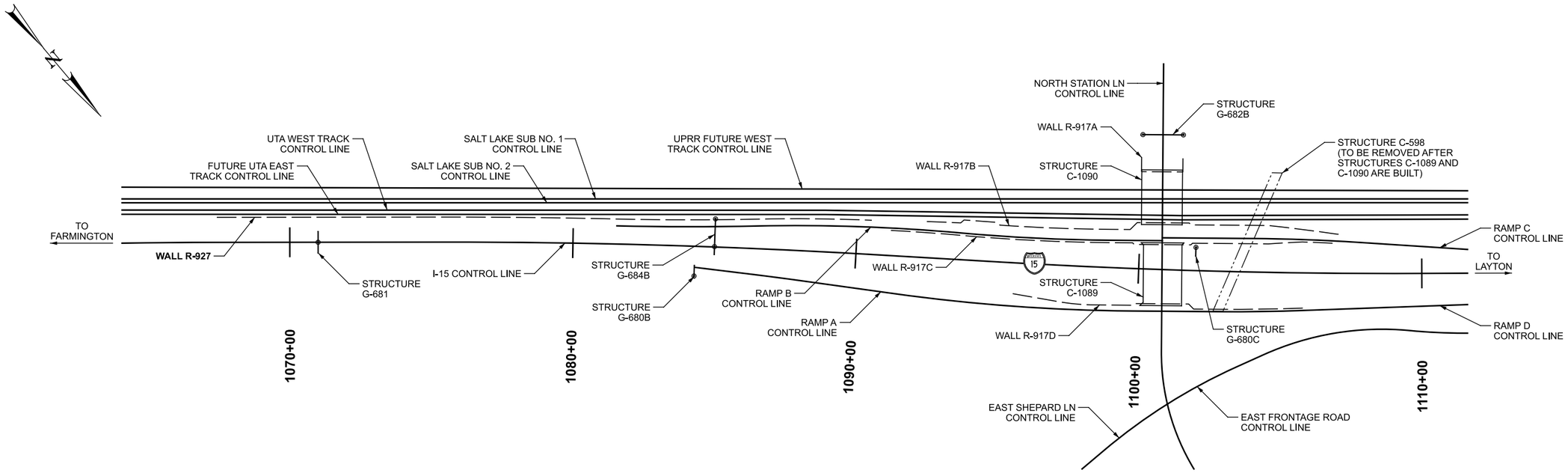
EXHIBIT A



LOCATION PLAN

DESIGN DATA

LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION 2020 AND THE UDOT STRUCTURES DESIGN AND DETAILING MANUAL, 2022. RAIL ROAD LIVE LOADING FOR UTA COMMUTER RAIL TRAIN IN ACCORDANCE WITH THE AREMA MANUAL FOR RAILWAY ENGINEERING, 2022.

POST HOLE CONCRETE:	f'c = 4.0 KSI	n = 8	CLASS AA(AE)	fy(REINF) = 60 KSI
PRECAST WALL PANEL AND POST CONCRETE:	f'c = 5.0 KSI	n = 7	CLASS AAA(AE)	fy(REINF) = 60 KSI

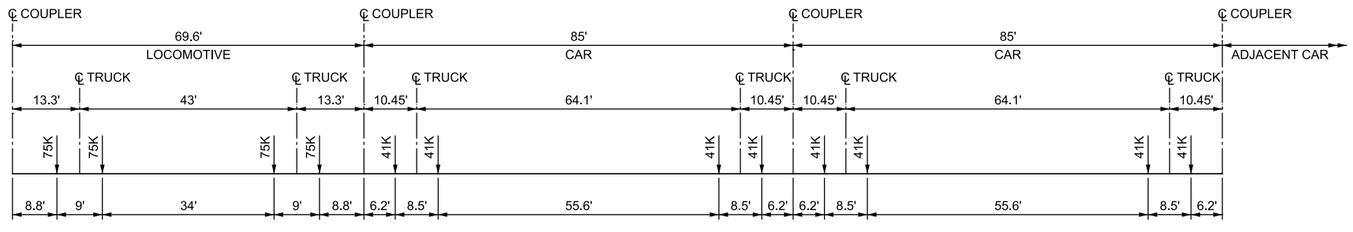
SEISMIC: 7% PROBABILITY OF EXCEEDANCE IN 75 YR DESIGN EVENT
PGA = 0.339g, Ss = 0.786g, S1 = 0.236g
As = 0.394g, SDs = 0.932g, SD1 = 0.454g
SITE CLASS D

GENERAL NOTES

1. USE COATED DEFORMED CARBON STEEL BARS CONFORMING TO AASHTO A767 OR ASTM A775, AND AASHTO M31 GRADE 60, UNLESS SHOWN OTHERWISE.
2. CHAMFER ALL EXPOSED CONCRETE CORNERS 3/4 INCH UNLESS SHOWN OTHERWISE.
3. PROVIDE 2 INCH MINIMUM CONCRETE COVER TO REINFORCING STEEL UNLESS SHOWN OTHERWISE.
4. VERIFY UTILITY LOCATIONS BEFORE CONSTRUCTION. PROTECT EXISTING UTILITIES IN PLACE UNLESS SHOWN OTHERWISE.
5. COAT OR GALVANIZE ALL MISCELLANEOUS STRUCTURAL STEEL PLACED IN STRUCTURAL CONCRETE, UNLESS SHOWN OTHERWISE.
6. DO NOT SCALE DRAWINGS. HORIZONTAL DIMENSIONS ARE PLAN. VERTICAL DIMENSIONS ARE PLUMB.
7. ALL STATIONS, OFFSETS AND ANGLE POINTS ARE LOCATED AT THE WALL CONTROL LINE.

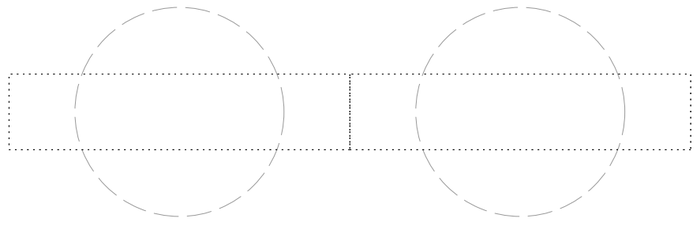
INDEX OF SHEETS

1. LOCATION PLAN AND GENERAL NOTES
2. VERTICAL PROFILES
3. R-927 SITUATION AND LAYOUT 1 OF 3
4. R-927 SITUATION AND LAYOUT 2 OF 3
5. R-927 SITUATION AND LAYOUT 3 OF 3
6A. SOIL DATA 1 OF 3
6B. SOIL DATA 2 OF 3
6C. SOIL DATA 3 OF 3
7. R-927 WALL DETAILS 1
8. R-927 WALL DETAILS 2



COMMUTER RAIL TRAIN

(MAX LOAD UP TO 10 CARS)



THIS SEAL APPLIES TO ALL SHEETS CONTAINING THE SIGNATURE ON THE SEAL

THIS SEAL APPLIES TO ALL SHEETS CONTAINING THE SIGNATURE ON THE SEAL

UTAH DEPARTMENT OF TRANSPORTATION
AUTHORIZED FOR USE

UDOT STRUCTURES DESIGN MANAGER

QUANTITIES

ITEM	EST	UNIT	AS CONST
PRECAST PANELS	14858	SQ FT	
PRECAST POSTS	6810	FT	
POST HOLES	4823	FT	

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN KRC 10/22 | CHECK JHO 10/22
DRAWN BJA 10/22 | CHECK JHO 10/22

MM/DD/YY DATE
ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
LOCATION PLAN AND GENERAL NOTES

PIN 15684
PROJECT NUMBER S-I15-7(340)325

DAVIS
COUNTY

R-927
STRUCTURE NUMBER

R-927
DRAWING NUMBER

SHEET 1 OF 8

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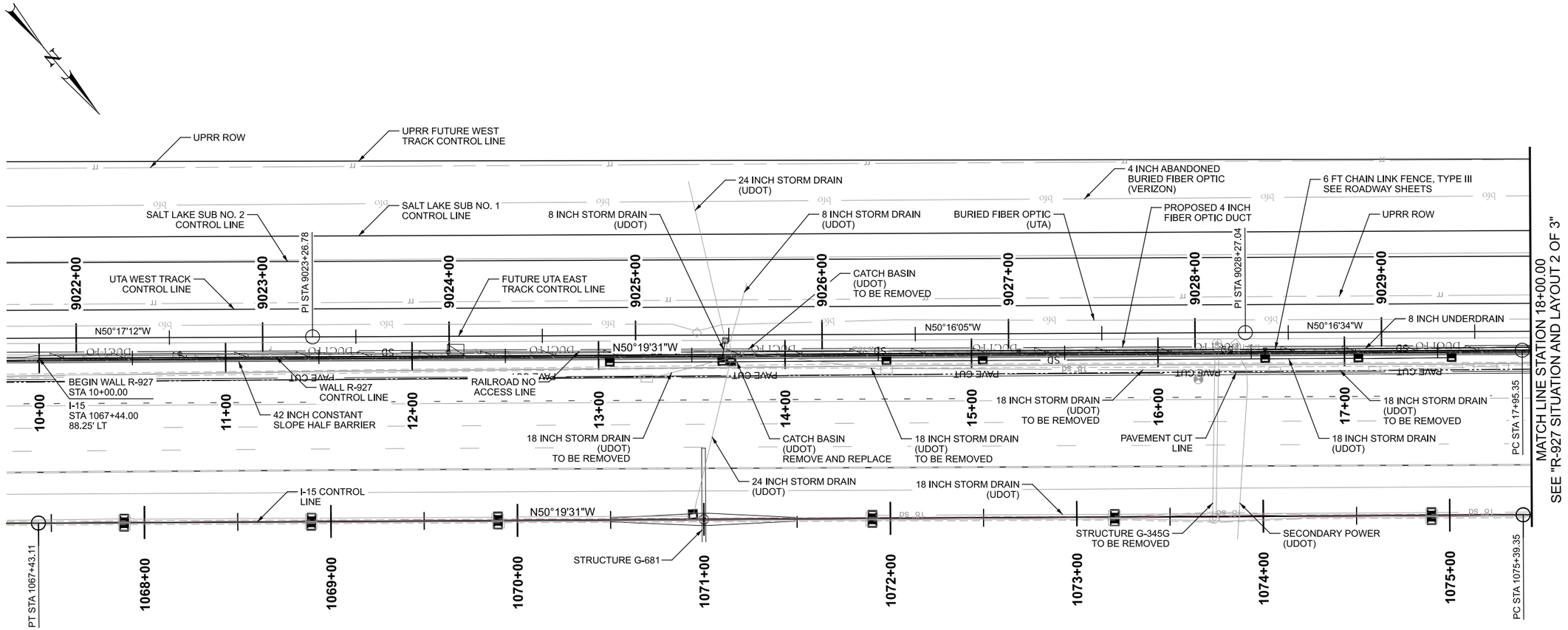
EXHIBIT A

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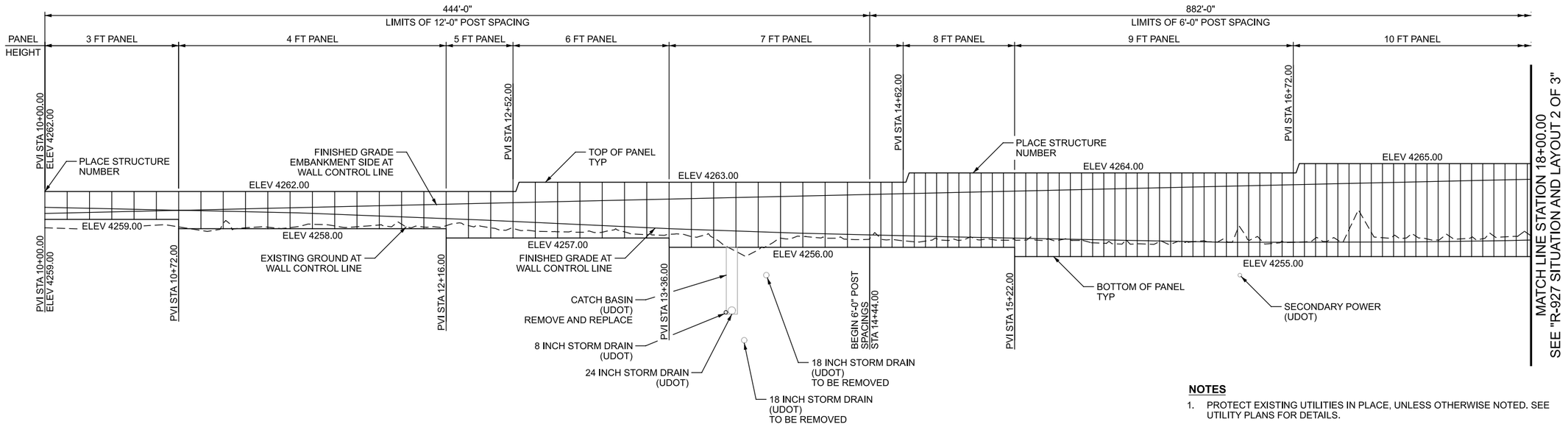


SHEET 2 OF 8	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION	PRELIMINARY - NOT FOR CONSTRUCTION		
DRAWING NUMBER R-927	PRECAST RETAINING WALL	STRUCTURES DIVISION	PS&E SUBMITTAL - 02/23/2023		
STRUCTURE NUMBER R-927	VERTICAL PROFILES	HORROCKS ENGINEERS	MM/DD/YY DATE	ENGINEER OF RECORD (EOR)	DESIGN KRC 10/22 CHECK JHO 10/22
COUNTY DAVIS	PROJECT NUMBER S-I15-7(340)325 PIN 15684				DRAWN BJA 10/22 CHECK JHO 10/22

EXHIBIT A



R-927 PARTIAL PLAN



R-927 PARTIAL DEVELOPED ELEVATION

STATION RANGES ARE FROM CENTER OF POST TO CENTER OF POST
POST HOLES AND 6 FT CHAIN LINK FENCE, TYPE III NOT SHOWN FOR CLARITY

NOTES

1. PROTECT EXISTING UTILITIES IN PLACE, UNLESS OTHERWISE NOTED. SEE UTILITY PLANS FOR DETAILS.
2. PLACE THE STRUCTURE NUMBER, INCLUDING THE END LETTER DESIGNATION, AT THE TOP OF THE PRECAST PANEL AT BEGINNING, END, AND AT 500 FT INTERVALS. REFER TO "R-927 WALL DETAILS 2" FOR THE REQUIRED SIZE AND SHAPE OF LETTERING.
3. SPACE POSTS AT 12'-0" ON CENTER UNLESS NOTED OTHERWISE.

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN KRC 10/22 | CHECK JHO 10/22
DRAWN BJA 10/22 | CHECK JHO 10/22

MM/DD/YY DATE
ENGINEER OF RECORD (EOR)

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
R-927 SITUATION AND LAYOUT 1 OF 3
PROJECT NUMBER S-I15-7(340)325
PIN 15684

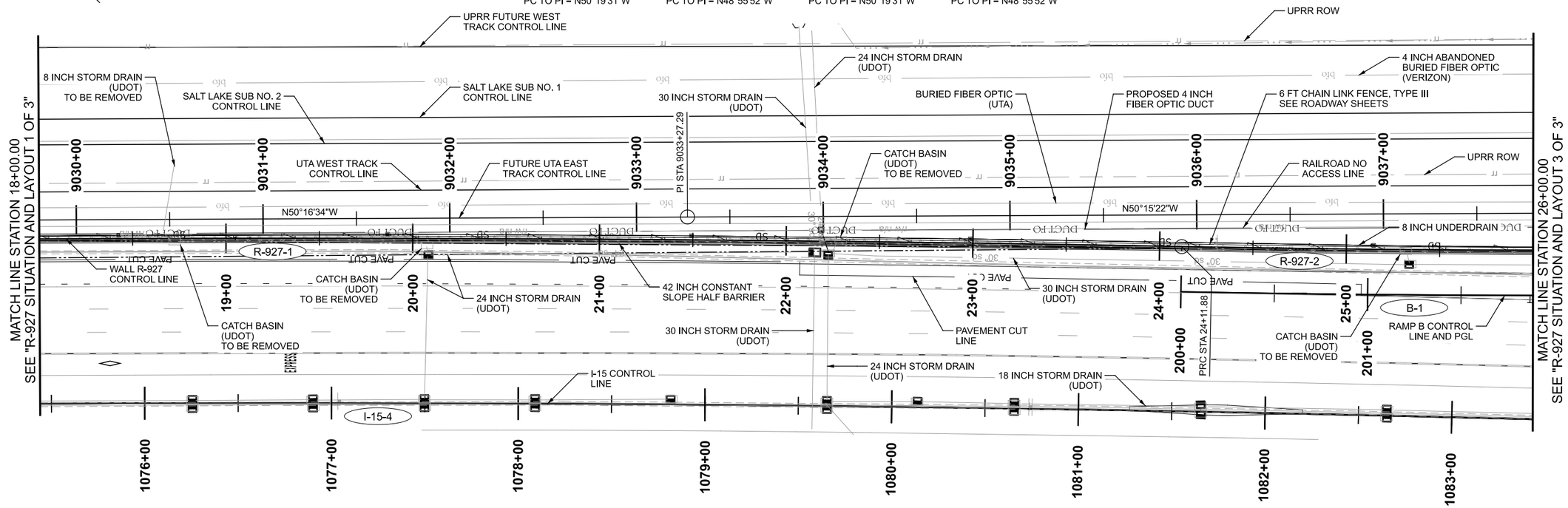
DAVIS
COUNTY
R-927
STRUCTURE NUMBER
R-927
DRAWING NUMBER
SHEET 3 OF 8

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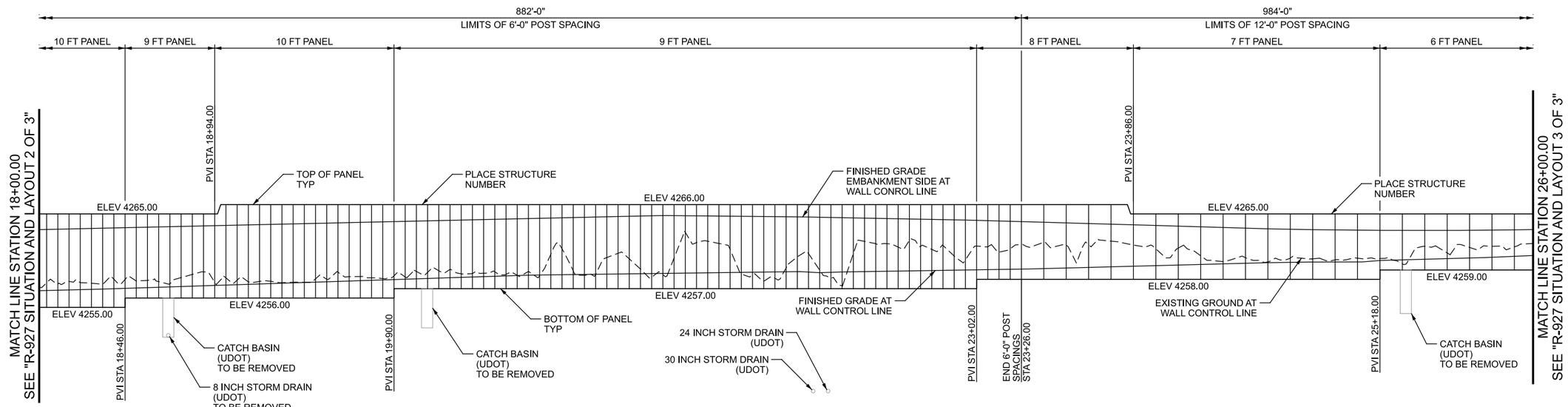
EXHIBIT A

CURVE DATA

CURVE NUMBER I-15-4	CURVE NUMBER RAMP B-1	CURVE NUMBER R-927-1	CURVE NUMBER R-927-2
Δ = 03°24'21" RT	Δ = 02°33'17" LT	Δ = 01°23'39" RT	Δ = 02°33'17" LT
R = 25250.00'	R = 11100.00'	R = 25338.25'	R = 11075.75'
T = 750.69'	T = 247.50'	T = 308.28'	T = 246.96'
L = 1500.94'	L = 494.91'	L = 616.53'	L = 493.83'
PI = STA 1082+90.04	PI = STA 202+47.50	PI = STA 21+03.63	PI = STA 26+58.83
N = 523523.63	N = 523556.67	N = 523173.26	N = 523538.03
E = 525475.00	E = 525356.09	E = 525759.17	E = 525340.56
PC TO PI = N50°19'31"W	PC TO PI = N48°55'52"W	PC TO PI = N50°19'31"W	PC TO PI = N48°55'52"W



R-927 PARTIAL PLAN



R-927 PARTIAL DEVELOPED ELEVATION

STATION RANGES ARE FROM CENTER OF POST TO CENTER OF POST
POST HOLES AND 6 FT CHAIN LINK FENCE, TYPE III NOT SHOWN FOR CLARITY

NOTES

1. SEE "R-927 SITUATION AND LAYOUT 1 OF 3" FOR NOTES.

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN	KRC	10/22	CHECK	JHO	10/22
DRAWN	BJA	10/22	CHECK	JHO	10/22

MM/DD/YY DATE — ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
R-927 SITUATION AND LAYOUT 2 OF 3
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684

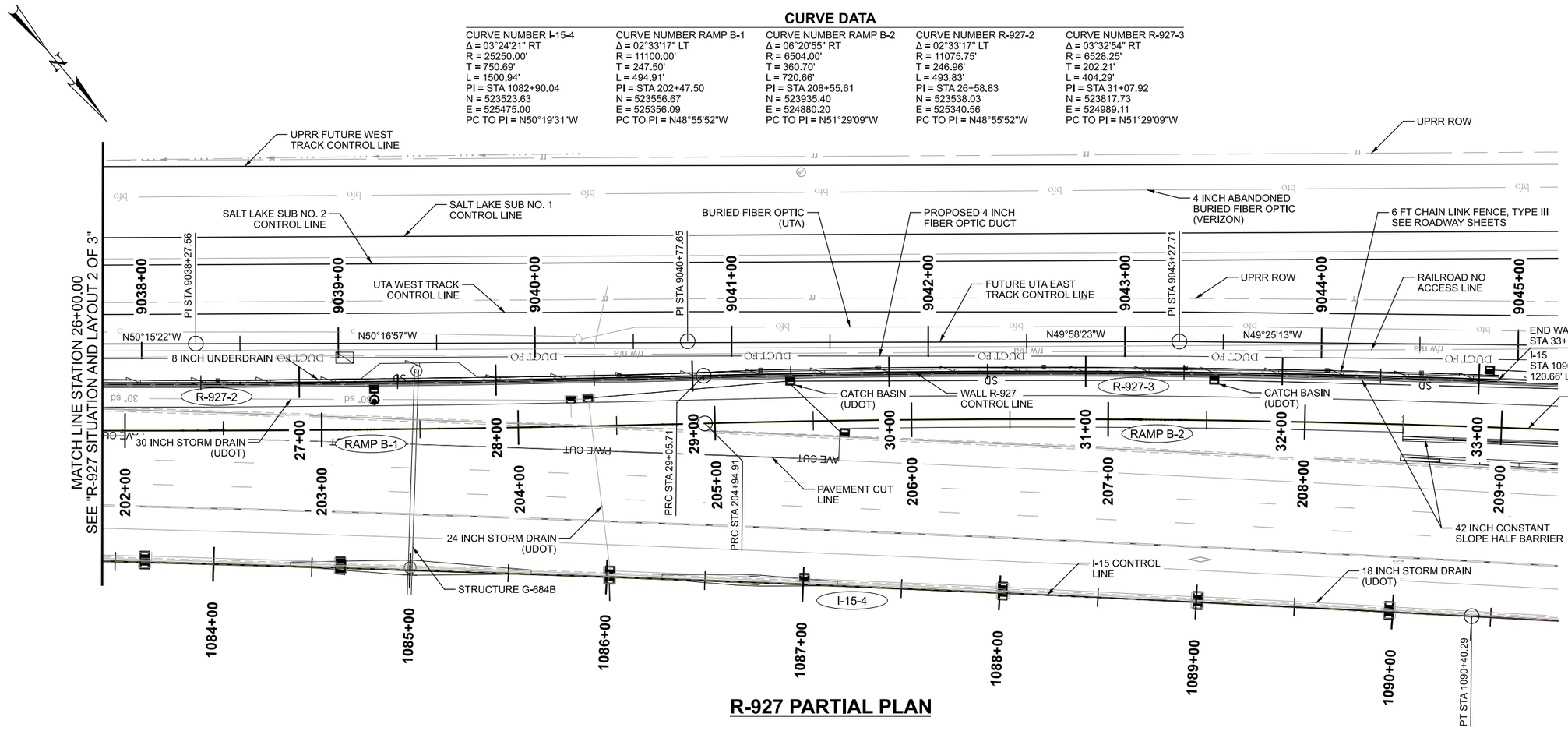
DAVIS — COUNTY
R-927 — STRUCTURE NUMBER
R-927 — DRAWING NUMBER
SHEET 4 OF 8

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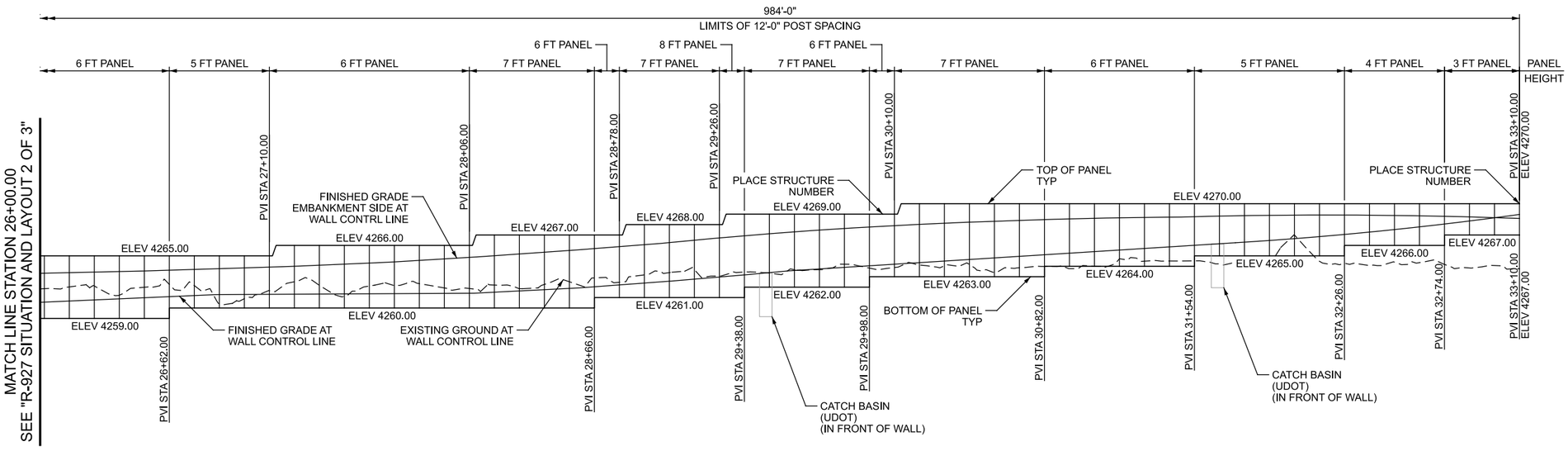
EXHIBIT A

CURVE DATA

CURVE NUMBER I-15-4	CURVE NUMBER RAMP B-1	CURVE NUMBER RAMP B-2	CURVE NUMBER R-927-2	CURVE NUMBER R-927-3
Δ = 03°24'21" RT	Δ = 02°33'17" LT	Δ = 06°20'55" RT	Δ = 02°33'17" LT	Δ = 03°32'54" RT
R = 25250.00'	R = 11100.00'	R = 6504.00'	R = 11075.75'	R = 6528.25'
T = 750.69'	T = 247.50'	T = 360.70'	T = 246.96'	T = 202.21'
L = 1500.94'	L = 494.91'	L = 720.66'	L = 493.83'	L = 404.29'
PI = STA 1082+90.04	PI = STA 202+47.50	PI = STA 208+55.61	PI = STA 26+58.83	PI = STA 31+07.92
N = 523523.63	N = 523556.67	N = 523935.40	N = 523538.03	N = 523817.73
E = 525475.00	E = 525356.09	E = 524880.20	E = 525340.56	E = 524989.11
PC TO PI = N50°19'31"W	PC TO PI = N48°55'52"W	PC TO PI = N51°29'09"W	PC TO PI = N48°55'52"W	PC TO PI = N51°29'09"W



R-927 PARTIAL PLAN



R-927 PARTIAL DEVELOPED ELEVATION

STATION RANGES ARE FROM CENTER OF POST TO CENTER OF POST
POST HOLES AND 6 FT CHAIN LINK FENCE, TYPE III NOT SHOWN FOR CLARITY

NOTES

1. SEE "R-927 SITUATION AND LAYOUT 1 OF 3" FOR NOTES.

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN KRC 10/20 | CHECK JHO 10/22
DRAWN BJA 10/20 | CHECK JHO 10/22

MM/DD/YY DATE
ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
R-927 SITUATION AND LAYOUT 3 OF 3
PIN 15684
PROJECT NUMBER S-I15-7(340)325

DAVIS
COUNTY

R-927
STRUCTURE NUMBER

R-927
DRAWING NUMBER

SHEET 5 OF 8

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EXHIBIT A

DRILL HOLE LOG — BORING NO. 21-UTA-B1

PROJECT: I-15; SHEPARD LANE INTERCHANGE - UTA WALL
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N: 522697, E: 526355 / LAT: 40.994164° N, LONG: 111.914497° W
DRILLING METHOD: 20-CME-55 / NW CASING TO 5'
DRILLER: T.K.
DEPTH TO WATER - INITIAL: ▽ 9.0' **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 202101-017-02
DATE STARTED: 9/1/22
DATE COMPLETED: 9/1/22
GROUND ELEVATION: 4258.3'
LOGGED BY: M.N.H., J.B.

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							16" ASPHALT								
				16	40,42,27,(99+)	GP-GM	brown, moist, very dense — GRAVEL W/SILT & SAND (fill)								
						GM	red, moist, very dense — SILTY GRAVEL W/SAND (fill)								
4255						GM	red, moist								
				15	18,29,35,(99+)	SM (A-1-b(0))	brown, moist, very dense — SILTY SAND W/GRAVEL (fill)		6.8		NP	34	48	16	
	5														
				16	6,12,17,(62)	SM (A-4(0))	brown & gray, moist, very dense — SILTY SAND		17.4		NP	2	51	47	
							GRAVEL (driller's observation)								
4250							LEAN CLAY W/SAND								
				16	5,5,6,(20) T 0.36	CL (A-4(6))	dk. brown, moist		18.5	27	9	0	17	83	
	10					CL-ML	gray, very moist, firm								
							SILTY CLAY W/SAND								
4245				14	Pushed T 0.31	CL-ML (A-4(3))	lt. brown, very moist, firm	100.9	22.0	27	7	0	28	72	CT UU 2,946 psf
	15						SILTY CLAY W/SAND silty sand lenses								
				15	3,2,2,(6) T 0.30	CL-ML	lt. brown, very moist, firm								

BOTTOM OF HOLE

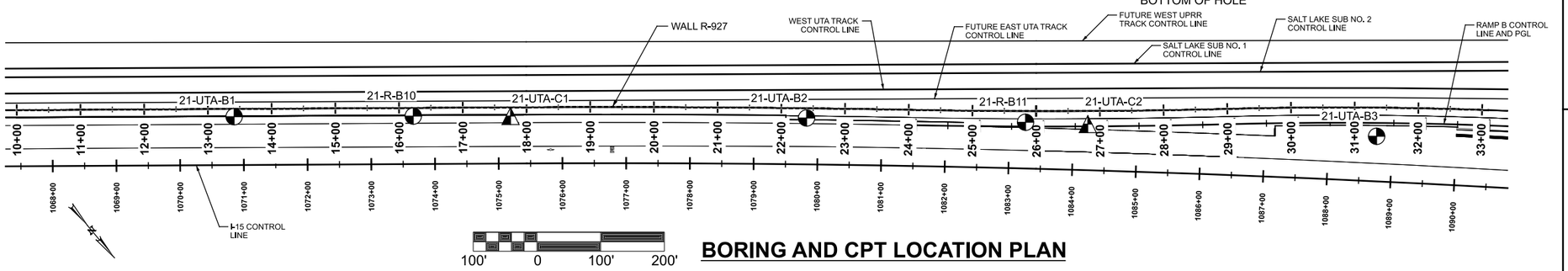
DRILL HOLE LOG — BORING NO. 21-UTA-B2

PROJECT: I-15; SHEPARD LANE INTERCHANGE - UTA WALL
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N: 523276, E: 525668 / LAT: 40.995742° N, LONG: 111.916996° W
DRILLING METHOD: 20-CME-55 / NW CASING TO 5'
DRILLER: T.K.
DEPTH TO WATER - INITIAL: ▽ 9.5' **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 202101-017-02
DATE STARTED: 9/1/22
DATE COMPLETED: 9/1/22
GROUND ELEVATION: 4258.7'
LOGGED BY: M.N.H., J.B.

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							16" ASPHALT								
				16	45,35,27,(99+)	GP-GM	brown, sl. moist, very dense — GRAVEL W/SILT & SAND (fill)								
						GM	red, moist, very dense — SILTY GRAVEL W/SAND (fill)								
						GM	red-brown, moist								
4255				15	22,25,25,(99+)	ML	brown, moist — SANDY SILT slightly plastic (fill)								
						SM	brown, very moist, very dense — SILTY SAND W/GRAVEL (fill)								
	5														
				0	21,10,5,(30)	-	no recovery — LEAN CLAY W/SAND								
						CL	gray, wet								
				12	3,2,2,(7) T 0.20	CL	dk. gray to black, very moist, soft — LEAN CLAY trace organics								
4250						SM	dk. gray, wet								
				13	Pushed T 0.25	SM (A-4(0))	dk. gray, wet — SILTY SAND		23.8		NP	0	51	49	
	10					CL (A-6(12))	dk. gray, wet — LEAN CLAY organics, sand seams	93.3	31.0	34	12	0	6	94	CT
				15	2,2,2,(7)	ML (A-4(0))	brown, wet, loose — SANDY SILT clay lenses		29.3		NP	0	39	61	Hyd.
4245															
	15			14	Pushed	ML	gray, wet								
				18	2,1,2,(5)	ML (A-4(0))	gray, wet, loose — SANDY SILT organics		28.2		NP	0	33	67	Hyd.
4240															
	20			17	2,2,2,(6) T 0.15	CL	lt. brown, wet, soft — LEAN CLAY silty sand lenses								

BOTTOM OF HOLE



BORING AND CPT LOCATION PLAN

KEY TO BORING LOG

SYMBOLS

Split Spoon Sample — 2,3,7,(6) ← (N)60 Value; T 0.45 ← Torvane (tsf); PP 2.0 ← Pocket Penetrometer (tsf)
Core — 95,60 ← Percent Recovery, R.Q.D.
Thin-Walled Tube Sample — Pushed; T 0.45 ← Torvane (tsf); PP 2.0 ← Pocket Penetrometer (tsf)

CT = Consolidation
UU = Unconsolidated, Undrained
Hyd. = Hydrometer
Chem. = pH, Resistivity, Sulfate, Chloride, Soluble Salts

2" OD Split Spoon (SPT)
2.5" OD Split Spoon

RELATIVE DENSITY (NON-PLASTIC - SAND & SILT)

VERY LOOSE, $(N_1)_{60}$ <5
LOOSE, $(N_1)_{60}$ 5-10
MED DENSE, $(N_1)_{60}$ 11-30
DENSE, $(N_1)_{60}$ 31-50
VERY DENSE, $(N_1)_{60}$ >50

CONSISTENCY (PLASTIC - SILT & CLAY)

VERY SOFT, TORVANE <0.12, PP <0.25
SOFT, TORVANE 0.12-0.25, PP 0.25-0.5
FIRM, TORVANE 0.25-0.50, PP 0.5-1.0
STIFF, TORVANE 0.50-1.00, PP 1.0-2.0
VERY STIFF, TORVANE 1.00-2.00, PP 2.0-4.0
HARD, TORVANE >2.00, PP >4.0

GENERAL NOTES

1. THE SUBSURFACE EXPLORATIONS SHOWN WERE CONDUCTED ON 09/01/22 BY RB&G ENGINEERING, INC.
2. THIS BORING LOG REPRESENTS A SYNOPSIS OF THE SOIL DEPOSITS ENCOUNTERED WITHIN THE BORING AND IS BASED ON SOUND GEOLOGICAL AND ENGINEERING JUDGEMENT. BECAUSE SOIL IS A COMPLEX MEDIUM, THIS BORING LOG MAY OR MAY NOT REPRESENT THE SOIL CONDITIONS AT THIS SITE. THIS SUBSURFACE INTERPRETATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION AND JUDGEMENT OF THE CONTRACTOR.
3. THE WATER LEVEL AND CONDITIONS INDICATED ON THE BORING LOG REPRESENT HOLE CONDITIONS ON THE DATE SHOWN, HOWEVER, IT SHOULD BE NOTED THAT AT LOCATIONS AWAY FROM THE BORING OR AT ANOTHER TIME THE WATER LEVEL AND CONDITIONS MAY VARY SIGNIFICANTLY.
4. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.
5. COBBLE - A ROCK WITH AN AVERAGE DIMENSION BETWEEN 3 INCHES AND 12 INCHES
6. BOULDER - A ROCK WITH AN AVERAGE DIMENSION OF 12 INCHES OR GREATER.

NOTE: DRILL RIG USED - 20-CME-55, HAMMER E=0.83

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN MNH 09/22 | CHECK SRJ 10/22
DRAWN JPN 10/22 | CHECK SRJ 10/22

MM/DD/YY DATE — ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
RB&G ENGINEERING

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
SOIL DATA 1 OF 3
PIN 15684
S-I15-7(340)325
PROJECT NUMBER

DAVIS
COUNTY
R-927
STRUCTURE NUMBER
R-927
DRAWING NUMBER
SHEET 6A OF 8

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EXHIBIT A

DRILL HOLE LOG — BORING NO. 21-UTA-B3

PROJECT: I-15; SHEPARD LANE INTERCHANGE - UTA WALL
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N: 523873, E: 525001 / LAT: 40.997372° N, LONG: 111.919422° W
DRILLING METHOD: 20-CME-55 / NW CASING TO 9'
DRILLER: T.K.
DEPTH TO WATER - INITIAL: ▽ 10.7' **AFTER 24 HOURS:** ▼ N.M.
PROJECT NUMBER: 202101-017-02
DATE STARTED: 9/1/22
DATE COMPLETED: 9/1/22
GROUND ELEVATION: 4266.3'
LOGGED BY: M.N.H., J.B.

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							12.5" ASPHALT								
4265				17	55,64,47,(99+)	GM	gray-brown, moist, very dense — SILTY GRAVEL W/SAND (fill)								
						GP-GM	brown, moist, very dense — SILTY SAND W/GRAVEL (fill)								
						CL-ML	brown, moist, stiff — SANDY SILTY CLAY (fill)								
				16	24,38,25,(99+)	GM	gray-brown, moist, very dense — SILTY GRAVEL W/SAND (fill)								
						SM	lt. brown, moist, very dense — SILTY SAND								
	5														
4260				11	Pushed T 0.33	CL-ML (A-4(5))	lt. brown, moist, firm — SILTY CLAY	104.1	20.3	28	6	0	3	97	UU 1,848 psf
					T 0.20	CL-ML	lt. brown, moist, soft — SILTY CLAY silty sand lenses								
	10			8	4,3,4,(13)	SM	lt. rusty-brown, wet, med. dense — SILTY SAND								
4255				16	3,2,3,(8) T 0.18	CL-ML,SM	lt. brown, very moist & wet, soft/loose — INTERBEDDED LAYERS OF SILTY CLAY & SILTY SAND								
	15			18	Pushed T 0.19	CL (A-6(11))	lt. brown, very moist, soft to firm — LEAN CLAY silty sand lenses	88.9	29.7	34	11	0	5	95	CT UU 2,105 psf
4250				18	0,1,2,(5) T 0.17	CL	lt. brown, very moist, soft								

BOTTOM OF HOLE

DRILL HOLE LOG — BORING NO. 21-R-B10

PROJECT: I-15; SHEPARD LANE INTERCHANGE
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N: 522877, E: 526139 / LAT: 40.994654° N, LONG: 111.915280° W
DRILLING METHOD: 08-CME-55 / NW CASING to 5'
DRILLER: D.K.
DEPTH TO WATER - INITIAL: ▽ 2.9' **AFTER 24 HOURS:** ▼ DRY AT 5.4' 1/26/22
PROJECT NUMBER: 202101-017
DATE STARTED: 6/11/21
DATE COMPLETED: 6/11/21
GROUND ELEVATION: 4257.1'
LOGGED BY: W.R., J.B.

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							16" ASPHALT								
4255				10	30,25,16,(90)	GM	lt. brown, moist, very dense — SILTY GRAVEL W/SAND (fill)								
						GM	red-brown, very moist								
				15	8,10,11,(49)	ML	dk. brown, wet, dense — SILT plastic								
	5			15	13,20,50,(99+)	SM (A-4(0))	dk. gray, wet, very dense — SILTY SAND W/GRAVEL		15.1		NP	16	42	42	
4250				6	38,22,8,(67)	GC	dk. gray-brown, very moist, dense — CLAYEY GRAVEL W/SAND								
							SILTY SAND								
	10			6	5,2,4,(12)	SM	dk. gray, wet, med. dense								

BOTTOM OF HOLE

DRILL HOLE LOG — BORING NO. 21-R-B11

PROJECT: I-15; SHEPARD LANE INTERCHANGE
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N: 523502, E: 525409 / LAT: 40.996361° N, LONG: 111.917934° W
DRILLING METHOD: 20-CME-55 / NW CASING TO 4.5'
DRILLER: T.K.
DEPTH TO WATER - INITIAL: ▽ 4.6' **AFTER 24 HOURS:** ▼ N.M.
PROJECT NUMBER: 202101-017
DATE STARTED: 6/15/21
DATE COMPLETED: 6/15/21
GROUND ELEVATION: 4260.2'
LOGGED BY: M.N.H., J.B.

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4260							13" ASPHALT								
				15	32,30,20,(99+)	GP-GM	brown, sl. moist, very dense — GRAVEL W/SILT & SAND (fill)								
				13	10,15,16,(73)	SM	lt. brown, dry, very dense — SILTY SAND								
						SM	lt. brown, moist								
4255	5			15	8,7,9,(38)	ML	brown, moist — SANDY SILT								
						SM	dk. gray, moist, dense — SILTY SAND								
				13	2,1,2,(6)	OL	black, moist, soft — ORGANIC SILT W/SAND								

BOTTOM OF HOLE

KEY TO BORING LOG

SYMBOLS

Split Spoon Sample — 2,3,7,(16) (N)60 Value; T 0.45 Torvane (tsf); PP 2.0 Pocket Penetrometer (tsf)
Core — 95,60 Percent Recovery, R.Q.D.
Thin-Walled Tube Sample — Pushed; T 0.45 Torvane (tsf); PP 2.0 Pocket Penetrometer (tsf)

CT = Consolidation
UU = Unconsolidated, Undrained
Hyd. = Hydrometer
Chem. = pH, Resistivity, Sulfate, Chloride, Soluble Salts

2" OD Split Spoon (SPT)
2.5" OD Split Spoon

RELATIVE DENSITY (NON-PLASTIC - SAND & SILT)

VERY LOOSE, $(N_1)_{60}$ <5
LOOSE, $(N_1)_{60}$ 5-10
MED DENSE, $(N_1)_{60}$ 11-30
DENSE, $(N_1)_{60}$ 31-50
VERY DENSE, $(N_1)_{60}$ >50

CONSISTENCY (PLASTIC - SILT & CLAY)

VERY SOFT, TORVANE <0.12, PP <0.25
SOFT, TORVANE 0.12-0.25, PP 0.25-0.5
FIRM, TORVANE 0.25-0.50, PP 0.5-1.0
STIFF, TORVANE 0.50-1.00, PP 1.0-2.0
VERY STIFF, TORVANE 1.00-2.00, PP 2.0-4.0
HARD, TORVANE >2.00, PP >4.0

GENERAL NOTES

1. THE SUBSURFACE EXPLORATIONS SHOWN WERE CONDUCTED BETWEEN 06/11/21 AND 09/01/22 BY RB&G ENGINEERING, INC.
2. THIS BORING LOG REPRESENTS A SYNOPSIS OF THE SOIL DEPOSITS ENCOUNTERED WITHIN THE BORING AND IS BASED ON SOUND GEOLOGICAL AND ENGINEERING JUDGEMENT. BECAUSE SOIL IS A COMPLEX MEDIUM, THIS BORING LOG MAY OR MAY NOT REPRESENT THE SOIL CONDITIONS AT THIS SITE. THIS SUBSURFACE INTERPRETATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION AND JUDGEMENT OF THE CONTRACTOR.
3. THE WATER LEVEL AND CONDITIONS INDICATED ON THE BORING LOG REPRESENT HOLE CONDITIONS ON THE DATE SHOWN, HOWEVER, IT SHOULD BE NOTED THAT AT LOCATIONS AWAY FROM THE BORING OR AT ANOTHER TIME THE WATER LEVEL AND CONDITIONS MAY VARY SIGNIFICANTLY.
4. THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES, AND THE TRANSITION MAY BE GRADUAL.
5. COBBLE - A ROCK WITH AN AVERAGE DIMENSION BETWEEN 3 INCHES AND 12 INCHES
6. BOULDER - A ROCK WITH AN AVERAGE DIMENSION OF 12 INCHES OR GREATER.

NOTE: DRILL RIG USED -
20-CME-55, HAMMER E=0.83
08-CME-55, HAMMER E=0.83

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN MNH 09/22 CHECK SRJ 10/22
DRAWN JPN 10/22 CHECK SRJ 10/22
MM/DD/YY DATE — ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
RB&G ENGINEERING

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
SOIL DATA 2 OF 3

PIN 15684
S-I15-7(340)325
PROJECT NUMBER

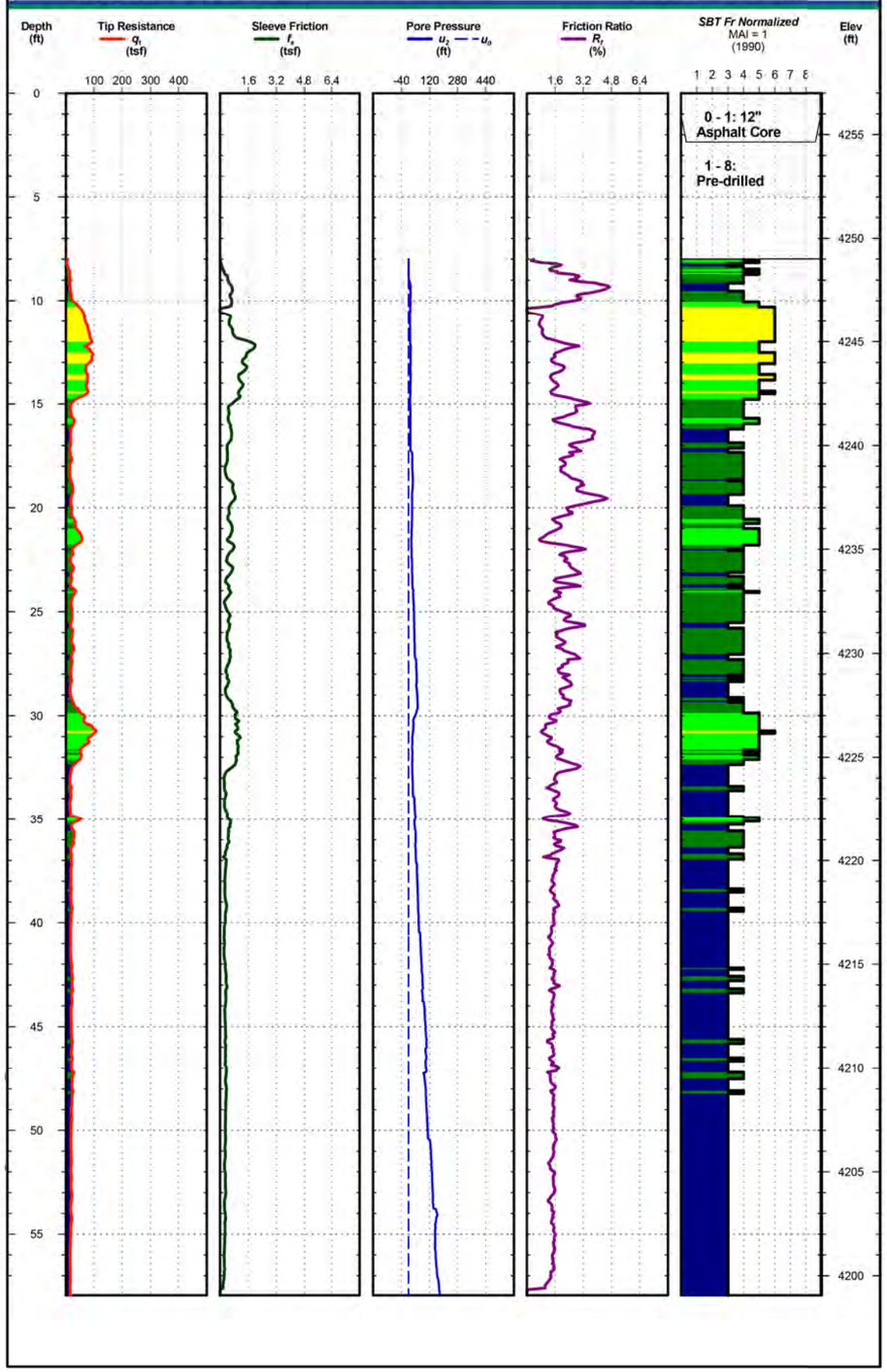
DAVIS
COUNTY
R-927
STRUCTURE NUMBER
R-927
DRAWING NUMBER
SHEET 6B OF 8

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EXHIBIT A

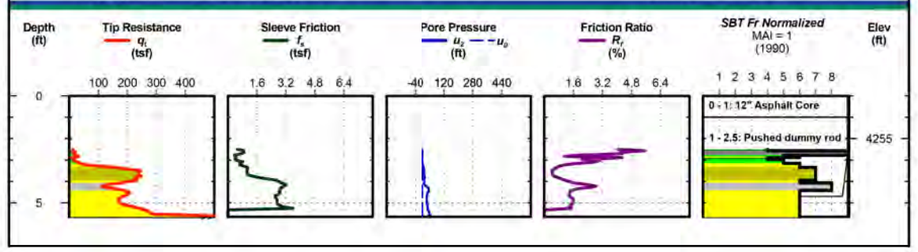
Cone Penetration Test — 22-UTA-C01

Date: Sep. 1, 2022
Estimated Water Depth:
Rig/Operator: DHBedke / ADBedke
Latitude: 40.994923
Longitude: -111.915706
Elevation: 4257.0
Total Depth: 58.0 ft
Termination Criteria: Target Depth
Cone Size: 1.41 sn 4644.149



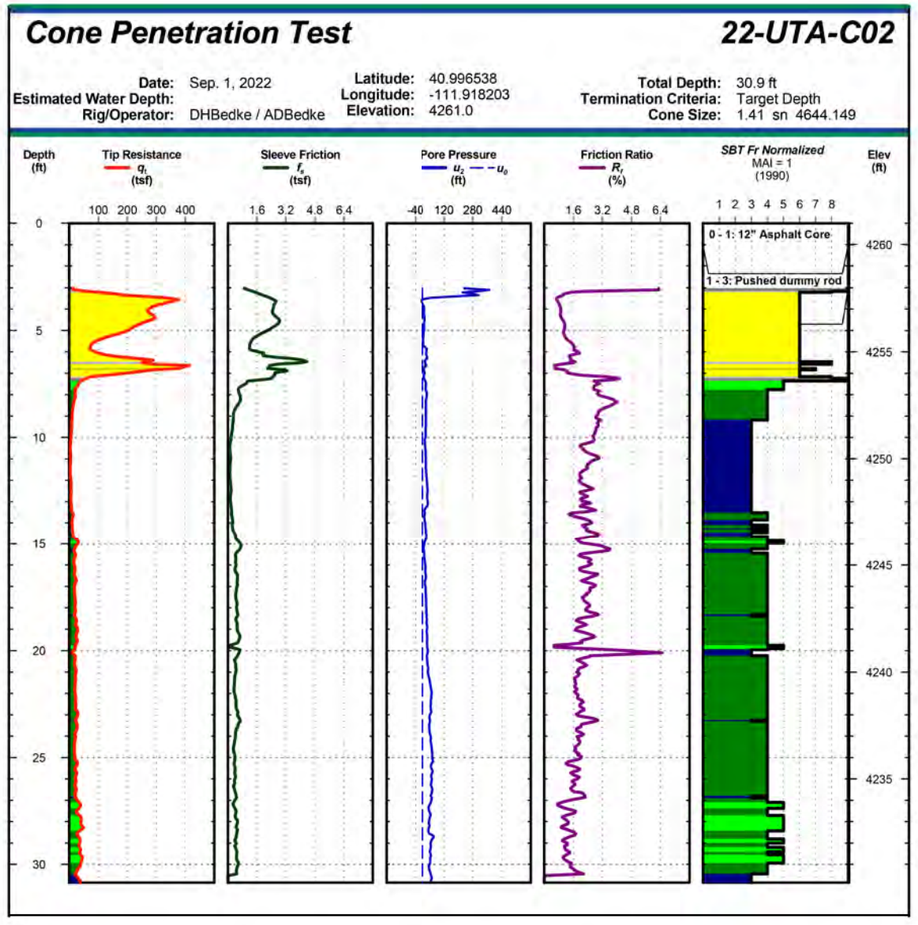
Cone Penetration Test — 22-UTA-C01a

Date: Sep. 1, 2022
Estimated Water Depth:
Rig/Operator: DHBedke / ADBedke
Latitude: 40.994936
Longitude: -111.915738
Elevation: 4257.0
Total Depth: 5.7 ft
Termination Criteria: Maximum Reaction Force
Cone Size: 1.41 sn 4644.149



Cone Penetration Test — 22-UTA-C02

Date: Sep. 1, 2022
Estimated Water Depth:
Rig/Operator: DHBedke / ADBedke
Latitude: 40.996538
Longitude: -111.918203
Elevation: 4261.0
Total Depth: 30.9 ft
Termination Criteria: Target Depth
Cone Size: 1.41 sn 4644.149



KEY TO CPT LOG

GENERAL NOTES

1. THE SUBSURFACE EXPLORATIONS SHOWN WERE CONDUCTED ON 09/01/2022 BY BEDKE GEOTECHNICAL FIELD SERVICES FOR RB&G ENGINEERING, INC..
2. EQUILIBRIUM PORE PRESSURES ARE ESTIMATED PORE WATER PRESSURE IN FEET OF PIEZOMETRIC HEAD DETERMINED USING PORE PRESSURE DISSIPATION TESTS AT THE DEPTHS AND ON THE DATES SHOWN. ACTUAL GROUNDWATER CONDITIONS AT OTHER LOCATIONS, AT OTHER DEPTHS, OR AT OTHER TIMES MAY VARY SIGNIFICANTLY.
3. CPT LOG IS CORRELATED INTERPRETATION OF SOIL BEHAVIOR BASED ON MEASUREMENTS OF AN ELECTRIC PIEZOCONE, AND SOIL BEHAVIOR TYPE (SBT) INTERPRETATIONS WILL NOT NECESSARILY MATCH TRADITIONAL CLASSIFICATIONS OF PHYSICAL SOIL SAMPLES.

