

APPENDIX C
NORTHERN PARKWAY IMPLEMENTATION STRATEGIES

APPENDIX C

FUNDING AND PHASING OPTIONS

This appendix defines the availability of funding for the Northern Parkway and then develops two options for phasing of construction (1) East to West, and (2) West to East. This analysis is limited to the section of the Northern Parkway east of the Sarival Avenue alignment. The Northern Parkway/Loop 303 traffic interchange is addressed in the SR 303L DCR.

BACKGROUND

The base funding and phasing information is taken directly from the Maricopa Association of Governments (MAG) Regional Transportation Plan (RTP). Funding and phasing information is listed by five-year phases as follows

- Phase I: 1/1/06 - 6/30/10
- Phase II: 7/1/11 - 6/30/15
- Phase III: 7/1/16 - 6/30/20
- Phase IV: 7/1/21 - 12/31/25

This section discusses committed and potential funding for the Northern Parkway – all costs and funds are in 2006 dollars. Committed funds are reflected in the RTP. Potential funds are not included in the RTP but are reasonable potential sources of funding. They are discussed here to illustrate that the Northern Parkway design concepts developed can reasonably be expected to be completed even though all funding is not legally committed.

COMMITTED FUNDING

Regional Funds. The voters of Maricopa County approved Proposition 400 in November 2004, which includes funding for the Northern Parkway. The current estimated amount of these funds are documented in the Arterial Life Cycle Program (ALCP) as approved by the MAG Regional Council on June 28, 2006 in the amount of \$213.7 million. These are mostly MAG federal STP funds although some regional sales tax funds are included in selected years.

Local Match. The RTP regional funds require a minimum local match of 30%. An initial exploration of the division of funds between local entities was (1) 40% by the City of Glendale, (2) 30% by Maricopa County, (3) 20% by the City of Peoria, and (4) 10% by the City of El Mirage. This was based on current and future frontage along the Northern Parkway.

Local match includes all local expenditures since the Regional Transportation Plan (RTP) was approved by voters. This includes any ROW dedications and expenditures for preliminary engineering.

Flood Control District. Tentative agreement has been reached with the Maricopa County Flood Control District to jointly fund a drainage project in the western part of the corridor at \$2.0 million. Another request has been submitted to the District to jointly fund regional drainage improvements that will be beneficial to both the District and Northern Parkway. The estimated cost share from the District for the additional request is \$3.2 million.

POTENTIAL FUNDING

Regional Adjustment. Last year regional revenues and costs increased much more than originally anticipated in developing the Regional Transportation Plan. However, funds allocated to MAG street projects have only been increased by the consumer price index.

Additional Local Funds. A 30 % local match is the minimum requirement established by the ALCP Policies and Procedures. Minimum local match funds are shown in Table C-1. Local funds could be committed well beyond the minimum match level. In particular, developer contribution could be used to enhance the level of local contribution. Supplemental match funds shown in Tables C-2, C-3, and C-4 for the years of 2006-2025 are based on an additional 25 percent of the minimum local match.

Additional Flood Control District. Other joint funded drainage projects are being explored with the County Flood Control District, but are not included in this analysis.

Grants. Over the 20-year period, additional grant funds might be anticipated. For example, defense related funds for the TI at Litchfield road have been explored to meet Luke AFB special needs. Other approach such as ITS and demonstration funds might be explored to meet the unique circumstances of the Northern Parkway. Potential funds are not included in this analysis.

Offset for Federal Funds. The RTP includes both sales tax and federal funds for regional arterial projects. Cost and risks are higher in using federal funds. Potential compensation for using federal funds (such as on the Northern Parkway) has been considered as part of the MAG arterial street program, but are not included in this analysis.

Potential Balancing Funds. These funds are shown in Tables C-1, C-2, and C-3 in Phase IV of the RTP. They consist of potential grants, supplemental match funds, and variations in revenue projections needed to balance the funding table.

Unidentified Future Funding. Supplemental future funding is unidentified funding that occurs after 2025 necessary to complete the Northern Parkway concept.

Regional Extension. The Northern Parkway is a long-term staged concept. Potentially regional transportation sales tax could be extended after 2025.

Agua Fria River Bridge. MCDOT has explored funding additional bridges over the Agua Fria River. Funding priorities for a bridge on Glendale Avenue could be moved to Northern Avenue. These funds are not included in this analysis.

Developer Contributions. Developers are anticipating contributing some ROW for Northern Parkway. These contributions may be viewed as local match and are not included in this analysis at this time.

BONDING

Bonding is only used in the West to East Phasing Option. The Goal is to advance Phase III funds to Phase II to complete the section from Loop 303 to L101 within seven years. The City of Glendale is considering advancing Glendale Onboard Transportation Program funds through bonding. All costs associated with advancing of these funds are assumed to be paid for by the City of Glendale above minimum local match requirements.

