

REPORT FROM

OFFICE OF THE CITY ADMINISTRATIVE OFFICER

Date: August 9, 2018

CAO File No. 0220-05345-0001

Council File No. 18-0244

Council District: All

To: The Mayor
The City Council

From: Richard H. Llewellyn, Jr., City Administrative Officer

Reference: Department of Transportation 2017-18 Transit Service Analysis
Report dated August 4, 2017; Mayor referral dated August 31, 2017

Subject: **TRANSIT SERVICE ANALYSIS PHASE ONE IMPLEMENTATION REPORT BACK**

RECOMMENDATIONS

That the City Council, subject to the approval of the Mayor:

1. Authorize the General Manager of the Department of Transportation (DOT) to amend the DASH and Commuter Express contracts (subject to the approval of the City Attorney as to form and legality) to reflect the new recommended service level to implement the following:
 - a. Extend PM hours of service for DASH service in downtown, extend hours of service for all existing routes, and add weekend service to all DASH routes.
 - b. Realign select routes and increase DASH bus frequency to every 15 minutes Monday thru Friday and 20 minutes on weekends to improve service delivery for all existing routes.
 - c. Add four new DASH routes in Boyle Heights West, Pacoima, Sylmar, and Canoga Park.
 - d. Add a new Playa Vista spur to the existing Commuter Express Line 437 route.
2. Authorize a one-year micro-transit shared used pilot program in the Westside of Los Angeles and instruct the DOT to report back to the Council and Mayor on results;
3. Increase subsidies for the Cityride program from \$42 to \$84 per quarter and approve the implementation of Taxi overflow service to meet the demand for increased service and direct the DOT to report back on the results;
4. Approve the findings of the Federal Transit Administration (FTA) Title VI Analysis for the Transit Service Analysis as described in the Department's report Attachment Eleven;
5. Approve the recommended new transit performance metrics as described in the DOT's report Attachment Six, and request the DOT to report back on ridership, service headways improvements and customer satisfaction after implementation of Phase One;

6. Authorize the use of up to \$25 million in Municipal Improvement Corporation of Los Angeles (MICLA) Commercial Paper (CP) for the DOT bus purchase program through 2024-25, subject to awarded grant receipts available for reimbursement;

Controller Authorization:

7. Establish a new interest bearing Fund entitled "Bus Purchase Program" within Department 94, to receive and disburse authorized funds, including those received from both the State and Federal governments as reimbursements for capital purchases authorized by Council;
8. Establish new accounts within the Bus Purchase Program, Fund No. TBD, Department 94, pursuant to instructions to be provided by the Office of the CAO (CAO), and expend funds directly from these newly created accounts within the project budgeted amounts;
9. Upon proper documentation from the department and approval of the CAO to advance up to \$25 million from the MICLA CP Fund No. 298 to the Bus Purchase Program Fund No. TBD, on a revolving basis through Fiscal Year 2024-25 to be repaid from State and Federal reimbursements;
10. Reduce appropriations and disencumber \$1,070,498 in Fiscal Year 2016 in Proposition A, Fund No. 385, Account No. 94MA00 Community DASH Bus Purchase Expansion; Reappropriate a total of \$147,932,907.48 in various accounts to a new account entitled Transit Operations Expansion as specified in Attachment D;

DOT

11. Direct the Department to report back in three years (2021-22) on the status of anticipated and awarded grant receipts to address the fleet replacement needs beginning in 2022-23 to 2024-25;
12. Instruct the Department to report back on potential DASH, Commuter Express fare and advertising increases to support the overall increased cost of Phase One operations and maintenance;
13. Instruct the Department to report back on the potential for additional Metro formula revenue allocations upon completion of the implementation of Phase One;
14. Instruct the Department, working with the CAO to renegotiate the Metro Measure R Three Percent Local Match Contribution and seek credit for the regional projects constructed within City limits which meet the first/last mile criteria and report back;
15. Instruct the Department, working with the CAO to explore the funding options presented and report back;
16. Authorize DOT to make any technical adjustments as necessary and consistent with the

Mayor and Council actions on this matter, subject to the approval of the CAO, and request the Controller to implement these instructions.

SUMMARY

The Department of Transportation (DOT) presented a transit service analysis report and recommendations at the March 25, 2018 Transportation Committee meeting. Working under the direction of the City Council (C.F. 18-0244), the DOT has updated the 2005 Community Needs Assessment, and expanded the study to include an updated line by line analysis of transit services offered by the City. The comprehensive Transit Service Analysis (TSA) of DASH, Commuter Express and Cityride Dial a Ride services was conducted over a two year period (from 2015 to 2017) to assess and evaluate the change in demographics, population, new and planned bus and rail transit lines, and the changing uses of business and residential areas. The DOT contracted with consultant, Transportation Management and Design, Inc. (TMD) to assist with the overall evaluation and recommendations for Phases One and Two.

The DOT recommends the implementation of Phase One at this time. Phase Two recommendations are deferred to a later date and are subject to identification of an on-going funding source. The recommendations are as follows:

Phase One:

- Extend PM hours of service in Downtown LA, and extend hours of service for all existing routes and weekend service;
- Realign select routes and improve service headways (time between buses) for all existing routes;
- Add four new routes for DASH services in Boyle Heights West, Pacoima, Sylmar, and Canoga Park;
- Add a new Playa Vista spur to Commuter Express Line 437;
- Increase subsidies for Cityride clients back to 2010 levels and implement a Taxi Overflow Program; and
- Implement a one-year micro shared transit pilot in West LA.

Phase Two:

- Add six new routes for DASH services for Mission Hills, Van Nuys/North Hills, Sun Valley, Elysian Valley/Cypress Park, North Hollywood and Glassell Park/Highland Park.

The annual base cost of current operations for DASH, Commuter Express and Cityride is \$76 million. Overall Phase One changes require an increase in annual operating costs of \$62.38 million, for a total new annual cost of \$138.8 million (represents an increase of 82%). In addition, \$129 million in one-time capital costs will be incurred for fleet purchases to support Phase One, with \$103 million being grant reimbursable. No increase to DASH or Commuter fares is proposed to support the increased costs.

Historically, the Department funds their capital purchases through grant awards. In order to front fund these purchases, allocations are set aside over several years in either designated special purpose fund appropriations or a Reserve for Future Transit Service appropriation for future

services. Typically, grants will reimburse the City up to eighty percent of the cost and the remaining twenty percent is the City's required match.

As proposed by DOT, the current funding plan for Phase One capital purchases assumes the use of prior year fleet replacement (\$40.6 million), and current Reserve for Future Transit Service (\$61.8 million) appropriations as front funding. This expense will be reimbursed by awarded grants and deposited as revenue into Proposition A. Additional, regular future fleet replacement needs are estimated at \$137.1 million and grant awards are assumed in the forecast as reimbursements. As proposed, the fund will have a deficit of \$15.3 million in 2020-21, increasing to \$284.8 million in 2032-33, assuming no additional on-going revenue or increased costs beyond our estimates.

The Transportation Committee requested this Office to report back with funding options to support the TSA Phase One implementation. The DOT bus purchases in the forecast are identified to occur in two phases with a cost estimate for both phases at \$266.1 million, with \$53.4 million as the required match and \$212.7 million as potentially grant reimbursed. The City may continue to purchase buses under the existing model or use short term financing to purchase the buses as an alternative approach for implementation as follows:

1. Application of \$95.03 million in one-time various special purpose fund and reserve fund appropriations;

Under the current plan, the City will fully budget the entire cost of bus purchases at \$266.1 million in the forecast with grant reimbursements supporting up to eighty percent of the cost. The Department has set aside various special purpose fund appropriations over several budget cycles in designated accounts in anticipation of a potential expansion. Approximately \$38.35 million for transit expansion operations and maintenance appropriations are available. In addition, \$56.68 million in one-time funding in the Reserve for Future Transit Service account designated as surplus can be utilized for any transit need. The City can elect to apply these appropriations directly to the shortfall and extend the shortfall to 2023-24. The deficit will start at \$6.0 million and grow to \$189.8 million by 2032-33.

2. Short Term Financing and the application of \$171.9 million in one-time various special purpose fund and reserve fund appropriations;

Under an alternate approach, the City can consider the use of Municipal Improvement Corporation of Los Angeles (MICLA) Commercial Paper (CP). MICLA CP may be used as a tool to support the DOT bus purchases rather than the existing model which requires setting aside reserves within Proposition A. The City would budget only the match requirement (\$53.4 million) instead of \$266.1 million. The City uses MICLA CP to finance capital, and equipment purchases with a useful life over seven years and has been used in prior years to front fund grant reimbursable capital projects. Bus purchases are considered capital expenses and have a useful life over twelve years and meet these criteria. The use of MICLA CP for Phase One is low risk as there are awarded grants available for reimbursement. The second phase bears slightly more risk as grants have not yet been awarded, however DOT's track record in securing grants has been highly successful. Similar to Option One, \$95.03 million remains available. In addition, \$76.4 million is now

available as this amount was previously budgeted for the bus purchases under Option One. This amount includes \$61.8 million in a Reserve for Future Transit appropriation and \$14.60 million in fleet replacement appropriations available for use. Together with solid cash flow management, this tool provides a feasible option to defer the shortfall.

With the use of MICLA CP and the application of \$171.9 million in special purpose and Reserve for Future Transit Service fund appropriations, the shortfall will be deferred to 2027-28 and start at \$12.8 million, and grow to \$115.7 million by 2032-33. A shortfall still exists under both scenarios, however, the impact to outlying years is reduced.

The other options are more long term and will require the Department to report back, or require the Council and Mayor to make policy and budgetary decisions as part of the annual budget process.

1. Identification of additional cost savings;
2. Identification of additional revenue;
3. Credit for Measure R Metro Local Match contribution - first/last mile projects;
4. Future Proposition A expenditure funding shifts; and
5. Reduction to existing services;

The use of one-time reserve funds to support on-going programs is not in compliance with City fiscal policy. However the use of MICLA CP for capital purchases is appropriate, consistent with City financial policies and provides a low risk strategy to support the implementation of this priority.

FISCAL IMPACT STATEMENT

There is no fiscal impact to the General Fund. The Proposition A Fund provides special funds to support the City transit services and programs. The annual base cost of current Transit Operations (DASH, Commuter Express and Cityride) is \$76 million. The cost of the proposed increase in service is \$62.3 million annually, and would increase the overall annual cost to \$138.8 million. No increase to DASH or Commuter fares is proposed to support the increased costs. The use of MICLA CP as a cash flow mechanism to support current and future bus purchases is appropriate. The use of one-time funds, to support on-going programs is not in compliance with City fiscal policy, but will allow for the implementation of this Mayor and Council priority.

DEBT IMPACT STATEMENT

There is no debt impact to the General Fund as a result of the recommended items. The total Municipal Improvement Corporation of Los Angeles (MICLA) Commercial Paper (CP) interest and related financing costs for Phase One, from 2019-20 to 2024-25, is approximately \$2.4 million. The use of MICLA CP is a policy decision as it may impact the ability to fund other capital projects in the future. Actual interest rates may differ as rates are dependent on market conditions at the time of issuance. This cost will be paid from the Proposition A Fund.

RHL:IR:0618004

Attachments

FINDINGS

The Transit Service Analysis (TSA) report recommended changes to the City's public transit program identified as Phases One and Two. The Department's recommendations address Phase One and defer Phase Two until future funds are available.

Operational Changes – Phase One

A. DASH Service Changes

The TSA recommends the following changes to improve overall service levels for DASH routes, and includes expanding service areas to address unmet transit needs:

- Extend PM hours of service and add weekend service = Cost \$15 million annually
Extend late evening DASH in downtown until 9 pm seven days a week for all downtown routes. Extend hours of service until 7 pm for all existing routes, and add weekend service to all DASH routes that do not currently operate on Saturday and Sunday. No additional vehicles are required. This can be implemented immediately in 2018-19.
- Route realignments / Improve headways = Cost \$29 million annually
Realign or modify 27 routes and improve service headways (time between buses) for all DASH routes to a maximum of every 15 minutes Monday thru Friday and 20 minutes on weekends to improve performance for all existing routes, which do not already operate at that level. For example realignment may involve reducing unnecessary turns or modifying the route to improve travel times and performance. Ninety-seven new vehicles will be required and are anticipated to be placed into service over two years (2019-2020 and 2020-21) contingent upon the delivery of buses.
- Expand DASH service with four new routes = Cost \$14.2 million annually
Add four new routes for DASH services in Boyle Heights West, Pacoima, Sylmar, and Canoga Park. These routes have a potential for high ridership to support unmet transit needs (Refer to Attachment A). The service areas were prioritized based on scores received using the Performance Index developed by the consultant. The model looked at factors that would contribute to a successful route including income levels, households without cars, and the number of children in a household. Thirty-six new vehicles will be required and are anticipated to be placed into service over two years (2019-20 and 2020-21) contingent upon the delivery of buses.

B. Commuter Express

No significant changes are recommended for the Commuter Express lines. At the request of Council District Eleven, the TSA reviewed the potential for the extension of a new spur for Route 437 into Playa Vista. With the recent residential development in Playa Vista, there is potential to increase bus ridership. This new spur can also provide additional transit services to the Westside.

- New Commuter Express 437 Playa Vista Spur = Cost \$176,000 annually.
Add a new spur to Playa Vista Line 437. No current stops will be eliminated and no additional vehicles are required. This can be implemented in 2018-19.

C. Cityride

The Cityride Dial-a-Ride (DAR) program provides transportation services to eligible seniors (65 years and older) or individuals who have a qualifying disability. Active clients use the service for medical appointments, grocery shopping, recreational and social activities and personal business within the City limit (up to a 20 mile radius). The City provides \$42 in quarterly user subsidies to clients for the purchase of trips which may be used for franchised taxi service or the City DAR program. This operation has been in service since the 1990's. In 2010, subsidy levels were reduced by fifty percent from \$84 to \$42 per quarter which impacted the number of available trips which could be taken. As a result of the reduced subsidy, the number of active riders went from a high of 90,000 in 2010 to 30,000 today. In addition, the number of available DAR vehicles was reduced from 73 to 44. The Department reports the need for service remains critical based on feedback from the community. The TSA proposes the following programmatic changes:

- Restore quarterly subsidy from \$42 to \$84 = Cost \$3.5 million annually.
The subsidy is proposed to be restored back to 2010 levels, before service level reductions were taken. This action is anticipated to increase ridership and would support the increasing community demand for service based on feedback from clients and constituent groups.
- Implement the DAR taxi overflow program and eliminate trips over 10 miles.
Under the current program, clients have the option to use their subsidy and schedule a trip using either the taxi service or a DAR van for travel within a 20 mile radius. Under the new program, the Department would retain the discretion to assign the best vehicle for the most cost efficient trip, depending on the trip destination and user needs. The Department reports that with the elimination of trips over 10 miles, group rides would achieve cost efficiencies and have the potential to generate more trips. Essentially, the taxi overflow program is designed to optimize the DAR, provide clients access to more trips and stimulate cost savings. The DOT reports other cities have had success with this type of program.
- Increase taxi subsidy level from \$12 to \$20.
The current policy provides a taxi subsidy up to \$12 in fare value per trip for the taxi fare payment and the client is responsible for paying all costs over \$12. Under the new program, the client would be able to use up to \$20 of their quarterly subsidy for taxi fare.

D. Micro-Shared Demand Based Transit Pilot Program

This new program is proposed as a one-year pilot to increase mobility options for neighborhoods that have less density and do not necessarily use traditional transit. The estimated cost is \$940,000 annually. The service would be demand based and provide service in Venice/Marina Del Rey/Playa Vista during AM peak hours or PM late evening hours after DASH service ends. An on-line reservation and payment application system

would be developed. The service would support connection to the Metro rail system. Existing Cityride shuttles would be used and can be implemented in 2018-19. The DOT reports that the anticipated fare to be charged is still under development.

Operational Cost Estimates – Phase One

The current annual base cost for existing operations (DASH, Commuter Express and Cityride) is estimated at \$76 million. Phase One proposed recommendations require an additional \$62.8 million annually and would increase incrementally, resulting in a total annual estimated cost of \$138.8 million (Refer to Table One). This amount is assumed to increase up to three percent annually thereafter.

Table One – Phase One Cost for Operations and Maintenance				
TRANSIT SERVICES	2017-18 Existing Operational Costs	Additional Annual Operational Costs (Full Implementation)	Total	Percent Change from Existing Cost
DASH				
Existing: Continuation of Service	\$56,809,584	-	\$56,809,584	-
New: Extended Hours and weekend service	-	15,000,000	15,000,000	26%
New: Route modifications, improve service headways (time between buses)	-	29,000,000	29,000,000	51%
New: Add four routes	-	14,192,492	14,192,492	25%
Subtotal	56,809,584	58,192,492	115,002,076	102%
Commuter Express				
Existing: Continuation of Service	14,090,416	-	14,090,416	-
New: Add one new spur to existing route	-	176,000	176,000	1%
Subtotal	14,090,416	176,000	14,266,416	1%
Cityride				
Existing: Continuation of Service	5,100,000	-	5,100,000	-
New: Increase subsidy level	-	3,500,000	3,500,000	69%
New: Micro-Shared use transit pilot	-	940,000	940,000	9%
Subtotal	5,100,000	4,440,000	9,540,000	78%
Grand Total	\$76,000,000	\$62,808,492	\$138,808,492	82%

Capital Cost Estimates – Phase One

The Department currently funds their bus purchase program with grant reimbursements supporting up to eighty percent of the cost of the buses. Historically, allocations are set aside for the required match (twenty percent) and the grant portions (eighty percent) over several years in either designated special purpose fund appropriations or Reserve for Future Transit Service accounts. Once the buses are delivered, this front funding is used to pay the invoice and staff then seek reimbursement from the grantors. Reimbursements are deposited back into Proposition A as grant revenue and reprogrammed annually within the fund.

Per Council File 17-0739 adopted in November 2017, the Council directed that all future bus purchases be electric and 100 percent zero emissions by 2030 or earlier. The original TSA report assumed the purchase of CNG vehicles. Therefore, we have worked with DOT to develop a better

cost estimate largely assuming the purchase of electric vehicles. Approximately 157 buses are required as part of Phase One at a cost estimate of \$129 million (Refer to Table Two). This estimate is for 24 DASH replacement buses and 133 new DASH buses for the proposed changes (97 for service headways and 36 for four new DASH routes). Of this amount \$103 million will be reimbursed from awarded grants, and \$26 million is required as part of the grant match.

Table Two – Phase One Capital Costs						
	Estimated Costs of Buses			Number of Buses		
	Electric (\$825,000)	CNG (\$565,000)	Total	Electric	CNG	Total
DASH Fleet Replacement	\$19,800,000	-	\$19,800,000	24	-	24
Enhancements to existing routes	78,375,000	1,130,000	79,505,000	95	2	97
Four New Routes	29,700,000	-	29,700,000	36	-	36
Grand Total	\$127,875,000	\$1,130,000	\$129,005,000	155	2	157

In anticipation of a Phase One expansion, DOT has set aside a total of \$102.4 million in prior year fleet replacement (\$40.6 million) and current year Reserve for Future Transit Service (\$61.8 million) appropriations to front fund the anticipated \$129 million in capital costs. This plan has worked in the past but going forward will be restrained due to the additional on-going costs being imposed by Phase One. It is our understanding that such reimbursements will occur within three to forty-five days business days depending upon the grantor. Because the delivery of the buses will be staggered the entire amount is not needed at one time.

Fifteen Year Forecast – Proposition A

The City receives its local Proposition A funds from the Los Angeles County Metropolitan Transportation Authority (Metro) and uses funds to support public transit programs (DASH, Commuter Express and Cityride) administered by the DOT. Other funded programs include Specialized Transit such as the Charter Bus Program, Paratransit, Bikeshare, the Downtown LA Streetcar and support programs such as Transit Bus Security, the Measure R Local Three Percent Match, program and accounting staff, and expense funding.

The forecast has been updated from the original report transmitted on August 4, 2017 to include revenue and expenditures not previously included. On the revenue side other recently awarded grants and increased 2018-19 Metro transit allocations and subsidies are now included. On the expenditure side, revised cost estimates for electric fleet replacement vehicles for DASH and Commuter Express (rather than CNG), allocations for the anticipated Downtown LA Streetcar Project O&M set aside, the City's Measure R Three Percent Local Match for Metro projects, \$2.4 million in potential cost savings per year from the use of electric vehicles and the elimination of \$2.8 million in leasing expenses per year for transit facilities are also included.

The DOT current business model for capital purchases relies on grant reimbursements. Therefore, we used this as a baseline scenario in the development of a fifteen year forecast. The forecast is a best estimate at this time (Refer to Attachment B). Both revenue and expenditures can be impacted by unforeseen circumstances, including recessions, or cost savings.

- Assuming Phase One recommendations are approved under the current funding plan (Attachment B) with no additional revenues, a deficit of \$15.3 million within the Proposition A fund will begin in 2020-21, and grow to \$284.8 million in 2032-33.

Funding Strategy

The Council identified Phase One as a priority and requested this Office to develop funding options to support the implementation of the TSA. As noted earlier without additional on-going revenue to support the additional services a shortfall is forthcoming. The DOT bus purchases in the forecast are identified to occur in two phases: bus purchases required as part of Phase One and future regular fleet replacement purchases. The total cost estimate is \$266.1 million, with \$53.4 as the required match and \$212.7 million as potentially grant reimbursed (Refer to Table Three).

Fiscal Year	Table Three – Overall Capital Costs			
	Match	Capital	Total	
2019-20	\$ 3,825,248	\$ 15,516,983	\$ 19,342,231	Current TSA Needs Phase One -TSA DASH Fleet Replacement
2020-21	22,177,230	87,485,539	109,662,769	Phase One -TSA DASH expansion
Subtotal	26,002,478	103,002,522	129,005,000	
2022-23	3,780,000	15,120,000	18,900,000	Outlying Years DASH Fleet Replacement
2023-24	8,930,000	35,720,000	44,650,000	CE Fleet Replacement
2024-25	14,720,000	58,880,000	73,600,000	DASH and CE Fleet Replacement
Subtotal	27,430,000	109,720,000	137,150,000	
Grand Total	\$53,432,478	\$212,722,522	\$266,155,000	

The City may choose to either move forward with the current funding plan to purchase the buses or use short term financing to purchase the buses. Both options result in a shift of the shortfall to later years. The following options and the impact to the shortfalls resulting from either option are identified as follows:

- Application of \$95.03 million in one-time various special purpose and reserve fund appropriations:

Under the current plan, the entire cost of bus purchases at \$266.1 million is budgeted in the forecast, with grant reimbursements supporting up to eighty percent. Over several budget cycles, the Department has set aside various special purpose fund and Reserve for Future Transit Service appropriations in anticipation of a potential expansion. Approximately \$38.35 million for expansion operations and maintenance appropriations are available. In addition,

\$56.68 million in Reserve for Future Transit Service accounts designated as surplus is available for any transit need. These designated appropriations and reserves were built up over time and are available to support Phase One on-going costs.

With the application of \$95.03 million towards the shortfall, it will be deferred to 2023-24 and starts at \$6.0 million, and grows to \$189.8 million by 2032-33 (Attachment C).

2. Short Term Financing and the application of \$171.9 million in one-time various special purpose and reserve fund appropriations :

Under an alternative approach, the use of Municipal Improvement Corporation of Los Angeles (MICLA) Commercial Paper (CP) may be used as a tool to support DOT bus purchases rather than the existing method of setting aside reserves within Proposition A. This short term financing mechanism is used for capital and equipment purchases with a useful life over seven years, and has been used in prior years to front fund grant reimbursable capital projects. Bus purchases are considered capital expenses and have a useful life over twelve years and meet the criteria. Combined with solid cash flow management, this tool will mitigate the need to set aside the entire cost of bus purchases within Proposition A.

Assuming this approach, a total of \$53.4 million (match only) would be budgeted, instead of \$266.1 million. The interest and financing costs are estimated at \$2.4 million and would be paid by Proposition A. Similar to the current funding plan in Option One, \$95.03 million remains available to offset the shortfall. In addition, \$76.4 million is now available as this amount was previously budgeted for capital costs under the current funding plan. Under this scenario, a total of \$171.9 million is available to defer the shortfall. Of this amount \$24 million is already set aside for transit expansion, thus \$147,932,907.48 can be reappropriated per Attachment E of this report and transferred to a new account for Transit Expansion to defer the shortfall:

With the use of MICLA CP and the application of \$171.9 million in one-time special purpose funds, the deficit is deferred to 2027-28 and starts at \$12.8 million, and grows to \$115.7 million by 2032-33 (Attachment D).

Using MICLA CP for the current TSA is low risk as there are awarded grants available for reimbursement. The second phase bears slightly more risk as grants have not yet been awarded. However the Department has been successful in their ability to secure grant awards in the past. It is recommended that MICLA CP be applied and \$25 million in MICLA CP authority be authorized on a revolving basis to pay for anticipated bus purchases through 2024-25. Although the anticipated costs exceed \$25 million, the entire amount is not needed at once due to staggered deliveries of buses. The creation of a special fund is required to better manage the outstanding CP proceeds, grant reimbursements and direct expenditures. This Office will monitor the timing of grant reimbursements to ensure sufficient cash flow. The Department should report back in three years on the status of anticipated and awarded grant receipts for fleet replacement needs beginning in 2022-23 to 2024-25, to ensure grants will be available as reimbursement under this strategy.

Lastly, it should be noted that using the MICLA CP may impact the ability to fund other capital projects using this program. However, given the past average MICLA budgeted capital needs this funding approach still allows for capacity for other projects. In years with above average capital needs, certain projects may not be able to be financed through MICLA.

In addition to the recommended strategy, the City should consider the following options to further mitigate the Proposition A shortfall:

1. Identification of additional cost savings:

The forecast estimates \$2.4 million in cost savings per year from the use of electric vehicles rather than CNG. The Department estimates that it cost \$16,000 less per year to charge an electric vehicle than fueling a CNG bus. The Department anticipates that additional savings can be captured for operation and maintenance costs as they may be less than CNG. Once the new electric vehicles are received and in operation, the Department will have a true assessment on these savings from both and can report back.

2. Identification of additional revenues:

Due to the significant increase in on-going operational costs it is recommended that the Department report back on the potential for fare increases to DASH and Commuter Express. Although fare increases are generally unfavorable, the increased service levels being proposed provide a community benefit. This Office researched other municipal and regional operators and found that in general transit fares have increased over the past few years and are higher than the City. It is our understanding that the TSA consultant did not review the potential for fee increases and that a study would need to be completed to determine the fiscal impact. In addition, it is recommended that the structure for advertising revenue be revisited as the fleet expands.

In addition, the Department believes that additional Metro transit funds using the Formula Allocation Procedure (FAP) will be available once the Transit Expansion is underway. The FAP is based upon transit performance data for operations that covers the most recent year for which audited data is available. Each operator's share is calculated as follows: 50% of the operator's vehicle service miles and 50% of the operator's passenger revenues divided by its base cash fare. The City receives FAP funding for the Downtown DASH, and five Community DASH routes. With the Phase One increase in headways for DASH routes and the new Downtown DASH routes, the forecast estimates that \$10 million by 2020-21 with full implementation of the TSA will be generated. With the passage of Measure R, public transit funding was allocated to eligible operators to maintain and expand bus service. Eligible operators who expand service will be able to roll the new services into the FAP. The four new DASH routes appear to qualify for FAP funding. The DOT Transit staff is working with Metro to confirm funding. This could potentially add an additional \$5 million per year to the forecast in revenue after the two-year lag.

3. Credit for Measure R Metro Local Match Contributions – first/last mile projects:

The City and Metro signed a 15 year agreement on September 15, 2014 (C.F. 13-0337) that the City would contribute three percent of the cost to various Measure R Metro projects which are in the City boundaries. The payment for this match agreement has come out of Proposition A Local Return Fund over the past two years due to funding shortfalls in the Measure R Local Return Fund with annual allocations being set aside during budget development. Payments will run through 2027-28 totaling \$142.9 million and are included in the forecast. Similar to the Measure M Administrative Guidelines regarding the three match contribution, the City should negotiate a credit towards such payments for regional projects that fall within the project boundaries and meet the first/last mile criteria. It is recommended that the City renegotiate the 15 year agreement with Metro, seek Council approval and the Metro Board adoption.

4. Future Proposition A Expenditure funding shifts:

The Council and the Mayor through the annual budget cycle may consider shifting various bus and rail expenditures from the Proposition A Local Return Fund to other eligible special funds in anticipation of future shortfalls. Specifically, future Specialized Transit or Support Programs allocations shifted to the Measure M Local Return or other special funds, if funding permits in upcoming fiscal years. The following specialized transit services or support programs could be considered in upcoming budget cycles: Bikeshare Operations and Maintenance, Streetcar, and the Measure R Three Percent Local Match (if unable to renegotiate this requirement).

5. Reduction to existing services:

The reduction of existing services to support these increased additional on-going costs should be considered. Other programs or services such as the Senior Cityride program, Charter Bus, Marketing and Advertising, Transit Facility Security and Maintenance services currently funded may be further explored for cost savings or reductions to service levels.

These options provide a strategy to support the on-going costs for the TSA Phase One recommendations. All the options are feasible and provide solutions to achieve the Council and Mayor transit priorities. Either of the first two options can be applied immediately, while the remainder are more long term and will require further exploration requiring the Department to report back.

Lastly, it is important to keep in mind that in 2009-10, the City was confronted with the prospect of a looming deficit in future years for Proposition A. The deficit for 2010-11 was projected at \$23 million and expected to grow to \$350 million over the next ten years due to increases in operating expenses, as cash fares remained the same since the 1980's. As a result on June 24, 2010, the City Council (C.F.10-0082) approved service level reductions, increased fares for DASH and Commuter Express (to be implemented over a two year period), and reduced Cityride subsidies as part of a multi-pronged approach to reduce the anticipated shortfall.

Timeline

The Department will order the first set of buses within 60 days of approval of this report in order to obligate grants funds recently awarded. The remaining buses will be procured via the use of the State's procurement process once it becomes available in January 2019. Once the buses are ordered they can take up to 12 to 18 months to be built and delivered. Upon delivery to the City, front funding will need to be available to pay the invoices, which is estimated to occur sometime between September 2019 and June 2020, possibly crossing over into 2020-21.

Transit Yards and Infrastructure Update

Over the past two years, DOT has worked with existing transit contractors and negotiated the purchase of two transit yards currently in use, as part of a long term strategy to reduce leasing costs. Escrow closed in December 2017 for the Washington Transit Yard and in March 2018 for the Sylmar Transit Yard. Both yards will require upgrades to existing infrastructure (charging stations) to accommodate electric vehicles. In addition, the new CNG Bus Facility being constructed in Downtown will be completed by December 2018 and will also require upgrades to accommodate electric vehicles. At this time, the Department estimates that \$6 million may be needed for the overall upgrades. However, a better estimate will be developed once actual bids are received. In anticipation of these planned infrastructure needs, the 2018-19 Adopted Budget set aside \$6 million within Proposition A for facility improvements and infrastructure upgrades. An additional \$5 million in grant funding is also available to support these costs. The Department anticipates needing one additional yard in the South. However, an Infrastructure Study is planned to assist the Department in determining the overall space needs. In anticipation of such needs, the 2018-19 Adopted Budget set aside \$15 million in Proposition A to purchase one additional facility.

Phase Two

Six new routes were identified to service Mission Hills, Van Nuys/North Hills, Sun Valley Elysian Valley/Cypress Park, North Hollywood, and Glassell Park/Highland Park at an annual operating cost of \$17.1 million annually. Implementation is subject to identification of on-going funding and is deferred until a later time.

Title VI Analysis

As a recipient of federal grants, the City is subject to Title VI of the Civil Rights Act of 1964 which prohibits discrimination under any program or activity receiving federal financial assistance. The proposed service changes and new routes being proposed were analyzed by TMD to be in compliance with Title VI. Major service changes were reviewed to determine if there were disparate impacts on minority populations and disproportionate burdens on low income non-minority populations within ¼ mile of DASH routes and ¼ mile of Commuter Express stops. Proposed changes to existing DASH routes and new routes qualified as major service changes, and were deemed to be in Title VI compliance with no disparate impacts. For more detailed information, please refer to Attachment 11 of the Department's report.

Transit Performance Standards

The TSA also reviewed existing Transit Performance Standards and Evaluation Guidelines that were approved by the City Council in 1999 (C.F 98-1121). Performance standards are used to compare routes and service to better allocate resources and determine successful service, identify poor performing service or eliminate unsuccessful service. The study recommended changes to keep pace with industry standards and best practices. For more detailed information, please refer to Attachment 6 of the Department's report.

The recommended Key Performance Indicators (KPI's) are as follows:

Service Type	Performance Standards	Current Metric	New Metric
DASH	Cost Effectiveness	Farebox Recovery Ratio	Farebox recovery ratio (internal) Operating Ratio (external)
	Service Performance	Passengers/Revenue Hour	Passengers/Revenue Hour (with service improvements)
	Cost Efficiency – <i>New</i>	-	Cost per Passenger
Commuter Express (CE)	Cost Effectiveness	Farebox Recovery Ratio	Farebox recovery ratio (internal) Operating Ratio (external)
	Service Performance	Passengers/Revenue Hour	Passengers per trip
	Cost Efficiency – <i>New</i>	-	Cost per Passenger

- **Cost Effectiveness** – Measures the overall cost effectiveness of the service.
 - Operating Ratio is the ratio of total revenues to operating costs. This is typically the combination of fare revenues and other revenues such as advertising and subsidies.
 - Farebox Recovery Ratio is the ratio of fare revenue to operating costs. It does not include other subsidies such as advertising or special funding for routes.
- **Service Performance** – Measures the service productivity of the route.
 - DASH - Passengers per revenue hour measures the average number of passenger boardings per hour of revenue.
 - CE - Passengers per trip measures the average number of passenger boardings per trip.
- **Cost Efficiency (new)** – Measures if service is being provided efficiently.
 - Cost per Passenger measures the cost of operating service per passenger boarding.

It should be noted that the Passengers/Revenue Hour metric includes the evaluation of a combination of route modifications, service headways improvements and increased ridership. This metric does not solely evaluate service headway improvements. The service headway improvements are monitored daily and evaluated as part of DOT's On-Time Performance metric. In addition, On-Time information is available for transparency on the Department's website.

**DASH EXPANSION
PHASE ONE AND TWO
COST ESTIMATES**

Attachment A

Recommended

Phase One	Council District	Annual O&M Cost Estimate	Buses Needed	Capital Cost Estimate
Boyle Heights West	14	2,684,963	8	6,600,000
Pacoima	6,7	5,962,858	12	9,900,000
Sylmar	7	1,490,715	3	2,475,000
Canoga Park	3	4,053,956	8	6,600,000
			5	4,125,000
TOTAL		\$14,192,492	36	\$29,700,000

On hold, pending available funding

Phase Two	Council District	Annual O&M Cost Estimate	Buses Needed	Capital Cost Estimate
Mission Hills	7,12	4,054,000	8	6,600,000
Van Nuys/North Hills	6,12	1,491,111	3	2,475,000
Sun Valley	2,6	4,054,000	8	6,600,000
Elysian Valley/Cypress Park	1,13	2,440,501	7	5,775,000
North Hollywood	2,6	2,982,000	6	4,950,000
Glassell Park/Highland Park	1,14	2,141,000	6	4,950,000
			6	4,950,000
TOTAL		\$17,162,612	44	\$36,300,000

Current Funding Plan without CP Financing

PROPOSITION A 15 YEAR FORECAST -- DASH SERVICE IMPROVEMENTS AND PHASE ONE EXPANSION

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
2018-19															
2017-18															
Estimates															
Adopted															
Revised															
2018-19															
2019-20															
2020-21															
2021-22															
2022-23															
2023-24															
2024-25															
2025-26															
2026-27															
2027-28															
2028-29															
2029-30															
2030-31															
2031-32															
2032-33															
Cash Balance															
Prior Years Unexpended Appropriations															
Adjusted Beginning Cash Balance															
Revenue															
Prop A Sales Tax Receipts (1)															
Prop A, MTA/FTA reimbursements (2)															
Advertising Revenue															
Other Revenue															
Prop A, Farebox Revenue(4)															
Prop A, Farebox Revenue new service															
Prop A, Transit Scrip															
Interest															
Other - MTA Bus Passes															
Other Grants (3)															
Total Receipts															
Total Revenue															
Expenditures															
City Transit Service(5)															
Specialized Transit(5)(6)															
Transit Capital(7)															
Support Programs (8)															
Reserve for Future Transit Services															
Total Expenditures															
Balance															
Debt Service															
Balance															
Application of \$95.03 M in prior year appropriations															
Balance															

(1) Sales tax growth rate of 3% assumed in future years.

(2) Updates new Metro Funding Marks as part of FY 19 revised budget.

(3) Includes \$57.8 m in recently awarded grant receipts.

(4) Farebox revenue includes DASH, prepaid fare media and Commuter Express fares increase 1%

(5) Transit costs increase at 3% for CPI.

(6) Assumes \$6 M annually for Streetcar Project for future O&M. Not escalated

(7) Capital costs for bus purchases, facility upgrades and additional facilities. Total costs (match plus capital) for bus purchases are budgeted in Year 2, 3, 5, 6, and 7.

(8) Assumes City Three Percent Metro Match Obligation in Year 4, 5, 6, 7, 8, 9, 10.

Current Funding Plan without CP Financing - Option One

PROPOSITION A 15 YEAR FORECAST – DASH SERVICE IMPROVEMENTS AND PHASE ONE EXPANSION

				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	2017-18 Estimates	2018-19 Adopted Budget	Revised 2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	
Cash Balance		271.9	271.0															
Prior Years Unexpended Appropriations		(176.9)	(176.9)															
Adjusted Beginning Cash Balance	\$ 273.0	\$ 94.1	\$ 94.1	\$ 35.0	\$ 80.2	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (6.0)	\$ (49.9)	\$ (59.6)	\$ (71.9)	\$ (86.9)	\$ (101.7)	\$ (119.2)	\$ (139.7)	\$ (163.2)	
Revenue																		
Prop A Sales Tax Receipts (1)	\$ 74.0	\$ 75.0	\$ 75.0	\$ 77.2	\$ 79.5	\$ 81.9	\$ 84.4	\$ 86.9	\$ 89.5	\$ 92.2	\$ 95.0	\$ 97.8	\$ 100.8	\$ 103.8	\$ 106.9	\$ 110.1	\$ 113.4	
Prop A, MTA/FTA reimbursements (2)	56.0	55.8	90.8	79.4	109.3	81.2	96.7	117.8	141.4	83.0	83.3	83.8	84.3	84.9	85.4	86.0	86.5	
Advertising Revenue	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Other Revenue																		
Prop A, Farebox Revenue(4)	12.5	11.3	11.3	11.4	11.5	11.7	11.8	11.9	12.0	12.1	12.3	12.4	12.5	12.6	12.7	12.9	13.0	
Prop A, Farebox Revenue new service		-	-	8.5	8.0	8.1	8.1	8.2	8.3	8.4	8.5	8.6	8.6	8.7	8.8	8.9	9.0	
Prop A, Transit Scrip	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Interest	2.8	2.9	2.9	0.7	0.6	0.3	-	-	-	-	-	-	-	-	-	-	-	
Other - MTA Bus Passes	1.3	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
Other Grants (3)	-	-	-	57.8	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Receipts	\$ 147.8	\$ 147.6	\$ 182.6	\$ 238.1	\$ 212.0	\$ 186.4	\$ 204.2	\$ 228.0	\$ 254.4	\$ 198.9	\$ 202.3	\$ 205.8	\$ 209.4	\$ 213.2	\$ 217.0	\$ 221.1	\$ 225.1	
Total Revenue	\$ 420.8	\$ 241.7	\$ 276.7	\$ 273.1	\$ 292.3	\$ 186.3	\$ 204.2	\$ 228.0	\$ 248.4	\$ 148.9	\$ 142.7	\$ 133.9	\$ 122.4	\$ 111.5	\$ 97.8	\$ 81.3	\$ 61.9	
Expenditures																		
City Transit Service(5)	\$ 83.8	\$ 102.8	\$ 102.8	\$ 115.6	\$ 140.1	\$ 144.5	\$ 148.9	\$ 153.5	\$ 158.3	\$ 163.1	\$ 168.2	\$ 173.4	\$ 178.7	\$ 184.2	\$ 189.8	\$ 195.7	\$ 201.7	
Specialized Transit(5)(6)	10.3	16.3	16.3	16.5	16.8	17.1	17.4	17.7	18.0	18.4	18.7	19.1	19.4	19.8	20.2	20.6	21.0	
Transit Capital(7)	22.9	22.8	22.8	26.5	109.8	0.2	19.1	44.8	73.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Support Programs (8)	32.8	38.0	38.0	34.3	40.9	46.4	47.0	47.6	48.2	26.8	27.5	28.1	25.8	26.5	27.3	28.0	28.8	
Reserve for Future Transit Services		\$ 61.8	61.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Expenditures	\$ 149.8	\$ 241.7	\$ 241.7	\$ 192.9	\$ 307.6	\$ 208.2	\$ 232.4	\$ 263.6	\$ 298.3	\$ 208.5	\$ 214.6	\$ 220.8	\$ 224.1	\$ 230.7	\$ 237.5	\$ 244.5	\$ 251.7	
Balance	\$ 271.0	\$ (0.0)	\$ 35.0	\$ 80.2	\$ (15.3)	\$ (21.9)	\$ (28.2)	\$ (35.6)	\$ (49.9)	\$ (59.6)	\$ (71.9)	\$ (86.9)	\$ (101.7)	\$ (119.2)	\$ (139.7)	\$ (163.2)	\$ (189.8)	
Debt Service																		
Balance			35.0	\$ 80.2	\$ (15.3)	\$ (21.9)	\$ (28.2)	\$ (35.6)	\$ (49.9)	\$ (59.6)	\$ (71.9)	\$ (86.9)	\$ (101.7)	\$ (119.2)	\$ (139.7)	\$ (163.2)	\$ (189.8)	
Application of \$95.03 M in prior year appropriations			\$ -	\$ 15.3	\$ 21.9	\$ 28.2	\$ 29.6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Balance			35.0	\$ 80.2	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (6.0)	\$ (49.9)	\$ (59.6)	\$ (71.9)	\$ (86.9)	\$ (101.7)	\$ (119.2)	\$ (139.7)	\$ (163.2)	\$ (189.8)	

(1) Sales tax growth rate of 3% assumed in future years.

(2) Updates new Metro Funding Marks as part of FY 15 revised budget.

(3) Includes \$57.8 m in recently awarded grant receipts.

(4) Farebox revenue includes DASH, prepaid fare media and Commuter Express fares increase 1%

(5) Transit costs increase at 3% for CPI.

(6) Assumes \$6 M annually for Streetcar Project for future O&M. Not escalated

(7) Capital costs for bus purchases, facility upgrades and additional facilities. Total costs (match plus capital) for bus purchases are budgeted in Year 2, 3, 5, 6, and 7.

(8) Assumes City Three Percent Metro Match Obligation in Year 4, 5, 6, 7, 8, 9, 10.

Alternative Plan with CP Financing for Capital Purchases - Option Two

PROPOSITION A 15 YEAR FORECAST — DASH SERVICE IMPROVEMENTS AND PHASE ONE EXPANSION

	2017-18	2018-19	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
	Estimates	Adopted Budget	Revised 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
Cash Balance		271.9	271.0														
Prior Years Unexpended Appropriations		(176.9)	(176.9)														
Adjusted Beginning Cash Balance	\$ 273.0	\$ 94.1	\$ 94.1	\$ 35.0	\$ 27.7	\$ 0.0	\$ (0.0)	\$ (0.0)	\$ 0.0	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (12.8)	\$ (27.6)	\$ (45.1)	\$ (65.6)	\$ (89.1)
Revenue																	
Prop A Sales Tax Receipts (1)	\$ 74.0	\$ 75.0	\$ 75.0	\$ 77.2	\$ 79.5	\$ 81.9	\$ 84.4	\$ 86.9	\$ 89.5	\$ 92.2	\$ 95.0	\$ 97.8	\$ 100.8	\$ 103.8	\$ 106.9	\$ 110.1	\$ 113.4
Prop A, MTA/FTA reimbursements (2)	56.0	55.8	90.8	63.9	73.9	81.2	81.6	82.1	82.5	83.0	83.3	83.8	84.3	84.9	85.4	86.0	86.5
Advertising Revenue	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Other Revenue																	
Prop A, Farebox Revenue(4)	12.5	11.3	11.3	11.4	11.5	11.7	11.8	11.9	12.0	12.1	12.3	12.4	12.5	12.6	12.7	12.9	13.0
Prop A, Farebox Revenue new service				8.5	8.0	8.1	8.1	8.2	8.3	8.4	8.5	8.6	8.6	8.7	8.8	8.9	9.0
Prop A, Transit Scrip	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Interest	2.8	2.9	2.9	0.7	0.3	0.1	-	-	-	-	-	-	-	-	-	-	-
Other - MTA Bus Passes	1.3	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Other Grants (3)				5.8													
Total Receipts	\$ 147.8	\$ 147.6	\$ 182.6	\$ 170.6	\$ 176.4	\$ 186.1	\$ 189.1	\$ 192.3	\$ 195.5	\$ 198.9	\$ 202.3	\$ 205.8	\$ 209.4	\$ 213.2	\$ 217.0	\$ 221.1	\$ 225.1
Total Revenue	\$ 420.8	\$ 241.7	\$ 276.7	\$ 205.6	\$ 204.0	\$ 186.2	\$ 189.0	\$ 192.2	\$ 195.5	\$ 198.8	\$ 202.3	\$ 205.8	\$ 196.5	\$ 185.6	\$ 171.9	\$ 155.4	\$ 136.0
Expenditures																	
City Transit Service(5)	\$ 83.8	\$ 102.8	\$ 102.8	\$ 115.6	\$ 140.1	\$ 144.5	\$ 148.9	\$ 153.5	\$ 158.3	\$ 163.1	\$ 168.2	\$ 173.4	\$ 178.7	\$ 184.2	\$ 189.8	\$ 195.7	\$ 201.7
Specialized Transit(5) (6)	10.3	16.3	16.3	16.5	16.8	17.1	17.4	17.7	18.0	18.4	18.7	19.1	19.4	19.8	20.2	20.6	21.0
Transit Capital (7)	22.9	22.8	22.8	11.0	22.3	0.2	3.9	9.1	14.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Support Programs (8)	32.8	38.0	38.0	34.3	40.9	46.4	47.0	47.6	48.2	26.8	27.5	28.1	25.8	26.5	27.3	28.0	28.8
Reserve for Future Transit Service		61.8	61.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenditures	\$ 149.8	\$ 241.7	\$ 241.7	\$ 177.4	\$ 220.1	\$ 208.2	\$ 217.2	\$ 227.9	\$ 239.4	\$ 208.5	\$ 214.6	\$ 220.8	\$ 224.1	\$ 230.7	\$ 237.5	\$ 244.5	\$ 251.7
Balance	\$ 271.0	\$ (0.0)	\$ 35.0	\$ 28.2	\$ (16.1)	\$ (22.0)	\$ (28.2)	\$ (35.7)	\$ (43.9)	\$ (9.7)	\$ (12.3)	\$ (15.0)	\$ (27.6)	\$ (45.1)	\$ (65.6)	\$ (89.1)	\$ (115.7)
Debt Service (9)				0.5	0.5	0.1	0.2	0.4	0.6	-	-	-	-	-	-	-	-
Balance			35.0	27.7	(16.6)	(22.1)	(28.4)	(36.1)	(44.5)	(9.7)	(12.3)	(15.0)	(27.6)	(45.1)	(65.6)	(89.1)	(115.7)
Application of \$171.9 M in set aside appropriations			-	-	16.6	22.1	28.4	36.1	44.5	9.7	12.3	2.2	-	-	-	-	-
Balance			\$ 35.0	\$ 27.7	\$ 0.0	\$ (0.0)	\$ (0.0)	\$ 0.0	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (12.8)	\$ (27.6)	\$ (45.1)	\$ (65.6)	\$ (89.1)	\$ (115.7)

(1) Sales tax growth rate of 3% assumed in future years.

(2) Updates new Metro Funding Marks as part of FY19 revised budget.

(3) Includes \$5.7 in recently awarded grants for facility upgrades and chargers.

(4) Farebox revenue includes DASH, prepaid fare media and Commuter Express fares increase 1%

(5) Transit costs increase at 3% for CPI.

(6) Assumes \$6 M annually for Streetcar Project for future O&M. Not escalated.

(7) Capital cost for bus purchases, facility upgrades and additional facilities. CP financing used for bus purchases for all years, requiring only matching costs to be budgeted.

(8) Assumes City Three Percent Metro Match Obligation in Year 4, 5, 6, 7, 8, 9 and 10.

(9) Estimated Debt Service for Phase One and future bus purchases.


