

Santa Ana-Garden Grove Fixed Guideway Corridor

Appendix O

Engineering Drawing



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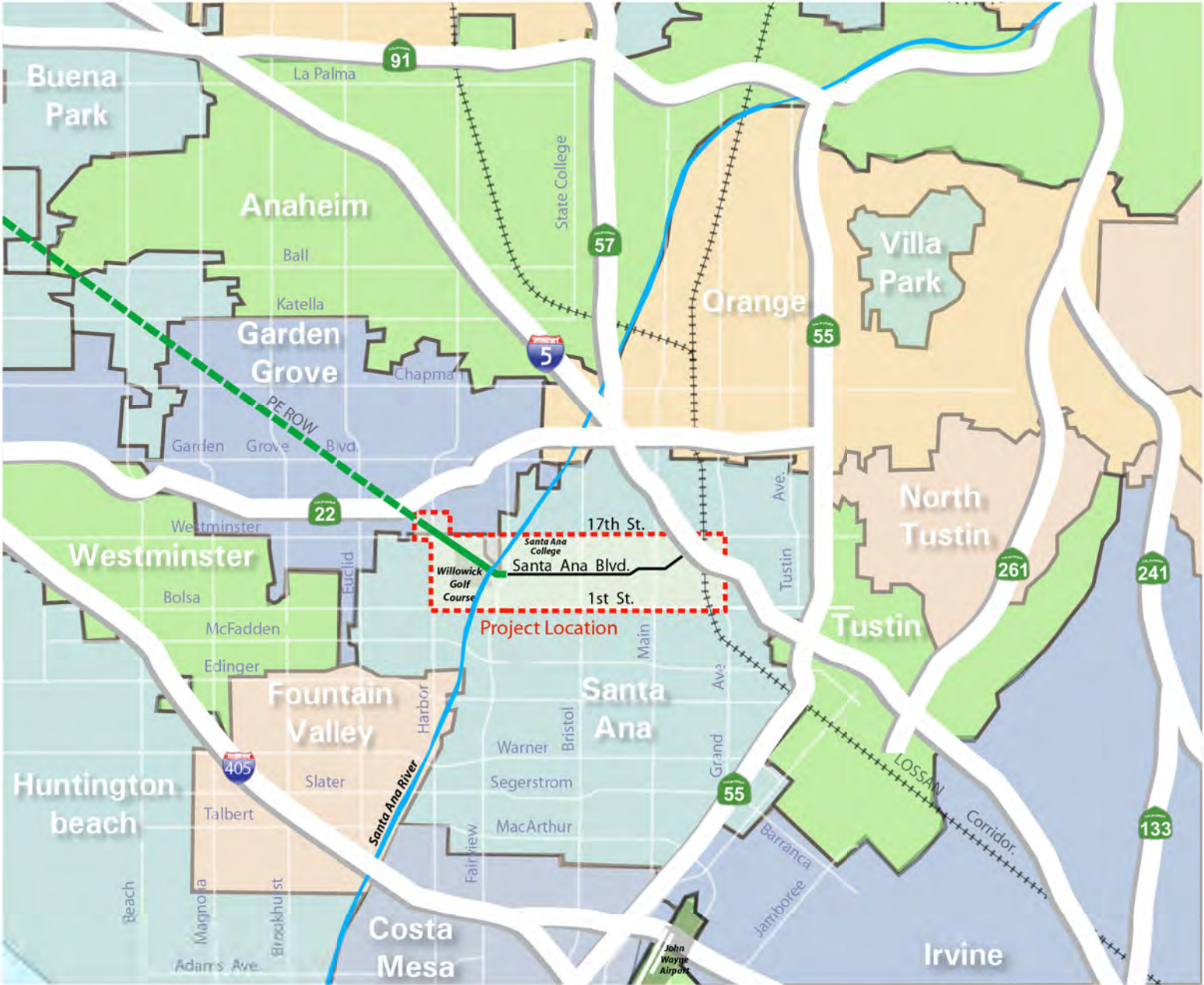


Santa Ana and Garden Grove Fixed Guideway Corridor

CONCEPTUAL DESIGN PLAN SET



OCTOBER 22, 2012



LEGEND

Study Area

Metrolink/Amtrak Rail Line

PE ROW

NORTH

C

CORDOBA CORPORATION

2677 NORTH MAIN STREET, SUITE 240

SANTA ANA, CA 92705

714.558.6124 PH - 714.558.8467 FAX

OCTA

Santa Ana

Education 1st

G

GARDEN GROVE

SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR

SITE LOCATION MAP

DRAWING NO.
G-02
SHEET NO.
SCALE
NONE

Plot Driver= SA-StreetCar.pltctfg Pentable= SA-STREETCAR.TBL

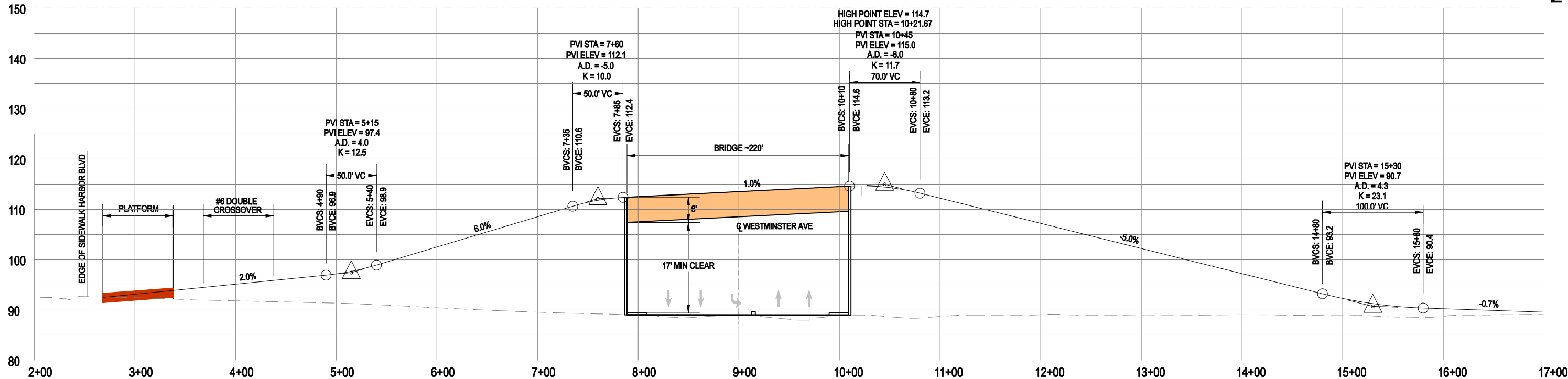
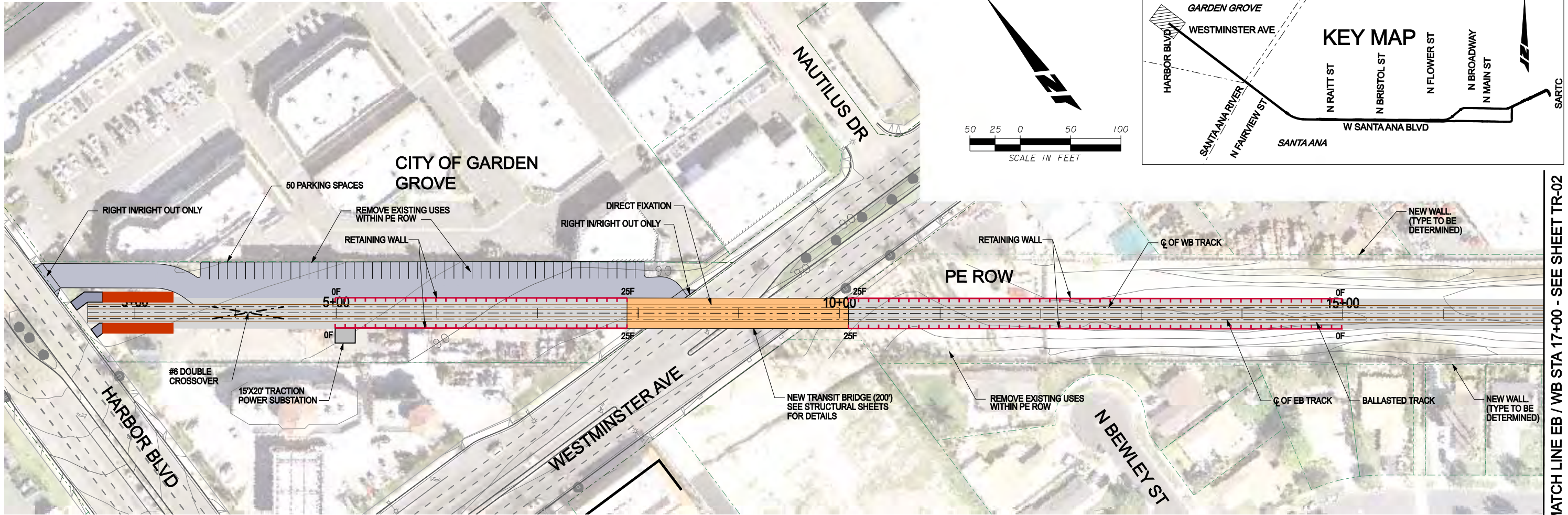
3/7/2011 3:04:52 PM z:*ENG\SantaAna\Fixed_Guideway\CADD*06_Gen*Sheets*G-02.dgn USER=CAD3



Santa Ana and Garden Grove Fixed Guideway Corridor

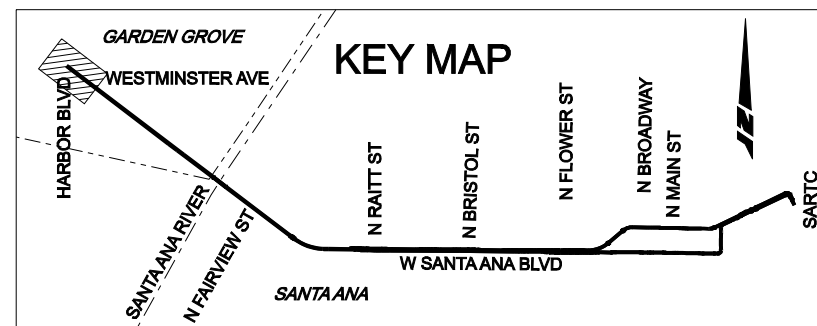
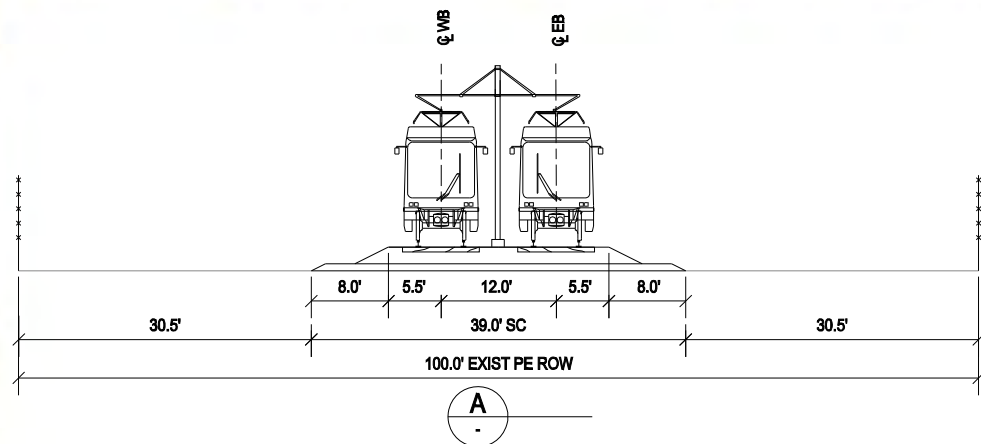
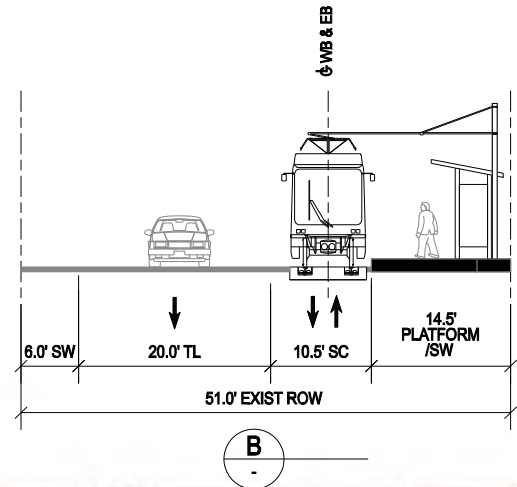
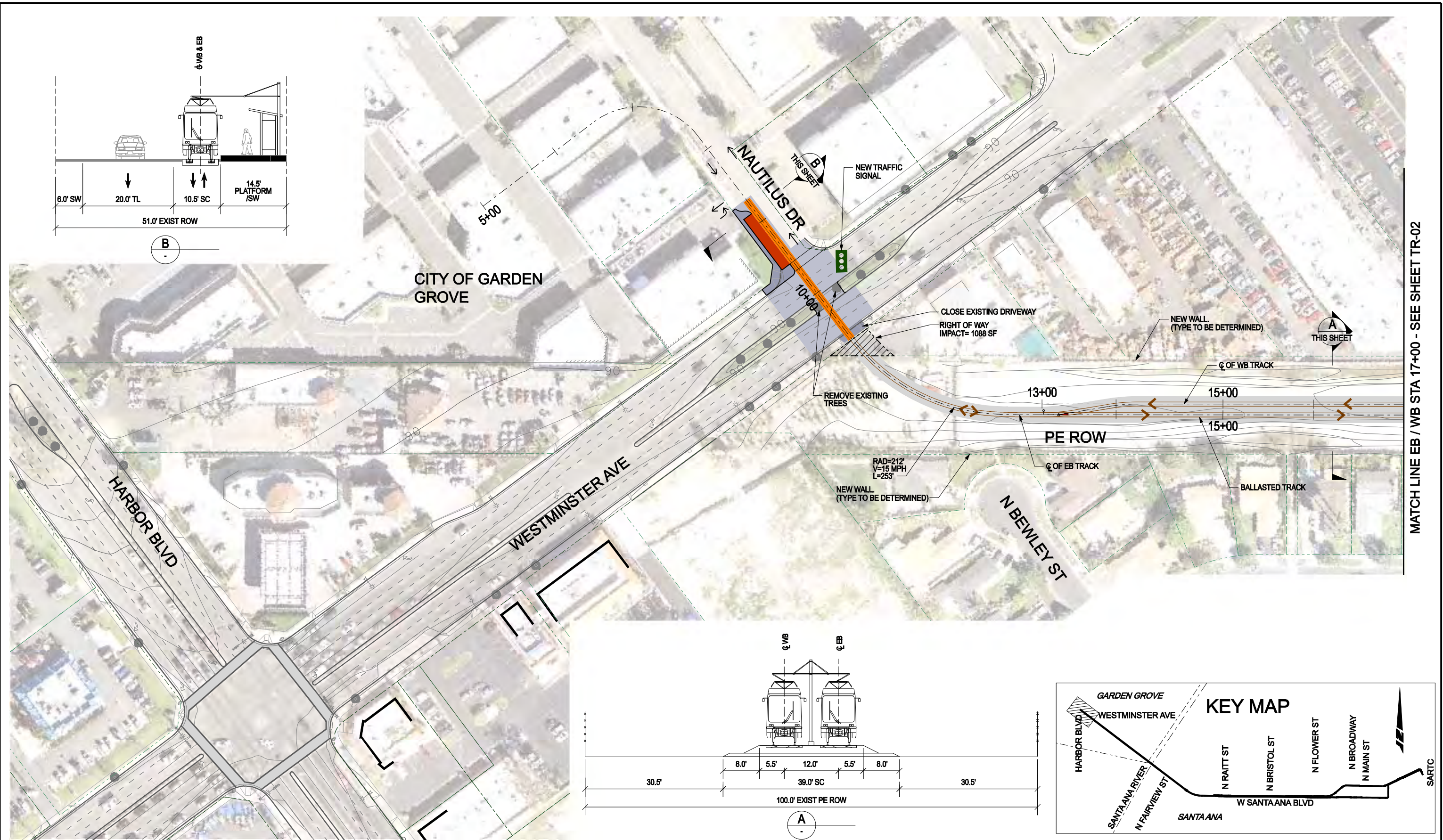
SECTION 1: TRACK ALIGNMENT AND ROADWAY IMPROVEMENTS