COSTS AND STAGING

Certain costs and staging assumptions are listed as follows:

- In accord with Loop 303 DCR and Environmental Assessment, a system type interchange will be constructed at Loop 303 and Northern Parkway in Phase II. These interchange costs are not included in this analysis.
- In accord with the RTP, the east to west option includes interim four-lane construction from Sarival to Dysart Road in Phase I. The purpose is to protect the needed ROW on the half-mile alignment and then to use this land for interim construction.
- The east to west option will include temporary (throw away) widening (from 2 to 4 lanes) for the section from Dysart Road to 111th Avenue in Phase I. This is to prevent interim bottleneck condition.
- Initially, as today, the Agua Fria River crossing will be a dip section. Once the chanalization of the river takes place a bridge with a 100-year flood standard will be constructed. As the river is very wide in this area, \$20 to \$30 million could be wasted by constructing a 100-year standard bridge prematurely.
- At Loop 101, Northern Avenue will be widened to six thru lanes.
- Funds for Right of way protection are programmed in both options.
- Neighborhood access roads are assumed to be constructed when left turn access is prohibited by Northern Parkway construction.
- Proposed grade separations at 107th and 115th are last in all cases – should Option One be selected these grade separations would not be constructed.
- 15% has been added to the ultimate construction costs from Sarival to El Mirage roads to account for added costs associated with constructing the improvements in two phases (initial and ultimate) in the east to west phasing option.
- Updated cost estimates for Northern Parkway indicate that not all the improvements can be completed within the 20-year MAG RTP.

EAST TO WEST PHASING OPTION WITH MINIMUM LOCAL MATCH

This option is reflected in the current Regional Transportation Plan and generally begins in Phase I with an interim facility from Sarival to Dysart Road. The plan then shifts to the east end of the corridor for improvements from US 60 (Grand Avenue) to Loop 101 in Phase III. Phase IV completes the Northern Parkway by constructing the ultimate improvements from Loop 101 to Sarival Avenue.

The minimum match option shown in Table C-1 and Figure C-1 includes interim/initial construction from Sarival to 111th avenues including at-grade signalized intersections at arterial streets and a low flow crossing at the Agua Fria River in Phase I. After the western interim/initial construction, the approach is to proceed from Grand westward with ultimate construction. Since regional funding is not available until Phase III in the RTP, construction of the Grand “flyover” and improvements from Grand to 91st avenues will not get under way until Phase III. The completion of the bypass at Loop 101 is in Phase IV. The Northern Avenue street improvements from 91st Avenue to 103rd Avenue, Northern Parkway improvements from 103rd to 111th avenues, and the ultimate improvements including GSI from Sarival Avenue to El Mirage Road, the Agua Fria River Bridge, and the Option 2 improvements will not be completed within the 20 year funded period.

EAST TO WEST PHASING OPTION WITH SUPPLEMENTAL LOCAL MATCH

The supplemental match option shown in Table C-2 and Figure C-2 is similar to the minimum match option except the additional funding in excess of the minimum 30% match in accord with current trend commitments is included. This option allows the construction of the Northern Avenue street improvements from 91st to 103rd avenues to be moved to Phase IV.

EAST TO WEST PHASING OPTION EVALUATION

The East to West Option is the traditional approach to build from the more congested central areas to the less congested outer areas. However, it is not clear that this is the most efficient approach in this case. Major investments in the L303 TI and interim construction between Sarival and Dysart will be underutilized for over 20 years. The effectiveness of investments will be limited, as the system will be built from a bottleneck to bottleneck (Grand to end of the line) thus limiting mobility advantages of a high capacity and high-speed facility.

This will result in ROW acquisition and interim construction between L303 and Dysart Road in Phase I. Funds would be reserved for ROW protection and acquisition in all phases. In Phase III, full construction would start at Grand and proceed west. Upgrades to interim construction between Sarival and Dysart would not occur without additional funding and this could be after 2025

TABLE C-1
NORTHERN PARKWAY OPTION - EAST TO WEST ALTERNATIVE WITH MINIMUM LOCAL MATCH
FUNDING SOURCES AND PROJECT COST SUMMARIES
(In Millions of 2006 Dollars)