Transfers Between Accounts within Departments and Funds
Transit Service Analysis Phase One
For Fiscal Year 2018-19

<u>Transportation</u>	<u>Transfer From:</u>	<u>Amount</u>	<u>Transfer To:</u>	<u>Amount</u>
<i>Transfers funds from various accounts to support the Phase One transit expansion</i>	<u>Fund 385/ Proposition A Local Transit Assistance</u>		<u>Fund 385/ Proposition A Local Transit Assistance</u>	
	94J296, DASH Fleet Replacement	2,505,061.19	New Account, Transit Operations Expansion	147,932,907.48
	94L296, DASH Fleet Replacement	5,240,000.00		-
	94M297, Cityride Fleet Replacement	2,765,001.60		
	94MA02, CE Bus Purchase Exp	578,038.69		
	94MA01, Cityride Vehicle Purchase Exp	2,900,000.00		
	94MA00, Community DASH Bus Purchase Exp	1,070,498.00		
	94P158, Unappropriated Balance DASH	14,355,000.00		
	94P399, Reserve for Future Transit Service	56,680,385.00		
	94R399, Reserve for Future Transit Service	61,838,923.00		
	Total	<u>147,932,907.48</u>	Total	<u>147,932,907.48</u>

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: August 4, 2017

To: The Honorable Eric Garcetti, Mayor
Office of the Mayor
Attention: Mandy Morales, Legislative Coordinator

From: Seleta J. Reynolds,  General Manager
Department of Transportation

Subject: **TRANSIT SERVICE ANALYSIS RECOMMENDATIONS**

SUMMARY

The Los Angeles Department of Transportation (LADOT) recently completed a comprehensive Transit Service Analysis (TSA) for all of its transit services including DASH, Commuter Express, and the Cityride program. Based on the results of the TSA, this report is recommending service changes to improve and expand LADOT's transit services. Funding has been included in FY 2017-18 budget for all of the recommended changes in Phase 1 except for route modifications and service headway improvements (\$29M) on existing DASH routes.

RECOMMENDATIONS

That the City Council, subject to approval of the Mayor:

1. Authorize the General Manager, Department of Transportation, to amend the following existing or successor DASH, Commuter Express, and Cityride service contracts (subject to the approval of the City Attorney as to form and legality) to reflect the recommended service levels, and to adjust the service contractor hourly cost rates as necessary to implement the following:
 - a. Extend service hours to later evening and add weekend service to all DASH routes
 - b. Implement recommended route modifications and improve service headways to at least every 15 minutes on all DASH routes
 - c. Increase subsidies for Cityride clients from \$42 to \$84 per quarter and add a pilot taxi service to complement existing dial-a-ride van service
 - d. Implement a micro-transit shared use pilot program in the Westside of Los Angeles
 - e. Add Playa Vista to the existing Commuter Express Line 437 route
 - f. Implement four new DASH routes in Phase 1 (Attachment 12)
 - g. Add six new DASH routes in Phase 2 subject to the identification of new funding (Attachment 12)
2. Approve the findings of the Federal Transit Administration (FTA) Title VI Analysis for the TSA as described in Attachment 11.
3. Approve the recommended new transit performance metrics as detailed in Attachment 6.
4. Direct the General Manager, Department of Transportation, to work with City Council offices and stakeholder groups to identify bus stop locations and minor route modifications as warranted within the cost limit of these recommendations.

BACKGROUND

LADOT Transit conducted an extensive public outreach campaign to solicit input from communities, elected offices, and partner agencies on how to improve and restructure its transit services to meet the changing needs of the City. Overwhelmingly, the public expressed an interest in improving LADOT's current transit service by 1) improving existing headways; 2) extending service hours into late evenings and weekends; and 3) adding new service lines in select communities.

LADOT contracted with Transportation Management and Design, Inc. (TMD) to assist with the preparation of analytical reports, route-by-route recommendations, modeling proposed DASH routes and route modifications, preparing the accompanying Title VI analysis, and assisting with public presentations. Given the growth in the regional transportation network, the densification of downtown and other employment and residential centers and the shift in demographics, TMD recommended that improving operational efficiencies to existing service should be LADOT Transit's highest priority.

DISCUSSION

LADOT Transit staff carefully considered TMD's analysis and recommendations and gave significant weight to input from riders and stakeholders before finalizing recommended changes to existing services.

Below is a summary of the proposed changes along with the fiscal impact.

Proposed Phase 1 Changes	Annual Operating Costs	Capital Costs
Extend PM and weekend DASH service	\$15M	None
Improve service headways on DASH	\$29M	\$10.9M (match funds)
Increase subsidies for Cityride clients	\$3.5M	None
Implement micro-transit demonstration	\$940,000	Use existing vehicles
Add Playa Vista to CE Line 437	\$176,000	No add vehicles req.
Add four new DASH Routes*	\$14.3M	\$4.1M (match funds)
Sub-Total	\$62.92M	\$15.0M
Add six new DASH routes in Phase 2**	\$17.2M	\$19.2M
Total	\$80.12M	\$34.2M

*Operating funds have been included in FY 2017-18 budget. However, service will not be implemented until new buses are manufactured and delivered in FY 2019-20.

**Subject to the identification of new funding.

The recommended new DASH routes are:

<u>Phase 1 New DASH Routes</u>	<u>Council District</u>	<u>Operating/Capital Costs (in \$M)</u>
DASH Boyle Heights West	14	\$2,685/\$5,100
DASH Pacoima	6, 7	\$5,963/\$7,910,
DASH Sylmar	7	\$1,491/\$2,260,
DASH Canoga Park	3	\$4,054/\$5,100
 <u>Phase 2 New DASH Routes</u>	 <u>CD</u>	
DASH Mission Hills	7,12	\$4,054/\$5,100
DASH Van Nuys/North Hills	6,12	\$1,491/\$2,260
DASH Sun Valley	2, 6	\$4,054/\$5,100
DASH Elysian Valley/Cypress Park	1,13	\$2,441/\$4,520
DASH North Hollywood	2, 6	\$2,982/\$4,520
DASH Glassell Park/Highland Park	1, 14	\$2,141/\$4,250

Funding

The table below reflects the proposed costs by fiscal year for Phase 1 of the recommended changes.

TSA PROPOSED CHANGES - COST ESTIMATES BY FISCAL YEAR

FY	Extating Service	Extend DASH PM and Weekend	Increase Subsidies for Cityride Clients	Shared Use Demo	CE 437 Modification	Improve Headways on DASH	4 New DASH Routes PHASE I
17/18	\$76,000,000	\$15,000,000	\$3,500,000	\$470,000	\$176,000		\$14,355,000
18/19	\$109,501,000			\$470,000		\$14,500,000	
19/20	\$124,471,000					\$14,500,000	
Total		\$15,000,000	\$3,500,000	\$940,000	\$176,000	\$29,000,000	\$14,355,000

FINANCIAL IMPACT

There is no General Fund impact. Sufficient funds are included in the City's Adopted FY 2015-16, FY 2016-17 and FY 2017-18 Proposition A Local Transit Assistance (PALTA) Budgets to begin implementation of all service enhancements not requiring new vehicles. Currently, the lead time for delivery of new vehicles is between 18 and 20 months. The Department will request additional funding in FY 2018-19 and FY 2019-20 to implement recommendations for route modifications and headway improvement. However, any proposed program additions or changes in the Prop A forecast assumptions will impact the Department's ability to implement all of the recommendations indicated in

Honorable Eric Garcetti,
Mayor

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August 4, 2017

Phase 1 including the four new DASH routes. The Department will implement the Phase 2 DASH services when operating and capital funds become available.

SJR/CR:cr

Transit Service Analysis

Detailed Report

August 2017

TRANSIT SERVICE ANALYSIS (TSA) - DETAILED REPORT ON RECOMMENDED SERVICE CHANGES

On February 5, 2014, the City Council passed a motion (CF 13-1550) (Attachment 1) instructing the Department of Transportation (LADOT Transit) to update its 2005 Community DASH Needs Assessment Study and incorporate changes in demographics and the impacts of rail and Bus Rapid Transit (BRT) services on current as well as future DASH routes. LADOT Transit, with the assistance of Transportation Management and Design, Inc., (TMD) a nationally respected transportation planning consultant, completed a comprehensive Transit Service Analysis (TSA). The TSA went beyond the DASH Needs Assessment to include a systematic line-by-line analysis of LADOT's DASH and Commuter Express services with the goal of improving the efficiency and effectiveness of these services. Previous studies did the DASH Needs Assessment and the line-by-line analysis as stand-alone studies. The 2016 TSA also included a Federal Transit Administration (FTA) Title VI Analysis of the recommended service changes, an evaluation of its transit performance metrics, and a review of the Cityride paratransit program for seniors and disabled passengers.

The recommendations contained in this report followed two phases of public hearings, presentations to stakeholders, including City Council members and /or their staffs, and an evaluation of thousands of public comments received at the meetings and hearings, online, from telephone messages, and in person at LADOT Transit's Customer Service Center. This evaluation required further analysis and adjustments by LADOT Transit staff and its consultant to several of the preliminary recommendations resulting in the Two-Phased Service Plan suggested in this document.

LADOT Transit is recommending the following changes to its service:

Table 1

Proposed Phase 1 Changes	Annual Operating Costs	Capital Costs
Extend PM and weekend DASH service	\$15M	None
Improve service headways	\$29M	\$10.9M (match funds)
Increase subsidies for Cityride clients	\$3.5M	None
Implement micro-transit demonstration**	\$940,000	Use existing vehicles
Add Playa Vista spur to CE Line 437	\$176,000	No add vehicles req.
Add four new DASH Routes	\$14.3M	\$4.1M (match funds)
<i>Sub-Total</i>	<i>\$62.92M</i>	<i>\$15.0M</i>
Add six new DASH routes in Phase 2*	\$17.20M	\$19.2M
<i>Total</i>	<i>\$80.12M</i>	<i>\$34.2M</i>

*Subject to the identification of new funding

** Micro transit demonstration using public-private model for on demand transit.

** 50 percent of this total or \$470,000 has been included in FY 2017-18 budget since the projected date for implementation is January 2018. The Department will request the remaining \$470,000 in FY 2018-19.

A detailed summary of these changes is contained in Attachment 3.

DISCUSSION

In 2016, LADOT Transit conducted a comprehensive line-by-line analysis of its existing transit services, including DASH, commuter express, and Cityride, updated its 2005 Community DASH Needs Assessment, revamped its Cityride program, prepared a Title VI analysis, and conducted an extensive public outreach campaign, while also updating its transit performance metrics. LADOT contracted with TMD to assist in this effort. TMD prepared analytical reports, made route-by-route recommendations, modeled proposed DASH routes and route modifications, prepared an accompanying Title VI analysis, and assisted with public presentations. LADOT Transit staff carefully considered TMD's recommendations and gave significant weight to input from riders and stakeholders before finalizing recommended changes to existing services.

Key Project Objectives

- Systematically evaluate and rank the performance of each existing DASH and Commuter Express using performance metrics and line ranking methodology approved by City Council (CF 05-2015).
- Assess the need for potential new and/or modified DASH and Commuter Express services to address performance issues, identify unmet transit needs, increase system connectivity to regional transit hubs, and serve new markets resulting from changes in land.
- Use patterns, demographics, and major new residential, commercial and institutional developments.
- Update the 2005 LADOT Community DASH Needs Assessment Study report using 2010 census data to provide a prioritized, ranked list of potential new Community DASH services with projected performance scores.
- Evaluate and update LADOT's Transit performance metrics and line-ranking methodology.
- Evaluate the Cityride Program, including changes implemented as part of the 2010 line-by-line analysis that have impacted Cityride clients. Recommend strategies to improve cost-effectiveness and responsiveness to client needs and compare the program to similar voluntary paratransit programs locally and nationally.
- Execute a comprehensive public engagement plan that ensures all impacted populations have the ability to provide input into the recommendations. Produce public education materials in compliance with LADOT Transit Limited English Proficiency Plan (LEP).
- Conduct a federal Title VI analysis of all recommended service changes and new services.

Public Outreach

LADOT's Transit marketing consultant, Ilium and Associates, conducted a comprehensive and coordinated outreach effort in support of the Transit Service Analysis. The effort began at the onset of the Transit Service Analysis in 2015 to engage and solicit input from the public in the review process and continued through 2016 when the public was able to review and comment on LADOT's preliminary recommendations. The outreach effort included:

- Fourteen public workshops and hearings held throughout the City in June 2015 and August 2016 (313 attendees total)
- Thirty meetings/presentations for Council Offices, the Mayor's Office, Metro, neighborhood councils, chambers of commerce, and other stakeholder groups
- Field interviews with LADOT Transit riders and bus drivers
- Correspondence to neighborhood councils, chambers of commerce, and business improvement districts soliciting input
- Public workshop and hearing notices posted on LADOT Transit website, LADOT Transit buses, public buildings, and at LADOT Customer Service Center; distributed via email lists, Twitter.com/ladottransit, Facebook.com/ladottransit, and YouTube; published in the LA Times, LA Daily News, and 10 ethnic language newspapers
- Project website with an interactive discussion forum that garnered ideas and comments from 180 participants (www.ladottransit.com/movingforwardtogether)
- Public comment phone line in 11 languages and dedicated email address for public comments

Staff also met with Metro bus service planners and made a presentation to the Metro San Fernando Valley Service Council in October 2016.

The first phase of outreach in 2015 resulted in 1,669 public comments, suggestions, and ideas. The second phase in 2016 resulted in over 700 public comments on LADOT's Transit preliminary recommendations.

See Attachment 7 for a summary of public outreach activities and Attachment 8 for a summary of public comments.

A. Line-by-Line Analysis

For the line-by-line analysis, TMD evaluated each existing DASH and Commuter Express route's performance, including service productivity, efficiency and financial effectiveness performance profiles by time of day and segment; schedule adherence at time points by time of day, and running times between time points; and average seat utilization by route, route segment, and run. The data source for this evaluation was Syncromatics, LADOT's Transit GPS-based route management service that electronically tracks the locations of buses. All DASH and Commuter Express buses are equipped with Syncromatics hardware and software that allows LADOT Transit to track on-time performance, driver

performance, and bus stop timing resulting in a route performance history.

The system-wide average for each service type compared routes and route segments. The analysis resulted in a thorough assessment that identified the strengths and weaknesses of each LADOT's Transit route and route segment and opportunities for improvement. Comprehensive ridership profiles for each DASH and Commuter Express line using Ridecheck passenger count data, Transtrack (comprehensive data management program) for revenue hours and performance trends, and 2014 on-board survey data. The research findings provided a complete demographic and geographic for each DASH and Commuter Express route.

TMD recommended numerous changes to existing DASH routes based on projected ridership increases and operational improvement. Many of the suggested changes simply involved reducing unnecessary turns that impact travel time and on-time performance. Some changes moved DASH route segments from minor to major streets where key destinations tend to be located and ridership are potentially higher. Many residents and riders expressed concerns about losing DASH service on the minor streets that serve local libraries, parks, recreation centers, and transit-dependent neighborhoods. After hearing these concerns, LADOT eliminated a number of route shifts from minor to major streets and kept a number of existing routes as is.

Some poor performing DASH routes, however, needed an overhaul to maintain their viability. Chief among these is DASH Fairfax, consistently a poor performing route with respect to on-time performance and ridership. This is largely due to its extensive length of travel along heavily congested streets in the Mid-City area, traveling from Wilshire Blvd. to Cedars Sinai Medical Center. LADOT Transit is proposing to trim the route alignment and provide frequent service along Fairfax, Melrose, La Cienega and Third St. by eliminating the low-ridership loop around Park La Brea and Wilshire Blvd. The Cityride Program currently provides a fixed-route shuttle service through Park La Brea to Pan Pacific Park and Beverly Blvd. on Tuesdays and Thursdays. If expanded to every weekday, this will provide convenient transit service for Park La Brea residents.

LADOT Transit is proposing to keep all of the DASH routes to maintain transit service for existing riders. The table below shows the existing DASH routes by Council District (CD).

Table 2

<u>Existing DASH routes</u>	<u>CD</u>
Beachwood Canyon	13, 4
Boyle Heights/East LA	14,
Chesterfield Square	8, 9
Crenshaw	8
DASH Downtown (five routes)	1,9,14
El Sereno/City Terrace	1, 14
Fairfax	4, 5
Highland Park/Eagle Rock	1, 14
Hollywood	4, 13,
Hollywood/Wilshire (Larchmont Shuttle)	4, 10, 13
King-east	9
Leimert/Slauson	8, 9, 10
Lincoln Heights/Chinatown	1, 14
Los Feliz	4, 13

Midtown	8, 10
Northridge	8, 10
Observatory Shuttle	4, 13
Panorama City/Van Nuys	6
Pico Union/Echo Park	1, 9, 13, 14
San Pedro	15
Southeast	8, 9
Pueblo Del Rio	8, 9
Van Nuys/Studio City	6
Vermont Main	8, 9
Watts	8, 9, 15
Wilmington	15
Wilshire Center/Koreatown	1, 4, 10, 13

Key Performance Findings

The line-by-line analysis revealed the following:

- Productivity (a service effectiveness metric that measures average ridership per unit of service) for Community DASH is 40 passengers per revenue hour, making it an effective service based upon national averages. DASH Pico Union/Echo Park, DASH Watts, DASH Vermont/Main, DASH Panorama City/Van Nuys, and DASH Wilmington are among LADOT's most productive Community DASH routes.
- Average weekday operating cost per passenger on Community DASH is nearly \$3.00. The most productive routes in the system also have the lowest operating costs per passenger; and the lowest is \$1.49 for DASH Panorama City/Van Nuys, which has the highest productivity.
- Downtown DASH is most productive during AM and PM peak times, averaging 31-35 passengers per revenue hour. DASH A and DASH E are Downtown's most productive routes. DASH E generates the highest weekday ridership of the five Downtown routes.
- Average operating cost per passenger on Downtown DASH is \$3.24. DASH E has the lowest operating cost per passenger at \$2.55.
- Downtown DASH is on-time 74 percent of the time primarily attributed to congestion due to construction projects and filming in the area.
- Commuter Express averages 27 passengers per trip. The most productive routes (409, 438, and 448) address gaps in the regional transit network. Commuter Express 422, a reverse commute service between Downtown LA and the Conejo Valley via the San Fernando Valley, generates high ridership and efficient cost/passenger and farebox recovery ratio metrics, despite its long route length (40 miles).
- Average operating cost per passenger on Commuter Express is \$5.49. Commuter Express 409, 438, and 448 perform well across multiple financial effectiveness metrics. Commuter Express 448 has the highest farebox recovery ratio at 82 percent.

- On-time performance for Commuter Express is 76 percent. Commuter Express routes 142, 438, 448, and 549 have on-time performance of 80 percent or higher.
- Overcrowding is not a significant problem on Commuter Express routes - about 96 percent of trips have maximum passenger loads under the maximum seating capacity of 49. Commuter Express routes 438, 448, and 573 have the highest rate of overcrowding due to their popularity with riders. Grant funds paid additional motor coaches to help address this issue.

In response to these findings and in support of the key project objectives described above, LADOT is recommending a significant expansion of its DASH services with increased days and hours of service, shortened headways, and select route modifications. This financial investment will result in improved service efficiency by reducing headways and provide critical first mile/last mile connectivity to regional bus and rail services. This in turn will increase LADOT Transit ridership; thereby reducing regional Vehicle Miles Traveled (VMT) and helping the City meet its sustainability goals for clean air. The table below shows the DASH services that connect to Metro and Metrolink stations.

Table 3

DASH SERVICES THAT CONNECT TO METRO & METROLINK STATIONS

SERVICE	METRO SERVICES								METRO-LINK
	BLUE	GREEN	EXPO	GOLD	ORANGE	PURPLE	RED	SILVER	
DASH A Little Tokyo/City West	X		X	X		X	X	X	
DASH B Chinatown/Financial District	X		X	X		X	X	X	X
DASH D Union Station/South Park	X		X	X		X	X	X	X
DASH E City West/Fashion District	X		X			X	X	X	
DASH F Financial District/Exposition Park/USC	X		X			X	X	X	
DASH Beachwood Canyon							X		
DASH Boyle Heights/East LA				X					
DASH Chesterfield Square	X							X	
DASH Crenshaw			X						
DASH El Sereno/City Terrace									
DASH Fairfax									
DASH Highland Park/Eagle Rock				X					
DASH Hollywood							X		
DASH Hollywood/Wilshire						X	X		
DASH King East	X		X					X	
DASH Leimert/Sluson									
DASH Lincoln Heights/Chinatown				X		X	X		X
DASH Los Feliz							X		
DASH Midtown			X						
DASH Northridge									X
DASH Observatory							X		
DASH Panorama City/Van Nuys									X
DASH Pico Union/Echo Park	X					X	X		
DASH Pueblo del Rio	X								
DASH San Pedro								X	
DASH Southeast	X		X					X	
DASH Van Nuys/Studio City					X				
DASH Vermont/Main									
DASH Watts	X	X							
DASH Wilmington								X	
DASH Wilshire Center/Koreatown						X	X		

A route extension for commuter express 437 on the westside is the only proposed change to the commuter express program. Attachment 3 shows the specific recommendations for modifications of routes, schedules, and headways for existing lines.

Below is a summary of the proposed changes:

- Improve headways (time between buses) on all DASH routes to a maximum of 15 minutes on weekdays and 20 minutes on weekends. This will improve first-last mile service to Metro Rail and Bus Rapid Transit stations.
- Implement late evening service for a one-year demonstration, until 9 pm seven days a week for all DASH Downtown routes except for the new DASH route C in downtown and minor span of service adjustments on community DASH routes..
- Add Saturday and Sunday service to all DASH routes that do not already have it (except for DASH C).
- Expand Commuter Express 437 with a new spur into Playa Vista.
- Implement a pilot project to demonstrate a micro transit demand-response pilot project in Venice/Marina Del Rey/Playa Vista (exact locations are still being finalized) with possible expansion to other areas of the City using the existing Cityride contract (vehicles and drivers).

B. Community DASH Need Assessment Update

As part of this TSA, LADOT updated its 2005 Community DASH Needs Assessment Study using 2010 census data and developed a list of recommended new Community DASH routes prioritized by phase according to transit need and predicted performance. The Update identifies 10 potential new DASH routes projected to have high ridership and performance scores while serving areas of unmet transit need in the City. The new routes also reflect, proposals, and suggestions received from stakeholders and the public during the outreach effort. TMD recommended new and modified DASH route alignments to serve key destinations and neighborhoods identified by LADOT Transit staff as well as participants in the public outreach process.

Similar to the 2005 study, the Community DASH Needs Assessment Update considered existing and planned transit services operated by Metro, Santa Monica Big Blue Bus, and other municipal providers. To minimize potential service duplication and identify areas with actual unmet transit needs this information was incorporated into the predictive performance model. The Update also identifies and evaluates potential new routes to improve the connectivity of Community DASH to existing and planned regional rail (Metro Rail and Metrolink) and bus rapid transit stations. There was also a review of opportunities to convert existing Metro local bus routes and route segments to Community DASH routes.

LADOT Transit modeled all public and stakeholder suggestions for changes to existing routes using the same predictive performance model used to analyze proposed new DASH routes. Staff considered these suggestions in the context of the line-by-line analysis discussed above resulting in recommendations for route modifications. Attachment 8 contains the stakeholder suggestions and other public comments. Attachment 9 contains the performance index scores for each route

modification suggestion.

The recommended new DASH routes:

Table 4

<u>Phase I New DASH Routes</u>	<u>CD</u>
DASH Boyle Heights West	14
DASH Pacoima	6, 7
DASH Sylmar	7
DASH Canoga Park	3
 <u>Phase New 2 DASH Routes</u>	 <u>CD</u>
DASH Mission Hills	7, 12
DASH Van Nuys/North Hills	6, 12
DASH Sun Valley	2, 6
DASH Elysian Valley/Cypress Park	1, 13
DASH North Hollywood	2, 6
DASH Glassell Park/Highland Park	1, 14

Attachment 4 contains a detailed summary chart of the new DASH routes. Attachment 10 has Modeling scores and Attachment 5 contains the new DASH route maps.

Operation of the four new Phase 1 DASH routes will cost an additional \$14.1 million annually and require 36 new buses. Operation of the six new DASH routes in Phase II will cost \$17.2 million annually and \$19.2 in capital costs.

C. Cityride Program Update

LADOT evaluated the performance of its Cityride Program including the impacts of service reductions and fee increases implemented in 2010. The following key metrics examined by service area, before and after the 2010 service and fee changes:

1. Number of registered clients
2. Average monthly ridership by taxi and dial-a-ride service
3. Boardings per hour
4. Cost and subsidy per passenger
5. Trip purposes
6. Trip denials

LADOT also reviewed comparable voluntary paratransit services in other cities for alternative approaches and strategies. As a result, LADOT proposes the following changes to Cityride to improve service effectiveness and cost efficiency:

- Increase the monthly user subsidy level from \$42 back to \$84, as it was in 2010. The monthly subsidy will be applicable to both dial-a-ride and taxi services.
- Eliminate dial-a-ride service for trips over 10 miles in length.
- Increase the taxi subsidy from \$12 to \$20 per ride.

- LADOT's Transit Cityride broker will choose whether the client is assigned dial-a-ride van or a shared ride taxi for individual trips, depending on trip destination and user needs, based upon criteria provided by LADOT Transit.

The dial-a-ride program will be extended by utilizing taxi companies to extend the scope of the dial-a-ride program thereby improving efficiencies. Instead of purchasing additional vehicles for the dial-a-ride program to address the increase in demand (when the subsidies increase from \$42 to \$84 per quarter), LADOT Transit can more effectively address increased demand by using taxis to provide peak-time service. When the Cityride program was compared with other paratransit providers (Access Paratransit, Department of Aging and the Cityride Taxi Program), the cost to LADOT per ride for a Cityride client using the dial-a-ride was the highest of the other services providers mentioned above (approximately \$42 a ride). By using taxis for trips that are too costly to operate a dial-a-ride van, LADOT Transit will be able to provide expanded service at a lower cost point. Currently, taxi rides for Cityride clients cost a maximum of \$12 per trip. The cost would rise to a maximum of \$20 per trip under these proposed changes. The cost to implement these changes to the Cityride program is approximately \$3 million annually but will have no additional capital costs.

LADOT Transit will work with the Department of Aging to extend the days and hours of service of the Cityride's Park La Brea Shuttle to provide transit service for Park La Brea. Cityride's Park La Brea service will provide transit service between Park La Brea and nearby shopping, medical offices, senior centers, libraries, and recreational facilities.

D. Shared-Use Mobility Demonstration Project

The DASH predictive performance model shows that some areas of the City are less likely to support successful DASH routes due to demographics and land uses. In general, successful DASH routes run in areas with lower average incomes, higher transit-dependency and usage, larger numbers of school-age children, a mix of trip-generating land uses such as shopping centers, schools, major employers, and recreational centers, and proximity to other transit lines.

Westside demographic profiles are considerably different with higher household incomes and greater vehicle availability. Land use is also different with less density, therefore, neighborhoods on the Westside do not perform well in this predictive performance model, and DASH routes proposed there did not score well across the board. To provide viable shared mobility transportation options in these neighborhoods, LADOT Transit is proposing a micro transit demand-response of an application-centered, shared mobility project demonstration project for Venice/Marina Del Rey/Playa Vista in the near-term, with possible expansion into other areas such as Downtown LA during late evening hours after DASH service ends. This demonstration will not only help to assess the viability of the application-centered, mobility services, similar to ride hailing services but it will also provide sufficient information to enable the Department to implement this service concept on a wider scale through an Request for Proposals (RFP) process. The Department will use nationally recognized standards used by other agencies in similar demonstrations to measure the success of the pilot and have full access to the data that it generates.

The twelve-month demonstration project will connect one or more of these areas (Venice, Marina Del Rey, Playa Vista) with the Metro rail system via the Expo Line Palms Station. It will operate primarily during the AM and PM peak periods but will also be able to provide mid-day and late-night service based on demand. The operating concept utilizes cut-away buses that are already part of the Cityride

fleet. An on-line trip reservation and payment application that is accessible from mobile devices will expedite trip requests and fare collection. The system will employ a crowd-sourced route generator that responds to demand along an established transportation corridor. Stops will be flexible and marked with appropriate signage to indicate pickup locations for passengers. Commuters will benefit from the increased mobility options resulting from a state-of-the-art reservation and payment application and direct connections to the regional rail system.

LADOT is also participating in two other similar demonstration projects through a Mobility Hubs Grant and a Downtown Los Angeles On Demand Mobility Connectivity Center Grant. Both projects seek to provide similar service in Downtown Los Angeles to address mobility gaps during late night hours when DASH service is less productive and less cost effective.

Mobility Hubs Grant

The Mobility Hubs Grant project will create focal points in the transportation network that seamlessly integrate different modes of transportation, multi-modal supportive infrastructure, and place-making strategies to enhance mobility and create activity centers. These activity centers or Mobility Hub, will be connected through first/last mile strategies that facilitate access between existing transit and other transportation modes and services such as secured bicycle parking, bike sharing, car sharing, ride sharing, carpooling, public transit, and on-demand transit. The service areas are comprised of 13 Metro bus and rail stations located in Downtown LA, Hollywood, and Long Beach, and the neighborhoods around those stations. The targeted user groups consist of low-income individuals commuting to work, transit-dependent persons, and people living around the selected Metro stations who would benefit from low- and high-tech solutions to connect to transit and employment centers. The Department plans to release an RFP to select a provider for this service.

Downtown Los Angeles On-Demand Mobility Connectivity Center Grant

LADOT, in partnership with Fixing Angelenos Stuck in Traffic (FAST) and the LA Cleantech Incubator (LACI), is establishing a Downtown LA On-Demand Mobility Connectivity Center that will provide multi-modal mobility options for residents, commuters, and visitors in Downtown LA. The project will coordinate and promote shared mobility services and active transportation for Downtown employers, employees, and community members with the goal of reducing single-occupancy vehicle trips. Over an 18-month demonstration period, the project will create a new-shared mobility district and will operate a new electric vehicle (EV) shuttle system that operates on-demand routes to public transit stations to provide first/last mile connections. It will locate EV chargers at the Mobility Center and at strategic locations throughout Downtown and deliver a mobility marketplace application (app). It will partner with the Metro Bike Share system and future shared-mobility systems to create a network of shared use mobility services; expand Metro's new transit rider subsidy program; provide outreach, education, and marketing for programmatic components through pop-up and planned events at the Mobility Center and throughout Downtown; track trips; and evaluate program performance. The demonstration will begin in first quarter of 2017.

E. Transit Performance Metrics

As part of the Transit Service Analysis, TMD evaluated LADOT's Transit Performance Standards and Transit Service Evaluation Guidelines that were approved by City Council in 1999 (CF 98-1121.) To reflect the unique characteristics of LADOT's transit system the study recommends changes to

performance metrics and methodology to keep pace with industry standards and best practices. See Attachment 6 for the full report, "Performance Metrics Evaluation."

The recommended performance metrics are:

- Service Performance
 - Utilize *passengers per trip* for Commuter Express services
 - Utilize *passengers per revenue hour* for DASH services
- Cost Efficiency
 - Utilize *operating cost per passenger* for all modes
- Cost Effectiveness
 - For internal analysis, utilize standard *farebox recovery ratio* (excluding subsidies)
 - For external use, utilize *operating ratio* (farebox revenues + subsidies)

F. Title VI Analysis

Title VI of the Civil Rights Act of 1964 requires that no person, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Additionally, related regulations and statutes expanded the range and scope of Title VI coverage and applicability to prohibit discrimination based on disability, sex, age, income, and Limited English Proficiency as an extension of national origin. LADOT Transit is a recipient of federal grants and maintains a comprehensive Title VI Program. A full Title VI analysis of the changes and new routes proposed in the Transit Service Analysis by TMD in compliance with FTA Circular 4702.1B issued on October 1, 2012, and 49 CFR Section 21.9(b.) Attachment 11 contains the full Title VI Analysis.

The Study first assessed the proposed changes to existing DASH and Commuter Express routes and the addition of new DASH routes for classification as "major service changes" per LADOT's Transit Title VI Program. A major service change defined as an increase or decrease in revenue service hours or revenue miles of 25 percent or more. Proposed changes qualified as major service changes when evaluated for "disparate impacts" on minority populations and "disproportionate burdens" on low-income non-minority populations within a ¼ mile of DASH routes and ¼ mile of Commuter Express stops.

The US Census' 2015 American Community Survey 5-Year Estimates sourced data for minority and non-minority low-income population. Routes with span of service or frequency changes were examined on a cumulative basis by evaluating all changes together, per LADOT's Title VI Program.

The Title VI analysis found the following:

- Proposed changes to 28 existing DASH routes, and the 10 proposed new DASH routes and new DASH C, qualify as major service changes.
- The only proposed major service change that triggered a *reduction* in revenue service hours or revenue miles is the re-route of DASH Lincoln Heights/Chinatown. The change results in a ~~disparate impact on minority populations~~ - the benefit rate for minority populations does not meet the Title VI threshold for no disparate impact. The proposed re-routing of DASH B, which in combination with a re-routed DASH Boyle Heights, will serve the same areas now served by DASH

Lincoln Heights/Chinatown and mitigate any disparate impact. Riders will benefit from increased bus frequency and expanded days and hours of service on DASH B, as well as a more direct connection between Lincoln Heights, Chinatown, and Downtown LA.

- Minority populations will experience a 73 percent benefit rate from the cumulative changes in bus frequency and span of service, well in compliance with the Title VI threshold for no disparate impact. Non-minority low-income persons will experience a 60 percent benefit rate, also well in compliance with the threshold for no disproportionate burden.
- The proposed re-routing of DASH F, DASH Los Feliz, and DASH Northridge/Reseda trigger slight disparate impacts on minority populations. The benefit rate for minority populations is not as high as it is for non-minorities and does not meet the Title VI threshold for no disparate impact. The overall benefits to the community from the proposed improvements and changes on these routes, which include increased bus frequency and span of service as well as re-routing to serve more key destinations, will outweigh the slight disparate impacts.
- Of the 10 proposed new DASH routes, only DASH Mission Hills triggers a potential disproportionate burden on non-minority low income persons (38 total) because the benefits are slightly higher (by 0.5 percent) for non-low income and non-minority populations. DASH Mission Hills has one of the highest modeling scores of the new DASH route requests made by stakeholders and adjusted its route to serve more key destinations in an area with unmet demand for a community circulator. The DASH Mission Hills' overall benefits to the community will outweigh the small disproportionate burden.

Implementation Schedule

Full implementation of the recommended transit service changes, including the five new Phase I DASH routes, will require 142 new buses. This does not include replacement buses scheduled for the existing fleet (buses have a working life of 10-12 years.) The new buses take 12-20 months for production and delivery from the manufacturer after placing an order. However, some of the service improvements recommended in the TSA such as extended days and hours of service, can begin quickly with existing vehicles, although existing contracts with bus service providers will need modification.

Below is the schedule for implementation of the service changes and implementation of new routes:

FY 2017-18	Place initial order for new buses
FY 2017-18	Begin weekend and extended hours of DASH service; implement changes to the Cityride program; begin commuter express service to Playa Vista; initiate demand response demonstration on the Westside; place order for additional DASH buses as funding allows
FY 2018-19	Receive new buses; begin the implementation of changes to existing DASH routes to reduce headways; begin the implementation of Phase 1 DASH routes; order additional buses as needed
FY 2019-20	Receive the remainder of the new buses; complete changes to existing headways; complete implementation of new Phase 1 DASH routes

Impact of proposed recommendations on ridership and farebox revenue

With the addition of approximately 440,000 in annual revenue service hours, LADOT Transit is anticipating a significant increase in total ridership and farebox revenues. The table below shows the anticipated new ridership and farebox revenue that generated by these recommendations.

Table 5

	Current Passengers Per hour	Existing Daily Service Hours	Original Daily Ridership	Elasticity for Frequency and Span of Service	New Daily Ridership	Additional Daily Farebox*
Existing Service	35.99	1,897	68,256	0.8	122,861	\$19,112
Estimated new daily ridership - 54,605						

*Assumes an average DASH fare of \$0.35.

Methodology for Ridership Increase

A review of available literature shows that when increasing frequency, a 50 percent increase in ridership is expected. Most of the literature references Transit Cooperative Research Program (TCRP) Report 95 Travel Response to Transportation System Changes: Chapter 9 – Transit Scheduling and Frequency. Under the Travel Response Summary (page 9-4) an elasticity of +0.5 is stated as the average response to frequency changes. The TRCP report further changes but their effect is not often identified separately.” The increase in ridership (elasticity) based on the span of service LADOT is proposing was conservatively set at 0.3. Therefore, the total elasticity LADOT used to project ridership growth for both the frequency and span of service is 0.8.

LADOT believes this increase is conservative since ridership will also increase due to better connections with regional rail and bus as well as the recently implemented electronic fare incentive that lowers the \$0.50 DASH fare to \$0.35 those who use a TAP purse.

Monitoring of Recommended Service Changes/New Routes

LADOT Transit intends to monitor the performance of all of the various service enhancements; however close attention will be paid to the new service concepts specifically late night service in Downtown. With the roll-out of the shared mobility demonstration in Downtown Los Angeles, specifically targeting late night service (after fixed route has stopped running), plus the opening of Metro’s Regional Connector in 2019, LADOT Transit anticipates that it may need to tweak the Downtown DASH routes and/or the evening hours to ensure that duplication of effort is not occurring. The Department will also be monitoring new weekend DASH service to ensure that this service expansion is also being effective in terms of ridership and farebox recovery.

Using TMD’s enhanced Performance Index will measure performance to determine their long-term viability and success. The Performance Index expects that a new route should achieve a composite score of at least 0.50 in the first six months of service and 0.70 after one year of service.

Facilities Requirement

A significant increase in the LADOT Transit bus fleet is required to implement these service recommendations; therefore, LADOT Transit will need to add new facilities to its current list of facilities in order to accommodate these vehicles. LADOT Transit has relied on its contractors to lease facilities to operate, maintain, and fuel the vehicles. However, because of high lease costs (lease costs are a pass through to LADOT Transit) it is inadvisable to perform infrastructure upgrades (CNG fuel stations, electrical infrastructure, etc.) at these facilities. LADOT Transit plans to continue purchasing operating facilities whenever possible and have included funding in the 10- year budget forecast for these types of purchasing opportunities

Currently, LADOT Transit's fleet of 357 buses operates out of four operating facilities. However, when fully implemented, the fleet size will increase to 505 vehicles, an increase of 133 vehicles (6 of these are pending orders). This figure does not include additional buses that will be required to implement Phase 2 new DASH routes.

LADOT Transit is in the process of building a new DASH Downtown Operations and Maintenance facility that will accommodate up to 70 DASH buses scheduled to open in January 2019. LADOT Transit estimates that it may need another (or larger) facility in the South Region by FY 2019-20. LADOT Transit is currently looking at the possibility of being able to repurpose the majority of the Sun Valley Metrolink station and will need to upgrade that location to accommodate some of the new DASH routes in the San Fernando Valley. LADOT Transit is also looking to purchase the existing facility and possibly a second facility, or will need to purchase a single larger facility for its South Region operations to accommodate all of the required new vehicles. A line item request has been included in FY 2017-18 budget to pay for a portion of these new facilities. Additional funding will also be set aside in future budget years to purchase the required facilities.

Funding

Proposition A 10-year forecast

The Proposition A 10-year forecast looks at the anticipated operating costs and programs funded by Proposition A and the anticipated revenues including operating and capital subsidies received from Metro. The TSA recommended DASH enhancements to existing routes and Phase 1 expansion DASH routes are included in the 10-year forecast. The forecast indicates that there will not be a deficit for the 10 -year forecast cycle contingent on no new projects or programs added to the Prop A budget (See Attachment 2).

Full implementation of the recommended changes to existing and new DASH and Commuter Express routes will increase LADOT's Transit FY 2017-18 operating budget by approximately \$29M annually (from \$95 million to \$124 million) and will require an additional 133 DASH vehicles. There will be sufficient vehicles in the commuter fleet after pending purchases to implement the changes to the Commuter Express Line route 437 (See Attachment 5).

Regional (FAP) Transit Operating Funding

LADOT Transit currently receives regional Formula Allocation Procedure (FAP) transit operating subsidies through Metro for its Commuter Express, DASH Downtown, and seven Community DASH lines

that operated previously by Metro. City Proposition A funds fully funds the remaining nineteen Community DASH lines. LADOT Transit is the only Included/Eligible transit operator in Los Angeles County that has a substantial portion of its fixed route transit services not included in the FAP. LADOT Transit estimates that it could receive approximately \$30 million per year in additional FAP revenue if all Community DASH services were included in the FAP.

Measure R Sales Tax Revenue

Voters approved Measure R in November 2008 that provides 20 percent of the revenues to bus service operations, maintenance, and expansion. The FAP calculation methodology allocates the 20 percent bus operations share. For FY 2017, LADOT Transit received \$4,634,000 from this fund.

Measure M Sales Tax Revenues

Like Measure R, the new Measure M sales tax provides 20 percent of the revenue allocated for transit operations. LADOT transit services will receive approximately \$4.6 million a year in transit operations revenue. In addition, there are set aside capital funding to purchase vehicles for first mile/last mile service.

Senate Bill 1 – Road Repair and Accountability Act

SB1 provides significant, stable and ongoing increase in state transportation funding in more than two decades. The State Legislature has provided additional funding (November 1, 2017) for transportation infrastructure and new and existing transportation programs. LADOT transit currently receives State Transit Assistance (STA) funding from Metro for bus operations. LADOT is expected to receive at least \$3 million a year. LADOT will work with Metro to ensure that the LADOT Transit is receiving its fair share of funding.

Bus Grant Funding

The majority of grant funds available for LADOT Transit are for capital purchases, such as (buses, facilities and related equipment). As an eligible municipal operator, LADOT Transit receives Federal Transit Administration (FTA) 5307 funding each year. In addition, FTA has discretionary grant programs such as Bus and Bus Facility and the Low or No Emission program.

The State of California has several grant programs including the Cap and Trade funded programs, which consists of Low Carbon Operations Transportation Program (LCTOP) and Transit, and Intercity Rail Capital Program (TIRCP). The California Energy Commission also has funding available for Zero Emission vehicles. LADOT Transit Grant staff will be ready to apply for all grants that provide funding for buses.

The charts below list the DASH TSA and Replacement Bus Capital Program. The current and anticipated grant funding is included along with a Bus Purchase Account. The Bus Purchase Account will deposit all bus grant reimbursements into an account to purchase additional buses. The grant reimbursements are not included in the 10-year forecast but will now be part of this special fund.

LADOT DASH Bus Capital Program

DASH Replacement (2006, 2007)

Federal Transit Administration	Grants	Match	
2014/2015	\$2,776,229	\$1,189,812	7
2015/2016	\$6,723,500	\$2,881,500	17

24

DASH TSA Enhancements & Phase 1

Federal Transit Administration

2015/2016	\$863,902	\$370,273	2
2016/2017	\$7,587,402	\$3,251,744	19
2017/2018	\$8,991,075	\$3,853,317	23
2018/2019	\$8,991,075	\$3,853,317	23
2019/2020	\$8,991,075	\$3,853,317	23

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State Prop 1B

2016/2017	\$1,383,771	\$416,229	3
2017/2018	\$1,383,771	\$416,229	3
2018/2019	\$1,383,771	\$416,229	3

9

Metro Call for Projects

2015	\$2,724,556	\$1,167,666	7
2015	\$1,610,580	\$690,248	3

10

Metro Toll Revenue Grant

2016	\$845,280	\$362,142	2
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State LCTOP

2017	\$306,450		
2018	\$306,450		
2019	\$306,450		2

No Grant Funds		\$11,300,000	20
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Total Grant and Match funding	\$55,175,337	\$34,022,023	157
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Total Cost of DASH Buses (Grants + Match)	\$89,197,360
Prior Year Unexpended Appropriations	\$38,025,000
Cost Included in 10-Year Forecast	\$51,172,360

Buses	
2006 and 2007 Replacement Buses	24
TSE Enhancements to Existing Services	97
Phase 1 New Buses	36
Total	157

Electrification of the LADOT bus fleet

The table above reflects the average costs for CNG powered buses. However, it is important to note that the City is committed to a zero emission path forward in order to provide sustainable, clean air alternatives to its existing fleet of CNG powered buses. The current cost to purchase a DASH electric bus is approximately \$270,000 more than that of a similarly sized CNG bus. The Department will seek every grant opportunity to bridge this difference in cost between new and replacement vehicles and for the associated infrastructure costs. The current funding does not reflect the additional cost described above.

Next Steps

The Department will be able to execute contract amendments with the various service providers following approval of these recommendations. These include implementation of the following: late night and weekend service in on DASH, Cityride recommendations, the modification of Commuter Express Line 437 to serve the Playa Vista Community, and the micro-transit shared-use mobility pilot demonstration on the westside of Los Angeles. LADOT Transit will also be able to place orders to purchase new CNG DASH buses. The Department is already in a joint procurement partnership to purchase a minimum of 45 CNG buses. Further, LADOT Transit has begun steps to release an RFP for zero emission buses and will be purchasing electric buses whenever a grant opportunity provides additional funding to bridge the cost differential between a CNG bus and an electric bus (current difference is approximately \$270,000).

FINANCIAL IMPACT

There is no General Fund impact. Sufficient funds are included in the City's Adopted FY 2015-16, FY 2016-17 and FY 2017-18 Proposition A Local Transit Assistance (PALTA) Budgets to begin implementation of all service enhancements not requiring new vehicles. The Department will request additional funding in FY 2018-19 and FY 2019-20 to implement recommendations for service modifications and headway improvements. However, any proposed changes in Prop A forecast assumptions will impact the ability to implement all of the recommendations indicated in Phase 1 of the Report. When operating and capital funds becomes available, the Department will implement Phase 2 DASH services.

SJR:CR

Attachments

Attachments:

- 1- CF 13-1550
- 2- Proposition A 10 Year Forecast – 2017-2026 DASH Service Improvement and Phase I DASH Expansion (chart)
- 3- Transit Service Analysis Modification Summary (chart)
- 4- New DASH Routes (chart)
- 5- Recommended DASH and CE 437 Route Maps (maps)
- 6- Recommended New Performance Metrics (report)
- 7- Summary of Public Outreach (chart)
- 8- Summary of Public Comments (chart)
- 9- Modeling Scores for Existing DASH Route Modification Requests (chart)
- 10- Modeling Scores for New DASH Route Requests (chart)
- 11- Title VI Analysis (report)
- 12- Transit Service Analysis Cost Estimate (chart)

Attachment 1

CF 13-1550

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HOLLY L. WOLCOTT
Interim City Clerk

When making inquiries relative to
this matter, please refer to the
Council File No.

CITY OF LOS ANGELES
CALIFORNIA



ERIC GARCETTI
MAYOR

Office of the
CITY CLERK

Council and Public Services
Room 395, City Hall
Los Angeles, CA 90012
General Information - (213) 976-1133
Fax: (213) 976-1040

SHANNON HOPES
Council and Public Services
Division

www.cityclerk.lacity.org

February 7, 2014

To All Interested Parties:

The City Council adopted the action(s), as attached, under Council
File No. 13-1550, at its meeting held February 5, 2014.

City Clerk
OS

TRANSPORTATION COMMITTEE REPORT relative to updating the 2005 Community Needs Assessment to evaluate citywide transportation needs.

Recommendation for Council action, as initiated by Motion (Krekorian - Koretz):

INSTRUCT the Los Angeles Department of Transportation (LADOT) to:

- a. Update the 2005 Community Needs Assessment to take into account significant changes in population, demographics, transportation needs and transit infrastructure, citywide, since that survey was conducted, as amended to include a line by line analysis of transit services offered by the LADOT.
- b. Report relative to potential sources of revenue for new or modified Community DASH lines.

Fiscal Impact Statement: None submitted. Neither the City Administrative Officer nor the Chief Legislative Analyst has completed a financial analysis of this report.

Community Impact Statement: None submitted.

SUMMARY

On November 19, 2013, Council considered Motion (Krekorian - Koretz) relative to updating the 2005 Community Needs Assessment to evaluate the transportation needs of the San Fernando Valley. Motion states that in 2004, the LADOT created a Community DASH Needs Assessment Study that produced a list of potential modifications and additions to existing Community DASH routes for consideration by the City for implementation. Since that time, significant growth and demographic changes have occurred in the San Fernando Valley. In addition, the construction of major rail and bus rapid transit lines should affect the routing and scheduling of future and current DASH Lines. Motion movers recommend that Council instruct the LADOT to update the 2005 Community Needs Assessment and report relative to potential sources of revenue for new or modified Community DASH lines. Council referred Motion to the Transportation Committee for consideration.

At its meeting held January 22, 2014, the Transportation Committee discussed this matter with LADOT staff. Committee members recommended that Council approve Motion, as amended to expand the Community Needs Assessment citywide, and that the study include a line by line analysis of transit services offered by the Department. Discussion was also held regarding coordinating short-route taxi service with transit hubs.