LEGEND	DIRECTION OF TRAFFIC →	BUILDING-REMOVAL	EASTBOUND EMBEDDED TRACK	EXISTING SIGNAL
	PLATFORM	WORK LIMITS - ASPHALT	WESTBOUND EMBEDDED TRACK	EXISTING PED SIGNAL
	GATE	WORK LIMITS - CONCRETE	EASTBOUND BALLASTED TRACK	NEW SIGNAL
	PARKING	WORK LIMITS - BALLAST	WESTBOUND BALLASTED TRACK	ADD TRANSIT ONLY SIGNAL
CORDOBA CORPORATION 2671 NORTH MAIN STREET, SUITE 240 SANTA ANA, CA 92705 714.558.6124 PH - 714.558.8467 FAX				
URS				
OCTA				
GARDEN GROVE				
SANTA ANA AND GARDEN GROVE FIXED GUIDEWAY CORRIDOR PE ROW SEGMENT - ALT1 & ALT2 WESTERN TERMINUS OPTION B: ELEVATED WESTERN TERMINUS TO STA 17-00				
DRAWING NO. TR-01B				
SHEET NO. OF 28				
SCALE				

MATCH LINE EB / WB STA 17+00 - SEE SHEET TR-02



MATCH LINE EB / WB STA 17+00 - SEE SHEET TR-02

LEGEND	DIRECTION OF TRAFFIC	→
	PLATFORM	■
	GATE	⊖
	PARKING	Ⓟ
	NEW ROW	- - -
BUILDING-REMOVAL	WORK LIMITS - ASPHALT	▨
	WORK LIMITS - CONCRETE	▩
	WORK LIMITS - BALLAST	▧
	WORK LIMITS - ASPHALT	▨
EASTBOUND EMBEDDED TRACK	WESTBOUND EMBEDDED TRACK	→
	EASTBOUND BALLASTED TRACK	→
	WESTBOUND BALLASTED TRACK	→
	WESTBOUND BALLASTED TRACK	→
EXISTING SIGNAL	EXISTING PED SIGNAL	Ⓟ
	NEW SIGNAL	Ⓟ
	ADD TRANSIT ONLY SIGNAL	Ⓟ
	ADD TRANSIT ONLY SIGNAL	Ⓟ

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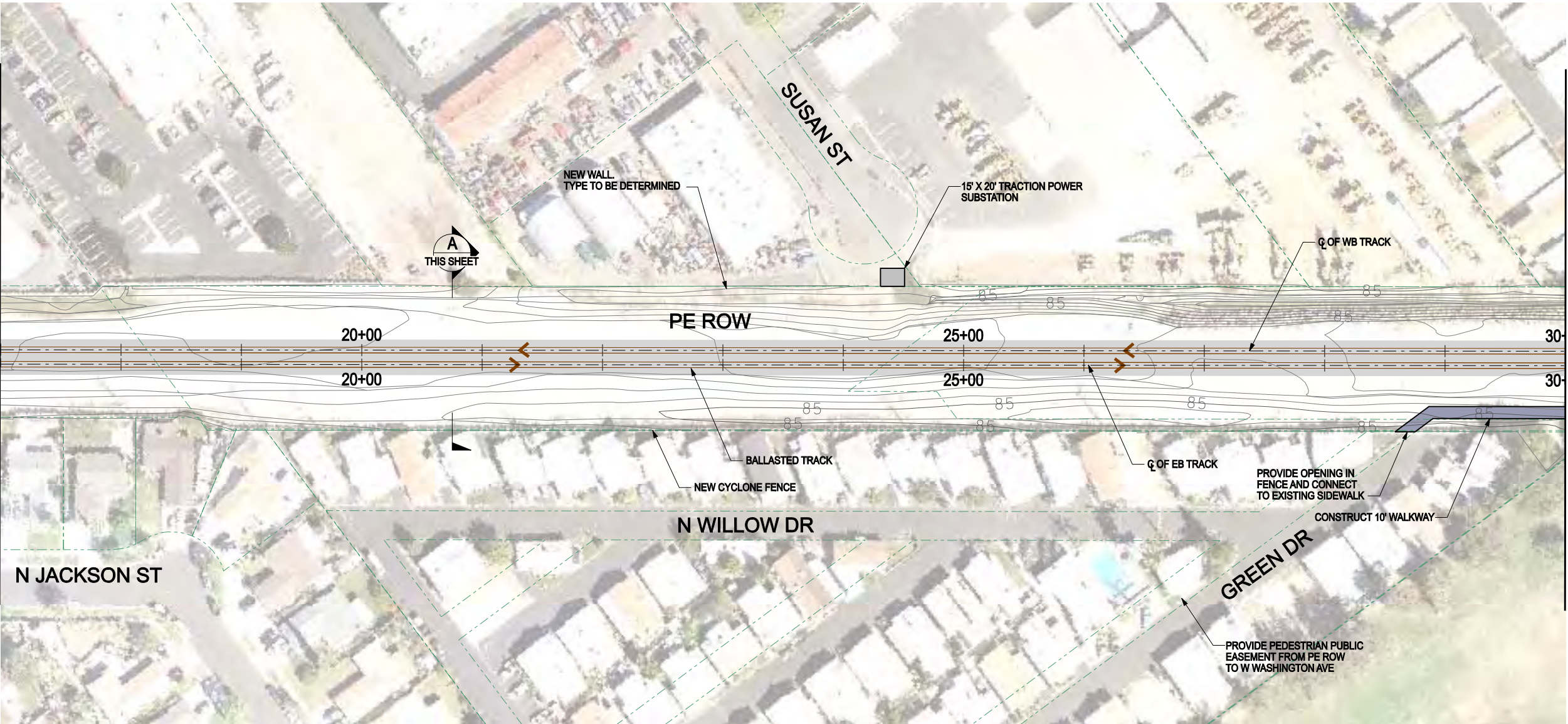
**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**
PE ROW SEGMENT - ALT 1 & ALT 2
WESTERN TERMINUS OPTION C: TRUNCATED
AT-GRADE WESTERN TERMINUS TO STA 17-00

DRAWING NO.
TR - 01C

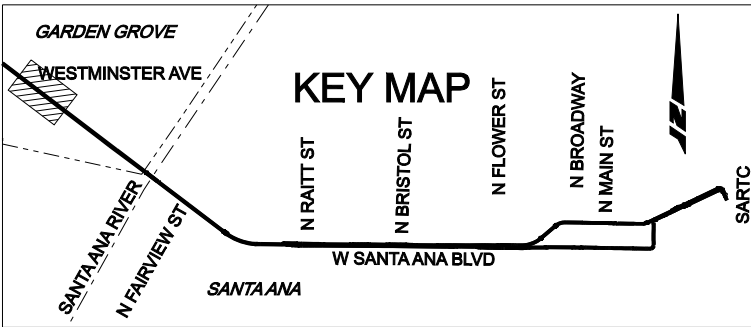
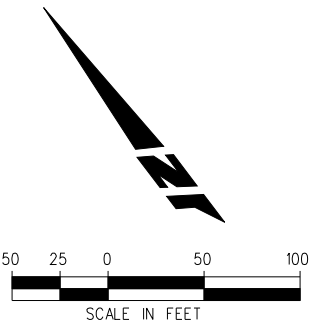
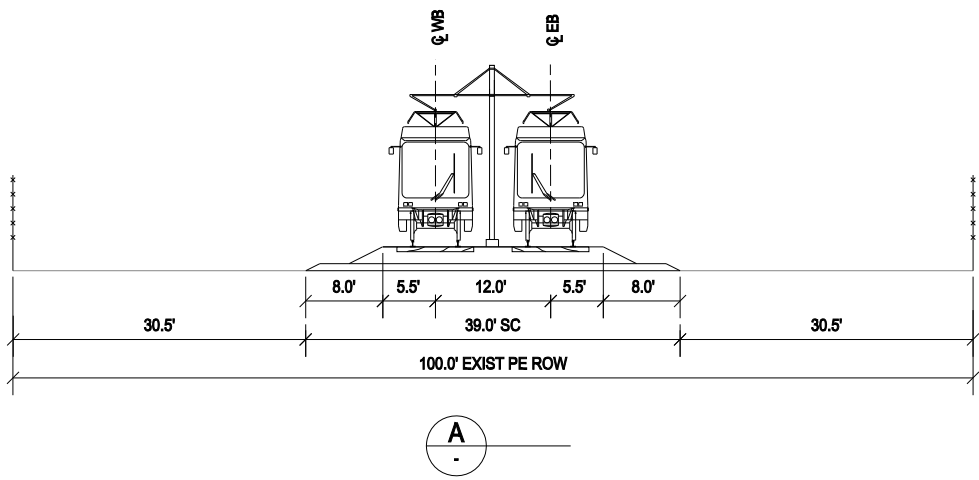
SHEET NO.