	Phase I (2006-2010)	Phase II (2011-2015)	Phase III (2016-2020)	Phase IV (2021-2025)	(2026-2030)	Totals
OPTION 1						
Preliminary Engineering	3.5	-	-	-	-	3.5
Sarival to Dysart ROW	31.9	-	-	-	-	31.9
Sarival to Dysart Interim Design	1.9	-	-	-	-	1.9
Sarival to Dysart Interim Construction	23.0	-	-	-	-	23.0
Dysart to 111th Interim Design	0.6	-	-	-	-	0.6
Dysart to 111th Interim Construction	7.1	-	-	-	-	7.1
ROW Protection	10.0	4.0	1.0	-	-	15.0
Grand Traffic Interchange Ultimate Design	-	3.0	-	-	-	3.0
Grand Traffic Interchange ROW	-	-	1.9	-	-	1.9
Grand Traffic Interchange Ultimate Construction	-	-	38.0	-	-	38.0
91st to Grand Ultimate Design	-	-	4.5	-	-	4.5
91st to Grand ROW	-	-	6.5	-	-	6.5
91st to Grand Ultimate Construction	-	-	57.1	-	-	57.1
103rd to 91st Street Design	-	-	-	-	2.0	2.0
103rd to 91st Ultimate ROW	-	-	-	12.2	-	12.2
103 rd to 91 st Street Construction	-	-	-	-	24.6	24.6
103rd to 91st Ultimate "Bypass" Design	-	-	-	8.9	-	8.9
103rd to 91st Ultimate "Bypass" Construction	-	-	-	111.2	-	111.2
Agua Fria River to 103rd (8-lanes) Interim Design	-	-	-	-	1.5	1.5
Agua Fria River to 103rd (8-lanes) ROW	-	-	-	-	6.4	6.4
Agua Fria River to 103rd (8-lanes) Construction	-	-	-	-	18.5	18.5
Agua Fria River Bridge Ultimate Design	-	-	-	-	1.7	1.7
Agua Fria River Bridge ROW	-	-	-	-	0.3	0.3
Agua Fria River Bridge Ultimate Construction	-	-	-	-	21.2	21.2
Sarival to El Mirage Ultimate Design	-	-	-	-	5.3	5.3
Sarival to El Mirage ROW	-	-	-	-	9.6	9.6
Sarival to El Mirage Ultimate Construction +	-	-	-	-	85.4	74.3
OPTION 2						
115th to 103rd Ultimate Design	-	-	-	-	2.3	2.3
115th to 103rd ROW	-	-	-	-	2.7	2.7
107th Overpass Ultimate Construction	-	-	-	-	5.3	5.3
115th Traffic Interchange Construction	-	-	-	-	23.2	23.2
Totals	78.0	7.0	109.0	132.3	210.0	536.3
Funding Sources						
Committed Regional Funding	55.9	-	78.2	79.7	-	213.7
Glendale Minimum Match	9.6	-	13.5	13.8	-	36.9
MCDOT Minimum Match	7.2	-	10.0	10.2	-	27.4
Peoria Minimum Match	4.9	-	6.5	6.6	-	18.0
El Mirage Minimum Match	2.3	-	3.5	3.6	-	9.4
FCD	5.2	-	-	-	-	5.2
Potential Balancing Funds *	-	-	-	15.7	-	15.7
Unidentified Future Funding	-	-	-	-	210.0	210.0
Totals	85.0	0.0	111.7	129.6	210.0	536.3
RUNNING BALANCE	7.0	0.0	2.7	0.0	0.0	0.0
* Potential Grants, overmatch, and variations in revenue projections needed to balance account						
+ 15% added for staging						

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FIGURE C-1
NORTHERN PARKWAY PHASING OPTION - EAST TO WEST ALTERNATIVE WITH MINIMUM LOCAL MATCH

TABLE C-2
NORTHERN PARKWAY OPTION - EAST TO WEST ALTERNATIVE WITH SUPPLEMENTAL LOCAL MATCH
FUNDING SOURCES AND PROJECT COST SUMMARIES
(In Millions of 2006 Dollars)

