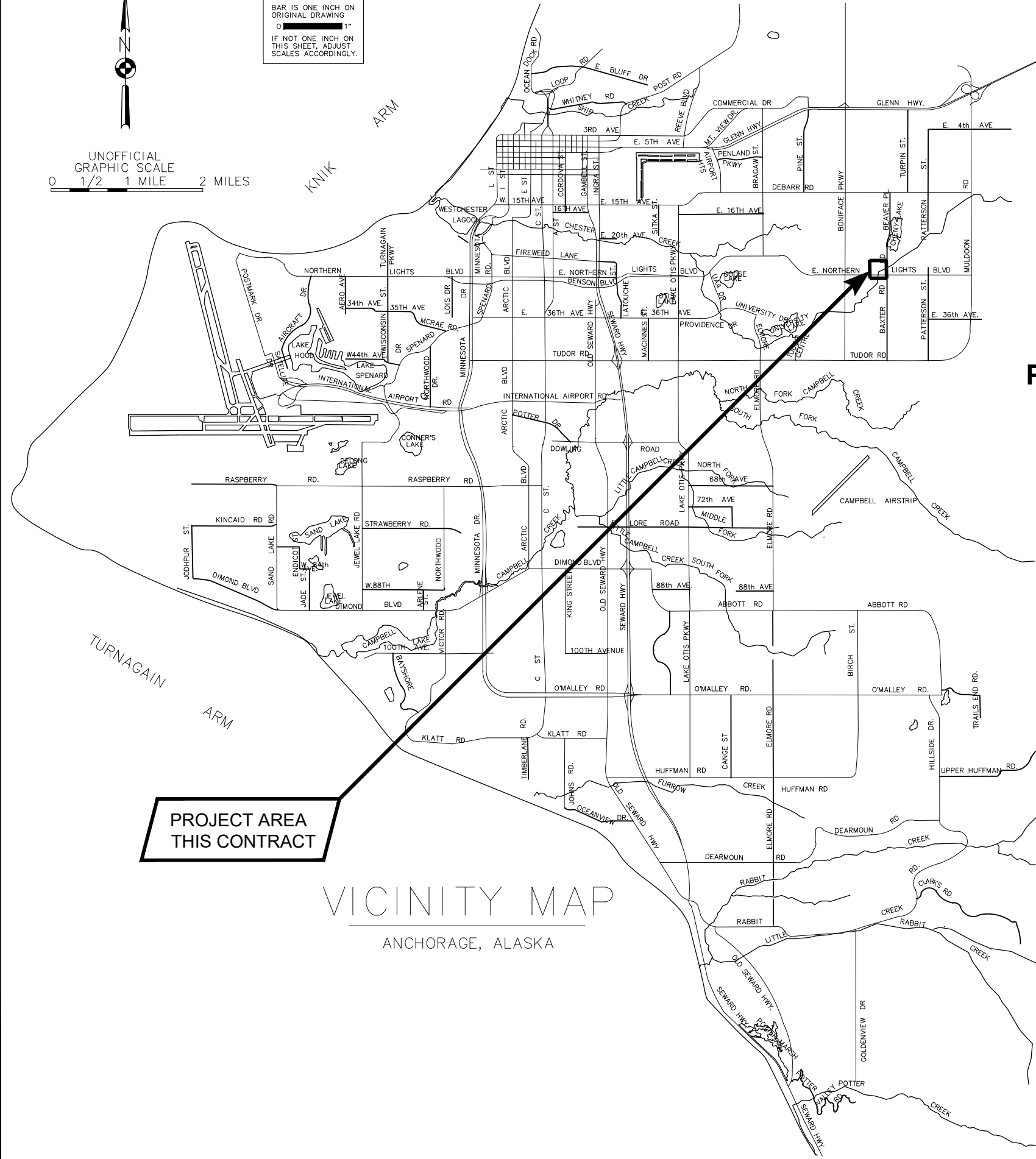


**VERIFY SCALES**  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



**PROJECT AREA  
THIS CONTRACT**

VICINITY MAP  
 ANCHORAGE, ALASKA



**MUNICIPALITY OF ANCHORAGE  
 PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

**CAMROSE DRIVE  
 STORM DRAINAGE PROJECT**

**PROJECT NUMBER: 20-27  
 JUNE 2023  
 95% DESIGN**

PREPARED BY:



APPROVED BY:

BRANDON TELFORD, P.E.  
 ACTING MUNICIPAL ENGINEER

SHEET INDEX		
SHEET NO.	DESCRIPTION	SCHEDULE
GENERAL		
G1	COVER SHEET	ALL
G2	SHEET INDEX	ALL
G3	GENERAL NOTES	ALL
G4	LEGEND & ABBREVIATIONS	ALL
G5	KEY MAP	ALL
SURVEY		
V1	SURVEY CONTROL	ALL
V2	SURVEY CONTROL	ALL
V3	TEMPORARY EASEMENT & PERMIT MAP	ALL
V4	TEMPORARY EASEMENT & PERMIT MAP	ALL
V5	TEMPORARY EASEMENT & PERMIT MAP	ALL
DEMOLITION		
B1	DEMOLITION PLAN	ALL
B2	DEMOLITION PLAN	ALL
B3	DEMOLITION PLAN	ALL
B4	DEMOLITION SUMMARY TABLES	ALL
B5	DEMOLITION SUMMARY TABLES	ALL
B6	DEMOLITION SUMMARY TABLES	ALL
B7	DEMOLITION SUMMARY TABLES	ALL
ABANDONMENT		
A1	OUTFALL PIPE ABANDONMENT	SCHED B
A2	OUTFALL PIPE ABANDONMENT	SCHED B
A3	OUTFALL PIPE ABANDONMENT	SCHED B
TYPICAL SECTIONS		
C1	TYPICAL SECTIONS	SCHED A
C2	TYPICAL SECTIONS	SCHED A
C3	TYPICAL SECTIONS	SCHED A
ROADWAY		
R1	ROADWAY PLAN & PROFILE	SCHED A
R2	ROADWAY PLAN & PROFILE	SCHED A
R3	ROADWAY PLAN & PROFILE	SCHED A
R4	INTERSECTION LAYOUT	SCHED A
R5	INTERSECTION LAYOUT	SCHED A
R6	INTERSECTION LAYOUT	SCHED A
ROADWAY SUMMARY TABLES		
T1	ROADWAY SUMMARY TABLES	SCHED A
T2	ROADWAY SUMMARY TABLES	SCHED A
ROADWAY DETAILS		
D1	ROADWAY DETAILS	SCHED A
D2	ROADWAY DETAILS	SCHED A
D3	ROADWAY DETAILS	SCHED A
D4	ROADWAY DETAILS	SCHED A
D5	ROADWAY DETAILS	SCHED A
SIGNING & STRIPING		
S1	SIGNING & STRIPING	SCHED A
S2	SIGNING & STRIPING	SCHED A

SHEET INDEX		
SHEET NO.	DESCRIPTION	SCHEDULE
STORM DRAIN		
SD1	STORM DRAIN PLAN & PROFILE	SCHED B
SD2	STORM DRAIN PLAN & PROFILE	SCHED B
SD3	STORM DRAIN PLAN & PROFILE	SCHED B
SD4	STORM DRAIN PLAN & PROFILE	SCHED B
SD5	STORM DRAIN DETAILS	SCHED B
SD6	STORM DRAIN DETAILS	SCHED B
SD7	STORM DRAIN DETAILS	SCHED B
SD8	STORM DRAIN DETAILS	SCHED B
SD9	STORM DRAIN DETAILS	SCHED B
SD10	STREAMBANK RECONSTRUCTION DETAILS	SCHED B
SD11	STREAMBANK RECONSTRUCTION DETAILS	SCHED B
SD12	STREAMBANK RECONSTRUCTION DETAILS	SCHED B
SD13	STORM DRAIN DETAILS	SCHED B
SD14	STORM DRAIN SUMMARY TABLES	SCHED B
SEWER		
SS1	COVER SHEET	SCHED C
SS2	KEY MAP, NOTES & SEWER DETAILS	SCHED C
SS3	SEWER PLAN & PROFILE	SCHED C
ILLUMINATION		
I1	ILLUMINATION PLAN	SCHED D
I2	ILLUMINATION AND TRAFFIC INTERCONNECT PLAN	SCHED D
I3	ILLUMINATION AND INTERCONNECT SCHEDULES & DETAILS	SCHED D
I4	LC-LU POWER ONE-LINE, PANEL SCHEDULE, AND CONTROL SCHEMATIC	SCHED D
HEAT TRACE		
E1	HEAT TRACE PLAN	SCHED B
E2	HEAT TRACE CONTROL SCHEMATIC & HEAT TRACE LOAD CENTER DETAILS	SCHED B
E3	HEAT TRACE LOAD CENTER SCHEDULE & POWER ONE-LINE	SCHED B
E4	HEAT TRACE DETAILS	SCHED B

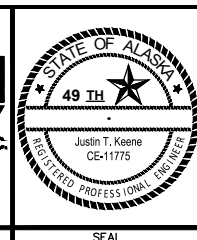
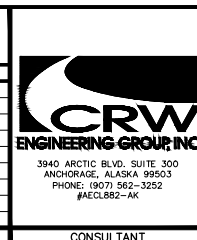
WORK SCHEDULES	
A	ROADWAY IMPROVEMENTS
B	DRAINAGE IMPROVEMENTS
C	SEWER IMPROVEMENTS
D	ILLUMINATION & SIGNALIZATION IMPROVEMENTS

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Sheet Index.dwg

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				
BASIS OF THIS DATUM GAAB 1972 ADJUST							



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	ALL	
SHEET INDEX			
SCALE	HOR. N/A VER. N/A	GRID SW1538, SW1638 DATE JUNE 2023	STATUS 95% SHEET
		G2 of G5	

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY OF ANCHORAGE (MOA) STANDARD SPECIFICATIONS, DATED 2015, (HEREINAFTER REFERRED TO AS MASS), THE LATEST EDITION OF THE ANCHORAGE WATER AND WASTEWATER UTILITY (AWWU) DESIGN AND CONSTRUCTION PRACTICES MANUAL (DCPM) AND THE SPECIAL PROVISIONS.
- CAUTION!!! THE LOCATION OF THE EXISTING FEATURES AND UTILITIES SHOWN IN THESE DRAWINGS (PLAN & PROFILES) ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL FEATURES AND UTILITIES ENCOUNTERED AND RECORD THEIR LOCATION ON THE CONTRACT RECORD DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY OR AS NOTED ON THE DRAWINGS. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS WHICH ARE NOT SPECIFICALLY INDICATED AS BEING PROVIDED BY THE OWNER IN THE SPECIAL PROVISIONS. CONTRACTOR SHALL ADHERE TO ALL PERMIT REQUIREMENTS. THE PERMITS SHALL BE MAINTAINED ON THE PROJECT SITE. COPIES SHALL BE GIVEN TO THE ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ALL WORK IN CLOSE PROXIMITY TO EXISTING OVERHEAD/UNDERGROUND TELEPHONE, CABLE, FIBER OPTIC, GAS, AND ELECTRIC UTILITIES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES AND GUIDELINES AND THE SHORING AND CLEARANCE REQUIREMENTS OF THE SERVING UTILITY. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- LIMITS OF ROADWAY EXCAVATION SHOWN ON THE DRAWINGS ARE APPROXIMATE. ACTUAL LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER DURING CONSTRUCTION OPERATIONS.
- GEOTECHNICAL (SOILS) INFORMATION IS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL WORK SHALL BE PERFORMED WITHIN PUBLIC RIGHT-OF-WAY, PUBLIC USE EASEMENT, SLOPE EASEMENT, TEMPORARY CONSTRUCTION EASEMENT, DRAINAGE EASEMENT, ELECTRIC EASEMENT, INTRAGOVERNMENTAL USE PERMIT OR, TEMPORARY CONSTRUCTION PERMIT AREAS. THE EASEMENTS AND TEMPORARY CONSTRUCTION PERMITS ACQUIRED FOR THIS PROJECT MAY HAVE RESTRICTIONS. SEE CONTRACT DOCUMENTS FOR RESTRICTIONS.
- CONTRACTOR SHALL RESTORE DISTURBED PROPERTY, INCLUDING DRAINAGE SWALES, TO PRE-CONSTRUCTION CONDITIONS, UNLESS OTHERWISE DIRECTED BY ENGINEER. PAYMENT FOR RESTORING DISTURBED PROPERTY OUTSIDE OF IDENTIFIED CONSTRUCTION LIMITS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE. DISTURBED AREAS NOT BEING PAVED OR FINISHED WITH GRAVEL/CONCRETE SHALL BE TOPSOILED AND SEEDED WITH SCHEDULE A SEEDING MIX UNLESS OTHERWISE NOTED.
- PROJECT CLEARING AND GRUBBING LIMITS SHALL COINCIDE WITH THE LIMITS OF DISTURBANCE AS SHOWN ON THE DEMOLITION (B) SHEETS. CONTRACTOR SHALL OBTAIN APPROVAL OF THE CLEARING AND GRUBBING LIMITS BY THE ENGINEER PRIOR TO CLEARING AND GRUBBING, SEE SPECIFICATIONS FOR MORE INFORMATION. CONTRACTOR SHALL CLEAR TREE BRANCHES/LIMBS PER TREE CLEARING DETAILS SHOWN ON SHEET D5.
- SLOPE LIMITS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE ACTUAL SLOPE LIMITS BASED ON PRECONSTRUCTION SURVEY DATA.
- IN PREPARATION FOR AND IMMEDIATELY PRIOR TO PAVING, THE CONTRACTOR SHALL SAW CUT AND REMOVE ADDITIONAL PAVEMENT BEYOND THE INITIAL SAW CUT, A MINIMUM OF 1-FOOT ONTO UNDISTURBED ASPHALT. AT TRANSVERSE JOINTS FINAL SAW CUT LINE SHALL BE SKEWED 15° - 25° PER DETAIL 2, SHEET D4. ASPHALT TACK COAT SHALL BE APPLIED BY CONTRACTOR TO THE SAWN FACE OF ASPHALT PRIOR TO BEGINNING PAVING.
- PAVEMENT CROSS SLOPE ON SIDE STREETS SHALL VARY AT INTERSECTIONS TO PROVIDE POSITIVE DRAINAGE. SEE ROADWAY (R) SHEETS FOR INTERSECTION LAYOUTS.
- ALL WORK AND MATERIALS REQUIRED FOR REMOVING ANY LITTER OR DEBRIS CREATED BY CONSTRUCTION OPERATIONS WITHIN THE PROJECT LIMITS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE.
- ALL ORGANIC MATERIAL SHALL BE REMOVED FROM THE SUBGRADE TO A DEPTH TO BE DETERMINED BY THE ENGINEER. NO ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL SHALL BE UTILIZED FOR BACKFILL.
- THE CONTRACTOR SHALL SUBMIT RECORD SURVEY NOTES WITH THE RECORD DRAWINGS.
- ROADWAY/DRIVEWAY EXCAVATION SHALL BE MEASURED BY EXCAVATED CROSS-SECTION AND SHALL BE LIMITED TO THE PAY LIMITS IDENTIFIED IN THE TYPICAL CROSS SECTIONS SHOWN ON THE C SHEETS, UNLESS ADDITIONAL EXCAVATION IS DIRECTED BY THE ENGINEER IN WRITING.
- THE PROJECT ROADWAY CENTERLINE STATIONING IS RIGHT-OF-WAY CENTERLINE PER SURVEY

- CONTROL DRAWINGS UNLESS OTHERWISE NOTED. SEE SURVEY CONTROL DRAWINGS FOR HORIZONTAL AND VERTICAL CONTROL.
- ALL CURB LOCATIONS, RADIUS MEASUREMENTS AND ELEVATIONS ARE TO THE TOP BACK OF CURB (TBC) UNLESS OTHERWISE NOTED.
  - MAINTAIN A MINIMUM OF TEN FEET (10') HORIZONTAL AND EIGHTEEN INCHES (18") SEPARATION BETWEEN THE OUTSIDE OF PIPES FOR WATER MAINS AND SERVICES TO SANITARY SEWER OR STORM DRAIN. INSTALL INSULATION BOARD (R-18) BETWEEN THE PIPES WHEN THE VERTICAL SEPARATION IS BETWEEN EIGHTEEN INCHES (18") AND THIRTY-SIX INCHES (36"). INSULATION MAY BE OMITTED WHEN THE VERTICAL SEPARATION IS GREATER THAN THIRTY-SIX INCHES (36"). WHERE STORM OR SEWER CROSS A WATER LINE, THE JOINTS OF ALL PIPES ARE TO HAVE A MINIMUM SEPARATION OF NINE FEET (9') FROM THE CROSSING.
  - EXISTING WATER AND SEWER SERVICE LINES ARE NOT SHOWN IN THE PROFILES UNLESS SPECIFICALLY CALLED OUT.
  - ALL CURB AND GUTTER INCLUDING MEDIAN CURB SHALL BE PAID AS "P.C.C. CURB AND GUTTER (ALL TYPES)".
  - EXISTING SHALLOW (CABLE, ELECTRIC, TELEPHONE, GAS, FIBER OPTIC, ETC) UTILITIES AND RELOCATED PROPOSED SHALLOW UTILITIES ARE NOT SHOWN IN THE TYPICAL CROSS SECTIONS. EXISTING SHALLOW UTILITY CROSSINGS ARE SHOWN AT AN ASSUMED ELEVATION IN THE PROFILES UNLESS OTHERWISE NOTED. RELOCATED PROPOSED SHALLOW UTILITIES ARE NOT SHOWN IN THE PLANS OR PROFILES. RELOCATED PROPOSED SHALLOW UTILITIES ARE TO BE RELOCATED BY OTHERS AS SHOWN IN THE UTILITY RELOCATION PLANS, SEE CONTRACT DOCUMENTS FOR MORE INFORMATION.
  - THE MATCH EXISTING ELEVATIONS AS SHOWN IN THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL ADJUST PROPOSED GRADES AS REQUIRED TO MATCH INTO EXISTING ELEVATIONS PER THE DIRECTION OF THE ENGINEER.
  - ALL FILL, USABLE EXCAVATION, AND TRENCH BACKFILL SHALL BE COMPACTED TO NINETY-FIVE PERCENT (95%) OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT, PER MASS DIVISION 20 EARTHWORK, BASED ON MODIFIED PROCTOR TEST VALUES. ALL FILLS SHALL BE PLACED IN LIFTS NOT EXCEEDING 12-INCHES.
  - FIRE HYDRANTS SHALL BE ADJUSTED TO FINAL GRADE BY AWWU O&M DIVISION ON REIMBURSABLE BASIS. THE CONTRACTOR IS TO PROVIDE WRITTEN NOTICE TO THE ENGINEER A MINIMUM OF SEVEN (7) DAYS PRIOR TO THE NEED FOR FINAL FIRE HYDRANT ADJUSTMENT. THE WRITTEN NOTICE IS TO CONTAIN, AT A MINIMUM, THE MANUFACTURER AND MODEL NUMBER OF THE HYDRANT AND VERTICAL ADJUSTMENT NEEDED IN SIX (6") INCREMENTS.
  - THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING STORM DRAIN AND SEWER SYSTEM TO BE REPLACED/EXTENDED IS IN A DIFFERENT HORIZONTAL AND VERTICAL LOCATION OF THE PROPOSED STORM DRAIN AND SEWER SYSTEM TO BE INSTALLED IN LOCATIONS AS SHOWN ON THE STORM DRAIN (SD) AND SEWER (SS) SHEETS.
  - UNLESS OTHERWISE NOTED ALL VALVE BOXES, KEYBOXES, CLEANOUTS, CATCH BASINS, AND MANHOLES WITHIN THE CONSTRUCTION DISTURBANCE LIMITS SHALL BE ADJUSTED RELATIVE TO FINISH GRADE PER MASS, THESE DRAWINGS OR THE SPECIAL PROVISIONS.
  - IN CASE OF CONFLICT BETWEEN STATIONING AND DIMENSIONED LOCATION OF PIPE OR FITTINGS, USE DIMENSIONED LOCATIONS.
  - 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.
  - WATER RESULTING FROM CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS OR CREEKS UNLESS PERMITS ARE OBTAINED BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO, THOSE REQUIRED BY THE MOA STORM WATER PLAN REVIEW OFFICE. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM AN EXCAVATION ONTO ROADWAYS. CONTRACTOR SHALL PROVIDE A DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF NECESSARY PERMITS AND APPROVALS TO THE MOA RIGHT OF WAY PERMIT OFFICE.

CALL BEFORE YOU DIG!!!	
Alaska Digline, Inc.	Statewide . . . . . 811
Alaska Railroad . . . . .	265-2520
Military Fuel Lines . . . . .	552-3760
State Storm Drains . . . . .	333-2411

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CAD\ 2019\01 Working Set\01 Civil\10152.00 General Notes.dwg

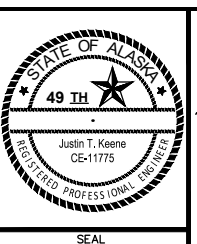
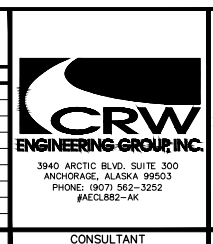
**RECORD DRAWING**

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK										
CONSTRUCTION RECORD										
VERTICAL DATUM										
REVISIONS										
CONSULTANT										
SEAL										



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	ALL	
GENERAL NOTES			
SCALE	HOR. N/A VER. N/A	GRID SW538, SW638 DATE JUNE 2023	STATUS 95% SHEET 63 of 65

**PLAN LEGEND**

PROPERTY		
EXISTING	PROPOSED	
---	---	CENTERLINE
---	---	EASEMENT LINE
---	---	PROPERTY LINE
---	---	ROW LINE
---	---	SECTION LINE
---	---	TEMPORARY CONSTRUCTION EASEMENT/PERMIT
UTILITY		
EXISTING	PROPOSED	
---	---	ABANDONED UTILITY
---	---	CABLE TV LINE (UNDERGROUND)
---	---	CABLE TV LINE (OVERHEAD)
---	---	CABLE TV LINE & FIBER OPTIC (OVERHEAD)
---	---	CABLE TV PEDESTAL (UNDERGROUND)
---	---	CONTROLLER OR ATR CABINET
---	---	CULVERT
---	---	ELECTRIC LINE (UNDERGROUND)
---	---	ELECTRIC LINE (OVERHEAD)
---	---	ELECTRIC & CABLE TV LINE (OVERHEAD)
---	---	ELECTRIC & TELEPHONE LINE (OVERHEAD)
---	---	ELECTRIC, CABLE TV & FIBER OPTIC (OVERHEAD)
---	---	ELECTRIC JB TYPE IA
---	---	ELECTRIC JB TYPE II
---	---	ELECTRIC JB TYPE III
---	---	ELECTRIC LOAD CENTER
---	---	ELECTRIC MANHOLE/JB
---	---	ELECTRIC METER
---	---	ELECTRIC PEDESTAL UNDERGROUND
---	---	ELECTRIC SIGN
---	---	ELECTRIC SWITCH CABINET
---	---	ELECTRIC TRANSFORMER
---	---	ELECTRIC VAULT
---	---	FIBER OPTIC LINE (UNDERGROUND)
---	---	FIBER OPTIC VAULT
---	---	FLOOR DRAIN
---	---	FOOTING DRAIN SERVICE LINE
---	---	FOOTING DRAIN SERVICE CONNECTION
---	---	GAS LINE
---	---	GAS METER
---	---	GAS VALVE
---	---	GUY POLE
---	---	GUY ANCHOR
---	---	JOINT USE ELECTRIC & TELEPHONE POLE
---	---	LIGHTED BOLLARD
---	---	LUMINAIRE
---	---	LUMINAIRE (PEDESTRIAN)
---	---	REMOVE PIPE
---	---	SANITARY SEWER LINE
---	---	SANITARY SEWER MANHOLE
---	---	SANITARY SEWER SERVICE CONNECTION
---	---	SANITARY SEWER CLEANOUT
---	---	STORM DRAIN LINE
---	---	SUBDRAIN LINE
---	---	STORM DRAIN CATCH BASIN
---	---	STORM DRAIN CATCH BASIN MANHOLE OR MH
---	---	STORM DRAIN MANHOLE (TYPE VARIES)
---	---	STUBOUT CAPPED OR PLUGGED END

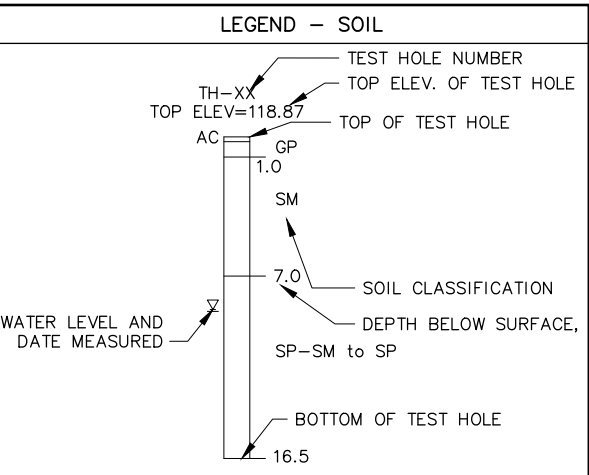
UTILITY		
EXISTING	PROPOSED	
---	---	TELEPHONE & CABLE TV LINE (OVERHEAD)
---	---	TELEPHONE LINE (OVERHEAD)
---	---	TELEPHONE LINE (UNDERGROUND)
---	---	TELEPHONE MANHOLE
---	---	TELEPHONE PEDESTAL
---	---	TRAFFIC DETECTOR LOOPS
---	---	TRAFFIC LINE (UNDERGROUND)
---	---	TRAFFIC SIGNAL POLE
---	---	TRAFFIC SIGNAL POLE/LUMINAIRE
---	---	UTILITY POLE
---	---	WATER LINE
---	---	WATER FIRE HYDRANT
---	---	WATER KEY BOX
---	---	WATERTIGHT SANITARY SEWER MANHOLE
---	---	WATER VALVE
---	---	WATER WELL
ROADWAY		
EXISTING	PROPOSED	
---	---	APPROX SLOPE LIMITS (CUT)
---	---	APPROX SLOPE LIMITS (FILL)
---	---	COLOR CONCRETE (RED, THICKNESS VARIES, IMPRINTED)
---	---	CURB & GUTTER
---	---	EDGE OF PAVEMENT
---	---	EDGE OF SIDEWALK/CONCRETE
---	---	GUARDRAIL, BARRIER RAIL
---	---	INTERLOCKING CONCRETE PAVERS
---	---	RETAINING WALL (TYPE VARIES)
---	---	STREET SIGN
---	---	UNPAVED (GRAVEL) EDGE OF ROAD/DWY
MISCELLANEOUS		
EXISTING	PROPOSED	
---	---	BLUFF AREA/ EARTHWORK SLOPE
---	---	BOLLARD/POST (TYPE VARIES)
---	---	BOULDER
---	---	DECK
---	---	DRAINAGE ARROW (DIRECTION OF FLOW)
---	---	DRAINAGE SWALE
---	---	FENCE (TYPE VARIES)
---	---	FENCE (DECORATIVE)
---	---	HOUSE OR STRUCTURE
---	---	LANDSCAPING ROCK
---	---	MAILBOX (INDIVIDUAL)
---	---	MAILBOX (CLUSTER)
---	---	NEWS BOX
---	---	PARKING METER
---	---	PARCEL NUMBER WITH PARCEL ADDRESS BELOW
---	---	STREAMBANK RECONSTRUCTION (FULL)
---	---	STREAMBANK RECONSTRUCTION (LIMITED)
---	---	STREAM/EDGE OF WATERWAY
---	---	TREE/SHRUB (CONIFEROUS)
---	---	TREE/SHRUB (DECIDUOUS)
---	---	TEST BORING OR TEST HOLE
---	---	VEGETATION & BRUSH/TREE LINE

**PROFILE LEGEND**

SYMBOL		
EXISTING	PROPOSED	
---	---	APPROXIMATE EXCAVATION LIMITS
---	---	GROUND OVER PIPE
---	0.00%	GRADE AT CENTER LINE
---	---	GRADE AT LEFT ROW
---	---	GRADE AT RIGHT ROW
---	---	PIPE (PROFILE)
---	---	PIPE (SECTION)
---	---	STORM DRAIN CATCH BASIN/OGS
---	---	STORM DRAIN/SANITARY SEWER MANHOLE & PIPE
---	---	UTILITY CROSSING
---	---	UTILITY CROSSING (WATER/SEWER/STORM DRAIN)
---	---	UTILITY CROSSING (CABLE)
---	---	UTILITY CROSSING (ELECTRIC)
---	---	UTILITY CROSSING (FIBER OPTIC)
---	---	UTILITY CROSSING (GAS)
---	---	UTILITY CROSSING (TELEPHONE)
---	---	INSULATION
---	---	RIPRAP

**COMMON ABBREVIATIONS (ABBR.)**

ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
AC	ASPHALT CONCRETE	MSL	MEAN SEA LEVEL
	ASBESTOS CEMENT	N	NORTH
AD	ALGEBRAIC DIFFERENCE	N/A	NOT APPLICABLE
ADEC	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION	N.I.C.	NOT IN CONTRACT
		NTS	NOT TO SCALE
AFD	ANCHORAGE FIRE DEPARTMENT	NWT	NO WATER TABLE
AWG	AMERICAN WIRE GAUGE	OC	ON CENTER
AWWA	AMERICAN WATER WORKS ASSOCIATION	OCEW	ON CENTER EACH WAY
APPROX/ APPX	APPROXIMATE	OD	OUTSIDE DIAMETER
		OGS	OIL AND GRIT SEPARATOR
BM	BENCH MARK	OH	OVERHEAD
	BEGINNING OF PROJECT	PC	POINT OF CURVATURE
BOP	BOTTOM OF PIPE (OUTSIDE)		
		PCC	PORTLAND CONCRETE CEMENT
BOS	BOTTOM OF STEEL		POINT OF CONTINUOUS CURVATURE
C&G	CURB AND GUTTER	PCMP	PRECOATED CORRUGATED METAL PIPE
CB	CATCH BASIN		
		PCPEP	PERFORATED CORRUGATED POLYETHYLENE PIPE
CBMH	CATCH BASIN MANHOLE		
CI	CAST IRON	PI	POINT OF INTERSECTION
C/L, CL	CENTERLINE	PL, P/L	PROPERTY LINE
CMP	CORRUGATED METAL PIPE	POB	POINT OF BEARING
CO	CLEANOUT	PSL	POSTED SPEED LIMIT
CONST	CONSTRUCTION	PT	POINT OF TANGENCY
CPEP	CORRUGATED POLYETHYLENE PIPE	PUE	PUBLIC USE EASEMENT
CY	CUBIC YARD	PVC	POINT OF VERTICAL CURVATURE
DIA	DIAMETER	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	PVI	POINT OF VERTICAL INTERSECTION
DW	DETECTABLE WARNING	PVT	POINT OF VERTICAL TANGENT
DWY	DRIVEWAY	REINF	REINFORCEMENT
E	EAST	ROW, R/W	RIGHT OF WAY
ELEC	ELECTRIC / ELECTRICAL	RJB	RESTRAINED JOINT INTEGRAL BELL
ELEV, EL	ELEVATION	RT, R	RIGHT
EOP	END OF PROJECT / EDGE OF PAVEMENT	S	SOUTH
F&I	FURNISH AND INSTALL	S/W	SIDEWALK
FF	FINISHED FLOOR	SS	STAINLESS STEEL
FG	FINISHED GRADE	SF	SQUARE FOOT
FH	FIRE HYDRANT	SI	STREET INTERSECTION
GA	GAUGE	ST	STREET
GALV	GALVANIZED	STA	STATION / STATIONING
GB	GRADE BREAK	STD	STANDARD
GV	GATE VALVE	STRUCT	STRUCTURE
H/HORIZ	HORIZONTAL	TBC	TOP BACK OF CURB
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE	TBM	TEMPORARY BENCH MARK
JB	JUNCTION BOX		
		TCP	TEMPORARY CONSTRUCTION PERMIT
LC	LOAD CENTER		TRAFFIC CONTROL PLAN
IAW	IN ACCORDANCE WITH	TELE	TELEPHONE
ID	INSIDE DIAMETER	TH	TEST HOLE
IE/INV	INVERT ELEVATION (INSIDE BTM OF PIPE)	TOP	TOP OF PIPE
INTX	INTERSECTION	TOS	TOP OF STEEL
INV	INVERT	TW	TOP OF WALL
KB	KEYBOX	TYP	TYPICAL
LF	LINEAR FOOT	UG	UNDERGROUND
LT, L	LEFT	UON	UNLESS OTHERWISE NOTED
LUM	LUMINAIRE	UTIL	UTILITY
MAX	MAXIMUM	VERT	VERTICAL
ME	MATCH EXISTING	VB	VALVE BOX
MH	MANHOLE	VC	VERTICAL CURVE
MIN	MINIMUM	W	WEST
MON	MONUMENT	W/	WITH



- NOTES:
- STANDARD LEGEND AND ABBREVIATIONS SHOWN. NOT ALL LEGEND ITEMS AND ABBREVIATIONS ARE PART OF THIS CONTRACT.
  - SOIL CLASSIFICATION IS BASED UPON UNIFIED SOIL CLASSIFICATION (ASTM D 2487-00), SEE GEOTECHNICAL SOIL BORING LOGS FOR MORE INFORMATION.
  - SEE LEGEND ON SHEET V1 FOR SURVEY CONTROL SYMBOLS. ADDITIONAL LEGEND AND ABBREVIATION ITEMS NOT SHOWN HERE ARE PROVIDED ON SPECIFIC SHEETS THROUGHOUT THE DRAWINGS.

File: s:\data\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Legend & Abbreviations.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.

CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

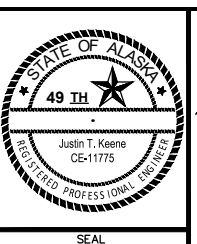
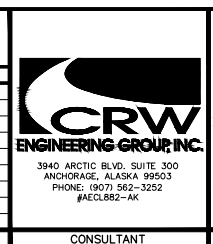
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BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72				

PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL



**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

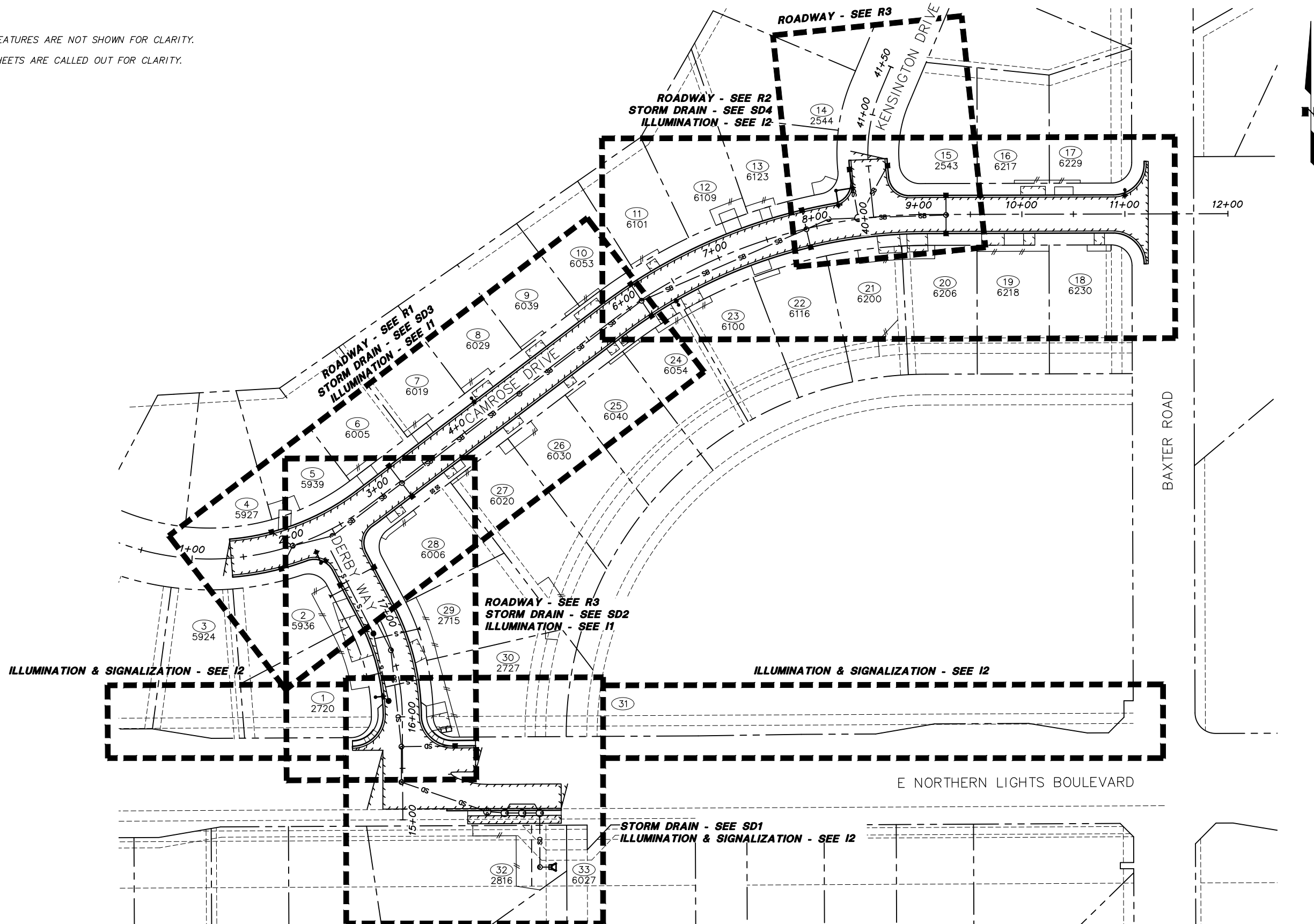
20-27 CAMROSE DRIVE ALL  
STORM DRAINAGE PROJECT

**LEGEND & ABBREVIATIONS**

SCALE HOR. N/A VER. N/A  
GRD SW538, SW638  
DATE JUNE 2023 STATUS 95% SHEET G4 of G5

**NOTES:**

- EXISTING FEATURES ARE NOT SHOWN FOR CLARITY.
- NOT ALL SHEETS ARE CALLED OUT FOR CLARITY.



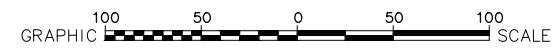
File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Key Map.dwg

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

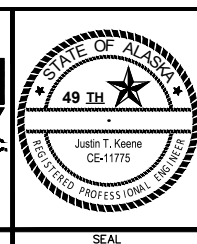
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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



**CRW ENGINEERING GROUP, INC.**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC1882-AK



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL  
**KEY MAP**

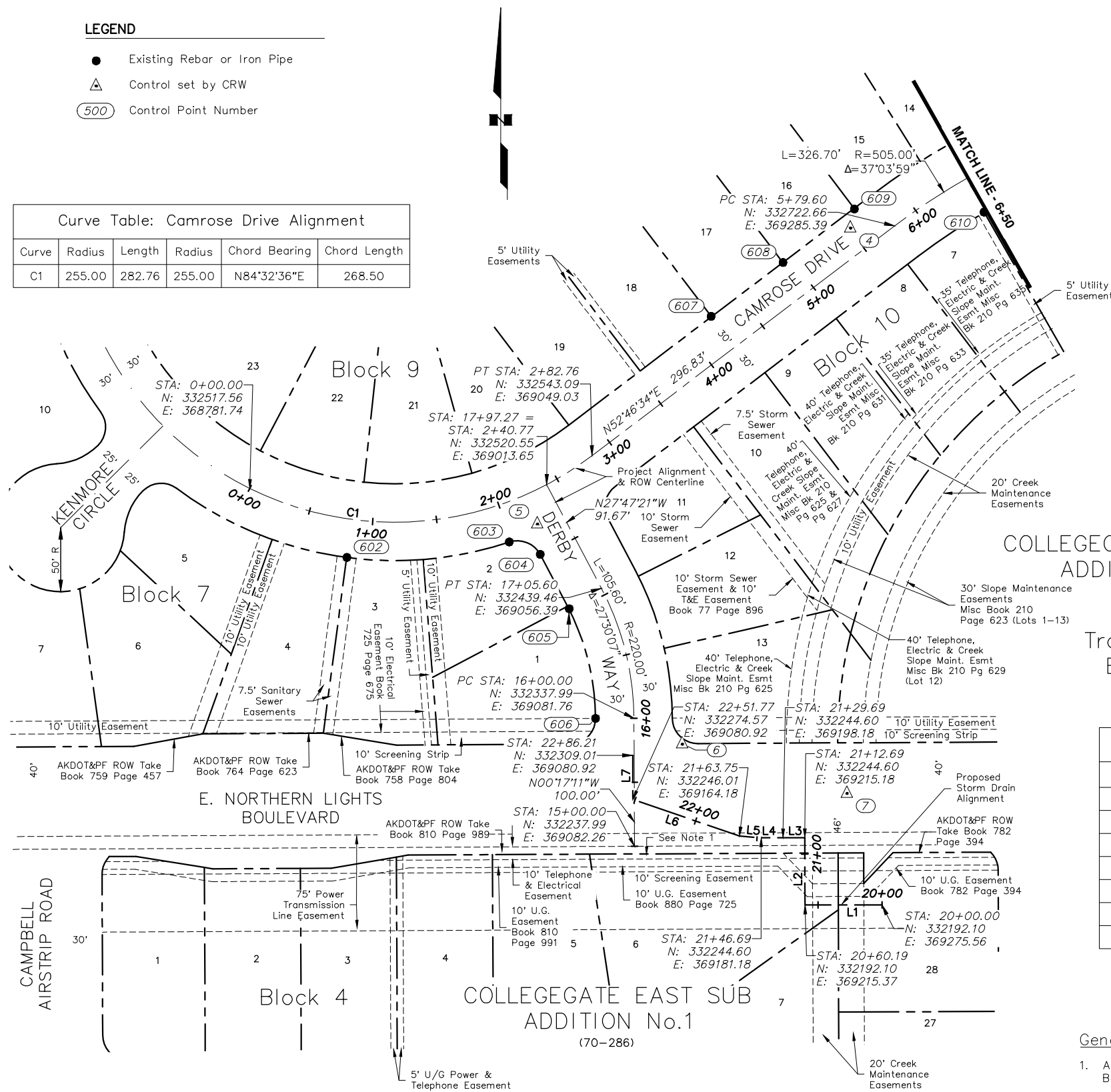
SCALE: HOR. 1"=50'  
 VER. N/A

GRID SW1538, SW1638  
 DATE JUNE 2023 STATUS 95% SHEET G5 of G5

**LEGEND**

- Existing Rebar or Iron Pipe
- △ Control set by CRW
- (500) Control Point Number

Curve Table: Camrose Drive Alignment					
Curve	Radius	Length	Chord Bearing	Chord Length	
C1	255.00	282.76	255.00	N84°32'36"E	268.50



Horizontal Control – Derby Way Alignment					
Point	Station	Offset	Northing	Easting	Description
6	15+79.62	37.74 RT	332317.80	369119.60	Set Rebar with 2" Aluminum Cap 0.3' below grade
7	15+40.44	166.21 RT	332279.26	369248.27	Set Rebar with 2" Aluminum Cap 0.2' below grade
604	17+51.41	29.88 LT	332466.06	369008.60	Found 5/8" Rebar flush with grade
605	17+02.88	29.66 LT	332423.54	369031.24	Found 1-1/2" Iron Pipe flush with grade
606	16+00.06	29.97 LT	332337.89	369051.80	Found 5/8" Rebar flush with grade

Horizontal Control – Camrose Drive Alignment					
Point	Station	Offset	Northing	Easting	Description
4	5+51.17	19.35 LT	332720.86	369251.05	Set Rebar with 2" Aluminum Cap 0.2' below grade
5	2+21.89	24.68 RT	332489.75	369006.49	Set Rebar with 2" Aluminum Cap 0.1' below grade
602	0+83.73	29.97 RT	332463.61	368857.58	Found 5/8" Rebar 0.7' below grade
603	1+98.72	29.93 RT	332475.69	368984.42	Found 5/8" Rebar 0.1' below grade
607	4+22.66	30.37 LT	332651.91	369142.05	Found 5/8" Rebar flush with grade
608	4+92.85	29.95 LT	332694.03	369198.20	Found 5/8" Rebar 0.3' below grade
609	5+62.56	29.47 LT	332735.82	369254.00	Found bent 5/8" Rebar flush with grade
610	6+45.77	29.60 RT	332733.42	369355.22	Found bent 5/8" Rebar 0.1' below grade

**COLLEGE EAST SUB ADDITION No.3 (72-49)**

**Tract B**

Proposed Storm Drain Alignment		
Line No.	Direction	Length
L1	N90° 00' 00"W	60.19
L2	N00° 12' 30"W	52.50
L3	N90° 00' 00"W	17.00
L4	S89° 59' 32"W	17.00
L5	N85° 16' 11"W	17.06
L6	N71° 03' 55"W	88.02
L7	N00° 00' 00"E	34.44

**Horizontal Control**

**Coordinate System:**  
This project is located entirely within the Anchorage Bowl 2000 adjustment, a local surface grid coordinate system expressed in U.S. Survey feet units developed by the Alaska Department of Transportation.

**Basis of Coordinates:**  
The Basis of Coordinates is NGS Station O'Malley, located near the intersection of the New Seward Highway and O'Malley Road. Said station has Anchorage Bowl 2000 coordinates of 303939.2310 N, 353362.5446 E. U.S. Survey Feet.

**Basis of Bearings:**  
The Basis of Bearings is a local plane bearing between NGS Station O'Malley and NGS Station Loop 2 USE RM 3 1964. NGS Station Loop 2 USE RM 3 1964 bears N 01°43'26.4" E a distance of 49488.4476 feet from NGS Station O'Malley. NGS Station Loop 2 USE RM 3 1964 has Anchorage Bowl 2000 coordinates of 353405.2778 N, 354851.3982 E. U.S. Survey Feet.

**Translation Parameters:**  
To convert the local coordinates to NAD83 (92) State Plane coordinates expressed in U.S. Survey Feet, translate using +2,296,868.6878 N U.S. Survey Feet, +1,312,517.4904 E U.S. Survey Feet, and scale using 0.9998910192.

**Vertical Control**

Vertical control is based on the MOA Benchmark GAAB 100, Elevation = 296.56 feet (GAAB), a 2-1/2" brass cap set vertically in the north face of the north wing of Susitna Elementary School, 9.5 feet east of the northwest corner, as described on page D-15 of the MOA Benchmark Book, and MOA Benchmark GAAB 15 ALT, Elevation 324.72 feet (GAAB), the head of a screw set vertically in the west end of a concrete block entryway wall at the southwest corner of Scenic Park Elementary School, as described in online MOA Benchmarks Map Gallery application.

**General Notes**

- AKDOT & PF Right-of-Way take as shown in Book 880 Page 721.

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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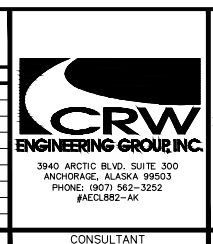
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DATA	DRAWN BY	CHECKED BY	DATE
BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES/FINAL	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773,	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
3785, 3795, 3796 & 3821	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72				



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT		
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	ALL
<b>SURVEY CONTROL</b>		
CAMROSE DRIVE - BOP TO STA 6+50 DERBY WAY - STA 15+00 TO STA 17+97 STORM DRAIN - STA 20+00 TO STA 22+86		
SCALE HOR. 1"=50' VER. N/A	GRID SW538, SW1638 DATE JUNE 2023 STATUS 95%	SHEET V1 of V5

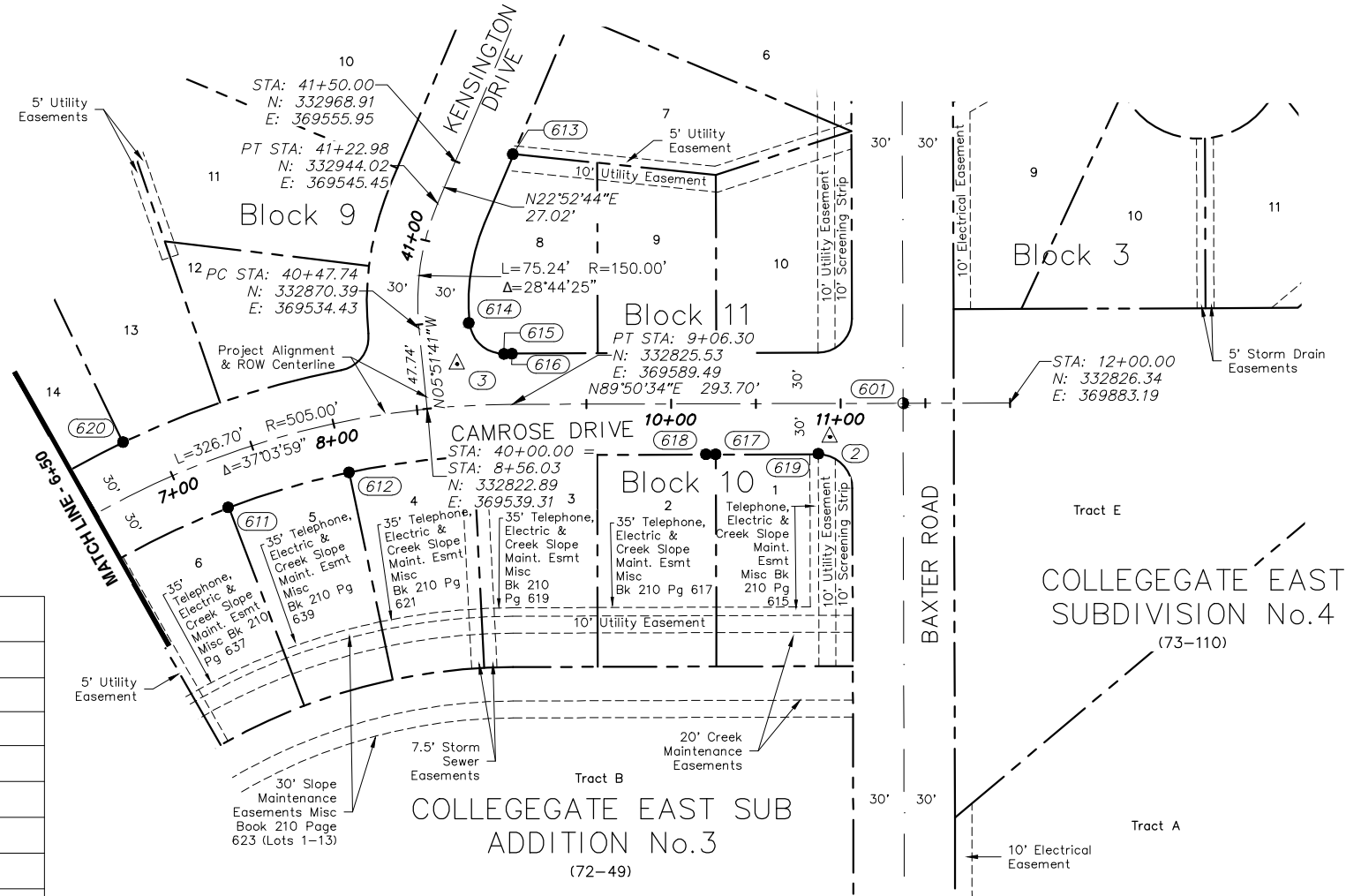
**LEGEND**

- Existing Aluminum Cap
- Existing Rebar or Iron Pipe
- △ Control set by CRW
- 500 Control Point Number



Horizontal Control – Kensington Drive Alignment					
Point	Station	Offset	Northing	Easting	Description
613	N/A	N/A	332973.10	369589.75	Found bent 5/8" Rebar 0.2' below grade
614	40+47.87	29.45 RT	332873.50	369563.72	Found 5/8" Rebar 0.3' below grade

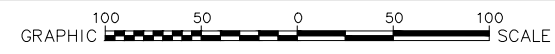
Horizontal Control – Camrose Drive Alignment					
Point	Station	Offset	Northing	Easting	Description
2	10+93.71	19.81 RT	332806.24	369776.96	Set Rebar with 2" Aluminum Cap 0.2' below grade
3	8+75.33	24.90 LT	332849.34	369556.96	Set Rebar with 2" Aluminum Cap 0.2' below grade
601	11+36.76	0.00 RT	332826.16	369819.95	Found 3-1/4" Aluminum Cap in Monument Case
611	7+23.98	29.74 RT	332764.70	369421.78	Found 5/8" Rebar 0.1' below grade
612	8+02.99	29.97 RT	332785.39	369493.10	Found 5/8" Rebar flush with grade
615	9+01.64	29.74 LT	332855.24	369584.47	Found 5/8" Rebar 0.4' below grade
616	9+06.10	29.79 LT	332855.33	369589.20	Found 5/8" Rebar 0.3' below grade
617	10+26.17	29.88 RT	332795.98	369709.44	Found 5/8" Rebar with 1-1/4" Orange Plastic Cap 0.2' below grade
618	10+20.34	29.80 RT	332796.05	369703.62	Found 5/8" Rebar 0.2' below grade
619	10+86.66	29.64 RT	332796.39	369769.94	Found 1/2" Rebar 0.1' below grade
620	6+82.19	30.17 LT	332803.23	369359.78	Found 5/8" Rebar 0.1' below grade



File: s:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\02 Survey\03 Survey Control\10152.00 Survey Control Sheet.dwg

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



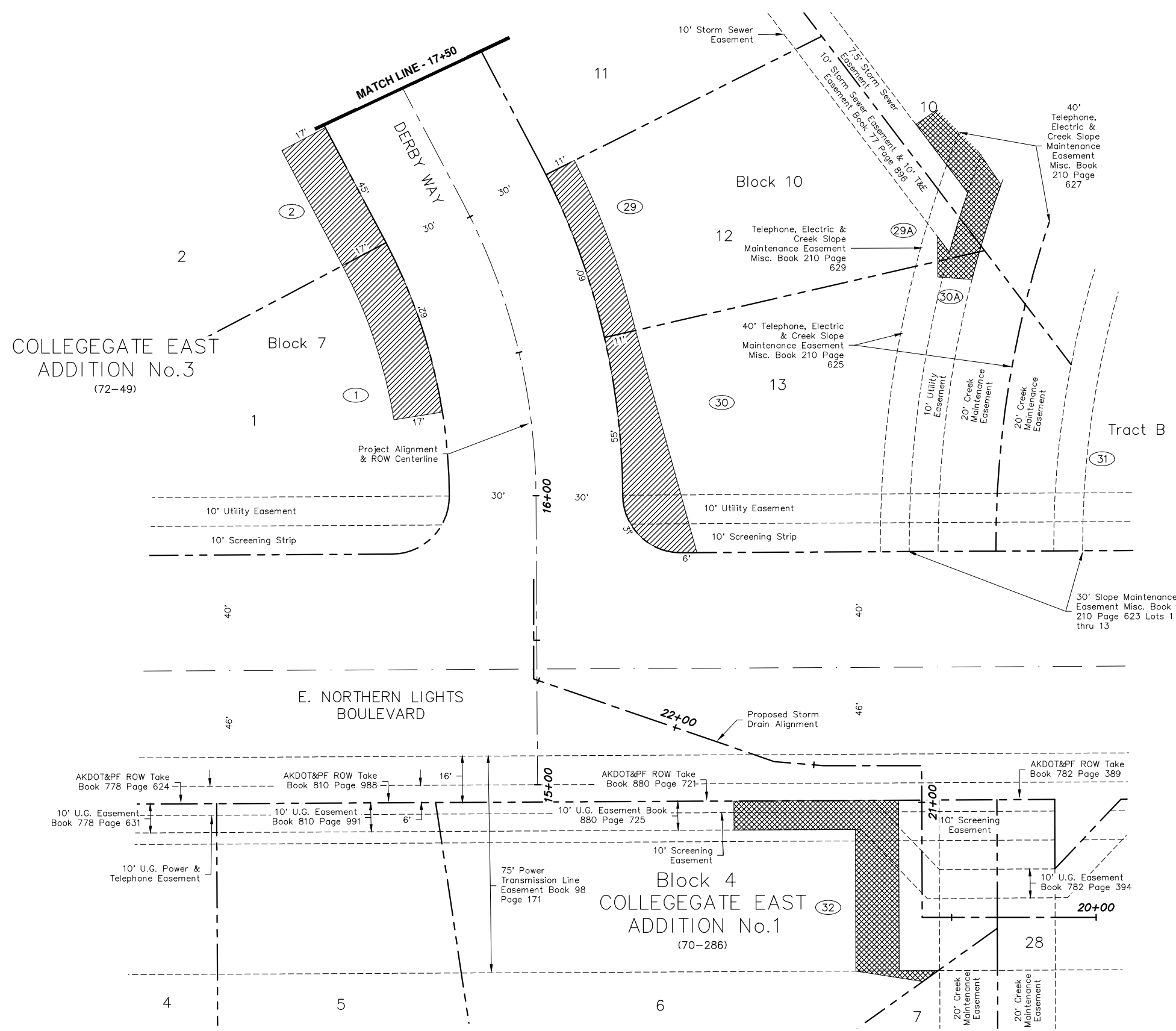
**CRW ENGINEERING GROUP INC.**  
 3940 ARCTIC BLVD. SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AECLE882-AK

STATE OF ALASKA  
 49 TH  
 Christopher J. Blitz  
 LS-111300  
 REGISTERED PROFESSIONAL LAND SURVEYOR

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL  
**SURVEY CONTROL**  
 CAMROSE DRIVE – STA 6+50 TO STA 12+00  
 KENSINGTON DRIVE – STA 40+00 TO STA 41+50  
 SCALE HOR. 1"=50' VER. N/A  
 GRID SWIS38, SW1638  
 DATE JUNE 2023 STATUS 95% SHEET V2 of V5

File: \\crweng.com\Projects\JobsData\10152.00 Camrose Drive Storm Drainage\00\_CADD\_2019\01 Working Set\02 ROW Base\10152.00 Temporary Easement & Permit Map.dwg



TEMPORARY EASEMENT AND PERMIT TABLE		
PARCEL	LEGAL DESCRIPTION	TYPE
1	Lot 1, Block 7, Collegiate East Addition No. 3, Plat No. 72-49	TCP
2	Lot 2, Block 7, Collegiate East Addition No. 3, Plat No. 72-49	TCP
29	Lot 12, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
29A	Lot 12, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCE
30A	Lot 13, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCE
30	Lot 13, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
32	Lot 6, Block 4, Collegiate East Addition No. 1, Plat No. 70-286	TCE

**LEGEND**

- (1A) Parcel Number
- Temporary Construction Permit (TCP)
- Temporary Construction Easement (TCE)

Temporary Construction Permits (TCP) and Intragovernmental Temporary Construction Permits (ITCP) are dimensioned on this sheet. Temporary Construction Easements (TCE) are dimensioned on a separate parcel map exhibit.

**Notes**

1. Temporary Construction Permit for Lots 11 & 10, Block 10 shown on sheet V4.



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1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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BY: \_\_\_\_\_

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COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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BY: \_\_\_\_\_

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PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72				
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MUNICIPAL/STATE	JM	JH								

PLAN CHECK CONSTRUCTION RECORD VERTICAL DATUM REVISIONS CONSULTANT SEAL



**CRW ENGINEERING GROUP INC.**

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STATE OF ALASKA  
49 TH  
Christopher J. Blitz  
LS-111300  
REGISTERED PROFESSIONAL LAND SURVEYOR

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL

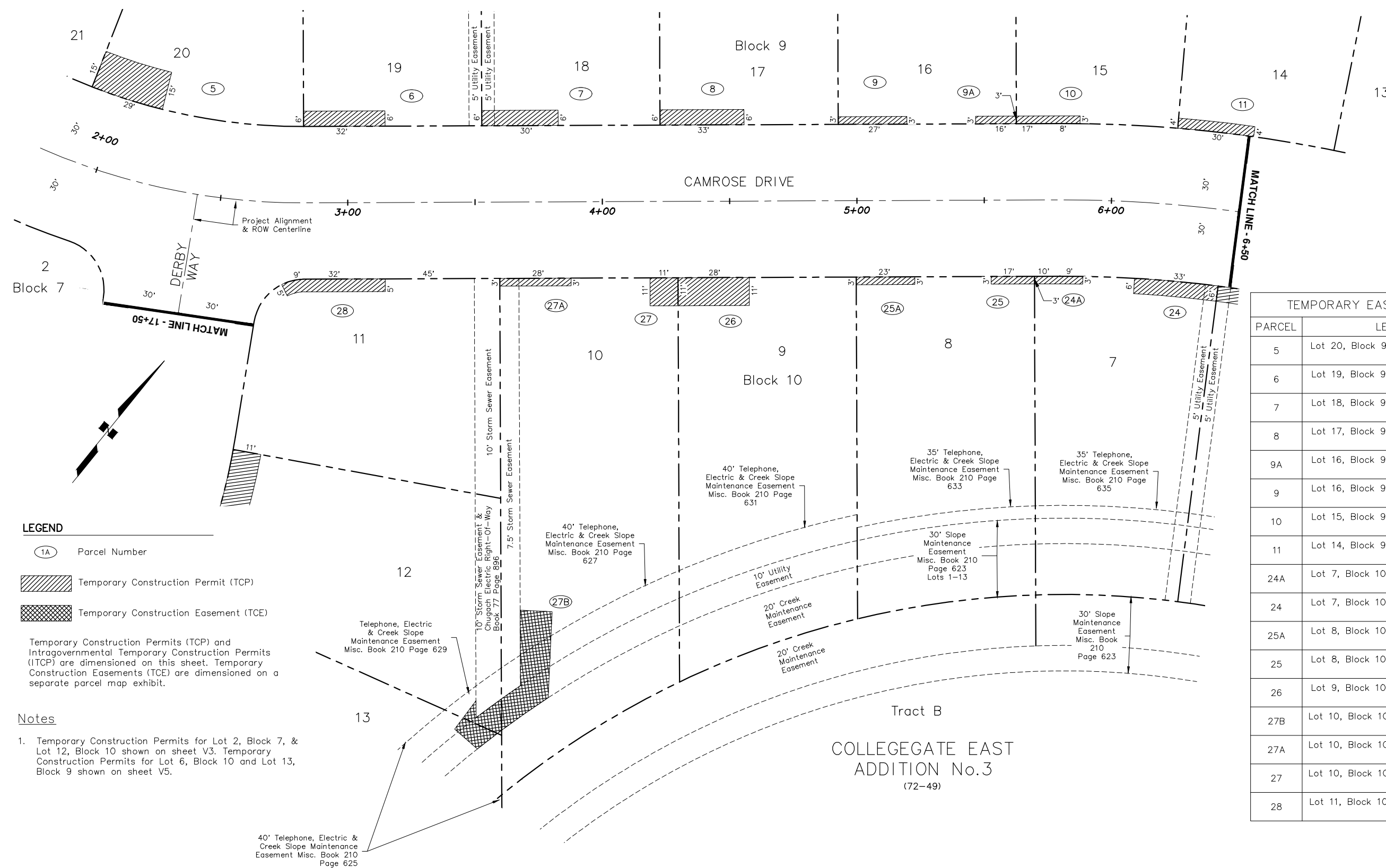
**TEMPORARY EASEMENT & PERMIT MAP**

DERBY WAY - STA 15+00 TO STA 17+50  
STORM DRAIN - STA 20+00 TO STA 22+86

SCALE HOR. 1"=20' VER. N/A GRID SW1538, SW1638 DATE JUNE 2023 STATUS 95% SHEET V3 of V5



File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\02 Survey\02 ROW Base\10152.00 Temporary Easement & Permit Map.dwg



- LEGEND**
- (1A) Parcel Number
  - Temporary Construction Permit (TCP)
  - Temporary Construction Easement (TCE)
- Temporary Construction Permits (TCP) and Intragovernmental Temporary Construction Permits (ITCP) are dimensioned on this sheet. Temporary Construction Easements (TCE) are dimensioned on a separate parcel map exhibit.

- Notes**
- Temporary Construction Permits for Lot 2, Block 7, & Lot 12, Block 10 shown on sheet V3. Temporary Construction Permits for Lot 6, Block 10 and Lot 13, Block 9 shown on sheet V5.

TEMPORARY EASEMENT AND PERMIT TABLE		
PARCEL	LEGAL DESCRIPTION	TYPE
5	Lot 20, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
6	Lot 19, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
7	Lot 18, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
8	Lot 17, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
9A	Lot 16, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
9	Lot 16, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
10	Lot 15, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
11	Lot 14, Block 9, Colleagate East Addition No. 3, Plat No. 72-49	TCP
24A	Lot 7, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
24	Lot 7, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
25A	Lot 8, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
25	Lot 8, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
26	Lot 9, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
27B	Lot 10, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCE
27A	Lot 10, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
27	Lot 10, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP
28	Lot 11, Block 10, Colleagate East Addition No. 3, Plat No. 72-49	TCP

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773,	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
3785, 3795, 3796 & 3821	GAAB 15	ALT as shown in online MOA	324.72'				
		Benchmarks Map Gallery Application					

PLAN CHECK CONSTRUCTION RECORD VERTICAL DATUM REVISIONS CONSULTANT SEAL

**CRW ENGINEERING GROUP INC.**  
 3940 ARCTIC BLVD. SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AECLE882-AK



**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT  
**TEMPORARY EASEMENT & PERMIT MAP**  
 CAMROSE DRIVE - BOP TO STA 6+50

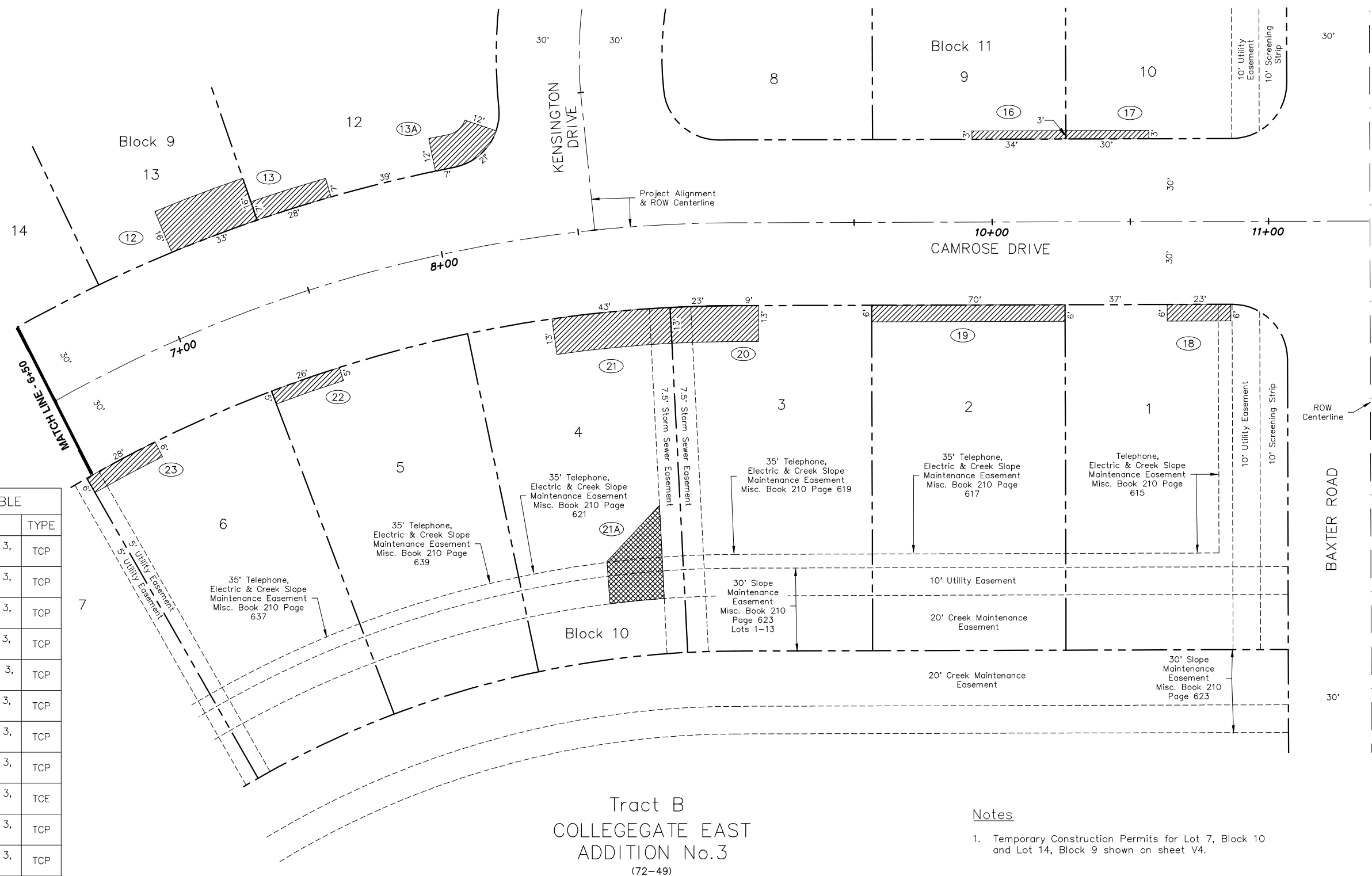
SCALE: HOR. 1"=20' VER. N/A  
 GRID: SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95% SHEET: V4 of V5



**LEGEND**

- (1A) Parcel Number
  - Temporary Construction Permit (TCP)
  - Temporary Construction Easement (TCE)
- Temporary Construction Permits (TCP) and Intragovernmental Temporary Construction Permits (ITCP) are dimensioned on this sheet. Temporary Construction Easements (TCE) are dimensioned on a separate parcel map exhibit.