SBT Material Graphics

- 1 - Sensitive, Fine Grained Soils
- 2 - Organic Soils, Peats
- 3 - Clays-Clay to Silty Clay
- 4 - Silt Mixtures-Clay Silt to Silty Clay
- 5 - Sand Mixtures-Silty Sand to Sandy Silt
- 6 - Sands-Clean Sand to Silty Sand
- 7 - Gravelly Sand to Sand
- 8 - Very Stiff Clay to Clayey Sand*
- 9 - Very Stiff Fine Grained Soils*

*overconsolidated or cemented

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN JSP 09/22 CHECK SRJ 10/22
DRAWN JPN 10/22 CHECK SRJ 10/22

MM/DD/YY DATE
ENGINEER OF RECORD (EOR)

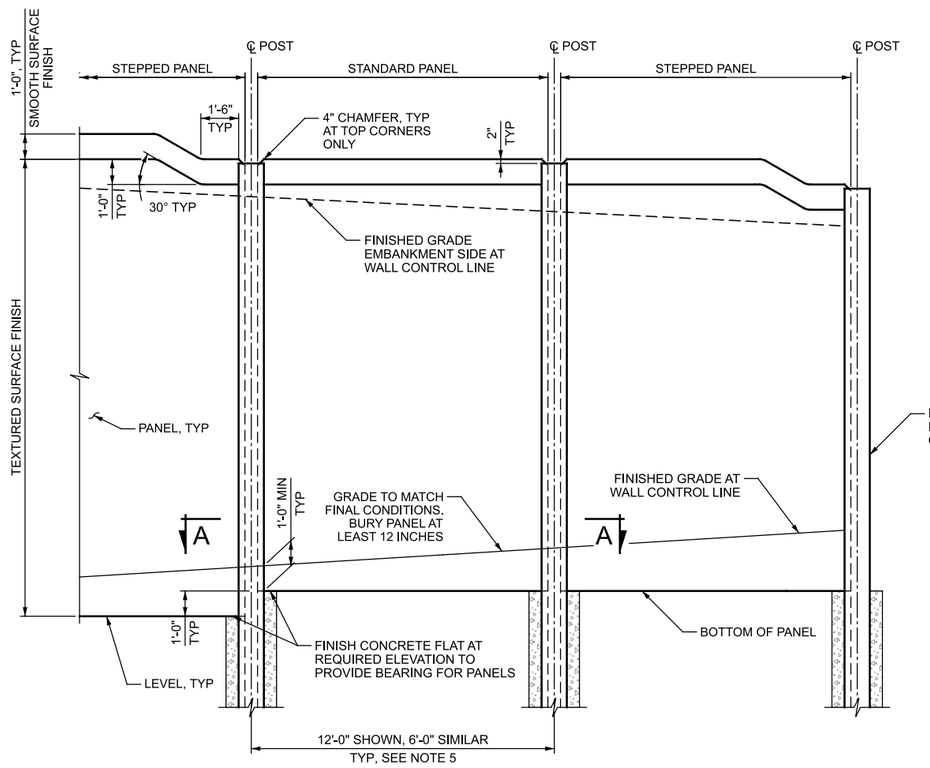
UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
RB&G ENGINEERING

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
SOIL DATA 3 OF 3
PIN 15684
PROJECT NUMBER S-I15-7(340)325

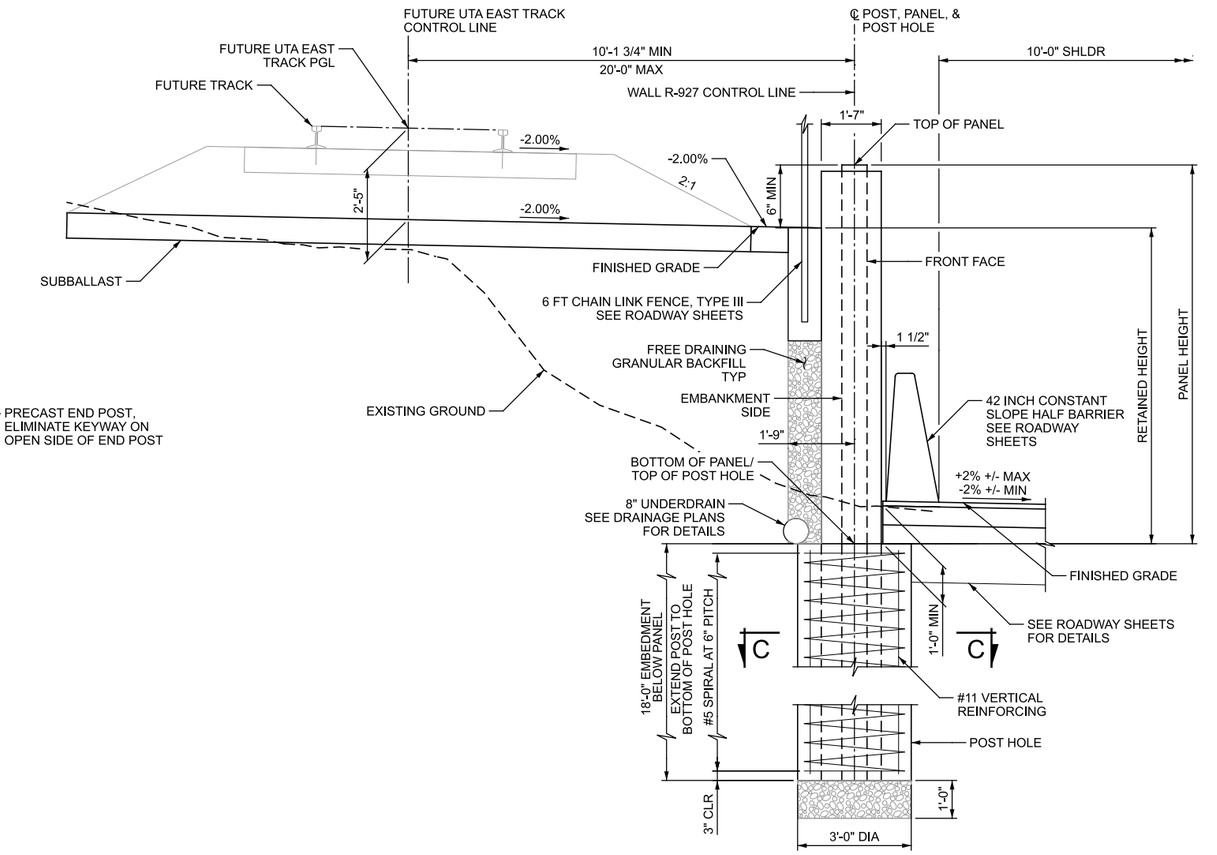
DAVIS
COUNTY
R-927
STRUCTURE NUMBER
R-927
DRAWING NUMBER
SHEET 6C OF 8

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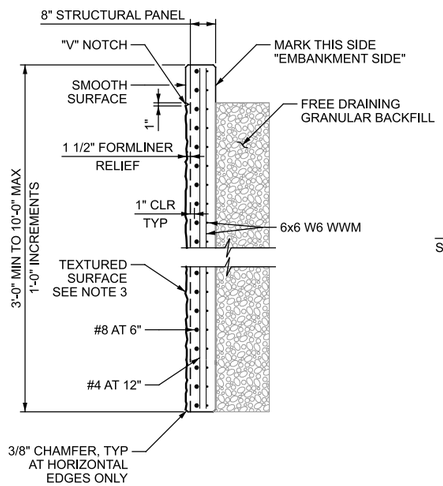
EXHIBIT A



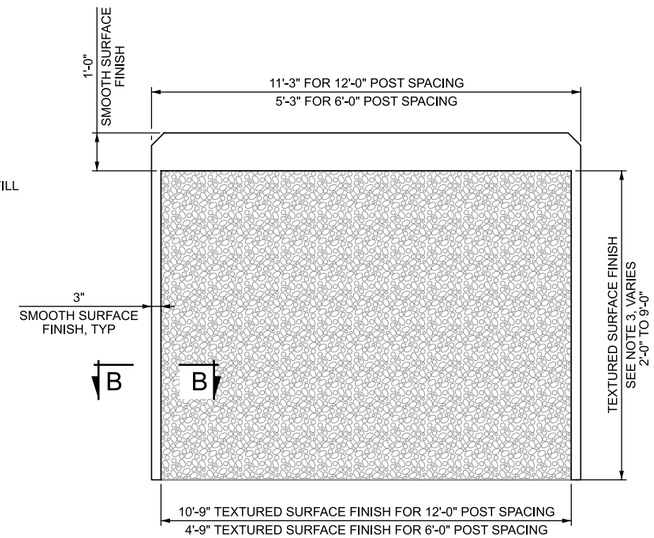
TYPICAL ELEVATION



TYPICAL SECTION

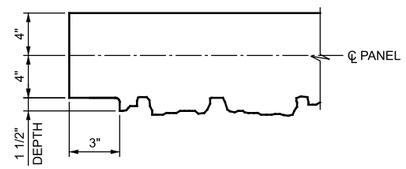


PANEL SECTION

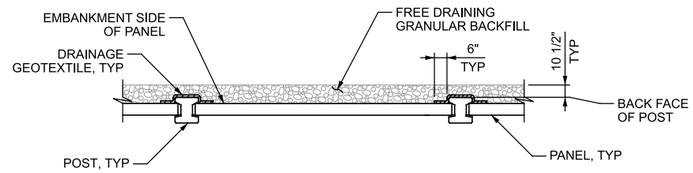


TYPICAL PANEL

EMBANKMENT SIDE FACE SMOOTH SURFACE FINISH



SECTION B-B



NOTE: PLACE FREE DRAINING GRANULAR BACKFILL AND DRAINAGE GEOTEXTILE FROM TOP OF FINISHED GRADE TO BOTTOM OF PANEL.

SECTION A-A

NOTES

1. ALL PANELS ARE: RETAINING PANELS

	6 FT POST SPACING	12 FT POST SPACING
MIN HEIGHT:	7 FT	3 FT
MAX HEIGHT:	10 FT	8 FT
LENGTH:	5 FT 3 IN	11 FT 3 IN
THICKNESS (EXCLUDES TEXTURED SURFACE):	8 IN	8 IN

2. SEE "R-927 WALL DETAILS 2" FOR SECTION C-C.
3. FORM A TEXTURED SURFACE ON EXPOSED SIDE OF RETAINING PANEL. USE LARGE SANDSTONE ASHLAR OR APPROVED EQUAL WITH 1 1/2" MAX RELIEF AND CONCRETE COATING, SAE INTERNATIONAL AMS-STD-595A 36492.
4. SEE "R-927 WALL DETAILS 2" FOR POST AND POST HOLE DETAILS. MEASURE POST HOLE DEPTH FROM THE LOWER OF THE TWO ADJACENT PANELS.
5. SEE SITUATION AND LAYOUT SHEETS FOR WALL POST SPACING REQUIREMENTS.
6. AT CONTRACTOR'S OPTION, RIGID PLASTIC FOAM MAY BE ADDED BETWEEN POSTS AND ROADWAY BARRIER TO FORM BARRIER.

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN KRC 10/22 | CHECK JHO 10/22
DRAWN BJA 10/22 | CHECK JHO 10/22

MM/DD/YY DATE | ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
R-927 WALL DETAILS 1

PIN 15684
PROJECT NUMBER S-I15-7(340)325

DAVIS
COUNTY

R-927
STRUCTURE NUMBER

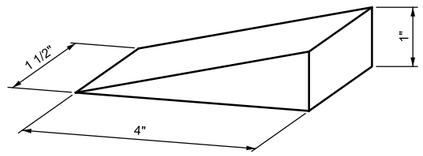
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DRAWING NUMBER

SHEET 7 OF 8

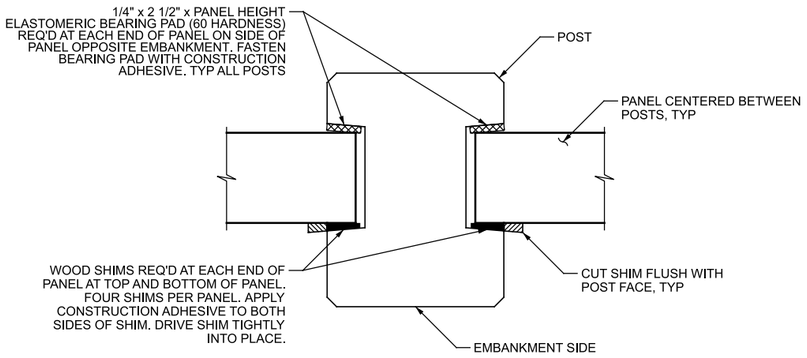
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EXHIBIT A

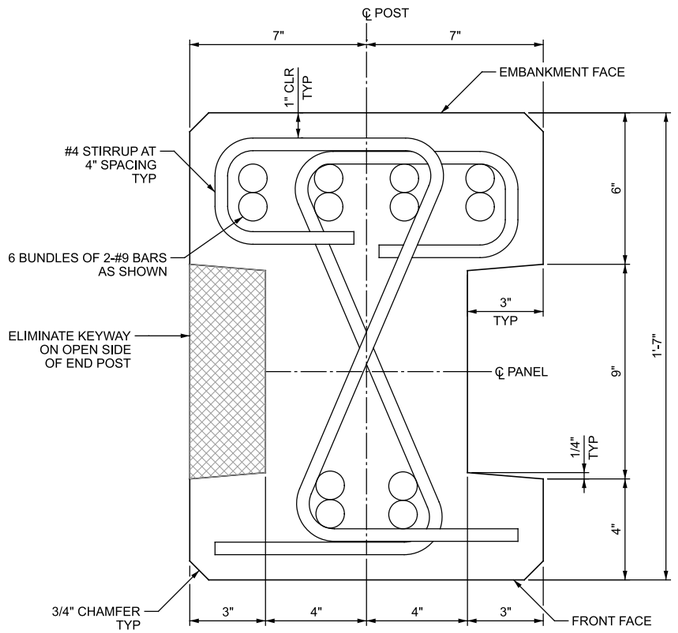
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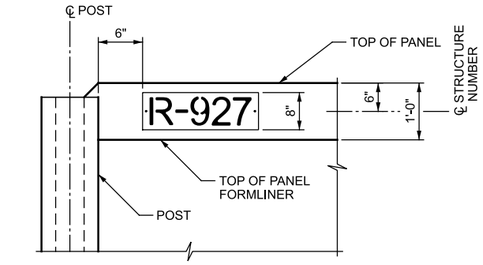
WOOD SHIM DETAIL



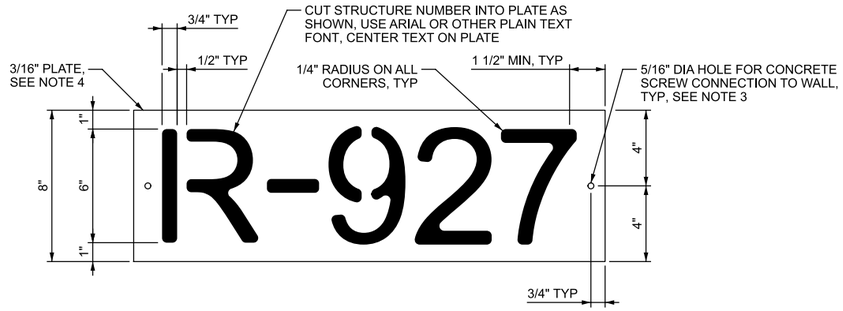
POST & PANEL DETAIL



SECTION THROUGH POST



FRONT OF WALL ELEVATION

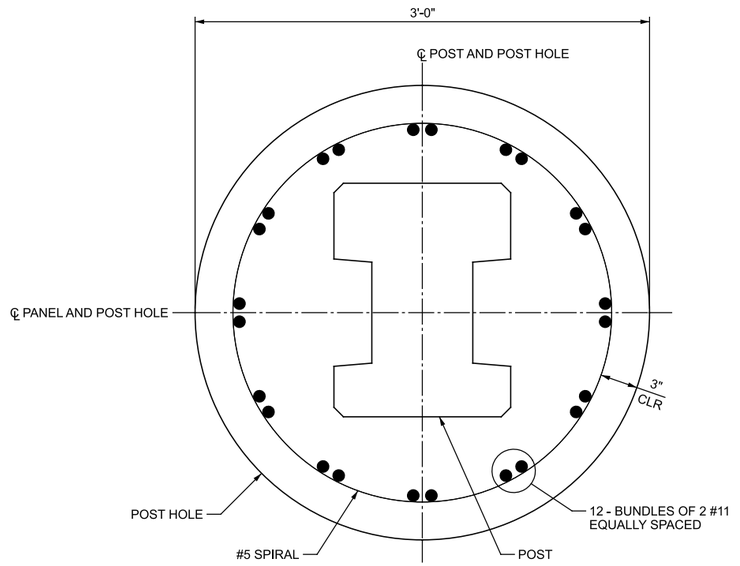


STRUCTURE NUMBER PLATE DETAIL

FOR SCREW CONNECTION TO WALL

PANEL STRUCTURE NUMBER DETAIL

SEE NOTES



SECTION C-C

NOTES

1. SEE SITUATION AND LAYOUT SHEETS FOR STRUCTURE NUMBER LOCATIONS.
2. USE COATED 3/16 INCH DIAMETER OR 1/4 INCH DIAMETER CONCRETE SCREWS AT EACH END FOR ATTACHING PLATE TO CONCRETE WALL FACE. USE COATING THAT PROVIDES LONG-TERM CORROSION RESISTANCE INTENDED FOR OUTDOOR HARSH ENVIRONMENTS THAT IS COMPATIBLE WITH THE STEEL PLATE GALVANIZED FINISH. FOLLOW ALL MANUFACTURER INSTRUCTIONS FOR SCREW INSTALLATION.
3. USE STEEL CONFORMING TO AASHTO M270 GRADE 36 FOR PLATE. GALVANIZE PLATE AFTER FABRICATION ACCORDING TO AASHTO M111.

QUANTITIES		
ITEM	EST QTY	UNIT
PRECAST 11'-3" RETAINING PANEL HEIGHT 3 FT	9	EACH
PRECAST 11'-3" RETAINING PANEL HEIGHT 4 FT	16	EACH
PRECAST 11'-3" RETAINING PANEL HEIGHT 5 FT	13	EACH
PRECAST 11'-3" RETAINING PANEL HEIGHT 6 FT	35	EACH
PRECAST 11'-3" RETAINING PANEL HEIGHT 7 FT	40	EACH
PRECAST 11'-3" RETAINING PANEL HEIGHT 8 FT	6	EACH
PRECAST 5'-3" RETAINING PANEL HEIGHT 7 FT	3	EACH
PRECAST 5'-3" RETAINING PANEL HEIGHT 8 FT	14	EACH
PRECAST 5'-3" RETAINING PANEL HEIGHT 9 FT	85	EACH
PRECAST 5'-3" RETAINING PANEL HEIGHT 10 FT	45	EACH
PRECAST POST LENGTH 20'-10"	9	EACH
PRECAST POST LENGTH 21'-10"	16	EACH
PRECAST POST LENGTH 22'-10"	14	EACH
PRECAST POST LENGTH 23'-10"	34	EACH
PRECAST POST LENGTH 24'-10"	45	EACH
PRECAST POST LENGTH 25'-10"	18	EACH
PRECAST POST LENGTH 26'-10"	86	EACH
PRECAST POST LENGTH 27'-10"	45	EACH

PRELIMINARY - NOT FOR CONSTRUCTION
PS&E SUBMITTAL - 02/23/2023

DESIGN	KRC	10/22	CHECK	JHO	10/22
DRAWN	BJA	10/22	CHECK	JHO	10/22

MM/DD/YY DATE — ENGINEER OF RECORD (EOR)

UTAH DEPARTMENT OF TRANSPORTATION
STRUCTURES DIVISION
HORROCKS ENGINEERS

I-15; SHEPARD LN INTCHG & PED OVERPASS
PRECAST RETAINING WALL
R-927 WALL DETAILS 2
PIN 15684
PROJECT NUMBER S-I15-7(340)325

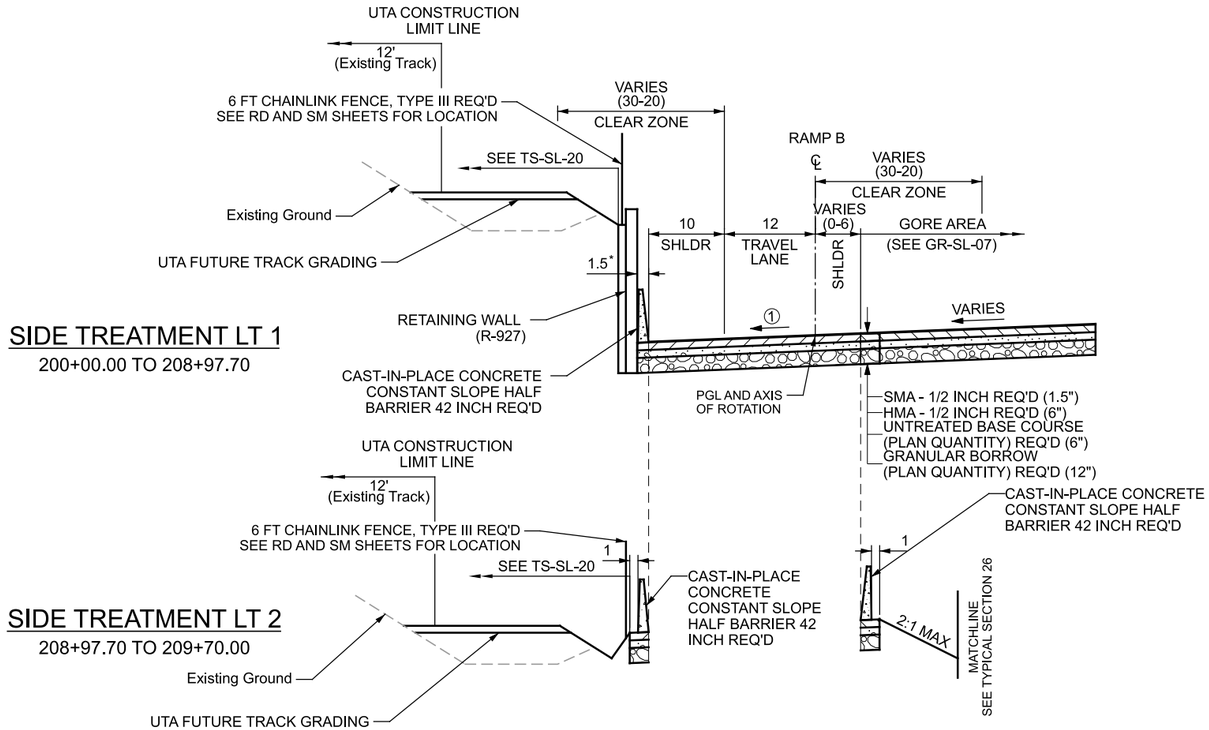
DAVIS
COUNTY

R-927
STRUCTURE NUMBER

R-927
DRAWING NUMBER

SHEET 8 OF 8

EXHIBIT A



SIDE TREATMENT LT 1
200+00.00 TO 208+97.70

SIDE TREATMENT RT 1
200+00.00 TO 208+50.00

SIDE TREATMENT LT 2
208+97.70 TO 209+70.00

SIDE TREATMENT RT 2
208+50.00 TO 209+70.00

TYPICAL SECTION 18

RAMP B

200+00.00 TO 209+70.00
DESIGN SPEED 60/45 MPH
CLEAR ZONE 30/20 FT
*INCLUDES 1 INCH CONCRETE BEHIND BARRIER

NOTES:

① REFER TO RP-SL SERIES SHEETS FOR CROSS SLOPE INFORMATION

2. REFER TO GR-SL SERIES SHEETS FOR INTERSECTION AND GORE GRADING DETAILS.
3. REFER TO RD-SL SERIES SHEETS FOR PAVEMENT WIDTH INFORMATION.
4. REFER TO SS-SL SERIES SHEETS FOR LANE WIDTH INFORMATION.
5. REFER TO LS SERIES SHEETS FOR LANDSCAPING TREATMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

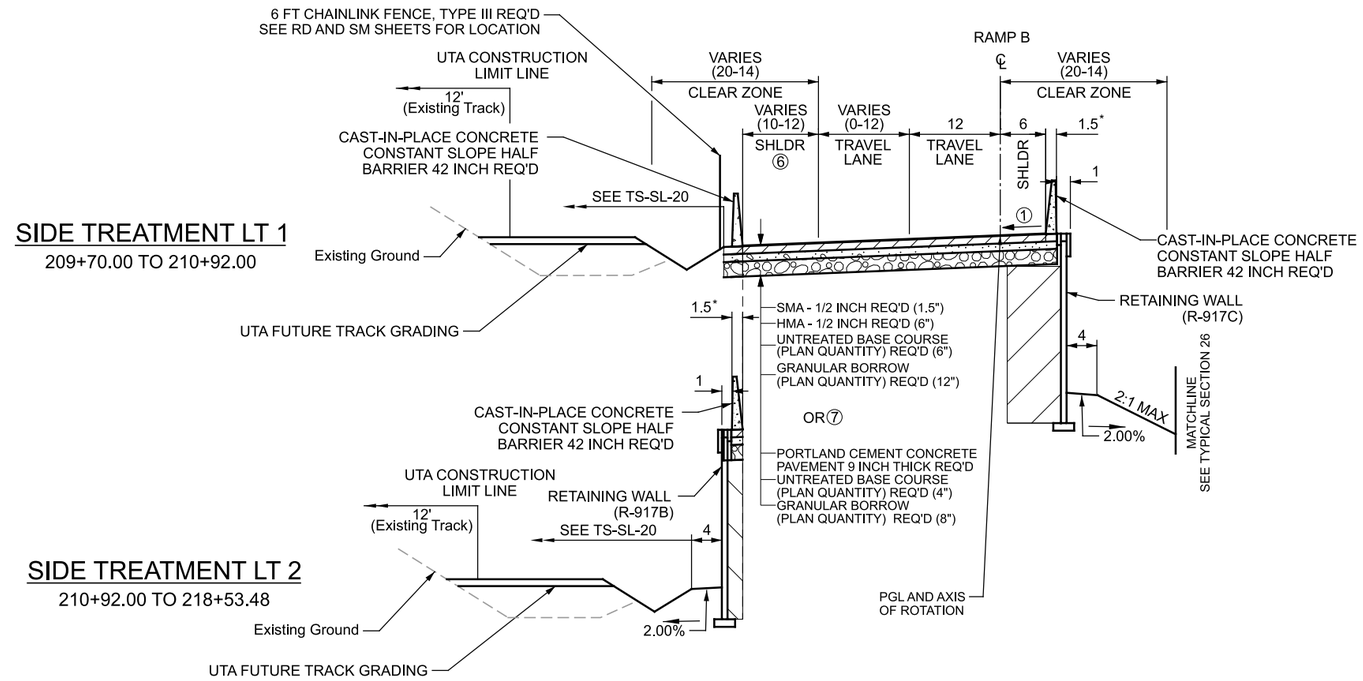
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QC CHECKED BY RNW
MM/DD/YY DATE

APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
TYPICAL SECTION
SHEET NO. TS-SL-11

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EXHIBIT A



TYPICAL SECTION 19

RAMP B

209+70.00 TO 218+53.48
DESIGN SPEED 45/25 MPH
CLEAR ZONE 20/14 FT
*INCLUDES 1 INCH PAVEMENT BEHIND BARRIER

NOTES:

① REFER TO RP-SL SERIES SHEETS FOR CROSS SLOPE INFORMATION

2. REFER TO GR-SL SERIES SHEETS FOR INTERSECTION AND GORE GRADING DETAILS.
3. REFER TO RD-SL SERIES SHEETS FOR PAVEMENT WIDTH INFORMATION.
4. REFER TO SS-SL SERIES SHEETS FOR LANE WIDTH INFORMATION.
5. REFER TO LS SERIES SHEETS FOR LANDSCAPING TREATMENTS.

⑥ EXTRA SHOULDER WIDTH TO ACCOMMODATE FUTURE RAMP METERING.

⑦ SEE RD SERIES SHEETS FOR PAVING LIMITS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

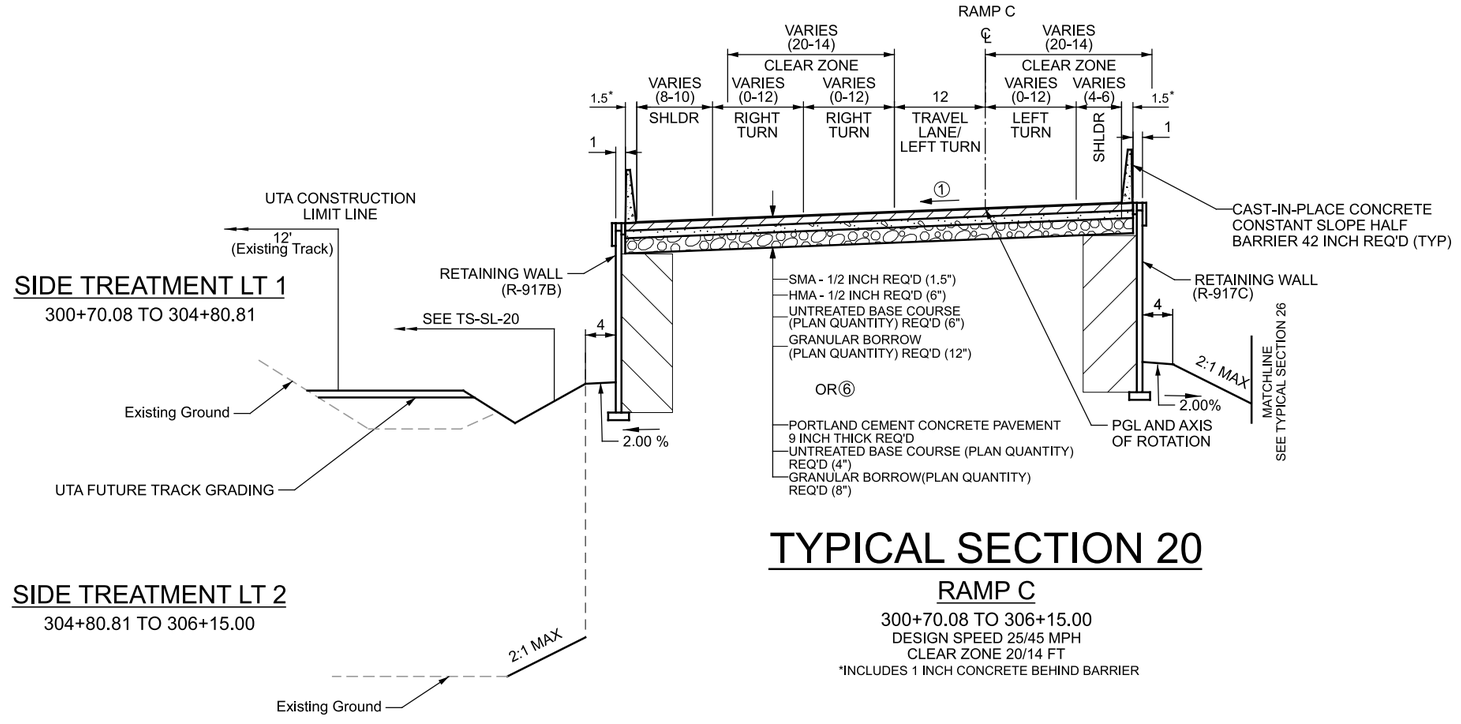
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QC CHECKED BY RNW
DATE MM/DD/YY

APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN 15684
TYPICAL SECTION
SHEET NO. TS-SL-12

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EXHIBIT A



TYPICAL SECTION 20

RAMP C

300+70.08 TO 306+15.00
DESIGN SPEED 25/45 MPH
CLEAR ZONE 20/14 FT
*INCLUDES 1 INCH CONCRETE BEHIND BARRIER

NOTES:

① REFER TO RP-SL SERIES SHEETS FOR CROSS SLOPE INFORMATION

2. REFER TO GR-SL SERIES SHEETS FOR INTERSECTION AND GORE GRADING DETAILS.
3. REFER TO RD-SL SERIES SHEETS FOR PAVEMENT WIDTH INFORMATION.
4. REFER TO SS-SL SERIES SHEETS FOR LANE WIDTH INFORMATION.
5. REFER TO LS SERIES SHEETS FOR LANDSCAPING TREATMENTS.

⑥ SEE RD SERIES SHEETS FOR PAVING LIMITS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY KLY
QC CHECKED BY RNW
DATE MM/DD/YY

APPROVED
PROFESSIONAL ENGINEER

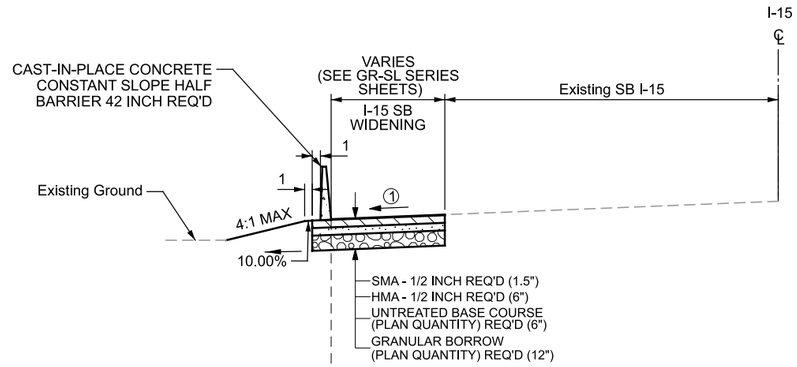
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PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
TYPICAL SECTION

SHEET NO. TS-SL-13

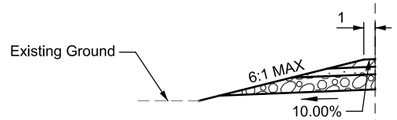
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EXHIBIT A

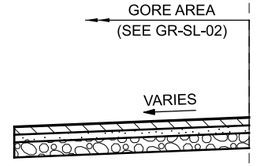
SIDE TREATMENT LT 1
1046+93.78 TO 1051+46.00



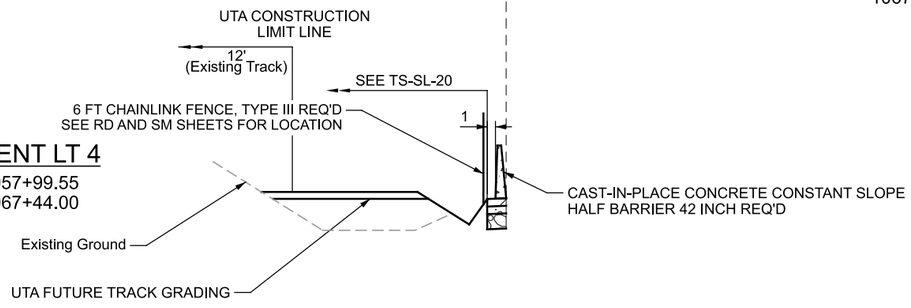
SIDE TREATMENT LT 2
1051+46.00 TO 1054+48.03



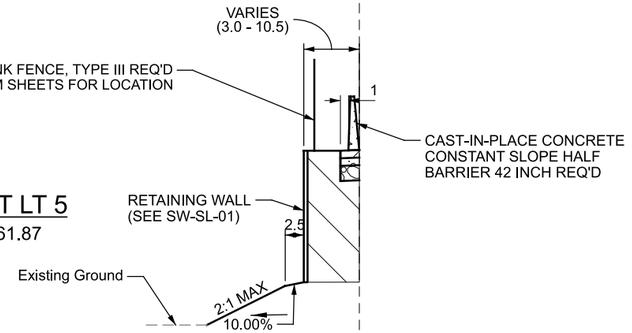
SIDE TREATMENT LT 3
1054+48.03 TO 1055+78.44



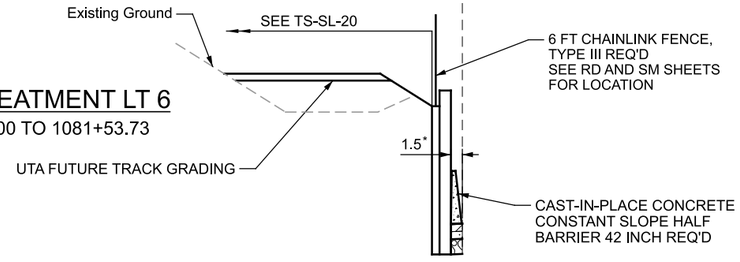
SIDE TREATMENT LT 4
1057+41.00 TO 1057+99.55
1060+61.87 TO 1067+44.00



SIDE TREATMENT LT 5
1057+99.55 to 1060+61.87



SIDE TREATMENT LT 6
1067+44.00 TO 1081+53.73



TYPICAL SECTION 26
I-15 (SOUTHBOUND)
1046+93.78 TO 1055+78.44
1057+41.00 TO 1081+53.73
DESIGN SPEED 70 MPH
CLEAR ZONE 30 FT

NOTES:

① REFER TO GR-SL SERIES SHEETS FOR PAVEMENT WIDENING DETAILS.

2. REFER TO RD-SL SERIES SHEETS FOR PAVEMENT WIDTH INFORMATION.
3. REFER TO SS-SL SERIES SHEETS FOR LANE WIDTH INFORMATION.
4. REFER TO LS SERIES SHEETS FOR LANDSCAPING TREATMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY KLY
QC CHECKED BY RNW
DATE MM/DD/YY

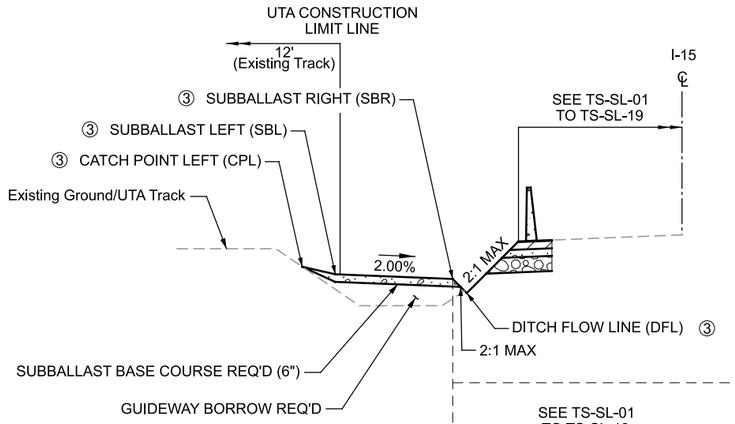
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
TYPICAL SECTION

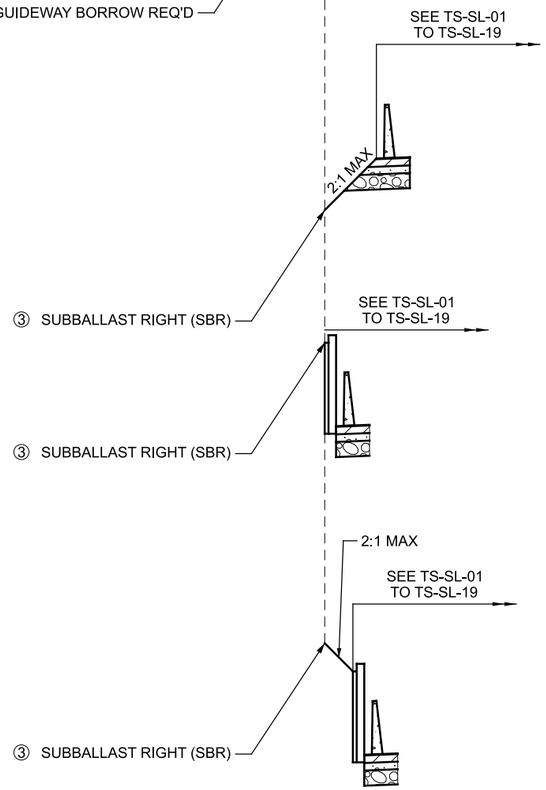
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EXHIBIT A



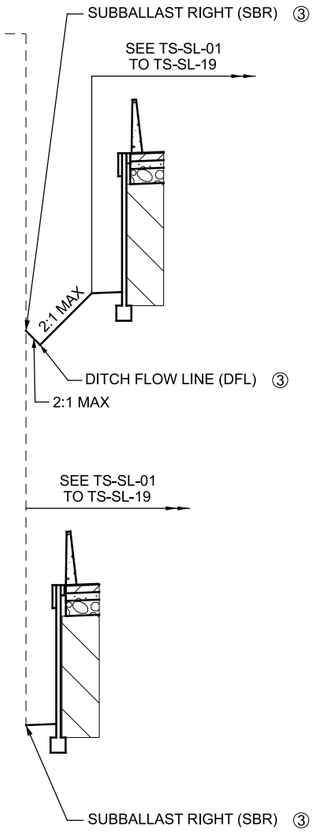
SIDE TREATMENT 1
1057+05.50 TO 1062+16.06
1090+47.54 TO 1092+42.63



SIDE TREATMENT 2
1062+16.06 TO 1067+44.00

SIDE TREATMENT 3
1067+44.00 TO 1079+50.00

SIDE TREATMENT 4
1079+50.00 TO 1090+47.54



SIDE TREATMENT 5
1092+42.63 TO 1093+68.52
1094+42.75 TO 1099+82.79
1101+80.19 TO 1105+63.69

SIDE TREATMENT 6
1093+68.52 TO 1094+42.75
1099+82.79 TO 1101+80.19

TYPICAL SECTION 27
FUTURE UTA TRACK GRADING
1057+05.50 TO 1105+63.69*
*STATIONING BASED OFF I-15 CL

NOTES:

1. SEE TS-SL-01 TO TS-SL-19 FOR INFORMATION NOT SHOWN ON THIS SHEET.
2. REFER TO LS SERIES SHEETS FOR LANDSCAPING TREATMENTS.
3. SEE GR-SL-24 THRU GR-SL-32 FOR STATION/OFFSET/ELEVATION INFORMATION.

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

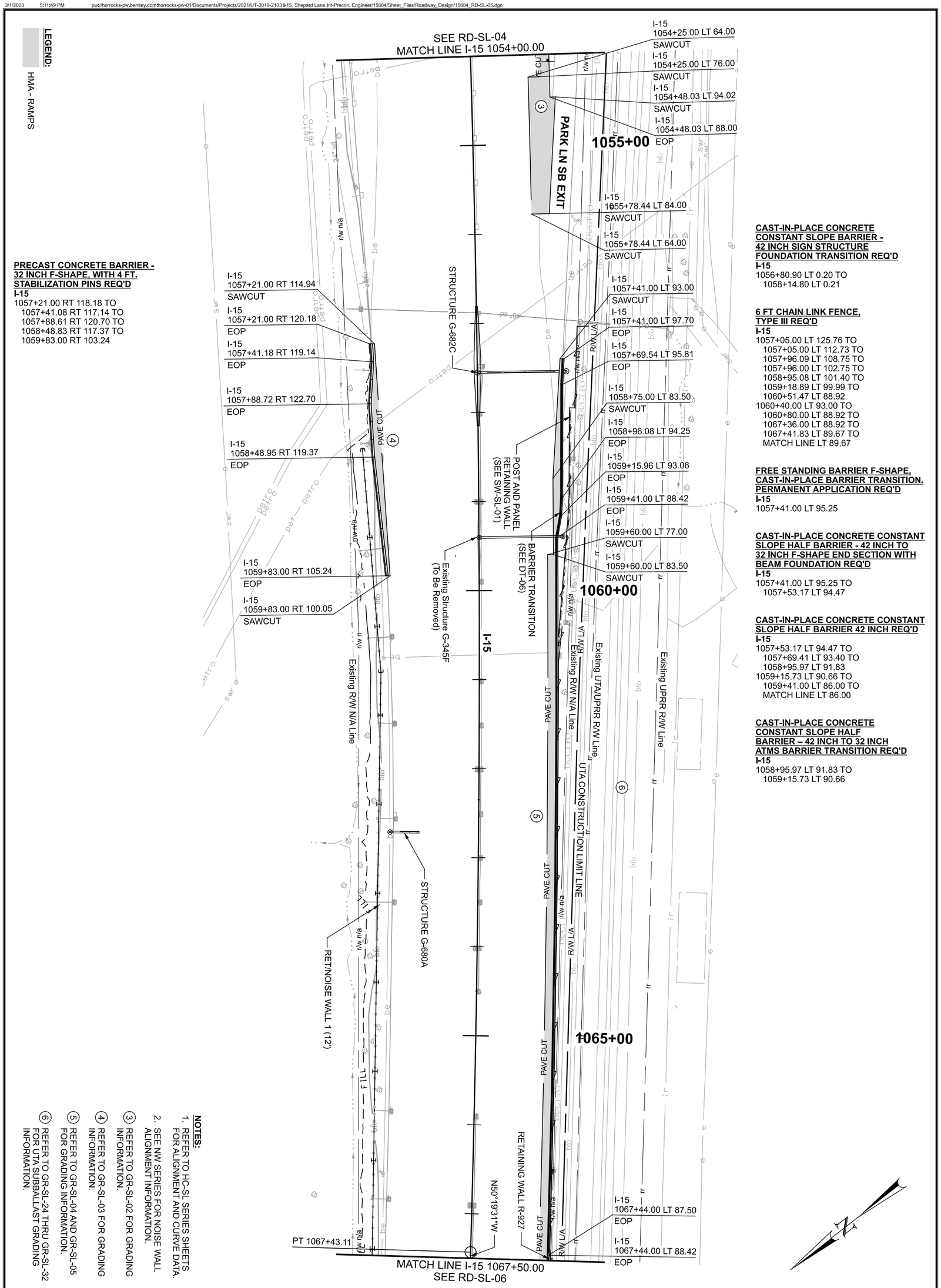
UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KLY
QC CHECKED BY: RNW
DATE: MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
TYPICAL SECTION
SHEET NO. TS-SL-20

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EXHIBIT A



PRECAST CONCRETE BARRIER - 32 INCH F-SHAPE, WITH 4 FT. STABILIZATION PINS REQ'D
I-15
1057+21.00 RT 118.18 TO
1057+41.08 RT 117.14 TO
1057+88.61 RT 120.70 TO
1058+48.83 RT 117.37 TO
1059+83.00 RT 103.24

CAST-IN-PLACE CONCRETE CONSTANT SLOPE BARRIER - 42 INCH SIGN STRUCTURE FOUNDATION TRANSITION REQ'D
I-15
1056+80.90 LT 0.20 TO
1058+14.80 LT 0.21

6 FT CHAIN LINK FENCE, TYPE III REQ'D
I-15
1057+05.00 LT 125.76 TO
1057+05.00 LT 112.73 TO
1057+96.09 LT 108.75 TO
1057+96.00 LT 102.75 TO
1058+95.08 LT 101.40 TO
1059+18.89 LT 99.99 TO
1060+51.47 LT 88.92
1060+40.00 LT 93.00 TO
1060+80.00 LT 88.92 TO
1067+36.00 LT 88.92 TO
1067+41.83 LT 89.67 TO
MATCH LINE LT 89.67

FREE STANDING BARRIER F-SHAPE, CAST-IN-PLACE BARRIER TRANSITION, PERMANENT APPLICATION REQ'D
I-15
1057+41.00 LT 95.25

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER - 42 INCH TO 32 INCH F-SHAPE END SECTION WITH BEAM FOUNDATION REQ'D
I-15
1057+41.00 LT 95.25 TO
1057+53.17 LT 94.47

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER 42 INCH REQ'D
I-15
1057+53.17 LT 94.47 TO
1057+69.41 LT 93.40 TO
1058+95.97 LT 91.83
1059+15.73 LT 90.66 TO
1059+41.00 LT 86.00 TO
MATCH LINE LT 86.00

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER – 42 INCH TO 32 INCH ATMS BARRIER TRANSITION REQ'D
I-15
1058+95.97 LT 91.83 TO
1059+15.73 LT 90.66

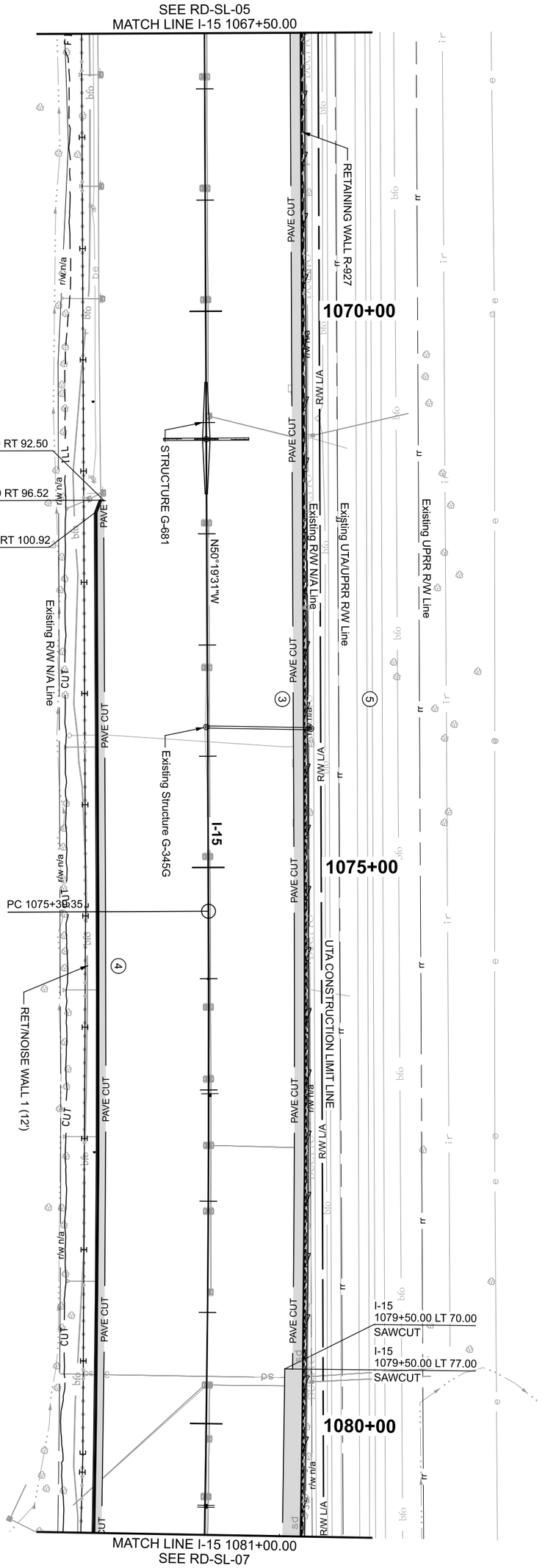
NOTES:
1. REFER TO HC-SL SERIES SHEETS FOR ALIGNMENT AND CURVE DATA.
2. SEE NW SERIES FOR NOISE WALL ALIGNMENT INFORMATION.
3. REFER TO GR-SL-02 FOR GRADING INFORMATION.
4. REFER TO GR-SL-03 FOR GRADING INFORMATION.
5. REFER TO GR-SL-04 AND GR-SL-05 FOR GRADING INFORMATION.
6. REFER TO GR-SL-24 THRU GR-SL-32 FOR UTA SUBBALLAST GRADING INFORMATION.

