

TROOST AVENUE STREETSCAPE PLAN

JUNE 2008



ACKNOWLEDGEMENTS

Mayor

MARK FUNKHOUSER
KAY BARNES (1999-2007)

City Manager

WAYNE A. CAUTHEN

City Council

DEB HERMANN
DEB HERMANN (2003-2007) 1st District-at-Large

BILL SKAGGS
BILL SKAGGS (2003-2007) 1st District

ED FORD
BONNIE SUE COOPER (2003-2007) 2nd District-at-Large

RUSS JOHNSON
JOHN FAIRFIELD (2003-2007) 2nd District

MELBA CURLS
TROY NASH (2003-2007) 3rd District-at-Large

SHARON SANDERS BROOKS
SAUNDRA MCFADDEN-WEAVER (2003-2007) 3rd District

BETH GOTTSTEIN
JIM GLOVER (2003-2007) 4th District-at-Large

JAN MARCASON
JIM ROWLAND (2003-2007) 4th District

CINDY CIRCO
BECKY NACE (2003-2007) 5th District-at-Large

TERRY RILEY
TERRY RILEY (2003-2007) 5th District

CATHY JOLLY
ALVIN BROOKS (2003-2007) 6th District-at-Large

JOHN A. SHARP
CHARLES A. EDDY (2003-2007) 6th District

Prepared for:

The City Planning and Development
Department

Prepared by:

HNTB

ACKNOWLEDGEMENTS

Troost Avenue Streetscape Plan Advisory Committee

MR. MARK SWOPE	Kansas City Area Transportation Authority
MR. KRIS KRAMER	Stowers Institute
MS. RENEE NEADES	49/63 Neighborhood Coalition
MR. MIKE HELMER	Ewing Marion Kauffman Foundation
MS. MARI LEE	Southtown Council
MR. HOWARD TOWNSEND	Troost Corridor Community Association
MS. CAROL GRIMALDI	Brush Creek Community Partners
MR. MIKE BIER	Kansas City Power and Light Company
MR. RICK ANDERSON	University of Missouri-Kansas City
MR. COLIN GAGE	University of Missouri-Kansas City
MR. JOE RYAN	Missouri Department of Conservation
MR. MISHKAT AZ-ZUBAIR	Troost Corridor Community Association
MR. OLLIE GATES	Plaza East Development
MR. LELAND GOLDSTON	Hyde Park Neighborhood Association
MS. SARA HUMPHREY	Hyde Park Neighborhood Association
MS. LADENE MORTON	Troost Neighborhood Association
MR. GUY SWANSON	Rockhurst University
MS. ALICIA DOUGLAS	Rockhurst University
MR. ROBERT TAYLOR	Manheim Park Neighborhood
MR. RALPH PAYNE	Rockhill Homes Association
MS. JANET MILLER	Rockhill Homes Association
MR. BRIAN BALL	Rockhill Homes Association

The Troost Avenue Streetscape Plan Advisory Committee, formed through The City Planning and Development Department, represents a broad cross-section of individuals, neighborhood groups, organizations, city agencies, businesses, and institutions. This group assisted in the development of the plan by providing insight and ensuring the finished plan represented the needs and the goals of the communities along the Troost Avenue Corridor.

Great appreciation is extended to all the participants who provided input and contributed their time throughout the planning process. Through stakeholder persistence, the vision outlined in the Troost Avenue Streetscape Plan shall be realized; providing the community a moment of pride.

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Section A - Introduction

Project Description:

The Troost Avenue streetscape planning process, focuses on the area from 42nd Street to 52nd Street. The task is to prepare a streetscape plan for this one-mile long corridor. The corridor begins on the north along very traditional urban neighborhoods and continues to the south along two major urban university campuses.

The replacement of the Troost Bridge has been an impetus to coordinate all of the proposed improvement projects in the area. The channel improvements will connect the Brush Creek corridor design from just west of the Rockhill

Bridge to the newly completed improvements just east of the Paseo Bridge complex. It is anticipated that the new walks will provide a continuous connection from east to west along Brush Creek. In addition, the intersection at Troost Avenue and Volker Boulevard will be redesigned to accommodate left turn movements in each direction. The City is currently working on a system to connect the traffic signals along Volker Boulevard to improve traffic flow. Public art will also be integrated into the overall project design. An Advisory Committee is formed to assist in generating ideas for the streetscape. The public will be invited to participate and provide comments as well.

The final product will include:

- A refined "selected" streetscape option
- Identification of alternatives within selected streetscape
- An estimate of cost for one typical block
- Identify cost ranges of streetscape elements
- Implementation options



Troost Avenue Streetscape Planning Area

INTRODUCTION

Streetscape Definitions

The following are streetscape definitions and guidelines summarized from several existing planning reports:

Streetscape Definition 1: The environment along a street in an urbanized area. Streetscape elements include the roadway, including medians and associated landscaping, fountains, sculptures, sidewalks, on-street parking, street lighting, pedestrian lighting, traffic signals, signage, benches, trash containers, newspaper and other vending machines, bus shelters and other features within the area of the right-of-way.

Streetscape Definition 2: The distinguishing character of a particular street as created by its width, degree of curvature, paving materials, design of the street furniture and forms of surrounding buildings.

Streetscape Elements:

Elements typically included in successful streetscapes include:

- a. Sidewalks
- b. Lighting
- c. Signage
- d. Street Furniture and Amenities
- e. Public Art
- f. Landscaping, Street Trees, Planters
- g. Gateways and Transitions
- h. Intersection Improvements
- i. Curb Extensions
- j. Transit / Bus Shelters
- k. Building Setbacks
- l. Walkability
- m. Bike Facilities
- n. Utilities

Streetscape Examples

The following pages include images of streetscapes and streetscape elements.



