TINTIC INDUSTRIAL LEAD REALIGNMENT
MILEPOST 746.29, SHARP SUBDIVISION
FEBRUARY 23, 2017

Jim Hall
801 428-9224

Tuesday
3/21/17
8:30 am.
meeting

DRAWING INDEX

SCOPE OF WORK:

UPRR:
INSTALL 393 TF
SHIFT 273 TF
REMOVE 180 TF
INSTALL 1 - No. 15 LH POTO
INSTALL 1 - TYPE 2 RH POWER DSPD

INDUSTRY:
FURNISH 357 TF
FURNISH 1 - No. 15 LH POTO
FURNISH 1 - TYPE 2 RH POWER DSPD
FURNISH & INSTALL 7,022 TF
SHIFT 139 TF
REMOVE 927 TF
FURNISH & INSTALL 1 - No. 9 RH HTTO
FURNISH & INSTALL 1 - No. 11 LH HTTO
FUNISH & INSTALL 1 - TYPE 2 SLIDING
DERAIL w/ WHEEL CROWDER
REMOVE 1 - No. 11 LH HTTO

VARIANCES:

1. TRACK A IS IN A CURVE THROUGH THE PROP. BRIDGE.
2. 23' T.C. FOR TRACK A FROM MAINLINE PER UTA AGREEMENT.

- MOU UPRR MAG UTA UDOT Spanish Fork Springville
-
- Who owns power lines
- What is trail/open space west of Sharp Line
- Trail $ in the next MAG funding round