PARCEL	LEGAL DESCRIPTION	TYPE
12	Lot 13, Block 9, Collegiate East Addition No. 3, Plat No. 72-49	TCP
13A	Lot 12, Block 9, Collegiate East Addition No. 3, Plat No. 72-49	TCP
13	Lot 12, Block 9, Collegiate East Addition No. 3, Plat No. 72-49	TCP
16	Lot 9, Block 11, Collegiate East Addition No. 3, Plat No. 72-49	TCP
17	Lot 10, Block 11, Collegiate East Addition No. 3, Plat No. 72-49	TCP
18	Lot 1, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
19	Lot 2, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
20	Lot 3, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
21A	Lot 4, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCE
21	Lot 4, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
22	Lot 5, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP
23	Lot 6, Block 10, Collegiate East Addition No. 3, Plat No. 72-49	TCP



Tract B  
COLLEGIATE EAST  
ADDITION No.3  
(72-49)

- Notes**
- Temporary Construction Permits for Lot 7, Block 10 and Lot 14, Block 9 shown on sheet V4.

File: \\crweng.com\Projects\JobsData\10152.00 Camrose Drive Storm Drainage\00 CAD\2018\01 Working Set\02 Survey\02 ROW Base\10152.00 Temporary Easement & Permit Map.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

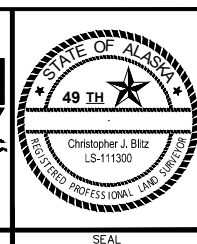
DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

PLAN CHECK CONSTRUCTION RECORD VERTICAL DATUM REVISIONS CONSULTANT SEAL

**CRW ENGINEERING GROUP INC.**  
 3940 ARCTIC BLVD. SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC0882-AK



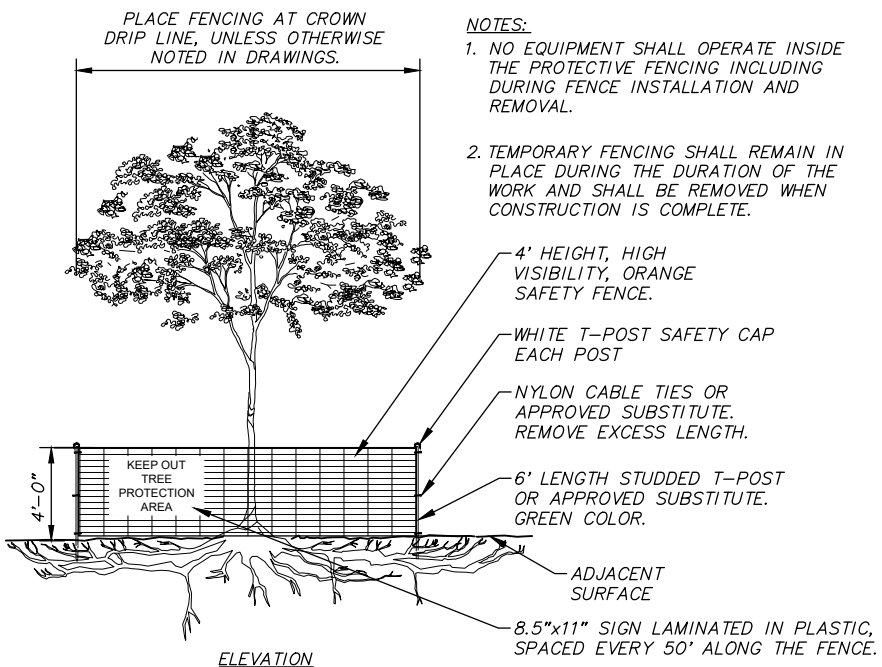
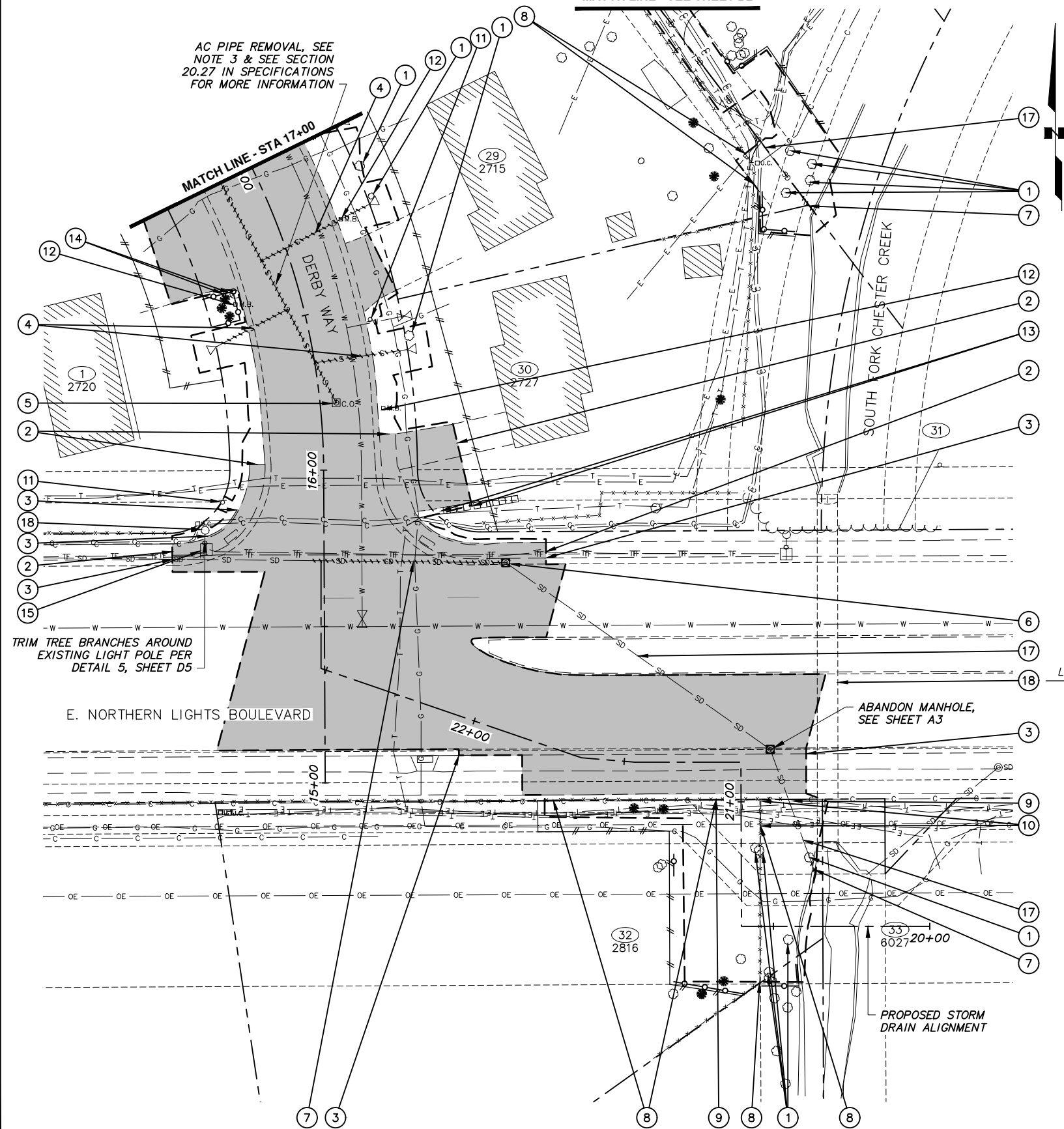
**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT  
**TEMPORARY EASEMENT & PERMIT MAP**  
 CAMROSE DRIVE - STA 6+50 TO STA 12+00

SCALE HOR. 1"=20' VER. N/A  
 GRID SW538, SW638  
 DATE JUNE 2023 STATUS 95% SHEET V5 of V5

MATCH LINE - SEE SHEET B2

AC PIPE REMOVAL, SEE NOTE 3 & SEE SECTION 20.27 IN SPECIFICATIONS FOR MORE INFORMATION



**TEMPORARY TREE PROTECTION FENCE DETAIL**

SCALE: NTS

**NOTES:**

1. SEE SUMMARY TABLE SHEETS B4-B7 FOR STATION AND OFFSET OF DEMOLITION ITEMS.
2. SEE ROADWAY IMPROVEMENTS (R) SHEETS FOR DRIVEWAY RECONSTRUCTION LIMITS.
3. NO MEASUREMENT SHALL BE MADE FOR REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE. THE WORK REQUIRED FOR THE REMOVAL, SPECIAL HANDLING, BAGGING AND DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE INCIDENTAL TO OTHER WORK ITEMS WITHIN THE SCHEDULE C BID SCHEDULE AND NO SEPARATE PAYMENT SHALL BE MADE. SEE SEWER (SS) SHEETS FOR EXTENTS OF DEMOLITION OF SEWER ITEMS.

**LEGEND**

- ① CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AFTER CLEARING LIMITS HAVE BEEN APPROVED AND AFTER TEMPORARY TREE PROTECTION FENCES (SECTION 75.12) HAVE BEEN ESTABLISHED AS SHOWN, OR AS DIRECTED BY THE ENGINEER IN THE FIELD (SECTION 20.04). NOT ALL TREES, SHRUBS, AND VEGETATION ARE SPECIFICALLY CALLED OUT OR SHOWN.
- ② REMOVE SIDEWALK OR CONCRETE APRON (SECTION 20.07).
- ③ REMOVE CURB AND GUTTER (SECTION 20.08).
- ④ REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE (SECTION 20.27), SEE NOTE 3.
- ⑤ REMOVE SANITARY SEWER CLEANOUT (SECTION 50.06).
- ⑥ REMOVE MANHOLE OR CATCH BASIN (SECTION 55.11).
- ⑦ REMOVE PIPE (SECTION 70.07).
- ⑧ REMOVE AND RESET FENCE (SECTION 70.08).
- ⑨ REMOVE FENCE (SECTION 70.08).
- ⑩ REMOVE AND RESET GATE (SECTION 70.08)
- ⑪ REMOVE AND SALVAGE SIGN. THIS WORK SHALL BE INCIDENTAL TO THE BID ITEM STANDARD SIGNS (SECTION 70.11).
- ⑫ RELOCATE MAILBOX (SECTION 70.17).
- ⑬ REMOVAL/DISPOSAL AND/OR SALVAGE/INSTALLATION OF OBSTRUCTIONS (SECTION 70.22).
- ⑭ SALVAGE AND RELOCATE OR DISPOSE EXISTING BOULDER AS DIRECTED BY ENGINEER IN THE FIELD (SECTION 75.11).
- ⑮ REMOVE JUNCTION BOX (SECTION 80.08), SEE SHEET 12.
- ⑯ ABANDON PIPE IN PLACE, SEE SHEETS A1-A2.
- ⑰ PROTECT IN PLACE.
- REMOVAL OF PAVEMENT (SECTION 20.09) AND/OR, SIDEWALK, CURB & GUTTER, AND CONCRETE, AS SHOWN & NOTED IN SUMMARY TABLES.
- - - APPROXIMATE LIMITS OF DISTURBANCE
- ..... REMOVE PIPE, SEE NOTE 3.
- TEMPORARY TREE PROTECTION FENCE (SECTION 75.12), LOCATIONS TO BE FIELD VERIFIED, SEE DETAIL 1, THIS SHEET.

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH	ASBUILT							
QUANTITIES	JM	JH	CONTRACTOR							
PRELIMINARY/FINAL	JM	JH	INSPECTOR							
MUNICIPAL/STATE	JM	JH								

GRAPHIC SCALE: 0 20 40 60 80

**CRW ENGINEERING GROUP, INC.**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC1882-AK

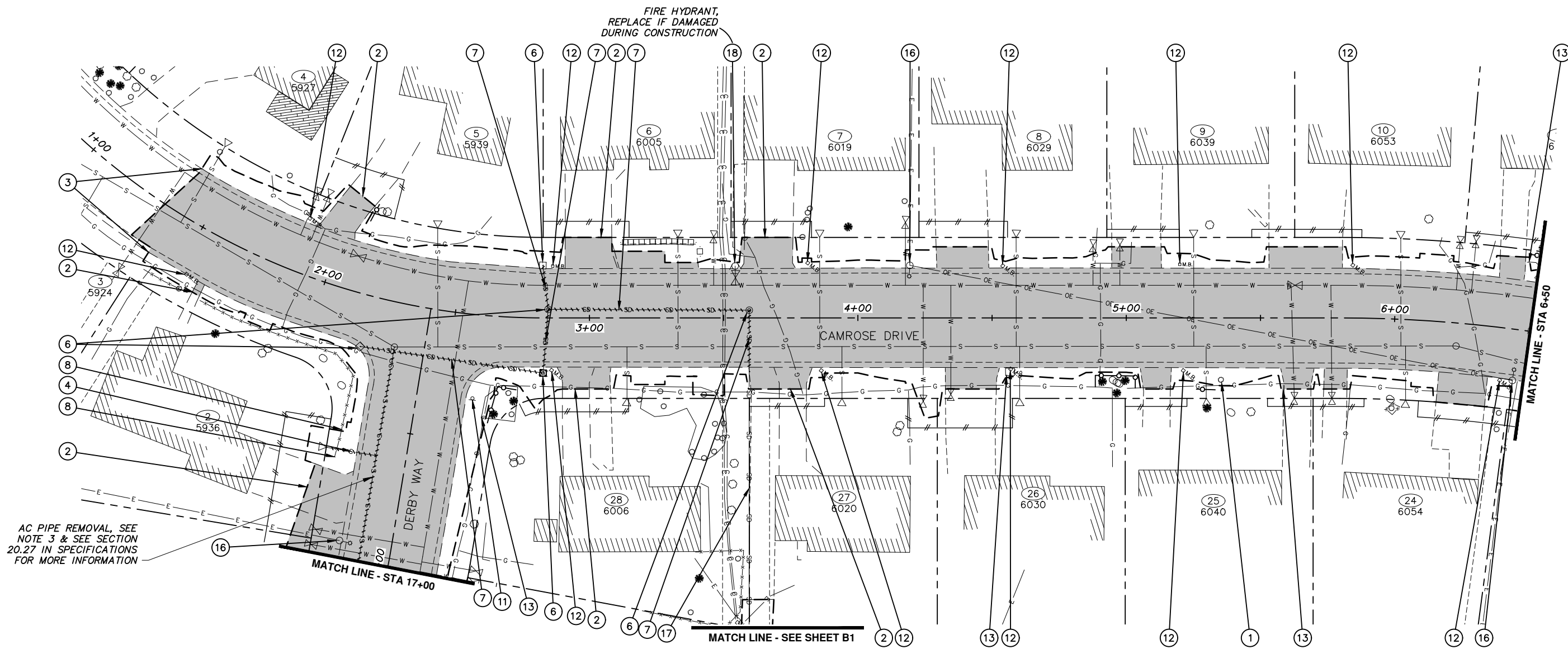
STATE OF ALASKA  
 49 TH  
 Christopher T. Koerner  
 CE-145371  
 REGISTERED PROFESSIONAL ENGINEER

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL  
**DEMOLITION PLAN**

SCALE: HOR. 1"=20'  
 VER. N/A  
 GRID SW538, SW638  
 DATE: JUNE 2023  
 STATUS: 95%  
 SHEET B1 of B7

File: I:\Jobs\10152.00 Camrose Drive Storm Drainage\00 CAD\2019\01 Working Set\01 Civil\10152.00 Demolition Plan.dwg



AC PIPE REMOVAL, SEE NOTE 3 & SEE SECTION 20.27 IN SPECIFICATIONS FOR MORE INFORMATION

**LEGEND**

- ① CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AFTER CLEARING LIMITS HAVE BEEN APPROVED AND AFTER TEMPORARY TREE PROTECTION FENCES (SECTION 75.12) HAVE BEEN ESTABLISHED AS SHOWN, OR AS DIRECTED BY THE ENGINEER IN THE FIELD (SECTION 20.04). NOT ALL TREES, SHRUBS, AND VEGETATION ARE SPECIFICALLY CALLED OUT OR SHOWN.
- ② REMOVE SIDEWALK OR CONCRETE APRON (SECTION 20.07).
- ③ REMOVE CURB AND GUTTER (SECTION 20.08).
- ④ REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE (SECTION 20.27), SEE NOTE 3.
- ⑥ REMOVE MANHOLE OR CATCH BASIN (SECTION 55.11).
- ⑦ REMOVE PIPE (SECTION 70.07).
- ⑧ REMOVE AND RESET FENCE (SECTION 70.08).
- ⑪ REMOVE AND SALVAGE SIGN. THIS WORK SHALL BE INCIDENTAL TO THE BID ITEM STANDARD SIGNS (SECTION 70.11).
- ⑫ RELOCATE MAILBOX (SECTION 70.17).
- ⑬ REMOVAL/DISPOSAL AND/OR SALVAGE/INSTALLATION OF OBSTRUCTIONS (SECTION 70.22).
- ⑮ REMOVE LUMINAIRE POLE (BY OTHERS).
- ⑰ ABANDON PIPE IN PLACE, SEE SHEETS A1-A2.
- ⑱ PROTECT IN PLACE.
- REMOVAL OF PAVEMENT (SECTION 20.09) AND/OR, SIDEWALK, CURB & GUTTER, AND CONCRETE, AS SHOWN & NOTED IN SUMMARY TABLES.
- - - APPROXIMATE LIMITS OF DISTURBANCE
- ..... REMOVE PIPE, SEE NOTE 3.
- TEMPORARY TREE PROTECTION FENCE (SECTION 75.12), LOCATIONS TO BE FIELD VERIFIED, SEE DETAIL 1, SHEET B1.

**NOTES:**

1. SEE SUMMARY TABLE SHEETS B4-B7 FOR STATION AND OFFSET OF DEMOLITION ITEMS.
2. SEE ROADWAY IMPROVEMENTS (R) SHEETS FOR DRIVEWAY RECONSTRUCTION LIMITS.
3. NO MEASUREMENT SHALL BE MADE FOR REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE. THE WORK REQUIRED FOR THE REMOVAL, SPECIAL HANDLING, BAGGING AND DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE INCIDENTAL TO OTHER WORK ITEMS WITHIN THE SCHEDULE C BID SCHEDULE AND NO SEPARATE PAYMENT SHALL BE MADE. SEE SEWER (SS) SHEETS FOR EXTENTS OF DEMOLITION OF SEWER ITEMS.

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Plan.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

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.

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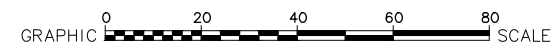
COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES/FINAL	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

BASIS OF THIS DATUM GAAB 1972 ADJUST



**CRW ENGINEERING GROUP, INC.**

3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AECLE82-AK

STATE OF ALASKA  
49 TH  
Christopher T. Koerner  
CE-145371  
REGISTERED PROFESSIONAL ENGINEER



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL

DEMOLITION PLAN

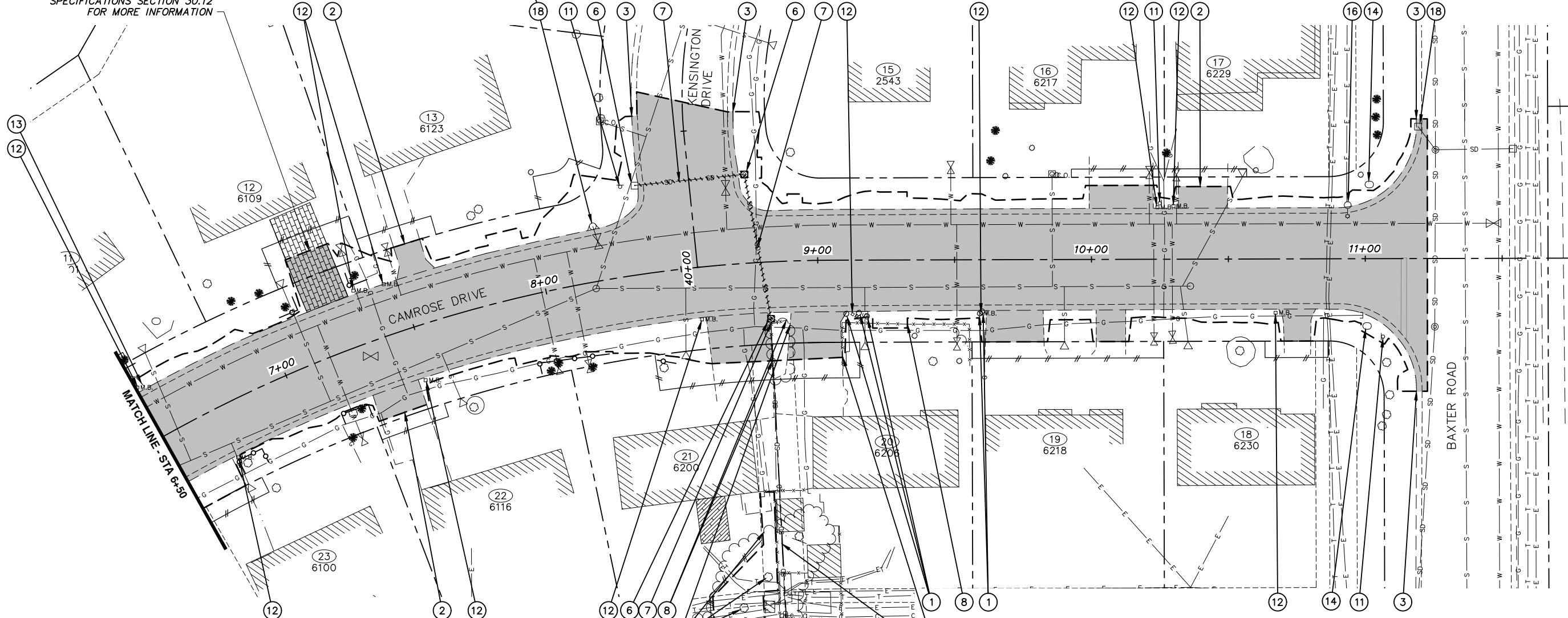
SCALE HOR. 1"=20' VER. N/A

GRID SW538, SW638

DATE JUNE 2023 STATUS 95% SHEET B2 of B7

REMOVE AND RESET INTERLOCKING CONCRETE PAVERS, SEE THE SPECIFICATIONS SECTION 30.12 FOR MORE INFORMATION

FIRE HYDRANT, REPLACE IF DAMAGED DURING CONSTRUCTION



**LEGEND**

- ① CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AFTER CLEARING LIMITS HAVE BEEN APPROVED AND AFTER TEMPORARY TREE PROTECTION FENCES (SECTION 75.12) HAVE BEEN ESTABLISHED AS SHOWN, OR AS DIRECTED BY THE ENGINEER IN THE FIELD (SECTION 20.04). NOT ALL TREES, SHRUBS, AND VEGETATION ARE SPECIFICALLY CALLED OUT OR SHOWN.
- ② REMOVE SIDEWALK OR CONCRETE APRON (SECTION 20.07).
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- ⑥ REMOVE MANHOLE OR CATCH BASIN (SECTION 55.11).
- ⑦ REMOVE PIPE (SECTION 70.07).
- ⑧ REMOVE AND RESET FENCE (SECTION 70.08).
- ⑪ REMOVE AND SALVAGE SIGN. THIS WORK SHALL BE INCIDENTAL TO THE BID ITEM STANDARD SIGNS (SECTION 70.11).
- ⑫ RELOCATE MAILBOX (SECTION 70.17).
- ⑬ REMOVAL/DISPOSAL AND/OR SALVAGE/INSTALLATION OF OBSTRUCTIONS (SECTION 70.22).

⑦ SOUTH FORK CHESTER CREEK

- ⑭ SALVAGE AND RELOCATE OR DISPOSE EXISTING BOULDER AS DIRECTED BY ENGINEER IN THE FIELD (SECTION 75.11).
- ⑯ REMOVE LUMINAIRE POLE (BY OTHERS).
- ⑰ ABANDON PIPE IN PLACE, SEE SHEETS A1-A2.
- ⑱ PROTECT IN PLACE.
- REMOVAL OF PAVEMENT (SECTION 20.09) AND/OR, SIDEWALK, CURB & GUTTER, AND CONCRETE, AS SHOWN & NOTED IN SUMMARY TABLES.
- - - APPROXIMATE LIMITS OF DISTURBANCE
- ..... REMOVE PIPE.
- TEMPORARY TREE PROTECTION FENCE (SECTION 75.12), LOCATIONS TO BE FIELD VERIFIED, SEE DETAIL 1, SHEET B1.

**NOTES:**

1. SEE SUMMARY TABLE SHEETS B4-B7 FOR STATION AND OFFSET OF DEMOLITION ITEMS.
2. SEE ROADWAY IMPROVEMENTS (R) SHEETS FOR DRIVEWAY RECONSTRUCTION LIMITS.

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Plan.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

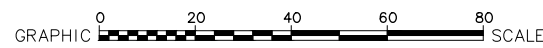
COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

BASIS OF THIS DATUM GAAB 1972 ADJUST



**CRW ENGINEERING GROUP, INC.**

3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AEC1882-AK

STATE OF ALASKA  
49 TH  
Christopher T. Koenen  
CE-145371  
REGISTERED PROFESSIONAL ENGINEER

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL

DEMOLITION PLAN

SCALE HOR. 1"=20'  
VER. N/A

GRID SW538, SW638

DATE JUNE 2023 STATUS 95% SHEET B3 of B7

20.07 REMOVE SIDEWALK OR CONCRETE APRON (2)						
SHEET	APPX STATION BEGIN	APPX OFFSET (FT)	APPX STATION END	APPX OFFSET (FT)	AREA (SY)	REMARKS
B1	15+73.8	48.5 LT	16+02.1	21.3 LT	28	
B1	15+74.1	70.9 RT	16+10.5	20.7 RT	45	
B1	16+01.8	34.0 RT	16+11.3	32.5 RT	24	
B2	17+13.9	29.0 LT	17+32.1	27.2 LT	33	
B2	1+57.9	20.7 RT	1+60.6	20.8 RT	1	
B2	1+93.6	27.8 LT	2+06.5	25.0 LT	23	
B2	2+89.5	22.3 RT	3+00.0	21.3 RT	10	
B2	2+90.9	24.2 LT	3+08.5	24.3 LT	23	
B2	3+57.7	25.1 LT	3+75.7	25.2 LT	24	
B2	3+69.7	21.3 RT	3+81.9	21.4 RT	10	
B3	7+27.0	23.5 RT	7+45.4	23.5 RT	19	
B3	7+51.8	26.5 LT	7+61.2	26.2 LT	14	
B3	10+31.8	22.5 LT	10+49.7	22.6 LT	16	

20.08 REMOVE CURB AND GUTTER (3)						
SHEET	APPX STATION BEGIN	APPX OFFSET (FT)	APPX STATION END	APPX OFFSET (FT)	LENGTH (FT)	REMARKS
B1	15+08.6	42.8 RT	15+08.5	153.8 RT	111	NORTHERN LIGHTS BLVD
B1	15+71.5	70.9 RT	17+00.0	18.4 RT	177	NORTHERN LIGHTS/DERBY WAY
B1	15+71.7	48.5 LT	17+00.0	18.8 LT	138	NORTHERN LIGHTS/DERBY WAY
B1	15+76.3	49.5 RT	15+86.0	29.3 RT	23	NORTHERN LIGHTS/DERBY WAY
B1	15+79.1	37.6 LT	15+87.4	28.2 LT	13	NORTHERN LIGHTS/DERBY WAY
B2	17+00.0	18.8 LT	1+38.0	18.4 RT	166	DERBY WAY/CAMROSE DRIVE
B2	17+00.0	18.4 RT	2+81.6	18.3 RT	100	DERBY WAY/CAMROSE DRIVE
B2	1+38.0	18.5 LT	2+81.4	18.5 LT	133	CAMROSE DRIVE
B2	2+83.6	18.4 LT	6+50.0	18.4 LT	369	CAMROSE DRIVE
B2	2+83.7	18.3 RT	6+50.0	18.8 RT	364	CAMROSE DRIVE
B3	6+50.0	18.4 LT	40+31.0	18.6 LT	202	CAMROSE DR/KENSINGTON DR
B3	6+50.0	18.8 RT	8+80.0	18.5 RT	222	CAMROSE DRIVE
B3	40+33.2	18.6 LT	40+56.3	18.5 LT	24	KENSINGTON DRIVE
B3	40+33.0	18.2 RT	40+52.2	18.3 RT	19	KENSINGTON DRIVE
B3	40+30.8	18.3 RT	11+18.8	51.0 LT	274	KENSINGTON DR/CAMROSE DR
B3	8+82.9	18.5 RT	11+18.6	48.5 RT	252	CAMROSE DRIVE

20.09 REMOVE PAVEMENT				
SHEET	STATION TO STATION	OFFSET	AREA (SY)	REMARKS
B1	21+03 TO 17+00	LT & RT	1,586	NORTHERN LIGHTS BLVD, DERBY WAY, SIDEWALK, DRIVEWAYS
B2	17+00 TO 6+50	LT & RT	2,388	DERBY WAY, CAMROSE DRIVE, DRIVEWAYS
B3	6+50 TO 11+23	LT & RT	2,151	CAMROSE DRIVE, KENSINGTON DRIVE, BAXTER ROAD, DRIVEWAYS

- NOTES: 1. SEE ROADWAY IMPROVEMENT SHEETS FOR ROADWAY PAVEMENT REMOVAL LIMITS.  
2. SEE DRIVEWAY RECONSTRUCTION TABLE FOR DRIVEWAY PAVEMENT REMOVAL LIMITS.

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Summary Tables.dwg

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT		ALL
DEMOLITION SUMMARY TABLES			
SCALE	HOR. N/A VER. N/A	GRID SW1538, SW1638	DATE JUNE 2023 STATUS 95% SHEET
			B4 of B7

20.27

REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE (INCIDENTAL WORK ITEM, SEE NOTE 1) ④

SHEET	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	SIZE (INCH)	LENGTH (FT)	REMARKS
B1	16+34.0	30.0 RT	16+34.5	0.2 RT	4	30	AC SEWER SERVICE
B1	16+46.2	30.0 LT	16+53.2	5.2 LT	4	26	AC SEWER SERVICE
B1	16+71.0	8.6 LT	16+76.3	30.0 RT	4	39	AC SEWER SERVICE
B1/B2	16+21.1	5.2 RT	17+80.9	11.1 LT	8	160	AC SEWER
B2	17+39.9	11.1 LT	17+39.9	30.0 LT	4	19	AC SEWER SERVICE

NOTE: 1. NO MEASUREMENT SHALL BE MADE FOR REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE. THE WORK REQUIRED FOR THE REMOVAL, HANDLING, AND DISPOSAL OF ASBESTOS CEMENT PIPE SHALL BE INCIDENTAL TO OTHER WORK ITEMS WITHIN THE SCHEDULE C BID SCHEDULE AND NO SEPARATE PAYMENT SHALL BE MADE.

50.06

REMOVE EXISTING SANITARY SEWER MANHOLE OR CLEANOUT ⑤

SHEET	APPX STATION	APPX OFFSET (FT)	NORTHING	EASTING	MANHOLE	CLEANOUT	REMARKS
B1	16+21.1	5.2 RT	332359.58	369085.78		X	

55.11

REMOVE MANHOLE OR CATCH BASIN ⑥

SHEET	APPX STATION	APPX OFFSET (FT)	CATCH BASIN	MANHOLE	REMARKS
B1	15+70.1	58.1 RT		X	NORTHERN LIGHTS BLVD
B2	2+18.70	19.3 RT	X		CAMROSE DRIVE
B2	2+82.63	19.6 LT	X		CAMROSE DRIVE
B2	2+82.75	20.6 RT		X	CAMROSE DRIVE
B2	2+84.59	3.2 LT		X	CAMROSE DRIVE
B2	3+59.54	2.9 LT		X	CAMROSE DRIVE
B3	40+32.1	19.8 LT	X		KENSINGTON DRIVE
B3	40+32.0	20.5 RT		X	KENSINGTON DRIVE
B3	8+81.85	20.8 RT		X	CAMROSE DRIVE

70.07

REMOVE PIPE ⑦

SHEET	APPX STA BEGIN	APPX OFFSET (FT)	APPX STA END	APPX OFFSET (FT)	SIZE (INCH)	LENGTH (FT)	REMARKS
B1	20+36.7	17.2 RT	20+82.9	21.6 RT	18	6	STORM DRAIN
B1	15+70.1	58.1 RT	15+71.1	3.3 LT	18	61	STORM DRAIN
B1	16+46.4	166.3 RT	16+50.0	163.4 RT	18	7	
B2	2+18.7	19.3 RT	2+82.8	20.6 RT	10	69	STORM DRAIN
B2	2+82.6	19.6 LT	2+84.6	3.2 LT	12	17	STORM DRAIN
B2	2+82.8	20.6 RT	2+84.6	3.2 LT	10	24	STORM DRAIN
B2	2+84.6	3.2 LT	3+59.5	2.9 LT	18	75	STORM DRAIN
B2	3+59.54	2.9 LT	3+59.5	20.0 RT	18	23	STORM DRAIN
B3	40+32.1	19.8 LT	40+32.0	20.5 RT	12	40	STORM DRAIN
B3	40+32.0	20.5 RT	8+81.9	20.8 RT	18	54	STORM DRAIN
B3	8+81.9	20.8 RT	8+81.9	22.3 RT	18	2	STORM DRAIN
B3	8+81.5	143.3 RT	8+81.5	147.3 RT	18	4	STORM DRAIN

70.08

REMOVE AND RESET FENCE ⑧

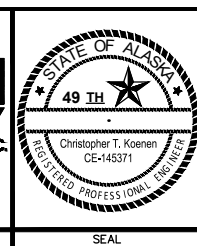
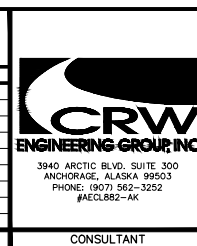
SHEET	EXISTING LOCATION					PROPOSED LOCATION					REMARKS
	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	
B1	20+54.4	17.9 LT	20+92.3	6.2 RT	50	20+54.4	17.9 LT	20+92.9	8.0 LT	62	
B1	21+00.7	8.0 LT	21+67.9	15.7 LT	52	21+00.7	8.0 LT	21+67.9	15.7 LT	52	
B1	16+54.7	149.3 RT	16+60.7	149.2 RT	11	16+54.7	149.3 RT	16+60.7	149.2 RT	11	
B2	17+36.9	26.4 LT	17+46.9	25.5 LT	10	17+36.9	26.4 LT	17+46.9	25.5 LT	10	
B3	8+46.2	131.7 RT	8+71.7	130.9 RT	18	8+46.2	131.7 RT	8+71.7	130.9 RT	18	
B3	8+71.7	130.9 RT	8+92.0	130.9 RT	15	8+71.7	130.9 RT	8+92.0	130.9 RT	15	
B3	8+81.6	36.1 RT	8+87.7	21.5 RT	19	8+81.6	36.1 RT	8+87.3	22.9 RT	19	
B3	9+09.1	35.5 RT	9+32.7	23.4 RT	37	9+09.1	35.5 RT	9+32.7	23.4 RT	37	

NOTES:  
 1. PROVIDE TEMPORARY FENCING PER SECTION 70.23 FOR ALL FENCES REMOVED OR AS DIRECTED BY THE ENGINEER.  
 2. STAKE RESET FENCE LAYOUT IN THE FIELD FOR ENGINEER TO REVIEW AND APPROVE PRIOR TO INSTALLATION. THIS WORK SHALL BE INCIDENTAL TO SECTION 70.08 PAY ITEM.

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Summary Tables.dwg

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72				
PROFILE	RB	JK			Benchmarks Map Gallery Application					
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821							
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL  
 DEMOLITION SUMMARY TABLES  
 SCALE: HOR. N/A VER. N/A  
 GRID SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95%  
 SHEET B5 of B7

70.08						⑨
REMOVE FENCE						
SHEET	EXISTING LOCATION					
	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	
B1	21+00.9	8.0 LT	21+00.9	14.9 RT	23	

70.08											⑩
REMOVE & RESET GATE											
SHEET	EXISTING LOCATION					PROPOSED LOCATION					
	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	
B1	20+92.3	6.2 RT	21+00.3	6.3 RT	8	20+92.9	8.0 LT	21+00.7	8.0 LT	8	

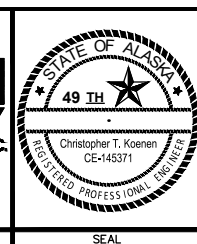
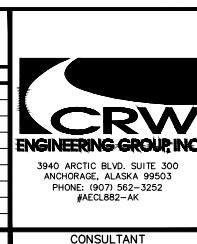
70.11							⑪
REMOVE AND SALVAGE SIGN							
SHEET NO.	APPROX STATION	APPROX OFFSET (FT)	SIGN TYPE	LEGEND	SIGN POST	REMARKS	
B1	15+89.9	32.4 LT	D3-101	DERBY WAY 2700	PERFORATED STEEL TUBE		
			D3-101	E NORTHERN LIGHTS BLVD 6000			
			R1-1	STOP			
	16+44.5	20.0 RT	R2-4M-20	MAXIMUM SPEED 20	PERFORATED STEEL TUBE		
B2	17+66.8	20.7 RT	D3-101	DERBY WAY 2700	PERFORATED STEEL TUBE		
			D3-101	CAMROSE DR 6000			
			R1-1	STOP			
B3	40+32.2	25.1 LT	D3-101	KENSINGTON DR 2500	STEEL TUBE		
	10+25.0	20.5 LT	D3-101	CAMROSE DR 6100	PERFORATED STEEL TUBE		
			R2-4M-20	MAXIMUM SPEED 20			
	11+06.4	28.5 RT	D3-101	CAMROSE DR 6200	PERFORATED STEEL TUBE		
			R1-1	STOP			

70.22							⑬
REMOVAL/DISPOSAL AND/OR SALVAGE/INSTALLATION OF OBSTRUCTIONS							
SHEET	APPX STATION	APPX OFFSET (FT)	OBSTRUCTION ITEM	QUANTITY	ACTION	REMARKS	
B1	15+86.7	37.4 RT	RETAINING WALL	10 LF	REMOVE AND REINSTALL		
B2	17+64.0	25.3 RT	LANDSCAPING EDGING	14 LF	PLACE ON PROPERTY		
B2	4+56.8	20.3 RT	LANDSCAPING EDGING	12 LF	PLACE ON PROPERTY		
B2/B3	6+50	24.8 LT	LANDSCAPING EDGING	11 LF	PLACE ON PROPERTY		

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00\_CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Summary Tables.dwg

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY				
BASE	TS	AR				
TOPOGRAPHY	TS	RB				
PROFILE	RB	JK				
STORM SEWER	JM	JH	FIELD BOOKS	BM NO.	LOCATION	ELEV.
WATER/SANITARY SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'
GAS	TS	AR	STAKING	GAAB 15	ALT as shown in online MOA	324.72'
TELEPHONE	TS	AR				
ELECTRIC	JH	TK				
DESIGN	JM	JH	ASBUILT			
QUANTITIES	JM	JH	CONTRACTOR	BASIS OF THIS DATUM GAAB 1972 ADJUST		
PRELIMINARY/FINAL	JM	JH	INSPECTOR			
MUNICIPAL/STATE	JM	JH				
PLAN CHECK	CONSTRUCTION RECORD		VERTICAL DATUM		REVISIONS	



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT		ALL
DEMOLITION SUMMARY TABLES			
SCALE	HOR. N/A VER. N/A	GRID SW1538, SW1638 DATE JUNE 2023	STATUS 95% SHEET
			B6 of B7



70.17

RELOCATE MAILBOX <span style="float: right;">(12)</span>					
SHEET	EXISTING LOCATION		NEW LOCATION		REMARKS
	APPX STATION	APPX OFFSET (FT)	APPX STATION	APPX OFFSET (FT)	
B1	16+18.1	20.0 RT	16+17.5	20.5 RT	
B1	16+59.3	20.7 LT	16+61.0	20.5 LT	
B1	16+75.1	19.7 RT	16+72.0	20.5 RT	
B2	1+53.3	18.2 RT	1+53.0	20.5 RT	
B2	1+86.0	20.4 LT	2+09.0	20.5 LT	
B2	2+85.9	19.5 RT	2+85.0	20.5 RT	
B2	2+86.3	19.3 LT	2+86.0	20.5 RT	
B2	3+81.3	20.5 LT	3+81.0	20.5 LT	
B2	3+86.4	19.7 RT	3+86.0	20.5 RT	
B2	4+54.0	19.4 LT	4+54.0	20.5 LT	
B2	4+56.9	19.1 RT	4+57.0	20.5 RT	
B2	5+19.9	19.9 LT	5+18.5	20.5 LT	
B2	5+21.2	19.6 RT	5+21.5	20.5 RT	
B2	5+84.2	19.7 LT	5+85.5	20.5 LT	
B2	6+41.6	19.6 RT	6+42.0	20.5 RT	
B3	6+50.3	20.2 LT	6+51.5	20.5 LT	
B3	6+70.8	19.6 RT	6+73.5	20.5 RT	
B3	7+33.6	19.7 LT	7+36.0	20.5 LT	
B3	7+44.5	18.3 LT	7+47.0	20.5 LT	
B3	7+48.0	19.8 RT	7+51.0	20.5 RT	
B3	8+55.8	19.1 RT	8+52.0	20.5 RT	
B3	9+12.7	19.8 RT	9+13.0	20.5 RT	
B3	9+59.6	19.6 RT	9+56.0	20.5 RT	
B3	10+24.1	19.0 LT	9+94.0	20.5 LT	
B3	10+30.0	19.4 LT	10+30.0	20.5 LT	
B3	10+67.2	19.7 RT	10+65.0	20.5 RT	

NOTE: SEE SHEET D4 FOR MAILBOX INSTALLATION DETAILS.

75.11

SALVAGE AND RELOCATE OR DISPOSE EXISTING BOULDER <span style="float: right;">(14)</span>			
SHEET	APPX STATION	APPX OFFSET (FT)	REMARKS
B1	16+62.9	20.0 LT	
B1	16+63.9	22.0 LT	
B3	11+00.6	24.6 RT	
B3	11+01.5	27.1 LT	

80.08

REMOVE JUNCTION BOX <span style="float: right;">(15)</span>			
SHEET	APPX STATION	APPX OFFSET (FT)	REMARKS
B1	15+75	37.6 LT	

75.12

TEMPORARY TREE PROTECTION FENCE						
SHEET	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	REMARKS
B1	20+41.9	19.1 LT	20+53.7	19.1 LT	11.9	
B1	20+59.5	21.6 LT	21+34.2	70.2 LT	22.6	
B1	20+76.3	21.6 LT	20+83.3	21.6 LT	7.0	
B1	16+44.2	158.6 RT	16+52.9	151.3 RT	22.3	
B1	16+53.7	30.6 LT	16+64.5	30.3 LT	29.4	
B1	16+77.4	162.3 RT	16+80.1	152.3 RT	15.2	
B2	2+09.9	26.9 LT	2+11.6	33.7 LT	7.0	
B2	17+58.7	27.7 RT	2+73.7	27.0 RT	21.0	
B2	4+88.5	25.7 RT	5+03.3	26.1 RT	23.7	

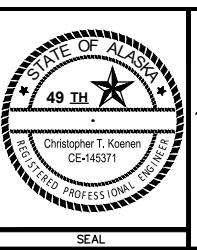
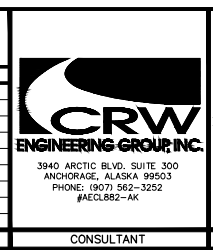
75.12

TEMPORARY TREE PROTECTION FENCE (CONTINUED)						
SHEET	APPX BEGIN STATION	APPX BEGIN OFFSET (FT)	APPX END STATION	APPX END OFFSET (FT)	LENGTH (FT)	REMARKS
B2/B3	6+47.2	28.4 LT	6+53.8	28.4 LT	7.0	
B3	6+70.6	26.1 RT	6+80.5	26.1 RT	20.5	
B3	7+06.0	20.3 LT	7+12.9	25.6 LT	12.5	
B3	7+13.6	24.8 RT	7+24.3	25.5 RT	18.4	
B3	7+32.9	26.8 LT	7+39.5	21.9 LT	11.9	
B3	7+91.7	29.0 RT	8+18.8	26.8 RT	29.7	
B3	8+36.7	31.8 RT	8+43.8	33.9 RT	7.0	
B3	8+47.3	132.3 RT	8+65.2	145.4 RT	20.9	

File: I:\JobData\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Demolition Summary Tables.dwg

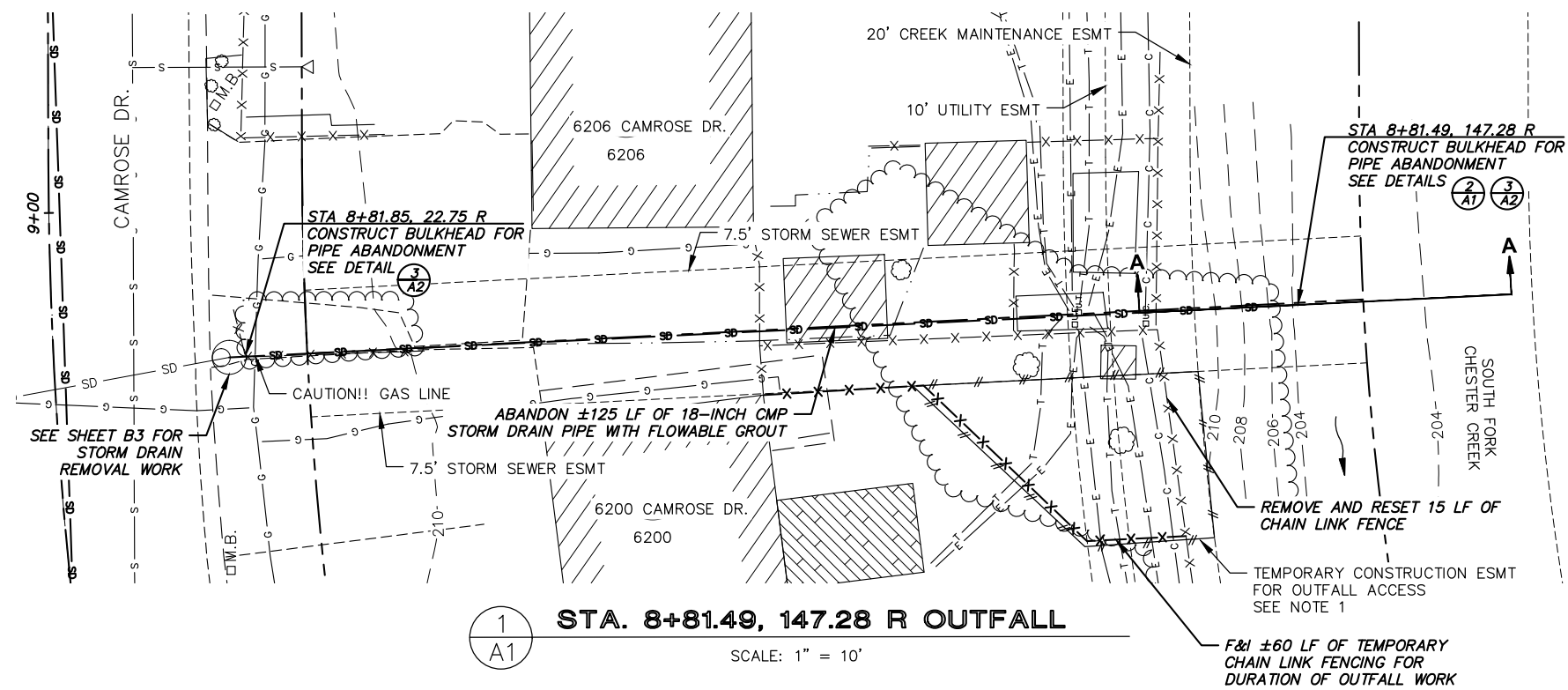
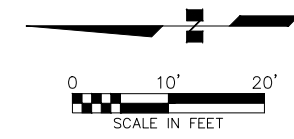
**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821							
STORM SEWER	JM	JH			Benchmarks Map Gallery Application					
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT ALL  
**DEMOLITION SUMMARY TABLES**

SCALE: HOR. N/A VER. N/A  
 GRID: SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95% SHEET: B7 of B7



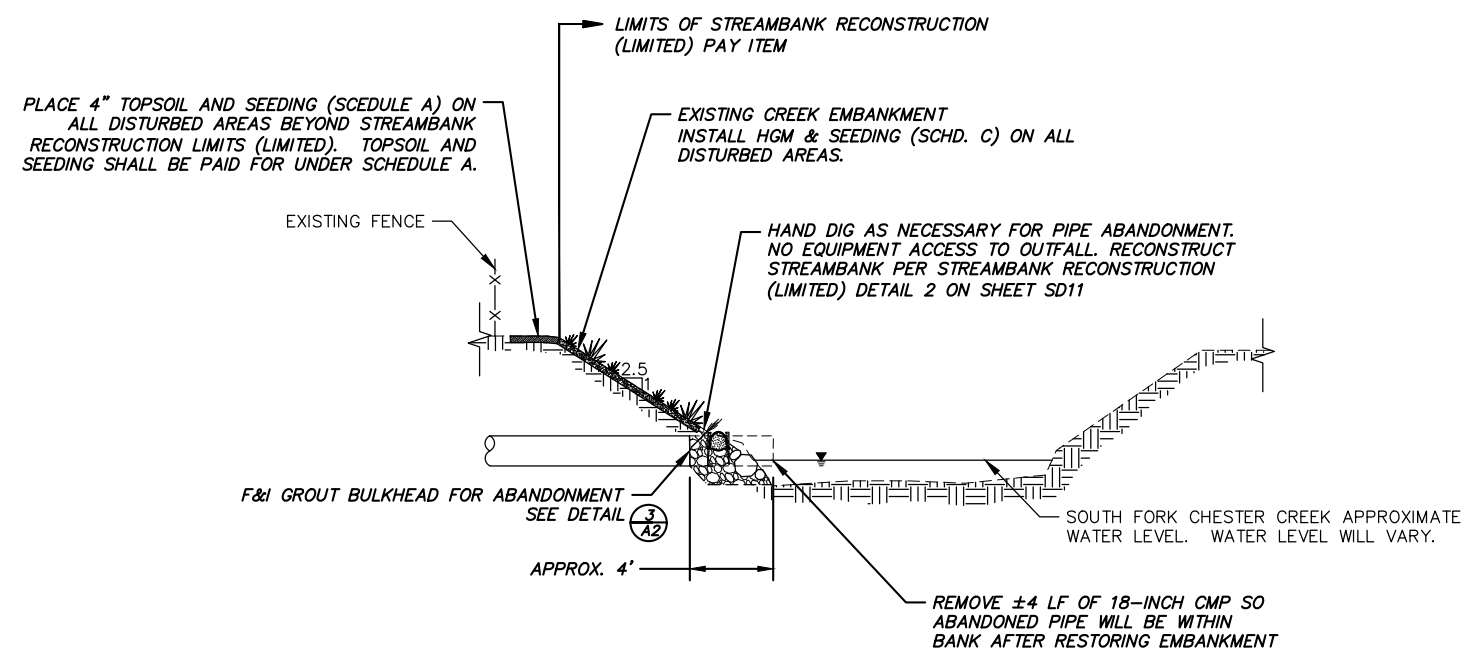
1  
A1

**STA. 8+81.49, 147.28 R OUTFALL**

SCALE: 1" = 10'

**NOTES:**

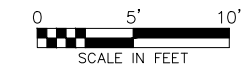
1. OUTFALL ACCESS WILL BE BY FOOT ONLY FOR PIPE ABANDONMENT BETWEEN STA 8+81.85, 22.75 R AND STA 8+81.49, 147.28 R. NO EQUIPMENT WILL BE ALLOWED OTHER THAN HAND TOOLS. COORDINATE ACCESS AND FENCING WITH HOMEOWNERS.



2  
A1

**SECTION A-A**

SCALE: 1" = 5'



95% DESIGN

File: S:\2309 Camrose Pipe Abandonment\07 - CAD\Camrose Pipe Abandon P&P's FINAL\_CHECK\_SET.dwg

**RECORD DRAWING**

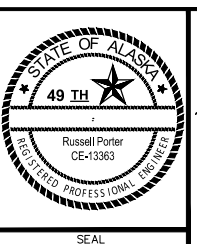
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 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
BASE TOPOGRAPHY										
PROFILE										
STORM SEWER										
WATER/SANITARY SEWER										
GAS										
TELEPHONE										
ELECTRIC										
DESIGN										
QUANTITIES										
PRELIMINARY/FINAL										
MUNICIPAL/STATE										

**Steph Engineering LLC**  
 3900 ARCTIC BLVD, SUITE 204  
 ANCHORAGE, ALASKA 99503  
 TEL: (907) 562-1468

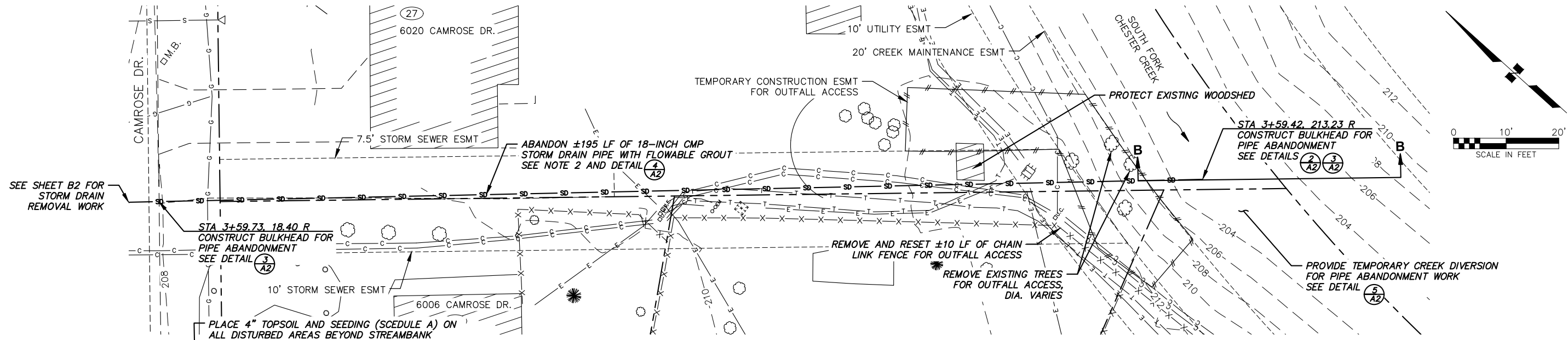


**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**OUTFALL PIPE ABANDONMENT**

SCALE: HOR. N/A VER. N/A GRID: SW1538, SW1638 DATE: JUNE 2023 STATUS: 95% SHEET: A1 of A3



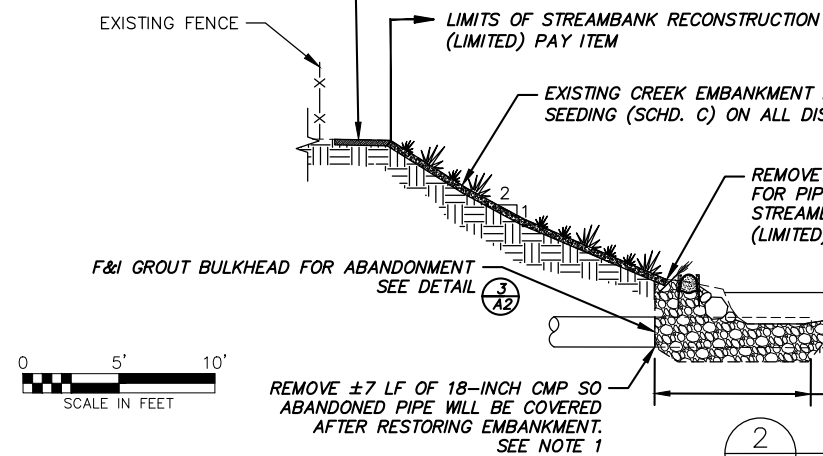
**1 STA. 3+59.42, 213.23 R OUTFALL**

SCALE: 1" = 10'

**95% DESIGN**

**NOTES:**

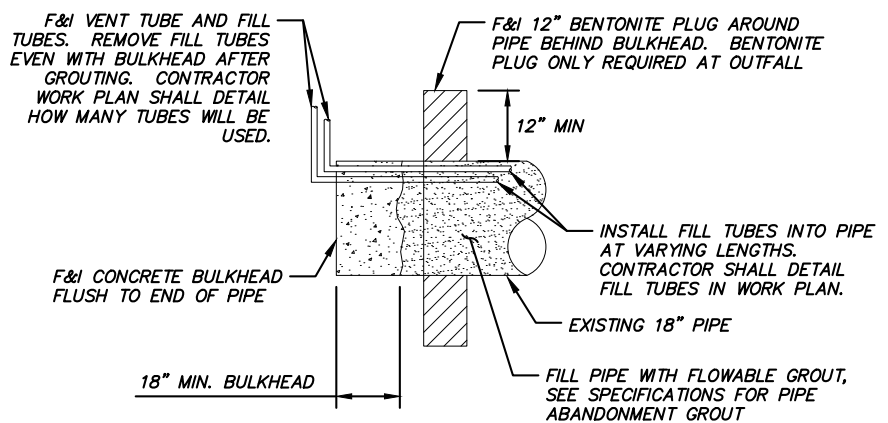
- EXISTING PIPE OUTFALL IS FULLY SUBMERGED BELOW SOUTH FORK CHESTER CREEK WATER LINE AND WILL REQUIRE CREEK DIVERSION. SEE CREEK DIVERSION DETAIL THIS SHEET.
- EXISTING PIPE IS BELIEVED TO BE IN POOR CONDITION AND MAY BE PARTIALLY FULL OF DEBRIS AND/OR PARTIALLY COLLAPSED. IF GROUT RETURN RESULTS IN AN INSUFFICIENT AMOUNT TO ABANDON THE EXISTING PIPE, VACUUM EXCAVATE TO PIPE AND INSTALL GROUT PER ADDITIONAL GROUT INJECTION DETAIL THIS SHEET. CONTRACTOR SHALL ASSUME THREE ADDITIONAL GROUT INJECTIONS WILL BE REQUIRED.



