
Final
Environmental Impact Report

**Newark Center
for Health Sciences & Technology**

SCH #: 2004052080

Lead Agency:
Ohlone Community College District

Prepared by:
Jerry Haag, Urban Planner

November 2004

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Introduction

A Draft Environmental Impact Report (DEIR) dated September 2004 was prepared for this Project and distributed for public review. The proposed Project involves the consideration of a Master Plan for the Newark Center for Health Sciences & Technology. The Master Plan calls for the construction of a 160,000 gross square foot educational building as part of District facilities. Ancillary uses could consist of a 10,000 square foot medical clinic, a day care user and maintenance building. Parking for on-site uses would also be provided. The 81-acre site is located on the west side of Cherry Street, south of Mowry Avenue and east of the Union Pacific Railroad tracks in the City of Newark. The Center is being funded by Measure A, a locally passed bond measure to purchase the land and construct necessary facilities. A full description of the proposed Project is contained in the DEIR document.

Under the California Environmental Quality Act (CEQA) and implementing CEQA Guidelines, after completion of the Draft EIR, lead agencies are required to consult with and obtain comments from public agencies and organizations having jurisdiction by law over elements of the Project and to provide the general public with an opportunity to comment on the Draft EIR. Lead agencies are also required to respond to substantive comments on environmental issues raised during the EIR review period.

As the lead agency for this Project, the Ohlone Community College District held a public review period between September 21, 2004 and November 8, 2004.

This Final EIR document (FEIR) contains all public comments received during the public review process regarding the DEIR and the District's responses to those comments. Included within the document is an annotated copy of the comment letter, identifying specific comments, followed by a response to that comment. The FEIR also contains clarifications and minor corrections to information presented in the DEIR as well as revisions to the proposed Project.

Clarifications and Modifications to the DEIR

The following clarifications and modifications to the DEIR are incorporated by reference into the DEIR document. This section also includes supplemental traffic calculations not included in the DEIR document.

1. Page 1-1 (Table 1-Summary of Impacts and Mitigation Measures): The following Mitigation Measure is hereby deleted from Table 1-1: ~~Mitigation Measure 4.1 1: The following measures shall be incorporated into final building and improvement plans for the project:~~
 - a) ~~Street lights shall be equipped with cut-off lenses and oriented down to minimize unwanted light and glare spill over.~~
 - b) ~~Exterior house lighting and lights on other buildings, especially the proposed recreation building, shall be directed downward.~~This mitigation measure was incorrectly included in Table 1. A similar mitigation measure is included in Table 1 that accomplishes the same objective.
2. Page 1-38 (Table 1-Summary of Impacts and Mitigation Measures): Approval of the proposed Project would increase the amount of wastewater entering the

- sanitary sewer system and would be accommodated by the Union Sanitary District collection, treatment and disposal system. References to solid waste in this table are deleted.
3. Page 104: AM and PM turning movement information presented in Table 12 was collected approximately one year ago; not three years ago as shown on the table. This is a typographical error.
 4. Page 109: The Standards of Significance for Traffic and Transportation impacts is hereby amended as follows. This is based on Comment letter 3.6 submitted by the Alameda County Congestion management Agency.
 - A reduction in service levels below LOS D for signalized intersections. This is based on City of Newark standard for Level of Service included in the Transportation Element of the General Plan;
 - ~~Exceed, either individually or cumulatively, a level of service standards established by the local Congestion Management Agency for designated roads or highways;~~
 - Creation of other significant traffic or circulation impacts, such as creation of unsafe intersections, lack of sufficient sight-line distances and similar safety hazards;
 - Result in inadequate emergency access to the project site;
 - Provision of insufficient parking such that vehicles would be forced to park on adjacent public streets on a regular basis; or
 - Conflict with adopted policies, plans or programs supporting alternative modes of transportation, such as busses, bicycles or pedestrian circulation.
 5. Page 126: The title of Table 15 appearing on this page is changed to read as follows "Future Base and Future Base + Project Intersection LOS."
 5. Page 127: The title of Table 16 appearing on this page is changed to read as follows "Cumulative and Cumulative + Project Intersection LOS."
 6. The following supplemental information is hereby included in the EIR in response to Comments 3.5.3 and 3.5.4.

Table 1A (new)
City of Fremont Approved Project Trip Generation

Project	Trip Calculations	Trips
1. Pacific Commons		
Office/R&D		
Daily	4,698,000 s.f. x 9.049/ksf	42,512
AM Peak	4,698,000 s.f. x 1.08/ksf	5,074 (4,313 in, 761 out)
PM Peak	4,698,000 s.f. x 1.08/ksf	5,074 (913 in, 4,161 out)
Industrial		
Daily	1,122,500 s.f. x 4.501/ksf	5,052
AM Peak	1,122,500 s.f. x 0.57/ksf	640 (448 in, 192 out)
PM Peak	1,122,500 s.f. x 0.64/ksf	718 (115 in, 603 out)

Retail			
Daily	710,000 s.f. x 39.752/ksf	28,224	
AM Peak	710,000 s.f. x 0.44/ksf		312 (187 in, 125 out)
PM Peak	710,000 s.f. x 3.08/ksf		2,187 (1,312 in, 875 out)
Auto Mall			
Daily	300,000 s.f. x 18.97/ksf	5,691	
AM Peak	300,000 s.f. x 1.42ksf		426 (258 in, 168 out)
PM Peak	300,000 s.f. x 1.76/ksf		528 (204 in, 324 out)

2. Fremont MRF:

Daily	192,000 s.f. x 6.8125/ksf	1,308	
AM Peak	192,000 s.f. x 0.375/ksf		72 (36 in, 36 out)
PM Peak	192,000 s.f. x 0.28/ksf		54 (27 in, 27 out)

Source: Kathleen Livermore, Senior Planner, City of Fremont, "EIR – Ohlone College Newark Center for Health Sciences and Technology: Transportation and Circulation Comments," Letter to Simon Barros, Director of Facilities, Ohlone Community College District, November 5, 2004.

Table 15 (revised)
 Future Base and Future Base Plus Project Intersection Level-of-Service (LOS)
 AM and PM Peak Hour Conditions

Intersection	Future Base		Future Base + Project	
	AM LOS	PM LOS	AM LOS	PM LOS
1. Central/Cherry	C 0.79	B 0.62	D 0.82	B 0.63
2. I-880 NB/Mowry	A 0.34	B 0.65	A 0.34	B 0.66
3 I-880 SB/Mowry	A 0.31	B 0.61	A 0.32	B 0.66
4. Cedar/Alpenrose Ct.	A 0.29	A 0.60	A 0.30	A 0.60
5. Cedar/Mowry	A 0.49	A 0.54	A 0.52	A 0.55
6. Cherry/Mowry	B 0.62	D 0.84	B 0.68	D 0.87
7. I-880 NB/Stevenson	A 0.38	B 0.61	A 0.39	B 0.61
8. I-880 SB/Stevenson	A 0.37	B 0.61	A 0.39	B 0.61
9. Balentine/Stevenson	A 0.32	C 0.80	A 0.32	D 0.81
10. Cedar/Stevenson	A 0.43	A 0.40	A 0.45	A 0.41
11. Cherry/Stevenson	B 0.64	D 0.87	B 0.64	D 0.90
12. Boyce/ Auto Mall Pkwy.	A 0.43	C 0.71	A 0.43	C 0.72

Notes:

Intersection LOS is expressed as a Volume/Capacity (v/c) ratio. This methodology is based on the Contra Costa Transportation Authority (CCTA) standards and is consistent with previous transportation studies conducted in the City of Newark (Planning Area 2, Planning Area 4, and Newark Redevelopment Area).

Future base intersection LOS represents vehicle traffic from approved/pending projects in the City of Newark (Central/Timber Retail, Silliman Center, Newpark Mall, and Newark Re-zoning) and the City of Fremont (Pacific Commons and Fremont MRF).

Back up traffic information is included in Appendix 1 of the Final EIR,

Summary of DSEIR Comment Letters

Comment letters were received by the City of Dublin during the 45-day public comment period on the DEIR from the following agencies, organizations and other interested parties.

	Commenter	Date
	Federal Agencies	
	None	
	State Agencies	
2.1	State of California, Office of Planning and Research (OPR)	11/05/04
2.2	State of California, Department of Fish and Game	10/19/04
2.3	State of California, Department of Transportation (Caltrans)	10/19/04
	Local Agencies	
3.1	Alameda County Water District (ACWD)	10/15/04
3.2	Union Sanitary District (USD)	10/20/04
3.3	Newark Police Department	10/25/04
3.4	Alameda County Water District ACWD	10/26/04
3.5	City of Fremont	11/05/04
3.6	Alameda County Congestion Management Agency (ACCMA)	11/08/04



Arnold
Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Jan Boel
Acting Director

November 5, 2004

Letter 2.1

Don Eichelberger
Ohlone Community College District
43600 Mission Boulevard
P.O. Box 3909
Fremont, CA 94539-0390

Subject: Newark Center for Health Sciences & Technology Master Plan
SCH#: 2004052080

Dear Don Eichelberger:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on November 4, 2004, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,


Terry Roberts
Director, State Clearinghouse

Enclosures

cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2004052080
Project Title Newark Center for Health Sciences & Technology Master Plan
Lead Agency Ohlone Community College District

Type EIR Draft EIR
Description A Master Plan to guide the future development of the Newark Center for Health Sciences & Technology. The campus is proposed to consist of a main 160,000 SF building, other outbuildings, parking, landscaping and utility connections to serve the proposed campus.

Lead Agency Contact

Name Don Eichelberger
Agency Ohlone Community College District
Phone (510) 659-6260 **Fax**
email
Address 43600 Mission Boulevard
P.O. Box 3909
City Fremont **State** CA **Zip** 94539-0390

Project Location

County Alameda
City Newark
Region
Cross Streets Cherry Street / Mowry Avenue
Parcel No. 901-0185-013-07 and 901-0185-014

Township	Range	Section	Base
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Proximity to:

Highways I-880
Airports N/A
Railways Union Pacific
Waterways SF Bay
Schools Newark Memorial HS
Land Use The project site is currently used for agricultural production with no major permanent structures. The only structure is a PG&E transmission tower.

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Cumulative Effects; Drainage/Absorption; Economics/Jobs; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 2; Department of Parks and Recreation; Native American Heritage Commission; Department of Fish and Game, Region 3; Department of Water Resources; California Highway Patrol; Caltrans, District 4; San Francisco Bay Conservation and Development Commission; Department of Toxic Substances Control

Date Received 09/20/2004 **Start of Review** 09/21/2004 **End of Review** 11/04/2004

DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5505
FAX (510) 286-5513
TTY (800) 735-2929



*Flex your power!
Be energy efficient!*

Letter 2.2

November 4, 2004

ALA880627
SCH#2004052080

Mr. Don Eichelberger
Ohlone Community College District
43600 Mission Boulevard
Fremont, CA 94539

Dear Mr. Eichelberger:

NEWARK HEALTH SCIENCES CENTER – DRAFT ENVIRONMENTAL IMPACT REPORT

Thank you for including the California Department of Transportation in the environmental review process for the Newark Health Sciences Center. The following comment is based on the Draft Environmental Impact Report (DEIR):

Level of Service

Please verify the DEIR's conclusion that traffic volumes for the Cumulative + Project Year 2025 scenario at the Cedar Boulevard/Mowry Avenue intersection result in level of service E, with a volume to capacity ratio of 0.95; and further that these volumes are conservative and include the previously proposed Sun Microsystems project at the site.

Please feel free to call or email Patricia Maurice of my staff at (510) 622-1644 or patricia_maurice@dot.ca.gov with any questions regarding this letter.

Sincerely,

A handwritten signature in black ink that reads "Timothy C. Sable".

TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

c: Ms. Terry Roberts, State Clearinghouse

Enclosures



DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>

POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500



October 19, 2004

Letter 2.3

Mr. Don Eichelberger
Ohlone Community College District
43600 Mission Boulevard
Fremont, CA 94539

Dear Mr. Eichelberger

Newark Center For Health Sciences & Technology
Ohlone Community College District
SCH # 2004052080

The Department of Fish and Game (DFG) has reviewed the document for the subject project. We do not have specific comments regarding the proposed project and its effects on biological resources. Please be advised this project may result in changes to fish and wildlife resources as described in the California Code of Regulations, Title 14, Section 753.5(d)(1)(A)-(G)¹. Therefore, a de minimis determination is not appropriate, and an environmental filing fee as required under Fish and Game Code Section 711.4(d) should be paid to the Alameda County Clerk on or before filing of the Notice of Determination for this project.

If you have any questions, please contact Mr. Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584.

Sincerely,

Robert W. Floerke
Regional Manager
Central Coast Region

cc: State Clearinghouse

¹ <http://ccr.oal.ca.gov/>. Find California Code of Regulations, Title 14 Natural Resources, Division 1, Section 753



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WILLIAM J. ZENONI
 Finance and Administration Manager

October 15, 2004

Letter 3.1

Mr. Richard Fujikawa
 City of Newark
 37101 Newark Boulevard
 Newark, CA 94560

Dear Mr. Fujikawa:

Subject: Monitoring Wells Located Within - Ohlone College Newark Center, Cherry Street;
 ACWD 2004-78

The District has determined that the following monitoring wells, as shown on the attached sketch, are located within the property boundaries of the development: **3.1.1**

- Monitoring Well No. 5S/1W-07H003**
- Monitoring Well No. 5S/1W-07H004**
- Monitoring Well No. 5S/1W-07J001**

In order to protect the ground water basin which constitutes a major source of water supply for this area, each monitoring well must either be protected or properly destroyed prior to or during development. This is the responsibility of the property owner. If the wells are to remain, a letter so indicating must be sent to the District. If the wells are: 1) no longer required by any regulatory agency; 2) no longer being monitored on a regular basis; or 3) damaged, lost, or the surface seal is jeopardized in any way during the development process, the well/wells must be destroyed in compliance with the City Well Ordinance.