- UPRR Conceptuall is approved

Shawn Marstall (801) 668-2155

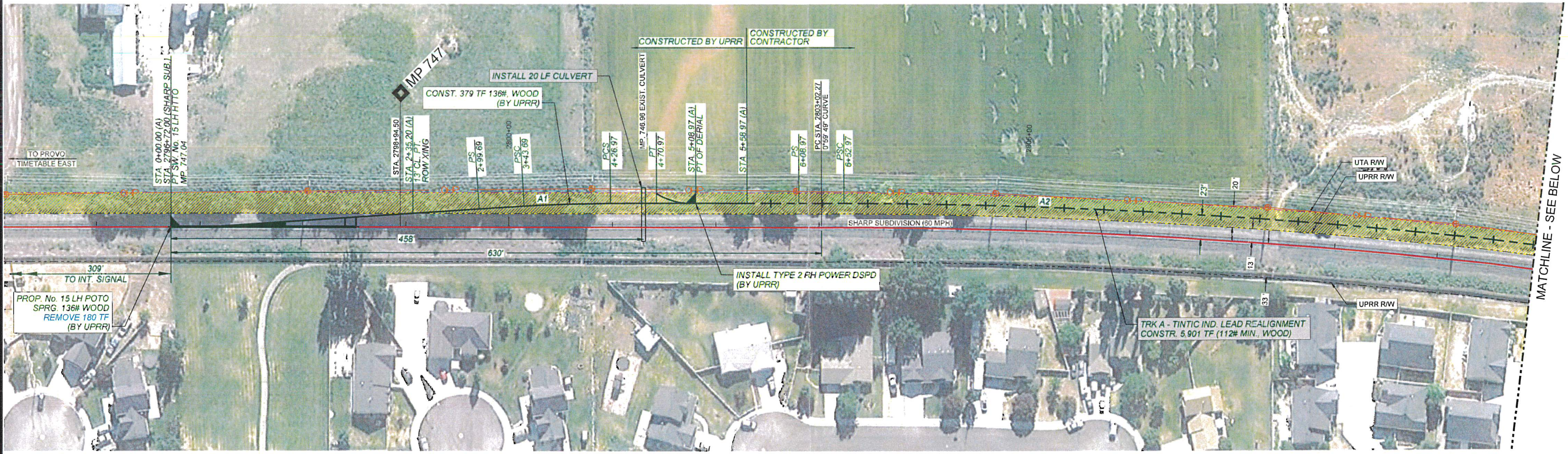
PRELIMINARY
NOT FOR CONSTRUCTION

300 0 300 600
SCALE IN FEET

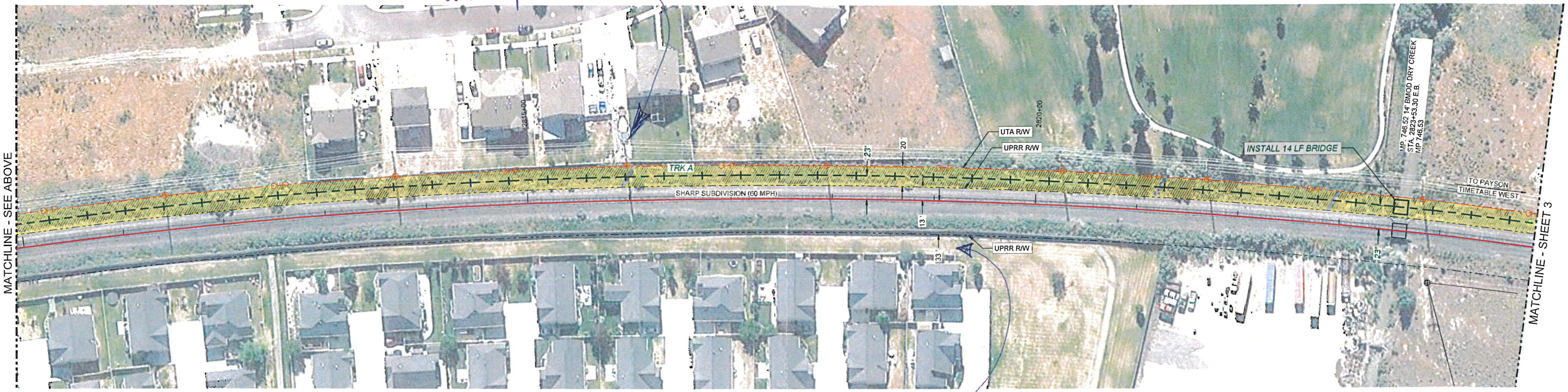
CONCEPT DESIGN

RAILPROS FIELD SERVICES 360 S. FORT LN, STE. # 3A - LAYTON, UTAH 84041 www.railprosfs.com	DRAWN BY: RH	FOR USE IN AGREEMENT WITH:	UNION PACIFIC RAILROAD
	CHECKED BY: SM	LOCATION & DESCRIPTION:	TINTIC INDUSTRIAL LEAD REALIGNMENT MP 747.04, SHARP SUBDIVISION, SPANISH FORK, UT
	DATE: 2/23/2017		
	SHEET NUMBER 1 of 4	SHEET TITLE:	COVER SHEET

Color table: c:\UPRR\CAD\Workspace\Standards\Tables\Pen\UPRR_V8i_Pentable.tbl
R:\Engineering\16FS0003 - MRC - Tintic Ind Lead Realignment\CAD\CAD Exhibits\01 Tintic 10% Design Cover Sheet.dgn
3/6/2017



Who's power lines?



