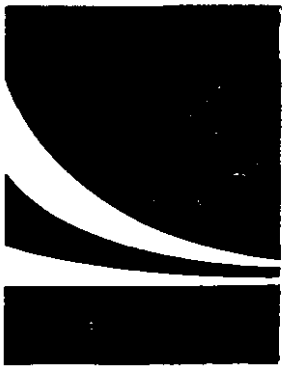
FINAL TIER 1 ENVIRONMENTAL IMPACT REPORT
AMENDMENT NO. 1

SOUTH BELTWAY TRANSPORTATION CORRIDOR

Prepared For



Kern Council of Governments

1401 19th St., Suite 200, Bakersfield, CA 93301

California State Clearinghouse No. 92072049-93102045

Prepared By
HARLAND BARTHOLOMEW AND ASSOCIATES, INC.
May 1994

BEFORE THE KERN COUNCIL OF GOVERNMENTS
COUNTY OF KERN, STATE OF CALIFORNIA

RESOLUTION NO. 94-05

In the Matter of:

ADOPTION OF THE FINAL AMENDMENT NO. 1 TO THE TIER 1 ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE SOUTH BELTWAY TRANSPORTATION CORRIDOR STUDY.

WHEREAS, the Kern Council of Governments (Kern COG), acting as the regional transportation planning agency (RTPA), has prepared the Final Tier 1 Environmental Impact Report (EIR) for the South Beltway Transportation Corridor Study; and

WHEREAS, a Notice of Availability was published on January 23, 1994 which informed the public that comments on the Amended Draft EIR could be received between January 26, 1994 and March 11, 1994, in accordance with California Environmental Quality Act Guidelines, Section 15087(a); and

WHEREAS, affected agencies were also given 45 days, January 26 to March 11, to submit comments on the Amended Draft Tier 1 EIR for the South Beltway Transportation Corridor Study; and

WHEREAS, a public meeting was held at Alicante School in Lamont on February 3, 1994 and a duly noticed public hearing was conducted at the office of the Kern Council of Governments, Bakersfield, California, on February 17, 1994 to hear testimony and comments during the 45-day review period; and

WHEREAS, the South Beltway Transportation Corridor Study is an implementation measure of the Metropolitan Bakersfield 2010 General Plan; and

WHEREAS, the South Beltway Transportation Corridor Study is intended to support the Metropolitan Bakersfield 2010 General Plan Land Use Element; and

WHEREAS, the EIR was prepared and considered for certification by Kern COG; and

WHEREAS, Kern COG did certify the Final EIR this date May 5, 1994; and

WHEREAS, the environmental record prepared in conjunction with the project includes the following:

A. The Draft and Final EIR;

B. All staff reports, memorandums, maps, letters, minutes of meetings and other documents prepared by Kern COG staff relating to the project;

C. All testimony, documents and other evidence presented by the City of Bakersfield, Kern County and consultants working with Kern COG relating to the project;

D. The proceedings before Kern COG relating to the project and EIR, including testimony and documenting evidence introduced at the public hearing; and

E. Matters of common knowledge to Kern COG which it considers including, but not limited to, the following:

1. The Metropolitan Bakersfield 2010 General Plan;
2. The City of Bakersfield and the County of Kern Zoning Ordinances;
3. City of Bakersfield Municipal Code;
4. Kern County Floodplain Management Ordinances; and
5. Other formally adopted policies by the County of Kern and the City of Bakersfield.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The above recitals are true and correct.

2. All required notices have been given.

3. Potentially Significant Impacts that have been mitigated to a Level of non-significance are as follows:

A. Geology, Topography and Soils:

1. Disturbance of covering soil
2. Damage to the South Beltway due to severe groundshaking

B. Air Quality: Exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement.

C. Hydrological Resources:

1. Potential decrease of water quality due to runoff from the roadway
2. Potential changes to the path of flood waters
3. Potential exposure of population to flood hazards
4. Potential increase of runoff due to increase of impermeable surfaces

D. Plants and Wildlife: Loss of existing plant and wildlife habitat and individuals of sensitive plant and wildlife species

E. Noise:

1. Creation of intermittent high noise levels in the project area
2. Impacts to sensitive noise receptors from construction and operation of the proposed project

F. Light and Glare: Increased light and glare in the project area

G. Land Use and Relocation:

1. Disruption of agricultural activities
2. Disruption to residential and commercial uses

H. Traffic Analysis: Reduction in access

I. Cultural Resources: Damage to unknown existing archaeological sites in the proposed project right-of-way

J. Hazardous Wastes: Impacts from excavation of contaminated soil during construction of the proposed project

As to each above listed impact, the Kern Council of Governments finds that changes or alternatives have been incorporated into the project which avoid impacts or mitigate impacts to a level of non-significance as per Section 15091 of the California Environmental Quality Act guidelines.

A. Geology, Topography and Soils

SIGNIFICANT EFFECT

Disturbance of covering soil

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Regrade and re-vegetate disturbed areas outside highway facility limits.

SIGNIFICANT EFFECT

Damage to the South Beltway due to severe groundshaking

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Engineered design of proposed project to comply with Federal and State regulations intended to minimized damage from seismic activities considered typical of the area.

B. Air Quality

SIGNIFICANT EFFECT

Exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement.

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Fugitive dust emissions shall be controlled by construction contractors with regular watering or other airborne dust reduction measures in compliance with the San Joaquin Valley Unified Air Pollution Condtrol District (SJVUAPCD). Wetting may reduce fugitive dust emissions by approximately 50 percent.

The developer shall be responsible for the tuning up of all construction machinery to manufacturers' specifications.

Prior to any action by a state or federal agency which would result in ground disturbance of natural or agricultural lands the agency shall conduct site-specific surveys for non-listed sensitive species of plants and wildlife. These surveys shall be conducted in support of succeeding tiers of environmental documentation and shall be conducted as specific alignments and construction corridors are identified. Specific mitigation to reduce impacts to non-listed sensitive species shall be identified in the succeeding tiers of environmental documentation, but shall include avoidance wherever possible. Where avoidance is not possible, the agency shall coordinate with DFG and USFWS to determine appropriate mitigation or compensation.

E. Noise:

SIGNIFICANT EFFECT

Creation of intermittent high noise levels in the project area

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Limit construction to the hours of 7 a.m. to 5 p.m, Monday through Saturday, unless traffic volumes or public safety issues warrant otherwise. Final determination of construction hours will occur during the Tier 2 phase of environmental review.

SIGNIFICANT EFFECTS

Impacts to sensitive noise receptors from construction and operation of the proposed project.

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Construction equipment must employ sound restriction devices to reduce noise levels. Noise specifications for construction equipment should be written in compliance with City and/or County noise guidelines and should include a set of guidelines to enable contractors to accordingly (required by law)

F. Light and Glare

SIGNIFICANT EFFECT

Increased light and glare in the project area

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Exterior lights used for traffic control will be directed away from the adjacent light sensitive uses.

No construction on the project shall take place in the evening when considerable amounts of lighting would be needed, unless traffic volumes or public safety issues warrant it. Determination of evening construction will occur with the environmental clearance of a specific construction project.

G. Land Use and Relocation

SIGNIFICANT EFFECT

Disruption of agricultural activities

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Design drainage to prevent potentially polluted water run-off from the transportation corridor from flowing into adjacent agriculture land.

Restore existing agricultural and irrigation drainage systems.

SIGNIFICANT EFFECT

Disruption to residential and commercial uses

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Construct block walls or other screening facilities wherever at-grade travel lanes are adjacent to single-family residential areas.

The City of Bakersfield and the County of Kern shall require adequate setbacks for future development to avoid additional conflict with the proposed right-of-way.

Use vegetation along the shoulders and at interchanges as buffering to improve visual quality.

H. Traffic Analysis

SIGNIFICANT EFFECT

Reduction in access

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Design and build frontage road or other alternative access route.

I. Cultural Resources

SIGNIFICANT EFFECT

Damage to unknown existing archaeological sites in the proposed project right-of-way

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

Prior to construction a field survey should be conducted by a qualified archaeologist to determine if any archaeological resources are present, and to determine recommendations if any such resources are discover.

An updated records search should be conducted prior to beginning work on this project in order to provide information on any additional sites located during the present survey, and a recommendation as to whether or not additional work may be necessary given to the scope of this project.

J. Hazardous Wastes

SIGNIFICANT EFFECT

Impacts from excavation of contaminated soil during construction of the proposed project

FINDING

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the potentially significant effects thereof as identified in the Final EIR.

SUPPORTIVE EVIDENCE

The project developer/owner shall conduct soil tests for agriculture wastes, and contamination from oil wells and underground storage tanks to confirm the absence of contamination.

Potential sites should be identified for future projects to ensure consideration in their environmental clearance.

Existing oil wells, and underground fuel storage tanks will be identified to prevent damage from occurring during the construction phase.

4. Impacts not mitigated to a level of non-significance are as follows:

A. Loss of Prime Agricultural Land: The EIR finds that this impact is still considered significant after the recommended mitigation measure. The mitigation measure for this impact recommends the development of other agricultural lands not currently in use. There is presently no assurance that other lands presently fallow would be converted to agricultural use. There is no assurance that land presently in agricultural use will remain as such at the time this project is proposed to be built. Current population and development trends indicate a need for an enhanced transportation corridor in this urbanizing area of Metropolitan Bakersfield.

B. Relocation of Residences and Businesses: The EIR finds that this impact is considered potentially significant after the recommended mitigation measure. Mitigation measures for this impact include notification of business owners, residences and agricultural land owners within 300 feet of the proposed right-of-way needed for development as soon as possible.

The following are project benefits associated with this project:

1. Improve the flow of traffic through the region.

2. Improve air quality.

3. Remove traffic and congestion from local streets.

4. Provide route alternate from I-5 to S.R. 58.

5. Reduce the cost and impact resulting from the purchase and acquisition of rights-of-way for this transportation corridor.

6. Further the Goals of the Metropolitan Bakersfield 2010 General Plan.

7. Further the Goals of the Metropolitan Bakersfield Circulation Element.

5. Statement of Overriding Consideration:

The Final Tier 1 Environmental Impact Report (EIR) prepared for the South Beltway Transportation Corridor identified certain significant effects and this Board hereby finds that the Final Tier 1 Environmental Impact Report (EIR) for the South Beltway Transportation Corridor should be certified since mitigation measures recommended in the Final EIR will be incorporated into the Corridor Adoption Plan to mitigate possible environmental effects to a level which are not significant, and that the benefits of the South Beltway Transportation Corridor outweigh the unavoidable adverse effects of not preparing and adopting a plan.

6. De Minimis Impact Finding

Due to the nature of this project being a preliminary planning study, the environmental document prepared for the project is a Tier 1 level EIR and has not identified or finalized all of the environmental impacts associated with the project at this stage of development. Staff, therefore, concludes that this project is not subject to the payment of fees associated with the Department of Fish and Game and AB 3158 at this time. This project is tiered as set forth by Section 15385 and 15165, respectively, of the California State CEQA guidelines, and consequently, will require additional environmental documents(s). Although the potentially adverse effect of diminishing or eliminating wildlife resources were identified by the State Department of Fish and Game during the Notice of Preparation (NOP) stage of the Tier 1 document, future environmental

documents will provide additional opportunity for government agencies to comment more specifically on possible mitigation measures of the identified impacts. Fees associated with the State Department of Fish and Game and AB 3158 may be required upon the filing of these future environmental documents.

7. Kern COG adopts all of the findings of fact set forth in the Final Tier 1 Environmental Impact Report (EIR) for the South Beltway Transportation Corridor Study and adopts all of the above stated findings as per Section 15091 of the California Environmental Quality Act guidelines, the statement of overriding consideration and the De Minimis Impact Finding.

8. This Board hereby finds that as identified in the Final Tier 1 Environmental Impact Report (EIR) Amendment No. 1 of the South Beltway Transportation Corridor will not have a significant effect on the environment and certifies that a Final Environmental Impact Report for this Plan has been completed in compliance with the California Environmental Quality Act of 1970, as amended and that the Kern Council of Governments, Transportation Planning Agency has reviewed and considered the information contained in the environmental document prior to the approval of the Final Tier 1 Environmental Impact Report (EIR) of the South Beltway Transportation Corridor.

AUTHORIZED, SIGNED AND APPROVED THIS 5TH DAY OF MAY 1994:

AYES: Burkett, Moser, Miller, Bryan, Prout, Ackermann, Booth, McLaughlin, Larwood, Shell, McCuen, Silver

NOES: None

ABSTAIN: None

ABSENT: Salvaggio, Mata, Johnson, Binger

Richard Moser, Chairman
Kern Council of Governments

ATTEST:

I hereby certify that the foregoing is a true copy of a resolution of the Kern Council of Governments, duly authorized at a regularly-scheduled meeting held on the 5th day of May 1994.

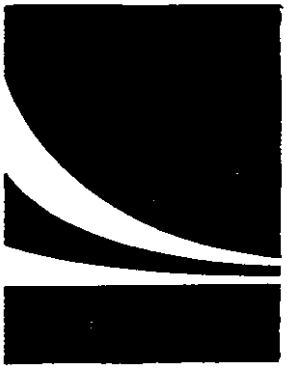
Ronald E. Brummett, Executive Director
Kern Council of Governments

Date: May 5, 1994

FINAL TIER 1 ENVIRONMENTAL IMPACT REPORT
AMENDMENT NO. 1

SOUTH BELTWAY TRANSPORTATION CORRIDOR

Prepared For



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1401 19th St., Suite 200, Bakersfield, CA 93301

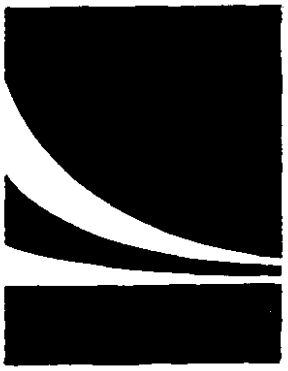
California State Clearinghouse No. 92072049-93102045

Prepared By
HARLAND BARTHOLOMEW AND ASSOCIATES, INC.
May 1994

DRAFT TIER 1 ENVIRONMENTAL IMPACT REPORT, AMENDMENT NO. 1

SOUTH BELTWAY TRANSPORTATION CORRIDOR

Prepared For



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California State Clearinghouse No. 92072049-93102045

Prepared By
HARLAND BARTHOLOMEW AND ASSOCIATES, INC.
January 1994

This Environmental Impact Report was prepared through grants from the Federal Highway Administration and the State of California Department of Transportation.

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SECTION I
SUMMARY

A. PROJECT LOCATION AND CHARACTERISTICS

The City of Bakersfield is a rapidly developing metropolitan center located in the central portion of Kern County in central California. Figure I-1 displays the location of Kern County and the metropolitan Bakersfield area. The Metropolitan Bakersfield 2010 General Plan's Circulation Element proposes a circulation plan intended to avoid the congestion that would result from buildout of the General Plan's land use plan. This circulation plan includes building a freeway ring around Bakersfield to relieve arterials of regional and interstate trips. The South Beltway Transportation Corridor, a portion of this regional ring, is planned for construction sometime after 2020. However, right-of-way preservation in the immediate future is expected to reduce the cost for land acquisition.

The City of Bakersfield, in conjunction with the County of Kern and the Kern Council of Governments (KCOG) proposes the adoption of the South Beltway Transportation Corridor right-of-way in the Bakersfield Metropolitan Area. KCOG is the project sponsor for the proposed right-of-way adoption (KCOG and project sponsor will be used interchangeably in this Environmental Impact Report (EIR)). The California Department of Transportation (Caltrans), ~~as~~ the (likely) ultimate developer of the project, has assigned by default the responsibility of alignment selection and project financing to KCOG. The City of Bakersfield and the County of Kern, as responsible agencies, have the authority for administering the implementation and mitigation of the project. KCOG has identified the need for preparation of a "Tier 1" EIR to assess the impacts associated with the proposed preservation of the right-of-way for the project.

A previously proposed Draft EIR (DEIR) evaluated three west end routes and two east end routes. In response to public comments on that previous DEIR, three new options are being considered for the eastern portion. Three original alternatives for the project are shown as

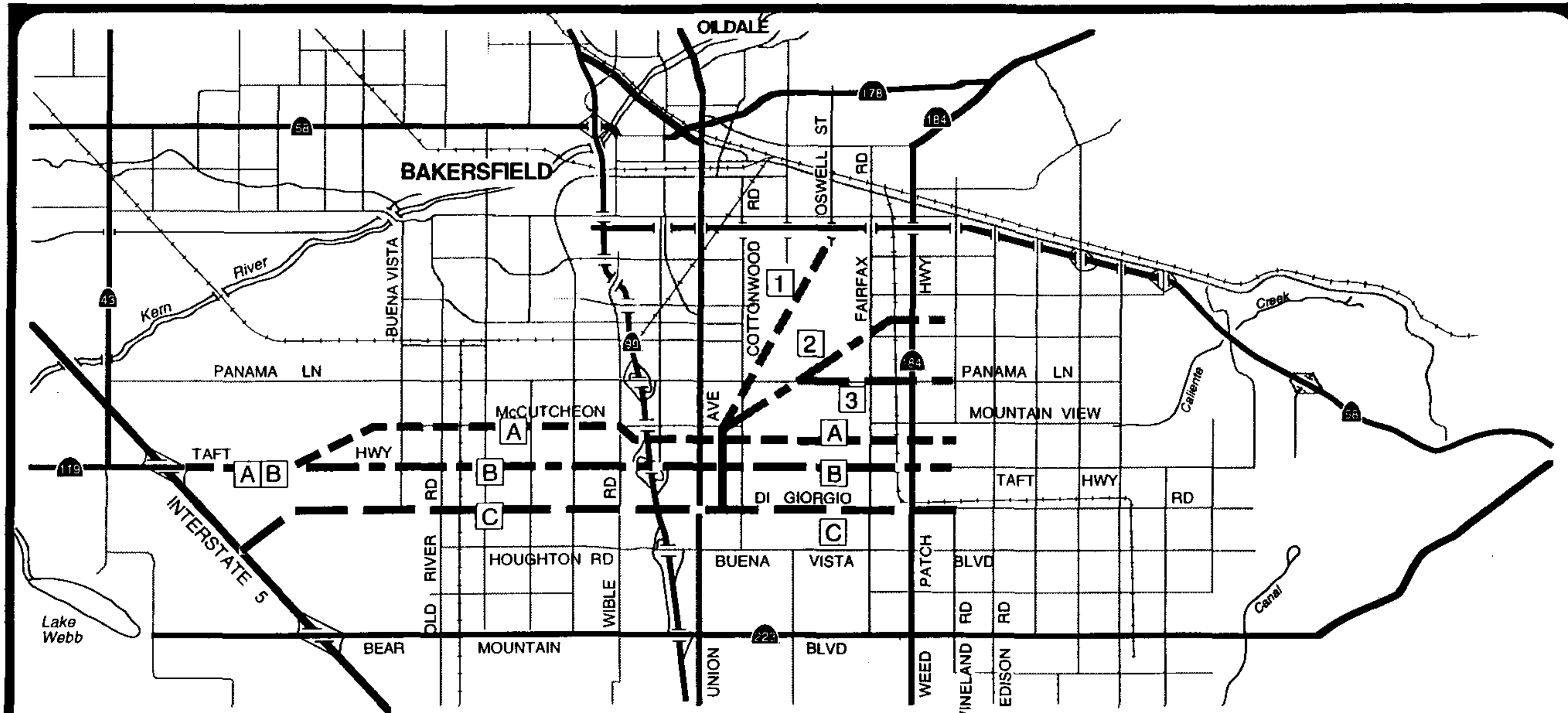
No Scale

South Beltway Transportation Corridor Environmental Impact Report

Regional Location Map

Harland Bartholomew & Associates, Inc.

FIGURE I-1



Source: Harland Bartholomew & Associates, Inc., 1993

January 1994

West Portion of Route

OPTION A

OPTION B

OPTION C

East Portion of Route

OPTION 1

OPTION 2

OPTION 3

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

FIGURE I-2
LOCATION MAP

Harland Bartholomew & Associates, Inc.

Options A, B, and C on Figure I-2. All three alternatives would extend east/west from Interstate 5 to Vineland Road.

In addition to Alternatives A, B, and C, there are nine other project alternatives as well as the No Project Alternative. These nine alternatives are combinations of Options A, B, and C and Options 1, 2, and 3 (see Table I-1).

The first option, Option A, would be the portion of Alternative A which extends from Interstate 5 along State Route 119, Taft Highway, then travels northeast to follow McCutcheon Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives A1, A2, or A3.

Option B would be the portion of Alternative B which extends from Interstate 5 along State Route 119, Taft Highway, to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives B1, B2, or B3.

The third option, Option C would be the portion of Alternative C which extends from Interstate 5 approximately two-and-one-half to three miles south of Taft Highway, then travels northeasterly and follows roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives C1, C2, or C3.

The three additional options for the east portion of the route corridor are shown as Options 1, 2, and 3 on Figure I-2. Options 1, 2 and 3 would connect with Options A, B, and C at a point approximately between Union Avenue and Cottonwood Road and extend either to Route 58 (Option 1) or Vineland Road (Options 2 and 3). Option 1 extends in a north-northeasterly direction from the connection point of the corridor and intersects State Route 58 at the Oswell Street intersection. The second option, Option 2, extends northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then

travels east connecting with Vineland Road. The third option, Option 3, travels northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extends easterly connecting with Vineland Road.

Table I-1
Proposed Project Alternatives

Alternative	Description
1) A	Extending from I-5 to Vineland Road roughly following McCutcheon Road
2) B	Extending from I-5 to Vineland Road along Taft Highway
3) C	Extending from I-5 to Vineland Road, roughly along DiGiorgio Road
4) A1	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
5) A2	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
6) A3	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road
7) B1	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
8) B2	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
9) B3	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road
10) C1	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
11) C2	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
12) C3	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road

The proposed project could be one of Alternative A, B, C, A1, A2, A3, B1, B2, B3, C1, C2, or C3. Therefore, there are 12 project alternatives and the No Project Alterntive, with no preferred alternative defined by KCOG at this time.

The Tier 1 EIR is intended to analyze the impacts associated with the right-of-way required for a transportation corridor. At the present time no specific type of transportation facility has been selected. The only issues that have been identified are the need for the corridor and its general location. Several types of facilities may be appropriate to serve the area in the future, such as a freeway, light rail, HOV lanes, or other transit uses. It is assumed that each use would dictate different right-of-way dimensions. However, in order to provide an estimate of the approximate amount of land required for a typical right-of-way, the following ~~California Department of Transportation (~~Caltrans~~)~~ highway standards were used. A six-lane divided highway consisting of six 12-feet wide travel lanes, a 60-feet wide median, and 10-feet wide shoulders on each side of the highway with an additional 30 feet between the edge of the highway and the right-of-way fence to allow for frontage roads would require a right-of-way of 212 feet. Additionally, in areas needing elevated road crossings or depression of the road, approximately 50 feet of additional right-of-way would be needed on each side to compensate for the 2:1 slope ratio required by Caltrans. These areas would require a total right-of-way of approximately 312 feet. The actual facility may require a larger or smaller right-of-way.

The study maps do not identify precise footprints for construction. Consequently, the analysis presented in this Tier 1 EIR is reflective of the project area comprehensive facility needs and impacts. However, anticipated construction activities would include paving, overlaying existing pavement, widening of some roadway/bridge structures, modifying traffic signals, modifying existing roadway drainage facilities, and construction of new concrete curbs, gutters and sidewalks. The environmental impacts associated with the proposed project and examined in this document are summarized in Table I-2. A detailed analysis of each individual specific impact can be found in the corresponding analysis within Section IV of this document. The EIR addresses the impacts associated with the long term

implementation of the South Beltway Transportation Corridor, as well as the short term impacts associated with construction of the proposed project.

As noted, the right-of-way adoption will guide the development and planning design of the corridor. Therefore, the EIR is required to be a comprehensive and qualitative document. Subsequent projects and activities dictated by design and construction of the project will require a more detailed Tier 2 environmental analysis prior to City, County and Caltrans approval.

Based on the Initial Study environmental evaluation and public meetings, KCOG, as the lead agency, concurred that the following environmental issues should be evaluated:

Earth	Existing topography in the areas immediately adjacent to the roadbed may be altered and the roadway may extend into areas where the soil(s) need to be supported in order to provide a safe and stable base.
Air Quality	The air quality along the transportation corridor may be affected by the additional vehicular traffic and mobile emissions due to the increased volume capacity.
Water	The proposed project may require the construction of additional storm drains as much of the project area is currently covered with permeable surfaces. Drainage patterns may therefore be altered.
Plant Life and Animal Life	The proposed project may result in a reduction in the amount of plant life adjacent to the corridor. As a result, some animal life in the area may have their food supply altered. Endangered plant and/or animal species may be located in the area and affected by the proposed corridor.
Noise	The proposed project may result in a short-term increase in noise due to grading and construction equipment. In addition, the corridor may increase traffic volumes and result in a corresponding increase in vehicular-generated noise.

Light and Glare	The project may introduce short-term sources of light as a result of construction activities. Additionally, there may be additional sources of light from vehicular sources travelling along the corridor.
Land Use, Housing and Relocation	The project may require the conversion of existing farmland to non-agricultural uses and may reduce the amount of acreage devoted to residential uses. The project may result in the displacement of businesses or residences.
Transportation/ Circulation	The proposed project may increase the number of vehicles using Taft Highway, Interstate 5, and Route 58 due to the new connecting highway and the increased carrying capacity. As a result, drivers currently using other roadways may alter their travel patterns to use the new facility. Roadways that provide access to the new facility may also experience an increase in traffic volumes.
Cultural Resources	The proposed corridor may effect undocumented cultural/historic/ archaeological sites adjacent to the roadway.
Risk of Upset/ Human Health/ Hazardous Materials	Any existing gas or oil facilities in the area may be disturbed or relocated which could result in exposure to hazardous materials during grading and excavation. Construction of the corridor, however, will improve the area's circulation system and, therefore, improve the ability of emergency vehicles to respond to requests.

B. PROJECT ALTERNATIVES

Based on input from responsible agencies, the public (see responses to the City's Notice of Preparation provided in Section XI of this EIR) and analysis by KCOG, the 12 alternatives described above and in Table I-1 (Alternatives A, B, C, A1, A2, A3, B1, B2, B3, C1, C2 or C3) and the No Project Alternative are analyzed in this EIR. In addition to the alternatives described above, others were considered. Feasibility studies and traffic analysis models were conducted for each alternative studied. Based on feasibility studies, it was determined by the lead agency that alternatives located north of the proposed alternative sites were too costly. The traffic models that were conducted on the routes south of the proposed alternative sites

concluded that the anticipated future traffic demand on smaller arterials would not be mitigated. In particular, a route which would roughly follow Bear Mountain Boulevard was considered, but rejected due to its inability to relieve the anticipated urban traffic demand.

No Project:

The No Project alternative assumes that no corridor will be adopted and all existing conditions along each of the routes will remain as they are in 1994.

C. SIGNIFICANT AND LONG TERM EFFECTS

Implementation of the South Beltway Transportation Corridor would result in significant impacts to earth resources and land uses. Other impacts associated with the South Beltway Transportation Corridor are incremental and long term in nature. Therefore impacts can be anticipated in advance and mitigation measures developed as necessary.

Some building materials and energy resources would be irretrievably committed to long term use, but conservation measures would reduce the overall impact of that commitment. The proposed South Beltway Transportation Corridor represents an approach to insure the timely availability of infrastructure to serve planned development and is therefore considered a growth-inducing project.

Table I-2 provides a summary of potentially significant adverse impacts associated with the proposed South Beltway Transportation Corridor. In addition, the table also provides a summary of recommended mitigation measures, significance of the environmental impacts with the mitigation measures, and mitigation monitoring responsibilities.

TABLE I-2
SUMMARY OF IMPACTS AND MITIGATIONS

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
A. GEOLOGY, TOPOGRAPHY AND SOILS				
Disturbance of covering soil	Regrade and revegetate disturbed areas outside highway facility limits	Insignificant	Project Developer/ City of Bakersfield/ Kern County/	During and after construction
Damage to the South Beltway due to severe groundshaking	Engineered design of proposed project to comply with Federal and State regulations intended to minimize damage from seismic activities considered typical of the area	Insignificant	Project Developer/City of Bakersfield/ Kern County/	During project design
Loss of Prime Agricultural Land	Development of other agricultural lands not currently in use	Significant	City of Bakersfield/ Kern County/ Owners affected	During right-of-way acquisition
B. AIR QUALITY				
Exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement	Fugitive dust emissions shall be controlled by construction contractors with regular watering or other airborne dust reduction measures in compliance with the SJVUAPCD. Wetting may reduce fugitive dust emissions by approximately 50 percent	Insignificant	Project Developer/ SJVUAPCD	Prior to and during construction
	The developer shall be responsible for the tuning up of all construction machinery to manufacturers' specifications	Insignificant	Project Developer/Project Sponsor	Prior to construction
	Construction activities should be phased and scheduled by the developer(s) to avoid emission peaks. Construction should be discontinued during first stage smog alerts	Insignificant	Project Sponsor/Project Developer	Prior to and during construction
	Stockpiles of soil and similar materials shall be protected from wind erosion	Insignificant	Project Developer	During construction

TABLE I-2
SUMMARY OF IMPACTS AND MITIGATIONS

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	In sensitive areas, a temporary wall of sufficient height to reduce windblown dust shall be erected	Insignificant	Project Developer/Project Sponsor	Prior to and during construction
	An air quality analysis of construction activities shall be completed to ensure that construction emissions meet the SJVUAPCD standards	Insignificant	Project Developer/Project Sponsor	Prior to construction
	Encourage alternative modes of transportation such as bicycle pathways near the proposed right-of-way and HOV lanes	Insignificant	KCOG/City of Bakersfield/Kern County	During project design
C. HYDROLOGICAL RESOURCES				
Potential decrease of water quality due to runoff from the roadway	Compliance with the CRWQCB, Central Valley Region regulations to meet the water quality objectives specified in the NPDES permit and the 1991 California Inland Surface Waters Plan	Insignificant	City of Bakersfield/ Kern County	During project construction and operation
Potential changes to the path of flood waters	Compliance with the regulations and guidelines in the Kern County Floodplain Management Ordinance and the Kern County Zoning Ordinance	Insignificant	City of Bakersfield/ Kern County	Prior to issuance of a grading permit and as development occurs
Potential exposure of population to flood hazards	The County shall obtain the required federal funding and authorization for the implementation of the Caliente Creek Flood Control Project	Insignificant	City of Bakersfield/ Kern County	Prior to construction and as development occurs
Potential increase of runoff due to increase of impermeable surfaces	Require project developer to provide proper collection for runoff	Insignificant	Project Developer/City of Bakersfield/ Kern County	Prior to construction and as development occurs

TABLE I-2
SUMMARY OF IMPACTS AND MITIGATIONS

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
D. PLANTS AND WILDLIFE				
Loss of existing plant and wildlife habitat and individuals of sensitive plant and wildlife species	Prior to any action by a state agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the California Department of Fish and Game (DFG) pursuant to California Fish and Game Code Section 2090 and Public Resources Code Section 21104.2. Any requirements or decisions by DFG pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by DFG as a result of public agency consultations leading to authorization to take listed species have not yet been determined,but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)	Insignificant	Department of Fish and Game	Prior to issuance of a grading permit

TABLE I-2
SUMMARY OF IMPACTS AND MITIGATIONS

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	Prior to any action by a federal agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7(a) of the Federal Endangered Species Act (16 USC Section 1536(a)). Any requirements or decisions by USFWS pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by USFWS as a result of public agency consultations leading to authorization to take listed species have not yet been determined, but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)	Insignificant	U.S. Fish and Wildlife Service	Prior to issuance of a grading permit

SECTION II
INTRODUCTION

A. PURPOSE OF THE EIR

The purpose of an Environmental Impact Report (EIR) as defined in section 15121 (a) of the State Guidelines for the implementation of the California Environmental Quality Act (California Administrative Code, Title 14, Division 6, Chapter 3) is as follows:

> *"An EIR is an informational document which would inform public agency decision-makers and the public generally of the significant effects, and describe reasonable alternatives to the project..."*

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) and guidelines (as amended through 1990) and the California Department of Transportation's (Caltrans') "Guidelines for Tiered Environmental Documents". The objective of a Tiered EIR is to facilitate environmental review by use of a document tailored for corridor preservation where timing is a factor. A Tier I EIR does not have the detail of a project level document; the purpose of the Tier 1 document is to address environmental issues relative to a location adoption decision. Subsequent to this Tier 1 EIR, a follow-up Tier 2 EIR will address project specific issues and will describe in more detail the project's environmental consequences, design alternatives, and project mitigation. Issues in both the Tier 1 and Tier 2 documents will be addressed in a merged fashion.

The EIR is an informational document which will inform and assist public agency decision makers, and the public in general, on the significant environmental effects of the proposed project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project as proposed. This document assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the adoption of the right-of-way and the implications of the future transportation facility. This EIR is also intended to support the permitting processes of all agencies whose discretionary approvals must be obtained for particular elements of this project.

This document has the following specific uses and/or purposes:

1. To comply with CEQA;

2. To provide public notice to other potential interested or affected parties regarding the proposed project;

3. To assess impacts resulting from adoption of the proposed corridor and the implications of the resulting transportation facility;

4. To assess potential impacts from feasible alternatives to the proposed project; and

5. To provide environmental documentation to be used in applicable environmental permitting processes.

B. LEAD AGENCY AND DOCUMENT FORMAT

The Kern Council of Governments (KCOG) is the lead agency, as defined by Section 21067 of CEQA, for this EIR, and has supervised its preparation. The overall format of the EIR contains those components required by CEQA. Specifically, a detailed description of the corridor and the alternative sites is included in Sections I and III in this EIR. The environmental setting, impacts, and mitigation measures for each of the project alternatives are discussed in Section IV. Sections V and VI of this EIR discuss thirteen alternatives with respect to the effects of their implementation as well as long-term implications of the corridor. References are included in Section IX and supporting documentation are included in Section X of this EIR.

Environmental documentation and review procedures are administered by the KCOG's planning staff. Although the proposed project at this time does not include specific development analysis, it is anticipated that once specific development proposals are formulated these proposals may require approval from the following responsible local and state agencies: (1) California Department of Transportation; and (2) California Department of Fish and Game.

The project's environmental review process commenced with the preparation of an Initial Study which was completed by KCOG in June, 1992 and an amendment to the Initial Study

in October, 1993. The Initial Studies concluded that an EIR must be prepared which would further analyze issues within the following ten environmental areas: (1) Earth; (2) Air Quality; (3) Water; (4) Plant Life and Animal Life; (5) Noise; (6) Light and Glare; (7) Land Use, Housing and Relocation; (8) Transporation and Circulation; (9) Cultural Resources; and, (10) Risk of Upset/Human Health/Hazardous Materials. As required by CEQA, this EIR also focuses on the long-term and cumulative changes anticipated as a result of the modification of the area to allow the proposed corridor. There are 13 alternatives considered in this EIR. Each alternative will result in similar impacts as identified in the Initial Study, however, the significance of the impact will be determined by the location of each option. The No Project Alternative is the only alternative which would prevent any of the identified impacts from occurring.

The alternatives are as follows (see Table II-1 below): Alternatives 1 to 3 are Options A, B or C. All three alternatives would extend east/west from Interstate 5 to Vineland Road. The first alternative, Alternative A, would extend east from Interstate 5 along State Route 119, Taft Highway, then travel northeast to follow McCutcheon Road. The second alternative, Alternative B, would extend east from Interstate 5 along Taft Highway. The third alternative, Alternative C proposes that the corridor extend from Interstate 5 roughly along DiGiorgio Road.

Alternatives 4 to 12 are Options 1, 2, or 3 connecting with Options A, B, or C. The first option, Option A, would be the portion of Alternative A which extends from Interstate 5 along State Route 119, Taft Highway, then travels northeast to follow McCutcheon Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives A1, A2, or A3.

Option B would be the portion of Alternative B which extends from Interstate 5 along State Route 119, Taft Highway, to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives B1, B2, or B3.

The third option, Option C would be the portion of Alternative C which extends from Interstate 5 approximately two-and-one-half to three miles south of Taft Highway, then travels northeasterly and follows roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives C1, C2, or C3.

The three eastern portion options connect with Options A, B, and C at a point approximately between Union Avenue and Cottonwood Road and extend either to Route 58 (Option 1) or Vineland Road (Options 2 and 3). Option 1 extends in a north-northeasterly direction from the western portion of the corridor and intersects State Route 58 at the Oswell Street intersection. Option 2, extends northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then travels east connecting with Vineland Road. Option 3, travels northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extends easterly connecting with Vineland Road.

Table II-1
Proposed Project Alternatives

Alternative	Description
1) A	Extending from I-5 to Vineland Road roughly following McCutcheon Road
2) B	Extending from I-5 to Vineland Road along Taft Highway
3) C	Extending from I-5 to Vineland Road, roughly along DiGiorgio Road
4) A1	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
5) A2	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
6) A3	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road

7) B1 Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection

8) B2 Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road

9) B3 Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road

10) C1 Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection

11) C2 Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road

12) C3 Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road

The last alternative, Alternative (13) is the No-Project Alternative which assumes that no corridor will be adopted and all existing conditions along each of the routes will remain as they are in 1994.

On October 8, 1993, KCOG issued a Notice of Preparation (NOP) which was circulated to interested and responsible agencies, organizations and individuals for 30 days. The NOP identified KGOG's intent to require the preparation of an EIR for the project, and its solicitation of comments regarding the content. The Initial Study and NOP are presented in Section XI of this document.

The purpose of this EIR is to provide objective and authoritative planning information in a logical format to assist KCOG, City and County staff, the City of Bakersfield Planning Commission, City Council, Board of Supervisors and the general public in their consideration of the environmental consequences associated with the proposed project. This document is

arranged in a format that facilitates examination according to the needs and interests of the various individuals reviewing the document. For the casual reviewer or those with general responsibility for decisions regarding the overall impacts of the proposed project, attention to Section I, Summary, may be sufficient. For those with specific environmental interests and responsibilities, the Table of Contents is a guide to the appropriate sub-section of Section IV, Environmental Setting, Impacts, and Mitigations.

C. MITIGATION MONITORING PROGRAM

Effective January 1, 1989, CEQA was amended to add Section 21081.6, implementing Assembly Bill (AB) 3180, Mitigation Monitoring Programs. As part of CEQA environmental review procedures, AB3180 requires a public agency to adopt a monitoring and reporting program for assessing efficacy of any required mitigation measures applied to proposed developments. As stated in Section 21081.6 of the Public Resources Code:

> *"...the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment."*

AB 3180 provides general guidelines for implementing monitoring and reporting programs. Specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final approval of the project proposal by the responsible decision maker(s). In response to established CEQA requirements and those of AB 3180 (Public Resources code Section 21000 et seq.), the proposed mitigation monitoring program shall be submitted to respective staff for the City of Bakersfield and Kern County Planning Departments for consideration prior to completion of the environmental review process to facilitate appropriate response to the proposals. Mitigation Monitoring Programs are included in each of the subsections in Section IV, Environmental Setting, Impacts and Mitigations.

Several documents are incorporated into this EIR by reference. These reports are listed in in this EIR in Section IX, Organizations and Persons Contacted, Preparers, and References and

are available for public review at the Kern Council of Governments, 1401 19th Street, Suite 200, Bakersfield, 93301, or the City of Bakersfield Planning Department, City Hall, 1501 Truxtun Avenue.

SECTION III
PROJECT DESCRIPTION

The Kern Council of Governments (KCOG), Kern County, and the City of Bakersfield have identified the need to ensure that future east-west traffic in the area between Interstate 5 to State Route 58 (see Figure I-1) can be accommodated. In order to meet traffic demand generated by proposed land uses, these three agencies have identified the need to develop a new transportation facility, referred to as "The South Beltway Transportation Corridor". Depending on the alternative selected, the proposed route would run approximately 20 miles through primarily flat terrain south of downtown Bakersfield. The three agencies have determined that this area will require an improved transportation route to accommodate the anticipated population growth that will take place over the next 30 years. While the western portion of the corridor would run generally along the same east-west route as State Route 119 (Taft Highway), it has been determined that the existing State Route 119 will not have adequate capacity for future traffic.

The proposal is the adoption of right-of-way alignment for future development of the South Beltway Transportation Corridor from Interstate 5 Freeway to State Route 58. The evaluation criteria used by KCOG, Kern County and the City of Bakersfield for selection of route lines are as follows:

- Proximity to existing or proposed schools and parks;
- Proximity to existing interchanges on State Route 99 (Federal Highway Administration only allows interchanges approximately every mile in urban areas);
- Disruption to existing neighborhoods;
- Cost of right-of-way acquisition;
- Displacement cost (existing structures);
- Effect on local circulation;
- Land use severance; and
- Environmental considerations.

In addition to the route adoption alternatives discussed below, others were considered. Feasibility studies and traffic analysis models were conducted for each alternative studied. Based on feasibility studies, it was determined by the lead agency that alternatives located north of the proposed project site were too costly. The traffic models that were conducted on the routes south of the proposed alternative sites concluded that the anticipated future traffic demand on smaller arterials would not be mitigated.