A permit is required for the destruction of each monitoring well. Application for a permit may be obtained from the Alameda County Water District, Engineering Department, at 43885 South Grimmer Boulevard, Fremont. Before a permit is issued, the applicant is required to deposit with the District, cash or check in a sufficient sum to cover the fee for issuance of the permit or charges for field investigation and inspection.


Mr. Richard Fujikawa
Page 2
October 15, 2004

As a further condition, the District reserves the right to refuse water service within this development until such time as well issues are resolved in accordance with the well ordinance.

Compliance with well ordinance requirements does not imply a commitment of water service to this development by Alameda County Water District. Any questions regarding water service should be directed to the Development Division of the District's Engineering Department.

Thank you for your cooperation in this matter.

Sincerely,

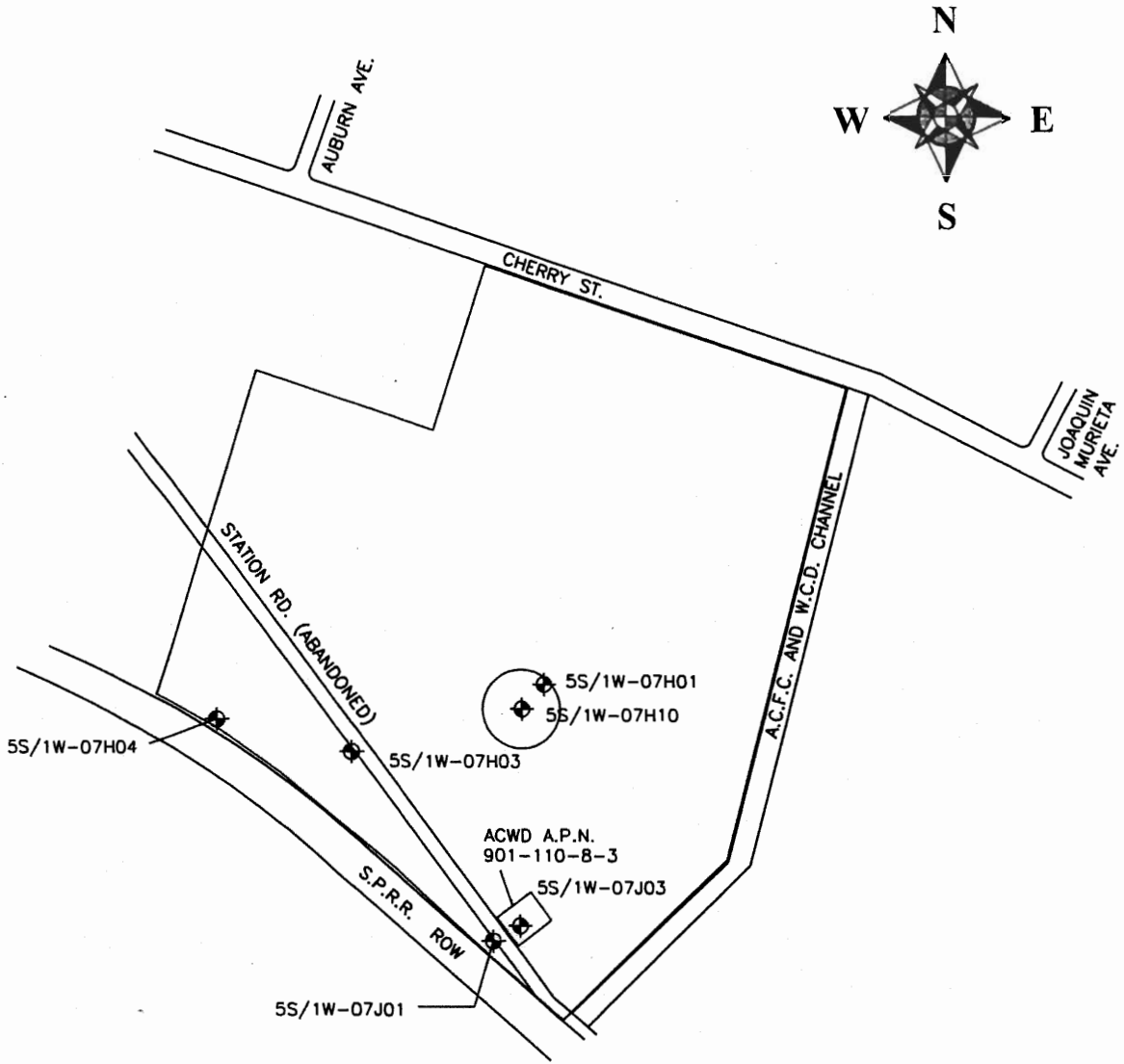





M. Selim Zeyrek
Groundwater Resources Engineer

cs

Attachment

cc: Simon Barros, Ohlone Community College District
Stephen Yazalina, Sandis Humber Jones



-  WATER WELL
-  MONITORING WELL
-  WELL BURIED - NOT FIELD LOCATED

WELL LOCATION MAP



LOCATION: OHLONE NEWARK CENTER
 DATE: 10/7/04
 SCALE: N.T.S. LOCATIONS APPROXIMATE
 DRAWN BY: L. MOORE



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Pat Kite

Anjali Lathi

Jennifer Toy

Dan Wilkowsky

Officers
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General Manager
District Engineer

David M. O'Hara
Attorney

October 20, 2004

Letter 3.2

Ohlone Community College District
P.O. Box 3909
Fremont, CA 94539-0390

Attention: Mr. Simon Barros

RE: Environmental Impact Report – Ohlone College Newark Center for Health Sciences and Technology

Dear Mr. Barros,

Thank you for sending a copy of the Environmental Impact Report (EIR) for the Ohlone College Newark Center for Health Sciences and Technology for USD review and comment. We have the following comments: **3.2.1**

1. Impact 4-11-4 Utilities and Public Services/Wastewater Collection, Treatment and Disposal on Page 1-38 is misleading because the title refers to wastewater collection while the paragraph discusses about solid waste and construction debris. Also, solid waste and other debris that are extracted from the wastewater during treatment are either used as fertilizer or disposed of to landfills in Solano or Merced Counties and not nearest landfill which would be the one located at the end of Mowry Avenue in Fremont. We therefore recommend changing the paragraph to read:

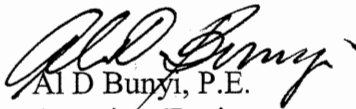
Approval of the proposed project would increase the amount of wastewater entering the sanitary sewer system and will be accommodated by existing Union Sanitary District collection, treatment and disposal facilities.

2. The EIR also indicates that sewage from the project, estimated at 11,144 gpd, will be discharged to the 12-inch diameter main along the southern property line. I would like to confirm that we have sufficient capacity in this line to accommodate the proposed discharge. This connection is preferred by USD instead of a connection to the 18-inch main in Cherry Street. As you are aware of, we have identified a capacity deficiency downstream of the 18-inch main and we are currently working on a project to mitigate this problem. **3.2.2**

Mr. Simon Barros
October 20, 2004
Page 2

If you have any questions, please be free to call me at (510) 477-7617

Truly yours,


Al D Bunyi, P.E.
Associate Engineer

Cc: File

Attachment

Impact	Topic/Impact	Significance/Mitigation Measure	Net Impact After Mitigation
4-11-4	<p>Utilities and Public Services/ Wastewater Collection, Treatment and Disposal Approval of the proposed project would increase the amount of solid waste entering the waste stream. Additional quantities of solid waste, including construction debris, could be accommodated at the nearest landfill. Additional capital equipment and personnel would be funded from user fees and charges (<i>less-than-significant impact</i>).</p>	<p>No mitigation measures are required.</p> <p>Please revise to read:</p>	Less-than-significant
4-11-4	<p>Utilities and Public services/ Wastewater Collection, Treatment and Disposal Approval of the proposed project would increase the wastewater entering the sanitary sewer system and will be accommodated by existing Union Sanitary District collection, treatment and disposal facilities.</p>	<p>Utilities and Public services/ Wastewater Collection, Treatment and Disposal Approval of the proposed project would increase the wastewater entering the sanitary sewer system and will be accommodated by existing Union Sanitary District collection, treatment and disposal facilities.</p>	Less-than-significant
4-11-5	<p>Utilities and Public Services/Solid Waste: Increases in solid waste from the Newark Center Project could be accommodated in the local landfill (<i>less-than significant and no mitigation required</i>).</p>	<p>No mitigation measures are required.</p>	Less-than-significant
4.11-6	<p>Utilities and Public Services/Electricity and Natural Gas: Electrical and natural gas service to the project site could be accommodated (<i>less-than-significant and no mitigation required</i>).</p>	<p>No mitigation measures are required.</p>	Less-than-significant



CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 793-1400 • FAX (510) 794-2306

October 25, 2004

Mr. Simon Barros, Director of Facilities
Ohlone Community College District
43600 Mission Boulevard, Bldg. 10
Fremont, CA 94539

Letter 3.3

Dear Mr. Barros:

Thank you for the opportunity to review the Environmental Impact Report for the Ohlone College Newark Center for Health Services and Technology. This new campus will certainly be a positive addition to our community; however, there are some public safety concerns that I would like to address. Your study indicates there will be an increase in vehicular traffic on thoroughfares, resulting in additional congestion at major intersections and highway on/off ramps. An increase in the daily traffic flow and transient population will certainly impact our staffing levels and require our department to provide additional public safety services that were not anticipated, nor budgeted.

I am sure that you would agree that working together to gain an understanding and agreement as to jurisdictional boundaries, case investigations, traffic accident reports, and routine calls for service would be beneficial for all involved. I would like to meet with you to discuss this matter in further detail before the campus opening. Please feel free to contact me at (510) 794-2315.

Sincerely,

A handwritten signature in black ink, appearing to read 'RAY SAMUELS', with a large, stylized flourish extending to the left.

RAY SAMUELS
Chief of Police



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 Finance and Administration Manager

October 26, 2004

Mr. Simon Barros
 Ohlone Community College District
 P.O. Box 3909
 Fremont, CA 94539-0390

Letter 3.4

Dear Mr. Barros:

Subject: Environmental Impact Report—Ohlone College Newark Center for Health Sciences and Technology

Thank you for the opportunity to comment on the Environmental Impact Report (EIR)-Ohlone College Newark Center for Health Sciences and Technology, which the Alameda County Water District (ACWD) received on September 24, 2004. ACWD has reviewed the report and would appreciate your consideration of the following comments:

Under Environmental Impacts, Impact 4.7-4, Hydrology/Flooding: Degradation of Groundwater Quality, page 84, the following comments should be addressed:

1. ACWD drilling permit applications must be submitted for the construction of geothermal ground-coupled heat pump system wells and well construction must conform to ACWD requirements. Geothermal ground-coupled heat pump system wells must be approved by ACWD prior to their construction. **3.4.1**
2. Interconnection of two or more aquifers will not be permitted. A conductor casing must be installed to separate distinct shallow water-bearing zones from the Newark Aquifer. **3.4.2**
3. The annular space between the conductor casing and the borehole wall must be effectively sealed to prevent it from being a preferential pathway for the movement of pollutants, or contaminants from surface spills and leaks and of poor-quality water from shallow water-bearing zones to the Newark Aquifer. A minimum of 2 inches of sealing material must be maintained between the casing **3.4.3**

and borehole wall. The sealing material must be the same as specified for water wells and approved by ACWD.

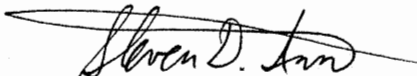
The annular surface seal must not be less than 35 ft in length and the total depth of the wells must not be more than 140 ft below ground surface.

4. ACWD does not allow the use of any fluids within piping in geothermal ground-coupled heat pump system wells other than clean potable water.
5. All wells must be located an adequate distance from buildings and other structures to allow access for well modification, maintenance, repair, and destruction. Iron markers, trace tapes, or wire must be installed at each well to facilitate locating the buried wells.
6. The future destruction of geothermal ground-coupled heat pump system wells must be completed in conformance with ACWD requirements. Destruction of a geothermal ground-coupled heat pump system well requires the complete removal of water from the heat exchange loop, completely drilling out the well, and sealing the well to the surface.

In addition, ACWD has determined that two abandoned water wells and three groundwater monitoring wells are located within the property boundaries of the development. The abandoned water wells must either be brought into compliance or properly destroyed and the groundwater monitoring wells must either be protected or properly destroyed prior to the development. ACWD permit applications must be submitted for the destruction of abandoned water wells and monitoring wells.

Thank you for the opportunity to comment on the EIR report. We look forward to working cooperatively with Ohlone College's staff to address these concerns. If you have any questions regarding this letter, please call M. Selim Zeyrek at (510) 668-4491.

Sincerely,



Steven D. Inn
Groundwater Resources Manager

sz:bbm

November 5, 2004

Mr. Simon Barros, Director of Facilities
Ohlone Community College District
P.O. Box 3909
43600 Mission Boulevard
Fremont, CA 94539-03900

Letter 3.5

**SUBJECT: EIR – Ohlone College Newark Center for Health Sciences and Technology:
Transportation and Circulation Comments**

Dear Mr. Barros:

Thank you for the opportunity to provide comments on the Ohlone College Newark Center for Health Sciences and Technology. The City of Fremont would like to offer the following comments and clarifications on the Transportation and Circulation section of the EIR. These are offered to provide the City of Newark with updated and consistent project information in this section.

