CITY OF CHULA VISTA

City of Chula Vista
Urban Core Specific Plan

Appendices

Appendices

Appendix A. Glossary

Appendix A. Glossary

The following glossary is provided primarily in support of the Urban Core Design Guidelines. For further definitions, please refer to Chula Vista Municipal Code Section 19.04.

#

360-degree Architecture
The full articulation of building facades on all four sides of a structure, including variation in massing, roof forms, and wall planes, as well as surface articulation. See four-sided architecture.

A

Access
An opening in a fence, wall or structure, or a walkway or driveway, permitting pedestrian or vehicular approach to or within any structure or use.

Accessibility
A means of approaching, entering, exiting, or making use of; passage. The right to approach, enter, exit, or make use of; often used in the form of disabled accessibility.

Adaptive Reuse
The reuse of older structures that would have otherwise been demolished, often involving extensive restoration or rehabilitation of the interior and/or exterior to accommodate the new use. (See also Recycling)

Addition
Any construction that increases the size of a building, dwelling, or facility in terms of site coverage, height, length, width, or gross floor area, occurring after the completion of the original.

Aesthetics
Characterized by a heightened sensitivity or appreciation of beauty and often discussed in conjunction with view impacts.

Alignment (Architectural)

The visual alignment and subsequent placement of architectural elements such as windows, cornice elements, soffits, awnings, from one structure to adjacent structures in order to promote continuity along a block.

Alley

A narrow street or passageway between or behind a series of buildings which affords only secondary access to abutting property.

Alteration

Any construction or substantial change in the exterior appearance of any building or structure.

Amenities

Something that contributes to physical or material comfort. A feature that increases attractiveness or value, especially of a piece of real estate or a geographic location.

Arcade

A roofed passageway or lane. A series of arches supported by columns, piers, or pillars, either freestanding or attached to a wall to form a gallery.

Arch

A curved structure supporting its weight over an open space such as a door or window.

Articulation

Describes the degree or manner in which a building wall or roofline is made up of distinct parts or elements. The small parts or portions of a building form that are expressed (materials, color, texture, pattern, modulation, etc.) and come together to define the structure. A highly articulated wall will appear to be composed of a number of different planes, usually made distinct by their change in direction (projections and recesses) and/or changes in materials, colors or textures.

Asymmetry

Irregular correspondence of form and configuration on opposite sides of a dividing line or plane or about a center or an axis; having unbalanced proportions.

Atrium

A dramatic enclosed glass-roofed indoor space typically associated with high-rise hotels and office buildings.

Attached
Joined to or by a wall, especially by sharing a wall with another building; not freestanding.

Awning
A fixed cover, typically comprised of cloth over a metal frame that is placed over windows or building openings as protection from the sun and rain.

Awning Sign
A sign painted on, printed on, or attached flat against the surface of an awning.

B

Balcony
A railed projecting platform found above ground level on a building.

Baluster
Any of the small posts that make up a railing, as in a staircase; may be plain, turned, or pierced.

Balustrade
A series of balusters surmounted by a rail.

Barrel Tiles
Rounded clay roof tiles most often used on Spanish-style houses. Usually red but are often available in may colors.

Bay (Structural)
A regularly repeated spatial element in a building defined by beams or ribs and their supports.

Bay Window
A window that projects out from an exterior wall.

Beautification
The transformation of barren or uninteresting spaces, buildings, forms, structures, into a comfortable or attractive place or environment.

Berm
An artificially raised area of soil or turf intended to screen undesirable attributes of a project or site.

Blockscape

The aggregated facade wall composed of uninterrupted placement of individual urban oriented structures located side-by-side along an entire block as opposed to individual buildings located within the block.

Bollards

A series of short posts of metal, concrete, or wood set at intervals to delineate an area or to exclude vehicles from an area.

Breezeway

A roofed area usually found between a garage and house proper or between commercial and industrial buildings and designed to provide shelter for outdoor comfort.

Buffer

A term often applied to landscaped areas separating incompatible land uses. Can also mean an area of a "transitional" land use that lies between two incompatible land uses.

Building

Any structure having a roof supported by columns or walls, used or intended to be used for the shelter or enclosure of persons, animals or property.

Building Frontage

The building elevation that fronts a public street where customer access to the building is available.

Building Height

The building height as measured from finish grade to top of roof, not including parapets or other architectural features.

Building Stepback

The minimum horizontal distance, as measured from the street property line, that the upper portion of a building must step back from the lower portion of the building; must occur at or below the noted building height.

Bulkhead

The space located between the pavement/sidewalk and the bottom of a traditional storefront window.

Business Frontage
The portion of a building frontage occupied by a single tenant space having a public entrance within the building frontage. For businesses located on the interior of a building without building frontage, the building elevation providing customer access should be considered the business frontage.

C

Canopy
A protective roof-like covering, often of canvas, mounted on a frame over a walkway or door or niche; often referred to as an awning.

Cantilever
A projecting element, such as a beam or porch, supported at a single point or along a single line by a wall or column, stabilized by counterbalancing downward force around the point of fulcrum.

Channel Letters
Three-dimensional individually cut letters or figures, illuminated or not illuminated, affixed directly to a structure.

Clerestory Window
A window (usually narrow) placed in the upper walls of a room to provide extra light.

Colonnade
A row of columns forming an element of an architectural composition, carrying either a flat-topped entablature or a row of arches.

Column
A vertical support, usually cylindrical, consisting of a base, shaft and capital, either monolithic or built-up, of drums the full diameter of the shaft.

Complement
In new construction, it means to add to the character of the area by attempting to incorporate compatible architectural styles, setbacks, height, scale, massing, colors, and materials.

Contextual
Relating to the existing built and natural environment.

Coping (Cap)
A flat cover of stone or brick that protects the top of a wall.

Corbel
1) A projecting wall member used as a support for some elements of the superstructure. 2) Courses of stone or brick in which each course projects beyond the course beneath it. 3) Two such structures, meeting at the topmost course creating an arch.

Cornice
The horizontal projection at the top of a wall or part of a roof which projects over the side wall and serves as a crowning member.

Court
1) An extent of open ground partially or completely enclosed by walls or buildings; a courtyard. 2) A short street, especially a wide alley walled by buildings on three sides. 3) A large open section of a building. 4) A large building, such as a mansion, standing in a courtyard.

Cupola
A small, dome-like structure, on top of a building to provide ventilation and decoration.

Curb Cut
The elimination of a street curb to enable increased access to crosswalks/ sidewalks, entry driveways or parking lots.

D

Deciduous
Trees or shrubs, usually in temperate climates, that shed leaves annually.

Dentil
A band of small, square, tooth-like blocks forming part of the characteristic ornamentation of the Ionic, Corinthian, and Doric orders.

Detached
Standing apart from others; separate or disconnected.

Detached Garage
A garage that is completely surrounded by open space or connected to a building by an uncovered terrace.

Detail
An element of a building such as trim, moldings, other ornamentation or decorative features.

Dormer Window
A vertical window which projects from a sloping roof placed in a small gable.

Downspout
A vertical pipe used to conduct water from a roof drain or gutter to the ground or cistern.

E

Eave
The projecting lower edge of a roof.

Eclectic
Selecting or employing individual elements from a variety of sources, systems, or styles.

Elevation
An orthographic view of the vertical features of a building (front, rear, side, interior elevation).

Enhancement
To make better either functionally or in appearance.

Espalier
A trellis of framework on which the trunk and branches of fruit trees or shrubs are trained to grow in one plane.

Eyebrow Window
A small, horizontal, rectangular window, often located on the uppermost story and aligned with windows below.

External illumination
The lighting of an object from a light source located a distance from the object.

F

FAR (Floor Area Ratio)
Floor Area Ratio (FAR) is a measure of the bulk of buildings on a lot or site. FAR is calculated by dividing the gross floor area of all buildings on a lot or site by the lot or site area. Gross floor area includes the total enclosed area of all floors of a building measured from the exterior walls including halls, stairways, elevator shafts at each floor level, service and mechanical equipment rooms, balconies, recreation rooms, and attics having a height of more than seven feet but excluding area used exclusively for vehicle parking or loading. (See Chapter VI - Land Use and Development Regulations for example FAR diagrams.)

Façade
The exterior face of a building, which is the architectural front, sometimes distinguished from other faces by elaboration of architectural or ornamental details.

Fascia
The outside horizontal board on a cornice.

Faux
A simulation or false representation of something else, as in faux wood or stone.

Fenestration
The stylistic arrangement of windows in a building.

Fieldstone
A stone used in its natural shape and condition.

Figurative Sign
A sign utilizing a three dimensional object to communicate the business product or services.

Fixture
A design element considered to be permanently established or fixed in its built or natural environment.

Focal Point
A building, object, or natural element in a street-scene that stands out and serves as a point of focus, catching and holding the viewer's attention.

Four-sided Architecture
The full articulation of building facades on all four sides of a structure, including variation in massing, roof forms, and wall planes, as well as surface articulation. See 360-degree architecture.

G

Gable Roof
A ridge roof that slopes up from only two walls. A gable is the vertical triangular portion of the end of a building from the eaves to the ridge of the roof.

Gambrel
A roof where each side has two slopes; a steeper lower slope and a flatter upper one; a 'barn roof'. Often found in Colonial revival houses in the "Dutch" style.

Glazed Brick
A brick that has been glazed and fired on one side.

Gutter
A shallow channel of metal or wood that is set immediately below and along the eaves of a building for catching and carrying rainwater from the roof.

H

Hardscape
Areas which water does not easily penetrate; surfaces that are not landscaped, i.e., sidewalks, streets, building pads, etc.

Hedge
A row of closely planted shrubs or low-growing trees forming a fence or boundary.

Hipped (Hip Roof)
A roof with four uniformly pitched sides.

Historic
Having importance in or influence on history.

Homogeneity
The state or quality of being the same.

I

Infill
A newly constructed building within an existing development area.

Internally Illuminated Sign
A sign whose light source is located in the interior of the sign so that rays shine through the face of the sign, or a light source that is attached to the face of the sign and is perceived as a design element of the sign.

J

K

Kicker
A piece of wood that is attached to a formwork member to take the thrust of another member.

L

Landmark

A building or site that has historical significance, especially one that is marked for preservation.

Landscaping
An area devoted to or developed and maintained with indigenous or exotic planting, lawn, ground cover, gardens, trees, shrubs, and other plant materials, decorative outdoor landscape elements, pools, fountains, water feature, paved or decorated surfaces of rock, stone, brick, block, or similar material (excluding driveways, parking, loading, or storage areas), and sculpture elements. Plants on rooftops, porches or in boxes attached to buildings are not considered landscaping for purposes of meeting minimum landscaping requirements. Additional guidance regarding acceptable landscaping elements is provided in Chapter VII - Development Design Guidelines.

Lattice
A grillwork created by crisscrossing or decoratively interlacing strips of material.

Level of Service (LOS)
A qualitative measure describing operational conditions within a traffic stream in terms of speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Labeled on a continuum from A to F, Level A denotes the best traffic conditions while Level F indicates traffic gridlock.

Light Trespass
Extraneous light on adjacent property, typically produced by stray light from outdoor lighting systems

Lintel
A horizontal support member that supports a load over an opening, as a window or door opening, usually made of wood, stone or steel; may be exposed or obscured by wall coverings.

Loading Space
An area used exclusively for the loading and unloading of goods from a vehicle in connection with the use of the site on which such space is located.

Loft
A large, usually unpartitioned floor over a factory, warehouse, or other commercial or industrial space. An open space under a roof; an attic or a garret. This is also a type of housing product.

Lot
A piece or parcel of land occupied or intended to be occupied by a principal building or a group of such buildings and accessory buildings, or utilized for a principal use and uses accessory thereto, together with such open spaces, and having frontage on a public or an approved private street.

Lot Coverage
Lot coverage is the percentage of a lot or site covered by buildings.

Lumen
The rate of flow of light used to express the overall light output of a lamp.

M

Maintenance
The work of keeping something in proper condition; upkeep.

Mansard
Traditionally a hip roof, each face of which has a steeper lower part and a shallower upper part. In contemporary commercial development, the second portion of the roof is replaced with a flat roof or equipment well. These are referred to as mansard roofs but bear little resemblance to the original.

Masonry
Wall construction of such material as stone, brick and adobe.

Mass
Mass describes three-dimensional forms, the simplest of which are cubes, boxes (or "rectangular solids"), cylinders, pyramids and cones. Buildings are rarely one of these simple forms, but generally are composites of varying types of assets. This composition is generally described as the "massing" of forms in a building.

Mixed-Use
Mixed-use developments combine different types of land uses or structures (such as commercial/office and residential uses) on a single-lot, or as components of a single development. The uses may be combined either vertically within the same structure or spread horizontally on the site in different areas and structures.

Monolithic
A single large flat surface (facade) without relief. A massive unyielding structure.

Monument Sign
Permanent signs where the entire bottom of the sign is affixed to the ground, not to a building.

Mullions
The divisional pieces in a multi-paned window.

Muntin
Wood or metal strips separating panels in a window.

N

Neon Sign
Glass tube lighting in which a combination of gas and phosphors are used to create colored light.

Newel
The terminating baluster at the lower end of a handrail.

Niche
A recess in a wall.

O

Open Space
For the purposes of the open space requirement, the term "open space" refers to any areas with minimum dimensions of 60 square feet (6'x10') and devoted to the following common, private, or public uses: patio, porch, balcony, deck, garden, playground, plaza, swimming pool, sports court/field, recreation room, gym, spa, community room, cultural arts, lawn/turf, pond, fountain, atrium, sunroom, theater, amphitheater, band shell, gazebo, picnic area, shelter, roof, or similar passive or active recreational/leisure use or facility that is not used for enclosed dwelling unit floor area or commercial use space.

Ornamentation.
Details added to a structure solely for decorative reasons (i.e. to add shape, texture or color to an architectural composition).

Outbuilding
An auxiliary structure that is located away from a house or principal building (e.g. garage, studio, guest house, shed).

P

Parapet
A low retaining wall at the edge of a roof, porch, or terrace.

Parking
An open area used for the purpose of storing an automobile, usually for a temporary time period.

Parkway
The public area between the curbing and the sidewalk.

Paseo
A place that allows for a pedestrian to take a slow, easy stroll or walk outdoors and often between buildings; often covered or partially covered, the path, series of paths, or walkway along which such a walk is taken.

Pattern
The pattern of material can also add texture and can be used to add character, scale and balance to a building. The lines of the many types of brick bonds are examples of how material can be placed in a pattern to create texture.

Pediment
The low triangular gable following the roof slopes over the front and rear of a building; also used to crown features such as doors and windows.

Pergola
An arbor formed of horizontal trelliswork supported on columns or posts, over which vines or other plants are trained.

Permeable Paving
Paving material that allows the passage of water between and through voids in its surface.

Pedestrian-scale
Refers to building and landscape elements that are modest in size; suitable to average human size.

Permanent Sign
A sign constructed of durable materials and intended to exist for the duration of time that the use or occupant is located on the premises.

Pier
A vertical, non-circular masonry support, more massive than a column.

Pilaster
A rectangular column with a capital and base, set into a wall as an ornamental motif.

Pillar
Similar to but more slender than a pier, also non-circular.

Pitch
The slope of a roof expressed in terms of ratio of height to span.

Platted
A piece of land; a plot. A map showing actual or planned features, such as streets and building lots.

Plaza
A public square with room for pedestrians and associated activities.

Pocket Park
A very small, lushly landscaped open space often nestled between residential homes, and intended for limited use by local residents only.

Pole Sign
A sign mounted on a freestanding pole or other support so that the bottom edge of the sign face is six feet or more above finished grade.

Pop-out
Applied to exterior walls, pop-outs create shadow patterns and depths on the wall surfaces.

Porch
A covered entrance or semi-enclosed space projecting from the facade of a building, usually having a separate roof. An open or enclosed gallery or room attached to the outside of a building; a veranda.

Portico
A porch or vestibule (lobby or passage between entrance and lobby) roofed and partly opened on at least one side.

Preservation
Places a high premium on the retention of all historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made. Standards focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character.

Primary Building Façade
The particular facade of a building that faces the street to which the address of the building pertains.

Project
Any proposal for new or changed use, or for new construction, alteration, or enlargement of any structure that is subject to the provisions of this manual.

Projecting Sign
A sign that protrudes horizontally from the facade of a building, usually at a 90-degree angle to the building..

Promenade
A public place to take a leisurely walk for pleasure, such as an avenue.

Proportion
The relationship of size, quantity, or degree between two or more things or parts of something. Proportion can describe height-to-height ratios, width-to-width ratios, and width-to-height ratios, as well as ratios of massing. Landscaping can be used to establish a consistent rhythm along a streetscape, which will disguise the lack of proportion in building size and placement.

Public Art
Any sculpture, fountain, monument, mural or other form of art located in a public space or private space open to public view.

Q

R

Recess
A hollow place, as in a wall.

Reconstruction
Establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials.

Recycling
The reuse of older structures that would have otherwise been demolished, often involving extensive restoration or rehabilitation of the interior and/or exterior to accommodate the new use. (See also Adaptive Reuse.)

Refuge Island

A defined area between traffic lanes that provides a safe place for pedestrians to wait when crossing the street.

Rehabilitation
Emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. Standards focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character.

Relief
Carving raised above a background plane, as in base relief.

Remodeling
Any change or alteration to a building that substantially alters its original state.

Renovation
The modification of or changes to an existing building in order to extend its useful life or utility through repairs or alterations.

Restoration
Focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods.

Return
A surface turned back from a principal surface, such as the side of pilaster or the jamb of a window or door opening.

Reuse
To use again, especially after salvaging or special treatment or processing.

Reveal
The vertical side section of a doorway or window frame.

Rhythm
In urban design, the regular recurrence of lines shapes, forms, elements, colors, or other architectural or natural elements, usually within a proportional system, such as even placing of trees down a street or similar widths and heights of buildings in a street block.

Ridge
The horizontal line formed by the juncture of two sloping planes, especially the line formed by the surfaces at the top of a roof.

Right-of-way
Land that has been established by reservation, dedication, prescription, condemnation, or other means and that is occupied by a road, walkway, railroad, utility distribution or transmission facility, or other similar use.

Rise
The vertical distance from one stair tread to the next.

Riser
The vertical portion of a step. The board covering the open space between stair treads.

Rooflines
Various forms to a roof, such as pitch, ridge, hip, etc., often at different angles.

Roof Pitch
Degree of roof slant stated in inches rise per foot.

Roof Span
The distance equal to twice the roof run, or the horizontal distance between the outside faces of bearing wall plates.

Roofscape
The collective image of rooflines and roof styles of adjacent buildings and structures as seen against the sky.

Row Townhouse
An unbroken line of houses sharing one or more sidewalls with its neighbors.

Rustication
A method of forming stonework with recessed joints and smooth or roughly textured block faces.

S

Sash
The framework into which windowpanes are set.

Scale
The proportion of one object to another. "Pedestrian" or "human" scale incorporates building and landscape elements that are modest in size. "Monumental" scale incorporates large or grand building elements.

Screening
A method of visually shielding or obscuring a structure, or portion of, by a fence, wall, berm, or similar structure.

Setback
The distance between the property line and the building, measured horizontally and perpendicular to the property line.

Shed Roof
A roof shape having only one sloping pane.

Shutter
A movable cover for a window used for protection from weather and intruders.

Side Loading Garage
An accessory building or portion of a principal building, located and accessed from the side of such and designed or used for the parking or temporary storage of the motor vehicles of principal building occupants.

Sidewalk
A paved walkway along the side of a street.

Siding
The finish covering on the exterior of a frame building (with the exception of masonry). The term cladding is often used to describe any exterior wall covering, including masonry.

Skyline
The upper outline or silhouette of a building, buildings, or landscape as seen against the sky.

Sill
The framing member that forms the lower side of an opening, such as a doorsill. A windowsill forms the lower, usually projecting, lip on the outside face of a window.

Sign
Please refer to Chula Vista Municipal Code Section 19.04. Supplemental definitions are provided in Chapter VII - Development Design Guidelines.

Site
A lot, or group of contiguous lots not divided by an alley, street, other right-of-way, or city limit that is proposed for development in accord with the provisions of this manual, and is in a single ownership or has multiple owners, all of whom join in an application for development.

Soffit
The underside of a beam, arch, eave, overhang, dropped ceiling, etc.

Spandrel Glass
Non-vision glass, available in reflective, patterned, and solid colors. Can be used to give the appearance of having windows.

Spark Arrester
A device that is located at the top of a chimney used to prevent sparks, embers, or other ignited material above a certain size from being expelled to the atmosphere.

Stoop
A small porch, platform, or staircase leading to the entrance of a house or building.

Storefront
The side of a store or shop facing a street. The traditional "main street" facade bounded by a structural pier on either side, the sidewalk on the bottom and the lower edge of the upper facade on top, typically dominated by retail display windows.

Stormwater
Water running on the surface of the ground due to rainfall from a storm event.

Story
That portion of a building included between the surface of any floor and the floor or ceiling next above it.

Streetscape
The overall appearance of a street or grouping of streets in an area and/or the relationship of buildings to the surrounding sidewalk and streets.

Street Wall
The edges created by buildings and landscaping that enclose the street and create space.

Street Wall Frontage
The percentage of street front that must be built to, with the ground floor building façade at the minimum setback.

Structure
Anything constructed, the use of which requires permanent location on the ground, or attachment to something having a permanent location on the ground, excluding swimming pools, patios, walks, access drive, or similar paved areas.

Stucco
A durable finish for exterior walls, usually composed of cement, sand, and lime and applied while wet. A fine plaster for interior wall ornamentation, such as moldings.

Surface Materials
Can be used to create a texture for a building - from the roughness of stone or a ribbed metal screen to the smoothness of marble or glass. Some materials, such as wood, may be either rough (such as wood shingles or re-sawn lumber) or smooth (such as clapboard siding).

Surround(s)
The molding that outlines an object or opening.

Symmetry
Exact correspondence of form and configuration on opposite sides of a dividing line or plane or about a center or an axis; having balanced proportions.

T

Temporary Sign
Any sign intended to be displayed for a limited period of time and capable of being viewed from any public right-of-way, parking area, or neighboring property.

Texture
Texture refers to variations in the exterior facade and may be described in terms of roughness of the surface material, the patterns inherent in the material or the patterns in which the material is placed. Texture and lack of texture influence the mass, scale, and rhythm of a building. Texture also can add intimate scale to large buildings by the use of small detailed patterns, such as brick masonry.

Tower
Any floor above the defined street wall height used for framing the street.

Traffic
The passage of people, vehicles, or messages along routes of transportation or communication. Vehicles or pedestrians in transit.

Traffic Calming
Techniques that are used to reduce the speed of vehicular traffic, such as lane narrowing, sharp offsets, sidewalk bulge-outs, speed bumps, and road surface variations.

Transit
Conveyance of people or goods from one place to another, especially on a local public transportation system.

Transition
A change from one place or state or stage to another. In an urban planning context, a "transition" could describe a step in scale of one development to another.

Transom
A small window just above a door.

Trash Receptacle
A fixture or container for the disposal of garbage. Sometimes ornamental in nature.

Trellis
A system of horizontal joists supported on posts, often designed to support growing plants.

Trim
The decorative finish around a door or window; the architrave or decorative casing used around a door or window frame. Any visible woodwork or moldings that cover or protect joints, edges, or ends of another material. Examples: baseboards, cornices, door trim, and window trim.

Turf Island
A landscaped area located at the base of a building to buffer the hard edge of a building from a paved surface.

Turret
A small tower, often at the corner of a building.

U

Use
The purpose for which the land or a building is arranged, designed, or intended to be used and for which it is or may be used.

V

Valley
A low region on a roof between gables.

Veneer
A thin facing of finishing material.

Veneer Wall
The covering of wall construction by a second material to enhance wall beauty, i.e., brick or stone over frame, brick or stone over concrete block.

W

Wall Sign
A sign that is attached to or painted on the exterior wall of a structure with the display surface of the sign approximately parallel to the building wall.

Window Sill
The flat piece of wood, stone, or the like, at the bottom of a window frame.

Window Sign
A sign posted, painted, placed, or affixed in or on a window exposed to public view. An interior sign that faces a window exposed to public view that is located within three feet of the window is considered a window sign for the purpose of calculating the total area of all window signs.

Window Types

- *Awning - Top hinged.*
- *Bay - Extends beyond the exterior face of the wall.*
- *Bow - Projected window with a curved surface often in the glass itself.*
- *Casement - Side hinged.*
- *Combination - The integration of two or more styles into one unit.*
- *Double Hung - Two sash, vertical sliding.*
- *Hopper - Bottom hinged.*
- *Horizontal sliding - Two or more sashes designed to slide over one another.*
- *Jalousie - Glass slats (Venetian blind principle) with hand crank to open.*
- *Oriel - Windows that project from an upper story, supported by a bracket.*
- *Picture Window - Fixed sash.*

X

Y

Z

Appendix B. Traffic Analysis

FINAL Traffic Impact Analysis

Chula Vista Urban Core

October 2005

Prepared for:
RRM Design Group

Project No. 095413000

FINAL Traffic Impact Analysis

Chula Vista Urban Core

October 2005

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1.0 INTRODUCTION

This study evaluates the potential traffic-related impacts associated with the adoption of the Chula Vista Urban Core Specific Plan. This study determines the appropriate geometric design of the urban arterials, as defined in the Chula Vista General Plan. In addition, this study will recommend improvements to achieve acceptable LOS for any potential traffic impacts associated with the project. This study will serve as the traffic impact analysis for future redevelopment projects consistent with the Urban Core Specific Plan.

Project Description

The Chula Vista Urban Core is located in the northwestern portion of the City of Chula Vista, California. **Figure 1-1** illustrates the project study area in a regional context. The Urban Core Specific Plan (UCSP) Study Area covers approximately 1,700 acres within the northwestern portion of the City of Chula Vista. It is generally bordered by the San Diego Freeway (I-5) to the west, C Street to the north, Del Mar Street to the east, and L Street to the south. While there are 1,700 acres within the UCSP Study Area, it was determined that the proposed changes to land use designations be focused on areas more in need of revitalization. Therefore, the Specific Plan boundary focuses on the development and redevelopment of approximately 690 gross acres within the larger UCSP Study Area. **Figure 1-2** illustrates both the UCSP Study Area and the Focus Area.

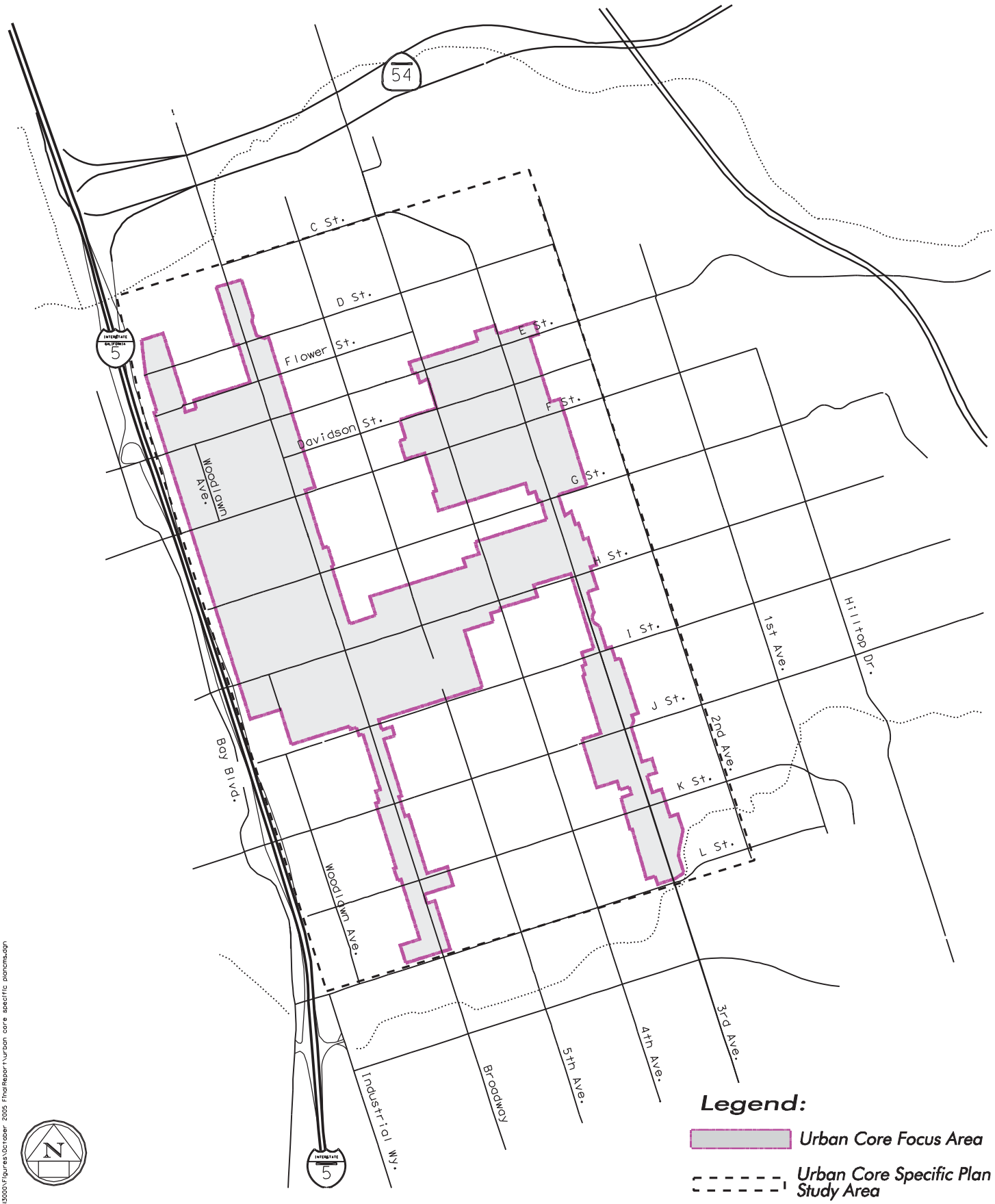
Analysis Scenarios

A total of three scenarios were analyzed as part of the Urban Core project, which are listed below:

- ***Existing Conditions***
  - Existing Conditions: Represents the traffic conditions of the existing street network, primarily in the Urban Core Focus Area, but also includes key intersections and roadway segments within and near the Urban Core Specific Plan Study Area.
- ***Year 2030***
  - Year 2030 Conditions: Represents the traffic conditions of the street network consistent with the adopted general plan update, implementation of the regional transit vision, and full build-out of the Urban Core.
  - Year 2030 With Improvements Conditions: Represents the traffic conditions of the street network with improvements to several roadways and intersections.

It should be noted that due to urban revitalization, the timing, sequencing, and the extent of development is not predictable and is speculative. The Urban Core Specific Plan covers a large geographic area, which could redevelop in many different ways. As a result, the intermediate years were not analyzed; only the full buildout of the Urban Core was analyzed. As such, the impacts resulting from the full buildout of the Urban Core would be considered cumulative impacts.


Miramar Rd
805
15
Marine Corps Air Station Miramar
Santee Lakes
Mast Blvd
Lakesi
67
Santee
Pepper Dr
52
Ruffin Rd
125
Fanita Dr
Mission Gorge Rd
274
Aero Dr
Navajo Rd
Pitcher Pkwy
Boste
SAN DIEGO
Murray Reservoir
El Cajon
163
Friars Rd
Fiesta Island
San Diego
Fuerte Dr
Montezuma Rd
54
La Mesa
Casa de Oro
Spring Valley
CALIFORNIA
Lemon Grove
209
Nimitz Blvd
N Harbor Dr
5th Ave
54th St
Chollas Reservoir
15
94
B St
San Diego
Market St
Imperial Ave
S17
Skyline Dr
North Island
Coronado
Paradise Valley Rd
Sweetwater Reservoir
75
National City
54
Lincoln Acres
San Diego Bay
Bonita
Chula Vista
E H St
Otay Lakes Rd
Pacific Ocean
4th Ave
Hilltop Dr
Clear Ave
Imperial Beach
Main St
Palm Ave
Brown Field Municipal Airport
905
Imperial Beach Naval Air Station
San Ysidro Larsen Field
Tijuana
BAJA CALIFORNIA
Urban Core Specific Plan
N



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PLOTTED : 10/7/2005

KIMLEY-HORN and ASSOCIATES

Figure 1-2

Urban Core Specific Plan

2.0 METHODOLOGY

The following section describes the methodology used in the determination of study intersections, analysis process, and determination of significant impacts.

Study Intersections

The Urban Core is located in the Northwest Planning Subarea, located south of SR-54, west of I-805, north of L Street, and east of I-5. More specifically, the Urban Core Specific Plan is bounded by C Street, Del Mar Avenue, L Street, and I-5. The following intersections shown in **Table 2-1** were identified for evaluation. These intersections represent all key intersections in the Urban Core Specific Plan and others that could be influenced by land use intensifications within the Urban Core.

TABLE 2-1
STUDY INTERSECTIONS

	Intersection	Traffic Control (a)
1	Bay Blvd-I-5 SB Ramp @ E St (b)	Signal
2	I-5 NB Ramp @ E St	Signal
3	Woodlawn Ave @ E St	Signal
4	Broadway @ E St	Signal
5	5th Ave @ E St	Signal
6	4th Ave @ E St	Signal
7	3rd Ave @ E St	Signal
8	2nd Ave @ E St	Signal
9	1st Ave @ E St (b)	Signal
10	Flower St @ E St (b)	Signal
11	Bonita Glen Dr @ Bonita Rd (b)	Signal
12	Bay Blvd @ F St (b)	AWSC
13	Broadway @ F St	Signal
14	5th Ave @ F St	Signal
15	4th Ave @ F St	Signal
16	3rd Ave @ F St	Signal
17	2nd Ave @ F St	Signal
18	Broadway @ G St	Signal
19	5th Ave @ G St	Signal
20	4th Ave @ G St	Signal
21	3rd Ave @ G St	Signal
22	2nd Ave @ G St	AWSC
23	Hilltop Dr @ G St (b)	AWSC
24	I-5 SB Ramp @ H St	Signal
25	I-5 NB Ramp @ H St	Signal

Notes:
(a) Signal = Traffic signal, AWSC = All-way Stop Control, TWSC = Two-way Stop Control
(b) Outside of Urban Core Specific Plan study area, but due to proximity and ingress/egress patterns, these intersections were included as part of the study area.

TABLE 2-1
STUDY INTERSECTIONS (Continued)

	Intersection	Traffic Control (a)
26	Woodlawn Ave @ H St	Signal
27	Broadway @ H St	Signal
28	5th Ave @ H St	Signal
29	4th Ave @ H St	Signal
30	3rd Ave @ H St	Signal
31	2nd Ave @ H St	Signal
32	1st Ave @ H St (b)	Signal
33	Hilltop Dr @ H St (b)	Signal
34	Broadway @ SR-54 WB Ramp (b)	Signal
35	Broadway @ SR-54 EB Ramp (b)	Signal
36	Broadway @ C St	Signal
37	Broadway @ D Street	Signal
38	Broadway @ Flower St	Signal
39	Broadway @ I St	Signal
40	Broadway @ J St	Signal
41	Broadway @ K St	Signal
42	Broadway @ L St	Signal
43	4th Ave @ SR-54 WB Ramp (b)	Signal
44	4th Ave @ SR-54 EB Ramp (b)	Signal
45	4th Ave @ Brisbane St (b)	Signal
46	4th Ave @ C St	Signal
47	4th Ave @ D St	Signal
48	4th Ave @ I St	Signal
49	4th Ave @ J St	Signal
50	4th Ave @ K St	Signal
51	4th Ave @ L St	Signal
52	3rd Ave @ Davidson St	Signal
53	3rd Ave @ I St	Signal
54	3rd Ave @ J St	Signal
55	3rd Ave @ K St	Signal
56	3rd Ave @ L St	Signal
57	2nd Ave @ D St	AWSC
58	J St @ I-5 SB Ramp	Signal
59	J St @ I-5 NB Ramp	Signal
60	Woodlawn Ave @ J St	TWSC
61	L St @ Bay Blvd	TWSC
62	L St @ Industrial Blvd	Signal
63	Bay Blvd @ I-5 SB Ramp (b)	TWSC
64	Industrial Blvd @ I-5 NB Ramp (b)	AWSC

Notes:
(a) Signal = Traffic signal, AWSC = All-way Stop Control, TWSC = Two-way Stop Control
(b) Outside of Urban Core Specific Plan study area, but due to proximity and ingress/egress patterns, these intersections were included as part of the study area.

As shown in Table 2-1, 56 signalized intersections exist near and within the Urban Core Specific Plan study area under existing conditions. It should be noted that intersections 1, 9 through 12, 23, 32 through 35, 43 through 45, 63, and 64 are outside of the Urban Core Specific Plan study area, but are included in the analysis due to the proximity and ingress/egress patterns. **Figure 2-1** displays the location of the study intersections.

Analysis Process

The analysis process includes determining the operations at the study intersections for the a.m. and p.m. peak-hours and operations on roadway segments using ADT volumes. Intersections will be measured and quantified by using the Synchro traffic analysis software package. Roadway segments will be measured based on each segment's volume and assigned capacity. Results will be compared to the City's standards to determine the level of service (LOS).

Analysis Software

To analyze the operations of both signalized and unsignalized intersections, Synchro 6 (Trafficware) was used for the analysis. Synchro 6 uses the methodologies outlined in the 2000 *Highway Capacity Manual (HCM)*.

The default peak-hour factor (PHF) of 0.92 was used for the Existing Conditions and Year 2030 scenarios. Under the Year 2030 scenario, all signal timings and phasings at the study intersections were optimized as a network and a common cycle length was selected at all intersections. Also, it should be noted that at each interchange, the two ramp intersections were optimized separately and assumed to be coordinated.

Signalized Intersections

The 2000 *HCM* published by the Transportation Research Board establishes a system whereby highway facilities are rated for their ability to process traffic volumes. The terminology "level of service" is used to provide a "qualitative" evaluation based on certain "quantitative" calculations, which are related to empirical values.

LOS for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The criteria for the various levels of service designations are given in **Table 2-2**.

TABLE 2-2
LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

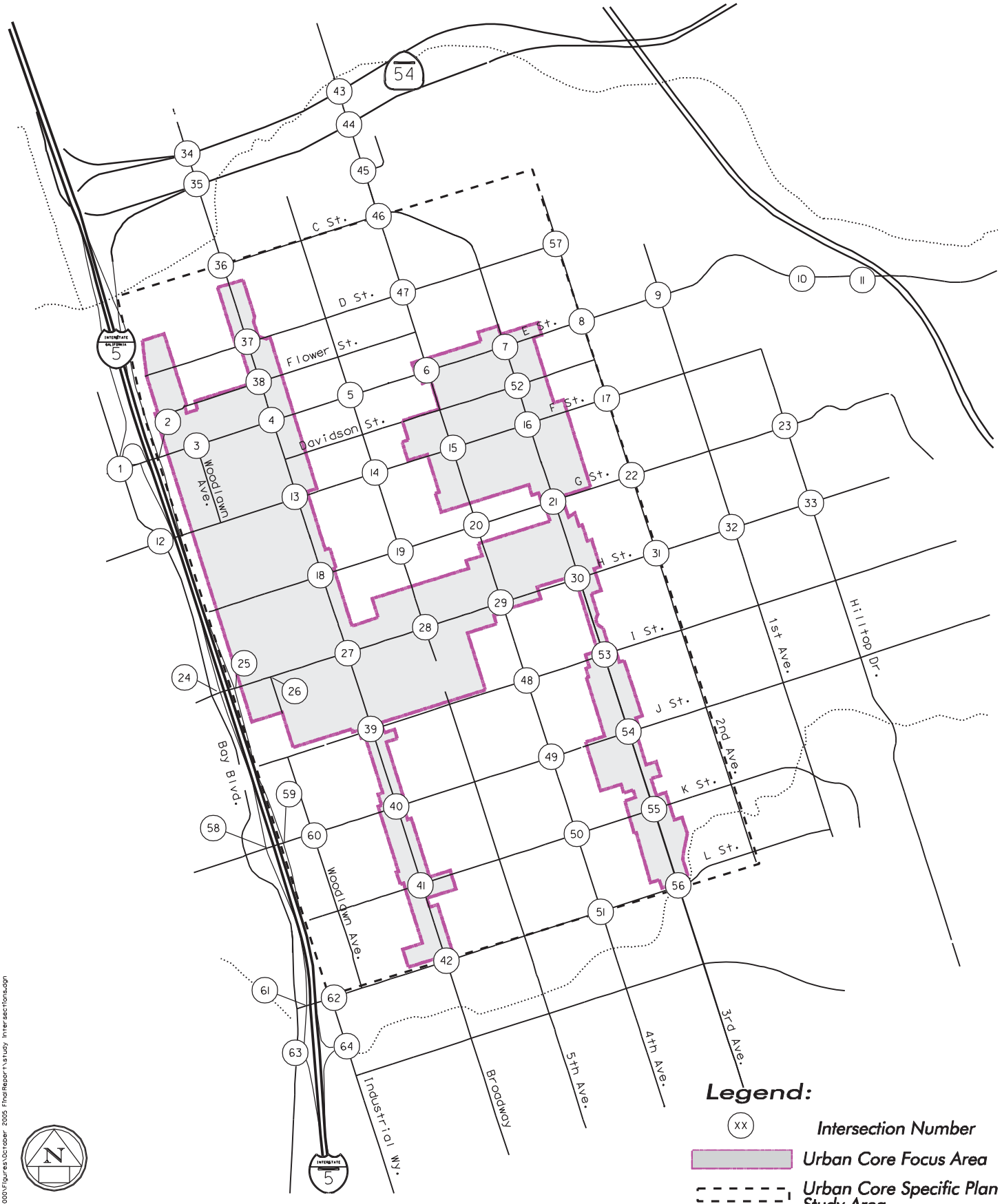
LOS	Control Delay (sec/veh) (a)	Description
A	≤10.0	Operations with very low delay and most vehicles do not stop.
B	<10.0 and <20.0	Operations with good progression but with some restricted movement.
C	>20.0 and <35.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and <55.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55.0 and <80.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Notes:
(a) 2000 Highway Capacity Manual, Chapter 16, Page 2, Exhibit 16-2

Effects of At-Grade Trolley Crossings

As part of the General Plan Update transportation analysis, the effects of the trolley grade crossings at E Street and H Street were evaluated. The analysis replicated the effects of a trolley/rail crossing by assuming a signal at the trolley crossings. A summary of this analysis is included as an attachment to this report (see **Appendix A**). The analysis assumed that a trolley would cross once per every five minutes, using current trolley service and once every two and a half minutes using planned service increases. Field observations indicate that the trolley crossing guards stay down for about 54 seconds. This means that one-sixth of the time, the trolley crossings are down and with future service enhancements, the trolley crossing guards are down one-third of the time.

With the trolley crossings down, queues would start to form in the east-west direction and extend into adjacent intersections. This would cause additional delays and affect the operations at each impacted intersection. As such, delays shown in the respective intersection summary tables for the intersections affected by the trolley crossings would be increased between 17 and 40 seconds per vehicle, causing a drop in LOS grade.


54
5
C St.
D St.
E St.
F St.
G St.
H St.
I St.
J St.
K St.
L St.
Flower St.
Davidson St.
Woodlawn Ave.
Bay Blvd.
Industrial Wy.
Broadway
5th Ave.
4th Ave.
3rd Ave.
2nd Ave.
1st Ave.
Hilltop Dr.
Legend:
XX
Intersection Number
Urban Core Focus Area
Urban Core Specific Plan Study Area

Roadway Segments

In order to determine the LOS for a street segment on a daily basis, the average daily traffic (ADT) volume is compared to its maximum acceptable volume for each type of roadway (arterial, collector, etc.) in the City. The roadway segment capacities of Circulation Element roadways (Class I Collectors and above) were evaluated under existing and proposed conditions using LOS thresholds published by the City of Chula Vista's adopted General Plan. Volume-to-Capacity (v/c) ratios were calculated for each segment. It should be noted that the capacity of a roadway is equal to the maximum LOS E volume, but the LOS is based on the acceptable volume for each respective type of facility. **Table 2-3** summarizes the acceptable volumes with its corresponding LOS for each Circulation Element and Urban Core Circulation Roadway. A more detailed discussion related to the development of the Urban Core Circulation Element is contained in Section 1.2 of the 2005 adopted General Plan.

TABLE 2-3
ROADWAY SEGMENT CAPACITY AND LEVEL OF SERVICE

FACILITY		ACCEPTABLE LOS	LEVEL OF SERVICE (LOS)				
CLASS (a)	LANES		A	B	C	D	E
CIRCULATION ELEMENT ROADWAYS							
Expressway	7/8	C	52,500	61,300	70,000	78,800	87,500
Prime	6	C	37,500	43,800	50,000	56,300	62,500
Major Street	6	C	30,000	35,000	40,000	45,000	50,000
	4	C	22,500	26,300	30,000	33,800	37,500
Class I Collector	4	C	16,500	19,300	22,000	24,800	27,500
URBAN CORE CIRCULATION ELEMENT ROADWAYS							
Gateway Street	6	D	40,800	47,600	54,400	61,200	68,000
	4	D	28,800	33,600	38,400	43,200	48,000
Urban Arterial	4	D	25,200	29,400	33,600	37,800	42,000
Commercial Boulevard	4	D	22,500	26,250	30,000	33,750	37,500
Downtown Promenade	4	D	22,500	26,250	30,000	33,750	37,500
	2	D	9,600	11,200	12,800	14,400	16,000

Note:
Shaded cells correspond to the acceptable traffic volumes for each respective roadway.
(a) The adopted Circulation Element roadways are considered to be Class I Collector Streets and above, and the Urban Core Circulation Element are considered to be 6-lane Gateway Streets and below.

Significance Determination

The significance criteria to evaluate the project impacts to intersections are based on the City of Chula Vista's *Guidelines for Traffic Impact Studies in the City of Chula Vista*, February 13, 2001 and on the City of Chula Vista's adopted General Plan. At intersections, the measurement of effectiveness (MOE) is based on allowable increases in delay. At roadway segments, the MOE is based on allowable increases in the ADT.

Within the City of Chula Vista, the goal is to achieve LOS D or better at all signalized and unsignalized intersections. A project specific impact would occur if the operations at intersections are at LOS E or F *and* the project trips comprise five percent or more of the entering volume. Entering volumes are defined as the number of vehicles "entering" an intersection during a peak-hour. A cumulative impact would occur if the operations at intersections are at LOS E or F only.

For non-Urban Core Circulation Element roadways (Expressway, Prime Arterial, Major Street, Town Center Arterial, Class I Collector), a roadway segment that currently operates at LOS C or better and with the proposed changes would operate at LOS D or worse at General Plan buildout is considered a significant impact. In addition, a roadway segment that currently operates at LOS D or E would operate at LOS E or F at General Plan buildout, respectively, or which operates at LOS D, E, or F and would worsen by five percent or more at General Plan buildout is considered a significant impact.

For Urban Core Circulation Element roadways (Gateway Street, Urban Arterial, Commercial Boulevard, Downtown Promenade), a roadway segment that currently operates at LOS D or better and with the proposed changes would operate at LOS E or F at General Plan buildout is considered a significant impact. In addition, a roadway segment that currently operates at LOS F and would worsen by five percent of more at General Plan buildout is considered a significant impact. **Table 2-4** shows the criteria for determining levels of significance at intersections and roadway segments.

TABLE 2-4
LEVELS OF SIGNIFICANCE CRITERIA FOR INTERSECTIONS AND ROADWAY SEGMENTS

Facility	Measurement of Effectiveness (MOE)	Significance Threshold
Intersection	Seconds of delay	LOS E or F and >5% of entering volume
Roadway Segment	ADT	Non Urban Core Circulation Element Roadways: LOS C or better → LOS D or worse at buildout or LOS D/E → LOS E/F at buildout and >5% of entering volume Urban Core Circulation Element Roadways: LOS D or better → LOS E/F at buildout or LOS E/F and >5% of entering volume

Source: *Guidelines for Traffic Impact Studies in the City of Chula Vista*, February 13, 2001 and City of Chula Vista Adopted General Plan.

3.0 EXISTING CONDITIONS

This section summarizes the existing roadway circulation network, peak-hour and daily traffic volumes, and operations at the study intersections and roadway segments.

Road Network

The following provides a description of the existing street system within the Urban Core study area. It should be noted that the street network is set up in a grid system, with "Streets" typically running east-west and "Avenues" typically running north-south. In addition, each section contains an exhibit of a typical cross section for each respective roadway segment.

E Street is an east-west roadway. E Street is classified as a four-lane gateway street between I-5 and I-805, with the exception of the segment between Broadway and First Avenue, which is classified as a four-lane urban arterial. E Street is four lanes between 3rd Avenue and Broadway, approximately 62 feet in width. Parallel parking is provided on both sides of the street in this section. E Street to the west of Broadway has four lanes, is approximately 70 feet in width, has a two-way left-turn lane, and has no on-street parking. Sidewalks are provided on both sides of the roadway in both sections. The posted speed limit is 30 mph.

F Street is an east-west roadway. F Street is classified as a four-lane downtown promenade between I-5 and Broadway and as a two-lane downtown promenade between Broadway and Third Avenue. F Street is four lanes between Third Avenue and Fourth Avenue with a raised median in the center and is approximately 65 feet in width. The only on-street parking provided in this segment is limited parallel parking on the north side of F Street between Third Avenue and Garret Avenue. Between Fourth Avenue and Broadway, F Street is a two-lane roadway, approximately 40 feet in width with parallel parking on both sides. F Street has four lanes between Broadway and I-5 with parallel parking on both sides and is approximately 66 feet in width. Sidewalks are provided on both sides of the roadway in all three sections. The posted speed limit is 30 mph.

H Street is an east-west roadway with a center two-way left turn lane. H Street is classified as a six-lane gateway street between I-5 and Broadway and between Hilltop Drive and I-805 and as a four-lane urban arterial between Broadway and Hilltop Drive; however, it should be noted that H Street is not built to its ultimate classification and functions as a four-lane roadway between I-5 and Broadway. Parking is provided on-street east of Third Avenue. H Street is approximately 70 feet in curb-to-curb width between Third Avenue and Broadway and 64 feet in curb-to-curb width between Broadway and I-5. Sidewalks are provided on both sides of the street. The posted speed limit is 35 mph.

Broadway is a north-south roadway. Broadway is classified as a four-lane gateway street between SR-54 and C Street and a four-lane commercial boulevard between C Street and L Street. Parallel parking is provided on both sides of the roadway. Between F Street and H Street, there is a two-way left turn lane and the roadway is approximately 82 feet in width. Broadway is approximately 68 feet in width between E Street and F Street. Sidewalks are provided on both sides of the street. The posted speed limit is 35 mph.

3rd Avenue is a north-south roadway. Third Avenue is classified as a four-lane commercial boulevard between C Street and E Street and between H Street and L Street and classified as a two/four-lane downtown promenade between E Street and H Street. Third Avenue is two lanes between E Street and F Street, approximately 72 feet in width. Between F Street and Madrona Street, Third Avenue is a four-lane

roadway with a raised median, approximately 101 feet in width. Between Madrona Street and G Street, Third Avenue is four lanes and approximately 72 feet in width. Angled parking is provided in these first three sections. Third Avenue is a four-lane roadway with a center two-way left-turn lane between G Street and H Street; approximately 66 feet in width and including parallel parking. Sidewalks are provided on both sides of the street in all four sections. The posted speed limit is 35 mph.

Table 3-1 summarizes the existing roadway segment dimensions based on field observations and measurements by Kimley-Horn staff.

Figures 3-1 to **3-1.5** show the existing lane configurations and traffic control at the study intersections and **Figure 3-2** shows the number of lanes and street classification on each evaluated roadway segment within the vicinity of the project site.

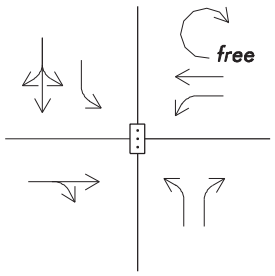
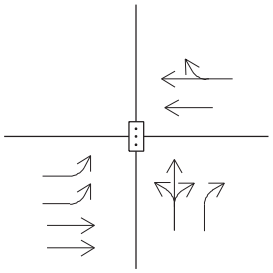
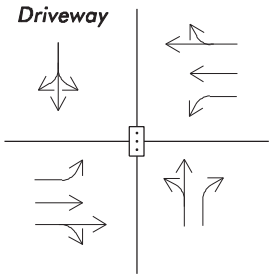
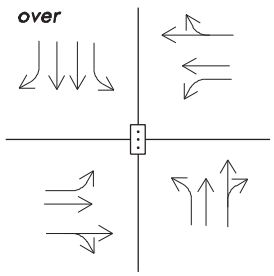
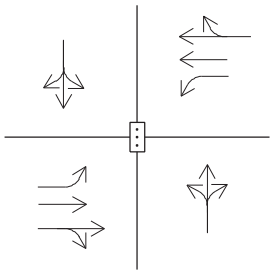
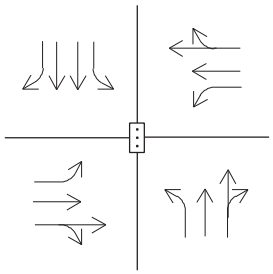
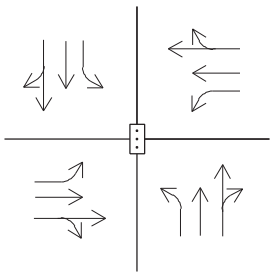
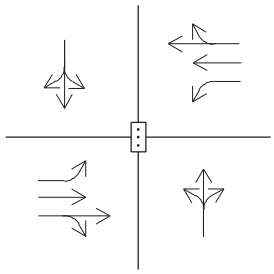
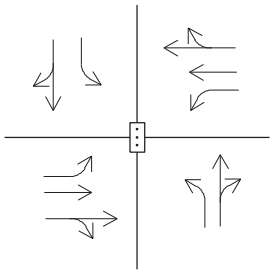
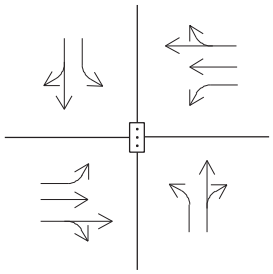
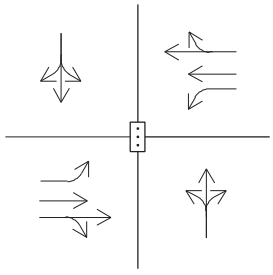
TABLE 3-1
EXISTING ROADWAY SEGMENT DIMENSIONS

Street Segment	Total Travel Lanes	Median/Turn Lane	Curb-to-Curb Width	Parking	Bike Lane
E St between I-5 and Woodlawn Ave	4	Two-Way Left Turn Lane	70’	N	N
E St between Woodlawn Ave and Broadway	4	Two-Way Left Turn Lane	70’	N	N
E St between Broadway and 1st Ave	4	N	62’	Y	N
E St between 1st Ave and I-805	4	Two-Way Left Turn Lane	71’	N	Y
F St between I-5 and Woodlawn Ave	4	N	66’	Y	N
F St between Woodlawn Ave and Broadway	4	N	66’	Y	N
F St between Broadway and 4th Ave	2	N	40’	Y	N
F St between 4th Ave and 3rd Ave	4	Raised Median	65’	N	N
H St between I-5 and Broadway	4	Two-Way Left Turn Lane	64’	N	N
H St between Broadway and 3rd Ave	4	Two-Way Left Turn Lane	64’	N	N
H St between 3rd Ave and Hilltop Dr	4	Two-Way Left Turn Lane	64’	N	Y
H St between Hilltop Dr and I-805	4	N	65’	N	N
J St between Bay Blvd and Broadway	4	Raised Median	67’	N	N
L St between I-5 and Broadway	4	Two-Way Left Turn Lane	63’	N	N
L St between Broadway and Hilltop Dr	4	N	64’	Y	N
Woodlawn Ave between E St and F St	2	N	36’	Y	N
Woodlawn Ave between G St and H St	2	N	33’	Y	N

TABLE 3-1
EXISTING ROADWAY SEGMENT DIMENSIONS (Continued)

Street Segment	Total Travel Lanes	Median/Turn Lane	Curb-to-Curb Width	Parking	Bike Lane
Broadway between SR-54 and C St	4	N	68’	N	N
Broadway between C St and E St	4	Two-Way Left Turn Lane	70’	Y	N
Broadway between E St and F St	4	N	68’	Y	N
Broadway between F St and H St	4	Two-Way Left Turn Lane	82’	Y	N
Broadway between H St and K St	4	Two-Way Left Turn Lane	80’	Y	N
Broadway between K St and L St	4	Two-Way Left Turn Lane	80’	Y	N
Broadway south of L St	4	Raised Median	82’	Y	N
4th Ave between SR-54 and C St	4	Raised Median Extended NB/SB RT Lanes	90’	N	N
4th Ave between C St and E St	4	N	64’	Y	N
4th Ave between E St and H St	4	Two-Way Left Turn Lane	64’	N	N
4th Ave between H St and L St	4	N	63’	Y	N
3rd Ave between C St and E St	4	N	64’	Y	N
3rd Ave between E St and F St	2	N	62’	Y	N
3rd Ave between F St and Madrona St	4	Raised Median	101’	Y	N
3rd Ave between Madrona St and G St	4	N	72’	Y	N
3rd Ave between G St and H St	4	Two-Way Left Turn Lane	66’	Y	N
3rd Ave between H St and L St	4	Two-Way Left Turn Lane	63’	N	N
3rd Ave south of L St	4	Two-Way Left Turn Lane	61’	N	N

E STREET CORRIDOR

1. E St/Bay Blvd -I-5 SB Ramps	2. E St/I-5 NB Ramps	3. E St/Woodlawn Ave	4. E St/Broadway
			
5. E St/5th Ave	**6. E St/4th Ave**	**7. E St/3rd Ave**	**8. E St/2nd Ave**
			
9. E St/1st Ave	**10. E St/Flower St**	**11.Bonita Glen Dr/Bonita Rd**	
			

Legend:

Traffic Signal

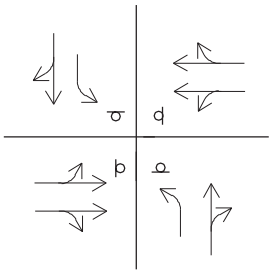
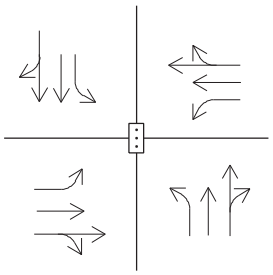
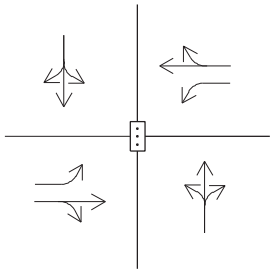
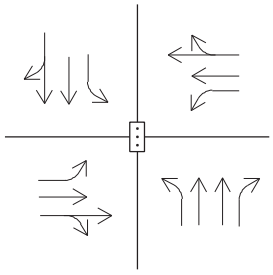
over Overlap Phase

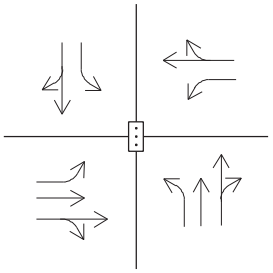
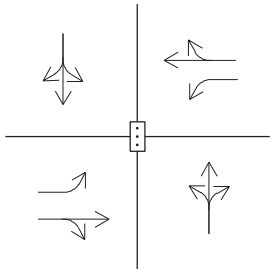
Figure 3-1

KIMLEY-HORN and ASSOCIATES

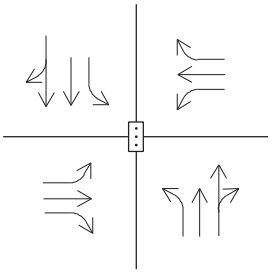
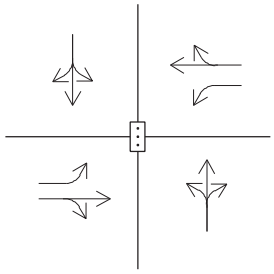
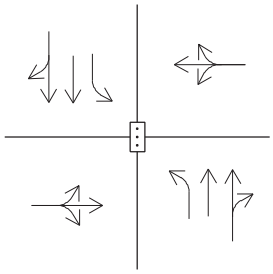
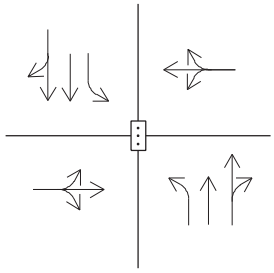
Existing Intersection Geometrics

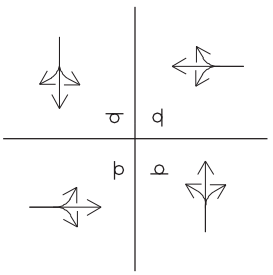
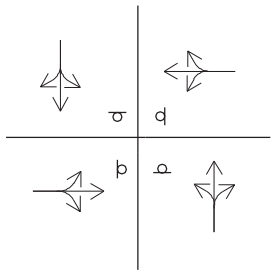
F STREET CORRIDOR

12. F St/Bay Blvd	13. F St/Broadway	14. F St/5th St	15. F St/4th Ave
			

16. F St/3rd Ave	17. F St/2nd Ave
	

G STREET CORRIDOR

18. G St/Broadway	19. G St/5th Ave	20. G St/4th Ave	21. G St/3rd Ave
			

22. G St/2nd Ave	23. G St-Peppertree/Hilltop Dr
	

Legend:

Traffic Signal

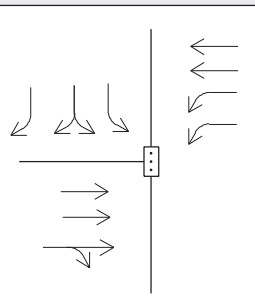
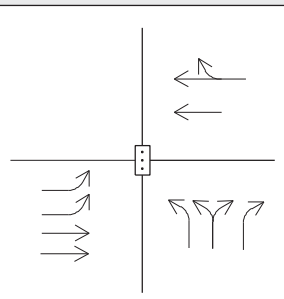
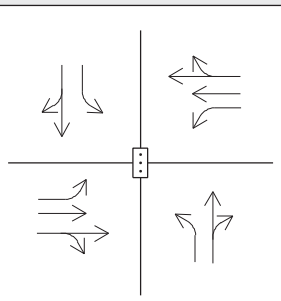
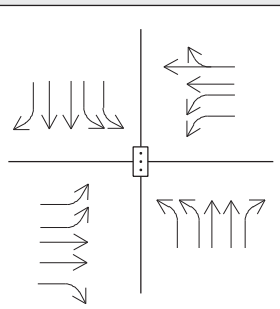
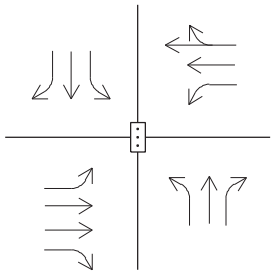
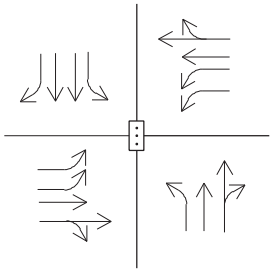
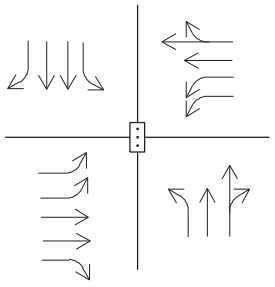
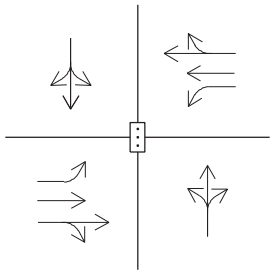
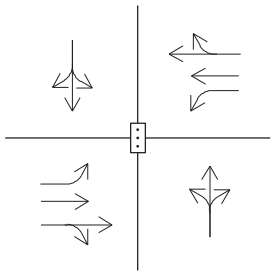
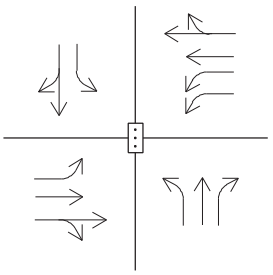
Stop Sign

Figure 3-1.1

Existing Intersection Geometrics

KIMLEY-HORN and ASSOCIATES

H STREET CORRIDOR

24. H St/I-5 SB Ramps	25. H St/I-5 NB Ramp	26. H St/Woodlawn Ave	27. H St/Broadway
			
28. H St/5th Ave	**29. H St/4th Ave**	**30. H St/3rd Ave**	**31. H St/2nd Ave**
			
32. H St/1st Ave	**33. H St/Hilltop Dr**		
			

Legend:

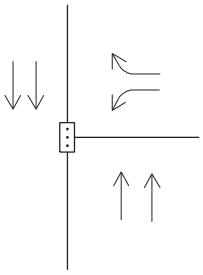
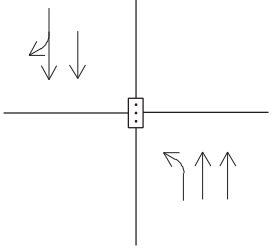
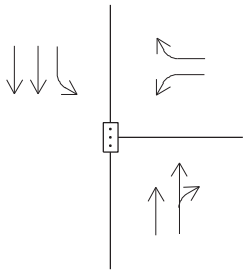
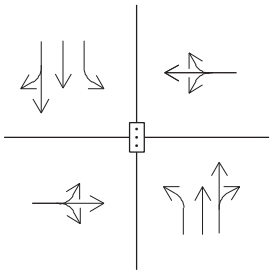
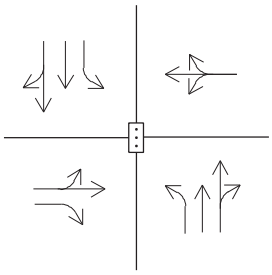
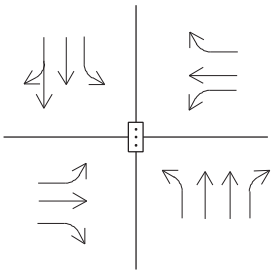
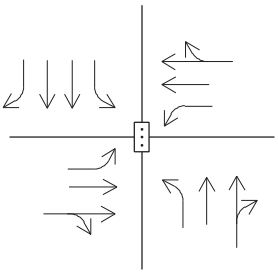
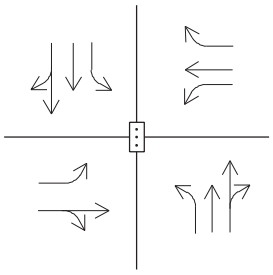
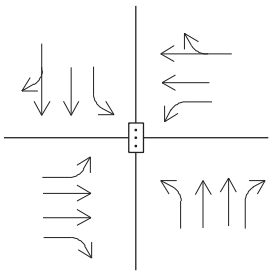
Traffic Signal

Figure 3-1.2

Existing Intersection Geometrics

KIMLEY-HORN and ASSOCIATES

BROADWAY CORRIDOR

34. Broadway/ SR-54 WB Off-Ramp	35. Broadway/ SR-54 EB On-Ramp	36. Broadway/C St	37. Broadway/D St
			
38. Broadway/Flower St	**39. Broadway/I St**	**40. Broadway/J St**	**41. Broadway/K St**
			
42. Broadway/L St			
			

Legend:

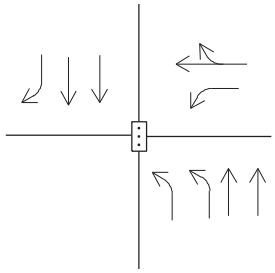
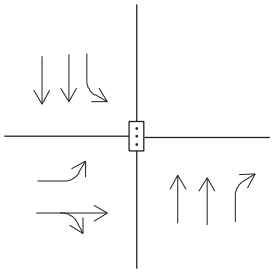
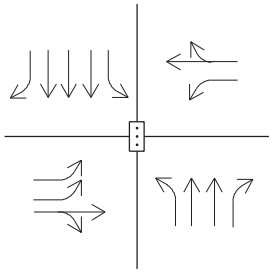
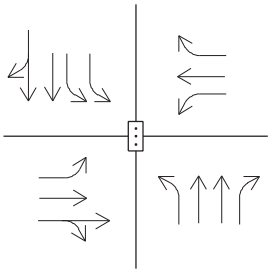
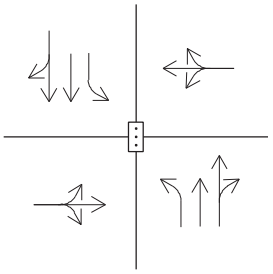
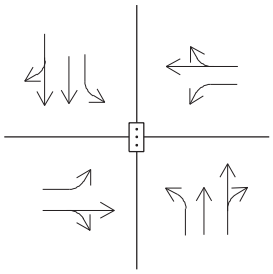
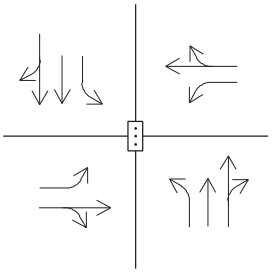
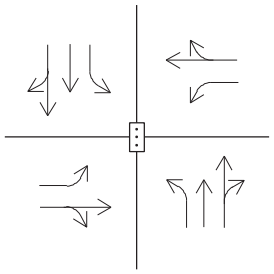
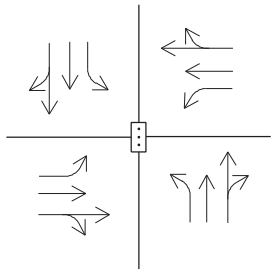
Traffic Signal

Figure 3-1.3

KIMLEY-HORN and ASSOCIATES

Existing Intersection Geometrics

4TH AVENUE CORRIDOR

43. 4th Ave/SR-54 WB Ramp	44. 4th Ave/SR-54 EB Ramp	45. 4th Ave/Brisbane St	46. 4th Ave/C St
			
47. 4th Ave/D St	**48. 4th Ave/I St**	**49. 4th Ave/J St**	**50. 4th Ave/K St**
			
51. 4th Ave/L St			
			

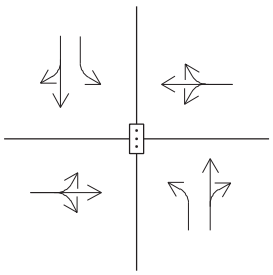
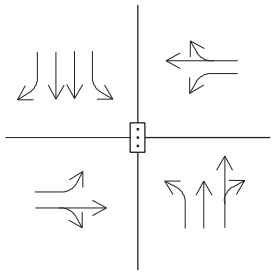
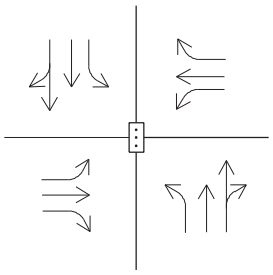
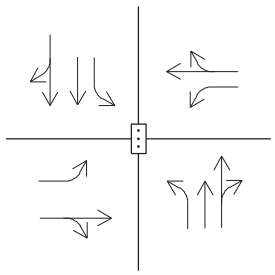
Legend:

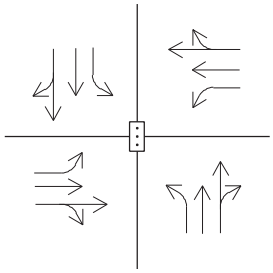
Traffic Signal

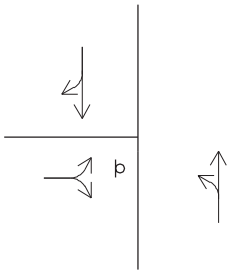
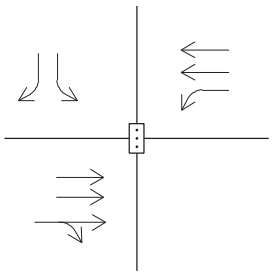
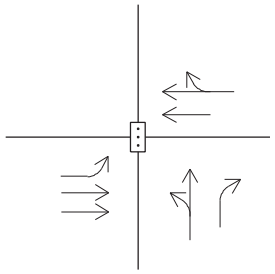
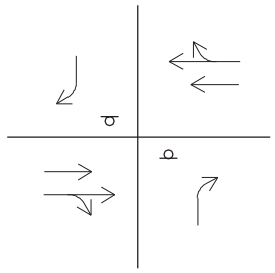
Figure 3-1.4

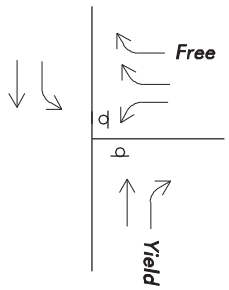
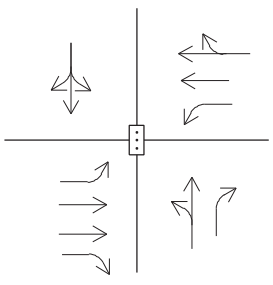
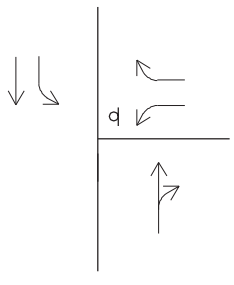
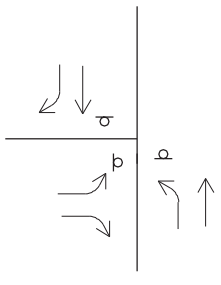
Existing Intersection Geometrics

3RD AVENUE CORRIDOR

52. 3rd Ave/Davidson Dr	53. 3rd Ave/I St	54. 3rd Ave/J St	55. 3rd Ave/K St
			

56. 3rd Ave/L St


57. 2nd Ave/D St	58. I-5 SB Ramps/J St	59. I-5 NB Ramps/J St	60. Woodlawn/J St
			

61. Bay Blvd/L St	62. Industrial Blvd/L St	63. Bay Blvd/I-5 SB Ramps	64. Industrial Blvd/I-5 NB Ramps
* 			

* *Intersection analyzed with NB/SB free-flow movement and WB being stop-controlled.*

Legend:

- Traffic Signal
- Stop Sign

Figure 3-1.5

KIMLEY-HORN and ASSOCIATES

Existing Intersection Geometrics

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PLOTTED : 10/7/2005

KIMLEY-HORN and ASSOCIATES

Figure 3-2

Existing Roadway Geometrics

Traffic Volumes

Existing a.m. (7:00 a.m. to 9:00 a.m.) and p.m. (4:00 p.m. to 6:00 p.m.) peak-hour turning movement counts were conducted by Southland Car Counters, Turning Point Traffic Service, and Traffic Data Service Southwest at the study intersections. These counts were taken during several different time periods in 2004/2005 and are summarized in **Table 3-2**. The existing ADT for the roadway segments were obtained from the City of Chula Vista. Dates of these counts ranged between 1995 and 2003 and are summarized in **Table 3-3**.

TABLE 3-2
INTERSECTION SEGMENT COUNT DATA SOURCE

	INTERSECTION	SOURCE	DATE
1	Bay Blvd-I-5 SB Ramp @ E St	TPTS	11/16/04
2	I-5 NB Ramp @ E St	TPTS	11/23/04
3	Woodlawn Ave @ E St	SCC	6/16/04
4	Broadway @ E St	SCC	6/22/04
5	5th Ave @ E St	SCC	6/23/04
6	4th Ave @ E St	SCC	6/22/04
7	3rd Ave @ E St	SCC	6/23/04
8	2nd Ave @ E St	SCC	6/23/04
9	1st Ave @ E St	SCC	6/23/04
10	Flower St @ E St	SCC	6/23/04
11	Bonita Glen Dr @ Bonita Rd	SCC	6/23/04
12	Bay Blvd @ F St	TPTS	11/18/04
13	Broadway @ F St	SCC	6/16/04
14	5th Ave @ F St	SCC	6/24/04
15	4th Ave @ F St	SCC	6/23/04
16	3rd Ave @ F St	SCC	6/16/04
17	2nd Ave @ F St	TDSS	4/20/05
18	Broadway @ G St	SCC	6/22/04
19	5th Ave @ G St	SCC	6/16/04
20	4th Ave @ G St	SCC	6/16/04
21	3rd Ave @ G St	SCC	6/22/04
22	2nd Ave @ G St	TDSS	4/20/05
23	Hilltop Dr @ G St	TDSS	4/20/05
24	I-5 SB Ramp @ H St	TPTS	11/18/04
25	I-5 NB Ramp @ H St	SCC	11/14/04
26	Woodlawn Ave @ H St	SCC	1/19/04
27	Broadway @ H St	SCC	1/15/04
28	5th Ave @ H St	SCC	1/15/04
29	4th Ave @ H St	SCC	1/14/04
30	3rd Ave @ H St	SCC	1/14/04
31	2nd Ave @ H St	SCC	1/14/04
32	1st Ave @ H St	SCC	1/15/04

Notes:
SCC = Southland Car Counters; TPTS = Turning Point Traffic Services, TDSS = Traffic Data Service Southwest

TABLE 3-2
INTERSECTION SEGMENT COUNT DATA SOURCE (Continued)

	INTERSECTION	SOURCE	DATE
33	Hilltop Dr @ H St	SCC	1/15/04
34	Broadway @ SR-54 WB Ramp	TDSS	4/20/05
35	Broadway @ SR-54 EB Ramp	TDSS	4/20/05
36	Broadway @ C St	SCC	6/16/04
37	Broadway @ D Street	SCC	6/16/04
38	Broadway @ Flower St	SCC	6/16/04
39	Broadway @ I St	TDSS	4/20/05
40	Broadway @ J St	TDSS	3/30/05
41	Broadway @ K St	TDSS	4/20/05
42	Broadway @ L St	TDSS	4/20/05
43	4th Ave @ SR-54 WB Ramp	TDSS	4/20/05
44	4th Ave @ SR-54 EB Ramp	TDSS	4/20/05
45	4th Ave @ Brisbane St	SCC	6/16/04
46	4th Ave @ C St	SCC	6/16/04
47	4th Ave @ D St	SCC	6/16/04
48	4th Ave @ I St	SCC	6/23/04
49	4th Ave @ J St	SCC	6/16/04
50	4th Ave @ K St	SCC	6/16/04
51	4th Ave @ L St	SCC	6/16/04
52	3rd Ave @ Davidson St	SCC	6/23/04
53	3rd Ave @ I St	SCC	6/23/04
54	3rd Ave @ J St	SCC	6/16/04
55	3rd Ave @ K St	SCC	6/16/04
56	3rd Ave @ L St	SCC	6/16/04
57	2nd Ave @ D St	TDSS	5/3/05
58	J St @ I-5 SB Ramp	TPTS	11/16/04
59	J St @ I-5 NB Ramp	TPTS	11/16/04
60	Woodlawn Ave @ J St	TDSS	4/20/05
61	L St @ Bay Blvd	TPTS	11/17/04
62	L St @ Industrial Blvd	TPTS	11/17/04
63	Bay Blvd @ I-5 SB Ramp	TPTS	11/17/04
64	Industrial Blvd @ I-5 NB Ramp	TPTS	11/17/04

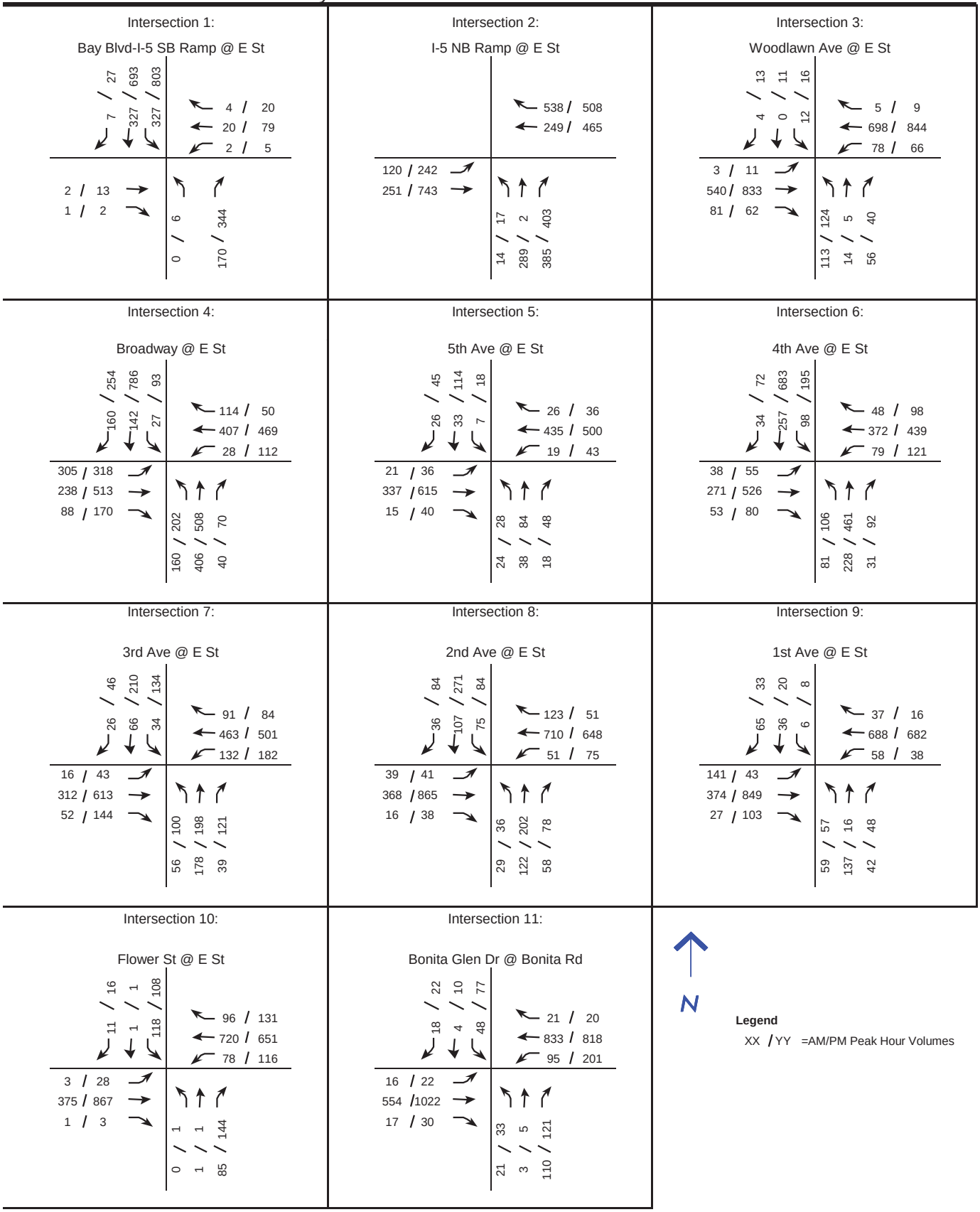
Notes:
SCC = Southland Car Counters; TPTS = Turning Point Traffic Services, TDSS = Traffic Data Service Southwest

TABLE 3-3
ROADWAY SEGMENT COUNT DATA SOURCE

STREET	SEGMENT	COUNT SOURCE	COUNT DATE
E Street	I-5 - Woodlawn Avenue	City of Chula Vista	2003
	Woodlawn Avenue - Broadway	City of Chula Vista	2003
	Broadway - First Avenue	City of Chula Vista	2002/2003
F Street	Bay Boulevard - Broadway	City of Chula Vista	2000
	Broadway - 3rd Avenue	City of Chula Vista	1996/2000/2001
H Street	I-5 - Broadway	City of Chula Vista	2002
	Broadway - Hilltop Drive	City of Chula Vista	2002/2003
J Street	Bay Boulevard - Broadway	City of Chula Vista	2002/2003
L Street	I-5 - Broadway	City of Chula Vista	2002/2003
Woodlawn Avenue	E Street – F Street	City of Chula Vista	2002/2003
	G Street – H Street	City of Chula Vista	2002/2003
Broadway	C Street - E Street	City of Chula Vista	1997
	E Street - H Street	City of Chula Vista	1996/1997/2003
	H Street - L Street	City of Chula Vista	1997/2003
4th Avenue	C Street - E Street	City of Chula Vista	2000
	E Street - H Street	City of Chula Vista	1996/2002
	H Street - L Street	City of Chula Vista	1995/1996/2000/2003
3rd Avenue	C Street - E Street	City of Chula Vista	1995/1996
	E Street - H Street	City of Chula Vista	2002
	H Street - L Street	City of Chula Vista	2002/2003

Figures 3-3 to **3-3.5** illustrate the existing peak-hour traffic volumes at the study intersections and **Figure 3-4** illustrates the existing ADT volumes along the roadway segments.