SCALE

MATCH LINE EB / WB STA 17+00 - SEE SHEET TR-01A OR TR-01B



MATCH LINE EB / WB STA 30+00 - SEE SHEET TR-03

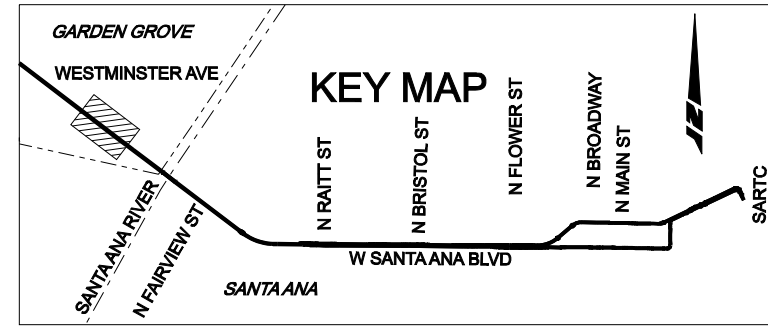
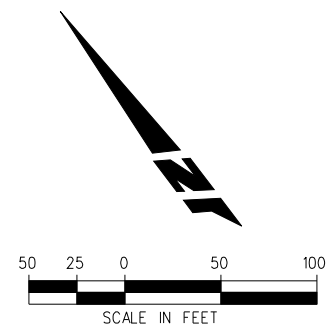
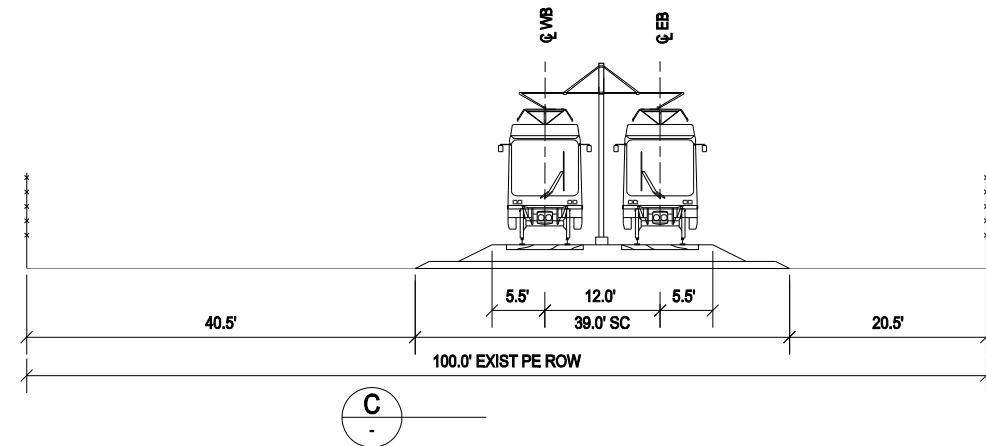
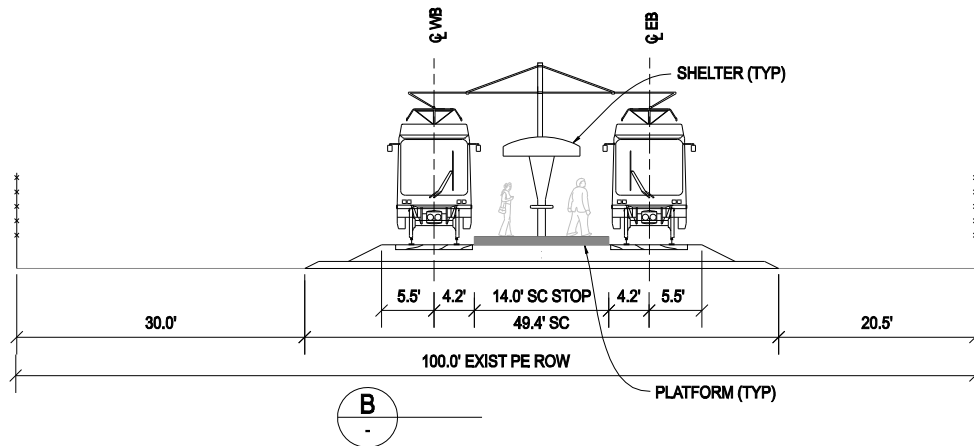
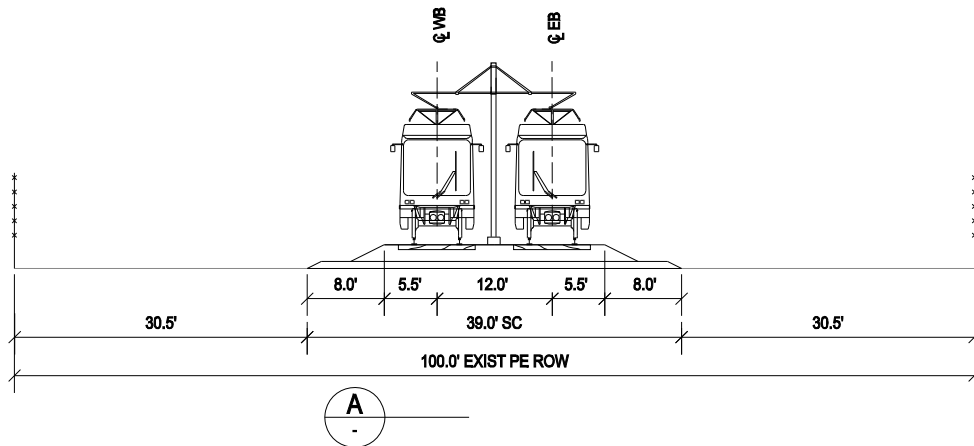
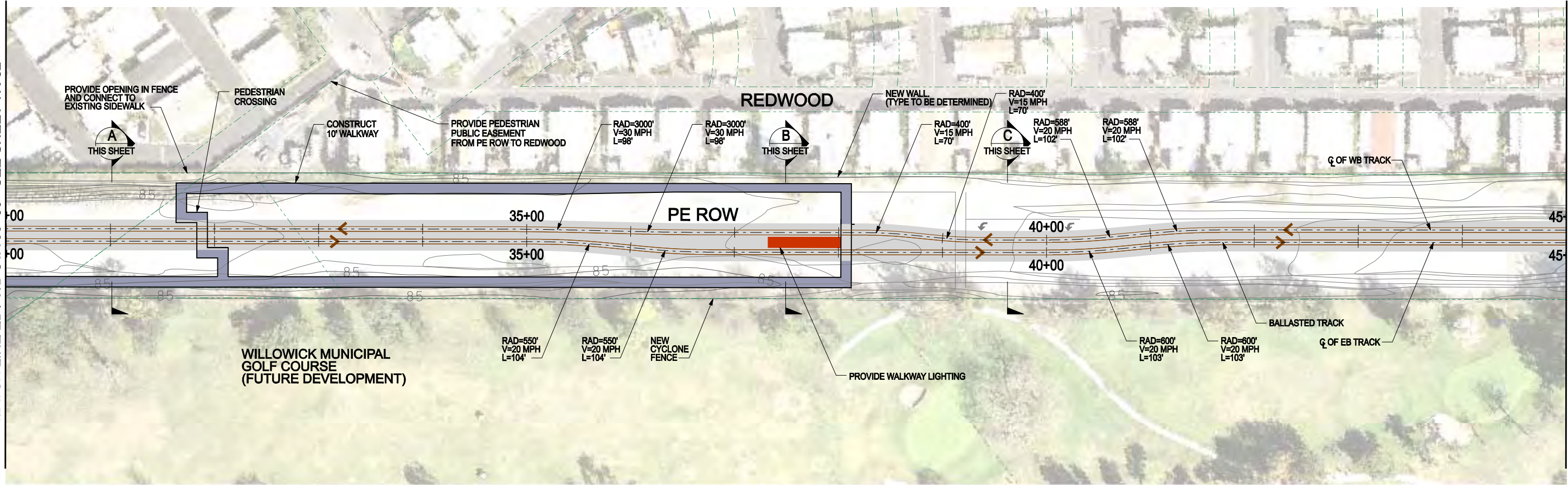


















LEGEND	DIRECTION OF TRAFFIC →	BUILDING-REMOVAL [Hatched Box]	EASTBOUND EMBEDDED TRACK [Track with Arrow]	EXISTING SIGNAL [Signal Icon]						
	PLATFORM [Orange Bar]	WORK LIMITS - ASPHALT [Blue Line]	WESTBOUND EMBEDDED TRACK [Track with Arrow]	EXISTING PED SIGNAL [Signal Icon]						
	GATE [Gate Icon]	WORK LIMITS - CONCRETE [Blue Line]	EASTBOUND BALLASTED TRACK [Track with Arrow]	NEW SIGNAL [Signal Icon]						
	PARKING [P Icon]	WORK LIMITS - BALLAST [Blue Line]	WESTBOUND BALLASTED TRACK [Track with Arrow]	ADD TRANSIT ONLY SIGNAL [Signal Icon]						
NEW ROW [Dashed Line]										
STRUCTURE [Orange Bar]										
<div><div>CORDOBA CORPORATION 2677 NORTH MAIN STREET, SUITE 240 SANTA ANA, CA 92705 714.558.6124 PH - 714.558.8467 FAX</div><div>OCTA</div><div></div><div></div></div>										
<div><div>SANTA ANA AND GARDEN GROVE FIXED GUIDEWAY CORRIDOR TRACK ALIGNMENT AND RDWY IMPROVEMENTS PE ROW SEGMENT - ALT1 & ALT2 STA 17+00 TO 30+00</div><div><table><tr><td>DRAWING NO.</td><td>TR - 02</td></tr><tr><td>SHEET NO.</td><td></td></tr><tr><td>SCALE</td><td></td></tr></table></div></div>					DRAWING NO.	TR - 02	SHEET NO.		SCALE	
DRAWING NO.	TR - 02									
SHEET NO.										
SCALE										

Plot Driver= SA-StreetCar.plt Pentable=PDX_Exh_SA-StreetCar.tbl

MATCH LINE EB / WB STA 30+00 - SEE SHEET TR-02

MATCH LINE EB / WB STA 45+00 - SEE SHEET TR-04



LEGEND	DIRECTION OF TRAFFIC	→	BUILDING-REMOVAL		EASTBOUND EMBEDDED TRACK		EXISTING SIGNAL	
	PLATFORM		WORK LIMITS - ASPHALT		WESTBOUND EMBEDDED TRACK		EXISTING PED SIGNAL	
	GATE		WORK LIMITS - CONCRETE		EASTBOUND BALLASTED TRACK		NEW SIGNAL	
	PARKING		WORK LIMITS - BALLAST		WESTBOUND BALLASTED TRACK		ADD TRANSIT ONLY SIGNAL	
	NEW ROW	- - - - -						
	STRUCTURE							

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GARDEN GROVE

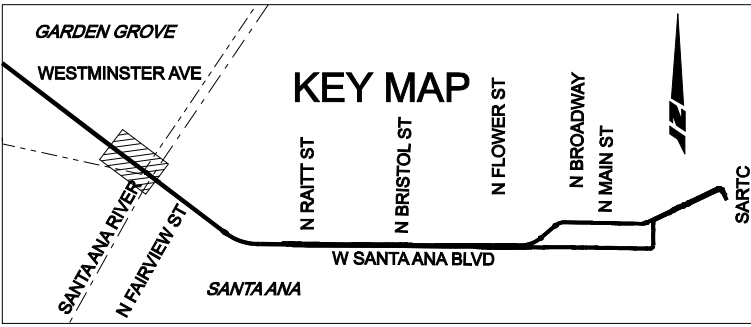
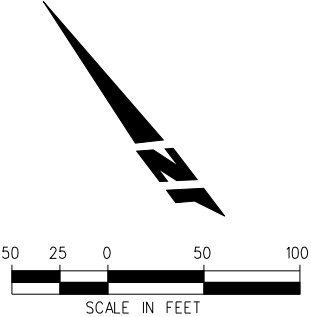
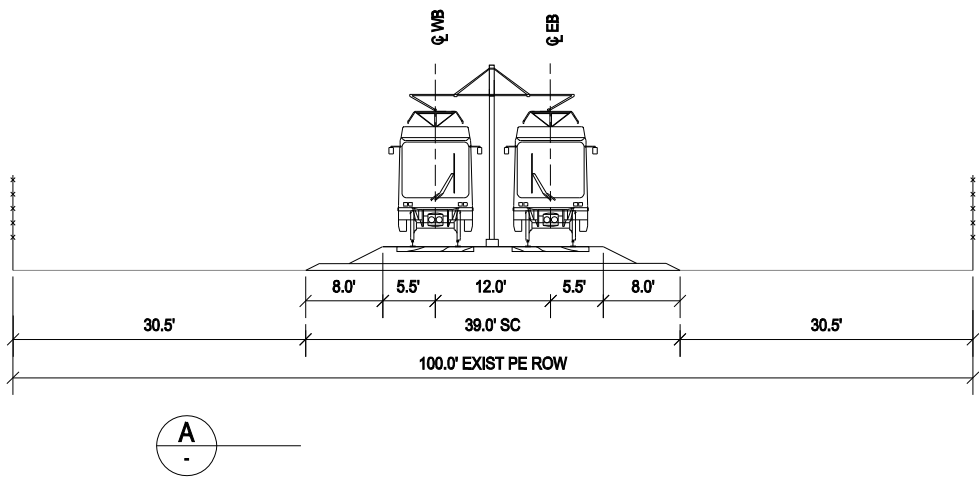
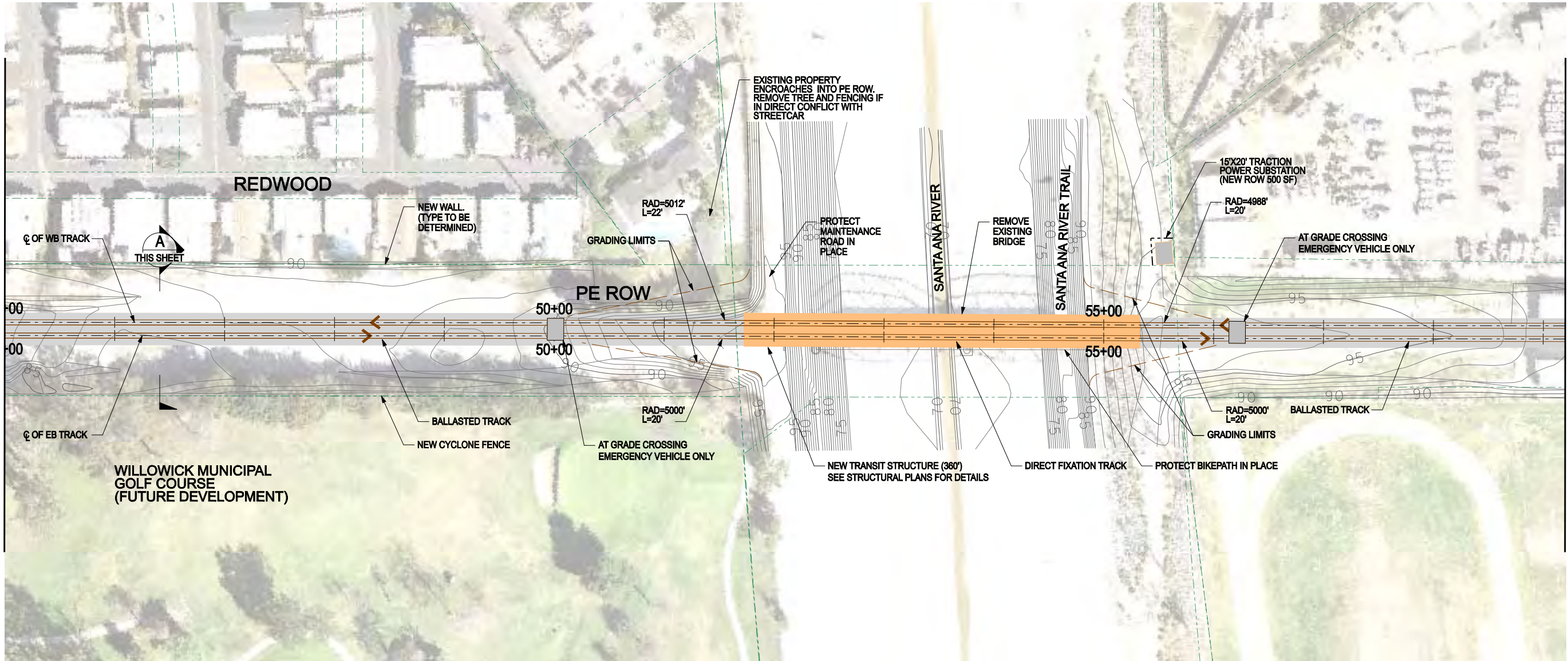
**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**

TRACK ALIGNMENT AND RDWY IMPROVEMENTS
PE ROW SEGMENT - ALT1 & ALT2
STA 30+00 TO 45+00

DRAWING NO.	TR - 03
SHEET NO.	
SCALE	

MATCH LINE EB / WB STA 45+00 - SEE SHEET TR-03

MATCH LINE EB / WB STA 59+20 - SEE SHEET TR-05



LEGEND	DIRECTION OF TRAFFIC	→
	PLATFORM	[Orange Bar]
	GATE	[Black Line]
	PARKING	Ⓟ
	NEW ROW	- - - - -
STRUCTURE	[Orange Bar]	
BUILDING-REMOVAL	[Hatched Box]	
WORK LIMITS - ASPHALT	[Blue Line]	
WORK LIMITS - CONCRETE	[Dark Blue Line]	
WORK LIMITS - BALLAST	[Grey Line]	
EASTBOUND EMBEDDED TRACK	[Orange Arrow]	
WESTBOUND EMBEDDED TRACK	[Orange Arrow]	
EASTBOUND BALLASTED TRACK	[Orange Arrow]	
WESTBOUND BALLASTED TRACK	[Orange Arrow]	
EXISTING SIGNAL	[Signal Icon]	
EXISTING PED SIGNAL	[Signal Icon]	
NEW SIGNAL	[Signal Icon]	
ADD TRANSIT ONLY SIGNAL	[Signal Icon]	