The following are my comments regarding the subject EIR. References are made to Section 4.10, "Transportation and Circulation" on pages 100 – 124 of the EIR:

1. Table 12, Page 104: The turning movement counts are over three years old and might not accurately reflect the existing conditions, especially considering that the economic conditions were quite different in 2001. **3.5.1**
2. Table 12, Page 104: The table identifies Intersection No. 11, Cherry/Stevenson LOS analysis as an unsignalized intersection. The intersection is a signalized intersection, and should be analyzed as a signalized intersection. **3.5.2**
3. Future base traffic conditions, Page 104: This section identifies only four developments in the City of Newark for background conditions. There are also two currently approved developments in the City of Fremont that could likely affect traffic flows in the study area. The two developments are: **3.5.3**
 - a) Pacific Commons. The development is located on Auto Mall Parkway between Christy Street and Boyce Road. This development, approved by City Council in 2003,

November 5, 2004

Mr. Simon Barros, Director of Facilities
Ohlone Community College District
P.O. Box 3909
43600 Mission Boulevard
Fremont, CA 94539-03900

Letter 3.5

**SUBJECT: EIR – Ohlone College Newark Center for Health Sciences and Technology:
Transportation and Circulation Comments**

Dear Mr. Barros:

Thank you for the opportunity to provide comments on the Ohlone College Newark Center for Health Sciences and Technology. The City of Fremont would like to offer the following comments and clarifications on the Transportation and Circulation section of the EIR. These are offered to provide the City of Newark with updated and consistent project information in this section.

The following are my comments regarding the subject EIR. References are made to Section 4.10, "Transportation and Circulation" on pages 100 – 124 of the EIR:

1. Table 12, Page 104: The turning movement counts are over three years old and might not accurately reflect the existing conditions, especially considering that the economic conditions were quite different in 2001. **3.5.1**
2. Table 12, Page 104: The table identifies Intersection No. 11, Cherry/Stevenson LOS analysis as an unsignalized intersection. The intersection is a signalized intersection, and should be analyzed as a signalized intersection. **3.5.2**
3. Future base traffic conditions, Page 104: This section identifies only four developments in the City of Newark for background conditions. There are also two currently approved developments in the City of Fremont that could likely affect traffic flows in the study area. The two developments are: **3.5.3**
 - a) Pacific Commons. The development is located on Auto Mall Parkway between Christy Street and Boyce Road. This development, approved by City Council in 2003,

Sincerely,

Kathleen Livermore
Senior Planner

KL/ms

consists of 4,698,000 square feet of Office/R&D, 1,122,500 square feet of Industrial, 710,000 square feet of Retail, and 300,000 square feet of Auto Mall.

- b) Fremont Material Recovery Facility (MRF). The development is located at 41149 Boyce Road (between Stevenson Boulevard and Stewart Avenue). It consists of 192,000 square feet of Waste Transfer Facility.

4. Table 13, Page 106: Include trip generation for the two developments described in comment number 3 above as follows: **3.5.4**

Project	Trip Rate	Trips
Pacific Commons		
Office/R&D		
Daily	4,698,000 sq. ft. x 9.049/ksf	42,512
AM Peak	4,698,000 sq. ft x 1.08	5,074 (4313 in; 761 out)
PM Peak	4,698,000 sq. ft x 1.08	5,074 (913 in; 4161 out)
Industrial		
Daily	1,122,500 sq. ft. x 4.501/ksf	5052
AM Peak	1,122,500 sq. ft. x 0.57/ksf	640 (448 in; 192 out)
PM Peak	1,122,500 sq. ft. x 0.64/ksf	718 (115 in; 603 out)
Retail		
Daily	710,000 sq. ft. x 39.752/ksf	28,224
AM Peak	710,000 sq. ft. x 0.44/ksf	312 (187 in; 125 out)
PM Peak	710,000 sq. ft. x 3.08/ksf	2,187 (1,312 in; 875 out)
Auto Mall		
Daily		5,691
AM Peak		426 (258 in; 168 out)
PM Peak		528 (204 in; 324 out)
Fremont MRF		
Daily		1308
AM Peak		72 (36 in; 36 out)
PM Peak		54 (27 in; 27 out)

5. Table 15, Page 111: There is a conflict between the title of the table and the columns heading (the title says “Existing and Future Base, but the columns headings says “Future Base and “Future Base + Project). **3.5.5**

6. Table 15, Page 111: Please revise the table to reflect the background traffic in Comment 4 above (i.e. to reflect the traffic from Pacific Commons and Fremont MRF). Please do the same for other related tables. **3.5.6**

Thank you again for the opportunity to provide these comments. If you have any questions regarding these comments/clarifications, please call me at (510) 494-4438.



ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
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AC Transit

Director
Dolores Jaquez

Alameda County

Supervisors
Nate Milby
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Mayor
Beverly Johnson

City of Albany

Mayor
Peggy Thomsen

BART

Chairperson
Director
Pete W. Snyder

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Councilmember
Kris Worthington

City of Dublin

Councilmember
George A. Zika

City of Emeryville

Councilmember
Nora Davis

City of Fremont

Mayor
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City of Hayward

Mayor
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City of Livermore

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City of Newark

Vice Mayor
Luis Freitas

City of Oakland

Vice Chairperson
Councilmember
Larry Reid

City of Piedmont

Councilmember
Jeff Wieler

City of Pleasanton

Mayor
Tom Pico

City of San Leandro

Mayor
Sheila Young

City of Union City

Mayor
Mark Green

Executive Director

Dennis R. Fay

November 8, 2004

Mr. Simon Barros
Director of Facilities
Ohlone Community College District
43600 Mission Boulevard
P O Box – 3909
Fremont, CA 94539-0390

Letter 3.6

SUBJECT: Comments on the Environmental Impact Report (EIR) for the Ohlone College Newark Center for Health Sciences and Technology in the City of Newark

Dear Mr. Barros:

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the Ohlone College Newark Center for Health Sciences and Technology in the City of Newark. Located within the City of Newark, the 81-acre site is located west of Cherry Street, south of Mowry Avenue and east of Union Pacific Railroad tracks. Facilities proposed under the Master Plan include approximately 182,000 gross square feet of classrooms, related educational space, faculty and staff offices and support uses. Parking for 650 vehicles would also be provided as well as on-site landscaping, service roads, a detention basin and extension of water, sewer, natural gas, telecommunication and cable television service.

The ACCMA respectfully submits the following comments. Where possible, EIR page numbers are referenced.

- Page 6, Project Description, Enrollment and Staffing: It is not clear as to how many classes would be offered at what time of the day. This information is critical to estimate the trip generation rate, particularly the Peak Hour rate. The method to estimate the trip generation appears to indicate that the classes would be offered in a uniform basis throughout the day so that the trips generated from the project would be uniform. If the campus is oriented towards working adults, then many classes would be held in the evening and the PM peak hour trips would be more than identified. Please clarify the schedule of classes along with any potential impact. **3.6.1**
- Page 110, Table 14 – Trip Generation: ITE Trip Generation, 7th Edition and San Diego Association of Governments (SANDAG)'s document on 'Traffic Generators' were used to estimate the trip generation from the project area. Per ITE report, Junior/Community **3.6.2**

College (# 540) has a trip generation rate of 0.16 during the PM peak period as opposed to the PM Peak rate of 0.12 used in the EIR. Further, in this regard, it would be appropriate to use a trip generation rate that was based on a local facility whenever possible. Therefore, it may be more accurate to use the trip generation rate estimated from the existing Community Colleges in the East Bay, if it is available. Please modify the trip generation table appropriately.

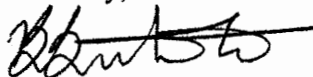
- Page 108 & 109, ACCMA, Standard of Significance for Level of Service: Reference to ACCMA's Congestion Management Program (CMP) standards from this section should be deleted. The standard referenced in the CMP is for the LOS Monitoring Program identified in the CMP and is applicable only for monitoring *existing* conditions. This project is subject to the requirements of the Land Use Analysis Program of the CMP and for that element the Alameda County CMA does not have a policy for determining a threshold of significance. Professional judgment should be applied to determine the significance of project impacts. Similar references on page 109, the second bullet on the Standard of Significance, and on page 113, Year 2010 Impacts on MTS routes should also be deleted or changed appropriately. 3.6.3

- Impact on CMP roadways: Should there be any deficiency identified (LOS F) in the future on the CMP roadways in the vicinity of the project site, the City of Newark could be required to prepare deficiency plans. The College should participate in funding any necessary improvements to improve the LOS. 3.6.4

- Page 114, Public Transit: It appears that currently there is no AC Transit route serving the project site because the only AC Transit service, Route 232 (Ohlone College), that served the site earlier was discontinued due to low ridership. However, based on the discussions with the AC Transit staff, the report states that the AC Transit 213 (Mowry) route that connects to Fremont BART station would be extended from the Newpark Mall to the project site. Documentation that indicates that the AC Transit can provide this service should be made available. 3.6.5

Once again, thank you for the opportunity to comment. Should you have any questions or require any additional information, please do not hesitate to contact me at (510) 836-2560 ext.24.

Sincerely,



Saravana Suthanthira
Associate Transportation Planner

cc: John Becker, Community Development Director, City of Newark
file: CMP - Environmental Review Opinions - Responses - 2004

Annotated Comment Letters and Responses

Letter 2.1: State of California, Office of Planning and Research (OPR)

- Comment: The State Clearinghouse distributed the Draft EIR to potentially affected state agencies between September 21 and November 4, 2004.

Response: Comment acknowledged and no further action is required.

Letter 2.2: State of California, Department of Fish and Game

- Comment: The Department does not have specific comments on the proposed project, however, the project could result in changes to fish and wildlife resources. Therefore, a de minimum finding is not appropriate and an environmental filing fee is required to be paid before filing a Notice of Determination.

Response: Comment acknowledged. An environmental filing fee will be paid with the filing of a Notice of Determination.

Letter 2.3: State of California, Department of Transportation (Caltrans)

- Comment: Please verify the DEIR's conclusion that traffic volumes for the Cumulative + Project Year 2025 scenario at the Cedar Boulevard/Mowry Avenue intersection result in level of service E, with a volume to capacity ratio of 0.95; and further that these volumes are conservative and include the previously proposed Sun Microsystems project at the site.

Response: Year 2025 cumulative traffic volumes were based directly on the Alameda County Congestion Management Agency (ACCMA) transportation model output. ACCMA model output is based on the Association of Bay Area Governments (ABAG) Projections 2002 for land uses within the City of Newark (and elsewhere). Projected land uses for the specific project site's traffic analysis zone (TAZ) included office and R&D development consistent with the previously approved Sun Microsystems development. Therefore, cumulative traffic projections are very conservative as they contain development on the site that would generate significantly more traffic than the currently proposed project.

As a result of these cumulative volumes, significant impacts would occur at the Cedar/Mowry intersection under both cumulative and cumulative plus project conditions. With cumulative (no project) volumes, the intersection would be operating at LOS E (0.94) during the PM peak hour. With project traffic added, the intersection would operate at LOS E (0.95) during the same time period. Mitigation measures for this intersection have been recommended under cumulative (no project) conditions. With mitigation, the intersection would operate at LOS D (0.85) under cumulative (no project) conditions and LOS D (0.86) with project traffic during the PM peak hour.

Letter 3.1: Alameda County Water District (October 15, 2004)

- Comment 3.1.1: ACWD has determined that three District monitoring wells are located on the site. Wells must either be protected properly or destroyed prior to development on the site. This is the decision of the property owner. If the wells are to remain, a letter so indicating must be sent to the District. Necessary permits should also be obtained from the District. The District reserves the right to refuse water service to the development until water well issues are resolved.

Response: Comment acknowledged. The District will be notified if existing monitoring wells are to be destroyed and necessary permits will be obtained prior to any demolition.

Letter 3.2: Union Sanitary District

- Comment 3.2.1: The District recommends changing the text of Impact 4.11-4 on Table 1 (page 1-38) to read as follows "Approval of the proposed Project would increase the amount of wastewater entering the sanitary sewer system and would be accommodated by the Union Sanitary District collection, treatment and disposal system." The revised text change is recommended due to potential confusion in the DEIR regarding wastewater and solid waste material that would be generated by the project.

Response: The suggested text change is hereby made by reference and incorporated into the text DEIR Table 1. Impact 4.11-4 is correctly identified on page 129 of the text of the DEIR. This change is included in the previous section entitled "Changes and Modifications to the DEIR."

- Comment 3.2.2: The District has sufficient capacity to accommodate the estimated amount of wastewater (approximately 11,144 gallons per day) generated by the project and discharged into an existing 12-inch line along the westerly property line. Although there is a deficiency in existing downstream sewer facilities, this is currently being corrected by the District.

Response: The District's comment is acknowledged and confirms the assessment made regarding wastewater collection, treatment and disposal presented in the DEIR.

Letter 3.3: Newark Police Department

- Comment 3.3: Although the Department is supportive of the proposed Project, construction of the Project will result in an increase in vehicular traffic on thoroughfares and increased congestion at major intersections and freeway ramps.

Response: The DEIR acknowledges that there would be increases for police calls for services (Impact 4.11-1). Although this is identified as a less-than-significant impact since the District anticipates having their own security staff on site, a meeting with the Newark Police Department is recommended.

Letter 3.4: Alameda County Water District (October 26, 2004)

- Comment 3.4.1: Drilling permit applications must be submitted for the construction of geothermal ground-coupled heat pumps and all construction must conform to ACWD requirements. Proposed heat pump systems must be approved by ACWD prior to construction.

Response: The proposed heat pump system will be designed and constructed in accordance with ACWD standards. Necessary permits will be obtained from the District prior to heat pump installation.

- Comment 3.4.2: Interconnection of two or more aquifers will not be permitted and a conductor casing must be installed to separate shallow water-bearing zones from the Newark Aquifer.

Response: Comment acknowledged. The Project engineering detail will be resolved prior to application for permits from the District.

- Comment 3.4.3: Drilling permit applications must be submitted for the construction of geothermal ground-coupled heat pumps and all construction must conform to ACWD requirements. Proposed heat pump systems must be approved by ACWD prior to construction. An annular space must be between the conductor casing and the borehole must be sealed. No fluids should be used within piping of the heat pump system. All wells must be located an adequate distance from buildings and other structures to allow adequate access. The future destruction of geothermal heat pump systems must be accomplished per ACWD standards.

Response: The proposed heat pump system will be designed and constructed in accordance with ACWD standards. Necessary permits will be obtained from the District prior to heat pump installation and all other requirements of the ACWD will be met.

