FINAL REPORT APPENDIX VOLUME 3

Alameda Corridor East Phase II Grade Separation Traffic Study and Concept Plans

December 2011

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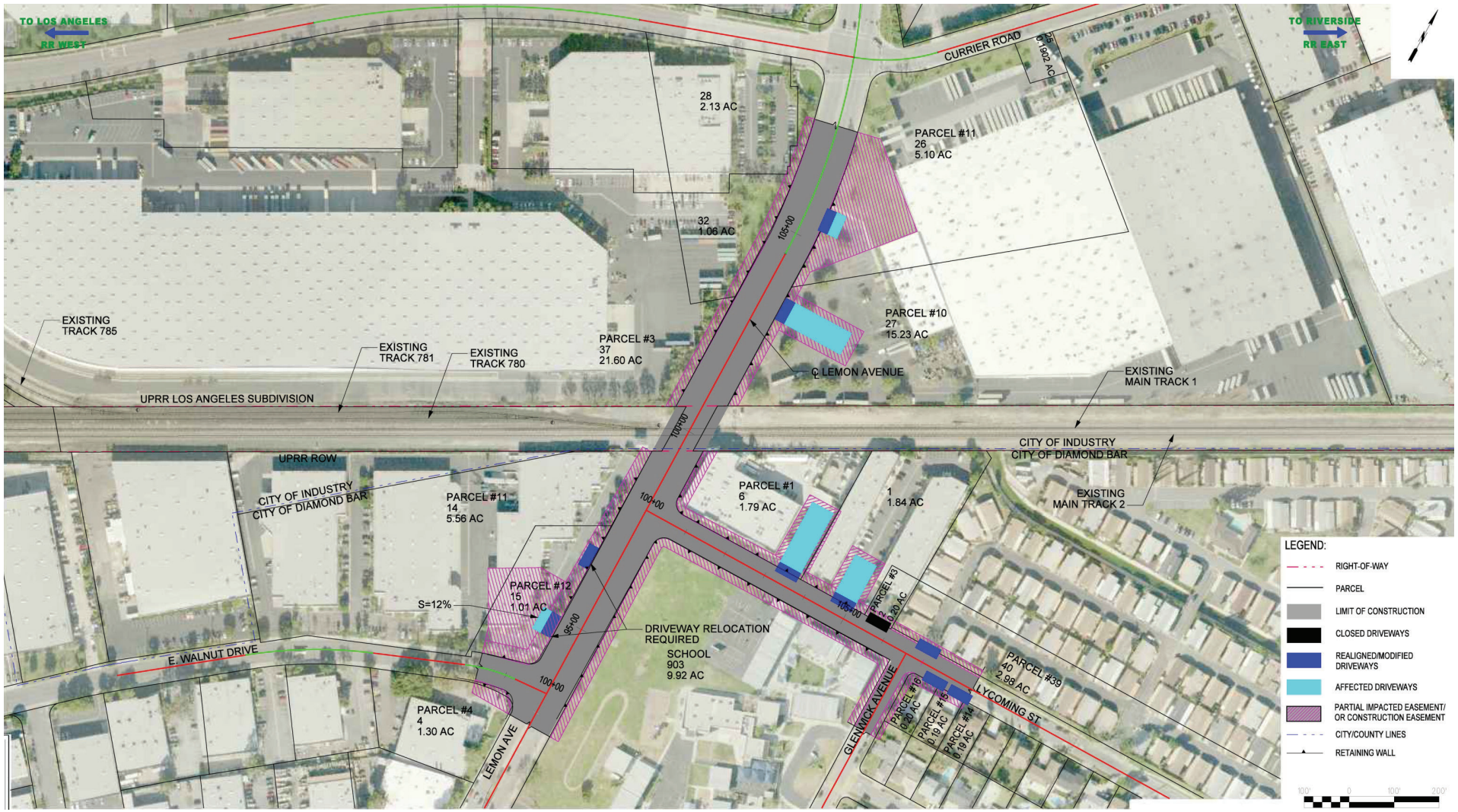
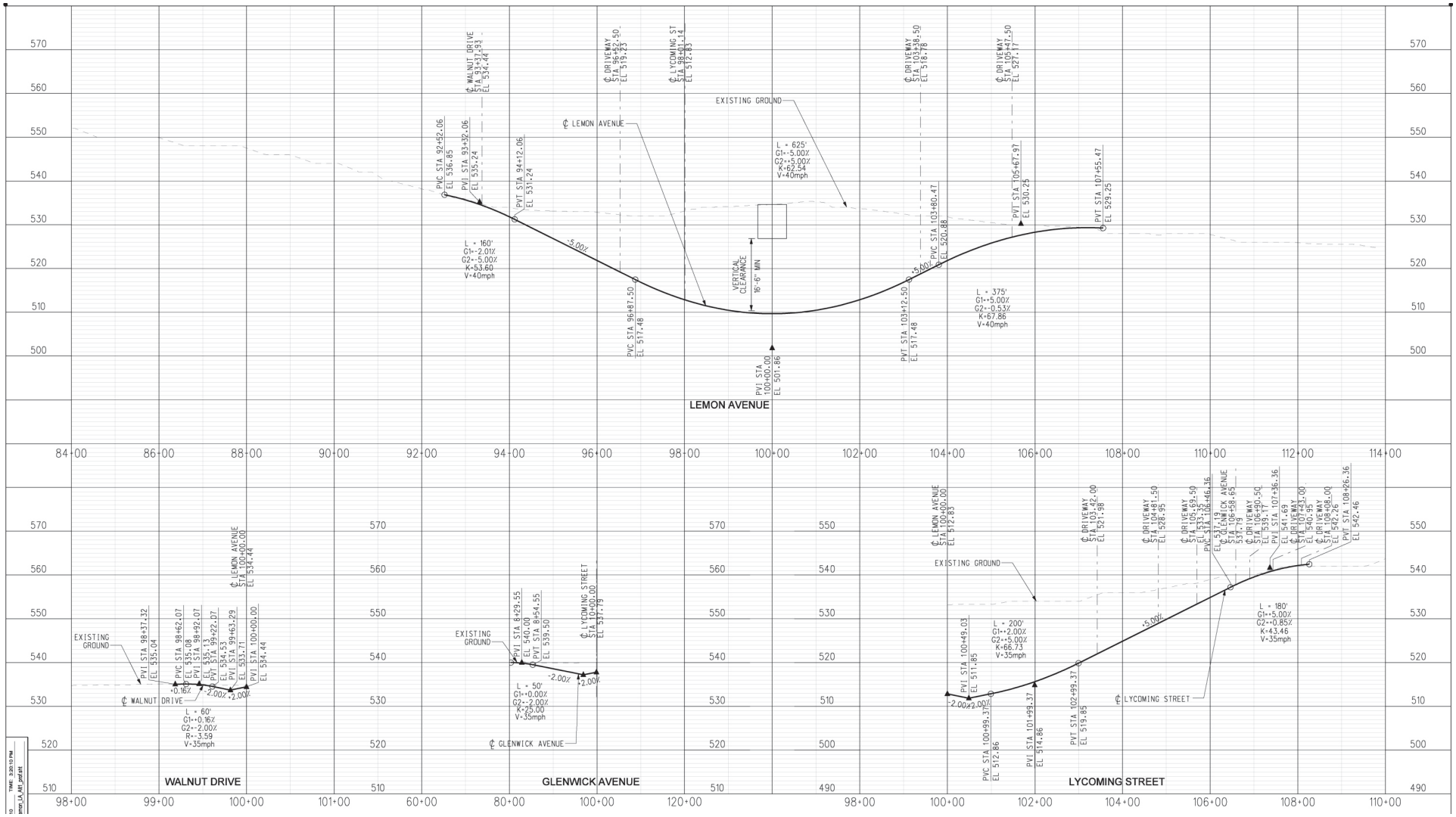
Appendices – Volume 3

APPENDIX G
LEMON AVENUE AT UPRR LOS ANGELES SUBDIVISION



Source: JL Patterson & Associates, Inc.