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**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**

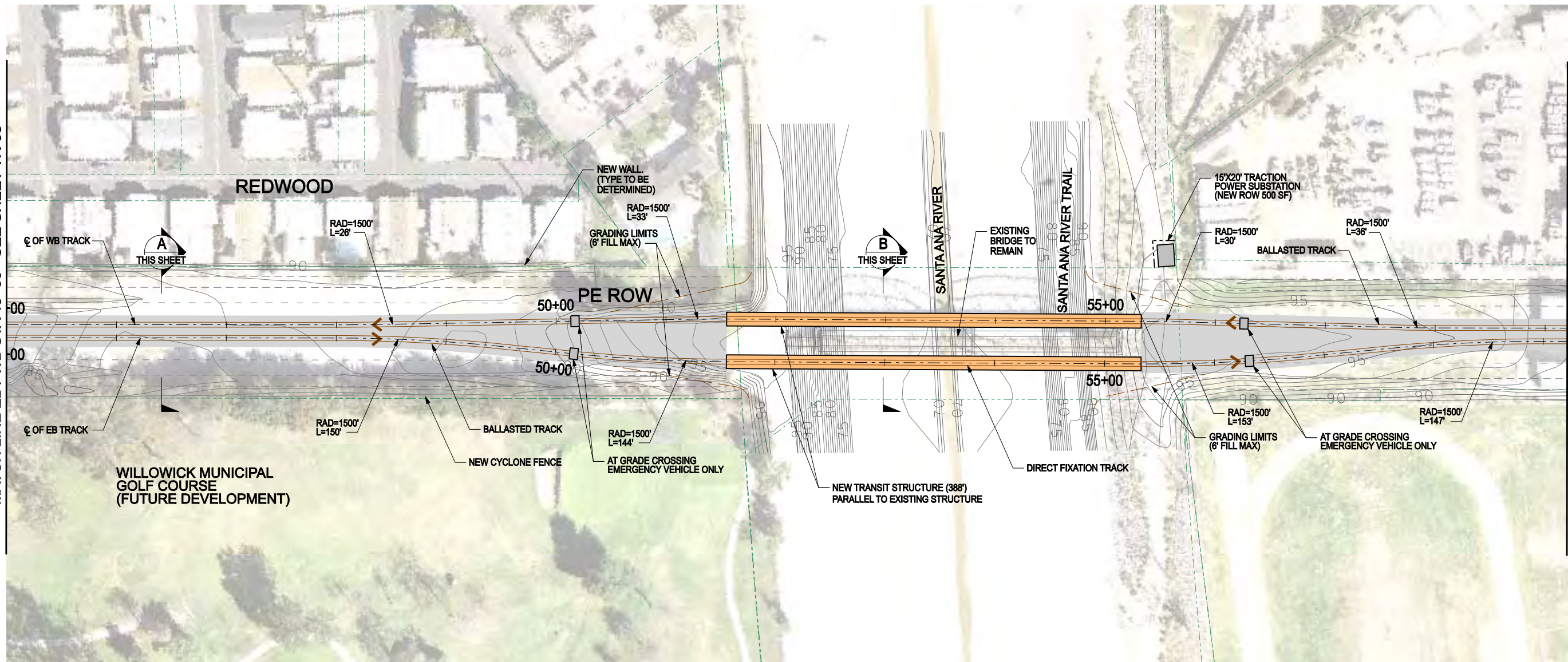
PE ROW SEGMENT - ALT 1 & ALT 2
BRIDGE OPTIONS 1 & 3: NEW BRIDGE
RIVER BRIDGE AT STA 45+00 TO STA 59-20

DRAWING NO.
TR - 04A

SHEET NO.

SCALE

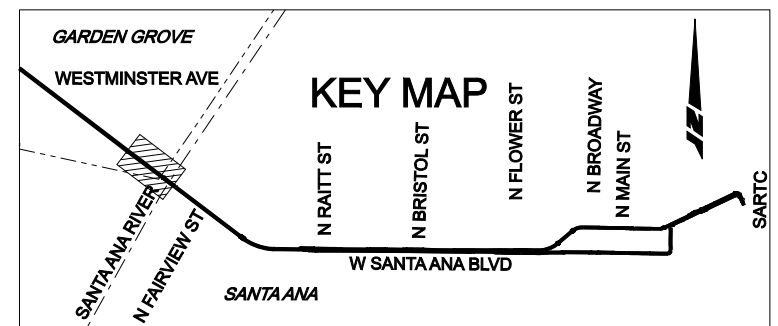
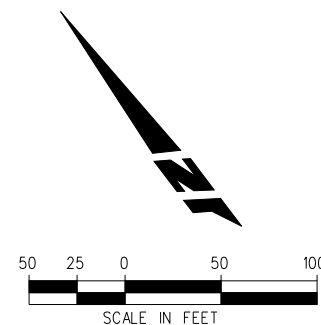
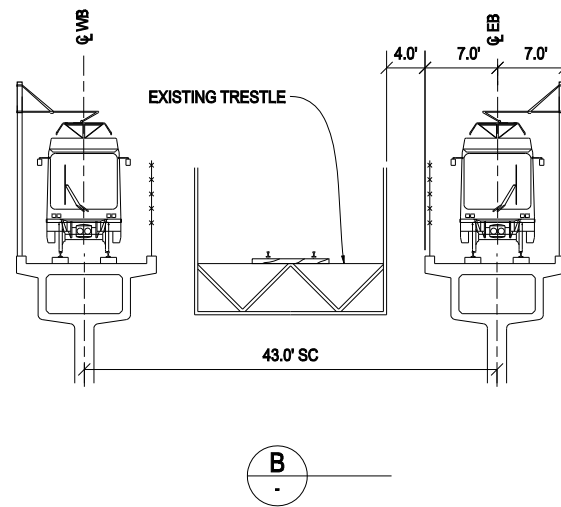
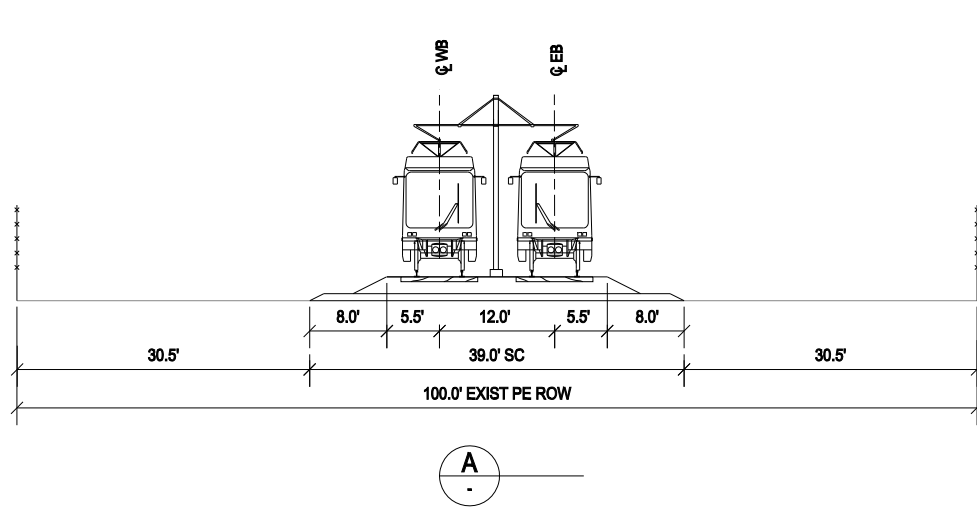
MATCH LINE EB / WB STA 45+00 - SEE SHEET TR-03



MATCH LINE EB / WB STA 59+20 - SEE SHEET TR-05

= "OPTION B" EB STA 59+21.60

= "OPTION B" WB STA 59+20.12



LEGEND	DIRECTION OF TRAFFIC	→	BUILDING-REMOVAL		EASTBOUND EMBEDDED TRACK		EXISTING SIGNAL	
	PLATFORM		WORK LIMITS - ASPHALT		WESTBOUND EMBEDDED TRACK		EXISTING PED SIGNAL	
	GATE		WORK LIMITS - CONCRETE		EASTBOUND BALLASTED TRACK		NEW SIGNAL	
	PARKING		WORK LIMITS - BALLAST		WESTBOUND BALLASTED TRACK		ADD TRANSIT ONLY SIGNAL	
	NEW ROW							
	STRUCTURE							

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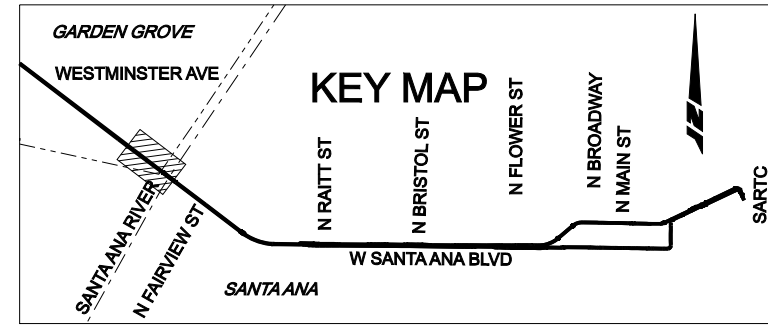
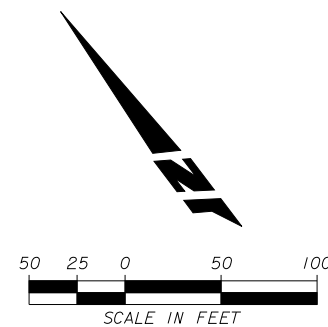
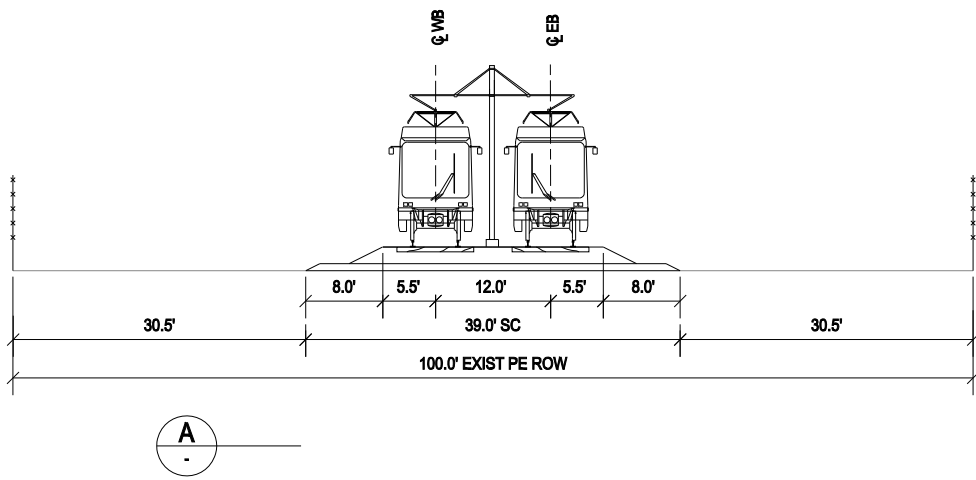
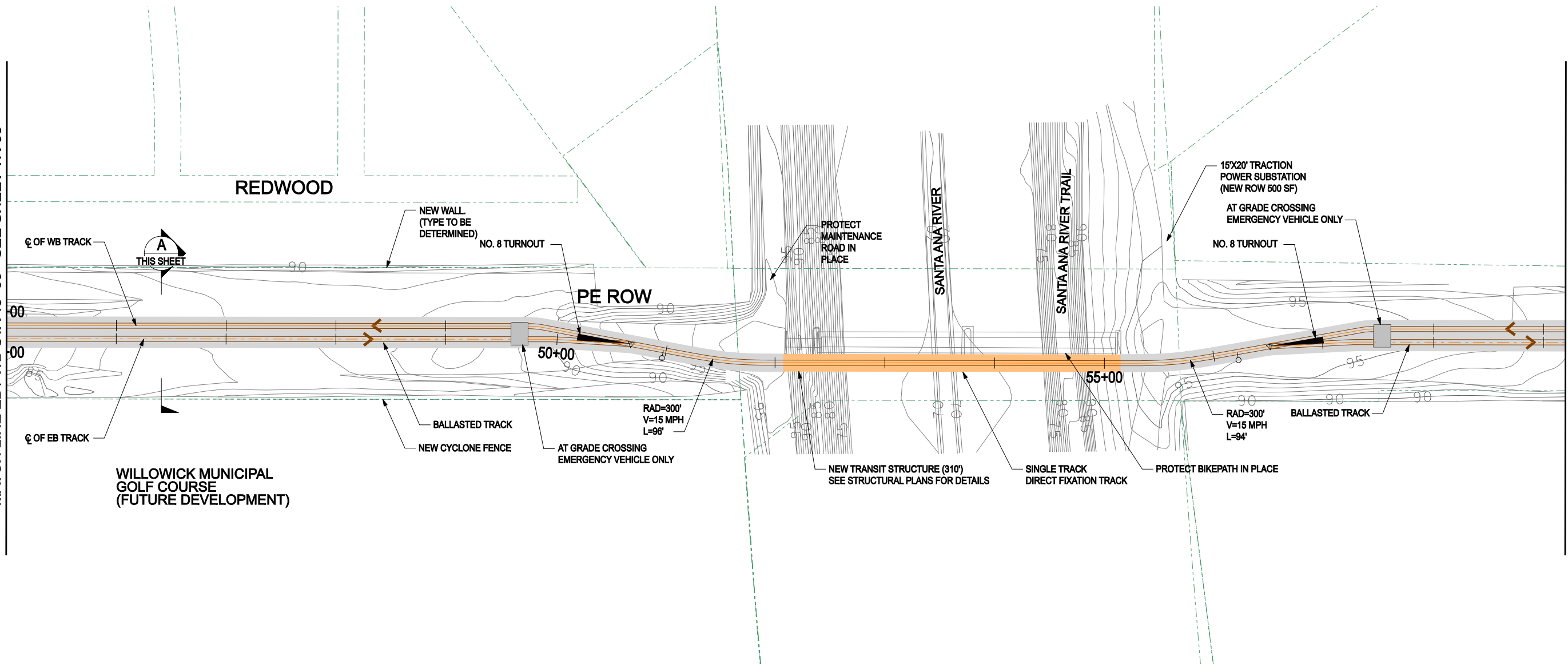
GARDEN GROVE


















