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**ALASKA RAILROAD CORPORATION**

**ARRC DEPOT DRIVE IMPROVEMENTS  
 PHASE I**

**FINAL  
 FEBRUARY 2020**

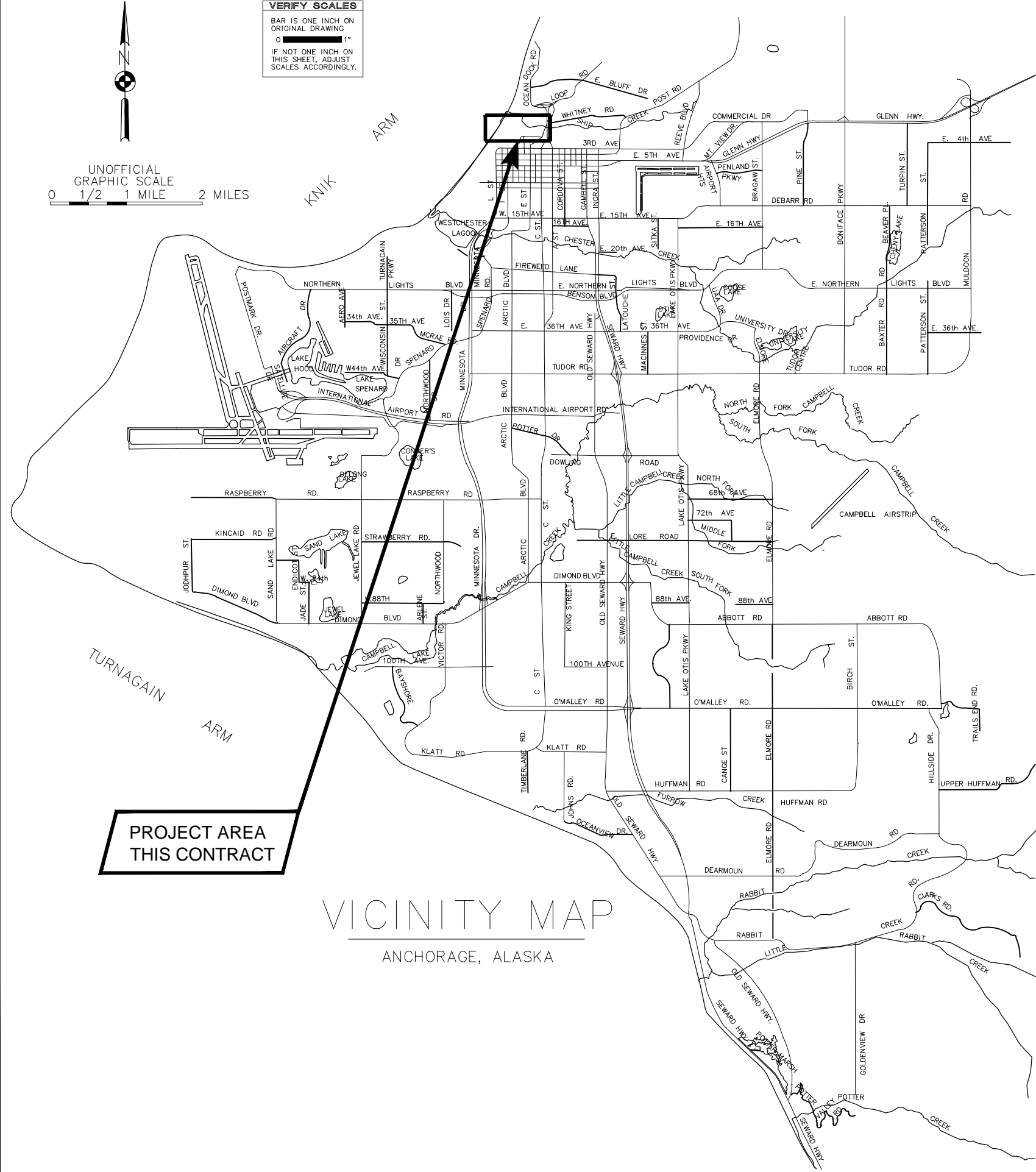
PREPARED BY:



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 ANCHORAGE, ALASKA 99503  
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 #AECL882-AK



Consulting Engineers, Inc.  
 (907) 274-2622 / FAX (907) 274-0914



VICINITY MAP  
 ANCHORAGE, ALASKA

**PROJECT AREA  
 THIS CONTRACT**

File: \\crweng.com\Projects\JobsData\31103.01 Arrc Depot Drive Development\00 CADD\01 Working Set\00 General\31103.01 - Sheet Index.dwg PLOT DATE: 2/14/2020 3:53 PM

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A	BASE BID
B	ADDITIVE ALTERNATIVE 1



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

PROJECT NO: 31103.01  
 ARRCC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 SHEET INDEX  
 DATE: FEB 2020  
 STATUS: FINAL

SCALE	REV	DATE	DESCRIPTION	REVISION	BY
HOR. N/A					
VER. N/A					
DESIGNED BY					
MH					
DRAWN BY					
JS					
CHECKED BY					
EJ					
APPROVED BY					
EJ					

SHEET NO.  
**G2**

File: \\crweng.com\Projects\JobsData\31103.01\_ARRC\_Depot\_Drive\_Development\00\_CADD\01\_Working\_Set\00\_General\31103.01 - General Notes.dwg PLOT DATE: 2/14/2020 3:23 PM

**GENERAL NOTES:**

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE MUNICIPALITY OF ANCHORAGE (MOA) STANDARD SPECIFICATIONS, DATED 2015, CURRENT REVISION, (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.
2. THE LOCATION OF THE EXISTING FEATURES AND UTILITIES SHOWN IN THESE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES ENCOUNTERED AND RECORD THEIR LOCATION ON THE CONTRACT RECORD DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. UTILITY CROSSINGS ARE NOT SHOWN IN THE PROFILE FOR CLARITY.
3. EXISTING UTILITIES OR WATER AND SEWER SERVICE LINES ARE NOT SHOWN IN THE TYPICAL CROSS SECTIONS.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE PERMITS SHALL BE MAINTAINED ON THE PROJECT SITE.
5. ALL WORK IN CLOSE PROXIMITY TO EXISTING OVERHEAD TELEPHONE AND/OR ELECTRIC UTILITIES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES AND GUIDELINES AND THE CLEARANCE REQUIREMENTS OF THE SERVING UTILITY.
6. LIMITS OF EXCAVATION SHOWN ON THE DRAWINGS ARE APPROXIMATE. ACTUAL LIMITS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER DURING CONSTRUCTION OPERATIONS.
7. GEOTECHNICAL (SOIL) INFORMATION IS INCLUDED IN THE CONTRACT DOCUMENTS.
8. ALL WORK SHALL BE PERFORMED WITHIN ALASKA RAILROAD CORPORATION (ARRC) PROPERTY OR PUBLIC RIGHT-OF-WAY. ALL DISTURBED AREA BEYOND THE SLOPE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION, UNLESS OTHERWISE NOTED. RE-VEGETATION SHALL BE IN ACCORDANCE WITH THE LANDSCAPING PLAN.
9. CONTRACTOR SHALL RESTORE DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS, UNLESS OTHERWISE DIRECTED BY ENGINEER. PAYMENT FOR RESTORING DISTURBED AREAS OUTSIDE OF IDENTIFIED CONSTRUCTION LIMITS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE. AREAS NOT BEING PAVED SHALL BE TOPSOIL AND SEEDED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS UNLESS OTHERWISE NOTED.
10. PROJECT CLEARING AND GRUBBING LIMITS SHALL COINCIDE WITH SLOPE OR EXCAVATION LIMITS. SLOPE LIMITS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE ACTUAL SLOPE LIMITS BASED ON SURVEY DATA AND SHALL OBTAIN APPROVAL OF THE CLEARING AND GRUBBING LIMITS BY THE ENGINEER. NOT ALL TREES AND SHRUBS ARE SHOWN ON THE PLANS. CONTRACTOR SHALL MINIMIZE IMPACTS TO THE EXISTING VEGETATION.
11. 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. TRANSVERSE JOINTS SHALL NOT BE PERPENDICULAR TO CENTERLINE, BUT SHALL BE SKEWED BETWEEN FIFTEEN AND TWENTY-FIVE DEGREES (15° AND 25°) PER MASS SECTION 40.06. TACK COAT SHALL BE APPLIED TO THE SAWN FACE OF ASPHALT PRIOR TO BEGINNING PAVING. TACK COAT SHALL ALSO BE APPLIED BETWEEN LAYERS OF ASPHALT. TACK COAT SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT WILL BE MADE.
12. PAINT ALL CONTACT SURFACES INCLUDING CURBING, GUTTERS, MANHOLES, AND OTHER CONCRETE STRUCTURES WITH A THIN, UNIFORM COATING OF ASPHALTIC CEMENT OR APPROVED EQUAL MATERIAL PRIOR TO PAVING AGAINST THEM.
13. PAVEMENT CROSS SLOPE SHALL VARY AT INTERSECTIONS TO PROVIDE POSITIVE DRAINAGE. WHERE PAVEMENT SLOPES EXCEED 6%, THE ENGINEER SHALL REVIEW CURB STAKING PRIOR TO FINAL GRADING AND CONCRETE PLACEMENT. IF 0.5% SLOPE CAN NOT BE MAINTAINED AROUND THE CURB RETURN, NOTIFY ENGINEER IMMEDIATELY.
14. ALL WORK AND MATERIALS REQUIRED FOR REMOVING ANY LITTER OR DEBRIS WITHIN THE PROJECT LIMITS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT WILL BE MADE.
15. 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.
16. THE CONTRACTOR SHALL SUBMIT RECORD SURVEY NOTES WITH THE RECORD DRAWINGS.
17. EXCAVATION SHALL BE MEASURED BY CROSS-SECTION AND SHALL BE LIMITED TO THE PAY LIMITS IDENTIFIED IN THE TYPICAL CROSS SECTIONS UNLESS ADDITIONAL EXCAVATION IS DIRECTED BY THE ENGINEER.
18. THE ROADWAY STATIONING IS THE PROPOSED ROADWAY CENTERLINE PER SURVEY CONTROL DRAWING UNLESS OTHERWISE NOTED. SEE SURVEY CONTROL DRAWING FOR HORIZONTAL AND VERTICAL CONTROL.
19. ALL CURB LOCATIONS, RADIUS MEASUREMENTS AND ELEVATIONS ARE TO THE TOP BACK OF CURB (TBC) UNLESS OTHERWISE NOTED.
20. UNLESS OTHERWISE NOTED, ALL VALVE BOXES, CLEANOUTS, AND MANHOLES WITHIN THE CONSTRUCTION AREA SHALL BE ADJUSTED RELATIVE TO FINISH GRADE PER MASS OR THESE DRAWINGS.
21. FURNISH AND INSTALL RIGID BOARD HIGH DENSITY EXTRUDED POLYSTYRENE, MIN 60 PSI, EQUIVALENT TO R-20 PER 4" THICK INSULATION BETWEEN THE STORM DRAIN IMPROVEMENTS AND THE WATER AND SEWER UTILITIES WHEN THE VERTICAL CLEARANCE IS LESS THAN THREE FEET. IF 18 INCHES OF VERTICAL SEPARATION BETWEEN WATER AND SEWER/STORM DRAIN MAINS CAN NOT BE MAINTAINED THEN RELOCATION WILL BE REQUIRED.
22. COORDINATE WITH AWWU FOR HYDRANTS THAT REQUIRE ADJUSTMENT TO FINISH GRADE.
23. ALL CURBS AND GUTTER SHALL BE PAID AS P.C.C CURB AND GUTTER (ALL TYPES).
24. WATER RESULTING FROM THE CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS REQUIRED PERMITS, INCLUDING, BUT NOT LIMITED TO, THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION, ARE OBTAINED BY THE CONTRACTOR. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM EXCAVATION ONTO ROADWAYS. THE CONTRACTOR SHALL PROVIDE DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING AND PAYING FOR ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL PROVIDE COPIES OF PERMITS AND APPROVALS TO THE MOA ROW PERMIT OFFICE PRIOR TO BEGINNING DEWATERING.
25. ALL FILL, USABLE EXCAVATION, AND TRENCH BACKFILL SHALL BE COMPACTED TO 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 LIFT NOT EXCEEDING 12-INCHES.
26. ALASKA RAILROAD FLAG PROTECTION IS REQUIRED WHEN OPERATING EQUIPMENT INSIDE OR CAPABLE OF EXTENDING INTO ALASKA RAILROAD FLAGGING BOUNDARY. COORDINATE WITH ARRC TO ESTABLISH FLAGGING BOUNDARY PRIOR TO BEGINNING CONSTRUCTION.
27. CONTRACTOR SHALL COORDINATE ALL WORK AND ACCESS WITH ARRC WHILE ON ARRC PROPERTY.
28. ARRC TRACKS MAY BE LOCKED OUT BETWEEN THE HOURS OF 0900 TO 1600 WITH PRIOR APPROVAL FROM ARRC. COORDINATE WITH PAUL FARNSWORTH AT 907-265-2540.

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



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

PROJECT NO. 31103.01  
 ARR C DEPOT DRIVE IMPROVEMENTS - PHASE I  
 GENERAL NOTES  
 DATE: FEB 2020  
 STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	HOR. N/A	VER. N/A
DESIGNED BY	MH	
DRAWN BY	JS	
CHECKED BY	EJ	
APPROVED BY	EJ	

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Improvements\00 CADD\01 Working Set\00 General\31103.01 - Legend.dwg PLOT DATE: 2/14/2020 3:23 PM

**PLAN LEGEND**

SYMBOL			SYMBOL		
EXISTING	PROPOSED		EXISTING	PROPOSED	
---	---	CENTERLINE	⊙	⊙	STORM DRAIN MANHOLE
---	---	PROPERTY LINE	⊕	⊕	CATCH BASIN MANHOLE
---	---	ROW LINE	□	■	CATCH BASIN
---	---	EASEMENT LINE	○	●	SANITARY SEWER MANHOLE
---	---	SECTION LINE	⊠	⊠	SANITARY SEWER/SUBDRAIN CLEANOUT
---	---	UNPAVED (GRAVEL) EDGE OF ROAD/DRIVEWAY	▽	▽	SEWER SERVICE CONNECTION
---	---	EDGE OF PAVEMENT	⊕	⊕	CESSPOOL/SEPTIC TANK
---	---	STREAM/EDGE OF WATERWAY	⊕	⊕	WATER WELL
---	---	PAVEMENT/DRIVEWAY REMOVAL	⊕	⊕	WATERTIGHT SANITARY SEWER MANHOLE
---	---	CURB & GUTTER	⊕	⊕	WATER KEY BOX/VALVE MARKER
---	---	RADIUS TO BACK OF CURB	⊕	⊕	FIRE HYDRANT
---	---	DRAINAGE SWALE	⊕	⊕	DRY WELL
---	---	DRAINAGE ARROW	⊕	⊕	GAS VALVE
---	---	BLUFF AREA/ EARTHWORK SLOPE	⊕	⊕	GAS METER
---	---	CULVERT	⊕	⊕	UNDERGROUND ELECTRIC PEDESTAL
---	---	CHAINLINK FENCE	⊕	⊕	ELECTRICAL MANHOLE/J-BOX
---	---	WOOD FENCE	⊕	⊕	ELECTRIC METER
---	---	DECIDUOUS TREE/SHRUB	⊕	⊕	JB TYPE IA
---	---	CONIFEROUS TREE/SHRUB	⊕	⊕	JB TYPE II
---	---	VEGETATION & BRUSH	⊕	⊕	JB TYPE III
---	---	GUARDRAIL	⊕	⊕	ELECTRICAL VAULT
---	---	STREET SIGN	⊕	⊕	LUMINAIRE
---	---	HANDICAPPED PARKING	⊕	⊕	UTILITY POLE
---	---	TEST BORING OR TEST HOLE	⊕	⊕	GUY POLE
---	---	RAILROAD TRACKS	⊕	⊕	GUY ANCHOR
---	---	MAILBOX	⊕	⊕	CONTROLLER OR ATR CABINET
---	---	HOUSE OR STRUCTURE	⊕	⊕	LOAD CENTER
---	---	CONTOUR LINE	⊕	⊕	SWITCH CABINET
---	---	SPOT ELEVATION	⊕	⊕	ELECTRIC TRANSFORMER
---	---	IRON PIN (REBAR) / IRON PIPE	⊕	⊕	JOINT USE POWER & TELE. POLE
---	---	BENCHMARK	⊕	⊕	TELEPHONE MANHOLE
---	---	TEMPORARY BENCHMARK	⊕	⊕	UNDERGROUND TELE. PEDESTAL
---	---	BRASS CAP MONU./BLM CORNER	⊕	⊕	UNDERGROUND TV CABLE PEDESTAL
---	---	PK NAIL, SPIKE OR CONCRETE NAIL	⊕	⊕	UNDERGROUND FIBER OPTIC PEDESTAL
---	---	ALCAP OR PLASTIC CAP	⊕	⊕	FOOTING DRAIN SERVICE
---	---	FILL SLOPE LIMITS	⊕	⊕	TRAFFIC SIGNAL POLE/LUMINAIRE
---	---	CUT SLOPE LIMITS	⊕	⊕	TRAFFIC SIGNAL POLE
---	---	RETAINING WALL	⊕	⊕	CLUSTER MAILBOX
---	---	RETAINING WALL - SHEET PILE	⊕	⊕	PARCEL NUMBERS
---	---	CABLE TV LINE	⊕	⊕	PARKING METER
---	---	CABLE TV LINE (OVERHEAD)	⊕	⊕	OPTICOM DETECTOR
---	---	ELECTRIC LINE	⊕	⊕	GAS LINE
---	---	ELECTRIC LINE (OVERHEAD)	⊕	⊕	SANITARY SEWER LINE
---	---	ELECTRIC & TELEPHONE (OVERHEAD)	⊕	⊕	STORM DRAIN LINE
---	---	FIBER OPTIC	⊕	⊕	SUBDRAIN
---	---	FIN DRAIN	⊕	⊕	TELEPHONE LINE
---	---	FUEL/OIL LINE	⊕	⊕	TELEPHONE LINE (OVERHEAD)
---	---	FOOTING DRAIN SERVICE/STUBOUT	⊕	⊕	TRAFFIC LINE
---	---	ABANDONED UTILITY	⊕	⊕	TREE PROTECTION ZONE
---	---		⊕	⊕	WATER LINE

**PROFILE LEGEND**

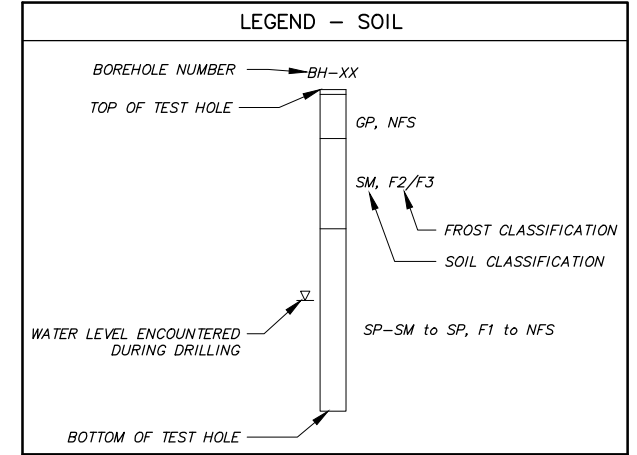
---	---	GRADE AT CENTER LINE	▨	INSULATION
---	---	APPROXIMATE EXCAVATION LIMITS		
---	---	PIPE (PROFILE)		
---	---	PIPE (SECTION)		
---	---	WATER LEVEL		

**BOREHOLE SYMBOLS**

▨	ORGANIC MAT (OL)
▨	ASPHALT CONCRETE (AC)
▨	SILTY SAND (SM)
▨	POORLY GRADED SAND (SP)
▨	POORLY GRADED SAND WITH SILT/GRAVEL (SP-SM)
▨	SILTY GRAVEL (GM)
▨	LEAN CLAY (CL)

NOTE:  
LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED ON THIS PROJECT.

COMMON ABBREVIATIONS			
ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
AC	ASPHALT CONCRETE	N.I.C.	NOT IN CONTRACT
APPROX, APPX	APPROXIMATE	NTS	NOT TO SCALE
ARRC	ALASKA RAILROAD CORPORATION	NWT	NO WATER TABLE
AWWU	ANCHORAGE WATER AND WASTEWATER UTILITY	OC	ON CENTER
BH	BOREHOLE	OCEW	ON CENTER EACH WAY
BM	BENCH MARK	OD	OUTSIDE DIAMETER
BOP	BEGINNING OF PROJECT	OH	OVERHEAD
C&G	CURB AND GUTTER	PC	POINT OF CURVATURE
CB	CATCH BASIN	PCC	PORTLAND CONCRETE CEMENT
CBMH	CATCH BASIN MANHOLE	PE	POLYETHYLENE
C/L, CL	CENTERLINE	PI	POINT OF INTERSECTION
CMP	CORRUGATED METAL PIPE	PL, P/L	PROPERTY LINE
CO	CLEANOUT	PCMP	PRECOATED CORRUGATED METAL PIPE
CONST	CONSTRUCTION	PGPEP	PERFORATED CORRUGATED POLYETHYLENE PIPE
CPEP	CORRUGATED POLYETHYLENE PIPE	PRC	POINT OF REVERSE CURVATURE
DIA	DIAMETER	PT	POINT OF TANGENCY
DIP	DUCTILE IRON PIPE	PUE	PUBLIC USE EASEMENT
D.W.	DETECTABLE WARNING	PVC	POINT OF VERTICAL CURVATURE
ELEC	ELECTRIC / ELECTRICAL	PVI	POINT OF VERTICAL INTERSECTION
ELEV, EL	ELEVATION	PVT	POINT OF VERTICAL TANGENT
EOC	END OF CONCRETE	ROW, R/W	RIGHT OF WAY
EOP	END OF PROJECT / EDGE OF PAVEMENT	RT, R	RIGHT
EX, EXIST	EXISTING	S/W	SIDEWALK
F&I	FURNISH AND INSTALL	SS	STAINLESS STEEL
FG	FINISHED GRADE	SD	STORM DRAIN
GB	GRADE BREAK	SEC COR	SECTION CORNER
JB	JUNCTION BOX	SI	STREET INTERSECTION
LC	LOAD CENTER	ST	STREET
IAW	IN ACCORDANCE WITH	STA	STATION / STATIONING
IE	INVERT ELEVATION	STD	STANDARD
INTX	INTERSECTION	STRUCT	STRUCTURE
INV	INVERT	TBC	TOP BACK OF CURB
LF	LINEAR FOOT	TBM	TEMPORARY BENCH MARK
LT, L	LEFT	TCP	TEMPORARY CONSTRUCTION PERMIT
LUM	LUMINAIRE	TELE	TELEPHONE
MAX	MAXIMUM	TH	TEST HOLE
MH	MANHOLE	(TYP.)	TYPICAL
(MIN.)	MINIMUM	UG	UNDERGROUND
ML&P	MUNICIPAL LIGHT & POWER	UOC	UNLESS OTHERWISE NOTED
MON	MONUMENT	UTIL	UTILITY
MSL	MEAN SEA LEVEL	VB	VALVE BOX
N/A	NOT APPLICABLE	VC	VERTICAL CURVE



NOTE:  
SEE GEOTECHNICAL REPORT FOR DETAILED BOREHOLE INFORMATION.

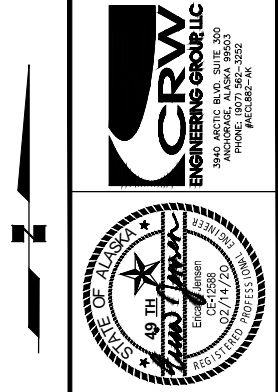
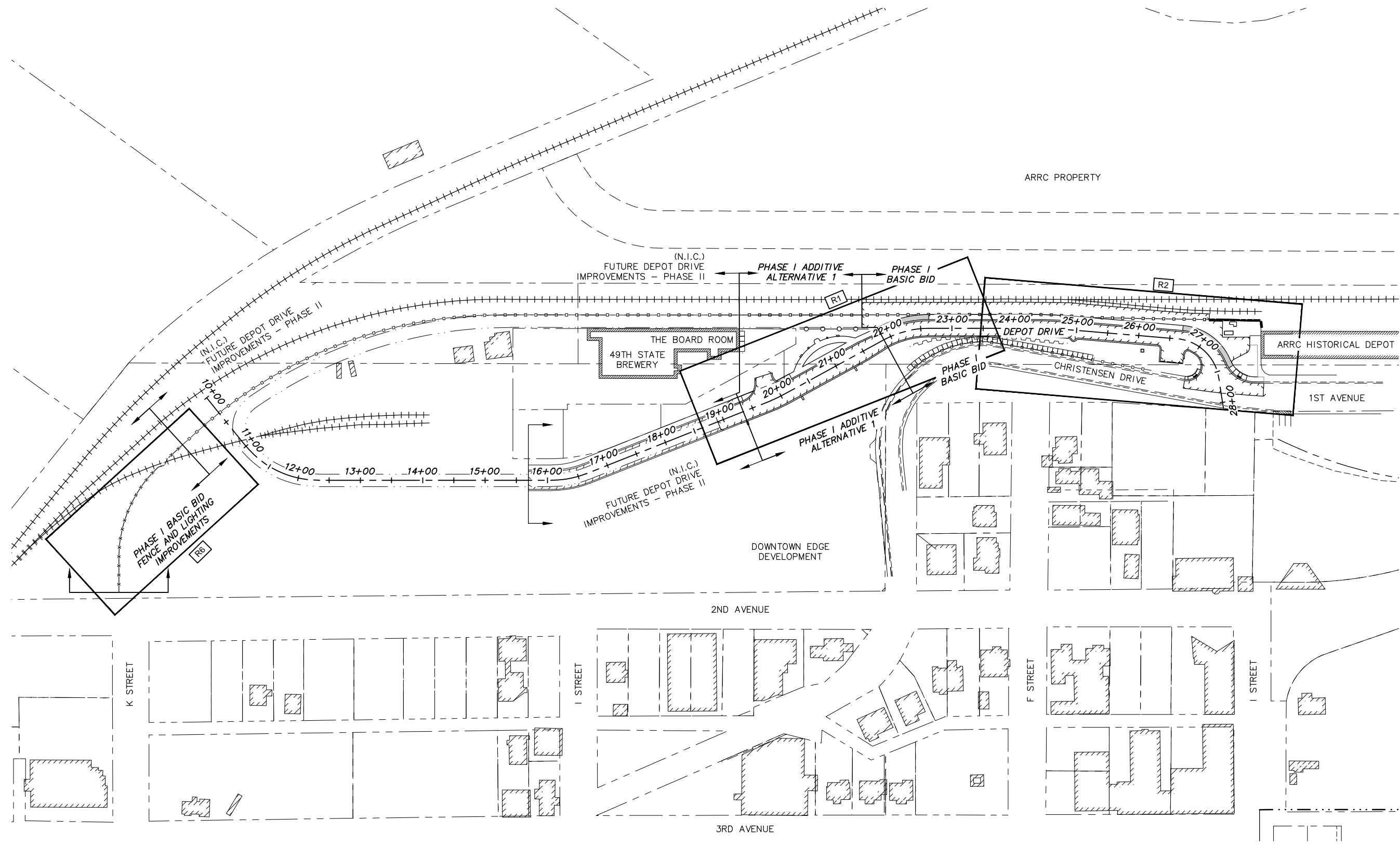


PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
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PROJECT NO: 31103.01  
SCH: ALL  
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
LEGEND & ABBREVIATIONS  
DATE: FEB 2020  
STATUS: FINAL

SCALE	HOR.	VER.	N/A	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY

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PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL

PROJECT NO.	31103.01
SHEET NO.	05
DATE	FEB 2020
STATUS	FINAL

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 80'
VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

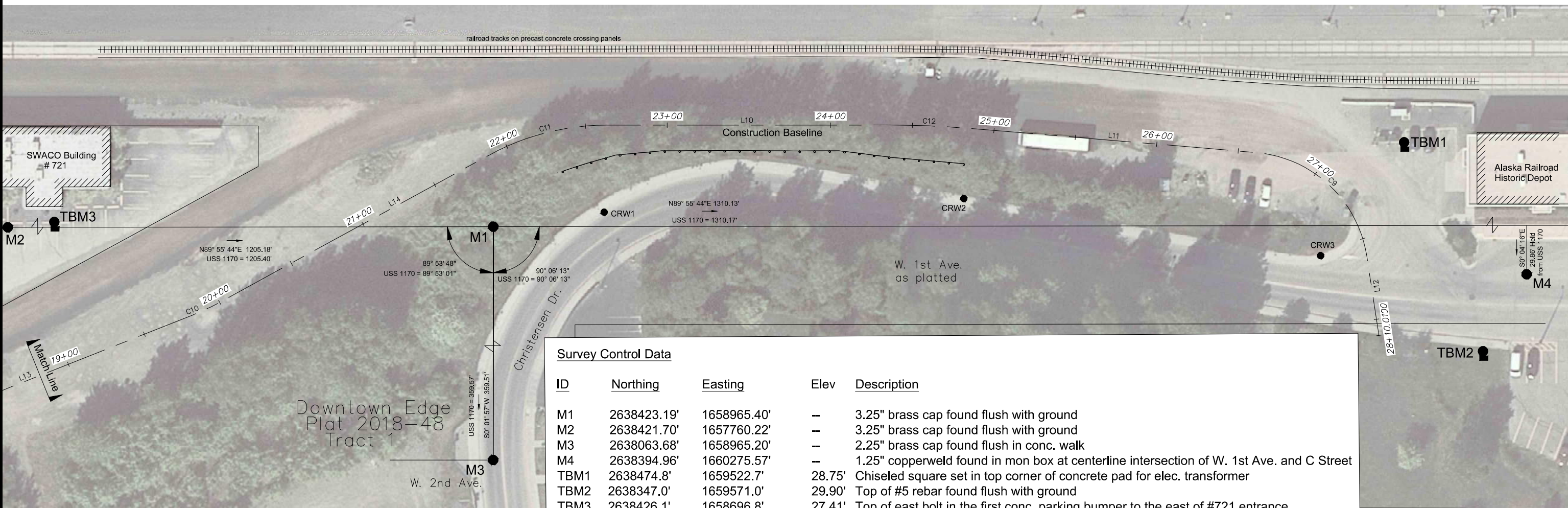


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LINE TABLE: ALIGNMENTS						
LINE #	LENGTH	DIRECTION	STARTING STATION	ENDING STATION	START POINT	END POINT
L8	98.77'	S39° 01' 02"E	10+00.00	10+98.77	2638373.88,1657876.79	2638297.14,1657938.97
L9	374.73'	N90° 00' 00"E	12+32.24	16+06.97	2638241.58,1658055.51	2638241.58,1658430.25
L13	318.18'	N68° 25' 13"E	16+63.47	19+81.65	2638252.09,1658485.42	2638369.11,1658781.29
L14	187.74'	N61° 21' 34"E	20+00.13	21+87.87	2638376.95,1658798.02	2638466.94,1658962.79
L10	172.15'	N89° 58' 45"E	22+62.79	24+34.94	2638485.29,1659034.63	2638485.35,1659206.78
L11	175.36'	S85° 11' 49"E	24+85.46	26+60.82	2638483.25,1659257.23	2638468.56,1659431.98
L12	49.10'	S08° 44' 00"E	27+60.91	28+10.01	2638405.21,1659499.83	2638356.68,1659507.29

CURVE TABLE: ALIGNMENTS					
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	STARTING STATION	ENDING STATION
C7	150.00'	133.47'	S64° 30' 31"E	10+98.77	12+32.24
C8	150.00'	56.50'	N79° 12' 37"E	16+06.97	16+63.47
C10	150.00'	18.49'	N64° 53' 24"E	19+81.65	20+00.13
C11	150.00'	74.93'	N75° 40' 10"E	21+87.87	22+62.79
C12	600.00'	50.52'	S87° 36' 32"E	24+34.94	24+85.46
C9	75.00'	100.09'	S46° 57' 54"E	26+60.82	27+60.91



**Survey Control Data**

ID	Northing	Easting	Elev	Description
M1	2638423.19'	1658965.40'	--	3.25" brass cap found flush with ground
M2	2638421.70'	1657760.22'	--	3.25" brass cap found flush with ground
M3	2638063.68'	1658965.20'	--	2.25" brass cap found flush in conc. walk
M4	2638394.96'	1660275.57'	--	1.25" copperweld found in mon box at centerline intersection of W. 1st Ave. and C Street
TBM1	2638474.8'	1659522.7'	28.75'	Chiseled square set in top corner of concrete pad for elec. transformer
TBM2	2638347.0'	1659571.0'	29.90'	Top of #5 rebar found flush with ground
TBM3	2638426.1'	1658696.8'	27.41'	Top of east bolt in the first conc. parking bumper to the east of #721 entrance
CRW 1	2638432.04'	1659033.18'	52.05'	CRW metal washer
CRW 2	2638440.40'	1659253.29'	41.46'	CRW metal washer
CRW 3	2638405.45'	1659471.65'	30.02'	CRW metal washer

**Notes:**

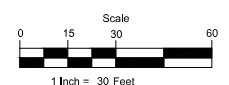
- Field survey by RTK GPS between 2018-04-23 & 2019-10-22.
- Horizontal Control Statement: The Horizontal Datum for this survey is the Alaska State Plane Coordinate System, Zone 4, NAD83 using RTK Differential Corrections from CORS ANC2, Broadcast Northing = 2,621,462.07', Easting = 1,643,344.12', US survey feet.
- Vertical Control Statement: The Vertical Datum for this survey is NAD88 Geoid 12B using RTK Differential Corrections from CORS ANC2 which has an ellipsoid height = 188.366' and a broadcast orthometric height = 168.10' and by a spirit level check into NGS Benchmark Tidal 12 which has an NAD88 Geoid 12B orthometric height = 28.93'.
- Benchmark Tidal 12 has a GAAB 1972 elevation = 22.14'. Therefore, subtract 6.79' from the NAD88 Geoid 12B elevations shown on this drawing to compute their equivalent elevations on GAAB 1972.
- Underground utilities were compiled based on field survey of surface features, painted locates, and record plans. The accuracy of the compiled underground utilities is uncertain, nor is it guaranteed that all underground utilities are shown.

**LEGEND**

- Construction Baseline
- Railroad Tracks
- Retaining Wall
- Building



*Douglas A. Stephens*  
 2020-02-14  
 Douglas A. Stephens, PLS # 13840 Date



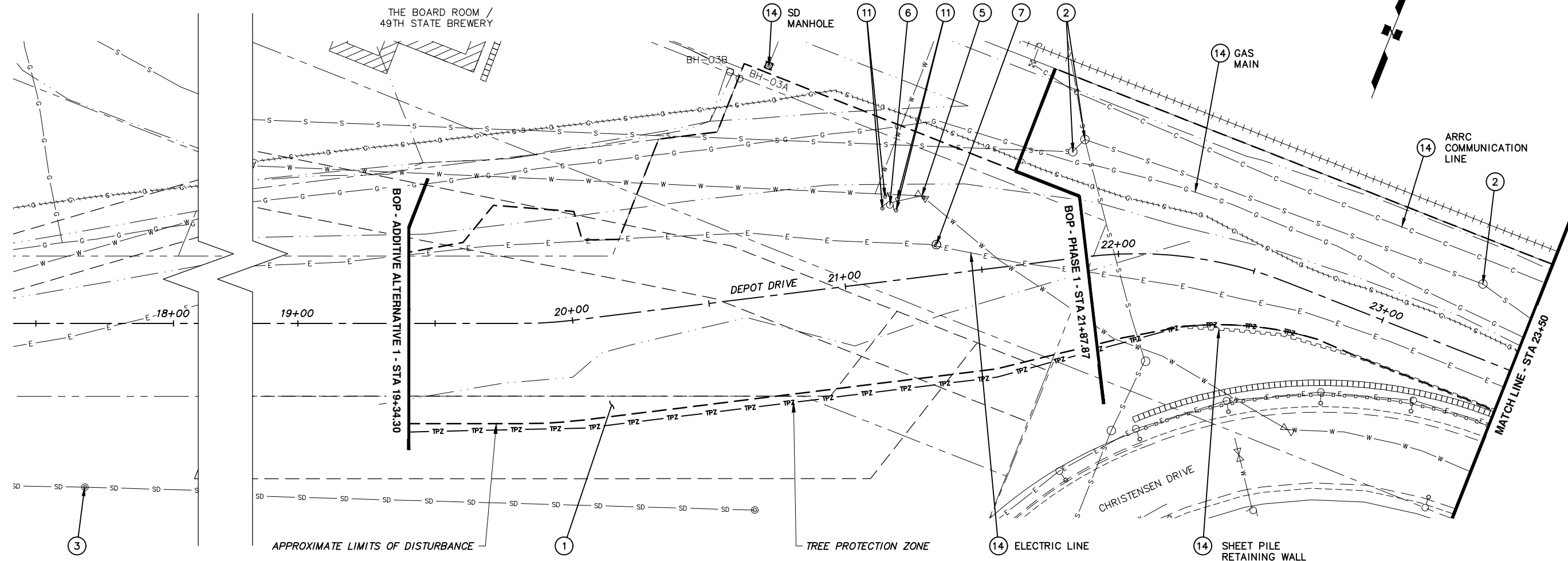
**ALASKA RAILROAD CORPORATION**  
 REAL ESTATE DEPARTMENT, LAND SERVICES  
 P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

**Depot Drive Improvements Phase 1 Survey Control Sheet**

DRAWN BY: DAS SCALE: 1" = 30' DATE: 2020-02-12  
 CHECKED BY: DAS  
 APPROVED BY: DAS

**Anchorage Terminal Reserve**  
 Sheet V1 of V1

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Demolition.dwg PLOT DATE: 2/14/2020 3:23 PM



**LEGEND**

- ① CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AFTER CLEARING LIMITS HAVE BEEN APPROVED BY ENGINEER 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 AND REPLACE MANHOLE CONE SECTION OR GRADE RINGS (SECTION 50.06).
- ③ CONNECT TO EXISTING STORM DRAIN CATCH BASIN (SECTION 55.04).
- ④ ADJUST STORM DRAIN MANHOLE TO FINISH GRADE (NOT SHOWN THIS SHEET).
- ⑤ REMOVE AND REPLACE VALVE BOX TOP SECTION (SECTION 60.03).
- ⑥ ADJUST FIRE HYDRANT ASSEMBLY (SECTION 60.04). EXISTING FIRE HYDRANT TO REMAIN, COORDINATE WITH AWWU FOR ADJUSTING TO FINISH GRADE.
- ⑦ ADJUST ELECTRIC MANHOLE TO FINISH GRADE (SECTION 70.04). COORDINATE WITH ML&P FOR ADJUSTING TO FINISH GRADE.
- ⑧ REMOVE FENCE (NOT SHOWN THIS SHEET).
- ⑨ REMOVE AND SALVAGE SIGN (NOT SHOWN THIS SHEET).
- ⑩ REMOVE AND RELOCATE SIGNS (NOT SHOWN THIS SHEET).
- ⑪ REMOVE AND DISPOSE OF GUARD POSTS (SECTION 70.13).
- ⑫ ADJUST ARRC JUNCTION BOX TO GRADE (NOT SHOWN THIS SHEET). COORDINATE WITH ARRC FOR ADJUSTING TO FINISH GRADE.
- ⑬ REMOVE LUMINAIRE POLE (NOT SHOWN THIS SHEET).
- ⑭ PROTECT IN PLACE
- ☒ REMOVAL OF SIDEWALK (NOT SHOWN THIS SHEET) AS SHOWN & NOTED IN SUMMARY TABLES.
- REMOVAL OF CURB & GUTTER (NOT SHOWN THIS SHEET) AS SHOWN & NOTED IN SUMMARY TABLES.
- ▒ REMOVAL OF PAVEMENT (NOT SHOWN THIS SHEET) AS SHOWN & NOTED IN SUMMARY TABLES.
- - - APPROXIMATE LIMITS OF DISTURBANCE
- TPZ - TEMPORARY TREE PROTECTION FENCE (SECTION 75.12), LOCATIONS TO BE FIELD VERIFIED, SEE SHEET B3 FOR DETAIL.