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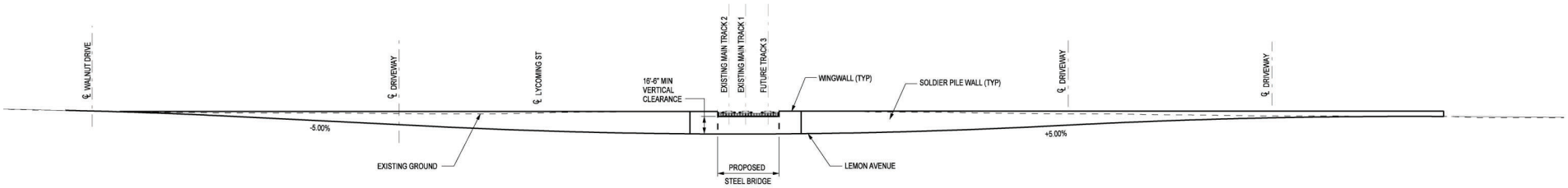
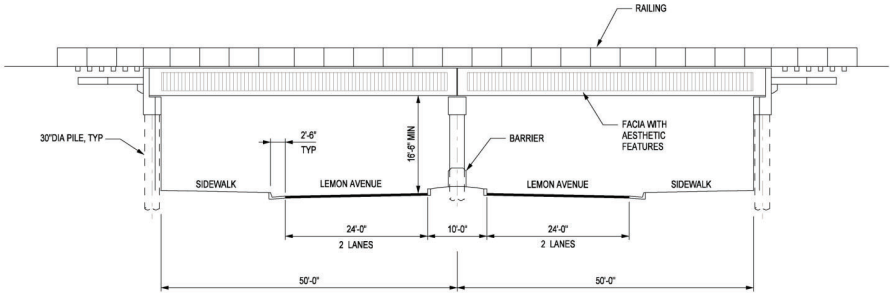
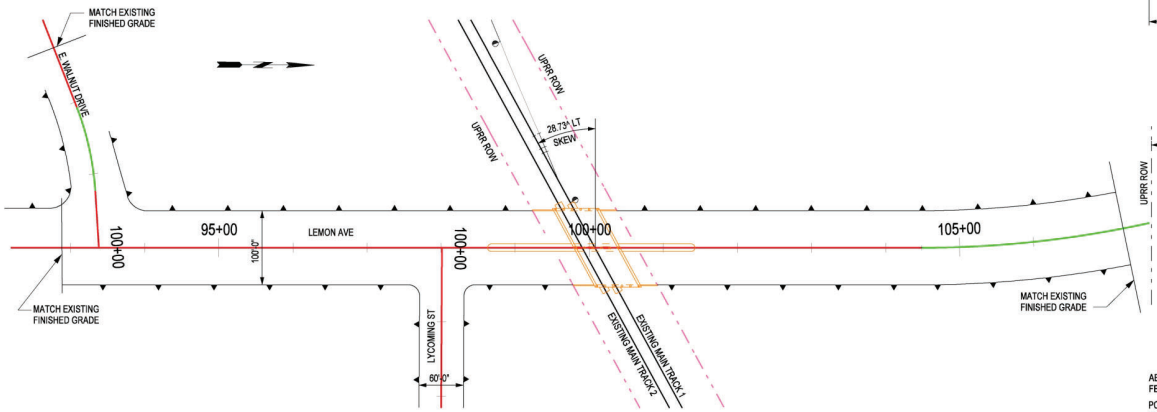


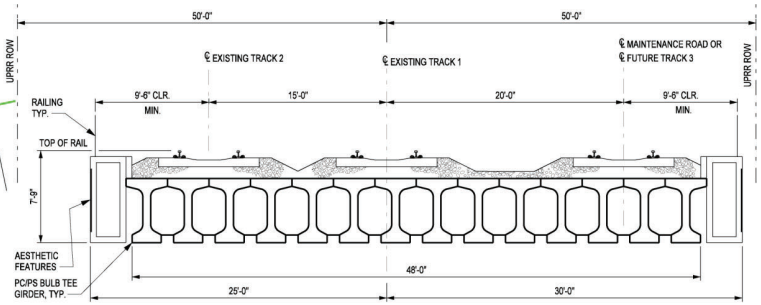
ELEVATION - LEMON AVENUE
SCALE: 1" = 50'



SECTION NORMAL TO LEMON AVENUE
SCALE: 1" = 10'



PLAN
SCALE: 1" = 80'

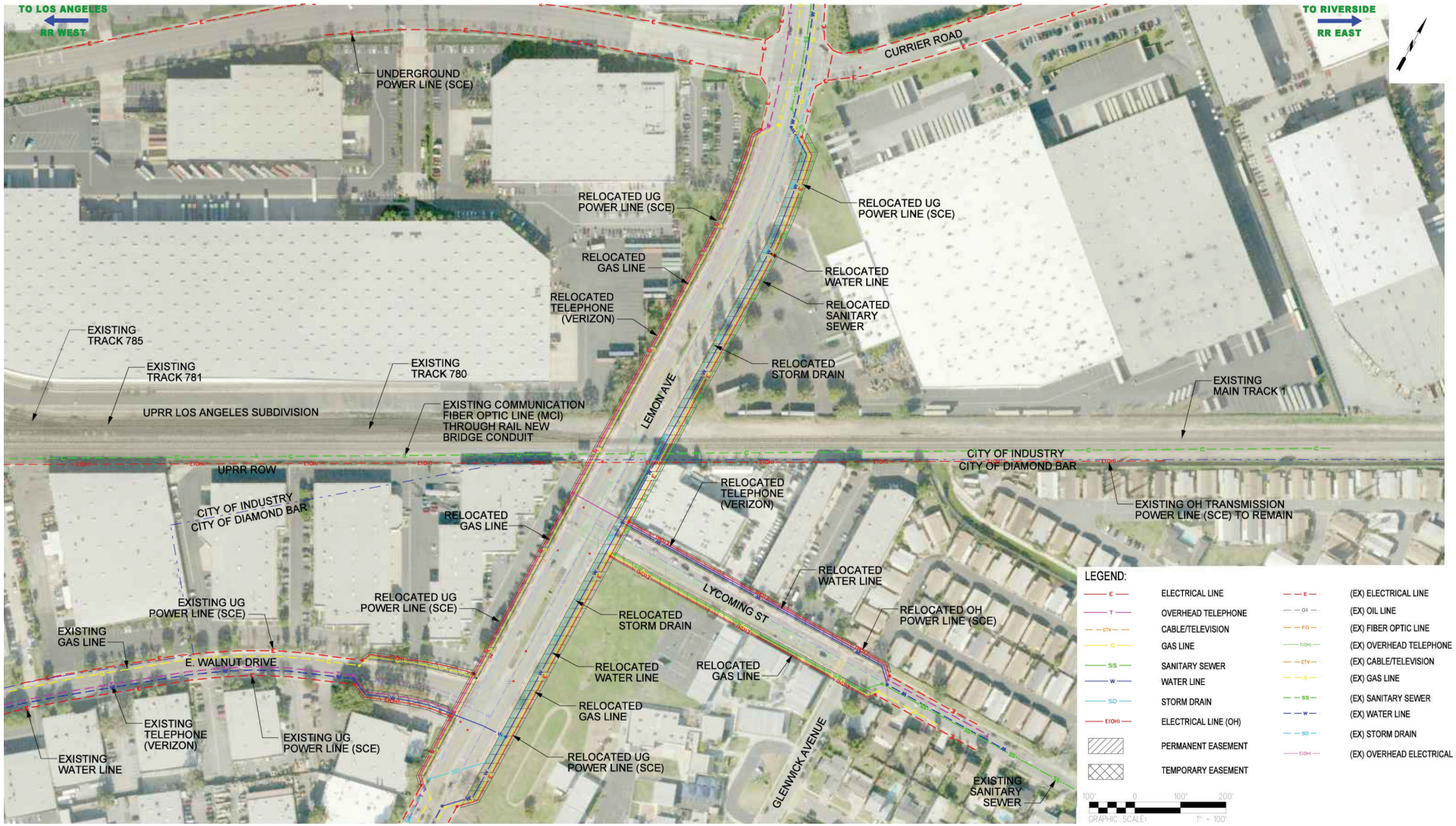


TYPICAL SECTION
SCALE: 1" = 5'

Source: JL Patterson & Associates, Inc.

Source: JL Patterson & Associates, Inc.

Source: JL Patterson & Associates, Inc.



