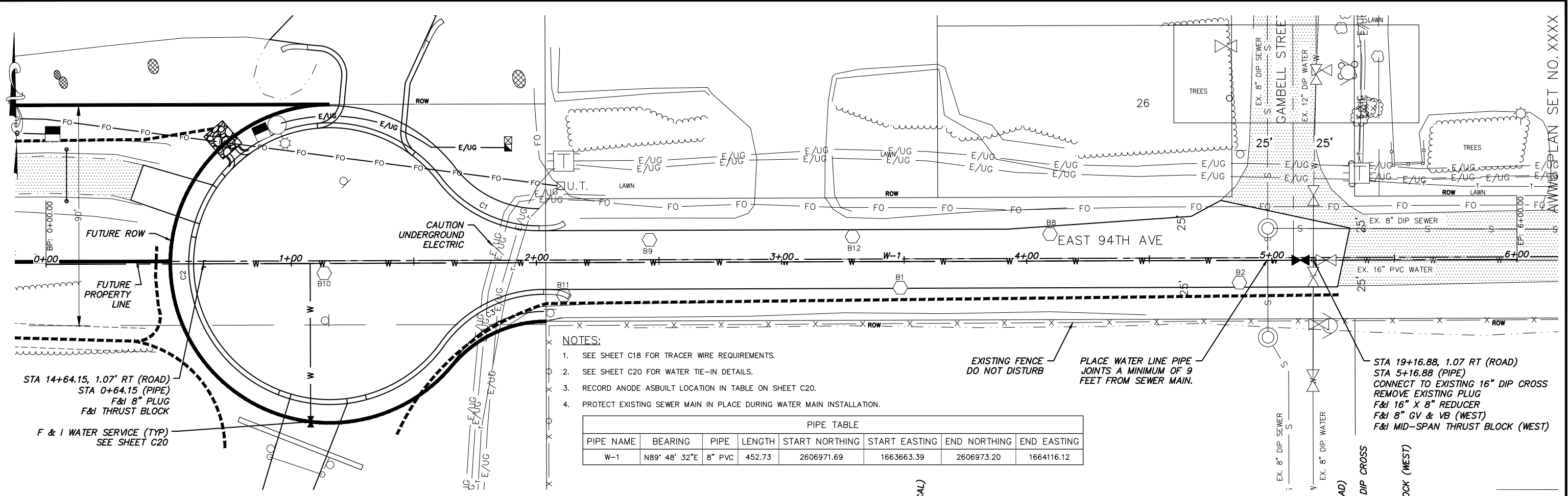
KING STREET CAMPUS EXPANSION

**CROSS SECTIONS
 E. 94TH AVENUE**

HORIZ SCALE: 1" = 20'
 VERT SCALE: _____
 DATE: 5/2020
 GRID: SW2431
 PROJ. ID.: WW 00007

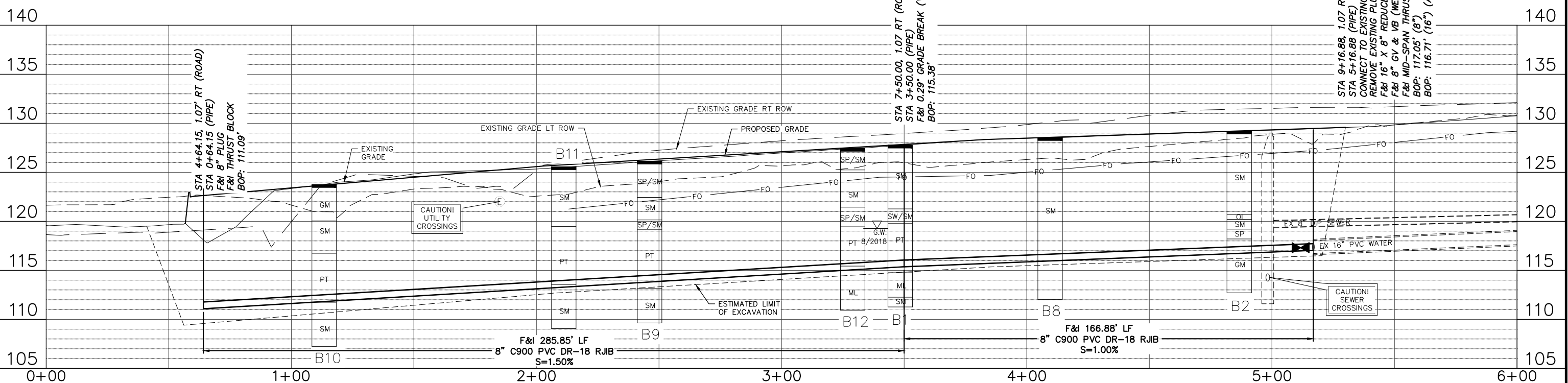
SHEET C24 of C27

2019/10/02 2:08 PM By: Jonathan Petruno\KS-03.dwg Active\00007 King Street CP 94th.dwg



- NOTES:**
- SEE SHEET C18 FOR TRACER WIRE REQUIREMENTS.
 - SEE SHEET C20 FOR WATER TIE-IN DETAILS.
 - RECORD ANODE ASBUILT LOCATION IN TABLE ON SHEET C20.
 - PROTECT EXISTING SEWER MAIN IN PLACE DURING WATER MAIN INSTALLATION.

PIPE TABLE							
PIPE NAME	BEARING	PIPE	LENGTH	START NORTHING	START EASTING	END NORTHING	END EASTING
W-1	N89° 48' 32"E	8" PVC	452.73	2606971.69	1663663.39	2606973.20	1664116.12



VERIFY SCALE THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATE	DESCRIPTION	BY
BASE				TELEPHONE	
TOPOGRAPHY				ELECTRIC	
PROFILE				CABLE TV	
SANITARY SEWER				TRAFFIC SIGNAL	
STORM SEWER				DESIGN	
WATER				QUANTITIES	
GAS				MUN. FINAL CHECK	

PLAN CHECK

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

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 BY: _____ TITLE: _____
 DATE: _____

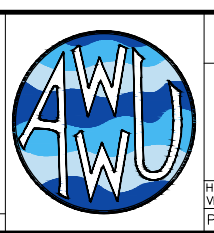
2. DATA TRANSFERRED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

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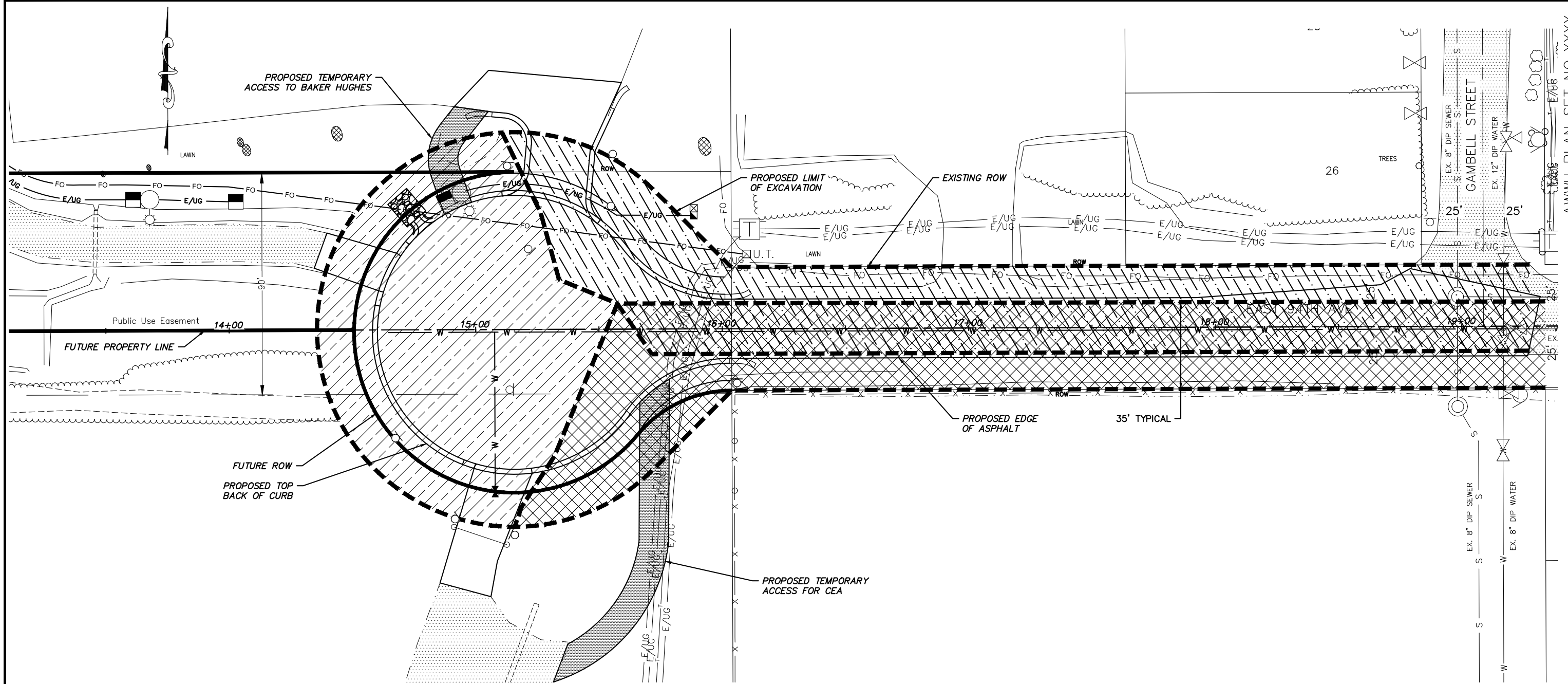
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KING STREET CAMPUS EXPANSION

**WATER IMPROVEMENTS
 E. 94TH AVENUE**

HORIZ SCALE: 1" = 20'
 VERT SCALE: 1" = 5'
 DATE: 5/2020 GRID: SW2431
 PROJ. ID.: WW 00007 SHEET C25 of C27

AWWU PLAN SET NO. XXXX



TRAFFIC CONTROL NOTES:

1. THIS PLAN HAS BEEN DEVELOPED TO ENSURE CONSTRUCTIBILITY. CONTRACTOR SHALL PROVIDE A WORK PLAN DESCRIBING PHASING, TRAFFIC CONTROL AND EXCAVATION PLANS AS DESCRIBED IN SECTION 10.5.34 AND 70.12 OF THE SPECIAL PROVISIONS. PROVIDE ENGINEER WITH APPROVED TRAFFIC CONTROL PLAN.
2. REFERENCE PART 6, TEMPORARY TRAFFIC CONTROL, MUTCD 2009 FOR STANDARD SIGNS. COMPLETE ALL WORK ACCORDING TO THE ALASKA TRAFFIC MANUAL, MASS, SPECIAL PROVISIONS, AND THE FINAL APPROVED TRAFFIC CONTROL PLAN.
3. CONTRACTOR TO KEEP ONE LANE OPEN AT ALL TIMES EXCEPT FOR LIMITED CLOSURES TO COMPLETE WORK SAFELY. ACCESS TO BAKER HUGHES WILL BE MAINTAINED AT ALL TIMES. COORDINATE ACCESS TO THE SUBSTATION WITH CEA. COORDINATE ACCESS TO THE AWWU PRV FACILITY WITH AWWU.
4. TEMPORARY ACCESS ROAD(S) SHALL BE A MINIMUM OF 12 FEET WIDE AND SHALL BE CONSTRUCTED WITHIN THE EAST 94TH AVENUE ROW OR AS SHOWN OR AS OTHERWISE APPROVED BY THE OWNER. TEMPORARY ACCESS ROADS SHALL BE CONSTRUCTED WITH TYPE IIA AND SURFACED WITH RAP. GEOTEXTILE SHALL BE PLACED TO ENSURE CLEAN REMOVAL. INSTALL TEMPORARY CULVERTS AS REQUIRED.
5. THE CONTRACTOR SHALL RESTORE, LANDSCAPE, RESTORE DRAINAGE, AND STABILIZE ALL TEMPORARY ACCESS ROADS UPON CESSATION OF THE USE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

LEGEND	
	PHASE 1 EXCAVATION AREA
	PHASE 2 EXCAVATION AREA
	PHASE 3 EXCAVATION AREA
	TEMPORARY ACCESS ROUTE

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE			TELEPHONE				
TOPOGRAPHY			ELECTRIC				
PROFILE			CABLE TV				
SANITARY SEWER			TRAFFIC SIGNAL				
STORM SEWER			DESIGN				
WATER			QUANTITIES				
GAS			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

RECORD DRAWING		Note: To be filled out on original drawings upon project completion.	
1. DATA PROVIDED BY:	_____	3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.	DATA TRANSFER CHECKED BY: _____
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BY: _____	DATE: _____	COMPANY: _____	BY: _____ TITLE: _____
2. DATA TRANSFERRED BY: _____	DATE: _____		

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KING STREET CAMPUS EXPANSION		
TRAFFIC CONTROL/PHASING DIAGRAM E. 94TH AVENUE		
HORIZ SCALE: 1" = 20'	DATE: 5/2020	GRID: SW2431
VERT SCALE: N/A	PROJ. ID.: WW 00007	SHEET C261 C27

GENERAL SHEET NOTES

1. SEE SHEET E3 FOR J6 PLAN VIEW.

GENERAL ELECTRICAL NOTES

- CALL BEFORE YOU DIG. HAVE ALL UTILITIES, PROPERTY LINES AND EASEMENTS LOCATED PRIOR TO STARTING WORK. IMMEDIATELY NOTIFY THE ENGINEER IN THE EVENT OF CONFLICTS.
- ELECTRICAL IMPROVEMENTS ARE NOT PERMITTED TO BE INSTALLED OUTSIDE OF THE RIGHT-OF-WAY OR WITHIN A UTILITY EASEMENT. IMMEDIATELY NOTIFY THE ENGINEER IN THE EVENT OF CONFLICTS.
- CONDUIT RUNS SHALL BE RMC UNLESS OTHERWISE NOTED.
- COORDINATE LOAD CENTER INSTALLATIONS WITH CEA PRIOR TO INSTALLATION. INSTALLATIONS DEVIATING FROM THE PLANS SHALL BE APPROVED BY CEA AND THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- PROVIDE SCOTCH CAL 220 DECALS ON EXTERIOR OF NEW LOAD CENTER DENOTING OWNER (MOA) AND PURPOSE (LU).
- ATTACH LAMINATED POWER ONE LINE AND SUMMARY INSIDE EACH LOAD CENTER DOOR.
- PROVIDE ARC FLASH WARNING LABELS WITH INCIDENT ENERGY LEVEL VALUES AND PERSONNEL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS ON EACH PIECE OF EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 110.16 AND NFPE 70E.
- PROVIDE LABELS INDICATING MAXIMUM AVAILABLE FAULT CURRENT ON EACH PIECE OF SERVICE EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 110.24.
- UNLESS OTHERWISE DIRECTED, POLE SETBACKS SHALL BE ACCORDING TO THE FOLLOWING SCHEDULE:
 - 2' MINIMUM FROM EDGE OF SIDEWALK OR PATHWAY.
 - 7' MINIMUM FROM BACK OF CURB.
- WHEN POLE LOCATION IS WITHIN 10 FEET OF A UTILITY, EXCAVATE A HOLE TO 12 INCHES BELOW ANTICIPATED UTILITIES DEPTH WITH A VACTOR TRUCK BEFORE INSTALLING FOUNDATION.