Respectfully Submitted,

TRANSPORTATION COMMITTEE



ADOPTED

FEB 05 2014

LOS ANGELES CITY COUNCIL

<u>MEMBER</u>	<u>VOTE</u>
BONIN:	YES
KORETZ:	YES
LABONGE:	YES
PARKS:	ABSENT
KREKORIAN:	YES

-NOT OFFICIAL UNTIL COUNCIL ACTS-

Attachment 2

Proposition A 10-Year Forecast – 2017-2026 DASH Service Improvement and Phase 1 DASH Expansion

City of Los Angeles Department of Transportation (LADOT)

PROPOSITION A 10 YEAR FORECAST -- 2017-2027 - DASH SERVICE IMPROVEMENTS AND PHASE 1 DASH EXPANSION/1 YEAR MEASURE R PROJECTS & STREETCAR

	1	2	3	4	5	6	7	8	9	10		
	2015-16	2016-17										
	Actual	Estimated	2017-18	2018-19	2019-20	2020-21	2021-22	2022-2023	2023-24	2024-25	2025-26	2026-27
Revenue												
Adjusted Beginning Cash Balance	\$ 233.8	\$ 271.3	\$ 107.4	\$ 68.1	\$ 73.1	\$ 58.2	\$ 68.0	\$ 62.6	\$ 62.7	\$ 45.1	\$ 24.6	\$ 15.8
Prop A Sales Tax Receipts	\$ 70.5	\$ 71.9	\$ 75.0	\$ 76.5	\$ 78.0	\$ 79.6	\$ 81.1	\$ 82.8	\$ 84.4	\$ 86.1	\$ 87.8	\$ 89.6
Prop A, MTA/FTA reimbursements	69.1	55.8	69.5	74.5	49.3	118.8	82.1	64.2	100.6	101.0	65.5	66.0
Advertising Revenue	1.0	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Other Revenue												
Prop A, Farebox Revenue(1)	12.3	12.5	12.5	12.7	12.8	22.0	22.2	22.4	22.6	22.8	23.1	23.3
Prop A, Transit Scrip	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Interest	2.8	2.8	2.8	0.9	0.7	0.7	0.6	0.7	0.6	0.5	0.4	0.2
Other	1.6	1.6	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Total Receipts	\$ 157.6	\$ 145.6	\$ 162.4	\$ 167.7	\$ 144.0	\$ 224.2	\$ 189.2	\$ 173.2	\$ 211.4	\$ 213.7	\$ 180.0	\$ 182.4
Total Revenue	\$ 391.4	\$ 416.9	\$ 269.8	\$ 235.9	\$ 217.0	\$ 282.5	\$ 257.2	\$ 235.8	\$ 274.1	\$ 258.8	\$ 204.6	\$ 198.2
Expenditures												
City Transit Service(2)	\$ 72.1	\$ 92.1	\$ 117.4	\$ 112.4	\$ 127.1	\$ 130.9	\$ 134.9	\$ 138.9	\$ 143.0	\$ 147.3	\$ 151.7	\$ 156.3
Specialized Transit(2)(3)	5.8	11.9	18.3	18.3	12.6	12.9	13.3	13.6	14.0	14.4	14.8	15.3
Transit Capital	22.5	25.4	32.9	13.7	0.2	51.3	26.5	0.2	51.0	51.0	0.2	0.2
Support Programs	19.3	28.1	33.1	18.4	18.9	19.4	19.9	20.4	21.0	21.5	22.1	22.7
Total Expenditures	\$ 119.7	\$ 157.5	\$ 201.7	\$ 162.8	\$ 158.8	\$ 214.5	\$ 194.6	\$ 173.1	\$ 229.0	\$ 234.2	\$ 188.8	\$ 194.5
Reserve Balance	\$ 271.7	\$ 259.4	\$ 68.1	\$ 73.1	\$ 58.2	\$ 68.0	\$ 62.6	\$ 62.7	\$ 45.1	\$ 24.6	\$ 15.8	\$ 3.7

(1) Farebox revenue includes DASH, prepaid fare media and Commuter Express fares increase 1%

(2) Transit costs increase at 3%

(3) Adjusted Beginning Cash Balance 2014-2015 reflects prior year's Unexpended Appropriations

(4) Includes FY 2018 Funding Marks

Attachment 3

Transit Service Analysis Modification Summary

TRANSIT SERVICE ANALYSIS MODIFICATIONS SUMMARY

04/26/17

Routes	Route Alignment		Service Hours			Headways			Notes
	Changed	Existing	M-F	Sat	Sun	M-F	Sat	Sun	

DASH

Beachwood Canyon		X	6:30A-7:45P*	6:30A-7:45P*	9A-6P	15 min	20 min	20 min	No major holidays
Boyle Heights/East LA	X		6A-7P	9A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
Chesterfield Square	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	Service 365 days/year
Chinatown (aka Lincoln Heights/Chinatown)	X		6A-7P	9A-6:30P*	9A-6P	15 min	20 min	20 min	No major holidays
Crenshaw		X	6A-7P	9A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
Downtown	A	X	6A-9P	9A-9P	9A-9P	7 min	10 min	15 min	No major holidays
	B	X	6A-9P	9A-9P	9A-9P	6 min	10 min	15 min	No major holidays
	C (City Half Shuttle)	X	6:30A-8:30P			10 min			No City holidays
	D	X	6A-9P	9A-9P	9A-9P	5 min	10 min	15 min	No major holidays
	E	X	6A-9P	6:30A-9P*	9A-9P	5 min	10 min	15 min	No major holidays
	F	X	6A-9P	9A-9P	9A-9P	10 min	10 min	15 min	No major holidays
El Sereno/City Terrace		X	6:30A-8:15P*	9A-9:15P*	9A-9:15P*	15 min	20 min	20 min	Service 365 days/year
Fairfax	X		6A-7P	9A-6:30P*	9A-6:30P*	15 min	20 min	20 min	No major holidays
Highland Park/Eagle Rock		X	6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	No major holidays
Hollywood	X		6A-7P	9A-6:30P*	9A-6P*	15 min	20 min	20 min	No major holidays
Hollywood/Wilshire	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	No major holidays
King-East	X		6A-7P	9A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
Leimert/Clayson	X		6A-7P	9A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
Chinatown (aka Lincoln Heights/Chinatown)	X		6A-7P	9A-6:30P*	9A-6P	15 min	20 min	20 min	No major holidays
Lbs. Field	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	No major holidays; add bi-directional service
Midtown	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Northridge/Reseda	X		6:30A-7P*	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays; add bi-directional service
Observatory Shuttle	X		12P-10P	10A-11P	10A-11P	20 min	20 min	20 min	Service 365 days/year
Panorama City/Van Nuys	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	Service 365 days/year
Pico Union/Echo Park		X	6A-10P*	9A-10P*	9A-10P*	10-14 min	16 min	16 min	Service 365 days/year
Pueblo Del Rio	X		6A-7P	9A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
San Pedro		X	6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	365 days/year
Southeast	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	Service 365 days/year
Van Nuys/Studio City	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Vermont/Main	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	No major holidays
Watts	X		6A-7P	6:40A-6P*	9A-6P	15 min	20 min	20 min	No major holidays
Wilmington	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	Service 365 days/year
Wilshire Center/Koreatown	X		6A-7P	9A-6P*	9A-6P*	15 min	20 min	20 min	Service 365 days/year

COMMUTER EXPRESS

437	X		6:52A-7:22P			15-55 min			No major holidays
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TRANSIT SERVICE ANALYSIS NEW ROUTES SUMMARY

New Routes	Route Alignment		Service Hours			Headways			Notes
	New	Existing	M-F	Sat	Sun	M-F	Sat	Sun	

DASH Phase I

Boyle Heights West	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Cenoga Park	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Pacoima	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Sylmar	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays

DASH Phase II

Elysian Valley/Cypress Park	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Glendale Park/Highland Park	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Mission Hills	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
North Hollywood	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Van Nuys/North Hills	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays
Van Valley	X		6A-7P	9A-6P	9A-6P	15 min	20 min	20 min	No major holidays

* Existing service hours per July 1, 2016, printed schedule

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Attachment 4

New DASH Routes

RECOMMENDED NEW DASH ROUTES

Phase 1

Route Name	CD	Modeling Result	Operating Assumptions	Notes
DASH Boyle Heights West	14	1.20	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Hybrid route developed by consultant based on multiple stakeholder requests and industry best practices; serves commercial areas between Soto St and Indiana Ave and connects to Indiana Gold Line Station; scores above 1.10; does not duplicate existing transit service; is located within LA City; provides more efficient alignment than other high-scoring stakeholder requests for DASH service in Boyle Heights; provides first mile/last mile connection to regional transit system; nearby DASH Boyle Heights has above average ridership; consultant recommends first round implementation
DASH Pacoima	6, 7	1.18	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Hybrid route developed by consultant based on multiple stakeholder requests and industry best practices; serves major activity centers and key destinations including Kaiser Panorama City, schools and commercial uses along Van Nuys Bl; scores above 1.10; does not duplicate existing transit service; is located within LA City; provides more efficient alignment than other high-scoring stakeholder requests for DASH service in Pacoima; consider extending route east to Foothill Bl to connect with Hansen Dam Rec Center, Library and Discovery Cube; consultant recommends first round implementation
DASH Sylmar	7	1.13	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Hybrid route developed by consultant based on multiple stakeholder requests and industry best practices; serves major activity centers and key destinations including Sylmar Metrolink Station and LA Mission College; scores above 1.10; does not duplicate existing transit service; is located within LA City; provides more efficient alignment than other high-scoring stakeholder requests for DASH service in Sylmar; provides first mile/last mile connection to regional transit system; consultant recommends first round implementation
DASH Canoga Park	3	1.07	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Hybrid route developed by consultant based on multiple stakeholder requests and industry best practices; serves major activity centers and key destinations, including shopping centers along Topanga Canyon Bl, and connects to Canoga Orange Line Station; scores above 1.00; does not duplicate existing transit service; is located within LA City; provides first mile/last mile connection to regional transit system; provides more efficient alignment than other stakeholder requests for DASH service in Warner Center, but consider extending route south to Warner Center Transit Hub to better serve Warner Center proper; consultant recommends first round implementation

Phase 2

Route Name	CD	Modeling Result	Operating Assumptions	Notes
DASH Mission Hills	7, 12	1.12	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; serves San Fernando Mission, schools and commercial areas along Sepulveda; scores above 1.10; does not duplicate existing transit service; is located within LA City; responds to stakeholder requests for DASH service in Mission Hills; consultant recommends second round implementation because limited opportunities for commercial tripmaking would impact potential ridership
DASH Van Nuys/North Hills	6, 12	1.12	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; serves major activity centers and key destinations including VA Hospital and LAX Flyaway, provides transit link between Van Nuys and North Hills, and connects to Van Nuys Metrolink Station; scores above 1.10; does not duplicate existing transit service; is located within LA City; responds to stakeholder requests for DASH service between Van Nuys and North Hills; provides first mile/last mile connection to regional transit system; nearby DASH Panorama City/Van Nuys has high ridership; consultant recommends against implementation because limited opportunities for commercial tripmaking would impact potential ridership
DASH Sun Valley	2, 6	1.08	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; scores above 1.00; does not duplicate existing transit service; is located within LA City; responds to stakeholder requests for DASH service in Sun Valley; consultant recommends against implementation because limited opportunities for commercial tripmaking would impact potential ridership and significant decrease in population and employment density near Strathern/Tujunga would further limit productivity
DASH Elysian Valley/Cypress Park	1, 13	1.05	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; serves commercial areas along Figueroa St, provides link between Elysian Valley, Cypress Park and Glassell Park, and connects to Lincoln Heights/Cypress Park Gold Line Station and Southwest Museum Gold Line Station; scores above 1.00; does not duplicate existing transit service; is located within LA City; provides first mile/last mile connection to regional transit system; responds to stakeholder requests for DASH service connecting Elysian Valley, Cypress Park and Glassell Park; consider not running route into Lincoln Heights but instead continuing up Figueroa St to Highland Park Gold Line Station which has bus bays and bus turnaround; consultant recommends against implementation because hilly topography limits potential ridership
DASH North Hollywood	2, 6	1.02	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; serves No Ho Arts District and commercial areas along Laurel Canyon Bl and connects to North Hollywood Red Line and Orange Line Stations; scores above 1.00; does not duplicate existing transit service; is located within LA City; provides first mile/last mile connection to regional transit system; responds to stakeholder requests for DASH service in North Hollywood; consider running on Victory Bl rather than Vanowen to serve more commercial areas; consultant recommends second round implementation because industrial land uses between Tujunga and Vineland near Burbank Airport limit potential ridership
DASH Glassell Park/Highland Park	1, 14	1.02	7 days/week including 6 holidays; 6 am-7 pm weekdays; 9 am-6 pm weekends; 15 min headway everyday	Route based on stakeholder requests; serves major activity centers and key destinations, including commercial areas along York Bl, provides transit link between Glassell Park and Highland Park, and connects to Southwest Museum Gold Line Station and Highland Park Gold Line Station; scores above 1.00; does not duplicate existing transit service; is located within LA City; provides first mile/last mile connection to regional transit system; responds to stakeholder requests for DASH service connecting Glassell Park and Highland Park; consultant recommends second round implementation after higher-scoring proposals

Attachment 5

Recommended DASH and CE 437 Route Maps

TRANSIT SERVICE ANALYSIS

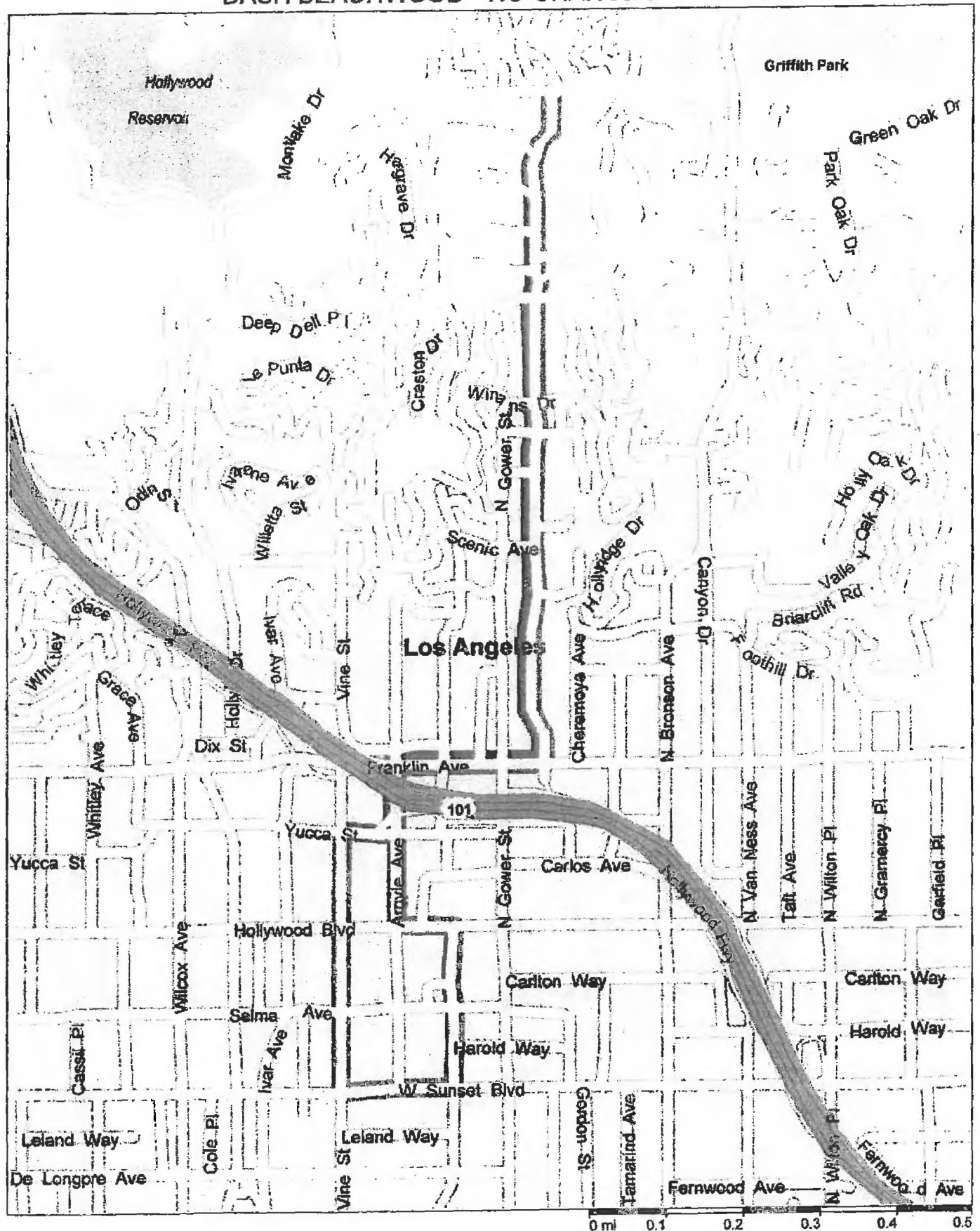
MAP LEGEND



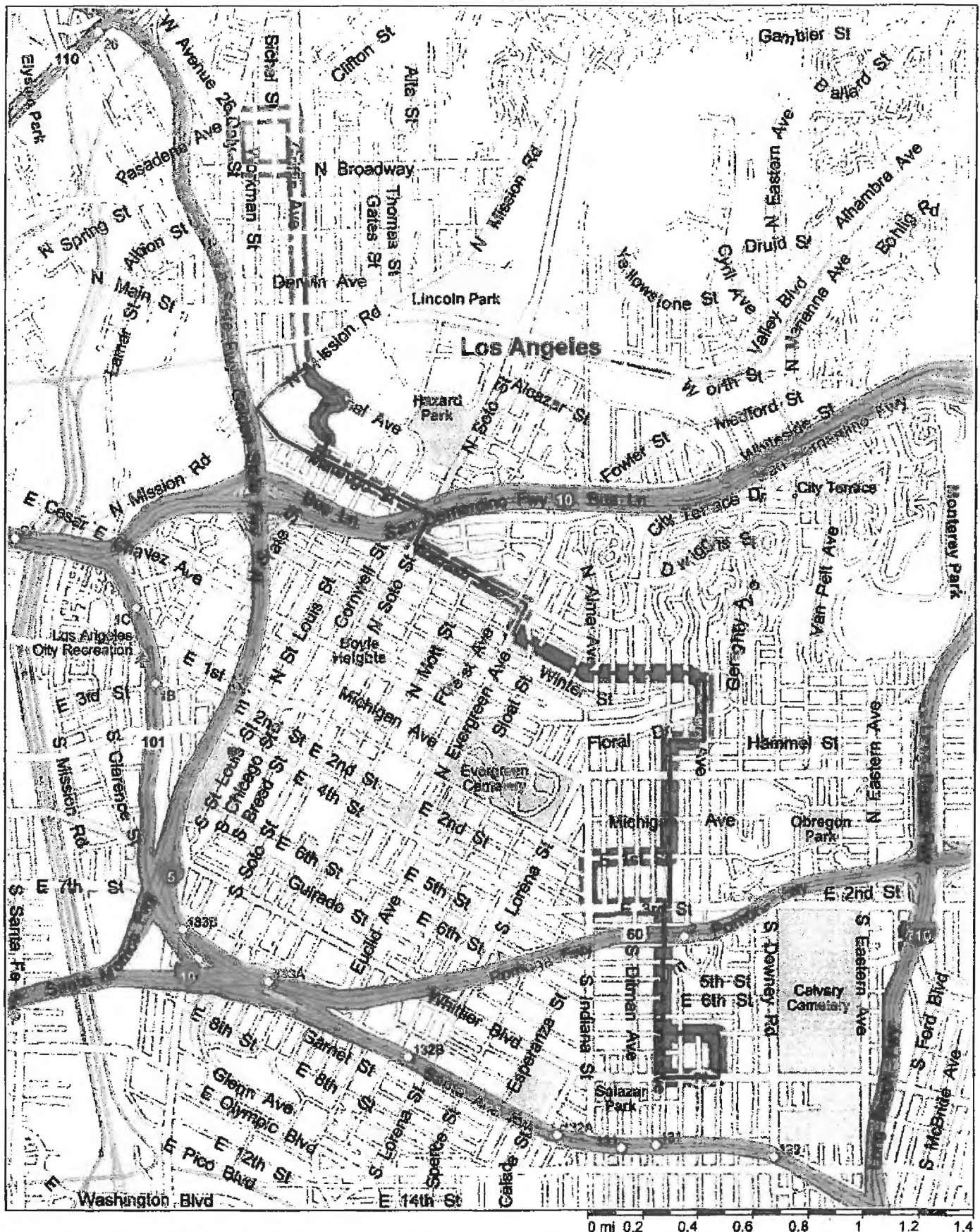
PROPOSED ROUTE

EXISTING ROUTE

DASH BEACHWOOD - NO CHANGE IN ROUTE

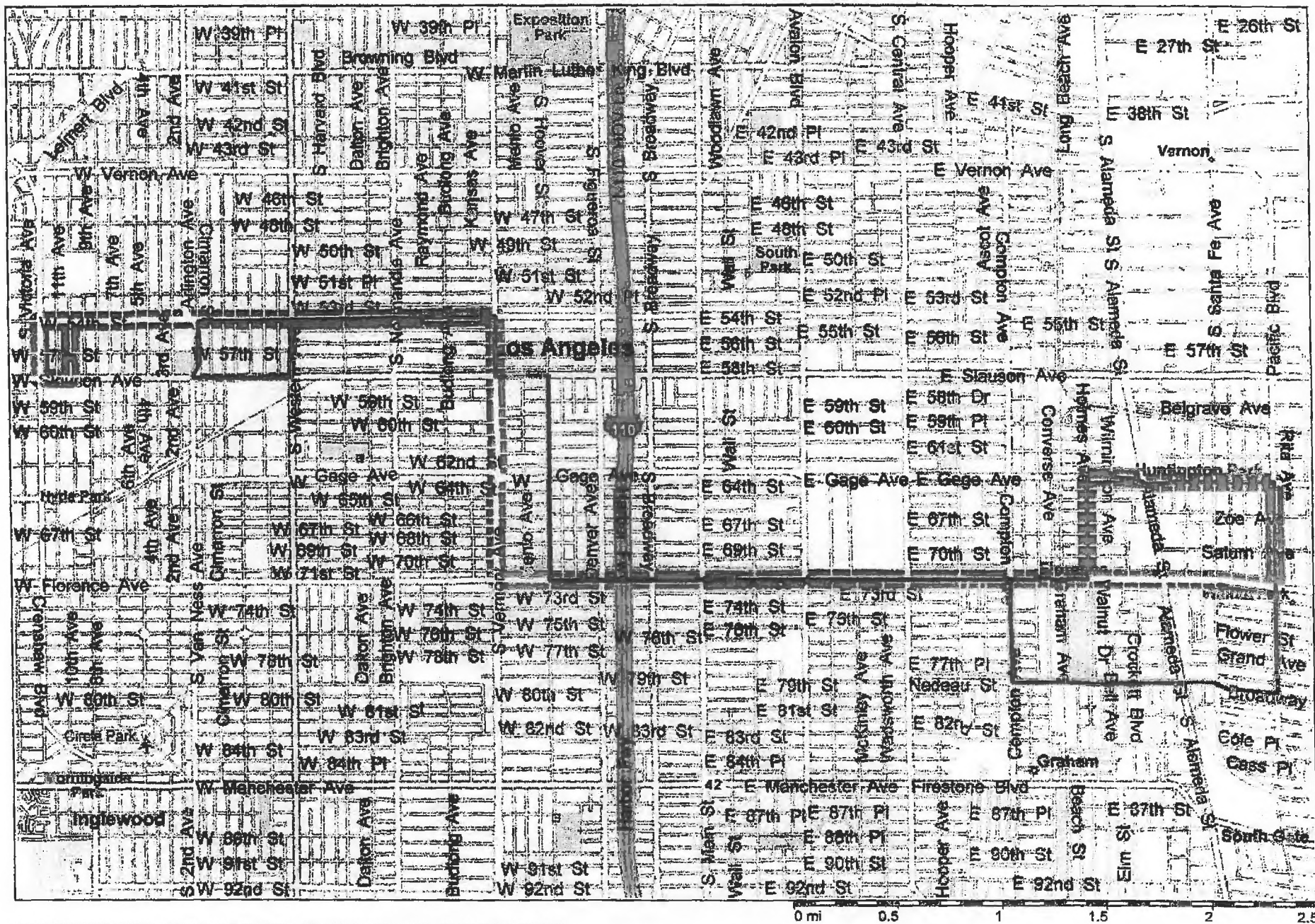


DASH BOYLE HEIGHTS / EAST LA - RECOMMENDED ROUTE CHANGE

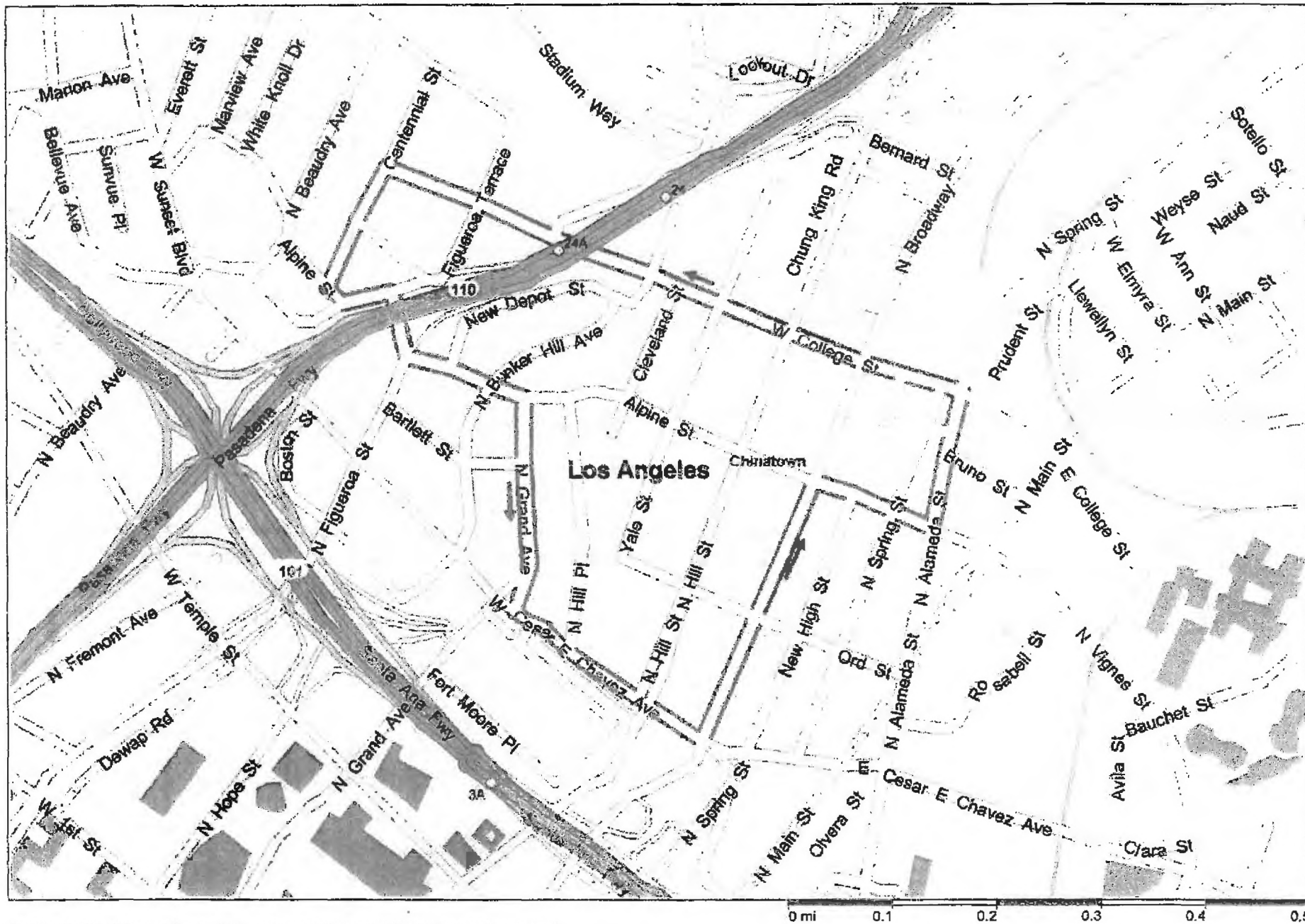


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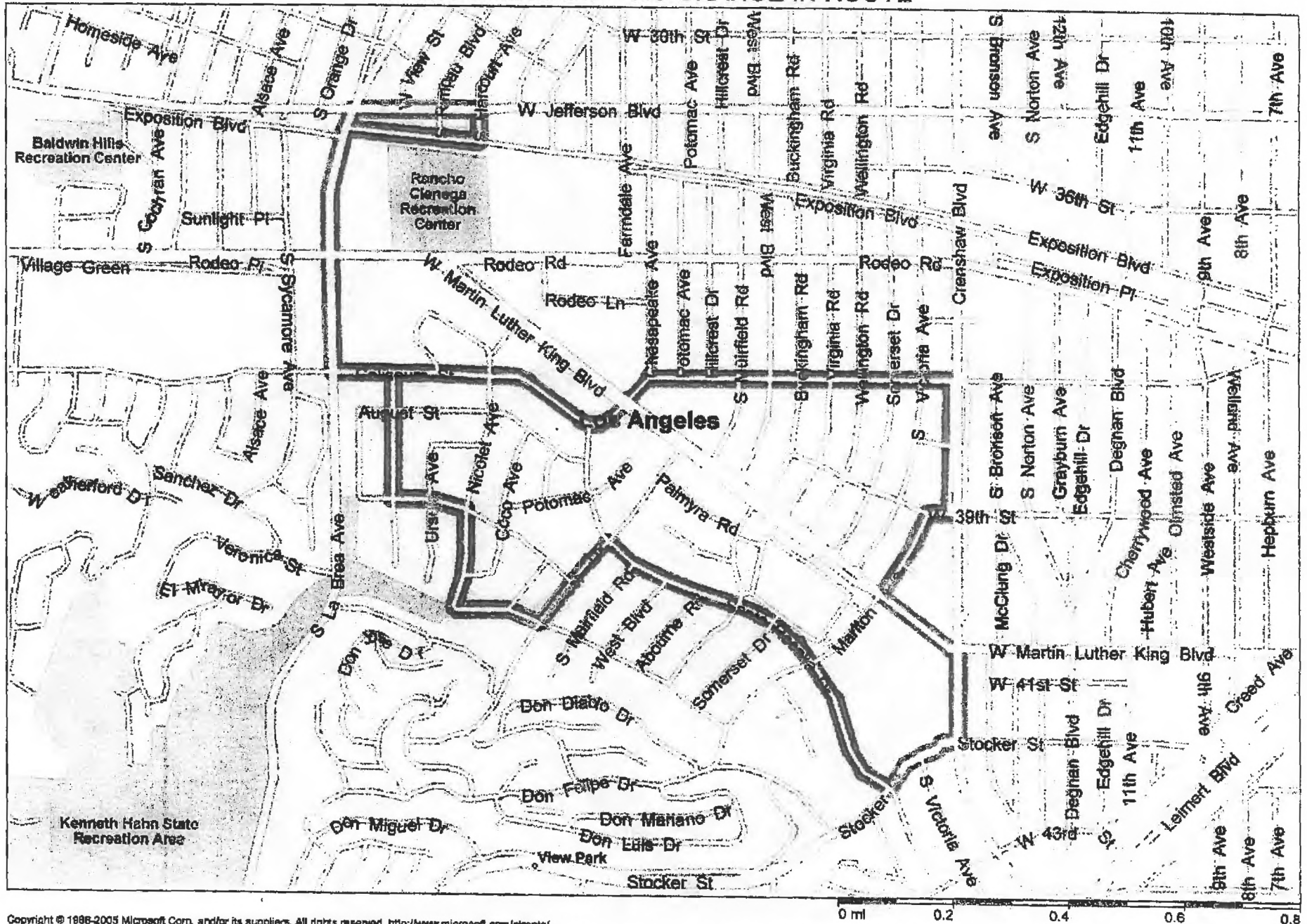
DASH CHESTERFIELD SQUARE - RECOMMENDED ROUTE CHANGE