	Phase I (2006-2010)	Phase II (2011-2015)	Phase III (2016-2020)	Phase IV (2021-2025)	(2026-2030)	Totals
OPTION 1						
Preliminary Engineering	3.5	-	-	-	-	3.5
Sarival to Dysart ROW	31.9	-	-	-	-	31.9
Sarival to Dysart Interim Design and Construction	24.9	-	-	-	-	24.9
Dysart to 111th Interim Design	0.6	-	-	-	-	0.6
Dysart to 111th Interim Construction	7.1	-	-	-	-	7.1
ROW Protection	10.0	5.0	-	-	-	15.0
Grand Traffic Interchange Ultimate Design	-	3.0	-	-	-	3.0
Grand Traffic Interchange ROW	-	1.9	-	-	-	1.9
Grand Traffic Interchange Ultimate Construction	-	-	38.0	-	-	38.0
91st to Grand Ultimate Design	-	-	4.5	-	-	4.5
91st to Grand ROW	-	-	6.5	-	-	6.5
91st to Grand Ultimate Construction	-	-	57.1	-	-	57.1
103rd to 91st Street Design	-	-	2.0	-	-	2.0
103rd to 91st Street ROW	-	-	12.2	-	-	12.2
103 rd to 91 st Street Construction	-	-	-	24.6	-	24.6
103rd to 91st Ultimate "Bypass" Design	-	-	-	8.9	-	8.9
103rd to 91st Ultimate "Bypass" Construction	-	-	-	111.2	-	111.2
Agua Fria River to 103rd (8-lanes) Interim Design	-	-	-	-	1.5	1.5
Agua Fria River to 103rd (8-lanes) ROW	-	-	-	-	6.4	6.4
Agua Fria River to 103rd (8-lanes) Construction	-	-	-	-	18.5	18.5
Agua Fria River Bridge Ultimate Design	-	-	-	-	1.7	1.7
Agua Fria River Bridge Ultimate Construction/ROW	-	-	-	-	21.5	21.5
El Mirage Road to Dysart Ultimate Design	-	-	-	-	2.6	2.6
El Mirage Road to Dysart ROW	-	-	-	-	9.6	9.6
El Mirage Road to Dysart Construction +	-	-	-	-	47.2	47.2
Sarival to Dysart Ultimate Design	-	-	-	-	2.7	2.7
Sarival to Dysart Ultimate Construction +	-	-	-	-	38.3	38.3
OPTION 2						
115th to 103rd Ultimate Design & ROW	-	-	-	-	5.0	5.0
107th Overpass Ultimate Construction	-	-	-	-	5.3	5.3
115th Traffic Interchange Construction	-	-	-	-	23.2	23.2
Totals	78.0	9.9	120.3	144.7	183.5	536.3
FUNDING SOURCES						
Committed Regional Funding	55.9	-	78.2	79.7	-	213.7
Glendale Minimum Match	9.6	-	13.5	13.8	-	36.9
Glendale Supplemental Match	2.4	-	3.5	3.6	-	9.5
MCDOT Minimum Match	7.2	-	10.0	10.2	-	27.4
MCDOT Supplemental Match	1.7	-	2.5	2.4	-	6.6
Peoria Minimum Match	4.9	-	6.5	6.6	-	18.0
Peoria Supplemental Match	1.2	-	1.5	1.8	-	4.5
El Mirage Minimum Match	2.3	-	3.5	3.6	-	9.4
El Mirage Supplemental Match	0.6	-	1.0	0.7	-	2.3
FCD	5.2	-	-	-	-	5.2
Potential Balancing Funds *	-	-	-	19.4	-	19.4
Unidentified Future Funding	-	-	-	-	183.5	183.5
Totals	91.0	0.0	120.2	141.8	183.5	536.3
RUNNING BALANCE	13.0	3.1	2.9	0.0	0.0	0.0
* Potential grants, overmatch, and variations in revenue projections needed to balance account						
+ 15% added for staging						

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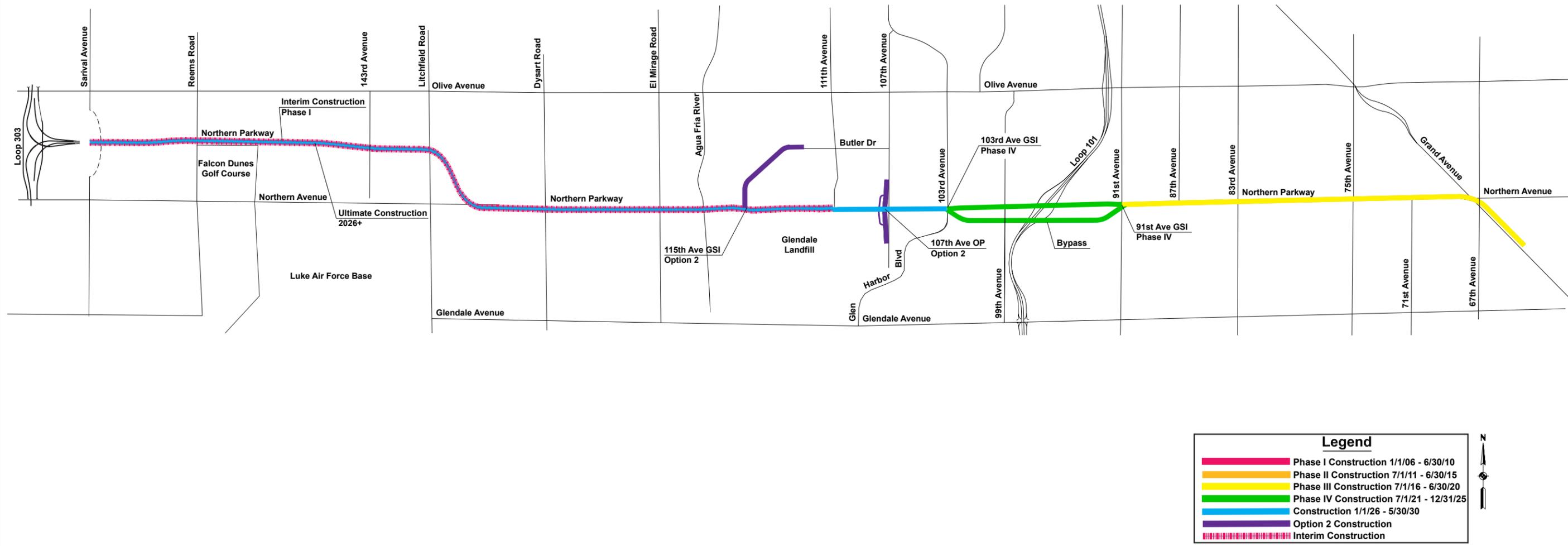