ELECTRICAL LEGEND

- ELECTROLIER
- TYPE 1A JUNCTION BOX
- TYPE 2 JUNCTION BOX
- TYPE 3 JUNCTION BOX
- LOAD CENTER
- UNDERGROUND CONDUIT
- CIRCUIT BREAKER
- WATTHOUR METER
- IN-LINE FUSED DISCONNECT

ABBREVIATIONS

- A AMPERE
- BCU BARE COPPER
- C CONDUIT
- CEA CHUGACH ELECTRIC ASSOCIATION
- CKT CIRCUIT
- CU COPPER
- G GROUND CONDUCTOR
- KVA KILO-VOLT-AMPERES
- RMC (GALVANIZED) RIGID METAL CONDUIT
- TYP TYPICAL
- UON UNLESS OTHERWISE NOTED
- V VOLTS
- W WATTS

SUMMARY OF LOAD CENTER "A"

LOAD CENTER TYPE:	TYPE 1A (MOA)									
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION									
SERVICE CONDUIT TYPE:	RIGID METAL CONDUIT									
LOCATION DATA										
LOAD CENTER:	94TH AVE									
POWER SOURCE:	NEW LINE EXTENSION									
PHOTOELECTRIC CONTROL:	AT LOAD CENTER									
SERVICE VOLTAGE:	120/240V, 1-PHASE, 3-WIRE WITH GROUNDED NEUTRAL									
PROVIDE METER SOCKET:	YES									
MAIN BREAKER A:	240V, 100A, 2-POLE									
CONTACTOR:	600V, 12-POLE									
AIC RATING:	10,000A									
PANEL A										
POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aø	Bø	POLE KVA	DESCRIPTION	AMP TRIP	POLE	
1	15/2	PHOTOCELL	0.1	0.2		0.1	LTG 1*	20/2	2	
3			0.1		0.2	0.1			4	
5	20/2	SPARE	0.3	0.5		0.2	SPARE	20/2	6	
7			0.3		0.5	0.2			8	
9			0.0	0.0		0.0			10	
11			0.0		0.0	0.0			12	
13			0.0	0.0		0.0			14	
15			0.0		0.0	0.0			16	
17			0.0	0.0		0.0			18	
*THROUGH CONTACTOR				0.7	0.7			TOTAL KVA	1.4	
									AMPS	5.8

SHORT CIRCUIT CALCULATION - LC "A"

TRANSFORMER RATING	10KVA
VOLTAGE	120/240V
TRANSFORMER IMPEDANCE	1.2%
LET-THRU SHORT CIRCUIT CURRENT	6,251A
LENGTH TO FAULT	15'
SERVICE CONDUCTOR SIZE	1/0 AWG ALUMINUM
SERVICE CONDUIT	NON-METALLIC
MAX FAULT CURRENT	4,938A
DATE CALCULATED	4/30/2020

ARC FLASH CALCULATION - LC "A"

INCIDENT ENERGY	1.15 J/cm ²
ARC-FLASH BOUNDARY	19"
ARC-FLASH PPE CATEGORY	1
NOMINAL SYSTEM VOLTAGE	240V
LIMITED APPROACH BOUNDARY	42"
RESTRICTED APPROACH BOUNDARY	12"
CALCULATION DATE	4/30/2020

LUMINAIRE SCHEDULE

MANUFACTURER	GE LIGHTING OR APPROVED EQUAL
MODEL	ELRC
LIGHT SOURCE	LED
WATTAGE	39W
COLOR TEMP	4,000K
MINIMUM CRI	70
INITIAL OUTPUT	4,700 LUM
DRIVE CURRENT	700MA
VOLTAGE	240V
PHOTOCELL	YES, 7-PIN
LENS TYPE	CUT OFF
IES DISTRIBUTION	M-C-4
UL LISTED	YES
SHIELDED	NO
WARRANTY	10 YEARS

LUMINAIRE PERFORMANCE CRITERIA

POLE TYPE	MAST ARM
LAMP	LED
LIGHT LOSS FACTOR	0.85
AIMING ANGLE	0
NUMBER OF LANES	2
ROAD WIDTH	32'
PATH WIDTH	-
MEDIAN WIDTH	0'
MOUNTING HEIGHT	30'
ARM LENGTH	8'
SETBACK	8'
SPACING	150'
AVERAGE ILLUMINANCE	0.40 FC
UNIFORMITY (AVE/MIN)	5.0:1
VEILING LUMINANCE	0.22
CLASSIFICATION	LOCAL
PED CONFLICT	LOW

JUNCTION BOX SCHEDULE

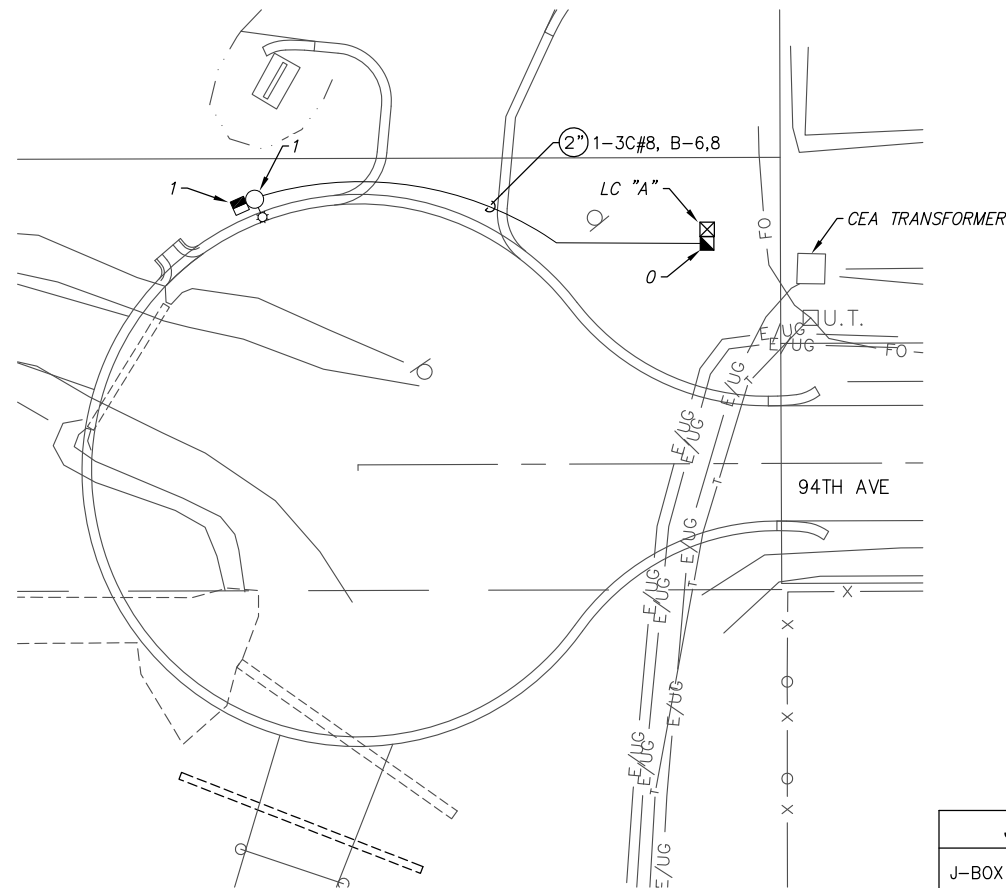
J-BOX	NORTHING	EASTING	TYPE
0	2607581.769	1663478.000	2
1	2607388.769	1663478.000	1A

STATIONING IS APPROXIMATE, POSITION SHOULD BE VERIFIED BY FIELD ENGINEER.

ELECTROLIER SCHEDULE

POLE	NORTHING	EASTING	WATTS	LUMENS	VOLTS	LIGHTING DISTRIBUTION	BASE TYPE	FOUNDATION	MOUNTING HEIGHT	SHAFT LENGTH	ARM LENGTH	REMARKS
1	2607382.000	1663478.000	39	4,579	208	M-C-2/3	SLIP	PILE	26	26	6	

STATIONING IS APPROXIMATE, POSITION SHOULD BE VERIFIED BY FIELD ENGINEER.
MAST ARM SHALL BE PERPENDICULAR TO ROADWAY CENTERLINE UNLESS OTHERWISE NOTED.



2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTIS\AWWU King Street Campus Extension\Dwg\Elec\C27.dwg

VERIFY SCALE THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING. 0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE	DESCRIPTION	BY
BASE	#	#	TELEPHONE	#	#				
TOPOGRAPHY	#	#	ELECTRIC	#	#				
PROFILE	#	#	CABLE TV	#	#				
SANITARY SEWER	#	#	TRAFFIC SIGNAL	#	#				
STORM SEWER	#	#	DESIGN	#	#				
WATER	#	#	QUANTITIES	#	#				
GAS	#	#	MUN. FINAL CHECK	#	#				

PLAN CHECK REVISIONS

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MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