**2**

**SECTION B-B**

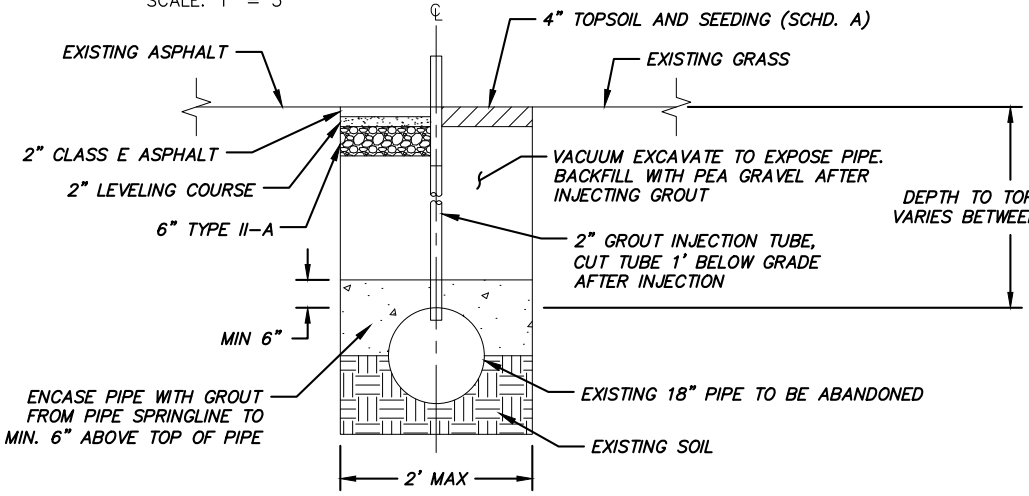
SCALE: 1" = 5'



**3**

**CONCRETE BULKHEAD**

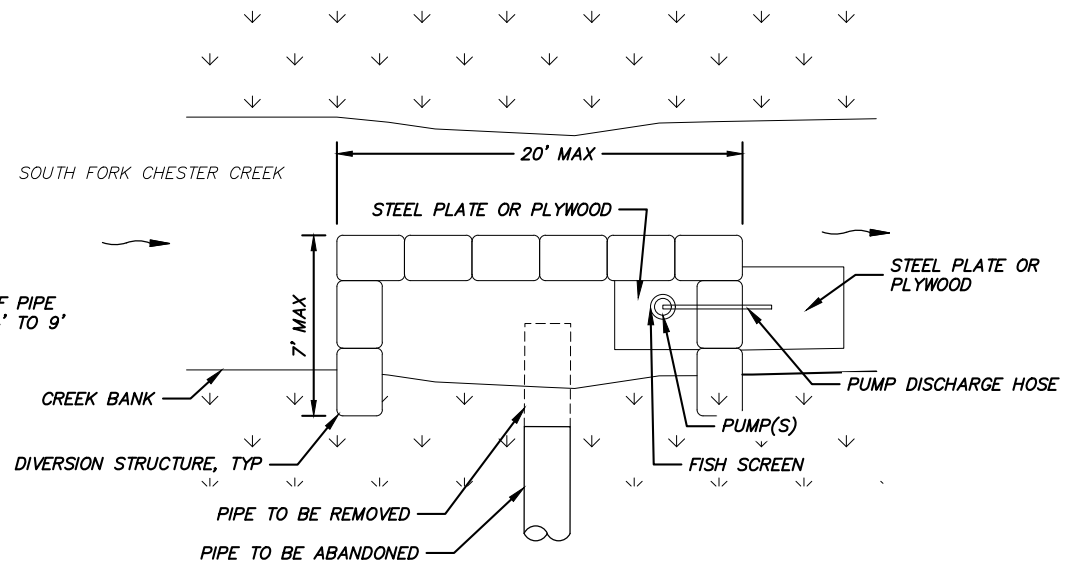
SCALE: NTS



**4**

**ADDITIONAL GROUT INJECTION DETAIL**

SCALE: NTS



**5**

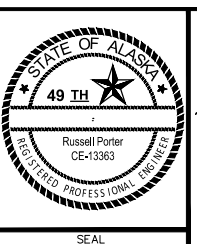
**CREEK DIVERSION PLAN**

SCALE: NTS

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 BY: \_\_\_\_\_  
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 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE TOPOGRAPHY										
PROFILE										
STORM SEWER										
WATER/SANITARY SEWER										
GAS										
TELEPHONE										
ELECTRIC										
DESIGN										
QUANTITIES										
PRELIMINARY/FINAL										
MUNICIPAL/STATE										

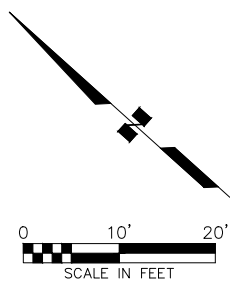
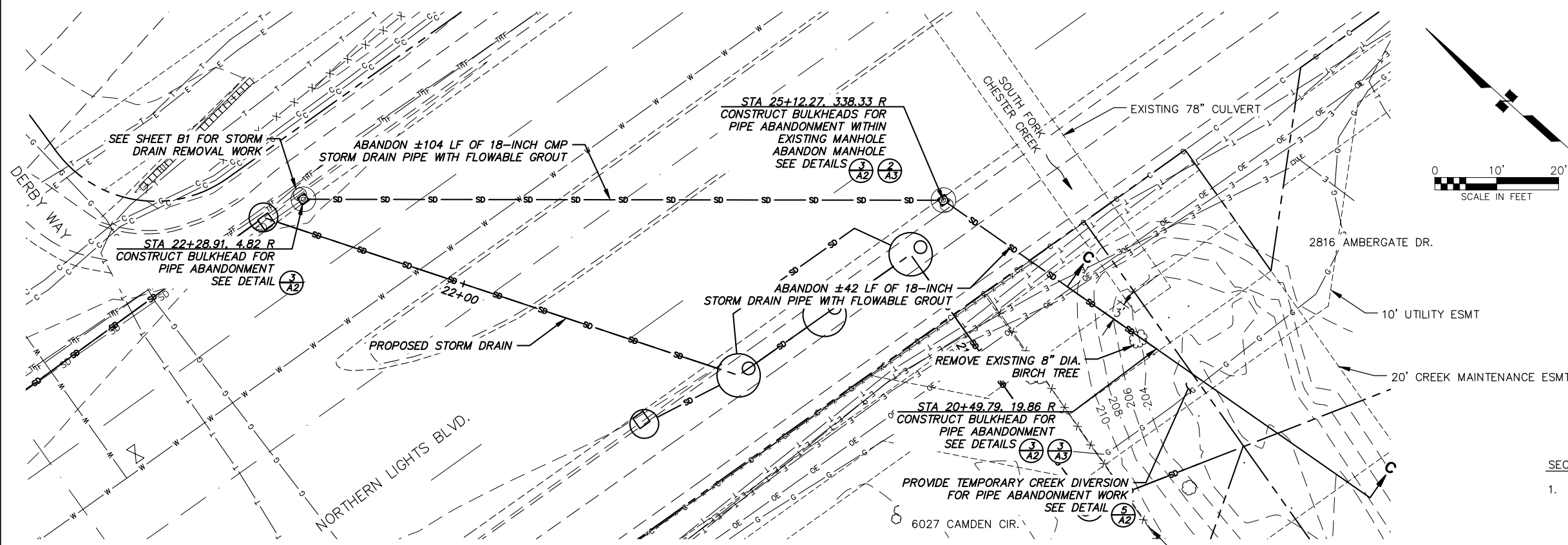
**Steph**  
 ENGINEERING LLC  
 3900 ARCTIC BLVD, SUITE 204  
 ANCHORAGE, ALASKA 99503  
 TEL: (907) 562-1468



**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**OUTFALL PIPE ABANDONMENT**  
 SCALE: HOR. N/A VER. N/A  
 GRID: SW538, SW638  
 DATE: JUNE 2023 STATUS: 95% SHEET: A2 of A3

File: S:\2309 Camrose Pipe Abandonment\07 - CAD\Camrose Pipe Abandonment P&P's FINAL\_CHECK\_SET.dwg

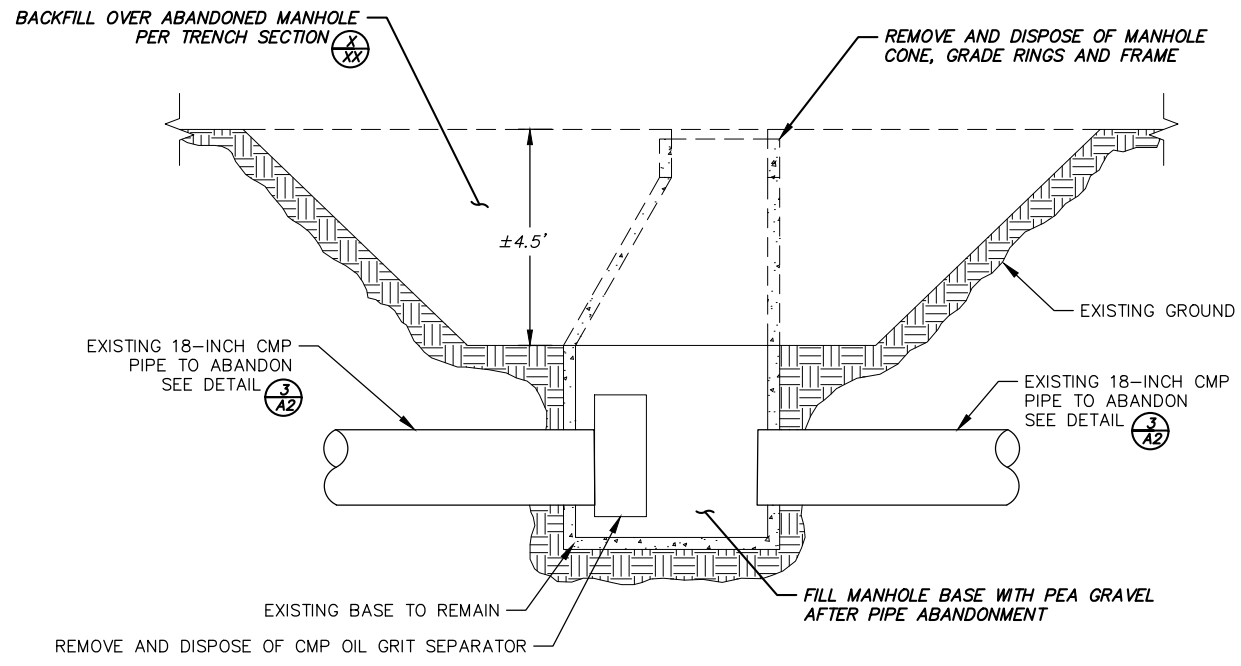
95% DESIGN



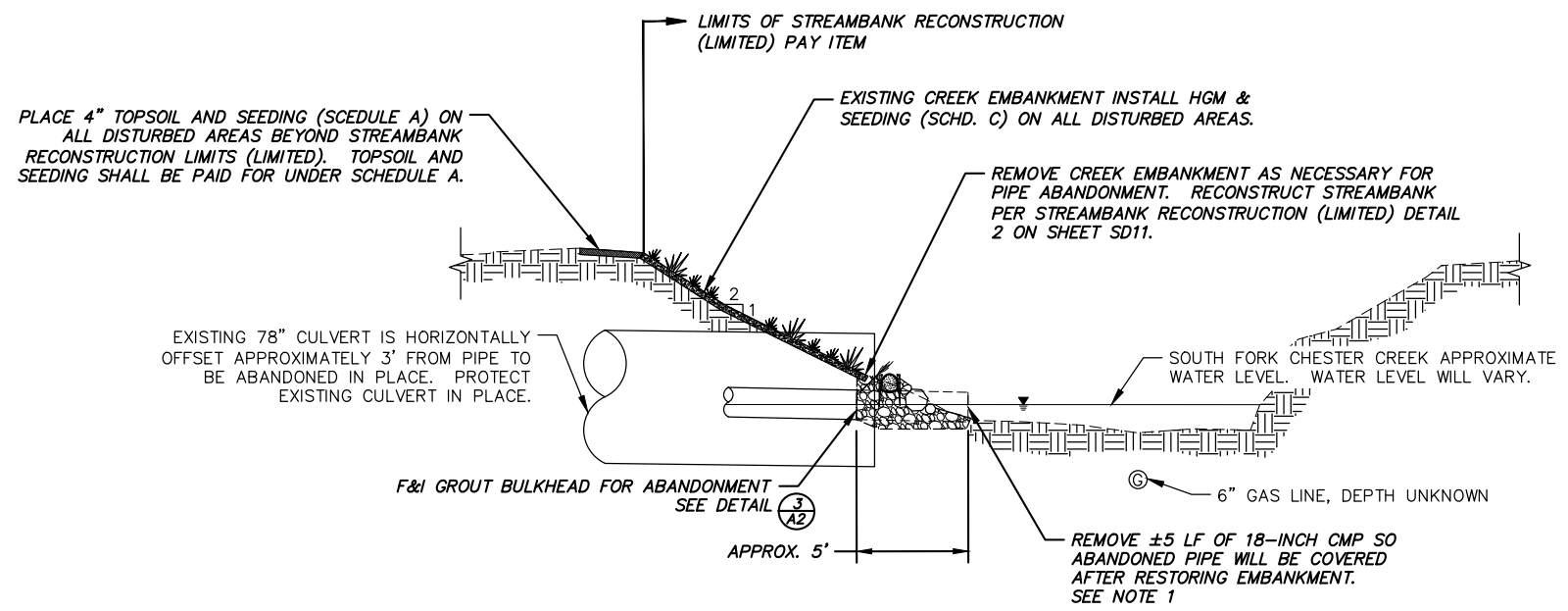
1  
A3  
STA. 20+49.79, 19.86 R OUTFALL  
SCALE: 1" = 10'

SECTION C-C NOTES:

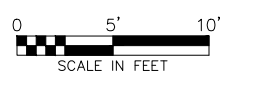
- EXISTING PIPE IS PARTIALLY SUBMERGED BELOW SOUTH FORK CHESTER CREEK WATER SURFACE AND WILL REQUIRE CREEK DIVERSION. SEE CREEK DIVERSION DETAIL (5/A2)



2  
A3  
MANHOLE ABANDONMENT  
SCALE: NTS



3  
A3  
SECTION C-C  
SCALE: 1" = 5'



File: S:\2309 Camrose Pipe Abandonment\07 - CAD\07 Camrose Pipe Abandonment P&P's FINAL\_CHECK SET.dwg

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
BASE TOPOGRAPHY										
PROFILE										
STORM SEWER										
WATER/SANITARY SEWER										
GAS										
TELEPHONE										
ELECTRIC										
DESIGN										
QUANTITIES										
PRELIMINARY/FINAL										
MUNICIPAL/STATE										

**Steph**  
ENGINEERING LLC

3900 ARCTIC BLVD, SUITE 204  
ANCHORAGE, ALASKA 99503  
TEL: (907) 562-1468

STATE OF ALASKA  
49 TH  
Russell Porter  
CE-13363  
REGISTERED PROFESSIONAL ENGINEER

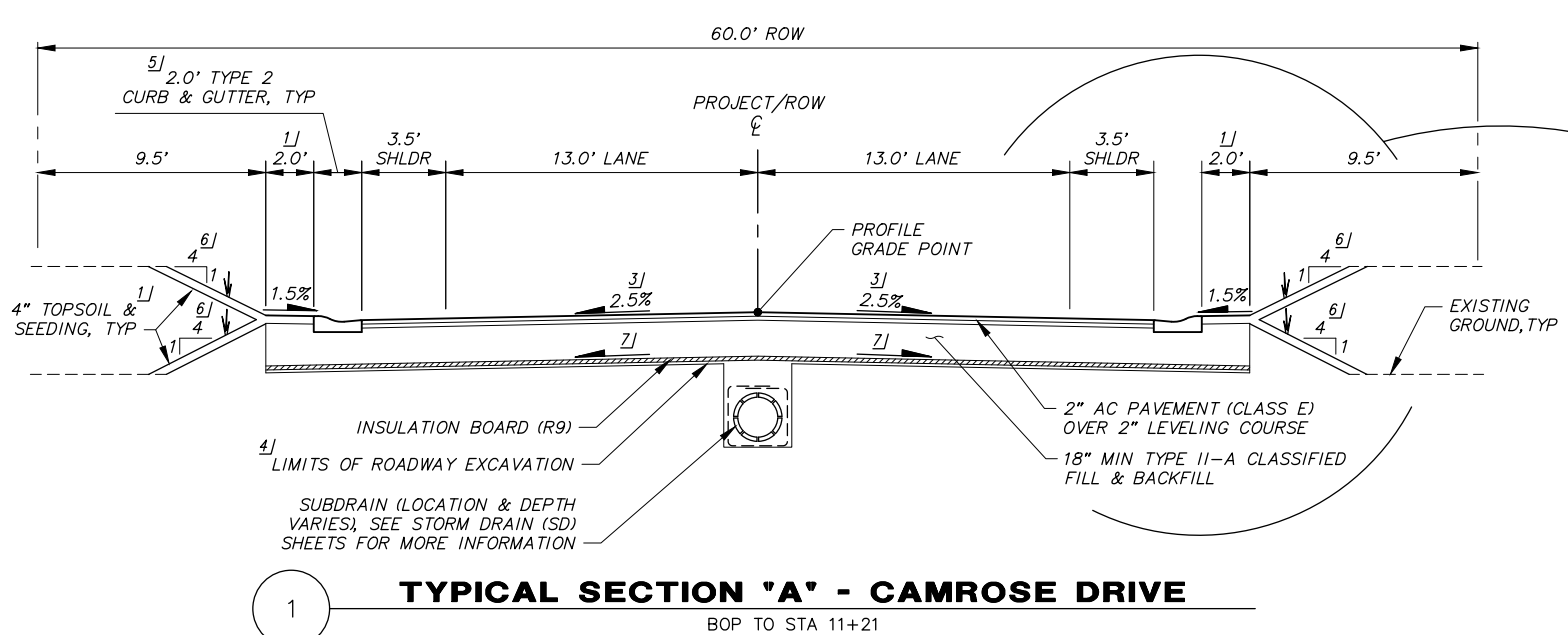


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

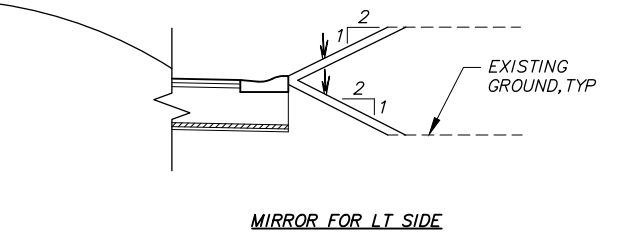
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**OUTFALL PIPE ABANDONMENT**

SCALE HOR. N/A VER. N/A GRID SW1538, SW1638 DATE JUNE 2023 STATUS 95% SHEET A3 of A3



**1** **TYPICAL SECTION 'A' - CAMROSE DRIVE**  
BOP TO STA 11+21



**2** **TYPICAL SECTION 'A1' CAMROSE DRIVE NARROWED SECTION**

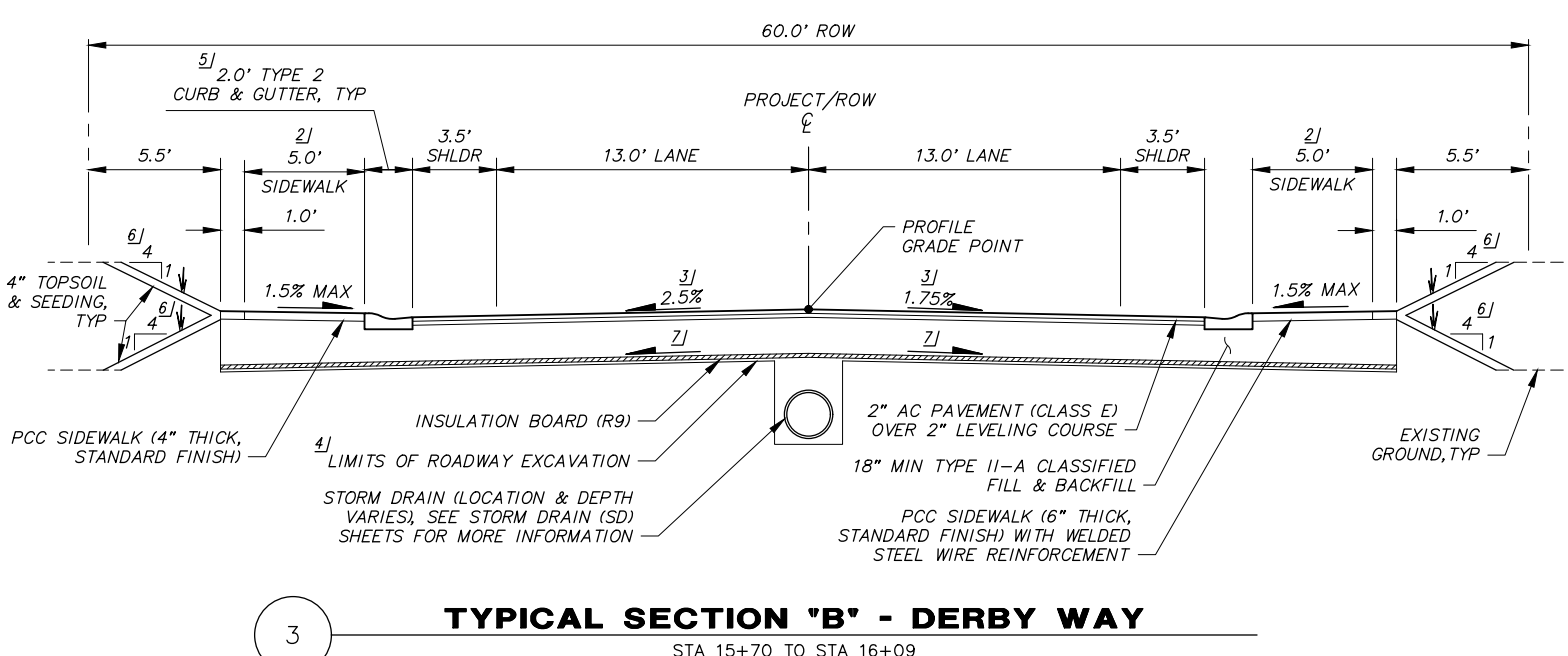
STA 4+82 TO STA 5+06, RT  
 STA 6+68 TO STA 6+85, RT  
 STA 6+99 TO STA 7+15, LT  
 STA 7+11 TO STA 7+27, RT  
 STA 7+31 TO STA 7+46, RT  
 STA 7+85 TO STA 8+09, RT

**#/ FOOT NOTES:**

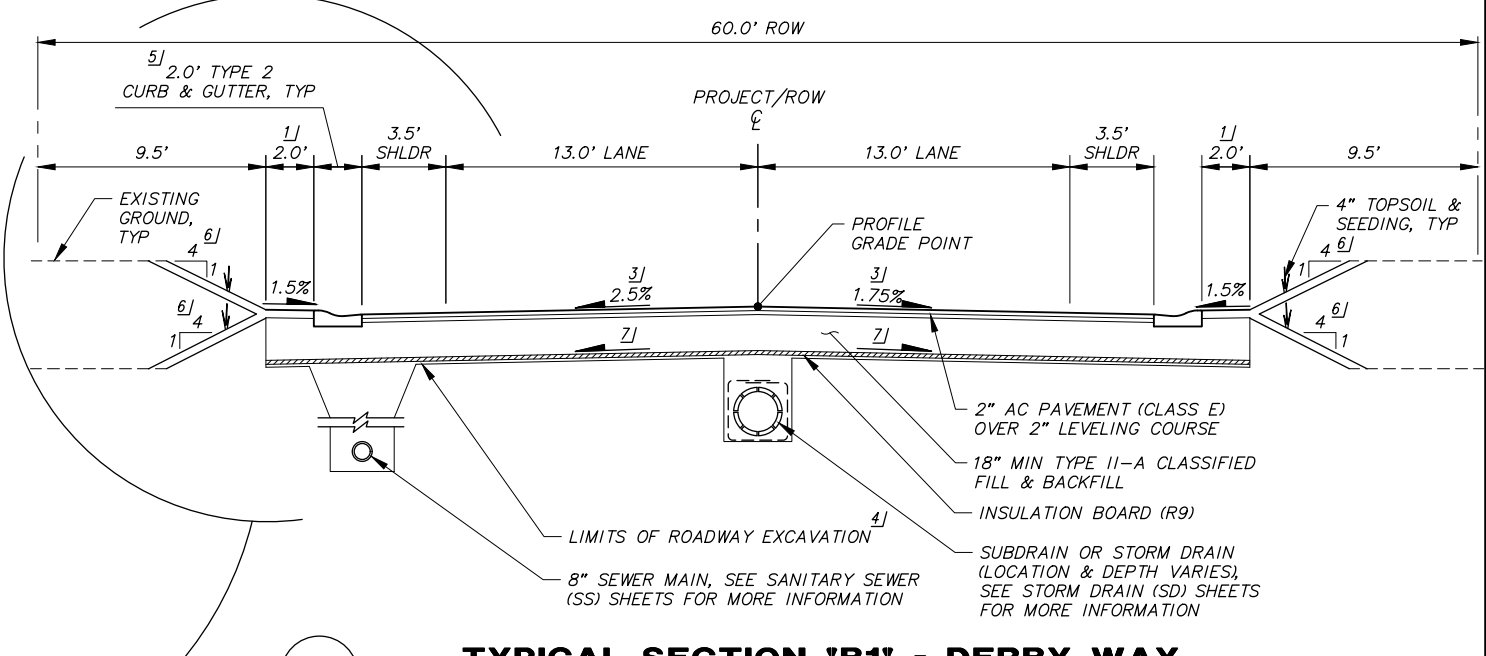
- PLACE 4" OF TOPSOIL AND SEEDING (SCHEDULE A) ON ALL DISTURBED AREAS.
- THE MAXIMUM SIDEWALK CROSS SLOPE GRADE IS 2% AT DRIVEWAYS.
- ROADWAY CROSS SLOPE VARIES AT SOME LOCATIONS ALONG SIDE STREETS. SEE INTERSECTION LAYOUT SHEETS FOR LOCATIONS. MODIFY ROADWAY CROSS SLOPE AS REQUIRED TO MATCH INTO EXISTING ROADWAY OR AS DIRECTED IN THE FIELD BY THE ENGINEER. PROVIDE SMOOTH TRANSITION TO MATCH EXISTING AND TO PROVIDE POSITIVE DRAINAGE TOWARD DRAINAGE STRUCTURES.
- PRIOR TO PLACEMENT OF FILL, NATIVE MATERIAL SHALL BE SCARIFIED, PROOF-ROLLED AND COMPACTED AS DIRECTED BY ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- TOP AC PAVEMENT SHALL BE 1/8" - 1/4" ABOVE LIP OF CURB, UNLESS OTHERWISE NOTED. SEE DETAIL 4, SHEET C3. SEE INTERSECTION LAYOUT SHEETS FOR LOCATIONS OF CURB TRANSITIONS.
- THE TYPICAL CUT/FILL SLOPES ARE 4 (HORIZONTAL): 1 (VERTICAL). MODIFY TYPICAL CUT/FILL SLOPES TO A MAXIMUM (STEEPEST) CUT/FILL SLOPE OF 2 (HORIZONTAL): 1 (VERTICAL) AS REQUIRED TO MATCH EXISTING GROUND WITHIN ROW. SEE CUT SLOPE SUMMARY TABLE, THIS SHEET, FOR LOCATIONS OF 2:1 CUT SLOPES. FILL SLOPES MAY VARY ALONG ROADWAY TO PROVIDE POSITIVE DRAINAGE TOWARD ROADWAY. SEE DETAIL 2, SHEET C3. SEE ROADWAY SHEETS FOR LOCATIONS. THE ENGINEER MAY ADJUST THE TYPICAL SLOPES IN THE FIELD.
- INSULATION SLOPE SHALL MATCH ROADWAY CROSS SLOPE.

**SHEET NOTES:**

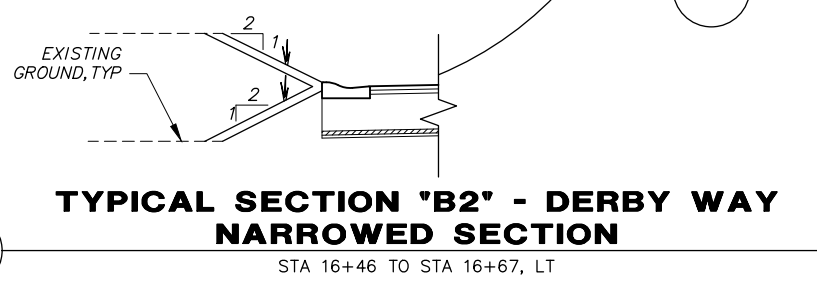
- THE STATION RANGES ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE ENGINEER.



**3** **TYPICAL SECTION 'B' - DERBY WAY**  
STA 15+70 TO STA 16+09



**4** **TYPICAL SECTION 'B1' - DERBY WAY**  
STA 16+09 TO STA 17+97



**5** **TYPICAL SECTION 'B2' - DERBY WAY NARROWED SECTION**  
STA 16+46 TO STA 16+67, LT

**2 (HORIZONTAL) : 1 (VERTICAL) CUT SLOPE SUMMARY**

APPROX BEGIN STATION	APPROX END STATION	OFFSET	REMARKS
BOP	1+90	LT	CAMROSE DRIVE
11+09	11+21	LT	CAMROSE DRIVE
15+70	16+10	LT & RT	DERBY WAY

File: I:\data\10152.00 Camrose Drive Storm Drainage\00 CAD 2019\01 Working Set\01 Civil\10152.00 Typical Sections.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 BY: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK			CONSTRUCTION RECORD		VERTICAL DATUM					

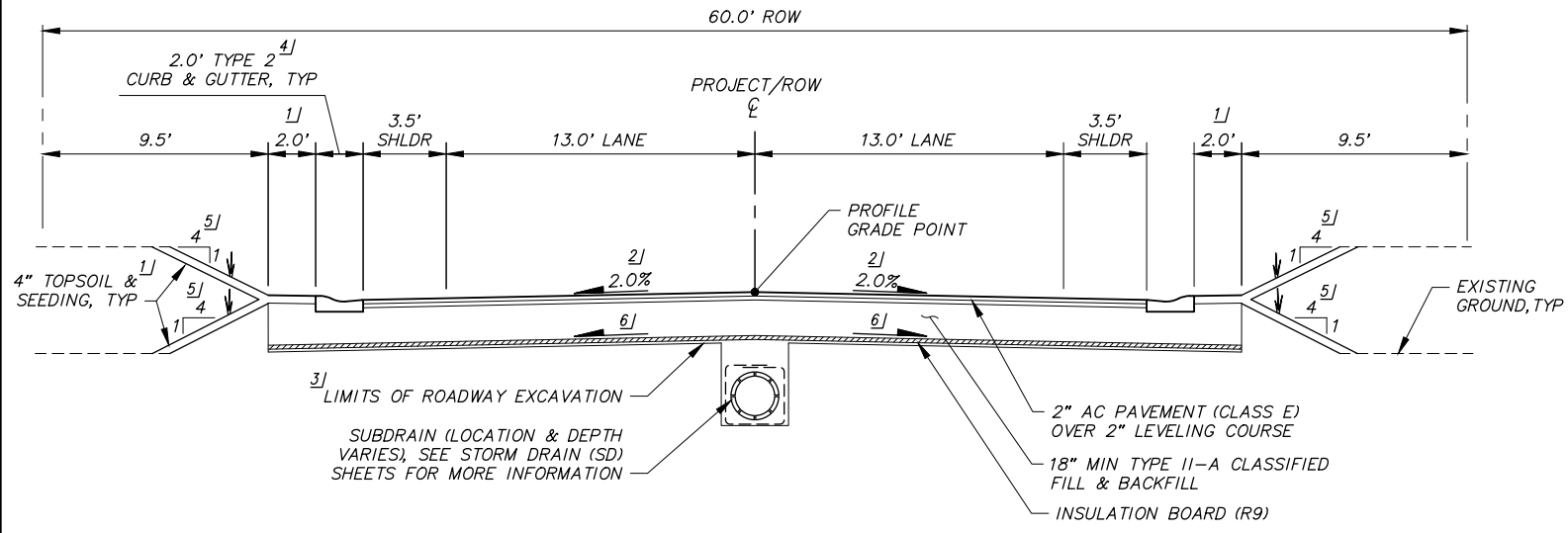
**CRW ENGINEERING GROUP, INC.**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC0882-AK

STATE OF ALASKA  
 49 TH  
 Robert W. Burdick  
 CE-123959  
 REGISTERED PROFESSIONAL ENGINEER

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
**TYPICAL SECTIONS**  
 CAMROSE DRIVE & DERBY WAY

SCALE HOR. N/A VER. N/A  
 GRID SW538, SW638  
 DATE JUNE 2023 STATUS 95% SHEET C1 of C3



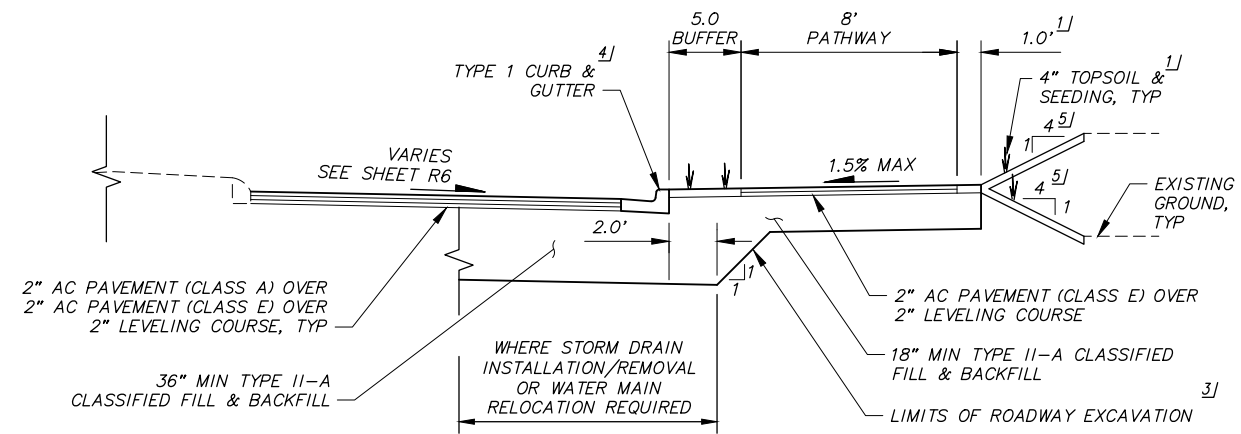
1 **TYPICAL SECTION 'C' - KENSINGTON DRIVE**  
STA 40+00 TO STA 40+56

**#/ FOOT NOTES:**

1. PLACE 4" OF TOPSOIL AND SEEDING (SCHEDULE A) ON ALL DISTURBED AREAS.
2. ROADWAY CROSS SLOPE VARIES AT SOME LOCATIONS ALONG SIDE STREETS. SEE INTERSECTION LAYOUT SHEETS FOR LOCATIONS. MODIFY ROADWAY CROSS SLOPE AS REQUIRED TO MATCH INTO EXISTING ROADWAY OR AS DIRECTED IN THE FIELD BY THE ENGINEER. PROVIDE SMOOTH TRANSITION TO MATCH EXISTING AND TO PROVIDE POSITIVE DRAINAGE TOWARD DRAINAGE STRUCTURES.
3. PRIOR TO PLACEMENT OF FILL, NATIVE MATERIAL SHALL BE SCARIFIED, PROOF-ROLLED AND COMPACTED AS DIRECTED BY ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
4. TOP AC PAVEMENT SHALL BE 1/8" - 1/4" ABOVE LIP OF CURB, UNLESS OTHERWISE NOTED. SEE DETAIL 4, SHEET C3. SEE INTERSECTION LAYOUT SHEETS FOR LOCATIONS OF CURB TRANSITIONS.
5. THE TYPICAL CUT/FILL SLOPES ARE 4 (HORIZONTAL): 1 (VERTICAL). MODIFY TYPICAL CUT/FILL SLOPES TO A MAXIMUM (STEEPEST) CUT/FILL SLOPE OF 2 (HORIZONTAL): 1 (VERTICAL) AS REQUIRED TO MATCH EXISTING GROUND WITHIN ROW. SEE CUT SLOPE SUMMARY TABLE, SHEET C1, FOR LOCATIONS OF 2:1 CUT SLOPES. FILL SLOPES MAY VARY ALONG ROADWAY TO PROVIDE POSITIVE DRAINAGE TOWARD ROADWAY. SEE DETAIL 2, SHEET C3. SEE ROADWAY SHEETS FOR LOCATIONS. THE ENGINEER MAY ADJUST THE TYPICAL SLOPES IN THE FIELD.
6. INSULATION SLOPE SHALL MATCH ROADWAY CROSS SLOPE.

**SHEET NOTES:**

1. THE STATION RANGES ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE ENGINEER.



2 **TYPICAL SECTION 'D' - E. NORTHERN LIGHTS BOULEVARD**  
STA 15+00 TO STA 15+70

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Typical Sections.dwg

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 BY: \_\_\_\_\_

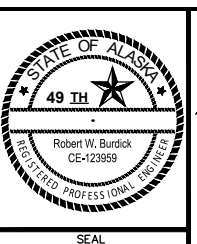
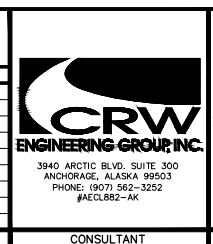
DATA	DRAWN BY	CHECKED BY	DATE
BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

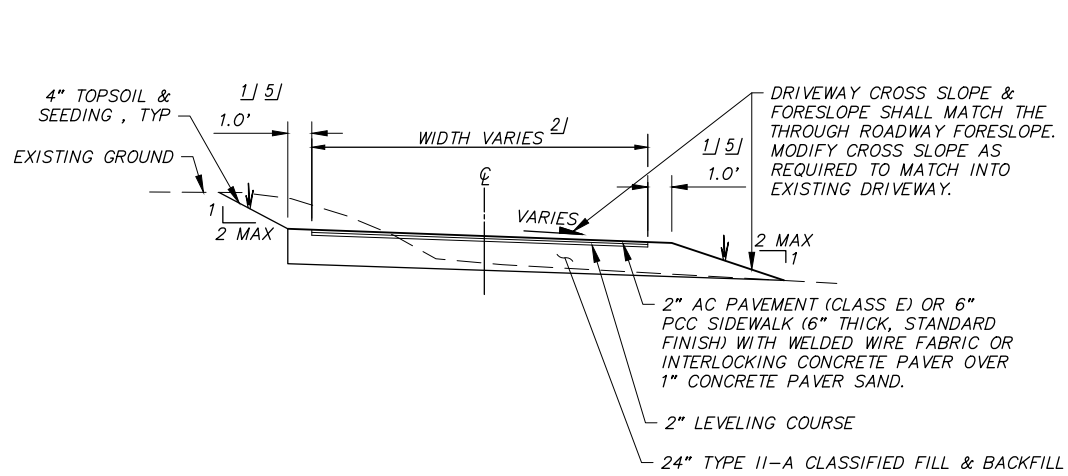
FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
	GAAB 15	ALT as shown in online MOA	324.72'				
		Benchmarks Map Gallery Application					

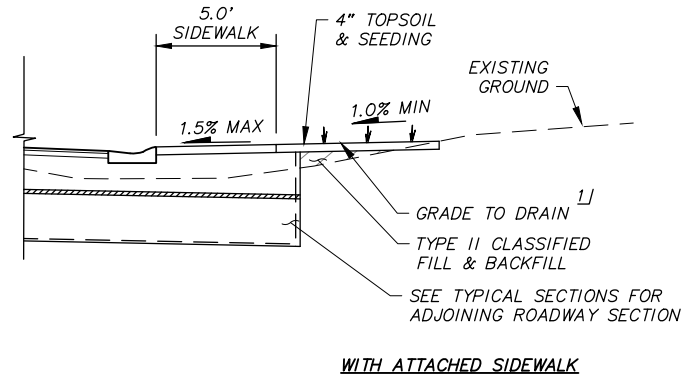
PLANS	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL
PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL



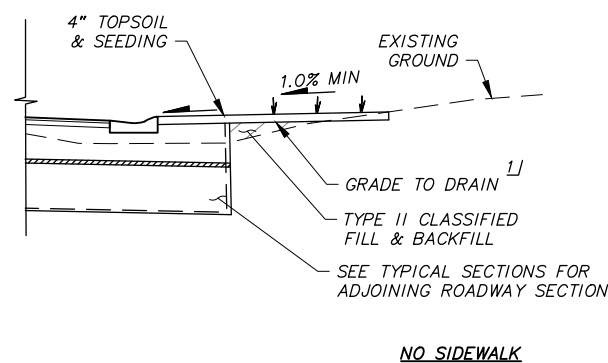
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
**TYPICAL SECTIONS**  
 KENSINGTON DRIVE & E. NORTHERN LIGHTS BOULEVARD  
 SCALE: HOR. N/A VER. N/A  
 GRID: SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95% SHEET C2 of C3



**TYPICAL SECTION 'E' DRIVEWAY  
PAVED, CONCRETE, OR INTERLOCKING CONCRETE PAVER**



WITH ATTACHED SIDEWALK

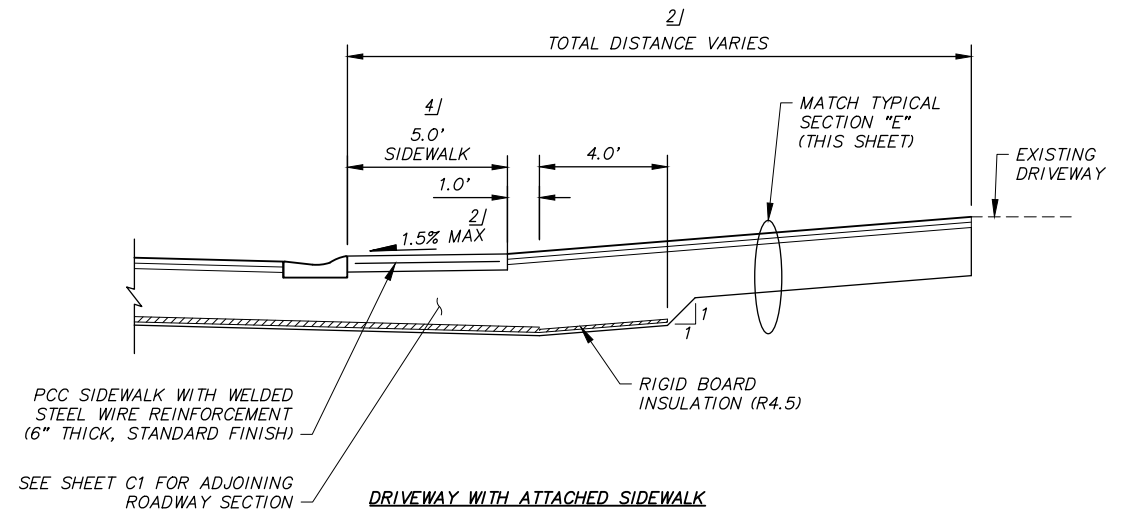


NO SIDEWALK

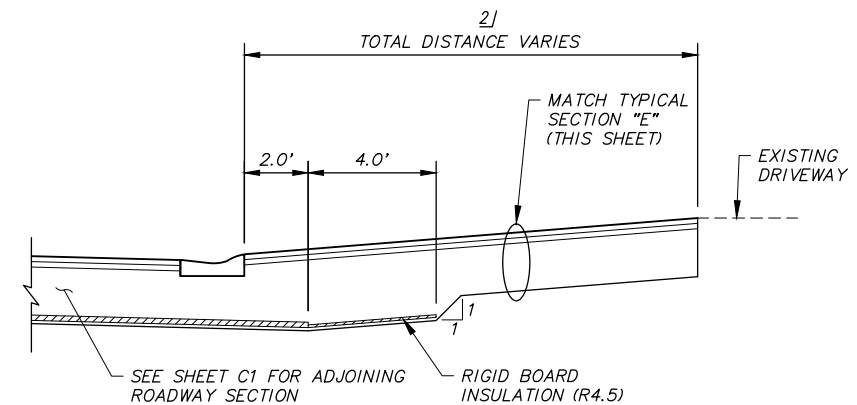
**SPECIAL FILL GRADING DETAILS**

**#1 FOOT NOTES:**

- PLACE 4" OF TOPSOIL AND SEEDING (SCHEDULE A) ON ALL DISTURBED AREAS.
- SEE 20.28 RECONSTRUCT DRIVEWAY SUMMARY TABLE SHEET T1 & RECONSTRUCT DRIVEWAY DETAILS 2 & 3 SHEET D2 FOR DRIVEWAY RECONSTRUCTION INFORMATION.
- INSTALL INSULATION ADJACENT TO DRIVEWAY AND TRANSITION TO DRIVEWAY SECTION PER DETAIL 3, THIS SHEET
- THE MAXIMUM SIDEWALK CROSS SLOPE IS 2% AT DRIVEWAYS. TRANSITION FROM TYPICAL 1.5% SIDEWALK CROSS SLOPE OVER 5 FEET.
- OMIT 1.0' SHOULDER FOR PARCEL 1, 12, & 22-25 DRIVEWAYS WITHIN 10' OF EXISTING TREES.

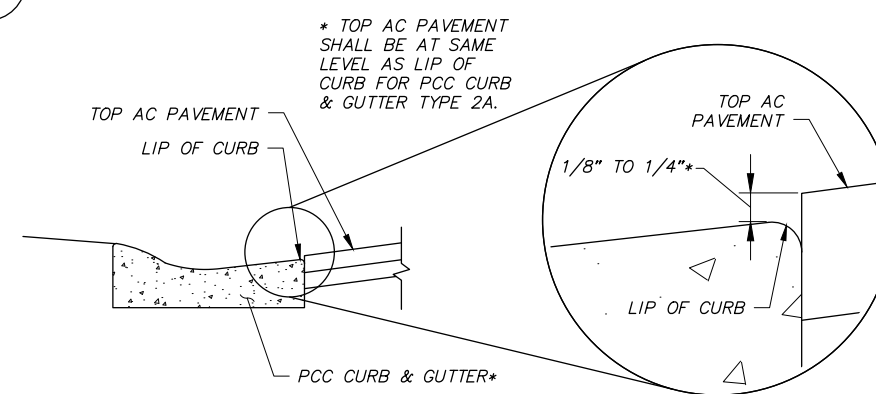


DRIVEWAY WITH ATTACHED SIDEWALK



DRIVEWAY WITH NO SIDEWALK

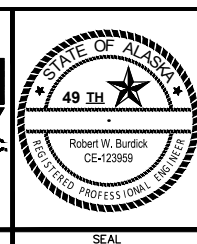
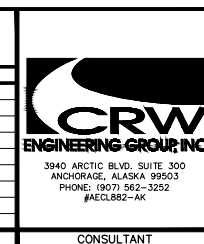
**TYPICAL DRIVEWAY CONNECTION SECTION**



**CURB AND GUTTER & AC PAVEMENT EDGE DETAIL**

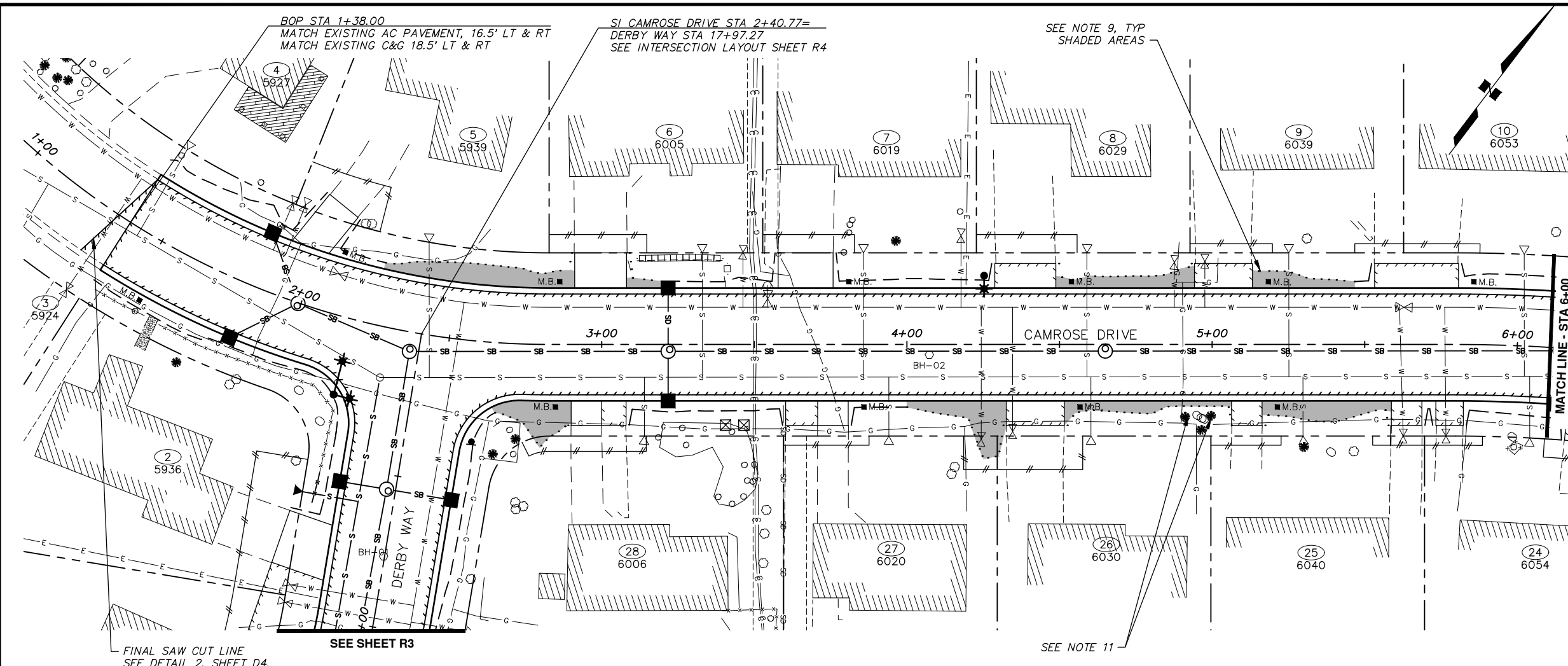
**RECORD DRAWING**  
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 BY: \_\_\_\_\_  
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 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK			Benchmarks Map Gallery Application					
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821							
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR	STAKING							
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH	ASBUILT							
QUANTITIES	JM	JH	CONTRACTOR							
PRELIMINARY/FINAL	JM	JH	INSPECTOR							
MUNICIPAL/STATE	JM	JH								
PLAN CHECK			CONSTRUCTION RECORD							
			VERTICAL DATUM							
			REVISIONS							
			CONSULTANT							
			SEAL							

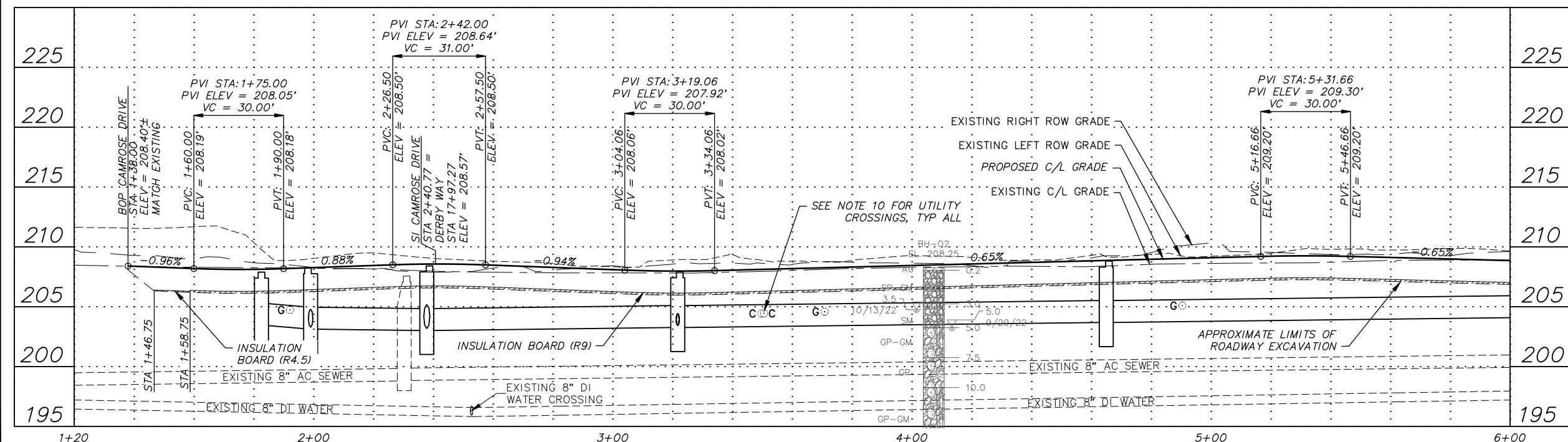


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	SCHED A	
TYPICAL SECTIONS			
MISCELLANEOUS			
SCALE	HOR. N/A VER. N/A	GRID SW1538, SW1638	DATE JUNE 2023 STATUS 95% SHEET
			C3 of C3

File: I:\lab\data\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Civil\10152.00 Typical Sections.dwg



- NOTES:**
- SEE ROADWAY SUMMARY TABLE (T) SHEETS FOR DETAILED ROADWAY INFORMATION.
  - SEE DETAIL (D) SHEETS FOR ROADWAY DETAILS.
  - SEE TYPICAL SECTION (C) SHEETS FOR ROADWAY CROSS SECTIONS.
  - FOR DETAILED SOILS INFORMATION, SEE THE SPECIFICATIONS.
  - SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS AND ELEVATIONS OF STORM DRAIN PIPES & STRUCTURES.
  - SEE SURVEY CONTROL (V) SHEETS FOR PROJECT CENTERLINE ALIGNMENT DATA.
  - SEE ILLUMINATION (I) SHEETS FOR ROADWAY LIGHTING INFORMATION.
  - THE DEMOLITION ITEMS REMOVED AS SHOWN ON THE DEMOLITION (B) SHEETS ARE NOT SHOWN FOR CLARITY.
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  - CAUTION!!! THE LOCATION OF EXISTING UTILITY CROSSINGS SHOWN IN PROFILE ARE APPROXIMATE. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY OR AS NOTED.
  - PROTECT EXISTING TREE IN PLACE. SEE NARROWED TYPICAL SECTION 2, SHEET C1. NARROWED TYPICAL SECTION SHALL BE 10' ON EITHER SIDE OF TREE OR TO THE NEAREST DRIVEWAY EDGE IF DRIVEWAY IS WITHIN 10' OF TREE.



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 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

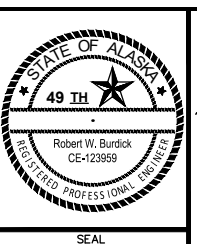
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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES/FINAL	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

BASIS OF THIS DATUM GAAB 1972 ADJUST

**CRW ENGINEERING GROUP, LLC**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC0882-AK



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

**ROADWAY PLAN & PROFILE**

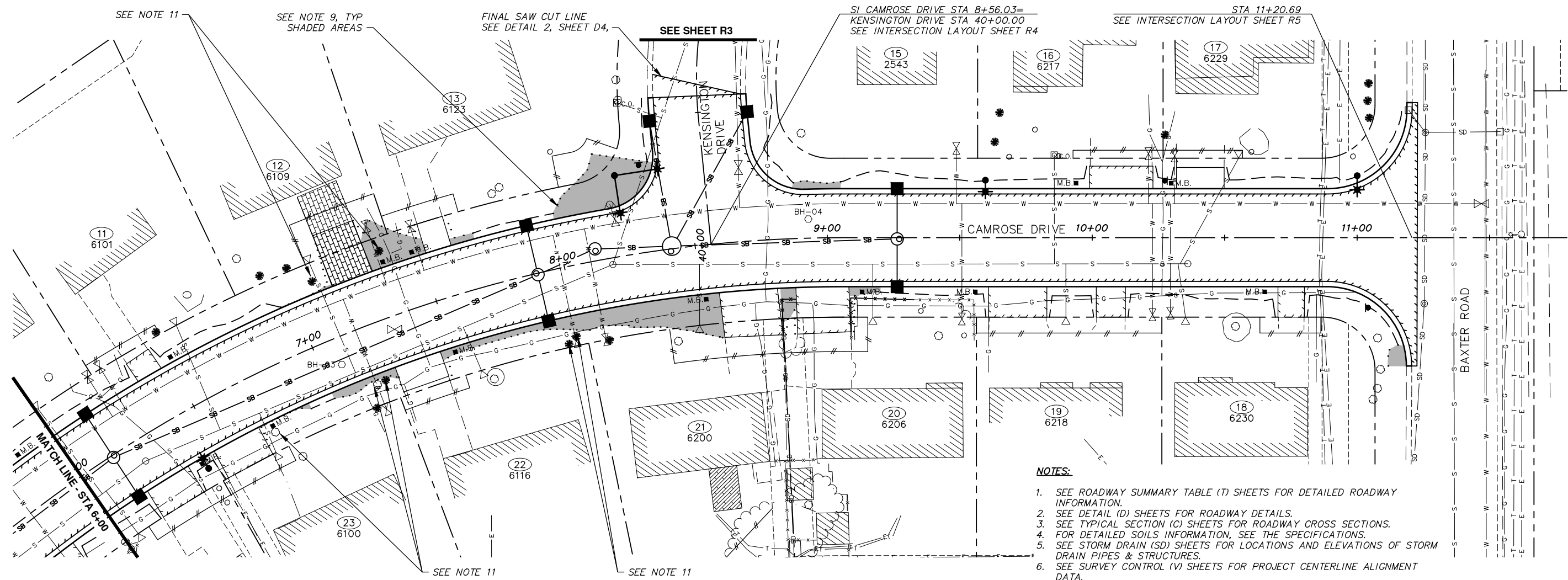
CAMROSE DRIVE - BOP TO STA 6+00

SCALE: HOR. 1"=20'  
 VER. 1"=5'

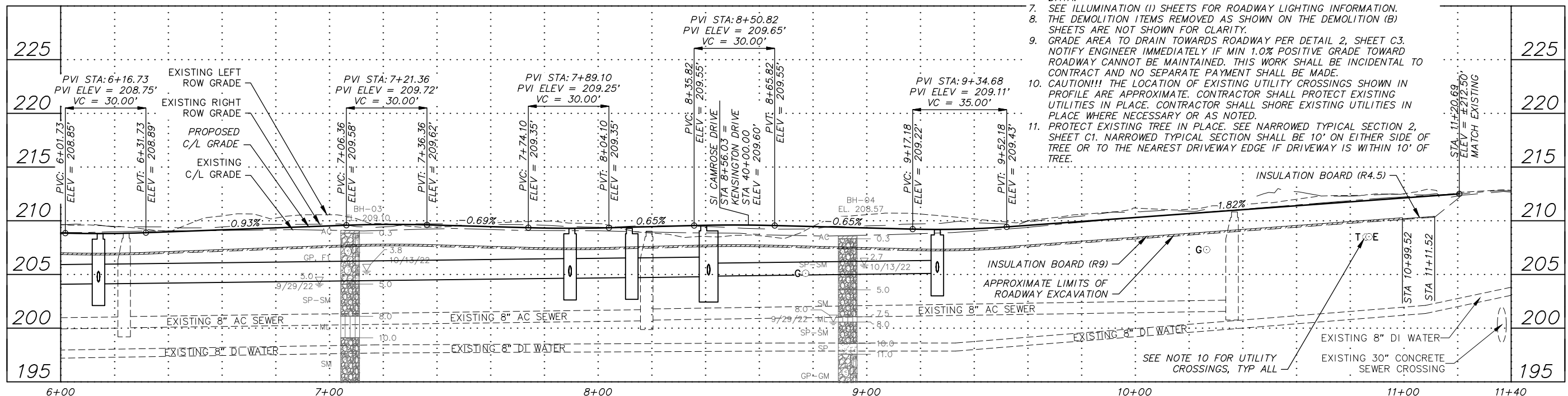
GRID SW538, SW638

DATE: JUNE 2023 STATUS: 95% SHEET R1 of R6





- NOTES:**
- SEE ROADWAY SUMMARY TABLE (T) SHEETS FOR DETAILED ROADWAY INFORMATION.
  - SEE DETAIL (D) SHEETS FOR ROADWAY DETAILS.
  - SEE TYPICAL SECTION (C) SHEETS FOR ROADWAY CROSS SECTIONS.
  - FOR DETAILED SOILS INFORMATION, SEE THE SPECIFICATIONS.
  - SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS AND ELEVATIONS OF STORM DRAIN PIPES & STRUCTURES.
  - SEE SURVEY CONTROL (V) SHEETS FOR PROJECT CENTERLINE ALIGNMENT DATA.
  - SEE ILLUMINATION (I) SHEETS FOR ROADWAY LIGHTING INFORMATION.
  - THE DEMOLITION ITEMS REMOVED AS SHOWN ON THE DEMOLITION (B) SHEETS ARE NOT SHOWN FOR CLARITY.
  - GRADE AREA TO DRAIN TOWARDS ROADWAY PER DETAIL 2, SHEET C3. NOTIFY ENGINEER IMMEDIATELY IF MIN 1.0% POSITIVE GRADE TOWARD ROADWAY CANNOT BE MAINTAINED. THIS WORK SHALL BE INCIDENTAL TO CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
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 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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 DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	DATE
BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

**CRW ENGINEERING GROUP, LLC**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC1882-AK

**STATE OF ALASKA**  
 49 TH  
 Robert W. Burdick  
 REGISTERED PROFESSIONAL ENGINEER

**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

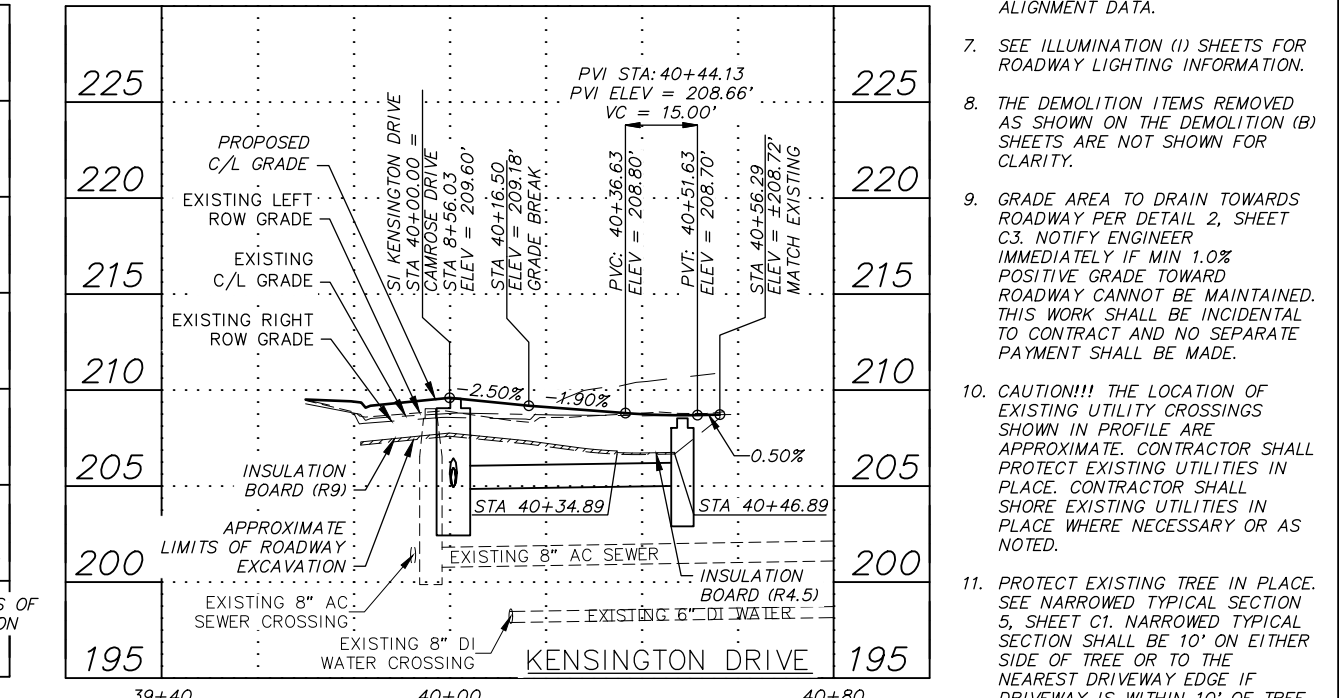
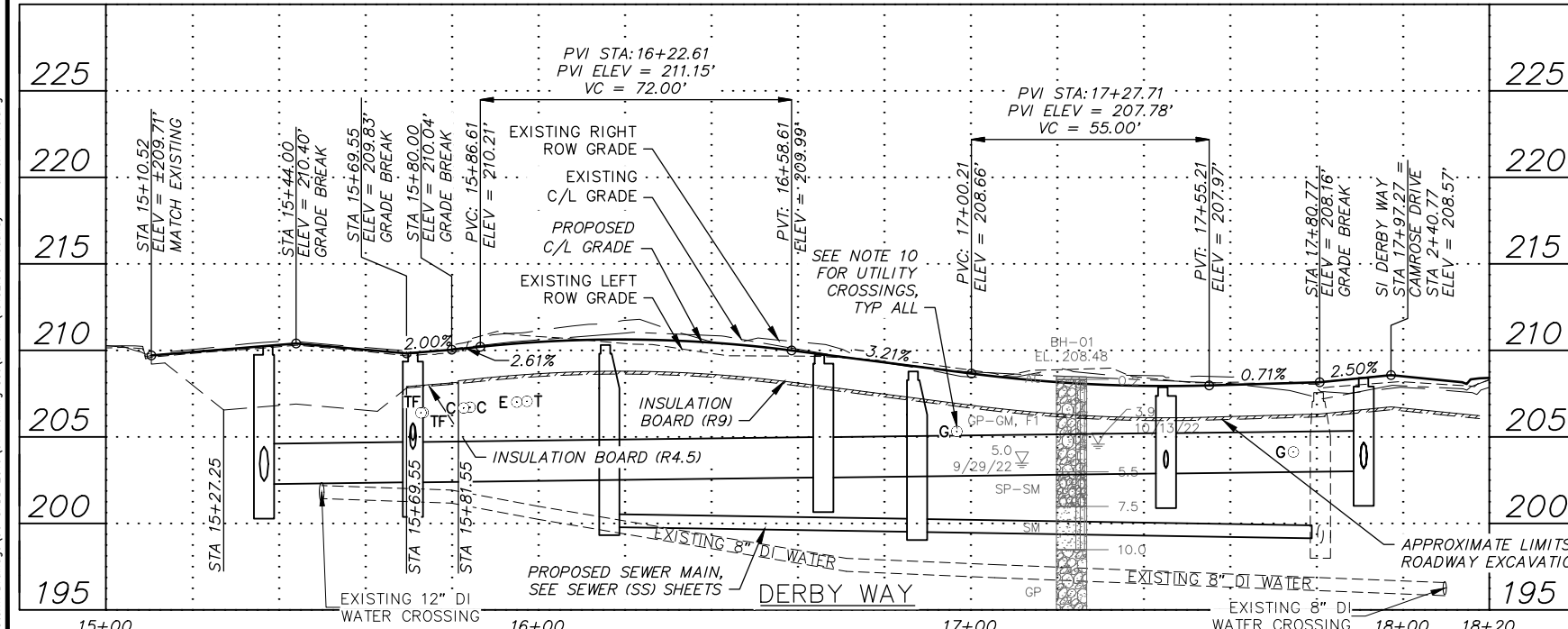
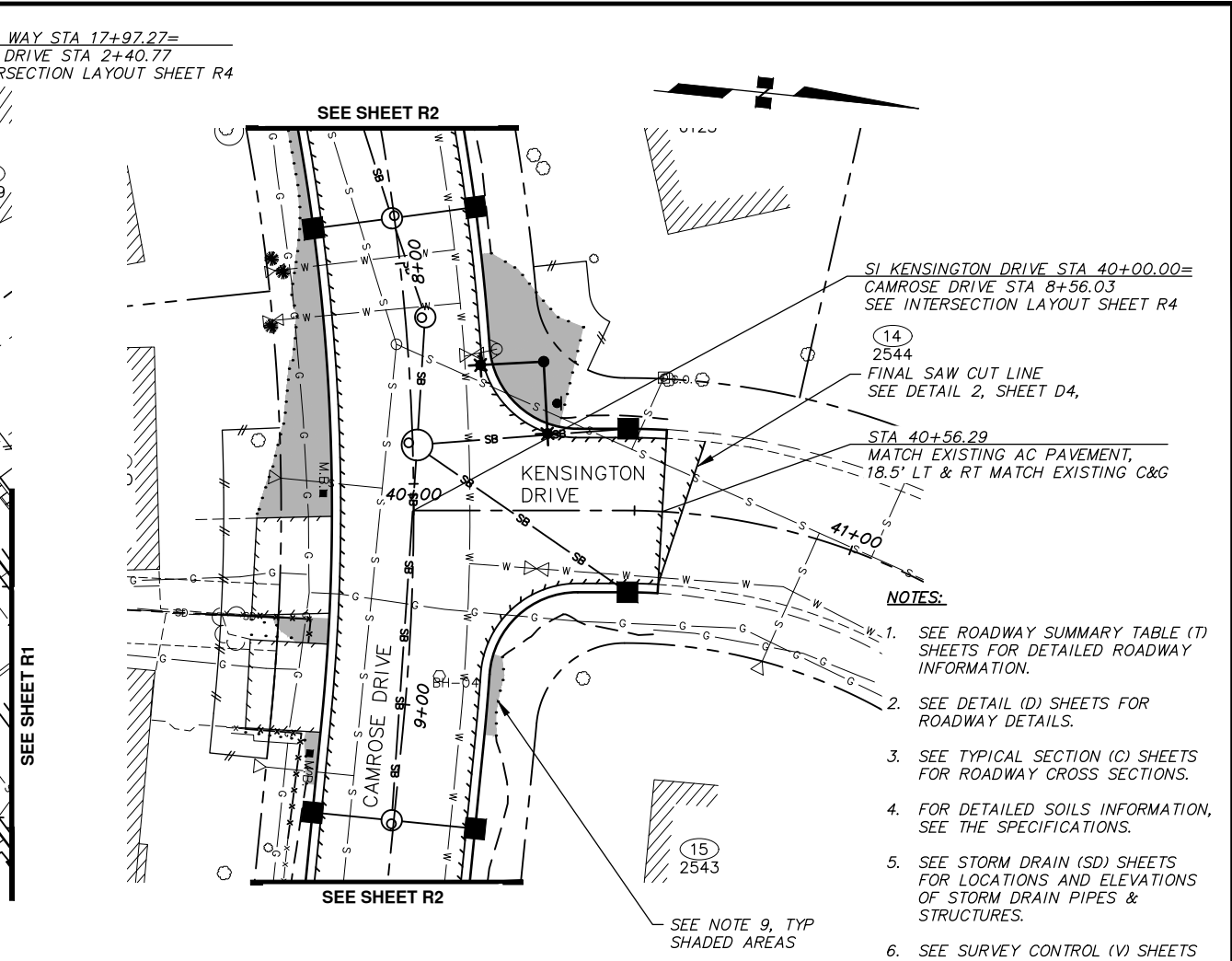
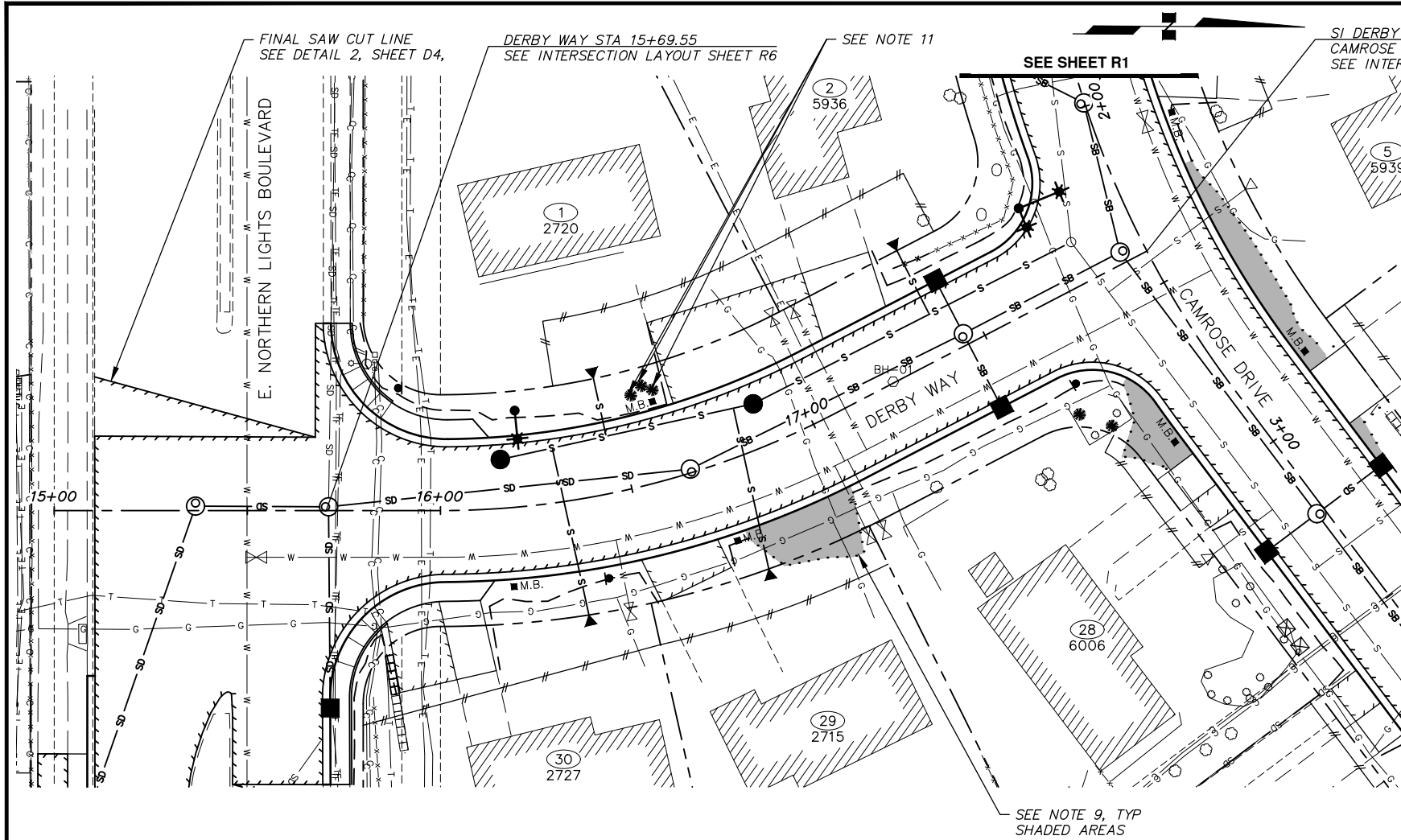
**ROADWAY PLAN & PROFILE**

CAMROSE DRIVE - STA 6+00 TO STA 11+21

SCALE HOR. 1"=20'  
 VER. 1"=5'

GRID SW138, SW139  
 DATE JUNE 2023 STATUS 95% SHEET R2 of R6

File: I:\subdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Roadway - Plan & Profile.dwg



- NOTES:**
- SEE ROADWAY SUMMARY TABLE (T) SHEETS FOR DETAILED ROADWAY INFORMATION.
  - SEE DETAIL (D) SHEETS FOR ROADWAY DETAILS.
  - SEE TYPICAL SECTION (C) SHEETS FOR ROADWAY CROSS SECTIONS.
  - FOR DETAILED SOILS INFORMATION, SEE THE SPECIFICATIONS.
  - SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS AND ELEVATIONS OF STORM DRAIN PIPES & STRUCTURES.
  - SEE SURVEY CONTROL (V) SHEETS FOR PROJECT CENTERLINE ALIGNMENT DATA.
  - SEE ILLUMINATION (I) SHEETS FOR ROADWAY LIGHTING INFORMATION.
  - THE DEMOLITION ITEMS REMOVED AS SHOWN ON THE DEMOLITION (B) SHEETS ARE NOT SHOWN FOR CLARITY.
  - GRADE AREA TO DRAIN TOWARDS ROADWAY PER DETAIL 2, SHEET C3. NOTIFY ENGINEER IMMEDIATELY IF MIN 1.0% POSITIVE GRADE TOWARD ROADWAY CANNOT BE MAINTAINED. THIS WORK SHALL BE INCIDENTAL TO CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
  - CAUTION!!! THE LOCATION OF EXISTING UTILITY CROSSINGS SHOWN IN PROFILE ARE APPROXIMATE. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY OR AS NOTED.
  - PROTECT EXISTING TREE IN PLACE. SEE NARROWED TYPICAL SECTION 5, SHEET C1. NARROWED TYPICAL SECTION SHALL BE 10' ON EITHER SIDE OF TREE OR TO THE NEAREST DRIVEWAY EDGE IF DRIVEWAY IS WITHIN 10' OF TREE.