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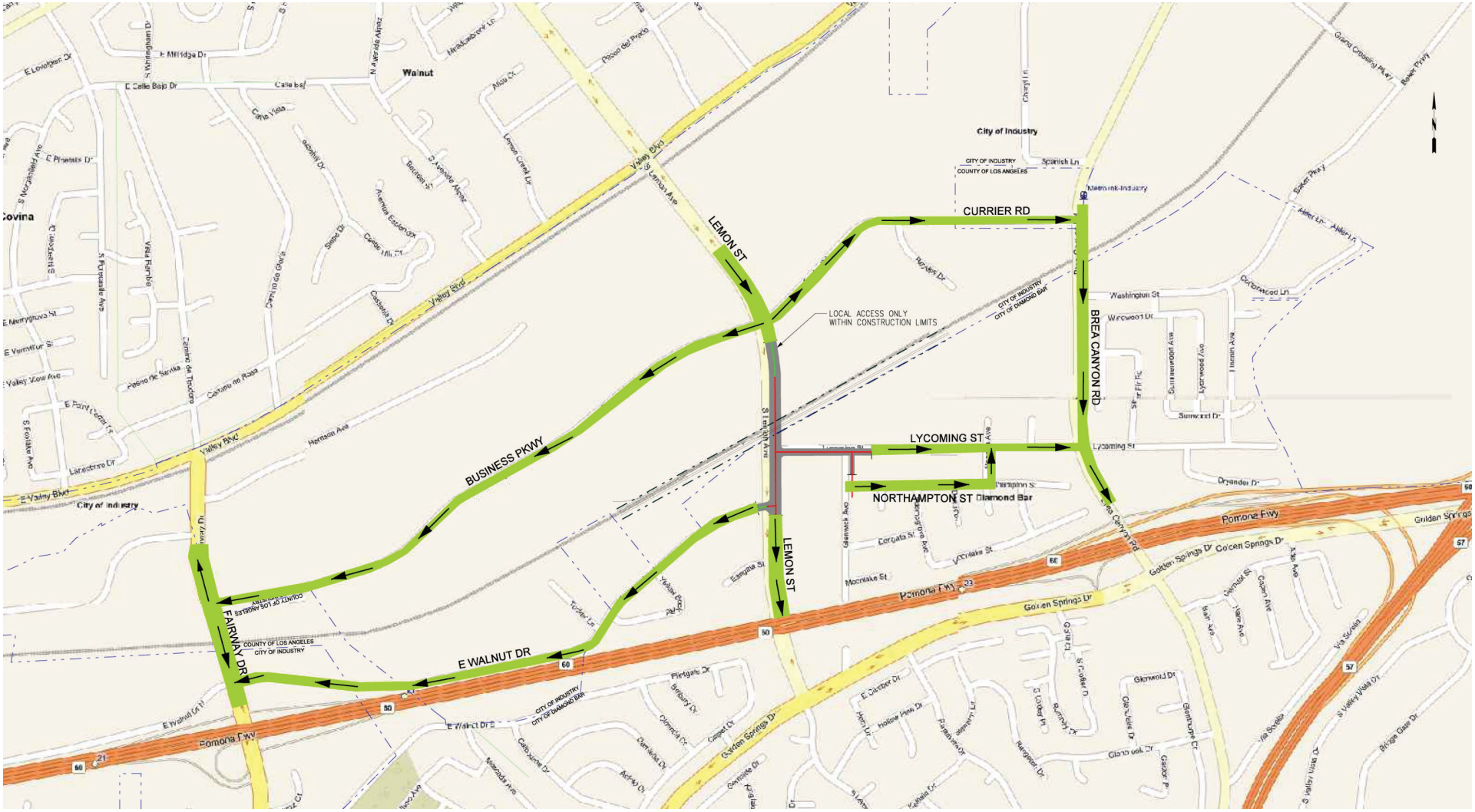


Source: JL Patterson & Associates, Inc.

ACE Task 2 Preliminary Cost Estimate

Lemon Avenue - LA Sub Underpass

WORK DESCRIPTION-LEMON AVENUE UNDERCROSSING	EST. QTY	UNIT	UNIT PRICE	TOTAL PRICE
CIVIL CONTRACTOR				
Civil / Grading/Drainage				
Mobilization/Demobilization (8% Civil)	1	LS	$1,636,970	$ 1,636,970
Clearing & Grubbing (3% Civil)	1	LS	$613,864	$ 613,864
Traffic (7% Civil)	1	LS	$1,432,349	$ 1,432,349
Earth Work - Cut	10,000	CY	$40	$ 400,000
Earth Work -Fill		CY	$30	$ -
Civil Work (C&G, AC, SW, Etc.)	1	LS	$1,904,870	$ 1,904,870
Detour Road	1	LS	$500,000	$ 500,000
Environmental	1	LS	$300,000	$ 300,000
Crossings				
Remove Existing Panels (3 Pairs)	360	LF	$20	$ 7,200
New Crossing Panels (2 Pairs)	240	LF	$1,200	$ 288,000
Roadway Total =	***$***	***7,083,253***		
Structural				
Bridge inclusive of abutment and related items, Soldier pile lagging walls for roadways, and structural excavation. Not inclusive of pump station	1	LS	$15,192,060	$ 15,192,060
Utilities *Note 1 & 2*				
Water, Electrical, Gas, Storm Drain, Sewer & Fiber Optic	1	LS	$1,870,000	$ 1,870,000
			CIVIL CONTRACTOR TOTAL	*$ 24,145,000*
UNION PACIFIC RAILROAD				
Track work				
Remove & Relocate Turnout	4	EA	$175,000	$ 700,000
Install New Track	3,540	TF	$350	$ 1,239,000
Remove Track	3,540	TF	$120	$ 424,800
Shift Track	2,400	TF	$225	$ 540,000
Crossings				
Remove Crossing House and Gates	1	LS	$50,000	$ 50,000
New Temporary Crossing House and Gates Removal and Reprogramming of Temporary Crossings Detour Road	3	EA	$500,000	$ 1,500,000
			UPPR RAILROAD TOTAL	*$ 4,453,800*
			SUB TOTAL	*$ 28,599,000*
PROJECT COST				
CIVIL / STRUCTURAL ENGINEERING:				
Geotechnical Investigation (3% Construction)	1	LS	$857,970	*$ 857,970*
Survey/ Aerial Mapping (2% Construction)	1	LS	$571,980	*$ 571,980*
Design & Design Support (10% Construction)	1	LS	$2,859,900	*$ 2,859,900*
Right-of-Way-Acquisitions *Note 3,4& 5*	1	LS	$23,436,126	*$ 23,436,126*
Construction Management (10% Construction)	1	LS	$2,859,900	*$ 2,859,900*
Agency Costs (16% Construction) Note 6	1	LS	$4,575,840	*$ 4,575,840*
Program Management Costs (8% Construction) Note 7	1	LS	$2,287,920	*$ 2,287,920*
Flagging (6% Construction)	1	LS	$1,715,940	*$ 1,715,940*
Permitting/City Requirement (1% Construction)	1	LS	$285,990	*$ 285,990*
			Sub Total PROJECT COST	*$ 39,452,000*
Project Costs not Inclusive of ROW Acquisitions	$ 16,015,440.00			
			Total	***$ 68,051,000***
Not Inclusive of ROW Acquisitions		**Contingency**	30%	*$ 13,384,462*
			Grand Total	**$ 81,435,000**

Notes

1. Utility relocation cost estimates assume all affected utilities (sewer and storm drain) can be relocated by gravity flow systems similar to the existing systems.

2.Cost for drainage item includes construction of one storm drain pump station at the project area.

3. Right of Way cost estimates are based on $100/SF which covers the land and building allowance for full takes or areas affected by part takes.

4. Right of Way costs do not include any associated relocation costs or severance damages to the business operators.

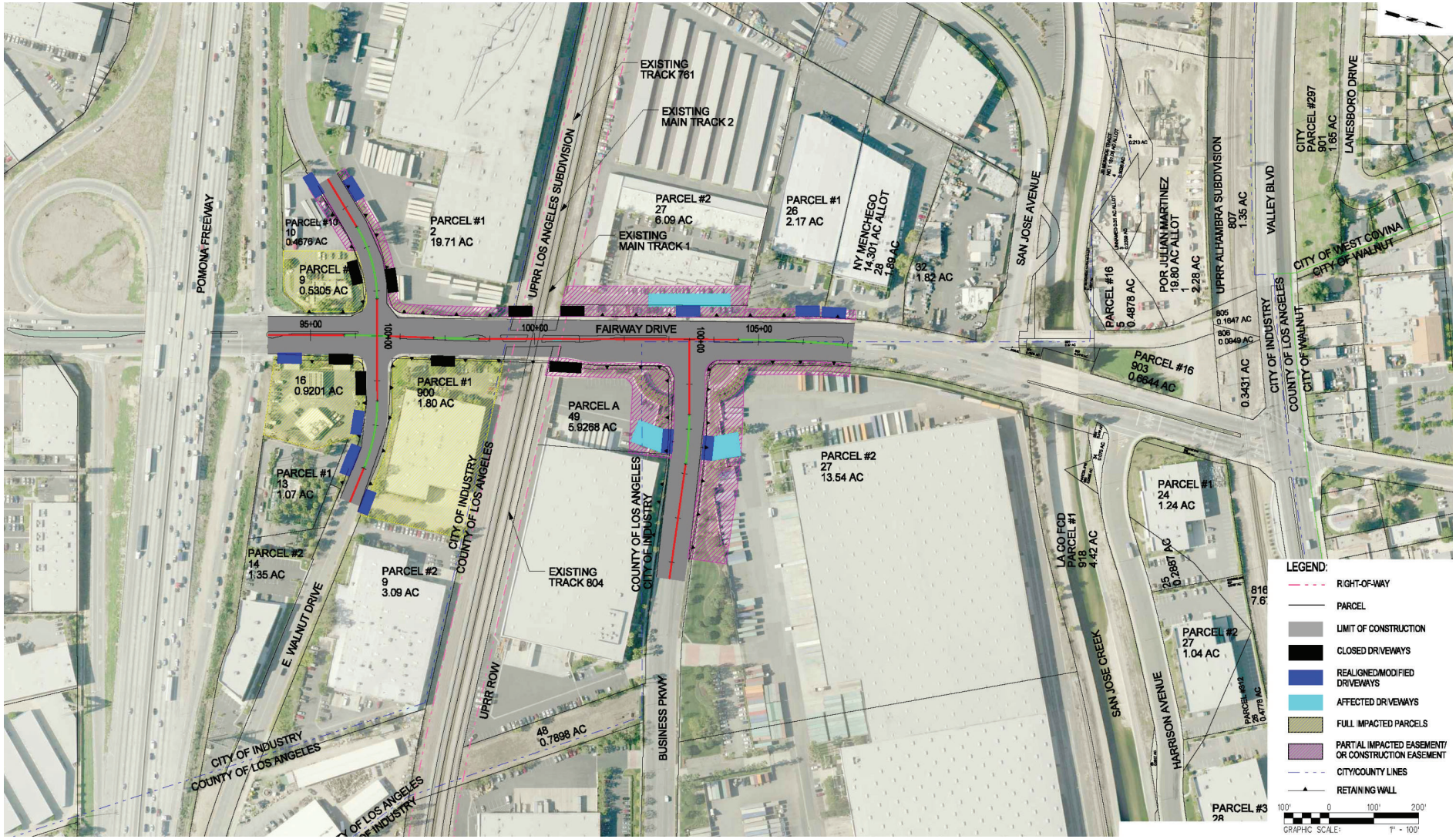
5. Right of Way costs include a 26% allowance for acquisition costs. (appraisals, negotiation, labor, legal, closing cost, etc.)