Letter 3.5: City of Fremont

- Comment 3.5.1. On Table 12, page 104, the turning movement counts are over three years old and might not accurately reflect the existing conditions, especially considering that the economic conditions were quite different in 2001.

Response: The intersection turning movement counts conducted for the Ohlone College Newark Center draft transportation section was conducted in April 2003 and are just over a year old. This is a typographical error that is corrected in the preceding section entitled "Changes and Modifications to the DEIR."

- Comment 3.5.2: Table 12 on page 104 identifies Intersection No. 11, Cherry/Stevenson LOS analysis as an unsignalized intersection. This intersection is signalized, and should be analyzed as a signalized intersection.

Response: The Cherry/Stevenson intersection listed in Table 12 was analyzed as a signalized intersection throughout the draft analysis. The footnote reference (#3) for Table 12 stating that the unsignalized LOS is expressed in seconds of delay has been removed/corrected in the section above entitled Clarifications and Modifications to the DEIR.

- Comment 3.5.3: Regarding future base traffic conditions on page 104, this section identifies only four developments in the City of Newark for background conditions. There are also two currently approved developments in the City of Fremont that could likely affect traffic flows in the study area. These two developments are:
 - a) Pacific Commons. The development is located on Auto Mall Parkway between Christy Street and Boyce Road. This development, approved by City Council in 2003, consists of 4,698,000 square feet of Office/R&D, 1,112,500 square feet of Industrial, 710,000 square feet of Retail, and 300,000 square feet of Auto Mall.
 - b) Fremont Material Recovery Facility (MRF). The development is located at 41149 Boyce Road (between Stevenson Boulevard and Stewart Avenue). It consists of 192,000 square feet of Waste Transfer Facility.

Response: These approved projects have been included in Future Base and Future Base plus Project Conditions analyses. See the FEIR section entitled "Clarifications and Modifications to the DEIR".

- Comment 3.5.4: On Table 13 page 106, include the trip generation for the two developments described in comment number 3.5. 3 above.

Response: Please see the revised Approved Project Trip Generation shown in the section entitled Clarifications and Modifications to the DEIR.

- Comment 3.5.5: On Table 15, page 111 there is a conflict between the title of the table and the columns heading (the title says “Existing and Future Base,” but the columns heading says “Future Base and Future Base + Project).

Response: The title heading on Table 15 is incorrect. The title should read “Future Base and Future Base + Project.” Intersection LOS listed in Table 15 is correct for future base and future base plus project conditions. This information is corrected in the section above entitled “Clarifications and Modifications to the DEIR.”

- Comment 3.5.6: Table 15, Page 111: Please revise Table 15 (page 111) to reflect the background traffic in Comment 3.5. 4, above (i.e. to reflect the traffic from Pacific Commons and Fremont MRF). Please do the same for other related tables.

Response: Based on approved project trip distribution information supplied by City of Fremont Engineering staff (personal conversation between Peter Galloway of Omni Means and Kunle Odumade of the City of Fremont Public Works Department, 11/10/04, approved project trips from the Pacific Commons and Fremont MRF projects were added to future base (no project) traffic volumes. Vehicle and truck traffic from these approved projects would primarily affect the arterial routes of Auto Mall Parkway, Boyce Road, Cherry Street, and Stevenson Boulevard in the project study area.

As part of approved project development in the City of Fremont, specific circulation improvements would occur at project study intersections located south of the project site. As part of the Pacific Commons development, the Auto Mall Parkway/Boyce Road intersection would be improved with additional north-south through lanes on Boyce Road (two in each direction). Other turn lanes would be added on Auto Mall Parkway and Auto Mall Circle to accommodate anticipated traffic in/out of the Pacific Commons area. At the Stevenson Boulevard/Boyce Road intersection, an additional westbound left-turn lane would be constructed on Stevenson Boulevard to accommodate Pacific Commons traffic coming to/from Stevenson Boulevard.

Both of these circulation improvements have been assumed as part of revised future base (no project) conditions.

With additional approved project traffic from the City of Fremont, both future base and future base plus project intersection LOS have been recalculated in Table 15 of the OCCD DEIR (see the “Corrections and Modifications to the DEIR,” section above). As shown in the revised table, all project study intersections would continue to operate at LOS D or better during the AM and PM peak hour with planned circulation improvements.

Letter 3.6: Alameda County Congestion Management Agency

- Comment 3.6.1. The Project Description (page 6) contains information on number of classes to be offered at specific times of day. This information is critical to estimate project trip generation. The method used to estimate trips appears to indicate that classes would be offered on a uniform basis throughout the day. If the campus is to be oriented to working adults many classes will be offered in the evening and more PM peak hour trips would be generated. Please clarify with a schedule of classes along with any potential impact.

Response: The DEIR was prepared as early in the Master Plan process as possible, consistent with CEQA objectives. District staff has not yet identified a schedule of academic classes for the Newark Center facility, so the information requested by the commentor could not be used in determining trip generation. Therefore, the EIR consultant used the most recent and nationally recognized standardized trip information contained in the latest edition of ITE's Trip Generation Handbook. This was supplemented by trip generation information published by the San Diego Association of Governments (SANDAG). Therefore, the District believes the trip generation information contained in the DEIR accurately portrays the anticipated operation of the Newark Center facility.

- Comment 3.6.2: ITE Trip Generation and San Diego Association of Governments (SANDAG)'s document on "Traffic Generators" were used to estimate the trip generation from the project area (see Page 110, Table 14). Per ITE report, Junior/Community College (#540) has a trip generation rate of 0.16 during the PM peak period as opposed to the PM peak rate of 0.12 used in the EIR. Further, in this regard, it would be appropriate to use a trip generation rate that was based on the local facility whenever possible. Therefore, it may be more accurate to use the trip generation rate estimated from the existing Community Colleges in the East Bay, if it is available. Please modify the trip generation table appropriately.

Response: Daily and peak hour trip generation for the proposed project was based on the most conservative Junior/Community College trip rates found in both ITE (7th Edition, 2003) and SANDAG (2002). The daily trip generation rate is identical in both references. However, the AM peak hour rate for Junior/Community Colleges is higher in SANDAG and this rate was used in the DEIR. The PM peak hour trip generation rate found in ITE (land use #540) is listed as 0.12 trips per student, not 0.16 trips per student as previously stated. This peak hour rate was higher than SANDAG and was used in the DEIR.

Daily and peak hour trip generation counts at other Ohlone College campuses were not possible during the project analyses. Although these counts would have been preferable, project campuses were not in full session during project analyses in the summer months.

- Comment 3.6.3: Reference is made to standards of significance used by the ACCMA's CMP should be deleted. These are found on pages 108, 109 and 113 of the document. The standard referenced in the DEIR is for the LOS Monitoring system and is applicable for monitoring existing conditions. Professional judgment should be used to assess level of significance.

Response: References to use of ACCMA standards of significance on pages 1098 and 109 DEIR are hereby deleted by reference. (See the FEIR section entitled "Changes and Modifications to the DEIR.") The reference to the ACCMA on page 113 of the document regarding ACCMA MTS routes are provided in the DEIR for reference and do not relate to a standard of significance.

- Comment 3.6.4: Should there be any deficiency to future CMP roadways in the vicinity of the project site, the City of Newark could be required to prepare deficiency plans. The college should participate in any funding of improvements to improve the LOS.

Response: This comment is acknowledged. No such conditions have been identified in this DEIR. Funding of any LOS deficit conditions would be negotiated between the City of Newark and the District.

- Comment 3.6.5: There is currently no AC Transit bus service to the project site. However, based on discussions contained in the report, it appears that AC Transit Route 213 would be extended from NewPark Mall to serve the project site. Documentation that indicates that AC Transit can provide service should be made available.

Response: Information contained in the DEIR is based on a personal communication between the DEIR traffic consultant and AC Transit route planning staff. Attempts will be made to provide written documentation of this statement, however, actions of the AC Transit staff are beyond the control of the Ohlone Community College District.

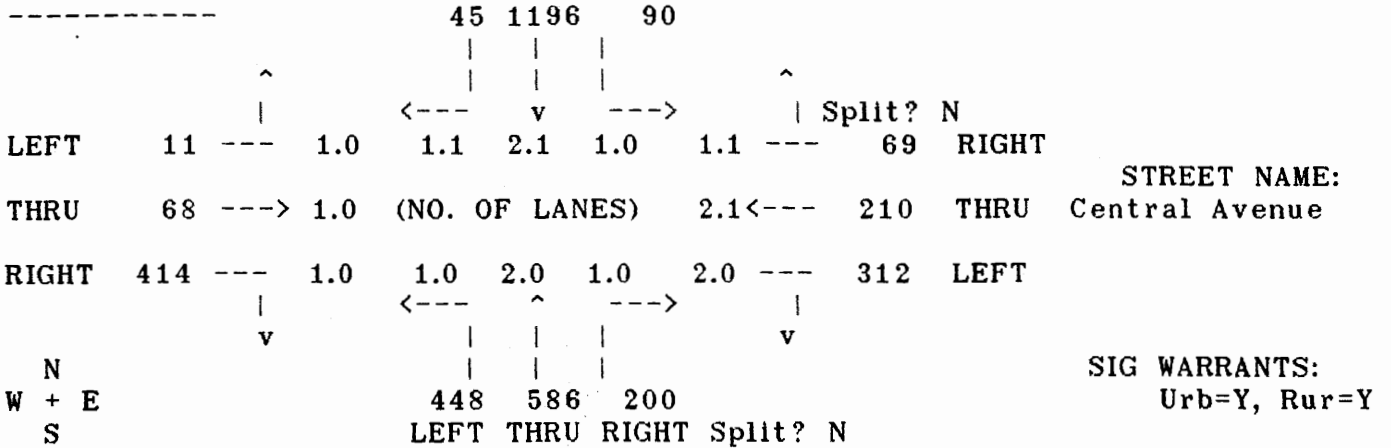
APPENDIX 1: SUPPLEMENTAL TRAFFIC CALCULATIONS

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 1 Cherry Street/Central Avenue City of Newark
 Count Date APRIL 2003 Time 7:00-9:00 AM Peak Hour 7:15-8:15 AM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL



STREET NAME:
Central Avenue

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	200	28 *	1650	0.0170	
THRU (T)	586	586	3300	0.1776	
LEFT (L)	448	448	1650	0.2715	0.2715
SB RIGHT (R)	45	45	1650	0.0273	
THRU (T)	1196	1196	3300	0.3624	
LEFT (L)	90	90	1650	0.0545	
T + R		1241	3300	0.3761	0.3761
EB RIGHT (R)	414	0 *	1650	0.0000	
THRU (T)	68	68	1650	0.0412	0.0412
LEFT (L)	11	11	1650	0.0067	
WB RIGHT (R)	69	69	1650	0.0418	
THRU (T)	210	210	3300	0.0636	
LEFT (L)	312	312	3000	0.1040	0.1040
T + R		279	3300	0.0845	

TOTAL VOLUME-TO-CAPACITY RATIO: 0.79
 INTERSECTION LEVEL OF SERVICE: C

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AA.VOL,CAP=

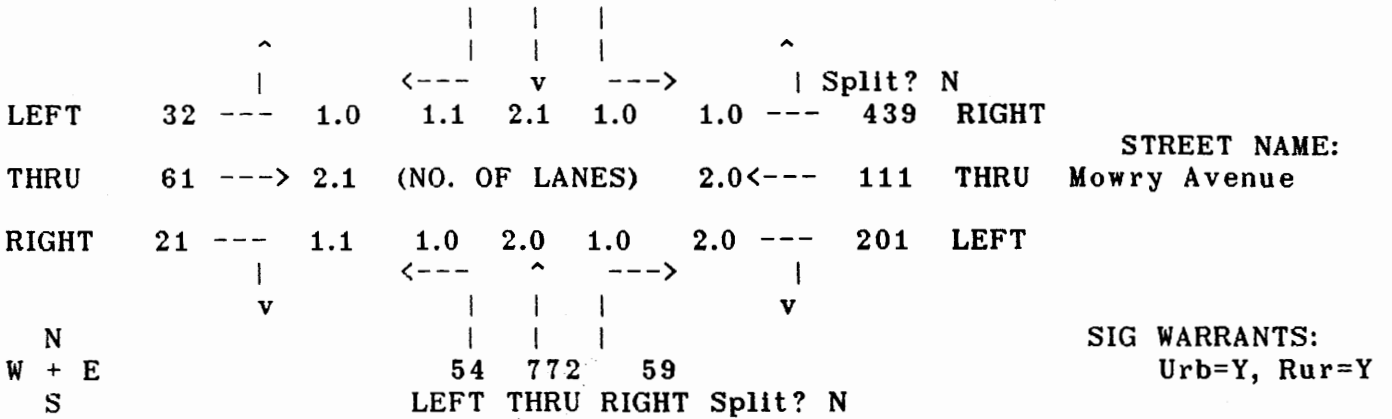
Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 6 Cherry Street/Mowry Avenue
 Count Date APRIL 2003 Time 7:00-9:00 AM

City of Newark
 Peak Hour 7:30-8:30 AM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL
 ----- 38 1610 345



STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	59	0 *	1650	0.0000	
THRU (T)	772	772	3300	0.2339	
LEFT (L)	54	54	1650	0.0327	0.0327
SB RIGHT (R)	38	38	1650	0.0230	
THRU (T)	1610	1610	3300	0.4879	
LEFT (L)	345	345	1650	0.2091	
T + R		1648	3300	0.4994	0.4994
EB RIGHT (R)	21	21	1650	0.0127	
THRU (T)	61	61	3300	0.0185	
LEFT (L)	32	32	1650	0.0194	
T + R		82	3300	0.0248	0.0248
WB RIGHT (R)	439	94 *	1650	0.0570	
THRU (T)	111	111	3300	0.0336	
LEFT (L)	201	201	3000	0.0670	0.0670

TOTAL VOLUME-TO-CAPACITY RATIO: 0.62
 INTERSECTION LEVEL OF SERVICE: B

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 7 I-880 NB Off/Stevenson Blvd.