FIGURE C-2
NORTHERN PARKWAY PHASING OPTION - EAST TO WEST ALTERNATIVE WITH SUPPLEMENTAL LOCAL MATCH

WEST TO EAST PHASING OPTION

Another approach is to start construction in the west and proceed to the east (See Table C-3 and Figure C-3). This option would consist of constructing the ultimate improvements from Sarival Avenue to the 115th Avenue alignment and interim improvements from 115th Avenue to Loop 101 by 2014. The ultimate improvements include GSI at the arterials and the Agua Fria River Bridge while the interim improvements include an eight lane section from 115th Avenue to 103rd Avenue, traffic signals at 111th and 107th avenues, new eastbound roadway and New River bridge from 103rd to 99th avenues and widening of Northern Avenue to a 6-lane roadway from 99th Avenue to Loop 101 including dual left-turn lanes. This approach accelerates the channelization of the Agua Fria River. In Phase IV of the RTP (2021-2025) ultimate improvements from 91st Avenue to Grand Avenue including GSI at 83rd and 75th avenues, and the Grand Avenue flyover would be constructed. Given funding limitations, the Northern Parkway by-pass from 103rd to 91st avenues including the GSI at 103rd and 91st avenues, improvements to Northern Avenue from Loop 101 to 91st Avenue, and Option 2 improvements would be constructed after Phase IV.

This approach maximizes regional mobility by directly attaching the highest speed and highest capacity portion of Northern Parkway to Loop 303 as soon as possible. This approach has a major advantage to help shape quality economic development that is emerging now in the western portion of the West Valley. This option saves money by not doing interim construction. It also maximizes investment benefit to the public since the cost of the parkway per mile is considerably less on the west end of the parkway when compared to the east end. Given the urgency of shaping this new development, bonding is warranted to meet the goal of completing a high-speed high capacity facility between L303 and L101 within seven years.

The advantage of this approach is regional mobility and economic development. The Northern Parkway can be catalyst for quality development. Also construction between Loop 303 and Dysart Road would only occur once eliminating throwaway construction costs.

TABLE C-3
NORTHERN PARKWAY - WEST TO EAST ACCELERATED ALTERNATIVE
FUNDING SOURCES AND PROJECT COST SUMMARIES
(In Millions of 2006 Dollars)