Denver, Colorado



Stillwater



Bethesda, Maryland



River Market, Kansas City, Missouri

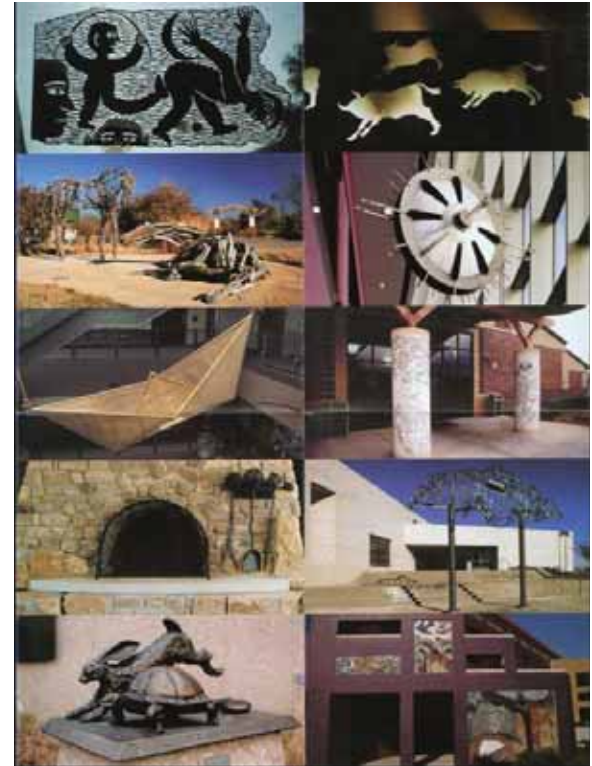
INTRODUCTION



Street Banner



Spaces Between Buildings



Public Art



Building and Wayfinding Signage



Newspaper Vending Stand



Planters and Lighting



Colorful Planter

Section B - Existing Conditions

The following pages contain images of existing streetscape conditions along Troost Avenue. There are three distinctive sub-areas within the study area.

42nd Street to Brush Creek Boulevard:

The first sub-area is between 42nd Street and Brush Creek Boulevard. This northern area consists of residential and small businesses.

Brush Creek Boulevard and Volker Boulevard:

The second-sub area is between Brush Creek Boulevard and Volker Boulevard. This central area consists of commercial and institutional uses.

Volker Boulevard and 52nd Street:

The third sub-area is between Volker Boulevard and 52nd Street. This southern area primarily consists of institutional uses with a few residential and commercial uses as well.

The existing conditions images are separated into the three sub-areas within the corridor. Within each sub-area, the images are placed in order by block beginning at the north end of the corridor at 42nd Street.



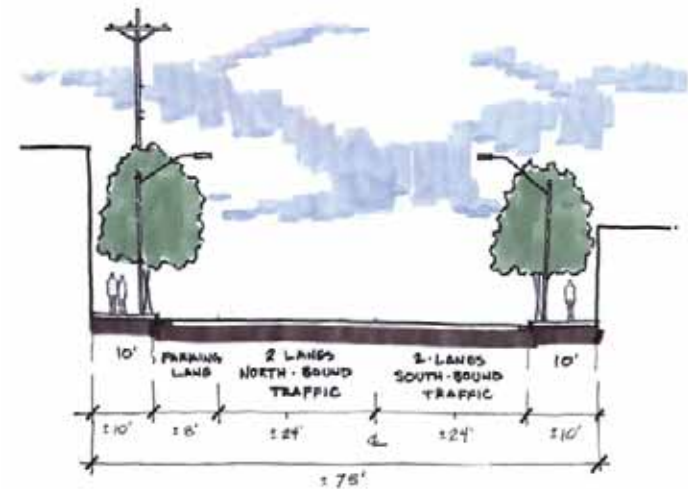
Troost Avenue Site Analysis

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard



Study Area between 42nd Street and Brush Creek Boulevard

The northern sub-area is made up of a mix of single family residential and small businesses. To the right are some typical sections of Troost Avenue as it looks today.



Section through Troost

42nd Street to 43rd Street



Canopy at Prince Howard. Uniform sidewalk paving with no accents. Street trees have minimal opening for water and air infiltration.



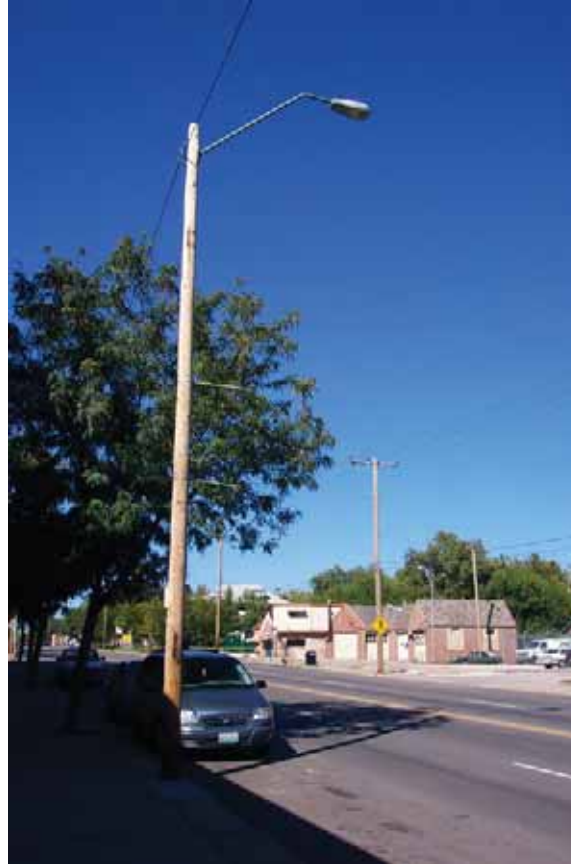
Special paving at Prince Howard entrance. Pavement condition is deteriorating.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

42nd Street to 43rd Street



Gas meter visible from street.



Existing streetlight and tree canopy on one side of the street.



Street tree partially removed.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

42nd Street to 43rd Street



Existing sign and street tree. Existing signage is mounted inconsistently.



Transit stop signage.



Crosswalk marked with signage. Pedestrians required to cross 4 traffic lanes and 2 parking lanes.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

42nd Street to 43rd Street



Storefront entrance with planter. Plantings are not maintained and planter is not consistent with materials on the storefront.

43rd Street to 44th Street



Typical fire hydrant and metal utility poles adjacent to roadway. Street trees are absent from one side of the corridor. Sidewalk pavement is deteriorating.



Concrete walk is not continuous.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

43rd Street to 44th Street



Unique corner monument. Maintenance is needed on the bench, steps, and surrounding walls. Planting urns are provided for seasonal color.