ILLUMINATION PLAN E. 94TH AVENUE

95% DRAFT

HORIZ SCALE: 1"=20'
VERT SCALE: N/A
PROJ. ID.: WW00007

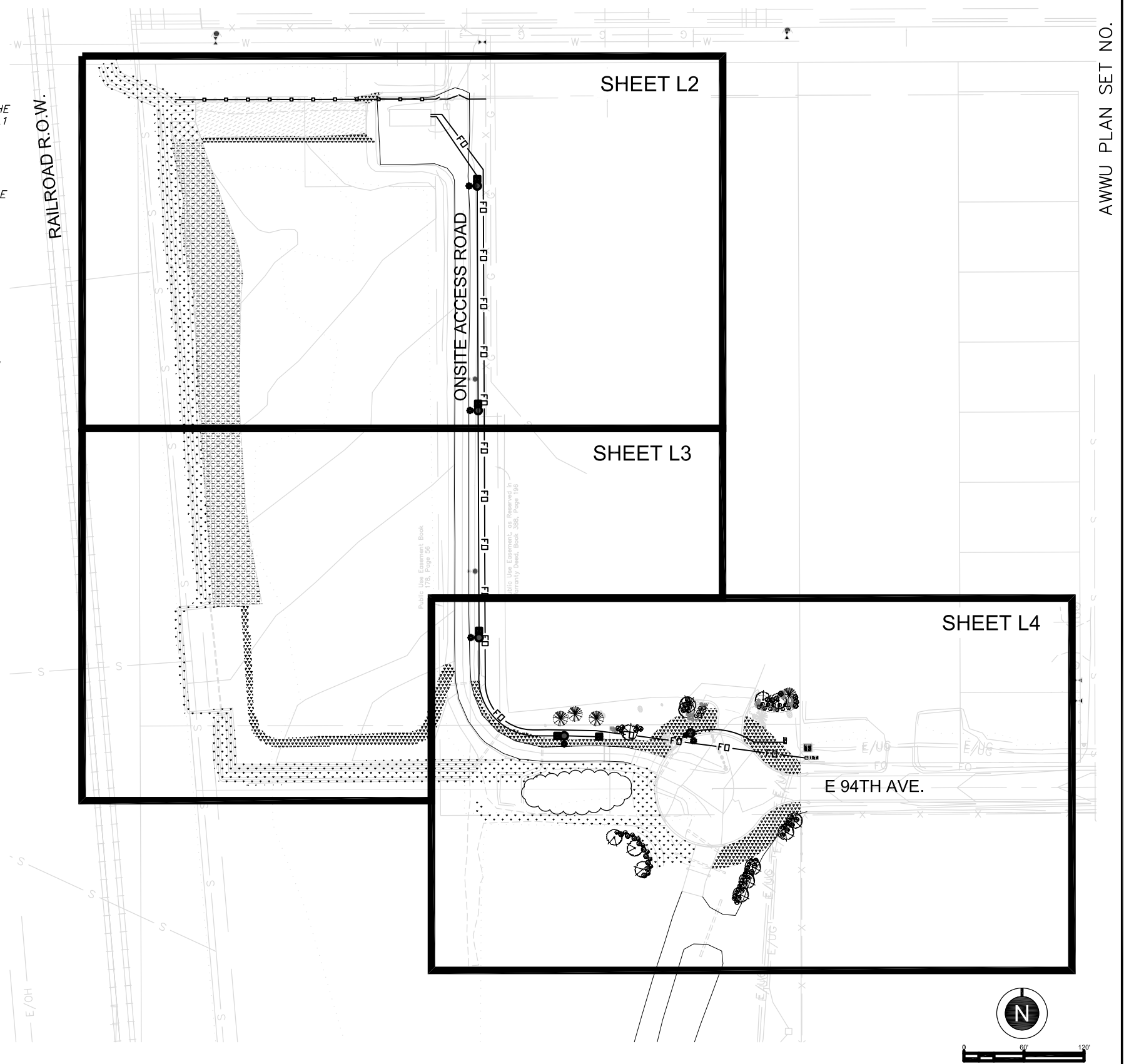
DATE: 5/2020 GRID: SW2341

CONSULTANT SEAL SHEET C27 of C27

LANDSCAPE NOTES

- ALL PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 (LATEST EDITION).
- LANDSCAPE MATERIALS, EXECUTION, AND SUBMITTALS SHALL BE CONSISTENT WITH THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATION AND PROJECT SPECIFICATIONS (M.A.S.S.) LATEST EDITION.
- CONTRACTOR SHALL CALL ANCHORAGE DIG LINE TO VERIFY UNDERGROUND UTILITY LOCATIONS PRIOR TO DIGGING. CONTRACTOR IS RESPONSIBLE FOR ANY UNDERGROUND UTILITY DAMAGE.
- THE CONTRACTOR SHALL HAVE ADEQUATE STORAGE SPACE FOR PLANT MATERIAL PRIOR TO THE SITE BEING READY FOR INSTALLATION.
- NOTIFY THE OWNER'S REPRESENTATIVE FOR INSPECTION OF ALL TREES, SHRUBS, AND PERENNIALS PRIOR TO BRINGING MATERIAL TO THE PROJECT SITE. ANY PLANT MATERIAL SHOWING SIGNS OF DAMAGE, DISEASE, SCARING, OVER-PRUNING, OR NOT MEETING THE ANSI Z60.1 STANDARDS SHALL BE REJECTED AND REPLACED AT NO COST TO THE OWNER. ANY SUBSTITUTIONS MUST BE APPROVED BY OWNER'S REPRESENTATIVE.
- ALL TREES AND SHRUBS MUST HAVE NURSERY TAGS INTACT AND VISIBLE AT THE TIME OF THE INITIAL INSPECTION.
- IF THERE IS A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS IN THE GRAPHIC REPRESENTATION AND THE CALLOUTS OR SCHEDULE THE GRAPHIC REPRESENTATION SHALL GOVERN.
- CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY SITE CONDITIONS THAT REQUIRE MODIFICATIONS TO THE LANDSCAPE PLAN PRIOR TO INSTALLATION.
- INSTALL MOOSE PROTECTION FENCE AROUND ALL NEW DECIDUOUS TREES IMMEDIATELY FOLLOWING PLANTING. MAINTAIN FOR EXTENT OF WARRANTY PERIOD.
- PLANTINGS BEDS TO RECEIVE 18" DEPTH TOPSOIL THROUGHOUT BEDS.
- MAINTENANCE, INCLUDING BUT NOT LIMITED TO WATERING, WEEDING, FERTILIZING, AND MOWING, SHALL BE PERFORMED ONCE PLANT MATERIAL HAS BEEN INSTALLED AND THROUGHOUT THE MAINTENANCE AND WARRANTY PERIOD PER M.A.S.S.
- PROTECT EXISTING TREES IN PLACE THAT ARE NOT IDENTIFIED FOR REMOVAL. IF EXISTING TREES ARE DAMAGED DURING CONSTRUCTION THEY SHALL BE REPLACED WITH EQUIVALENT SIZE AND SPECIES TREE AT NO COST TO OWNER.
- PROVIDE SHREDDED BARK MULCH THROUGHOUT PLANTING BEDS WHERE SHOWN ON DRAWINGS.

QTY	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	NOTES
TREES: CONIFERS						
PP 4		PICEA PUNGENS	COLORADO GREEN SPRUCE	6' HT.	AS SHOWN	
TREES: SHADE & FLOWERING						
BP 13		BETULA Papyrifera (MULTI-STEM)	WHITE PAPER BIRCH	2" CAL.	AS SHOWN	
SHRUBS						
CO 16		CORNUS SERICEA 'BAILEY'	RED-TWIG DOGWOOD	18" HT.	AS SHOWN	
SB 12		SPIREA BETULIFOLIA	ALASKA SPIREA	18" HT.	AS SHOWN	
SS 37		SORBARIA SORBIFOLIA 'SEM'	SEM FALSE SPIREA	18" HT.	AS SHOWN	
VT 19		VIBURNUM TRILOBUM	AMERICAN CRANBERRYBUSH	24" HT.	AS SHOWN	
SEED						
SYMBOL SCIENTIFIC NAME COMMON NAME % BY WEIGHT NOTES						
SCHEDULE D: REVEGETATION SEED MIX WITH EROSION CONTROL (HP-FGM)						
11.9 MSF (TOTAL FOR ALL LANDSCAPE SHEETS)		DESCHAMPSIA CAESPITOSA	NORTRAN TUFTED HAIRGRASS	50%		MIX APPLICATION RATE: 5 LBS. PER MSF. APPLY WITH EROSION CONTROL: HP-FGM. ALL SEEDED AREAS TO RECEIVE 4" OF TOPSOIL
		FESTUCA RUBRA 'ARCTARED'	RED FESCUE 'ARCTARED'	40%		
		LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	10%		
SCHEDULE D: REVEGETATION SEED MIX WITH EROSION CONTROL (HP-FGM) NO TOPSOIL						
20.9 MSF (WITHOUT TOPSOIL TOTAL FOR ALL LANDSCAPE SHEETS)		DESCHAMPSIA CAESPITOSA	NORTRAN TUFTED HAIRGRASS	50%		MIX APPLICATION RATE: 5 LBS. PER MSF. NO TOPSOIL FOR THIS AREA
		FESTUCA RUBRA 'ARCTARED'	RED FESCUE 'ARCTARED'	40%		
		LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	10%		
SCHEDULE C: WETLAND SEED MIX WITH EROSION CONTROL (HP-FGM)						
29.5 MSF (TOTAL FOR ALL LANDSCAPE SHEETS)		DESCHAMPSIA BERINGENSIS	BERING HAIRGRASS	40%		MIX APPLICATION RATE: 3 LBS. PER MSF. APPLY WITH EROSION CONTROL: HP-FGM. ALL SEEDED AREAS TO RECEIVE 4" OF TOPSOIL
		FESTUCA RUBRA 'ARCTARED'	RED FESCUE 'ARCTARED'	30%		
		BECKMANNIA SYZIGACHNE 'EGAN'	EGAN AMERICAN SLOUGHGRASS	30%		
MATERIALS						
SYMBOL ITEM SIZE NOTES						
126 S.Y.	N/A	SHREDDED BARK MUCLH	PRODUCTS PER M.A.S.S.			PLACE 3-INCH DEPTH WITHIN PLANTING BEDS WITH LANDSCAPE EDGNG
310 LF (INCLUDING GATES)		CHAINLINK FENCE WITH BARBED WIRE WITH DOUBLE SWING GATE AND MAN GATE	8-FOOT HT. 9 GAUGE FABRIC			DETAIL 70-41 AND 70-42
175 LF		LANDSCAPE EDGING	PRODUCTS PER M.A.S.S.			
26		RELOCATE BOULDERS	ON-SITE BOULDERS			M.A.S.S. SECTION 75.11



2020/05/06 2:39 PM By: Huddle AK Dropbox\01 CLIENTS\039 FTIS\King Street Campus Expansion - AWWU\07_AutoCAD\01_Plans\AWWU King Street Landscape.dwg

VERIFY SCALE THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1" IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATE
BASE	TELEPHONE		
TOPOGRAPHY	ELECTRIC		
PROFILE	CABLE TV		
SANITARY SEWER	TRAFFIC SIGNAL		
STORM SEWER	DESIGN		
WATER	QUANTITIES		
GAS	MUN. FINAL CHECK		
PLAN CHECK		REVISIONS	

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: _____
 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.
 CONTRACTOR: _____
 BY: _____ TITLE: _____
 DATE: _____

2. DATA TRANSFERRED BY: _____
 COMPANY: _____
 DATE: _____

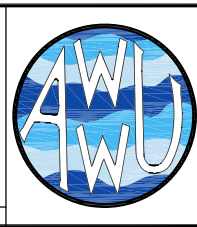
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
 DATA TRANSFER CHECKED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

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 FAX: (907) 563-3813
 LICENSE # AECC924

CONSULTANT



MUNICIPALITY OF ANCHORAGE
 WATER & WASTEWATER UTILITY

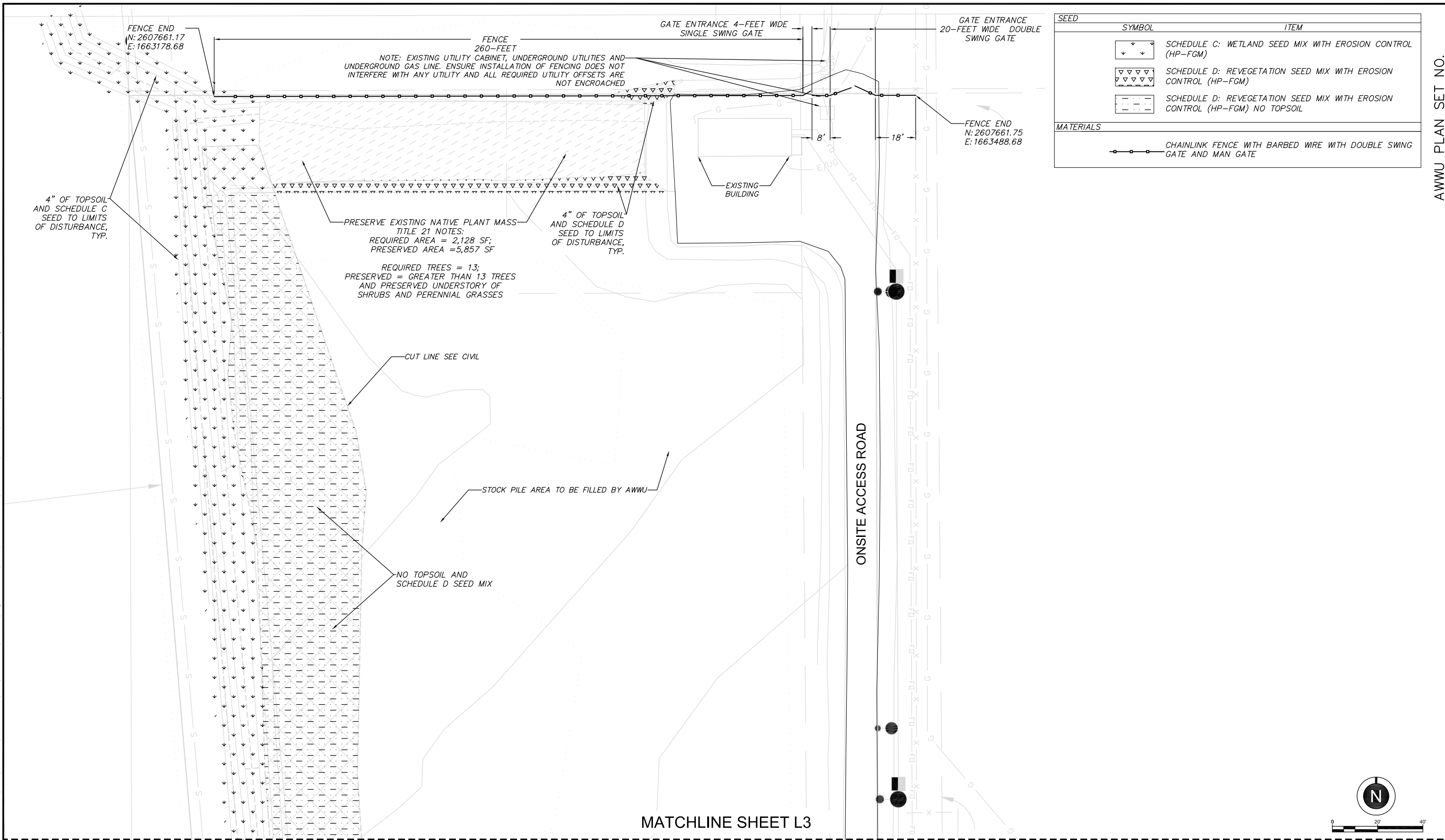
KING STREET CAMPUS EXPANSION

LANDSCAPE SCHEDULE AND NOTES

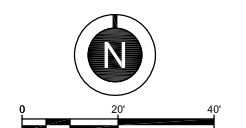
HORIZ SCALE: NA
 VERT SCALE: NA
 DATE: 05/01/2020
 GRID: SW2431
 PROJ. ID.: WW 00007

SHEET L1 of 5

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AWWU PLAN SET NO.



DATA	DRAWN BY	CHECKED BY	DATE	REV	DESCRIPTION	BY
BASE						
TOPOGRAPHY						
PROFILE						
SANITARY SEWER						
STORM SEWER						
WATER						
GAS						
PLAN CHECK				REVISIONS		

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

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BY: _____ TITLE: _____
DATE: _____

2. DATA TRANSFERRED BY: _____
COMPANY: _____
DATE: _____

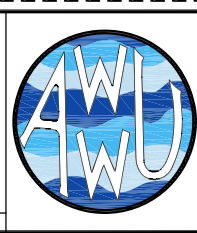
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
DATA TRANSFER CHECKED BY: _____
COMPANY: _____
BY: _____ TITLE: _____
DATE: _____

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KING STREET CAMPUS EXPANSION

LANDSCAPE PLAN

HORIZ SCALE: NA
VERT SCALE: NA
DATE: 05/01/2020
GRID: SW2431
PROJ. ID.: WW 00007

SHEET L2 of 5

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2020/05/06 2:39 PM By: Huddle AK

MATCHLINE SHEET L2

MATCHLINE SHEET L4

ONSITE ACCESS ROAD

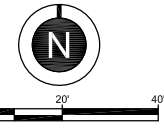
SEED	SYMBOL	ITEM
		SCHEDULE C: WETLAND SEED MIX WITH EROSION CONTROL (HP-FGM)
		SCHEDULE D: REVEGETATION SEED MIX WITH EROSION CONTROL (HP-FGM)
		SCHEDULE D: REVEGETATION SEED MIX WITH EROSION CONTROL (HP-FGM) NO TOPSOIL

NO TOPSOIL AND SCHEDULE D SEED MIX

4" OF TOPSOIL AND SCHEDULE D SEED

RAP SURFACE SEE CIVIL

4" OF TOPSOIL AND SCHEDULE C SEED TO LIMITS OF DISTURBANCE, TYP.



VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE			TELEPHONE				
TOPOGRAPHY			ELECTRIC				
PROFILE			CABLE TV				
SANITARY SEWER			TRAFFIC SIGNAL				
STORM SEWER			DESIGN				
WATER			QUANTITIES				
GAS			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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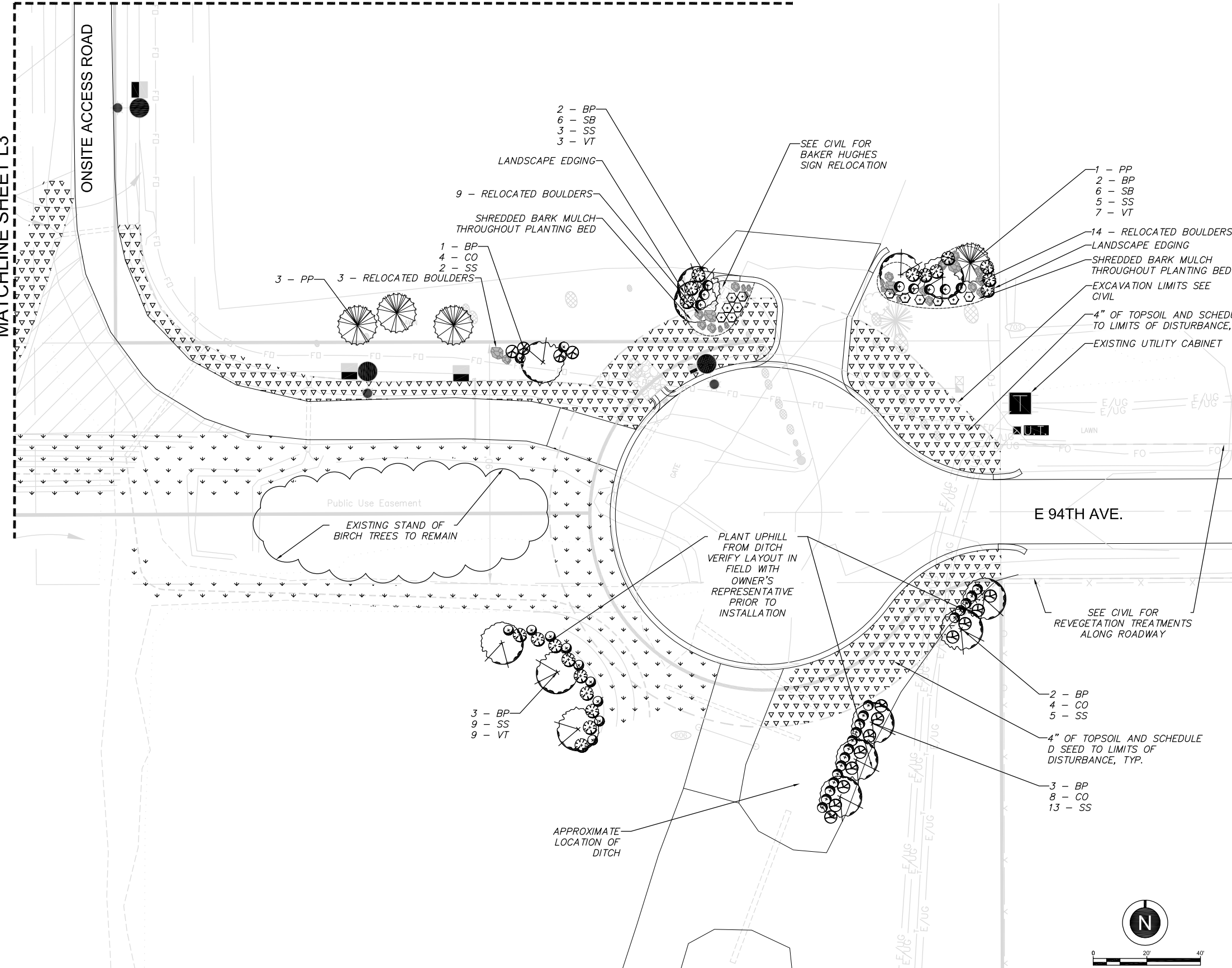
MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY			
KING STREET CAMPUS EXPANSION			
LANDSCAPE PLAN			
HORZ SCALE: NA	DATE: 05/01/2020	GRID: SW2431	SHEET L3 of 5
VERT SCALE: NA	PROJ. ID.: WW 00007		

AWWU PLAN SET NO.

MATCHLINE SHEET L3

MATCHLINE SHEET L3

AWWU PLAN SET NO.



LABEL	SYMBOL	SCIENTIFIC NAME	COMMON NAME
TREES: CONIFERS			
PP		PICEA PUNGENS	COLORADO GREEN SPRUCE
TREES: SHADE & FLOWERING			
BP		BETULA PAPYRIFERA (MULTI-STEM)	WHITE PAPER BIRCH
SHRUBS			
CO		CORNUS SERICEA 'BAILEY'	RED-TWIG DOGWOOD
SB		SPIREA BETULIFOLIA	ALASKA SPIREA
SS		SORBARIA SORBIFOLIA 'SEM'	SEM FALSE SPIREA
VT		VIBURNUM TRILOBUM	AMERICAN CRANBERRYBUSH
SEED			
		SCHEDULE C: WETLAND SEED MIX WITH EROSION CONTROL (HP-FGM)	
		SCHEDULE D: REVEGETATION SEED MIX WITH EROSION CONTROL (HP-FGM)	
MATERIALS			
		SHREDDED BARK MUCHL	
		LANDSCAPE EDGING	
		RELOCATE BOULDERS	

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DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE			TELEPHONE				
TOPOGRAPHY			ELECTRIC				
PROFILE			CABLE TV				
SANITARY SEWER			TRAFFIC SIGNAL				
STORM SEWER			DESIGN				
WATER			QUANTITIES				
GAS			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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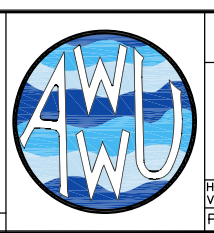
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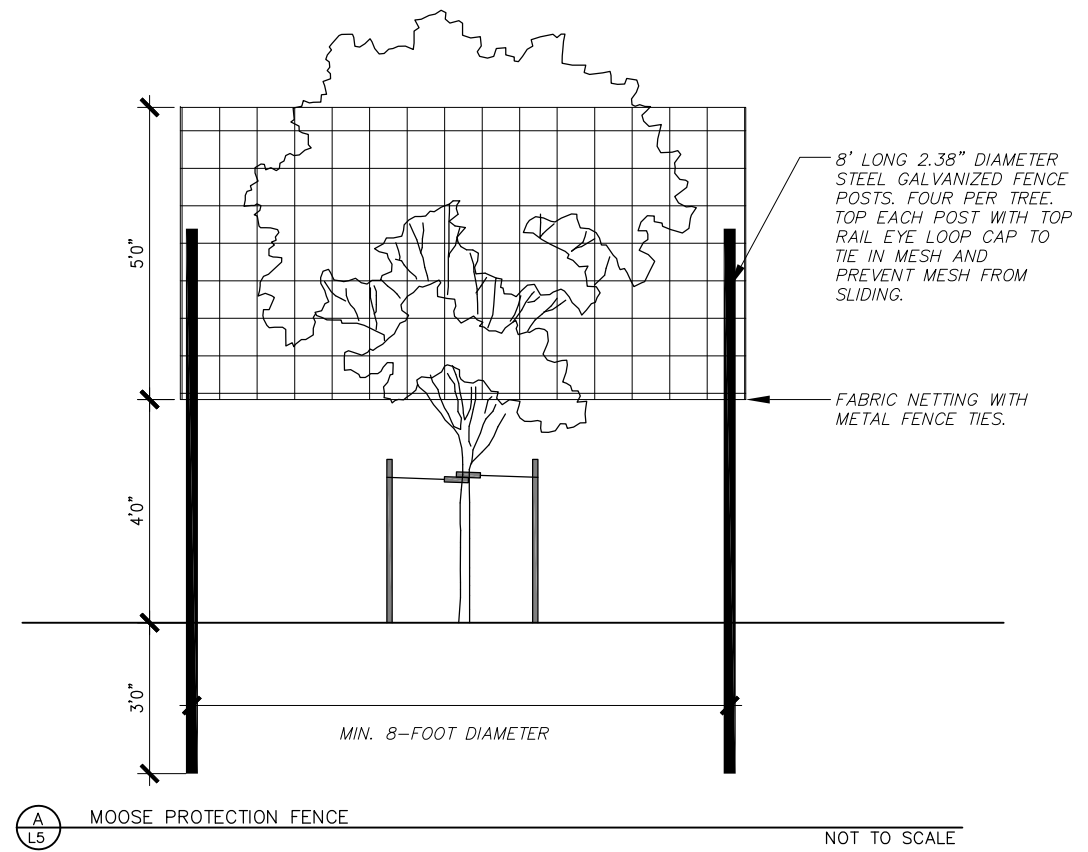
MUNICIPALITY OF ANCHORAGE
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KING STREET CAMPUS EXPANSION

LANDSCAPE PLAN

HORIZ SCALE: NA
 VERT SCALE: NA
 DATE: 05/01/2020
 GRID: SW2431
 PROJ. ID.: WW 00007

SHEET L4 of 5



VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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BASE			TELEPHONE				
TOPOGRAPHY			ELECTRIC				
PROFILE			CABLE TV				
SANITARY SEWER			TRAFFIC SIGNAL				
STORM SEWER			DESIGN				
WATER			QUANTITIES				
GAS			MUN. FINAL CHECK				
PLAN CHECK				REVISIONS			

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MUNICIPALITY OF ANCHORAGE
WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

LANDSCAPE DETAILS

HORIZ SCALE: NA
 VERT SCALE: NA
 DATE: 05/01/2020
 GRID: SW2431
 PROJ. ID.: WW 00007

SEAL

SHEET L5 of 5

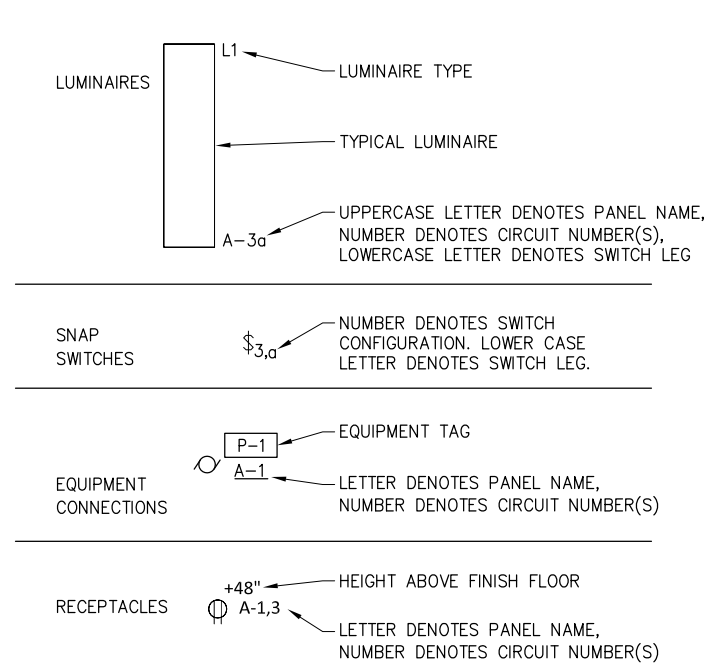
ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
GENERAL	
—	EXPOSED CONDUIT
----	UNDERGROUND CONDUIT
— — —	3/4" X 10' COPPER CLAD STEEL GROUND ROD
— — —	CONDUIT RUN — CHANGE IN ELEVATION
— — —	LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
— — —	HOME RUN
—UE—	UNDERGROUND ELECTRIC
—O—	OVERHEAD ELECTRIC
—X—	CLASS 1, DIVISION 1, HAZARDOUS LOCAITON
POWER	
Ⓚ	KILOWATT-HOUR METER
Ⓚ	PANELBOARD
—M—	MOLDED CASE CIRCUIT BREAKER, X = AMPERE RATING, Y = NO. OF POLES
Ⓜ	POWER MONITOR
Ⓜ	MOTOR, 3-PHASE
Ⓜ	MOTOR, SINGLE PHASE
Ⓜ	STARTER — COMBINATION
Ⓜ	STARTER — FUSED
Ⓜ	STARTER — DISCONNECT
Ⓜ	STARTER — THERMAL
Ⓜ	120V GROUND FAULT INTERRUPTING (GFI) RECEPTACLE
Ⓜ	SINGLE POLE SWITCH
TELECOM	
Ⓜ	TELECOM — PHONE
Ⓜ	TELECOM — DATA
Ⓜ	TELECOM — PHONE / DATA
Ⓜ	TELECOM — TTB
FIRE ALARM	
Ⓜ	STROBE
Ⓜ	HORN STROBE
Ⓜ	HORN
Ⓜ	WATER FLOW BELL
Ⓜ	FIRE PULL STATION
Ⓜ	HEAT DETECTOR
Ⓜ	PHOTOELECTRIC SMOKE DETECTOR
Ⓜ	CONTROL PANEL
MISCELLANEOUS	
Ⓜ	THERMOSTAT
Ⓜ	JUNCTION BOX OR FITTING
Ⓜ	SOLENOID VALVE
Ⓜ	MOTORIZED VALVE
Ⓜ	EMERGENCY PUSH BUTTON
Ⓜ	METERING PUMP
Ⓜ	FLOAT
Ⓜ	HEATER
Ⓜ	SEAL-OFF FITTING
Ⓜ	MOTORIZED DAMPER
Ⓜ	TRANSDUCER
Ⓜ	DOOR SWITCH
OTHER SYMBOLS ARE AS DEFINED BY NOTE.	