**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**
PE ROW SEGMENT - ALT1 & ALT 2
BRIDGE OPTION 2: BRIDGE AVOIDANCE - A
A RIVER BRIDGE AT STA 45+00 TO STA 59+20

DRAWING NO.	TR - 04B
SHEET NO.	
SCALE	

MATCH LINE EB / WB STA 45+00 - SEE SHEET TR-03

MATCH LINE EB / WB STA 59+20 - SEE SHEET TR-05



LEGEND	DIRECTION OF TRAFFIC	→	BUILDING-REMOVAL		EASTBOUND EMBEDDED TRACK		EXISTING SIGNAL	
	PLATFORM		WORK LIMITS - ASPHALT		WESTBOUND EMBEDDED TRACK		EXISTING PED SIGNAL	
	GATE		WORK LIMITS - CONCRETE		EASTBOUND BALLASTED TRACK		NEW SIGNAL	
	PARKING		WORK LIMITS - BALLAST		WESTBOUND BALLASTED TRACK		ADD TRANSIT ONLY SIGNAL	
	NEW ROW							
	STRUCTURE							

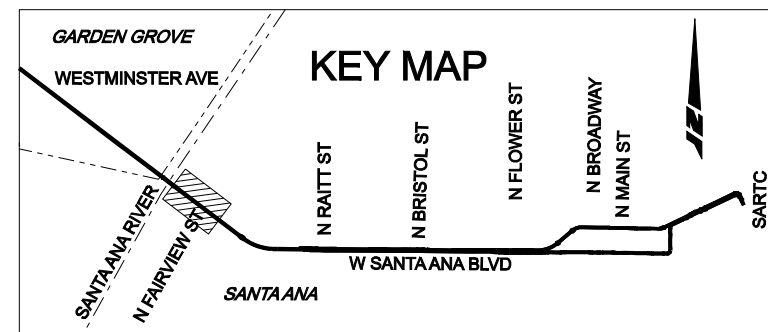
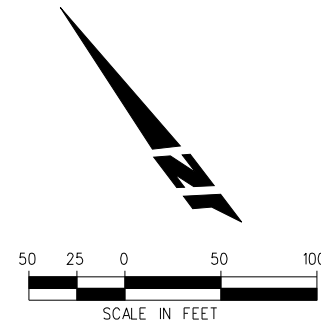
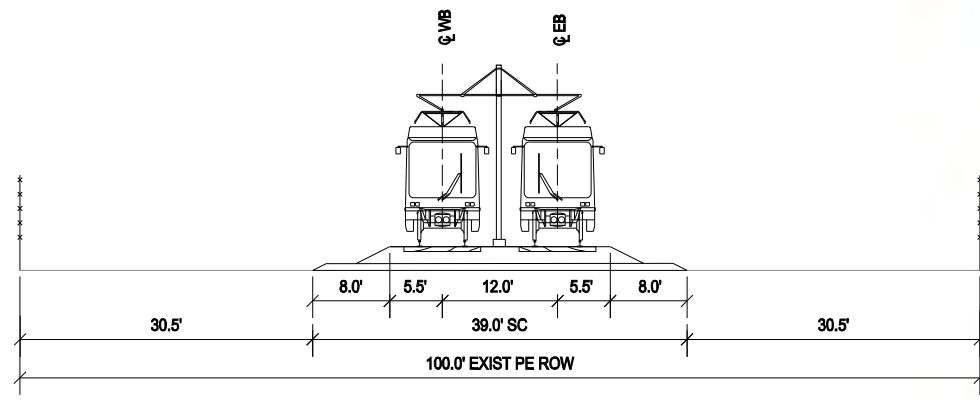
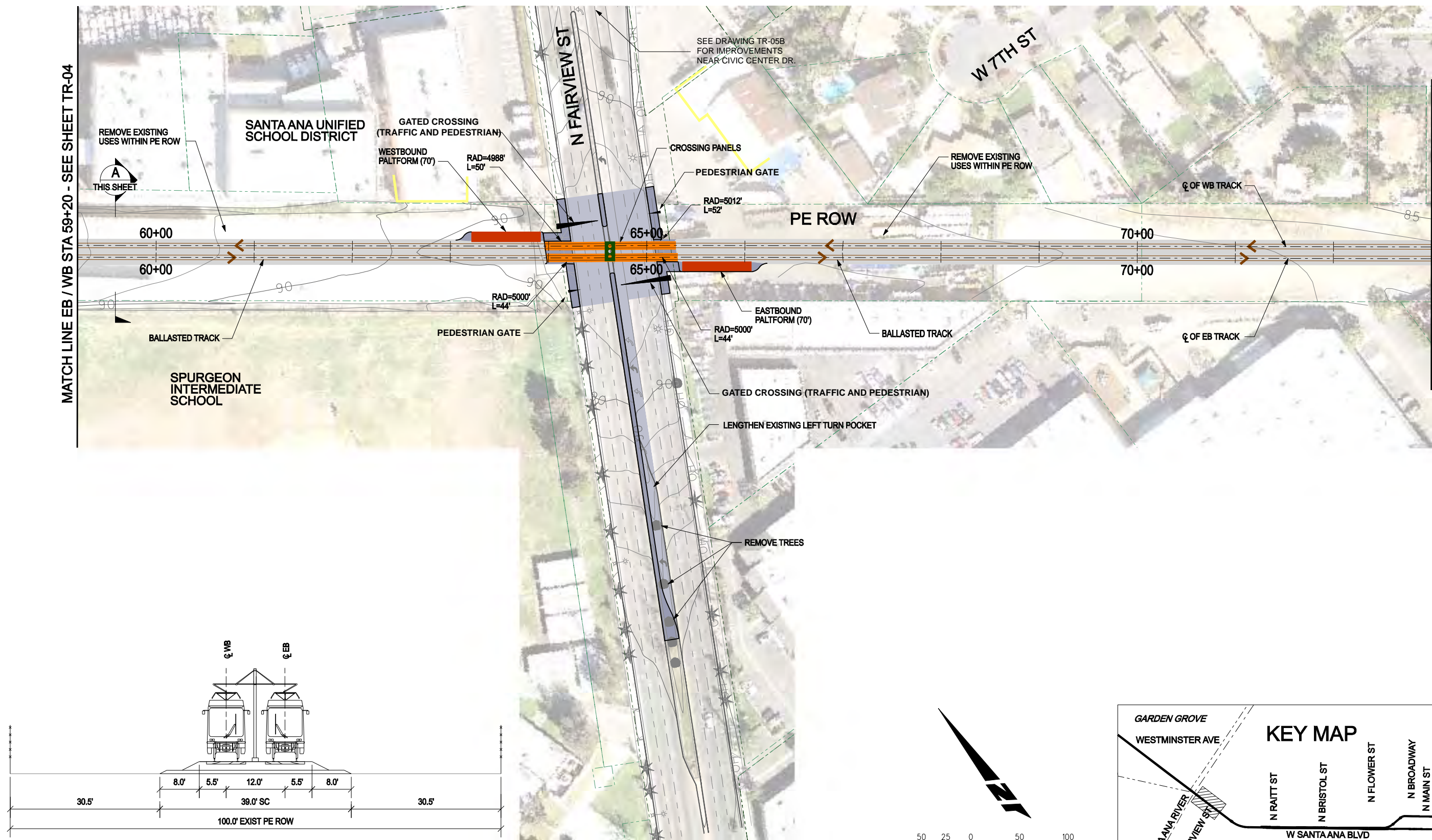
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**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**
PE ROW SEGMENT - ALT1 & ALT 2
BRIDGE OPTION 4: BRIDGE AVOIDANCE - B
STA 45+00 TO 59+20

DRAWING NO.	TR-04D
SHEET NO.	OF 28
SCALE	

MATCH LINE EB / WB STA 59+20 - SEE SHEET TR-04

MATCH LINE EB / WB STA 73+00 - SEE SHEET TR-06



LEGEND	DIRECTION OF TRAFFIC →	BUILDING-REMOVAL [Hatched Box]	EASTBOUND EMBEDDED TRACK [Orange Arrow]	EXISTING SIGNAL [Signal Icon]
	PLATFORM [Orange Bar]	WORK LIMITS - ASPHALT [Blue Line]	WESTBOUND EMBEDDED TRACK [Orange Arrow]	EXISTING PED SIGNAL [Signal Icon]
	GATE [Gate Icon]	WORK LIMITS - CONCRETE [Blue Line]	EASTBOUND BALLASTED TRACK [Orange Arrow]	NEW SIGNAL [Signal Icon]
	PARKING [P Icon]	WORK LIMITS - BALLAST [Blue Line]	WESTBOUND BALLASTED TRACK [Orange Arrow]	ADD TRANSIT ONLY SIGNAL [Signal Icon]
NEW ROW [Dashed Line]				
STRUCTURE [Orange Bar]				

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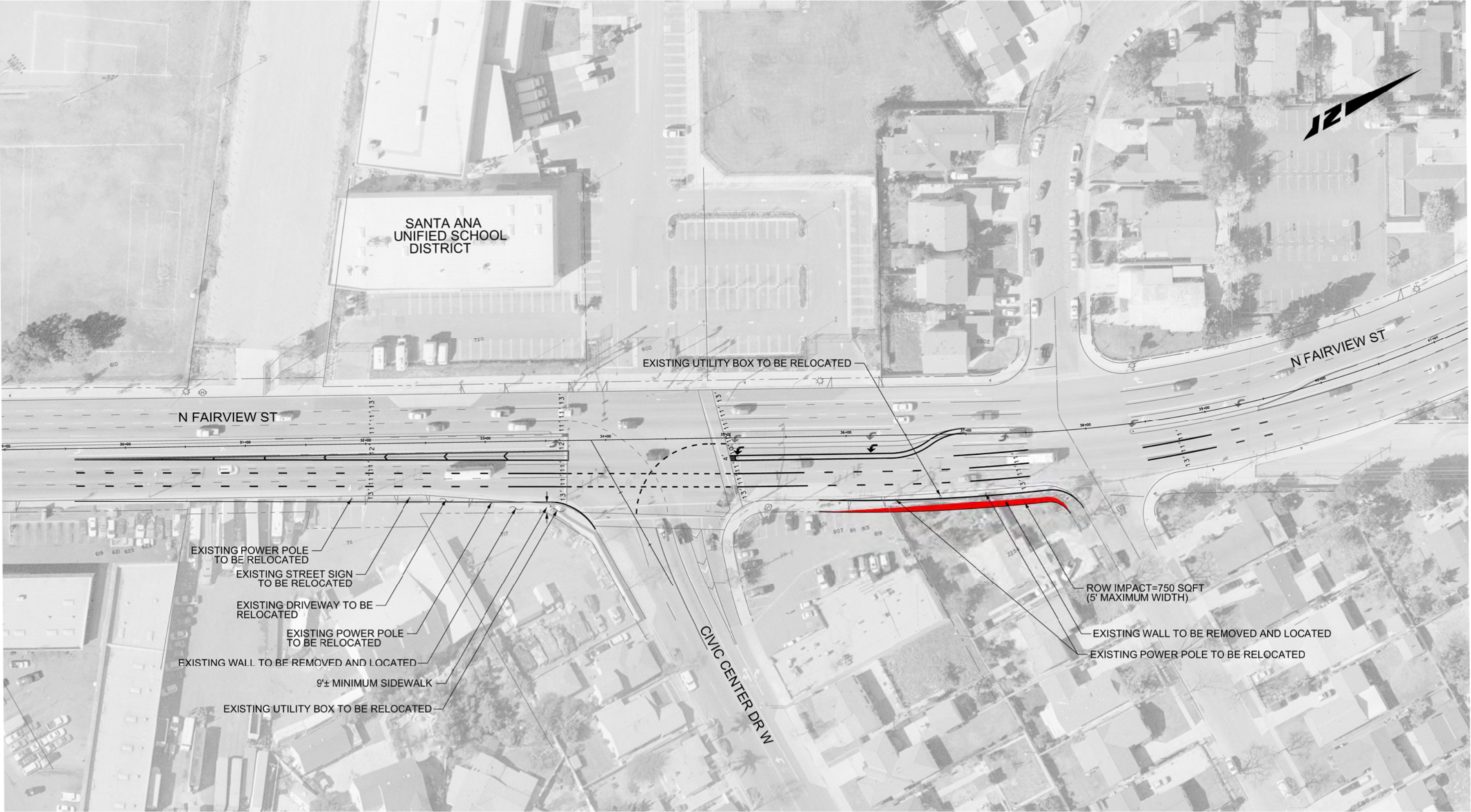
Santa Ana Education 1st