6. Agency Costs include Agency Project Management direct labor and Agency indirect costs.

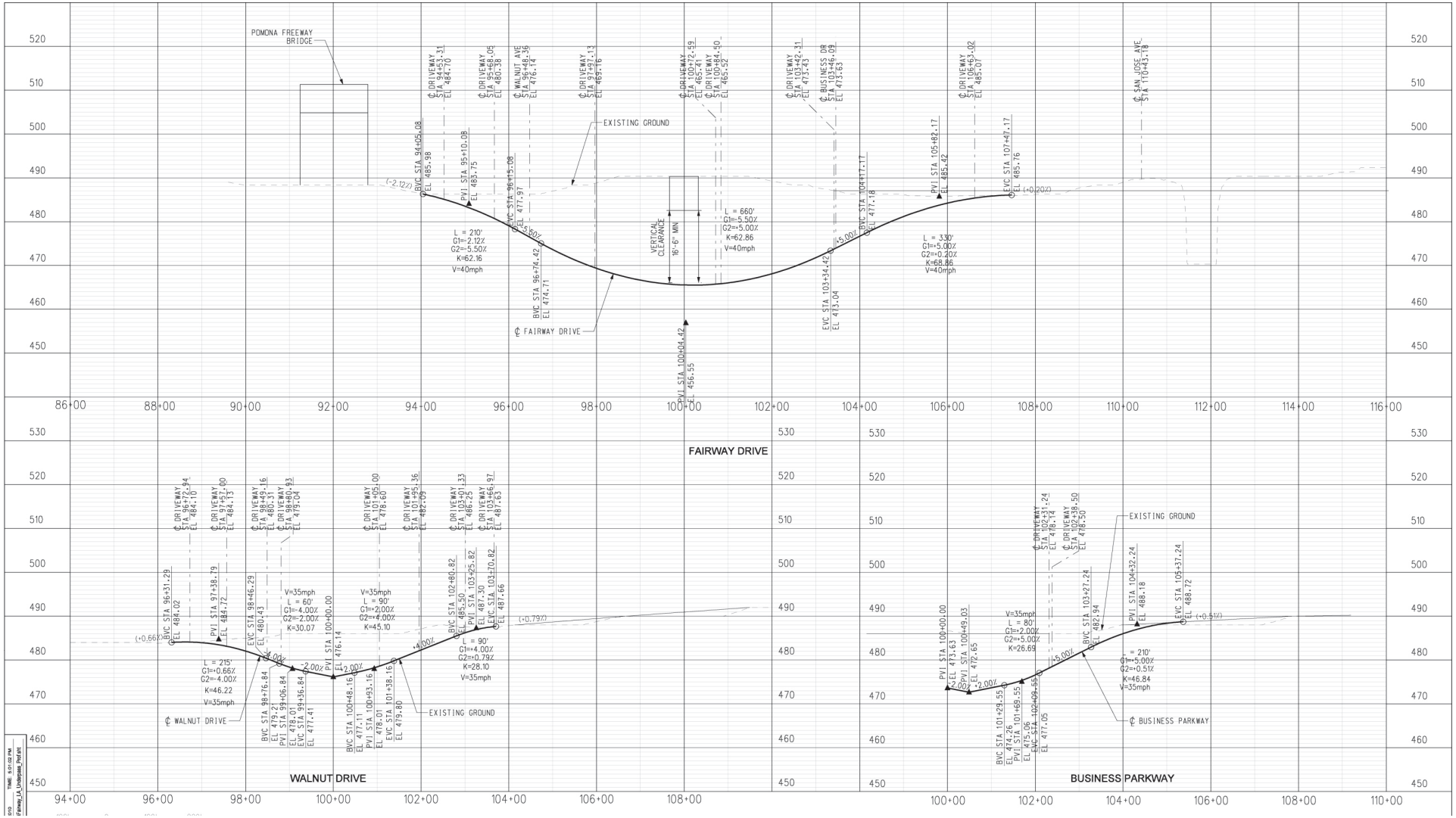
7. Program Management costs include third party project support costs such as community outreach, environmental management, DBE and labor compliance, and property survey.

8. This estimate is prepared using construction cost information based on current dollar cost as of 2011.

APPENDIX H
FAIRWAY DRIVE AT UPRR LOS ANGELES SUBDIVISION



Source: JL Patterson & Associates, Inc.



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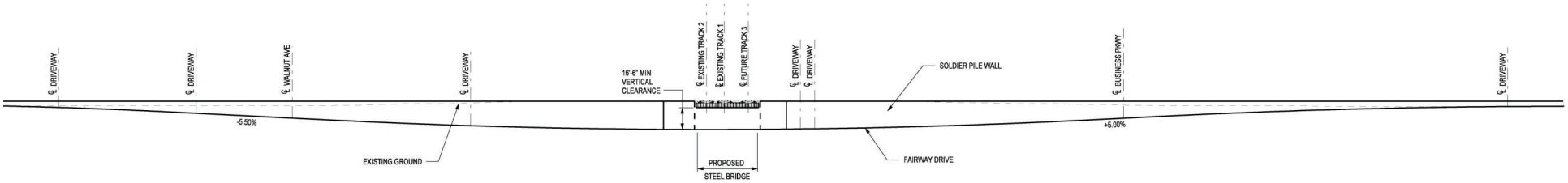
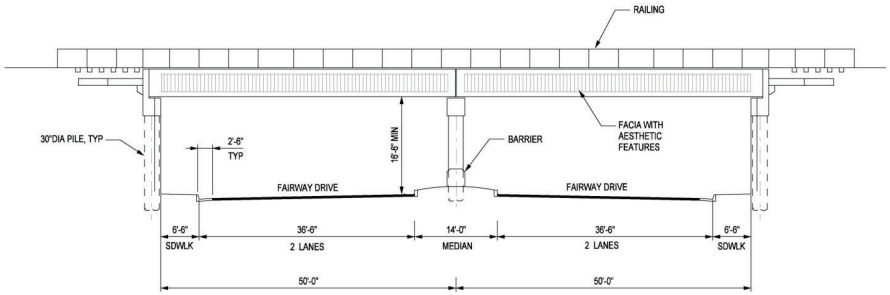
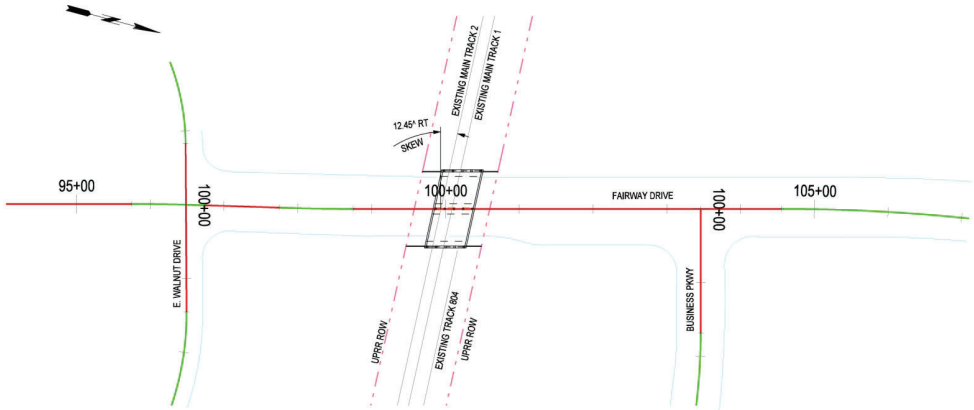


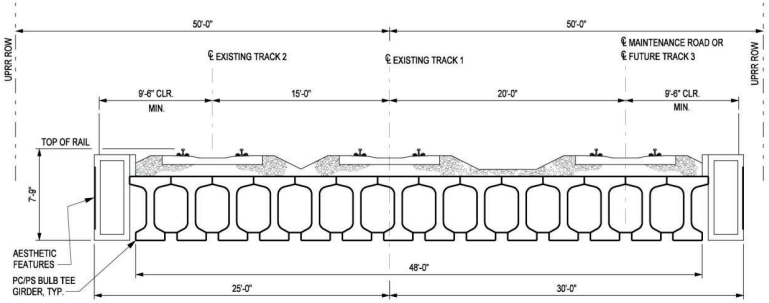
ELEVATION - FAIRWAY DRIVE
SCALE: 1" = 40'