Project Costs	Phase I (2006-2010)	Phase II (2011-2015)	Phase III (2016-2020)	Phase IV (2021-2025)	(2026-2030)	Totals
OPTION 1						
Sarival to Dysart ROW	31.9	-	-	-	-	31.9
Sarival to Dysart Ultimate Design	4.3	-	-	-	-	4.3
Sarival to Dysart Ultimate Construction	52.2	-	-	-	-	52.2
ROW Protection	10.0	3.0	5.0	-	-	18.0
Dysart to El Mirage Ultimate Design	3.2	-	-	-	-	3.2
Dysart to El Mirage ROW	0.4	-	-	-	-	0.4
Dysart to El Mirage Ultimate Construction	-	41.0	-	-	-	41.0
Agua Fria River Bridge Ultimate Design	1.7	-	-	-	-	1.7
Agua Fria River Bridge Ultimate Construction/ROW	-	21.5	-	-	-	21.5
Agua Fria River Bridge to 111th Interim Design	0.7	-	-	-	-	0.7
Agua Fria River Bridge to 111th ROW	-	3.6	-	-	-	3.6
Agua Fria River Bridge to 111th Interim Construction	-	9.1	-	-	-	9.1
111th to 103rd (8-lanes) Interim Design	-	0.8	-	-	-	0.8
111th to 103rd (8-lanes) ROW	-	2.8	-	-	-	2.8
111th to 103rd (8-lanes) Construction	-	9.4	-	-	-	9.4
103rd to Loop 101 Street Design	-	1.9	-	-	-	1.9
103rd to Loop 101 Street ROW	-	11.5	-	-	-	11.5
103rd to Loop 101 Street Construction	-	23.9	-	-	-	23.9
91st to Grand Ultimate Design	-	-	-	4.5	-	4.5
91st to Grand ROW	-	-	-	4.5	-	4.5
91st to Grand Ultimate Construction	-	-	-	57.1	-	57.1
Grand Traffic Interchange Ultimate Design	-	-	-	3.0	-	3.0
Grand Traffic Interchange ROW	-	-	-	5.9	-	5.9
Grand Traffic Interchange Ultimate Construction	-	-	-	38.0	-	38.0
103rd to 91st Ultimate "Bypass" Design	-	-	-	-	8.9	8.9
103rd to 91st "Bypass" ROW	-	-	-	-	5.7	5.7
103rd to 91st Ultimate "Bypass" Construction	-	-	-	-	111.2	111.2
OPTION 2						
115th to 103rd Ultimate Design/ROW	-	-	-	-	6.2	6.2
107th Overpass Ultimate Construction	-	-	-	-	5.3	5.3
115th Traffic Interchange Construction	-	-	-	-	23.2	23.2
Totals	104.4	128.5	5.0	113.0	160.5	511.4
FUNDING SOURCES						
Committed Regional Funding	55.8	-	78.2	79.7	-	213.7
Glendale Minimum Match	12.5	14.5	-	9.6	-	36.6
Glendale Supplemental Match	5.1	1.7	-	2.5	-	9.3
Glendale Pre-match (67 th Ave., DCR, ROW)	-8.4	-	-	-	-	-8.4
MCDOT Minimum Match	9.4	11.0	-	7.1	-	27.5
MCDOT Supplemental Match	4.0	1.1	-	1.7	-	6.8
Peoria Minimum Match	6.3	7.4	-	4.6	-	18.3
Peoria Supplemental Match	1.9	1.5	-	1.3	-	4.7
Peoria Pre-match (ROW)	-1.0	-	-	-	-	-1.0
El Mirage Minimum Match	3.1	3.6	-	2.5	-	9.2
El Mirage Supplemental Match	0.5	1.2	-	0.4	-	2.1
FCD	5.2	-	-	-	-	5.2
Glendale GO Bond Advance	17.0	85.2	(78.2)	(24.0)	-	0
Potential Balancing Funds	-	-	-	26.9	-	26.9
Unidentified Future Funding	-	-	-	-	160.5	160.5
Totals	111.4	127.2	0.0	112.4	160.5	511.4
RUNNING BALANCE	7.0	5.7	0.7	0.0	0.0	0.0