**NOTES:**

1. SEE SUMMARY TABLE SHEETS B3 - B4 FOR STATION AND OFFSET OF DEMOLITION ITEMS.
2. SEE ROADWAY IMPROVEMENTS (R) SHEETS FOR EXTENT OF PROPOSED.
3. SEE STORM DRAIN (SD) SHEETS FOR MORE INFORMATION.
4. SEE ILLUMINATION (I) SHEETS FOR ADDITIONAL DEMO ITEMS.



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL  
 DATE: FEB 2020

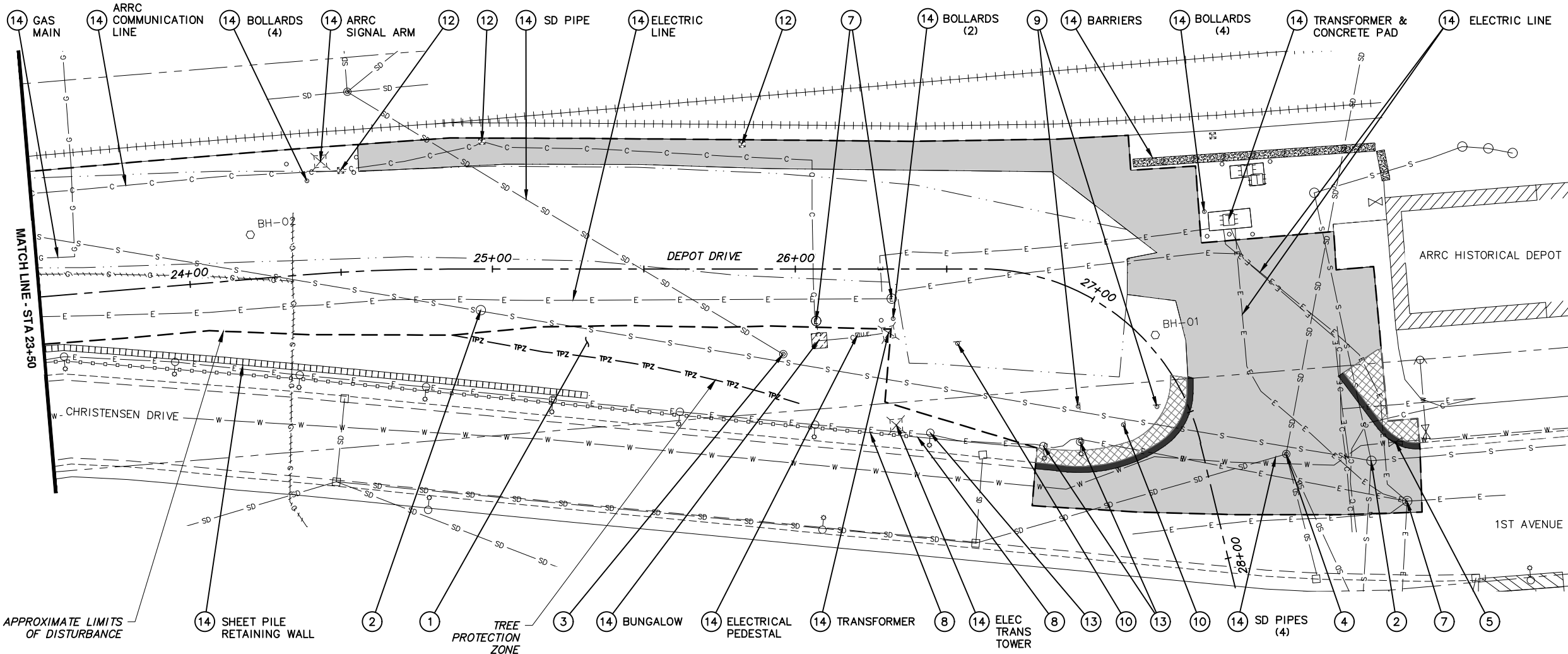
**ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 DEMOLITION PLAN**  
 STA BOP TO STA 23+50

PROJECT NO: 31103.01  
 STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 20'
VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Demolition.dwg PLOT DATE: 2/14/2020 3:23 PM



**LEGEND**

- ① CLEAR AND GRUB WITHIN LIMITS OF DISTURBANCE AFTER CLEARING LIMITS HAVE BEEN APPROVED BY ENGINEER 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 AND REPLACE MANHOLE CONE SECTION OR GRADE RINGS (SECTION 50.06).
- ③ CONNECT TO EXISTING STORM DRAIN CATCH BASIN (SECTION 55.04)
- ④ ADJUST STORM DRAIN MANHOLE TO FINISH GRADE (SECTION 55.08)
- ⑤ REMOVE AND REPLACE VALVE BOX (SECTION 60.03).
- ⑥ ADJUST FIRE HYDRANT ASSEMBLY (NOT SHOWN THIS SHEET).
- ⑦ ADJUST ELECTRIC MANHOLE TO FINISH GRADE (SECTION 70.04). COORDINATE WITH ML&P FOR ADJUSTING TO FINISH GRADE.
- ⑧ REMOVE FENCE (SECTION 70.08).
- ⑨ REMOVE AND SALVAGE SIGN (SECTION 70.11).
- ⑩ REMOVE AND RELOCATE SIGNS (SECTION 70.11).
- ⑪ REMOVE AND RESET BOLLARD (NOT SHOWN THIS SHEET). REMOVE AND RESET FIRE HYDRANT GUARD POSTS IN ACCORDANCE WITH MASS STANDARD DETAIL 60-12.
- ⑫ ADJUST ARRC JUNCTION BOX TO GRADE (SECTION 80.08). COORDINATE WITH ARRC FOR ADJUSTING TO FINISH GRADE.
- ⑬ REMOVE LUMINAIRE POLE (SECTION 80.28).
- ⑭ PROTECT IN PLACE
- ☒ REMOVAL OF SIDEWALK AS SHOWN & NOTED IN SUMMARY TABLES.
- REMOVAL OF CURB & GUTTER AS SHOWN & NOTED IN SUMMARY TABLES.
- REMOVAL OF PAVEMENT AS SHOWN & NOTED IN SUMMARY TABLES.
- - - APPROXIMATE LIMITS OF DISTURBANCE
- TPZ - TEMPORARY TREE PROTECTION FENCE (SECTION 75.12), LOCATIONS TO BE FIELD VERIFIED, SEE SHEET B3 FOR DETAIL.

**NOTES:**

1. SEE SUMMARY TABLE SHEETS B3 - B4 FOR STATION AND OFFSET OF DEMOLITION ITEMS.
2. SEE ROADWAY IMPROVEMENTS (R) SHEETS FOR EXTENT OF PROPOSED.
3. SEE STORM DRAIN (SD) SHEETS FOR MORE INFORMATION.
4. SEE ILLUMINATION (I) SHEETS FOR ADDITIONAL DEMO ITEMS.



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I

**DEMOLITION PLAN**

STA 23+50 TO STA EOP

PROJECT NO: 31103.01

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 20'
VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

SHEET NO.

**B2**

DATE: FEB 2020

STATUS: FINAL



20.07

REMOVE SIDEWALK OR CONCRETE APRON						
SHEET	APPX STATION BEGIN	APPX OFFSET (FT)	APPX STATION END	APPX OFFSET (FT)	AREA (SY)	SCHEDULE
B2	27+52.3	66.2 LT	27+69.8	71.6 LT	28	A
B2	27+36.3	0.4 RT	27+26.4	50.2 RT	37	A

20.08

REMOVE CURB AND GUTTER						
SHEET	APPX STATION BEGIN	APPX OFFSET (FT)	APPX STATION END	APPX OFFSET (FT)	LENGTH (FT)	SCHEDULE
B2	27+39.7	3.9 LT	27+38.1	53.3 RT	67	A
B2	27+54.1	51.9 LT	27+77.7	70.4 LT	36	A

20.09

REMOVE PAVEMENT				
SHEET	STATION TO STATION	OFFSET	AREA (SY)	SCHEDULE
B2	24+57.40 TO EOP	LT&RT	1,125	A

NOTES: 1. SEE ROADWAY IMPROVEMENT SHEETS FOR ROADWAY PAVEMENT REMOVAL LIMITS.

50.06

REMOVE AND REPLACE MANHOLE CONE SECTION OR MANHOLE GRADE RINGS							
SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED TOP OF CASTING ELEVATION (FT)	CONE SECTION	GRADE RINGS	SCHEDULE
B1	21+92	42.4 LT	27.64	28.44	X		A
B1	21+88	38.4 LT	27.48	28.41	X		A
B1	23+29	25.6 LT	27.74	28.53	X		A
B2	24+96	13.7 RT	27.43	28.00	X		A
B2	27+80	53.4 LT	28.68	28.46		X	A

55.04

CONNECT TO EXISTING STORM DRAIN SYSTEM			
SHEET	APPX STATION	APPX OFFSET (FT)	SCHEDULE
B1	17+68	59.6 RT	A
B2	25+96	28.1 RT	A

55.08

ADJUST STORM DRAIN MANHOLE TO FINISH GRADE					
SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED TOP OF CASTING ELEVATION (FT)	SCHEDULE
B2	27+71	26.6 LT	28.70	28.47	A

60.03

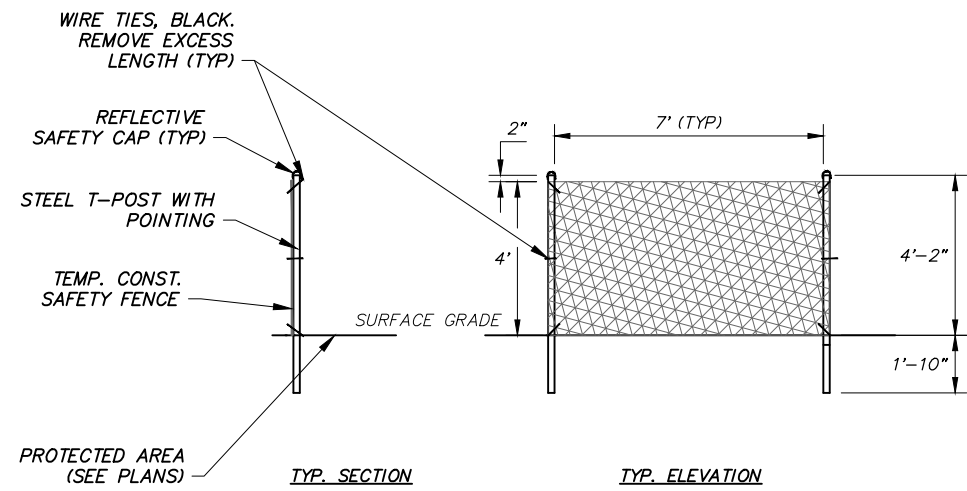
REMOVE AND REPLACE VALVE BOX					
SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED TOP OF CASTING ELEVATION (FT)	SCHEDULE
B1	21+32	29.1 LT	26.30	28.20	B
B2	27+76	62.7 LT	28.54	28.60	A

60.04

ADJUST FIRE HYDRANT ASSEMBLY					
SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED GRADE (FT)	SCHEDULE
B1	21+20	27.4 LT	26.51	28.26	B

70.04

ADJUST ELECTRIC MANHOLE TO FINISH GRADE					
SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED TOP OF CASTING ELEVATION (FT)	SCHEDULE
B1	21+35	11.0 LT	26.41	27.76	B
B2	26+07	17.2 RT	26.93	27.01	A
B2	26+32	09.8 RT	26.39	27.10	A
B2	27+96	61.9 LT	28.61	28.55	A



1 TEMPORARY TREE PROTECTION FENCE DETAIL  
SCALE: NTS



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
DEMOLITION DETAILS & SUMMARY TABLES  
DATE: FEB 2020  
STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	N/A
HOR. VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

SHEET NO.

B3

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70.08

REMOVE FENCE ⑧

SHEET	APPX STATION BEGIN	APPX OFFSET (FT)	APPX STATION END	APPX OFFSET (FT)	LENGTH (FT)	SCHEDULE
B2	26+24.7	54.0 RT	26+40.3	55.5 RT	16	A

70.11

SALVAGE SIGNS ⑨

SHEET	APPX STATION	APPX OFFSET (FT)	LEGEND	SCHEDULE
B2	27+23	31.0 RT	NO PARKING	A
B2	27+43	09.4 RT	STOP	A
			W 1ST AVE	
			DEPOT DR	

70.11

REMOVE AND RELOCATE SIGNS ⑩

SHEET	APPX STATION	APPX OFFSET (FT)	LEGEND	SCHEDULE
B2	27+44	22.1 RT	RAILROAD ASSIGNED PARKING	A
B2	27+44	22.1 RT	BOARDROOM	A

70.13

REMOVE AND RESET BOLLARD ⑪

SHEET	STATION	OFFSET (FT)	SCHEDULE
B1	21+16.8	26.5 LT	B
B1	21+18.2	30.7 LT	B
B1	21+21.7	25.2 LT	B
B1	21+22.5	29.3 LT	B

80.08

ADJUST ARRC JUNCTION BOX TO GRADE ⑫

SHEET	APPX STATION	APPX OFFSET (FT)	EXISTING GRADE (FT)	PROPOSED GRADE (FT)	SCHEDULE
B2	24+52	33.5 LT	28.14	28.56	A
B2	24+97	42.1 LT	28.41	28.46	A
B2	25+82	41.3 LT	28.34	28.41	A

80.28

REMOVE LUMINAIRE POLE ⑬

SHEET	APPX STATION	APPX OFFSET (FT)	SCHEDULE
B2	26+45	54.1 RT	A
B2	27+29	48.2 RT	A
B2	27+41	37.2 RT	A



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL

DATE: FEB 2020

PROJECT NO: 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 DEMOLITION SUMMARY TABLES  
 STATUS: FINAL

SCALE	HOR.	VER.	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
N/A	N/A	N/A	MH	JS	EJ	EJ

SHEET NO.  
**B4**

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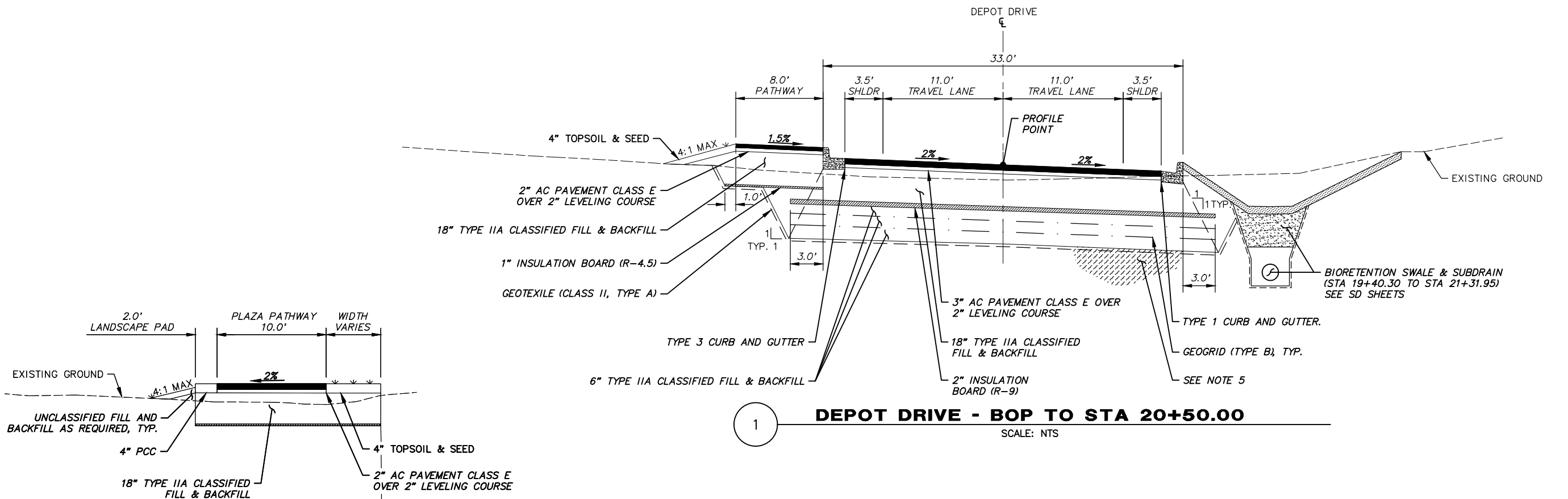
PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL  
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
TYPICAL SECTIONS

PROJECT NO: 31103.01  
DATE: FEB 2020  
STATUS: FINAL

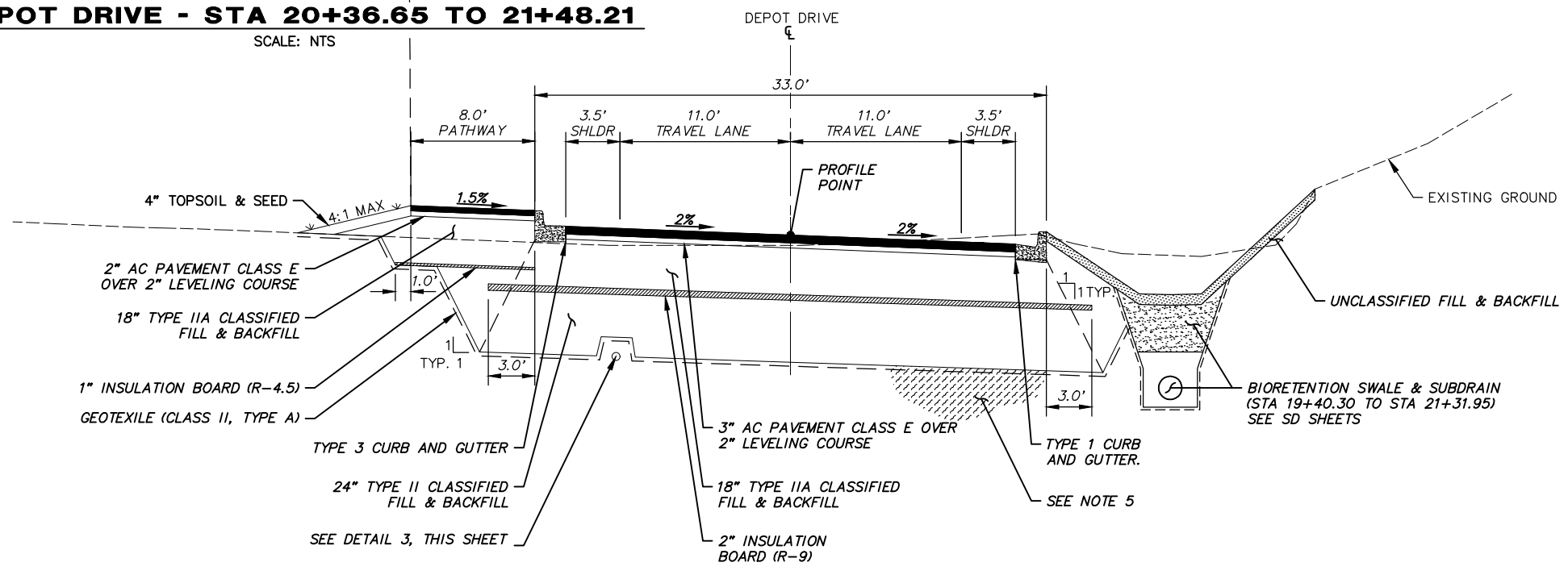
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VER. N/A  
DESIGNED BY: MH  
DRAWN BY: JS  
CHECKED BY: EU  
APPROVED BY: EU

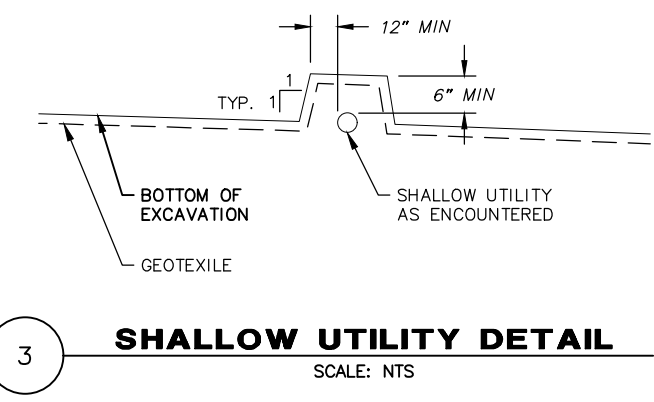


**DEPOT DRIVE - STA 20+36.65 TO 21+48.21**  
SCALE: NTS

**DEPOT DRIVE - BOP TO STA 20+50.00**  
SCALE: NTS



**DEPOT DRIVE - STA 20+50.00 TO 21+50.37\***  
SCALE: NTS

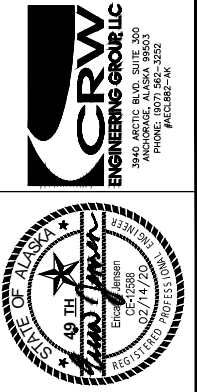


**SHALLOW UTILITY DETAIL**  
SCALE: NTS

- NOTES**
- ALL TRANSITIONS IN SUBBASE THICKNESS SHOULD BE GRADED MINIMUM 8H:1V LONGITUDINALLY AND 4H:1V IN TRANSVERSE DIRECTION, UNLESS OTHERWISE NOTED.
  - ALL TRANSITIONS IN INSULATION SHOULD BE STEPPED DOWN IN 1 INCH INCREMENTS.
  - BOARD INSULATION SHOULD HAVE A MINIMUM R-VALUE 4.5 PER INCH, 60 PSI COMPRESSIVE STRENGTH, AND MAXIMUM WATER ABSORPTION OF 0.3 PERCENT BY VOLUME IN ACCORDANCE WITH MASS.
  - PLACE 4" TOPSOIL AND SEEDING ON ALL DISTURBED AREAS; SEE LANDSCAPING (L) SHEETS FOR MORE INFORMATION.
  - IF ENCOUNTERED, AND AS DIRECTED BY THE ENGINEER, REMOVE SOFT SUBGRADE, PEAT, OR ORGANICS AND BACKFILL WITH TYPE II CLASSIFIED FILL AND BACKFILL
  - SEE ROADWAY (R) SHEETS & SUMMARY TABLE (T) SHEETS FOR MORE INFORMATION.
  - SEE STORM DRAIN (SD) SHEETS FOR MORE INFORMATION.
  - GEOGRID SHALL BE TYPE B REINFORCEMENT PER MASS AND MEET TYPE 2 STRENGTH PER AASHTO M 288.

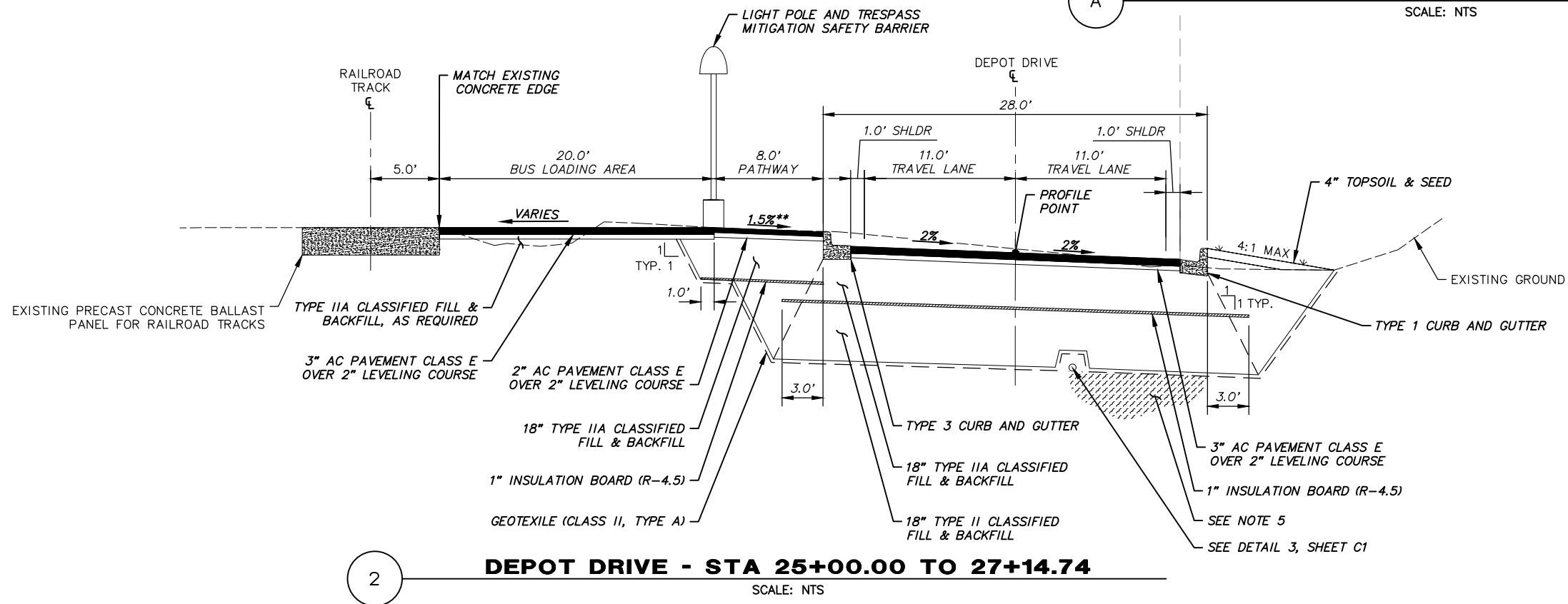
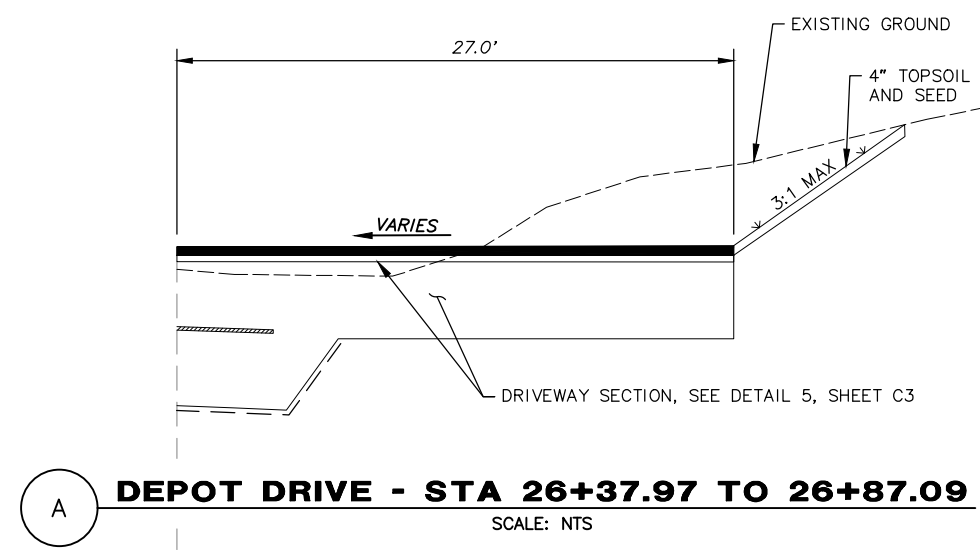
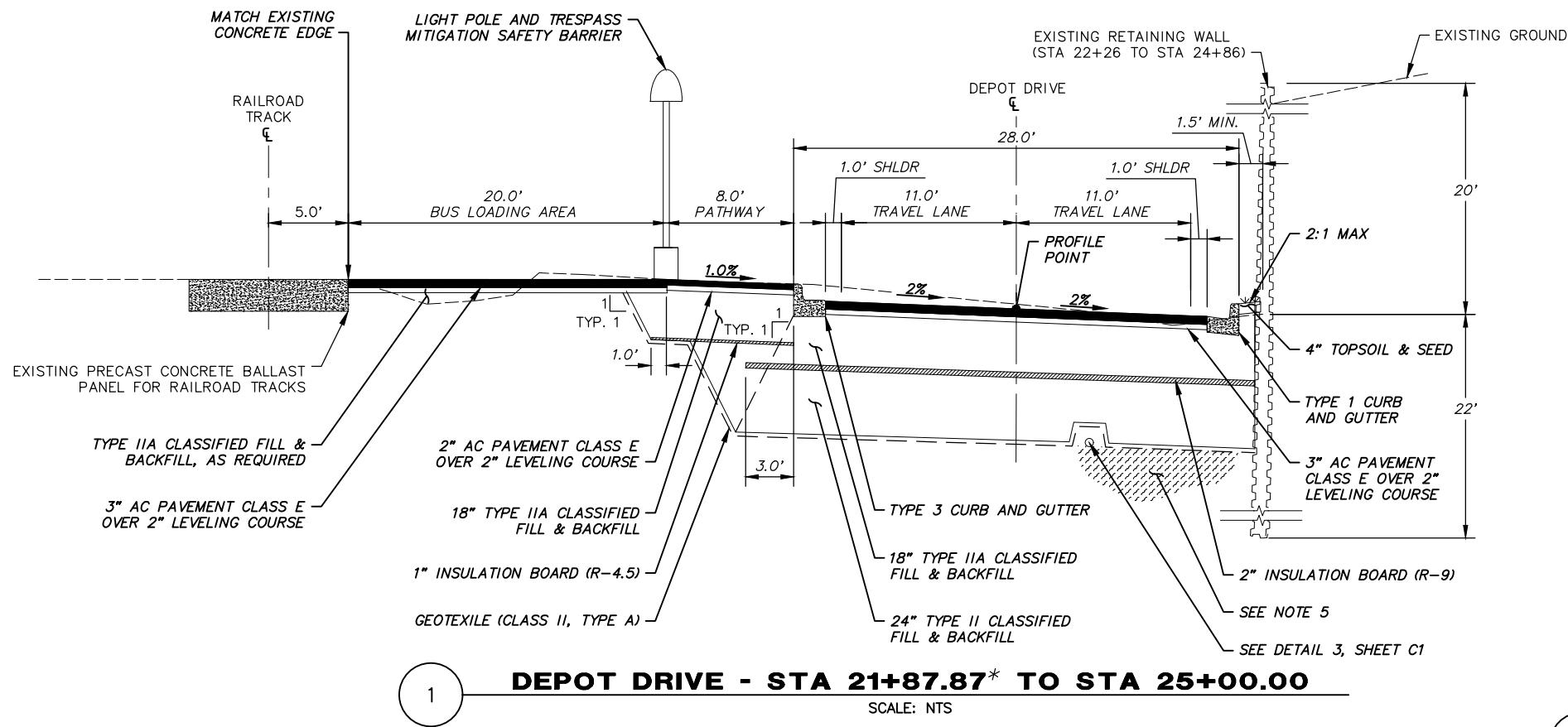
\* TRANSITION SECTIONS BETWEEN STA 21+50.37 AND STA 21+87.87 CONTINUOUSLY.

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PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 PROJECT NO: 31103.01  
 CITY GRID: 1230  
 WATER GRID: 1230  
 SEWER GRID: 1230  
 DATE: FEB 2020  
 STATUS: FINAL  
 PROJECT NO: 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 TYPICAL SECTIONS



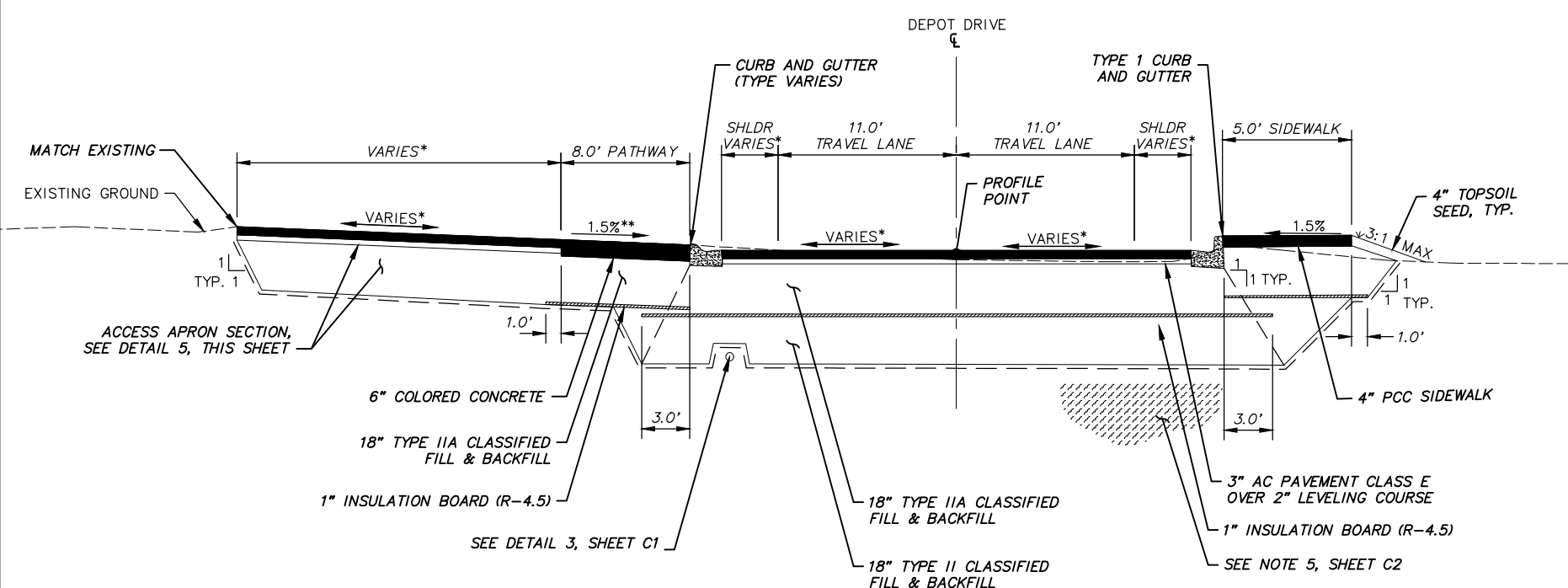
**NOTES**

- ALL TRANSITIONS IN SUBBASE THICKNESS SHOULD BE GRADED MINIMUM 8H:1V LONGITUDINALLY AND 4H:1V IN TRANSVERSE DIRECTION, UNLESS OTHERWISE NOTED.
- ALL TRANSITIONS IN INSULATION SHOULD BE STEPPED DOWN IN 1 INCH INCREMENTS.
- BOARD INSULATION SHOULD HAVE A MINIMUM R-VALUE 4.5 PER INCH, 60 PSI COMPRESSIVE STRENGTH, AND MAXIMUM WATER ABSORPTION OF 0.3 PERCENT BY VOLUME IN ACCORDANCE WITH MASS.
- PLACE 4" TOPSOIL AND SEEDING ON ALL DISTURBED AREAS; SEE LANDSCAPING (L) SHEETS FOR MORE INFORMATION.
- IF ENCOUNTERED, AND AS DIRECTED BY THE ENGINEER, REMOVE SOFT SUBGRADE, PEAT, OR ORGANICS AND BACKFILL WITH TYPE II CLASSIFIED FILL AND BACKFILL.
- SEE ROADWAY (R) SHEETS & SUMMARY TABLE (T) SHEETS FOR MORE INFORMATION.
- SEE STORM DRAIN (SD) SHEETS FOR MORE INFORMATION.

\* TRANSITION SECTIONS BETWEEN STA 21+50.37 AND STA 21+87.87 CONTINUOUSLY.  
 \*\* PATHWAY CROSS SLOPE IS 1.0% FOR FROM STA 26+30.97 TO STA 26+68.21.