SHEET NO. RD-SL-05	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	ROADWAY		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY HB	

EXHIBIT A

LEGEND:

HMA - RAMPS



CAST-IN-PLACE CONCRETE CONSTANT SLOPE BARRIER - 42 INCH SIGN STRUCTURE FOUNDATION TRANSITION REQ'D
I-15
1070+64.00 RT 0.06 TO
1071+64.00 RT 0.26

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER - 42 INCH TO 32 INCH F-SHAPE END SECTION WITH BEAM FOUNDATION REQ'D
I-15
1071+69.39 RT 94.08 TO
1071+80.81 RT 98.50

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER 42 INCH REQ'D
I-15
1071+80.81 RT 98.50 TO
MATCH LINE RT 98.50

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER 42 INCH REQ'D
I-15
MATCH LINE LT 86.00 TO
MATCH LINE LT 86.00

6 FT CHAIN LINK FENCE, TYPE III REQ'D
I-15
MATCH LINE LT 89.67 TO
MATCH LINE LT 89.67

NOTES:

1. REFER TO HC-SL SERIES SHEETS FOR ALIGNMENT AND CURVE DATA.
2. SEE NW SERIES FOR NOISE WALL ALIGNMENT INFORMATION.

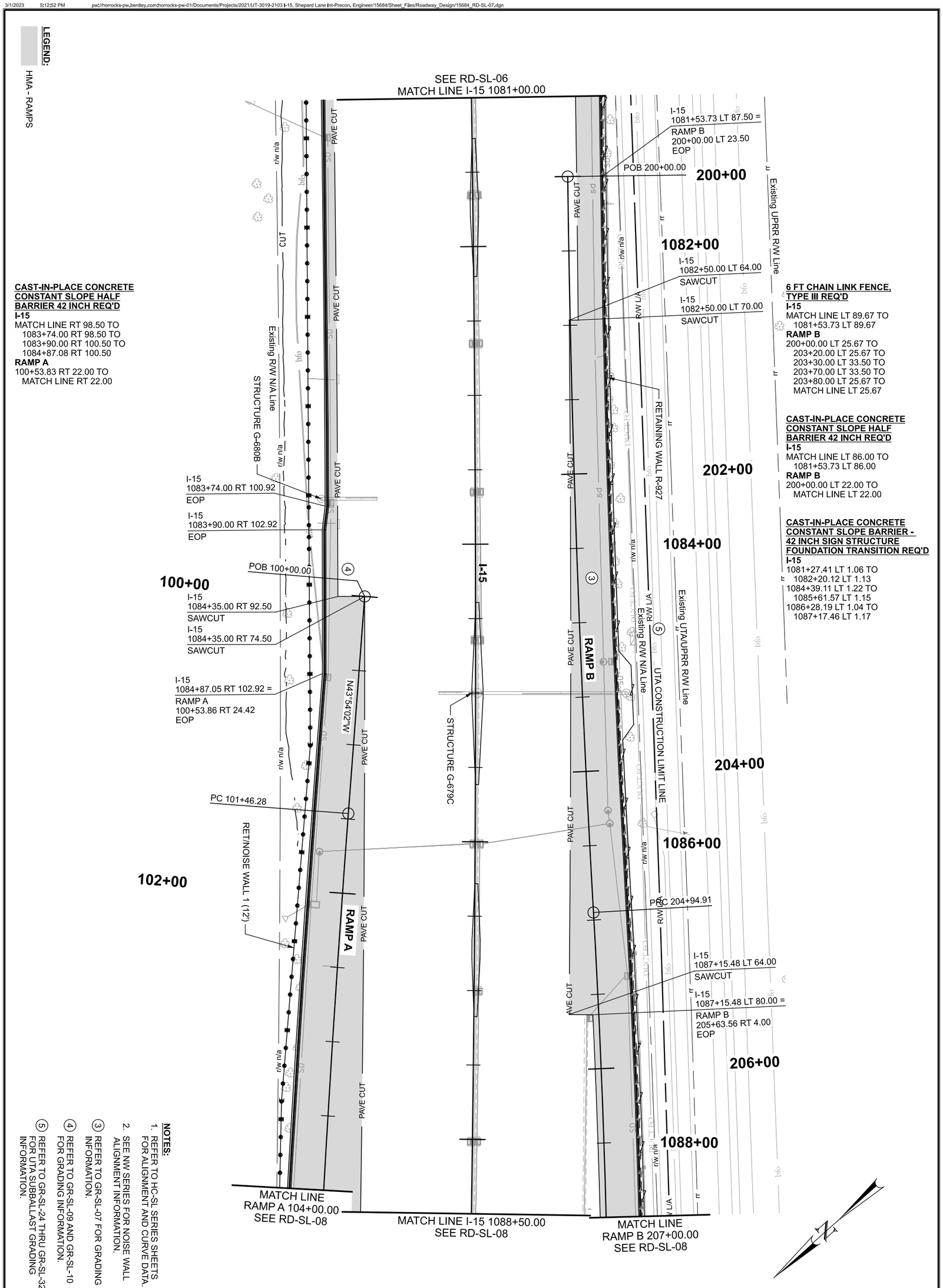
③ REFER TO GR-SL-05 AND GR-SL-06 FOR GRADING INFORMATION.

④ REFER TO GR-SL-08 AND GR-SL-09 FOR GRADING INFORMATION.

⑤ REFER TO GR-SL-24 THRU GR-SL-32 FOR UTA SUBBALLAST GRADING INFORMATION.

SHEET NO. RD-SL-06	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED PROFESSIONAL ENGINEER	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	ROADWAY		MM/DD/YY DATE	QC CHECKED BY HB	

EXHIBIT A



CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER 42 INCH REQ'D
I-15
MATCH LINE RT 98.50 TO
1083+74.00 RT 98.50 TO
1083+90.00 RT 100.50 TO
1084+87.08 RT 100.50
RAMP A
100+53.83 RT 22.00 TO
MATCH LINE RT 22.00

6 FT CHAIN LINK FENCE, TYPE III REQ'D
I-15
MATCH LINE RT 89.67 TO
1081+53.73 LT 89.67
RAMP B
200+00.00 LT 25.67 TO
203+20.00 LT 25.67 TO
203+30.00 LT 33.50 TO
203+70.00 LT 33.50 TO
203+80.00 LT 25.67 TO
MATCH LINE LT 25.67

CAST-IN-PLACE CONCRETE CONSTANT SLOPE HALF BARRIER 42 INCH REQ'D
I-15
MATCH LINE RT 86.00 TO
1081+53.73 LT 86.00
RAMP B
200+00.00 LT 22.00 TO
MATCH LINE LT 22.00

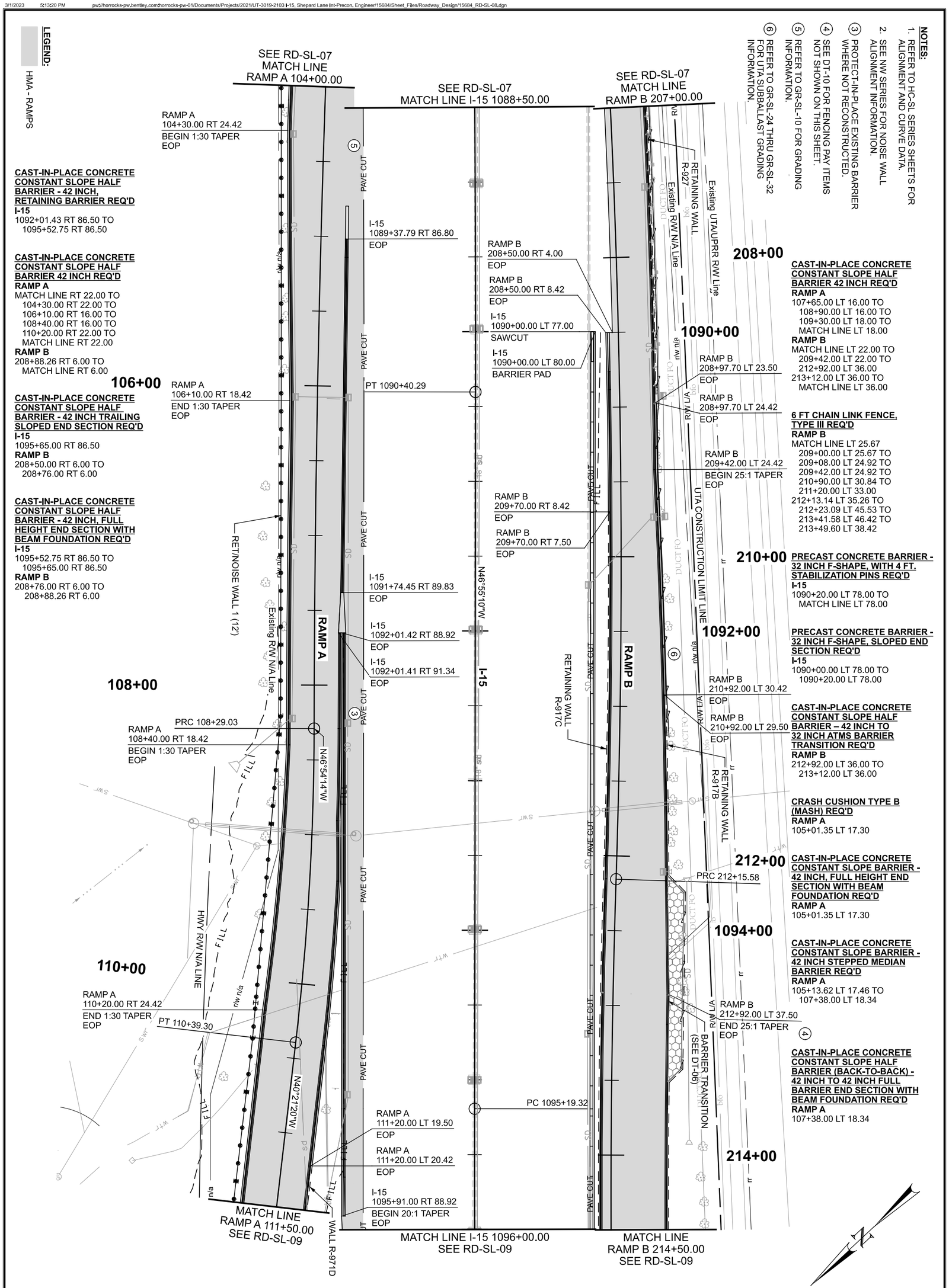
CAST-IN-PLACE CONCRETE CONSTANT SLOPE BARRIER - 42 INCH SIGN STRUCTURE FOUNDATION TRANSITION REQ'D
I-15
1081+27.41 LT 1.06 TO
1082+20.12 LT 1.13
1084+39.11 LT 1.22 TO
1085+61.57 LT 1.15
1086+28.19 LT 1.04 TO
1087+17.46 LT 1.17

NOTES:
1. REFER TO HC-SL SERIES SHEETS FOR ALIGNMENT AND CURVE DATA.
2. SEE NW SERIES FOR NOISE WALL ALIGNMENT INFORMATION.
3. REFER TO GR-SL-07 FOR GRADING INFORMATION.
4. REFER TO GR-SL-09 AND GR-SL-10 FOR GRADING INFORMATION.
5. REFER TO GR-SL-24 THRU GR-SL-32 FOR UTA SUBBALLAST GRADING INFORMATION.

SHEET NO. RD-SL-07	PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION, HORROCKS ENGINEERS			REVISIONS
	PROJECT NUMBER: S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER	MM/DD/YY DATE	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	ROADWAY			QC CHECKED BY HB	

EXHIBIT A

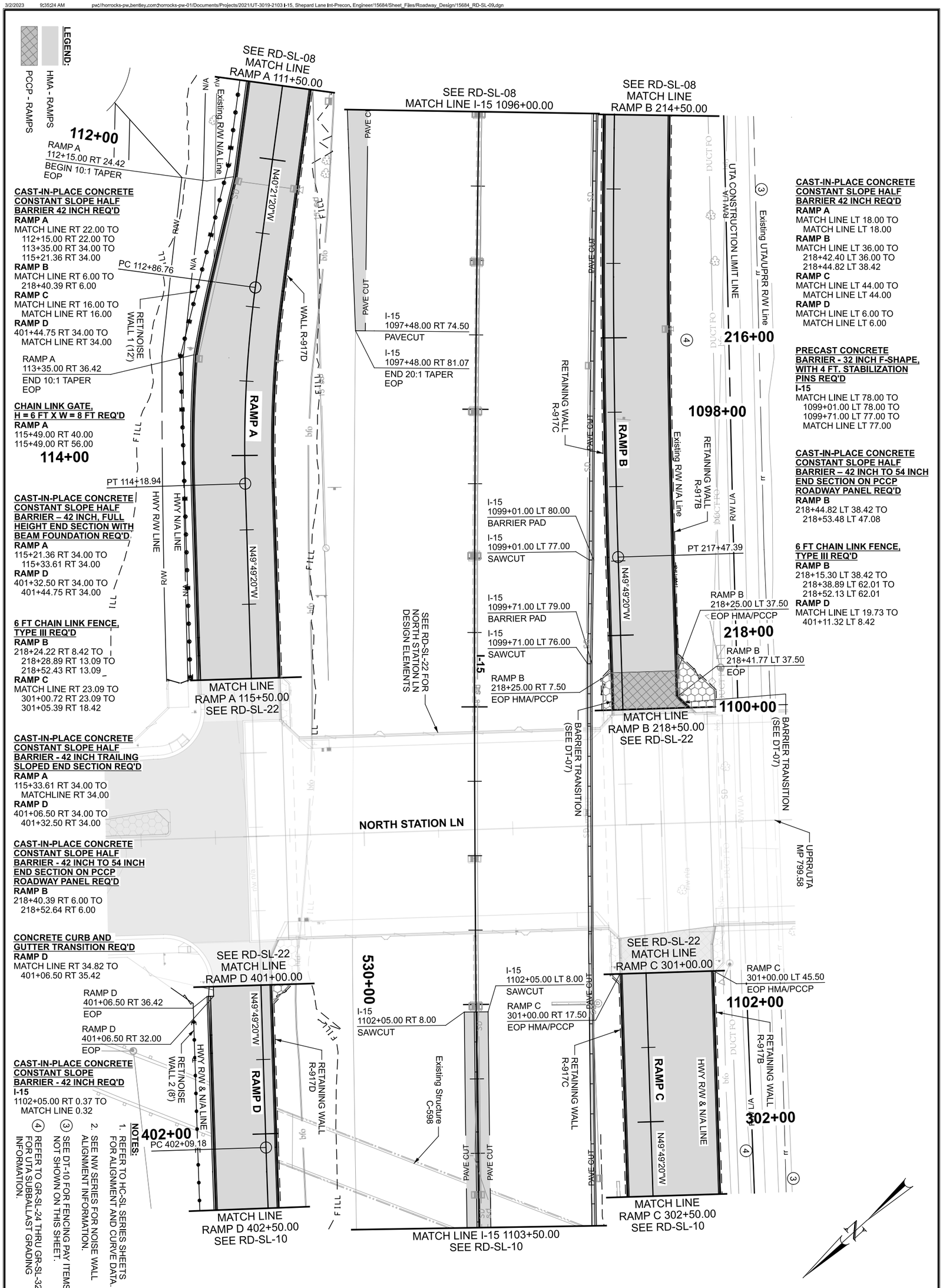
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SHEET NO. RD-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS			REVISIONS	
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO.	DATE	APPROVED BY / REMARKS
		ROADWAY	PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY HB			

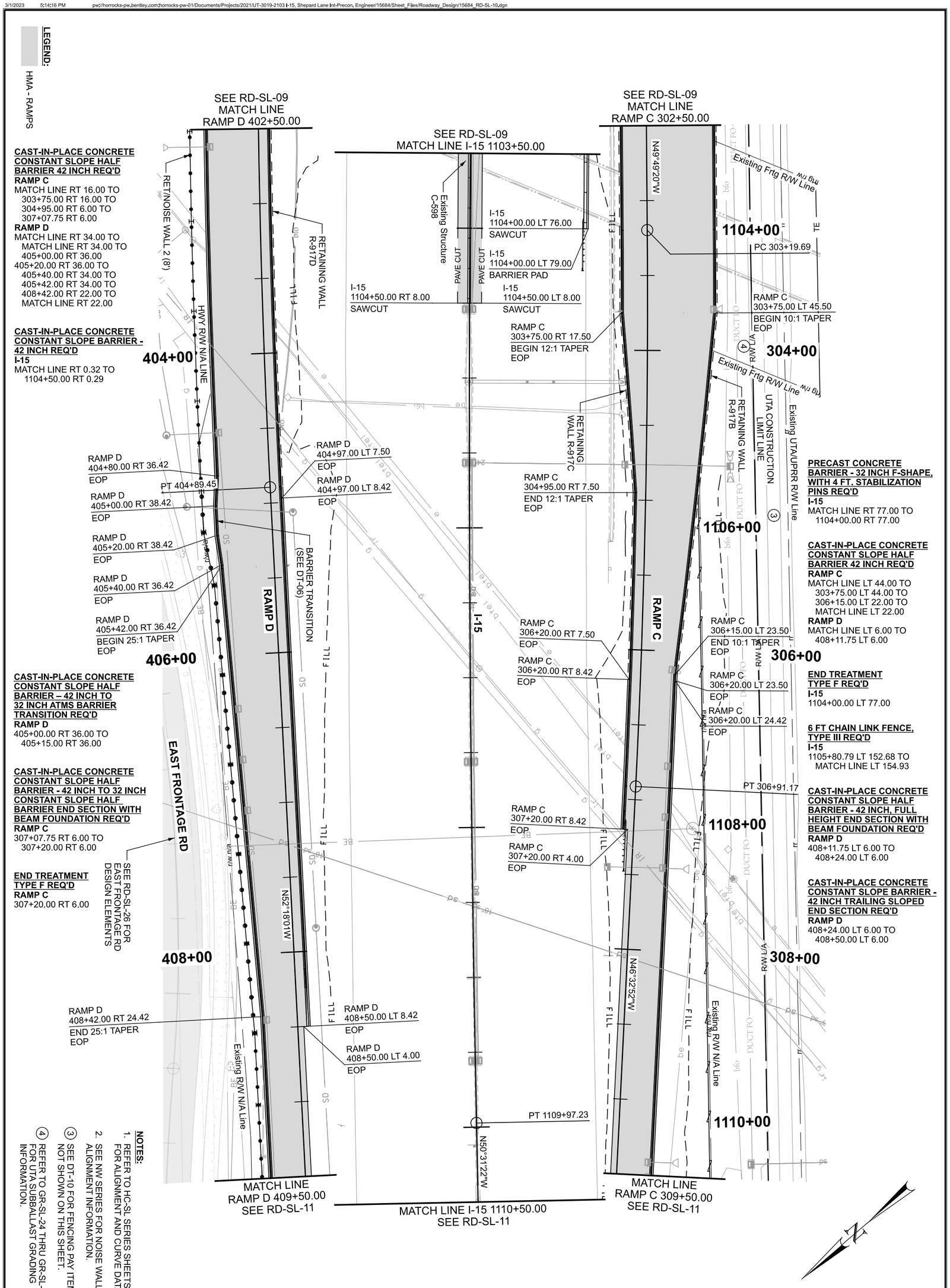
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SHEET NO. RD-SL-09	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	ROADWAY		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY HB	

EXHIBIT A



SHEET NO. RD-SL-10	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	ROADWAY		MM/DD/YY DATE	QC CHECKED BY HB	

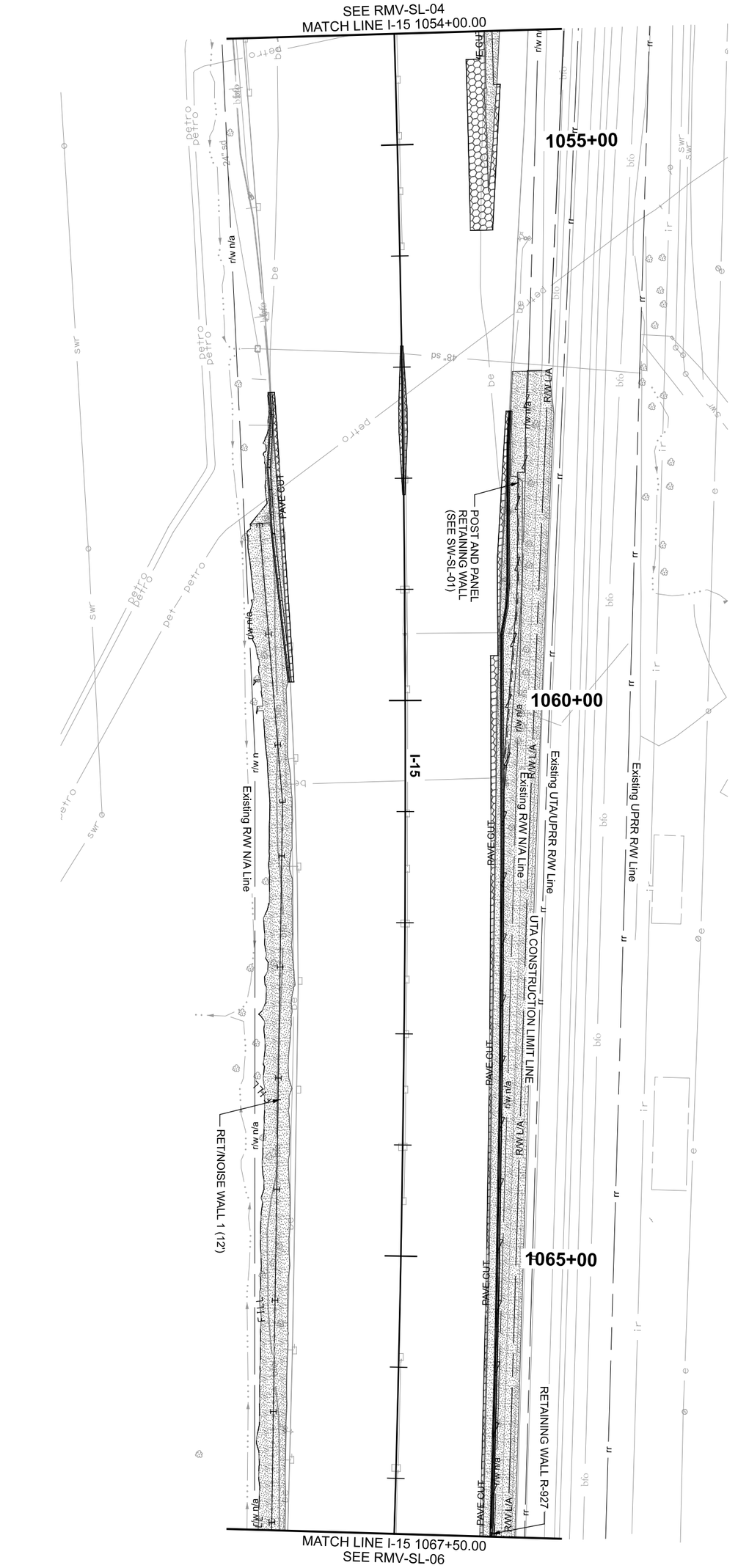
EXHIBIT A

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LEGEND:

REMOVE ASPHALT PAVEMENT REQ'D

CLEARING AND GRUBBING (PLAN QUANTITY) REQ'D



REMOVE PRECAST CONCRETE BARRIER REQ'D
I-15
1057+21.00 RT 117.18 TO
1059+83.00 RT 102.24

REMOVE TREE REQ'D
I-15
1058+50.00 RT 140.00 TO
1065+65.00 RT 110.00
(APPROX. 7 TREES)

REMOVE PRECAST CONCRETE BARRIER REQ'D
I-15
MATCH LINE LT 79.38 TO
1054+51.31 LT 79.43
1057+41.00 LT 95.25 TO
MATCH LINE LT 78.12

REMOVE FENCE REQ'D
I-15
1057+05.00 LT 125.50 TO
MATCHLINE LT 96.27

REMOVE CAST-IN-PLACE CONCRETE BARRIER REQ'D
I-15
1057+07.50 LT 0.24 TO
1058+06.50 LT 0.21

REMOVE TREE REQ'D
I-15
1060+20.00 LT 100.00 TO
1061+20.00 LT 100.00
(APPROX. 4 TREES)

NOTES:
1. SEE DR-SL SERIES SHEETS FOR ALL DRAINAGE REMOVALS AND RELOCATIONS.
2. SEE UR-SL SERIES SHEETS FOR ALL UTILITY REMOVALS AND RELOCATIONS.
3. SEE SS-SL SERIES SHEETS FOR ALL SIGNING REMOVALS AND RELOCATIONS.

SHEET NO. RMV-SL-05

PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER	S-I15-7(340)325 PIN 15684
	REMOVAL

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

APPROVED
PROFESSIONAL ENGINEER
MM/DD/YY
DATE

DRAWN BY KKH
QC CHECKED BY KLY

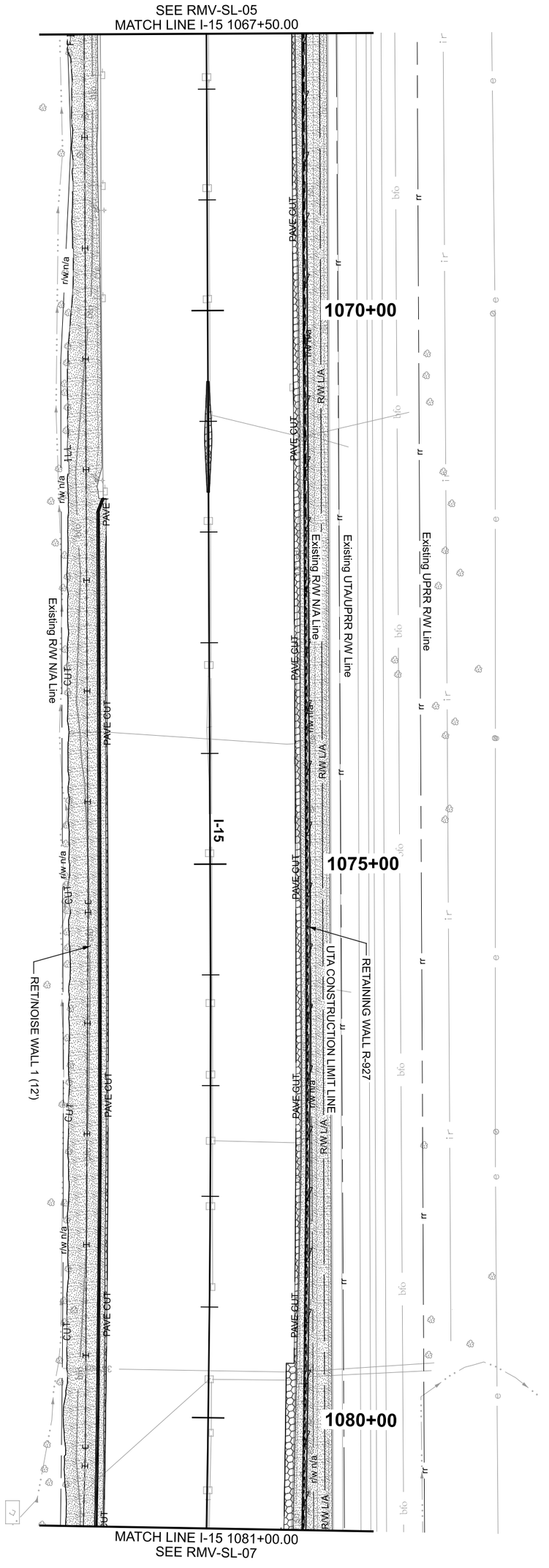
REVISIONS			
NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

LEGEND:

REMOVE ASPHALT PAVEMENT REQ'D

CLEARING AND GRUBBING (PLAN QUANTITY) REQ'D



REMOVE TREE REQ'D
I-15
1068+25.00 RT 110.00 TO
1068+60.00 RT 115.00
(APPROX. 2 TREES)

REMOVE FENCE REQ'D
I-15
MATCHLINE LT 96.27 TO
MATCHLINE LT 100.40

REMOVE PRECAST CONCRETE BARRIER REQ'D
I-15
MATCH LINE LT 78.12 TO
MATCH LINE LT 75.83

REMOVE CAST-IN-PLACE CONCRETE BARRIER REQ'D
I-15
1070+49.83 RT 0.02 TO
1071+48.80 RT 0.24

REMOVE TREE REQ'D
I-15
1076+25.00 LT 90.00 TO
MATCH LINE LT 90.00
(APPROX. 13 TREES)

NOTES:

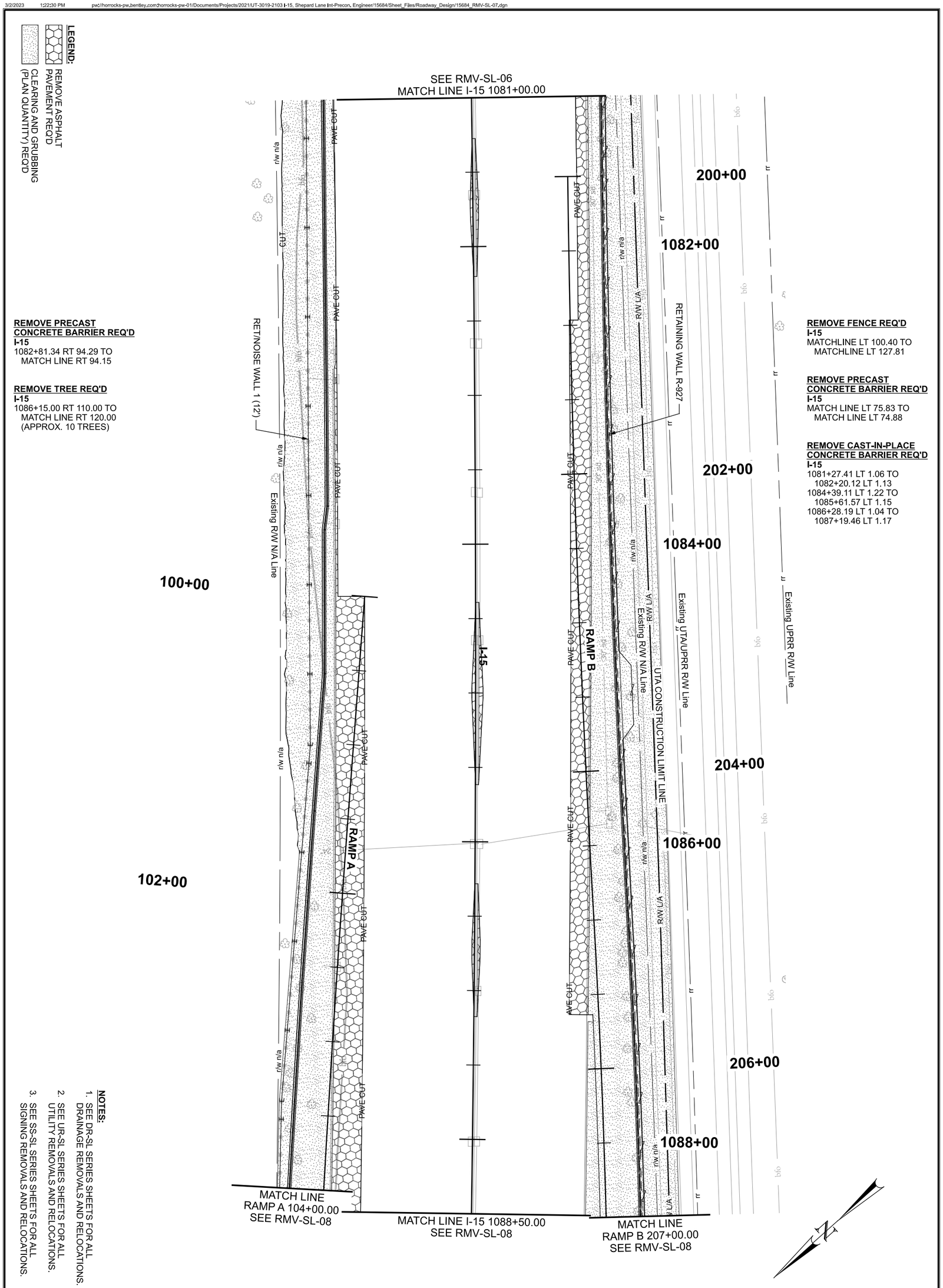
1. SEE DR-SL SERIES SHEETS FOR ALL DRAINAGE REMOVALS AND RELOCATIONS.
2. SEE UR-SL SERIES SHEETS FOR ALL UTILITY REMOVALS AND RELOCATIONS.
3. SEE SS-SL SERIES SHEETS FOR ALL SIGNING REMOVALS AND RELOCATIONS.

SHEET NO. RMV-SL-06	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	**UTAH DEPARTMENT OF TRANSPORTATION** HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER	MM/DD/YY DATE	DRAWN BY KKH
	REMOVAL				QC CHECKED BY KLY

NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

3/2/2023 1:22:30 PM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Roadway_Design/15684_RMV-SL-07.dgn



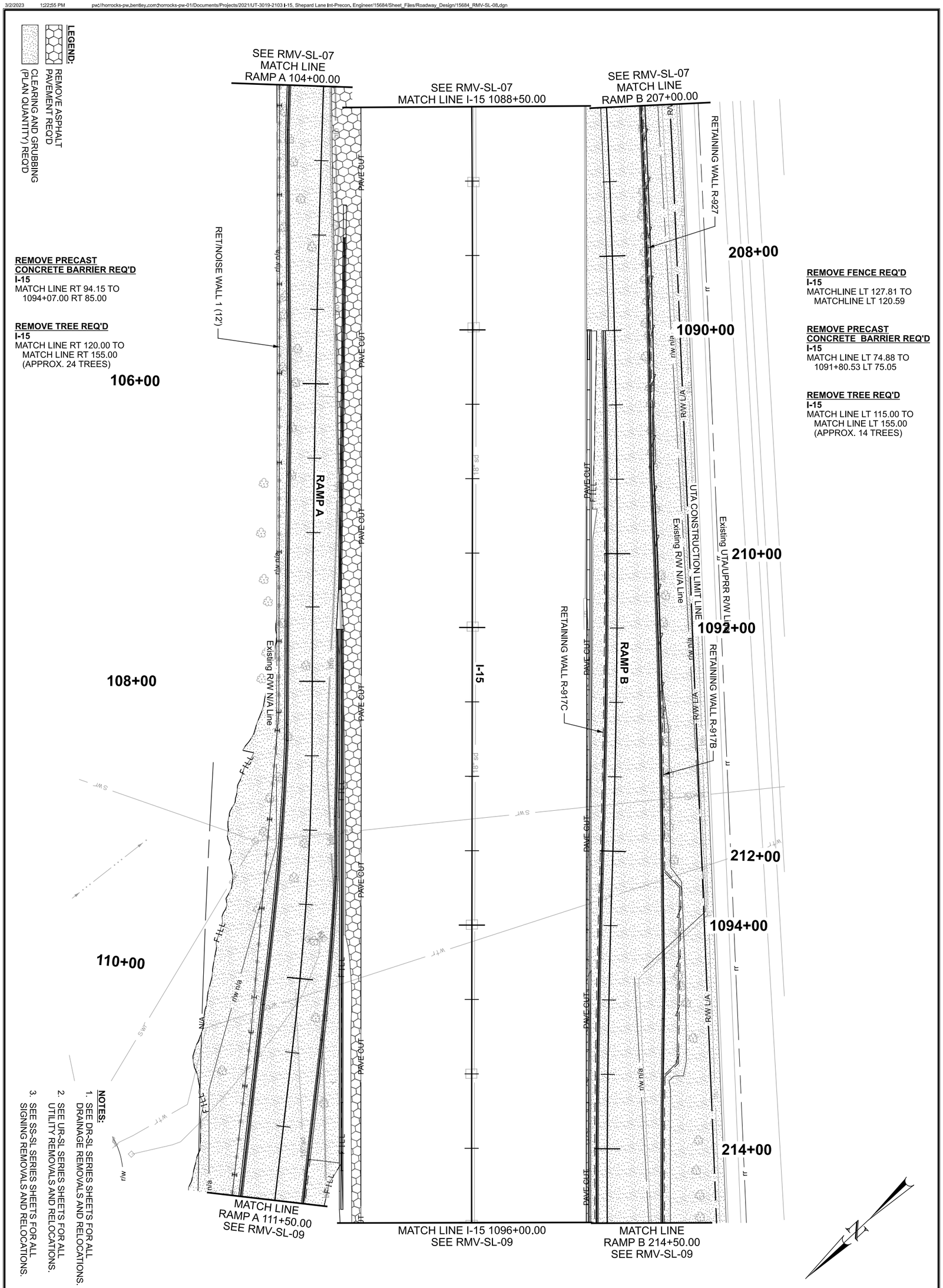
NOTES:

1. SEE DR-SL SERIES SHEETS FOR ALL DRAINAGE REMOVALS AND RELOCATIONS.
2. SEE UR-SL SERIES SHEETS FOR ALL UTILITY REMOVALS AND RELOCATIONS.
3. SEE SS-SL SERIES SHEETS FOR ALL SIGNING REMOVALS AND RELOCATIONS.

SHEET NO. RMV-SL-07	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	REMOVAL		MM/DD/YY DATE	QC CHECKED BY KLY	

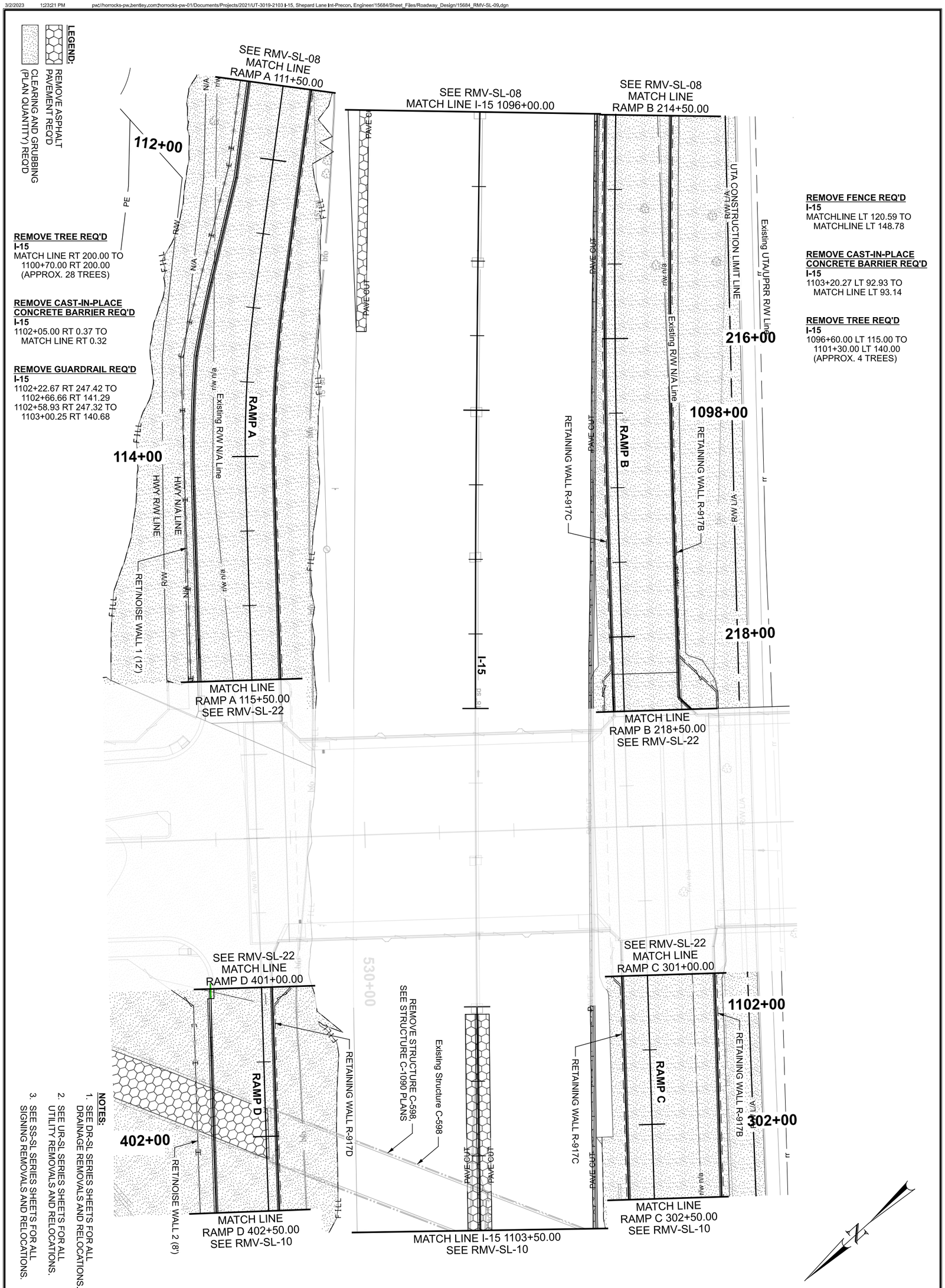
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SHEET NO. RMV-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	REMOVAL		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY KLY	

EXHIBIT A



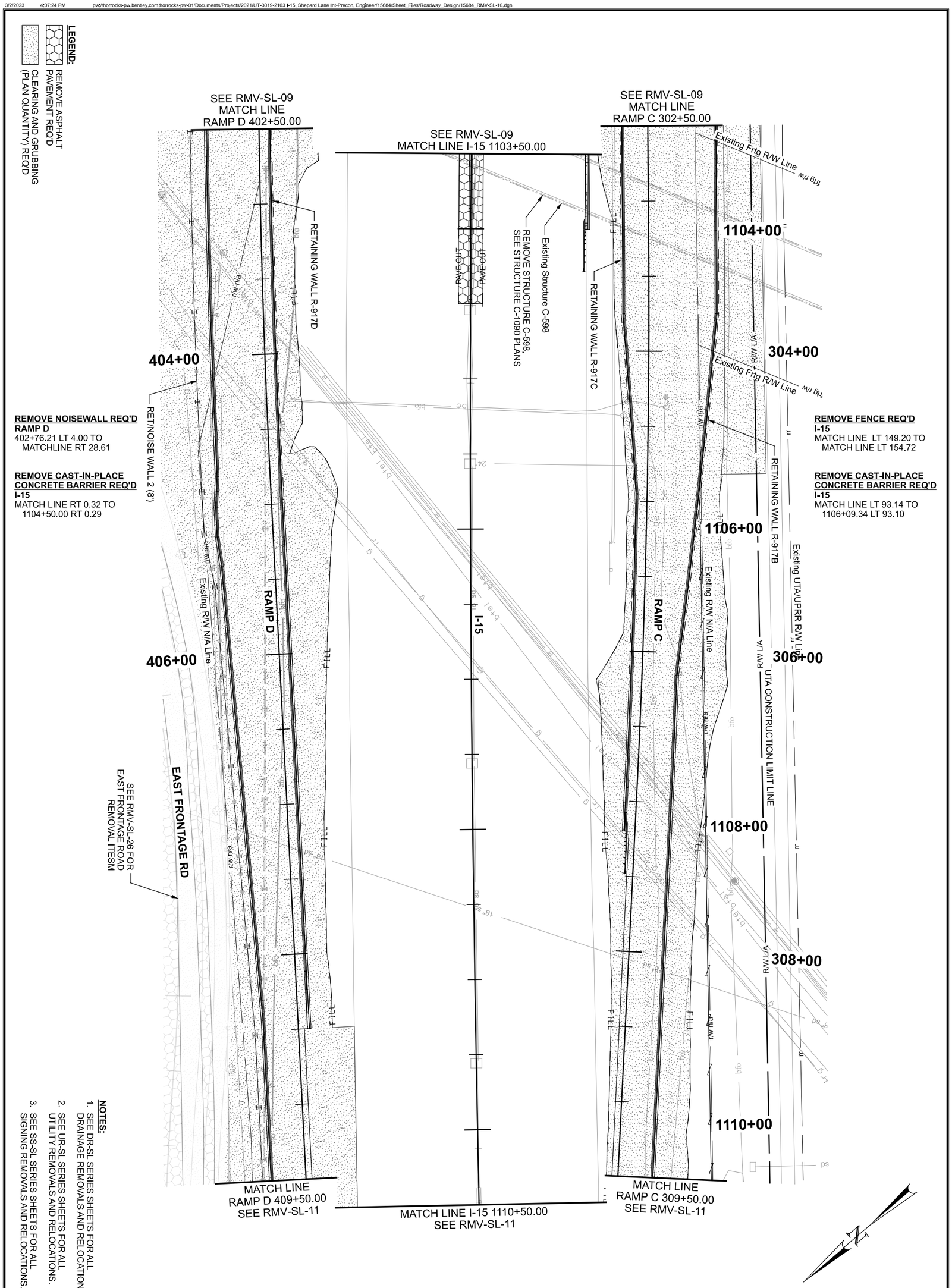
NOTES:

1. SEE DR-SL SERIES SHEETS FOR ALL DRAINAGE REMOVALS AND RELOCATIONS.
2. SEE UR-SL SERIES SHEETS FOR ALL UTILITY REMOVALS AND RELOCATIONS.
3. SEE SS-SL SERIES SHEETS FOR ALL SIGNING REMOVALS AND RELOCATIONS.

SHEET NO. RMV-SL-09	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	REMOVAL		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY KLY	

EXHIBIT A

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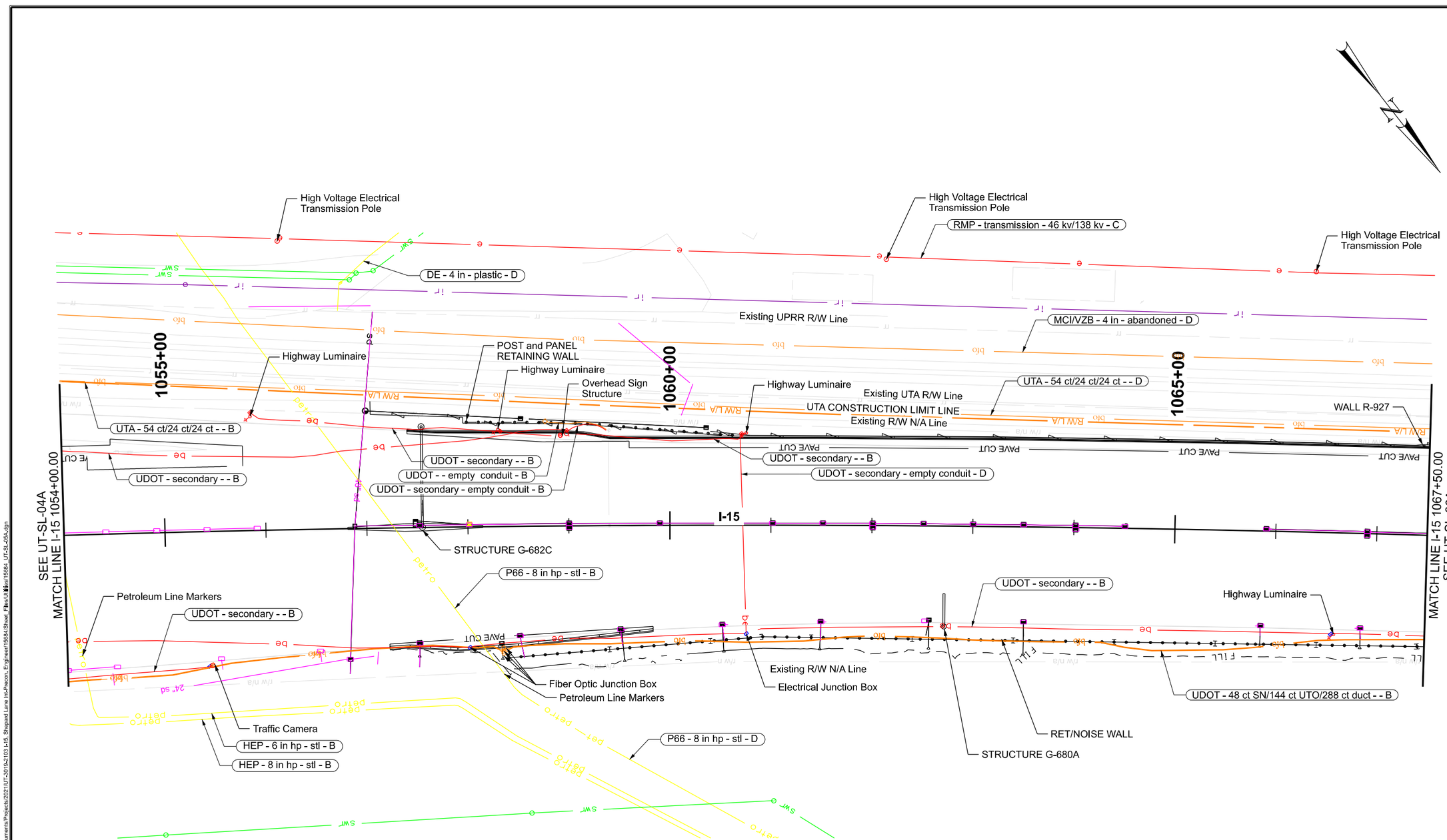


NOTES:

1. SEE DR-SL SERIES SHEETS FOR ALL DRAINAGE REMOVALS AND RELOCATIONS.
2. SEE UR-SL SERIES SHEETS FOR ALL UTILITY REMOVALS AND RELOCATIONS.
3. SEE SS-SL SERIES SHEETS FOR ALL SIGNING REMOVALS AND RELOCATIONS.