SECTION NORMAL TO FAIRWAY DRIVE
SCALE: 1" = 10'



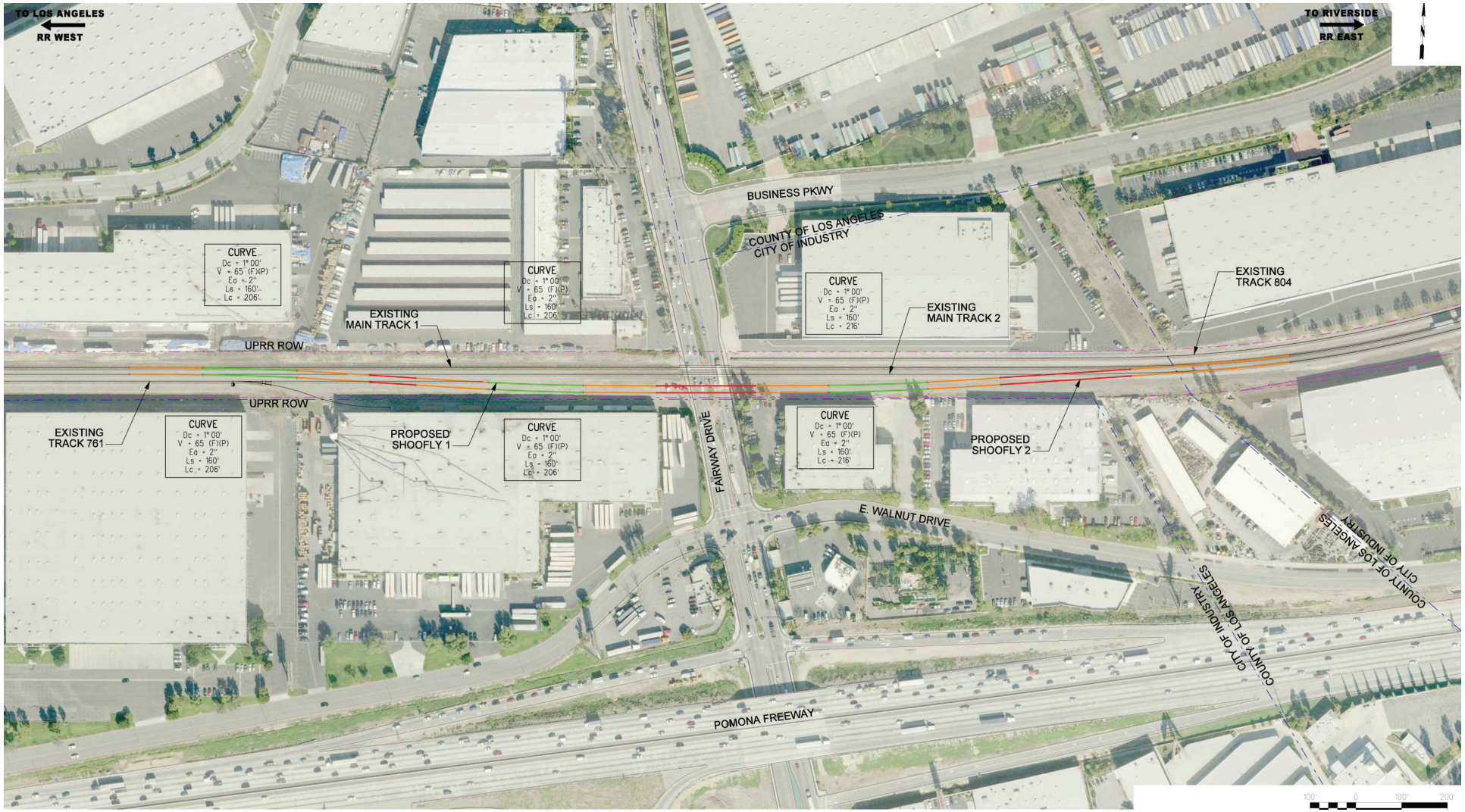
PLAN
SCALE: 1" = 80'



TYPICAL SECTION
SCALE: 1" = 5'

J:_Underpass_BRIT.dgn

Source: JL Patterson & Associates, Inc.



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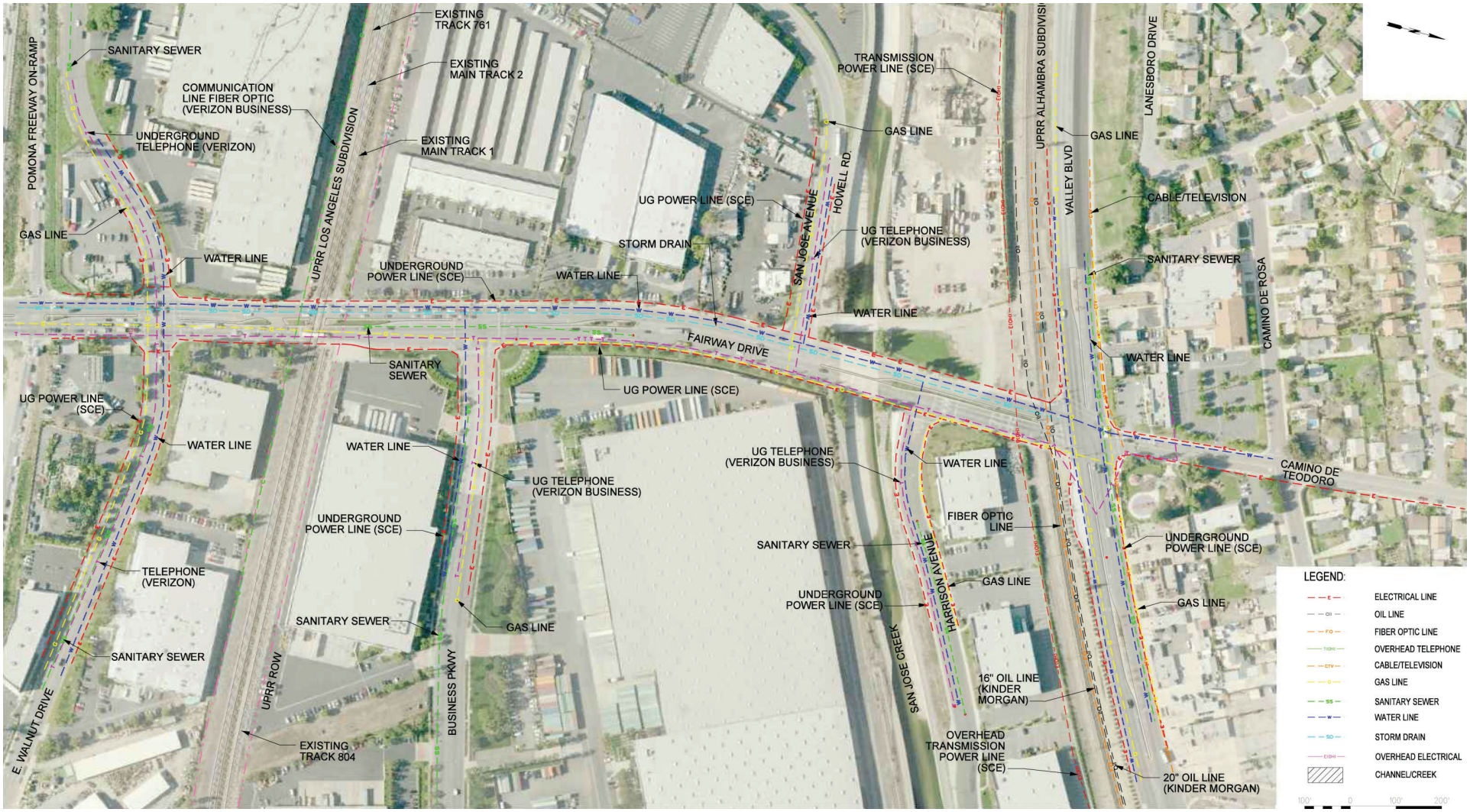