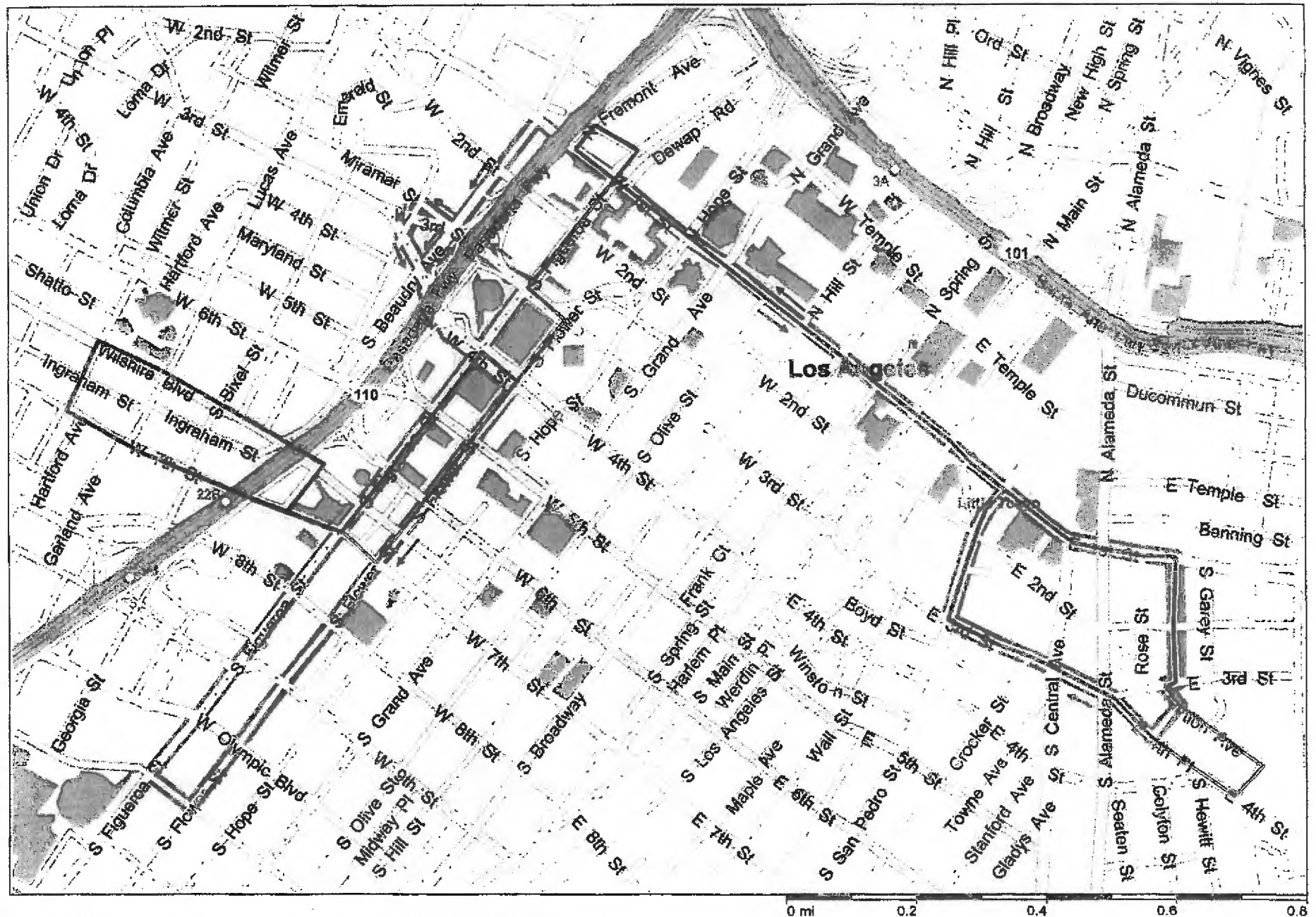
DASH CHINATOWN - RECOMMENDED NEW ROUTE



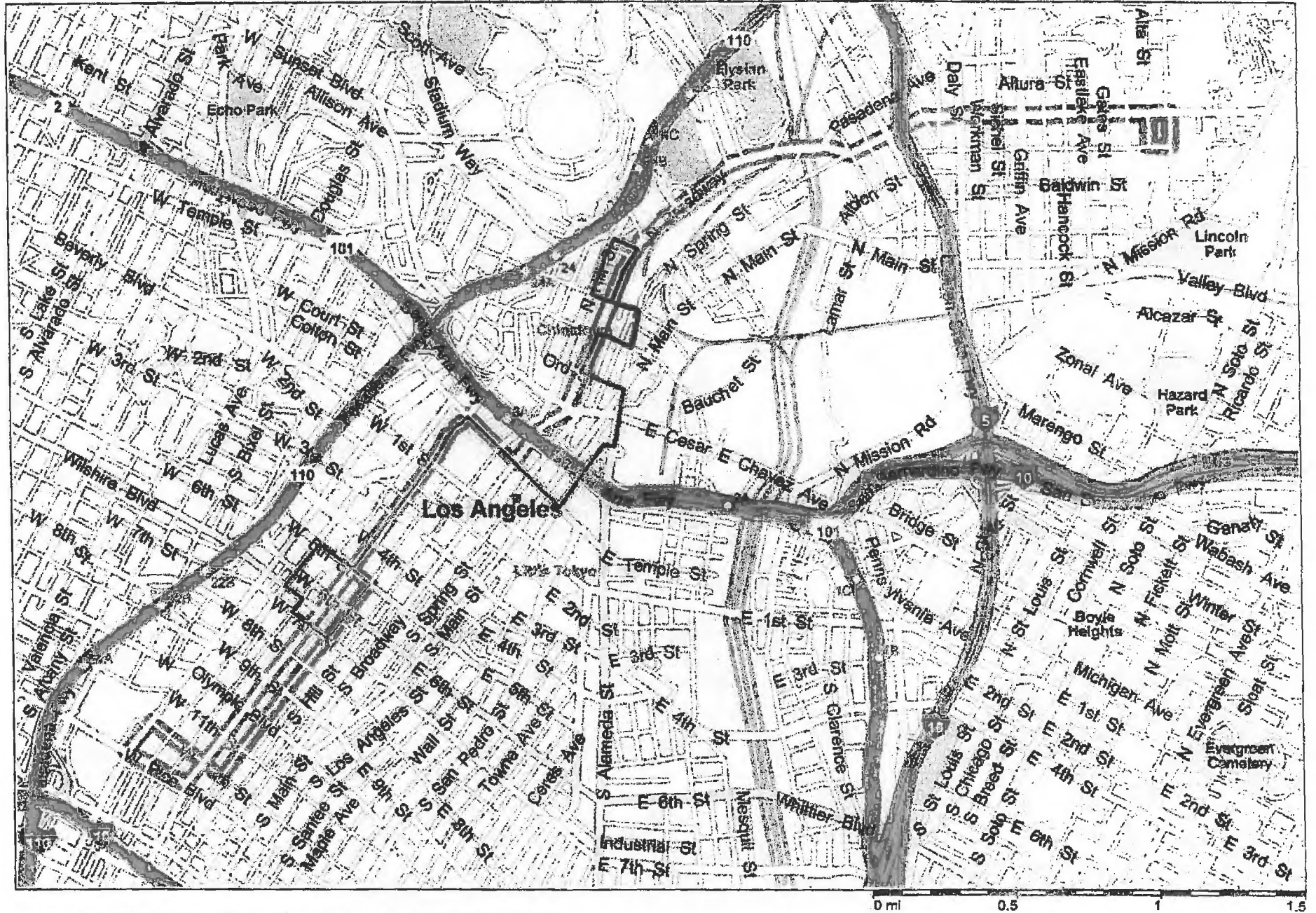
DASH CRENSHAW - NO CHANGE IN ROUTE



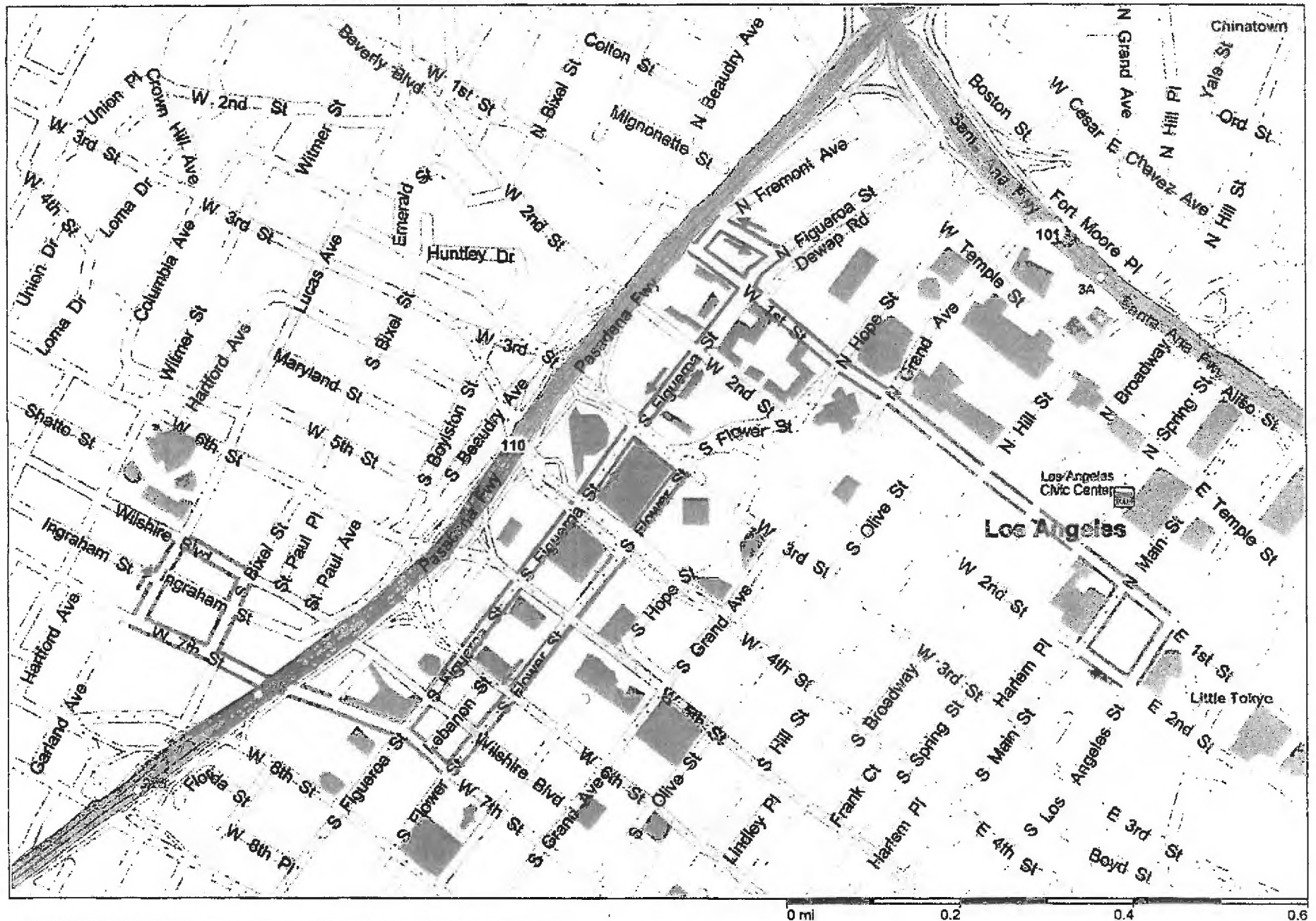
DOWNTOWN DASH A - RECOMMENDED ROUTE CHANGE



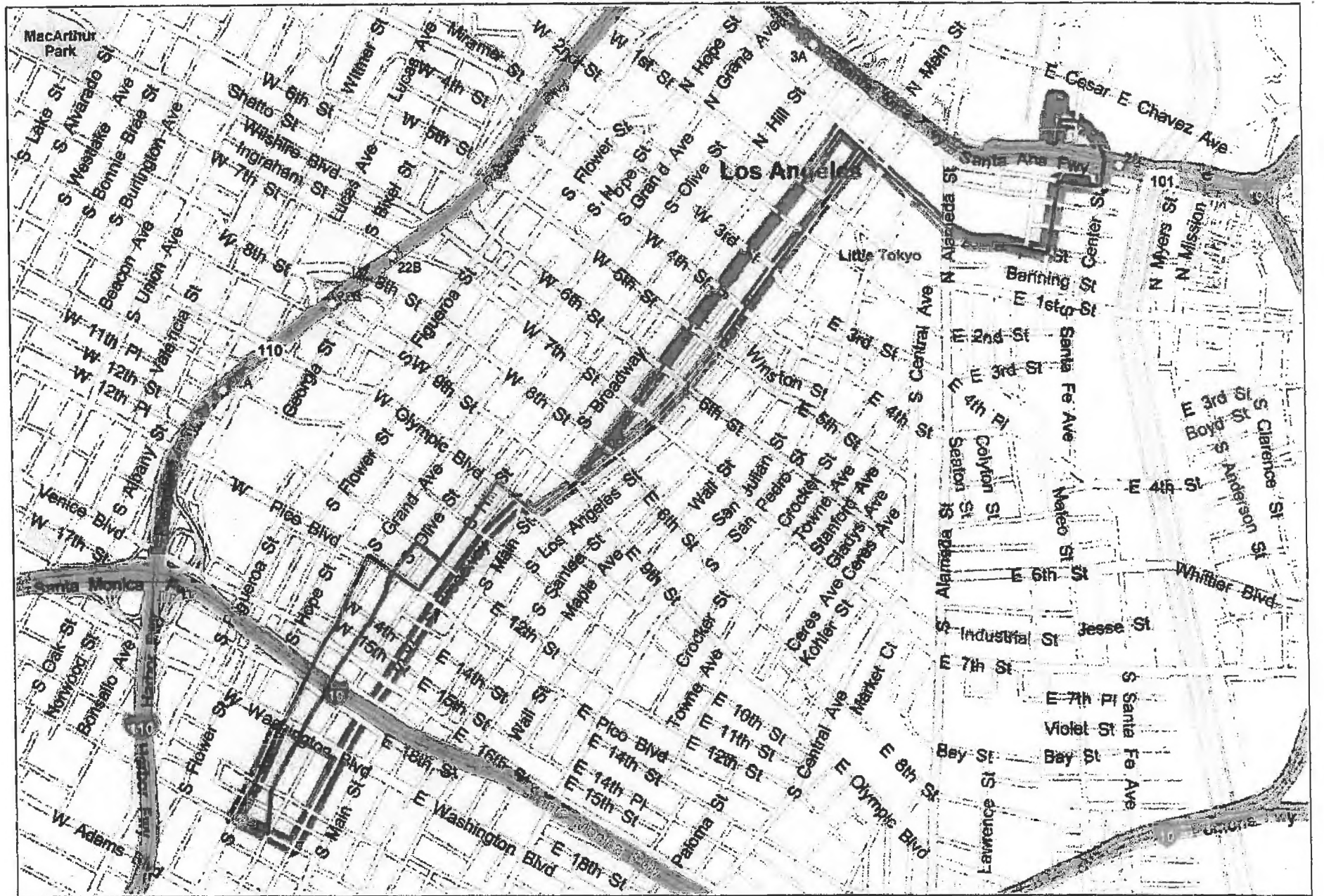
DOWNTOWN DASH B - RECOMMENDED ROUTE CHANGE



DOWNTOWN DASH C - RECOMMENDED NEW ROUTE

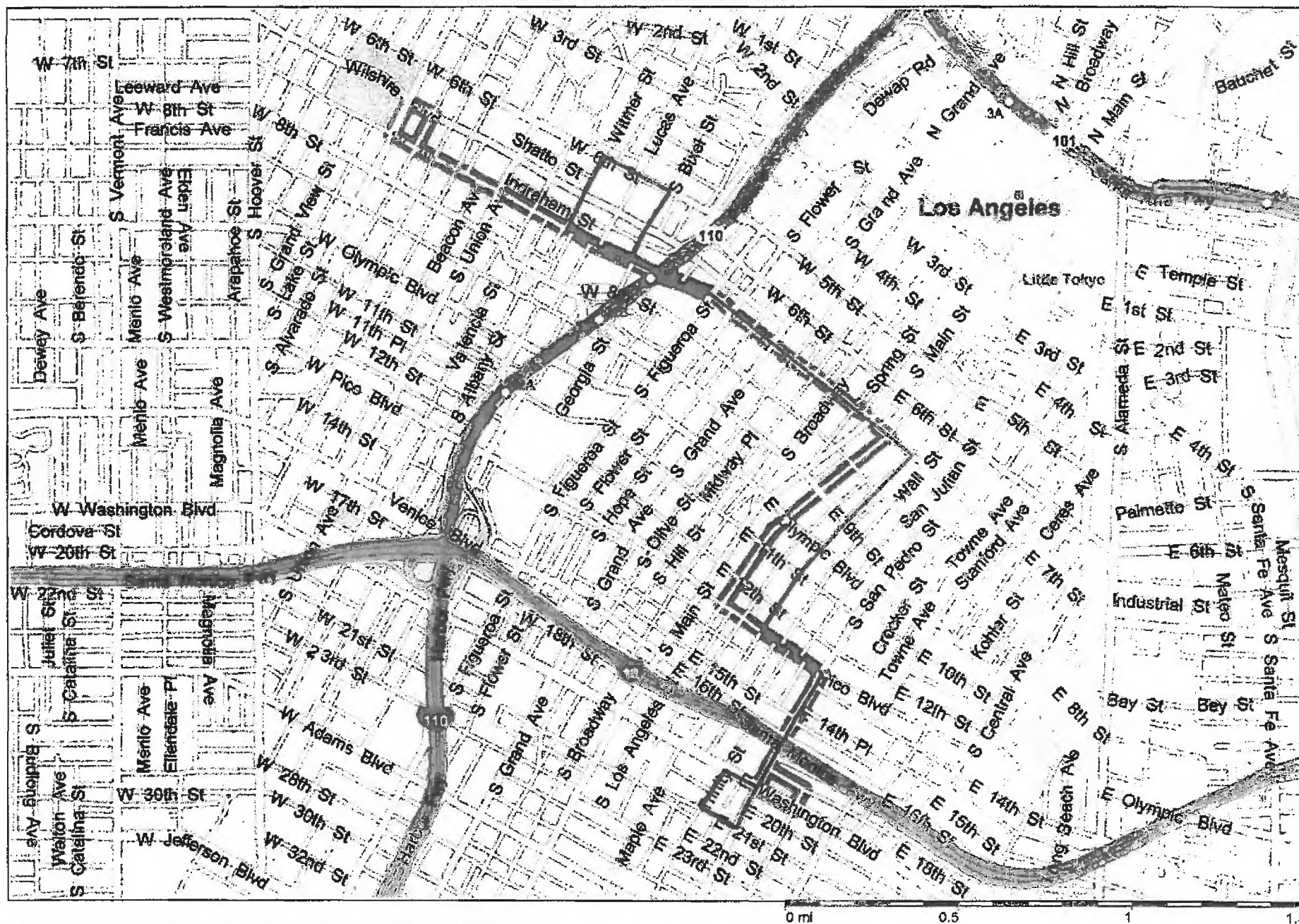


DOWNTOWN DASH D - RECOMMENDED ROUTE CHANGE

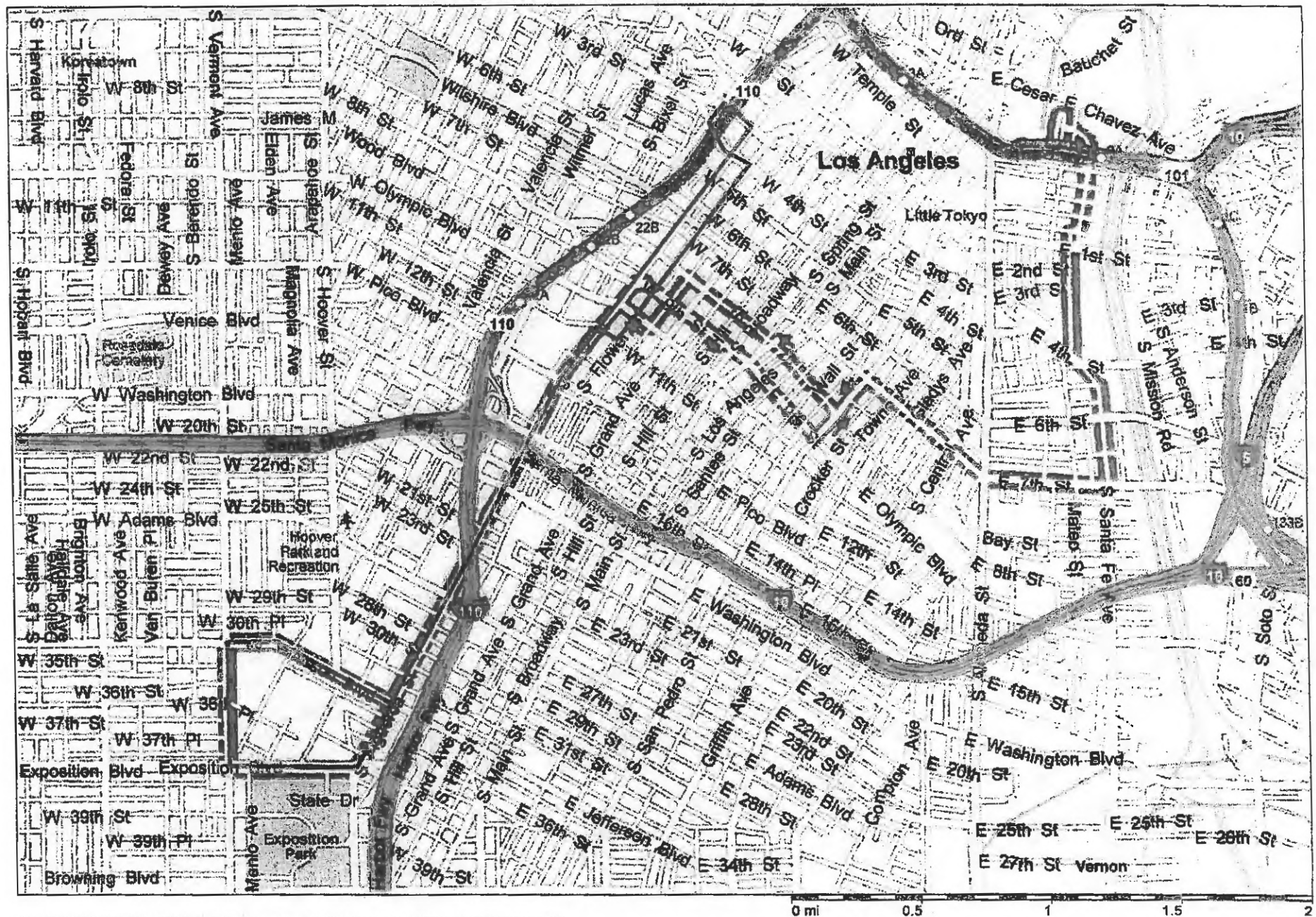


0 mi 0.2 0.4 0.6 0.8 1 1.2

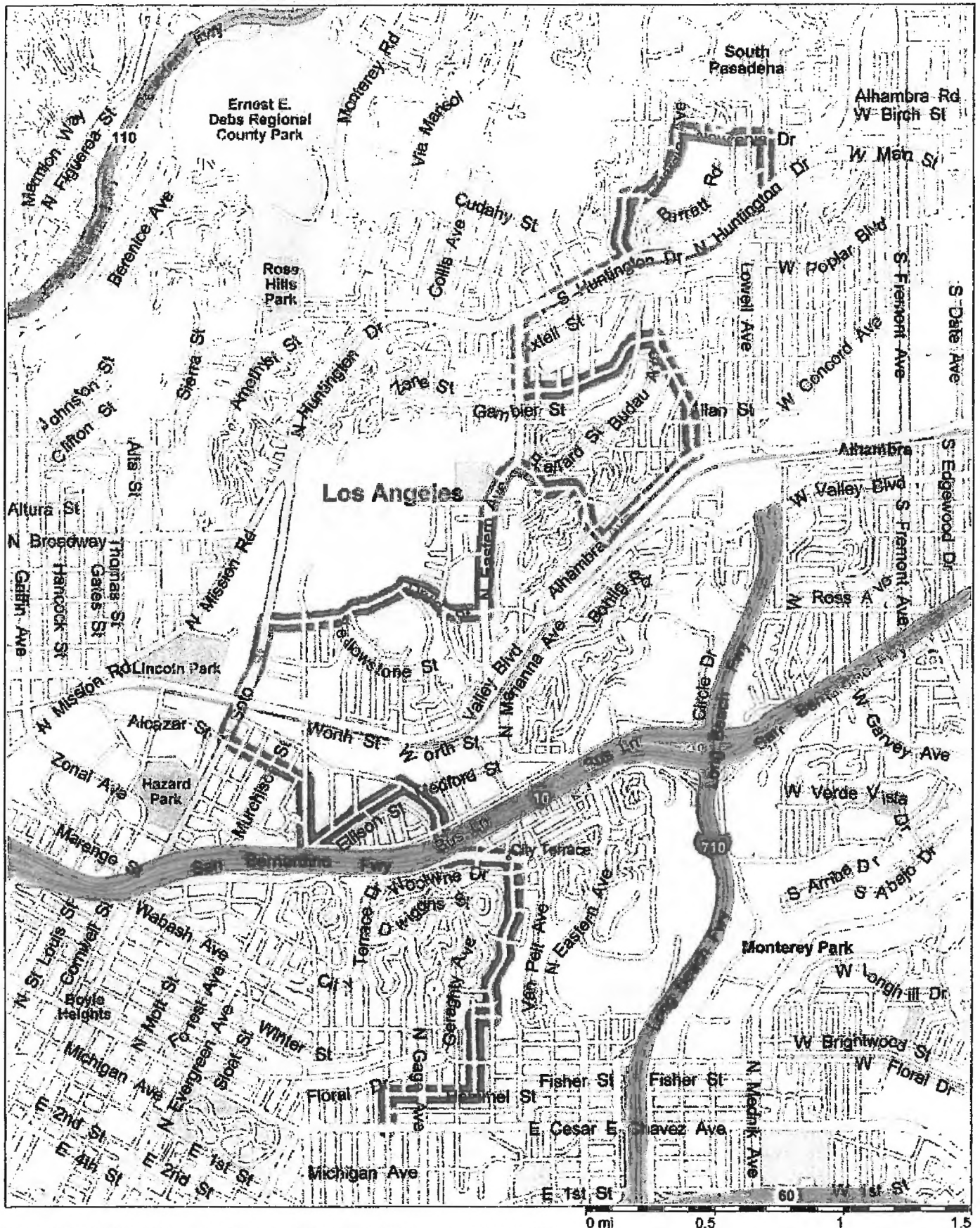
DOWNTOWN DASH E - RECOMMENDED ROUTE CHANGE



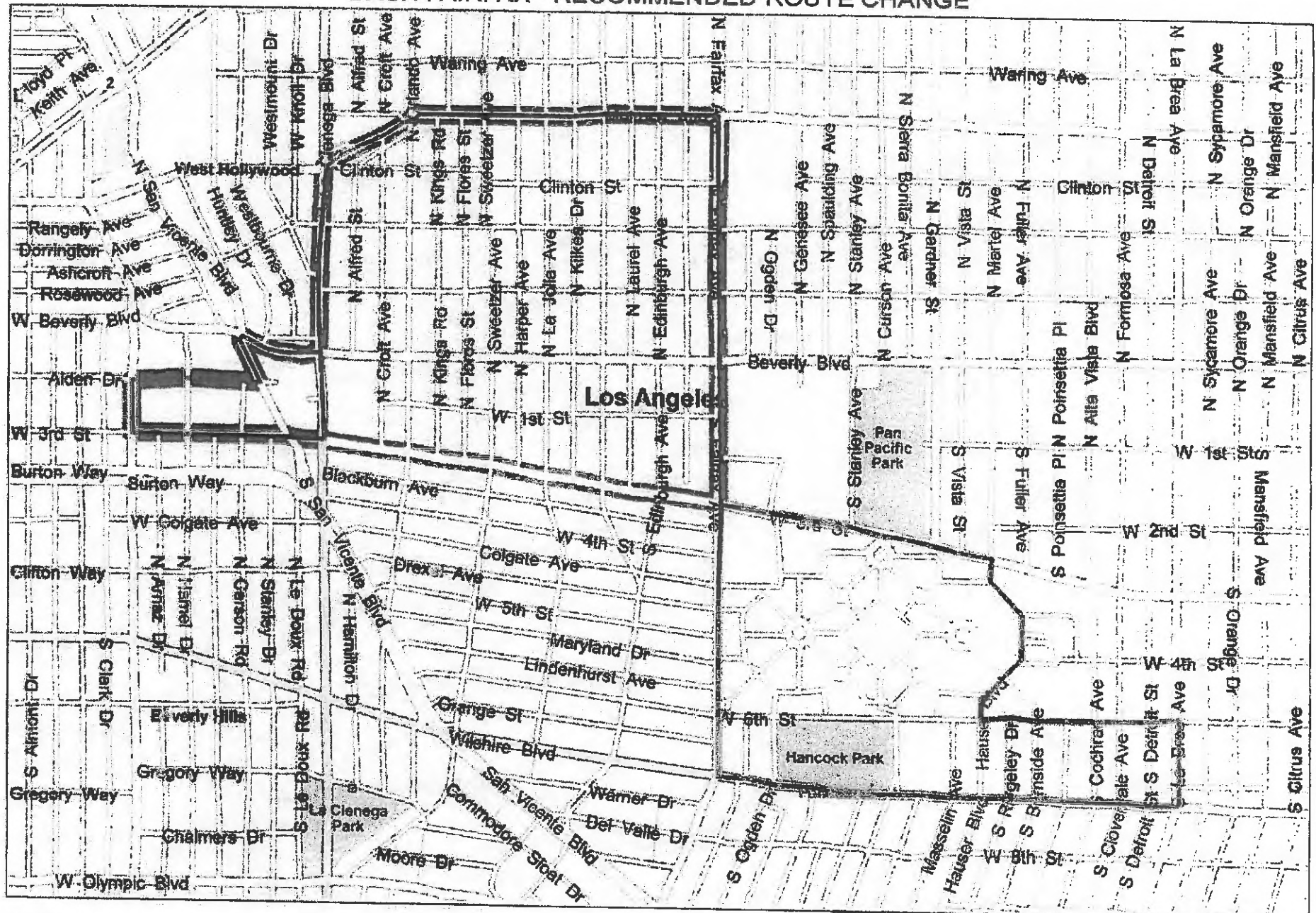
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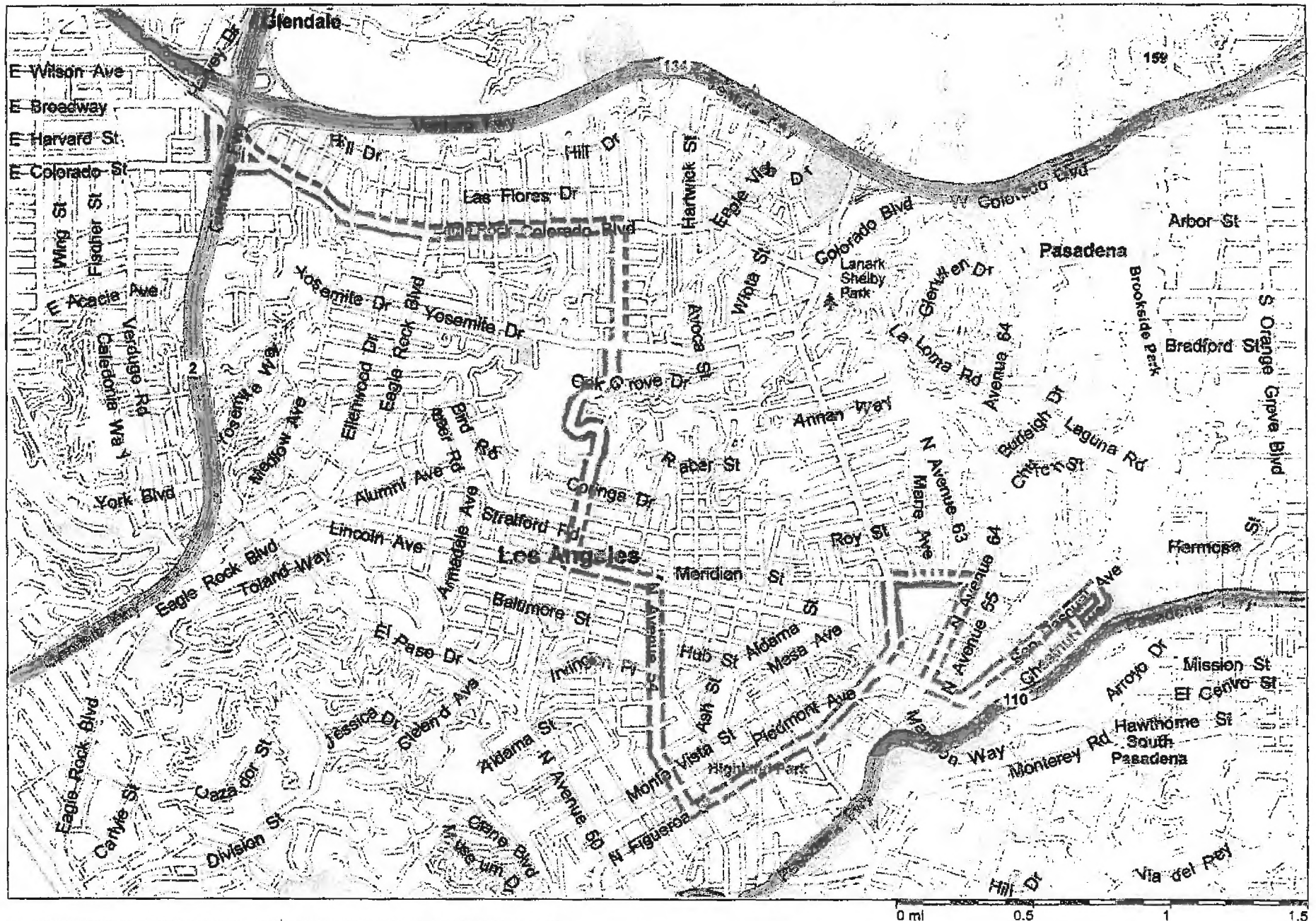
DASH EL SERENO CITY TERRACE - NO CHANGE IN ROUTE



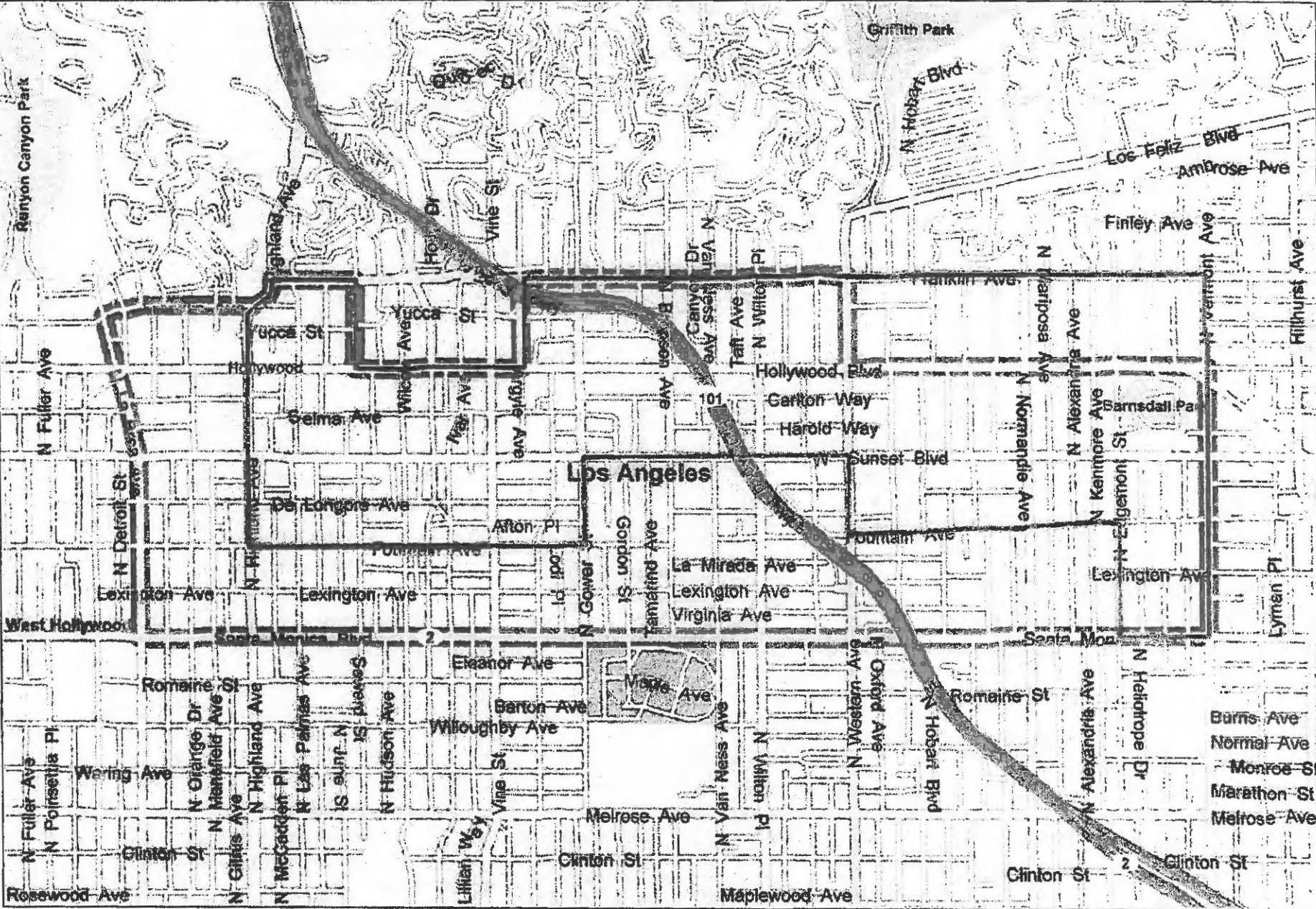
DASH FAIRFAX - RECOMMENDED ROUTE CHANGE



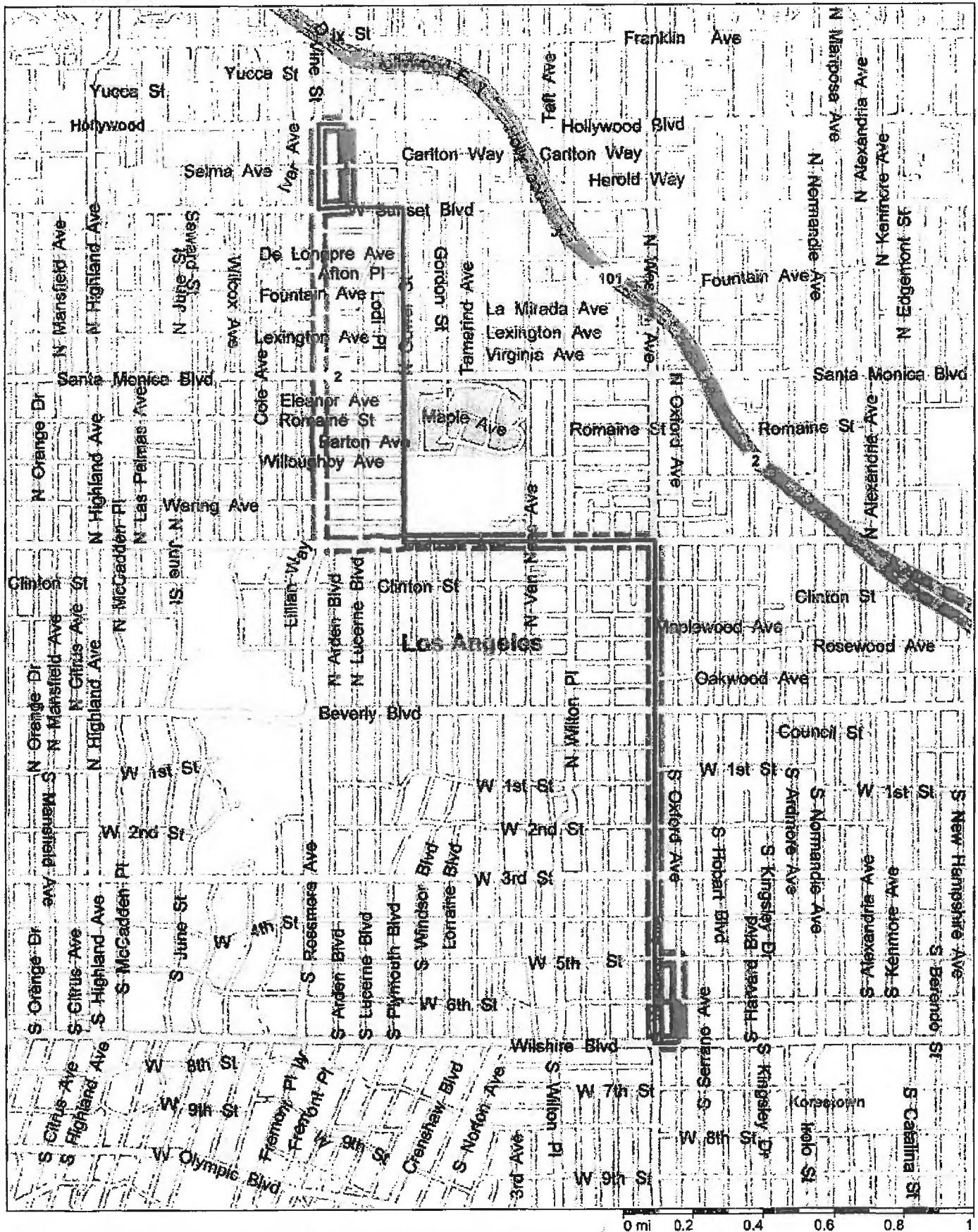
DASH HIGHLAND PARK / EAGLE ROCK - NO CHANGE IN ROUTE



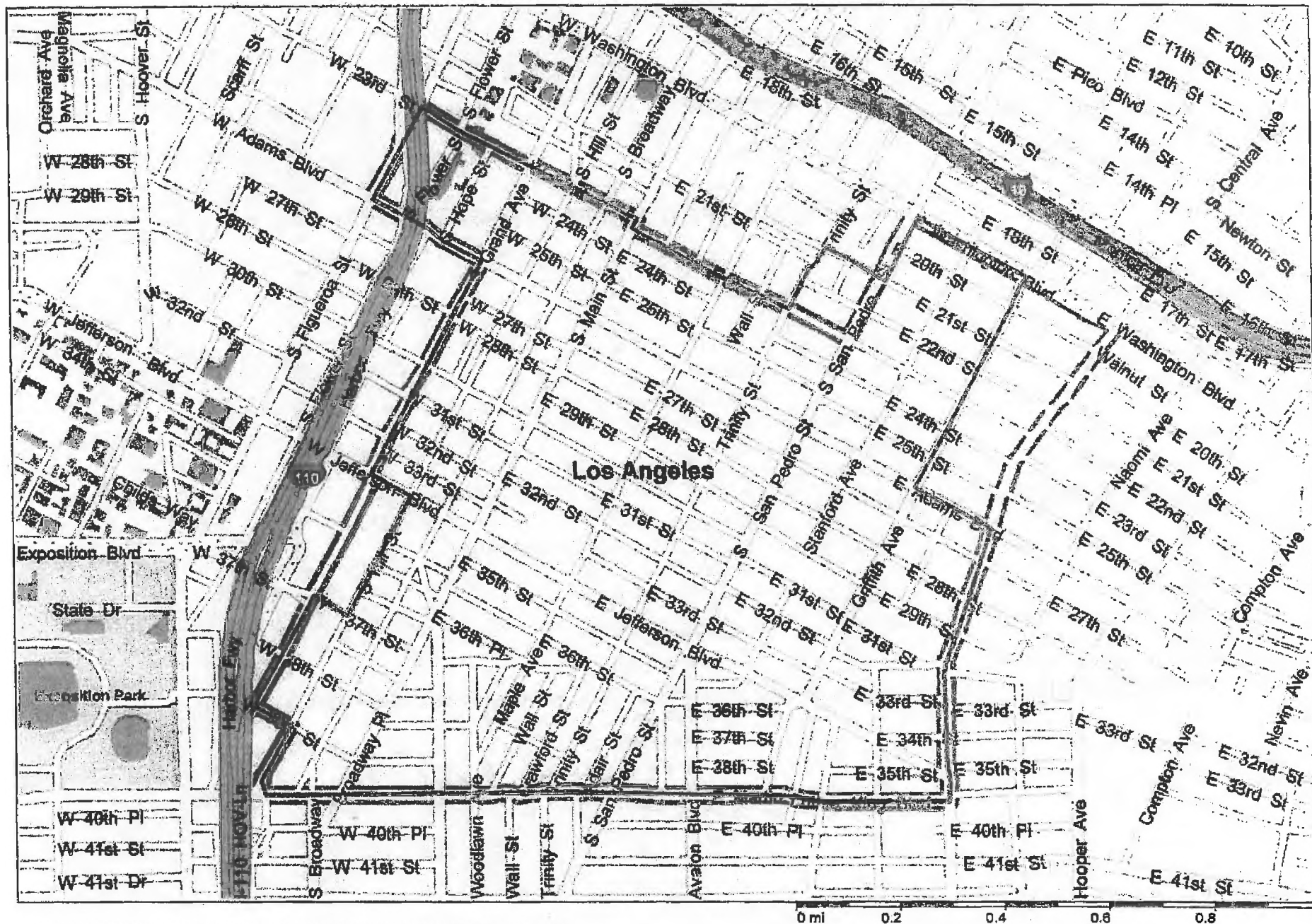
DASH HOLLYWOOD - RECOMMENDED ROUTE CHANGE



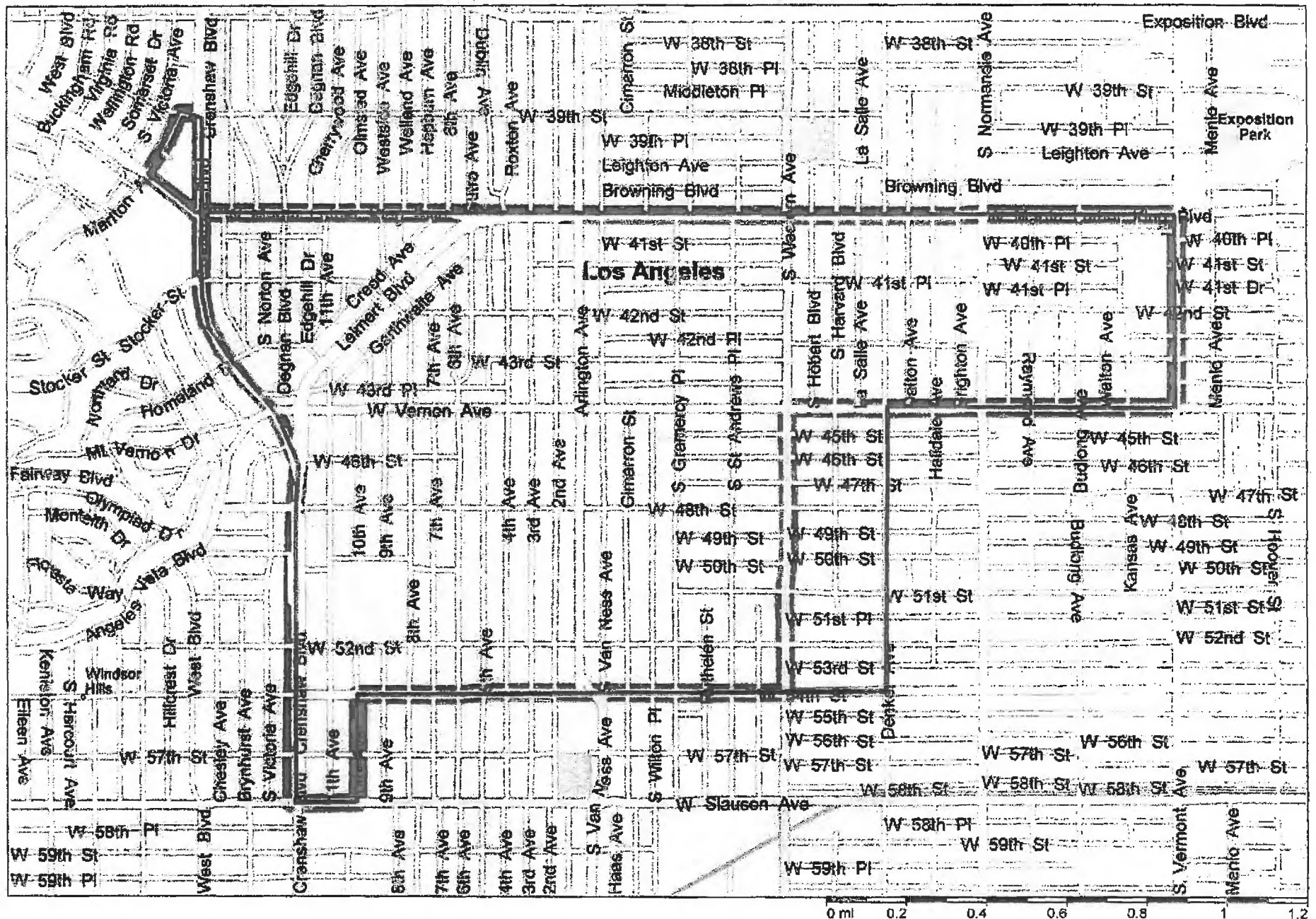
DASH HOLLYWOOD / WILSHIRE - RECOMMENDED ROUTE CHANGE



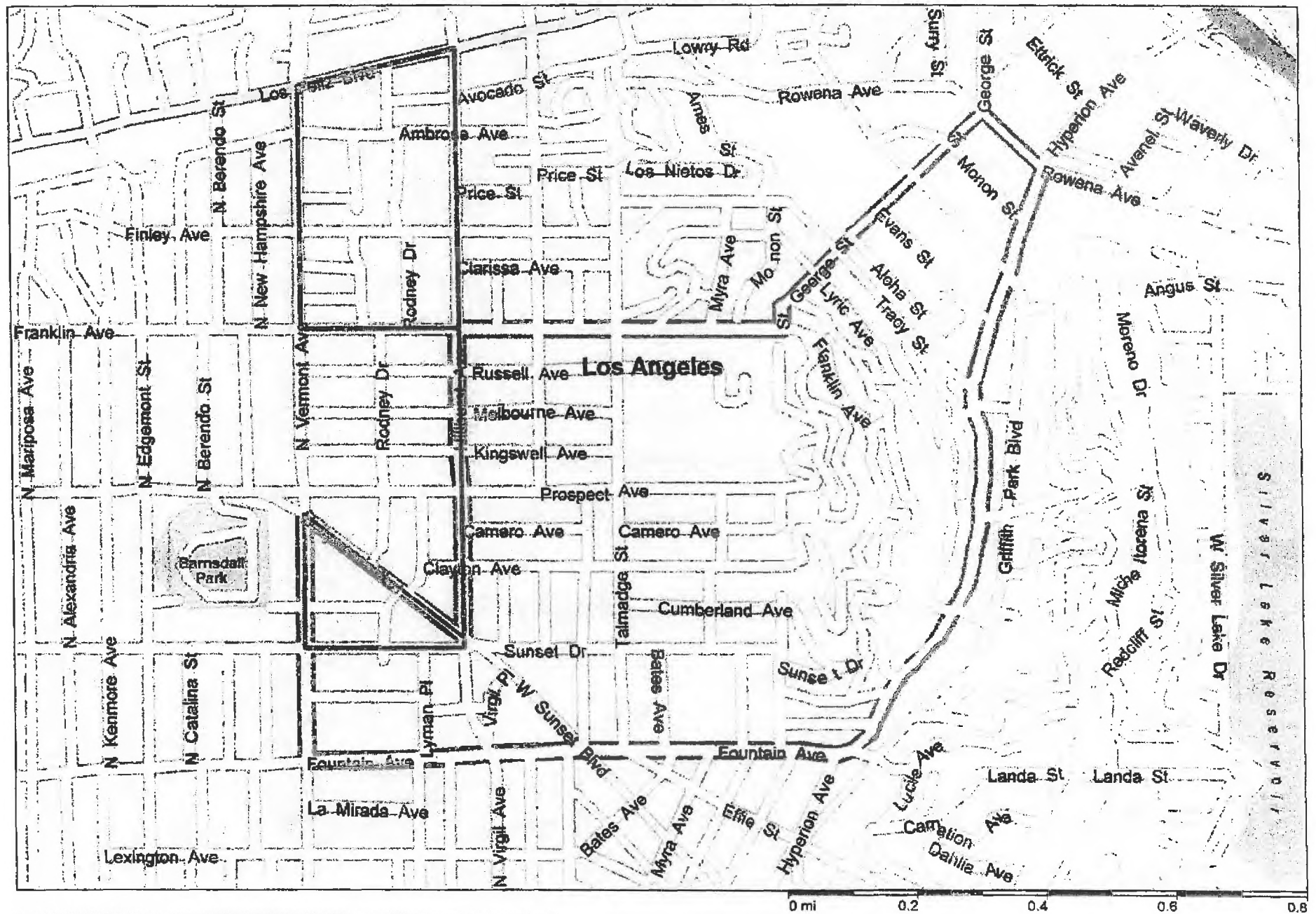
DASH KING EAST - RECOMMENDED ROUTE CHANGE



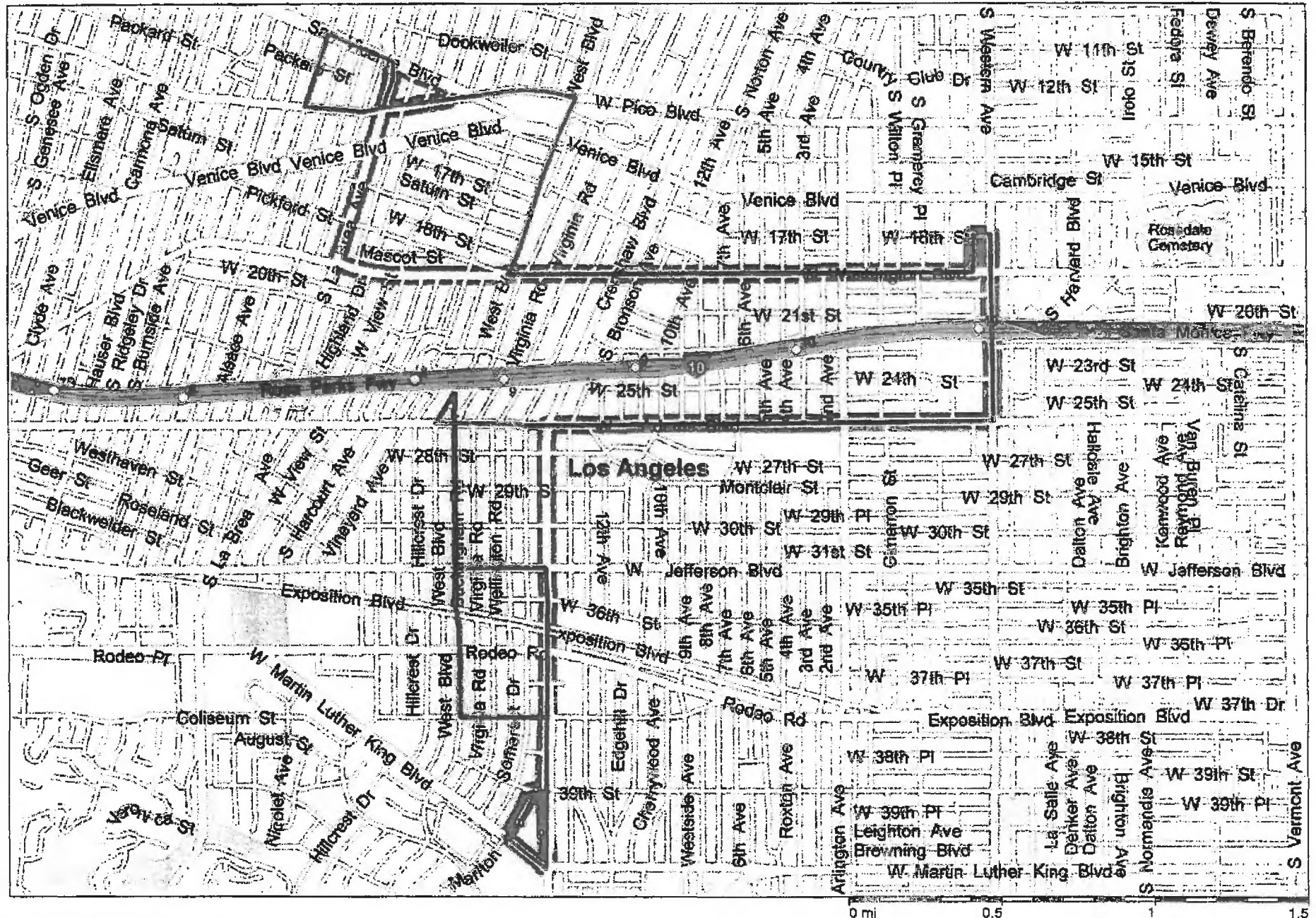
DASH LEIMERT / SLAUSON - RECOMMENDED ROUTE CHANGE



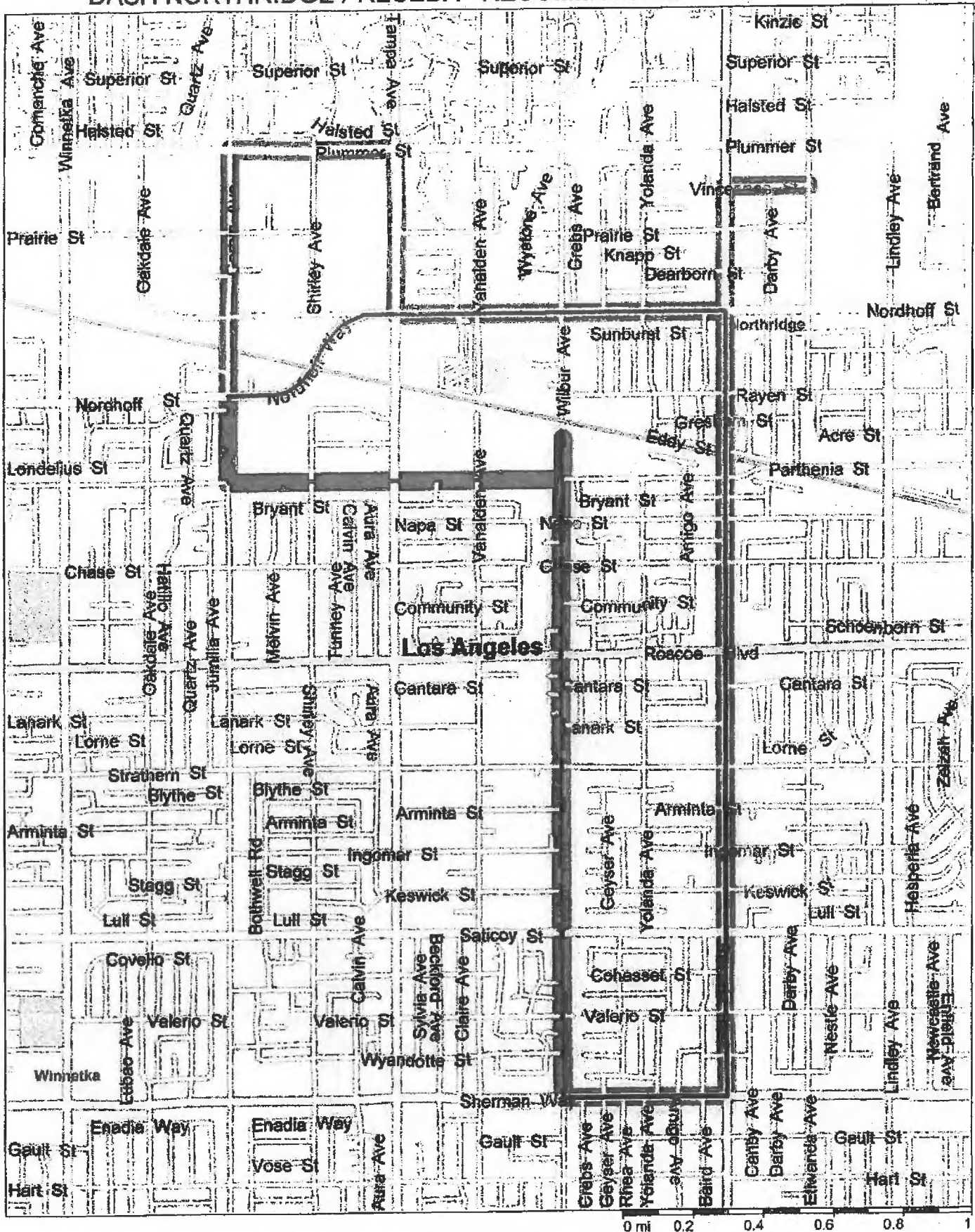
DASH LOS FELIZ - RECOMMENDED ROUTE CHANGE



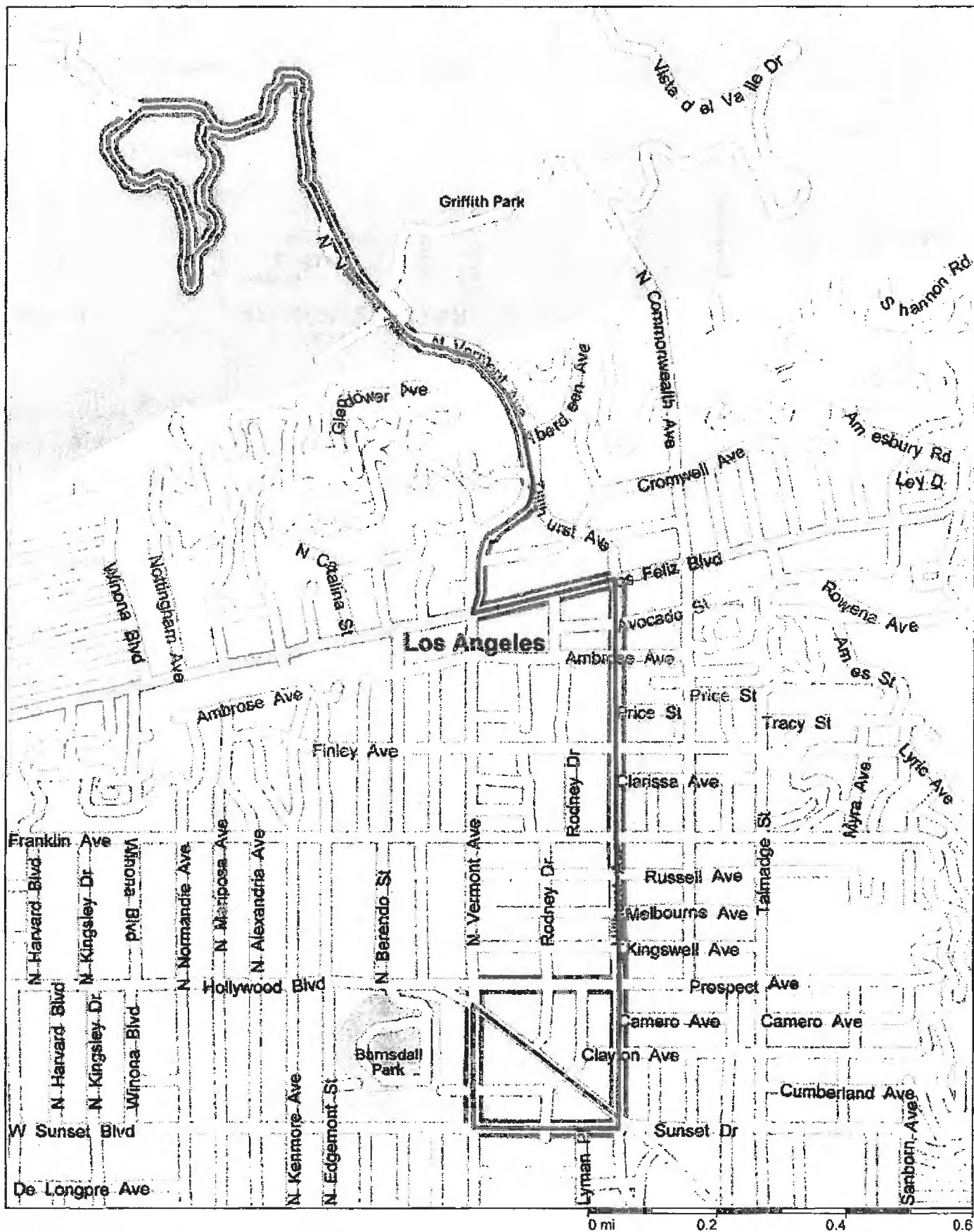
DASH MIDTOWN - RECOMMENDED ROUTE CHANGE



DASH NORTHRIDGE / RESEDA - RECOMMENDED ROUTE CHANGE

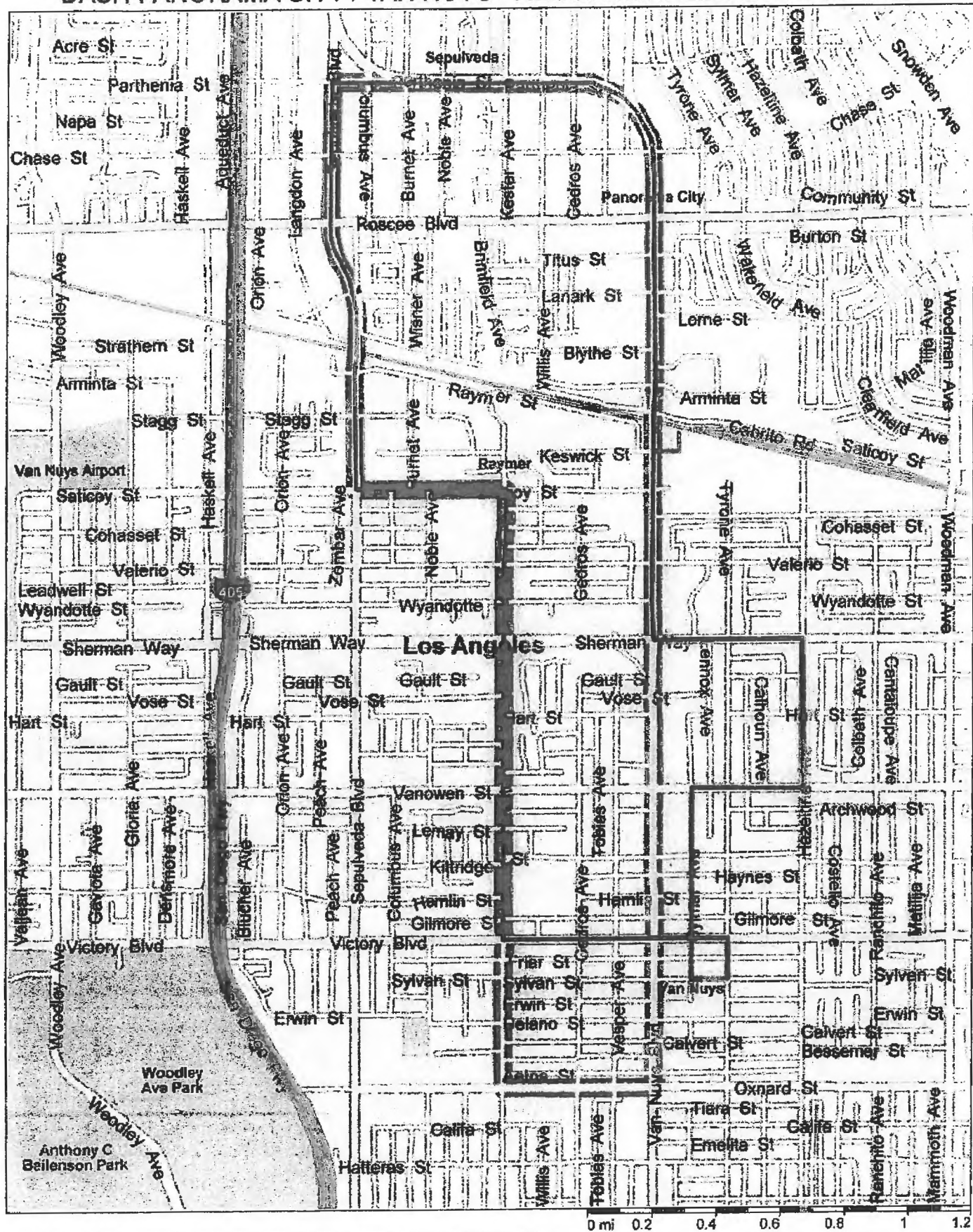


DASH OBSERVATORY - RECOMMENDED ROUTE CHANGE



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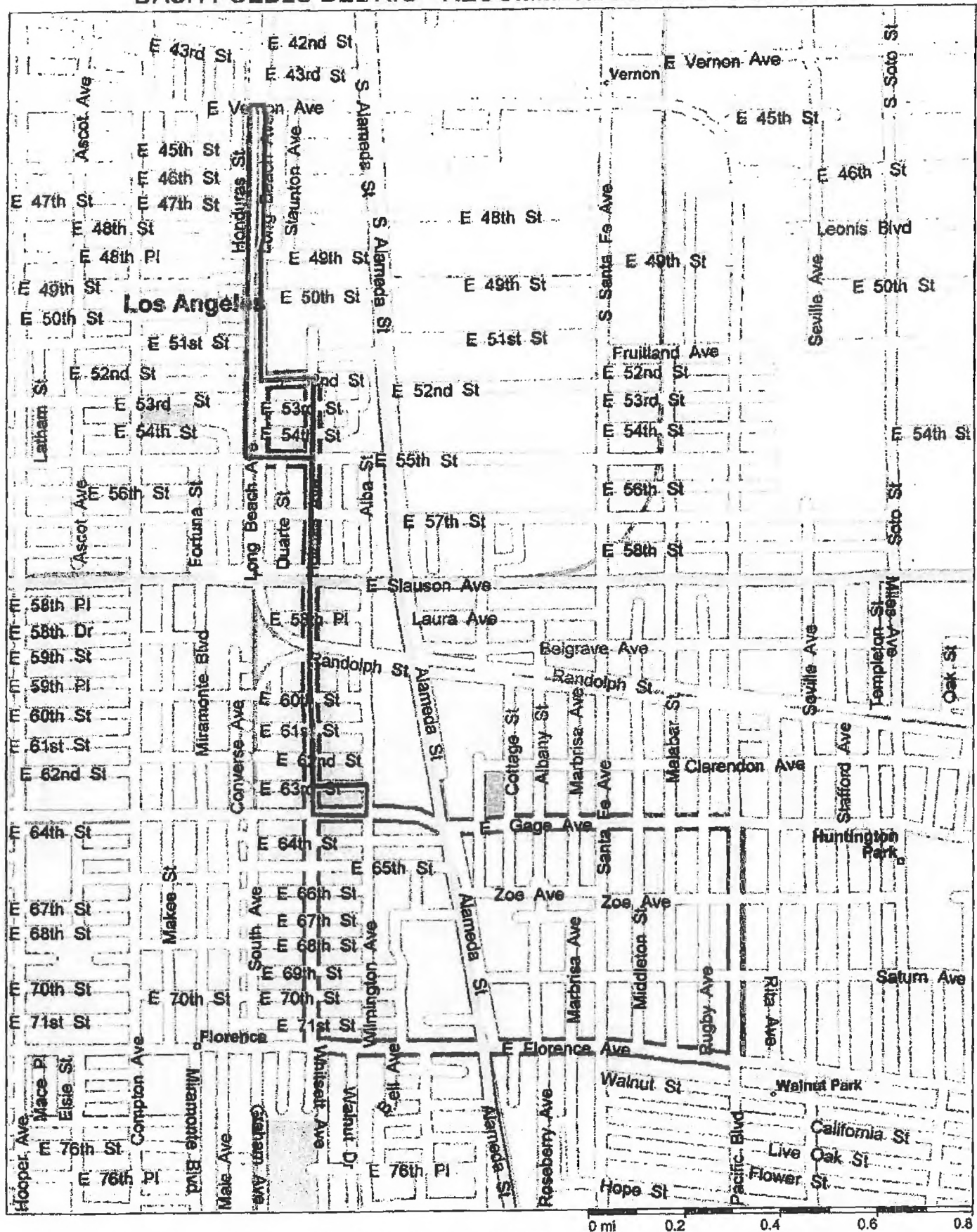
DASH PANORAMA CITY / VAN NUYS - RECOMMENDED ROUTE CHANGE