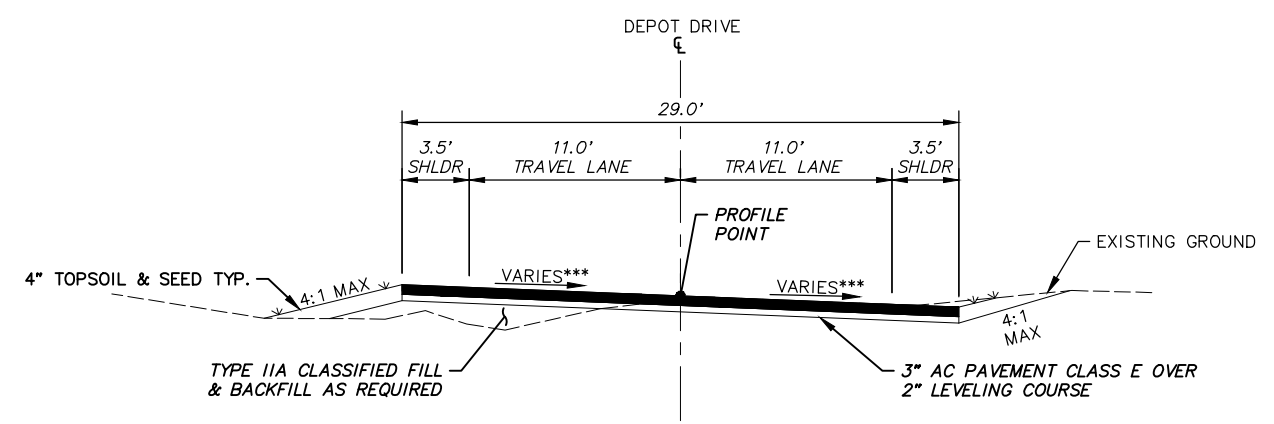
REV	DATE	DESCRIPTION	BY

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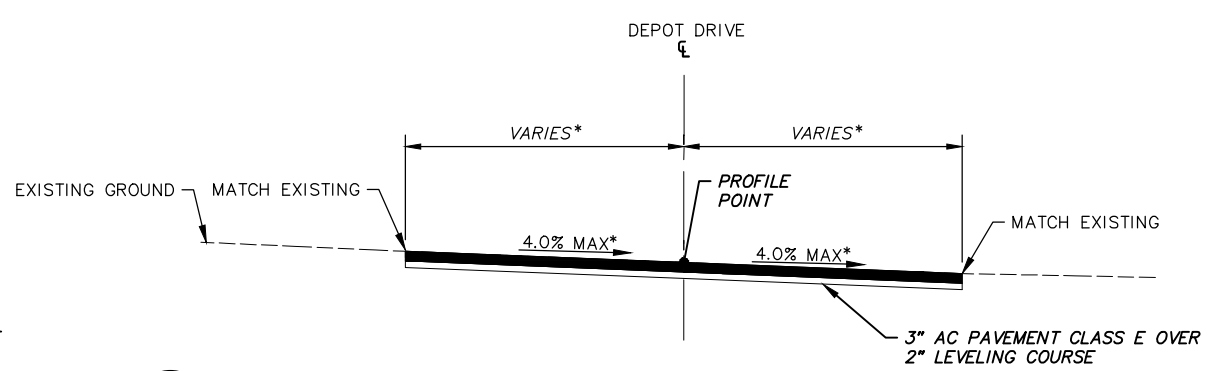


**1 DEPOT DRIVE - STA 27+14.74 TO STA 27+65.70**  
SCALE: NTS

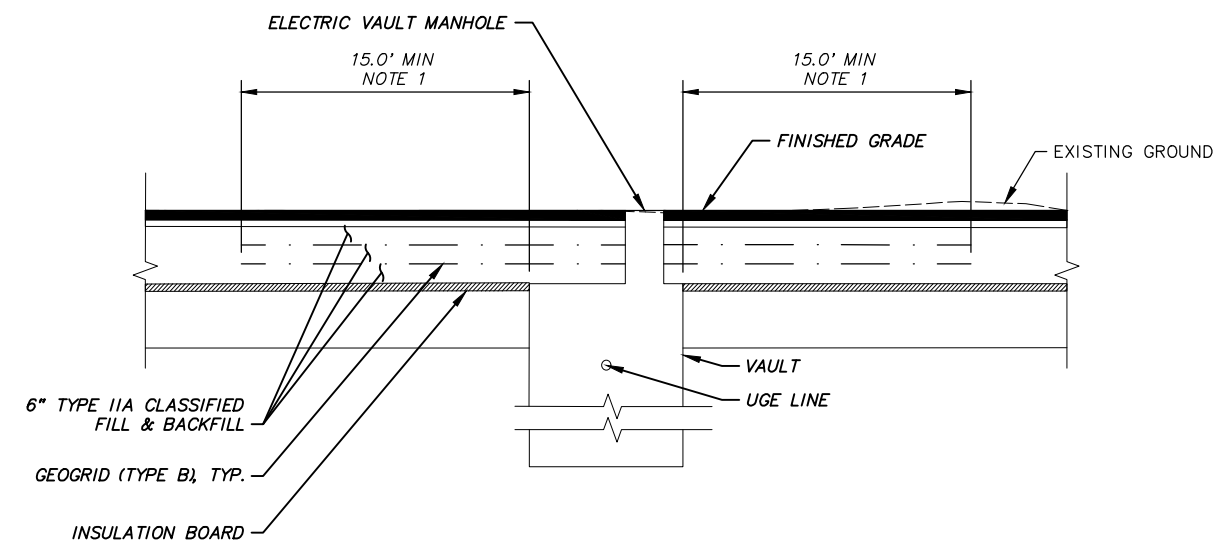
- NOTES**
1. ALL TRANSITIONS IN SUBBASE THICKNESS SHOULD BE GRADED MINIMUM 8H:1V LONGITUDINALLY AND 4H:1V IN TRANSVERSE DIRECTION, UNLESS OTHERWISE NOTED.
  2. ALL TRANSITIONS IN INSULATION SHOULD BE STEPPED DOWN IN 1 INCH INCREMENTS.
  3. BOARD INSULATION SHOULD HAVE A MINIMUM R-VALUE 4.5 PER INCH, 60 PSI COMPRESSIVE STRENGTH, AND MAXIMUM WATER ABSORPTION OF 0.3 PERCENT BY VOLUME IN ACCORDANCE WITH MASS.
  4. PLACE 4" TOPSOIL AND SEEDING ON ALL DISTURBED AREAS; SEE LANDSCAPING (L) SHEETS FOR MORE INFORMATION.
  5. IF ENCOUNTERED, AND AS DIRECTED BY THE ENGINEER, REMOVE SOFT SUBGRADE, PEAT, OR ORGANICS AND BACKFILL WITH TYPE II CLASSIFIED FILL AND BACKFILL
  6. SEE ROADWAY (R) SHEETS & SUMMARY TABLE (T) SHEETS FOR MORE INFORMATION.
  7. SEE STORM DRAIN (SD) SHEETS FOR MORE INFORMATION.
  8. GEOGRID SHALL BE TYPE B REINFORCEMENT PER MASS AND MEET TYPE 2 STRENGTH PER AASHTO M 288.
  9. EXTEND GEOGRID LAYERS 15' BEYOND VAULT WALLS IN ALL DIRECTIONS, WITHIN THE ROADWAY STRUCTURAL SECTION.
- \* SEE SHEET R3 FOR INTERSECTION LAYOUT, GRADING LIMITS, AND LIMITS OF COLORED CONCRETE.
- \*\* PATHWAY CROSS SLOPE IS 1.0% FOR FROM STA 26+30.97 TO STA 26+68.21.
- \*\*\* TRANSITION TO MATCH EXISTING GROUND CONTINUOUSLY OVER 50'. ENSURE POSITIVE DRAINAGE.



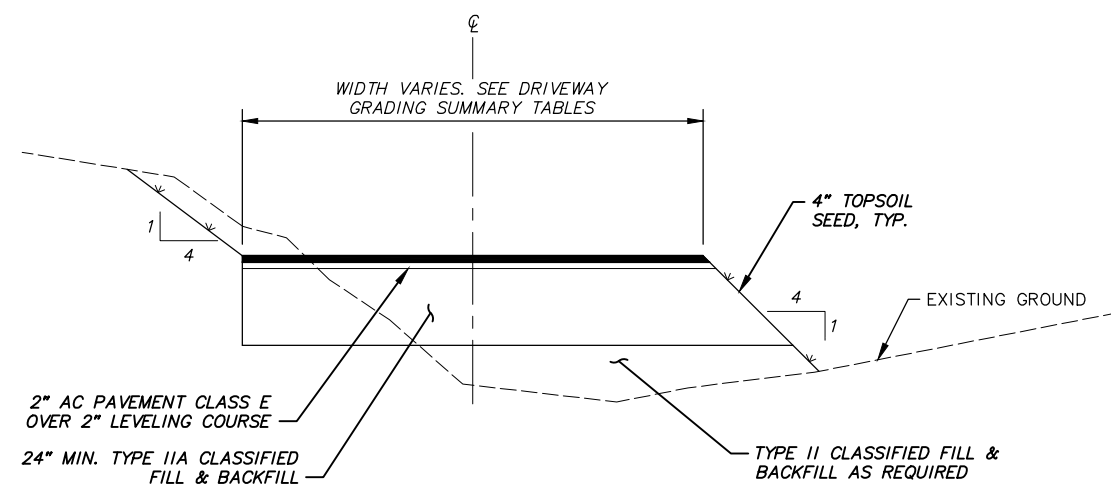
**2 DEPOT DRIVE BOP TRANSITION - STA 18+84.30 TO STA 19+34.30**  
SCALE: NTS



**3 1ST AVENUE - STA 27+65.70 TO STA 27+85.01**  
SCALE: NTS



**4 ELECTRIC VAULT TRANSITION**  
SCALE: NTS



**5 TYPICAL DRIVEWAY & ACCESS APRON**  
SCALE: NTS



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

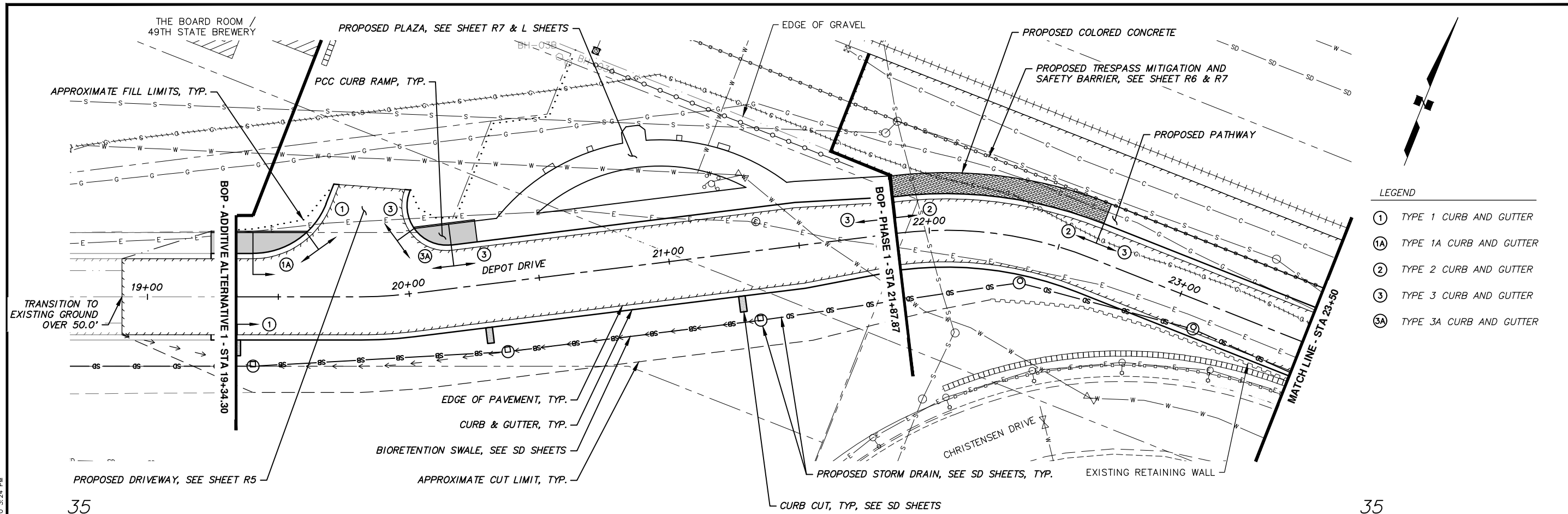
SCH: ALL  
DATE: FEB 2020

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
TYPICAL SECTIONS  
PROJECT NO: 31103.01  
STATUS: FINAL

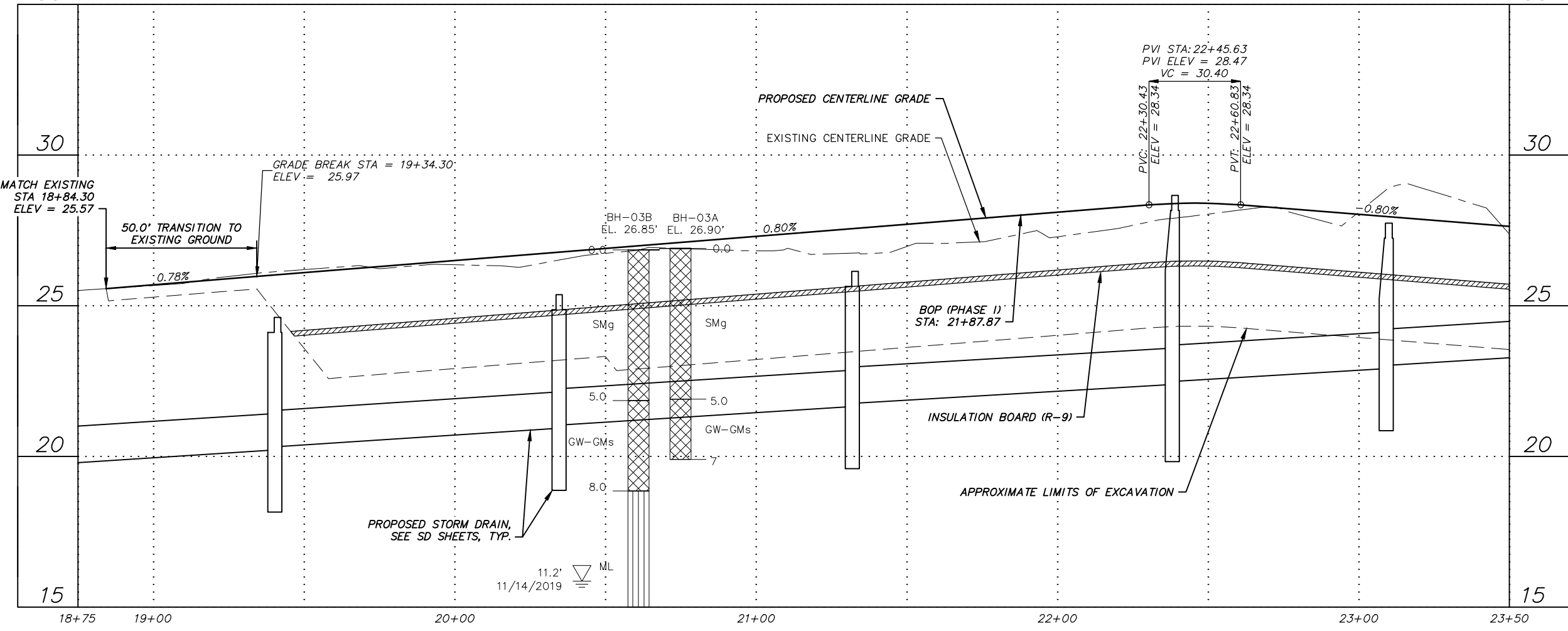
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SCALE: HOR. N/A  
VER. N/A  
DESIGNED BY: MH  
DRAWN BY: JS  
CHECKED BY: EU  
APPROVED BY: EU  
SHEET NO. **C3**

File: \\crweng.com\Projects\SubData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Plan & Profile.dwg PLOT DATE: 2/14/2020 3:24 PM




- LEGEND**
- ① TYPE 1 CURB AND GUTTER
  - ①A TYPE 1A CURB AND GUTTER
  - ② TYPE 2 CURB AND GUTTER
  - ③ TYPE 3 CURB AND GUTTER
  - ③A TYPE 3A CURB AND GUTTER




- NOTES:**
1. SEE GRADING SHEETS FOR MORE INFORMATION ON SIDEWALK, PATHWAY, AND CURB RAMP LOCATIONS.
  2. SEE SHEET R5 FOR DRIVEWAY GRADING DETAILS AND DETAIL SHEETS FOR CURB RAMP DETAILS.
  3. TRANSITION BETWEEN CURBS CONTINUOUSLY OVER 6' OR AS SHOWN ON GRADING DETAIL PLANS. PROVIDE CONSTANT FLOWLINE BETWEEN CHANGE IN CURB TYPE.





3940 ARCTIC BLVD., SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
#A00082-AK



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I

**ROADWAY PLAN & PROFILE**

STA BOP TO STA 23+50

DATE: FEB 2020

STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE: HOR. 1" = 20'  
VER. 1" = 2'

DESIGNED BY: MH  
DRAWN BY: JS  
CHECKED BY: EU  
APPROVED BY: EU

SHEET NO. **R1**

File: \\crweng.com\Projects\SubData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Plan & Profile.dwg PLOT DATE: 2/14/2020 3:24 PM



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 PROJECT NO. 31103.01  
 CITY GRID 1230  
 WATER GRID 1230  
 SEWER GRID 1230

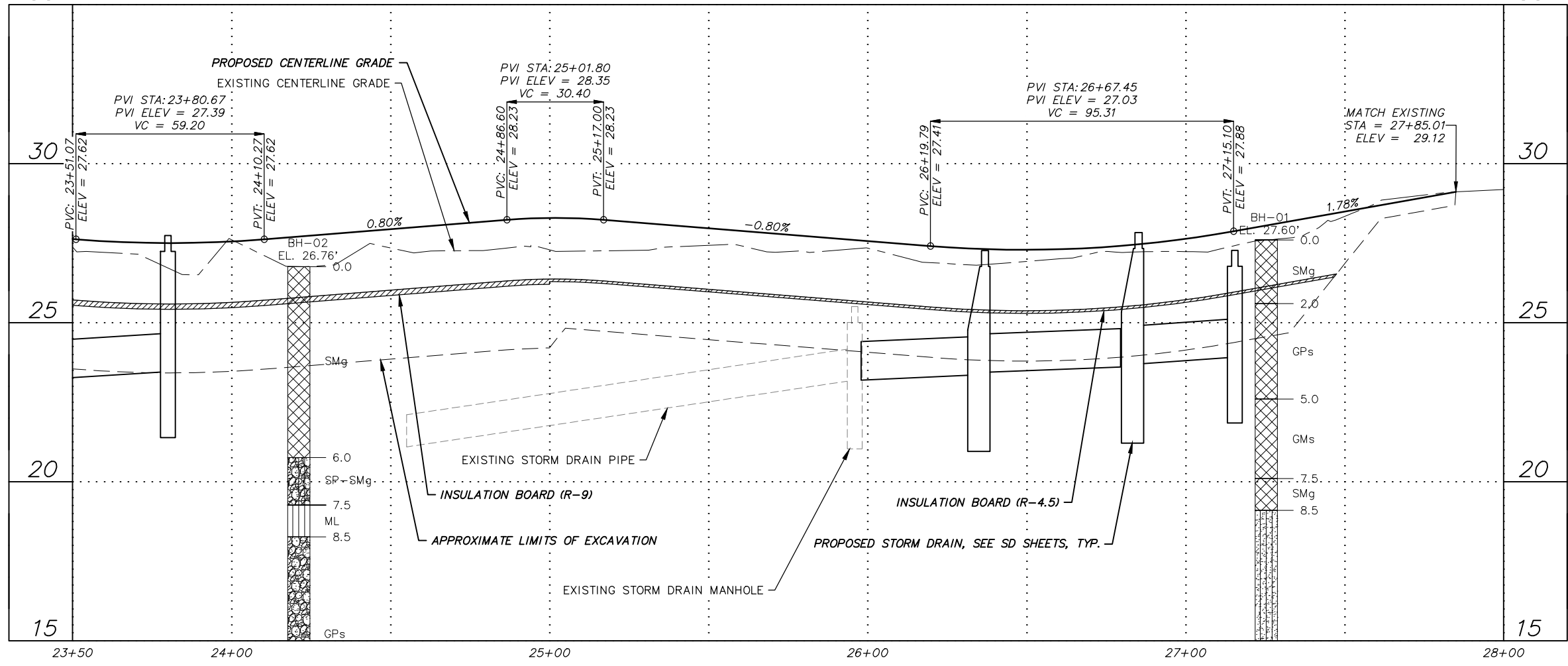
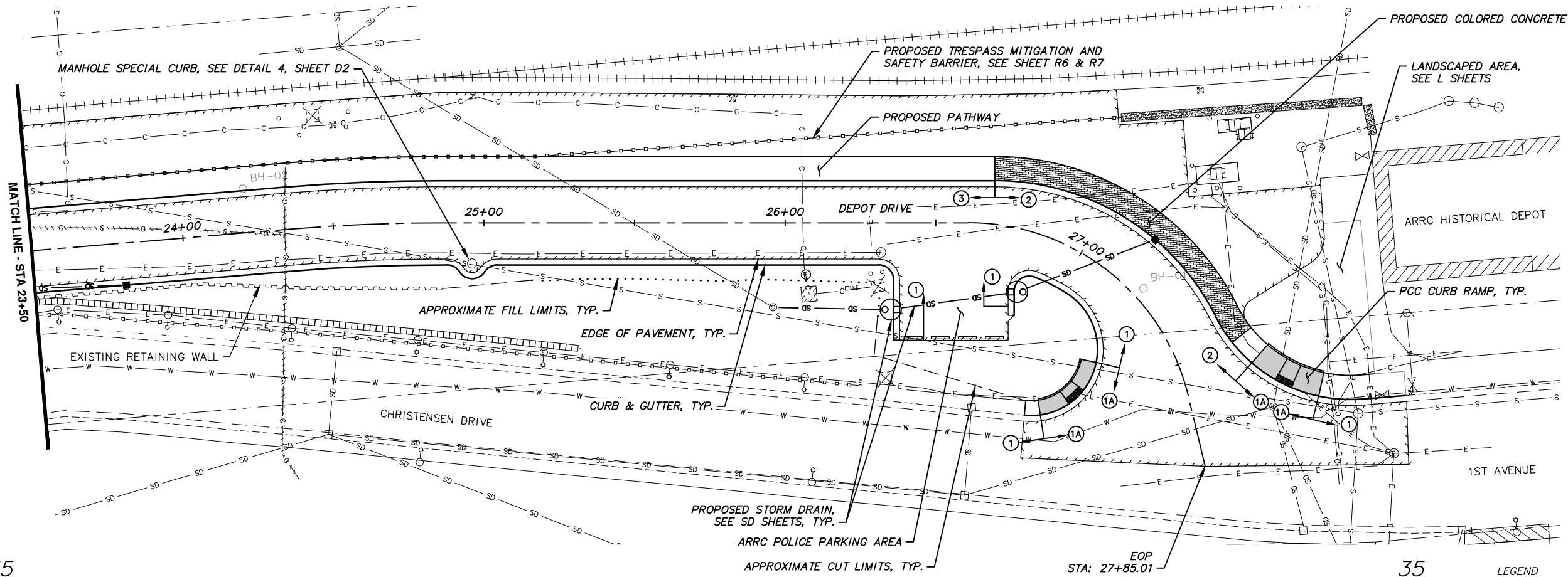
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 ROADWAY PLAN & PROFILE  
 STA 23+50 TO EOP

DATE: FEB 2020  
 STATUS: FINAL

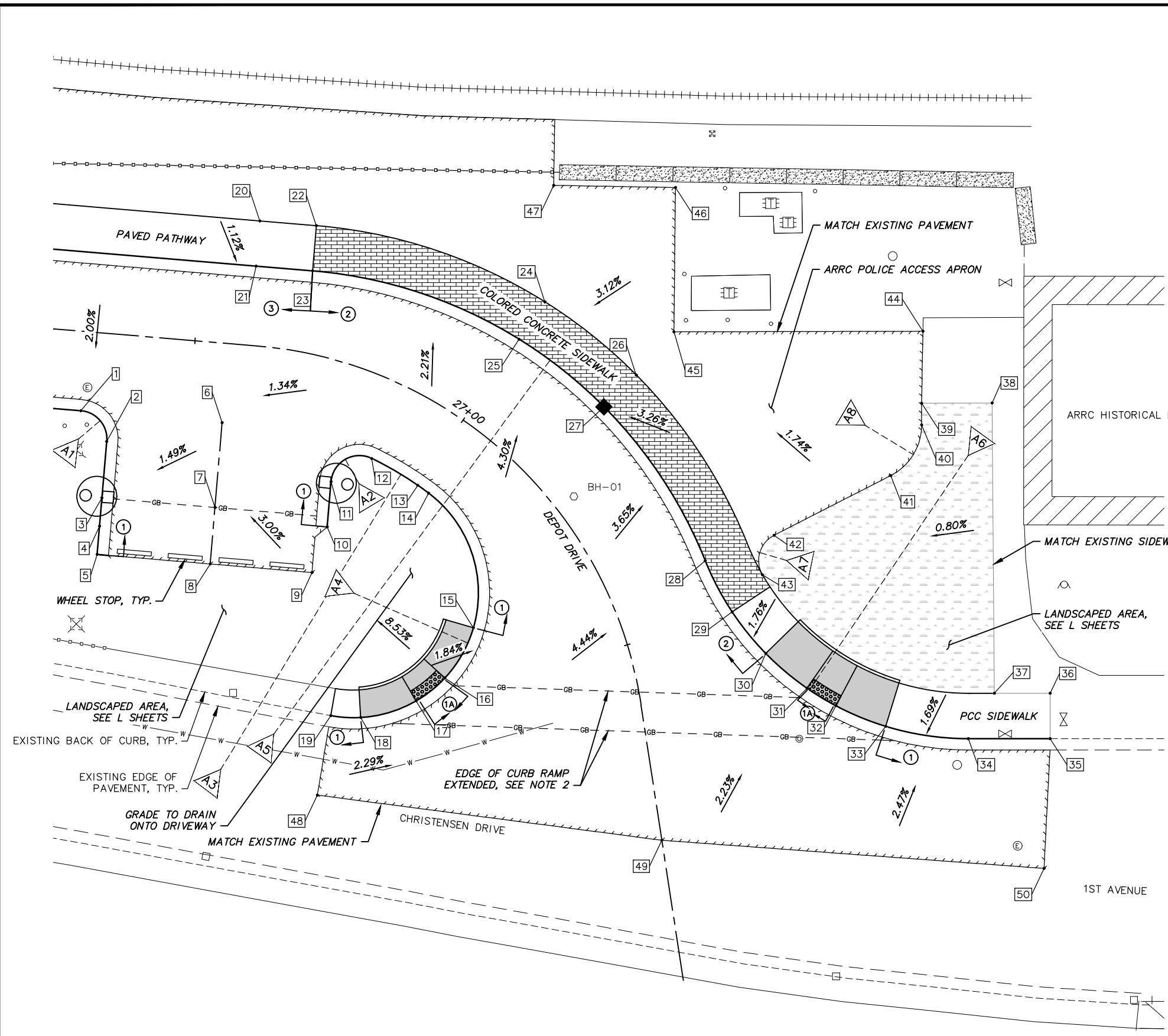
REV	DATE	DESCRIPTION	BY

SCALE: HOR. 1" = 20'  
 VER. 1" = 2'  
 DESIGNED BY: MH  
 DRAWN BY: JS  
 CHECKED BY: EU  
 APPROVED BY: EU

SHEET NO. R2



File: \\crweng.com\Projects\JobsData\31103.01 ARRRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Intersection\_Layout.dwg PLOT DATE: 2/14/2020 3:24 PM



LEGEND

- ① TYPE 1 CURB AND GUTTER
- ①A TYPE 1A CURB AND GUTTER
- ② TYPE 2 CURB AND GUTTER
- ③ TYPE 3 CURB AND GUTTER
- 1.5% → PROPOSED DIRECTION OF DRAINAGE AND GRADE
- ▭ PCC CURB RAMP
- ▭ COLORED CONCRETE
- ▭ DETECTABLE WARNING PANEL
- ▭ LANDSCAPE AREA
- - - GB - GRADE BREAK

NOTES:

1. SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
2. THE MAXIMUM CROSS-SLOPE BETWEEN EDGES OF CURB RAMP EXTENDED SHALL BE 2%. IF A 2% CROSS-SLOPE CANNOT BE MAINTAINED NOTIFY ENGINEER PRIOR TO INSTALLATION OF AC PAVEMENT.
3. UNLESS OTHERWISE SHOWN, PROVIDE TRANSITION BETWEEN CURB TYPES CONTINUOUSLY OVER 6'. PROVIDE CONSTANT FLOWLINE BETWEEN CHANGE IN CURB TYPE.
4. SEE C3 FOR DRIVEWAY AND ARRRC POLICE ACCESS APRON TYPICAL SECTION.
5. SEE DETAIL (D) SHEETS FOR CURB RAMP DETAILS.
6. MAINTAIN A MINIMUM SLOPE OF 0.5% ALONG FLOW LINE OF CURB.

RADIUS TABLE				
POINT	STATION	OFFSET (FT)	RADIUS (FT)	DESCRIPTION
A1	26+30.97	19.00 RT.	5.0	TBC
A2	26+88.43	19.00 RT.	5.0	TBC
A3	26+60.82	75.00 RT.	61.0	TBC
A4	27+02.88	36.00 RT.	22.0	TBC
A5	27+28.23	63.76 RT.	82.0	TBC
A6	27+42.47	68.03 LT.	50.0	TBC
A7	27+45.80	31.44 LT.	5.0	EOP
A8	27+35.50	53.82 LT.	10.0	EOP

DEPOT DRIVE AT 1ST AVENUE

INTERSECTION LAYOUT



1



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

ARRRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
INTERSECTION LAYOUT

DEPOT DRIVE AT 1ST AVENUE

DATE: FEB 2020

STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 10'
VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

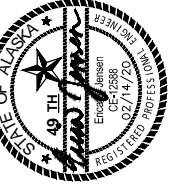
SHEET NO.

R3



POINT SUMMARY – DEPOT DR. AT 1ST AVE.

POINT	STATION	OFFSET (FT)	TBC ELEV (FT)	DESCRIPTION
1	26+30.97	14.00 RT.	27.50	TBC, PC CURVE A1
2	26+35.97	19.00 RT.	27.44	TBC, PT CURVE A1
3	26+35.97	29.00 RT.	27.39	TBC, SD STRUCTURE S3-1
4	26+35.97	34.00 RT.	27.49	TBC, BEGIN CURB TAPER
5	26+35.97	39.00 RT.	27.19	TBC, END CURB
6	26+55.97	14.00 RT.	27.27	DRIVEWAY REFERENCE CENTERLINE
7	26+55.97	29.00 RT.	27.20	DRIVEWAY REFERENCE CENTERLINE
8	26+55.97	39.00 RT.	27.40	DRIVEWAY REFERENCE CENTERLINE
9	26+87.09	36.67 RT.	27.80	EDGE OF PAVEMENT
10	26+85.56	28.23 RT.	27.66	TBC, BEGIN CURB
11	26+81.99	20.60 RT.	27.88	TBC, PC CURVE A2, SD STRUCTURE S3-2
12	26+88.43	14.00 RT.	27.94	TBC, PCC CURVE A2/A3
13	27+00.00	14.00 RT.	28.14	TBC, SPOT ELEVATION
14	27+02.88	14.00 RT.	28.26	TBC, PCC CURVE A3/A4
15	27+33.93	23.87 RT.	29.71	TBC, BEGIN RAMP
16	27+43.22	32.29 RT.	29.85	END RAMP, BEGIN LANDING
17	27+46.95	38.45 RT.	29.96	END LANDING, BEGIN RAMP
18	27+45.59	48.63 RT.	30.58	TBC, END RAMP
19	27+38.14	53.34 RT.	30.84	TBC, PT CURVE A4, MATCH EXISTING
20	26+59.62	22.00 LT.	28.06	EDGE OF PATHWAY, SPOT ELEVATION
21	26+59.62	14.00 LT.	27.98	TBC, SPOT ELEVATION
22	26+67.61	22.40 LT.	27.68	EDGE OF PATHWAY, BEGIN COLORED CONCRETE
23	26+68.21	14.43 LT.	27.56	TBC, PC CURVE A5, BEGIN COLORED CONCRETE
24	27+00.00	25.36 LT.	27.49	EDGE OF COLORED CONCRETE, SPOT ELEVATION
25	27+00.00	17.35 LT.	27.37	TBC, SPOT ELEVATION
26	27+15.37	26.06 LT.	27.39	EDGE OF COLORED CONCRETE, SPOT ELEVATION
27	27+15.51	18.06 LT.	27.27	TBC, SD STRUCTURE 13-1
28	27+41.82	18.04 LT.	28.26	TBC, PRC CURVE A5/A6
29	27+49.89	19.37 LT.	28.31	TBC, END COLORED CONCRETE
30	27+56.59	23.27 LT.	28.27	TBC, BEGIN RAMP
31	27+62.41	29.36 LT.	28.22	END RAMP, BEGIN LANDING
32	27+66.24	33.92 LT.	28.25	END LANDING, BEGIN RAMP
33	27+71.15	42.06 LT.	28.72	TBC, END RAMP
34	27+75.51	56.11 LT.	28.80	TBC, PT CURVE A6
35	27+77.70	70.36 LT.	28.50	TBC, MATCH EXISTING
36	27+69.80	71.57 LT.	28.65	MATCH EXISTING
37	27+68.30	61.86 LT.	28.48	MATCH EXISTING
38	27+39.06	75.59 LT.	28.53	MATCH EXISTING
39	27+36.20	64.46 LT.	28.30	EOP, EOC, MATCH EXISTING
40	27+38.06	62.73 LT.	28.32	EDGE OF PAVEMENT, PC CURVE A8
41	27+41.32	54.02 LT.	28.37	EDGE OF PAVEMENT, PT CURVE A8
42	27+42.29	30.96 LT.	28.46	EDGE OF PAVEMENT, PC CURVE A7
43	27+46.44	26.51 LT.	28.42	EOP, EDGE OF PAVEMENT, PT CURVE A7
44	27+30.48	70.97 LT.	28.49	EOP, EOC, MATCH EXISTING
45	27+14.74	36.13 LT.	27.88	EOP, MATCH EXISTING
46	27+04.26	55.27 LT.	28.32	EOP, MATCH EXISTING
47	26+93.38	43.59 LT.	28.14	EOP, MATCH EXISTING
48	27+67.92	58.81 RT.	30.44	EOP, MATCH EXISTING
49	27+85.01	.00 RT.	29.12	EOP, MATCH EXISTING
50	28+00.15	65.84 LT.	28.61	EOP, MATCH EXISTING



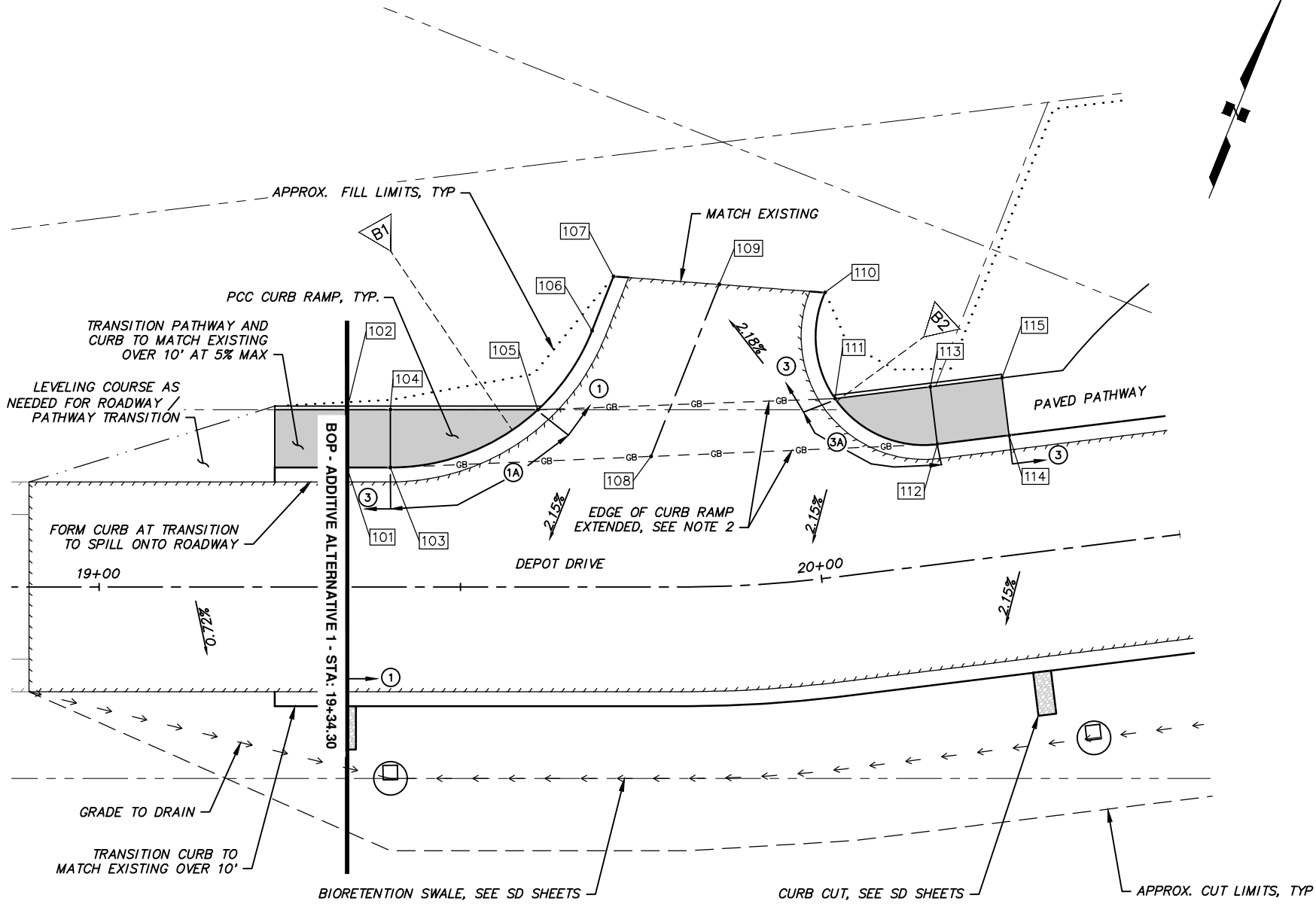
PROJECT NO. 31103.01  
CITY GRID 1230  
WATER GRID 1230  
SEWER GRID 1230

SCH: A  
PROJECT NO. 31103.01  
ARRC DEPOT DRIVE IMPROVEMENTS – PHASE I  
INTERSECTION LAYOUT POINT TABLES  
DEPOT DRIVE AT 1ST AVENUE  
DATE: FEB 2020  
STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE HOR. N/A  
VER. N/A  
DESIGNED BY MH  
DRAWN BY JS  
CHECKED BY EU  
APPROVED BY EU

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Driveway Grading.dwg PLOT DATE: 2/14/2020 3:24 PM



**LEGEND**

- ① TYPE 1 CURB AND GUTTER
- ①A TYPE 1A CURB AND GUTTER
- ③ TYPE 3 CURB AND GUTTER
- ③A TYPE 3A CURB AND GUTTER

- 1.5% → PROPOSED DIRECTION OF DRAINAGE AND GRADE
- ▭ PCC CURB RAMP
- GRADE BREAK

**NOTES:**

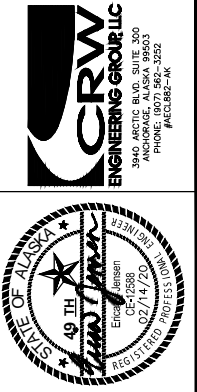
1. SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
2. THE MAXIMUM CROSS-SLOPE BETWEEN EDGES OF CURB RAMP EXTENDED SHALL BE 2%. IF A 2% CROSS-SLOPE CANNOT BE MAINTAINED NOTIFY ENGINEER PRIOR TO INSTALLATION OF AC PAVEMENT.
3. UNLESS OTHERWISE SHOWN, PROVIDE TRANSITION BETWEEN CURB TYPES CONTINUOUSLY OVER 6'. PROVIDE CONSTANT FLOWLINE BETWEEN CHANGE IN CURB TYPE.
4. SEE C3 FOR DRIVEWAY TYPICAL SECTION.
5. SEE DETAIL (D) SHEETS FOR CURB RAMP DETAILS.
6. MAINTAIN A MINIMUM SLOPE OF 0.5% ALONG FLOW LINE OF CURB.