Existing signage mounted on a round, galvanized post. Street tree with a minimal water and air infiltration zone.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

43rd Street to 44th Street



Three examples of inconsistent utility and light poles. Existing overhead power lines are unsightly and limit potential for a mature tree canopy.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

44th Street to 45th Street



Existing signage and metal streetlight.



Existing neighborhood identification banner mounted on a street light.



Small transit stop signage with no other designation or site furnishings.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

44th Street to 45th Street



Transit stop furnishings that are inconsistent with other transit stops. Litter is evident.



Storefront signage. Existing pedestrian walks are deteriorating and pose a safety and accessibility problem.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

45th Street to Brush Creek boulevard



Vending machine and inconsistent trash receptacles. Utilitarian appearance and lack of lid provide unsightly views.



Pay phone with numerous cigarette butts. Sidewalk around gas meter is missing.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

45th Street to Brush Creek boulevard



Site furnishings are inconsistent. Existing concrete bench is deteriorating. No trash receptacle is located by the bench and trash is evident. Broken glass remains at the trash receptacle.



Broken glass remains at the trash receptacle.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

44th Street to 45th Street



Planters along storefront soften the hardscape. No trees are present to provide shade.



Surface parking is secured with a utilitarian chain link fence. Lone building is present with “gaps” on either side.

EXISTING CONDITIONS - 42nd Street to Brush Creek Boulevard

45th Street to Brush Creek boulevard



Fire hydrant and street tree. Sidewalk condition is unsightly.



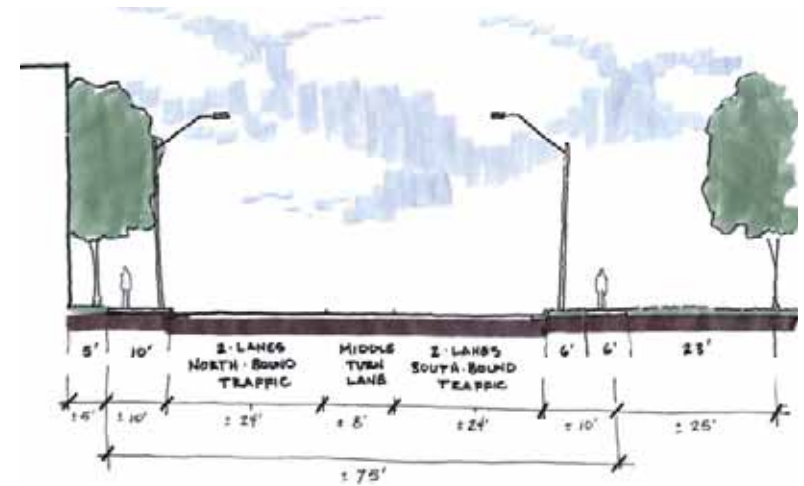
Parking lot screened with a black, wrought iron fence. No street trees present along Troost Avenue to buffer pedestrians from the roadway.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard



Study Area between Brush Creek Boulevard and Volker Boulevard

The central sub-area is made up of a mix of large institutional uses, such as UMKC, Missouri Department of Conservation, and the Kauffman Foundation along with local and national businesses. To the right is a typical section of Troost Avenue as it looks today in the central sub-area.



Section through Troost

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Brush Creek boulevard to Emanuel Cleaver II Boulevard



Store signage and pedestrian street crossing.



Wood utility pole and overhead utilities.



Single building remnants remaining on street.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Brush Creek boulevard to Emanuel Cleaver II Boulevard



Existing metal seating and parking lot screening wall. Tall screen does not allow visibility to seating area.



Existing wood streetlight and metal traffic signal. Intersection is stark and unwelcoming.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Brush Creek boulevard to Emanuel Cleaver II Boulevard



Transit stop signage with map attached to utility pole. No consistency exists between materials.



Utility box and trash receptacle placement restrict pedestrian movement.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Emanuel Cleaver II Boulevard to 48th Street



Traffic signal with pedestrian signal but missing actuator buttons.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Emanuel Cleaver II Boulevard to 48th Street



Vending machine secured to existing utility pole. Vending machine character is based on the product not the location.



Existing signage and walk transition. Walk changes from being adjacent to the street to having a landscape separation.



Concrete trash receptacle with no lid and unsightly plastic liner.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Emanuel Cleaver II Boulevard to 48th Street



Metal streetlight, concrete trash receptacle, and existing street tree.



Existing signage and curb cut.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

Emanuel Cleaver II Boulevard to 48th Street



Vending machines disrupt the visual continuity and clutter the pedestrian zone.



View east down 48th Street to Paseo. The side street character is utilitarian.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

48th Street to Volker Boulevard



Regulation signage mounted on free standing post.



Regulation signage and deteriorating sidewalk.



Regulation signage mounted on free standing post.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

48th Street to Volker Boulevard



Regulation signage and utility marker visible from Troost.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

48th Street to Volker Boulevard



Existing street trees at the bridge approach.



Damaged storm sewer inlet creating a safety hazard.

EXISTING CONDITIONS - Brush Creek Boulevard to Volker Boulevard

48th Street to Volker Boulevard



Existing bridge guard rail and pedestrian walk.

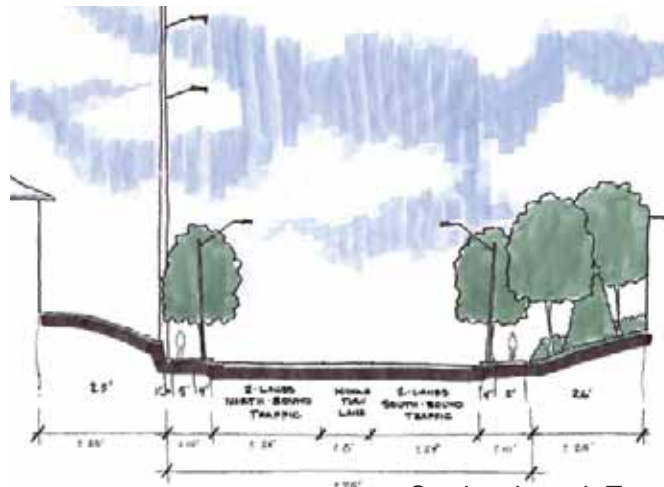
EXISTING CONDITIONS - Volker Boulevard to 52nd Street



h Street

Study Area between Volker Boulevard and 52nd Street

The southern sub-area is made up of a mix of large institutional uses, such as UMKC, Stower's Research Institute, and Rockhurst University along with multi-family residential and local businesses. To the right is a typical section of Troost Avenue as it looks today in the southern sub-area.