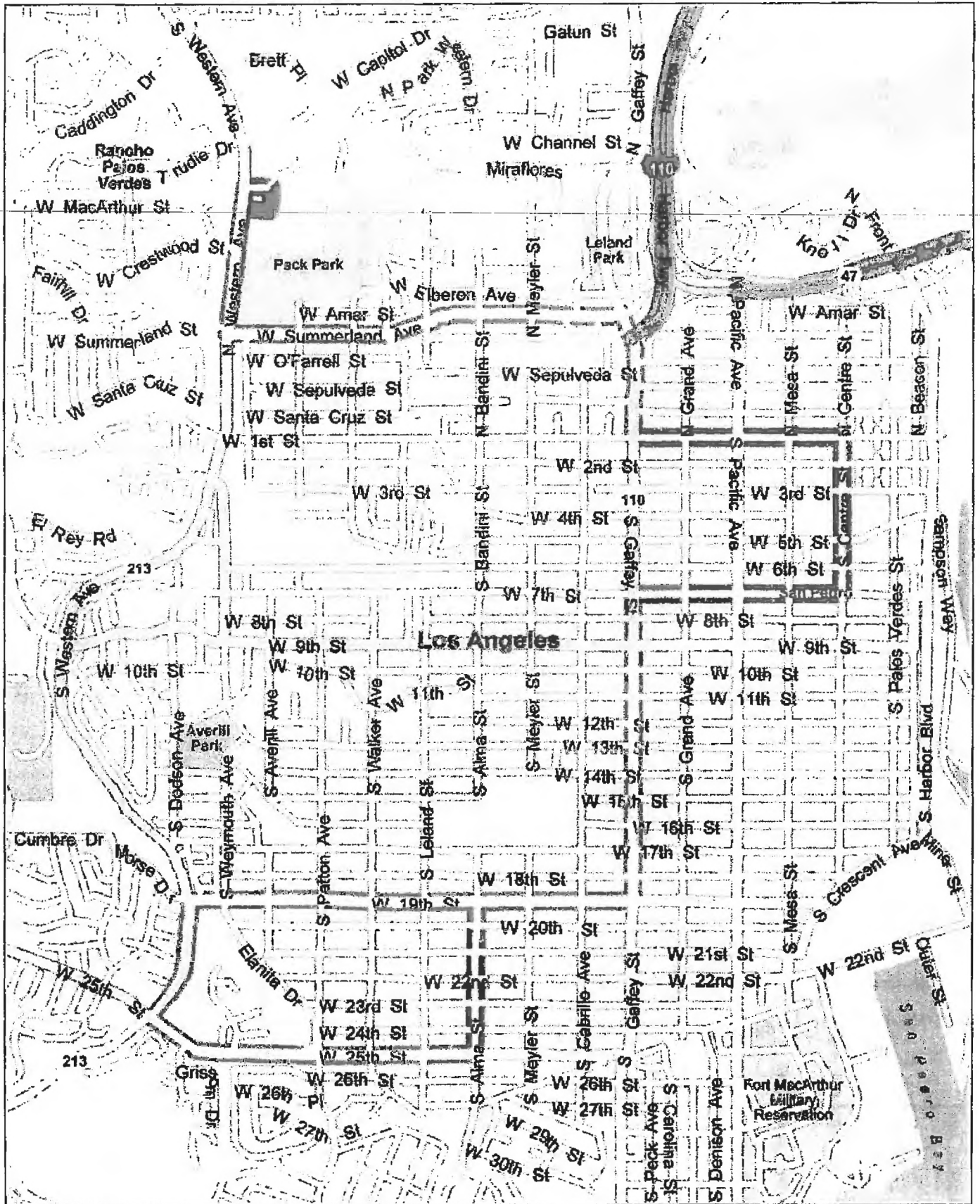
DASH PICO UNION / ECHO PARK - NO CHANGE IN ROUTE



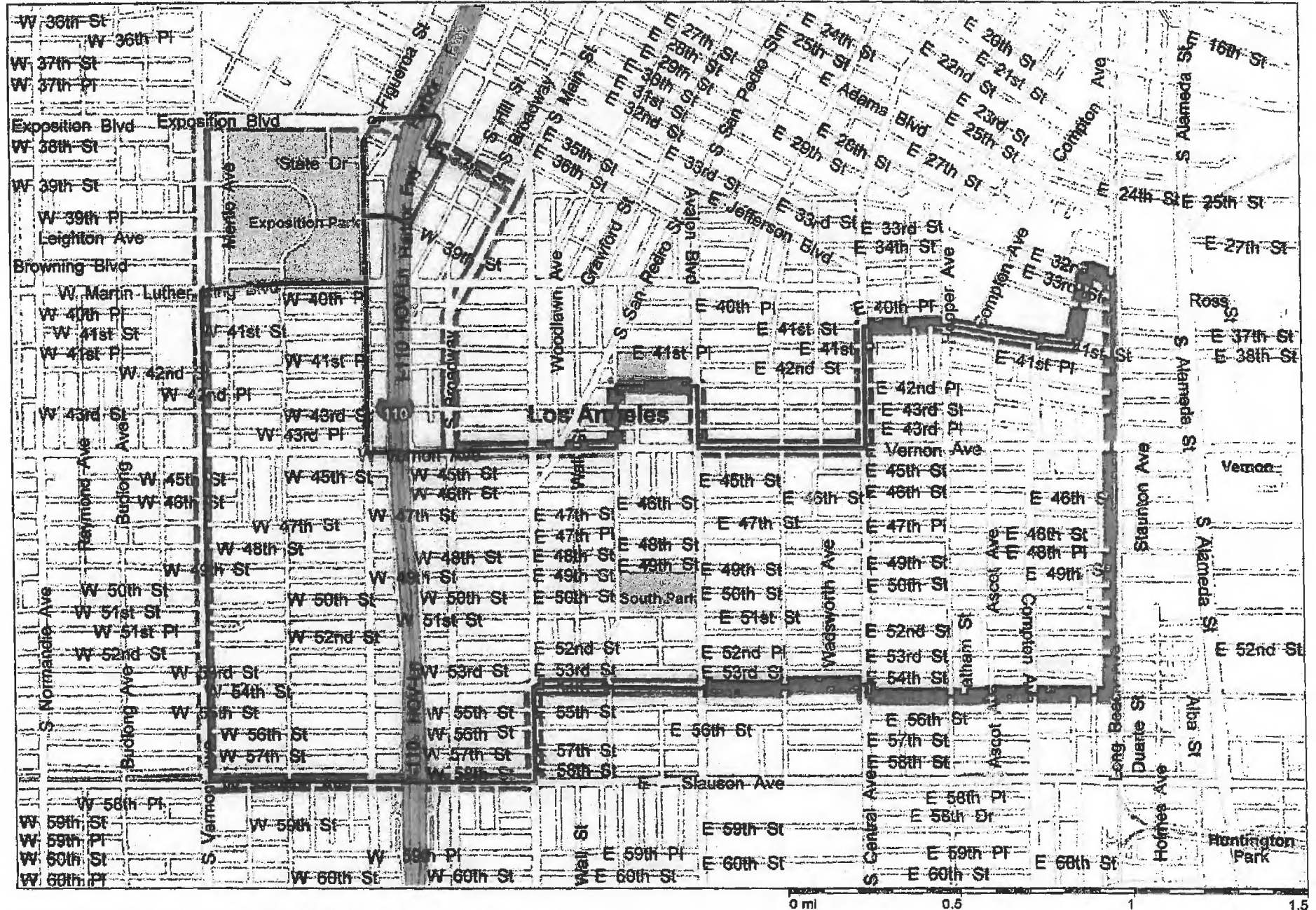
DASH PUEBLO DEL RIO - RECOMMENDED ROUTE CHANGE



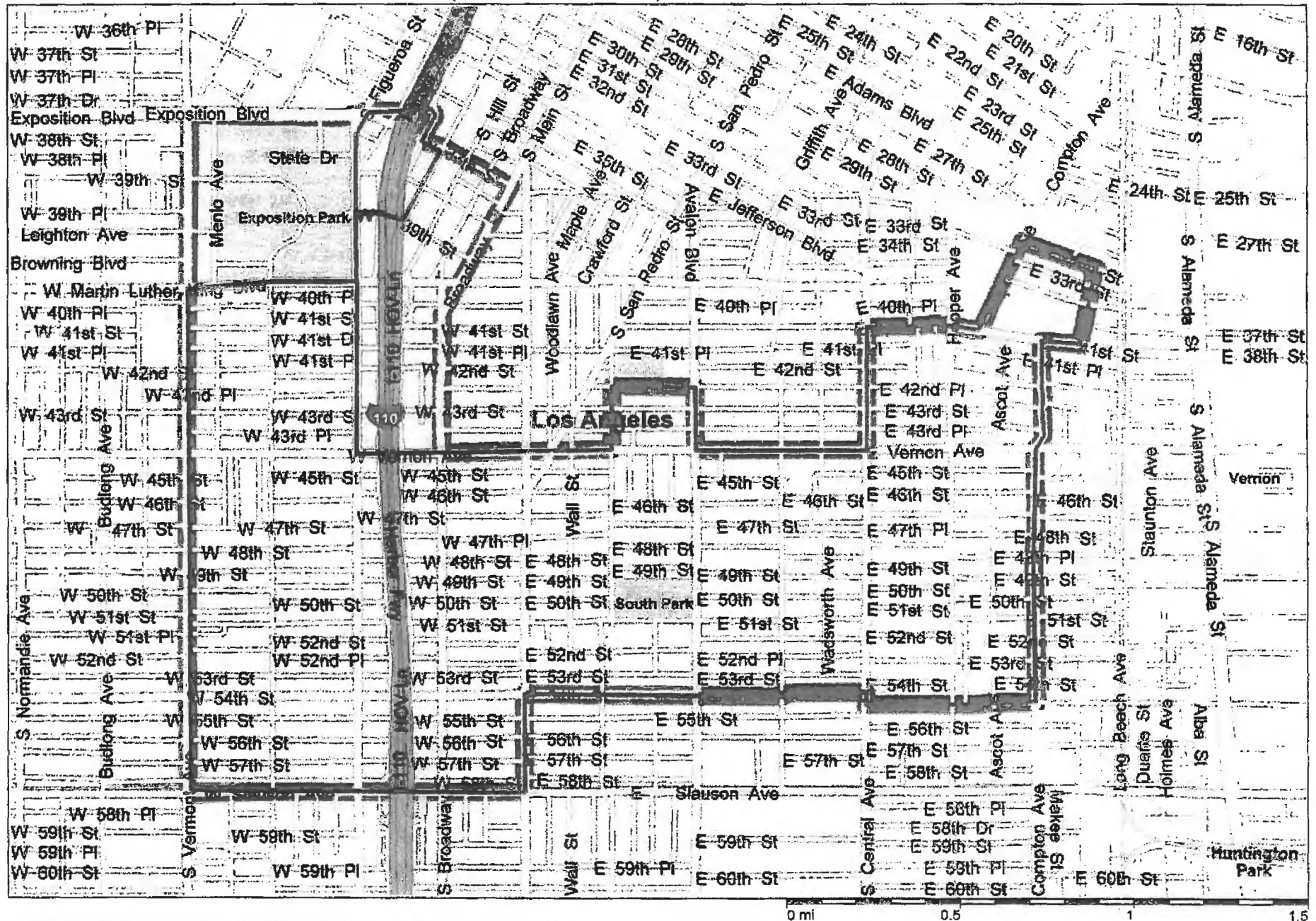
DASH SAN PEDRO - NO CHANGE IN ROUTE



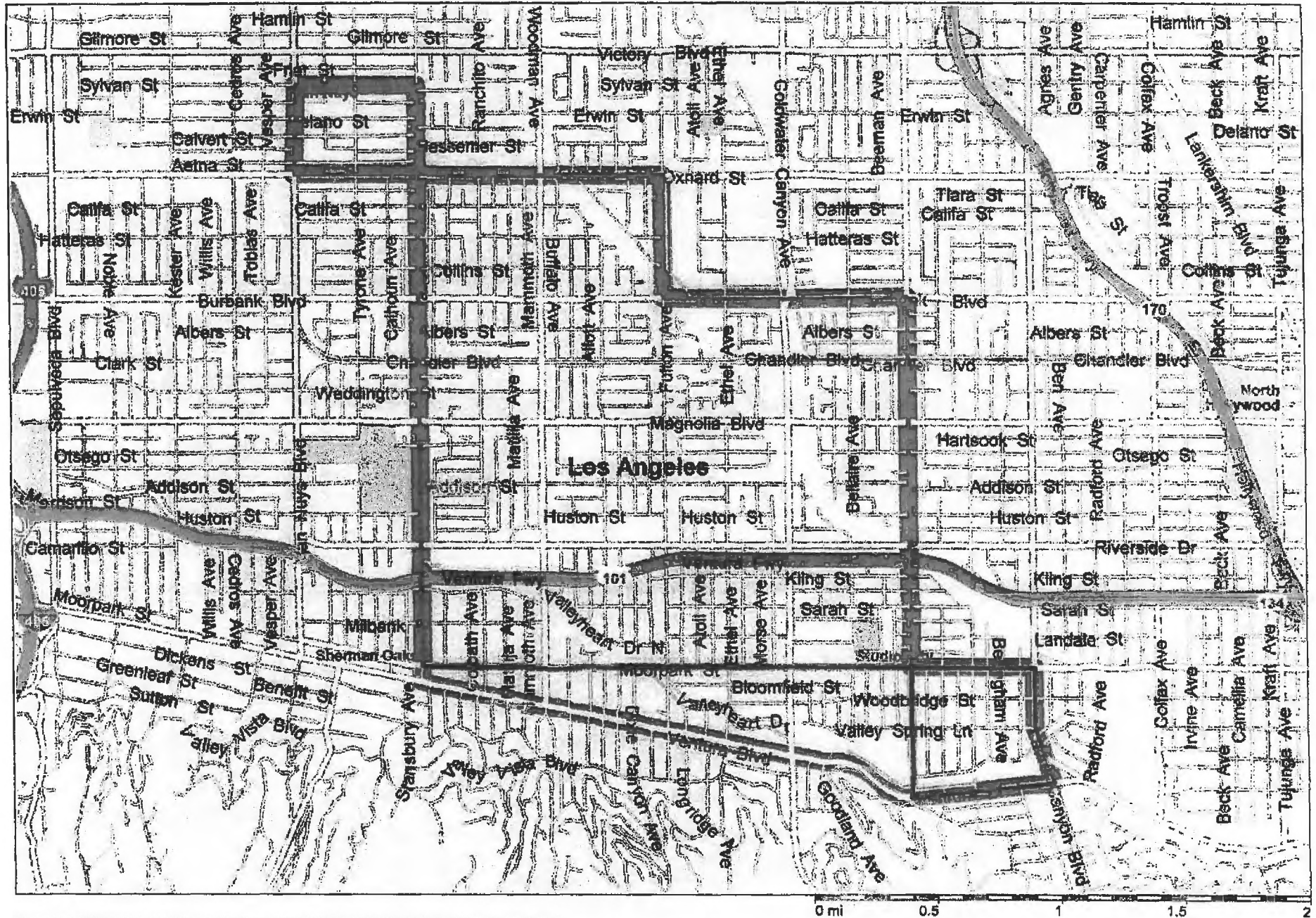
DASH SOUTHEAST (clockwise) - RECOMMENDED ROUTE CHANGE



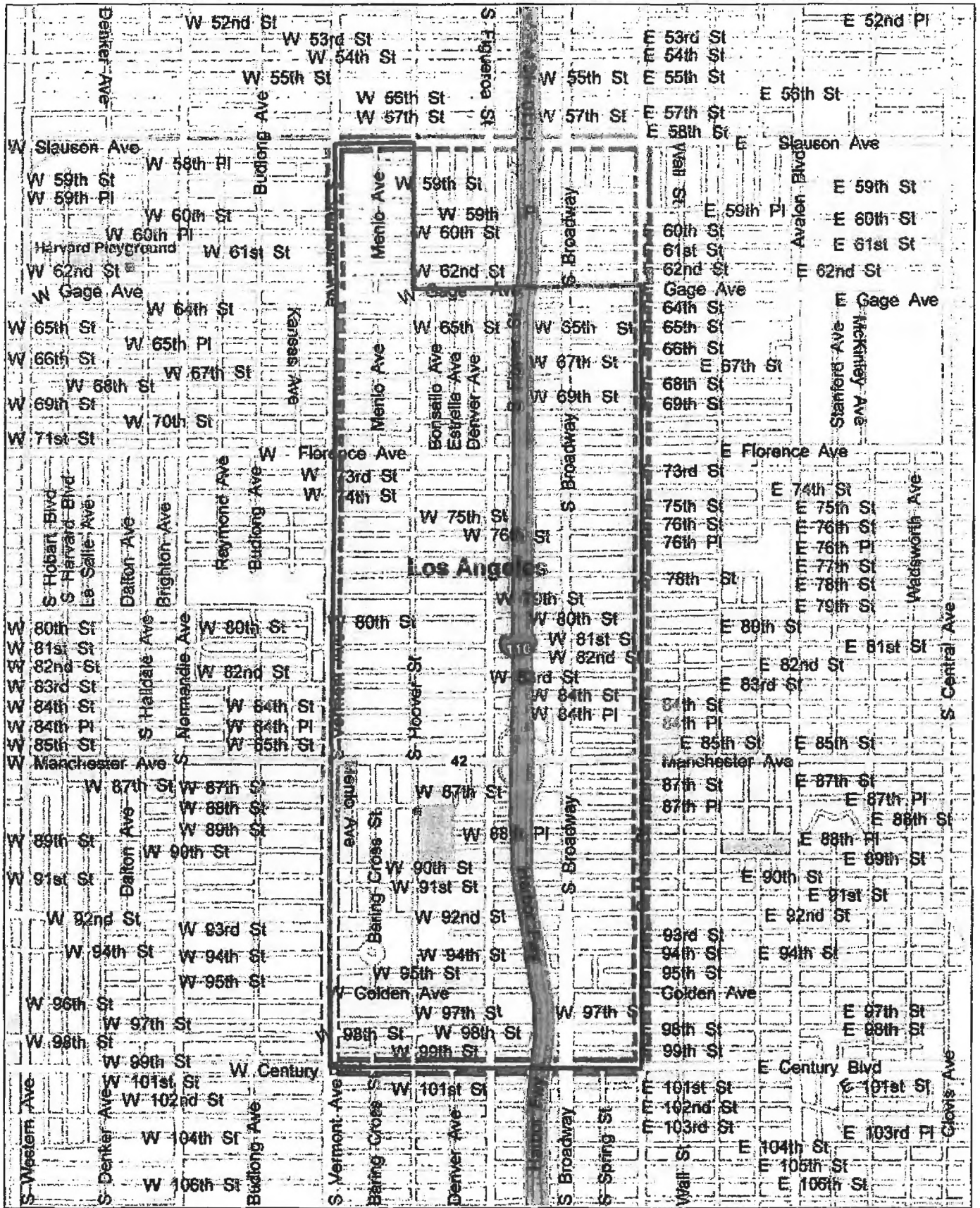
DASH SOUTHEAST (counter clockwise) - RECOMMENDED ROUTE CHANGE



DASH VAN NUYS / STUDIO CITY - RECOMMENDED ROUTE CHANGE

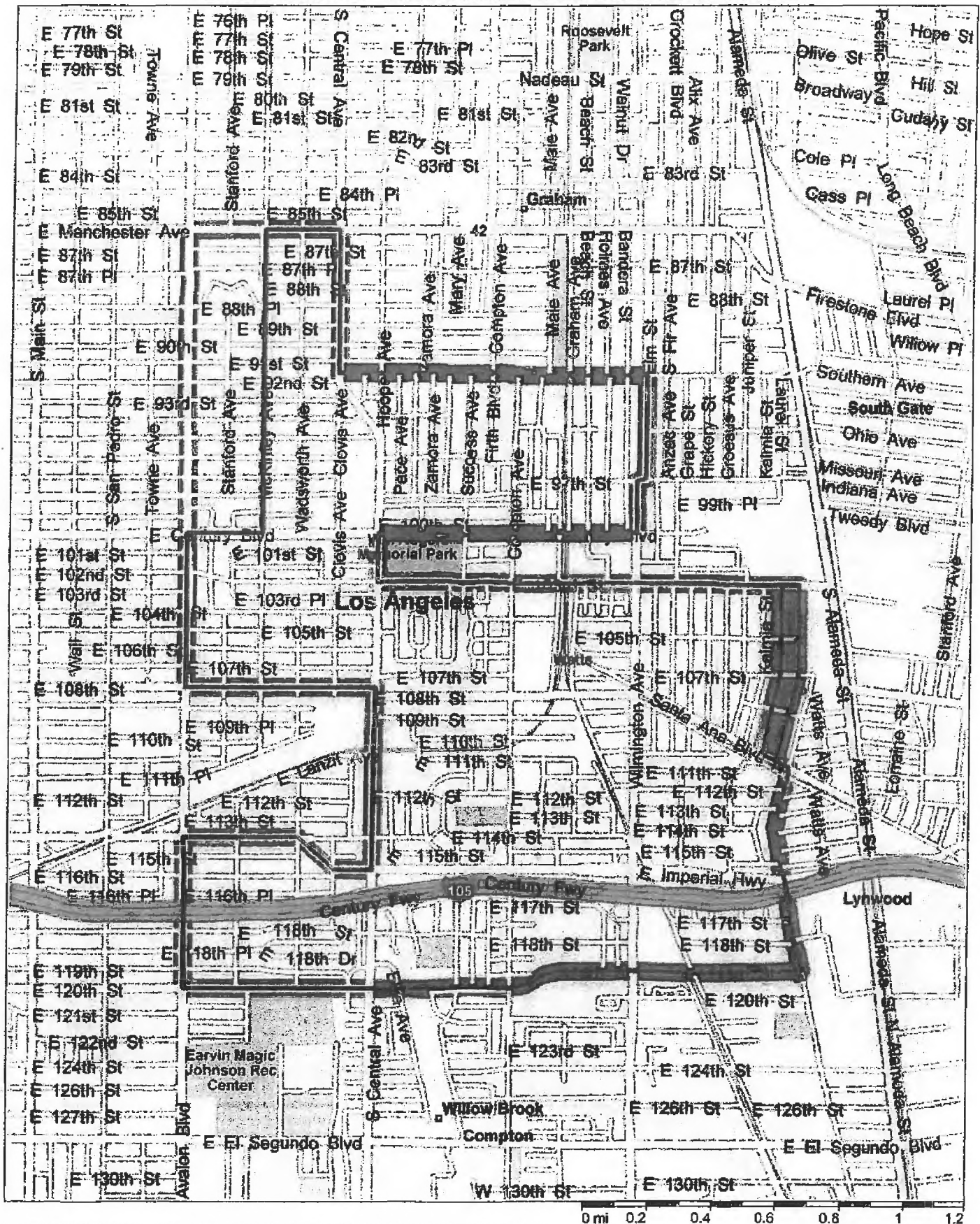


DASH VERMONT / MAIN - RECOMMENDED ROUTE CHANGE

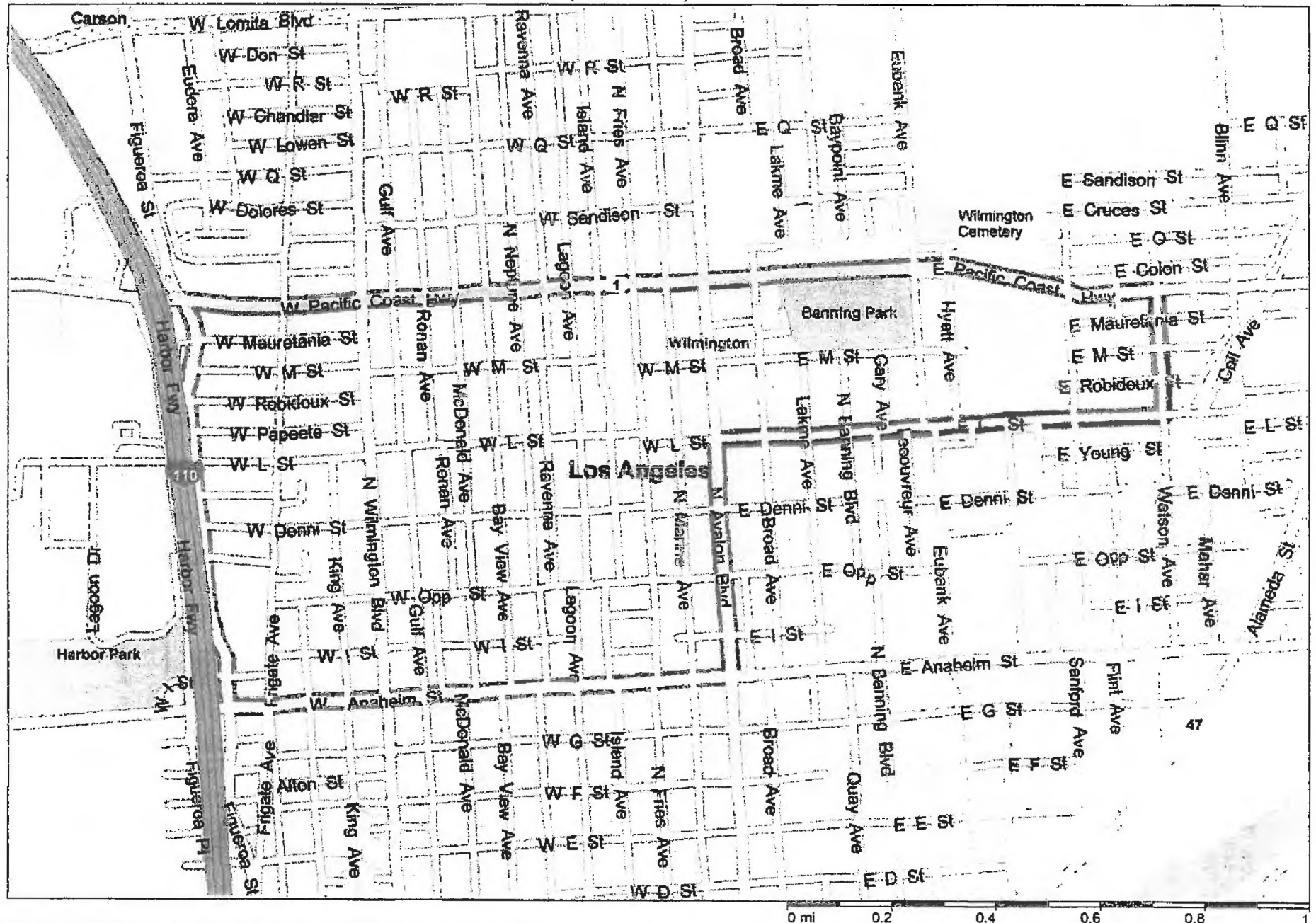


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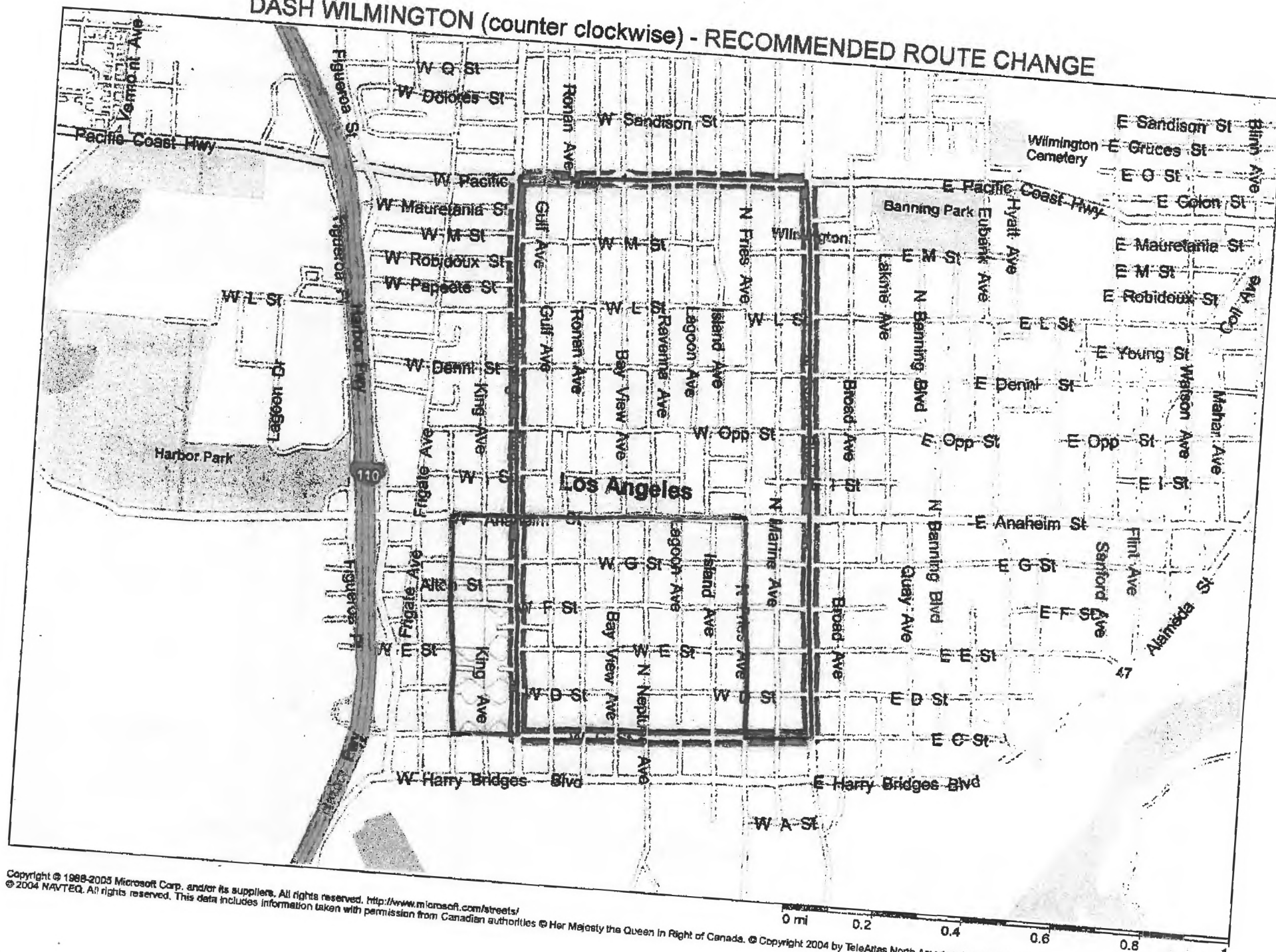
DASH WATTS - RECOMMENDED ROUTE CHANGE



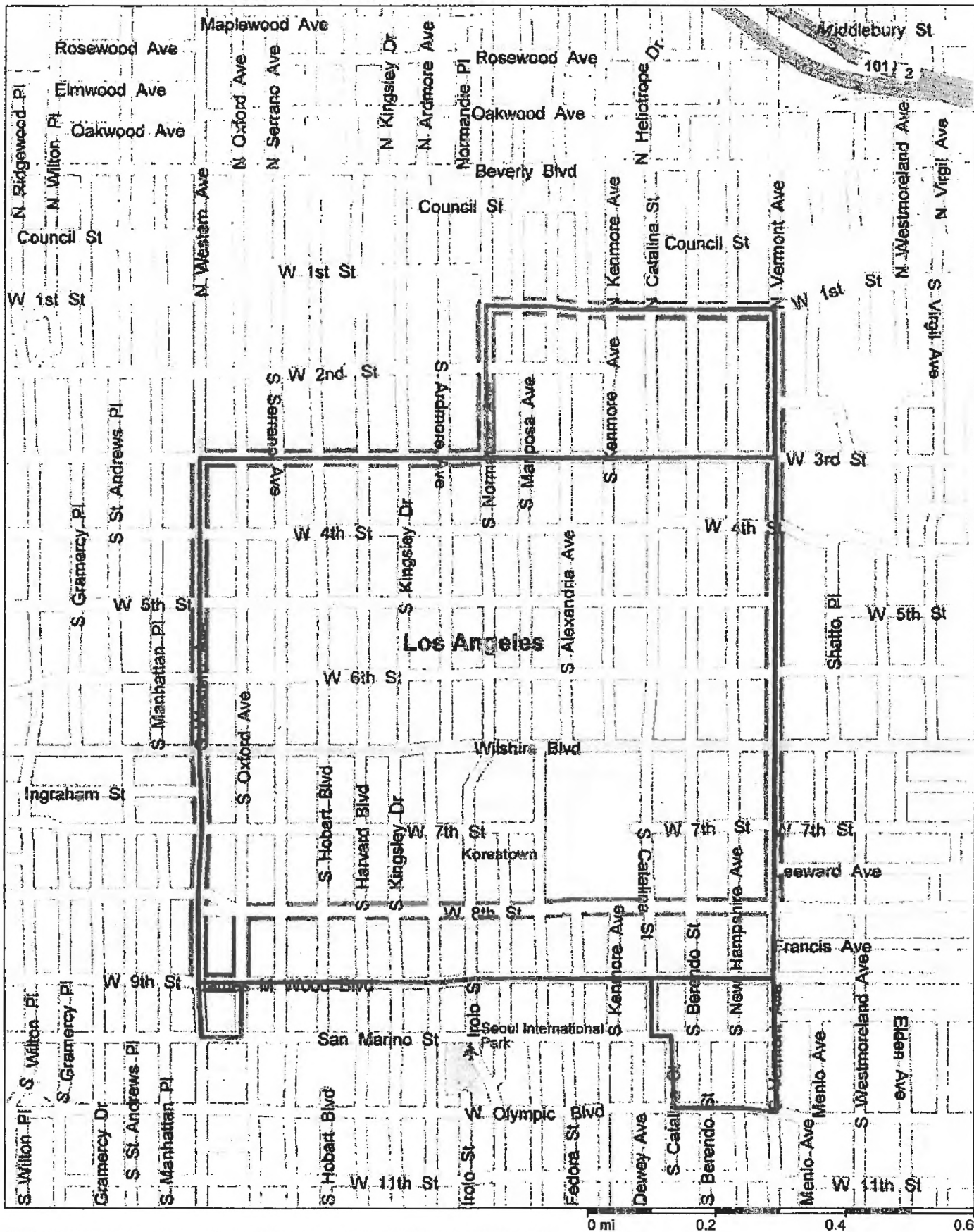
DASH WILMINGTON (clockwise) - NO CHANGE IN ROUTE



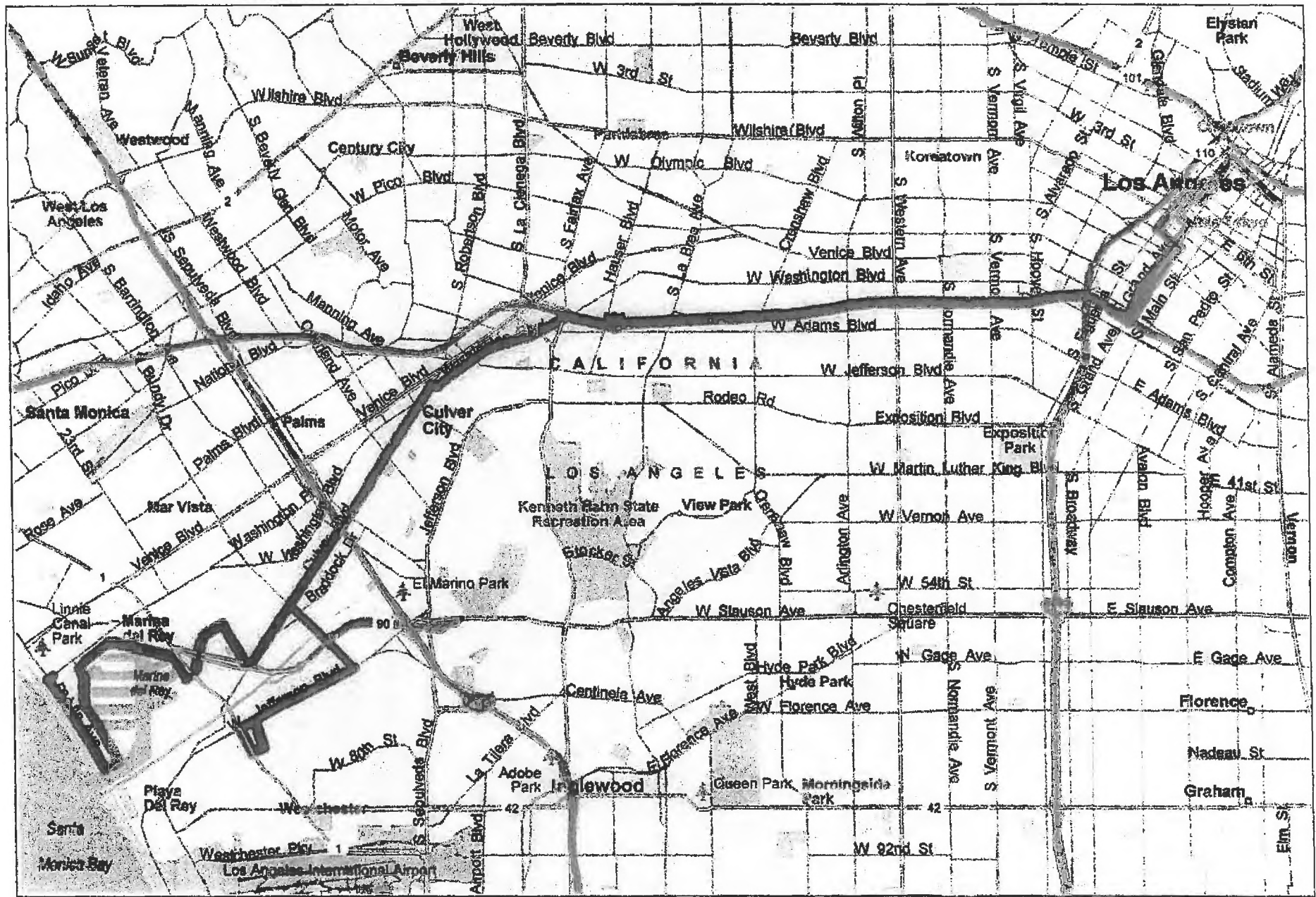
DASH WILMINGTON (counter clockwise) - RECOMMENDED ROUTE CHANGE



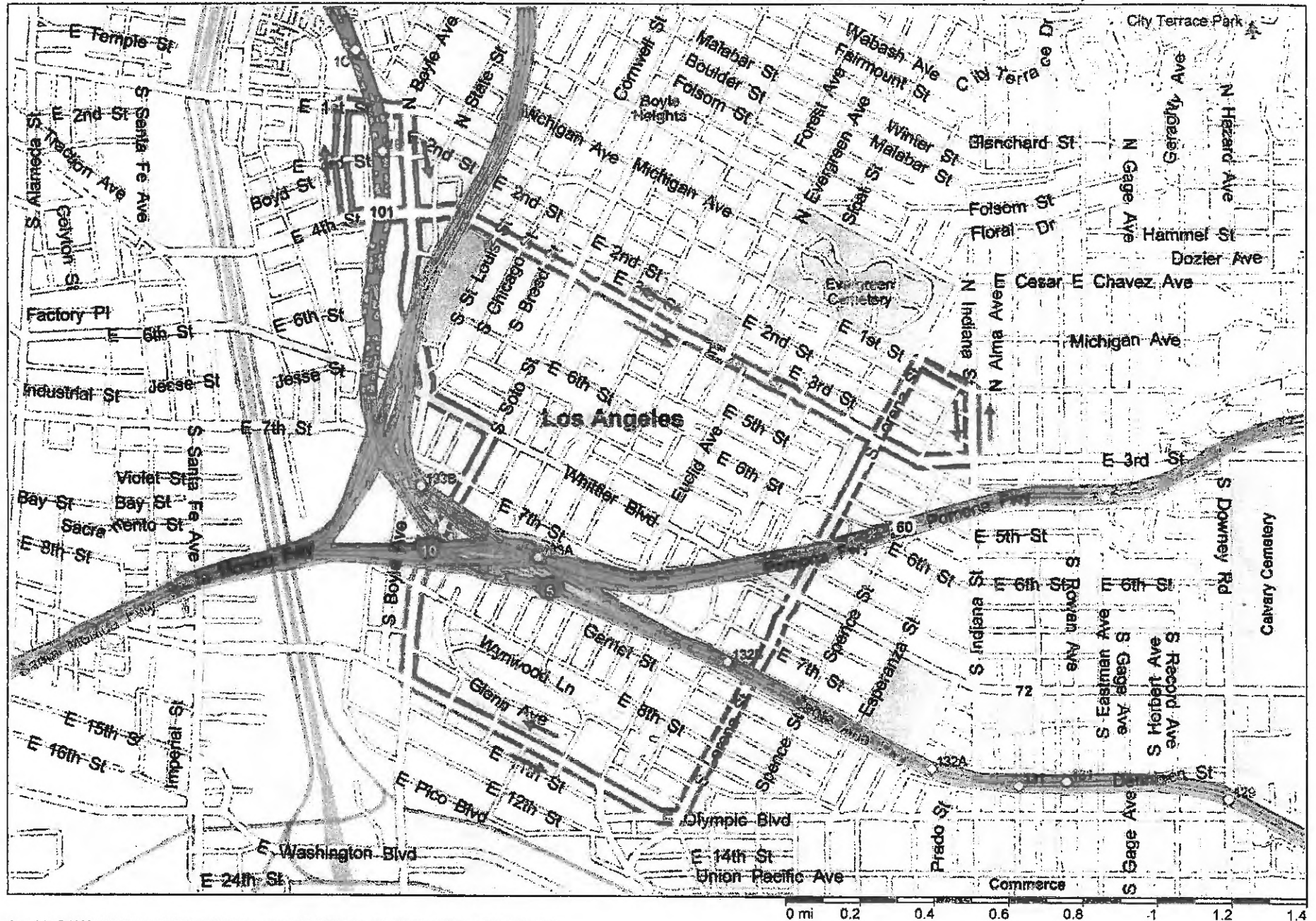
DASH WILSHIRE CENTER / KOREATOWN - RECOMMENDED ROUTE CHANGE



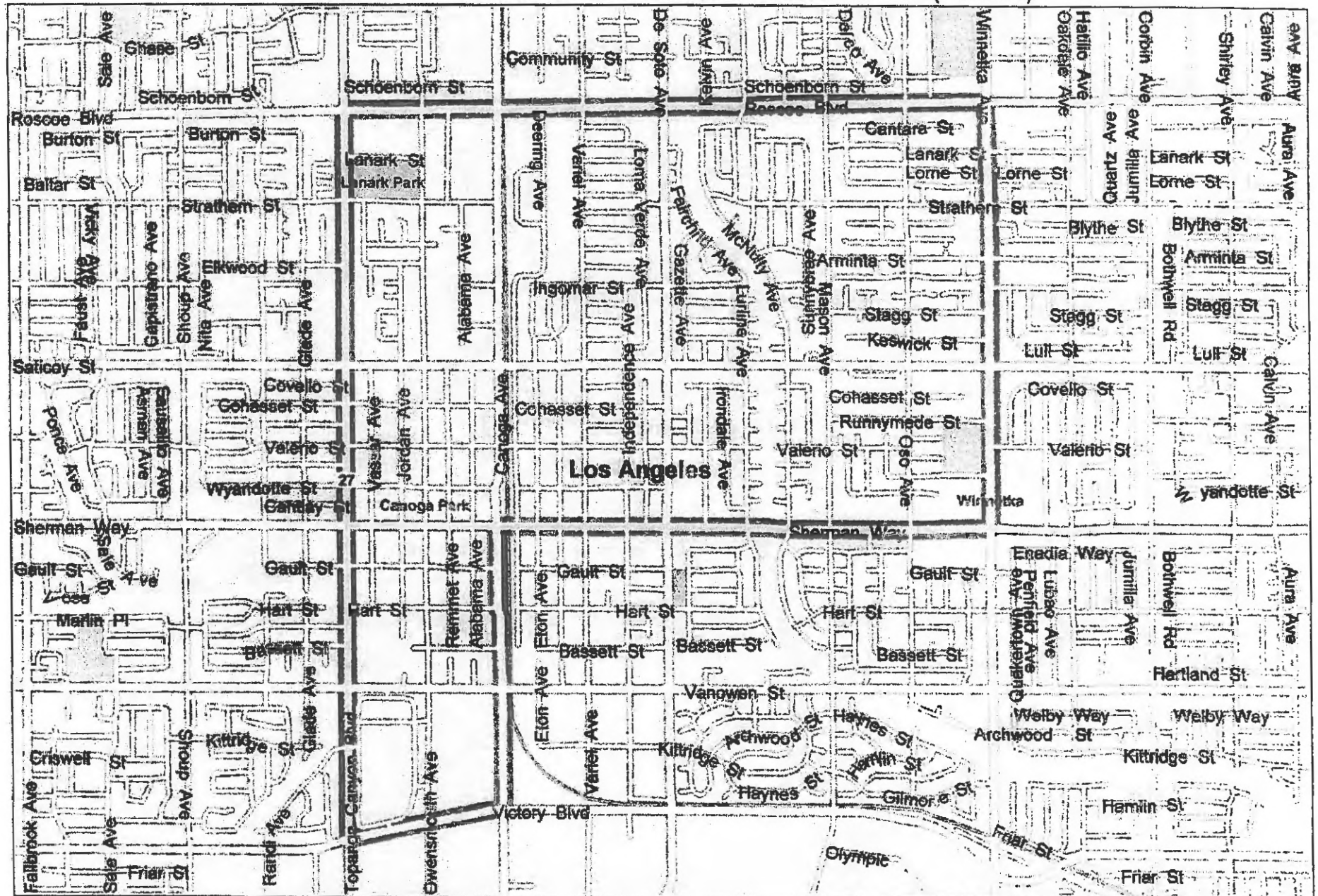
COMMUTER EXPRESS LINE 437 - RECOMMENDED ROUTE CHANGE



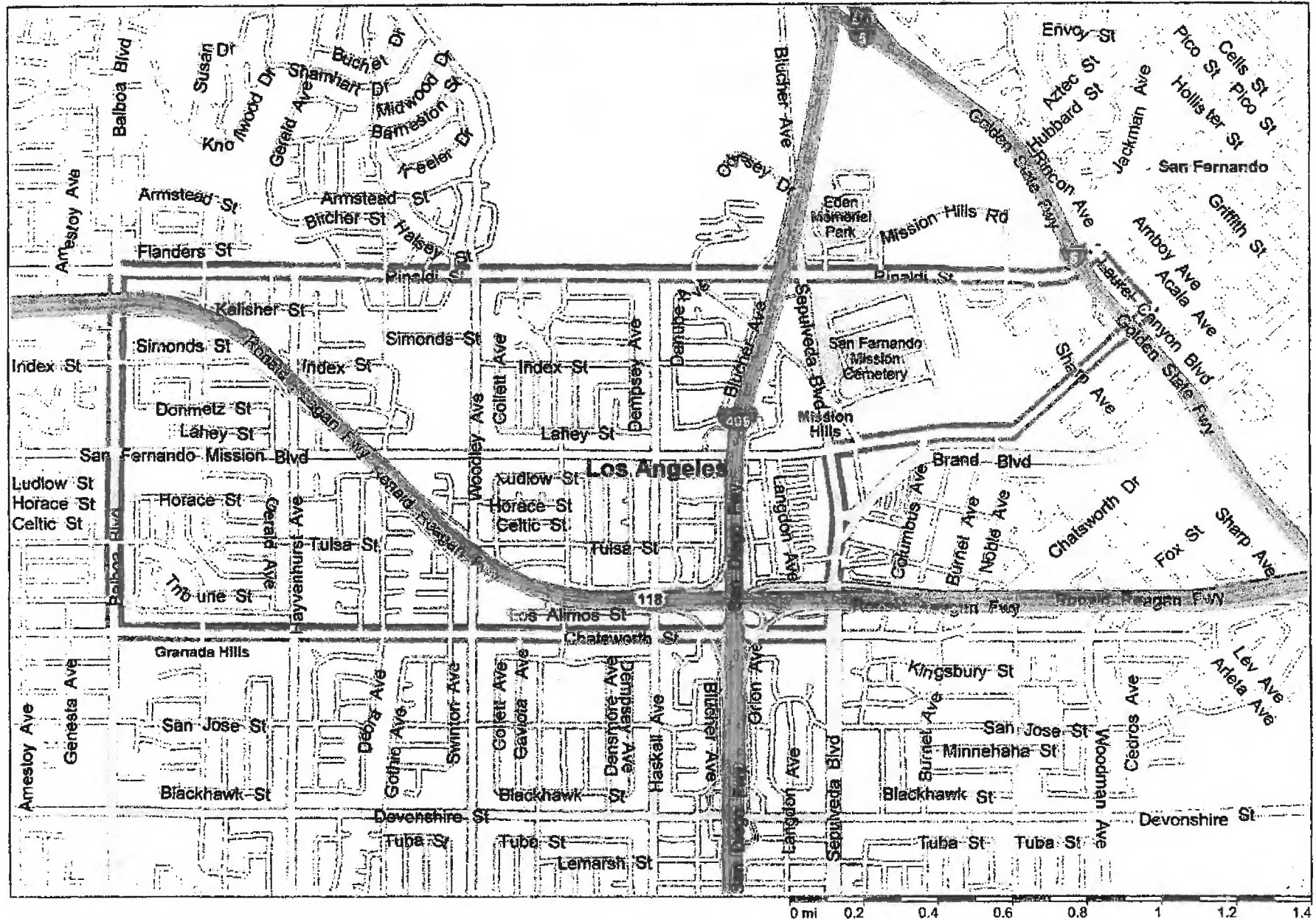
DASH BOYLE HEIGHTS WEST - RECOMMENDED NEW ROUTE (Phrase I)