CURVE A1
D = 3°00'00"
R = 1910.08'
DELTA = 3°49'06"
L = 83.28'
S/L = 44.00'
1" = 20 MPH

CURVE A2
D = 0°59'34"
R = 5770.85'
DELTA = 23°46'01"
L = 2349.79'
S/L = 44.00'
1" = 20 MPH

Who owns this open space

50 0 50 100
SCALE IN FEET

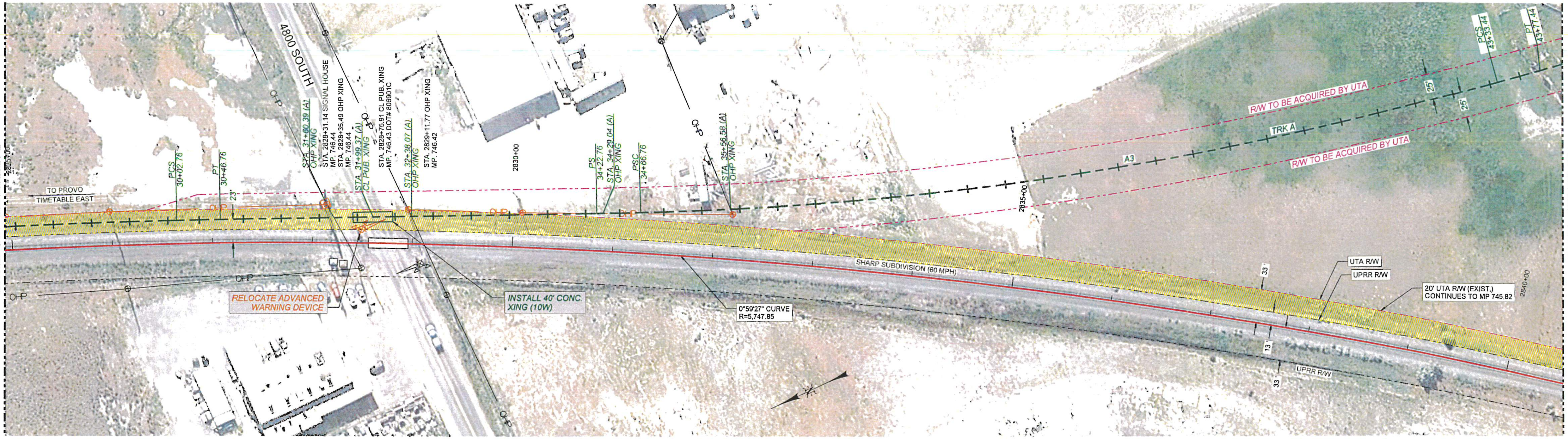
CONCEPT DESIGN

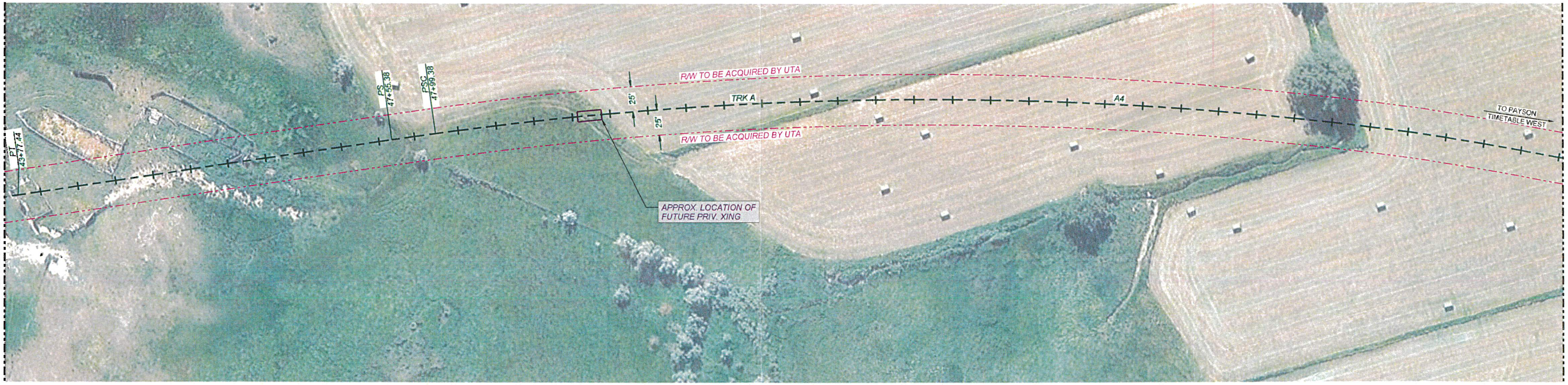
PRELIMINARY
NOT FOR CONSTRUCTION

Color table:
c:\UPRR\CAD\Workspace\Standards\Tables\Pen\UPRR_V8i_Pentable.tbl
R:\Engineering\6FS0003 - MRC - Tintic Ind Lead Realignment\CAD\CAD Exhibits\02 Tintic 10% Design.dgn
3/6/2017

RAILPROS FIELD SERVICES
360 S. FORT LN, STE. # 3A - LAYTON, UTAH 84041
www.railprosfs.com

DRAWN BY: RH	FOR USE IN AGREEMENT WITH:	UNION PACIFIC RAILROAD
CHECKED BY: SM	LOCATION & DESCRIPTION: TINTIC INDUSTRIAL LEAD REALIGNMENT MP 747.04, SHARP SUBDIVISION, SPANISH FORK, UT	
DATE: 2/23/2017		
SHEET NUMBER 2 of 4	SHEET TITLE: TRACK PLAN	