Three alternatives (Alternatives A, B, and C) would extend east/west from Interstate 5 to Vineland Road. The first alternative, Alternative A, would extend east from Interstate 5 along State Route 119, Taft Highway, then travel northeast to follow McCutcheon Road approximately. Alternative B would extend east from Interstate 5 along Taft Highway and Alternative C, proposes that the corridor extend from Interstate 5 generally parallel to DiGiorgio Road.

In addition to Alternatives A, B, and C, there are nine other project alternatives as well as the No Project Alternative. These nine alternatives are combinations of Options A, B, and C and Options 1, 2, and 3 (see Table I-1).

The first option, Option A, would be the portion of Alternative A which extends from Interstate 5 along State Route 119, Taft Highway, then travels northeast to follow McCutcheon Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives A1, A2, or A3.

Option B would be the portion of Alternative B which extends from Interstate 5 along State Route 119, Taft Highway, to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives B1, B2, or B3.

The third option, Option C would be the portion of Alternative C which extends from Interstate 5 approximately two-and-one-half to three miles south of Taft Highway, then travels

northeasterly and follows roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives C1, C2, or C3.

The three additional options for the east portion of the route corridor are shown as Options 1, 2, and 3 on Figure I-2. These three options would connect with the western portion of the corridor at the point approximately between Union Avenue and Cottonwood Road and extend either to Route 58 (Option 1) or Vineland Road (Options 2 and 3). Option 1 extends in a north-northeasterly direction from the western portion of the corridor and intersects State Route 58 at the Oswell Street intersection. The second option, Option 2, extends northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then travels east connecting with Vineland Road. The third option, Option 3, travels northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extends easterly connecting with Vineland Road.

The proposed project could be one of Alternatives 1 through 12 (Alternative A, B, C, A1, A2, A3, B1, B2, B3, C1, C2, or C3). Therefore, there are 12 project alternatives and the No-Project Alternative, with no preferred alternative defined by KCOG at this time.

This Tier 1 EIR presents an analysis of the impacts associated with reserving the right-of-way required for the proposed transportation corridor. At the present time no specific type of transportation facility has been selected. The only issues that have been identified are the need for the corridor and its general location. Several types of facilities which may be appropriate to serve the area in the future, such as a freeway, light rail, HOV lanes, or other transit uses. It is assumed that each use would dictate different right-of-way dimensions. However, in order to provide an estimate of the approximate amount of land required for a typical right-of-way, the following California Department of Transportation (Caltrans) highway standards were used. A six-lane divided highway consisting of six 12-feet wide travel lanes, a 60-feet wide median, and 10-feet wide shoulders on each side of the highway with an

additional 30 feet between the edge of the highway and the right-of-way fence to allow for frontage roads would require a right-of-way of 212 feet. Additionally, in areas needing elevated road crossings or depression of the road, approximately 50 feet of additional right-of-way would be needed on each side to compensate for the 2:1 slope ratio required by Caltrans. These areas would require a total right-of-way of approximately 312 feet. The actual facility may require a larger or smaller right-of-way.

The western portion of the South Beltway Transportation Corridor is rural in character, with a mix of residential, commercial, agricultural and oil-related uses. The eastern portion of the highway is also rural in character with agricultural and some oil-related uses. The southwest portion of metropolitan Bakersfield just north of the proposed corridor is highly developed with residential, office, and commercial land uses. The South Beltway Transportation Corridor is a planned strategic link in the highway network leading to and through Kern County and metropolitan Bakersfield. Motorists traveling to and from the metropolitan Bakersfield area could use the South Beltway Transportation Corridor if they originate or have destinations along Interstate 5 or State Route 58. The corridor would facilitate goods movement, intrastate travel, and subregional and local travel as a connection between Interstate 5 to State Route 58. It would become one of the limited number of state highways that cross the Sierra Nevada mountain range between Los Angeles and Sacramento and would be the most direct route for motorists traveling between northern California, Interstate 15 (connecting to Las Vegas), Interstate 40 (connecting to Arizona) and routes which are heavily used for trucking.

Existing and projected residential development and employment, both within the corridor and immediately adjacent to the corridor, are creating the need for additional highway capacity to meet local circulation needs. This circulation demand is becoming particularly acute in the western portion of the corridor which is becoming increasingly urbanized. The Bakersfield 2010 Metropolitan General Plan, Circulation Element, states that State Route 119 (Taft Highway) is currently experiencing some congestion in addition to problems with heavy truck

use. Increased regional demand would overload State Route 119 and may increase congestion on State Route 58.

Existing traffic model runs indicate surface highways, streets, and roads adjacent to and near the proposed route will be unable to accommodate the future anticipated traffic demand. It is forecasted that at buildout of the land use plan, virtually all highways and major arterials will operate at a volume exceeding 80 percent capacity. The actual proposed corridor will take several years to plan, finance, and build. The corridor is planned for construction sometime after 2020.

SECTION IV
SETTING, IMPACTS, AND MITIGATION MEASURES

The following section provides a qualitative description of the affected environmental resource areas and the potential impacts that may result from the proposed right-of-way and route alignment of the South Beltway Transportation Corridor from Interstate 5 to State Route 58. Typical mitigation measures are recommended to reduce adverse and significant impacts, however, actual mitigation measures will be determined at the time a construction project is environmentally cleared. The California Department of Transportation (Caltrans), ~~as~~ the (likely) ultimate developer of the project will be responsible for the environmental clearance and the mitigation. Depending on the project and when it is implemented, impacts and appropriate mitigation measures may vary. The assessment of each issue is provided in the following format:

- **Environmental Setting:** The physical conditions, both natural and man-made, of the general area which will be affected by the proposed project.
- **Environmental Impacts and Alternatives Analysis:** Direct or primary effects and analysis of the project alternatives. This section will describe impacts that effect the general area. When there are site specific impacts due to a particular alternative, those impacts will be described following the general discussion.
- **Mitigation Measures:** Measures recommended to reduce adverse and significant impacts.
- **Mitigation Monitoring Program:** Program for carrying out recommended mitigation measures including mitigation responsibility and project phase of mitigation.

A. TOPOGRAPHY, GEOLOGY, AND SOILS

Environmental Setting

Topography

The topography of Kern County is quite varied. Slope of the natural terrain ranges from virtually flat to vertical. The mountain ranges of the County provide the greatest variety of topographic features from the rolling hills and deeply eroded canyons of the coast ranges to the sharp granitic features of the Sierra Nevada. The project area is located in the San Joaquin Valley, a relatively flat plain with minimal sloping.

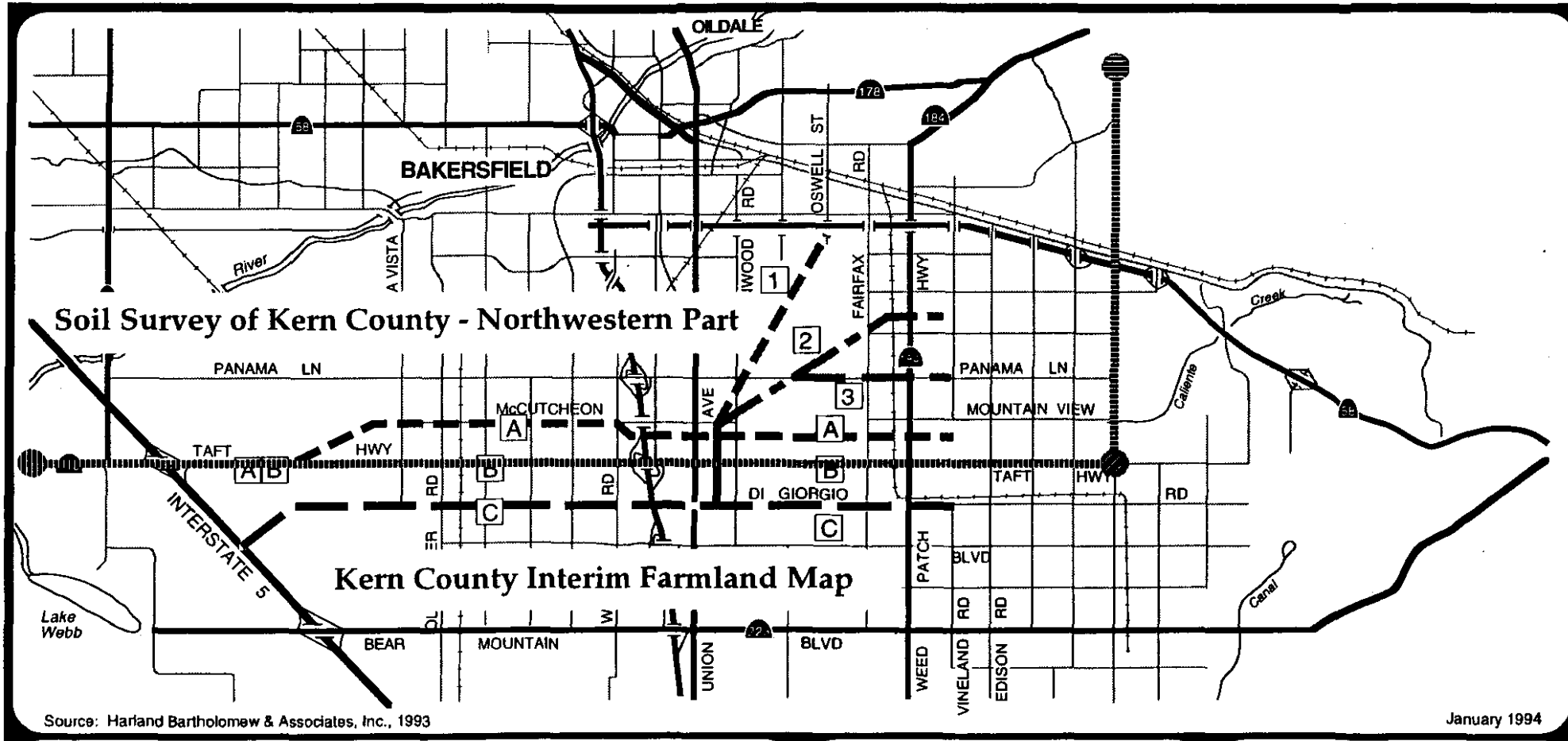
Geology

The project alternatives are located at the southern end of the San Joaquin Valley (also known as the Great Valley Geomorphic Province). In this area, the Valley is defined by the Sierra Nevada and the Tehachapi Mountain Range on the east, the San Emigdio Range on the south, and the Coast Range on the west. For the most part, the Kern County portion of the Valley is a closed basin with no direct drainage to the Pacific Ocean; this is a result of bulge in the Valley floor that stretches primarily east/west across the Valley near the northerly County limits. Evidence of the Valley's existence as a marine basin as long ago as late Jurassic is present in the early folding of the Sierra Nevada.

Erosion from both the Sierra Nevada and Coast Range has resulted in the deposition of immense thicknesses of sediments in the valley. The thickness of sediments underlying the area varies from about 3,300 feet near Delano and 7,000 feet near first point of measurement on the Kern River to more than 3,500 feet in the Buena Vista Lake area.

Seismicity

The southern San Joaquin Valley, including most of Kern County, is considered a seismically active area. Regional geologic features include the San Andreas Faults and associated faults (Figure IV-1). These faults are listed under the Alquist-Priolo Special Studies Zones. The last major seismic activity on any of these faults was the 1952 White Wolf earthquake centered


OILDALE
BAKERSFIELD
178
184
58
OSWELL ST
RD
A VISTA
River
FAIRFAX
HWY
Creek
Soil Survey of Kern County - Northwestern Part
PANAMA LN
McCUTCHEON
MOUNTAIN VIEW
Caliente
TAFT
HWY
DI GIORGIO
INTERSTATE 5
Kern County Interim Farmland Map
PATCH
BLVD
Lake
Webb
BEAR
MOUNTAIN
UNION
WEED
VINELAND
EDISON
Canal
Source: Harland Bartholomew & Associates, Inc., 1993
January 1994
West Portion of Route
OPTION A
OPTION B
OPTION C
East Portion of Route
OPTION 1
OPTION 2
OPTION 3
Soil Survey Boundaries
1 0 1 2 4 miles
South Beltway Transportation Corridor
Environmental Impact Report
FIGURE IV-2
SOIL SURVEY BOUNDARIES
Harland Bartholomew & Associates, Inc.

on Wheeler Ridge, about 20 miles south of the project area. The White Wolf earthquake was a 7.7 Richter Magnitude event, along with numerous aftershocks. Local seismic activity is somewhat limited to an occasional fault or subsurface fault associated with local oil fields. Earthquake epicenters are also removed from the project area except for local events nearby.

Two 4.0 to 4.9 Magnitude epicenters occurred along Enos Lane and a 3.0 to 3.9 Magnitude event occurred along the Nord Road extension. Due to the relatively flat nature of the Valley and South Beltway Transportation Corridor area, landslides are not considered a concern.

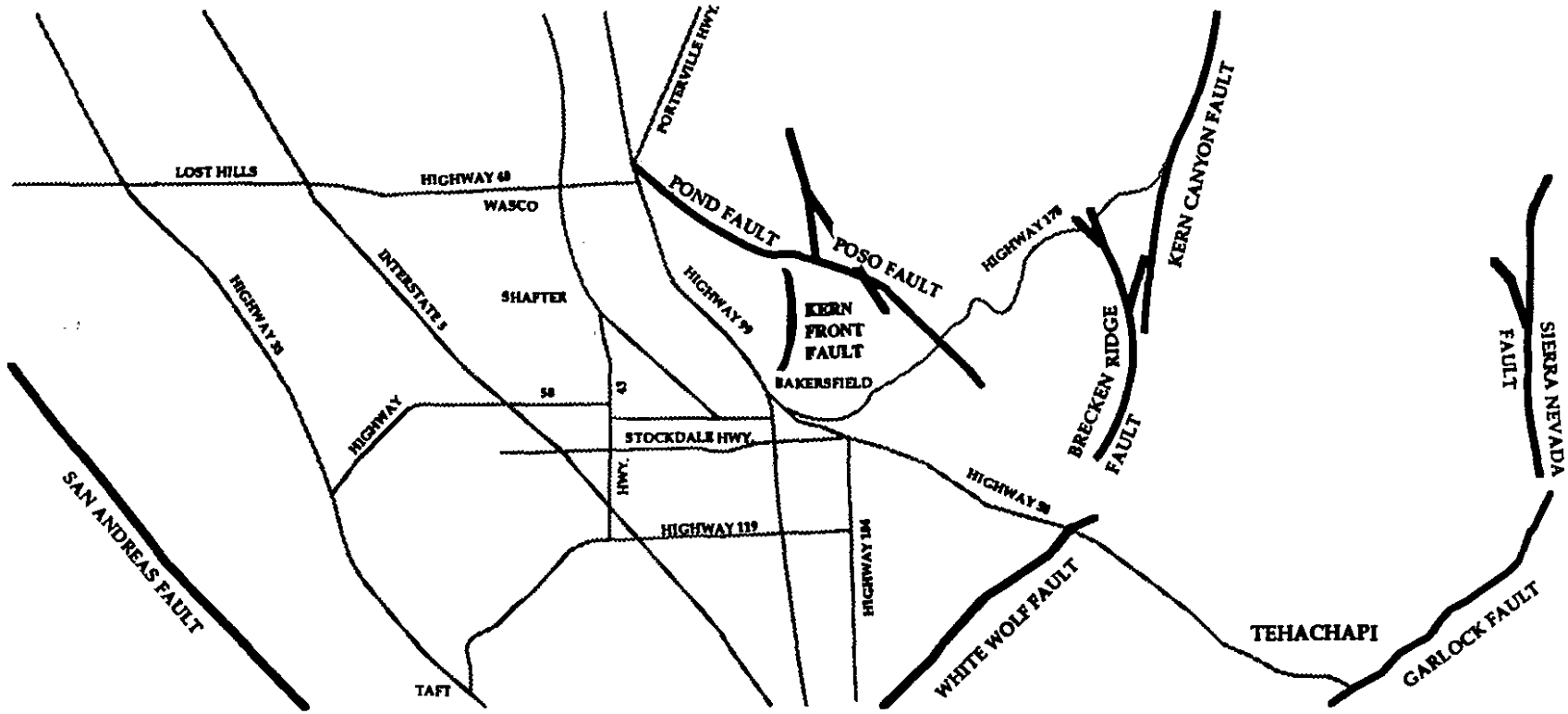
Soils

Information on Soils in the project area was obtained from two sources: the Soil Conservation Service Northwest Soil Survey, and the Kern County Interim Farmland Map. The boundaries of the two soil study areas are depicted in Figure IV-2.

Based on the Soil Conservation Service "Northwest Soil Survey" the majority of soils in the project area are Kimberlina-Wasco soils. Small amounts of Panoche-Milham-Kimberlina soils are located just north of State Route 119 along State Route 184 and Delano-Chanac soils are located east of State Route 184 to State Route 58. The following specific soils are located within the project area.

- 125 - Cajon Loamy Sand, 0 to 2 percent slopes
- 127 - Cajon Sandy Loam, Overblown, 0 to 2 percent slopes
- 174 - Kimberlina Fine Sandy Loam, 0 to 2 percent slopes
- 179 - Kimberlina Fine Sandy Loam, Saline Alkali, 0 to 2 percent slopes
- 211 - Panoche Clay Loam, 0 to 2 percent slopes
- 214 - Panoche Clay Loam, Saline Alkali, 0 to 2 percent slopes
- 246 - Whitewolf Coarse Sandy Loam

These soils are all deep, nearly level, well-drained soils located on floodplains and alluvial fans, alluvial plains and basin rims and are derived dominantly from granitic and sedimentary rocks. Slopes are 0 to 2 percent at elevations ranging from 250 to 1,000 feet. The vegetation in areas not cultivated is mainly annual grasses and forbs. The annual average precipitation for



NO SCALE

January 1994

South Beltway Transportation Corridor Environmental Impact Report

MAJOR ACTIVE FAULTS

Harland Bartholomew & Associates, Inc.

FIGURE
IV-1

these soils is 6 to 8 inches. The average annual temperature ranges from 64 to 66 degrees Fahrenheit and the average frost-free season is 250 to 300 days. Available water capacity ranges from low to high. Run-off is slow and hazard of water erosion is slight.

The following provides a brief description of these soils:

Cajon Loamy Sand

Cajon Loam Sand is typically pale brown loamy sand about 9 inches thick. The upper 5 inches of the underlying material is light gray sand, and the lower part to a depth of 60 inches or more is stratified light brownish gray sandy loam. In some areas the surface layer is sand. Permeability of this Cajon soil is rapid. Available water capacity is low. Runoff is very slow, and the hazard of water erosion is slight. The hazard of soil blowing is high. Effective rooting depth is 60 inches or more. Most areas of this unit are used for irrigated crops, mainly alfalfa, cotton, grapes, and small grain. Among the other crops grown are onions and potatoes. Some areas are used for urban development.

Cajon Sandy Loam, Overblown

Cajon Sandy Loam, Overblown is pale brown sandy loam about 10 inches thick. The upper 30 inches of the underlying material is light brownish gray loamy sand, and the lower part to a depth of 60 inches or more is light gray sand. In some areas the surface layer is loamy sand or fine sandy loam. Permeability of this Cajon soil is low or moderate. Runoff is very slow, and the hazard of water erosion in none to slight. The hazard of soil blowing is moderate and effective rooting depth is 60 inches or more. Most areas of this unit are used for irrigated crops such as cotton, alfalfa, and sugar beets. Among the other crops grown are grapes and almonds. Some areas are used for homesite development and oil wells are common. This unit is suited to hay, pasture and irrigated crops. Limitations of the soil include restricted available water capacity, moderate hazard of soil blowing, and rare periods of flooding.

Kimberlina Fine Sandy Loam, 0 to 2 percent slopes

This soil is brown fine sandy loam about 9 inches thick. The upper 36 inches of the underlying material is pale brown fine sandy loam, and the lower part to a depth of 71 inches is pale brown silt loam. In some areas the surface layer is sandy loam or coarse sandy loam. Permeability of this soil is moderate. Available water capacity is high, runoff is slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more. Most areas of this unit are used for irrigated crops, mainly almonds, alfalfa, cotton, and grapes. Among the other crops grown are potatoes, sugar beets, pistachios, and onions. Some areas are used for irrigated pasture, limited livestock grazing, and urban development.

Kimberlina Fine Sandy Loam, Saline Alkali, 0 to 2 percent slopes

This soil has a surface layer of brown fine sandy loam about 9 inches thick. The upper 36 inches of the underlying material is brown fine sandy loam, and the lower part to a depth of 71 inches is pale brown silt loam. The soil is slightly to moderately saline-alkali. In some areas the surface layer is loamy sand or sandy loam. Permeability of this soil is moderately slow. Available water capacity is very low to moderate. Runoff is slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more. This unit is used for row and field crops such as cotton, alfalfa, and barley and oil wells are common in some areas. This soils main limitation is its alkaline condition.

Panoche Clay Loam, 0 to 2 percent slopes

This soil is pale brown clay loam about 16 inches thick. The upper 20 inches of the underlying material is pale brown loam, and the lower part at a depth of 60 inches or more is light yellowish brown sandy clay loam and clay loam. In some areas the surface layer is loam. Permeability of this soil is moderate. Available water capacity is high to very high, runoff is very slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more. Most areas of this unit are used for

irrigated crops, mainly cotton, alfalfa, almonds, grapes, and pistachios. Among the other crops grown are barley, oranges, blackeye beans, potatoes, sugar beets, and sorghum. Some areas are used for livestock grazing and as homesites. This unit is suitable for hay and pasture, irrigated crops, and livestock grazing. If this unit is used for urban development, the main limitation is rare periods of flooding.

Panoche Clay Loam, Saline Alkali, 0 to 2 percent slopes

This soil has a surface layer of grayish brown clay loam about 21 inches thick. The subsurface layer is light brownish gray clay loam about 6 inches thick. The underlying material to a depth of 60 inches or more is pale brown clay loam. The soil is moderately saline-alkali. In some areas the surface layer is loam. Permeability of this Panoche soil is moderately slow. Available water capacity is moderate or high. Runoff is slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more. Toxic levels of boron may be present in places. This unit is used for irrigated salt tolerant crops such as cotton, alfalfa, barley, sorghum, and sugar beets and for irrigated pasture. Some areas are used for livestock grazing. This unit is suited to irrigated pasture and row and field crops that are salt tolerant. It is limited mainly by the saline-alkali condition of the soil. This unit is poorly suited to livestock grazing. The production of vegetation suitable for livestock grazing is limited by low rainfall and the saline-alkali condition of the soil.

Whitewolf Coarse Sandy Loam

Whitewolf Coarse Sandy Loam is brown coarse sandy loam about 11 inches thick. The upper 32 inches of the underlying material is pale brown loamy sand, and the lower part to a depth of 65 inches is pale brown loamy coarse sand and coarse sand. In some areas the surface layer is loamy sand or sandy loam. Permeability of this Whitewolf soil is rapid. Available water capacity is low. Runoff is slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more. Most areas of this unit are used for irrigated crops, mainly grapes. Among other crops

grown are cotton, onions, and potatoes. This unit is suited to irrigated crops and is limited mainly by the rapid permeability and low available water capacity of the soil. Based on the Soil Conservation Service "Kern County Interim Farmland Map" there are two sets of agricultural land definitions for farmland that appears in the project area. The qualitative farmland interpretations are only available for that area of the county covered by USDA soil survey information. Farmed lands outside the soil survey are shown as Irrigated or Non-Irrigated.

Important farmland definitions for areas within USDA soil survey include:

- **Prime Farmland:** Land with the best combination of physical and chemical features for the production of agricultural crops;
- **Farmland of Statewide Importance:** Land with a good combination of physical and chemical features for the production of agricultural crops;
- **Unique Farmland:** Farmland of lesser quality soils used for the production of the State's leading cash crops; and
- **Farmland of Local Importance:** No farmlands of Local Importance were identified for Kern County.

Interim definitions for area outside USDA soil survey include:

- **Irrigated Farmland:** Cropped lands with a developed irrigation water supply that is dependable and of adequate quality; and
- **Non-Irrigated Farmland:** land on which agricultural commodities are produced utilizing stored soil moisture.

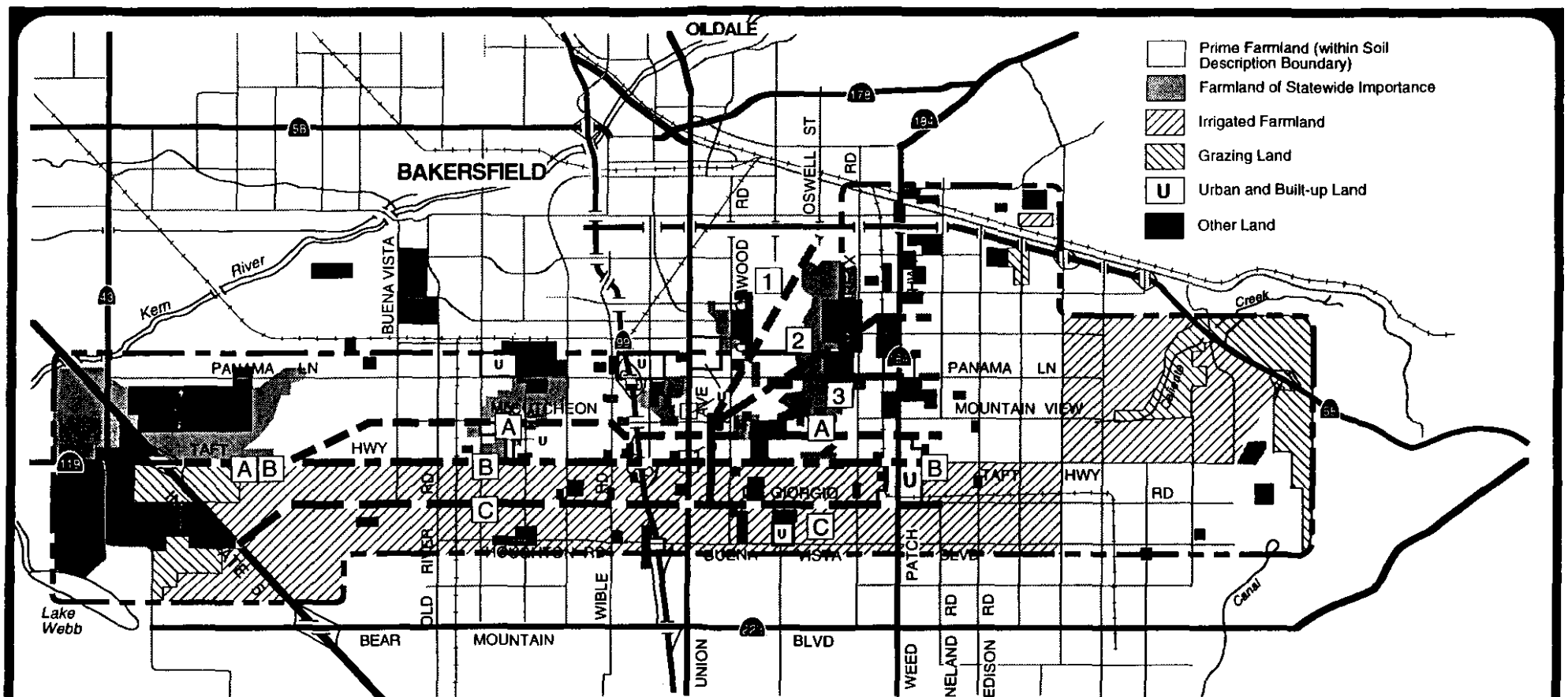
Additional definitions used in both areas include:

- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock;
- **Urban and Built-Up Land:** Land occupied by structures or infrastructure to accommodate a building density of at least one unit to one and one-half acres, or approximately six structures to ten acres; and
- **Other Land:** Land which does not meet the criteria of any other category.

Figure IV-3 shows the above soil classifications in relation to the project area. Prime farmland is of major importance in providing the nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, state, and federal levels, as well as individuals, must encourage and facilitate the wise use of prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, seed, forage, fiber, and oilseed crops. Such soils have properties that are favorable for the economic production of sustained high yields of crops. The soils need only to be treated and managed using acceptable farming methods. Adequate moisture and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal units of energy and economic resources, and farming these soils results in the least damage to the environment.

With the exception of Panoche Clay Loam, Saline Alkali, 0 to 2 percent slopes, all of the soils in the project area are classified as meeting the requirements for prime farmland if water for irrigation is available.


OILDALE
BAKERSHELD
Prime Farmland (within Soil Description Boundary)
Farmland of Statewide Importance
Irrigated Farmland
Grazing Land
U
Urban and Built-up Land
Other Land
Kern River
BUENA VISTA
OSWELL ST
RD
WOOD
1
2
3
A
B
C
U
PANAMA LN
MOUNTAIN VIEW
TAFT HWY
GIORGIO
BUENA VISTA
PATCH
BLVD
RD
Creek
Canal
Lake Webb
BEAR MOUNTAIN BLVD
OLD RIVER
WIBLE
UNION
WEED
VINELAND
EDISON
119
43
58
178
184
99
5
Source: Harland Bartholomew & Associates, Inc., 1993
January 1994
West Portion of Route
OPTION A
OPTION B
OPTION C
Soil Description Boundary
East Portion of Route
OPTION 1
OPTION 2
OPTION 3
1 0 1 2 4 miles
South Beltway Transportation Corridor
Environmental Impact Report
FIGURE IV-3
KERN COUNTY FARMLAND
Harland Bartholomew & Associates, Inc.

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

Topography

The proposed project would require the use of new land for a transportation corridor, eventually causing changes in elevation to the existing topography. Future construction of the corridor will require additional grading and covering soil will be disturbed. As a result, the roadbed may extend into areas where soils need to be supported to provide a stable base. Additional fill may be needed for the construction of the South Beltway Transportation Corridor at intersections of roads where either elevations or depressions would be needed. Further research will be needed in the Tier 2 document before topographical impacts can determined.

Seismicity

Construction - Development of the South Beltway Transportation Corridor would have no adverse effect on the seismicity of the area. In case of a major seismic event, however, construction could be disrupted and structures damaged. Impacts to structures would be similar to those that might occur during operation. The probability of an earthquake occurring during construction is lower, however, than the probability of one occurring during operation because of the shorter duration of construction. Although several minor subsurface faults are crossed or approached by the proposed alternatives, no significant fault system or geologic feature appears to be significantly affected.

An earthquake can also result in liquefaction of soils, which in turn could result in differential settlement and damage to overlying structures. The potential for liquefaction at a site reflects the intensity of groundshaking, the characteristics of the soils underlying the site, and the depth of the water table. The predicted groundshaking intensity of the South Beltway Transportation Corridor vicinity is sufficient to cause liquefaction. Soils underlying the highway, however, are not susceptible to liquefaction. The soils underlying South Beltway Transportation Corridor would be susceptible to liquefaction only if they were water-saturated

within 30 feet of the ground surface (Kern County/Rosedale EIR, 1986). Perched groundwater does not occur along the proposed project area. The water table in the study area is at a depth of 50 feet, well below the 30-foot limit that could produce liquefaction. The characteristics of the soils underlying the highway and the depth of the water table beneath the highway indicated only a low potential for the occurrence of liquefaction during an earthquake. Additionally, the alternatives are far enough away from the Kern River and other sources of high groundwater so that liquefaction would not be a significant problem.

Operation - A major seismic event could disrupt operation of the South Beltway Transportation Corridor. Adverse impacts from an earthquake result primarily from groundshaking. The intensity of groundshaking at a particular site reflects the magnitude of the earthquake, the distance of the site from the epicenter, and the characteristics of the soils underlying the site. Damage to the South Beltway Transportation Corridor could result from severe groundshaking, particularly from an earthquake along the Pond or White Wolf Fault systems. This damage and the possible disruption of operations would be a significant adverse impact. Damage from groundshaking of high intensity would probably be slight, however, for specially designed structures.

The potential for and damage caused by liquefaction would be the same during the future operation of the South Beltway Transportation Corridor as during the construction phase.

The proposed area is not at any greater risk from the adverse effects of an earthquake than is any other similar route in the local area. Moreover, the project would be constructed to comply with federal and state ~~building codes~~ design standards intended to reduce the possibility of damage from a seismic event.

Soils

Construction - According to the Metropolitan Bakersfield 2010 General Plan, nearly all soil within and adjacent to the proposed South Beltway Transportation Corridor is classified as

"prime agricultural land". Preserving the right-of-way for and future construction of the South Beltway Transportation Corridor will result in the direct loss of prime farmland, much of which is presently being farmed. In addition, there is a potential growth-inducing and cumulative impact caused by highway expansion resulting in loss of additional prime agricultural land to urban and suburban uses. However, those areas committed by General Plan designation are limited to areas within the City of Bakersfield General Plan area. It is not possible to preserve land for a future right-of-way for the corridor that would not traverse prime agricultural land because prime agricultural land surrounds the entire project area. The physical and engineering characteristics of these soils, particularly drainage capacity and the low to moderate potential for expansion, would have little to no effect on construction because the soils are unsaturated.

Operation - No adverse impact on soils would result from operation of the South Beltway Transportation Corridor because no additional ground-disturbing activity beyond construction would occur. The unsaturated nature of soils underlying the project area and the depth of the water table indicate little potential for soils having any adverse impact on operations. Moreover, engineering design would comply with all federal, state, and local design codes to ensure that soil characteristics would have no adverse impact on operations.

Mitigation Measures

The following mitigation measure is recommended to reduce impacts related to topography.

1. Regrade and revegetate disturbed areas outside the transportation corridor limits.

The following mitigation measure is recommended to reduce impacts related to seismicity.

1. Seismic impacts shall be mitigated by developers through engineering design of the proposed facility in compliance with Federal and State regulations intended to minimize damage from seismic activities considered typical of the area.

The following mitigation measure is recommended to reduce impacts related to soils.

1. Development of other agricultural lands not currently in use.

There are no known mitigation measures that would reduce impacts on prime agriculture soils. According to the U.S. Department of Agriculture, no alternative route alignments would avoid transversing prime agricultural soil.

Alternatives Analysis

The following table compares the impacts of the project alternatives. The existing topography would be changed slightly by the proposed alternatives. Minor grading and excavation as well as fill for the construction of any elevated roads may be needed, but any changes would be less-than-significant. As the table indicates, all alternatives except the "no project" alternative, will impact the soils by removing and disturbing prime agricultural land.

Alternative	Alter Existing Topography	Impact on Soils	Impact on Seismicity
A	Yes	Yes	No
B	Yes	Yes	No
C	Yes	Yes	No
A1	Yes	Yes	No
A2	Yes	Yes	No
A3	Yes	Yes	No
B1	Yes	Yes	No
B2	Yes	Yes	No
B3	Yes	Yes	No
C1	Yes	Yes	No
C2	Yes	Yes	No
C3	Yes	Yes	No
No Project	No	No	No

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with topography, geology, and soils.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Disturbance of covering soil	Regrade and Revegetate disturbed areas outside highway facility limits	Insignificant	Project Developer City of Bakersfield/ Kern County	During and after construction
Damage to the South Beltway Transportation Corridor due to severe groundshaking	Engineered design of proposed project to comply with Federal and State regulations intended to minimize damage from seismic activities considered typical of the area	Insignificant	Project Developer City of Bakersfield/ Kern County	During project design
Loss of Prime Agricultural Land	Development of other agricultural lands not currently in use	Significant	City of Bakersfield/ Kern County/ Owners affected	During right-of-way acquisition

B. AIR QUALITY

Environmental Setting

The following information regarding air quality was obtained from the Kern County Air Pollution Control District (KCAPCD) 1990 Annual Report and staff. The Kern County Air Pollution Control District is now part of the San Joaquin Valley Unified Air Pollution Control District but remains a distinct entity dealing with the easterly portion of the County.

The project area is situated in the southern portion of the San Joaquin Valley Air Basin, a basin approximately 250 miles in length and 120 miles wide. It extends from the crest of the Sierra Nevada Mountains west to the crest of the Coast Range and includes the floor of the San Joaquin Valley (SJV).

Meteorological conditions, combined with the geographic configuration of the San Joaquin Valley Air Basin, produce conditions favorable for the development of air pollution, principally as a result of "inversions". Rising air becomes trapped below a warmer air layer, forming an inversion layer. Typically, in the summer months, downward vertical air movement compresses and heats the air, causing a subsidence inversion. Winter inversions are formed

by the air cooled by contact with the earth at night. When inversion conditions exist, vertical transport and dispersion is hindered, causing pollutants to accumulate.

Air pollution in Kern County is caused by emissions from stationary and mobile sources located within the County. According to the KCAPCD 1990 Annual Report, stationary source emissions account for approximately 88 percent of reactive organic gas (ROG) emissions and 13 percent of carbon monoxide emissions in the SJV portion of the County. Petroleum production is a major source of these pollutants. Mobile source emissions account for approximately 12 percent of ROG emissions, and 87 percent of carbon monoxide emissions in the SJV portion of the County.

An additional cause of high pollutant concentrations in Kern County is the generally prevailing wind patterns in the San Joaquin Valley. Pollutants from throughout the Valley are carried to the Bakersfield area by the prevailing northwest winds and back up against the Tehachapi and Sierra Nevada Mountains. As a result, air quality in the southern Valley is often very poor on days when the rest of the Valley does not suffer from residual pollutant concentrations.

As a result, the SJV portion of Kern County has exceeded the California Ambient Air Quality Standards (CAAQS) for ozone more than 120 days per year since 1987 (KCAPCD 1990 Annual Report). Oil and gas production sources are the primary contributors of ozone "precursors" (oxides of nitrogen and reactive organic gases) in the SJV portion of the county; mobile sources and transport from the South Coast and the SJV are the most significant contributors to the desert's ozone problem (Kern County Air Pollution Control District Annual Report, 1990). The SJV portion of Kern County experienced 46 daily exceedences of the federal ozone standard in 1987, 56 in 1988, and 42 in 1989.

The study area for the proposed project is located in Metropolitan Bakersfield, with the Chester and Edison Avenue monitoring stations closest to the site. An additional station is located north of Bakersfield in the suburb of Oildale. The Chester Avenue station is located

in the center of the city and the Edison Avenue station is located in eastern Bakersfield. The highest concentration for ozone at these stations as well as the total number of days exceeding the federal and state ozone standards in 1989 are shown in Table IV-1.

Table IV-1
Number of Days of Ozone Exceedences

Station	High, PPM*	Federal Standard	State Standard
Chester Street	0.14	4	56
Edison	0.16	27	102
Oildale	0.13	1	34
County Summary	0.18	42	132

*PPM is the parts per million by volume.
Source: California Air Resources Board. Summary of 1989 Air Quality Data.

Ambient concentrations of air contaminants are measured within the city and compared to federal and state standards to determine air quality. These standards are set by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) at levels to protect public health and welfare with an adequate margin of safety. There are federal and state ambient air quality standards for ozone, CO, NO2, PM10, SO2, and lead. The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has failed to attain the ozone standard. This reflects in large part the uncertainties and inaccuracies of the predictive modelling processes that had forecast ozone air quality standard attainment by 1982.

The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) measures compliance with other state standards: sulfates, hydrogen sulfide, vinyl chloride, and visibility. These standards are listed in Table IV-2.

Table IV-2
Summary of Ambient Air Quality Standards

Federal Standards (EPA Designations)		
Contaminants	**San Joaquin Valley**	**Southeast Desert**
Ozone	*Nonattainment*	*Nonattainment*
Carbon Monoxide (metropolitan)	*Nonattainment*	Unclassified
Sulfur Dioxide	Attainment	Attainment
PM10	*Nonattainment*	*Nonattainment*
Lead	Attainment	Attainment
State Standards (CARB Designations)		
Ozone	*Nonattainment*	*Nonattainment*
Carbon Monoxide (metropolitan)	*Nonattainment*	Unclassified
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM10	*Nonattainment*	*Nonattainment*
Lead	Attainment	Attainment
Sulfate	Unclassified	Attainment
Hydrogen Sulfide	Unclassified	Unclassified
Vinyl Chloride	Unclassified	Unclassified
Visibility	Unclassified	Unclassified

Source: KCAPCD Annual Report 1990
"Unclassified" denotes a lack of data sufficient to make a designation.

The Federal government through the EPA, established the National Ambient Air Quality Standards (NAAQS) under the provisions of its Clean Air Act (CAA). In states where these standards are exceeded, the EPA requires the preparation of air quality attainment plans for meeting the standards, with federal sanctions for those who fail to adequately plan for attainment. These plans, are to be prepared by local agencies designated by the governor of each state and incorporated into a State Implementation Plan (SIP).

Kern County is an ozone nonattainment area and must submit plans to show attainment of the standards by the earliest practicable date. These plans are subject to CARB approval. The district board must determine if identified strategies are cost-effective and will facilitate attainment. Plans must achieve district-wide emission reductions of 5 percent or more per year averaged every consecutive three years and must contain contingency measures to be implemented if the district does not achieve mandated milestones. Districts in the same air basin must cooperate in developing consistent plans. The degree and extent of requirements of the California Clean Air Act (CCAA) for a given district depend on the level of severity of a district's air quality problems. All of Kern County is considered nonattainment area with respect to ozone and PM 10. The Bakersfield Metropolitan Area is considered nonattainment for Carbon Monoxide. Ozone nonattainment in the San Joaquin Valley portion is classified "severe" while the non-transported ozone is the Southwest Desert portion is classified as "serious".