SHEET NO. RMV-SL-10	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	REMOVAL		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY KLY	

EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
2. SEE UT-SL-##B SHEETS FOR EXISTING WET UTILITY INFORMATION (IRRIGATION, SANITARY SEWER, WATER).
3. SEE DR SHEETS FOR EXISTING DRAINAGE INFORMATION.
4. SEE ATMS SHEETS FOR ATMS INFORMATION.
5. SEE UR SHEETS FOR UTILITY RELOCATION INFORMATION.
6. SEE UP SHEETS FOR DETAILED UTILITY RELOCATION DESIGN INFORMATION.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY: KKH | CHECKED BY: WLS | QC | DATE: MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS

PROJECT NUMBER: S-I15-7(340)325

PIN: 15684

UTILITY

SHEET NO. UT-SL-05A

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EXHIBIT A

WBWCD - 16 in - stl - D
CDSD - 18 in - con - C
CDSD - 30 in - con - C
Sanitary Sewer Manhole
CDSD - 30 in - con - C
WBWCD - 16 in - stl - D
Irrigation Manhole
Existing UPRR R/W Line
POST AND PANEL RETAINING WALL
1055+00
1060+00
1065+00
Existing UTA R/W Line
UTA CONSTRUCTION LIMIT LINE
Existing R/W N/A Line
WALL R-927
PAVE CUT
SEE UT-SL-04B
MATCH LINE I-15 1054+00.00
I-15
STRUCTURE G-682C
MATCH LINE I-15 1067+50.00
SEE UT-SL-06B
Existing R/W N/A Line
STRUCTURE G-680A
RET/NOISE WALL
Sanitary Sewer Manhole
CDSD - 8 in - con - C
CDSD - 8 in - con - C
Sanitary Sewer Manhole
Sanitary Sewer Manhole

UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

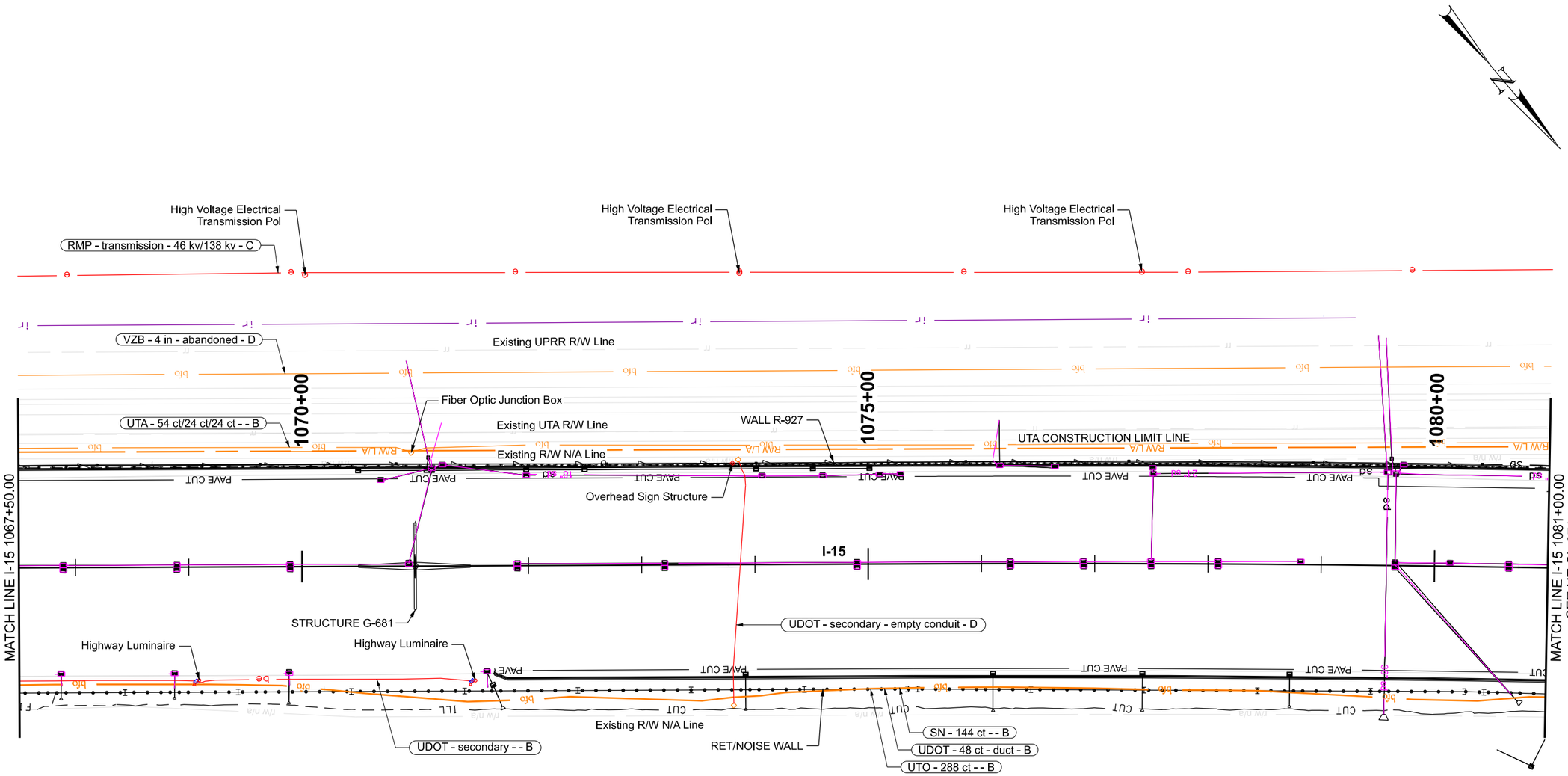
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CHECKED BY: WLS
QC
DATE: MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
UTILITY

SHEET NO. UT-SL-05B

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EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
DATE: MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

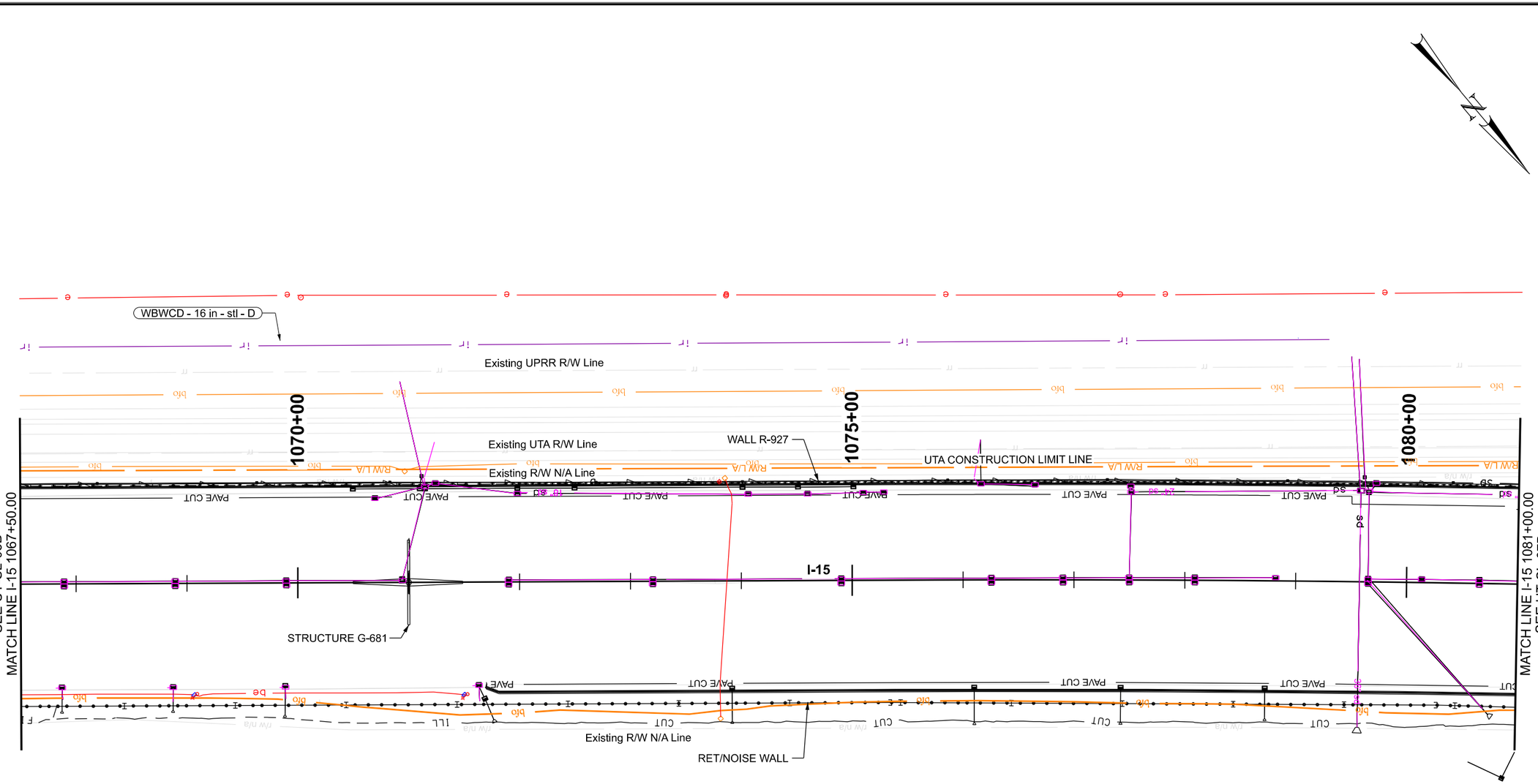
PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684

UTILITY

SHEET NO. UT-SL-06A

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EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY: KKH
CHECKED BY: WLS
QC
DATE: MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS

PROJECT NUMBER: S-I15-7(340)325

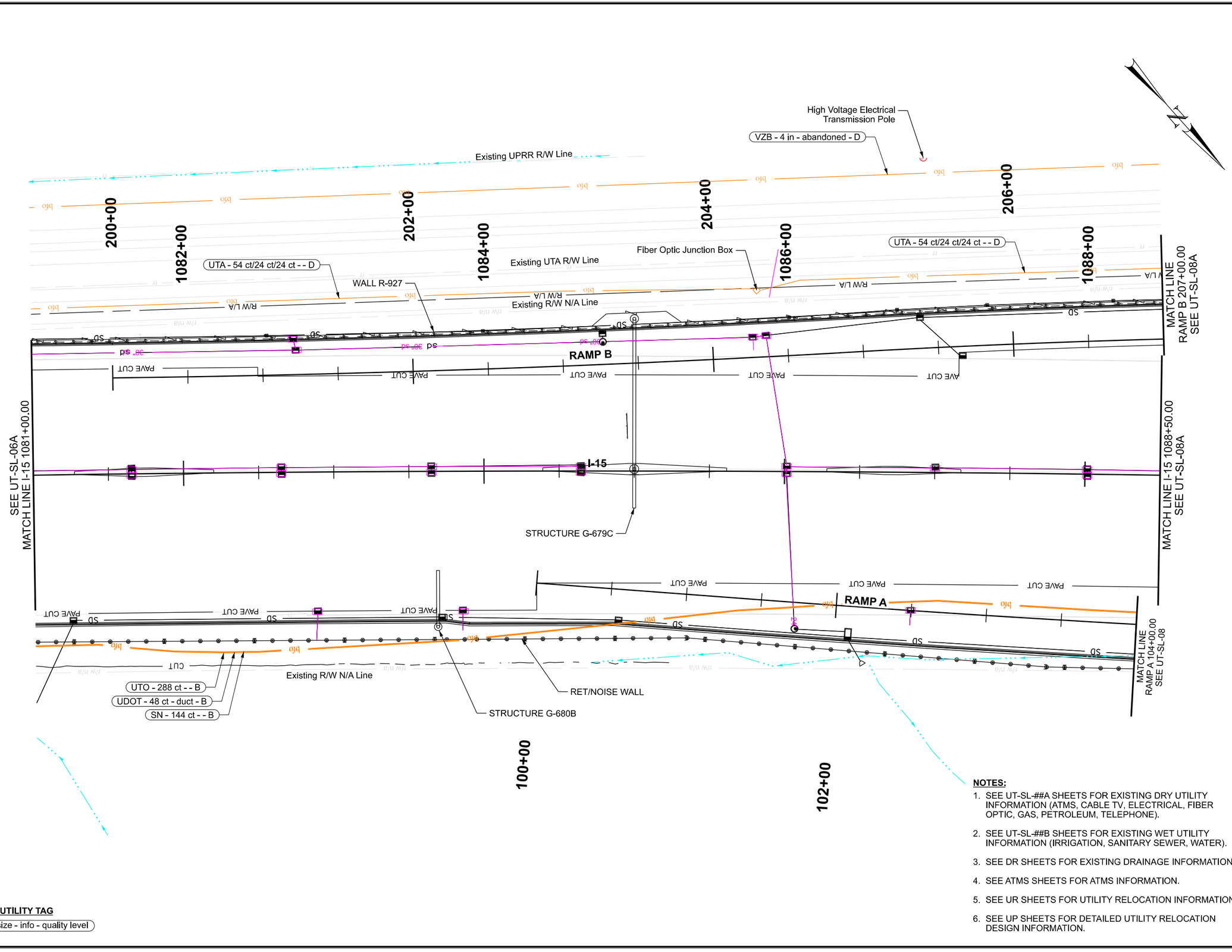
PIN: 15684

UTILITY

SHEET NO. UT-SL-06B

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EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY	CHECKED BY	QC
KKH	WLS	

MM/DD/YY
DATE

APPROVED

PROFESSIONAL ENGINEER

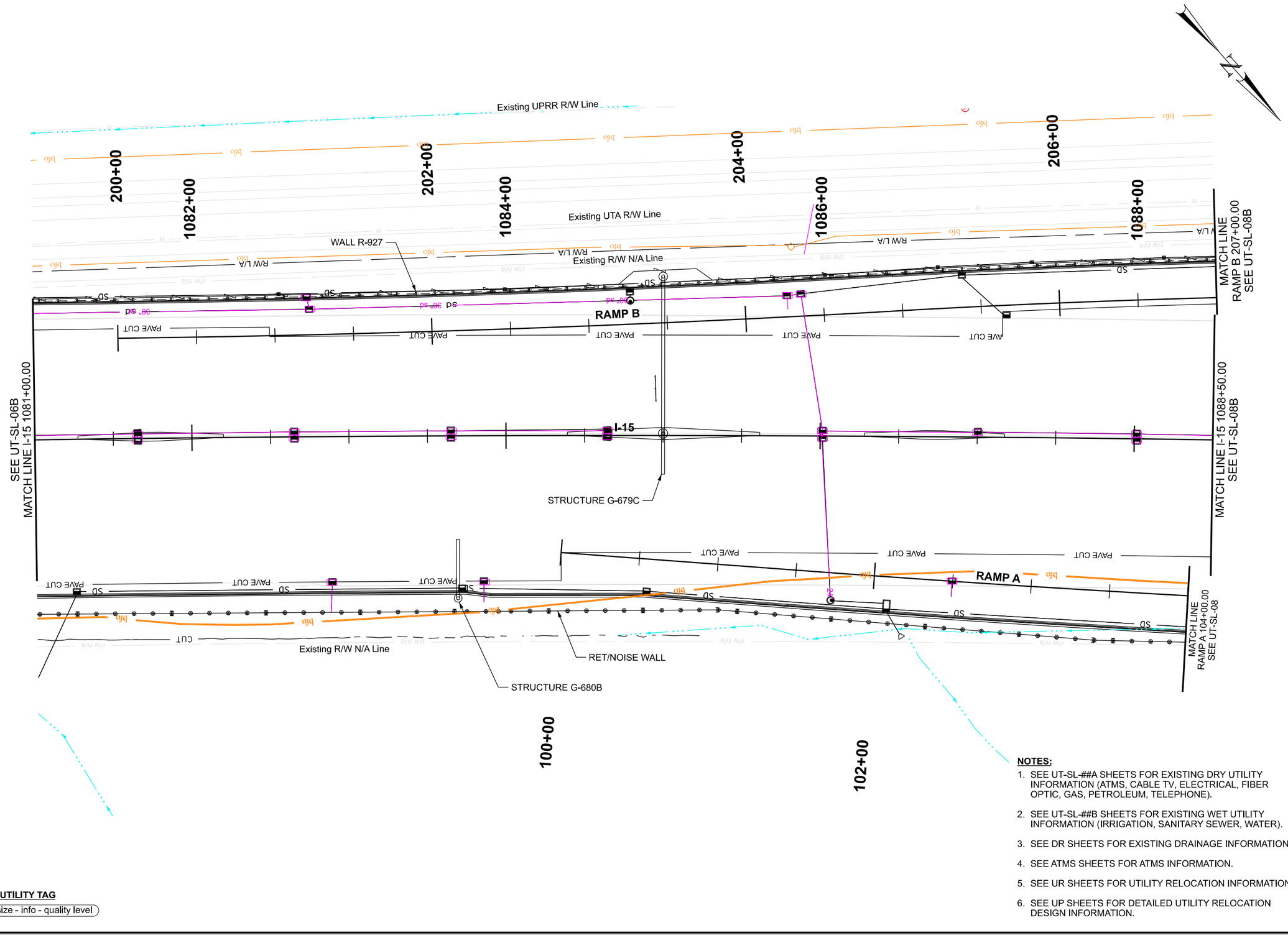
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I-15; SHEPARD LN INTCHG & PED OVERPASS	S-I15-7(340)325	15684

UTILITY

SHEET NO. UT-SL-07A

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EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
DATE MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS

PIN 15684

S-I15-7(340)325

UTILITY

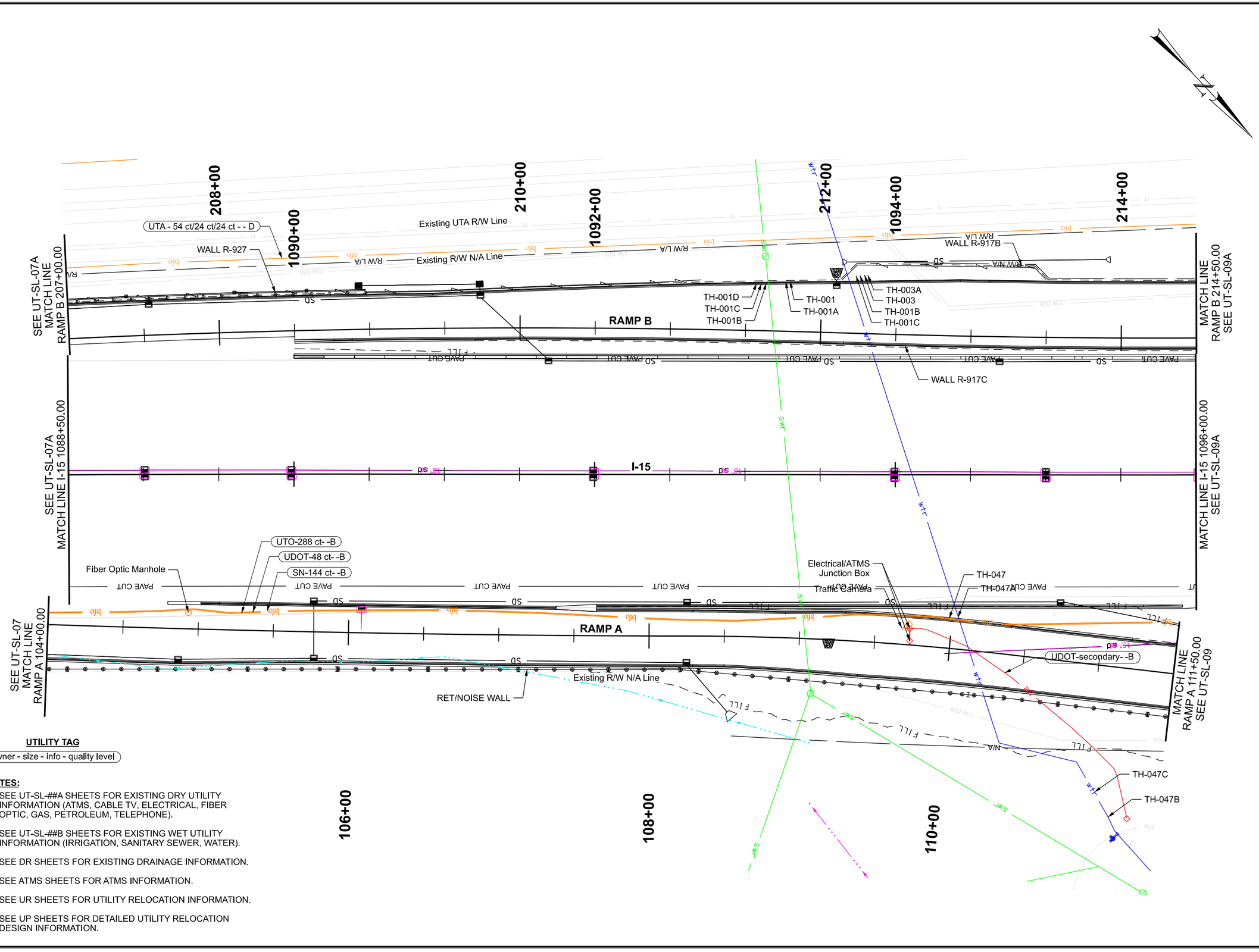
PROJECT

PROJECT NUMBER

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EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

APPROVED

PROFESSIONAL ENGINEER

DRAWN BY: KKH

QC CHECKED BY: WLS

DATE: MM/DD/YY

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS

PROJECT NUMBER: S-I15-7(340)325

PIN: 15684

UTILITY

SHEET NO. UT-SL-08A

2/15/2023 4:53:46 PM

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EXHIBIT A

SEE UT-SL-07B
MATCH LINE
RAMP B 207+00.00

208+00

1090+00

WALL R-927

210+00

Existing UTA R/W Line

1092+00

Existing R/W N/A Line

Sanitary Sewer Manhole

212+00

1094+00

WALL R-917B

214+00

MATCH LINE
RAMP B 214+50.00
SEE UT-SL-09B

RAMP B

TH-001D
TH-001C
TH-001B
TH-001
TH-001A
TH-003A
TH-003
TH-001B
TH-001C

WALL R-917C

FMCY - 12 in - pvc - D

SEE UT-SL-07B
MATCH LINE I-15 1088+50.00

I-15

MATCH LINE I-15 1096+00.00
SEE UT-SL-09B

CDSD - 18 in - con - D

SEE UT-SL-07
MATCH LINE
RAMP A 104+00.00

RAMP A

TH-047
TH-047A

MATCH LINE
RAMP A 111+50.00
SEE UT-SL-09

Existing R/W N/A Line

RET/NOISE WALL

Sanitary Sewer
Manhole

106+00

108+00

CDSD-15 in-con-C

CDSD-8 in-con-C

110+00

TH-047C
TH-047B
Fire Hydrant

UTILITY TAG

owner - size - info - quality level

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
DATE: MM/DD/YY

APPROVED
PROFESSIONAL ENGINEER

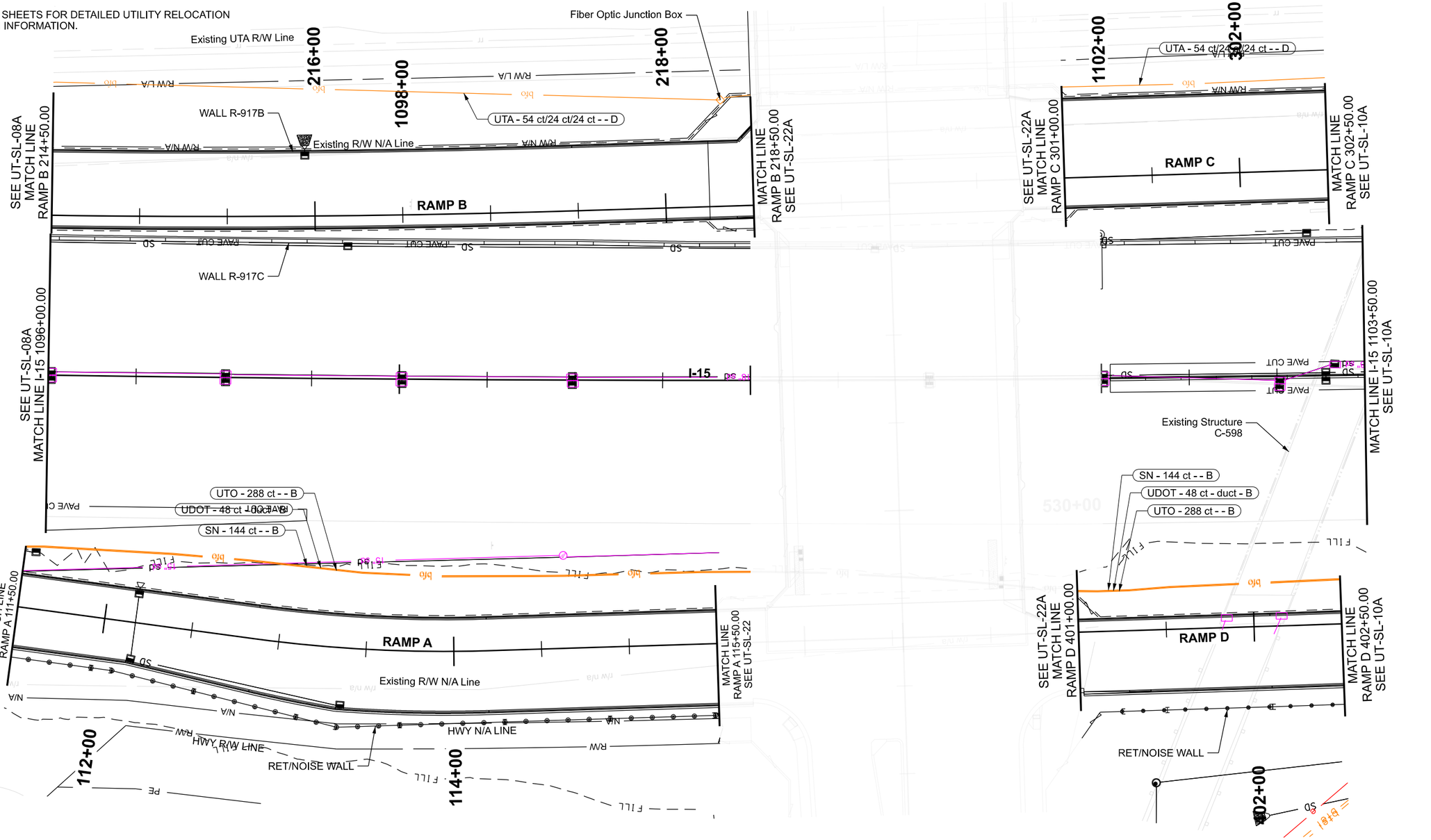
PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
UTILITY

SHEET NO. UT-SL-08B

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NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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UTILITY TAG

owner - size - info - quality level

EXHIBIT A

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
DATE: MM/DD/YY

PROFESSIONAL ENGINEER

APPROVED

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
UTILITY

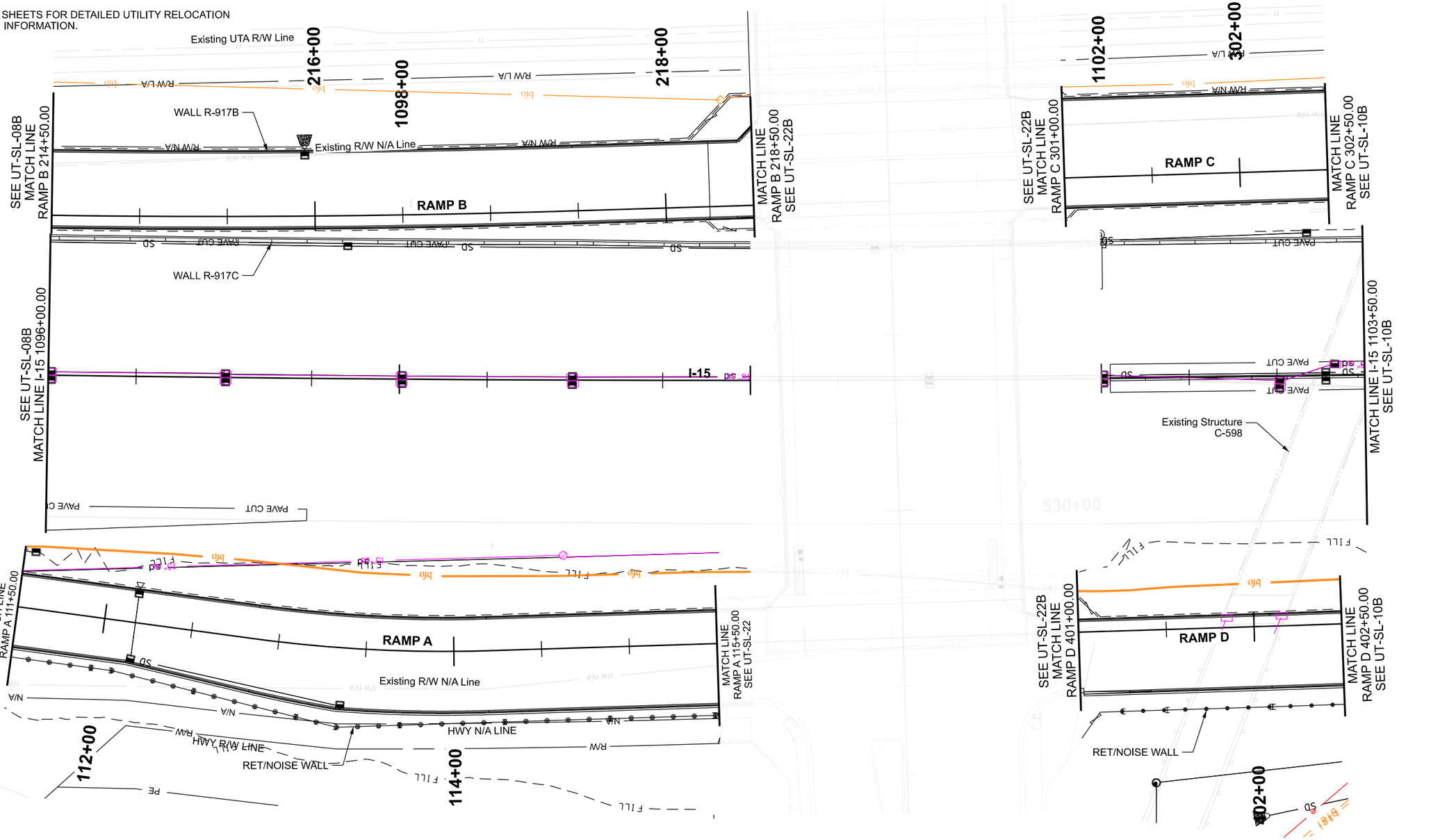
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EXHIBIT A

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
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UTILITY TAG

owner - size - info - quality level

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY	KKH	APPROVED	
QC CHECKED BY	WLS	DATE	MM/DD/YY

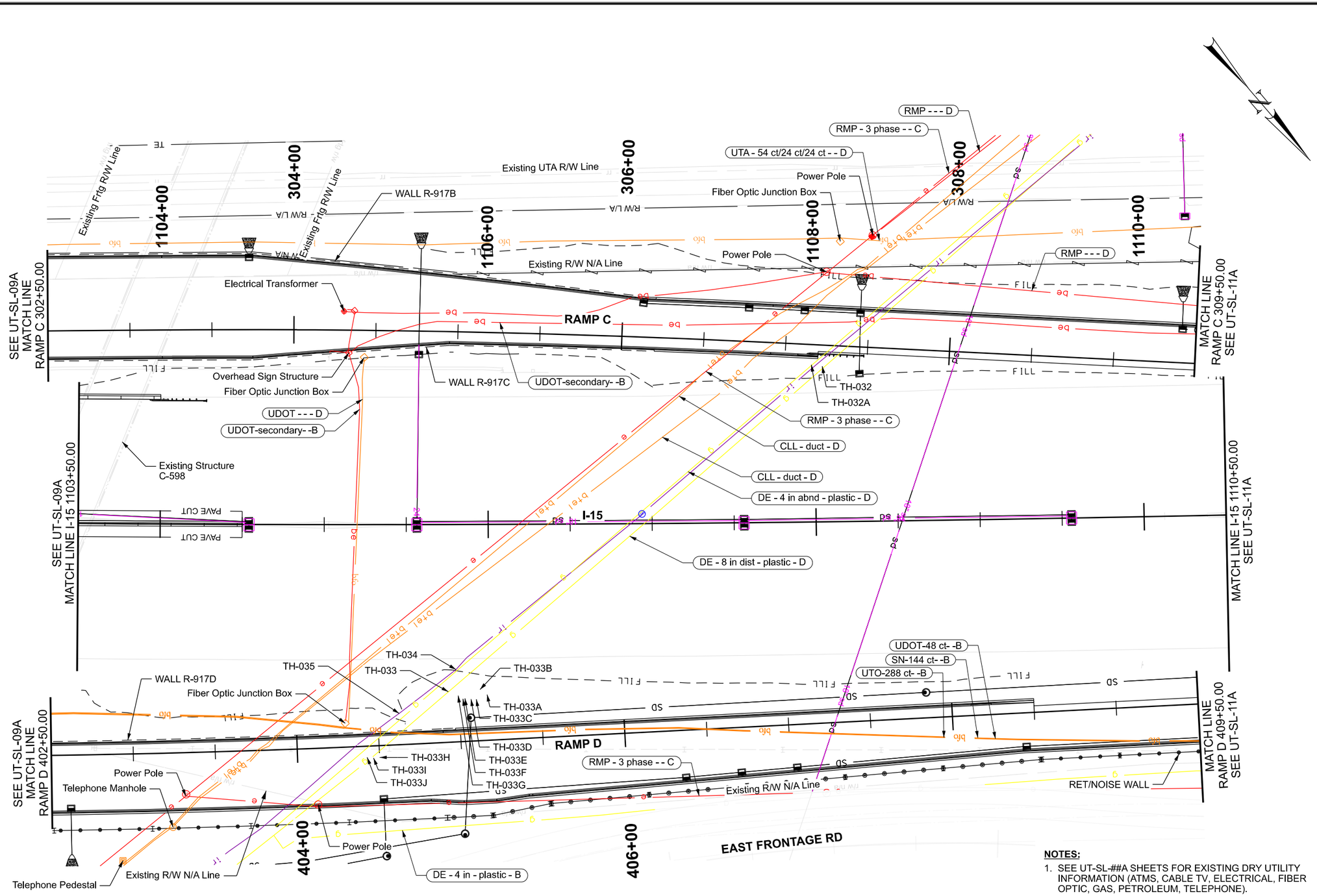
PROFESSIONAL ENGINEER

PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	PIN	15684
PROJECT NUMBER	S-I15-7(340)325		
	UTILITY		

SHEET NO. UT-SL-09B

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2/15/2023 4:05:18 PM

EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
2. SEE UT-SL-##B SHEETS FOR EXISTING WET UTILITY INFORMATION (IRRIGATION, SANITARY SEWER, WATER).
3. SEE DR SHEETS FOR EXISTING DRAINAGE INFORMATION.
4. SEE ATMS SHEETS FOR ATMS INFORMATION.
5. SEE UR SHEETS FOR UTILITY RELOCATION INFORMATION.
6. SEE UP SHEETS FOR DETAILED UTILITY RELOCATION DESIGN INFORMATION.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS

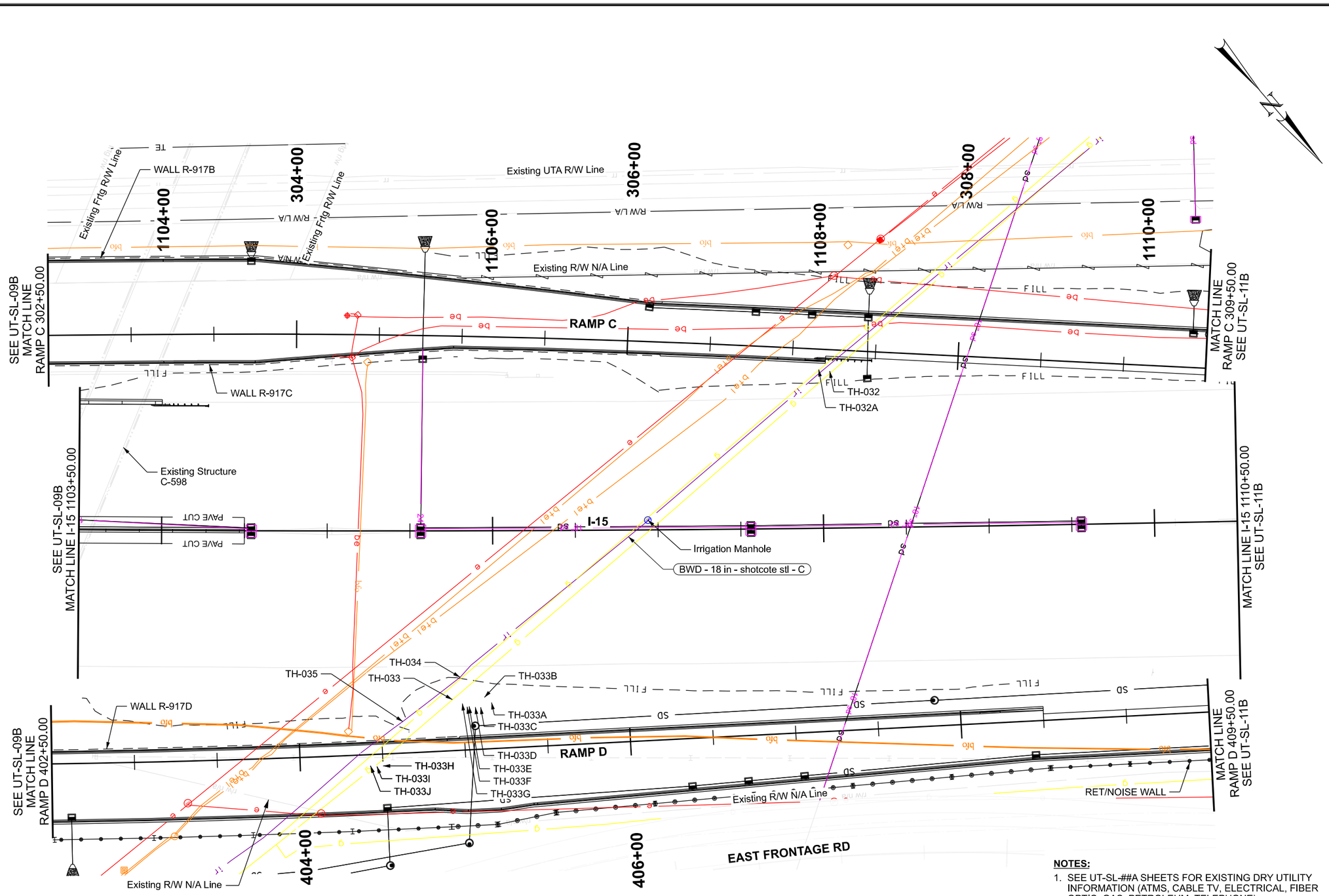
PROJECT
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684

UTILITY

SHEET NO. UT-SL-10A

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2/15/2023 4:25:58 PM

EXHIBIT A



UTILITY TAG

owner - size - info - quality level

NOTES:

1. SEE UT-SL-##A SHEETS FOR EXISTING DRY UTILITY INFORMATION (ATMS, CABLE TV, ELECTRICAL, FIBER OPTIC, GAS, PETROLEUM, TELEPHONE).
2. SEE UT-SL-##B SHEETS FOR EXISTING WET UTILITY INFORMATION (IRRIGATION, SANITARY SEWER, WATER).
3. SEE DR SHEETS FOR EXISTING DRAINAGE INFORMATION.
4. SEE ATMS SHEETS FOR ATMS INFORMATION.
5. SEE UR SHEETS FOR UTILITY RELOCATION INFORMATION.
6. SEE UP SHEETS FOR DETAILED UTILITY RELOCATION DESIGN INFORMATION.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

HORROCKS ENGINEERS

APPROVED

PROFESSIONAL ENGINEER

DRAWN BY KKH

QC CHECKED BY WLS

MM/DD/YY
DATE

I-15; SHEPARD LN INTCHG & PED OVERPASS

PROJECT

PROJECT NUMBER S-I15-7(340)325

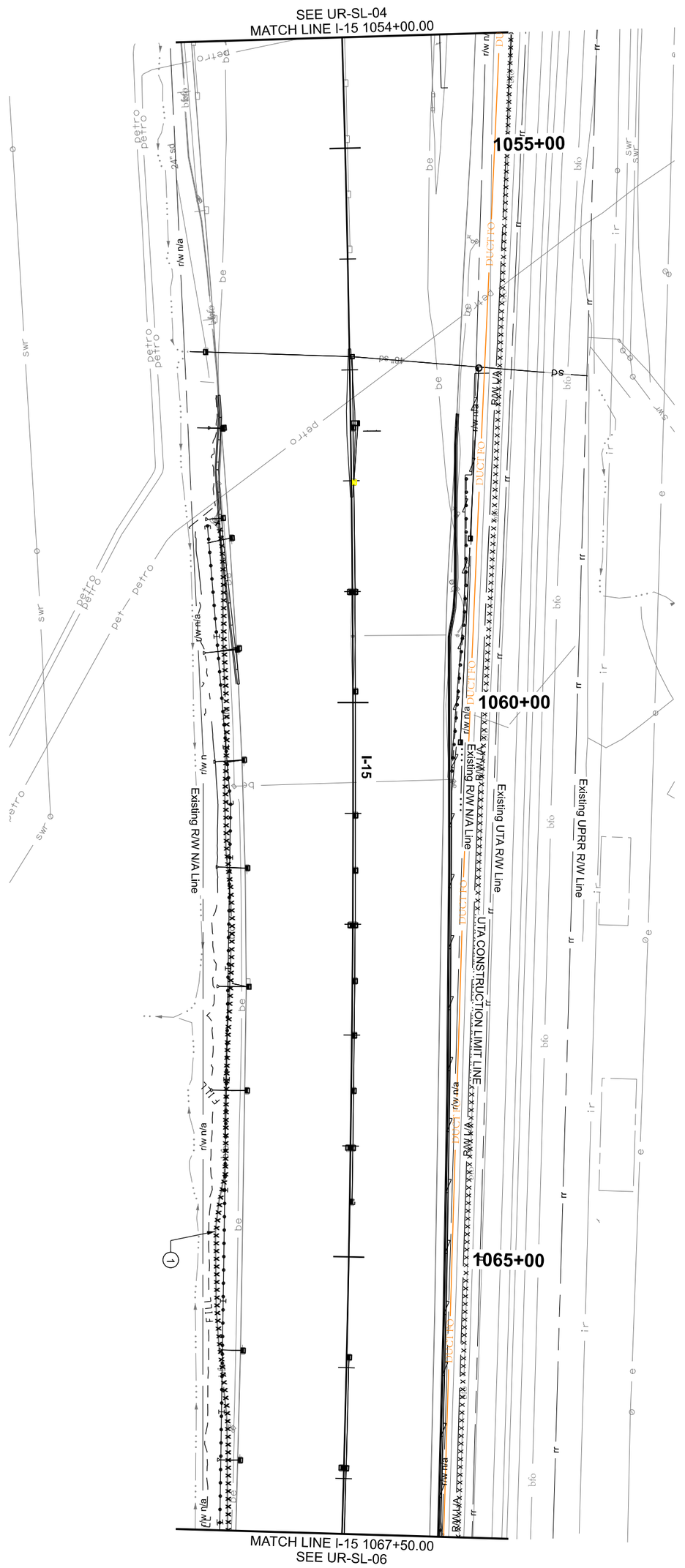
PIN 15684

UTILITY

SHEET NO. UT-SL-10B

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2/15/2023 4:25:15 PM

EXHIBIT A



RELOCATE BURIED FIBER OPTIC (SYRINGA)
I-15
1058+34.16 RT 123.28 TO MATCH LINE RT 102.95

RELOCATE BURIED FIBER OPTIC (UTOPIA)
I-15
1058+34.16 RT 123.28TO MATCH LINE RT 102.95

1D CONDUIT REQ'D
I-15
MATCH LINE LT 142.30 TO MATCH LINE LT 91.62

RELOCATE BURIED FIBER OPTIC (UTA)
I-15
MATCH LINE LT 153.30 TO MATCH LINE LT 105.58

NOTES:

1. BURIED FIBER OPTIC LINES RUN IN UDOT ATMS SYSTEM.
2. SEE ATMS SHEETS FOR ATMS REMOVALS AND RELOCATIONS.
3. PROPOSED ALIGNMENT OF UTA DUCT BANK IS 7.5' FROM CENTERLINE OF FUTURE SECOND FRONTRUNNER TRACK.

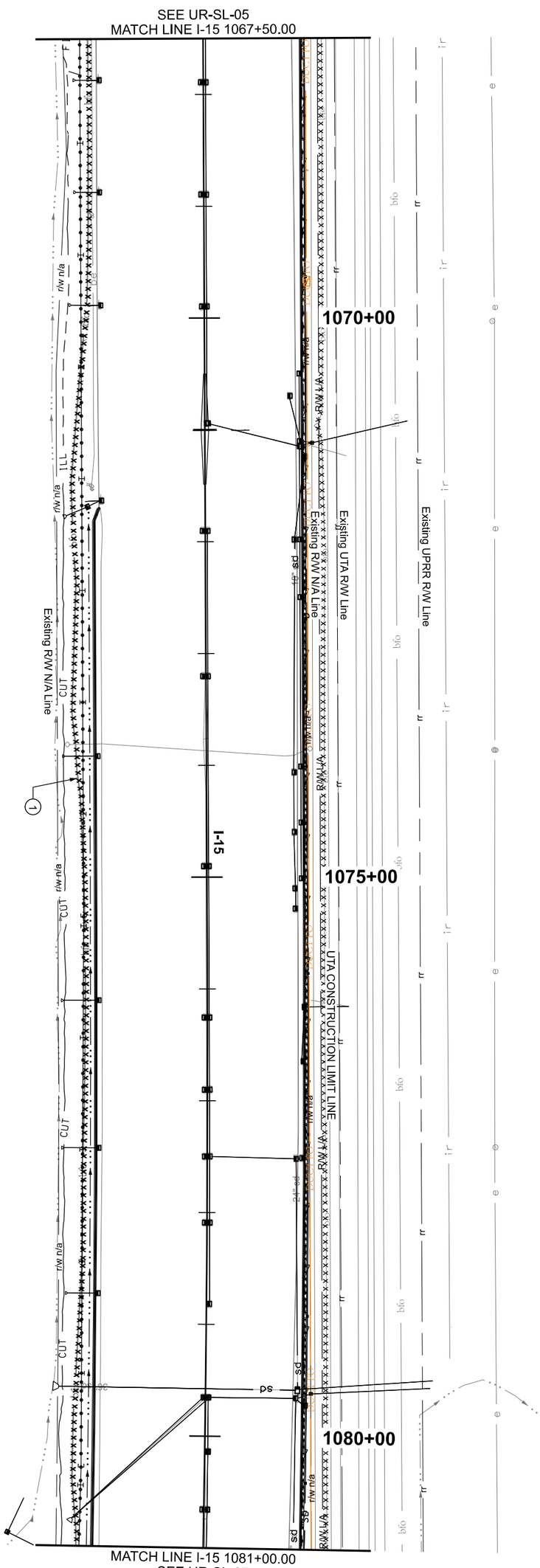
SHEET NO. UR-SL-05

PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	**UTAH DEPARTMENT OF TRANSPORTATION** HORROCKS ENGINEERS	REVISIONS
PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH
UTILITY RELOCATION		PROFESSIONAL ENGINEER — MM/DD/YY DATE	QC CHECKED BY TAS

NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

2/16/2023 3:09:02 PM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/UR-Sheets/15684_UR-SL-06.dgn



RELOCATE BURIED FIBER OPTIC (SYRINGA)
I-15
MATCH LINE RT 102.95 TO MATCH LINE RT 113.89

RELOCATE BURIED FIBER OPTIC (UTOPIA)
I-15
MATCH LINE RT 102.95 TO MATCH LINE RT 113.89

1D CONDUIT REQ'D
I-15
MATCH LINE LT 91.62 TO MATCH LINE LT 96.59

RELOCATE BURIED FIBER OPTIC (UTA)
I-15
MATCH LINE LT 105.58 TO MATCH LINE LT 110.62

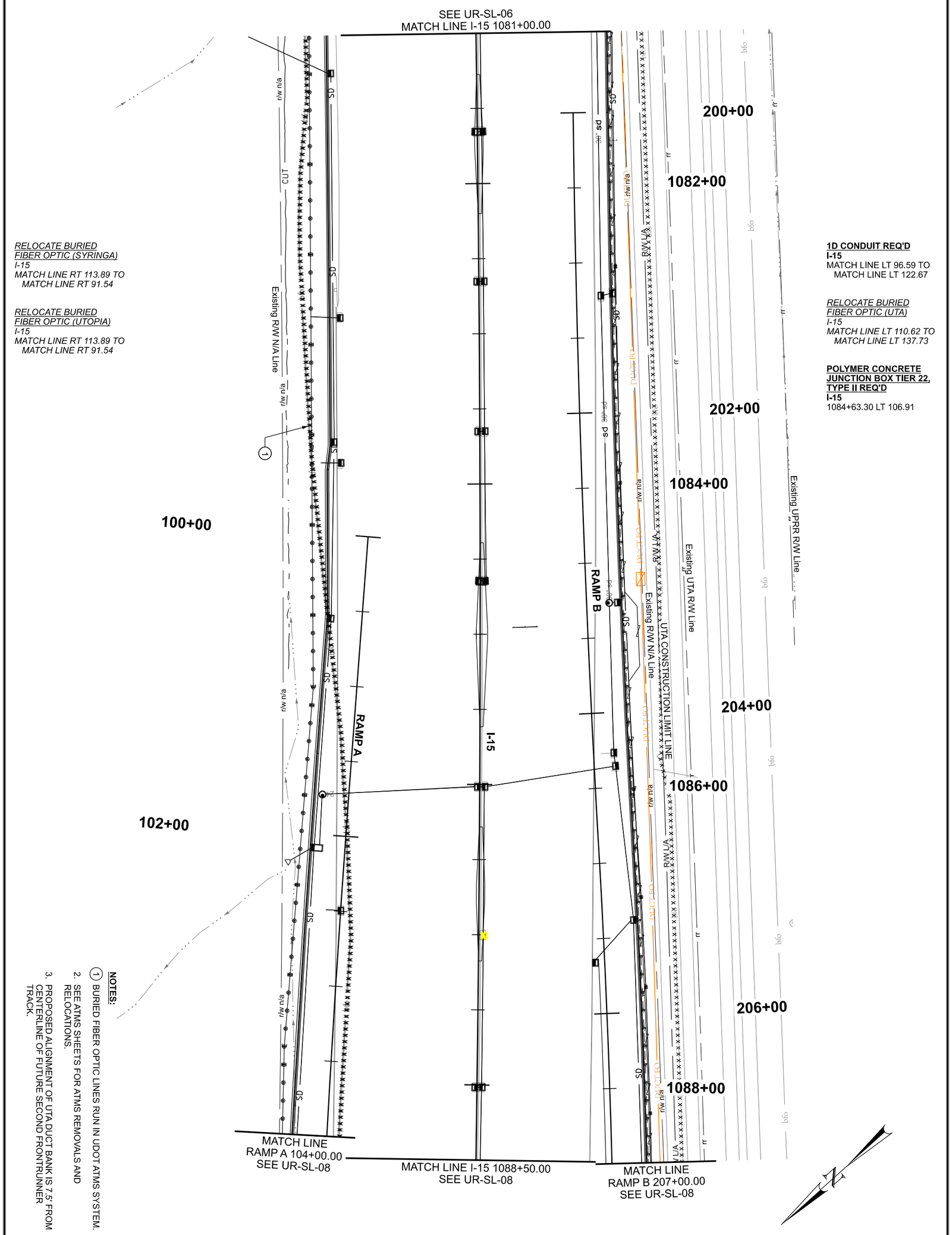
POLYMER CONCRETE JUNCTION BOX TIER 22, TYPE II REQ'D
I-15
1069+67.43 LT 91.75

NOTES:

1. (1) BURIED FIBER OPTIC LINES RUN IN UDOT ATMS SYSTEM.
2. SEE ATMS SHEETS FOR ATMS REMOVALS AND RELOCATIONS.
3. PROPOSED ALIGNMENT OF UTA DUCT BANK IS 7.5' FROM CENTERLINE OF FUTURE SECOND FRONT RUNNER TRACK.