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DATA	DRAWN BY	CHECKED BY	DATE
BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

GRAPHIC SCALE: 40 20 0 20 40

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**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

**ROADWAY PLAN & PROFILE**

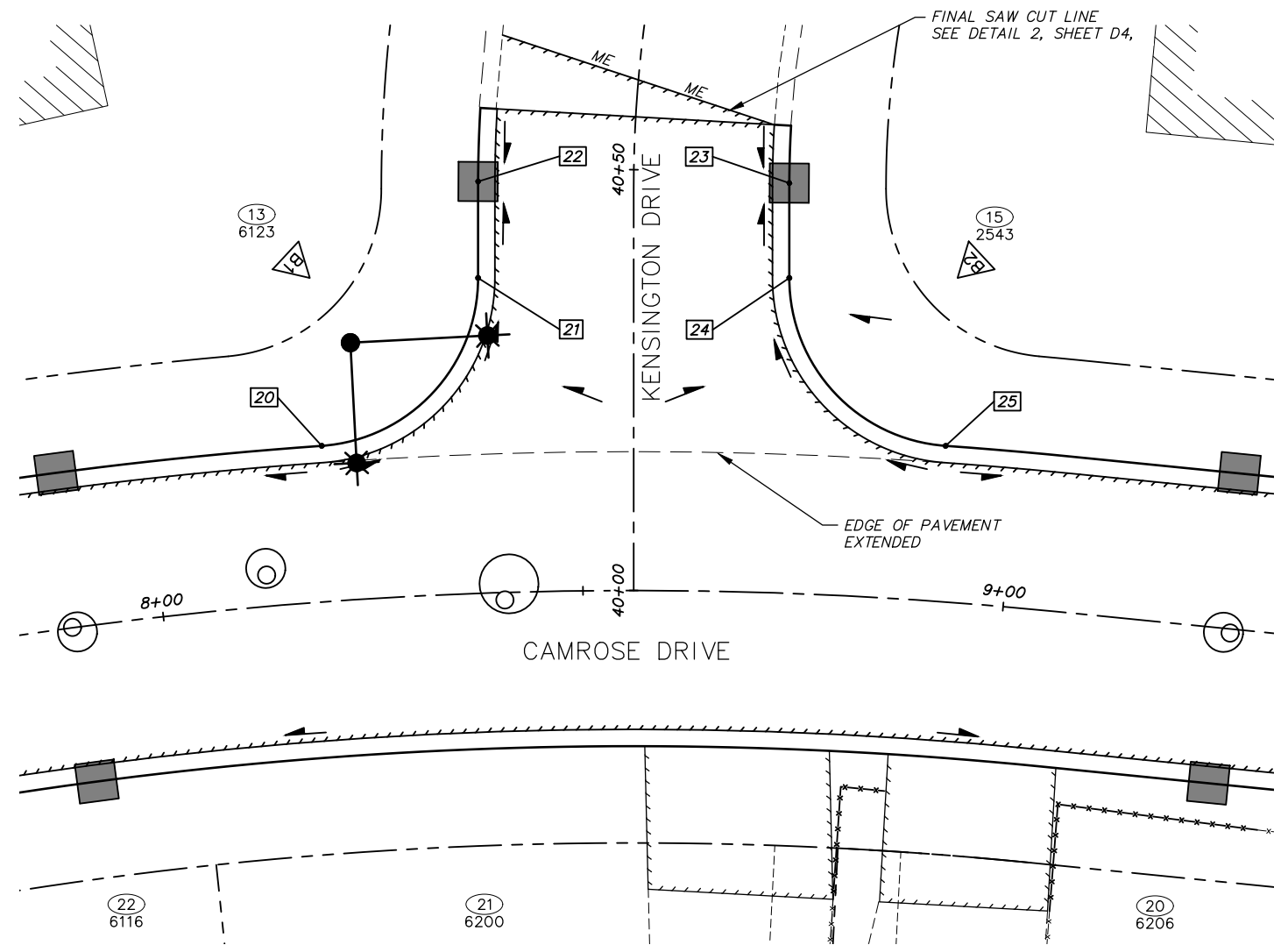
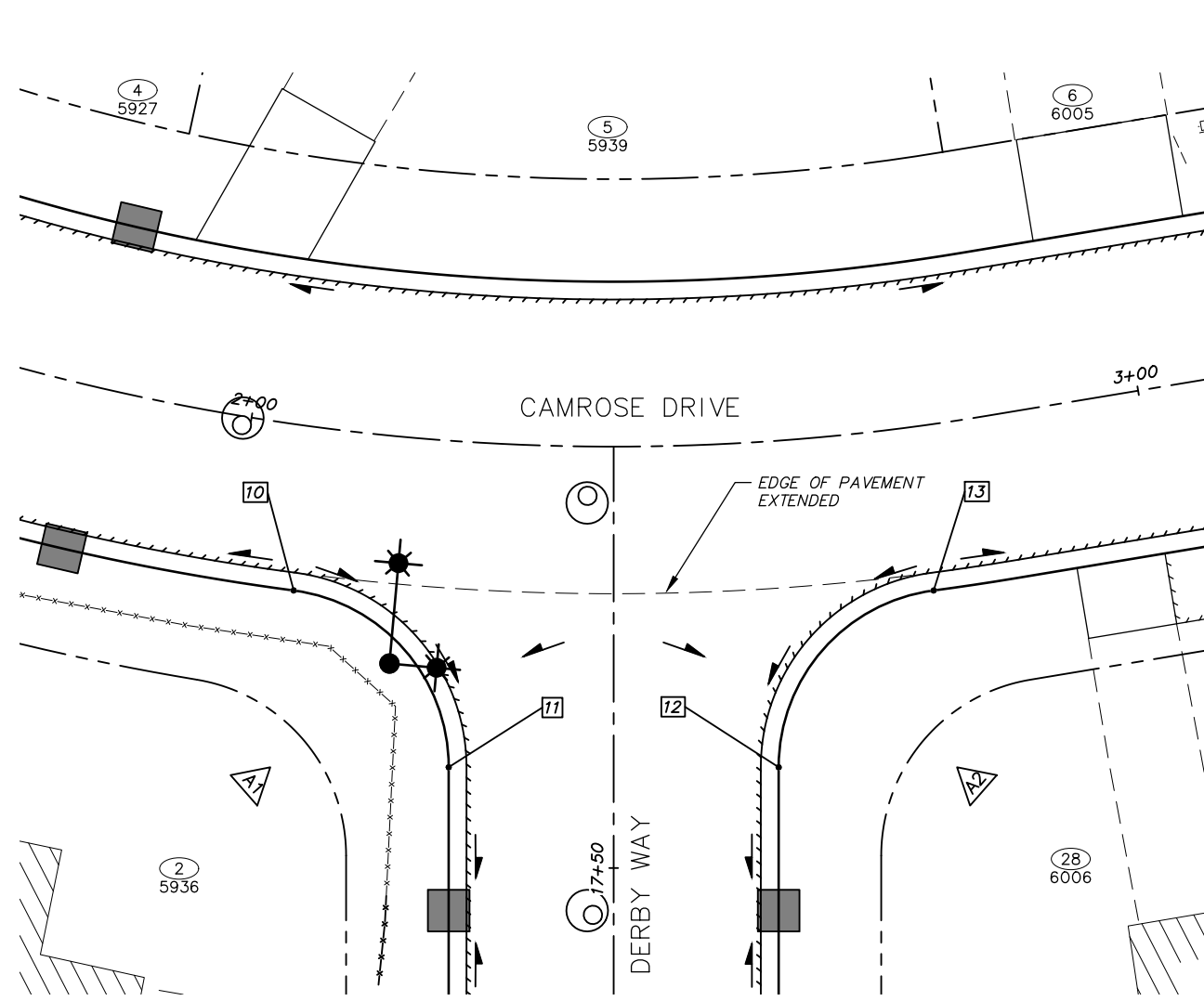
DERBY WAY & KENSINGTON DRIVE

SCALE: HOR. 1"=20'  
 VER. 1"=5'

GRID SW138, SW139

DATE: JUNE 2023 STATUS: 95% SHEET R3 of R6

File: I:\JobsData\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Roadway - Plan & Profile.dwg



□ POINT SUMMARY – CAMROSE DRIVE AT DERBY WAY

POINT	STATION	OFFSET (FT)	TBC ELEV (FT)	CURB TYPE	LIP OF CURB ELEV (FT)	TO NEXT POINT*		DESCRIPTION
						LENGTH (FT)	SLOPE (%)	
10	2+07.23	18.5 RT	208.09	2	207.92	31.66	-1.00%	PC
11	2+24.58	36.6 RT	207.78	2	207.61	-	-	PT
12	2+56.97	36.6 RT	207.90	2	207.73	31.66	0.62%	PC
13	2+74.32	18.5 RT	208.10	2	207.93	-	-	PT

\* LENGTH & SLOPE TO NEXT POINT IS ALONG LIP OF CURB

□ POINT SUMMARY – CAMROSE DRIVE AT KENSINGTON DRIVE

POINT	STATION	OFFSET (FT)	TBC ELEV (FT)	CURB TYPE	LIP OF CURB ELEV (FT)	TO NEXT POINT*		DESCRIPTION
						LENGTH (FT)	SLOPE (%)	
20	8+20.22	18.5 RT	209.21	2	209.04	33.00	-1.75%	PC
21	8+38.80	37.5 RT	208.63	2	208.46	11.45	-0.90%	PT
22	8+39.16	48.9 RT	208.53	2	208.36	-	-	CATCH BASIN
23	8+72.90	48.7 RT	208.53	2	208.36	11.28	0.91%	CATCH BASIN
24	8+73.25	37.5 RT	208.63	2	208.46	33.00	1.54%	PC
25	8+91.83	18.5 RT	209.14	2	208.97	-	-	PT

\* LENGTH & SLOPE TO NEXT POINT IS ALONG LIP OF CURB

**LEGEND**  
 APPROXIMATE DIRECTION OF DRAINAGE FLOWS

- NOTES**
- SEE ROADWAY (R) SHEETS FOR ROADWAY & SIDEWALK LOCATIONS.
  - SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
  - SEE SIGNING & STRIPING (S) SHEETS FOR LOCATIONS & TYPES OF SIGNS & TRAFFIC MARKINGS.
  - LIP OF CURB IS FRONT OF CURB AND GUTTER AT EDGE OF PAVEMENT.

△ CURB RADIUS TABLE

POINT	TBC RADIUS POINT		RADIUS (FT)	DESCRIPTION
	STATION	OFFSET (FT)		
A1	2+07.23	38.5 RT	20.0	DERBY WAY
A2	2+74.32	38.5 RT	20.0	DERBY WAY
B1	8+20.22	38.5 LT	20.0	KENSINGTON DRIVE
B2	8+91.83	38.5 LT	20.0	KENSINGTON DRIVE

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Intersection Layout.dwg

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 BY: \_\_\_\_\_

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 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821							
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

GRAPHIC SCALE: 20 10 0 10 20

PLAN CHECK CONSTRUCTION RECORD VERTICAL DATUM REVISIONS CONSULTANT SEAL



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

INTERSECTION LAYOUT

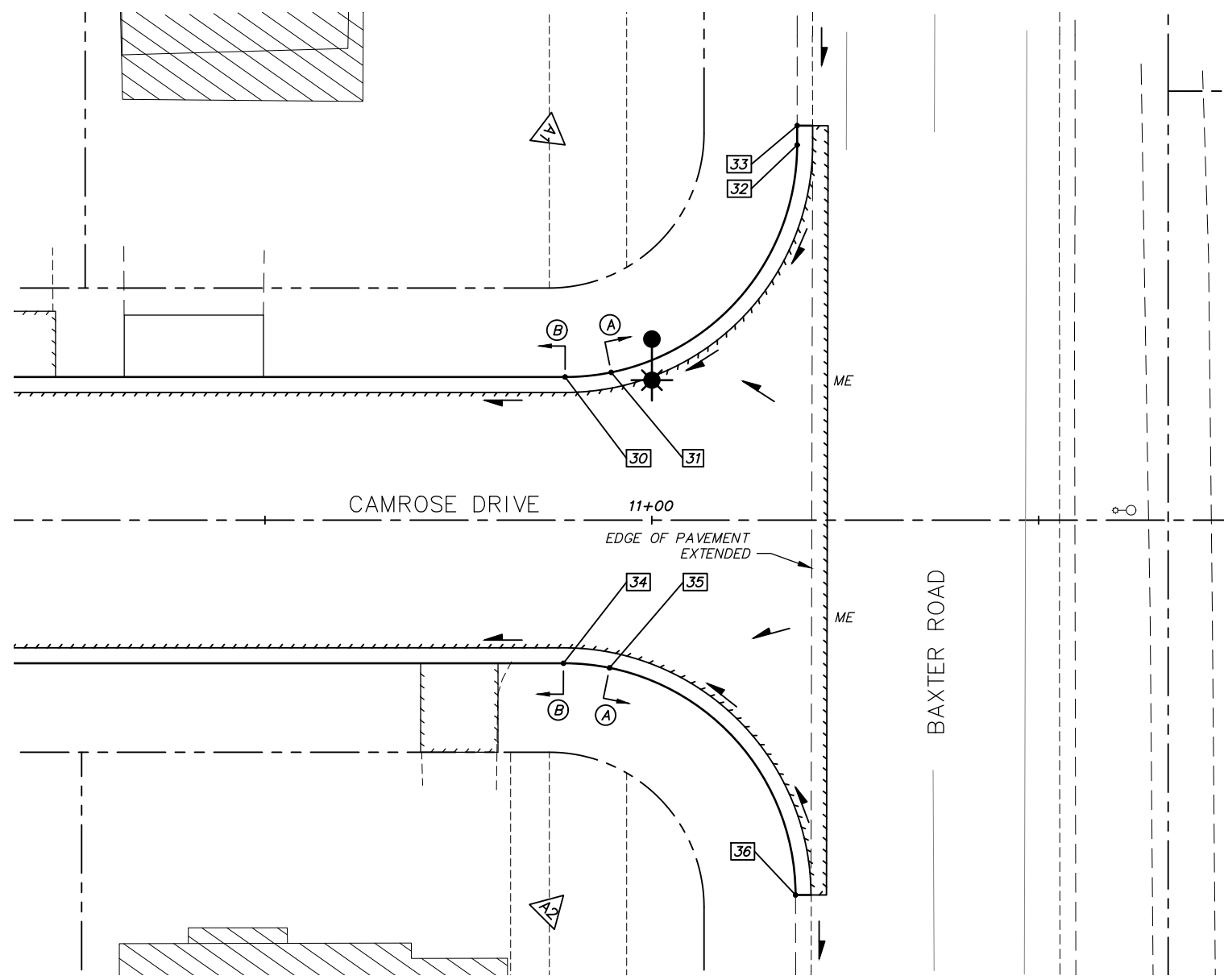
DERBY WAY & KENSINGTON DRIVE

SCALE: HOR. 1"=10' VER. N/A

GRID SW538, SW638

DATE: JUNE 2023 STATUS: 95% SHEET R4 of R6

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00\_CADD\2019\01\_Working Set\01\_Civil\10152.00 Intersection\_Layout.dwg



□ POINT SUMMARY – CAMROSE DRIVE AT BAXTER ROAD

POINT	STATION	OFFSET (FT)	TBC ELEV (FT)	CURB TYPE	LIP OF CURB ELEV (FT)	TO NEXT POINT*		DESCRIPTION
						LENGTH (FT)	SLOPE (%)	
30	10+88.79	18.5 RT	211.68	2	211.51	6.40	2.38%	PC, END TYPE 2 CURB & GUTTER
31	10+94.75	19.1 RT	212.06	1	211.66	43.85	2.38%	BEGIN TYPE 1 CURB & GUTTER
32	11+18.79	48.5 RT	213.10	1	212.70	2.50	0.63%	PT
33	11+18.79	51.0 RT	213.17±	1	212.72±		–	MATCH EXISTING
34	10+88.58	18.5 RT	211.67	2	211.50	6.40	1.71%	PC, END TYPE 2 CURB & GUTTER
35	10+94.54	19.1 RT	212.01	1	211.61	43.81	1.71%	BEGIN TYPE 1 CURB & GUTTER
36	11+18.58	48.5 RT	212.76±	1	212.36±		–	PT, MATCH EXISTING

\* LENGTH & SLOPE TO NEXT POINT IS ALONG LIP OF CURB

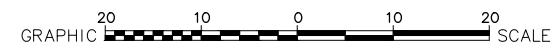
△ CURB RADIUS TABLE

POINT	TBC RADIUS POINT		RADIUS (FT)	DESCRIPTION
	STATION	OFFSET (FT)		
A1	10+88.79	48.5 LT	30.0	BAXTER ROAD
A2	10+88.58	48.5 RT	30.0	BAXTER ROAD

DESIGNATION CURB TYPE  
 (A) TYPE 1 CURB  
 (B) TYPE 2 CURB

LEGEND  
 ——— APPROXIMATE DIRECTION OF DRAINAGE FLOWS

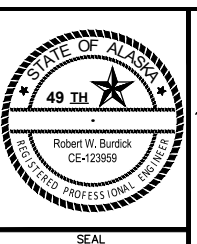
- NOTES
- SEE ROADWAY (R) SHEETS FOR ROADWAY & SIDEWALK LOCATIONS.
  - SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
  - SEE SIGNING & STRIPING (S) SHEETS FOR LOCATIONS & TYPES OF SIGNS & TRAFFIC MARKINGS.
  - LIP OF CURB IS FRONT OF CURB AND GUTTER AT EDGE OF PAVEMENT.



RECORD DRAWING  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
PROFILE	RB	JK		GAAB 15	ALT as shown in online MOA	324.72'				
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

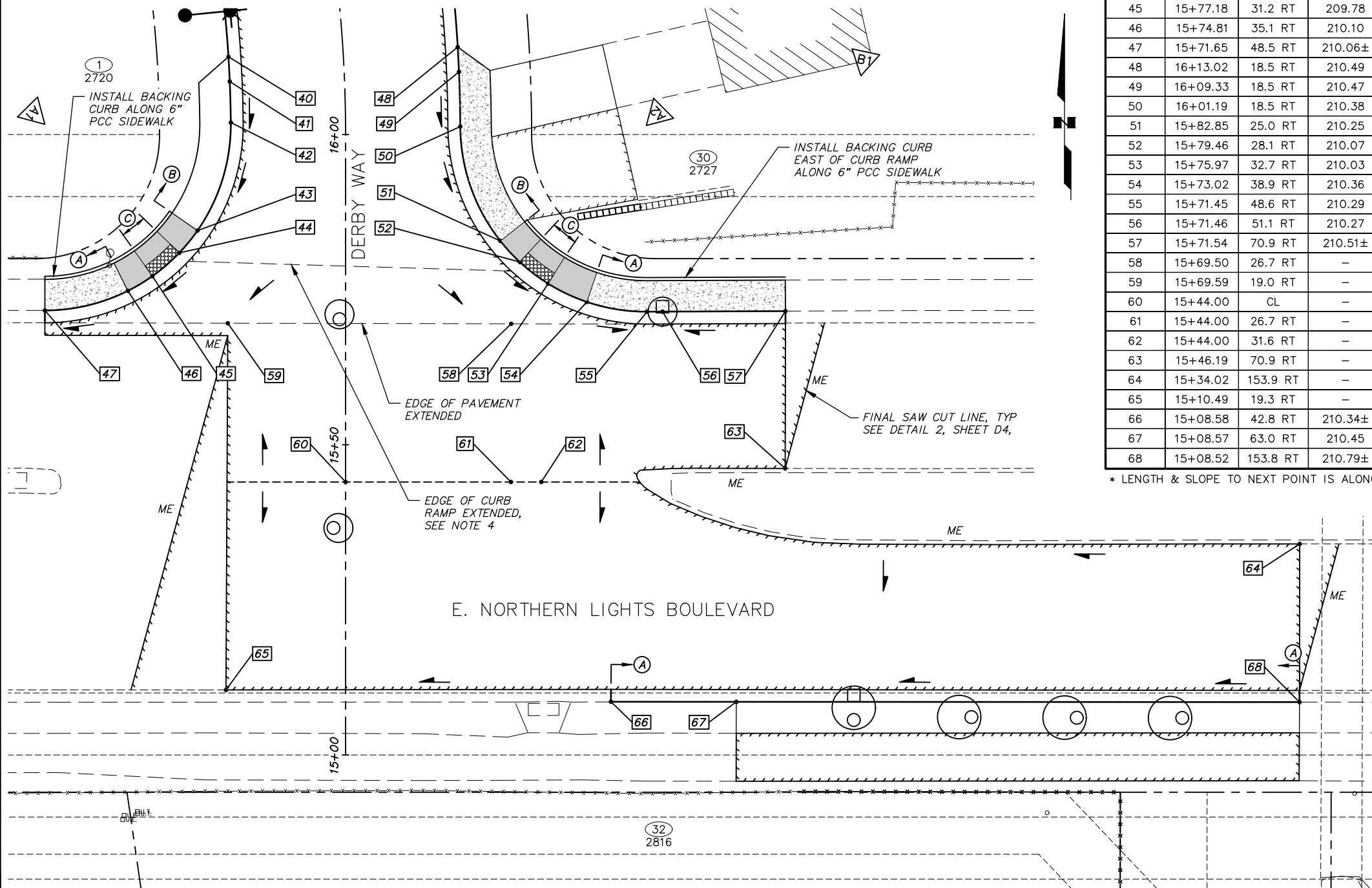
**CRW ENGINEERING GROUP, LLC**  
 3940 ARCTIC BLVD, SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AECLE882-AK



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
 INTERSECTION LAYOUT  
 BAXTER ROAD  
 SCALE: HOR. 1"=10' VER. N/A  
 GRID SW1538, SW1638  
 DATE JUNE 2023 STATUS 95% SHEET R5 of R6

**NOTES**

- SEE ROADWAY (R) SHEETS FOR ROADWAY & SIDEWALK LOCATIONS.
- SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
- SEE SIGNING & STRIPING (S) SHEETS FOR LOCATIONS & TYPES OF SIGNS & TRAFFIC MARKINGS.
- THE MAXIMUM CROSS-SLOPE BETWEEN EDGE OF PAVEMENT EXTENDED AND EDGE OF CURB RAMP EXTENDED SHALL BE 2%. IF A 2% CROSS-SLOPE CANNOT BE MAINTAINED NOTIFY ENGINEER PRIOR TO INSTALLATION OF AC PAVEMENT.
- PROVIDE CONSTANT FLOWLINE BETWEEN CHANGE IN CURB TYPE.
- SEE DETAIL (D) SHEETS FOR CURB RAMP DETAILS.
- LIP OF CURB IS FRONT OF CURB AND GUTTER AT EDGE OF PAVEMENT.



POINT	STATION	OFFSET (FT)	TBC ELEV (FT)	CURB TYPE	LIP OF CURB ELEV (FT)	TOP AC ELEV (FT)	TO NEXT POINT*		DESCRIPTION
							LENGTH (FT)	SLOPE (%)	
40	16+13.69	18.5 RT	210.37	2	210.20	-	4.04	-0.61%	BEGIN FLARE
41	16+09.33	18.5 RT	210.35	2	210.18	-	6.67	-1.17%	END FLARE
42	16+02.12	18.5 RT	210.27	2	210.10	-	19.77	-1.13%	PC
43	15+84.51	23.9 RT	210.05	2	209.88	-	4.92	-1.13%	BEGIN RAMP
44	15+80.94	26.8 RT	209.85	2A	209.82	-	6.15	-1.13%	END RAMP, BEGIN LANDING
45	15+77.18	31.2 RT	209.78	2A	209.75	-	4.92	-1.13%	END LANDING, BEGIN RAMP
46	15+74.81	35.1 RT	210.10	1	209.70	-	14.79	-1.13%	END RAMP
47	15+71.65	48.5 RT	210.06±	1	209.53±	-	-	-	PT, MATCH EXISTING
48	16+13.02	18.5 RT	210.49	2	210.32	-	3.97	-0.52%	BEGIN FLARE
49	16+09.33	18.5 RT	210.47	2	210.30	-	8.75	-1.03%	END FLARE
50	16+01.19	18.5 RT	210.38	2	210.21	-	21.23	-0.65%	PC
51	15+82.85	25.0 RT	210.25	2	210.08	-	4.92	-0.65%	BEGIN RAMP
52	15+79.46	28.1 RT	210.07	2A	210.04	-	6.15	-0.65%	END RAMP, BEGIN LANDING
53	15+75.97	32.7 RT	210.03	2A	210.00	-	7.39	-0.65%	END LANDING, BEGIN RAMP
54	15+73.02	38.9 RT	210.36	1	209.96	-	10.53	-0.65%	END RAMP
55	15+71.45	48.6 RT	210.29	1	209.89	-	2.50	-0.65%	PT
56	15+71.46	51.1 RT	210.27	1	209.87	-	19.81	0.54%	CATCH BASIN
57	15+71.54	70.9 RT	210.51±	1	209.98±	-	-	-	MATCH EXISTING
58	15+69.50	26.7 RT	-	-	-	209.96	-	-	EDGE OF PAVEMENT EXTENDED
59	15+69.59	19.0 RT	-	-	-	209.73	-	-	EDGE OF PAVEMENT EXTENDED
60	15+44.00	CL	-	-	-	210.40	-	-	GRADE BREAK, CL
61	15+44.00	26.7 RT	-	-	-	210.49	-	-	GRADE BREAK, CL
62	15+44.00	31.6 RT	-	-	-	210.52	-	-	GRADE BREAK, CL
63	15+46.19	70.9 RT	-	-	-	210.67±	-	-	MATCH EXISTING
64	15+34.02	153.9 RT	-	-	-	210.88±	-	-	MATCH EXISTING
65	15+10.49	19.3 RT	-	-	-	209.64±	-	-	MATCH EXISTING
66	15+08.58	42.8 RT	210.34±	1	209.87±	-	20.21	0.90%	TBC, MATCH EXISTING
67	15+08.57	63.0 RT	210.45	1	210.05	-	90.82	0.15%	TBC
68	15+08.52	153.8 RT	210.79±	1	210.18±	-	-	-	TBC, MATCH EXISTING

\* LENGTH & SLOPE TO NEXT POINT IS ALONG LIP OF CURB

POINT	TBC RADIUS POINT		RADIUS (FT)	DESCRIPTION
	STATION	OFFSET (FT)		
A1	16+02.12	48.5 LT	30.0	DERBY WAY
A2	16+01.19	48.5 RT	30.0	DERBY WAY

**LEGEND**

- ➔ APPROXIMATE DIRECTION OF DRAINAGE FLOWS
- GRADE BREAK
- ▒ PCC CURB RAMP
- ▒ PCC SIDEWALK (6" THICK, STANDARD FINISH)
- ▒ DETECTABLE WARNING PANEL

**DESIGNATION | CURB TYPE**

- (A) TYPE 1 CURB
- (B) TYPE 2 CURB
- (C) TYPE 2A CURB

File: \\labdata\10152\00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Intersection Layout.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.

CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	DATE
BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

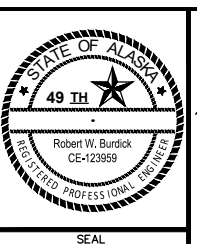
  

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

BASIS OF THIS DATUM GAAB 1972 ADJUST

**CRW ENGINEERING GROUP, LLC**

3940 ARCTIC BLVD, SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AEC0882-AK



**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

**INTERSECTION LAYOUT**

E. NORTHERN LIGHTS BOULEVARD

SCALE: HOR. 1"=10'  
VER. N/A

GRID SW538, SW638  
DATE: JUNE 2023  
STATUS: 95%  
SHEET R6 of R6

RECONSTRUCT DRIVEWAY

SHEET	PARCEL	CENTERLINE REFERENCE		DRIVEWAY WIDTH (FT)	CURB TYPE AT DRIVEWAY	SKEW ANGLE (DEGREES)	LANDING LENGTH (FT)	LANDING GRADE	TOTAL DISTANCE (FT)	EXISTING GRADE	PROPOSED GRADE	SURFACE TYPE ON PROPERTY	CONSTRUCT PER DETAIL	REMARKS
		STATION	OFFSET											
R1	5	1+96.78	LT	12	2	-72	N/A	N/A	17.5	6.6%	8.4%	CONCRETE	DETAIL 3, SHEET D2	
R1	28 WEST	2+94.98	RT	10	2	90	N/A	N/A	8.0	6.5%	2.7%	CONCRETE	DETAIL 3, SHEET D2	
R1	6	2+99.64	LT	17	2	-90	N/A	N/A	11.5	5.2%	4.3%	CONCRETE	DETAIL 3, SHEET D2	
R1	28 EAST	3+03.98	RT	8	2	90	N/A	N/A	8.0	6.5%	2.7%	ASPHALT	DETAIL 3, SHEET D2	
R1	27 WEST	3+65.52	RT	10.5	2	90	N/A	N/A	8.0	5.9%	6.1%	ASPHALT	DETAIL 3, SHEET D2	
R1	7	3+66.81	LT	18	2	-90	N/A	N/A	11.5	9.2%	6.9%	CONCRETE	DETAIL 3, SHEET D2	
R1	27 EAST	3+75.77	RT	10	2	90	N/A	N/A	8.0	5.9%	6.1%	CONCRETE	DETAIL 3, SHEET D2	
R1	8	4+38.79	LT	20	2	-90	N/A	N/A	8.0	4.9%	3.7%	ASPHALT	DETAIL 3, SHEET D2	
R1	26	4+42.05	RT	19	2	90	N/A	N/A	8.0	5.6%	1.8%	ASPHALT	DETAIL 3, SHEET D2	
R1	9 WEST	5+03.72	LT	19	2	-90	N/A	N/A	8.0	6.1%	2.1%	ASPHALT	DETAIL 3, SHEET D2	
R1	25 WEST	5+11.36	RT	10	2	90	N/A	N/A	8.0	8.4%	5.1%	ASPHALT	DETAIL 3, SHEET D2	
R1	9 EAST	5+58.00	LT	9.5	2	-90	N/A	N/A	8.0	6.1%	7.7%	ASPHALT	DETAIL 3, SHEET D2	
R1	25 EAST	5+63.72	RT	10	2	90	N/A	N/A	8.0	6.3%	4.8%	ASPHALT	DETAIL 3, SHEET D2	
R1	10	5+71.75	LT	18	2	-90	N/A	N/A	8.0	8.1%	8.7%	ASPHALT	DETAIL 3, SHEET D2	
R1	24 WEST	5+77.79	RT	9	2	90	N/A	N/A	8.0	4.1%	4.5%	ASPHALT	DETAIL 3, SHEET D2	
R2	24 EAST	6+27.32	RT	18	2	90	N/A	N/A	11.5	4.4%	7.1%	ASPHALT	DETAIL 3, SHEET D2	
R2	11	6+41.57	LT	10	2	-86	N/A	N/A	8.4	1.7%	3.1%	ASPHALT	DETAIL 3, SHEET D2	
R2	23	6+58.30	RT	19	2	90	N/A	N/A	11.5	2.0%	4.0%	ASPHALT	DETAIL 3, SHEET D2	
R2	12	7+23.16	LT	16	2A	-90	N/A	N/A	20.5	1.2%	1.2%	INTERLOCKING CONCRETE PAVERS	DETAIL 3, SHEET D2	TRANSITION FROM TYPE 2 TO TYPE 2A C&G OVER 4 FEET
R2	22	7+36.05	RT	18	2	90	N/A	N/A	9.9	4.6%	2.9%	CONCRETE	DETAIL 3, SHEET D2	
R2	13	7+56.44	LT	10	2	-90	N/A	N/A	11.5	6.2%	4.6%	CONCRETE	DETAIL 3, SHEET D2	
R2	21	8+68.82	RT	22	2	93	N/A	N/A	17.5	5.7%	1.4%	ASPHALT	DETAIL 3, SHEET D2	
R2	20	8+97.83	RT	20	2	91	N/A	N/A	17.4	5.7%	4.4%	ASPHALT	DETAIL 3, SHEET D2	
R2	19 WEST	9+71.87	RT	22	2	90	N/A	N/A	11.5	4.7%	6.0%	ASPHALT	DETAIL 3, SHEET D2	
R2	19 EAST	10+07.04	RT	11	2	90	N/A	N/A	11.5	5.3%	6.4%	ASPHALT	DETAIL 3, SHEET D2	
R2	16	10+10.92	LT	24	2	-90	N/A	N/A	8.5	4.2%	6.5%	ASPHALT	DETAIL 3, SHEET D2	
R2	17	10+40.81	LT	18	2	-90	N/A	N/A	8.0	4.9%	6.5%	CONCRETE	DETAIL 3, SHEET D2	
R2	18	10+75.12	RT	10	2	90	N/A	N/A	11.5	4.7%	7.5%	ASPHALT		
R3	30 SOUTH	15+91.18	RT	15	2	103	5.0	1.9%	25.8	5.3%	7.4%	ASPHALT	DETAIL 2, SHEET D2	
R3	30 NORTH	16+03.50	RT	10.5	2	101	4.8	2.3%	24.8	7.9%	9.5%	CONCRETE	DETAIL 2, SHEET D2	
R3	29	16+57.85	RT	20	2	102	N/A	N/A	9.8	4.6%	5.2%	ASPHALT	DETAIL 3, SHEET D2	
R3	1	16+86.85	LT	32	2	-86	N/A	N/A	21.3	2.4%	2.9%	ASPHALT	DETAIL 3, SHEET D2	
R3	2 SOUTH	17+07.33	LT	10	2	-81	N/A	N/A	18.8	7.0%	4.8%	ASPHALT	DETAIL 3, SHEET D2	
R3	2 NORTH	17+21.52	LT	18	2	-80	N/A	N/A	16.4	5.9%	8.1%	CONCRETE	DETAIL 3, SHEET D2	

RECONSTRUCT DRIVEWAY NOTES:

- "LANDING LENGTH" BEGINS AT THE BACK OF CURB & GUTTER.
- "LANDING GRADE" IS THE GRADE OF THE LANDING FROM THE BACK OF CURB & GUTTER TO THE END OF LANDING.
- "SKEW ANGLE" ("+" IS CLOCKWISE AND "-" IS COUNTER CLOCKWISE) IS MEASURED FROM PROJECT CENTERLINE WITH 0 DEGREES ALIGNED ALONG INCREASING STATIONS.
- "TOTAL DISTANCE" IS THE LIMIT OF RECONSTRUCTION BEGINNING AT THE BACK OF CURB & GUTTER.
- "PROPOSED GRADE" IS APPROXIMATE GRADE FROM THE END OF THE LANDING TO THE LIMIT OF RECONSTRUCTION. ACTUAL CONSTRUCTION GRADE MAY VARY.
- WIDTHS, LENGTHS & GRADES PRESENTED IN THE DRIVEWAY SUMMARY TABLE ARE MEASURED ALONG SKEW ANGLE AND MAY NOT BE PERPENDICULAR TO ROADWAY CENTERLINE ALIGNMENT.
- MATCH EXISTING DRIVEWAY WIDTH AT LIMITS OF DRIVEWAY RECONSTRUCTION. WIDTH OF DRIVEWAY AS SHOWN IN SUMMARY TABLE SHALL EXTEND TO BACK OF SIDEWALK OR BACK OF CURB ALONG SKEW ANGLE.

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Roadway Summary Tables.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

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: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
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DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AEC1882-AK

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A

ROADWAY SUMMARY TABLES

SCALE: HOR. N/A VER. N/A

GRID: SW1538, SW1638

DATE: JUNE 2023 STATUS: 95%

SHEET T1 of T2

30.02

P.C.C. CURB AND GUTTER (ALL TYPES)

Table with 5 columns: SHEET, STATION TO STATION, OFFSET (FT), LENGTH (FT), REMARKS. Rows include R1, R2, R3, R6 with various stationing and remarks like 'INCLUDES KENSINGTON DRIVE' and 'DERBY WAY'.

PCC CURB & GUTTER (ALL TYPES) NOTES:

- 1. SEE INTERSECTION LAYOUT SHEETS SHEETS R4-R6 FOR LOCATIONS AND TYPES OF CURB AND GUTTER.

30.03

P.C.C. SIDEWALK

Table with 8 columns: SHEET, APPX BEGIN STA, APPX OFFSET (FT), APPX END STA, APPX OFFSET (FT), 4" THICK, AREA (SY), 6" THICK, AREA (SY), REMARKS. Rows include R1, R2, R3 with various stationing and remarks like 'PARCEL 5 DRIVEWAY'.

30.04

P.C.C. CURB RAMP (6" THICK) & DETECTABLE WARNINGS

Table with 7 columns: SHEET, APPX STATION, OFFSET (FT), CURB RAMP AREA (SY), DETECTABLE WARNING AREA (SF), CURB RAMP TYPE, REMARKS. Rows include R3 with remarks 'E. NORTHERN LIGHTS BLVD'.

PCC CURB RAMP & DETECTABLE WARNING NOTES:

- 1. SEE INTERSECTION LAYOUT SHEET R6 FOR LOCATIONS OF CURB RAMPS AND DETECTABLE WARNINGS.

30.12

REMOVE AND RESET INTERLOCKING CONCRETE PAVERS

Table with 7 columns: SHEET, APPX BEGIN STA, APPX OFFSET (FT), APPX END STA, APPX OFFSET (FT), AREA (SF), REMARKS. Row includes R2 with remark 'PARCEL 12 DRIVEWAY'.

50.06

REMOVE AND REPLACE MANHOLE CONE SECTION OR MANHOLE COVER AND FRAME

Table with 6 columns: SHEET, STATION, OFFSET (FT), CONE SECTION, COVER AND FRAME, REMARKS. Rows include R1, R2 with remarks 'X' and 'X'.

SANITARY SEWER MANHOLE CONE/RING NOTES:

- 1. SEE MASS DETAILS 50-05, 50-25 AND 50-26.
2. COORDINATE W/ ENGINEER IN FIELD TO VERIFY WHETHER CONE SECTION OR MANHOLE COVER AND FRAME REPLACEMENT IS REQUIRED.
3. PER THE THE SECTION 50.06 SPECIAL PROVISIONS, THE REMOVE AND REPLACE MANHOLE CONE SECTION PAY ITEM INCLUDES REMOVING AND REPLACING THE COVER AND FRAME. SEE SECTION 50.06 SPECIAL PROVISIONS FOR A COMPLETE LIST OF INCIDENTAL ITEMS.

55.12

ADJUST CATCH BASIN TO FINISH GRADE

Table with 4 columns: SHEET, STATION, OFFSET (FT), REMARKS. Row includes R2 with remark '48.2 LT'.

60.03 & 60.05

REMOVE AND REPLACE VALVE BOX TOP SECTION OR ADJUST KEY BOX

Table with 6 columns: SHEET, STATION, OFFSET (FT), KEY BOX, VALVE BOX TOP SECTION, REMARKS. Rows include R1, R2, R3 with remarks 'X' and 'X'.

REMOVE AND REPLACE VALVE BOX TOP SECTION OR ADJUST KEY BOX NOTES:

- 1. SEE MASS DETAIL 60-16.

SPECIAL FILL GRADING TABLE

Table with 5 columns: SHEET, APPROX BEGIN STATION, APPROX END STATION, OFFSET, REMARKS. Rows include R1 with various stationing and offsets.

SPECIAL FILL GRADING NOTES:

- 1. SPECIAL FILL GRADING SHALL BE PER DETAIL 2, SHEET C3.
2. LOCATIONS ARE APPROXIMATE, CONTRACTOR SHALL MODIFY LOCATIONS IN THE FIELD PER THE DIRECTION OF THE ENGINEER OR AS NECESSARY TO PROVIDE POSITIVE DRAINAGE TOWARD ROADWAY. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.

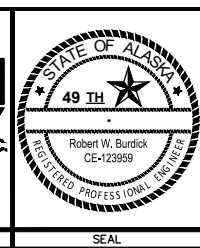
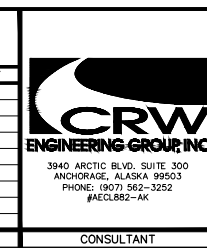
SPECIAL FILL GRADING TABLE (CONTINUED)

Table with 5 columns: SHEET, APPROX BEGIN STATION, APPROX END STATION, OFFSET, REMARKS. Rows include R2, R3 with various stationing and remarks like 'DERBY WAY'.

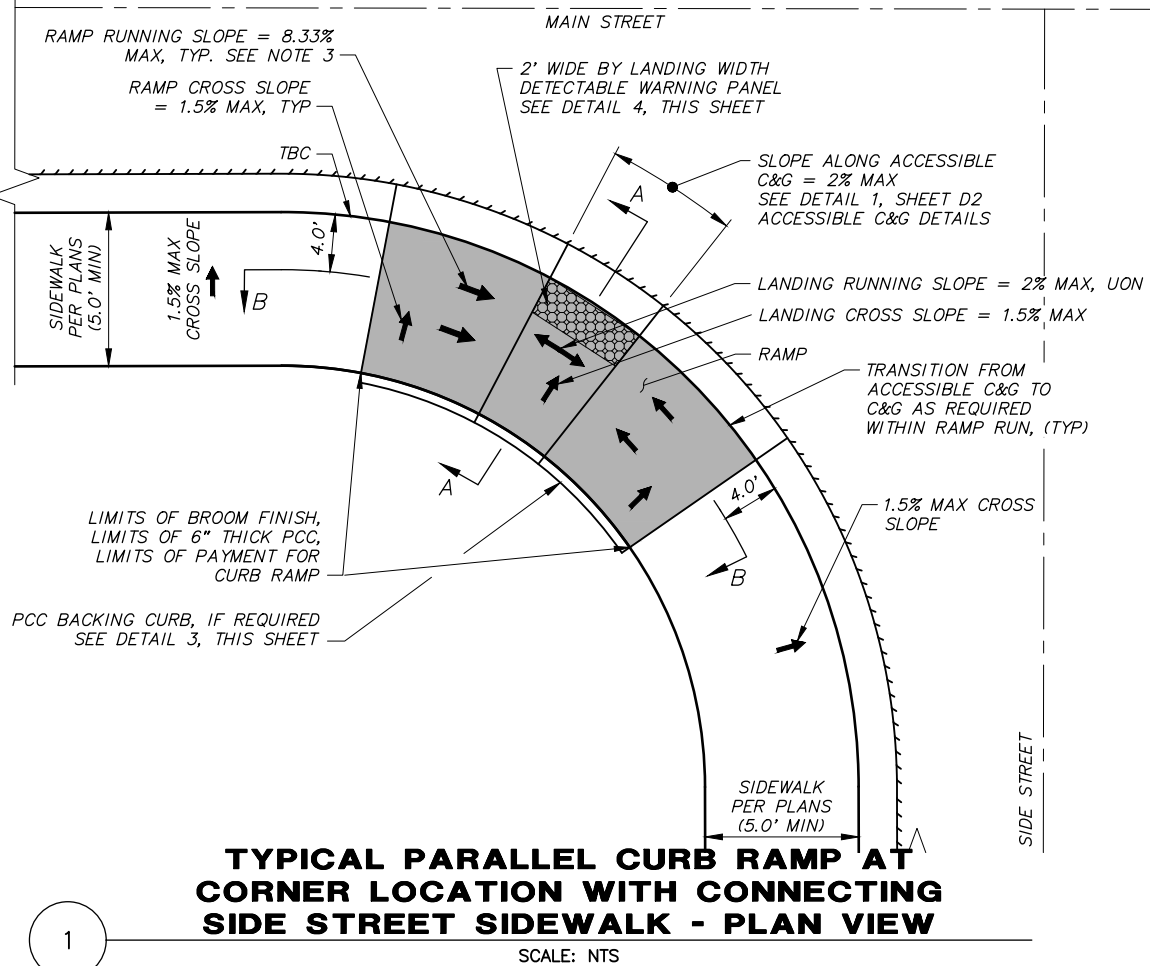
File: I:\data\10152.00 Camrose Drive Storm Drainage\00\_CADD\2019\01\_Working Set\01\_Civil\10152.00\_Roadway\_Summary\_Tables.dwg

RECORD DRAWING
1. DATA PROVIDED BY: TITLE:
THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.
CONTRACTOR: TITLE: DATE:
BY:
2. DATA TRANSFERRED BY: TITLE: DATE:
COMPANY:
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: TITLE: DATE:
COMPANY:
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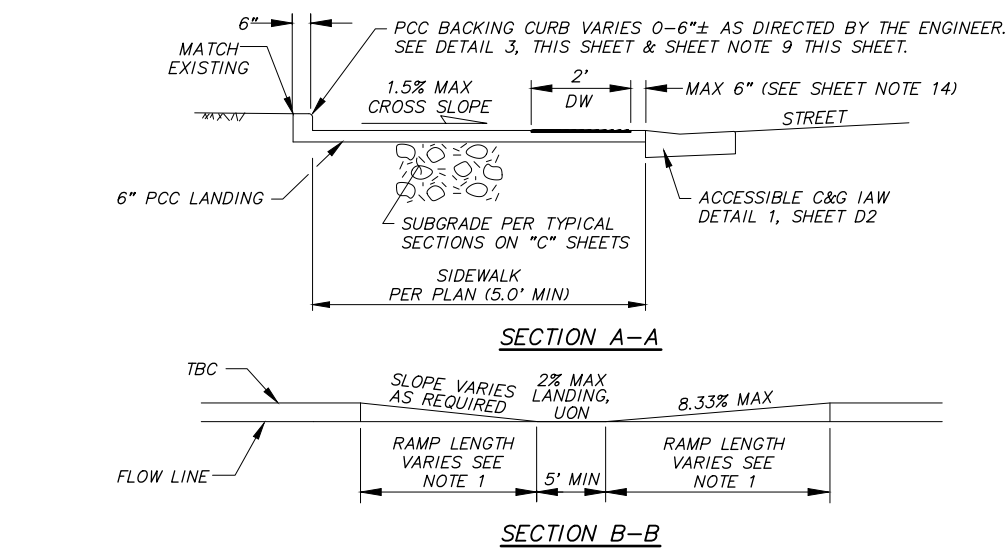
Table with columns: DATA, DRAWN BY, CHECKED BY, FIELD BOOKS, BM NO., LOCATION, ELEV., REV., DATE, DESCRIPTION, BY. Includes details for GAAB100 and GAAB 15.



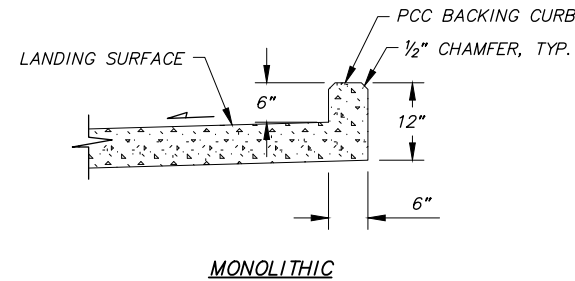
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A
ROADWAY SUMMARY TABLES
SCALE: HOR. N/A VER. N/A
GRID SW538, SW638
DATE: JUNE 2023 STATUS: 95% SHEET T2 of T2



**1 TYPICAL PARALLEL CURB RAMP AT CORNER LOCATION WITH CONNECTING SIDE STREET SIDEWALK - PLAN VIEW**  
SCALE: NTS



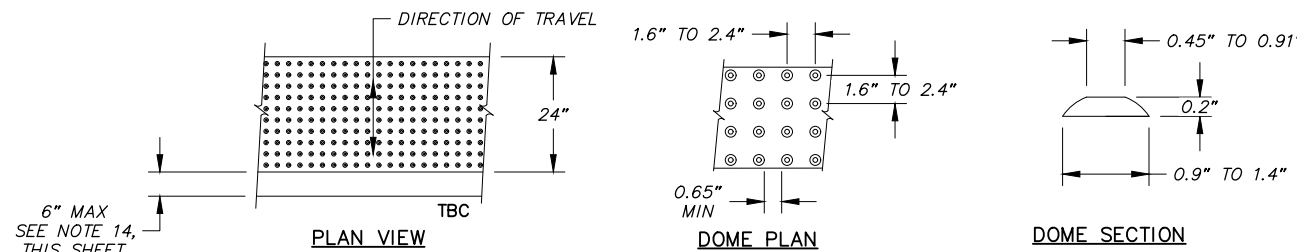
**2 TYPICAL CURB RAMP SECTIONS**  
SCALE: NTS



**3 MONOLITHIC BACKING CURB DETAIL**  
SCALE: NTS

**BACKING CURB DETAIL NOTES:**

1. THE TOP OF BACKING CURB SHALL TRANSITION BACK TO TOP OF SIDEWALK AT TOP RAMP SECTION OF CURB RAMP UNLESS OTHERWISE SHOWN ON PLANS.



**4 DETECTABLE WARNING PANEL**  
SCALE: NTS

**SHEET NOTES:**

1. SEE SHEET R6 FOR CURB RAMP TYPES, LOCATIONS, RAMP, LANDING AND FLARE LENGTHS AND ELEVATIONS. RAMP/FLARE/LANDING LENGTH FOR PARALLEL CURB RAMPS SHALL BE AS MEASURED 4' OFF BACK OF CURB.
2. NOTIFY ENGINEER PRIOR TO INSTALLATION OF CONCRETE IF MAXIMUM/MINIMUM SLOPES CANNOT BE MAINTAINED.
3. FOR PARALLEL CURB RAMPS, RAMPS SHALL BE 15 FEET MAXIMUM. RAMPS SHALL HAVE THE OUTSIDE EDGES AND JOINTS TRIMMED WITH A 1/4-INCH RADIUS EDGING TOOL.
4. ALL SLOPES ARE IN REFERENCE TO THE HORIZONTAL.
5. MINIMUM FLOWLINE SLOPE IN CURB RETURN IS 0.5%, UNLESS OTHERWISE NOTED.
6. PROVIDE CONSTANT FLOWLINE BETWEEN CHANGE IN CURB TYPE.
7. CONSTRUCT SIDEWALK ADJACENT TO CURB RAMP PER THE TYPICAL SECTIONS SHOWN ON THE "C" SHEETS.
8. PAYMENT FOR ALL PCC CURB AND GUTTER, INCLUDING MODIFIED AND TRANSITIONAL CURB, SHALL BE PAID UNDER THE BID ITEM "P.C.C. CURB & GUTTER (ALL TYPES)" AND NO SEPARATE PAYMENT SHALL BE MADE.
9. FORM BACKING CURB AS DIRECTED BY THE ENGINEER TO MATCH EXISTING GROUND. PAYMENT FOR THIS CURB SHALL BE MADE UNDER THE BID ITEM "P.C.C. CURB RAMP (6\"/>

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CAD\2019\01 Working Set\01 Civil\10152.00 Roadway Details.dwg

**RECORD DRAWING**

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BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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BY: \_\_\_\_\_

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TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK										
CONSTRUCTION RECORD										
VERTICAL DATUM										
REVISIONS										

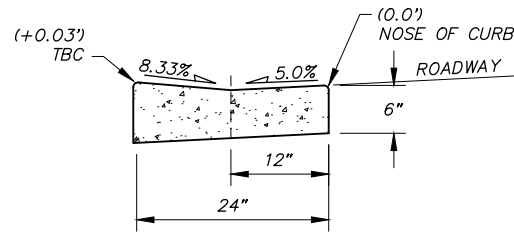
**CRW ENGINEERING GROUP INC.**  
3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AEC0882-AK

STATE OF ALASKA  
49 TH  
Robert W. Burdick  
REGISTERED PROFESSIONAL ENGINEER  
CE-123959

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT		
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	SCHED A
<b>ROADWAY DETAILS</b>		
CURB RAMPS		
SCALE	HOR. N/A VER. N/A	GRID SW538, SW638
	DATE JUNE 2023	STATUS 95%
SHEET	D1	of D5





**PCC CURB AND GUTTER TYPE 2A**  
FOR USE IN CURB RAMPS WITH TYPE 2 C&G  
OR AS INDICATED ON THE PLANS.

**ACCESSIBLE CURB & GUTTER NOTES:**

1. TRANSITION CURBS TO MAINTAIN CONSTANT FLOWLINE ACROSS CURB RAMP AND AROUND CURB RETURN IAW PLANS.
2. PAYMENT FOR ALL PCC CURB AND GUTTER, INCLUDING MODIFIED AND TRANSITIONAL CURB, SHALL BE PAID UNDER THE BID ITEM "PCC CURB & GUTTER (ALL TYPES)" AND NO SEPARATE PAYMENT SHALL BE MADE.

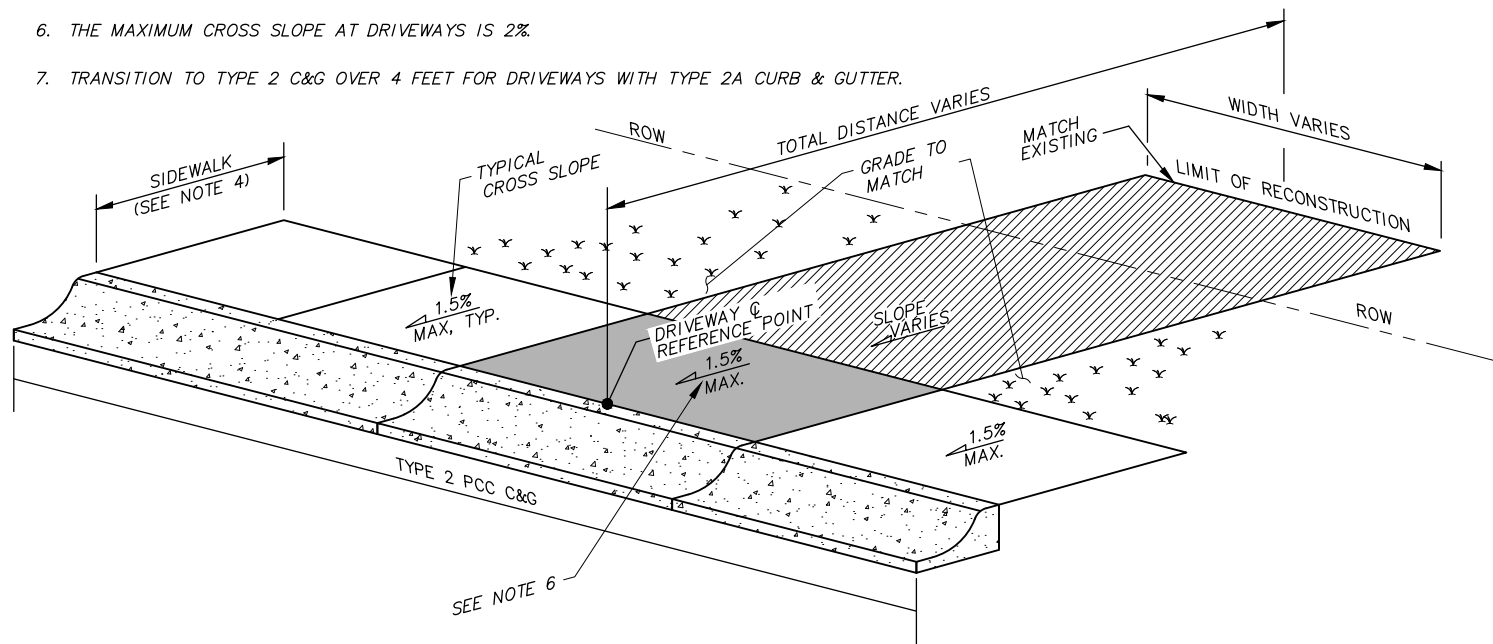
**1 ACCESSIBLE CURB & GUTTER TYPE 2A SECTION**  
SCALE: NTS

**SHEET DRIVEWAY NOTES:**

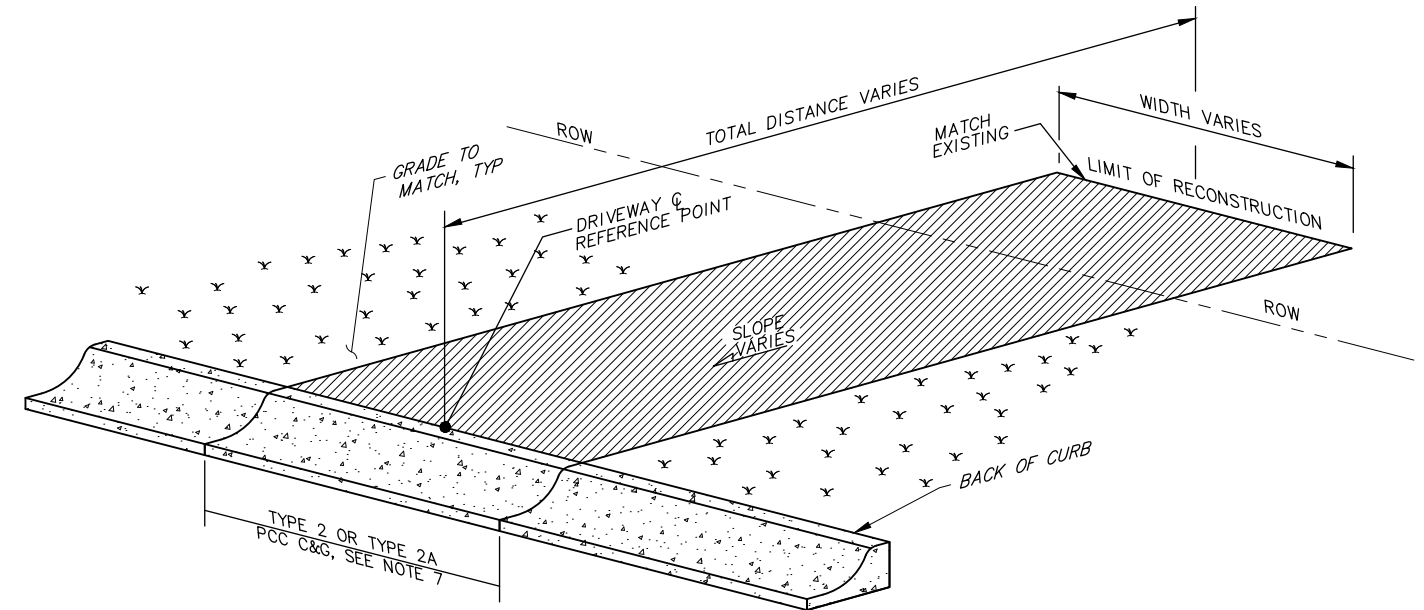
1. ALL SLOPES ARE IN REFERENCE TO THE HORIZONTAL.
2. PAYMENT FOR PCC CURB & GUTTER (ALL TYPES) AND TRANSITION C&G SHALL BE PAID UNDER THE BID ITEM "PCC CURB & GUTTER (ALL TYPES)" AND NO SEPARATE PAYMENT SHALL BE MADE.
3. CENTER THE PROPOSED DRIVEWAY ENTRANCES ON DRIVEWAY CENTERLINE REFERENCE POINT AS SHOWN IN THE 20.28 RECONSTRUCT DRIVEWAY SUMMARY TABLES PROVIDED ON THE ROADWAY SUMMARY TABLE "T" SHEETS.
4. SIDEWALK THICKNESS SHALL BE 6" AT DRIVEWAYS UNLESS OTHERWISE NOTED. INSTALL WELDED STEEL WIRE REINFORCEMENT IN 6" THICK SIDEWALKS PER THE SPECIFICATIONS.
5. SEE 20.28 DRIVEWAY RECONSTRUCTION SUMMARY TABLES ON THE ROADWAY SUMMARY TABLE "T" AND DRIVEWAY RECONSTRUCTION DETAILS, FOR INDIVIDUAL DRIVEWAY SPECIFICS.
6. THE MAXIMUM CROSS SLOPE AT DRIVEWAYS IS 2%.
7. TRANSITION TO TYPE 2 C&G OVER 4 FEET FOR DRIVEWAYS WITH TYPE 2A CURB & GUTTER.