ELECTRICAL ABBREVIATIONS

∅	PHASE, DIAMETER	RMC	RIGID METAL CONDUIT
A	ANALOG SIGNAL, AMPERE	PR	PAIR
AFF	ABOVE FINISH FLOOR	R	RED, RADIUS
AFG	ABOVE FINISH GRADE	RT	RIGHT
AI	ANALOG INPUT	SCP	SCADA CONTROL PANEL
AO	ANALOG OUTPUT	SIG	SIGNAL
BCU	BARE COPPER	SLC	SIGNALIZING LINE CIRCUIT
BLDG	BUILDING	SS	STAINLESS STEEL
C	CONDUIT	TS	THERMOSTAT / TEMPERATURE SWITCH
CB	CIRCUIT BREAKER	TWSH	TWISTED WIRE SHIELDED CONDUCTOR
CKT	CIRCUIT	TYP	TYPICAL
CL	CENTERLINE	UG/P	UNDERGROUND PRIMARY
CP	CONTROL PANEL	UON	UNLESS OTHERWISE NOTED
CT	CURRENT TRANSFORMER	V	VOLTS
CU	COPPER	VA	VOLT-AMPERES
D	DIGITAL SIGNAL	W	WIRE, WATTS, WHITE
DI	DIGITAL INPUT	WP	WEATHERPROOF
DO	DIGITAL OUTPUT	XFMR	TRANSFORMER
DWG	DRAWING	ZS	LIMIT SWITCH
(E)	EXISTING		
E	EMERGENCY		
EMT	ELECTRICAL METALLIC TUBING		
FLA	FULL LOAD AMPERES		
FS	FLOW SWITCH		
G	GROUND CONDUCTOR		
GFI	GROUND FAULT INTERRUPTING		
GRC	GALVANIZED RIGID (STEEL) CONDUIT		
GRD	GROUND		
H	HOT CONDUCTOR		
HH	HANDHOLE		
HL	HIGH LEVEL		
HOA	HAND OFF AUTO		
HP	HORSEPOWER		
J-BOX	JUNCTION BOX		
KV	KILOVOLT		
KVA	KILOVOLT-AMPERES		
LCP	LIGHTING LOCAL CONTROL PANEL		
LHA	LAMP HOUSING ASSEMBLY		
LT	LEFT		
LTF	LIQUID TIGHT FLEXIBLE CONDUIT (METALLIC)		
LTG	LIGHTING		
MCC	MOTOR CONTROL CENTER		
MDP	MAIN DISTRIBUTION PANEL		
MLO	MAIN LUG ONLY		
MOV	MOTOR OPERATED VALVE		
(N)	NEW		
N	NEUTRAL (GROUNDED) CONDUCTOR		
NAC	NOTIFICATION APPLIANCE CIRCUIT		
NEG	NEGATIVE		
N.I.C.	NOT IN CONTRACT		
NC	NORMALLY CLOSED		
NLT	NOT LESS THAN		
NO	NUMBER		
NO	NORMALLY OPEN, NUMBER		
P	POLE		
PLC	PROGRAMMABLE LOGIC CONTROLLER		
PM	POWER MONITOR		
POE	POWER OVER ETHERNET		

EQUIPMENT TAG LEGEND



MOUNTING HEIGHT SCHEDULE	
EQUIPMENT	HEIGHT
PANELBOARDS (TOP)	72"
POWER METER BASE (CENTER LINE OF SOCKET)	PER UTILITY
CONTACTORS, MOTOR STARTERS, DISCONNECT SWITCHES (TOP)	66"
RECEPTACLES IN NON-FINISHED AND MECHANICAL SPACES	48"
WALL MOUNTED SWITCHES	46"

PROJECT SUMMARY

- THE PROJECT INCLUDES THE FOLLOWING WORK:
1. INSTALL ROADWAY LIGHTING ALONG AN ACCESS ROAD.
 2. INSTALL A NEW ELECTRICALLY ACTUATED SECURITY GATE, INCLUDING A FIBER OPTIC COMMUNICATION SYSTEM.
 3. INSTALL LIGHTING, POWER, AND CONTROLS IN A NEW GARAGE.
 4. CONNECT GARAGE POWER TO THE EXISTING PRV BUILDING.

FIXTURE SCHEDULE

QTY	TYPE	FIXTURE SYMBOL	LAMP SIZE	MOUNTING	DESCRIPTION
	S1		51W / LED	MOUNT TO BUILDING WALL	LED WALL-PACK, 6,200 LUMENS, 5,000K COLOR TEMPERATURE, 120V, PHOTOCCELL CONTROL, MOTION SENSOR, LITHONIA # TWR1 LED AOL 50K MVOLT DDBTXD.

2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTIS\AWWU King Street Campus Extension\Dwg\Elec\E1-1.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE	#		TELEPHONE	#			
TOPOGRAPHY	#		ELECTRIC	#			
PROFILE	#		CABLE TV	#			
SANITARY SEWER	#		TRAFFIC SIGNAL	#			
STORM SEWER	#		DESIGN				
WATER	#		QUANTITIES				
GAS	#		MUN. FINAL CHECK	#			
PLAN CHECK				REVISIONS			

RECORD DRAWING		Note: To be filled out on original drawings upon project completion.	
1. DATA PROVIDED BY:	_____	3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.	DATE: _____
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BY: _____ TITLE: _____		DATA TRANSFER CHECKED BY: _____	DATE: _____
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BY: _____ TITLE: _____		DATE: _____	

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MUNICIPALITY OF ANCHORAGE
 WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

LEGEND, ABBREVIATIONS, AND GENERAL ELECTRICAL NOTES

HORIZ SCALE: N/A
 VERT SCALE: N/A
 DATE: 5/2020
 GRID: SW2341
 SHEET E1 of E8

SHEET NOTES

- ① EXISTING ACS PEDESTAL. PROVIDE 2" HDPE CONDUIT FROM PEDESTAL TO PRV BUILDING. ACS TO PROVIDE FIBER SERVICE WITHIN CONDUIT (FUTURE). CONDUIT MAY BE INSTALLED IN TRENCH ALONGSIDE LIGHTING FIBER CONDUITS, HOWEVER ACS CONDUIT SHALL NOT BE ROUTED INTO AWWU J-BOXES.
- ② NEW GATE CONTROLLER SUPPORT BOX. SUPPORT FROM NEW STEEL POST. SEE DETAIL 2 SHEET E6 FOR PERIPHERAL DEVICE ARRANGEMENT.

ELECTROLIER SCHEDULE

POLE	NORTHING	EASTING	WATTS	LUMENS	VOLTS	LIGHTING DISTRIBUTION	BASE TYPE	FOUNDATION	MOUNTING HEIGHT	SHAFT LENGTH	ARM LENGTH	REMARKS
1	2607575.000	1663480.089	39	4,700	208	M-C-2	SLIP	PILE	30	28	6	
2	2607350.634	1663480.992	39	4,700	208	M-C-2	SLIP	PILE	30	28	6	
3	2607123.754	1663481.930	39	4,700	208	M-C-2	SLIP	PILE	30	28	6	
4	2607025.515	1663567.000	39	4,700	208	M-C-2	SLIP	PILE	30	28	6	

STATIONING IS APPROXIMATE, POSITION SHOULD BE VERIFIED BY FIELD ENGINEER.
MAST ARM SHALL BE PERPENDICULAR TO ROADWAY CENTERLINE UNLESS OTHERWISE NOTED.

JUNCTION BOX SCHEDULE

J-BOX	NORTHING	EASTING	TYPE
J1	2607581.769	1663480.089	1A
J2	2607357.403	1663480.992	1A
J3	2607130.523	1663481.93	1A
J4	2607025.515	1663560.231	1A
J5	2607024.709	1663601.902	1A

STATIONING IS APPROXIMATE, POSITION SHOULD BE VERIFIED BY FIELD ENGINEER.

LUMINAIRE SCHEDULE

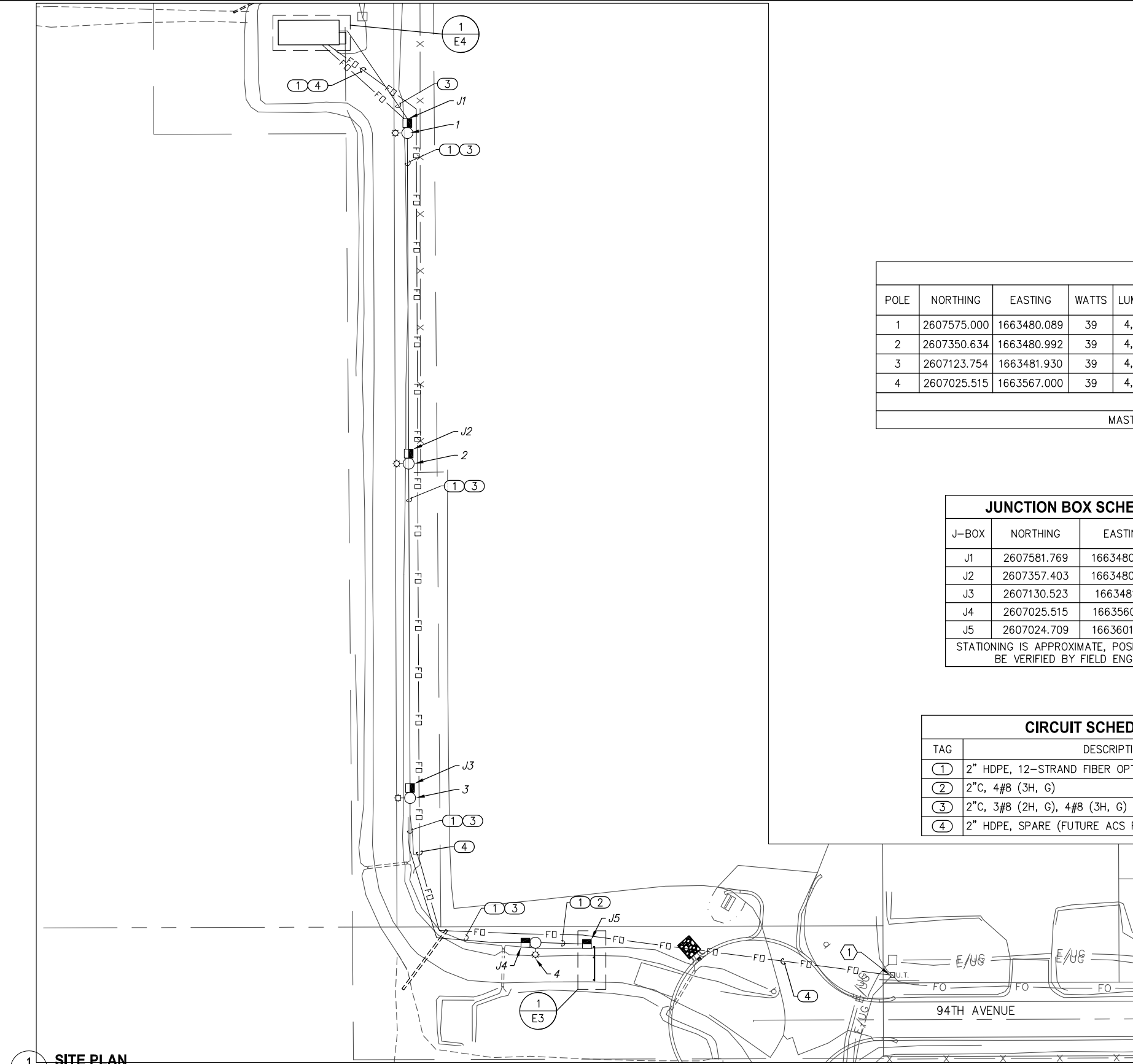
MANUFACTURER	GE LIGHTING OR APPROVED EQUAL
MODEL	ELR1
LIGHT SOURCE	LED
WATTAGE	39W
COLOR TEMP	4,000K
MINIMUM CRI	70
INITIAL OUTPUT	4,700 LUM
DRIVE CURRENT	700MA
VOLTAGE	240V
PHOTOCELL	YES, 7-PIN
LENS TYPE	CUT OFF
IES DISTRIBUTION	M-C-2
UL LISTED	YES
SHIELDED	YES
WARRANTY	10 YEARS

LUMINAIRE PERFORMANCE CRITERIA

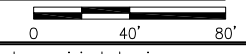
POLE TYPE	MAST ARM
LAMP	LED
LIGHT LOSS FACTOR	0.87
AIMING ANGLE	0
NUMBER OF LANES	2
ROAD WIDTH	32'
PATH WIDTH	-
MEDIAN WIDTH	0'
MOUNTING HEIGHT	30'
ARM LENGTH	6'
SETBACK	9'
SPACING	185'
AVERAGE ILLUMINANCE	0.40 FC
UNIFORMITY (AVE/MIN)	2.6:1
VEILING LUMINANCE	0.38
CLASSIFICATION	LOCAL
PED CONFLICT	LOW

CIRCUIT SCHEDULE

TAG	DESCRIPTION
①	2" HDPE, 12-STRAND FIBER OPTIC CABLE
②	2"C, 4#8 (3H, G)
③	2"C, 3#8 (2H, G), 4#8 (3H, G)
④	2" HDPE, SPARE (FUTURE ACS FIBER SERVICE)



1 SITE PLAN
E2 SCALE: 1"=40'-0"



2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTIS\AWWU King Street Campus Extension\Dwgs\Elec\E2.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	#		TELEPHONE	#	
TOPOGRAPHY	#		ELECTRIC	#	
PROFILE	#		CABLE TV	#	
SANITARY SEWER	#		TRAFFIC SIGNAL	#	
STORM SEWER	#		DESIGN	#	
WATER	#		QUANTITIES	#	
GAS	#		MUN. FINAL CHECK	#	

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DATE: _____

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DATE: _____

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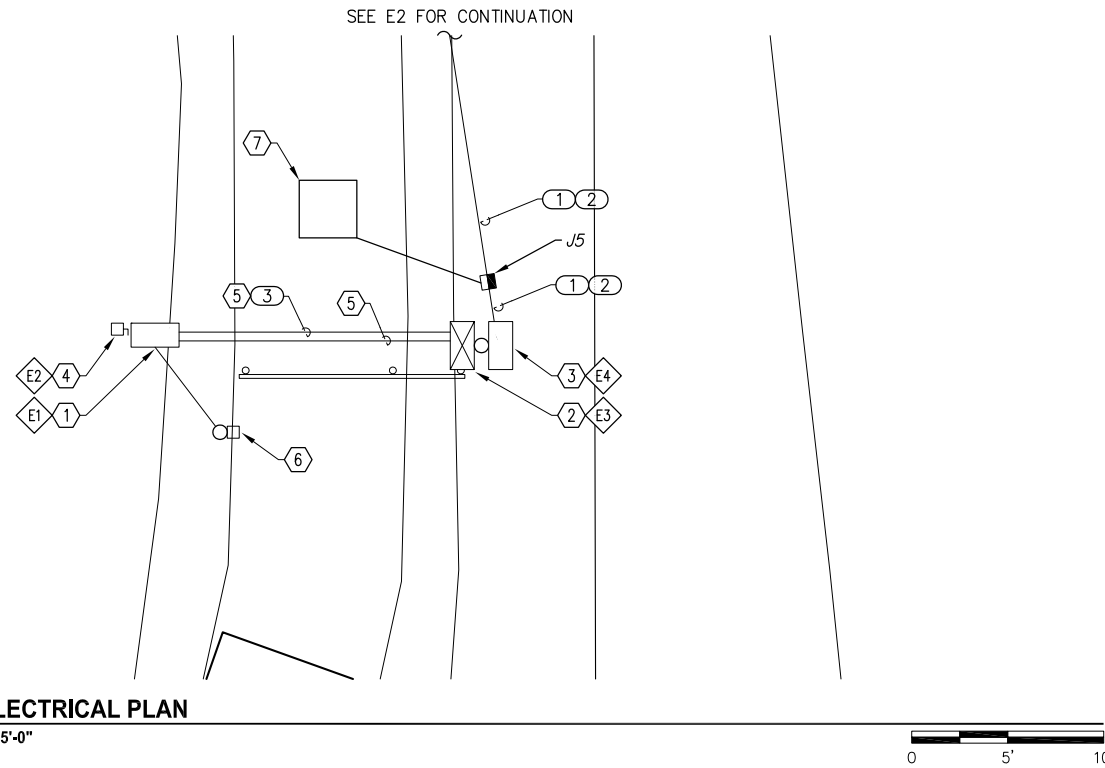
KING STREET CAMPUS EXPANSION