City of Newark

Count Date APRIL 2003

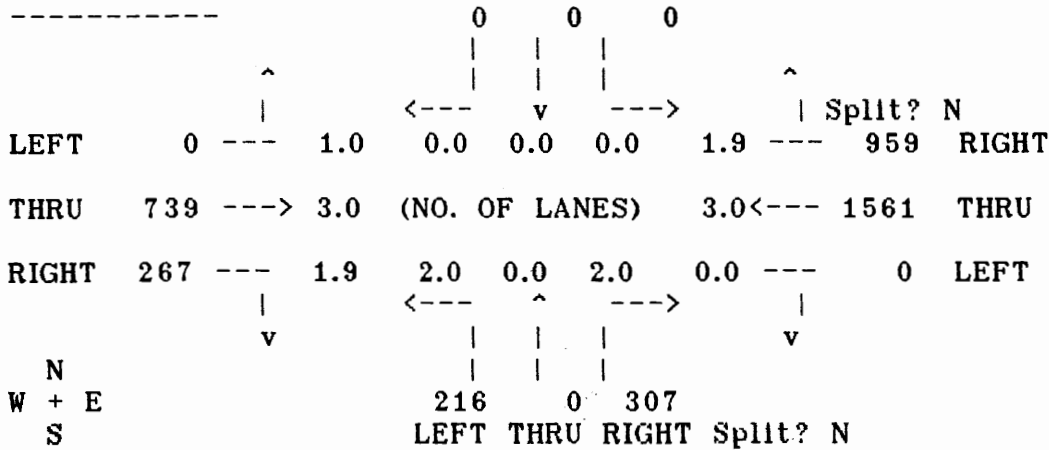
Time 7:00-9:00 AM

Peak Hour 7:45-8:45 AM

CCTA METHOD

RIGHT THRU LEFT

2-PHASE SIGNAL



STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: I-880 NB Off

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	307	307	3273	0.0938	0.0938
NB LEFT (L)	216	216	3273	0.0660	
EB RIGHT (R)	267	267	1800	0.1483	
EB THRU (T)	739	739	5400	0.1369	
EB LEFT (L)	0	0	1800	0.0000	0.0000
WB RIGHT (R)	959	959	1800	0.5328	
WB THRU (T)	1561	1561	5400	0.2891	0.2891

TOTAL VOLUME-TO-CAPACITY RATIO: 0.38
INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 8 I-880 SB Off/Stevenson Blvd. City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 8:00-9:00 AM

CCTA METHOD

RIGHT THRU LEFT

2-PHASE SIGNAL

			356	0	382				
			<---	v	---			Split? N	
LEFT	0	---	2.0	0.0	2.0	1.9	---	444	RIGHT
THRU	606	---	(NO. OF LANES)			3.0	---	1379	THRU
RIGHT	212	---	0.0	0.0	0.0	0.0	---	0	LEFT
			<---	^	---				
N			0	0	0				
W + E			LEFT THRU RIGHT			Split? N			
S									

STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: I-880 SB Off

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	356	356	3273	0.1088	
LEFT (L)	382	382	3273	0.1167	0.1167
EB RIGHT (R)	212	212	1800	0.1178	
THRU (T)	606	606	5400	0.1122	
WB RIGHT (R)	444	444	1800	0.2467	
THRU (T)	1379	1379	5400	0.2554	0.2554

TOTAL VOLUME-TO-CAPACITY RATIO:

0.37

INTERSECTION LEVEL OF SERVICE:

A

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 9 Albrae-Balentine/Stevenson Blvd. City of Newark

Count Date APRIL 2003

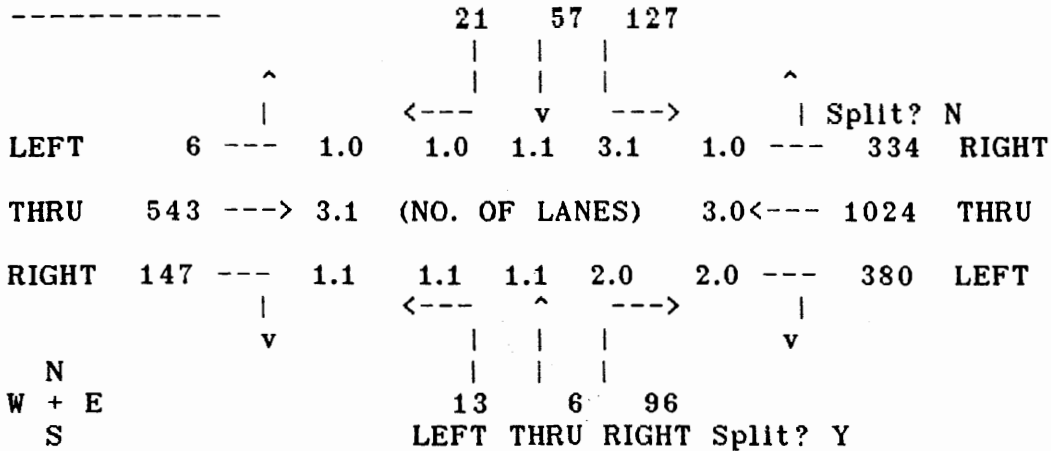
Time 7:00-9:00 AM

Peak Hour 8:00-9:00 AM

CCTA METHOD

RIGHT THRU LEFT

6-PHASE SIGNAL



STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Albrae-Balentine

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	96	0 *	3000	0.0000	
THRU (T)	6	6	1650	0.0036	
LEFT (L)	13	13	1650	0.0079	
T + L		19	1650	0.0115	0.0115
SB RIGHT (R)	21	15 *	1650	0.0091	
THRU (T)	57	57	1650	0.0345	
LEFT (L)	127	127	4304	0.0295	
T + L		184	4304	0.0428	0.0428
EB RIGHT (R)	147	147	1650	0.0891	
THRU (T)	543	543	4950	0.1097	
LEFT (L)	6	6	1650	0.0036	
T + R		690	4950	0.1394	0.1394
WB RIGHT (R)	334	285 *	1650	0.1727	
THRU (T)	1024	1024	4950	0.2069	
LEFT (L)	380	380	3000	0.1267	0.1267

TOTAL VOLUME-TO-CAPACITY RATIO: 0.32

INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 10 Cedar Boulevard/Stevenson Blvd. City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 7:30-8:30 AM

CCTA METHOD		RIGHT THRU LEFT						6-PHASE SIGNAL	
-----		115	9	400					
LEFT	50	1.0	1.0	1.1	2.1	1.0	54	RIGHT	
THRU	382	2.1	(NO. OF LANES)			2.0	850	THRU	
RIGHT	4	1.1	1.1	1.1	1.0	1.0	47	LEFT	
N		LEFT THRU RIGHT						Split? N	
W + E		2 1 1						Split? Y	
S									

STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cedar Boulevard

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	1	0 *	1650	0.0000	
THRU (T)	1	1	1650	0.0006	
LEFT (L)	2	2	1650	0.0012	
T + L		3	1650	0.0018	0.0018
SB RIGHT (R)	115	65 *	1650	0.0394	
THRU (T)	9	9	1650	0.0055	
LEFT (L)	400	400	3000	0.1333	
T + L		409	3000	0.1363	0.1363
EB RIGHT (R)	4	4	1650	0.0024	
THRU (T)	382	382	3300	0.1158	
LEFT (L)	50	50	1650	0.0303	0.0303
T + R		388	3300	0.1170	
WB RIGHT (R)	54	0 *	1650	0.0000	
THRU (T)	850	850	3300	0.2576	0.2576
LEFT (L)	47	47	1650	0.0285	

TOTAL VOLUME-TO-CAPACITY RATIO: 0.43
 INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/11/04

INTERSECTION 11 Cherry-Boyce/Stevenson Blvd.

City of Newark

Count Date APRIL 2003

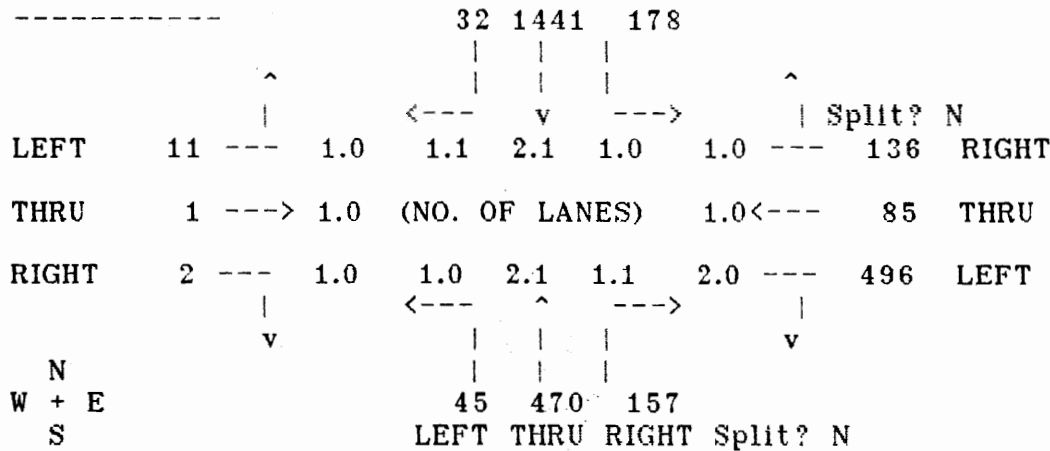
Time 7:00-9:00 AM

Peak Hour 7:30-8:30 AM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL



STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cherry-Boyce

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	157	157	1650	0.0952	
THRU (T)	470	470	3300	0.1424	
LEFT (L)	45	45	1650	0.0273	0.0273
T + R		627	3300	0.1900	
SB RIGHT (R)	32	32	1650	0.0194	
THRU (T)	1441	1441	3300	0.4367	
LEFT (L)	178	178	1650	0.1079	
T + R		1473	3300	0.4464	0.4464
EB RIGHT (R)	2	0 *	1650	0.0000	
THRU (T)	1	1	1650	0.0006	0.0006
LEFT (L)	11	11	1650	0.0067	
WB RIGHT (R)	136	0 *	1650	0.0000	
THRU (T)	85	85	1650	0.0515	
LEFT (L)	496	496	3000	0.1653	0.1653

TOTAL VOLUME-TO-CAPACITY RATIO:

0.64

INTERSECTION LEVEL OF SERVICE:

B

* ADJUSTED FOR RIGHT TURN ON RED

INT=E.INT,VOL=AA.VOL,CAP=

Condition: AM Future Base (No Project) Conditions

11/10/04

INTERSECTION 12 Boyce Road/Auto Mall Pkwy.

City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 7:45-8:45 AM

CCTA METHOD		RIGHT THRU LEFT						8-PHASE SIGNAL	
		91	1120	663					
LEFT	26	2.0	1.0	2.0	2.0	1.0	322	RIGHT	
THRU	96	2.1	(NO. OF LANES)			2.0	242	THRU	
RIGHT	9	1.1	1.0	2.0	1.0	2.0	164	LEFT	
N								SIG WARRANTS:	
W + E		4 286 64						Urb=Y, Rur=Y	
S		LEFT THRU RIGHT Split? N							

STREET NAME: Boyce Road

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	64	0 *	1650	0.0000	
THRU (T)	286	286	3300	0.0867	
LEFT (L)	4	4	1650	0.0024	0.0024
SB RIGHT (R)	91	77 *	1650	0.0467	
THRU (T)	1120	1120	3300	0.3394	0.3394
LEFT (L)	663	663	3000	0.2210	
EB RIGHT (R)	9	9	1650	0.0055	
THRU (T)	96	96	3300	0.0291	
LEFT (L)	26	26	3000	0.0087	
T + R		105	3300	0.0318	0.0318
WB RIGHT (R)	322	0 *	1650	0.0000	
THRU (T)	242	242	3300	0.0733	
LEFT (L)	164	164	3000	0.0547	0.0547
TOTAL VOLUME-TO-CAPACITY RATIO:				0.43	
INTERSECTION LEVEL OF SERVICE:				A	

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=AA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 1 Cherry Street/Central Avenue

City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL

				14	710	110			
				<---	v	---		Split? N	
LEFT	22	---	1.0	1.1	2.1	1.0	1.1	---	69 RIGHT
THRU	146	---	1.0	(NO. OF LANES)			2.1	---	80 THRU
RIGHT	351	---	1.0	1.0	2.0	1.0	2.0	---	191 LEFT
				<---	^	---			
N									
W + E				333	1314	204			
S				LEFT THRU RIGHT			Split? N		

STREET NAME:
Central Avenue

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	204	99 *	1650	0.0600	
THRU (T)	1314	1314	3300	0.3982	0.3982
LEFT (L)	333	333	1650	0.2018	
SB RIGHT (R)	14	14	1650	0.0085	
THRU (T)	710	710	3300	0.2152	
LEFT (L)	110	110	1650	0.0667	0.0667
T + R		724	3300	0.2194	
EB RIGHT (R)	351	18 *	1650	0.0109	
THRU (T)	146	146	1650	0.0885	0.0885
LEFT (L)	22	22	1650	0.0133	
WB RIGHT (R)	69	69	1650	0.0418	
THRU (T)	80	80	3300	0.0242	
LEFT (L)	191	191	3000	0.0637	0.0637
T + R		149	3300	0.0452	

TOTAL VOLUME-TO-CAPACITY RATIO:

0.62

INTERSECTION LEVEL OF SERVICE:

B

* ADJUSTED FOR RIGHT TURN ON RED

INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 6 Cherry Street/Mowry Avenue