Section through Troost

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

Volker Boulevard to 50th Street



Volker Boulevard and Troost Avenue pedestrian crossing. No Pedestrian signals are present.



Neighborhood monument.



Sidewalk and on-street parking at Stower's Institute.



Neighborhood monument in park.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

Volker Boulevard to 50th Street



Park and covered transit stop.



Vending machines and concrete trash receptacle with lid. Walk and drainage inlet are deteriorating.



Major overhead electrical transmission lines.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

50th Street to 51st Street



Regulation signage mounted to existing utility pole.



Utilitarian trash receptacle with out lid. Secured to electric transmission pole.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

50th Street to 51st Street



Residential entry monument and entry drive with landscaped median.



Gap in sidewalk.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

51st Street to 52nd Street



Regulation signage mounted on free standing post.



Concrete trash receptacle with lid and electric transmission pole. No screening between parking area and pedestrian walk.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

51st Street to 52nd Street



Regulation signage mounted on existig tuility poles.



Fire hydrant in buffer area.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

51st Street to 52nd Street



Walk with landscape buffer between pedestrian zone and street.



Existing street tree trimmed to avoid conflict with overhead utilities.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

51st Street to 52nd Street



Transit bench with recycled seat materials. Bench is mounted on walk and can interrupt pedestrian traffic.



Transit stop signage mounted to existing utility pole.

EXISTING CONDITIONS - Volker Boulevard to 52nd Street

51st Street to 52nd Street



Traffic signal without pedestrian signals.



Transit stop and shelter.

Section C - Summary of Troost Projects

The Troost Project at Brush Creek is a combination of many capital improvement projects that will upgrade and enhance the Troost at Volker area. The overall project includes five projects which are:

- Troost Bridge. The Troost Bridge over Brush Creek will be replaced with a new single span structure.
- Channel Improvements. The Brush Creek channel will be improved from the dam just east of Rockhill Road to the Paseo drop structure which is west of The Paseo Boulevard. The improvements will implement the flood control recommendations for this area.
- Volker and Troost Intersection. The Volker Boulevard and Troost Avenue intersection will be upgraded to improve turning and through movements. In addition, pedestrian safety enhancements will be part of the overall design consideration as well as the City's Walkability Plan.

- Troost Streetscape Plan. The Troost Avenue streetscape planning process, focuses on the area from 42nd Street to 52nd Street. The task is to prepare a streetscape plan for this one-mile long corridor.
- Public Art. Public art is a component of the overall project and public art design will be integrated into the design improvements.



Troost Bridge Viewed from Brush Creek

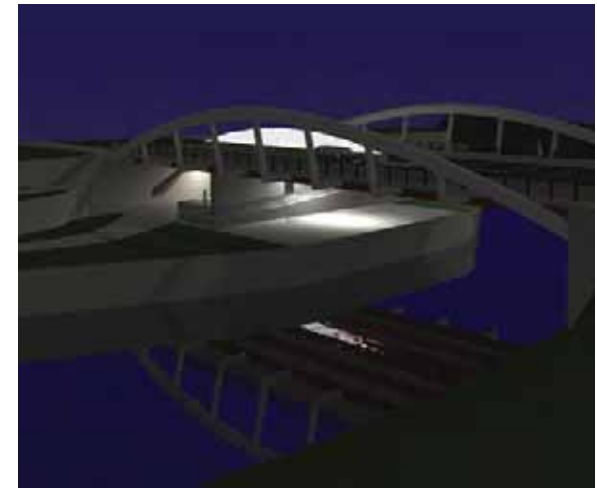


Recommended Troost Bridge Design

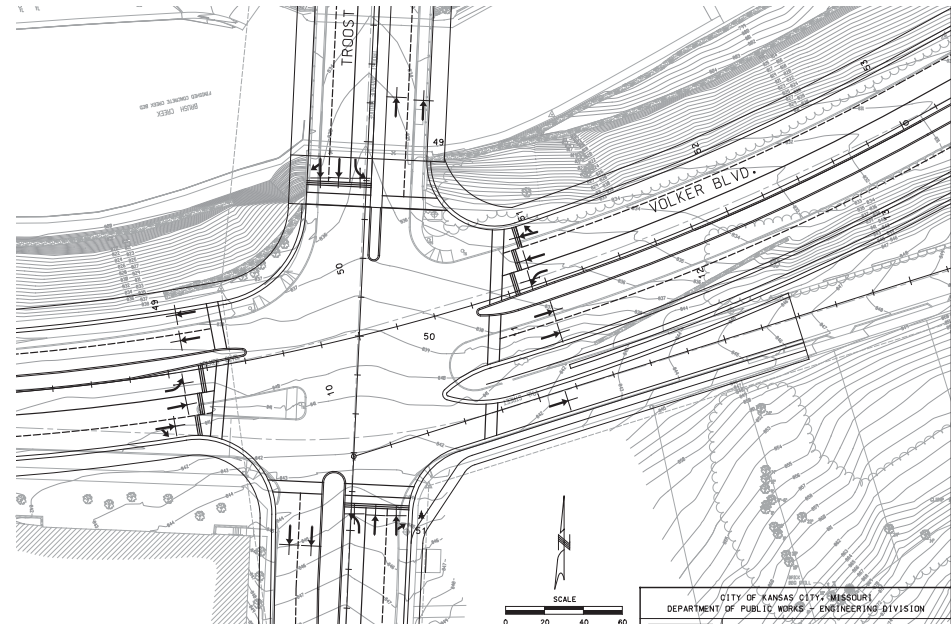
SUMMARY OF TROOST PROJECTS



Brush Creek Channel Concept



Bridge Artwork Concept



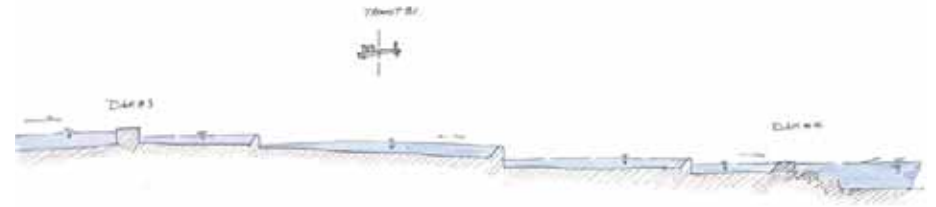
Proposed Troost Avenue and Volker Boulevard Intersection Design