**1 THE BOARD RM./49TH STATE BREWERY DRIVEWAY**  
DRIVEWAY GRADING



RADIUS TABLE			
TBC RADIUS POINT			
POINT	STATION	OFFSET (FT)	RADIUS (FT)
B1	19+40.30	46.50 LT.	30.0
B2	20+18.17	31.50 LT.	15.0

POINT SUMMARY - THE BOARD ROOM / 49TH STATE BREWERY DRIVEWAY				
POINT	STATION	OFFSET (FT)	ELEV (FT)	DESCRIPTION
101	19+34.30	16.50 LT.	26.11	TBC, BEGIN RAMP
102	19+34.30	24.50 LT.	26.13	EOC, BEGIN RAMP
103	19+40.30	16.50 LT.	26.29	TBC, END RAMP, BEGIN LANDING, PC CURVE B1
104	19+40.30	24.50 LT.	26.41	EOC, END RAMP, BEGIN LANDING
105	19+60.69	24.50 LT.	26.16	TBC, END LANDING
106	19+68.18	35.44 LT.	26.34	TBC, PT CURVE B1
107	19+71.16	42.95 LT.	26.47	TBC, END CURB AND GUTTER, MATCH EXISTING
108	19+76.34	18.04 LT.	26.49	DRIVEWAY REFERENCE CENTERLINE
109	19+87.38	41.76 LT.	26.00	DRIVEWAY REFERENCE CENTERLINE
110	20+05.32	39.24 LT.	26.03	TBC, BEGIN CURB AND GUTTER, MATCH EXISTING, PC CURVE B2
111	20+04.90	24.50 LT.	26.82	TBC, BEGIN LANDING
112	20+18.17	16.50 LT.	26.92	TBC, END LANDING, BEGIN RAMP, PC CURVE B2
113	20+18.17	24.50 LT.	27.04	EOC, END LANDING, BEGIN RAMP
114	20+28.17	16.50 LT.	27.56	TBC, END RAMP
115	20+28.17	24.50 LT.	27.68	EOC, END RAMP



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

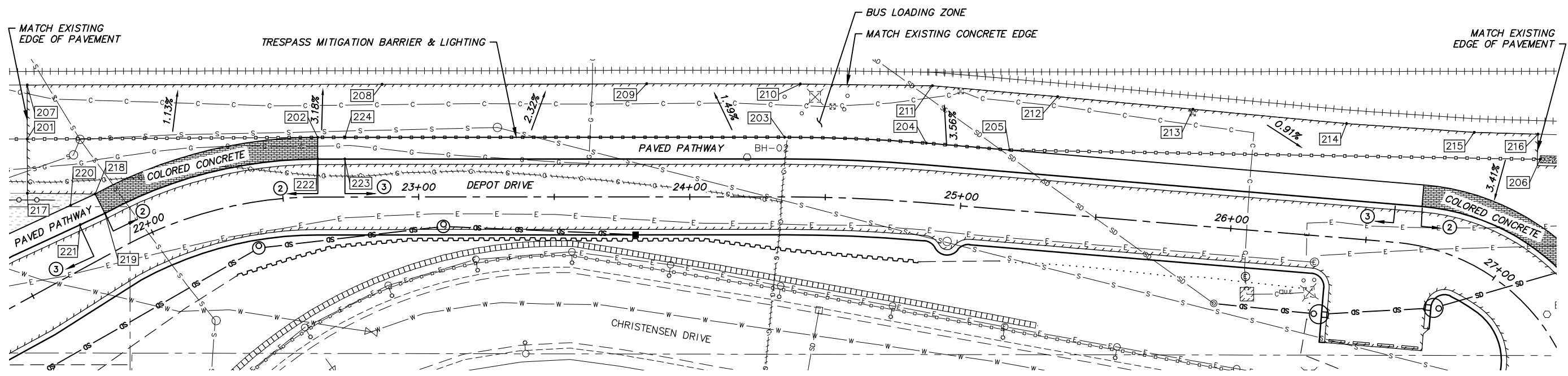
SCH: B  
PROJECT NO: 31103.01  
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
DRIVEWAY GRADING  
STATUS: FINAL  
DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

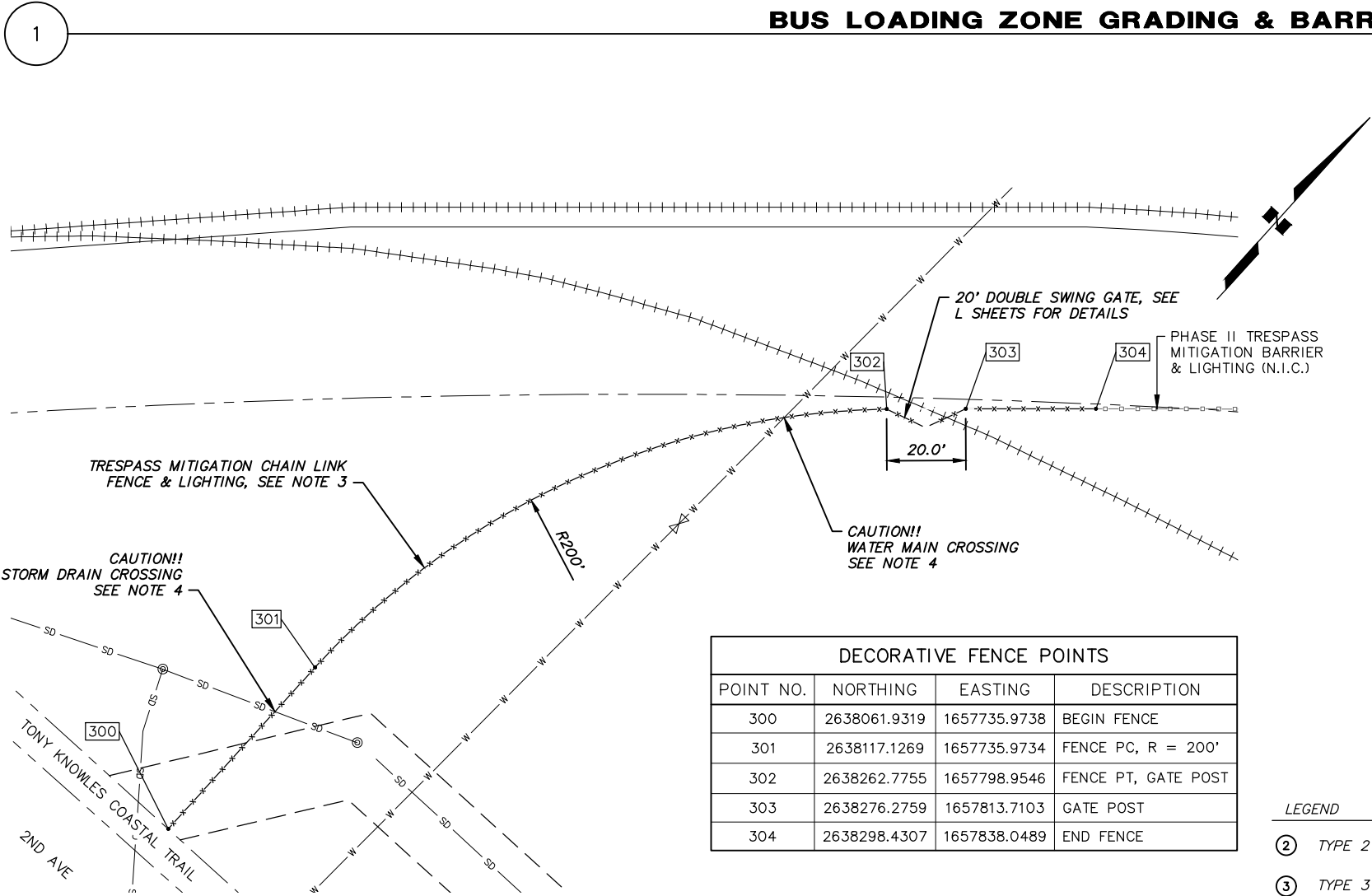
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VER. N/A  
DESIGNED BY: MH  
DRAWN BY: JS  
CHECKED BY: EU  
APPROVED BY: EU

REV	DATE	DESCRIPTION	BY

SCALE	HOR.	VER.	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
1" = 20'	N/A	N/A	MH	US	EJ	EJ



**BUS LOADING ZONE GRADING & BARRIER PLAN**



**CHAINLINK FENCE PLAN**



POINT SUMMARY - BUS LOADING ZONE				
POINT	STATION	OFFSET (FT)	ELEV (FT)	DESCRIPTION
201	21+75.94	51.78 LT.	27.84	EOP, MATCH EXISTING, BARRIER PI
202	22+62.79	22.00 LT.	28.82	BARRIER PC, R = 622'
203	24+34.94	22.00 LT.	28.68	BARRIER PT
204	24+85.46	22.00 LT.	29.08	BARRIER PI
205	25+16.23	22.00 LT.	29.10	BARRIER PI
206	26+93.23	46.12 LT.	28.18	END BARRIER AT EXISTING CONCRETE BARRIER
207	21+85.47	69.31 LT.	28.36	EOP, MATCH EXISTING CONCRETE EDGE
208	22+86.54	41.56 LT.	28.23	EOP, MATCH EXISTING CONCRETE EDGE
209	23+84.11	41.75 LT.	28.18	EOP, MATCH EXISTING CONCRETE EDGE
210	24+40.37	41.63 LT.	28.28	EOP, MATCH EXISTING CONCRETE EDGE
211	24+85.90	43.29 LT.	28.42	EOP, MATCH EXISTING CONCRETE EDGE
212	25+32.27	43.12 LT.	28.48	EOP, MATCH EXISTING CONCRETE EDGE
213	25+82.37	42.70 LT.	28.40	EOP, MATCH EXISTING CONCRETE EDGE
214	26+39.30	42.16 LT.	28.37	EOP, MATCH EXISTING CONCRETE EDGE
215	26+76.89	45.65 LT.	28.33	EOP, MATCH EXISTING CONCRETE EDGE
216	26+90.14	53.90 LT.	28.34	EOP, MATCH EXISTING CONCRETE EDGE
217	21+66.39	34.21 LT.	27.33	EOP, MATCH EXISTING
218	21+88.16	22.00 LT.	28.49	EOP, EOC, BEGIN COLORED CONCRETE
219	21+87.93	14.00 LT.	28.41	TBC TYPE 2 C&G, BEGIN COLORED CONCRETE
220	21+78.22	22.67 LT.	28.80	EDGE OF PATHWAY, SPOT ELEVATION
221	21+77.91	14.67 LT.	28.72	TBC, BEGIN TYPE 3 CURB
222	22+62.79	14.00 LT.	28.74	TBC TYPE 2 C&G, END COLORED CONCRETE
223	22+72.79	14.00 LT.	29.03	TBC, BEGIN TYPE 3 CURB
224	22+72.79	22.00 LT.	29.11	EDGE OF PATHWAY, SPOT ELEVATION

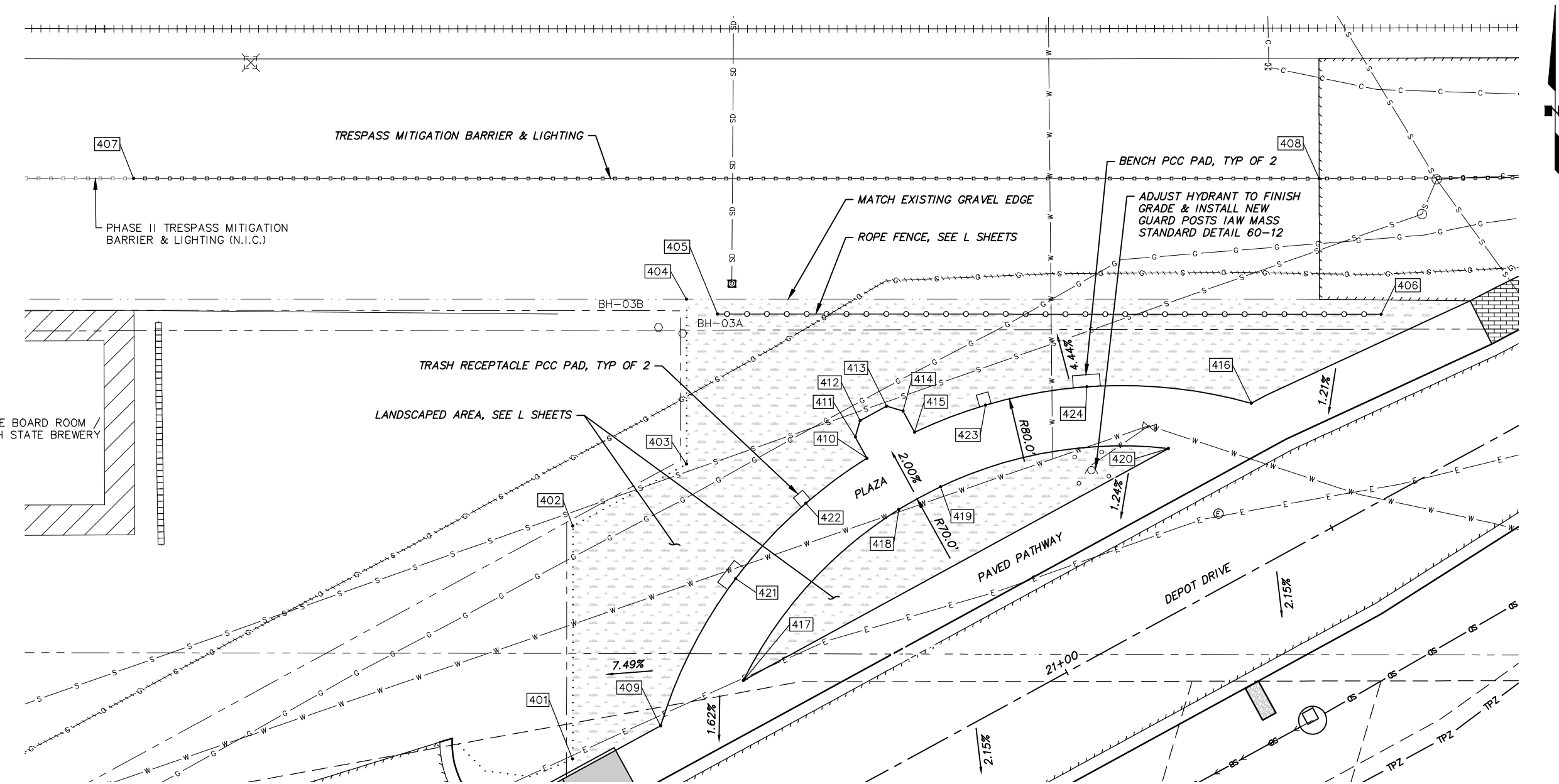
DECORATIVE FENCE POINTS			
POINT NO.	NORTHING	EASTING	DESCRIPTION
300	2638061.9319	1657735.9738	BEGIN FENCE
301	2638117.1269	1657735.9734	FENCE PC, R = 200'
302	2638262.7755	1657798.9546	FENCE PT, GATE POST
303	2638276.2759	1657813.7103	GATE POST
304	2638298.4307	1657838.0489	END FENCE

- LEGEND**
- (2) TYPE 2 CURB AND GUTTER
  - (3) TYPE 3 CURB AND GUTTER
  - 1.5% PROPOSED DIRECTION OF DRAINAGE AND GRADE
  - PCC CURB RAMP
  - COLORED CONCRETE
  - LANDSCAPE AREA

- NOTES:**
1. SEE STORM DRAIN (SD) SHEETS FOR LOCATIONS & ELEVATIONS OF SD PIPES & STRUCTURES.
  2. SEE TYPICAL SECTION (C) SHEETS FOR MORE INFORMATION.
  3. CLEAR 10' BEYOND PROPOSED FENCE ALIGNMENT. CONNECT TO EXISTING FENCE ON COASTAL TRAIL. SEE L SHEETS FOR MORE INFORMATION.
  4. UNDERGROUND UTILITIES IN THESE DRAWINGS ARE SHOWN IN GENERAL LOCATIONS ONLY. OTHER UTILITIES MAY EXIST THROUGHOUT THE PROJECT AREA. DEPTHS OF MOST ARE UNKNOWN. CALL FOR UTILITY LOCATES PRIOR TO DRIVING FENCE POSTS. ADJUST POST SPACING AS REQUIRED TO AVOID EXISTING UTILITIES.

File: \\crweng.com\Projects\SubData\31103.01\ARRC Depot Drive Development\00\_CADD\01\_Working\_Set\01\_Civil\31103.01\_Grading\_Plan.dwg PLOT DATE: 2/14/2020 3:25 PM

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Grading Plan.dwg PLOT DATE: 2/14/2020 3:25 PM



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**PLAZA GRADING & BARRIER PLAN**



POINT SUMMARY – PLAZA GRADING				
POINT	STATION	OFFSET (FT)	ELEV (FT)	DESCRIPTION
401	20+21.23	26.67 LT.	26.44	EDGE OF LANDSCAPED AREA, MATCH EXISTING
402	20+39.77	60.56 LT.	26.48	EDGE OF LANDSCAPED AREA, MATCH EXISTING
403	20+61.21	60.53 LT.	26.61	EDGE OF LANDSCAPED AREA, MATCH EXISTING
404	20+74.32	84.50 LT.	0.00	EDGE OF LANDSCAPED AREA, MATCH EXISTING
405	20+77.65	79.88 LT.	26.67	BEGIN ROPE FENCE
406	21+74.15	27.12 LT.	28.20	END ROPE FENCE
407	20+03.48	146.00 LT.	28.13	BEGIN BARRIER
408	21+75.94	51.78 LT.	27.84	BARRIER PI
409	20+36.65	24.50 LT.	27.74	BEGIN PLAZA PATHWAY
410	20+87.93	47.03 LT.	27.50	EDGE OF PLAZA PATHWAY
411	20+87.93	51.03 LT.	27.46	EDGE OF PLAZA PATHWAY
412	20+89.93	53.03 LT.	27.43	EDGE OF PLAZA PATHWAY

POINT SUMMARY – PLAZA GRADING				
POINT	STATION	OFFSET (FT)	ELEV (FT)	DESCRIPTION
413	20+94.93	53.03 LT.	27.43	EDGE OF PLAZA PATHWAY
414	20+96.93	51.03 LT.	27.46	EDGE OF PLAZA PATHWAY
415	20+96.93	47.03 LT.	27.50	EDGE OF PLAZA PATHWAY
416	21+48.21	24.50 LT.	28.59	END PLAZA PATHWAY
417	20+52.29	24.50 LT.	27.86	BEGIN PLAZA PATHWAY
418	20+88.49	37.04 LT.	27.70	EDGE OF PLAZA PATHWAY
419	20+96.37	37.04 LT.	27.70	EDGE OF PLAZA PATHWAY
420	21+32.57	24.50 LT.	28.48	END PLAZA PATHWAY
421	20+59.27	39.96 LT.	27.62	END PLAZA PATHWAY
422	20+75.47	45.33 LT.	27.55	BENCH PCC PAD
423	21+09.39	45.33 LT.	27.74	TRASH RECEPTACLE PCC PAD
424	21+25.59	39.96 LT.	28.06	BENCH PCC PAD

**LEGEND**

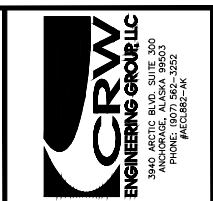
1.5% → PROPOSED DIRECTION OF DRAINAGE AND GRADE

PCC CURB RAMP

COLORED CONCRETE

LANDSCAPE AREA

**NOTES:**  
1. SEE TYPICAL SECTION (C) SHEETS FOR MORE INFORMATION.



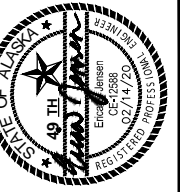
PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: B  
PROJECT NO: 31103.01  
ARRC DEPOT DRIVE IMPROVEMENTS – PHASE I  
PLAZA GRADING AND BARRIER PLAN  
STATUS: FINAL  
DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

SCALE: 1" = 10'  
DESIGNED BY: N/A  
DRAWN BY: JUS  
CHECKED BY: EUJ  
APPROVED BY: EUJ  
SHEET NO. **R7**

File: \\crweng.com\Projects\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01\_Civil\31103.01 - Roadway Details.dwg PLOT DATE: 2/14/2020 3:25 PM



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL  
 PROJECT NO: 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I

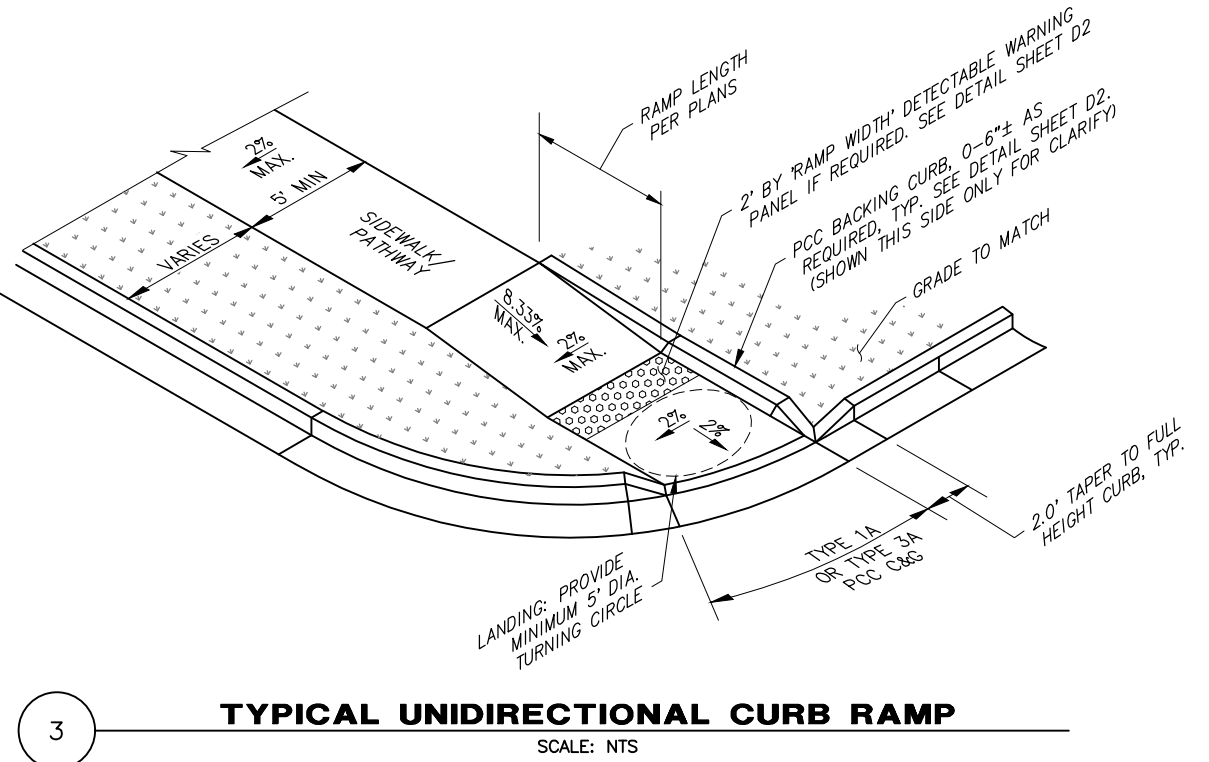
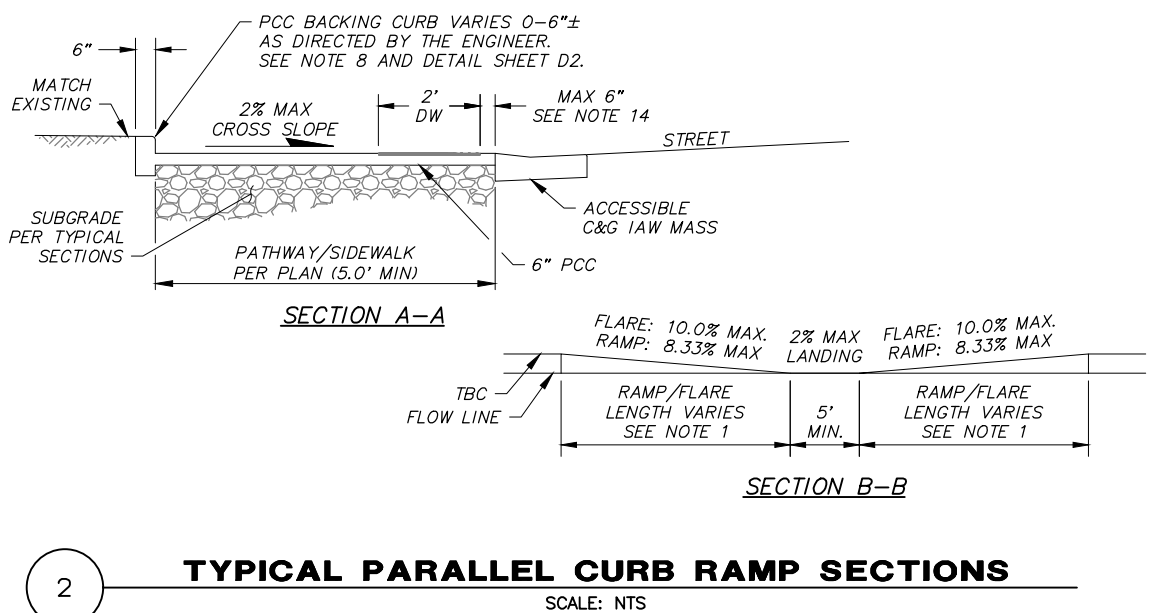
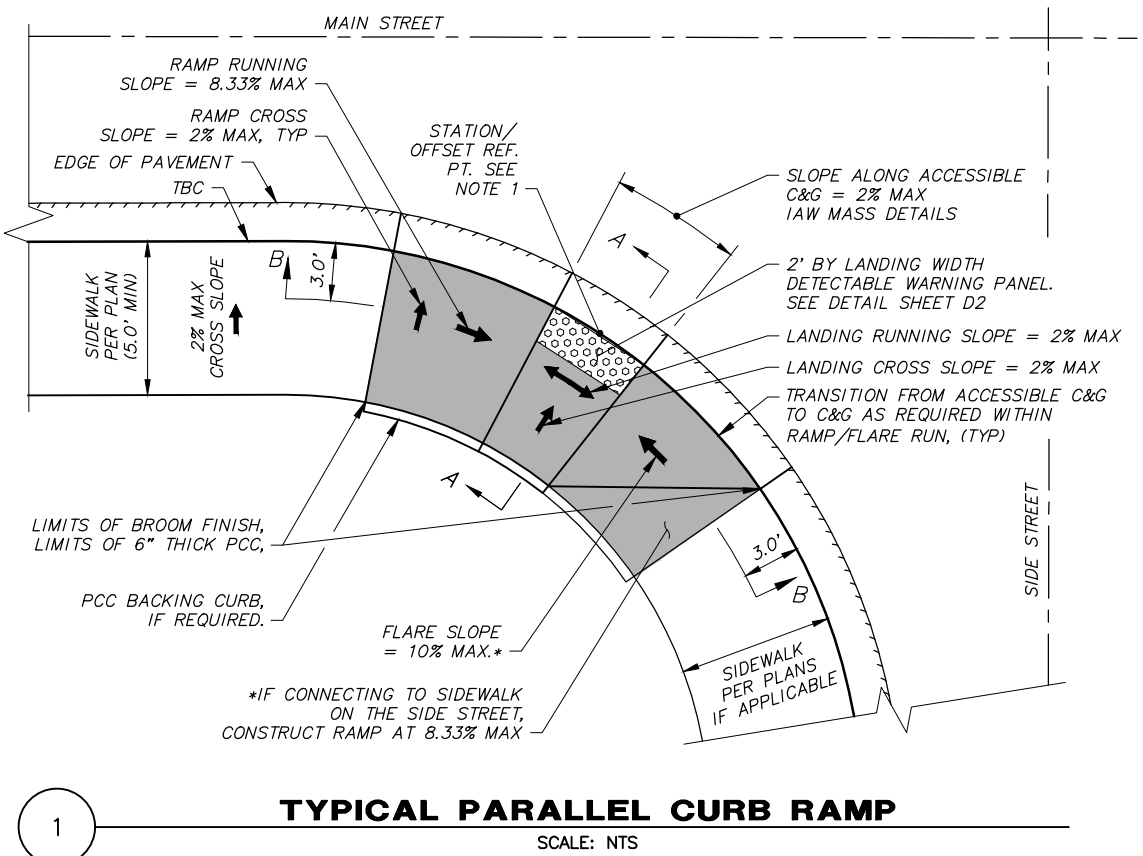
**CURB RAMP DETAILS**

STATUS: FINAL  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

SCALE	HOR. N/A	VER. N/A
DESIGNED BY	MH	
DRAWN BY	JS	
CHECKED BY	EJ	
APPROVED BY	EJ	

SHEET NO. **D1**



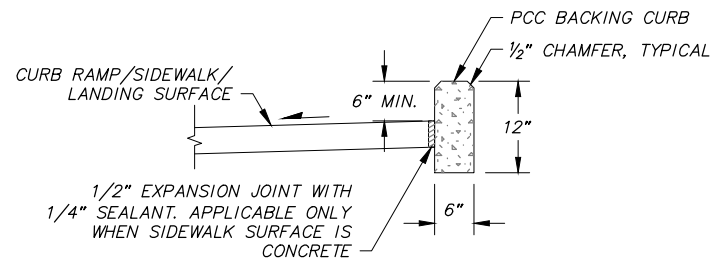
30.04 P.C.C. CURB RAMP					
SHEET	STATION	OFFSET (FT)	CURB RAMP TYPE	DETECTABLE WARNING	COMMENTS
R3	27+46.95	38.45 RT.	PARRALEL	YES	1ST AVENUE
R3	27+71.15	42.06 LT.	PARRALEL	YES	1ST AVENUE
R5	19+40.30	16.50 LT.	UNIDIRECTIONAL	NO	49TH STATE BREWERY DRIVEWAY
R5	20+18.17	16.50 LT.	UNIDIRECTIONAL	NO	49TH STATE BREWERY DRIVEWAY

SEE INTERSECTION LAYOUT AND DRIVEWAY GRADING SHEETS R3 - R5 FOR CURB RAMP AND DETECTABLE WARNING DETAILS.

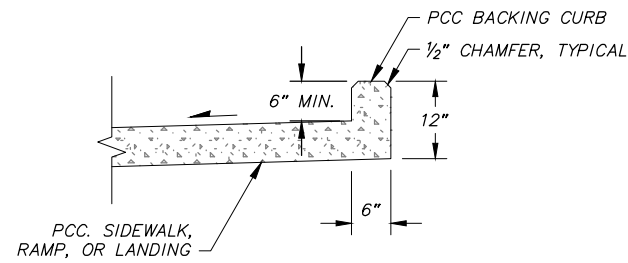
**SHEET NOTES**

- SEE SHEETS R3-R5 FOR CURB RAMP LOCATIONS AND RAMP, LANDING, AND FLARE LENGTHS AND ELEVATIONS. RAMP/FLARE/LANDING LENGTH FOR PARALLEL CURB RAMPS SHALL BE AS MEASURED 3' OFF BACK OF CURB.
- NOTIFY ENGINEER PRIOR TO INSTALLATION OF CONCRETE IF MAXIMUM/MINIMUM SLOPES CANNOT BE MAINTAINED.
- 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.
- ALL SLOPES ARE IN REFERENCE TO THE HORIZONTAL.
- MINIMUM FLOWLINE SLOPE ALONG CURB RETURN IS 0.5%. NOTIFY ENGINEER IF MINIMUM SLOPE CAN'T BE MAINTAINED.
- PROVIDE CONSTANT FLOWLINE BETWEEN CHANGES IN CURB TYPE.
- CONSTRUCT SIDEWALK ADJACENT TO CURB RAMP PER THE TYPICAL SECTIONS SHOWN ON "C" SHEETS.
- FORM BACKING CURB AS DIRECTED BY THE ENGINEER TO MATCH EXISTING GROUND. 4" TOPSOIL AND SEEDING SHALL BE PLACED ON DISTURBED GRASS AREAS PER THE LANDSCAPING PLANS.
- CONSTRUCT RAMPS AND LANDINGS WITH A BROOM FINISH RUNNING PERPENDICULAR TO THE DIRECTION OF TRAVEL.
- RAMPS MAY BE ADJUSTED TO ENSURE MINIMUM 48" CLEARANCE AROUND APPURTENANCES SUCH AS SIGNAL POLES, POWER POLES, LIGHT POLES, J-BOXES, SIGNS, CATCH BASINS AND MANHOLES. PRIOR TO PLACEMENT OF CONCRETE AND APPURTENANCES, THE RAMP LAYOUT AND LOCATION SHALL BE APPROVED BY THE ENGINEER.
- INSTALL YELLOW ADA APPROVED DETECTABLE WARNINGS PANELS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS. SET DETECTABLE WARNINGS SO THAT THE FIELD AREA AT THE BASE OF THE DOMES IS FLUSH WITH THE SURROUNDING CONCRETE. THERE SHALL BE NO LIP AT THE EDGE OF THE DETECTABLE WARNINGS. SEE DETAIL SHEET D2.
- DETECTABLE WARNINGS DOMES AT PARALLEL CURB RAMPS SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINATE DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
- GAP BETWEEN DETECTABLE WARNING PANELS AND BACK OF CURB ONLY ALLOWABLE AT CENTER OF CURB RAMPS. CORNERS OF DETECTABLE WARNINGS SHALL BE FLUSH WITH BACK OF CURB. IF REQUIRED BY THE ENGINEER CONTRACTOR SHALL CUT DETECTABLE WARNING PANELS PER THE MANUFACTURER'S RECOMMENDATIONS.

File: \\crweng.com\Projects\SubData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 - Roadway Details.dwg PLOT DATE: 2/14/2020 3:25 PM

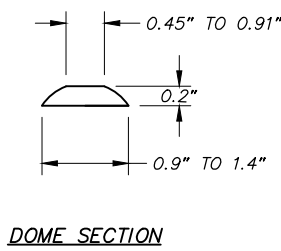
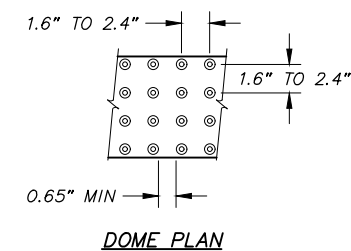
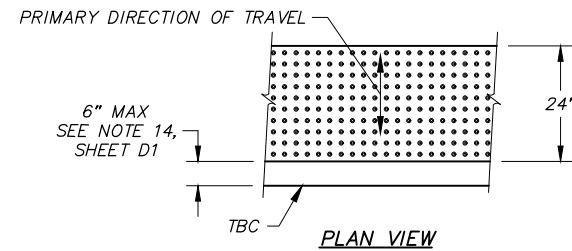


INDEPENDENT

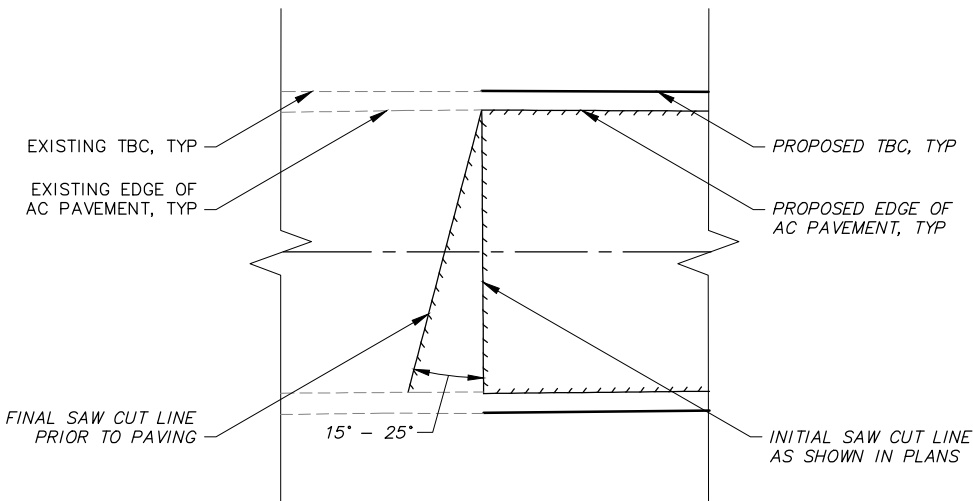


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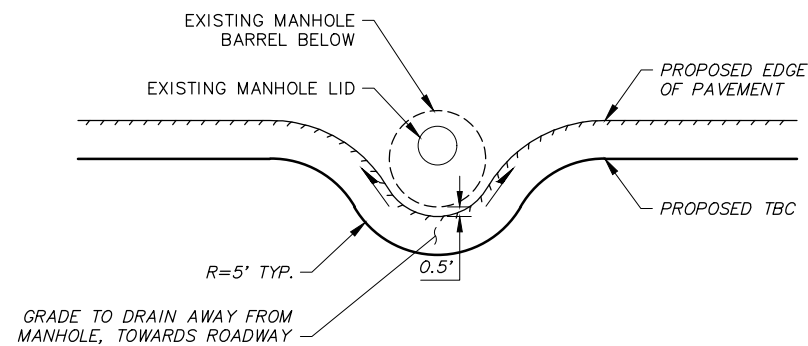
1 **BACKING CURB DETAILS**  
SCALE: NTS



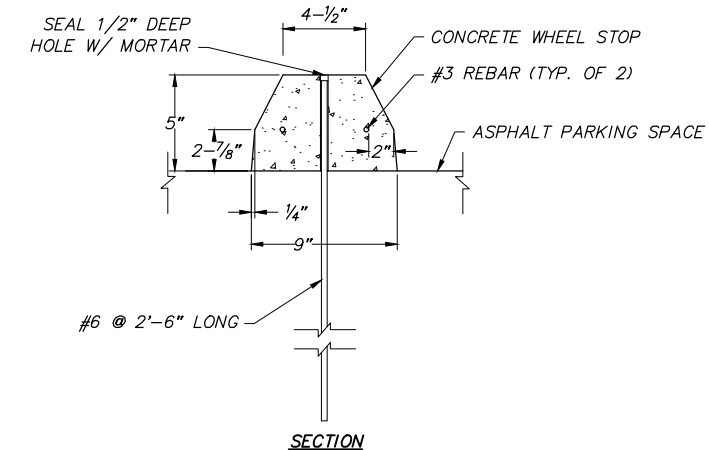
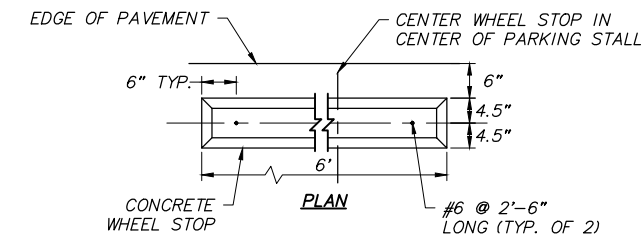
2 **DETECTABLE WARNING PANEL**  
SCALE: NTS



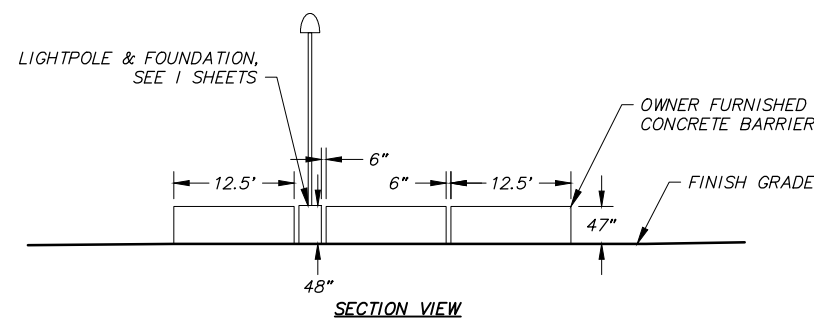
3 **TRANSVERSE SAW CUT JOINT DETAIL**  
SCALE: NTS



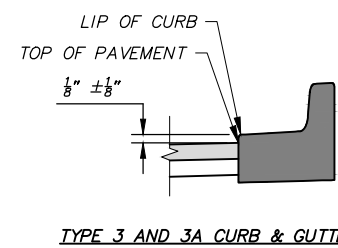
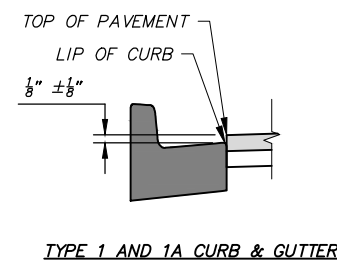
4 **MANHOLE SPECIAL CURB DETAIL**  
SCALE: NTS



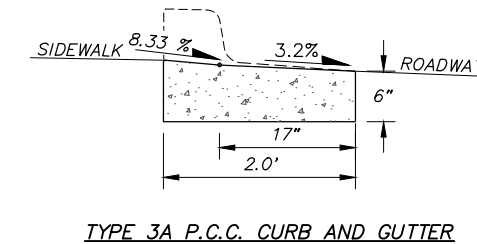
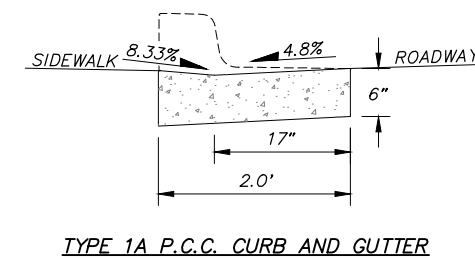
5 **WHEEL STOP DETAIL**  
SCALE: NTS



6 **CONCRETE BARRIER INSTALLATION DETAIL**  
SCALE: NTS



7 **PAVEMENT-CURB INTERFACE DETAIL**  
SCALE: NTS



8 **TYPE 1A AND 3A CURB & GUTTER DETAIL**  
SCALE: NTS

**CURB AND GUTTER NOTES**

- ALL CURBS AND GUTTERS SHALL BE CONSTRUCTED IAW MASS SECTION 30.02 - "PORTLAND CEMENT CONCRETE, CURB & GUTTER, AND VALLEY GUTTER".
- TRANSITION CURBS TO MAINTAIN CONSTANT FLOWLINE ACROSS CURB RAMP IAW PLANS.