CURVE A3	CURVE A4
D = 1°38'01"	D = 1°38'01"
R = 3507.49'	R = 3507.49'
DELTA = 14°52'36"	DELTA = 27°06'01"
L = 866.68'	L = 1614.96'
S/L = 44.00'	S/L = 44.00'
1" - 20 MPH	1" - 20 MPH

50 0 50 100
SCALE IN FEET

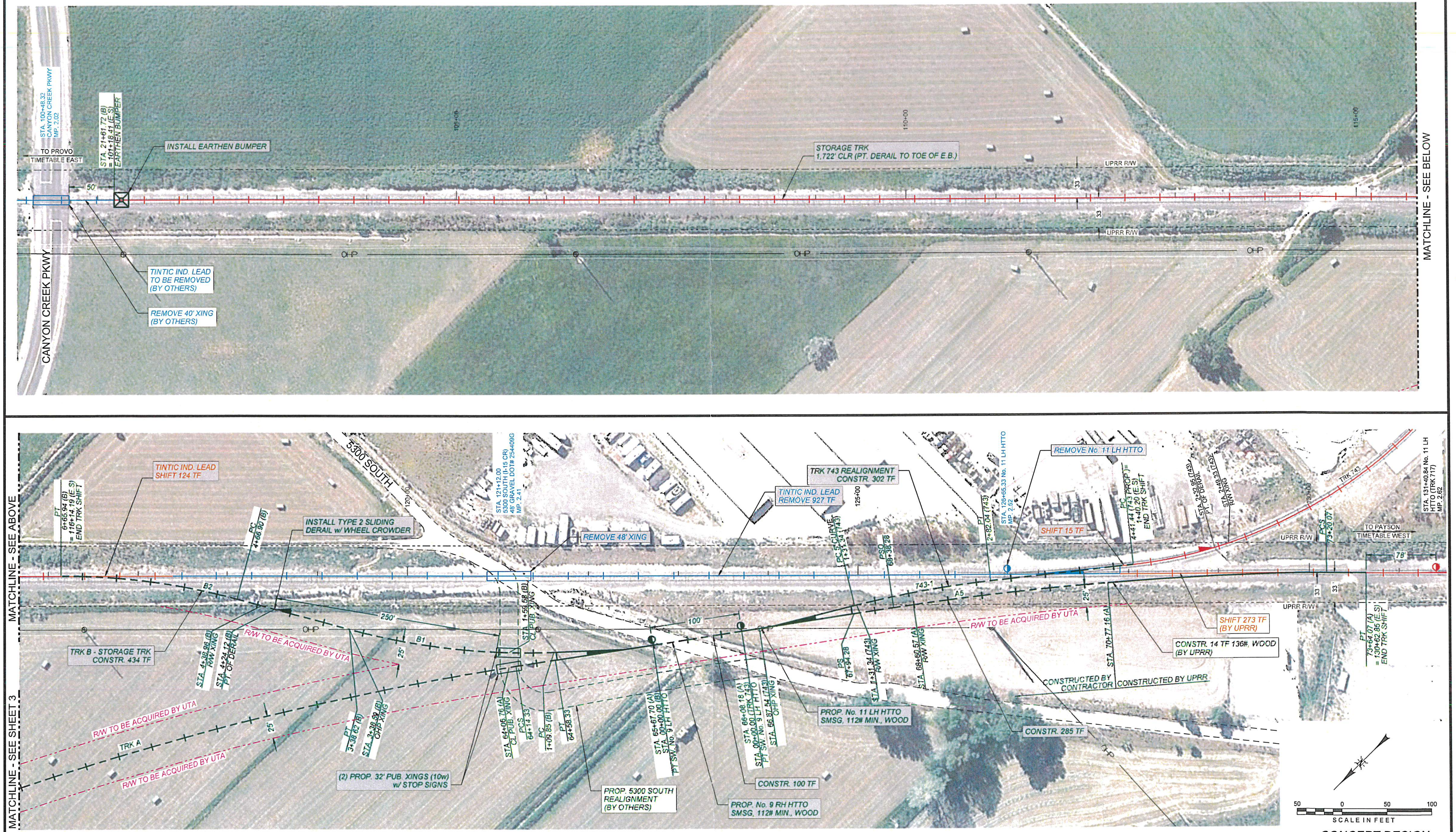
CONCEPT DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