SITE PLAN, ILLUMINATION SCHEDULES

HORIZ SCALE: 1"=40' DATE: 5/2020 GRID: SW2341
VERT SCALE: N/A PROJ. ID.: WW00007 SHEET E2 of E8

SHEET NOTES

- ① NEW GATE OPERATOR. INSTALL TO EXISTING FOUNDATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS; ADJUST FOUNDATION LOCATION RELATIVE TO GATE SUCH THAT GATE OPERATOR HAS ADEQUATE SPACE BETWEEN GATE, INSTALL NEW ANCHORS AS REQUIRED AND GROUT EXISTING ANCHOR HOLES SMOOTH. INSTALL NEW GATE EDGE SENSOR AND PHOTOEYE EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ② NEW GATE CONTROLLER SUPPORT BOX. SUPPORT FROM NEW STEEL POST. SEE DETAIL 2 SHEET E8 FOR PERIPHERAL DEVICE ARRANGEMENT.
- ③ NEW FIBER DISTRIBUTION PANEL 'DP4'. SEE E6 AND E7 FOR DETAILS.
- ④ NEW GATE OPERATOR DISCONNECT SWITCH.
- ⑤ NEW CONTROL CONDUCTORS AS REQUIRED IN 1" CONDUIT.
- ⑥ NEW HIGH/LOW CARD READERS
- ⑦ NEW VEHICLE LOOP DETECTOR



3 GATE ELECTRICAL PLAN
E3 SCALE: 1"=5'-0"

ELECTRICAL EQUIPMENT SCHEDULE		
ITEM NO.	DESCRIPTION	MANUFACTURER OR EQUAL
E1	1HP, 208V, 3Ø GATE OPERATOR	LIFTMASTER CAT# SL595UL
E2	30A, 208V, 3PST, NON-FUSIBLE DISCONNECT SWITCH	SQUARE D
E3	120V, 1Ø GATE CONTROL SUPPORT BOX	
E4	NEMA 4X, STAINLESS STEEL FIBER DISTRIBUTION PANEL ENCLOSURE - SEE ITEMS E5 AND E6 BELOW	HOFFMAN
E5	FIBER CONNECTOR HOUSING, WALL-MOUNT	CORNING CAT# PWH-06P
E6	FIBER SPLICE HOUSING, WALL-MOUNT	CORNING CAT# WSH-11SPT-F
E7	PTZ CAMERA. PROVIDE WITH MILESTONE CORPORATE LICENSE, COORDINATE WITH AWWU.	SONY SNC-WR632C
E8	19", 12-UNIT HINGED WALL MOUNT CABINET	TRIPP-LITE SRW12US

CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2" HDPE, 24-STRAND FIBER OPTIC CABLE
②	2"C, 4#8 (3H, G)
③	1"C, 3#8 (H, N, G)

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VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	#		TELEPHONE	#	
TOPOGRAPHY	#		ELECTRIC	#	
PROFILE	#		CABLE TV	#	
SANITARY SEWER	#		TRAFFIC SIGNAL	#	
STORM SEWER	#		DESIGN		
WATER	#		QUANTITIES		
GAS	#		MUN. FINAL CHECK	#	
PLAN		CHECK		REVISIONS	

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CONSULTANT

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WATER & WASTEWATER UTILITY

KING STREET CAMPUS EXPANSION

GATE ELECTRICAL PLAN

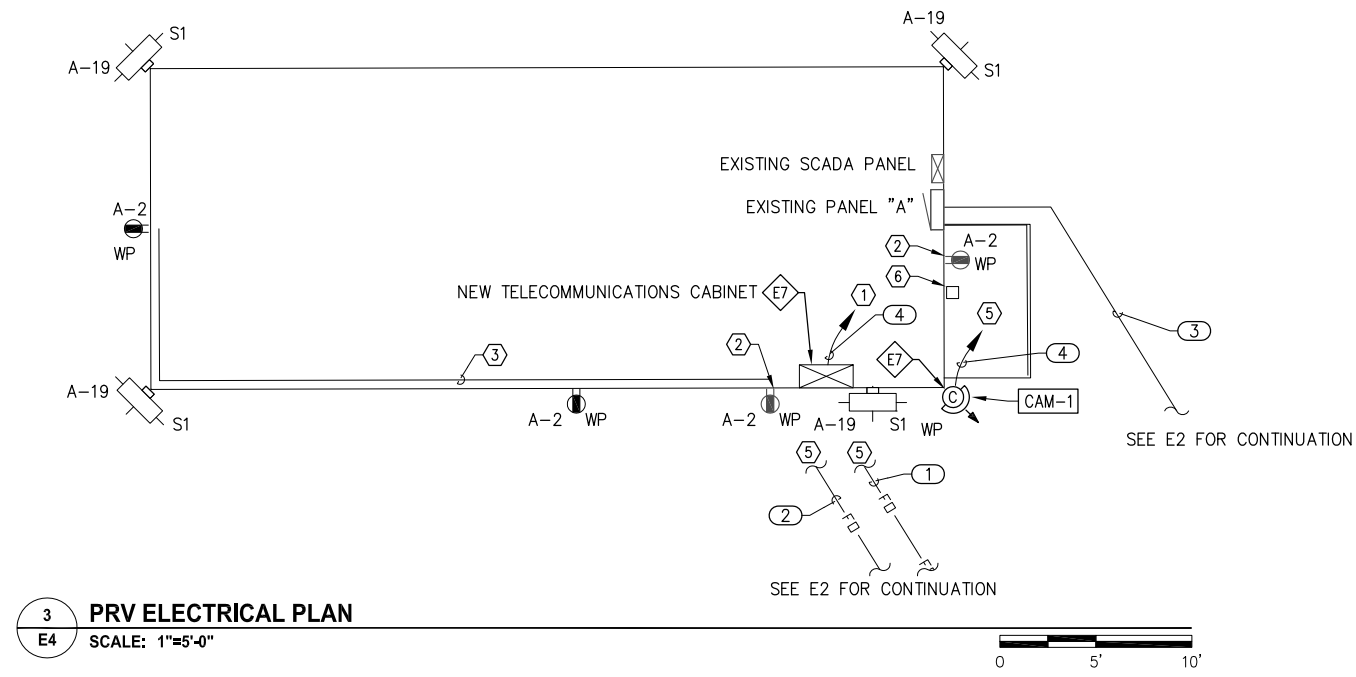
HORIZ SCALE: 1"=10'
VERT SCALE: N/A
DATE: 5/2020
GRID: SW2341
PROJ. ID.: WW00007

SHEET E3 of E8

SHEET NOTES

- ① CONNECT CIRCUIT TO EXISTING SCADA PANEL
- ② EXISTING RECEPTACLE
- ③ EXTEND INTERIOR CONDUIT AND CONDUCTORS TO NEW EXTERIOR RECEPTACLE LOCATIONS. CORE DRILL CONCRETE WALL AND EXTEND TO NEW RECEPTACLES.
- ④ MOUNT WALL-PACK TO BUILDING CORNER ABOVE CAMERA.
- ⑤ CONNECT CIRCUIT TO NEW TELECOMMUNICATIONS CABINET
- ⑥ NEW CARD READER AND DOOR HARDWARE
- ⬡ SEE ELECTRICAL EQUIPMENT SCHEDULE SHEET E3

CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2" HDPE (FUTURE ACS FIBER)
②	2"C, 4C#4 (3H, N) & 1C#8 (G)
③	2"C, 3C#8 (2H, G), 4C#8 (3H, G)
④	3/4"C, CAT6



3 PRV ELECTRICAL PLAN
E4 SCALE: 1"=5'-0"

2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTS\AWWU King Street Campus Extension\Dwg\Elec\E4 PRV PLAN.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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TOPOGRAPHY	#		ELECTRIC	#	
PROFILE	#		CABLE TV	#	
SANITARY SEWER	#		TRAFFIC SIGNAL	#	
STORM SEWER	#		DESIGN		
WATER	#		QUANTITIES		
GAS	#		MUN. FINAL CHECK	#	
PLAN CHECK			REVISIONS		

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KING STREET CAMPUS EXPANSION

PRV ELECTRICAL PLAN

HORIZ SCALE: 1"=5'
 VERT SCALE: N/A
 PROJ. ID.: WW00007

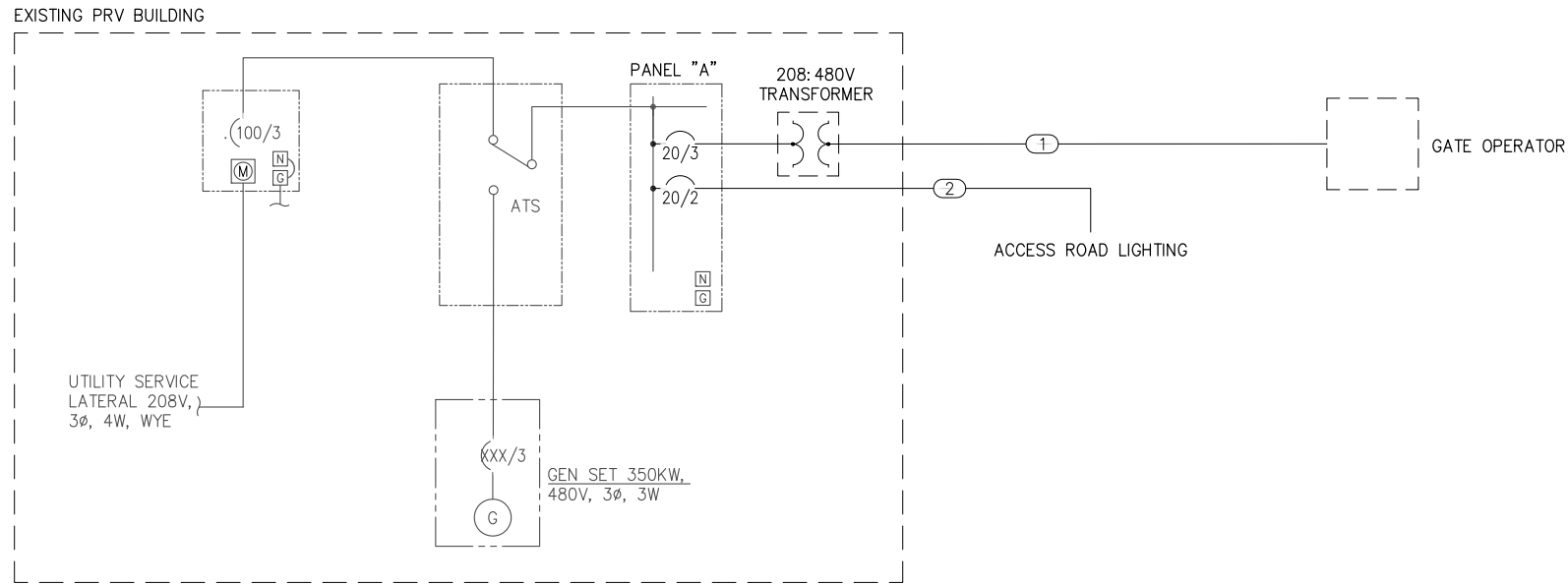
DATE: 5/2020
 GRID: SW2341

SHEET E4 of E8

SHEET NOTES

- ① PROVIDE AND BOND TO 1/2" X 20' CONCRETE ENCASED ELECTRODE (UFER).

CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2" GRC, 4C#8 (3H, G)
②	2" GRC, 2C#8 (2H) & 1C#8



1 POWER ONE-LINE
E5 SCALE: NTS

EXISTING PANEL "A" SCHEDULE													
VOLTAGE: 208/120				BUS:				MIN. A.I.C. RATING: 10,000					
MAIN:				LOCATION: PRV BUILDING				ENCLOSURE:					
								MOUNTING: SURFACE					
CKT	AMP	LOAD DESCRIPTION	KVA	LOAD	A	B	C	LOAD	KVA	LOAD DESCRIPTION	AMP	CKT	
1	20/1	INTERIOR LIGHTS	1.0	L	1.7			R	0.7	RECPT - EXTERIOR	20/1	2	
3			0.2	C		0.9		R	0.7	RECPT - INTERIOR	20/1	4	
5	20/3	SCADA	0.2	C			1.7	C	1.5	EUH-1, 3.0 KW	20/2	6	
7			0.2	C	1.7			C	1.5		20/2	8	
9	20/1	BATTERY CHARGER	0.5	N			0.7	C	0.2	GEN CONTROL PANEL	20/1	10	
11	20/1	SUPPLY FAN SF-1	0.1	M			0.3	LM	0.2	GUH-1	20/1	12	
13			0.0	C	0.6			N	0.6	GATE OPERATOR	20/3	14	
15	15/3	POWER MONITOR	0.0	C		0.6		N	0.6			16	
17			0.0	C			0.6	N	0.6			18	
19	20/1	EXTERIOR LIGHTS	0.2	L	0.3			L	0.1	ROADWAY LIGHTING	20/2	20	
21							0.1	L	0.1			22	
23								0.0				24	
25					0.0							26	
27						0.0						28	
29							0.0					30	
			4.3	2.3	2.6								
* ITALIC = NEW CIRCUIT BREAKER													
TOTAL KVA: 9.3													
AMPS: 25.9													
SUMMARY BY LOAD TYPE		CONNECTED KVA			TOTAL	NEC%	NEC TOTAL	NOTES:					
L	RECEPTACLES	PH A	PH B	PH C	FEED	KVA							
1.3	0.7	0.1	0.7	0.0		1.4	1.25	1.8					
0.7	0.0	0.0	0.0	0.0		1.4	10K+50%	1.4					
0.0	0.0	0.0	0.1			0.1	1.00	0.1					
0.0	0.0	0.0	0.2			0.2	1.25	0.3					
1.7	0.4	1.7				3.9	1.25	4.8					
0.6	1.1	0.6				2.3	1.00	2.3					
0.0	0.0	0.0	0.0			0.0	1.00	0.0					
0.0	0.0	0.0	0.0			0.0	0.00	0.0					
0.0	0.0	0.0	0.0			0.0	1.00	0.0					
0.0	0.0	0.0	0.0			0.0	1.00	0.0					
TOTAL KVA (PHASE)		4.3	2.3	2.6		9.3		10.7					
TOTAL AMPERES		36.2	19.5	21.9		25.9		29.7					
PHASE BALANCE, ABC		A-B	B-C	C-A									
PERCENT													