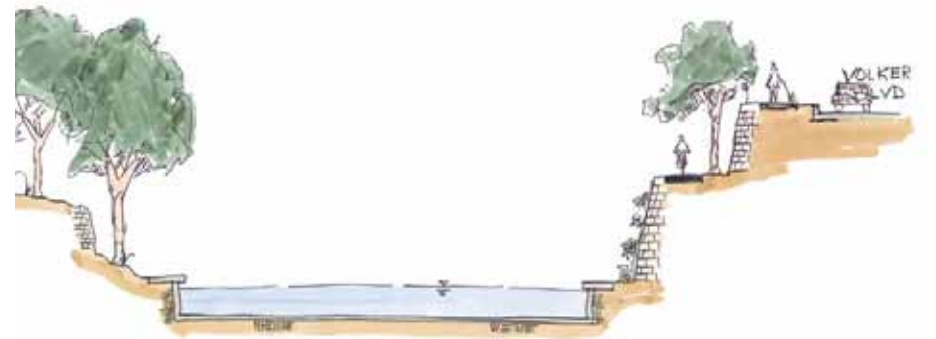
Preliminary Bridge Concept



Preliminary Bridge Concept



Channel Profile



Channel Section West of Troost Avenue



Channel Section East of Troost Avenue

SUMMARY OF TROOST PROJECTS

Section D - Inventory of Existing Plans

A inventory of existing plans allows for comprehensive approach to assess both public and private influences in and around the Troost Avenue study area. Each plan has direct as well as indirect impacts that may affect the opportunities and constraints of adjacent areas. Plans developed by the City of Kansas City and affiliated agencies along with plans developed by private and quasi-public groups are briefly reviewed in this section.

The plan inventory is broken down into two groups. The first group consists of plans that have been adopted by the City of Kansas City, Missouri:

FOCUS

- *Brush Creek Corridor Land Use and Development Plan*
- *Troostwood Neighborhood Plan*
- *The Plaza Urban Design and Development Plan*
- *UMKC Campus Master Plan*

The second group of plans consists of those that have not been adopted by the City:

- *Troost Corridor Plan*
- *Troost Corridor Action Plan*
- *Brush Creek 2020 Master Plan*

The following Neighborhood Assessment Reports were also reviewed for streetscape information (no information of significance was added):

- *Hyde Park Neighborhood*
- *Rockhill*
- *Country Club Plaza, Park Central and Research Park*
- *Brookside Park, Countryside, Crestwood, Rockhill Crest, South Plaza and Wornall Homestead*
- *Manheim Park Neighborhood*
- *Troost Plateau and South Park*

INVENTORY OF EXISTING PLANS

The FOCUS Kansas City Plan

City Planning & Development,
1997

Study Area
Citywide

Purpose
Strategies for future growth and redevelopment for the Kansas City Metropolitan area

Plan Summary

Streetscape Definition - The environment along a street in an urbanized area. Streetscape elements include the roadway, including medians and associated landscaping, fountains, sculptures, sidewalks, on-street parking, street lighting, pedestrian lighting, traffic signals, signage, benches, trash containers, newspaper and other vending machines, bus shelters and other features within the area of the right-of-way.

The FOCUS Kansas City Plan, the City's comprehensive and strategic plan, was adopted unanimously by the City Council in October 1997 by Resolution Number 971268. The plan is composed of seven policy plans that share a set of common strategies called

"Building Blocks". Based on these twelve principle strategies, the seven policy plans work together to make recommendations for implementing FOCUS.

The FOCUS Kansas City Plan contains recommendations and guidelines relating to public streetscape throughout the various policy plans and building blocks. The following is a summary of these recommendations:

The Building Blocks

CITY LIFE BUILDING BLOCK

The City Life Building Block advocates creating unique places by, "establishing development guidelines that address public art, billboards and streetscape", in order to enrich our urban environment.

CONNECTING CORRIDORS BUILDING BLOCK

Corridors are physical and cultural pathways that connect people and neighborhoods. There are many types of corridors identified in FOCUS, several of which could be applied to Troost Avenue (FOCUS does not make specific street designations), including:

Great Pedestrian Streets

- Corridors typically served by several modes of transportation and exhibiting a relatively dense, urban pattern of development. Streets and their adjacent uses have been designed to serve and promote pedestrian movement. They often occur over larger, connected districts best described as "pedestrian zones."
- Great pedestrian streets will be created or reinforced when pedestrian movements and amenities are regarded equally to other modes of transportation. Great pedestrian environments must exist within a context of automotive, bicycle and, especially, transit access. The public streetscape must provide a safe, aesthetic, and comfortable setting for pedestrians. Equally important, however, is the private development that serves the pedestrian setting. Activities should directly front onto pedestrian "friendly" environments in a relatively continuous manner. Points of access to adjacent development should occur frequently.
- Great pedestrian streets in Kansas City will be demonstrated by:

- The development of infill sites
- that close gaps in the pedestrian environment
- Zero or near zero lot line
- development in many instances
- A hierarchy of pedestrian spaces
- from sidewalks to small courts to plazas to parks and squares
- A coordinated landscape and streetscape system
- The reuse and rehabilitation of historic structures that provide character and a sense of pedestrian scale on the street
- Clustered and mixed use developments, with uses stacked vertically rather than separated horizontally
- Spontaneous or programmed activities, such as festivals, street fairs, and parades
- A real and perceived sense of safety, reinforced by continuous pedestrian traffic
- "24 hour" environments
- Parking lots or structures that do not interrupt the continuity of the pedestrian environment
- Guidelines
 - New developments should be required to construct a

- streetscape concept along the public sidewalk that is compatible with the concept adopted for that street.
- Along pedestrian corridors, the primary entrance to a building must front directly onto the pedestrian sidewalk or onto a public plaza adjacent to the sidewalk
- Except where necessary due to automobile traffic volumes, all pedestrian street crossings should remain at the pedestrian street/sidewalk level. When overhead walkways are deemed appropriate, they should not block views of significant buildings or landmarks. Their design should also be compatible with the buildings they link.
- Pedestrian oriented uses, such as retail storefronts, are encouraged along all pedestrian oriented streets. Frequent pedestrian entrances and smaller foot print buildings are desirable.
- Surface parking lots should be screened with a wall or landscape treatment directly adjacent to the pedestrian sidewalk.
- Parking garages should be

- mixed-use in character with store front oriented activities at ground level. The width of parking garage entrances should be minimized so as not to adversely impact pedestrian flow.