SHEET NO. UR-SL-06	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	**UTAH DEPARTMENT OF TRANSPORTATION** HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	UTILITY RELOCATION		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY TAS	

EXHIBIT A



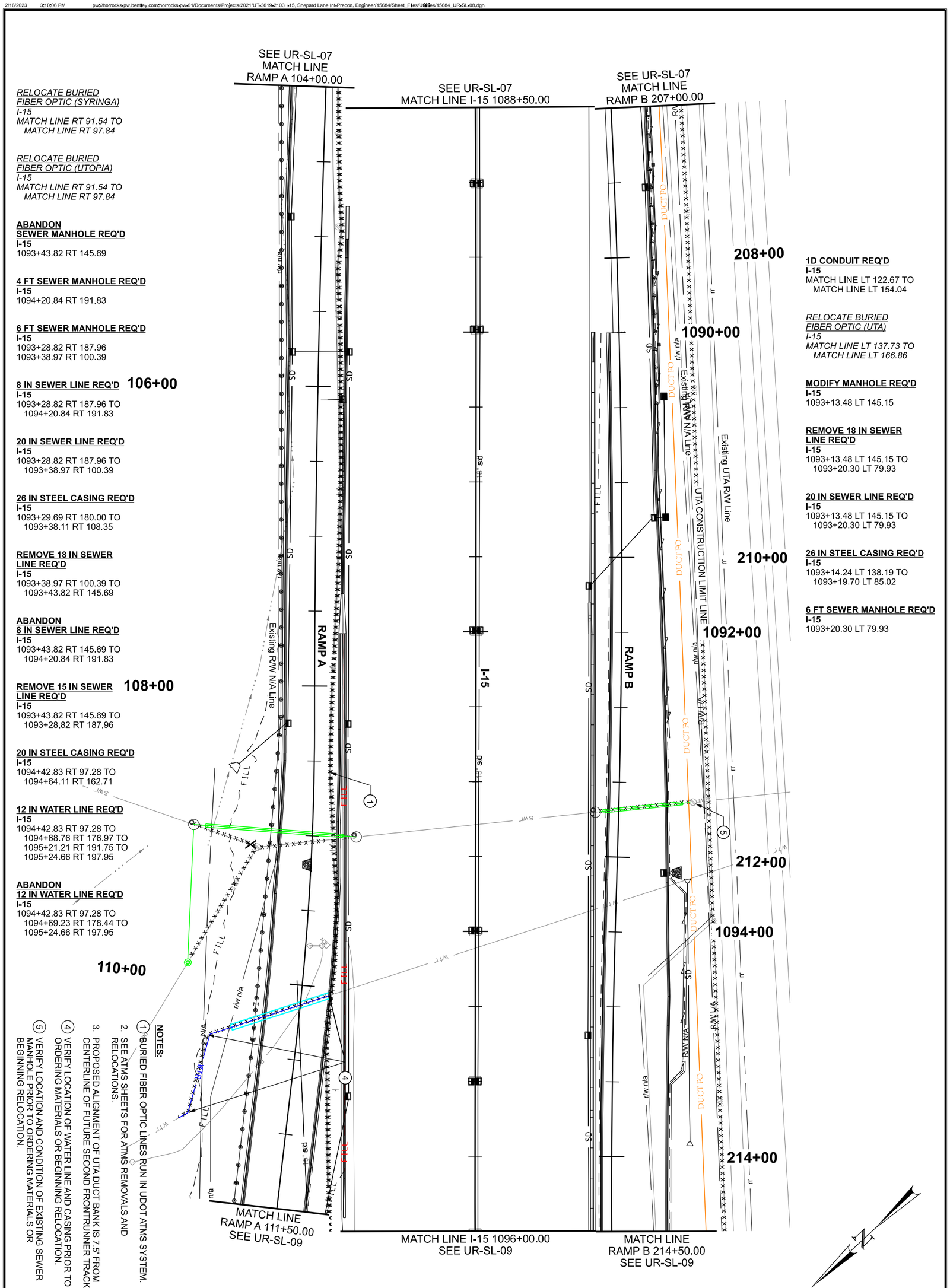
NOTES:

1. BURIED FIBER OPTIC LINES RUN IN UDOT ATMS SYSTEM.
2. SEE ATMS SHEETS FOR ATMS REMOVALS AND RELOCATIONS.
3. PROPOSED ALIGNMENT OF UTA DUCT BANK IS 7.5' FROM CENTERLINE OF FUTURE SECOND FRONTRUNNER TRACK.

SHEET NO. UR-SL-07	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	UTILITY RELOCATION		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY TAS	

EXHIBIT A

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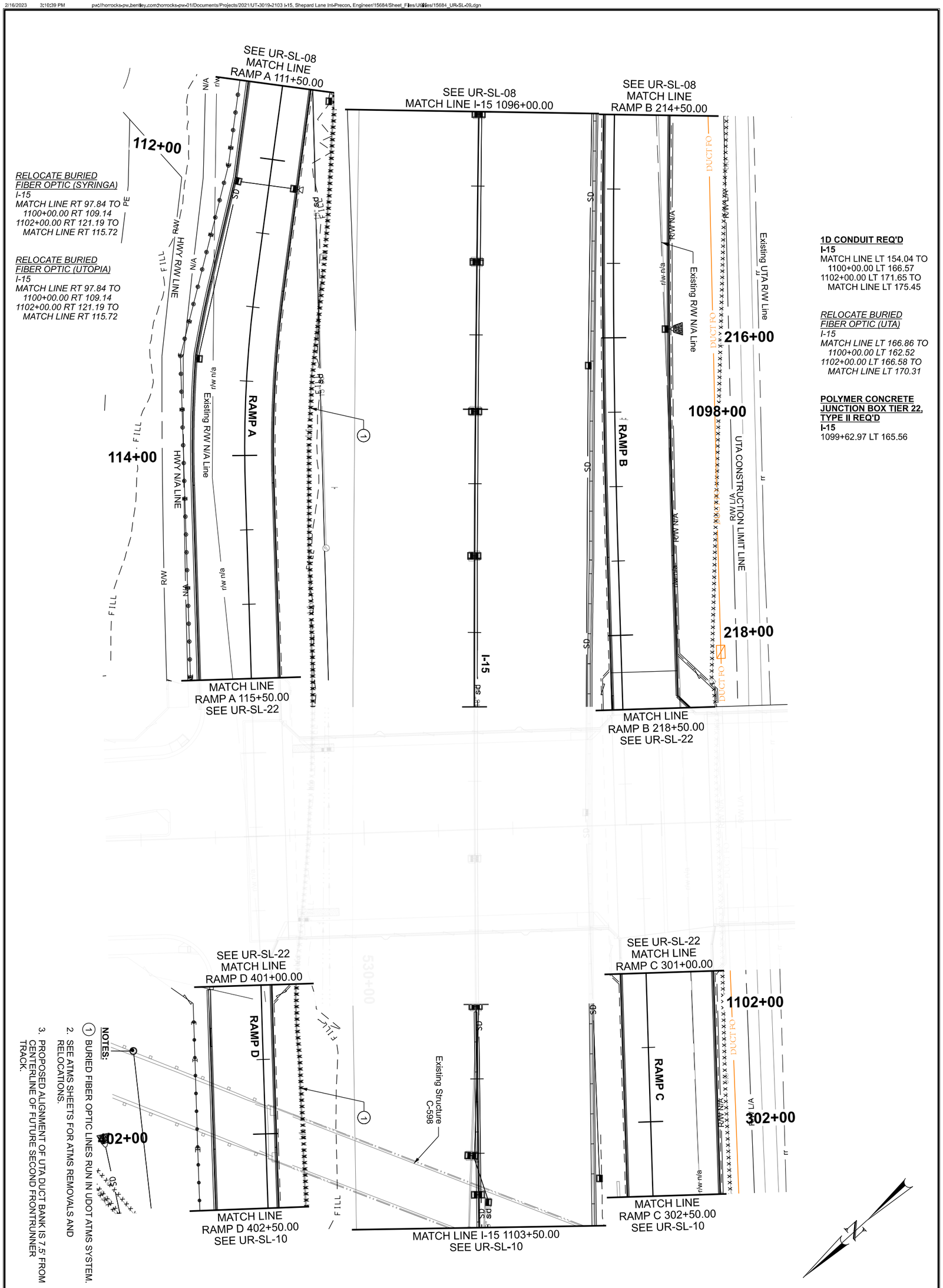
NOTES:

1. BURIED FIBER OPTIC LINES RUN IN UDOT ATMS SYSTEM.
2. SEE ATMS SHEETS FOR ATMS REMOVALS AND RELOCATIONS.
3. PROPOSED ALIGNMENT OF UTA DUCT BANK IS 7.5' FROM CENTERLINE OF FUTURE SECOND FRONTRUNNER TRACK.
4. VERIFY LOCATION OF WATER LINE AND CASING PRIOR TO ORDERING MATERIALS OR BEGINNING RELOCATION.
5. VERIFY LOCATION AND CONDITION OF EXISTING SEWER MANHOLE PRIOR TO ORDERING MATERIALS OR BEGINNING RELOCATION.

SHEET NO. UR-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	UTILITY RELOCATION		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY TAS	

EXHIBIT A

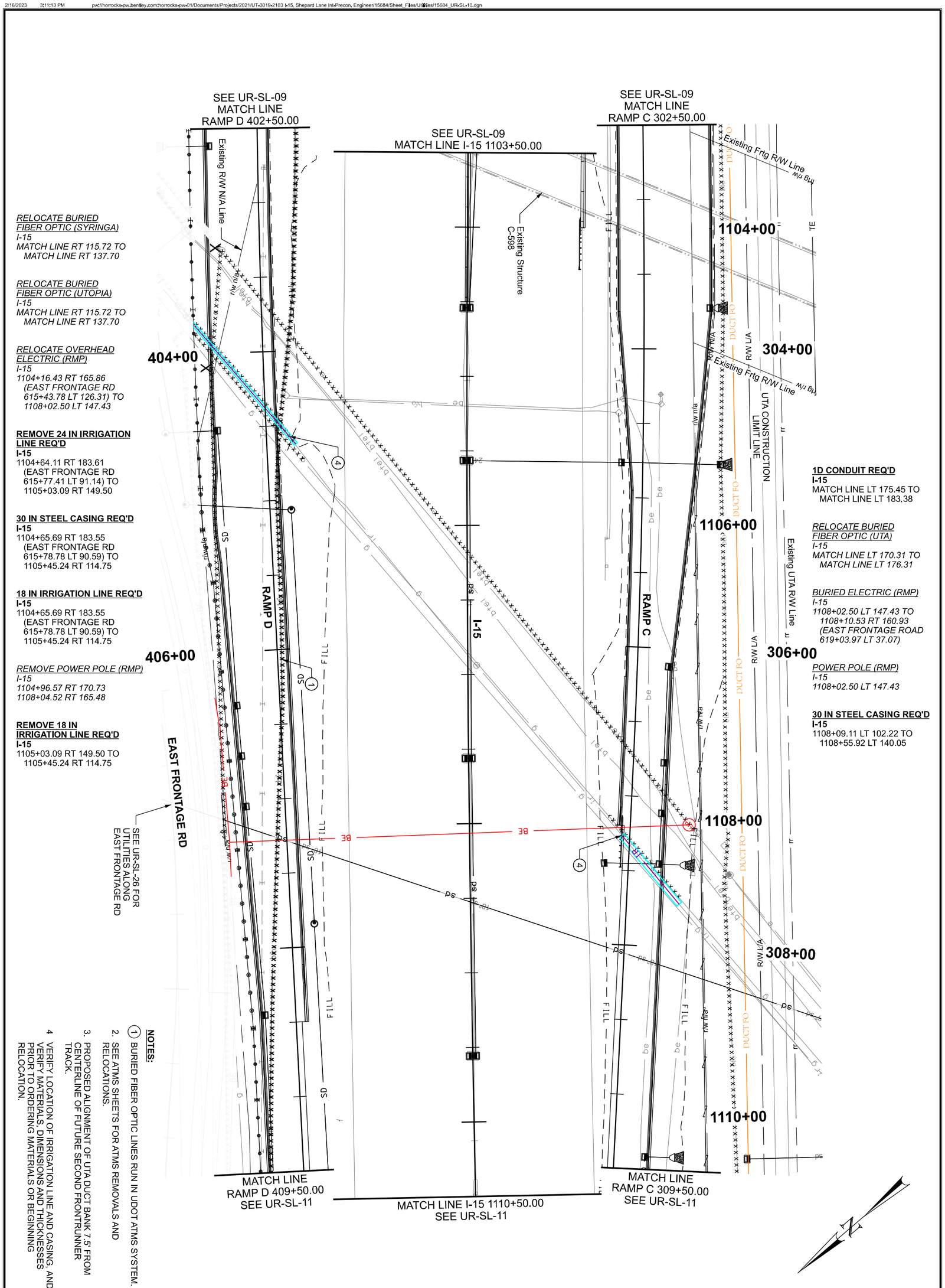
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SHEET NO. UR-SL-09	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	**UTAH DEPARTMENT OF TRANSPORTATION** HORROCKS ENGINEERS			REVISIONS	
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH		NO. DATE APPROVED BY	REMARKS
	UTILITY RELOCATION		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY TAS			

EXHIBIT A

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RELOCATE BURIED FIBER OPTIC (SYRINGA)
I-15
MATCH LINE RT 115.72 TO MATCH LINE RT 137.70

RELOCATE BURIED FIBER OPTIC (UTOPIA)
I-15
MATCH LINE RT 115.72 TO MATCH LINE RT 137.70

RELOCATE OVERHEAD ELECTRIC (RMP)
I-15
1104+16.43 RT 165.86 (EAST FRONTAGE RD 615+43.78 LT 126.31) TO 1108+02.50 LT 147.43

REMOVE 24 IN IRRIGATION LINE REQ'D
I-15
1104+64.11 RT 183.61 (EAST FRONTAGE RD 615+77.41 LT 91.14) TO 1105+03.09 RT 149.50

30 IN STEEL CASING REQ'D
I-15
1104+65.69 RT 183.55 (EAST FRONTAGE RD 615+78.78 LT 90.59) TO 1105+45.24 RT 114.75

18 IN IRRIGATION LINE REQ'D
I-15
1104+65.69 RT 183.55 (EAST FRONTAGE RD 615+78.78 LT 90.59) TO 1105+45.24 RT 114.75

REMOVE POWER POLE (RMP)
I-15
1104+96.57 RT 170.73
1108+04.52 RT 165.48

REMOVE 18 IN IRRIGATION LINE REQ'D
I-15
1105+03.09 RT 149.50 TO 1105+45.24 RT 114.75

SEE UR-SL-26 FOR UTILITIES ALONG EAST FRONTAGE RD

1D CONDUIT REQ'D
I-15
MATCH LINE LT 175.45 TO MATCH LINE LT 183.38

RELOCATE BURIED FIBER OPTIC (UTA)
I-15
MATCH LINE LT 170.31 TO MATCH LINE LT 176.31

BURIED ELECTRIC (RMP)
I-15
1108+02.50 LT 147.43 TO 1108+10.53 RT 160.93 (EAST FRONTAGE ROAD 619+03.97 LT 37.07)

POWER POLE (RMP)
I-15
1108+02.50 LT 147.43

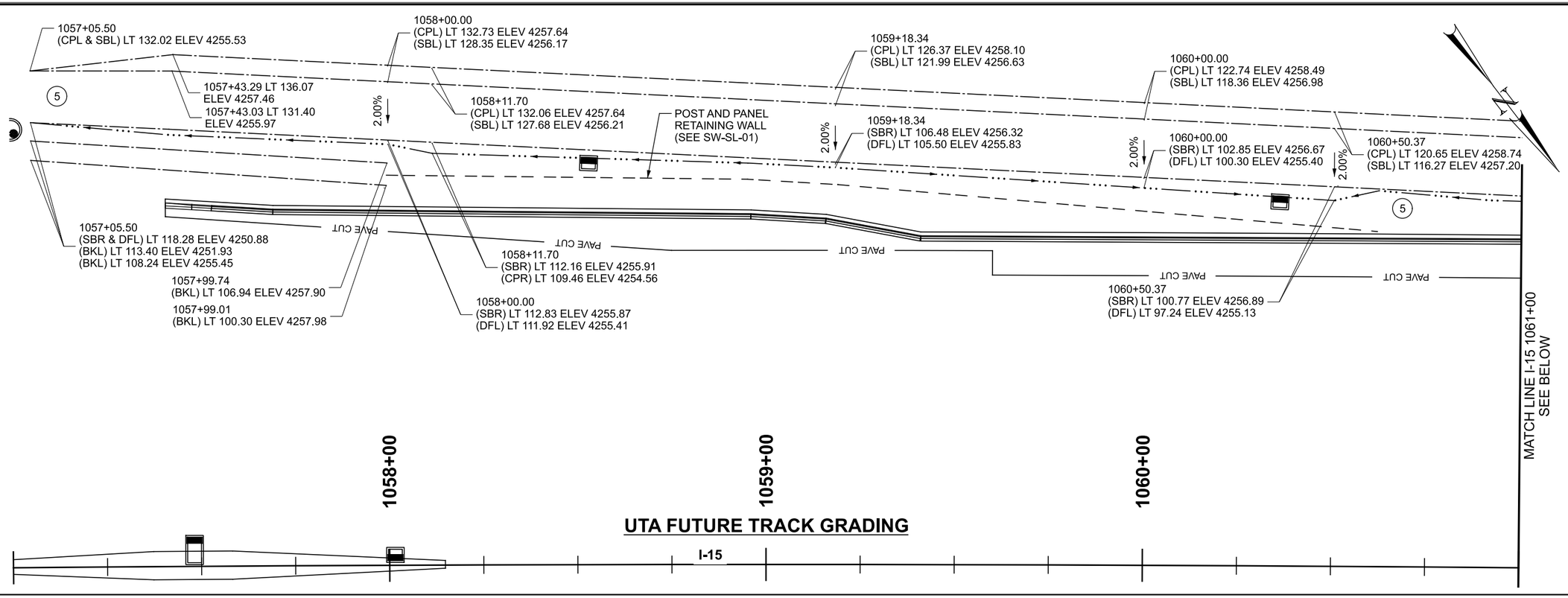
30 IN STEEL CASING REQ'D
I-15
1108+09.11 LT 102.22 TO 1108+55.92 LT 140.05

NOTES:

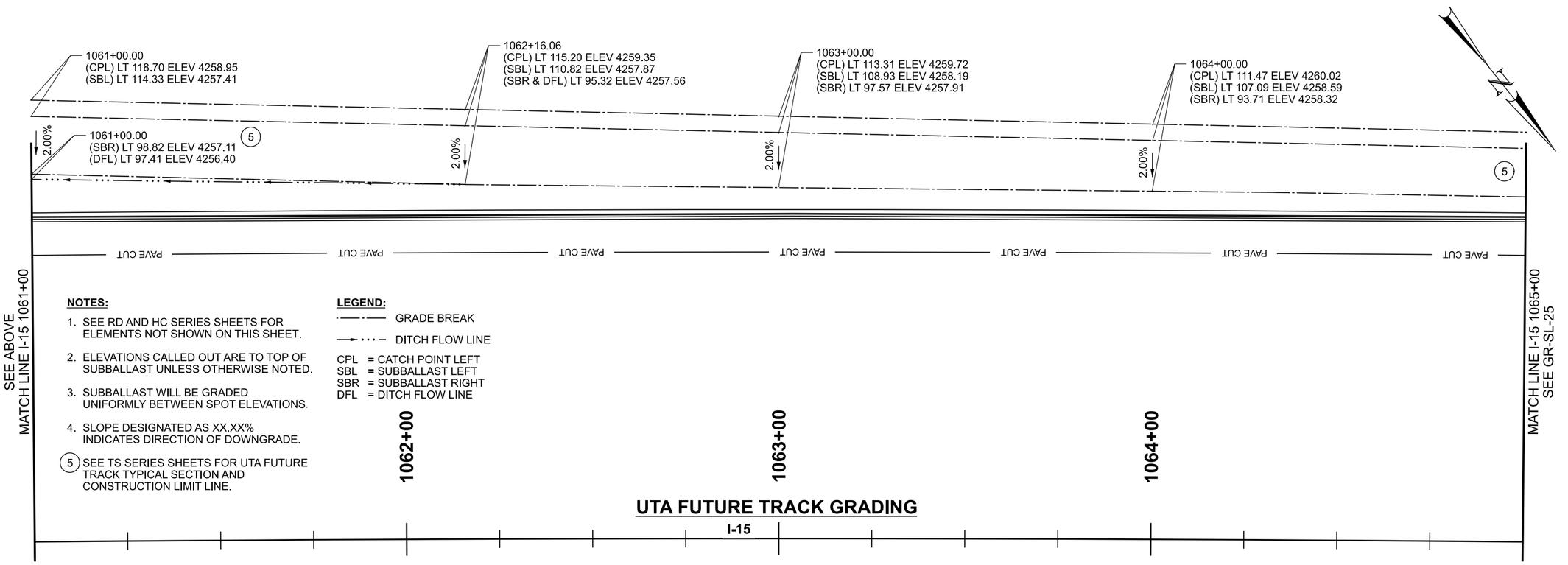
1. (1) BURIED FIBER OPTIC LINES RUN IN UDOT ATMS SYSTEM.
2. SEE ATMS SHEETS FOR ATMS REMOVALS AND RELOCATIONS.
3. PROPOSED ALIGNMENT OF UTA DUCT BANK 7.5' FROM CENTERLINE OF FUTURE SECOND FRONTRUNNER TRACK.
4. VERIFY LOCATION OF IRRIGATION LINE AND CASING, AND VERIFY MATERIALS, DIMENSIONS AND THICKNESSES PRIOR TO ORDERING MATERIALS OR BEGINNING RELOCATION.

SHEET NO. UR-SL-10	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	UTILITY RELOCATION		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY TAS	

EXHIBIT A



UTA FUTURE TRACK GRADING



UTA FUTURE TRACK GRADING

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.
5. SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
DATE: 01/11/23

APPROVED
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG &
PED OVERPASS

PROJECT

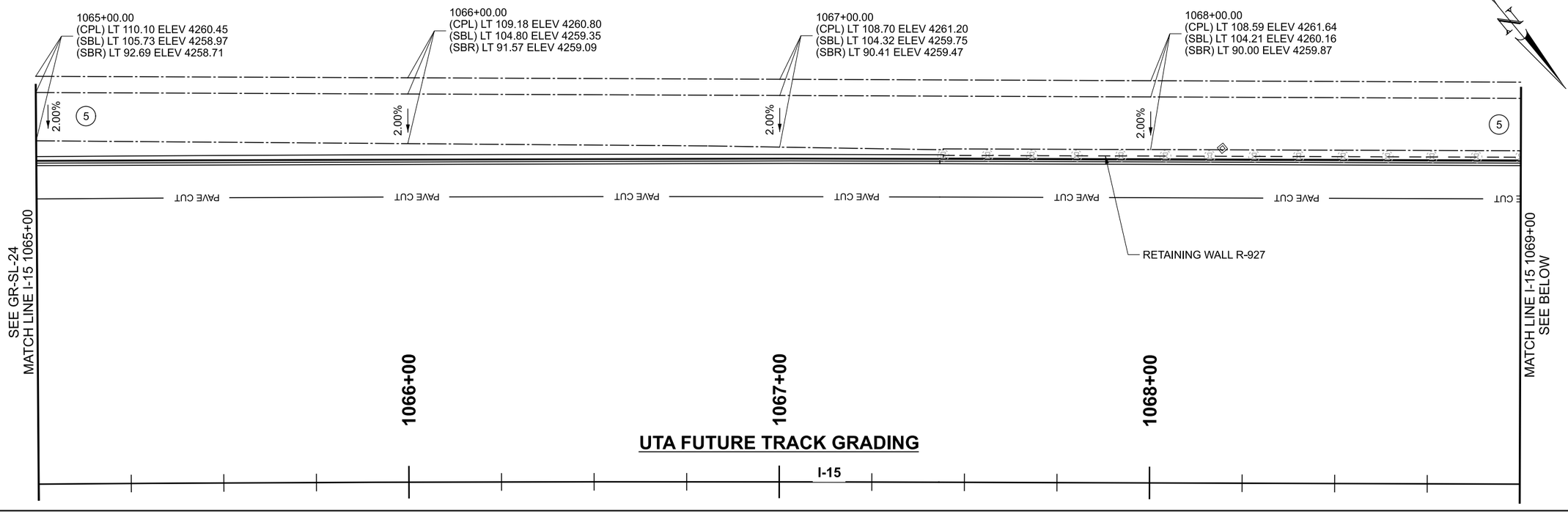
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PIN: 15684

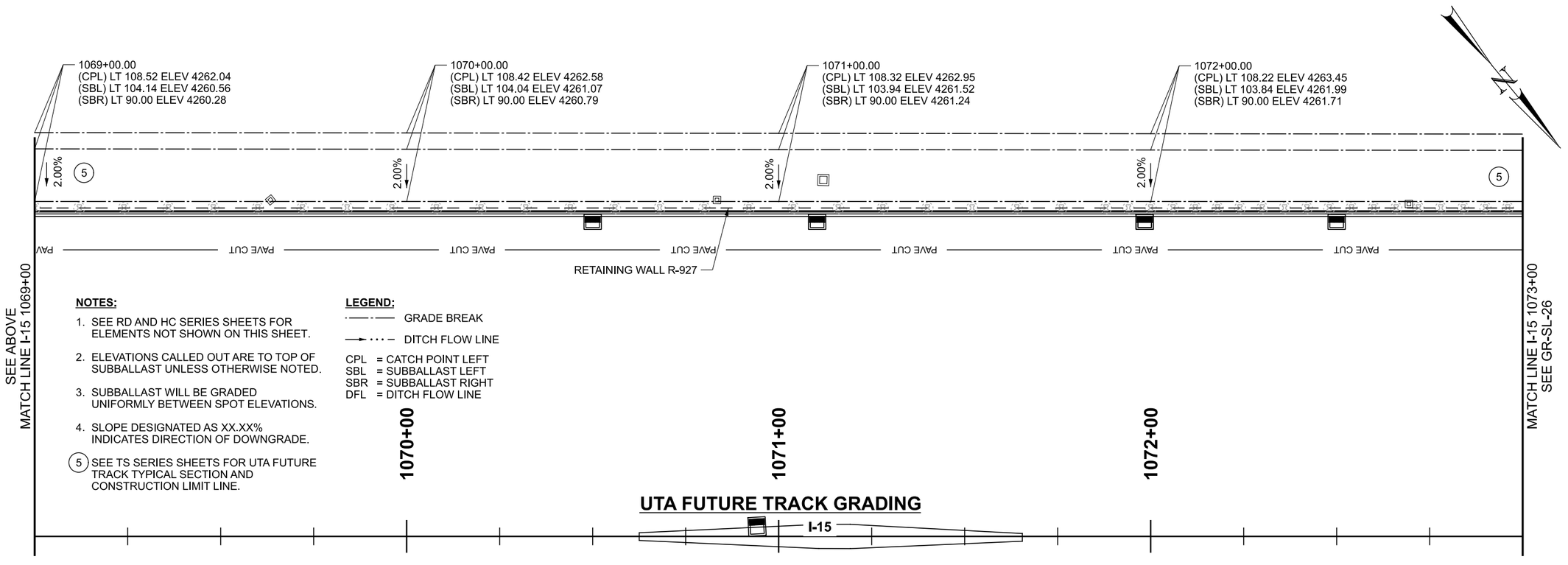
GRADE

SHEET NO. GR-SL-24

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EXHIBIT A





NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.
5. SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
DATE: 01/11/23

APPROVED
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG &
PED OVERPASS

PIN: 15684
S-I15-7(340)325

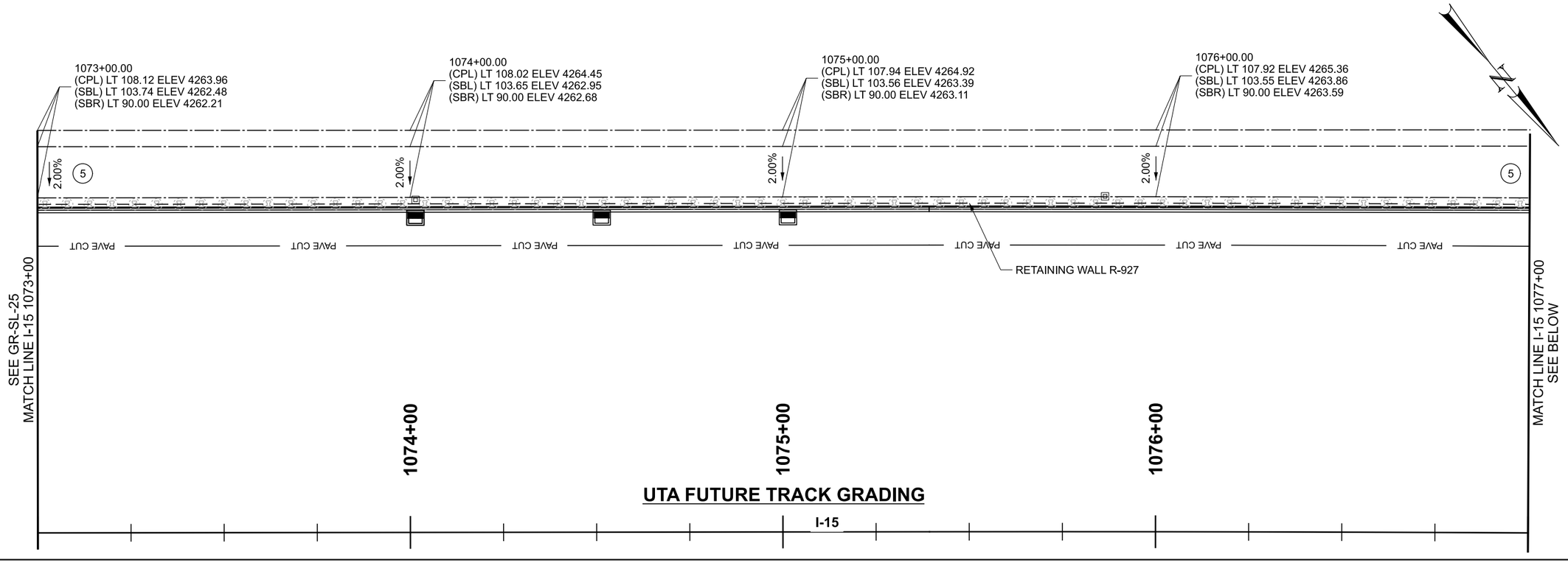
GRADE

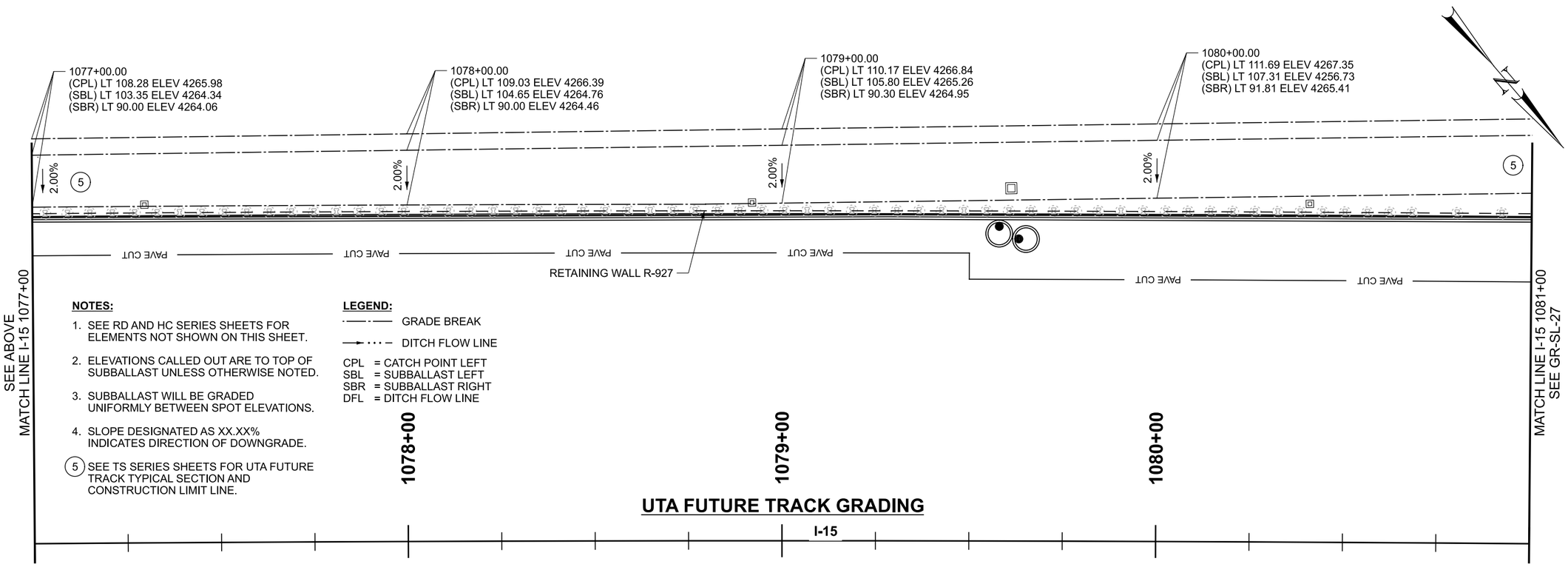
PROJECT
PROJECT NUMBER

SHEET NO. GR-SL-25

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EXHIBIT A





NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.
5. SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
DATE: 01/11/23

APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684

GRADE

SHEET NO. GR-SL-26

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EXHIBIT A

1081+00.00
(CPL) LT 113.60 ELEV 4267.84
(SBL) LT 109.22 ELEV 4266.19
(SBR) LT 93.72 ELEV 4265.88

1082+00.00
(CPL) LT 115.90 ELEV 4268.28
(SBL) LT 111.53 ELEV 4266.66
(SBR) LT 96.03 ELEV 4266.35

1083+00.00
(CPL) LT 118.61 ELEV 4268.88
(SBL) LT 114.23 ELEV 4267.21
(SBR) LT 98.73 ELEV 4266.90

1084+00.00
(CPL) LT 121.72 ELEV 4269.48
(SBL) LT 117.34 ELEV 4267.85
(SBR) LT 101.84 ELEV 4267.54

200+00 201+00 202+00 203+00

2.00% ⑤

RETAINING WALL R-927

PAVE CUT

RAMP B

SEE GR-SL-26
MATCH LINE I-15 1081+00

MATCH LINE I-15 1085+00
SEE BELOW

1082+00 1083+00 1084+00

UTA FUTURE TRACK GRADING

I-15

1085+00.00
(CPL) LT 125.27 ELEV 4270.03
(SBL) LT 120.90 ELEV 4268.41
(SBR) LT 105.39 ELEV 4268.09

1086+00.00
(CPL) LT 129.22 ELEV 4270.67
(SBL) LT 124.84 ELEV 4269.07
(SBR) LT 109.33 ELEV 4268.76

1087+00.00
(CPL) LT 133.23 ELEV 4271.31
(SBL) LT 128.85 ELEV 4269.69
(SBR) LT 113.34 ELEV 4269.37

1088+00.00
(CPL) LT 137.43 ELEV 4271.70
(SBL) LT 133.05 ELEV 4270.23
(SBR) LT 117.54 ELEV 4269.91

204+00 205+00 206+00 207+00

SEE ABOVE
MATCH LINE I-15 1085+00

MATCH LINE I-15 1089+00
SEE GR-SL-28

1086+00 1087+00 1088+00

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

⑤ SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK
DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE

UTA FUTURE TRACK GRADING

I-15

REVISIONS				
NO.	DATE	APPROVED BY		REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY KLY
DATE 01/11/23

APPROVED
PROFESSIONAL ENGINEER

PROJECT I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER S-I15-7(340)325
PIN 15684
GRADE

SHEET NO. GR-SL-27

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EXHIBIT A

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

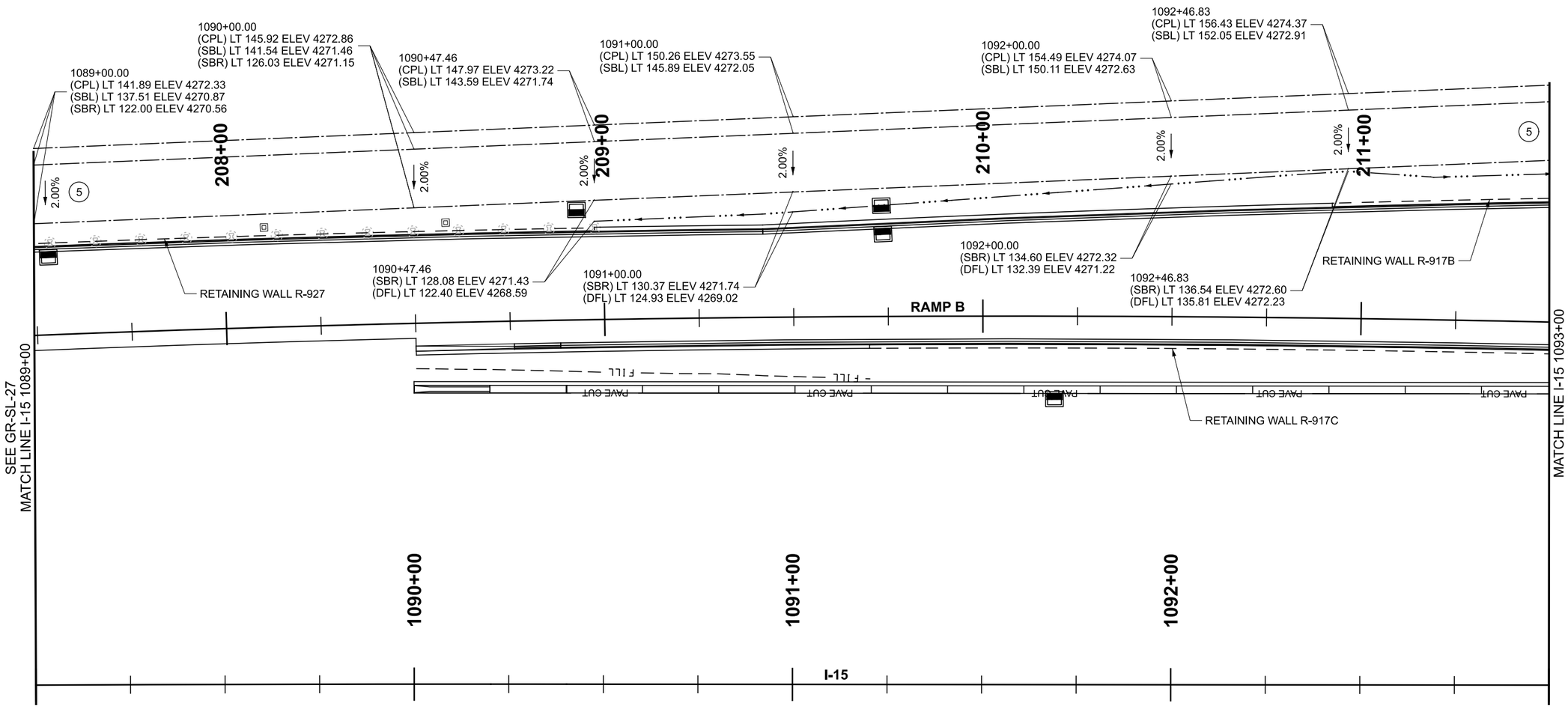
(5) SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE



UTA FUTURE TRACK GRADING

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY KLY
MM/DD/YY DATE

APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
GRADE

SHEET NO. GR-SL-28

3/8/2023 11:48:31 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-21/03 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Grading/15684_GR-SL-28.dgn

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

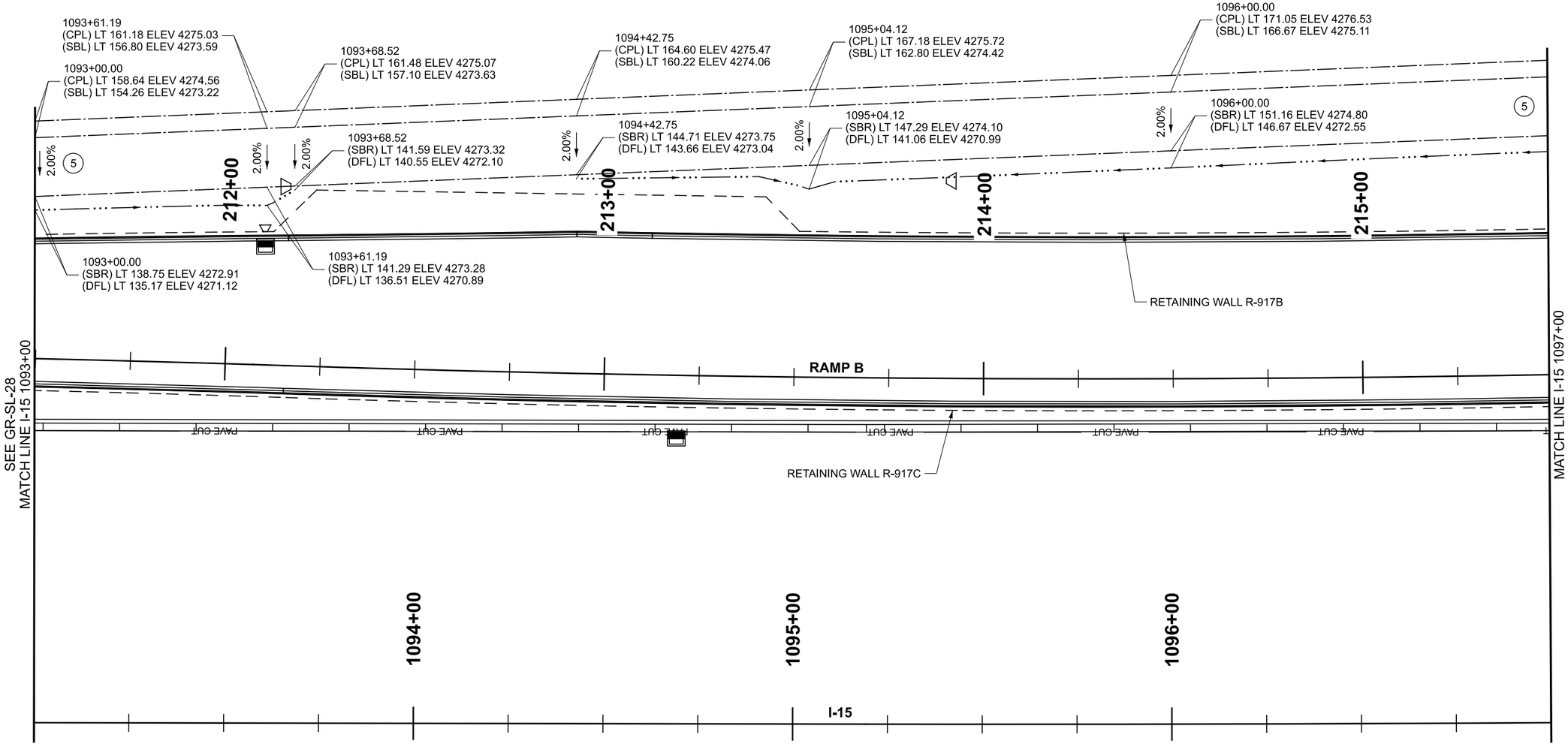
(5) SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE



UTA FUTURE TRACK GRADING

EXHIBIT A

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
DATE: MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
GRADE

SHEET NO. GR-SL-29

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EXHIBIT A

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

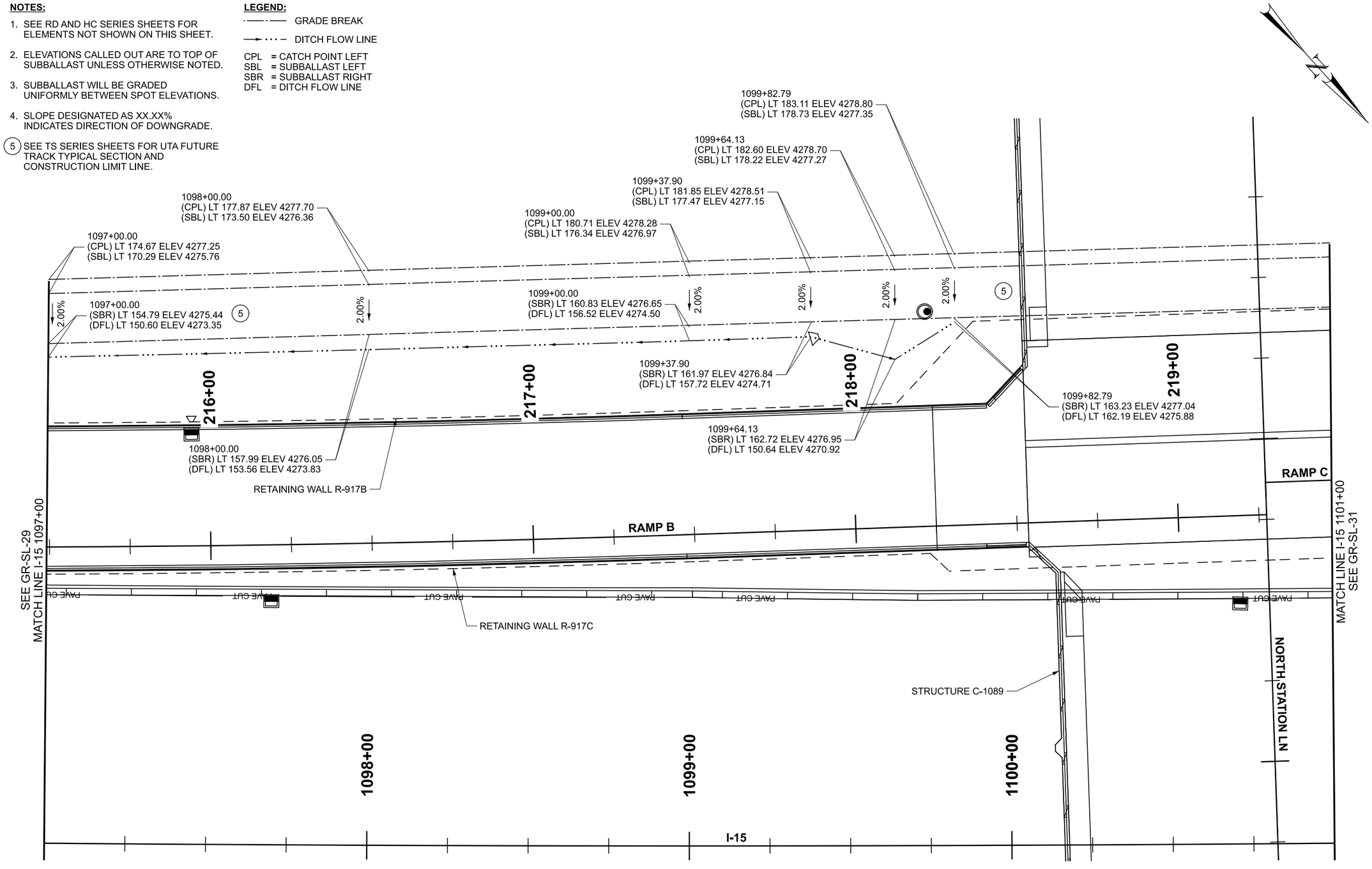
(5) SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE



UTA FUTURE TRACK GRADING

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
DATE: MM/DD/YY

APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
GRADE

SHEET NO. GR-SL-30

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EXHIBIT A

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

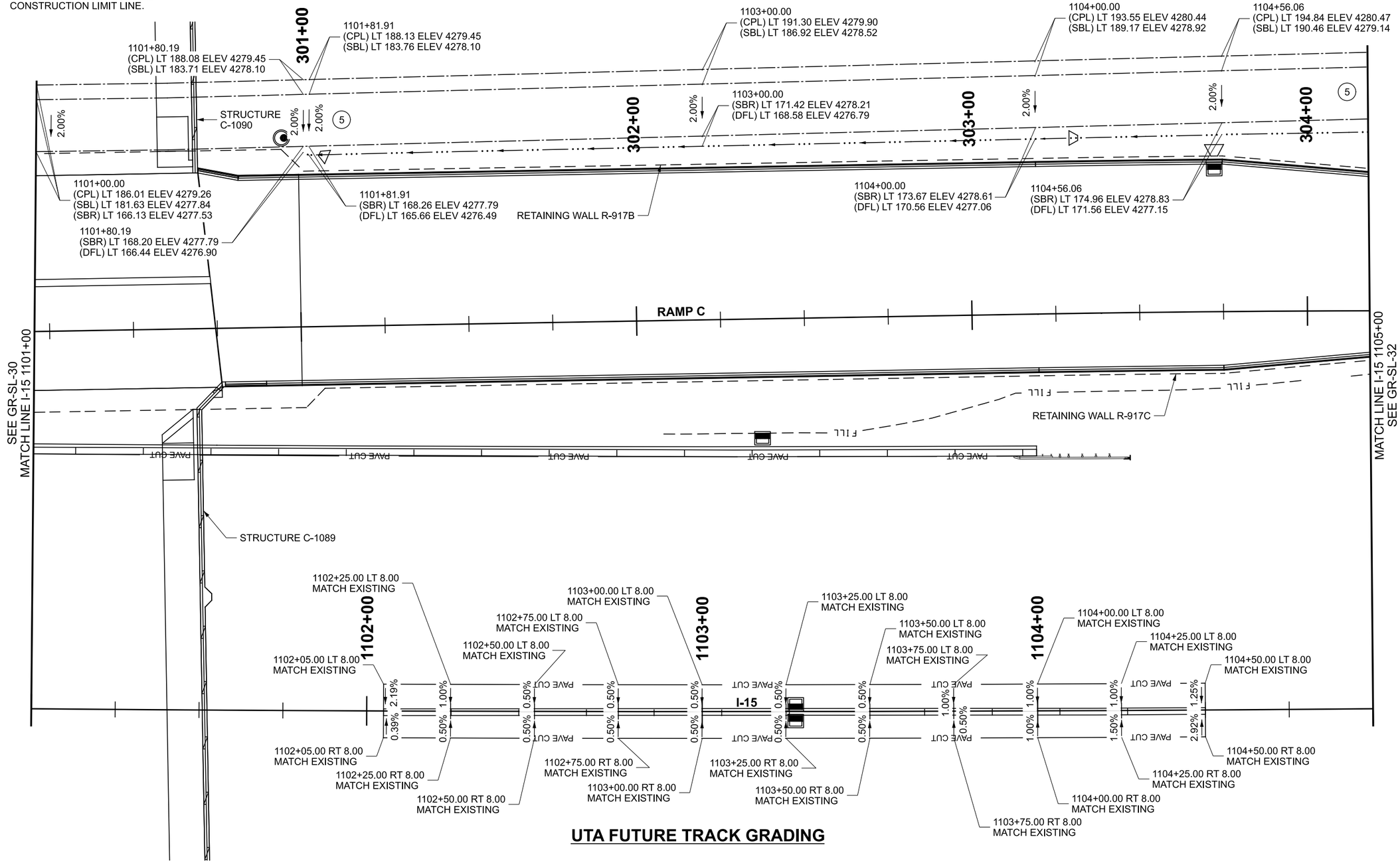
(5) SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE



UTA FUTURE TRACK GRADING

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: KLY
APPROVED: MM/DD/YY (DATE)
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
GRADE

SHEET NO. GR-SL-31

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EXHIBIT A

NOTES:

1. SEE RD AND HC SERIES SHEETS FOR ELEMENTS NOT SHOWN ON THIS SHEET.
2. ELEVATIONS CALLED OUT ARE TO TOP OF SUBBALLAST UNLESS OTHERWISE NOTED.
3. SUBBALLAST WILL BE GRADED UNIFORMLY BETWEEN SPOT ELEVATIONS.
4. SLOPE DESIGNATED AS XX.XX% INDICATES DIRECTION OF DOWNGRADE.

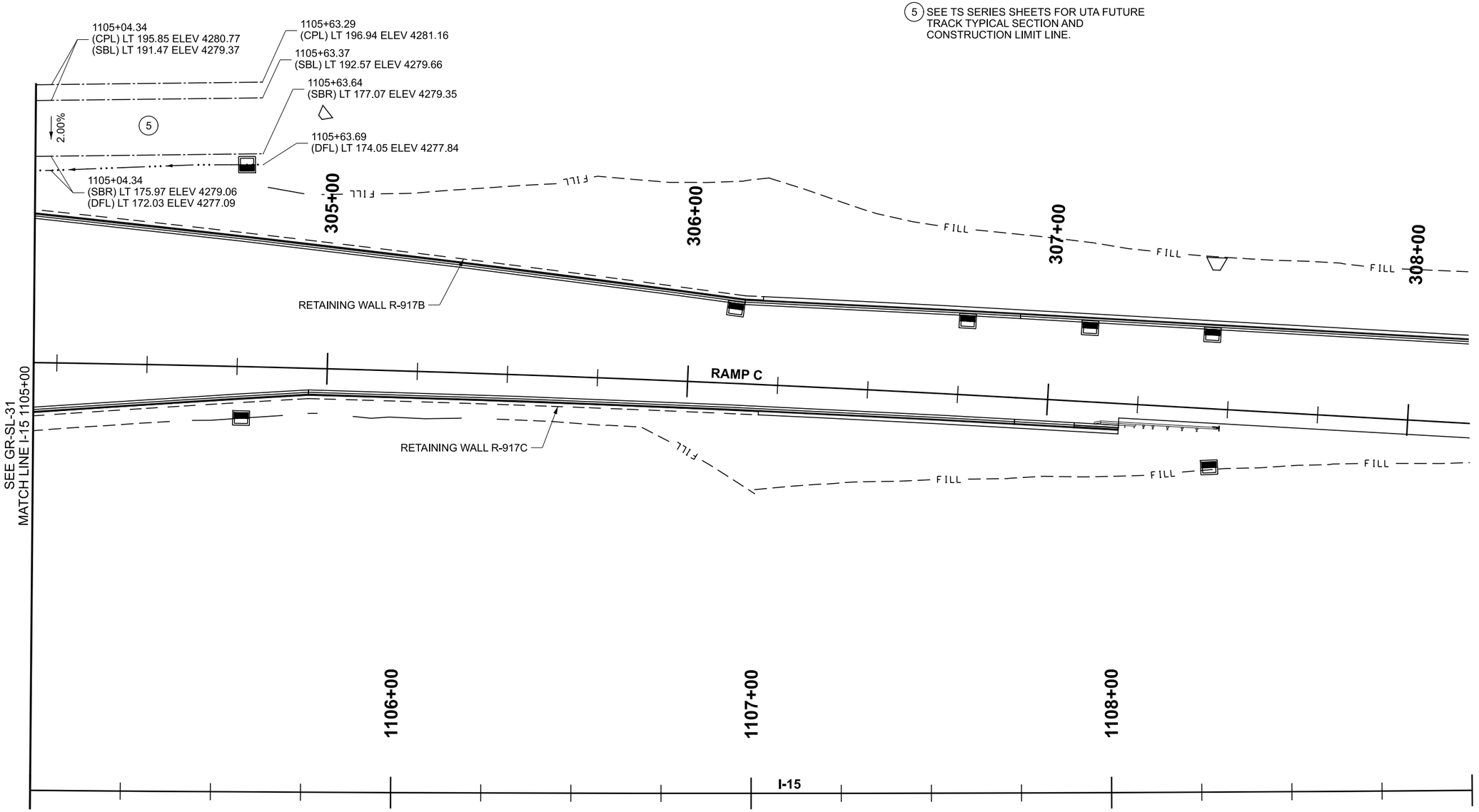
(5) SEE TS SERIES SHEETS FOR UTA FUTURE TRACK TYPICAL SECTION AND CONSTRUCTION LIMIT LINE.