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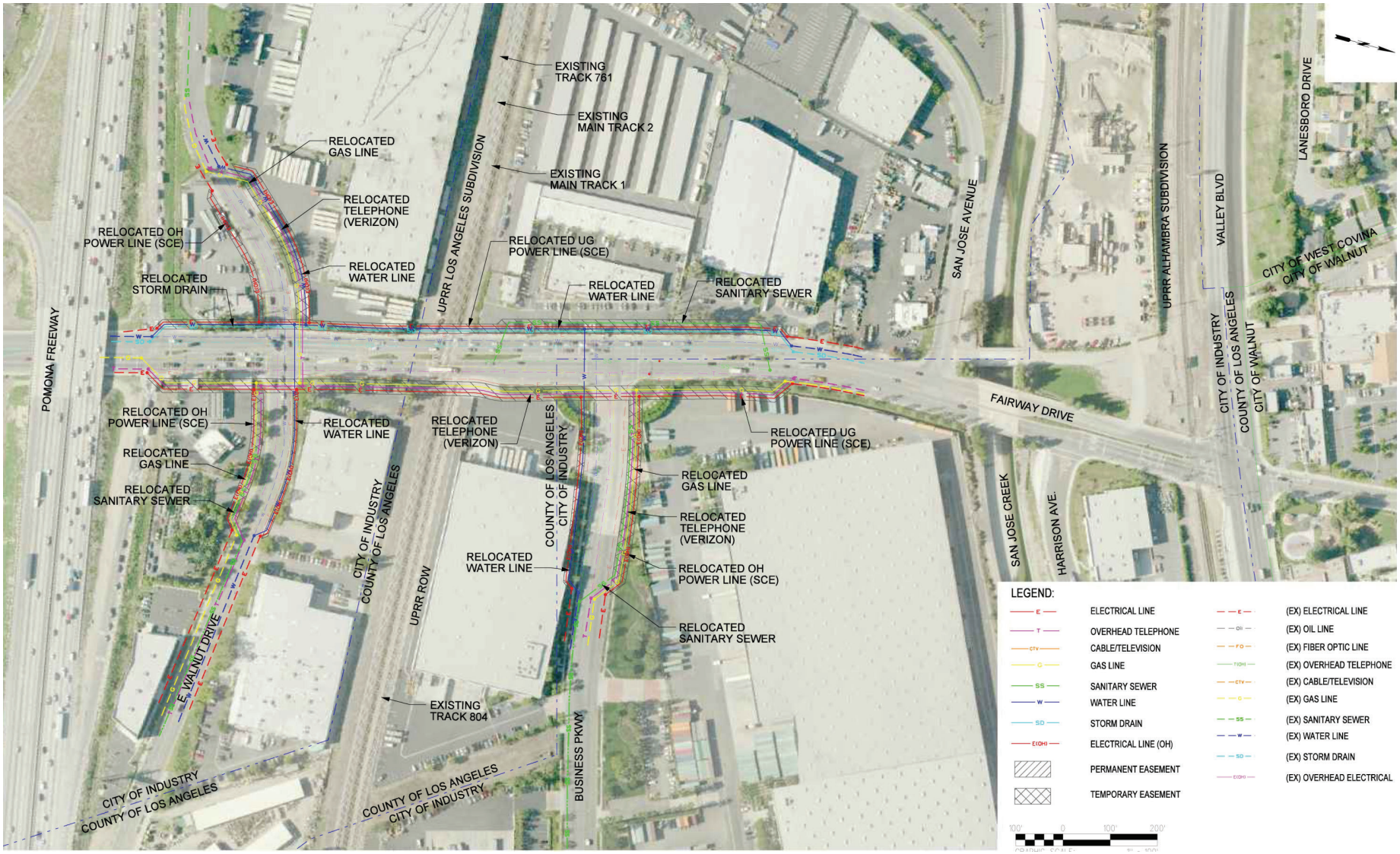
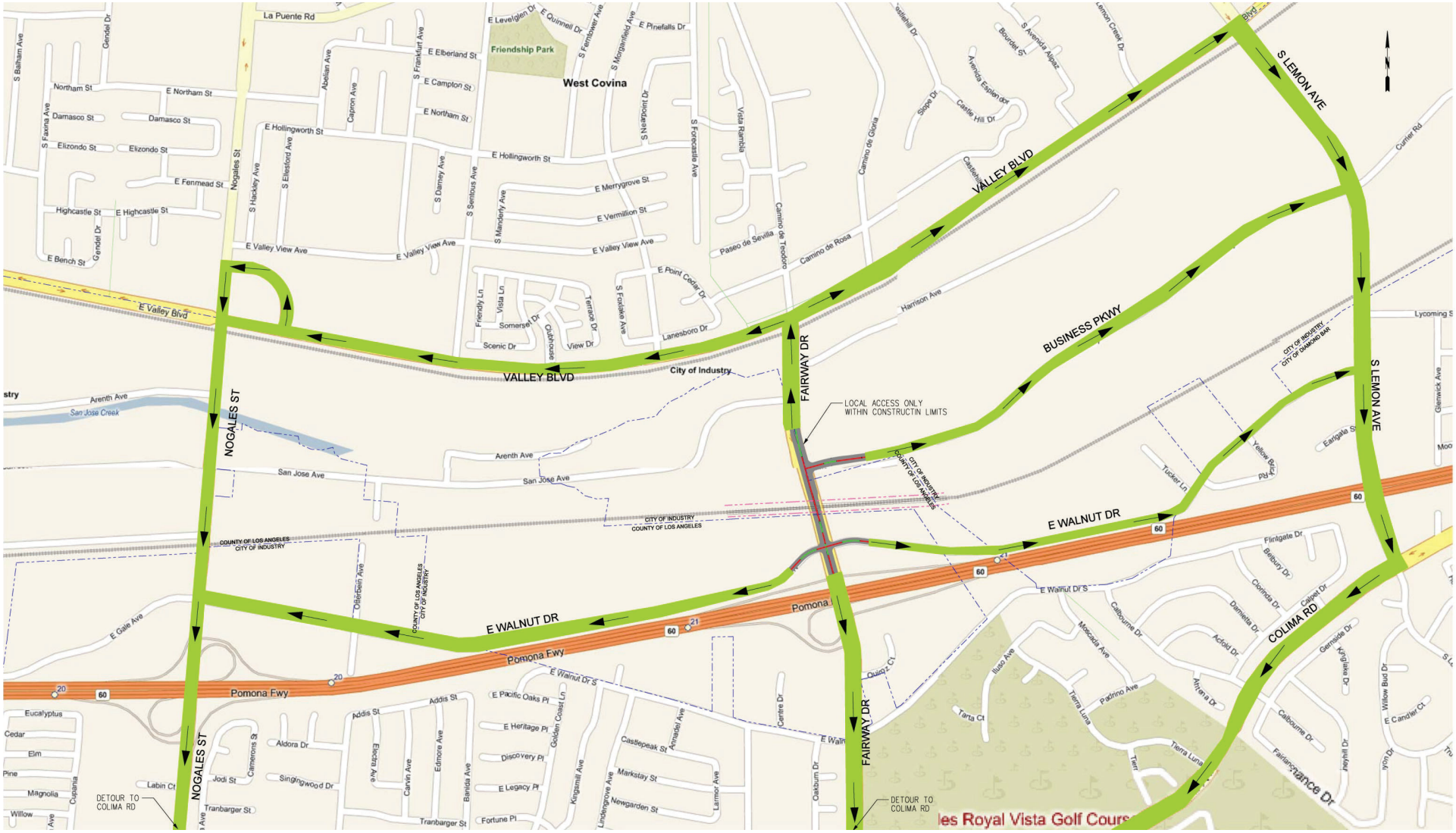


Source: JL Patterson & Associates, Inc.



Source: JL Patterson & Associates, Inc.

ACE Task 2 Preliminary Cost Estimate

Fairway Drive - LA Sub Underpass

WORK DESCRIPTION-FAIRWAY DRIVE UNDERCROSSING	EST. QTY	UNIT	UNIT PRICE		TOTAL PRICE
CIVIL CONTRACTOR					
Civil / Grading/Drainage					
Mobilization/Demobilization (8% Civil)	1	LS	$1,966,214	$	1,966,214
Clearing & Grubbing (3% Civil)	1	LS	$737,330	$	737,330
Traffic (7% Civil)	1	LS	$1,720,437	$	1,720,437
Earth Work - Cut	130,600	CY	$40	$	5,224,000
Earth Work -Fill		CY	$30	$	-
Civil Work (C&G, AC, SW, Etc.)	1	LS	$1,622,862	$	1,622,862
Detour Road	1	LS	$500,000	$	500,000
Environmental	1	LS	$300,000	$	300,000
Crossings					
Remove Existing Panels (3 Pairs)	360	LF	$20	$	7,200
New Crossing Panels (2 Pairs)	240	LF	$1,200	$	288,000
Roadway Total =	***12,366,043***				
Structural					
Bridge inclusive of abutment and related items, Soldier pile lagging walls for roadways, and structural excavation. Not inclusive of pump station	1	LS	$14,455,610	$	14,455,610
Utilities *Note 1 & 2*					
Water, Electrical, Gas, Storm Drain, Sewer & Fiber Optic	1	LS	$2,180,000	$	2,180,000
			CIVIL CONTRACTOR TOTAL	*$*	*29,001,653*
UNION PACIFIC RAILROAD					
Track work					
Remove & Relocate #7 Turnout	2	EA	$175,000	$	350,000
Install New Track	2,898	TF	$350	$	1,014,300
Remove Track	2,898	TF	$120	$	347,760
Shift Track	4,366	TF	$225	$	982,350
Crossings					
Remove Crossing House and Gates	1	LS	$50,000	$	50,000
New Temporary Crossing House and Gates Removal and Reprogramming of Temporary Crossings Detour Road	3	EA	$500,000	$	1,500,000
			UPPR RAILROAD TOTAL	*$*	*4,244,410*
			SUB TOTAL	*$*	*33,246,000*
PROJECT COST					
CIVIL / STRUCTURAL ENGINEERING:					
Geotechnical Investigation (3% Construction)	1	LS	$997,380	*$*	*997,380*
Survey/ Aerial Mapping (2% Construction)	1	LS	$664,920	*$*	*664,920*
Design & Design Support (10% Construction)	1	LS	$3,324,600	*$*	*3,324,600*
Right-of-Way-Acquisitions *Note 3, 4 & 5*	1	LS	$32,656,932	*$*	*32,656,932*
Construction Management (10% Construction)	1	LS	$3,324,600	*$*	*3,324,600*
Agency Costs (16% Construction) Note 6	1	LS	$5,319,360	*$*	*5,319,360*
Program Management Costs (8% Construction) Note 7	1	LS	$2,659,680	*$*	*2,659,680*
Flagging (6% Construction)	1	LS	$1,994,760	*$*	*1,994,760*
Permitting/City Requirement (1% Construction)	1	LS	$332,460	*$*	*332,460*
			Sub Total PROJECT COST	*$*	*51,275,000*
Project Costs not Inclusive of ROW Acquisitions	$	18,617,760			
			Total	***$***	***84,521,000***
Not Inclusive of ROW Acquisitions		**Contingency**	30%	*$*	*15,559,220*
			Grand Total	**$**	**100,080,000**