City of Newark

Count Date APRIL 2003

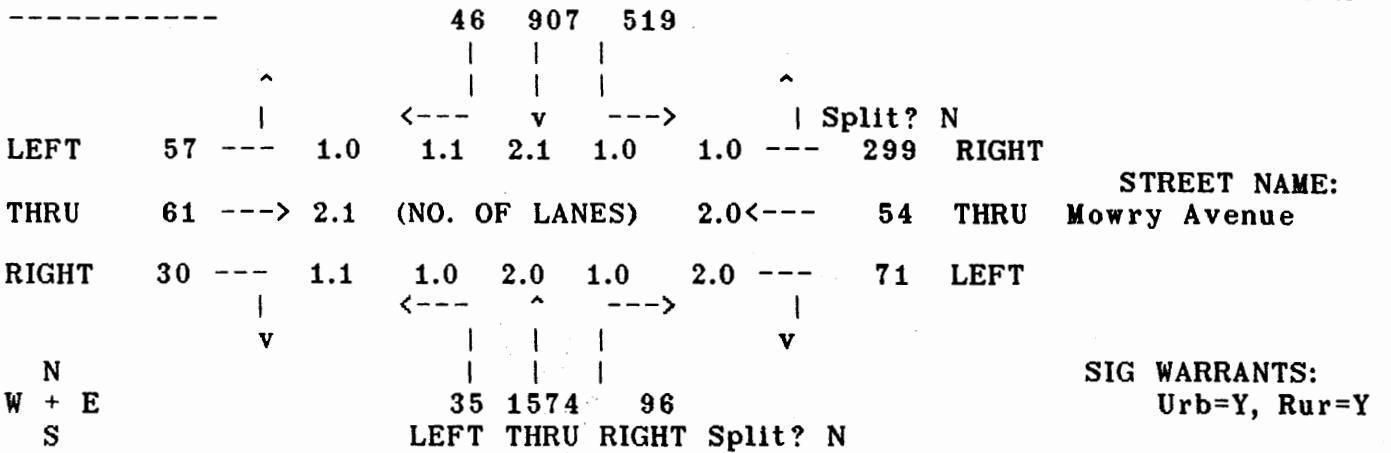
Time 4:00-6:00 PM

Peak Hour 4:30-5:30 PM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL



STREET NAME: Mowry Avenue

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	96	57 *	1650	0.0345	
THRU (T)	1574	1574	3300	0.4770	0.4770
LEFT (L)	35	35	1650	0.0212	
SB RIGHT (R)	46	46	1650	0.0279	
THRU (T)	907	907	3300	0.2748	
LEFT (L)	519	519	1650	0.3145	0.3145
T + R		953	3300	0.2888	
EB RIGHT (R)	30	30	1650	0.0182	
THRU (T)	61	61	3300	0.0185	
LEFT (L)	57	57	1650	0.0345	
T + R		91	3300	0.0276	0.0276
WB RIGHT (R)	299	0 *	1650	0.0000	
THRU (T)	54	54	3300	0.0164	
LEFT (L)	71	71	3000	0.0237	0.0237

TOTAL VOLUME-TO-CAPACITY RATIO: 0.84

INTERSECTION LEVEL OF SERVICE: D

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 8 I-880 SB Off/Stevenson Blvd.

City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD		RIGHT THRU LEFT						2-PHASE SIGNAL	
		396	0	763					
		<---	v	---			Split? N		
LEFT	0	0.0	2.0	0.0	2.0	1.9	162	RIGHT	
		(NO. OF LANES)						STREET NAME:	
THRU	2032	3.0				3.0	1443	THRU	Stevenson Blvd.
RIGHT	488	1.9	0.0	0.0	0.0	0.0	0	LEFT	
		<---	^	---					
		v	0	0	0			SIG WARRANTS:	
		LEFT THRU RIGHT Split? N						Urb=Y, Rur=Y	

STREET NAME: I-880 SB Off

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	396	396	3273	0.1210	
LEFT (L)	763	763	3273	0.2331	0.2331
EB RIGHT (R)	488	488	1800	0.2711	
THRU (T)	2032	2032	5400	0.3763	0.3763
WB RIGHT (R)	162	162	1800	0.0900	
THRU (T)	1443	1443	5400	0.2672	
TOTAL VOLUME-TO-CAPACITY RATIO:					0.61
INTERSECTION LEVEL OF SERVICE:					B

* ADJUSTED FOR RIGHT TURN ON RED

INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 9 Albrae-Balentine/Stevenson Blvd. City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD		RIGHT THRU LEFT						6-PHASE SIGNAL	
		34	114	795					
		<---	v	---		Split? N			
LEFT	46 --- 1.0	1.0	1.1	3.1		1.0 ---	624	RIGHT	
THRU	1048 ---> 3.1	(NO. OF LANES)				3.0<---	681	THRU	STREET NAME: Stevenson Blvd.
RIGHT	108 --- 1.1	1.1	1.1	2.0		2.0 ---	539	LEFT	
		<---	^	---					
						v			
N		121		167	593				SIG WARRANTS: Urb=Y, Rur=Y
W + E		LEFT THRU RIGHT Split? Y							
S									

STREET NAME: Albrae-Balentine

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	593	297 *	3000	0.0990	
THRU (T)	167	167	1650	0.1012	
LEFT (L)	121	121	1650	0.0733	
T + L		288	1650	0.1745	0.1745
SB RIGHT (R)	34	0 *	1650	0.0000	
THRU (T)	114	114	1650	0.0691	
LEFT (L)	795	795	4304	0.1847	
T + L		909	4304	0.2112	0.2112
EB RIGHT (R)	108	108	1650	0.0655	
THRU (T)	1048	1048	4950	0.2117	
LEFT (L)	46	46	1650	0.0279	
T + R		1156	4950	0.2335	0.2335
WB RIGHT (R)	624	319 *	1650	0.1933	
THRU (T)	681	681	4950	0.1376	
LEFT (L)	539	539	3000	0.1797	0.1797

TOTAL VOLUME-TO-CAPACITY RATIO: 0.80
 INTERSECTION LEVEL OF SERVICE: C

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 10 Cedar Boulevard/Stevenson Blvd. City of Newark
 Count Date APRIL 2003 Time 4:00-6:00 PM Peak Hour 4:45-5:45 PM

CCTA METHOD		RIGHT THRU LEFT						6-PHASE SIGNAL	
-----		72	3	193					
	^								
		<---	v	---				Split? N	
LEFT	155 ---	1.0	1.0	1.1	2.1	1.0	---	255 RIGHT	
THRU	874 --->	2.1	(NO. OF LANES)			2.0<---	434	THRU	
RIGHT	10 ---	1.1	1.1	1.1	1.0	1.0	---	90 LEFT	
		<---	^	---					
	v						v		
N									
W + E		4	10	18					
S		LEFT THRU RIGHT Split? Y							

STREET NAME: Stevenson Blvd.

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cedar Boulevard

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	18	0 *	1650	0.0000	
THRU (T)	10	10	1650	0.0061	
LEFT (L)	4	4	1650	0.0024	
T + L		14	1650	0.0085	0.0085
SB RIGHT (R)	72	0 *	1650	0.0000	
THRU (T)	3	3	1650	0.0018	
LEFT (L)	193	193	3000	0.0643	
T + L		196	3000	0.0653	0.0653
EB RIGHT (R)	10	10	1650	0.0061	
THRU (T)	874	874	3300	0.2648	
LEFT (L)	155	155	1650	0.0939	
T + R		884	3300	0.2679	0.2679
WB RIGHT (R)	255	149 *	1650	0.0903	
THRU (T)	434	434	3300	0.1315	
LEFT (L)	90	90	1650	0.0545	0.0545

TOTAL VOLUME-TO-CAPACITY RATIO: 0.40
 INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/10/04

INTERSECTION 12 Boyce Road/Auto Mall Pkwy.
 Count Date APRIL 2003 Time 4:00-6:00 PM

City of Newark
 Peak Hour 4:30-5:30 PM

CCTA METHOD		RIGHT THRU LEFT						8-PHASE SIGNAL	
		23	561	416					
LEFT	72	2.0	1.0	2.0	2.0	1.0	495	RIGHT	
THRU	251	2.1	(NO. OF LANES)			2.0	80	THRU	
RIGHT	12	1.1	1.0	2.0	1.0	2.0	159	LEFT	
N								SIG WARRANTS:	
W + E								Urb=Y, Rur=Y	
S		LEFT THRU RIGHT Split? N							

STREET NAME: Boyce Road

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	213	126 *	1650	0.0764	
THRU (T)	1284	1284	3300	0.3891	0.3891
LEFT (L)	26	26	1650	0.0158	
SB RIGHT (R)	23	0 *	1650	0.0000	
THRU (T)	561	561	3300	0.1700	
LEFT (L)	416	416	3000	0.1387	0.1387
EB RIGHT (R)	12	12	1650	0.0073	
THRU (T)	251	251	3300	0.0761	
LEFT (L)	72	72	3000	0.0240	0.0240
T + R		263	3300	0.0797	
WB RIGHT (R)	495	266 *	1650	0.1612	0.1612
THRU (T)	80	80	3300	0.0242	
LEFT (L)	159	159	3000	0.0530	
TOTAL VOLUME-TO-CAPACITY RATIO:					0.71
INTERSECTION LEVEL OF SERVICE:					C

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PA.VOL,CAP=

Condition: PM Future Base (No Project) Conditions

11/11/04

INTERSECTION 11 Cherry-Boyce/Stevenson Blvd.
 Count Date APRIL 2003 Time 4:00-6:00 PM

City of Newark
 Peak Hour 5:00-6:00 PM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL

			2	722	211				
			<---	v	---			Split? N	
LEFT	29	---	1.0	1.1	2.1	1.0	1.0	---	172 RIGHT
THRU	82	---	> 1.0	(NO. OF LANES)			1.0	<---	9 THRU
RIGHT	31	---	1.0	1.0	2.1	1.1	2.0	---	209 LEFT
			v					v	
N									
W + E				3	1530	535			
S				LEFT THRU	RIGHT	Split? N			

STREET NAME: Stevenson Blvd.
 SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cherry-Boyce

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	535	535	1650	0.3242	
THRU (T)	1530	1530	3300	0.4636	
LEFT (L)	3	3	1650	0.0018	
T + R		2065	3300	0.6258	0.6258
SB RIGHT (R)	2	2	1650	0.0012	
THRU (T)	722	722	3300	0.2188	
LEFT (L)	211	211	1650	0.1279	0.1279
T + R		724	3300	0.2194	
EB RIGHT (R)	31	28 *	1650	0.0170	
THRU (T)	82	82	1650	0.0497	0.0497
LEFT (L)	29	29	1650	0.0176	
WB RIGHT (R)	172	0 *	1650	0.0000	
THRU (T)	9	9	1650	0.0055	
LEFT (L)	209	209	3000	0.0697	0.0697
TOTAL VOLUME-TO-CAPACITY RATIO:				0.87	
INTERSECTION LEVEL OF SERVICE:				D	

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PA.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 1 Cherry Street/Central Avenue

City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 7:15-8:15 AM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL

				45	1224	90			
				<---	v	---		Split? N	
LEFT	11	---	1.0	1.1	2.1	1.0	1.1	---	69 RIGHT
THRU	68	---	1.0	(NO. OF LANES)			2.1	---	210 THRU
RIGHT	428	---	1.0	1.0	2.0	1.0	2.0	---	354 LEFT
				<---	^	---			
N				453	591	211			
W + E				LEFT THRU RIGHT			Split? N		
S									

STREET NAME: Central Avenue

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	211	16 *	1650	0.0097	
THRU (T)	591	591	3300	0.1791	
LEFT (L)	453	453	1650	0.2745	0.2745
SB RIGHT (R)	45	45	1650	0.0273	
THRU (T)	1224	1224	3300	0.3709	
LEFT (L)	90	90	1650	0.0545	
T + R		1269	3300	0.3845	0.3845
EB RIGHT (R)	428	0 *	1650	0.0000	
THRU (T)	68	68	1650	0.0412	0.0412
LEFT (L)	11	11	1650	0.0067	
WB RIGHT (R)	69	69	1650	0.0418	
THRU (T)	210	210	3300	0.0636	
LEFT (L)	354	354	3000	0.1180	0.1180
T + R		279	3300	0.0845	

TOTAL VOLUME-TO-CAPACITY RATIO: 0.82
 INTERSECTION LEVEL OF SERVICE: D

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

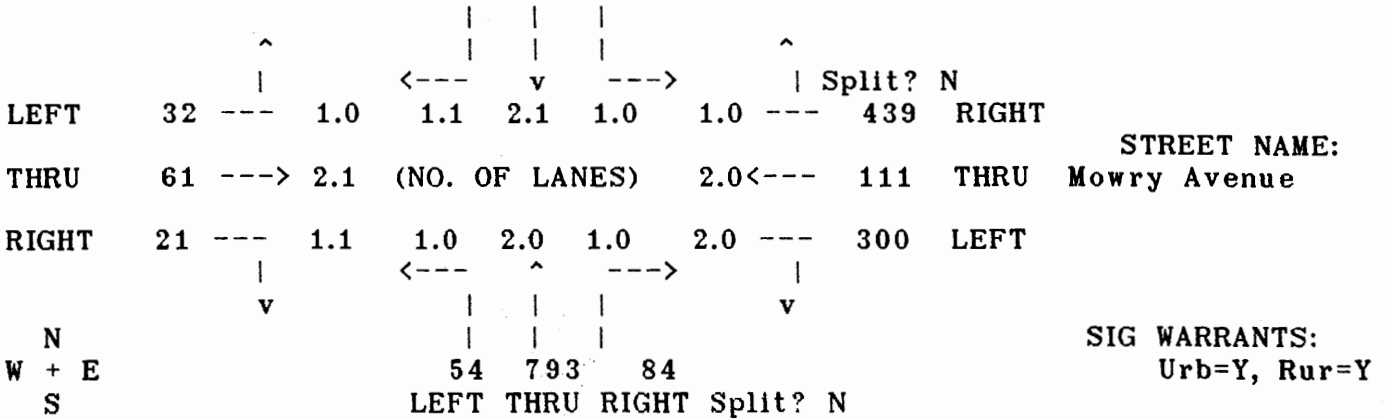
Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 6 Cherry Street/Mowry Avenue
 Count Date APRIL 2003 Time 7:00-9:00 AM

City of Newark
 Peak Hour 7:30-8:30 AM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL
 ----- 38 1695 345



STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	84	0 *	1650	0.0000	
THRU (T)	793	793	3300	0.2403	
LEFT (L)	54	54	1650	0.0327	0.0327
SB RIGHT (R)	38	38	1650	0.0230	
THRU (T)	1695	1695	3300	0.5136	
LEFT (L)	345	345	1650	0.2091	
T + R		1733	3300	0.5252	0.5252
EB RIGHT (R)	21	21	1650	0.0127	
THRU (T)	61	61	3300	0.0185	
LEFT (L)	32	32	1650	0.0194	
T + R		82	3300	0.0248	0.0248
WB RIGHT (R)	439	94 *	1650	0.0570	
THRU (T)	111	111	3300	0.0336	
LEFT (L)	300	300	3000	0.1000	0.1000
TOTAL VOLUME-TO-CAPACITY RATIO:				0.68	
INTERSECTION LEVEL OF SERVICE:				B	

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 8 I-880 SB Off/Stevenson Blvd.