Transit Corridors

- Early in the City's development, transit was a dominant influence of urban form. An effective transit corridor is frequently developed more densely than an auto-mobile oriented corridor, and it often supports a pedestrian oriented environment.
- The successful implementation of FOCUS is dependent on an increasingly strong transit system. Transit in the future may be found in several modes from mini-bus to bus to light rail, or even historic rail.
- Indicators of a successful transit corridor include:
 - A regional transit network that reinforces desirable development patterns and corridors
 - Transit that is located and designed to support pedestrian environments
 - Transit that promotes higher density, mixed-use development within certain corridors

INVENTORY OF EXISTING PLANS

- Transit that promotes a nodal
- rather than a strip commercial pattern of development
- Parking and transit that are
- considered as components of a unified development concept
- Guidelines
 - Increase allowable development
 - density within 1/4 mile of urban transit stations in pedestrian zones.
 - Decrease parking requirements
 - for developments within 1/4 mile of urban transit stations in pedestrian zones in order to encourage transit ridership.
 - Prohibit automotive uses, such
 - as gas stations, car washes, and drive through restaurants, within 600 feet of urban transit stations in pedestrian zones.
 - Encourage and provide
 - incentives for mixed use development within 600 feet of urban transit stations in pedestrian zones. Ground floor uses should be pedestrian intensive, such as store front retail.
 - At multi-modal transfer points,
 - such as park and ride facilities, provide pedestrian walkways and amenities to link modal connections and to connect the transfer

point with its surrounding neighborhoods.

- In residential areas along transit
- corridors, provide sidewalks on both sides of the street which connect neighborhoods to transit stops.

MOVING ABOUT THE CITY BUILDING BLOCK

- The desired outcomes of this building block relating to streetscape are:
- To encourage foot and bicycle travel by providing sidewalks, trails, plazas, and bicycle lanes that are safe for people of all ages.
- Design pedestrian and bicycle amenities, benches, bike racks and lockers, appropriate landscaping, and smaller scale signage into new development.
- Safe and usable streets should be promoted through policies and practices that reduce the potential for crimes against people. This would include expanding the community policing programs, adopting new city requirements that increase standards for street lighting and streetscape design, and improve crime prevention techniques through environmental design.

QUALITY PLACES TO LIVE AND WORK BUILDING BLOCK

- This building block recommends a set of guidelines called the Quality Places Characteristics which are to act as the basic framework to create quality places to live and work. The following are Quality Places Characteristics relating to streetscape:
- Create or retrofit well-designed major streets to be pleasant for driving and integrated into adjacent neighborhoods by using medians, plantings, statuary, etc.
- Require that new and rebuilt streets be no wider than the minimum width allowable for safety, any amenities like medians that are required on major streets, and expected traffic volume.
- Use traffic calming strategies to ensure pedestrian safety. Strategies should include shorter turning radii at inter-sections, narrowed street width at crosswalks, and others.
- Include landscaping and streetfurnishings that both are durable and include only elements appropriate and useful to the area.
- Reduce visual clutter along streets such as billboards, utility poles, overhead wires, etc.

- Allow on-street parking, so as to provide a safe buffer between pedestrians and traffic and to thus encourage and increase pedestrian activity on the street.
- Prepare and implement design standards that contain certain elements that are consistent city-wide, such as street and paving standards, while maintaining specifications to ensure unique district and neighborhood characters such as lighting, street furnishing, building location, etc.
- Create gathering places in neighborhoods that are appropriate to the neighborhoods' size, scale, and density.
- Use commercial and retail centers to define public spaces including: parks, squares, etc.
- Design commercial (retail and office) activity centers to include inviting gathering places for nearby residents and people who work there.
- Replace current "strip commercial" and "strip mall" development patterns with commercial/retail hubs located near major-arterial intersections and transit nodes. Design these hubs with green spaces and identifiable gathering places.

- Create streetscape elements and standards that are consistent within an area or district, make an area unique, create an identity, and recall elements from the particular time at which the area developed.

The Policy Plans

CITYWIDE PHYSICAL FRAMEWORK PLAN, URBAN DESIGN GUIDELINES FOCUS contains the following design guidelines that relate to streetscape:

Pedestrian Oriented Zones Guidelines

- Develop a streetscape concept along the public sidewalk that is compatible with the concept adopted for that street in its area plan; walking should be safe and inviting
- Along pedestrian corridors, the primary entrance to commercial buildings should front directly onto the pedestrian sidewalk with a zero setback or onto a public plaza adjacent to the sidewalk.
- New development in urban commercial areas should reinforce the character and density of the area by having a minimum floor area ratio (FAR) of 1.0.

- All pedestrian street crossings should remain at the pedestrian street/sidewalk level, except where necessary due to automobile traffic volumes or significant market considerations.
- Pedestrian oriented uses, such as retail storefronts, are encouraged along all pedestrian oriented streets. Frequent pedestrian entrances to buildings are desirable. Pedestrian friendly streets have a consistent streetscape, architectural design theme and dimension.
- Surface parking lots should be screened
- Or landscape treatment directly adjacent to the pedestrian sidewalk.
- Parking garages should be mixed-use in character with storefront oriented activities at ground level. The width of the parking garage entrances should be minimized so as not to adversely impact pedestrian flow.
- On-street, parallel parking should be preserved wherever possible.