Notes

1. Utility relocation cost estimates assume all affected utilities (sewer and storm drain) can be relocated by gravity flow systems similar to the existing systems.

2.Cost for drainage item includes construction of one storm drain pump station at the project area.

3. Right of Way cost estimates are based on $100/SF which covers the land and building allowance for full takes or areas affected by part takes.

4. Right of Way costs do not include any associated relocation costs or severance damages to the business operators.

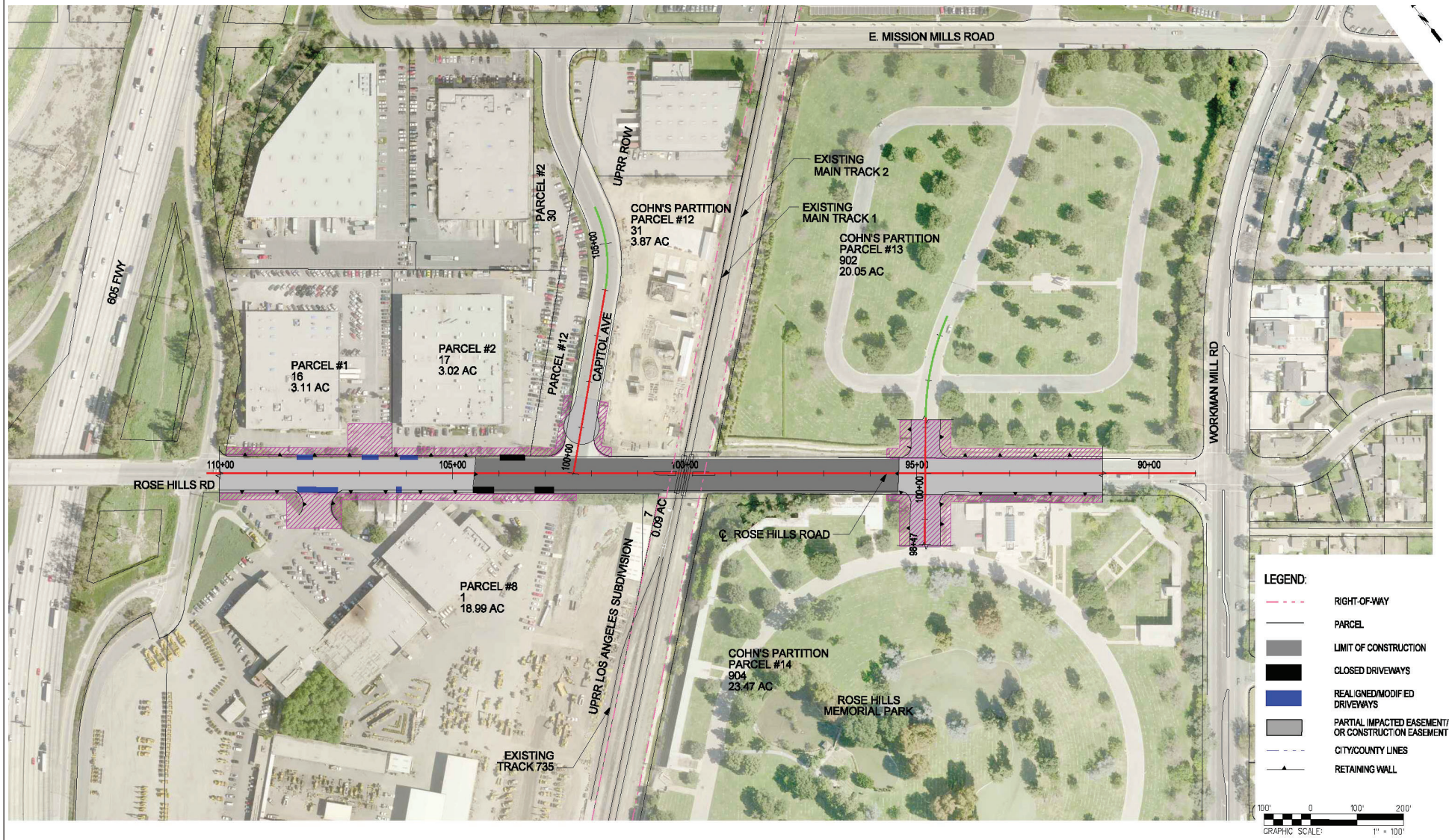
5. Right of Way costs include a 26% allowance for acquisition costs. (appraisals, negotiation, labor, legal, closing cost, etc.)

6. Agency Costs include Agency Project Management direct labor and Agency indirect costs.

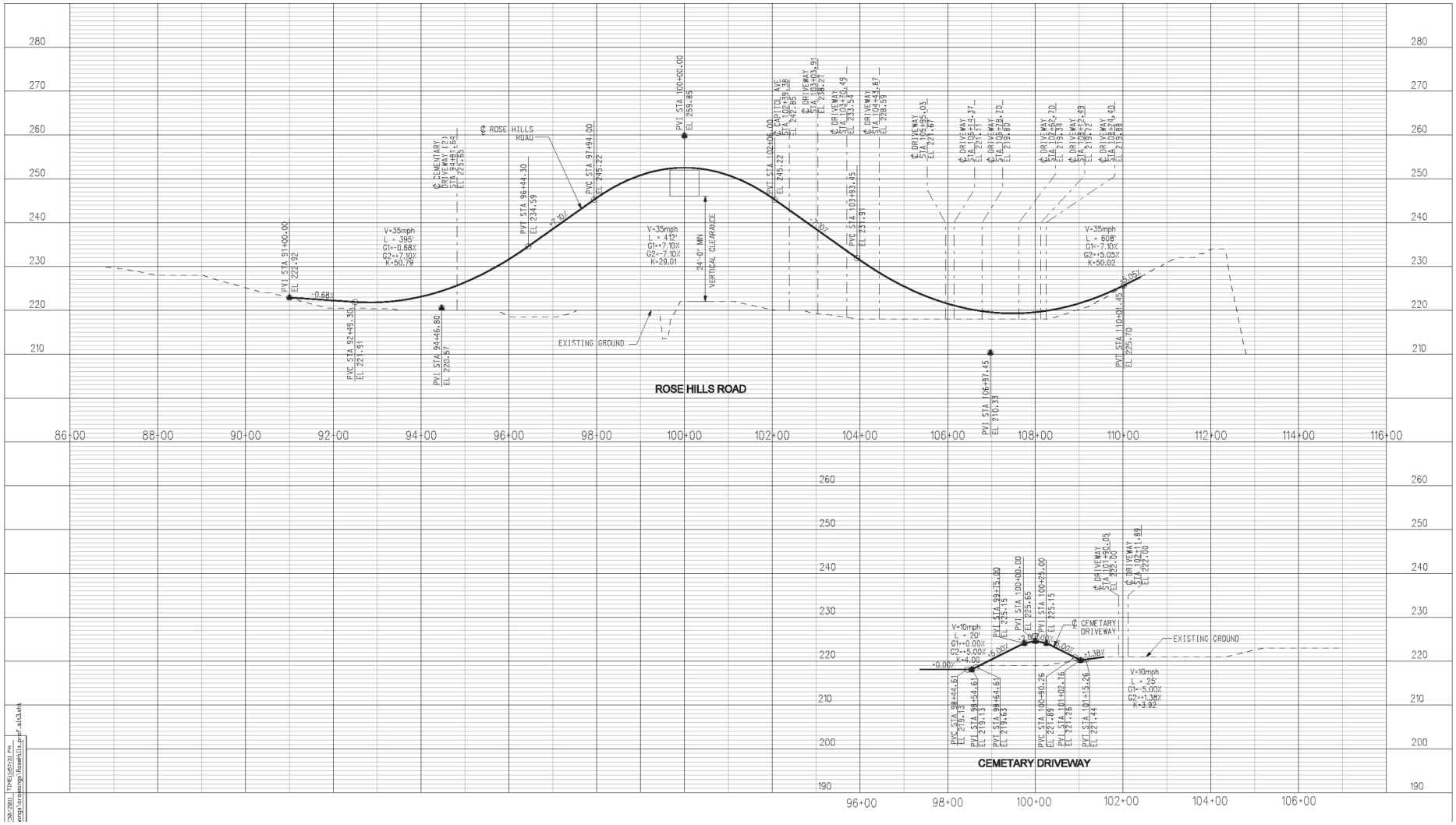
7. Program Management costs include third party project support costs such as community outreach, environmental management, DBE and labor compliance, and property survey.