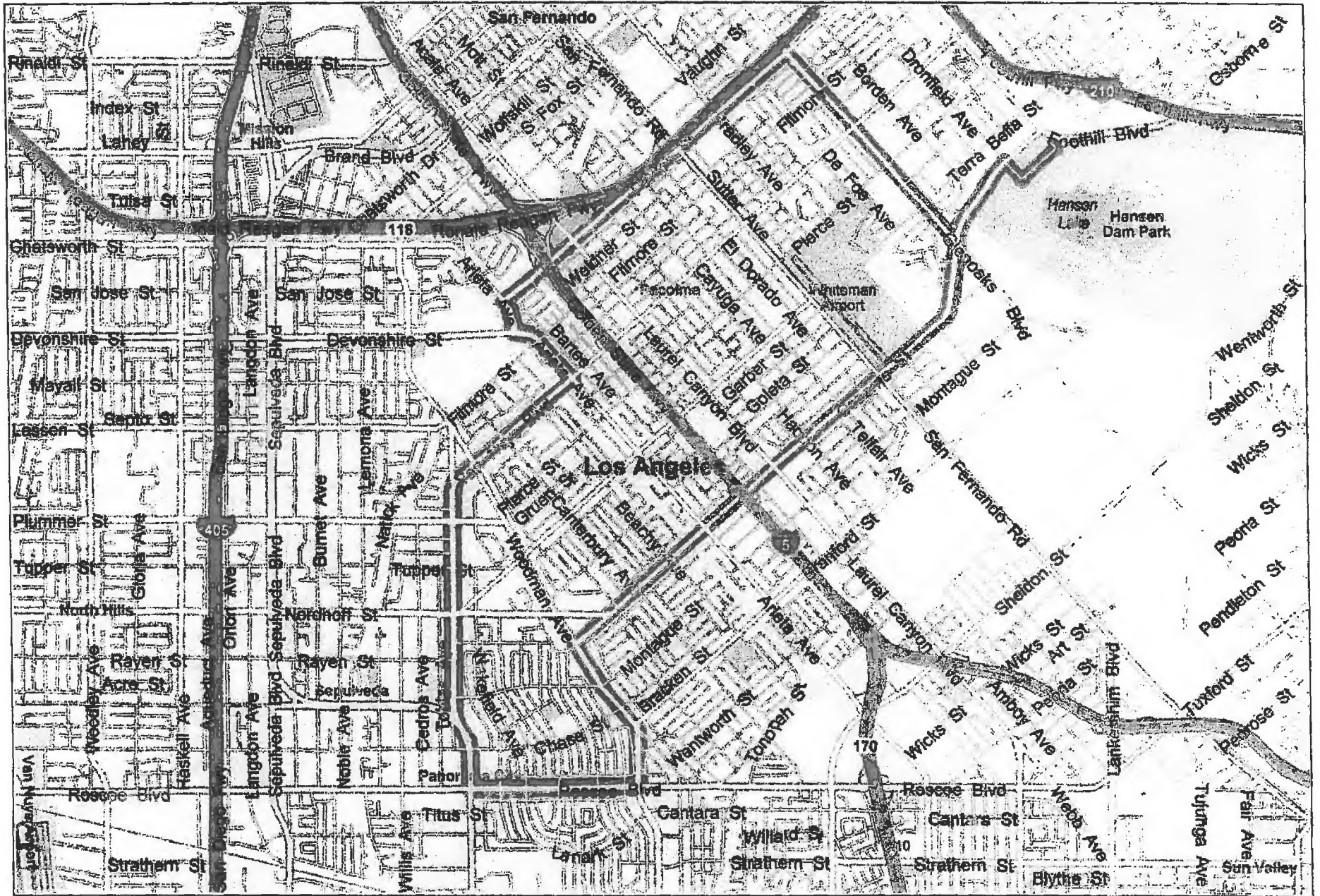
DASH CANOGA PARK - RECOMMENDED NEW ROUTE (Phase I)



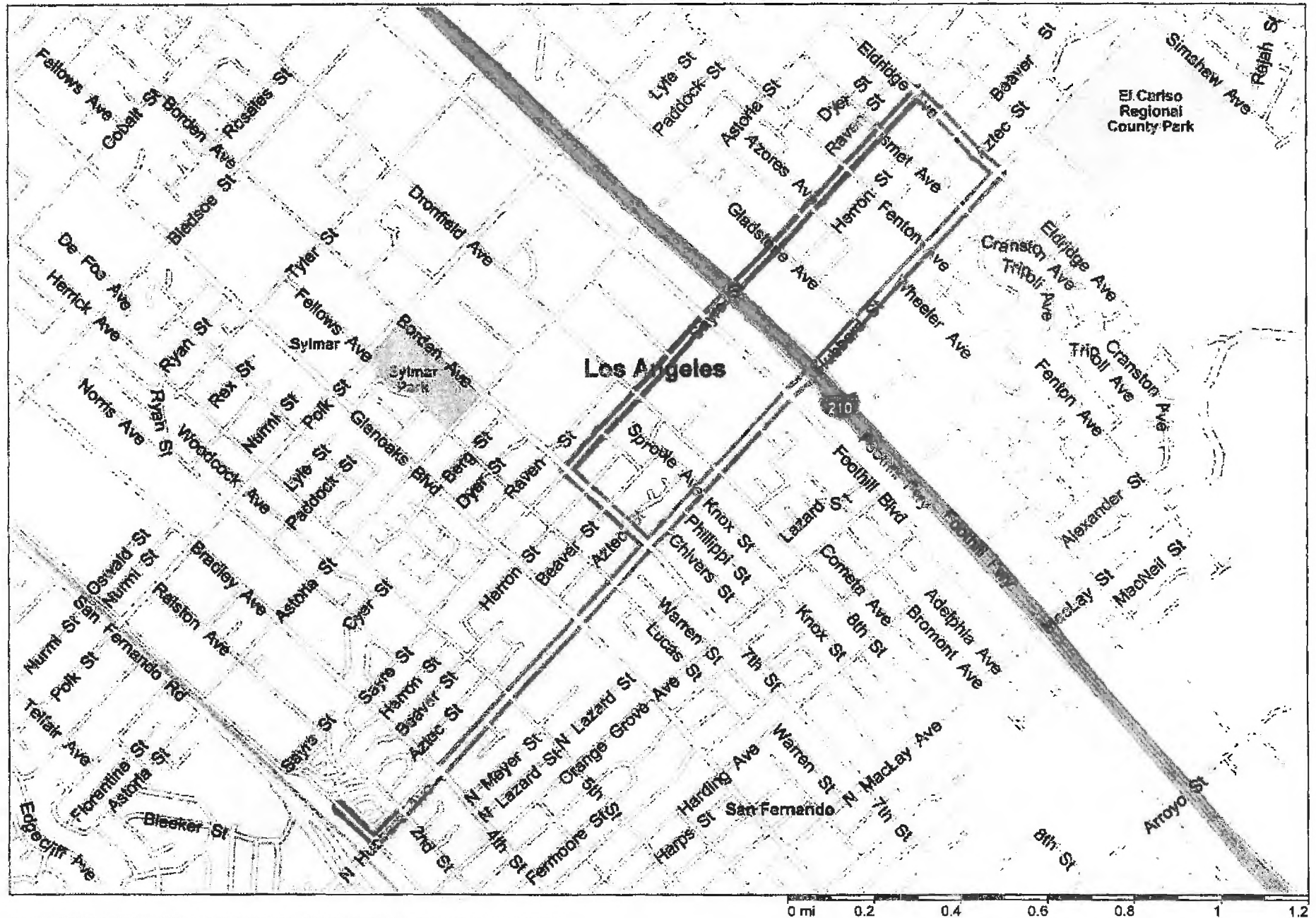
DASH MISSION HILLS - RECOMMENDED NEW ROUTE (Phase II)



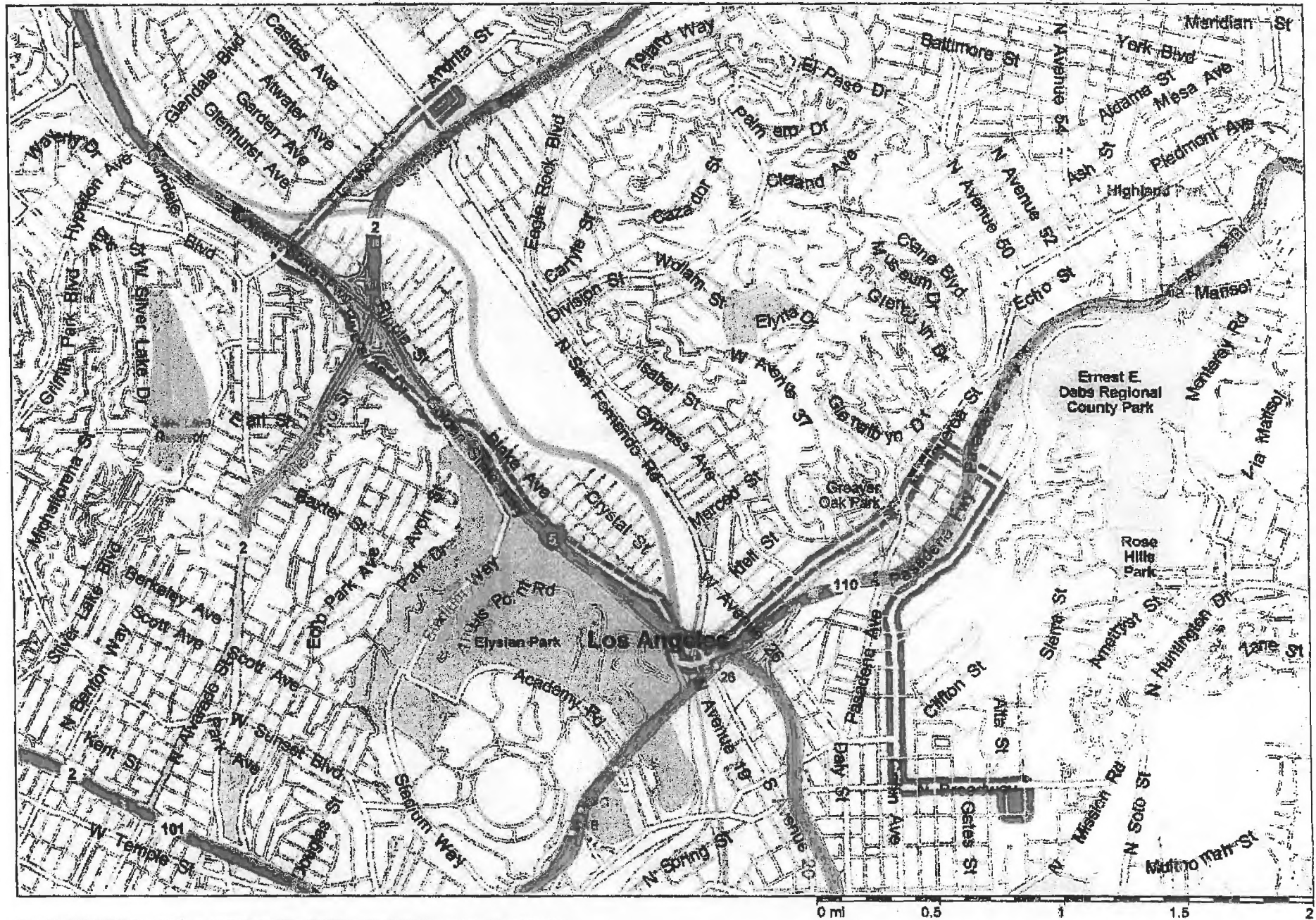
DASH PACOIMA - RECOMMENDED NEW ROUTE (Phase I)



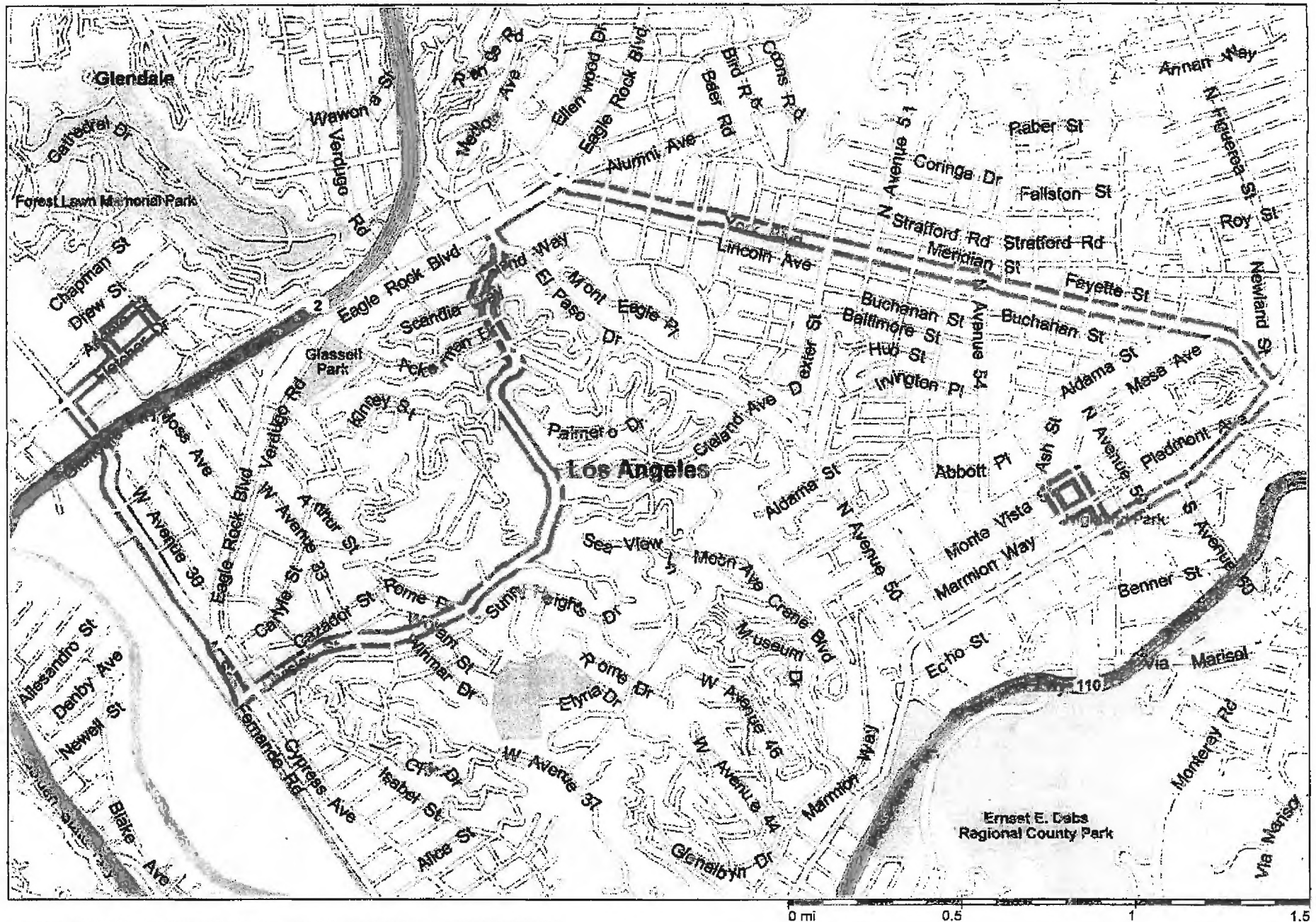
DASH SYLMAR - RECOMMENDED NEW ROUTE (Phase I)



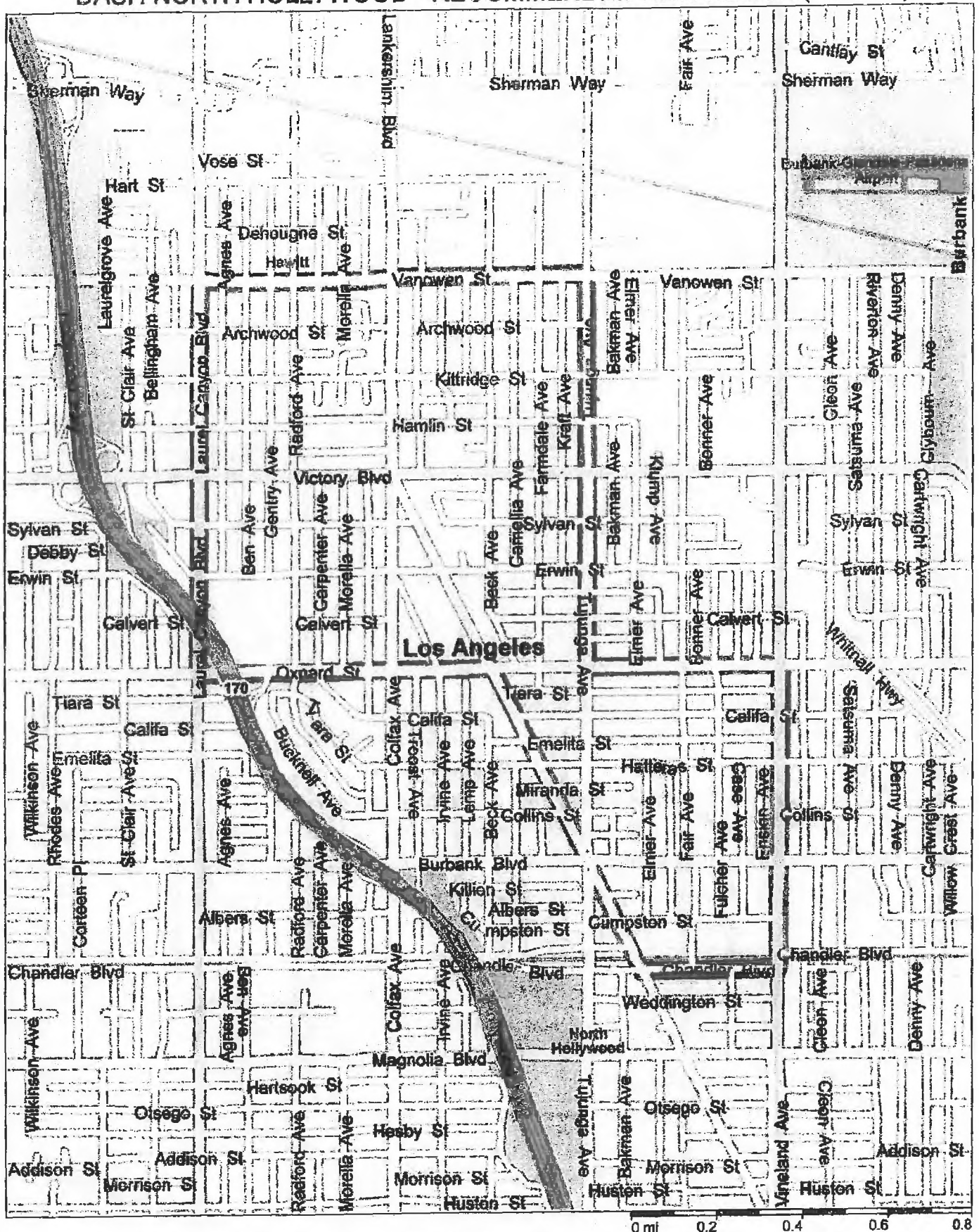
DASH ELYSIAN VALLEY / CYPRESS PARK - RECOMMENDED NEW ROUTE (Phase II)



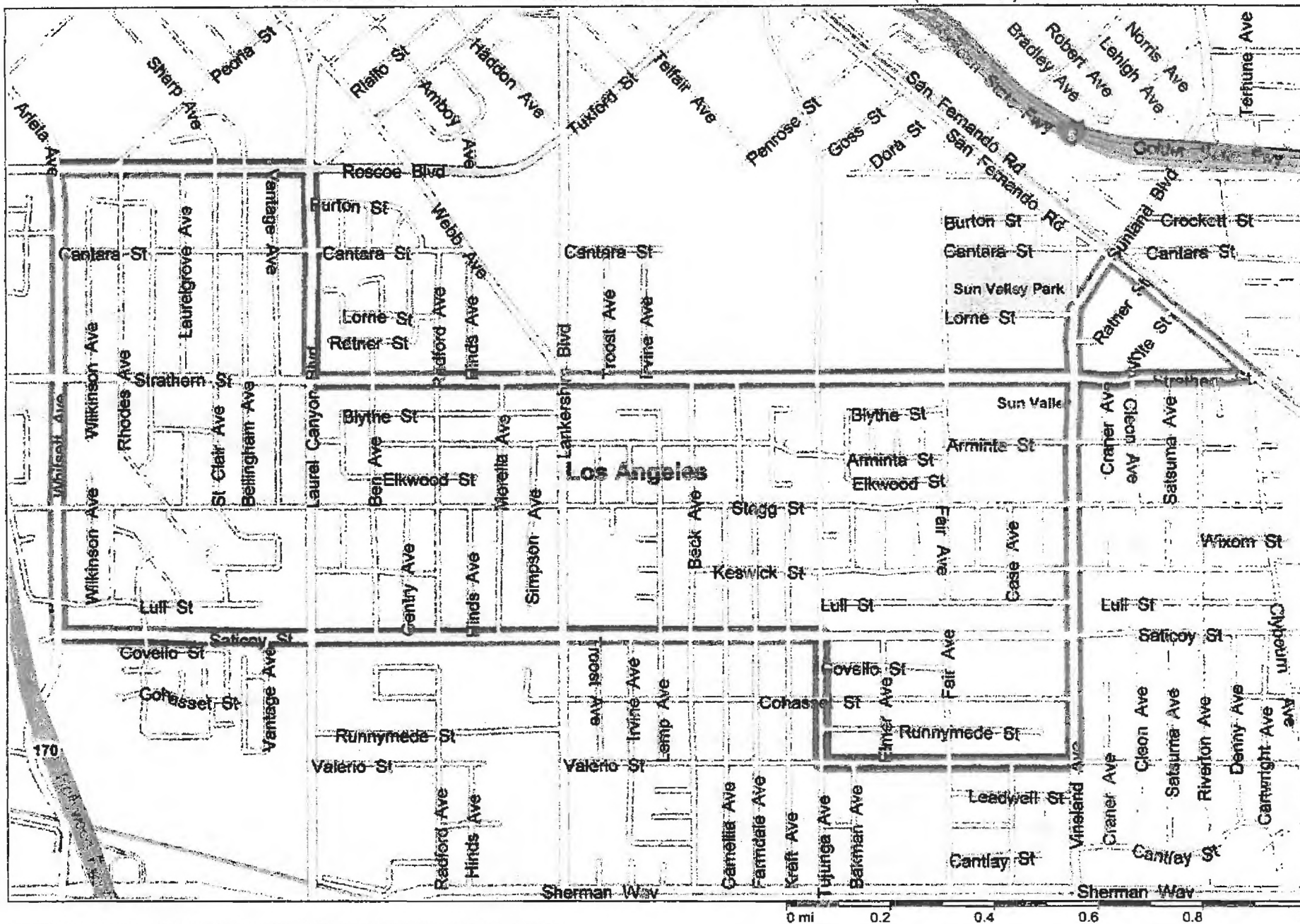
DASH GLASSELL PARK / HIGHLAND PARK - RECOMMENDED NEW ROUTE (Phase II)



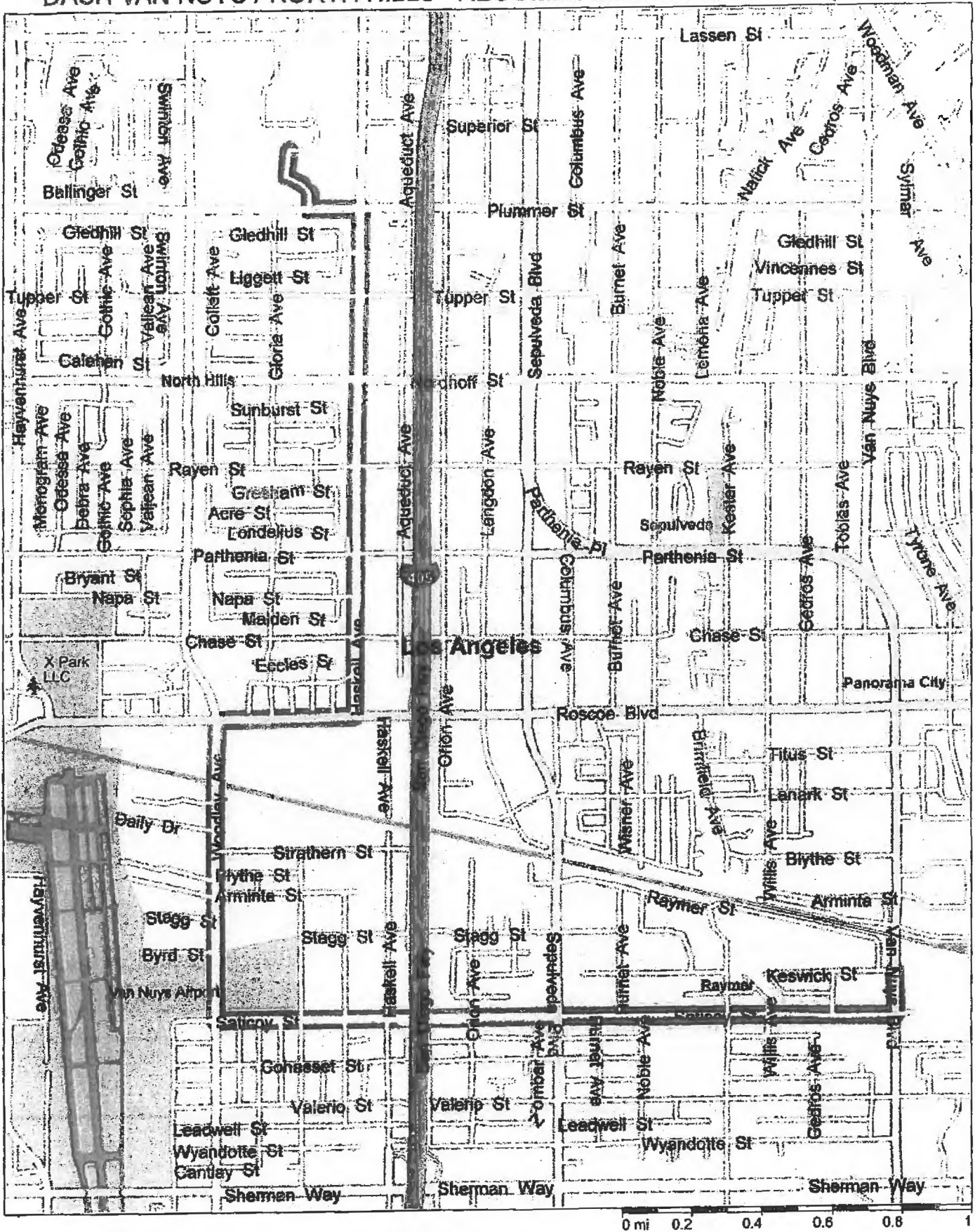
DASH NORTH HOLLYWOOD - RECOMMENDED NEW ROUTE (Phase II)



DASH SUN VALLEY - RECOMMENDED NEW ROUTE (Phase II)



DASH VAN NUYS / NORTH HILLS - RECOMMENDED NEW ROUTE (Phase II)



Attachment 6

Recommended New Performance Metrics

Performance Metrics Evaluation

June 2015



PREPARED BY:



Introduction

LADOT currently operates a variety of services in diverse neighborhoods across the City of Los Angeles. LADOT has established performance standards in order to evaluate, compare, and modify its array of services. This memorandum evaluates LADOT's existing standards and line ranking methodology in order to identify opportunities for improvement. The report will review other agency's methodologies to provide an industry context for developing recommendations.

Background

LADOT first recommended establishing performance standards and service evaluation guidelines in 1998. LADOT established these policies in order to better allocate existing resources based on service performance and cost-effectiveness. The recommended performance measures and performance index methodology were to be used to help continue successful services, modify poor-performing services, and eliminate unsuccessful services.

Performance Evaluation and Ranking

The Performance Index uses three key performance indicators (KPIs) to evaluate and rank each line:

- Passengers² per Revenue Hour (service effectiveness)
- Subsidy per Passenger Mile (cost effectiveness)
- Operating Ratio (Passenger Fares divided by Operating Cost)

Each route is evaluated against the system-wide average for each measure. A score above 1.0 means that the route is performing above-average. A score of 1.0 means that the route is equal to the system average, and a score below 1.0 represent below-average performance.

Routes are not separated by service type when calculating and comparing scores. The total performance score is the unweighted average of the three scores for each measure and is a Composite Index KPI. Routes are then ranked and grouped into three categories of performance based on the total performance score: routes that currently operate successfully, routes that require further evaluation, and routes that should be eliminated due to poor performance.

²The industry uses "passengers" and "passenger boardings" interchangeably. Where the term "passengers" is used relative to a metric it refers to passenger boardings unless otherwise noted.

Guidelines for Evaluating Services

Successful Routes

If the Performance Index for a route is higher than 0.70, then the service would continue to operate unchanged.

Modification of Marginal Services

Routes that fall below the performance threshold of 0.70 are evaluated further for possible improvements. This threshold was adopted based on a similar approach used by San Diego Metropolitan Transit System and after review of the existing route performance. LADOT developed the following service evaluation guidelines to use if routes received a score under 0.70:

- Review travel market that is being served
- Identify and analyze unmet needs within the service area
- Analyze ridership by fare category, route segment, time of day, and rider use patterns
- Evaluate customer comments
- Review marketing
- Route restructuring
- Implement public outreach strategies
- Attempt to secure funding
- Re-evaluate the Performance Index methodology

Cancelling Poor-Performing Routes

Routes that are selected for further evaluation but do not improve over a three month period are discontinued (Performance Index below 0.50). City Council offices are informed of the actions used to improve services and the results from service changes. Services that generate a Performance Index score above 0.50 but below 0.70 are reviewed annually. LADOT currently has the following exceptions to the cancellation guidelines:

- Routes are initiated as traffic mitigation
- Routes are funded by grants or other partial private financing
- Special policy directives of City Council

Establishing New DASH Service

LADOT developed guidelines for initiating new services based on evaluation standards and available resources. These guidelines led to the development of a basic needs assessment. The assessment identifies candidates for new service based on unmet transit needs and the potential for high ridership. LADOT uses the following steps to evaluate local needs:

- Determine that there is inadequate access to transit service within the community
- Assess need based on travel pattern data
- Assess demographic characteristics of the community
- Assess service characteristics in relation to local land use plans

- Determine that high density residential areas and major trip generators are within close proximity of each other
- Determine that a route could serve key activity centers

In 2005, LADOT underwent a separate Community DASH needs assessment study to improve the predictions of new Community DASH services. The study identified areas that would likely benefit from new DASH service and noted the basic elements for successful DASH routes. This is currently being updated as part of the LADOT Transit Service Analysis.

After assessing the conditions for potential new service, LADOT prepares and submits a report to the Mayor and City Council for consideration.

Implementing New DASH Service

After the completion of the basic needs assessment and identification of City funding sources, the following steps are recommended to guide the implementation of new service:

- LADOT recommends a one-year pilot project that has buses with 30 minute headways in each direction
- Support from the local community and City Council
- New service should have a Performance Index of at least 0.15 after six months and 0.30 after one year
- New service should be implemented within the budget period to determine funding availability

Prior Reviews of Performance Measures

Since its implementation, LADOT has conducted two reviews of its evaluation process. The first, completed in 2005, compared LADOT's performance measures with LA Metro's in order to identify improvement opportunities. The following table compares the two sets of metrics.

2005 PERFORMANCE METRICS

LADOT	LA Metro
<ul style="list-style-type: none"> • Resource Utilization (Passengers / Revenue Hour) • Cost Effectiveness (Subsidy / Passenger Mile) • Fiscal Responsibility (Passenger Fares / Operating Cost) 	<ul style="list-style-type: none"> • Utilization of Resources (Passengers / Service Hour) • Capacity Utilization (Passenger Miles / Seat Mile) • Cost Effectiveness (Subsidy / Passenger) • Percent of Time above Load Standard (120%)

The Line Ranking methodology between the two systems is very similar. LA Metro evaluates its lines by assigning an index score to each route. Routes that achieve an index lower than 0.60 are considered poor performers and are tagged for further evaluation and service improvement, compared to LADOT's cutoff of 0.70. Routes that are selected for service improvements but do not achieve an index score above 0.60 are considered for discontinuation.

More recently, LADOT's 2014 Peer Review Study sought to compare its current service evaluation and ranking methodology with a larger pool of peer agencies. More specifically, LADOT wanted to evaluate:

- Ranking criteria
- Line ranking formula
- Policy framework
- Service performance

LADOT reviewed five transit agencies outside of Southern California and three within the Los Angeles region. These agencies were selected in order to understand how other agencies in similar operating environments evaluated their routes.

2014 LADOT PEER REVIEW

Outside Southern California	Los Angeles Region
<ul style="list-style-type: none"> • Denver RTD • DC Circulator • Spokane Transit • Santa Clara Valley Transportation Authority (VTA) • Livermore/Amador Valley Transit (LAVTA) 	<ul style="list-style-type: none"> • Foothill Transit • Glendale Beeline • Pasadena ARTS

Based on this evaluation, LADOT staff made recommendations for updating its existing performance metrics (see table below).

2014 STUDY: RECOMMENDED PERFORMANCE METRICS

Service Type	Performance Category	Existing Metric	Recommended Metric
DASH	Cost Effectiveness	Subsidy/Passenger Mile	Cost/Passenger Mile
	Resource Utilization	Passengers/Hour	Passengers/Revenue Mile
	Fiscal Responsibility	Farebox Recovery Ratio	Farebox Recovery Ratio ²
Commuter Express	Cost Effectiveness	Subsidy/Passenger Mile	Cost/Passenger
	Resource Utilization	Passengers/Hour	Passengers/Bus Trip
	Fiscal Responsibility	Farebox Recovery Ratio	Farebox Recovery Ratio

² The 2014 report recommended that Metro's Formula Allocation Procedure (FAP) or other subsidies be excluded when evaluating DASH or Commuter Express routes against each other. When comparing services (DASH vs. Commuter Express) or evaluating system wide performance, the farebox recovery ratio is calculated with all revenue and FAP.

The 2014 report also recommended that LADOT modify its current line ranking methodology to more accurately measure performance by service type and for the entire system. The following three formulas reflect the line ranking methodologies that would be used for DASH, Commuter Express, and the LADOT system:

- System wide Index (DASH + Commuter Express) = (Cost/Passenger score + Passengers/Hour score + Operating Ratio score)/3
- DASH-only Index = (Cost/Passenger Mile score + Passengers/Mile score + Farebox Recovery Ratio score)/3
- Commuter Express-only Index = (Cost/Passenger score + Passengers/Bus Trip score + Farebox Recovery Ratio score)/3

The final recommendation noted that LADOT should adopt a transit policy framework that links goals, objectives, performance metrics and standards for evaluating services. Service quality, economic, and productivity goals were highlighted as important to include as part of the policy framework.

2015 Performance Measures Evaluation

Peer Review

This peer review is a more expansive follow-up to the prior year's work. LADOT has selected local and national agencies that operate similar services in similar operating environments. LADOT looked for the following service type characteristics when identifying peers:

Express Services

- Service from various neighborhoods to a central location via expressways or freeways
- Zone-based fares higher than the local base fare
- Underlying local service in communities served by express buses

Community Circulators

- Local community-based service—not a primary regional connector
- Frequent service (20 minutes or better)

Downtown Circulators

- Service to multiple destinations such as employment districts and key activity centers
- Frequent Service (10 minutes or better)

AGENCIES SELECTED FOR PEER REVIEW

Service Type	Transit Agency
Express Services	Antelope Valley Transit Authority (AVTA)
	City of Santa Monica Big Blue Bus (BBB)
	Foothill Transit
	Massachusetts Bay Transportation Authority (MBTA)
	Montebello Bus Lines
	Regional Transportation District – Denver (RTD)
	City of Santa Clarita Transit (SCT)
	Sound Transit (ST)
	Los Angeles County Metropolitan Transportation Authority (LA Metro)
Community Circulators	Dallas Area Rapid Transit (DART)
	Glendale Beeline
	Metropolitan Transit Authority of Harris County, Houston, Texas (METRO)
	Union City Transit (UCT)
	Pasadena Area Rapid Transit System (Pasadena ARTS)
	Burbank Bus
Downtown Circulators	DC Circulator
	Spokane Transit Authority (STA) Downtown Shuttles
	RTD Denver MallRide
	Charm City Circulator (Baltimore)
	Long Beach Transit Passport ³

Performance Standards

Each agency uses standards to evaluate route performance in relation to established targets. However, many agencies do not vary evaluation standards by service type. They apply the same performance standards to all routes. The following section summarizes how the peers evaluate the following performance categories:

- Service Effectiveness – Measures the service effectiveness and productivity of the route
- Cost Efficiency – Measures if service is being provided efficiently
- Financial Effectiveness – Measures the overall cost effectiveness of the service
- Other metrics

³ Long Beach Transit Passport's frequency is between 15 minutes and 30 minutes depending on time of day.

Express Services

Express services provide connections between communities and major employment hubs. These services tend to have fewer stops compared to local routes resulting in less passenger turnover.

Service Effectiveness

LADOT currently uses passengers per revenue hour when evaluating their Commuter Express services. *A majority of agencies use either passengers per revenue hour or passengers per trip when analyzing resource utilization.* Passengers per revenue hour measures ridership (passenger boardings) per unit of service emphasizes seat turnover (more riders making short trips versus the typical express rider making longer trips) making express services less competitive in effectiveness to local service transit.

The three agencies with major express bus networks, RTD, MBTA, and Sound Transit⁴, use passengers per trip. RTD uses this measure only for its express services. Passengers per trip is the most effective metric for assessing trip-based express routes and allows for individual trip decision-making. Trip-based express services do not operate based on frequency, but rather specific trips, which is the typical practice on lower demand express routes.

Santa Monica Big Blue Bus and Santa Clarita Transit include passengers per mile as an additional evaluation metric for express services. However, for express services with little seat turnover, this measure is highly correlated with route length, which minimizes the metric's value as with passengers per hour.

A better measure is passenger miles per revenue hour which eliminates the seat turnover (local) versus trip length issue (express) is comparing different types of transit service. The passenger mile metric is favored by the airline industry for its additional precision in guiding service effectiveness decisions when financial performance is key. However, passenger miles are not widely understood in the transit industry, despite their use in NTD, and are challenging for planners and decision-makers alike.

Recommendation: While passenger miles per revenue hour are the best metric from a utility standpoint, their use in the industry is minimal. Given that LADOT primarily operates infrequent "trip-based" express service the passenger boardings per trip metric is recommended for assessing service effectiveness.

Cost Efficiency

LADOT currently does not have a pure cost efficiency metric, opting to use subsidy per passenger mile as a proxy for cost efficiency. Big Blue Bus and Santa Clarita Transit use cost per passenger while RTD and Sound Transit also utilize subsidy per passenger. LADOT's use of subsidy per passenger mile allows for accurate comparison across different service types (see previous section discussion regarding airline industry use of the passenger mile metric), but it is a financial effectiveness rather than cost efficiency indicator since it includes both productivity and revenue generation.

The purpose of cost efficiency measurement is to assess how well vehicle and operator resources are utilized in delivering service. As such, metrics based on subsidy include revenue generation, which makes it difficult to accurately assess efficient use of resources. As a result, cost per service unit is superior for this assessment and use of "per revenue mile" is best because it includes operating, maintenance, and overhead cost distributed over the basic service unit of revenue miles. Use of "per revenue hour" is not recommended because it fails to capture the impact of vehicle and operator scheduling on efficiency. However, given LADOT's method of reporting operating costs, operating cost per revenue mile would purely be based on the speed of the service, and thus would not be a reliable metric to compare different lines.

⁴ Sound Transit operates only express bus service.

Passenger-based cost efficiency metrics are correlated with productivity, but would still allow for some measurement of how a transit agency delivers service to its customers. The rationale of introducing a passenger component for the cost efficiency metric is to rank routes that serve the community well with attractive destinations higher than routes that run quickly between locations but serve few people along the way.

Recommendation: A new cost efficiency metric is proposed: operating cost per passenger.

Financial Effectiveness

The majority of agencies reported using farebox recovery ratio as a way to measure fiscal responsibility. Targets for farebox recovery ratios varied slightly among peers with AVTA at 22.4 percent and RTD and Santa Clarita Transit at 30 percent. BBB has established a farebox recovery ratio of 12 percent as its standard for its commuter services. Given LADOT's unique and varied funding sources, *it is recommended that the agency exclude external subsidies and utilize farebox recovery ratios when conducting its initial comparisons.* This measure provides critical insight for service design and planning. Decisions regarding disposition of the service (improvement, reduction, or retention) should be made including dedicated external funding sources in cost recovery measures.

Recommendation: LADOT should use only the Farebox Recovery Ratio including only farebox revenue in the line ranking assessment. External funding should be considered when evaluating actions for underperformers and when presenting the information at public meetings.

Community Circulator Services

Community circulators provide trips between local destinations and key transit hubs, resulting in more closely spaced stops and travel shorter distances. Community DASH routes serve as community circulators throughout the City of Los Angeles.

Service Effectiveness

A majority of agencies who operate community circulators utilize passengers per revenue hour to evaluate service effectiveness. LADOT uses passengers per revenue hour to evaluate their resource utilization for Community DASH. This measure provides an evaluation of how many passengers are carried per hour that the bus is in revenue service. Only one agency (Houston Metro) uses passengers per revenue mile to evaluate service effectiveness. Almost all of the comparable agencies utilize passengers per revenue hour, which aligns with LADOT's performance measure for Community DASH. No changes are proposed.

Recommendation: Passenger boardings per revenue hour should continue to be the metric.

Cost Efficiency

LADOT is the only agency to utilize subsidy per passenger mile as a performance measure. As noted for express service, the subsidy per passenger mile is a cost effectiveness metric and should be replaced with one that more accurately assesses cost efficiency. Several agencies such as Glendale Beeline, Pasadena ARTS, and DART use subsidy per passenger as the performance metric to measure cost efficiency. Glendale Beeline, Houston Metro, and Union City Transit use cost per revenue hour as part of their cost effectiveness evaluation metrics.

Recommendation: A new cost efficiency metric is proposed: operating cost per passenger.

Financial Effectiveness

All of the peer agencies utilize farebox recovery ratio to determine whether a route's cost recovery is meeting the minimum standards. LADOT's operating ratio includes farebox revenue and other outside funding sources. In the case of LADOT, the initial analysis of a route's financial performance should be conducted without external subsidies.

Recommendation: As with Express service, use the Farebox Recovery Ratio including only farebox revenue in the line ranking assessment. External funding should be considered when evaluating actions for underperformers and when presenting the information at public meetings.

Downtown Circulator Services

Downtown circulators provide local and frequent trips to key employment hubs, tourist attractions, and other activity centers. Similar to community circulators, downtown circulators experience high passenger turnover and shorter passenger trips compared to express services. Downtown circulators often connect with high-frequency, high-capacity transit services.

Service Effectiveness

The standards measuring service effectiveness are similar among LADOT and other peers who operate downtown circulators. *LADOT uses passengers per revenue hour for Downtown DASH, which is consistent with other peers.* Most of the peer systems use passengers per revenue hour, except for Charm City Circulator who measure service effectiveness using annual ridership. *No change is recommended* for changing performance measures for Downtown DASH as it aligns with industry best practice and peer practice.

Recommendation: Passenger boardings per revenue hour should continue to be the metric.

Cost Efficiency

Cost effectiveness metrics vary among agencies who operate downtown circulator services. Similar to Commuter Express and Community Circulator service, LADOT uses subsidy per passenger mile for measuring cost effectiveness. No other peer agency uses this measure. However, DC Circulator and RTD MallRide use *subsidy per passenger when evaluating cost effectiveness* of routes. Charm City Circulator and Long Beach Transit Passport use cost per passenger to evaluate their services, as these services operate fare-free. As noted previously, the subsidy per passenger mile is a cost effectiveness metric and should be replaced with one that accurately assesses cost efficiency.

Recommendation: A new cost efficiency metric is proposed: operating cost per passenger.

Financial Effectiveness

Peers have used farebox recovery ratio to evaluate their cost recovery efforts. RTD, Charm City Circulator, and Long Beach Transit Transport do not have documented farebox recovery performance standards. This is due to the free fares on their downtown circulators. LADOT should use farebox recovery to analyze its downtown services.