INVENTORY OF EXISTING PLANS

THE PLAN FOR THE HEART OF THE CITY (URBAN CORE PLAN)

Great Streets

Troost Avenue is a designated "Great Street" in *The Plan for the Heart of the City*. FOCUS makes the following recommendations for Great Streets in the Urban Core:

- The *Plan for the Heart of the City* calls for the revitalization of the boulevards and the designation of a network of Great Streets where the City will focus investment and target incentives to upgrade infrastructure, enhance the streetscape and encourage activity that is attractive to pedestrians.
- The aspiration for a vibrant central city requires the creation and maintenance of the type of commercial street only found in the core. The qualities that make these streets desirable and viable are distinctly urban and are easily replicable; they include:
 - Diversity of activity
 - Safety for pedestrians
 - Attractive streetscape amenities such as lighting, benches, signage, trees, etc.
 - Access to desirable goods and services

- Density of activity to encourage walking
- Smaller scale elements and storefronts at the street level to encourage diversity and density of activity

Create new street standards

- While current street design standard maximize the flow and speed of vehicular traffic, they detract from the safety and appeal of walking or bicycling. To enhance the pedestrian experience, new standards will require streets to be constructed at minimum widths, with reduced turning radii at intersections to slow traffic around turns and improve the relationship between sidewalk, curb and street to maximize pedestrian safety and comfort. Other modifications will be made to require pedestrian refuge islands in major intersections, parkways or similar buffers between sidewalk and street and enhanced lighting standards to put an emphasis on providing light at the sidewalk in addition to the street. Although the new Main Street - Brookside Connector on the Plaza is

acknowledged to be a desirable connection, its design significantly detracts from the Plaza environment because of its significant width, high speed traffic, long signal cycles and lack of refuge islands.

Prioritize investment into streetscape

- The Great Streets Network is created to offer the City a system by which to prioritize investment into infrastructure and streetscape improvements. Primary investment will be made along these corridors, especially when they coincide with multi-modal transit systems.

Brush Creek Corridor Land Use and Development Plan

Applied Urban Research Institute, 1998

Study Area:

Oak Street to Elmwood Avenue, 43rd Street to 55th Street

Purpose:

To build upon existing public investment in an area that contains a concentration of cultural, research, educational, recreational and health related facilities unique to the Kansas City region.

Dominant Characteristics

- Brush Creek - an urban waterway undergoing flood control and beautification will add an amenity to Kansas City's midtown area.
- Parkland - in addition to the parkway that surrounds the creek, there are more than a dozen parks designed for both passive and active uses.
- Community anchors - from schools and churches to the academic, health and cultural institutions that draw visitors from around the region and country the Brush Creek Corridor is well endowed with community-focused institutions that can and do play a role in the physical,

economic and social health of the area.

Plan Recommendations and Redevelopment Framework

- Modifying the City's Adopted land use plan at four locations to reflect the following land uses: low-medium density residential (Troostwood neighborhood), open space (The Paseo intersection), retail commercial (along Swope Parkway), and mixed uses at Prospect Avenue and Swope Parkway).
- Examining zoning designations long Swope Parkway and at Prospect Avenue to alter development parameters
- Investing in public infrastructure projects and traffic analysis to enhance development sites and assess impacts at 47th Street and Troost Avenue, 45th Street and Rockhill Road and at The Paseo intersection.
- Applying the various development tools made available by city, state and federal sources to targeted sites.

Prototype Development Project

The unique features and historic fabric of the Troostwood neighborhood offers a resource for employees of adjacent institutions. New single family infill housing for moderate-income households will support the predominantly single family character in the interior of the neighborhood. Senior/assisted living housing is suggested for the parts of the periphery of the neighborhood. This option would allow elderly residents in and around the Troostwood neighborhood to remain in a familiar setting when the burdens of home ownership become too great.

INVENTORY OF EXISTING PLANS

Troost Corridor Plan

City Planning and Development
Department, 1998

Study Area:

Troost Avenue from 22nd Street to
Volker Boulevard

Purpose:

To begin a process for redevelopment of Troost from 22nd Street to Volker Boulevard. Taking the recommendations from the neighborhood assessments and community workshops, the Plan presents a blueprint program for action on each goal for Troost.

Plan Concepts

- Neighborhood-based scale for new development.
 - New development and redevelopment shall be geared toward neighborhood markets in scale and in approach matching the existing development fabric. New commercial shall be encouraged to occur in traditional nodes and for local markets as opposed to destination centers.

- The importance of Troost as a transportation connector.
 - Development of new transit centers will help support the strong link Troost Avenue represents in the City's transportation system.
- Mixed-use Development
- Conservation of existing resources and removal of blight.
 - Preserve and rehabilitate existing structures while creating open space with the removal of blighted structures.
- Involvement of the City as a redevelopment partner.
 - Using the City's programs and resources in concert with neighborhood groups and businesses to stimulate redevelopment.
- Support for existing businesses and institutions on Troost.
 - Utilize economic and development initiatives to retain existing businesses while improving Troost Avenue's image.
- Multi-Cultural Diversity
 - Existing multi-cultural and ethnic bases should be reflected in new development.

Zone 4 Implementation Strategy: 42nd Street to Volker Boulevard

- Multifamily Rehabilitation
 - Work with Neighborhood Housing Services and other partners to find funding for rehabilitation of multifamily structures in this area.
- 41st and 43rd Street Commercial
 - Work with Neighborhood Housing Services and other partners to provide incentives to assist business owners at these two intersections.
- Rezoning/Conforming Uses
 - To discourage continuing negative uses in this area, restrict extension of "nonconforming uses" (exceptions) through rezoning.

Troostwood Neighborhood Plan
Applied Urban Research Institute , 1999

Study Area
Rockhurst Road/52nd Street to Volker
Boulevard, Troost Avenue to The Paseo

Purpose
*Framework for future development
based on community and institutional
issues*

Plan Summary
The Troostwood Neighborhood Plan, undertaken by the Applied Urban Research Institute, provides residents with methods to determine and implement future land use goals. The plan suggests amending future land use, enhance the neighborhood's identity, initiate a neighborhood conservation program, request a formal traffic study for the area, enhance open space, limit higher density uses along Troost Avenue, and continue neighborhood organizing and advocacy work.

Streetscape recommendations were limited to:

- Creating unique markers that distinguish Troostwood
- Improve sidewalks
- Take advantage of the Parks system edge

The Plaza Urban Design and Development Plan

City Planning and Development, 1989

Study Area

43rd Street to 55th Street,
State Line Road to The Paseo

Purpose

Conserve the outstanding amenities of the Plaza

Plans Summary

The Plaza Urban Design and Development Plan sets out to conserve the outstanding amenities the Plaza offers while accommodating future growth and change. Future development is expected to contribute and enhance the existing Plaza area environment.