PROJECT NO.	31103.01
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SCH: ALL  
DATE: FEB 2020

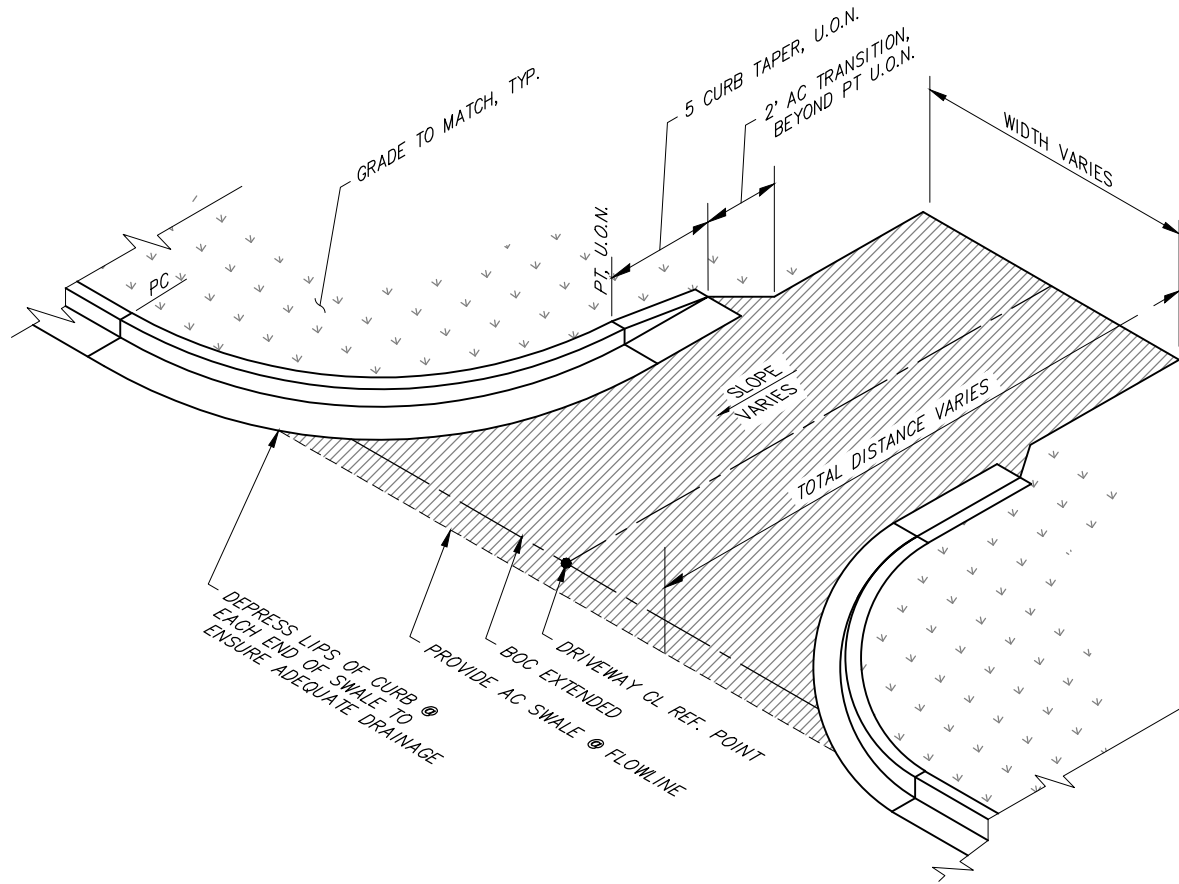
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
ROADWAY DETAILS  
STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	N/A
HOR. VER.	N/A
DESIGNED BY	MH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

SHEET NO. **D2**

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 - Roadway Details.dwg PLOT DATE: 2/14/2020 3:25 PM



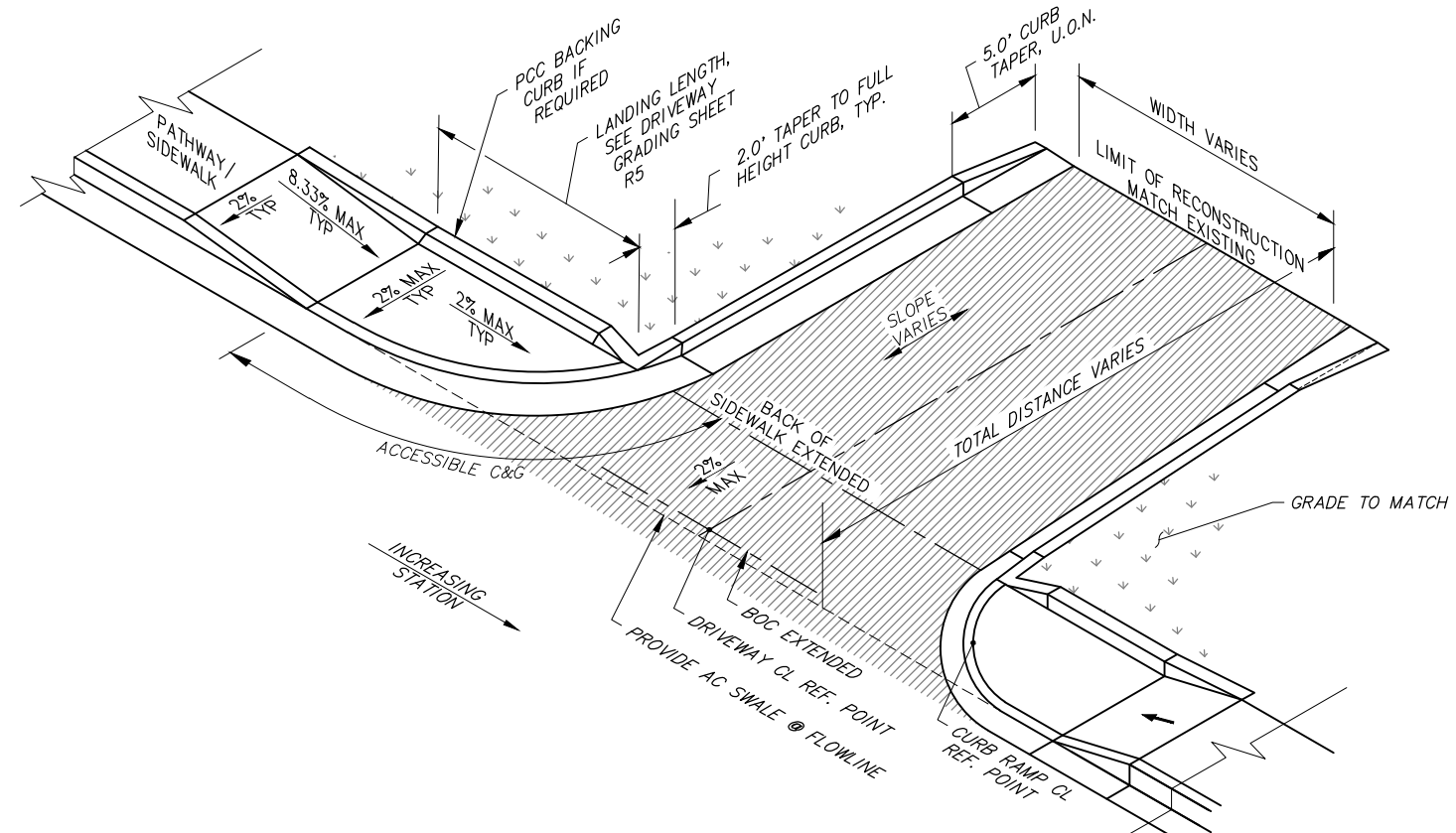
**LEGEND:**

LIMITS OF 2" AC PAVING

**DRIVEWAY NOTES**

1. ALL SLOPES ARE IN REFERENCE TO THE HORIZONTAL.
2. CENTER THE PROPOSED DRIVEWAY ENTRANCES ON DRIVEWAY CENTERLINE REFERENCE POINT.
3. SEE R3-R5 FOR DRIVEWAY SPECIFICS & RAMP LENGTHS.

**1** **TYPICAL DRIVEWAY CURB RETURN WITHOUT SIDEWALK/PATHWAY**  
SCALE: NTS



**2** **TYPICAL DRIVEWAY CURB RETURN WITH ATTACHED SIDEWALK/PATHWAY**  
SCALE: NTS



PROJECT NO. 31103.01  
CITY GRID 1230  
WATER GRID 1230  
SEWER GRID 1230

SCH: ALL

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
**DRIVEWAY CURB RETURN DETAILS**

PROJECT NO: 31103.01  
DATE: FEB 2020  
STATUS: FINAL

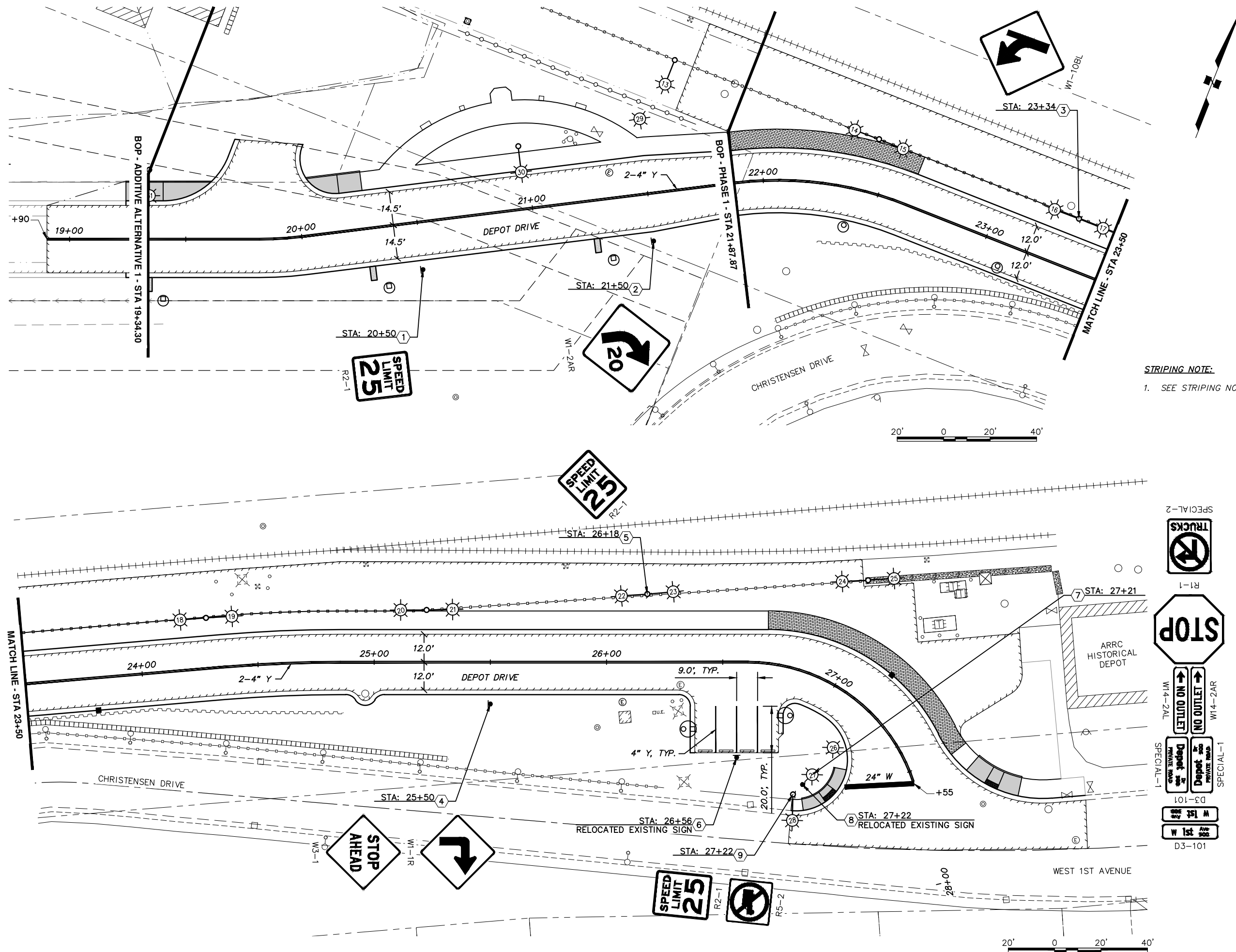
REV	DATE	DESCRIPTION	BY

SCALE	HOR. N/A	VER. N/A
DESIGNED BY	MH	
DRAWN BY	JS	
CHECKED BY	EJ	
APPROVED BY	EJ	

SHEET NO. **D3**

File: \\crweng.com\Projects\SubData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Signing & Striping.dwg PLOT DATE: 2/14/2020 3:25 PM



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

**SPECIAL-1**

- STOP
- NO OUTLET
- NO OUTLET
- Depot
- Depot
- PRIVATE ROAD
- PRIVATE ROAD

**SPECIAL-2**

- TRUCKS

**D3-101**

- 1st
- 1st
- W
- W

**R1-1**

- STOP

**R2-1**

- SPEED LIMIT 25

**R5-2**

- NO TRUCKS

**W14-2AL**

- NO OUTLET
- NO OUTLET

**W14-2AR**

- NO OUTLET
- NO OUTLET

**CRW ENGINEERING GROUP LLC**  
3940 ARCTIC BLVD., SUITE 300  
PRIME, AK 99507-562-3252  
#A00082-AK

**STATE OF ALASKA**  
Professional Engineer  
Eric Jensen  
0774620  
REG. 151989

PROJECT NO. 31103.01  
CITY GRID 1230  
WATER GRID 1230  
SEWER GRID 1230

SCH: ALL  
PROJECT NO. 31103.01  
CITY GRID 1230  
WATER GRID 1230  
SEWER GRID 1230

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
SIGNING AND STRIPING  
STA 80+ TO STA EOP

STATUS: FINAL  
DATE: FEB 2020

SCALE: 1" = 20'  
HOR. N/A  
VER. N/A  
DESIGNED BY RK  
DRAWN BY JS  
CHECKED BY EU  
APPROVED BY EU

SHEET NO. **S1**



File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Signing & Striping.dwg PLOT DATE: 2/14/2020 3:25 PM

SIGN SCHEDULE SUMMARY											
SHEET NO.	POST NO.	STATION	OFFSET	TYPE	LEGEND	WIDTH (INCHES)	HEIGHT (INCHES)	AREA (SF)	SIGN FACES	SIGN POST	COMMENTS
S1	1	20+50	20.5' RT	R2-1	25 MPH SPEED LIMIT	24	30	5.00	SW	2.5" PST	
	2	21+50	20.5' RT	W1-2AR	RIGHT CURVE AT 20 MPH	36	36	9.00	SW	2.5" PST	
	3	23+34	21.7' LT	W1-10BL	LEFT TURN/STRAIGHT	36	36	9.00	E	LIGHT POLE #16 / #17	
	4	25+50	18.0' RT	W1-1R	RIGHT TURN	30	30	6.25	W	2.5" PST	
				W3-1	STOP AHEAD	30	30	6.25	W		
	5	26+18	29.3' LT	R2-1	25 MPH SPEED LIMIT	24	30	5.00	SE	LIGHT POLE #22 / #23	
	6	26+56	41.0' RT	-	RAILROAD ASSIGNED PARKING	-	-	-	N	2.5" PST	RELOCATED EXISTING SIGN
	7	27+21	36.6' RT	D3-101	W 1ST AVE 500	30	8	3.33	N/S	LIGHT POLE #27	BACK TO BACK SIGNS
				SPECIAL-1	DEPOT DR 500 PRIVATE ROAD	30	12	5.00	W/E		BACK TO BACK SIGNS
				W14-2AL, W14-2AR	NO OUTLET	36	8	4.00	W/E		BACK TO BACK SIGNS
R1-1				STOP	30	30	6.25	N			
			SPECIAL-2	NO RIGHT TURN TRUCKS	24	30	5.00	N			
8	27+22	42.6' RT	-	BOARDROOM	-	-	-	E	2-2.5" PST	RELOCATED EXISTING SIGN	
9	27+22	48.5' RT	R2-1	25 MPH SPEED LIMIT	24	30	5.00	E	LIGHT POLE #28		
			R5-2	NO TRUCKS	24	24	4.00	E			

**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. UNLESS OTHERWISE STATED, 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 DETAILS 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 D" LETTERING: A COMBINATION OF LOWER-CASE LETTERS WITH INITIAL UPPER-CASE LETTERS.
6. INSTALL SIGN ON LIGHT POLE ACCORDING TO MASS STANDARD DETAIL 70-30.

**STRIPING NOTES:**

1. ALL STRIPING SHALL CONFORM TO THESE CONTRACT DOCUMENTS AND STANDARD MASS DETAILS. ALL REVISIONS SHALL CONFORM TO THE LATEST EDITION OF THE ALASKA TRAFFIC MANUAL AND THE MUTCD.
2. UNLESS OTHERWISE NOTED, PROVIDE METHYL METHACRYLATE PAINT OF THE COLORS AND WIDTHS SPECIFIED FOR THE TRAFFIC MARKINGS INDICATED IN THE DRAWINGS. PROVIDE 250 MIL GROOVED-IN APPLICATION FOR STOP BAR MARKINGS AND 90 MIL GROOVED-IN APPLICATION FOR ALL OTHER PAVEMENT MARKINGS.
3. DIMENSIONS REFERENCE CENTER OF STRIPE TO CENTER OF STRIPE OR CENTER OF STRIPE TO EDGE OF PAVEMENT.
4. "W" REFERENCES WHITE MARKINGS AND "Y" REFERENCES YELLOW MARKINGS.
5. INSTALL 24" WIDE STOP BARS PER MASS STANDARD DETAIL 70-18.



PROJECT NO. 31103.01  
 CITY GRID 1230  
 WATER GRID 1230  
 SEWER GRID 1230

SCH: ALL

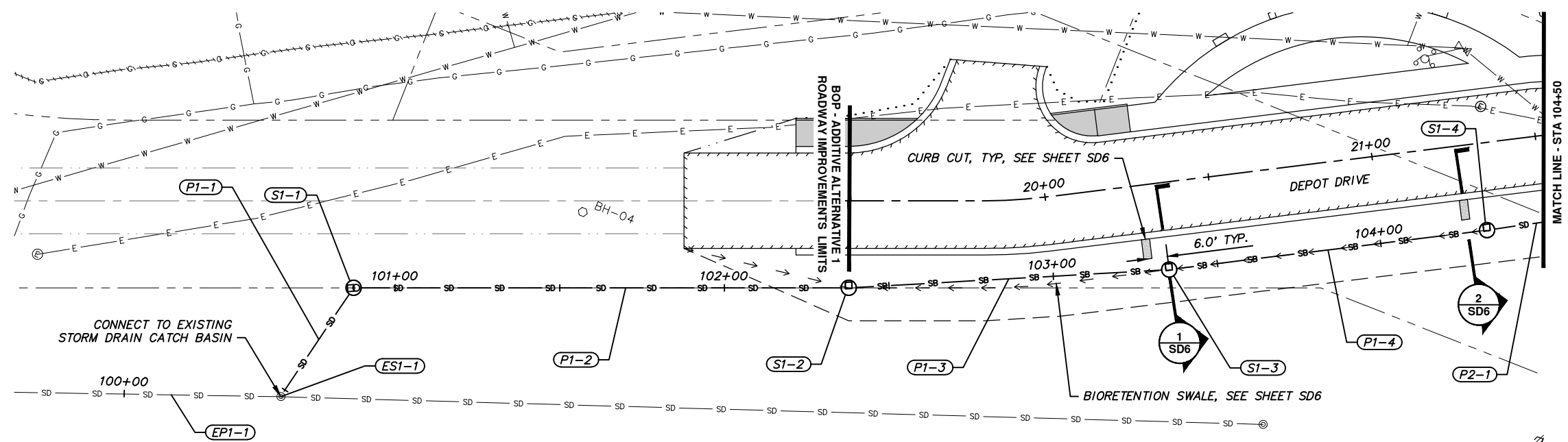
ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 SIGN SCHEDULE SUMMARY

PROJECT NO: 31103.01  
 STATUS: FINAL  
 DATE: FEB 2020

SCALE	REV	DATE	DESCRIPTION	REVISION	BY
HOR. N/A VER. N/A					
DESIGNED BY RK					
DRAWN BY JS					
CHECKED BY EJ					
APPROVED BY EJ					

SHEET NO.

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01\31103.01 Plan & Profile\_Storm.dwg PLOT DATE: 2/14/2020 3:26 PM



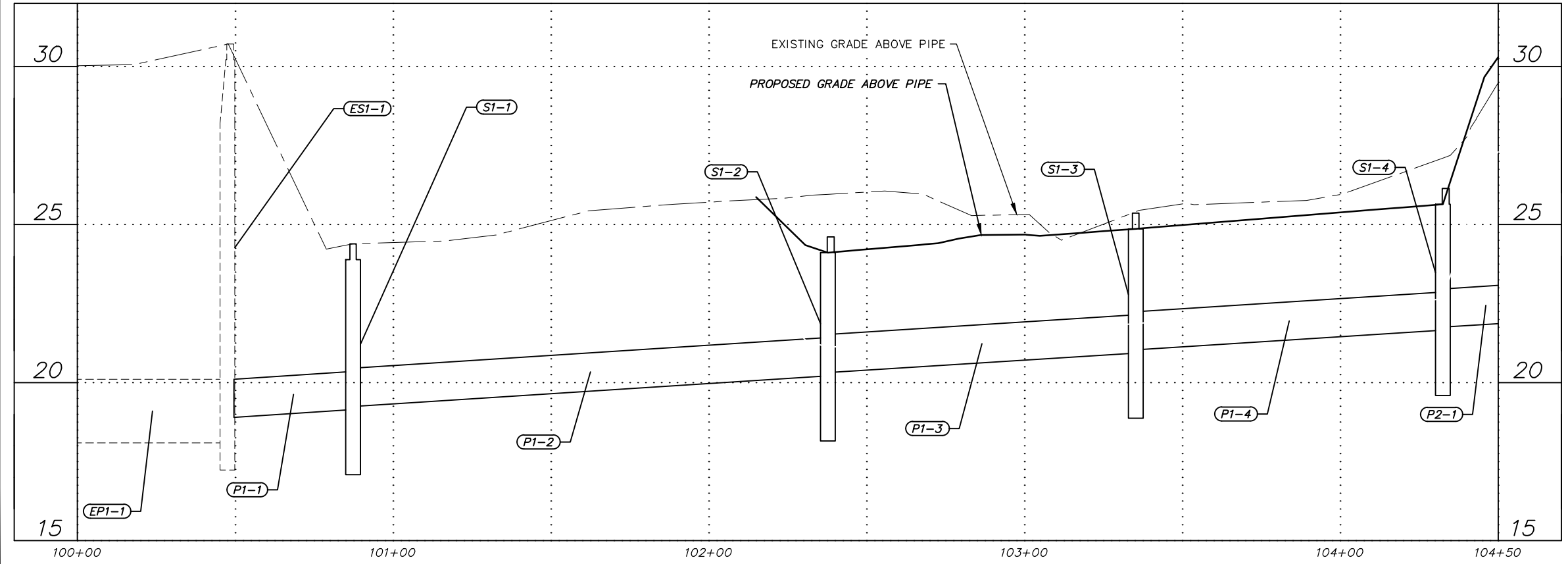
- NOTES:**
1. ALL STORM DRAIN WORK TO BE INCLUDED IN BASE BID.
  2. REFER TO SHEET SD4 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
  3. REFER TO SHEETS SD4-SD6 FOR STORM DRAIN DETAILS.

55.02 & 55.03 – STORM DRAIN & SUBDRAIN PIPE

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
EP1-1	24	CMP	-	ES1-1	-	18.10	-	-
P1-1	12	CPEP, S	41.75	S1-1	ES1-1	19.25	19.00	0.66%
P1-2	12	CPEP, S	150.44	S1-2	S1-1	20.32	19.35	0.66%
P1-3	12	CPEP, SP	97.49	S1-3	S1-2	21.04	20.42	0.66%
P1-4	12	CPEP, SP	97.28	S1-4	S1-3	21.76	21.14	0.66%

55.04 & 55.05 – STORM DRAIN STRUCTURES

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	NORTHING	EASTING	TOP OF CASTING ELEVATION (FT)	CURB TYPE	COMMENTS
ES1-1	CONNECT	MH	2638235.07	1658604.31	30.71	N/A	EXISTING MH (TYPE I)
S1-1	MH I	MH	2638273.94	1658612.71	24.39	N/A	MANHOLE COVER, PER MASS STANDARD DETAIL 55-7
S1-2	MH I (RED HT)	MH	2638239.26	1658752.59	24.61	N/A	BEEHIVE INLET, PER MASS STANDARD DETAIL 55-9
S1-3	MH I (RED HT)	MH	2638370.25	1658841.04	25.37	N/A	BEEHIVE INLET, PER MASS STANDARD DETAIL 55-9
S1-4	MH I (RED HT)	MH	2638416.88	1658926.41	26.14	N/A	BEEHIVE INLET, PER MASS STANDARD DETAIL 55-9



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

ARRC DEPOT DRIVE IMPROVEMENTS – PHASE I  
**STORM DRAIN PLAN & PROFILE**  
 BIORETENTION SWALE

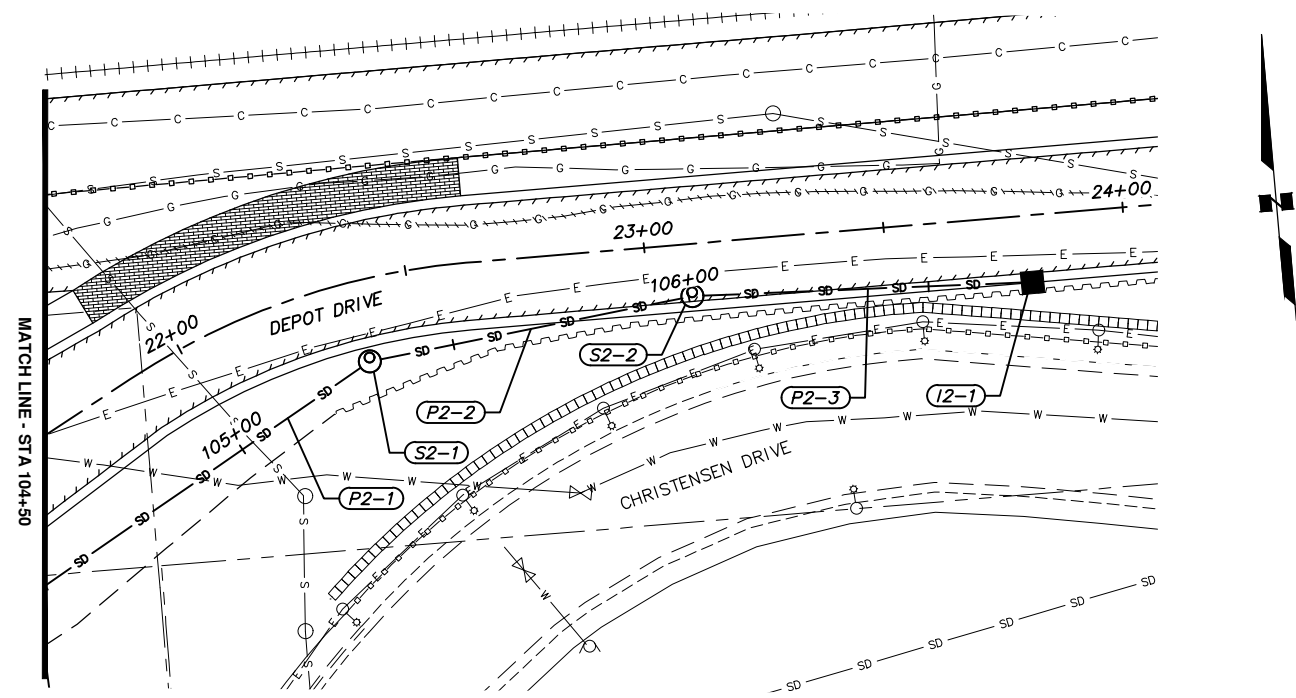
PROJECT NO: 31103.01  
 STATUS: FINAL  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 20'
VER.	1" = 2'
DESIGNED BY	MVH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

SHEET NO. **SD1**

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Plan & Profile\_Storm.dwg PLOT DATE: 2/14/2020 3:26 PM

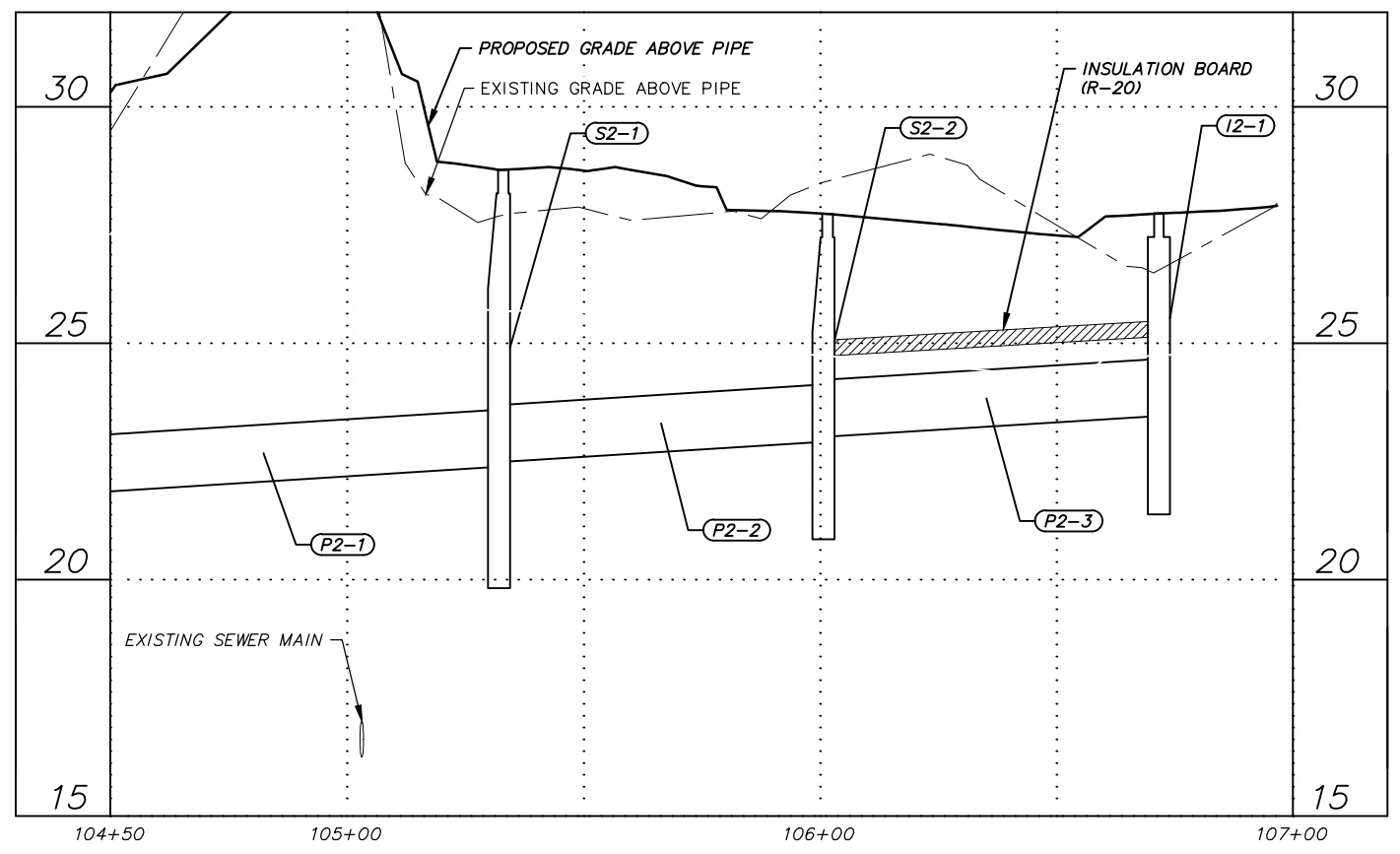


**55.02 – STORM DRAIN PIPE**

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
P2-1	12	CPEP, S	99.70	S2-1	S1-4	22.49	21.86	0.66%
P2-2	12	CPEP, S	68.53	S2-2	S2-1	23.02	22.59	0.66%
P2-3	12	CPEP, S	68.95	I2-1	S2-2	23.55	23.12	0.66%

**55.05 & 55.09 – STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	NORTHING	EASTING	TOP OF CASTING ELEVATION (FT)	CURB TYPE	COMMENTS
S2-1	MH I	MH	2638466.45	1659012.90	29.16	N/A	BEEHIVE INLET, PER MASS STANDARD DETAIL 55-9
S2-2	MH I	MH	2638474.43	1659080.97	27.70	N/A	MANHOLE COVER, PER MASS STANDARD DETAIL 55-7
I2-1	CB	CI	2638471.33	1659151.84	27.73	1	



- NOTES:**
- ALL STORM DRAIN WORK TO BE INCLUDED IN BASE BID.
  - REFER TO SHEET SD4 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
  - REFER TO SHEETS SD4-SD6 FOR STORM DRAIN DETAILS.