8. This estimate is prepared using construction cost information using current dollar cost as of 2011.

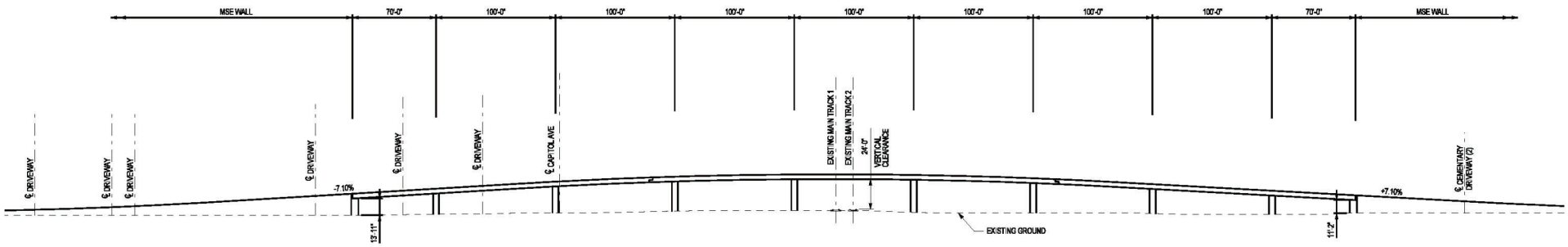
APPENDIX I
ROSE HILLS ROAD AT UPRR LOS ANGELES SUBDIVISION



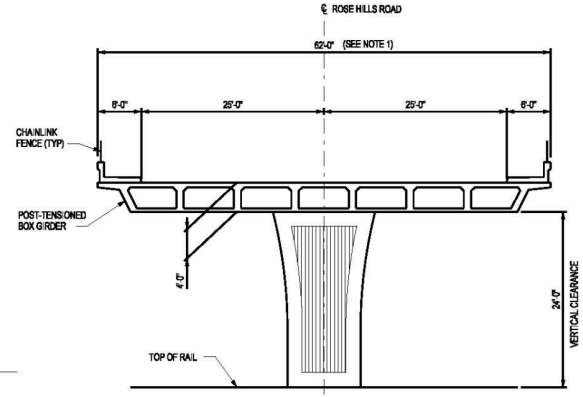
Source: JL Patterson & Associates, Inc.



Source: JL Patterson & Associates, Inc.

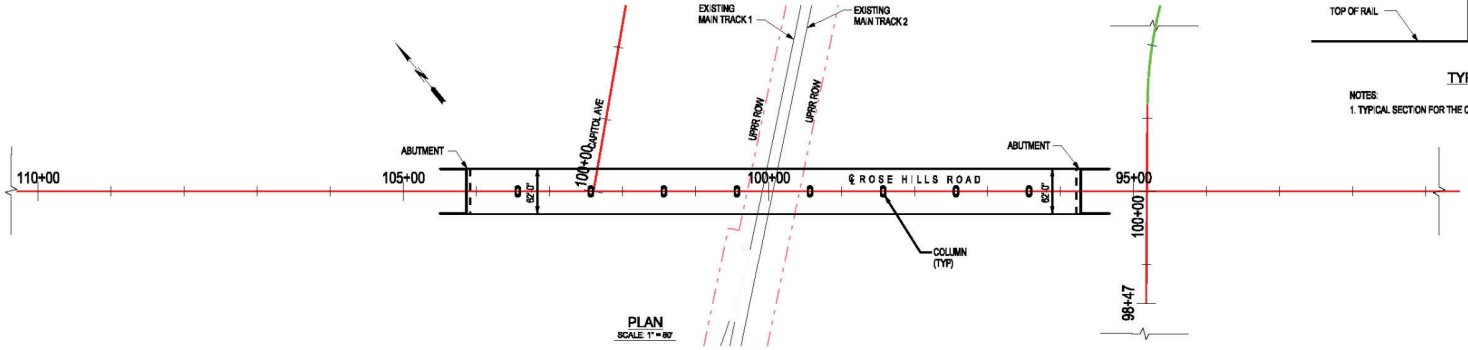


ELEVATION - ROSE HILLS ROAD
SCALE: 1" = 40'



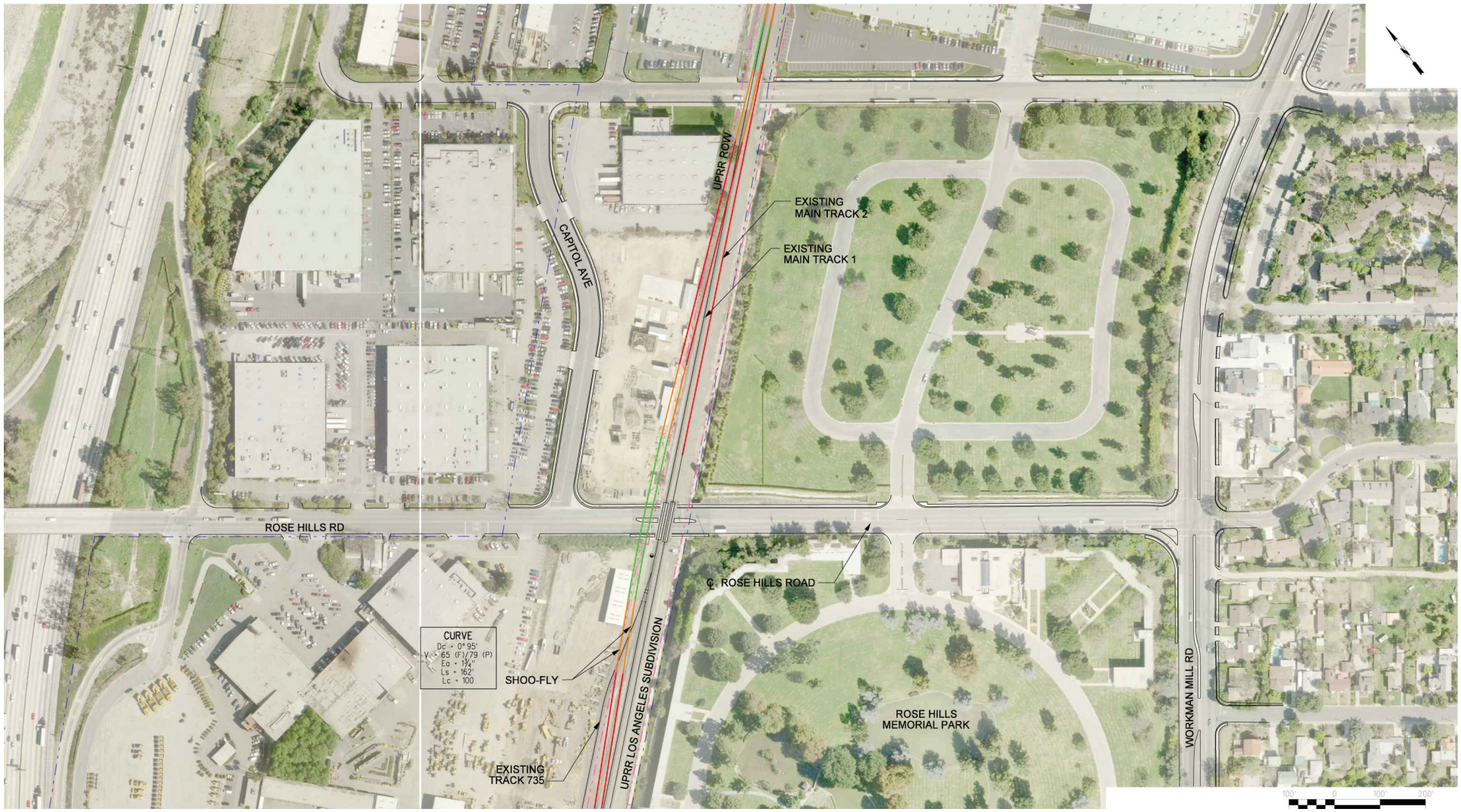
TYPICAL SECTION
SCALE: 1" = 8'

NOTES:
1. TYPICAL SECTION FOR THE CAPITAL AVENUE IS SIMILAR, EXCEPT THE WIDTH OF THE STRUCTURE.



PLAN
SCALE: 1" = 80'

Source: JL Patterson & Associates, Inc.



Source: JL Patterson & Associates, Inc.