LEGEND:

GRADE BREAK

DITCH FLOW LINE

CPL = CATCH POINT LEFT
SBL = SUBBALLAST LEFT
SBR = SUBBALLAST RIGHT
DFL = DITCH FLOW LINE



UTA FUTURE TRACK GRADING

REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY KLY

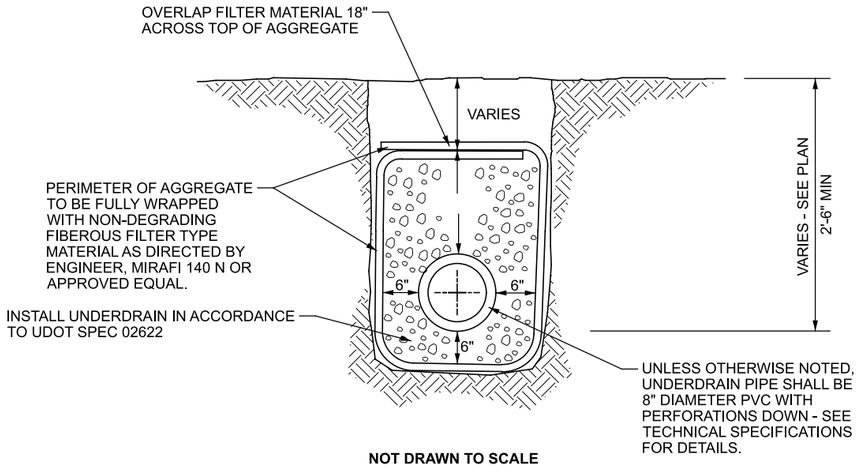
APPROVED
PROFESSIONAL ENGINEER
MM/DD/YY
DATE

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
GRADE

SHEET NO. GR-SL-32

3/8/2023 11:50:47 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Grading/15684_GR-SL-32.dgn

EXHIBIT A

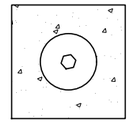


NOT DRAWN TO SCALE

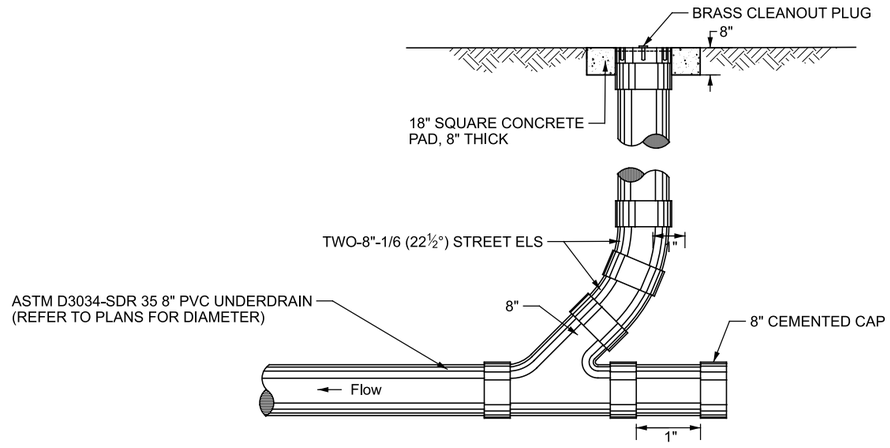
NOTE:

1. SOLID PIPE (W/O PERFORATIONS) IS TO BE USED UNDER DRIVES AND ROADWAYS, WITH COMPACTED BACKFILL.

UNDERDRAIN SECTION



PLAN VIEW
NOT DRAWN TO SCALE



SECTION VIEW
NOT DRAWN TO SCALE

NOTES:

1. CLEANOUT FACES DOWNSTREAM.
2. ALL CLEANOUTS ARE 6" ONLY

UNDERDRAIN CLEANOUT

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

DRAWN BY PJG
QC CHECKED BY CMR
01/11/23 DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
DRAINAGE DETAIL

SHEET NO. DRDT-12

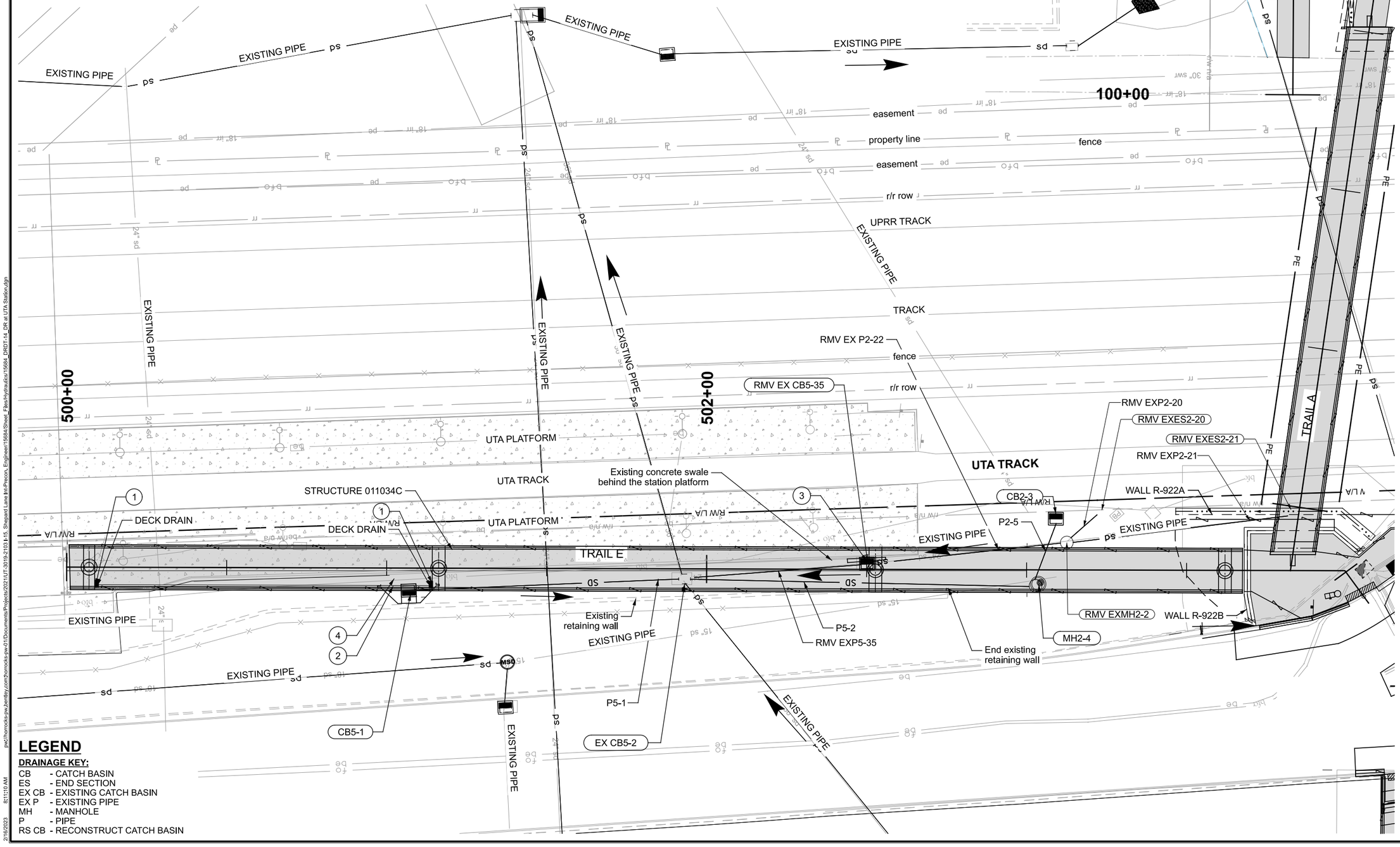
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EXHIBIT A

NOTES:

1. DECK DRAINS ON THE PEDESTRIAN BRIDGE ARE CONNECTED BY A PIPE. THE PIPE OUTFALLS TO A VERTICAL PIPE ATTACHED TO THE SIDE OF THE BENT. OUTFLOW DRAINS TO CB 5-4. SEE STRUCTURE 011034C FOR DETAILS.
2. SEE DRDT-15 FOR DETAILS ON THE APRON FOR CB5-1.
3. REMOVE EXISTING APRON, GUTTER AND INLET FOR INSTALLATION OF BRIDGE BENT. REPLACE THE SECTION REMOVED WITH A NEW GUTTER. MATCH THE FLOWLINE AND CROSS-SECTION OF THE EXISTING GUTTER.
4. CONNECT VERTICAL PIPE INSTALLED ALONG BRIDGE BENT TO CB 5-1.
5. FOR A LIST OF PAY ITEMS FOR THIS DETAIL, SEE DR-PL-03 AND DR-PL-05.

DRAINAGE DESIGN BEHIND THE UTA PLATFORM AND UNDER THE NEW PEDESTRIAN BRIDGE



LEGEND

DRAINAGE KEY:

CB	- CATCH BASIN
ES	- END SECTION
EX CB	- EXISTING CATCH BASIN
EX P	- EXISTING PIPE
MH	- MANHOLE
P	- PIPE
RS CB	- RECONSTRUCT CATCH BASIN

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

DRAWN BY CMR
QC CHECKED BY BOW
DATE 01/11/23
APPROVED
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS

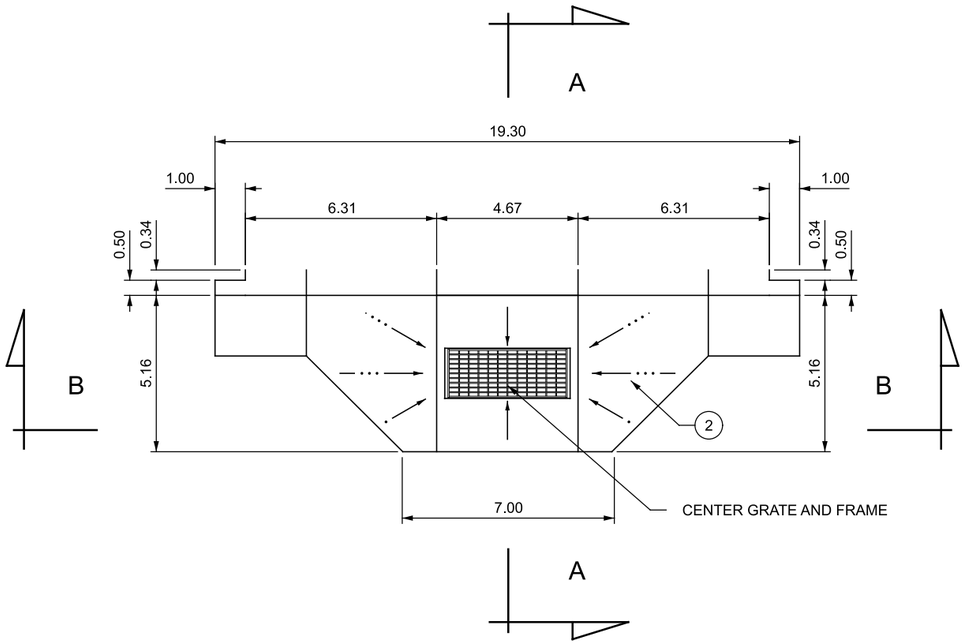
PROJECT
PROJECT NUMBER S-I15-7(340)325
PIN 15684

DRAINAGE DETAILS

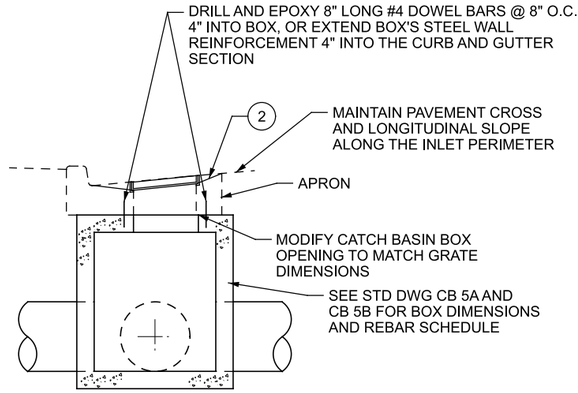
SHEET NO. DRDT-14

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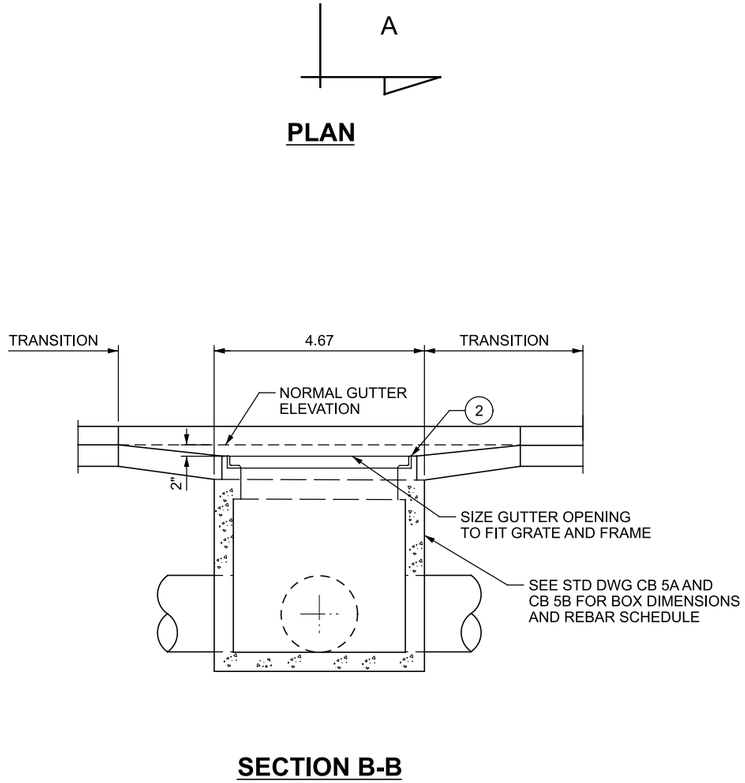
EXHIBIT A



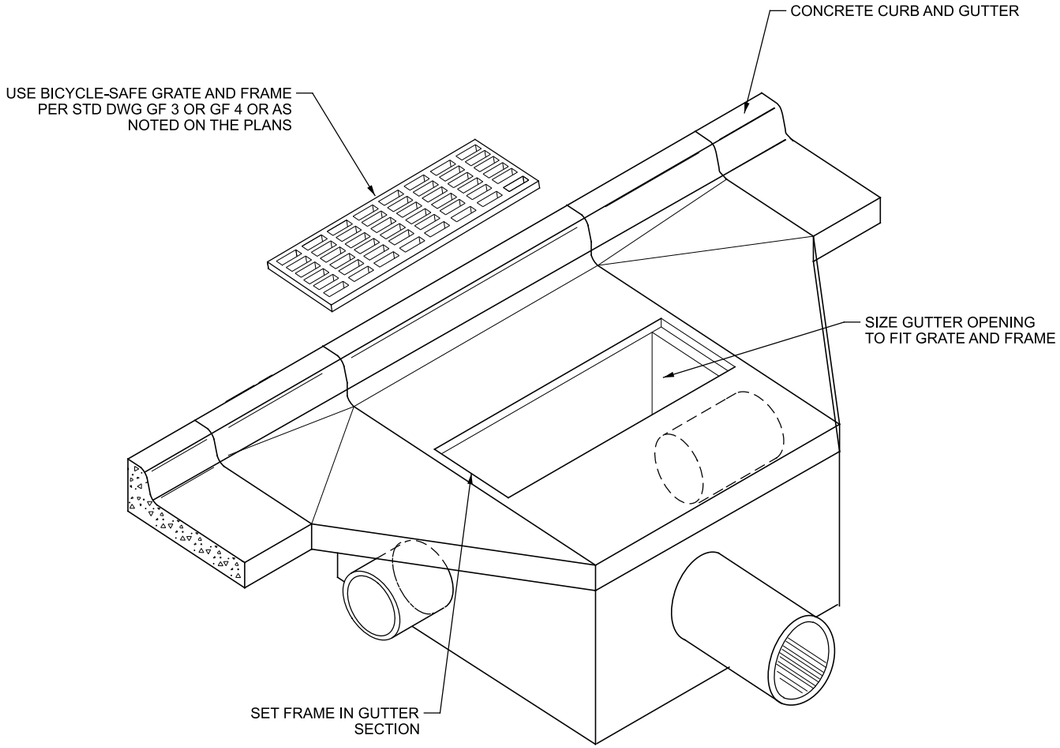
PLAN



SECTION A-A



SECTION B-B



ISOMETRIC VIEW

APRON FOR INLET BEHIND UTA TRAIN STATION

NOTES:

1. SEE DRDT-14 FOR LOCATION OF INLET.
2. MATCH THE SLOPES AND DIMENSIONS OF THE EXISTING APRONS BEHIND THE STATION PLATFORM.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

DRAWN BY PJG
QC CHECKED BY CMR
DATE 01/11/23

APPROVED
PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS

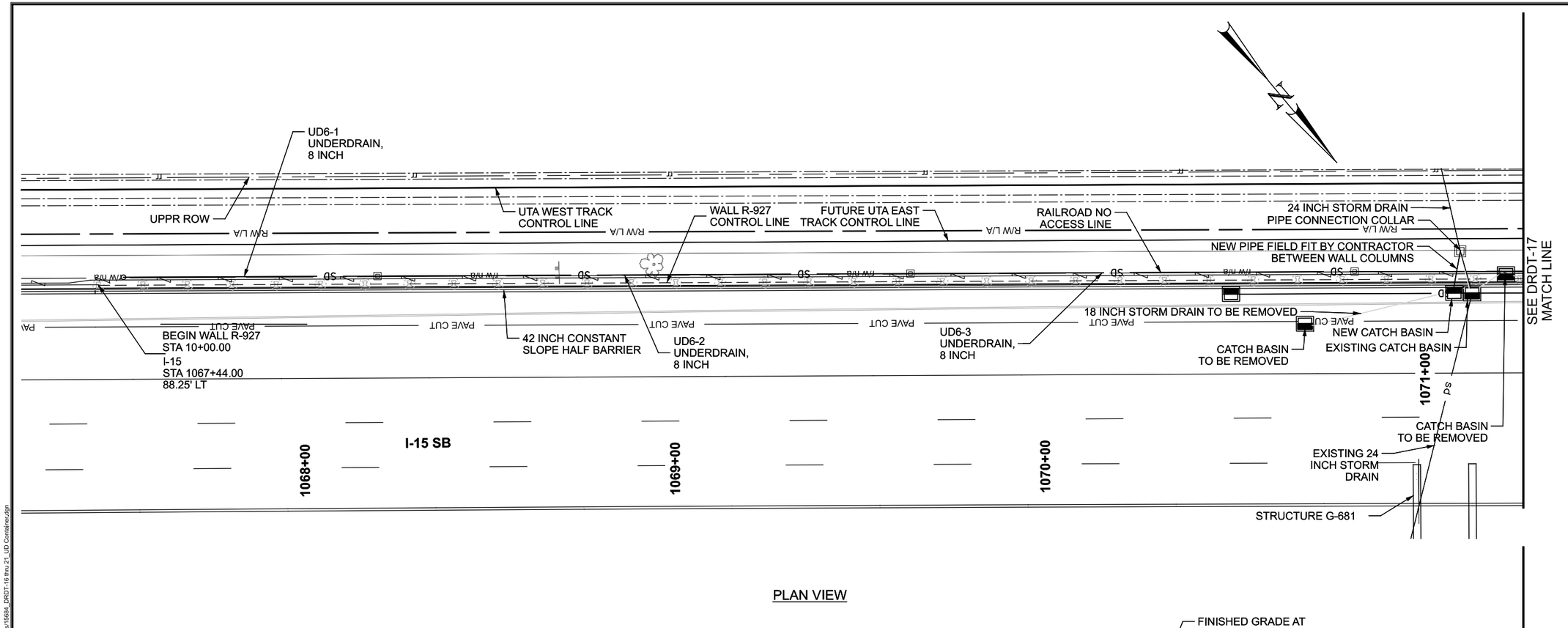
PROJECT
PROJECT NUMBER PIN 15684 S-I15-7(340)325

DRAINAGE DETAIL

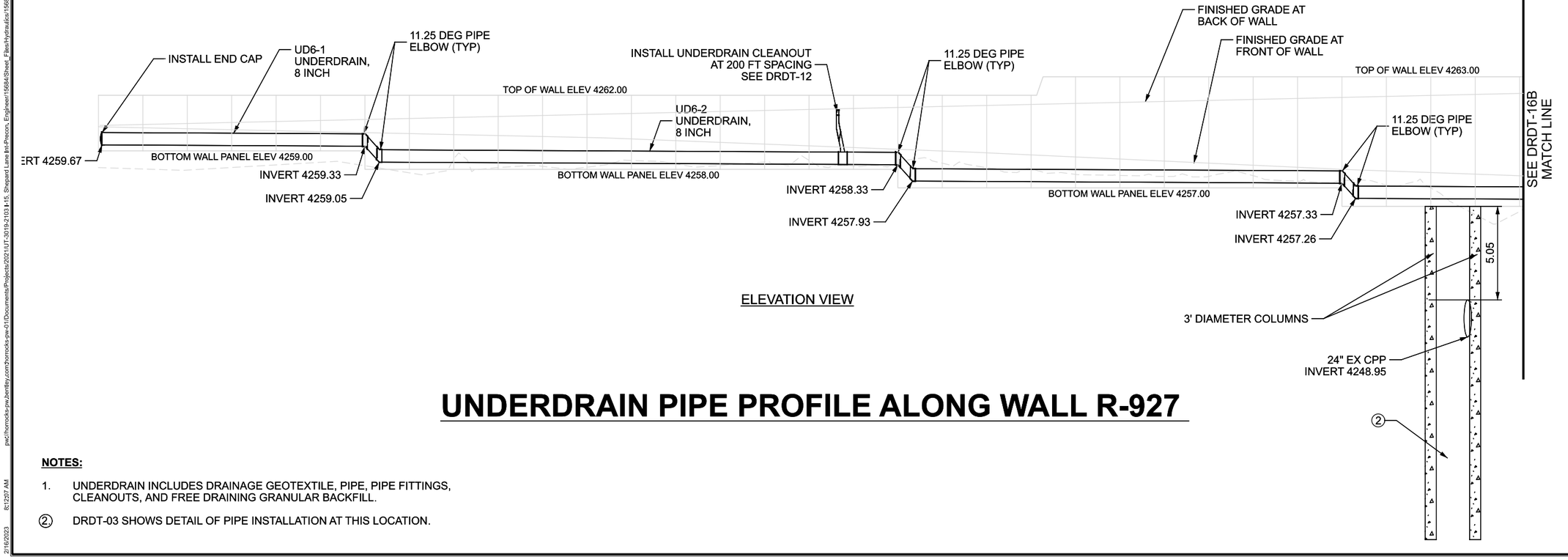
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EXHIBIT A



PLAN VIEW



ELEVATION VIEW

UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

② DRDT-03 SHOWS DETAIL OF PIPE INSTALLATION AT THIS LOCATION.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

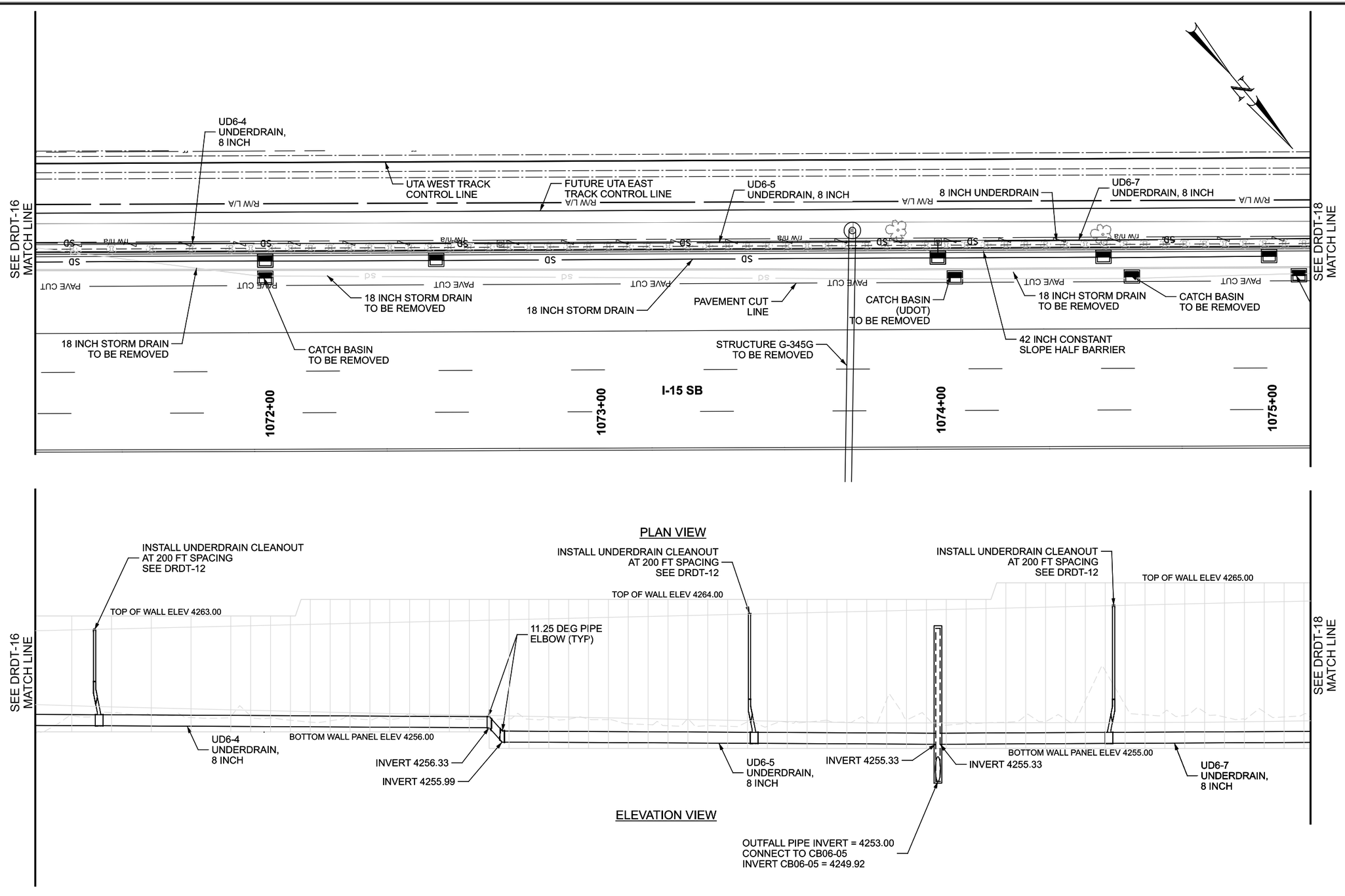
DRAWN BY: AJB
QC CHECKED BY: CMR
DATE: 01/11/23
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
DRAINAGE DETAIL

SHEET NO. DRDT-16

pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-20119-21103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DRDT-16 thru 21_UD Container.dgn
2/16/2023 8:12:07 AM

EXHIBIT A



UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

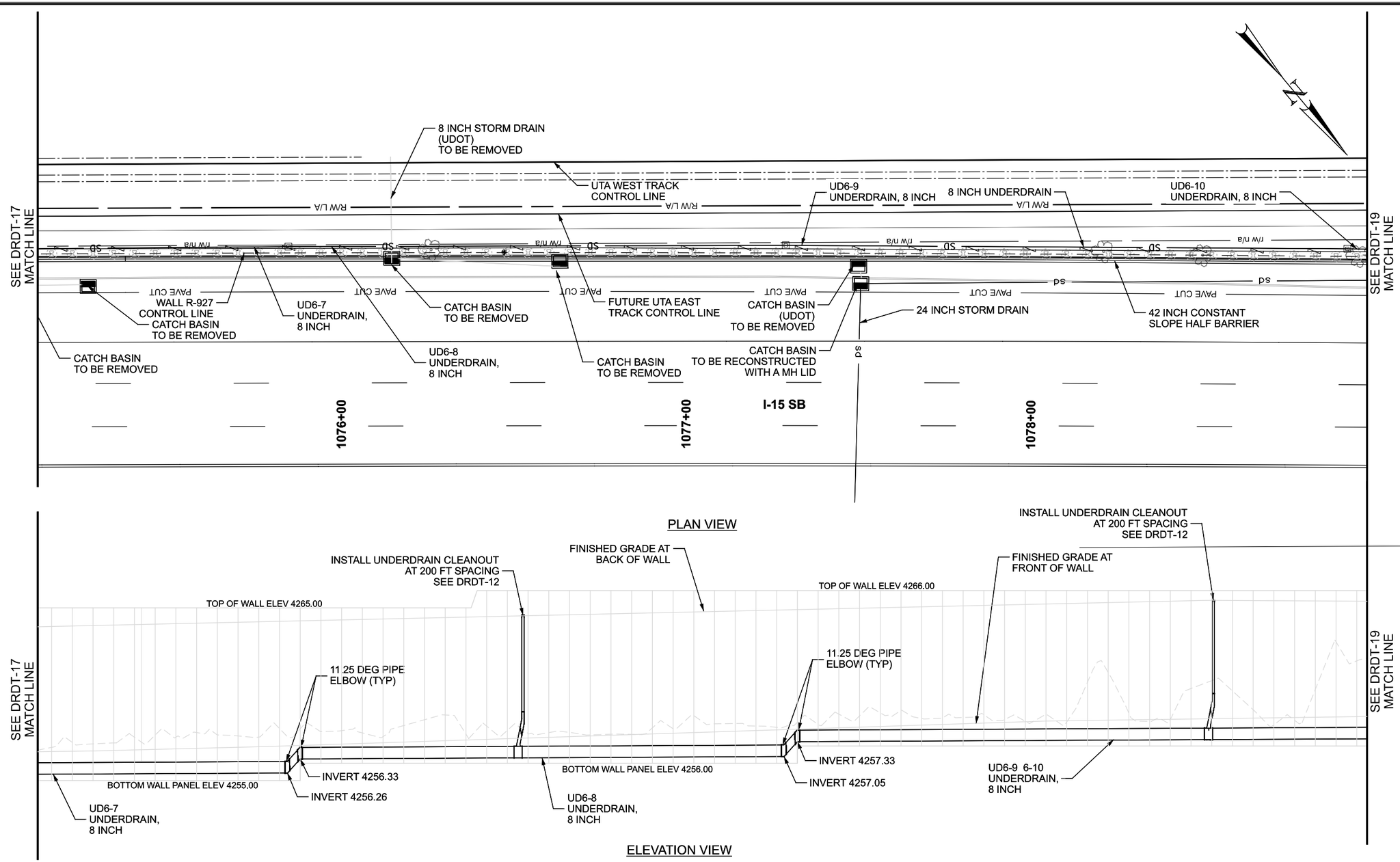
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QC CHECKED BY CMR
DATE 01/11/23
APPROVED
PROFESSIONAL ENGINEER

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN 15684
DRAINAGE DETAIL

SHEET NO. DRDT-17

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2/16/2023 8:12:09 AM

EXHIBIT A



UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

DRAWN BY AJB
QC CHECKED BY CMR

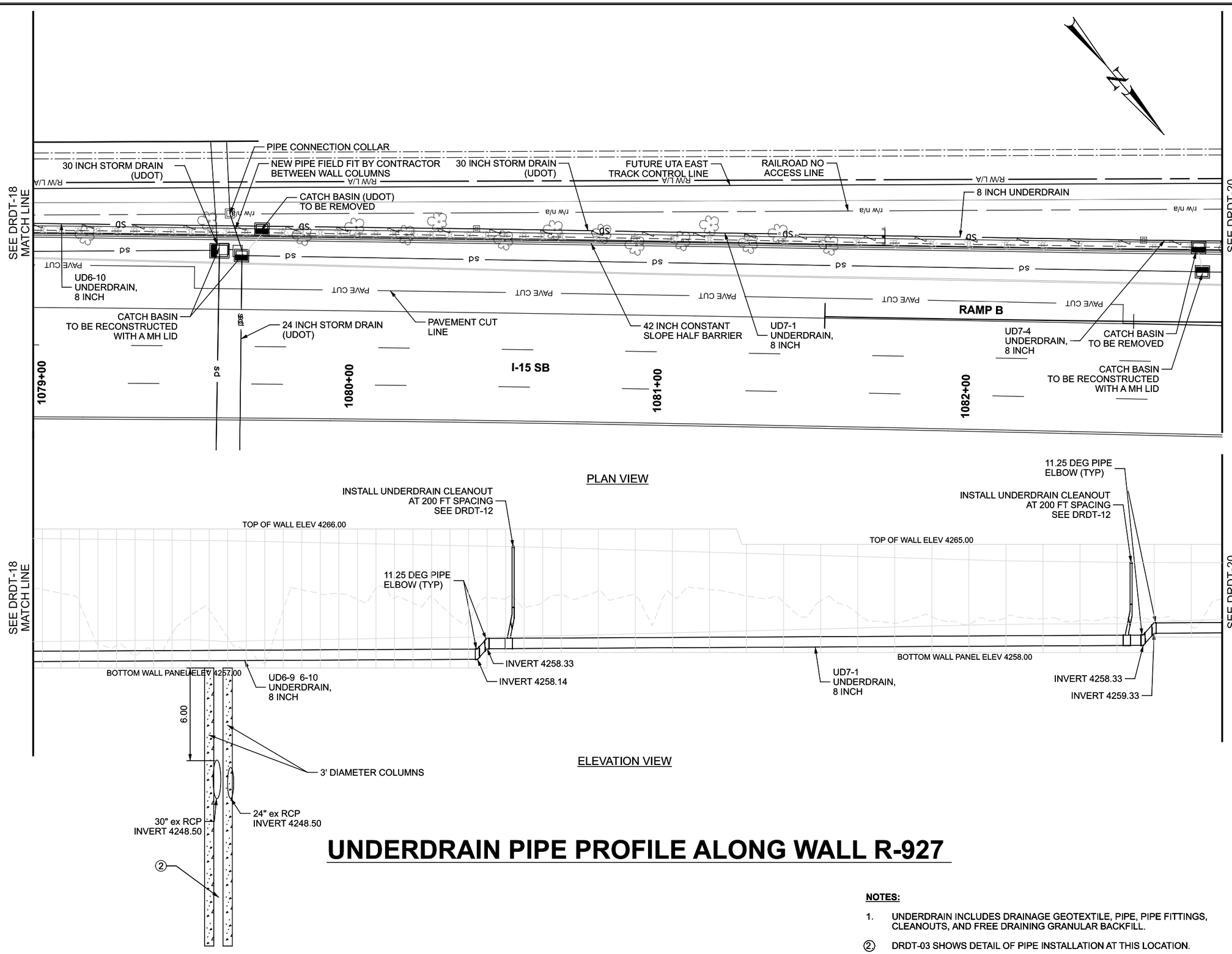
APPROVED
PROFESSIONAL ENGINEER
DATE 01/11/23

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684
DRAINAGE DETAIL

SHEET NO. DRDT-18

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EXHIBIT A



UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

② DRDT-03 SHOWS DETAIL OF PIPE INSTALLATION AT THIS LOCATION.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

DRAWN BY AJB
QC CHECKED BY CMR
DATE 01/11/23

APPROVED

PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG &
PED OVERPASS

PROJECT

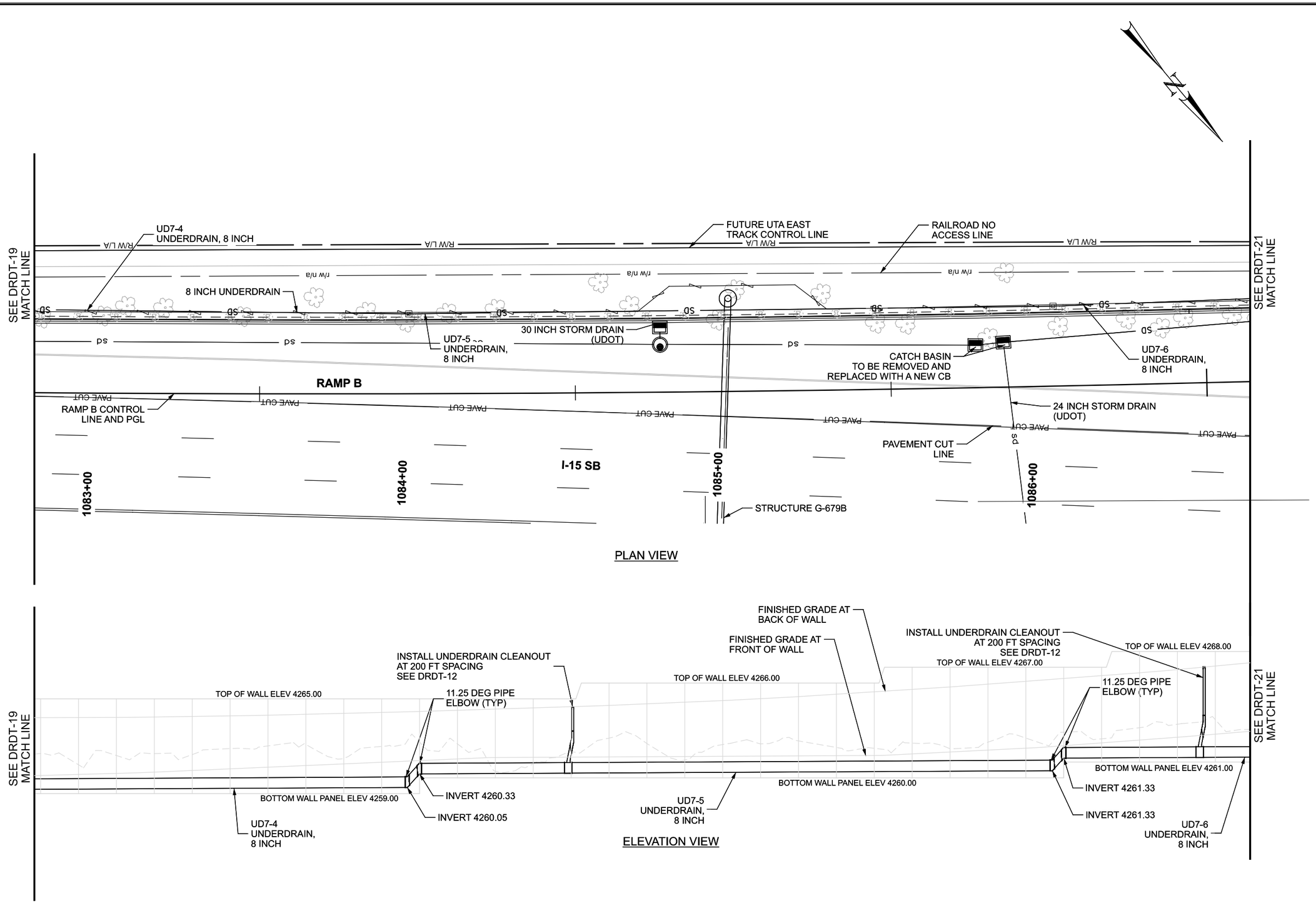
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PIN 15684

DRAINAGE DETAIL

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EXHIBIT A



UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

APPROVED

PROFESSIONAL ENGINEER

DRAWN BY AJB
QC CHECKED BY CMR
DATE 01/11/23

I-15; SHEPARD LN INTCHG & PED OVERPASS

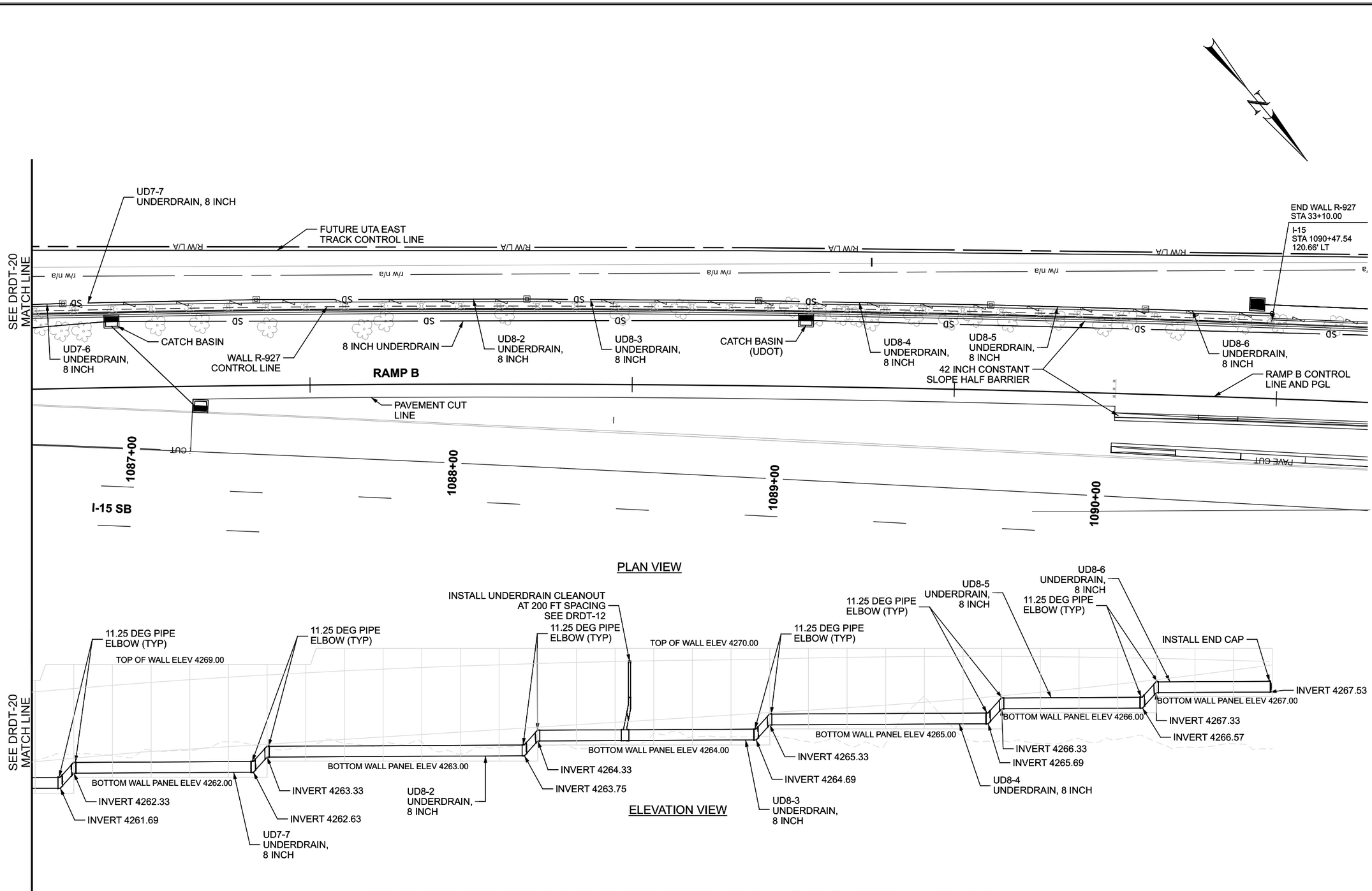
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PIN 15684

DRAINAGE DETAIL

SHEET NO. DRDT-20

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EXHIBIT A



UNDERDRAIN PIPE PROFILE ALONG WALL R-927

NOTES:

1. UNDERDRAIN INCLUDES DRAINAGE GEOTEXTILE, PIPE, PIPE FITTINGS, CLEANOUTS, AND FREE DRAINING GRANULAR BACKFILL.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

APPROVED
PROFESSIONAL ENGINEER

DRAWN BY AJB
QC CHECKED BY CMR
DATE 01/11/23

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN 15684

DRAINAGE DETAIL

SHEET NO. DRDT-21

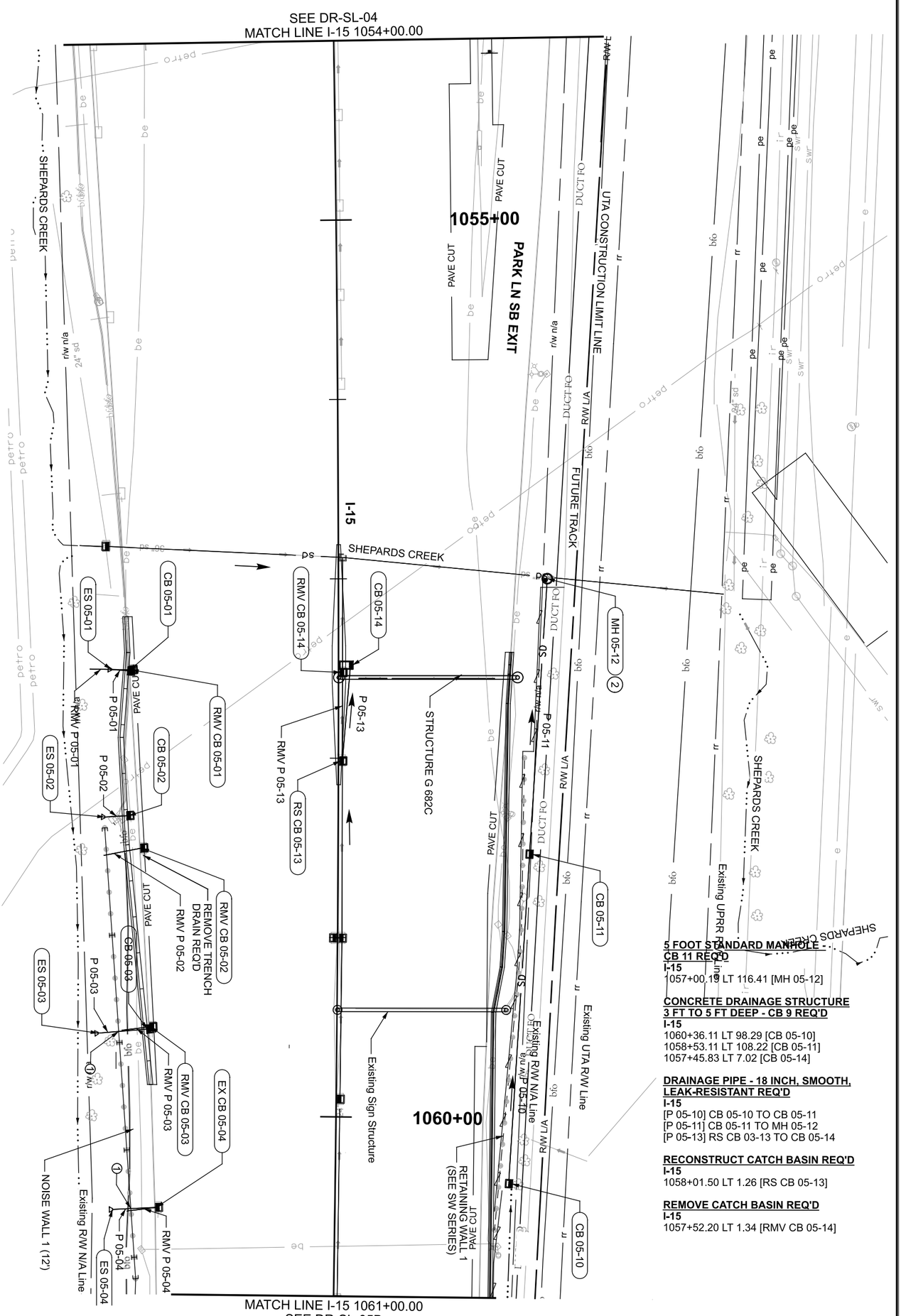
2/16/2023 8:12:18 AM pw://hornocks-pw.bentley.com:hornocks-pw-01/Documents/Projects/2021/UT-30119-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DRDT-15 thru 21_UD Container.dgn

EXHIBIT A

2/16/2023 7:48:39 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DR-SL-05A.dgn

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE



CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1057+51.28 RT 116.91 [CB 05-01]
1058+32.48 RT 117.29 [CB 05-02]
1059+51.99 RT 105.57 [CB 05-03]

CIRCULAR END SECTION 12 INCH REQ'D
I-15
1057+50.55 RT 126.57 [ES 05-01]
1058+33.31 RT 130.05 [ES 05-02]
1059+54.50 RT 133.02 [ES 05-03]
1060+53.25 RT 123.89 [ES 05-04]

DRAINAGE PIPE - 12 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 05-01] CB 05-01 TO ES 05-01
[P 05-02] CB 05-02 TO ES 05-02
[P 05-03] CB 05-03 TO ES 05-03
[P 05-04] 1060+51.78 RT 99.48
[EX CB 05-04] TO ES 05-04

REMOVE CATCH BASIN REQ'D
I-15
1057+50.79 RT 115.49 [RMV CB 05-01]
1058+50.60 RT 109.44 [RMV CB 05-02]
1059+50.69 RT 103.73 [RMV CB 05-03]

REMOVE TRENCH DRAIN REQ'D
I-15
1057+10.00 RT 108.63 TO
1059+90.00 RT 108.38

REMOVE PIPE REQ'D
I-15
[RMV P 05-01] RMV CB 05-01 TO 1057+50.31 RT 138.36
[RMV P 05-02] RMV CB 05-02 TO 1058+54.79 RT 130.39
[RMV P 05-03] RMV CB 05-03 TO 1059+52.73 RT 119.63
[RMV P 05-04] EX CB 05-04 TO 1060+54.03 RT 115.72

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
I-15
1057+00.19 LT 116.41 [MH 05-12]

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1060+36.11 LT 98.29 [CB 05-10]
1058+53.11 LT 108.22 [CB 05-11]
1057+45.83 LT 7.02 [CB 05-14]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 05-10] CB 05-10 TO CB 05-11
[P 05-11] CB 05-11 TO MH 05-12
[P 05-13] RS CB 03-13 TO CB 05-14

RECONSTRUCT CATCH BASIN REQ'D
I-15
1058+01.50 LT 1.26 [RS CB 05-13]

REMOVE CATCH BASIN REQ'D
I-15
1057+52.20 LT 1.34 [RMV CB 05-14]

NOTES:
1. SEE WALL DETAIL SHEETS FOR PIPES UNDER/THROUGH NOISE WALLS. STAKE OUT LOCATIONS OF WALL COLUMNS PRIOR TO PIPE INSTALLATION.
2. CONNECT MH5-12 TO EXISTING PIPE.