**SHEET DRIVEWAY LEGEND:**

- LIMITS OF 2" AC PAVING (CLASS E) FOR DRIVEWAY. CONCRETE & INTERLOCKING CONCRETE PAVER DRIVEWAY SURFACES SHALL MATCH SECTION E ON SHEET C3
- PCC SIDEWALK (6" THICK, STANDARD FINISH), SEE NOTE 4



**2 TYPICAL DRIVEWAY WITH ATTACHED SIDEWALK**  
SCALE: NTS



**3 TYPICAL DRIVEWAY WITH NO SIDEWALK**  
SCALE: NTS

File: s:\lab\data\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Roadway Details.dwg

**RECORD DRAWING**  
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BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
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BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

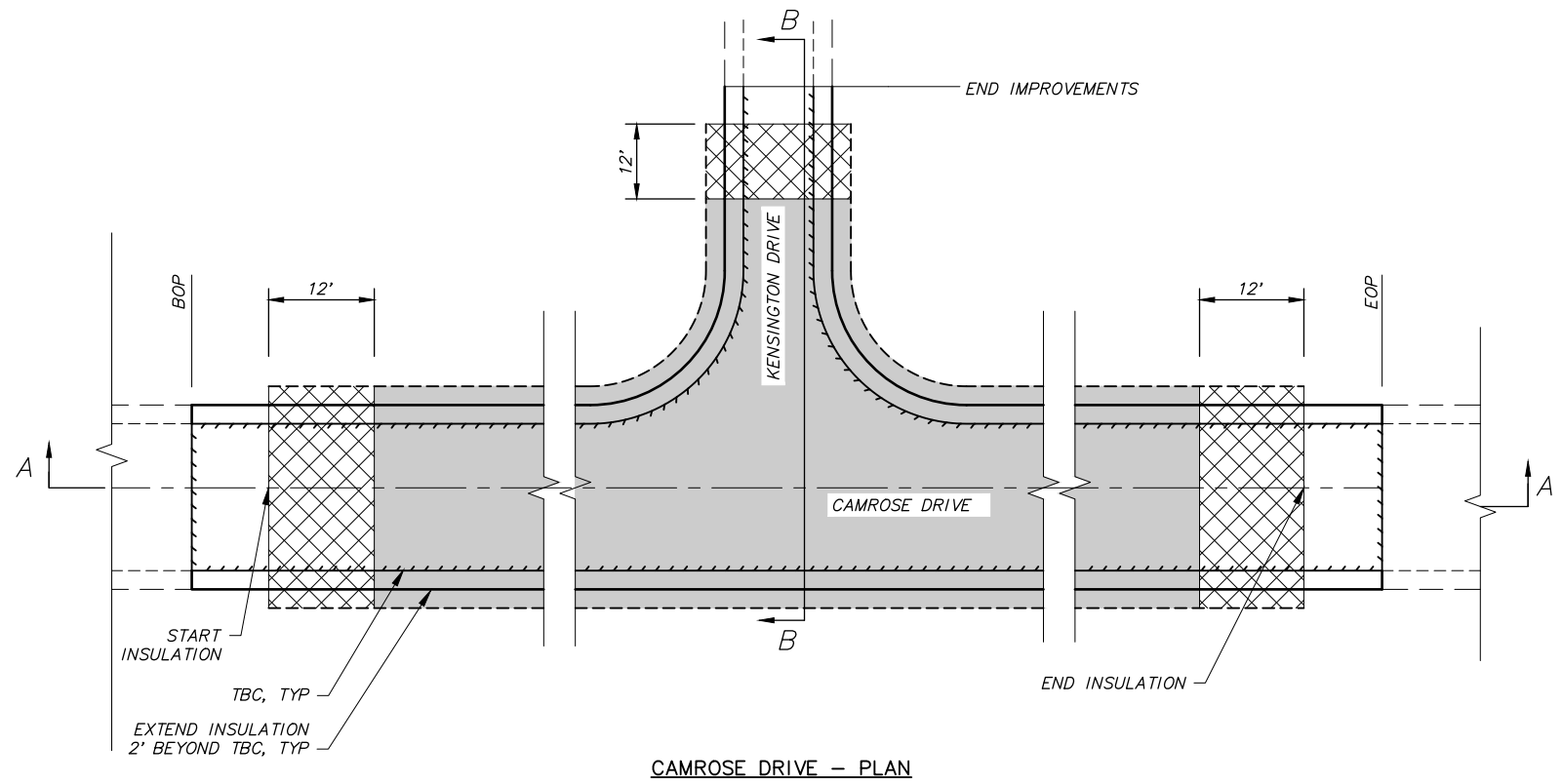
**CRW ENGINEERING GROUP, INC.**  
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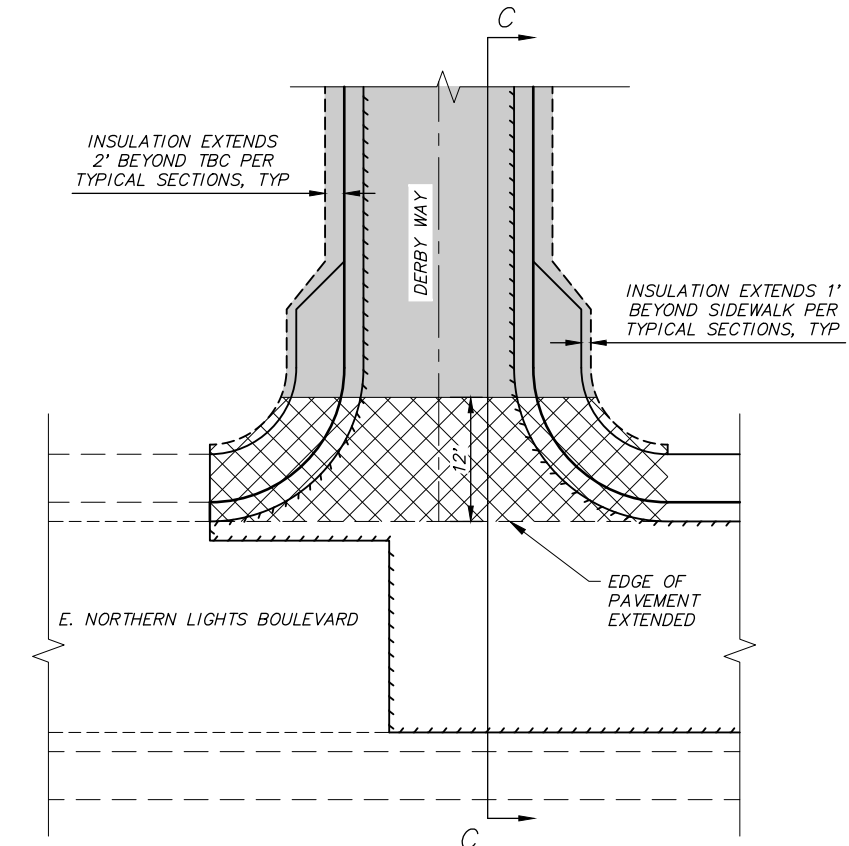
UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
ROADWAY DETAILS  
DRIVEWAYS  
SCALE HOR. N/A VER. N/A  
GRID SW1538, SW1638  
DATE JUNE 2023 STATUS 95% SHEET D2 of D5

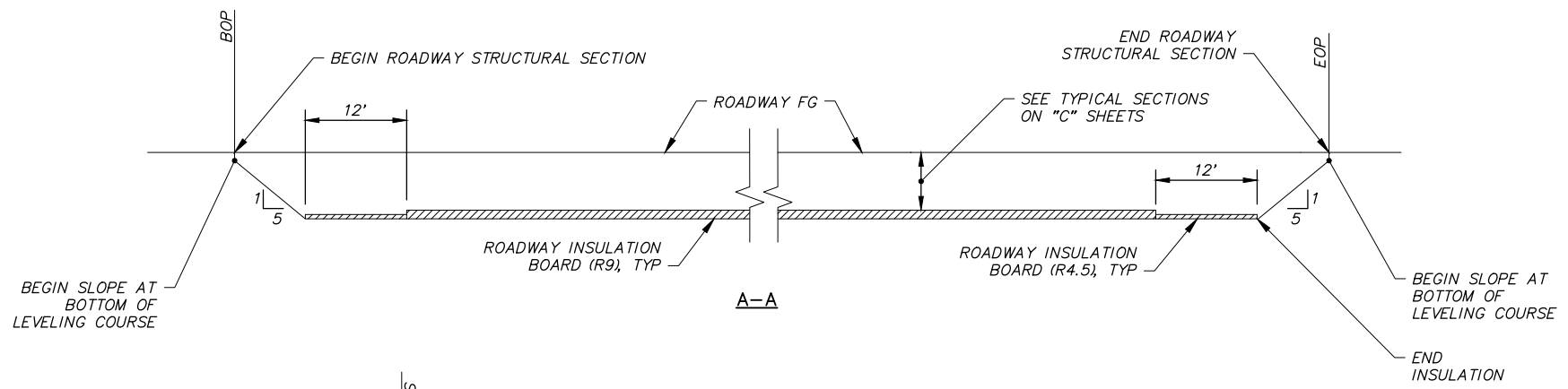
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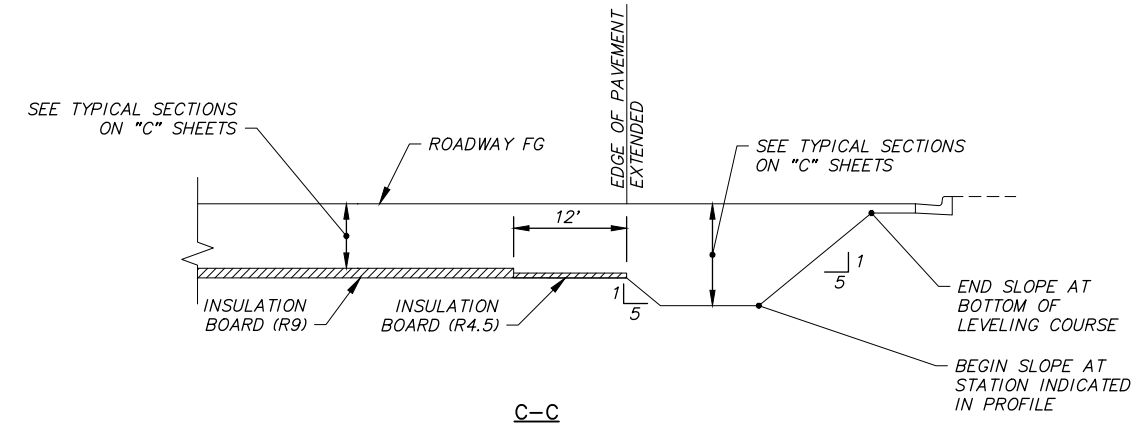
CAMROSE DRIVE - PLAN



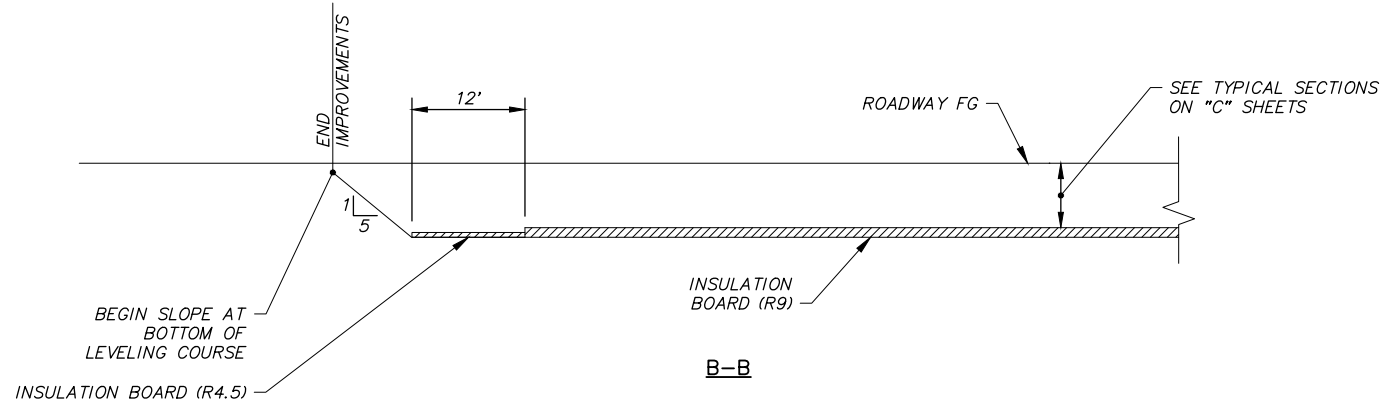
DERBY WAY - PLAN



A-A



C-C



B-B

**LEGEND PLAN**

INSULATION BOARD (R4.5)

INSULATION BOARD (R9)

**1 BOARD INSULATION AND EXCAVATION TRANSITION DETAILS**  
SCALE: NTS

**RECORD DRAWING**  
1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES/FINAL	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK										
CONSTRUCTION RECORD										
VERTICAL DATUM										
REVISIONS										
CONSULTANT										
SEAL										

**CRW ENGINEERING GROUP, INC.**  
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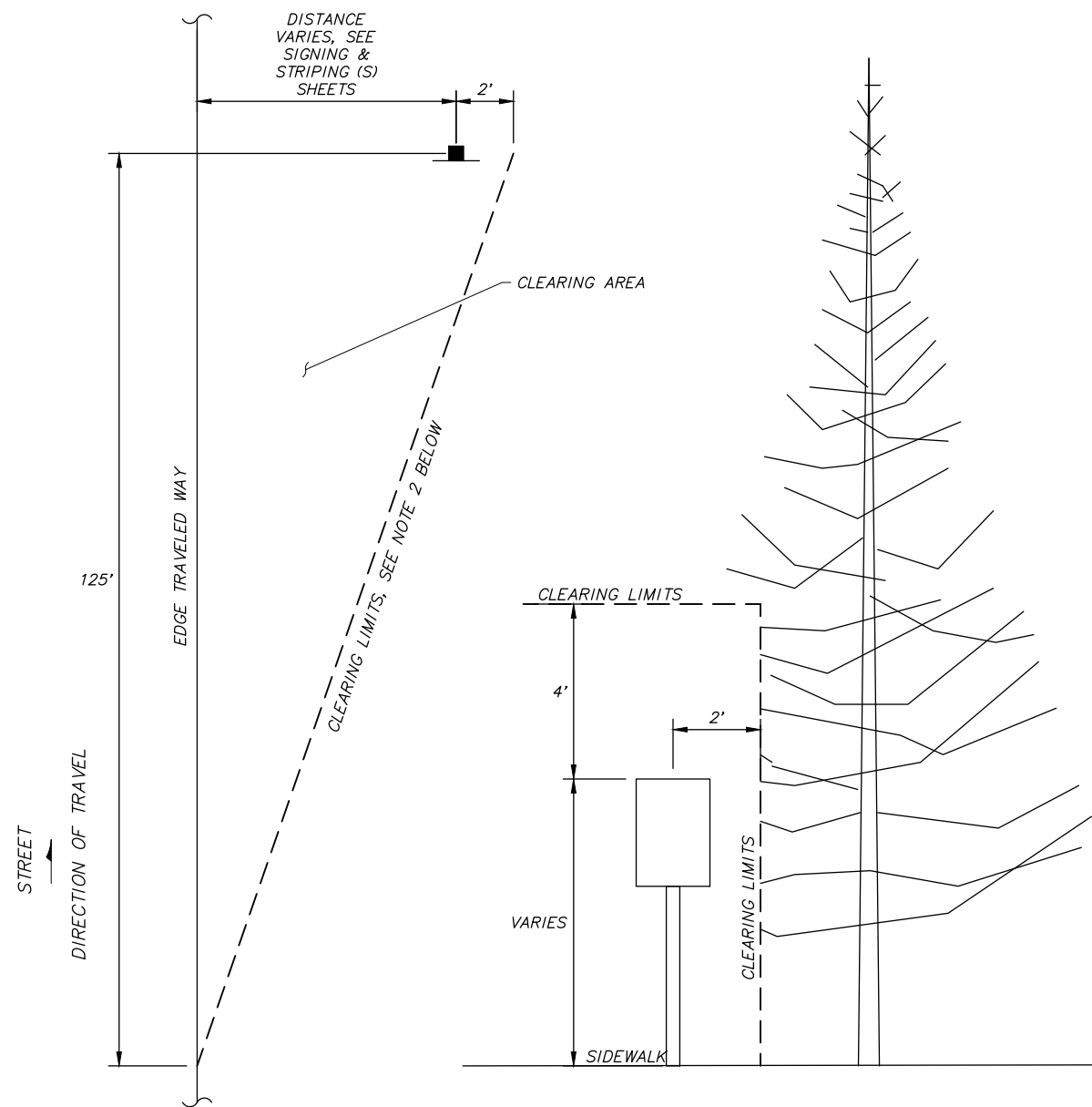
UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
**ROADWAY DETAILS**  
MISCELLANEOUS DETAILS

SCALE HOR. N/A VER. N/A  
GRID SW1538, SW1638  
DATE JUNE 2023 STATUS 95% SHEET D3 of D5



File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Roadway Details.dwg



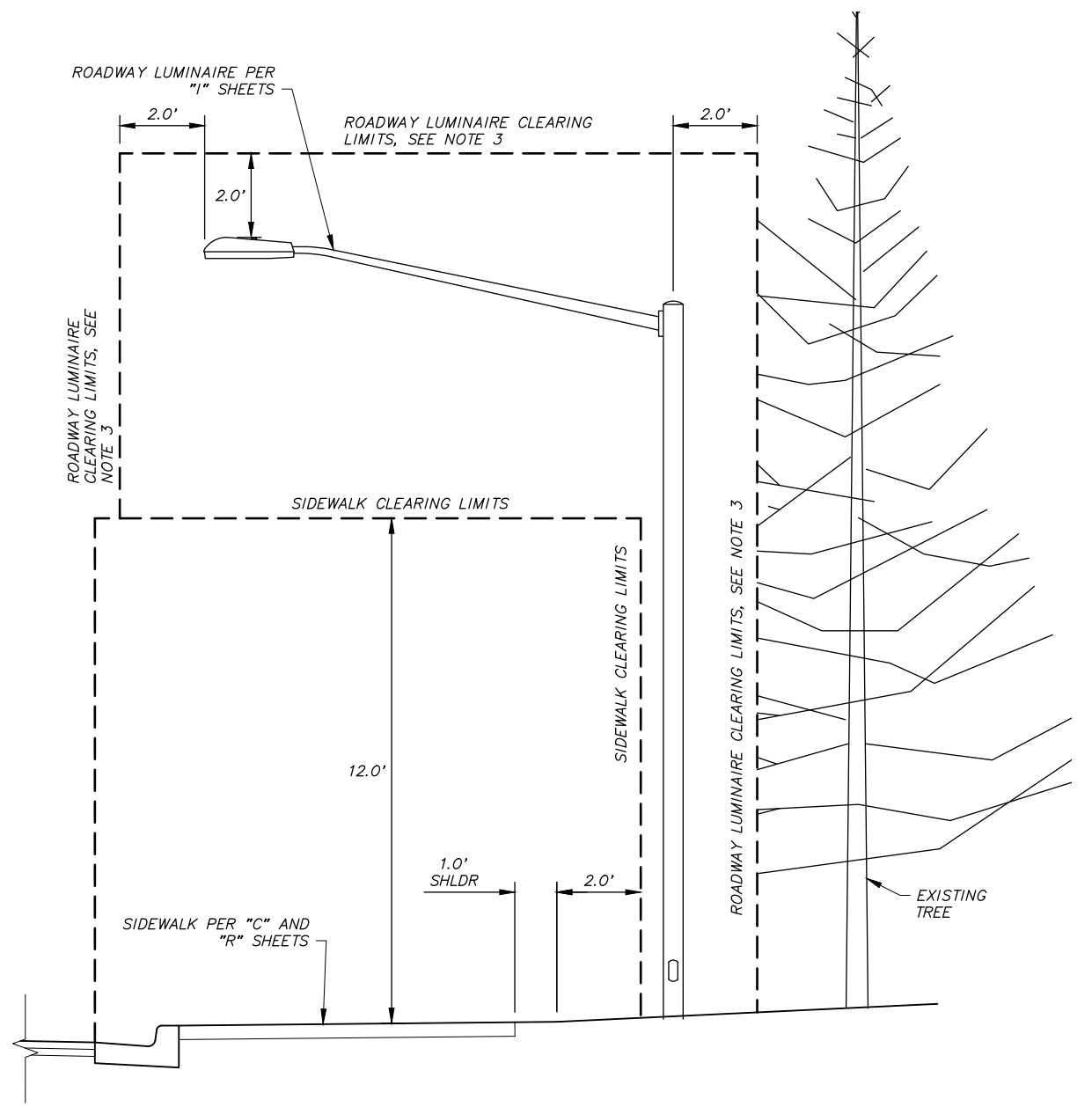
PLAN

ELEVATION

**SIGN SIGHT DISTANCE CLEARING DETAIL NOTES:**

1. SIGN SIGHT DISTANCE CLEARING SHALL BE INCIDENTAL TO SECTION 20.04 CLEARING AND GRUBBING PAY ITEM AND NO SEPARATE PAYMENT SHALL BE MADE.
2. MAINTAIN CLEARING LIMITS WITHIN AVAILABLE RIGHT-OF-WAY.
3. ALL CLEARING ACTIVITIES SHALL BE PERFORMED BY AN ISA CERTIFIED ARBORIST AND FOLLOW ANSI A300, PART 1, STANDARD PRACTICES AND ANSI Z133.1, ARBORICULTURAL OPERATIONS SAFETY.

1 **SIGN SIGHT DISTANCE CLEARING DETAIL**  
SCALE: NTS



ELEVATION

**SIDEWALK AND ROADWAY LUMINAIRE CLEARING DETAIL NOTES:**

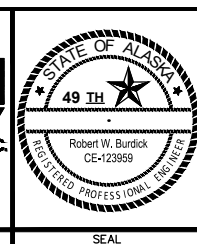
1. SIDEWALK AND ROADWAY LUMINAIRE CLEARING SHALL BE INCIDENTAL TO SECTION 20.04 CLEARING AND GRUBBING PAY ITEM AND NO SEPARATE PAYMENT SHALL BE MADE.
2. MAINTAIN CLEARING LIMITS WITHIN AVAILABLE RIGHT-OF-WAY.
3. ROADWAY LUMINAIRE CLEARING LIMITS SHALL INCLUDE 20 FEET UP STATION AND DOWN STATION ALONG THE ROADWAY.
4. ALL CLEARING ACTIVITIES SHALL BE PERFORMED BY AN ISA CERTIFIED ARBORIST AND FOLLOW ANSI A300, PART 1, STANDARD PRACTICES AND ANSI Z133.1, ARBORICULTURAL OPERATIONS SAFETY.

2 **SIDEWALK AND ROADWAY LUMINAIRE CLEARING DETAIL**  
SCALE: NTS

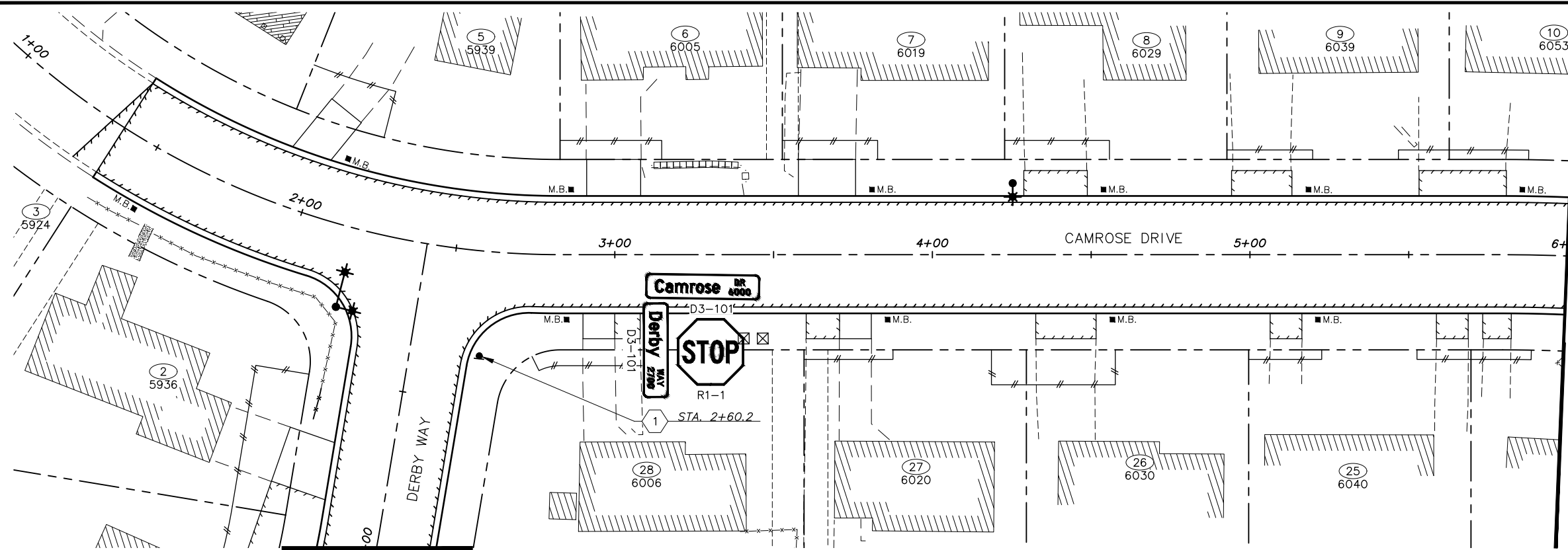
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DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

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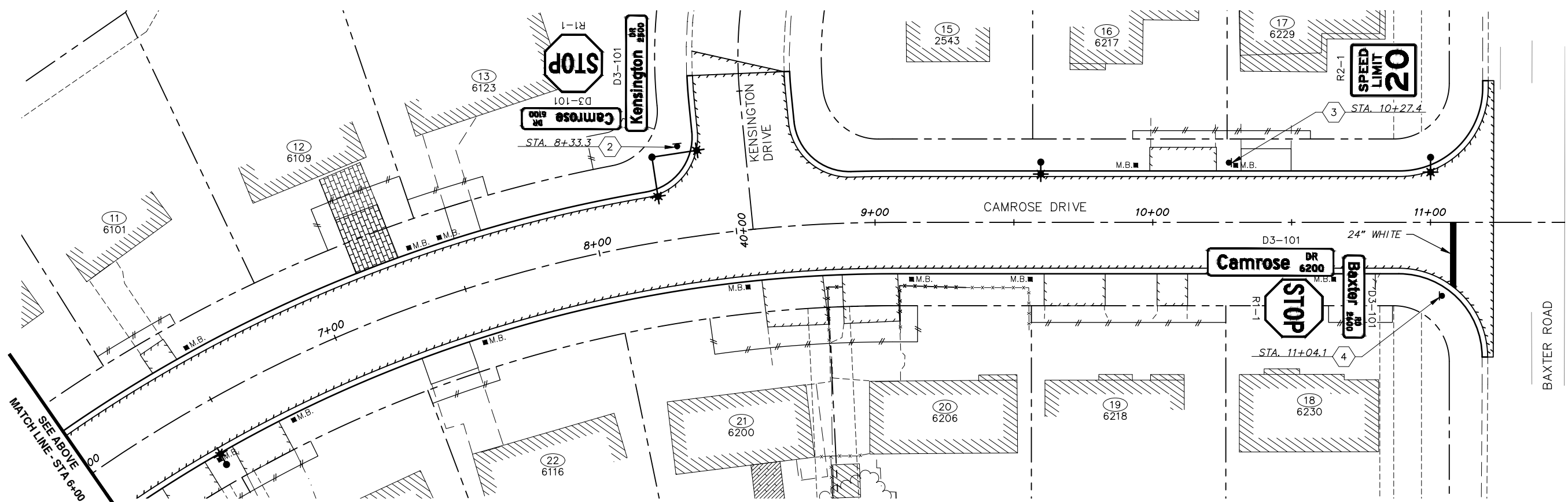


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
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**ROADWAY DETAILS**  
 CLEARING DETAILS  
 SCALE: HOR. N/A VER. N/A  
 GRID SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95%  
 SHEET D5 of D5



SEE SHEET S2

**NOTE:**  
1. SEE SIGNING NOTES ON SHEET S2.



SEE ABOVE  
MATCH LINE - STA 6+00

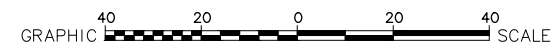
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 BY: \_\_\_\_\_  
 2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 3. BASED ON PERIODIC FIELD OBSERVATIONS BY THE ENGINEER (OR AN INDIVIDUAL UNDER HIS/HER DIRECT SUPERVISION), THE CONTRACTOR-PROVIDED DATA APPEARS TO REPRESENT THE PROJECT AS CONSTRUCTED.  
 DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

BASIS OF THIS DATUM GAAB 1972 ADJUST

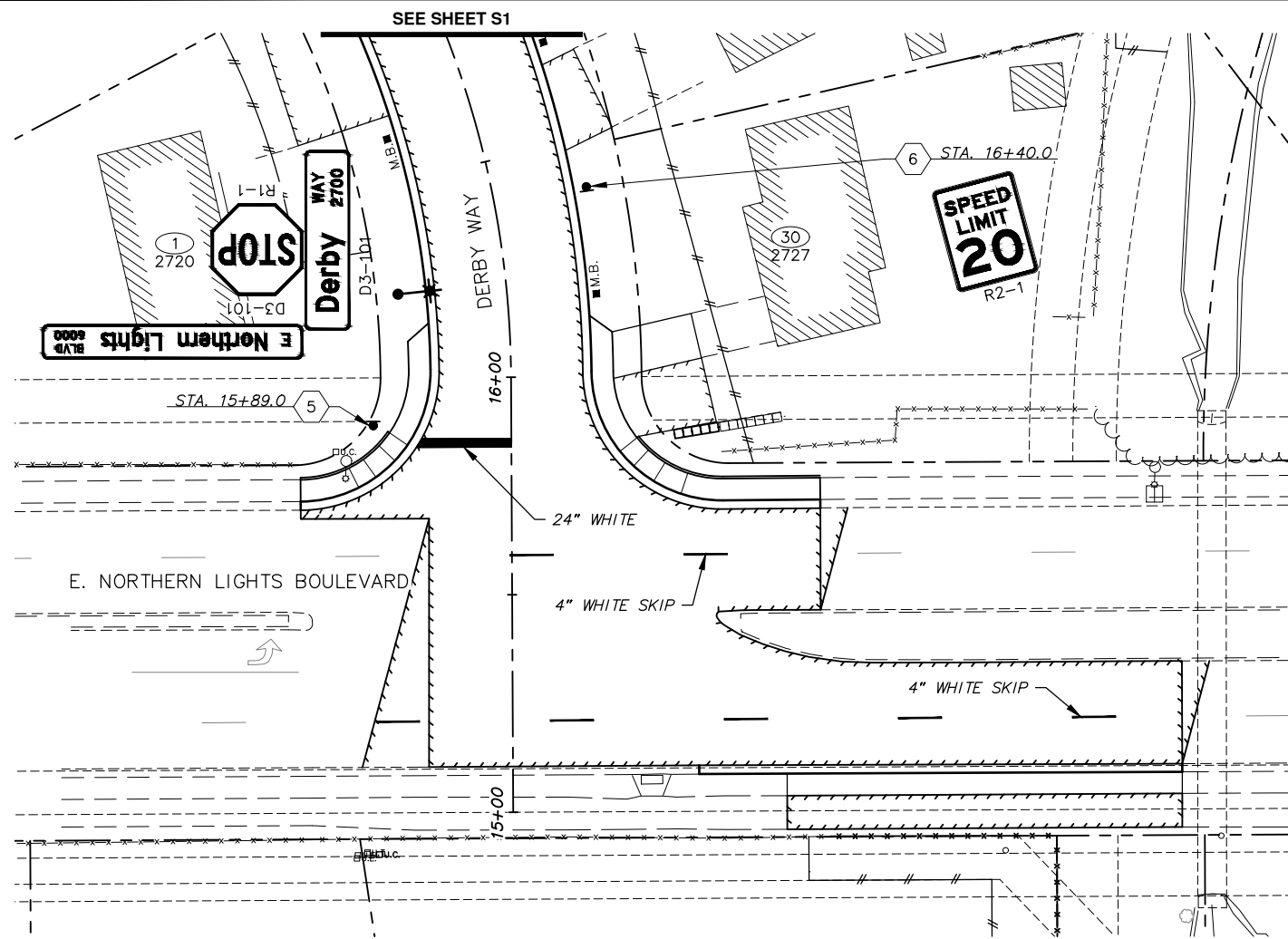


**CRW ENGINEERING GROUP INC.**  
 3940 ARCTIC BLVD. SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AECLE82-AK

STATE OF ALASKA  
 49 TH  
 Robert W. Burdick  
 CE-123959  
 REGISTERED PROFESSIONAL ENGINEER

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
**SIGNING & STRIPING**  
 CAMROSE DRIVE  
 SCALE HOR. 1"=20' VER. N/A  
 GRID SW1538, SW1638  
 DATE JUNE 2023 STATUS 95% SHEET S1 of S2



**SIGNING NOTES:**

1. THE STATIONS INDICATED IN THE SIGN SUMMARY ARE APPROXIMATE. INSTALL SIGNS AND SIGN FOUNDATIONS PER MASS STANDARD DETAILS. BEFORE INSTALLING ANY SIGN, STAKE THE LOCATION OF ALL SIGNS FOR THE ENGINEER'S REVIEW AND APPROVAL.
2. PROVIDE PERFORATED STEEL TUBE (PST) SIGN POSTS OF THE SIZE INDICATED IN THE SIGN SUMMARY.
3. INSTALL THE POSTS FOR STOP SIGNS AT LOCATIONS THAT CONFORM TO MASS STANDARD DETAIL 70-18.
4. ALL STOP SIGNS AND STREET NAME SIGNS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
5. THE LETTERING FOR STREET NAME SIGNS (D3 SERIES) SHALL BE FEDERAL HIGHWAY ADMINISTRATION "FHWA 2000 SERIES C" LETTERING, A COMBINATION OF LOWER-CASE LETTERS WITH INITIAL UPPER-CASE LETTERS.

**STRIPING NOTES:**

1. ALL STRIPING SHALL CONFORM TO THESE CONTRACT DOCUMENTS AND THE STANDARD MASS DETAILS. ALL REVISIONS SHALL CONFORM TO THE LATEST EDITION OF THE ALASKA TRAFFIC MANUAL AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. UNLESS OTHERWISE NOTED, PROVIDE METHYL METHACRYLATE PAINT OF THE COLORS AND WIDTHS SPECIFIED FOR THE TRAFFIC MARKINGS INDICATED ON THE DRAWINGS. PROVIDE INLAID APPLICATION MARKINGS IN THE FOLLOWING MANNER:
  - 250 MILS FOR 4" WHITE SKIP MARKINGS ON E. NORTHERN LIGHTS BOULEVARD
  - 125 MILS FOR 24" WHITE STOP BAR MARKINGS
3. SKIP LINE SPACING SHALL BE A 10' LONG STRIPE WITH A 30' SPACE.
4. OBLITERATE AND REPLACE ALL STRIPING DAMAGED BY CONTRACTORS OPERATIONS.
5. INSTALL 24" WIDE STOP BARS PER MASS STANDARD DETAILS 70-18 & 70-19.

70.11

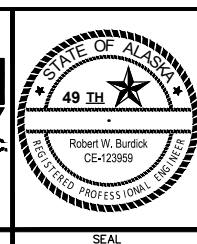
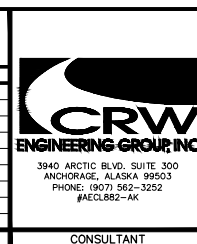
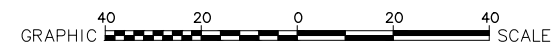
**STANDARD SIGN**

SHEET NO.	POST NO.	STATION	OFFSET	TYPE	LEGEND	WIDTH	HEIGHT	AREA (SF)	SIGN FACES	SIGN POST	REMARKS	
						(INCHES)	(INCHES)					
S1	1	2+60.2	33.0 RT	D3-101	DERBY WAY 2700	30	8	1.67	NE/SW	2.5" PST	ONE DOUBLE SIDED PANEL	
				D3-101	CAMROSE DR 6000	36	8	2.00	NW/SE		ONE DOUBLE SIDED PANEL	
				R1-1	STOP	30	30	6.25	SE			
	2	8+33.3	33.0 RT	D3-101	KENSINGTON DR 2500	42	8	4.67	E/W	2.5" PST	MOUNT TWO SIGNS BACK TO BACK	
				D3-101	CAMROSE DR 6100	36	8	2.00	N/S		ONE DOUBLE SIDED PANEL	
				R1-1	STOP	30	30	6.25	N			
3	10+27.4	21.5 LT	R2-1	SPEED LIMIT 20	24	30	5.00	E	2.5" PST			
			D3-101	CAMROSE DR 6200	54	12	9.00	N/S		MOUNT TWO SIGNS BACK TO BACK		
			D3-101	BAXTER RD 2600	30	8	1.67	E/W		ONE DOUBLE SIDED PANEL		
4	11+04.1	26.4 RT	R1-1	STOP	30	30	6.25	W	2.5" PST			
			D3-101	DERBY WAY 2700	48	12	8.00	E/W		MOUNT TWO SIGNS BACK TO BACK		
			D3-101	E NORTHERN LIGHTS BLVD 6000	60	8	6.67	N/S		MOUNT TWO SIGNS BACK TO BACK		
S2	5	15+89.0	31.7 LT	R1-1	STOP	30	30	6.25	N	2.5" PST		
				R2-1	SPEED LIMIT 20	24	30	5.00	SE		2.5" PST	

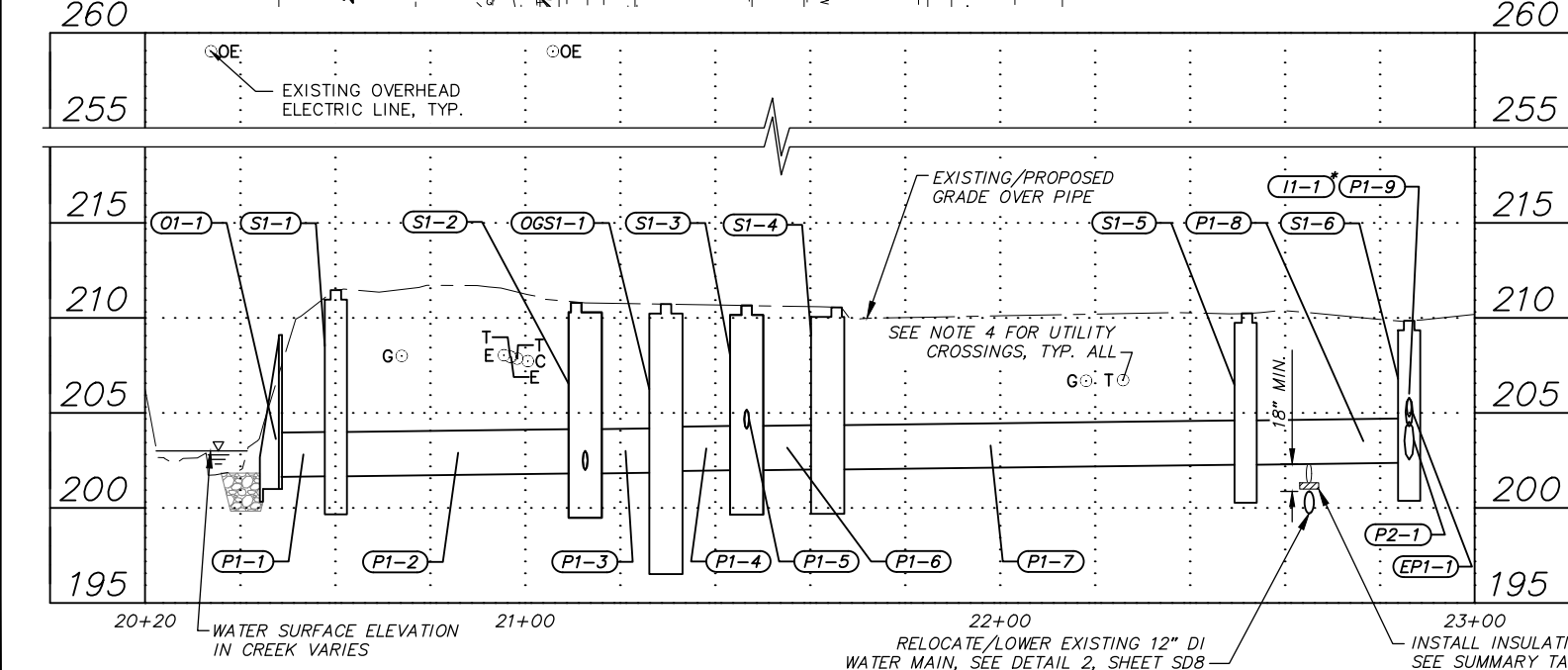
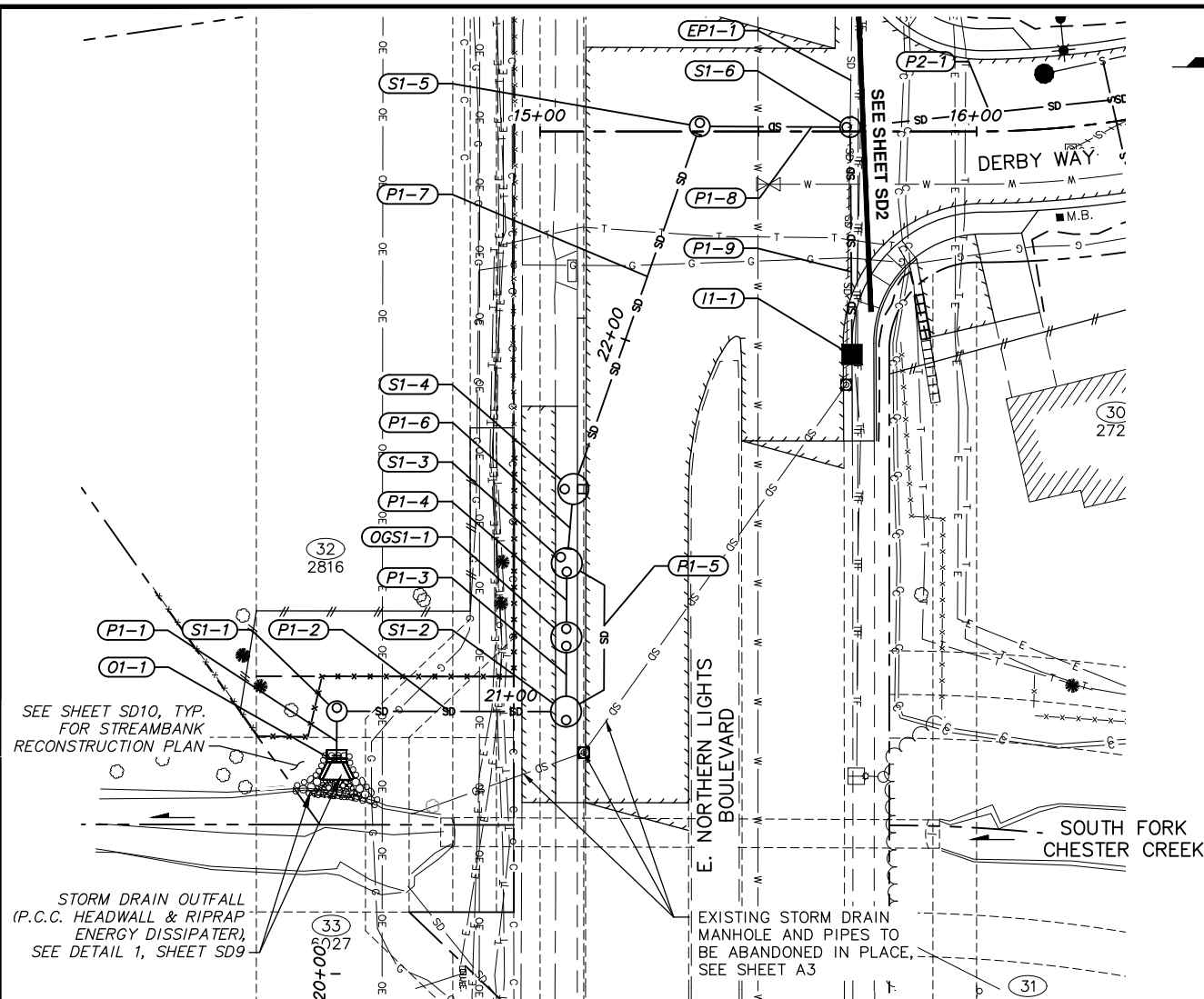
File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Signing & Striping.dwg

**RECORD DRAWING**  
 1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_  
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR		GAAB100	See MOA Benchmark Book, Page D-15	296.56				
TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED A  
**SIGNING & STRIPING**  
 E. NORTHERN LIGHTS BOULEVARD  
 SCALE HOR. 1"=20' VER. N/A  
 GRID SW538, SW638  
 DATE JUNE 2023 STATUS 95% SHEET S2 of S2



**55.02 - STORM DRAIN PIPE**

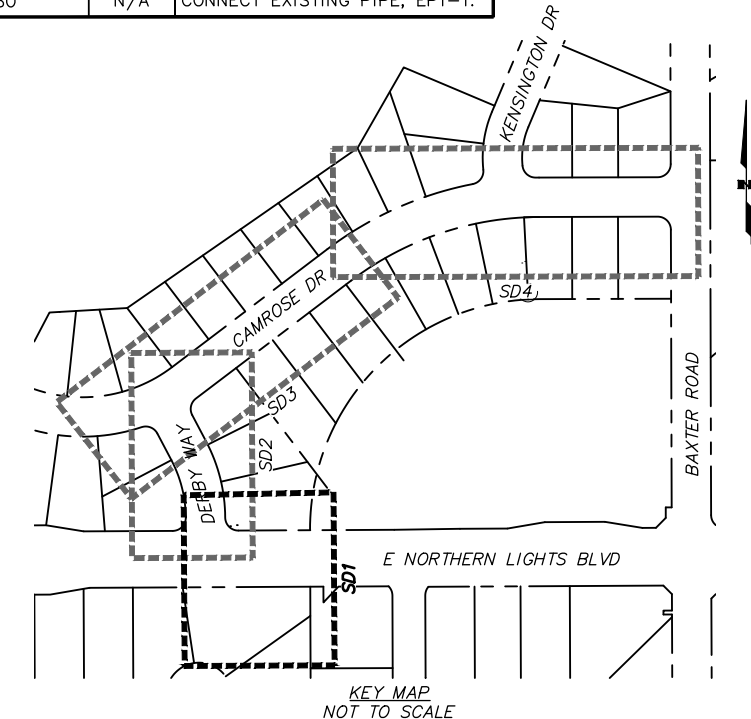
PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
P1-1	24	CPEP, S	11.69	S1-1	O1-1	201.83	201.80	0.31%
P1-2	24	CPEP, S	52.50	S1-2	S1-1	201.98	201.83	0.32%
P1-3	24	CPEP, S	17.00	OGS1-1	S1-2	202.02	201.98	0.36%
P1-4	24	CPEP, S	17.00	S1-3	OGS1-1	202.15	202.11	0.36%
P1-5**	12	CPEP, S	44.00	S1-3	S1-2	203.69	202.38	5.46%
P1-6	24	CPEP, S	17.06	S1-4	S1-3	202.19	202.15	0.36%
P1-7	24	CPEP, S	88.02	S1-5	S1-4	202.44	202.19	0.30%
P1-8	24	CPEP, S	34.44	S1-6	S1-5	202.54	202.44	0.33%
P1-9	12	CPEP, S	52.11	I1-1	S1-6	205.77	204.80	2.02%
EP1-1	18	CMP	--	--	S1-6	--	204.3±	--

\*\* OGS1-1 MAINTENANCE BYPASS PIPE, SEE NOTE 5.

**55.04, 55.05, 55.09 & 55.22 - STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	STATION	OFFSET TO STRUCTURE C/L	TOP OF CASTING ELEVATION	CURB TYPE	COMMENTS
O1-1	HEADWALL	--	20+48.50	CL	--	N/A	SEE DETAIL 3, SHEET SD9
S1-1	MH I	MH	20+60.19	CL	211.44	N/A	
S1-2	MH II	MH	21+12.69	CL	210.77	N/A	
OGS1-1	OGS	MH	21+29.69	CL	210.70	N/A	SEE DETAIL 1, SHEET SD6
S1-3	BYPASS/MH II	MH	21+46.69	CL	210.63	N/A	SEE DETAIL 2, SHEET SD6
S1-4	CB MH II	CI	21+63.75	CL	210.52	1	SEE DETAIL 3, SHEET SD7
S1-5	MH I	MH	22+51.77	CL	210.21	N/A	
I1-1	CB	CI	22+13.89	50.14' RT	210.27	1	
S1-6	MH I/CONNECT	MH	22+86.21	CL	209.80	N/A	CONNECT EXISTING PIPE, EP1-1.

- NOTES:**
1. AN ASTERISK (\*) DENOTES PIPE OR STRUCTURE NOT SHOWN IN PROFILE FOR CLARITY.
  2. REFER TO SHEET SD5 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
  3. REFER TO SHEETS SD5-SD14 FOR STORM DRAIN DETAILS AND SUMMARY TABLES.
  4. CAUTION!!! THE LOCATION OF EXISTING UTILITY CROSSINGS SHOWN IN PROFILE ARE APPROXIMATE. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY. UTILITIES IN CONFLICT WITH PROPOSED IMPROVEMENTS WILL BE RELOCATED BY OTHERS. SEE THE SPECIFICATIONS FOR MORE INFORMATION.
  5. CPEP FITTINGS I.A.W. MASS SECTION 55.02 SHALL BE USED FOR BYPASS PIPING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. LOCATION OF FITTINGS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE FITTINGS WITH ENGINEER'S APPROVAL TO MINIMIZE CONFLICTS WITH OTHER UTILITIES AND OBSTRUCTIONS. CONCRETE THRUST BLOCKS I.A.W. MASS STANDARD DETAIL 60-06 SHALL BE INSTALLED AT ALL FITTINGS. PAYMENT FOR THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 55.02, FURNISH, INSTALL, AND TELEVISION PIPE.
  6. REFER TO SHEET SD6 FOR OGS AND BYPASS STRUCTURE DETAILS.
  7. CONTRACTOR SHALL DIVERT CREEK AS REQUIRED TO MANAGE CREEK BACKWATER TO MINIMIZE IMPACTS FOR INSTALLATION OF STORM DRAIN IMPROVEMENTS.



**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

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DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
STAKING	GAAB 15	ALT. as shown in online MOA Benchmarks Map Gallery Application	324.72				

PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL

**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**STORM DRAIN PLAN & PROFILE**

SCALE HOR. 1"=20'  
VER. 1"=5'

GRID SW538, SW638

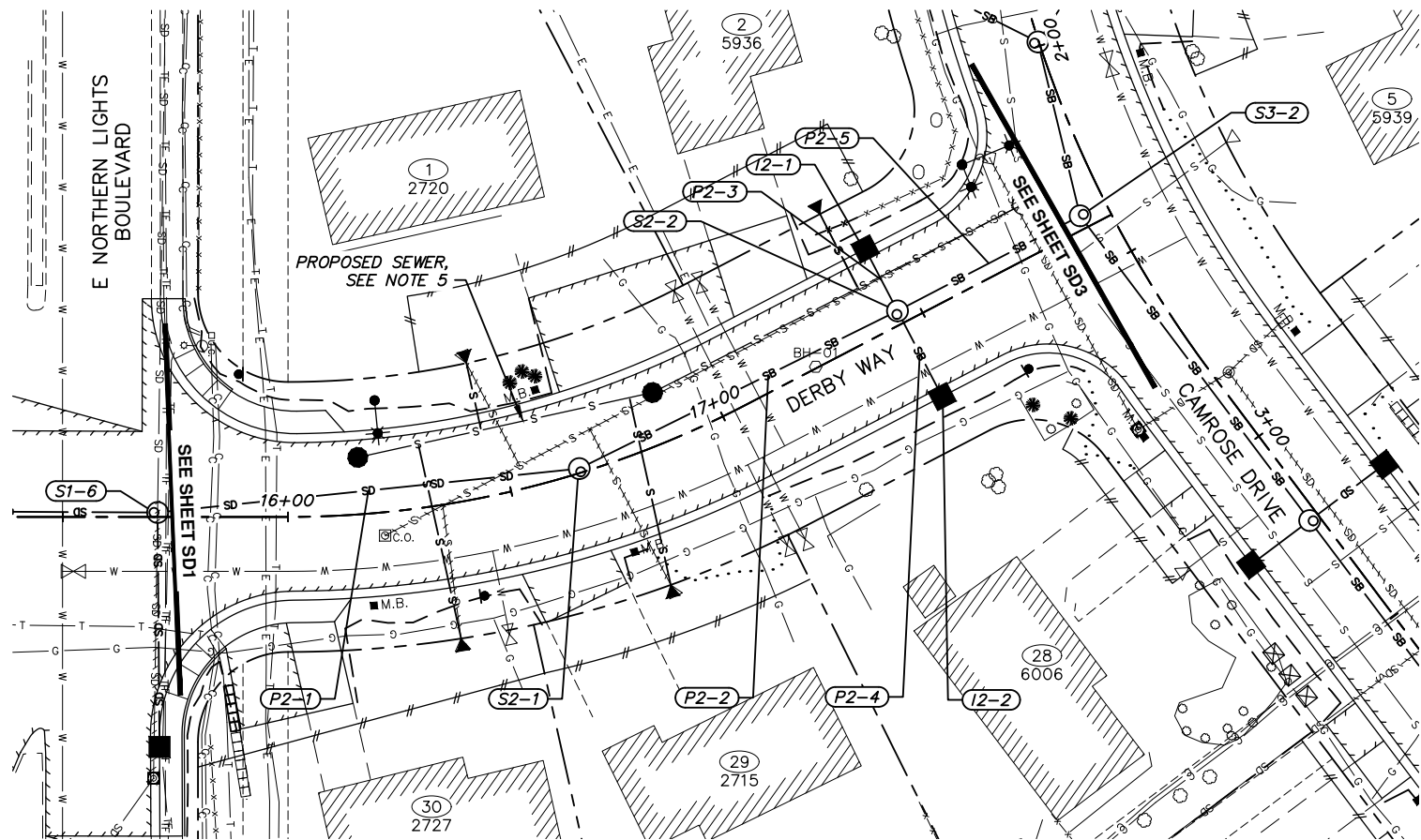
DATE JUNE 2023 STATUS 95% SHEET SD1 of SD14

**CRW ENGINEERING GROUP, LLC**  
3940 ARCTIC BLVD, SUITE 300 ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252 #AEC1882-AK

**STATE OF ALASKA**  
49 TH  
Joseph C. Hegna  
CE-11770  
REGISTERED PROFESSIONAL ENGINEER

**UNIVERSITY OF ANCHORAGE**

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Civil\10152.00 Storm Drain - Plan & Profile.dwg



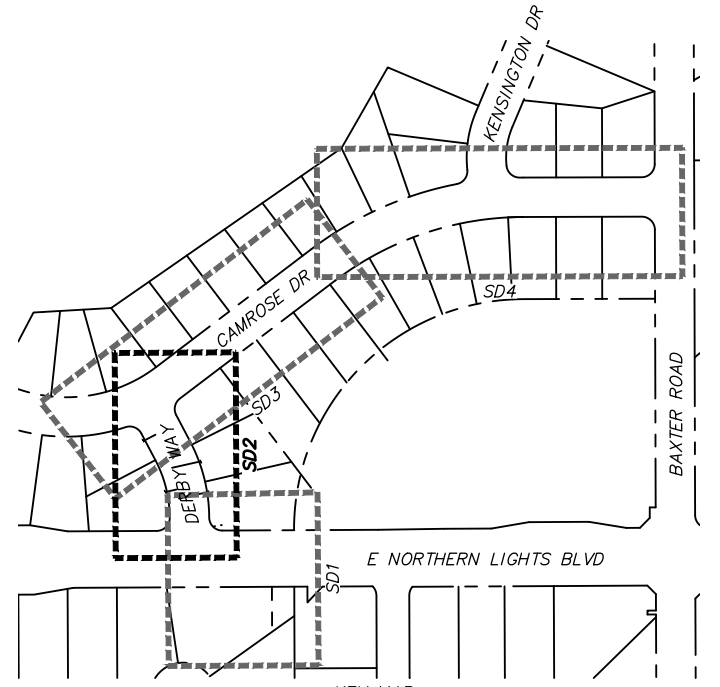
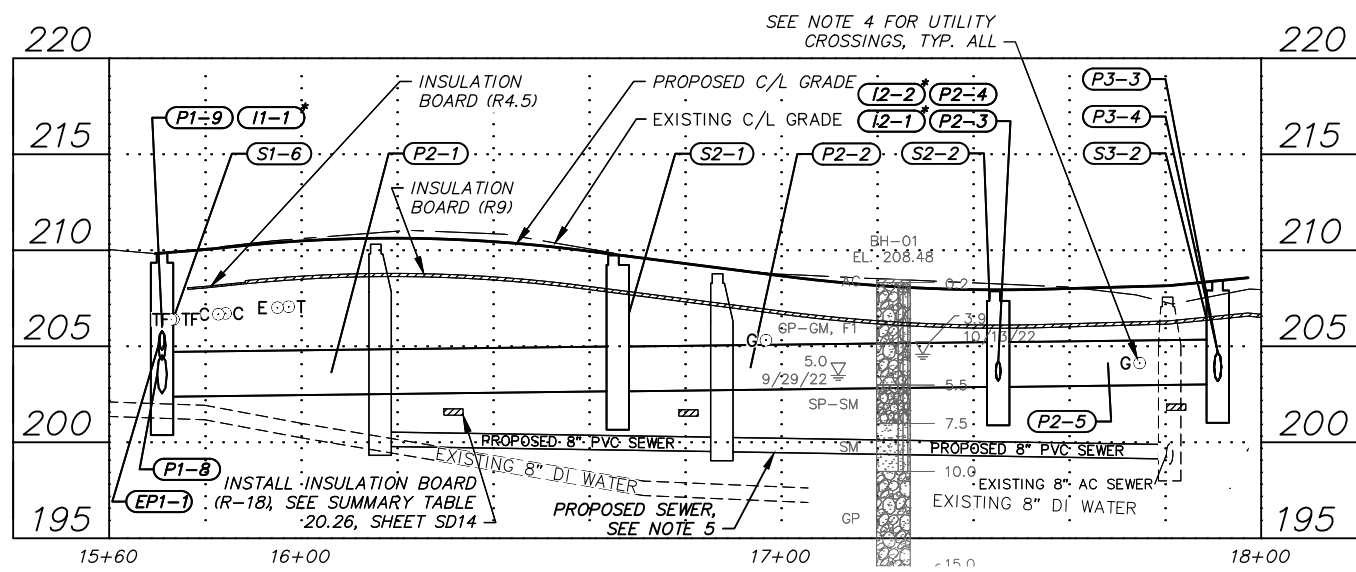
**55.02 & 55.03 – STORM DRAIN & SUBDRAIN PIPE**

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
P2-1	24	CPEP, S	94.17	S2-1	S1-6	202.82	202.54	0.31%
P2-2	24	CPEP, SP	78.89	S2-2	S2-1	203.05	202.82	0.31%
P2-3	12	CPEP, SP	15.53	I2-1	S2-2	203.44	203.20	2.08%
P2-4	12	CPEP, SP	21.47	I2-2	S2-2	203.57	203.22	2.00%
P2-5	24	CPEP, SP	45.73	S3-2	S2-2	203.18	203.05	0.31%

**55.05 & 55.09 – STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	STATION	OFFSET TO STRUCTURE C/L	TOP OF CASTING ELEVATION	CURB TYPE	COMMENTS
S2-1	MH I	MH	16+65.96	0.97' LT	209.72	N/A	
S2-2	MH I	MH	17+45.22	2.97' LT	207.85	N/A	
I2-1	CB	CI	17+45.22	18.50' LT	207.69	2	
I2-2	CB	CI	17+45.22	18.50' RT	207.82	2	

- NOTES:**
1. AN ASTERISK (\*) DENOTES PIPE OR STRUCTURE NOT SHOWN IN PROFILE FOR CLARITY.
  2. REFER TO SHEET SD5 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
  3. REFER TO SHEETS SD5-SD14 FOR STORM DRAIN DETAILS AND SUMMARY TABLES.
  4. CAUTION!!! THE LOCATION OF EXISTING UTILITY CROSSINGS SHOWN IN PROFILE ARE APPROXIMATE. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY. UTILITIES IN CONFLICT WITH PROPOSED IMPROVEMENTS WILL BE RELOCATED BY OTHERS. SEE THE SPECIFICATIONS FOR MORE INFORMATION.
  5. SEE SHEETS SS1-SS3 FOR PROPOSED SEWER DESIGN.



File: I:\data\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Plan & Profile.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
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 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

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 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

PLAN CHECK CONSTRUCTION RECORD VERTICAL DATUM REVISIONS CONSULTANT SEAL

**CRW ENGINEERING GROUP, LLC**  
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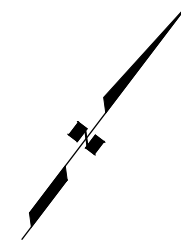
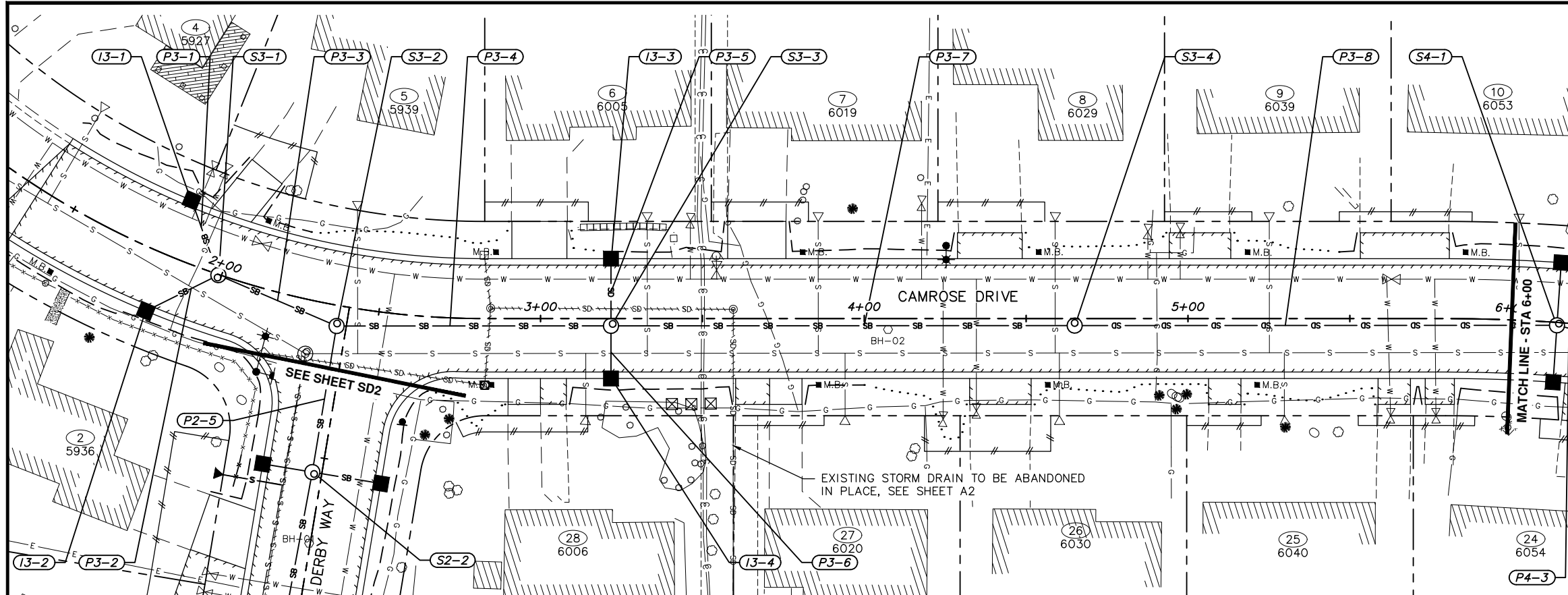


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**STORM DRAIN PLAN & PROFILE**

SCALE HOR. 1"=20'  
 VER. 1"=5'

GRID SW538, SW638  
 DATE JUNE 2023 STATUS 95% SHEET SD2 of SD14





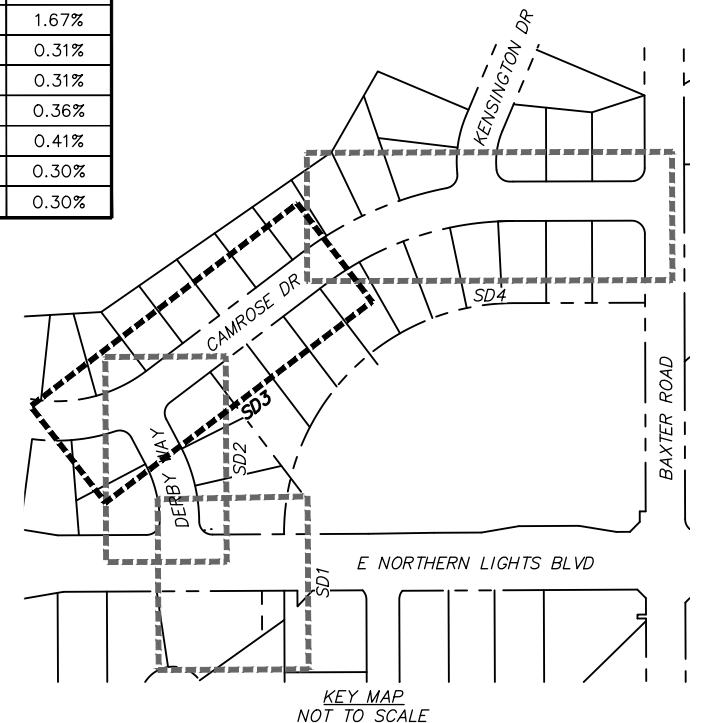
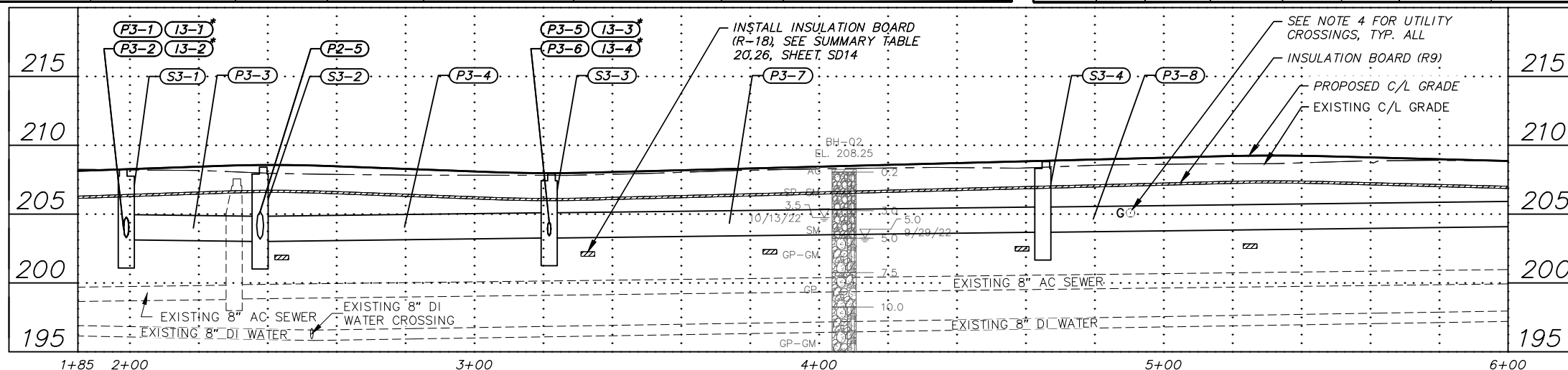
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**55.05 & 55.09 – STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	STATION	OFFSET TO STRUCTURE C/L	TOP OF CASTING ELEVATION	CURB TYPE	COMMENTS
I3-1	CB	CI	1+82.61	18.50' LT	207.89	2	
I3-2	CB	CI	1+82.61	18.50' RT	207.89	2	
S3-1	MH I	MH	1+99.04	0.21' RT	208.20	N/A	
S3-2	MH I	MH	2+37.88	6.33' RT	208.39	N/A	
S3-3	MH I	MH	3+21.76	2.25' RT	207.90	N/A	
I3-3	CB (RED)	CI	3+21.76	18.50' LT	207.73	2	
I3-4	CB	CI	3+21.76	18.50' RT	207.73	2	
S3-4	MH I	MH	4+65.00	2.16' RT	208.80	N/A	

**55.03 – SUBDRAIN PIPE**

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
P3-1	18	CPEP, SP	24.50	I3-1	S3-1	203.64	203.29	1.43%
P3-2	18	CPEP, SP	24.99	I3-2	S3-1	203.64	203.29	1.67%
P3-3	18	CPEP, SP	39.77	S3-1	S3-2	203.29	203.18	0.31%
P3-4	18	CPEP, SP	84.76	S3-3	S3-2	203.43	203.18	0.31%
P3-5	12	CPEP, SP	20.75	I3-3	S3-3	203.49	203.43	0.36%
P3-6	12	CPEP, SP	16.26	I3-4	S3-3	203.48	203.43	0.41%
P3-7	18	CPEP, SP	143.24	S3-4	S3-3	203.85	203.43	0.30%
P3-8	18	CPEP, SP	148.98	S4-1	S3-4	204.29	203.85	0.30%



File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Plan & Profile.dwg

**RECORD DRAWING**

1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72				

PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL

**CRW ENGINEERING GROUP, LLC**

3940 ARCTIC BLVD, SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AEC0882-AK

**STATE OF ALASKA**  
49 TH  
Joseph C. Hegna  
CE-11770  
REGISTERED PROFESSIONAL ENGINEER

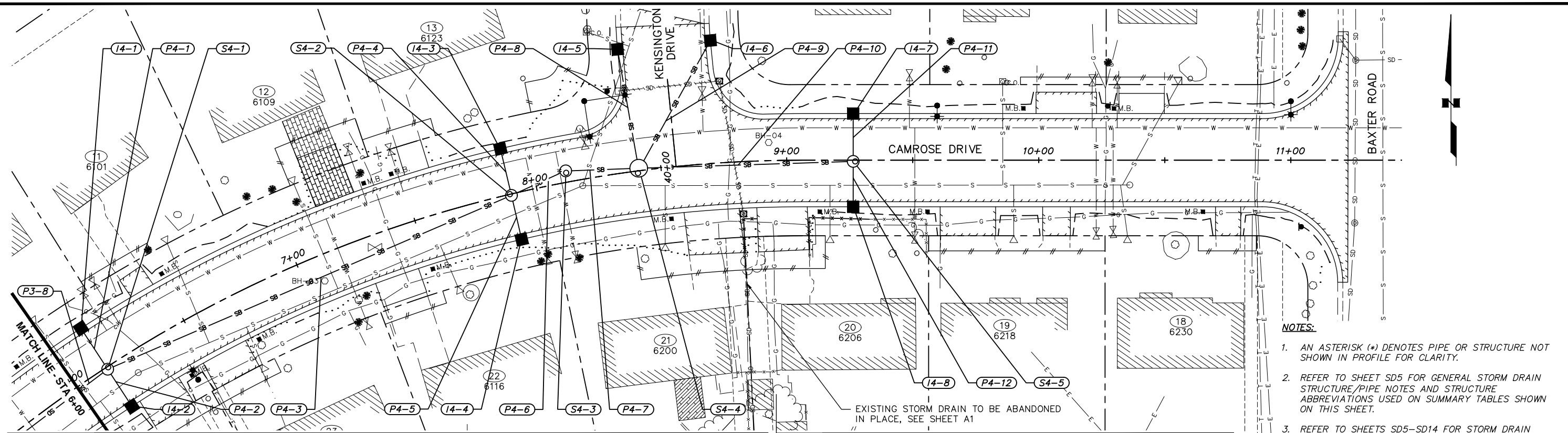
**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**STORM DRAIN PLAN & PROFILE**

SCALE HOR. 1"=20'  
VER. 1"=5'

GRID SW538, SW638  
DATE JUNE 2023 STATUS 95% SHEET SD3 of SD14



- NOTES:**
1. AN ASTERISK (\*) DENOTES PIPE OR STRUCTURE NOT SHOWN IN PROFILE FOR CLARITY.
  2. REFER TO SHEET SD5 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
  3. REFER TO SHEETS SD5-SD14 FOR STORM DRAIN DETAILS AND SUMMARY TABLES.
  4. CAUTION!!! THE LOCATION OF EXISTING UTILITY CROSSINGS SHOWN IN PROFILE ARE APPROXIMATE. CONTRACTOR SHALL PROTECT EXISTING UTILITIES IN PLACE. CONTRACTOR SHALL SHORE EXISTING UTILITIES IN PLACE WHERE NECESSARY. UTILITIES IN CONFLICT WITH PROPOSED IMPROVEMENTS WILL BE RELOCATED BY OTHERS. SEE THE SPECIFICATIONS FOR MORE INFORMATION.