Appendix B contains the existing peak-hour traffic volume data at the study intersections and the existing ADT volume data for the roadway segments.


Intersection 1:
Bay Blvd-I-5 SB Ramp @ E St
27 / 693 / 803
7 / 327 / 327
4 / 20
20 / 79
2 / 5
2 / 13
1 / 2
0 / 6 / 344
170
Intersection 2:
I-5 NB Ramp @ E St
538 / 508
249 / 465
120 / 242
251 / 743
14 / 17 / 2 / 403
289 / 385
Intersection 3:
Woodlawn Ave @ E St
13 / 11 / 16
4 / 0 / 12
5 / 9
698 / 844
78 / 66
3 / 11
540 / 833
81 / 62
113 / 124 / 5 / 40
14 / 56
Intersection 4:
Broadway @ E St
254 / 786 / 93
160 / 142 / 27
114 / 50
407 / 469
28 / 112
305 / 318
238 / 513
88 / 170
160 / 202 / 508 / 70
406 / 40
Intersection 5:
5th Ave @ E St
45 / 114 / 18
26 / 33 / 7
26 / 36
435 / 500
19 / 43
21 / 36
337 / 615
15 / 40
24 / 28 / 84 / 48
38 / 18
Intersection 6:
4th Ave @ E St
72 / 683 / 195
34 / 257 / 98
48 / 98
372 / 439
79 / 121
38 / 55
271 / 526
53 / 80
81 / 106 / 461 / 92
228 / 31
Intersection 7:
3rd Ave @ E St
46 / 210 / 134
26 / 66 / 34
91 / 84
463 / 501
132 / 182
16 / 43
312 / 613
52 / 144
56 / 100 / 198 / 121
178 / 39
Intersection 8:
2nd Ave @ E St
84 / 271 / 84
36 / 107 / 75
123 / 51
710 / 648
51 / 75
39 / 41
368 / 865
16 / 38
29 / 36 / 122 / 202 / 78
58
Intersection 9:
1st Ave @ E St
33 / 20 / 8
65 / 36 / 6
37 / 16
688 / 682
58 / 38
141 / 43
374 / 849
27 / 103
59 / 57 / 137 / 16 / 48
42
Intersection 10:
Flower St @ E St
16 / 1 / 108
11 / 1 / 118
96 / 131
720 / 651
78 / 116
3 / 28
375 / 867
1 / 3
0 / 1 / 1 / 144
1 / 85
Intersection 11:
Bonita Glen Dr @ Bonita Rd
22 / 10 / 77
18 / 4 / 48
21 / 20
833 / 818
95 / 201
16 / 22
554 / 1022
17 / 30
21 / 33 / 3 / 5 / 110 / 121
N
Legend
XX / YY =AM/PM Peak Hour Volumes

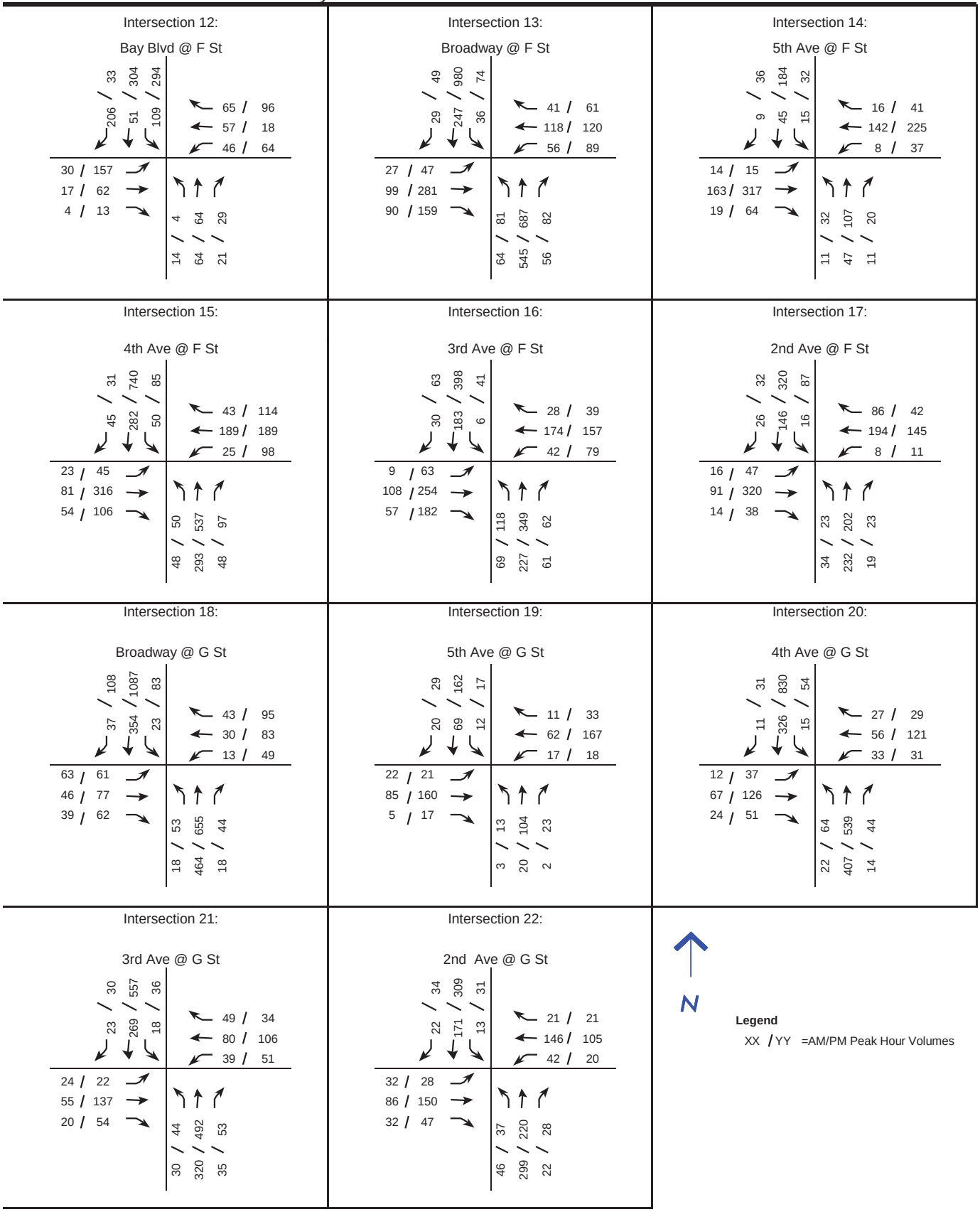
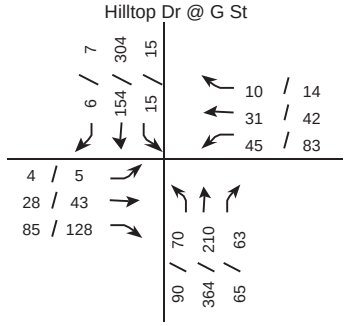


Figure 3-3.1

Existing Peak-Hour Traffic Volumes

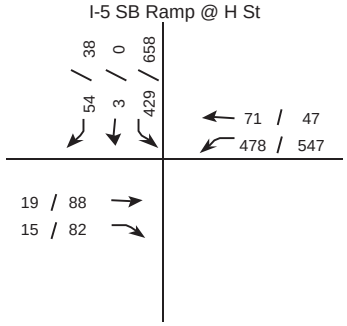
Intersection 23:

Hilltop Dr @ G St



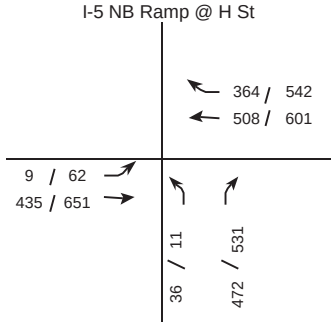
Intersection 24:

I-5 SB Ramp @ H St



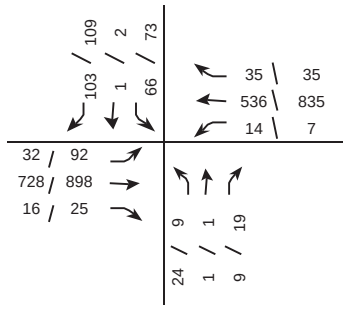
Intersection 25:

I-5 NB Ramp @ H St



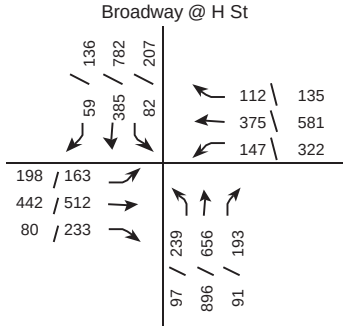
Intersection 26:

Woodlawn Ave @ H St



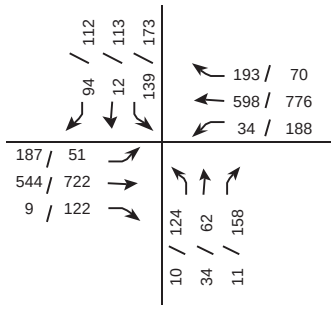
Intersection 27:

Broadway @ H St



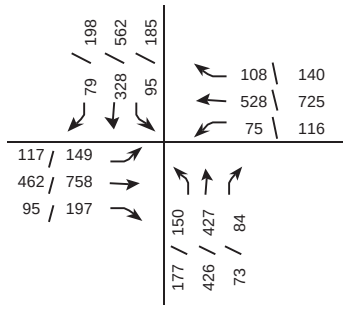
Intersection 28:

5th Ave @ H St



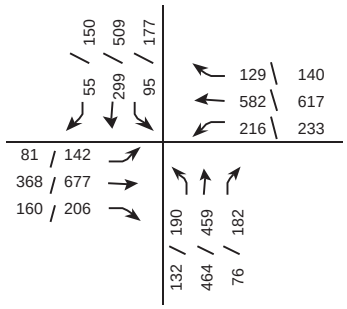
Intersection 29:

4th Ave @ H St



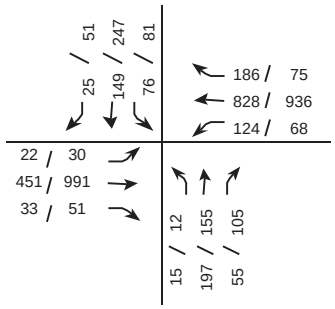
Intersection 30:

3rd Ave @ H St



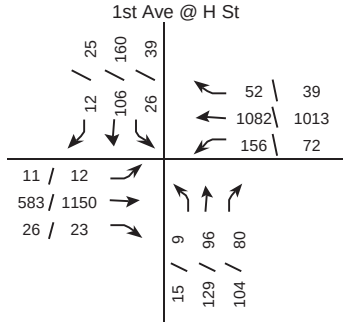
Intersection 31:

2nd Ave @ H St



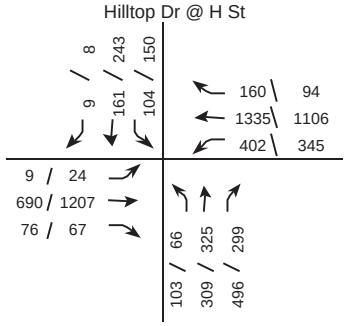
Intersection 32:

1st Ave @ H St



Intersection 33:

Hilltop Dr @ H St



Legend

XX / YY =AM/PM Peak Hour Volumes

Figure 3-3.2

Existing Peak-Hour Traffic Volumes

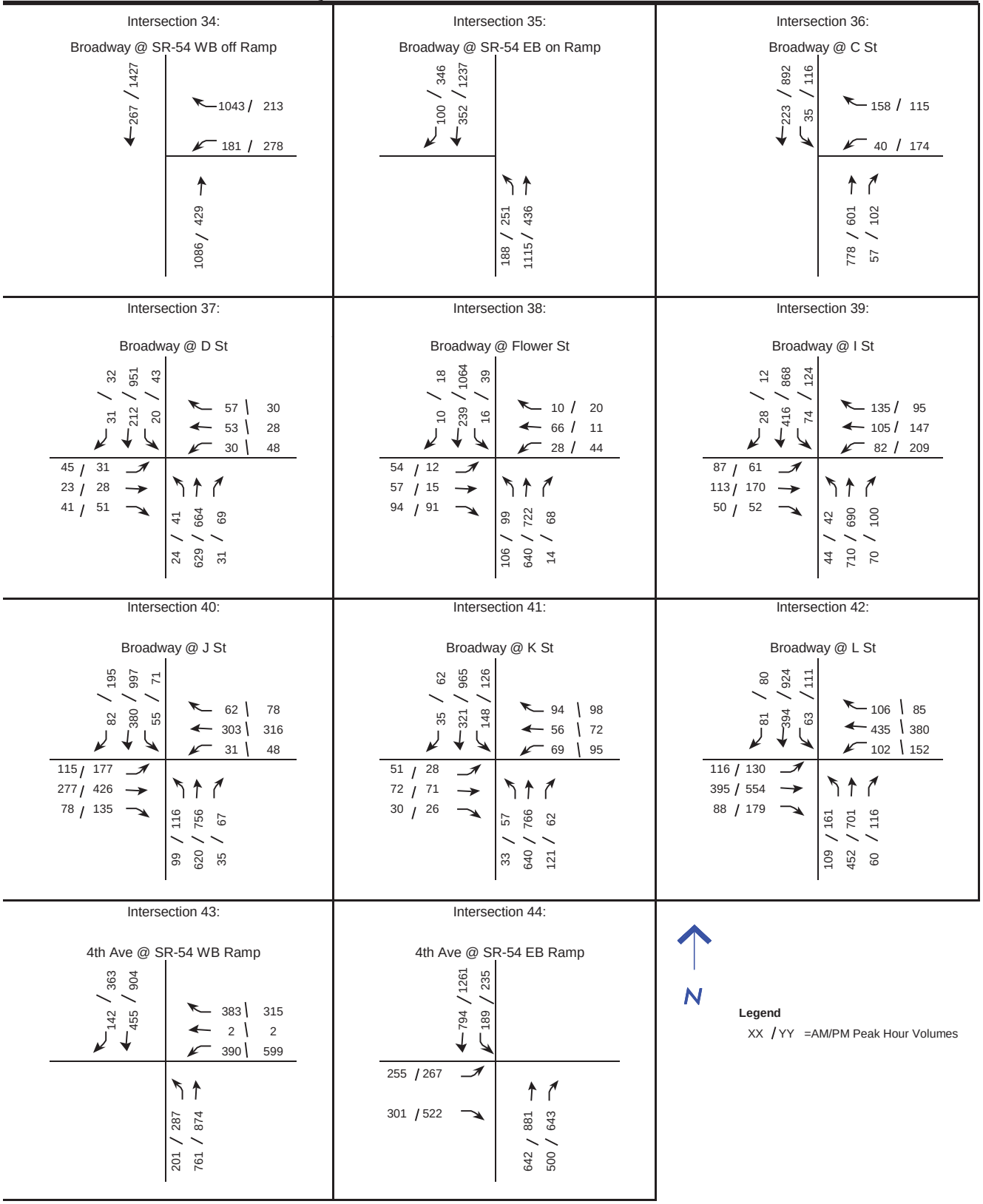


Figure 3-3.3

Existing Peak-Hour Traffic Volumes

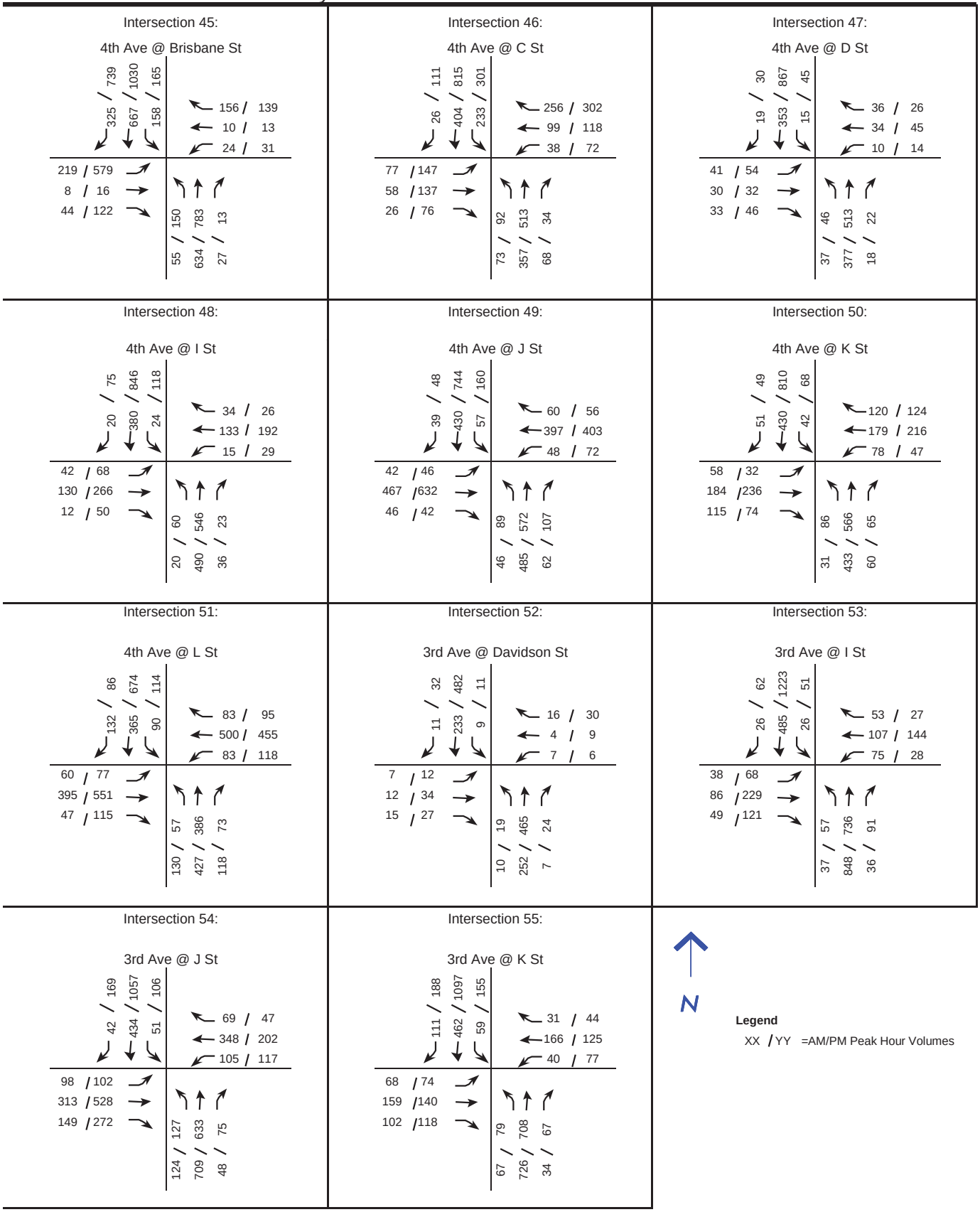
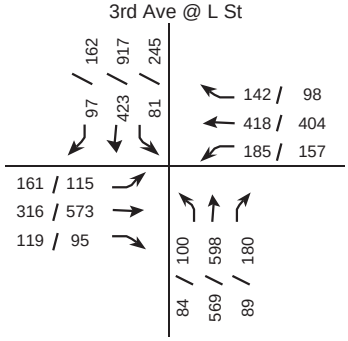


Figure 3-3.4

Existing Peak-Hour Traffic Volumes

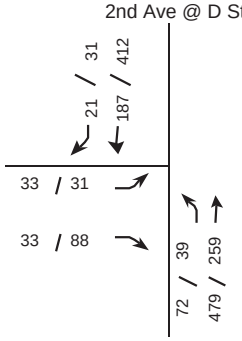
Intersection 56:

3rd Ave @ L St



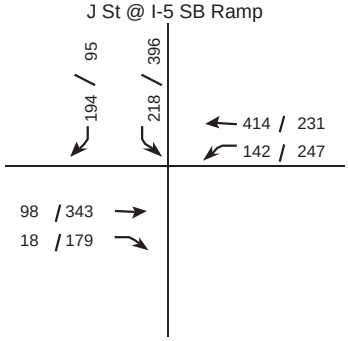
Intersection 57:

2nd Ave @ D St



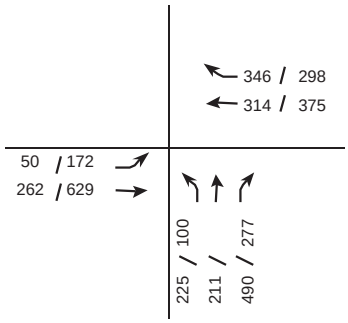
Intersection 58:

J St @ I-5 SB Ramp



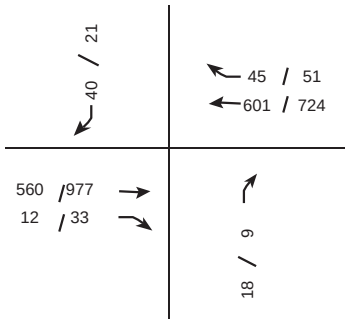
Intersection 59:

J St @ I-5 NB Ramp



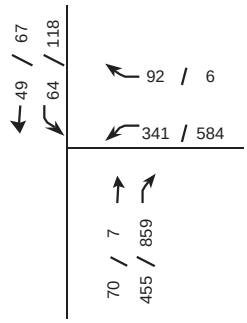
Intersection 60:

Woodlawn Ave @ J St



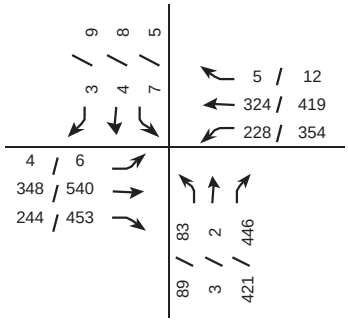
Intersection 61:

L St @ Bay Blvd



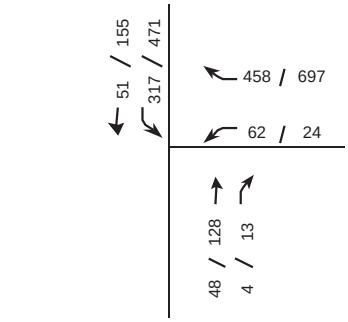
Intersection 62:

L St @ Industrial Blvd



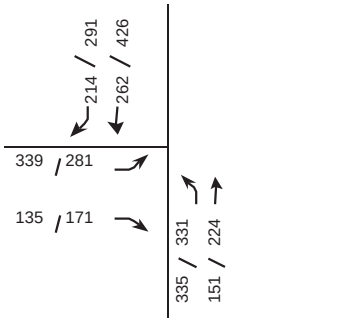
Intersection 63:

Bay Blvd @ I-5 SB Ramp



Intersection 64:

Industrial Blvd @ I-5 NB Ramp



Legend

XX / YY =AM/PM Peak Hour Volumes

Figure 3-3.5

Existing Peak-Hour Traffic Volumes

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PLOTTED : 10/7/2005

KIMLEY-HORN and ASSOCIATES

Figure 3-4

Existing ADT Volumes

Intersection Analysis

Table 3-4 displays the LOS analysis results for the study intersections under Existing Conditions. As shown in this table, all study intersections operate at LOS D or better during both peak periods, except for the following intersections:

- #34 Broadway @ SR-54 WB Ramp (LOS F – AM Peak);
- #61 L Street @ Bay Boulevard (LOS F – PM Peak); and
- #63 Bay Boulevard @ I-5 SB Ramp (LOS E – PM Peak).

It should be noted that the E Street and H Street intersections at the I-5 interchange (including Woodlawn Avenue) do not take into account the queues associated with the at-grade trolley crossings at both of these locations. As noted in the methodology section, the E Street and H Street intersections affected by the trolley crossing would experience additional delay along the arterial and at adjacent intersections. Additional delays would be between 17 and 40 seconds per vehicle (depending on the direction and time of day) and drop the LOS by at least one grade.

Appendix C contains the peak-hour intersections LOS calculation worksheets.

Roadway Segment Analysis

Table 3-5 summarizes the existing condition LOS analysis for the roadway segments located in the Urban Core. The existing volume is compared to the acceptable volume as defined in the City of Chula Vista's General Plan. Roadway segments that are part of the Urban Core Circulation Element have an acceptable volume equal to LOS D or better. All other roadway segments within the City have an acceptable volume equal to LOS C or better. As shown in this table, all Urban Core roadways currently function at LOS D or better.

Existing Transit Service

The Urban Core of Chula Vista is currently served by 11 Chula Vista Transit (CVT) routes (Routes 701, 702, 703, 704, 705, 706, 707, 708, 709, 711, and 712), two Metropolitan Transit System (MTS) routes (Routes 929 and 932), and the San Diego Trolley's Blue Line. Several CVT transit routes circulate within the Urban Core and Bayfront area; others serve the greater Chula Vista area and provide connections to National City Transit and other transit providers. MTS route 929 runs along 3rd and 4th Avenues through the Urban Core; MTS transit route 932 runs along Broadway. The San Diego Trolley's Blue Line provides service between Qualcomm Stadium and San Ysidro/Tijuana and extends through the Urban Core parallel to and on the east side of I-5, with stations at Bayfront/E Street and H Street. Service is provided seven days a week with service starting around 5:00 a.m. and ending around 12:00 a.m. During the peak periods, service is provided with 7.5-minute headways and 15 minutes during the off-peak periods.

Figure 3-5 displays the existing transit routes in the Urban Core.

TABLE 3-4

EXISTING CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY

	INTERSECTION	PEAK HOUR	EXISTING	
			DELAY (a)	LOS (b)
1	Bay Blvd-I-5 SB Ramp @ E St	AM	10.1	B
		PM	16.6	B
2	I-5 NB Ramp @ E St	AM	33.2	C
		PM	18.2	B
3	Woodlawn Ave @ E St	AM	21.7	C
		PM	15.5	B
4	Broadway @ E St	AM	16.9	B
		PM	26.3	C
5	5th Ave @ E St	AM	5.0	A
		PM	6.4	A
6	4th Ave @ E St	AM	13.5	B
		PM	18.8	B
7	3rd Ave @ E St	AM	11.9	B
		PM	15.2	B
8	2nd Ave @ E St	AM	7.3	A
		PM	11.0	B
9	1st Ave @ E St	AM	6.8	A
		PM	5.5	A
10	Flower St @ E St	AM	10.6	B
		PM	12.5	B
11	Bonita Glen Dr @ Bonita Rd	AM	12.1	B
		PM	16.5	B
12	Bay Blvd @ F St	AM	8.8	A
		PM	14.7	B
13	Broadway @ F St	AM	16.5	B
		PM	24.1	C
14	5th Ave @ F St	AM	5.7	A
		PM	8.2	A
15	4th Ave @ F St	AM	13.5	B
		PM	17.7	B
16	3rd Ave @ F St	AM	13.9	B
		PM	19.2	B
17	2nd Ave @ F St	AM	9.7	A
		PM	12.5	B
18	Broadway @ G St	AM	12.3	B
		PM	14.9	B
19	5th Ave @ G St	AM	6.3	A
		PM	7.5	A
20	4th Ave @ G St	AM	8.9	A
		PM	10.3	B

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 3-4

EXISTING CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	EXISTING	
			DELAY (a)	LOS (b)
21	3rd Ave @ G St	AM	8.6	A
		PM	9.2	A
22	2nd Ave @ G St	AM	14.1	B
		PM	16.3	C
23	Hilltop Dr @ G St	AM	16.7	C
		PM	14.4	B
24	I-5 SB Ramp @ H St	AM	28.8	C
		PM	21.1	C
25	I-5 NB Ramp @ H St	AM	12.7	B
		PM	14.8	B
26	Woodlawn Ave @ H St	AM	38.0	D
		PM	22.3	C
27	Broadway @ H St	AM	25.7	C
		PM	27.1	C
28	5th Ave @ H St	AM	10.8	B
		PM	11.3	B
29	4th Ave @ H St	AM	22.1	C
		PM	29.2	C
30	3rd Ave @ H St	AM	19.3	B
		PM	23.8	C
31	2nd Ave @ H St	AM	8.4	A
		PM	11.5	B
32	1st Ave @ H St	AM	7.6	A
		PM	8.2	A
33	Hilltop Dr @ H St	AM	32.2	C
		PM	41.3	D
34	Broadway @ SR-54 WB Ramp	AM	82.9	**F**
		PM	11.8	B
35	Broadway @ SR-54 EB Ramp	AM	3.3	A
		PM	6.3	A
36	Broadway @ C St	AM	18.1	B
		PM	15.1	B
37	Broadway @ D Street	AM	9.2	A
		PM	10.2	B
38	Broadway @ Flower St	AM	11.5	B
		PM	14.0	B
39	Broadway @ I St	AM	16.3	B
		PM	17.3	B
40	Broadway @ J St	AM	13.6	B
		PM	18.6	B

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 3-4

EXISTING CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	EXISTING	
			DELAY (a)	LOS (b)
41	Broadway @ K St	AM	11.7	B
		PM	13.2	B
42	Broadway @ L St	AM	15.5	B
		PM	20.4	C
43	4th Ave @ SR-54 WB Ramp	AM	14.7	B
		PM	25.9	C
44	4th Ave @ SR-54 EB Ramp	AM	13.4	B
		PM	27.2	C
45	4th Ave @ Brisbane St	AM	21.5	C
		PM	27.3	C
46	4th Ave @ C St	AM	23.2	C
		PM	31.4	C
47	4th Ave @ D St	AM	9.1	A
		PM	10.5	B
48	4th Ave @ I St	AM	8.8	A
		PM	10.1	B
49	4th Ave @ J St	AM	9.3	A
		PM	15.7	B
50	4th Ave @ K St	AM	8.5	A
		PM	10.1	B
51	4th Ave @ L St	AM	24.6	C
		PM	26.6	C
52	3rd Ave @ Davidson St	AM	9.9	A
		PM	13.2	B
53	3rd Ave @ I St	AM	10.1	B
		PM	12.2	B
54	3rd Ave @ J St	AM	18.8	B
		PM	35.9	D
55	3rd Ave @ K St	AM	9.5	A
		PM	11.0	B
56	3rd Ave @ L St	AM	18.1	B
		PM	27.0	C
57	2nd Ave @ D St	AM	14.9	B
		PM	14.9	B
58	J St @ I-5 SB Ramp	AM	8.9	A
		PM	15.1	B
59	J St @ I-5 NB Ramp	AM	10.6	B
		PM	8.2	A
60	Woodlawn Ave @ J St	AM	11.0	B
		PM	11.9	B

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 3-4

EXISTING CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

INTERSECTION		PEAK HOUR	EXISTING	
			DELAY (a)	LOS (b)
61	L St @ Bay Blvd	AM	16.8	C
		PM	120.3	**F**
62	L St @ Industrial Blvd	AM	18.9	B
		PM	25.4	C
63	Bay Blvd @ I-5 SB Ramp	AM	22.2	C
		PM	48.6	**E**
64	Industrial Blvd @ I-5 NB Ramp	AM	15.4	C
		PM	17.7	C

Notes:
Bold values indicate intersections operating at LOS E or F.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 3-5

EXISTING CONDITIONS ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

STREET	SEGMENT	STREET CLASSIFICATION (b)	DAILY TRAFFIC VOLUME	ACCEPTABLE VOLUME	LOS E CAPACITY	VOLUME TO CAPACITY (V/C)	DAILY SEGMENT LOS
E Street	I-5 - Woodlawn Avenue	4 Lanes Gateway Street	26,924	43,200	48,000	0.56 (b)	A
	Woodlawn Avenue - Broadway	4 Lanes Gateway Street	21,997	43,200	48,000	0.46 (b)	A
	Broadway - 1st Avenue	4 Lanes Urban Arterial	17,493	37,800	42,000	0.42 (b)	A
	1st Avenue - I-805	4 Lanes Gateway Street	17,966	43,200	48,000	0.37 (b)	A
F Street	Bay Boulevard - Woodlawn Avenue	4 Lanes Downtown Promenade	5,336	33,750	37,500	0.14 (b)	A
	Woodlawn Avenue - Broadway	4 Lanes Downtown Promenade	9,263	33,750	37,500	0.25 (b)	A
	Broadway - 4th Avenue	2 Lanes Downtown Promenade	8,574	14,400	16,000	0.54 (b)	A
	4th Avenue - 3rd Avenue	4 Lanes Downtown Promenade	11,395	33,750	37,500	0.30 (b)	A
H Street	I-5 - Broadway	4 Lanes Gateway Street (c)	33,116	43,200	48,000	0.69 (b)	B
	Broadway - 3rd Avenue	4 Lanes Urban Arterial	24,637	37,800	42,000	0.59 (b)	A
	3rd Avenue - Hilltop Drive	4 Lanes Urban Arterial	27,474	37,800	42,000	0.65 (b)	A
	Hilltop Drive - I-805	4 Lanes Gateway Street (c)	40,184	43,200	48,000	0.84 (b)	D
J Street	Bay Boulevard - Broadway	4 Lanes Major Street	19,024	40,000	37,500	0.51 (b)	A
L Street	I-5 - Broadway	4 Lanes Gateway Street	15,450	43,200	48,000	0.32 (b)	A
	Broadway - Hilltop Drive	4 Lanes Class I Collector	16,430	22,000	27,500	0.60 (b)	A
Woodlawn Avenue	E Street - F Street	2 Lanes Downtown Promenade	4,900	14,400	16,000	0.31 (b)	A
	G Street - H Street	2 Lanes Downtown Promenade	2,600	14,400	16,000	0.16 (b)	A
Broadway	SR-54 - C Street	4 Lanes Gateway Street	22,107	43,200	48,000	0.46 (b)	A
	C Street - E Street	4 Lanes Commercial Boulevard	20,015	33,750	37,500	0.53 (b)	A
	E Street - H Street	4 Lanes Commercial Boulevard	23,208	33,750	37,500	0.62 (b)	B
	H Street - K Street	4 Lanes Commercial Boulevard	25,713	33,750	37,500	0.69 (b)	B
	K Street - L Street	4 Lanes Commercial Boulevard	26,599	33,750	37,500	0.71 (b)	C
	South of L Street	4 Lanes Major Street	27,053	40,000	37,500	0.72	C
4th Avenue	SR-54 - C Street	4 Lanes Gateway Street (c)	36,923	43,200	48,000	0.77 (b)	C
	C Street - E Street	4 Lanes Urban Arterial	17,812	37,800	42,000	0.42 (b)	A
	E Street - H Street	4 Lanes Urban Arterial	17,001	37,800	42,000	0.40 (b)	A
	H Street - L Street	4 Lanes Urban Arterial	16,101	37,800	42,000	0.38 (b)	A
3rd Avenue	C Street - E Street	4 Lanes Commercial Boulevard	7,220	33,750	37,500	0.19 (b)	A
	E Street - G Street	4 Lanes Downtown Promenade	14,413	33,750	37,500	0.38 (b)	A
	G Street - H Street	4 Lanes Downtown Promenade	18,071	33,750	37,500	0.48 (b)	A
	H Street - L Street	4 Lanes Commercial Boulevard	23,459	33,750	37,500	0.63 (b)	B
	South of L Street	4 Lanes Class I Collector	21,814	22,000	27,500	0.79	C

NOTE: Values in **bold** indicate roadway segments exceeding the City's minimum performance standard.

(a) Street classification is based on the standards provided in the 2005 Chula Vista General Plan, but will be analyzed with existing number of lanes for each respective roadway segment.

(b) This roadway segment is part of the Urban Core Circulation Element.

(c) This roadway segment is classified as a 6-lane roadway, but is assumed to function as a 4-lane roadway for this scenario.

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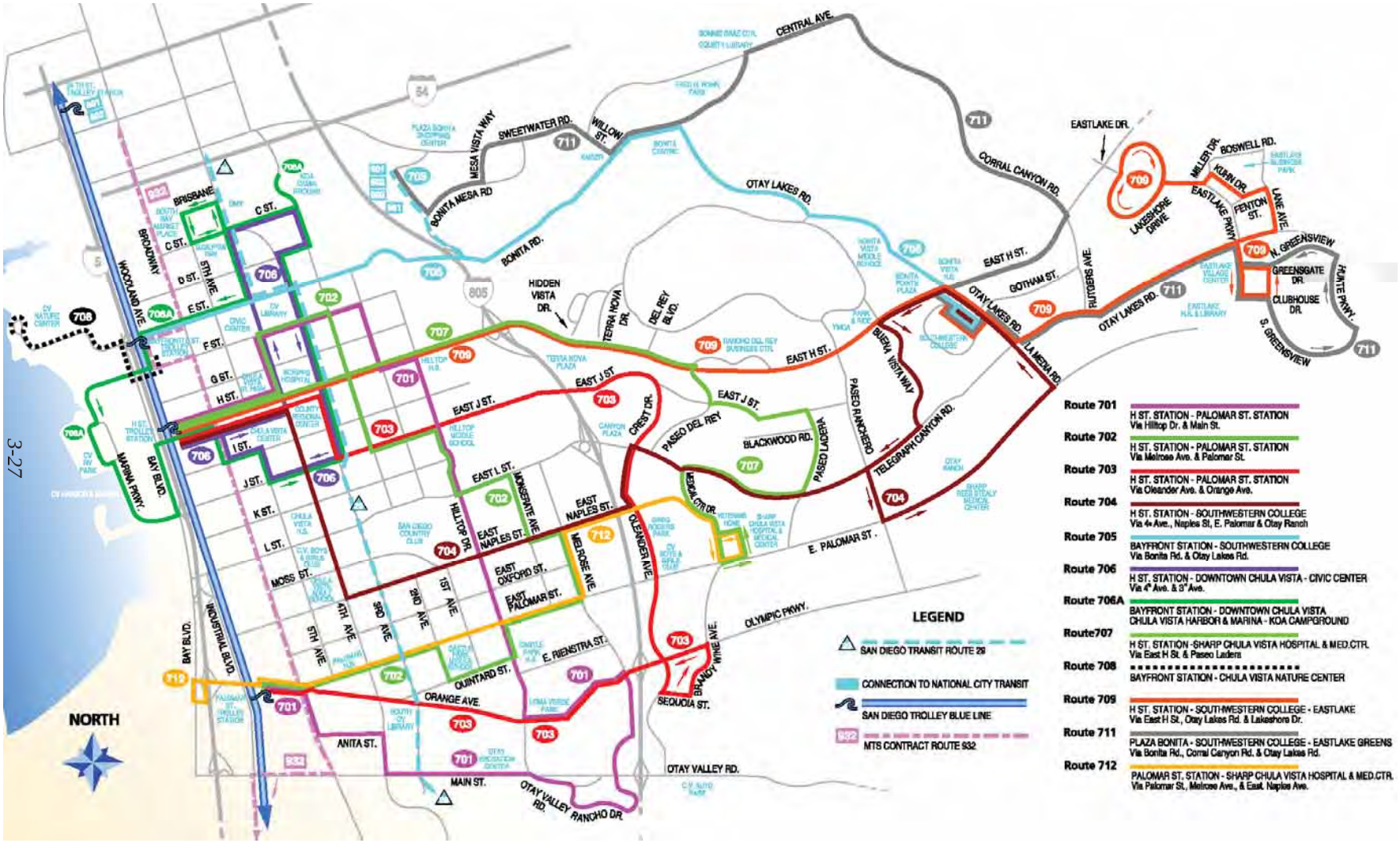

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Figure 3-5
Existing Transit Routes

4.0 URBAN CORE TRAFFIC

The following section describes the City of Chula Vista's Urban Core Specific Plan project including the projected land uses, Urban Core traffic generation, and transportation modeling assumptions.

Land Uses

In order to realize the vision for the urban core established by the updated General Plan, it was recognized that existing zoning for the Urban Core focus area or "subdistricts" needed "re-tooling". The 30+ year-old zoning regulations either precluded or created a cumbersome entitlement process to achieve the variety of living, employment, and service choices envisioned by the General Plan and quite common place in the 21st century. Therefore, the Specific Plan was prepared to provide a set of contemporary implementing tools to allow new development and redevelopment to occur over the next 20 to 25 years. To that end, the Specific Plan anticipates the following projected buildout over the life of the plan consistent with the General Plan, which is summarized in **Table 4-1**.

Figure 4-1 shows the location of the land uses assumed in the Urban Core.

TABLE 4-1
URBAN CORE SPECIFIC PLAN PROJECTED BUILDOUT

Land Use	Existing	Net Increase	Total
Residential	3,700 du	7,100 du	10,800 du
Retail	3,000,000 sf	1,000,000 sf	4,000,000 sf
Office	2,400,000 sf	1,300,000 sf	3,700,000 sf
Visitor Serving Commercial	--	1,300,000 sf	1,300,000 sf

Note:
All totals are approximate and may include a combination of new infill development and existing uses.

Urban Core Traffic Generation

The traffic associated with the Urban Core has been included in the traffic volumes used for the General Plan Update. The traffic forecasts from the General Plan Update were used for the UCSP transportation analysis because the trip generation for the Urban Core is generally consistent with the General Plan land uses associated projected traffic volumes and distribution patterns. Based on the Urban Core land uses shown in Figure 4-1, **Table 4-2** summarizes the trip generation for the Chula Vista Urban Core project. As shown in the table, a total of approximately 331,100 ADT is expected with the full build-out of the Urban Core. This would be an increase of 141,100 ADT over existing conditions. The largest percentage increase in ADT would occur from the residential land use, with an increase of approximately 100 percent.

TABLE 4-2
TRIP GENERATION SUMMARY

Land Use	Existing ADT	Net ADT Increase	Total ADT
Residential	22,200	42,600	64,800
Retail	120,000	40,000	160,000
Office	48,000	26,000	74,000
Visitor Serving Commercial	--	32,500	32,500
TOTALS	**190,200**	**141,100**	**331,100**

Note:
Trip generation values shown above were based rates referenced in the *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, SANDAG, April 2002. (6 trips/du for residential, 40 trips/1,000 sf for retail, 20 trips/1,000 sf for office, and 50% hotel/50% retail for visitor serving commercial)

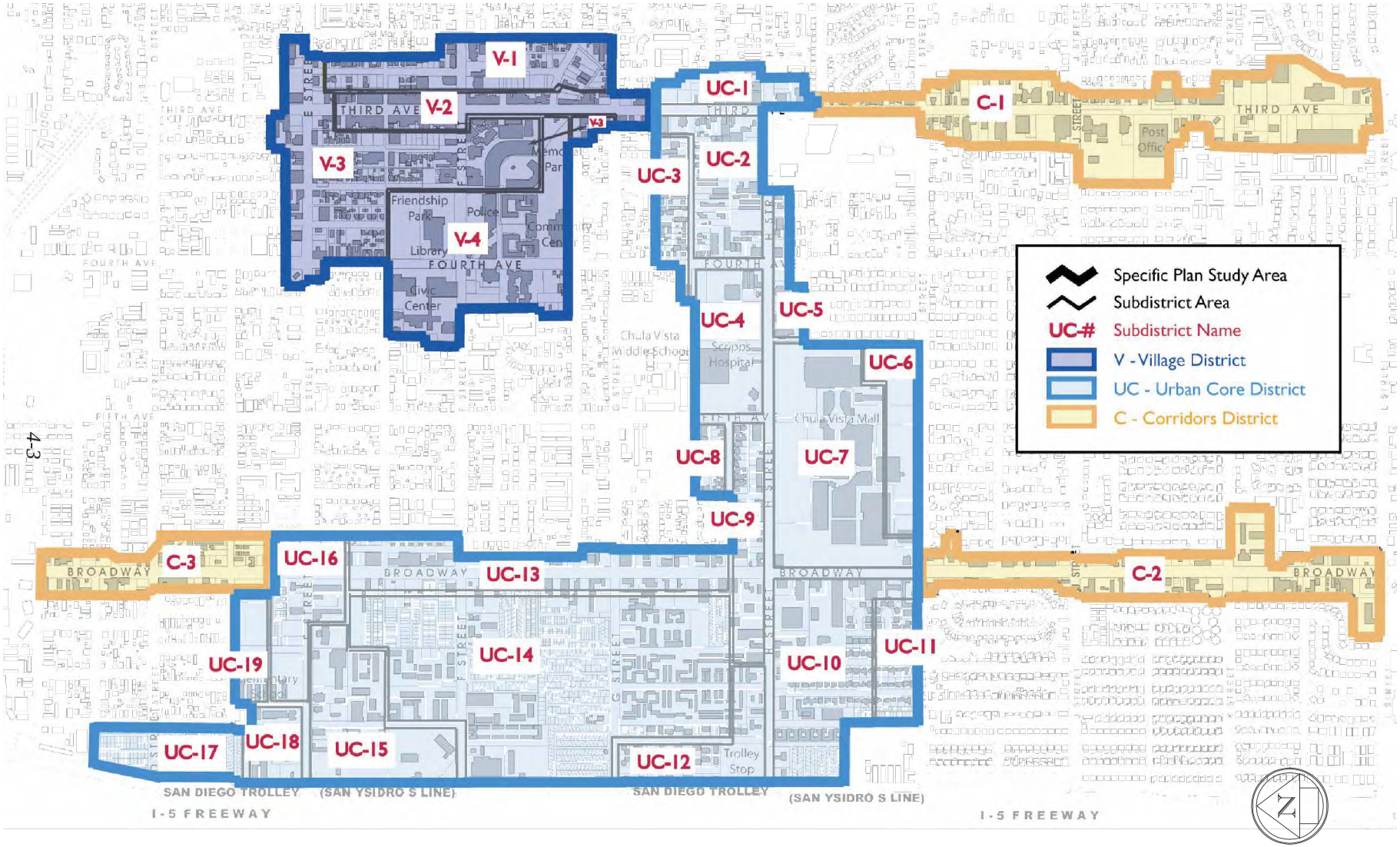

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Figure 4-1
Location of Urban Core Land Uses

Transportation Modeling

Traffic volumes for of the proposed Urban Core Specific Plan were generated using the SANDAG TRANPLAN regional traffic model, which is based on Series 10 employment and population projections for the San Diego region. This computerized model takes land use and transportation network information as inputs and estimates the volumes of traffic on existing and future roadways under long-term future conditions using the four-step Urban Transportation Planning Process:

1) Trip generation;

2) Mode split;

3) Trip distribution; and

4) Traffic assignment.

Regional transportation infrastructure was modeled using SANDAG's "reasonably expected" Mobility 2030 assumptions and General Plan land use assumptions. The following list summarizes the land use and network assumptions evaluated in this study:

Land Use Assumptions
- Full build-out of planned future land uses in the City of Chula Vista
- 2030 Population and Employment in the region
- See General Plan for other/all considerations

Network Assumptions
- Woodlawn Avenue would not be connected between F Street and G Street. H Street between Broadway and Hilltop Drive would be reclassified from a six-lane major to four-lane major (Circulation element changes within Urban Core. For other changes in Chula Vista, refer to Figure 1.2-1 of the City of Chula Vista General Plan shown in **Appendix D**.)
- SR-125 is a four-lane toll road
- See General Plan for other/all considerations

Transit Assumptions
- Regional Transit Vision (RTV) described in the Regional Transportation Plan (RTP) emphasizes integration of transit service within communities and neighborhoods, makes use of high-occupancy vehicle (HOV) lanes and/or managed lanes, incorporates signal priority or transit-only lanes on arterials, increasing transit competitiveness with automobile trips, and improved transit customer service.

- Regional Comprehensive Plan (RCP) incorporates smart growth, which involves identifying appropriate land patterns and a complementary multi-modal transportation system so as to improve the viability of public transit and other travel modes for the whole range of trip types, including commuting, shopping, school, etc.
- A Yellow Car Bus Rapid Transit (BRT) route would be provided along I-5, additional Blue Line Light Rail Transit (LRT) service would be provided along the existing trolley tracks, and a BRT route would be provided along H Street connecting the west and east ends of Chula Vista (For other routes outside of the Urban Core, refer to Figure 1.2-3 of the City of Chula Vista General Plan shown in **Appendix D**.)

5.0 YEAR 2030 CONDITIONS

This section provides a description of the year 2030 traffic conditions with the full build-out of the City of Chula Vista's Urban Core Specific Plan project land uses.

Road Network

It was assumed that roads within the Urban Core would be reclassified, but not yet built to their ultimate classification. As a result, no changes would be made to the roadway network compared to Existing Conditions. See previously shown Figures 3-1 to 3-1.5 and 3-2 for the traffic control and lane configurations at the study intersections and the number of lanes and street classifications on each roadway segment in 2030, respectively.

Traffic Volumes

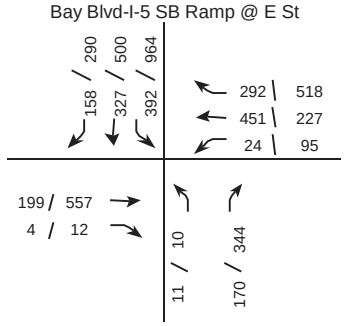
Year 2030 traffic volumes at study intersections were calculated by applying growth factors to existing traffic volumes. These growth factors were determined by comparing the Year 2030 ADT by the existing ADT for each respective roadway segment. This growth in traffic varied between a minimum of 10 percent to a more than doubling of traffic on some intersection approaches. In cases where extreme traffic growth was projected, adjustments were made to account for spreading of the peak hour. This spreading presumes that the peak hour may last for more than one hour in the morning or afternoon peak hour.

The Year 2030 Conditions ADT volumes along the roadway segments were obtained from SANDAG. This forecast model was based on Series 10 and included the Regional Transit Vision (RTV) assumption.

Figures 5-1 to **5-1.5** illustrate the Year 2030 Conditions peak-hour traffic volumes at the study intersections and **Figure 5-2** illustrates the Year 2030 Conditions ADT volumes along the roadway segments.

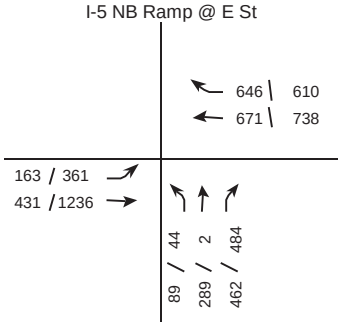
Intersection 1:

Bay Blvd-I-5 SB Ramp @ E St



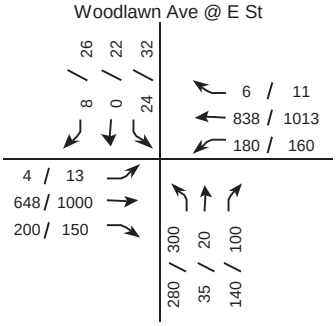
Intersection 2:

I-5 NB Ramp @ E St



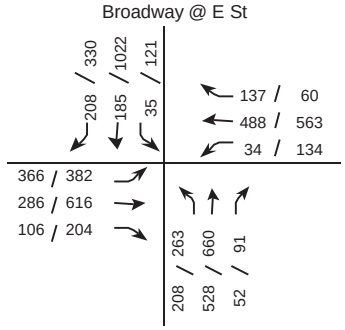
Intersection 3:

Woodlawn Ave @ E St



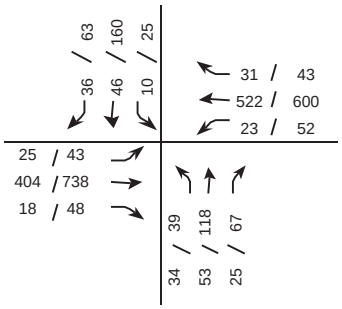
Intersection 4:

Broadway @ E St



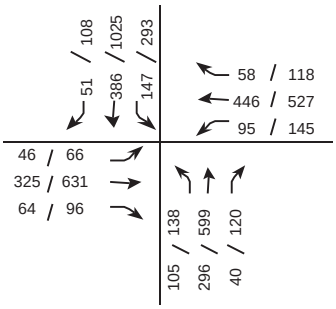
Intersection 5:

5th Ave @ E St



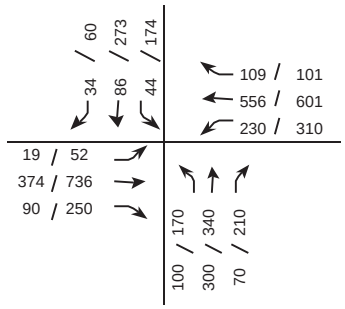
Intersection 6:

4th Ave @ E St



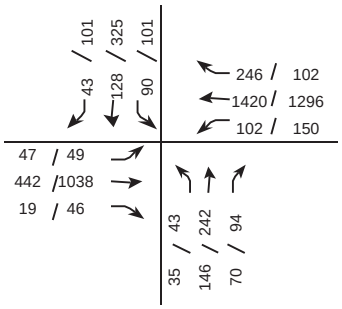
Intersection 7:

3rd Ave @ E St



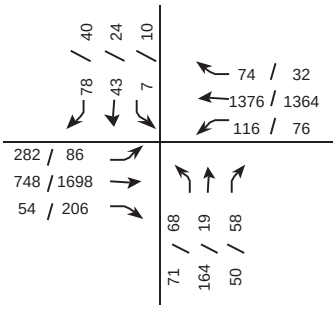
Intersection 8:

2nd Ave @ E St



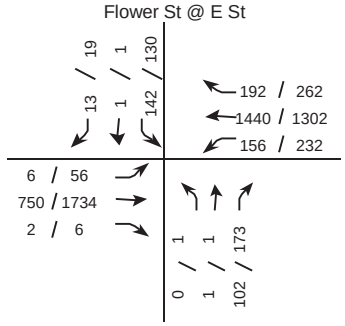
Intersection 9:

1st Ave @ E St



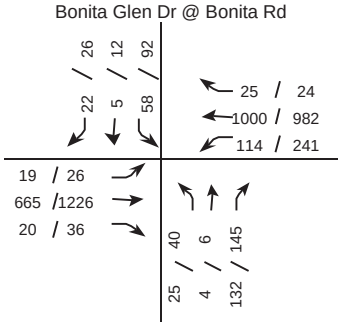
Intersection 10:

Flower St @ E St



Intersection 11:

Bonita Glen Dr @ Bonita Rd



Legend

XX / YY =AM/PM Peak Hour Volumes

Figure 5-1

Year 2030 Peak-Hour Traffic Volumes

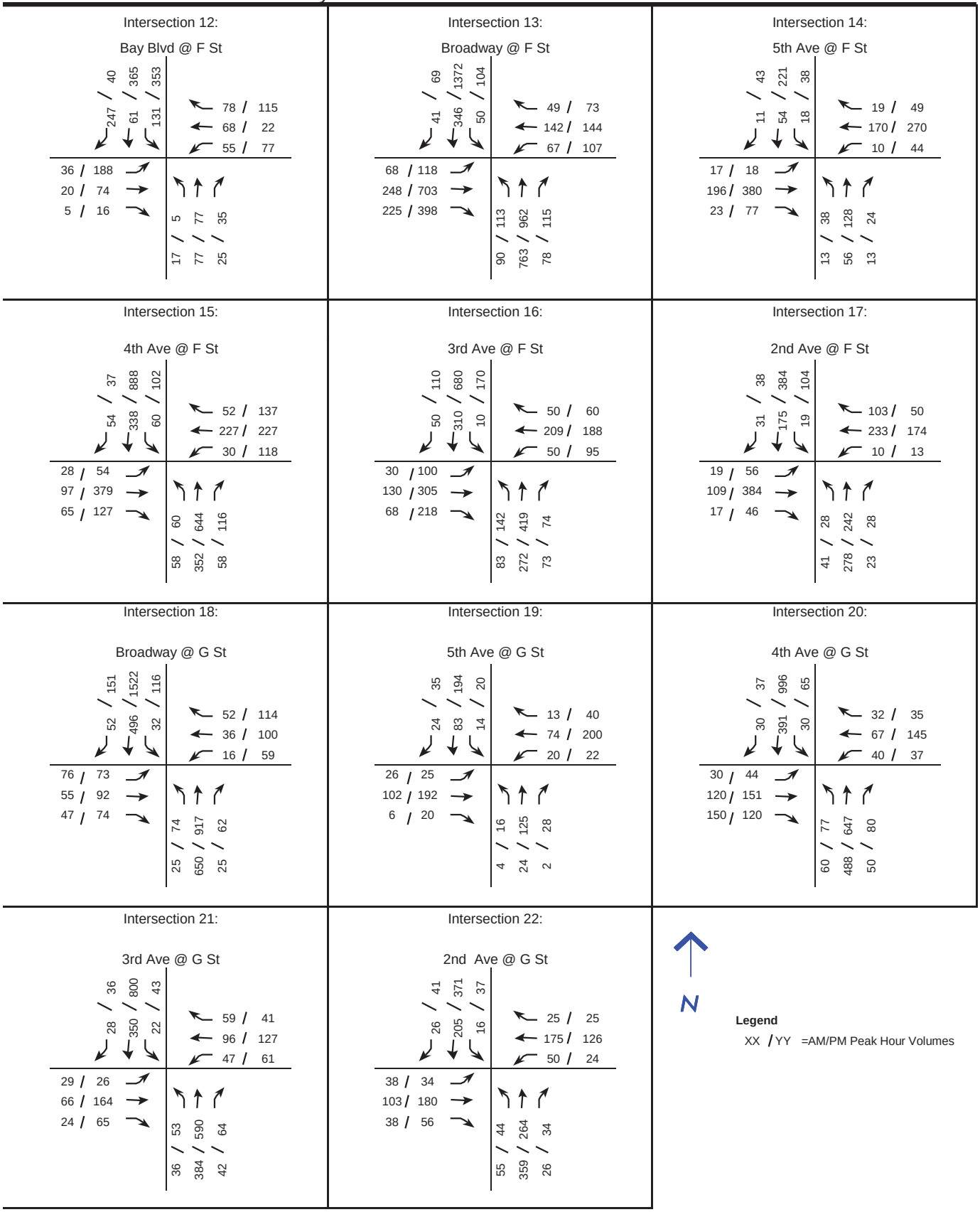


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Figure 5-1.1

Year 2030 Peak-Hour Traffic Volumes

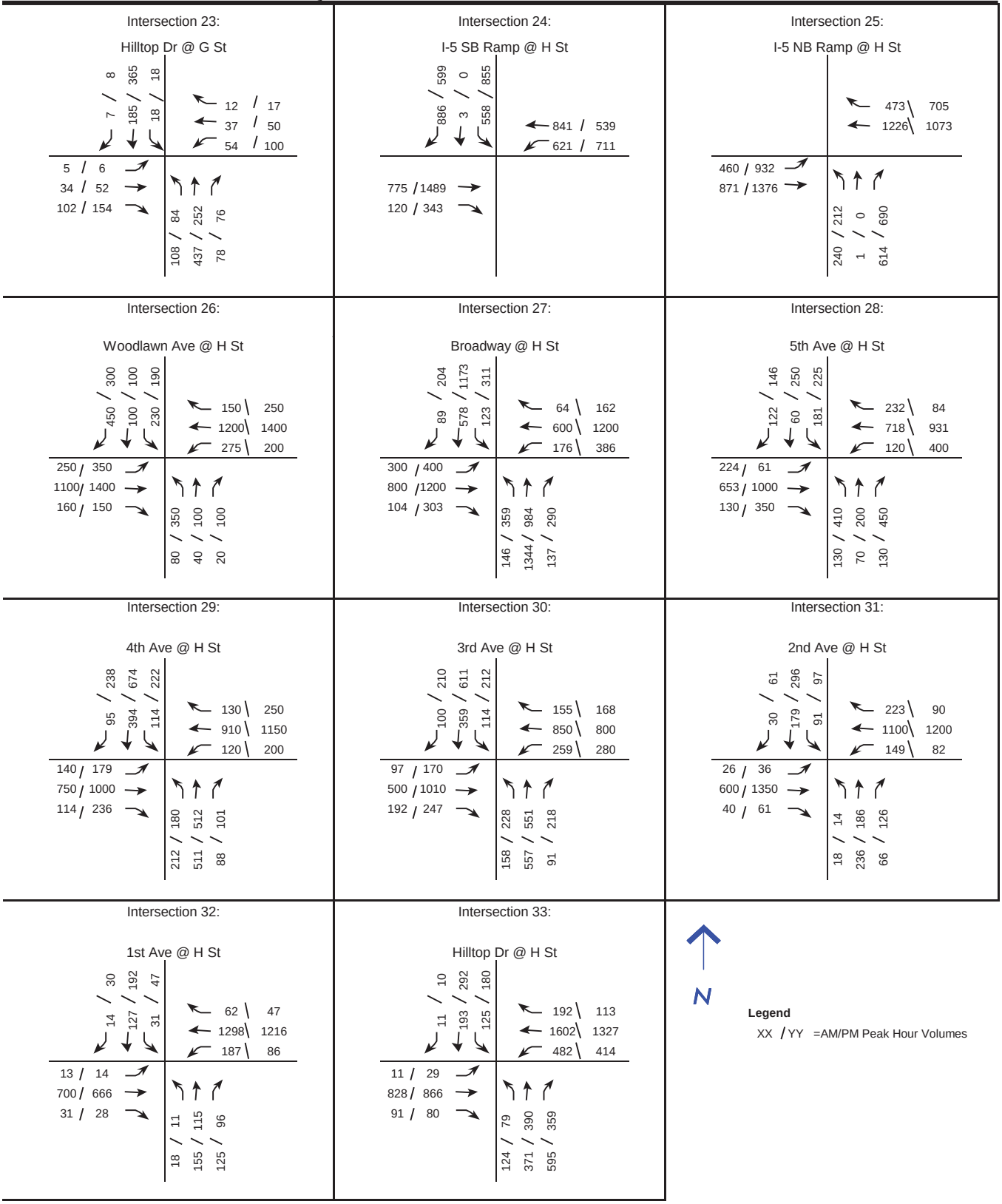

Figure 5-1.2

Year 2030 Peak-Hour Traffic Volumes

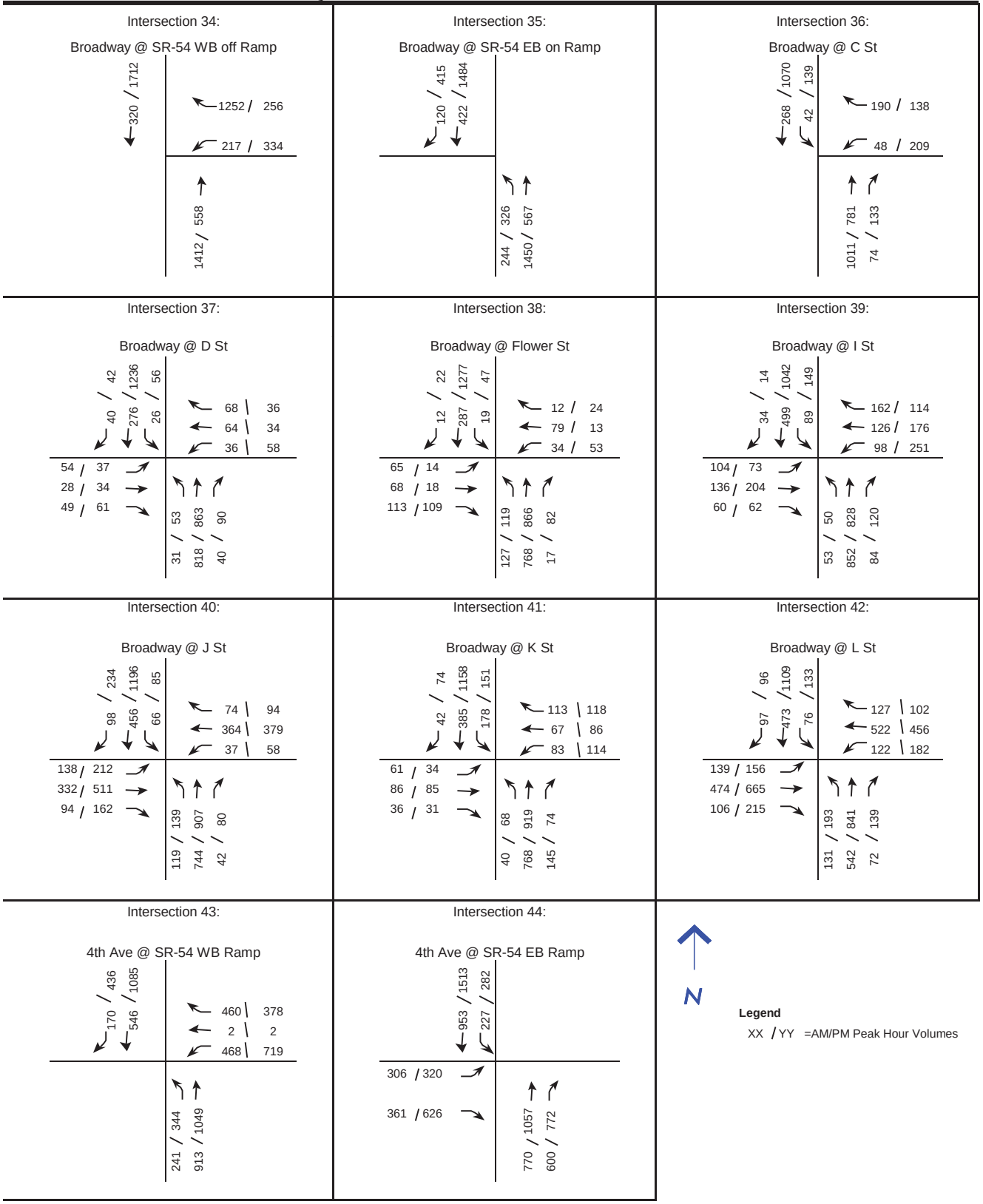

Figure 5-1.3
Year 2030 Peak-Hour Traffic Volumes

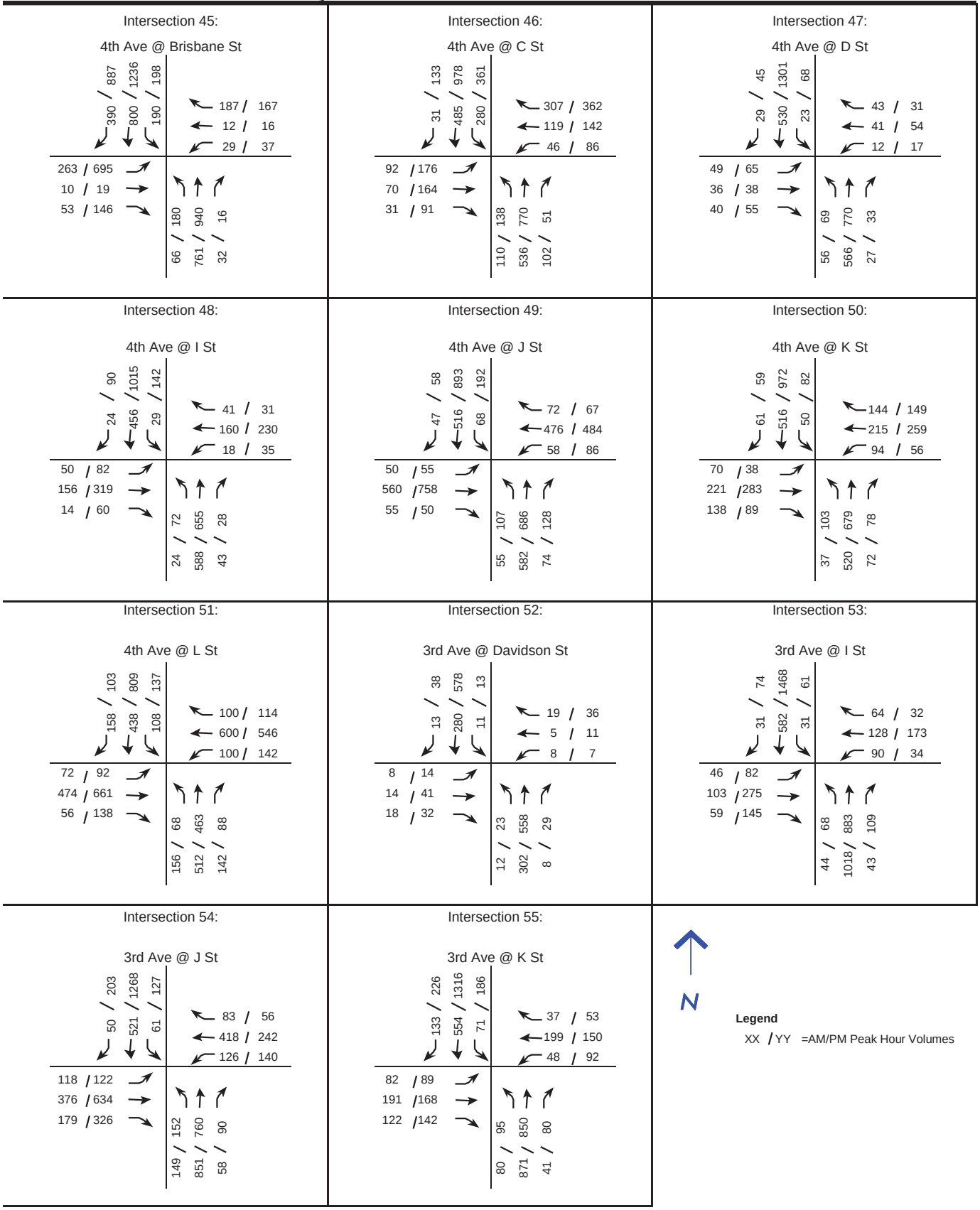

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Figure 5-1.4

Year 2030 Peak-Hour Traffic Volumes

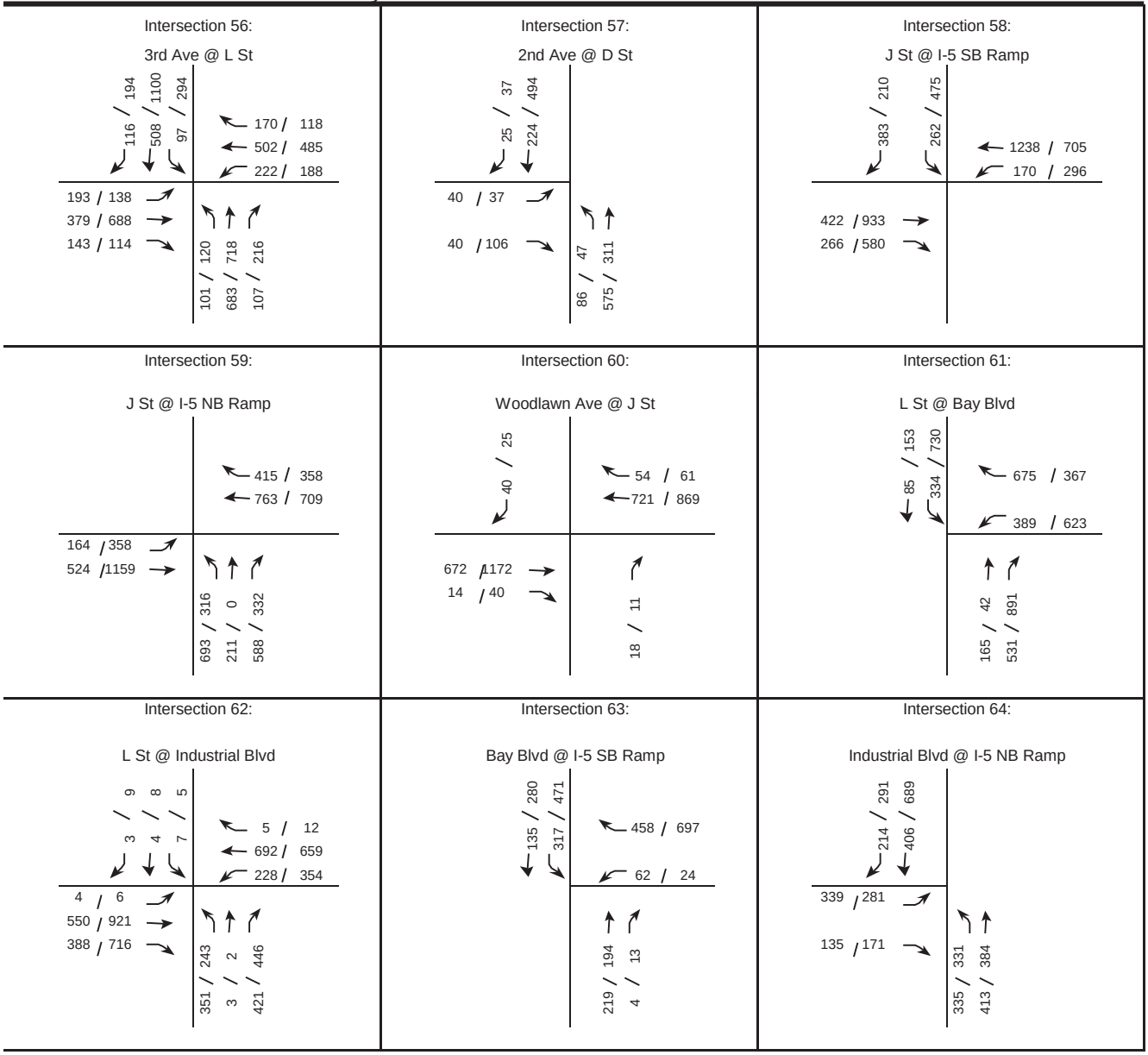

Figure 5-1.5

Year 2030 Peak-Hour Traffic Volumes

Figure 5-2

Year 2030 ADT Volumes

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Intersection Analysis

Table 5-1 displays the LOS analysis results for the study intersections under the Year 2030 Conditions scenario. As shown in this table, all study intersections operate at LOS D or better during both peak periods, except for the following 19 intersections:

- #1 Bay Boulevard/I-5 SB Ramp @ E Street (LOS E – AM Peak, LOS F – PM Peak);
- #2 I-5 NB Ramp @ E Street (LOS E – AM Peak);
- #13 Broadway @ F Street (LOS E – PM Peak);
- #24 I-5 SB Ramp @ H Street (LOS F – PM Peak);
- #25 I-5 NB Ramp @ H Street (LOS F – PM Peak);
- #26 Woodlawn Avenue @ H Street (LOS F – PM Peak);
- #27 Broadway @ H Street (LOS F – PM Peak);
- #28 5th Avenue @ H Street (LOS E – PM Peak);
- #29 4th Avenue @ H Street (LOS E – PM Peak);
- #33 Hilltop Drive @ H Street (LOS E – AM and PM Peak);
- #34 Broadway @ SR-54 WB Ramp (LOS F – AM Peak);
- #44 4th Avenue @ SR-54 EB Ramp (LOS F – PM Peak);
- #45 4th Avenue @ Brisbane Street (LOS E – PM Peak);
- #54 3rd Avenue @ J Street (LOS E – PM Peak);
- #57 2nd Avenue @ D Street (LOS E – PM Peak);
- #59 J Street @ I-5 NB Ramp (LOS F – AM Peak, LOS E – PM Peak);
- #61 L Street @ Bay Boulevard (LOS F – PM Peak);
- #63 Bay Boulevard @ I-5 SB Ramp (LOS F – AM and PM Peak); and
- #64 Industrial Boulevard @ I-5 NB Ramp (LOS F – PM Peak).

The majority of the interchange study intersections along I-5 or SR-54 would operate at an unacceptable LOS. In addition, many of the intersections along the H Street corridor would operate at an unacceptable LOS. As previously noted in Section 3, the delay at the E Street and H Street intersections affected by the trolley crossing would be worse than the delay shown in Table 5-1. Additional delays would be between 17 and 40 seconds per vehicle (depending on the direction and time of day) and drop the LOS by at least one grade. By providing a grade-separated trolley crossing at E Street and H Street, delays and LOS would be similar to the results shown in Table 5-1.

Appendix C contains the peak-hour intersections LOS calculation worksheets.