Recommendation: As with Express and Community Circulator services, use only the Farebox Recovery Ratio including only farebox revenue in the line ranking assessment. External funding should be considered when evaluating actions for underperformers and when presenting the information at public meetings.

Performance Standard Recommendations

The technical review provided insight into various ways agencies measure the services they provide. Based on the peer review of similar agencies and industry best practice, the following metrics are recommended:

- For service performance, the metric *passengers per trip* is recommended for Commuter Express services, while *passengers per revenue hour* should continue to be used for Community DASH and Downtown DASH services. Given that LADOT primarily operates infrequent "trip-based" express service the passenger boardings per trip metric is recommended for assessing service effectiveness. Community DASH and Downtown DASH routes have much more frequent service which makes passengers per revenue hour the better metric.
- For cost efficiency, *a new metric of operating cost per passenger is proposed across all modes*. While costs per service unit allow for a more accurate representation of cost effectiveness, it would not allow for an accurate ranking of performance by line. With perfect information, the use of "per revenue mile" is best because it includes operating, maintenance, and overhead cost distributed over the basic service unit of revenue miles. Other agencies use subsidies per passenger as a cost efficiency metric, but subsidies are more of a financial effectiveness metric rather than a cost efficiency metric. The cost per passenger metric balances the needs to understand cost efficiencies of each route while being able to differentiate among routes.
- When evaluating cost effectiveness, LADOT should use a more standard farebox recovery ratio which excludes subsidies. The rest of the industry uses farebox recovery ratios and exclude subsidies when evaluating at an individual route level. While LADOT has several routes that operate based on external subsidies, the route should be evaluated independent of any external funding. This allows for the most equitable analysis across the system. However, when presenting information to the public and to City Councilmembers, the operating ratio (with FAP/TSE subsidies) should be used. While it may be beneficial to present both metrics to show the impact of subsidized routes, it is much simpler to present one metric for financial effectiveness. Caution should be taken to ensure the proper definition is applied, as operating ratio is the sum of farebox revenues and external subsidies.

PERFORMANCE STANDARDS FOR EXPRESS SERVICES

Agency	Service Effectiveness (Productivity)	Cost Efficiency	Cost Effectiveness
LADOT	Passengers / Revenue Hour	--	Operating Ratio (Farebox + Route Subsidy) Subsidy/Passenger Mile
Antelope Valley Transit Authority	Passengers / Service Hour	Average Cost/Vehicle Service Hour	Farebox Recovery Ratio
Big Blue Bus	Passengers / Revenue Hour & Passengers / Revenue Mile	Operating Cost / Boarding	Farebox Recovery Ratio
Foothill Transit	Passengers / Service Hour	Average Cost/Vehicle Service Hour	Farebox Recovery Ratio
Massachusetts Bay Transportation Authority ⁵	Passengers / Trip Vehicle Load	--	Net Cost / Boarding (above fare paid; "subsidy")
Montebello Bus Lines	Passengers / Revenue Hour	Cost / Revenue Hour	Farebox Recovery Ratio
Denver RTD	Passengers / Revenue Hour Passengers / Trip		Farebox Recovery Ratio Subsidy / Boarding
Santa Clarita Transit	Passengers/Vehicle Service Hour Passengers/Vehicle Service Mile	Operating Cost / Boarding	Farebox Recovery Ratio
Sound Transit	Boardings / Revenue Hour Boardings / Trip Passenger Miles/Platform Vehicle Mile		Subsidy / Boarding
LA Metro	Passenger Boardings / Revenue Service Hour Passenger Miles/Seat Mile	Cost per Passenger Mile	Subsidy / Boarding

⁵ Metrics cover all services

PERFORMANCE STANDARDS FOR COMMUNITY CIRCULATORS

Agency	Service Effectiveness (Productivity)	Cost Efficiency	Cost Effectiveness
LADOT	Passengers/Hour	--	Operating Ratio (Farebox + Route Subsidy) Subsidy/Passenger Mile
Dallas DART	Passengers/Revenue Hour	--	Farebox Recovery Ratio Subsidy / Boarding
Glendale Beeline	Unlinked Passengers/Revenue Hour	Operating Cost/Revenue Hour Operating Cost/Revenue Mile	Farebox Recovery Ratio Subsidy / Boarding
Houston Metro	Passengers Per Revenue Hour Passengers Per Revenue Mile	Operating Cost per Passenger Operating Cost per Revenue Hour Operating Cost per Revenue Mile	Farebox Recovery Ratio
Union City Transit	Passengers/Revenue Service Hour	Operating Cost per Revenue Service Hour	Farebox Recovery Ratio
Pasadena ARTS	Passengers/Hour	Cost / Boarding	Farebox Recovery Ratio Subsidy / Boarding

PERFORMANCE STANDARDS FOR DOWNTOWN CIRCULATORS

Agency	Service Effectiveness (Productivity)	Cost Efficiency	Cost Effectiveness	Other metrics
LADOT	Passengers / Revenue Hour	--	Operating Ratio (Farebox + Route Subsidy) Subsidy/Passenger Mile	--
DC Circulator	Passengers / Revenue Hour	--	Farebox Recovery Subsidy / Boarding	Bus Stops/Mile
Spokane Transit	Passengers / Revenue Hour	--	Farebox Recovery Ratio	Energy consumption / Passenger Mile
RTD Denver Free MallRide	Passengers / Revenue Hour	Operating Cost / Boarding	--	--
Baltimore Charm City Circulator	Annual Riders	Operating Cost / Boarding	--	--
Long Beach Transit Passport	Passengers/Vehicle Service Hour	Operating Cost / Boarding	--	--

Line Ranking Methodologies

Transit agencies typically utilize one of the following methods to compare route performance within a system:

- Pure line ranking (Ranking lines and evaluating worst performers)
- Comparisons of individual routes to averages
- Comparisons of individual routes to set standards

Most use system wide standards to conduct these comparisons; a few utilize a methodology to rank and compare routes. The following section describes these methods in greater detail and provides case studies to highlight the actual applications, benefits, and drawbacks of each approach.

Pure Line Ranking

This form of evaluating transit routes within a system ranks the routes from best to worst in order using various performance metrics. The poorest performing routes are then analyzed to determine whether changes should be made to improve their performance. Of the agencies in the peer review, Sound Transit uses this methodology.

Case Study: Sound Transit

Sound Transit Express routes are categorized and ranked based on their performance using the following key performance indicators:

- Boardings per revenue hour
- Boardings per trip
- Subsidy per boarding
- Passenger miles per platform vehicle mile

The 26 ST Express services are assigned a ranking from 1 to 26 for each indicator. The individual rankings are combined to produce an overall ranking. The route's overall ranking then is assigned to one of the four quartiles:

- First Quartile – top 25 percent
- Second Quartile – within normal operational parameters
- Third Quartile – within normal operational parameters
- Fourth Quartile – bottom 25%

Routes in the First Quartile are the most productive and are good candidates for additional service investment. ... Routes that fall within the Second or Third Quartile tend to be operating within normal expectations. Routes that fall in the Fourth Quartile are the poorest performers and have the lowest ridership. Fourth Quartile routes are priority targets for analysis and improvement. Sound Transit recognizes that route rankings are not the only tool to manage service. Other factors that they consider in evaluating a route include: trip level performance, customer feedback, and/or field observations. However, these are not part of the quartile calculation.

Pros and Cons

Ranking the lines by performance is fairly easy to understand, as it is a simple calculation that allows one to see how a line compares against its peers. The cutoff for analyzing poor performing routes is based on the number of routes, which simplifies the process of determining which routes need to be further analyzed.

A disadvantage of this method of comparison is the lack of granularity in defining a good and bad route. It may not make sense to analyze the low performing routes when it performs similarly to other routes. Similarly, if all routes perform poorly there is little discretion in terms of how many routes should be analyzed.

Comparisons of Individual Routes to Averages

LADOT currently compares routes using averages. The agency assigns each route a score for three categories: passengers per revenue hour, subsidy per passenger, and operating ratio. The average value for each metric is calculated and assigned a score of 1.0. For each category, routes are assigned a value that is normalized based off of this average. The three scores are then averaged to create a Composite Index KPI value that is used to directly compare route performance.

Other agencies typically compare their individual routes against the system average or to the average of the service tier.

Case Study: Santa Monica Big Blue Bus (BBB)

BBB evaluates the following KPIs to compare the efficiency and effectiveness of individual routes:

- Passengers per Revenue Hour
- Passengers per Revenue Mile
- Farebox Recovery
- Cost per Passenger Boarding

The agency has also set specific targets for each service type.

Like Sound Transit, Santa Monica Big Blue Bus utilizes a Composite Index KPI which is calculated by assigning each route a ranking from 1 to 20 for each metric. The Composite KPIs are then combined to produce an overall ranking. Routes that are ranked with a lower number indicate that the route is a high performer (e.g. a route assigned a ranking of one would be the highest performer and 20 would be the poorest performer).

BBB also compares individual routes to the system-wide average for each metric:

- Low-performing service: 50% of system average and below;
- Average-performance service: between 51% and 149% of system average
- High-performing service: 150% of system average or better

BBB utilizes corrective action plans for routes that fall within one of the three categories. Routes that fall within the low or high categories are recommended for closer evaluation of service, while routes in the middle are operating within their service expectations.

Case Study: LA Metro

LA Metro utilizes a Route Performance Index (RPI) to compare bus route performance within similar service types. The index is based on system ridership and financial targets from the current fiscal year budget. Metro applies the RPI to all of its bus services. Corrective actions occur when Metro goes through their service change process. The RPI is comprised of three variables:

- Utilization of Resources – Passenger boardings per revenue service hour
- Utilization of Capacity – Passenger miles per seat mile
- Fiscal Responsibility – Subsidy per passenger

Indices are developed for each measure within each category of service. Routes that have an index of 1.0 fall within the operating average parameters, while lines with an index of less than 1.0 perform below the average. Lines that have an index less than 0.6 are classified as poor performers and are evaluated for improvement. Metro uses the following formula for their route performance index:

$$\text{Route Performance Index} = \{(BSH_i / BSH) + (PMSM_i / PMSM) + (SUB / SUB_i)\} / 3$$

Explanation of Variables

BSH & BSH _i	Category average and line specific boardings per service hour
PMSM & PMSM _i	Category average and line specific passenger miles per seat mile
SUB & SUB _i	Category average and line specific subsidy per passenger

Routes that fall within the bottom 15 percent of bus lines in each service type are evaluated in greater detail for potential service changes to improve overall performance.

Case Study: Spokane Transit

Spokane Transit routes are evaluated using three performance standards:

- Ridership
- Equivalent Energy Consumption
- Fares

The agency compares route performance against annual target scores established for each service category.

Ridership: Basic routes that do not serve the Central Business District (CBD) must meet an expected minimum ridership threshold that is one-half standard deviation below the average of the CBD routes. The 2013 benchmark was 25.5 boardings per revenue hour. For basic routes that do not serve the CBD, have a threshold of 12.7 boardings per revenue hour. Commuter Peak service must meet an expected minimum ridership threshold that is one-half standard deviation above the average of basic routes, which was 33.5 boardings per revenue hour in 2013.

Equivalent Energy Consumption: The purpose of measuring the energy consumed per mile traveled for each passenger. According to Connect Spokane, a bus route should perform equally to a private automobile in terms of energy used by each rider. This measure utilizes benchmarks that look at the average load factor by vehicle type. Basic routes must meet an expected average load factor that is equivalent to a single occupancy vehicle.

The average load factor benchmark for Commuter Peak is higher than the basic routes and must be as energy efficient as the average-loaded private automobile.

Farebox: The threshold for farebox recovery ratio is based on the system wide average. For farebox recovery ratio, Spokane Transit uses a benchmark that is equal to one-half the system wide average. The 2013 system average was 21.5 percent, which meant that the farebox recovery threshold was 10.7 percent.

Pros and Cons

This method of line ranking offers a finer level of detail and comparison. It does a more effective job of identifying outliers in performance. This information can help with the development of more targeted recommendations. Routes are not immediately penalized for being slightly below average.

However, this method still does not help characterize overall system performance. A system with strong performance across the board and a system with poor performance across the board can theoretically look the same because this method of evaluation is based off of an index and averages. In addition, tying performance to system averages can result in thresholds that vary from year-to-year.

Comparisons of Individual Routes to Standards

Another way to determine the performance of a route is to compare each line against a set standard. These standards are typically defined in board policy and should reflect the nature of the system and social and financial goals. The standards can also be broken down by service tier, as high frequency transit will perform differently than circulators and express routes.

Case Study: DC Circulator

DC Circulator has several key goals to guide the growth and sustainability of the system. When looking at one of its goals, "Maximize financial and operational return on investment," the agency has set several standards that should be met when determining how services are performing:

- 25 percent farebox recovery
- \$2.75 subsidy per passenger
- 20 boardings per revenue hour

These standards were set to help the agency define the role of its DC Circulator in the greater transportation network of Washington DC. The operational performance metrics, while not specifically tied to the average performance of the system, were developed as attainable goals to ensure the service was viable in the future.

Pros and Cons

Having a set standard for performance has several advantages over comparisons to an average. First, it is easier to understand as the minimum threshold would not vary from year-to-year. New routes introduced as pilot projects or major service adjustments would not affect the average for performance standards. An agency could

also adjust its performance targets should its overall operating environment, or agency objectives change significantly.

Disadvantages from this process include determining the appropriate standards. Typically this would be based on prior performance data, but standards may also be based on a peer review of similar agencies. However, standards that are unrealistic or limiting can have a negative impact on service evaluation and design.

Line Ranking Methodology Recommendations

LADOT currently ranks routes using an index of average values: passengers per revenue hour, subsidy per passenger mile, and operating ratio. The line ranking methodology should first be updated to reflect the new metrics specified in the Performance Standards section. As a result of the service performance metrics no longer being consistent across all services, the line ranking should be done separately for the different service types (i.e. Commuter Express would have its own line ranking and Community DASH and Downtown DASH would have a separate line ranking). The existing method of line ranking does an effective job of identifying outliers in performance and opportunities for more targeted recommendations, and would still be effective to identify outliers within each service type. When evaluating new services, values should be updated such that the services have Performance Indices of 0.5 after six months and 0.7 after one year, up from 0.15 and 0.3 respectively. Overall, LADOT's evaluation method is flexible and responsive to changing operating conditions.

Appendix A: Terminology

Resource Utilization

Passengers per Revenue Hour measures the average number of passenger boardings per hour of revenue service. It is calculated by dividing the number of passengers by revenue hours.

Passengers per Revenue Mile measures the average number of passenger boardings per mile while the vehicle is operating in revenue service. It is calculated by dividing the number of passengers by the revenue miles.

Passengers per Trip measure the average number of passenger boardings per trip. It is calculated by dividing passengers by the number of trips.

Cost Effectiveness

Cost per Passenger measures the cost of operating service per passenger boarding.

Subsidy per Passenger measures the residual amount of operating costs after subtracting fare revenues that the operator has to subsidize per passenger boarding. It is calculated by dividing the route subsidy by the total numbers of passengers boarded.

Cost per Revenue Service Hour measures the operating costs per hour of revenue service.

Cost per Revenue Service Mile measures the operating costs per mile of revenue service.

Subsidy per Passenger Mile measures the residual amount of operating costs *after* subtracting fare revenues that the operator has to pay per mile traveled. It is calculated by dividing the route subsidy by the total passenger miles.

Cost per Passenger Mile measures the operating costs per mile that the passenger travels.

Fiscal Responsibility

Farebox Recovery Ratio is the ratio of fare revenue to operating costs. It does not include other operating revenues (e.g., advertising) or special funding for routes.

Operating Ratio is the ratio of total revenues to operating costs. This is typically the combination of fare revenues and other revenues such as advertising or subsidies.

Other Metrics

Vehicle Loading is the ratio of the number of people to the number of seats on the bus.

Attachment 7

Summary of Public Outreach

Summary of Public Outreach for Transit Service Analysis

LADOT Public Workshops & Hearings

Central City

Jun. 15, 2015, Noon-1 pm, Caltrans Building, 100 S. Main St.

Aug. 22, 2016, Noon-1 pm, Caltrans Building, 100 S. Main St.

Harbor Area

Jun. 16, 2015, 6-7 pm, Harbor Commission Board Room, 425 S. Palos Verdes St.

Aug. 29, 2016, 6-7 pm, San Pedro Library, 931 S. Gaffey St.

Hollywood

Aug. 30, 2016, 6-7 pm, Hollywood Recreation Center, 1122 Cole Ave.

East/Northeast LA

Jun. 17, 2015, 6-7 pm, Ramona Hall Community Center, 4580 N. Figueroa St.

Aug. 23, 2016, 6-7 pm, Glassell Park Senior Center, 3750 Verdugo Rd.

San Fernando Valley – East

Jun. 8, 2015, 6-7 pm, Marvin Braude Constituent Service Center, 6262 Van Nuys Bl.

Aug. 31, 2016 6-7 pm, Marvin Braude Constituent Service Center, 6262 Van Nuys Bl.

San Fernando Valley - West

Aug. 20, 2016, 1-2 pm, Robert M. Wilkinson Multipurpose Center, 8956 Vanalden Ave.

South LA

Jun. 15, 2015, 6-7 pm, South Los Angeles Activity Center, 7020 S. Figueroa St.

Aug. 22, 2016, 6-7 pm, Constituent Service Center, 8475 S. Vermont Ave.

Westside

Jun. 9, 2015, 6-7 pm, Henry Medina West LA Parking Enforcement Facility, 11214 W. Exposition Bl.

Aug. 24, 2016, 6-7 pm, Felicia Mahood Multipurpose Center, 11338 Santa Monica Bl.

Additional Presentations & Meetings

Valley Industry & Commerce Association, Transportation Committee, Jul. 14, 2015

Central City Neighborhood Partners, Westlake, Jul. 23, 2015

Sherman Oaks Neighborhood Council, Green & Beautification Committee, Sept. 9, 2015

CD 14 briefing, City Hall, Oct. 6, 2015

CD 4 briefing, City Hall, Oct. 6, 2015

Council Deputies workshop on Community DASH model, City Hall, Nov. 3, 2015

CSUN Transportation Working Group, CSUN, Nov. 12, 2015

CD 11 briefing, City Hall, Nov. 17, 2015

Mayor's Office, LADOT, May 26, 2016

LA Fashion District, Jun. 10, 2016

CD 11 briefing, City Hall, Jun. 24, 2016
 Council Deputies briefing, City Hall, Jun. 30, 2016
 CD 13 briefing, City Hall, Jul. 12, 2016
 CD 1 briefing, City Hall, Jul. 28, 2016
 CD 11 briefing, Aug. 5, 2016
 CD 5 briefing, Aug. 9, 2016
 CD 4 briefing, Aug. 17, 2016
 Historical Cultural Neighborhood Council, Urban Design/Land Use Committee, Arts District, Aug. 17, 2016
 CD 15 briefing, Aug. 29, 2016
 CD 14 briefing, Aug. 31, 2016
 Valley Industry & Commerce Association, Transportation Committee, Sept. 6, 2016
 Mayor's Office, Great Streets Team, LADOT, Sept. 7, 2016
 Lincoln Heights Neighborhood Council, Sept. 15, 2016
 Empowerment Congress West Area Neighborhood Development Council, Baldwin Hills, Sept. 22, 2016
 Metro Bus Service Planning, LADOT, Sept. 28, 2016
 Metro San Fernando Valley Service Council, Van Nuys City Hall, Oct. 5, 2016
 CD 13 briefing, Oct. 26, 2016
 Sherman Oaks Neighborhood Council, Nov. 14, 2016
 South of Robertson Neighborhood Council, CD 5 Field Office, Nov. 30, 2016
 Central City Associates, FAST, Arts District BID, South Park BID, Fashion District BID, Historic District BID,
 Downtown LA Neighborhood Council, Dec. 8, 2016

Field Interviews

Rider interviews conducted & comment cards distributed/collected at 21 major LADOT Transit bus stops in neighborhoods across the City over 2 week period in June, 2015

Interviews conducted with drivers at each of the four LADOT Transit operating facilities in May, 2015

Verbatim comments and survey responses from LADOT Transit on-board surveys of all routes in 2014

Correspondence & Notices

Letters from Chief of Transit to Neighborhood Councils, chambers of commerce, and business improvement districts soliciting comments, May 27, 2015, and Jul. 29, 2016

Workshop notices sent to workshop locations, posted in public buildings and at LADOT Customer Service Center & distributed on buses, Spring 2015

Public hearing notices advertised in daily and weekly community and ethnic newspapers, July, 2016:

LA Times	Jewish Journal
La Opinion	Korea Times
LA Daily News	Rafu Shimpo
Armenian Media Network	Saigon Times
Asian Journal	Siam Media Network
World Journal	

Public hearing notices posted on LADOT Transit vehicles, Summer 2016

Social Media/Online Info

Project website with interactive discussion forum: [www.ladottransit.com/moving forward together](http://www.ladottransit.com/moving_forward_together). This online platform accessed through the LADOT Transit website solicited reader input on questions such as "How would you prioritize LADOT's future transit investments?" This outreach garnered 139 ideas, 118 comments, and 127 survey responses from 180 participants.

Public Comment phone line in 11 languages in Spring 2015 & Summer/Fall 2016

Dedicated email address for public comments in Spring 2015 & Summer/Fall 2016

Notices & reminders about workshops & hearings sent via:

Email lists of interested parties (riders & non-riders)

Twitter.com/ladottransit

Facebook.com/ladottransit

YouTube

Proposed DASH and CE maps were posted online at ladottransit.com in Summer 2016 for public review and comment

Public Response

Attendance at first phase (2015) public workshops: 76

Attendance at second phase (2016) public hearings: 237

First phase (2015) comments from all sources including public workshops: 1,669

Second phase (2016) comments from all sources including public hearings: 703 (including 53 received after 09/30/16 cut-off date)

Attachment 8

Summary of Public Comments

Summary of Public Comments for Transit Service Analysis

Route	Issue	Number of Respondents With	Special Group Responses
DASH Downtown LA	Suggest more connectivity from South Park especially. South Park residential growth is supposed to triple by 2019 so need more connectivity from South Park to other areas like Arts District, Fashion District. Need east-west connectivity	8 public hearing comments	South Park BID
	Suggest extended hours past 9 PM	4 emails 7 public hearing comments	FAST & Central City Association also requested a meeting to discuss needs & improvements
	Suggest weekends for all DASH Downtown routes	1 email 1 letter	DLANC
DASH A	Oppose elimination of service for Third & San Pedro as there are 300 low income senior housing units around the corner & they use it to go to 7th & Metro.	189 emails 1 phone call 2 public hearing comments	Petition from local residents
	Oppose change with no service to Little Tokyo - not addressing disabled needs	1 email	
	Support changes	2 emails	
	Request weekend service	5 emails	
	Oppose any change in route— Figueroa Plaza and Garland Bldg are issues; City workers need transit to City Hall	28 emails	
	Suggest Route A go to LA Live again	1 email	
	Oppose eliminating service from Wilshire & Bixel to City West	1 email	
	Request more service in Arts District, especially from 7th & Mateo	10 emails	
DASH B	Oppose elimination of DASH B service to Union Station	2 emails	
	Suggest better frequency & oppose changes	1 public hearing comment	
DASH D	Request DASH D service on weekend	1 public hearing comment	
	Suggest serving 1 Santa Fe	2 emails	
	Suggest better frequency	2 public hearing comments	
DASH E	Suggest stop at Wilshire & Valencia due to constant construction around Good Samaritan Hospital	1 email	

DASH Hollywood	Oppose move off Franklin between Highland & Whitley to Hollywood Blvd Also request stop returned to Hollywood & Argyle	9 emails 3 phone calls 1 stop request email	Hollywood Argyle Civic Association
	Suggest extended nighttime hours	1 email 5 phone calls 2 public hearing comments	
	Suggest shorter frequency than 30 minutes	1 public hearing comment	
	Support proposed changes	2 emails	Hollywood Property Owners Alliance & Hollywood BID
DASH Hollywood, DASH Los Feliz, Observatory Shuttle	Suggest route changes	1 email	Los Feliz Neighborhood Council
DASH Leimert/Slauson	Suggest keeping route on 54th St since there is no other bus service there and Slauson is already well-served. OK to get off Denker.	25 attendees at public meeting	Empowerment Congress West Area Neighborhood Development Council
DASH Lincoln Heights/Chinatown	Oppose changes as "guarantees that the elderly and families without cars will have difficulty shopping or attending school and no USC Hospital or Hearing Office access. Also disabled issues and walking time on the hillsides not addressed."	1 email	
DASH Los Feliz	Oppose taking DASH Los Feliz off Hillhurst	32 emails 8 phone call 1 public hearing comment	
	Oppose proposed route and Suggest different route per attached map	1 email	Conducted poll on Nextdoor.com and got an 84% favorable response to different route per attached map
	Suggest collapsing DASH Los Feliz & Observatory Shuttle routes into one route	1 email	Los Feliz Neighborhood Council
	Suggest extended hours and weekend service	4 emails	
	Support proposed changes	11 emails	
DASH Midtown	Support proposed change	25 attendees at public meeting	Empowerment Congress West Area Neighborhood Development Council
DASH Mission Hills	Support but suggest change to routing: extend route to Balboa instead of Woodley. Balboa has shopping center, restaurants & churches.	1 email	

Attachment 9

Modeling Scores for Existing DASH Route Modification Requests

DASH Van Nuys/North Hills	Support new route	1 email	New Horizons of San Fernando Valley
DASH Watts	Oppose routing changes as it impacts seniors and school children	6 phone calls public hearing comment	1
DASH Wilshire Center/Koreatown	Suggest keeping route to Koreatown as is and at least run clockwise on James M. Wood Way due to high value of students	1 email	
SPECIAL REQUEST DASH service in Silver Lake	Request for DASH service in Silver Lake connecting with Los Feliz	21 emails 8 public hearing comments	Silver Lake Neighborhood Council
SPECIAL REQUEST DASH service between Hollywood business district up Canyon Dr north of Franklin Ave to Griffith Park	Request to handle visitor incursion issues in Hollywoodland neighborhood	2 emails	Hollywoodland Homeowners Assn.
SPECIAL REQUEST DASH service between Porter Ranch and Cal State Dominguez Hills	Request for additional transit service from Porter Ranch to Cal State Dominguez Hills	1 phone call	
Commuter Express 142	Oppose loop at 19th, 25th & Alma as CE buses may not be able to make the turn	2 emails	
Commuter Express 437	Oppose dropping Marina del Rey or adding time to trip because of Playa Vista	17 emails	
	Request information on which stops may be eliminated as much concern being expressed	6 emails	
	Suggest later buses & more service	1 email	
SPECIAL REQUEST Commuter Express Route 409	Request updating to 409	1 email	
SPECIAL REQUEST Commuter Express Route 573	Request for bus stop to be moved back to Chatsworth & Gaynor as current stop is very dangerous	5 emails 4 phone calls 2 public hearing comments	Rider petition

Attachment 10

Modeling Scores for New DASH Route Requests

ID #	Route Name/Area	CD	Comments	Model Result	Request Type	TMD Response
85	Pueblo del Rio / Huntington Park	9	Extension of Pueblo del Rio service to Huntington Park via Gage, Pacific, and Florence to State St	1.25	Modification	It is recommended that Pueblo del Rio be extended to provide service along Gage Ave, Pacific Blvd, and Florence Ave. Extending the route further east as requested would increase the amount of resources being used on service outside of Los Angeles city limits.
64	Panorama City, Van Nuys	2, 6	Deviate DASH Panorama City/Van Nuys to serve Van Nuys LAX Flyaway Station	1.22	Modification	This request is not recommended. It creates a large deviation for a very productive route and would negatively impact a large number of riders.
80	San Pedro - 7th Street	15	Service around San Pedro along 7th and 13th corridors	1.10	Modification	The proposed changes to DASH San Pedro will incorporate some of this request. The new DASH San Pedro will offer circulation between 15th and 5th. The proposed alignment provides more robust community circulation.
44	South Los Angeles	9	DASH Southeast is too long and confusing. Consider splitting into two separate routes or consolidating alignment	1.15	Modification	The request suggested splitting DASH Southeast into two routes. The proposed recommendation is to streamline the current alignment while maintaining one route name. Splitting the above-average route into two services would complicate the transit structure in return for minimal benefit.
45	South Los Angeles	8, 9	Add DASH service on Hoover Street in South Los Angeles	1.15	Modification	Request was to shift service onto Hoover. DASH service in South Los Angeles emphasizes Vermont, a critical regional corridor. Shifting service onto Hoover is not recommended. Operating service on Hoover is too close to the Vermont corridor.
71	B Sereno/City Terrace	14	Extend DASH El Sereno/City Terrace to serve Cal State LA.	1.13	Modification	Implementing this modification is not recommended as it would create a 1-mile deviation to the university. This route already features a number of deviations and would benefit from additional streamlining, not deviations.
41	Temple/Beaudry	1, 13	Realign DASH Pico Union to continue on Alvarado and turn onto Temple instead of Beverly to better connect with CE 422.	1.10	Modification	Request not recommended. This is a high-performing, frequent route. Any new deviations can significantly impact the performance of this route.
42	San Pedro	15	Extend DASH San Pedro south of 25th Street to serve Point Fermin	1.09	Modification	Implementing this modification is not recommended as service to the proposed Point Fermin anchor is unlikely to generate enough demand to warrant the cost of a 2-mile deviation.
43	South Los Angeles	9	Extend DASH Southeast further west to connect to Crenshaw	1.09	Modification	Implementing this request is not recommended. This deviation is more than 5 miles and will require significant resources. This request is better served by regional services.
58	Westlake, Temple/Beaudry, Pico Union, Echo Park	1	Deviate DASH Pico Union/Echo Park to directly serve Edward Roybal Learning Center students. See map of proposed service on MindMixer.	1.09	Modification	Request not recommended. This is a high-performing, frequent route. Any new deviations can significantly impact the performance of this route.
52	Hollywood	13	Create better DASH access for Cahuenga/Selma/over area within Hollywood	1.07	Modification	This request is not recommended. DASH Hollywood will be streamlined to improve on-time performance.
55	Northridge, Porter Ranch, Chetsworth, Canoga Park	2, 4	Improve DASH in Northridge by connecting existing route to Orange Line, Porter Ranch, and creation of bidirectional service. Also connect directly with CSUN by serving the CSUN transit hub.	1.04	Modification	This modification is not recommended because it will increase resource requirements and significantly change the route's role and efficiency. The updated DASH Northridge will serve CSUN Transit Center.
106	Northridge / Reseda	12	Extend DASH to serve CSUN	1.03	Modification	Updated DASH Northridge will serve CSUN Transit Center.
39	Mid City	10	Extend DASH Midtown west to serve Houser or Fairfax via Washington.	1.02	Modification	Recommend tightening alignment at northern terminus to improve efficiency and on-time performance.
35	Highland Park	1, 14	Realign DASH Highland Park/Eagle Rock to travel on Yosemite instead of Townsend.	1.00	Modification	The updated DASH Highland Park/Eagle Rock will operate on York and Eagle Rock Boulevard to create better connections into commercial activity centers. Yosemite is not recommended because it is a more residential corridor.
34	Eagle Rock	1, 14	Reinstate old Eagle Rock DASH service	0.99	Modification	The updated DASH Highland Park/Eagle Rock will operate on York and Eagle Rock Boulevard to create better connections into commercial activity centers.
65	Van Nuys, Studio City	2, 4, 6	Extend existing DASH Van Nuys/Studio City to connect to the NoHo Red Line station.	0.91	Modification	Scored below 1.0 threshold, not considered for implementation.
36	Lincoln Heights	1, 14	Extend DASH Lincoln Heights/Chinatown to Soto.	0.86	Modification	Scored below 1.0 threshold, not considered for implementation.
5	DASH Los Feliz to Silver Lake	4	Extend Los Feliz DASH to Observatory and Trader Joe's/Gelson's	0.84	Modification	Scored below 1.0 threshold, not considered for implementation.
38	Los Feliz/Silver Lake	13	Streamline DASH Los Feliz route and serve major destinations such as Trader Joe's, Gelson's, and John Marshall High School to improve ridership.	0.73	Modification	Scored below 1.0 threshold, not considered for implementation.
82	Hollywood - Los Feliz	4, 13	Combination of Los Feliz and Hollywood DASH, extending to Hyperion and Silver Lake	0.64	Modification	Scored below 1.0 threshold, not considered for implementation.
37	Los Feliz	13	Extend DASH Los Feliz to cover more of Sunset Blvd	0.62	Modification	Scored below 1.0 threshold, not considered for implementation.
110	Hollywood	13	Consider bifurcating route	0.43 / 0.72	Modification	Scored below 1.0 threshold, not considered for implementation.

Attachment 11

Title VI Analysis

99	Century City	5	We would ask the same question for our second large employment center of Century City. Can DASH in some way help to address their short-haul commute needs?	0.72	New Service	Scored below 1.0 threshold, not considered for implementation.
79	North University Park	8,9	Loop Circulator using Grand, MLK Jr, Vermont, Adams	0.70	New Service	Scored below 1.0 threshold, not considered for implementation.
1	DASH Arts Shuttle	14	Create new Arts District DASH route that serves 525 S. Hewitt Street (Lakretz Innovation Center)	0.59	New Service	Scored below 1.0 threshold, not considered for implementation.
30	Downtown LA	14	Need DASH service along Alameda between Cesar Chavez and 7th Street in Downtown LA and other parts of the Arts District	0.59	New Service	Scored below 1.0 threshold, not considered for implementation.
31	Downtown LA	14	Would like DASH service between 3rd and 8th street and San Pedro and Alameda street in DTLA.	0.59	New Service	Scored below 1.0 threshold, not considered for implementation.
107	Venice Beach	11	Venice Beach service via Windward, Abbot Kinney, Rose, Lincoln	0.58	New Service	Scored below 1.0 threshold, not considered for implementation.
50	Hollywood, Melrose	4, 5, 13	Reintroduce DASH service that connects Hollywood/Highland to Cedars Sinai	0.49	New Service	Scored below 1.0 threshold, not considered for implementation.
61	Westwood, Century City	5	Proposed DASH service: Possible service running on one or more: Wilshire Blvd, Santa Monica Blvd, Olympic Blvd, Westwood Blvd, or Sepulveda Blvd. Service to UCLA, Federal Building, Westfield Century City, and Westside Pavilion. Connection at some point to Commuter Express 431, 534, 573.	0.46	New Service	Scored below 1.0 threshold, not considered for implementation.
98	Westwood	5	Westwood is our largest employment center in CD 5 and is served by many transit lines, but do all of these lines adequately serve the short-haul commute needs of those living in Westwood or within two miles of this area? Is there potential demand for a DASH line that can better serve these needs?	0.46	New Service	Scored below 1.0 threshold, not considered for implementation.
29	Downtown LA	14	Reinstate DASH Route DD in DTLA	0.27	New Service	Scored below 1.0 threshold, not considered for implementation.
14	South Park	14	Connect South Park to Music Center/City Hall/Union Station/Arts District/7th St Corridor	0.38	New Service	Scored below 1.0 threshold, not considered for implementation.
28	Downtown LA	14	Reinstate DASH Route C in DTLA	0.18	New Service	Scored below 1.0 threshold, not considered for implementation.

101	Silver Lake / Los Feliz - 2	4, 13	Silver Lake Specific Dash incl. Sunset Junction: Loop from Vermont/Beverly via Silver Lake Blvd, Glendale, Hyperion, Griffin Park Blvd, Lucile, Clinton	0.86	New Service	Scored below 1.0 threshold, not considered for implementation.
108	Del Rey	11	Del Rey and Mar Vista Gardens	0.86	New Service	Scored below 1.0 threshold, not considered for implementation.
103	New North Hollywood	2	Van Nuys (Victory/Van Nuys) to Studio City via Oxnard, Lankershim, Ventura (alternate route via Burbank, Laurel Canyon, Victory, Vineland, Oxnard, Lankershim, Moorpark, Tujunga)	0.85	New Service	Scored below 1.0 threshold, not considered for implementation.
102	Silver Lake / Los Feliz - 3	4, 13	Los Feliz/Griffith Park Specific incl., Northern Silver Lake : From Trader Joes, Hyperion, Fountain, Vermont, Franklin, Hillhurst, Vermont/Vermont Canyon Rd to Griffith Observatory	0.83	New Service	Scored below 1.0 threshold, not considered for implementation.
100	Silver Lake / Los Feliz - 1	4, 13	Greater Silver Lake and Los Feliz Dash Service: From Vermont/Sunset, Fountain, Myra, Hoover, Bellevue, Silver Lake Blvd, Glendale, Rowena, Hyperion to Trader Joes	0.82	New Service	Scored below 1.0 threshold, not considered for implementation.
104	Ventura Blvd	2	Circulator connecting Ventura Blvd via Cahuenga Pass, Studio City, Encino, Sherman Oaks, etc.	0.80	New Service	Scored below 1.0 threshold, not considered for implementation.
91	Los Feliz	4, 13	Service from Vermont and Sunset to Wilshire and Vermont via Virgil	0.78	New Service	Scored below 1.0 threshold, not considered for implementation.
92	Palms / Robertson	11	Service from Culver City Expo Station to Del rey via Palms, Sawtelle, Venice, and Inglewood	0.77	New Service	Scored below 1.0 threshold, not considered for implementation.
97	Expo Palms	5	Is the service that is provided for the Palms community by Santa Monica Big Blue and by Culver City Bus adequate to serve this purpose? Can a circulator bus through Palms that reaches as far south as Venice Blvd. with stops as far north as the Palms Library and possibly even Pico Blvd. help to enhance mobility in the area?	0.77	New Service	Scored below 1.0 threshold, not considered for implementation.
2	DASH Playa Vista to Expo Line (Downtown)	11	New Commuter Express to Playa Vista	0.76	New Service	Scored below 1.0 threshold, not considered for implementation.
13	Playa Vista to Venice	11	See routing from survey	0.76	New Service	Scored below 1.0 threshold, not considered for implementation.
51	Venice Beach, Playa Vista	11	DASH service requested by City Council member Mike Bonin (CD 11) between Playa Vista and Venice Beach.	0.76	New Service	Scored below 1.0 threshold, not considered for implementation.
96	Robertson Blvd	5	DASH service on Robertson Blvd between national Blvd and Beverly Blvd, connecting to Expo Culver City (existing 220 ridership is 318 daily boardings)	0.73	New Service	Scored below 1.0 threshold, not considered for implementation.
3	Century City/Beverly Hills to Expo	13	Create circulator from new Expo to Beverly Hills and Century City	0.72	New Service	Scored below 1.0 threshold, not considered for implementation.
72	Westwood, Century City, West LA	5	Create better DASH service and connections to the new Expo Line and Westwood/West LA/Century City area.	0.72	New Service	Scored below 1.0 threshold, not considered for implementation.

4	DASH Silver Lake to E. Hollywood + Red Line	4	Create DASH route connecting Silver Lake to East Hollywood and Red Line	1.00	New Service	This route will be served by the updated DASH Los Feliz. The proposed modifications would create a connection between the Vermont/Sunset Red Line station and Silver Lake.
Metro 687	Altadena, Pasadena		LA Metro 687	1.00	New Service - Metro Shuttle	It is not recommended that Metro Route 687 be implemented as a Community DASH route; the entirety of the route is outside the city limits of Los Angeles. It is recommended that resources focus on improving service within Los Angeles city limits.
62	Westchester, LAX	11	New DASH service: Culver City Transit Center to LAX World Way West running along Sepulveda Blvd and Imperial Highway.	0.98	New Service	Scored below 1.0 threshold, not considered for implementation.
76	Van Nuys - Whitsett	2,5	Service from Van Nuys Orange Line Station to Sherman and Whitsett via Oxnard and LA Valley College	0.98	New Service	Scored below 1.0 threshold, not considered for implementation.
89	Arlington	4,10	Circulator Service from Wilshire and Western via 6th, Harvard, Venice, Arlington, and Wilton	0.97	New Service	Scored below 1.0 threshold, not considered for implementation.
9	DASH Silicon Beach	11	Create new DASH in Silicon Beach Area connecting to Aviation and LAX	0.97	New Service	Scored below 1.0 threshold, not considered for implementation.
63	Downtown LA, Pico Union, USC	1, 8,9, 14	New DASH service: LA Live to USC. Route will start from 11th & Figueroa serving Staples Center & Microsoft Theater. Running on 8th St and 9th St in Downtown LA area. Running on James M Wood Blvd and Bonnie Brae St in Pico Union area. No bus runs on James M Wood and no bus runs on Bonnie Brae. Running on Washington Blvd and Bonsallo Ave. Running on Figueroa St in the USC area. Serving also the 37th St. Transitway Station on the street level and going around the DMV office.	0.96	New Service	Scored below 1.0 threshold, not considered for implementation.
73	Lincoln Heights, Chinatown	1, 14	Create DASH route in Chinatown/Lincoln Heights that serves DMV, Forever 21, High School, and Union Station.	0.95	New Service	Scored below 1.0 threshold, not considered for implementation.
48	Echo Park, East Hollywood	13	Create DASH service from Echo Park to Vermont Metro Station.	0.92	New Service	Scored below 1.0 threshold, not considered for implementation.
6	DASH Pacific Palisades to Expo Line	11	New DASH Pacific Palisades to Expo Line	0.89	New Service	Scored below 1.0 threshold, not considered for implementation.
60	Silver Lake, Los Feliz, Atwater Village	4, 13	Proposed DASH service: A loop that starts at Sunset Junction and goes up Hyperion (by the Gelsons and Trader Joes), goes over the Glendale Hyperion Bridge to Atwater Village (also near the Vons and Glendale Amtrak. Heads south on San Fernando and returns to Sunset Junction Via Fletcher, Glendale (by the proposed Whole foods) and Silverlake Blvd	0.88	New Service	Scored below 1.0 threshold, not considered for implementation.
66	Los Feliz, Silver Lake, Atwater Village, Glendale	4, 13	New DASH service: Glendale train station to San Fernando, west on Glendale Blvd over the Hyperion Bridge. Down Hyperion by Gelsons and Trader Joes, up St. George and Griffith Park by Marshall High, Back to Atwater via Los Feliz (By Costco, Best Buy, ToysRUs, etc) back down San Fernando to Glendale Amtrak.	0.88	New Service	Scored below 1.0 threshold, not considered for implementation.

Metro 625	El Segundo, LAX	11	LA Metro 625	1.06	New Service - Metro Shuttle	It is not recommended that Metro 625 be implemented as a Community DASH route. The nature of the route's focus on LAX limits the trip purposes this route can facilitate, impacting the productivity of the route. The route also duplicates other services that serve LAX.
49	Elysian Valley	1, 13	Create DASH service for Elysian Valley. Create connection to Gold Line and to Cypress Park as part of service.	1.05	New Service	It is not recommended that this route be implemented. The proposed alignment would primarily service lower-density residential areas that would impact the performance of the route.
88	Mt Washington	1, 14	Service from Fletcher and San Fernando to Highland Park via San Fernando, Division, El Paso, Ave 50, and Figueroa	1.05	New Service	It is not recommended that this route be implemented. The proposed alignment would primarily service lower-density residential areas that would impact the performance of the route.
Metro 607	Inglewood Windsor Hills	8	LA Metro 607	1.04	New Service - Metro Shuttle	It is not recommended that Metro 607 be implemented as a Community DASH route. A majority of the route is located outside of Los Angeles city limits. It is recommended that resources be prioritized towards services within city boundaries.
7	DASH Warner Center	3	New DASH to reconsider Warner Center	1.03	New Service	This area will be served by the new DASH Canoga Park. The new route will provide more efficient circulation between Warner Center and the Orange Line.
93	Warner Center	3	Circulator service serving Warner Center and surrounding area	1.03	New Service	This area will be served by the new DASH Canoga Park. The new route will provide more efficient circulation between Warner Center, Westfield Topanga, and the Orange Line.
78	Eagle Rock - Glassell Park	1, 13, 14	Circulator service from Eagle Rock to Glassell Park via El Paso and Eagle Rock	1.03	New Service	It is not recommended that this route be implemented due to duplicative connections. The updated DASH Highland Park/Eagle Rock will provide service on Eagle Rock Boulevard, while Metro route 28 provides a regional connection between Eagle Rock and Glassell Park.
94	Harbor City	15	Circulator service using Western, 223rd, Normandie, and Pacific Coast	1.03	New Service	It is not recommended that this route be implemented; the proposed alignment would primarily serve residential and industrial uses, limiting its potential productivity.
95	North Hollywood Circulator	2, 6	Circulator service using Vanowen, Tujunga, Oxnard, Vineland, Lankershim, and Laurel Canyon	1.02	New Service	It is not recommended that this route be implemented. Industrial land uses between Tujunga and Vineland near the Burbank Airport limit the potential productivity of the route. It is recommended that higher scoring routes be implemented before this route.
33	Highland Park	1, 14	Create DASH service that serves Avenue 50 & Monte Vista neighborhood to help residents up and down steep streets.	1.02	New Service	It is not recommended that this route be implemented; the route would primarily serve low density residential neighborhoods which would limit its ability to generate significant ridership.
46	Mt Washington	1	Create DASH service to connect Mt. Washington neighborhood to community destinations and the Gold Line.	1.02	New Service	It is not recommended that this route be implemented; the route would primarily serve low density residential neighborhoods which would limit its ability to generate significant ridership.
53	Mount Washington	1	Create DASH service for Mount Washington with the following alignment: Mt. Washington, Avenue 45, running up to the Self-Realization Fellowship and the Elementary School. Coming back down San Raphael to the Coptic Church and out to Ave 50. Ave 50 to Figueroa. South on Fig to Marmion. North on Marmion to Ave 45.	1.02	New Service	It is not recommended that this route be implemented; the route would primarily serve low density residential neighborhoods which would limit its ability to generate significant ridership.
87	Glassell Park / Highland Park	1, 14	Service from Fletcher and San Fernando to Highland Park via San Fernando, Cypress, and Figueroa	1.02	New Service	Through the route would serve a mixture of commercial, residential and educational land uses, it is recommended that higher scoring proposals be implemented before this proposal.
Metro 685	Glendale, Glassell Park	1, 14	LA Metro 685	1.02	New Service - Metro Shuttle	A significant portion of this alignment lies outside of Los Angeles city limits. It is recommended that investments focus on improving service within Los Angeles city limits.
70	Warner Center	3, 12	New DASH service: Serve Warner Center and connect to the Orange Line	1.01	New Service	This area will be served by the new DASH Canoga Park. The new route will provide more efficient circulation between Warner Center, Westfield Topanga, and the Orange Line.
86	Elysian Valley / Cypress Park / Lincoln Heights	1, 13, 14	Service from Fletcher and San Fernando to Lincoln High via Riverside, Figueroa, Griffin, Broadway	1.00	New Service	It is recommended that this route not be implemented, other requests for service in the area scored higher; an extension to serve Broadway would result in an inefficient alignment.
4	DASH Eagle Rock to Elysian Valley	1, 13, 14	Create DASH route connecting Eagle Rock to Elysian Valley, running through Glassell Park	1.00	New Service	It is recommended that this route not be implemented. Proposed changes to the alignment of DASH Highland Park/Eagle Rock would serve portions of Eagle Rock Boulevard, while the regional connection between Eagle Rock and Glassell Park would be served by Metro route 28. This route will be served by the updated DASH Los Feliz. The proposed modifications would create a connection between the Vermont/Sunset Red Line station and Silver Lake.