City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 8:00-9:00 AM

CCTA METHOD	RIGHT	THRU	LEFT	2-PHASE SIGNAL	
	356	0	382		
LEFT	0	0.0	2.0	0.0	2.0
THRU	627	3.0	3.0	1.9	444
RIGHT	212	1.9	0.0	0.0	0.0
			0		
			0		
			0		
			0		

STREET NAME: Stevenson Blvd.

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: I-880 SB Off

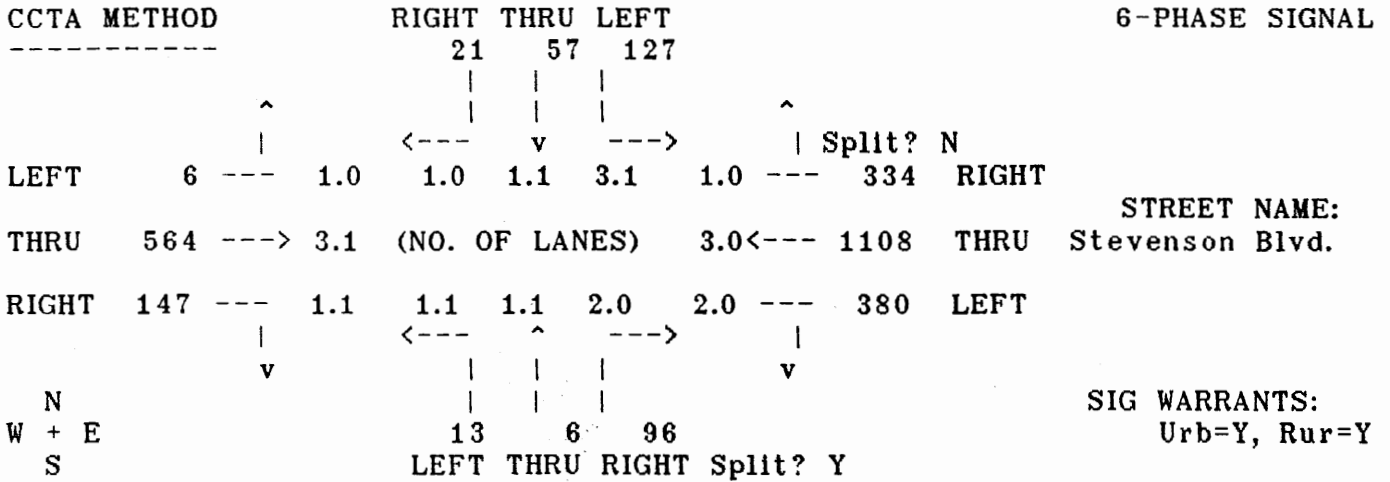
MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	356	356	3273	0.1088	
LEFT (L)	382	382	3273	0.1167	0.1167
EB RIGHT (R)	212	212	1800	0.1178	
THRU (T)	627	627	5400	0.1161	
WB RIGHT (R)	444	444	1800	0.2467	
THRU (T)	1463	1463	5400	0.2709	0.2709
TOTAL VOLUME-TO-CAPACITY RATIO:					0.39
INTERSECTION LEVEL OF SERVICE:					A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 9 Albrae-Balentine/Stevenson Blvd. City of Newark
 Count Date APRIL 2003 Time 7:00-9:00 AM Peak Hour 8:00-9:00 AM



STREET NAME: Albrae-Balentine

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	96	0 *	3000	0.0000	
THRU (T)	6	6	1650	0.0036	
LEFT (L)	13	13	1650	0.0079	
T + L		19	1650	0.0115	0.0115
SB RIGHT (R)	21	15 *	1650	0.0091	
THRU (T)	57	57	1650	0.0345	
LEFT (L)	127	127	4304	0.0295	
T + L		184	4304	0.0428	0.0428
EB RIGHT (R)	147	147	1650	0.0891	
THRU (T)	564	564	4950	0.1139	
LEFT (L)	6	6	1650	0.0036	
T + R		711	4950	0.1436	0.1436
WB RIGHT (R)	334	285 *	1650	0.1727	
THRU (T)	1108	1108	4950	0.2238	
LEFT (L)	380	380	3000	0.1267	0.1267

TOTAL VOLUME-TO-CAPACITY RATIO: 0.32
 INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 10 Cedar Boulevard/Stevenson Blvd. City of Newark
 Count Date APRIL 2003 Time 7:00-9:00 AM Peak Hour 7:30-8:30 AM

CCTA METHOD	RIGHT THRU LEFT						6-PHASE SIGNAL	
		115	9	400				
		<---	v	---			Split? N	
LEFT	50	1.0	1.0	1.1	2.1	1.0	54	RIGHT
THRU	403	2.1	(NO. OF LANES)			2.0	934	THRU
RIGHT	4	1.1	1.1	1.1	1.0	1.0	47	LEFT
			<---	^	---			
		v				v		
N								SIG WARRANTS:
W + E			2	1	1			Urb=Y, Rur=Y
S			LEFT THRU RIGHT Split? Y					

STREET NAME: Cedar Boulevard

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	1	0 *	1650	0.0000	
THRU (T)	1	1	1650	0.0006	
LEFT (L)	2	2	1650	0.0012	
T + L		3	1650	0.0018	0.0018
SB RIGHT (R)	115	65 *	1650	0.0394	
THRU (T)	9	9	1650	0.0055	
LEFT (L)	400	400	3000	0.1333	
T + L		409	3000	0.1363	0.1363
EB RIGHT (R)	4	4	1650	0.0024	
THRU (T)	403	403	3300	0.1221	
LEFT (L)	50	50	1650	0.0303	0.0303
T + R		407	3300	0.1233	
WB RIGHT (R)	54	0 *	1650	0.0000	
THRU (T)	934	934	3300	0.2830	0.2830
LEFT (L)	47	47	1650	0.0285	

TOTAL VOLUME-TO-CAPACITY RATIO: 0.45
 INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/11/04

INTERSECTION 11 Cherry-Boyce/Stevenson Blvd.

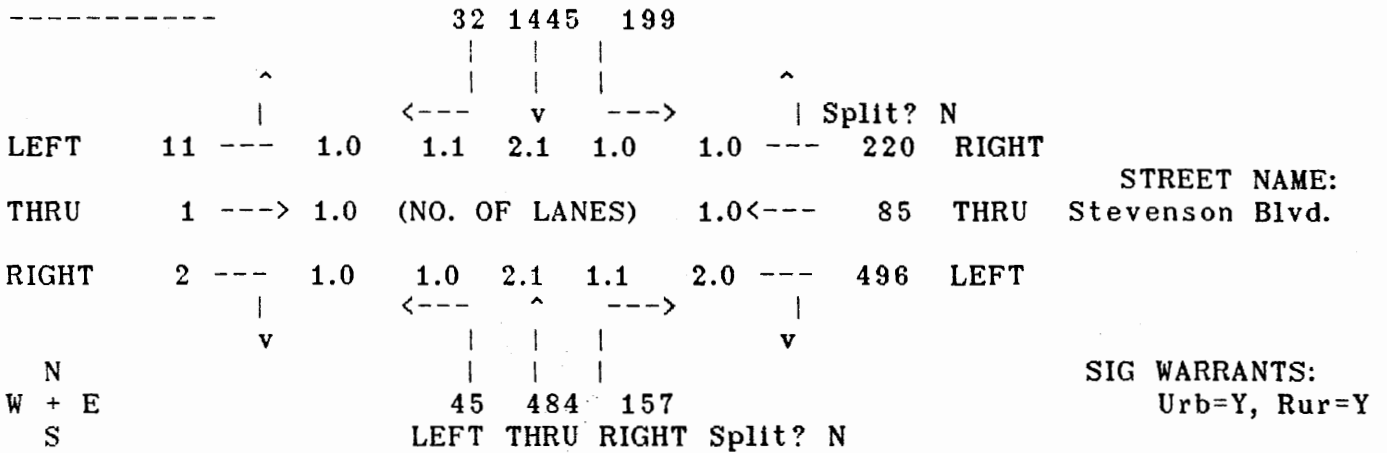
City of Newark

Count Date APRIL 2003

Time 7:00-9:00 AM

Peak Hour 7:30-8:30 AM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL



STREET NAME: Stevenson Blvd.

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cherry-Boyce

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	157	157	1650	0.0952	
THRU (T)	484	484	3300	0.1467	
LEFT (L)	45	45	1650	0.0273	0.0273
T + R		641	3300	0.1942	
SB RIGHT (R)	32	32	1650	0.0194	
THRU (T)	1445	1445	3300	0.4379	
LEFT (L)	199	199	1650	0.1206	
T + R		1477	3300	0.4476	0.4476
EB RIGHT (R)	2	0 *	1650	0.0000	
THRU (T)	1	1	1650	0.0006	0.0006
LEFT (L)	11	11	1650	0.0067	
WB RIGHT (R)	220	21 *	1650	0.0127	
THRU (T)	85	85	1650	0.0515	
LEFT (L)	496	496	3000	0.1653	0.1653

TOTAL VOLUME-TO-CAPACITY RATIO: 0.64

INTERSECTION LEVEL OF SERVICE: B

* ADJUSTED FOR RIGHT TURN ON RED

INT=E.INT,VOL=AJ.VOL,CAP=

Condition: AM Future Base + Project Conditions

11/10/04

INTERSECTION 12 Boyce Road/Auto Mall Pkwy.
 Count Date APRIL 2003 Time 7:00-9:00 AM

City of Newark
 Peak Hour 7:45-8:45 AM

CCTA METHOD		RIGHT THRU LEFT						8-PHASE SIGNAL	
		91	1120	667					
LEFT	26 --- 2.0	1.0	2.0	2.0	1.0	---	336	RIGHT	
THRU	96 ---> 2.1	(NO. OF LANES)			2.0	---	242	THRU	
RIGHT	9 --- 1.1	1.0	2.0	1.0	2.0	---	164	LEFT	
N		LEFT THRU RIGHT Split? N						SIG WARRANTS:	
W + E		4	286	64			Urb=Y, Rur=Y		
S									

STREET NAME: Boyce Road

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	64	0 *	1650	0.0000	
THRU (T)	286	286	3300	0.0867	
LEFT (L)	4	4	1650	0.0024	0.0024
SB RIGHT (R)	91	77 *	1650	0.0467	
THRU (T)	1120	1120	3300	0.3394	0.3394
LEFT (L)	667	667	3000	0.2223	
EB RIGHT (R)	9	9	1650	0.0055	
THRU (T)	96	96	3300	0.0291	
LEFT (L)	26	26	3000	0.0087	
T + R		105	3300	0.0318	0.0318
WB RIGHT (R)	336	0 *	1650	0.0000	
THRU (T)	242	242	3300	0.0733	
LEFT (L)	164	164	3000	0.0547	0.0547
TOTAL VOLUME-TO-CAPACITY RATIO:				0.43	
INTERSECTION LEVEL OF SERVICE:				A	

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=AJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 1 Cherry Street/Central Avenue

City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL

				14	729	110			
				<---	v	---			Split? N
LEFT	22	---	1.0	1.1	2.1	1.0	1.1	---	69 RIGHT
THRU	146	---	1.0	(NO. OF LANES)			2.1	---	80 THRU
RIGHT	360	---	1.0	1.0	2.0	1.0	2.0	---	219 LEFT
				<---	^	---			
N									SIG WARRANTS:
W + E				341	1322	220			Urb=Y, Rur=Y
S				LEFT THRU RIGHT					Split? N

STREET NAME: Central Avenue

SIG WARRANTS: Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	220	100 *	1650	0.0606	
THRU (T)	1322	1322	3300	0.4006	0.4006
LEFT (L)	341	341	1650	0.2067	
SB RIGHT (R)	14	14	1650	0.0085	
THRU (T)	729	729	3300	0.2209	
LEFT (L)	110	110	1650	0.0667	0.0667
T + R		743	3300	0.2252	
EB RIGHT (R)	360	19 *	1650	0.0115	
THRU (T)	146	146	1650	0.0885	0.0885
LEFT (L)	22	22	1650	0.0133	
WB RIGHT (R)	69	69	1650	0.0418	
THRU (T)	80	80	3300	0.0242	
LEFT (L)	219	219	3000	0.0730	0.0730
T + R		149	3300	0.0452	

TOTAL VOLUME-TO-CAPACITY RATIO: 0.63
 INTERSECTION LEVEL OF SERVICE: B

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 6 Cherry Street/Mowry Avenue City of Newark
 Count Date APRIL 2003 Time 4:00-6:00 PM Peak Hour 4:30-5:30 PM