The Kern County Southeast Desert and San Joaquin Valley Air Quality Attainment Plans contain:

1. A permit program providing for no net increase in emissions for all new or modified sources;
2. Application of best available retrofit control technology to existing sources;
3. Reasonably available transportation control measures;
4. Provisions to develop area and indirect source control programs;
5. Provisions to develop and maintain an emissions inventory system;
6. Provisions for a public information program; and
7. Transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled per trip.

Additionally, the following apply to the San Joaquin Valley:

1. Transportation control measures to achieve, during weekday commute hours, an average of 1.5 or more persons per passenger vehicle by 1999 and no net increase in vehicle emissions after 1997;

2. Measures to achieve the use of a significant number of low-emission vehicles by fleet operators; and

3. Measures to reduce population exposures to excess pollutant levels when compared to exposures experienced during 1986 through 1988:

   - At least 25 percent by December 31, 1994,
   - At least 40 percent by December 31, 1997, and
   - At least 50 percent by December 31, 2000.

The CAA also specifies conformity review for transportation facilities. The CAA empowers the EPA Administrator to withhold, condition, or restrict grants for public transportation facilities that may contribute, directly or indirectly, to an increase in emissions of any pollutants which would interfere with, or be inconsistent with, the State Implementation Plan (SIP). In addition, CAA requires that federal actions, including those delegated to state and local agencies, conform to the SIP. The assurance of conformity is the affirmative responsibility of the head of each federal agency. A Metropolitan Planning Organization may not approve any project, program or plan which does not conform to the SIP.

The State of California established ambient air quality standards for the state known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporated additional standards for air contaminants. California has established the CARB to regulate mobile air pollution sources (such as motor vehicles) and oversee the functions of local air pollution control districts and air quality management districts, which administer air quality activities at the regional and county levels throughout the state. California has also established a mechanism for air quality planning and enforcement to attain the CAAQS.

Air quality along South Beltway Transportation Corridor will be monitored by the SJVUAPCD.

The SJVUAPCD has the authority to issue permits for stationary sources of air pollution, develop and enforce air quality rules and regulations, and promulgate air quality improvement plans.

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

The impacts of the proposed project on the local and regional air quality are dependent on the emissions increase or decrease attributable to the project. Impacts on air quality are considered to be significant if the proposed project's emissions cause an exceedence of the ambient standard or make a measurable increase to an existing exceedence of an air quality standard. Impacts can be separated into two categories: a) local, and b) regional. Local and regional impacts could result from construction and operation of the proposed project.

Local

Construction - Construction of the project would produce two types of air contaminants: exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement. Construction impacts would occur for the entire length of the construction phase of the proposed project.

An air quality analysis of the construction activities will need to be completed before construction begins, to ensure that construction emissions will meet the San Joaquin Valley Unified Air Pollution Control District standards. The study should include average dust emission factors for construction activities (dust from grading, dirt roads, etc.) and dust control measures that can be used to reduce dust levels.

Operation - Emission sources include construction vehicles, fugitive dust, and user vehicles. Air contaminants include carbon monoxide, hydrocarbons, nonmethane carbons, NOx, Sox, and particulates. However, existing arterials paralleling the freeway, including would experience a decline in traffic volume and may experience a decline in vehicular emissions.

The built project may contribute to upgrading the air quality in the areas immediately adjacent to it by relieving traffic congestion and, as a result, reduce incomplete combustion emissions, such as hydrocarbons and carbon monoxide due to idling cars in traffic. Specifically, the construction of the South Beltway Transportation Corridor will relieve vehicle congestion and produce fewer hours of travelling in traffic. The slower traffic flows, the more incomplete combustion emissions are released. The construction of the corridor would decrease idling time which would reduce incomplete combustion emissions. However, complete combustion related emissions such as nitrogen oxides may increase.

Regional

The region-wide impact of the proposed South Beltway Transportation Corridor would most likely be a slight decline in emissions. Although the number of vehicles using the road may increase in number, the daily vehicle hours would decrease, as would total daily miles of congestion. This is indicative of smoother traffic flow, with fewer stops and less idling time, which would all reduce emissions. A transportation corridor is considered a growth inducing project. The availability of freeway access or other modes of transportation may affect the growth rate of the area, beyond what has been projected. Therefore, emissions may increase due to population increases indirectly related to the proposed corridor.

Mitigation Measures

The following mitigation measures are recommended to reduce air quality impacts related to construction activities.

1. Fugitive dust emissions shall be controlled by construction contractors with regular watering or other airborne dust reduction measures in compliance with the SJVUAPCD. Wetting may reduce fugitive dust emissions by approximately 50 percent.

2. The developer shall be responsible for the tuning up of all construction machinery to manufacturers' specifications.

3. Construction activities should be phased and scheduled by the developer(s) to avoid emission peaks. Construction should be discontinued during first stage smog alerts.

4. Stockpiles of soil and similar materials shall be protected from wind erosion.

5. In sensitive areas, a temporary wall of sufficient height to reduce windblown dust shall be erected by developers during construction.

6. An air quality analysis of construction activities shall be completed prior to construction to ensure that construction emissions meet the SJVUAPCD standards.

7. Encourage alternative modes of transportation such as bicycle pathways near the proposed right of way and HOV lanes.

Alternatives Analysis

The following table compares the impacts of the project alternatives. The table indicates that each route alternative will alter the existing air quality. Every alternative will create additional emissions to the current air conditions. The No Project alternative will have greater impacts on the air quality than Alternatives 1 through 12. Slower traffic speeds in condensed areas promote higher amounts of emissions. Smoother traffic flow resulting from the any of the project alternatives would reduce air emissions resulting in an overall improvement in air quality both locally and regionally.

Alternative	Alter Existing Air Quality	Impact on Local Air Quality	Impact on Regional Air Quality
A	Yes	Yes	Yes
B	Yes	Yes	Yes
C	Yes	Yes	Yes
A1	Yes	Yes	Yes
A2	Yes	Yes	Yes
A3	Yes	Yes	Yes
B1	Yes	Yes	Yes
B2	Yes	Yes	Yes
B3	Yes	Yes	Yes
C1	Yes	Yes	Yes
C2	Yes	Yes	Yes
C3	Yes	Yes	Yes
No Project	Yes	Yes	Yes

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with air quality.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement	Fugitive dust emissions shall be controlled by construction contractors with regular watering or other airborne dust reduction measures in compliance with the SJVUAPCD. Wetting may reduce fugitive dust emissions by approximately 50 percent	Insignificant	Project Developer/ SJVUAPCD	Prior to and during construction
	The developer shall be responsible for the tuning up of all construction machinery to manufacturers' specification	Insignificant	Project Developer/Project Sponsor	Prior to construction
	Construction activities should be phased and scheduled by the developer(s) to avoid emission peaks. Construction should be discontinued during the second first stage smog alerts	Insignificant	Project Developer/Project Sponsor	Prior to and during construction
	Stockpiles of soil and similar materials shall be protected from wind erosion	Insignificant	Project Developer	During construction
	In sensitive areas, a temporary wall of sufficient height to reduce windblown dust shall be erected during construction	Insignificant	Project Developer/Project Sponsor	Prior to and during construction
	An air quality analysis of construction activities shall be completed to ensure that construction emissions meet the SJVUAPCD standards	Insignificant	Project Developer/Project Sponsor	Prior to construction
	Encourage alternative modes of transportation such as bicycle pathways near the proposed right of way and HOV lanes	Insignificant	KCOG/City of Bakersfield/Kern County	During project design

C. HYDROLOGICAL RESOURCES

Environmental Setting

Surface Hydrology

Water resources in the area of the proposed project include groundwater, the Kern River, the

State Water Project and the Federal Central Valley Project. The principal use of water in the area served by the Kern County Water Agency is irrigated agriculture. A recent summary of utilization of the area water was tabulated by the Kern County Water Agency for its 1991 annual report. This information is presented in Table IV-3. In addition to these tabulated sources, local streams and effective precipitation (the portion of the area's rainfall which is of crop or groundwater recharge benefit) supply an additional 175,200 acre-feet per year of water.

Table IV-3
1991 Water Consumption Summary
(In 1,000 acre-feet)

Source of Water Supply	Irrigated Agriculture	Municipal and Industrial	Ground Water Recharge	Total
Kern River	230	1	106	337
Central Valley Project	203	1	---	204
State Water Project	37	35	8	80
Groundwater	1,892	98	---	1,990
TOTAL	**2,362**	**135**	**114**	**2,611**

Source: Water Supply Report 1991 prepared by Kern County Water Agency

The Kern River originates in groups of glacial lakes near Mount Whitney and has two principle tributaries, the North and South Forks, which meet in Lake Isabella. Isabella Dam and Reservoir, completed by the Army Corps of Engineers in 1954, is the major flood protection facility along the Kern River. Holding back a maximum of 570,000 acre-feet of water, this earthfill dam is 185-feet high and 1,695-feet long.

From its source at the base of Mt. Whitney to its terminus at the Buena Vista Lake Bed, the Kern River drains 2,382 square miles, 820 square miles of which are in Kern County. The elevational drop and length of the Kern River makes it one of the most rapidly descending rivers in the nation. The large drainage area and rapid flow has resulted in considerable flood

Caliente Creek Stream Group outlets has resulted in damages over the past 30 years. These damages are the result of encroachment of development on an existing floodplain without adequate flood protection measures.

The greatest risk of flooding in the proposed project area is in the east portion (near Lamont and Arvin), where damage due to flooding of valley lands has been affected by two main factors: 1) the frequency and magnitude of flooding; and 2) development within the existing floodplain. The Caliente Creek floodplain is not a defined channel due to flat topography in the Lamont area. Among the floodplain management techniques utilized by the County in this area is a requirement for the lowest floor level in habitable structures within the floodway fringe to be at least one foot above the base (100-year) flood elevation. The utilization of levees and flowage easements, as proposed in the Caliente Creek Flood Control Project, is also under consideration.

With the development of the Isabella Dam and Reservoir, and the subsequent floodplain management practices by Kern County and the City of Bakersfield, the hazards from a 100-year flood are minimal for the Bakersfield metropolitan area. However, the Caliente Creek floodplain will continue to experience flooding until the Caliente Creek Flood Control Project is implemented.

Water Quality

Surface water quality in the proposed project area is generally good to excellent and is well within the limits for both domestic and irrigation uses. Table IV-4 displays water quality data for three sources: the Kern River as it enters the San Joaquin Valley, the Friant-Kern Canal at Friant, and the State Water Project as recorded near Kettleman City.

Current data indicate that the quality of Basin groundwater is highly variable. While groundwater from the west side of the valley has high mineral concentrations and is categorized as sodium sulfate or sodium chloride types, the east side groundwater is generally

TABLE IV-4
SURFACE WATER QUALITY OF KERN COUNTY SUPPLIES

Constituent	Kern River[1] (1951-1985) Concentration (mg/l) No. of Analysis	Min.	Max.	Avg.	Friant-Kern Canal[2] (1974-1981) Concentration (mg/l) No. of Analysis	Min.	Max.	Avg.	State Water Project[3] (1980-1984) Concentration (mg/l) No. of Analysis	Min.	Max.	Avg.
Calcium	132	6.0	64.0	14.1	47	0.6	5.5	2.9	--	--	--	--
Magnesium	132	0.4	29.0	2.8	47	0.1	1.3	0.5	--	--	--	--
Sodium	236	1.5	190.0	15.2	47	1.1	5.2	2.8	[4]	17	91	38
Potassium	101	0.0	23.0	2.0	47	0.2	1.2	0.7	--	--	--	--
Carbonate	--	--	--	--	13	11.0	29.0	18.0	--	--	--	--
Sulfate	81	0.0	44.0	10.6	43	0.3	6.0	1.7	[4]	11	98	37
Chloride	244	0.0	22.0	6.9	47	0.6	4.0	1.9	--	26	101	44
Nitrate	51	0.0	3.6	0.7	58	0.0	6.2	1.7	--	--	--	--
Flouride	27	0.0	0.50	.26	37	0.0	0.20	0.09	[4]	--	--	--
Boron	221	0.0	0.46	0.14	5	0.0	0.0	0.0		0.1	0.9	0.2
Total Hardness	**249**	**19**	**168**	**47**	**47**	**2**	**17**	**10**	[4]	**48**	**174**	**87**
Total Dissolved Solids	**61**	**46**	**187**	**87**	**43**	**13**	**43**	**25**	[4]	**112**	**478**	**218**
Ph (units)	**204**	**96.6**	**8.9**	**7.6**	**65**	**5.5**	**7.6**	**7.2**	[4]	**7.4**	**8.6**	**8.0**

[1] Source: Department of Water Resources data on EPA STORET System
[2] Source: U.S. Geological Survey data on EPA STORET System
[3] Source: DWR O&M Monthly SWP Operations Reports
[4] Monthly summaries based on instantaneous EC Recordings

good. The groundwater in the east is primarily of the bicarbonate type, either sodium bicarbonate or calcium bicarbonate. Although the east side groundwater is of somewhat lower quality than Kern River water, the primary historical recharge source; its chemical characteristics are similar. Overall, the east side groundwater is very usable, even though its quality decreases in areas farther from the river due to limited recharge in the less permeable deposits.

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

For the purpose of this document, an impact is considered to be a physical change in the existing hydrological environment. An impact is considered to be significant if it meets the following criteria:

- The project results in changes in absorption rates, drainage patterns or the rate and amount of surface runoff;
- The project results in discharge into surface waters or a reduction in surface water quality including, but not limited to temperature, dissolved oxygen, turbidity or contaminant levels; or
- The project results in a change in the quantity and quality of ground waters.

The development of the South Beltway Transportation Corridor would result in increased impervious surfaces (proposed total right-of-way would range from approximately 212 to 312 feet), which in turn would generate increased amounts of oil, fuel, and other chemicals being deposited on the roadway. During periods of precipitation, these materials would enter adjacent drainages and ultimately be allowed to percolate into the ground. This may result in some alteration of groundwater quality, depending on the amount of runoff generated.

The Bakersfield 2010 General Plan (March 1990) does not make reference to the quality of surface runoff into local drainages. However, this omission is not likely due to evidence that runoff is not degraded, but rather that this potential source of pollution has not yet been

perceived as a problem and scientifically investigated. The City of Bakersfield and the County of Kern are in the process of applying to the Central Valley Regional Water Quality Control Board for a joint storm water permit in order to comply with the National Pollution Discharge Elimination System (NPDES) program; the first step in a congressionally-mandated program directed at water runoff pollution, proposed by the United States Environmental Protection Agency (EPA) for cities with more than 100,000 population to be required to detail their systems for collecting storm water, gauge the pollutants in the runoff, and propose measures for handling pollutants (Los Angeles Times, 1988). The program has been proposed in response to nation-wide concerns that pesticides, fertilizers, oil, and other street residues collected in storm drainage systems are polluting surface waters as they are washed into streams and lakes.

Development of the South Beltway Transportation Corridor Route would convert currently undeveloped and farmed areas to transportation uses. Some of the areas proposed for development lie within the 100-year floodplain. The greatest risk of flooding in the project area occurs south of Bakersfield in the Lamont/Arvin area. Factors attributed to this risk include the lack of flood control facilities along the Caliente Creek Channel such as dams and levees, and development within the existing floodplain.

The Kern County Engineering Surveying Services Department notes that highway development may result in alteration of drainage patterns. This would occur primarily wherever the roadway is elevated or depressed. However, any activity, including construction of the roadway at-grade, could also result in drainage pattern changes. Without proper collection, downstream properties could be inundated with a concentrated flow.

Proper collection for surface water runoff would be required to avoid adverse impacts. An elevated or at-grade road would require runoff to be directed to culverts or other structures for dispersion downstream from the collection points or to be directed to a sump for percolation purposes. A depressed roadway would require collection of overland flow to be

directed to a low point for percolation or transported across the facility. The project sponsor would be required to utilize assessment districts or public improvement districts to defray or finance costs of needed facilities in already improved areas in order to remain consistent with the General Plan overall strategy of requiring those who benefit from infrastructure improvements to fund those improvements.

Surface hydrology may be significantly affected by the construction of the proposed project. Based on ~~the State of California Department of Transportation (~~Caltrans~~)~~ highway standards, the proposed corridor route would require a total right-of-way which would range from approximately 212 to 312 feet. Anticipated construction activities would include paving, overlaying existing pavement, widening of some roadway/bridge structures, modifying traffic signals, modifying existing roadway drainage facilities, and construction of new concrete curbs, gutters, and sidewalks. The degree or significance of the impacts will depend on the ultimate design and specific location of the highway.

Alternatives A, B, C, A2, A3, B2, B3 C2, and C3

In the vicinity of the eastern portion of the project area (the Lamont/Weedpatch area) the general path of flood waters is to the west southwest. The eastern portions of Alternatives A, B, C, A2, A3, B2, B3, C2, and C3 could affect the path of these flood waters.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to hydrological resources.

1. The City of Bakersfield and the County of Kern shall comply with the regulations set forth by the California Regional Water Quality Control Board (CRWQCB), Central Valley Region. If applicable, the Quality of surface runoff shall meet the narrative water quality objectives specified in the NPDES permit and the narrative and numerical water quality objectives in the 1991 California Inland Surface Waters Plan.

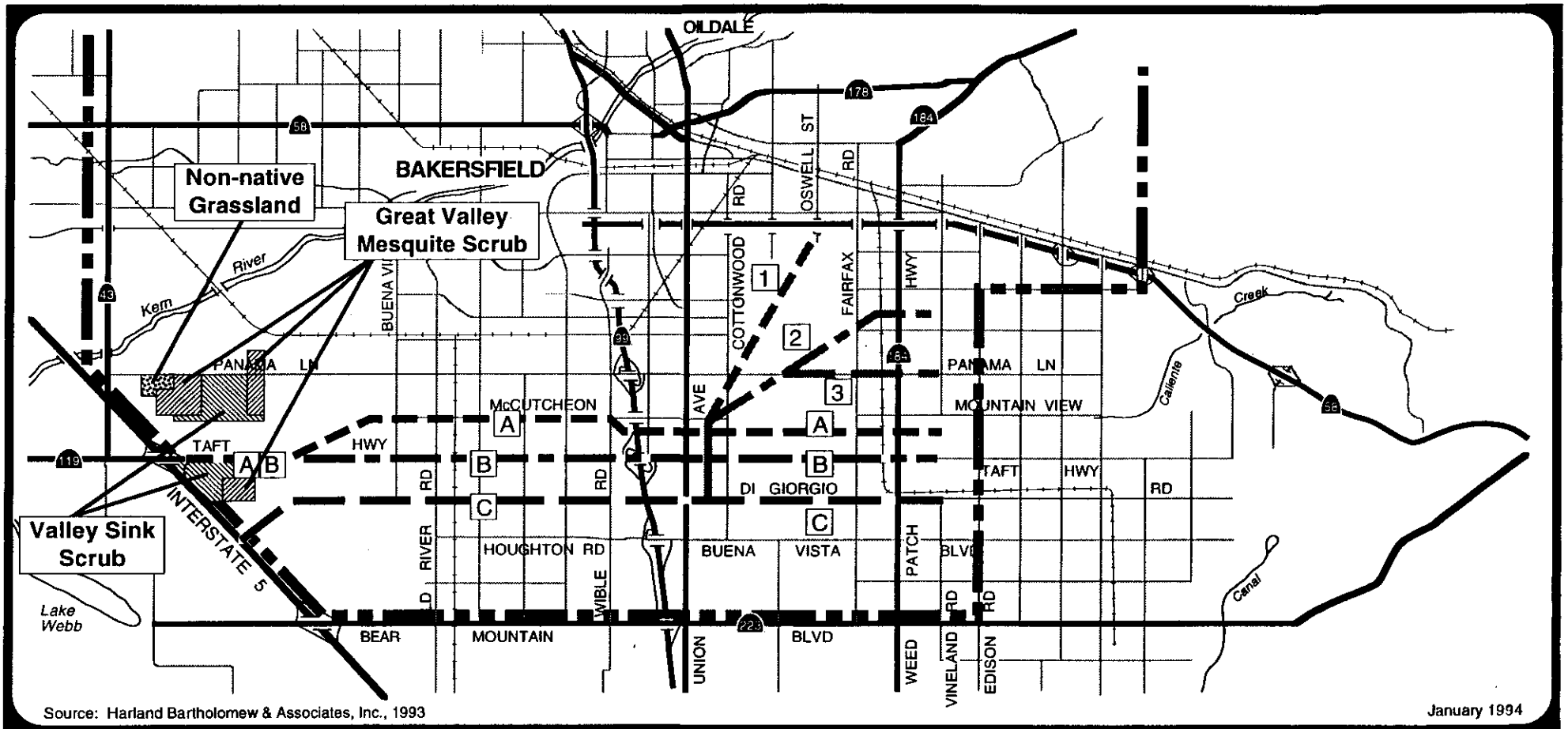
2. The applicant shall comply with the regulations and guidelines contained in the Kern County Floodplain Management Ordinance and the Kern County Zoning Ordinance.

Plant Communities

The "roadway" assessment of natural plant communities occurring within the proposed Transportation South Beltway Transportation Corridor right-of-way determined that land uses adjacent to the South Beltway Transportation Corridor are comprised of natural lands and urban, agricultural and oil industry uses. Plant communities which occur on natural lands within the South Beltway Transportation Corridor include Valley Sink Scrub and Great Valley Mesquite Scrub (nomenclature follows "Preliminary Descriptions of the Terrestrial Natural Communities of California, Holland, R.F., 1986," published by the Non-game Heritage Program, California Department of Fish and Game). The communities are further described below and their locations are depicted on Figure IV-5.

Valley Sink Scrub historically occurred around the lakes of the southern San Joaquin Valley in heavily saline or alkaline clay soils having a high ground water table. The community is best described as an open to dense scrubland dominated by alkali-tolerant plants of the family Chenopodiaceae such as iodine bush (*Allenrolfea occidentalis*) and sea-blite (*Sueda* spp.). An herbaceous understory is typically absent, though a sparse cover of red brome (*Bromus rubens*) is occasionally present. Other plant species which are found in this community include recurved larkspur (*Delphinium recurvatum*), saltgrass (*Distichlas spicata*) and Mojave red sage (*Kochina californica*). This community has been largely extirpated, but does persist in several areas within the southern portion of the City of Bakersfield's planning area.

Great Valley Mesquite Scrub was once widely distributed within the San Joaquin Valley where the community occurred on sandy loams of alluvial origin. The community is dominated by mesquite (*Prosopis glandulosa torreyana*) and desert saltbush (*Atriplex polycarpa*) while understories support various introduced annuals, especially red brome. This community has also been largely extirpated, but a stand with excellent habitat quality does occur just south of the Taft Highway approximately one mile east of Interstate 5.



Source: Harland Bartholomew & Associates, Inc., 1993

January 1994

West Portion of Route

- *OPTION A*
- *OPTION B*
- *OPTION C*

East Portion of Route

- *OPTION 1*
- *OPTION 2*
- *OPTION 3*

Bakersfield Metropolitan HCP Boundary

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

FIGURE IV-5

NATURAL LANDS MAP

Harland Bartholomew & Associates, Inc.

Much of the remaining portion of the proposed South Beltway Transportation Corridor right-of-way is in or adjacent to agricultural production. Although these lands do not typically support natural vegetation communities, when they are allowed to lie fallow they often support Non-native Grassland.

Non-native Grassland is the most widespread community in the San Joaquin Valley. Its component species were introduced during the era of Spanish colonization and were well-established in the Valley prior to the onset of agricultural and industrial development.

The annual grasses which dominate this community provide a dense to sparse groundcover and are often associated with numerous species of showy, native annual wildflowers, especially in years of favorable rainfall. The grasses and flowers germinate with the onset of the late fall rains. Growth, flowering, and seed-set occur during winter and spring. With few exceptions, the plants die by the summer while the species persist as seeds until the following winter rains.

Native plant species found in the Non-native Grassland community include the California poppy (*Eschscholtzia californicus*), alkali peppergrass (*Lepidium dictyotum*), baby blue eyes (*Nemophila menziesii*), fescues (*Vulpia megalura, V. microstachys*) and various subspecies of lupine (*Lupinus* spp.), gilia (*Gilia* spp.), and tarweeds (*Hemizonia* spp.). Non-native species which typically occur in this community include wild oats (*Avena barbata, A. fatua*), filarees (*Erodium botrys, E. circutarium*), bromes (*Bromus mollis, B. rigidus, B. rubens*) and Italian ryegrass (*Lolium multiflorum*).

Wildlife Habitat

Wildlife species which may be expected in the Valley Sink Scrub and Great Valley Mesquite Scrub located south of the Taft Highway include sensitive species such as San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia silus*), Tipton kangaroo rat (*Dipodomys nitratoides*) and San Joaquin antelope squirrel (*Ammospermophilus nelsoni*).

Since Valley Sink Scrub, Great Valley Mesquite Scrub and other southern San Joaquin Valley natural vegetation communities have been largely eliminated, these remaining areas of natural land have high habitat value to the aforementioned sensitive species and many more common species. These areas often function as "refugia" or "ecological islands" within a landscape dominated by agriculture and other industrial and urban land uses.

Most of the land located within the proposed South Beltway Transportation Corridor is in agricultural use. Various predatory birds including red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*) and burrowing owl (*Athene cunicularia*) utilize these lands as foraging habitat since many agricultural crops support substantial populations of rodents.

Other species of birds may also utilize agricultural areas. Western kingbird (*Tyrannus verticalis*), mourning dove (*Zenaidura macroura*), western meadowlark (*Sturnella neglecta*), and Brewers' blackbird (*Euphagus cyanocephalus*) are often observed foraging in or over these areas.

Few birds nest in these agricultural habitats, but these areas do provide food, refuge, and sites to breed and care for young for several species of resident mammals. California ground squirrel (*Spermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), California vole (*Microtus californicus*), western harvest mouse (*Reithrodontomys megalotis*), and house mouse (*Mus musculus*) often occur in the agricultural crops that are produced in the vicinity of the proposed South Beltway Transportation Corridor. Coyote (*Canis latrans*) and San Joaquin kit fox often enter these areas to hunt the aforementioned species.

Although wildlife utilization of the South Beltway Transportation Corridor agricultural lands is often substantial, the "edge" habitats created by unplowed agricultural field boundaries, vegetated roadsides and other areas containing strips of unmanaged vegetation, provide higher value wildlife habitat. These areas are not usually subject to regularity or magnitude of disturbance that agricultural fields experience. Consequently, wildlife populations in these

habitats can occasionally increase to relatively high numbers over a period of years, whereas populations in agricultural fields are often decimated by harvesting operations and must rely on recruitment of individuals from adjacent edge habitats. The species previously described for agricultural lands also occur in the edge habitats. In addition, a number of other species, including the endangered Tipton kangaroo rat (*Dipodomys nitratoides*) may also be found in these habitats.

Non-native Grassland occurring on fallow agricultural land within the South Beltway Transportation Corridor also provides high value wildlife habitat, but may not support the population densities of the edge habitats due to the temporal nature of this community on these lands. Only when these lands are allowed to remain fallow for a number of years do the populations increase to levels that approach the carrying capacity of the habitat.

Sensitive Species

A number of sensitive species have been recorded within the City of Bakersfield planning area and are identified in the Metropolitan Bakersfield 2010 General Plan (Table IV-5). Since the South Beltway Transportation Corridor occurs primarily within this planning area, each of the species recorded from this area may potentially occur within the new proposed highway right-of-way. For the purposes of this document, these sensitive status species are defined to include the following:

- Federally listed, proposed and candidate threatened and endangered species (Title 50, Code of Federal Regulations Part 17.11 and 17.12);
- State of California listed and candidate threatened and endangered species (1992);
- State of California fully protected species which, while they are not listed as threatened or endangered, are protected by provisions of the Fish and Game Code of California (1992);
- State of California listed rare species (1992);
- Species of special concern to the California Department of Fish and Game (1992); and

- Plants listed by the California Native Plant Society (1988).

Although available data indicate there are no known records of sensitive plant species within the new proposed highway right-of-way, there are records of San Joaquin wooly-threads (*Lembertia congdonii*), Hoover's wooly-star (*Eriastrum hooveri*), recurved larkspur (*Delphinium recurvatum*) and Bakersfield cactus (*Opuntia treleasii*) within the project vicinity.

Table IV-5
Sensitive Species Recorded From Metropolitan Bakersfield 2010 Plan Area

Common Name	Scientific Name	Status		
Plant/Animal Life		**Federal**	**State**	**Other**
Plants				
Annual saltbush	*Atriplex* spp.	FC2	--	--
Bakersfield saltbush	*Atriplex tularensis*	FC2	CE	1B
California jewelflower	*Caulanthus californicus*	FE	CE	1B
Slough thistle	*Cirsium crassicule*	FC2	--	--
Hispid Birds-beak	*Cordylanthus mollis hispidus*	FC2	--	1B
Recurved larkspur	*Delphinium recurvatum*	FC2	--	--
Kern mallow	*Eremalche kernensis*	FE	--	1B
Hoover's wooly-star	*Eriastrum hooveri*	FT	--	1B
Comanche Point layia	*Layia leucopappa*	FC2	--	1B
San Joaquin wooly threads	*Lembertia congdonii*	FE	--	1B
Bakersfield cactus	*Opuntia treleasei*	FE	CE	1B
Animals				
Tricolored blackbird	*Agelaius tricolor*	FC2	CSC	--
San Joaquin antelope squirrel	*Ammospermophilus nelsoni*	FC2	CT	--
Silvery legless lizard	*Anniella pulchra*	--	CSC	--
Pallid bat	*Antrozous pallidus*	--	CSC	--
Burrowing owl	*Athene cunicularia*	--	CSC	--
San Joaquin tiger beetle	*Cicindela tranquebarica*	FC2	--	--

Table IV-5
Sensitive Species Recorded From Metropolitan Bakersfield 2010 Plan Area

Common Name	Scientific Name	Status		
Plant/Animal Life		Federal	State	Other
Western pond turtle	*Clemmys marmorata*	FPE	CSC	--
Giant kangaroo rat	*Dipodomys ingens*	FE	CE	--
Short-nosed kangaroo rat	*Dipodomys nitratoides brevinasus*	FC2	CSC	--
Tipton kangaroo rat	*Dipodomys nitratoides*	FE	CE	--
Blunt-nosed leopard lizard	*Gambelia silus*	FE	CE	--
Loggerhead shrike	*Lanius ludovicianus*	FC2	--	--
San Joaquin whipsnake	*Masticophis flagellum ruddocki*	--	CSC	--
Tulare grasshopper mouse	*Onychomys torridus tularensis*	--	CSC	--
San Joaquin pocket mouse	*Perognathus inornatus*	FC2	--	--
California horned lizard	*Phrynosoma coronatum frontale*	--	CSC	--
Western spadefoot	*Scaphiopus hammondii*	--	CSC	--
American badger	*Taxidea taxus*	--	CSC	--
LeConte's thrasher	*Toxostoma lecontei*	--	CSC	--
San Joaquin kit fox	*Vulpes macrotis mutica*	FE	CT	--

Status Codes
FE Federally listed as Endangered
FT Federally listed as Threatened
FC2 Candidate species under review for federal listing. Category 2 includes species for which the USFWS presently has some information indicating that proposing to list them as threatened or endangered species may be appropriate, but for which further biological research is needed to determine biological vulnerability and threats.
CE Listed as Endangered by the State of California
CT Listed as Threatened by the State of California
CSC California Species of Special Concern
List 1B Plants listed as rare, threatened or endangered in California and elsewhere by the California Native Plant Society. All plants on this list meet the definitions of Section 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code.
Source: "Metropolitan Bakersfield 2010 General Plan," March 1990.

San Joaquin wooly-threads is an annual herb that produces several, frequently- branching stems which arise from a common base. The small yellow disk-flowers bloom from March

to April. The species is typically found in drifted alkaline sand or clay soils in areas supporting Non-native Grassland or Valley Saltbush Scrub at elevations between 250 to 2500 feet. In addition, this member of the sunflower family (Compositae) may appear only in years of greater than normal rainfall.

Hoover's wooly-star is an annual herb belonging to the phlox family (Polemoniaceae). This species produces many wire-like branches supporting small white flowers that bloom from February to May. It is endemic to the southern San Joaquin Valley and adjoining South Coast Ranges from Kern to Fresno County where it grows in the sandy soils of the rolling plains. The species is typically associated with Valley Saltbush Scrub and Valley Sink Scrub below 500 feet in elevation.

Recurved larkspur is a member of the crowfoot family (Ranunculaceae). This species has shallow, woody, fibrous roots and red to purple stems ranging from 7 to 24 inches in height. The stems are erect and are either smooth or slightly pubescent. The palmatifid leaves are 0.5 to 1.2 inches wide and grow mainly on the upper portion of the stem. The sepals are light blue, oblong to ovate in shape, with blunt, incurved tips and sparse flat-lying bristles. The spur, the hollow projecting appendage of the larkspur calyx, is straight and 0.4 to 0.55 inches long. The conspicuous petals are white or cream colored. The lower petals are whitish to pale blue.

The recurved larkspur occurs in subalkaline soils of brushy or open places in Valley Sink Scrub, Non-native Grassland and Valley Saltbush Scrub. Historically, it occurred in Glenn and Butte Counties and from Contra Costa County south to Kern County where it blooms from March to May.

The Bakersfield cactus is a low-growing member of the cactus family (Cactaceae) that typically grows in extensive thickets. It generally develops beavertail-like pads three to four inches wide and five to seven inches long. The areoles (eye-spots) are never depressed but

are flush with the pad surface or somewhat raised. All aeroles have spines which vary in number and length. The large, magenta flowers bloom in May. Historically, the Bakersfield cactus occurred "in dense, almost impenetrable colonies" (Twisselman 1969) along sandy bluffs, dry stream beds, rolling grassy hills and sandy flats with good drainage within the Bakersfield region. Habitat for this species also typically occurs at elevations between 600 to 800 feet on soils that are granular with large cobbles.

Currently, there are thought to be five primary population areas for the Bakersfield cactus (Metropolitan Bakersfield HCP Final EIR, 1991). These areas include populations located west and north of Caliente Creek. Sensitive species of wildlife which have been recorded from within the project vicinity include San Joaquin kit fox, Tipton kangaroo rat, blunt-nosed leopard lizard and San Joaquin antelope squirrel.

San Joaquin kit fox is a small, slender fox with exceptionally large ears. Pelage color ranges from pale gray and rust to buffy yellow with a whitish underside. Kit foxes are primarily nocturnal. As such, the species typically emerges at sunset to hunt kangaroo rats (*Dipodomys* spp.), black-tailed jackrabbit, desert cottontail (*Sylvilagus audubonl*) and California ground squirrel.

The historic range of this species is believed to have been San Joaquin County south to southern Kern County. Today, kit foxes are thought to survive in all 11 counties of its historic range as well as three counties where it historically had not been recorded. Conversion of lands to intensive agriculture have eliminated much of the kit foxes habitat and the species is now mainly confined to the foothills and interior coast range valleys. However, many kit foxes are found in and around the outskirts of Bakersfield where they live and forage in vacant lots, fallow fields and other open areas.

Prior to the introduction of irrigated agriculture in the San Joaquin Valley, the prime habitat for the San Joaquin kit fox was Valley Saltbush Scrub, Valley Sink Scrub and Lower Sonoran

Grassland. Today, the species still inhabits remaining remnants of these communities, but is also found in a variety of disturbed habitats, including agricultural fields, oil fields and along highways, aqueducts and canals. In the Bakersfield area, railroad right-of-ways and canals are often used by the kit fox to travel between habitats.

Dens of this species are usually found in areas of low-to-moderate relief and in loose textured soils. However, man-made structures such as culverts, well casings and irrigation pipes have also been used by kit foxes as both transient and natal dens.

Tipton kangaroo rat is a subspecies of the smallest kangaroo rat (*Dipodomys nitratoides*), and measures from 3.9 to 4.3 inches in head and body length. The tail is longer than the body and ranges from 4.9 to 5.1 inches in length.

Like all kangaroo rats, the Tipton kangaroo rat is adapted for bipedal jumping, and has greatly enlarged hind limbs, a long thickened tail, a short neck and a large head. The ears and eyes are on the upper side of the head. Fur-lined cheek pouches hold seeds and other food for transport to caches which the animal locates close to its burrow. The forelimbs of the Tipton kangaroo rat are short, with long, stout claws and four dexterous finger-like toes.

The Tipton kangaroo rat commonly digs burrows on elevated ground which is not subject to flooding. However, areas which are flooded in winter and spring are occasionally colonized during the dry season. The preferred location for Tipton kangaroo rat burrows typically involves alluvial fans and floodplains and includes fine, highly alkaline sands and, to a lesser degree, alkaline sandy loams. The species is most commonly associated with Valley Sink Scrub and Valley Saltbush Scrub on the floor of the Tulare Basin. These communities provide a habitat of sparsely scattered shrubs and a scant-to-moderate groundcover of grasses and forbs.

The historic population of the Tipton kangaroo rat is estimated to have been approximately

17,164,800 individuals. Today about one percent of this former estimated total (or 190,000) remain. Agricultural conversion of lands which occurred after the completion of the Central Valley Project has resulted in habitat loss and is believed to be the main cause resulting in the decline of this species. Tipton kangaroo rats formerly occupied a range that included the Tulare Lake Basin in parts of Fresno, Kings, Tulare and Kern counties. The former range of approximately 1,716,500 acres has been reduced to 63,400 acres or 3.7 percent of the original range.

The blunt-nosed leopard lizard is a relatively large lizard. It is so named because of its short, broad skull and blunt snout. The robust body and long tail display a prominent pattern of dark spots and pale cross-bars. Adult males range from 3.5 to 4.8 inches in body length and are slightly larger than adult females which average 3.4 to 4.2 inches. The tail is approximately 4.5 to 5.5 inches in length.

The leopard lizard's historic range covered 7.5 million acres form the Sacramento-San Joaquin Delta to the Tehachapi Mountains and between the Sierra Nevada foothills on the east and the Coastal Range on the west. The historic range included the San Joaquin Valley, Kettleman Plain, Carrizo Plain and Cuyama Valley.

The range of the blunt-nosed leopard lizard in 1985 was estimated at 415,680 acres. This estimate represents a reduction of 95 percent from the estimated historic range. This loss of habitat, like that of the San Joaquin kit fox and Tipton kangaroo rat, is believed to have resulted from agricultural conversion of natural habitats.

Blunt-nosed leopard lizards are known to occur in Non-native Grassland, Valley Saltbush Scrub, Valley Sink Scrub and Sierra-Tehachapi Saltbush Scrub. The species is most abundant where ground cover is sparse, but contains numerous large saltbush (*Atriplex* spp.) and bladderpod (*Isomeris arborea*) bushes. This lizard utilizes burrows for escape, cover, shelter and egg-laying, but does not excavate its own burrows. The existing burrows of small

mammals such as kangaroo rats, California ground squirrels, Valley pocket gopher (*Thomomys bottae*) and pocket mice (*Perognathus* spp.) are instead appropriated by this species. The preferred locations of burrows includes sparsely vegetated slopes of less than 30 degrees, canyon floors, low foothills and large washes and arroyos.

The San Joaquin antelope squirrel has a yellowish-brown pelage with a creamy white line on each side of the back extending from shoulder to hip and a tail with a white underside. The head and body are 6 to 6.5 inches long while the tail length is 2.5 to 3 inches (Burt and Grossenheider 1976).

The squirrel is omnivorous and feeds primarily on grass and forb seeds and insects (DFG 1990). It will co-occupy giant kangaroo rat precincts and digs burrows in road cuts and arroyos (Williams 1979; 1985). Williams (1979) states that the range of the antelope squirrel most nearly coincides with the range of the giant kangaroo rat, but its microhabitat preferences are different.

The historic range of the San Joaquin antelope squirrel included the western and southern portions of the Tulare Basin, San Joaquin Valley and areas to the west including the Cuyama Valley, Carrizo Plain and Elkhorn Plain. The western half of the range extended north to western Merced County. Today, San Joaquin antelope squirrel is found on the San Joaquin Valley floor in Kern County and along the eastern edge of the Valley, north to Tipton in Tulare County (DFG 1990).

The San Joaquin antelope squirrel is found in flat to sloping terrain with loam or sand loam soils in the western and southern portions of the Tulare Basin. The antelope squirrel can be found in association with the Interior Coast Range Saltbush Scrub, Upper Sonoran Subshrub Scrub, Non-native Grassland and Valley Sink Scrub. The habitat normally consists of species such as saltbush (*Atriplex* spp.), ephreda (*Ephreda viridis*), bladderpod (*Isomeris arborea*), goldenbush (*Haplopappus* spp.) and snakeweed (*Gutierrezia californica*). Grinnell and Dixon

(1918) and Hawbecker (1953) observed that it only rarely occurred in valley floor habitats with alkaline soils dominated by iodine bush (*Allenrolfea occidentalis*) and spiny saltbush (*Atriplex spinifera*). It has also been observed in the Non-native Grassland community (Hawbecker 1958).

The home range of the San Joaquin antelope squirrel is thought to be approximately two to eight acres with an average of 6 acres (DFG 1990). The squirrel has a high degree of fidelity to its home range and typically remains there from year to year. Individuals are known to traverse up to half of their home range per day (Hawbecker 1958).