Roadway Segment Analysis

Table 5-2 summarizes the Year 2030 Conditions LOS analysis for the roadway segments located in the Urban Core. The projected volume, estimated using the approved transportation model of SANDAG, is compared to the acceptable volume of the roadways using the adopted functional classifications from the Chula Vista General Plan. As shown in this table, all roadway segments meet the adopted LOS standard of D for the Urban Street System, except for the following roadway segments:

- H Street between I-5 and Broadway (LOS F)
- H Street between Hilltop Drive and I-805 (LOS E)

TABLE 5-1

YEAR 2030 CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY

	INTERSECTION	PEAK HOUR	EXISTING		YEAR 2030		INCREASE IN DELAY	SIGNIFICANT IMPACT?
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
1	Bay Blvd-I-5 SB Ramp @ E St	AM	10.1	B	**58.4**	**E**	**48.3**	**YES**
		PM	16.6	B	**302.9**	**F**	**286.3**	**YES**
2	I-5 NB Ramp @ E St	AM	33.2	C	**60.5**	**E**	**27.3**	**YES**
		PM	18.2	B	31.9	C	13.7	NO
3	Woodlawn Ave @ E St	AM	21.7	C	25.8	C	4.1	NO
		PM	15.5	B	20.5	C	5.0	NO
4	Broadway @ E St	AM	16.9	B	30.3	C	13.4	NO
		PM	26.3	C	47.2	D	20.9	NO
5	5th Ave @ E St	AM	5.0	A	5.6	A	0.6	NO
		PM	6.4	A	7.7	A	1.3	NO
6	4th Ave @ E St	AM	13.5	B	16.2	B	2.7	NO
		PM	18.8	B	33.3	C	14.5	NO
7	3rd Ave @ E St	AM	11.9	B	12.9	B	1.0	NO
		PM	15.2	B	24.8	C	9.6	NO
8	2nd Ave @ E St	AM	7.3	A	15.5	B	8.2	NO
		PM	11.0	B	28.9	C	17.9	NO
9	1st Ave @ E St	AM	6.8	A	40.6	D	33.8	NO
		PM	5.5	A	10.1	B	4.6	NO
10	Flower St @ E St	AM	10.6	B	20.2	C	9.6	NO
		PM	12.5	B	37.1	D	24.6	NO
11	Bonita Glen Dr @ E St	AM	12.1	B	12.5	B	0.4	NO
		PM	16.5	B	23.0	C	6.5	NO
12	Bay Blvd @ F St	AM	8.8	A	9.8	A	1.0	NO
		PM	14.7	B	21.4	C	6.7	NO
13	Broadway @ F St	AM	16.5	B	17.7	B	1.2	NO
		PM	24.1	C	**66.1**	**E**	**42.0**	**YES**
14	5th Ave @ F St	AM	5.7	A	6.6	A	0.9	NO
		PM	8.2	A	10.0	A	1.8	NO
15	4th Ave @ F St	AM	13.5	B	15.3	B	1.8	NO
		PM	17.7	B	23.7	C	6.0	NO
16	3rd Ave @ F St	AM	13.9	B	15.9	B	2.0	NO
		PM	19.2	B	23.5	C	4.3	NO
17	2nd Ave @ F St	AM	9.7	A	13.4	B	3.7	NO
		PM	12.5	B	12.7	B	0.2	NO
18	Broadway @ G St	AM	12.3	B	14.0	B	1.7	NO
		PM	14.9	B	21.0	C	6.1	NO
19	5th Ave @ G St	AM	6.3	A	7.7	A	1.4	NO
		PM	7.5	A	8.3	A	0.8	NO
20	4th Ave @ G St	AM	8.9	A	12.8	B	3.9	NO
		PM	10.3	B	18.0	B	7.7	NO

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 5-1

YEAR 2030 CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	EXISTING		YEAR 2030		INCREASE IN DELAY	SIGNIFICANT IMPACT?
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
21	3rd Ave @ G St	AM	8.6	A	11.8	B	3.2	NO
		PM	9.2	A	10.5	B	1.3	NO
22	2nd Ave @ G St	AM	14.1	B	22.2	C	8.1	NO
		PM	16.3	C	32.3	D	16.0	NO
23	Hilltop Dr @ G St	AM	16.7	C	33.7	D	17.0	NO
		PM	14.4	B	24.1	C	9.7	NO
24	I-5 SB Ramp @ H St	AM	28.8	C	36.7	D	7.9	NO
		PM	21.1	C	**84.5**	**F**	**63.4**	**YES**
25	I-5 NB Ramp @ H St	AM	12.7	B	47.6	D	34.9	NO
		PM	14.8	B	**138.4**	**F**	**123.6**	**YES**
26	Woodlawn Ave @ H St	AM	38.0	D	33.7	C	-4.3	NO
		PM	22.3	**F**	**260.6**	**F**	**238.3**	**YES**
27	Broadway @ H St	AM	25.7	C	42.7	D	17.0	NO
		PM	27.1	C	**118.1**	**F**	**91.0**	**YES**
28	5th Ave @ H St	AM	10.8	B	15.2	B	4.4	NO
		PM	11.3	B	**61.6**	**E**	**50.3**	**YES**
29	4th Ave @ H St	AM	22.1	C	38.6	D	16.5	NO
		PM	29.2	C	**59.4**	**E**	**30.2**	**YES**
30	3rd Ave @ H St	AM	19.3	B	23.0	C	3.7	NO
		PM	23.8	C	39.7	D	15.9	NO
31	2nd Ave @ H St	AM	8.4	A	13.7	B	5.3	NO
		PM	11.5	B	31.4	C	19.9	NO
32	1st Ave @ H St	AM	7.6	A	9.8	A	2.2	NO
		PM	8.2	A	12.5	B	4.3	NO
33	Hilltop Dr @ H St	AM	32.2	C	**58.3**	**E**	**26.1**	**YES**
		PM	41.3	D	**74.2**	**E**	**32.9**	**YES**
34	Broadway @ SR-54 WB Ramp	AM	**82.9**	**F**	**190.6**	**F**	**107.7**	**YES**
		PM	11.8	B	16.2	B	4.4	NO
35	Broadway @ SR-54 EB Ramp	AM	3.3	A	10.1	B	6.8	NO
		PM	6.3	A	17.7	B	11.4	NO
36	Broadway @ C St	AM	18.1	B	20.1	C	2.0	NO
		PM	15.1	B	18.1	B	3.0	NO
37	Broadway @ D Street	AM	9.2	A	12.1	B	2.9	NO
		PM	10.2	B	14.9	B	4.7	NO
38	Broadway @ Flower St	AM	11.5	B	12.3	B	0.8	NO
		PM	14.0	B	17.4	B	3.4	NO
39	Broadway @ I St	AM	16.3	B	16.4	B	0.1	NO
		PM	17.3	B	21.1	C	3.8	NO
40	Broadway @ J St	AM	13.6	B	15.7	B	2.1	NO
		PM	18.6	B	29.6	C	11.0	NO

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

TABLE 5-1

YEAR 2030 CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	EXISTING		YEAR 2030		INCREASE IN DELAY	SIGNIFICANT IMPACT?
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
41	Broadway @ K St	AM	11.7	B	14.5	B	2.8	NO
		PM	13.2	B	16.4	B	3.2	NO
42	Broadway @ L St	AM	15.5	B	17.5	B	2.0	NO
		PM	20.4	C	34.7	C	14.3	NO
43	4th Ave @ SR-54 WB Ramp	AM	14.7	B	23.1	C	8.4	NO
		PM	25.9	C	42.3	D	16.4	NO
44	4th Ave @ SR-54 EB Ramp	AM	13.4	B	37.2	D	23.8	NO
		PM	27.2	C	**95.2**	**F**	**68.0**	**YES**
45	4th Ave @ Brisbane St	AM	21.5	C	25.8	C	4.3	NO
		PM	27.3	C	**61.5**	**E**	**34.2**	**YES**
46	4th Ave @ C St	AM	23.2	C	24.7	C	1.5	NO
		PM	31.4	C	40.0	D	8.6	NO
47	4th Ave @ D St	AM	9.1	A	13.5	B	4.4	NO
		PM	10.5	B	12.6	B	2.1	NO
48	4th Ave @ I St	AM	8.8	A	11.9	B	3.1	NO
		PM	10.1	B	18.0	B	7.9	NO
49	4th Ave @ J St	AM	9.3	A	12.0	B	2.7	NO
		PM	15.7	B	42.7	D	27.0	NO
50	4th Ave @ K St	AM	8.5	A	12.7	B	4.2	NO
		PM	10.1	B	20.0	B	9.9	NO
51	4th Ave @ L St	AM	24.6	C	27.6	C	3.0	NO
		PM	26.6	C	35.3	D	8.7	NO
52	3rd Ave @ Davidson St	AM	9.9	A	14.7	B	4.8	NO
		PM	13.2	B	19.2	B	6.0	NO
53	3rd Ave @ I St	AM	10.1	B	11.6	B	1.5	NO
		PM	12.2	B	18.3	B	6.1	NO
54	3rd Ave @ J St	AM	18.8	B	22.9	C	4.1	NO
		PM	35.9	D	**74.5**	**E**	**38.6**	**YES**
55	3rd Ave @ K St	AM	9.5	A	12.3	B	2.8	NO
		PM	11.0	B	22.4	C	11.4	NO
56	3rd Ave @ L St	AM	18.1	B	22.9	C	4.8	NO
		PM	27.0	C	44.1	D	17.1	NO
57	2nd Ave @ D St	AM	14.9	B	31.2	D	16.3	NO
		PM	14.9	B	**36.0**	**E**	**21.1**	**YES**
58	J St @ I-5 SB Ramp	AM	8.9	A	17.5	B	8.6	NO
		PM	15.1	B	40.4	D	25.3	NO
59	J St @ I-5 NB Ramp	AM	10.6	B	**135.2**	**F**	**124.6**	**YES**
		PM	8.2	A	**61.7**	**E**	**53.5**	**YES**
60	Woodlawn Ave @ J St	AM	11.0	B	16.3	C	5.3	NO
		PM	11.9	B	18.2	C	6.3	NO

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 5-1

YEAR 2030 CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	EXISTING		YEAR 2030		INCREASE IN DELAY	SIGNIFICANT IMPACT?
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)		
61	L St @ Bay Blvd	AM	16.8	C	22.7	C	5.9	NO
		PM	**120.3**	**F**	**203.0**	**F**	**82.7**	**YES**
62	L St @ Industrial Blvd	AM	18.9	B	30.9	C	12.0	NO
		PM	25.4	C	52.6	D	27.2	NO
63	Bay Blvd @ I-5 SB Ramp	AM	22.2	C	**84.0**	**F**	**61.8**	**YES**
		PM	48.6	**E**	**221.2**	**F**	**172.6**	**YES**
64	Industrial Blvd @ I-5 NB Ramp	AM	15.4	C	26.0	D	10.6	NO
		PM	17.7	C	**66.5**	**F**	**48.8**	**YES**

Notes:

ECL= Exceeds calculable limit . At intersections at or over capacity, the calculated delay value becomes unreliable.

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

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TABLE 5-2

YEAR 2030 ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

STREET	SEGMENT	STREET CLASSIFICATION (b)	DAILY TRAFFIC VOLUME	ACCEPTABLE VOLUME	LOS E CAPACITY	VOLUME TO CAPACITY (V/C)	DAILY SEGMENT LOS
E Street	I-5 - Woodlawn Avenue	4 Lanes Gateway Street	32,000	43,200	48,000	0.67 (b)	B
	Woodlawn Avenue - Broadway	4 Lanes Gateway Street	32,000	43,200	48,000	0.67 (b)	B
	Broadway - 1st Avenue	4 Lanes Urban Arterial	21,000	37,800	42,000	0.50 (b)	A
	1st Avenue - I-805	4 Lanes Gateway Street	24,000	43,200	48,000	0.50 (b)	A
F Street	Bay Boulevard - Woodlawn Avenue	4 Lanes Downtown Promenade	19,000	33,750	37,500	0.51 (b)	A
	Woodlawn Avenue - Broadway	4 Lanes Downtown Promenade	18,000	33,750	37,500	0.48 (b)	A
	Broadway - 4th Avenue	2 Lanes Downtown Promenade	11,000	14,400	16,000	0.69 (b)	B
	4th Avenue - 3rd Avenue	4 Lanes Downtown Promenade	13,000	33,750	37,500	0.35 (b)	A
H Street	I-5 - Broadway	4 Lanes Gateway Street (c)	52,000	43,200	48,000	1.08 (b)	**F**
	Broadway - 3rd Avenue	4 Lanes Urban Arterial	37,000	37,800	42,000	0.88 (b)	A
	3rd Avenue- Hilltop Drive	4 Lanes Urban Arterial	35,000	37,800	42,000	0.83 (b)	A
	Hilltop Drive - I-805	4 Lanes Gateway Street (d)	47,500	43,200	48,000	0.99 (b)	**E**
J Street	Bay Boulevard - Broadway	4 Lanes Major Street	25,000	40,000	37,500	0.67 (b)	B
L Street	I-5 - Broadway	4 Lanes Gateway Street	24,000	43,200	48,000	0.50 (b)	A
	Broadway - Hilltop Drive	4 Lanes Class I Collector	20,000	22,000	27,500	0.73 (b)	C
Woodlawn Avenue	E Street - F Street	2 Lanes Downtown Promenade	12,000	14,400	16,000	0.75 (b)	C
	G Street - H Street	2 Lanes Downtown Promenade	9,000	14,400	16,000	0.56 (b)	A
Broadway	SR-54 - C Street	4 Lanes Gateway Street	25,000	43,200	48,000	0.52 (b)	A
	C Street - E Street	4 Lanes Commercial Boulevard	28,000	33,750	37,500	0.75 (b)	C
	E Street - H Street	4 Lanes Commercial Boulevard	28,000	33,750	37,500	0.75 (b)	C
	H Street - K Street	4 Lanes Commercial Boulevard	29,000	33,750	37,500	0.77 (b)	C
	K Street - L Street	4 Lanes Commercial Boulevard	31,000	33,750	37,500	0.83 (b)	D
	South of L Street	4 Lanes Major Street	29,000	40,000	37,500	0.77	C
4th Avenue	SR-54 - C Street	6 Lanes Gateway Street	42,000	61,200	68,000	0.62 (b)	B
	C Street - E Street	4 Lanes Urban Arterial	23,000	37,800	42,000	0.55 (b)	A
	E Street - H Street	4 Lanes Urban Arterial	20,000	37,800	42,000	0.48 (b)	A
	H Street - L Street	4 Lanes Urban Arterial	18,000	37,800	42,000	0.43 (b)	A
3rd Avenue	C Street - E Street	4 Lanes Commercial Boulevard	12,000	33,750	37,500	0.32 (b)	A
	E Street - G Street	4 Lanes Downtown Promenade	21,000	33,750	37,500	0.56 (b)	A
	G Street - H Street	4 Lanes Downtown Promenade	19,000	33,750	37,500	0.51 (b)	A
	H Street - L Street	4 Lanes Commercial Boulevard	24,000	33,750	37,500	0.64 (b)	B
	South of L Street	4 Lanes Class I Collector	22,000	22,000	27,500	0.80	C

NOTE: Values in **bold** indicate roadway segments exceeding the City's minimum performance standard.
(a) Street classification is based on the standards provided in the 2005 Chula Vista General Plan.
(b) This roadway segment is part of the Urban Core Circulation Element.
(c) This roadway segment is classified as a 6-lane roadway, but is assumed to function as a 4-lane roadway for this scenario.
(d) The ADT was taken from the March 25, 2005 Espanada Mixed Use Development Traffic Study prepared by Darnell & Associates, Inc.

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Future Transit Service

A number of regional transit improvements are envisioned that will either serve the Urban Core area. Many of these lines provide transit stations within the Urban Core Specific Planning area and are integrated into the land use and transportation components of the specific plan. Other routes are located with transit stations nearby; these routes could serve the urban core area. It should be noted that most routes listed below do not have implementation dates except for the first phase of the regional BRT project and that some of the route numbers may change in the future. **Figure 5-3** depicts those planned regional routes in the South Bay.

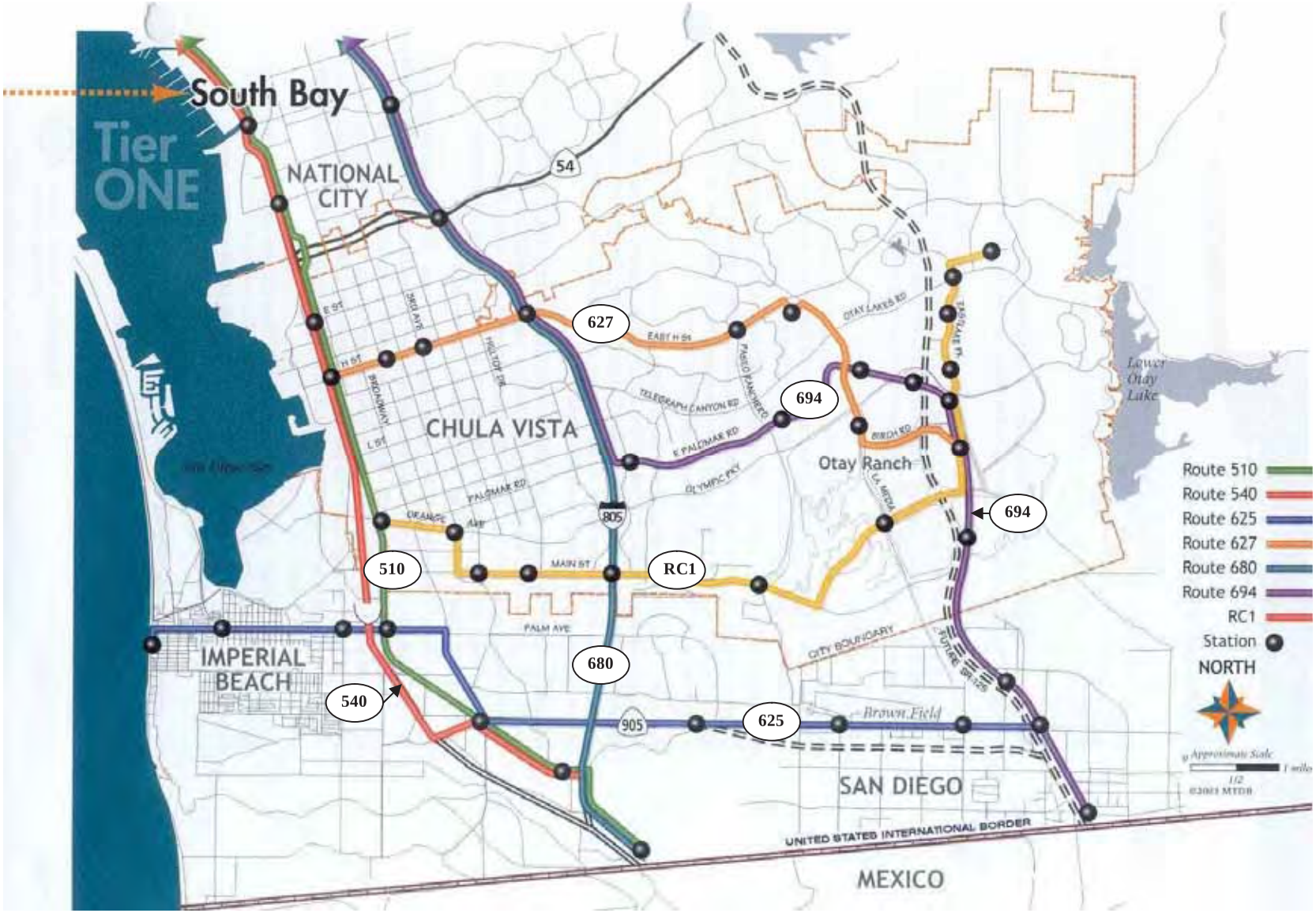
Route 510 (Existing Blue Line Trolley) would have increased frequency of service. LRT headways would be reduced from 10 minutes to 5 minutes. In order to achieve this level of transit service, it would be necessary to grade separate the LRT tracks from key surface streets, such as E Street and H Street within the project area.

South Bay Transit First Project would provide Regional Bus Rapid Transit (BRT) service between Otay Ranch in eastern Chula Vista and downtown San Diego. The first phase of the project would follow I-805 and SR-94, along with East Palomar Street. Phase 1 of the project could be completed by the Year 2010. The second phase of the project would extend the line to the Otay Border crossing and serve businesses in Otay Mesa.

Route 540 (I-5 Express Service) would provide Regional Bus Rapid Transit (BRT) service from San Ysidro to downtown San Diego and Old Town. This route would use median lanes in I-5 and would have a transit stop at H Street (with elevators to the H Street over crossing at I-5. This route would have infrequent stations, which would allow for shorter travel times, as compared to Route 510.

Route 627 (H Street BRT) would provide a transit connection between the Chula Vista Urban Core Specific Plan area and Southwestern College and the Eastern Urban Center. This route will connect the major activity centers in the redeveloping areas of western Chula Vista to the rapidly growing areas of eastern Chula Vista.

Route 680 (Sorrento Valley to San Ysidro International Border) would provide Regional BRT service between the San Ysidro and Sorrento Mesa along the I-805 corridor. This service would connect Chula Vista to major employment centers in Kearny Mesa and Sorrento Mesa. Transit stations for this route would be located on I-805 at H Street.



Kimley-Horn and Associates, Inc.

Figure 5-3
Regional Transit Routes

6.0 YEAR 2030 WITH IMPROVEMENTS CONDITIONS

This section provides a description of the Year 2030 traffic conditions at locations where improvements were assumed due to the addition of a project feature or recommended to achieve acceptable LOS. Project features were assumed at locations where either the roadway segment or study intersection operates within acceptable thresholds, but were due to improvements associated with the UCSP. Improvements are recommended at the majority of roadway segments/intersections that exceeded the acceptable thresholds.

Road Network

The following section describes the recommended improvements along the roadway segments in the Urban Core study area. These recommended roadway widths will be used in developing the parkway recommendations and ROW dimensions. It should be noted that right-of-way (ROW) value for the Woodlawn Avenue segment is not shown on the cross section figure due to the uncertainty of the park area at this time.

Table 6-1 summarizes the proposed changes to the existing roadway network. It should be noted that roadway segments that did not have any changes compared to existing conditions were omitted from the table. As shown in the table, all improvements shown for Third Avenue, F Street, Broadway, and Woodlawn Avenue would be considered project features. Improvements along E Street and H Street are recommended to achieve acceptable LOS.

Figures 6-1 to **6-10** illustrate the proposed cross sections for the corridors of E Street, F Street, H Street, Broadway, 3rd Avenue, and Woodlawn Avenue.

TABLE 6-1
PROPOSED ROADWAY SEGMENT DIMENSIONS

Street Segment	Total Existing Travel Lanes	Total Proposed Travel Lanes	Existing Turn Lane/Median	Proposed Turn Lane/Median	Existing Curb-to-Curb Width	Proposed Curb-to-Curb Width	Existing Parking	Proposed Parking	Existing Bike Lanes	Proposed Bike Lanes
Project Feature										
Third Avenue between E Street and F Street	2	2	No Median	No Median	72’	24’/68’ *	Y	Y/N *	N	N
Third Avenue between F Street and Madrona Street	4	2	Raised Median	Raised Median	101’	24’/68’ *	Y	Y/N *	N	N
Third Avenue between Madrona Street and G Street	4	2	No Median	No Median	72’	24’/68’ *	Y	Y/N *	N	N
F Street between Third Avenue and Fourth Avenue	4	2	Raised Median, Bike Lanes (Class III)	Two-way Left Turn Lane/Raised Median, Bike Lanes (Class I)	65’	48’	Y	Y	Y	Y
F Street between Fourth Avenue and I-5	2	2	No Median, Bike Lanes (Class III)	Two-way Left Turn Lane/Raised Median, Bike Lanes (Class I)	40’	48’	Y	Y	Y	Y
Broadway between E Street And F Street	4	4	No Median	Raised Median, Bike Lanes (Class II)	68’	82’	Y	Y	N	Y
Broadway between F Street and H Street	4	4	Two-way Left Turn Lane	Raised Median, Bike Lanes (Class II)	82’	82’	Y	Y	N	Y
Woodlawn Avenue between E Street and H Street	2	2	No Median	Park Area	36’	Varies	Y	Y	N	N
Improvements to Achieve Acceptable LOS										
E Street between I-5 and 300’ east of I-5	4	4	Two-Way Left Turn Lane	Two-Way Left Turn Lane, Westbound Right Turn Lane	70’	76’	N	N	N	N
H Street between I-5 and Broadway	4	6	Two-Way Left Turn Lane	Raised Median, Bike Lanes (Class II)	64’	94’	N	N	N	Y

* The 24-foot cross section assumes no parking along Third Avenue and the 68-foot cross section assumes diagonal parking on both sides of Third Avenue.

E Street Corridor

The roadway cross section on E Street is adequate to serve future traffic needs except for the segment between Woodlawn Avenue and I-5. To mitigate the intersection impact at the I-5 NB Ramp with E Street, a westbound right-turn lane is required. It is recommended that E Street be widened between Woodlawn Avenue and I-5, which would add an additional six feet in the curb-to-curb width. This segment will need an additional 22 feet of ROW. This added width will allow for an extended right-turn lane on westbound E Street onto the I-5 northbound on-ramp. This improvement would help to reduce the queues in the westbound direction and improve the operations at the I-5 NB ramp and at Woodlawn Avenue intersection.

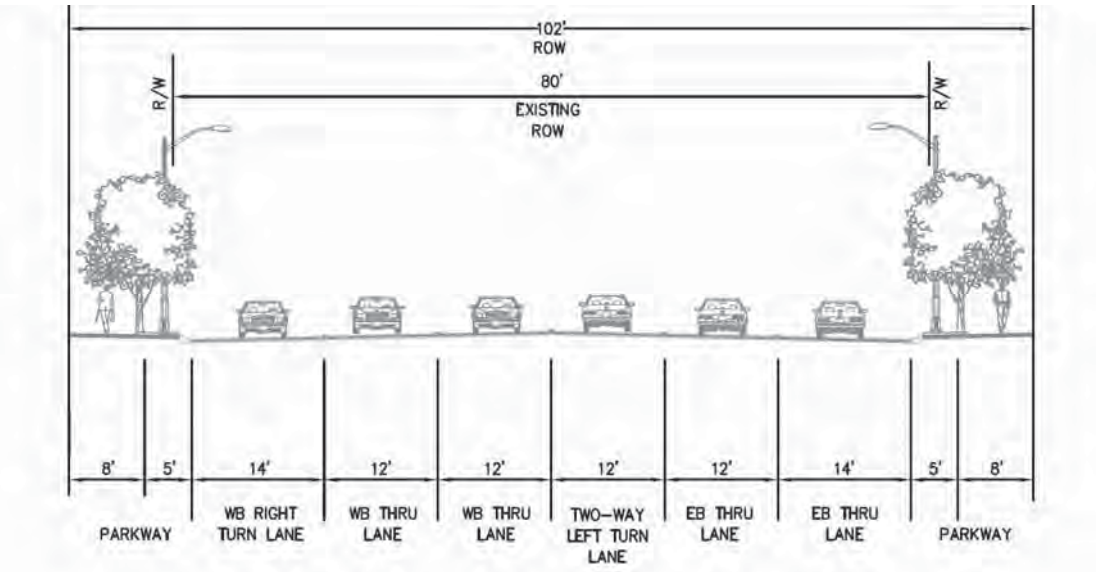


Figure 6-1 Proposed Cross Section, E Street Between I-5 and 300' East of I-5 N Ramp

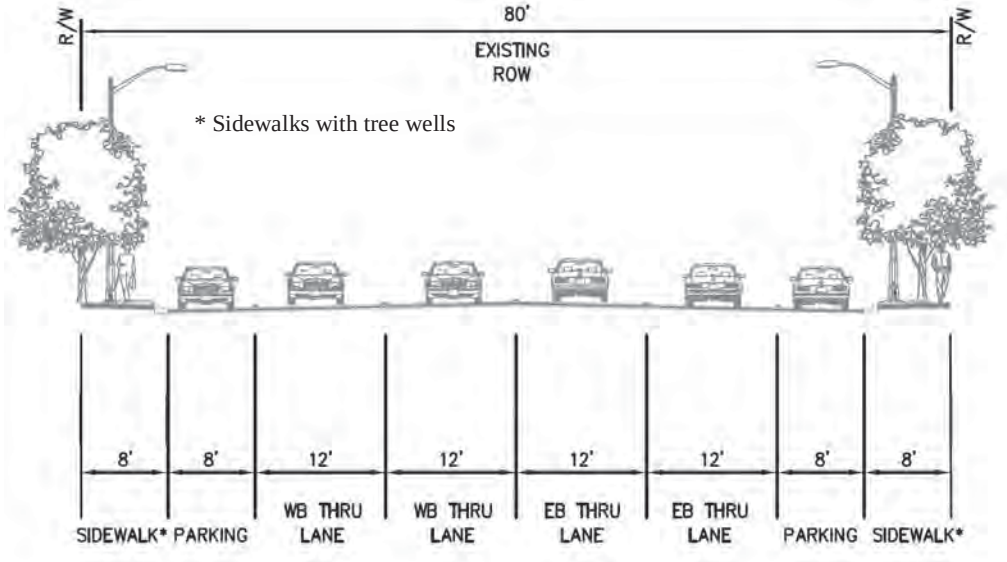


Figure 6-2 Proposed Cross Section, E Street Between 3rd Avenue and Broadway

F Street Bike Lanes

As a project feature of the Urban Core Specific Plan, Class I bike lanes would be added to F Street between Third Avenue and I-5. The new Class I bike lanes ("bikeway") will improve the connectivity of the Urban Core to the Bayfront Area encouraging better synergy between uses/users on the Bayfront and Urban Core, including pedestrians and bicyclists. Wide parkways, off-street bike lanes, and wide sidewalks will provide an opportunity to stroll or bicycle through the Urban Core. A Class II facility would exist on F Street where a Class I bikeway cannot be accommodated due to mature trees or new/existing medians. For F Street, a 16-foot parkway is provided between Fourth Avenue and Broadway and a 12-foot parkway is provided between Third Avenue and Fourth Avenue. Existing trees from Third Avenue to Broadway are proposed to be preserved and incorporated into the streetscape theme. It is suggested that the overhead utility line be placed underground as part of this improvement project.

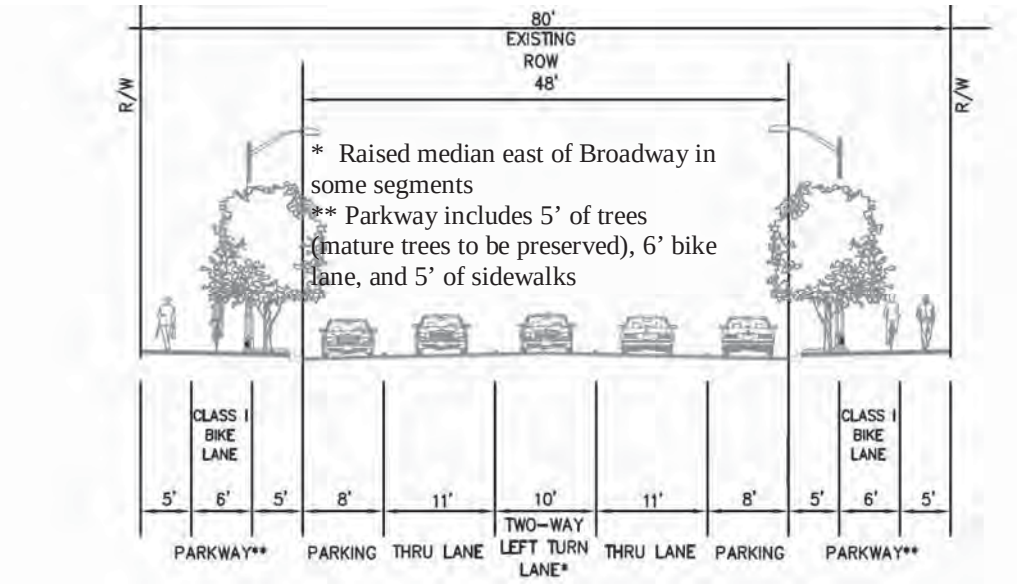


Figure 6-3 Proposed Cross Section, F Street Between Third Avenue and I-5

H Street Corridor

The segment of H Street from Third Avenue to Broadway will be widened by eight feet. The new segment configuration will feature two travel lanes and a bike lane in each direction, as well as a raised center median. One side of the street will also have parallel parking.

An additional 30 feet in the curb-to-curb width will be added to H Street between Broadway and I-5 to include an additional travel and in both directions. This improvement is consistent with the ultimate classification of H Street as defined in the adopted General Plan. The additional travel lane is needed to accommodate buildout daily and peak-hour traffic on H Street and would improve the operations along this segment.

Further, a Class II bikeway is proposed to be added to H Street between Third Avenue and I-5. H Street is intended as the "backbone" of the Urban Core, as it connects the transit focus areas at H Street/Third Avenue and H Street/I-5 and facilitates local and regional transit routes (and Bus Rapid Transit in the future). Twenty-foot wide sidewalks are proposed in order to create a grand boulevard feeling and promote pedestrian use.

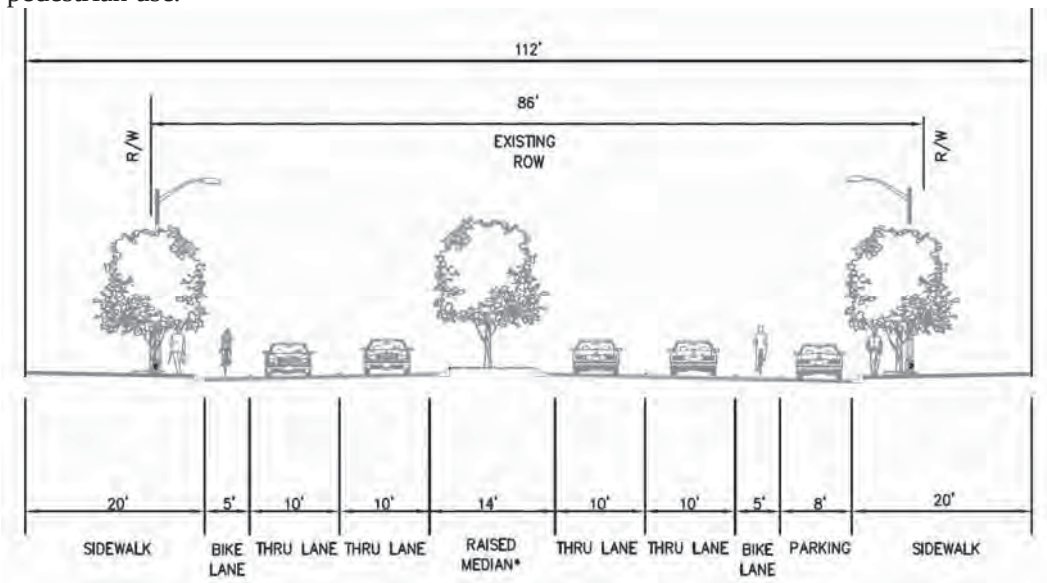


Figure 6-4 Proposed Cross Section, H Street Between Third Avenue and Broadway

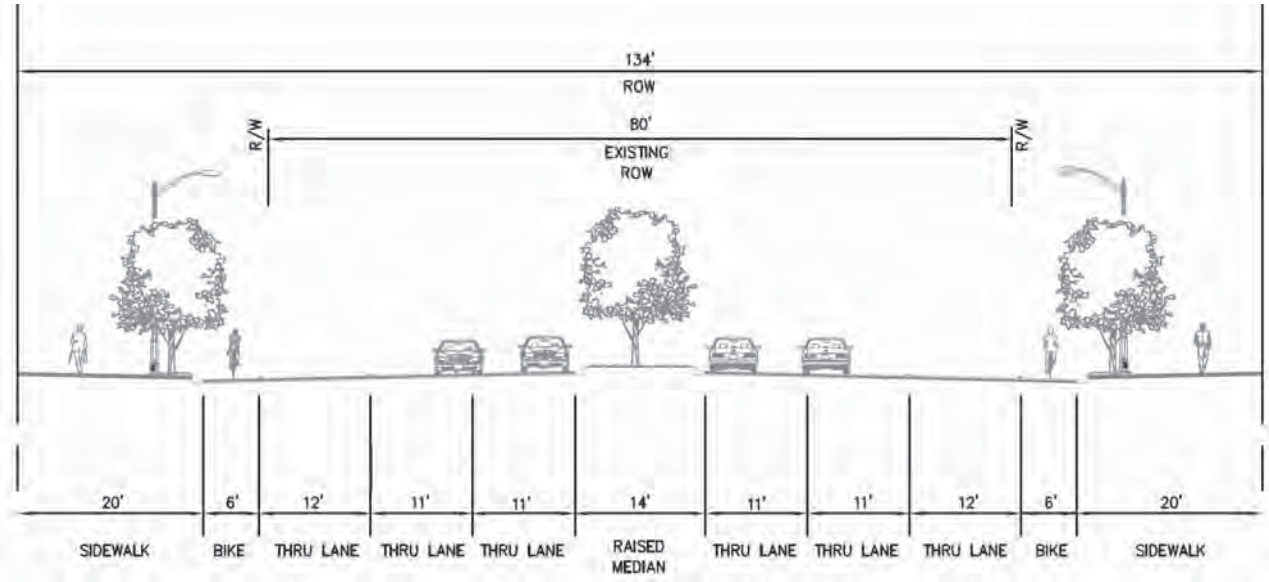


Figure 6-5 Proposed Cross Section, H Street Between Broadway and I-5

Broadway Corridor

Broadway would be improved by adding a 12-foot raised median as a project feature. In addition, a Class II bikeway is proposed to be added along Broadway between C Street and L Street. Broadway will be widened by 14 feet between E Street and F Street to accommodate a final configuration consisting of the raised median, bike lanes in both directions, and narrower traffic lanes. Between F Street and H Street, the roadway would not need to be widened and the existing median would be converted to a raised median. Nine-foot wide sidewalks will support pedestrian circulation. It is proposed to retain the existing palm trees within parkway areas.

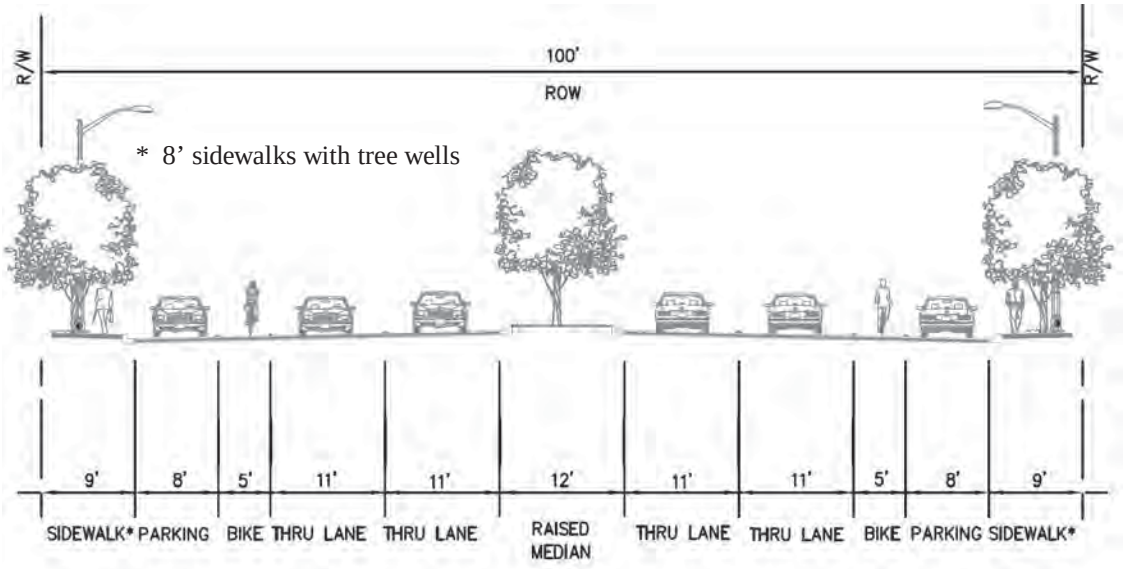


Figure 6-6 Proposed Cross Section, Broadway Between C Street and L Street

3rd Avenue Pedestrian Enhancements

As a project feature of the Urban Core Specific Plan, the sidewalks on 3rd Avenue between E Street and G Street will be widened. The widening of the sidewalks will encourage a higher pedestrian use of 3rd Avenue and provide opportunity for outdoor activity areas within the Village Area. The cross section of 3rd Avenue varies greatly between E Street and G Street. The roadway width varies between 72 feet and 101 feet.

The roadway will be narrowed to provide one through lane in each direction between E Street and G Street. The remainder of Third Avenue to L Street will stay in the current four-lane configuration. It is proposed to retain the existing median. Three distinct cross sections will be provided. On-street parking may be reduced with the implementation of the Third Avenue enhancements. It is recommended that these enhancements be provided in coordination with the provision of off-street parking in the vicinity so that parking impacts do not occur to surrounding areas.

Diagonal parking will be provided for most parts of Third Avenue. Figure 6-7 shows the cross section where angled parking is permitted. Due to relatively high through traffic volumes, it is recommended that the roadway be of sufficient width to allow vehicles to back out without blocking through traffic lanes. It should be noted that the curb-to-curb dimension is not reduced where diagonal parking is provided on the segment of Third Avenue between E Street and F Street.

Figure 6-8 illustrates selected mid-block locations where pedestrian crossing will occur. The roadway would be narrowed to 24 feet by extending the curb into the street. Curbs will be extended toward the roadway centerline about 38 feet on each side of the roadway. This reconfiguration would allow for additional pedestrian crossings with reduced crossing distances at selected locations.

Figure 6-9 shows the treatment at intersections. This cross section allows for a right-turn lane and a left-turn lane to be provided. Although the turning volumes from Third Avenue are not very high, these lanes are needed to remove turning traffic from the through traffic. Turning vehicles will need to yield to anticipated high pedestrian traffic volumes; the turn lanes allow these yielding vehicles to pull out of the through travel lanes. This intersection configuration will adequately accommodate future traffic demands along Third Avenue while providing a significantly enhanced pedestrian friendly streetscape.

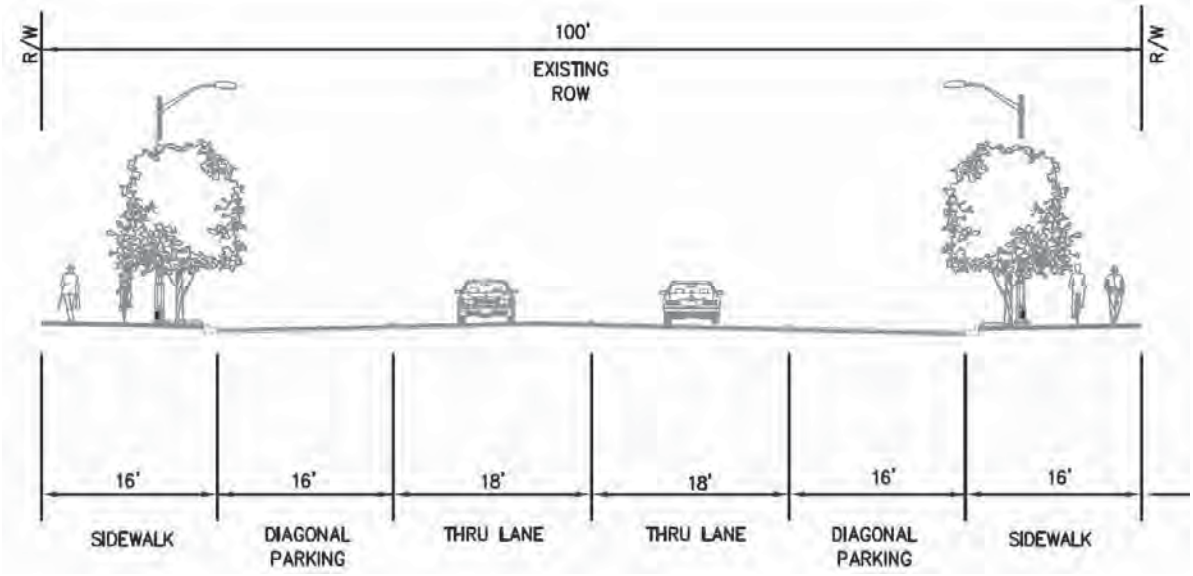


Figure 6-7 Proposed Cross Section, 3rd Avenue With Diagonal Parking

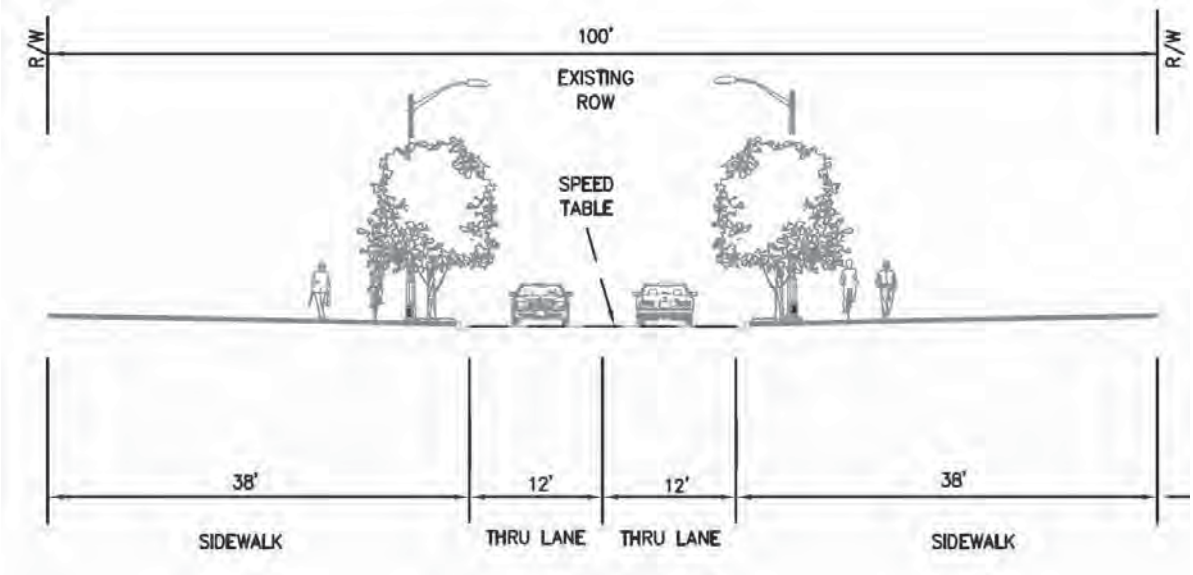


Figure 6-8 Proposed Cross Section, 3rd Avenue Without Diagonal Parking

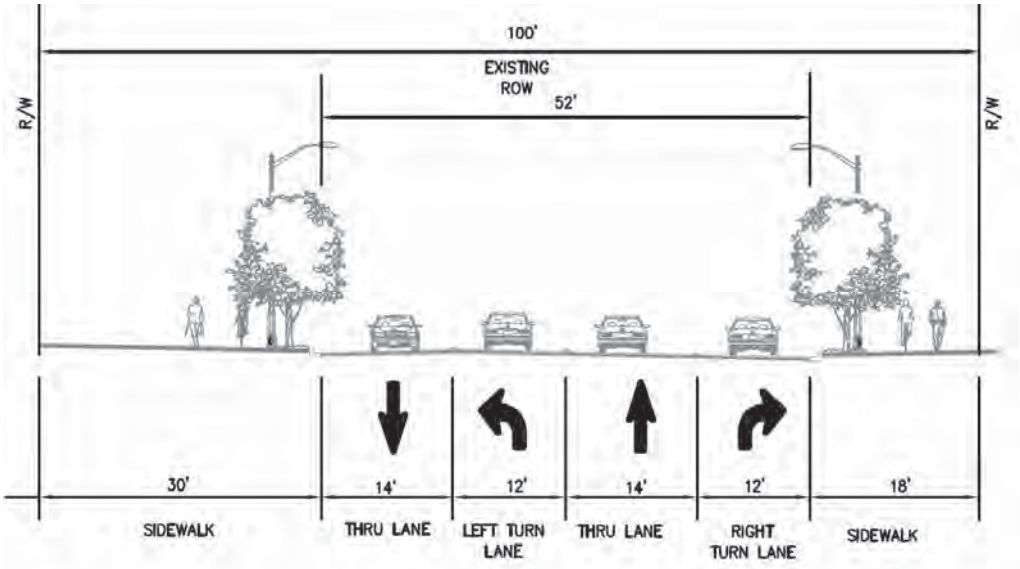


Figure 6-9 Proposed Cross Section, 3rd Avenue At Signalized Intersections

Woodlawn Avenue Couplet

As a project feature, Woodlawn Avenue would be extended and converted to a one-way couplet between south of E Street and north of H Street. Woodlawn Avenue is not built as a continuous roadway between E Street and H Street. The creation of the one-way couplet would include the construction of a neighborhood park between the one-way streets. The neighborhood park may include a variety of recreational uses such as playgrounds, walkways, and basketball courts. The couplet could be implemented over time as property redevelops.

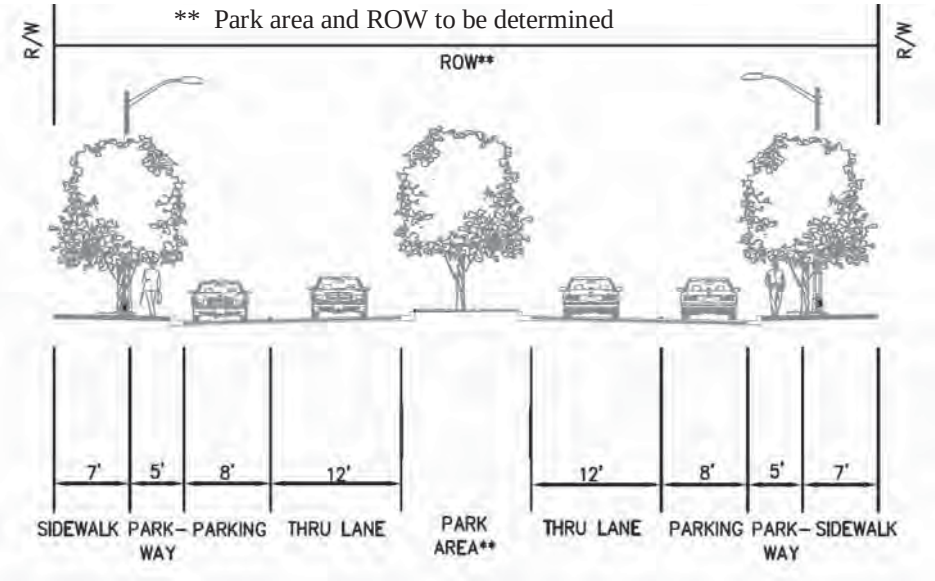


Figure 6-10 Proposed Cross Section, Entire Length of Woodlawn Avenue

Roadway Segment Analysis

Table 6-2 summarizes the Year 2030 With Improvement Conditions LOS analysis for the roadway segments with assumed improvements located in the Urban Core. As shown in this table, H Street between I-5 and Broadway would be widened to a six-lane gateway. As a result, the acceptable ADT would increase and result in an acceptable LOS. For 3rd Avenue between E Street and G Street, this segment would be retained or narrowed as a two-lane downtown promenade. As a result, the acceptable ADT would decrease and result in an unacceptable LOS. However, 3rd Avenue corridor intersections would operate at acceptable levels of service and the narrowing of 3rd Avenue and increasing the width of the sidewalks would create a friendlier pedestrian atmosphere.

TABLE 6-2

YEAR 2030 WITH IMPROVEMENTS CONDITIONS ROADWAY SEGMENT LEVEL OF SERVICE SUMMARY

STREET	SEGMENT	DAILY TRAFFIC VOLUME	BEFORE IMPROVEMENTS	ACCEPTABLE VOLUME	DAILY SEGMENT LOS	AFTER IMPROVEMENTS	ACCEPTABLE VOLUME	DAILY SEGMENT LOS
H Street	I-5 - Broadway	52,000	4 Lanes	43,200	**F**	6 Lanes	61,200	D
3rd Avenue	E Street - G Street	21,000	2/4 Lanes	14,400/ 33,350	A	2 Lanes	14,400	**F**

K:\095413000\Excel\October 2005 Final Report\[413rs050504.xls]Table 6-2

Intersection Improvements

Due to the unique nature of urban revitalization, the exact timing, sequence and extent of infill development is hard to predict and doing so would be speculative. The anticipated 20-25 year implementation of the Specific Plan therefore necessitates a different approach to implementing the recommended long-term intersection improvements in order to achieve acceptable LOS thresholds. The 20 intersection improvements that follow have been divided into three tiers for phased long term implementation based on need and enhancement to the function of the overall street network. It should be noted that three of the intersections (#7, #16, and #21) are proposed as project features rather than necessitated to improve intersection LOS and the improvements will likely be related to and timed with implementation of streetscape improvements along Third Avenue. The intersection numbers correspond to the intersection numbering system outlined in this report.

Tier 1 Improvements

- Provide a grade-separated intersection at the E Street and H Street trolley crossing locations. This improvement would be considered a regional improvement as the trolley provides service throughout the region. Coordination with MTS/SANDAG will be required for this improvement.
- **#1 Bay Boulevard/I-5 Southbound Ramp/E Street**: Add an eastbound through and right-turn lane, southbound right-turn lane, and northbound right-turn lane. Coordination with Caltrans will be required for this improvement.
- #**2 I-5 Northbound Ramp/E Street**: Add a westbound right-turn lane. Coordination with Caltrans will be required for this improvement.
- **#24 I-5 Southbound Ramp/H Street**: Add a southbound left, eastbound through and right-turn lanes. Coordination with Caltrans will be required for this improvement.
- **#25 I-5 Northbound Ramp/H Street**: Add a westbound through and right-turn lane and restripe south approach to accommodate dual left-turn lanes. Coordination with Caltrans will be required for this improvement.
- **#26 Woodlawn Avenue/H Street**: Change Woodlawn Avenue to a one-way couplet. This improvement is required to serve the intense redevelopment occurring on both sides of H Street. The couplet improvement is not required further north toward E Street.
- **#27 Broadway/H Street**: Add an eastbound transit queue jumper lane and westbound through and right-turn lanes.
- **#28 Fifth Avenue/H Street**: Change the northbound/southbound approaches to include protective plus permissive phasing and add a westbound right-turn lane.
- **#29 Fourth Avenue/H Street**: Add an eastbound/westbound right-turn lane.
- **#44 Fourth Avenue/SR-54 Eastbound Ramp**: Add an eastbound right-turn lane. Coordination with Caltrans will be required for this improvement.

Tier 2 Improvements

- **#34 Broadway/SR-54 Westbound Ramp**: Add a westbound right-turn lane. Coordination with Caltrans will be required for this improvement.
- #**59 J Street/I-5 Northbound Ramp**: Add an eastbound left-turn and westbound right-turn lane. Coordination with Caltrans will be required for this improvement.
- **#61 L Street/Bay Boulevard**: Signalize the intersection, add a southbound left-turn lane, and a northbound right-turn overlap phase to the traffic signal.

- **#63 Bay Boulevard/I-5 Southbound Ramp**: Signalize the intersection. Coordination with Caltrans will be required for this improvement.
- **#64 Industrial Boulevard/I-5 Northbound Ramp**: Signalize the intersection. Coordination with Caltrans will be required for this improvement.
- H Street from four lanes to six lanes from I-5 to Broadway

Tier 3 Improvements

- **#7 Third Avenue/E Street**: Convert the northbound and southbound shared right-through lane into exclusive right-turn lanes.
- **#13 Broadway/F Street**: Add an eastbound right-turn lane.
- **#16 Third Avenue/F Street**: Separate the southbound shared through-right lane into an exclusive through and right-turn lanes, convert the northbound shared through-right lane into an exclusive right-turn lane.
- **#21 Third Avenue/G Street**: Convert the northbound/southbound shared through-right lane into exclusive right-turn lanes.
- #**45 Fourth Avenue/Brisbane Street**: Add a southbound right-turn overlap phase to the traffic signal.
- **#57 Second Avenue/D Street**: Convert to an all-way stop controlled intersection.

In each individual tier, the City's existing monitoring program will determine exactly which projects are implemented first during the biannual CIP program review. In addition to determining timing and need, this systems and operations monitoring approach should also be used to further ascertain final design details of the intersection improvements and may include consideration of the effects on traffic flow as well as the impacts/benefits to other travel modes (e.g. pedestrians and bicycles) that are foundational to the successful implementation of the Specific Plan.

The recommended improvements at the study intersections listed above are shown in **Figure 6-11** and **6-11.1**. It should be noted that the E Street and H Street intersections between the I-5 NB Ramp and Woodlawn Avenue assumes a Light Rail Transit (LRT) grade separation, which would separate vehicular traffic from the trolley. It is recommended that the trolley tracks be grade separated along E and H Streets to improve intersection operations and to accommodate the planned increase in trolley frequency.

Recommendations at intersections 27, 33, and 54 do not improve conditions to an acceptable LOS due to ROW constraints. **Figure 6-12** shows the intersections that have improvements that are considered to be project features or improvements.

Intersection Analysis

Table 6-3 displays the LOS analysis results for the study intersections that have assumed improvements under the Year 2030 With Improvements scenario. As shown in this table, all study intersections could operate at LOS D or better during both peak periods with the proposed improvements, except for the following intersections:

- #27 Broadway/H Street
- #33 Hilltop Drive/H Street
- #54 3rd Avenue/J Street

At the Broadway/H Street intersection (Int. #27), an additional northbound and southbound through lane would be required in order to achieve an acceptable LOS D conditions. However, this improvement would require extensive widening of Broadway and H Street to allow for lane drops. Furthermore, this widening would create longer pedestrian crossings. As such, the recommended improvements of the eastbound queue jumper lane and the additional westbound through and right-turn lanes would improve the intersection from LOS F to LOS E conditions.

At the Hilltop Drive/H Street intersection (Int. #33), no improvements would be recommended due to ROW constraints. The poor LOS at this intersection is primarily caused by the high traffic volumes in the eastbound/westbound movements. Additional through and/or turn lanes would be required in order to improve this intersection to an acceptable LOS. With no improvements, this intersection would remain at LOS E during both peak periods.

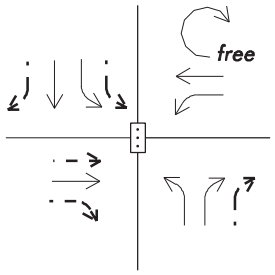
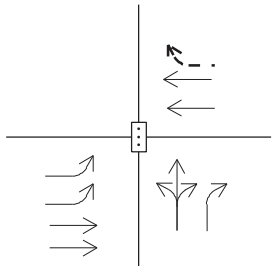
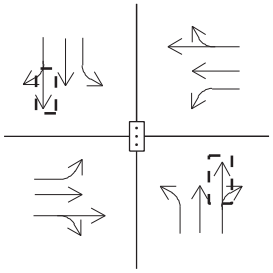
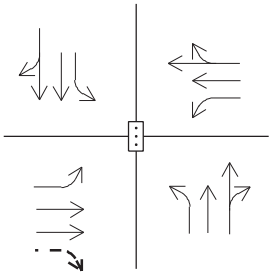
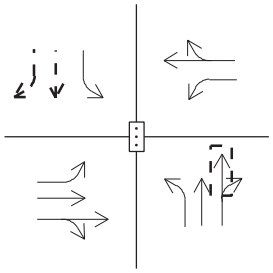
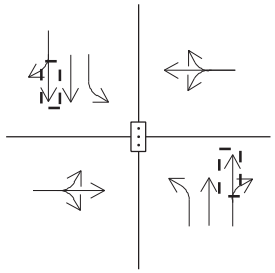
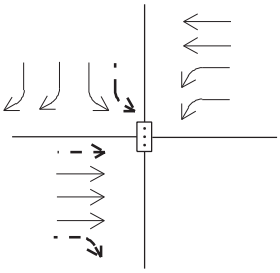
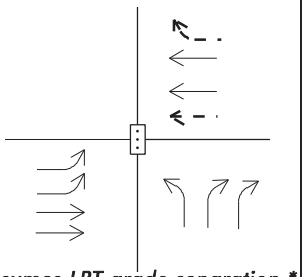
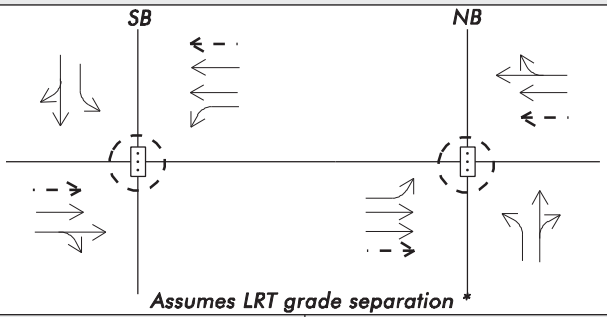
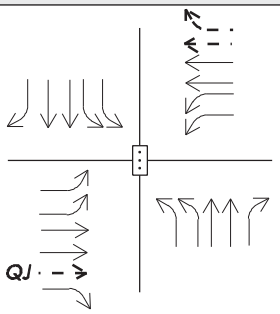
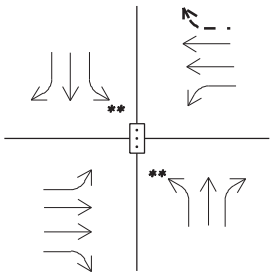
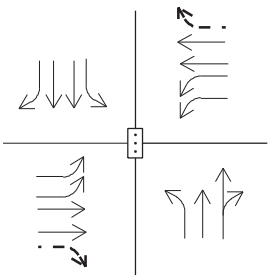
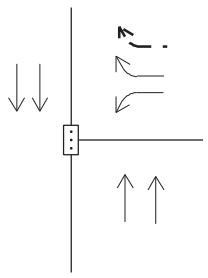
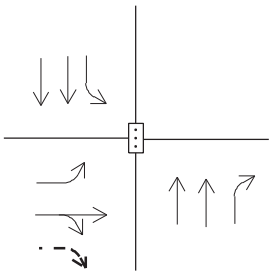
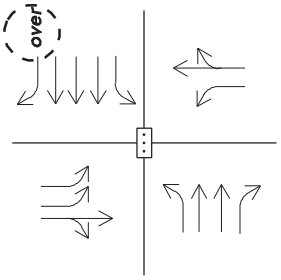
At the 3rd Avenue/J Street intersection (Int. #54), the required improvement of an additional southbound right-turn lane would impact the Henry's Marketplace building, which is built adjacent to the sidewalk. Therefore, this improvement is not recommended. As a result, the LOS would remain at LOS E. However, if the property were to redevelop in the future, additional ROW could be obtained for the southbound right-turn lane.

It should be noted that all of the study intersections along 3rd Avenue would operate at an acceptable LOS without improvements. However, due to the narrowing of 3rd Avenue to create a friendlier pedestrian atmosphere, one of the through lanes along 3rd Avenue in each direction would be converted to an exclusive right-turn lane.

Figure 6-13 shows the locations of these intersections that would still remain at LOS E. **Appendix C** contains the peak-hour intersections LOS calculation worksheets.

West Side Shuttle Service

West Side Shuttle is a concept proposed to serve both the Urban Core Specific Plan and the Bayfront Master Plan areas in western Chula Vista. This service would complement existing and planned future transit improvements. The shuttle would provide localized service between various uses in western Chula Vista and provide connections to the regional transit system. **Figure 6-14** depicts the proposed routing of the West Side Shuttle. The shuttle would provide regional connectivity with stations serving Route 510 at the existing E Street station, Routes 510, 540 (future service), and 627 (future service) at the existing H Street trolley station, and the future station on H Street near Third Avenue serving future Route 627. In addition, five other stations are planned to serve destinations within the Urban Core Specific Plan, along with three additional stations within the Bayfront Master Plan.

1. E St/Bay Blvd -I-5 SB Ramps	2. E St/I-5 NB Ramps	7. E St/3rd Ave	13. F St/Broadway
	 Assumes LRT grade separation *		
16. F St/3rd Ave	**21. G St/3rd Ave**	**24. H St/I-5 SB Ramps**	**25. H St/I-5 NB Ramp**
			 Assumes LRT grade separation *
26. H St/Woodlawn Ave		**27. H St/Broadway**	**28. H St/5th Ave**
 Assumes LRT grade separation *			
29. H St/4th Ave	**34. Broadway/ SR-54 WB Off-Ramp**	**44. 4th Ave/SR-54 EB Ramp**	**45. 4th Ave/Brisbane St**
			

* The Light Rail Transit Crossings on E Street and H Street will have to be grade separated from the vehicular traffic along E Street and H Street.

** To improve this intersection the left turn phasing from the indicated movements will be changed to protective + permissive.

Legend:

- Traffic Signal
- Stop Sign
- Existing lane
- Proposed Improvement
- Lane to be "altered"
- over New Overlap Phase
- QJ Queue Jumper

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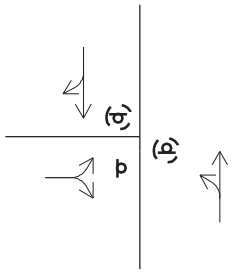
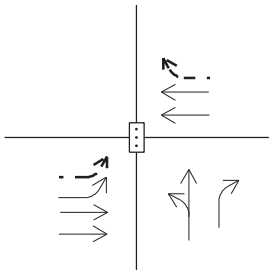
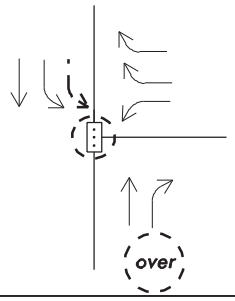
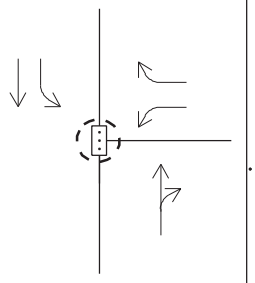
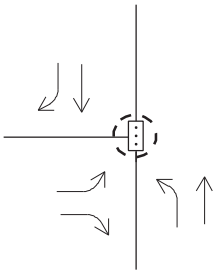
Figure 6-11
Year 2030 with Improvements
Intersections Geometrics

57. 2nd Ave/D St	59. I-5 NB Ramps/J St	61. Bay Blvd/L St	63. Bay Blvd/I-5 SB Ramps
			

64. Industrial Blvd/I-5 NB Ramps


Legend:

- Traffic Signal
- New Traffic Signal
- Existing lane
- Proposed Improvement
- New Overlap Phase
- Lane to be "altered"
- New Stop Sign

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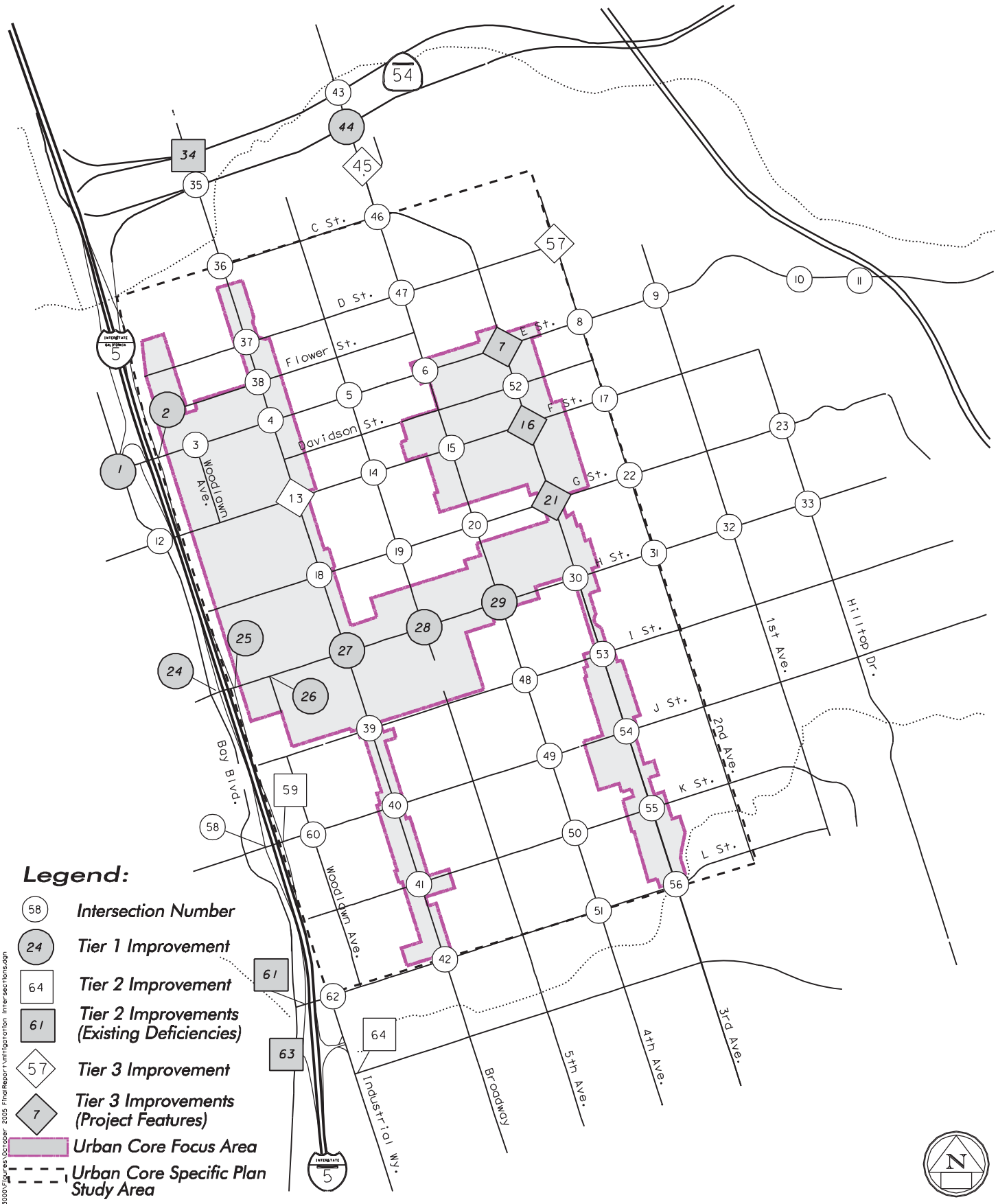
Figure 6-11.1
Year 2030 with Improvements
Intersections Geometrics



Legend:

- 58 — Intersection Number
- 24 — Tier 1 Improvement
- 64 — Tier 2 Improvement
- 61 — Tier 2 Improvements (Existing Deficiencies)
- 57 — Tier 3 Improvement
- 7 — Tier 3 Improvements (Project Features)
- Urban Core Focus Area
- Urban Core Specific Plan Study Area

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Figure 6-12
Project Features/Improvements at Study Intersection

TABLE 6-3

YEAR 2030 WITH IMPROVEMENTS CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY

	INTERSECTION	PEAK HOUR	BEFORE IMPROVEMENTS		AFTER IMPROVEMENTS		PROPOSED IMPROVEMENTS (c)
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	
1	Bay Blvd-I-5 SB Ramp @ E St (f)	AM	**58.4**	**E**	25.5	C	Add EBT, EBR, SBL, SBR and NBR lanes.
		PM	**302.9**	**F**	37.2	D	
2	I-5 NB Ramp @ E St (f)	AM	**60.5**	**E**	26.1	C	Add WBR lane.
		PM	31.9	C	20.6	C	
7	3rd Ave @ E St (d)	AM	12.9	B	21.5	C	Convert NBT shared RT lane and SBT shared RT lane into exclusive RT lanes.
		PM	24.8	C	25.7	C	
13	Broadway @ F St	AM	17.7	B	20.0	B	Add EBR lane.
		PM	**66.1**	**E**	39.7	D	
16	3rd Ave @ F St (d)	AM	15.9	B	20.4	C	Separate SBT shared RT lane into an exclusive SBR lane and a SBT lane; Convert the NBT shared RT lane into an exclusive NBR lane.
		PM	23.5	C	23.2	C	
21	3rd Ave @ G St (d)	AM	11.8	B	10.3	B	Convert NBT shared RT lane and SBT shared RT lane into exclusive RT lanes.
		PM	10.5	B	15.2	B	
24	I-5 SB Ramp @ H St (f)	AM	36.7	D	21.5	C	Add SBL, EBT, and EBR lanes.
		PM	**84.5**	**F**	27.1	C	
25	I-5 NB Ramp @ H St (f)	AM	47.6	D	23.1	C	Add WBR, WBT, and restripe south approach to accommodate dual left turns.
		PM	**138.4**	**F**	31.7	C	
26	Woodlawn Ave @ H St (e)	AM	33.7	C	32.2/13.3 (e)	C/B (e)	Change Woodlawn Ave. to a one way couplet.
		PM	**260.6**	**F**	22.2/28.8 (e)	C/C (e)	
27	Broadway @ H St	AM	42.7	D	36.4	D	Add EBT Queue Jumper Lane, WBT and WBR lanes
		PM	**118.1**	**F**	**77.0**	**E**	
28	5th Ave @ H St	AM	15.2	B	19.1	B	Change NB and SB approaches to protective + permissive phasing and add WBR lane.
		PM	**61.6**	**E**	52.0	D	
29	4th Ave @ H St	AM	38.6	D	30.3	C	Add EBR and WBR lanes.
		PM	**59.4**	**E**	40.2	D	
33	Hilltop Dr @ H St	AM	**58.3**	**E**	**58.3**	**E**	Do nothing due to ROW Constraints.
		PM	**74.2**	**E**	**74.2**	**E**	

Notes:

Bold values indicate intersections operating at LOS E or F.

EBL=Eastbound left turn lane; EBT=Eastbound through lane; EBR=Eastbound right turn lane; NBL=Northbound left turn lane; NBT=Northbound through lane; NBR=Northbound right turn lane; WBL=Westbound left turn lane; WBT=Westbound through lane; WBR=Westbound right turn lane; SBL=Southbound left turn lane; SBT=Southbound through lane; SBR=Southbound right turn lane.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

(c) See figures 6-21 to 6-21.1 for the proposed improvements at the study intersections.

(d) Change in travel lanes is due to narrowing of 3rd Avenue.

(e) The Woodlawn Avenue couplet creates 2 new intersections. The first number/letter corresponds to the delay/LOS at the west intersection and the second number/letter corresponds to the delay/LOS at the east intersection.

(f) Coordination with Caltrans will be required for the proposed improvement at this intersection.

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TABLE 6-3

YEAR 2030 WITH IMPROVEMENTS CONDITIONS

PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY (Continued)

	INTERSECTION	PEAK HOUR	BEFORE IMPROVEMENTS		AFTER IMPROVEMENTS		PROPOSED IMPROVEMENTS (c)
			DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	
34	Broadway @ SR-54 WB Ramp (f)	AM	**190.6**	**F**	45.2	D	Add WBR lane
		PM	16.2	B	14.8	B	
44	4th Ave @ SR-54 EB Ramp (f)	AM	37.2	D	22.6	C	Add EBR lane.
		PM	**95.2**	**F**	25.2	C	
45	4th Ave @ Brisbane St	AM	25.8	C	24.2	C	Add SBR overlap phase.
		PM	**61.5**	**E**	50.1	D	
54	3rd Ave @ J St	AM	22.9	C	22.9	C	Do Nothing due to impacts on Henry's Building.
		PM	**74.5**	**E**	**74.5**	**E**	
57	2nd Ave @ D St	AM	31.2	D	27.0	D	Convert to an all-way stop control intersection.
		PM	36.0	**E**	18.6	C	
59	J St @ I-5 NB Ramp (f)	AM	**135.2**	**F**	28.3	C	Add EBL and WBR lanes.
		PM	**61.7**	**E**	24.1	C	
61	L St @ Bay Blvd	AM	22.7	C	18.1	B	Add SBL lane, signalize intersection, and add NBR overlap phasing.
		PM	**203.0**	**F**	17.1	B	
63	Bay Blvd @ I-5 SB Ramp (f)	AM	**84.0**	**F**	17.7	B	Signalize intersection.
		PM	**221.2**	**F**	46.9	D	
64	Industrial Blvd @ I-5 NB Ramp (f)	AM	26.0	D	12.6	B	Signalize intersection.
		PM	**66.5**	**F**	20.8	C	

Notes:

Bold values indicate intersections operating at LOS E or F.

ECL= Exceeds calculable limit . At intersections at or over capacity, the calculated delay value becomes unreliable.

EBL=Eastbound left turn lane; EBT=Eastbound through lane; EBR=Eastbound right turn lane; NBL=Northbound left turn lane; NBT=Northbound through lane; NBR=Northbound right turn lane; WBL=Westbound left turn lane; WBT=Westbound through lane; WBR=Westbound right turn lane; SBL=Southbound left turn lane; SBT=Southbound through lane; SBR=Southbound right turn lane.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 6.0

(c) See figures 6-21 to 6-21.1 for the proposed improvements at the study intersections.

(d) Change in travel lanes is due to narrowing of 3rd Avenue.

(e) The Woodlawn Avenue couplet creates 2 new intersections. The first number/letter corresponds to the delay/LOS at the west intersection and the second number/letter corresponds to the delay/LOS at the east intersection.

(f) Coordination with Caltrans will be required for the proposed improvement at this intersection.

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PLOTTED : 10/4/2005

KIMLEY-HORN and ASSOCIATES

Figure 6-13
Study Intersections Remaining LOS E

Kimley-Horn and Associates, Inc.

Figure 6-14
West Side Shuttle Proposed Route

7.0 FINDINGS AND CONCLUSIONS

The following section provides a summary of the key findings and study recommendations.

- The Urban Core Specific Plan (UCSP) focus area is located east of I-5, west of Del Mar Avenue, north of L Street, and south of C Street.
- Approximately 331,000 ADT is expected with the full build-out of the Urban Core, which is an increase of 141,000 ADT over existing conditions.
- A total of 64 intersections and 32 roadway segments were identified for analysis.
- Under existing conditions, three intersections operate at LOS E or worse during the peak periods and all roadway segments function at an acceptable LOS.
- Under Year 2030 conditions, 20 intersections operate at LOS E or worse during the peak periods and all but two roadway segment functions at an acceptable LOS.
- Recommended improvements were made along nine roadway segments within the study area, which include E Street, F Street, H Street, Woodlawn Avenue, and several segments along Broadway and 3rd Avenue.
- With the recommended improvements, the segment of H Street between I-5 and Broadway would function at an acceptable LOS, but the segment of 3rd Avenue between E Street and G Street would function at LOS F.
- The 3rd Avenue corridor intersections would operate at acceptable levels of service and the narrowing of 3rd Avenue and increasing the width of the sidewalks would create a friendlier pedestrian atmosphere.
- Recommended improvements were made at the 20 intersections that would operate at LOS E or worse during the peak periods and at locations where improvements to the road network would also affect the intersections at either end of the segment.
- Three of the 20 intersections (#7, #16, and #21) are proposed as project features rather than necessitated to improve intersection LOS and the improvements will likely be related to and timed with implementation of streetscape improvements along Third Avenue.

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Appendix C. Market Analysis

Economics Research Associates

CITY OF CHULA VISTA URBAN CORE SPECIFIC PLAN MARKET ANALYSIS

Submitted to:
THE CITY OF CHULA VISTA

Prepared by:
Economics Research Associates

June 2, 2005

ERA Project No. 15362

GENERAL LIMITING CONDITIONS

This study is based on estimates, general knowledge of the industry and consultations with the client and the client's representatives. No responsibility is assumed for inaccuracies in reporting by the client, the client's agent and representatives or any other data source used in preparing or presenting this study. Research was conducted from April 2004 through July 2004, and Economics Research Associates has not undertaken any update of its research effort since such date. No warranty or representation is made by Economics Research Associates that any of the projected values or results contained in this study will actually be achieved. This report is not to be used in conjunction with any public or private offering of securities or other similar purpose where it may be relied upon to any degree by any person other than the client without first obtaining the prior written consent of Economics Research Associates. This study may not be used for purposes other than that for which it is prepared. This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions, and considerations.

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I. Introduction and Summary Findings

Introduction

The City of Chula Vista retained Economics Research Associates (ERA), under subcontract with RRM Associates, to review the market for infill development and redevelopment as input to the Chula Vista Urban Core Specific Plan. Exhibit I-1 shows the Study Area, which is bordered by Freeway I-5 to the West, Palm Oaks Street to the East, C Street to the North, and L Street to the South.

The purpose of this report is to describe the regional economic and demographic context in which development will take place, review the current real estate market for commercial and housing development; assess the Urban Core's strengths, weaknesses, opportunities, and threats for development; and estimate support for the long-term development in the Urban Core.

Summary Findings

Regional Economic Context

The strong and relatively secure regional economic environment provides an excellent context in which to undertake future development in the Urban Core. The shortage of affordable market rate housing presents an opportunity for the Urban Core to increase its housing stock and find a ready market.

Regionally, residential development is the dominant land use in terms of aggregate value among the classes of new development. A strategy to transform the Urban Core sooner rather than later should fundamentally be based on opportunities for new residential development.

Urban Core's Economic Position

Redevelopment, infill development, and revitalization of existing development will take place within a growing and dynamic market, though one that is increasingly less affordable. The region's diversified economy provides stability, while projected shifts in regional growth patterns towards South County will generate new opportunities for the Urban Core if development there is priced competitively. The Urban Core's location between two growing economic hubs – Downtown San Diego and Tijuana -- is well positioned within coastal South County for capturing a significant share of regional growth.

Exhibit I-1 Study Area

While Chula Vista has been growing along with the region, western Chula Vista's 8,000 additional jobs projected between 2000 and 2030 is a declining share of citywide job growth. Existing SANDAG forecasts indicate that western Chula Vista, which includes the Urban Core, may continue to see a declining share of sub-regional growth as new development continues in eastern Chula Vista and elsewhere in South County. Despite its declining share of citywide employment, western Chula Vista's (SRA-21) 44,800 jobs forecasted by 2030 will still remain a majority share of citywide employment (56 percent in 2030 compared to 68 percent in 2000). Some of the projected declining share of future job growth reflects existing land use policies and the build-out nature of western Chula Vista, compared to other, newer areas of South County. Policies in the Urban Core and elsewhere in western Chula Vista, such as the Bayfront, that expand development capacity could change these assumptions, particularly if the development and community characteristics are of a competitive quality.

Chula Vista's taxable sales per capita are approximately 9 percent lower than the countywide average, which reflects net leakage of retail sales and Chula Vista's lack of tourism sales. Still, taxable sales grew by 3.7 percent per year between 1997 and 2002. The Urban Core can play a role in recapturing some sales that are lost to other jurisdictions. The Urban Core traditionally has been an important retail area for Chula Vista and South Bay residents, and consumers from Mexico; however, its share of citywide sales, though still large, is falling except for apparel and food stores in recent years, as new retail centers are developed in eastern Chula Vista.

Retail development and revitalization will be an important component of the Urban Core's future. The Urban Core's share of citywide apparel sales is rising. Apparel sales may have increased its market share due growth in cross border trade that is important to Chula Vista Center, growth in the South Bay regional population, and the limited amount of fashion stores included in the new developments in eastern Chula Vista (though this will change when the new regional mall planned in Otay Ranch is developed). While the Urban Core's retail outlets will benefit from the growing consumer base in South Bay, the Urban Core's traditional commercial role will have to adjust to growing competition, including eastern Chula Vista, the border communities (especially for Mexican trade), and downtown San Diego (for entertainment and dining), by finding new niches and serving more focused geographic areas. The Urban Core's market share of regional sales will probably decline as new competition develops, but absolute sales and supportable space will expand as the market population, particularly in western Chula Vista, grows.

While the Urban Core has visitor-serving uses, such as motels, and is along a major tourist travel corridor along the I-5 to Mexico, it currently is not very competitive in the regional tourism market. Its current minor niche is lodging for the budget traveler. Chula Vista's Bayfront is key for penetrating the region's visitor market, especially the traveler market to Mexico. The Urban Core's opportunity to improve its share of the visitor market would be enhanced with a strong link to the Bayfront. If the Urban Core is to attract visitors to the region on its own, it will have

to develop a unique niche, probably centered on culture, music, and food, and as an affordable location with amenities for the business market. Still, regional competition is great, and tourism will probably be a minor component of the Urban Core's economy.

The Urban Core, with the Bayfront, does have the opportunity to leverage the Mexican market to expand the reasons Mexicans shop in Chula Vista, from staples, fashion, and services, to dining and entertainment, particularly for families. There are many links between residents in South Bay and Tijuana, such as business, family, and friends, and the Urban Core can position itself as one of the primary areas within the border zone region where cross border business networking and personal gatherings can occur. The importance of the Mexican market to Chula Vista, however, should diminish somewhat, though remain significant, as the resident consumer base in the South Bay market area grows and opportunities diversify.

Demographics

SANDAG forecasts relatively lesser population and household growth, a largely aging population, a more diversified Hispanic and multicultural population, and relatively lower incomes and education levels in western Chula Vista and the Urban Core compared to countywide averages. These characteristics have implications for housing affordability and consumer buying power and preferences.

SANDAG's forecasts, however, reflect existing trends and capacities associated with current General Plan land use policies. Since SANDAG forecasts significant growth in South Bay that will change South Bay's demographic characteristics, the opportunity exists for the Urban Core to reinvent itself by changing land use policy to accommodate a greater share of South Bay and countywide growth, and modify its projected demographic characteristics in the process. The natural aging of the existing population in the Urban Core, particularly in single-family housing neighborhoods where properties overtime will turnover to new households, may also change the Urban Core's demographic profile over the next couple of decades.

While the opportunity exists to diversify the Urban Core's demographic trends, it should be recognized that most of the Urban Core's and western Chula Vista's demographic characteristics is already in place, associated with existing housing, and that these characteristics will continue to have influence even as the Urban Core diversifies with new development.

Many of the demographic trends are regional. The average age of the population is rising, as the baby-boom generation ages, and housing and districts that appeal to an aging population will be important. Environments that appeal to a multi-cultural population will be important. Housing that is affordable will be important.