GARDEN GROVE


**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**

TRACK ALIGNMENT AND RDWY IMPROVEMENTS
PE ROW SEGMENT - ALT1 & ALT2
STA 59+20 TO 73+00

DRAWING NO.	TR - 05A
SHEET NO.	
SCALE	



LEGEND	
	RIGHT OF WAY IMPACT
	EXISTING RIGHT OF WAY
	PROPOSED RIGHT OF WAY



CORDOBA CORPORATION

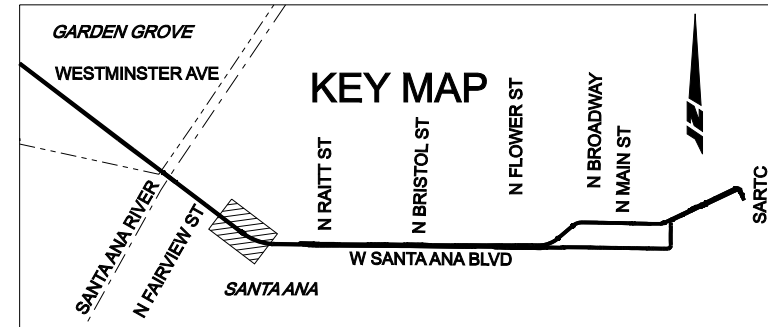
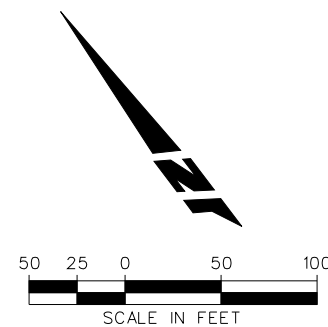
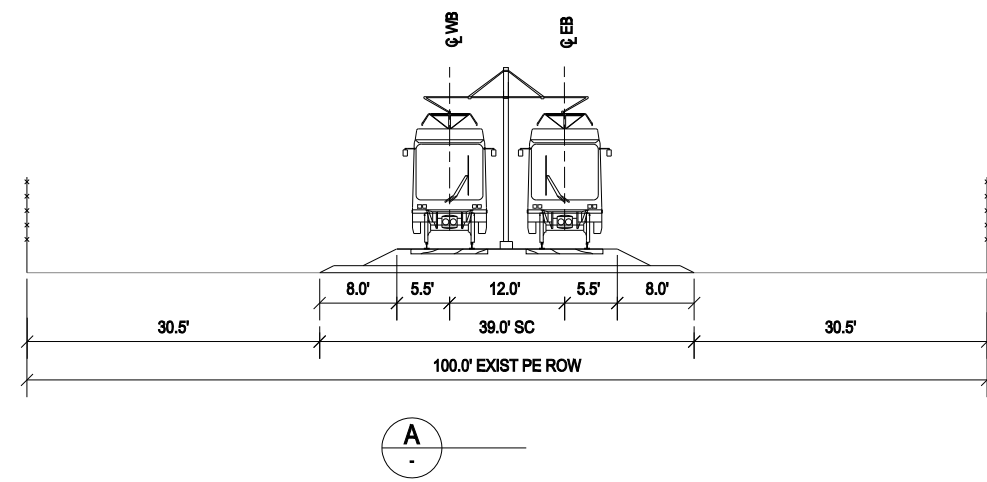
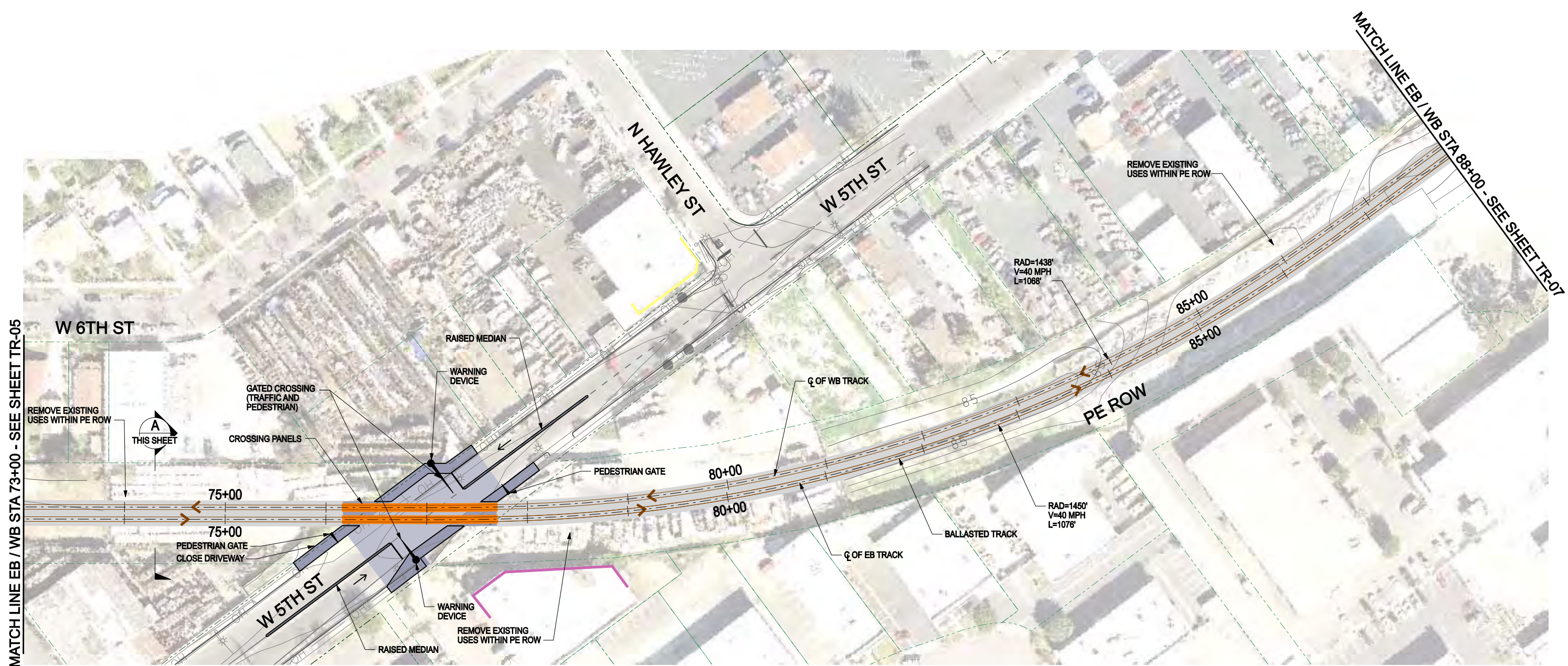
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SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR

FAIRVIEW ST AND CIVIC CENTER DR
INTERSECTION IMPROVEMENTS

DRAWING NO.	TR-05B
SHEET NO.	OF
SCALE	1"=40'



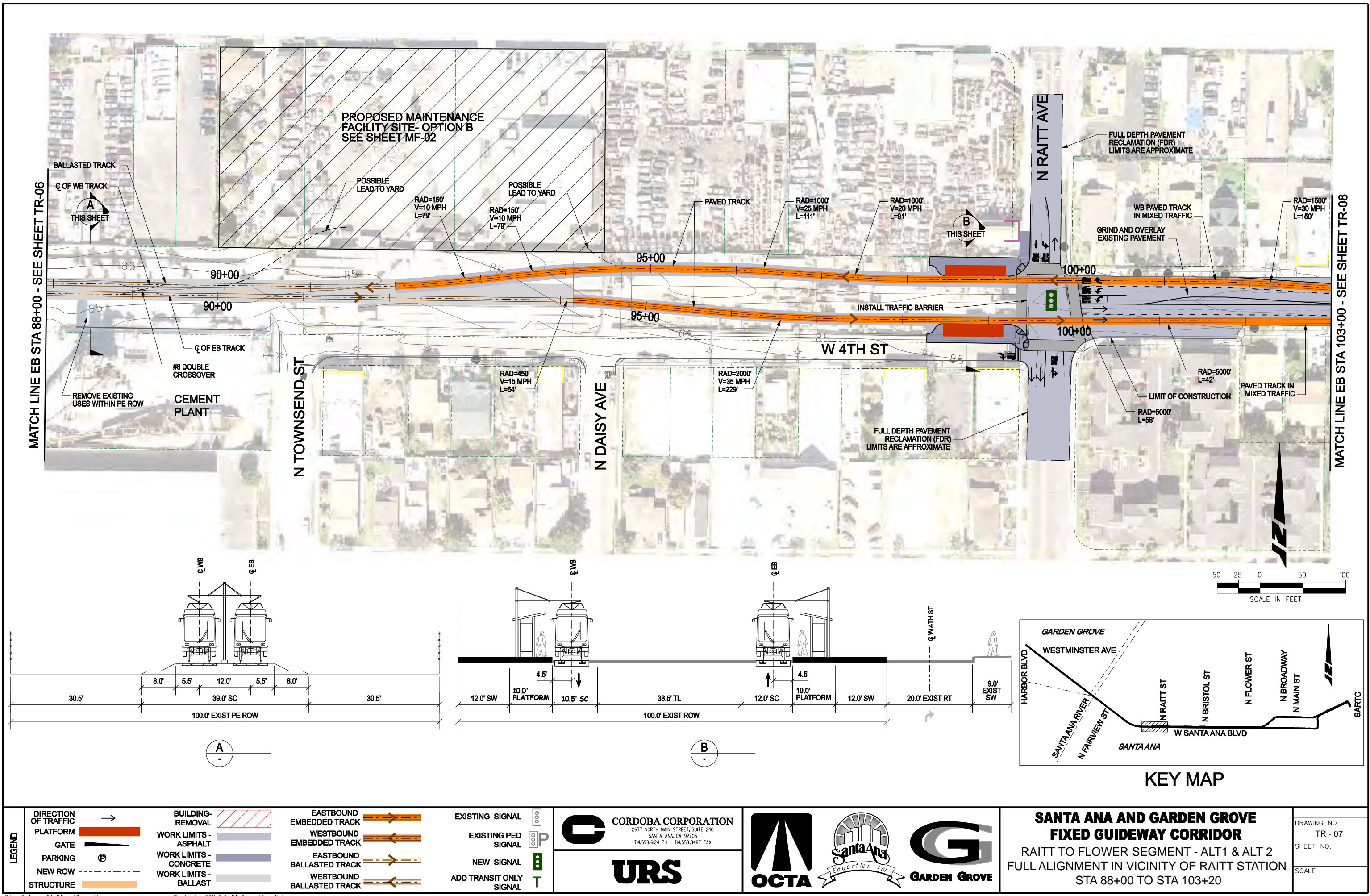
LEGEND	DIRECTION OF TRAFFIC →	BUILDING-REMOVAL [Hatched Box]	EASTBOUND EMBEDDED TRACK [Orange Arrow]	EXISTING SIGNAL [Signal Icon]
	PLATFORM [Orange Bar]	WORK LIMITS - ASPHALT [Blue Line]	WESTBOUND EMBEDDED TRACK [Orange Arrow]	EXISTING PED SIGNAL [P Icon]
	GATE [Gate Icon]	WORK LIMITS - CONCRETE [Dark Blue Line]	EASTBOUND BALLASTED TRACK [Orange Arrow]	NEW SIGNAL [Signal Icon]
	PARKING [P Icon]	WORK LIMITS - BALLAST [Light Blue Line]	WESTBOUND BALLASTED TRACK [Orange Arrow]	ADD TRANSIT ONLY SIGNAL [T Icon]
NEW ROW [Dashed Line]				
STRUCTURE [Orange Bar]				

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**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**

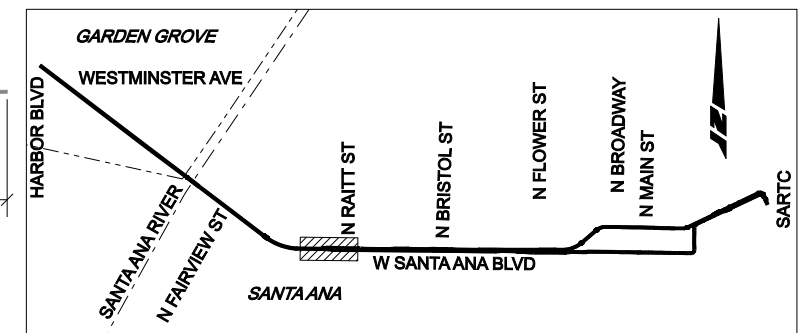
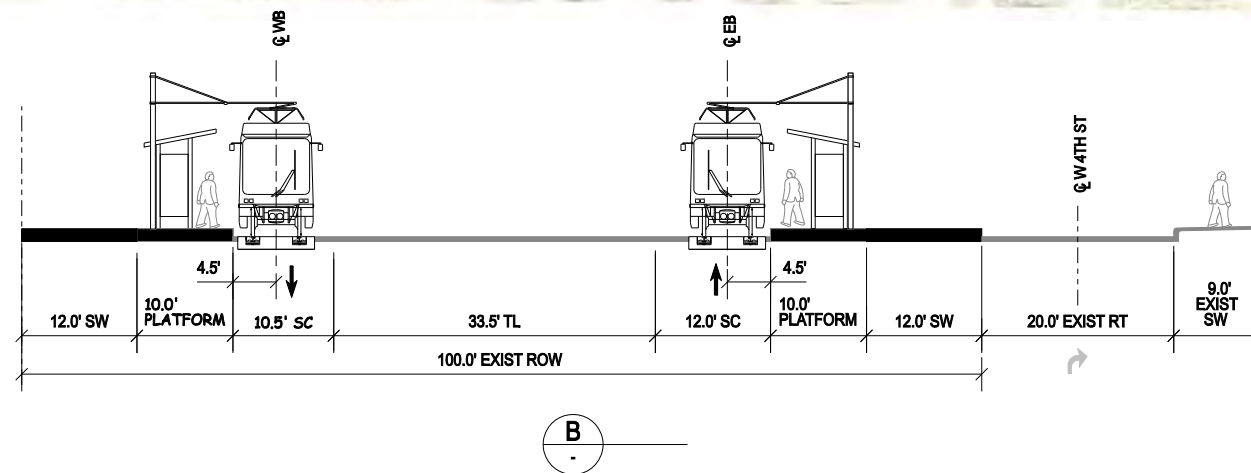
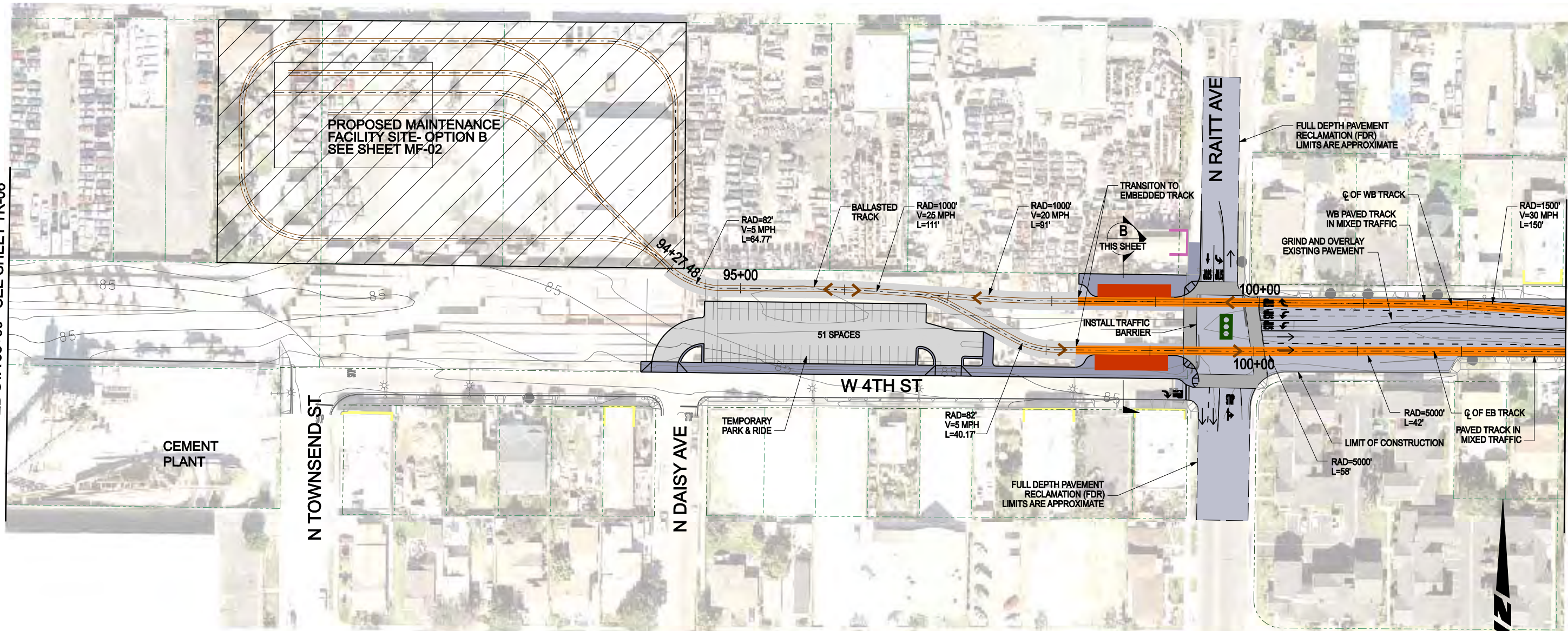
TRACK ALIGNMENT AND RDWY IMPROVEMENTS
PE ROW SEGMENT - ALT1 & ALT2
STA 73+00 TO 88+00