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

Development of the proposed South Beltway Transportation Corridor may result in the incremental and cumulative loss of sensitive species habitat. Although site-specific surveys will be conducted in the follow-up Tier 2 document to determine the presence or absence of sensitive species, the various sensitive species recorded from the Metropolitan Bakersfield 2010 Plan area are expected and assumed to occur within the agricultural lands, edge habitats and natural lands which occur within and adjacent to the areas proposed for the several alternatives. Construction of the South Beltway Transportation Corridor may therefore, result in the loss of individuals of sensitive species during grading. Increased traffic which would result from increased traffic capacity associated with the proposed South Beltway Transportation Corridor would result in increased roadway mortality of wildlife. This effect of the project may impact sensitive species populations associated with the natural lands located adjacent to Panama Lane and the Taft Highway (Figure IV-5), and ARCO mitigation lands located adjacent to portions of the Taft Highway west of Interstate 5 (not within the proposed South Beltway Transportation Corridor). Therefore, pursuant to Section 15065(a) of the State CEQA Guidelines, the proposed construction and use of the South Beltway Transportation Corridor has the potential to reduce the number or restrict the range of a rare or endangered plant or animal and, as such, is a significant impact.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to wildlife and vegetation.

1. Prior to any action by a state agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the California Department of Fish and Game (DFG) pursuant to California Fish and Game Code Section 2090 and Public Resources Code Section 21104.2. Any requirements or decisions by DFG pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by DFG as a result of public agency consultations leading to authorization to take listed species have not yet been determined,but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)

2. Prior to any action by a federal agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7(a) of the Federal Endangered Species Act (16 USC Section 1536(a)). Any requirements or decisions by USFWS pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by USFWS as a result of public agency consultations leading to authorization to take listed species have not yet been determined, but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)

3. Prior to any action by a state or federal agency which would result in ground disturbance of natural or agricultural lands the agency shall conduct site-specific surveys for non-listed sensitive species of plants and wildlife. These surveys shall be conducted in support of succeeding tiers of environmental documentation and shall be conducted as specific alignments and construction corridors are identified. Specific mitigation to reduce impacts to non-listed sensitive species shall be identified in the succeeding tiers of environmental documentation, but shall include avoidance wherever possible. Where avoidance is not possible, the agency shall coordinate with DFG and USFWS to determine appropriate mitigation or compensation.

Alternatives Analysis

The following table provides a comparison of the project alternatives and the No Project Alternative. With the exception of the No Project Alternative, all of the alternatives would result in the reduction of land currently inhabited by plants and wildlife including sensitive species. Alternatives A and B and the western portions of Alternatives A1, A2, A3, B1, B2, and B3 would result in more severe impacts to sensitive species due to their proximity to natural lands and the natural lands which occur near Panama Lane. Alternatives C, C1, C2, and C3 are not in as close proximity to any natural lands and therefore would be expected to result in less severe impacts to sensitive species than Alternatives A and B and the western portions of Alternatives A1, A2, A3, B1, B2, and B3 (discussed below).

Alternatives A and B

Alternatives A and B would be expected to result in a greater loss of habitat and roadway-induced mortality. These alignments are immediately adjacent to natural lands supporting sensitive species and are within 0.8 miles of other natural lands supporting sensitive species located along Panama Lane.

Alternative	Loss of Existing Plant and Wildlife Habitat	Loss of Individuals of Sensitive Plant and Wildlife Species
A	Yes	Yes
B	Yes	Yes
C	Yes*	Yes*
A1	Yes**	Yes**
A2	Yes**	Yes**
A3	Yes**	Yes**
B1	Yes**	Yes**
B2	Yes**	Yes**
B3	Yes**	Yes**
C1	Yes*	Yes*
C2	Yes*	Yes*
C3	Yes*	Yes*
No Project	No	No

* Impacts are to a lesser degree than Alternatives A, B, A1, A2, A3, B1, B2, and B3

** Western portion only

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with wildlife.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Loss of existing plant and wildlife habitat and individuals of sensitive plant and wildlife species	Prior to any action by a state agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the California Department of Fish and Game (DFG) pursuant to California Fish and Game Code Section 2090 and Public Resources Code Section 21104.2. Any requirements or decisions by DFG pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by DFG as a result of public agency consultations leading to authorization to take listed species have not yet been determined,but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)	Insignificant	Department of Fish and Game	Prior to issuance of grading permit
	Prior to any action by a federal agency which would result in ground disturbance of natural or agricultural lands, the agency shall consult with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7(a) of the Federal Endangered Species Act (16 USC Section 1536(a)). Any requirements or decisions by USFWS pursuant to such consultation with regard to development of the South Beltway Transportation Corridor shall be implemented by the agency. Specific conditions that will be required by USFWS as a result of public agency consultations leading to authorization to take listed species have not yet been determined, but shall include conditions that will result in avoidance of take or a net benefit to the affected species prior to any actions that could result in impacts. (It should be noted that these conditions may also include requirements to conduct detailed surveys of specific alignments and construction corridors and to quantify take of listed plant and animal species.)	Insignificant	U.S. Fish and Wildlife Service	Prior to issuance of grading permit

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	Prior to any action by a state or federal agency which would result in ground disturbance of natural or agricultural lands the agency shall conduct site-specific surveys for non-listed sensitive species of plants and wildlife. These surveys shall be conducted in support of succeeding tiers of environmental documentation and shall be conducted as specific alignments and construction corridors are identified. Specific mitigation to reduce impacts to non-listed sensitive species shall be identified in the succeeding tiers of environmental documentation, but shall include avoidance wherever possible. Where avoidance is not possible, the agency shall coordinate with DFG and USFWS to determine appropriate mitigation or compensation.	Insignificant	Department of Fish and Game/U.S. Fish and Wildlife Service	Prior to issuance of grading permit

E. NOISE

Environmental Setting

Noise Descriptors

Sound is created when an object vibrates and radiates part of its energy as acoustic pressure or waves through a medium, such as air, water, or a solid. The ear receives these sound pressure waves and converts them to neurological impulses which are transmitted to the brain for interpretation. The interpretation or perception of sound may be different from the actual sound depending on the individual's sensitivity and the time of day. Environmental noise is usually measured by its A-weighted decibels (dBA). A decibel is a logarithmic unit of sound energy intensity. An A-weighted decibel sound level scale has been developed to measure sound in a similar manner to the way the human responds to sound. The use of the A-weighted scale is often indicated by using the abbreviation "dBA" for expressing the units of the sound quantities. For example, conversation at 3 feet is approximately 65 dBA. Sound levels become intolerable and then painful at levels above 110 dBA. A quiet urban daytime sound level is typically 50 dBA. Sound levels below 60 dBA are generally accepted while complaints are possible at 70 dBA. Public reaction to sound levels becomes more predictable

as sound levels increase. In general, people can perceive a three-decibel difference in noise levels; a difference of 10 dBA is perceived as a doubling in the noise level.

Noise is measured using criteria related to annoyance and environmental health. Excessive sound levels not only cause annoyance but may also have both physiological and psychological effects. Environmental noise levels typically fluctuate over time; different types of noise descriptors are used to account for this variability. These descriptors include the Day Night Average Sound Level (L_{dn}) or Community Noise Equivalent Level (CNEL) noise index. These descriptors or measures recognize there is an increased sensitivity to noise during the nighttime hours compared to daytime sensitivity. L_{dn} is a method of representing the combined effect of noise exposure averaged over 24 hours. This L_{dn} methodology applies a penalty or weight for nighttime noise where a weight factor of 10 dB is applied to account for increased sensitivity to noise in the nighttime (10 p.m. to 7 a.m.). CNEL incorporates an additional evening (7 p.m. to 10 p.m.) weighing of three dB. However, L_{dn} and CNEL are typically within 1 dBA of each other.

Noise Standards, Plans and Policies

The California Government Code and the California Office of Noise Controls (1976) identify major noise sources as including highways and freeways, primary arterials and major local streets and railroads. In the Metropolitan 2010 Plan three highways were considered to be major noise sources, Highway 99, Highway 119 (Taft Highway), and Highway 184.

The Metropolitan Bakersfield 2010 Plan, as well as the California Office of Noise Control, has classified the following as noise sensitive receptors:

- Residential Areas
- Schools
- Convalescent and Acute Care Hospitals
- Rest Homes
- Long-term medical or mental care facilities, and
- Other uses deemed noise sensitive by the local jurisdiction.

There are no schools, hospitals, rest homes, medical or mental care facilities in the areas

adjacent to the project alternatives. However there are several residential uses located along the proposed corridor route. The majority of land use in the project area is agriculture which is not considered a sensitive noise receptor.

Existing and proposed schools, including both Ridgeview High School and Kern High School District's planned high school, however, are in proximity to potential alignments. The selection of the final alignment, therefore, should consider these facilities and locate the route no closer than 700 feet from these sites. In addition, the final route selection within the transportation corridor, which will be subject to the Tier 2 EIR, should consider the potential for mitigating noise, the emission of vehicle-generated pollution and light/glare.

Existing Noise Levels

The project alternatives are located in areas dominated by agricultural land uses. The metropolitan Bakersfield area is located to the north of the area. The areas in the vicinity of the alternatives are becoming rapidly developed with residential land uses. While there are several proposed subdivisions in the area, there are not a significant number of noise sensitive receptors.

Noise sources in the project vicinity are predominantly from automobile, truck and railroad traffic on the surrounding highways, roadways and railways. Major roadways include: (1) Taft Highway which represents, a portion of the west end of Alternatives A, A1, A2, and A3 and runs south of the remainder of it, Alternative B, completely and the western portion of Alternatives B1, B2, and B3; (2) Panama Lane which runs north of Alternatives A, B, and C and the western portions of A1, A2, A3, B1, B2, B3, C1, C2, and C3, and south of the eastern portions of A1, A2, A3, B1, B2, B3, C1, C2, and C3; (3) Interstate 5 which is located at the west end of all of the alternatives; and, (4) Highways 99 and 184 which run north/south through the alternative alignments. There are two railroad tracks running north/south which cross the alternatives. The westerly tracks are located just east of River Road and the easterly tracks are located between Fairfax Road and Highway 184.

The properties located in the vicinity of the project alternatives are currently impacted by traffic noise which exceeds the City's exterior noise standards of 60 dBA L_{dn}, for residential uses. Noise levels in the commercial areas are below the City's commercial exterior noise standard of 75 dBA L_{dn}.

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

The purpose of this section is to analyze the general impacts on noise that would occur in the future, during construction and operation of the proposed transportation corridor.

Construction Noise Impacts

Future construction of the proposed corridor would generate intermittent high noise levels on and adjacent to the site. Construction activities in sensitive areas generating noise are prohibited between the hours of 5 p.m. and 7 a.m. but would occur between 7 am and 5 pm throughout the construction periods. Impacts to sensitive noise receptors, such as residential land uses located in the vicinity of the proposed project site may occur. Construction activities of the proposed corridor would generate intermittent high noise levels on and adjacent to the development sites during this period. A noise study shall be prepared under the Tier 2 environmental review to identify more specific impacts associated with construction activities.

If acoustical studies for future construction projects conclude the construction will create additional noise impacts, applicable mitigation measures will be recommended. There may be some noise impacts associated with future construction projects that cannot be mitigated because the mitigation would deny access to a residence or business. These impacts will be addressed in future environmental documentation if it is anticipated that they will occur.

Mobile Noise Impacts

The proposed project would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways. However, increases in traffic and the resulting noise

levels will not increase directly in relation to each other. A 20 percent increase in traffic will not translate into a 20 percent increase in the ambient noise level. Traffic and the resulting noise increases logrythmically. Therefore, substantial increases in traffic will result in only minor increases in noise levels overall. As a rule of thumb, when background traffic volumes are already high, it takes a doubling of traffic to increase ambient noise levels by three dBA. In general, people can perceive a three dBA difference in noise levels; a difference of 10 dBA is perceived as a doubling of loudness.

The construction of the proposed South Beltway Transportation Corridor would introduce additional traffic into the area and the increased traffic will slightly increase noise levels in the area. Because the projected noise level increases are anticipated to be less than three dBA, no significant noise impact would be generated by the project. However, existing ambient levels are high. According to the Metropolitan Bakersfield 2010 General Plan, Taft Highway (which is a portion of the west end of the proposed route and runs south of the remainder of the proposed South Beltway Transportation Corridor) and Highways 99 and 184 (which run north/south through the proposed corridor) are classified as major sources of community noise. The proposed project may contribute an incremental increase and exaggerate an existing poor condition.

The majority of the traffic noise will correspond with peak hour trip generation projected for future development. Future projects in the area may result in additional traffic and noise impacts in the vicinity of the proposed South Beltway Transportation Corridor. The evaluation of specific impacts will require transportation and acoustical impact studies for each project individually. Based on the results and conclusions of these studies, specific mitigation measures will be prescribed.

Mitigation Measures

The following mitigation measures are recommended to reduce the impacts from project-related traffic and construction-related noise. These mitigation measures should be employed

in developed areas where noise sensitive land uses exist. Mitigation will be redetermined when the construction project is environmentally cleared.

1. Construction hours will be limited to the hours of 7 a.m. to 5 p.m., Monday through Saturday, unless traffic volumes or public safety issues warrant otherwise (as determined by city, county or state officials). Final determination of construction hours will occur during the Tier 2 phase of environmental review.

2. Construction equipment must employ sound restriction devices to reduce noise levels in sensitive areas. Noise specifications for construction equipment should be written in compliance with City and/or County noise guidelines and should include a set of guidelines to enable contractors to bid accordingly. This is required by law.

3. Where noise impacts from construction activities prove to unduly interfere with operations of businesses (as determined by the City of Bakersfield or County of Kern Planning Department), Caltrans will erect temporary noise barriers where they do not restrict access to residences or businesses and where they do not affect visibility of businesses.

4. The City of Bakersfield and the County of Kern shall require adequate setbacks or other measures for present and future sensitive receptors to avoid additional conflict with the proposed right-of-way.

5. Appropriate noise buffers, such as sound walls, landscaping, or landscaped berms will be constructed if it is determined by future acoustical analysis that operation of the project will result in a significant increase (greater than 3 dBA) in noise levels in the vicinity of sensitive receptors such as, schools.

Alternatives Analysis

The following table compares the impacts of the project alternatives and the No Project Alternative. The project alternatives will increase the overall amount of noise along the proposed South Beltway Transportation Corridor.

Alternatives A, A1, A2, A3, B, B1, B2, and B3

Construction noise will have significant impacts on noise-sensitive areas for all alternatives, but impacts resulting from the Alternatives A and B and the western portions of Alternatives A1, A2, A3, B1, B2, and B3 would be more significant because there is more development

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Creation of intermittent high noise levels in the project area	Limit construction to the hours of 7 a.m. to 5 p.m., Monday through Saturday, in sensitive areas, unless traffic volumes or public safety issues warrant otherwise. Final determination of construction hours will occur during the Tier 2 phase of environmental review	Insignificant	City of Bakersfield/Kern County	During construction
Impacts to sensitive noise receptors from construction and operation of the proposed project	Construction equipment must employ sound restriction devices to reduce noise levels in sensitive areas. Noise specifications for construction equipment should be written in compliance with City and/or County noise guidelines and should include a set of guidelines to enable contractors to bid accordingly (required by law)	Insignificant	Project Developer/City of Bakersfield/Kern County	Prior to and during construction
	Erect temporary noise barriers at sensitive areas where they do not restrict access to residences or businesses and where they do not affect visibility of businesses	Insignificant	Project Developer/City of Bakersfield/Kern County	Prior to and during construction
	The City of Bakersfield and the County of Kern shall require adequate setbacks or other measures for present and future sensitive receptors to avoid additional conflict with the proposed right-of-way	Insignificant	Project Developer/City of Bakersfield/Kern County	Prior to Construction

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	Appropriate noise buffers, such as sound walls, landscaping, or landscaped berms will be constructed if it is determined by future acoustical analysis that operation of the project will result in a significant increase (greater than 3 dBA) in noise levels in the vicinity of sensitive receptors such as schools	Insignificant	Project Developer/Kern County/City of Bakersfield	During construction and prior to operation

F. LIGHT AND GLARE

Environmental Setting

The project area is a mix of urban agricultural uses. Although many areas are undeveloped there are several areas that are developed. The amount of artificial light in these areas is substantial, characteristic of urban areas. Major sources of light include parking area lights and commercial signage in the industrial and commercial areas. Existing lighting sources are concentrated mainly along Taft Highway from commercial businesses and residential areas located throughout the project area. The amount of light and glare is however, minimal in the residential areas.

Environmental Impacts

Alternatives 1-12 (A-C, A1-C3)

The construction of the South Beltway Transportation Corridor will result in the addition of new permanent lighting sources. Impacts could occur during the construction of the project and from the completed project itself.

Construction during the evening hours would result in sufficient new light sources that would significantly affect the buildings and residences along the route. Thus the project contractor

should avoid any construction during the evening to ensure that minimal new lighting would be used during construction.

There will be an additional source of light and glare introduced into the project area from automobiles or other transportation vehicles traveling along the proposed South Beltway Transportation Corridor. Headlight glare may increase in intensity but will not face in any new directions than those that currently exist.

The California Department of Transportation has set standards for freeway, highway, and major and minor arterial lighting. Highway standard lighting consists of 200 watt high pressure sodium lights placed on 30 foot high support poles. Any required state highway lighting will be directed downward to avoid the production of unnecessary light anywhere but on the corridor.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to light and glare.

1. Exterior lights used for traffic control will be directed away from the adjacent light sensitive uses.

2. No construction on the project shall take place in the evening, when considerable amounts of lighting would be needed, unless traffic volumes or public safety issues warrant it. Determination of evening construction will occur with the environmental clearance of a specific construction project.

Alternatives Analysis

The following table compares the impacts of the project alternatives and the No Project Alternative.

Alternative	Alter Existing Light and Glare Conditions	Impacts to Light and Glare during Construction	Impacts to Light and Glare During Operation
A	Yes	No	Yes
B	Yes	No	Yes
C	Yes	No	Yes
A1	Yes	No	Yes
A2	Yes	No	Yes
A3	Yes	No	Yes
B1	Yes	No	Yes
B2	Yes	No	Yes
B3	Yes	No	Yes
C1	Yes	No	Yes
C2	Yes	No	Yes
C3	Yes	No	Yes
No Project	No	No	No

The amount of light and glare will increase with all alternatives except the "no project" alternative. If mitigation measures are followed and construction is terminated before dusk, there would be no additional light sources during construction or operation to produce significant impacts. The intensity of light will increase for all proposed project alternatives, however, the No Project Alternative will allow less vehicles on the roadway and would result in a smaller increase in light intensity. All of the alternatives will create new sources of light but any impacts resulting are considered less-than-significant after mitigation.

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with light and glare.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Increased light and glare in project area	Exterior lights used for traffic control will be directed away from the adjacent light sensitive uses.	Insignificant	Project Sponsor	During construction and operation

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	No construction on the project shall take place in the evening when considerable amounts of lighting would be needed, unless traffic volumes or public safety issues warrant it. Determination of evening construction will occur with the environmental clearance of a specific construction project.	Insignificant	Project Sponsor	During construction

G. LAND USE AND RELOCATION

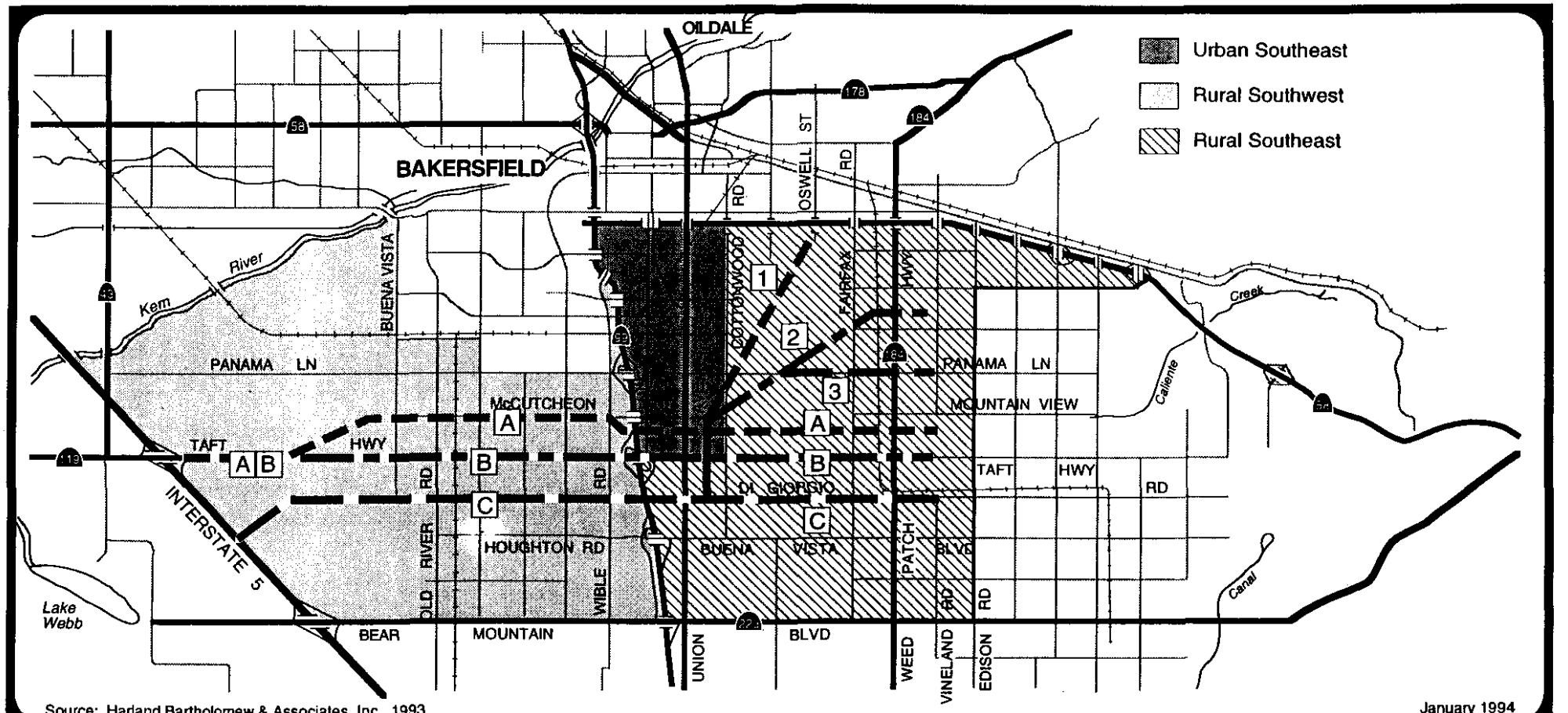
Environmental Setting

Metropolitan Bakersfield Urban/Rural Areas

The proposed project area is located adjacent to a wide variety of land uses, ranging from single-family residential to commercial to agriculture to industrial. The City of Bakersfield has divided Metropolitan Bakersfield into four quadrants for purpose of analysis. The quadrants were then subdivided into developed urban and rural undeveloped areas. The project area is located within three of these subdivided areas. The three areas of Metropolitan Bakersfield include: Rural Southwest, Urban Southeast, and Rural Southeast (Figure IV-6).

The Rural Southwest area is primarily agricultural and it includes the area of Pumpkin Center. Pumpkin Center is adjacent to State Highway 99, providing travelers support commercial services. The Rural Southwest area also includes extensive agricultural lands, a large sewage treatment plant, and a large area to the west of Buena Vista Road that is targeted by the state for a groundwater recharge project.

The Urban Southeast area is generally bordered by Highway 58 on the north, Panama Road on the south, State Highway 99 on the west, and Cottonwood Road on the east. The pattern



Source: Harland Bartholomew & Associates, Inc., 1993

January 1994

West Portion of Route

- *OPTION A*
- *OPTION B*
- *OPTION C*

East Portion of Route

- *OPTION 1*
- *OPTION 2*
- *OPTION 3*

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

FIGURE IV-6

URBAN/RURAL AREA DISTRICTS

Harland Bartholomew & Associates, Inc.

of land use in this area is characterized by linear commercial development, particularly along Ming and Union Avenues, lacking any distinguished focus. This area includes: the Valley Plaza Mall, a regional shopping center; the Bakersfield Airpark; and Casa Loma, a community with older residential uses which has been designated by the state as an "Enterprise Zone". The purpose of the Enterprise Zone is to create jobs, stimulate new industrial and commercial development, and encourage private investment.

The Rural Southeast area includes three predominant uses or areas. The first area is Lamont, which is a rural service community with small-lot residences, a core of retail shops, and various agricultural support industries. The second use is a large sewage treatment site which extends from Brundage Lane to Panama Road, and the third use is an extensive amount of agricultural land.

The western end of the South Beltway Transportation Corridor would primarily run through the Rural Southwest District and the eastern portion of the routes would primarily run through the rural southeast district. These areas are predominantly agricultural, scattered with low density residential uses. Alternative A runs to the north of both Pumpkin Center and Lamont, Alternative B runs through Pumpkin Center and Lamont, and Alternative C runs south of Pumpkin Center and Lamont.

There is a small area of the urban southeast district which would be affected by a small section of Alternatives A and B and the portion of the right-of-way connecting the east and west end portions of the corridor.

General Plan Land Use Designations

According to the Metropolitan Bakersfield 2010 General Plan, several different land use designations are located along or adjacent to the proposed route of the South Beltway Transportation Corridor. The predominant land use designation in the vicinity of the proposed project is R-IA, Intensive Agriculture, which allows a minimum parcel size of 20 acres. The

other land use designations include: commercial uses, Highway Commercial (HC) and General Commercial (GC); residential uses, Rural Residential (RR), Estate Residential (ER), Suburban Residential (SR), Low Density Residential (LR), and Low Medium Density Residential (LMR); an open space designation (OS) which includes resource management areas such as agriculture and flood plains; two public facilities designations -- (P) which includes government buildings, hospitals, public utilities, cemeteries, sewage treatment plants, waste disposal sites, and other publicly owned facilities, and (PS) which includes public and private schools; two industrial designations, (LI) Light Industrial and (SI) Service Industrial; and, the primary designation within the eastern portion of Alternatives A1, B1, and C1, (R-MP) Mineral Petroleum with a minimum of five acre parcels.

Existing Land Uses

Aerial photographs provided by the City of Bakersfield and the Metropolitan Bakersfield 2010 General Plan land use plan were used to determine the approximate number and type of existing uses located within and along the alternative routes.

The construction of the South Beltway Transportation Corridor would involve the acquisition of land within and adjacent to the proposed right-of-way. There are currently several structures that lie within and along the proposed routes of the alternatives, ranging in use from commercial to residential. Additionally, there are several acres of farm/agricultural uses that lie within or adjacent to the project area. All land acquisition and relocation procedures will comply with the Title VI Civil Rights Policy and the Uniform Relocation Assistance and Property Acquisition Act of 1970 as amended.

Agricultural Land

Typically, the agricultural activities in the area consist of row crops such as cotton and orchards. There are several different soil types located within the Bakersfield area as discussed in Section IV.A: Geology, Topography and Soils. The predominant soil type located in the project area is Prime Farmland or Farmland of Statewide Importance (see Figure IV-3

in Section IV.A, Geology, Topography and Soils). Prime farmland is of major importance in providing the short- and long-range needs for food and fiber for this country. The acreage of high-quality farmland is limited. Prime farmland soils produce the highest yields with minimal units of energy and economic resources. Farming these soils results in the least damage to the environment. Most of the soils in the project area are classified as meeting the requirements for prime farmland if water for irrigation is available.

Urban Development

The vast majority of land uses within and along the routes of the development alternatives are agricultural. In addition to agricultural uses, there are several residential and commercial land uses located in the vicinity of the project area. The majority of residential uses appear to be related to agriculture, such as farm houses, barns, sheds and other associated structures. There are few areas of concentrated development, most is low density scattered along the throughout the entire area of the proposed corridor. The existing development is however, primarily concentrated between Buena Vista Road and Union Avenue.

Proposed or Approved Development

The City of Bakersfield is reviewing or has approved several development projects in the project area, many of which are located adjacent to Alternative A and the western portion of Alternatives A1, A2, and A3. There are approximately six projects approved along the north and south sides of Alternative A and the western portion of Alternatives A, A1, A2, and A3 between Stine Road on the west and Union Avenue on the east. A future high school site is located south of Alternative A and the west portion of Alternatives A, A1, A2, and A3. In addition to the proposed developments located along Alternative A and the western portion of Alternatives A1, A2, and A3, there are several more located to the north of these alternatives and Alternative B and the western portion of Alternatives B1,, B2, and B3.

Environmental Impacts

Impacts would be significant if they involved actions that conflicted with the City of

Bakersfield's Metropolitan Bakersfield 2010 General Plan and Kern County's General Plan. Significant impacts would also occur if construction or operations required relocation or reconfiguration of existing land uses or otherwise precluded or disrupted current or planned uses.

The proposed project will require the acquisition of land to construct the proposed corridor. This will affect several businesses, residences, and agricultural fields.

Agricultural Land

The greatest impact will occur to agricultural land, as it makes up the majority of land uses in the area. Adoption of the proposed right-of-way for and the future construction of the South Beltway Transportation Corridor would result in the direct loss of prime farmland, much of which is presently being farmed. The following approximate amount of land would be affected by each alternative:

- A - 80 plots of land;
- B - 93 plots of land;
- C - 113 plots of land;
- A1 - 89 plots of land;
- A2 - 88 plots of land;
- A3 - 86 plots of land;
- B1 - 103 plots of land;
- B2 - 98 plots of land;,
- B3 - 98 plots of land'
- C1 - 101 plots of land;
- C2 - 94 plots of land; and,
- C3 - 94 plots of land.

The majority of land within the project area is agricultural with a few areas of urban development scattered along the proposed route. The proposed alternative corridors would affect only portions of plots within the right-of-way, allowing the remaining plot land to be recovered for use.

Additionally, the reduction of agricultural land has the potential for cumulative impacts

resulting from zone changes. Depending on the size of the parcel of land affected, and the amount of land to be taken, the current use may become impractical and therefore a zoning change would be required to achieve a productive use of the land. Therefore, there is a potential for additional loss of prime agricultural land due to conversion to urban and suburban uses. However, much of the project area within Metropolitan Bakersfield is designated for agricultural use and would require a general plan amendment to be used for a different purpose. It is not possible to locate the proposed route in an area that would not affect prime agricultural land, because it is the predominant soil type in the area.

Urban Development

Several commercial and residential areas are located in or near the proposed alternative rights-of-way. Impacts on these areas directly relate to the other environmental characteristics discussed in this document. Residents and businesses will be impacted by noise, air pollution, increased traffic, and reduced visual value resulting from construction and vehicular movement along the proposed corridor. Structures located within the proposed project right-of-way will need to be acquired and the residents and businesses relocated. Parcels with limited depth, but not entirely within a proposed right-of-way may have their lot area reduced substantially.

Significant impacts will occur to structures located both within and within close proximity to the right-of-way of the alternatives. City and County setback regulations should be researched for each individual property as part of the Tier 2 assessment. If a parcel of land is still economically viable after removing the portion within the plan lines, the impacts could be considered less than significant. However, those lots with good potential for future development, but which could not be developed because of imposed restrictions, would be impacted significantly and any existing structures on those lots may need to be relocated. Those buildings near, but not within the right-of-way, will need considerable buffering to minimize any impacts.

The following impacts would occur to developed land along each of the alternatives:

A: Along this route there are approximately 13 farms developed with dwelling units and other structures totalling approximately 33 structures; 58 non-farm residential dwelling units; 13 commercial units, and approximately five storage/industrial facilities along this route. Based on an average household size of 2.5 persons per unit (Metropolitan Bakersfield General Plan, 1990 and assuming one dwelling unit per farm), relocation would eventually result in the displacement of approximately 178 persons.

B: Along this route, there is a greater mix of residential and commercial uses, therefore, a greater number and type of land uses would be impacted by this alternative as compared to the other alternatives. Most of the developed areas in southern Bakersfield are located along Taft Highway and therefore a much more significant number of residences and businesses would be impacted. Occupants of approximately 183 residences would be directly impacted by this route, with occupants of 10 additional units, located just south of the right-of-way, possibly requiring relocation. There are also approximately four farms with approximately 13 structures which would be impacted. This alternative would result in the eventual displacement of approximately 468 to 493 people. Additionally, there would be approximately 73 businesses and two light industrial complexes impacted by this route.

C: A greater amount of agricultural land would be impacted by this route compared to the other routes. There are approximately 15 farms with 47 structures that would appear to be impacted. At least two of these farms accounting for approximately nine structures appear to be commercial. While not located directly within the right-of-way, there are 10 additional structures which would be impacted under this alternative. Residents of approximately 30 dwelling units would require relocation. This would result in the displacement of approximately 108 to 133 people. There does not appear to be any commercial structures which would require relocation under this alternative.

A1: There are approximately 21 farms developed with dwelling units and other structures totalling approximately 52 structures; 41 non-farm residential dwelling units; 13 commercial units, and approximately four storage/industrial facilities along this route. Based on an average household size of 2.5 persons per unit (Metropolitan Bakersfield General Plan, 1990 and assuming one dwelling unit per farm), relocation would eventually result in the displacement of approximately 155 persons.

A2: There are approximately 12 farms developed with dwelling units and other structures totalling approximately 32 structures; 47 non-farm residential dwelling units; 13 commercial units, and approximately four storage/industrial facilities along this route. Based on an average household size of 2.5 persons per unit (Metropolitan Bakersfield General Plan, 1990 and assuming one dwelling unit per farm), relocation would result in the eventual displacement of approximately 148 persons.

A3: There are approximately 12 farms developed with dwelling units and other structures totalling approximately 32 structures; 49 non-farm residential dwelling units; 13 commercial units, approximately four storage/industrial facilities, and two miscellaneous structures along this route. Based on an average household size of 2.5 persons per unit (Metropolitan Bakersfield General Plan, 1990 and assuming one dwelling unit per farm), relocation would result in the eventual displacement of approximately 153 persons.

B1: Occupants of 148 residences would be directly impacted by this route, with occupants of 10 additional units, located just south of the right-of-way, possibly requiring relocation. This alternative would result in 370 to 395 people eventually being displaced and would displace an additional 43 miscellaneous farm buildings. There would be approximately 54 businesses and two light industrial complexes impacted by this alternative.

B2: Occupants of 146 residences would be directly impacted by this route, with occupants of 10 additional units, located just south of the right-of-way, possibly requiring relocation. This alternative would result in the eventual displacement of 365 to 390 people an additional 23 miscellaneous farm buildings. There would be approximately 54 businesses and two light industrial complexes impacted by this alternative.

B3: Occupants of 147 residences would be directly impacted by this route, with occupants of 10 additional units, located just south of the right-of-way, possibly requiring relocation. This alternative would eventually result in 368 to 393 people being displaced and would displace an additional 28 miscellaneous farm buildings. There would be approximately 54 businesses and two light industrial complexes impacted by this alternative.

C1: There are approximately 20 farms with 61 structures that would appear to be impacted by this route. At least two of these farms accounting for approximately 13 structures appear to be commercial. While not located directly within the right-of-way, there are 10 additional structures which would be impacted under this alternative. Residents of approximately 23 dwelling units would require relocation. This option would eventually result in the displacement of approximately 103 to 128 people. There does not appear to be any commercial structures which would require relocation under this alternative.

C2: There are approximately 19 farms with 50 structures that would appear to be impacted by this route. At least two of these farms accounting for approximately 13 structures appear to be commercial. While not located directly within the right-of-way, there are 10 additional structures which would be impacted under this alternative. Residents of approximately 23 dwelling units would require relocation. This would result in the eventual displacement of approximately 100 to 125 people. There does

not appear to be any commercial structures which would require relocation under this alternative.

C3: There are approximately 19 farms with 58 structures that would appear to be impacted by this route. At least two of these farms accounting for approximately 13 structures appear to be commercial. While not located directly within the right-of-way, there are 10 additional structures which would be impacted under this alternative. Residents of approximately 23 dwelling units would require relocation. This would result in the eventual displacement of approximately 100 to 125 people. There does not appear to be any commercial structures which would require relocation under this alternative.

The land uses in the vicinity of the eastern portion of the corridor are characterized by agricultural or rural uses rather than urban uses. Therefore, the eastern end of the corridor will have significantly less impacts on displacement of urban development, structures, and people than that of the western end of the corridor. Additionally, the east end routes do not appear to impact any commercial structures. The severity of impacts for each alternative is, therefore determined by the western end of the routes.

In addition to the agricultural and residential impacts, the eastern portions of Alternatives A1, B1, and C1 run through an oil field and the Southeast Incentive Area. These alternatives could result in a postive impact on businesses located along the corridor.

Future Development

In addition to existing development there are several tracts approved for development in the project area. There are several tracts located along or adjacent to Alternative A and the western portions of Alternatives A1, A2, and A3. Additionally, there is one tract identified along Alternative B and the western portion of Alternatives B1, B2, and B3 (located along the north side of Taft Highway just east of State Route 99). There have been no other tracts identified along the other options.

Along Alternative A, and the western portion of Alternatives A1, A2, and A3, there is a future high school site on Stine Road, south of the proposed right-of-way and north of a Road.

However, it is far enough south of this alternative that it would not be impacted by the activities of the future route. Between Stine Road and Union Avenue, there are six tracts which have been approved and a seventh which is awaiting approval that would be directly affected by the proposed project (Tracts 5600, 5559, 5362, 5446, 4459, and 5396). According to the City of Bakersfield, five of the six approved tracts would include 920 new dwelling units. Specific development information on the sixth tract (Tract 4459) is not available. The proposed right-of-way of Alternative A and the western portion of Alternatives A1, A2, and A3 lies adjacent to two of the tracts and runs through small portions of the other four tracts. There may not be an impact to any proposed dwelling units on those projects as designed. However, it would be the responsibility of the City of Bakersfield to purchase the land required for the right-of-way. No construction has occurred to date; therefore, no residents would require relocation.

There are several other approved tracts in the project area; however, they are located sufficiently north or south of the proposed alternatives to preclude any impacts from the project.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to agricultural uses.

1. Design drainage to prevent potentially polluted water run-off from the transportation corridor from flowing into adjacent agriculture land.

2. Restore existing agricultural and irrigation drainage systems.

The following mitigation measures are recommended to reduce impacts related to residential and commercial uses.

1. Construct block walls or other screening facilities along the right-of-way wherever at-grade, travel lanes are adjacent to single-family residential.

2. The City of Bakersfield and the County of Kern shall require adequate setbacks for future development to avoid additional conflict with the proposed right-of-way.

3. Use vegetation along the shoulders and at interchanges as buffering and to improve visual quality.

4. Adopt policies that restrict the installation of signs along the route.

The following mitigation measures are recommended to reduce impacts related to relocation.

1. The County of Kern and the City of Bakersfield shall notify business owners, residents, and agricultural land owners within 300 feet of the proposed right-of-way needed for project development as soon as possible.

2. Plan checks by the City of Bakersfield and the County of Kern for buffering for those structures located close to but not within the right-of-way of the proposed South Beltway Transportation Corridor.

3. All relocation and land acquisition procedures shall comply with the policies and procedures of the Title VI Civil Rights Policy and the Uniform Relocation Assistance and Property Acquisition Act of 1970 as amended.

Alternatives Analysis

The following table compares the impacts of the project alternative and the No Project alternative.

Alternative	Alter Existing Land Uses	Impacts Structures During Construction	Impacts on Structures During Operation
A	Yes	Yes	Yes
B	Yes	Yes	Yes
C	Yes	Yes	Yes
A1	Yes	Yes	Yes
A2	Yes	Yes	Yes
A3	Yes	Yes	Yes
B1	Yes	Yes	Yes
B2	Yes	Yes	Yes
B3	Yes	Yes	Yes
C1	Yes	Yes	Yes
C2	Yes	Yes	Yes
C3	Yes	Yes	Yes
No Project	Maybe	No	No

The existing land use denoted by the Metropolitan Bakersfield 2010 General Plan will not be changed by any of the alternatives in the near future, but there are possibilities for long-term changes. Some existing land uses will be affected by the construction and operation of the one of the project alternatives, and some land uses will be affected by the no project alternative.

With the exception of the No Project Alternative, each of the alternatives would result in some amount of displacement of people or businesses. The approximate impact of each option was described above in the Environmental Impact section.

Construction of any of the proposed project alternatives will require the acquisition of land and may disrupt current activities of homes and businesses, including access and parking. Proper mitigation should reduce these impacts to less-than-significant.

Operation may result in permanent significant impacts regardless of the alternative selected. The acquisition of land may result in the relocation of residents and businesses. Once completed, relocation is irreversible. The impact of relocating families and businesses is significant, however, in time proper mitigation should reduce these impacts to less-than-significant. Further detailed research is necessary to determine the exact number of structures to be relocated or removed. Only then can the significance of the impacts on site specific buildings be known.

No Project Alternative

The No Project Alternative will impact present and future businesses and residents in the project vicinity. Without the proposed project or either of the alternative routes, traffic congestion may limit existing land use activities, and may inhibit future development.