The Real Estate Market

The real estate market indicators are strong for the residential and retail sectors, with rising prices and low vacancy rates countywide and within the Urban Core. Though rising, commercial retail monthly rents ($1.00 to $2.60 NNN per s.f.) and apartment rental rates ($0.61 to $1.29 NNN per s.f.) in the Urban Core are below average, reflecting its older building stock. Occupancy rates are very high, indicating strong demand at existing price points. It would be difficult to support new development at commercial retail and apartment rental rates associated with the Urban Core's older building stock. New development will have to achieve rents that are higher than average for the Urban Core. Limited recent examples demonstrate that this is possible, such as the Chula Vista Gateway mixed-use project, with retail in the first story and office space above. While there has been little new housing development in the Urban Core, several projects are proposed, which demonstrate that developers believe they can command rents and prices that are higher than existing market rents and prices for older properties.

Examples of new ownership housing are limited; however, the resale price of existing single-family homes ($468,000 in April, 2004) and condominiums ($350,000 in April, 2004) are growing and healthy, and only moderately lower than the countywide average. The relative affordability of housing in the Urban Core provides a near to mid-term advantage and market opportunity.

While the office sector countywide has moderately higher vacancy rates than other types of income property, office space in the Urban Core has low occupancy rates. Monthly rents in the Urban Core for most properties ($1.65 to$1.85 NNN) are lower than average, reflecting the older nature of most existing office buildings. The higher rents ($2.50 to $2.75 NNN) and strong occupancy rates achieved at the Gateway project, however, indicate that quality new office developments can generate relatively high rental income. Whether these values were achieved due to pent-up demand from a market that had not seen new Class A office development in decades, or reflect a developing and sustainable office sub-market remains to be seen.

The lodging inventory in the Urban Core, which is comprised of older properties, is positioned for the budget traveler. The low rents and occupancy rates, and declining transient occupancy taxes (TOT) revenues indicate that lodging is the weakest of the land uses that the Urban Core may potentially develop. While South Bay at some point may support a business hotel, Chula Vista's Bayfront or the Eastern Urban Center may be better positioned.

Commercial and residential land prices in the Urban Core ($47 to $63 per s.f. for commercial and $20 per s.f. for residential), though high for Chula Vista, are low relative to downtown San Diego, and present an opportunity to capture development, particularly urban housing development, that use to be feasible in downtown San Diego, but are no longer feasible given

downtown San Diego's land prices. Compared to eastern Chula Vista, however, the Urban Core achieves lower rents, but higher land prices, which makes it financially difficult to develop a financially feasible project. Future densities in the urban core probably have to be higher than existing densities to achieve enough revenue per acre to cover land costs. How developers provide parking affordably while increasing densities, while keeping rents and prices in line with the market, will be an important challenge.

Long-Term Development Parameters

Office Development

It is estimated that the Urban Core may reasonably expect to absorb approximately 750,000 to 1.1 million square feet of office space by 2030, in addition to existing supply, under the Moderate to High scenarios. The potential amount demanded would be less under a Low scenario, but planning policy should not unduly constrain potential upside growth if the more optimistic scenarios materialize.

Retail Development

The Urban Core has access to several potential consumer markets, including local and out-of-area households, downtown area employees, overnight visitors and cross border shoppers.

It is estimated that the Urban Core could support approximately 2.3 million square feet of gross leasable retail space, including existing retail space within the Urban Core, such as Chula Vista Shopping Center, 3rd Avenue, E Street, H Street, and Broadway. This amount could be higher if household and population capacity is enhanced, and average incomes rise with new development.

Housing Development

It is reasonable to assume that build-out capacity in the South Suburban MSA will increase, which would result in greater growth in the sub-market than SANDAG currently forecasts past the year 2020. Chula Vista is contemplating such increases as it updates its General Plan, including within the Eastern Urban Center, Downtown, and the upland portions of the Bayfront. The City of San Diego is considering adding housing capacity to the Otay Mesa Community Plan. San Ysidro and National City redevelopment efforts contemplate new urban housing capacity. While most of these changes in policies that will increase housing capacity have not yet been approved, it is likely that some will be approved given the regional housing affordability issue.

Assuming that household growth in the South Suburban MSA continues between 2020-2030 at the same rate as SANDAG forecasts for the 2010-2020 period, and that the Urban Core can

capture a significant share of this growth, the Urban Core might accommodate over 1,500 to over 3,600 new housing units between 2000 and 2030, including potentially small-lot single-family homes and attached town homes, and multi-family ownership and rental properties at various densities and heights.

Lodging

Lodging prospects are limited due to the lack of a major generator for overnight tourism demand, and the competitive advantage of lodging planned on Chula Vista's Bayfront. Waterfront hotels have traditionally performed better than the general lodging market due to the popularity of ocean views and bay access. Lodging within the Urban Core will probably have to position itself for the economy class, or a lower price point than planned at the Chula Vista Bayfront, and target travelers along Interstate 5 heading to and from Baja California, business travelers, and visiting families and friends.

Financial Considerations

The amount of revenue a property can generate relative to increases in costs must be greater to induce private redevelopment and renovation, without public subsidies. Rents and home prices, and densities, will have to be greater to generate this additional revenue.

How parking is addressed, in terms of standards (such as reducing standards near transit or allowing shared parking standards for mixed-use development), location (forming parking districts that can pool parking in-lieu fees to provide serviceable off-site parking at a lower cost due to economies of scale), and type (ensuring parking development costs are commensurate with achievable rents) is important.

Another major issue that will affect feasibility is the ultimate impact fee costs, given the potentially higher cost of providing public facilities in an existing community to serve the additional population.

If the Urban Core Plan's allowable densities requires subterranean parking, rents and home prices per square foot will have to be even greater to afford the high cost of subterranean parking. A Keyser Marston Associates (KMA) study for the City of Chula Vista that tested the residual value of alternative forms of housing at different densities and assumed impacts concluded that townhomes and mid-rise condominium development currently are the most feasible housing prototype, supporting current estimates of acquisition costs for improved properties in western Chula Vista. The feasibility of high-rise condominium development appeared low because of the higher costs relative to prices, although a relatively modest increase in high-rise price

assumptions (which the Chula Vista Urban Core could evolve into) would make high-rise development feasible. KMA concluded that rental rates currently are too low to support increases in land values and construction costs.

Building upon KMA's analysis and using similar impact fee factors, ERA evaluated three hypothetical mixed-use housing and retail scenarios on 50,000 square foot lots, and applied the draft development standards prepared by RRM Associates. The first two scenarios were variations of mixed-use development within the V-2 Village area. The first scenario, V-2-A, assumes that development maximizes the allowed floor-area ratio (FAR), necessitating subterranean parking. The second scenario, V-2-B, assumes that only one level of lower cost tuck-under parking (half level below grade and half above grade, utilizing natural ventilation) is developed and the number of residential units is limited by the parking supply. Both of these scenarios assume that commercial parking requirements is satisfied off-site through parking in-lieu fees. The third scenario, V-12, assumes a high-rise, transit-oriented, mixed-use development were all parking is placed on site. Theses analyses are presented in Appendix A.

The estimated residual land values that these scenarios may support are as follows:

Scenario	**Residual Land Value Per S.F. of Land Area**
V-2A: FAR Capacity	$21
V-2B: Parking Constrained	$71
UC-12: Transit-Oriented High-Rise	$22

While these prices are comparable for higher density residential and commercial land in the urban areas of South Bay, only the Parking Constrained scenario generates sufficient value to recover the cost of property acquisition that includes land and existing improvements, which is the more common scenario within the Urban Core. The reason the Parking Constrained scenario performs better is that the high cost of subterranean parking is avoided. The UC-12 scenario, the Transit-Oriented High Rise Scenario, must compensate for higher construction costs per unit associated with high-rise development, which reduces residual value given market prices.

Based on this analysis, the City should strive to improve the feasibility of private redevelopment by doing the following:

- Strive to reduce the impact fee cost burden on development through efficient infrastructure planning, and the use of public funds (such as redevelopment funds) to cover some of the costs of infrastructure and public facility provision;

- Reduce parking in-lieu fees by developing district parking as a public/private partnership, and/or base fees on the provision of common surface lots, rather than structured parking.

These measures are particularly important in the early phases of the Urban Core's redevelopment. Overtime, as prices and rents rise in real terms relative to construction costs, the residual land value of development will rise and the ability for private parties to purchase existing properties, without subsidy will improve, as will development's capacity to absorb higher parking and impact fee costs.

The Urban Core's Competitive Strengths, Weaknesses, Opportunities & Threats

Development prospects within the Urban Core have many competitive strengths and opportunities, but also some competitive weaknesses to overcome and potential threats to avoid and prepare against.

Strengths

- Location between downtown San Diego and Tijuana
- Established retail market concentration
- Proximity to the Bay and potential view development
- Established employment, retail, and residential center with high occupancy
- Public investment in infrastructure
- Quality entry-level and mid-market rate ownership housing
- Transit linkages and good regional highway access
- Traditional downtown district

Weaknesses

- Relatively lower incomes
- Limited visitor industry
- Low hotel room rates and occupancy rates
- Aging building stock
- Relatively lower rents that discourage investment
- Public facility deficiencies
- Relatively neutral regional market image
- Relatively weak linkage with the Bayfront

Opportunities

- Affordable development relative to downtown San Diego
- Ability to capture a larger share of housing demand than SANDAG forecasts
- An alternative and more affordable urban lifestyle than downtown San Diego
- Coastal view development and links to the Bayfront
- Pedestrian and transit-oriented development
- Ability to intercept Mexican consumers
- Become South County's office employment, retail, and entertainment center
- Become a meeting place for San Diego/Mexico business and personal networks
- Housing for many incomes, preferences, and cultures

Threats

- Competition from other mixed-use urban nodes in the region
- Competition from Bayfront development if not linked with core
- Competition from the Eastern Urban Center if not adequately distinguished
- Cost and complexity of land assembly and infill development
- Infrastructure and public facility constraints and mitigation costs
- Not overcoming a "second tier" reputation in the regional market
- Exposure to Mexican currency fluctuations

Concentrating efforts in keystone districts within the Urban Core to show success and generate some critical mass, rather than dilute efforts with individual scattered developments, may be important for generating momentum and long-term success, so that people choose to live, shop, and work in the Urban Core because of its own distinct identity.

II. Market Context

Regional Economic Base

San Diego has a strong and diversified regional economy. The major contributors to the economy (as measured by contribution to the Gross Regional Product) are manufacturing, the military, tourism, business and technology services, and trade. This diversity provides both stability and an entrepreneurial spirit exemplified by the region's many small businesses.

According to the San Diego Regional Chamber of Commerce, San Diego County's gross regional product[1] (GRP) grew dramatically in real terms (adjusted for inflation) from 1980 to 1990. The economy faced a structural change as the Cold War ended and the defense industry, in particular the aerospace industry, contracted. This structural change combined with a national recession stagnated and even decreased the GRP in the early 1990s. The economy rebounded slowly up to 1995. Since then, the economy's growth has accelerated until the early 2000s, and has continued to grow at a slower rate in the early 2000s. The period from 1997 to 2000 registered the most impressive growth, as shown in Exhibit II-1.

Population has grown with the economy's growth, fueled by foreign and national migration and the natural increase of the base population. San Diego County's population grew by almost 494,000 people between 1990 and 2003, from 2.5 million to 3.0 million, for an average compounded annual growth rate of 1.4 percent. Due to the recession experienced during the first years of the 1990's decade, the real gross regional product per capita, adjusted for inflation, experienced negative annual growth rates between 1991 and 1993, grew 0.7 percent in 1994 and increased steadily thereafter, reaching 6.9 percent in 1999 and 8.0 percent in 2000.

During the period between 2000 and 2003, the San Diego Region added more than 173,400 new residents, increasing its population by 6.1 percent. Due to the growth in population, the real gross regional product per capita, adjusted for inflation, experienced more modest annual growth rates in 2001 (0.6 percent), 2002 (0.3 percent) and 2003 (1.4 percent), compared to much higher GRP growth rates per capita from 1996 to 2000.

The tragic events of 9/11, 2001 have resulted in an increase in spending for military and defense, which has reinvigorated these traditional San Diego industries. In 2002, the region had more than 105,000 Active Duty Personnel and 24,000 Department of Defense civilian jobs. Defense

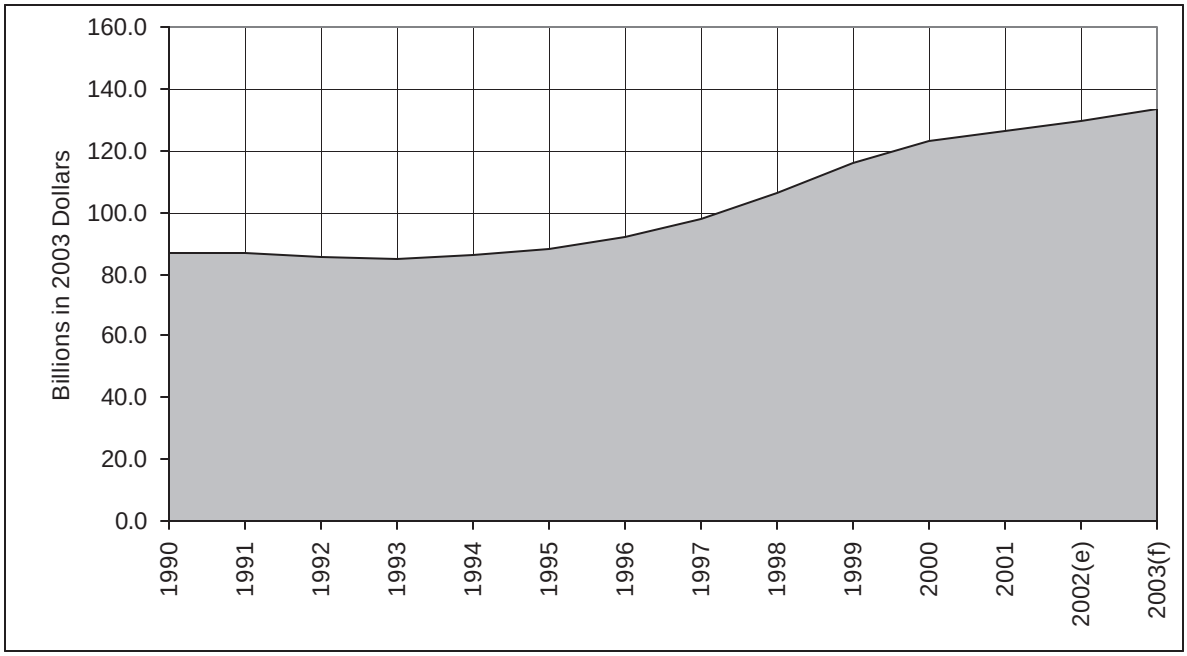
[1] This measure is the regional version of the Gross Domestic Product, or GDP, which is a measure of total economic output.

expenditures in the region increased by $3.2 billion in 2002, a 30 percent increase from Department of Defense expenditures in 2001,

While the military and defense industries are important to the region, businesses, universities, and institutes in San Diego County developed strong technical industries in the later 1980s and 1990s, such as biotechnology (the region is the third largest biotech cluster in the United States), telecommunications, software, medical instruments, electronics, etc. Trade has grown, first with the maquiladora program, then NAFTA. Tourism remains strong.

Today, the region's economic base is more diverse than it has ever been and is better prepared to face future economic downturns, thereby lessening the region's reliance on the defense industry and federal expenditures, the contraction of which greatly affected the economy during the 1990's recession.

Exhibit II-1 San Diego County Real Gross Regional Product



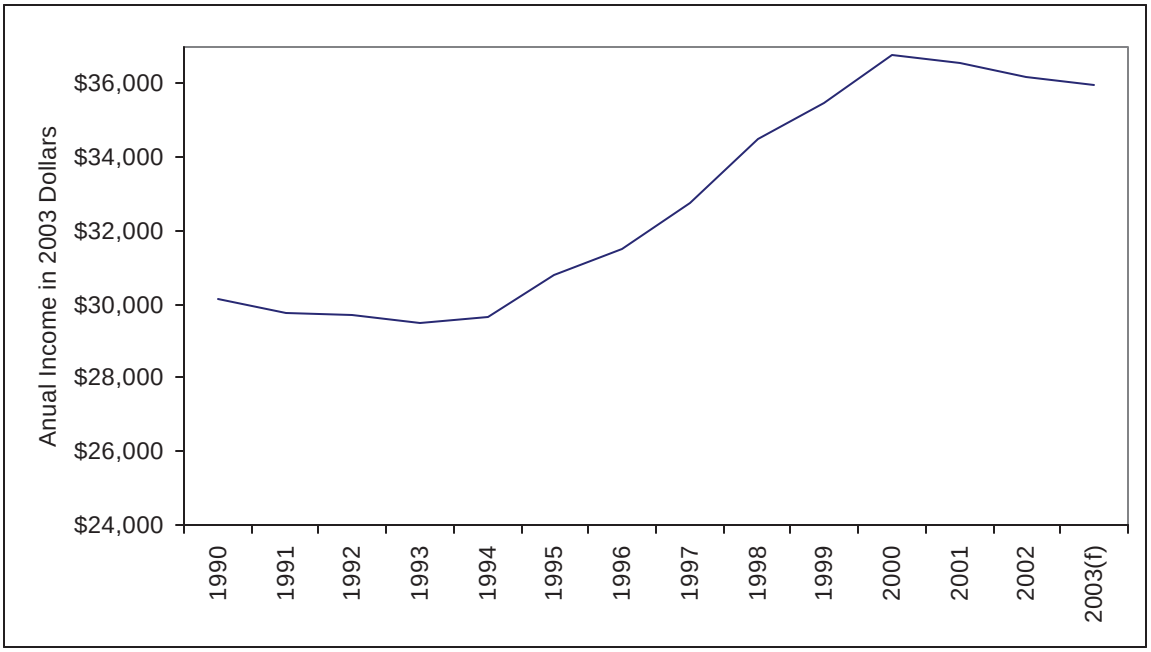
Source: San Diego Regional Chamber of Commerce.
San Diego Economic Bulletin, Forecast 2003, Volume 51, Number 1.

In 2003, 1.43 million people were employed on average in San Diego County throughout the year and the unemployment rate stood at 4.4 percent. Although the unemployment rate has increased from the 3.4 percent in 2001, San Diego has performed better than the state of California, which

recorded an unemployment rate of 6.5 percent[2] in 2003. It should be mentioned that the recent increase in the unemployment rate is partly due to people moving to the region, attracted to the strong economy, and not the result of a weak job generation. In 2002, more than 10,000[3] jobs were added to the local economy, contrasting with the 125,000[4] jobs lost in the State of California as a whole. San Diego's rate of 4.4 percent is at or near the generally accepted "full employment" threshold.

San Diego County's personal income per capita, in real terms adjusted for inflation, increased substantially during the 1980's, but declined during the first half of the 1990's as a result of the recession. Recovery started in 1994 and per capita income topped in 2000, but has decreased slightly in recent years, as illustrated in Exhibit II-2.

Exhibit II-2 San Diego County Real per Capita Income



Source: San Diego Regional Chamber of Commerce.

Perhaps the greatest contributor to price inflation in the region is the cost of housing. San Diego County has become one of the least affordable housing markets in the country. Following the 1990's recession, home prices have increased every year since 1996. Adjusted for inflation, the

[2] San Diego Regional Chamber of Commerce, 2003 Economic Outlook

[3] San Diego Regional Chamber of Commerce, 2002 Year in Review, Volume 51, Number 3

[4] idem

average home value in the county has increased 76.4[5] percent since 1995, for a compound annual growth rate of 7.3 percent, well above the annual inflation rate. Such increases are the result of various economic factors, such as stable economic growth, high migration rates that increase the demand for housing, scarcity of land and housing supply, and historically low interest rates.

Affordability has become a major concern for the region's economy, as the proportion of local households that can afford a home has dramatically decreased in the last 10 years. During the 1994 recession, the proportion of households who could afford the median price home was 48 percent; today, only 16 percent of households can afford the median price home in San Diego County[6].

The future bodes well for the region's economy due to its diversity, federal expenditures, proximity to Mexico, qualified workforce, and amenities and destinations that attract tourists. Defense will continue to be an important part of the region's economy for the foreseeable future. Technology companies will also drive growth for the region. The tourism industry is expected to attract more visitors in years to come. San Diego County's proximity to large short-haul markets, such as Southern California, Northern California, Arizona and other western states shelter the region's tourism economy somewhat from potential disruptions to national and international travel. The region's economy has also benefited from NAFTA related trade given its strategic geographic location. Since its inception in 1994, the total dollar volume of international trade has more than tripled in the region.

The strong and relatively secure economic environment provides an excellent context in which to undertake future development in the Urban Core. The shortage of affordable market rate housing presents an opportunity for the Urban Core to increase its housing stock and find a ready market.

Development Trends

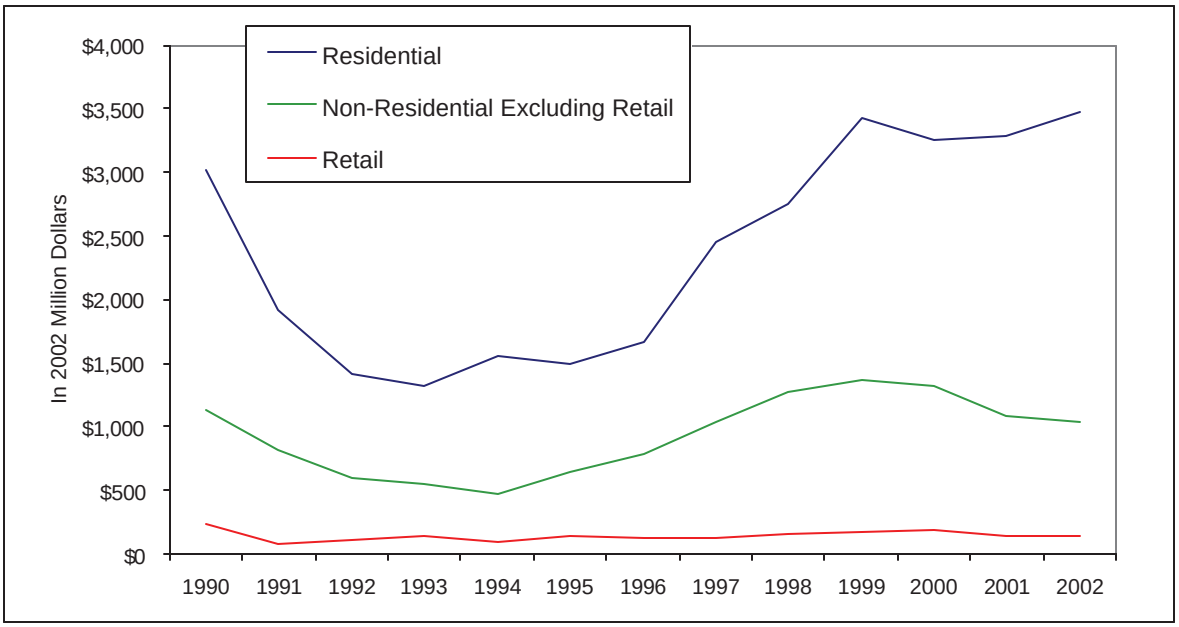
Exhibit II-3 shows San Diego County development trends measured by permit valuation (in 2002 dollars) for residential development, non-residential development excluding retail, and retail development. Residential permit value averaged $2.4 billion from 1990 to 2002 in constant 2002 dollars, reaching $3.5 billion in 2002. Non-residential permit value, excluding retail permits, averaged $0.9 billion from 1990 to 2002 in constant 2002 dollars, reaching $1.0 billion in 2002. Retail permit value averaged $145 million from 1990 to 2002 in constant 2002 dollars, reaching $138 million in 2002.

[5] San Diego Regional Chamber of Commerce, Economics Research Associates

[6] San Diego Regional Chamber of Commerce, San Diego Economic Bulletin

Exhibit II-4 shows development trends in the City of Chula Vista measured by permit valuation (in 2002 dollars) for residential development, non-residential development excluding retail, and retail development. Residential permit value averaged $288 million from 1990 to 2003 in constant 2002 dollars, reaching $606 million in 2003. Non-residential permit value, excluding retail permits, averaged $29 million from 1990 to 2003 in constant 2002 dollars, reaching $50 million in 2000. Retail permit value averaged $23 million from 1990 to 2003 in constant 2002 dollars, reaching $53 million in 2003.

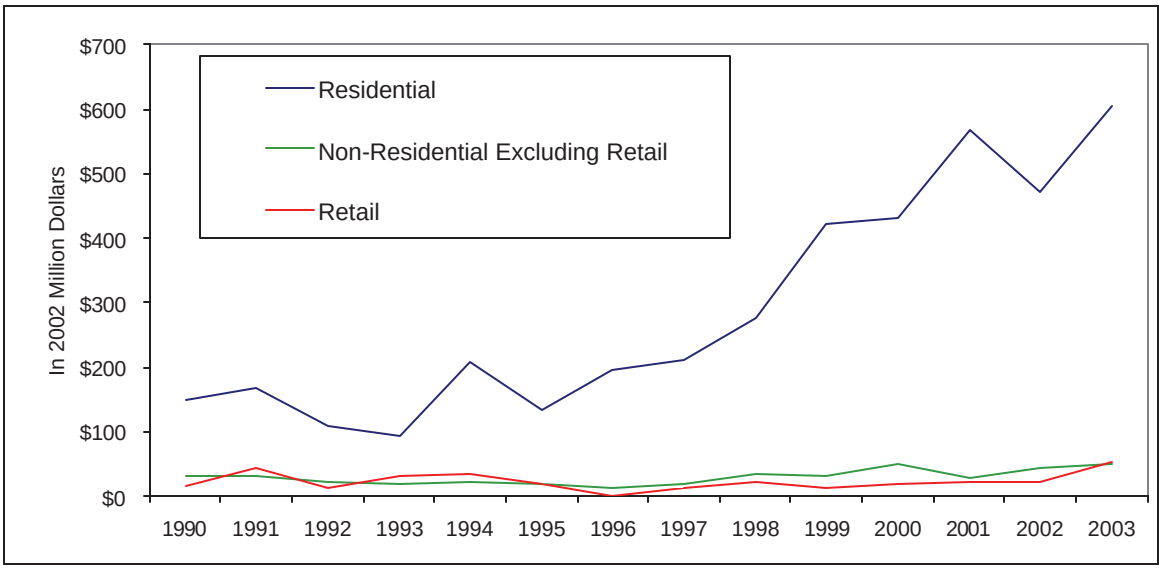
Exhibit II-3 Countywide Development Permit Value



Source: San Diego Regional Chamber of Commerce

Regionally, residential development is by far the dominant land use in terms of aggregate value among the classes of new development. A strategy to transform the Urban Core sooner rather than later should fundamentally be based on opportunities for new residential development.

Exhibit II-4 Chula Vista Development Permit Value



Source: San Diego Regional Chamber of Commerce

Employment Trends

San Diego County

According to SANDAG, the San Diego Region is expected to increase its workforce from 1.38 million to 1.82 million between 2000 and 2030, for a compounded annual growth rate (CAGR) of 0.9 percent. Employment growth projections for the San Diego Region are evenly distributed throughout the 30-year term; it is estimated, on average, that 146,000 jobs will be added to the local economy every ten years. Table II-1 shows forecasted employment growth by industry for San Diego County between 2000 and 2030.

The Financial, Insurance and Real Estate (FIRE) sector is projected to grow by 54 percent during the 30-year period, adding 37,715 new jobs, while the Services sector is forecasted to grow by 50 percent, adding 201,295 jobs to the regional economy. These sectors are particularly important for the private office market. Retail trade, another important sector for downtown development, is expected to add almost 67,000 new jobs.

Table II-1 San Diego County Employment Growth by Industry 2000-2030

	2000	2010	% Change	2020	% Change	2030	% Change
Agriculture	11,800	10,648	-9.76%	9,897	-7.05%	9,782	-1.16%
Construction	70,000	78,655	12.36%	79,396	0.94%	78,621	-0.98%
Finance, Insurance & Real Estate	69,501	81,759	17.64%	95,641	16.98%	107,216	12.10%
Government	206,600	240,239	16.28%	257,928	7.36%	273,174	5.91%
Manufacturing	129,200	116,562	-9.78%	116,822	0.22%	118,494	1.43%
Military	90,093	90,093	0.00%	90,093	0.00%	90,093	0.00%
Retail trade	217,100	239,456	10.30%	260,113	8.63%	283,899	9.14%
Self employment, domestic workers	89,380	98,305	9.99%	108,281	10.15%	118,673	9.60%
Services	399,202	461,117	15.51%	529,159	14.76%	600,497	13.48%
Transportation, Comm. & P.Utilities	50,800	55,880	10.00%	60,683	8.60%	69,128	13.92%
Wholesale trade	51,000	55,808	9.43%	64,870	16.24%	74,453	14.77%
Total	1,384,676	1,528,522	**10.39%**	1,672,883	**9.44%**	1,824,030	**9.04%**

Source: SANDAG and Economics Research Associates

South Suburban Market Area

Employment growth in the South Suburban Major Statistical Area (MSA), where western Chula Vista and the Urban Core are located, is expected to increase from 85,900 to 167,300 between 2000 and 2030, adding more than 81,000 jobs for a compounded annual growth rate (CAGR) of 2.2 percent, well above the regional average. Table II-2 shows employment growth by industry for the South Suburban Major Statistical Area in San Diego County between 2000 and 2030.

In the South Suburban Area, the FIRE sector is projected to increase by 204 percent during the 30-year period, adding 6,900 new jobs, while the Services sector is forecasted to grow by 242 percent, adding 35,689 new jobs to the South Bay economy.

Table II-3 shows the South Suburban MSA's projected share of San Diego County's net growth in employment between 2000 and 2030 for FIRE, Government, Retail Trade, Government, and Services sectors, important sectors for the Urban Core. As shown, South Suburban MSA's share of regional growth for all categories is projected to increase each subsequent decade. According to SANDAG's estimates, the South Suburban Area may increase its share of total employment in San Diego County from 6.2 percent in 2000 to 9.2 percent by 2030.

Table II-2 South Suburban Employment Growth by Industry 2000-2030

	2000	2010	% Change	2020	% Change	2030	% Change
Agriculture	251	253	0.8%	257	1.6%	258	0.4%
Construction	1,905	2,153	13.0%	2,174	1.0%	2,491	14.6%
Finance, Insurance & Real Estate	3,369	4,515	34.0%	7,391	63.7%	10,269	38.9%
Government	19,312	23,251	20.4%	26,426	13.7%	29,338	11.0%
Manufacturing	9,998	9,046	-9.5%	9,080	0.4%	9,355	3.0%
Military	200	200	0.00%	200	0.00%	200	0.0%
Retail trade	17,927	20,446	14.1%	23,839	16.6%	28,370	19.0%
Self employment, domestic workers	10,660	12,463	16.9%	14,989	20.3%	17,410	16.2%
Services	14,737	20,929	42.0%	33,661	60.8%	50,426	49.8%
Transportation, Comm. & P.Utilities	3,433	4,612	34.3%	5,972	29.5%	8,790	47.2
Wholesale trade	4,112	5,272	28.2%	7,587	43.9%	10,346	36.4%
Total	85,904	103,140	**20.1%**	131,576	**27.6%**	167,253	**27.1%**

Source: SANDAG; and Economics Research Associates

Table II-3 South Suburban Net Growth Employment Share of San Diego County between 2000 and 2030 for FIRE, Government, Retail Trade and Services Sectors

	2000-2010	2010-2020	2020-2030
Finance, Insurance & Real Estate	9.3%	20.7%	24.9%
Government	11.7%	17.9%	19.1%
Retail trade	11.3%	16.4%	19.0%
Services	10.0%	18.7%	23.5%

Source: SANDAG and Economics Research Associates

Chula Vista

In the case of Chula Vista, SANDAG forecasts that jobs will increase from 53,700 to 79,400 between 2000 and 2030, for a CAGR of 1.3 percent, which is less than the South Suburban growth rate, but still above the countywide average growth rate. SANDAG is forecasting that a higher proportion of South Bay job growth will occur elsewhere, such as Otay Mesa. The City of Chula Vista is expected to receive 6,074 new jobs between 2000 and 2010, 9,086 between 2010 and 2020, and 10,551 between 2020 and 2030. Table II-4 shows SANDAG's forecasted employment growth by industry for the City of Chula Vista between 2000 and 2030.

The FIRE sector in Chula Vista is projected to increase by 107 percent, adding 2,451 jobs between 2000 and 2030, while the Services sector is forecasted to grow 88 percent, adding 10,314 jobs to the city's employment base during the 30-year period.

These forecasts are based on existing land use policy. If land-use policy changes to allow for more or less employment, the forecasted share of regional employment growth occurring in Chula Vista may also change.

Table II-4 Chula Vista Employment Growth by Industry 2000-2030

	2000	2010	% Change	2020	% Change	2030	% Change
Agriculture	165	165	0.0%	165	0.0%	165	0.0%
Construction	1,378	1,558	13.1%	1,567	0.6%	1,672	6.7%
Finance, Insurance & Real Estate	2,290	2,777	21.3%	3,819	37.5%	4,741	24.1%
Government	8,814	10,788	22.4%	11,707	8.5%	12,644	8.00%
Manufacturing	6,051	5,357	-11.5%	5,363	0.1%	5,477	2.1%
Military	0	0		0		0	
Retail trade	11,794	12,500	6.0%	13,530	8.2%	15,142	11.9%
Self employment, domestic workers	7,633	8,734	14.4%	10,102	15.7%	11,191	10.8%
Services	11,727	13,533	15.4%	17,419	28.7%	22,041	26.5%
Transportation, Comm. & P.Utilities	1,810	2,055	13.5%	2,366	15.1%	2,914	23.2%
Wholesale trade	2,069	2,338	13.0%	2,853	22.0%	3,455	21.1%
Total	53,731	59,805	**11.3%**	68,891	**15.2%**	79,442	**15.3%**

Source: SANDAG and Economics Research Associates

Table II-5 shows Chula Vista's forecasted share of South Suburban MSA's net employment growth between 2000 and 2030 for FIRE, Government, Retail Trade and Services sectors. As shown in the table, Chula Vista's share of FIRE category net growth is forecasted to decrease from 42.5 percent between 2000 and 2010 to 32.0 percent between 2020 and 2030, while its share of Government's net growth is forecasted to decrease from 50.1 percent to 32.2 percent during the same timeframe. Chula Vista's share for Retail Trade's net growth is forecasted to increase from 28.0 percent to 35.6 percent and decrease slightly in the services sector.

The South Suburban MSA is forecasted to add over 81,300 new jobs between 2000 and 2030. During the same timeframe, the City of Chula Vista is projected to add over 25,700 new jobs. According to SANDAG's forecasts, the City of Chula Vista is forecasted to capture 31.6 percent of the total employment growth in the South Suburban Area during the 30-year period.

Table II-5 Chula Vista Net Growth Employment Share of South Suburban between 2000 and 2030 for FIRE, Government, Retail Trade and Services Sectors

	2000-2010	2010-2020	2020-2030
Finance, Insurance & Real Estate	42.5%	36.2%	32.0%
Government	50.1%	28.9%	32.2%
Retail trade	28.0%	30.4%	35.6%
Services	29.2%	30.5%	27.6%

Source: SANDAG and Economics Research Associates

Even though the City of Chula Vista is projected to add more than 25,700 new jobs between 2000 and 2030, its share of the total employment growth within the South Suburban Area is expected to decrease from 62.5 percent in 2000 to 47.5 percent by 2030. Chula Vista's declining shares are expected because of growth in other areas in the South Suburban MSA, particularly Otay Mesa, which would decrease Chula Vista's existing shares. Again, if land use policies change in Chula Vista to allow more or less growth, the city's projected share of South Suburban growth may also change.

SRA-21 (Western Chula Vista)

The Urban Core comprises approximately 20-25 percent of SANDAG's Sub-Regional Area 21 (SRA-21) land, the smallest geographic area for which SANDAG reports employment by sector. SRA-21 generally comprises western Chula Vista. SANDAG forecasts that jobs in SRA-21 will increase from 36,800 to 44,800 between 2000 and 2030, adding almost 8,000 new jobs to the local economy for a 0.7 percent compounded annual growth rate (CAGR). The CAGR for SRA-21 is significantly lower than the 1.3 percent CAGR forecasted for the City of Chula Vista, which in turn is lower than the 2.2 percent CAGR for the South Suburban Area, and reflects that SRA-21 is closer to build-out under existing General Plan policies. Again, changes in land use policy would influence these projections.

SRA-21 is forecasted to capture 31 percent of the total employment growth in the City of Chula Vista during the 30-year period. Table II-6 shows employment growth by industry for SRA-21 between 2000 and 2030.

Within SRA-21, the FIRE industry sector is projected to increase 36.0 percent during the 30-year period, adding 518 jobs, while the Services sector is forecasted to grow by 37.9 percent, adding 3,067 jobs. The Retail Trade sector is projected to increase 19.8 percent, adding 1,682 jobs.

Table II-6 SRA-21 Employment Growth by Industry 2000-2030

	2000	2010	% Change	2020	% Change	2030	% Change
Agriculture	160	160	0.0%	160	0.0%	160	0.0%
Construction	959	1,042	8.7%	1,046	0.4%	1,124	7.5%
Finance, Insurance & Real Estate	1,436	1,595	11.1%	1,685	5.6%	1,954	16.0%
Government	6,312	7,503	18.9%	7,729	3.0%	8,329	7.8%
Manufacturing	5,042	4,418	-12.4%	4,421	0.1%	4,519	2.2%
Military	0	0		0		0	
Retail trade	8,487	8,858	4.4%	9,158	3.4%	10,169	11.0%
Self employment, domestic workers	3,569	3,678	3.1%	3,789	3.0%	4,162	9.8%
Services	8,092	8,888	9.8%	9,332	5.0%	11,159	19.6%
Transportation, Comm. & P.Utilities	1,059	1,065	0.6%	1,084	1.8%	1,257	16.0%
Wholesale trade	1,673	1,678	0.3%	1,731	3.2%	1,944	12.3%
Total	36,789	38,885	**5.7%**	40,135	**3.2%**	44,777	**11.6%**

Source: SANDAG and Economics Research Associates

Table II-7 shows SRA-21's share of Chula Vista's net growth between 2000 and 2030 for FIRE, Government, Retail Trade and Services sectors. SRA-21's is projected to account for 32.6 percent of Chula Vista's FIRE net growth between 2000 and 2010, decrease to 8.6 percent between 2010 and 2020, and increase to 29.2 percent between 2020 and 2030. SRA-21's share of Chula Vista's Government net growth share follows a similar pattern, accounting for 60.3 percent of total forecasted Chula Vista net growth between 2000 and 2010, decreasing to 24.6 percent between 2010 and 2020, and increasing again to 64.0 percent between 2020 and 2030. Retail trade and Services follow similar patterns as well.

Presumably, this fluctuation in market share that SANDAG is forecasting anticipates that western Chula Vista will capture a large share this decade, but will lose market share to eastern Chula Vista, particularly the Eastern Urban Center, during the next decade, and regain some market share the following decade as the EUC approaches build-out.

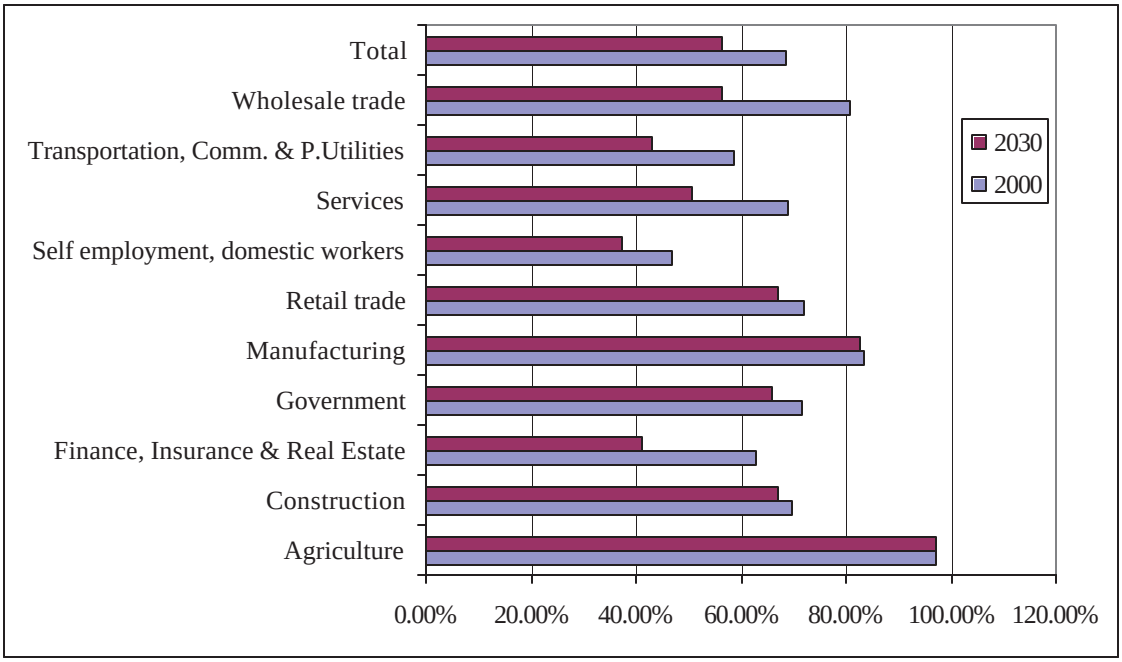
SRA-21's share of total employment in Chula Vista is expected to decrease from 68.4 percent in 2000 to 56.3 percent by 2030, attributable to the development of new employment centers within the City of Chula Vista (particularly in eastern Chula Vista). Exhibit II-5 shows SRA-21's projected share of citywide employment by industry sector from 2000 and 2030.

Table II-7 SRA-21 Job Growth As a Share of Chula Vista's Job Growth between 2000 and 2030 for FIRE, Government, Retail Trade and Services Sectors

	2000-2010	2010-2020	2020-2030
Finance, Insurance & Real Estate	32.6%	8.6%	29.2%
Government	60.3%	24.6%	64.0%
Retail trade	52.5%	29.1%	62.7%
Services	44.1%	11.4%	39.5%

Source: SANDAG and Economics Research Associates

Exhibit II-5 SRA-21 Share of Chula Vista Employment by Industry Sector for 2000 and 2030



Source: SANDAG; and Economics Research Associates

Implications for the Urban Core

Redevelopment, infill development, and revitalization of existing development will take place within a growing and dynamic market, though increasingly less affordable. The region's diversified economy provides stability, while projected shifts in regional growth patterns towards South County will generate new opportunities for the Urban Core if it is priced competitively. The Urban Core's location between two growing economic hubs –Downtown San Diego and

Tijuana -- is well positioned within coastal South County for capturing a significant share of regional growth.

While Chula Vista has been growing along with the region, western Chula Vista's share of the city's job and retail growth has been declining. Existing SANDAG forecasts indicate that western Chula Vista, which includes the Urban Core, may continue to see a declining share of sub-regional growth as new development continues in eastern Chula Vista and elsewhere in South County, though western Chula Vista's share of total jobs (new and existing) will still remain significant. Some of the projected declining share of future job growth reflects existing land use policies and the build-out nature of western Chula Vista, compared to other, newer areas of South County. Policies in the Urban Core and elsewhere in western Chula Vista, such as the Bayfront, that expand development capacity could change these assumptions, particularly if the development and the community characteristics are of a competitive quality.

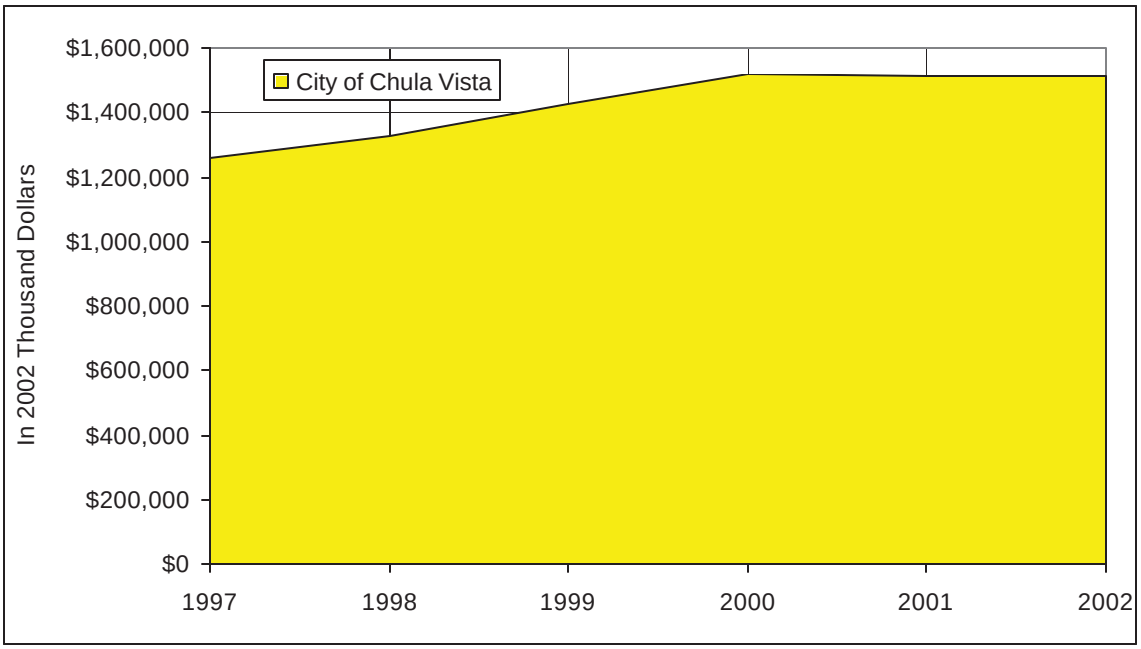
Retail Trends

Retail Sales

Taxable retail sales in the City of Chula Vista has grown in real terms adjusted for inflation from 1997 to 2002. As shown in Exhibit II-6, City of Chula Vista taxable retail sales (in 2002 constant dollars) increased from $1.3 billion in 1997 to $1.5 billion in 2000, for a 6.4 percent average compounded annual growth rate. Taxable retail sales in Chula Vista slightly decreased in 2001 and 2002. Between 1997 and 2002, the average compounded annual growth rate of taxable retail sales was 3.7 percent.

Chula Vista's taxable retail sales per capita in 2002 was $7,913, 18.5 percent lower than the countywide average of $9,378. This may be attributable to the time delay associated with developing new commercial development to serve the growing population in eastern Chula Vista. Chula Vista's relatively lower penetration of the regional tourism market may also be a factor, though this is countered by Chula Vista's higher than average share of sales to the Mexican market.

Exhibit II-6 City of Chula Vista Taxable Retail Sales Trends



Source: State Board of Equalization

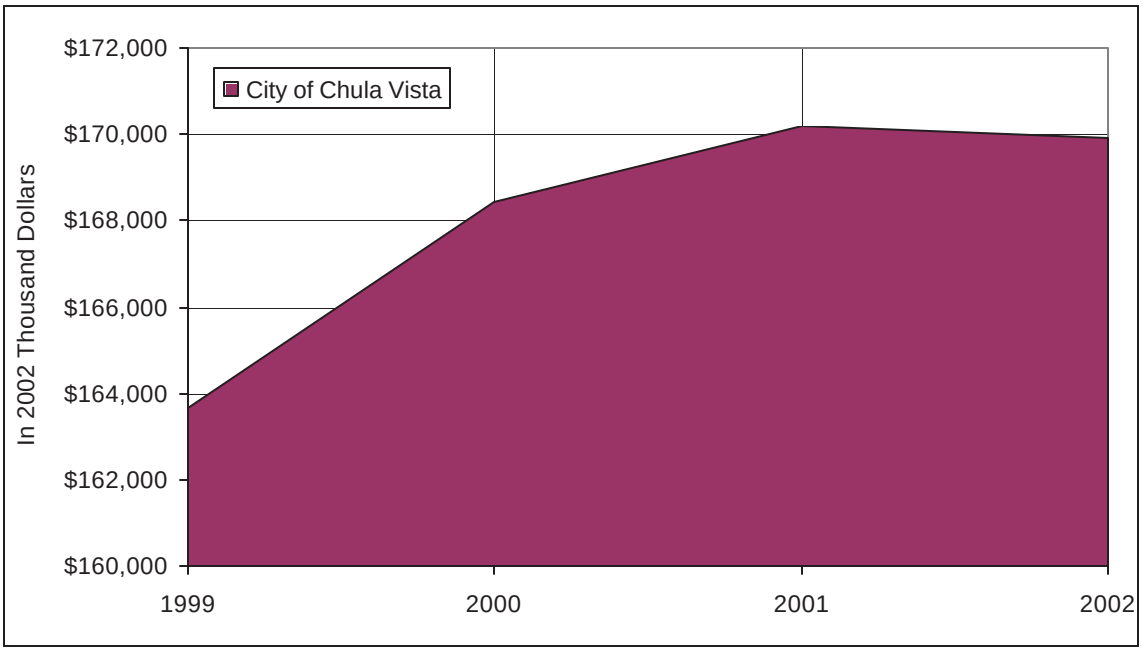
Restaurants are potentially an important part of the Urban Core's future retail offerings, especially if the Urban Core is to become a regional destination for eastern Chula Vista and other South County residents. In 2002, eating and drinking places represented 11.2 percent of all taxable retail sales in the City of Chula Vista, lower than the 12.8 percent they represent in San Diego County, and the 12.6 percent they represent in the State of California. Exhibit II-7 shows taxable sales for eating and drinking places in 2002 dollars for the City of Chula Vista.

The Urban Core Retail Sales

Table II-8 shows taxable sales by category in the Urban Core for 1995, 2000 and 2003 and CAGR. The Urban Core includes commercial corridors along E Street, H Street, Broadway Avenue and 3rd Avenue.

Table II-9 shows taxable sales by category in the Urban Core as a percentage of Chula Vista for 1995 and 2000. The categories that showed an increasing share of citywide sales were apparel and food stores. The Urban Core's share of all other categories decreased between 1995 and 2000.

Exhibit II-7 City of Chula Vista Eating and Drinking Taxable Retail Sales Trends



Source: State Board of Equalization

Table II-8 1995 and 2000 Urban Core Taxable Sales

	1995	2000	CAGR (1995-2000)	2003	CAGR (2000-2003)
Apparel Stores	28,529,500	44,729,800	9%	47,028,300	2%
General Merchandise Stores	86,778,000	146,005,800	11%	150,855,200	1%
Food Stores	26,154,700	34,415,100	6%	37,706,800	3%
Eating & Drinking Places	48,673,800	55,208,500	3%	68,240,900	7%
Building Materials & Farm Implements	7,023,900	5,376,200	-5%	6,323,400	6%
Auto Dealers & Auto Supplies	21,978,400	32,606,000	8%	38,179,300	5%
Service Stations	32,509,200	33,191,000	0%	35,184,700	2%
Other Retail Stores	41,069,900	67,158,100	10%	84,827,900	8%
All Other Categories	29,067,400	33,191,000	3%	35,116,400	2%
Total	**321,784,800**	**451,881,500**		**503,462,900**	

Source: City of Chula Vista and ERA

Table II-9 1995 and 2000 Urban Core Percentage of Citywide Taxable Sales

	1995	2000
Apparel Stores	51.9%	67.2%
General Merchandise Stores	33.4%	29.5%
Food Stores	37.2%	38.0%
Eating & Drinking Places	41.2%	35.5%
Building Materials & Farm Implements	12.0%	5.3%
Auto Dealers & Auto Supplies	25.5%	22.3%
Service Stations	32.7%	27.4%
Other Retail Stores	42.9%	42.7%
All Other Categories	21.4%	16.0%

Source: California Board of Equalization, City of Chula Vista and ERA

Retail Space

In 2003, retail sales in the county supported 48.1 million square feet of retail space (in buildings 50,000 square feet or greater), compared to 35.3 million in 1993, for an average annual increase of 1.3 million square feet and an average compounded annual growth rate of 3.1 percent. According to CB Richard Ellis, vacancy rates for retail space are at the lowest levels in 10 years (2.7 percent at the end of 2003); in marked contrast to 1993 when vacancy rates stood at 8.7 percent. During 2003, the region absorbed 1.5 million square feet of new retail space.

In the 3rd quarter of 2003, the Chula Vista/Bonita retail market had 2.7 million square feet (in buildings 50,000 square feet or greater) and vacancy rates much lower than the county average, at 0.60 percent, reflecting an under-served local market. Of the 1.7 million square feet under construction in San Diego County during the 3rd quarter of 2003, the Chula Vista/Bonita retail market accounted for 380,000 square feet, or 22.4 percent.

Implications for the Urban Core

The Urban Core traditionally has been an important retail area for Chula Vista and South Bay residents, and consumers from Mexico. Retail development and revitalization will be an important component of the Urban Core's future. While the Urban Core's retail outlets will benefit from the growing consumer base in South Bay, the Urban Core's traditional commercial role will have to adjust to growing competition in South Bay, including eastern Chula Vista, the border communities (especially for Mexican trade), and downtown San Diego (for entertainment

and dining), by finding new niches and serving more focused geographic areas. The Urban Core's market share of regional sales will probably decline as new competition develops, but absolute sales and supportable space will expand as the market population, particularly in western Chula Vista, grows.

Visitor Market

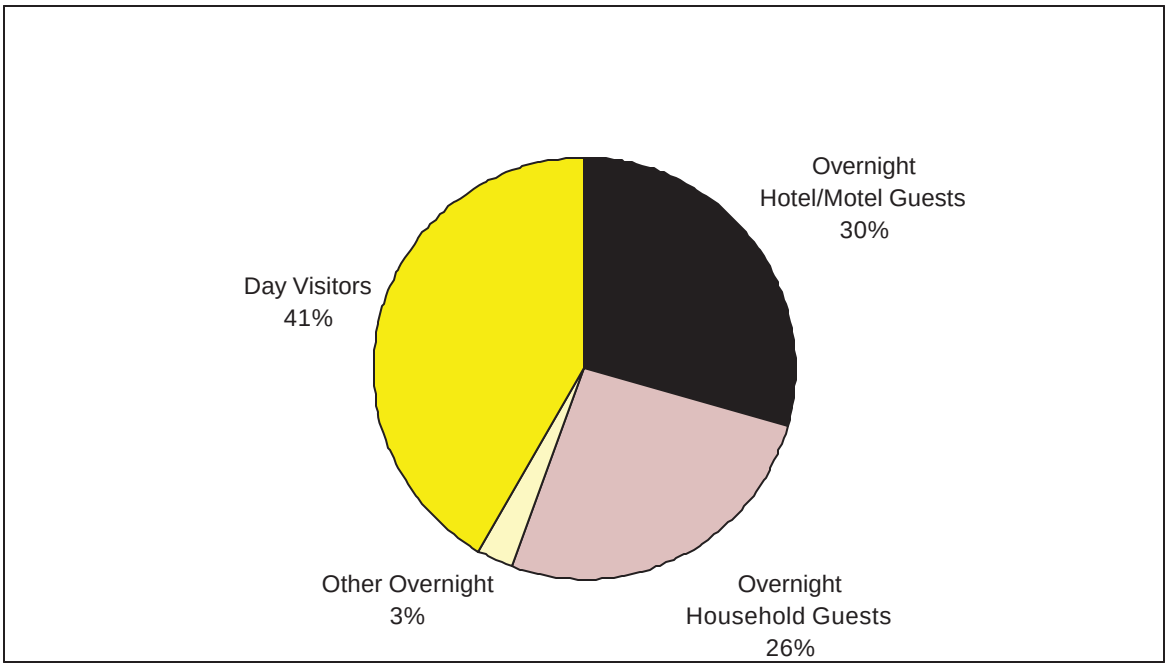
Visitor Characteristics

According to the San Diego Convention & Visitors Bureau, there were approximately 38 million total visitors to San Diego County in 2002. Total visitation declined 1.2 percent in 2002 compared to the prior year. Overnight visitation increased 1.6 percent, while day visitation decreased 4.7 percent.

Exhibit II-8 shows the visitor distribution for San Diego County in 2002. The exhibit shows that most visitors to San Diego were day visitors primarily from Southern California, (Mexican day-visitors are not counted as tourists and are discussed separately). Overnight visitors accounted for approximately 42 percent of all visitors. In 2002, there were 15.8 million overnight visitors to San Diego County. This figure increased from 14.7 million in 1997, for a 1.5 percent compounded annual growth rate.

While the Urban Core has visitor-serving uses, such as motels, and is along a major tourist travel corridor - the I-5 to Mexico, it currently is not very competitive in the regional tourism market. Its current minor niche is lodging for the budget traveler. Chula Vista's Bayfront is key for penetrating the region's visitor market, especially the traveler market to Mexico. The Urban Core's opportunity to improve its share of the visitor market would be enhanced with a strong link to the Bayfront. If the Urban Core were to attract visitors to the region on its own, it would have to develop a unique niche, probably centered on culture, music, and food, and as an affordable location with amenities for the business market. Still, the regional competition is great, and tourism will probably be a minor component of the Urban Core's economy.

Exhibit II-8 San Diego County Distribution of Total Visitors in 2002 (38 Million)



Source: San Diego County 2002 Overnight Visitor Profile Report
(San Diego Convention and Visitors Bureau and CIC Research)

The Mexican Market

The Mexican market from the Tijuana metro area is more an extension of the region's resident market than a tourist market. They are an important source of consumers for the region's retailers, particularly in South County. The city of Tijuana experienced dramatic growth during the 1990-2000 period, increasing its population by 62 percent. According to the 2000 census, 1.2 million[7] people lived in Tijuana, compared to 750,000 in 1990, for a 4.9 percent compounded annual growth rate. In addition, the state of Baja California increased its population by 49.8 percent, from 1.7 million to 2.5 million people during the same period for a 4.1 percent compounded annual growth rate. This trend is expected to continue, as Baja California has the second highest positive net migration among the states in Mexico.

During the second half of the 1990's, the Tijuana metro area grew economically due to the industrial growth associated with the Maquiladora program and NAFTA. However, this growth subsided due to the United States recession and increased competition and factory relocations to Asian countries. Job and economic growth has begun to rebound during the last year as the U.S. economy recovers.

[7] Instituto Nacional de Estadistica, Geografia e Informatica (INEGI)

Mexicans crossing the border for shopping account for a notable amount of total retail sales in different cities in San Diego County. San Diego Dialogue estimates that between 40-60 percent of all northbound border crossings are made for shopping. According to a survey of Chula Vista retailers conducted in the early 2000's by the Social, Behavorial, and Research Institute (SBRI) at California State University, San Marcos, in association with ERA, 25 percent of all business sales were to Mexican shoppers. San Diego Dialogue estimates that up to 65 percent of all retail sales in San Ysidro come from Mexican shoppers, while in Coronado, this figure is estimated at 10 percent. As the City of Tijuana continues to receive migration from central Mexico and the middle-class population increases, cities in south San Diego County will continue to experience significant sales volumes to Mexican nationals.

According to the United States Customs service, San Ysidro and Otay Mesa together had more than 9.7 million northbound pedestrian crossings in 2003, which represented 20.1 percent of all pedestrian crossings into the United States, increasing from 17.5 percent in 1997. San Ysidro and Otay Mesa increased its share of total northbound pedestrian crossings into California, from 43.7 percent in 1997 to 53.7 percent in 2003.

San Ysidro and Otay Mesa represented 25.3 percent of all private vehicle northbound crossings into the United States in 2003 and 68.3 percent of California, with 22.3 million crossings.

San Ysidro is the most traveled border crossing at either border; it alone comprised 13.8 percent of all border crossings in the United States. San Ysidro and Otay border crossings combined represent nearly one fifth of all U.S. border crossings, with 17.2 percent.

The majority of Mexicans crossing the border at San Ysidro and Otay are residents of the Tijuana metropolitan area, or approximately 92 percent. Many residents of Tijuana commute to work and do their shopping in the United States. The Universidad Autonoma de Baja California (UABC) conducted a survey in 2001 and estimated that people from Baja California spend at least $1.6 billion dollars every year in the San Diego region. The increase in average hourly crossings during weekends is directly associated to Mexicans crossing the border for shopping.

Since Mexicans are an important source of consumers in Chula Vista, the city is particularly vulnerable to the stability of the peso. When the peso was devalued in the early 1990s, taxable sales per capita in Chula Vista, in real terms adjusted for inflation, declined by more than 20 percent.

The Urban Core, with the Bayfront, does have the opportunity to leverage the Mexican market to expand the reasons Mexicans shop in Chula Vista, from staples, fashion, and services, to dining and entertainment, particularly for families. There are many links between residents in South Bay and Tijuana, such as business, family, and friends, and the Urban Core could position itself as one

of the primary areas within the border zone region where cross border business networking and personal gatherings can occur. The importance of the Mexican market to Chula Vista, however, should diminish somewhat, though remain significant, as the resident consumer base in the South Bay grows.

III. Demographic Context

The following section examines population growth and characteristics for the region, the City of Chula Vista, SRA-21 (western Chula Vista), and the Urban Core project area.

Population

SANDAG forecasts that San Diego County will grow from 2.8 million people in 2000 to almost than 3.9 million in 2030, adding 1.1 million people to the region, a 37 percent increase with a 1.1 percent compounded annual growth rate (CAGR). During the same period, SANDAG forecasts that the City of Chula Vista will grow from 173,000 to 278,000 people, increasing more than 105,000 people during the 30-year period, for a 60 percent increase and a 1.6 percent CAGR. Chula Vista is projected to receive approximately 10 percent of total population growth in San Diego County between 2000 and 2030. However, most of the growth in the City of Chula Vista is forecasted to occur east of Interstate Freeway I-805.

SANDAG's forecasts that population in SRA-21, western Chula Vista, will increase by 13 percent during this time period, from 108,000 to 123,000 people, for a net growth of 14,000, or a CAGR of 0.4 percent, well below citywide and countywide rates. SRA-21 is forecasted to house 13.5 percent of the net growth projected for the City of Chula Vista over the 30-year period. SANDAG's current forecasts assume a higher proportion of growth for Eastern Chula Vista and limited capacity for growth in the older SRA-21 neighborhoods, which limits population projections.

Urban Core Population

Since the Urban Core Study Area includes residents from ten different census tracts, ERA obtained the population of each census tract and applied percentages depending on the area of the census tract that formed part of the Urban Core to estimate population characteristics in the Urban Core[8].

SANDAG forecasts that population in the Urban Core Study Area may grow by 14.4 percent between 2000 and 2030, from 22,700 to 26,000, for a net growth of almost 3,300 people.

[8] The relevant census and their assumed proportions within the Urban Core are as follows: CT123.02 (100%), CT123.03 (20%), CT124.01 (30%), CT124.02 (100%), CT125 (25%), CT126 (20%), CT127 (100%), CT128 (20%), CT129 (20%) and CT 130 (100%).

Approximately 23 percent of the net growth in SRA-21 between 2000 and 2030 is forecasted to occur in the Urban Core.

Table III-1 shows population for San Diego County, Chula Vista, SRA-21 and the Project Area.

Table III-1 Population Growth Trends 2000-2030

Market Areas	2000	2003	2010	2020	2030	Numeric Change 2000-2030	Percent Change 2000-2030	Average Annual Growth Rate 2000-2030
Urban Core	22,709	23,177	23,543	25,138	25,975	3,266	14.4%	0.5%
SRA 21	108,907	109,789	113,140	119,048	123,053	14,146	13.0%	0.4%
Chula Vista	173,556	199,680	247,885	268,970	278,183	104,627	60.3%	1.6%
San Diego County	2,813,833	2,961,579	3,211,721	3,528,605	3,855,085	1,041,252	37.0%	1.1%

Source: SANDAG and Economics Research Associates

Age Distribution

As shown in Table III-2, by 2030 the proportion of the total population that are children and young adults in San Diego County, Chula Vista, SRA 21 and the Urban Core are expected to be less than in 2000. The age cohort between 35 and 54 is projected to remain approximately the same. In turn, the proportion of older-age cohorts is forecasted to increase significantly during this period. People between 55 and 74 years old are projected to increase from 13.4 percent to 22.8 percent of the total population in the Urban Core between 2000 and 2030. Similar increases are expected in SRA-21, the City of Chula Vista, and the county as a whole.

Table III-3 shows the age distribution for the Urban Core, SRA-21, Chula Vista and San Diego County in 2000 and 2030. SANDAG forecasts that the number of children and young adults in the Urban Core and SRA-21 will decline, and the number of middle-aged and senior adults will grow during the 30-year period, even though they are projected to grow in absolute numbers countywide. The number of people 55-years and older in the Urban Core and SRA-21 is projected to grow by over 4,000 and 18,700 people, respectively.

SANDAG's forecasts reflect the aging of the "baby-boom" generation, and the 140 percent increase in the number, and 70 percent increase in the percentage, of people 65 years and older by 2030. Since their projections are based on existing planning policy, they do not account for how a significant increase in urban housing may change the Urban Core's demographics and age distribution. The Urban Core's new urban housing development will help Chula Vista position itself to increase its share of the regional young adult market. Although new infill development in the Urban Core should appeal to young adults, who are often associated with urban housing, the young adult population is not expected to grow as rapidly regionally as the 55+ age groups. Secure urban housing also appeals to older populations due to their low maintenance, walkable street environments, and access to services. Consequently, the growing empty-nestor and senior market will also be important over the long-term.

Table III-2 Age Distribution Share in 2000 and 2030

	Urban Core		SRA-21		Chula Vista		SD County	
Age Groups (Years)	2000	2030	2000	2030	2000	2030	2000	2030
Total Pop	22,709	25,975	108,907	123,053	173,556	278,183	2,813,833	3,855,085
0-9	15.3%	11.2%	15.8%	11.0%	16.2%	11.6%	14.6%	11.7%
10-19	13.1%	10.9%	15.0%	12.0%	15.4%	12.6%	14.2%	12.1%
20-34	24.6%	19.7%	22.6%	18.3%	21.7%	17.3%	24.0%	20.7%
35-54	25.6%	24.1%	25.7%	25.1%	28.3%	28.7%	28.8%	25.2%
55-64	6.7%	11.1%	7.4%	12.7%	7.4%	12.8%	7.3%	11.1%
65-74	6.7%	11.7%	7.0%	11.6%	6.0%	9.8%	5.7%	10.2%
75+	8.0%	11.3%	6.5%	9.2%	5.0%	7.1%	5.5%	9.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SANDAG and Economics Research Associates

Table III-3 2000 and 2030 Age Distribution

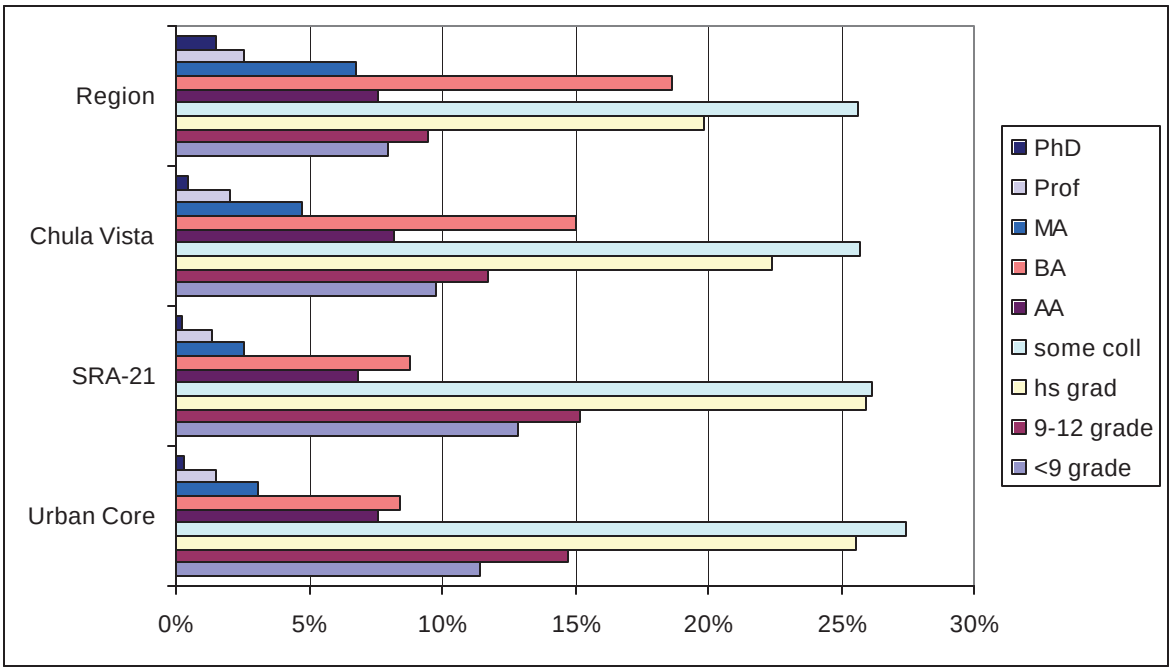
	Urban Core		SRA 21		Chula Vista		SD County	
Age Groups (Years)	2000	2030	2000	2030	2000	2030	2000	2030
0-9	3,479	2,916	17,235	13,539	28,063	32,384	411,450	451,210
10-19	2,986	2,833	16,383	14,790	26,683	35,035	399,588	467,415
20-34	5,595	5,110	24,579	22,502	37,720	48,130	674,313	796,297
35-54	5,804	6,265	28,016	30,854	49,040	79,788	810,066	971,914
55-64	1,526	2,889	8,078	15,670	12,921	35,710	204,666	427,320
65-74	1,512	3,036	7,583	14,331	10,442	27,286	160,059	394,142
75+	1,807	2,926	7,033	11,367	8,687	19,850	153,691	346,787
Total Pop	22,709	25,975	108,907	123,053	173,556	278,183	2,813,833	3,855,085

Source: SANDAG and Economics Research Associates

Education

In 2000, the population of the Urban Core and SRA-21 had less schooling than the population of Chula Vista as a whole and San Diego County, as shown in Exhibit III-1. In 2000, of the total adult population 25 years and over, 26 percent of the Urban Core and 28 percent of SRA-21 did not finish high school, compared to 22 percent for the City of Chula Vista and 17 percent for San Diego County. Likewise, only 8 percent of the population 25 years and over in the Urban Core had a bachelor's degree and 9 percent in SRA-21, compared to 15 percent in Chula Vista and 19 percent for San Diego County.

Exhibit III-1 San Diego County, Chula Vista and SRA-21 Education



Source: SANDAG; and Economics Research Associates

Households

SANDAG forecasts that the Urban Core may add 540 new households between 2000 and 2030, representing 24 percent of total new households in SRA-21 during this timeframe. SANDAG forecasts that SRA-21 will receive 8.2 percent of total new household formation in the City of Chula Vista between 2000 and 2030, adding almost 2,200 households, for a 0.2 percent CAGR. Household projections forecast most of the growth in eastern Chula Vista. Nevertheless, Chula Vista is projected to add over 26,800 new households or 8.8 percent of total household formation in San Diego County between 2000 and 2030, for a 1.3 percent CAGR. San Diego County is projected to add more than 300,000 new households during this time period, for a 0.9 percent CAGR. Therefore, while Chula Vista is projected to grow faster than the countywide average, SRA-21 and the Urban Core are not.

Table III-4 shows households for the Urban Core, SRA-21, Chula Vista and San Diego County for 2000, 2010, 2020 and 2030.

Table III-4 SRA 21, Chula Vista and San Diego County Growth Trends

Market Areas	2000	2010	2020	2030	Numeric Change 2000-2030	Percent Change 2000-2030	Average Annual Growth Rate 2000-2030
Urban Core	8,769	8,891	9,182	9,309	540	6.2%	0.2%
SRA-21	37,694	38,373	39,205	39,890	2,196	5.8%	0.2%
Chula Vista	57,705	78,779	82,843	84,519	26,814	46.5%	1.3%
Region	994,677	1,116,323	1,193,475	1,296,496	301,819	30.3%	0.9%

Source: SANDAG and Economics Research Associates

Household Income

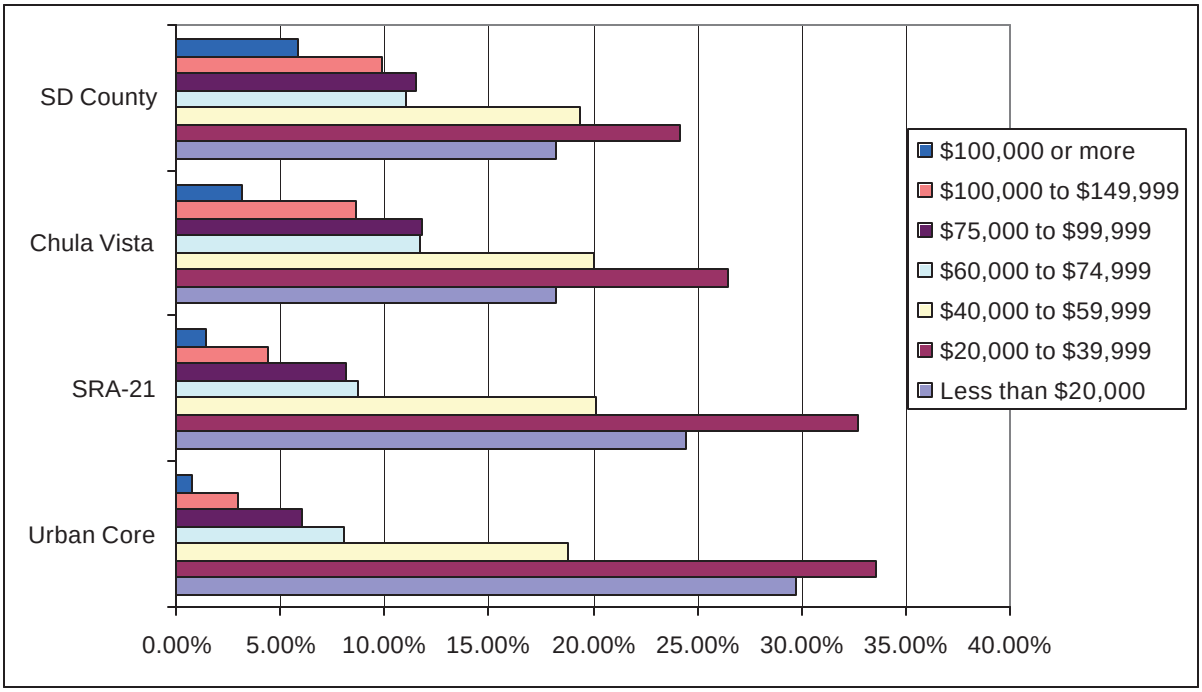
According to SANDAG, the Urban Core and SRA-21 had a disproportionate amount of low-income households compared to Chula Vista and the county as a whole in 2000. Households earning less than $20,000 represented 29.7 percent of all households in the Urban Core and 24.5 percent of households in SRA-21. In Chula Vista and San Diego County, only 18 percent of all households earned less than $20,000 per year. Households with average incomes between $20,000 and $39,999 represented 33.6 percent and 32.7 percent of all households in the Urban Core and SRA-21 respectively, compared to 26.4 percent in Chula Vista and 24.1 percent countywide.

All areas had approximately the same share of households with incomes between $40,000 and $59,999. Approximately 14.1 percent of households in the Urban Core and 16.8 percent of households in SRA-21 earned between $60,000 and $100,000, significantly lower than Chula Vista and San Diego County, with 23.5 and 22.6 respectively.

Households earning more than $100,000 represented only 3.8 percent of all households in the Urban Core and 5.8 percent of households in SRA-21. Comparatively, 11.8 percent and 15.7 percent of all households in the City of Chula Vista and San Diego County respectively earned more than $100,000 in 2000.

Exhibit III-2 shows the estimated annual household income distribution for the individual market areas in 2000.

Exhibit III-2 2000 Annual Household Income



Source: SANDAG and Economics Research Associates

ERA calculated a weighted average median household income of $31,797 for the Urban Core in 2000, $3,328 lower than the SRA-21 median household income of $35,125. SRA-21 median household income is $9,700 lower than Chula Vista's median household income of $44,834. In 2000, median household income for San Diego County stood at $47,268, $12,100 higher than the City of Chula Vista. Median household income citywide relative to the countywide average, however, is expected to improve as higher-income communities are developed in Chula Vista, particularly in eastern Chula Vista.

Racial and Ethnic Composition

Table III-5 shows race distribution for the Urban Core, SRA-21, Chula Vista and San Diego County for 2000 and 2030. Hispanics are noted separately, as it is an ethnic distinction that crosses races, rather than a racial distinction. Of the Non-Hispanic population, Whites occupy the highest percentage for all regions in 2000. By 2030, however, Whites are forecasted to decrease considerably as a percentage of the total population in all regions.

Table III-5 2000 and 2030 SRA-21, Chula Vista and San Diego County Race and Ethnicity

	Race and Ethnicity							
Year	**2000**	**2000**	**2000**	**2000**	**2030**	**2030**	**2030**	**2030**
Area	**Urban Core**	**SRA-21**	**Chula Vista**	**SD County**	**Urban Core**	**SRA-21**	**Chula Vista**	**SD County**
NH White	32.2%	30.0%	31.7%	55.0%	9.7%	9.2%	10.5%	39.7%
NH Black	5.0%	4.3%	4.3%	5.5%	5.8%	5.0%	5.8%	5.1%
NH Am Indian	0.4%	0.4%	0.3%	0.5%	0.2%	0.3%	0.5%	0.5%
NH Asian	4.9%	5.0%	10.6%	8.7%	5.1%	5.2%	13.8%	9.5%
NH Hawaiian	0.4%	0.5%	0.5%	0.4%	1.5%	1.6%	2.6%	2.1%
NH other	0.2%	0.2%	0.2%	0.2%	1.6%	1.3%	2.6%	2.3%
NH 2+ races	2.8%	2.5%	2.7%	2.9%	3.3%	3.2%	4.3%	3.9%
Subtotal	45.9%	42.9%	50.4%	73.3%	27.3%	25.7%	40.1%	63.1%
Hispanic Origin	54.1%	57.1%	49.6%	26.7%	72.7%	74.3%	59.9%	36.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SANDAG and Economics Research Associates

Hispanics are projected to increase as a percentage of total population in all regions between 2000 and 2030. In the Urban Core, the Hispanic population is forecasted to increase from 54 percent of the total population in 2000 to 73 percent in 2030; in SRA-21, Hispanics are projected to increase from 57.0 percent to 74.0 percent of total population during the 30-year period.

Implications for the Urban Core

SANDAG forecasts relatively lesser population and household growth, a largely aging, largely Hispanic and multicultural population, with relatively lower incomes and education levels in western Chula Vista and the Urban Core compared to countywide averages. These characteristics have implications for housing affordability and consumer buying power and preferences.

These forecasts, however, reflect existing trends and capacities associated with current General Plan land use policies. Since SANDAG forecasts significant growth in South Bay that will change South Bay's demographic characteristics, the opportunity exists for the Urban Core to reinvent itself by changing land use policy to accommodate a greater share of South Bay and countywide growth, and modify its projected demographic characteristics in the process.

For example, SANDAG forecasts continued high shares of lower income households and a declining young adult population, even though incomes are projected to rise regionally and the

young adult population is projected to grow in number regionally, though declining proportionately. New development in the Urban Core can help diversify its household income profile and increase the Urban Core's share of the growing regional young adult population, which will present new opportunities for retail services.

While this opportunity exists to diversify the Urban Core's demographic trends, it should be recognized that most of the Urban Core's and western Chula Vista's demographic characteristics is already in place, associated with existing housing, and that these characteristics will continue to have influence even as the Urban Core diversifies with new development.

Many of the demographic trends are regional. The average age of population is rising, as the baby-boom generation ages, and housing and districts that appeal to an aging population will be important. Environments that appeal to a multi-cultural population will be important. Housing that is affordable will be important.

IV. Real Estate Market Overview

This section presents real estate market trends for office, retail, and residential uses in Chula Vista and the Urban Core project area.

Retail Market

The retail sector in San Diego County has remained strong over the past few years. According to CB Richard Ellis, vacancy rates throughout the county in the 4th Quarter 2003 stood at 2.7 percent, compared to the national average of 6.8 percent. From the 4th quarter 2002 to the 4th quarter 2004, the countywide average vacancy rate averaged 3.2 percent. The vacancy rate has been declining steadily since the early 1990's when the rate peaked at 9 percent.

It is estimated that 1.5 million square feet of new retail space was absorbed in 2003, a notable increase from 2002 when 1.1 million square feet were absorbed.

According to CB Richard Ellis, there are 2.7 million square feet of retail space in the Chula Vista/Bonita sub-market, representing 5.7 percent of the 48.1 million leasable retail space in the region (including San Diego County and Temecula/Murrieta) that CB Richard Ellis inventories (50,000 square feet or greater). Approximately 380,000 square feet was under-construction in the Chula Vista/Bonita sub-market, or approximately 44.3 percent of the 858,000 square feet under construction in San Diego County, as of the 4th Quarter, 2003. The Chula Vista/Bonita retail market maintains a very low vacancy rate, 0.6 percent, at lower-than average rents. The average retail lease rate of $1.65 in the 4th Quarter 2003 was 91 percent of the countywide average of $1.82.

The CoStar Group reports 80.1 million square feet of total retail space countywide in March 2004, plus 538,000 square feet under-construction, including owner occupied and smaller retail space, of which 2.8 million square feet, or 3.6 percent, is vacant and available.

The Urban Core Retail Market

Retail space in the Urban Core is mostly concentrated in four distinct business corridors, namely H Street, Broadway Avenue, 3rd Avenue and E Street. F Street also has retail space at the intersection with Third Avenue. All four retail corridors attract shoppers from the local market, South County, and Mexico, though some are more regional serving while others are more local

serving. H Street includes the frontage for Chula Vista Center, an 870,000 square foot older regional shopping center owned by General Growth that is undergoing renovation. Third Avenue is Chula Vista's historic downtown "Main Street." Broadway is a community and regional serving strip-retail corridor that serves western South County.

Retail Rents

Most of the retail space in these corridors is small to medium size, with the exception of the Chula Vista Shopping Center, located on H Street. Average asking triple-net (NNN) rents per square foot in the Urban Core vary depending on the business corridor, as follows:

- According to Grubb and Ellis, asking triple-net (NNN) rents in the L Street Corridor range between $1.30 and $1.40 per square foot, with some exceptions where rents range between $2.00 and $2.50 per square foot.