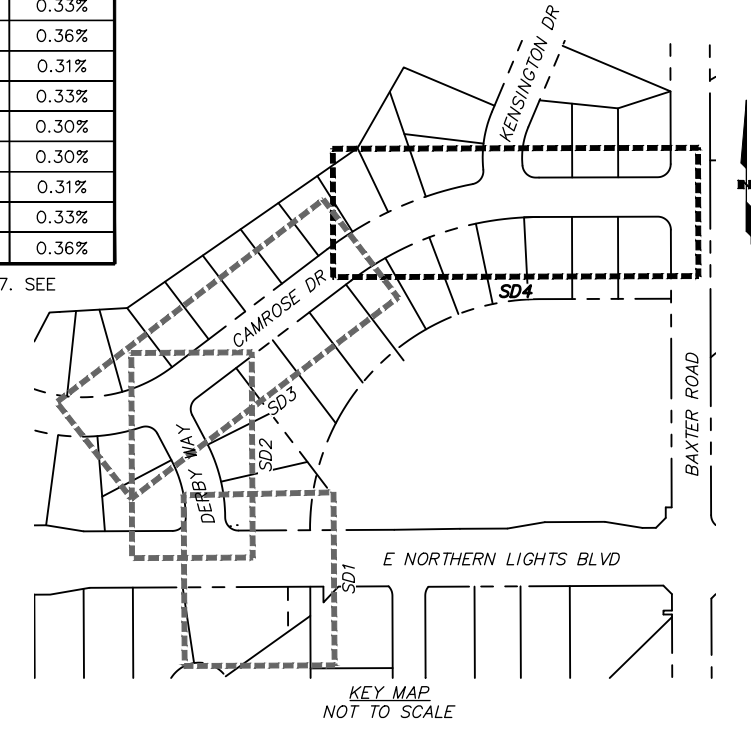
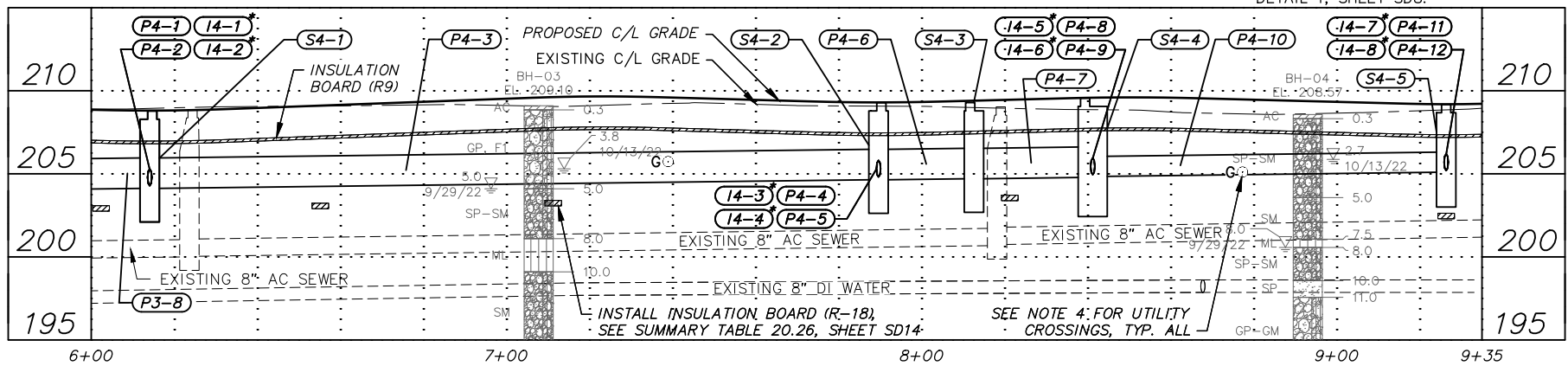
**55.05 & 55.09 - STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	STATION	OFFSET TO STRUCTURE C/L	TOP OF CASTING ELEVATION	CURB TYPE	COMMENTS
S4-1	MH I	MH	6+14.07	0.90' RT	208.77	N/A	
I4-1	CB (RED)	CI	6+14.07	18.50' LT	208.56	2	
I4-2	CB (RED)	CI	6+14.07	18.50' RT	208.56	2	
S4-2	MH I	MH	7+89.63	0.57' RT	209.27	N/A	
I4-3	CB (RED)	CI	7+89.59	18.50' LT	209.05	2	
I4-4	CB (RED)	CI	7+89.58	18.50' RT	209.05	2	
S4-3	MH I	MH	8+12.62	4.50' LT	209.28	N/A	
S4-4	MH II	MH	8+41.23	1.00' LT	209.53	N/A	
I4-5	CB (RED)	CI	8+39.16	48.90' LT	208.52	2	SEE DETAIL 3, SHEET SD7
I4-6	CB (RED)	CI	8+72.90	48.72' LT	208.52	2	
S4-5	MH I	MH	9+26.37	0.48' RT	209.15	N/A	
I4-7	CB (RED)	CI	9+26.37	18.50' LT	208.94	2	
I4-8	CB (RED)	CI	9+26.37	18.50' RT	208.94	2	

**55.03 - SUBDRAIN PIPE**

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
P4-1	12	CPEP, SP	19.40	I4-1	S4-1	204.34	204.29	0.32%
P4-2	12	CPEP, SP	17.60	I4-2	S4-1	204.34	204.29	0.37%
P4-3	18	CPEP, SP	174.43	S4-2	S4-1	204.81	204.29	0.31%
P4-4	12	CPEP, SP	19.07	I4-3	S4-2	204.86	204.81	0.33%
P4-5	12	CPEP, SP	17.93	I4-4	S4-2	204.86	204.81	0.36%
P4-6**	18	CPEP, SP	23.62	S4-3	S4-2	204.87	204.81	0.31%
P4-7**	18	CPEP, SP	28.98	S4-4	S4-3	204.95	204.87	0.33%
P4-8	12	CPEP, SP	47.95	I4-5	S4-4	205.08	204.95	0.30%
P4-9	12	CPEP, SP	58.12	I4-6	S4-4	205.11	204.95	0.30%
P4-10	12	CPEP, SP	85.13	S4-5	S4-4	205.20	204.95	0.31%
P4-11	12	CPEP, SP	18.98	I4-7	S4-5	205.25	205.20	0.33%
P4-12	12	CPEP, SP	18.02	I4-8	S4-5	205.25	205.20	0.36%

\*\* INSTALL PIPE WITH CLASS 1 PERFORATIONS FOR PIPE SEGMENTS P4-6 & P4-7. SEE DETAIL 1, SHEET SD8.



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 BY: \_\_\_\_\_

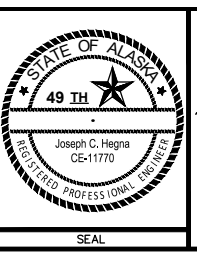
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 BY: \_\_\_\_\_

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BASE	TS	AR	
TOPOGRAPHY	TS	RB	
PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV.	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56				
	GAAB 15	ALT as shown in online MOA	324.72				
		Benchmarks Map Gallery Application					

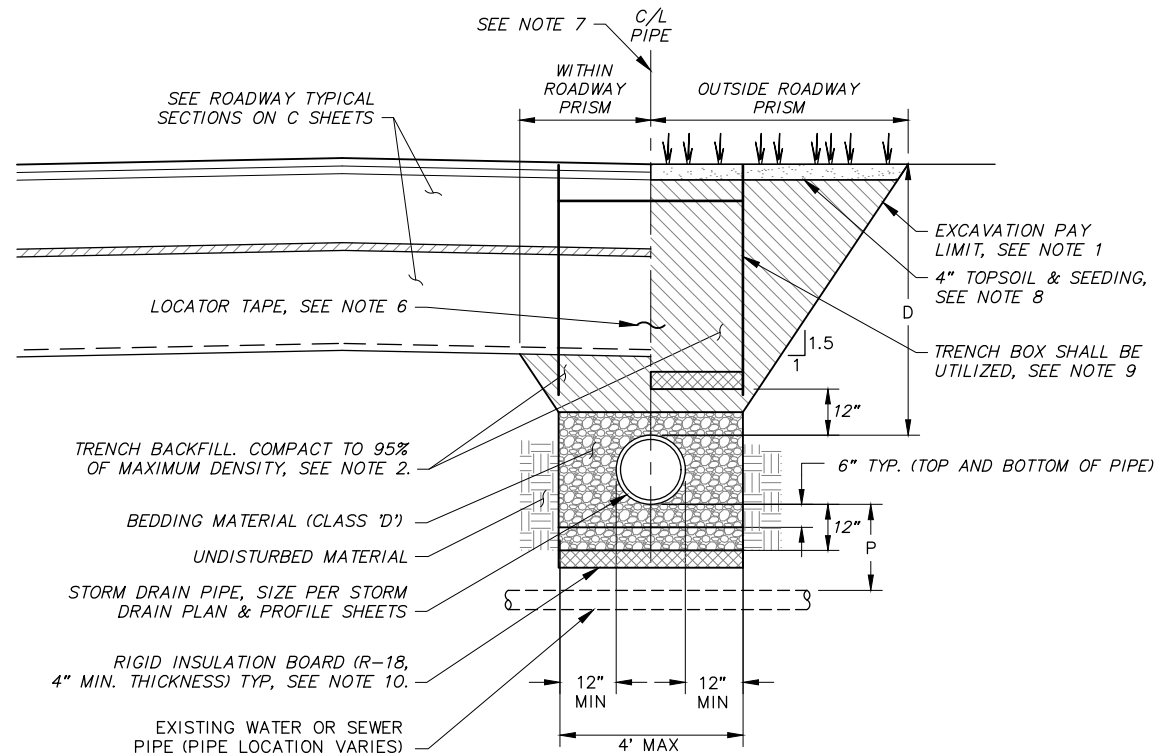


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

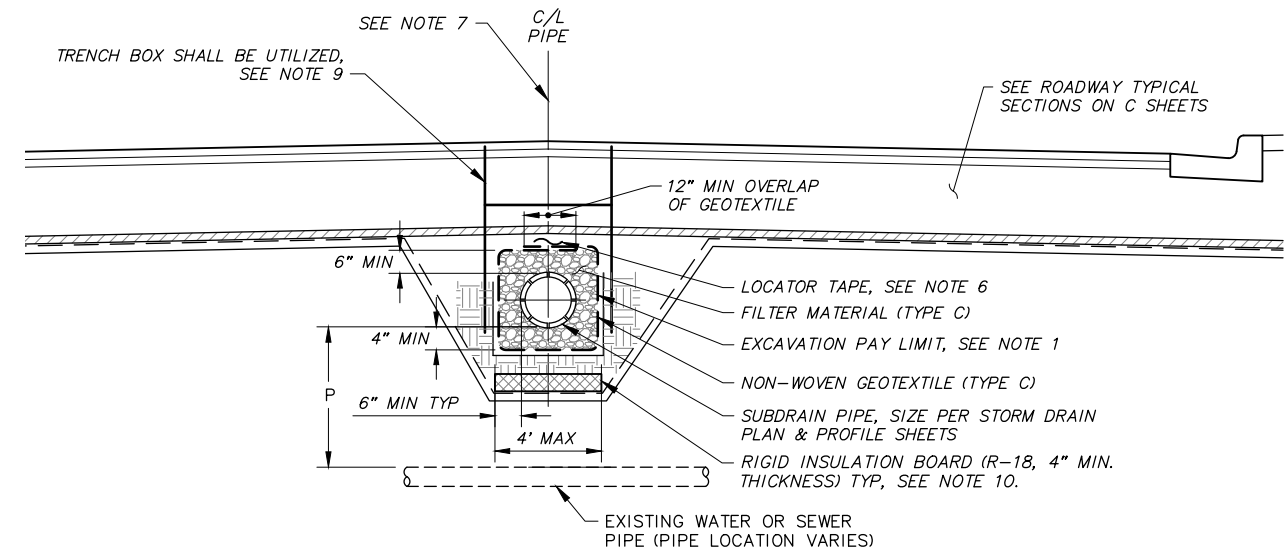
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**STORM DRAIN PLAN & PROFILE**

SCALE HOR. 1"=20' VER. 1"=5' GRID SW538, SW638 DATE JUNE 2023 STATUS 95% SHEET SD4 of SD14



**1 TYPICAL STORM DRAIN TRENCH SECTION**  
SCALE: NTS



**2 TYPICAL SUBDRAIN TRENCH SECTION**  
SCALE: NTS

**STORM DRAIN & SUBDRAIN TRENCH SECTION NOTES:**

- TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE, AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED TRENCH WALL SLOPES AND DIMENSIONS ARE FOR PAY QUANTITY DETERMINATIONS ONLY.
- TRENCH BACKFILL SHALL BE NATIVE MATERIAL MEETING TYPE III CLASSIFICATION (MINIMUM) AS APPROVED BY THE ENGINEER. NATIVE MATERIAL NOT MEETING TYPE III CLASSIFICATION SHALL BE REMOVED AND REPLACED WITH FURNISH TRENCH BACKFILL (TYPE II).
- REMOVE AND DISPOSE OF ALL ORGANIC MATERIALS IN ACCORDANCE WITH MASS SECTION 20.13.
- IN PREPARATION FOR AND IMMEDIATELY PRIOR TO PAVING, CONTRACTOR SHALL SAW CUT AND REMOVE AN ADDITIONAL 12 INCHES FROM EXISTING PAVEMENT EDGE. THE ENGINEER MAY REQUIRE MORE THAN 12 INCHES ADDITIONAL CUT IF THE EXISTING 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.
- WHERE WATER AND STORM DRAIN/SUBDRAIN MAINS CROSS, STORM DRAIN/SUBDRAIN MAIN JOINTS SHALL BE AT LEAST 10 FEET FROM WATER MAIN JOINTS.
- INSTALL DETECTABLE LOCATOR TAPE AT LEAST 18 INCHES BUT NO MORE THAN 36 INCHES ABOVE THE CROWN OF THE PIPE.
- LOCATION OF STORM DRAIN/SUBDRAIN VARIES WITHIN ROADWAY. INSTALL STORM DRAIN/SUBDRAIN AS SHOWN ON STORM DRAIN PLAN & PROFILE SHEETS.
- PLACE 4" OF COMPACTED TOPSOIL AND SEEDING (SCHEDULE A) ON ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.
- TRENCH BOX SHALL BE UTILIZED TO MINIMIZE TRENCH WIDTH AND REDUCE IMPACTS TO ADJACENT PROPERTIES AND RE-VEGETATION. CONTRACTOR SHALL AVOID IMPACTS TO TREE PROTECTION ZONES.
- INSTALL INSULATION BOARD (R-18) WHEN:
  - 'D' IS LESS THAN 4' IN AREAS OUTSIDE OF THE INSULATED ROADWAY SECTIONS. INSULATION PLACEMENT SHALL CONFORM TO MASS DETAIL 20-9.
  - 'P' IS LESS THAN 3', AS MEASURED FROM OUTSIDE OF PIPES & WITHIN BEDDING LIMITS, OR AS DIRECTED BY ENGINEER IN THE FIELD.
- WATER LINES CROSSING STORM DRAIN LINES REQUIRE A MINIMUM INSULATED VERTICAL SEPARATION OF EIGHTEEN (18) INCHES. IF EIGHTEEN (18) INCHES CAN NOT BE OBTAINED, THE WATER LINE WILL HAVE TO BE RELOCATED.

**GENERAL STORM DRAIN STRUCTURE & PIPE NOTES:**

- HORIZONTAL AND VERTICAL CONTROL POINTS FOR STORM DRAIN STRUCTURES (REFERENCE POINTS CALLED OUT IN PLAN & PROFILE SHEETS) ARE:
 

STRUCTURE	HORZ CONTROL	REFERENCE ELEV.
TYPE I MH	CENTER OF MH	FG/TOP OF LID.
TYPE II MH	CENTER OF MH	FG/TOP OF LID.
TYPE II CBMH	CENTER OF MH	TBC @ MID. PT. OF CURB INLET HOOD
CATCH BASIN	CENTER OF CB	TBC @ MID. PT. OF CURB INLET HOOD
- PIPE LENGTHS ARE BASED ON THE HORIZONTAL DISTANCE BETWEEN THE CENTER OF CONNECTING STRUCTURES OR FITTINGS. PIPE SLOPES ARE CALCULATED USING THE ACTUAL LENGTH OF PIPE FROM THE INSIDE FACE OF STRUCTURES.
- UNLESS OTHERWISE NOTED, ALL STORM DRAIN MAIN PIPE SHALL BE CPEP, TYPE S AND ALL SUBDRAIN PIPE SHALL BE CPEP, TYPE SP.
- THE FOLLOWING ABBREVIATIONS USED ON THE STORM DRAIN STRUCTURE TABLES ON THE PLAN & PROFILES SHEETS ARE DESCRIBED BELOW:
  - CB - CATCH BASIN
  - CB (RED) - REDUCED HEIGHT CATCH BASIN
  - CB MH II - CATCH BASIN MANHOLE, TYPE II
  - MH I - STORM DRAIN MANHOLE, TYPE I
  - MH II - STORM DRAIN MANHOLE, TYPE II
  - OGS - OIL AND GRIT SEPARATOR
  - CONNECT - CONNECT TO EXISTING STORM DRAIN MANHOLE AND/OR PIPE
  - BYPASS - BYPASS PIPE USED TO REROUTE FLOW AROUND OGS DURING MAINTENANCE
  - CI - CURB INLET
  - MH - MANHOLE FRAME AND LID

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BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								

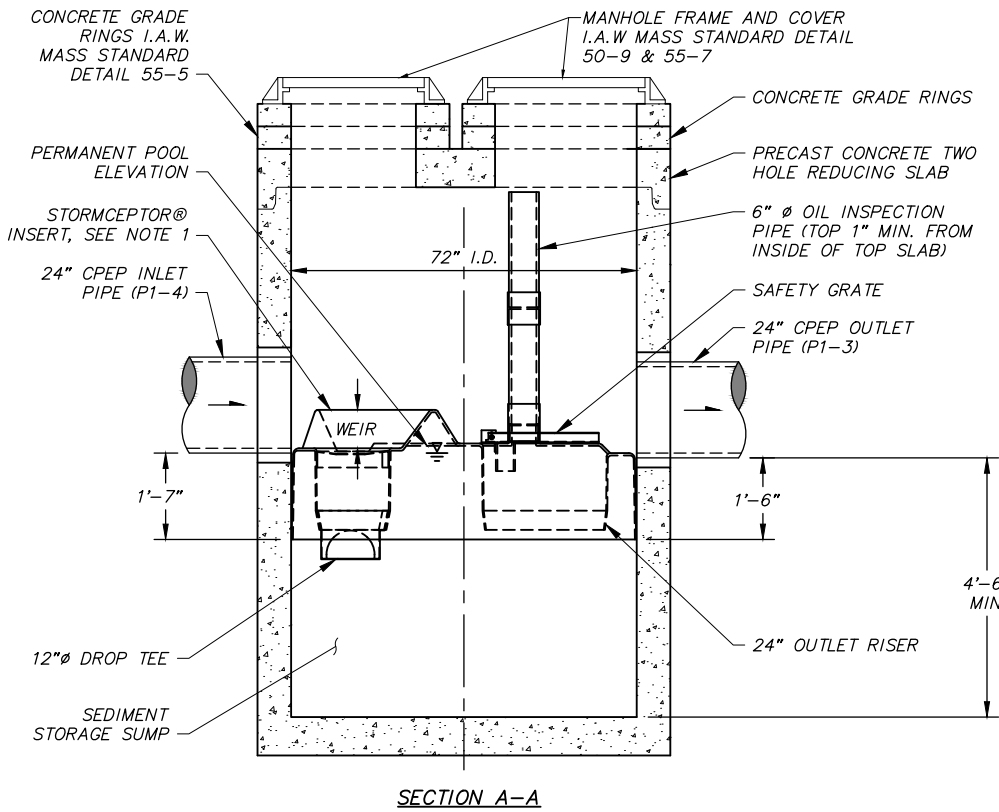
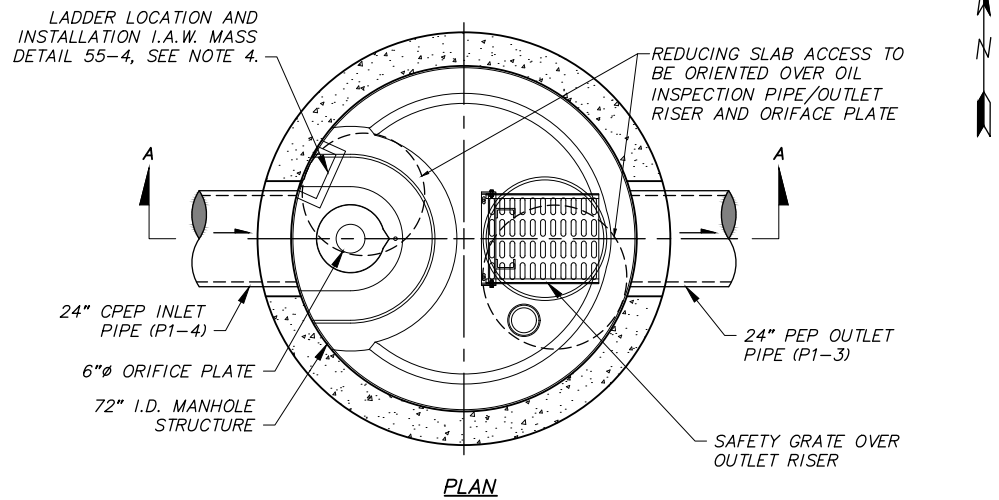
**CRW ENGINEERING GROUP INC.**  
3940 ARCTIC BLVD. SUITE 300  
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PHONE: (907) 562-3252  
#AEC1882-AK

STATE OF ALASKA  
49 TH  
Joseph C. Hegna  
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CE-11770

UNIVERSITY OF ANCHORAGE

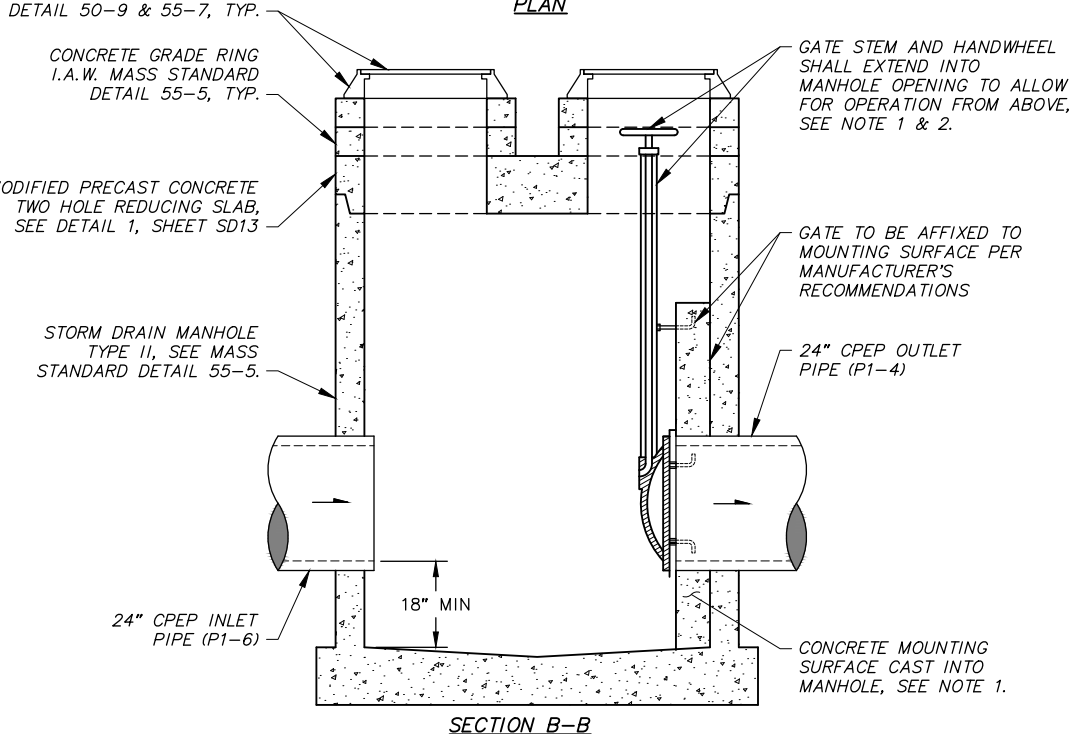
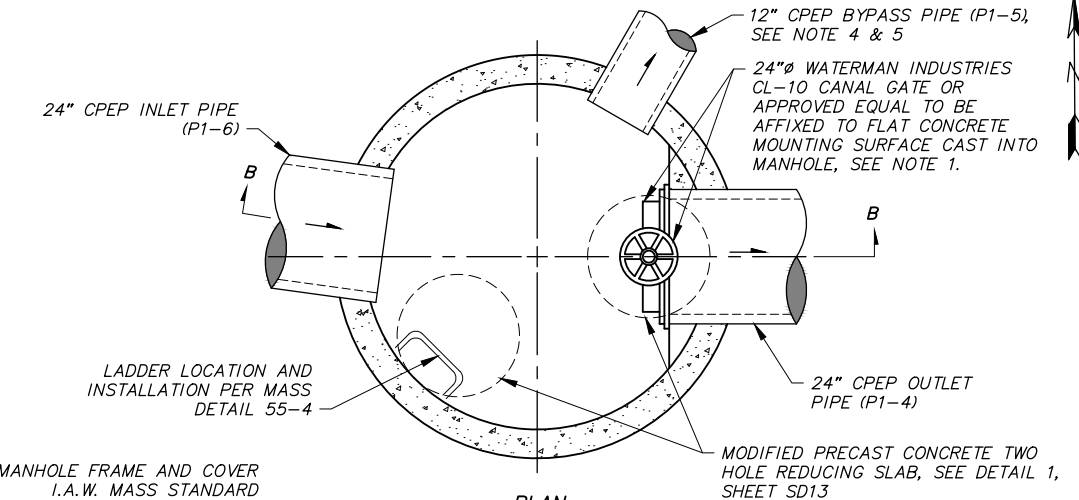
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**STORM DRAIN DETAILS**

SCALE: HOR. N/A VER. N/A  
GRID: SW538, SW638  
DATE: JUNE 2023  
STATUS: 95%  
SHEET: SD5 of SD14



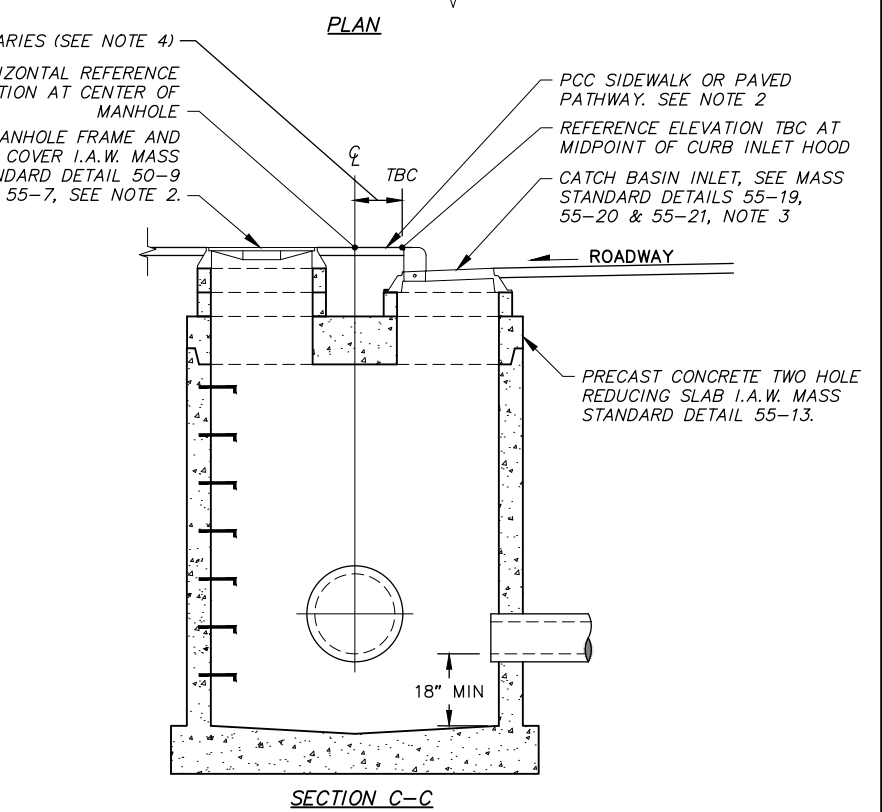
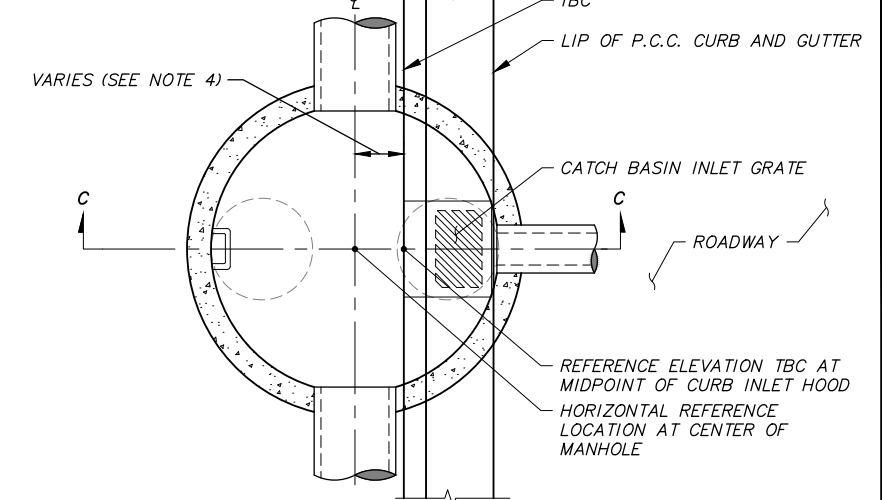
- OIL & GRIT SEPARATOR NOTES**
- OIL AND GRIT SEPARATOR (STRUCTURE OGS1-1) SHALL BE STORMCEPTOR MODEL STC900 MANUFACTURED BY CONTECH ENGINEERED SOLUTIONS LLC OR APPROVED EQUAL.
  - ACCESS OPENING THROUGH REDUCING SLAB SHOULD BE POSITIONED OVER THE DROP TEE AND OIL PORT.
  - SEE STORM DRAIN PLAN & PROFILE SHEETS FOR INLET AND OUTLET PIPE INVERTS & ORIENTATION AND STRUCTURE INFORMATION.
  - LADDER RUNGS NOT SHOWN IN SECTION VIEW FOR CLARITY.

**1 OIL AND GRIT SEPARATOR (OGS1-1) DETAIL**  
SCALE: NTS



- BYPASS MANHOLE NOTES**
- CAST CONCRETE MOUNTING SURFACE INTO MANHOLE SUCH THAT BYPASS GATE HANDWHEEL IS CENTERED IN ACCESS OPENING.
  - BYPASS GATE STEM SHALL BE NON-RISING TO POSITION HANDWHEEL AT CONVENIENT STATIC OPERATING ELEVATION FROM MANHOLE OPENING ABOVE.
  - BYPASS MANHOLE (S1-3) SHALL BE PAID FOR UNDER PAY ITEM 55.05 CONSTRUCT (TYPE II) BYPASS MANHOLE.
  - BYPASS PIPE (P1-5) AND CATCH BASIN LEAD (P1-6) NOT SHOWN IN SECTION B-B FOR CLARITY.
  - ADJUST LOCATION OF PIPE PENETRATION INTO MANHOLE FOR BYPASS PIPE (P1-5) AS REQUIRED TO AVOID CONFLICT WITH CONCRETE MOUNTING SURFACE.

**2 BYPASS MANHOLE (S1-3) DETAIL**  
SCALE: NTS



- TYPE II CATCH BASIN MANHOLE NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2015 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS AS CURRENTLY AMENDED AND AS MODIFIED ON THIS DETAIL.
  - SET MANHOLE COVER 1/4-INCH BELOW PCC SIDEWALK OR PAVED PATHWAY FINISH GRADE OR PER MASS STANDARD DETAIL 55-10 FOR ALL OTHER LOCATIONS.
  - MH CENTER MAY BE ON ROADWAY SIDE OF CURB LINE IN SOME LOCATIONS. ALIGN CATCH BASIN INLET WITH CURB LINE.
  - OFFSET FOR STANDARD INSTALLATION IS 0.95'.

**3 TYPE II CATCH BASIN MAHOLE DETAIL**  
SCALE: NTS

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DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR								
STAKING	TS	AR			Benchmarks Map Gallery Application					
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK										
CONSTRUCTION RECORD										
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REVISIONS										
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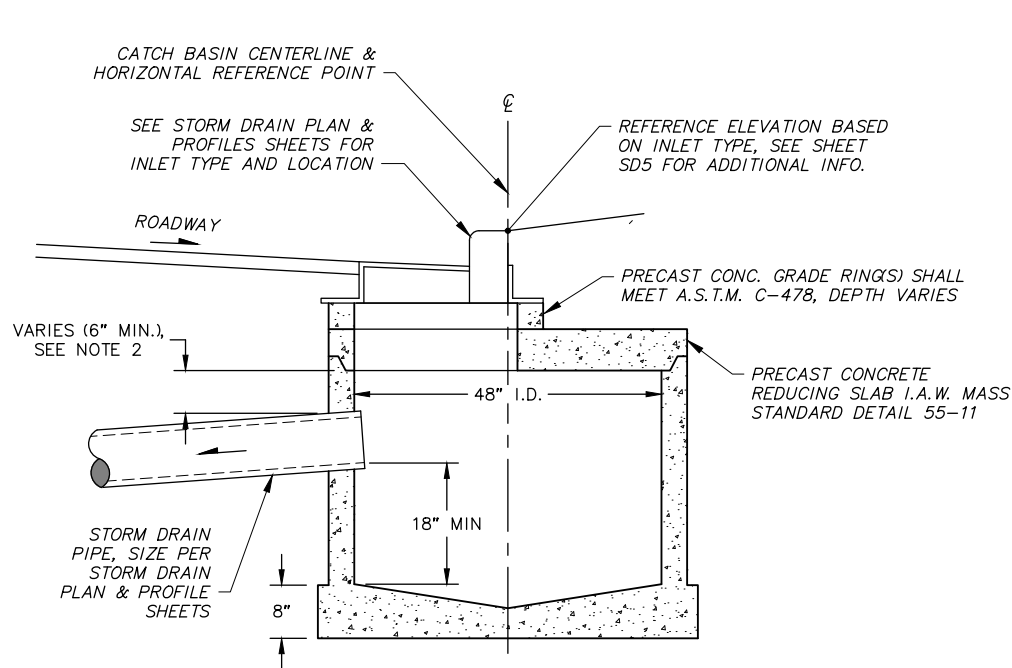
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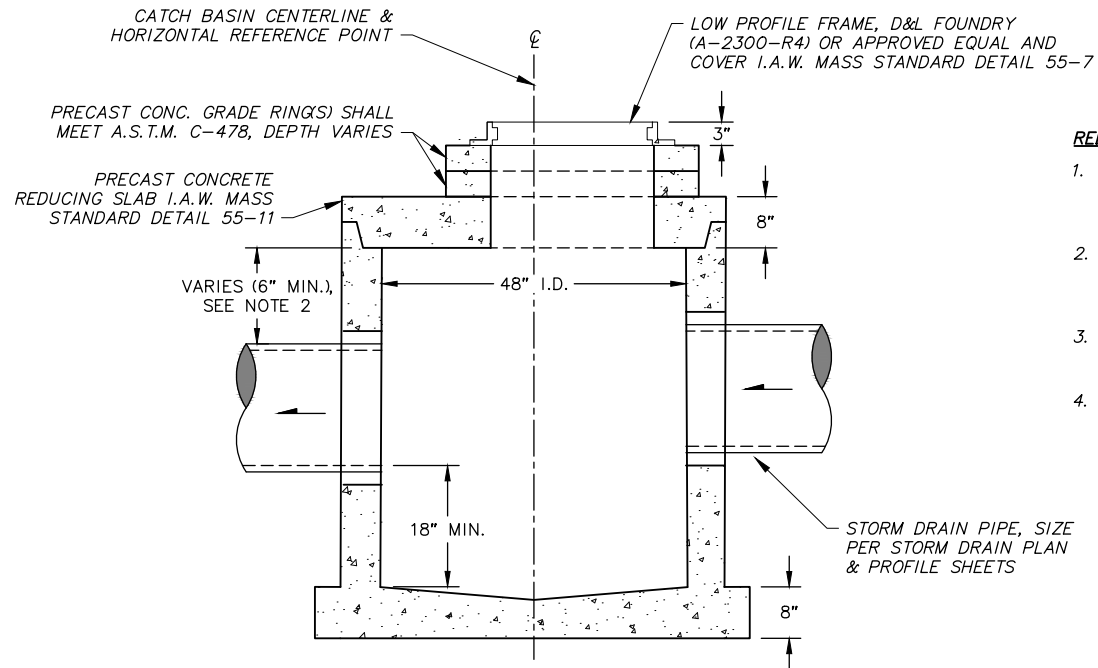
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE SCHED B  
STORM DRAINAGE PROJECT  
STORM DRAIN DETAILS

SCALE: HOR. N/A VER. N/A  
GRID SW1538, SW1638  
DATE: JUNE 2023  
STATUS: 95%  
SHEET SD6 of SD14

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CAD\2019\01 Working Set\01 Civil\10152.00 Storm Drain - Details.dwg



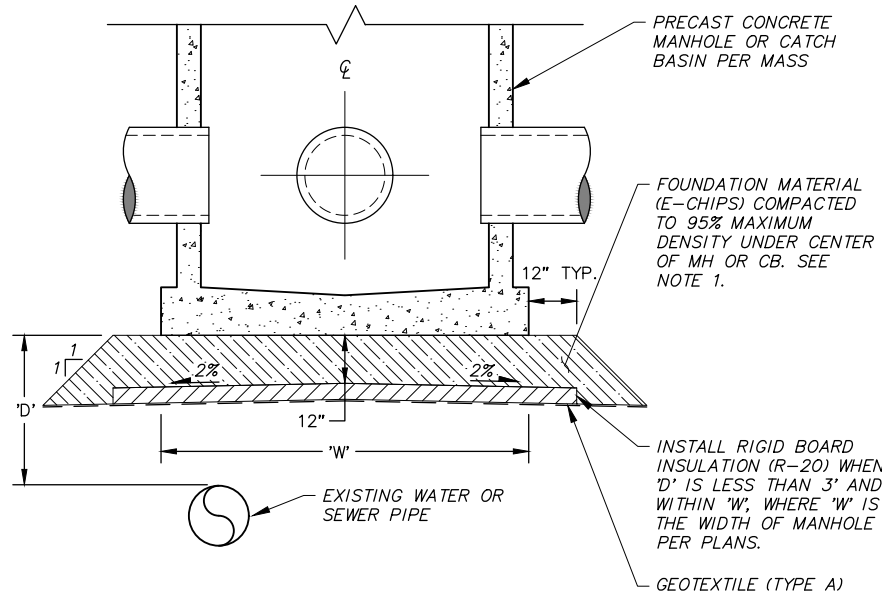
1 **REDUCED HEIGHT CATCH BASIN**  
SCALE: NTS



2 **REDUCED HEIGHT (TYPE I) MANHOLE**  
SCALE: NTS

**REDUCED HEIGHT STRUCTURE NOTES**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2015 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS (MASS) AS CURRENTLY AMENDED AND AS MODIFIED ON THESE DETAILS.
2. BASE SECTION HEIGHT BETWEEN TOP OF PIPE AND REDUCING SLAB SHALL BE REDUCED AS NECESSARY TO FACILITATE THE CONSTRUCTION OF THE STORM DRAIN AS SHOWN ON THE PLAN AND PROFILE SHEETS.
3. REDUCED HEIGHT CATCH BASIN SHALL BE PAID FOR UNDER PAY ITEM 55.09, CONSTRUCT CATCH BASIN.
4. REDUCED HEIGHT MANHOLE AND CATCHBASIN MANHOLE SHALL BE PAID FOR UNDER PAY ITEM 55.05, CONSTRUCT (TYPE I) MANHOLE & CONSTRUCT (TYPE I) CATCH BASIN MANHOLE.



**FOUNDATION BACKFILL & STORM DRAIN STRUCTURE INSULATION NOTES**

1. INSTALL FOUNDATION MATERIAL (E-CHIPS) AS DIRECTED BY ENGINEER OR WHERE INSULATION IS REQUIRED. PAYMENT FOR GEOTEXTILE SHALL BE INCIDENTAL TO PAY ITEM 20.19 FOUNDATION BACKFILL (E-CHIPS).

3 **FOUNDATION BACKFILL & STORM DRAIN STRUCTURE INSULATION DETAIL**  
SCALE: NTS

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Details.dwg

**RECORD DRAWING**  
1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_

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BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				

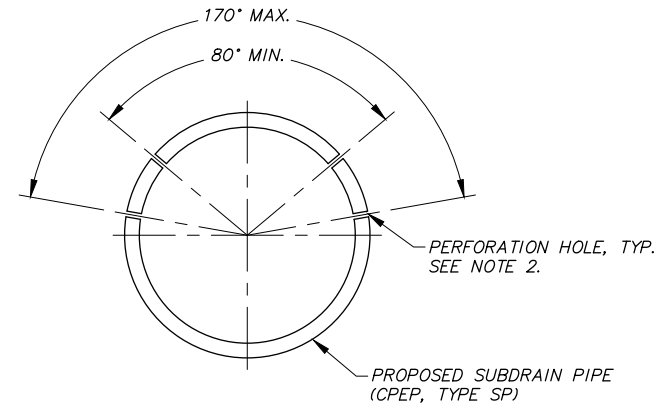
**CRW ENGINEERING GROUP INC.**  
3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AECLE882-AK

STATE OF ALASKA  
49 TH  
Joseph C. Hegna  
CE-11770  
REGISTERED PROFESSIONAL ENGINEER

MUNICIPALITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE SCHED B  
STORM DRAINAGE PROJECT  
**STORM DRAIN DETAILS**

SCALE: HOR. N/A VER. N/A  
GRID: SW1538, SW1638  
DATE: JUNE 2023  
STATUS: 95%  
SHEET: SD7 of SD14



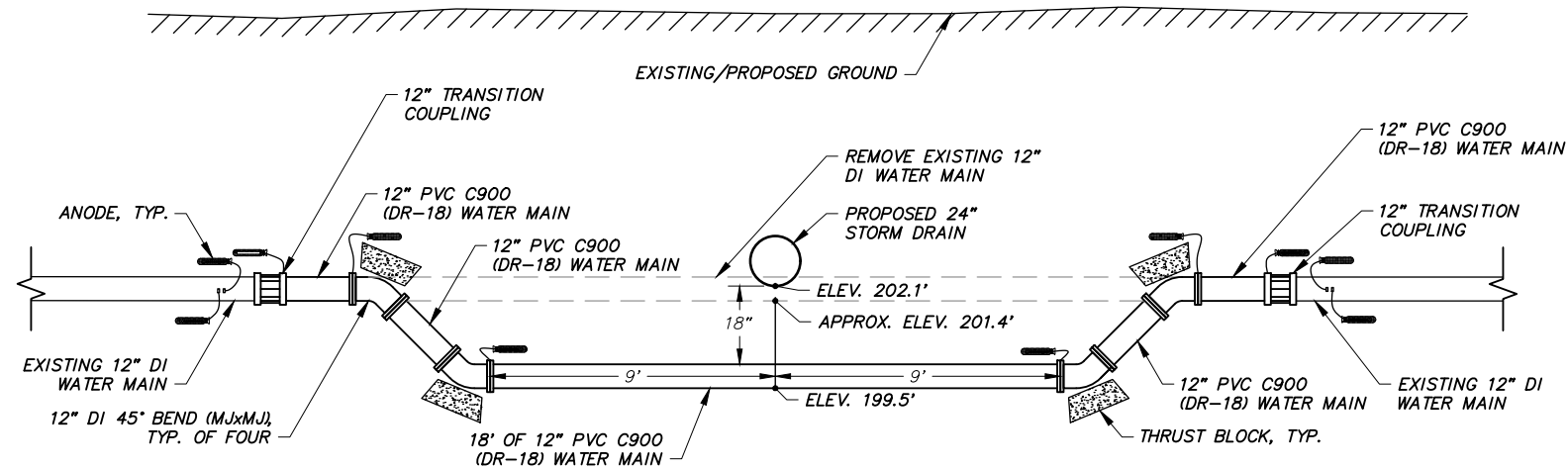
**PERFORATION NOTES:**

1. PERFORATION PATTERN SHALL BE CLASS 1 PER AASHTO M294 FOR SELECT SUBDRAIN PIPES AS SPECIFIED ON STORM DRAIN PLAN AND PROFILE SHEETS.
2. THE ORIENTATION OF CLASS 1 PERFORATIONS SHALL BE LOCATED ABOVE SPRINGLINE OF THE PIPE AS SHOWN ON THIS DETAIL.

**CLASS 1 PERFORATION PATTERN & SUBDRAIN PIPE ORIENTATION**

SCALE: NTS

1



ANODE SCHEDULE			
STATION	OFFSET	STATION	OFFSET

**RELOCATE WATER MAIN DETAIL**

SCALE: NTS

2

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Details.dwg

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TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK			CONSTRUCTION RECORD		VERTICAL DATUM				REVISIONS	CONSULTANT

**CRW ENGINEERING GROUP, INC.**  
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 #AECLE82-AK

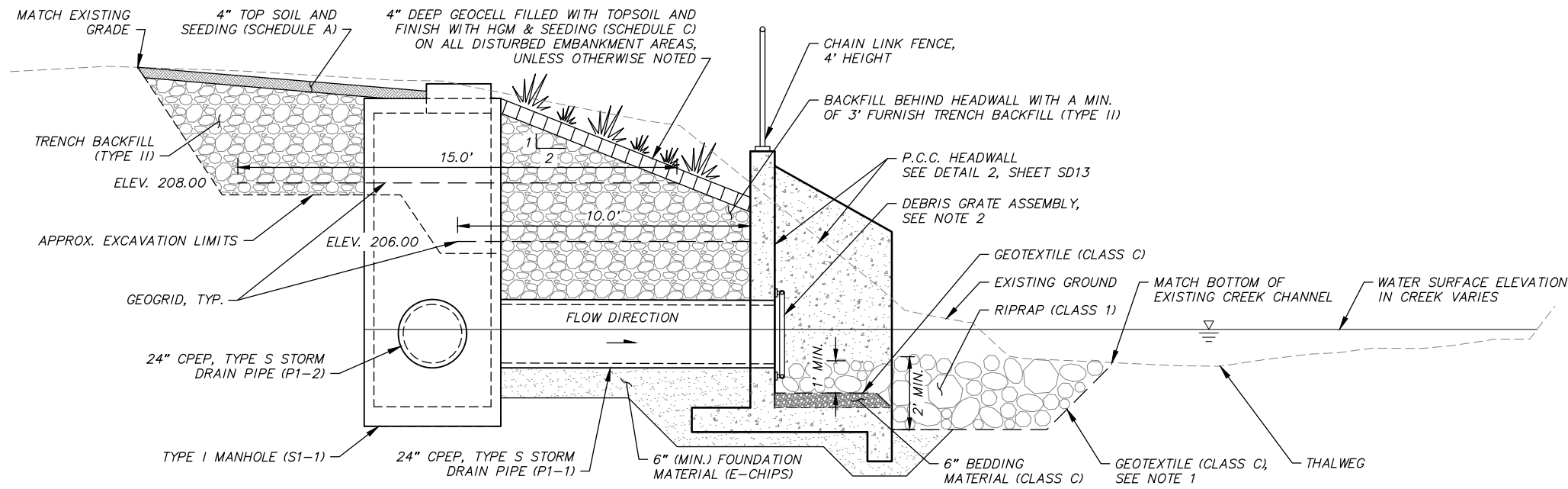
STATE OF ALASKA  
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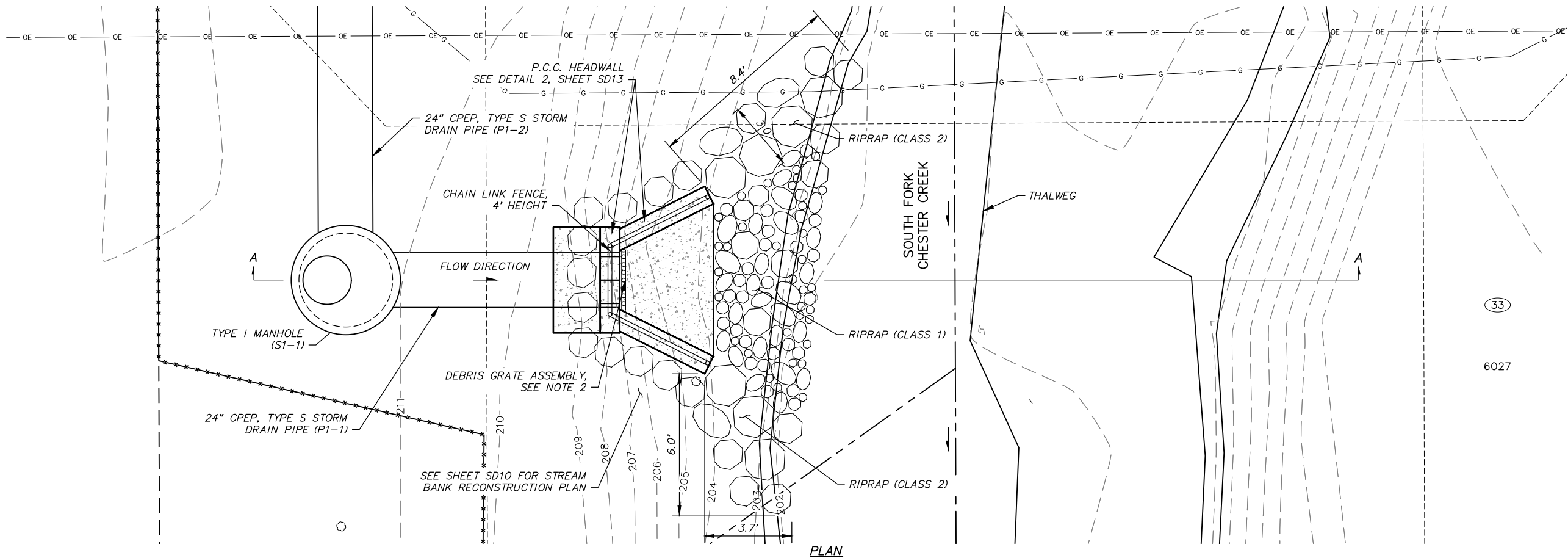
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**STORM DRAIN DETAILS**  
 SCALE: HOR. N/A VER. N/A  
 GRID SW1538, SW1638  
 DATE: JUNE 2023 STATUS: 95%  
 SHEET SD8 of SD14

**OUTFALL NOTES**

1. PAYMENT FOR GEOTEXTILE SHALL BE INCIDENTAL TO PAY ITEM 20.24, RIPRAP (CLASS 1).
2. DEBRIS GRATE OPENINGS SHALL BE NO MORE THAN 4-INCHES AND SHALL BE EITHER HINGED OR REMOVABLE FOR MAINTENANCE ACCESS.



**SECTION A-A**



**PLAN**

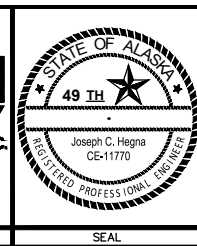
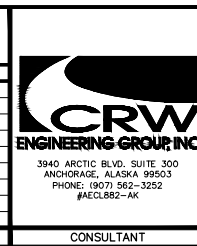
**STORM DRAIN OUTFALL DETAIL**

SCALE: NTS

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Outfall.dwg

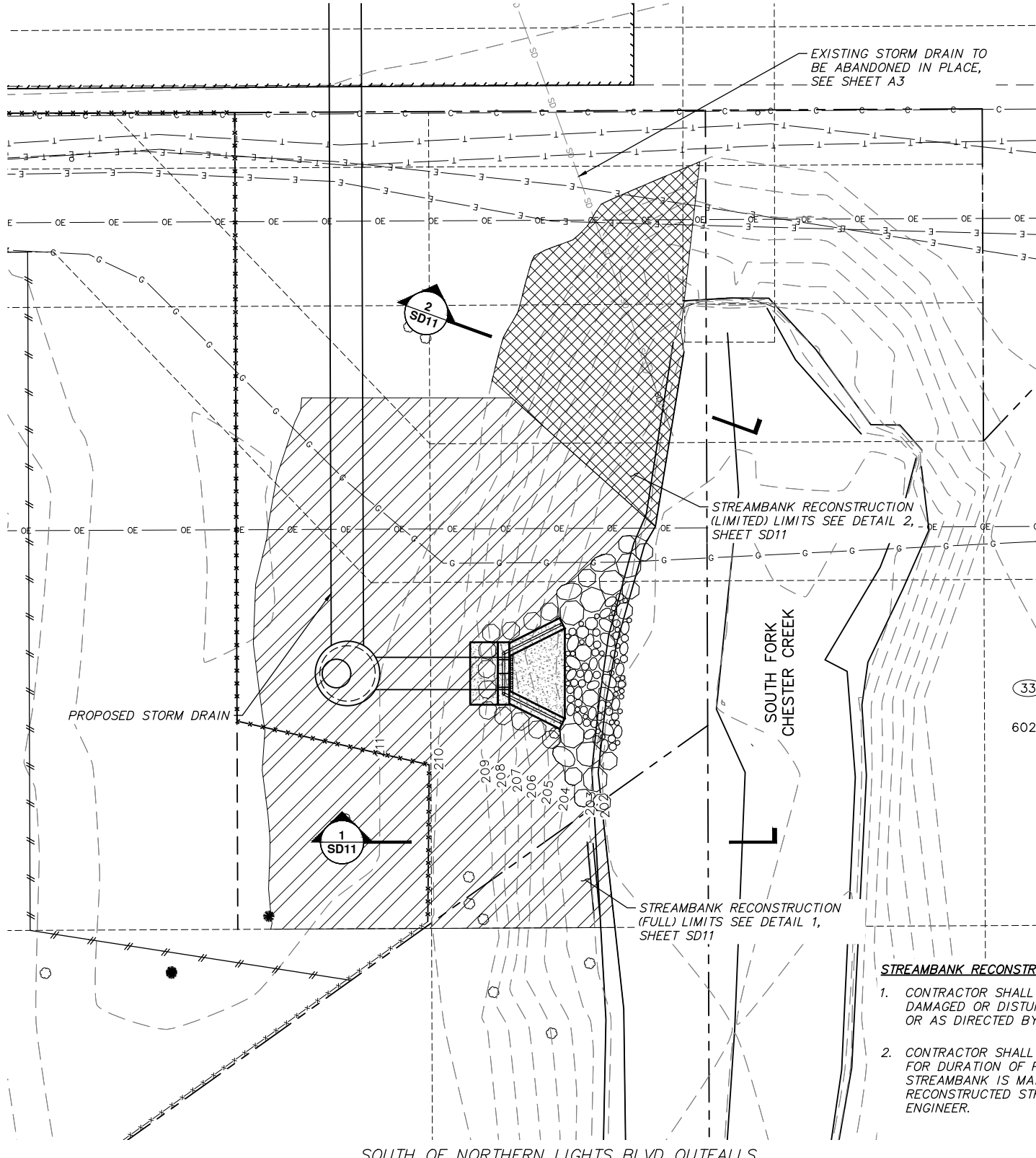
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PROFILE	RB	JK								
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TELEPHONE	TS	AR								
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DESIGN	JM	JH								
QUANTITIES	JM	JH								
PRELIMINARY/FINAL	JM	JH								
MUNICIPAL/STATE	JM	JH								
PLAN CHECK										
CONSTRUCTION RECORD										
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REVISIONS										
CONSULTANT										
SEAL										

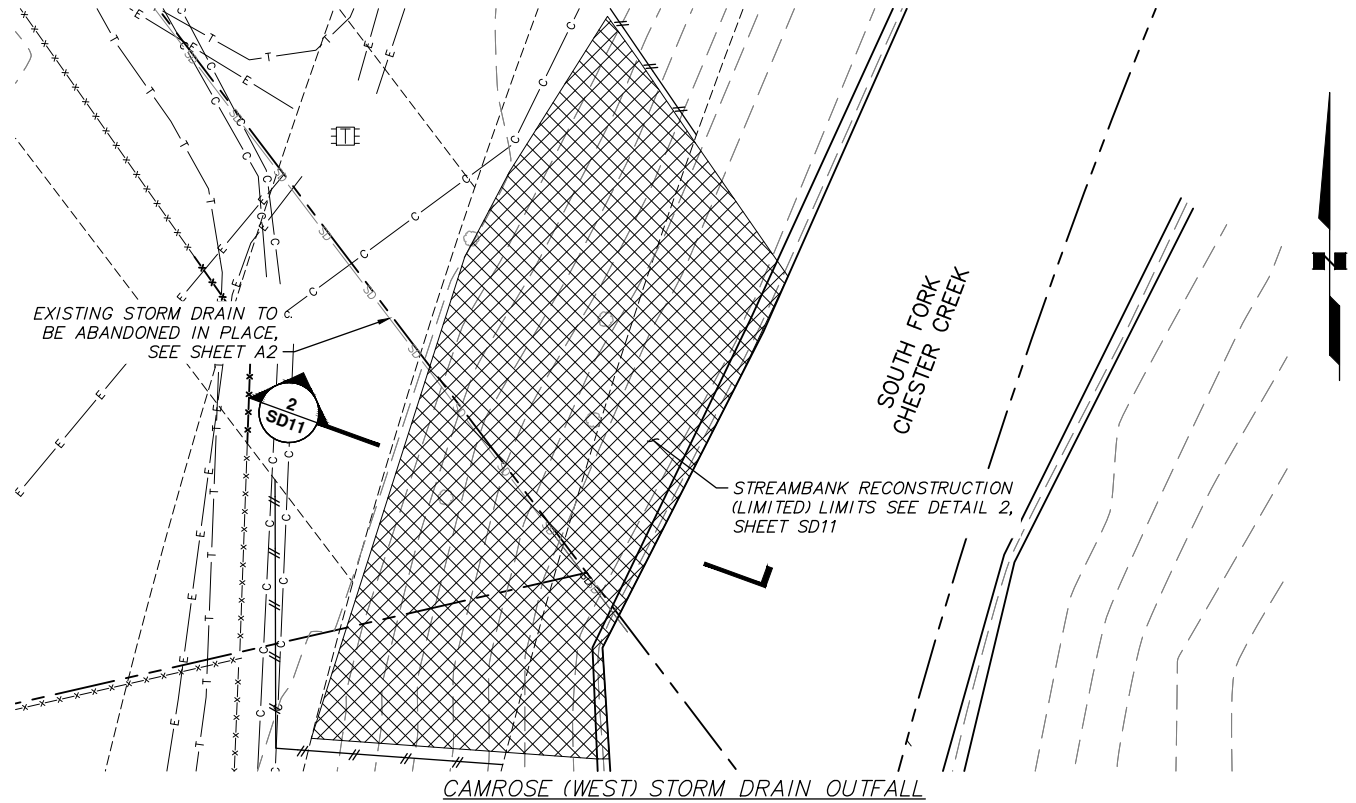


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	SCHED B	
<b>STORM DRAIN DETAILS</b>			
SCALE	HOR. N/A VER. N/A	GRID SW538, SW1638 DATE JUNE 2023	STATUS 95%
			SD9 of SD14 SHEET

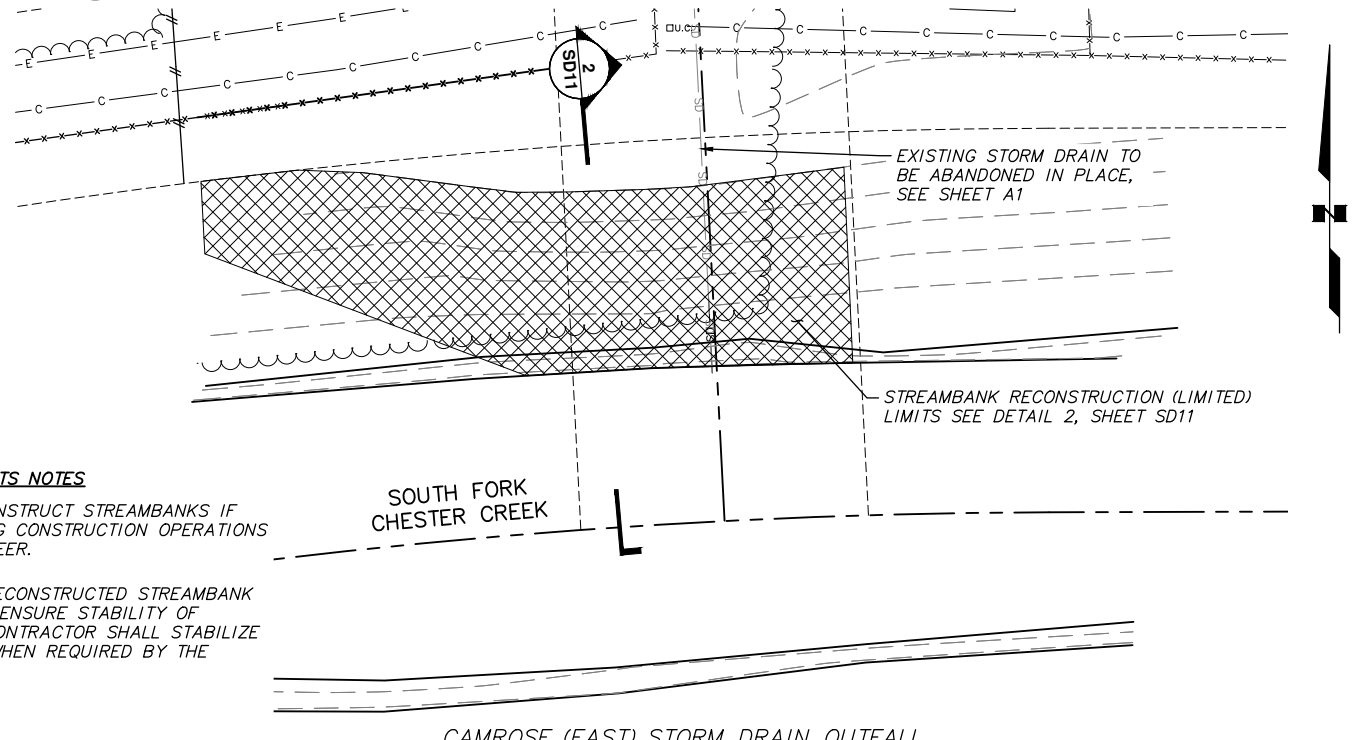
File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Storm Drain - Outfall.dwg



**1 STREAMBANK RECONSTRUCTION LIMITS (LOCATION 1)**  
SCALE: 1:5



**2 STREAMBANK RECONSTRUCTION LIMITS (LOCATION 2)**  
SCALE: 1:5



**3 STREAMBANK RECONSTRUCTION LIMITS (LOCATION 3)**  
SCALE: 1:5

- STREAMBANK RECONSTRUCTION LIMITS NOTES**
- CONTRACTOR SHALL ONLY RECONSTRUCT STREAMBANKS IF DAMAGED OR DISTURBED DURING CONSTRUCTION OPERATIONS OR AS DIRECTED BY THE ENGINEER.
  - CONTRACTOR SHALL MONITOR RECONSTRUCTED STREAMBANK FOR DURATION OF PROJECT TO ENSURE STABILITY OF STREAMBANK IS MAINTAINED. CONTRACTOR SHALL STABILIZE RECONSTRUCTED STREAMBANK WHEN REQUIRED BY THE ENGINEER.