DRAWING NO. TR-06
SHEET NO.
SCALE



MATCH LINE EB STA 88+00 - SEE SHEET TR-06

MATCH LINE EB STA 103+00 - SEE SHEET TR-08



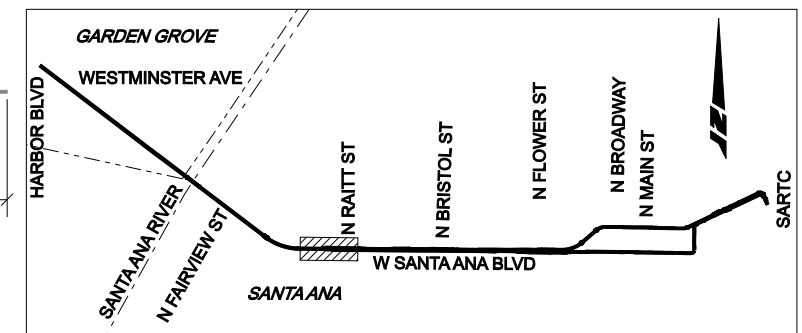
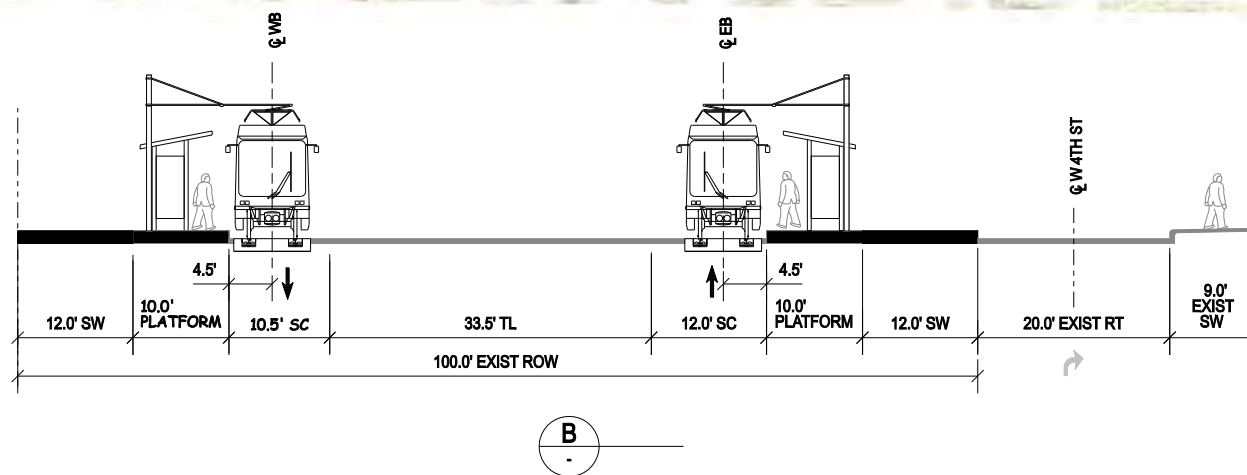
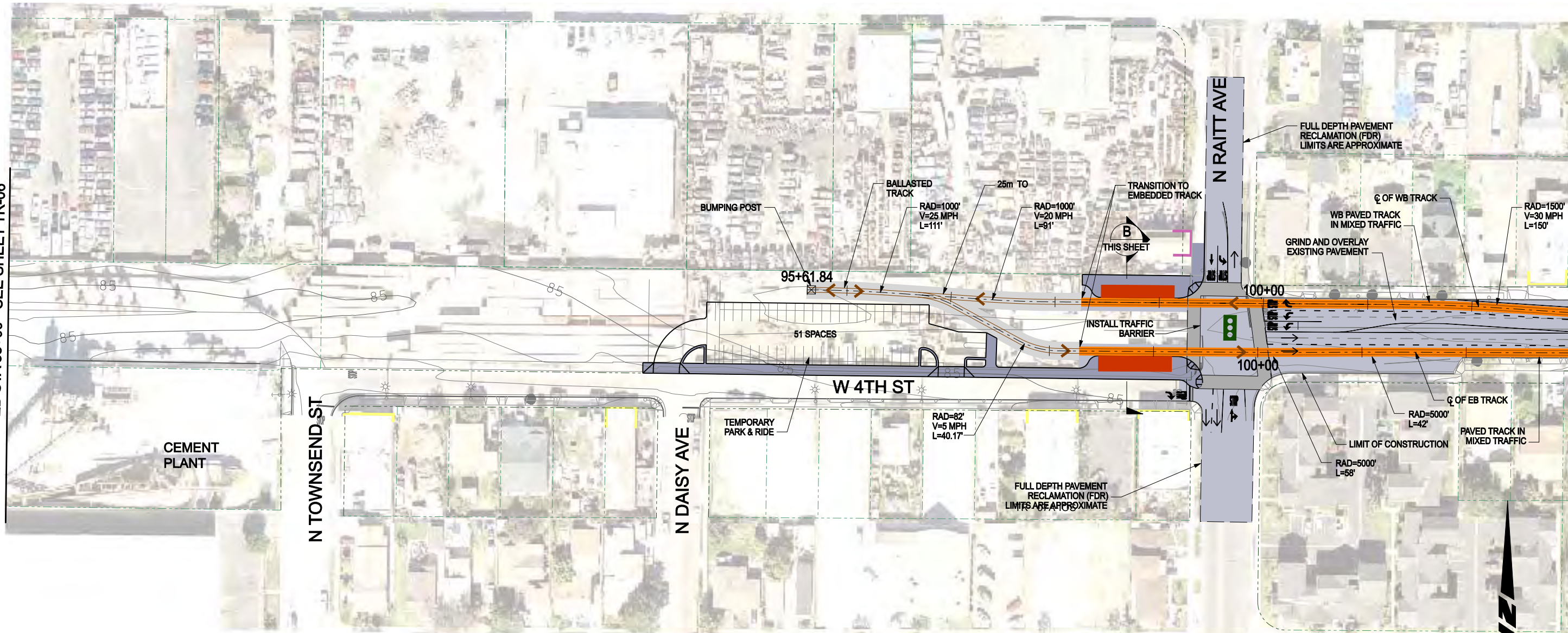
KEY MAP

LEGEND	DIRECTION OF TRAFFIC PLATFORM GATE PARKING NEW ROW STRUCTURE	BUILDING-REMOVAL WORK LIMITS - ASPHALT WORK LIMITS - CONCRETE WORK LIMITS - BALLAST	EASTBOUND EMBEDDED TRACK WESTBOUND EMBEDDED TRACK EASTBOUND BALLASTED TRACK WESTBOUND BALLASTED TRACK	EXISTING SIGNAL EXISTING PED SIGNAL NEW SIGNAL ADD TRANSIT ONLY SIGNAL	CORDOBA CORPORATION 2671 NORTH MAIN STREET, SUITE 240 SANTA ANA, CA 92705 714.558.6124 PH - 714.558.8467 FAX URS	OCTA <i>Santa Ana Education 1st</i> GARDEN GROVE	SANTA ANA AND GARDEN GROVE FIXED GUIDEWAY CORRIDOR RAITT TO FLOWER - IOS 1 & IOS 2 WITH O&M FACILITY AT SITE B STA 94+27.48 TO 103+00	DRAWING NO. TR - 07A-10S
				SHEET NO.				
				SCALE				

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Pentable: PDX_Exh_SA-StreetCar.tbl

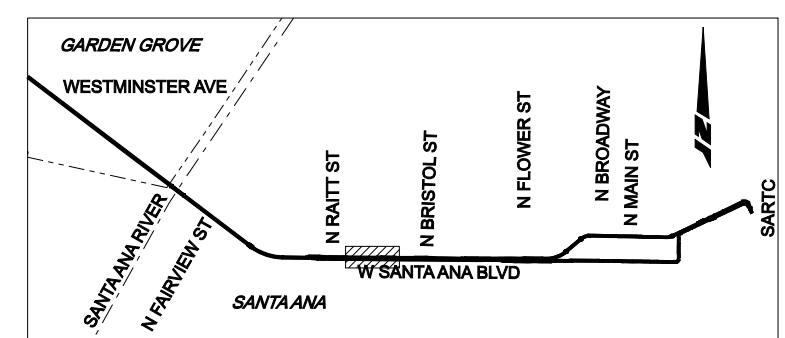
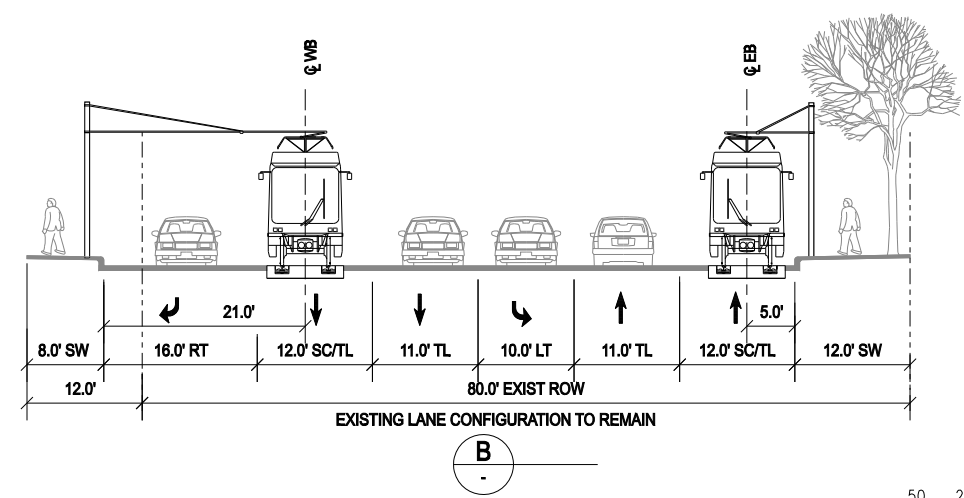
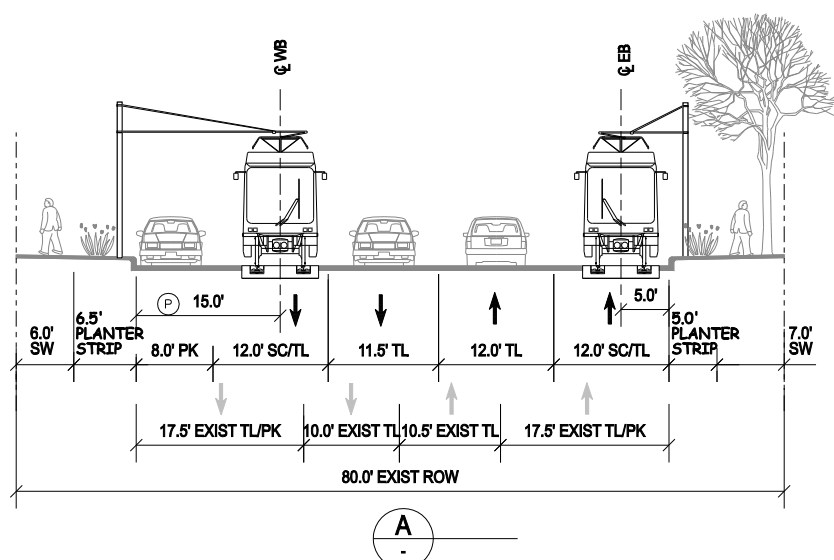
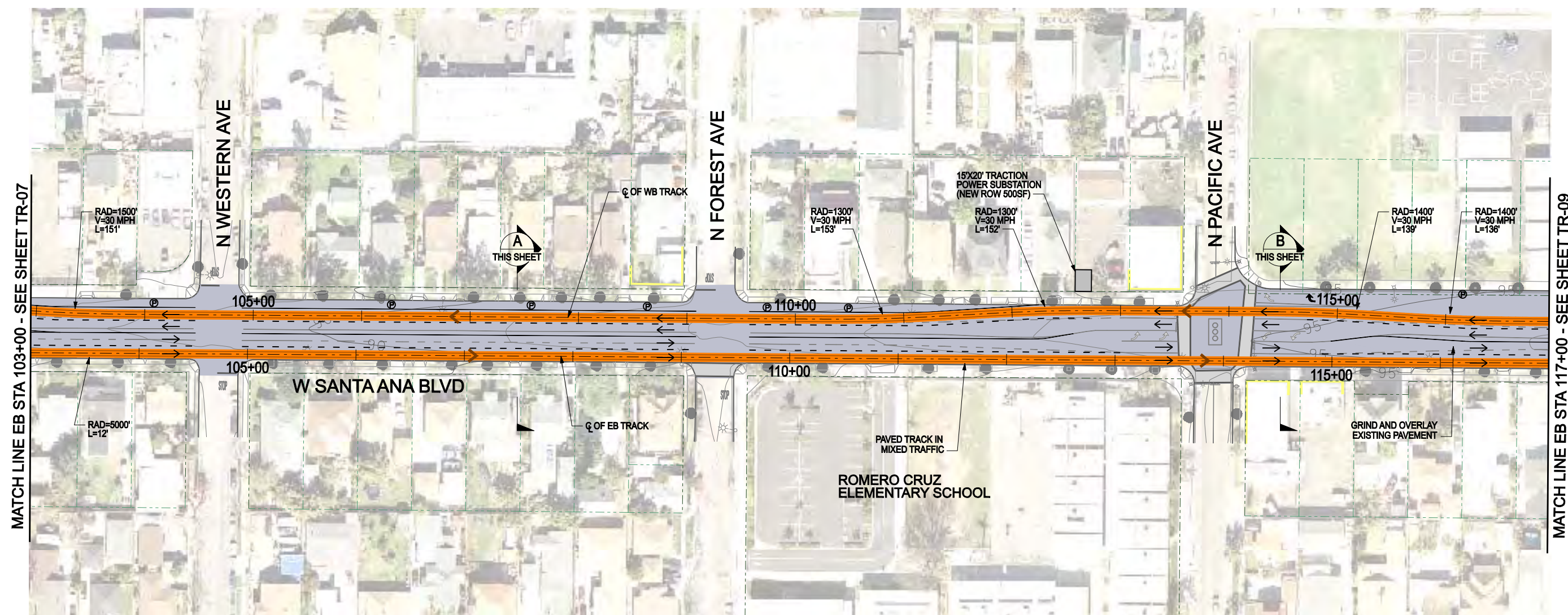
MATCH LINE EB STA 88+00 - SEE SHEET TR-06