SHEET NO. DR-SL-05A	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER 01/11/23 DATE
	DRAINAGE		DRAWN BY AJB; QC CHECKED BY CMR

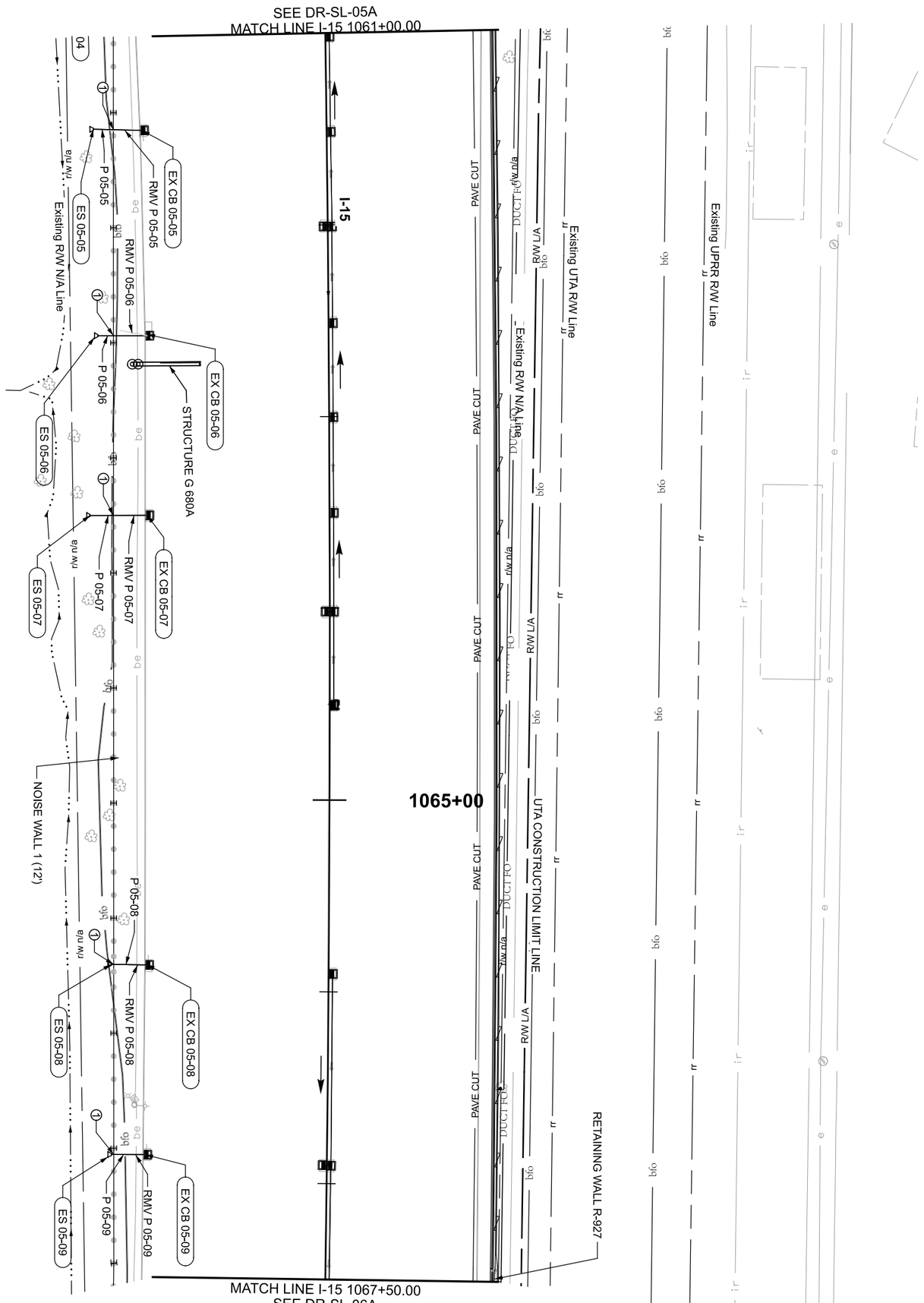
REVISIONS

NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE



CIRCULAR END SECTION 12 INCH REQ'D
I-15
1061+48.68 RT 121.64 [ES 05-05]
1062+56.94 RT 120.32 [ES 05-06]
1063+51.18 RT 124.91 [ES 05-07]
1065+86.48 RT 113.41 [ES 05-08]
1066+86.10 RT 112.44 [ES 05-09]

DRAINAGE PIPE - 12 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 05-05] EX CB 05-05 TO ES 05-05
[P 05-06] EX CB 05-06 TO ES 05-06
[P 05-07] EX CB 05-07 TO ES 05-07
[P 05-08] EX CB 05-08 TO ES 05-08
[P 05-09] EX CB 05-09 TO ES 05-09

REMOVE PIPE REQ'D
I-15
[RMV P 05-05] 1061+49.59 RT 96.34
[EX CB 05-05] TO 1061+49.38 RT 114.27
[RMV P 05-06] 1062+57.14 RT 94.69
[EX CB 05-06] TO 1062+54.27 RT 108.59
[RMV P 05-07] 1063+51.18 RT 95.13
[EX CB 05-07] TO 1063+51.46 RT 108.45
[RMV P 05-08] 1065+86.62 RT 94.82
[EX CB 05-08] TO 1065+86.78 RT 104.09
[RMV P 05-09] 1066+85.97 RT 94.86
[EX CB 05-09] TO 1066+86.55 RT 104.87

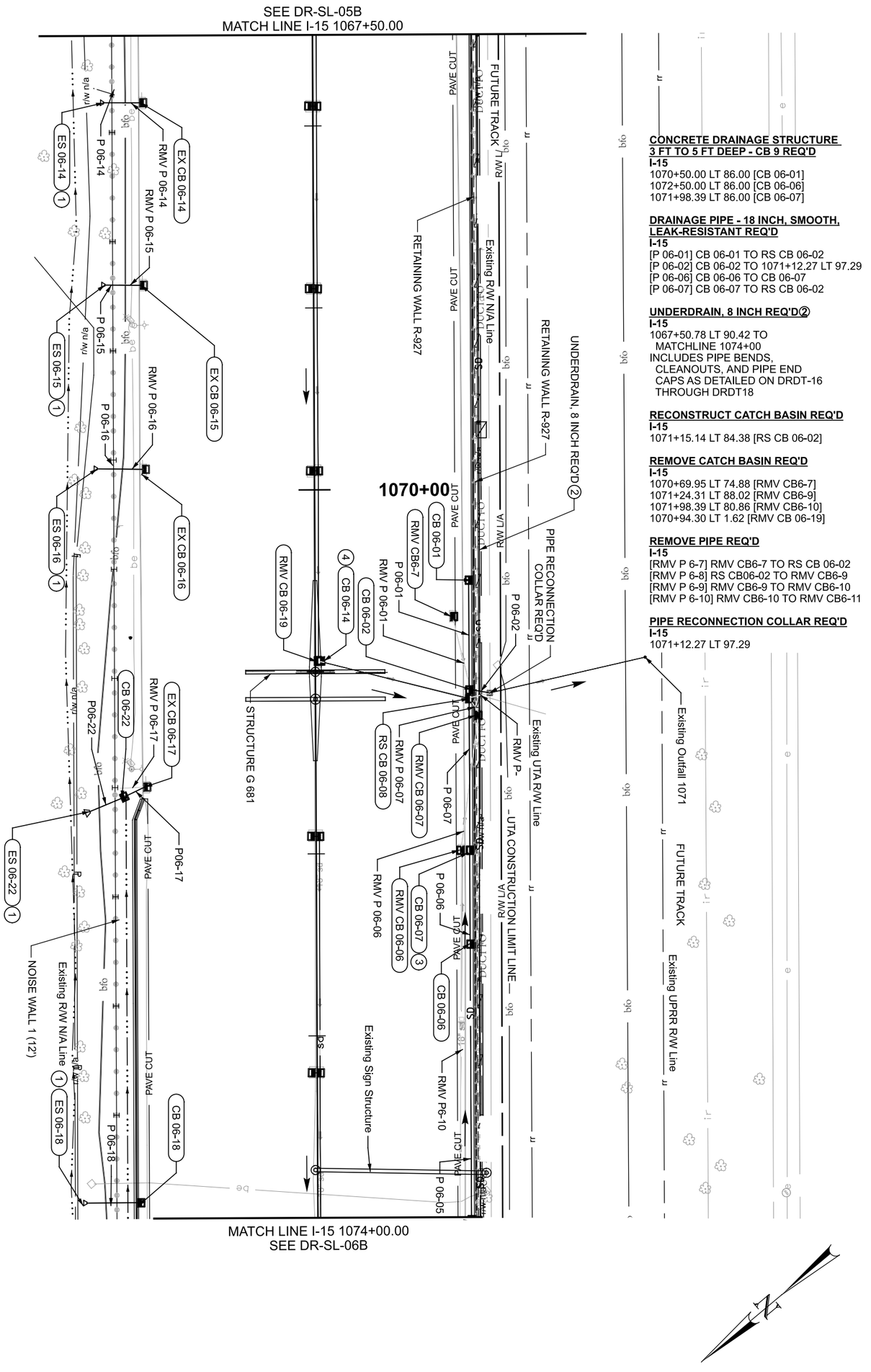
NOTES:
1. SEE WALL DETAIL SHEETS FOR PIPES UNDER/THROUGH NOISE WALLS. STAKE OUT LOCATIONS OF WALL COLUMNS PRIOR TO PIPE INSTALLATION.

SHEET NO. DR-SL-05B	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY AJB	NO. DATE APPROVED BY REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

EXHIBIT A

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE



CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1073+92.79 RT 98.50 [CB 06-18]
1071+63.07 RT 104.39 [CB 06-22]

CIRCULAR END SECTION 12 INCH REQ'D
I-15
1067+72.33 RT 123.72 [ES 06-14]
1068+86.56 RT 130.50 [ES 06-15]
1069+84.01 RT 126.14 [ES 06-16]
1073+93.81 RT 129.89 [ES 06-18]
1071+63.31 RT 129.55 [ES 06-22]

DRAINAGE PIPE - 12 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 06-14] 1067+86.86 RT 94.67
[EX CB 06-14] TO ES 06-14
[P 06-15] 1068+87.13 RT 94.78
[EX CB 06-15] TO ES 06-15
[P 06-16] 1069+90.95 RT 95.00
[EX CB 06-16] TO ES 06-16
[P 06-17] 1071+62.88 RT 94.15
[EX CB 06-17] TO CB 06-22
[P 06-18] CB 06-18 TO ES 06-18
[P 06-22] CB 06-22 TO ES 06-22

REMOVE PIPE REQ'D
I-15
[RMV P 06-14] EX CB 06-14 TO 1067+87.55 RT 104.56
[RMV P 06-15] EX CB 06-15 TO 1068+86.85 RT 106.85
[RMV P 06-16] EX CB 06-16 TO 1069+88.48 RT 104.74
[RMV P 06-17] EX CB 06-17 TO 1071+63.48 RT 107.30

REMOVE CATCH BASIN REQ'D
I-15
1070+93.93 RT 0.18 [RMV CB 06-19]

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1070+50.00 LT 86.00 [CB 06-01]
1072+50.00 LT 86.00 [CB 06-06]
1071+98.39 LT 86.00 [CB 06-07]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 06-01] CB 06-01 TO RS CB 06-02
[P 06-02] CB 06-02 TO 1071+12.27 LT 97.29
[P 06-06] CB 06-06 TO CB 06-07
[P 06-07] CB 06-07 TO RS CB 06-02

UNDERDRAIN, 8 INCH REQ'D (2)
I-15
1067+50.78 LT 90.42 TO MATCHLINE 1074+00
INCLUDES PIPE BENDS, CLEANOUTS, AND PIPE END CAPS AS DETAILED ON DRDT-16 THROUGH DRDT18

RECONSTRUCT CATCH BASIN REQ'D
I-15
1071+15.14 LT 84.38 [RS CB 06-02]

REMOVE CATCH BASIN REQ'D
I-15
1070+69.95 LT 74.88 [RMV CB6-7]
1071+24.31 LT 88.02 [RMV CB6-9]
1071+98.39 LT 80.86 [RMV CB6-10]
1070+94.30 LT 1.62 [RMV CB 06-19]

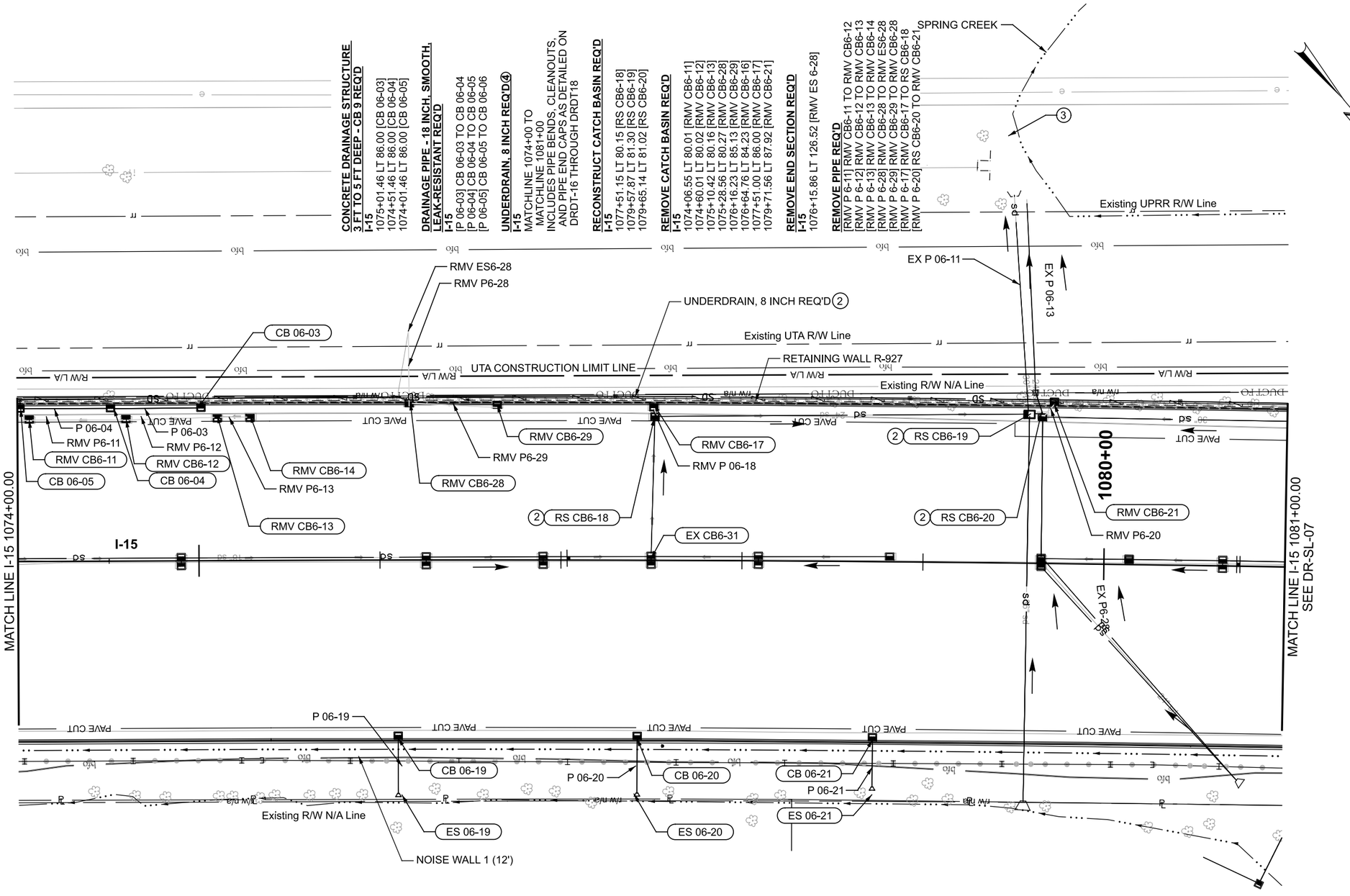
REMOVE PIPE REQ'D
I-15
[RMV P 6-7] RMV CB6-7 TO RS CB 06-02
[RMV P 6-8] RS CB06-02 TO RMV CB6-9
[RMV P 6-9] RMV CB6-9 TO RMV CB6-10
[RMV P 6-10] RMV CB6-10 TO RMV CB6-11

PIPE RECONNECTION COLLAR REQ'D
I-15
1071+12.27 LT 97.29

NOTES:
1. SEE WALL SHEETS FOR PIPE UNDER/THROUGH NOISE WALL. STAKE OUT LOCATIONS OF WALL COLUMNS PRIOR TO INSTALLATION.
2. INSTALL UNDERDRAIN AS SHOWN ON DRDT-11 AND DRDT-16 THROUGH 18. INSTALL UNDERDRAIN CLEANOUTS AT 200 FT MAX SPACING.
3. TIE UNDERDRAIN OUTFALL PIPE TO CB 06-07. SEE DRDT-17
4. REMOVE EXCB AND REPLACE WITH CB 06- TO FIT DRAINAGE AROUND NEW SIGN STRUCTURE.
5. SEE DRDT-03 FOR DETAILS ON PIPE CONNECTIONS HERE.

SHEET NO. DR-SL-06A	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY AJB	NO. DATE APPROVED BY REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

EXHIBIT A



CONCRETE DRAINAGE STRUCTURE
3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1075+01.46 LT 86.00 [CB 06-03]
1074+51.46 LT 86.00 [CB 06-04]
1074+01.46 LT 86.00 [CB 06-05]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
I-15
[P 06-03] CB 06-03 TO CB 06-04
[P 06-04] CB 06-04 TO CB 06-05
[P 06-05] CB 06-05 TO CB 06-06

UNDERDRAIN, 8 INCH REQ'D (4)
I-15
MATCHLINE 1074+00 TO
MATCHLINE 1081+00
INCLUDES PIPE BENDS, CLEANOUTS, AND PIPE END CAPS AS DETAILED ON DRDT-16 THROUGH DRDT18

RECONSTRUCT CATCH BASIN REQ'D
I-15
1077+51.15 LT 80.15 [RS CB6-18]
1079+57.87 LT 81.30 [RS CB6-19]
1079+65.14 LT 81.02 [RS CB6-20]

REMOVE CATCH BASIN REQ'D
I-15
1074+06.55 LT 80.01 [RMV CB6-11]
1074+60.01 LT 80.02 [RMV CB6-12]
1075+10.42 LT 80.16 [RMV CB6-13]
1075+28.56 LT 80.27 [RMV CB6-28]
1076+16.23 LT 85.13 [RMV CB6-29]
1076+64.76 LT 84.23 [RMV CB6-16]
1077+51.00 LT 86.00 [RMV CB6-17]
1079+71.56 LT 87.92 [RMV CB6-21]

REMOVE END SECTION REQ'D
I-15
1076+15.86 LT 126.52 [RMV ES 6-28]

REMOVE PIPE REQ'D
[RMV P 6-11] RMV CB6-11 TO RMV CB6-12
[RMV P 6-12] RMV CB6-12 TO RMV CB6-13
[RMV P 6-13] RMV CB6-13 TO RMV CB6-14
[RMV P 6-28] RMV CB6-28 TO RMV ES6-28
[RMV P 6-29] RMV CB6-29 TO RMV CB6-28
[RMV P 6-17] RMV CB6-17 TO RS CB6-18
[RMV P 6-20] RS CB6-20 TO RMV CB6-21

CONCRETE DRAINAGE STRUCTURE
3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1076+11.92 RT 98.50 [CB 06-19]
1077+42.43 RT 98.50 [CB 06-20]
1078+72.94 RT 98.50 [CB 06-21]

CIRCULAR END SECTION 12 INCH REQ'D
I-15
1076+11.91 RT 129.80 [ES 06-19]
1077+40.77 RT 129.13 [ES 06-20]
1078+72.87 RT 128.80 [ES 06-21]

DRAINAGE PIPE - 12 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 06-19] CB 06-19 TO ES 06-19
[P 06-20] CB 06-20 TO ES 06-20
[P 06-21] CB 06-21 TO ES 06-21

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE

NOTES:

1. SEE WALL SHEETS FOR PIPE UNDER/THROUGH NOISE WALL. STAKE OUT LOCATIONS OF WALL COLUMNS PRIOR TO PIPE INSTALLATION.
2. RECONSTRUCT CATCH BASIN WITH ROUND MANHOLE LID.
3. SEE DRDT-04 FOR DETAILS ON PIPE CONNECTIONS HERE.
4. INSTALL UNDERDRAIN AS SHOWN ON DRDT-11 AND DRDT-16 THROUGH 18. INSTALL UNDERDRAIN CLEANOUTS AT 200 FT MAX SPACING.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
WALL CONSULTANT GROUP

APPROVED

PROFESSIONAL ENGINEER

DRAWN BY	AJB
QC CHECKED BY	CMR
DATE	01/11/23

I-15; SHEPARD LN INTCHG &
PED OVERPASS

PROJECT
PROJECT NUMBER
S-I15-7(340)325
PIN 15684

DRAINAGE

SHEET NO. DR-SL-06B

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EXHIBIT A

2/16/2023 7:50:31 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DR-SL-07.dgn

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE

SEE DR-SL-06
MATCH LINE I-15 1081+00.00

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1081+33.96 RT 98.50 [CB 07-09]
1083+88.26 RT 100.27 [CB 07-13]
1084+82.58 RT 100.66 [CB 07-12]
RAMP A
103+35.90 RT 22.00 [CB 07-10]
102+09.82 RT 22.00 [CB 07-11]

CIRCULAR END SECTION 12 INCH REQ'D
I-15
1081+25.67 RT 123.90 [ES 07-09]

CIRCULAR END SECTION 24 INCH REQ'D
I-15
1083+72.64 RT 124.72 [ES 7-13]
RAMP A
102+18.40 RT 32.81 [ES 7-14]

DRAINAGE PIPE - 12 INCH, REINFORCED CONCRETE, LEAK-RESISTANT REQ'D
[P 07-09] CB 07-09 TO ES 07-09

DRAINAGE PIPE - 24 INCH, REINFORCED CONCRETE, LEAK-RESISTANT REQ'D
[P 07-10] CB 07-10 TO CB 07-11
[P 07-11] CB 07-11 TO CB 07-12
[P 07-12] CB 07-12 TO CB 07-13
[P 07-13] CB 07-13 TO ES 07-13
[P 07-14] ES 07-14 TO CB 07-11

RECONSTRUCT CATCH BASIN REQ'D
I-15
1081+65.66 RT 0.87 [RS CB7-16]

REMOVE CATCH BASIN REQ'D
I-15
1083+85.69 RT 93.85 [RMV CB 07-09]
1082+88.79 RT 93.92 [RMV CB 07-10]
RAMP A
102+49.66 LT 1.74 [RMV CB 07-11]

REMOVE END SECTION REQ'D
I-15
1086+06.94 RT 102.12 [RMV ES 07-14]

REMOVE PIPE REQ'D
I-15
[RMV P 07-09] RMV CB 07-09 TO 1083+85.47 RT 105.81
[RMV P 07-10] RMV CB 07-10 TO 1082+87.80 RT 112.162
[RMV P 07-14] 1086+01.54 RT 3.09 TO RMV ES 07-14
RAMP A
[RMV P 07-11] RMV CB 07-11 TO 102+49.79 RT 6.86

NOTES:
1. PLACE CB07-07 AT LOWPOINT IN UNPAVED GORE AREA.
2. RECONSTRUCT CATCH BASIN WITH A MANHOLE LID - GF 7 SOLID LID.
3. SEE WALL SHEETS FOR PIPE UNDER/THROUGH NOISE WALL.
4. INSTALL UNDER DRAIN AS SHOWN ON DRDT-12 AND DRDT-16 THROUGH 18. INSTALL UNDERDRAIN CLEANOUTS AT 200 FT MAX SPACING.

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP B
205+38.72 LT 22.00 [CB 07-01]
203+27.04 LT 22.00 [CB 07-06]
205+65.83 RT 7.68 [CB 07-07]

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
RAMP B
203+26.94 LT 15.21 [MH 07-04]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 07-07] CB 07-07 TO CB 07-01

DRAINAGE PIPE - 30 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 07-01] CB 07-01 TO RS CB 07-05

UNDERDRAIN, 8 INCH REQ'D④
I-15
MATCHLINE 1081+00 TO MATCHLINE 1088+50
INCLUDES PIPE BENDS, CLEANOUTS, AND PIPE END CAPS AS DETAILED ON DRDT-16 THROUGH DRDT-18

RECONSTRUCT CATCH BASIN REQ'D
I-15
1081+65.42 LT 2.88 [RS CB7-15]
1084+64.68 LT 2.36 [RS CB7-17]
1084+64.79 LT 0.10 [RS CB7-18]
1087+00.48 LT 2.15 [RS CB7-06]
RAMP B
201+22.53 LT 14.02 [RS CB 07-03]
204+27.01 LT 12.85 [RS CB 07-04]
204+35.91 LT 13.10 [RS CB 07-05]

REMOVE CATCH BASIN REQ'D
RAMP B
201+20.80 LT 22.60 [RMV CB 07-02]

REMOVE PIPE REQ'D
[RMV P 07-02] RMV CB 07-02 TO RS CB 07-03

MATCH LINE RAMP A 104+00.00 SEE DR-SL-08
MATCH LINE I-15 1088+50.00 SEE DR-SL-08
MATCH LINE RAMP B 207+00.00 SEE DR-SL-08

SHEET NO. DR-SL-07	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY AJB	NO. DATE APPROVED BY REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

EXHIBIT A

2/16/2023 7:51:02 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DR-SL-08.dgn

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE

SEE DR-SL-07 MATCH LINE RAMP A 104+00.00

SEE DR-SL-07 MATCH LINE I-15 1088+50.00

SEE DR-SL-07 MATCH LINE RAMP B 207+00.00

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1089+98.72 RT 86.50 [CB 08-12]
RAMP A
106+22.02 RT 22.00 [CB 08-14]
109+19.53 RT 22.00 [CB 08-15]

CIRCULAR END SECTION 18 INCH REQ'D
RAMP A
109+19.58 LT 28.63 [ES 08-15]
I-15
1090+27.74 RT 99.08 [ES 08-13]

CONCRETE HEADWALL REQ'D
TRASH RACK REQ'D
RAMP A
108+98.61 RT 70.45 [ES 08-08]

LOOSE RIPRAP REQ'D
RAMP A
109+19.58 LT 28.63 [ES 08-15]

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
RAMP A
108+05.05 LT 33.73 [MH 08-09]
106+22.02 LT 14.00 [MH 08-10]
105+62.21 LT 14.00 [MH 08-11]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 08-12] CB 08-12 TO MH 08-11
[P 08-14] CB 08-14 TO MH 08-10
[P 08-15] CB 08-15 TO ES 08-15

DRAINAGE PIPE - 24 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 08-08] ES 08-08 TO MH 08-09
[P 08-09] MH 08-09 TO MH 08-10
[P 08-10] MH 08-10 TO MH 08-11
[P 08-11] MH 08-11 TO CB 07-10
[P 08-13] ES 08-13 TO MH 08-11

UNDERDRAIN CLEANOUT REQ'D①
RAMP A
108+52.12 RT 55.99 [UDCO 08-16]
107+57.47 RT 46.77 [UDCO 08-17]
106+56.64 RT 44.23 [UDCO 08-18]

UNDERDRAIN, 8 INCH REQ'D①
[UD 08-16] UDCO 08-16 TO UDCO 08-17
[UD 08-17] UDCO 08-17 TO UDCO 08-18
[UD 08-18] UDCO 08-18 TO CB 08-14

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15
1094+69.19 LT 76.76 [CB 08-01]
1091+69.19 LT 77.00 [CB 08-02]
RAMP B
209+73.62 LT 23.26 [CB 08-03]
207+53.66 LT 22.00 [CB 08-04]
208+93.27 LT 24.07 [CB 08-07]
209+73.28 LT 29.39 [CB 08-08]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 08-01] CB 08-01 TO CB 08-02
[P 08-02] CB 08-02 TO CB 08-03
[P 08-05] CB 08-05 TO CB 08-03
[P 08-07] CB 08-07 TO CB 08-05

DRAINAGE PIPE - 30 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 08-03] CB 08-03 TO CB 08-04
[P 08-04] CB 08-04 TO CB 07-01
[P 08-20] ES 08-20 TO ES 08-21

UNDERDRAIN, 8 INCH REQ'D 1
I-15
MATCHLINE 1088+50 TO 1090+47.40 LT 121.92
INCLUDES PIPE BENDS, CLEANOUTS, AND PIPE END CAPS AS DETAILED ON DRDT-16 THROUGH DRDT-18

LOOSE RIPRAP REQ'D
RAMP B
212+09.49 LT 35.12 [ES 08-06]

CIRCULAR END SECTION 18 INCH REQ'D
RAMP B
212+15.78 LT 47.23 [ES 08-21]
213+89.86 LT 52.12 [ES 08-20]

DOWNDRAIN ITEMS (DRDT-11):
CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP B
212+09.58 LT 32.70 [CB 08-06]

12 IN SDR-17 HDPE FUSION WELDED PIPE REQ'D
RAMP B
[P 08-06] CB 08-06 TO ES 08-06

DOWNDRAIN NOZZLE REQ'D
RAMP B
212+09.49 LT 35.12 [ES 08-06]

NOTES:

1. INSTALL UNDER DRAIN AS SHOWN ON DRDT-12. INSTALL UNDERDRAIN CLEANOUTS AT 200 FT MAX SPACING.

REMOVE CATCH BASIN REQ'D
I-15
1090+45.12 RT 90.49
[RMV CB 8-10]

REMOVE END SECTION REQ'D
I-15
1090+44.88 RT 99.06
[RMV ES 8-10]
1094+31.76 RT 119.03
[RMV ES8-1]

REMOVE PIPE REQ'D
[RMV P 8-10] RMV CB 8-10 TO ES 8-10

MATCH LINE RAMP A 111+50.00 SEE DR-SL-09

MATCH LINE I-15 1096+00.00 SEE DR-SL-09

MATCH LINE RAMP B 214+50.00 SEE DR-SL-09

SHEET NO. DR-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY AJB	NO. DATE APPROVED BY REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

EXHIBIT A

2/16/2023 7:51:34 AM pw://horrocks-pw.bentley.com:horrocks-pw-01/Documents/Projects/2021/UT-3019-2103 I-15, Shepard Lane Int-Precon, Engineer/15684/Sheet_Files/Hydraulics/15684_DR-SL-09.dgn

DRAINAGE KEY:
CB - CATCH BASIN
ES - END SECTION
MH - MANHOLE
P - PIPE
UD - UNDERDRAIN
UDCO - UNDERDRAIN CLEANOUT

MODIFIER:
EX - EXISTING
RS - RECONSTRUCT
RMV - REMOVE

SEE DR-SL-08 MATCH LINE RAMP A 111+50.00

SEE DR-SL-08 MATCH LINE I-15 1096+00.00

SEE DR-SL-08 MATCH LINE RAMP B 214+50.00

RETAINING WALL R-917E

CB 09-10

P 09-10

NOISE WALL 1 (12')

CB 09-09

P 09-09

RETAINING WALL R-917D

RAMP A

Existing R/W N/A Line

HWY R/W LINE

HWY N/A LINE

RMV MH9-1

RMV ES9-2

RMV P9-2

MATCH LINE RAMP A 115+50.00 SEE DR-SL-22

LOOSE RIPRAP REQ'D ②

STRUCTURE C-1089

SEE DR-SL-22 FOR NORTH STATION LN DESIGN ELEMENTS

I-15

CB 09-04

P 09-04

RETAINING WALL R-917C

RAMP B

P 09-03

CB 09-01

ES 09-01

P 09-01

DOWNDRAIN SEE DRDT-11

LOOSE RIPRAP REQ'D

Existing UTA N/A Line

UTA CONSTRUCTION LIMIT LINE

RETAINING WALL R-917B

216+00

1098+00

218+00

MATCH LINE RAMP B 218+50.00 SEE DR-SL-22

CB 09-03

530+00

SEE DR-SL-22 MATCH LINE RAMP D 401+00.00

SEE DR-SL-22 MATCH LINE RAMP C 301+00.00

STRUCTURE C-1090

1102+00

302+00

MH 09-12

P 09-11

NOISE WALL 2 (12')

HWY R/W & N/A LINE

RETAINING WALL R-917D

RAMP D

RIPRAP AT BOTTOM OF BRIDGE DOWNSPOUT. SEE DRDT-08, SEE R-917D PLANS FOR LOCATIONS OF DOWNSPOUTS.

P 09-12

ES 10-19

LOOSE RIPRAP REQ'D

Existing Structure C-598

STRUCTURE G 680C

RETAINING WALL R-917C

P 09-02

RAMP C

CB 09-02

RETAINING WALL R-917B

MATCH LINE RAMP D 402+50.00 SEE DR-SL-10

MATCH LINE I-15 1103+50.00 SEE DR-SL-10

MATCH LINE RAMP C 302+50.00 SEE DR-SL-10

NOTES:
① SEE DR-SL-10B FOR P 09-11 AND P 09-12 PIPE PROFILES.

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP A
113+36.34 RT 34.00 [CB 09-09]
112+16.24 RT 22.22 [CB 09-10]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 09-07] MH9-8 TO MH10-11
[P 09-09] CB 09-09 TO CB09-10
[P 09-10] CB09-10 TO CB 08-15
[P 09-12] MH9-12 TO CB26-1

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
RAMP D
401+40.07 RT 87.35 [MH9-12]

REMOVE END SECTION REQ'D
I-15
1099+82.11 RT 98.18 [RMV ES 9-2]

REMOVE MANHOLE REQ'D
I-15
1098+93.55 RT 100.95 [RMV MH 9-1]

LOOSE RIPRAP REQ'D ②
I-15
1100+27.16 RT 94.51
1101+37.15 RT 91.55

REMOVE PIPE END SECTION REQ'D
[RMV P 9-2] RMV ES 9-2 TO RMV MH 9-1
[RMV P 9-1] RMV MH 9-1 TO RMV ES 8-1

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
I-15 MAINLINE
1103+33.68 LT 88.77 [CB 09-02]
1100+71.35 LT 76.00 [CB 09-03]
1097+70.01 LT 77.00 [CB 09-04]
RAMP B
215+94.40 LT 36.00 [CB 09-01]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
[P 09-02] CB 09-02 TO CB 09-03
[P 09-03] CB 09-03 TO CB 09-04
[P 09-04] CB 09-04 TO CB 08-01

DOWNDRAIN ITEMS (DRDT-11):
CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP B
215+94.40 LT 36.00 [CB 09-01]

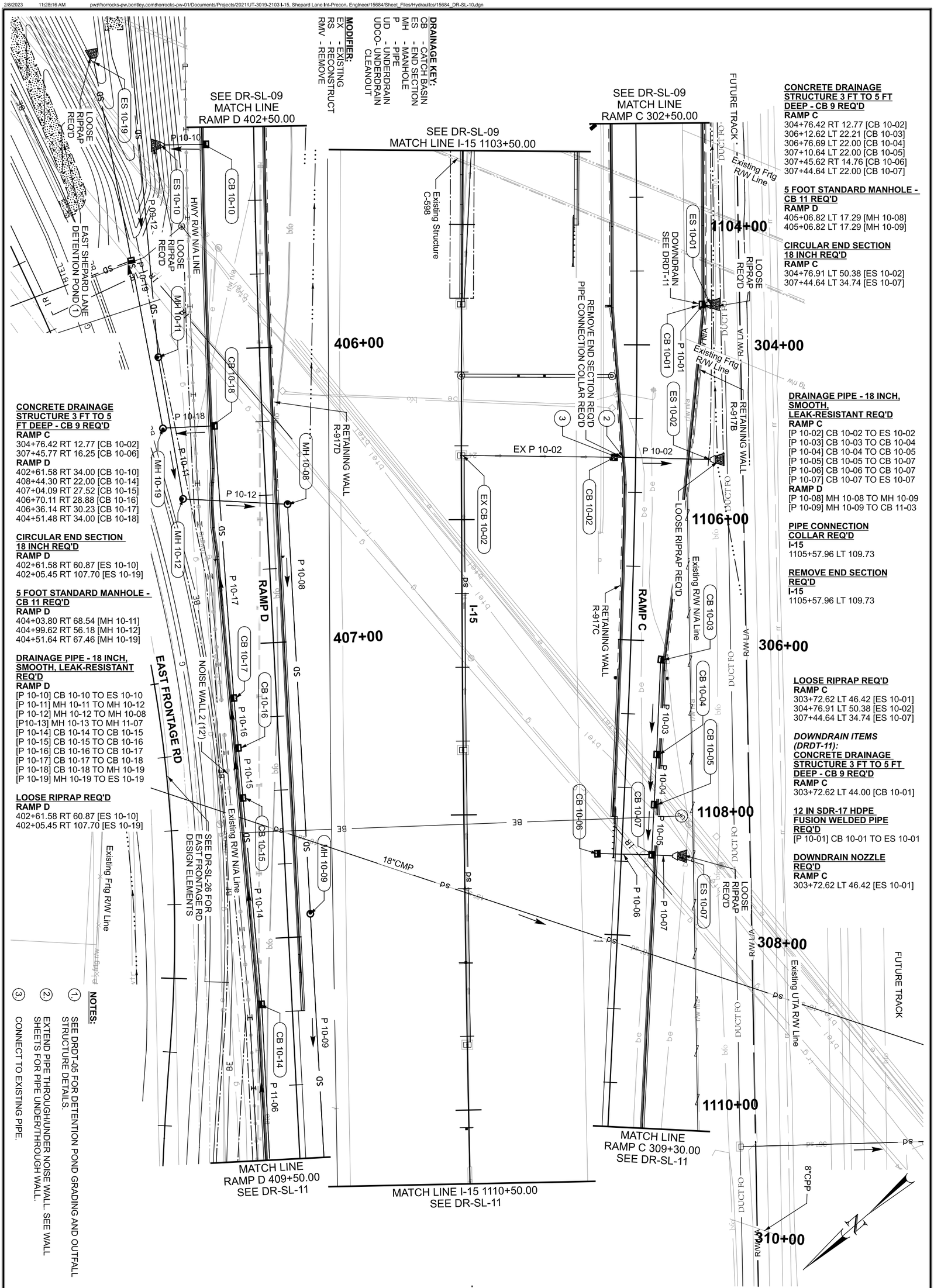
12 IN SDR-17 HDPE FUSION WELDED PIPE REQ'D
[P 09-01] CB 09-01 TO ES 09-01

DOWNDRAIN NOZZLE REQ'D
RAMP B
215+94.37 LT 38.42 [ES 09-01]

LOOSE RIPRAP REQ'D
RAMP B
215+94.37 LT 38.42

SHEET NO. DR-SL-09	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP			REVISIONS	
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED		DRAWN BY AJB	NO.	DATE / APPROVED BY / REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER	01/11/23 DATE	QC CHECKED BY CMR		

EXHIBIT A



CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP C
304+76.42 RT 12.77 [CB 10-02]
307+45.77 RT 16.25 [CB 10-06]
RAMP D
402+61.58 RT 34.00 [CB 10-10]
408+44.30 RT 22.00 [CB 10-14]
407+04.09 RT 27.52 [CB 10-15]
406+70.11 RT 28.88 [CB 10-16]
406+36.14 RT 30.23 [CB 10-17]
404+51.48 RT 34.00 [CB 10-18]

CIRCULAR END SECTION 18 INCH REQ'D
RAMP D
402+61.58 RT 60.87 [ES 10-10]
402+05.45 RT 107.70 [ES 10-19]

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
RAMP D
404+03.80 RT 68.54 [MH 10-11]
404+99.62 RT 56.18 [MH 10-12]
404+51.64 RT 67.46 [MH 10-19]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
RAMP D
[P 10-10] CB 10-10 TO ES 10-10
[P 10-11] MH 10-11 TO MH 10-12
[P 10-12] MH 10-12 TO MH 10-08
[P10-13] MH 10-13 TO MH 11-07
[P 10-14] CB 10-14 TO CB 10-15
[P 10-15] CB 10-15 TO CB 10-16
[P 10-16] CB 10-16 TO CB 10-17
[P 10-17] CB 10-17 TO CB 10-18
[P 10-18] CB 10-18 TO MH 10-19
[P 10-19] MH 10-19 TO ES 10-19

LOOSE RIPRAP REQ'D
RAMP D
402+61.58 RT 60.87 [ES 10-10]
402+05.45 RT 107.70 [ES 10-19]

CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP C
304+76.42 RT 12.77 [CB 10-02]
306+12.62 LT 22.21 [CB 10-03]
306+76.69 LT 22.00 [CB 10-04]
307+10.64 LT 22.00 [CB 10-05]
307+45.62 RT 14.76 [CB 10-06]
307+44.64 LT 22.00 [CB 10-07]

5 FOOT STANDARD MANHOLE - CB 11 REQ'D
RAMP D
405+06.82 LT 17.29 [MH 10-08]
405+06.82 LT 17.29 [MH 10-09]

CIRCULAR END SECTION 18 INCH REQ'D
RAMP C
304+76.91 LT 50.38 [ES 10-02]
307+44.64 LT 34.74 [ES 10-07]

DRAINAGE PIPE - 18 INCH, SMOOTH, LEAK-RESISTANT REQ'D
RAMP C
[P 10-02] CB 10-02 TO ES 10-02
[P 10-03] CB 10-03 TO CB 10-04
[P 10-04] CB 10-04 TO CB 10-05
[P 10-05] CB 10-05 TO CB 10-07
[P 10-06] CB 10-06 TO CB 10-07
[P 10-07] CB 10-07 TO ES 10-07
RAMP D
[P 10-08] MH 10-08 TO MH 10-09
[P 10-09] MH 10-09 TO CB 11-03

PIPE CONNECTION COLLAR REQ'D
I-15
1105+57.96 LT 109.73

REMOVE END SECTION REQ'D
I-15
1105+57.96 LT 109.73

LOOSE RIPRAP REQ'D
RAMP C
303+72.62 LT 46.42 [ES 10-01]
304+76.91 LT 50.38 [ES 10-02]
307+44.64 LT 34.74 [ES 10-07]

DOWNDRAIN ITEMS (DRDT-11):
CONCRETE DRAINAGE STRUCTURE 3 FT TO 5 FT DEEP - CB 9 REQ'D
RAMP C
303+72.62 LT 44.00 [CB 10-01]

12 IN SDR-17 HDPE FUSION WELDED PIPE REQ'D
[P 10-01] CB 10-01 TO ES 10-01

DOWNDRAIN NOZZLE REQ'D
RAMP C
303+72.62 LT 46.42 [ES 10-01]

NOTES:
1. SEE DRDT-05 FOR DETENTION POND GRADING AND OUTFALL STRUCTURE DETAILS.
2. EXTEND PIPE THROUGH/UNDER NOISE WALL. SEE WALL SHEETS FOR PIPE UNDER/THROUGH WALL.
3. CONNECT TO EXISTING PIPE.

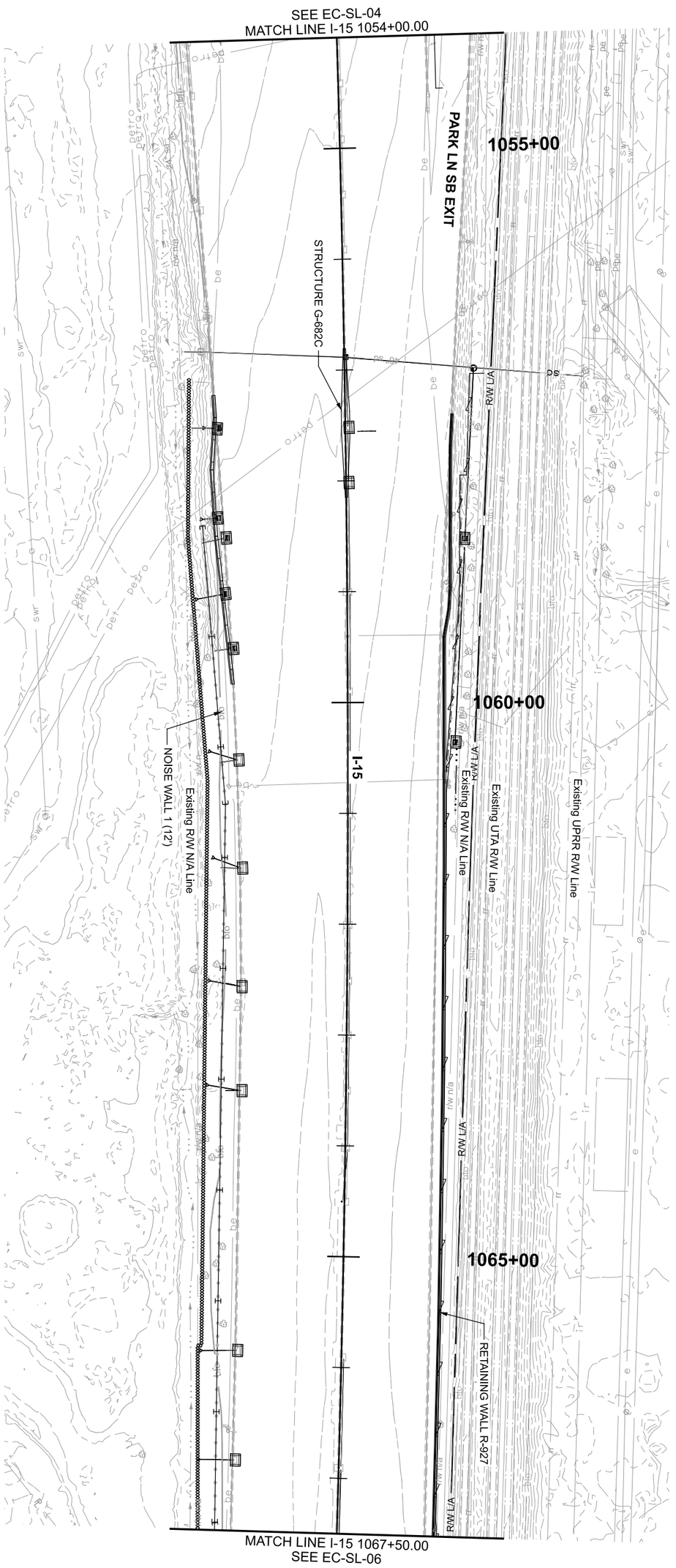
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	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY	AJB	NO. DATE APPROVED BY	REMARKS
	DRAINAGE		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY	CMR		

EXHIBIT A

LEGEND

SILT FENCE REQ'D

GUTTER - INLET BARRIER REQ'D



GUTTER - INLET BARRIER REQ'D
I-15
1057+51.28 RT 116.91 [CB 05-01]
1058+32.48 RT 117.29 [CB 05-02]
1059+01.35 RT 110.93 [CB 05-03]
1060+51.78 RT 99.48 [EX CB 05-04]
1061+49.59 RT 96.34 [EX CB 05-05]
1062+56.91 RT 94.70 [EX CB 05-06]
1063+51.18 RT 95.13 [EX CB 05-07]
1065+86.70 RT 94.82 [EX CB 05-08]
1066+85.97 RT 94.86 [EX CB 05-09]
1057+51.28 RT 116.91 [RMV CB 05-01]
1058+50.60 RT 109.44 [RMV CB 05-02]
1059+50.69 RT 103.73 [RMV CB 05-03]

SILT FENCE REQ'D
I-15
1057+05.30 RT 140.41 TO
1058+49.87 RT 143.22 TO
1060+69.94 RT 126.63 TO
1065+82.94 RT 126.51 TO
1065+83.02 RT 129.8 TO
MATCH LINE RT 125.57

GUTTER - INLET BARRIER REQ'D
I-15
1060+36.17 LT 99.16 [CB 05-10]
1058+53.11 LT 108.22 [CB 05-11]
1057+52.30 LT 1.34 [RS CB 05-15]

SILT FENCE REQ'D
I-15
MATCH LINE LT 129.73 TO
1056+77.04 LT 115.02 TO
1056+80.85 LT 146.96 TO
MATCH LINE LT 117.27

SHEET NO. EC-SL-05	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED PROFESSIONAL ENGINEER — 01/11/23 DATE
	EROSION CONTROL		DRAWN BY BOW QC CHECKED BY CMR

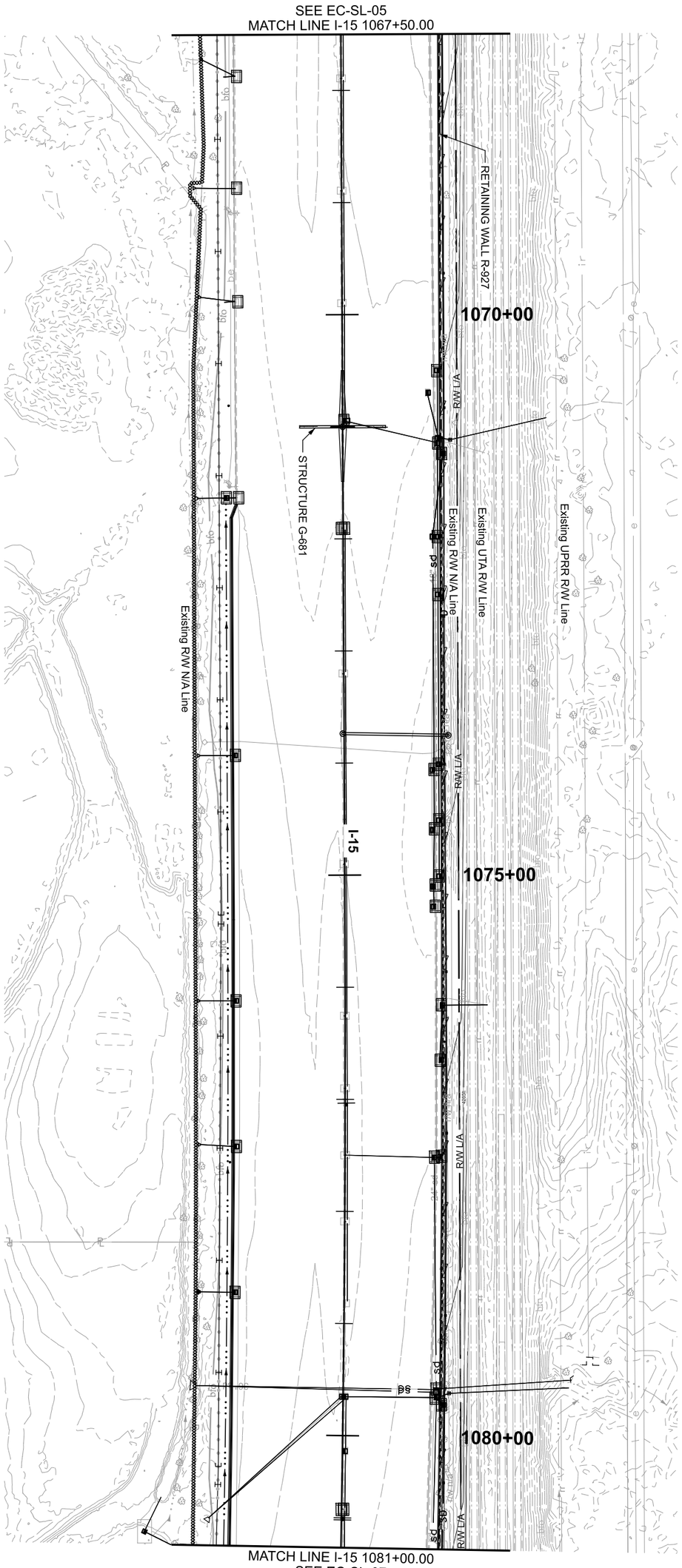
REVISIONS			
NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

LEGEND

SILT FENCE REQ'D

GUTTER - INLET BARRIER REQ'D



GUTTER - INLET BARRIER REQ'D
I-15
1073+92.79 RT 98.50 [CB 06-18]
1076+11.92 RT 98.50 [CB 06-19]
1077+42.43 RT 98.50 [CB 06-20]
1078+72.94 RT 98.50 [CB 06-21]
1071+63.07 RT 104.39 [CB 06-22]
1071+90.22 RT 0.36 [EX CB6-13]
1067+86.86 RT 94.67 [EX CB 06-14]
1068+87.13 RT 94.78 [EX CB 06-15]
1069+88.28 RT 95.00 [EX CB 06-16]
1071+62.88 RT 94.15 [EX CB 06-17]
1070+94.39 RT 0.62 [EX CB6-19]

SILT FENCE REQ'D
I-15
MATCH LINE RT 125.57 TO
1068+81.45 RT 124.37 TO
1068+82.20 RT 134.9 TO
1068+93.16 RT 135.28 TO
1069+04.86 RT 125.58 TO
1070+46.69 RT 132.90 TO
MATCH LINE RT 132.03

GUTTER - INLET BARRIER REQ'D
I-15
1070+50.00 LT 86.00 [CB 06-01]
1075+01.46 LT 86.00 [CB 06-03]
1074+51.46 LT 86.00 [CB 06-04]
1074+01.46 LT 86.00 [CB 06-05]
1072+50.00 LT 86.00 [CB 06-06]
1071+98.39 LT 86.00 [CB 06-07]
1071+15.14 LT 85.87 [RS CB 06-02]
1077+51.15 LT 80.15 [RS CB6-18]
1079+57.87 LT 81.30 [RS CB6-19]
1079+65.14 LT 81.02 [RS CB6-20]
1070+94.30 LT 1.62 [RS CB06-30]
1070+69.95 LT 74.88 [RMV CB6-7]
1071+24.31 LT 88.02 [RMV CB6-9]
1071+98.39 LT 80.86 [RMV CB6-10]
1074+06.55 LT 80.01 [RMV CB6-11]
1074+60.01 LT 80.02 [RMV CB6-12]
1075+10.42 LT 80.16 [RMV CB6-13]
1075+28.56 LT 80.27 [RMV CB6-28]
1076+16.23 LT 85.13 [RMV CB6-29]
1076+64.76 LT 84.23 [RMV CB6-16]
1077+51.00 LT 86.00 [RMV CB6-17]
1079+71.56 LT 87.92 [RMV CB6-21]
1071+90.37 LT 0.73 [EX CB-9]
1080+65.64 LT 0.47 [EX CB 6-32]
1080+65.56 LT 1.35 [EX CB-19]