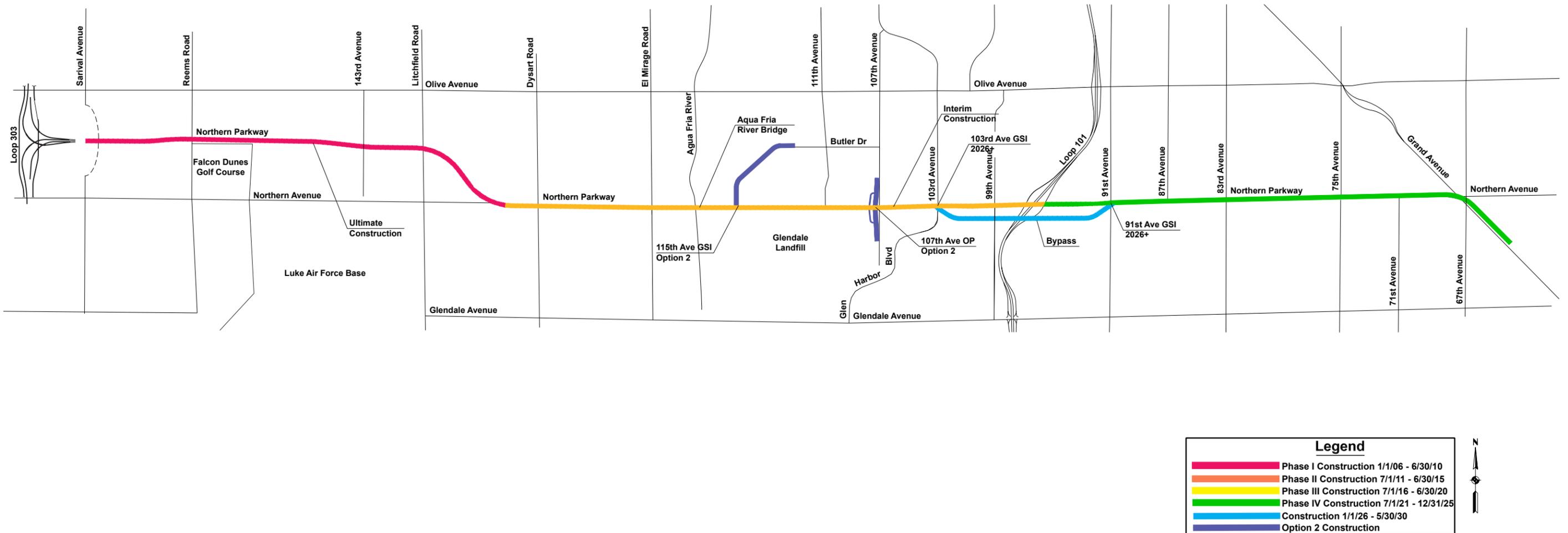


FIGURE C-3
NORTHERN PARKWAY PHASING OPTION - WEST TO EAST ACCELERATED ALTERNATIVE

LOOP 303 TO LOOP 101 ACCELERATED CONNECTION

This concept focuses on constructing the ultimate improvements from Sarival Avenue to west of 103rd Avenue and interim improvements from west of 103rd Avenue to Loop 101 by 2014 (see Figure C-4). The ultimate improvements include Grade Separated Intersections (GSI) at intersecting arterials (Sarival Avenue, Reems Road, Litchfield Road, Dysart Road, and El Mirage Road), the Agua Fria River Bridge, and traffic signals at 111th and 107th Avenues. Interim improvements include the west ramps at 103rd Avenue, new eastbound Northern Avenue roadway and New River bridge from 103rd to 99th avenues, and widening of Northern Avenue to a 6-lane roadway from 99th Avenue to Loop 101 including dual left-turn lanes. All these interim improvements will be constructed in their ultimate locations to avoid reconstruction when the ultimate parkway improvements are constructed. Given funding limitations, the ultimate Northern Parkway by-pass from 103rd to 91st avenues including GSI at 103rd and 91st avenues would be constructed after the MAG Regional Transportation Plan (RTP) Phase IV (2026+).

The improvements from Loop 303 to Loop 101 would be completed by 2014 in 3 separate projects. The first project would construct ultimate improvements from Sarival Avenue to Dysart Road including GSI at Sarival Avenue, Reems Road and Litchfield Road. These improvements would be constructed in 2009 and 2010. The Loop 303/Northern Parkway system interchange is part of the Loop 303 project scheduled for Phase II of the MAG RTP (2011-2015). This segment of the parkway would be fully access controlled.

The second project would consist of constructing the ultimate improvements from Dysart Road to 111th Avenue including GSI at Dysart Road and El Mirage Road, frontage roads between Dysart and El Mirage roads, and the Agua Fria River Bridge. These improvements would be completed by 2012. The construction of the Agua Fria River bridge is dependent on the Agua Fria River channelization in accordance with the adopted watercourse master plan by 2012. Upon completion of these improvements, Northern Parkway will be fully access controlled from Sarival Avenue to the 115th Avenue alignment, with partial access control east to 111th Avenue.

The last project would be completed in 2014. It would include widening Northern Parkway to its ultimate configuration from 111th Avenue to 103rd Avenue, constructing the west ramps at 103rd Avenue, constructing the new eastbound Northern Avenue roadway from 103rd Avenue to 99th Avenue, widening Northern Avenue to six lanes and dual lefts from 99th Avenue to the east ramps for Loop 101, improvements to the Northern Avenue/Loop 101 ramps, and tapers east of the Loop 101 to match existing Northern Avenue. This segment would have partial access control.

This alternative requires funding in Phase I and II of the RTP that exceed funds allocated for Northern Parkway in the Arterial Life Cycle Program (ALCP) approved by the MAG Regional Council. Several options are possible to provide the funding for the Loop 303 to Loop 101 Accelerated 7-Year Phasing option with payback from ALCP funds in Phase III and IV. The City of Glendale is considering advancing Glendale Onboard (GO) Transportation Program funds through bonding. All costs associated with advancing of these funds are assumed to be paid for by the City of Glendale in addition to the minimum local match requirements.

The 30% minimum local match required by MAG is assumed to be divided among the four funding partners as follows: Glendale – 40%, MCDOT – 30%, Peoria – 20%, and El Mirage –

10%. The resultant annual minimum match based on the committed regional funds shown in Table C-4 from 2006 to 2010 plus minimum match based on committed regional funds in Phase III and a portion of Phase IV are shown in the years 2010 to 2013 in the table. Additional supplemental matching funds are required to fund this option. The supplemental match funds are assumed to be 25% of the minimum matching funds. In addition, \$5.2 million is anticipated from the Maricopa County Flood Control District for joint drainage and flood control features of the parkway.