MATCH LINE EB STA 103+00 - SEE SHEET TR-08



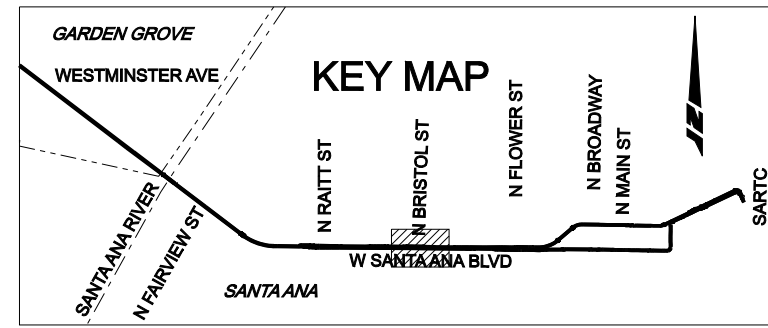
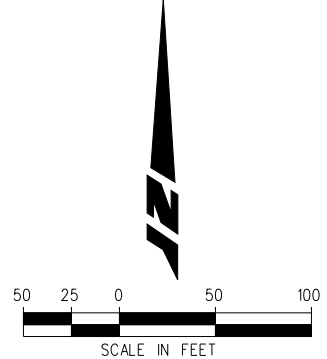
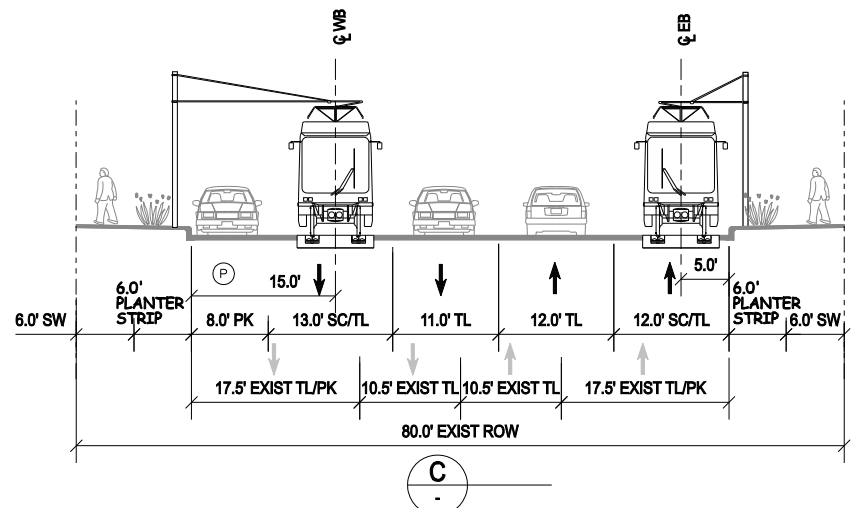
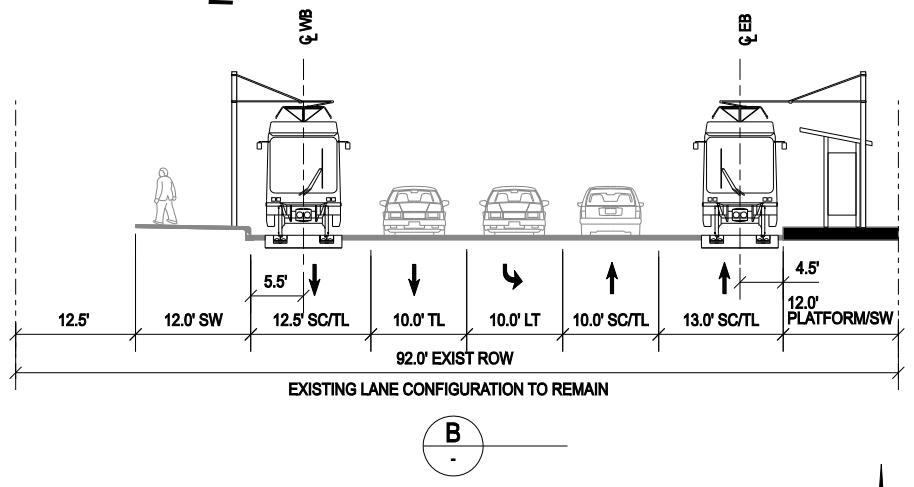
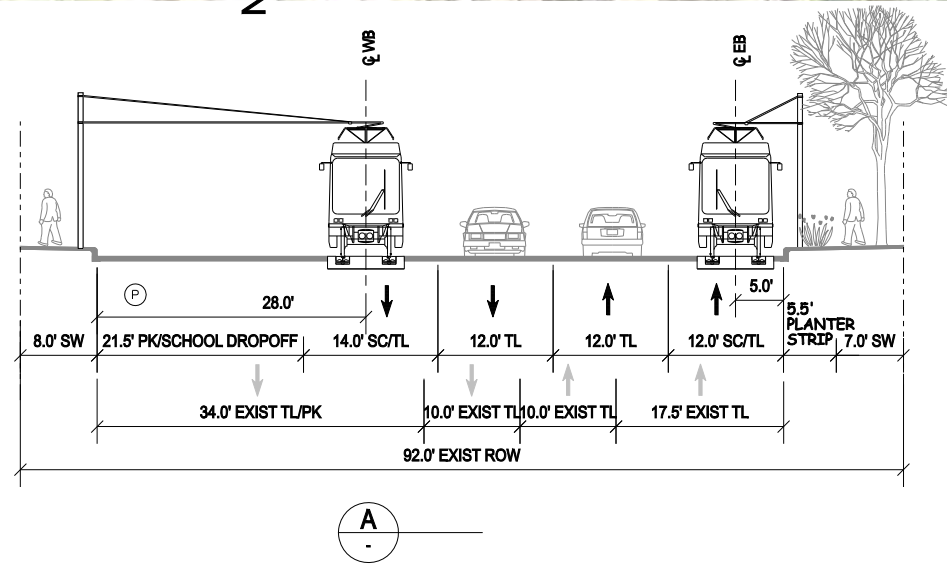
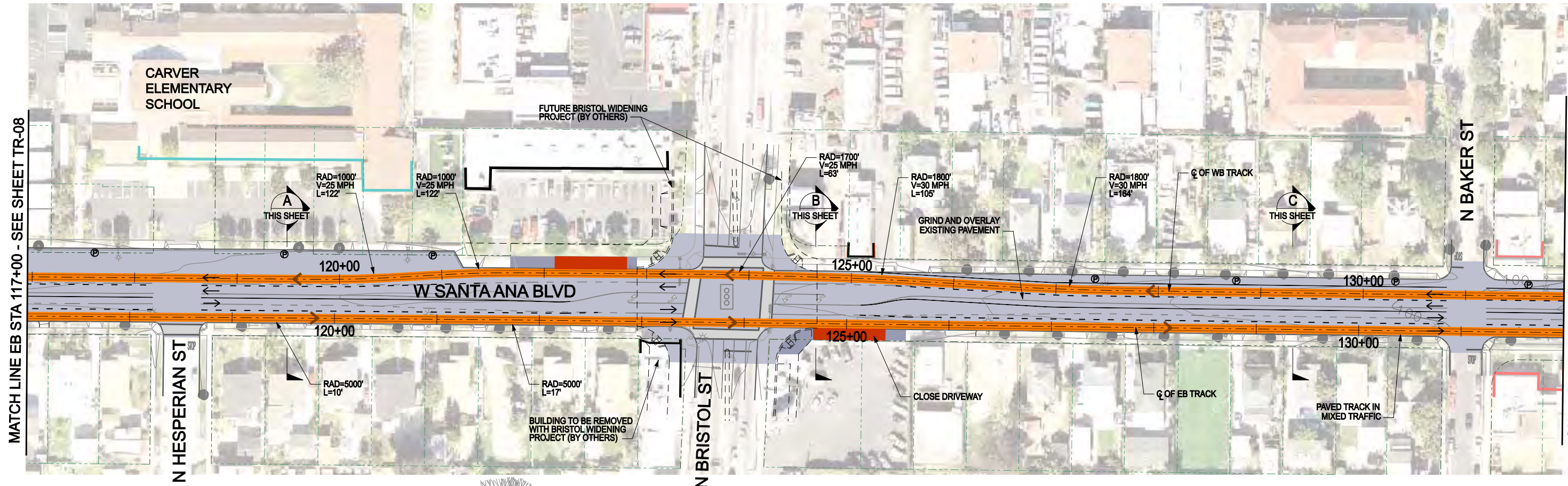
KEY MAP

LEGEND	DIRECTION OF TRAFFIC PLATFORM GATE PARKING NEW ROW STRUCTURE	BUILDING-REMOVAL WORK LIMITS - ASPHALT WORK LIMITS - CONCRETE WORK LIMITS - BALLAST	EASTBOUND EMBEDDED TRACK WESTBOUND EMBEDDED TRACK EASTBOUND BALLASTED TRACK WESTBOUND BALLASTED TRACK	EXISTING SIGNAL EXISTING PED SIGNAL NEW SIGNAL ADD TRANSIT ONLY SIGNAL	<div><div></div><div>CORDOBA CORPORATION 2671 NORTH MAIN STREET, SUITE 240 SANTA ANA, CA 92705 714.558.6124 PH - 714.558.8467 FAX</div></div> <div><div></div><div></div><div></div><div></div></div>	SANTA ANA AND GARDEN GROVE FIXED GUIDEWAY CORRIDOR RAITT TO FLOWER - IOS 1 & IOS 2 WITH O&M FACILITY AT SITE A STA 95+61.84 TO 103+00	DRAWING NO. TR - 07B-10S
	SHEET NO.						
	SCALE						



KEY MAP

LEGEND DIRECTION OF TRAFFIC → PLATFORM — GATE — PARKING P NEW ROW - - - STRUCTURE —	BUILDING-REMOVAL WORK LIMITS - ASPHALT — WORK LIMITS - CONCRETE — WORK LIMITS - BALLAST —	EASTBOUND EMBEDDED TRACK — WESTBOUND EMBEDDED TRACK — EASTBOUND BALLASTED TRACK — WESTBOUND BALLASTED TRACK —	EXISTING SIGNAL EXISTING PED SIGNAL NEW SIGNAL ADD TRANSIT ONLY SIGNAL	<div> CORDOBA CORPORATION 2677 NORTH MAIN STREET, SUITE 240 SANTA ANA, CA 92705 714.558.6124 PH - 714.558.8467 FAX </div> <div> URS </div>	<div> OCTA </div> <div> Santa Ana Education 1st </div> <div> GARDEN GROVE </div>	SANTA ANA AND GARDEN GROVE FIXED GUIDEWAY CORRIDOR TRACK ALIGNMENT AND RDWY IMPROVEMENTS RAITT TO FLOWER SEGMENT - ALT1 & ALT2 STA 103+00 TO 117+00	DRAWING NO. TR - 08
							SHEET NO.
SCALE							



LEGEND	DIRECTION OF TRAFFIC	→
	PLATFORM	→
GATE	NEW ROW	→
	STRUCTURE	→
BUILDING-REMOVAL	WORK LIMITS - ASPHALT	→
	WORK LIMITS - CONCRETE	→
WORK LIMITS - BALLAST	EXISTING SIGNAL	→
	EXISTING PED SIGNAL	→
NEW SIGNAL	ADD TRANSIT ONLY SIGNAL	→
	EXISTING SIGNAL	→
EXISTING PED SIGNAL	EXISTING SIGNAL	→
	EXISTING PED SIGNAL	→
NEW SIGNAL	EXISTING SIGNAL	→
	EXISTING PED SIGNAL	→
ADD TRANSIT ONLY SIGNAL	EXISTING SIGNAL	→
	EXISTING PED SIGNAL	→

CORDOBA CORPORATION
2677 NORTH MAIN STREET, SUITE 240
SANTA ANA, CA 92705
714.558.6124 PH - 714.558.8467 FAX

URS

OCTA

Santa Ana Education 1st

GARDEN GROVE

**SANTA ANA AND GARDEN GROVE
FIXED GUIDEWAY CORRIDOR**

**TRACK ALIGNMENT AND RDWY IMPROVEMENTS
RAITT TO FLOWER SEGMENT - ALT1 & ALT2
STA 117+00 TO 132+00**

DRAWING NO.	TR - 09
SHEET NO.	
SCALE	