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with land use and relocation.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Disruption of agricultural activities and water systems	Design drainage to prevent potentially polluted water run-off from the transportation corridor from flowing into adjacent agriculture land	Insignificant	City of Bakersfield/ Kern County	During operation
	Restore existing agricultural and irrigation drainage systems	Insignificant	Project Developer/City of Bakersfield/ Kern County/	During construction
Disruption to residential and commercial uses	Construct block walls or other screening facilities wherever at-grade travel lanes are adjacent to single-family residential	Insignificant	Project Developer/City of Bakersfield/ Kern County/	During construction
	The City of Bakersfield and the County of Kern shall require adequate setbacks for present and future development to avoid additional conflict with the proposed right-of-way.	Insignificant	City of Bakersfield/Kern County	During project design
	Use vegetation along the shoulders and at interchanges as buffering and to improve visual quality	Insignificant	Project Developer/City of Bakersfield/ Kern County/	Prior to construction

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Relocation of residences and businesses	Notification of business owners, residents, and agricultural land owners within 300 feet of the proposed right-of-way needed for project development as soon as possible	Potentially Significant	City of Bakersfield/ Kern County/ Project Sponsor	Upon adoption of right-of-way
	Plan checks for buffering for those structures located close to but not within the right-of-way of the proposed South Beltway Transportation Corridor	Insignificant	City of Bakersfield/ Kern County	Prior to construction
	Compliance of all relocation and land acquisition procedures with the policies and procedures of the Title VI Civil Rights Policy and the Uniform Relocation Assistance and Property Acquisition Act of 1970 as amended	Insignificant	City of Bakersfield/ Kern County	During acquisition of right-of-way

H. TRAFFIC ANALYSIS

Environmental Setting

The transportation corridor for the South Beltway was conceptually identified in the Metropolitan Bakersfield 2010 General Plan. The corridor was shown conceptually as consisting of a new high-capacity east-west road located somewhere south of Panama Lane in the vicinity of the Taft Highway. The South Beltway Transportation Corridor was identified in the General Plan to provide east/west access from State Route 58 to Interstate 5.

For the purpose of analysis in this Tier 1 environmental impact report, nine preliminary route

alignments (including three west end options and three east end options) have been identified with a total of twelve combined alternatives. As previously discussed in Sections I, II, and III, Options A, B, and C are the portions of Alternatives A, B, and C, respectively, which extend from I-5 to the point between Cottonwood Road and Union Avenue where they connect with the east end Options 1, 2, and 3.

Alternatives A, B, and C and each west end option lies approximately along what at present are two-lane rural roads. Option A is roughly aligned with McCutcheon Road, Alternative Option B is aligned with Taft Highway/State Route 119, and Option C is roughly aligned with Engle/Di Giorgio Road. The first east end option (Option 1) would extend in a north-northeasterly direction from the western portion of the corridor to State Route 58 at the Oswell Street intersection. Option 2, would extend northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and continue east to connect with Vineland Road. The third alternative, Option 3, would travel northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extend easterly connecting with Vineland Road.

This traffic study is qualitative in nature since final plans for the alignments have not been specified and traffic projections were used to estimate impacts. Projected traffic volumes for the beltway, for State Route 99 and State Route 58 were obtained from model runs of the Kern Council of Governments' model for the forecast year 2020. Substantial growth is projected in the southwest portion of the city. This growth will cause an increase in traffic on the surrounding roadway network and create a demand for additional highway capacity. The South Beltway would provide that capacity.

Caltrans has indicated that the Taft Highway, State Route 119, needs to be upgraded to a four lane expressway by the year 2010. Completion of the South Beltway may replace SR 119 if built along the Taft Highway alignment or it may supplement State Route 119 if built along one of the other alignments. The existing Taft Highway is heavily traveled by

trucks and has been identified as a congestion location in the 2010 General Plan. Construction of the beltway along any of the alignments has the potential of reducing truck traffic along the Taft Highway.

Environmental Impacts

The proposed project would attract additional traffic between State Route 58 and Interstate 5 since it would provide a more direct access for those traveling from northern California to the southeast. These routes carry a large proportion of truck traffic. The project may also cause drivers currently using other facilities to alter their travel patterns to use the new route. Roadways that provide access to the facility may also experience an increase in traffic volumes.

Table IV-6 and Figure IV-7 show projected daily traffic volumes for each South Beltway Transportation Corridor alternative[1]. These estimates were developed with the Kern COG travel demand model and Kern Council of Governments demographic projections. The buildout estimates are based on the Metropolitan Bakersfield 2010 General Plan, which is now expected to buildout sometime beyond the year 2020. ~~The 2020 forecasts show only modest demand for a road in the South Beltway Transportation Corridor because this part of the metropolitan area is not expected to be fully developed by the year 2020.~~ While the current forecast of future traffic demand inidicates only a modest increase in traffic from existing land uses, the 2020 forecast when accounting for future intensification of land uses proposed in the regional land use plans for the area will create a demand for additional transportation facilities. That is, while existing land uses will not require the construction of an additional facility in the area, future planned land uses will create the demand that will be met by the proposed transportation corridor. All of the model forecasts assume a six-lane Taft Highway (except Option B, and the western portion of B1, B2 and B3, which would replace the Taft

[1] Roman numerals I through XXVII depicted on Figure IV-7 represent the locations of the average daily traffic (ADT) estimates presented in Table IV-6.

Highway), a four-lane freeway on Route 58 to I-5, and the West Beltway as a four-lane expressway.

From Caltrans recommendations for construction, the South Beltway Transportation Corridor would include sufficient right-of-way to accommodate a six lane freeway, providing a capacity of 2,000 cars per lane per hour. Table IV-6 shows that a six-lane freeway will be sufficient to accommodate 2020 traffic demand, assuming a two-lane Taft Highway.

Table IV-7 presents the maximum traffic demand for each alternative both along the alternative route and at other locations within the project vicinity. The location of the maximum demand for each option varies among each alternative. The estimated traffic demand could be accommodated with a six-lane at-grade arterial.

Traffic on State Route 99 and State Route 58 was also projected. The highest projected estimate of average daily traffic for all alternatives would occur on Route 58, east of Route 99. A closer study of congestion on both state routes would be needed to determine criteria in selecting one alternative over another.

Regarding impacts to local circulation, existing traffic both east-west and north-south routes would be affected. Parallel east-west roads would experience a decrease in traffic compared to the no-project scenario. Any east-west roads that would be physically supplanted by the project would need to be replaced with frontage roads to maintain property access. Right-of-way sufficient for inclusion of frontage roads has been specified in the project description.

North-south roads may experience an increase or decrease in traffic with the project depending on whether they would have an interchange or not. Interchanges may not be spaced closer than at one-mile intervals according to U.S. Federal Highway Administration guidelines. Overcrossings without an interchange could be spaced closer but would probably not occur any closer than at one-half mile intervals. Actual interchange and ~~overpass~~

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor
Project and No Project Alternatives

COUNT I		
LOCATION	ALTERNATIVE	ADT 2020
ON ALT A E. OF I-5	A	30900
ON ALT A1 E. OF I-5	A-1	31000
ON ALT A2 E. OF I-5	A-2	30500
ON ALT A3 E. OF I-5	A-3	31300
ON ALT B E. OF I-5	B	31000
ON ALT B1 E. OF I-5	B-1	30300
ON ALT B2 E. OF I-5	B-2	32000
ON ALT B3 E. OF I-5	B-3	29500
ON ALT C E. OF I-5	C	31400
ON ALT C1 E. OF I-5	C-1	29700
ON ALT C2 E. OF I-5	C-2	31400
ON ALT C3 E. OF I-5	C-3	30900
NOT APPLICABLE	NO BUILD	

COUNT II		
LOCATION	ALTERNATIVE	ADT 2020
ON I-5 NO. OF RTE. 119	A	29400
ON I-5 NO. OF RTE. 119	A-1	29300
ON I-5 NO. OF RTE. 119	A-2	30400
ON I-5 NO. OF RTE. 119	A-3	29900
ON I-5 NO. OF RTE. 119	B	28400
ON I-5 NO. OF RTE. 119	B-1	30600
ON I-5 NO. OF RTE. 119	B-2	30800
ON I-5 NO. OF RTE. 119	B-3	28200
ON I-5 NO. OF RTE. 119	C	25100
ON I-5 NO. OF RTE. 119	C-1	25500
ON I-5 NO. OF RTE. 119	C-2	27200
ON I-5 NO. OF RTE. 119	C-3	26500
ON I-5 NO. OF RTE. 119	NO BUILD	28700

COUNT III		
LOCATION	ALTERNATIVE	ADT 2020
ON I-5 SO. OF RTE 223	A	13400
ON I-5 SO. OF RTE 223	A-1	14200
ON I-5 SO. OF RTE 223	A-2	15100
ON I-5 SO. OF RTE 223	A-3	13900
ON I-5 SO. OF RTE 223	B	11900
ON I-5 SO. OF RTE 223	B-1	15300
ON I-5 SO. OF RTE 223	B-2	13400
ON I-5 SO. OF RTE 223	B-3	13800
ON I-5 SO. OF RTE 223	C	6800
ON I-5 SO. OF RTE 223	C-1	8900
ON I-5 SO. OF RTE 223	C-2	8500
ON I-5 SO. OF RTE 223	C-3	8300
ON I-5 SO. OF RTE 223	NO BUILD	22700

COUNT IV		
LOCATION	ALTERNATIVE	ADT 2020
ON A W. OF HWY 99	A	50500
ON A1 W. OF HWY 99	A-1	52500
ON A2 W. OF HWY 99	A-2	54400
ON A3 W. OF HWY 99	A-3	53900
ON B W. OF HWY 99	B	49900
ON B1 W. OF HWY 99	B-1	48900
ON B2 W. OF HWY 99	B-2	50000
ON B3 W. OF HWY 99	B-3	49100
ON C W. OF HWY 99	C	34900
ON C1 W. OF HWY 99	C-1	31800
ON C2 W. OF HWY 99	C-2	36200
ON C3 W. OF HWY 99	C-3	34300
NOT APPLICABLE	NO BUILD	

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor
Project and No Project Alternatives
(Continued)

COUNT V		
LOCATION	ALTERNATIVE	ADT 2020
ON A E. OF HWY 99	A	46000
ON A1 E. OF HWY 99	A-1	44000
ON A2 E. OF HWY 99	A-2	46000
ON A3 E. OF HWY 99	A-3	45300
ON B E. OF HWY 99	B	46600
ON B1 E. OF HWY 99	B-1	43600
ON B2 E. OF HWY 99	B-2	44000
ON B3 E. OF HWY 99	B-3	42500
ON C E. OF HWY 99	C	36900
ON C1 E. OF HWY 99	C-1	24100
ON C2 E. OF HWY 99	C-2	28000
ON C3 E. OF HWY 99	C-3	26300
NOT APPLICABLE	NO BUILD	

COUNT VI		
LOCATION	ALTERNATIVE	ADT 2020
ON A E. OF UNION AVE	A	49200
ON A1 E. OF UNION AVE	A-1	39100
ON A2 E. OF UNION AVE	A-2	47700
ON A3 E. OF UNION AVE	A-3	46300
ON B E. OF UNION AVE	B	48900
ON B1 E. OF UNION AVE	B-1	27800
ON B2 E. OF UNION AVE	B-2	41400
ON B3 E. OF UNION AVE	B-3	39900
ON C E. OF UNION AVE	C	44200
ON C1 E. OF UNION AVE	C-1	21300
ON C2 E. OF UNION AVE	C-2	24700
ON C3 E. OF UNION AVE	C-3	22500
NOT APPLICABLE	NO BUILD	

COUNT VII		
LOCATION	ALTERNATIVE	ADT 2020
ON A E. OF FAIRFAX	A	36200
NOT APPLICABLE	A-1	
ON A2 E. OF FAIRFAX	A-2	23400
ON A3 E. OF FAIRFAX	A-3	26700
ON B E. OF FAIRFAX	B	36000
NOT APPLICABLE	B-1	
ON B2 E. OF FAIRFAX	B-2	22900
ON B3 E. OF FAIRFAX	B-3	26600
ON C E. OF FAIRFAX	C	40800
NOT APPLICABLE	C-1	
ON C2 E. OF FAIRFAX	C-2	21300
ON C3 E. OF FAIRFAX	C-3	25700
NOT APPLICABLE	NO BUILD	

COUNT VIII		
LOCATION	ALTERNATIVE	ADT 2020
ON DiGIORGIO E OF EDISON RD	A	6700
ON DiGIORGIO E OF EDISON RD	A-1	5400
ON DiGIORGIO E OF EDISON RD	A-2	5400
ON DiGIORGIO E OF EDISON RD	A-3	5400
ON DiGIORGIO E OF EDISON RD	B	5900
ON DiGIORGIO E OF EDISON RD	B-1	5500
ON DiGIORGIO E OF EDISON RD	B-2	5800
ON DiGIORGIO E OF EDISON RD	B-3	5300
ON DiGIORGIO E OF EDISON RD	C	6100
ON DiGIORGIO E OF EDISON RD	C-1	5900
ON DiGIORGIO E OF EDISON RD	C-2	5900
ON DiGIORGIO E OF EDISON RD	C-3	5900
ON DiGIORGIO E OF EDISON RD	NO BUILD	5500

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor Project and No Project Alternatives
(Continued)

COUNT IX		
LOCATION	ALTERNATIVE	ADT 2020
ON A SO. OF RTE 58	A	24500
ON A1 SO. OF RTE 58	A-1	55500
ON A2 SO. OF RTE 58	A-2	22900
ON A3 SO. OF RTE 58	A-3	22100
ON B SO. OF RTE 58	B	25000
ON B1 SO. OF RTE 58	B-1	55100
ON B2 SO. OF RTE 58	B-2	20300
ON B3 SO. OF RTE 58	B-3	21000
ON C SO. OF RTE 58	C	18800
ON C1 SO. OF RTE 58	C-1	48500
ON C2 SO. OF RTE 58	C-2	20600
ON C3 SO. OF RTE 58	C-3	20600
NOT APPLICABLE	NO BUILD	

COUNT X		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 223 E. OF EDISON RD	A	13500
ON RTE 223 E. OF EDISON RD	A-1	12900
ON RTE 223 E. OF EDISON RD	A-2	12900
ON RTE 223 E. OF EDISON RD	A-3	12700
ON RTE 223 E. OF EDISON RD	B	13300
ON RTE 223 E. OF EDISON RD	B-1	13000
ON RTE 223 E. OF EDISON RD	B-2	13200
ON RTE 223 E. OF EDISON RD	B-3	12800
ON RTE 223 E. OF EDISON RD	C	13400
ON RTE 223 E. OF EDISON RD	C-1	12900
ON RTE 223 E. OF EDISON RD	C-2	12800
ON RTE 223 E. OF EDISON RD	C-3	12700
ON RTE 223 E. OF EDISON RD	NO BUILD	13400

COUNT XI		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 58 E. OF EDISON RD	A	35700
ON RTE 58 E. OF EDISON RD	A-1	34400
ON RTE 58 E. OF EDISON RD	A-2	35300
ON RTE 58 E. OF EDISON RD	A-3	35300
ON RTE 58 E. OF EDISON RD	B	35900
ON RTE 58 E. OF EDISON RD	B-1	33800
ON RTE 58 E. OF EDISON RD	B-2	35100
ON RTE 58 E. OF EDISON RD	B-3	35000
ON RTE 58 E. OF EDISON RD	C	35000
ON RTE 58 E. OF EDISON RD	C-1	34400
ON RTE 58 E. OF EDISON RD	C-2	35400
ON RTE 58 E. OF EDISON RD	C-3	35700
ON RTE 58 E. OF EDISON RD	NO BUILD	32400

COUNT XII		
LOCATION	ALTERNATIVE	ADT 2020
ON A SO OF RTE 178	A	30100
ON A1 SO OF RTE 178	A-1	24800
ON A2 SO OF RTE 178	A-2	30900
ON A3 SO OF RTE 178	A-3	30400
ON B SO OF RTE 178	B	30300
ON B1 SO OF RTE 178	B-1	25200
ON B2 SO OF RTE 178	B-2	29800
ON B3 SO OF RTE 178	B-3	30200
ON C SO OF RTE 178	C	27400
ON C1 SO OF RTE 178	C-1	25200
ON C2 SO OF RTE 178	C-2	29600
ON C3 SO OF RTE 178	C-3	30500
NOT APPLICABLE	NO BUILD	

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor
Project and No Project Alternatives
(Continued)

COUNT XIII		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 178 E. OF RTE 184	A	20300
ON RTE 178 E. OF RTE 184	A-1	20500
ON RTE 178 E. OF RTE 184	A-2	20500
ON RTE 178 E. OF RTE 184	A-3	20500
ON RTE 178 E. OF RTE 184	B	20400
ON RTE 178 E. OF RTE 184	B-1	20600
ON RTE 178 E. OF RTE 184	B-2	20500
ON RTE 178 E. OF RTE 184	B-3	20600
ON RTE 178 E. OF RTE 184	C	20300
ON RTE 178 E. OF RTE 184	C-1	20500
ON RTE 178 E. OF RTE 184	C-2	20400
ON RTE 178 E. OF RTE 184	C-3	20400
ON RTE 178 E. OF RTE 184	NO BUILD	19800

COUNT XIV		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 178 W. OF A	A	33800
ON RTE 178 W. OF A1	A-1	30900
ON RTE 178 W. OF A2	A-2	36100
ON RTE 178 W. OF A3	A-3	35900
ON RTE 178 W. OF B	B	33900
ON RTE 178 W. OF B1	B-1	30700
ON RTE 178 W. OF B2	B-2	34600
ON RTE 178 W. OF B3	B-3	35100
ON RTE 178 W. OF C	C	31600
ON RTE 178 W. OF C1	C-1	31000
ON RTE 178 W. OF C2	C-2	34700
ON RTE 178 W. OF C3	C-3	35700
ON RTE 178 E. OF RTE 184	NO BUILD	19800

COUNT XV		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 58 W. OF FAIRFAX	A	60900
ON RTE 58 W. OF FAIRFAX	A-1	78800
ON RTE 58 W. OF FAIRFAX	A-2	60600
ON RTE 58 W. OF FAIRFAX	A-3	60000
ON RTE 58 W. OF FAIRFAX	B	61300
ON RTE 58 W. OF FAIRFAX	B-1	78700
ON RTE 58 W. OF FAIRFAX	B-2	60700
ON RTE 58 W. OF FAIRFAX	B-3	60200
ON RTE 58 W. OF FAIRFAX	C	64700
ON RTE 58 W. OF FAIRFAX	C-1	78700
ON RTE 58 W. OF FAIRFAX	C-2	61500
ON RTE 58 W. OF FAIRFAX	C-3	61400
ON RTE 58 W. OF FAIRFAX	NO BUILD	56400

COUNT XVI		
LOCATION	ALTERNATIVE	ADT 2020
ON OSWELL SO OF RTE 178	A	27400
ON OSWELL SO OF RTE 178	A-1	28000
ON OSWELL SO OF RTE 178	A-2	27100
ON OSWELL SO OF RTE 178	A-3	27100
ON OSWELL SO OF RTE 178	B	27400
ON OSWELL SO OF RTE 178	B-1	28200
ON OSWELL SO OF RTE 178	B-2	27100
ON OSWELL SO OF RTE 178	B-3	26900
ON OSWELL SO OF RTE 178	C	27100
ON OSWELL SO OF RTE 178	C-1	28100
ON OSWELL SO OF RTE 178	C-2	27300
ON OSWELL SO OF RTE 178	C-3	27900
ON OSWELL SO OF RTE 178	NO BUILD	26600

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor Project and No Project Alternatives
(Continued)

COUNT XVII		
LOCATION	ALTERNATIVE	ADT 2020
ON FAIRFAX SO OF RTE 178	A	25100
ON FAIRFAX SO OF RTE 178	A-1	27000
ON FAIRFAX SO OF RTE 178	A-2	25300
ON FAIRFAX SO OF RTE 178	A-3	25300
ON FAIRFAX SO OF RTE 178	B	25100
ON FAIRFAX SO OF RTE 178	B-1	27100
ON FAIRFAX SO OF RTE 178	B-2	25400
ON FAIRFAX SO OF RTE 178	B-3	25200
ON FAIRFAX SO OF RTE 178	C	25100
ON FAIRFAX SO OF RTE 178	C-1	27000
ON FAIRFAX SO OF RTE 178	C-2	25500
ON FAIRFAX SO OF RTE 178	C-3	25300
ON FAIRFAX SO OF RTE 178	NO BUILD	26500

COUNT XVIII		
LOCATION	ALTERNATIVE	ADT 2020
PANAMA LN E. OF WEEDPATCH	A	3000
PANAMA LN E. OF WEEDPATCH	A-1	1700
PANAMA LN E. OF WEEDPATCH	A-2	1900
PANAMA LN E. OF WEEDPATCH	A-3	1500
PANAMA LN E. OF WEEDPATCH	B	3100
PANAMA LN E. OF WEEDPATCH	B-1	1900
PANAMA LN E. OF WEEDPATCH	B-2	2000
PANAMA LN E. OF WEEDPATCH	B-3	1400
PANAMA LN E. OF WEEDPATCH	C	1700
PANAMA LN E. OF WEEDPATCH	C-1	1900
PANAMA LN E. OF WEEDPATCH	C-2	1800
PANAMA LN E. OF WEEDPATCH	C-3	1500
PANAMA LN E. OF WEEDPATCH	NO BUILD	1900

COUNT XIX		
LOCATION	ALTERNATIVE	ADT 2020
ON FAIRFAX SO. OF RTE 58	A	16500
ON FAIRFAX SO. OF RTE 58	A-1	10200
ON FAIRFAX SO. OF RTE 58	A-2	17800
ON FAIRFAX SO. OF RTE 58	A-3	17300
ON FAIRFAX SO. OF RTE 58	B	16600
ON FAIRFAX SO. OF RTE 58	B-1	10200
ON FAIRFAX SO. OF RTE 58	B-2	18200
ON FAIRFAX SO. OF RTE 58	B-3	17400
ON FAIRFAX SO. OF RTE 58	C	16300
ON FAIRFAX SO. OF RTE 58	C-1	10400
ON FAIRFAX SO. OF RTE 58	C-2	18100
ON FAIRFAX SO. OF RTE 58	C-3	17700
ON FAIRFAX SO. OF RTE 58	NO BUILD	16300

COUNT XX		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 58 E. OF UNION AVE	A	87000
ON RTE 58 E. OF UNION AVE	A-1	83500
ON RTE 58 E. OF UNION AVE	A-2	84800
ON RTE 58 E. OF UNION AVE	A-3	86200
ON RTE 58 E. OF UNION AVE	B	87400
ON RTE 58 E. OF UNION AVE	B-1	84300
ON RTE 58 E. OF UNION AVE	B-2	85000
ON RTE 58 E. OF UNION AVE	B-3	85000
ON RTE 58 E. OF UNION AVE	C	87600
ON RTE 58 E. OF UNION AVE	C-1	85300
ON RTE 58 E. OF UNION AVE	C-2	86000
ON RTE 58 E. OF UNION AVE	C-3	86000
ON RTE 58 E. OF UNION AVE	NO BUILD	88900

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor Project and No Project Alternatives
(Continued)

COUNT XXI		
LOCATION	ALTERNATIVE	ADT 2020
ON UNION AV N. OF PANAMA LN	A	29000
ON UNION AV N. OF PANAMA LN	A-1	24400
ON UNION AV N. OF PANAMA LN	A-2	25800
ON UNION AV N. OF PANAMA LN	A-3	26500
ON UNION AV N. OF PANAMA LN	B	28600
ON UNION AV N. OF PANAMA LN	B-1	24900
ON UNION AV N. OF PANAMA LN	B-2	26100
ON UNION AV N. OF PANAMA LN	B-3	26500
ON UNION AV N. OF PANAMA LN	C	27400
ON UNION AV N. OF PANAMA LN	C-1	23800
ON UNION AV N. OF PANAMA LN	C-2	25300
ON UNION AV N. OF PANAMA LN	C-3	25700
ON UNION AV N. OF PANAMA LN	NO BUILD	26800

COUNT XXII		
LOCATION	ALTERNATIVE	ADT 2020
ON PANAMA LN E OF UNION AV	A	15300
ON PANAMA LN E OF UNION AV	A-1	16200
ON PANAMA LN E OF UNION AV	A-2	13400
ON PANAMA LN E OF UNION AV	A-3	13100
ON PANAMA LN E OF UNION AV	B	15000
ON PANAMA LN E OF UNION AV	B-1	16800
ON PANAMA LN E OF UNION AV	B-2	15000
ON PANAMA LN E OF UNION AV	B-3	14900
ON PANAMA LN E OF UNION AV	C	16300
ON PANAMA LN E OF UNION AV	C-1	18500
ON PANAMA LN E OF UNION AV	C-2	16900
ON PANAMA LN E OF UNION AV	C-3	16900
ON PANAMA LN E OF UNION AV	NO BUILD	18400

COUNT XXIII		
LOCATION	ALTERNATIVE	ADT 2020
ON PANAMA LN W OF UNION AV	A	15000
ON PANAMA LN W OF UNION AV	A-1	17500
ON PANAMA LN W OF UNION AV	A-2	14600
ON PANAMA LN W OF UNION AV	A-3	14400
ON PANAMA LN W OF UNION AV	B	15300
ON PANAMA LN W OF UNION AV	B-1	17500
ON PANAMA LN W OF UNION AV	B-2	15600
ON PANAMA LN W OF UNION AV	B-3	15600
ON PANAMA LN W OF UNION AV	C	18600
ON PANAMA LN W OF UNION AV	C-1	20800
ON PANAMA LN W OF UNION AV	C-2	18500
ON PANAMA LN W OF UNION AV	C-3	18100
ON PANAMA LN W OF UNION AV	NO BUILD	19900

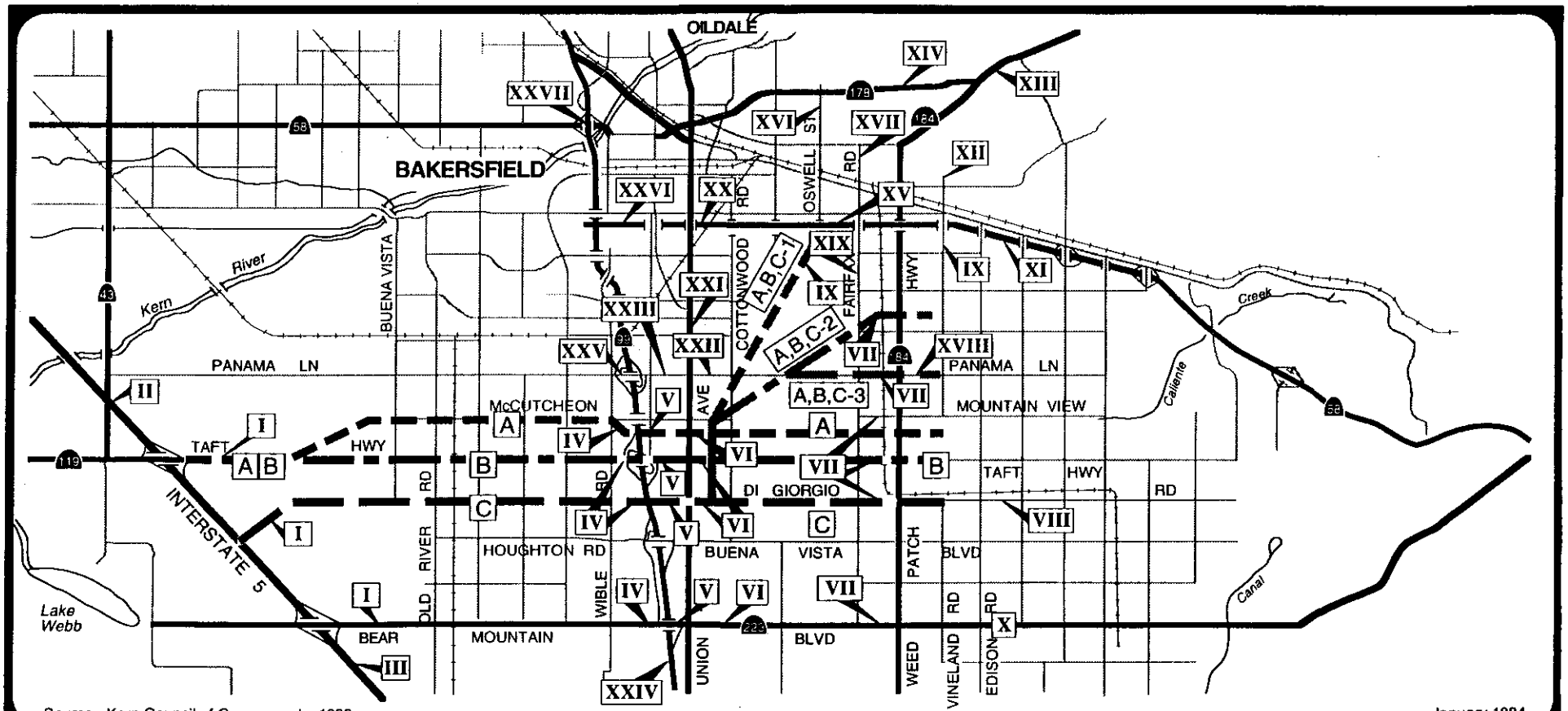
COUNT XXIV		
LOCATION	ALTERNATIVE	ADT 2020
ON HWY 99 SO OF RTE 223	A	58300
ON HWY 99 SO OF RTE 223	A-1	55500
ON HWY 99 SO OF RTE 223	A-2	54900
ON HWY 99 SO OF RTE 223	A-3	54900
ON HWY 99 SO OF RTE 223	B	59600
ON HWY 99 SO OF RTE 223	B-1	58100
ON HWY 99 SO OF RTE 223	B-2	58200
ON HWY 99 SO OF RTE 223	B-3	58300
ON HWY 99 SO OF RTE 223	C	63600
ON HWY 99 SO OF RTE 223	C-1	61000
ON HWY 99 SO OF RTE 223	C-2	62400
ON HWY 99 SO OF RTE 223	C-3	61600
ON HWY 99 SO OF RTE 223	NO BUILD	48300

Table IV-6
Projected Traffic (Average Daily Traffic) for the South Beltway Transportation Corridor
Project and No Project Alternatives
(Continued)

COUNT XXV		
LOCATION	ALTERNATIVE	ADT 2020
ON HWY 99 NO OF PANAMA LN	A	89400
ON HWY 99 NO OF PANAMA LN	A-1	85400
ON HWY 99 NO OF PANAMA LN	A-2	86200
ON HWY 99 NO OF PANAMA LN	A-3	86000
ON HWY 99 NO OF PANAMA LN	B	89500
ON HWY 99 NO OF PANAMA LN	B-1	85900
ON HWY 99 NO OF PANAMA LN	B-2	86500
ON HWY 99 NO OF PANAMA LN	B-3	87000
ON HWY 99 NO OF PANAMA LN	C	88400
ON HWY 99 NO OF PANAMA LN	C-1	85700
ON HWY 99 NO OF PANAMA LN	C-2	83200
ON HWY 99 NO OF PANAMA LN	C-3	86800
ON HWY 99 NO OF PANAMA LN	NO BUILD	87900

COUNT XXVI		
LOCATION	ALTERNATIVE	ADT 2020
ON RTE 58 E OF HWY 99	A	126300
ON RTE 58 E OF HWY 99	A-1	125400
ON RTE 58 E OF HWY 99	A-2	126300
ON RTE 58 E OF HWY 99	A-3	128900
ON RTE 58 E OF HWY 99	B	126400
ON RTE 58 E OF HWY 99	B-1	126400
ON RTE 58 E OF HWY 99	B-2	125400
ON RTE 58 E OF HWY 99	B-3	125800
ON RTE 58 E OF HWY 99	C	128700
ON RTE 58 E OF HWY 99	C-1	127000
ON RTE 58 E OF HWY 99	C-2	126500
ON RTE 58 E OF HWY 99	C-3	127000
ON RTE 58 E OF HWY 99	NO BUILD	129800

COUNT XXVII		
LOCATION	ALTERNATIVE	ADT 2020
ON HWY 99 NO. OF RTE 58	A	108300
ON HWY 99 NO. OF RTE 58	A-1	105100
ON HWY 99 NO. OF RTE 58	A-2	105800
ON HWY 99 NO. OF RTE 58	A-3	107300
ON HWY 99 NO. OF RTE 58	B	108300
ON HWY 99 NO. OF RTE 58	B-1	107300
ON HWY 99 NO. OF RTE 58	B-2	108000
ON HWY 99 NO. OF RTE 58	B-3	110900
ON HWY 99 NO. OF RTE 58	C	111300
ON HWY 99 NO. OF RTE 58	C-1	108800
ON HWY 99 NO. OF RTE 58	C-2	109900
ON HWY 99 NO. OF RTE 58	C-3	110300
ON HWY 99 NO. OF RTE 58	NO BUILD	116400



Source: Kern Council of Governments, 1993

January 1994

West Portion of Route

- *OPTION A*
- *OPTION B*
- *OPTION C*

East Portion of Route

- *OPTION 1*
- *OPTION 2*
- *OPTION 3*

II Roman Numerals Correspond to Traffic Counts Located in Table IV-6.

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

FIGURE IV-7

Projected Average Daily Traffic (ADT)

Harland Bartholomew & Associates, Inc.

Table IV-7
Location of Maximum Average Daily Traffic (ADT)
for Project and No Project Alternatives

Alternative	Location	ADT
A	On Alternative A, west of Highway 99	50,500
A	On Route 58 east of Highway 99	126,300
A1	On Alternative A1, south of Route 58	55,500
A1	On Route 58 east of Highway 99	125,400
A2	On Alternative A2, west of Highway 99	54,400
A2	On Route 58 east of Highway 99	126,300
A3	On Alternative A3, west of Highway 99	53,900
A3	On Route 58 east of Highway 99	128,900
B	On Alternative B, west of Highway 99	49,900
B	On Route 58 east of Highway 99	126,400
B1	On Alternative B1, south of Route 58	55,100
B1	On Route 58 east of Highway 99	126,400
B2	On Alternative B2, west of Highway 99	50,000
B2	On Route 58 east of Highway 99	125,400
B3	On Alternative B3, west of Highway 99	49,100
B3	On Route 58 east of Highway 99	125,800
C	On Alternative C, east of Union Avenue	44,200
C	On Route 58 east of Highway 99	128,700
C1	On Alternative C1, south of Route 58	48,500
C1	On Route 58 east of Highway 99	127,000
C2	On Alternative C2, west of Highway 99	36,200
C2	On Route 58 east of Highway 99	126,500
C3	On Alternative C3, west of Highway 99	34,300
C3	On Route 58 east of Highway 99	127,000
No Project	On Route 58 east of Highway 99	129,800

Source: Kern Council of Governments, 1993

overcrossing locations would be determined following more detailed traffic and engineering studies. Roads that have an interchange with the project will experience an increase in traffic; roads without an interchange will probably experience a slight decrease in traffic.

A complete transportation study which identifies and evaluates impacts of the proposed project should be undertaken in a Tier 2 environmental document.

Mitigation Measures

The alignment alternatives will alter the circulation in the traffic study area but this impact is considered beneficial since completion of the project is expected to improve circulation. Not building the project will result in an increase in traffic congestion along the rural east/west roads in the study area, some of which ~~are~~ may already be congested.

The alignment for each west end alternative lies in the vicinity of existing roadway. Access from adjacent properties to these existing roadways will be limited where the South Beltway is constructed. This is a significant impact that needs to be mitigated. The construction of frontage roads parallel to the beltway can provide access for the affected properties. In some cases, the existing road becomes the frontage road.

Alternatives Analysis

The following table compares the impacts of the project alternative and the No Project Alternative.

As the table indicates, all of the alignment alternatives will alter the circulation system of the study area. This impact is considered less-than-significant since this alteration has been designed to improve traffic congestion and decrease travel time. Without alteration to the circulation system (no project), traffic conditions will continue to worsen in the study area.

Each of the alternatives will result in impacts to access. These impacts can be mitigated by

incorporation of alternative access into the design plans. Access impacts are considered less than significant after mitigation.

Alternative	Alter Existing Circulation	Impact on Access
A	Yes	Yes
B	Yes	Yes
C	Yes	Yes
A1	Yes	Yes
A2	Yes	Yes
A3	Yes	Yes
B1	Yes	Yes
B2	Yes	Yes
B3	Yes	Yes
C1	Yes	Yes
C2	Yes	Yes
C3	Yes	Yes
No Project	No	No

Mitigation Monitoring Program

The following table details the Mitigation Monitoring Program to reduce impacts associated with circulation.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Reduction in access	Design and build frontage road or other alternate access routes	Insignificant	Project Developer	Prior to and during construction

I. CULTURAL RESOURCES

Environmental Setting

The following section is a result of a search of the cultural resources site record files at the Southern San Joaquin Valley Archaeological Information Center. These files include known and recorded archaeological and historic sites, inventory and excavation reports filed with that office, and properties listed on the National Register of Historic Places, the California Historical Landmarks, and the California Inventory of Historic Resources.

In general, very little archaeological survey work has been conducted in the southern San Joaquin Valley. Two large surveys have been conducted in the vicinity of the Kern River and Interstate 5, near the western end of the project area. A number of other small surveys have been conducted along or in the vicinity of the proposed transportation corridor. In general, however, the proposed routes have not been inventoried for cultural resources.

One historic site has been recorded in the vicinity of Option 2. Muller Road which is on or near the alignment for Option 2 has been recorded as a historic road, CA-KER-3546H. Although, it has been repaved several times, the present road does follow the original alignment established prior to 1912. There are no other listed historic properties within the project area.

There is one reported archaeological site in the vicinity of the project area. This site is at the base of the foothills on the eastern end of the project area. ~~Locally known as The Rockpile,~~ the site reportedly contains bedrock mortars, midden, lithics, habitation debris, and pictographs. Artifacts including stone bowls have reportedly been found in the plowed fields surrounding this site. It is possible that additional sites exist at any point along the proposed alternative routes.

Other archaeological sites are recorded in the vicinity of the project routes. The western end of the project route, near Interstate 5 is considered to be an archaeologically sensitive area. A number of sites are recorded in this area, including ceremonial sites and burials. These sites may be subject to secondary impacts, depending on which alternative route is chosen.

Environmental Impacts

Although there are no recorded archaeological sites within the proposed project right-of-way, there is a possibility that archaeological resources might be present. Only a limited amount of systematic archaeological work has been done in this area and the archaeological sensitivity of many areas of the valley are not known. However, it is known that archaeological sites

are recorded or reported near both the extreme western and eastern ends of the project area. These areas are considered to be archaeologically sensitive. It is possible that both prehistoric and historic sites may exist in the project area at any point. Sites yet to be discovered in the area of proposed project could be adversely affected from construction. Sites could be destroyed and unaccessible once construction over them is complete.

Not enough is known about this area to predict where sites might or might not be located or to determine the archaeological sensitivity of any specific property. A lack of data cannot be interpreted as negative data.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts to cultural resources in the project area.

1. Prior to construction a field survey should be conducted by a qualified archaeologist to determine if any archaeological resources are present and to determine recommendations if any such resources are discovered.

2. An updated records search should be conducted prior to beginning work on this project in order to provide information on any additional sites located during the present survey and a recommendation as to whether or not additional work may be necessary given the scope of this project.

Alternatives Analysis

The following table compares the project alternatives. The table indicates that no impacts will occur to any known archaeological sites or resources in the project area. An updated research study must be completed before construction begins to prevent damage to any newly discovered sites. With the exception of the eastern end of Alternatives A2, B2, and C2 the proposed project alternatives are therefore, considered to be safe and unharmful to the area until deemed otherwise by further studies.

Alternatives A2, B2, and C2

There is one historic site recorded in the vicinity of the eastern portion of vicinity of Alternatives A2, B2, and C2. Muller Road is located in the immediate vicinity of the Option 2 alignment, either on or near the alignment. While it has been repaved several times the present road does follow the original road alignment established prior to 1912.

Alternative	Alter Existing Archeological Sites	Impact on Archeological Sites	Impact on Archeological Resources
A	No	No	No
B	No	No	No
C	No	No	No
A1	No	No	No
A2	No	Yes*	No
A3	No	No	No
B1	No	No	No
B2	No	Yes*	No
B3	No	No	No
C1	No	No	No
C2	No	Yes*	No
C3	No	No	No
No Project	No	No	No

* Eastern portion only

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with cultural resources.

Potentially Significant Adverse Impacts	Mitigation Measure	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Damage to unknown existing archaeological sites in the proposed project right-of-way	Prior to construction a field survey should be conducted by a qualified archaeologist to determine if any archaeological resources are present, and to determine recommendations if any such resources are discovered	Insignificant	Project Developer	Prior to construction

Potentially Significant Adverse Impacts	Mitigation Measure	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	An updated records search should be conducted prior to beginning work on this project in order to provide information on any additional sites located during the present survey, and a recommendation as to whether or not additional work may be necessary given the scope of this project	Insignificant	Project Developer	Prior to construction

J. HAZARDOUS WASTES

Environmental Setting

Hazardous waste is any waste which may cause harm to human health or the environment when improperly treated, stored, transported, handled, or disposed. Wastes may be hazardous because of their quantity, concentration, or physical, chemical, or infectious characteristics. The Environmental Protection Agency (EPA) has established four fundamental characteristics to assist in identifying hazardous wastes:

1. Ignitability: The ability to catch on fire (for example, solvents);
2. Corrosivity: The ability to destroy materials, including metals or living tissue (such as human skin), by chemical action (e.g. acids);
3. Reactivity: The ability to cause a violent chemical reaction, including wastes that are explosive or emit fumes (e.g. cyanide or sulfide); and
4. Toxicity: The ability to cause illness, injury or death, either immediately or in the long term.