RAILPROS FIELD SERVICES
360 S. FORT LN, STE. # 3A - LAYTON, UTAH 84041
www.railprosfs.com

DRAWN BY: RH	FOR USE IN AGREEMENT WITH: **UNION PACIFIC RAILROAD**
CHECKED BY: SM	LOCATION & DESCRIPTION: TINTIC INDUSTRIAL LEAD REALIGNMENT MP 747.04, SHARP SUBDIVISION, SPANISH FORK, UT
DATE: 2/23/2017	
SHEET NUMBER 3 of 4	SHEET TITLE: TRACK PLAN

Color table: c:\UPRR\CAD\Workspace\Standards\Tables\Pen\UPRR_V8i_Pentable.tbl
R:\Engineering\16FS0003 - MRC - Tintic Ind Lead Realignment\CAD\CAD Exhibits\03 Tintic 10% Design.dgn
3/6/2017



CONCEPT DESIGN

CURVE A5
D = 1°38'01"
R = 3507.49'
DELTA = 8°35'21"
L = 481.79'
S/L = 44.00'
1" - 20 MPH

CURVE B1
D = 7°30'00"
R = 764.49'
DELTA = 17°09'27"
L = 228.77'
10 MPH

CURVE B2
D = 7°30'00"
R = 764.49'
DELTA = 14°55'40"
L = 199.04'
10 MPH

CURVE 743 - 1
D = 5°00'00"
R = 1146.28'
DELTA = 7°39'26"
L = 153.14'
10 MPH

PRELIMINARY
NOT FOR CONSTRUCTION

Color table:
c:\UPRR\CAD\Workspace\Standards\Tables\Pen\UPRR_V8i_Pentable.tbl
R:\Engineering\16F50003 - MRC - Tintic Ind Lead Realignment\CAD\CAD Exhibits\04 Tintic 10% Design.dgn
3/6/2017

RAILPROS FIELD SERVICES 360 S. FORT LN. STE. # 3A - LAYTON, UTAH 84041 www.railprosfs.com	DRAWN BY: RH	FOR USE IN AGREEMENT WITH: UNION PACIFIC RAILROAD
	CHECKED BY: SM	LOCATION & DESCRIPTION: TINTIC INDUSTRIAL LEAD REALIGNMENT MP 747.04, SHARP SUBDIVISION, SPANISH FORK, UT
	DATE: 2/23/2017	
	SHEET NUMBER 4 of 4	SHEET TITLE: TRACK PLAN

PROJECT NAME: Sharp Tintic Connection
Cost Estimate

Prepared By: Matt Carter/Jimmy Vegh **Date** 6/5/2020

Proposed Project Scope: Connect Sharp Sub to Tintic Sub to abadon part of Tintic sub through Springville.

Approximate Route Reference Mile Post (BEGIN) =		(END) =	
Project Length =	0.000	miles	ft
Current FY Year (July-June) =	2020		
Assumed Construction FY Year =	2021		
Construction Items Inflation Factor =	1.10		1 yrs for inflation
Assumed Yearly Inflation for Engineering Services (PE and CE) (%/yr) =	3.25%		
Assumed Yearly Inflation for Right of Way (%/yr) =	4.0%		
Items not Estimated (% of Construction) =	10.0%		
Preliminary Engineering (% of Construction + Incentives) =	14.0%		Inc UPRR design
Construction Engineering (% of Construction + Incentives) =	7.0%		

Construction Items		Cost	Remarks
Public Information Services		$0	
Roadway and Drainage		$5,748,206	
Traffic and Safety		$50,000	
Structures		$672,000	
Environmental Mitigation		$250,000	
ITS		$0	
	Subtotal	$6,720,206	
	Items not Estimated (10%)	$672,021	Items not estimated - 10%
	Construction Subtotal	**$7,392,227**	
P.E. Cost	**P.E. Subtotal**	**$1,034,912**	14%
C.E. Cost	**C.E. Subtotal**	**$517,456**	7%
Right of Way	**Right of Way Subtotal**	$987,975	
Utilities	**Utilities Subtotal**	$100,000	
Incentives	**Incentives Subtotal**	$0	