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

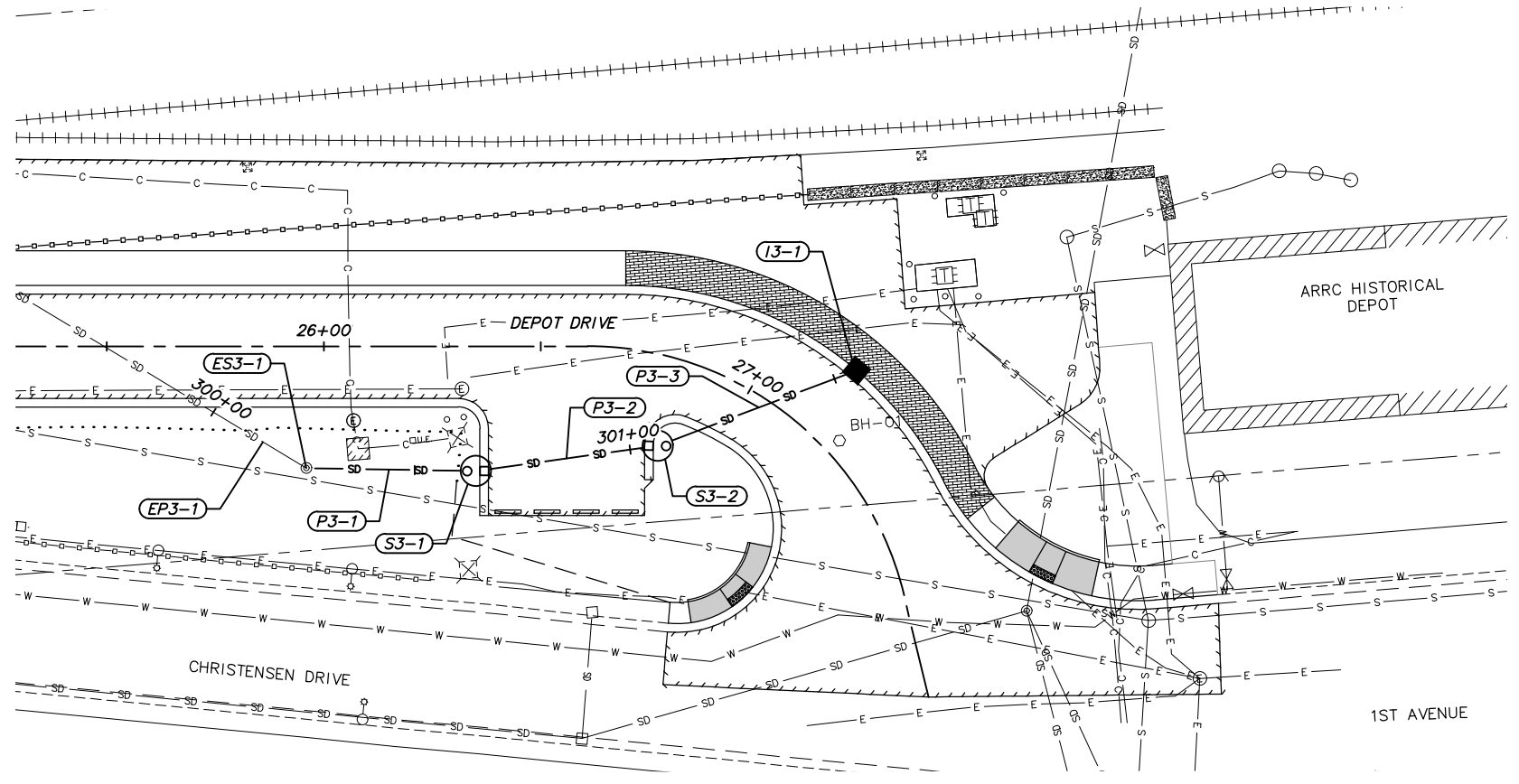
SCHE: A  
 PROJECT NO. 31103.01  
 CITY GRID 1230  
 WATER GRID 1230  
 SEWER GRID 1230  
 ARRC DEPOT DRIVE IMPROVEMENTS – PHASE I  
 STORM DRAIN PLAN & PROFILE  
 PROJECT NO. 31103.01  
 STATUS: FINAL  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

SCALE	HOR. 1" = 20'
VER.	1" = 2'
DESIGNED BY	MVH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

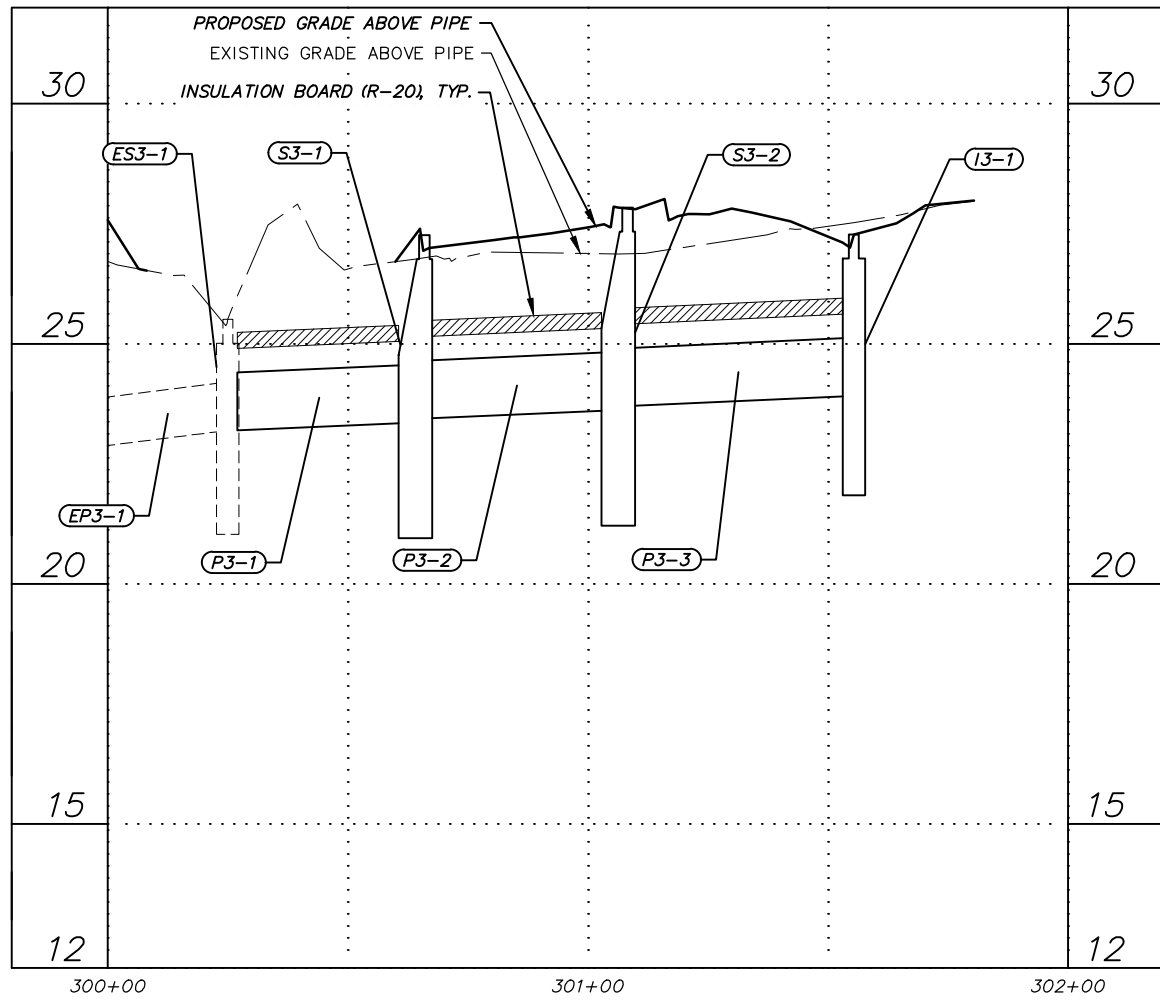
SHEET NO. **SD2**

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Plan & Profile\_Storm.dwg PLOT DATE: 2/14/2020 3:26 PM



**NOTES:**

1. ALL STORM DRAIN WORK TO BE INCLUDED IN BASE BID.
2. REFER TO SHEET SD4 FOR GENERAL STORM DRAIN STRUCTURE/PIPE NOTES AND STRUCTURE ABBREVIATIONS USED ON SUMMARY TABLES SHOWN ON THIS SHEET.
3. REFER TO SHEETS SD4-SD6 FOR STORM DRAIN DETAILS.
4. CONNECT TO EXISTING STORM DRAIN CATCH BASIN. REMOVE AND REPLACE MANHOLE COVER AND FRAME WITH BEEHIVE INLET PER MASS STANDARD DETAIL 55-9.



**55.02 – STORM DRAIN PIPE**

PIPE NAME	SIZE (IN.)	PIPE TYPE	LENGTH (FT.)	FROM	TO	INLET ELEVATION	OUTLET ELEVATION	SLOPE
EP3-1	24	CMP	—	ES3-1	—	23.20	21.10	1.28%
P3-1	12	CPEP, S	34.07	S3-1	ES3-1	23.45	23.30	0.50%
P3-2	12	CPEP, S	37.35	S3-2	S3-1	23.71	23.55	0.50%
P3-3	12	CPEP, S	45.14	I3-1	S3-2	24.01	23.81	0.50%

**55.04, 55.05 & 55.09 – STORM DRAIN STRUCTURES**

STRUCTURE ID	TYPE OF STRUCTURE	TYPE OF CASTING	NORTHING	EASTING	TOP OF CASTING ELEVATION (FT)	CURB TYPE	COMMENTS
ES3-1	CONNECT	MH	2638446.00	1659365.02	25.51	N/A	SEE NOTE 4
S3-1	CB MH II	MH	2638442.04	1659403.86	27.39	1	
S3-2	CB MH II	MH	2638444.33	1659446.10	27.88	1	
I3-1	CB	CI	2638457.81	1659493.28	27.27	2	



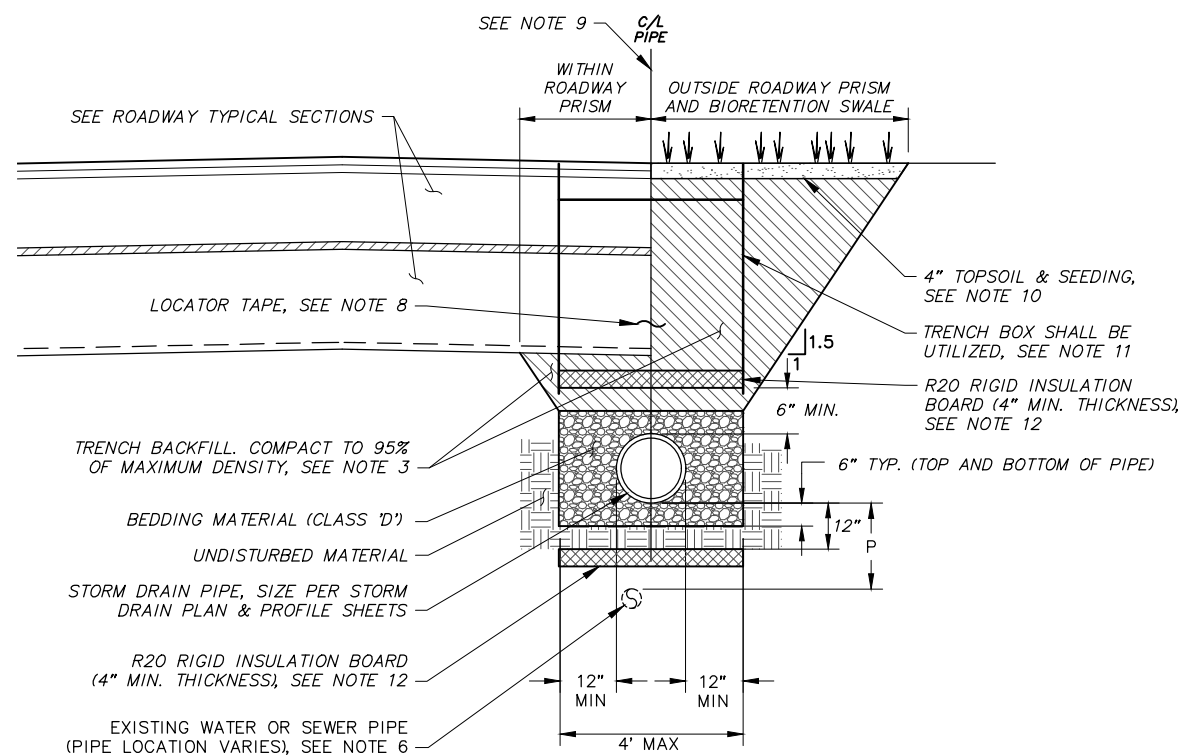
PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 PROJECT NO: 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS – PHASE I  
 STORM DRAIN PLAN & PROFILE  
 PROJECT NO: 31103.01  
 STATUS: FINAL  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

SCALE: HOR. 1" = 20'  
 VER. 1" = 2'  
 DESIGNED BY: MVH  
 DRAWN BY: JS  
 CHECKED BY: EU  
 APPROVED BY: EU  
 SHEET NO. **SD3**

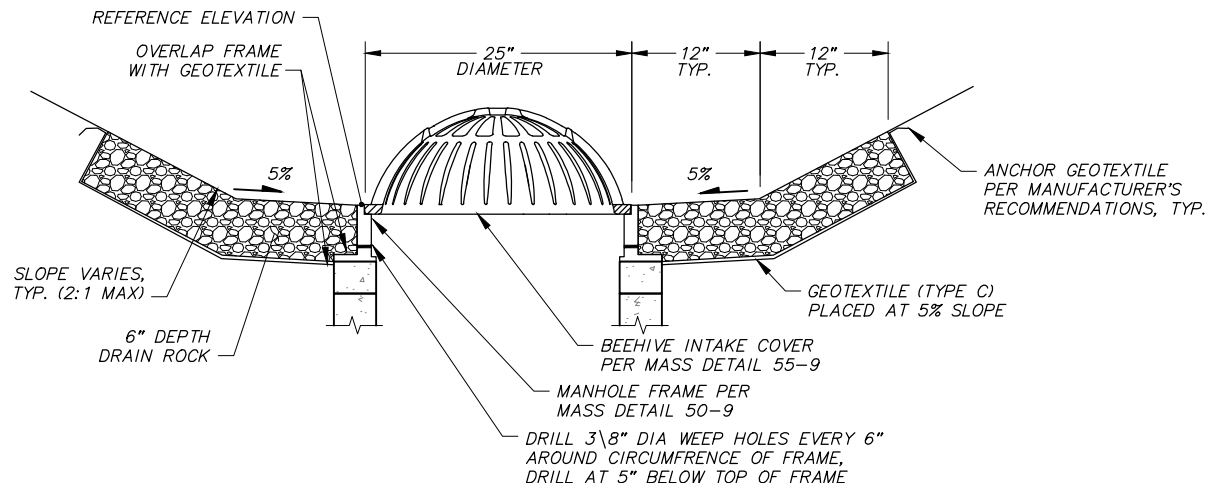
File: \\crweng.com\Projects\SubData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Storm Drain Details.dwg PLOT DATE: 2/14/2020 3:26 PM



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

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

- SEE SHEET SD6 FOR BIORETENTION SWALE TRENCH SECTIONS
- 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 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 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.
- WATER LINES CROSSING STORM DRAIN LINES REQUIRE A MINIMUM VERTICAL SEPARATION OF THREE (3) FEET. INSTALL R20 INSULATION BOARD WHEN 'P' IS LESS THAN 3', AS MEASURED FROM OUTSIDE OF PIPES & WITHIN BEDDING LIMITS, OR AS DIRECTED BY ENGINEER IN FIELD. EIGHTEEN (18) INCHES IS THE MINIMUM INSULATED SEPARATION DISTANCE. IF EIGHTEEN (18) INCHES CAN NOT BE OBTAINED, THE WATER LINE WILL HAVE TO BE RELOCATED.
- WHERE WATER AND STORM DRAIN MAINS CROSS, STORM DRAIN MAIN JOINTS SHALL BE AT LEAST 10 FEET FROM WATER MAIN JOINTS.
- INSTALL DETECTABLE LOCATOR TAPE THREE (3) FEET BELOW FINISH GRADE OR TWO (2) FEET DEEP IN THE STREET STRUCTURAL SECTION PER MASS SECTION 20.13.
- LOCATION OF STORM DRAIN VARIES WITHIN ROADWAY. INSTALL STORM DRAIN AS SHOWN ON STORM DRAIN PLAN & PROFILE SHEETS.
- PLACE 4" OF TOPSOIL AND SEEDING (SCHEDULE A) ON ALL DISTURBED AREAS OUTSIDE OF ROADWAY AND BIORETENTION SWALE. IF WITHIN BIORETENTION SWALE, SEE SHEET SD6 FOR TRENCH SECTION.
- TRENCH BOX SHALL BE UTILIZED TO MINIMIZE TRENCH WIDTH AND REDUCE IMPACTS TO ADJACENT INFRASTRUCTURE.
- INSTALL R20 INSULATION BOARD:
  - ABOVE SD PIPE WHEN COVER IS LESS THAN 4'; INSULATION SHALL BE STAGGERED IN 2" LAYERS, WITH A MINIMUM WIDTH OF 4'.
  - BELOW SD PIPE WHEN 'P' IS LESS THAN 3', AS MEASURED FROM OUTSIDE OF PIPES & WITHIN BEDDING LIMITS, OR AS DIRECTED BY ENGINEER IN THE FIELD.



**2 FIELD INLET DRAIN (OUTSIDE OF BIORETENTION SWALE)**  
SCALE: NTS

**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 (MH I)	CENTER OF MH	FG/TOP OF LID.
TYPE II CBMH (CBMH II)	CENTER OF MH	TBC @ MID. PT. OF CURB INLET HOOD
CATCH BASIN (CB)	CENTER OF CB	TBC @ MID. PT. OF CURB INLET HOOD
CB W/ FIELD INLET	CENTER OF CB	FG/TOP OF FRAME
TYPE I CBMH W/BEEHIVE	CENTER OF MH	FG/TOP OF FRAME

- 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.

- THE FOLLOWING ABBREVIATIONS USED ON THE STORM DRAIN STRUCTURE TABLES ON THE PLAN & PROFILES SHEETS ARE DESCRIBED BELOW:

- STRUCTURE TYPE:
  - MH I - STORM DRAIN MANHOLE, TYPE I
  - MH I (RED HT) - REDUCED HEIGHT STORM DRAIN MANHOLE, TYPE I
  - CB - CATCH BASIN
  - CB MH II - CATCH BASIN MANHOLE, TYPE II
  - CONNECT - CONNECT TO STORM DRAIN MANHOLE
- CASTING TYPE:
  - C.I. - CURB INLET
  - MH - MANHOLE FRAME AND LID



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCHEMATIC: A  
DATE: FEB 2020

ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
STORM DRAIN DETAILS

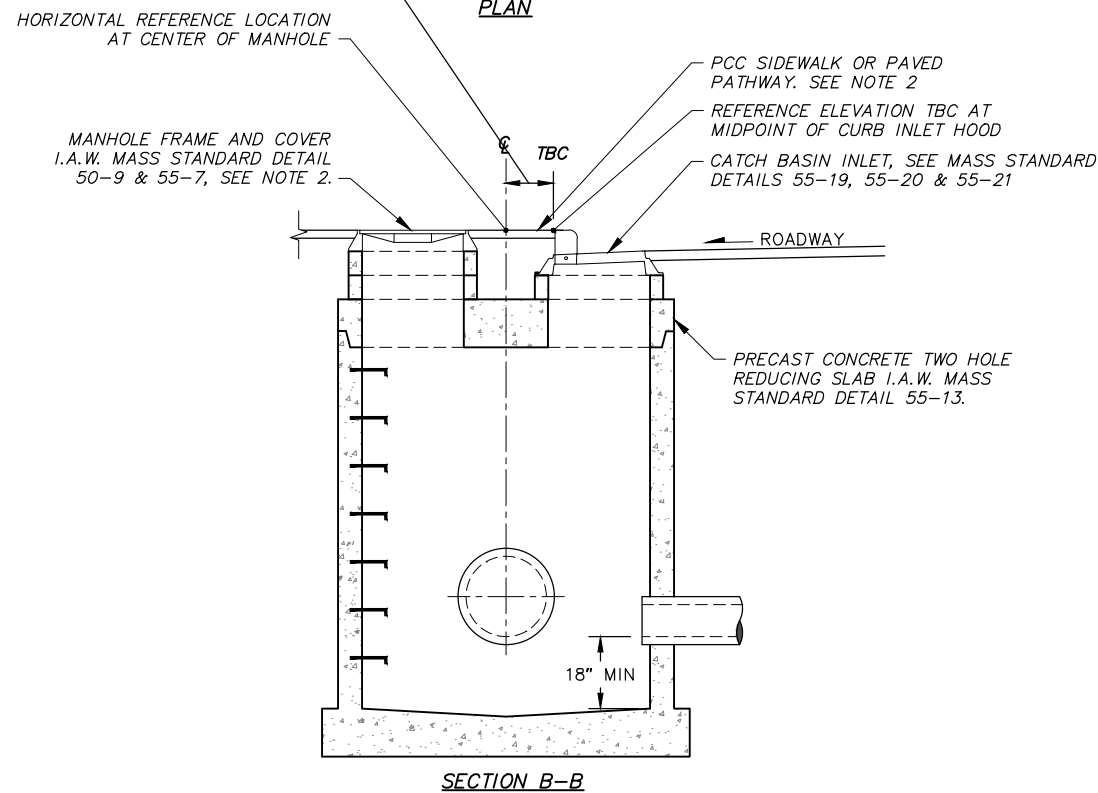
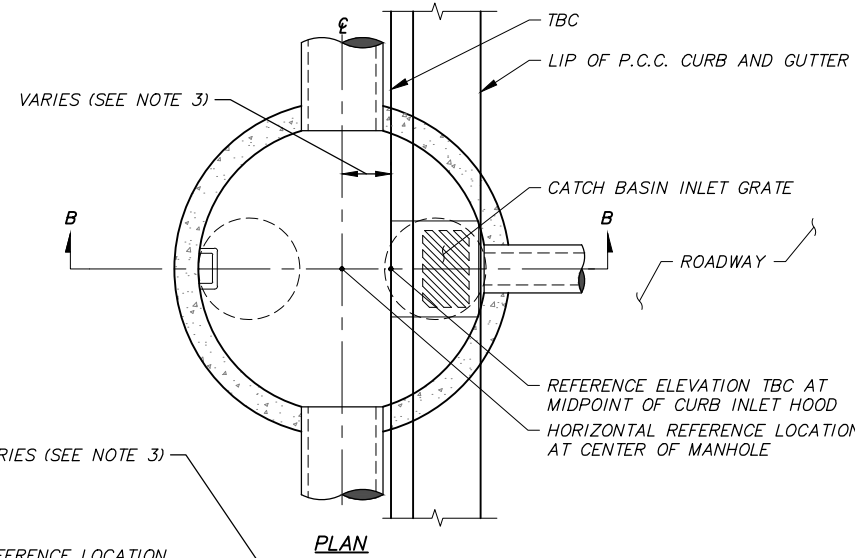
PROJECT NO: 31103.01  
STATUS: FINAL

REV	DATE	DESCRIPTION	BY

SCALE	HOR. N/A	VER. N/A	DESIGNED BY		CHECKED BY		APPROVED BY	
			MVH		EJ			

SHEET NO. **SD4**

File: \\crweng.com\Projects\JobsData\31103.01 ARRC Depot Drive Development\00 CADD\01 Working Set\01 Civil\31103.01 Storm Drain Details.dwg PLOT DATE: 2/14/2020 3:26 PM

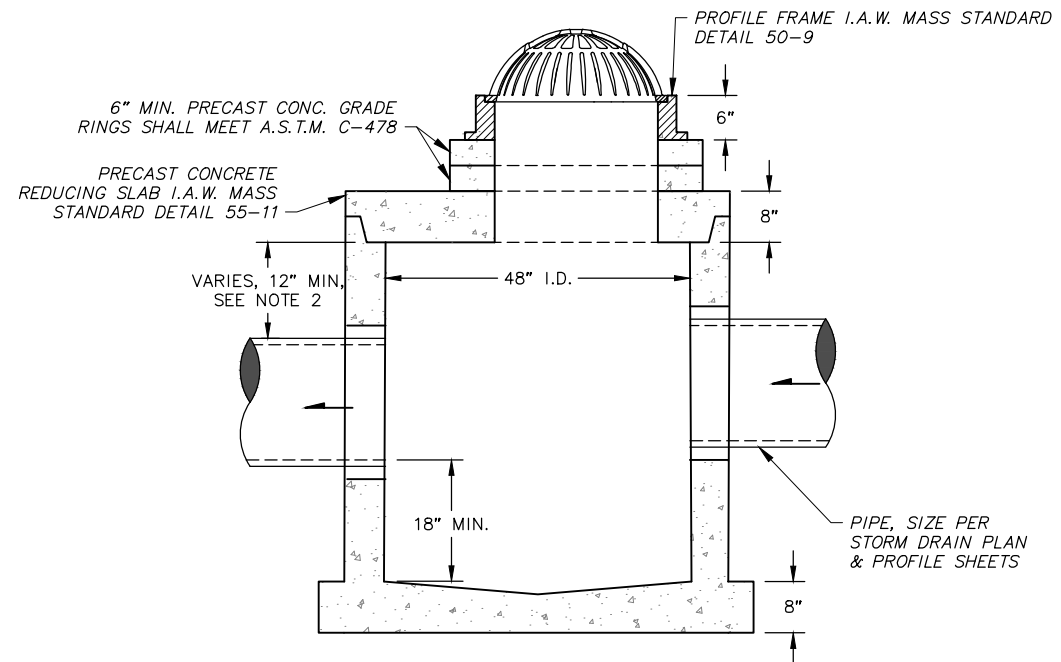


**TYPE II CATCH BASIN MANHOLE DETAIL**

SCALE: NTS

**TYPE II CATCH BASIN MANHOLE NOTES**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2015 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS AS CURRENTLY AMENDED AND AS MODIFIED ON THIS DETAIL.
2. 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.
3. OFFSET FOR STANDARD INSTALLATION IS 0.95'.



**TYPE I MANHOLE REDUCED HEIGHT**

SCALE: NTS

**TYPE I MANHOLE REDUCED HEIGHT 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 PIPE OR SUBDRAIN PIPE AS SHOWN ON THE PLAN AND PROFILE SHEETS.



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 PROJECT NO: 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 STORM DRAIN DETAILS  
 STATUS: FINAL  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	BY

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HOR. VER.	N/A
DESIGNED BY	MVH
DRAWN BY	JS
CHECKED BY	EJ
APPROVED BY	EJ

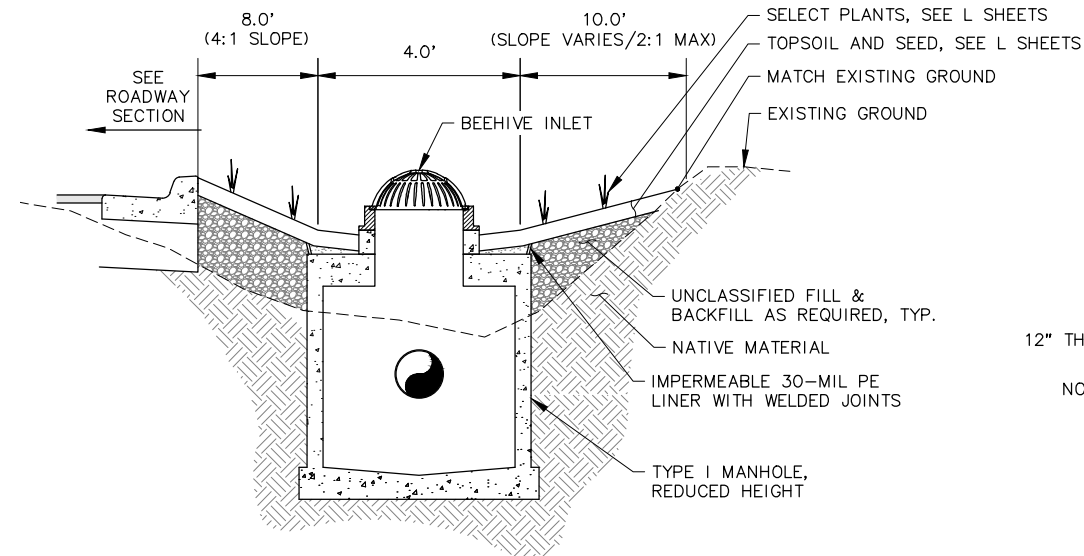
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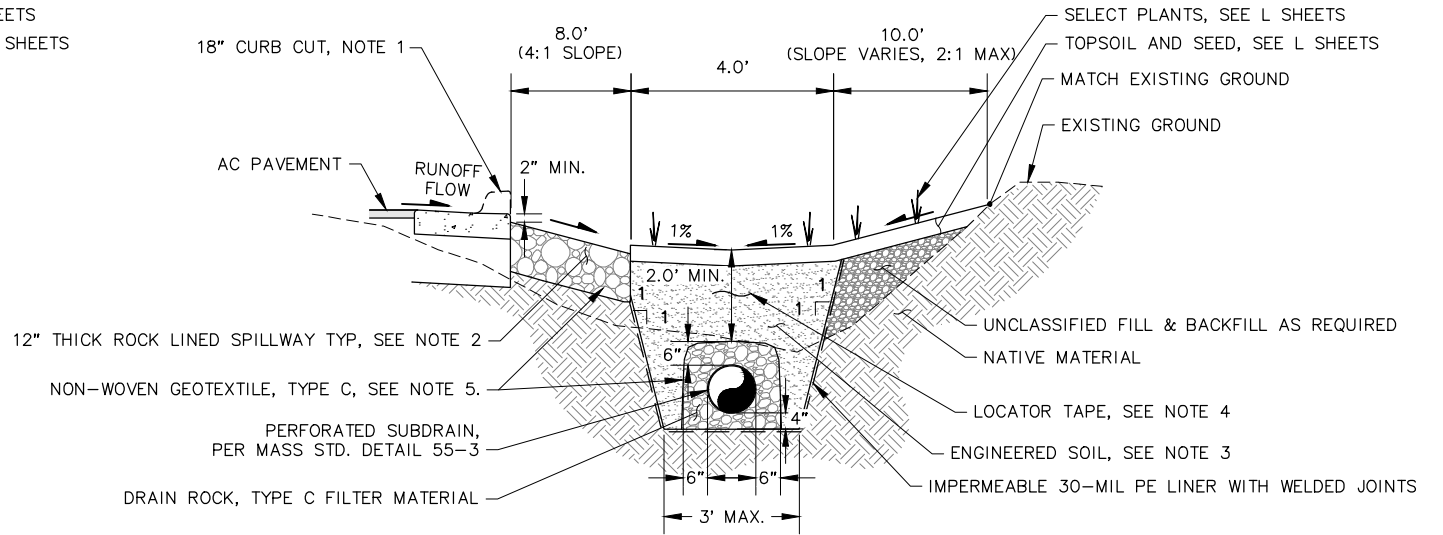
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 CITY GRID 1230  
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 SEWER GRID 1230

SCH: A  
 PROJECT NO. 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS - PHASE I  
 STORM DRAIN BIORETENTION SWALE DETAILS  
 DATE: FEB 2020  
 STATUS: FINAL



**1 BIORETENTION STORM DRAIN MANHOLE SECTION VIEW**

SCALE: NTS



**2 BIORETENTION SWALE & CURB CUT SECTION VIEW**

SCALE: NTS

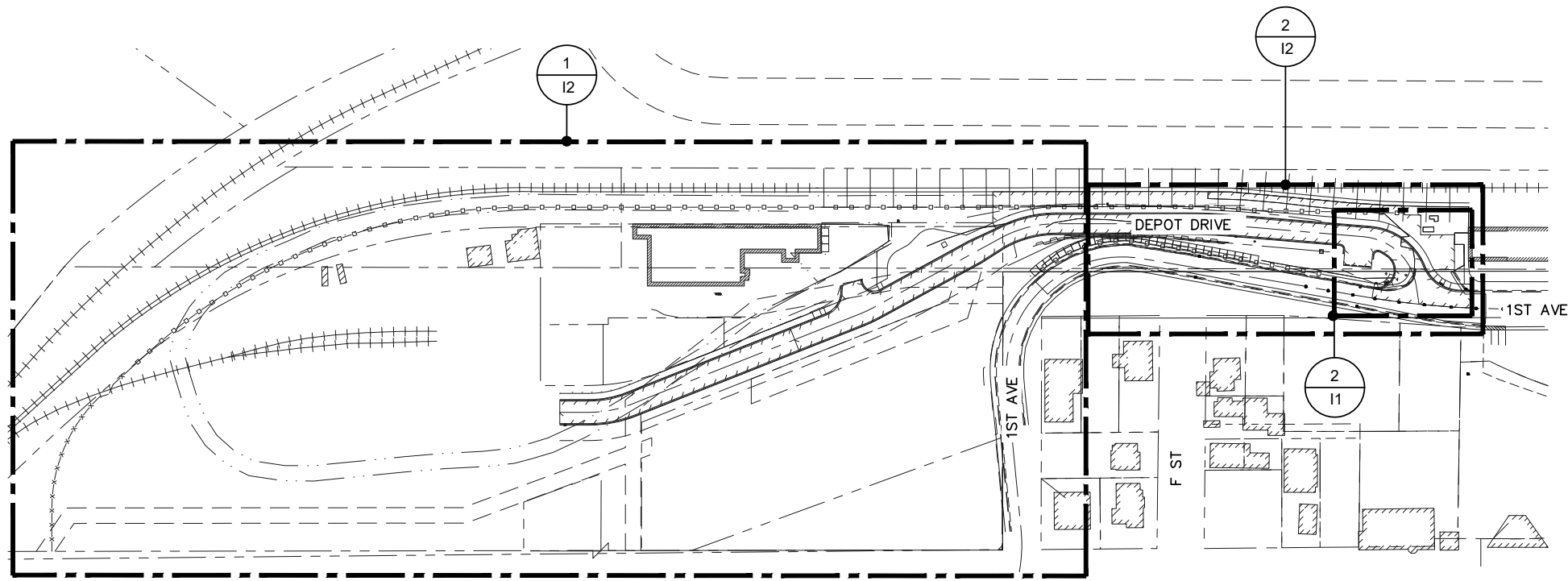
**NOTES:**

1. INSTALL CURB CUTS ADJACENT TO BIORETENTION SWALE. LOCATE CUTS 6' DOWNSTREAM OF NEAREST STORM DRAIN MANHOLE.
2. ROCK LINED SPILLWAY MEDIA SHALL CONFORM TO DRAIN ROCK PER MASS 20.18. LENGTH IN THE DIRECTION OF FLOW SHALL BE A MINIMUM OF 8 FEET, WITH A MINIMUM WIDTH OF 2.5 FEET. INSTALL SPILLWAY AT CURB CUTS ONLY, MIN. 2" BELOW FLOW LINE.
3. SEE SPECIAL PROVISIONS FOR ENGINEERED SOIL SPECIFICATIONS.
4. INSTALL DETECTABLE LOCATOR TAPE AT LEAST 18 INCHES BUT NO MORE THAN 24 INCHES ABOVE THE CROWN OF THE PIPE.
5. A MINIMUM 12" OVERLAP OF GEOTEXTILE WRAPPING AT THE TOP OF THE SUBDRAIN AND DRAIN ROCK IS REQUIRED.

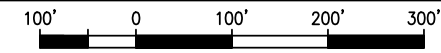
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N/A	N/A	N/A	MVH	JS	EJ	EJ

REV	DATE	DESCRIPTION	REVISION	BY



1  
11  
ELECTRICAL VICINITY MAP - ARRC DEPOT @ SHIP CREEK  
1" = 100'

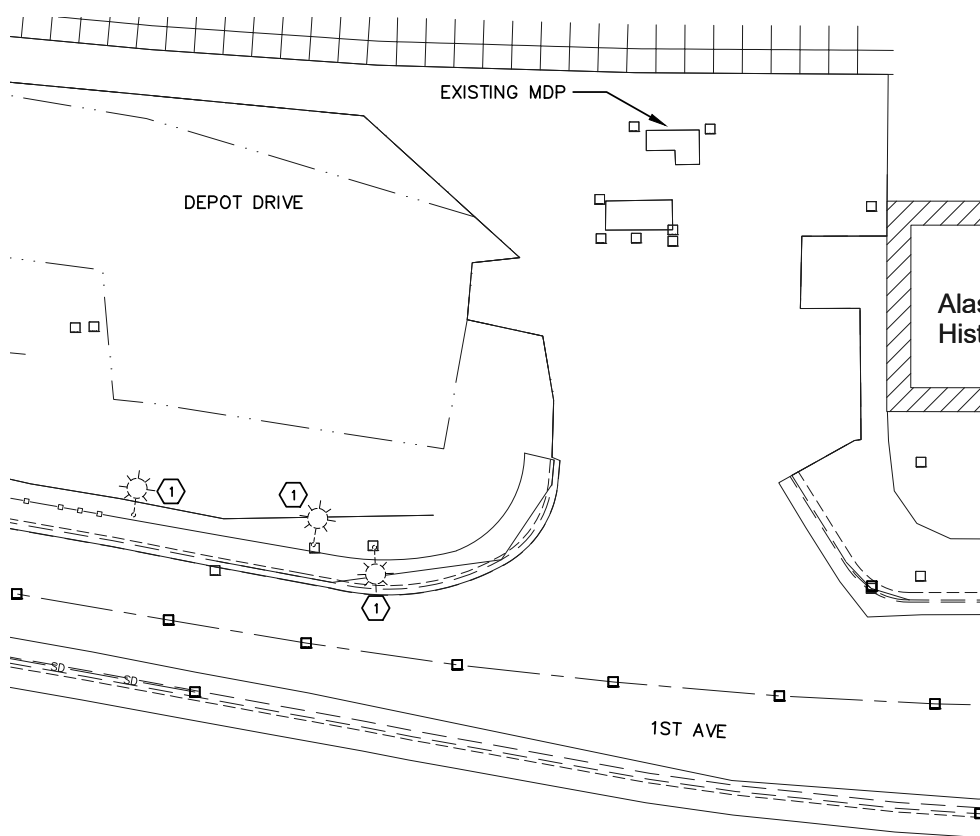


**DEMOLITION NOTES**

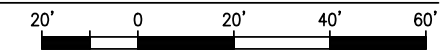
- 1 DEACTIVATE EXISTING CIRCUIT AT LOADCENTER, DISCONNECT AND REMOVE EXISTING ELECTROLIER INDICATED AND SALVAGE FOR RE-INSTALLATION PER MASS SECTION 80.28. REMOVE STRUCTURES, FOUNDATIONS, CONDUIT AND CONDUCTORS AS REQUIRED. DEMOLISH EXISTING FOUNDATION AND BOXES BACK TO LIMITS OF EXCAVATION. SEE SHEET 12 FOR NEW LOCATIONS.

**GENERAL NOTES**

- 1. ALL WORK SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS (M.A.S.S.), TITLE 21, AND THE PROJECT MANAGEMENT & ENGINEERING DEPARTMENT DESIGN CRITERIA MANUAL (DCM) UNLESS OTHERWISE NOTED INCLUDING MOA STANDARD DETAILS. SEE SHEET 14 FOR EXHIBIT DRAWINGS.
- 2. ALL RACEWAYS SHALL BE GALVANIZED RIGID METAL CONDUIT (RMC) PER SECTION 80.07 UNLESS OTHERWISE IDENTIFIED.
- 3. CONTRACTOR SHALL COORDINATE WITH ARRC AND UTILITY (ML&P) FOR LINE EXTENSION WORK REQUIRED FOR CONNECTION OF EXISTING LOADCENTER 'B'.
- 4. CONTRACTOR SHALL COORDINATE MESH NETWORK LIGHTING CONTROL INTERFACE WITH ARRC PROVIDED EQUIPMENT AS REQUIRED.



2  
11  
ENLARGED ILLUMINATION DEMOLITION PLAN  
1" = 20'

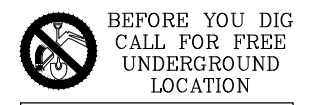


ELECTRICAL LEGEND		
XFMR	TRANSFORMER	T
NIC	NOT IN CONTRACT	
CKT	CIRCUIT - NUMBER AS NOTED (TYP.)	CKT-XX
A/100	ELECTROLIER DESIGNATION - SEE SCHEDULE	
ETR	EXISTING TO REMAIN	
NEC	NATIONAL ELECTRICAL CODE	
TYP.	TYPICAL	
E	EMERGENCY LIGHT, CIRCUIT, PANEL	
C	CONDUIT, CONCEALED. SIZE AS NOTED (TYP.)	
	CONDUIT, UNDERGROUND OR UNDERFLOOR	
	CONDUIT, EXPOSED	
FLEX	CONDUIT, FLEXIBLE	
	HOMERUN TO PANEL/CIRCUITS AS NOTED	
#X	WIRE COUNT OF # 12 UON/SPECIFIED	
UP	CONDUIT UP	
DN	CONDUIT DOWN	
PNL	PANELBOARD - SEE SCHEDULES	
	LOADCENTER - SEE SCHEDULES	
	REFER TO INDICATED NOTE	
	COMMUNICATIONS OUTLET	
RECPT	DUPLEX RECEPTACLE - NEMA 5-20R GFCI TYPE	
J-BOX	TYPE 1A JUNCTION BOX	
	ELECTROLIER - VARIOUS TYPES AS NOTED	
ARRC	ALASKA RAILROAD CORPORATION	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
AWG	AMERICAN WIRE GAUGE	
BNG	BELOW NATURAL GRADE	
(E)	EXISTING	
DCM	DESIGN CRITERIA MANUAL	
FOC	FIBER OPTIC CABLE	
GND	GROUND	
HDPE	HIGH DENSITY POLYETHYLENE	
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT	
MDP	MAIN DISTRIBUTION PANEL	
MFR	MANUFACTURER	
MOA	MUNICIPALITY OF ANCHORAGE	
(N)	NEW	
PC	PHOTOCELL	PC
RMC	RIGID METALLIC CONDUIT	
SCH	SCHEDULE	
WP	WEATHERPROOF	
WR	WEATHER RESISTANT	

**LINETYPES**

- NEW WORK
- EXISTING
- DEMOLITION

THIS IS A STANDARD LEGEND, ALL SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY ON THE DRAWING(S).