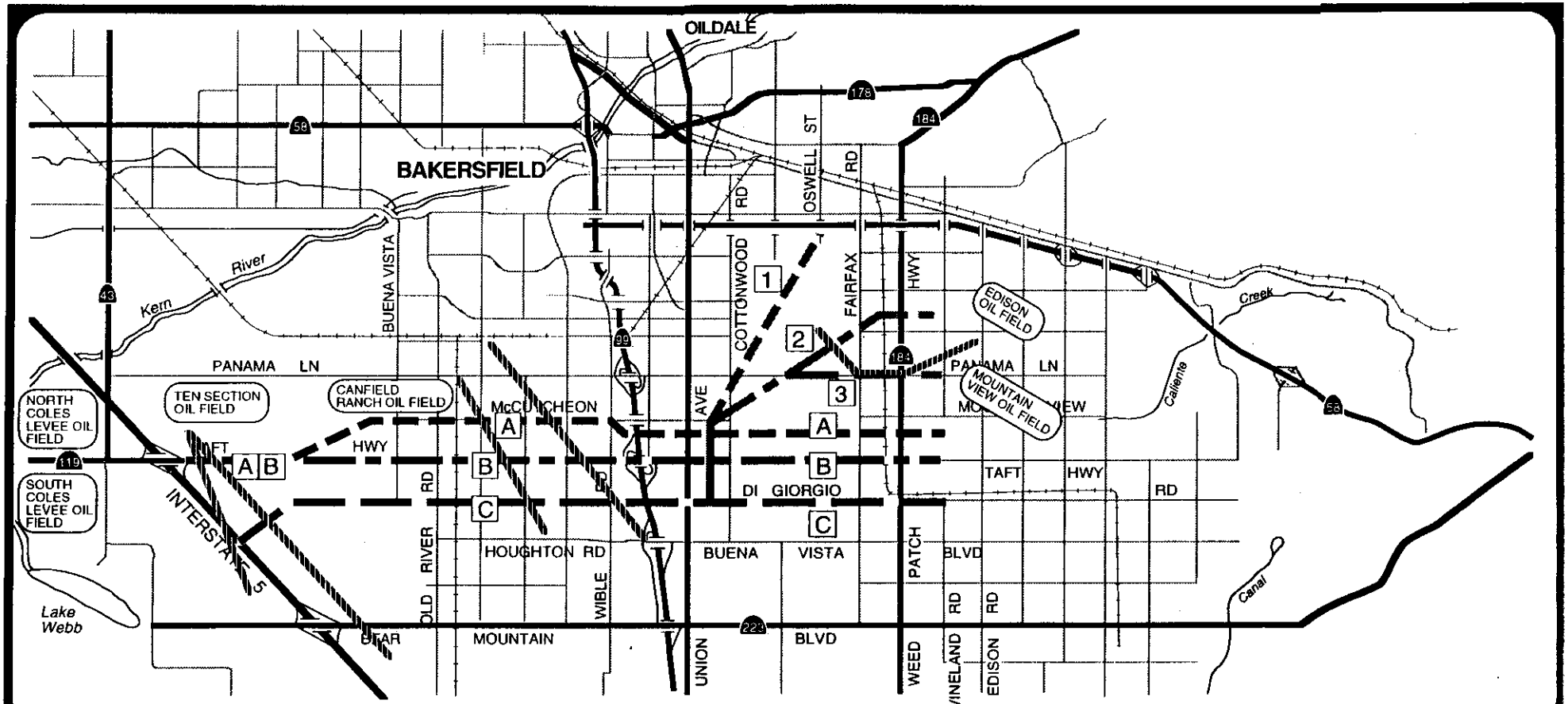
The State of California Hazardous Waste Control Act defines hazardous waste as a waste or combination of wastes which because of quantity, concentration, physical, chemical, or infectious characteristics, may (a) cause or significantly contribute to an increase in mortality

or an increase in serious irreversible, or incapacitating reversible illness; or (b) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed (Health and Safety Code, Division 20, Section 25117).

Hazardous wastes are produced by several industrial and domestic activities, ranging from large chemical plants to individual households. In Kern County, much of the hazardous waste is generated by oil industry activities. The County also has small quantity generators or hazardous wastes, including agriculture. Clean up of contaminated sites such as leaking gasoline tanks, agricultural product formulators or asbestos produces a significant portion of the wastes in the county.

Contaminated sites in the County are typically identified by the Kern County Health Department and contaminated sites in the City are typically identified by the City's Fire Department. Contaminated sites include commercial aerial crop dusting service landing fields, several gasoline stations with leaking tanks, and soil in oil production and refining locations. Potential sources of hazardous waste in the project area include brines, sludges, and hydrocarbons related to the oil extraction and refining industry, chemical products manufactured for agricultural applications, and fuel storage in commercial gas stations. Kern County is located in District 4 of the California Department of Conservation, Oil and Gas Division. District oil production totaled 231.4 million barrels in 1991, an increase of 1.7 million barrels over 1990.

There are six oil fields located in the vicinity of the project alternatives: North and South Coles Levee Oil Fields, Ten Section Oil Field, Canfield Ranch, Mountain View, and the Edison Oil Fields. Figure IV-8 shows the location of existing oil field within or adjacent to the project area. The North and South Cole Levee Oil Fields are located adjacent to the project area, west of Interstate 5. The Ten Section Oil Field is located northwest of the western portion of the alternatives between Panama Lane and Taft Highway. Canfield Oil Field is located on the



Source: Kern County Interim Farmland Map, 1988

January 1994

West Portion of Route

- *OPTION A*
- *OPTION B*
- *OPTION C*

East Portion of Route

- *OPTION 1*
- *OPTION 2*
- *OPTION 3*

Existing Oil Pipelines

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

FIGURE IV-8

EXISTING OIL FIELDS & PIPELINES

Harland Bartholomew & Associates, Inc.

northwest side of Alternative A and the western portions of Alternatives A1, A2, and A3, between McCutcheon Road and Panama Lane. Mountain View Oil Field which is located to the east of Alternatives A2, B2, C2, A3, B3, and C3, and the northeast of Alternative A, is situated approximately between Taft Highway and Panama Lane, east of Vineland Road. Edison Oil Field is located in the northeast portion of the project area, between Route 58 and Panama Lane, just east of Alternatives A2, B2, C2, A3, B3, and C3.

Agricultural land lies adjacent to the north and south sides of the entire proposed route. Two pairs of major pipelines cross the proposed South Beltway Transportation Corridor: one pair approximately one mile east of Interstate 5, and one pair approximately 8 to 9 1/2 miles east of Interstate 5, bisecting McCutcheon Road. An additional smaller pipeline intersects the eastern ends of Alternatives A2, B2, C2, A3, B3, and C3 at the east end of the project area at approximately Panama Lane. There are no gas stations adjacent to any of the project alternatives of the proposed South Beltway Transportation Corridor.

Environmental Impacts

Oil Production

Alternatives 1-12 (A-C, A1-C3)

Oil field waste consists of a variety of materials used or generated during drilling and production of oil and gas wells. These materials are of no further technical or economic value to the operating companies, drilling contractors, or supplies and service companies involved in well drilling and production activities. Wastes include brines, tank and sump bottoms, water softener regeneration brine, scrubber wastes, and drilling muds and cuttings. Other oil field wastes are generated in small volumes. These wastes may consist of hydrocarbon (crude oil), contaminated soils, neutralized acids, slop oils or emulsions, and well-fracture fluid returns. The majority of oil wastes are classified as nonhazardous. They may require processing or recycling, often in on-site sumps, pits, ponds, and treatment sites. Materials not suitable for on-site processing are sent to off-site facilities, which meet requirements for hazardous or designated wastes handling.

Waste generated from oil and gas production is regulated at the federal level by the Environmental Protection Agency, and at the state level by the Department of Health Services, State Water Resources Control Board, Regional Water Quality Control Board, California Waste Management Board, and the State Division of Oil and Gas. State Regulations regarding oil field wastes are generally more stringent than Federal Regulations.

Alternative A

Alternative A of the proposed South Beltway Transportation Corridor passes through two oil fields, the Ten Section and Canfield Ranch, as well as two pairs of major pipelines. The Ten Section Oil Field is located north of Taft Highway on the east side of Interstate 5 and as of 1991 had 2,120 proved acres with two plugged and abandoned wells and no operating wells. The Canfield Ranch Oil Field is located to the north of the western portion of the alternatives, south of Panama Lane and west of Old River Road and as of 1991 has had 1,590 proved acres and five oil producing wells.

Alternative A would run adjacent to the southern portion of the Canfield Oil Field. The operating wells are not in close proximity to the right-of-way and will not be affected.

The two pair of major pipelines crossing Alternative A are currently in operation. However, no major production or refining facilities would be impacted. Additionally, because there is only a minimal amount of extraction occurring, no significant impacts are anticipated.

Alternative B

The Ten Section Oil Field is the only oil field which will be affected by Alternative B. As discussed above, the Ten Section Oil Field, located north of Taft Highway on the east side of Interstate 5 had, as of 1991, 2,120 proved acres with two plugged and abandoned wells and no operating wells. Therefore, no significant impacts are anticipated to occur to this field.

There are two pairs of major pipelines which would cross Alternative B. They are currently in operation. However, no major production or refining facilities would be impacted.

Alternative C

There are no oil fields in the vicinity of Alternative C. However, there are two pairs of major pipelines crossing this alternative which are currently in operation. No major production or refining facilities would be impacted.

Alternatives A1, B1, C1

There are no oil fields nor pipelines which are located in the vicinity of the eastern portion of Alternatives A1, B1, or C1. The western portion of these alternatives would have the same impacts as Alternatives A, B, and C.

Alternatives B2, C2, C3

There are two oil fields in the vicinity of the eastern end of these alternatives: (1) Edison Oil Field which is located immediately to the east; and (2) Mountain View Oil Field which is located to the southeast. The Edison Oil Field is located north of Panama Lane and east of Vineland and as of 1991 had 6,010 proved acres, 17 oil producing wells, and 21 plugged and abandoned wells. The operating wells are not in close proximity to the proposed alternative right-of-way and will not be affected. The Mountain View Oil Field is located north of Taft Highway and as of 1991 had 2,855 proved acres and two oil producing wells.

There is only a minimal amount of extraction occurring, and therefore, the location of these alternatives in proximity to the oil fields is not considered significant. There is one pipeline crossing the eastern end of these proposed alternatives which is currently in operation. However, no major production or refining facilities would be impacted.

The western portion of these alternatives would have the same impacts as Alternatives A, B, and C.

Alternatives A3, B3, C3

The two oil fields in the vicinity of the eastern end of these alternatives include, Mountain View, and Edison Oil Fields, as well as one pipeline. The Mountain View Oil Field is located just east of the eastern portion of the routes to the north of Taft Highway. As of 1991 it had 2,855 proved acres and two oil producing wells. The Edison Oil Field is located north of Panama Lane and east of Vineland and as of 1991 had 6,010 proved acres, 17 oil producing wells, and 21 plugged and abandoned wells. The operating wells are not in close proximity to the South Beltway Transportation Corridor right-of-way and will not be affected.

There is one pipeline crossing the eastern end of these proposed alternatives which is currently in operation. However, no major production or refining facilities would be impacted.

The western portion of these alternatives would have the same impacts as Alternatives A, B, and C.

Contaminated Soil

Alternatives 1-12 (A-C, A1-3)

Impacts could occur during the construction phase of the proposed project. Contaminated soil may exist in the area. Once excavated, the contaminated soil could adversely affect the workers, public, and wildlife in the area. Without proper safety procedures, existing pipelines may be disrupted by excavation as well, causing additional contamination of the soil.

There are no sand and gravel operations in the proposed right-of-way; however, any resources within the right-of-way would no longer be available for recovery. Since there are no known deposits along the project right-of-way, no impacts should occur.

Large farms may generate manifested wastes, while small farms may be small quantity generators. Pesticides are used heavily in Kern County. Pesticide containers are triple rinsed with water, which is returned to the spray application equipment. This rinse water is then

applied to the crop or site for which the pesticide is intended. There is a potential for significant volumes of pesticide contaminated soil waste from cleanup of pesticide operation sites. This contaminated soil can adversely impact the workers of the proposed project once excavation begins.

Individual farmers or ranchers are responsible for disposing of their agricultural wastes. Title 14, California Code of Regulation, Division 7, Chapter 3, Article 8 entitled "Agricultural Solid Waste Management", governs disposal of agricultural wastes. Confined animal facilities are also regulated under Title 23, California Code of Regulations, Subchapter 15, Article 6, because they produce fertilizer/manure. These regulations establish levels of performance for waste management practices so that agricultural operations do not adversely affect the public health. Adverse effects that can be associated with agricultural operations include vectors and nuisance insects such as flies. A Vector is an organism that transmits disease germs, such as the fly. If not controlled, vectors may disseminate widely from the property and can cause detrimental effects on the health and comfort of the people living in surrounding areas. The Waste Management Regulations, stated in the Kern County Solid Waste Management Plan 1988, control the dust, odors, feathers, and other airborne debris generated from agricultural operations.

Adequate fertilizer/manure management practices are required to prevent nuisance and the creation of adverse public health conditions. Manure must be removed from confined animal areas and managed so as to prevent the creation of the adverse health and nuisance problems. Vegetable and fruit crop residues are a potential source of vectors, odors, and other conditions that can affect the public health, and are normally incorporated into the soil, consumed by livestock, or removed from the field. After removal from the field, crop residues or wastes should be stored, processed, or disposed of in a manner designed to prevent the creation of adverse conditions.

At this time agricultural solid wastes do not present any management problems. Crop waste

is recycled as much as possible. It may be piled and burned, shredded and disked into the soil, baled for bedding, or sold for feed. Some waste such as nursery plant debris, cotton gin wastes, and spoiled crop wastes enters landfills. Impacts are most likely to occur during the construction phase, when agricultural land will be excavated. Construction workers may be exposed to vectors and nuisance insects. Soils should be tested before construction begins to ensure the construction workers a safe environment for work.

Fuel for gas stations is stored in subsurface tanks. Leaking underground storage tanks (LUST) contaminate the soil and can cause adverse impacts to construction workers and the public once exposed to surface soils. Contaminated soil will not impair construction of the proposed project, but should be removed. Since there are no existing gas stations along the project right-of-way, no impacts should occur.

Mitigation Measures

The following mitigation measures are recommended to reduce impacts related to hazardous wastes.

1. The project developer/owner shall conduct soil tests prior to construction, for hazardous agriculture wastes, and hazardous contamination from oil wells and underground storage tanks to confirm the absence of contamination. If soil is found to be contaminated, it is the responsibility of the owner to clean up any hazardous waste prior purchase of the property.

2. Potential hazardous sites should be identified for future projects to ensure consideration in their environmental clearance.

3. Existing oil wells and lines, and underground fuel storage tanks will be identified, capped, abandoned or removed prior to construction of the proposed project to prevent damage from occurring during the construction phase.

Alternatives Analysis

The following table compares the project alternatives and the No Project alternative. The table

lists what impacts could occur in all areas by all project alternatives. Specific on-site studies at the oil fields will need to be conducted in the Tier 2 environmental review to determine exact locations of oil wells. The alternative which does not transect any oil fields, is Alternative C, which is in close proximity to several wells.

The two pairs of major pipelines will be impacted by the western end of all of the alternatives. The smaller pipeline near Panama Lane would be impacted by both the eastern end of Alternatives A2, B2, C2, A3, B3, and C3. A detailed study on the depth of these pipelines will be completed in the following Tier 2 environmental review to determine the safest means of construction around them. Due to the small portion of hazardous material contained in oil wells and pipelines, the impacts of both alternatives are deemed less-than-significant.

Agricultural hazardous wastes are an impact in all of the route alignment alternatives. Mitigation will render these impacts in both alternatives less-than-significant.

Impacts on fuel storage at commercial gas stations could occur as a result of construction of Alternative B and the western portion of Alternatives B1, B2, and B3 along Taft Highway. Alternatives A, A1, A2, A3, C, C1, C2, and C3 will not affect any gas stations. Although Alternative B would primarily be a widening of the existing right-of-way of Taft Highway, those fuel storage tanks located in close proximity to the road may be disturbed during construction and would need to be moved. In this case, all precautions must be taken to move the tanks safely. Location of underground tanks should be known before construction begins to prevent any unnecessary destruction of tanks that could result in leakage and contamination. Proper mitigation will render the impacts less-than-significant.

Alternative	Impacts from Oil Field waste	Impacts to Pipelines	Impacts from Agricultural Waste	Impacts on Fuel Storage
A	Yes	Yes	Yes	No
B	Yes	Yes	Yes	Yes
C	No	Yes	Yes	No
A1	Yes*	Yes*	Yes	No
A2	Yes	Yes	Yes	No
A3	Yes	Yes	Yes	No
B1	Yes*	Yes*	Yes	Yes*
B2	Yes	Yes	Yes	Yes*
B3	Yes	Yes	Yes	Yes*
C1	Yes*	Yes	Yes	No
C2	Yes	Yes	Yes	No
C3	Yes	Yes	Yes	No
No Project	No	No	No	No

* Western end only

Mitigation Monitoring Program

The following table details the proposed Mitigation Monitoring Program to reduce impacts associated with hazardous wastes.

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
Impacts from excavation of contaminated soil during construction of the proposed project	The project developer/owner shall conduct soil tests for agriculture wastes, and contamination from oil wells and underground storage tanks to confirm the absence of contamination	Insignificant	Project Developer (for clean up of contaminated soil)	Prior to construction
	Potential hazardous sites should be identified for future projects to ensure consideration in their environmental clearance	Insignificant	Project Developer	Prior to construction

Potentially Significant Adverse Impacts	Mitigation Measures	Significance After Mitigation	Program Responsibility/ Mitigation Report Recipient	Project Phase
	Existing oil wells, and underground fuel storage tanks will be identified, capped, abandoned or identified to prevent damage from occurring during the construction phase	Insignificant	Project Developer	Prior to construction

SECTION V
ALTERNATIVES TO PROPOSED PROJECT

The following section presents a description and short analysis of each project alternative. In addition to the following alternatives others were considered. There are thirteen total alternatives, A, B, C, A1, A2, A3, B1, B2, B3, C1, C2, C3, and the No Project alternative. The 12 right-of-way alternatives have equivalent potential with no preferred alternative defined by KCOG at this time. These alternatives however, are analyzed below as west end options A, B, and C and east end options 1, 2, and 3 only. This alternatives study does not include an analysis of the combined options.

Feasibility studies and traffic analysis models were conducted for each alternative studied. Based on feasibility studies, it was determined by the lead agency that alternatives located north of the proposed project site were too costly. The traffic models that were conducted on the routes south of the proposed project and project alternative sites concluded that the anticipated future traffic demand on smaller arterials would not be mitigated. Detailed analyses of the impacts associated with each of the alternatives are contained in each issue area in Section IV. By comparing the alternatives to each other, the favorable and unfavorable aspects of each can be evaluated with regard to the most appropriate location for the right-of-way.

The proposed project could be one of the 12 project alternatives, A, B, C, A1, A2, A3, B1, B2, B3, C1, C2, C3. The study area plans do not identify precise footprints for construction and therefore the alternatives analysis presented in this Tier 1 EIR is reflective of the project area comprehensive facility needs and impacts. The proposed project alternatives are listed below in Table V-1.

Table V-1
Proposed Project Alternatives

Alternative	Description
1) A	Extending from I-5 to Vineland Road roughly following McCutcheon Road
2) B	Extending from I-5 to Vineland Road along Taft Highway
3) C	Extending from I-5 to Vineland Road, roughly along DiGiorgio Road
4) A1	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
5) A2	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
6) A3	Extending from I-5 roughly along McCutcheon Road, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road
7) B1	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
8) B2	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
9) B3	Extending from I-5 along Taft Highway, to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road
10) C1	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling in a north-northeasterly direction and intersecting State Route 58 at the Oswell Street intersection
11) C2	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then extending east to connect with Vineland Road
12) C3	Extending from I-5, roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue then traveling northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extending easterly to connect with Vineland Road

Careful attention given to alternatives is required by the California Environmental Quality Act (CEQA). The CEQA guidelines require that a spectrum of legitimate alternatives be represented in the EIR, alternatives that provide for educated decision making and public interaction. The No Project alternative must always be considered along with the other selected options, as summarized below.

A - McCutcheon Road

This route would extend east from Interstate 5 along State Route 119, Taft Highway, then travel northeast to follow McCutcheon Road to Vineland Road. This alternative would improve east-west capacity but would result in the relocation of residential and commercial land uses. The areas located within close proximity to the proposed right-of-way, but not relocated, would still be subjected to the impacts of the corridor. Air quality would be improved over the existing conditions due to improved traffic conditions. Specific impacts resulting from this alternative are addressed under each issue area in Section IV.

Option A would be the portion of Alternative A which extends from Interstate 5 along State Route 119, Taft Highway, then travels northeast to follow McCutcheon Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives A1, A2, or A3.

Relationship to Project Objectives

Alternative A does promote the goals of the Metropolitan Bakersfield 2010 General Plan Circulation Element as it would provide an additional transportation route to meet the demands of projected population growth.

Option A, connecting to one of the east end options, would also promote the goals of the Metropolitan Bakersfield 2010 General Plan in providing an additional transportation facility to meet the demands of projected population growth.

B - Taft Highway/Panama Road

This route would follow Taft Highway/Panama Road from Interstate 5 to Vineland Road. East-west traffic flow and capacity would be improved by the implementation of this alternative. However, Alternative B would result in the greatest number of residential and business displacement and relocations. The areas located within close proximity to the proposed right-of-way, but not displaced, would still be subjected to the impacts of the corridor. Air quality would be improved over the existing conditions due to the improved traffic conditions. Specific impacts resulting from this alternative are addressed under each issue area in Section IV.

Option B would be the portion of Alternative B which extends from Interstate 5 along State Route 119, Taft Highway, to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives B1, B2, or B3.

Relationship to Project Objectives

Alternative B would provide an additional transportation facility to accommodate future population growth as recommended in the Metropolitan Bakersfield 2010 General Plan Circulation Element.

Option B, connecting to one of the east end options, would also promote the goals of the Metropolitan Bakersfield 2010 General Plan in providing an additional transportation facility to meet the demands of projected population growth.

C - DiGiorgio Road

This route proposes that the corridor begin at Interstate 5 approximately two-and-one-half to three miles south of Taft Highway, then travel northeasterly and follow roughly along DiGiorgio Road to Vineland Road. This alternative would require the relocation of more farms/agricultural activities than Alternative A, but fewer residences and businesses than Alternatives A and B. The areas located within close proximity to the proposed right-of-way,

but not relocated, would still be subjected to the impacts of the corridor. Air quality would be improved due to improved traffic conditions. Specific impacts resulting from this alternative are addressed under each issue area in Section IV.

Option C would be the portion of Alternative C which extends from Interstate 5 approximately two-and-one-half to three miles south of Taft Highway, then travels northeasterly and follows roughly along DiGiorgio Road to a point between Cottonwood Road and Union Avenue where it would connect with either Option 1, 2, or 3 to create Alternatives C1, C2, or C3.

Relationship to Project Objectives

This alternative would provide an additional transportation facility to accommodate future population growth as recommended in the Metropolitan Bakersfield 2010 General Plan Circulation Element. However, this alternative is located considerably farther south than the majority of increased development is anticipated to occur.

Option C, connecting to one of the east end options, would also promote the goals of the Metropolitan Bakersfield 2010 General Plan in providing an additional transportation facility to meet the demands of projected population growth. However, as mentioned above, the route is located considerably farther south than the majority of increased development is anticipated to occur.

1 - Highway 58 Connector

This route extends from the point between Union Avenue and Cottonwood Road in a north-northeasterly direction and intersects State Route 58 at the Oswell Street intersection. The areas located within close proximity to the proposed right-of-way, but not relocated, would still be subjected to the impacts of the corridor. East-west traffic flow would be improved and as a result there would be a corresponding improvement in air quality. Specific impacts resulting from this route are addressed under each issue area in Section IV. In addition to the displacement of agricultural land, dwelling units and people, this route bisects an oil field.

Relationship to Project Objectives

This route would provide an additional transportation facility to accommodate future population growth as recommended in the Metropolitan Bakersfield 2010 General Plan Circulation Element. It would provide a connection with Highway 58, however, it would not travel as far east as the other two east end options.

2 - Vineland Road Connector

Option 2, extends northeasterly from the west end connection, to the Atchison/Topeka/ Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then travels east connecting with Vineland Road. The areas located within close proximity to the proposed right-of-way, but not relocated, would still be subjected to the impacts of the corridor. This route would improve east-west capacity and air quality would be improved over the existing conditions due to improved traffic conditions. Specific impacts resulting from this route are addressed under each issue area in Section IV.

Relationship to Project Objectives

This route would provide an additional transportation facility to accommodate future population growth as recommended in the Metropolitan Bakersfield 2010 General Plan Circulation Element. It does not extend to Highway 58, however it connects with Vineland Road which does connect with Highway 58.

3 - Vineland Road Connector, Panama Lane

The east end option, Option 3, travels northeasterly from the western end options to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extends easterly connecting with Vineland Road. The areas located within close proximity to the proposed right-of-way, but not relocated, would still be subjected to the impacts of the corridor. Additionally, the eastern end of this route follows Panama Lane, an existing roadway. The improved east-west capacity would result in an improvement in air quality

conditions. Specific impacts resulting from this route are addressed under each issue area in Section IV.

Relationship to Project Objectives

This route would provide an additional transportation facility to accommodate future population growth as recommended in the Metropolitan Bakersfield 2010 General Plan Circulation Element. It does not extend to Highway 58, however it connects with Vineland Road which does connect with Highway 58.

No Project Alternative

Consideration of a No Project alternative is required by CEQA. Under this alternative the right-of-way for South Beltway Transportation Corridor would not be adopted. The environmental characteristics of the project area would remain generally the same as those described in the environmental setting sections of Section IV. Continued urban development in south Bakersfield and Kern County would produce additional area traffic resulting in worsened traffic conditions. Air quality would also be degraded because the increase in traffic on the existing roads combined with the slower speeds of traffic will produce a greater amount of emissions. Service levels along State Route 99 and State Route 184 will also continue to become more critical.

This alternative is considered environmentally superior to the other scenarios and to the proposed project, because it imposes no additional demands on local facilities and services, and because it would not have any additional impact on the existing environment. Also, since future excavations (relating to construction of the proposed South Beltway Transportation Corridor) would not occur, no earth would be exported form the site and no change in storm water runoff would occur. However, the No Project alternative would not alleviate the worsening traffic conditions in the area.

Cumulative development without the corridor would produce additional area traffic at slower speeds, which in turn would cause an increase in air pollution, increases in noise levels, and increased consumption of energy.

Relationship to Project Objectives

This alternative would not promote the goal of the Metropolitan Bakersfield 2010 General Plan's Circulation Element which calls for additional transportation facilities to meet the demands of increased population growth in the Bakersfield area. As a result, the General Plan may need to be updated and amended to reflect future growth without additional transportation facilities.

Environmentally Superior Alternative

As required by CEQA, an environmentally superior alternative must be identified. For the analysis of the proposed South Beltway Transportation Corridor, the No Project alternative satisfies this requirement. Although the No Project alternative would not cause any additional impacts to the area, this alternative would result in worsened traffic conditions and an increase in air emissions. The increase in traffic on the existing roads combined with the slower speeds of traffic will produce a greater amount of emissions.

When the No Project alternative is found to be the environmentally superior alternative, CEQA requires that another alternative must also be identified as being environmentally superior. Alternatives A, ~~and~~ Alternative C, ~~and~~ Options A, and Option C would result in fewer impacts to the environment than Alternative B ~~or~~ and Option B. Therefore, Alternative A, Alternative C, Option A and Option C ~~and~~ could be considered environmentally superior to the No Project Alternative. Alternative C and Option C would result in the relocation of fewer homes and businesses than Alternative A and Option A. For this reason, Alternative C and Option C would also be environmentally superior to the others alternatives. However, ~~this route~~ Alternative C and Option C would not alleviate future traffic ~~patterns~~ impacts as well as Alternatives A, ~~or~~ Alternative B, ~~or~~ Options A, or Option B ~~would~~ because ~~it~~ Alternative C and

Option C ~~is~~ are located south of the area in which the highest amount of growth in anticipated to occur.

The east end options each affect the land uses in the project area similarly. Options 2 and 3 may affect the path of flood waters and Option 1 bisects an existing oil field. However, the eastern end of Option 3 is aligned along an existing roadway, and therefore may have less impacts than the other two east end options.

SECTION VI
LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

A. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Approval of a right-of-way for the South Beltway Transportation Corridor would be the first step in a series of actions leading to ultimate construction and use of a transportation facility. It is likely that the approval of the right-of-way would result in a long-term commitment by the County and City to pursue construction of the corridor. As each subsequent approval is taken by the City, the County, and Caltrans, a more permanent commitment to use of land and human resources is secured. Long-term benefits of the proposed project include lessened traffic congestion on State Route 58 and State Route 99, as well as on surrounding roads. Additionally, long-term productivity of the location would be increased by this development.

Short-term effects are considered minimal at this time. While an obvious need to ensure an adequate roadway system to accomodate future traffic conditions in the project area is evident, and a need to resolve the status of the planned but incomplete freeway system in the Bakersfield area is also apparent, the economic limitation of the current governmental budget will minimize the short-term uses of man's environment. The short-term uses will include the purchase and covering of private land, and reduction of large amounts of acreage of agricultural land.

Significantly, the long-term effects would be similar to the short-term impact; that is, agricultural land would be eliminated as would natural habitat. However, current trends indicate that some of this land would be converted from agriculture use even if the proposed project is not constructed.

B. IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED PROJECT IF IT WERE IMPLEMENTED

The major irreversible commitment due to the project will be a change in land uses within and immediately adjacent to the corridor from agricultural, residential and commercial uses to transportation use. Improvements such as bridge construction, water conveyance systems, structures, and drainage network, will also irreversibly alter the existing environment. A permanent loss of land for some residential, commercial, and agricultural use in the area will result from construction of the South Beltway Transportation Corridor.

A variety of materials and resources will be committed during construction and the life of the proposed project. Ultimately, construction of the proposed project will consume quantities of several natural resources including, but not limited to wood, steel, petroleum products, concrete, and electrical energy. Users of the completed facility will consume natural resources in the form of fuels and water. Many of these resources, especially fossil fuels, are in limited supply, and their future availability is uncertain. Use of resources in this way is not unusual or exceptional in the process of growth and development. The quantities and rates of use are not expected to significantly exceed that expected as part of County growth elsewhere. However, the rates of use will be somewhat hastened initially.

SECTION VII
GROWTH INDUCING IMPACTS OF PROPOSED ACTION

Southwest Bakersfield and south Bakersfield have been experiencing growth for the past two decades; consequently, it is difficult to identify growth that would occur with or without development of the South Beltway Transportation Corridor. Urban development has continued in southwest Bakersfield and trends indicate a continued increase regardless of development of the future corridor. The current and anticipated growth patterns have resulted in a greater demand for highway or other types of transportation facility construction as addressed in the Metropolitan Bakersfield 2010 General Plan. The proposed project is anticipated to meet the demands and alleviate the impacts of increased growth rather than inducing significant additional growth. While the project may induce some growth it is anticipated that the impacts will be minimal compared to those if future projected growth was not accomodated.

The continued development of new residential and commercial areas in south Bakersfield will result in compounded circulation problems south of the Kern River. The proposed project is only one portion of the solution. By itself, the development of South Beltway Transportation Corridor would probably only minimally induce growth easterly, however, in the long term, suburban development can be expected to continue throughout Bakersfield with the future proposed transportation routes providing rapid access westerly and easterly.

The increase in traffic and transportation corridor use may induce land use changes along the South Beltway Transportation Corridor. Depending on the current lot size, the reduction of land for the corridor may be substantial enough to make the present use of land no longer practical. This could result in an influx of desired zone changes. Those zone changes could in turn, influence surrounding areas/land uses as well, causing substantial changes in growth plans for the project area.

While residential growth patterns are not expected to change or increase due to the construction of the South Beltway Transportation Corridor, it is likely that the area

surrounding the transportation facility will experience a growth in highway or mass transit serving and general commercial uses, such as fast food restaurants, gas stations, and mini-markets. Employment opportunities provided by the increased commercial growth are likely to be filled by existing area residents as this type of employment is part-time and often temporary providing lower wages. Therefore, it is not likely that highway serving commercial development will result in an increase in population growth.

SECTION VIII
CUMULATIVE IMPACTS

Cumulative impacts are defined as two or more individual effects, which, when combined, are considerable or which compound or increase other environmental impacts. Project impacts combined with the impacts of other proposed development in the area results in cumulative impacts to a specific area. Possible cumulative impacts to the project area is difficult to determine and analyze at the present time, as the construction of the proposed South Beltway Transportation Corridor is not planned for approximately 30 years. However, cumulative impacts that could result from the proposed project and other development in the area relate to the removal of open space/agricultural land.

While few sensitive species may reside in the project area, these lands provide food, refuge, and sites to breed and care for young for several species of resident mammals. The acquisition of open space and agricultural land, in conjunction with further urban development in the corridor, could reduce the area's animal population, but cannot be determined until site-specific surveys have been completed.

The conversion of agricultural land may limit the practicality of several existing uses. For example, if the amount of land adjacent to the roadway that is acquired for the proposed corridor is proportionally large, the existing land uses may no longer be feasible to maintain. This could influence the land use significantly and may encourage requests for zone changes (which could lead to incompatibility with surrounding land uses, and limits on future development).

Depending on the type, amount and intensity of development, cumulative development would also result in depletion of nonrenewable resources such as energy and construction materials. Cumulative demand for public services and utilities in the future will likely increase, possibly requiring the expansion of municipal infrastructure. As a result of local population growth, demand for housing and for consumer goods and services would increase. Cumulative

impacts will be addressed in more detail in subsequent EIRs for individual projects as well as the EIR addressing the actual construction of the proposed South Beltway Transportation Corridor.

Cumulative transportation development in the Bakersfield and Kern County area includes a "freeway ring". The goal of this ring is to alleviate existing and anticipated traffic congestion and expedite both north/south and east/west travel through the area. The proposed South Beltway Transportation Corridor will constitute the southern portion of this ring, providing east/west transportation access. Cumulative impacts from this freeway ring are expected to result in the improvement of transportation and air quality in the Bakersfield area.

SECTION IX
ORGANIZATIONS AND PERSONS CONTACTED AND REFERENCES

Organizations and Persons Contacted

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Shaw, Marian, Civil Engineer III, City of Bakersfield Department of Public Works, Personal Communications with HBA, August 1992-November 1993.

Organizations and Persons Contacted (cont.)

Sorenson, Darrell, Kern County Water Agency.

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Wright, Ted, City of Bakersfield Department of Public Works.

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Preparers of Draft EIR

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Pasadena, CA 91101

Frank B. Wein, AICP	Project Director
Shayne Reich	Project Manager
Traci L. Robinson	Project Planner
Robert Brueck	Graphic Technician
Mike Bumgardner	Ecologist/Environmental Planner
Joan Rappold	Project Planner

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100 Park Center Plaza, Suite 450
San Jose, CA 95113

Gary Black	Traffic Engineer
Lisa Dye	Traffic Engineer

Kern County Council of Governments
1401 19th Street, Suite 200
Bakersfield, CA 93301

Ron Brummett	Executive Director
Roger Taylor	Principal Planner
Joe Stramaglia	Associate Planner

SECTION X
RESPONSE TO COMMENTS

The following section contains: (a) letters received by the Kern Council of Governments during the 45-day public review period on the Draft Environmental Impact Report - Amendment No. 1 (DEIR); (b) comments from the February 3, 1994 public meeting on the project; and (c) comments from the February 17, 1994 public hearing on the EIR. The section is organized with each letter followed by the corresponding responses. The public meeting and public hearing comments follow the written comments. Note: Revisions to the Draft EIR are shown in this Final EIR by ~~strikeout~~ (deleted text) and redline (inserted text).

A. Letters Received by the Kern Council of Governments

Letter	Agency
A-1	City of Bakersfield (Public Works Dept.)
A-2	Joe Garone/Joe Garone Farms
A-3	Kern Transportation Foundation
A-4	County of Kern - Transportation Management Department
A-5	Kern High School District
A-6	San Joaquin Valley Unified Air Pollution Control District
A-7	Governor's Office of Planning and Research (OPR)
A-8	California Dept. of Transportation (Caltrans)

B. Comments from the Public Meeting held on February 23, 1994

Comment	Person
B-1	Betty Elkins
B-2	Faye Holbert
B-3	Frank C. Lopez
B-4	Louis and Bruna Limi
B-5	Louis and Bruna Limi (second comment sheet)

C. Comments from the Public Hearing held on February 17, 1994

Comment	Person
C-1	Joe Garone
C-2	Virgie Witte
C-3	Marian Shaw
C-4	Katie Bernal

A. LETTERS

LETTER A-1

BAKERSFIELD

PUBLIC WORKS DEPARTMENT
1501 TRUXTUN AVENUE
BAKERSFIELD, CALIFORNIA 93301
(805) 326-3724

ED W. SCHULZ, DIRECTOR • CITY ENGINEER

February 17, 1994

Kern Council of Governments
1401 - 19th Street
Bakersfield, CA 93301

RE: **South Beltway Environmental Impact Report**

Honorable Council:

We wish to take this opportunity to provide additional input regarding the environmental review for the South Beltway location efforts.

City of Bakersfield staff have been very involved in the beltway location study and analysis from the first efforts. Our staff has identified corridors, located potential interchange locations, estimated right of way requirements, estimated right of way and construction costs and participated in input for the computer modeling runs. As a result of these efforts, City staff still recommends a preferred route designated as alignment "A" and which extends from I-5 to east of Weedpatch Highway and will be recommending same to the adopting bodies. It is our preferred route for the following reasons:

1. It best serves the traffic demands of the corridor to be serviced.

2. It will ultimately provide enhanced transportation opportunities to the Lamont area population center.

3. It is least disruptive, in our opinion, to existing and planned development (disregarding the DiGiorgio alignment as being too far south).

A-1-1

It is recommended your Council certify the environmental document as being complete and refer the document to the City of Bakersfield and Kern County for route selection hearings and route approval.

Very truly yours,

ED W. SCHULZ
Public Works Director

Response to Letter A-1

The letter raises no environmental issues that require response. The letter, however, confirms that analysis presented in the Draft Revised EIR is, in the opinion of the City's Public Works Department, complete and that the EIR should be certified by the Kern COG.

JOE GARONE FARMS

PHONE (805) 831-2127
1001 EAST HOSKING ROAD
BAKERSFIELD, CALIFORNIA 93307

February 16, 1994

LETTER A-2

Mr. Ron Brummett, Executive Director
Kern Council of Governments
1401 19th Street, Suite 200
Bakersfield, Ca. 93301

Re: South Beltway Proposed Alternatives

The Kern Council of Governments is to be complimented for expanding the study for the alignment of the South Beltway. Thorough study and early public input generally results in a much better project.

Prior to your hearing of February 25, 1993, I submitted written comments for your consideration, a copy of which is attached. At a subsequent hearing I made oral comments upon which I would like to elaborate. I recommended that the East/West alignment should be taken to a point which would be in line with the extention of Oswell Street and then turn north to a point to be determined. It has come to my attention that since that is down the middle of the 100 year flood plane, it might pose a problem. Therefore, I am recommending Cottonwood Rd. as an alternate North/South alignment of that portion of the freeway, as shown on the attached maps.