Cost Estimate (ePM screen 505)	**2020**		**2021**	
P.E.		**$1,035,000**		**$1,069,000**
Right of Way		**$988,000**		**$1,027,000**
Utilities		**$100,000**		**$110,000**
Construction		**$7,392,000**		**$8,149,000**
C.E.		**$517,000**		**$534,000**
Incentives		**$0**		**$0**
Aesthetics	**0.00%**	**$0**		**$0**
Change Order Contingency	**1.71%**	**$126,299**		**$139,000**
UDOT Oversight	**2.00%**	**$160,000**		**$176,000**
	TOTAL	**$10,318,299**	**TOTAL**	**$11,204,000**
PROPOSED COMMISSION REQUEST	**TOTAL**	**$10,318,299**	**TOTAL**	**$11,204,000**

Project Assumptions/Risks

1
2
3
4
5
6
7

Inflation

PROJECT NAME: Sharp Tintic Connection

Year	Rate	Recommended Rate	Cumulative Inflation Factor
2019	6.5%	0.0%	1.00
2020	5.5%	5.5%	1.06
2021	4.5%	4.5%	1.10
2022	4.0%	4.0%	1.15
2023	3.5%	3.5%	1.19
2024	3.5%	3.5%	1.23
2025	3.5%	3.5%	1.27
2026	3.5%	3.5%	1.32
2027	3.5%	3.5%	1.36
2028	3.5%	3.5%	1.41
2029	3.5%	3.5%	1.46
2030	3.5%	3.5%	1.51
2031	3.5%	3.5%	1.56
2032	3.5%	3.5%	1.62
2033	3.5%	3.5%	1.67
2034	3.5%	3.5%	1.73
2035	3.5%	3.5%	1.79
2036	3.5%	3.5%	1.86
2037	3.5%	3.5%	1.92
2038	3.5%	3.5%	1.99
2039	3.5%	3.5%	2.06
2040	3.5%	3.5%	2.13
2041	3.5%	3.5%	2.20
2042	3.5%	3.5%	2.28
2043	3.5%	3.5%	2.36
2044	3.5%	3.5%	2.44
2045	3.5%	3.5%	2.53
2046	3.5%	3.5%	2.62
2047	3.5%	3.5%	2.71
2048	3.5%	3.5%	2.80

Please contact UDOT Estimate Support with any questions (801-965-4708).