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VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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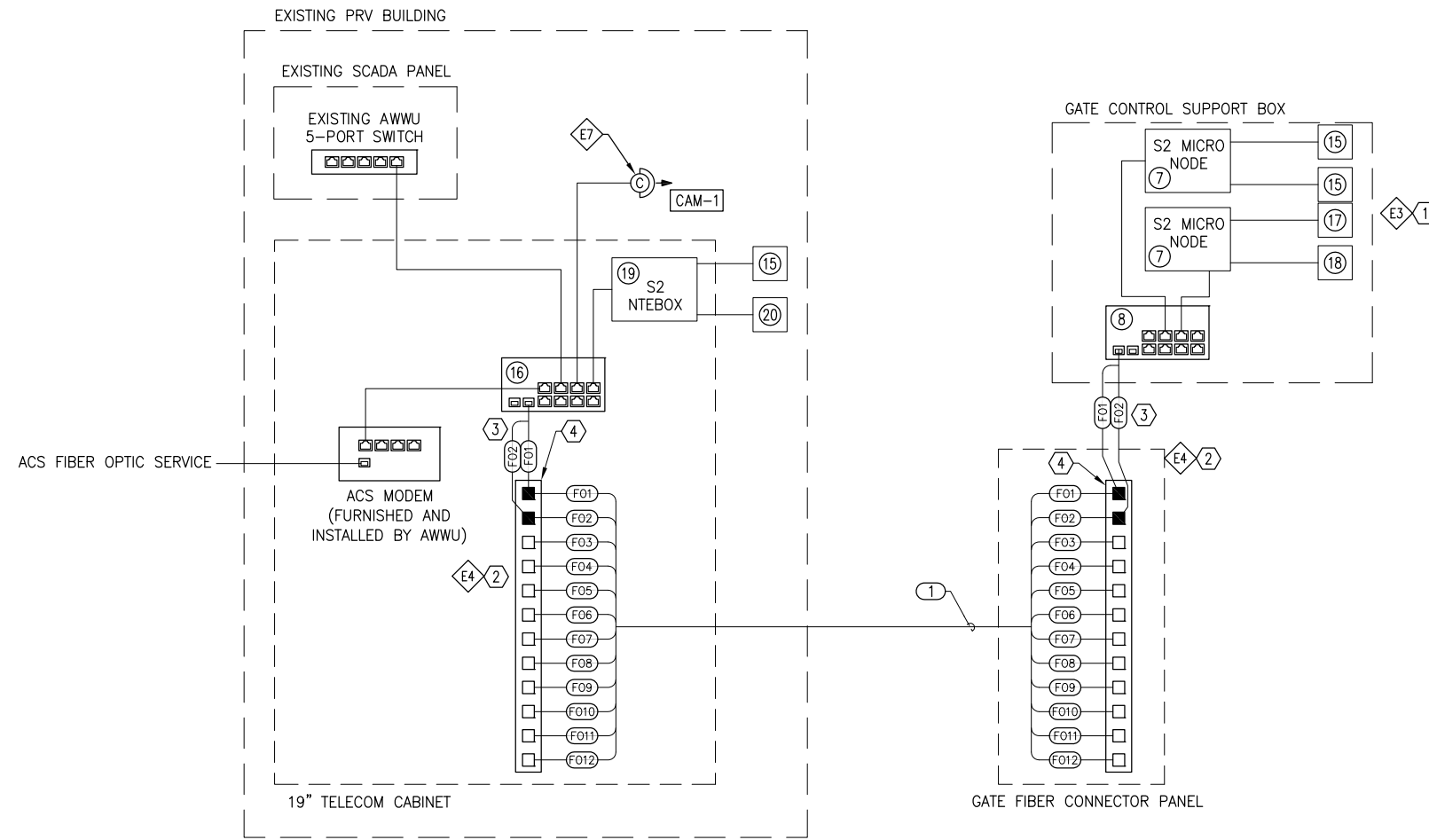
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				KING STREET CAMPUS EXPANSION	
<p align="center">POWER ONE-LINE AND SCHEDULE</p>		HORZ SCALE: N/A VERT SCALE: N/A		DATE: 5/2020	GRID: SW2341
		PROJ. ID.: WW00007		SHEET E5 of E8	

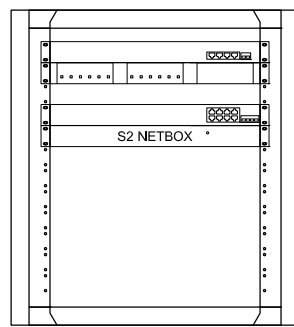


SHEET NOTES

- ① NEW VEHICLE GATE CONTROL SUPPORT BOX.
- ② NEW OPTICAL FIBER DISTRIBUTION PANEL.
- ③ NEW FACTORY PATCH CORDS.
- ④ NEW LC DUPLEX TYPE CONNECTOR PANELS AS REQUIRED.
- # SEE COMPONENT SCHEDULE ON SHEET E6
- E# SEE ELECTRICAL EQUIPMENT SCHEDULE SHEET E3

CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	NEW 12-STRAND FIBER CABLE

1 NETWORK ARCHITECTURE
E6 SCALE: NTS



- E4 ACS MODEM (INSTALLED BY AWWU) FIBER PANEL
- E16 CISCO WS-C3560CX-12PD-S
- E19 S2 NETBOX

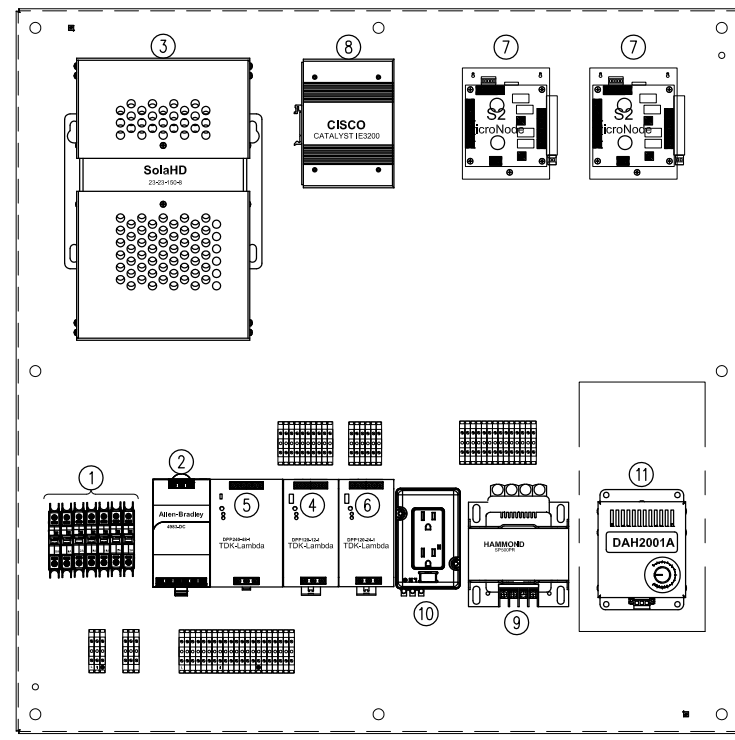
2 TELECOM CABINET ELEVATION
E6 SCALE: NTS

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VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
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PLAN CHECK			REVISIONS		

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CONTRACTOR: _____	COMPANY: _____	<div style="display: flex; align-items: center; justify-content: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">95% DRAFT</div> </div>									
BY: _____ TITLE: _____	BY: _____ TITLE: _____										
DATE: _____	DATE: _____										
2. DATA TRANSFERRED BY: _____	COMPANY: _____	<table border="1" style="width: 100%;"> <tr> <td colspan="2">CONSULTANT</td> <td colspan="2">SEAL</td> </tr> </table>		CONSULTANT		SEAL					
CONSULTANT		SEAL									
CONTRACTOR: _____	DATE: _____	<table border="1" style="width: 100%;"> <tr> <td>HORIZ SCALE: N/A</td> <td>DATE: 5/2020</td> <td>GRID: SW2341</td> <td>SHEET E6 of E8</td> </tr> <tr> <td>VERT SCALE: N/A</td> <td>PROJ. ID.: WW00007</td> <td></td> <td></td> </tr> </table>		HORIZ SCALE: N/A	DATE: 5/2020	GRID: SW2341	SHEET E6 of E8	VERT SCALE: N/A	PROJ. ID.: WW00007		
HORIZ SCALE: N/A	DATE: 5/2020	GRID: SW2341	SHEET E6 of E8								
VERT SCALE: N/A	PROJ. ID.: WW00007										

MUNICIPALITY OF ANCHORAGE
WATER & WASTEWATER UTILITY
KING STREET CAMPUS EXPANSION
NETWORK ARCHITECTURE



1 GATE CONTROLLER SUPPORT BOX BACKPLANE LAYOUT
E7 SCALE: NTS

COMPONENT SCHEDULE			COMPONENT SCHEDULE (CONTINUED)		
ITEMS	EQUIPMENT / MATERIAL	MANUFACTURER, OR EQUAL	ITEMS	MATERIALS / EQUIPMENT	MANUFACTURER, OR EQUAL
①	CIRCUIT BREAKER, UL489	ALLEN-BRADLEY	⑪	200W, 120V, ENCLOSURE HEATER	HOFFMAN
②	SURGE ARRESTOR AND FILTER	ALLEN-BRADLEY CAT# 4983-DC	⑫	PHOTOEYES	OPTEX CAT# AX-70
③	1,000VA, 120V:120V CONSTANT VOLTAGE TRANSFORMER	SOLA CAT# 23-23-210-8	⑬	GATE EDGE SENSOR	MLLER EDGE CAT# MGR20
④	DC POWER SUPPLY, 120VAC INPUT, 12VDC OUTPUT	TDK-LAMBDA CAT# DPP120-12-1	⑭	GATE EDGE SENSOR TRANSMITTER/RECEIVER KIT	MILLER EDGE CAT# MWRTA12
⑤	DC POWER SUPPLY, 120VAC INPUT, 48VDC OUTPUT	TDK-LAMBDA CAT# DPP240-48-1	⑮	CARD READER	HID CAT# 3575
⑥	DC POWER SUPPLY, 120VAC INPUT, 24VDC OUTPUT	TDK-LAMBDA CAT# DPP120-24-1	⑯	8-PORT NETWORK SWITCH WITH 2 SFP-PORTS. INSTALLED IN TELECOM CABINET	CISCO WS-C3560CX-12PD-S
⑦	ACCESS CONTROL NODE	S2 SECURITY MICRONODE PLUS	⑰	WEGAND REMOTE RECEIVER	LINEAR LOR
⑧	HARDENED ETHERNET NETWORK SWITCH, 8-PORT WITH 2 SFP-PORTS	CISCO CATALYST IE3200	⑱	SINGLE CHANNEL, SINGLE OUTPUT VEHICLE DETECTOR	RENO AX-4-S
⑨	500VA, 120V:24V TRANSFORMER	HAMMOND	⑲	ACCESS CONTROL SYSTEM	S2 NETBOX
⑩	15A, 120V, WEATHER RESISTANT, NEMA 5-15R DUPLEX RECEPTACLE	-	⑳	MAGNETIC DOOR LOCK	

GATE CONTROL NARRATIVE

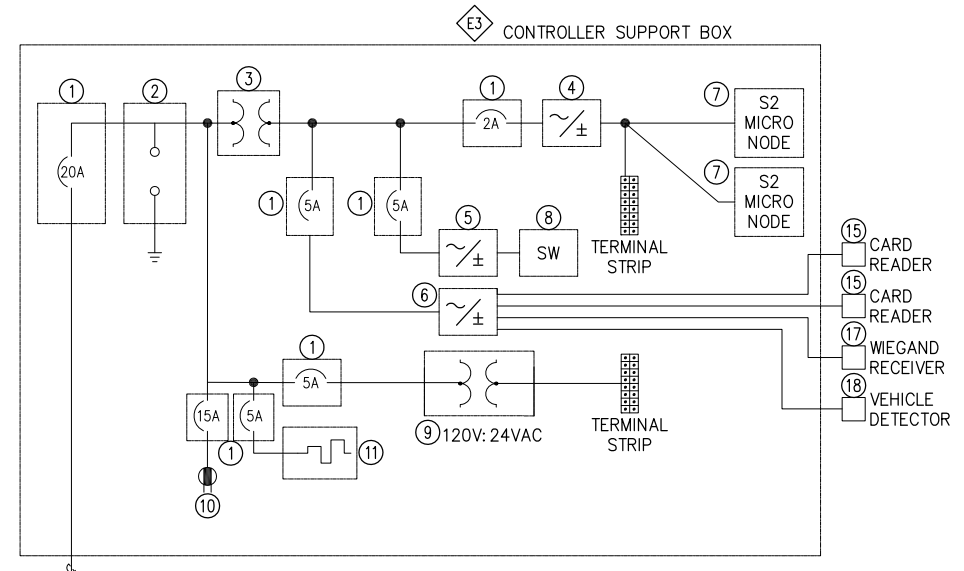
THE GATE OPERATOR, GATE CONTROLLER, SAFETY DEVICES (EDGE SENSOR, PHOTOEYES) AND PERIPHERAL EQUIPMENT SHALL BE INTEGRATED FOR A FULLY FUNCTIONAL SYSTEM. THE NEW GATE CONTROLLER SHALL BE INTEGRATED WITH THE EXISTING HEADEND CONTROL SYSTEM AND SHALL BE PROGRAMMED WITH ALL USER TAG INFORMATION.

- THE SYSTEM SHALL FUNCTION AS FOLLOWS:
- THE GATE WILL OPEN UPON INITIATION OF THE FOLLOWING:
 - AUTHORIZED TAG READ BY THE ENTRY CARD READER;
 - AUTHORIZED TAG READ BY THE EXIT CARD READER;
 - THE GATE WILL CLOSE AFTER 60 SECONDS (OPERATOR ADJUSTABLE) UNLESS ONE OF THE FOLLOWING OCCURS:
 - THE EDGE SENSOR DETECTS AN OBSTRUCTION, UPON WHICH THE GATE OPERATOR WILL AUTOMATICALLY REVERSE;
 - THE PHOTOEYE BEAM IS OBSTRUCTED, UPON WHICH THE GATE OPERATOR WILL AUTOMATICALLY REVERSE AND REMAIN OPEN UNTIL THE PHOTOEYE BEAM OBSTRUCTION HAS BEEN REMOVED.
 - THE GATE OPERATOR RESPONDS TO THE GATE CONTROLLER SIGNALS AS PROGRAMMED AT THE HEADEND CONTROL SYSTEM.