Cottonwood Road is the east boundary of the 250 acres owned by the Garone Family, which is in the process of being developed into a master community. Hosking Rd. is the north boundary of the project. Negotiations are now underway to site a High School in this development project. This definitely should be taken into consideration in freeway planning. If the North/South freeway were placed on, or adjacent to, Cottonwood Rd., we would have no objection to such an alignment. A-2-1

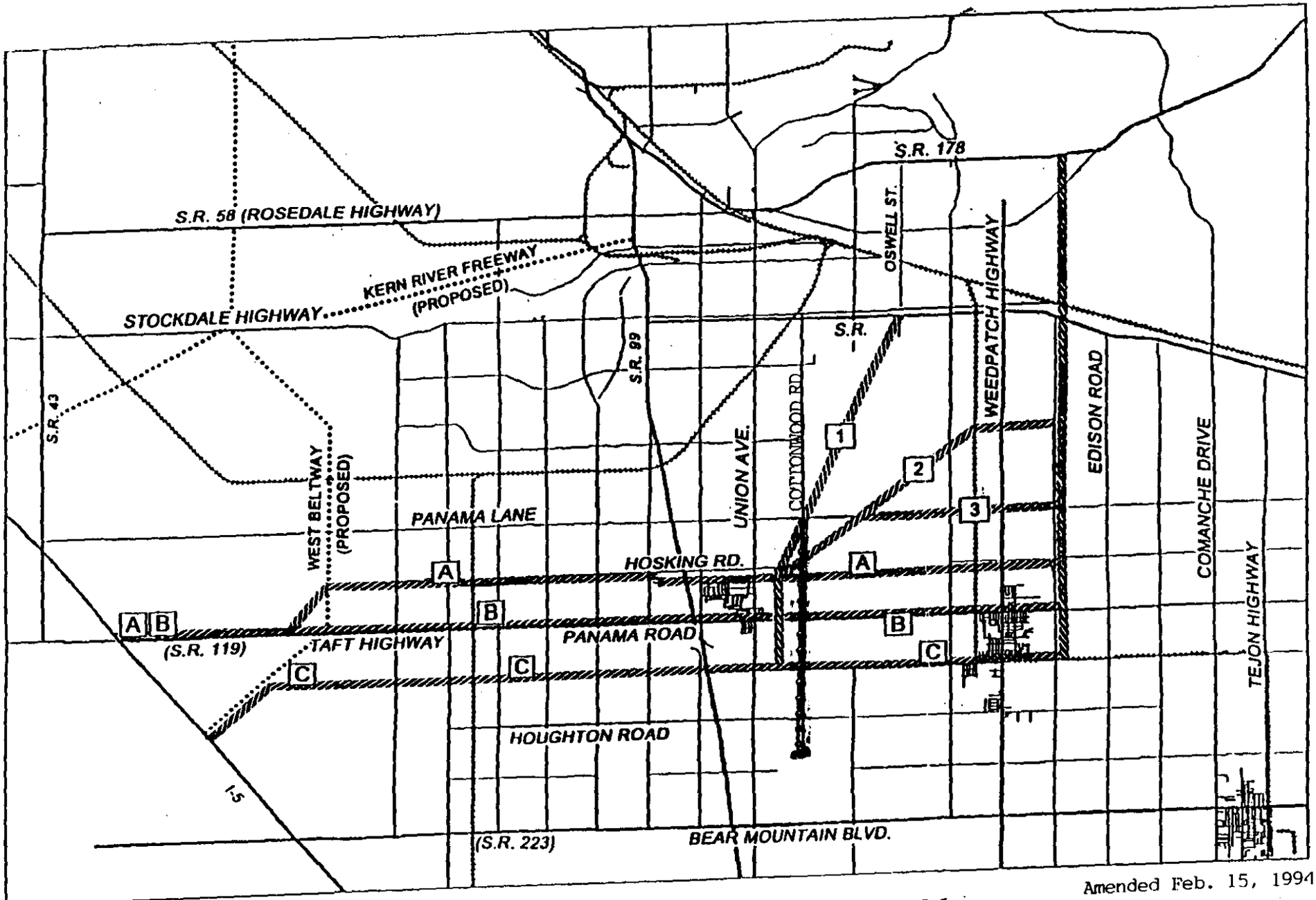
The East/West alignment should be moved southerly so as to incorporate the community of Greenfield within the Greater Bakersfield Metropolitan area. This would enhance the value of the Freeway as a true Beltway, while allowing for the orderly growth of Greenfield into what is perhaps it's most desirable area of expansion.

Sincerely,

Joe D. Garone

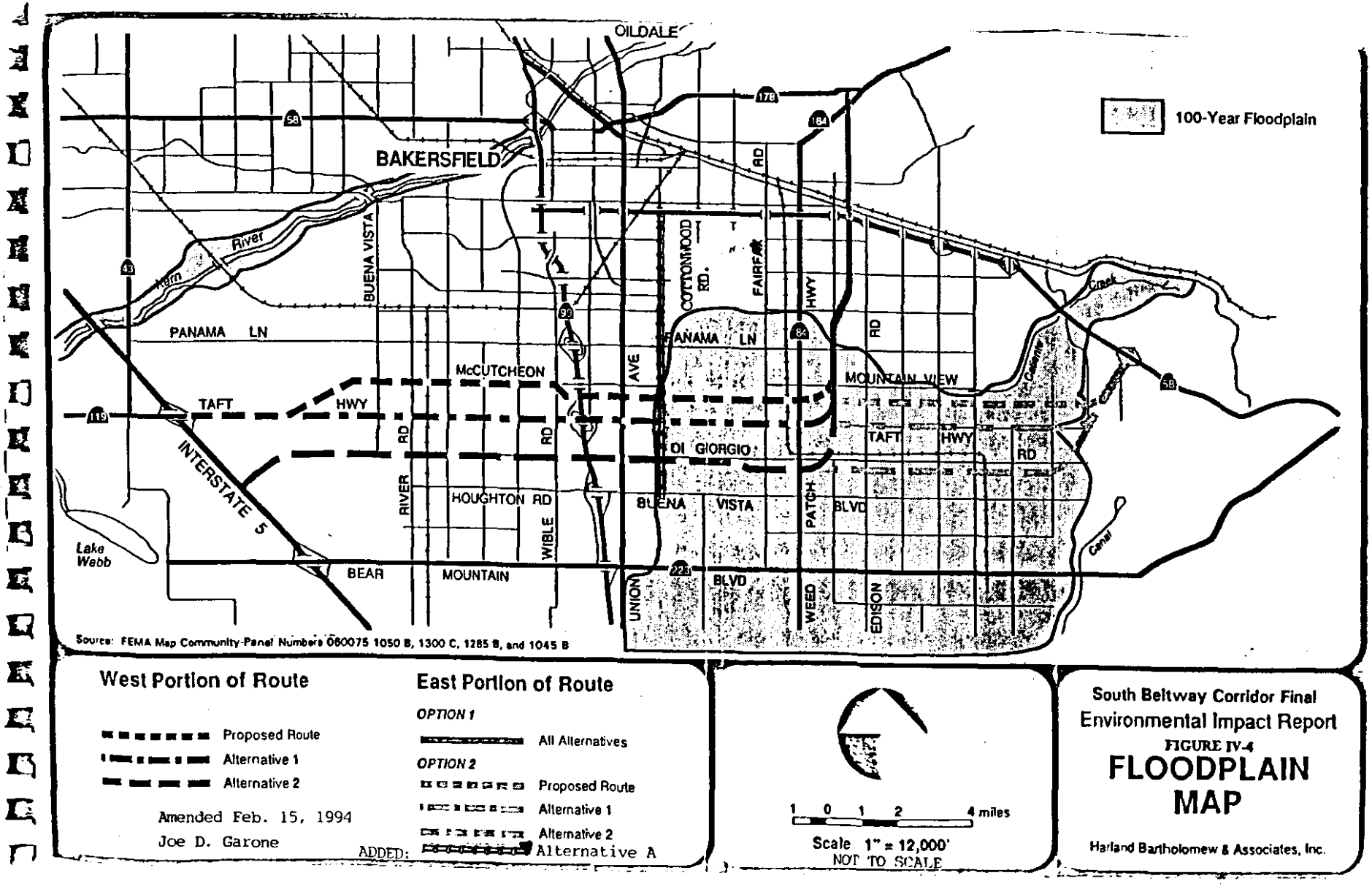
JDG:ld

Attachments: 3



SOUTH BELTWAY STUDY

Amended Feb. 15, 1994
Joe D. Garone
ADDED: COTTONWOOD RD.


OILDALE
BAKERSFIELD
178
184
58
43
99
119
223
Kern River
BUENA VISTA
COTTONWOOD RD.
FAIRFAX
HWY
RD
PANAMA LN
McCUTCHEON
TAFT HWY
INTERSTATE 5
RIVER RD
HOUGHTON RD
WIBLE RD
AVE
DI GIORGIO
MOUNTAIN VIEW
TAFT HWY
RD
BUENA VISTA
PATCH BLVD
BLVD
UNION
WEED
EDISON
Lake Webb
BEAR MOUNTAIN
Canal
100-Year Floodplain
Source: FEMA Map Community-Panel Numbers 060075 1050 B, 1300 C, 1285 B, and 1045 B
West Portion of Route
Proposed Route
Alternative 1
Alternative 2
Amended Feb. 15, 1994
Joe D. Garone
East Portion of Route
OPTION 1
All Alternatives
OPTION 2
Proposed Route
Alternative 1
Alternative 2
ADDED: Alternative A
1 0 1 2 4 miles
Scale 1" = 12,000'
NOT TO SCALE
South Beltway Corridor Final
Environmental Impact Report
FIGURE IV-4
FLOODPLAIN MAP
Harland Bartholomew & Associates, Inc.

SOUTH BELTWAY
PROPOSED ALIGNMENT ALTERNATIVES

COMMENT SHEET

Public Meeting
February 25, 1993

Name: Joe D. Garone **Address:** 1920 F Street, Ste 1

City: Bakersfield, CA **Zip Code** 93301

I would like to make the following comments or ask the following questions:

(Please Print)

It is my opinion that Alternate #1 (Hosking Road Alignment) is not the most desirable location for the proposed Beltway. The friends and neighbors with whom I have spoken share my feelings for the following reasons:

1. It will not serve the needs of the total community as well as a more southerly alignment.
2. Acquisition costs will be much less for a southerly route.
3. It is only five (5) miles south of Freeway 58 which seems to be very close for such a major Arterial.
4. A more southerly route would more effectively interconnect Freeway 58 with Freeway 99 for through traffic. This would reduce congestion in the more populated area.
5. The Garone Family has owned the north 250 acres of Section 32 T30, R28 since 1910. We are in the process of developing this acreage into a well planned community. Alternate #1 divides this parcel in two. Obviously this alignment would have a very serious negative impact on our development.

Continued - see Over

Use reverse side for additional comments

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett
Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

Response to Letter A-2

Comment A-2-1: Mr. Garone recommends the alignment of the South Beltway follow Cottonwood Road (a north/south alignment) and the east/west alignment be moved farther south to incorporate the community of Greenwood within the greater Bakersfield metropolitan area. This specific alignment (or option) was not evaluated in the Draft Revised EIR for the following reasons: (a) locating the beltway farther south (such as Bear Mountain Blvd.), the freeway would be growth-inducing, providing freeway access to an area of the County that is not planned for intense development in the adopted regional plans; and (b) the planned future growth in the area between Panama Lane and Taft Highway between US 99 and Weedpatch Highway would not be served by a freeway, thus increasing local traffic on this area's street network, which is inconsistent with adopted regional plans to improve circulation and reduce related air quality impacts resulting from increase vehicle-miles traveled. If Kern COG concludes that the alignment should be farther south than evaluated in the Draft Revised EIR, then the evaluation should include an assessment of the relationship to the adopted regional growth plans for this area. In addition, the proposed project is not the adoption of a specific alignment, but is only the adoption of a very generalized corridor. Following the adoption of the corridor, specific analysis will be conducted by the City of Bakersfield and the County of Kern to determine the most feasible alignment. The presence of a high school site (even a proposed site with no school yet developed) will be an important factor in the City's and the County's evaluation of the potential specific alignment. It is very likely that the criteria for the adoption of a specific alignment will include avoiding public school sites (either existing or proposed).

Kern Transportation Foundation

We're Moving Forward

MEMORANDUM

LETTER A-3

From: Don Lindsay

To: Ron Brummett

Subject: February 3, 1994 South Beltway Meeting in Lamont

Date: February 4, 1994

Last night's meeting in Lamont went well. Roger Taylor did a good job. However, there were a few questions asked that need better answers:

#1 Why do we need a South Belt? **A-3-1**

#2 Why can't it be located north of Bakersfield or further south? **A-3-2**

#3 Isn't it needed to benefit only Bakersfield? **A-3-3**

#4 How and when will affected landowners be compensated? Will a landowner be compensated for "loss of value"? **A-3-4**

P.O.Box 486, Bakersfield,CA 93302-0486 (805) 834-1369

Response to Letter A3

Comment A-3-1: The need for the south beltway is identified in several previously adopted City and County land use and associated circulation plans. The south beltway has been identified as needed to support future planned growth in the area southerly of the existing developed City area. The proposed beltway will, if developed, reduce potential impacts resulting from regional through-traffic using the area's local streets. In addition, the proposed beltway will, if developed, reduce commute time on local streets (and result in a corresponding decrease in congestion, traffic-generated noise and air pollution along the area's local streets).

Comment A-3-2: The regional land use and transportation plans envision a "beltway" encircling the entire Bakersfield metropolitan area. A "northern" portion is already part of this long-range plan. Locating the south beltway farther south would not achieve the project's objectives and benefits and would, to a large extent, great additional adverse impacts by inducing sprawl farther south of the planned urban uses.

Comment A-3-3: The proposed south beltway will benefit more than just the City of Bakersfield. The beltway will reduce traffic on the local street system.

Comment A-3-4: Affected landowners will be compensated in accordance with applicable state laws requiring compensation at fair market value for land purchased for public uses (such as a freeway or highway project). Since no specific route is proposed, it would be speculative to estimate what parcels may or may not be affected; this type of analysis would be possible only after the generalized corridor is identified and adopted by the City and the County. Compensation will be made prior to acquisition which may not occur for several years or more.

TRANSPORTATION MANAGEMENT DEPARTMENT
WILLIAM A. SUITOR, P.E., Director
2700 "M" STREET, SUITE 400
BAKERSFIELD, CA 93301
Phone: (805) 861-2481
FAX: (805) 324-1715

RESOURCE MANAGEMENT AGENCY
JOEL HEINRICHS, AGENCY DIRECTOR
Air Pollution Control District
Engineering & Survey Services Department
Planning & Development Services Department
Transportation Management Department
Waste Management Department

March 8, 1994

LETTER A-4

Kern Council of Governments
Attention: Joe Stramaglia
1401 19th Street, Suite 200
Bakersfield, CA 93301

Dear Mr. Stramaglia:

Re: 7-2.4a Draft Environmental Impact Report - Amendment Number 1 to Tier I EIR for South Beltway Transportation Corridor Study

By letter dated January 12, 1994, this Department submitted a number of concerns on the Administrative Draft EIR that we felt should be addressed in the EIR for the South Beltway. We realize that constraints limited the consultant's ability to modify the text of the document at that time. We therefore submit our comments on this proposal, many of which were in our previous letter to you.

Our comments will be primarily directed toward Section IV.H. Traffic Analysis; however, comments specific to other sections will also be included.

There appear to be several items in this administrative draft document that should to be corrected or added to the report prior to issuance for public review. Page I-6 indicates that the only issues identified are "the need for the corridor and its general location". Further, Page III-1 indicates that KernCOG, the County and the City "have identified the need to ensure that future east-west traffic in the area between Interstate 5 to (sic) State Route 58 can be accommodated," while on Page IV-79 it is stated that growth will "create a demand for additional highway capacity" which the South Beltway would provide. Yet, Page IV-80 reports "The 2020 forecast show only modest demand for a road in the South Beltway Transportation Corridor because this part of the metropolitan area is not expected to be fully developed by the year 2020." (emphasis added) The EIR, when submitted for public review, should define the need and demonstrate that there is or is not a demand for the corridor. A-4-1

Another item involves east side alternative 2 and 3. Neither of these options appear to satisfy the goal of the 2010 Plan and Circulation Element to provide a route for traffic between I-5 and SR 58; it appears that both options terminate at Vineland Road, about four miles south of SR 58. The EIR should to address the potential impacts from not meeting the 2010 Plan goals and from not providing a link between Vineland Road and SR 58. A-4-2

The original South Beltway Draft EIR did not address the potential effects of Alternate Route C, the southerly-most route, on development proposed by Pacific Rim Land Company (Pacificana Specific Plan) at the west end of the alignment; this was probably because the Pacificana project had not yet been officially submitted to the County for processing. A-4-3

However, at this time, the Pacificana project is a filed application, and the EIR circulated and a hearing date set by Planning and Development Services for consideration by the Board of Supervisors. Amendment 1, South Beltway Draft EIR should address the impacts of this project specifically as it relates to land use and circulation patterns proposed by Pacificana, and the alignment and intersection of Alternate C with the West Beltway within that project.

Table I-2, Summary of Impacts and Mitigation, should add other impacts described in Section IV starting on Page 80, including:

- attracting additional traffic between SR 58 and I-5;
- causing drivers to alter travel patterns;
- varying traffic volumes on alternative routes (may be more of an impact on some options, not so on others);
- affecting north-south and east-west local circulation;
- affecting roads without interchange to South Beltway.

A-4-4

"No Project" is discussed under the Alternative Analysis section in the various environmental characteristics and in the Alternatives Section of the EIR. Currently, EIRs will contain two "no project" scenarios: one as required by statute, which basically allows development to occur as vested; the other, as evolved from case law, "freezes" land uses as it exists. It is not clear which "no project" is used in the Alternative Analysis sections. If the latter is used, the statement made on Page IV-24 regarding air quality impacts being greater under No Project than any of the alternative, may not be correct. However, if the former is used, then the findings on Page IV-59 regarding Noise, and IV-63 regarding Light & Glare may not be correct since additional vehicles using existing roadways may result in greater noise and light & glare impacts than any of the alternatives. The EIR should clarify which "No Project" scenario is being used.

A-4-5

Page IV-79 does not include a description of the Alternate B or C options between Union Avenue and Cottonwood Road. This north-south link is not described as part of the west end nor east end alternatives. While a Tier 1 Draft EIR may not be the place to include highway geometrics, this report should at least include a description of the transition between east-west alternatives and the diagonal options in order to assess potential impacts to land uses in the area.

A-4-6

Table IV-6 lists projected traffic volumes at specified locations along the various alternative routes. Figure IV-7 is a key map to these locations. However the reader must "flip" pages back-and-forth in order to visualize traffic counts at any particular location. We would suggest that a map that shows traffic counts at these specified locations be substituted for the tables to allow for easier reading by the reviewer.

A-4-7

A-4-8

Page IV-91, first paragraph under Mitigation Measures, please change the end of the last sentence as follows: "... some of which ~~are~~ may already be congested." Also please define the term "congested" as it pertains to the previous sentence.

Please be sure that corrections made as a result of the above-noted comments are also made in the Alternatives Section where necessary.

Should you have any questions concerning these comments, please contact either Barry Hayslett or Fred Simon, Transportation Management Department, at (805) 861-2481.

Very truly yours,

Fred Simon
Principal Planner

FS:ab
~~Enclosure~~
L39.D64
cc: Resource Management Agency
LLN, BH

Response to Letter A-4

Comment A-4-1: The text of the Draft EIR on Pages I-6, III-1 and IV-79 are correct in noting that one of the objectives of the proposed South Beltway Transportation Corridor is to meet future demand for additional transportation facility capacity. The text on Page IV-80 should be revised with the sentence noted in the comment deleted and replaced with the following new text:

> "While the current forecast of future traffic demand indicates only a modest increase in traffic from existing land uses, the 2020 forecast when accounting for future intensification of land uses proposed in the regional land use plans for the area will create a demand for additional transportation facilities. That is, while existing land uses will not require the construction of an additional facility in the area, future planned land uses will create the demand that will be met by the proposed transportation corridor."

Comment A-4-2: Comment acknowledged that neither of the east side alternatives will satisfy the goal of the 2010 regional plan and the County's adopted Circulation Element. As a result, significant impacts will result, including increased traffic on surface streets due to future growth in the area, increased vehicular noise and associated land use impacts.

Comment A-4-3: The traffic impact analysis for the South Beltway Corridor, prepared by Kern COG, did include potential regional traffic generated by future development in the Pacificana Specific Plan as well as other major regional proposals (such as San Emidio Ranch). Therefore, although not specifically mentioned in the traffic impact analysis, the analysis does include potential regional growth. The traffic impact analysis indicates that there will be an increased demand for the South Beltway Transportation Corridor to be developed. The decision regarding the alignment of the South Beltway Corridor will be based on several factors, including the relationship to both existing land uses and proposed developments, such as the Pacificana Specific Plan.

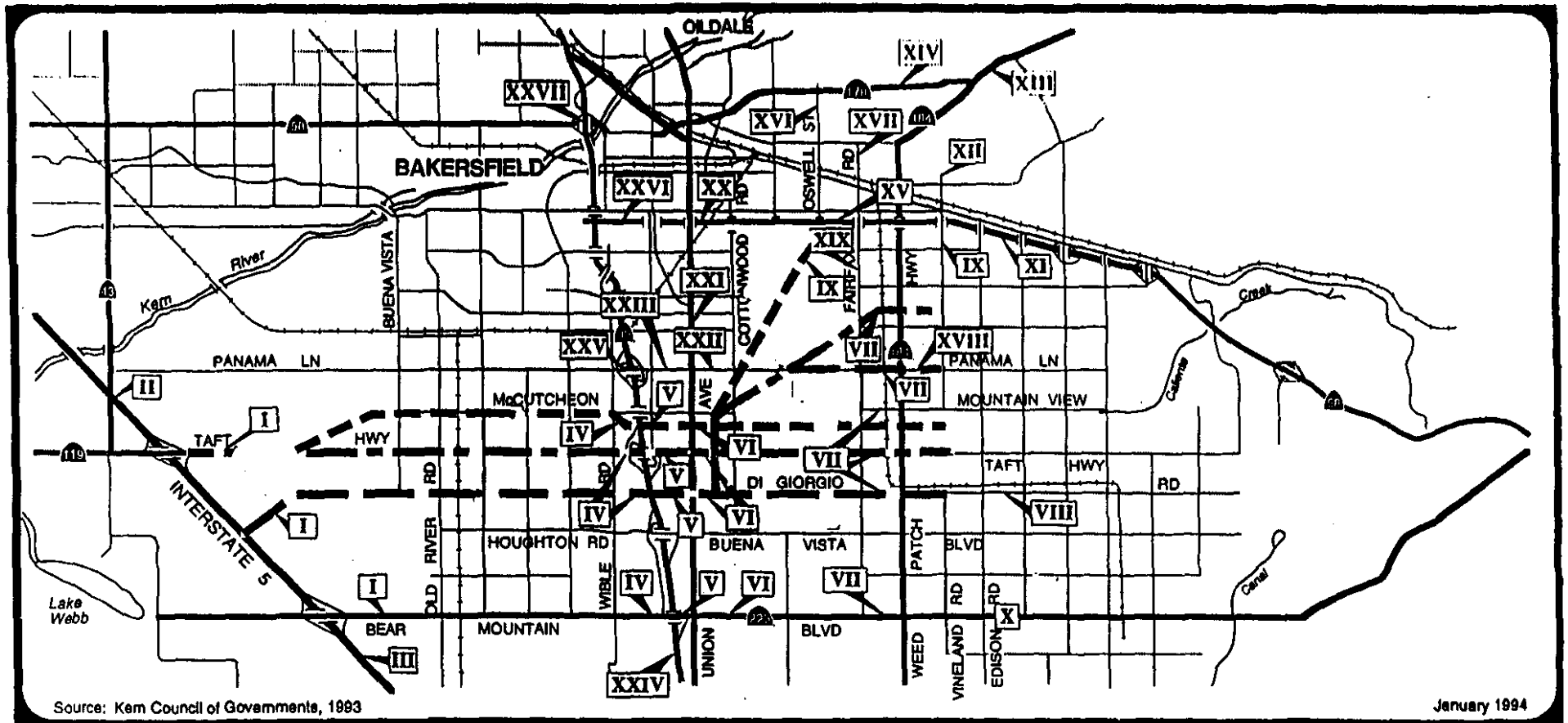
Comment A-4-4: The impacts summarized in this comment were included in the discussion as potential impacts from the future corridor. At the end of the discussion it is stated that a complete transportation analysis would be required to determine exactly what impacts would occur. The only impact that was definately identified was the one which is reflected and addressed in both the mitigation monitoring table and in Table 1-2.

Comment A-4-5: The "no project alternative" in the case of the proposed transportation corridor is no development of the transportation corridor. That is, no freeway, grade-separated highway (of any configuration, number of lanes and/or high-occupancy vehicle facility) or any other type of facility would be construction under the "no project alternative." As a result, there will be increased air quality impacts (due to the projected increase in traffic in the area that will have to use surface streets (which are inefficient when compared to other facilities such as, grade-separated freeways/highways and, as result, produce more vehicle emissions per mile that vehicles travelling at higher speeds on grade-separated roads). Likewise, the "no project alternative" will result in greater noise and light/glare impacts than the proposed project because of increase vehicular movement on local/surface streets in proximity to residential uses that cannot be mitigated. Vehicular-noise and vehicular generated light/glare can be mitigated in the design of the future transportation facility through the use of noise walls, grade separation(s), landscaping and other barriers. Vehicular-noise and vehicular generated light/glare on surface streets cannot be mitigated by these design features. Therefore, the "no project alternative" would result in greater impacts in regards to these issues than the proposed project.

Comment A-4-6: The potential impacts due to the construction of the transition between the east-west alternative(s) and the diagonal options cannot be defined at this time. The potential impacts will be fully assessed in the future Tier 2 EIR for the transportation corridor.

Comment A-4-7: A map, as suggested, is attached to this series of responses to comments.

Comment A-4-8: As suggested, the first paragraph on Page IV-91 will be modified. "Congested" refers to level of service (that is, the ratio between the volume of the road and the design capacity). The higher the ratio between volume and capacity (V/C), the more congested the road.



Source: Kern Council of Governments, 1993

January 1994

Roman Numerals Correspond to Location of Traffic Counts

1 0 1 2 4 miles

South Beltway Transportation Corridor
Environmental Impact Report

LOCATION OF TRAFFIC COUNTS

Harland Bartholomew & Associates, Inc.

KERN HIGH SCHOOL DISTRICT

BOARD OF TRUSTEES
Kenneth E. Secor, President
Fred L. Stamm, Vice President
David C. Crenshaw, Clerk
Earle J. Gibbens
Sandra V. Serrano

THOMAS N. JONES, Ed.D., Superintendent

2000 TWENTY-FOURTH STREET
BAKERSFIELD, CALIFORNIA
93301-3899
(805) 631-3100
FAX: (805) 631-2123

DR. NEAL W. OLSEN
Assistant Superintendent, Business

March 11, 1994

LETTER A-5

Kern Council of Governments
ATTN: Ronald E. Brummett
1401 19th Street, Suite 200
Bakersfield, CA 93301

RE: South Beltway Corridor Study - Amendment No. 1 to Tier 1 EIR

Dear Mr. Brummett:

The Kern High School District has reviewed the subject EIR. The proposed project may have impacts on two high schools within the Kern High School District. The District is concerned that the EIR has failed to adequately acknowledge the presence of the high schools and has not adequately addressed the impacts this project may have on the high schools. Each high school represents an investment of over $35 million. The District requests that the Final EIR address the following comments:

1. The District is currently constructing Ridgeview High School which is located on the west side of Stine Road, just north of the intersection with McKee Road. Ridgeview High School is situated between route Option A and B. This high school is scheduled to open in August 29, 1994. As we understand it, the precise corridor locations have not been selected, and therefore either, Option A or B, if selected, could ultimately be located closer to the school. A-5-1

2. The District is currently negotiating on option for the purchase of a site for Comprehensive Campus Number 5. The proposed 49.5 acre site is located on the south side of Hosking Road between Union Ave. and Cottonwood Road (see attached map). This site was selected based on a number of criteria used by the District for siting a high school. The criteria included factors such as distance from other District schools, floodplain, and anticipated growth patterns. The selected site best met the criteria and it would be difficult to locate another site which would ideally fit the criteria. From the detail aerial photo based maps examined at Kern COG's office, it appears that the high school site is in direct conflict with Option A and Option A1, A2, and A3. Because of the direct conflict, Option A could not be constructed as shown. A-5-2

3. Assuming that the direct conflict can be resolved by relocating the proposed beltway, it appears likely that the proposed campus will be located very close to one or more alternatives. Given that possibility, the District does not think the EIR adequately addresses impacts on the schools. Section III, page III-1 states that the evaluation criteria used for the selection of route lines included "proximity to existing or proposed schools and parks". Page IV-55 identified schools as "noise sensitive receptors". However, the EIR states that there are no schools adjacent to the project alternatives. While this may currently be the case, the EIR should acknowledge the planned high school and Ridgeview High School. The school site locations should be considered when selecting the final corridor alignment. A-5-3

4. The minimum distance between a freeway and a class room is 700 feet. This minimum distance should be considered when selecting a route alternative. The EIR does not adequately address potential noise impacts on the schools. Because of potential noise impacts, the projects should provide for adequate mitigation of noise that may result from the freeway, both during construction and operation. A-5-4

5. The EIR did not address potential air quality impacts on adjacent land uses, such as schools. Line source air emissions from a freeway may result in localized degradation of air quality. Degraded air quality may impact physical education programs. This potential impact should be considered when selecting the final corridor alignment and should be addressed in the EIR. A-5-5

The District requests that it be kept on the mailing list for all additional actions that may occur relative to this project. Additional comments will be provided relative to the issues identified above during the route selection process and following the preparation of the Tier 2 EIR.

Sincerely,

Jack W. Coward
Director, Facilities Planning

JWC/dy

Enclosure

xc: Steve Paine

KCOFGOV.RHS

SCHOOL DIST. 74-2 74-23 74-14
Site
49.39 Acres
Campus #5 Site
67.38AC
26.79AC
26.79AC
91.9 AC
20 AC.
10 AC.
9.97AC
13.17 AC.
6.03A
35.52 AC
35.52 AC
2AC
2AC
2AC
2AC
2AC
2AC
20AC
TRACT
Hosking Rd.
STATE HWY ST NO 99

Response to Letter A-5

Comment A-5-1: Comment acknowledged that although a specific alignment is not know at this time, both Option A and Option B could ultimately be closer to Ridgeview High School.

Comment A-5-2: Comment acknowledged;however, the aerial photos referred to in the comment should not be considered as a preferred alignment. The aerial photos are only one possible depiction of alignments. Nonetheless, the District is correct in noting that if the route is constructed as shown on the aerial photos, there would be a significant conflict with the proposed school facility.

Comments A-5-3, and A-5-5: The text of the EIR on page IV-55 will be revised to include the , **A-5-4** following additional text:

> "Existing and proposed schools, including both Ridgeview High School and Kern High School District's planned high school, however, are in <u>proximity</u> to potential alignments. The selection of the final alignment, therefore, should consider these facilities and locate the route no closer than 700 feet from these sites. In addition, the final route selection within the transportation corridor, which will be subject to the Tier 2 EIR, should consider the potential for mitigating noise, the emission of vehicle-generated pollution and light/glare.

LETTER A-6

San Joaquin Valley
Unified Air Pollution Control District

March 11, 1994

Ronald E. Brummett
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, CA 93301

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 2

To Roger Isom	From Joe Olmstead
Co.	Co.
Dept.	Phone #
Fax # 324-8215	Fax # 324-1697

HARD COPY TO FOLLOW

Draft Tier 1 Environmental Impact Report (EIR) - Amendment No. 1
South Beltway Transportation Corridor Study
(SCH# 92072049-93102045)

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed your Environmental Impact Report (EIR) and has the following comments and suggestions.

The District commends you on your thoughtful recommendations to help mitigate the adverse air quality impacts from this project. However there are a couple of areas that may have an air quality impact that need to be considered during the decision process of selecting a specific corridor.

- The alternatives should be analyzed for which alignment is most appropriate for the light rail right-of-way. A-6-1
- The alternatives should be reviewed for the barriers they may create to bike and pedestrian uses. (Does the beltway cut off existing and planned residential areas from schools and neighborhood commercial?) A-6-2

In addition, the District would like to see a mitigation that encouraged the provision of pedestrian and bike access across the beltway as well as overcrossings and undercrossings for vehicular traffic. A-6-3

David L. Crow
Executive Director/Air Pollution Control Officer

Northern Region
Central Region
Southern Region

The District appreciates the opportunity to comment on this Environmental Impact Report. If you have any questions, please do not hesitate to contact me at (805) 861-3682.

Joe O'Banion
Environmental Planner, Southern Region

APCD Ref #: S940010
X Ref #s: S930225
S930050
S920014

Response to Letter A-6

Comment A-6-1: At this time, each potential corridor appears to be suitable for light-rail. The specific character of the transportation facility (that is, a conventional freeway or a facility that incorporates a light-rail line and/or high-occupancy vehicle lanes, will be determined following the selection of the corridor. One of the criteria for the eventual design of the transportation facility specific character should be the ability to develop one or more of these alternative transportation modes.

Comment A-6-2: One of the objectives of defining the corridor for the south beltway is to assist the City of Bakersfield and the County of Kern in their review and approval of future land development proposals. With the adoption of a preferred corridor, and even more so after the adoption of the specific alignment, both the City and the County can review future land use proposals to ensure that the freeway/highway or other facility does not cut-off or otherwise separate residential areas from schools, commercial uses and recreation facilities.

STATE OF CALIFORNIA

PETE WILSON, *Governor*

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814

LETTER A-7

March 14, 1994

ROGER W. TAYLOR
KERN COUNCIL OF GOVERNMENTS
1401 19TH STREET
SUITE 200
BAKERSFIELD, CA 93301

Subject: AMENDMENT NO. 1 TO THE TIER 1 SCH #: 93102045

Dear ROGER W. TAYLOR:

The State Clearinghouse has submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is now closed and the comments from the responding agency(ies) is(are) enclosed. On the enclosed Notice of Completion form you will note that the Clearinghouse has checked the agencies that have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the comment package is not in order, please notify the State Clearinghouse immediately. Remember to refer to the project's eight-digit State Clearinghouse number so that we may respond promptly.

Please note that Section 21104 of the California Public Resources Code required that:

> "a responsible agency 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."

Commenting agencies are also required by this section to support their comments with specific documentation.

These comments are forwarded for your use in preparing your final EIR. Should you need more information or clarification, we recommend that you contact the commenting agency(ies).

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 Mari Lemos at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Michael Chiriat
Chief, State Cl

Enclosures
cc: Resources Agency

Mail to: State Clearinghouse, 1400 Tenth Street, Rm. 121, Sacramento, CA 95814 -- 916/445-0613 | See Note Below

NOTICE OF COMPLETION AND ENVIRONMENTAL DOCUMENT FORM

SCH # 93102045

1. Project Title: Amendment No. 1 to the Tier I South Beltway EIR Transportation Corridor Study

2. Lead Agency: Kern Council of Governments | 3. Contact Person: Roger W. Taylor

3a. Street Address: 1401 19th Street, #200 | 3b. City: Bakersfield

3c. County: Kern | 3d. Zip: 93301 | 3e. Phone: 805/861-2191

PROJECT LOCATION: 4. County: Kern | 4a. City/Community: Bakersfield Area

4b. (optional) Assessor's Parcel No. ______ | 4c. Section ____ Twp. ____ Range ____

5a. Cross Streets: ______ | 5b. For Rural, Nearest Community: ______

6. Within 2 miles of: a. State Hwy No. 119 | b. Airports ______ | c. Waterways ______

7. DOCUMENT TYPE	8. LOCAL ACTION TYPE	10. DEVELOPMENT TYPE
CEQA	01 ___ General Plan Update	01 ___ Residential: Units ____ Acres ____
01 ___ NOP	02 ___ New Element	02 ___ Office: Sq.Ft. ____
02 ___ Early Cons	03 ___ General Plan Amendment	Acres ____ Employees ____
03 ___ Neg Dec	04 ___ Master Plan	03 ___ Shopping/Commercial: Sq.Ft. ____
04 ___ Draft EIR	05 ___ Annexation	Acres ____ Employees ____
05 X Supplement/Subsequent EIR (if so, prior SCH # 93072049)	06 ___ Specific Plan	04 ___ Industrial: Sq.Ft. ____
	07 ___ Redevelopment	Acres ____ Employees ____
	08 ___ Rezone	05 ___ Sewer: MGD ____
NEPA	09 ___ Land Division (Subdivision, Parcel Map, Tract Map, etc.)	06 ___ Water: MGD ____
06 ___ Notice of Intent		07 X Transportation: Type Tier I EIR
07 ___ Envir. Assessment/FONSI	10 ___ Use Permit	08 ___ Mineral Extraction: Mineral ____
08 ___ Draft EIS	11 ___ Cancel Ag Preserve	09 ___ Power Generation: Wattage ____
OTHER	12 X Other Adoption of Tier I EIR	Type: ____
09 ___ Information Only		10 ___ Other: ____
10 ___ Final Document	9. TOTAL ACRES: ____	
11 ___ Other ____		

11. PROJECT ISSUES DISCUSSED IN DOCUMENT

01 ___ Aesthetic/Visual	08 X Geologic/Seismic	15 ___ Sewer Capacity	22 ___ Water Supply
02 X Agricultural Land	09 ___ Jobs/Housing Balance	16 ___ Soil Erosion	23 ___ Wetland/Riparian
03 X Air Quality	10 ___ Minerals	17 ___ Solid Waste	24 X Wildlife
04 X Archaeological/Historical	11 X Noise	18 ___ Toxic/Hazardous	25 ___ Growth Inducing
05 ___ Coastal Zone	12 ___ Public Services	19 X Traffic/Circulation	26 ___ Incompatible Landuse
06 ___ Fire Hazard	13 ___ Schools	20 X Vegetation	27 X Cumulative Effects
07 X Flooding/Drainage	14 ___ Septic Systems	21 ___ Water Quality	28 ___ Other ____

12. FUNDING (approx.): Federal $ ____ State $ ____ Total $ ____

13. PRESENT LAND USE AND ZONING: Predominately agricultural use with some residential development.

14. PROJECT DESCRIPTION: Route Adoption of the South Beltway Transportation Corridor for the purpose of preserving right-of-way for this project, to benefit the population of Kern County.

CLEARINGHOUSE CONTACT: MARI LEMOS
(916) 445-0613

STATE REVIEW BEGAN: 1-27-94

DEPT REV TO AGENCY: 3-7

AGENCY REV TO SCH: 3-11

SCH COMPLIANCE: 3-14

93102045

PLEASE NOTE SCH NUMBER ON ALL COMMENTS

PLEASE FORWARD LATE COMMENTS DIRECTLY TO THE LEAD AGENCY ONLY

AQMD/APCD: [illegible] (Resources: 1/28)

CMT SNT	CMT SNT
[redacted] Resources	[redacted]
[redacted]	[redacted] ARB
Conservation	[redacted]
Fish & Game 4	Reg. WQCB # 5
[redacted]	[redacted]
DWR	
[redacted]	
Aeronautics	
CHP	
Caltrans # 6	
Trans Planning	
[redacted]	State Lands Comm
	[redacted]

(SL = sent by lead / ** = sent by SCH)

TOTAL P.04

Response to Letter A-7

No response necessary; the letter indicates that the Draft EIR was distributed, as prescribed by state procedures to implement CEQA, by the Office of Planning and Research (OPR) to various state agencies and departments for review and comment. The only state agency to comment is the Dept. of Transporation (see following letter A-8).

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
1352 West Olive Avenue
Post Office Box 12616
Fresno, California 93778

(209) 488-4088
TDD (209) 488-4066
FAX (209) 488-4101

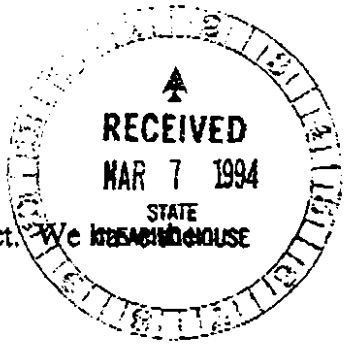
LETTER A-8

March 3, 1994

3-14

2132-IGR/CEQA
KER-GEN
Tier I of South Beltway EIR
Transportation Corridor Study
Amendment No. 1
SCH# 93102045

Mr. Roger W. Taylor
Kern Council of Governments
1401 19th Street, #200
Bakersfield, CA 93301



Dear Mr. Taylor:

Thank you for the opportunity to review and comment on the above project. We have the following comments:

GENERAL COMMENTS

1. We recommend that a multimodal analysis be done at this stage and should not refer exclusively to freeway alignments. **A-8-1**

2. We question whether the alignment description needs to be repeated so much. **A-8-2**

SPECIFIC COMMENTS

1. Page I-1, second paragraph: Please rephrase the sentence stating Caltrans as the ultimate developer of the project. This may not be so. **A-8-3**

2. Page III-4, second paragraph: We are uncertain whether the South Beltway will truly serve as an interregional route because it will not connect with Route 58 east. Please rephrase this to clarify the character of the route. See Page IV-80 for a similar reference that should also be changed. **A-8-4**

3. Page IV-13, fourth paragraph: The reference to "building codes" should be "design standards." **A-8-5**

4. Page IV-90, third paragraph: The term "overpass" should be indicated as "overcrossing." **A-8-6**

5. Page IV-93, paragraph four: Delete reference to "locally known as the Rockpile." Archaeological site information is confidential. A-8-7

6. Page V-8, paragraph four: The discussion on the various Alternatives and Options is confusing. Please restate as appropriate. A-8-8

If you have any questions, or if you disagree with our comments, please call Randy Treece at (209) 488-4153.

Sincerely,

Randall D. Treece

for MARC BIRNBAUM, Chief
Advance Planning & Program Development

Response to Letter A-8

Comment A-8-1: While Kern COG acknowledges that the corridor may be developed as a multi-modal facility, the decision regarding the ultimate character of the corridor will not be made until the Tier II environmental impact analysis. The multi-modal analysis will be conducted at that time to determine the ultimate facility.

Comment A-8-2: Comment acknowledged; no response necessary.

Comment A-8-3: The text of the Final EIR reflects the comment that Caltrans may or may not be the ultimate developer of the project.

Comment A-8-4: The Kern County Circulation Element and the Bakersfield 2010 General Plan describe the South Beltway as an integral corridor to the region's transportation network. The South Beltway is part of the larger, long-term plan to develop a "beltway" (or loop) encircling the metropolitan Bakersfield area.

Comment A-8-5: Comment acknowledged; the text of the Final EIR has been changed to reflect the comment.

Comment A-8-6: The text of the Final EIR has been changed to reflect the comment.

Comment A-8-7: The text of the Final EIR has been changed to reflect the comment.