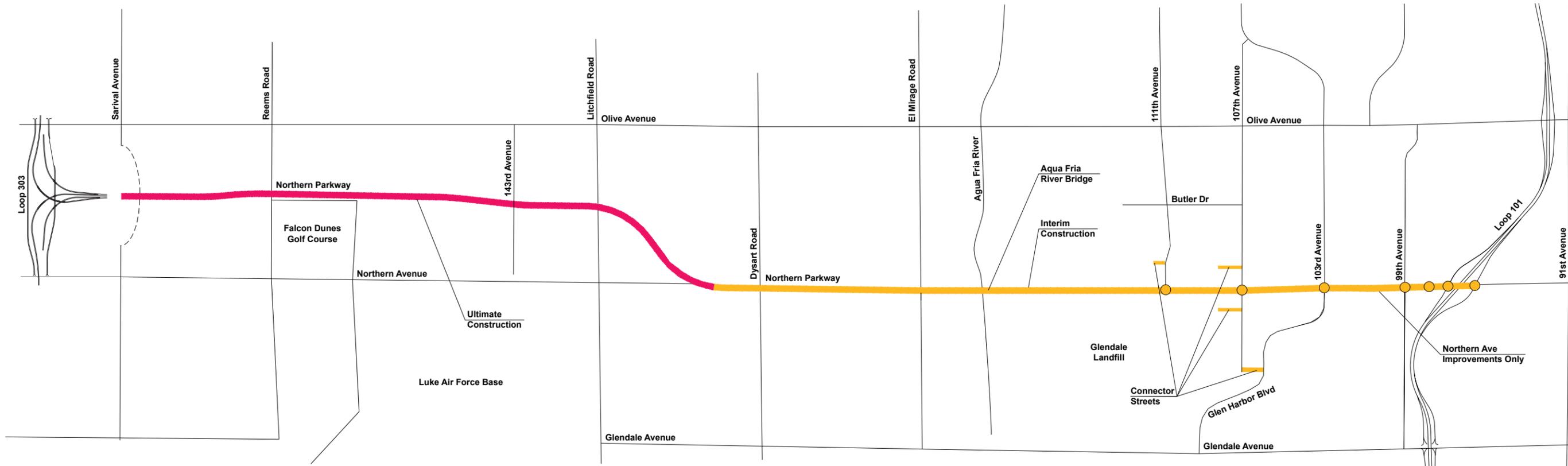
Table C-4 also includes reductions to the minimum and supplemental local match funds for Northern Parkway for agency expenditures that have already been incurred including Glendale and Peoria right-of-way preservation costs and Glendale costs for the Northern Parkway DCR.

CONCLUSION

The Loop 303 to Loop 101 Accelerated Phasing Option is the preferred alternative with the Loop 303 to Loop 101 7-year construction phasing as described above. Refinements to this option are currently being developed by the agency partners.

TABLE C-4
NORTHERN PARKWAY – LOOP 303 TO LOOP 101 ACCELERATED ALTERNATIVE
FUNDING SOURCES AND PROJECT COST SUMMARIES
(In Millions of 2006 Dollars)

Project Costs	Phase I (2006-2010)	Phase II (2011-2015)	Totals
Sarival to Dysart ROW	31.9	-	31.9
Sarival to Dysart Ultimate Design	4.3	-	4.3
Sarival to Dysart Ultimate Construction	52.2	-	52.2
ROW Protection	10.0	3.0	13.0
Dysart to El Mirage Ultimate Design	3.2	-	3.2
Dysart to El Mirage ROW	0.4	-	0.4
Dysart to El Mirage Ultimate Construction	-	41.0	41.0
Agua Fria River Bridge Ultimate Design	1.7	-	1.7
Agua Fria River Bridge Ultimate Construction/ROW	-	21.5	21.5
Agua Fria River Bridge to 111th Interim Design	0.7	-	0.7
Agua Fria River Bridge to 111th ROW	-	3.6	3.6
Agua Fria River Bridge to 111th Interim Construction	-	9.1	9.1
111th to 103rd (8-lanes) Interim Design	-	0.8	0.8
111th to 103rd (8-lanes) ROW	-	2.8	2.8
111th to 103rd (8-lanes) Construction	-	9.4	9.4
103rd to Loop 101 Street Design	-	1.9	1.9
103rd to Loop 101 Street ROW	-	11.5	11.5
103rd to Loop 101 Street Construction	-	23.9	23.9
Totals	104.4	128.5	232.9
Funding Sources			
Committed Regional Funding	55.8	-	55.8
Glendale Minimum Match	12.5	14.5	27.0
Glendale Supplemental Match	5.1	1.7	6.8
Glendale Pre-match (67 th Ave., DCR, ROW)	-8.4	-	-8.4
MCDOT Minimum Match	9.4	11.0	20.4
MCDOT Supplemental Match	4.0	1.1	5.1
Peoria Minimum Match	6.3	7.4	13.7
Peoria Supplemental Match	1.9	1.5	3.4
Peoria Pre-match (ROW)	-1.0	-	-1.0
El Mirage Minimum Match	3.1	3.6	6.7
El Mirage Supplemental Match	0.5	1.2	1.7
FCD	5.2	-	5.2
Glendale GO Bond Advance	17.0	85.2	102.2
Totals	111.4	127.2	238.6
RUNNING BALANCE	7.0	5.7	5.7



Legend	
	Phase I Construction 1/1/06 - 6/30/10
	Phase II Construction 7/1/11 - 6/30/15
	Traffic Signal



FIGURE C-4
NORTHERN PARKWAY LOOP 303 TO LOOP 101 ACCELERATED ALTERNATIVE