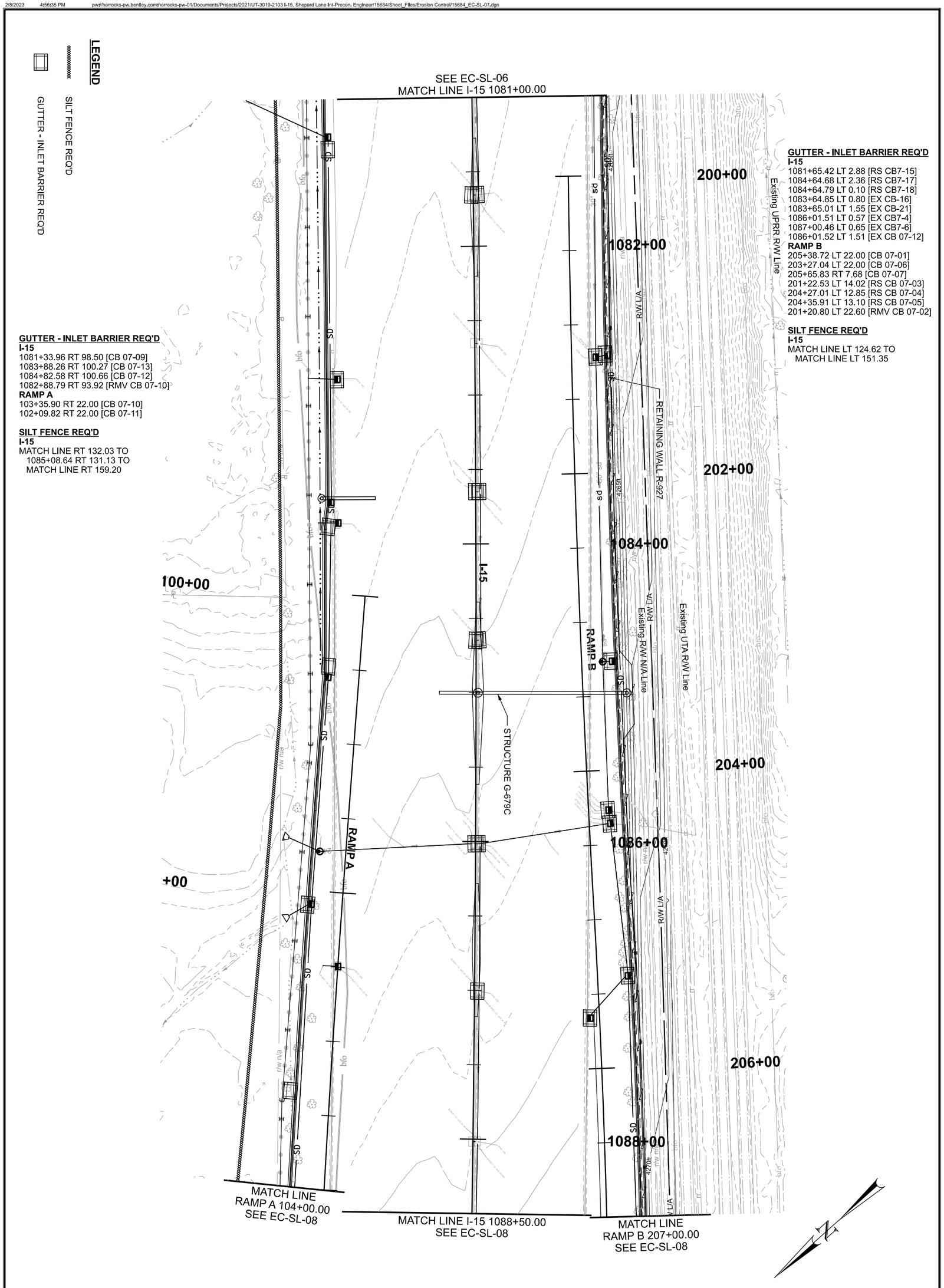
SILT FENCE REQ'D
I-15
MATCH LINE 117.27 TO
MATCH LINE LT 124.62

N

SHEET NO. EC-SL-06	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	**UTAH DEPARTMENT OF TRANSPORTATION** WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY BOW	NO. DATE APPROVED BY REMARKS
	EROSION CONTROL		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

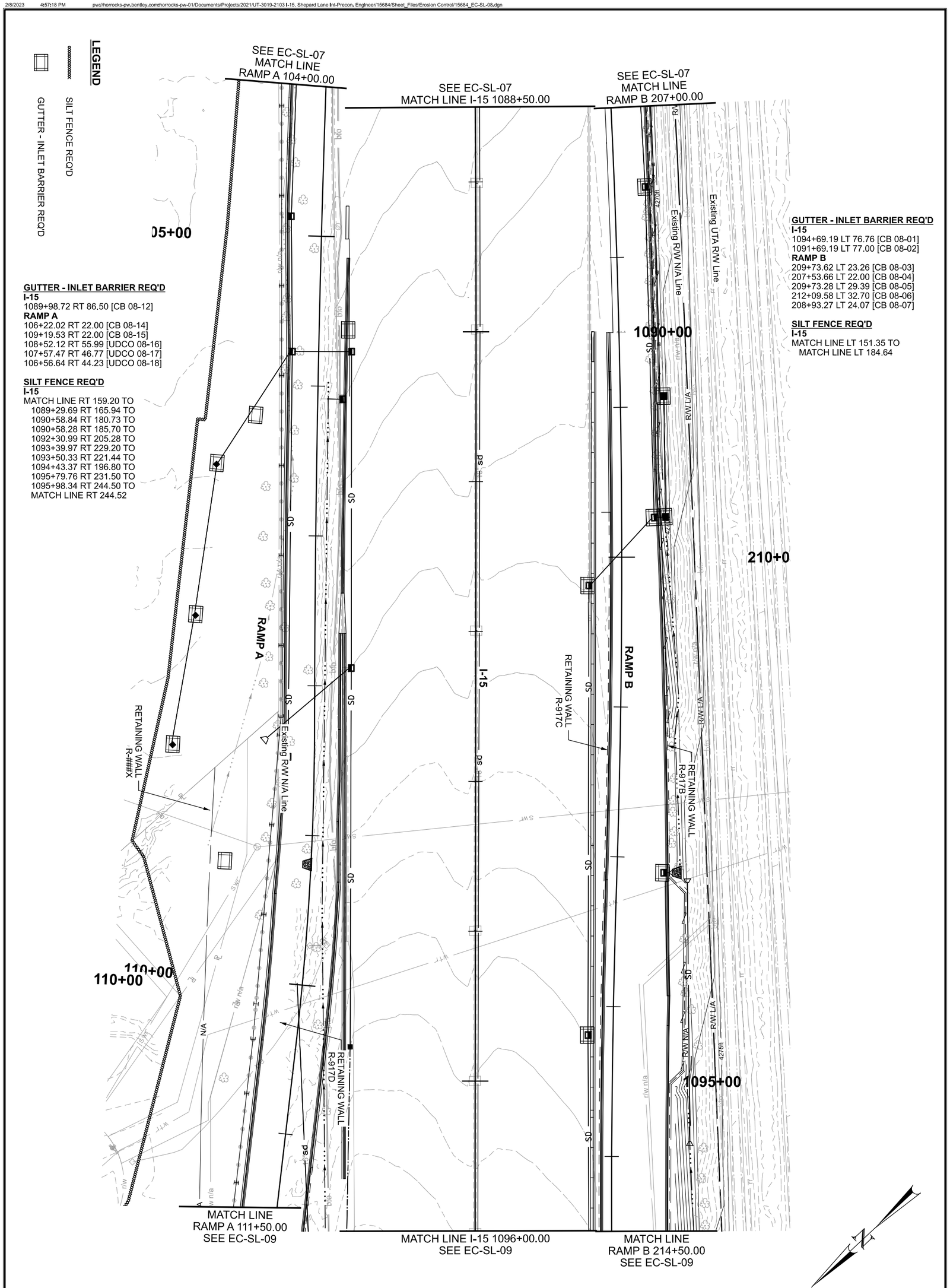
EXHIBIT A

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SHEET NO. EC-SL-07	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS		UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP			REVISIONS		
	PROJECT NUMBER	S-I15-7(340)325	PIN 15684	APPROVED PROFESSIONAL ENGINEER	01/11/23 DATE	DRAWN BY BOW QC CHECKED BY CMR	NO.	DATE	APPROVED BY / REMARKS
	EROSION CONTROL								

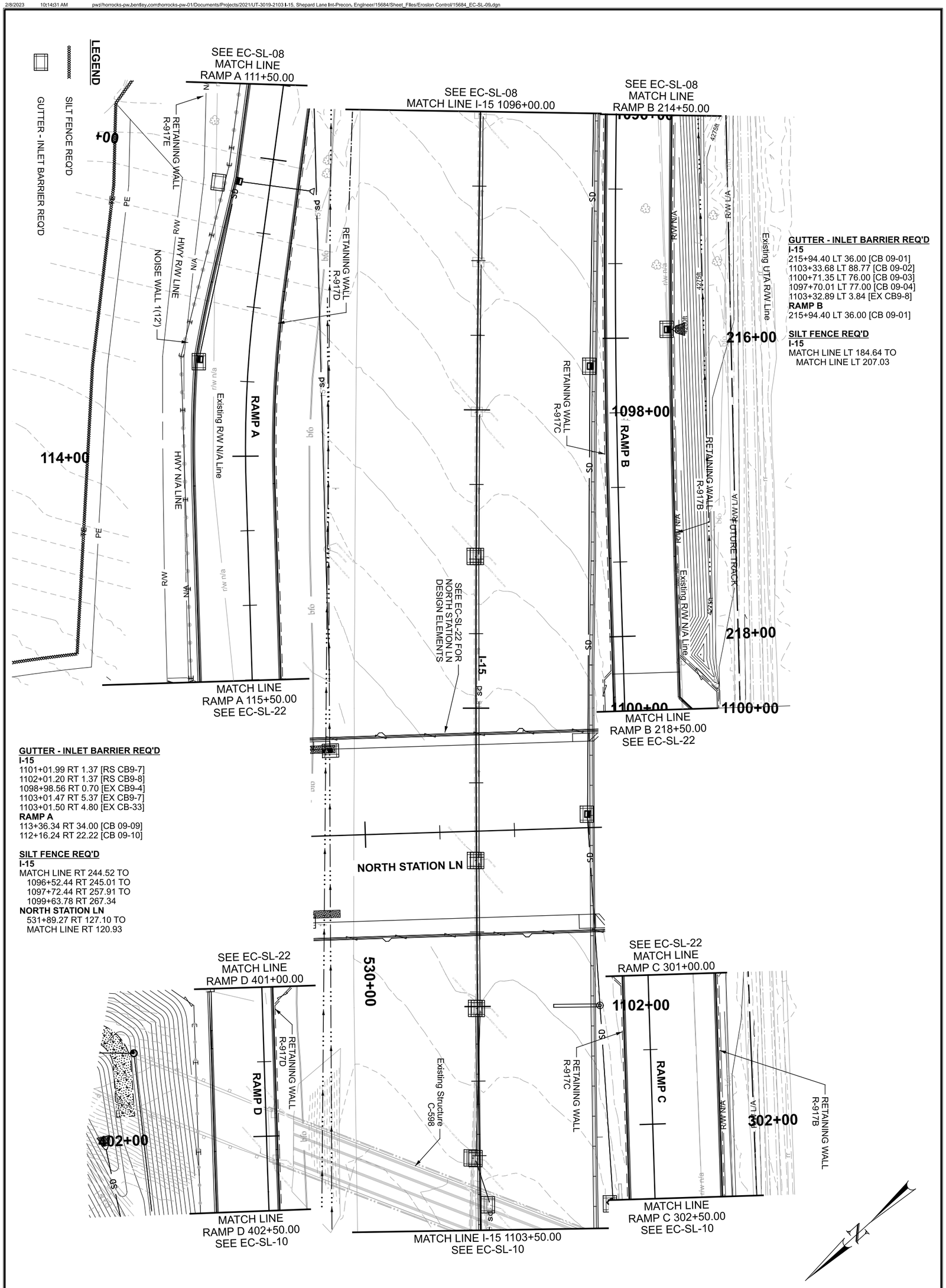
EXHIBIT A



SHEET NO. EC-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS		UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP			REVISIONS
	PROJECT NUMBER	S-I15-7(340)325	PIN 15684	APPROVED PROFESSIONAL ENGINEER	01/11/23 DATE	DRAWN BY BOW QC CHECKED BY CMR	NO. DATE APPROVED BY REMARKS
		EROSION CONTROL					

EXHIBIT A

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GUTTER - INLET BARRIER REQ'D
I-15
1101+01.99 RT 1.37 [RS CB9-7]
1102+01.20 RT 1.37 [RS CB9-8]
1098+98.56 RT 0.70 [EX CB9-4]
1103+01.47 RT 5.37 [EX CB9-7]
1103+01.50 RT 4.80 [EX CB-33]
RAMP A
113+36.34 RT 34.00 [CB 09-09]
112+16.24 RT 22.22 [CB 09-10]

SILT FENCE REQ'D
I-15
MATCH LINE RT 244.52 TO
1096+52.44 RT 245.01 TO
1097+72.44 RT 257.91 TO
1099+63.78 RT 267.34
NORTH STATION LN
531+89.27 RT 127.10 TO
MATCH LINE RT 120.93

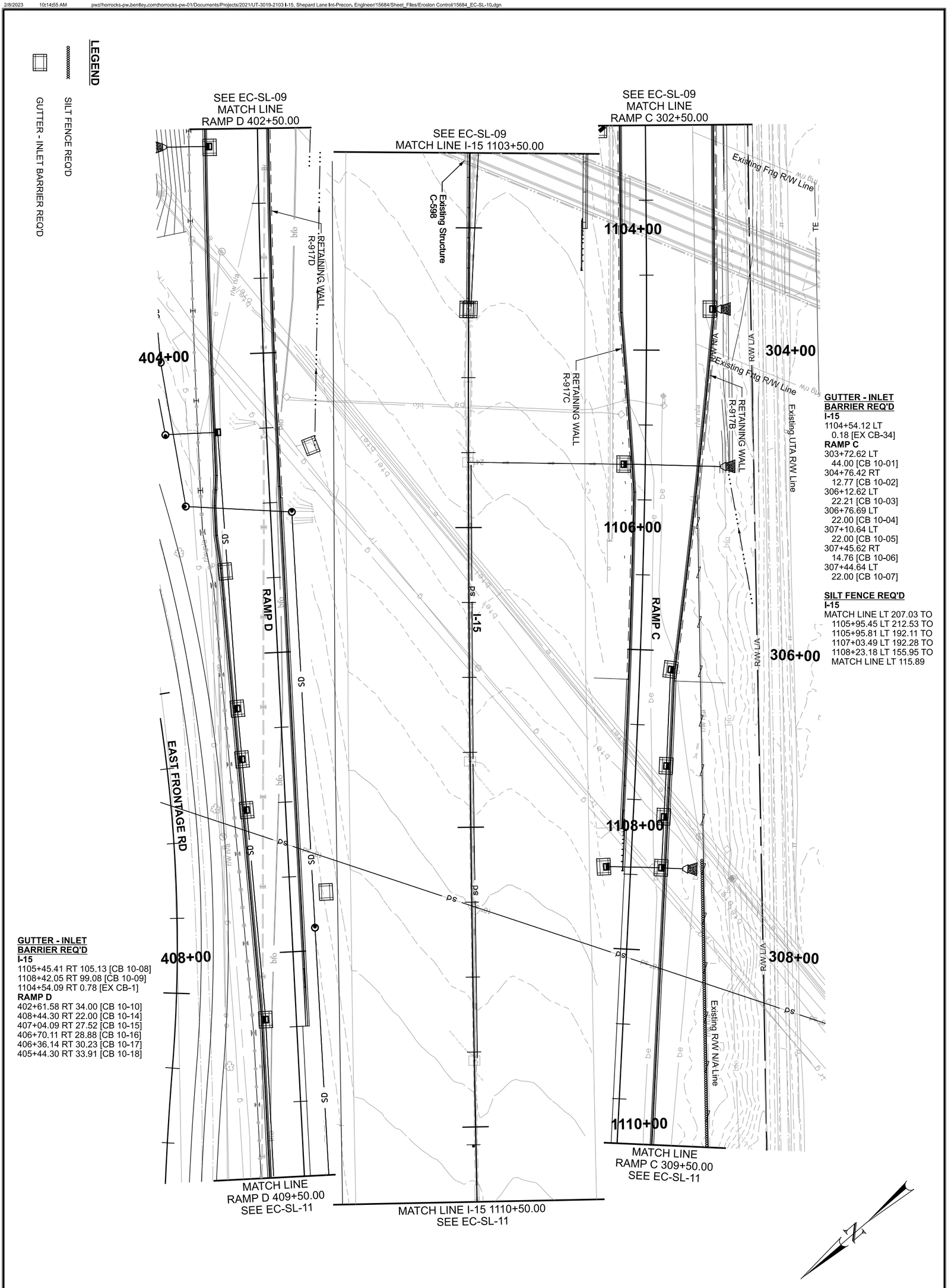
GUTTER - INLET BARRIER REQ'D
I-15
215+94.40 LT 36.00 [CB 09-01]
1103+33.68 LT 88.77 [CB 09-02]
1100+71.35 LT 76.00 [CB 09-03]
1097+70.01 LT 77.00 [CB 09-04]
1103+32.89 LT 3.84 [EX CB9-8]
RAMP B
215+94.40 LT 36.00 [CB 09-01]

SILT FENCE REQ'D
I-15
MATCH LINE LT 184.64 TO
MATCH LINE LT 207.03

SHEET NO. EC-SL-09	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY BOW	NO. DATE APPROVED BY REMARKS
	EROSION CONTROL		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY CMR	

EXHIBIT A

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SHEET NO. EC-SL-10	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION WALL CONSULTANT GROUP			REVISIONS	
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY	BOW	NO. DATE APPROVED BY	REMARKS
	EROSION CONTROL		PROFESSIONAL ENGINEER 01/11/23 DATE	QC CHECKED BY	CMR		

EXHIBIT A

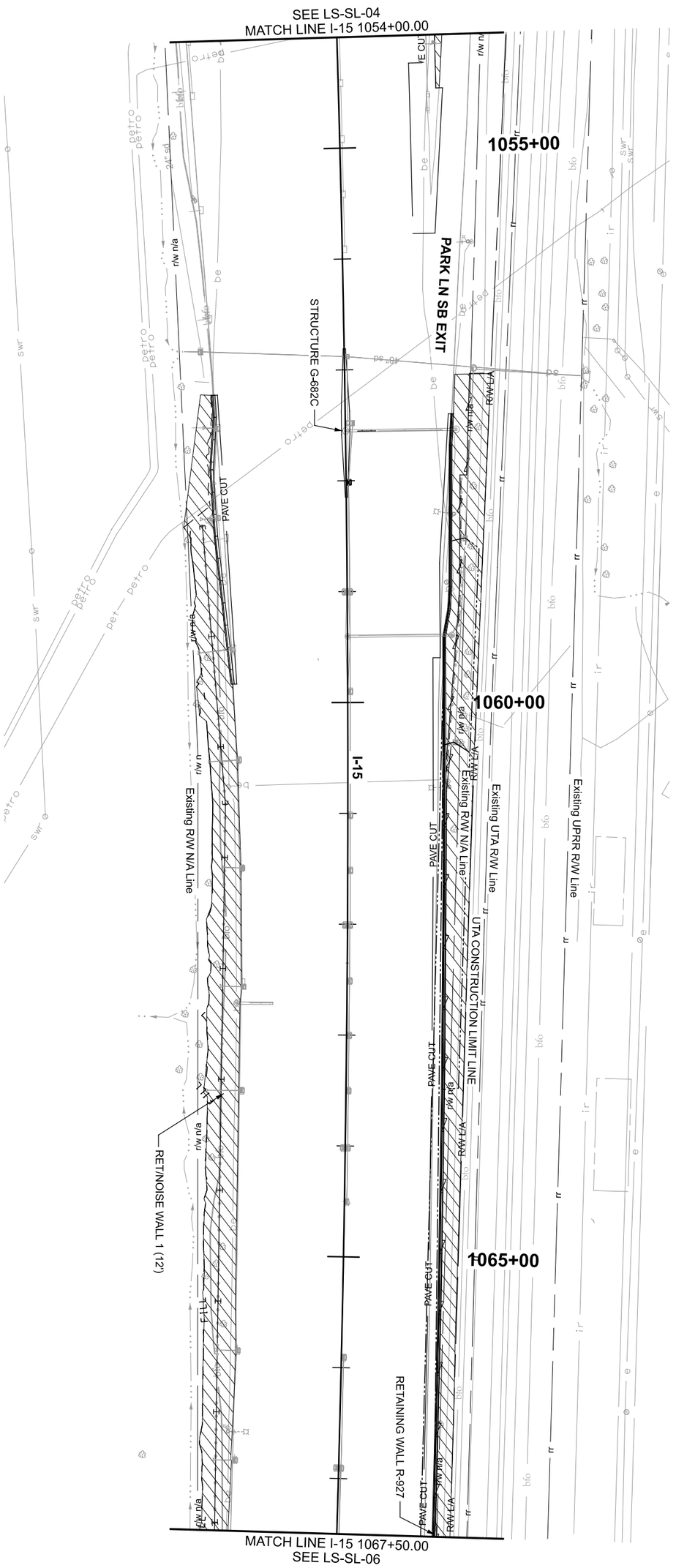
LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1057+21.10 RT TO
1067+50.00 RT

HECP TYPE 1 REQ'D
I-15
1057+21.10 RT TO
1067+50.00 RT

BROADCAST SEED REQ'D
I-15
1057+21.10 RT TO
1067+50.00 RT



STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1054+00.00 LT TO
1054+48.03 LT
1057+05.47 LT TO
1067+50.00 LT

HECP TYPE 1 REQ'D
I-15
1054+00.00 LT TO
1054+48.03 LT
1057+05.47 LT TO
1067+50.00 LT

BROADCAST SEED REQ'D
I-15
1054+00.00 LT TO
1054+48.03 LT
1057+05.47 LT TO
1067+50.00 LT

NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
2. ALL AREAS DISTURBED THAT ARE NOT SHOWN ON THESE PLANS SHALL BE RESTORED USING A 4" DEPTH OF CONTRACTOR FURNISHED OR STOCKPILED TOPSOIL, SEED MIX PER PLANS, AND HECP TYPE 1.
3. EXISTING LANDSCAPE AREAS IN PARK STRIP DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN AS COST TO CURE AREAS, SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO TOPSOIL, TURF GRASS, IRRIGATION, MULCH, OR SHRUBBERY/TREES.

SHEET NO. LS-SL-05	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	LANDSCAPE		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY ZS	

EXHIBIT A

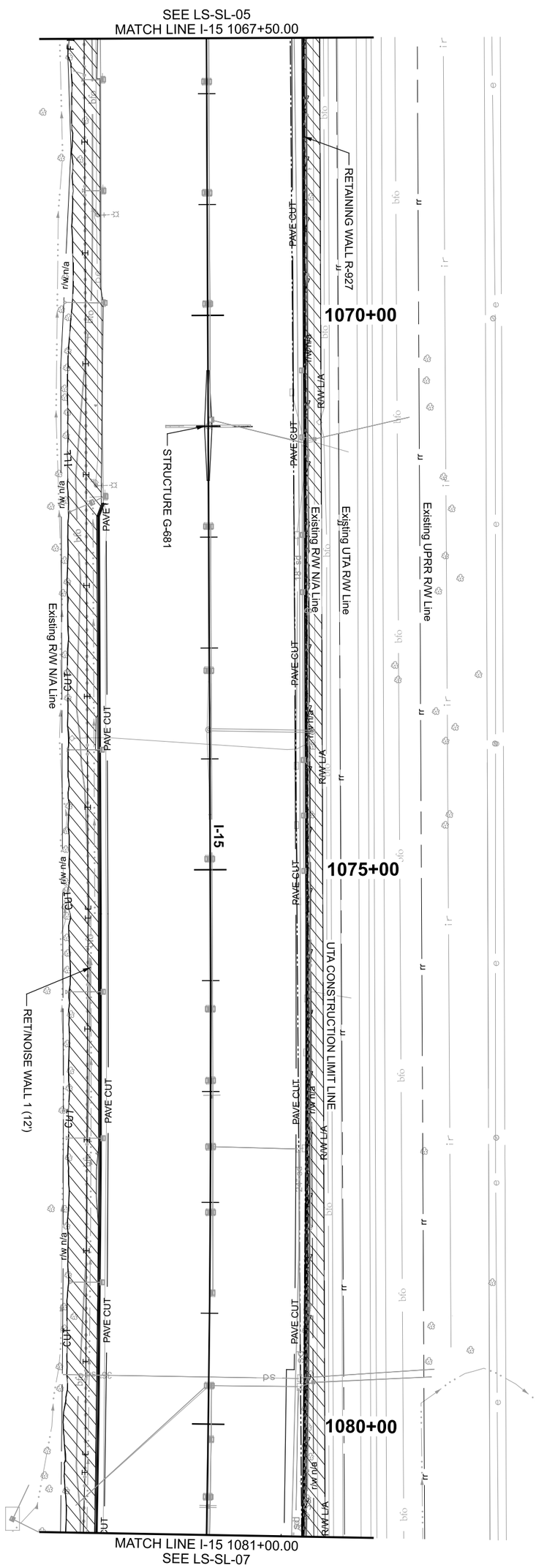
LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1067+50.00 RT TO
1081+00.00 RT

HECP TYPE 1 REQ'D
I-15
1067+50.00 RT TO
1081+00.00 RT

BROADCAST SEED REQ'D
I-15
1067+50.00 RT TO
1081+00.00 RT



STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1067+50.00 LT TO
1081+00.00 LT

HECP TYPE 1 REQ'D
I-15
1067+50.00 LT TO
1081+00.00 LT

BROADCAST SEED REQ'D
I-15
1067+50.00 LT TO
1081+00.00 LT

NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
2. ALL AREAS DISTURBED THAT ARE NOT SHOWN ON THESE PLANS SHALL BE RESTORED USING A 4" DEPTH OF CONTRACTOR FURNISHED OR STOCKPILED TOPSOIL, SEED MIX PER PLANS, AND HECP TYPE 1.
3. EXISTING LANDSCAPE AREAS IN PARK STRIP DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN AS COST TO CURE AREAS, SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO TOPSOIL, TURF GRASS, IRRIGATION, MULCH, OR SHRUBBERY/TREES.

SHEET NO. LS-SL-06	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED PROFESSIONAL ENGINEER — MM/DD/YY DATE
	LANDSCAPE		DRAWN BY KKH QC CHECKED BY ZS

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

EXHIBIT A

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LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1081+00.00 RT TO
1088+34.12 RT

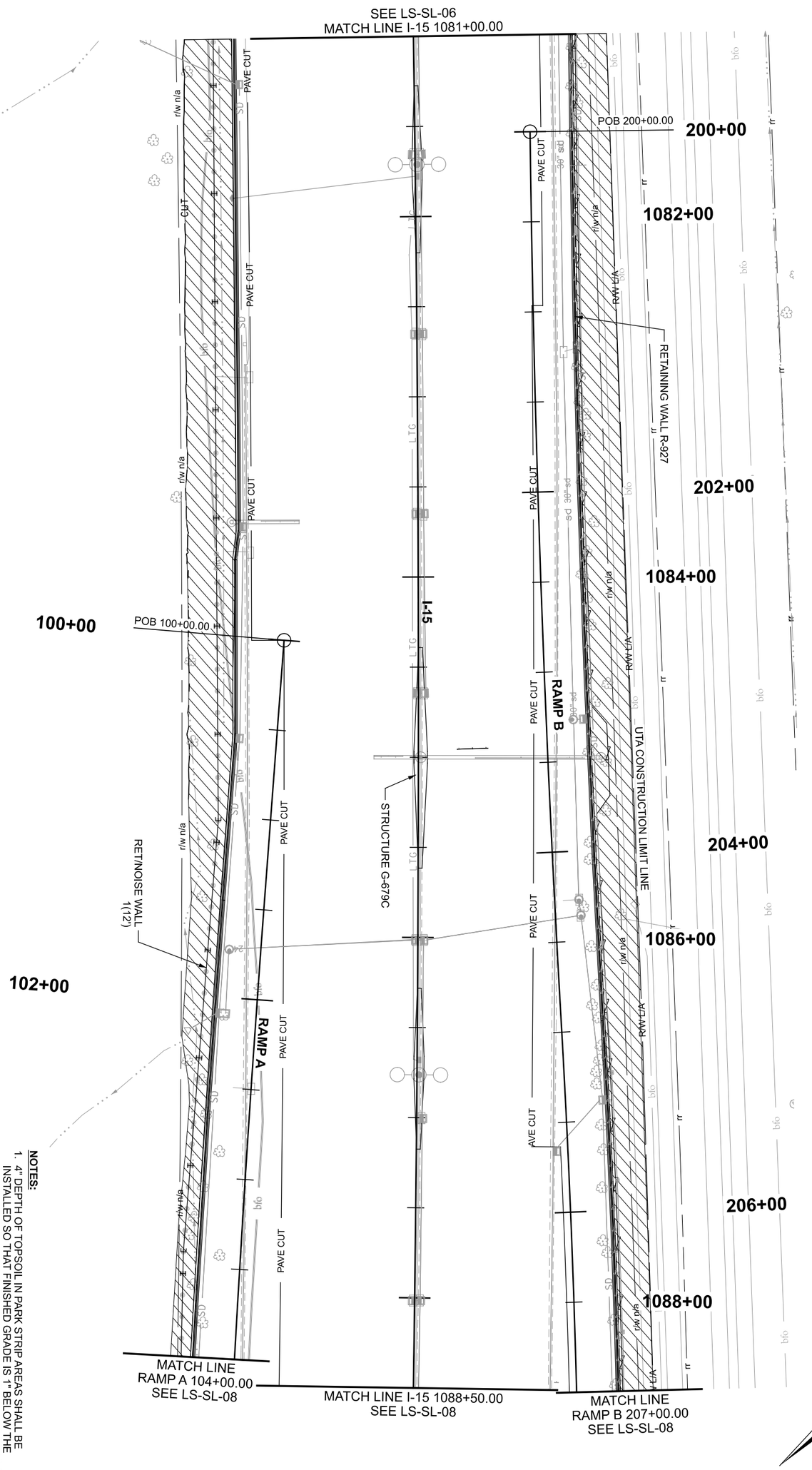
HECP TYPE 1 REQ'D
I-15
1081+00.00 RT TO
1088+34.12 RT

BROADCAST SEED REQ'D
I-15
1081+00.00 RT TO
1088+34.12 RT

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
I-15
1081+00.00 LT TO
1088+50.00 LT

HECP TYPE 1 REQ'D
I-15
1081+00.00 LT TO
1088+50.00 LT

BROADCAST SEED REQ'D
I-15
1081+00.00 LT TO
1088+50.00 LT



NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
2. ALL AREAS DISTURBED, THAT ARE NOT SHOWN ON THESE PLANS SHALL BE RESTORED USING A 4" DEPTH OF CONTRACTOR FURNISHED OR STOCKPILED TOPSOIL, SEED MIX PER PLANS, AND HECP TYPE 1.
3. EXISTING LANDSCAPE AREAS IN PARK STRIP DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN AS COST TO CURE AREAS, SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO TOPSOIL, TURF GRASS, IRRIGATION, MULCH, OR SHRUBBERY/TREES.

SHEET NO. LS-SL-07	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS		REVISIONS
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED ..... PROFESSIONAL ENGINEER	DRAWN BY KKH	NO. DATE APPROVED BY REMARKS
	LANDSCAPE		MM/DD/YY DATE	QC CHECKED BY ZS	

EXHIBIT A

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LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY

NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
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STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
RAMP A
104+00.00 RT TO
111+50.00 RT

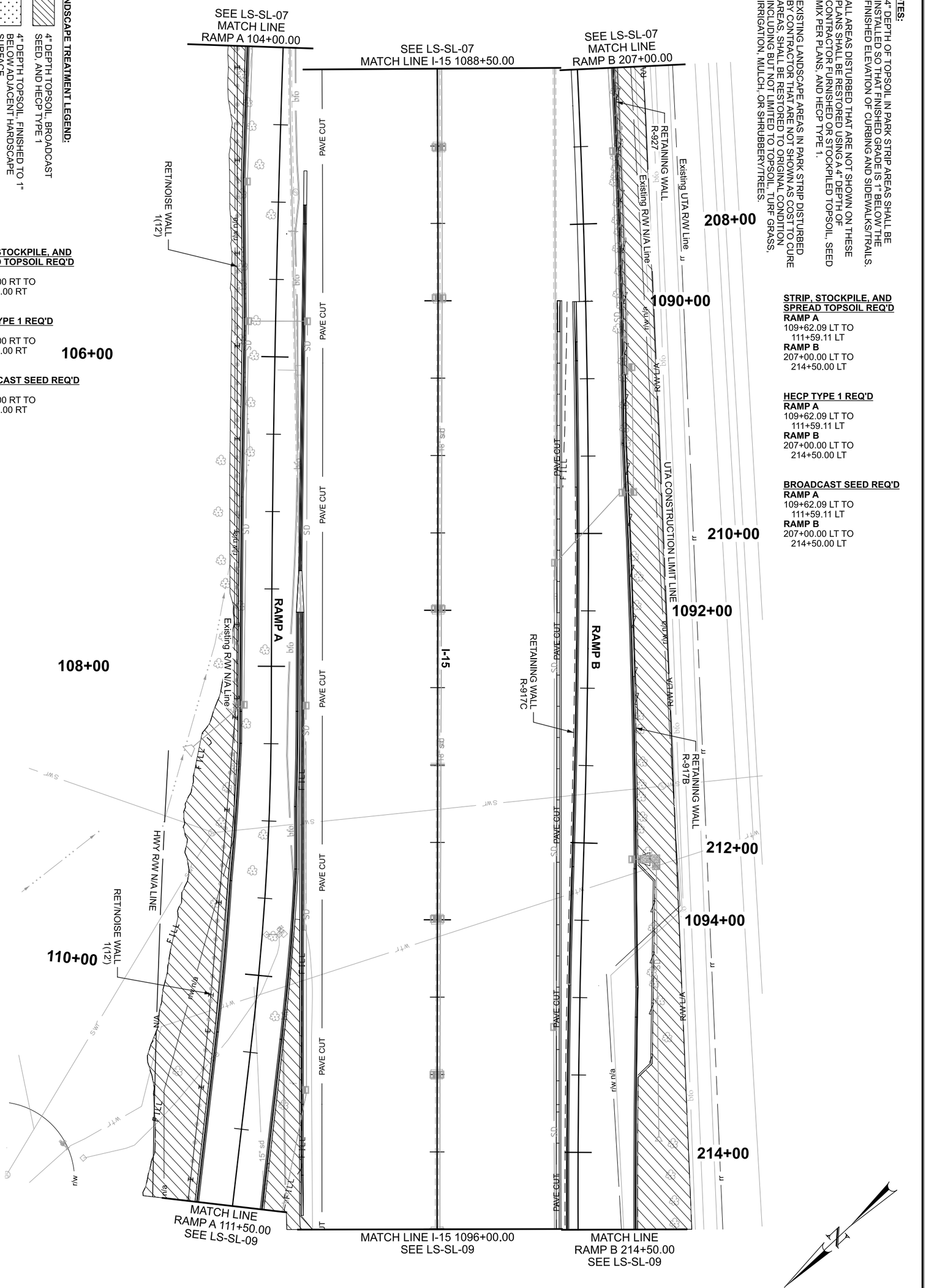
HECP TYPE 1 REQ'D
RAMP A
104+00.00 RT TO
111+50.00 RT

BROADCAST SEED REQ'D
RAMP A
104+00.00 RT TO
111+50.00 RT

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
RAMP A
109+62.09 LT TO
111+59.11 LT
RAMP B
207+00.00 LT TO
214+50.00 LT

HECP TYPE 1 REQ'D
RAMP A
109+62.09 LT TO
111+59.11 LT
RAMP B
207+00.00 LT TO
214+50.00 LT

BROADCAST SEED REQ'D
RAMP A
109+62.09 LT TO
111+59.11 LT
RAMP B
207+00.00 LT TO
214+50.00 LT



SHEET NO. LS-SL-08	PROJECT	I-15; SHEPARD LN INTCHG & PED OVERPASS	UTAH DEPARTMENT OF TRANSPORTATION HORROCKS ENGINEERS			REVISIONS	
	PROJECT NUMBER	S-I15-7(340)325 PIN 15684	APPROVED	DRAWN BY	KKH	NO. DATE APPROVED BY	REMARKS
	LANDSCAPE		PROFESSIONAL ENGINEER MM/DD/YY DATE	QC CHECKED BY	ZS		

EXHIBIT A

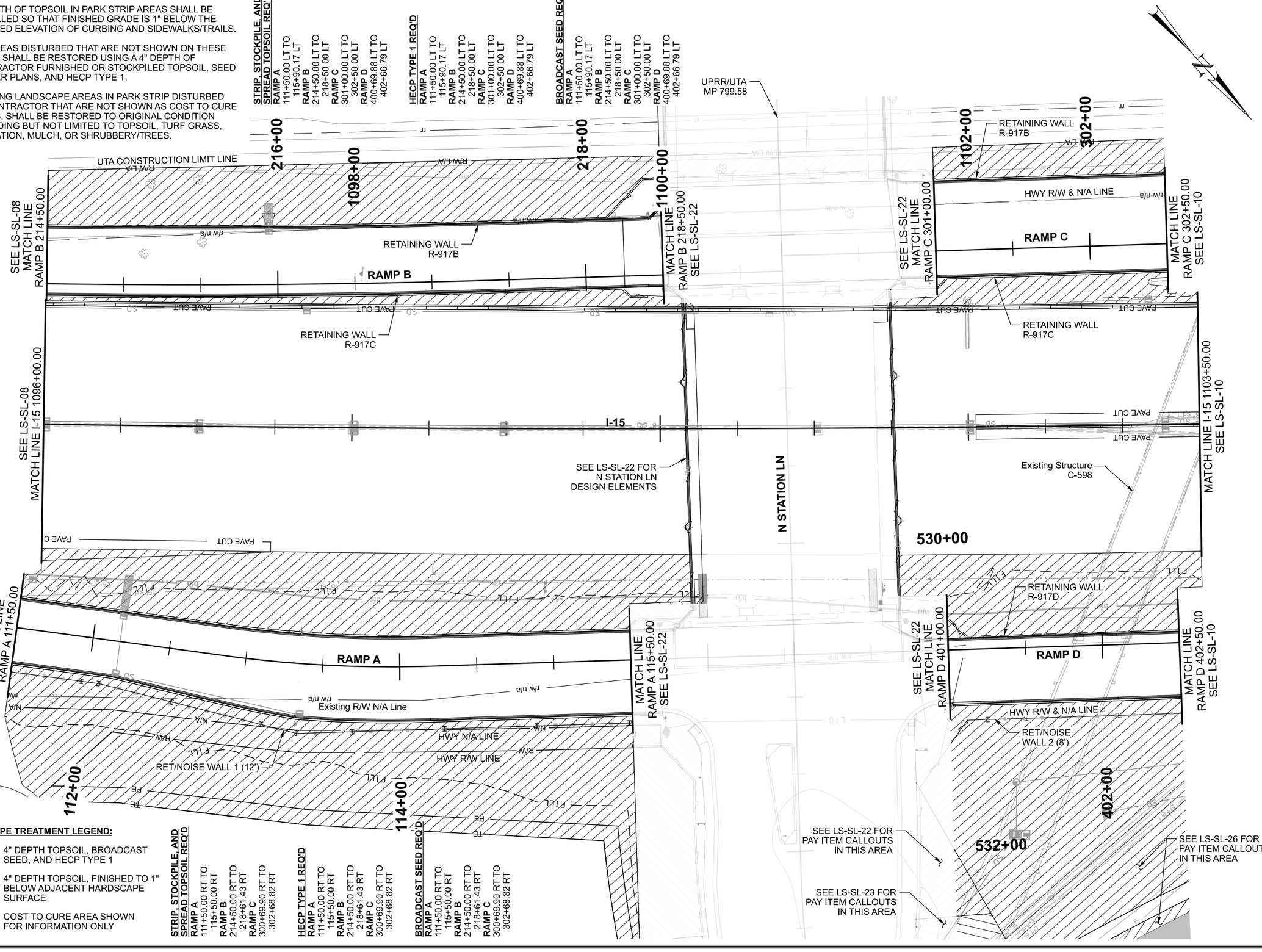
NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
2. ALL AREAS DISTURBED THAT ARE NOT SHOWN ON THESE PLANS SHALL BE RESTORED USING A 4" DEPTH OF CONTRACTOR FURNISHED OR STOCKPILED TOPSOIL, SEED MIX PER PLANS, AND HECP TYPE 1.
3. EXISTING LANDSCAPE AREAS IN PARK STRIP DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN AS COST TO CURE AREAS, SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO TOPSOIL, TURF GRASS, IRRIGATION, MULCH, OR SHRUBBERY/TREES.

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
RAMP A 111+50.00 LT TO 115+90.17 LT
RAMP B 214+50.00 LT TO 218+50.00 LT
RAMP C 301+00.00 LT TO 302+50.00 LT
RAMP D 400+69.88 LT TO 402+66.79 LT

HECP TYPE 1 REQ'D
RAMP A 111+50.00 LT TO 115+90.17 LT
RAMP B 214+50.00 LT TO 218+50.00 LT
RAMP C 301+00.00 LT TO 302+50.00 LT
RAMP D 400+69.88 LT TO 402+66.79 LT

BROADCAST SEED REQ'D
RAMP A 111+50.00 LT TO 115+90.17 LT
RAMP B 214+50.00 LT TO 218+50.00 LT
RAMP C 301+00.00 LT TO 302+50.00 LT
RAMP D 400+69.88 LT TO 402+66.79 LT



LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY

STRIP, STOCKPILE, AND SPREAD TOPSOIL REQ'D
RAMP A 111+50.00 RT TO 115+50.00 RT
RAMP B 214+50.00 RT TO 218+61.43 RT
RAMP C 300+69.90 RT TO 302+68.82 RT

HECP TYPE 1 REQ'D
RAMP A 111+50.00 RT TO 115+50.00 RT
RAMP B 214+50.00 RT TO 218+61.43 RT
RAMP C 300+69.90 RT TO 302+68.82 RT

BROADCAST SEED REQ'D
RAMP A 111+50.00 RT TO 115+50.00 RT
RAMP B 214+50.00 RT TO 218+61.43 RT
RAMP C 300+69.90 RT TO 302+68.82 RT

NO.	DATE	APPROVED BY	REMARKS

REVISIONS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: ZS
MM/DD/YY
DATE

APPROVED

PROFESSIONAL ENGINEER

I-15; SHEPARD LN INTCHG & PED OVERPASS

PROJECT

PROJECT NUMBER: S-I15-7(340)325 PIN 15684

LANDSCAPE

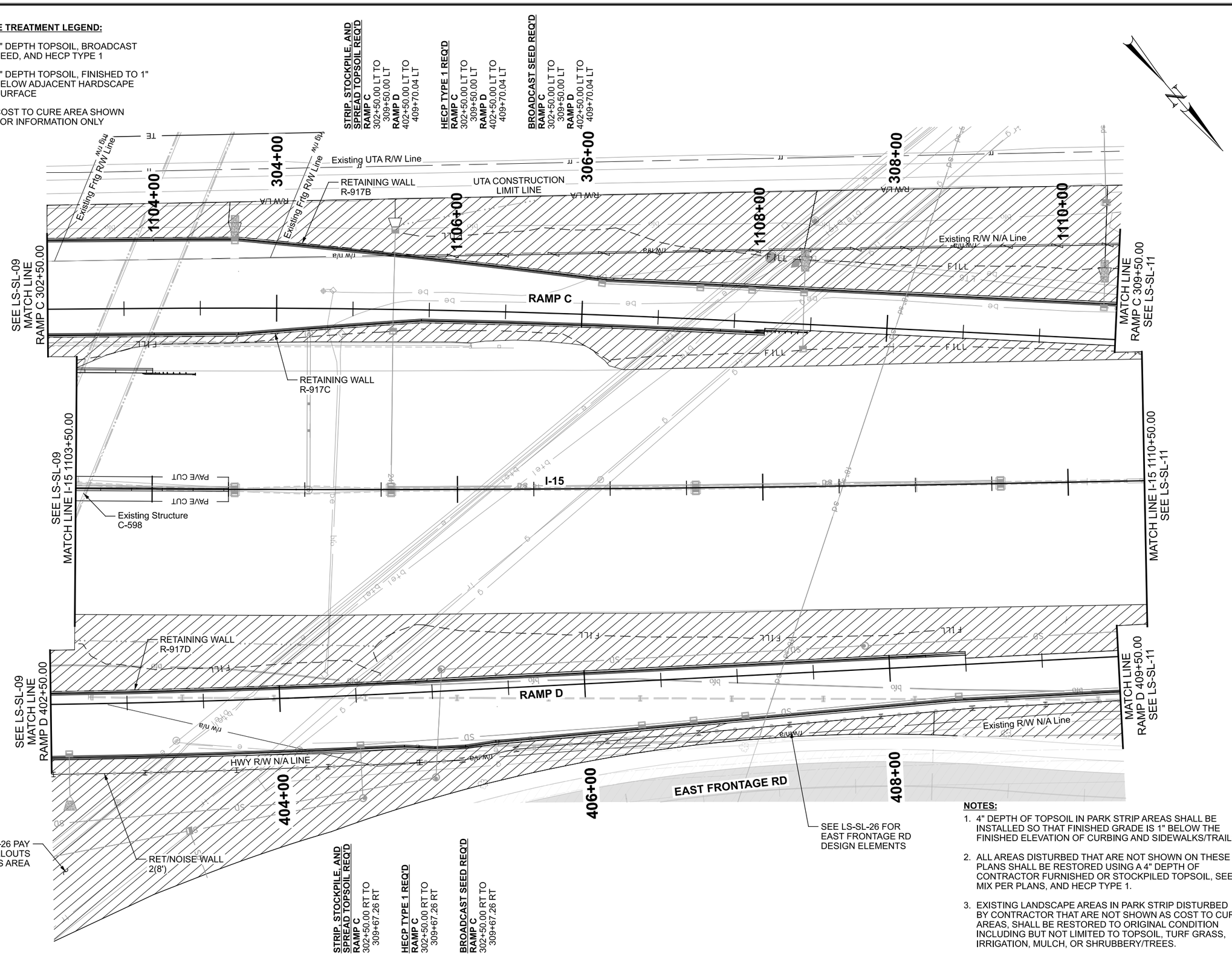
SHEET NO. LS-SL-09

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EXHIBIT A

LANDSCAPE TREATMENT LEGEND:

- 4" DEPTH TOPSOIL, BROADCAST SEED, AND HECP TYPE 1
- 4" DEPTH TOPSOIL, FINISHED TO 1" BELOW ADJACENT HARDSCAPE SURFACE
- COST TO CURE AREA SHOWN FOR INFORMATION ONLY



NOTES:

1. 4" DEPTH OF TOPSOIL IN PARK STRIP AREAS SHALL BE INSTALLED SO THAT FINISHED GRADE IS 1" BELOW THE FINISHED ELEVATION OF CURBING AND SIDEWALKS/TRAILS.
2. ALL AREAS DISTURBED THAT ARE NOT SHOWN ON THESE PLANS SHALL BE RESTORED USING A 4" DEPTH OF CONTRACTOR FURNISHED OR STOCKPILED TOPSOIL, SEED MIX PER PLANS, AND HECP TYPE 1.
3. EXISTING LANDSCAPE AREAS IN PARK STRIP DISTURBED BY CONTRACTOR THAT ARE NOT SHOWN AS COST TO CURE AREAS, SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING BUT NOT LIMITED TO TOPSOIL, TURF GRASS, IRRIGATION, MULCH, OR SHRUBBERY/TREES.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: ZS

APPROVED

PROFESSIONAL ENGINEER — DATE: MM/DD/YY

PROJECT: I-15; SHEPARD LN INTCHG & PED OVERPASS
PROJECT NUMBER: S-I15-7(340)325
PIN: 15684

LANDSCAPE

SHEET NO. LS-SL-10

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EXHIBIT B

PIN: 15684 PROJECT NAME: SHEPARD LANE INTERCHANGE - UTA DOUBLE TRACKING BETTERMENT

Cost Estimate - Concept Level

Prepared By: Horrocks Engineers **Date** 3/8/2023

Approximate Route Reference Mile Post (BEGIN) =		(END) =	
Project Length =		miles	ft
Current FY Year (July-June) =	2022		
Assumed Construction FY Year =	2023		
Construction Items Inflation Factor =	1.09	1 yrs for inflation	
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.0%		
Assumed Yearly Inflation for Right of Way (%/yr) =	3.0%		
Contingency (% of Construction) =	15.0%		
Preliminary Engineering (% of Construction + Incentives) =			
Construction Engineering (% of Construction + Incentives) =	5.0%		

Sheet1

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
	Mobilization	1	Lump	$31,008.23	$31,008.23	
	Survey and Layout	1	Lump	$16,802.67	$16,802.67	
	Clearing and Grubbing	3.0	Acre	$1,250.00	$3,750.00	
	Guideway Excavation	1,102	Cu Yd	$62.00	$68,324.00	
	Guideway Borrow	7,363	Cu Yd	$42.00	$309,246.00	
	Subgrade Stabilization Type IB (Contingency)	250	Cu Yd	$215.00	$53,750.00	
	Subballast Base Course	1,555	Cu Yd	$103.00	$160,165.00	
				Roadway Subtotal	**$643,045.90**	
Drainage						
	Concrete Drainage Structure 5 ft to 7 ft Deep - CB 9	4	Each	$10,250.00	$41,000.00	
	Drainage Pipe - 18 inch, Smooth, Leak-Resistant	58	ft	$410.00	$23,780.00	
	Precast Manhole - CB11	2	Each	$11,875.00	$23,750.00	
	Pipe connection collar	1	Each	$750.00	$750.00	
	Circular End Section 18 inch	1	Each	$1,000.00	$1,000.00	
	Remove Catch Basin	4	Each	$1,000.00	$4,000.00	
	Remove Pipe	62	ft	$100.00	$6,200.00	
				Drainage Subtotal	**$100,480.00**	
Structures						
	Precast Panels (R-927)	14,858	Sq ft	$35.00	$520,030.00	
	Precast Posts (R-927)	6,810	ft	$70.00	$476,700.00	
	Post Holes (R-927)	4,823	ft	$200.00	$964,600.00	
				Structures Subtotal	**$1,961,330.00**	
Utilities						
	Fiber Optic Duct Bank, 1-D, Installed in Trench	5,950	ft	$35.00	$208,250.00	Cable by UTA
	Fiber Optic Duct Bank, 1-D, Installed by Bore	500	ft	$55.00	$27,500.00	Cable by UTA
	Type II Pull Box	4	Each	$1,875.00	$7,500.00	Cable by UTA
				Utilities Subtotal	**$243,250.00**	
				Subtotal	$2,948,105.90	
				Contingency (10%)	$294,810.59	
				Construction Subtotal	**$3,242,916.49**	
P.E. Construction Support				**P.E. Construction Support Subtotal**	**$39,133.28**	
C.E. Cost				**C.E. Subtotal**	**$147,405.30**	5%
Right of Way				**Right of Way Subtotal**	**$0**	
	Total Take (w/Residential Relocation)		*Each*	*$0.00*		
	Partial Take		*sq ft*	*$15.00*		
	Demolition of Property		*Each*	*$10,000.00*		
Utility Relocations		**0.00%**		**Utilities Subtotal**	**$0**	
Contractor Incentives		**0.00%**		**Incentives Subtotal**	**$0**	
Aesthetics		**0.00%**		**Aesthetics Subtotal**	**$0**	
Change Order Contingency		**6.00%**		**CO Contingency Subtotal**	**$176,886.35**	
Miscellaneous				**Miscellaneous Subtotal**	**$0**	
				BETTERMENT AMOUNT	**$3,606,341.42**	