Comment A-8-8: To clarify the discussion for the reader, the fourth paragraph on Page V-8 has been revised in the Final EIR to read as follows (with additions shown in redline and deletions shown as ~~strikeouts~~):

> "When the No Project Alternative is found to be the environmentally superior alternative, the California Environmental Quality Act (CEQA) requires that another alternative must also be identified as being environmentally superior. Alternatives A, ~~and~~ Alternative C, ~~and~~ Options A and Option C would result in fewer impacts to the environment than Alternative B ~~or~~ and Option B. Therefore, Alternative A, Alternative C, Option A and Option C ~~and~~ could be considered environmentally superior to the No Project Alternative. Alternative C and Option C would result in the relation of fewer homes and businesses than Alternative A and Option A. For this reason, Alternative A and Option C would also be environmentally superior to the others ~~alternatives~~. However, ~~this route~~ Alternative C and Option C would not

alleviate future regional traffic ~~patterns~~ impacts as well as Alternatives A, ~~or~~ Alternative B, ~~or~~ Options A or Option B ~~would~~ because ~~it~~ Alternative C and Option C are located south of the area in which the highest amount of growth is anticipated to occur."

B. COMMENTS FROM THE PUBLIC MEETING HELD ON FEBRUARY 3, 1994

The issues addressed at the public meeting held on February 3, 1994 pertained to the project itself. The adequacy of the EIR was not a subject of this meeting. The written comments received by Kern COG as a result of this public meeting are provided on the following pages for information purposes only.

SOUTH BELTWAY PROPOSED ALTERNATIVES

Amendment No. 1 to the Tier 1 Environmental Impact Report (EIR)
for the South Beltway Transportation Corridor Study

LETTER B-1

COMMENT SHEET
Public Meeting February 3, 1994

(Please Print)

Name BETTY ELKINS Address 10705 SAN DIEGO ST.

City LAMONT Zip Code 93241 Phone 845-0572

I would like to make the following comments:

I like proposal #1, but not stop at Di Giorgio Road. But Continue on to Bear Mt. Blvd. and then go West to I-5. All new building is going Southwest of Bakersfield.

RECEIVED
FEB 11
KERN COUNCIL OF GOVERNMENTS

Use reverse side for additional comments

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett, Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

PLEASE NOTE: Comments should be received in our office no later than 5:00 p.m. March 11, 1994.

SOUTH BELTWAY PROPOSED ALTERNA LETTER B-2

Amendment No. 1 to the Tier 1 Environmental Impact Report (EIR)
for the South Beltway Transportation Corridor Study

COMMENT SHEET
Public Meeting February 3, 1994
(Please Print)

RECEIVED
FEB 8 1994
KERN COUNCIL OF GOVERNMENTS

Name DAVE HOBART **Address** 14721 S. EDISON RD.

City BAKERSFIELD **Zip Code** 93307 **Phone** (805) 845-1264

I would like to make the following comments:

IT HAS BEEN ASKED MANY TIMES AT THE MEETING AT KERN COG THAT BEAR MT. BLVD. BE STUDIED TO BE USED AS THE SOUTH BELTWAY. THIS HAS NOT BEEN DONE AND I FEEL A SERIOUS LOOK SHOULD BE TAKEN AT THIS. WITH BAKERSFIELD, LAMONT, AND THE PROPOSED SAN EMIDIO TOWN GROWING SO MUCH IN ANOTHER 10, 15 OR 20 YEARS I BELIEVE THE PROPOSED ALTERNATIVES ARE IN TO CLOSE. BEAR MT. HAS LESS DEVELOPED HOUSING THAN THE OTHER ALTERNATIVES AND THEREFORE IT SEEMS IT WOULD BE LESS EXPENSIVE TO PURCHASE LAND. IT ALSO IS A DIRECT ROUTE TO I-5 AND GOING WEST ON 223 TRAFFIC COULD EASILY CONTINUE TO 58 OVER BEAR MT. OR GO NORTH ON COMANCHE TO 58 AND DIRECT TO 178. IN DOING THIS IT WOULD ALSO BENEFIT THE TOWN OF ARVIN BY HAVING MORE TRAFFIC DIRECTED IN THEIR DIRECTION WHICH AS THEY HAVE ALREADY STATED TO KERN COG THEY WOULD WELCOME.

IF INDEED THIS BELTWAY IS NOT TO BE BUILT FOR ANOTHER 10 + YEARS I AM SURE A LOT MORE BUILDING WILL BE DONE AROUND LAMONT AND SOUTH BAKERSFIELD WHICH WILL ONLY MAKE THE PURCHASE PRICE OF THE LAND MORE.

IF BEAR MT. IS NOT GOING TO BE LOOKED AT THEN I BELIEVE ALTERNATE A-1 WOULD (OVER)

Use reverse side for additional comments

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett, Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

PLEASE NOTE: Comments should be received in our office no later than 5:00 p.m. March 11, 1994.

BE THE BEST. IT IS MY UNDERSTANDING THAT A GOOD PORTION OF THE LAND ON THE 1 ALTERNATE ALREADY BELONGS TO THE COUNTY OR STATE AND THAT SHOULD MAKE THE BUYING PRICE BETTER, IF IN FACT THE COST IS A FACT AT ALL.

BESIDES ALL THE OTHER FACTORS PUT ASIDE, LAMONT IS IN A FLOOD PLAIN AND SEEMS THAT WOULD BE A CONSIDERATION WITH ROUTEING MORE TRAFFICE IN THAT AREA. A LOT OF MISTAKES WERE MADE WHEN FREWAY 58 WAS BUILT, PLEASE LET'S NOT DO THAT AGAIN, TAKING TIME TO LOOK AT ALL THE POSIBILITIES COULD BE USEFUL.

RECEIVED

SOUTH BELTWAY PROPOSED ALTERNATIVES

Amendment No. 1 to the Tier 1 Environmental Impact Report (EIR)
for the South Beltway Transportation Corridor Study

COMMENT SHEET
Public Meeting February 3, 1994

LETTER B-3

(Please Print)

Name FRANK C LOPEZ Address 10025 SAN EMEDIO ST

City LAMONT Zip Code 93241 Phone 845-3070

I would like to make the following comments:

I own property at 9501 Corner of Mc Patch and montal S.T. also empty lot next To it, which at present I am negotiateching on a New building.
I also own 8111 Montal ST - lot: Which Intend To improve This ground for business.
I also own 8001 Panama Rd. Casa Lopez - also have plans, either remodel or set back building or New Building.

Hope your people make the - right decision - I have Suffer enough.

Use reverse side for additional comments

Please read my note

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett, Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

PLEASE NOTE: Comments should be received in our office no later than 5:00 p.m. March 11, 1994.

Dear Sir:

I am not against this project, all in favor, before population increase and traffic doubles. My thinking.

If we follow I-2-3 route will be less expense, only farm land to purchase.

If we follow R.B.C. route will be very expensive, too much property to buy, at a very high price to pay.

My life Since 1946 after 3 yrs 4 month in the air force made my home in Palo Alto. Ca.

1- First place of Business on Bayshore high Way - Highway widen moved to El Camino Close to University high Way widen again. Moved to Mt View 1½ miles South on El Camino. Got it again. In 1974 left the Bay area - Safe Place Lament. I am 78 yrs old - Hate to start all over again.

Mr Frank C Lopez

LETTER B-4

SOUTH BELTWAY PROPOSED ALTERNATIVES

Amendment No. 1 to the Tier 1 Environmental Impact Report (EIR)
for the South Beltway Transportation Corridor Study

COMMENT SHEET

Public Meeting February 3, 1994

(Please Print)

Name Louie & Rosemary Lewis Address 435- E Panama Rd.

City Bakersfield Zip Code 93307 Phone 831-2667

I would like to make the following comments:

After going to all meetings
I think that South Beltway
should go on the first choice
A on Hosking Rd.

RECEIVED
FEB 28 1994
KERN COUNCIL
OF GOVERNMENTS

Use reverse side for additional comments

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett, Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

PLEASE NOTE: Comments should be received in our office no later than 5:00 p.m. March 11, 1994.

LETTER B-5

SOUTH BELTWAY PROPOSED ALTERNATIVES

Amendment No. 1 to the Tier 1 Environmental Impact Report (EIR)
for the South Beltway Transportation Corridor Study

COMMENT SHEET

Public Meeting February 3, 1994

(Please Print)

Name Louie Lymi and Bruna Limi Address 1435 E Panama Rd

City Bakersfield Zip Code 93307 Phone 831-2667

I would like to make the following comments:

I think the best route for Beltway is Hosking Rd and # 1 That route I will not disturb as many people.

Bruna Limi

RECEIVED
FEB 7 1994
KERN COUNCIL OF GOVERNMENTS

Use reverse side for additional comments

PLEASE PLACE THIS IN THE COMMENT BOX OR MAIL TO:

Mr. Ron Brummett, Executive Director
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, California 93301

PLEASE NOTE: Comments should be received in our office no later than 5:00 p.m. March 11, 1994.

C. COMMENTS FROM THE PUBLIC HEARING FEBRUARY 17, 1994

The public hearing held on February 17, 1994 was to hear public comments on the adequacy of the Draft EIR. Four people testified at the public hearing. The following summarizes their comments; responses to their comments are provided.

Comment C-1 - Joe Garone: Expressed his appreciation to the Council for broadening the scope of the study and said that Kern COG won a lot more public support by doing so. In earlier meetings, he suggested that the east-west alignment be taken to a point which would be in line with the extension of Oswell Street and then turn north to a point to be determined which, however, is in the middle of the 100 year flood plain. Therefore, he would like to recommend Cottonwood Road as an alternate north-south alignment of that portion of the freeway. Mr. Garone referred to several aerial photos of the affected area. Cottonwood Road is the east boundary and Hosking Road is the north boundary of a 250 acres project owned by the Garone family and upon which a master planned community is being developed. Negotiations are also underway to site a high school in the development project. Mr. Garone said he would have no objection if a north/south alignment were placed on or adjacent to Cottonwood Road; that the east/west alignment be moved southerly to incorporate the community of Greenfield within the greater Bakersfield metropolitan area. He said this would enhance the value of the freeway as a true beltway as well as to allow orderly growth of Greenfield into what is perhaps it's most desirable area of expansion.

Response to Comment C-1: Please see response to Mr. Garone's written comment (Response A-2-1).

Comment C-2 - Virgie Witte: While her area is not impacted by the study, she was dismayed that the freeway may turn out to be a 2-lane beltway. One of her problems in this area is the tendency to underbuild and go back to fix it later. She said if a beltway is going to be built then build it to the absolute "max" to six to eight lanes and do it now while it is still cheaper than it will be 15 to 30 years from now, and before something is built in the way.

Response to Comment C-2: The actual configuration of the proposed beltway is not known at this time. It is likely that the freeway will be built with three (3) lanes in each direction; however, the freeway may be built with only two lanes in each direction with either a high-occupancy vehicle lane in each direction or another mode of transportation in the median (such as a light rail line). The intent of the County, the City and Kern COG is to build the beltway to its planned maximum. Nonetheless, the intent of the current proposal --- adoption of a generalized corridor --- and the subsequent adoption of the specific alignment will ensure that there is adequate right-of-way acquired for the beltway to avoid future development built "in the way" of the freeway.

Comment C-3 - Marian Shaw, City of Bakersfield Dept. of Public Works: Ms. Shaw read into the public record the City's letter (see Letter A-1).

Response to Comment C-3: No further response necessary; see preceding response to Letter A-1.

Comment C-4 - Katie Bernal: The impact to humans should be taken into consideration when looking at the environmental document. She said this area is her environment and that she will definitely be impacted no matter which of the corridors are selected, especially the new alternatives proposed. B-1, B-2, B-3, C-1,C- 2 and C-3 would not only cut out her house but the land that is farmed. Ms. Bernal said that not only will her home be taken away but her livelihood as well.. She asked that along with the consideration of air and noise in the environmental document that the impact on humans be considered as well.

Response to Comment C-4: As previously noted, the proposed action is not the adoption of a specific alignment; therefore, it is not possible to identify individual parcels (including homes, farms, businesses, etc.) that may be in the path of the corridor. However, as noted in this Draft EIR, the proposed corridor is already developed with a variety of land uses, many that cannot be displaced without considerable disruption. Although the specific environmental effects on individual parcels (and their uses) will be assessed in the Tier 2 EIR/EIS for this beltway project, it is nonetheless anticipated that the following impacts will likely result: (a) displacement of homes and business; (b) reduction of productive agricultural land; and (c) short-term increased in construction noise and air pollution during construction of the beltway. These potential impacts will be off-set by improved regional transportation circulation, including reducing regional through traffic from the area's local streets. The proposed project will also implement a portion of the adopted regional land use and circulation plan.

SECTION XI
NOTICE OF PREPARATION (NOP), INITIAL STUDY, DISTRIBUTION LIST AND RESPONSES TO THE NOP

The following documents include:

(1) A copy of the Notice of Preparation and Initial Study which were circulated between October 8 and November 8, 1993;

(2) The distribution list for the Notice of Preparation and Initial Study; and,

(3) The responses to the Notice of Preparation from:

- City of Bakersfield, Economic and Community Development Department
- San Joaquin Valley Unified Air Pollution Control District
- North Bakersfield Recreation & Park District
- State of California, Business, Transportation and Housing Agency
- Kern High School District

NOTICE OF PREPARATION

TO: _____

FROM: Kern Council of Governments
1401 19th Street
Suite 200
Bakersfield, CA 93301

SUBJECT: Amendment No. 1 the Tier 1 Environmental Impact Report (EIR) for the South Beltway Transportation Corridor Study (California State Clearinghouse No. 92072049)

Kern Council of Governments (Kern COG) will be the Lead Agency and will prepare an amendment to the Tier 1 Environmental Impact Report (EIR) for the project identified below. Kern COG is requesting input regarding the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. This amendment to the EIR will be necessary for your agency when considering your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice.

Please send your response to **Ronald Brummett** at the address shown above. We will need the name for a contact person in your agency.

PROJECT TITLE: Amendment No. 1 to the Tier 1 Environmental Impact Report for the South Beltway Transportation Corridor Study

LOCATION: City of Bakersfield, California

DESCRIPTION: The South Beltway Transportation Corridor ("proposed project") is an east/west corridor which would connect Interstate 5 and State Route 58. The focus of this amendment is the eastern portion (Options 1, 2 and 3 on the attached map) of the proposed project. This segment would connect Options A, B, and C (or, "the western portion", as shown on the attached map) at a point between Union Avenue and Cottonwood Road and extend either to Route 58 (Option 1) or Vineland Road (Options 2 and 3). The three alternatives lie in southeastern Bakersfield between Panama Road and State Route 58.

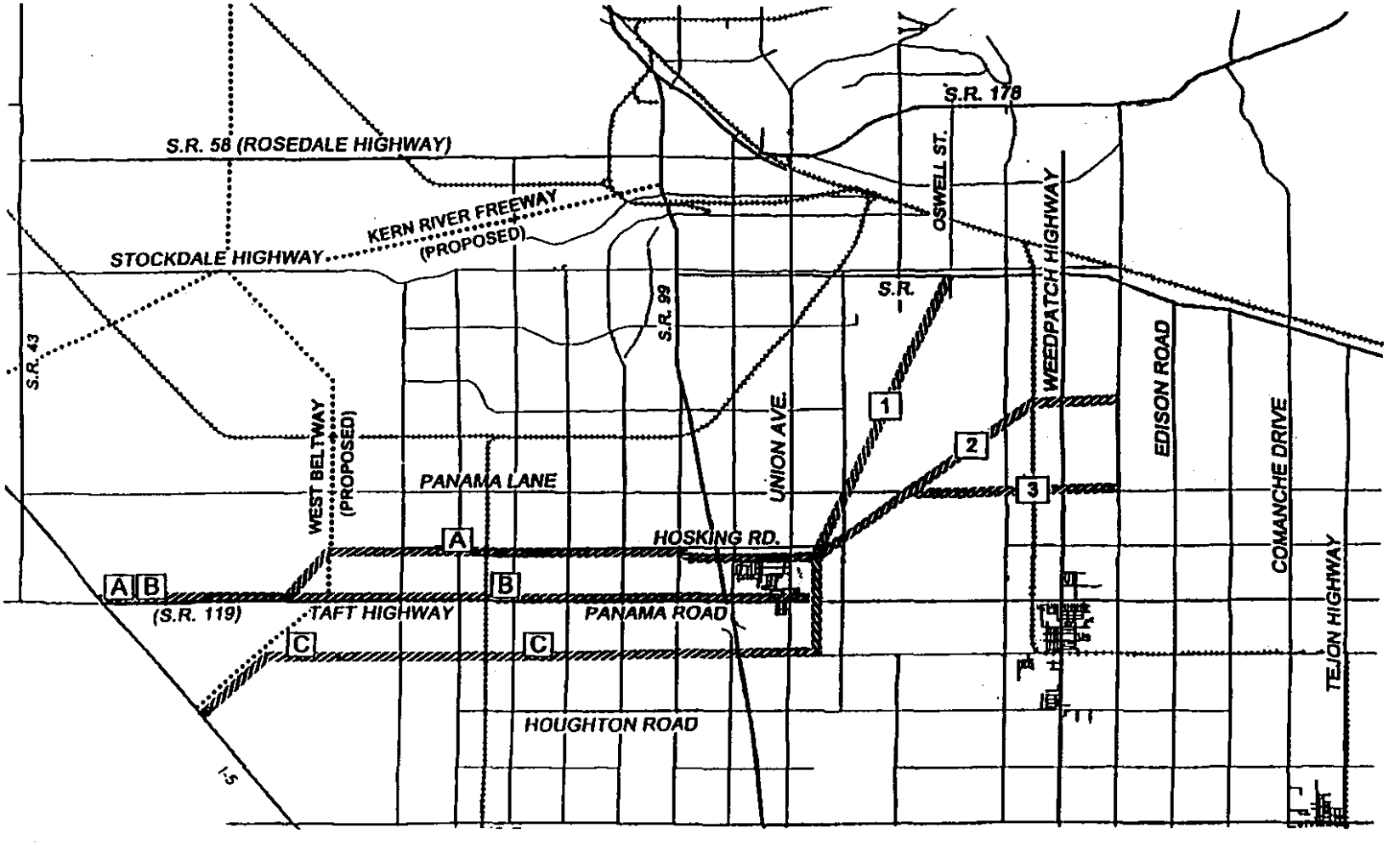
Date: October 8, 1993

Signature: 
Title: Executive Director
Telephone: 805/861-2191

Consulting firm retained to prepare Draft EIR:

Name: Harland Bartholomew & Associates, Inc.
Address: 199 South Los Robles Avenue
Pasadena, CA 91101
Contact Person: Frank Wein, AICP

Figure 1
Proposed South Beltway
Transportation Corridor



Legend

Alternative: 3

Scale: 1 inch = approximately 3 miles

INITIAL STUDY:
Amendment No. 1 to the Tier 1 Environmental Impact Report for the South Beltway Transportation Corridor

California State Clearinghouse No. 9207249

PROJECT LOCATION

The Kern Council of Governments (Kern COG) will be the "lead agency" (as defined in the California Environmental Quality Act (CEQA)) for this amendment to the Tier 1 environmental documentation for the proposed South Beltway Transportation Corridor. Kern COG, the City of Bakersfield, the County of Kern, and the California State Department of Transportation (Caltrans), have identified several transportation corridors in the metropolitan Bakersfield area. One of these corridors is the South Beltway Transportation Corridor. The east/west Corridor would connect Interstate 5 on the west end to Route 58 or Vineland Road on the east (see Figure 1). This corridor has been identified in the recently adopted 2010 General Plan for the Bakersfield Metropolitan Area. Options A, B, and C of the South Beltway Transportation Corridor (as shown on the attached map) will herein be referred to as the western portion of the corridor. The eastern portion alternatives will connect with the western portion of the corridor at a point approximately between Union Avenue and Cottonwood Road and extend either to Route 58 (Option 1) or Vineland Road (Options 2 and 3). The three project alternatives lie in southeastern Bakersfield between Panama Road and State Route 58.

PROJECT DESCRIPTION

This document is Amendment No. 1 to the Tier 1 South Beltway Transportation Corridor Environmental Impact Report (EIR). The proposed project is an east/west transportation corridor which connects Interstate 5 on the west with State Route 58 on the east. The western portion of the corridor (Options A, B and C as identified on the map) was analyzed in the original EIR and will not be altered. The focus of this amendment to the EIR will be the alternatives for the eastern portion only. All three alternatives are equal, with no preferred alternative. The specific type of transportation facility has not been determined and will be the subject of future environmental documentation. The following is a description of the each alternative/option:

Option 1: This alternative extends in a north-northeasterly direction from the western portion of the corridor and intersects State Route 58 at the Oswell Street intersection.

Option 2: This alternative extends northeasterly approximately to the Atchison/Topeka/Southern Pacific/Santa Fe railroad tracks, north of Panama Lane, and then travels east connecting with Vineland Road.

Option 3: This alternative travels northeasterly to approximately Panama Lane between Cottonwood Road and Fairfax Road and then extends easterly connecting with Vineland Road.

The Tier 1 EIR is intended to analyze the impacts associated with the right-of-way required for a transportation corridor. At the present time no specific type of transportation facility has been selected. The only issues that have been identified are the need for the corridor and its general location. Several types of facilities which may be appropriate to serve the area in the future, such as a freeway, light rail, HOV lanes, or other transit uses. It is assumed that each use would dictate different right-of-way dimensions. However, in order to provide an estimate of the approximate amount of land required for a typical right-of-way, the following California Department of Transportation (Caltrans) highway standards were used. A six-lane divided highway consisting of six 12-feet wide travel lanes, a 60-feet wide median, and 10-feet wide shoulders on each side of the highway with an additional 30 feet between the edge of the highway and the right-of-way fence to allow for frontage roads would require a right-of-way of 212 feet. Additionally, in areas needing elevated road crossings or depression of the road, approximately 50 feet of additional right-of-way would be needed on each side to compensate for the 2:1 slope ratio required by Caltrans. These areas would require a total right-of-way of approximately 312 feet. The actual facility may require a larger or smaller right-of-way. Anticipated construction activities would include paving, overlaying existing pavement, widening of some roadway/bridge structures, modifying traffic signals, modifying existing roadway drainage facilities, and construction of new concrete curbs, gutters and sidewalks.

ENVIRONMENTAL IMPACT REPORT

Kern COG will be the lead agency for the preparation of Amendment No. 1 to the Tier 1 environmental documentation for the proposed South Beltway Transportation Corridor. This Initial Study, submitted in compliance with CEQA Guidelines and the City of Bakersfield's Local Guidelines, has been prepared for the purpose of determining the potential environmental impacts associated with the project. The Environmental Checklist Form on the following page has been completed to identify the environmental issues raised by the proposed project. Based on this checklist, Kern COG has identified the need for a Tier 1 Environmental Impact Report.

The "Discussion of Environmental Evaluation" supplements information contained in the accompanying Environmental Checklist Form and provides a brief discussion of the issues identified by the applicant. The proposed project was evaluated against those impact areas listed in the checklist and categorized under one of the three headings.

If the proposed project would produce an environmental impact, or may produce an impact, the checklist was marked under either the "yes" or "maybe" heading. If no environmental impact upon the topical issue would result from implementation of the project, the checklist was marked under the "no" heading.

ENVIRONMENTAL CHECKLIST FORM

(To Be Completed By Lead Agency)

I. Background

1. Name of Proponent Kern Council of Governments
2. Address and Phone # of Proponent 1401 19th Street, Suite 200
   Bakersfield, California 93301
   (805) 861-2191
3. Date of the Checklist Submitted _____
4. Agency Requiring the Checklist _____
5. Name of the Proposal, if applicable South Beltway Transportation Corridor

II. Environmental Impacts

(Explanations of all "yes","no", and "maybe" answers are required on attached sheets.)

	Yes	Maybe	No
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic structures?			X
b. Disruptions, displacements, compaction or uncovering of the soil?	X		
c. Change in topography or ground surface relief features?	X		
d. The destruction, covering or modification of any unique geologic or physical features?			X
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, depostion or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			X
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?			X
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration or ambient air quality?		X	
b. The creation of objectionable odors?			X
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?			X
3. Water. Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either			

	Yes	Maybe	No
marine or fresh water?	____	____	X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	____	X	____
c. Alterations to the course or flow of flood waters?	____	____	X
d. Change in the amount of surface water in any water body?	____	____	X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	____	____	X
f. Alteration of the direction or rate of flow of ground waters?	____	____	X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer with cuts or excavations?	____	____	X
h. Substantial reduction in the amount of water otherwise available for public water supplies?	____	____	X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	____	____	X
4. **Plant Life. Will the proposal result in:**			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	____	____	X
b. Reduction of the numbers of any unique, rare or endangered species of plants?	____	X	____
c. Introduction of new species of plants into an area, or in a barrier to the normal replishment of existing species?	____	____	X
d. Reduction in acreage of any agricultural crop?	____	____	X
5. **Animal Life. Will the proposal result in:**			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic			

	Yes	Maybe	No
movement?	X		
b. Effects on existing parking facilities, or demand for new parking?			X
c. Substantial impact upon existing transportation systems?	X		
d. Alterations to present patterns of circulation or movement of people and/or goods?	X		
e. Alterations to waterborne, rail or air traffic?			X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?			X
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?			X
b. Police protection?			X
c. Schools?			X
d. Parks or other recreational facilities?			X
e. Maintenance of public facilities, including roads?	X		
f. Other governmental sevices?			X
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?			X
b. Substantial increase in demand upon existing sources or energy, or require the development of new sources of energy?			X
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities?			X
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?		X	
b. Exposure of people to potential health hazards?		X	

	Yes	Maybe	No
18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?			X
19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?			X
20. Cultural Resources. Will the proposal result in:			
a. The alteration of or the destruction of a prehistoric or historic archaeoligical site?		X	
b. Adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?			X
c. The potential to cause a physical change which would affect unique ethnic cultural values?			X
d. The restriction of existing religious or sacred uses within the potential impact area?			X
21. Mandatory Findings of Significance. Does the project have:			
a. The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels threaten to eliminate a plant or animal community reduce the number or restrict the rand of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
b. The potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).			X
c. Impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant).	X		
d. Environmental effects which will cause substantial			

	Yes	Maybe	No
adverse effects on human beings, either directly or indirectly?	____	X	____

III. Discussion of Environmental Evaluation
(Narrative description of environmental impacts).

IV. Determination
(To be completed by the Lead Agency).

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. [ ]

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION WILL BE PREPARED. [ ]

I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. [X]

_____ _____
Date Signature

_____
For

DISCUSSION OF ENVIRONMENTAL ISSUES

The following provides a narrative description of the environmental impacts identified in the preceding environmental checklist form. The terms proposed project, proposed corridor, and facility are used interchangeably. All issues noted by "yes" or "maybe" on the checklist form will be assessed in the subject amendment to the Tier 1 Environmental Impact Report (EIR); issues noted by "no" will not be assessed in the EIR.

1. Earth: The construction of a transportation corridor will require grading and the uncovering of soil near the roadbed. As a result, the existing topography of the area immediately adjacent to the roadbed will be altered. The corridor may extend into areas where the soils need to be supported in order to provide a safe and stable base. The proposed project will not increase the exposure of additional people to geologic hazards as the proposed corridor is generally in the same area as existing highways and roads.

2. Air Quality: The proposed corridor may result in additional traffic volumes in this portion of the City and County; as a result, there may be an increase in mobile (vehicular) source emissions. The proposed corridor will not create any objectionable odors or result in the construction of any barrier to existing air patterns.

3. Water: The proposed corridor will require the construction of additional storm drains and may alter the existing drainage patterns. The proposed project will not alter existing ground water sources nor result in any alteration of any surface water stream, river or lake.

4. Plant Life and 5. Animal Life: Construction of the proposed project may reduce the amount of plant life adjacent to the corridor. As a result, some animal life in the area may have their food supply altered. Endangered plant and/or animal species may be located in the area and affected by the proposed corridor.

6. Noise: The proposed project may result in a short-term increase in noise due to grading and construction equipment. In addition, the corridor may increase traffic volumes and result in a corresponding increase in vehicular-generated noise.

7. Light and Glare: The proposed project may introduce additional short-term sources of light as a result of construction activities. Additionally, there may be additional sources of light from vehicular sources travelling along the corridor.

8. Land Use: The proposed project will require a large right-of-way and will likely reduce the acreage devoted to agricultural and residential uses. Parcels adjacent to the highway that have limited depth may have their lot area reduced to a substantial degree. Relocation of businesses or residences may be necessary.

9. Natural Resources: The proposed project will not increase the rate of consumption of natural resources, nor change the type of natural resources that are used by highway-related uses.

10. Risk of Upset and **17. Human Health:** The proposed corridor will not introduce explosives or hazardous substances in the area, however, existing gas or oil facilities in the area may be disturbed or relocated and thereby expose hazardous materials once the grading of soil begins. Construction of the corridor will improve the area's circulation system and, therefore, improve the ability of emergency vehicles to respond to requests.

11. Population and **12. Housing:** The proposed corridor will not increase the area's housing stock nor directly result in inducing additional population growth, however, homes lying within the proposed right-of-way for the corridor may be relocated.

13. Transportation/Circulation: The proposed corridor may increase the number of vehicles using Taft Highway, Interstate 5, and Route 58 due to the new connecting highway and the increased carrying capacity. As a result, drivers currently using other roadways may alter their travel patterns to use the new facility. Roadways that provide access to the new facility may also experience an increase in traffic volumes.

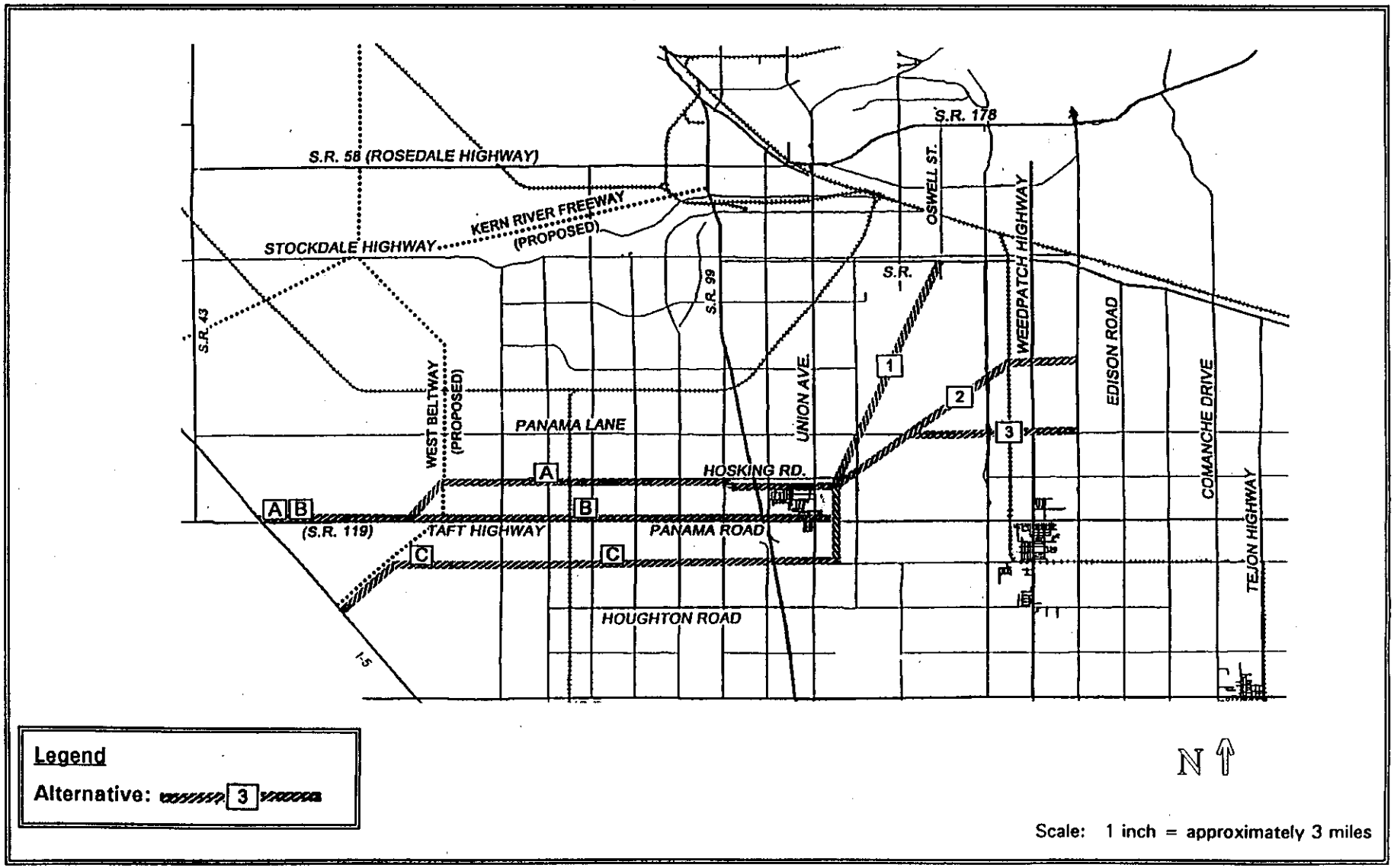
14. Public Services, 16. Utilities and **19. Recreation:** The proposed project will not increase the demand on police/sheriff, fire, parks, schools, or other public services nor public utilities, with the exception of roads. The new roadways may require additional maintenance. As a result, there may be a need for new or altered governmental services or alteration of existing utility lines/systems pertaining to the new facility.

15. Energy: The proposed project will not increase the amount of energy consumed; there may, however, be a reduction in the amount of energy used by trucks and automobiles as a result of increasing operating efficiencies.

18. Aesthetics: The proposed corridor will not introduce any significant structures that would inhibit views in the area.

20. Cultural Resources: The proposed corridor may effect undocumented cultural/historic/archaeological sites adjacent to the roadway.

Figure 1
Proposed South Beltway
Transportation Corridor



Kern County Library
Northeast

Kern County Library
Rathburn

Kern County Library
Southwest

Department of Public Works
Kern County

Kern County Library
Wilson Road

Planning & Development Services
Kern County

APCD
Kern County

Kern County Sheriff

Department of Park & Recreation
Kern County

Community Development
Kern County

Fire Department
Kern County

Department of Health
Kern County

Beale Library
Kern County

Holloway-Gonzales Library
Kern County

Joe O'Bannon
Valley Air District
2700 "M" St., Suite 275
Bakersfield, CA 93301

City of Bakersfield
Public Works
1501 Truxtun Ave.
Bakersfield, CA 93301

City of Bakersfield
Community Development
515 Truxtun Ave.
Bakersfield, CA 93301

City of Bakersfield
Fire Department
2101 "H" St.
Bakersfield, CA 93301

Governor's Office of Planning and Research
State clearinghouse
1400 10th St.
Sacramento, CA 95814

City of Bakersfield
Police Department
PO Box 59
Bakersfield, CA 93302

Kern County Water Agency
PO Box 58
Bakersfield, CA 93302

Kern High School District
2000 24th St.
Bakersfield, CA 93301

Bruce W. Rapp
Pacific Bell
200 New Stine Rd., Room 260
Bakersfield, CA 93309

Kern County Housing Authority
525 Roberts Lane
Bakersfield, CA 93308

Golden Empire Transit District
1830 Golden State Ave.
Bakersfield, CA 93301

Bakersfield Senior Center (CTSA)
530 4th St.
Bakersfield, CA 93304

California State Department of Transport
District 6
PO Box 12616
Fresno, CA 93778

San Joaquin Valley Unified APCD
1999 Tuolumne St.
Fresno, CA 93721

Greater Bakersfield Chamber of Commerce
1033 Truxtun Ave.
Bakersfield, CA 93301

Board of Trade
Kern County

North Bakersfield Park & Rec District
450 Galaxy Ave.
Bakersfield, CA 93308

Economic Development Corporation
Kern County

BAKERSFIELD

October 14, 1993

Mr. Ronald E. Brummett
Executive Director
Kern Council of Governments
1401 - 19th Street Suite 200
Bakersfield, California 93301

SUBJECT: COMMENTS ON AMENDMENT NO. 1 TO THE SOUTH BELTWAY TRANSPORTATION CORRIDOR STUDY

Dear Ron,

In reviewing the proposed alternatives for the South Beltway, I envision potential economic development opportunities for Bakersfield businesses associated with Alternative #1.

Alternative #1 runs through the Southeast Metropolitan Bakersfield Incentive Area. This alignment would provide additional freeway frontage for potential industrial users in the Incentive Area. Companies considering a location in the Incentive Area would find the increased visibility and immediate freeway access created by Alternative #1 desirable site selection criteria. It would also provide closer freeway access to the Bakersfield Municipal Airport, increasing transportation opportunities for users at the city-owned airport.

I hope these observations may be of some help as you prepare your review.

Sincerely,

John F. Wager, Jr.
Economic Development Director

cc: Alan Tandy, City Manager
Ed Schulz, Public Works Director
Jack Hardisty, Planning Director

dl/beltway.ltr

City of Bakersfield • Economic and Community Development Department
515 Truxtun Avenue • Bakersfield • California 93301
(805) 326-3765 • Fax (805) 328-1548 • TDD (805) 324-3631

San Joaquin Valley
Unified Air Pollution Control District

November 2, 1993

Ronald E. Brummett
KERN COUNCIL OF GOVERNMENTS
1401 19th Street, Suite 200
Bakersfield, CA 93301

Amendment No. 1 the Tier 1 Environmental Impact Report (EIR) for the South Beltway Transportation Corridor Study (SCH# 92072049)

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation of your Environmental Impact Report (EIR) and welcomes the opportunity to continue participation in the environmental processes surrounding this project.

The District has no further requests or suggestions that have not already been communicated in earlier stages of this project.

The District appreciates the opportunity to comment on this Notice of Preparation of an EIR. If you have any questions, please do not hesitate to contact me at (805) 861-3682.

Joe O'Bannon
Environmental Planner, Southern Region

APCD Ref #: S930225
X Ref #s: S930050
S920014

David L. Crow
Executive Director/Air Pollution Control Officer

1999 Tuolumne Street Suite 200 • Fresno CA 93721 • (209) 497-1000 • FAX (209) 233-2057

Northern Region
4230 Kiernan Avenue Suite 130 • Modesto CA 95356
(209) 545-7000 • Fax (209) 545-8652

Central Region
1999 Tuolumne Street Suite 200 • Fresno CA 93721
(209) 497-1000 • Fax (209) 233-2057

Southern Region
2700 M Street Suite 275 • Bakersfield CA 93301
(805) 861-3682 • Fax (805) 861-2060

North Bakersfield Recreation & Park District
405 Galaxy Avenue, Bakersfield, California 93308 (805) 392-2000

October 19, 1993

Ronald Brummett
Kern Council of Governments
1401 19th Street, Suite 200
Bakersfield, California 93301

SUBJECT: Notice of Preparation-Amendment No. 1 to the South Beltway Transportation Corridor Study Tiere 1 Environmental Impact Report

Dear Mr. Brummett:

The reference project is outside North Bakersfield Recreation and Park District boundaries. Therefore, it will have little if any impact on District services.

Sincerely,

Colon G. Bywater

Colon G. Bywater
Planning and Construction Director

CGB:bc

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
1352 West Olive Avenue
Post Office Box 12616
Fresno, California 93778

(209) 488-4088
TDD (209) 488-4066
FAX (209) 488-4101

November 8, 1993

2132-IGR/CEQA
6-KER-GEN
Amendment No. 1-Tier 1 EIR
for the South Beltway
Corridor Study
SCH# 92072049

Mr. Frank Wein
Kern Council of Governments
1401 19th Street, Suite 200
Bakersfield, CA 93301

Dear Mr.Wein:

We have reviewed the NOP for the above referenced project and have the following comments.

We question how Alternatives 1, 2 and 3 for the South Beltway Corridor will impact State Routes 184 and 58, particularly for the traffic impacts. Also, for alternatives 2 and 3, will there be another north-south beltway to intercept these roadways? And if so, where is it located?

If you have any questions, please call Randy Treece at (209) 488-4153.

Sincerely,

Randall E. Treece

for MARC BIRNBAUM, Chief
Advance Planning & Program Development

KERN HIGH SCHOOL DISTRICT

BOARD OF TRUSTEES

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David B. Stanton, Vice President — Earle J. Gibbons, Clerk
David C. Crenshaw — Fred L. Starrh

THOMAS N. JONES, Ed.D., Superintendent

2000 TWENTY-FOURTH STREET
BAKERSFIELD, CALIFORNIA
93301-3899

(805) 631-3100

FAX: (805) 631-2133

DR. NEAL W. OLSEN
Associate Superintendent, Business

November 8, 1993

Kern Council of Governments
ATTN: Ronald E. Brummett
1401 - 19th Street, Suite 200
Bakersfield, CA 93301

RE: Amendment No. 1 - The Tier I Environmental Impact Report for the South Beltway Transportation Corridor Study Clearinghouse No. 92072049

Dear Mr. Brummett:

The District's earlier position regarding the South Beltway Transportation Corridor Study has not changed. The District is presently limited to the location area of the North 1/2 and East 1/2 of Section 32 T.305. R.28. E.

Please take in consideration our 30 million plus investment and the problems your project will cause us.

If you have any questions, don't hesitate to call me.

Sincerely,

Jack W. Colvard
Director, Facilities Planning

JWC/dy

S-BELTWY.JWC