- Asking NNN rents at the intersection of Broadway and H range between $2.25 and $2.60 per square foot, with vacancy rates around 5 and 7 percent.

- According to Voit Commercial, along Broadway Avenue, rates vary between $1.50 and $2.00 per square foot NNN, while rents along 3rd Avenue range between $1.00 and $1.25 per square foot, with occupancy rates at nearly 100 percent.

Some projects are reportedly obtaining higher lease rates, such as the Gateway project at the corner of 3rd Avenue and H Street. According to Jim Pieri at Mountain West Real Estate, the phase I Gateway project is completely leased, with rates ranging between $2.75 and $3.00 NNN per square foot per month.

For comparison, these rates, including the new Gateway project fall below asking rates at the Eastlake Village Center in eastern Chula Vista, with asking rents at $3.50 per square foot NNN.

Retail Building Sales

Sales of retail buildings in the City of Chula Vista and the Urban Core have appreciated in recent years, as shown in Table IV-1. The Urban Core significantly increased its sales price per square foot in 2001 compared to 2000. Nevertheless, it remained below the average Price/SF for the City of Chula Vista in 2001 and 2002. In 2003, the study area surpassed the City by almost $9 per SF, and 16 of the 21 sales in the city occurred in the Urban Core.

Table IV-1 Chula Vista and Urban Core Retail Space Sales Price/SF and Sales/Year

	Chula Vista		Urban Core	
Year	Price/SF	Sales/Yr.	Price/SF	Sales/Yr.
2000	$135.03	15	$82.54	5
2001	$121.28	20	$119.42	11
2002	$137.60	18	$132.39	8
2003	$172.89	21	$181.48	16
Mar-04	$202.55	4	$188.33	2

Source: Costar and Economics Research Associates

Office Market

According to CB Richard Ellis, in the 4th quarter of 2003 there were 48.6 million square feet of leasable office space in San Diego County, out of which more than 952,000 were located in South San Diego (which includes Chula Vista), accounting for approximately 2 percent of total office leasable space in the region. The South San Diego office sub-market is defined as space located south of Freeway 94 and east of Freeway 5. The square footage mentioned includes buildings with 10,000 square feet or more and does not include owner occupied buildings.

In the 4th quarter of 2003, office space vacancy rates stood at 11.5 percent for San Diego County and 10.0 percent for South San Diego. San Diego County recorded average lease rates of $1.80 per square foot, while rates for South San Diego stood at $1.12. Of the more than 600,000 square feet under construction in the region, approximately 67,000, or 10.5 percent, were being built in the South San Diego sub-market.

According to the CoStar Group, the region had 82.1 million square feet of total office space, including owner-occupied buildings (except government), medical buildings (except hospitals), and smaller buildings, or 69 percent greater than CB Richard Ellis' count of leasable office space greater than 10,000 square feet. CoStar Group estimates that 11.4 million square feet of this inventory, or 13.9 percent, is vacant including sublet space that is available.

The Urban Core Office Market

Most of the office space within the Chula Vista Urban Core is comprised of professional services offices and medical services. The services include medical and dental clinics, insurance, tax preparation and travel agencies. Office space in the study area is mostly located in small one or two story buildings, although new multiple story buildings have been built in the past few years, such as the Chula Vista Gateway, with its first phase built in 2001 and the second phase currently in construction.

Once completed, the Chula Vista Gateway project will add a total of 285,000 square feet of office space and 62,000 square feet of retail space to the Urban Core. This project, which is the first major office development in downtown for more than 20 years, is an important indicator for demonstrating demand for Class A space in the Urban Core. However, as the first new office development in decades, its relatively rapid absorption and high achievable rents may also reflect pent-up demand rather than stable, sustainable demand. Additional office developments are needed to test the depth of demand over time.

Office Rents

Asking rents for other office space in the Urban Core ranges between $1.65 and $1.85 per square foot triple net, well below asking rents for office space at the Eastlake Business Center for example, where rents go for $2.25 per square foot plus janitorial and electric. Lease rates for office space in the Gateway project range between $2.5 and $2.75 per square foot per month, well above the countywide average and the Eastlake Business Center.

Office Building Sales

The average sales price per square foot for office space in Chula Vista has fluctuated since 2000, with the highest value recorded in 2001. Price per square foot for sales transactions in the Urban Core has been higher than the City of Chula Vista for the last three years, although they have also been inconsistent, as shown in Table IV-2.

Table IV-2 Chula Vista and Urban Core Office Space Sales Price/SF and Sales/Year

	Chula Vista		Urban Core	
Year	Price/SF	Sales/Yr.	Price/SF	Sales/Yr.
2000	$138.18	10	$110.57	4
2001	$145.03	8	$149.31	7
2002	$140.45	11	$163.64	6
2003	$130.22	5	$143.49	3

Source: Costar and Economics Research Associates

Residential Market

For Sale Housing

As with most of San Diego County, home prices in the City of Chula Vista have increased dramatically in recent years. According to DataQuick Information Systems, the median home price in San Diego County increased from $358,000 in April 2003 to $439,000 in April 2004, a 22.6 percent increase during the one-year period.

During the same time period, single-family home appreciation increased more than 26.0 percent in all Zip Codes in the City of Chula Vista. The median sale price for existing single-family homes in the 91910 Zip Code (where the Urban Core is located), increased from $365,000 in April 2003 to $480,000 in April 2004, for a 31.5 percent increase. Condominium sales in the 91910 Zip Code increased from $267,000 to $300,000 during the same time period, for an increase of 12.4 percent. Table IV-3 shows total sales and median homes sale values for existing single-family and condominium homes for all Zip Codes in Chula Vista for April 2003 and 2004.

The highest appreciation for existing single-family homes occurred in the newer areas of Chula Vista, in Zip Codes 91914 and 91915. Interestingly, appreciation for existing condominiums between April 2003 and 2004 was higher than 26 percent in all Zip Codes, except Zip Code 91910.

Table IV-4 shows total sales and median homes sale values for new single-family and condominium homes combined for all Zip Codes in Chula Vista for April 2003 and 2004. Zip Code 91910 had only one new home sale in April 2003 and none in 2004, compared to all other Zip Codes where new housing is still being developed.

Table IV-3 Chula Vista Existing Single Family and Condominium Home Sales for April 2003 and 2004

		Single Family Homes					Condominiums				
Place	**ZipCode**	**No. Sold**		**Median 03**	**Median 04**	**%Change**	**No. Sold**		**Median 03**	**Median 04**	**%Change**
Chula Vista N	91910	60	67	$ 365,000	$ 480,000	31.5%	29	40	$ 267,000	$ 300,000	12.4%
Chula Vista S	91911	54	58	$ 329,500	$ 417,500	26.7%	43	37	$ 216,500	$ 287,500	32.8%
CV-E.Lake-Otay Ranch	91913	43	63	$ 379,000	$ 510,000	34.6%	22	15	$ 269,500	$ 340,000	26.2%
Chula Vista NE	91914	13	13	$ 425,000	$ 600,000	41.2%	7	5	$ 305,000	$ 395,000	29.5%
Chula Vista SE	91915	25	39	$ 380,000	$ 567,500	49.3%	13	12	$ 302,000	$ 373,500	23.7%

Source: DataQuick Information Systems

Table IV-4 Chula Vista New Single Family and Condominium Home Sales for April 2003 and 2004

		New Single-Family/Condominiums				
Place	**ZipCode**	**No. Sold**		**Median 03**	**Median 04**	**%Change**
Chula Vista N	91910	1	n/a	$ 418,000	$ -	
Chula Vista S	91911	50	22	$ 259,000	$ 358,250	38.3%
CV-E.Lake-Otay Ranch	91913	30	80	$ 471,250	$ 434,750	-7.7%
Chula Vista NE	91914	85	62	$ 455,000	$ 531,250	16.8%
Chula Vista SE	91915	12	52	$ 494,250	$ 583,000	18.0%

Source: DataQuick Information Systems

In June 2004, the median sales price of homes in Zip Code 91910, compared to the countywide average, was as follows:

	Re-Sale Single-family	Re-Sale Condominiums	New Single-Family/Condominiums
CV Zip Code 91910	$467,500	$350,000	$667,750
SD Countywide	$520,000	$365,000	$440,000
CV/SD County Median	90%	96%	152%

Rental Housing

According to Market-Pointe Realty, the average rent in San Diego County in September 2003 stood at $1,123 per month, while vacancy rates increased slightly to 2.06 percent, well below the vacancy level needed for a fluid and competitive market. The average monthly rental asking price in San Diego County was $1.31 per square foot.

In the case of the Urban Core Project Area, most of the rental housing was built more than 20 years ago and is reflected in the asking prices compared to the newer areas of Chula Vista. ERA found average rental rates in the Urban Core to be $0.99 per square foot, compared to $1.44 in the Otay Ranch areas. Average asking rents in the Urban Core were $930 per month. According to Market Pointe Realty, the vacancy rate in zip code 91910 stood at 2.4 percent, also below what is necessary for a competitive market. The vacancy rate was obtained with a sample of 80 projects and 4,132 units.

Table IV-5 shows asking rents for several apartment buildings in the Urban Core study area.

Table IV-5 June 2004 Asking Rents for Apartments located in the Chula Vista Urban Core

Project Name	Type	Rent per Month	SQFT	PR/SQFT/MNTH
Woodlawn Colonial	1 Br/1 Bth	$720	576	$1.25
	2 Br/2 Bth	$920	900	$1.02
Palm Shadows	1 Br/1 Bth	$725	560	$1.29
	2 Br/1 Bth	$895	800	$1.12
	2 Br/2 Bth	$995	890	$1.12
Alva Gardens	2 Br/2 Bth	$1,175	1900	$0.62
	2 Br/1.5 Bth	$1,150	1872	$0.61
Park Marina Apts	2 Br/2 Bth	$950	1250	$0.76
Meheli Palm Apts	1 Br/1 Bth	$675	800	$0.84
Center Towers	1 Br/1 Bth	$795	700	$1.14
	2 Br/1 Bth	$995	900	$1.11
	2 Br/2 Bth	$1,100	1100	$1.00
Sunnyfresh Apts.	2 Br/1 Bth	$1,000	950	$1.05
			Average	**$0.99**

Source: Economics Research Associates

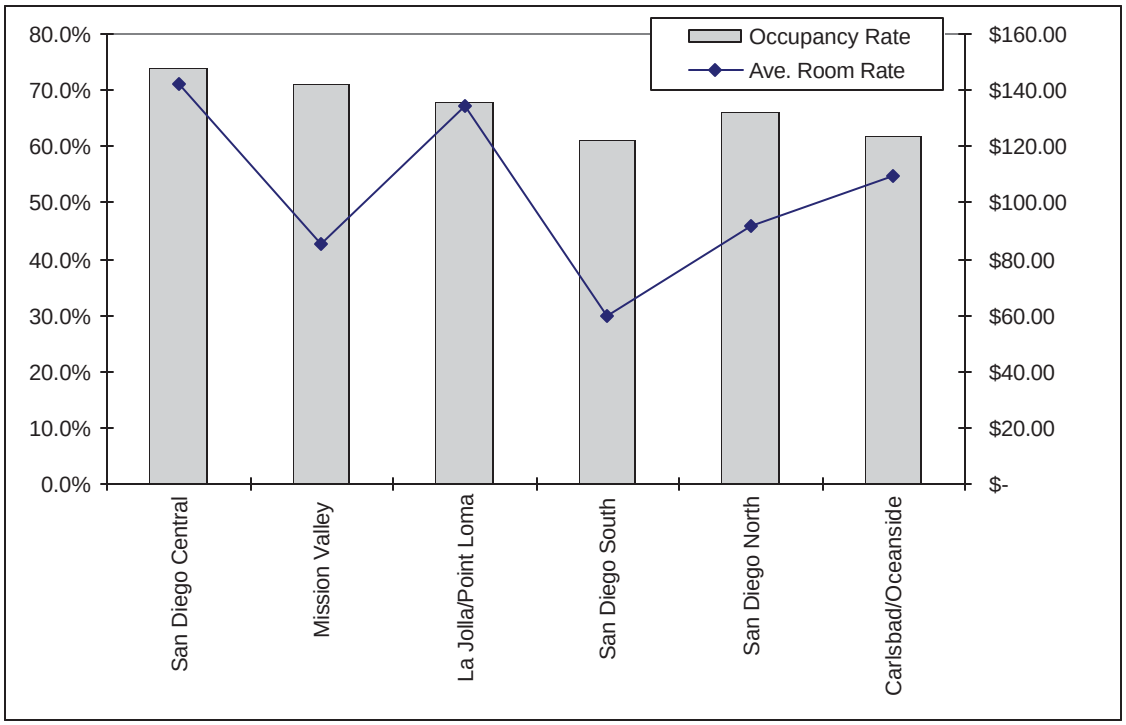
Lodging Trends

San Diego County's hotel inventory has grown over the last few years with the addition of several hotels. All new hotels have been built outside of Chula Vista, in the northern part of the County or downtown San Diego.

Exhibit IV-1 shows occupancy rates in 2002 by sub-market. As shown in the Exhibit, the San Diego South Market, which includes the City of Chula Vista, had the lowest occupancy rate of all sub-markets with 61.1 percent throughout 2002, a 3.9 percent decrease compared to the 65.0 percent occupancy rate for South San Diego in 2001. Occupancy rates for San Diego County were 69.9 percent in 2001 and 68.4 percent in 2002.

Occupancy rates in the San Diego South sub-market increased 2.0 percentage points between 1997 and 2003, from 58.4 percent to 60.4 percent respectively, as shown in Exhibit IV-2. As shown in the Exhibit, rates increased consistently between 1997 and 2001, but fell in 2002 and 2003 after the 9/11 attacks.

Exhibit IV-1 Hotel Performance by Sub-markets

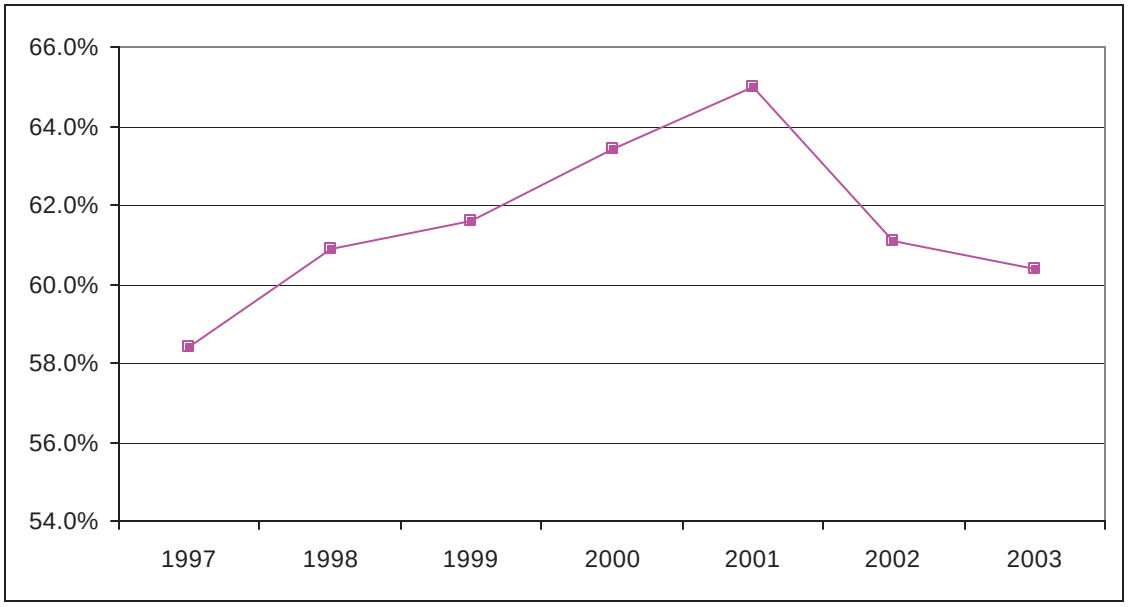


Source: San Diego County 2002 Overnight Visitor Profile Report

The average daily room rate in South San Diego was the lowest of all sub-markets, at $59.85. In San Diego County, the average daily room rate in 2002 was $110.81.

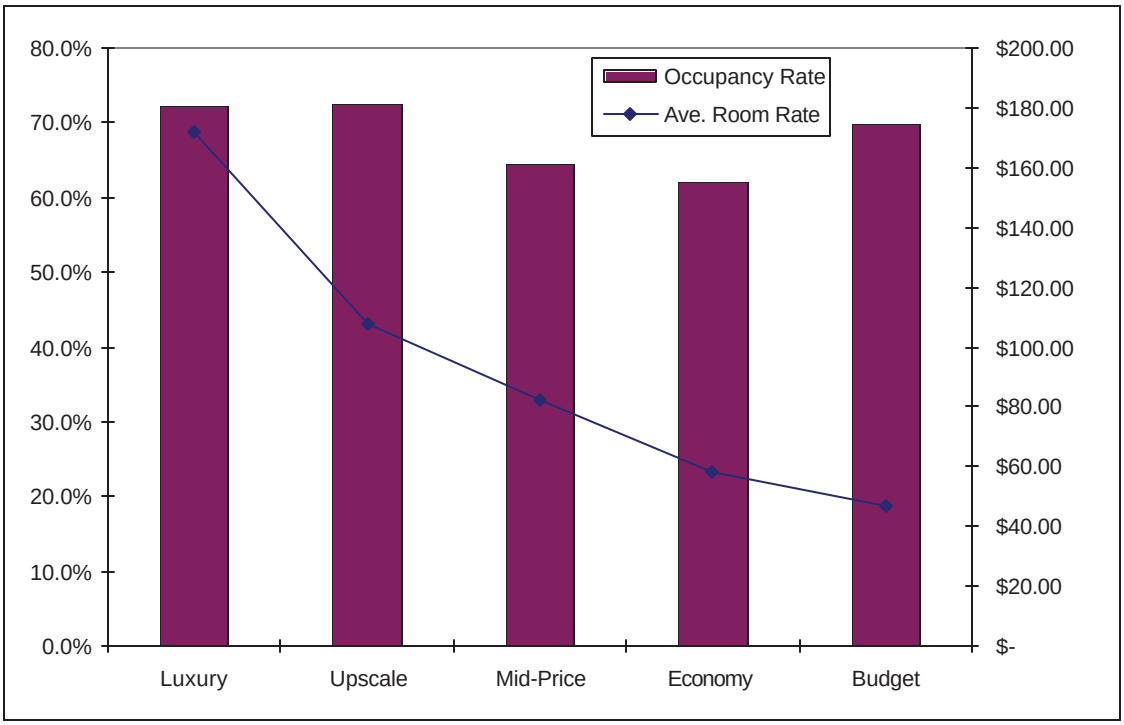
Exhibit IV-3 shows occupancy rates in 2002 by type of hotel in the San Diego Region. Luxury and upscale hotels (as defined by Smith Travel Research and the Convention & Visitors Bureau) recorded the highest annual occupancy rates, while the economy hotel category recorded the lowest occupancy rate of all groups at 62.2 percent. Nevertheless, when compared to occupancy rates in 1993, the occupancy rate for the economy category increased 8 percentage points, while the budget category recorded the biggest jump, from 56.4 percent occupancy in 1993 to 69.8 percent in 2002, a 13.4 percentage point increase. During the same period, the occupancy rate for the luxury category decreased by 1.5 percentage points, while upscale and mid-priced hotels showed a slight increase in occupancy rate.

Exhibit IV-2 San Diego South Sub-market Occupancy Trends



Source: Smith Travel Research

Exhibit IV-3 San Diego Hotel Performance by Type of Hotel



Source: San Diego County 2002 Overnight Visitor Profile Report
(San Diego Convention and Visitors Bureau and CIC Research)

Transient Occupancy Tax

There are 15 motels in the Urban Core Study Area. Table IV-6 shows the list of motels. The Urban Core only has small motels. The Transient Occupancy Tax (TOT) received from these motels was $227, 894 in 2002 and $224, 102 in 2003, for a 1.7 percent decrease. The TOT collected seems low considering the number of motels in the Urban Core. It should be noted, however, that some of these hotels are rather small, and rentals of 30 or more days are customary, excluding them from paying TOT.

Table IV-6 Chula Vista Urban Core Motels

	Name	Address	Rooms	RAC Rate Week	RAC Rate Weekend
1	Motel 6	745 E Street	176	$ 45.99	$ 59.99
2	Days Inn	699 E St.	104	$ 79.00	$ 149.00
3	South Bay Inn (Best Western)	710 E St.	76	$ 94.46	$ 104.46
4	Traveler Inn Suites	235 Woodlawn Ave.	85	$ 69.99	$ 79.99
5	Royal Vista Inn	632 E St.	80	$ 51.70	$ 66.00
6	Vagabond Inn	230 Broadway	90	$ 69.95	$ 79.95
7	Highway Inn Motel	74 Broadway	41	$ 65.00	$ 50.00
8	Avon Motel	99 Broadway			
9	Big 7 Motel	333 Broadway	45		
10	Riviera Motel	372 Broadway	22	$ 40.00	$ 45.00
11	Travel Inn	394 Broadway	70	$ 90.00	$ 110.00
12	Rodeway Inn	778 Broadway			
13	Bay Cities Motel	864 Broadway			
14	Early California Motel	692 H St.	41	$ 42.00	$ 75.00
15	El Primero Hotel	416 3rd Ave.	22	$ 80.00	$ 90.00

Source: Economics Research Associates

Recent Property Sales Transactions

According to Costar, since January 2000, there have been 318 commercial property sales transactions in the City of Chula Vista, out of which 139 were in the Urban Core Study Area, representing almost 44 percent of total property sales in the City. The majority of the sales in both the City of Chula Vista and the study area were building transactions, with 257 and 132 respectively. Land sales transactions in Chula Vista since January 2000 totaled 57, while the Urban Core registered 7 in the same time period.

Property Sales Transactions

More than 80 percent of all property sales transactions (building and land) in the City of Chula Vista since January 2000 have been building sales. In the case of the Urban Core Study Area, 95 percent of all transactions were building sales. Interestingly, more than 60 percent of all office, apartment and hotel buildings sold in the City of Chula Vista were located within the Urban Core.

In addition, 54 percent of all retail buildings sold since January 2000 were in the study area. Conversely, only 5 percent of total industrial buildings sold in the city since 2000 were located in the study area.

In total, since January 2000, building sales transactions in the Urban Core represented 51 percent of all building sales transactions in the City of Chula Vista, as shown in Table IV-7.

Table IV-7 Building Sales Transactions by Category since January 2000

	City of Chula Vista	Urban Core Study Area	Percent
Office Building	35	21	60%
Industrial Building	39	2	5%
Apartment Building	97	62	64%
Retail Building	78	42	54%
Hotel/Motel Building	8	5	63%
Total	**257**	**132**	**51%**

Source: Costar and Economics Research Associates

For every category, ERA compiled median square footage and price per square foot for property sales transactions in the City of Chula Vista as well as the Urban Core since 2003, as shown in Table IV-8 and Table IV-9. Median values were preferred as mean averages were significantly skewed upwards due to a few properties that sold for well above average.

Table IV-8: SF and Price per SF for Building Sales Transactions by Category in Chula Vista since 2003

	SF			Price/SF		
	Median	Low	High	Median	Min	Max
Office Building	16,626	748	35,000	$ 139.76	$ 80.90	$ 441.18
Industrial Building	10,000	3,250	90,000	$ 84.73	$ 70.00	$ 115.38
Apartment Building	7,776	2,400	68,925	$ 154.21	$ 97.21	$ 225.83
Retail Building	4,730	750	55,750	$ 176.14	$ 44.81	$ 1,626.67
Hotel/Motel Building	3,684	-	-	$ 176.44	$ -	$ -

Source: Costar and Economics Research Associates

Table IV-9: SF and Price per SF for Building Sales Transactions by Category in the Urban Core since 2003

	SF			Price/SF		
	Median	Low	High	Median	Min	Max
Office Building	8,700	748	35,000	$ 166.67	$ 94.29	$ 441.18
Industrial Building 1/	10,150	-	-	$ 66.95	-	-
Apartment Building	6,744	2,400	63,750	$ 150.33	$ 117.54	$ 225.83
Retail Building	4,730	1,512	19,200	$ 161.09	$ 97.25	$ 474.71
Hotel/Motel Building	-	-	-	-	-	-

1/ Only two transactions. Average instead of median taken

Source: Costar and Economics Research Associates

Land Sales Transactions

Table IV-10 shows land sales transactions by category for the City of Chula Vista and the Urban Core Study Area, as well as the percent of the total in the study area. Most of the land sales transactions occurred outside the Urban Core, which has limited vacant parcels. Noticeably, five of the seven land sales transactions in the Urban Core were commercial related, representing more than 20 percent of the total commercial land sales transactions in the City of Chula Vista.

In total, land sales transactions in the Urban Core represented 11 percent of all land sales in the City of Chula Vista since January 2000.

Table IV-10: Land Sales Transactions by Category

	City of Chula Vista	Urban Core Study Area	Percent
Commercial Land	23	5	22%
Industrial Land	14	0	0%
Residential Land	20	1	5%
Total	**57**	**6**	**11%**

Source: Costar and Economics Research Associates

Table IV-11 and Table IV-12 show median square footage and price per square foot for land sales transactions in the City of Chula Vista and the Urban Core since 2003.

Table IV-11: SF and Price per SF for Land Sales Transactions by Category in Chula Vista since 2003

	SF			Price/SF		
	Median	Low	High	Median	Min	Max
Commercial Land	40,510	5,750	576,299	$ 15.86	$ 3.66	$ 65.22
Industrial Land	252,212	20,037	1,943,647	$ 6.80	$ 3.09	$ 32.44
Residential Land	469,000	146,500	741,000	$ 39.29	$ 22.75	$ 39.56

Source: Costar and Economics Research Associates

Table IV-12: SF and Price per SF for Land Sales Transactions by Category in the Urban Core since 2003

	SF			Price/SF		
	Median	Low	High	Median	Low	High
Commercial Land 1/	9,775	-	-	$ 56.16	$ -	$ -
Industrial Land		-	-		-	-
Residential Land 2/	-	-	-	$ -	-	-

1/ Only two transactions. Average instead of median taken

Source: Costar and Economics Research Associates

Implications for the Urban Core

The real estate market indicators are strong for the residential and retail sectors, with rising prices and low vacancy rates countywide and within the Urban Core. Though rising, commercial retail rents and apartment rental rates in the Urban Core are below average, reflecting its older building stock. Occupancy rates are very high, indicating strong demand at existing price points. It would be difficult to support new development at commercial retail and apartment rental rates associated with the Urban Core's older building stock. New development will have to be able to command higher than average rents for the Urban Core.

Examples of new ownership housing are limited; however, the resale price of single-family homes and condominiums are growing and healthy, though moderately lower than the countywide average and prices in eastern Chula Vista. The relative affordability of housing in the Urban Core provides a near to mid-term advantage and market opportunity.

While the office sector countywide has moderately higher vacancy rates than other types of income property, office space in the Urban Core has low vacancy rates. Rents in the Urban Core, however, are lower than average, reflecting the older nature of most existing office buildings. The higher rents and strong occupancy rates achieved at the Gateway project indicate that quality new office developments can generate relatively high rental income. Whether these values were achieved due to pent-up demand from a market that had not seen new Class A office development in decades, or reflect a developing and sustainable office sub-market remains to be seen.

The lodging inventory in the Urban Core, which is comprised of older properties, is positioned for the budget traveler. The low rents and occupancy rates, and declining TOT revenues indicate that lodging is the weakest of the land uses that the Urban Core may potentially develop. While South Bay at some point may support a business hotel, Chula Vista's Bayfront or the Eastern Urban Center may be better positioned.

Commercial land prices in the Urban Core, though high for Chula Vista, are low relative to downtown San Diego, and present an opportunity to capture development, particularly urban housing development, that use to be feasible in downtown San Diego, but is no longer feasible given downtown San Diego's land prices. Compared to eastern Chula Vista, however, the Urban Core achieves lower rents, but high land prices, which makes it financially difficult to develop a financially feasible project. Future densities in the Urban Core probably have to be higher to achieve enough revenue per acre to cover land prices. How developers provide parking affordably while increasing densities, while keeping rents and prices in line with the market, will be an important challenge.

V. Market Demand Parameters

Based on the analysis of the economic base, historic and current demographic characteristics, and real estate market trends, potential long-term demand for three types of land uses that may become integral to the Urban Core strategy was estimated. These include retail, residential and office uses. The purpose of these forecast ranges are to provide capacity parameters for long-term land use planning. Given the long-term nature of these forecasts and the uncertainty associated with a 30-year time horizon, they should not be interpreted as precise annual market absorption projections.

Office Demand

Table V-1 presents projected growth for leasable office space over time countywide using an average employment density factor of 249 square feet per worker, which is calculated by dividing growth in leasable office space from 1990 to 2000 by employment growth in office-related industries from 1990 to 2000. This ratio may be more than required per worker since it may include a modest amount of new office space built to replace older obsolete office space. This factor is applied to SANDAG's projected countywide employment growth in office-related industries to forecast demand for occupied office space over time. Total supply demanded is estimated allowing for a structural vacancy rate of 7 percent.

Table V-2 presents projected demand for total office space, including owner-occupied or build-to-suit space other than hospitals and government buildings. South County's share of countywide demand is expected to grow over time given its growing share of regional population and employment, and the approaching build-out of other business park locations in the region. The low-demand estimate assumes that South County's capture of regional growth will increase over the next 25 years, reaching 7 percent of the market's growth from 2020-2030 (compared to 1.9 percent of the countywide inventory today). Some of this demand for office space may be filled by new business park locations as well as more urban locations. The moderate and high-demand scenarios assume more aggressive and accelerated growth rates of South County's market share, anticipating that pent-up demand, the growing population base in South County, economic growth in Mexico, and regional traffic congestion will provide greater incentive for new employment space in South County, reaching 15-20 percent of countywide growth between 2020 and 2030.

Office is a flexible land use that can adjust to changing land values and growing demand with increases in density. Consequently, unlike industrial space, there will continue to be significant regional capacity for additional office development in sub-markets that are competitive because

of their central locations in the region, their proximity to the region's tech industry clusters, their existing critical mass, and their ability to redevelop to higher densities.

Given these assumptions, South County's share of total countywide office supply would equal approximately 2.8 to 5.1 percent by 2030, compared to 1.9 percent today.

Chula Vista is and should continue to be the dominant office location within South County. Chula Vista's share of South County demand is estimated for low to high scenarios, with the low scenario based approximately on Chula Vista's existing share of South County office space. From 2000 to 2030, total office space demanded in Chula Vista is estimated to range from 0.9 to 3.2 million square feet, with a moderate scenario of 2.1 million square feet, including multi-tenant space, owner-occupied space, and medical office space, but excluding hospitals and government space. This is in addition to Chula Vista's year 2000 office space supply, and would place Chula Vista's 2030 supply near today's supply in East County (under the low scenario), Rancho Bernardo/Scripps Ranch (under the moderate scenario), and University City (under the high scenario).

Unlike University City, the office space supply in Chula Vista would be distributed among several areas, in particular the Bayfront, Downtown (primarily within the Urban Core), and the Eastern Urban Center in Otay Ranch. Table V-3 presents a possible allocation of citywide demand among the major potential office locations within the city – Bayside, Downtown, EUC/Otay Ranch, and elsewhere – based on the Moderate and High scenarios. Downtown and the EUC (Eastern Urban Center) are envisioned as the dominant office locations within the city, but the Bayside may be quite competitive given its waterfront location. The Bayside, however, has limitations on allowable uses within the State Tidelands Trust and strong demand for other public and commercial recreation uses that may limit it potential office development capacity.

As shown, based on reasonable allocation assumptions, the Urban Core may expect to absorb approximately 750,000 to 1.1 million square feet of office space by 2030, in addition to existing supply, under the Moderate to High scenarios. The potential amount demanded would be less under a Low scenario, but planning policy should not unduly constrain potential upside growth if the more optimistic scenarios materialize.

Table V-1 San Diego County Employment Based Office Space Projections, 2000 to 2030

1990-2000 Trends(1):			Occupied GLA	Occupied GLA Avg. Annual	
Yr.	Total GLA	Occupied GLA	Total Increase	Increase	CAGR
1990	35,067,159	27,808,257			
2000	40,889,421	38,436,056	10,627,799	1,062,780	3.3%

	Assumed % Using Office	2000	2010	2020	2030
Employment (SIC Categories)					
FIRE	100%	69,501	81,759	95,641	107,216
Manufacturing	3%	3,876	3,497	3,505	3,555
Self Employed and Domestic	10%	8,938	9,831	10,828	11,867
Services	34.0%	135,729	156,780	179,914	204,169
Transportation, Comm. & Pub. Util.	10.0%	5,080	5,588	6,068	6,913
Total		223,124	257,454	295,956	333,720
Increase in Office Employment By Period		71,218	34,330	38,502	37,764
Assumed Occupied Office Space / Empl.		249	249	249	249
Total Increase in Leasable Office Space Demand By Period from Employment Growth		10,627,799			
Factor for Owner-occupied/Build-to-suit buildings (3)		1.67			
Total Increase in Leasable & Owner-Occupied Office Space Demand By Period from Employment Growth		17,748,424	8,555,622	9,595,222	9,411,253
Total Supportable Space Allowing for Structural Vacancy of:			9,199,594	10,317,443	10,119,626
Annual Average Increase in Supportable Office Space Supply By Period			919,959	1,031,744	1,011,963
Total Leasible and Owner-Occupied Space at End of Period		82,142,777	91,342,371	101,659,814	111,779,440
Cumulative Increase in Supportable Office Space Supply 2000-2030			9,199,594	19,517,037	29,636,663

Notes:
(1) Torto Wheaton Research, A CB Richard Ellis Buinsess Unit; Sedway Group
(2) Per SANDAG's 2030 Projections
(3) Based on Co-Stars 2004 inventory of 82m s.f., including owner-occupied space
(except government & hopsitals) vs. CB Richard Ellis' inventory of 49.2m of rentable space

Source: Economics Research Associates

Table V-2 Projected Demand for Office Space in San Diego County and Chula Vista 2000 to 2030

	2010	2020	2030
Countywide			
Estimated Increase in Lesable Office Space During Previous 10 Years	9,199,594	10,317,443	10,119,626
South County Capture Rate Scenarios			
Low Scenario	3.0%	5.0%	7.0%
Moderate Scenario	5.0%	10.0%	15.0%
High Scenario	7.0%	13.0%	20.0%
South County Space Demand for Period			
Low Scenario	275,988	515,872	708,374
Moderate Scenario	459,980	1,031,744	1,517,944
High Scenario	643,972	1,341,268	2,023,925
South County Cummulative Space			
Low Scenario	275,988	791,860	1,500,234
Moderate Scenario	459,980	1,491,724	3,009,668
High Scenario	643,972	1,985,239	4,009,164
Chula Vista as Percentage of South Suburban			
Chula Vista Capture Rate Scenarios			
Low Scenario	60.0%	60.0%	60.0%
Moderate Scenario	70.0%	70.0%	70.0%
High Scenario	80.0%	80.0%	80.0%
Chula Vista Space Demand for Period			
Low Scenario	165,593	309,523	425,024
Moderate Scenario	321,986	722,221	1,062,561
High Scenario	515,177	1,073,014	1,619,140
Chula Vista Cummulative Space			
Low Scenario	165,593	475,116	900,140
Moderate Scenario	321,986	1,044,207	2,106,768
High Scenario	515,177	1,588,191	3,207,332

Source: Economics Research Associates

Table V-3 Assumed Distribution of Office Space Demand in Chula Vista 2000-2030

	%	2010	%	2020	%	2030
Cumulative Office Space						
Moderate Scenario:	100%	322,000	100%	1,044,000	100%	2,107,000
Bayside	10%	32,200	15%	157,000	23%	485,000
Downtown	40%	128,800	40%	417,600	35%	737,000
EUC/Otay Ranch/EastLake	45%	144,900	40%	417,600	40%	843,000
Elsewhere	5%	16,100	5%	52,000	2%	42,000
High Scenario:	100%	515,000	100%	1,588,000	100%	3,207,000
Bayside	10%	51,500	15%	238,000	23%	738,000
Downtown	45%	231,750	40%	635,200	35%	1,122,000
EUC/Otay Ranch/EastLake	45%	231,750	40%	635,200	40%	1,283,000
Elsewhere	5%	25,750	5%	79,000	2%	64,000

Source: Economics Research Associates

Retail Demand

The Urban Core has access to several potential consumer markets, including local and out-of-area households, downtown area employees, overnight visitors and cross border shoppers. Retail support attributed to downtown area employees follows the current General Plan allocation of space at build-out.

Table V-4 through Table V-6 presents estimated retail sales from the primary, secondary, and tertiary resident markets based on estimated household buying power in each market and assumed capture rates for different types of retail centers. The estimated number of future households in the resident market areas are based on existing forecasts, which are based on existing land use plans. If these plans change to add more residents, the estimate of buying power, and therefore supportable retail space would be proportionately greater.

The share of total sales by shopping center type was assigned based on expenditures in San Diego County. Additionally, ERA assumed capture rates by store type, which varies by type of center and market analyzed. The closer the market area to the Urban Core, the higher the capture rate assumed.

Table V-7 shows potential retail support from other sources, including downtown employees, cross border traffic and overnight visitors. For the employee component, the average daily retail spending was assumed at $4.00. It is assumed that supportable sales-per-SF for new retail development is $300. Downtown retail is assumed to capture 25 percent of cross border expenditures in Chula Vista, which in turn is assumed to capture 20 percent of total cross border expenditures in San Diego County. For overnight visitors, ERA assumed hotel occupancy rates at 60 percent and average retail expenditures per room night of $25.00

Table V-8 provides a final summary of supportable retail space from residents, downtown employees, cross border traffic and overnight visitors. It is assumed that the Urban Core would capture 85 percent of supportable space for the Chula Vista downtown area, or 2.3 million square feet of gross leasable retail space, including existing retail space within the Urban Core, such as Chula Vista Shopping Center, 3rd Avenue, E Street, H Street, and Broadway.

The City has particular interest in support for restaurants within the Urban Core, especially higher-end restaurants. In response to this particular interest, ERA projected the number of households required to support 20,000 square feet of eating and drinking space considering $1,467 average annual eating and drinking sales per household for San Diego County and average sales per square foot of $312. The households needed to support 20,000 square feet of restaurant space (a cluster of 3-4 restaurants) at various capture rates are as follows:

Capture Rate	Households Needed
100 %	4,259
50 %	8,518
10 %	42,588
5 %	85,176

If the restaurants achieved higher than average sales per square foot, the number of households required would be more at each capture rate assumption. It is important to note that in the highly competitive San Diego regional market, no specific restaurant cluster will attract 100 percent, or event 50 percent, of household dining and drinking expenditures. The number of households needed in the market area under a 5 to 10 percent capture rate scenario is probably closer to reality for a specific restaurant cluster.

Table V-4 Chula Vista Potential Retail Sales 2030: Downtown Residents (Primary Market) Resident Market Support Based on the Existing General Plan

Coutywide Expenditure/HH		$ 20,401					
Countywide Avg. HH Income		$ 69,805					
Market Area Avg. HH Income		$ 51,629					
Market Area Exp./HH Income Relative to Countywide Average		80.6%					
Market Area Exp./HH Income		$ 16,441					
Households (2030)		20,504					
		Super Regional Center	**Regional Center**	**Community Center**	**Neighborhood Center**	**Other**	**Total**
Share of Total Sales		10.8%	12.1%	21.0%	17.5%	38.6%	100.0%
Distribution/Household		$ 1,779	$ 1,993	$ 3,448	$ 2,875	$ 6,346	$ 16,441
Capture Rate/Store Type		40.0%	40.0%	70.0%	90.0%	70.0%	--
Captured Sales/Household		$ 711	$ 797	$ 2,414	$ 2,587	$ 4,442	$ 10,952
Total Captured Sales ($000s)		$ 14,587	$ 16,345	$ 49,494	$ 53,048	$ 91,083	# $ 224,557
Sales/s.f. (by center type)		$ 258	$ 254	$ 269	$ 323	$ 300	--
Supportable GLA (s.f.)		56,585	64,264	183,706	164,215	303,611	772,382
Supportable Acreage @ FAR	0.3	4.33	4.92	14.06	12.57	23.23	**59.10**

Source: Economics Research Associates.

Table V-5 Chula Vista Potential Retail Sales 2030: Rest of Chula Vista Excluding Downtown (Secondary Market) Resident Market Support Based on the Existing GP

Coutywide Expenditure/HH		$ 20,401					
Countywide Avg. HH Income		$ 69,805					
Market Area Avg. HH Income		$ 64,332					
Market Area Exp./HH Income							
Relative to Countywide Average		94.6%					
Market Area Exp./HH Income		$ 19,309					
Households (2030)		68,435					
		Super Regional Center	**Regional Center**	**Community Center**	**Neighborhood Center**	**Other**	**Total**
Share of Total Sales		10.8%	12.1%	21.0%	17.5%	38.6%	100.0%
Distribution/Household		$ 2,089	$ 2,341	$ 4,050	$ 3,376	$ 7,453	$ 19,309
Capture Rate/Store Type		25.0%	25.0%	15.0%	10.0%	10.0%	--
Captured Sales/Household		$ 522	$ 585	$ 608	$ 338	$ 745	$ 2,798
Total Captured Sales ($000s)		$ 35,737	$ 40,045	$ 41,574	$ 23,105	$ 51,006	# $ 57,365
Sales/s.f. (by center type)		$ 258	$ 254	$ 269	$ 323	$ 300	--
Supportable GLA (s.f.)		138,632	157,446	154,311	71,524	170,020	691,932
Supportable Acreage @ FAR	0.3	10.61	12.05	11.81	5.47	13.01	**52.95**

Source: Economics Research Associates.

Table V-6 Chula Vista Potential Retail Sales 2030: Rest of San Diego County (Tertiary Market) Resident Market Support Based on the Existing GP

Estimated Tertiary Market Capture (2003)	$	654	Million (from ERA's Fiscal Impact analysis)
Projected Countywide HH Growth		1.09%	annually between 2000-2030 (excluding Chula Vista)
Potential Tertiary Market Capture in Chula Vista (2030)	$	876	Million
Tertiary Market Capture (2030) adjusted for Vehicle purchases (less 12%)	$	771	
Downtown Share of Citywide Retail Land Inventory at buildout		24.5%	
Estimated Regional Capture in Downtown (2030)	$	214	Million
Supportable GLA (s.f.) @ $300/s.f.		714,463	
Supportable Acreage @ FAR 0.3		**54.67**	

Source: Economics Research Associates.

Table V-7 Downtown Chula Vista: Potential Retail Support from Other Sources (2030)
Based on the Existing General Plan

Retail Support Attributed to Downtown Area Employees				
Land Use at Buildout		Acres	Est. Employee/acre	Employees
Office Commercial	CO	81.3	76.7	6,231
Retail Commercial	CR	218.4	20.5	4,486
Thoroughfare Commercial	CT	66.9	10.5	699
Visitor Commercial	CV	22.5	14.0	315
Resort/Recreational	RES	-	22.3	-
General Industrial	I	-	12.1	-
Research & Limited Industrial	IL	94.9	24.0	2,274
Public/Quasi-Public Uses	PQ	211.5	6.0	1,269
Total Employment				15,274
Average Annual Workdays		235		
Average Daily Employee Spending		$4.00		
Total Annual Expenditure		$14.4	Million	
Estimated Supportable Sales/s.f.		$300		
Estimated Supportable GLA (s.f.)		47,859	s.f.	
Estimated Supportable Acreage @ FAR	0.30	**3.66**	**Acres**	

Retail Support Attributed to Cross-Border (Mexican) Traffic - excluding workers and tourists				
Estimated countywide cross border retail expenditure (2003):				
Gross Retail Exp.		$ 1,917.3	Million	
Estimated Capture in Chula Vista	20%	$383.5	Million	
Estimated Downtown Capture (2003)	25%	$95.9	Million	
Estimated Mexican Exp. Growth (2003-2030)		0.5%	Annually	
Estimated Mexican Retail Exp.in Downtown (2030)		$109.7	Million	
Estimated Supportable Sales/s.f.		$300		
Estimated Supportable GLA (s.f.)		365,619	s.f.	
Estimated Supportable Acreage @ FAR	0.30	**27.98**	**Acres**	

Retail Support Attributed to Overnight Visitors (Hotel Rooms)				
Developed Visitor Commercial (CV) Acres		22.5	acres	
Estimated Existing Rooms/developed acre		22	rooms/acre	
Estimated Total Rooms		497	rooms	
Annual room-nights @ occupancy of	60%	108,771	room nights	
Avg. retail expenditure/room night		$ 25.00	/room-night	
Estimated taxable retail sales attributed to hotel rooms		$ 2.72	Million	
Estimated Supportable Sales/s.f.		$300		
Estimated Supportable GLA (s.f.)		9,064	s.f.	
Estimated Supportable Acreage @ FAR	0.30	**0.69**	**Acres**	

Source: Economics Research Associates.

Table V-8 Supportable Retail Space in Downtown Chula Vista (2030) Under the Existing General Plan

	Area (s.f.)	Acres
Resident Market		
Primary Market Support	772,382	59.1
Secondary Market Support	691,932	52.9
Tertiary Market Support	714,463	54.7
Subtotal	**2,178,777**	**166.7**
Other retail Sources		
Area Employees	47,859	3.7
'Cross-Border' Shoppers	365,619	28.0
Other overnight visitors	9,064	0.7
Subtotal	**422,542**	**32.3**
Urban Core Capture of Downtown Area	**85%**	
TOTAL	**2,211,121**	**169.2**

Source: Economics Research Associates

Housing Demand

Table V-9 presents projected housing demand for the Urban Core in 2010, 2020 and 2030. To calculate the demand, ERA obtained SANDAG's projected net growth figures for the 2000-2010, 2010-2020 and 2020-2030 periods for SRA-21 (western Chula Vista) and the South Suburban Major Statistical Area. SRA-21's share of the South Suburban MSA's projected net growth is the basis for the low demand scenario. Even though SRA-21's share of the South Suburban MSA's household growth increased significantly from 2 percent (between 2000 and 2010) to 6 percent (between 2010 and 2020) to 17 percent (between 2020 and 2030), absolute increases in households for SRA-21 did not vary greatly, since, according to SANDAG's forecasts, South Suburban's net growth share of San Diego County growth is forecasted to decrease greatly after 2020.

Medium and High scenarios assumed that SRA-21 will capture a higher than projected share of total household growth in the South Suburban MSA, assuming that the City of Chula Vista implements policies that facilitate redevelopment and infill development, and increases the Urban Core's potential development capacity. ERA assumed that the Urban Core might capture half of all future growth in SRA-21, with remaining growth occurring in the Bayfront and elsewhere within downtown and western Chula Vista. This percentage is consistent with expected growth in the Chula Vista Bayfront, considering that some of the growth in the Bayfront would come from households that otherwise would not live in the area.

Total cumulative housing projections by 2030 in the Urban Core estimate almost 1,098 new households in the low scenario, more than 1,924 in the medium scenario and 2,749 in the high scenario.

Table V-10 shows single and multiple family housing units for the Urban Core Study Area in 2010, 2020 and 2030. ERA assumed 30 percent of all future housing units to be single-family units and 70 percent to be multiple housing units. Single-family housing within the Urban Core may include small lot single-family homes, as found in downtown Oceanside, or attached town homes, as found in San Diego's Uptown Community Plan area. Multi-family housing may include ownership and rental multi-level housing at various densities and heights within the Urban Core.

Table V-9 Chula Vista Urban Core Study Area Housing Demand for 2010, 2020 and 2030

	2000	2004	2010	2020	2030
South Suburban MSA Households					
Total Households	94,080	108,083	121,787	135,377	139,522
South Suburban Housing Net Growth					
Total Households			27,707	13,590	4,145
SRA 21 Households					
Total Households	37,694	38,397	38,373	39,205	39,890
SRA-21Housing Net Growth					
Total Households			679	832	685
SRA 21 Net Growth as a Percentage of South Suburban Net Growth					
Low Scenario			2%	6%	17%
Moderate Scenario			5%	11%	23%
High Scenario			8%	15%	30%
Estimated SRA 21 Household Growth					
Low Scenario			679	832	685
Moderate Scenario			1,448	1,435	964
High Scenario			2,217	2,039	1,244
Urban Core Household Growth Per Period @ 50% of SRA 21 Growth					
Low Scenario			340	416	343
Moderate Scenario			724	718	482
High Scenario			1,108	1,019	622
Cumulative Urban Core Household Growth					
Low Scenario			340	756	1,098
Moderate Scenario			724	1,442	1,924
High Scenario			1,108	2,128	2,749

Source: SANDAG and Economics Research Associates

Table V-10: Estimated Single and Multiple Family Housing Demand in the Chula Vista Urban Core Study Area for 2010, 2020 and 2030

	2010	2020	2030
Urban Core Single Family Housing Demand @ 30 Percent of Estimated Urban Core Demand			
Low Scenario	102	125	103
Moderate Scenario	217	215	145
High Scenario	332	306	187
Cumulative Urban Core Single Family Housing Demand			
Low Scenario	102	227	329
Moderate Scenario	217	432	577
High Scenario	332	638	825
Urban Core Multi-Family Housing Demand @ 70 Percent of Estimated Urban Core Demand			
Low Scenario	238	291	240
Moderate Scenario	507	502	337
High Scenario	776	713	435
Cumulative Urban Core Multi-Family Housing Demand			
Low Scenario	238	529	769
Moderate Scenario	507	1,009	1,347
High Scenario	776	1,489	1,924

Source: SANDAG and Economics Research Associates

Scenario 2 – Continued South Suburban MSA Growth

SANDAG's household forecasts for the South Suburban MSA assume a significant tapering of growth in each decade from 2000 to 2030. SANDAG assumes a 2.6 percent annual growth rate between 2000 and 2010, falling to 1.1 percent from 2010 to 2020, falling to 0.30 percent from 2020 and 2030. Some decline in the annual growth rate is expected as the household base in the South Suburban MSA increases. However, the decline is faster than the decline assumed countywide. SANDAG's forecasts may assume that growth in the South Suburban MSA will fall dramatically as Otay Ranch approaches build-out.

If the communities in the South Suburban MSA increase their potential build-out capacity, South Suburban MSA's household growth rates should not decline so rapidly. There is no reason to assume that the South Suburban MSA would be less appealing between 2020 and 2030 than it is prior to 2020 if capacity is increased unless infrastructure and public facility standards are not maintained.

It is reasonable to assume that build-out capacity in the South Suburban MSA will increase. Chula Vista is contemplating such increases as it updates its General Plan, including within the Eastern Urban Center, Downtown, and the upland portions of the Bayfront. The City of San Diego is considering adding housing capacity to the Otay Mesa Community Plan. San Ysidro and National City redevelopment efforts contemplate new urban housing capacity. While most of these changes in policies that will increase housing capacity have not yet been approved, it is likely that some will be approved given the regional housing affordability issue.

Assuming that household growth in the South Suburban MSA continues between 2020-2030 at the same rate as SANDAG forecasts for the 2010-2020 period, and that the Urban Core can capture a significant share of this growth, the Urban Core might accommodate over 1,500 to over 3,600 new housing units between 2000 and 2030, as presented in Table V-10, of which most would be multi-family housing given land prices, as estimated in Table V-11.

Table V-10 Chula Vista Urban Housing Demand for 2010, 2020 and 2030
(Second Scenario – Assuming 2010-2020 Growth Rate Continues Between 2020-2030)

	2000	2004	2010	2020	2030
South Suburban MSA Households					
Total Households	94,080	108,083	121,787	135,377	150,483
South Suburban Housing Net Growth					
Total Households			27,707	13,590	15,106
SRA 21 Net Growth as a Percentage of South Suburban Net Growth					
Low Scenario			2%	6%	10%
Moderate Scenario			5%	11%	15%
High Scenario			8%	15%	20%
Estimated SRA 21 Household Growth					
Low Scenario			679	832	1,511
Moderate Scenario			1,448	1,435	2,266
High Scenario			2,217	2,039	3,021
Urban Core Household Growth Per Period @ 50% of SRA 21 Growth					
Low Scenario			340	416	776
Moderate Scenario			724	718	1,133
High Scenario			1,108	1,019	1,511
Cumulative Urban Core Household Growth					
Low Scenario			340	756	1,532
Moderate Scenario			724	1,442	2,575
High Scenario			1,108	2,128	3,639

Source: SANDAG and Economics Research Associates

Table V-11 Single and Multiple Family Housing Demand in the Chula Vista Urban Core Study Area for 2010, 2020 and 2030
(Second Scenario – Assuming 2010-2020 Growth Rate Continues Between 2020-2030)

	2000	2004	2010	2020	2030
Urban Core Single Family Housing Demand @ 30 Percent of Estimated Urban Core Demand					
Low Scenario			102	125	233
Moderate Scenario			217	215	340
High Scenario			332	306	453
Cumulative Urban Core Single Family Housing Demand					
Low Scenario			102	227	460
Moderate Scenario			217	432	772
High Scenario			332	638	1,091
Urban Core Multi-Family Housing Demand @ 70 Percent of Estimated Urban Core Demand					
Low Scenario			238	291	543
Moderate Scenario			507	502	793
High Scenario			776	713	1,058
Cumulative Urban Core Multi-Family Housing Demand					
Low Scenario			238	529	1,072
Moderate Scenario			507	1,009	1,802
High Scenario			776	1,489	2,547

Source: SANDAG and Economics Research Associates

Urban Core Capacity

Estimated build-out capacity for residential, retail and office space in the Urban Core under the proposed General Plan update is presented in Table V-12, based on data provided by the City of Chula Vista. The table also presents total existing land uses in 2004 and the development capacity for new incremental growth.

Table V-12 Urban Core Plan Capacity for New Incremental Growth

	Residential Units	Retail S.F.	Office S.F.
Build-out Capacity	10,865	4,795,712	2,936,818
Total Existing Land Use 2004	5,036	2,990,978	2,377,766
Development Capacity for New Incremental Growth	5,829	1,804,734	559,052

As shown in the table, existing residential units in 2004 represent only 46 percent of the Urban Core's total capacity at build-out, which leaves capacity for over 5,800 units in the Urban Core.

Estimated retail space in the Urban Core in 2004 represents approximately 62 percent of the total capacity at build-out, which leaves around 1.8 million square feet of retail space to be developed.

Estimated office space in the Urban Core in represents almost 81 percent of the total build-out capacity, leaving 560,000 square feet for new development.

Table V-13 compares development capacity for residential, retail and office space in the Urban Core with estimated demand projected by ERA.

Table V-13 Growth Capacity vs. Estimated Demand (2004-2030)

	Residential Units	Retail S.F.	Office S.F.
Development Capacity for New Incremental Growth	5,829	1,804,734	559,052
Estimated Demand (1) (2004-2030, High Scenarios)	3,639	530,536	1,122,000
Net Surplus <Deficit> Capacity at 2030	2,190	1,274,198	(562,948)

Based on this comparison, it appears that the Urban Core plan, as currently planned, may have additional capacity for residential and retail development, and perhaps insufficient capacity for potential office development. The extra residential and retail capacity could be considered upside potential for additional growth if market forecasts prove too conservative. It may also represent additional capacity beyond the year 2030. It appears, however, that the City has the flexibility of considering some re-allocation of uses if it so chooses. In particular, the City may want to designate that some of the commercial-retail capacity would be mixed-use commercial that could be developed either as commercial retail or commercial office space. This would help address the potential shortfall in office space capacity.

Given the long term housing needs in the region, the housing capacity should not be reduced necessarily since it will be needed someday as the region continues to grow, unless a reduction is required to address other planning objectives and policies. However, infrastructure and public facility financing strategies may want to anticipate that not all of this capacity will be built by 2030.

Financial Feasibility Issues

The amount of revenue a property can generate relative to increases in costs must be greater to induce private redevelopment and renovation, without public subsidies. Rents and home prices, and densities, will have to be greater to generate this additional revenue.

How parking is addressed, in terms of standards (such as reducing standards near transit or allowing shared parking standards for mixed-use development), location (forming parking districts that can pool parking in-lieu fees to provide serviceable off-site parking at a lower cost due to economies of scale), and type (ensuring parking development costs are commensurate with achievable rents) is important.

Another major issue that will affect feasibility is the ultimate impact fee costs, given the potentially higher cost of providing public facilities in an existing community to serve the additional population.

If the Urban Core Plan's allowable densities requires subterranean parking, rents and home prices per square foot will have to be even greater to afford the high cost of subterranean parking. A Keyser Marston Associates (KMA) study for the City of Chula Vista that tested the residual value of alternative forms of housing at different densities concluded that townhomes and mid-rise condominium development currently are the most feasible housing prototype, supporting current estimates of acquisition costs for improved properties in western Chula Vista. The feasibility of

high-rise condominium development appeared low because of the higher costs relative to prices, although a relatively modest increase in high-rise price assumptions (which the Chula Vista Urban Core could evolve into) would make high-rise development feasible. KMA concluded that rental rates currently are too low to support increases in land values and construction costs.

Building upon KMA's analysis and using similar impact fee factors, ERA evaluated three hypothetical mixed-use housing and retail scenarios on 50,000 square foot lots, and applying the draft development standards prepared by RRM Associates. The first two scenarios were variations of mixed-use development within the V-2 Village area. The first scenario, V-2-A, assumes that development maximizes the allowed floor-area ratio (FAR), necessitating subterranean parking. The second scenario, V-2-B, assumes that only one level of lower cost tuck-under parking (half level below grade and half above grade, utilizing natural ventilation) is developed and the number of residential units is limited by the parking supply. Both of these scenarios assume that commercial parking requirements is satisfied off-site through parking in-lieu fees. The third scenario, V-12, assumes a high-rise, transit-oriented, mixed-use development were all parking is placed on site. Theses analyses are presented in Appendix A.

The estimated residual land values that these scenarios may support are as follows:

Scenario	**Residual Land Value Per S.F. of Land Area**
V-2A: FAR Capacity	$21
V-2B: Parking Constrained	$71
UC-12: Transit-Oriented High-Rise	$22

There are limited land sales in the Urban Core against which to compare with the estimated residual values since the Urban Core's land is mostly developed. Since 2003, the median price of commercial retail land in Chula Vista was $15.90 per square foot, and the median price for residential land was $39 per square foot. There were only a couple of commercial land sales within the Urban Core, averaging $56 per square foot. KMA reports prices for lower density residential developments (20 units per acre or less) of $10 per square foot, a sale price of $20 per square foot for a site forming a portion of the proposed Esplanade condominium on H Street, and a median sales price for commercial sites in urban South Bay of $22 per square foot, with the highest value site in Downtown Chula Vista.

While the residual land values estimated are comparable for higher density residential and commercial land in the urban areas of South Bay, only the Parking Constrained scenario generates sufficient value to recover the cost of property acquisition that includes land and existing improvements (assuming under-performing and obsolete buildings), which is the more common scenario within the Urban Core. KMA reports median sales prices for improved

properties in urban South Bay range from $41 to $63 per square foot of land area, considerably higher than unimproved land.

The reason the Parking Constrained scenario performs better is that the high cost of subterranean parking is avoided. The UC-12 scenario, the Transit-Oriented High Rise Scenario, also must compensate for higher construction costs per unit associated with high-rise development. While a 10 percent average premium per square foot was assumed for the high-rise development, a greater view premium would be required to compensate for the extra development costs.

Based on this analysis, the City should strive to improve the feasibility of private redevelopment by doing the following:

- Strive to reduce the impact fee cost burden on development through efficient infrastructure planning, and the use of public funds (such as redevelopment funds) to cover some of the costs of infrastructure and public facility provision;

- Reduce parking in-lieu fees by developing district parking as a public/private partnership, and/or base fees on the provision of common surface lots, rather than structured parking.

These measures are particularly important in the early phases of the Urban Core's redevelopment. Overtime, as prices and rents rise in real terms relative to construction costs, the residual land value of development will rise and the ability for private parties to purchase existing properties, without subsidy will improve, as will development's capacity to absorb higher parking and impact fee costs.

VI. SWOT Analysis

This section provides an outlook of the Urban Core's strengths, weaknesses, opportunities, and threats from a market and economic perspective. The Urban Core should build-upon its strengths, overcome or mitigate its weaknesses, exploit its opportunities, and monitor its threats as it develops in the future.

Strengths

- Location between downtown San Diego and Tijuana
- Strong and established retail market
- Proximity to the Bay
- Established employment, retail, and residential center with high occupancy
- Public investment in infrastructure
- Quality entry-level and mid-market rate ownership housing
- Transit linkages
- Traditional downtown district
- Good regional access

Weaknesses

- Relatively lower incomes
- Limited visitor industry
- Low hotel room rates and occupancy rates
- Aging building stock
- Relatively lower rents
- Public facility deficiencies
- Relatively neutral regional market image
- Relatively weak linkage with the Bayfront

Opportunities

- Affordable development relative to downtown San Diego
- Ability to capture a larger share of housing demand than SANDAG forecasts
- An alternative urban lifestyle than downtown San Diego
- Coastal view development and links to the Bayfront
- Pedestrian and transit-oriented development
- Intercept Mexican market consumers
- Become South County's office employment, retail, and entertainment center
- Housing for many incomes, preferences, and cultures

Threats

- Competition from other mixed-use urban nodes in the region
- Competition from Bayfront development if not linked with core
- Competition from the Eastern Urban Center if not adequately distinguished
- Cost and complexity of land assembly and infill development
- Infrastructure and public facility constraints
- Not overcoming "second tier" reputation in regional market
- Exposure to Mexican currency fluctuations

Concentrating efforts in keystone districts within the Urban Core to show success and generate some critical mass, rather than dilute efforts with individual scattered developments, may be important for generating momentum and long-term success, so that people choose to live, shop, and work in the Urban Core because of its own distinct identity.

Appendix A

Table 1
First Scenario - FAR Capacity

V-2A VILLAGE ASSUMPTIONS

Lot Size	**50,000**
Maximum Coverage	**90%**
Lot Available for Construction	**45,000**

Floor Area Ratio	**3**
Maximum Construction SF	**150,000**

Square Feet Breakdown	**Percentage**	**SF**
- Residential	**70%**	**105,000**
- Retail	**20%**	**30,000**
- Office	**10%**	**15,000**

Parking Spaces	**Zoning Reg.**	**Spaces**
- Onsite Residential *	**1.5**	**143**
- Offsite Commercial	**3**	**135**

*** 1.5 parking spaces per residential unit**
*** Capacity of 121 parking spaces per underground parking level**

Source: Economics Research Associates

Table 2
First Scenario - FAR Capacity

V-2A VILLAGE ESTIMATED REVENUES FROM RESIDENTIAL PROPERTY SALE

Unit Type	Total Residential SF	Average Size per Unit	# of Units	Square Footage Per Unit	Price Per Unit	Price Per Square Foot	Total Sales Revenue
Condominium Units	105,000	1,100	95	1,100	$313,500	$285.00	$29,782,500
Total			**95**				**$29,782,500**

Residential Revenue		
Total Sales		$29,782,500
Cost of Sale	4%	($1,191,300)
Net Residential Revenue		**$28,591,000**
Revenue per SF		**$272**

Source: Economics Research Associates.

Table 3
First Scenario - FAR Capacity

V-2A VILLAGE ESTIMATED COMMERCIAL SPACE REVENUE

Leasable Retail SF			30,000	SF
Leasable Office SF			15,000	SF
Total Leasable SF			45,000	SF
NNN Monthly Retail Rental Rate		$	1.75	per month
NNN Monthly Office Rental Rate		$	2.00	per month
Gross Retail Annual Rental Income			$630,000	
Gross Office Annual Rental Income			$360,000	
Total Gross Annual Rental Income			$990,000	
Less Vacancy & Collection	5%	$	(49,500)	
Gross Effective Income			$940,500	
Non-reimbursable operating expenses	4%		(37,620)	
Net Operating Income			$902,880	
Cap Rate			9%	
Estimated Capitalized Value			**$10,032,000**	
Capitalized Value per SF			**$223**	

Source: Economics Research Associates

Table 4
First Scenario - FAR Capacity

V-2A VILLAGE DEVELOPMENT COSTS

Project Square Footage

Retail	30,000
Office	15,000
Residential for Sale	105,000

Underground Parking (Residential Spaces only) 143 2 underground parking levels

	Total	Per SF	Per Space	Per Unit	% of Total
Direct Costs					
Direct Costs, Retail /1	$2,880,000	$96			8.6%
Direct Costs, Office /1	$2,025,000	$135			6.0%
TI Allowance	$900,000	$20			2.7%
Direct Costs, Residential /1	$11,970,000	$114			35.7%
Direct costs, Underground Parking	$3,562,500			$25,000	10.6%
Subtotal Direct Costs	**$21,337,500**				63.6%
Commercial Parking Fee	**$2,193,750**		$13,000		6.5%
Soft Costs					
Developer Overhead 2/	$853,500				2.5%
Residential Open Space Fee	$950,000			$10,000	2.8%
Commercial and Residential Fees 3/	$2,336,814				7.0%
Financing Costs /4	$1,920,375				5.7%
Architectural & Engineering 5/	$640,125				1.9%
Miscelaneous (Legal and Other)	$250,000				0.7%
Subtotal Indirect Costs	**$6,950,814**				20.7%
Contingency 6/	**$3,048,206**				9.1%
Total Development Cost (excluding land)	**$33,530,271**				100.0%

1/ Includes site improvements, demolition, construction cost, contingency, etc.
2/ Based on 4% of Subtotal Direct Costs
3/ Includes Public Facility, Sewer, Park, Plan Check, Building Permit, School and Water Capacity Fees
4/ Based on 9% of Subtotal Direct costs
5/ Based on 3% of Subtotal Direct Costs
6/ Based on 10% of Subtotal Direct Costs, Commercial Parking Fee and Subtotal Indirect Costs

Source: Economics Research Associates

Table 5
First Scenario - FAR Capacity

V-2A VILLAGE FINANCING ESTIMATE

Revenues		**Amount**
For-sale Housing Revenue		$28,591,000
Capitalized Value of Retail Rental Property		$10,032,000
Total Sources of Revenue		**$38,623,000**
Costs		
Direct Costs		$21,337,500
Commercial Parking Fee		$2,193,750
Indirect Costs (Soft Costs, Financing & Fees)		$6,951,000
Contingency		$3,048,000
Total Costs Excluding Land		**$33,530,250**
Developer Profit	12%	$4,023,630
Total Costs Excluding Land		**$37,553,880**
NET		**$1,069,120**
Residential Value per SF of Land		**$21.4**

Source: Economics Research Associates

Table 6
Second Scenario - Parking Constrained

V-2B VILLAGE ASSUMPTIONS

Lot Size	**50,000**
Maximum Coverage	**90%**
Lot Available for Construction	**45,000**

Floor Area Ratio	**3**
Maximum Construction SF	**150,000**

Square Feet Breakdown	**Percentage**	**SF**
- Residential	**70%**	**105,000**
- Retail	**20%**	**30,000**
- Office	**10%**	**15,000**

Parking Spaces	**Zoning Reg.**	**Spaces**
- Onsite Residential *	**1.5**	**121**
- Offsite Commercial	**3**	**135**

*** 1.5 parking spaces per residential unit**
*** Capacity of 121 parking spaces per tuckunder parking level**

Source: Economics Research Associates

Table 7
Second Scenario - Parking Constrained

V-2B VILLAGE ESTIMATED REVENUES FROM RESIDENTIAL PROPERTY SALE

Unit Type	Total Residential SF	Average Size per Unit	# of Units	Square Footage Per Unit	Price Per Unit	Price Per Square Foot	Total Sales Revenue
Condominium Units	89,100	1,100	81	1,100	$313,500	$285.00	$25,393,500
Total			**81**				**$25,393,500**

Residential Revenue		
Total Sales		$25,393,500
Cost of Sale	4%	($1,015,740)
Net Residential Revenue		**$24,378,000**
Revenue per SF		**$274**

Source: Economics Research Associates.

Table 8
Second Scenario - Parking Constrained

V-2B VILLAGE ESTIMATED COMMERCIAL SPACE REVENUE

Leasable Retail SF			30,000	SF
Leasable Office SF			15,000	SF
Total Leasable SF			45,000	SF
NNN Monthly Retail Rental Rate		$	1.75	per month
NNN Monthly Office Rental Rate		$	2.00	per month
Gross Retail Annual Rental Income			$630,000	
Gross Office Annual Rental Income			$360,000	
Total Gross Annual Rental Income			$990,000	
Less Vacancy & Collection	5%	$	(49,500)	
Gross Effective Income			$940,500	
Non-reimbursable operating expenses	4%		(37,620)	
Net Operating Income			$902,880	
Cap Rate			9%	
Estimated Capitalized Value			**$10,032,000**	
Capitalized Value per SF			**$223**	

Source: Economics Research Associates

Table 9
Second Scenario - Parking Constrained

V-2B VILLAGE DEVELOPMENT COSTS

Project Square Footage

Retail	30,000
Office	15,000
Residential for Sale	89,100

Underground Parking (Residential Spaces only) 121 1 underground parking level

	Total	Per SF	Per Space	Per Unit	% of Total
Direct Costs					
Direct Costs, Retail /1	$2,880,000	$96			10.5%
Direct Costs, Office /1	$2,025,000	$135			7.4%
TI Allowance	$900,000	$20			3.3%
Direct Costs, Residential /1	$10,157,000	$114			36.9%
Direct costs, Underground Parking	$1,092,857			$9,000	4.0%
Subtotal Direct Costs	**$17,054,857**				61.9%
Commercial Parking Fee	**$2,193,750**		$13,000		8.0%
Soft Costs					
Developer Overhead 2/	$682,194				2.5%
Residential Open Space Fee	$810,000			$10,000	2.9%
Commercial and Residential Fees 3/	$1,993,770				7.2%
Financing Costs /4	$1,534,937				5.6%
Architectural & Engineering 5/	$511,646				1.9%
Miscelaneous (Legal and Other)	$250,000				0.9%
Subtotal Indirect Costs	**$5,782,547**				21.0%
Contingency 6/	**$2,503,115**				9.1%
Total Development Cost (excluding land)	**$27,534,270**				100.0%

1/ Includes site improvements, demolition, construction cost, contingency, etc.
2/ Based on 4% of Subtotal Direct Costs
3/ Includes Public Facility, Sewer, Park, Plan Check, Building Permit, School and Water Capacity Fees
4/ Based on 9% of Subtotal Direct costs
5/ Based on 3% of Subtotal Direct Costs
6/ Based on 10% of Subtotal Direct Costs, Commercial Parking Fee and Subtotal Indirect Costs

Source: Economics Research Associates

Table 10
Second Scenario - Parking Constrained

V-2B VILLAGE FINANCING ESTIMATE

Revenues		**Amount**
For-sale Housing Revenue		$24,378,000
Capitalized Value of Retail Rental Property		$10,032,000
Total Sources of Revenue		**$34,410,000**
Costs		
Direct Costs		$17,054,857
Commercial Parking Fee		$2,193,750
Indirect Costs (Soft Costs, Financing & Fees)		$5,783,000
Contingency		$2,503,000
Total Costs Excluding Land		**$27,534,607**
Developer Profit	12%	$3,304,153
Total Costs Excluding Land		**$30,838,760**
NET		**$3,571,240**
Residential Value per SF of Land		**$71.4**

Source: Economics Research Associates

Table 11
UC-12 H STREET TROLLEY ASSUMPTIONS

Lot Size	**50,000**
Maximum Coverage	**50%**
Lot Available for Construction	**25,000**

Floor Area Ratio	**6**
Maximum Construction SF	**300,000**

Square Feet Breakdown	**Percentage**	**SF**
- Residential	**83.3%**	**250,000**
- Retail	**8.3%**	**25,000**
- Office	**8.3%**	**25,000**

Parking Spaces		
- Onsite Residential *	**1**	**227**
- Onsite Commercial	**2**	**100**

*** 1 parking space per residential unit**

Source: Economics Research Associates

Table 12
UC-12 H STREET TROLLEY ESTIMATED REVENUES FROM RESIDENTIAL PROPERTY SALE

Unit Type	Total Residential SF	Average Size per Unit	# of Units	Square Footage Per Unit	Price Per Unit	Price Per Square Foot	Total Sales Revenue
Condominium Units	250,000	1,100	227	1,100	$344,850	$313.50	$78,280,950
Total			**227**				**$78,280,950**

Residential Revenue		
Total Sales		$78,280,950
Cost of Sale	4%	($3,131,238)
Net Residential Revenue		**$75,150,000**
Revenue per SF		**$301**

Source: Economics Research Associates.

Table 13
UC-12 H STREET TROLLEY ESTIMATED COMMERCIAL SPACE REVENUE

Leasable Retail SF			25,000	SF
Leasable Office SF			25,000	SF
Total Leasable SF			50,000	SF
NNN Monthly Retail Rental Rate		$	2.25	per month
NNN Monthly Office Rental Rate		$	2.50	per month
Gross Retail Annual Rental Income			$675,000	
Gross Office Annual Rental Income			$750,000	
Total Gross Annual Rental Income			$1,425,000	
Less Vacancy & Collection	5%	$	(71,250)	
Gross Effective Income			$1,353,750	
Non-reimbursable operating expenses	4%		(54,150)	
Net Operating Income			$1,299,600	
Cap Rate			9%	
Estimated Capitalized Value			**$14,440,000**	
Capitalized Value per SF			**$289**	

Source: Economics Research Associates

Table 14
UC-12 H STREET TROLLEY DEVELOPMENT COSTS

Project Square Footage

Retail	25,000
Office	25,000
Residential for Sale	250,000

Underground Parking (Residential Spaces)	227	2 underground residential parking levels
Underground Parking (Commercial Spaces)	100	1 underground commercial parking level

	Total	Per SF	Per Unit	% of Total
Direct Costs				
Direct Costs, Retail /1	$2,400,000	$96		3.0%
Direct Costs, Office /1	$3,375,000	$135		4.3%
TI Allowance	$1,000,000	$20		1.3%
Direct Costs, Residential /1	$40,000,000	$160		50.6%
Direct costs, Residential Underground Parking	$5,675,000		$25,000	7.2%
Direct costs, Commercial Underground Parking	$2,500,000		$25,000	3.2%
Subtotal Direct Costs	**$54,950,000**			69.6%
Soft Costs				
Developer Overhead 2/	$2,198,000			2.8%
Residential Open Space Fee	$2,270,000		$10,000	2.9%
Commercial and Residential Fees 3/	$5,556,486			7.0%
Financing Costs /4	$4,945,500			6.3%
Architectural & Engineering 5/	$1,648,500			2.1%
Miscelaneous (Legal and Other)	$250,000			0.3%
Subtotal Indirect Costs	**$16,868,486**			21.4%
Contingency 6/	**$7,181,849**			9.1%
Total Development Cost (excluding land)	**$79,000,335**			100.0%

1/ Includes site improvements, demolition, construction cost, contingency, etc.
2/ Based on 4% of Subtotal Direct Costs
3/ Includes Public Facility, Sewer, Park, Plan Check, Building Permit, School and Water Capacity Fees
4/ Based on 9% of Subtotal Direct costs
5/ Based on 3% of Subtotal Direct Costs
6/ Based on 10% of Subtotal Direct Costs, Commercial Parking Fee and Subtotal Indirect Costs

Source: Economics Research Associates

Table 15
UC-12 H STREET TROLLEY FINANCING ESTIMATE

Revenues		**Amount**
For-sale Housing Revenue		$75,150,000
Capitalized Value of Retail Rental Property		$14,440,000
Total Sources of Revenue		**$89,590,000**
Costs		
Direct Costs		$54,950,000
Indirect Costs (Soft Costs, Financing & Fees)		$16,868,486
Contingency		$7,181,849
Total Costs Excluding Land		**$79,000,335**
Developer Profit	12%	$9,480,040
Total Costs Excluding Land		**$88,480,375**
NET		**$1,109,625**
Residential Value per SF of Land		**$22.2**

Source: Economics Research Associates

Appendix D. Public Facilities and Services Program

Appendix D. Public Facilities and Services Program

A. Introduction

The City of Chula Vista's General Plan was updated in December 2005 and created a new vision for the city. A large part of that vision, developed over a five-year planning process, focused on the revitalization and redevelopment of western Chula Vista. New growth is planned around "smart growth" principles such as mixed use and transit oriented development that concentrates infill and redevelopment to select focus areas and corridors to protect stable single family neighborhoods, better utilize land resources, reduce environmental effects, and make more efficient use of existing infrastructure.

The General Plan calls for the preparation and adoption of specific plans to carry out the vision of the General Plan in an organized and orderly fashion. This Specific Plan implements the policies and objectives of the General Plan Update to direct a portion of the growth expected to occur in the City over the next 20 years to the Urban Core Area, by providing zone changes, development regulations, and design guidelines to accommodate future growth. Along with the plan for new land uses, this Specific Plan also identifies the proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities that would be located within the area covered by the Specific Plan and needed to support the land uses described in the Specific Plan.

This Appendix has been compiled using the various existing chapters of the Specific Plan, the Final Report on Facilities Implementation Analysis,and the Final Environmental Impact Report to provide a consolidated location for the various components of the Specific Plan Public Facilities and Services Program, prepared pursuant to Chula Vista Municipal Code Section 19.07, Specific Plans, and the California Government Code, Title 7, Division 1, Chapter 3, Article 8, Section 65451.

1. Background

In the late 1980s, a citizen's initiative, referred to as the "Cumming's Initiative", was passed by a majority vote of the electorate and was incorporated as Chula Vista Municipal Code (CVMC) Section 19.80 (Ord. 2309 Initiative 1988). The purpose and intent of the initiative was generally to ensure the quality of life for the residents of Chula Vista through a variety of measures such as:

- *preserving the character of the community;*
- *protecting the open space of the city;*

- *ensuring the adequacy of city facilities, school facilities, recreation and park facilities and services; fire, police, and paramedic protection; and water and sanitary sewer systems;*
- *ensuring the balanced development of the city; and*
- *ensuring that the future traffic demands do not exceed the capacity of streets.*

The Ordinance states that the intent is "not designed to halt quality growth, but to ensure that rampant, unplanned development does not overtax facilities and destroy the quality and home town character of Chula Vista". In order to accomplish this goal, the Ordinance requires the staged provision of public services and facilities commensurate with growth through funding mechanisms such as a system of fees collected from developers at the time of new development. These fees are to be spent by the City, in a timely manner, on public facilities and services to ensure that new development will not have a negative impact on the residents of Chula Vista.

The City has specifically met the provisions of CVMC Section 19.80.020 through the implementation of funding mechanisms such as Development Impact Fees that are determined by land use category and paid upon the issuance of a building permit. Other fee programs include Transportation Development Impact Fees and Public Facilities Development Impact Fees that provide financing for transportation and recreation facility improvements based on population, density, and land use designation.

Since the passage of the Cummings Initiative in the late 1980s, many of the quality of life issues described above are now routinely addressed during the City's development review process. The City has established quality of life "thresholds" that are evaluated as part of the environmental review process for projects that are proposed and developed. The Growth Management Ordinance and Development Impact Fee Ordinances have been enacted to ensure that new development provides the timely payment of fees for public facilities needed as a result of new growth. Development Impact Fees have been put in place to require new development to provide a proportionate contribution to public services and facilities. These fees include fees for sewer and storm drain improvements, park acquisition and development, public facilities and services, and traffic improvements. School impacts fees are required pursuant to Government Code 65996.

Monitoring programs have been developed to track the rate and effect of growth on an annual basis. For example, the City has established the traffic monitoring program, which annually monitors the actual performance of the street system by conducting roadway segment travel time studies. A Growth

Management Oversight Commission has been established and annually reviews the growth management program. An annual report is submitted to the Planning Commission and the City Council.

2. Public Facilities and Services Program for the Specific Plan

The Specific Plan includes an assessment of the proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities that would be located within the area covered by the Specific Plan and needed to support the land uses described in the Specific Plan. In addition, the Specific Plan includes a program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out the Specific Plan.

Specifically, Chapters IX - Infrastructure and Public Facilities, X - Plan Implementation and Community Benefits Program, and XI - Plan Adminstration of the Specific Plan; the Final Report on Facilities Implementation Analysis; and the Specific Plan FEIR 06-01, including the Mitigation Monitoring and Reporting Program (MMRP), provide an assessment of the demands on public facilities and infrastructure due to development that may occur as a result of the Specific Plan and the plan and mechanisms to ensure public facilities and services occur commensurate with subsequent development. Chapter V - Mobility and Chapter VIII - Public Realm Design Guidelines provide an expanded discussion and illustrations of some of the public facilities, such as mobility improvements – traffic, pedestrian, and bicycle-- and other improvements such as parks and plazas.