Roadway and Drainage

PROJECT NAME: Sharp Tintic Connection

Item #	Item	Quantity	Units	Price	Cost	Remarks
Roadway						
000001000	Remove Fence - ROW/Field	4,700	LF	$4.00	$18,800.00	
000001100	Remove Trees - Within ROW	35	EA	$750.00	$26,250.00	
000001200	Remove Curb - South of 4800 S	180	LF	$7.41	$1,333.80	
000001300	Remove Asphalt - 4800 S	960	SF	$1.71	$1,641.60	
000001400	Remove Crossing - 5300 S	48	LF	$11.24	$539.52	
000001600	Clear & Grub - Within ROW	6	ACRE	$26,334.91	$158,009.46	
000001700	Over Excavate/Repalce 2- Subgrade	11,000	CY	$24.14	$265,540.00	
000001800	Import 2' Select Fill - 4800 S - 5300 S	8,600	CY	$39.58	$340,388.00	
000002200	ROW Fence	10,150	LF	$8.00	$81,200.00	
000002300	Repair Asphalt - 4800 S	670	SF	$12.46	$8,348.20	
000002400	Remove Crossing - Canyon Creek	1	LS	$15,751.87	$15,751.87	
000002500	Remove Crossing - 1600 S/1200 W	1	LS	$12,208.03	$12,208.03	
000002600	Remove Crossing - 950 W	1	LS	$24,784.48	$24,784.48	
000002700	Remove Crossing - Farm Access	1	LS	$4,439.98	$4,439.98	
000002800	Remove Crossing 800 S/400 W	1	LS	$8,766.08	$8,766.08	
000002900	Remove Crossing 700 S/400 W	1	LS	$25,952.29	$25,952.29	
Track UPRR						
000000100	Install 393 TF UPRR	393	TF	$132.18	$51,946.74	
000000200	Shift 273 TF UPRR	273	TF	$54.48	$14,873.04	
000000300	Remove 180 TF UPRR	180	TF	$13.83	$2,489.40	
000000400	Install NO 15 LH POTO	1	EA	$50,937.91	$50,937.91	
000000500	Install Type 2 RH Power DSPD	1	EA	$14,653.09	$14,653.09	
000000550	Relocate Advanced Warning Devise	1	EA	$20,000.00	$20,000.00	
000000700	Railroad Protection	1	LS	$25,000.00	$25,000.00	
Track						
000003000	Furnish 357 TF	357	TF	$127.45	$45,499.65	
000003100	Furnish No 15 LH POTO	1	EA	$165,617.50	$165,617.50	
000003200	Furnish Type 2 RH Power DSPD	1	EA	$32,055.00	$32,055.00	
000003300	Furnish and Install 7133 TF	7,133	TF	$290.56	$2,072,564.48	
000003400	Shift 139 TF	139	TF	$60.46	$8,403.94	
000003500	Remove 927 TF	927	TF	$14.03	$13,005.81	
000003600	Furnish and Install No 9 RH HTTO	1	EA	$94,496.82	$94,496.82	
000003700	Furnish and Install No11 LH HTTO	1	EA	$112,978.77	$112,978.77	
000003800	Furnish and Install Type 2 Sliding Derail	1	EA	$46,708.09	$46,708.09	
000003900	Remove No 11 LH HTTO	1	EA	$11,258.55	$11,258.55	
000004000	Crossing Panels - 10' Wide	128	TF	$500.00	$64,000.00	
000004200	Earthen Bumper	1	EA	$2,558.68	$2,558.68	
000005000	Indirects (25%)	1	Lump	$1,173,237.75	$1,173,237.75	
000005100	Markup (12%)	1	Lump	$703,942.56	$703,942.56	
Roadway Subtotal					**$5,720,181**	
Drainage						
000001500	Remove Drianage Headwall - MP 746.96 Exist Culvert	1	EA	$499.86	$499.86	
000002100	Drainage Culverts	330	LF	$83.41	$27,525.30	
Drainage Subtotal					**$28,025**	
PI						
015407010	Public Information Services	1	lump	$0.00	**$0**	

Traffic, Safety & ITS

PROJECT NAME: Sharp Tintic Connection

Item #	Item	Quantity	Units	Price	Cost	Remarks
Traffic						
Signals						
	Signals work	1	Lump	$50,000.00	$50,000.00	
Lighting						
Traffic and Safety Subtotal					**$50,000**	
ITS						
ITS Subtotal					**$0**	

Structures

PROJECT NAME: Sharp Tintic Connection

Item #	Item	Quantity	Units	Price	Cost	Remarks
Bridges						
000001900	Dry Creek Bridge Structure	1	Lump	$372,000.00	$372,000.00	
Walls						
000002000	Retaining Wall	1,200	LF	$250.00	$300,000.00	
Structures Subtotal					**$672,000**	

Environmental and Landscaping

PROJECT NAME: Sharp Tintic Connection

Item #	Item	Quantity	Units	Price	Cost	Remarks
Environmental						
	Wetland Mitigation	1	Lump	$250,000.00	$250,000.00	
Environmental Mitigation Subtotal					**$250,000**	

Utilities, Right of Way, and Incentives

PROJECT NAME: Sharp Tintic Connection

Item #	Item	Quantity	Units	Price	Cost	Remarks
Utilities						
	Relocate Utilities	1	Lump	$100,000.00	$100,000.00	
Utilities Subtotal					**$100,000**	
Right-of-way						
	ROW Purchase	219,550	sq ft	$4.50	$987,975.00	
Right-of-Way Subtotal					**$987,975**	
Incentives						
Incentives Subtotal					**$0**	