ID #	Route Name/Area	CD	Comments	Model Result	Request Type	Consultant (TMD) Response
40	MacArthur Park, Koreatown	1, 10	Create DASH service from MacArthur Park to Koreatown (Western)	1.23	New Service	Despite the high score, the alignment is not recommended given the very high frequency of existing Metro Line 65 service along W. 8th St. DASH Wishline Center/Koreatown will also be modified to serve a significant portion of the requested alignment.
8	DASH Van Nuys - Hansen Dam	6, 7	New DASH Van Nuys Amtrak to Hansen Dam, Children's Museum, Kaiser Hospital	1.29	New Service	Pacoima received a number of requests for new service. The area will be served by DASH Pacoima. The route aims to serve the key activity centers and destinations in the community via Osborne Street, Roscoe Boulevard, Van Nuys Boulevard, and Glendale Boulevard.
Metro 612	South Gate, Huntington Park, Walnut Park, Lynwood	15	LA Metro 612	1.27	New Service - Metro Shuttle	This route is not recommended for implementation because a majority of the requested route is located outside of Los Angeles city boundaries. It is recommended that resources be prioritized for services within the city boundaries.
74	Pacoima	7	Create DASH route in Pacoima	1.22	New Service	Pacoima received a number of requests for new service. The area will be served by DASH Pacoima. The route aims to serve the key activity centers and destinations in the community via Osborne Street, Roscoe Boulevard, Van Nuys Boulevard, and Glendale Boulevard.
Metro 611	Huntington Park, Walnut Park, Maywood	9	LA Metro 611	1.21	New Service - Metro Shuttle	This route is not recommended for implementation because a majority of the requested route is located outside of Los Angeles city boundaries. It is recommended that resources be prioritized for services within the city boundaries. The portion of the route within city limits along Florence Avenue would be served by the updated DASH Pueblo del Rio route.
Metro 620	Boyle Heights	14	LA Metro 620	1.20	New Service - Metro Shuttle	Metro 620 is not recommended for conversion into a DASH route. The route's circuitous alignment is not conducive to effective transit service. Instead, the new DASH Boyle Heights West will serve the high demand for transit in the area with a more efficient alignment.
109	Pacoima - Mission College	7	Pacoima to Mission College via San Fernando Metrolink	1.18	New Service	This request will be served by two new routes: DASH Pacoima and DASH Hubbard. DASH Hubbard will connect Mission College with Metrolink via Hubbard. This alignment was streamlined in order to minimize duplication with the new DASH Pacoima route, which will operate on Van Nuys Boulevard.
84	Sylmar / Arleta	7	Service from Sylmar/San Fernando Metrolink to Arleta via Truman, Brand, Laurel Canyon, Fox, and Woodman	1.18	New Service	This alignment is not recommended, because the area will be served by DASH Pacoima and DASH Hubbard. These routes are viewed as the most productive alignments to serve the community.
77	Sylmar / San Fernando	7	Service from Sepulveda and Rinaldi to Eldridge and Hubbard via Sylmar HS and Sylmar/San Fernando Metrolink	1.17	New Service	This alignment is not recommended, because the area will be served by DASH Hubbard. DASH Hubbard is viewed as a more productive alignment.
90	Hubbard / Sayre	7	Service from Sylmar/San Fernando Metrolink to Sylmar via Hubbard / Sayre	1.15	New Service	This alignment is not recommended, because the area will be served by DASH Hubbard. DASH Hubbard is viewed as a more productive alignment.
Metro 665 Peak	City Terrace	14	LA Metro 665 Peak	1.14	New Service - Metro Shuttle	It is not recommended that this segment of Metro 665 be implemented as a Community DASH route. This stretch of Olympic currently receives frequent service from Metro routes 62 and 66.
Metro 665	City Terrace	14	LA Metro 665	1.14	New Service - Metro Shuttle	It is not recommended that Metro 665 be implemented as a Community DASH route. The majority of the route is outside of Los Angeles city limits; resources should be prioritized towards services within city limits.
12	Boyle Heights to Clarence/4th	14	Serve Boyle Heights to Clarence / 4th	1.14	New Service	This area will be served by the new DASH Boyle Heights West. DASH Boyle Heights West would provide more direct service between residential areas and commercial destinations in this area.
11.2	Desoto or Winnetka/Fallbrook	3, 12	Concerned about future traffic, want connector to malls	1.14	New Service	This request will be served by the new DASH Canoga Park. The new route will offer a connection between the Orange Line, Westfield Topanga, residences, and commercial activity centers via Topanga Canyon, Roscoe, and Sherman Way.
75	Mission Hills	7, 12	Create DASH route in Mission Hills	1.12	New Service	This route is not recommended for immediate implementation. It is a primarily residential route anchored by high schools. The route also runs through land uses with limited trip making such as the San Fernando Mission Cemetery. Industry experience indicates that this limited role would impact the productivity of the proposed route.
8	DASH Van Nuys-VA	6, 12	New DASH Van Nuys Amtrak to LAX Flyaway, VA Hospital, San Fernando Mission	1.12	New Service	This route is not recommended for implementation. The primarily residential route is anchored by high school and VA hospital. The limited opportunities for commercial trip making will impact route.
105	Van Nuys Metrolink - Kaiser	2	Van Nuys Metrolink to Kaiser and Valley College / Grant High	1.09	New Service	It is not recommended that this route be implemented. Large portions of the proposed alignment duplicate DASH Panorama City/Van Nuys. Woodman and Roscoe foster commercial activity, but there are no other corridors to anchor a circulator other than Van Nuys; operating on Van Nuys would duplicate DASH Panorama City/Van Nuys even further.
81	Sun Valley Circulator	2, 6	Service in Sun Valley using Strathern, Whitsett, Saticoy, Vineland connecting to Medical Center of North Hollywood	1.08	New Service	This route is not recommended for implementation. It is anchored by residential corridors along Strathern and Saticoy which impact productivity of the route. There is a significant decrease in population and employment density near Strathern and Tujunga which further limit the productivity of the route.
83	West Watts	15	Service along Avalon, 120th, Vermont, Imperial to Crenshaw Green Line Station	1.07	New Service	This is a non-direct route that primarily offers an east-west connection in the community. This route is not recommended for service because it duplicates many high-frequency, direct services. Many of its unique one-seat rides are likely to be low demand connections.
11.1	Topanga(Roscoe-Ventura)/Canoga	3, 12	Concerned about future traffic, want connector to malls	1.07	New Service	This area will be served by the new DASH Canoga Park. The new route will provide circulation between Roscoe, the Orange Line, and Westfield Topanga.

Attachment 11

Title VI Analysis

LADOT Transit Service Analysis

Title VI Analysis

February 2017

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Purpose and Background

The Federal Transit Administration (FTA) Office of Civil Rights conducts periodic reviews of sub recipients, such as the Los Angeles Department of Transportation (LADOT), to determine whether they are honoring their commitment to Title VI of the Civil Rights Act (49 USC 5332).

Title VI of the Civil Rights Act of 1964 ensures that “no person in the United States shall, on the basis of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” LADOT has committed to the FTA’s Title VI objectives set forth in Circular 4702.1 ensuring that FTA-assisted benefits and related services are made available and are equitably distributed without regard to race, color or national origin.

LADOT Transit plays a key role in public mobility within the City of Los Angeles. The agency operates multiple services that provide community circulation, network completion, and regional commuter connectivity. The *LADOT Transit Service Analysis* was designed to improve LADOT Transit service performance by:

- Assessing current service performance, identifying best practices, and constructing a framework for recommendations.
- Improving the performance and quality of Community DASH, Downtown DASH, and Commuter Express services.

This analysis was conducted in compliance with FTA’s Circular 4702.1B that was issued on October 1, 2012 and 49 CFR Section 21.9(b), to ensure that the *LADOT Transit Service Analysis* service recommendations comply with Title VI requirements.

LADOT Service Equity Policies

The service equity analysis used the following three policies and thresholds to evaluate the impacts of LADOT Transit’s proposed fixed route service changes.

Major Service Change Policy

Title VI policies require analysis of any service reductions or additions considered by the agency to be a “major service change.” LADOT uses a 25 percent threshold to define a “major service change”. Major service changes include service changes to existing routes that result in an increase or decrease in revenue service hours equal to or greater than 25 percent of existing revenue service hours, happening one time or cumulatively within a 12-month period, or any geographical alteration of an existing route affecting more than 25 percent of its revenue miles, happening one time or cumulatively within a 12-month period.

Additional changes that constitute a major service change include:

- The addition of a new route.
- The elimination of a route or service without an alternate fixed route replacement.
- All fare and fare media changes, whether an increase or decrease.

Changes exempt from qualifying as a major service change include:

- Route changes caused by an emergency.
- Changing a route name or number.
- Introduction or elimination of a limited-term route that will be, or has been, operated for no more than 12 months.
- Promotional or temporary fare reductions lasting no longer than 6 months.

Disparate Impact Policy

The Disparate Impact Policy establishes a threshold for determining whether a given action has a potential disparate impact on minority populations. A disparate impact occurs when a superficially neutral policy, practice, or change disproportionately affects members of a group identified by race, color, or national origin. LADOT uses the following policy to determine if a major service change could discriminate against these persons.

For non-fare-related major service changes, LADOT uses a four-fifths threshold. Under this policy, a disparate impact may occur when benefits are provided to minority populations at a rate less than 80% (four-fifths) the rate of benefits provided to the non-minority population or when adverse impacts from the change are borne by non-minority populations at a rate less than 80% (four-fifths) the rate of adverse impacts borne by minority populations.

Routes with span of service or frequency changes will be examined on a cumulative basis by evaluating all changes together to determine if a disparate impact exists. Routes with segment or alignment changes will be examined on an individual basis by evaluating the route changes separately to determine if a disparate impact exists.

If evidence of a disparate impact is found, LADOT Transit will determine if there are alternatives that would serve the same objectives but with a lesser impact on minority populations. If there are no viable alternatives, LADOT Transit must have a substantial legitimate justification for making the proposed change.

Disproportionate Burden Policy

The Disproportionate Burden Policy determines whether a given action places a disproportionate burden on low-income populations versus non-low-income populations. This policy applies only to low-income populations that are not also minority populations. A disproportionate burden occurs when a superficially neutral policy, practice, or change disproportionately affects low-income persons. LADOT uses the following policy to determine if a major service change could discriminate against these persons.

For non-fare-related major service changes, LADOT uses the same four-fifths threshold that is used to determine disparate impacts. A disproportionate burden may occur when benefits are provided to low-income populations at a rate less than 80% (four-fifths) the rate of benefits provided to the non-low-income population or when adverse impacts from the change are borne by non-low-income populations at a rate less than 80% (four-fifths) the rate of adverse impacts borne by low-income populations.

Routes with span of service or frequency changes will be examined on a cumulative basis by evaluating all changes together to determine if a disproportionate burden exists. Routes with segment or alignment changes will be examined on an individual basis by evaluating the route changes separately to determine if a disproportionate burden exists.

If evidence of a disproportionate burden is found, LADOT Transit will determine if there are alternatives that would serve the same objectives but with a lesser impact on low-income populations. If there are no viable alternatives, LADOT Transit must have a substantial legitimate justification for making the proposed change.

Proposed Fixed Route Service Changes

To improve the quality and performance of LADOT services, the *LADOT Transit Service Analysis* proposes to increase the frequency on successful routes, restructure routes to better serve current and future market demand and key destinations, and introduce new services. The following chart outlines the near-term route level changes.

Table 1: Proposed Changes

Route Name	Description of Proposed Changes
Beachwood Canyon	15-minute weekday service and 20-minute weekend service. Sunday service added.
Boyle Heights/ East LA	15-minute weekday service and 20-minute weekend service. Sunday service added. Route extended north to serve Griffin Ave Elementary School and Lincoln Heights Branch Library.
Chesterfield Square	15-minute weekday service. Service extended west to serve Park Mesa Heights area and rerouted to serve Huntington Park, no service south of Florence Ave.
Crenshaw	15-minute weekday service and 20-minute weekend service. Sunday service added.
El Sereno/ City Terrace	15-minute weekday service and 20-minute weekend. Deviation to Novgorod St removed.
Fairfax	15-minute weekday service and 20-minute weekend service. Sunday service added. Route redesigned as a circulator and will operate as a loop. No service south of W 3rd St and east of S Fairfax Ave.
Highland Park/ Eagle Rock	15-minute weekday service and 20-minute weekend service. Sunday service added.
Hollywood	15-minute weekday service and 20-minute weekend service. Sunday service added. Route redesigned as a circulator. No service south of Santa Monica Blvd.
Hollywood/ Wilshire	15-minute weekday service and 20-minute weekend service. Sunday service added.
Larchmont Shuttle	Retain current level of service
King- East	15-minute weekday service and 20-minute weekend service. Sunday service added. Minor deviations on route removed.
Leimert/ Slauson	15-minute weekday service and 20-minute weekend service. Sunday service added. Route travels along S Western Ave instead of Denker Ave.
Chinatown (Lincoln Heights/Chinatown)	15-minute weekday service and 20-minute weekend service. Sunday service added. Route substantially redesigned to be a circulator and will operate as a loop in Chinatown. No service north of W College St or east of Alameda St. DASH B redesigned to provide direct service between Lincoln Heights, Chinatown, and Downtown.
Los Feliz	New bidirectional service and weekend service. 15-minute weekday service and 20-minute weekend service. Redesigned as a circulator with service extended east. Service north of Franklin Ave to Los Feliz Blvd discontinued.
Midtown	15-minute weekday service and 20-minute weekend service. Sunday service added. Service along W Pico Blvd and West Blvd discontinued, deviation along Buckingham Rd removed.
Northridge/ Reseda	New bidirectional service and Sunday service. 15-minute weekday service and 20-minute weekend. Service extended to serve Northridge Fashion Center and Delmar T Oviatt Library.
Panorama City/ Van Nuys	15-minute weekday service, weekday and weekend service hours extended. Service extended to Oxnard St. No longer serves Hazeltine Ave and Van Nuys Elementary School.
Pico Union/ Echo Park	15-minute weekday service and 20-minute weekend service.
San Pedro	15-minute weekday service and 20-minute weekend service.
Southeast	15-minute weekday service.
Pueblo Del Rio	15-minute weekday service and 20-minute weekend service. Sunday service added. Route redesigned as a circulator, will run as a loop. No service north of E 52nd St.
Van Nuys/ Studio City	15-minute weekday service and 20-minute weekend service. Sunday service added. Route services Ventura Blvd instead of Moorpark St.
Vermont/ Main	15-minute weekday service and 20-minute weekend service. Sunday service added. Route no longer serves E Gage Ave and S Hoover St.
Watts	15-minute weekday service and 20-minute weekend service. Sunday service added. Route no longer serves E Century Blvd and McKinley Ave.
Wilmington	20-minute weekend service. Counterclockwise route no longer serves E Anaheim St, N Fries Ave, and Hawaiian Ave.
Wilshire Center/ Koreatown	15-minute weekday service. Clockwise and Counterclockwise routes now travel the same loop. No service south of W 8th St or north of W 3rd St.

Route Name	Description of Proposed Changes
Observatory Shuttle	20 min service. Weekday service added. Route deviation to serve Prospect Ave, no longer serves Hollywood Blvd.
DASH A	Weekend service added, weekday service extended to 9pm. 10-minute Saturday service and 15-minute Sunday service. Route deviations to Merrick St and Diamond St removed, loop west of S Figueroa St removed, service extended south to W 11th St.
DASH B	Weekend service added, weekday service extended to 9pm. 10-minute Saturday service and 15-minute Sunday service. Route runs along Broadway north of Temple St to Lincoln Park Ave and along Grand St south of Temple St to W Pico Blvd. This route was redesigned to provide a direct connection between Lincoln Heights, Chinatown, and Downtown.
DASH C	New Service connecting Little Tokyo to Good Samaritan Hospital via W 1st St, S Figueroa St, and W 7th St. 10-minute weekday frequency with a service span of 6:30AM to 6:30PM.
DASH D	Weekend service added, weekday service extended to 9pm. 5-minute weekday frequency, 10-minute Saturday service, and 15-minute Sunday service. Service runs along Broadway south of Olympic Blvd.
DASH E	Service extended to 9pm. Route deviation to 6th St removed, service extended to S. Alvarado St.
DASH F	Service extended to 9pm. 10-minute weekday service, 10-minute Saturday service, and 15-minute Sunday service. No service on S Figueroa north of W 9th, service extended to Union Station via W 9th, E 7th, and S Santa Fe Ave.
409 to Civic Center	Retain current level of service
419 to Downtown	Retain current level of service
423 to Downtown	Retain current level of service
431 to Financial District	Retain current level of service
437 to Financial District	New route pattern to Playa Vista added.
438 to Financial District	Retain current level of service
448 to Financial District	Retain current level of service
142	30-minute service on weekdays and weekends.
422	Retain current level of service
534	Retain current level of service
549	Retain current level of service
573	Retain current level of service
574	Retain current level of service
Union Station/Bunker Hill Shuttle	Retain current level of service
Boyle Heights West	New Service. Boyle Heights community circulator serving LA County Dept of Social Services, Promise Hospital, and multiple schools. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Canoga Park	New Service. Canoga Park and Winnetka community circulator serving multiple shopping centers and schools. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Mission Hills	New Service. Community circulator connecting Granada Hills and Mission Hills, serving Providence Holy Cross Medical Center. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Pacoima	New Service. Community circulator serving Panorama City, Arleta, and Pacoima. Serves Hansen Dam Recreation Center and multiple shopping centers. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.

Route Name	Description of Proposed Changes
Sylmar	New Service. Connects Sylmar/San Fernando MetroLink Station to LA Mission College via Hubbard St. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Elysian Valley / Cypress Park	New Service. Connects southern Montecito Heights with western Atwater Village. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Glassell Park/Highland Park	New Service. Serves Highland Park, Northeast LA, and Glassell Park via York Blvd, Division St, and San Fernando Rd. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
North Hollywood	New Service. Community circulator serving North Hollywood. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Van Nuys/North Hills	New Service. Connects Sepulveda Ambulatory Care Center to Van Nuys MetroLink Station. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.
Sun Valley	New Service. Community circulator serving southern Sun Valley. 15-minute weekday service and 20-minute weekend service. Weekday span of 6AM to 7PM, weekend span of 9AM to 6PM.

Major Service Changes

LADOT defines a "Major Service Change" as an increase or decrease in revenue service hours or revenue miles of 25 percent or more. The proposed service changes were analyzed using this threshold to identify the routes that triggered a major service change and required further analysis. In total, 39 routes qualified as major service changes, including 11 new routes.

Table 2: Major Service Changes

Route Name	Change
Lincoln Heights/Chinatown	Alignment and Frequency Change
Beachwood Canyon	Frequency Change; Major Investment
Boyle Heights/East LA	Frequency Change; Major Investment
Chesterfield Square	Frequency Change; Major Investment
Crenshaw	Frequency Change; Major Investment
Fairfax	Frequency Change; Major Investment
Highland Park/Eagle Rock	Frequency Change; Major Investment
Hollywood	Frequency Change; Major Investment
Hollywood/Wilshire	Frequency Change; Major Investment
King-East	Frequency Change; Major Investment
Leimert/Slauson	Frequency Change; Major Investment
Los Feliz	Alignment and Frequency Change; Major Investment
Midtown	Frequency Change; Major Investment
Northridge/Reseda	Alignment and Frequency Change; Major Investment
Panorama City/Van Nuys	Frequency Change; Major Investment
San Pedro	Frequency Change; Major Investment
Southeast	Frequency Change; Major Investment
Pueblo del Rio	Alignment and Frequency Change; Major Investment

Route Name	Change
Van Nuys/Studio City	Frequency Change; Major Investment
Vermont/Main	Frequency Change; Major Investment
Watts	Frequency Change; Major Investment
Wilshire Center/Koreatown	Frequency Change; Major Investment
DASH A	Frequency Change; Major Investment
DASH B	Alignment and Frequency Change; Major Investment
DASH D	Frequency Change; Major Investment
DASH E	Frequency Change; Major Investment
DASH F	Alignment and Frequency Change; Major Investment
Weekend Observatory Shuttle	Frequency Change; Major Investment
DASH C	New Route
Boyle Heights West	New Route
Canoga Park	New Route
Mission Hills	New Route
Pacoima	New Route
Sylmar	New Route
Elysian Valley/Cypress Park	New Route
Glassell Park/Highland Park	New Route
North Hollywood	New Route
Van Nuys/North Hills	New Route
Sun Valley	New Route

Service Equity Analysis

The service equity analysis utilized a Geographic Information Systems (GIS) approach to analyze the most recent US Census demographic data¹ to identify whether the major service changes resulted in a disparate impact or disproportionate burden on minority and non-minority "in poverty" populations. The analysis looked at Title VI implications based on the type of service change and by route. Full methodology can be found in Appendix A.

Table 3: Service Area Demographics

Demographics for Service Area ²	
Population Served	1,680,375
Minority Population Served	1,307,658
Non-Minority In-Poverty Population Served	50,150
Census Block Groups Served	1,773
Minority %	(Service Area Average) 78%
Non-Minority In-Poverty %	(Service Area Average) 4%

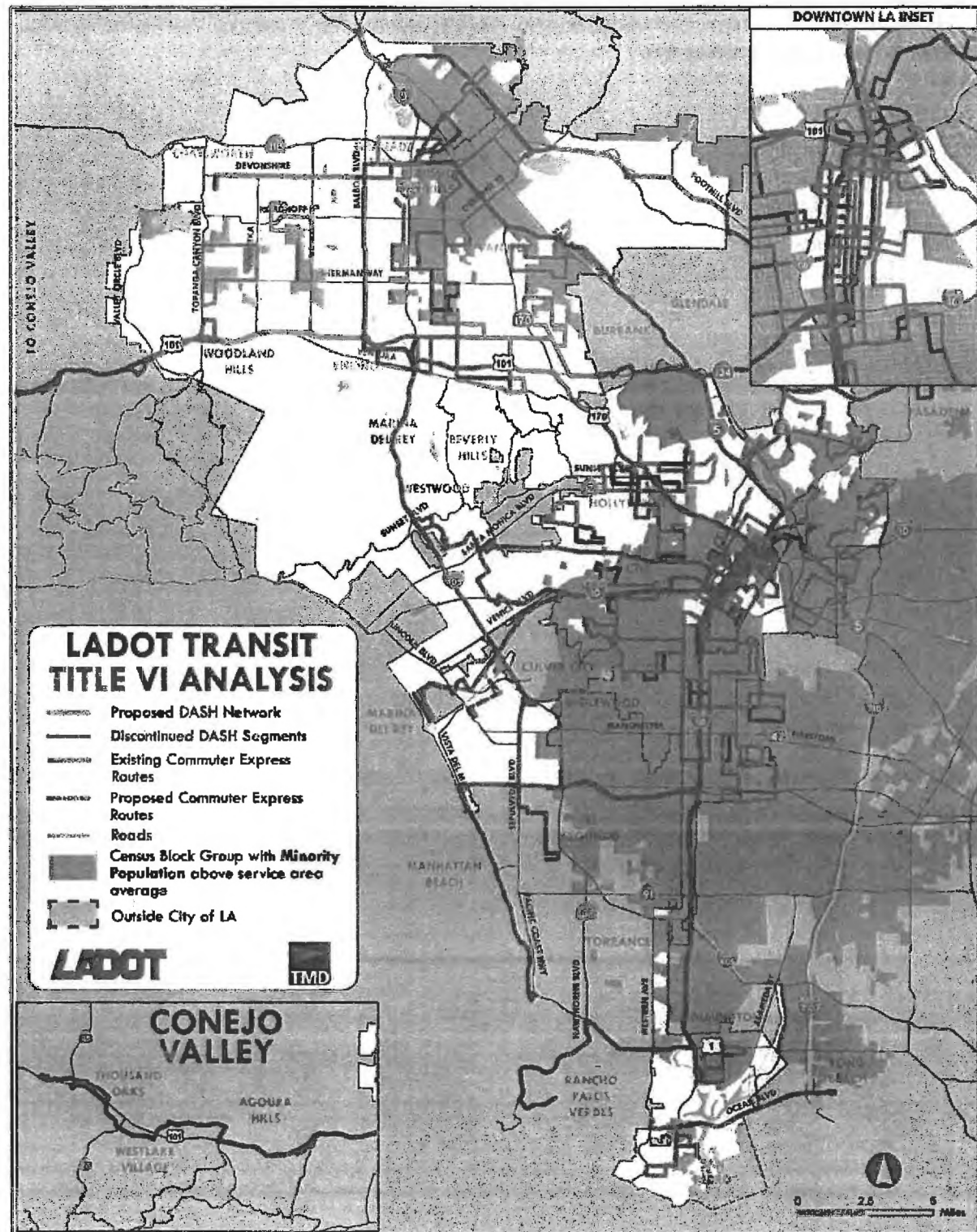
¹ 2015 American Community Survey 5-Year Estimates were used to determine minority and non-minority "in poverty" populations at the block group and tract level.

² Service Area is defined as census block group data for minority estimates and census tract data for non-minority "in poverty" estimates within ¼ mile of existing DASH routes and ¼ mile of existing Commuter Express stops

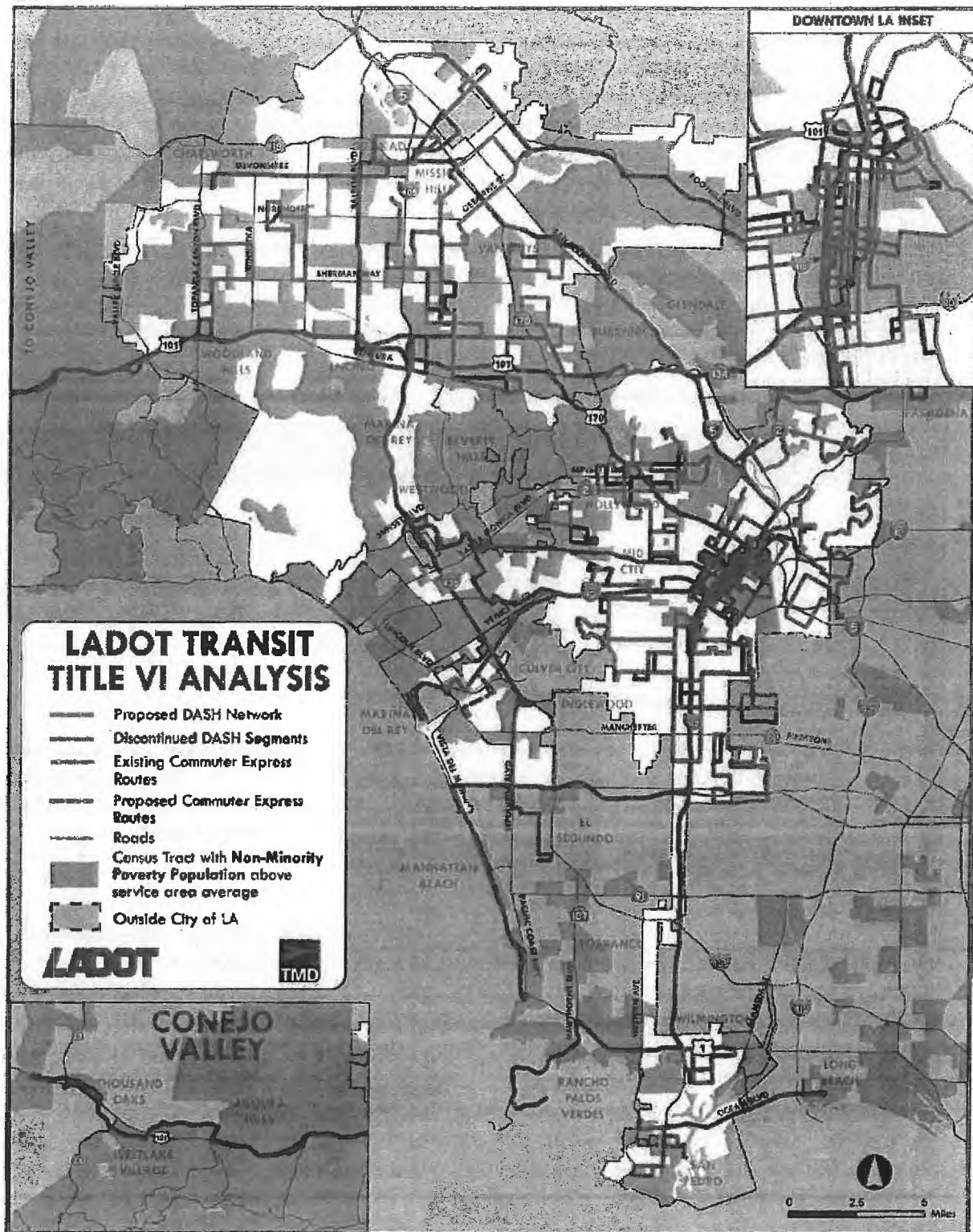
Maps 1 and 2 depict both the current weekday network and the proposed weekday network, and their proximity to Title VI populations. The maps identify the census block groups where the total minority is greater than the average for the service area and census tracts where the total non-minority "in poverty"³ population is greater than the average for the service area.

³ US Census defines low-income populations as "in poverty".

Map 1: Census Block Groups with Above Average Minority Populations



Map 2: Census Tracts with Above Average Non-Minority Low-Income Populations



Routes with Service Hour Reductions

The plan recommends a major service reduction in revenue service hours for only one route: DASH Lincoln Heights/Chinatown. This route experienced a major service hour reduction as a result of the redesign and shortening of the route alignment. Service frequency and span of service were not reduced on this route. The table below summarizes the demographic information for the affected population of that route. According to the LADOT service equity policies, a disparate impact or disproportionate burden would occur if adverse impacts are not borne by non-minority/non-low-income populations at a rate of at least 80 percent of the rate of adverse impacts borne by minority/low-income populations.

The change to DASH Lincoln Heights/Chinatown triggers a disparate impact based on an analysis of ACS 2015 5-year Estimate Census Block Group and Tract data using a 1/4 mile catchment area and the 4/5ths threshold. The impact rate to minority residents is 3.1 percent which exceeds the 4/5ths threshold of 2.5 percent. The change does not result in a disproportionate burden as the 0.9 percent impact rate to non-minority, low income residents is within the 4/5ths threshold.

Table 4: Demographics for Route with Major Service Reduction (DASH Lincoln Heights/Chinatown) – Census Data

Population Group	Existing Service Area Population	Within 1/4 Mile of Existing Route	Impact Rate	4/5ths Threshold
Non-Minority	372,717	3,664	1.4%	
Minority	1,307,658	40,659	3.1%	2.5%
Non-Minority Non-low Income	304,384	2,047	0.7%	
Non-Minority Low Income	50,150	427	0.9%	0.7%
Total	1,680,375	44,323	2.6%	

Routes with Alignment Reductions

The change to DASH Lincoln Heights/Chinatown was also the only route to trigger a major service reduction in revenue miles. Again, this change triggered a disparate impact based the 4/5ths threshold (see Table 4). The alignment reduction did not result in a disproportionate burden. This reduction is mitigated by the redesign of DASH B, which was expanded to cover areas no longer served by the DASH Lincoln Heights/Chinatown route. Further discussion of the mitigation measures can be found in Table 24.

Major Investments

LADOT Transit has made recommendations to increase hours and/or miles by 25 percent or more on 28 routes. The agency has also made recommendations to invest in 11 new routes. These investments will lead to more frequency, longer service spans, and increased geographic coverage. The following sections summarize how these benefits impact Title VI populations.

Routes with Frequency Improvements

According to LADOT's policy, routes with span of service or frequency changes are to be examined on a cumulative basis by evaluating all changes together. Minority residents experience a 73 percent benefit rate from the frequency improvements. This complies with the 4/5ths threshold of 41 percent. The benefit rate for non-minority, low-income residents is 60 percent, complying with the 39 percent threshold. As a result, these changes do not result in a disparate impact nor a disproportionate burden.

Table 5: Cumulative Benefits of Existing Routes that Qualified as "Major Changes" - Revenue Service Hours

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Routes	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	189,647	51%	41%
Minority	1,307,658	949,754	73%	
Non-Minority Non-low Income	304,384	149,822	49%	39%
Non-Minority Low Income	50,150	30,320	60%	
Total	1,680,375	1,139,401	68%	

Routes with Alignment Additions

LADOT's Disparate Impact and Disproportionate Burden Policies require all routes with major alignment changes be evaluated on an individual basis. In total, there were five existing routes that required individual assessments. Of the five alignment additions, three triggered disparate impacts: DASH Los Feliz, DASH Northridge/Reseda, and DASH F. None of the changes triggered a disproportionate burden. The following tables summarize the analyses.

Table 6: Los Feliz

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	13,427	3.6%	2.9%
Minority	1,307,658	12,112	0.9%	
Non-Minority Non-low Income	304,384	11,518	3.8%	3.0%
Non-Minority Low Income	50,150	1,666	3.3%	
Total	1,680,375	25,539	1.5%	

Table 7: Northridge / Reseda

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	11,187	3.0%	2.4%
Minority	1,307,658	29,099	2.2%	
Non-Minority Non-low Income	304,384	9,823	3.2%	2.6%
Non-Minority Low Income	50,150	1,407	2.8%	
Total	1,680,375	40,286	2.4%	

Table 8: Pueblo Del Rio

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	338	0.1%	0.1%
Minority	1,307,658	34,565	2.6%	
Non-Minority Non-low Income	304,384	320	0.1%	0.1%
Non-Minority Low Income	50,150	48	0.1%	
Total	1,680,375	34,903	2.1%	

Table 9: DASH B

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	6,240	1.7%	1.3%
Minority	1,307,658	30,571	2.3%	
Non-Minority Non-low Income	304,384	4,883	1.6%	1.3%
Non-Minority Low Income	50,150	930	1.9%	
Total	1,680,375	36,811	2.2%	

Table 10: DASH F

Population Group	Existing Service Area Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	372,717	12,839	3.4%	2.8%
Minority	1,307,658	34,008	2.6%	
Non-Minority Non-low Income	304,384	4,618	1.5%	1.2%
Non-Minority Low Income	50,150	2,876	5.7%	
Total	1,680,375	46,847	2.8%	

New Routes

In addition to increasing hours and/or miles by 25 percent or more on 28 existing routes, The Transit Service Analysis proposes to add 11 new routes that improve community mobility and circulation. When calculating the benefit rate of the proposed new routes, the entire City of Los Angeles was used as the service area, because it represented the population that was eligible to receive new service. The new routes were analyzed both individually and cumulatively. The cumulative benefits analysis exceeded the 4/5 benefit rate threshold for both minority and non-minority low-income populations, indicating the new routes are proposed in areas with higher concentrations of Title VI populations. Of the 11 proposed new routes, only DASH Mission Hills triggered a disproportionate burden in the individual analysis. The individual and cumulative route assessments are outlined below.

Table 11: DASH C

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	4,556	0.4%	0.3%
Minority	2,789,101	15,333	0.5%	
Non-Minority Non-low Income	951,805	3,912	0.4%	0.3%
Non-Minority Low Income	129,501	837	0.6%	
Total	3,894,012	19,889	0.5%	

Table 12: Boyle Heights West

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	937	0.1%	0.1%
Minority	2,789,101	45,505	1.6%	
Non-Minority Non-low Income	951,805	575	0.1%	0.0%
Non-Minority Low Income	129,501	245	0.2%	
Total	3,894,012	46,442	1.2%	

Table 13: Canoga Park

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	11,565	1.0%	0.8%
Minority	2,789,101	42,553	1.5%	
Non-Minority Non-low Income	951,805	10,708	1.1%	0.9%
Non-Minority Low Income	129,501	1,916	1.5%	
Total	3,894,012	54,118	1.4%	

Table 14: Mission Hills

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	5,858	0.5%	0.4%
Minority	2,789,101	12,924	0.5%	
Non-Minority Non-low Income	951,805	4,894	0.5%	0.4%
Non-Minority Low Income	129,501	38	0.0%	
Total	3,894,012	18,782	0.5%	

Table 15: Pacoima

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	4,608	0.4%	0.3%
Minority	2,789,101	74,928	2.7%	
Non-Minority Non-low Income	951,805	3,902	0.4%	0.3%
Non-Minority Low Income	129,501	896	0.7%	
Total	3,894,012	79,536	2.0%	

Table 16: Sylmar

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	2,125	0.2%	0.2%
Minority	2,789,101	19,634	0.7%	
Non-Minority Non-low Income	951,805	1,440	0.2%	0.1%
Non-Minority Low Income	129,501	259	0.2%	
Total	3,894,012	21,759	0.6%	

Table 17: Elysian Valley/Cypress Park

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	3,379	0.3%	0.2%
Minority	2,789,101	32,230	1.2%	
Non-Minority Non-low Income	951,805	3,453	0.4%	0.3%
Non-Minority Low Income	129,501	378	0.3%	
Total	3,894,012	35,609	0.9%	

Table 18: Glassell Park/Highland Park

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	6,367	0.6%	0.5%
Minority	2,789,101	40,572	1.5%	
Non-Minority Non-low Income	951,805	5,484	0.6%	0.5%
Non-Minority Low Income	129,501	816	0.6%	
Total	3,894,012	46,939	1.2%	

Table 19: North Hollywood

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	12,150	1.1%	0.9%
Minority	2,789,101	27,616	1.0%	
Non-Minority Non-low Income	951,805	9,389	1.0%	0.8%
Non-Minority Low Income	129,501	2,619	2.0%	
Total	3,894,012	39,766	1.0%	

Table 20: Van Nuys/North Hills

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	3,985	0.4%	0.3%
Minority	2,789,101	15,463	0.6%	
Non-Minority Non-low Income	951,805	3,724	0.4%	0.3%
Non-Minority Low Income	129,501	828	0.6%	
Total	3,894,012	19,448	0.5%	

Table 21: Sun Valley

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Route	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	6,379	0.6%	0.5%
Minority	2,789,101	31,762	1.1%	
Non-Minority Non-low Income	951,805	4,358	0.5%	0.4%
Non-Minority Low Income	129,501	1,218	0.9%	
Total	3,894,012	38,141	1.0%	

Table 22: Cumulative Benefits of Proposed New Routes

Population Group	City of Los Angeles Population	Within 1/4 Mile of Proposed Routes	Benefit Rate	4/5ths Threshold
Non-Minority	1,104,911	61,729	6%	4%
Minority	2,789,101	356,003	13%	
Non-Minority Non-low Income	951,805	51,667	5%	4%
Non-Minority Low Income	129,501	10,440	8%	
Total	3,894,012	417,732	11%	

Summary of Major Service Changes

LADOT Transit plans to make a number of major service changes to the network by increasing service hours, adjusting alignments, and adding new routes. These changes allow LADOT to better serve the community through improved frequency and expanded spans of service. The subsequent table summarizes the demographic information for each route undergoing a major service change. The routes that did not meet the thresholds for a disparate impact and/or disproportionate burden are marked in the table. These routes warrant additional review to determine possible service alternatives or mitigation measures (see discussion below).

Table 23: Summary of Major Service Changes

Route Name	Minority	Non-Minority Low-Income	Type of Major Service Change					Disparate Impact	Disproportionate Burden
			Reductions		Improvements				
			Service	Alignment	Service	Alignment	New		
Lincoln Heights/Chinatown	88%	1%	x	x				x	
Los Feliz	47%	7%			x	x		x	
Northridge/Reseda	72%	3%			x	x		x	
Pueblo del Rio	99%	<1%			x	x			
DASH B	83%	3%			x	x			
DASH F	73%	6%			x	x		x	
Routes with Service Improvements	83%	3%			x				
DASH C	77%	4%					x		
Boyle Heights West	98%	1%					x		
Canoga Park	79%	4%					x		
Mission Hills	69%	<1%					x		x
Pacoima	94%	1%					x		
Sylmar	90%	1%					x		
Elysian Valley/Cypress Park	91%	1%					x		
Glassell Park/Highland Park	86%	2%					x		
North Hollywood	69%	7%					x		
Van Nuys/North Hills	80%	4%					x		
Sun Valley	83%	3%					x		

Alternatives and Mitigation to Impacted Riders

LADOT Transit has proposed multiple changes aimed at improving service and strengthening the transit network. Some of the proposed changes include targeted service and alignment reductions based on performance, cost inefficiencies, or duplication, while most of the proposed changes focus on expanded service and coverage. The following routes have service changes that result in disparate impacts and disproportionate burdens based on census data:

- DASH F
- Lincoln Heights / Chinatown
- Los Feliz
- Mission Hills
- Northridge / Reseda

LADOT has identified mitigating factors that minimize the impacts of these service changes. Table 24 summarizes the mitigation measures for each major service change resulting in a disparate impact or disproportionate burden.

Table 24: Mitigating Factors

Route	Change	Mitigating Factor
DASH F	Alignment and Frequency Change; Major Investment	<p>LADOT is investing in an extended span and weekend frequency. The alignment is also being changed to connect USC, LA Live, the Arts District, and Union Station. The connection to the Arts District was identified as an area with an unmet mobility need. This was reinforced by a number of stakeholders and community members during public outreach. With the new alignment and investments in service, DASH F is designed to serve multiple roles from work-based circulation to evening entertainment. This change is a part of LADOT's effort to serve the growing demand for evening mobility in downtown Los Angeles.</p> <p>The changes to DASH F triggered a disparate impact because the benefit rate for minorities did not meet the 4/5ths threshold. However, LADOT has made similar design and investment strategies to other routes that serve more minority passengers such as DASH B and E.</p>
Lincoln Heights/Chinatown	Alignment and Frequency Change	<p>LADOT changed how it served the Lincoln Heights and Chinatown areas. The current DASH Lincoln Heights/Chinatown route performs below the system average, generating 27 passengers per revenue hour. The current route underperforms due to its circuitous alignment and unclear role.</p> <p>LADOT proposes a Chinatown circulator that will provide community mobility in Chinatown. LADOT is also proposing an extended alignment for DASH B to replace portions of the existing DASH Lincoln Heights/Chinatown. The new DASH B extension will connect Lincoln Heights, Chinatown, and Downtown Los Angeles. These changes in alignment triggered a disparate impact, however, passengers will receive more frequency and a more direct connection between Lincoln Heights, Chinatown, and Downtown Los Angeles. LADOT believes these designs will improve efficiency and effectiveness.</p> <p>Segments along E Ave 26, Daly St, Mission Rd, and N Main St will not be served by DASH B or DASH Chinatown. However, these segments will still be served by transit via DASH Boyle Heights/East LA and Metro Routes 76, 251, and 751.</p> <p>Segments along Baldwin St and Manitou Ave will not be served by transit. However, these segments are all within a 1/4 mile of transit.</p>
Los Feliz	Alignment and Frequency Change; Major Investment	<p>The current DASH Los Feliz performed below average, generating less than 250 boardings per weekday. LADOT made a number of changes to improve service. It redesigned the route as a bi-directional circulator. The route will connect several trip generators including the Metro Red Line, major hospitals, Marshall High School, and retail shopping. This route will be designed as an all day, all week service. This redesign triggered a disparate impact because the benefit rate was higher for non-minority residents. However, LADOT applied this same approach to numerous routes in its network, including routes with higher rates of minority residents.</p>
Mission Hills	New Route	<p>LADOT received several requests for new DASH service. The agency evaluated these requests using its DASH Needs Assessment model. The model predicted route performance based on several inputs. The model and its inputs were refined using existing performance data.</p> <p>DASH Mission Hills was one of the highest scoring requests. The alignment was updated based on industry best practices. It is designed to serve several retail destinations, educational institutions, and residential communities. This new route triggered a disproportionate burden because the benefits were higher for non-low income residents. However, LADOT proposed this route because it scored well in the model and filled an unmet community circulation. LADOT proposed similar, high-scoring routes in areas with higher populations of non-minority low-income residents.</p>
Northridge / Reseda	Alignment and Frequency Change; Major Investment	<p>DASH Northridge/Reseda performs very well. It averages 45 passengers per revenue hour. As a part of its Transit Service Analysis, LADOT wanted to build upon this success. The route currently operates as a one-way loop. LADOT wants to improve this route by making it bi-directional which makes it easier to connect into the local university, CSUN, and major retail destinations along Nordhoff and Reseda. These investments resulted in a disparate impact because the benefits are higher for non-minority residents. However, LADOT wants to ensure that its most successful circulators offer bi-directional service. LADOT will monitor the performance of this added service.</p>

Public Outreach Activities

LADOT executed a multi-channel, multi-phase outreach plan to collect public feedback during the Transit Service Analysis. LADOT collected input via open houses, public hearings, meetings with stakeholder groups, an online interactive website, a call-in suggestion line, mail, and social media. The first phase of outreach was used to share information about the project and listen to input on recommendations. LADOT held open houses across its service area at the following locations:

Table 25: Open Houses

Date	Time	Hearing Address
6/8/2015	6:00PM – 7:00PM	Marvin Braude Constituent Service Center 6262 Van Nuys Blvd, Van Nuys
6/9/2015	6:00PM – 7:00PM	Henry Medina West LA Parking Enforcement Facility 11214 W Exposition Blvd, Los Angeles
6/15/2015	12:00 PM-1:00 PM	Caltrans District 7 – DOT 100 S Main St, Los Angeles
6/15/2015	6:00 PM-7:00 PM	South Los Angeles Activity Center 7020 South Figueroa, Los Angeles
6/16/2015	6:00 PM-7:00 PM	Harbor Commission Board Room 425 South Palos Verdes, San Pedro
6/17/2015	6:00 PM-7:00 PM	Ramona Hall Community Center 4580 North Figueroa, Los Angeles

LADOT used the input from the open houses to help shape its recommendations. LADOT held public hearings once it developed its draft recommendations. This gave the public another opportunity to provide feedback on the proposed changes.

Table 26: Public Hearings

Date	Time	Hearing Address
8/20/2016	1:00 PM-2:00 PM	Robert M. Wilkinson Multi-Purpose Senior Center, 8956 Vanalden Ave, Northridge
8/22/2016	12:00 PM-1:00 PM	Caltrans District 7 – DOT 100 S Main St, Los Angeles
8/22/2016	6:00 PM-7:00 PM	Constituent Service Center 8475 South Vermont Ave, Los Angeles
8/23/2016	6:00 PM-7:00 PM	Glassell Park Senior Center 3759 Verdugo Rd, Los Angeles
8/24/2016	6:00 PM-7:00 PM	Felicia Mahood Multipurpose Senior Center 11338 Santa Monica Blvd, Los Angeles
8/29/2016	6:00 PM-7:00 PM	San Pedro Regional Branch Library 931 S Gaffey St, San Pedro
8/30/2016	6:00 PM-7:00 PM	Hollywood Recreation Center 1122 Cole Ave, Los Angeles
8/31/2016	6:00 PM-7:00 PM	Marvin Braude Constituent Service Center 6262 Van Nuys Blvd, Van Nuys

Conclusion

LADOT has developed the *Transit Service Analysis* to maximize resources, improve service, and create a more robust network. The agency developed recommendations based on productivity and financial effectiveness, resulting in proposed changes to 33 routes and recommendations for 11 new routes. According to LADOT's Title VI policies, 39 routes qualified as a "major service change." LADOT analyzed these changes and concluded five of them would result in a disparate impact and/or disproportionate burden. The agency identified alternatives or mitigating factors for residents near these impacted routes.

Appendix A

Service Equity Analysis Methodology

A Geographic Information Systems (GIS) based approach was used in this analysis to identify the location of the proposed service changes and compare both the benefits and impacts on the affected minority/non-minority and low-income/non-low-income populations. Affected populations were identified using Census Block Groups (Table B03002: Hispanic or Latino Origin by Race) and Census Tracts (Table B17020H: Poverty Status in the Last 12 Months by Age - White Alone, Not Hispanic or Latino) within 1/4 mile of DASH routes and 1/4 mile of Commuter Express stations. To limit the overestimation of population, a ratio policy rather than an intersection policy was used when calculating population numbers. The population from each block group or census tract was assigned to a route based on the ratio of the block group or tract's area within a 1/4 mile of a route and its total area. If a Census Block Group has a population of 100 and 30 percent of its area falls within the 1/4-mile buffer, the adjusted population for the block group would be 30 (100 x 30 percent).

To establish whether a disparate impact or disproportionate burden exists, LADOT Transit uses the 4/5ths (or 80 percent) threshold. This rule states benefits must be provided to minority/low-income populations at a rate of at least 80 percent of the rate of benefits provided to the non-minority/non-low-income population. Conversely, adverse effects must be borne by the non-minority/non-low-income population at a rate of at least 80 percent of the rate adverse effects are borne by minority/low-income populations.

For example, assume a service area consists of 100 residents, 20 of whom are minority and 80 of whom are non-minority. The agency makes improvements to a route that serves 41 individuals, 40 of whom are non-minority and 1 of who is minority. The following table illustrates this example:

Population Group	Service Area	Within 1/4 Mile of Route	Benefit Rate
Non-Minority	80	40	40 residents out of 80 = 50%
Minority	20	1	1 resident out of 20 = 5%
Total	100	41	41 residents out of 100 = 41%

The benefit rate is the number of residents from the target group affected by the change divided by the total residents from the target group in the service area. In this case, the benefit rate of non-minority residents is 50 percent. Using the four-fifths threshold, the minority benefit rate should not fall below 40 percent ($.80 \times .50 = .40$). In this case, the benefit rate of minority residents is 5 percent, which does not meet the 4/5ths threshold, resulting in a disparate impact.

Attachment 12

Transit Service Analysis Cost Estimate

Abstract[illegible]

TRANSIT SERVICE ANALYSIS COST ESTIMATE - II

New Routes	Route Alignment		Service Hours			Headways			Annual Revenue Hours			Annual Cost Proposed				Vehicles			Notes
	New	Existing	M-F	Sat	Sun	M-F	Sat	Sun	M-F	Sat	Sun	M-F	Sat	Sun	TOTAL	Proposed	Existing	Additional	
DASH Phase I																			
Boyle Heights West	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	28,520	2,808	2,808	2,218,746	234,608	234,608	\$ 2,854,953	8	0	8	No major holidays
Canoga Park	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	28,520	2,808	2,808	3,345,468	354,229	354,229	\$ 4,053,956	8	0	8	No major holidays
Peasdeva	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	38,750	3,744	3,744	6,014,247	472,305	472,305	\$ 5,902,654	12	0	12	No major holidays
Sylmar	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	9,045	908	908	1,254,982	118,076	118,076	\$ 1,490,715	3	0	3	No major holidays
Subtotal									113,285	12,104	12,104	15,179,081	1,613,448	1,613,448	\$ 18,246,448	30	0	30	plus 6 expense (10%)
DASH Phase II																			
Elysian Valley/Cypress Park	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	22,350	1,872	1,872	2,811,425	168,508	168,508	\$ 2,440,501	7	0	7	No major holidays
Glassell Park/Higland Park	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	19,590	1,872	1,872	1,861,228	168,508	168,508	\$ 2,140,236	6	0	6	No major holidays
Marston Hills	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	20,520	2,058	2,058	3,346,490	354,229	354,229	\$ 4,053,956	6	0	6	No major holidays
North Hollywood	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	15,800	1,872	1,872	2,368,124	238,153	238,153	\$ 2,861,435	6	0	6	No major holidays
Van Nuys/Worth Hills	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	9,845	908	908	1,284,562	118,076	118,076	\$ 1,490,715	3	0	3	No major holidays
Sun Valley	X		SA-7P	SA-6P	SA-6P	15 min	20 min	20 min	28,520	2,808	2,808	3,345,468	354,229	354,229	\$ 4,053,956	8	0	8	No major holidays
Subtotal									89,450	9,388	9,388	11,811,588	1,047,915	1,047,915	\$ 13,108,887	30	0	30	plus 6 expense (10%)

RED = attention

* Existing service hours per July 1, 2016, printed schedule

** weekday speed + 1