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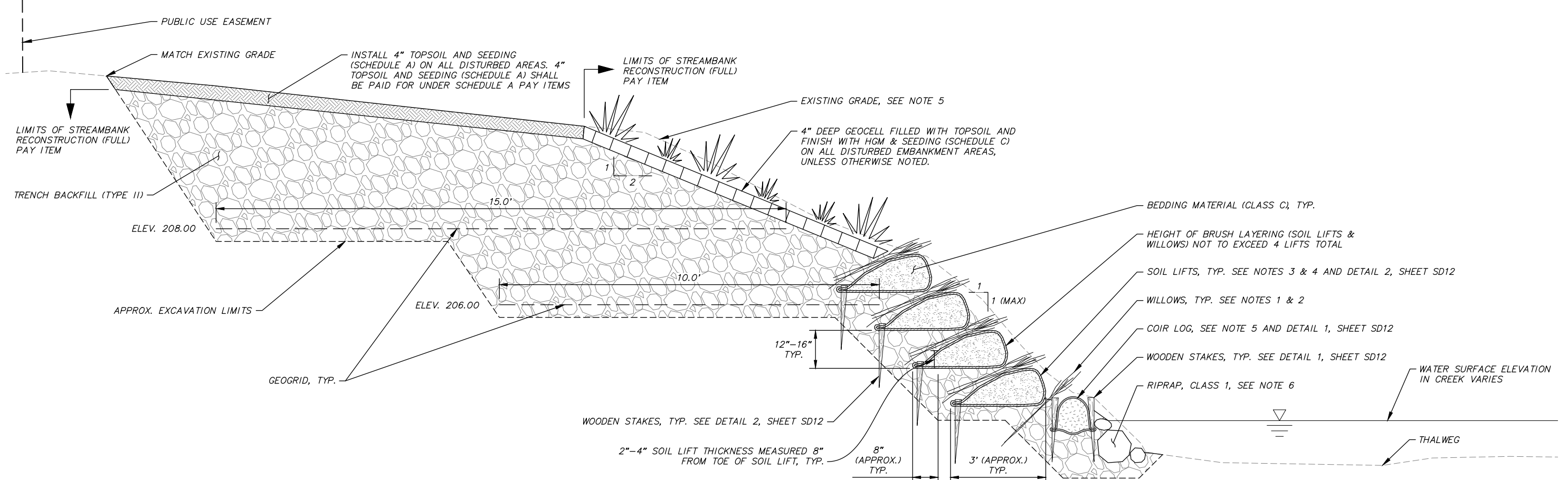
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SEAL										



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**STREAMBANK RECONSTRUCTION DETAILS**

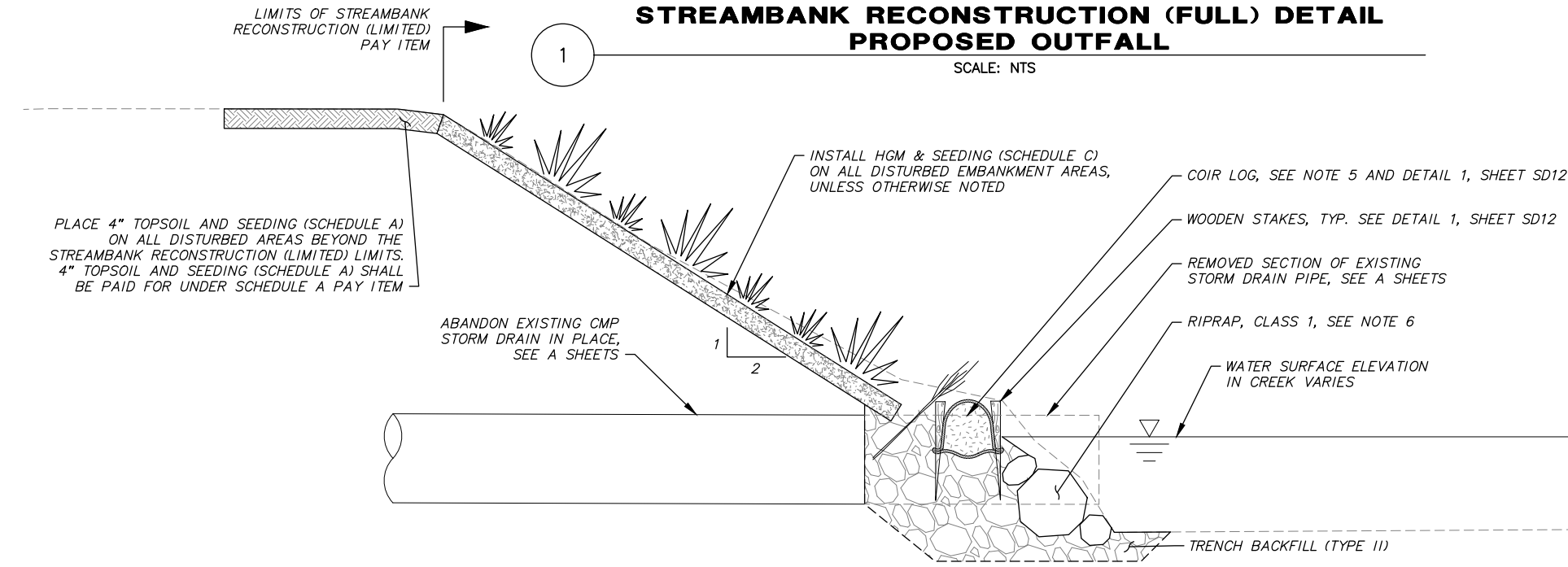
SCALE: HOR. N/A VER. N/A  
GRID SW538, SW1638  
DATE: JUNE 2023 STATUS: 95%  
SHEET SD10 of SD14





**STREAMBANK RECONSTRUCTION (FULL) DETAIL PROPOSED OUTFALL**

SCALE: NTS



**STREAMBANK RECONSTRUCTION (LIMITED) DETAIL EXISTING OUTFALL ABANDONMENT**

SCALE: NTS

- STREAMBANK RECONSTRUCTION NOTES**
1. TRIM WILLOWS SO ONLY 1/3 OF TOTAL CUTTING LENGTH IS ABOVE GROUND MAKING SURE TO LEAVE 2-TO-3 BUDS ON THE END OF THE EXPOSED STEM.
  2. WILLOWS SHOULD BE INSERTED BETWEEN THE COIR LOGS AND SOIL LIFTS AT 15 PER LINEAR FOOT AND AT A 45° ANGLE.
  3. BEDDING MATERIAL (CLASS C) IS ADDED ON TOP OF WILLOWS BETWEEN EVERY LIFT. SOIL SHOULD BE WATERED AND TAMPED TO REMOVE AIR POCKETS.
  4. BEDDING MATERIAL (CLASS C) IS ENCASED IN BOTH A FINE AND COARSE BIODEGRADABLE FABRICS.
  5. EXISTING GRADE VARIES. CONTRACTOR SHALL RECONSTRUCT STREAMBANK SUCH THAT THERE IS NO MATERIAL ADDED BEYOND THE EXISTING STREAMBANK CROSS-SECTION.
  6. PLACE RIPRAP, CLASS 1 AT TOE OF STREAMBANK AS REQUIRED.

File: s:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Outfall.dwg

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BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_

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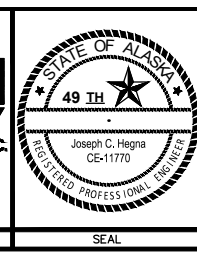
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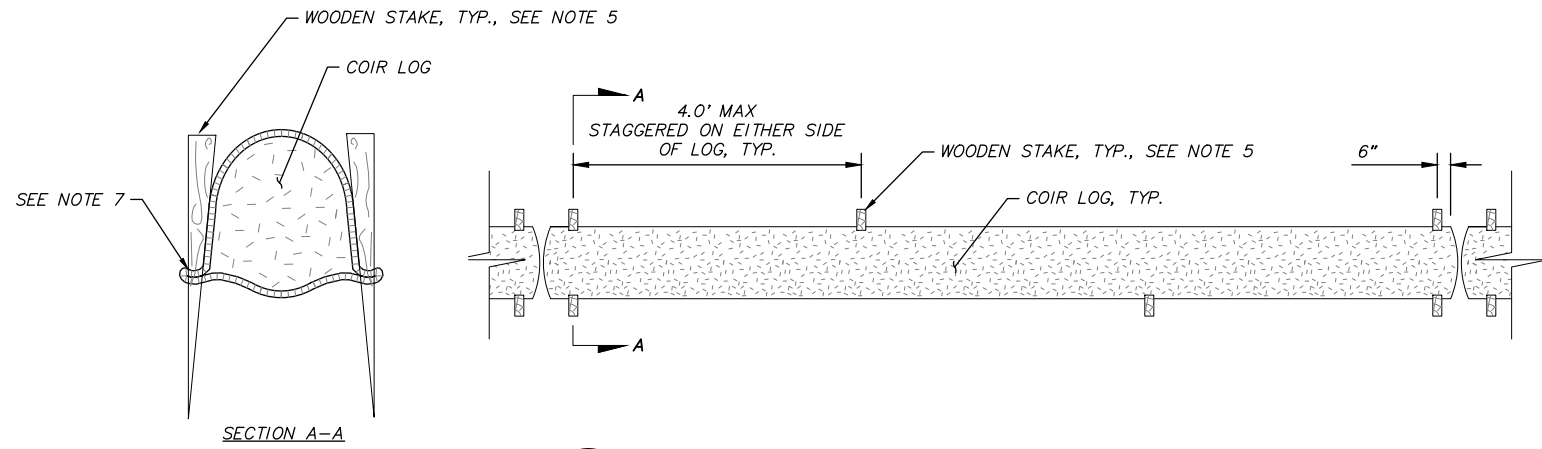
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TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72				
PROFILE	RB	JK	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
STORM SEWER	JM	JH								
WATER/SANITARY SEWER	JM	JH								
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TELEPHONE	TS	AR								
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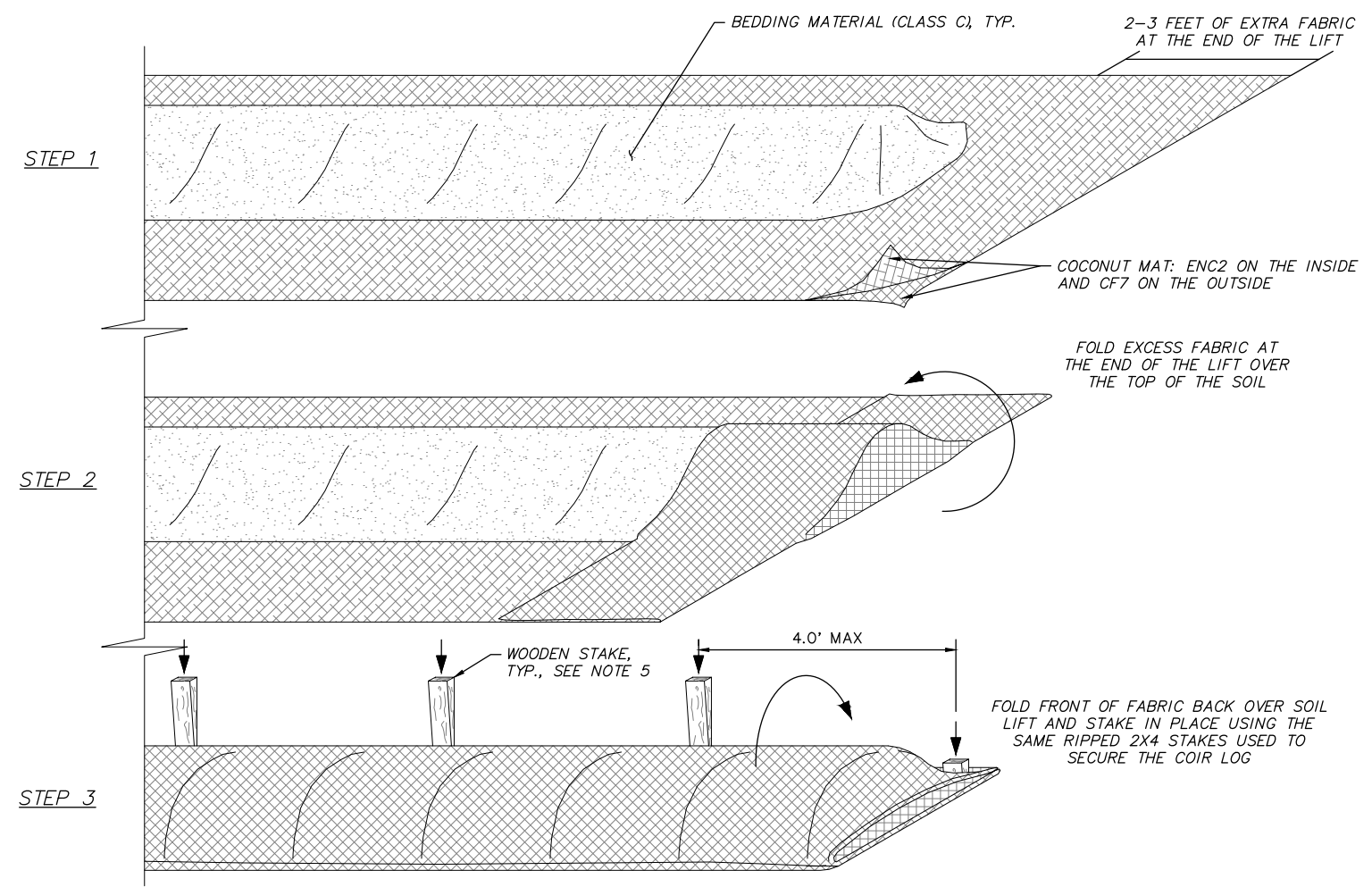


PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT		20-27		CAMROSE DRIVE STORM DRAINAGE PROJECT		SCHED B	
<b>STREAMBANK RECONSTRUCTION DETAILS</b>							
SCALE	HOR. N/A VER. N/A	GRID	SW538, SW638	DATE	JUNE 2023	STATUS	95%
						SD11	of SD14



1 **COIR LOG STAKING DETAIL**  
SCALE: NTS

- COIR LOG NOTES:**
1. COIR LOG IS ENCASED IN BOTH A FINE AND COARSE BIODEGRADABLE FABRICS.
  2. PRIOR TO PLACING COIR LOG, EXCAVATE TRENCH 2/3 THE HEIGHT OF COIR LOG. ENSURE LOGS ARE NOT RECESSED MORE THAN ONE-THIRD THE LOG DIAMETER IN TO THE BANK.
  3. ENSURE LOGS ARE PLACED TIGHTLY END TO END.
  4. WHERE PRACTICAL, THE EXTREME ENDS OF THE ROW OF LOGS SHOULD BE ROTATED UP THE BANK AND SECURED WITH STAKES.
  5. DIAGONALLY CUT 30"-36" LONG 2"x4" LUMBER TO CREATE STAKES.
  6. SECURE THE LOGS BY DRIVING THE STAKES BETWEEN THE OUTER NETTING AND THE CORE MATERIAL EACH SIDE OF THE LOGS AND SECURED INTO THE GROUND, NOT THROUGH THE CENTER OF THE LOG.
  7. A PAIR OF STAKES SHOULD BE PLACED 6 INCHES FROM THE ENDS OF THE COIR LOG. ENSURE THE SPACING OF STAKES (ONE ON EITHER SIDE) DOES NOT EXCEED 4 FEET.
  8. ONCE DRIVEN INTO THE GROUND, THE STAKES SHOULD SIT AT LEAST TWO-THIRDS BELOW THE GROUND AND ONE-THIRD ABOVE, AND FLUSH WITH THE TOP OF THE LOG.
  9. FILL AND SHAPE BEHIND THE LOGS IF REQUIRED.



2 **SOIL LIFT FABRIC WRAP DETAILS**  
SCALE: NTS

File: s:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Details.dwg

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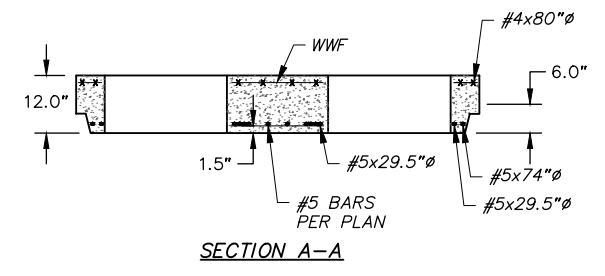
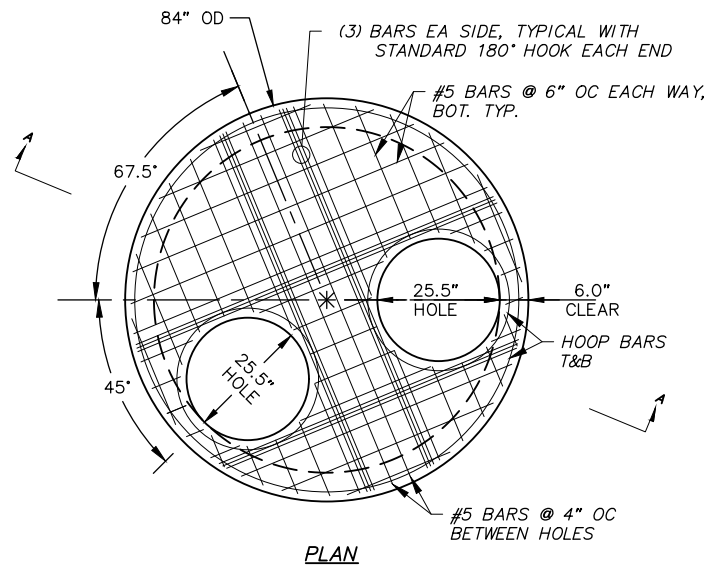
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PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE SCHED B  
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**STREAMBANK RECONSTRUCTION DETAILS**  
 SCALE HOR. N/A VER. N/A  
 GRID SW1538, SW1638  
 DATE JUNE 2023 STATUS 95%  
 SD12 of SD14 SHEET



**REDUCING SLAB NOTES**

1. CONCRETE MINIMUM DESIGN STRENGTH OF 4,000 PSI.

1 **MODIFIED PRECAST CONCRETE TWO HOLE REDUCING SLAB DETAIL**  
SCALE: NTS

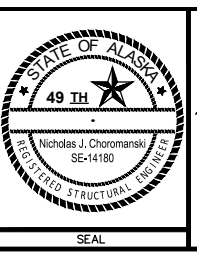
2 **P.C.C. STORM DRAIN HEADWALL**  
SCALE: NTS

**TO BE COMPLETED FOR FINAL DESIGN**

File: s:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Storm Drain - Details.dwg

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QUANTITIES/FINAL	JM	JH	CONTRACTOR							
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MUNICIPAL/STATE	JM	JH								
	PLAN CHECK		CONSTRUCTION RECORD		VERTICAL DATUM		REVISIONS		CONSULTANT	SEAL



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	SCHED B	
<b>STORM DRAIN DETAILS</b>			
SCALE	HOR. N/A VER. N/A	GRID SW1538, SW1638	DATE JUNE 2023 STATUS 95%
			SD13 of SD14

20.26

INSULATION BOARD (R-18) – PIPE CROSSINGS & STORM DRAIN INSULATION							
SHEET	BEGIN STATION	END STATION	OFFSET	WIDTH (FT)	LENGTH (FT)	AREA (SF)	COMMENTS
SD1	22+65	–	CL	4	8	32	WATER CROSSING (NORTHERN LIGHTS BLVD)
SD2	16+32	–	4.99' LT	4	8	32	SEWER SERVICE (PARCEL 30)
	16+81	–	2.84' LT	4	8	32	SEWER SERVICE (PARCEL 29)
	17+45	–	11.46' LT	4	8	32	SEWER MAIN
	17+82	–	2.97' LT	4	8	32	SEWER MAIN
SD3	2+44	–	5.27' RT	4	8	32	SEWER SERVICE (PARCEL 5)
	3+22	–	10.75' RT	4	8	32	SEWER MAIN
	3+33	–	2.24' RT	4	8	32	SEWER SERVICE (PARCEL 6)
	3+86	–	2.21' RT	4	8	32	SEWER SERVICE (PARCEL 7)
	4+59	–	2.17' RT	4	8	32	SEWER SERVICE (PARCEL 8)
	5+25	–	2.13' RT	4	8	32	SEWER SERVICE (PARCEL 9)
	6+02	–	1.57' RT	4	8	32	SEWER SERVICE (PARCEL 10)
SD4	6+14	–	9.31' RT	4	8	32	SEWER MAIN
	6+55	–	6.29' RT	4	8	32	SEWER SERVICE (PARCEL 11)
	7+11	–	8.23' RT	4	8	32	SEWER SERVICE (PARCEL 12)
	7+90	–	8.09' RT	4	8	32	SEWER MAIN
	8+21	–	3.23' LT	4	8	32	SEWER MAIN
	8+39	–	48.90' LT	8	8	64	CATCH BASIN OVER SEWER MAIN, SEE DETAIL 3, SHEET SD7
	9+26	–	9.49' RT	4	8	32	SEWER MAIN

**INSULATION BOARD NOTES**

- INSULATION BOARD SHALL BE INSTALLED I.A.W. TYPICAL STORM DRAIN AND SUBDRAIN TRENCH SECTIONS (DETAIL 1 & 2, SHEET SD5) AND MASS DETAIL 20-9.

60.02

RAISE OR LOWER WATER MAIN				
SHEET	APPX BEGIN STATION	SIZE (INCH)	TYPE	REMARKS
SD1	22+65.11	12	DI	LOWER WATER MAIN I.A.W. DETAIL 2, SHEET SD8 & MASS DETAIL 60-02

File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\01 Civil\10152.00 Storm Drain - Details.dwg

**RECORD DRAWING**

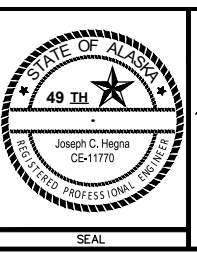
1. DATA PROVIDED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 THIS WILL SERVE TO CERTIFY THAT THESE RECORD DRAWINGS ARE A TRUE AND ACCURATE REPRESENTATION OF THE PROJECT AS CONSTRUCTED.  
 CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 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: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY
BASE	TS	AR
TOPOGRAPHY	TS	RB
PROFILE	RB	JK
STORM SEWER	JM	JH
WATER/SANITARY SEWER	JM	JH
GAS	TS	AR
TELEPHONE	TS	AR
ELECTRIC	JH	TK
DESIGN	JM	JH
QUANTITIES	JM	JH
PRELIMINARY/FINAL	JM	JH
MUNICIPAL/STATE	JM	JH

FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
STAKING	GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

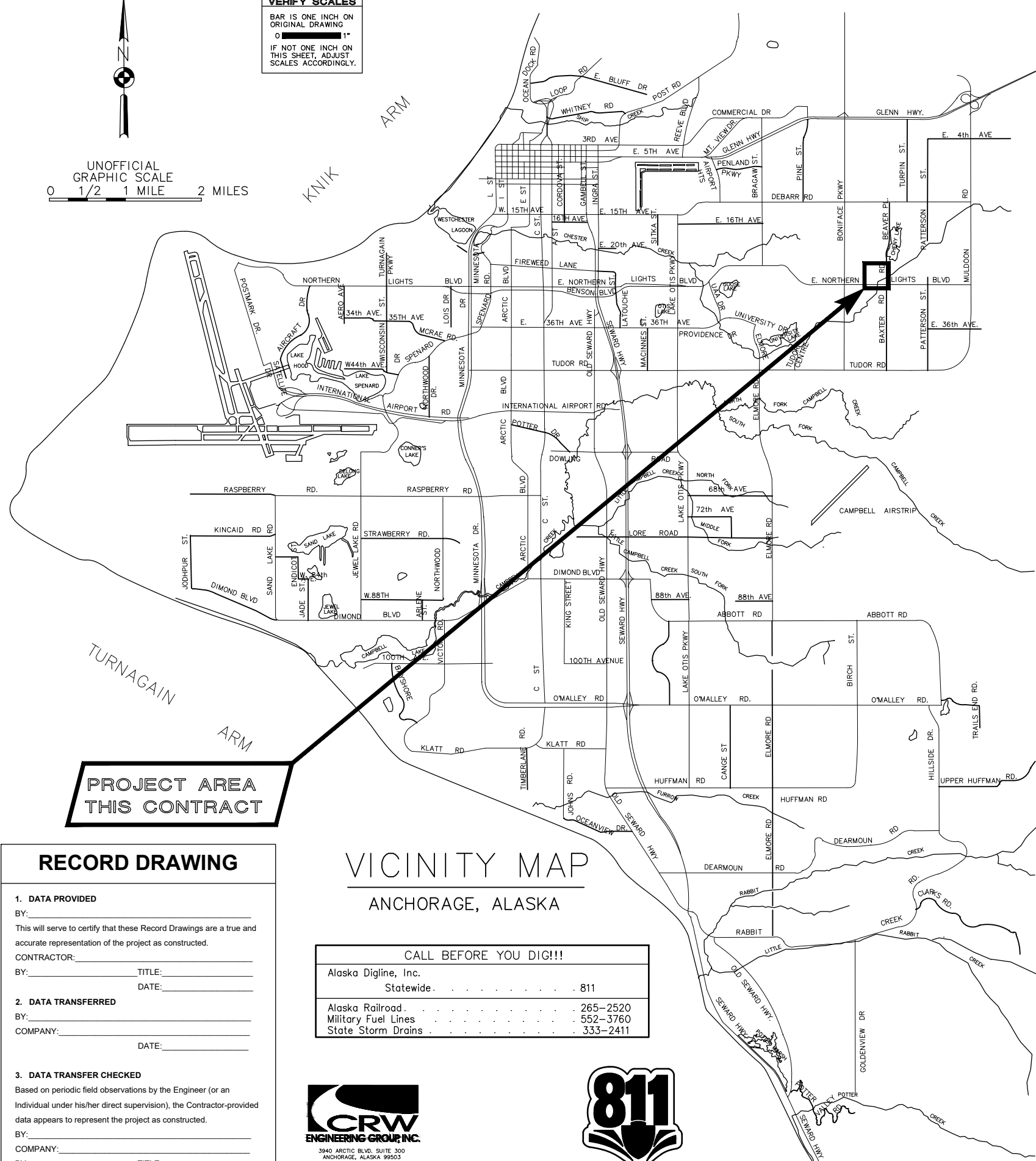
**STORM DRAIN SUMMARY TABLES**

SCALE: HOR. N/A VER. N/A    GRID SW1538, SW1638    DATE JUNE 2023    STATUS 95%    SHEET SD14 of SD14

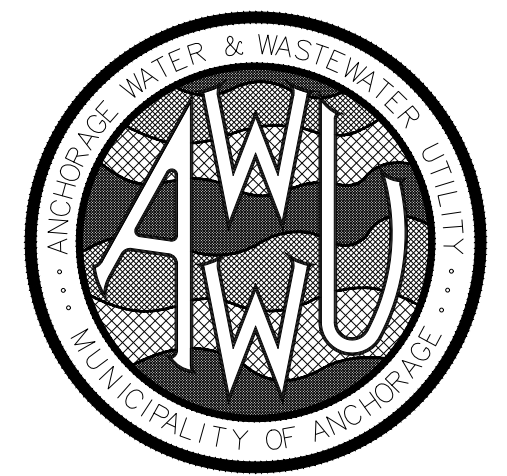


**VERIFY SCALES**  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1" 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

UNOFFICIAL GRAPHIC SCALE  
 0 1/2 1 MILE 2 MILES



**PROJECT AREA THIS CONTRACT**



MUNICIPALITY OF ANCHORAGE  
 WATER & WASTEWATER UTILITY

CAMROSE DRIVE  
 STORM DRAINAGE PROJECT  
 PROJECT IDENTIFICATION No. WM.00XXX  
 SCHEDULE C

JUNE 2023  
 95% SUBMITTAL

**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 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.  
 BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

VICINITY MAP  
 ANCHORAGE, ALASKA

**CALL BEFORE YOU DIG!!!**

Alaska Digline, Inc.	Statewide . . . . .	811
Alaska Railroad	. . . . .	265-2520
Military Fuel Lines	. . . . .	552-3760
State Storm Drains	. . . . .	333-2411



SHEET INDEX	
SHEET NO.	TITLE
SS1	COVER SHEET
SS2	KEY MAP, NOTES & SEWER DETAILS
SS3	SEWER PLAN & PROFILE

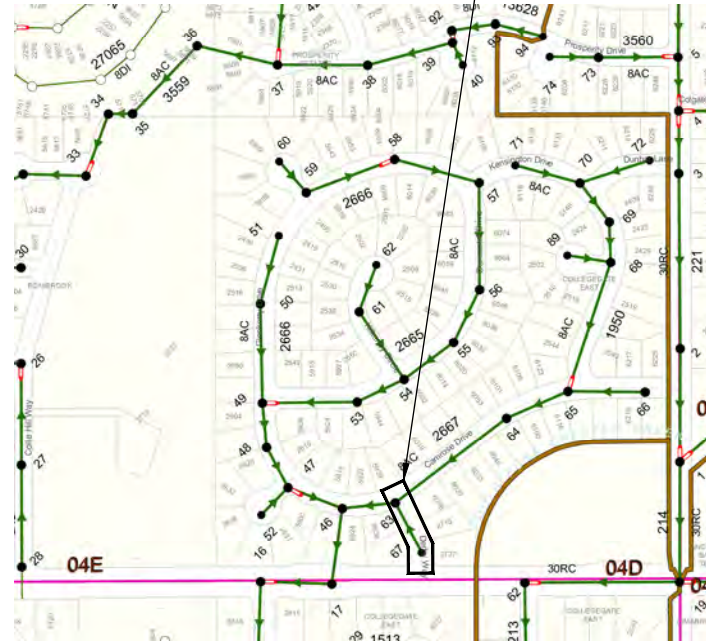
GENERAL NOTES

- 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 (DCPM), AND THE SPECIAL PROVISIONS.
- "BOP" IS DEFINED AS THE OUTSIDE BOTTOM OF PIPE. "INV" IS DEFINED AS THE INSIDE BOTTOM OF PIPE.
- MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 36 INCHES VERTICAL SEPARATION BETWEEN WATER MAINS/SERVICES AND STORM SEWERS (STORM DRAIN OR FOOTING DRAIN). IF 36 INCHES VERTICAL SEPARATION CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4 INCHES (R-18) RIGID INSULATION. MINIMUM VERTICAL SEPARATION SHALL BE 18 INCHES.
- 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.
- CONTRACTOR SHALL SUBMIT ALL FIELD SURVEY BOOKS (SURVEY LINE AND GRADE BOOKS) ALONG WITH THE RECORD DRAWINGS PRIOR TO CONTRACT FINAL PAYMENT.
- CONTRACTOR SHALL RESTORE ALL PROPERTY DISTURBED BY CONTRACT ACTIVITIES, INCLUDING DRAINAGE SWALES, TO PRE-CONSTRUCTION CONDITIONS OR AS SHOWN ON THE PLANS.
- WATER RESULTING FROM CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS PERMITS ARE OBTAINED BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, THOSE REQUIRED BY THE MUNICIPALITY OF ANCHORAGE STORM WATER PLAN REVIEW OFFICE. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM AN EXCAVATION ONTO ROADWAYS. CONTRACTOR SHALL PROVIDE A DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF NECESSARY PERMITS AND APPROVALS TO THE MOA RIGHT OF WAY PERMIT OFFICE.
- 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.
- ALL INSULATION PLACED ABOVE OR BETWEEN WATER/SEWER PIPES SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE, MIN. 60 P.S.I. COMPRESSIVE STRENGTH, FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-18 PER FOUR (4) INCH THICK INSULATION.
- HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

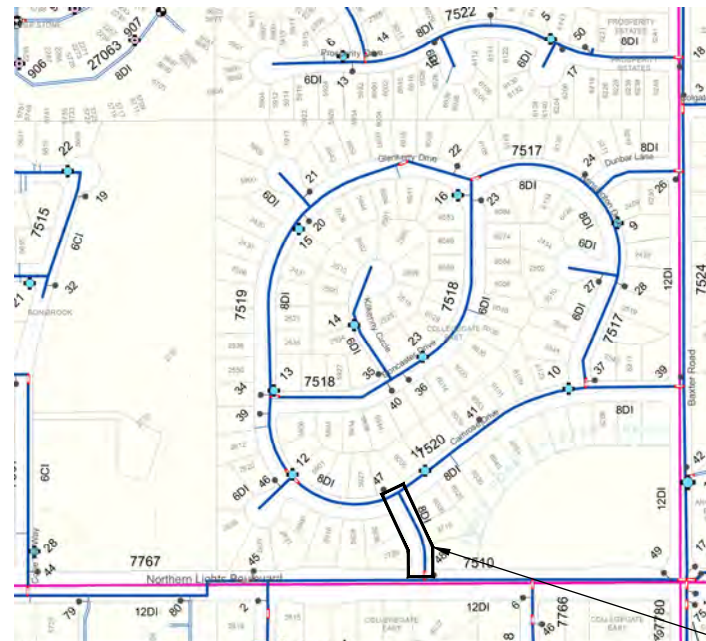
SEWER NOTES

- ALL GRAVITY SEWER PIPING SHALL BE SHALL BE PVC C900 (DR-18).
- STATIONING IS PIPE CENTERLINE STATIONING AS INDICATED ON THE DRAWINGS.
- ALL GRAVITY SEWER MAINS SHALL HAVE A MINIMUM OF 8 FEET OF BURY AT ALL POINTS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS. AT LOCATIONS WHERE THERE IS LESS THAN 8 FEET OF BURY, 4 INCHES (R-18) OF RIGID BOARD INSULATION SHALL BE INSTALLED.
- ALL MANHOLES SHALL BE SANITARY MANHOLES, IN ACCORDANCE WITH MASS.
- ALL MANHOLES SHALL HAVE A MINIMUM OF ONE 6-INCH GRADE RING. MAXIMUM GRADE RING ADJUSTMENTS SHALL NOT EXCEED 18-INCHES.
- PIPE BEDDING FOR PVC PIPE SHALL BE BEDDING MATERIAL (CLASS E) PER THE SPECIAL PROVISIONS.
- SEWER MAIN TRENCHES AND BEDDING SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY.
- PIPE LENGTHS FOR GRAVITY SEWER ARE BASED ON THE HORIZONTAL DISTANCE BETWEEN THE CENTER OF MANHOLES. PIPE SLOPES ARE CALCULATED USING THE ACTUAL LENGTH OF PIPE FROM INSIDE FACE OF MANHOLES.
- A MANHOLE SAFETY POST SHALL BE FURNISHED AND INSTALLED FOR ALL NEW AND REHABILITATED MANHOLES. A LADDER-UP SAFETY POST (MODEL LU-3) MANUFACTURED BY BILCO OR APPROVED EQUAL SHALL BE SECURED TO LADDER RUNGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF SANITARY SEWER SERVICE INTERRUPTION FOR CONNECTION TO TEMPORARY BYPASS SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SANITARY SEWER SERVICE TO THE EXISTING CUSTOMERS. TEMPORARY SEWER SERVICE PLAN MUST BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR SHALL SUBMIT A PLAN AND PROVIDE FOR CONTINUOUS BYPASS OF SEWER FLOWS FROM MAINS AND SERVICES AFFECTED BY CONSTRUCTION IN ACCORDANCE WITH MASS SECTION 50.05, SANITARY SEWER FLOW CONTROL.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ASBESTOS CEMENT PIPE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- WHERE WATER AND SEWER MAINS CROSS, SEWER MAIN JOINTS SHALL BE INSTALLED AT LEAST 9 FEET FROM EXISTING WATER MAIN JOINTS.
- CONNECTIONS FROM EXISTING SEWER SERVICES TO PROPOSED SEWER SERVICES SHALL BE ACCOMPLISHED BY UTILIZING A STAINLESS STEEL ROMAC STYLE LSS1 REPAIR CLAMP THAT IS A MINIMUM OF 8" IN WIDTH AND HAS A MINIMUM OF TWO STAINLESS STEEL BOLTS OR APPROVED EQUAL. THE ROMAC STYLE LSS1 REPAIR CLAMPS MAY NEED BUSHINGS IF THE PIPE DIAMETERS ARE DIFFERENT.

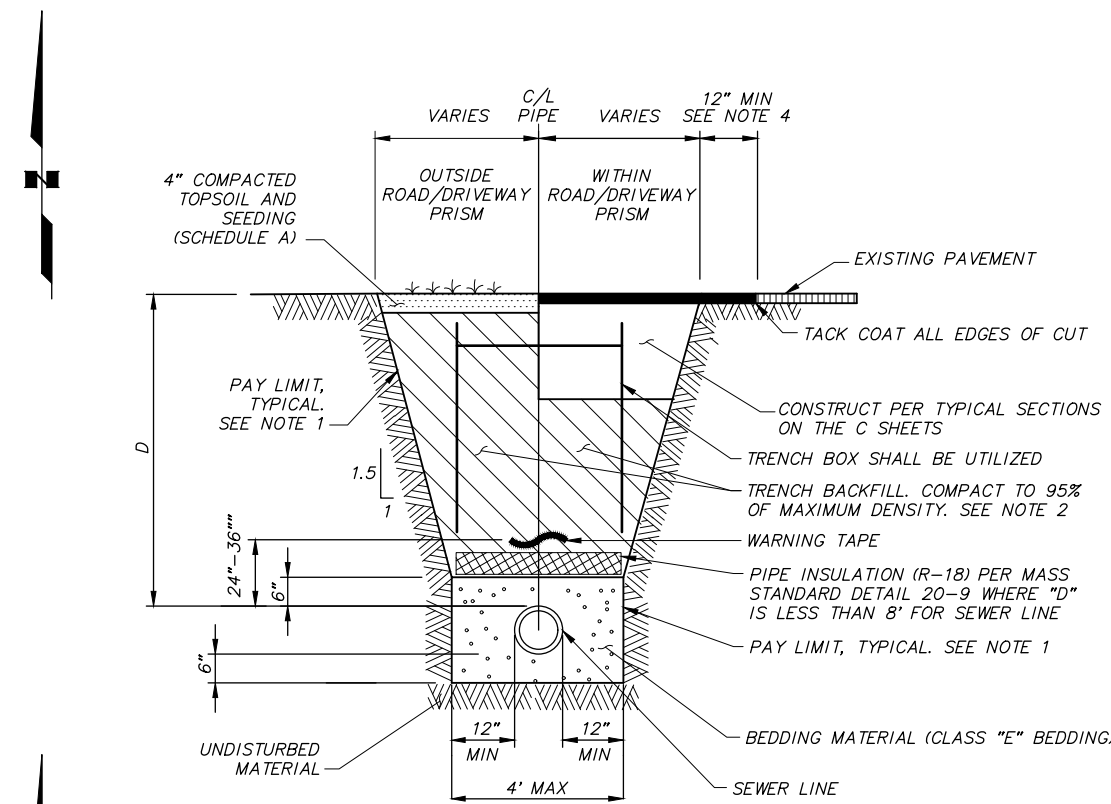
PROJECT AREA GRID SW 1538



SEWER KEY MAP N.T.S



WATER KEY MAP N.T.S



UTILITY TRENCH SECTION NOTES

- TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE, AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED TRENCH WALL SLOPES AND DIMENSIONS ARE FOR PAY QUANTITY DETERMINATIONS ONLY. A TRENCH BOX SHALL BE UTILIZED TO MINIMIZE EXCAVATION LIMITS.
- TRENCH BACKFILL SHALL BE NATIVE MATERIAL MEETING TYPE III CLASSIFICATION (MINIMUM) AS APPROVED BY THE ENGINEER. NATIVE MATERIAL NOT MEETING TYPE III CLASSIFICATION SHALL BE REMOVED AND REPLACED WITH TYPE II CLASSIFIED MATERIAL.
- REMOVE AND DISPOSE OF ALL ORGANIC MATERIALS IN ACCORDANCE WITH MASS SECTION 20.13.
- IN PREPARATION FOR AND IMMEDIATELY PRIOR TO PAVING, CONTRACTOR SHALL SAW CUT AND REMOVE AN ADDITIONAL 12 INCHES FROM EXISTING PAVEMENT EDGE. THE ENGINEER MAY REQUIRE MORE THAN A 12 INCH ADDITIONAL CUT IF THE EXISTING 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.

TYPICAL SEWER UTILITY TRENCH SECTION N.T.S

PROJECT AREA GRID SW 1538

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

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

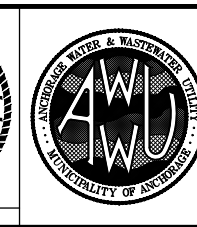
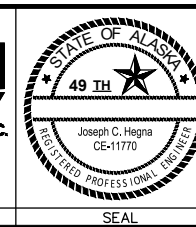
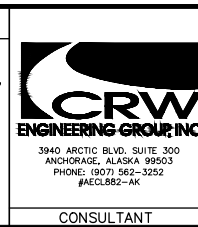
1. DATA PROVIDED BY: \_\_\_\_\_  
 This will serve to certify that these Record Drawings are a true and accurate representation of the project as constructed.  
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 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

2. DATA TRANSFERRED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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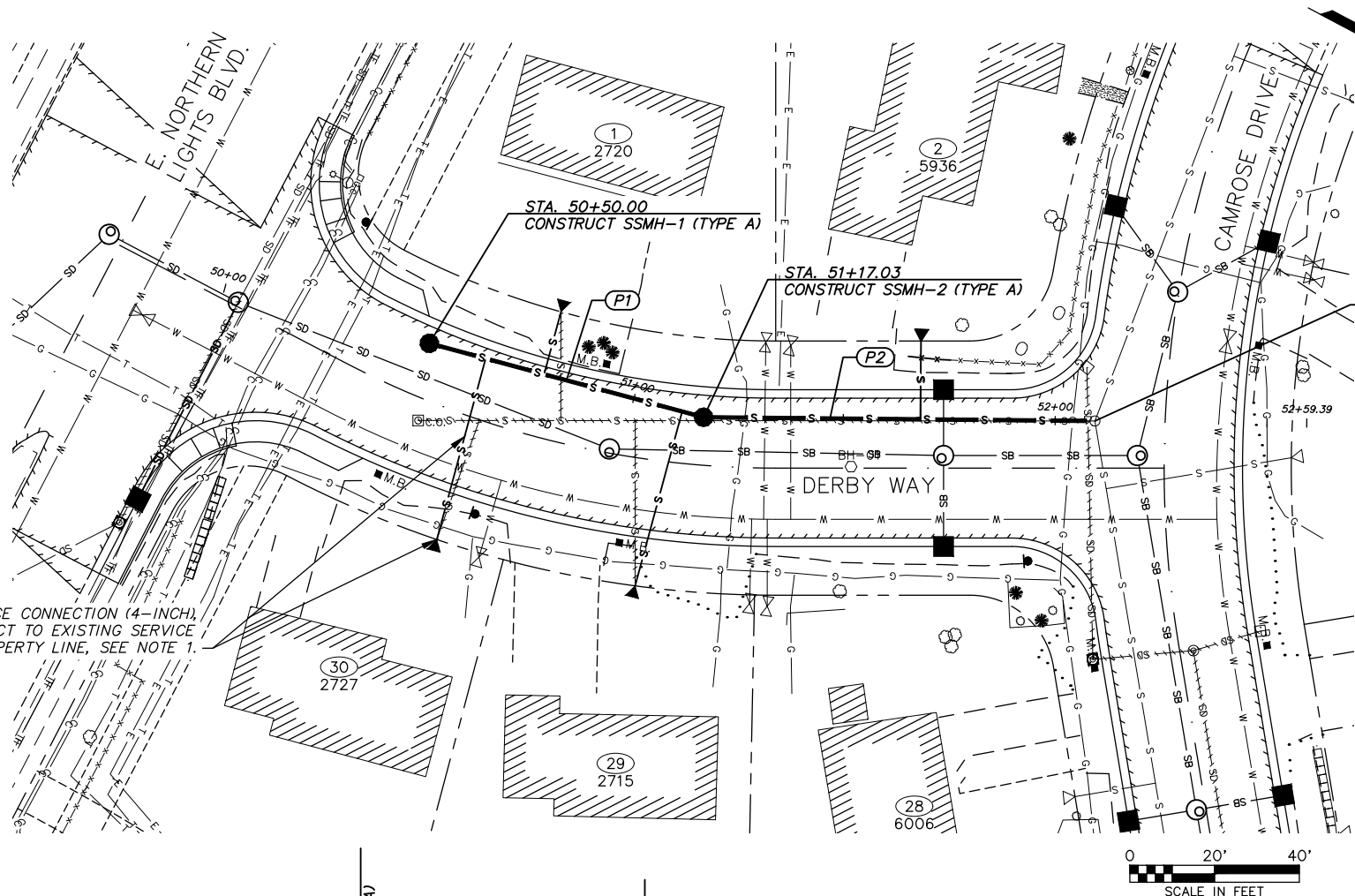
MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY

CAMROSE DRIVE STORM DRAINAGE PROJECT

**KEY MAP, NOTES & SEWER DETAILS**

HORIZ SCALE: N/A VERT SCALE: N/A DATE: JUNE 2023 GRID: SW1538 SHEET: SS2 of SS3

PROJ. ID.: WM.OOXXX



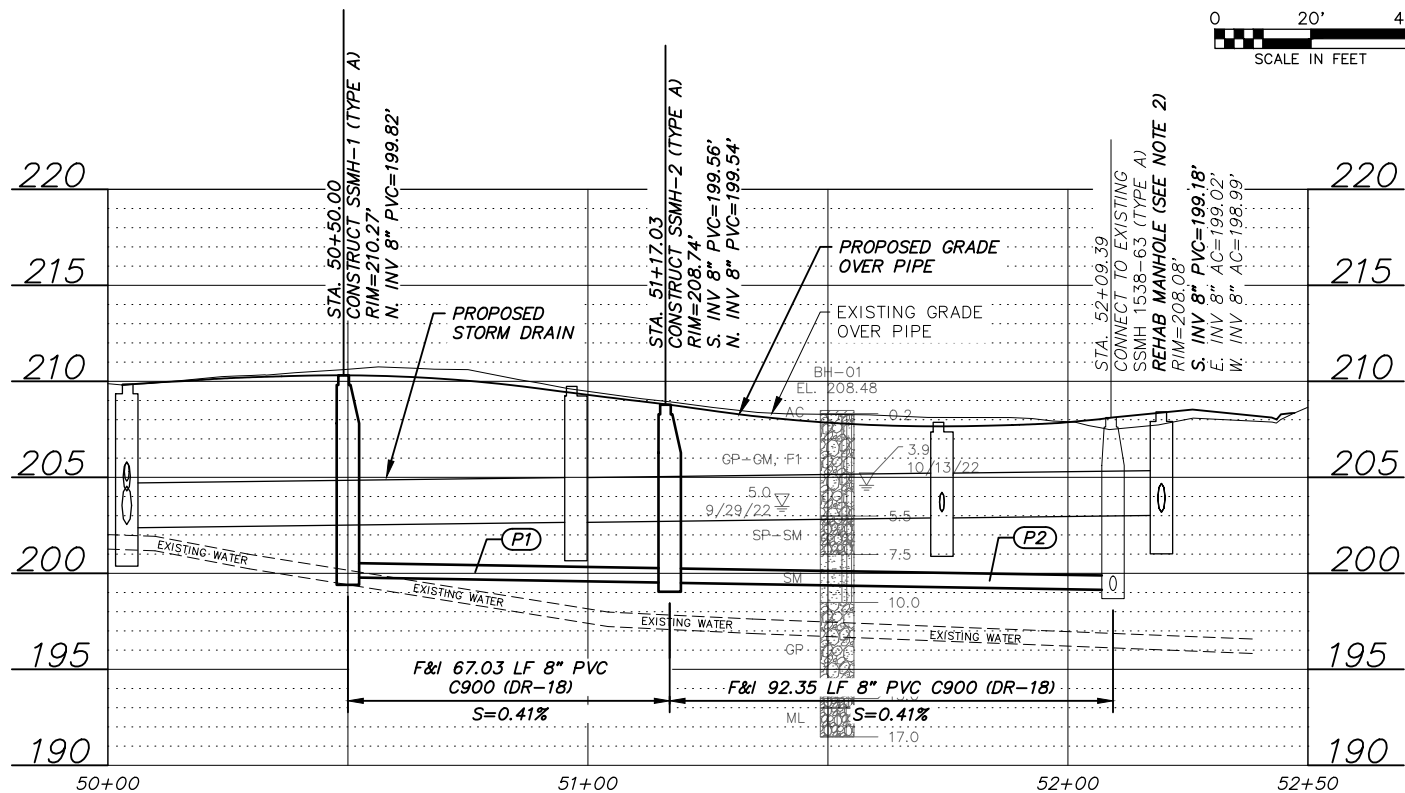
F&I SANITARY SEWER SERVICE CONNECTION (4-INCH), TYP. (4 TOTAL) AND CONNECT TO EXISTING SERVICE AT PROPERTY LINE, SEE NOTE 1.

NOTES

- CONTRACTOR SHALL FIELD VERIFY VERTICAL ALIGNMENT OF PROPOSED SANITARY SEWER SERVICE AND CONNECTION TO EXISTING SERVICE AT PROPERTY LINE TO AVOID CONFLICT WITH PROPOSED STORM DRAIN PIPE. PROPOSED SANITARY SEWER SERVICES SHALL BE ROUTED BELOW PROPOSED STORM DRAIN TO AVOID CONFLICT. FITTINGS REQUIRED TO MAKE CONNECTION REQUIRE ENGINEER'S APPROVAL.
- REHABILITATE EXISTING SSMH 1538-63 AS FOLLOWS:
  - REMOVE AND DISPOSE OF THE EXISTING COVER AND FRAME, GRADE RINGS, AND LADDER RUNGS.
  - FURNISH AND INSTALL SANITARY SEWER MANHOLE FRAME, COVER, AND GRADE RINGS I.A.W. MASS STANDARD DETAIL 50-1. ADJUST MANHOLE FRAME PER MASS STANDARD DETAIL 50-5.
  - FURNISH AND INSTALL SANITARY SEWER MANHOLE LADDER RUNGS I.A.W. MASS STANDARD DETAILS 50-1 AND 50-6.
  - SET AND SEAL ALL NEW COMPONENTS WITH PLASTIC GASKET JOINT SEALER, RAM-NEK OR EQUAL.
  - ALL NEW MANHOLE JOINTS AND EXISTING JOINT BETWEEN BARREL SECTION AND CONE SHALL BE SEALED WITH WRAPIDSEAL OR EQUAL EXTERNAL JOINT SEALANT. THIS WORK SHALL BE INCIDENTAL TO PAY ITEM 50.06 - REMOVE AND REPLACE GRADE RINGS.
  - WRAP EXTERIOR OF NEW MANHOLE COMPONENTS WITH THREE LAYERS OF 8-MIL POLYETHYLENE ENCASEMENT. THIS WORK SHALL BE INCIDENTAL TO PAY ITEM 50.06 - REMOVE AND REPLACE GRADE RINGS.

SEWER STRUCTURE DATA			
STRUCTURE ID	STATION	NORTHING	EASTING
EXISTING SSMH 1538-63	52+09.39	332500.92	369011.44
SSMH-1 (TYPE A)	50+50.00	332353.42	369068.45
SSMH-2 (TYPE A)	51+17.03	332418.81	369053.72

SEWER MAIN PIPE DATA					
PIPE ID	SIZE (IN)	TYPE	LENGTH (FT)	BEARING	SLOPE
P1	8	PVC C900 (DR-18)	67.03	N12° 41' 49"W	0.41%
P2	8	PVC C900 (DR-18)	92.36	N27° 14' 38"W	0.41%



SEWER SERVICE CONNECT CHART								
PARCEL	LEGAL DESCRIPTION	SEWER LINE STA. AT MAIN	SIZE	MATERIAL TYPE	DIST. FROM MAIN TO PROPERTY LINE*	OFFSET FROM ADJ. PROPERTY LINE**	DEPTH AT MAIN	DEPTH AT PROPERTY LINE**
1	COLLEGGATE EAST #3 BLOCK 7 LOT 1	50+78.20	4"	PVC C900 (DR-18)	15.3'		9.5'	
2	COLLEGGATE EAST #3 BLOCK 7 LOT 2	51+68.18	4"	PVC C900 (DR-18)	18.5'		7.6'	
29	COLLEGGATE EAST #3 BLK 10 LT 12	51+11.79	4"	PVC C900 (DR-18)	42.6'		8.7'	
30	COLLEGGATE EAST #3 BLOCK 10 LOT 13	50+63.74	4"	PVC C900 (DR-18)	44.3'		9.7'	

\* REPLACE PARCEL 1, 2, 29, AND 30 SEWER SERVICES FROM SEWER MAIN TO PROPERTY LINE  
 \*\* TO BE COMPLETED AS PART OF RECORD DRAWING

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.	
DATA	DRAWN BY	CHECKED BY	DESCRIPTION
BASE	TS	AR	TELEPHONE
TOPOGRAPHY	TS	RB	ELECTRIC
PROFILE	RB	JK	CABLE TV
SANITARY SEWER	JM	JH	TRAFFIC SIGNAL
STORM SEWER	JM	JH	DESIGN
WATER	JM	JH	QUANTITIES
GAS	TS	AR	MUN. FINAL CHECK

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

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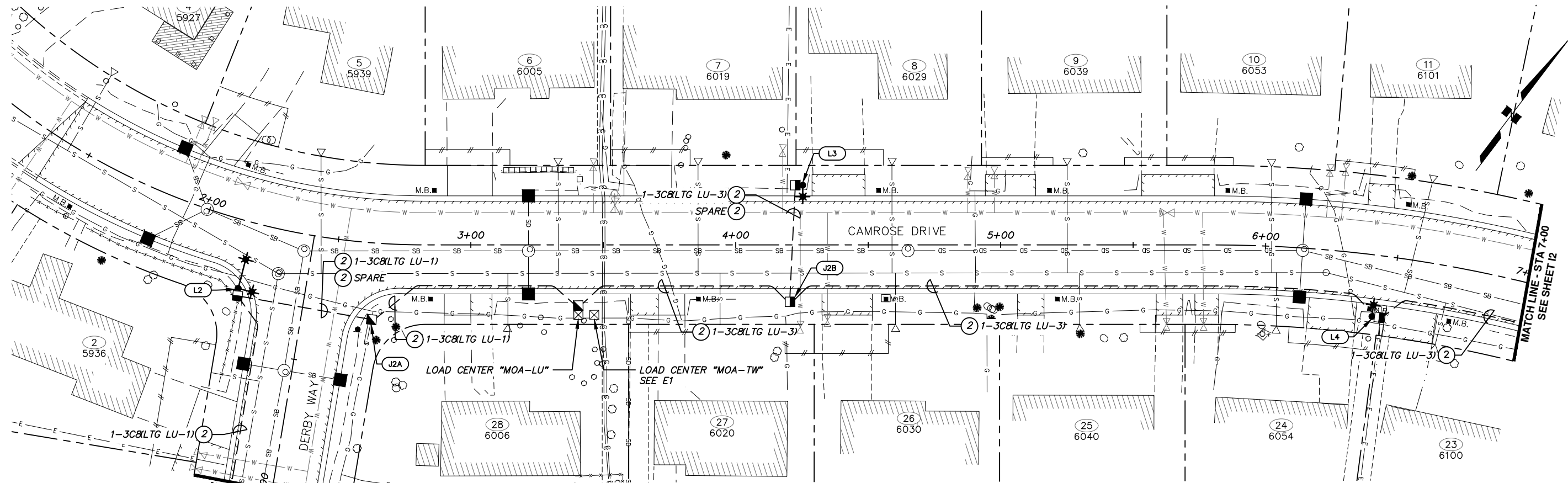
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 DATA TRANSFER CHECKED BY: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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 3940 ARCTIC BLVD, SUITE 300 ANCHORAGE, ALASKA 99503 PHONE: (907) 562-3252 #AECLEB2-AK			MUNICIPALITY OF ANCHORAGE WATER & WASTEWATER UTILITY	
			CAMROSE DRIVE STORM DRAINAGE PROJECT <b>SEWER PLAN &amp; PROFILE</b>	
CONSULTANT		SEAL		HORZ SCALE: 1"=20' VERT SCALE: 1"=5' PROJ. ID.: WM.00XXX
DATE: JUNE 2023		GRID: SW1538		SHEET 33 OF 33



MATCH LINE - STA 17+00  
SEE SHEET 12

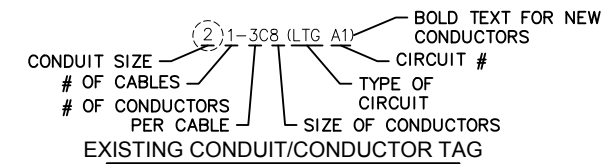
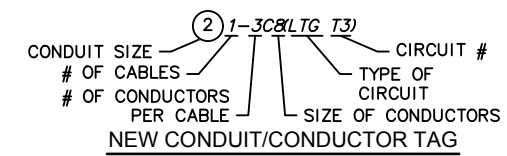
MATCH LINE - STA 7+00  
SEE SHEET 12

**ILLUMINATION NOTES:**

1. PROVIDE HOT DIP GALVANIZED STEEL POLES WITH MAST ARMS PER MOA STANDARDS DETAIL 80-19 AND 80-20, RESPECTIVELY.
2. ALL LUMINAIRE POLE FOUNDATIONS SHALL BE DRIVEN PILE UNLESS OTHERWISE NOTED ON THE DRAWINGS. PILE EMBEDMENT DEPTH SHALL BE 25' MINIMUM. LUMINAIRE POLE FOUNDATION HAS BEEN APPROVED TO BE LOCATED NO CLOSER THAN 3' FROM THE BACK OF CURB. WHEN POLE LOCATION IS WITHIN 10' OF A UTILITY, EXCAVATE A HOLE TO 12" BELOW ANTICIPATED UTILITIES DEPTH WITH A VECTOR TRUCK BEFORE DRIVING PILE. THIS WORK SHALL BE INCIDENTAL TO THE SECTION 80.04 PAY ITEM. SEE MASS DETAIL 80-13. CONTRACTOR SHALL STAKE LUMINAIRE POLE LOCATIONS IN THE FIELD FOR ENGINEERS REVIEW AND APPROVAL PRIOR TO INSTALLATION OF PILES.
3. INSTALL THE POLES WITH FIXED BASES PER MOA DETAIL 80-21.
4. PROVIDE THE POLE SHAFT LENGTHS AND MAST ARM LENGTHS SHOWN IN THE ROADWAY LUMINAIRE SCHEDULE.
5. PROVIDE RIGID METAL CONDUIT (RMC) WITH A BARE, STRANDED COPPER GROUND FOR ALL RACEWAYS. GROUND TO BE SIZED TO EQUAL LARGEST CONDUCTOR SIZE IN THE CONDUIT, MINIMUM #8 AWG.
6. PROVIDE ONE SPARE 2" RMC WITH PULL ROPE BETWEEN THE JUNCTION BOXES ADJACENT TO EVERY ROAD CROSSING.
7. PROVIDE A 3 CONDUCTOR CABLE FOR EACH BRANCH CIRCUIT. SIZE AS SHOWN ON THE DRAWINGS.
8. INSTALL THE JUNCTION BOX WITHIN 3' OF THE POLE OR LOAD CENTER. DO NOT INSTALL JUNCTION BOXES IN SIDEWALKS, PATHWAYS, TRAILS, DRIVEWAYS, OR DRAINAGE DITCHES. JUNCTION BOXES INSTALLED BEHIND SIDEWALKS, PATHWAYS OR TRAILS SHALL HAVE A MINIMUM SETBACK OF 2' AND BE PLACED BEHIND OR ON THE DOWN TRAFFIC SIDE OF FOUNDATIONS.
9. IN THE DRAWINGS, EACH JUNCTION BOX HAS A "J" FOLLOWED BY THE SAME IDENTIFYING NUMBER AS THE LIGHT POLE OR LOAD CENTER NEXT TO IT. FOR JUNCTION BOXES LOCATED BETWEEN POLES, THE IDENTIFYING NUMBER INCLUDES THE SMALLER OF THE TWO POLE NUMBERS BETWEEN WHICH THE JUNCTION BOX IS LOCATED AND AN "A" SUFFIX.

**LEGEND**

EXISTING	PROPOSED	
		LIGHTING CONDUIT/WIRE RUN BELOW GRADE
		TRAFFIC SIGNAL CONDUIT
		LUMINAIRE
		TYPE 1A JUNCTION BOX
		TYPE 2 JUNCTION BOX
		TYPE 3 JUNCTION BOX
		TYPE 1A LOAD CENTER
		CONNECTION BETWEEN EXISTING & NEW CONDUIT



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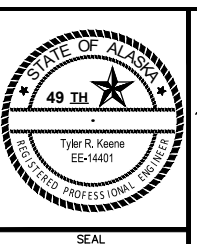
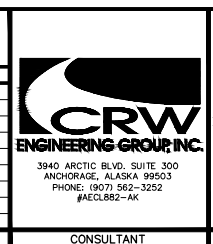
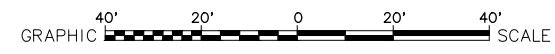
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 BY: \_\_\_\_\_

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TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH	ASBUILT							
QUANTITIES	JM	JH	CONTRACTOR							
PRELIMINARY/FINAL	JM	JH	INSPECTOR							
MUNICIPAL/STATE	JM	JH								



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED D

ILLUMINATION PLAN

SCALE: HOR. 1"=20' VER. N/A

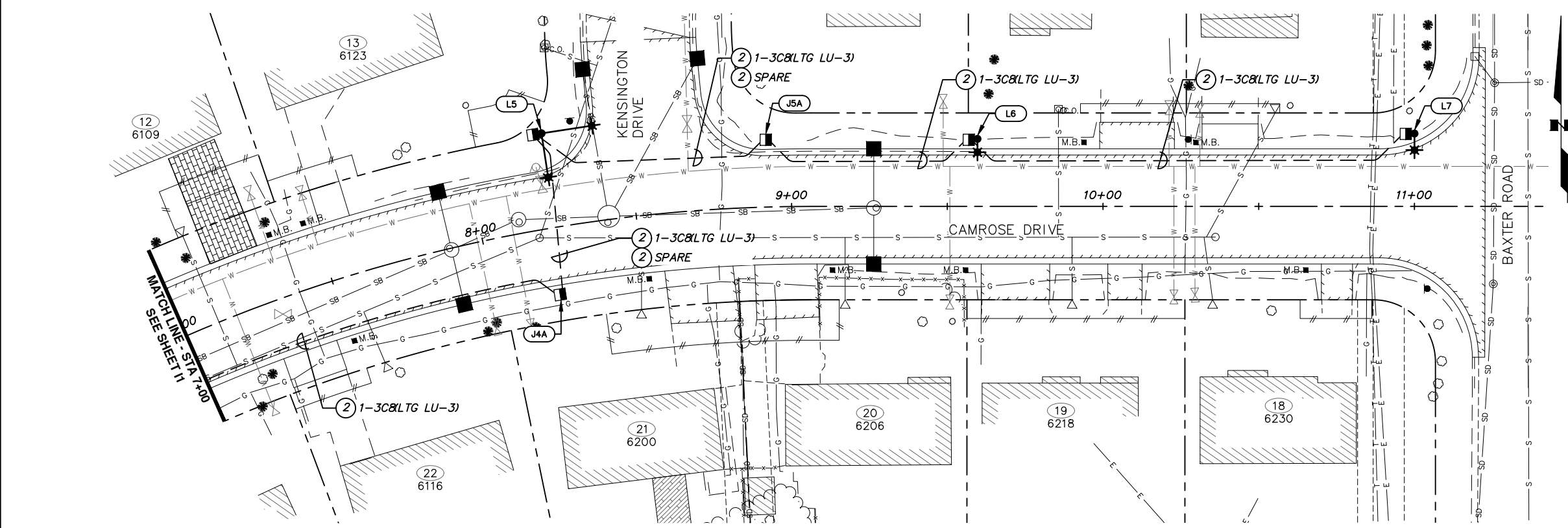
GRID SW538, SW638

DATE: JUNE 2023 STATUS: 95%

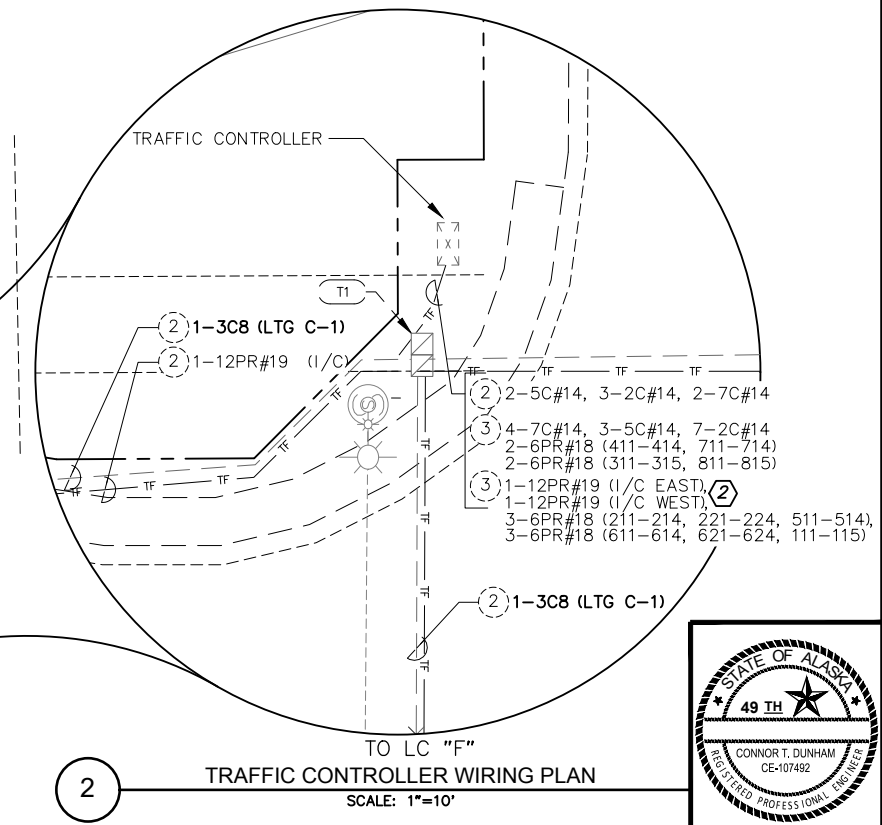
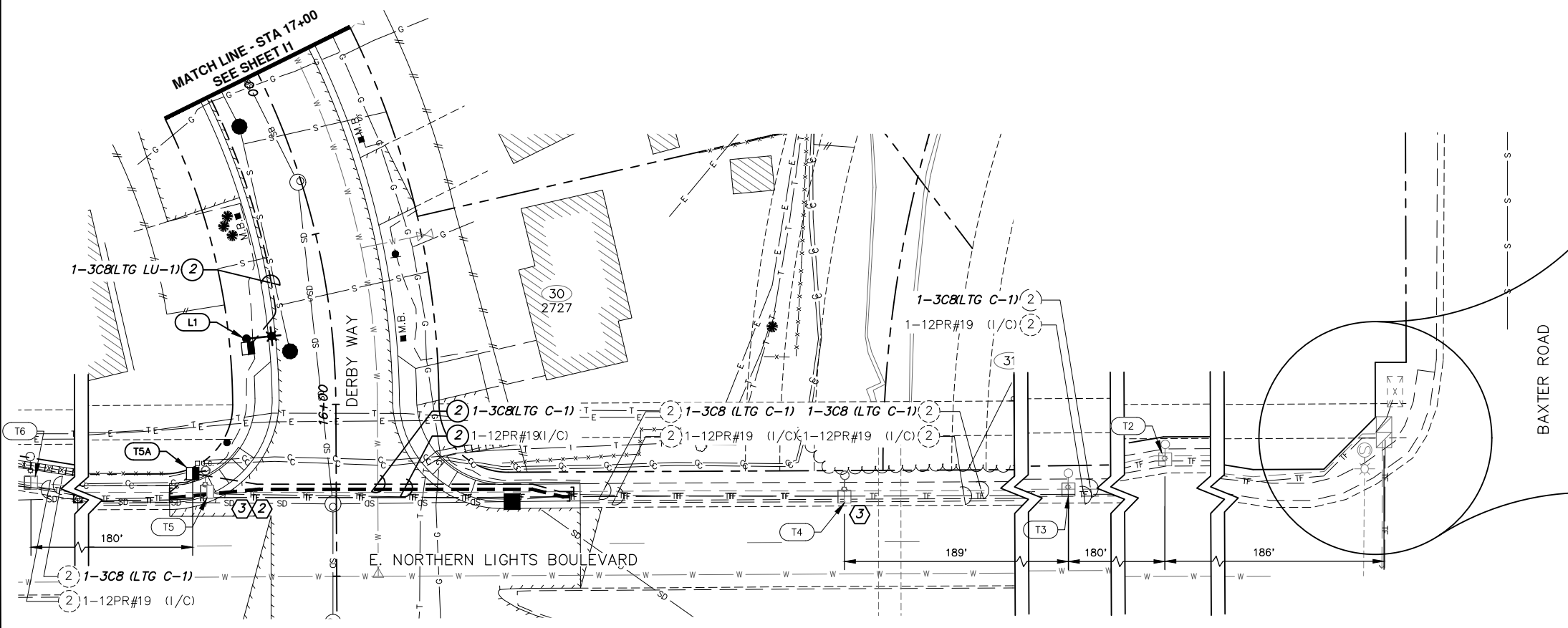
SHEET 11 of 14



File: I:\webdata\10152.00 Camrose Drive Storm Drainage\00 CADD 2019\01 Working Set\03 Electrical\10152.00 Illumination.dwg



- TRAFFIC INTERCONNECT NOTES:**
1. CONDUCTORS AND CONDUITS HAVE BEEN RECONSTRUCTED FROM ASBUILT. THE CONFIGURATION IN CONDUITS BETWEEN JB#T1 AND TRAFFIC CONTROLLER (TC) MAY VARY. CONTRACTOR TO VERIFY LOCATION OF INTERCONNECT CONDUCTORS AND SIZE OF SERVING CONDUITS.
  2. REMOVE INTERCONNECT HEADING WEST (1/C WEST) AT TRAFFIC CONTROL CABINET. PULL EXISTING 12PR#19 CABLE FROM TRAFFIC CONTROLLER TO JB#T6. COIL 12PR#19 CABLE AND PROTECT IN PLACE. REINSTALL EXISTING 12PR#19 CABLE AFTER CONDUIT AND JUNCTION BOX MODIFICATIONS ON THIS SHEET ARE COMPLETE.
  3. DISCONNECT LIGHTING CIRCUIT C-1 AT SPLICE IN JB#T6. INSTALL NEW 3C#8 AND BARE GROUND IN MODIFIED CONDUIT RUN BETWEEN LC "F" AND JB#T6 (APPROXIMATELY 1110'). CONNECT LUMINAIRE TO NEW CONDUCTORS AT THE FUSED DISCONNECTS IN LUMINAIRE HANDHOLES. PROVIDE NEW SPLICE IN ALL LIGHT POLE BASES PER DETAIL 2, SHEET 13 TO CONNECT TO EXISTING CONDUCTORS TO THE WEST. BARE GROUND SHALL BE CONTINUOUS AND BONDED AT LC "F".
  4. REMOVE EXISTING JUNCTION BOX AND SIDEWALK TO NEAREST JOINT. INTERCEPT 2" CONDUIT THROUGH JB#T5 TO PROVIDE CONTINUOUS CONDUIT RUN FROM JB#T4 TO JB#T6 FOR THE CONDUIT SERVING THE INTERCONNECT ONLY. INSTALL NEW JB#T5A BEHIND SIDEWALK AS SHOWN IN THE PLANS FOR LIGHTING CONDUIT AND CONDUCTORS ONLY.
  5. LOAD CENTER "F" LOCATED AT THE SOUTHWEST CORNER OF BAXTER RD. AND E. NORTHERN LIGHTS BLVD. SERVES CIRCUIT C-1.
  6. EXISTING CONDUITS SHALL BE CLEANED IN ACCORDANCE WITH MASS 80.11.1. CONDUIT SHALL BE CLEANED WITH A MANDREL OR CYLINDRICAL WIRE BRUSH AND BLOWN OUT WITH COMPRESSED AIR PRIOR TO INSTALLING CONDUCTORS.