As described in the Specific Plan and FEIR, subsequent new development would be required to provide adequate public services and facilities commensurate with development's impact. The Final Report on Facilities Implementation Analysis provides projected cost estimates, projected timing of facilities, and financing mechanisms and revenues. The revenues are based on projected tax increment and development impacts fees routinely collected as development occurs in the City. Existing City-wide Development Impact Fees (DIF) related to the provision of public facilities include:

- *City-wide Park Acquisition and Development (PAD) Fee*
- *Public Facilities (PF) DIF (police, fire, libraries, and recreation facilities)*
- *Sewer fees*
- *Storm drain fees*
- *Traffic signal fees*

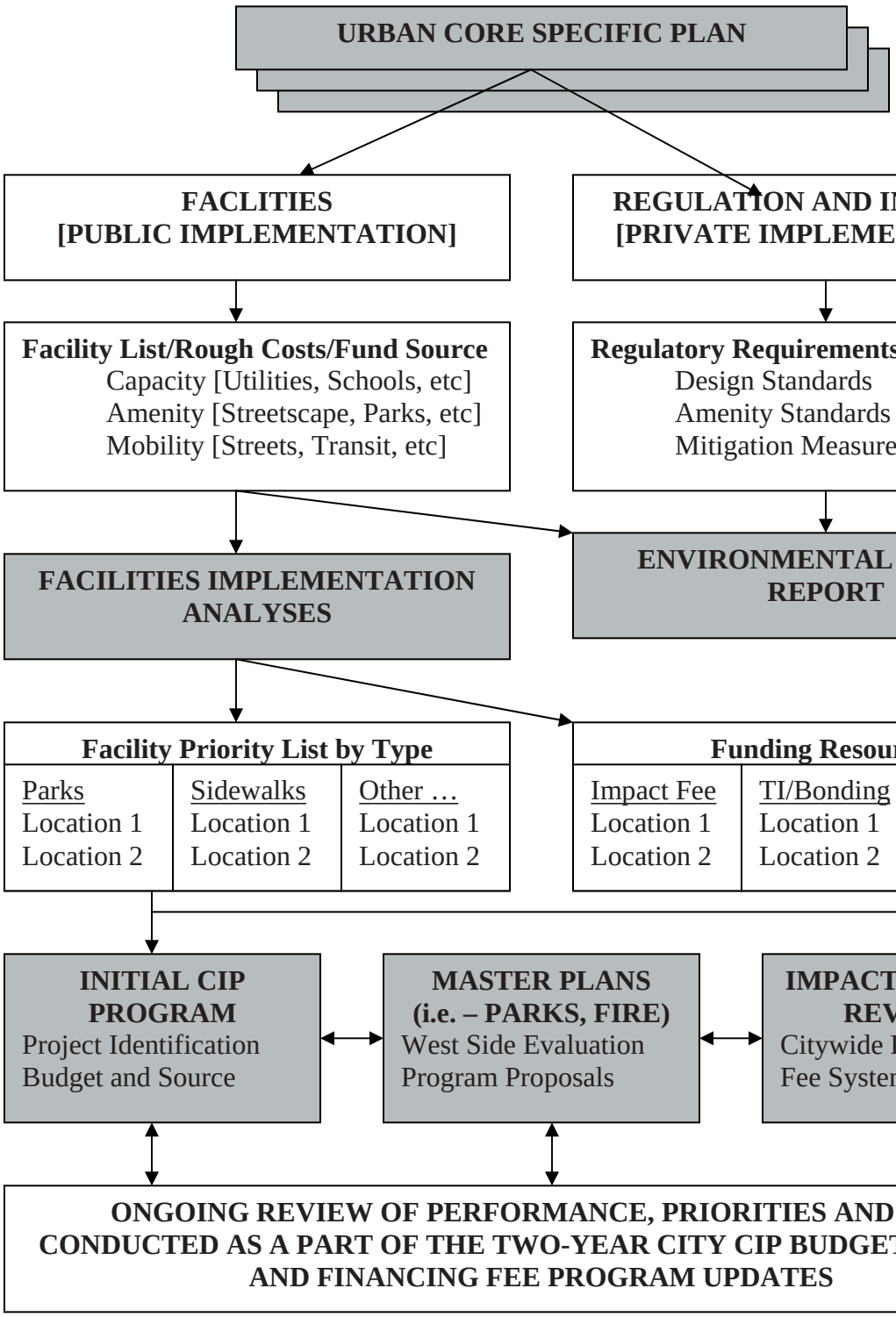
- *School impacts fees (collected pursuant to Government Code 65996)*

These fees would continue to be collected from new development as it occurs in the urban ore.

In addition, the Specific Plan Final Environmental Impact Report (FEIR), prepared as a Program EIR, includes an evaluation of the City's growth management quality of life thresholds at a programmatic level based on development projections over the course of the next 20 years. The EIR identifies mitigation measures that would be applied on a project-by-project basis during subsequent review of individual development projects. The Final EIR Mitigation Monitoring and Reporting Program (MMRP) provides a summary of the impacts analysis and/or mitigation measures for significant impacts that address provision of public services and facilities. The MMRP ensures that subsequent new development implements timely mitigation for impacts associated with new development, which includes, but is not limited to, the installation of infrastructure or the payment of fees for needed public facilities as a result of new growth. These requirements would be assured through the subsequent discretionary design review and approval of future project specific Urban Core Development Permits.

Although the Specific Plan is intended to attract future development to the Specific Plan Subdistricts Area, the timing, location, and extent of subsequent development projects are unpredictable due to the unique nature of urban revitalization. To further ensure the timely provision of public services and facilities, monitoring of on-going development activity would be assessed through the City's existing annual growth management monitoring and reporting. Monitoring programs, such as the traffic monitoring program, which monitors the actual performance of the street system by conducting real time roadway segment travel time studies, would track the rate and effect of growth on an annual basis. In addition to the annual GMO review, the bi-annual Budget/CIP cycle and a five-year status report would provide additional checks and balances of future growth. The integrated system of growth management programs, standards, regulations, facility master plans, funding systems, and monitoring activities provide an effective system of checks and balances to ensure that the provision of public services and facilities keeps in step with new development.

Following is a flow chart that identifies the pertinent sections of the Specific Plan and FEIR that contain information regarding the long term implementation plan and process for the provision of public facilities and services commensurate with new demand.

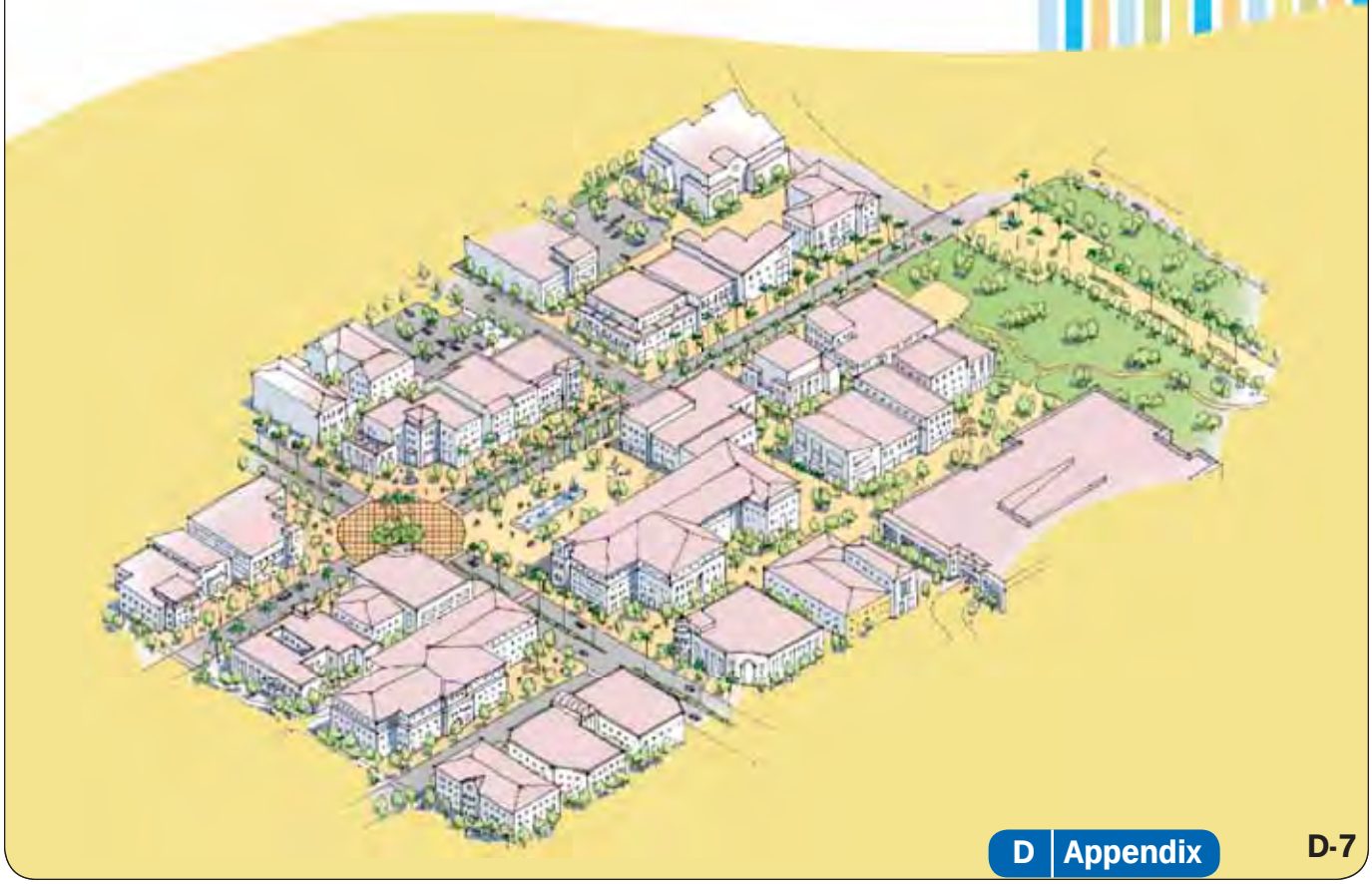


Implementation Flow Chart | Fg. D.1

B. Existing Conditions and Needs Assessment

This section consists of Chapter IX - Infrastructure and Public Facilities, in its entirety, and Chapter X - Plan Implementation and Community Benefits Program, Section E. Description of Improvements, Section F. Mobility Improvements, Section G. Urban Amenity Improvements, and Section H. Other Community Improvements.

IX. Infrastructure and Public Facilities D-7



IX. Infrastructure and Public Facilities

A. Introduction

The purpose of this chapter is to describe the infrastructure and public facilities applicable to the Specific Plan, including water supply, sewer, drainage, solid waste disposal, law enforcement and emergency services, schools, parks and recreation facilities, and energy and telecommunications. As part of its overall facilities planning and maintenance activities, the infrastructure related to the Specific Plan area has been studied during the City's General Plan effort. Since the Specific Plan implements the General Plan, these studies provide the basis of utilities and services needed for the Urban Core. Information from these studies and the corresponding city-wide implementation strategies are relied upon in large part for this chapter and have been brought forward into the Specific Plan for reference.

The Public Facilities and Services Element of the City's General Plan establishes a comprehensive strategy to provide and maintain infrastructure and public services for future growth without diminishing services to existing development. Public facilities collectively refer to utilities such as water, sewer, drainage, power and telecommunications services. Public services collectively refer to schools, library, law enforcement and fire protection. The City of Chula Vista includes public facilities and services in the General Plan that support and enrich the community including parks and recreation centers, art and cultural facilities and programs, childcare opportunities and health and human services. This chapter of the Specific Plan focuses on the General Plan proposals and criteria that have particular relevance to the Urban Core area.

B. Growth Forecasts

Based on the City of Chula Vista's General Plan, the City's population is projected to reach approximately 300,000 by the year 2030. The General Plan (2005) includes intensification of retail, office and residential uses with relatively lower emphasis on industrial uses in western Chula Vista, as compared to the previous version. The General Plan also proposes the replacement of a significant amount of existing lower density commercial and residential development in western Chula Vista with mixed use and higher density residential types.

Within the Specific Plan area, the implementation of the General Plan will result in a net increase of 7,100 dwelling units, an increase of commercial retail development by 1,000,000 square feet, increase of commercial office development by 1,300,000 square feet and the introduction of 1,300,000 square feet of visitor serving commercial use. The net increase in dwelling units would result in a population increase for the plan area of 18,318 persons (using a factor of 2.58 persons per household).

The foregoing calculation of population relies largely on historic family size information. The changing form of western Chula Vista may alter these forecasts significantly. The population projection will be affected by any change in national and regional demographics brought about by rates of immigration, aging in the population and alterations in birth rates. Moreover, the kind and intensity of development proposed for the focus areas of the Specific Plan and the pace of development within the Specific Plan area may result in changes to the historically observed family size and makeup.

Historically, smaller attached dwellings in multi-family developments have historically had lower family sizes than single family housing. Recent infill and urban core neighborhood developments in the San Diego region reflect even lower household populations and fewer minors per dwelling, with many developments predominantly occupied by childless couples of all ages. Calculating and tracking trends in the occupancy of the planned multi-family dwellings of the Urban Core will be critically important to correctly plan and program for facilities such as parks and schools.

C. Water, Sewer, Drainage and Solid Waste

1. Water Supply

Chula Vista has historically received the majority of its water supply from the San Diego County Water Authority (CWA). The CWA generally imports from 75 to 95 percent of this water from the Metropolitan Water District (MWD) of Southern California. The Sweetwater Authority provides water service to western Chula Vista, including the Specific Plan area. The Sweetwater Authority assures conformance to the same quality and service standards established by the State Department of Health Services (DHS) and the federal Clean Water Act. In addition to providing water supplies, the Sweetwater Authority provides emergency storage systems and implements conservation efforts.

Sweetwater Authority indicates approximately $5 million in incremental capital costs for system improvements to serve western Chula Vista per General Plan projections. Approximately $3 million of this amount will be for pipeline needs and the remaining $2 million will go toward increasing treatment capacity at the Perdue Treatment Plant. These amounts reflects capital costs in excess of what is currently planned to accommodate growth under the 1989 General Plan. These capital improvements are addressed by the Sweetwater Authority through its development impact fee structure, which is subject to ongoing review during the 30-year plan development period.

2. Sewer

Sewer services are essential for public health, safety and welfare. The City maintains and operates sewer facilities in the form of wastewater/sewer pipelines. These facilities feed into the larger regional system for treatment and disposal.

The City is already engaged in planning and upgrading improvement projects and will continue to do so in a phased manner under an adopted wastewater master plan. Connection fees are the primary funding source for capital improvement costs.

The City of Chula Vista purchases wastewater treatment capacity from the City of San Diego's Metropolitan Wastewater System (METRO). This allows the City to treat and dispose of wastewater flows at METRO facilities. The City's future wastewater flows will exceed the current treatment capacity necessitating the need to purchase additional capacity (in a phased manner). The City of Chula Vista has purchased 19.8 million gallons per day (MGD) of capacity rights in the METRO Sewage System. Based on existing conditions in 2004, the City discharges approximately 16.6 MGD into the METRO Interceptor. Based on flow analyses, it is estimated that by the year 2030, the City will generate

approximately 6.4 MGD of additional sewage. The General Plan (2005) projects an additional treatment capacity need of 1.57 MGD at buildout in western Chula Vista, which includes the projected demand of approximately 0.88 MGD for the Specific Plan area. These needed improvements equate to a cost of approximately $20.4 million.

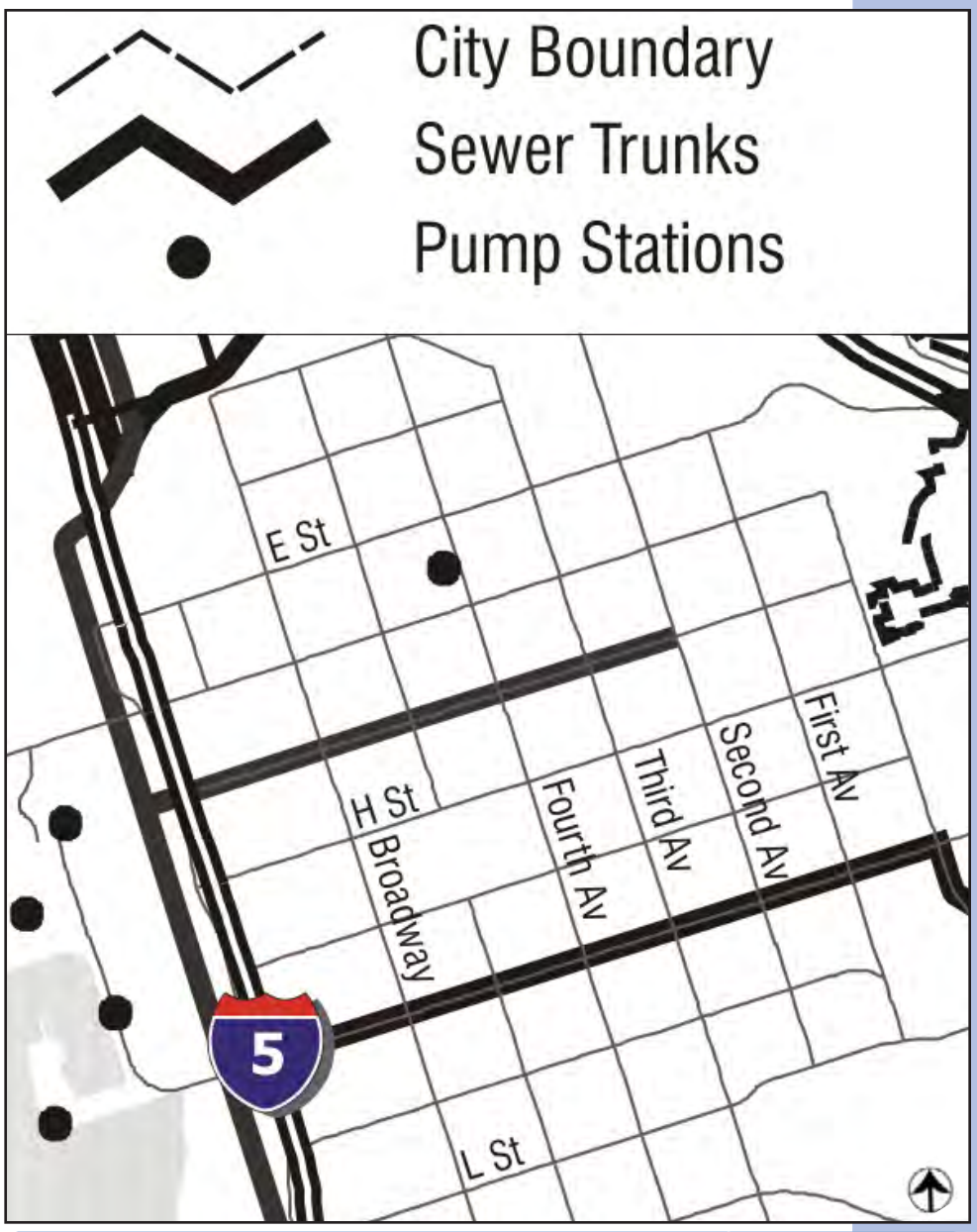
It is important to note that these are broad and preliminary estimates and are based largely on the wastewater generation rates stated in the Wastewater Master Plan, which will be subject to periodic update and review throughout the life of the Specific Plan. The City currently operates and maintains approximately 400 miles of sewer pipelines, ranging in size from 6 inches to 48 inches in diameter, as well as an extensive network of manholes, metering stations, pump lifts and lift stations (See Figure 9.1 Backbone Infrastructure for Wastewater Collection.)

The system is the subject of ongoing review and wastewater master plans. An update of the plan has been prepared in support of the General Plan Update (2005). In addition to maintaining the existing systems and replacing outdated components, the City must also address system upgrades and expansions to accommodate new sewer connections, especially in the eastern portion of the City. The costs of system upgrades, capacity and infrastructure management and planning is reflected in connection fees and sewer rates.

3. Drainage Infrastructure

Drainage facilities are public improvements to control storm water runoff so that peak runoff does not threaten public health or safety in the form of flooding and erosion. The City maintains strict requirements for sediment control from water runoff, which are reviewed and applied to new development on a project-by-project basis. These requirements are found in various programs and policies, including the City of Chula Vista Grading Ordinance, Subdivision Manual, Storm Water Management Standards Requirements Manual, development and redevelopment projects and "best management practices" (BMP) requirements for construction sites.

The condition of the overall drainage system is the subject of a Drainage Master Plan, which is undertaken and continually monitored for any major deficiencies or problems. (See Figure 9.2 Drainage Channels.) Within already urbanized areas such as the Urban Core, most needed drainage facilities are already in place, and since runoff is largely not changed by the redevelopment of one land use into another, the system of facilities for storm water runoff are equally largely in place. With the monitoring and review of construction and water quality practices conducted for each development project, the City, working through its Drainage Master Plan has a program in place to control runoff and meet applicable water quality standards.



Backbone Infrastructure for Wastewater Collection (Source: City of Chula Vista)

Fg. 9.1

Drainage Channels (Source: City of Chula Vista)

Fg. 9.2

Chula Vista is part of the San Diego watershed area. The San Diego watershed area's National Pollutant Discharge Elimination System (NPDES) permit requires that all runoff be treated so that pollutant levels at the storm water outfalls are minimized to the maximum extent practicable. Subsequently, drainage infrastructure may need to be constructed or modified to insure that "first flush" pollutants are captured through the Chula Vista Storm Water Management Unit. Typically, NPDES on-site detention/desiltation facilities will be required on development projects. The City will maintain its ability to enforce adequate maintenance of these facilities. The Environmental Element of the General Plan (2005) also addresses drainage issues throughout the City as they relate to water quality.

4. Solid Waste Infrastructure and Operations

The City of Chula Vista has established an exclusive franchise collection agreement with ~~Pacific Waste~~ Republic Services for the removal, conveyance, and disposal of any non-recyclable waste. The agreement is in effect through June 2028 with extension clauses for both City and ~~Pacific Waste~~ Republic Services. The agreement includes a number of programs and incentives for the franchise and the public to maximize recycling and other forms of landfill diversion. ~~Pacific Waste's parent company, Allied~~, Republic Services owns and operates both the Otay Landfill and the Sycamore Canyon Landfill located further north in San Diego County. Most of the solid waste generated in the City is disposed at the Otay Landfill.

The Otay Landfill is estimated to reach capacity in the year 2028. In south San Diego County, an area in East Otay Mesa was previously identified by the County as a tentative site. However, the County is no longer pursuing landfill siting at this location and there are no private siting efforts currently proposed. Once the Otay Landfill is closed, it will ~~is anticipated that a portion of the site could~~ be used for a trash transfer facility to the Sycamore Canyon Landfill and/or a Material Recovery Facility (MRF) where recyclables are prepared for secondary markets. ~~The City has also acquired rights to approximately 30 acres of space at the Otay Landfill for a composting facility when the landfill closes. Therefore,~~ Continued efforts to expand recycling and to accommodate compostable materials will reduce future waste transfer costs.

The City has the ability to control waste production within its general plan area, including the Urban Core. Current solid waste management strategies include source reduction, recycling and composting to decrease the waste stream impacting landfills.

5. Objectives and Policies

Objectives and policies directing water, sewer and drainage facilities are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan policies. Supporting objectives and policies follow the discussion.

a. General Plan Discussion: Keeping Pace with Growth and Maintenance Needs (Water, Sewer, Drainage) (PFS 1)

The City and its servicing districts strive to maintain existing water, sewer and drainage facilities to meet current and future demand and to comply with federal, state, and local requirements. The challenge posed by density increases in older parts of the City system is to repair existing deficiencies and maintain and possibly upsize older infrastructure. Over time, as the City continues to expand and additional water, sewer and drainage facilities are added, the demand for maintenance, along with associated fiscal impacts, will also grow.

Recent assessments have been completed to address water supply, wastewater and drainage facilities. The Water Supply Assessment prepared by the Sweetwater Authority dated June 8, 2005 evaluates existing conditions and future water needs for the Specific Plan. Existing average water demand for the Specific Plan area is cited as 1.96 MGD with a projected average water demand of 3.54 MGD at 2030 buildout. The Sweetwater Authority, Metropolitan Water District of Southern California and San Diego County Water Authority are implementing plans that include projects and programs to help ensure that the existing and planned water users within Sweetwater Authority's service area have an adequate supply. By using a variety of water supply sources, including importation, the Sweetwater Reservoir, National City Wells, and Reynolds Desalination, and by implementing conservation programs, sufficient water supply will be available for anticipated development under the Specific Plan.

The Wastewater Master Plan, prepared by PBS&J for the City of Chula Vista and dated May 2005, provides a comprehensive review and evaluation of the City's wastewater collection, conveyance, and treatment capacity requirements under existing and ultimate buildout conditions. Specific recommendations are made for the repair, upgrading, and buildout of wastewater collection and pumping facilities. The City currently has capacity rights in the METRO system (comprised of conveyance, treatment, and disposal facilities) equal to 19.8 MGD and will soon be allocated additional capacity through a re-rating process currently underway.

Wastewater facility improvements recommended for the Specific Plan area include:

- *Colorado Street Sewer Main (replace 1,314 feet of pipe between K Street and J Street)*
- *Center Street Main (replace 630 feet of pipe between Fourth Avenue and Garrett Avenue)*
- *Police Station Department (SPS-01) New Pump Station*
- *G Street (SPS-02) New Pump Station*

The Wastewater Master Plan also provides sewer system design standards and capital improvements program recommendation,s as well as a capacity fee update and facilities financing plan for both METRO facilities and Chula Vista pipelines, to ensure adequate wastewater facilities are provided for the Specific Plan area.

The 2004 Drainage Master Plan prepared by PBS&J for the City of Chula Vista consists of a city-wide hydrologic analysis and an updated version of the City's storm water conveyance system GIS database. The Drainage Master Plan includes 21 stand-alone technical appendices, each one with hydraulic calculations and accompanying 200-scale work maps. The hydraulic analyses were prepared for the 50-year and, where required, 100-year storm events for existing and projected conditions. Recommendations are provided for replacement of corrugated metal pipe (CMP) storm drain facilities as well as other capital improvement strategies. Additional updates and recommendations will be available upon the County of San Diego's completion of a calibration study to supplement the existing Hydrology Manual.

<u>General Plan Policies Related to the Urban Core</u>

1) *"For new development, require on-site detention of storm water flows such that, where practical, existing downstream structures will not be overloaded. Slow runoff and maximize on-site infiltration of runoff." (PFS 1.4)*

   Development within the Urban Core will be reviewed within the context of the drainage master plan and water quality rules applicable to the development, on a project-by-project basis.

2) *"To avoid recently improved streets from being torn up repeatedly, maintain a comprehensive facility phasing and capital improvement program. The program should be based on anticipated land development and be conducted in coordination with all utilities." (PFS 1.6)*

   The Urban Core facilities program, summarized in the following chapter, sets out timeframes for the improvement of streets, sidewalks

and other improvements. These timeframes will be coordinated with the master plans for sewer and drainage to minimize disruption of public streets.

3) *"Identify ways to obtain timely funding for public facility and service needs. Upon request by community representatives, facilitate the possible formation of assessment districts to finance public infrastructure, upgrades and maintenance." (PFS 1.7)*

The criteria are largely applicable to eastern territories, where master planned communities can facilitate the implementation of such districts. The implementation program for the Urban Core will act in a similar fashion to program and time facilities with need.

The above-described Water Supply Assessment, Wastewater Master Plan and Drainage Master Plan analyze the existing and future facilities needs for Chula Vista, including the Specific Plan area. With implementation of recommended improvements and programs, adequate facilities will be provided to serve the Urban Core as relates to water, wastewater and storm water drainage.

b. General Plan Discussion: Meeting Demand Through Alternative Technologies (PFS 2)

Growth will generate increased demand for water delivery and for sewer and drainage systems throughout the City. Water will continue to be a limited resource in semi-arid southern California. The ability to treat wastewater will be affected by the limitations of the San Diego Metro system. Drainage facilities will need to handle increased storm water runoff and potential pollutants in the face of increased growth and diminishing supplies of land. Building more infrastructure and acquiring more capacity can and should be offset by using alternative technologies to handle demand both in the older established parts of the City and in the newly developing areas. The following objective and policies address meeting resource and service demands through use of alternative technologies.

General Plan Policies Related to the Urban Core

1) *"As part of project construction and design, assure that drainage facilities in new development incorporate storm water runoff and sediment control, including state-of-the-art technologies where appropriate." (PFS 2.2)*

The City conducts and maintains a Storm Water Master Plan. It also reviews new development in a manner consistent with the applicable water quality standards.

c. General Plan Discussion: Long-Term Water Supplies (PFS 3)

The California Water Code requires all urban water suppliers within the state to prepare urban water management plan(s) and update them every five years, in years ending in five or zero. The plans are to identify supply and demand, infrastructure and funding. In accordance with the Act, the County Water Authority (CWA) adopted an Urban Water Management Plan in 2000 and will be updating it in 2005. The 2000 Plan forecasts total projected water demand for the entire area served by the CWA as 813,000 acre-feel of water in the year 2020. This figure includes municipal, industrial and agricultural demand and is adjusted for conservation savings. The report estimates total projected local water supplies in the year 2020 as 223,500 acre-feet. Local water supplies include surface water, water recycling, groundwater and seawater desalination. Through a shortage contingency analysis, the report also concludes that the CWA and its member agencies, through Emergency Response Plans (ERP) and Emergency Storage Projects (ESP), are taking actions to prepare for and appropriately handle a catastrophic interruption of water supplies.

While the CWA relies almost entirely on water imported from outside the region, the Sweetwater Authority has historically imported less than half of its water to meet demand. The Authority's remaining supply has been from two large local surface water reservoirs, Sweetwater and Loveland, which store surface runoff from the Sweetwater River. The Authority also adheres to development of additional local resources such as groundwater pumping and groundwater desalination. As the City grows, the need to identify the long-term supply of water continues.

The Water Supply Assessment prepared by the Sweetwater Authority dated June 8, 2005 evaluates existing conditions and future water needs for the Specific Plan. Existing average water demand for the Specific Plan area is cited as 1.96 million gallons per day (MGD) with a projected average water demand of 3.54 MGD at 2030 buildout. The Sweetwater Authority, Metropolitan Water District of Southern California and San Diego County Water Authority are implementing plans that include projects and programs to help ensure that the existing and planned water users within Sweetwater Authority's service area have an adequate supply. By using a variety of water supply sources, including importation, the Sweetwater Reservoir, National City Wells, and Reynolds Desalination, and by implementing conservation programs, sufficient water supply will be available for anticipated development under the Specific Plan.

<u>General Plan Policies Related to the Urban Core</u>

1) *Assist the water agencies (Sweetwater Authority) in preparing and maintaining Urban Water Management Plans that identify water demand anticipated by existing and new development. (PFS 3.1)*

   This activity will largely occur through city-wide development monitoring and reporting.

d. General Plan Discussion: Long-Term Sewer Capacities (PFS 4)

The City maintains and regularly updates a Wastewater Management Plan to evaluate the adequacy of the existing wastewater collection system to sustain the long-term growth of the City. The Wastewater Management Plan helps the City budget for Capital Improvement Projects (CIP), allocate resources for the acquisition of additional sewage capacity, and determine the short and long-term sewer capacity needs of the City.

General Plan Policies Related to the Urban Core

1) *"Continually monitor wastewater flows and anticipate future wastewater increases that may result from changes in adopted land use patterns." (PFS 4.1)*

   As cited above, the City's Wastewater Master Plan is undertaken to identify needed expansions, which are paid for by connection and service fees.

e. General Plan Discussion: Providing for Solid Waste Disposal (PFS 24)

The following objective and policies address the efficient handling of solid waste throughout the City. The important and related topics of reducing overall solid waste and of handling hazardous wastes are addressed in the Environment Element, Chapter 9 of the City of Chula Vista's General Plan. The Otay Landfill is estimated to reach capacity within the next 23 years, requiring closure of the facility. Meeting future needs of the planning area may require the creation of a regional transfer station, where solid waste collected from individual collection routes is transferred into large trucks for disposal. The transportation of solid waste to an alternate site must occur in an efficient manner that restricts adverse circulation, visual, and noise impacts.

General Plan Policies Related to the Urban Core

1) *"Plan for adequate systems and facilities to manage the City's solid waste generation, treatment and disposal." (PFS 24.1)*

   Solid waste programs and recycling are addressed through city-wide programs. Design Guidelines are provided in the Specific Plan for future development which reflect the ability to service for trash and recycling collection.

D. Law Enforcement, Fire Protection and Emergency Services

1. Facilities and Services

In the City of Chula Vista, fire protection and emergency medical services are provided by the Chula Vista Fire Department. Law enforcement services are provided by the Chula Vista Police Department. Fire stations are dispersed throughout the City, while police facilities are centered in headquarters located in downtown Chula Vista (See Figure 9.4 Police and Fire Station Locations.) The current Fire Station Master Plan calls for nine fire stations, eight of which have been constructed. The Master Plan is being updated to reflect changes to General Plan and to respond to a revised set of performance criteria as proposed in the Fire Department Strategic Plan. Therefore, the number and location of future fire stations, along with how the stations are equipped, is subject to change.

To maintain the high level of dependable, competent fire protection and emergency medical services the City enjoys, several strategies will continue to be employed. The City will continue to use a growth-related service standard, through its Growth Management Ordinance and program, to help determine if public safety is adequately protected. Fire Department staffing and equipment will continue to be expanded as needed to meet the service standard and to minimize hazards to the firefighters and public, in conformance with changes to the updated Fire Department Master Plan. The Fire Department will continue to enhance its capabilities and staffing through mutual aid agreements with fire departments in the surrounding communities.

Similar strategies also facilitate the provision of law enforcement services that meet the City's needs. The Department will continue to monitor calls for service, analyze crime statistics and resident survey data, and make changes in staffing and patrols to reflect the growing community's needs.

Effective fire protection, emergency medical, and law enforcement services require two-way relationships with the community. The unique needs and conditions in the community must be understood and the community must lend support to the various programs and efforts of the Police Department and Fire Department. The City encourages active participation by the Fire and Police Departments in all facets of community life, including involvement in area business, senior, and youth activities.

2. Disaster and Emergency Response Program

State regulations establish the Standardized Emergency Management System, or SEMS. The system includes requirements for incident command systems, multi-agency coordination systems, mutual aid agreements and the "operational area" concept. As an agency (municipality) with emergency response capability within the state, Chula Vista is required to use the SEMS system.

Chula Vista provides for the preparation and carrying out of plans for the protection of persons and property within the City in the event of an emergency (Municipal Code, Chapter 2.1.4 Emergency Organization Department). The Code requires coordination of the emergency functions of the City with other public agencies, corporations, and organizations.

There may be occasions when a limited scale evacuation is the appropriate response to an emergency situation. Under these circumstances, people should be evacuated to neighborhood and community schools, hospitals and public facilities, where they could receive adequate care and treatment. In the event of a major disaster, where a large part of the City may require evacuation, the circulation routes serving the Specific Plan area are:

- *I-5, I-805, and SR-54*
- *E Street, H Street, J Street, and L Street*
- *Broadway, Fourth Avenue, Hilltop Drive, and Third Avenue*

The Disaster Management Act of 2000 requires that, in order to remain eligible for post-disaster Federal Emergency Management Agency (FEMA) funding after November 2004, every jurisdiction in the United States must have an approved Hazard Mitigation Plan (HAZMIT Plan) to address the management of and response to emergency situations. In addition, to be eligible for pre-disaster FEMA funding for use in hazard mitigation, each jurisdiction's approved HAZMIT Plan must include the planned uses of these funds. The City of Chula Vista adopted a HAZMIT Plan in May 2004 to help mitigate impact to the City in the event of a natural or man-made disaster. The City's HAZMIT Plan was included in the San Diego County Multi-Jurisdictional HAZMIT Plan submitted to FEMA for approval in compliance with Federal Law.

Police and Fire Station Locations (Source: City of Chula Vista)

Fg. 9.3

3. Objectives and Policies

Objectives and policies directing law enforcement, fire protection and emergency responses are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

a. General Plan Discussion: Keeping Pace with Growth (Police, Fire Protection & Emergency Medical Service) (PFS 5)

The City of Chula Vista has experienced significant residential growth over the last decade. The majority of new growth has occurred in the east, where continued relatively high growth is expected in the coming years, along with density increases in the west. Fire protection, emergency medical service and police services will need to expand to match the demand brought on by this anticipated growth.

While fire stations are located throughout the City, the Police Department maintains one police headquarters, located in the western portion of the City. The police headquarters is sufficient to accommodate the growth projected in the Specific Plan.

General Plan Policies Related to the Urban Core

1) *"Continue to adequately equip and staff the Fire Department to ensure that established service standards for emergency calls are met." (PFS 5.1)*

2) *"Upgrade fire and emergency medical equipment as required to protect the public from hazards and to ensure the safety of the fire fighters." (PFS 5.2)*

b. General Plan Discussion: Emergency Response and Development (PFS 6)

General Plan policies and Growth Management standards tie new development and redevelopment to the provision of adequate public facilities and services, including police and fire protection. Some design characteristics, such as narrow street widths, aim to create walkable communities, serve to establish an overall neighborly atmosphere, and tend to reduce traffic speeds. In mixed use neighborhoods, density increases may result in taller buildings. The evolving urban form and the cumulative increase in development will affect emergency service response times as well as the equipment, facilities and personnel needed for fire and police services.

"Crime Prevention Through Environmental Design" (CPTED) is a method of incorporating design techniques into projects to help reduce the potential for

crime. CPTED is used in the development of parks, residential and commercial projects, schools, transit stations and parking lots to reduce the number of calls for service. The reduced call volume may favorably impact response times. CPTED includes the use of four primary strategies:

- *Providing natural access control into areas,*
- *Improving natural surveillance (i.e., increasing "eyes on the street"),*
- *Maintaining and managing a property to reduce crime and disorder, and*
- *Using territorial reinforcement to distinguish private space from public space.*

General Plan Policies Related to the Urban Core

1) *"Continue to require new development and redevelopment projects to demonstrate adequate access for fire and police vehicles." (PFS 6.1)*
2) *"Require new development and redevelopment projects to demonstrate adequate water pressure to new buildings." (PFS 6.2)*
3) *"Encourage Crime Prevention Through Environmental Design (CPTED) techniques in new development and redevelopment projects." (PFS 6.3)*

   Project review within the Specific Plan shall include the above-listed criteria. Design requirements and recommendations found in Chapter VII - Design Guidelines require future projects within the Specific Plan area to incorporate CPTED principles.

c. General Plan Discussion: Emergency Response Program (PFS 7)

A city-wide emergency response program provides the framework for responding to any type of emergency or disaster that might occur in Chula Vista. Accomplishing efficient emergency response involves coordination with other agencies regarding disaster preparedness, preparation and regular update of the emergency response plan, education of residents and businesses about the plan and about evacuation routes, and periodic training of City staff and other emergency response staff to effectively implement the plan.

General Plan Policies Related to the Urban Core

All General Plan policies within this criterion are implemented city-wide.

d. General Plan Discussion: Post Emergency Response (PFS 8)

In the event of disasters and emergencies, a swift and efficient response minimizes injuries, casualties and property damage. Planning post-disaster operations ensures the safety, health and welfare of our residents by allowing critical operations to continue as expeditiously and efficiently as possible following a catastrophic event. Post-disaster analysis will help the City improve safety plans and responses.

General Plan Policies Related to the Urban Core

All General Plan policies within this criterion are implemented city-wide.

E. Schools

1. School Facilities

Excellent schools are assets to any community. Two school districts serve the City. Chula Vista Elementary School District (CVESD) operates kindergarten through sixth grade; Sweetwater Union High School District (SUHSD) operates junior and senior high schools and ancillary programs. Higher education is available through Southwestern Community College.

As of 2004, the CVESD operates 42 schools and the SUHSD operates 26 schools, both within and outside the boundaries of the City of Chula Vista. (See Figure 9.4 Existing Primary and Secondary Schools Serving Chula Vista.) Both districts actively plan for modernization and expansion of campuses to accommodate anticipated increases in enrollments. The districts have completed improvements through modernization programs and bond issues or prepared modernization plans in preparation for construction.

2. Objectives and Policies

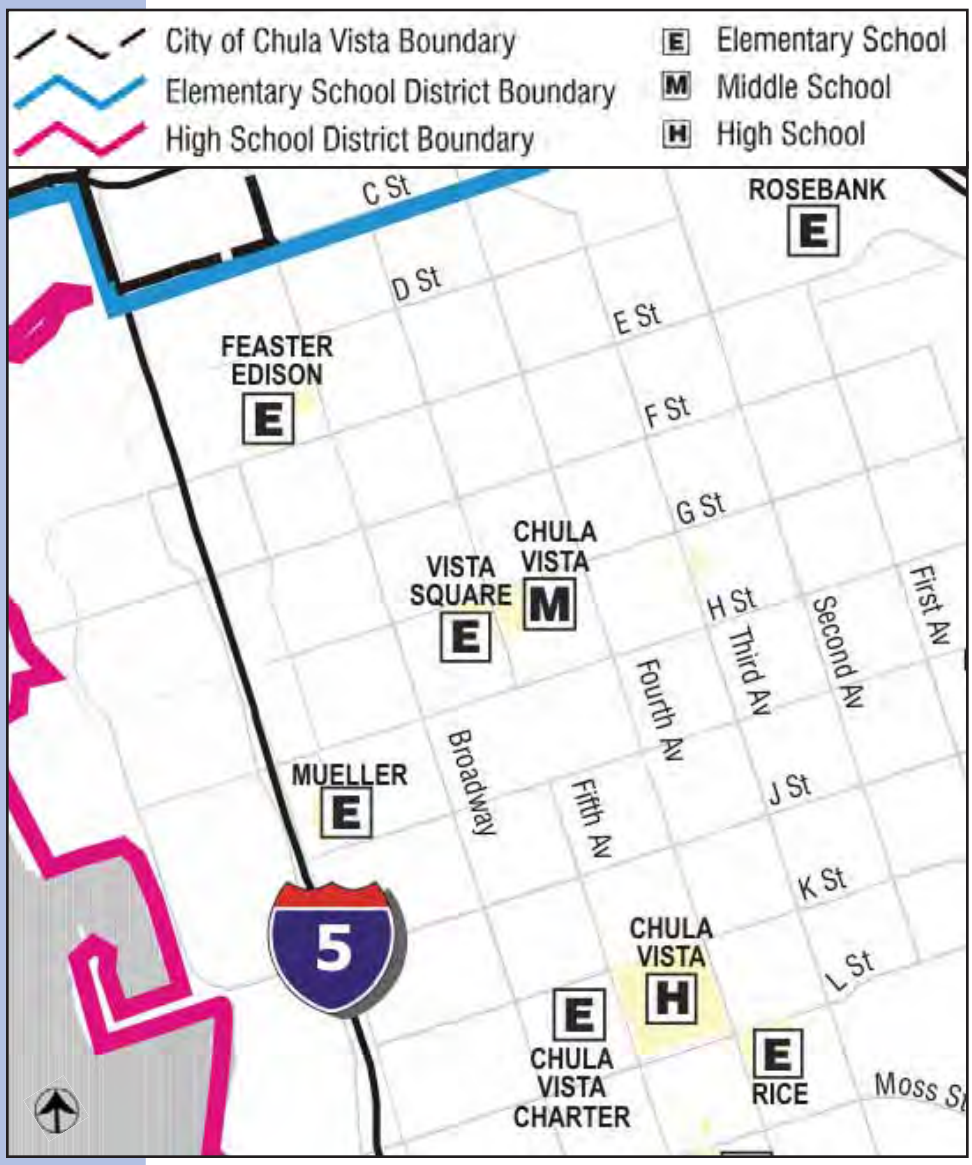
Objectives and policies impacting schools are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

a. General Plan Discussion: Keeping Pace with Growth and Technology (School Facilities) (PFS 9)

Population growth in western Chula Vista may impact existing, older school facilities. Modernization of school campuses is expected to continue as the school districts plan for facility improvements. Technology continues to change the work place and the social and cultural environments of our community. The school system, which helps shape our children and our future, must keep pace with development. While siting of schools falls under the jurisdiction of the local school districts, not the City, it is the City's intent to facilitate the district's efforts to provide school services.

<u>General Plan Policies Related to the Urban Core</u>

1) *Continue coordinating with local school districts during review of land use issues requiring discretionary approval to provide adequate school facilities, to meet needs generated by development, and to avoid overcrowding in accordance with guidelines of Government Code 65996(b). (PFS 9.1)*



Existing Primary and Secondary Schools Serving Chula Vista (Source: City of Chula Vista)

Fg. 9.4

2) *Encourage the consideration of new approaches to accommodate student enrollments, including alternative campus locations and education programs. (PFS 9.2)*

3) *Assist school districts in identifying and acquiring school sites for new construction in needed time frames. (PFS 9.3)*

4) *Assist school districts in identifying sources of funding for the expansion of facilities in western Chula Vista as needed based on growth. (PFS 9.4)*

5) *Work closely with the school districts to identify needs for public education facilities and programs, including developing and expanding extra-curricular recreation and educational programs for primary, secondary, and adult education, and providing state-of-the-art information services. (PFS 9.5)*

The foregoing policies reflect the need to plan and implement schools over the relatively long period of development implementing the Specific Plan. Cooperation in projecting growth and monitoring new development and the resulting demographics will assure that existing schools are expanded or new schools are built at the time of need.

b. General Plan Discussion: Site Location and Design (School Facilities) (PFS 10)

School districts control site selection and school design. In all instances, safe pickup and drop-off of students is a primary concern. Schools are generally designed with the intent of adding modular units to accommodate temporary spikes in student enrollment. While both Chula Vista school districts use this strategy, drawbacks include the fact that the units displace parking, open space and recreation areas. Some schools in western Chula Vista are already running out of limited buildable space and have no room to expand the campuses horizontally in the current land locked locations.

General Plan Policies Related to the Urban Core

1) *"Continue to coordinate and make recommendations to the school districts and property owners and developers on the location, size and design of school facilities relative to the location in the community. Encourage school districts to consider joint use and alternative structural design such as multi-story buildings where appropriate." (PFS 10.1)*

Alternative structural designs will be especially important within the Urban Core due to land availability.

2) *"Encourage the central location of new schools within the neighborhoods or areas they serve so as to further community development and enhance the quality of life." (PFS 10.4)*

3) *"Coordinate with the school districts on the design of school grounds and fields to provide for use of these facilities by the City's Youth Sports Council leagues." (PFS 10.5)*

Joint use of facilities by the City and the School District can maximize the public use of school and park sites.

F. Parks and Recreation

1. Facilities and Programs

Parks and recreation facilities and programming are essential to the health and welfare of the individuals living and working in the City of Chula Vista. Parks can provide a relief from the stress of daily life and can contribute to neighborhood engagement, economic development and community revitalization. The different types of parks and recreation facilities found in Chula Vista are described below. (See Figure 9.5 Existing and Proposed Public Parks and Recreation Facilities.)

Community parks, designed to serve more than one neighborhood, are ideally 30 or more acres and provide a wide variety of facilities, including swimming pools, playing fields, recreation centers, cultural centers and picnic areas. Neighborhood parks are intended to serve local residents; range in size from 5 to 15 acres; and include open play space, playing fields, play equipment and picnic areas. Mini parks consist of both public and private facilities, are typically less than four acres in size, serve a small number of homes, and contain very limited facilities such as a tot lot or play structure and some grass play area. Public mini parks are typically located in the older western portion of the City.

Urban parks are generally located in urban downtown areas and may contain facilities such as public plazas, tot lots, play structures, public art features, sports courts (such as basketball or tennis), walking/jogging trails, dog walk areas, picnic or seating areas, some grass play area, and trees. Urban parks, which will occur where infill and redevelopment activity is likely to occur, may be considered for public park credit as a necessary component of an overall park service solution where available and affordable land is scarce. Similar to mini parks, urban parks may serve a smaller number of homes than neighborhood parks, depending on the ultimate housing density within the service areas. Urban parks will typically be less than four acres in size. Recreation facilities are generally located within community parks and include community centers, gymnasiums, swimming pools, youth centers, and senior centers.

Several related documents address the development of parks and recreation facilities in the City. The Chula Vista Parks and Recreation Master Plan, adopted in November 2002, contains an inventory of existing parks and recreations facilities, a needs assessment, and policies to implement the General Plan. The Master Plan envisions the City's park and recreation facilities as an integrated system of amenities, programs and services interwoven throughout over 700 acres of parkland to meet the expressed needs of the community.

The Greenbelt Master Plan identifies segments of an overall backbone system of 28 linear miles of open space and parks that encircle the City. It discusses unique opportunities for a continuous trail system to link City parks and other resources outside of the City boundary.

2. Objectives and Policies

Objectives and policies directing parks and recreation facilities and programs are arranged around specific topics or issues. The following pages describe an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

a. General Plan Discussion: Keeping Pace with Growth (Parks and Recreation) (PFS 14)

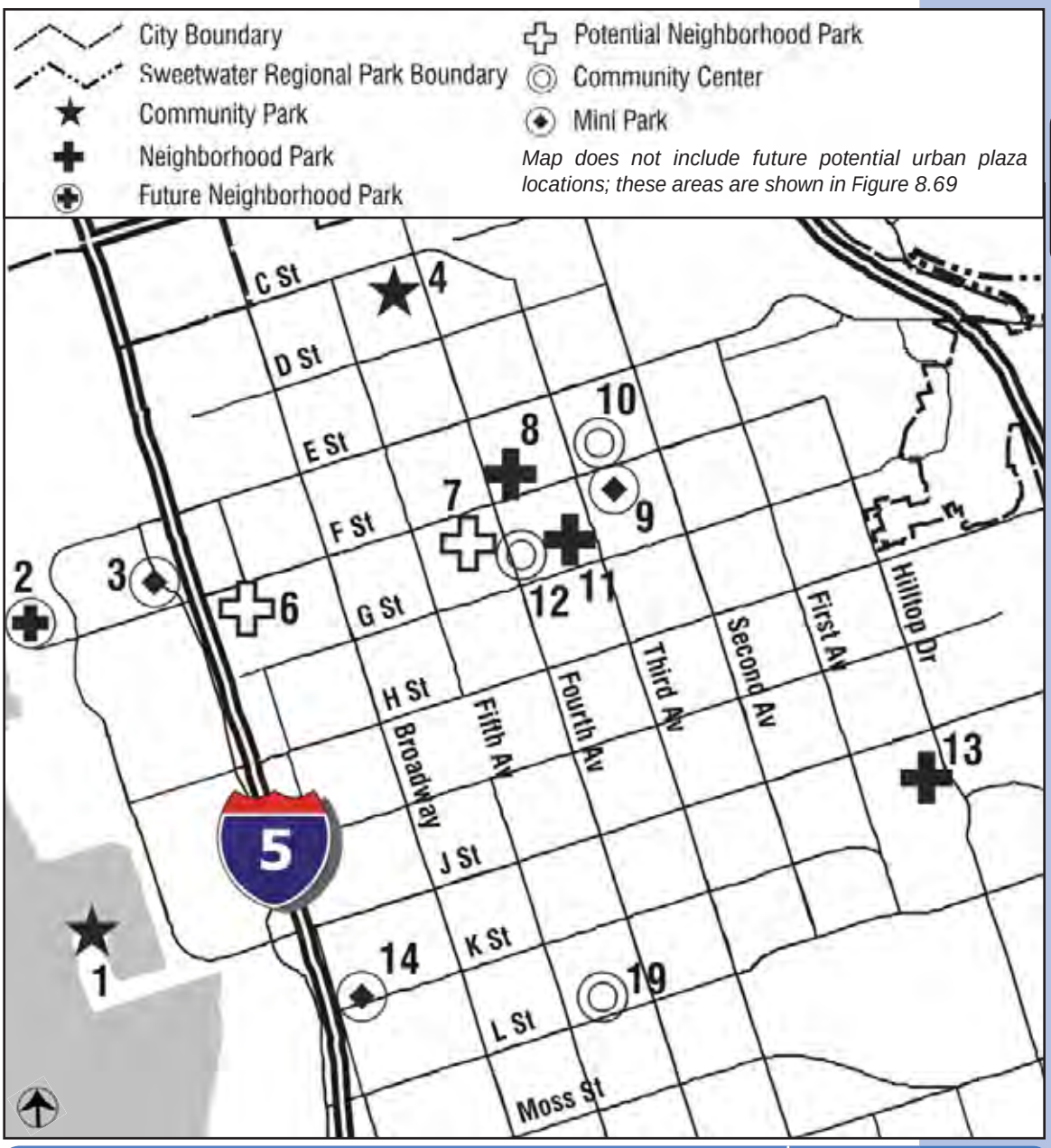
The City strives to maintain existing parks and recreation facilities, to offer recreational programs to meet current demand, and to plan and construct new parks and facilities and develop new programs to meet future demand due to growth. The majority of residential growth in the last decade has occurred in eastern Chula Vista; however, it is anticipated that significant growth will occur in both the east and the west in the future.

The Parks and Recreation Master Plan and Public Facilities Development Impact Fee program provide direction and financing for the size and location of parks and recreation facilities, based on population, density and land use designation.

Timely development and the provision of facilities, staffing, and equipment that is responsive to growth and community demands and expectations are important.

<u>General Plan Policies Related to the Urban Core</u>

1) *"Maximize the use of existing parks and recreation facilities through upgrades and additions/changes to programs to meet the needs of the community." (PFS 14.1)*
2) *"Construct new parks and recreation facilities that reflect the interests and needs of the community." (PFS 14.2)*
3) *"Continue to maintain and update the Chula Vista Parks and Recreation Master Plan, the Greenbelt Master Plan, the Park Dedication Ordinance and the recreation component of the Public Facilities Development Impact Fee, as needed." (PFS 14.3)*



Existing and Proposed Parks and Recreation Facilities (Source: City of Chula Vista)

Fg. 9.5

4) *"Use park dedication, location, site design and acceptance standards as provided in the Chula Vista Parks and Recreation Master Plan, the Park Dedication Ordinance and the Recreation DIF, as may be amended from time to time." (PFS 14.4)*

5) *"Work with proponents of new development projects and redevelopment projects at the earliest stages to ensure that parks, recreation, trails and open space facilities are designed to meet City standards and are built in a timely manner to meet the needs of residents they will serve." (PFS 14.5)*

6) *"Design recreation programs to reflect the interests and recreation needs of the children, teens, adults, and seniors living in our ethnically diverse city." (PFS 14.6)*

7) *"Explore opportunities for collaborations and partnerships with local organizations, expand use of volunteers, and develop commercial recreational facilities that meet public demand and need." (PFS 14.7)*

8) *"Continue to provide adequate park maintenance, park ranger service recreation services, staffing, and equipment to ensure safe, well-maintained facilities." (PFS 14.8)*

The foregoing policies will apply to recreation and park facilities within the Urban Core. The Parks and Recreation Master Plan and development impact fee programs will be monitored during the life of the Specific Plan and updated to meet service and demographic needs of the community.

b. General Plan Discussion: Meeting Park Demand (PFS 15)

Historic park development in western Chula Vista has been impacted by several factors: pre-existing park development standards that differ from current City standards, the Quimby Act - state legislation limiting park dedication requirements for new development, and Proposition 13- state legislation limiting property tax revenues. Increased residential densities and intensity of development will create a corresponding increase in demand for recreation facilities and programs. The current city-wide standard for new development provides for either the dedication or development of 3 acres of parkland for every 1,000 residents or the payment of in-lieu fees. The City's Recreation Development Impact Fee provides a funding mechanism for development of new recreation facility requirements. City-wide parkland and recreation development policies to guide future ordinances and master planning are identified below.

Scarce land tends to make parkland acquisition costs (in terms of cost of land and displacement) in western Chula Vista significantly higher compared to

the City's eastern territories. While future growth will result in the need and requirement for additional parklands and recreational facilities, there will be increased difficulty in securing appropriate park and recreation sites in western Chula Vista where land is largely built out. Lack of vacant and underutilized land, and/or competing demands and uses for land in the west provide challenges to increasing the park and recreation facility inventory. Maximizing the utility of existing parks and recreation facilities through renovation and expansion and consideration of non-active recreational uses within existing recreation needs is important in the western portion of the City; while this strategy will not provide additional park acreage, it will partially meet the needs of future residents. In addition to parkland acquisition efforts, potential solutions for new park sites include the covering of portions of I-5 to create park and open space areas and joint-use of school classrooms, playing fields and sports courts by the public via joint-use agreements. The provision of a community center within urban development areas should be considered, possibly within a new mixed-use environment.

An overall combination of park and recreation facilities that will serve all Chula Vista residents is planned. While a majority of the future demand for facilities may be met within planned public park sites, there will continue to be a need to rely on quasi-public park sites and joint-use facilities to increase the recreation facility inventory in the City. Details and strategies for meeting park demand will be addressed further through comprehensive revisions to the existing Parks and Recreation Master Plan.

General Plan Policies Polices Related to the Urban Core

1) *Continue to pursue a city-wide standard for the provision of developed parkland for new development projects on a basis equivalent to three acres per estimated one thousand new residents. (PFS 15.1)*

2) *Consider a combination of land dedication, improvements, and/or in-lieu fees for park development improvements in the Northwest and Southwest Planning Areas to better serve the public park and recreation needs of future residents. (PFS 15.2)*

3) *Consider a broad mix of park types and facilities toward meeting park requirements in the Northwest and Southwest planning areas in response to existing development conditions and lack of land availability. Such facilities could include urban parks, plazas, neighborhood parks and community parks to meet the parkland dedication requirements of new development in the west. (PFS 15.3)*

4) *Promote the inclusion of park and recreation facilities in or near redevelopment areas to both serve the new development and to contribute to meeting existing park and recreation needs. (PFS 15.4)*

5) *Use park dedication, location and site design and acceptance of dedication standards as provided in the Chula Vista Parks and Recreation Master Plan, the Park Dedication Ordinance and the Recreation Development Impact Fee (DIF) program, as may be amended from time to time. (PFS 15.5)*

6) *Amend the Parks and Recreation Master Plan to add a new "urban park" definition for parks that may be developed within western Chula Vista, subject to specific siting, design and park dedication and credit criteria. (PFS 15.8)*

7) *Pursue the funding, design and development of a connected park as part of the Civic Center complex which links Will T. Hyde/Friendship Park, the Civic Center and Parkway Memorial Park. (PFS 15.10)*

8) *Consider the design of non-traditional, uniquely themed parks in the Urban Core and Bayfront that are "stand-alone" attractions or destinations, having unique character and features. (PFS 15.11)*

The foregoing polices will guide implementation of parks and facilities within the Urban Core.

The Specific Plan area is expected to have a system of public parks, plazas, promenades, and paseos that will contribute to the parks and recreation facilities that currently exist in the City. The following parks and open spaces exist or are expected to be constructed in the Specific Plan area.

Existing:

- *Eucalyptus Park, approximately 18 acres*
- *Will T. Hyde/Friendship Park, approximately 4 acres*
- *Norman Park & Community Senior Center, approximately 1.5 acres*

Proposed:

- *Lower Sweetwater, approximately 15 to 20 acres*
- *Memorial Park Annex, approximately 3 to 5 acres*
- *Promenade Park west of Broadway, approximately 12 to 15 acres*

In addition, a series of urban plazas are envisioned along Third Avenue, H Street, and Broadway, as well as a pedestrian promenade along F Street connecting downtown Third Avenue with the bayfront, which will also add recreational value to urban life.

c. General Plan Discussion: Joint Use of Park and School Facilities (PFS 18)

Increased intensity of development in western Chula Vista and lack of vacant and underutilized land for park facilities will result in an increased demand on parks and schools for recreational facilities. Joint use of facilities provides an opportunity for the school children and the general public to mutually benefit.

Public demand for field space for youth leagues exceeds the City's supply of sports fields in City parks, due to competing demands with adult athletic leagues and the sheer number of youth sports teams to accommodate. The City currently relies on individual elementary, middle, and high schools to allow use of the schools' fields by Youth Sports Council leagues.

<u>General Plan Policies Related to the Urban Core</u>

1) *Promote the City Council and the Boards of the two School Districts entering into long-term master agreements to allow allocation of school fields to the City's Youth Sports Council leagues via a process administered by the City, and to allow after-school use of classrooms at different schools for recreation classes. (PFS 18.1)*

2) *Coordinate with the School Districts on the design of school grounds and fields to provide for use of these facilities by the City's Youth Sports council leagues. (PFS 18.2)*

3) *Consider siting elementary schools adjacent to neighborhood parks, where feasible, to allow for expanded use of the school grounds and classrooms by the general public and the park area by the school children. (PFS 18.3)*

The foregoing polices will guide the City in discussions with the School Districts on possible joint use of facilities within the Urban Core.

G. Energy and Telecommunications

1. Energy

San Diego Gas and Electric (SDG&E) owns, operates and maintains the pipes, wires and appurtenances needed to transport natural gas and transmit and distribute electricity to Chula Vista residential, commercial, industrial and institutional facilities. These two forms of energy are essential to everyday life in Chula Vista. SDG&E estimates that additional infrastructure may be needed to deliver energy, serve a growing population, maintain local and regional reliability, and move energy through the western regional U.S. system. SDG&E projects that infrastructure may include new electricity distribution substations in the western part of the City. The following objective and policies relate to the provision of energy to the City. A discussion and related policies addressing energy conservation are contained in the Environmental Element, Chapter 9 of the City of Chula Vista's General Plan.

2. Telecommunications

Telecommunications services in Chula Vista include telephone, cable and wireless communication services and are provided by several companies. Future communication technologies may expand into other fields. Infrastructure upgrades are being made by private providers to facilitate high-speed data transmission and interactive video capabilities. The City encourages constructing new office and industrial buildings with state-of-the-art telecommunication circuits to utilize these upgrades.

3. Objectives and Policies

Objectives and policies directing the generation and delivery of energy are arranged around specific topics or issues. The following describes an issue or topic and how the City has planned for adequate service for the Specific Plan through the General Plan. Supporting objectives and policies follow the discussion.

a. General Plan Discussion: Powering Chula Vista (PFS 22)

Population growth in Chula Vista will increase demand for energy and power. In response to energy needs, the City embarked on a mission to identify viable options to control the City's energy future. On May 29, 2001, the City Council adopted the City of Chula Vista Energy Strategy and Action Plan (Energy Strategy) and adopted an ordinance to investigate the possibility of creating a municipal utility.

The Energy Strategy identifies recommended actions, including monitoring the energy market and legal restrictions, being prepared to enter into an Electrical Services Contract with an Energy Services Provider or power generator as allowed by law, partnering with a third party to build and operate power generation facilities, developing an emissions offset program based on mobile sources, becoming a municipal "aggregator" and acquiring electricity at negotiated rates for City facilities and participating residents and business owners, expanding energy conservation projects for City facilities and promoting energy efficient and renewable energy programs for businesses and residents, and developing and implementing a legislative strategy that facilitates the City's overall energy plan.

General Plan Policies Related to the Urban Core

All policies regarding energy and telecommunications are implemented on a city-wide basis. The Specific Plan does provide for the review of buildings for greater energy efficiency and promotes standards for sustainability in Section 4. Special Guidelines of Chapter VII - Design Guidelines.

X. Plan Implementation and Community Benefits Program

X. Plan Implementation and Community Benefits Program

E. Description of Improvements

The following components describe the general approach to achieve the vision and fulfill the objectives for the Urban Core as outlined in the Specific Plan.

The following sections overview the factors and standards that have been used to develop the facilities list for the Specific Plan. Appendix D - Facilities Implementation Analysis is a complete listing of facilities, initial priority, order of magnitude costs, and likely funding source for implementation.

- *Mobility Improvements: This component describes various methods of improving mobility in the Urban Core through investments in pedestrian, bicycle, transit, street and parking systems.*
- *Amenity Improvements: This component describes various methods of improving the quality of the urban environment through investments in amenities such as street furnishings, gateways, wayfinding signs, public art, and storefront facade upgrades.*
- *Additional Community Improvements: This component addresses the method for investing in and improving existing and new community facilities such as parks, plazas, schools, utilities, and infrastructure.*
- *Key Short-Term Demonstration Projects: This section describes a number of selected short-term public improvement projects that the City should undertake to demonstrate its commitment to revitalizing the Urban Core and the potential for achieving the goals of the Specific Plan.*
- *Potential Funding Sources: The method to obtain the community benefits listed above includes harnessing the power of private investment and the strategic use of available public funds. This section outlines both private investment obligations and the most likely sources of public funds that are potentially available to the City.*

F. Mobility Improvements

The Specific Plan provides policy guidance on mobility systems with the primary goal of achieving a balanced transportation system. Inherent in this goal are initiatives that serve to calm traffic, create a friendlier pedestrian and bicycle environment, and vastly improve the availability and service of public transit. Also important to the Specific Plan are mobility connections to other areas of the city, including the eastern Chula Vista and Bayfront areas.

1. Pedestrian Facilities – Capital Projects

The primary goal of pedestrian facilities is to provide logical, convenient, and safe paths of travel throughout the Specific Plan area, making walking a preferred method of travel.

a. *Sidewalks on all streets throughout the planning area should be improved to include adequate width, a safe and smooth walking surface, and adequate lighting levels as specified in Chapter VIII - Public Realm Design Guidelines. In some cases, additional right-of-way (ROW) or public easements may be needed. Additional amenities such as directional signs, benches, and shade trees are important elements that improve the level of quality for pedestrian facilities. (See cross-sections and intersections in Chapter V - Mobility.)*

    1) *Third Avenue: special paving 14-foot or more wide, depending on diagonal parking locations (between E Street and G Street)*

    2) *E Street: standard paving, between 9-foot and 13-foot wide (need additional 22 feet total, or 11 feet on each side, of easement between I-5 and 300 feet east of ramp)*

    3) *F Street: standard paving, 16-foot wide with a 6-foot wide Class I bike path in the center of the sidewalk*

    4) *H Street: special paving, 16-foot wide (need additional 38 feet total of easement between I-5 and Broadway for sidewalk and additional travel lane, need additional 8 feet total additional ROW of easement between Broadway and Third Avenue for sidewalk)*

    5) *Broadway: standard paving, 9-foot wide*

    6) *Woodlawn Avenue: standard paving, 12-foot wide or 24 feet total both sides*

    7) *All other major streets: standard paving, minimum 10-foot wide*

b. *Crosswalks at all intersections throughout the planning area shall be clearly marked and improved as specified in Chapter VIII - Public Realm Design Guidelines.*

1) *Special paving at all intersections in the Village District along Third Avenue*

2) *Special paving at intersections along H Street at Third Avenue, Fourth Avenue, Fifth Avenue, Broadway, Woodlawn Avenue, and I-5*

3) *Special paving at intersections along Broadway at E Street, F Street, G Street, and H Street*

c. *Mid-block crosswalks at selected locations, as described in Chapter VIII - Public Realm Design Guidelines, shall be installed.*

- *Mid-block with special paving and advanced crossing technology at four locations along Third Avenue in the Village District*

d. *Paseos that connect residential areas, public parking lots, and other facilities to adjacent streets and pedestrian destinations are a key element in an enhanced pedestrian environment. Paseos should be incorporated into private and public improvement projects as necessary to provide exemplary pedestrian access.*

2. Bicycle Facilities – Capital Projects

The primary goal of bicycle facilities is to provide logical, convenient, and safe paths of travel throughout the Specific Plan area, making cycling a preferred method of travel. To supplement the proposed actions, a bike users map will be prepared to assist commuters and recreational riders in getting around the Urban Core and finding directions to various destinations.

a. *A boardwalk should be created along H Street and F Street that connects the Urban Core to the Bayfront area. The boardwalk shall consist of an elevated Class I bike path a minimum of 6-foot wide located in the center of the sidewalk on each side of H Street and F Street. The bike paths shall be marked with colored paving and signed to minimize conflicts between pedestrians, vehicles, and bicyclists. Bicycle boulevards will also be evaluated for Davidson Street and G Street.*

b. *Class II bicycle lanes, at a minimum of 6-foot wide, should be installed on Broadway and along the segments of F Street where a Class I bike path cannot be accommodated.*

c. *Class III bike routes should be established on the following streets: Fourth Avenue, Fifth Avenue, Third Avenue, E Street, G Street, I Street, J Street, K Street.*

d. *End of trip facilities, as specified in the updated City Bicycle Master Plan, should include secured bike racks and bike lockers.*

3. Transit Facilities – Policy Initiatives and Capital Projects

The primary goal of transit facilities is to provide a convenient and dependable alternative to automobile travel throughout the Specific Plan area.

a. Policy Initiatives

- *Establish a West Side Shuttle with service on H Street, Third Avenue, E Street or F Street, and Broadway with connections to the Bayfront and Trolley stations at E Street and H Street. The West Side Shuttle should have a relatively short headway of approximately 15 minutes and should run in both directions.*

b. Capital Projects

1) *Purchase shuttle vehicles as specified in West Side Shuttle program.*
2) *Establish shuttle stations consisting of expanded curb and vehicle pullout areas and signs at the following locations:*
   - *Third Avenue at H Street, F Street and E Street*
   - *E Street at Fifth Avenue, Broadway, Trolley station and Bayfront*
   - *Broadway at F Street and G Street*
   - *H Street at Fourth Avenue, Fifth Avenue, Broadway, Woodlawn Avenue, Trolley station and Bayfront*
3) *Provide bus stops and shelters at each of the shuttle locations for use by shuttle loop service and city-wide bus and transit service.*

4. Intersection Improvements - Capital Projects

The primary goal of street improvements is to provide a safe and efficient driving environment, quality road surfaces, and improved traffic operations through lane configurations and intersection designs. Intersections at the following locations will need to be improved to accommodate expected traffic demands. These improvements will include upgraded traffic control, signals and signal timing, turning lanes, and through lane configurations.

a. Priority of Intersection Improvements

Intersection improvements have been divided into three tiers based on priority, with the most important and immediate improvements classified as Tier 1. In each individual tier, the City's existing monitoring program will determine exactly which projects are implemented first during the biannual CIP program review. The intersection numbers correspond to the numbering system provided in Appendix B – Traffic Impact Analysis, prepared by Kimley-Horn and Associates, Inc.

1) Tier 1 Improvements

- *#1 Bay Boulevard/I-5 Southbound Ramp/E Street*
- *#2 I-5 Northbound Ramp/E Street*
- *#24 I-5 Southbound Ramp/H Street*
- *#25 I-5 Northbound Ramp/H Street*
- *#26 Woodlawn Avenue/H Street*
- *#27 Broadway/H Street*
- *#28 Fifth Avenue/H Street*
- *#29 Fourth Avenue/H Street*
- *#44 Fourth Avenue/SR-54 Eastbound Ramp*

2) Tier 2 Improvements

- *#34 Broadway/SR-54 Westbound Ramp*
- *#61 L Street/Bay Boulevard*
- *#63 Bay Boulevard/I-5 Southbound Ramp*
- *#64 Industrial Boulevard/I-5 Northbound Ramp*
- *H Street from four lanes to six lanes from I-5 to Broadway*

3) Tier 3 Improvements

- *#13 Broadway/F Street*
- *#45 Fourth Avenue/Brisbane Street*
- *#57 Second Avenue/D Street*

5. Parking Systems – Policy Initiatives

The primary goal of the parking policy is to provide ample, convenient and dependable public parking facilities at three primary locations within the Urban Core:

- *The Village District*
- *H Street Transit Focus Area (TFA)*
- *E Street TFA*

These areas will likely be parking districts designed to assist the private sector in minimizing the provision of on-site parking and providing ample parking for users in each of these areas.

a. *In five years, or sooner upon identification of need, prepare an update to the parking district in the Village District. This analysis shall address the phased provision of additional public parking including:*

   1) *Maintaining the equivalent of existing public spaces through shared parking and parking management initiatives,*

   2) *Provision of short-term off-street surface parking facilities,*

   3) *Provision of selected long-term parking structures in this District, and*

   4) *Updating the in-lieu fee program.*

b. *In five years, or sooner upon identification of need, prepare a parking analysis that addresses the following for the H Street and E Street TFAs:*

   1) *Maintaining the equivalent of existing public parking through shared parking and parking management initiatives,*

   2) *Provision of short-term off-street surface parking facilities,*

   3) *Provision of selected long-term parking structures in this District, and*

   4) *Determining the appropriateness of an in-lieu fee program.*

G. Urban Amenity Improvements

The Specific Plan provides policy and design guidance on urban amenities with the primary goal of achieving a physically enhanced and visually attractive urban environment that is a desirable destination within Chula Vista.

1. Streetscapes - Capital Projects

a. *Prepare streetscape master plans for selected streets in the Urban Core. Master plans should be prepared with community involvement and should be consistent with the guidelines and recommendations of the Specific Plan. Streetscape master plans should address the following elements:*

   1) *Coordination with adjacent infill development in order that street widening and urban design amenities can be incrementally implemented, to the extent feasible, concurrent with new development projects.*

   2) *Coordinated design with street improvement projects, including intersection, infrastructure, and mid-block and crosswalk designs.*

   3) *Detailed designs and materials specifications for all sidewalk areas, including paving, street furnishings, street trees, decorative street lights and other elements.*

   4) *Street master plans should be prepared for the following areas:*

      a) *Third Avenue between E Street and H Street*

      b) *Broadway between C Street and L Street*

      c) *H Street between I-5 and Del Mar Avenue*

      d) *F Street between I-5 and Del Mar Avenue*

      e) *E Street between I-5 and Del Mar Avenue*

b. *Prepare plans for the I-5 overcrossings that include enhanced sidewalk paving, decorative lighting, street furnishings, public art, and other elements. Coordinate the designs with gateways and streetscape plans for these areas. Plans should be prepared for the following locations:*

   1) *H Street*

   2) *F Street*

   3) *E Street*

2. Gateways - Capital Projects

Prepare detailed design plans for selected gateways in the Urban Core. Gateway plans should be prepared with community involvement and should be consistent with the guidelines and recommendations of the Specific Plan. The gateway plans may be developed and implemented as part of private development occurring at gateway locations. Plans should be prepared for the following locations:

a. Primary Gateways

1) *I-5 and E Street*
2) *I-5 and H Street*
3) *Third Avenue and E Street*
4) *Fourth Avenue and C Street*

b. Secondary Gateways

1) *I-5 and F Street*
2) *Third Avenue and H Street*

3. Wayfinding - Capital Projects

Prepare a wayfinding directional sign program for the Specific Plan area. The program should include incorporation of the City logo or other Urban Core identity brand, informational and directional sign designs to facilities such as public parking, public facilities and other important destinations. The program should include sign hierarchy and conceptual designs, should be prepared with community involvement, and should be consistent with the guidelines and recommendations of the Specific Plan. Actual capital projects will depend on the resulting plan or sign program.

4. Public Art - Policy Initiatives

Complete the art in public places program and implement through project review on individual developments and various public improvement projects.

5. Storefront/Facade Improvements – Policy Initiatives and Capital Projects

a. Policy Initiatives

1) Update the storefront façade improvement program in the Village District.

2) Prepare a new storefront façade improvement program for the Urban Core District along Broadway.

b. Capital Projects

- *Fund storefront and façade improvement projects through the provision of grants in compliance with the adopted program.*

H. Additional Community Improvements

The Specific Plan provides policy guidance on a range of public facilities and services with the primary goal of providing excellent facilities and services for the Urban Core residents and visitors. Inherent in this goal are initiatives that serve to produce additional park space; adequate and efficient use of public schools, plazas, and paseo systems; and upgraded utilities and infrastructure.

1. Parks

Pursue park opportunity sites within the Urban Core. Each potential park site should be located as specified in the updated Parks and Recreation Master Plan. Each park should contain facilities as required by the Parks and Recreation Master Plan update. The following are general areas for park improvements in the Urban Core:

a. *Lower Sweetwater Community Park (approximately 15 to 20 acres)*

b. *Memorial Park Annex (approximately 3 to 5 acres)*

c. *Park west of Broadway (approximately 12 to 15 acres)*

2. Plazas - Capital Projects

Pursue plaza improvement projects, with amenities as outlined in this Specific Plan, in conjunction with new development at the general locations shown on Figure 8.69 of Chapter VIII - Public Realm Design Guidelines.

3. Schools - Policy Initiatives

Coordinate with Chula Vista Elementary School District (CVESD) and the Sweetwater Unified High School District (SUHSD) to determine the need for additional school facility space as outlined Chapter IX – Infrastructure and Public Facilities.

4. Sustainable Development - Green Building Demonstration

The recently established National Energy Center for Sustainable Communities (NECSC) will serve as a tremendous resource to the City throughout the life of the Specific Plan. In partnership with the NECSC, the City will look to generate grant funding specific to the Urban Core that will support commitments from developers to undertake a green building demonstration program. Through existing agreements and future development programs, the City will target the Urban Core to create an urban model for sustainable community development.

A new resource guide could be developed which includes expanded sustainability goals, design principles and tools for designing and building in a mixed-use or urban development market. A Resource Guide for Sustainable Urban Development could expand upon the Environmental Sustainability Goals and Design Principles included in Chapter VII - Design Guidelines and help establish a framework for the creation of a sustainable Urban Core.

C. Long Term Implementation

This section consists of the Final Report on Facilities Implementation Analysis, which addresses projected cost estimates, projected timing, and projected revenues, such as development impact fees and tax increment financing; Chapter XI - Plan Administration, Section C. Specific Plan Administration, which addresses the Specific Plan's application to subsequent development projects; and the Final Environmental Impact Report's Mitigation and Monitoring Program (MMRP).

X. Plan Implementation and Community Benefits Program

D. Long Term Implementation Process

From the beginning of the Specific Plan process, there has been a keen awareness that the adoption and implementation of the plan will rest on the amenity value that new development can bring. This value cannot be achieved by attractive pictures and vague promises of future action. Among the key benefits of the Specific Plan will be amenities and capacity enhancements, in the form of such elements as parks, pedestrian spaces, utilities, transit accommodation and roadway improvements. The effort to plan and program the delivery of these essential public facilities within the Urban Core will be especially challenging. In new communities, the City has assessed such matters through the preparation of Public Facilities Finance Plans (PFFPs). These documents have served well to address the extension of facilities coinciding with the relatively short-term timing of new master planned neighborhoods and subdivision improvements. However, the Urban Core presents a vastly different set of circumstances: the placement or upgrading of public facilities within an existing neighborhood, in support of infill and redevelopment over a period of perhaps decades.

For the reasons stated above, the Specific Plan relies on a systematic approach to the delivery of public facilities. These facilities are designed to fulfill the obligations and objectives handed down from the General Plan. The public facilities program also fits well with the ongoing efforts of City construction and operating departments as these departments pursue their own particular studies, creative implementation approaches, and master plans.

The flow chart presented in Figure D.1 was prepared to show how the Urban Core project includes necessary components to inform the future citywide or western Chula Vista Impact Fee, Facilities Master Plan, and Capital Improvement Program processes. The key bridge from the plan and its regulations into public facilities is this Appendix D.

The implementation of the Specific Plan is also seen as somewhat dynamic and is subject to ongoing monitoring and priority-setting. While projects are assigned priorities based on 2005 factors, the timing and location of development may require that certain facilities be advanced in priority. This schedule assessment will be accomplished through a review of facility performance as part of the biannual review of the Citywide Capital Improvement Program (CIP) budget and through the preparation and maintenance of the City's facilities financing and fee strategies, as these items may be adopted and amended from time to time. Any change in priorities, timing and valuation from the facilities program associated with the CIP or facilities program shall not require the amendment of the Specific Plan, as long as such changes, additions or subtractions are not in conflict with the applicable CEQA review documents for this Specific Plan.

Economic &
Planning Systems

Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

FINAL REPORT

CHULA VISTA URBAN CORE SPECIFIC PLAN FACILITIES IMPLEMENTATION ANALYSIS

Prepared for:

City of Chula Vista

Prepared by:

Economic & Planning Systems, Inc.

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I. INTRODUCTION AND SUMMARY OF FINDINGS

Economic & Planning Systems (EPS) and McGill Martin Self (MMS) have been retained by the City of Chula Vista to prepare a Facilities Implementation Analysis (FIA) for the Urban Core Specific Plan. The FIA involves the following analyses:

1. Cost estimates, definitions of purpose, and allocation of geographic areas of benefit for the public improvements called for in the Specific Plan;

2. Projections of development in the Urban Core Specific Plan area over the next several decades;

3. Identification of public improvements that may be funded through nexus-based development impact fee programs;

4. Identification of any temporary and overall funding deficits attributable to shortfalls in fee revenues versus the costs of improvements;

5. Evaluation of the impacts of such fees on the feasibility of new development;

6. Discussion of the availability and applicability of alternative funding mechanisms, including redevelopment tax increment;

7. Revenue estimates for the tax increment likely to be generated through redevelopment in the Urban Core.

This analysis is intended to provide the decision-makers of the City of Chula Vista with an understanding of the purposes of various improvements, the extent to which the development in the Urban Core is likely to support the required costs of those improvements, and the various mechanisms through which those funds could be generated. This knowledge will be critical in prioritizing the public infrastructure and facility investments in various locations and at various times.

SUMMARY OF FINDINGS

This analysis has led to the following conclusions:

1. The public improvements called for in the Urban Core Specific Plan are estimated to cost a total of $135 million in today's dollars. These improvements include projects for transportation, traffic signalization, transit, and public spaces (parks and plazas).

2. A limited group of these public improvements are required to provide new capacity for development expected to occur in the Urban Core. The remaining improvements are required to address existing deficiencies and/or aesthetic

improvements in the Urban Core, and may have wider areas of benefit, including the Bayfront, Western Chula Vista, or the entire City.

3. Based on the findings and projections of market research, it is estimated that roughly 3,600 housing units, 259,000 square feet of retail, 1.1 million square feet of office space, and 650,000 square feet of hotel/motel will be developed in the Urban Core Specific Plan area through the year 2030. Full buildout of the Urban Core's expected future development—an additional 3,500 housing units and 200,000 square feet of office—may not occur for several additional decades.

4. The imposition of development impact fees in the Urban Core based only on those improvements required to mitigate the demands from new development would result in Transportation and Traffic Signal fees that are below the current levels being levied in Chula Vista. The Parks Acquisition and Development (PAD) fee calculated for the Urban Core would be slightly higher than the PAD fees currently applicable in Western Chula Vista, but well below the current levels in the Eastern Territories.

5. The impact fee revenues would not cover the full costs of improvements as detailed in the Specific Plan, and are also expected to lag behind the desired pace of improvements, which are heavily concentrated in the "5-10 year" timeframe. In sum, the impact fees calculated herein would be expected to cover roughly half of the total costs of improvements included in the Specific Plan.

6. The impact fees, as calculated for the Urban Core, would not materially affect the feasibility of desired residential or commercial development.

7. The development and continued value escalation of Redevelopment Project Area parcels within Western Chula Vista is projected to yield a total of nearly $200 million (present value) in tax increment through the year 2036. This does not include or assume any increase in revenue related to development proposals currently being discussed for the Bayfront area.

8. If impact fees are levied in the Urban Core as calculated in this document, only about $67 million or 35 percent of the tax increment would be required to fund other improvements not covered by the impact fees, leaving roughly $127 million (present value) for other projects within western Chula Vista redevelopment areas.