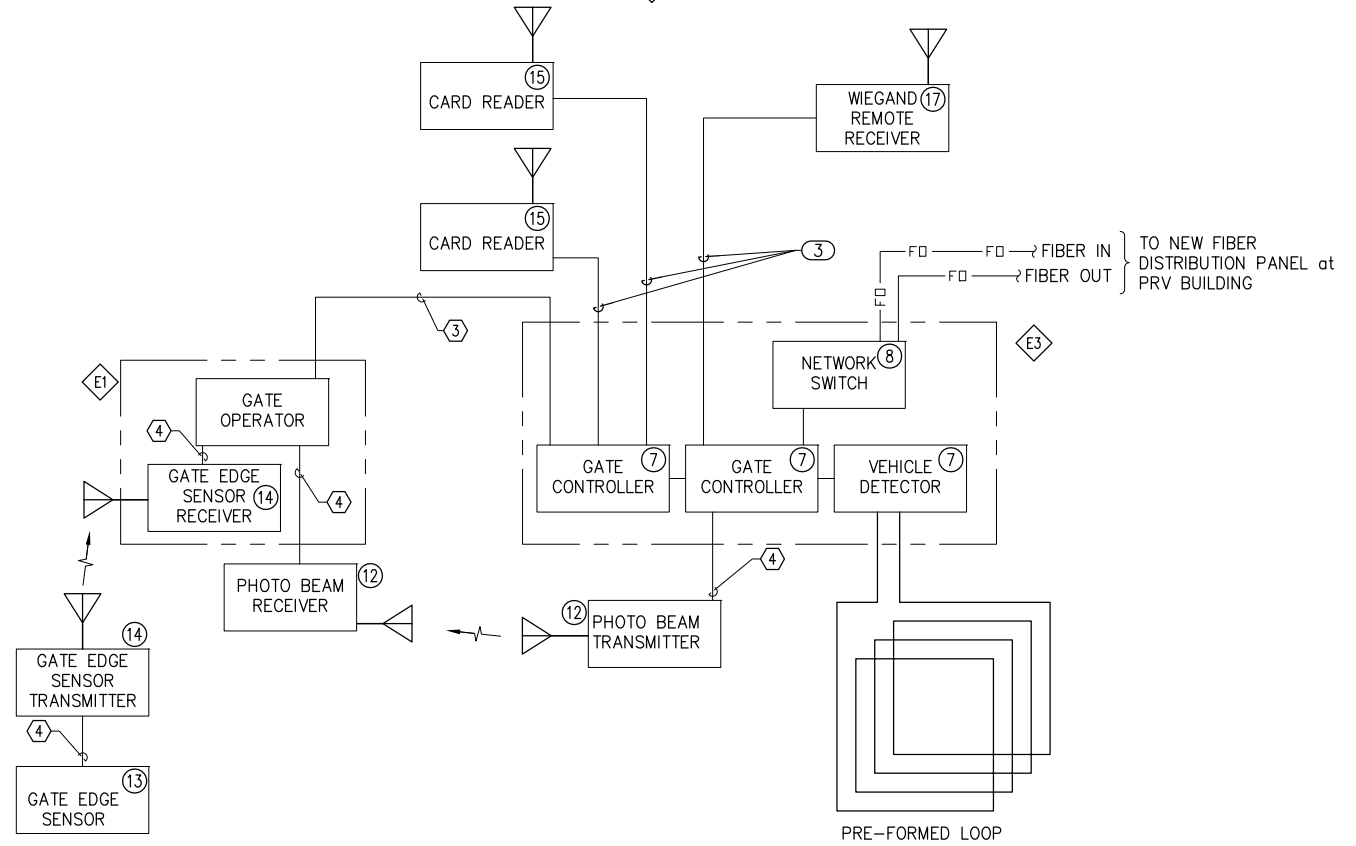
CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2"C, NEW 4#8 (3H, G)
②	1"C, NEW 3#8 (H, N, G)
③	1/2"C, RS-485 SERIAL DATA CABLE
④	1/2"C, 3#14 (2SIG, G)

SHEET NOTES

- ① GATE OPERATOR POWER CIRCUIT.
- ② GATE CONTROL SUPPORT BOX POWER CIRCUIT.
- ③ PROVIDE CONTROL CONDUCTORS BETWEEN GATE OPERATOR AND GATE CONTROLLER AS REQUIRED.
- ④ PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED BY THE MANUFACTURER.
- E# SEE ELECTRICAL EQUIPMENT SCHEDULE SHEET E2.1



2 GATE CONTROLLER SUPPORT BOX SINGLE-LINE DIAGRAM
E7 SCALE: NTS



3 GATE CONTROLLER SUPPORT BOX BLOCK DIAGRAM
E7 SCALE: NTS

2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTIS\AWWU King Street Campus Extension\Dwg\Elec\E7 GATE CONTROLLER SUPPORT BOX.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	#		TELEPHONE	#	
TOPOGRAPHY	#		ELECTRIC	#	
PROFILE	#		CABLE TV	#	
SANITARY SEWER	#		TRAFFIC SIGNAL	#	
STORM SEWER	#		DESIGN		
WATER	#		QUANTITIES		
GAS	#		MUN. FINAL CHECK	#	

RECORD DRAWING Note: To be filled out on original drawings upon project completion.

1. DATA PROVIDED BY: _____
 This shall serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.
 CONTRACTOR: _____
 BY: _____ TITLE: _____
 DATE: _____

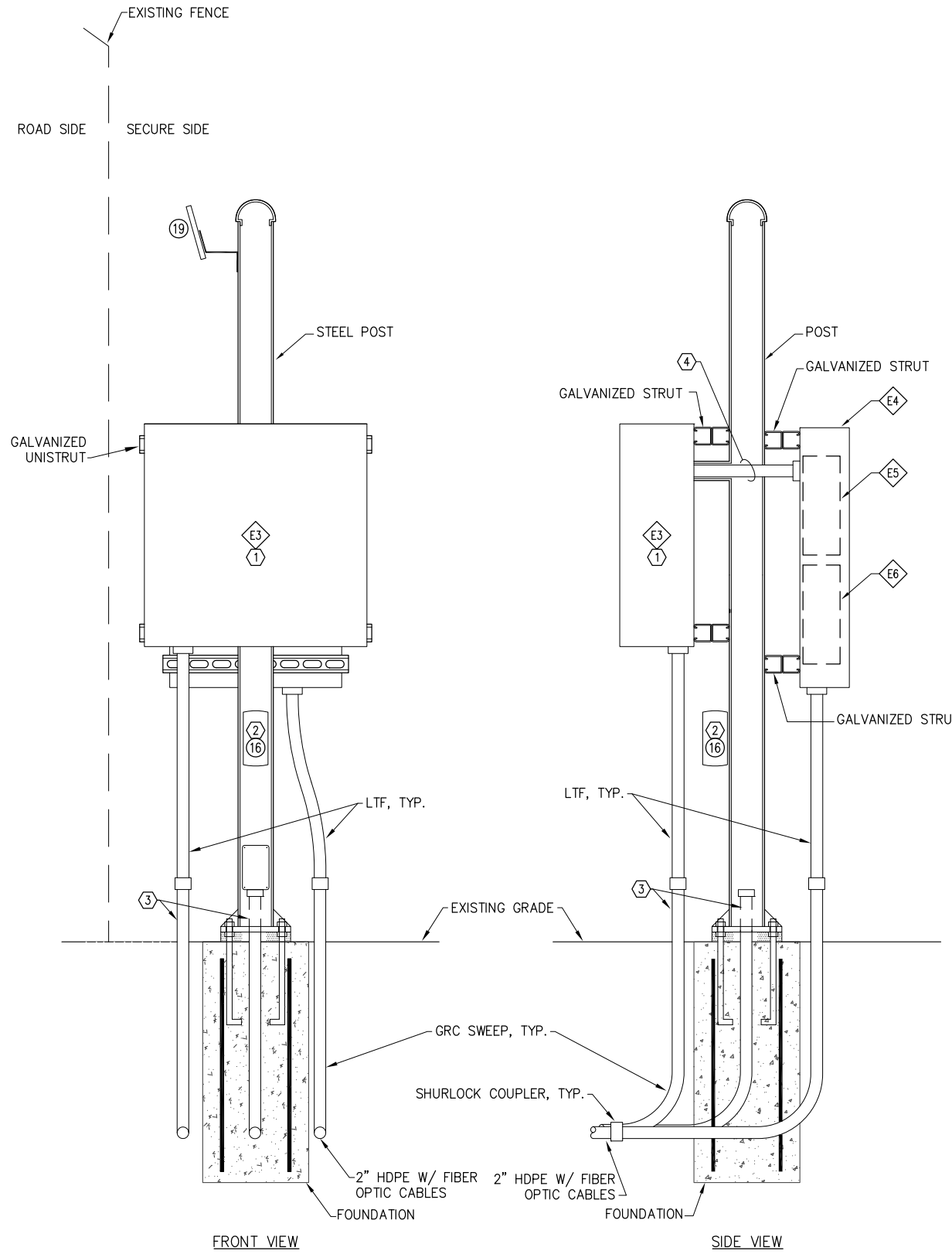
2. DATA TRANSFERRED BY: _____
 COMPANY: _____
 DATE: _____

3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
 DATA TRANSFER CHECKED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

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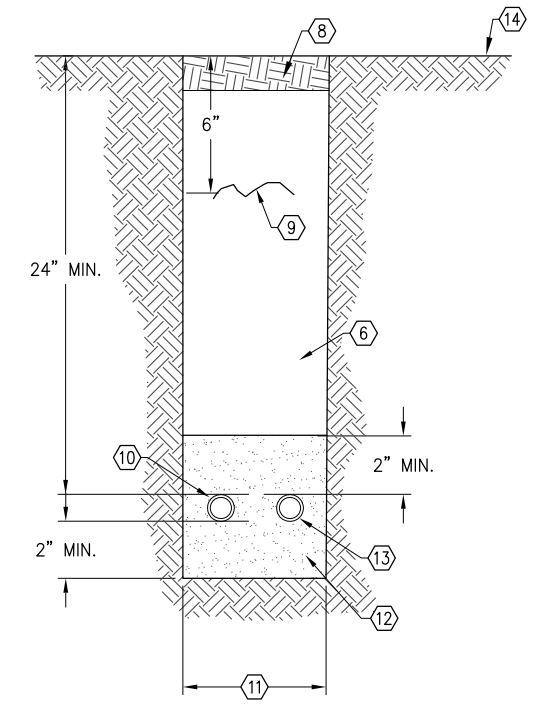
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<p style="font-size: 2em; font-weight: bold; transform: rotate(-45deg);">95% DRAFT</p>		<p>MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY</p> <p>KING STREET CAMPUS EXPANSION</p> <p style="font-weight: bold;">GATE CONTROLLER SUPPORT BOX</p>	
		<p>HORIZ SCALE: N/A VERT SCALE: N/A</p>	<p>DATE: 5/2020</p>



1 GATE SUPPORT BOX AND FIBER DISTRIBUTION PANEL
 E8 SCALE: NTS

- SHEET NOTES**
- ① GATE CONTROL SUPPORT BOX.
 - ② PHOTOEYE.
 - ③ POWER AND CONTROL CONDUITS BETWEEN GATE CONTROL SUPPORT BOX AND GATE OPERATOR
 - ④ 1" GRC FOR NEW FIBER PATCH CORDS, SEE SHEET E3 FOR DETAILS.
 - ⑤ NEW WEATHER/VANDAL RESISTANT COVER, VIKING ELECTRONICS OR EQUAL.
 - ⑥ REUSE EXCAVATED NFS GRAVEL, BACKFILL MATERIAL AND COMPACT TO 95% MAXIMUM DENSITY.
 - ⑦ IN GRASS AREAS HDPE CONDUITS FOR FIBER OPTIC CABLE MAY BE PLOWED IN AT CONTRACTORS OPTION.
 - ⑧ INSTALL 4" OF TOPSOIL AND SEED IN ACCORDANCE WITH M.A.S.S SECTION 75.04.
 - ⑨ 6" WIDE WARNING TAPE WITH METALLIC DETECTION STRIP 'CAUTION FIBER OPTIC CABLE BELOW'.
 - ⑩ POWER CONDUIT
 - ⑪ TRENCH WIDTH SHALL BE OF SUFFICIENT DIMENSION TO ALLOW A MINIMUM OF 2" SPACE BETWEEN CONDUITS, AND 2" SPACE BETWEEN EDGE OF CONDUITS AND TRENCH WALLS.
 - ⑫ 1/4" MINUS NFS MATERIAL.
 - ⑬ HDPE CONDUIT WITH FIBER OPTIC CABLE.
 - ⑭ FINISHED GRADE.
- # SEE COMPONENT SCHEDULE SHEET E7
 E# SEE ELECTRICAL EQUIPMENT SCHEDULE SHEET E5



2 TRENCH DETAIL
 E8 SCALE: NTS

2020/05/05 2:41 PM By: Roy N. Pace P:\Projects\PTIS\AWWU King Street Campus Extension\Dwg\Elec\E8 DETAILS.dwg

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.	
DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY	REV	DATE
BASE	#		TELEPHONE	#			
TOPOGRAPHY	#		ELECTRIC	#			
PROFILE	#		CABLE TV	#			
SANITARY SEWER	#		TRAFFIC SIGNAL	#			
STORM SEWER	#		DESIGN				
WATER	#		QUANTITIES				
GAS	#		MIN. FINAL CHECK	#			
PLAN CHECK				REVISIONS			

RECORD DRAWING Note: To be filled out on original drawings upon project completion.


1. DATA PROVIDED BY: _____
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 CONTRACTOR: _____
 BY: _____ TITLE: _____
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2. DATA TRANSFERRED BY: _____
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3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed.
 DATA TRANSFER CHECKED BY: _____
 COMPANY: _____
 BY: _____ TITLE: _____
 DATE: _____

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CONSULTANT	SEAL		MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY KING STREET CAMPUS EXPANSION	
			DETAILS	
		HORZ SCALE: N/A VERT SCALE: N/A PROJ. ID.: WW00007	DATE: 5/2020 GRID: SW2341	SHEET E8 of E8