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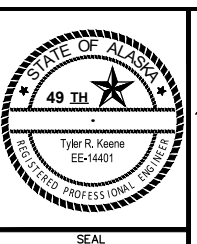
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PROFILE	RB	JK	
STORM SEWER	JM	JH	
WATER/SANITARY SEWER	JM	JH	
GAS	TS	AR	
TELEPHONE	TS	AR	
ELECTRIC	JH	TK	
DESIGN	JM	JH	
QUANTITIES	JM	JH	
PRELIMINARY/FINAL	JM	JH	
MUNICIPAL/STATE	JM	JH	

PLAN CHECK	CONSTRUCTION RECORD	VERTICAL DATUM	REVISIONS	CONSULTANT	SEAL

**CRW ENGINEERING GROUP, INC.**  
3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AECLE82-AK



**PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT**

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED D

**ILLUMINATION AND TRAFFIC INTERCONNECT PLAN**

SCALE: HOR. 1"=20' VER. N/A  
GRID SW538, SW638  
DATE: JUNE 2023 STATUS: 95% SHEET 12 of 14

LIGHT LEVELS TABLE						
LOCATION	MOA REQUIRED MIN. AVERAGE ILLUMINANCE (FC)	AVERAGE DESIGN ILLUMINANCE (FC)	MOA REQUIRED MAXIMUM UNIFORMITY RATIO	DESIGN UNIFORMITY RATIO	MOA REQUIRED MAX. VEILING LUMINANCE RATIO	DESIGN VEILING LUMINANCE RATIO
CAMROSE DRIVE	0.4	0.4	6.0:1	4.3:1	0.4:1	0.3:1
DERBY WAY	0.4	0.5	6.0:1	2.7:1	0.4:1	-
CAMROSE DRIVE/ DERBY WAY INTX	0.8	0.8	6.0:1	3.8:1	-	-
CAMROSE DRIVE/KENSINGTON DRIVE INTX	0.8	0.9	6.0:1	2.9:1	-	-

- NOTES:
- MOA REQUIREMENTS ARE FROM 2007 DCM CHAPTER 5 FOR A LOCAL ROADWAY WITH LOW PEDESTRIAN CONFLICT (MEDIUM DENSITY RESIDENTIAL).
  - LIGHT LOSS FACTOR (LLF) = 0.85.
  - MOUNTING HEIGHTS ARE 30'.

LUMINAIRE DEFINITION											
TYPE	SYMBOL	MAKE	MODEL	LAMP	VOLTAGE	DISTRIBUTION	LUMENS	CCT*	COLOR	OPTIONS	MOUNT
ROADWAY		CURRENT	ERL1	SEE LUMINAIRE SCHEDULE	240	SEE LUMINAIRE SCHEDULE	SEE LUMINAIRE SCHEDULE	3000K	SILVER	7-PIN RECEPTACLE W/ SHORTING CAP, BACKLIGHT SHIELD	MAST ARM

\*CCT = CORRELATED COLOR TEMPERATURE

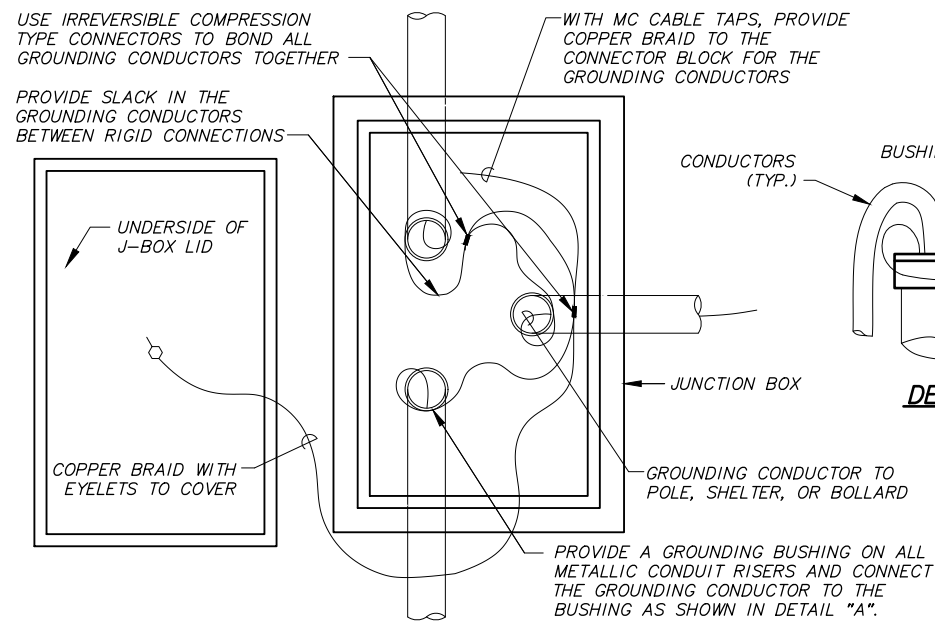
TRAFFIC JUNCTION BOX AND BASE SCHEDULE				
LABEL	TYPE	STATION	OFFSET	REMARKS
TC	BASE	SEE SHEET 12		TRAFFIC CONTROLLER
T1	3	SEE SHEET 12		EXISTING
T2	1A	SEE SHEET 12		EXISTING
T3	1A	SEE SHEET 12		EXISTING
T4	1A	15+72	147.8 R	EXISTING
T5	1A	15+75	37.6 L	REMOVE. INTERCEPT EXISTING ELBOWS BELOW GRADE
T5A	1A	15+80	41.7 L	NEW, EMBOSS LID WITH "LIGHTING"

ROADWAY LUMINAIRE SCHEDULE							
POLE	STATION	OFFSET	SHAFT LENGTH	MAST ARM LENGTH	LUMENS	DISTRIBUTION	CIRCUIT
L1*	16+21.7	24.95 LT	28'	6'	6000	MEDIUM, TYPE 2	LU-1
L2	02+17.9	25.46 RT	28'	5'**	4000	MEDIUM, TYPE 2	LU-1
				10'	4000	MEDIUM, TYPE 2	LU-1
L3	04+25.3	22.53 LT	27'	3'	6000	MEDIUM, TYPE 2	LU-3
L4	06+43.2	23.21 RT	27'	3'	6000	MEDIUM, TYPE 2	LU-3
L5	08+24.2	30.50 LT	27'	15**	4000	MEDIUM, TYPE 2	LU-3
				13'	6000	MEDIUM, TYPE 2	LU-3
L6	09+56.9	21.40 LT	28'	3'	4000	MEDIUM, TYPE 2	LU-3
L7	10+97.2	23.29 LT	28'	4'	4000	MEDIUM, TYPE 2	LU-3

\* = ON DERBY WAY ALIGNMENT

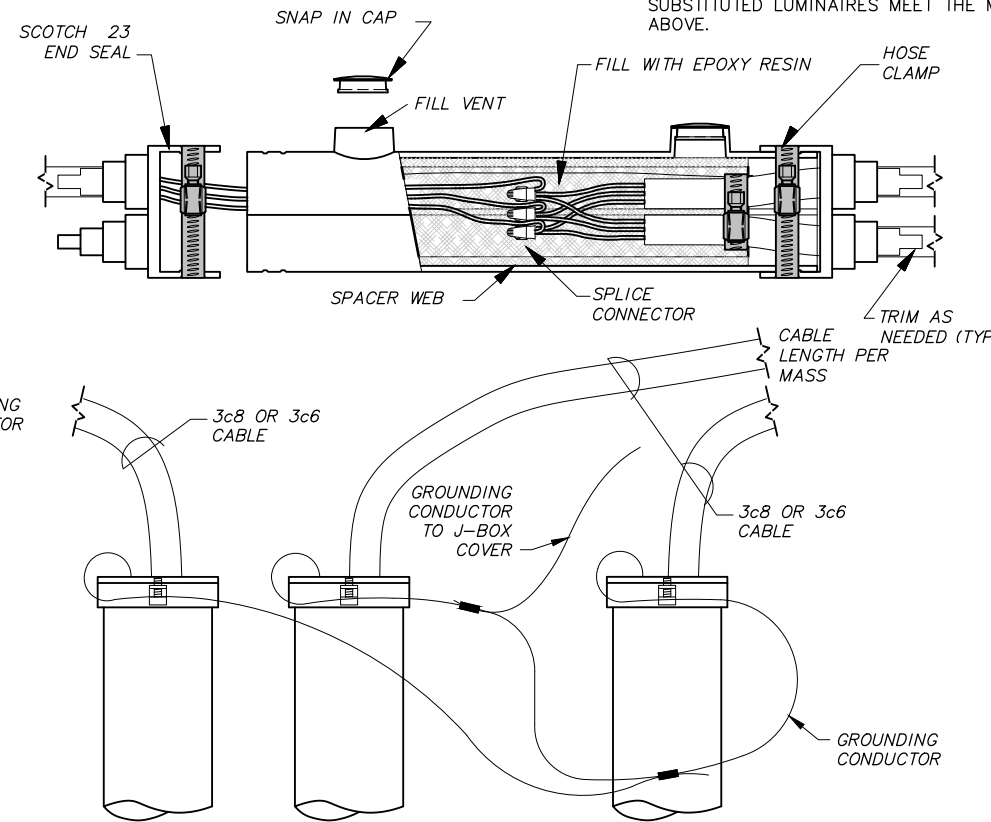
\*\* = PARALLEL TO CAMROSE DRIVE

SUBSTITUTION OF SPECIFIED LUMINAIRES REQUIRES SUBMITTAL OF A FULL LIGHTING ANALYSIS SHOWING THE SUBSTITUTED LUMINAIRES MEET THE MINIMUM MOA LIGHT LEVEL REQUIREMENTS PER THE LIGHTS LEVEL TABLE ABOVE.



**1 JUNCTION BOX GROUNDING DETAIL**

NTS  
ONLY GROUNDING CONDUCTORS ARE SHOWN FOR CLARITY



**2 TYPICAL TAP/SPLICE DETAIL**

NTS

ILLUMINATION JUNCTION BOX SCHEDULE				
J-BOX	TYPE	CIRCUIT	STATION	OFFSET
J2A	2	LU-1	02+64.6	28.90 RT
J2B	1A	LU-3	04+20.5	21.49 RT
J4A	1A	LU-3	08+21.7	21.54 RT
J5A	1A	LU-3	08+92.3	21.60 LT

NOTE: ONLY JUNCTION BOXES NOT ASSOCIATED WITH AN LUMINAIRE OR LOAD CENTER ARE SHOWN IN THIS TABLE.

File: I:\labdata\10152.00 Camrose Drive Storm Drainage\00 CAD 2019\01 Working Set\03 Electrical\10152.00 Schedules.dwg

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TOPOGRAPHY	TS	RB		GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
PROFILE	RB	JK		GAAB 15	ALT as shown in online MOA	324.72'				
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821		Benchmarks Map Gallery Application					
WATER/SANITARY SEWER	JM	JH								
GAS	TS	AR								
TELEPHONE	TS	AR								
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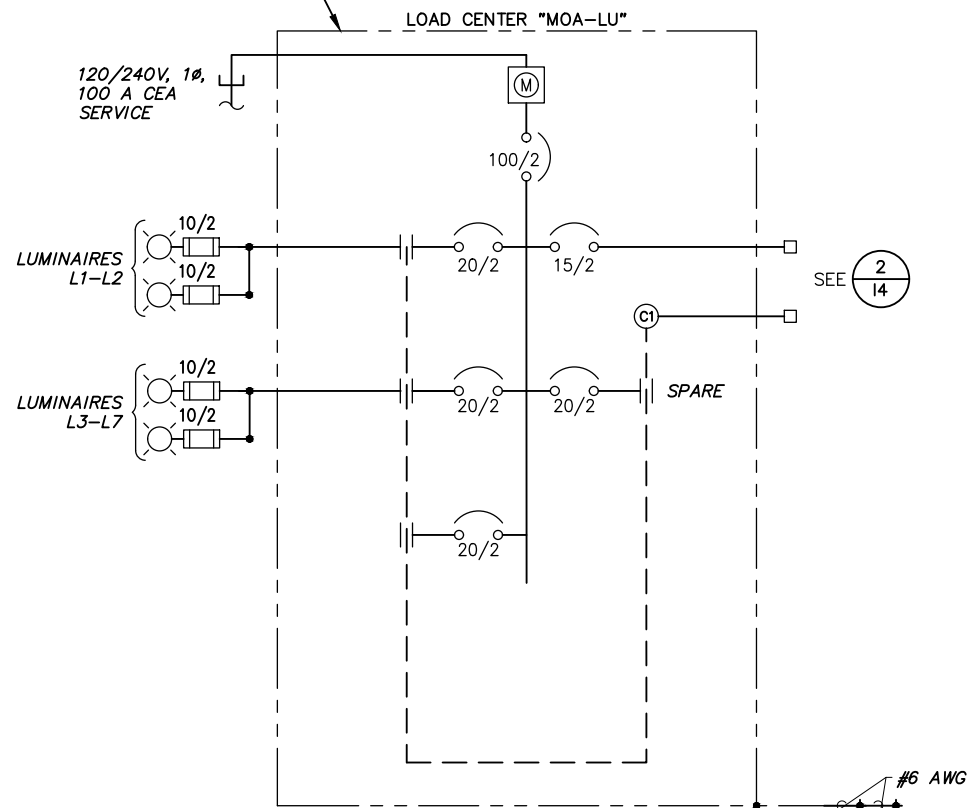
**CRW ENGINEERING GROUP INC.**  
 3940 ARCTIC BLVD. SUITE 300  
 ANCHORAGE, ALASKA 99503  
 PHONE: (907) 562-3252  
 #AEC1882-AK

STATE OF ALASKA  
 49 TH  
 Tylor R. Keene  
 EE-14401  
 REGISTERED PROFESSIONAL ENGINEER

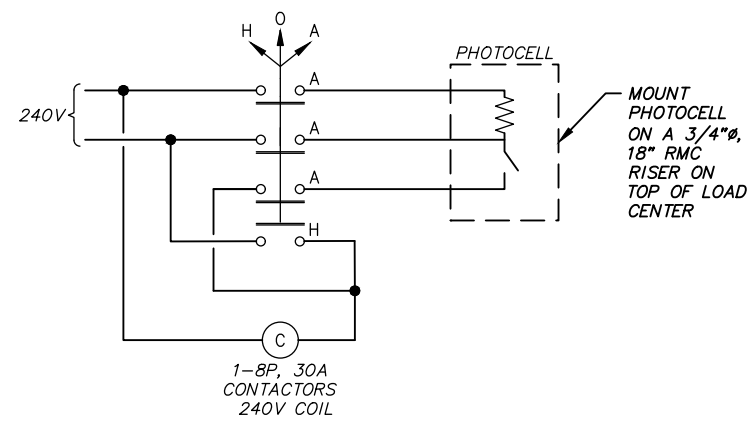
UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED D  
 ILLUMINATION AND INTERCONNECT SCHEDULES & DETAILS  
 SCALE HOR. VER. GRID SW538, SW1638 DATE JUNE 2023 STATUS 95% SHEET 13 of 14

PLACE PLACARD ON FRONT OF LOAD CENTER INSCRIBED WITH THE FOLLOWING:  
 MAXIMUM FAULT CURRENT = XXXA  
 CALCULATED MM/DD/YYYY



1 LOAD CENTER "LU" POWER ONE-LINE  
 NTS



2 LOAD CENTER PHOTOELECTRIC CONTROL SCHEMATIC  
 NTS

LOAD CENTER NO. MOA-LU TYPE: 1A  
 LOCATION: STATION - 3+40.6, OFFSET - 26.4 RT, CAMROSE DRIVE  
1-8 POLE, 30 AMP CONTACTORS  
 MAIN BREAKER A: 2 POLE, 100 AMPS, 240 VOLTS

PANEL A 100 AMPS MAIN LUGS, 120/240 VOLTS SINGLE PHASE 3 WIRE  
10,000 AMPS INTERRUPT CAPACITY

CKT.	CIRCUIT DESCRIPTION	KVA	AMP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	AMP	KVA	CIRCUIT DESCRIPTION	CKT.
LU-1	LUMINAIRES L1-L2	0.1	20/2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	15/2	0.2	PHOTOELECTRIC CONTROL	LU-2
LU-3	LUMINAIRES L3-L7	0.3	20/2																				20/2		SPARE	LU-4	
LU-5	SPARE		20/2																								

TOTAL CONNECTED LOAD = 0.6 KVA  
 TOTAL AMPS = 2.4 A

CIRCUIT	SIZE	LENGTH	VOLTAGE	CURRENT	V.D.
LU-1	#8 AWG	300	240V	0.48	0.09%
LU-3	#8 AWG	916	240V	1.04	0.62%

FLAG LEGEND COLOR, BLACK      FLAG BACKGROUND COLOR, HAZARD ORANGE

# WARNING

ARC FLASH AND SHOCK HAZARD PRESENT  
 APPROPRIATE PPE REQUIRED

Arc Flash Boundary: 0.72 Ft      Level: 1  
 Incident Energy: 2.365 cal/cm<sup>2</sup>      Minimum PPE Requirement: Level 1  
 Shock Hazard Exposure: 240 VAC  
 Calculated available fault current: 3,011 A

# PROVIDED FOR FINAL DESIGN

Limited Approach Boundary: 3.5 Ft  
 Restricted Approach Boundary: 4.0 Ft

LOAD CENTER "1"      STATIC LEGEND COLOR, BLACK      CALCULATED 11/30/2021

WATERMARK IS OPTIONAL. WATERMARK COLOR, GRAY  
 MAIN BACKGROUND COLOR, WHITE

3 LOAD CENTER "LU" ARC FLASH WARNING LABEL  
 NTS

- LOAD CENTER NOTES:
1. PLACARDS FOR LOAD CENTERS SHALL HAVE SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. CONTACT ENGINEER PRIOR TO ORDER OF PLACARD TO VERIFY MAXIMUM FAULT CURRENT.
  2. LABEL THE FRONT WITH 3M SCOTCHCAL REFLECTIVE DECALS NOTING OWNERSHIP: MOA, PURPOSE: LU (ILLUMINATION) AND THE VOLTAGE.
  3. PROVIDE ARC FLASH WARNING LABELS WITH INCIDENT ENERGY VALUES AND PERSONAL PROTECTIVE EQUIPMENT (PPE) ON EACH PIECE OF EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 110.16 AND NFPA 70E.

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PROFILE	RB	JK			Benchmarks Map Gallery Application					
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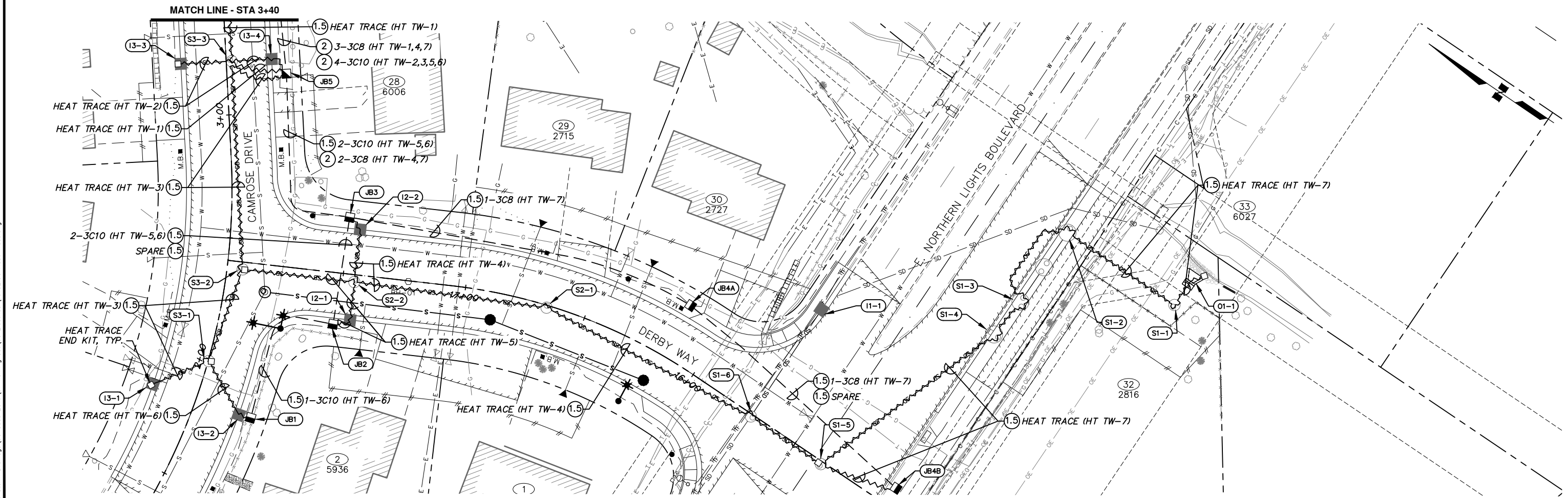
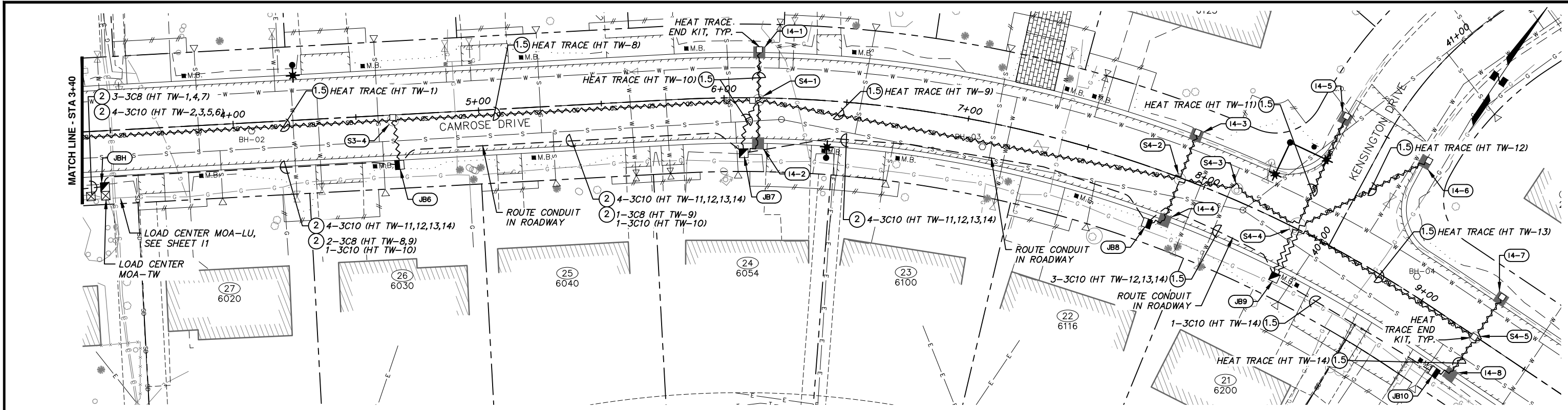
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PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED D  
 LC-LU POWER ONE-LINE, PANEL SCHEDULE, AND CONTROL SCHEMATIC

SCALE: HOR. N/A VER. N/A      GRID SW538, SW638      DATE: JUNE 2023      STATUS: 95%      SHEET 14 of 14



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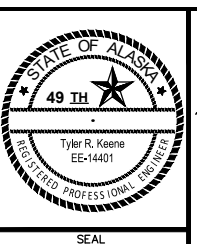
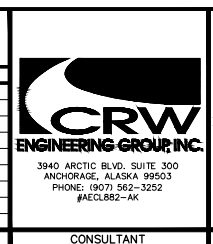
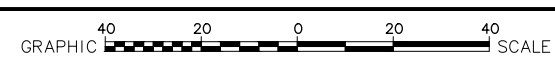
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DATA TRANSFER CHECKED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
COMPANY: \_\_\_\_\_ DATE: \_\_\_\_\_  
BY: \_\_\_\_\_

DATA	DRAWN BY	CHECKED BY	FIELD BOOKS	BM NO.	LOCATION	ELEV.	REV	DATE	DESCRIPTION	BY
BASE	TS	AR								
TOPOGRAPHY	TS	RB								
PROFILE	RB	JK								
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821	GAAB100	See MOA Benchmark Book, Page D-15	296.56'				
WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA	324.72'				
GAS	TS	AR								
TELEPHONE	TS	AR								
ELECTRIC	JH	TK								
DESIGN	JM	JH	ASBUILT							
QUANTITIES	JM	JH	CONTRACTOR							
PRELIMINARY/FINAL	JM	JH	INSPECTOR							
MUNICIPAL/STATE	JM	JH								

PLAN CHECK  
CONSTRUCTION RECORD  
VERTICAL DATUM  
REVISIONS  
CONSULTANT  
SEAL



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
HEAT TRACE PLAN

SCALE HOR. 1"=20'  
VER. N/A

GRID SW538, SW638  
DATE JUNE 2023 STATUS 95% SHEET E1 of E4

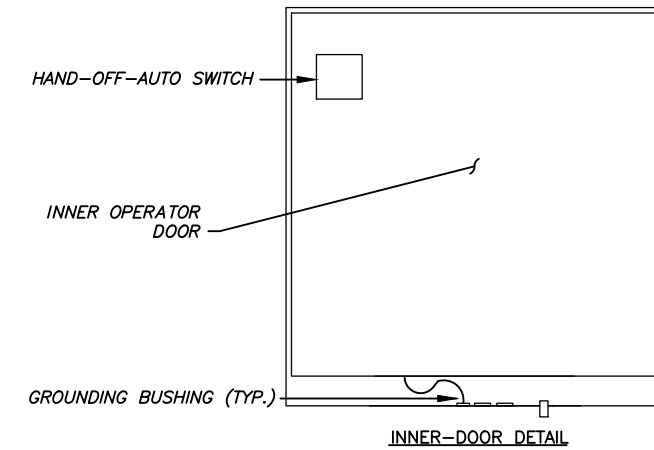
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**HEAT TRACE CONSTRUCTION NOTES**

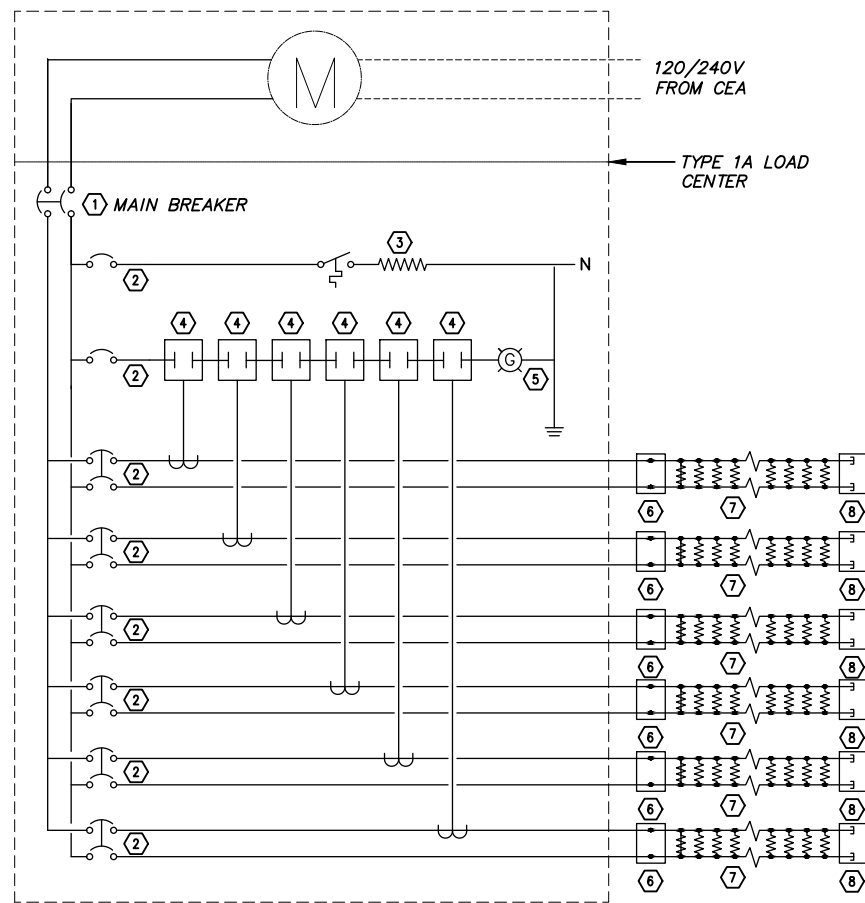
1. PROVIDE A HEAT TRACE CONTROLLER IN THE LOAD CENTER ENCLOSURE AT EACH LOCATION INDICATED ON THE DRAWINGS. INSTALL THE ENCLOSURE WITH THE DOOR FACING THE ADJACENT STREET.
2. INSTALL RIGID STEEL CONDUIT WITH A #8 AWG EQUIPMENT GROUNDING CONDUCTOR AND TWO XHHW-2 CONDUCTORS FOR EACH HEAT TRACE CIRCUIT BETWEEN THE CONTROLLER ENCLOSURE AND THE SERVING JUNCTION BOX. SIZE CONDUCTORS AND CONDUIT AS SHOWN ON THE PLANS.
3. PROVIDE SEAL-OFF FITTINGS IN THE SERVING JUNCTION BOX ON THE CONDUITS THAT ENTER THE MANHOLES OR CATCH BASINS.
4. INSTALL HEAT TRACE CAUTION SIGNS, PER DETAIL 3/E4, AT EACH CATCH BASIN WITH HEAT TRACE AND AT THE OUTFALL. EMBED MARKERS 24" IN SOIL.
5. INSTALL HEAT TRACE CONDUIT IN PIPES MANHOLES, CATCH BASINS PER DETAILS ON SHEET E4..
6. PROVIDE COMPLETED HEAT TRACE INSTALLATION RECORD (SEE MANUFACTURER'S INSTALLATION GUIDE FOR FORM) FOR FINAL ACCEPTANCE OF ALL HEAT TRACE RUNS. THIS SHALL INCLUDE INRUSH TEST AND STEADY STATE AFTER 15 MINUTES. CONTRACTOR TO RECORD AIR TEMPERATURE (OR WATER TEMPERATURE IF SUBMERGED) AT TIME OF TESTING.
7. INSTALL ONLY ONE (1) HEAT TRACE CABLE IN EACH CONDUIT WITH HEAT TRACE.
8. ALL COLD LEAD CONDUCTORS SHALL BE RUN CONTINUOUSLY BETWEEN THE LOAD CENTER AND THE HEAT TRACE SPLICE KIT. NO ADDITIONAL SPLICES ARE ALLOWED.
9. INSTALL A BARE CU STRANDED GROUND WIRE IN ALL CONDUITS WITH COLD LEADS, MINIMUM SIZE #8 AWG.

**HEAT TRACE CONTROLLER MATERIALS LIST**

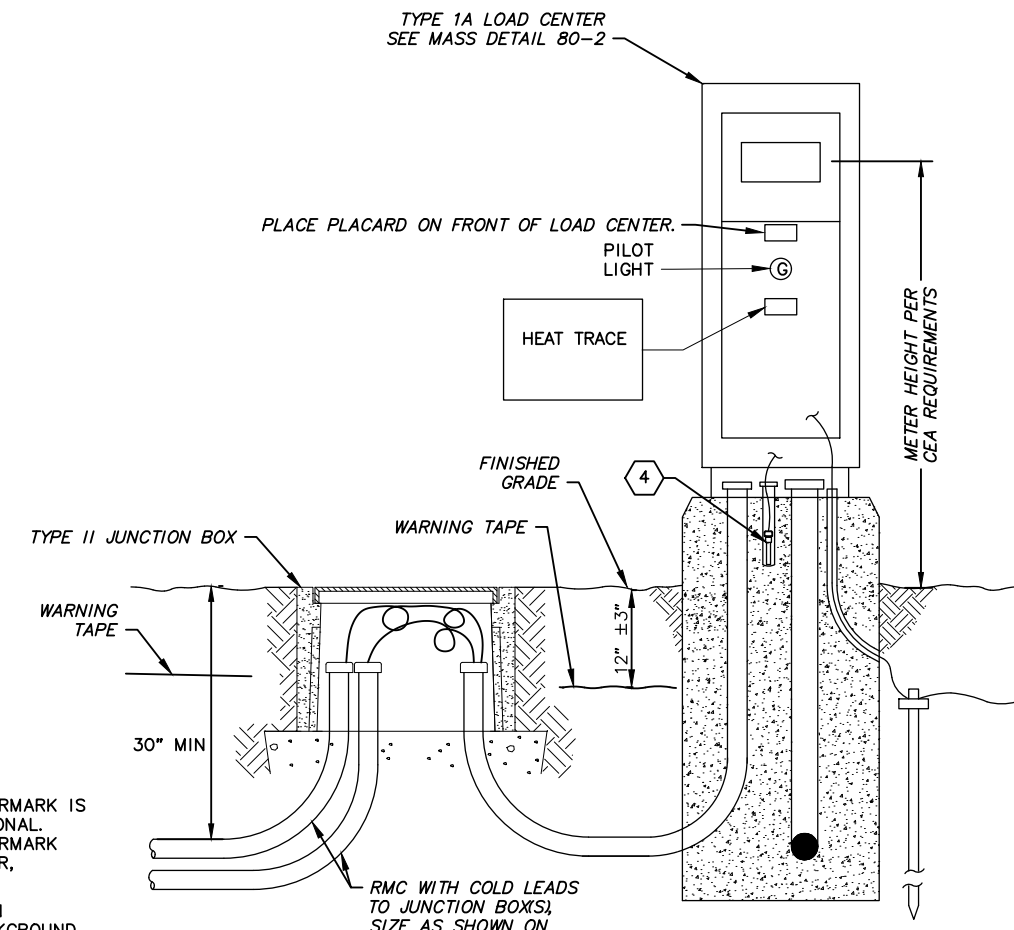
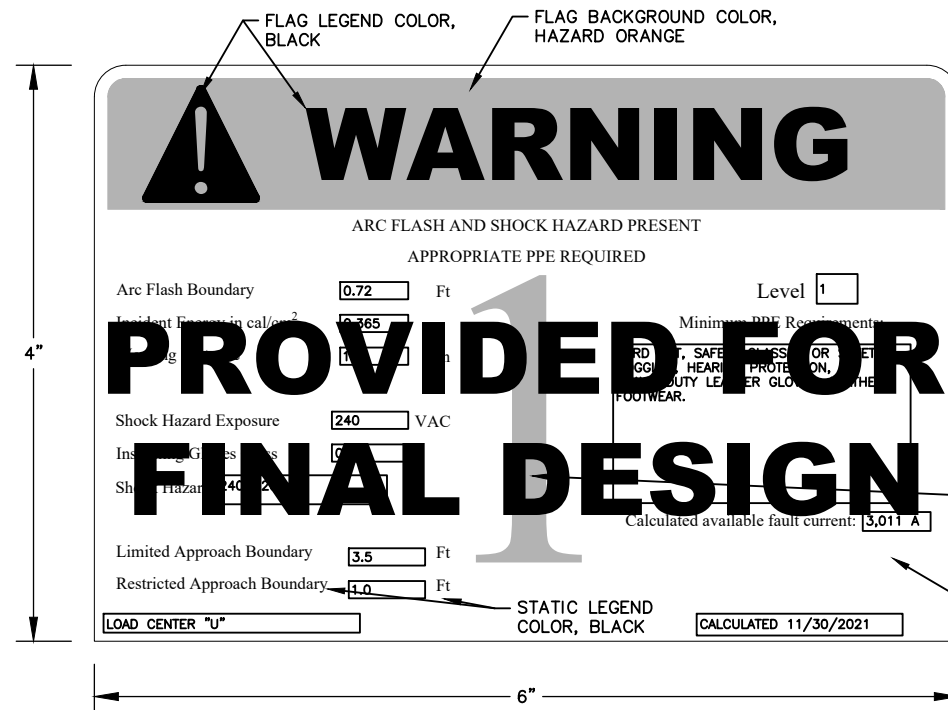
- ① 2 POLE MAIN CIRCUIT BREAKER, SIZE AS SHOWN IN THE PANEL SCHEDULES.
- ② 15/1 HEATER BREAKER, 15/1 CONTROL BREAKER AND CLASS B GROUND FAULT CIRCUIT INTERRUPTERS FOR HEAT TRACE CIRCUITS. HEAT TRACE CIRCUIT SIZES AS SHOWN IN THE PANEL SCHEDULES.
- ③ ENCLOSURE HEATER: 800W THERMOSTATICALLY CONTROLLED 120V FAN-DRIVEN HEATER. HOFFMAN "D-AH8001B" OR EQUAL.
- ④ ENCLOSED SELF-POWERED SPLIT CORE 120-277VAC ADJUSTABLE SWITCHING AC CURRENT SENSOR, RIB FUNCTIONAL DEVICES, INC #RIBXGAT-ECM OR APPROVED EQUAL. PROVIDE (1) PER HEAT TRACE CIRCUIT. INSTALL IN LOAD CENTER AND MONITOR L1 CONDUCTOR FOR EACH HEAT TRACE CIRCUIT. SET SWITCH TO 0.75A AND TEST TO MAKE SURE SWITCH CLOSE WHEN HEAT TRACE CIRCUIT BREAKER IS TURNED ON AND STAYS ON AFTER 4 HOURS AT OUTSIDE AIR TEMPERATURE OF 40 DEGREED OR HIGHER.
- ⑤ PILOT LIGHT: 120 VOLT LIGHT EMITTING DIODE LAMP WITH GREEN LENS, NEMA 4X RATED IN OUTER DOOR OF ENCLOSURE. LABEL "HEAT TRACE ON". PROVIDE A SPARE LAMP.
- ⑥ SPLICE KIT: POWER TO HEAT TRACE CABLE, LISTED FOR WET LOCATIONS. INSTALL PER HEAT TRACE MANUFACTURER'S RECOMMENDATIONS. CONNECT 3RD CONDUCTOR FROM 3C CABLE COLD LEADS TO THE GROUND SHEATH OF THE HEAT TRACE CABLE AND THE GROUND BUS BAR IN THE LOAD CENTER. IDENTIFY THE GROUND CONDUCTOR ON EITHER END PER NEC.
- ⑦ HEAT TRACE CABLE: TEMPERATURE LIMITING TYPE LISTED FOR CLASS I, DIVISION 2 USE, WET LOCATIONS AND RATED AT 7 WATTS/FOOT AT 240 VOLTS. du ALASKA ARCTIC TRACE TL SERIES #Z120724CBTL OR APPROVED EQUAL.
- ⑧ HEAT TRACE END KIT PER MANUFACTURER. INSTALL NIPPLE AND CAP AT END OF CONDUIT RUN FOR END KIT.



- LOAD CENTER NOTES:**
1. PROVIDE A LOAD CENTER FOUNDATION THAT IS SIZED FOR THE LOAD CENTER BEING INSTALLED. LOAD CENTER SHOULD NOT OVERHANG THE FOUNDATION CHAMFERS.
  2. PLACARDS FOR LOAD CENTERS SHALL HAVE SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. CONTACT ENGINEER PRIOR TO ORDER OF PLACARD FOR MAXIMUM FAULT CURRENT.
  3. LABEL THE FRONT WITH 3M SCOTCHCAL REFLECTIVE DECALS NOTING OWNERSHIP: MOA, PURPOSE: TH (THAW WIRE) AND THE VOLTAGE.
  4. PROVIDE ARC FLASH WARNING LABELS WITH INCIDENT ENERGY VALUES AND PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS ON EACH PIECE OF EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 110.16 AND NFPA 70E. SEE DETAIL 2/E2.



NOTE: GENERAL DETAIL, NUMBER OF CIRCUITS AND BREAKER SIZE MAY VARY. SEE PLAN DRAWINGS & LOAD CENTER SCHEDULES.



**1 LOAD CENTER CONTROL SCHEMATIC**  
NTS

**2 LOAD CENTER MOA-TW ARC FLASH WARNING LABEL**  
NTS

**3 HEAT TRACE LOAD CENTER**  
NTS

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**RECORD DRAWING**

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CONTRACTOR: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

BY: \_\_\_\_\_

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COMPANY: \_\_\_\_\_

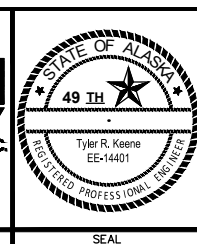
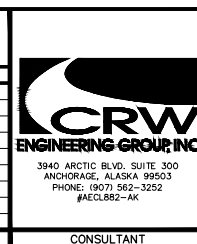
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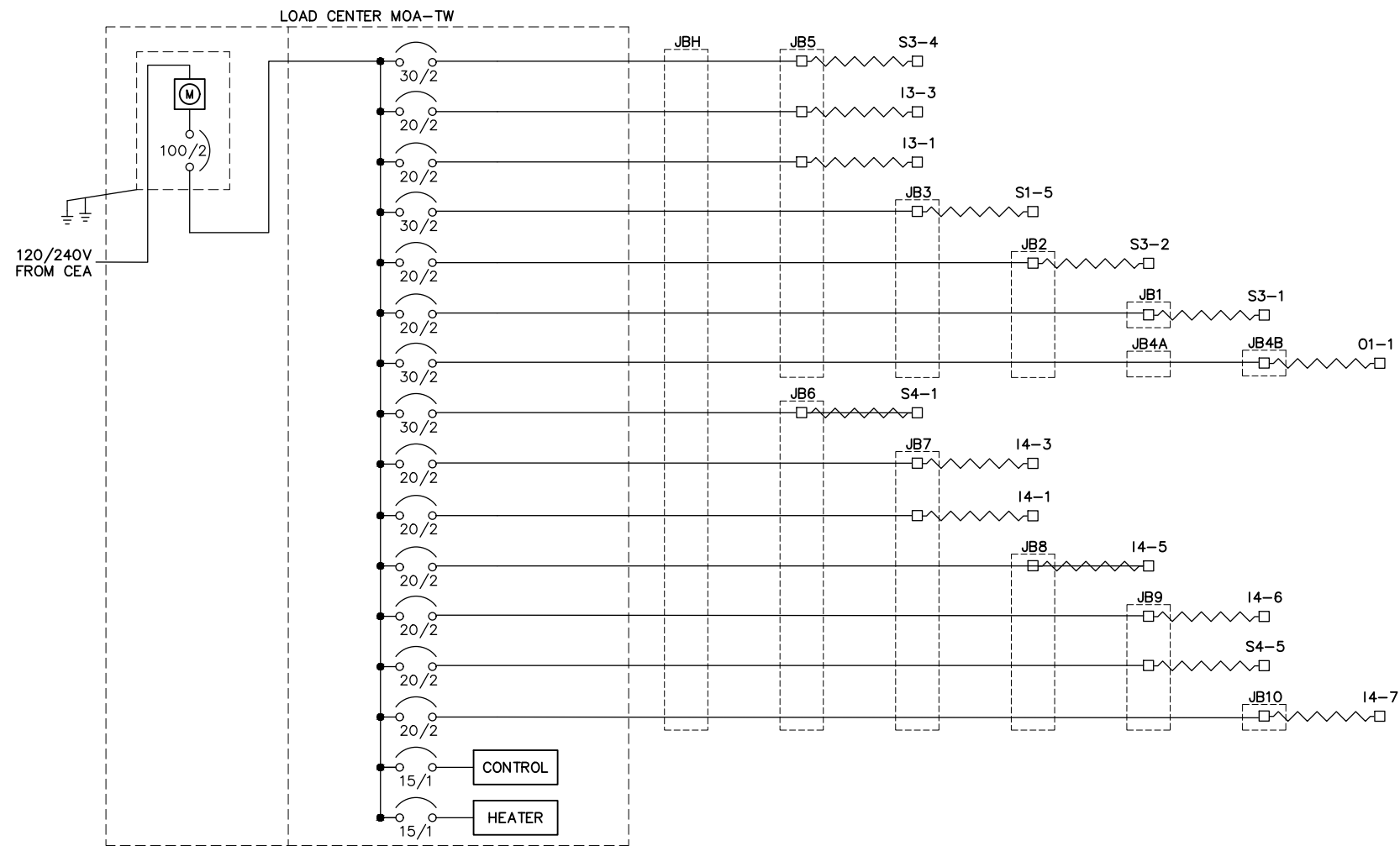
COMPANY: \_\_\_\_\_

BY: \_\_\_\_\_

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WATER/SANITARY SEWER	JM	JH		GAAB 15	ALT as shown in online MOA Benchmarks Map Gallery Application	324.72'				
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	PLAN CHECK									
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				REVISIONS						
					CONSULTANT					
									SEAL	



PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT			
20-27	CAMROSE DRIVE STORM DRAINAGE PROJECT	SCHED B	
<b>HEAT TRACE CONTROL SCHEMATIC &amp; HEAT TRACE LOAD CENTER DETAILS</b>			
SCALE	HOR. N/A VER. N/A	GRID SW538, SW638	DATE JUNE 2023
		STATUS 95%	SHEET E2 of E4



1 **LOAD CENTER MOA-TW POWER ONE-LINE**  
NTS

LOAD CENTER NO. MOA-TW TYPE: 1A  
 LOCATION: STATION - 3+46.5 , OFFSET - 26.5 RT, CAMROSE DRIVE  
 MAIN BREAKER A: 2 POLE, 150 AMPS, 240 VOLTS

PANEL A 150 AMPS MAIN LUGS, 120/240 VOLTS SINGLE PHASE 3 WIRE  
10,000 AMPS INTERRUPT CAPACITY

CKT.	CIRCUIT DESCRIPTION	KVA	AMP	WIRE	AMP	KVA	CIRCUIT DESCRIPTION	CKT.
TW-1	HEAT TRACE S3-4	1.9	30/2	1	20/2	0.8	HEAT TRACE I3-3	TW-2
TW-3	HEAT TRACE I3-1	2.1	20/2	3	30/2	3.0	HEAT TRACE S1-4	TW-4
TW-5	HEAT TRACE S3-2	0.6	20/2	5	20/2	5.6	HEAT TRACE S3-1	TW-6
TW-7	HEAT TRACE O1-1	2.9	30/2	7	30/2	1.9	HEAT TRACE S4-1	TW-8
TW-9	HEAT TRACE I4-3	2.5	30/2	9	20/2	0.7	HEAT TRACE I4-1	TW-10
TW-11	HEAT TRACE I4-5	1.0	20/2	11	20/2	1.0	HEAT TRACE I4-6	TW-12
TW-13	HEAT TRACE S4-5	1.3	20/2	13	20/2	0.9	HEAT TRACE I4-7	TW-14
TW-15	HEATER	0.9	15/1	15	15/1	0.5	HEAT TRACE CONTROL	TW-16

TOTAL CONNECTED LOAD = 27.6 KVA  
 TOTAL AMPS = 115.0 A

TAG	TYPE	CIRCUITS	STATION	OFFSET
JBH	TYPE 2	TW-1 - TW-14	LOCATE PER MASS	
JB1	TYPE 1A	TW-6, HT SPLICE KIT	01+83.0	23.5 RT
JB2	TYPE 1A	TW-5, TW-6, HT SPLICE KIT	17+52.0	21.0 LT
JB3	TYPE 1A	TW-4, TW-5, TW-6, TW-7, HT SPLICE KIT	17+50.0	23.0 RT
JB4A	TYPE 1A	TW-7	16+14.5	23.0 RT
JB4B	TYPE 1A	TW-7, HT SPLICE KIT	15+05.5	7.5 RT
JB5	TYPE 2	TW-1 - TW-7, (3) HT SPLICE KITS	03+15.5	24.0 RT
JB6	TYPE 1A	TW-8, TW-9, TW-10, TW-11, TW-12, TW-13, TW-14, HT SPLICE KIT	04+66.7	20.5 RT
JB7	TYPE 2	TW-9, TW-10, TW-11, TW-12, TW-13, TW-14, (2) HT SPLICE KITS	06+08.0	22.5 RT
JB8	TYPE 1A	TW-11, TW-12, TW-13, TW-14, HT SPLICE KIT	07+83.0	22.0 RT
JB9	TYPE 2	TW-12, TW-13, TW-14, (2) HT SPLICE KITS	08+42.0	22.0 RT
JB10	TYPE 1A	TW-14, HT SPLICE KIT	09+20.5	22.0 RT

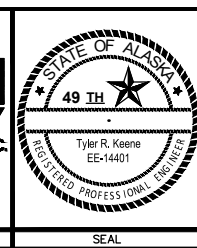
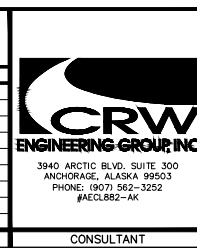
CIRCUIT	FROM	THROUGH	TO	LENGTH
TW-1		I3-4, S3-3	S3-4	220'
TW-2	JB5	I3-4, S3-3	I3-3	90'
TW-3		S3-3, S3-2, S3-1	I3-1	245'
TW-4	JB3	I2-2, S2-2, S2-1, S1-6	S1-5	345'
TW-5	JB2	I2-1, S2-2	S3-2	70'
TW-6	JB1	I3-2	S3-1	80'
TW-7	JB4B	S1-5, S1-4, S1-3, S1-2, S1-1	O1-1	330'
TW-8	JB6	S3-4	S4-1	215'
TW-9		I4-2, S4-1, S4-2	I4-3	290'
TW-10	JB7	S4-1	I4-1	80'
TW-11	JB8	I4-4, S4-2, S4-3, S4-4	I4-5	115'
TW-12		S4-4	I4-6	115'
TW-13	JB9	S4-4	S4-5	155'
TW-14	JB10	I4-8, S4-5	I4-7	100'

CIRCUIT	SIZE	LENGTH	VOLTAGE	CURRENT	V.D.
TW-1	#8	35'	240	6.38	0.14%
TW-2	#10	35'	240	2.61	0.09%
TW-3	#10	35'	240	7.11	0.24%
TW-4	#8	105'	240	10.01	0.64%
TW-5	#10	150'	240	2.03	0.29%
TW-6	#10	220'	240	2.32	0.49%
TW-7	#8	370'	240	9.57	2.15%
TW-8	#8	270'	240	6.24	1.02%
TW-9	#8	270'	240	8.41	2.16%
TW-10	#10	435'	240	2.32	0.96%
TW-11	#10	435'	240	3.34	1.38%
TW-12	#10	490'	240	3.34	1.56%
TW-13	#10	490'	240	4.50	2.10%
TW-14	#10	570'	240	2.90	1.58%

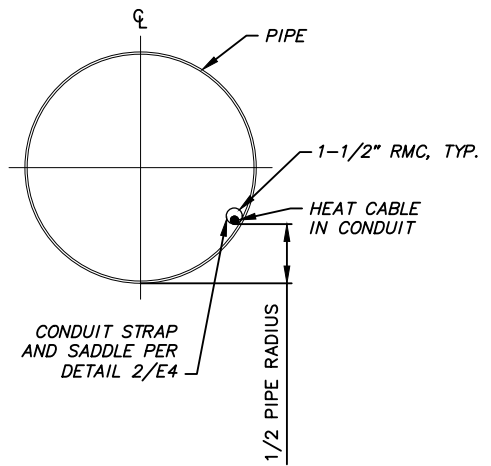
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**RECORD DRAWING**  
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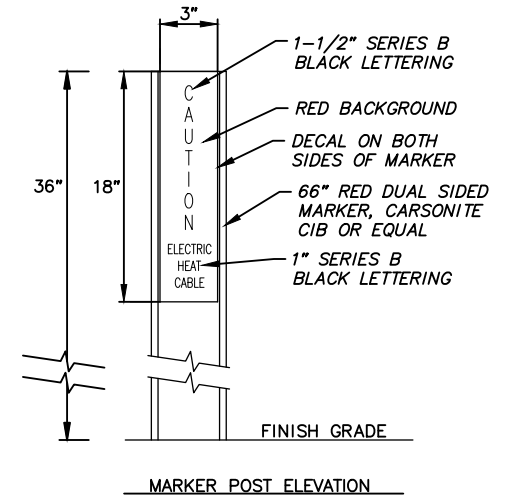
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TOPOGRAPHY	TS	RB		GAAB 15	ALT as shown in online MOA	324.72'				
PROFILE	RB	JK			Benchmarks Map Gallery Application					
STORM SEWER	JM	JH	DESIGN MOA BOOK No. 3629, 3773, 3785, 3795, 3796 & 3821							
WATER/SANITARY SEWER	JM	JH								
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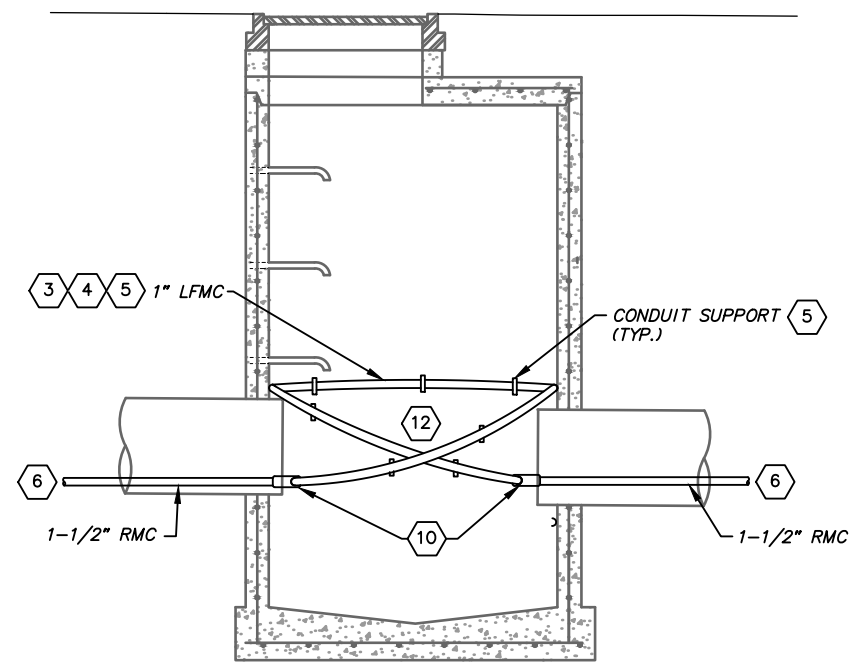
PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT  
 20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B  
**HEAT TRACE LOAD CENTER SCHEDULE & POWER ONE-LINE**  
 SCALE: HOR. N/A VER. N/A  
 GRID SW538, SW638  
 DATE: JUNE 2023 STATUS: 95% SHEET E3 of E4



**HEAT TRACE MOUNTING DETAILS**  
NTS

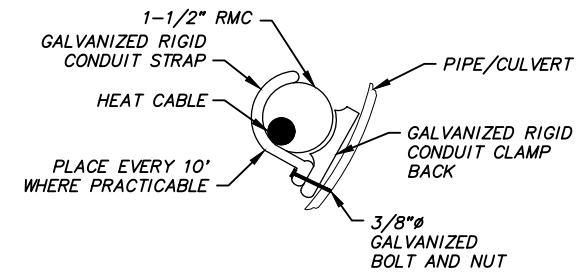


**CAUTION SIGN DETAIL**  
NTS

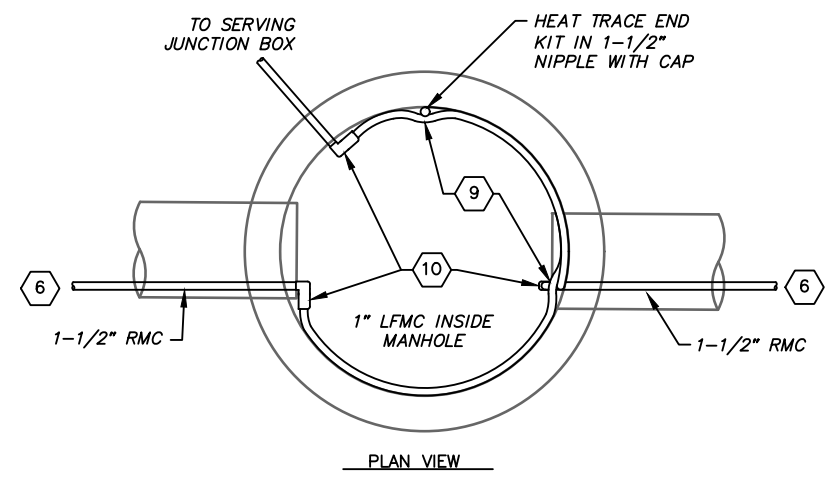


**MANHOLE HEAT TRACE PASS THROUGH DETAIL**  
NTS

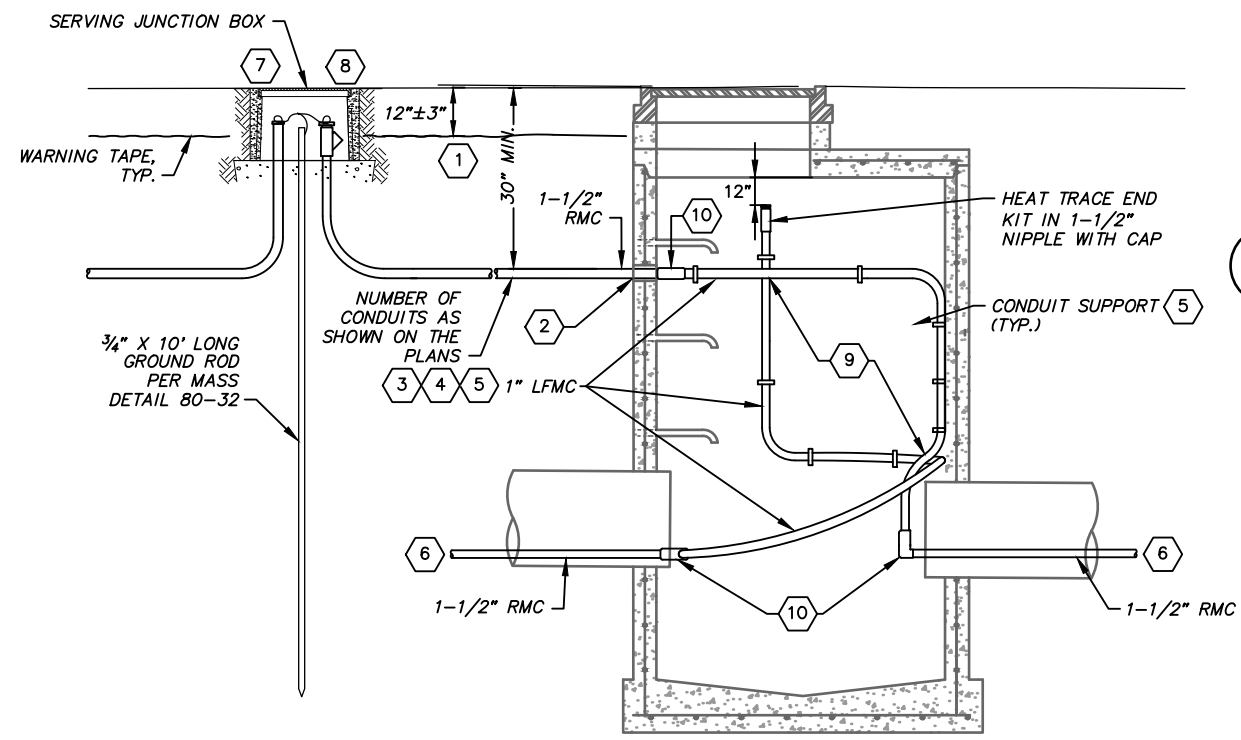
- # **MANHOLE HEAT TRACE CONSTRUCTION NOTES**
1. INSTALL RIGID METAL CONDUITS (RMC) A MINIMUM OF 30 INCHES BELOW FINISHED GRADE.
  2. CORE DRILL SEPARATE CONDUIT ACCESS HOLES FOR EACH CONDUIT THROUGH THE MANHOLE WALL AND GROUT AROUND THE INSTALLED CONDUIT.
  3. PROVIDE 1" LIQUID-TIGHT FLEXIBLE METAL CONDUITS (LFMC) INSIDE THE MANHOLE OR CATCH BASIN. PROVIDE LFMC FITTINGS ON BOTH ENDS OF ALL SEGMENTS OF LFMC.
  4. PROVIDE THE LFMC WITH A STAINLESS STEEL GROUND STRAP BETWEEN THE SECTIONS OF RMC.
  5. ATTACH LFMC TO MANHOLE WALL ON 2.5' CENTERS WITH GALVANIZED 2-HOLE CONDUIT STRAP AND CONCRETE ANCHORS.
  6. PROVIDE 1-1/2" RMC WITH HEAT TRACE IN THE STORM DRAIN PIPES, EXTENDING THEM TO THE LOCATIONS SHOWN IN THE DRAWINGS.
  7. PROVIDE TYPE 2 OR TYPE 1A JUNCTION BOXES WITH GROUNDING BUSHINGS, AND GROUNDING PER MASS DETAIL 80-32 OR 80-31 AS SHOWN ON THE PLANS.
  8. COMPLETE SPLICES BETWEEN HOT AND COLD LEADS IN THE JUNCTION BOX AND PROVIDE SEALING FITTINGS ON THE RMC TO THE MANHOLE OR CATCH BASIN.
  9. CROSS THE LFMC TO PROVIDE A CONTINUOUS HEATED PATH.
  10. INSTALL AN LB-TYPE CONDUIT BODY WITH GASKETED COVER BETWEEN LFMC AND RMC ENTERING AND EXISTING PIPING AND MANHOLES AND CATCH BASINS.
  11. FOR MANHOLES WITH MORE THAN ONE HEAT TRACE, SEE DETAIL 5, SHEET E4.
  12. FOR MANHOLES THAT ONLY HAVE ONE HEAT TRACE, SPIRAL HEAT TRACE LFMC AROUND MANHOLE A MINIMUM OF 1.5 TIMES BEFORE HEAT TRACE LEAVES THE MANHOLE.
  13. SPIRAL HEAT TRACE LFMC A MINIMUM OF 1.5 TIMES IN CATCH BASIN.



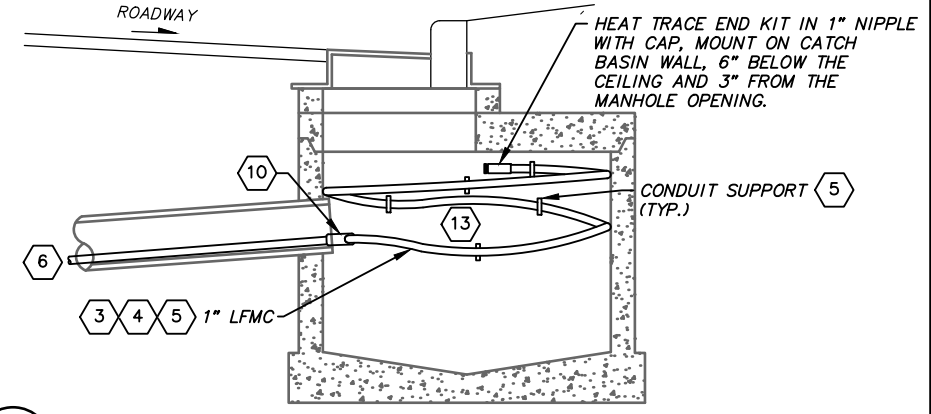
**PIPE CONDUIT SADDLE & STRAP**  
NTS



**MANHOLE HEAT TRACE DETAIL**  
NTS



**CATCH BASIN HEAT TRACE DETAIL**  
NTS



**CATCH BASIN HEAT TRACE PASS THROUGH DETAIL**  
NTS

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BY: \_\_\_\_\_

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CONSULTANT										
SEAL										

**CRW ENGINEERING GROUP, INC.**

3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#AECLE882-AK

STATE OF ALASKA  
49 TH  
TYLER R. KEENE  
EE-14401  
REGISTERED PROFESSIONAL ENGINEER

UNIVERSITY OF ANCHORAGE

PROJECT MANAGEMENT AND ENGINEERING DEPARTMENT

20-27 CAMROSE DRIVE STORM DRAINAGE PROJECT SCHED B

**HEAT TRACE DETAILS**

SCALE: HOR. N/A VER. N/A GRID: SW538, SW638 DATE: JUNE 2023 STATUS: 95% SHEET: E4 of E4