Locate Call Center of Alaska  
 WEB: www.811ak.com  
 Statewide...811  
 who will notify subscribed utilities only.  
 Other utilities need to be contacted individually.



PROJECT NO.	20002
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

ARRC DEPOT DRIVE IMPROVEMENTS  
 ELECTRICAL LEGEND, SCHEDULE & PLANS  
 PROJECT NO: 20002  
 STATUS: FINAL  
 DATE: FEB 2020

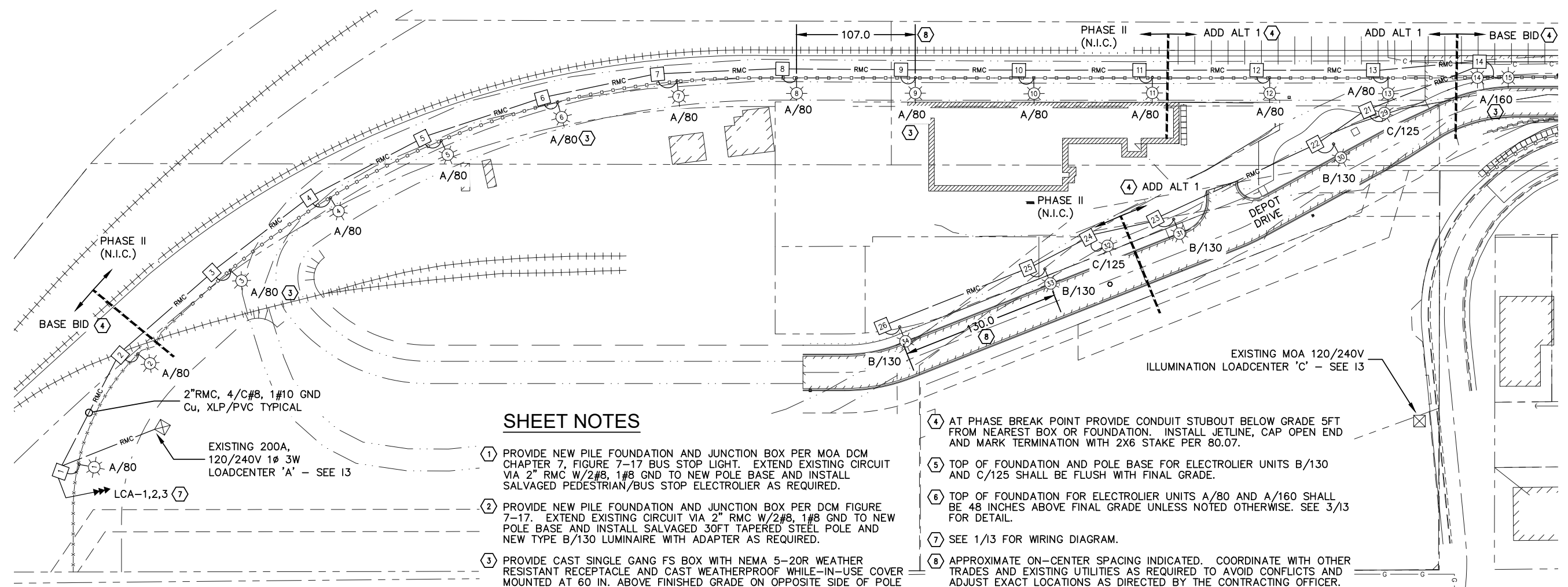
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SCALE	
HOR. VER.	
DESIGNED BY	JHE
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CHECKED BY	EMC
APPROVED BY	EMC

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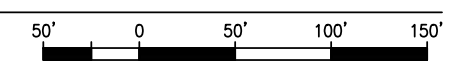
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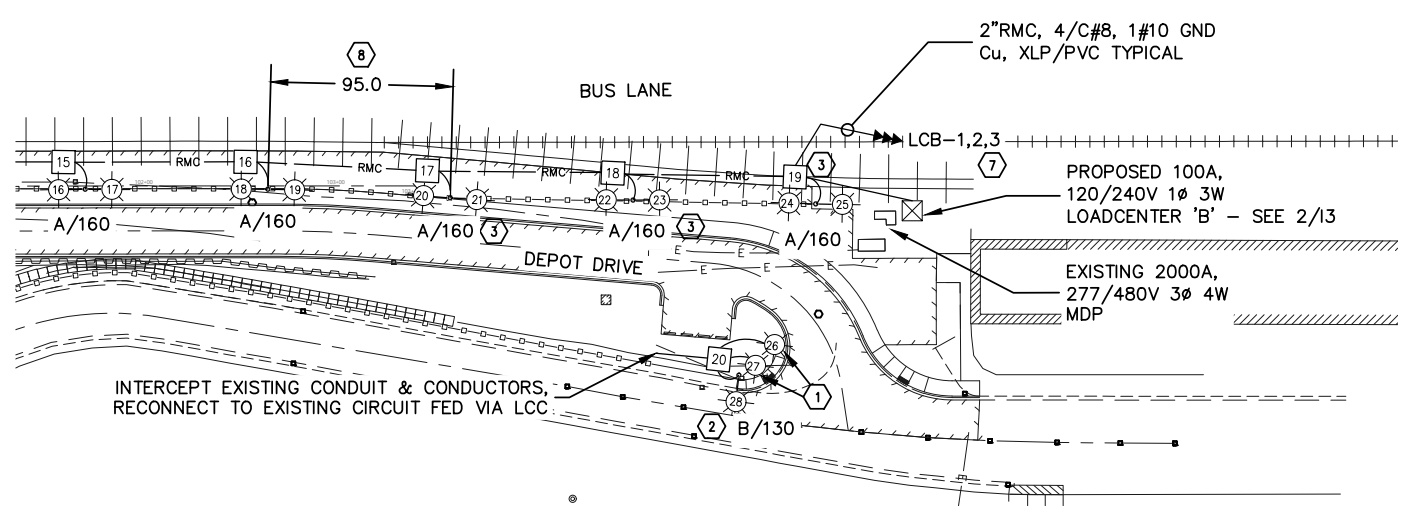
**SHEET NOTES**

- 1 PROVIDE NEW PILE FOUNDATION AND JUNCTION BOX PER MOA DCM CHAPTER 7, FIGURE 7-17 BUS STOP LIGHT. EXTEND EXISTING CIRCUIT VIA 2" RMC W/2#8, 1#8 GND TO NEW POLE BASE AND INSTALL SALVAGED PEDESTRIAN/BUS STOP ELECTROLIER AS REQUIRED.
- 2 PROVIDE NEW PILE FOUNDATION AND JUNCTION BOX PER DCM FIGURE 7-17. EXTEND EXISTING CIRCUIT VIA 2" RMC W/2#8, 1#8 GND TO NEW POLE BASE AND INSTALL SALVAGED 30FT TAPERED STEEL POLE AND NEW TYPE B/130 LUMINAIRE WITH ADAPTER AS REQUIRED.
- 3 PROVIDE CAST SINGLE GANG FS BOX WITH NEMA 5-20R WEATHER RESISTANT RECEPTACLE AND CAST WEATHERPROOF WHILE-IN-USE COVER MOUNTED AT 60 IN. ABOVE FINISHED GRADE ON OPPOSITE SIDE OF POLE HANDHOLE. INSTALL 1"LMFC TO BOX FROM 1"RMC STUBBED UP AT TOP OF POLE BASE FOUNDATION. SEE 13 FOR DETAILS.
- 4 AT PHASE BREAK POINT PROVIDE CONDUIT STUBOUT BELOW GRADE 5FT FROM NEAREST BOX OR FOUNDATION. INSTALL JETLINE, CAP OPEN END AND MARK TERMINATION WITH 2X6 STAKE PER 80.07.
- 5 TOP OF FOUNDATION AND POLE BASE FOR ELECTROLIER UNITS B/130 AND C/125 SHALL BE FLUSH WITH FINAL GRADE.
- 6 TOP OF FOUNDATION FOR ELECTROLIER UNITS A/80 AND A/160 SHALL BE 48 INCHES ABOVE FINAL GRADE UNLESS NOTED OTHERWISE. SEE 3/13 FOR DETAIL.
- 7 SEE 1/13 FOR WIRING DIAGRAM.
- 8 APPROXIMATE ON-CENTER SPACING INDICATED. COORDINATE WITH OTHER TRADES AND EXISTING UTILITIES AS REQUIRED TO AVOID CONFLICTS AND ADJUST EXACT LOCATIONS AS DIRECTED BY THE CONTRACTING OFFICER.
- 9 ILLUMINATION EQUIPMENT (POLES, ARMS, & LUMINAIRES) SHALL BE FURNISHED BY ARRC. TRENCHING, FOUNDATION, BOXES, RACEWAY, GROUNDING, CABLE AND ELECTROLIERS SHALL BE CONTRACTOR FURNISHED, ASSEMBLED AND INSTALLED.

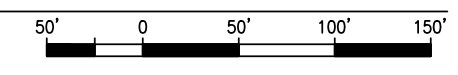
1 PARTIAL ILLUMINATION PLAN  
12 1" = 50'



ELECTROLIER SCHEDULE					
TYPE	LM OUTPUT	DIST	TEMP	DESCRIPTION	MFR/MODEL NO. (OR EQUAL)
A/80 6 9	9,200	II	40K	SOLID STATE ROADWAY LUMINAIRE, MEDIUM GREY POLYMER HOUSING, TENON MOUNT, 120-277V DRIVER, NEMA 7-PIN PHOTOCELL RECEPTACLE, IP66/ANSI 3G, UTILITY LABEL.	CREE: RSWM-A-HT-2ME-9L-40K8-UL-GY-N (LUMINAIRE) VALMONT: R-2MA0432B-220840605T40-SBF (POLE/ARM)
A/160 6 9	18,400	II	40K	SAME AS TYPE A/80 EXCEPT DUAL 4FT ARMS AND LUMINAIRES @ 180 DEGREES.	CREE: RSWM-A-HT-2ME-9L-40K8-UL-GY-N (LUMINAIRE) VALMONT: R-2MA0432B-220840605T40-SBF (POLE/ARM)
B/130 5	16,022	III	40K	SOLID STATE AREA LUMINAIRE, GREEN DIE-CAST HOUSING, INTEGRAL ARM MOUNT, 120-277V DRIVER, NEMA 7-PIN PHOTOCELL RECEPTACLE, IP66/ANSI 3G, SINGLE POLE MOUNTING BRACKET.	CREE: OSQ-A-NM-3ME-K40KULRPB1A (LUMINAIRE) VALMONT: DS210660A300HGFCAB (POLE)
C/125 5	11,255	V	35K	SOLID STATE DECORATIVE PUBLIC TRANSIT/PEDESTRIAN LUMINAIRE, GREEN DIE-CAST HOUSING, 120-277V DRIVER, NEMA 7-PIN PHOTOCELL RECEPTACLE, GFCI OUTLET..	STERNBERG: 1A1970LEDSGRB8ARC35T5MDL03SV2R7HSHNCSX (LUMINAIRE) 3812FP4/DSPAGFI/VG (POLE)



2 PARTIAL ILLUMINATION PLAN  
12 1" = 50'





**MBA**  
Consulting Engineers, Inc.  
(907) 274-2622 / FAX (907) 274-0914

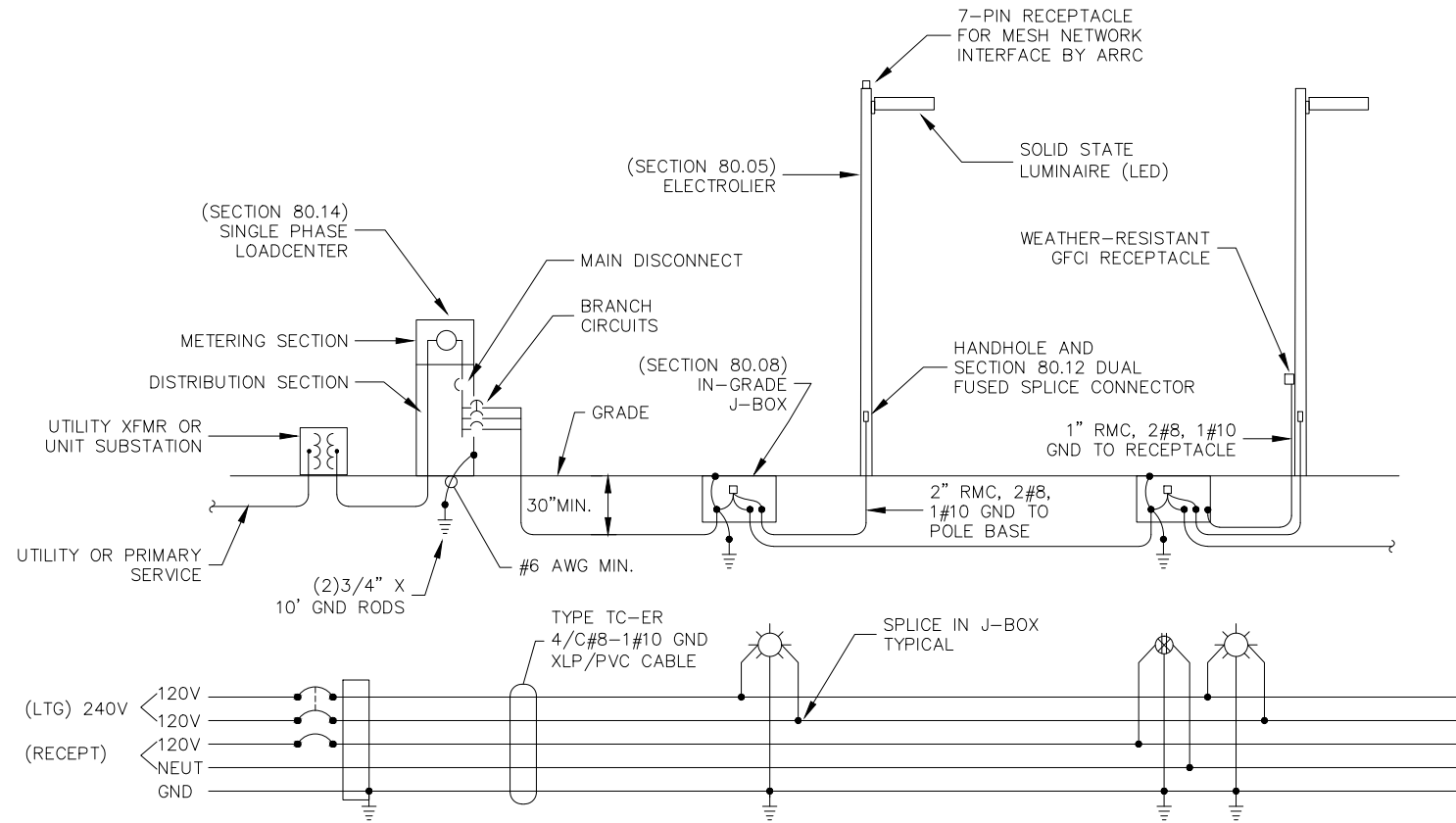
PROJECT NO.	20002	CITY GRID	1230	WATER GRID	1230
SCH: ALL		SEWER GRID	1230		

ARRC DEPOT DRIVE IMPROVEMENTS  
ILLUMINATION PLANS & SCHEDULE

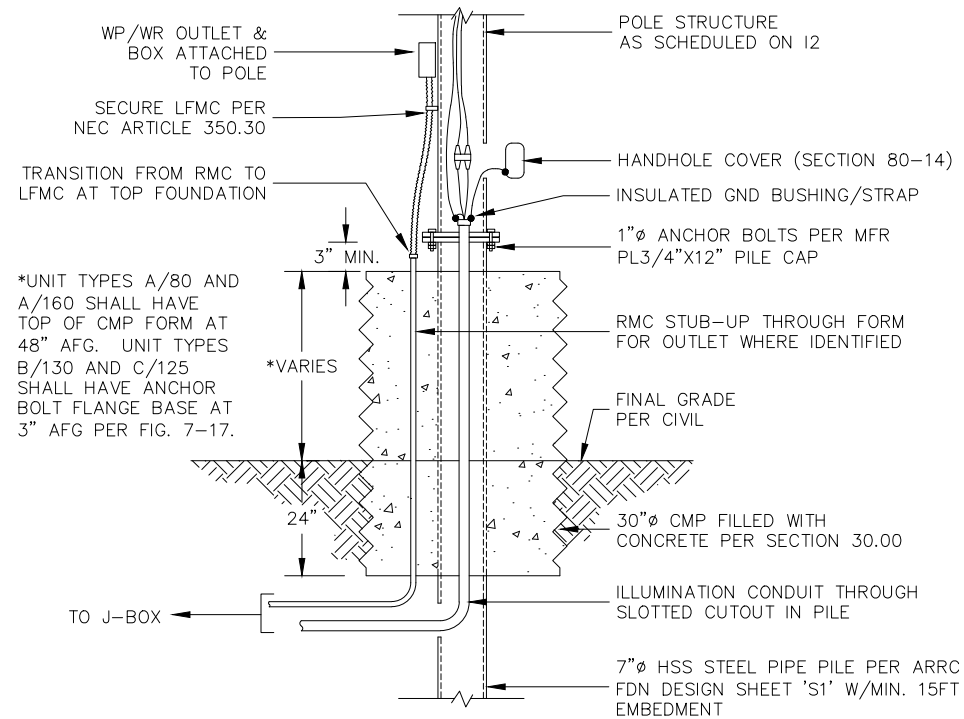
DATE: FEB 2020  
STATUS: FINAL

SCALE	HOR. VER.	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
		JHE	JHE	EMC	EMC

SHEET NO. 12



1 TYPICAL ILLUMINATION AND OUTLET CIRCUIT WIRING DIAGRAM  
13 NOT TO SCALE



3 ELECTROLIER FOUNDATION DETAILS  
13 NOT TO SCALE

### A.I.R. REQUIREMENTS

**SHORT CIRCUIT AND SERVICE NOTES:**

BASED ON THE FOLLOWING:

UTILITY	=	MLP
TRANSFORMER SIZE	=	50 KVA
TRANSFORMER IMPEDANCE	=	1.40 % Z
LENGTH OF SERVICE CONDUCTORS	=	95 FEET
SERVICE CONDUCTOR SIZE	=	#3/0 AWG
NUMBER OF PARALLEL RUNS	=	1
CONDUIT TYPE	=	Copper in Non-Metallic
MOTOR CONTRIBUTION	=	0 HP

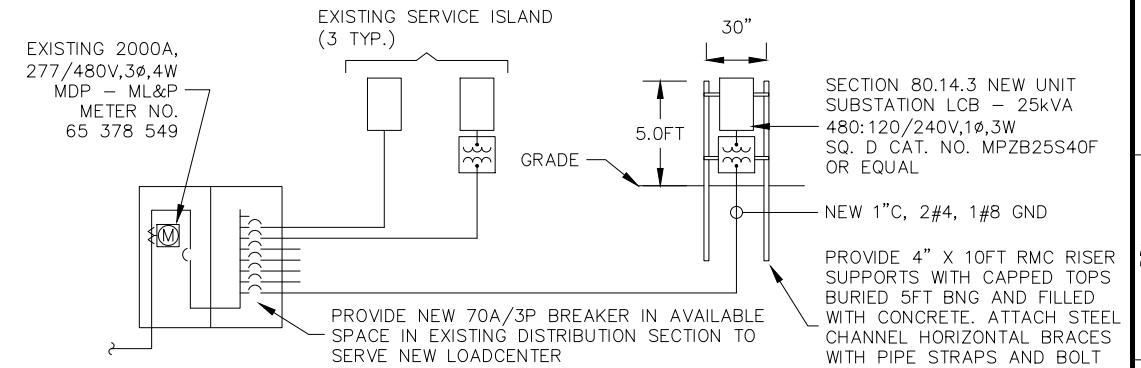
AVAILABLE SHORT CIRCUIT AMPS SUMMARY

LOCATION	TH#1	LC-A
SCA RMS @ XR	14.663	5.674
	1.49	0.67

THE ABOVE DATA (OTHER THAN MOTOR LOAD) SHALL BE CONFIRMED WITH THE SERVING UTILITY BEFORE EQUIPMENT IS ORDERED. ANY VARIATIONS THAT MIGHT INCREASE AVAILABLE SHORT-CIRCUIT CURRENT SHALL BE REPORTED TO THE CONTRACTING AGENCY.

SERVICE EQUIPMENT SHALL HAVE AN INTEGRATED SHORT CIRCUIT RATING SUITABLE FOR THE AVAILABLE SCA. DOWNSTREAM EQUIPMENT AND CIRCUIT BREAKER AIC RATINGS MAY BE SATISFIED BY UTILIZING ONE OF THE FOLLOWING METHODS:

- EQUIPMENT RATED FOR THE AVAILABLE SCA AT EACH POINT IN THE SYSTEM.
- UL-LISTED SERIES-CONNECTED CIRCUIT BREAKER COMBINATIONS RATED FOR THE AVAILABLE SCA AT EACH POINT.



2 PROPOSED YARD POWER ONE-LINE DIAGRAM  
13 NOT TO SCALE

### PANEL: LCA

PROJECT: DEPOT DRIVE IMPROVEMENTS  
LOCATION: NEMA 3R EXTERIOR

MOUNTING:  SURFACE  LUGS  
OPTIONS:  FEEDTHRU  SHUNT TRIP  ISO GND BAR  
 FLUSH  CB  SUBFEED LUG  SUBFEED BRKR  SOLID NEUTRAL

VOLTAGE: 240/120 VOLT 1 PHASE 3 WIRE 200 A MCB 22k AIC

NOTE	CIRCUIT DESCRIPTION	KVA	AMP	P	CKT	CKT	AMP	P	KVA	CIRCUIT DESCRIPTION	NOTE
	DEPOT DRIVE PH VIII	1.1	20		1	2	20	1	0.5	RECEPTACLES PH VIII	
	SPARE				2	3	4	20	1	SPACE	
	SPACE				5	6	5	6	1	SPACE	
	SPACE				7	8	7	8	1	SPACE	
	SPACE				9	10	9	10	1	SPACE	
	SPACE				11	12	11	12	1	SPACE	
	SPACE				13	14	13	14	1	SPACE	
	SPACE				15	16	15	16	1	SPACE	
	SPACE				17	18	17	18	1	SPACE	
	SPACE				19	20	19	20	1	SPACE	
	SPACE				21	22	21	22	1	SPACE	
	SPACE				23	24	23	24	1	SPACE	
	SPACE				25	26	25	26	1	SPACE	
	SPACE				27	28	27	28	1	SPACE	
	SPACE				29	30	29	30	1	SPACE	

CONNECTED LOAD: 1.7 KVA 6.9 A  
DEMAND LOAD: 1.9 KVA 8.0 A

### PANEL: LCB

PROJECT: DEPOT DRIVE IMPROVEMENTS  
LOCATION: NEMA 3R EXTERIOR

MOUNTING:  SURFACE  LUGS  
OPTIONS:  FEEDTHRU  SHUNT TRIP  ISO GND BAR  
 FLUSH  CB  SUBFEED LUG  SUBFEED BRKR  SOLID NEUTRAL

VOLTAGE: 240/120 VOLT 1 PHASE 3 WIRE 100 A MCB 22k AIC

NOTE	CIRCUIT DESCRIPTION	KVA	AMP	P	CKT	CKT	AMP	P	KVA	CIRCUIT DESCRIPTION	NOTE
	DEPOT DRIVE PH VIII	2.2	20		1	2	20	1	0.7	RECEPTACLES PH VIII	
	SPARE				2	3	4	20	1	SPACE	
	SPACE				5	6	5	6	1	SPACE	
	SPACE				7	8	7	8	1	SPACE	
	SPACE				9	10	9	10	1	SPACE	
	SPACE				11	12	11	12	1	SPACE	
	SPACE				13	14	13	14	1	SPACE	
	SPACE				15	16	15	16	1	SPACE	
	SPACE				17	18	17	18	1	SPACE	
	SPACE				19	20	19	20	1	SPACE	
	SPACE				21	22	21	22	1	SPACE	
	SPACE				23	24	23	24	1	SPACE	
	SPACE				25	26	25	26	1	SPACE	
	SPACE				27	28	27	28	1	SPACE	

CONNECTED LOAD: 2.9 KVA 12.0 A  
DEMAND LOAD: 3.4 KVA 14.3 A

### PANEL: LCC

PROJECT: EXISTING MOA TYPE 1A  
LOCATION: NEMA 3R EXTERIOR

MOUNTING:  SURFACE  LUGS  
OPTIONS:  FEEDTHRU  SHUNT TRIP  ISO GND BAR  
 FLUSH  CB  SUBFEED LUG  SUBFEED BRKR  SOLID NEUTRAL

VOLTAGE: 240/120 VOLT 1 PHASE 3 WIRE 100 A MCB 14k AIC

NOTE	CIRCUIT DESCRIPTION	KVA	AMP	P	CKT	CKT	AMP	P	KVA	CIRCUIT DESCRIPTION	NOTE
	SPACE				1	2	100			MAIN	
	SIGNAL CONTROLLER	50			3	4		2			
	CONTROLS	20	1	7	8	20	1			RECEPTACLES	
	LIGHTING	20			9	10	20			RECEPTACLES	
	LIGHTING	20			11	12	20			LIGHTING	
	LIGHTING	20			13	14	20			LIGHTING	
	LIGHTING	20			15	16	20			LIGHTING	

CONNECTED LOAD: 0.0 KVA 0.0 A  
DEMAND LOAD: 0.0 KVA 0.0 A

**MBA**  
Consulting Engineers, Inc.  
(907) 274-9252 / FAX (907) 274-9914

PROJECT NO. 20002  
CITY GRID 1230  
WATER GRID 1230  
SEWER GRID 1230

SCH: ALL  
ARRC DEPOT DRIVE IMPROVEMENTS  
ELECTRICAL SCHEDULES & DETAILS

DATE: FEB 2020  
STATUS: FINAL

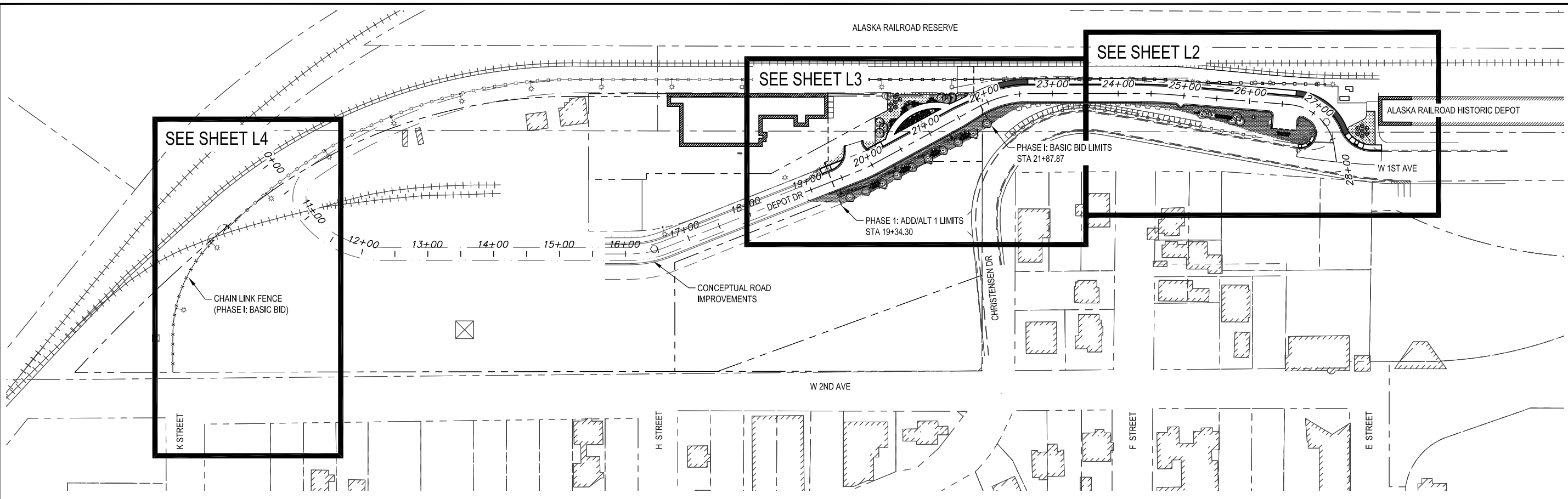
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DESIGNED BY JHE  
DRAWN BY JHE  
CHECKED BY EWC  
APPROVED BY EWC

SHEET NO. 13



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**LANDSCAPE SCHEDULE**

DECIDUOUS TREES						
QTY.	SYMBOL	ABBR.	LATIN NAME	COMMON NAME	SIZE	FURNISHING NOTES
3		AR	ACER RUBRUM	RED MAPLE	2" CAL.	B&B SINGLE STEM
13		BP	BETULA PAPYRIFERA	PAPER BIRCH	2" CAL.	B&B SINGLE STEM
6		MSB	MALUS 'DOLGO'	DOLGO CRABAPPLE	1-1/2" CAL.	B&B SINGLE STEM
13		PTE	POPULUS TREMULOIDES 'ERECTA'	COLUMNAR SWEDISH ASPEN	2" CAL.	B&B SINGLE STEM

SHRUBS						
QTY.	SYMBOL	ABBR.	LATIN NAME	COMMON NAME	SIZE	FURNISHING NOTES
6		AA	AMELANCHIER ALNIFOLIA VAR. PUMILA	DWARF SERVICEBERRY	MIN. #3 CONT.	POTTED 18" MIN. HT.
25		CS	CORNUS SERICEA 'KELSEY'	KELSEY'S DWARF RED-OSIER DOGWOOD	MIN. #3 CONT.	POTTED 18" MIN. HT.
3		RR	ROSA RUGOSA 'HANSA'	HANSA RUGOSA ROSE	MIN. #3 CONT.	POTTED 18" MIN. HT.
98		RA	ROSA ACICULARIS	PRICKLY ROSE	MIN. #3 CONT.	POTTED 18" MIN. HT.
126		VV	VACCINIUM VITIS-IDAEA	LINGONBERRY	MIN. #3 CONT.	POTTED 12" SPACING

PERENNIALS						
QTY.	SYMBOL	ABBR.	LATIN NAME	COMMON NAME	SIZE	FURNISHING NOTES
76		IS	IRIS SETOSA	WILD FLAG IRIS	MIN. #3 CONT.	POTTED 24" SPACING

MISCELLANEOUS			MISCELLANEOUS		
QTY.	SYMBOL	DESCRIPTION	QTY.	SYMBOL	DESCRIPTION
		4" TOPSOIL AND SCHEDULE A MOWABLE SEED MIX			CONCRETE PLANTER CURB
		4" TOPSOIL AND SCHEDULE B WILDFLOWER SEED MIX			LANDSCAPE EDGING
		4" TOPSOIL AND SCHEDULE C WETLAND SEED MIX			CHAIN LINK FENCE
1		TABLE			CONCRETE BARRIER (OWNER PROVIDED)
2		BENCH			ROPE FENCE
2		TRASH RECEPTACLE			TREE PROTECTION ZONE FENCE
2		BOULDER - 5' Ø MIN.			

- GENERAL LANDSCAPE NOTES:**
- IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES IN THE PLANS OR ON THE SITE. MODIFICATIONS IN THE FIELD SHALL NOT BE MADE UNTIL APPROVAL HAS BEEN GRANTED BY THE ENGINEER.
  - SEE CIVIL FOR EXISTING AND PROPOSED UTILITIES.
  - CONTRACTOR TO COORDINATE WITH UTILITY PROVIDERS AND VERIFY LOCATION OF UTILITIES PRIOR TO CONSTRUCTION.
  - CONTRACTOR IS RESPONSIBLE FOR PLACEMENT AND INSTALLATION OF OWNER PROVIDED CONCRETE BARRIER.
  - ALL PLANTS SHALL BE NURSERY GROWN UNLESS OTHERWISE SPECIFIED.
  - ALL PLANTING BEDS SHALL RECEIVE MIN 18" DEPTH TOPSOIL AND MIN. 3" DEPTH SHREDDED BARK MULCH.
  - ALL TREE, SHRUB AND PERENNIAL PLANTINGS IN SEEDED AREAS TO RECEIVE MIN. 18" DEPTH TOPSOIL AND MIN. 3" DEPTH SHREDDED BARK MULCH. PLACE MULCH IN A 5Ø RING AROUND STEM OR TRUNK UNLESS OTHERWISE NOTED. PROVIDE A SHOVEL CUT EDGE PER DETAIL 4/L6.
  - DO NOT APPLY HYDROSEEDING PRODUCT OR SEED MIX IN THE MULCHED AREA AROUND STEM OR TRUNK OF NEW PLANTINGS.
  - ALL DISTURBED LANDSCAPE AREAS NOT WITHIN PLANTING BEDS SHALL RECEIVE 4" MINIMUM TOPSOIL AND SCHEDULE A SEED MIX, UNLESS OTHERWISE NOTED ON PLANS.
  - REFER TO SHEET L6 FOR LANDSCAPE PLANTING DETAILS.
  - ALL DECIDUOUS TREES SHALL RECEIVE MOOSE PROTECTION FENCING PER 6/L6.