CCTA METHOD RIGHT THRU LEFT 8-PHASE SIGNAL

	RIGHT	THRU	LEFT						
	46	963	519						
	<---	v	---					Split? N	
LEFT	57	---	1.0	1.1	2.1	1.0	1.0	---	299 RIGHT
THRU	61	---	> 2.1	(NO. OF LANES)			2.0	---	54 THRU
RIGHT	30	---	1.1	1.0	2.0	1.0	2.0	---	137 LEFT
			<---						
	v								v
N									
W + E				35	1606	133			
S				LEFT THRU RIGHT					Split? N

STREET NAME:
Mowry Avenue

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cherry Street

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	133	58 *	1650	0.0352	
THRU (T)	1606	1606	3300	0.4867	0.4867
LEFT (L)	35	35	1650	0.0212	
SB RIGHT (R)	46	46	1650	0.0279	
THRU (T)	963	963	3300	0.2918	
LEFT (L)	519	519	1650	0.3145	0.3145
T + R		1009	3300	0.3058	
EB RIGHT (R)	30	30	1650	0.0182	
THRU (T)	61	61	3300	0.0185	
LEFT (L)	57	57	1650	0.0345	
T + R		91	3300	0.0276	0.0276
WB RIGHT (R)	299	0 *	1650	0.0000	
THRU (T)	54	54	3300	0.0164	
LEFT (L)	137	137	3000	0.0457	0.0457

TOTAL VOLUME-TO-CAPACITY RATIO: 0.87
 INTERSECTION LEVEL OF SERVICE: D

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 7 I-880 NB Off/Stevenson Blvd.
 Count Date APRIL 2003 Time 4:00-6:00 PM

City of Newark
 Peak Hour 4:30-5:30 PM

CCTA METHOD		RIGHT THRU LEFT						2-PHASE SIGNAL	
-----		0	0	0					
LEFT	0 --- 1.0	0.0	0.0	0.0	1.9	---	544	RIGHT	
THRU	2306 ---> 3.0	(NO. OF LANES)			3.0	---	1175	THRU	
RIGHT	524 --- 1.9	2.0	0.0	2.0	0.0	---	0	LEFT	
N		524 0 592						SIG WARRANTS:	
W + E		LEFT THRU RIGHT Split? N						Urb=Y, Rur=Y	
S									

STREET NAME: I-880 NB Off

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	592	592	3273	0.1809	0.1809
LEFT (L)	524	524	3273	0.1601	
EB RIGHT (R)	524	524	1800	0.2911	
THRU (T)	2306	2306	5400	0.4270	0.4270
LEFT (L)	0	0	1800	0.0000	
WB RIGHT (R)	544	544	1800	0.3022	
THRU (T)	1175	1175	5400	0.2176	
TOTAL VOLUME-TO-CAPACITY RATIO:					0.61
INTERSECTION LEVEL OF SERVICE:					B

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 8 I-880 SB Off/Stevenson Blvd.

City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD		RIGHT THRU LEFT						2-PHASE SIGNAL	
-----		396	0	763					
	^								
		<---	v	---			Split? N		
LEFT	0 ---	0.0	2.0	0.0	2.0	1.9 ---	162	RIGHT	
THRU	2043 --->	3.0	(NO. OF LANES)			3.0<---	1502	THRU	
RIGHT	509 ---	1.9	0.0	0.0	0.0	0.0 ---	0	LEFT	
		<---	^	---					
	v								
N									
W + E			0	0	0				
S			LEFT THRU RIGHT			Split? N			

STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: I-880 SB Off

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
SB RIGHT (R)	396	396	3273	0.1210	
LEFT (L)	763	763	3273	0.2331	0.2331
EB RIGHT (R)	509	509	1800	0.2828	
THRU (T)	2043	2043	5400	0.3783	0.3783
WB RIGHT (R)	162	162	1800	0.0900	
THRU (T)	1502	1502	5400	0.2781	
TOTAL VOLUME-TO-CAPACITY RATIO:					0.61
INTERSECTION LEVEL OF SERVICE:					B

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 9 Albrae-Balentine/Stevenson Blvd. City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM

CCTA METHOD RIGHT THRU LEFT 6-PHASE SIGNAL

				34	114	795				
				<---	v	---			Split? N	
LEFT	46	---	1.0	1.0	1.1	3.1	1.0	---	624	RIGHT
THRU	1080	---	3.1	(NO. OF LANES)			3.0	---	740	THRU
RIGHT	108	---	1.1	1.1	1.1	2.0	2.0	---	539	LEFT
				<---	^	---				
N										
W + E				121	167	593				
S				LEFT THRU RIGHT			Split? Y			

STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Albrae-Balentine

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	593	297 *	3000	0.0990	
THRU (T)	167	167	1650	0.1012	
LEFT (L)	121	121	1650	0.0733	
T + L		288	1650	0.1745	0.1745
SB RIGHT (R)	34	0 *	1650	0.0000	
THRU (T)	114	114	1650	0.0691	
LEFT (L)	795	795	4304	0.1847	
T + L		909	4304	0.2112	0.2112
EB RIGHT (R)	108	108	1650	0.0655	
THRU (T)	1080	1080	4950	0.2182	
LEFT (L)	46	46	1650	0.0279	
T + R		1188	4950	0.2400	0.2400
WB RIGHT (R)	624	319 *	1650	0.1933	
THRU (T)	740	740	4950	0.1495	
LEFT (L)	539	539	3000	0.1797	0.1797

TOTAL VOLUME-TO-CAPACITY RATIO: 0.81
INTERSECTION LEVEL OF SERVICE: D

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

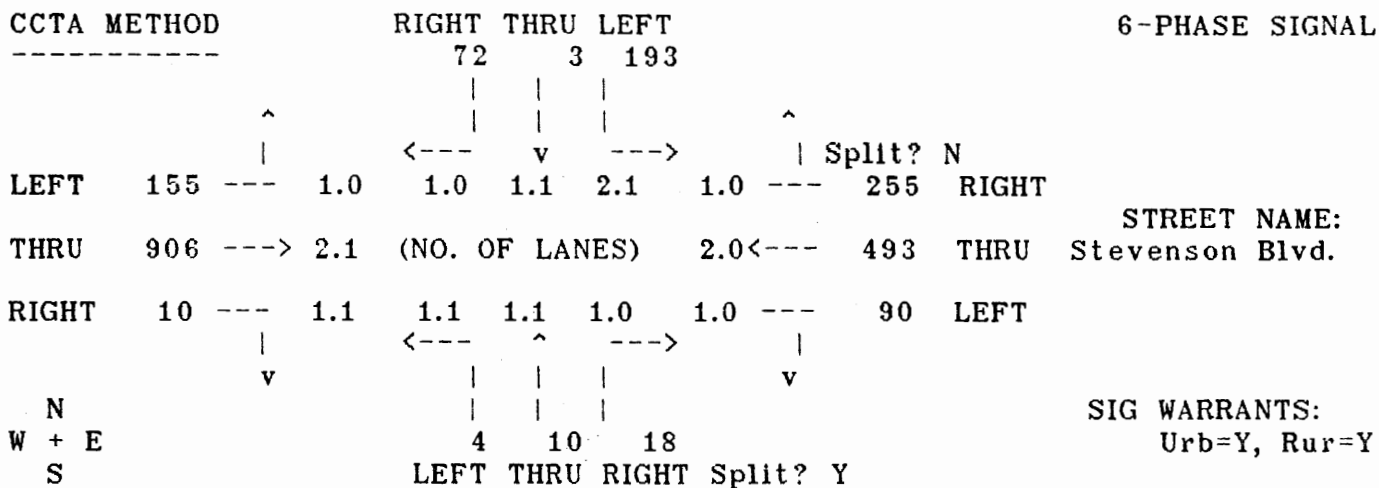
11/10/04

INTERSECTION 10 Cedar Boulevard/Stevenson Blvd. City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:45-5:45 PM



STREET NAME: Cedar Boulevard

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	18	0 *	1650	0.0000	
THRU (T)	10	10	1650	0.0061	
LEFT (L)	4	4	1650	0.0024	
T + L		14	1650	0.0085	0.0085
SB RIGHT (R)	72	0 *	1650	0.0000	
THRU (T)	3	3	1650	0.0018	
LEFT (L)	193	193	3000	0.0643	
T + L		196	3000	0.0653	0.0653
EB RIGHT (R)	10	10	1650	0.0061	
THRU (T)	906	906	3300	0.2745	
LEFT (L)	155	155	1650	0.0939	
T + R		916	3300	0.2776	0.2776
WB RIGHT (R)	255	149 *	1650	0.0903	
THRU (T)	493	493	3300	0.1494	
LEFT (L)	90	90	1650	0.0545	0.0545

TOTAL VOLUME-TO-CAPACITY RATIO: 0.41
 INTERSECTION LEVEL OF SERVICE: A

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 11 Cherry-Boyce/Stevenson Blvd. City of Newark

Count Date APRIL 2003

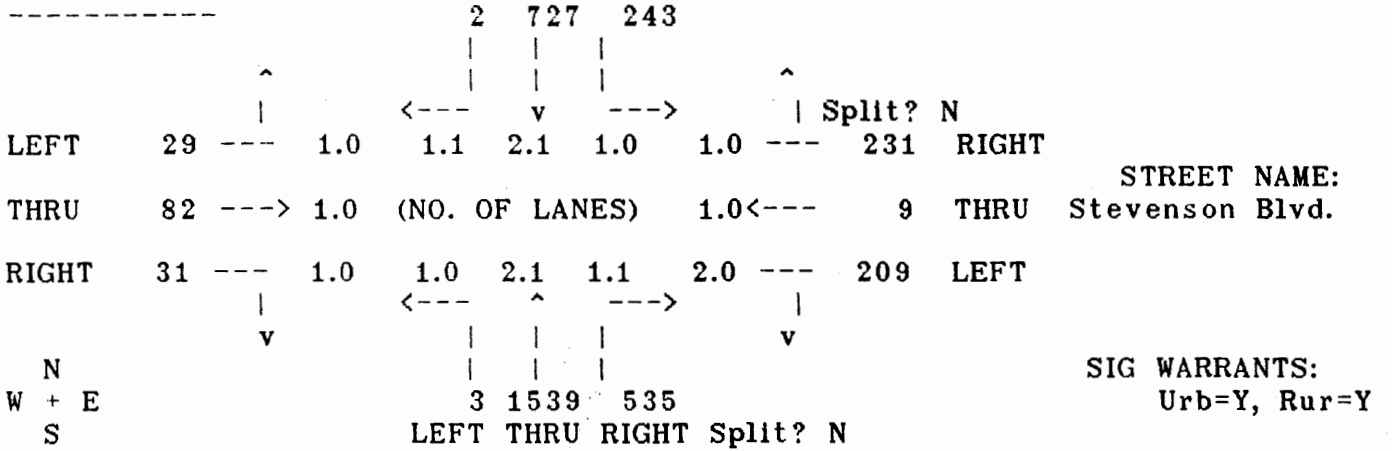
Time 4:00-6:00 PM

Peak Hour 5:00-6:00 PM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL



STREET NAME:
Stevenson Blvd.

SIG WARRANTS:
Urb=Y, Rur=Y

STREET NAME: Cherry-Boyce

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	535	535	1650	0.3242	
THRU (T)	1539	1539	3300	0.4664	
LEFT (L)	3	3	1650	0.0018	
T + R		2074	3300	0.6285	0.6285
SB RIGHT (R)	2	2	1650	0.0012	
THRU (T)	727	727	3300	0.2203	
LEFT (L)	243	243	1650	0.1473	0.1473
T + R		729	3300	0.2209	
EB RIGHT (R)	31	28 *	1650	0.0170	
THRU (T)	82	82	1650	0.0497	0.0497
LEFT (L)	29	29	1650	0.0176	
WB RIGHT (R)	231	0 *	1650	0.0000	
THRU (T)	9	9	1650	0.0055	
LEFT (L)	209	209	3000	0.0697	0.0697
TOTAL VOLUME-TO-CAPACITY RATIO:					0.90
INTERSECTION LEVEL OF SERVICE:					D

* ADJUSTED FOR RIGHT TURN ON RED
INT=E.INT,VOL=PJ.VOL,CAP=

Condition: PM Future Base + Project Conditions

11/10/04

INTERSECTION 12 Boyce Road/Auto Mall Pkwy.

City of Newark

Count Date APRIL 2003

Time 4:00-6:00 PM

Peak Hour 4:30-5:30 PM

CCTA METHOD

RIGHT THRU LEFT

8-PHASE SIGNAL

			23	561	421					
			<---	v	---			Split? N		
LEFT	72	---	2.0	1.0	2.0	2.0	1.0	---	504	RIGHT
THRU	251	---	>	2.1	(NO. OF LANES)	2.0	<---	80	THRU	STREET NAME:
										Auto Mall Pkwy.
RIGHT	12	---	1.1	1.0	2.0	1.0	2.0	---	159	LEFT
				<---	^	---				
			v				v			
N										SIG WARRANTS:
W + E				26	1284	213				Urb=Y, Rur=Y
S				LEFT	THRU	RIGHT	Split? N			

STREET NAME: Boyce Road

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	213	126 *	1650	0.0764	
THRU (T)	1284	1284	3300	0.3891	0.3891
LEFT (L)	26	26	1650	0.0158	
SB RIGHT (R)	23	0 *	1650	0.0000	
THRU (T)	561	561	3300	0.1700	
LEFT (L)	421	421	3000	0.1403	0.1403
EB RIGHT (R)	12	12	1650	0.0073	
THRU (T)	251	251	3300	0.0761	
LEFT (L)	72	72	3000	0.0240	0.0240
T + R		263	3300	0.0797	
WB RIGHT (R)	504	272 *	1650	0.1648	0.1648
THRU (T)	80	80	3300	0.0242	
LEFT (L)	159	159	3000	0.0530	
TOTAL VOLUME-TO-CAPACITY RATIO:					0.72
INTERSECTION LEVEL OF SERVICE:					C

* ADJUSTED FOR RIGHT TURN ON RED
 INT=E.INT,VOL=PJ.VOL,CAP=