9. Alternative funding sources such as regional or intergovernmental grants, Capital Improvements Program funds, developer exactions, and land-secured financing (Mello-Roos districts) may also be appropriate and attainable for certain improvements, thereby lowering the financial burden on the desired Urban Core development and allowing more tax increment funds to be used for other priorities in the City.

II. PUBLIC IMPROVEMENT COSTS

The Urban Core Specific Plan identifies a variety of public facilities for which this implementation analysis has been prepared. Some of these facilities are required to provide capacity for new residents, workers, and visitors to the Urban Core. Examples include intersection and roadway improvements, park improvements, etc. Other public facilities in the Specific Plan serve users beyond the Urban Core, such as the interchange and transit improvements that will be used by Bayfront and Eastern Chula Vista populations as well as those in Urban Core.

City staff, MMS, and EPS have established the list and estimated the costs of public improvements associated with the Urban Core Specific Plan, as shown on **Table 1**. The costs for these improvements have been estimated with contingencies included, and have been verified as reasonably conservative by City engineering staff. As shown, it is estimated that the total costs of public improvements for the Urban Core Specific Plan will total roughly $135 million, in today's dollars.

The list of improvements has been segregated into four categories: transportation improvements, traffic signals, transit improvements, and public spaces. This categorization is helpful in estimating the levels of impact fees that would be required to provide such improvements, and comparing those fees to the existing fees imposed in the City of Chula Vista.

As **Table 1** shows, the majority of the public improvement costs are categorized as transportation improvements. These include freeway interchange improvements, street widenings, added turn lanes, roadway restriping, etc. Sidewalk and crosswalk improvements are also shown in this category, as these improvements would be most efficiently constructed during the improvement of the streets.

Public spaces comprise the second largest category of costs. **Table 1** shows that three major park improvements would be required under the Specific Plan—Lower Sweetwater Park, Memorial Park, and Promenade Park. The costs of acquiring land and developing park features are included in these cost estimates. In addition, numerous plazas are envisioned throughout the Urban Core. These plazas would provide a different type of public space than would a traditional park, but are similar in providing public access to places for congregation and recreation.

EPS has assumed that the public space acquisitions and improvements generally would be phased according to the demands created by residential development in the Urban Core, but in fact may occur more opportunistically as parcels are available. Also, it is important to note that the park improvements (excluding the plazas) sum to roughly 33 to 40 acres. This amount may not be adequate for all of the residential development ultimately envisioned by the Specific Plan, but the total demand is assumed to be met in combination with proposed plazas in the Urban Core and parks in the Bayfront area.

Table 1
Public Facilities and Infrastructure Improvements
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Comments	Total Cost	Time Frame	Description/ Comments
TRANSPORTATION IMPROVEMENTS				
Bay Blvd/I-5 SB Ramp/E Street	Restripe At Ramp	$10,000	0-5 years	Add EB, SB and NB right-turn lanes
F Street Improvements (I-5 to Fourth Ave.)	48 feet wide, Includes Class I or II Bike Lane	$6,056,000	0-5 years	
F Street Sidewalk Improvements (I-5 to Fourth Ave.)	sidewalk lighting	$3,813,000	0-5 years	Standard paving of 16' wide incl. landscaping, tree wells and furniture/lighting?
Fifth Ave/H Street Change Approach	Add protective plus permissive phasing, add a 12' wide westbound right turn lane 120' in length included in CIP	$74,000	0-5 years	Change NB/SB approaches
Fourth Ave/H Street Add Lane		$74,000	0-5 years	Add EB/WB right-turn lane
Fourth Ave/SR-54 EB Ramp Add Lane		$74,000	0-5 years	Add EB right-turn lane
I-5 NB Ramp/E Street Add Lane & LRT	Coordinate with CalTrans, Only Restripe	$10,000	0-5 years	Add lane and LRT grade separation
I-5 NB Ramp/H Street Add Lanes/LRT/Restripe	Coordinate with CalTrans, Only Restripe	$10,000	0-5 years	Add lanes, LRT grade separation & restripe
I-5 SB Ramp/H Street Add Lanes	Coordinate with CalTrans, Only Restripe	$10,000	0-5 years	Add SB left, EB thru and right turn lanes
Third Ave/E Street Convert Lanes	Right Turn lanes, striping	$10,000	0-5 years	Convert to exclusive right-turn lanes
Third Ave/F Street Convert Lanes	Right Turn lanes, striping	$10,000	0-5 years	Convert to exclusive right-turn lanes
Third Ave/G Street Convert Lanes	Right Turn lanes, striping	$10,000	0-5 years	Convert to exclusive right-turn lanes
Third Avenue Crosswalk Paving (Village District)	Includes 8 crosswalks at intersections	$550,000	0-5 years	Crosswalk special paving along Third Ave
Third Avenue Sidewalk Improvements	Assume Special Paving between 14 to 38' wide (depends on diagonal parking)' Sidewalk monolithic curb and gutter, driveways and sidewalk lighting.	$1,744,000	0-5 years	16' wide improvements incl. landscaping, furniture, tree wells, and lighting
Third Avenue Midblock Improvements (5 @ 50' LF each)	Midblock Crossings and enhanced sidewalk	$954,000	0-5 years	38' wide improvements at mid-block crossings incl. landscaping, furniture, tree wells, and lighting
Third Avenue Street Improvements (E to G St.)	Narrow most of Third repave entire road	$5,014,000	0-5 years	
Broadway Sidewalk Improvements (C to L St.)	Assume Special Paving 9' wide Sidewalk monolithic curb and gutter, driveways, sidewalk lighting	$7,469,000	5-10 years	
Broadway Special Paving-Crosswalks	Assume Stamped Paving 8' wide	$93,000	5-10 years	Crosswalk special paving at E, F, G, H Streets
Broadway Street Improvements (E to F St.)	Widen Road 14 ' New pavement (82' curb to curb with 12' raised median), street lights, lane markings, curb, gutter and drainage	$3,066,000	5-10 years	Median & landscaping, lighting, curb-gutter, bike lanes
Broadway Street Improvements (C to E St., F to L St.)	New pavement (82' curb to curb with 12' raised median), street lights, lane markings, curb, gutter and drainage	$15,635,000	5-10 years	Total cost adjusted by $6M to incl. current TransNet program improvements.
Broadway/SR-54 WB Ramp Restripe	Restripe At Ramp	$10,000	5-10 years	Restripe into shared left-right lane
E Street Improvements (I-5 to 300' east of ramp)	Widen E Street Six Feet 300 feet in length, railroad arms relocate, restripe bridge	$139,000	5-10 years	
H Street Improvements (I-5 to Broadway)	86' wide, 14' raised median, street lights	$4,951,000	5-10 years	

Table 1
Public Facilities and Infrastructure Improvements
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Comments	Total Cost	Time Frame	Description/ Comments
J Street/I-5 NB Ramp Add Lane	Construction feasibility under review	$10,000	5-10 years	Add EB left-turn and WB right-turn lane
L Street/Bay Blvd Signal/Add lane	Construction feasibility under review	$474,000	5-10 years	Add signal, SB left-turn, and NB right-turn
E Street Streetscape Improvements (I-5 to Broadway, 3rd Ave. to 4th Ave.)	Enhanced landscaping, driveways, sidewalk lighting	$2,211,500	10 + Years	Standard paving 8'-13' incl. landscaping, furniture, tree wells and lighting. Figure shown = 50% of estimate provided due to reduced scope of area to be improved.
H Street Improvements (Broadway to Third)	70' wide, 14' raised median, street lights	$9,231,000	10 + Years	
H Street Sidewalk Improvements	Assume Special Paving 16' wide Sidewalk monolithic curb and gutter, driveways, sidewalk lighting, need 38' ROW between I-5/Broadway, 8' ROW between Broadway/Third Ave)	$1,988,000	10 + Years	Does not incl. additional ROW costs.
H Street Special Paving-Crosswalks (I-5 to Third Ave.)	Assume Stamped Paving 8' wide	$389,000	10 + Years	Crosswalk special paving at Third, Fourth, Fifth, Broadway, Woodlawn & I-5
Woodlawn Ave Sidewalk Improvements (E to H St.)	20' wide standard	$1,710,000	10 + Years	
Woodlawn Ave Street Improvements (E to G St.)	Include raised median connect to H street	$4,668,750	10 + Years	Doesn't include land acquisition costs
	Subtotal, Transportation	**$70,468,250**		
TRAFFIC SIGNAL				
Bay Blvd/I-5 SB Ramp Signal	Coordinate with Caltrans & CCV	$250,000	5-10 years	Add signal
Broadway/H Street Jumper Lane	Signs, Traffic Signal Modification	$38,000	5-10 years	Add jumper lane or thru lane
Industrial Blvd/I-5 NB Ramp Signal	Per CCV, CalTrans coordination.	$250,000	5-10 years	Add signal
Second Ave/D Street All-way Stop	4 Way Stop/ 2 Stop Signs	$10,000	10 + Years	Convert to all-way stop
Fourth Ave/Brisbane Street Signal Phase	Per CCV add signal head, restripe, reprogram	$74,000	10 + Years	Add SB right-turn overlap phase to signal
	Subtotal, Traffic Signal	**$622,000**		
TRANSIT IMPROVEMENTS				
Bus Shelters	Cost per CCV (3 @ 3rd Ave, 4 @ E St., 2 @ Broadway and 6 @ H St.)	$169,000	5-10 years	At each shuttle stop by shuttle loop service and citywide bus and transit service
	Subtotal, Transit Improvements	**$169,000**		

Table 1
Public Facilities and Infrastructure Improvements
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Comments	Total Cost	Time Frame	Description/ Comments
PUBLIC SPACES				
Parks				
Lower Sweetwater Park & Improvements	(UCSP Est.) 15-20 ac	$30,000,000	5-10 years	
Memorial Park Annex & Park Improvements	(UCSP Est.) 3-5 ac	$7,500,000	10 + Years	
Promenade Park & Improvements (West of Broadway between E & H St.)	(UCSP Est.) 15 ac	$22,000,000	10 + Years	
	Subtotal, Parks	**$59,500,000**		
Plazas				
3rd Ave/H Street Plaza Improvements		$350,000	0-5 years	
I-5 & F Street Overcrossing Plaza		$350,000	0-5 years	
Third Ave & F Street Plaza	Existing	$350,000	0-5 years	
Third Ave @ Memorial Park Plaza	Existing	$350,000	0-5 years	
4th Ave/H Street Plaza Improvements		$350,000	5-10 years	
5th Ave/H Street Plaza Improvements		$500,000	5-10 years	
Broadway/E Street Plaza & Improvements		$350,000	5-10 years	
Broadway/H Street Plaza & Improvements		$350,000	5-10 years	
E St. @ Trolley Station		$350,000	5-10 years	
H Street @ Chula Vista Center (Mall)		$350,000	10 + Years	
H Street @ Woodlawn Plaza		$350,000	10 + Years	
I-5 & E Street Overcrossing Plaza		$350,000	10 + Years	
I-5 & H Street Overcrossing Plaza		$350,000	10 + Years	
	Subtotal, Plazas	**$4,700,000**		
	Subtotal, All Public Spaces (Parks and Plazas)	**$64,200,000**		
TOTAL, ALL PUBLIC FACILITIES AND INFRASTRUCTURE IMPROVEMENTS		**$135,459,250**		

Unit costs are expressed in 2005 dollars through the entire spreadsheet and will be subject to change. Numbers are rounded to the thousandths dollar.

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

The costs for transit improvements and traffic signals are fairly minimal in the Urban Core Specific Plan, with each category representing less than $1 million.

Tables 2 and 3 further define the costs of various improvements according to the purpose of each improvement and the geographical areas of benefit. These distinctions are critical in understanding the nexus between new development in the Urban Core and the need for additional improvements, as well as identifying costs that should be borne by a larger geographic area than just the Urban Core. For example, new development in the Urban Core may not be responsible for fully funding improvements that will substantially benefit new development in the Bayfront area or existing development in the Eastern Territories. EPS has worked with City staff to conceptually allocate the costs for various improvements by purpose and geography. **Table 2** shows these allocations by percentage of costs, while **Table 3** calculates the actual dollars amounts implied by those allocations.

It is important to note that the improvements shown as being the responsibility of the Urban Core to provide new capacity are only those improvements identified as required for mitigation in environmental impact assessments. All other costs are "optional" in the sense that they are not required for environmental mitigation, and thus would not be wholly attributable to new development in the Urban Core. This distinction represents a highly conservative assumption regarding the nexus requirements for impact fees, as it is possible that other improvements intended to serve new Urban Core development may also be eligible for impact fee funding. This present study is not intended to fully document the nexus relationships between development and needed improvements; such analysis would be required separately prior to the adoption of any impact fees unique to the Urban Core.

Table 4 provides an estimate of the improvement costs by category, purpose, and geography in three different time periods—within five years, five to ten years, and ten or more years. This assessment distinguishes those improvements that are most critical to support new development in the near term from those that are likely to be required only as the Urban Core undergoes substantial new development. As **Table 4** shows, most of the costs attributable to the need for added capacity for development in the Urban Core are associated with public spaces. The transportation improvements are largely allocated to Citywide responsibility, as many of the improvements are required or desired to enhance traffic flow and the urban experience on major corridors that serve the entire City rather than just Urban Core populations. Again, the Urban Core is assigned only those transportation improvements identified as being required to mitigate additional traffic associated with new development in the Urban Core—the remaining costs are assumed to be more broadly shared.

It is important to note that several improvements envisioned for the Urban Core area are not included in this analysis, for various reasons. Parking structures for the transit stations and for the Village have not been included as costs in this Urban Core facilities analysis, because they serve a City-wide or even regional population and may be funded through other means. Similarly, the costs of building pedestrian paseos have not been

Table 2
Allocation of Public Facilities and Infrastructure Improvements -- Percentages
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Total Cost	Time Frame	% Needed For:		Geographical Responsibility (%)			
			New Capacity	Amenity	Urban Core	Bay-Front	Western C.V.	City-wide
TRANSPORTATION IMPROVEMENTS								
Bay Blvd/I-5 SB Ramp/E Street	$10,000	0-5 years	100%		67%	33%		
F Street Improvements (I-5 to Fourth Ave.)	$6,056,000	0-5 years		100%			100%	
F Street Sidewalk Improvements (I-5 to Fourth Ave.)	$3,813,000	0-5 years		100%			100%	
Fifth Ave/H Street Change Approach	$74,000	0-5 years	100%		100%			
Fourth Ave/H Street Add Lane	$74,000	0-5 years	100%		100%			
Fourth Ave/SR-54 EB Ramp Add Lane	$74,000	0-5 years	100%		100%			
I-5 NB Ramp/E Street Add Lane & LRT	$10,000	0-5 years	100%		67%	33%		
I-5 NB Ramp/H Street Add Lanes/LRT/Restripe	$10,000	0-5 years	100%		67%	33%		
I-5 SB Ramp/H Street Add Lanes	$10,000	0-5 years	100%		67%	33%		
Third Ave/E Street Convert Lanes	$10,000	0-5 years		100%				100%
Third Ave/F Street Convert Lanes	$10,000	0-5 years		100%				100%
Third Ave/G Street Convert Lanes	$10,000	0-5 years		100%				100%
Third Avenue Crosswalk Paving (Village District)	$550,000	0-5 years		100%				100%
Third Avenue Sidewalk Improvements	$1,744,000	0-5 years		100%				100%
Third Avenue Midblock Improvements (5 @ 50' LF each)	$954,000	0-5 years		100%				100%
Third Avenue Street Improvements (E to G St.)	$5,014,000	0-5 years		100%				100%
Broadway Sidewalk Improvements* (C to L St.)	$7,469,000	5-10 years		100%				100%
Broadway Special Paving-Crosswalks	$93,000	5-10 years		100%				100%
Broadway Street Improvements (E to F St.)	$3,066,000	5-10 years		100%				100%
Broadway Street Improvements (C to E St., F to L St.)	$15,635,000	5-10 years		100%				100%
Broadway/SR-54 WB Ramp Restripe	$10,000	5-10 years	100%		100%			
E Street Improvements (I-5 to 300' east of ramp)	$139,000	5-10 years	100%		67%	33%		
H Street Improvements (I-5 to Broadway)	$4,951,000	5-10 years	100%		67%	33%		
J Street/I-5 NB Ramp Add Lane	$10,000	5-10 years	100%		67%	33%		
L Street/Bay Blvd Signal/Add lane	$474,000	5-10 years	100%		67%	33%		
E Street Streetscape Improvements (I-5 to Broadway, 3rd Ave. to 4th Ave.)	$2,211,500	10 + Years		100%	50%		50%	
H Street Improvements (Broadway to Third)	$9,231,000	10 + Years		100%				100%
H Street Sidewalk Improvements	$1,988,000	10 + Years		100%				100%
H Street Special Paving-Crosswalks (I-5 to Third Ave.)	$389,000	10 + Years		100%				100%
Woodlawn Ave Sidewalk Improvements (E to H St.)	$1,710,000	10 + Years		100%	100%			
Woodlawn Ave Street Improvements (E to G St.)	$4,668,750	10 + Years		100%	100%			
Subtotal, Transportation	**$70,468,250**							
TRAFFIC SIGNAL								
Bay Blvd/I-5 SB Ramp Signal	$250,000	5-10 years	100%		67%	33%		
Broadway/H Street Jumper Lane	$38,000	5-10 years	100%		100%			
Industrial Blvd/I-5 NB Ramp Signal	$250,000	5-10 years	100%		67%	33%		
Second Ave/D Street All-way Stop	$10,000	10 + Years	100%		100%			
Fourth Ave/Brisbane Street Signal Phase	$74,000	10 + Years	100%		100%			
Subtotal, Traffic Signal	**$622,000**							

Table 2
Allocation of Public Facilities and Infrastructure Improvements -- Percentages
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Total Cost	Time Frame	% Needed For: New Capacity	% Needed For: Amenity	Geographical Responsibility (%): Urban Core	Bay-Front	Western C.V.	City-wide
TRANSIT IMPROVEMENTS								
Bus Shelters	$169,000	5-10 years		100%				100%
Subtotal, Transit Improvements	**$169,000**							
PUBLIC SPACES								
Parks								
Lower Sweetwater Park & Improvements	$30,000,000	5-10 years	100%		100%			
Memorial Park Annex & Park Improvements	$7,500,000	10 + Years	100%		100%			
Promenade Park & Improvements (West of Broadway between E & H St.)	$22,000,000	10 + Years	100%		100%			
Subtotal, Parks	**$59,500,000**							
Plazas								
3rd Ave/H Street Plaza Improvements	$350,000	0-5 years	100%		100%			
I-5 & F Street Overcrossing Plaza	$350,000	0-5 years	100%		100%			
Third Ave & F Street Plaza	$350,000	0-5 years	100%		100%			
Third Ave @ Memorial Park Plaza	$350,000	0-5 years	100%		100%			
4th Ave/H Street Plaza Improvements	$350,000	5-10 years	100%		100%			
5th Ave/H Street Plaza Improvements	$500,000	5-10 years	100%		100%			
Broadway/E Street Plaza & Improvements	$350,000	5-10 years	100%		100%			
Broadway/H Street Plaza & Improvements	$350,000	5-10 years	100%		100%			
E St. @ Trolley Station	$350,000	5-10 years	100%		100%			
H Street @ Chula Vista Center (Mall)	$350,000	10 + Years	100%		100%			
H Street @ Woodlawn Plaza	$350,000	10 + Years	100%		100%			
I-5 & E Street Overcrossing Plaza	$350,000	10 + Years	100%		100%			
I-5 & H Street Overcrossing Plaza	$350,000	10 + Years	100%		100%			
Subtotal, Plazas	**$4,700,000**							
Subtotal, All Public Spaces (Parks and Plazas)	**$64,200,000**							
TOTAL, ALL PUBLIC FACILITIES AND INFRASTRUCTURE IMPROVEMENTS	**$135,459,250**							

Unit costs are expressed in 2005 dollars through the entire spreadsheet and will be subject to change. Numbers are rounded to the thousandths dollar.

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 3
Allocation of Public Facilities and Infrastructure Improvements -- Dollar Amounts
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Total Cost	Time Frame	$ Needed For: New Capacity	$ Needed For: Amenity	Geographical Responsibility ($): Urban Core	Bay-Front	Western C.V.	City-wide
TRANSPORTATION IMPROVEMENTS								
Bay Blvd/I-5 SB Ramp/E Street	$10,000	0-5 years	$10,000	$0	$6,700	$3,300	$0	$0
F Street Improvements (I-5 to Fourth Ave.)	$6,056,000	0-5 years	$0	$6,056,000	$0	$0	$6,056,000	$0
F Street Sidewalk Improvements (I-5 to Fourth Ave.)	$3,813,000	0-5 years	$0	$3,813,000	$0	$0	$3,813,000	$0
Fifth Ave/H Street Change Approach	$74,000	0-5 years	$74,000	$0	$74,000	$0	$0	$0
Fourth Ave/H Street Add Lane	$74,000	0-5 years	$74,000	$0	$74,000	$0	$0	$0
Fourth Ave/SR-54 EB Ramp Add Lane	$74,000	0-5 years	$74,000	$0	$74,000	$0	$0	$0
I-5 NB Ramp/E Street Add Lane & LRT	$10,000	0-5 years	$10,000	$0	$6,700	$3,300	$0	$0
I-5 NB Ramp/H Street Add Lanes/LRT/Restripe	$10,000	0-5 years	$10,000	$0	$6,700	$3,300	$0	$0
I-5 SB Ramp/H Street Add Lanes	$10,000	0-5 years	$10,000	$0	$6,700	$3,300	$0	$0
Third Ave/E Street Convert Lanes	$10,000	0-5 years	$0	$10,000	$0	$0	$0	$10,000
Third Ave/F Street Convert Lanes	$10,000	0-5 years	$0	$10,000	$0	$0	$0	$10,000
Third Ave/G Street Convert Lanes	$10,000	0-5 years	$0	$10,000	$0	$0	$0	$10,000
Third Avenue Crosswalk Paving (Village District)	$550,000	0-5 years	$0	$550,000	$0	$0	$0	$550,000
Third Avenue Sidewalk Improvements	$1,744,000	0-5 years	$0	$1,744,000	$0	$0	$0	$1,744,000
Third Avenue Midblock Improvements (5 @ 50' LF each)	$954,000	0-5 years	$0	$954,000	$0	$0	$0	$954,000
Third Avenue Street Improvements (E to G St.)	$5,014,000	0-5 years	$0	$5,014,000	$0	$0	$0	$5,014,000
Broadway Sidewalk Improvements* (C to L St.)	$7,469,000	5-10 years	$0	$7,469,000	$0	$0	$0	$7,469,000
Broadway Special Paving-Crosswalks	$93,000	5-10 years	$0	$93,000	$0	$0	$0	$93,000
Broadway Street Improvements (E to F St.)	$3,066,000	5-10 years	$0	$3,066,000	$0	$0	$0	$3,066,000
Broadway Street Improvements (C to E St., F to L St.)	$15,635,000	5-10 years	$0	$15,635,000	$0	$0	$0	$15,635,000
Broadway/SR-54 WB Ramp Restripe	$10,000	5-10 years	$10,000	$0	$10,000	$0	$0	$0
E Street Improvements (I-5 to 300' east of ramp)	$139,000	5-10 years	$139,000	$0	$93,130	$45,870	$0	$0
H Street Improvements (I-5 to Broadway)	$4,951,000	5-10 years	$4,951,000	$0	$3,317,170	$1,633,830	$0	$0
J Street/I-5 NB Ramp Add Lane	$10,000	5-10 years	$10,000	$0	$6,700	$3,300	$0	$0
L Street/Bay Blvd Signal/Add lane	$474,000	5-10 years	$474,000	$0	$317,580	$156,420	$0	$0
E Street Streetscape Improvements (I-5 to Broadway, 3rd Ave. to 4th Ave.)	$2,211,500	10 + Years	$0	$2,211,500	$1,105,750	$0	$1,105,750	$0
H Street Improvements (Broadway to Third)	$9,231,000	10 + Years	$0	$9,231,000	$0	$0	$0	$9,231,000
H Street Sidewalk Improvements	$1,988,000	10 + Years	$0	$1,988,000	$0	$0	$0	$1,988,000
H Street Special Paving-Crosswalks (I-5 to Third Ave.)	$389,000	10 + Years	$0	$389,000	$0	$0	$0	$389,000
Woodlawn Ave Sidewalk Improvements (E to H St.)	$1,710,000	10 + Years	$0	$1,710,000	$1,710,000	$0	$0	$0
Woodlawn Ave Street Improvements (E to G St.)	$4,668,750	10 + Years	$0	$4,668,750	$4,668,750	$0	$0	$0
Subtotal, Transportation	**$70,468,250**		***$5,846,000***	***$64,622,250***	***$11,477,880***	***$1,852,620***	***$10,974,750***	***$46,163,000***
TRAFFIC SIGNAL								
Bay Blvd/I-5 SB Ramp Signal	$250,000	5-10 years	$250,000	$0	$167,500	$82,500	$0	$0
Broadway/H Street Jumper Lane	$38,000	5-10 years	$38,000	$0	$38,000	$0	$0	$0
Industrial Blvd/I-5 NB Ramp Signal	$250,000	5-10 years	$250,000	$0	$167,500	$82,500	$0	$0
Second Ave/D Street All-way Stop	$10,000	10 + Years	$10,000	$0	$10,000	$0	$0	$0
Fourth Ave/Brisbane Street Signal Phase	$74,000	10 + Years	$74,000	$0	$74,000	$0	$0	$0
Subtotal, Traffic Signal	**$622,000**		***$622,000***	***$0***	***$457,000***	***$165,000***	***$0***	***$0***

Table 3
Allocation of Public Facilities and Infrastructure Improvements -- Dollar Amounts
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvements	Total Cost	Time Frame	$ Needed For: New Capacity	$ Needed For: Amenity	Geographical Responsibility ($): Urban Core	Bay-Front	Western C.V.	City-wide
TRANSIT IMPROVEMENTS								
Bus Shelters	$169,000	5-10 years	$0	$169,000	$0	$0	$0	$169,000
Subtotal, Transit Improvements	***$169,000***		***$0***	***$169,000***	***$0***	***$0***	***$0***	***$169,000***
PUBLIC SPACES								
Parks								
Lower Sweetwater Park & Improvements	$30,000,000	5-10 years	$30,000,000	$0	$30,000,000	$0	$0	$0
Memorial Park Annex & Park Improvements	$7,500,000	10 + Years	$7,500,000	$0	$7,500,000	$0	$0	$0
Promenade Park & Improvements (West of Broadway between E & H St.)	$22,000,000	10 + Years	$22,000,000	$0	$22,000,000	$0	$0	$0
Subtotal, Parks	***$59,500,000***		***$59,500,000***	***$0***	***$59,500,000***	***$0***	***$0***	***$0***
Plazas								
3rd Ave/H Street Plaza Improvements	$350,000	0-5 years	$350,000	$0	$350,000	$0	$0	$0
I-5 & F Street Overcrossing Plaza	$350,000	0-5 years	$350,000	$0	$350,000	$0	$0	$0
Third Ave & F Street Plaza	$350,000	0-5 years	$350,000	$0	$350,000	$0	$0	$0
Third Ave @ Memorial Park Plaza	$350,000	0-5 years	$350,000	$0	$350,000	$0	$0	$0
4th Ave/H Street Plaza Improvements	$350,000	5-10 years	$350,000	$0	$350,000	$0	$0	$0
5th Ave/H Street Plaza Improvements	$500,000	5-10 years	$500,000	$0	$500,000	$0	$0	$0
Broadway/E Street Plaza & Improvements	$350,000	5-10 years	$350,000	$0	$350,000	$0	$0	$0
Broadway/H Street Plaza & Improvements	$350,000	5-10 years	$350,000	$0	$350,000	$0	$0	$0
E St. @ Trolley Station	$350,000	5-10 years	$350,000	$0	$350,000	$0	$0	$0
H Street @ Chula Vista Center (Mall)	$350,000	10 + Years	$350,000	$0	$350,000	$0	$0	$0
H Street @ Woodlawn Plaza	$350,000	10 + Years	$350,000	$0	$350,000	$0	$0	$0
I-5 & E Street Overcrossing Plaza	$350,000	10 + Years	$350,000	$0	$350,000	$0	$0	$0
I-5 & H Street Overcrossing Plaza	$350,000	10 + Years	$350,000	$0	$350,000	$0	$0	$0
Subtotal, Plazas	***$4,700,000***		***$4,700,000***	***$0***	***$4,700,000***	***$0***	***$0***	***$0***
Subtotal, All Public Spaces (Parks and Plazas)	***$64,200,000***		***$64,200,000***	***$0***	***$64,200,000***	***$0***	***$0***	***$0***
TOTAL, ALL PUBLIC FACILITIES AND INFRASTRUCTURE IMPROVEMENTS	**$135,459,250**		**$70,668,000**	**$64,791,250**	**$76,134,880**	**$2,017,620**	**$10,974,750**	**$46,332,000**

Unit costs are expressed in 2005 dollars through the entire spreadsheet and will be subject to change. Numbers are rounded to the thousandths dollar.

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 4
Allocation of Improvement Costs by Purpose and Geography through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Improvement Category	Geography	0-5 years	5-10 years	10+ years	Total
Transportation Costs					
New Capacity					
	Urban Core	$248,800	$3,744,580	$0	$3,993,380
	Bayfront	$13,200	$1,839,420	$0	$1,852,620
	Total	$262,000	$5,584,000	$0	$5,846,000
Amenity					
	Urban Core	$0	$0	$7,484,500	$7,484,500
	Bayfront	$0	$0	$0	$0
	Western Chula Vista	$9,869,000	$0	$1,105,750	$10,974,750
	Citywide	$8,292,000	$26,263,000	$11,608,000	$46,163,000
	Total	$18,161,000	$26,263,000	$20,198,250	$64,622,250
Traffic Signals					
New Capacity					
	Urban Core	$0	$373,000	$84,000	$457,000
	Bayfront	$0	$165,000	$0	$165,000
	Total	$0	$538,000	$84,000	$622,000
Transit Improvements					
Amenity					
	Urban Core	$0	$0	$0	$0
	Bayfront	$0	$0	$0	$0
	Western Chula Vista	$0	$0	$0	$0
	Citywide	$0	$169,000	$0	$169,000
	Total	$0	$169,000	$0	$169,000
Public Spaces					
New Capacity					
	Urban Core	$1,400,000	$31,900,000	$30,900,000	$64,200,000
Total Improvements					
New Capacity					
	Urban Core	$1,648,800	$36,017,580	$30,984,000	$68,650,380
	Bayfront	$13,200	$2,004,420	$0	$2,017,620
	Total	$1,662,000	$38,022,000	$30,984,000	$70,668,000
Amenity					
	Urban Core	$0	$0	$7,484,500	$7,484,500
	Bayfront	$0	$0	$0	$0
	Western Chula Vista	$9,869,000	$0	$1,105,750	$10,974,750
	Citywide	$8,292,000	$26,432,000	$11,608,000	$46,332,000
	Total	$18,161,000	$26,432,000	$20,198,250	$64,791,250

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

included, as it is assumed that private development would be encouraged to construct these as part of their site plans. The costs of wastewater treatment facilities required to serve new development are assumed to be fully funded through existing user fee programs. And finally, the costs for grade crossings at E and H Streets are to be funded through SANDAG as regional transportation improvements that will appropriately rely on a combination of local, state and federal transportation dollars.

III. DEVELOPMENT PROJECTIONS

The Urban Core Specific Plan proposes new zones to implement new development and redevelopment within designated areas consistent with the City's General Plan over the next 20 to 25 years. Because of the current developed condition of the Urban Core, and the unique nature of urban revitalization, the exact extent, timing and sequence of infill development and redevelopment pursuant to the new zones is unpredictable and depends on a variety of factors. These include, but are not limited to, long-term viability associated with recent development; longevity of other existing residential and commercial uses that may not redevelop over the 25 year planning horizon; preservation of significant historic structures; and development costs associated with the acquisition, demolition, and cleanup of urbanized land. To that end, the Specific Plan anticipates the following projected buildout over the life of the plan consistent with the General Plan:

Type of Development	Net New Development Potential in Urban Core at Full Buildout
Multifamily Residential	7,100 units
Retail	1,650,000 square feet
Commercial	1,300,000 square feet
Hotel/Motel	650,000 square feet

Previous analyses generated by Economics Research Associates (ERA) projected the amount of various types of development that are likely to occur during the next several decades. The ERA work, presented in a documented entitled *City of Chula Vista Urban Core Specific Plan Market Analysis* (June 2, 2005), indicated the following assumptions could represent an aggressive growth scenario for the Urban Core through 2030:

Development Type	Total Demand through 2030	Average Annual Absorption
Residential	3,639 Units	146 Units
Office	1,122,000 Square Feet	44,880 Square Feet

Note that the ERA study indicated that there would be no net new retail development in the Urban Core, as the report determined that the Urban Core already had as much retail as could be envisioned for the future. Also, the ERA report did not attempt to estimate demand and absorption for hotel/motel space.

To estimate the total new development in the Urban Core over the next several decades, EPS has used the ERA absorption projections for residential and office space, shown above, and created new projections for retail and hotel/motel uses. The retail projections are based on the amount of retail square footage envisioned in development projects currently proposed or in various stages of the development pipeline. These retail square footage figures were provided by City staff. EPS's hotel/motel projections assume that lodging development will be fully built out by 2030, because of high demand in the Urban Core as the developments and amenities envisioned for the Bayfront are completed.

In sum, EPS has assembled the development projections for the Urban Core Specific Plan Area shown on **Table 5**. These figures are applied to the various analyses that follow in the next Chapter of this Report.

Table 5
Development Absorption Projections by Time Period
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Land Use Category	Absorption Projections by Time Period				
	0-5 years	5-10 years	10-25 years	>25 Years	Total
Residential Units	730	730	2,179	3,461	7,100
Retail Square Feet (1)	234,000	25,000	0	0	259,000
Office Square Feet	224,400	224,400	673,200	178,000	1,300,000
Hotel/Motel Square Feet	130,000	130,000	390,000	0	650,000

(1) Total retail absorption is well below capacity created in the Specific Plan, corresponding to ERA's market analysis findings. Only retail square footage included in currently proposed projects is assumed to be built in Urban Core.

Sources: City of Chula Vista; Economics Research Associates; Economic & Planning Systems, Inc.

IV. DEVELOPMENT IMPACT FEE ANALYSIS

Enabled by AB 1600, development impact fees are required to establish the "nexus" or quantitative relationship between new development's demands on infrastructure, and the costs to provide capacity to meet those demands. Jurisdictions may not charge development impact fees that exceed the nexus-based costs attributable to new development. While this Facilities Implementation Analysis is not intended to establish the nexus for development impact fees at the level of engineering detail required for a legally defensible ordinance, it provides an estimate of the levels of fees that could be charged to new development in accordance with nexus principles, and evaluates the effects that such added costs may have on the feasibility of the types of development desired in the Urban Core.

This analysis calculates what fees might be charged by impact type, based on the development projected for the Urban Core Specific Plan alone, as a test of the feasibility of the plan. For reference, the discussion refers to transportation development impact fees ("TransDIF"), the Park Acquisition and Development Fee ("PAD"), and other terms generally used in Chula Vista based on existing fee programs. However, this analysis is restricted to the public improvement projects of the Urban Core Specific Plan and the developments projected to take place within that plan area. It is not expected that the City would establish a separate fee structure within this limited geography. Thus, at such time as a TransDIF is established for this area, or future adjustments are made to the PAD fees, those fees may vary significantly from the estimates contained in this report.

CALCULATION OF APPLICABLE IMPACT FEES

As discussed in Chapter II, the public facilities included in the Urban Core Specific Plan can be aggregated into only a few categories:

- Transportation Improvements—street widening, turning lanes, sidewalks and crosswalks, etc.
- Traffic Signals—lights, stop signs, phasing, etc.
- Transit Improvements—bus shelters
- Public Spaces—acquisition and development of parks and plazas

Of these categories, it is clear that the costs for certain transportation improvements, traffic signals, and public spaces would be eligible for funding through development impact fees, as they are demonstrably related to new development and impact fees currently exist for these purposes. Transit improvements are not as definitively related to new development in the Urban Core, as they may represent expanded services that serve the whole City or region, rather than just the residents, workers, and visitors of the Urban Core.

TRANSPORTATION IMPROVEMENTS

Certain transportation improvements are required to provide additional capacity on the existing roadway network, so that the vehicular traffic added from residents, workers, and visitors of the Urban Core will not cause congestion that causes health or safety problems. The City currently imposes a Transportation Development Impact Fee (TransDIF) on development in the Eastern Territories, and has proposed a similar fee to be applied throughout the City. The TransDIF in the Eastern Territories was structured for "greenfield" development, and in some cases is applied on a per-acre basis that does not reflect the conditions of the Urban Core, where redevelopment and higher density uses will be more prevalent than development on vacant land, and per-acre densities and mixes of uses will be more variable.

Transportation improvements are typically allocated to development based on trip generation—the number of vehicular trips that various types of development are likely to generate on the local road network. Trip generation varies by the type of development (residential, retail, office, etc.) and the context of the development (pedestrian-oriented mixed-use area vs. auto-oriented area). **Table 6** shows trip generation assumptions and calculations for the Urban Core Specific Plan at full buildout. As shown, it is projected that development in the Urban Core will generate over 100,000 daily vehicular trips at buildout, with residential development being responsible for the largest proportion of these trips.

Table 6 also applies the trip generation calculations to the costs for transportation improvements attributable to new development in the Urban Core, and calculates the fees that may be applicable to each type of development. As the table also illustrates, the calculated TransDIF's for all land uses in the Urban Core are substantially lower than those fees currently applied to new development in Eastern Chula Vista.

It is important to note that the costs used to calculate these TransDIF estimates do not include 100 percent of the projected costs of transportation improvements, as a large portion of those costs is required to address existing operational and aesthetic deficiencies and/or are assumed to be shared with development elsewhere in the City.

Table 7 compares the projected timing of TransDIF funding from new development in the Urban Core to the expected timing of various improvement costs. As shown, a disproportionate amount of improvement costs are shown to be desired in the five- to ten-year timeframe, creating a deficit in that period. In such instances, either projects would need to be deferred until more TransDIF funding is available from new development, or an alternative funding source would need to be utilized, which could then be back-filled with TransDIF funds as the development occurs in subsequent years.

Table 6
Transportation Development Impact Fee Estimate
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Traffic Signal Fee (1) Land Use Classification	Estimated Percent of Net New Development by Activity	Total New Development at Buildout (Units of Sq. Ft.)	Trip Generation per Day	Total Trips/ Day	Percent of Total Trips	Proportionate Share of Total Costs	Potential Fee per Unit or Sq. Ft.	Range of Proposed or Existing Fees (2)
Residential	Condo/Duplex	60%	4,260	8/DU	34,080	31.7%	$1,265,887	**$297**	
	Apartments	40%	2,840	6/DU	17,040	15.8%	$632,943	**$223**	
	Total/Average	100%	7,100		51,120	47.5%	$1,898,830	**$267**	$4,020 - $6,030/Unit
Retail	Commercial/Retail Center	50%	129,500	40/1000 SF	5,180	4.8%	$192,409	**$1.49**	
	Community Shopping Center	40%	103,600	80/1000 SF	8,288	7.7%	$307,854	**$2.97**	
	Restaurant/Lounge	10%	25,900	160/1000 SF	4,144	3.9%	$153,927	**$5.94**	
	Total/Average	100%	259,000		17,612	16.4%	$654,190	**$2.53**	$5.08 - $12.30/SF
Office	Commercial office building <100,000 SF	30%	390,000	20/1000 SF	7,800	7.3%	$289,728	**$0.74**	
	Commercial office building >100,000 SF	50%	650,000	17/1000 SF	11,050	10.3%	$410,447	**$0.63**	
	Corporate office building (single user)	10%	130,000	14/1000 SF	1,820	1.7%	$67,603	**$0.52**	
	Medical/dental building	10%	130,000	50/1000 SF	6,500	6.0%	$241,440	**$1.86**	
	Total/Average	100%	1,300,000		27,170	25.3%	$1,009,218	**$0.78**	$2.08 - $8.04/SF
Hotel/Motel	Hotel w/ convention & restaurant (3)	50%	325,000	10/Room	6,109	5.7%	$226,917	**$0.70**	
	Motel (2)	50%	325,000	9/Room	5,498	5.1%	$204,225	**$0.63**	
	Total/Average	100%	650,000		11,607	10.8%	$431,142	**$0.66**	$3.23 - $8.04/SF
Total					107,509	100%	$3,993,380		

(1) Traffic Signal Fee assumptions are used because they explicitly state the trip generation factors necessary to allocate costs.
(2) For residential, proposed fees provided by City staff. For non-residential, EPS estimated fees based on Eastern Territories fees (applied on per-acre basis), adjusted for likely densities of development in Urban Core.
(3) Assumes hotels/motels at 532 average gross square feet per room.

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 7
Transportation Development Impact Fee Projections through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Traffic Signal Fee (1) Land Use Classification	Estimated TransDIF	0-5 years		5-10 years		10+ years		Total	
			Units/SF	Fees	Units/SF	Fees	Units/SF	Fees	Units/SF	Fees
Residential	Condo/Duplex	$297	438	$130,155	438	$130,155	3,384	$1,005,578	4,260	$1,265,887
	Apartments	$223	292	$65,077	292	$65,077	2,256	$502,789	2,840	$632,943
	Total/Average	$267	730	$195,232	730	$195,232	5,640	$1,508,366	7,100	$1,898,830
Retail	Commercial/Retail Center	$1.49	117,000	$173,837	12,500	$18,572	0	$0	129,500	$192,409
	Community Shopping Center	$2.97	93,600	$278,138	10,000	$29,716	0	$0	103,600	$307,854
	Restaurant/Lounge	$5.94	23,400	$139,069	2,500	$14,858	0	$0	25,900	$153,927
	Total/Average	$2.53	234,000	$591,044	25,000	$63,146	0	$0	259,000	$654,190
Office	Commercial office building <100,000 SF	$0.74	67,320	$50,011	67,320	$50,011	255,360	$189,705	390,000	$289,728
	Commercial office building >100,000 SF	$0.63	112,200	$70,850	112,200	$70,850	425,600	$268,748	650,000	$410,447
	Corporate office building (single user)	$0.52	22,440	$11,669	22,440	$11,669	85,120	$44,264	130,000	$67,603
	Medical/dental building	$1.86	22,440	$41,676	22,440	$41,676	85,120	$158,087	130,000	$241,440
	Total/Average	$0.78	224,400	$174,207	224,400	$174,207	851,200	$660,805	1,300,000	$1,009,218
Hotel/Motel	Hotel w/ convention & restaurant (2)	$0.70	65,000	$45,383	65,000	$45,383	195,000	$136,150	325,000	$226,917
	Motel (3)	$0.63	65,000	$40,845	65,000	$40,845	195,000	$122,535	325,000	$204,225
	Total/Average	$0.66	130,000	$86,228	130,000	$86,228	390,000	$258,685	650,000	$431,142
Total TransDIF Fees				**$1,046,711**		**$518,813**		**$2,427,856**		**$3,993,380**
Total Costs Eligible for TransDIF (Urban Core Only)				**$248,800**		**$3,744,580**		**$0**		**$3,993,380**
TransDIF Surplus/(Deficit) in each Period				***$797,911***		***($3,225,767)***		***$2,427,856***		***$0***

(1) Traffic Signal Fee assumptions are used because they explicitly state the trip generation factors necessary to allocate costs.
(2) Assumes hotels at 650 gross square feet per room
(3) Assumes motels at 450 gross square feet per room

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

TRAFFIC SIGNALS

Traffic signals are required to safely and efficiently manage the flow of the vehicular traffic added from residents, workers, and visitors of the Urban Core. The City currently imposes a Traffic Signal Fee on most development projects throughout the City. The Traffic Signal Fee is allocated to development based on trip generation. **Table 8** applies the trip generation calculations to the costs for traffic signal improvements, and calculates the fees that may be applicable to each type of development.

Table 8 also compares the Traffic Signal Fees as calculated for the Urban Core to those currently applied to new development in Chula Vista. As shown, the projected Traffic Signal Fees for all land uses in the Urban Core are substantially lower than those currently levied by the City.

Table 9 compares the projected timing of Traffic Signal Fee funding from new development in the Urban Core to the expected timing of various improvement costs. As with the TransDIF improvements, a disproportionate amount of traffic signal improvement costs is shown to be desired in the five to ten year timeframe, creating a deficit in that period.

PUBLIC SPACES

Public spaces are also eligible for impact fee funding, as the amount of acreage required for parks and plazas is based on the residential population of an area, and is required to meet or exceed 3.0 acres per 1,000 residents. The City has an existing Park Acquisition and Development (PAD) fee ordinance, which is applied at one price level in the Eastern Territories and another (lower) level in Western Chula Vista. PAD fees are applied only to residential and hotel/motel development—retail and office projects are not currently required to contribute to park acquisition and development costs.

In the City's current PAD fee structure, the fee paid per hotel/motel room is 57.7 percent of the fee paid per residential unit. **Table 10** uses this ratio to allocate the estimated costs of park and plaza improvements included in the Urban Core Specific Plan. **Table 10** also compares the PAD Fees as calculated for the Urban Core to those currently applied to new development in Chula Vista. As shown, the calculated Urban Core fees are somewhat higher than the fees currently imposed in Western Chula Vista, but well below the fees being levied in the City's Eastern Territories.

Table 11 compares the projected timing of PAD funding from new development in the Urban Core to the expected timing of various improvement costs. Once again, a disproportionate amount of improvement costs is shown to be desired in the five- to ten-year timeframe, creating a deficit in that period. If park additions are required in proportion to population increases (3.0 acres per 1,000 population), this timing

Table 8
Traffic Signal Development Impact Fee Estimate
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Traffic Signal Fee Land Use Classification	Percent of Net New Development by Activity	Total New Development at Buildout (Units/Sq. Ft./Rooms)	Trip Generation per Day	Total Trips/ Day	Percent of Total Trips	Proportionate Share of Total Costs	Potential Fee per Unit/Sq. Ft./Room	Currently Applicable Traffic Signal Fee
Residential	Condo/Duplex	60%	4,260	8/DU	34,080	31.7%	$144,865	**$34.01**	$213.20
	Apartments	40%	2,840	6/DU	17,040	15.8%	$72,432	**$25.50**	$159.90
	Total/Average	100%	7,100		51,120	47.5%	$217,297	**$30.61**	
Retail	Commercial/Retail Center	50%	129,500	40/1000 SF	5,180	4.8%	$22,019	**$0.17**	$1.07
	Community Shopping Center	40%	103,600	80/1000 SF	8,288	7.7%	$35,230	**$0.34**	$2.13
	Restaurant/Lounge	10%	25,900	160/1000 SF	4,144	3.9%	$17,615	**$0.68**	$4.26
	Total/Average	100%	259,000		17,612	16.4%	$74,864	**$0.29**	
Office	Commercial office building <100,000 SF	30%	390,000	20/1000 SF	7,800	7.3%	$33,156	**$0.09**	$0.53
	Commercial office building >100,000 SF	50%	650,000	17/1000 SF	11,050	10.3%	$46,971	**$0.07**	$0.45
	Corporate office building (single user)	10%	130,000	14/1000 SF	1,820	1.7%	$7,736	**$0.06**	$0.37
	Medical/dental building	10%	130,000	50/1000 SF	6,500	6.0%	$27,630	**$0.21**	$1.33
	Total/Average	100%	1,300,000		27,170	25.3%	$115,492	**$0.09**	
Hotel/Motel	Hotel w/ convention & restaurant (1)	50%	611	10/Room	6,110	5.7%	$25,972	**$42.51**	$266.50/Room
	Motel (2)	50%	611	9/Room	5,499	5.1%	$23,375	**$38.26**	$239.85/Room
	Total/Average	100%	1,222		11,609	10.8%	$49,347	**$40.38**	
Total					107,511	100%	$457,000		

(1) Assumes hotels at 650 gross square feet per room
(2) Assumes motels at 450 gross square feet per room

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 9
Traffic Signal Fee Projections through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Land Use Classification	Estimated Fee	0-5 years		5-10 years		10+ years		Total	
			Units/SF/ Rooms	Fees	Units/SF/ Rooms	Fees	Units/SF/ Rooms	Fees	Units/SF/ Rooms	Fees
Residential	Condo/Duplex	$34.01	438	$14,895	438	$14,895	3,384	$115,076	4,260	$144,865
	Apartments	$25.50	292	$7,447	292	$7,447	2,256	$57,538	2,840	$72,432
	Total/Average	$30.61	730	$22,342	730	$22,342	5,640	$172,614	7,100	$217,297
Retail	Commercial/Retail Center	$0.17	117,000	$19,893	12,500	$2,125	0	$0	129,500	$22,019
	Community Shopping Center	$0.34	93,600	$31,829	10,000	$3,401	0	$0	103,600	$35,230
	Restaurant/Lounge	$0.68	23,400	$15,915	2,500	$1,700	0	$0	25,900	$17,615
	Total/Average	$0.29	234,000	$67,638	25,000	$7,226	0	$0	259,000	$74,864
Office	Commercial office building <100,000 SF	$0.09	67,320	$5,723	67,320	$5,723	255,360	$21,709	390,000	$33,156
	Commercial office building >100,000 SF	$0.07	112,200	$8,108	112,200	$8,108	425,600	$30,755	650,000	$46,971
	Corporate office building (single user)	$0.06	22,440	$1,335	22,440	$1,335	85,120	$5,066	130,000	$7,736
	Medical/dental building	$0.21	22,440	$4,769	22,440	$4,769	85,120	$18,091	130,000	$27,630
	Total/Average	$0.09	224,400	$19,936	224,400	$19,936	851,200	$75,621	1,300,000	$115,492
Hotel/Motel	Hotel w/ convention & restaurant (1)	$42.51	122	$5,194	122	$5,194	367	$15,581	611	$25,968
	Motel (2)	$38.26	122	$4,674	122	$4,674	367	$14,023	611	$23,371
	Total/Average	$40.38	244	$9,868	244	$9,868	733	$29,603	1,222	$49,339
Total Traffic Signal Fees Projected (rounded)				**$119,800**		**$59,400**		**$277,800**		**$457,000**
Total Costs Eligible for Traffic Signal Fees (Urban Core Only)				**$0**		**$373,000**		**$84,000**		**$457,000**
Traffic Signal Surplus/(Deficit) in each Period				***$119,800***		***($313,600)***		***$193,800***		***$0***

(1) Assumes hotels at 650 gross square feet per room
(2) Assumes motels at 450 gross square feet per room

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 10
Parks Acquisition and Development Impact Fee Estimate
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Total New Development at Buildout (Units/Rooms)	Proportionate Share of Total Costs	Potential Fee per Unit/Room	Currently Applicable PAD Fee in Western CV	Currently Applicable PAD Fee in Eastern CV
Residential	7,100	$58,404,955	**$8,226.05**	$6,651.00	$12,352.00
Hotel/Motel (1)	1,222	$5,790,086	**$4,738.20**	$3,835.00	$7,122.00
Total (rounded)		$64,200,000			

(1) Assumes hotels/motel rooms pay 57.6% of the fees paid by residential units, as in current ordinance, and average 532 gross square feet per room.

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 11
Parks Acquisition and Development Fee Projections through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Estimated Fee	0-5 years Units/ Rooms	0-5 years Fees	5-10 years Units/ Rooms	5-10 years Fees (rounded)	10+ years Units/ Rooms	10+ years Fees (rounded)	Total Units/ Rooms	Total Fees (rounded)
Residential	$8,226.05	730	$6,010,000	730	$6,010,000	5,640	$46,390,000	7,100	$58,410,000
Hotel/Motel	$4,738.20	244	$1,160,000	244	$1,160,000	733	$3,470,000	1,222	$5,790,000
Total PAD Fees Projected			**$7,170,000**		**$7,170,000**		**$49,860,000**		**$64,200,000**
Total Costs Eligible for PAD Fees (Urban Core Only)			**$1,400,000**		**$31,900,000**		**$30,900,000**		**$64,200,000**
PAD Fee Surplus/(Deficit) in each Period			***$5,770,000***		***($24,730,000)***		***$18,960,000***		***$0***

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

assumption is overly aggressive. The improvement timing assumptions on **Table 1** equate to the addition of 15 to 20 acres of parks (not including additional plaza acreage) within the first ten years – substantially more than the 11 acres that would be required for the new population (assuming 1,460 total units at 2.5 people per unit). From a funding perspective, it may be advisable to delay the acquisition and development of much of this required park land.

COMBINED DEVELOPMENT IMPACT FEES

Table 12 summarizes the total development impact fees calculated herein, and compares them to the total estimated costs of improvements eligible for impact fee funding. Consistent with the findings for each impact fee individually, **Table 12** shows that there is a projected surplus in the first five years, followed by a cumulative deficit in the 5-to10-year period that would then be recouped after 10 years.

DEVELOPMENT FEASIBILITY IMPACTS OF IMPACT FEES

The Urban Core Specific Plan is creating capacity for new development that is desired in an effort to revitalize this important area of Chula Vista. As such, it is important that the development impact fees imposed upon new development not create major hurdles to development feasibility. If the development impact fees are too high, the added costs to satisfy those fee requirements will in turn require higher price points for the development itself (residential values, commercial lease rates, etc.), assuming that other development costs (construction, design, financing, etc.) remain constant. To the extent that the market will not support these higher values or rents, the desired development is not likely to occur.

It is important to note that the City currently levies development impact fees beyond those estimated in this report. Examples include sewerage participation fees and Public Facilities Development Impact Fees (PFDIF). In addition, the Sweetwater Authority water district charges impact fees for water infrastructure. These additional fees have not been included in this analysis because no corresponding infrastructure or facility improvements have been expressly identified in the Urban Core Specific Plan. However, these additional fees will continue to be levied upon new development in the Urban Core, and used to support the growing demand for improvements such as police and fire facilities, libraries, recreational facilities, and water and wastewater infrastructure.

Table 13 compares the total development impact fees that may be imposed by the City to the estimated costs of development of various types. As shown, the combination of development impact fees calculated herein and the PFDIF and sewerage participation fees currently required represents a small fraction of the total costs associated with new development. At the levels calculated in this analysis, it is not expected that the development impact fees would substantially affect the feasibility of development in the

Table 12
Total Combined Development Impact Fee Projections through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Fee Type	0-5 years	5-10 years	10+ years	Total
TransDIF	$1,046,711	$518,813	$2,427,856	$3,993,380
Traffic Signal Fee	$119,800	$59,400	$277,800	$457,000
PAD Fee	$7,170,000	$7,170,000	$49,860,000	$64,200,000
Total Combined Fees Projected	**$8,336,511**	**$7,748,213**	**$52,565,656**	**$68,650,380**
Total Costs Eligible for Fees (Urban Core Only)	**$1,648,800**	**$36,017,580**	**$30,984,000**	**$68,650,380**
Combined Fee Surplus/(Deficit) in each Period	***$6,687,711***	***($28,269,367)***	***$21,581,656***	***$0***

Sources: City of Chula Vista; McGill Martin Self; Economic & Planning Systems, Inc.

Table 13
Feasibility Impacts of Estimated Development Impact Fees
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Activity Type	Estimated Development Cost (1)	TransDIF (2)	Traffic Signal Fee	PAD Fee	PFDIF (3)	Sewerage Participation Fee (3)	Total Fees	Fees as % of Costs
Residential (per Unit)								
With Existing Fees	$300,000	$4,020.00	$159.90	$6,651.00	$5,109.00	$2,608.50	$18,548.40	6.2%
With Newly Calculated Fees	$300,000	$267.44	$30.61	$8,226.05	$5,109.00	$2,608.50	$16,241.60	5.4%
Retail (per Sq. Ft.)								
With Existing Fees	$200	$5.08	$1.07	$0.00	$1.66	$0.73	$8.54	4.3%
With Newly Calculated Fees	$200	$2.53	$0.29	$0.00	$1.66	$0.73	$5.20	2.6%
Office (per Sq. Ft.)								
With Existing Fees	$275	$2.08	$0.37	$0.00	$0.33	$0.73	$3.51	1.3%
With Newly Calculated Fees	$275	$0.78	$0.09	$0.00	$0.33	$0.73	$1.93	0.7%
Hotel/Motel (per Sq. Ft.) (4)								
With Existing Fees	$250	$3.23	$0.45	$7.21	$0.33	$3.45	$14.67	5.9%
With Newly Calculated Fees	$250	$0.66	$0.08	$8.91	$0.33	$3.45	$13.43	5.4%

(1) Residential cost assumptions based on Mid-Rise Condo costs in Keyser Martson "West Side Residential In-Fill Feasibility Analysis" (August 30, 2004), increased by 20% to reflect inflation of construction costs. Retail, Office, and Hotel/Motel costs are estimated based on EPS experience on other recent urban development projects. Development costs do not include property acquisition costs.

(2) Existing TransDIF fees are based on EPS extrapolation of fees applied in Eastern Territories, based on assumed density of Urban Core development.

(3) Public Facilities Development Impact Fee (PFDIF) and Sewerage Participation Fee are not assumed to be different than those currently levied on Urban Core development.

(4) Assumes average of 532 gross square feet per room

Sources: Economic & Planning Systems, Inc.

Urban Core. By far, the greater factors will be the achievable price points (sale or lease) for the new development, and the costs of construction and property acquisition.

Furthermore, it is possible that development impact fees levied elsewhere in the City of Chula Vista could be used for some of the improvements listed in the Urban Core Specific Plan. As noted on **Tables 2 through 4**, there are numerous improvements included in the Specific Plan that may have benefits beyond the Urban Core. Impact fees on development in the Bayfront, broader Western Chula Vista, or the entire City could potentially be used to fund some of these additional improvements.

V. TAX INCREMENT FINANCING POTENTIAL

The City has retained Harrell & Company Advisors to provide tax increment projections for each of the Redevelopment Project Areas in Chula Vista. None of these Project Areas conforms perfectly to the boundaries of the Urban Core Specific Plan area. Some parcels in the Urban Core Specific Plan area are located within the Town Center I and Town Center II Project Areas, while others are located within the Amended Project Area, and still others are not located in any Redevelopment Project Area. The boundaries of each Redevelopment Project Area are shown on **Figure 1**.

EPS has worked with City staff and Harrell & Company to estimate the tax increment projections for each Redevelopment Project Area except the Bayfront area. The tax increment projections are based on the following assumptions:

1. Tax increment from projects that are currently in the development pipeline (planned, permitted, or under construction) is estimated based on the specific known attributes of the project (size, price points, timing, etc.). *This analysis does not include assumptions of tax increment from the evolving plans for redevelopment of the Bayfront (Gaylord, housing, etc.).*

2. The tax increment from all other Project Area parcels on which no specific projects are currently proposed is estimated based on an average of 4 percent annual growth in assessed value. This approach deliberately exceeds the 2 percent growth cap required under Proposition 13, as it is expected that many parcels in the Urban Core and the Redevelopment Project Areas will be redeveloped for significantly higher-value uses over the next several decades, and that there will be additional reassessments triggered by the sales of existing properties that do not redevelop. City staff has confirmed that this 4 percent growth assumption is reasonable, given the level of investment expected as well as the assessed value increases associated with ongoing resales of existing properties.

3. Desired improvements in the Urban Core are eligible to be funded using tax increment from any of the Redevelopment Project Areas shown on **Figure 1**. This assumption has been confirmed as accurate and appropriate by the City's Redevelopment Manager.

Table 14 shows the tax increment projections for each of the Redevelopment Project Areas in various time periods. As shown, these areas are expected to generate a total of $340 million of net tax increment (after housing set-asides, agency pass-throughs, County administrative costs, etc.) through the year 2036, when the last of the Redevelopment Project Areas is scheduled to sunset. However, $28 million of this combined net tax increment will be used to pay debt service (principal and interest) on bonds issued in 2000. Therefore, the net tax increment that could potentially be available for projects and operations in the Urban Core is estimated at $312 million.

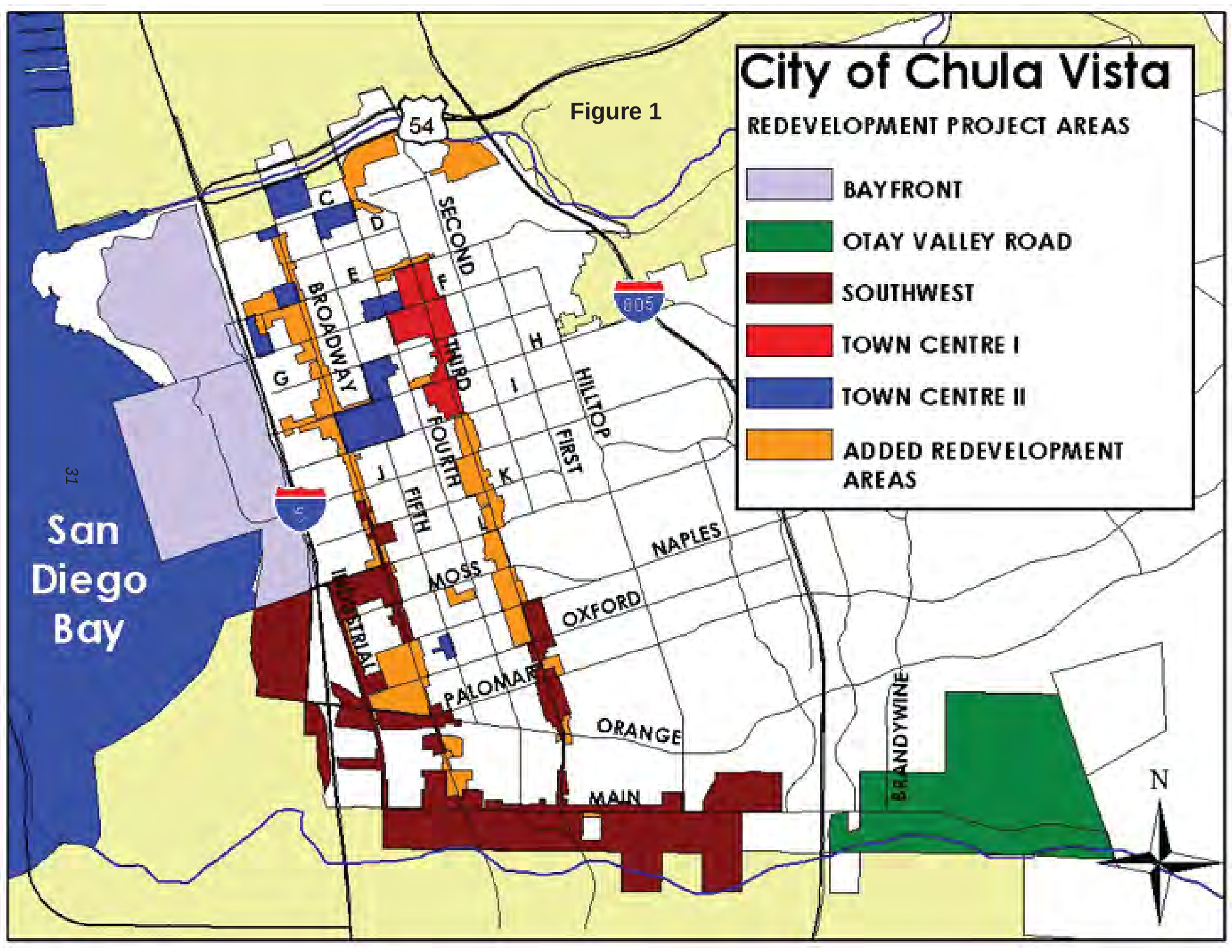
Figure 1
City of Chula Vista
REDEVELOPMENT PROJECT AREAS
BAYFRONT
OTAY VALLEY ROAD
SOUTHWEST
TOWN CENTRE I
TOWN CENTRE II
ADDED REDEVELOPMENT AREAS
San Diego Bay
54
805
5
SECOND
THIRD
FOURTH
FIFTH
FIRST
HILLTOP
BROADWAY
INDUSTRIAL
NAPLES
MOSS
OXFORD
PALOMAR
ORANGE
MAIN
BRANDYWINE
C
D
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Table 14
Projected Tax Increment Available for Urban Core Projects through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Year	Town Center I	Town Center II	Amended Project Area	Southwest Project Area	Otay Valley Project Area	Total Tax Increment for All Project Areas	Debt Service for 2000 Bonds	Available for Projects and Operations
2006	$1,325,200	$910,600	$231,600	$980,600	$1,070,200	$4,518,200	($1,203,083)	$3,315,117
2007	$1,366,200	$939,400	$334,200	$1,087,400	$1,209,600	$4,936,800	($1,201,313)	$3,735,487
2008	$1,531,600	$1,102,800	$529,600	$1,256,400	$1,339,200	$5,759,600	($1,203,898)	$4,555,702
2009	$1,894,600	$1,268,000	$848,000	$1,586,400	$1,375,800	$6,972,800	($1,200,623)	$5,772,177
2010	$2,363,400	$1,438,800	$1,206,800	$1,791,400	$1,413,800	$8,214,200	($1,201,263)	$7,012,937
2011	$2,412,800	$1,611,400	$1,466,800	$1,867,200	$1,452,400	$8,810,600	($1,200,563)	$7,610,037
2012	$2,465,200	$1,790,400	$1,607,200	$1,944,400	$1,493,400	$9,300,600	($1,203,483)	$8,097,117
2013	$2,517,000	$1,837,200	$1,750,800	$2,026,200	$1,536,800	$9,668,000	($1,204,748)	$8,463,252
2014	$2,571,800	$1,885,400	$1,901,000	$2,110,200	$1,580,800	$10,049,200	($1,204,308)	$8,844,892
2015	$2,627,800	$1,585,000	$2,057,200	$2,198,200	$1,613,200	$10,081,400	($1,142,113)	$8,939,287
2016	$2,686,800	$1,620,000	$2,172,400	$2,290,400	$1,647,800	$10,417,400	($1,141,113)	$9,276,287
2017	$2,746,000	$1,655,400	$2,292,000	$2,383,800	$1,685,000	$10,762,200	($1,138,318)	$9,623,882
2018	$2,808,200	$1,691,400	$2,415,700	$2,483,000	$1,723,400	$11,121,700	($1,138,678)	$9,983,022
2019	$2,873,200	$1,727,600	$2,545,600	$2,584,200	$1,762,200	$11,492,800	($1,142,178)	$10,350,622
2020	$2,939,200	$1,764,200	$2,679,300	$2,692,000	$1,802,400	$11,877,100	($1,138,840)	$10,738,260
2021	$3,009,000	$1,802,200	$2,818,600	$2,790,600	$1,845,800	$12,266,200	($1,138,595)	$11,127,605
2022	$3,079,000	$1,844,200	$2,963,100	$2,894,000	$1,889,400	$12,669,700	($1,141,495)	$11,528,205
2023	$3,154,400	$1,884,800	$3,112,600	$3,002,800	$1,934,400	$13,089,000	($1,142,275)	$11,946,725
2024	$3,230,600	$1,926,400	$3,268,700	$3,115,000	$1,982,400	$13,523,100	($1,140,350)	$12,382,750
2025	$3,308,800	$1,971,400	$3,430,300	$3,230,800	$2,031,600	$13,972,900	($1,141,275)	$12,831,625
2026	$3,391,400	$2,016,600	$3,598,000	$3,351,600	$2,082,000	$14,439,600	($1,139,781)	$13,299,819
2027	$3,475,800	$2,063,800	$3,773,000	$3,478,600	$2,135,400	$14,926,600	($1,140,869)	$13,785,731
2028	$3,564,600	$2,111,400	$3,953,100	$3,609,600	$2,190,000	$15,428,700	($1,139,269)	$14,289,431
2029	$0	$2,160,800	$4,141,300	$3,745,600	$2,247,400	$12,295,100	($754,981)	$11,540,119
2030	$0	$2,211,400	$4,336,500	$3,886,400	$2,305,200	$12,739,500	($753,431)	$11,986,069
2031	$0	$261,200	$4,539,500	$4,032,800	$2,366,600	$11,200,100	$0	$11,200,100
2032	$0	$264,200	$4,749,600	$4,185,800	$2,430,800	$11,630,400	$0	$11,630,400
2033	$0	$266,200	$4,969,400	$4,345,200	$2,496,200	$12,077,000	$0	$12,077,000
2034	$0	$268,200	$5,195,900	$4,509,800	$2,565,200	$12,539,100	$0	$12,539,100
2035	$0	$272,000	$5,432,400	$4,681,400	$2,636,000	$13,021,800	$0	$13,021,800
2036	$0	$274,000	$5,677,400	$4,860,200	$0	$10,811,600	$0	$10,811,600
Total	$61,342,600	$44,426,400	$89,997,600	$89,002,000	$55,844,400	$340,613,000	($28,296,843)	$312,316,157

Table 14
Projected Tax Increment Available for Urban Core Projects through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Year	Town Center I	Town Center II	Amended Project Area	Southwest Project Area	Otay Valley Project Area	Total Tax Increment for All Project Areas	Debt Service for 2000 Bonds	Available for Projects and Operations
Values by Time Period								
0-5 Years (2006-2010)								
Nominal Value	$8,481,000	$5,659,600	$3,150,200	$6,702,200	$6,408,600	$30,401,600	($6,010,180)	$24,391,420
Present Value at 3% Discount Rate	$7,928,965	$5,300,888	$2,903,531	$6,264,022	$6,022,088	$28,419,495	($5,670,242)	$22,749,253
5-10 Years (2011-2015)								
Nominal Value	$12,594,600	$8,709,400	$8,783,000	$10,146,200	$7,676,600	$47,909,800	($5,955,215)	$41,954,585
Present Value at 3% Discount Rate	$10,236,613	$7,086,374	$7,112,179	$8,237,102	$6,237,393	$38,909,661	($4,849,111)	$34,060,550
10+ Years (2016-2036)								
Nominal Value	$40,267,000	$30,057,400	$78,064,400	$72,153,600	$41,759,200	$262,301,600	($16,331,448)	$245,970,152
Present Value at 3% Discount Rate	$25,001,927	$17,855,772	$41,724,336	$38,993,275	$23,236,579	$146,811,889	($10,046,807)	$136,765,082
All Years (2006-2036)								
Nominal Value	$61,342,600	$44,426,400	$89,997,600	$89,002,000	$55,844,400	$340,613,000	($28,296,843)	$312,316,157
Present Value at 3% Discount Rate	$43,167,505	$30,243,034	$51,740,046	$53,494,399	$35,496,060	$214,141,045	($20,566,160)	**$193,574,884**

Sources: Harrell & Company Advisors; Economic & Planning Systems, Inc.

Table 14 also translates the tax increment projections into today's dollars, assuming a discount rate of 3 percent per year. The 3 percent discount rate simply translates the figures into today's dollars using a general inflation rate, which can be considered the appropriate figures to compare to the estimated improvement costs in today's dollars if the tax increment is simply dedicated on a "pay-as-you-go" basis over the next several decades. The sum of the tax increment under the 3 percent discount rate, therefore, is the appropriate point of comparison to the improvement costs if the City chooses not to issue a tax increment bond. As shown, EPS has estimated that the tax increment will yield roughly $194 million in today's dollars over the next 30 years.

Table 15 compares the total improvement costs to the combined funding from the tax increment projections and the estimated development impact fees from the previous chapter. As that table clearly shows, the combination of these potential funding sources greatly exceeds the total improvement costs (by nearly double). In addition, **Table 15** shows that, if all estimated impact fees are received, only 35 percent of the projected available tax increment would be required to fund Urban Core improvements, leaving 65 percent (roughly $127 million) in funding available for other projects.

It is important to note that, on a pay-as-you-go basis, the combination of tax increment and impact fees can more than cover the costs of all desired improvements in the first five years and over the full buildout of the Urban Core, but would not meet the full expected costs in the 5-10 year period. While the tax increment itself would cover the costs of improvements *not* funded by impact fees, the tax increment is not projected to cover those costs *and* the temporary deficit in impact fee funding. Thus, it is clear that either temporary funding would have to be secured or some of those 5-10 year improvements would need to be deferred.

Tables 16 through 18 explore one approach to closing the temporary funding gap in the 5-10 year time period—bonds based on tax increment realized at the time of bond issuance. **Table 16** shows the bonding capacity of the tax increment an annual basis. This analysis assumes that bonds issued on the tax increment would be subject to a 1.20 debt coverage ratio, meaning projected annual revenues exceed the amount dedicated to debt service by 20 percent to allow room for fluctuations in the actual tax increment received. EPS has also assumed that the bonds would have a 6.0 percent interest rate, that issuance costs would equal three percent of the total bond amount, and that the terms of the bonds would be only as many years as the tax increment was projected to be collected (through 2036). Thus, a bond issued in 2006 would have a 30-year term, while a bond issued in 2016 would have a 20-year term. As shown, EPS has estimated that the available tax increment in 2012 (year 6) could support a bond that would yield $82 million of up-front dollars from which improvements could be funded over time. The present value of that bond capacity is estimated at roughly $69 million.

As was shown on **Table 15**, the combination of annual tax increment and impact fees could fully fund the improvement costs in the first five-year period, but would not fully fund the costs in the 5-10 year period. **Table 17** shows that, if a bond is issued in Year 6 to fully fund the period's improvements not covered by impact fees, such a bond would

Table 15
Improvement Costs vs. Projected Tax Increment and Impact Fees Through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Item	0-5 years (2006 - 2010)	5-10 years (2011 - 2015)	10+ years (2016 - 2036)	Total
Improvements to be Funded through Impact Fees on URBAN CORE Development (1)	$1,648,800	$36,017,580	$30,984,000	$68,650,380
Improvements NOT Funded by Impact Fees on URBAN CORE Development	$18,174,200	$28,436,420	$20,198,250	$66,808,870
Total Improvement Costs	**$19,823,000**	**$64,454,000**	**$51,182,250**	**$135,459,250**
Present Value of Available Tax Increment at 3% Discount Rate (2)	$22,749,253	$34,060,550	$136,765,082	$193,574,884
Impact Fees on URBAN CORE Development (3)	$8,336,511	$7,748,213	$52,565,656	$68,650,380
Total Combined Funding (Tax Increment plus Impact Fees)	**$31,085,764**	**$41,808,762**	**$189,330,738**	**$262,225,264**
Net Surplus/(Deficit) in Combined Funding by Period	***$11,262,764***	***($22,645,238)***	***$138,148,488***	***$126,766,014***
Cumulative Surplus/(Deficit)	***$11,262,764***	***($11,382,474)***	***$126,766,014***	***$126,766,014***
Tax Increment Required to Fund Urban Core Improvements NOT Covered by Impact Fees on URBAN CORE Development (4)				***$66,808,870***
Percent of Available Tax Increment Required for Urban Core Improvements				*35%*
Remaining Tax Increment Available for Other Projects				*$126,766,014*

(1) From **Table 12**
(2) From **Table 14**
(3) From **Table 12**
(4) Difference between total present value of projected tax increment and total impact fees on Urban Core development.

Source: Economic & Planning Systems, Inc.

Table 16
Projected Tax Increment Bonding Capacity by Year
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Year	Years from Present (2006)	Available for Projects and Operations (All Project Areas)	Potential Bonding Capacity (1)	Present Value of Bonding Capacity (2)
2006	0	$3,315,117	$36,885,887	$36,885,887
2007	1	$3,735,487	$41,037,436	$39,842,171
2008	2	$4,555,702	$49,368,546	$46,534,589
2009	3	$5,772,177	$61,638,279	$56,407,757
2010	4	$7,012,937	$73,712,228	$65,492,360
2011	5	$7,610,037	$78,636,132	$67,832,219
2012	6	$8,097,117	$82,144,218	$68,794,490
2013	7	$8,463,252	$84,168,999	$68,437,099
2014	8	$8,844,892	$86,092,746	$67,962,409
2015	9	$8,939,287	$85,006,320	$65,150,266
2016	10	$9,276,287	$86,005,277	$63,996,003
2017	11	$9,623,882	$86,802,387	$62,707,891
2018	12	$9,983,022	$87,374,531	$61,282,738
2019	13	$10,350,622	$87,660,642	$59,692,631
2020	14	$10,738,260	$87,720,116	$57,993,331
2021	15	$11,127,605	$87,359,874	$56,072,979
2022	16	$11,528,205	$86,616,538	$53,976,563
2023	17	$11,946,725	$85,489,793	$51,722,731
2024	18	$12,382,750	$83,917,160	$49,292,487
2025	19	$12,831,625	$81,804,479	$46,651,951
2026	20	$13,299,819	$79,125,992	$43,810,143
2027	21	$13,785,731	N/A	N/A
2028	22	$14,289,431	N/A	N/A
2029	23	$11,540,119	N/A	N/A
2030	24	$11,986,069	N/A	N/A
2031	25	$11,200,100	N/A	N/A
2032	26	$11,630,400	N/A	N/A
2033	27	$12,077,000	N/A	N/A
2034	28	$12,539,100	N/A	N/A
2035	29	$13,021,800	N/A	N/A
2036	30	$10,811,600	N/A	N/A
Total		$312,316,157		

(1) Assumptions:

Debt Coverage Ratio =	120.0%
Bonding Interest Rate =	6.0%
Issuance Costs=	3.0%

Term = Number of Years remaining on Project Areas (through 2036) IF at least 10 years remain; Assumes no bond issue for less than 10-year term.

(2) Assumes 3% discount rate.

Sources: Harrell & Company Advisors; Economic & Planning Systems, Inc.

Table 17
Projected Tax Increment and Bonding Capacity Available for Urban Core Projects through Time
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Item	0-5 years (2006 - 2010)	5-10 years (2011 - 2015)	10+ years (2016 - 2036)	Total
Total Improvement Costs (1)	**$19,823,000**	**$64,454,000**	**$51,182,250**	**$135,459,250**
less Impact Fees on URBAN CORE Development (2)	$8,336,511	$7,748,213	$52,565,656	$68,650,380
Surplus/(Shortfall) of Available Impact Fees	***($11,486,489)***	***($56,705,787)***	***$1,383,406***	***($66,808,870)***
Tax Increment Revenues				
Present Value of Required Tax Increment Bond (3)	$0	$56,705,787	$0	$56,705,787
Present Value of Tax Increment NOT Used for Bond Debt Service (4)	$22,749,253	$13,085,413	$70,138,278	$105,972,944
Present Value of Remaining Tax Increment After Fully Funding Improvement Costs In Excess of Available Impact Fees	***$11,262,764***	***$13,085,413***	***$71,521,684***	***$95,869,862***

(1) See **Tables 2 through 4**.
(2) See **Table 12**.
(3) Used to offset shortfall in Years 5-10. See **Table 18** for bond capacity and debt service estimates. Present value calculated at 3% discount rate.
(4) Present Value at 3% discount rate of tax increment not used to pay annual bond debt service of $5,395,040

Source: Economic & Planning Systems, Inc.

Table 18
Required Tax Increment Bond and Debt Service to Cover Years 5-10 Shortfall
Urban Core Specific Plan Facilities Implementation Analysis; EPS #15001

Year	Years from Present (2006)	Available for Projects and Operations (All Project Areas)	Nominal Value of Required Bond (1)	Annual Debt Service on Bonds Issued in Year 6 (2)	Available Tax Increment After Debt Service
2006	0	$3,315,117		$0	$3,315,117
2007	1	$3,735,487		$0	$3,735,487
2008	2	$4,555,702		$0	$4,555,702
2009	3	$5,772,177		$0	$5,772,177
2010	4	$7,012,937		$0	$7,012,937
2011	5	$7,610,037		$0	$7,610,037
2012	6	$8,097,117	**$67,709,676**	$5,395,040	$2,702,077
2013	7	$8,463,252		$5,395,040	$3,068,212
2014	8	$8,844,892		$5,395,040	$3,449,852
2015	9	$8,939,287		$5,395,040	$3,544,247
2016	10	$9,276,287		$5,395,040	$3,881,247
2017	11	$9,623,882		$5,395,040	$4,228,842
2018	12	$9,983,022		$5,395,040	$4,587,982
2019	13	$10,350,622		$5,395,040	$4,955,582
2020	14	$10,738,260		$5,395,040	$5,343,220
2021	15	$11,127,605		$5,395,040	$5,732,565
2022	16	$11,528,205		$5,395,040	$6,133,165
2023	17	$11,946,725		$5,395,040	$6,551,685
2024	18	$12,382,750		$5,395,040	$6,987,710
2025	19	$12,831,625		$5,395,040	$7,436,585
2026	20	$13,299,819		$5,395,040	$7,904,779
2027	21	$13,785,731		$5,395,040	$8,390,691
2028	22	$14,289,431		$5,395,040	$8,894,391
2029	23	$11,540,119		$5,395,040	$6,145,079
2030	24	$11,986,069		$5,395,040	$6,591,029
2031	25	$11,200,100		$5,395,040	$5,805,060
2032	26	$11,630,400		$5,395,040	$6,235,360
2033	27	$12,077,000		$5,395,040	$6,681,960
2034	28	$12,539,100		$5,395,040	$7,144,060
2035	29	$13,021,800		$5,395,040	$7,626,760
2036	30	$10,811,600		$5,395,040	$5,416,560
Total		$312,316,157		$134,875,990	$177,440,167

(1) Based on shortfall after impact fees in Years 5-10 shown on **Table 17**, inflated by 3% per year.

(1) Assumptions:

Debt Coverage Ratio =	120.0%
Bonding Interest Rate =	6.0%
Issuance Costs=	3.0%

Term = Number of Years remaining on Project Areas (through 2036) IF at least 10 years remain;
Assumes no bond issue for less than 10-year term.

Sources: Harrell & Company Advisors; Economic & Planning Systems, Inc.

have to yield roughly $57 million in current dollars. This figure is well below the actual capacity created by the tax increment in Year 6, which was projected at $69 million (present value) on **Table 16**. As such, funding the deficit would not require the full bonding capacity available in Year 6, leaving revenues available for other projects. In addition, the portion of tax increment that is not required for debt service in the years following the bond issuance could also be available for other projects, as detailed on **Table 18**.

In sum, **Table 17** shows that the combination of impact fees on Urban Core development, "pay-as-you-go" tax increment funds and tax increment bonding capacity would be more than adequate to fully fund all of the improvement costs envisioned in the Specific Plan. Nearly $100 million of surplus revenue is shown to be likely, which could then be used for additional improvements in the Urban Core or elsewhere in Chula Vista.