**LANDSCAPE ABBREVIATIONS:**

ABBR.	ABBREVIATION
ADD	ADDITIVE
ALT	ALTERNATIVE
B&B	BALL & BURLAP
CAL.	CALIPER
☉	CENTERLINE
CONT.	CONTAINER
DIA.	DIAMETER
Ø	DIAMETER
HT.	HEIGHT
MAX.	MAXIMUM
MIN.	MINIMUM
N.I.C.	NOT IN CONTRACT
O.C.	ON CENTER
QTY.	QUANTITY
TYP.	TYPICAL

**WORK SCHEDULES**

LETTER	DESCRIPTION
A	PHASE I
B	ADDITIVE ALTERNATIVE 1



PROJECT NO. 31103.01  
 CITY GRID 1230  
 WATER GRID 1230  
 SEWER GRID 1230

SCH: ALL  
 PROJECT NO. 31103.01  
 CITY GRID 1230  
 WATER GRID 1230  
 SEWER GRID 1230

PROJECT NO. 31103.01

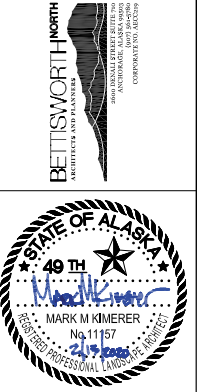
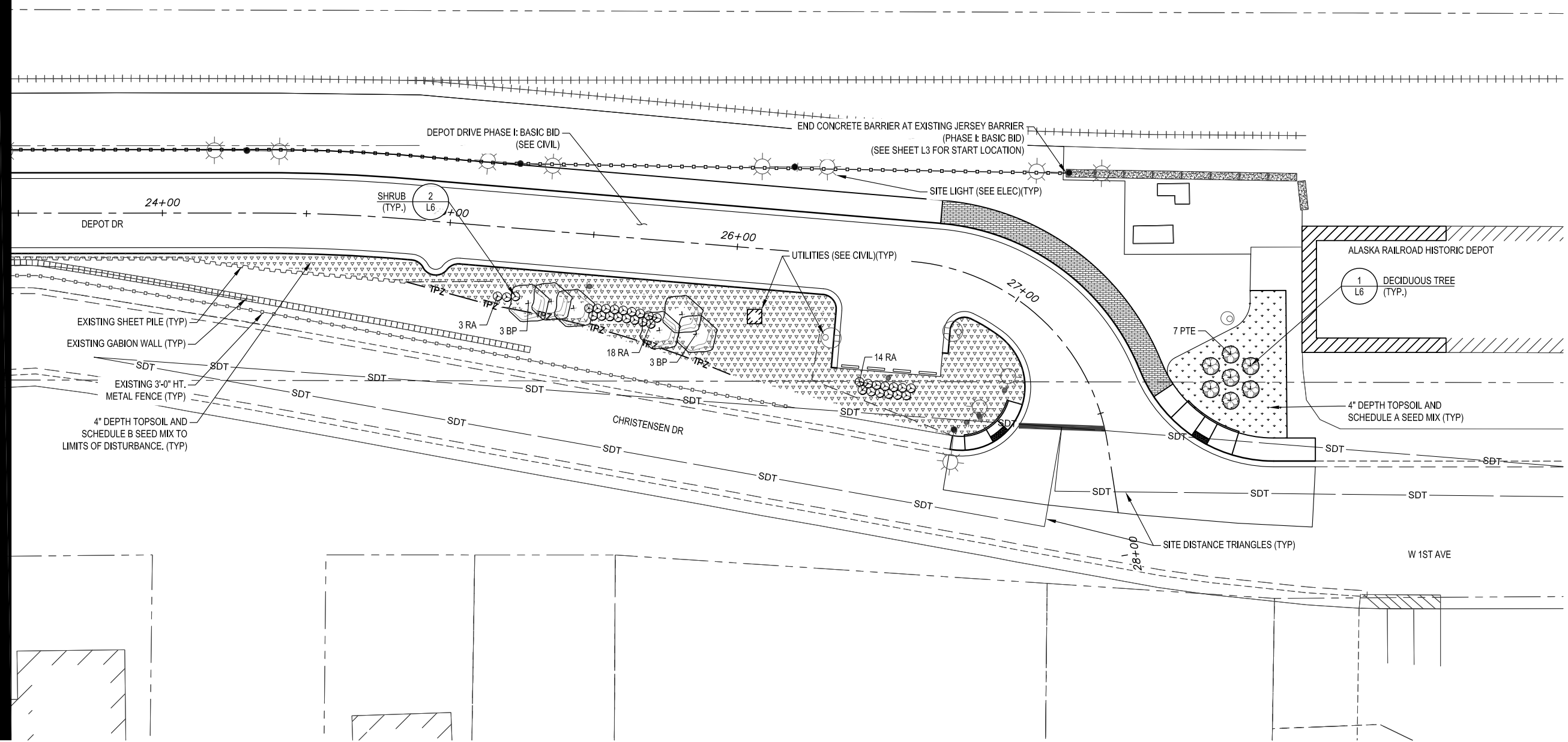
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DATE: FEB 2020

ARRC DEPOT DRIVE IMPROVEMENTS  
 LANDSCAPE KEY PLAN AND  
 LANDSCAPE SCHEDULE

L1

MATCHLINE: SEE SHEET L3



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 DATE: FEB 2020

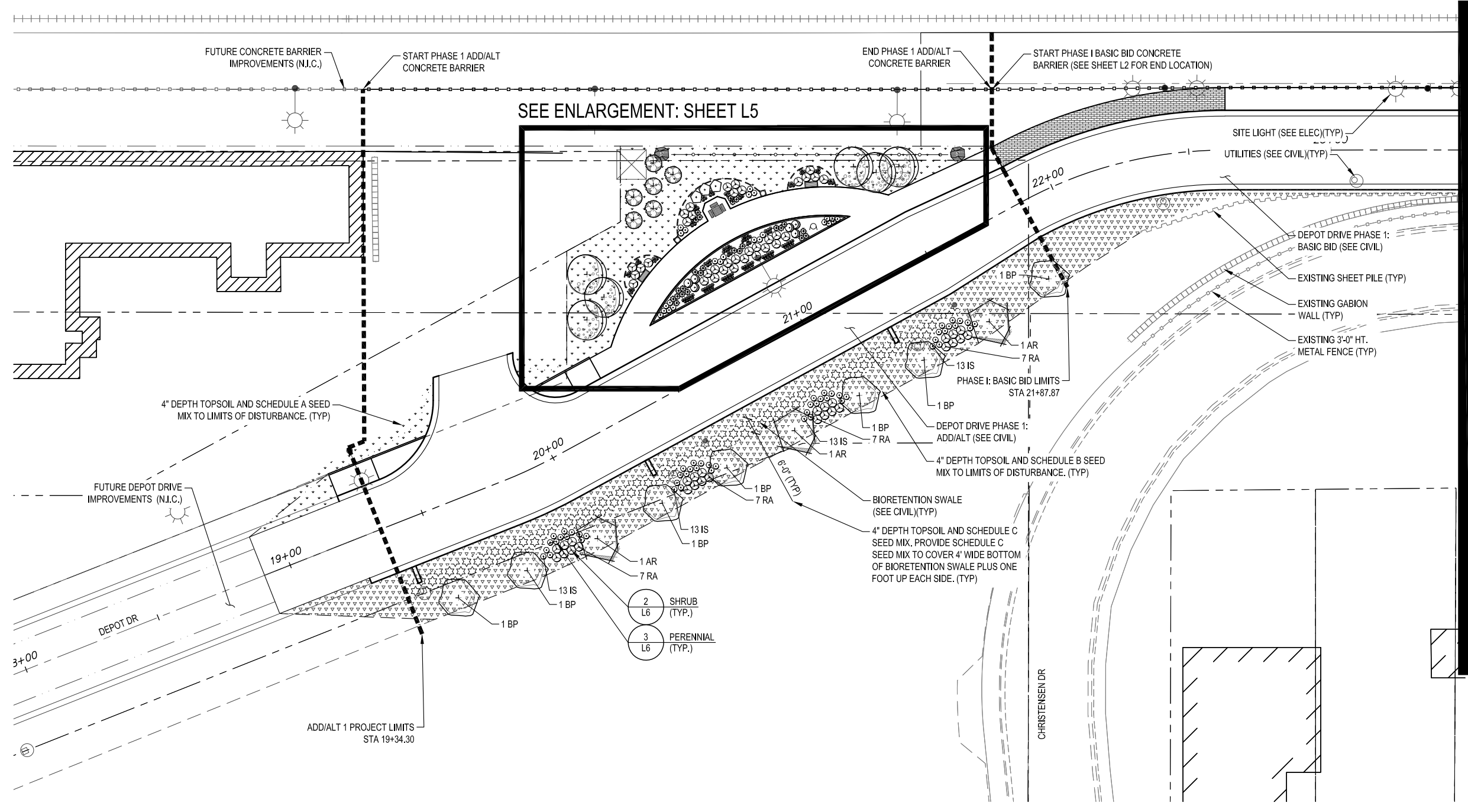
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**LANDSCAPE PLAN**

PROJECT NO. 31103.01  
 STATUS: CONSTRUCTION DOCUMENTS

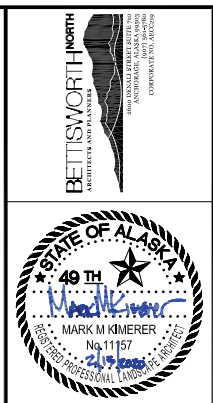
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 DESIGNED BY: MB  
 DRAWN BY: MB, EJ  
 CHECKED BY: MK  
 APPROVED BY: MK  
 SHEET NO. L2

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MATCHLINE: SEE SHEET L2



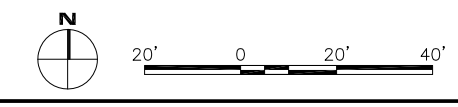
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CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

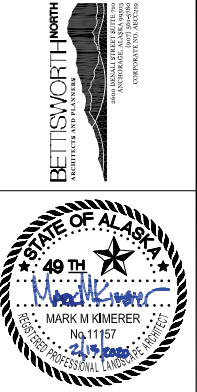
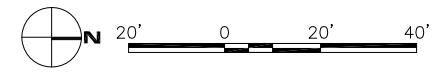
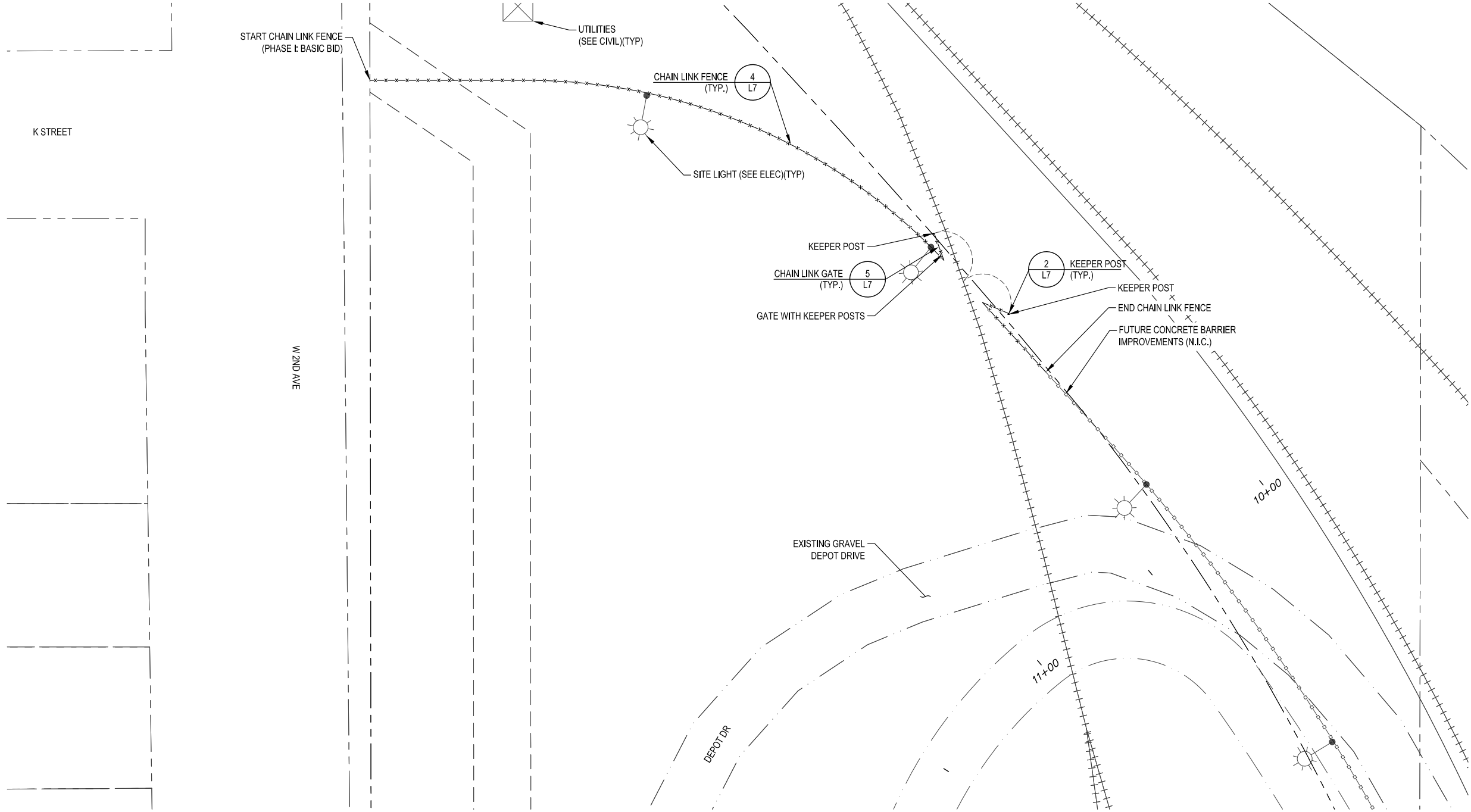
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DATE: FEB 2020

ARRC DEPOT DRIVE IMPROVEMENTS  
LANDSCAPE PLAN

REV	DATE	DESCRIPTION	BY

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DRAWN BY: MB, EJ  
CHECKED BY: MK  
APPROVED BY: MK  
SHEET NO. L3



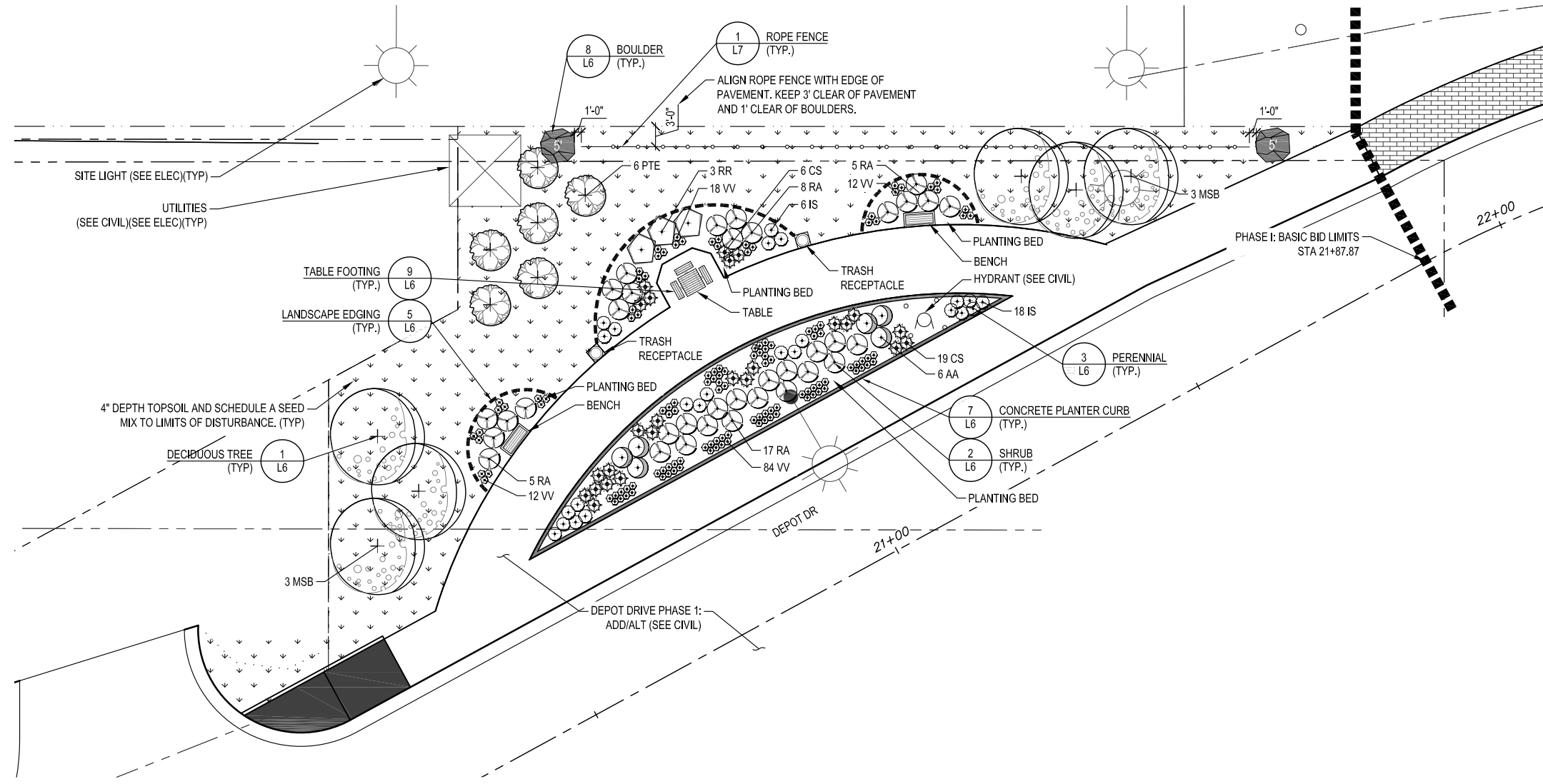


PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: A  
 PROJECT NO. 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS  
**LANDSCAPE PLAN**  
 PROJECT NO. 31103.01  
 STATUS: CONSTRUCTION DOCUMENTS  
 DATE: FEB 2020

REV	DATE	DESCRIPTION	REVISION	BY

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 HOR. VER. N/A  
 DESIGNED BY: MB  
 DRAWN BY: MB, EJ  
 CHECKED BY: MK  
 APPROVED BY: MK



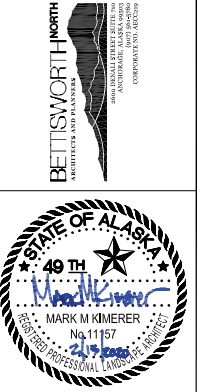
**LANDSCAPE LEGEND**

DECIDUOUS TREES		
SYMBOL	ABBR. LATIN NAME	COMMON NAME
	MSB MALUS 'DOLGO'	DOLGO CRABAPPLE
	PTE POPULUS TREMULOIDES 'ERECTA'	COLUMNAR SWEDISH ASPEN

SHRUBS		
SYMBOL	ABBR. LATIN NAME	COMMON NAME
	AA AMELANCHIER ALNIFOLIA VAR. PUMILA	DWARF SERVICEBERRY
	CS CORNUS SERICEA 'KELSEY'	KELSEY'S DWARF RED-OSIER DOGWOOD
	RA ROSA ACICULARIS	PRICKLY ROSE
	RR ROSA RUGOSA 'HANSA'	RUGOSA ROSE
	VV VACCINIUM VITIS-IDAEA	LINGONBERRY

PERENNIALS			
SYMBOL	ABBR. LATIN NAME	COMMON NAME	SPACING
	IS IRIS SETOSA	WILD FLAG IRIS	18" SPACING

MISCELLANEOUS		
SYMBOL	DESCRIPTION	NOTES
	4" TOPSOIL AND SCHEDULE A MOWABLE SEED MIX	
	TABLE	
	BENCH	
	TRASH RECEPTACLE	
	CONCRETE PLANTER CURB	
	LANDSCAPE EDGING	
	ROPE FENCE	
	BOULDER - 5" Ø MIN.	

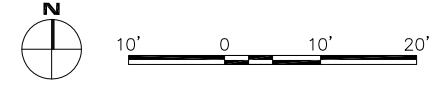


PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: B  
 PROJECT NO. 31103.01  
 ARRC DEPOT DRIVE IMPROVEMENTS  
 LANDSCAPE PLAN  
 ENLARGEMENT  
 PROJECT NO. 31103.01  
 STATUS: CONSTRUCTION DOCUMENTS  
 DATE: FEB 2020

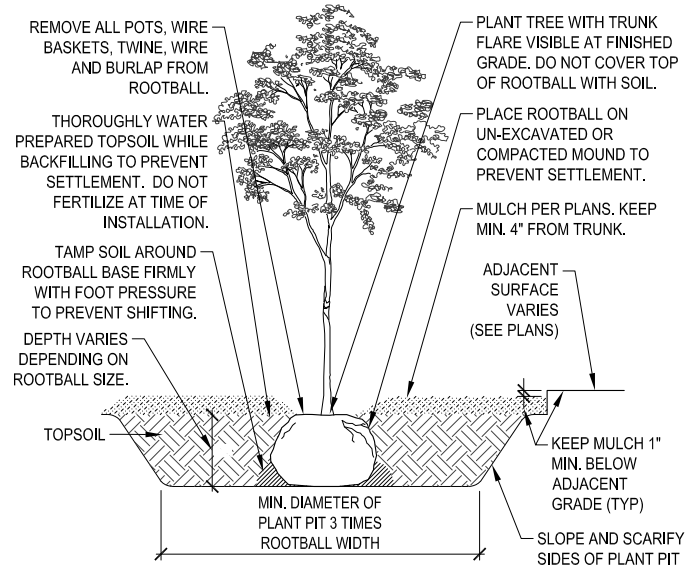
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 DRAWN BY: MB, EJ  
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 APPROVED BY: MK  
 SHEET NO. L5

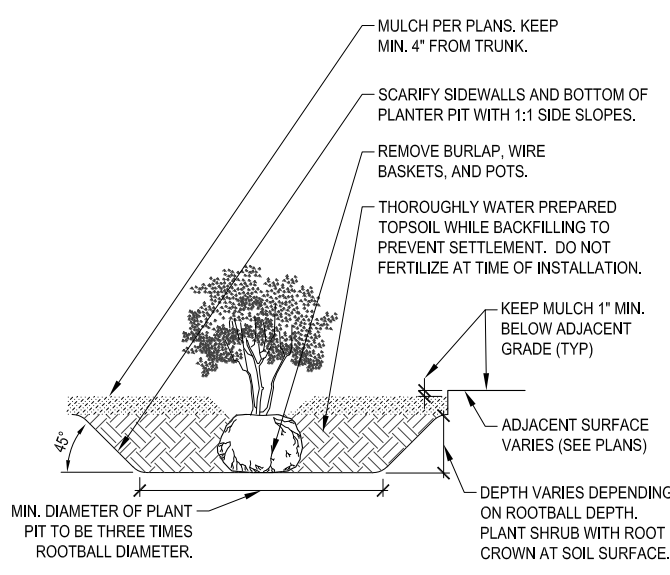




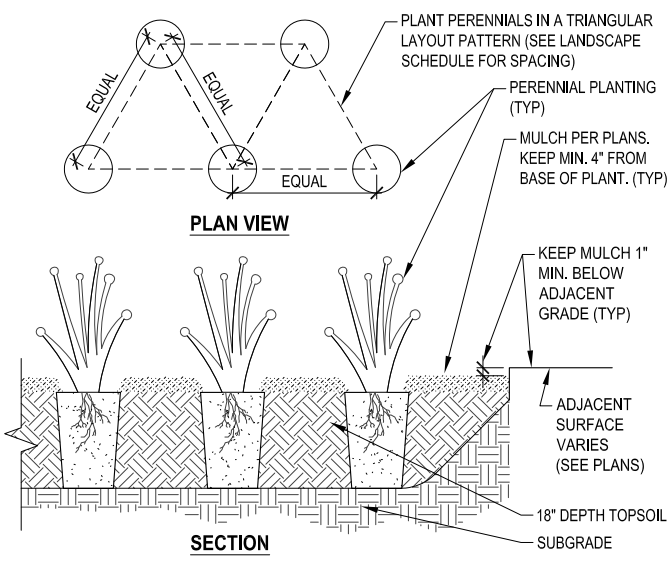
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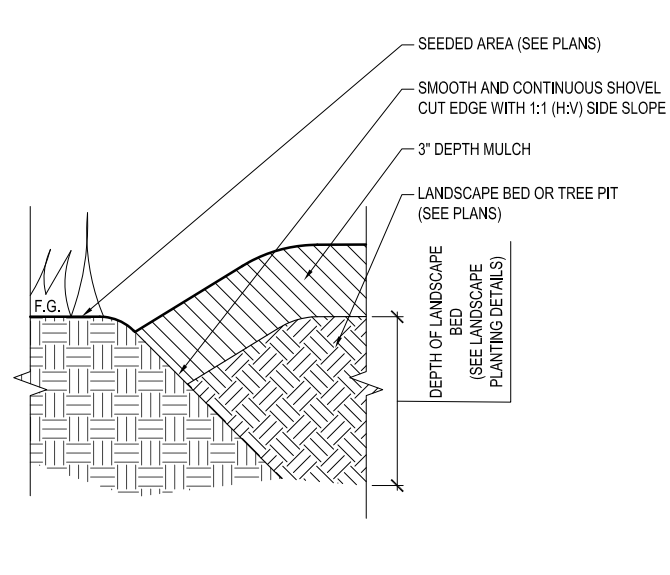
**1** L6  
NTS  
**DECIDUOUS TREE**



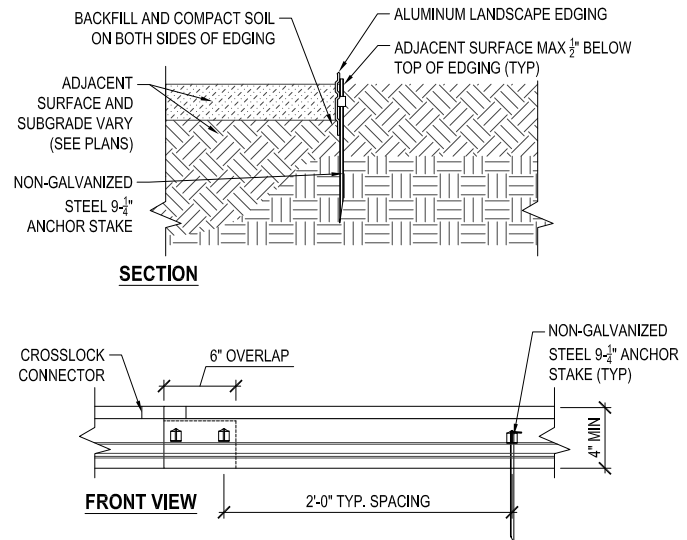
**2** L6  
NTS  
**SHRUB**



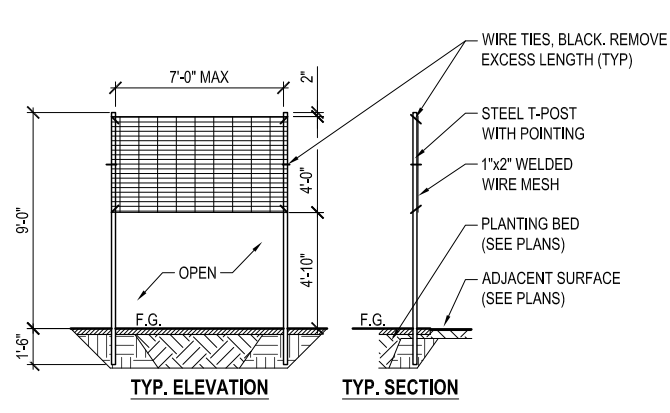
**3** L6  
NTS  
**PERENNIAL**



**4** L6  
NTS  
**SHOVEL CUT EDGE**



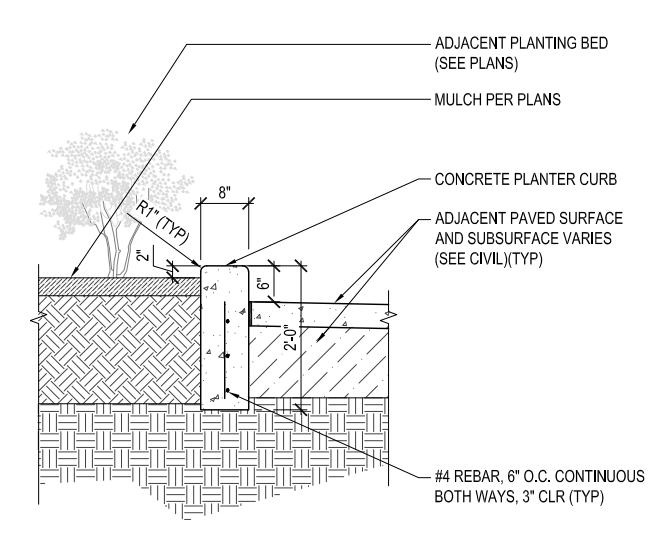
**5** L6  
NTS  
**LANDSCAPE EDGING**



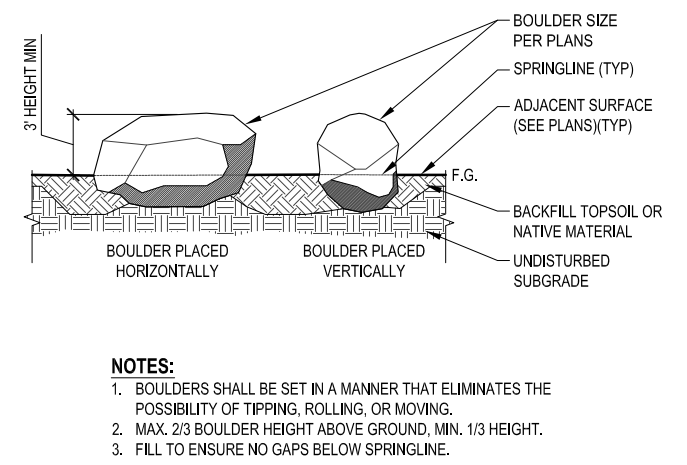
**NOTES:**

1. MOOSE PROTECTION FENCING REQUIRED AROUND ALL NEW DECIDUOUS TREES.
2. FOR INDIVIDUAL TREES, MIN. 3 POSTS REQUIRED PER TREE.
3. FOR TREE GROUPINGS, PLACE T-POSTS SO THAT MESH DOES NOT TOUCH BRANCHES.

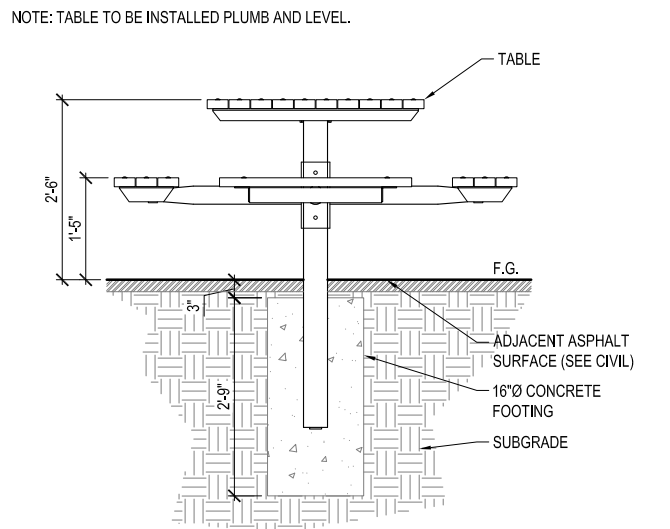
**6** L6  
NTS  
**MOOSE PROTECTION FENCE**



**7** L6  
NTS  
**CONCRETE PLANTER CURB**



**8** L6  
NTS  
**BOULDER**



**9** L6  
NTS  
**TABLE FOOTING**

NOTE: TABLE TO BE INSTALLED PLUMB AND LEVEL.



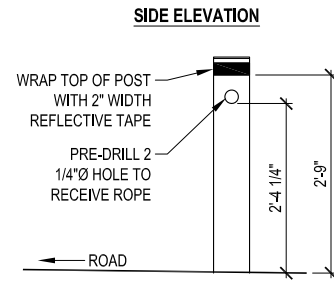
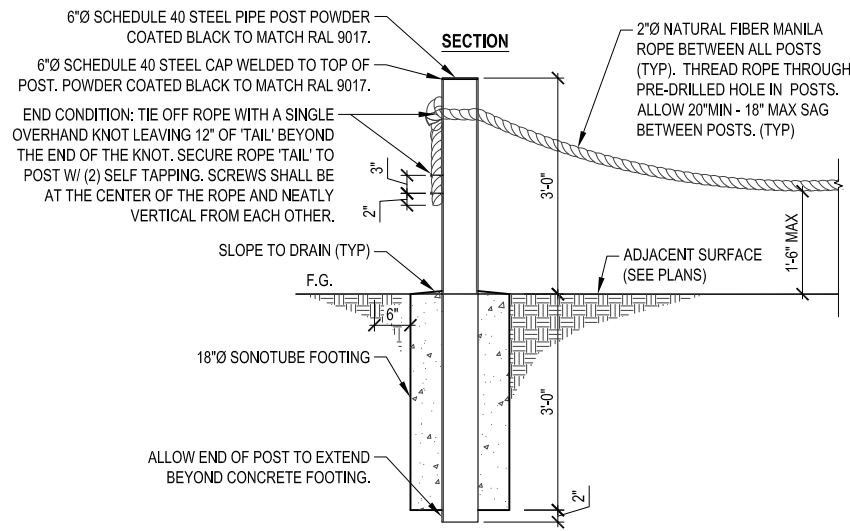
PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH.	ALL
ARRC DEPOT DRIVE IMPROVEMENTS	
LANDSCAPE DETAILS	
PROJECT NO. 31103.01	
STATUS:	CONSTRUCTION DOCUMENTS
DATE:	FEB 2020

REV	DATE	DESCRIPTION	BY

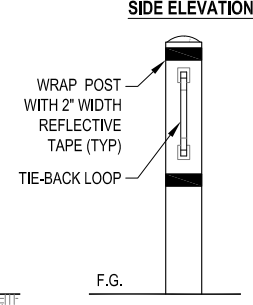
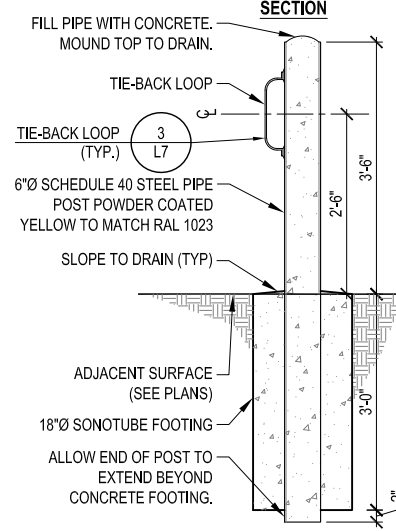
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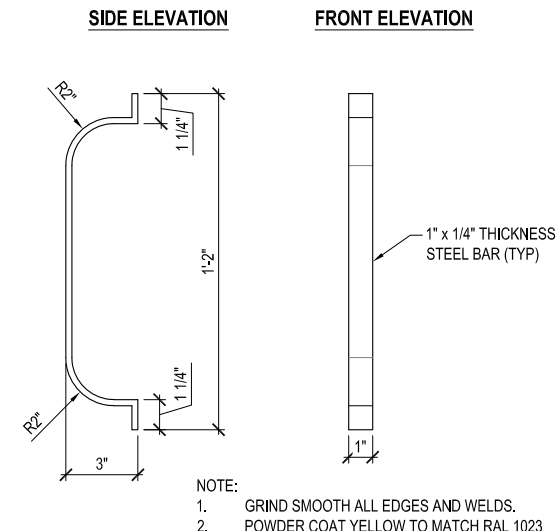
**NOTE:**  
 1. ALL FENCE ELEMENTS TO BE INSTALLED LEVEL AND PLUMB.  
 2. GRIND SMOOTH ALL EDGES AND WELDS.  
 3. SELF-TAPPING SCREWS SHALL BE #12X3" ZXL STEELBINDER METAL ROOFING SCREWS, GALVANIZED FINISH OR APPROVED SUBSTITUTE.

1 L7 ROPE FENCE  
NTS



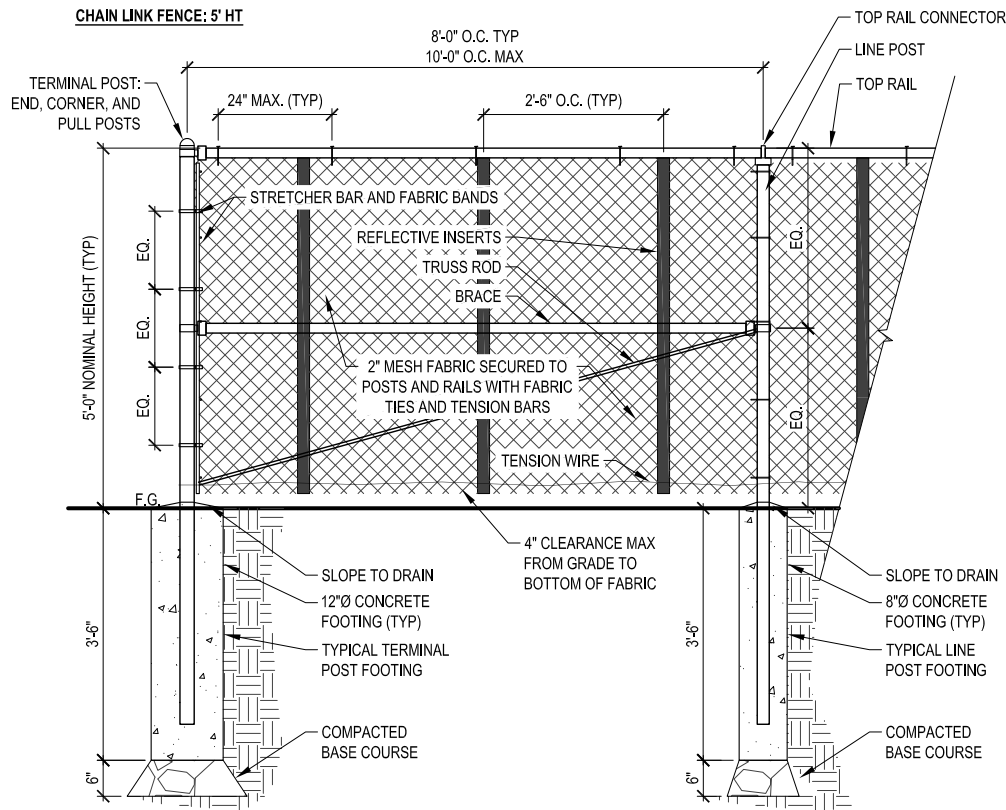
**NOTE:**  
 1. ALL FENCE ELEMENTS TO BE INSTALLED LEVEL AND PLUMB.  
 2. GRIND SMOOTH ALL EDGES AND WELDS.

2 L7 KEEPER POST  
NTS

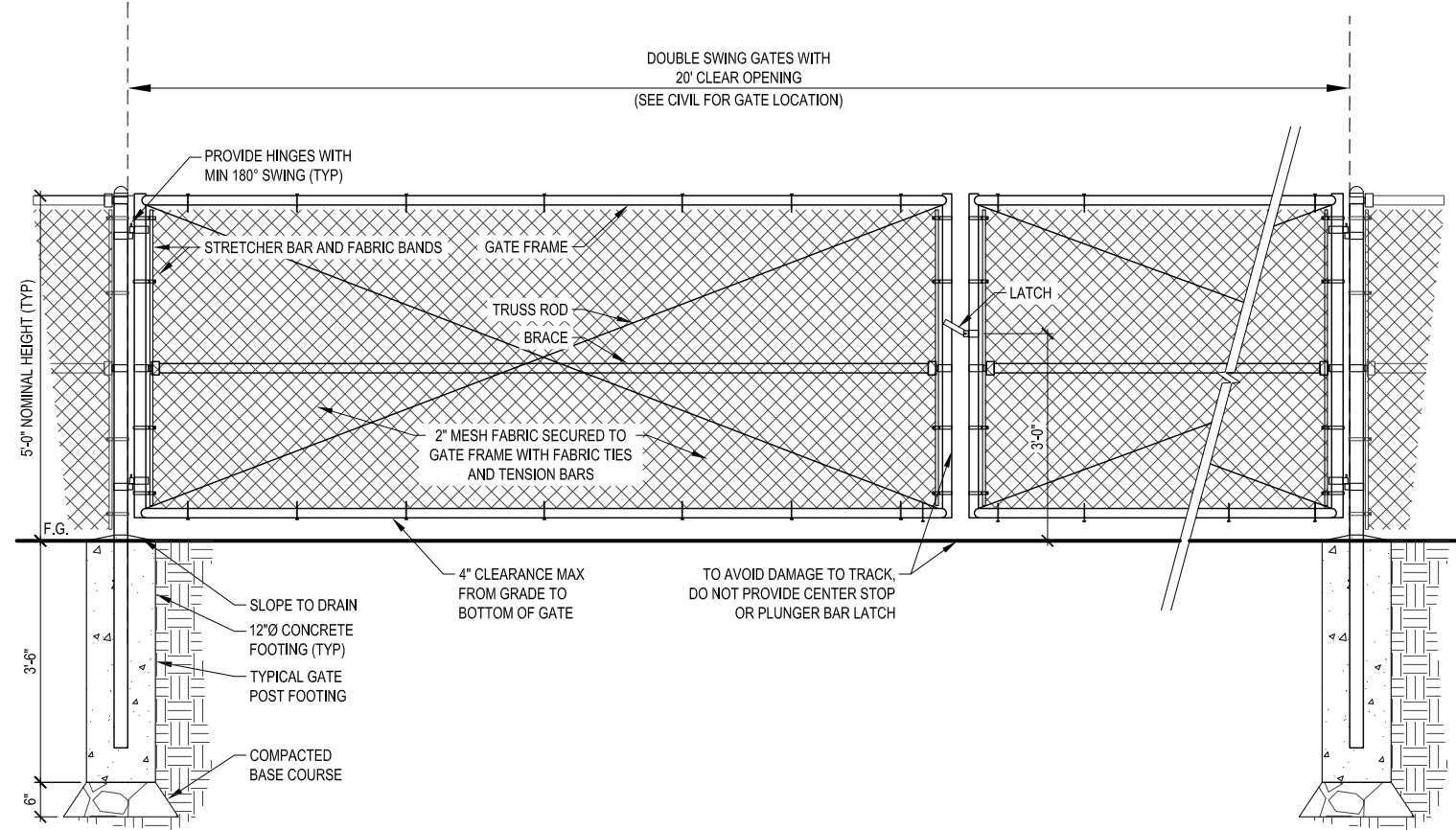


**NOTE:**  
 1. GRIND SMOOTH ALL EDGES AND WELDS.  
 2. POWDER COAT YELLOW TO MATCH RAL 1023

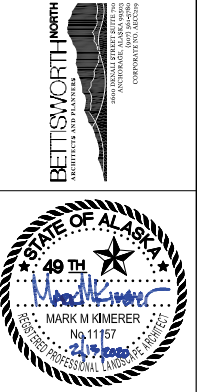
3 L7 TIE-BACK LOOP  
NTS



4 L7 CHAIN LINK FENCE  
NTS



5 L7 CHAIN LINK GATE  
NTS



PROJECT NO.	31103.01
CITY GRID	1230
WATER GRID	1230
SEWER GRID	1230

SCH: ALL  
 DATE: FEB 2020

ARRC DEPOT DRIVE IMPROVEMENTS  
 LANDSCAPE DETAILS  
 PROJECT NO. 31103.01  
 STATUS: CONSTRUCTION DOCUMENTS

REV	DATE	DESCRIPTION	BY

SCALE	N/A
HOR. VER.	N/A
DESIGNED BY	MB
DRAWN BY	MB, EJ
CHECKED BY	MK
APPROVED BY	MK

SHEET NO. L7