VI. CONCLUSIONS

This Facilities Implementation Analysis for the Urban Core Specific Plan has estimated the costs of various public improvements and allocated those costs according to their purpose and the geographic areas of benefit/responsibility. This analysis has also estimated the improvement costs that could be funded through development impact fees, and identified financial gaps in certain time periods and overall that would need to be addressed through other funding mechanisms. One such mechanism is tax increment financing from the City's Redevelopment Project Areas, which are projected to generate sufficient revenues over the next several decades to fully cover the costs of Urban Core improvements.

To the extent that other funding sources and mechanisms can be utilized, the costs addressed through impact fees and tax increment financing can be reduced. The reduction of impact fees can enhance the feasibility of desired development in the Urban Core, although it is not expected that the cost burden of the impact fees calculated herein would represent a significant feasibility hurdle for development. The reduction of the reliance on tax increment financing would enable those funds to be used for other improvement projects elsewhere in the City.

Other funding mechanisms that could be considered and sought to finance the public improvements envisioned in the Urban Core Specific Plan include the following:

- **Regional funding**—TransNet, SANDAG, and other funding sources may be available for certain improvements that have regional significance.

- **Capital Improvement Program funding—**Many of the improvements represent benefits to the City generally, and could be funded through the CIP budget.

- **Developer exactions—**The provision of plazas, park land (especially for the Promenade Park), streetscape improvements, etc. could be required as a condition of approval for certain developments (where feasible).

- **Land-secured financing**—Mello-Roos districts or other assessments on landowners or building occupants could be imposed to provide funding for improvements beyond those funded by impact fees. Application of these mechanisms is likely to be limited, however, because of multiple ownerships and developed conditions in the Urban Core.

It is important to note that this Facilities Implementation Analysis presents an analysis of the potential funding for the improvements detailed in the Urban Core Specific Plan. Policy-makers are not required to impose fees or allocate funding as described herein, but rather will be expected to assess the importance of various improvements and the appropriateness of various funding mechanisms in a context of competing policy and financial priorities, as well as under market conditions that will evolve through the next several decades as the Urban Core is undergoing re-investment and redevelopment.

XI. Plan Administration

XI. Plan Administration

C. Specific Plan Administration

1. Urban Core Development Permit and Design Review Requirements

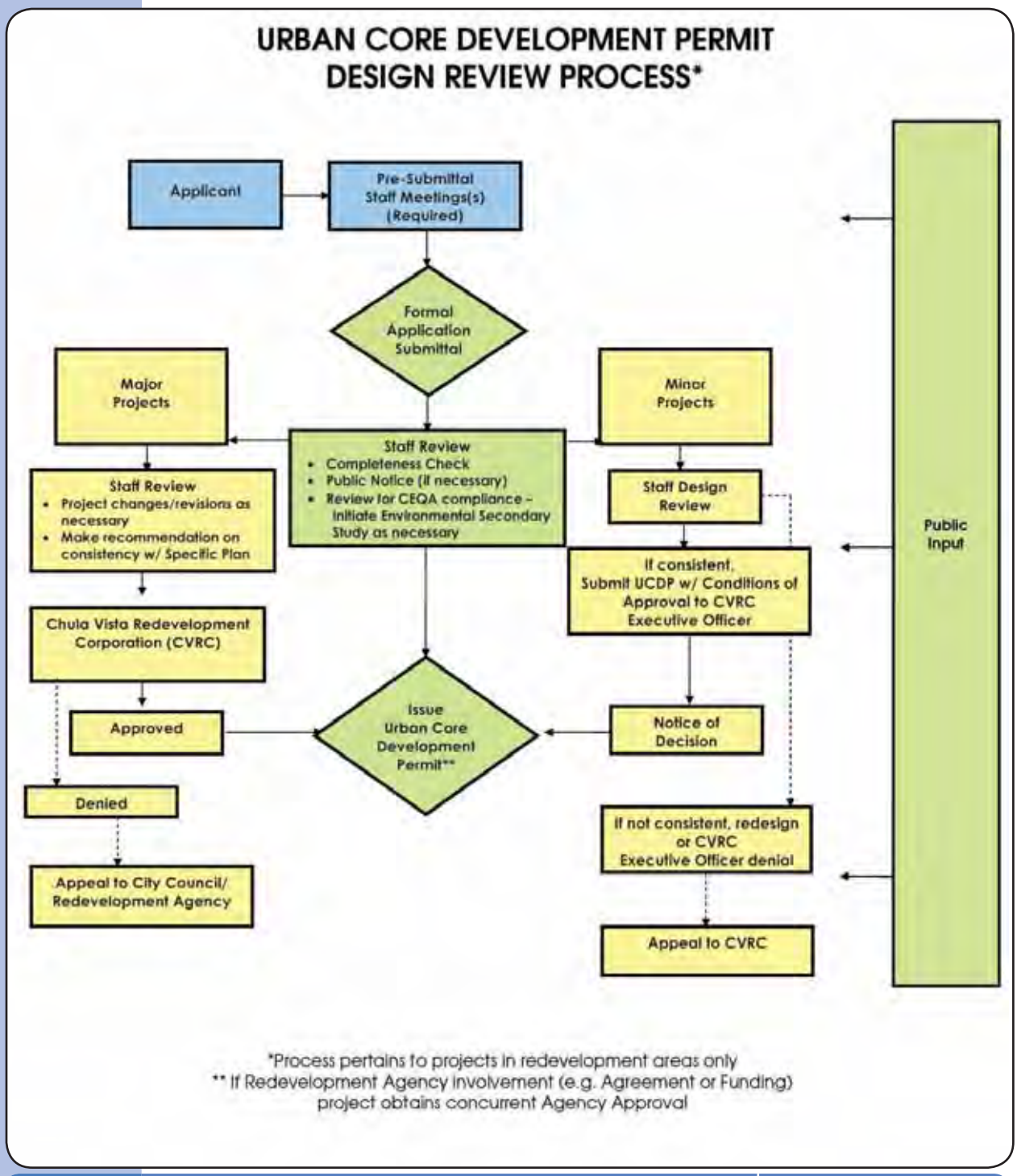
The Design Review Process for future development projects is established for the Specific Plan focus areas. Except as provided in paragraphs 3 and 4, below, development projects within the Specific Plan Focus Areas will be subject to a design review process to ensure consistency with the Specific Plan. In addition, proposed developments would also be required to adhere to existing CVMC regulations and processes for other discretionary review, such as those for conditional use permits, variances, and subdivisions, as may be applicable. (See CVMC 2.55, 19.14, and 19.54). All developments within the Specific Plan Focus Areas require submittal and approval of an Urban Core Development Permit (UCDP). The UCDP Review Process is illustrated in Figure 11.1. To be approved, a development project must:

- *comply with the permitted uses and development criteria contained in Chapter VI - Land Use and Development Regulations of this Specific Plan, and other applicable regulations contained in the CVMC; and,*
- *be found to be consistent with the design requirements and recommendations contained in Chapter VII - Design Guidelines of this Specific Plan.*

For those projects which propose buildings that exceed 84 feet in height, the further following findings will be required to be made:

- *The building design reflects a unique, signature architecture and creates a positive Chula Vista landmark;*
- *The project provides increased amenities such as public areas, plazas, fountains, parks and paseos, extensive streetscape improvements, or other public amenities that may be enjoyed by the public at large. These amenities will be above and beyond those required as part of the standard development approval process; and,*
- *The overall building height and massing provides appropriate transitions to surrounding areas in accordance with the future vision for those areas, or if in a Neighborhood Transition Combining District, the adjoining neighborhood.*

Except as provided in Section 3. Nonconforming Uses, Section 4. Exemptions, and Section 5. Site Specific Variance below, all projects require a pre-submittal meeting with staff to determine appropriate processing requirements and preliminary issue identification. The UCDP will be issued if it is determined



Urban Core Development Permit Design Review Process | Fg. D.2

that the project complies with the provisions of the Specific Plan, including the development regulations, standards and design guidelines. Approval of the UCDP will include all conditions of approval ranging from design, environmental mitigation measures, public improvements, and others as may be determined upon review of the specific development project. The UCDP process will ensure an enhanced level of review for major projects, while minimizing processing for minor projects, as defined by CVMC Section 19.14.582(i).

The Specific Plan provides separate processes for design review for those developments within established Redevelopment Project Areas and for those developments located outside established Redevelopment Project Areas. Figure 11.2 illustrates the boundaries of existing Redevelopment Project Areas, which may be amended from time to time, within the Specific Plan boundaries. Projects which include site areas within both areas shall be approved using the process set forth for Redevelopment Project Areas.

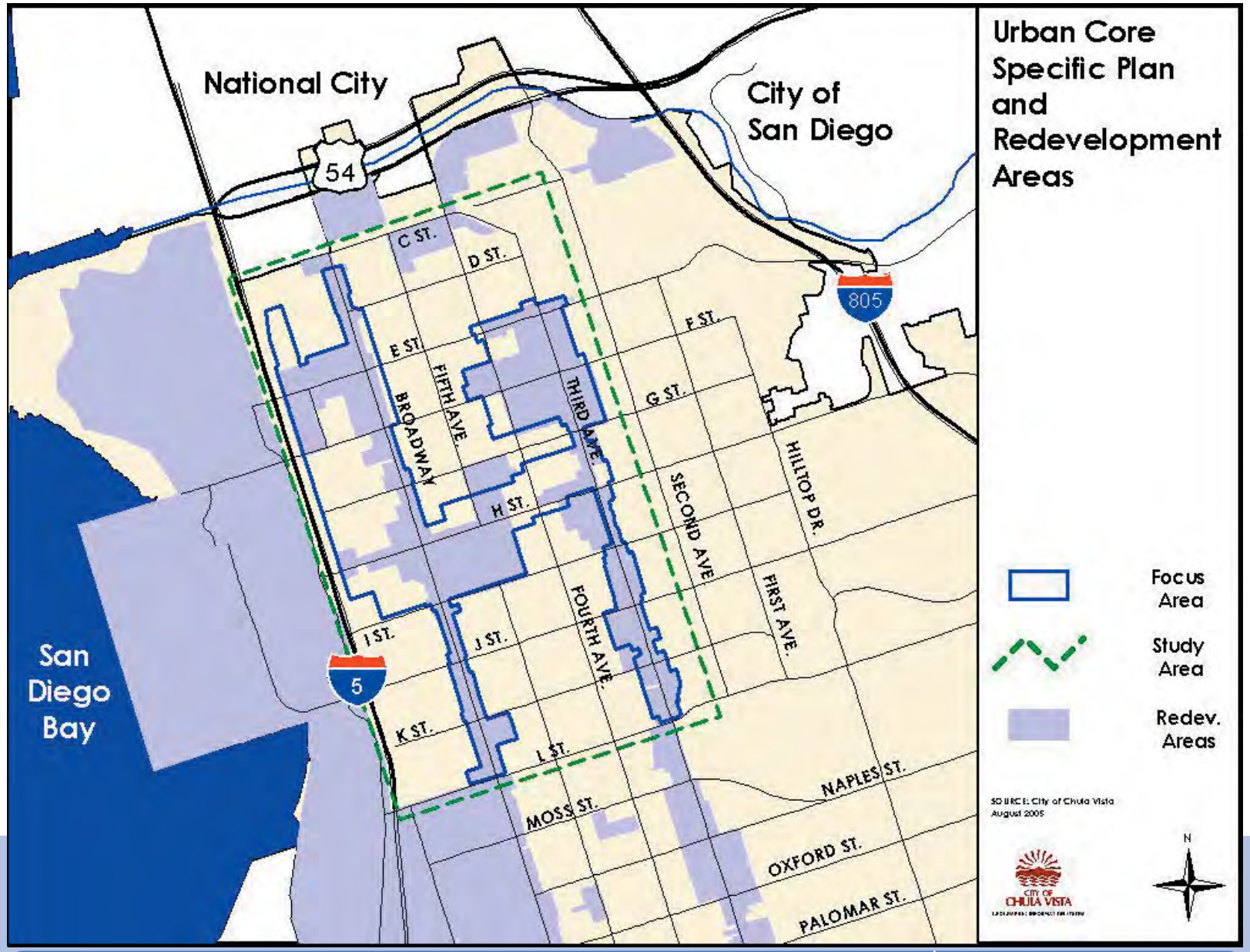
a. Developments Within a Redevelopment Project Area

The Chula Vista Redevelopment Corporation (CVRC) has been established by the City Council to assist with implementation and oversight of infill development in the Redevelopment Project Areas within the Specific Plan, and elsewhere within the City. The CVRC holds regularly scheduled meetings to review developments and design proposals. The CVRC provides a vehicle for public participation relating to the growth and redevelopment of the Chula Vista Urban Core, and serves as a communications link between its citizens, the City Council and Redevelopment Agency. In addition, the recently established Redevelopment Advisory Committee will provide input on projects, early and often.

All developments within the Specific Plan Focus Areas that are all or in part within a Redevelopment Project Area require submittal and approval of a UCDP. The UCDP process requires review and approval by either the CVRC Executive Director or the CVRC Board. For minor projects, design review will be subject to review and approval by the Executive Director of the CVRC with the opportunity for appeal to the CVRC. Design review of other projects will be conducted by staff with recommendation to the CVRC.

b. Developments Not Within a Redevelopment Project Area

Projects within the Specific Plan area, but outside a Redevelopment Project Area, will be subject to the City's existing design review processes. Large-scale projects, as defined above, will require review by the Design Review Committee. Minor projects may be reviewed and approved by the Zoning Administrator, or his/her designee in a manner consistent with CVMC Section 19.14.



Urban Core Specific Plan and Redevelopment Areas

Fg. D.3

c. Other Discretionary Approvals

The provisions of the Zoning Ordinance relative to other discretionary permits or actions (e.g. Tentative Map, Conditional Use Permits) shall be applied as required based on individual development projects.

2. Permitted Land Uses

Permitted land uses within the Specific Plan Focus Areas are identified in the Land Use Matrix found in Figures 6.2-6.6 of Chapter VI – Land Use and Development Regulations. The Community Development Director or his/her designee may determine in writing that a proposed use is similar and compatible to a listed use and may be allowed upon making one or more of the following findings:

- *The characteristics of and activities associated with the proposed use is similar to one or more of the allowed uses and will not involve substantially greater intensity than the uses listed for that District;*
- *The proposed use will be consistent with the purpose and vision of the applicable District;*
- *The proposed use will be otherwise consistent with the intent of the Specific Plan;*
- *The proposed use will be compatible with the other uses listed for the applicable District.*

The Community Development Director or his/her designee may refer the question of whether a proposed use is allowable directly to the CVRC or Planning Commission on a determination at a public hearing. A determination of the Community Development Director or his/her designee, CVRC or Planning Commission may be appealed in compliance with the procedure set forth in the CVMC.

CHULA VISTA URBAN CORE SPECIFIC PLAN
MITIGATION MONITORING REPORTING PROGRAM

(Public Facilities and Services Program)

Introduction

This mitigation monitoring reporting program (MMRP) was prepared for the City of Chula Vista Urban Core Specific Plan to comply with Public Resources Code section 21081.6, which requires public agencies to adopt such programs to ensure effective implementation of mitigation measures. This monitoring program is dynamic in that it will undergo changes as additional mitigation measures are identified and additional conditions of approval are placed on the project throughout the project approval process. Pursuant to Public Resources Code section 21081.6(a)(2), the City of Chula Vista designates the Environment Review Coordinator and the City Clerk as the custodians of the documents or their material which constitute the record of proceedings upon which its decision is based.

This monitoring program will serve a dual purpose of verifying completion of the mitigation identified in the EIR and generating information on the effectiveness of the mitigation measures to guide future decisions. The program includes the following:

- Monitor qualifications
- Specific monitoring activities
- Reporting system
- Criteria for evaluating the success of the mitigation measures

The proposed project is the adoption of the Chula Vista Urban Core Specific Plan (UCSP). The UCSP would govern the development and revitalization of the urban core of the City of Chula Vista. The UCSP includes land use objectives, development regulations (zoning), and development design guidelines to implement the adopted General Plan vision for the urban core. The UCSP's planning horizon is the year 2030.

The City of Chula Vista is located in southern San Diego County, between National City and the southernmost portion of the City of San Diego which abuts the U.S.-Mexican border. The UCSP area occupies 1,700 acres in the northwest portion of the City. A smaller, 690-gross-acre Subdistricts Area was determined to be most in need of revitalization and is the focus of all the regulatory land use provisions of the UCSP. The new zoning, development standards, and design guidelines proposed in the UCSP will apply only to the Subdistricts Area of the UCSP. Existing zoning and land use regulations will not be changed in the remaining portion of the UCSP study area outside the Subdistricts Area. The UCSP Subdistricts Area comprises the traditional downtown area east of I-5, west of Del Mar Avenue, north of L Street, and south of C Street.
Under the proposed Chula Vista Urban Core Specific Plan, the urban core would be organized into three planning districts (Urban Core, Village, and Corridors) and 26 subdistricts.

The proposed Chula Vista Urban Core Specific Plan is described in the Environmental Impact Report (EIR) text. The EIR, incorporated herein as referenced, focused on issues determined to be potentially significant by the City of Chula Vista. The issues addressed in the EIR include land use, landform alteration/aesthetics, cultural resources, geology and soils, paleontological resources, population and housing, hydrology and water quality, traffic circulation and access, noise, air quality, public services, public utilities, and hazards/risk of upset. The environmental analysis concluded that for all of the environmental issues discussed, some of the significant and potentially significant impacts could be avoided or reduced through implementation of recommended mitigation measures. Potentially significant impacts requiring mitigation were identified for landform alteration/aesthetics, cultural resources, geology and soils, paleontological resources, water quality, traffic circulation and access, noise, air quality, public services, public utilities (energy), and hazards/risk of upset.

Public Resources Code section 21081.6 requires monitoring of only those impacts identified as significant or potentially significant. The monitoring program for the Urban Core Specific Plan therefore addresses the impacts associated with only the issue areas identified above.

Mitigation Monitoring Team

The monitoring activities would be accomplished by individuals identified in the attached MMRP table. While specific qualifications should be determined by the City of Chula Vista, the monitoring team should possess the following capabilities:

- Interpersonal, decision-making, and management skills with demonstrated experience in working under trying field circumstances;
- Knowledge of and appreciation for the general environmental attributes and special features found in the project area;
- Knowledge of the types of environmental impacts associated with construction of cost-effective mitigation options; and
- Excellent communication skills.

Program Procedural Guidelines

Prior to any construction activities, meetings should take place between all the parties involved to initiate the monitoring program and establish the responsibility and authority of the participants. Mitigation measures that need to be defined in greater detail will be addressed prior to any project plan approvals in follow-up meetings designed to discuss specific monitoring effects.

An effective reporting system must be established prior to any monitoring efforts. All parties involved must have a clear understanding of the mitigation measures as adopted and these mitigations must be distributed to the participants of the monitoring effort. Those that would have a complete list of all the mitigation measures adopted by the City of Chula Vista would include the City of Chula Vista and its Mitigation Monitor. The Mitigation Monitor would distribute to each Environmental Specialist and Environmental Monitor a specific list of mitigation measures that pertain to his or her monitoring tasks and the appropriate time frame that these mitigations are anticipated to be implemented.

In addition to the list of mitigation measures, the monitors will have mitigation monitoring report (MMR) forms, with each mitigation measure written out on the top of the form. Below the stated mitigation measure, the form will have a series of questions addressing the effectiveness of the mitigation measure. The monitors shall complete the MMR and file it with the MM following the monitoring activity. The MM will then include the conclusions of the MMR into an interim and final comprehensive construction report to be submitted to the City of Chula Vista. This report will describe the major accomplishments of the monitoring program, summarize problems encountered in achieving the goals of the program, evaluate solutions developed to overcome problems, and provide a list of recommendations for future monitoring programs. In addition, and if appropriate, each Environmental Monitor or Environmental Specialist will be required to fill out and submit a daily log report to the Mitigation Monitor. The daily log report will be used to record and account for the monitoring activities of the monitor. Weekly and/or monthly status reports, as determined appropriate, will be generated from the daily logs and compliance reports and will include supplemental material (i.e., memoranda, telephone logs, and letters). This type of feedback is essential for the City of Chula Vista to confirm the implementation and effectiveness of the mitigation measures imposed on the project.

Actions in Case of Noncompliance

There are generally three separate categories of noncompliance associated with the adopted conditions of approval:

- Noncompliance requiring an immediate halt to a specific task or piece of equipment;
- Infraction that warrants an immediate corrective action but does not result in work or task delay; and
- Infraction that does not warrant immediate corrective action and results in no work or task delay.

There are a number of options the City of Chula Vista may use to enforce this program should noncompliance continue. Some methods commonly used by other lead agencies include “stop work” orders, fines and penalties (civil), restitution, permit revocations, citations, and injunctions. It is essential that all parties involved in the program understand the authority and responsibility of the on-site monitors. Decisions regarding actions in case of noncompliance are the responsibility of the City of Chula Vista.

SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

The following table summarizes the potentially significant project impacts and lists the associated mitigation measures and the monitoring efforts necessary to ensure that the measures are properly implemented. All the mitigation measures identified in the EIR are recommended as conditions of project approval and are stated herein in language appropriate for such conditions. In addition, once the Chula Vista Urban Core Specific Plan has been approved, and during various stages of implementation, the designated monitor, the City of Chula Vista, will further refine the mitigation measures.

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(PUBLIC FACILITIES AND SERVICES PROGRAM)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
HYDROLOGY/WATER QUALITY			
Surface and Ground Water Quality. Implementation of the proposed UCSP would allow a three-fold increase in population and associated intensification of existing urban land uses which would likely result in a substantial increase in direct runoff to drainage basins, municipal storm sewer systems, and eventual drainage to surface water and/or the ocean. This runoff will likely contain typical urban runoff pollutants such as sediment, pathogens, heavy metals, petroleum products, nutrients (phosphates and nitrates) and trash. This comprises a potentially significant long-term water quality impact. The potential long-term impacts to water quality which may result from implementation of the proposed UCSP would be required to be reduced to acceptable levels through the mandatory controls imposed by local, state, and federal regulations.	5.7-1: Prior to approval of subsequent individual development projects, compliance with all applicable federal, state and local laws and regulations regarding water quality (e.g. JURMP, SUSMP, NPDES, SWPP, and City Development and Redevelopment Projects Storm Water Manual) shall be demonstrated to the satisfaction of the City Engineer.	Prior to the approval of any construction permits, including but not limited to the first Grading Permit, Demolition Permit, and Urban Core Development Permit (UCDP).	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
HYDROLOGY/WATER QUALITY (cont.)			
Selected provisions of the UCSP that allow and encourage native plant landscaping and sustainable building practices (water input and waste efficiencies, living roofs, bioswales, etc.) would potentially lessen future runoff volumes, flow rate and pollutant concentration. The construction activities of subsequent individual projects would also potentially cause short-term water quality impacts through direct discharge of pollutants, soil excavation/sedimentation, and through encountering of shallow groundwater during subfloor grading. This comprises a potentially significant short-term water quality impact.	5.7-2: Prior to approval of subsequent individual development projects, project applicants shall demonstrate to the satisfaction of the City Engineer that the proposed on-site storm drain systems fully mitigate drainage impacts and meet all federal, state, and regional water quality objectives and all City standards and requirements. Land development construction drawings and associated reports shall include details, notes, and discussions relative to the required or recommended Best Management Practices (BMPs). Permanent storm water BMP requirements shall be incorporated into the project design and all subsequent individual development projects are required to complete the applicable Storm Water Compliance Form and comply with the City of Chula Vista's Storm Water Management Standards Requirements Manual.	Prior to the approval of any construction permits, including but not limited to the first Grading Permit, Demolition Permit, and Urban Core Development Permit (UCDP).	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
HYDROLOGY/WATER QUALITY (cont.)			
	5.7-3: The City of Chula Vista requires that all new development and significant redevelopment projects comply with the requirements of the NPDES Municipal Permit, Order No. 2001-01. According to said permit, all projects falling under the Priority Development Project Categories are required to comply with the Standard Urban Storm Water Mitigation Plans (SUSMP) and Numeric Sizing Criteria. Future projects shall comply with all applicable regulations, established by the United States Environmental Protection Agency (USEPA), as set forth in the National Pollutant Discharge Elimination System (NPDES) permit requirements for urban runoff and storm water discharge, and any regulations adopted by the City of Chula Vista pursuant to the NPDES regulations and requirements. Further, the applicant shall file a Notice of Intent (NOI) with the State Water Resource Control Board to obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity and shall	Prior to the approval of any construction permits, including but not limited to the first Grading Permit, Demolition Permit, and Urban Core Development Permit (UCDP).	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
HYDROLOGY/WATER QUALITY (cont.)			
	implement a Storm Water Pollution Prevention Plan (SWPP) concurrent with the commencement of grading activities. The SWPP shall include both construction and post-construction pollution prevention and pollution control measures, and shall identify funding mechanisms for the maintenance of post-construction control measures.		
	5.7-4: Prior to issuance of an Urban Core Development Permit or other discretionary permit, all subsequent individual development projects shall demonstrate to the satisfaction of the Community Development Director, conformance with Mediterranean/indigenous landscaping and other relevant design recommendations provided in UCSP Chapter VII Development Design Guidelines.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION			
Road Segments and Intersections Level of Service. A substantial increase in traffic on area roadways and at area intersections will result from planned population growth in the urban core area over the next 25 years. Without the intersection and roadway improvements envisioned in the proposed UCSP, by year 2030 conditions, 2 road segments and 19 intersections would operate at unacceptable LOS E or worse during peak traffic periods. This comprises a significant traffic impact prior to mitigation. The significant impacts to intersections will be mitigated to below significance by implementation of the improvements recommended in Mitigation Measure 5.8.5-1, with the exception of #27 Broadway/H Street, #33 Hilltop Drive/H Street and #54 Third Avenue/J Street. Impacts to these 3 intersections would remain significant and unmitigated.	5.8.5 -1: Intersection Improvements. Impacts to the 19 affected intersections will be mitigated to below significance by the implementation of improvements that have been divided into three tiers for phased implementation based on need and enhancement of the overall street network. Generally, time frames associated with the tiered improvements are anticipated as short-, mid- and long-term. In each tier, the City's existing TMP will determine the order in which projects are implemented during the biannual CIP program review. The Tier 1 improvements would be included in the current CIP and subsequently monitored for improvement within the first five years of implementation of the UCSP. It should be noted that three of the intersections (#7, #16, and #21) are proposed as project features rather than as needed to improve intersection LOS and most likely will be related to and timed with implementation of streetscape improvements along Third Avenue.	Three-tiered phasing of implementation based on need. Tier 1, short-term, improvements are to occur within the first five years of implementation of the UCSP or as may be modified by results of the annual Traffic Monitoring Program (TMP).	City of Chula Vista (CCV)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Recommendations at intersections #27, #33, and #54 do not improve conditions to an acceptable LOS due to ROW and design constraints. The following describes the constraints at the three intersections: • At the Broadway/H Street intersection (#27), an additional northbound and southbound through lane would be required in order to achieve an acceptable LOS D conditions. However, this improvement would require extensive widening of Broadway and H Street to allow for lane drops. Furthermore, this widening would create longer pedestrian crossings. As such, the recommended improvements of the eastbound queue jumper lane and the additional westbound through and right-turn lanes would improve the intersection from LOS F to LOS E conditions.	The intersection numbers in the improvements described below correspond to the intersection numbering system used in the TIA (Appendix C of this EIR): a. Tier 1 Improvements • #1 Bay Boulevard/I-5 Southbound Ramp/E Street: Add an eastbound through and right-turn lane, southbound right-turn lane, and northbound right-turn lane. Coordination with Caltrans will be required for this improvement. • #2 I-5 Northbound Ramp/E Street: Add a westbound right-turn lane. Coordination with Caltrans will be required for this improvement • #7 Third Avenue/E Street: Convert the northbound and southbound shared right-through lane into exclusive right-turn lanes. • #16 Third Avenue/F Street: Separate the southbound shared through-right lane into an exclusive through and right-turn lanes, convert the northbound shared through-right lane into an exclusive right-turn lane.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
• At the Hilltop Drive/H Street intersection (#33), no improvements would be recommended due to ROW constraints. The poor LOS at this intersection is primarily caused by the high traffic volumes in the eastbound/westbound movements. Additional through and/or turn lanes would be required in order to improve this intersection to an acceptable LOS. With no improvements, this intersection would remain at LOS E during both peak periods. • At the Third Avenue/J Street intersection (#54), the required improvement of an additional southbound right-turn lane would impact the existing commercial building (Henry's Marketplace), which is built adjacent to the sidewalk. Therefore, this improvement is not recommended.	• #21 Third Avenue/G Street: Convert the northbound/southbound shared through-right lane into exclusive right-turn lanes. • #24 I-5 Southbound Ramp/H Street: Add a southbound left, eastbound through and right-turn lanes. Coordination with Caltrans will be required for this improvement. • #25 I-5 Northbound Ramp/H Street: Add a westbound through and right-turn lane and restripe south approach to accommodate dual left-turn lanes. Coordination with Caltrans will be required for this improvement. • #26 Woodlawn Avenue/H Street: Change Woodlawn Avenue to a one-way couplet. This improvement is required to serve the intense redevelopment occurring on both sides of H Street. The couplet improvement is not required mitigation further north toward E Street. • #27 Broadway/H Street: Add an eastbound transit queue jumper lane and westbound through and right-turn lanes.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
As a result, the LOS would remain at LOS E. However, if the property were to redevelop in the future, additional ROW could be obtained for the southbound right-turn lane. While existing TransNet funding is expected to cover some of the costs of roadway and transit improvements and existing traffic signal fees currently collected as new development occurs would be applied, as appropriate, to identified signal-phasing improvements, the Facilities Implementation Analysis (FIA) has identified proposed development fees that may be needed to fund some of the recommended traffic improvements. In addition, some of the improvements will require right of way dedications either as part of the development process or concurrent with capital improvements, and/or coordination with Caltrans.	• #28 Fifth Avenue/H Street: Change the northbound/southbound approaches to include protective plus permissive phasing and add a westbound right-turn lane. • #29 Fourth Avenue/H Street: Add an eastbound/westbound right-turn lane. • #44 Fourth Avenue/SR-54 Eastbound Ramp: Add an eastbound right-turn lane. Coordination with Caltrans will be required for this improvement. b. Tier 2 Improvements • #34 Broadway/SR-54 Westbound Ramp: Add a westbound right-turn lane. Coordination with Caltrans will be required for this improvement. • #59 J Street/I-5 Northbound Ramp: Add an eastbound left-turn and westbound right-turn lane. Coordination with Caltrans will be required for this improvement.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
	• #61 L Street/Bay Boulevard: Signalize the intersection, add a southbound left-turn lane, and a northbound right-turn overlap phase to the traffic signal. • #63 Bay Boulevard/I-5 Southbound Ramp: Signalize the intersection. Coordination with Caltrans will be required for this improvement. • #64 Industrial Boulevard/I-5 Northbound Ramp: Signalize the intersection. Coordination with Caltrans will be required for this improvement. • H Street from four lanes to six lanes from I-5 to Broadway c. Tier 3 Improvements • #13 Broadway/F Street: Add an eastbound right-turn lane. • #45 Fourth Avenue/Brisbane Street: Add a southbound right-turn overlap phase to the traffic signal. • #57 Second Avenue/D Street: Convert to an all-way stop controlled intersection.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
	On an annual basis during buildout of the UCSP, the City shall apply the TMP to monitor actual performance of the street system in the Subdistricts Area by conducting roadway segment travel time studies in accordance with the City's Growth Management Program and Traffic Threshold Standards. The results of the annual study under the TMP will be used by the City to determine the timing and need for implementation of improvements to the nineteen intersections identified above as having potential significant impacts. The City shall implement the intersection improvements in phases based on the results of the annual TMP and on need and enhancement to the function of the overall street network. In addition to determining timing and need, this systems and operations monitoring approach should also be used to further ascertain final design details of the intersection improvements and may include consideration of the effects on traffic flow as well as the impacts/benefits to other travel modes (e.g., pedestrians and bicycles) that are foundational to the successful implementation of the Specific Plan.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
The potential significant impacts to street segments will be mitigated to below significance by implementation of the improvements recommended in Mitigation Measure 5.8.5-2, with the exception of Third Avenue between E and G Streets. The significant and unavoidable impact to this street segment result from the design of the project, which is intended to reduce Third Avenue to a two-lane downtown promenade to facilitate an enhanced pedestrian environment along the traditional commercial village. Although the planned improvements would result in an unacceptable LOS, they would meet the project objectives of creating a more pedestrian friendly and active streetscape that will accommodate multi-modes of transportation rather than accommodating only the automobile.	5.8.5-2: Segment Improvements. During build-out of the UCSP, the City shall apply the Traffic Monitoring Program (TMP) to monitor actual performance of the street system in the Subdistricts Area by conducting roadway segment travel time studies in accordance with the City's Growth Management Program and Traffic Threshold Standards. The results of the annual study under the TMP will be used by the City to determine the timing and need for implementation of improvements to the street segments identified as having potential significant impacts. The City shall implement the following street segment improvements: (1) based on the results of the annual TMP; or (2) based on need and enhancement to the function of the overall street network; and (3) in a manner that efficiently implements with phasing of necessary adjacent intersection improvements.	Timing of implementation based on (1) results of the annual Traffic Monitoring Program (TMP); (2) need and enhancement to the function of the overall street network; and (3) in a manner that efficiently implements with phasing of necessary adjacent intersection improvements.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
	1) H Street between I-5 and Broadway would be reclassified as a six-lane gateway. As a result, the acceptable ADT would increase and result in an acceptable LOS. 2) Third Avenue between E Street and G Street would be constructed as a two-lane downtown promenade to facilitate an enhanced pedestrian environment along the traditional commercial village. As a result, the acceptable ADT along the segment would decrease and result in an unacceptable LOS. As such, impacts to Third Avenue will be significant and unavoidable. However, the Third Avenue corridor intersections at E, F and G Streets would all operate at an acceptable LOS.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Due to the long-term nature of some of the improvements, the fee program and coordination have either not been implemented or begun, respectively, whereas the right of way exactions would occur with redevelopment. While these improvements are intended to be implemented when necessary and within the Tiers noted above, their long-term implementation cannot be assured at this time. Identified significant impacts will be partially mitigated but due to the lack of funding assurances at this time, future coordination with CALTRANS and SANDAG, and future right of way exactions, impacts are considered significant and unmitigated.	5.8.5- 3:Prior to issuance of an Urban Core Development Permit, subsequent development projects shall prepare a traffic assessment to quantify the projects' potential traffic impacts. Subsequent projects will be required to contribute their fair share to the Tiered Improvements listed above under Mitigation 5.8.5.1. Mitigation may be in the form of: 1. Payment of Transportation Development Impact Fee (TDIF), as may be established in the future for the western portion of the City; 2. Payment of existing Traffic Impact Signal Fee; 3. Construction of improvements within the project boundaries; and/or 4. Early advancement of improvements beyond the project boundaries, subject to a reimbursement agreement.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
	The City's TDIF program for the west side of the City, including the Urban Core is anticipated to be developed within the subsequent twelve months following adoption of the UCSP. The TDIF will clearly establish the costs of the improvements identified above as well as the fair share costs to be applied to all subsequent development projects. Once the TDIF has been established, the fee will be consistently applied to all subsequent development projects, until such time that the TDIF is amended or rescinded. In the interim, if subsequent development projects are processed and approved prior to the establishment of a TDIF, a condition of approval will be included that prior to issuance of building permits the project will contribute to the TDIF, as may be established.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Pedestrian, Bicycling and Public Transit. The three-fold increase in population projected for the UCSP Subdistricts Area by 2030 would place greater demands on public transit services. However, provisions of the UCSP serve to benefit, rather than to deteriorate, mobility conditions for pedestrians, bicyclists and public transit users. Additionally, the UCSP does not conflict with any adopted plans or programs supporting alternative transportation. Impacts to alternative forms of transportation as a result of the proposed UCSP would not be significant nor adverse given adherence of subsequent projects to relevant regulations and guidelines of the UCSP as outlined in Mitigation Measure 5.8.5-4.	5.8.5-4: Prior to issuance of an Urban Core Development Permit for subsequent development projects, the traffic assessment prepared to quantify the projects' potential traffic impacts will also identify how alternative modes of transportation will be accommodated. Mitigation may be in the form of: 1) Compliance with the development regulations and design guidelines of the UCSP to accommodate pedestrians, bicyclists and public transit; and 2) Where applicable, construction of improvements within the project boundaries; and/or 3) Early advancement of improvements beyond the project boundaries, subject to a reimbursement agreement.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Parking. A projected total of 18,560 parking spaces would be required to serve future development of the proposed UCSP at buildout. Potential significant impacts to parking would be reduced to below significance by the incorporation of these development regulations and design guidelines into subsequent development projects, as required as part of the UCSP design review process. Parking improvements will either be made on-site (i.e. where required of subsequent development projects), or off-site (i.e. in coordination with the City's Parking District or in Lieu Fee program). A number of other parking improvement strategies are included in the UCSP including raking buffers, parking districts and parking structures.	5.8.5-5: Prior to issuance of an Urban Core Development Permit, subsequent development projects shall comply with the parking standards set forth in the UCSP development regulations and design guidelines for the type and intensity of development proposed.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Multi-Jurisdictional Efforts. The proposed UCSP will result in both direct and cumulatively significant traffic impacts to study area freeway segments and ramps. As described above under Road Segments and Intersections Level of Service, the following freeway interchanges would be significantly impacted by the proposed UCSP: • #1: Bay Boulevard/I-5 SB ramp at E Street (LOS E – AM Peak, LOS F – PM Peak); • #2: I-5 NB Ramp at E Street (LOS E – AM and PM Peak); • #24: I-5 SB Ramp at H Street (LOS F – PM Peak); • #25: I-5 NB Ramp at H Street (LOS F – PM Peak); • #34: Broadway at SR-54 WB Ramp (LOS F – AM Peak); • #44: Fourth Avenue at SR-54 EB Ramp (LOS F – PM Peak);	5.8.5-6: The City shall participate in a multi-jurisdictional effort conducted by Caltrans and SANDAG to assist in developing a detailed engineering study of the freeway right-of-way that will identify transportation improvements along with funding, including federal, state, regional, and local funding sources, and phasing, that would reduce congestion consistent with Caltrans Standards on the I-5 South corridor from the State Route 54 (SR-54) interchange to State Route 75 (SR-75)/Palm Avenue (the "I-5 South Corridor") (hereinafter, the "Plan). Local funding sources may include fair share contributions by private development based on nexus as well as other mechanisms. The Plan required by this mitigation shall include the following: 1) The responsible entities (the "Entities") included in this effort will include, but may not be limited to the City, the Port, SANDAG, and Caltrans. Other entities may be included upon the concurrence of the foregoing Entities.	To coincide with multi-year planning effort that began June 2005, is ongoing and scheduled to conclude in three to five years.	City of Chula Vista (CCV), in cooperation with other jurisdictions.

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
• #59: J Street at I-5 NB Ramp (LOS F – AM Peak, LOS E – PM Peak); • #63: Bay Boulevard at I-5 SB Ramp (LOS F – AM and PM Peak); and • #64: Industrial Boulevard at I-5 NB Ramp (LOS F – PM Peak). The monitoring of traffic as stipulated by Mitigation Measure 5.8.5-1 will assist in establishing the need and timing for transportation improvements, including freeway-related improvements, serving the UCSP area. In addition, Mitigation Measure 5.8.5-3 requires subsequent development projects to prepare a traffic assessment to quantify the project's potential traffic impacts. Subsequent projects will also be required to contribute their fair share to the Tiered Improvements listed above under Mitigation 5.8.5.1.	2) The Plan will specifically identify physical and operational improvements to I-5, relevant arterial roads and transit facilities (the "Improvements"), that are focused on specific transportation impacts and will also identify the fair share responsibilities of each Entity for the construction and financing for each Improvement. The Plan may also identify other improvements necessary to address regional transportation needs, but for purposes of this mitigation measure, the Improvements included in the Plan need only be designed to mitigate the impacts created by the Proposed Project. 3) The Plan will set forth a timeline and other agreed-upon relevant criteria for implementation of each Improvement.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
Mitigation of impacts will require development and regional acceptance of a feasible program to improve freeway segments and ramps in the Urban Core area. The City, along with Caltrans, and SANDAG will continue to pursue and promote improvement of the I-5 freeway facilities adjacent to the UCSP area. The concept of promoting/requiring "fair-share" contributions on the part of developers for improvements to the freeway system will need to be addressed as part of the implementation of an acceptable program to improve freeway segments and ramps. As such, the specification of such requirements cannot be determined at this time. Mitigation Measure 5.8.5-6 was developed to ensure the continued participation in regional transportation planning efforts by the City, Caltrans, SANDAG, and other entities as may be identified.	4) The Plan will identify the total estimated design and construction cost for each Improvement and the responsibility of each Entity for both implementation and funding of such costs. 5) The Plan will include the parameters for any fair-share funding contributions to be implemented, that would require private and/or public developers to contribute to the costs, in a manner that will comply with applicable law. 6) In developing the Plan, the Entities shall also consider ways in which the Improvements can be coordinated with existing local and regional transportation and facilities financing plans and programs, in order to avoid duplication of effort and expenditure; however, the existence of such other plans and programs shall not relieve the Entities of their collective obligation to develop and implement the Plan as set forth in this mitigation measure. Nothing in the Plan shall be construed as relieving any Entity (or any other entity) from its independent responsibility (if any) for the implementation of any transportation improvement.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
TRAFFIC/CIRCULATION (cont.)			
The City of Chula Vista shall continue to work with SANDAG and Caltrans on an ongoing basis to identify sources and obtain funding for a variety of transportation system improvements. Future residential growth in the Urban Core will be subject to the Regional Transportation Congestion Improvement Program, as stipulated by the Transnet legislation and will provide additional funds for improvement of the regional arterial system.	7) The City shall seek adoption of the Plan before the City Council upon the completion of the multi-jurisdictional effort to develop the Plan. The City shall report, to their governing bodies regarding the progress made to develop the Plan within six months of the first meeting of the Entities. Thereafter, the City shall report at least annually regarding the progress of the Plan, for a period of not less than five years, which may be extended at the request of the City Council. 8) The Plan shall also expressly include each Entity's pledge that it will cooperate with each other in implementing the Plan. The failure or refusal of any Entity other than the City to cooperate in the implementation of this mitigation measure shall not constitute failure of the City to implement this mitigation measure; however, the City shall use its best efforts to obtain the cooperation of all responsible Entities to fully participate in order to achieve the goals of the mitigation measure.		

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC SERVICES			
Law Enforcement. Future development in accordance with the proposed UCSP would result in a significant impact to law enforcement services because of the anticipated increase in calls for service and the additional travel time required to answer these calls. While the police facility at Fourth Avenue and F Street is sufficient to meet the law enforcement needs created by increased demand resulting from development, more police officers will be needed in order to maintain response times. Significant impacts would result if timing of these provisions does not coincide with projected increase in demand for services and populations growth.	5.11.1-1: Subsequent development projects shall demonstrate that significant impacts to police services resulting from an individual project are addressed prior to approval of an Urban Core Development permit or other discretionary approval. As part of project review, subsequent development projects shall be evaluated for adequate access for police vehicles (pursuant to GPU Policy PFS 6.1) and integration of Crime Prevention Through Environmental Design (CPTED) techniques (pursuant to GPU Policy PFS 6.3).	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)
	5.11.1-2: As a condition of project approval, individual developers shall pay the public facilities development impact fees (PFDIF) at the rate in effect at the time building permits are issued.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)
Implementation of mitigation measures 5.11-1-1 through 5.11.1-3 would mitigate impacts to the provisions of adequate law enforcement services resulting from the adoption of the UCSP to below a level of significance.	5.11.1-3: As part of the annual budgeting process, the City shall assess the need for additional police personnel to provide protection services consistent with established City service levels and commensurate with the increase in population.	Needs assessed during annual City budget review.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC SERVICES (cont.)			
Fire Protection. The Chula Vista Fire Department does not currently meet the threshold standard for response time for the City, including the UCSP Subdistricts Area. Buildout of the proposed UCSP would increase demand for fire protection services. However, as population growth in the service area warrants, additional fire protection personnel and fire protection equipment and facilities would be provided to help ensure adequate service within the requirements of the GMOC threshold standards. Significant impacts to fire protection services would result if timing of these provisions does not coincide with projected increase in demand for services and population growth. With the implementation of mitigation measures 5.11.2-1 through 5.11.2-3, significant impacts to the provision of fire protection services would be mitigated to less than significant.	5.11.2-1: Prior to approval, subsequent individual development projects in the UCSP shall demonstrate provision of adequate access and water pressure for new buildings. 5.11.2-2: As a condition of project approval, individual developers shall pay the public facilities development impact fees at the rate in effect at the time building permits are issued. 5.11.2-3: As part of the annual budgeting process, the City will assess the need for additional fire personnel to provide protection services consistent with established City service levels and commensurate with the increase in population.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit. Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit. Needs assessed during annual City budget review.	City of Chula Vista (CCV) City of Chula Vista (CCV) City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC SERVICES (cont.)			
Schools. The proposed UCSP will result in a three-fold increase in population within the Subdistricts Area at buildout and an associated increase in demand for schools. At buildout, the UCSP is expected to generate a net increase of approximately 3,877 students between elementary, middle school, and high school grades. The generation of approximately 2,485 additional elementary students would have a significant impact on existing elementary schools serving the area because they are already at or near capacity. New students generated by the UCSP would require at least 59 additional elementary school classrooms. However, potentially fewer students may result from UCSP buildout or interim conditions due to the intensified urban environment of the UCSP, with new mid- to high-rise mixed uses likely to be occupied by single or childless young couples, or empty nesters. Therefore, the impacts may be overstated and will be monitored to accurately plan for new student enrollment.	5.11.3-1: Prior to approval, subsequent development projects in the UCSP shall demonstrate that significant impacts to public educational services resulting from the individual project have been addressed. As a condition of project approval, individual developers shall pay the statutory school impact fees at the rate in effect at the time building permits are issued.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC SERVICES (cont.)			
Libraries. Buildout of the UCSP may require additional library space in order to meet and maintain the City criteria of 500 square feet per 1,000 population and 3 books per person for new development. Based on the expected net increase in population of 18,318 with buildout of the UCSP, increased demand on existing library services would amount to approximately 9,159 square feet of library facilities and 54,954 books. Existing library service conditions in the City are inadequate and not in compliance with City standards. Additional library capacity is planned by 2007, however, with the construction of the 30,000-square-foot Rancho Del Rey Library. In the absence of this or other new library construction, any additional demand on library services would comprise a significant impact.	The following mitigation measure will mitigate library impacts resulting from the adoption of the UCSP to below a level of significance. 5.11.4-1: Prior to approval, subsequent individual development projects in the UCSP shall demonstrate that significant impacts to the provision of library services resulting from individual projects have been addressed. As a condition of project approval, individual developers shall pay the public facilities development impact fees at the rate in effect at the time building permits are issued.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC SERVICES (cont.)			
Parks and Recreation. Implementation of the proposed UCSP would generate increased demand for parks and recreation facilities. Full buildout of the UCSP would be required to provide up to approximately 55 acres of new parkland (incrementally and commensurate with new development) in order to meet the Chula Vista Municipal Code, Park Development Ordinance standard of 3 acres of parkland for every 1,000 people. A significant impact could occur if dedication of parkland and construction of new facilities does not coincide with project implementation and project population growth. Implementation of mitigation measure 5.11.5-1 would reduce impacts to the provisions of park and recreation services and facilities resulting from the adoption of the UCSP to below a level of significance.	5.11.5-1: Prior to approval of an Urban Core Development Permit, each subsequent project shall establish to the satisfaction of the Community Development Director that the project meets the City's parkland dedication requirement. As a condition of project approval, individual developers shall provide required parkland and facilities on-site, if possible and consistent with potential site locations identified in the UCSP and Parks Master Plan; or pay the applicable parkland acquisition and parkland development fee and recreation facility development impact fees at the rates in effect at the time building permits are issued.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

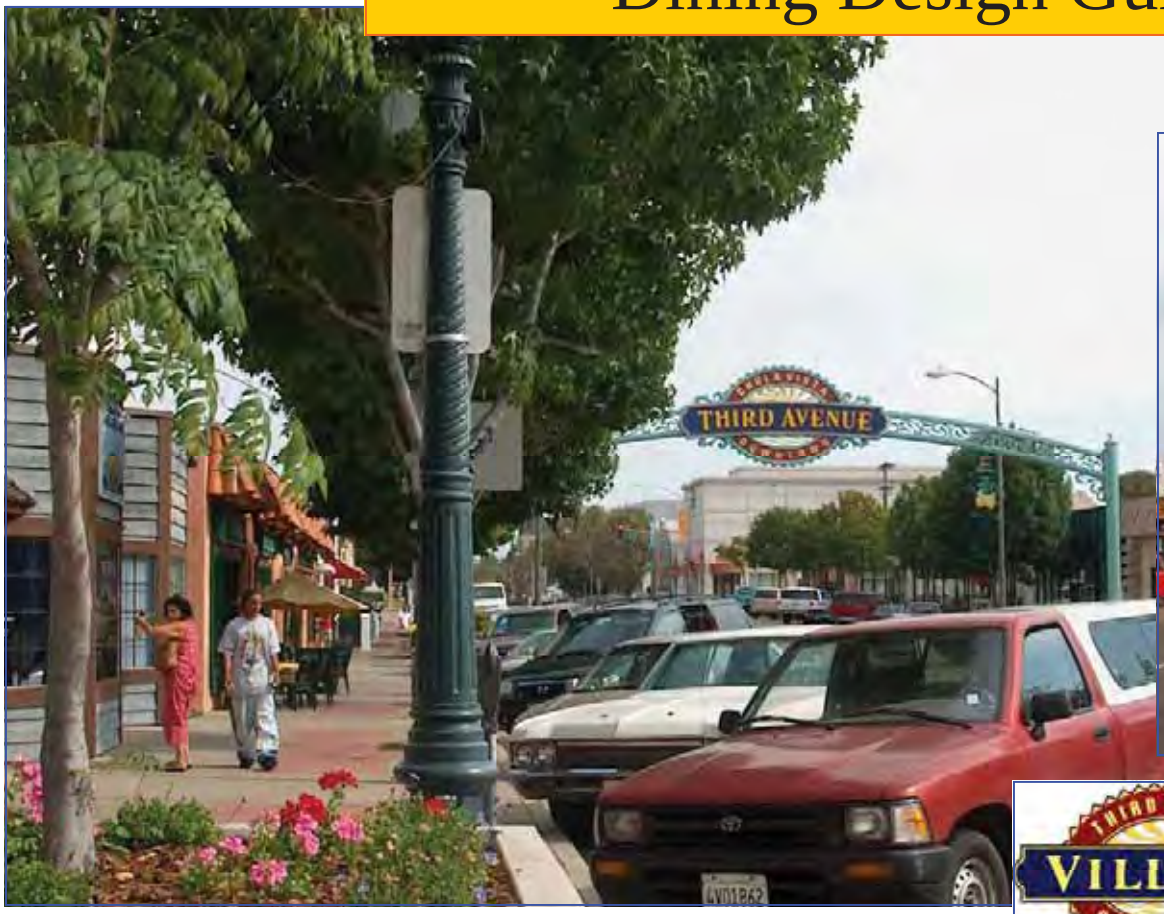
Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC UTILITIES			
Wastewater Treatment Capacity. Based on buildout projections, impacts to the provision of sewer service would be significant. Chula Vista owns capacity in the Metro system, which provides conveyance of City wastewater flows. Increasing population will place additional demand on sewer services. While it is the intent of the City to ensure that services are provided concurrent with need, the provision of sewer services is not solely within its authority. Although the City is in the process of acquiring additional capacity from Metro, that acquisition has not yet been finalized. Based on GPU buildout projections, the City will be generating approximately 26.2 mgd of wastewater citywide by 2030 and would need to acquire additional 6.4 mgd of capacity rights by the year 2030 in order to meet citywide projected demand. Of this total, 1.57 mgd are projected to be generated in western Chula Vista, including a projected generation of 0.88 mgd for the UCSP Subdistricts Area.	5.12.2-1: Prior to the approval of subsequent individual development projects, project plans shall demonstrate that there is sufficient wastewater capacity available to serve the proposed project. Conditions of approval may require sewer capacity fees to be contributed to mitigate project-related impacts.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

URBAN CORE SPECIFIC PLAN MITIGATION MONITORING AND REPORTING PROGRAM
(continued)

Potential Significant Impact	Mitigation Measures	Time Frame of Mitigation	Monitoring Reporting Agency
PUBLIC UTILITIES (cont.)			
Energy. Impacts to energy are considered significant because there is no long-term assurance that energy supplies will be available at buildout of the UCSP. Avoidance of energy impacts cannot be assured regardless of land use designation or population size. Although changes to planned land uses in the City would continue to implement the Energy Strategy Action Plan, San Diego Regional Energy Plan and Transit First Plan, implementation of the proposed land uses identified in the UCSP has the potential to result in significant impacts to nonrenewable and slowly renewable energy resources as a result of anticipated growth. The environmental sustainability measures of the UCSP(Chapter VI, G.) may further serve to reduce energy consumption associated with construction and occupation of structures within the UCSP area.	5.12.4-1: The City shall continue to implement the Energy Strategy Action Plan that addresses demand side management, energy efficient and renewable energy outreach programs for businesses and residents, energy acquisition, power generation, and distributed energy resources and legislative actions, and continue to implement the CO_2 Reduction Plan to lessen the impacts on energy. While implementation of the above mitigation measure reduces energy related impacts, because there is no assurance that energy resources will be available to adequately serve the projected increase in population resulting from adoption of the UCSP, the impact remains significant.	Prior to the approval of an Urban Core Development Permit (UCDP) or other discretionary permit.	City of Chula Vista (CCV)

Appendix E. Third Avenue Village Outdoor Dining Design Guidelines

Third Avenue Village Outdoor Dining Design Guidelines



Prepared by MMS Design Associates in cooperation with the Third Avenue Village Association.

CITY OF CHULA VISTA

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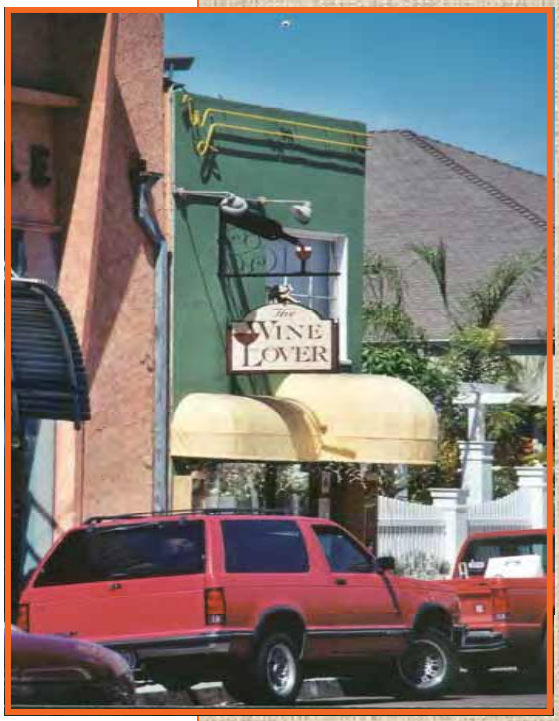
Purpose of Guidelines

The purpose of these Outdoor Dining Design Guidelines (“Design Guidelines”) is to provide overall guidelines for the use of outdoor dining areas along Third Avenue and adjoining streets. This achieves a quality appearances and maintains the Third Avenue Village character.

The City of Chula Vista permits outdoor dining along Third Avenue and adjoining streets in the Village area through an administrative permitting process Authorized by Resolution No. 1410, adopted by the City of Chula Vista Redevelopment Agency in 1994. Per this Resolution, it provides references to the function of an outdoor area and to a very limited sense the layout and operation.

The Third Avenue Village Association (TAVA) feels that the existing Resolution is outdated, needs to reflect the current visions and a clear nexus to the recently approved Urban Core Specific Plan (UCSP). TAVA feels that the design of each of the proposed outdoor dining area should “comply with the intent of the Urban Core Specific Plan approved design guidelines.” This document contains further description for the implementation of these guidelines for street furniture, preferred appurtenances and furnishings that are considered acceptable within the architectural and cultural framework of the Third Avenue Village area.

Central to the process of permitting outdoor dining along one of the south county’s older downtown avenues is the necessity of ensuring that the street furniture and other items placed along the street will complement the overall character of the Village and not detract from the Village’s architectural and character vision.



Background

The City of Chula Vista and the Third Avenue Village Association are pleased to offer existing and encourage future restaurants within the Village the option of utilizing the public sidewalks as outdoor dining areas. Outdoor dining gives restaurant patrons an amenity that has become an increasingly popular feature within the southern California area, due to its sunny weather and mild climates year around.

While the City supports the use of outdoor dining arrangements, restaurant operators must be aware of three (3) important factors in determining how to use an outdoor dining area:

1) Public safety and visibility
2) Circulation flow of pedestrian traffic and
3) Visual appropriateness within Village's character.

These Outdoor Dining Design Guidelines are intended to ensure that restaurants use the public sidewalk for outdoor dining in a way that is safe for pedestrians, does not present handicap constraints for the visually impaired, encourages interactions, and supports a pleasant outdoor dining experiences.

The Outdoor Dining Design Guidelines has blended elements of the existing Resolution No. 1410 with the current visions and strategies, USCP guidelines, other communities downtown guidelines and local knowledge to create a set of visual pictures to describe the intent and application. We hope this document will encourage more restaurants or cafés to take this opportunity to create an outdoor dining experience within the Village area.

Application Processing and Procedures

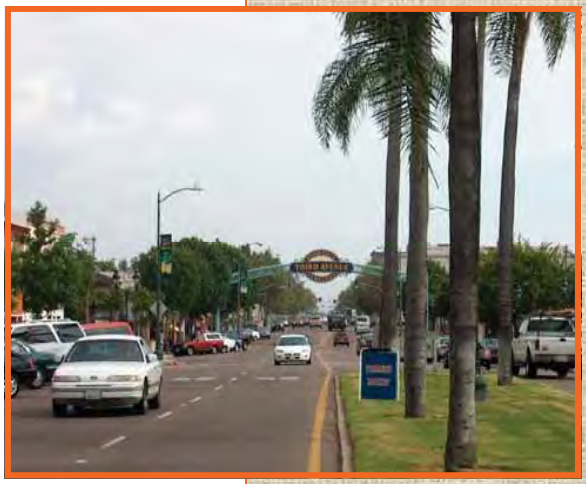
Outdoor dining is permitted within the Village along Third Avenue and adjoining streets through an administrative approval process. This administrative process will save time and expense by establishing standards that must be followed for all outdoor dining locations.

To apply, a restaurant owner or his/her designee needs to complete the following:

- **Application Form:** The applicant should fill out the a brief form with basic information about the restaurant, proposed number of seats and how these are to be arranged within the proposed outdoor space.

- **Site Plan:** A plan showing the proposed outdoor dining area with specific measurements (including a representation showing that at least 5 feet of unobstructed sidewalk space within the public right-of-way will remain for pedestrian circulation).

- **Photos or Drawing of Street Furniture:** Photos or other graphic representation (including color and materials) of furniture, umbrellas, stands, fences and/or railings needed for the City to verify that the proposed furniture conforms to these Design Guidelines.



Chapter 1: Barriers

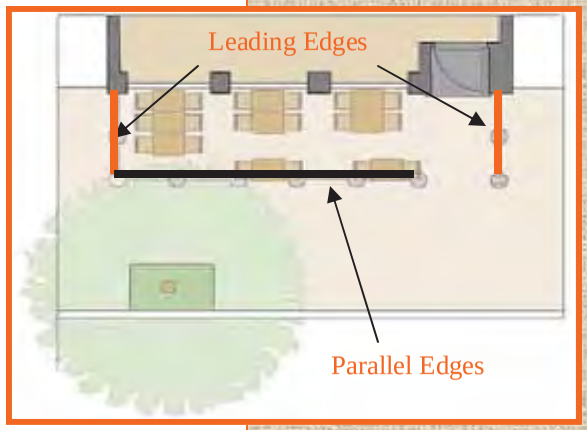
Dining area barriers (fences, gates, ropes etc.) are visually appealing and help to define and separate the dining area from the public sidewalk. All barrier material must be maintained in good visual appearance, without visible fading, dents, tears, rust, corrosion, or chipped or peeling paint.

Barriers are required in the following instances:

- Required for Leading Edge of all Dining Areas: A solid detectable barrier is required for the leading edge of all outdoor dining areas to ensure that visually impaired pedestrians using canes can detect the dining areas safely. The leading edge, illustrated to the right in orange, is defined as the section of a dining area that is at or near a perpendicular angle to the building wall and/or curb line.

- Required for Full Perimeter of Some Dining Areas: A solid detectable barrier is required for the full perimeter (with the exception of access openings) when the outdoor seating area extends more than 3 feet into the public right-of-way. The perimeter includes both the leading edges and parallel edges. Restaurants which do not serve alcohol and whose outdoor seating area extends less than 3 feet into the public right-of-way are not required to enclose the full perimeter of the seating area, but may do so on an optional basis.

- Required for Full Perimeter of All Outdoor Dining Areas Serving Alcohol: State law requires that outdoor dining areas where alcohol is served or consumed must enclose the area, with only one opening to the sidewalk for access.



Barrier Designs

1.1 Barrier Design Applications

A wide variety of styles and designs are permissible for outdoor dining area barriers:

Sectional Fencing: Sectional fencing (generally defined as rigid fence segments that can be attached together to create a unified fencing appearance) is the most desirable solution for outdoor seating areas using barriers. Such fencing is easily portable, but cannot be shifted by patrons or pedestrians, as can less rigid forms of enclosures. Sectional fencing must be of metal (aluminum, steel, iron, or similar) or of wood construction and must be of a color (either painted or stained).

Rope or Chain Rails: Rope or chain-type barriers (generally defined as enclosures composed of a rope or chain suspended by vertical elements such as stanchions) are permitted only if they meet the following criteria:

- Rope/Chain Diameter: The rope or chain must have a minimum diameter of 1 inch, in order to be detectable by the visually impaired.
- Posts: Vertical support posts (stanchions, bollards, etc.) must be constructed of wood or metal (aluminum, steel, iron, or similar).
- Stanchion Base Must Not Be A Tripping Hazard: If a stanchion or other vertical supporting device is attached to as base, that base must be flat and must measure no more that one-half (1/2) of an inch above the sidewalk surface. Typically stanchion have a minimum height of 36". No domed stanchion bases are permitted.

Figure 1: Use of rope or chain barrier should have a minimum diameter of one (1”) inch. Note the approved connection to the stands.

Figure 2: Acceptable use of a sectional fence.
Note appropriate base and connection to the fence.

Figure 3: Good example of a preferred stanchion base that is flat and no more than 1/2” above the sidewalk surface.

Figure 4: Here is an example of a stanchion that is not permitted within the outdoor area.

Figure 5: A great example of the outdoor sectional fencing that is linked together with a great design and has a low profile stanchions.

Freestanding: Any barrier (whether sectional fencing or rail-type) should be freestanding, without any permanent or temporary attachments to buildings, sidewalks or other structures.

Prohibited Barrier Styles:

- Fabric Inserts: Fabric inserts (whether natural or synthetic fabric) of any size are not permitted to be used as part of a barrier.
- Chain-link and Other Fencing: The use of chain-link, cyclone fencing, chicken wire or similar appurtenances is strictly prohibited. Materials not specifically manufactured for fencing or pedestrian control (including, but not limited to filled buckets, food containers, tires, tree stumps, vehicle parts, pallets, etc.) and not expressly permitted elsewhere in these Design Guidelines, may not be used as components of a barrier.

1.2 Barrier Measurements

To ensure their effectiveness as pedestrian control devices and to be detectable by persons with visual impairments, barriers should meet the following measurement guidelines:

Height: The highest point of a barrier (such as a stanchion) should be measured at least 36 inches in height, with the exception of planters.

Open Appearance: Fences or other perimeter enclosures with a height of between 36" and 50" should be at least fifty percent (50%) open (see-through) in order to maintain visibility of street level activity. Any enclosure with a height over 50" should be at least eighty percent (80%) open (see-through).

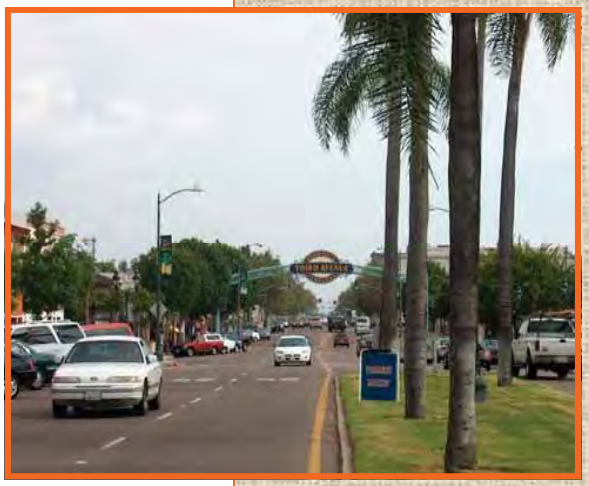


Figure 6: Fencing with fabric inserts are not permitted to be used as part of the barrier.

Figure 7: The Height of the sectional fence should be at least 36” along the entire fenced outdoor dining area.

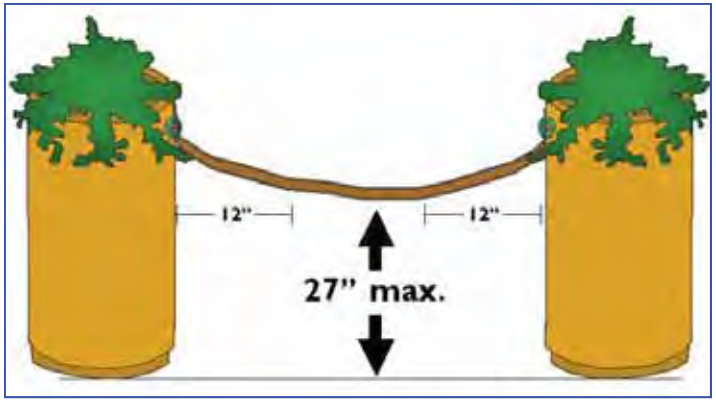


Figure 8: In all cases where the applicant is proposing a rope or chain barrier, the center of the barrier should be 27” from the sidewalk, as measured 12” from the side stanchions.

Maximum Distance from Ground: All barriers must be detectable to visual impaired pedestrians who employ a cane for guidance. Therefore the bottom of barriers should be no greater than 24 inches above the sidewalk surface.

How to Measure Rope/Chain Distance from Ground: In the case of a rope or chain enclosure, the rope/chain should not exceed 27 inches in height when measured 12 inches or more away from a vertical post (stanchion, bollard or other such support).

1.3 Access and Openings

Minimum Access Width: Any enclosure opening within the barrier should measure no less than 44 inches in width.

Location: Enclosure openings should be placed in a location that will not create confusion for visually impaired pedestrians.

1.4 Landscape Elements

Landscape Elements, such as planters or freestanding potted plants may be used in addition to, or in place of, other barrier designs. In addition, planters may be used in situations where no barrier is required (for example, where the outdoor dining areas do not extend more than three (3') feet onto the sidewalk) in order to provide added visual interest, or to create a more attractive and welcoming atmosphere.

Maximum Height of Planters: Planters may not exceed a height of 36 inches above the level of the sidewalk. (This pertains only to planters, not the plants contained therein.)

Figure 9: Here is an acceptable outdoor dining area that uses planters, materials and chain barrier.

Figure 10: Planters height may vary but in all cases should not exceed a maximum of 8' from sidewalk to top of plant materials.

Figure 11: Here are some good examples of planter design and uses of materials.

Maximum Height of Plants: Plant material may not exceed a height of 108 inches (9 feet) above the level of the sidewalk.

Planted Material: All planters must have plants contained within them. If the plants within a planter die, the plants must be immediately replaced or the planter removed from the public right-of-way. Artificial plants, empty planters, or planters with only bare dirt, mulch, straw, woodchips or similar material are strictly prohibited. Seasonal or thematic planter displays are encouraged.

Chapter 2: Furniture and Fixtures

Commercial and Service Retail liveliness depends on maintaining an attractive and high-quality atmosphere. As stated in the Urban Core Specific Plan, within the Public Realm Strategies, the Third Avenue Village and the City of Chula Vista want to create an unified and visually attractive environment which promote a sense of place, encouraging people to dine, explore and seek a variety of shops.

The quality of the streetscape and street furnishing is vitally important to that sense of place for the Third Avenue Village retail and pedestrian ambiance. The streetscape, landscaping and the adjacent buildings and/or outdoor spaces are the most significant overall elements in providing a dynamic visual environment.

Outdoor dining furniture becomes a prominent part of the streetscape when used in the front or along the sides of buildings, and such furniture needs to uphold the high standards applied to buildings and other improvements within the Third Avenue Village.

The pedestrian experience whether strolling along Third Avenue or sitting at a sidewalk café plays an important role in the functionality of the overall economic health of the Village and most important a sense of safety.

Figure 12: The outdoor dining area is for tables and chairs only. Other appurtenances or furnishing are not permitted within this area. Note the services tables and trash receptacles, these are not permitted.

A wide range of furniture styles, colors and materials is permitted. All furniture and fixtures should be maintained in good visual appearance, without visible fading, dents, tears, rust, corrosion, or chipped or peeling paint. All furniture and fixtures should be maintained in a clean condition at all times. All furniture and fixtures should be durable and sturdy construction as not to blow over with normal winds.

To ensure a quality visual appearance in keeping with the Third Avenue Village vision, common standards and conditions on the following pages apply to outdoor dining furniture such as tables and chairs.

2.1 Types of Street Furniture and Furnishings

Discouraged Furniture or Furnishings: Discourage furniture and furnishings include but is not limited to serving stations, bar counters, shelves, racks, sofas, televisions, trash receptacles, torches, etc.

Freestanding: Furniture and fixtures should not be secured to trees, lampposts, street signs, hydrants, or any other street infrastructure by means of ropes, chains or any other such devices, whether during restaurant operating hours or at times when the restaurant is closed.

2.2 Tables and Chairs

Tables need to be functional, not only for patrons, but also for pedestrians, given the limited space available for outdoor dining on many of the Third Avenue Village sidewalks.

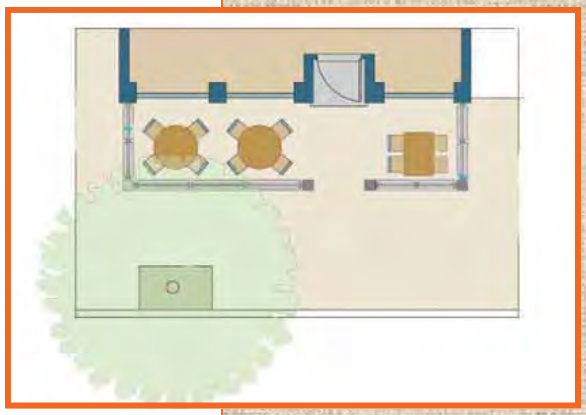


Figure 13: Here is a great example of an outdoor dining setup and furnishing. The chairs may be of dark or natural unpainted materials.

Figure 14: These smaller bistro style tables and chairs are more efficient, along use of the sidewalk and could be applied to various streets within the Third Avenue Village area.

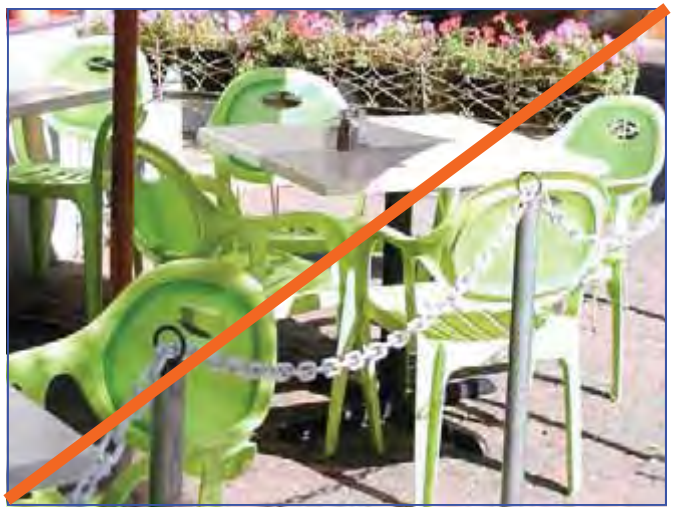


Figure 15: Plastic white or fluorescent furniture is not permitted under any circumstance within the Third Avenue Village area.

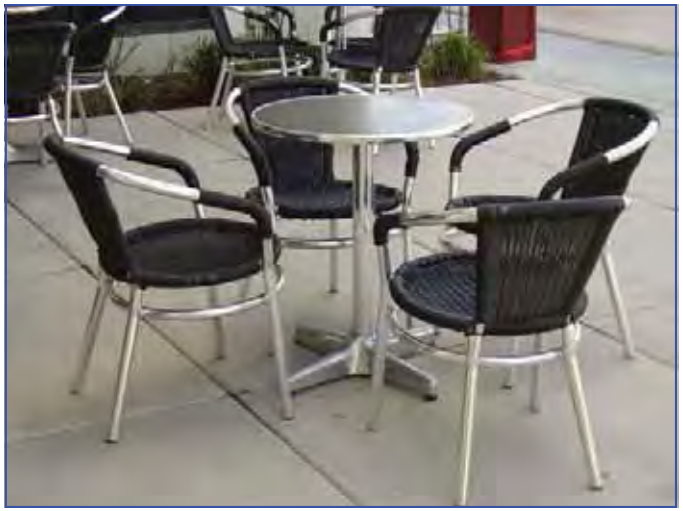


Figure 16: Combination between the chairs and tables is acceptable as long as they match each other, as shown in photos above and below.

Figure 17: Use of white plastic furniture is not permitted within the Third Avenue Village.

Outdoor dining furniture should also contribute to the overall atmosphere of Third Avenue's entertainment/retail/restaurant district and be complementary in both appearance and quality.

Color: Tables may be colored or of a natural unpainted material (i.e., wood, metal, etc.). Tables are not permitted to be white plastic or of any fluorescent or other strikingly bright or vivid color.

Size and Shape: The size and shape of tables strongly affects the functionality of an outdoor dining area. Due to Third Avenue's sidewalks configurations, restaurants should strive for space-efficient seating layouts and furniture siting while creating a usable space that is not to crowded and allows for easy circulation.

Square or Rectangular Tables Preferred: Square or rectangular tables are strongly recommended for use in Third Avenue's outdoor dining areas.

Better Fit: Square or rectangular tables may fit flush against a building's wall and can permit more usable surface area for patrons while at the same time leaving more space available for pedestrian circulation.

More Flexibility: Square or rectangular tables are more flexible for use in outdoor dining areas. Such tables may be combined to seat larger parties much more effectively than can round tables.

Smaller Tables Preferred: Smaller tables work better than larger tables and are more effectively and flexible. Although optimal table size varies by each restaurant's specific outdoor dining layout, smaller tables are preferred.

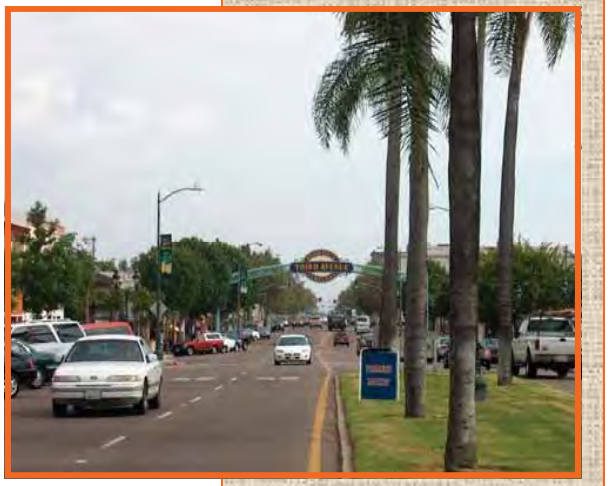
Chairs, like other outdoor dining elements, must contribute to the overall atmosphere of Third Avenue's commercial/retail district and should be complementary in both appearance and quality.

Color: Chairs may be colored or of a natural unpainted material (i.e., wood, metal etc.). Chairs are not permitted to be white plastic or of any fluorescent or other strikingly bright or vivid color.

Upholstery: Upholstered chairs are permitted. Upholstery is not permitted to be of any fluorescent or other strikingly bright or vivid color. Although not discourage, however, material covered chairs tend to be higher maintenance due to the cleaning aspects. These types of material chairs should be maintained in good visual appearance, without visible fading, dents, tears, rust, corrosion, or chipped or peeling paint.

Matching: All chairs used within a particular establishment's outdoor seating area should complement each other by being of visually similar design, construction and color.

Service Podiums: Podiums may be constructed of either wood or metal. The color palette shall match the outdoor dining areas theme for that given restaurant. Like other furnishings the podiums must be maintained in good visual appearance, without visible fading, dents, tears, rust, corrosion, or chipped or peeling paint. A small unobtrusive light maybe mounted on the podium, but must not create a visual or safety concern for the diners or nearby pedestrian areas. The location of the service podium may not create confusion for visually impaired pedestrians or create a blocking situation.



2.3 Umbrellas and Stands

Umbrellas can add a welcoming feel to outdoor dining areas and provide shelter from the elements, making their use desirable for outdoor dining applications. Appropriately design and sized umbrellas are permitted for use under this outdoor dining program. Umbrellas should be free of advertisements and contained within the outdoor dining area, and the lowest dimension of an extended umbrella must be at least 7 feet above the sidewalk surface. All umbrellas must comply with the following conditions.

Contained Within the Outdoor Seating Area: To ensure effective pedestrian flow and safety, all parts of any umbrella (including the fabric and supporting ribs) should be contained entirely within the outdoor seating area. No overhanging onto neighboring sidewalk (s) or landscaped areas will be allowed.

Minimum Height for Sidewalk Clearance: When extended, the umbrella should be measure at least 7 feet above the surface of the outdoor dining area in order to provide adequate circulation space below. This measurement should include not only the umbrella frame and panels, but also any decorative borders such as fringes, tassels, or other such ornamentation.

Maximum Height: Any part of an umbrella used in an outdoor seating area may not exceed a height of 120” (10 feet) above the level of the sidewalk, in order to avoid causing an undue visual obstruction or safety concern to other businesses.

Colors: Umbrellas should blend appropriately with the surrounding built environment. There fore, umbrella fabric is not permitted to be of any fluorescent or other strikingly bright or vivid color. Umbrella should be a solid color.

Size and Shape: The size and shape of an umbrella strongly affects its functionality within a constrained space such as an outdoor dining area. Due to the narrow measurements of most restaurants outdoor dining areas, restaurants using umbrellas should strive for space-efficient umbrella designs.

Square or Rectangular Umbrellas Preferred: Square or rectangular umbrellas, as opposed to round or octagonal umbrellas, are strongly recommended for use in Third Avenue's outdoor dining areas.

Market-Style Umbrellas Preferred: Market-style umbrellas – those designed specifically for patio or outdoor restaurant use – are preferred for outdoor dining purposes.

Material: Umbrella fabric must be of a material suitable for outdoor use, and should be canvas-type. No plastic fabrics, plastic/vinyl-laminated fabrics, or any type of rigid materials are permitted for use as umbrellas within an outdoor seating area.

Signage or Wording Prohibited: Umbrellas should not contain signage for the restaurant or for any other entity in the form of wording, logos, drawing, pictorial or photographic representations, or any other likewise identifying characteristic.

Figures 18, 19 & 20: Illustrate inappropriate signage and use of metal or plastic umbrellas which are not permitted within the Third Avenue Village.

Figure 21: This photo offers another good example of an outdoor umbrella application.

2.4 Sidewalk Coverings

The basic floor of outdoor seating area should be uncovered sidewalk material (such as concrete, concrete pavers, stamped concrete, etc.) as to provide continuity with the adjacent public right-of-way. Floor coverings or raised platforms may not be used within outdoor dining areas.

Prohibited Sidewalk Coverings:

Carpet: Prohibited sidewalk coverings include carpet or other flooring material constructed of fabric, canvas, wool, tile, linoleum, nylon, vinyl, or any covering that is intended to resemble turf.

Platforms: Raised decks, platforms, or other such surfaces are not permitted within outdoor dining areas.

2.5 Unobstructed Pedestrian Circulation

As established in the Outdoor Dining Ordinance, all outdoor dining areas should leave at least five (5') feet of unobstructed pedestrian space outside of the proposed outdoor dining area. These 5 feet of pedestrian space must be clear of obstruction caused by trees, tree wells, posts, hydrants, parking meters or any other infrastructure. In addition, no part of an outdoor dining areas (including plants) may extend into the 5 feet-unobstructed zone.

Figure 21: Overall this photo illustrates the minimum clearances required for an outdoor dining application. Note that there is ample dining area reserved and the public has a safe clearance between the outdoor dining area and other street obstacles, such as the street trees. This also includes other appurtenances such as parking meters, signs or poles that may be found within the public rights-of-ways.

2.6 Signage and Applications

Signage is permitted within outside dining areas affixed only to the building structure and with a valid City permit. No extra or additional signage is permitted solely as a result of an establishment's participation in this outdoor dining program. No free standing signs or banners will be allowed within the boundaries of the outdoor dining areas or hanging from the perimeter fencing.

2.7 Adjacency to Other Businesses

Restaurants need to be mindful of adjoining businesses when using outdoor dining areas, making sure that neighboring businesses remain visible to pedestrians and motorists, and are not negatively affected by noise, odors, etc. pursuant to CVMC 19.66 and 19.68

A restaurant may be required to adjust the outdoor seating area's layout, dimensions or distance from the property line (2 feet or more) to ensure that these performance standards are maintained.