Streetscape recommendations were limited to:

- Continuity of shops along sidewalks at street level
- Building entrances and display windows adjacent to sidewalks
- Connecting sidewalks enhanced with sculpture, fountains, street trees, and flowers
- Creating a sense of closure with buildings and streetscape elements
- Maintaining recognizable architectural character and consistency
- Variation of sidewalk materials, wide sidewalks, street trees and landscaping, pedestrian scaled lighting, and street furnishings

UMKC Campus Master Plan

University of Missouri, Kansas City, 2002

Aligns the future physical growth of the Volker and Hospital Hill campuses with the University's vision, values and strategic goals, asserting UMKC's role of leadership in Kansas City.

Master Plan Goals

The Campus Master Plan moves forward with three main goals:

1. Academic Excellence

- Create a model campus learning-living environment, offering students a range of traditional and non-traditional housing options and student live services that take advantage of UMKC's urban environment
- Site land uses and programs to promote collaboration within the University community and between the University and its neighbors

2. Campus without Borders

- Create a physical campus identity that distinguishes UMKC while tying it firmly to the large district of institutional, cultural, and residential used of which it is a part

- Make the best use of existing University and community resources to meet UMKC's future space demands and ensure that new campus development contributes to the vitality of the surrounding neighborhood
- Create a mechanism for ongoing dialogue between UMKC and the community and for regular updates to this master plan
- Create a framework for UMKC to partner in planning for areas adjacent to the campus

3. Unleashing Human Potential

- Preserve the existing open space character of the Volker campus and make open space a central feature of Hospital Hill to create a true campus environment
- Improve transportation connections between the two campuses
- Make vehicular circulation and parking simple and direct and encourage transit use

Master Plan Principles

Through the natural evolution of the master planning process, campus visions were refined into the following all-encompassing principles:

Create a vibrant learning and campus life experience

- Develop future academic functions within the academic core
- Develop new traditional student housing on the western edge of campus, between Brookside Boulevard and Oak Street, and 51st Street and Volker Boulevard
- Develop student housing and student support services on Hospital Hill
- Enhance and develop open spaces and greenways within the campus
- Pursue special opportunities for the Epperson House and site

Deepen and expand strength in the arts

- Develop a signature Cultural Arts District along the campus northern edge at Cherry Street, Volker Boulevard and Rockhill Road

Lead in the life sciences

- Create a campus identity on Hospital Hill for the health sciences
- Identify expansion sites for academic use or related functions that support the city's Life Sciences Initiative

Engage in urban issues

- Encourage and enhance retail activ-

INVENTORY OF EXISTING PLANS

- ity at the campus Troost Avenue edge
- Modify the Planning Boundary by:
 - Removing the area east of Forest Street, north of 48th Street
 - Removing the area on the west side of campus between Brookside Boulevard and Oak Street from 52nd Street south to and including the Treadway property (Sale of UMKC Properties will require additional Board of Curator's approval.)
- Pursue partnership opportunities, both physically and programmatically, outside the campus boundary with Kansas City:

UMKC/KCMO Partnerships

- Off-campus Athletics/Recreation
- Hospital Hill: Troost Avenue and 25th Street site

UMKC and Others

- Troost Corridor, South Plaza Neighborhood, and 51st Street to Main Street
- Pedestrian linkages with/through Linda Hall Library
- Pedestrian linkages with/through campus, neighborhoods, and Brush Creek Corridor

- Partner with the Rockhill Crest neighborhood and KCMO for joint use and enhancement of the Rockhill Crest neighborhood in conformance with a frame work of commitments established by the Neighborhood Council

Volker Campus Highlights

Land Use

Two major concepts form the basis for proposed land use plan for the Volker campus. The first concept supports the strategic goal of creating a vibrant learning environment. The concept focuses the location of major academic facilities within the campus core, an area within a ten minute walk from the center of campus, 51st Street and Holmes Street.

The second major concept supports the strategic goal of urban engagement. This concept designates the area between 53rd and 55th streets and between Holmes Street and Troost Avenue as a UMKC/Rockhill Crest neighborhood partnership area. The general principles guiding future development in the partnership area are:

- Maintain existing mix of uses

- Cooperative efforts to improve the character and quality of the neighborhood
- Continue the established dialogue between the University and the neighborhood beyond the scope of Campus Master Plan

Housing

A part of the University's strategic goals is to create an exemplary campus living environment partially through the addition of 1,600 more beds to the Volker Campus. The majority of these beds would be comprised of the traditional student configuration in the form of suites and single rooms. The remainder of the beds would be reserved for non-traditional student housing, such as apartments in a mixed-use environment along Troost Avenue from 51st Street to 55th Street and single family residences in the Rockhill Crest neighborhood. The two to three story apartment buildings will be incorporated with retail, office, or institutional activities on the ground floor.

The proposed mixed-use development will encourage a 24-hour activity along Troost Avenue as well as help the University to blend in with the adjacent neighborhood.

Pedestrian Circulation

The University is committed to providing safe pedestrian and bicycle access the campus through enhancing crosswalks with special paving or striping; employing traffic calming techniques at major pedestrian intersections; and linking campus pedestrian and bicycle facilities to those developed by the City.

Avenue between 55th Street and Emanuel Cleaver II Boulevard with proposed mixed-use developments providing housing, retail, research, and UMKC community outreach.

Parking

The University's facilities north of Brush Creek on the east side of Troost Avenue are noted for replacement in the Master Plan. A part of the redevelopment of the site includes the construction of a parking structure behind the proposed buildings that front on Troost Avenue and Brush Creek. Additional on-street parking along Troost Avenue will provide more street level activity along with traffic calming.

Partnerships

At the core of the University's vision of a campus without borders and urban engagement are forging strong partnerships with the City and neighborhood groups such as the Southtown Council and other Troost Avenue redevelopment organizations. These partnerships will help to revitalize Troost

Troost Corridor Action Plan

The Southtown Council, 2003

Study Area

Troost Avenue, Volker Boulevard to Meyer Boulevard

Purpose

Framework supporting redevelopment initiatives that promote a diverse environment

Plan Summary

The Troost Corridor Action Plan is intended to provide stakeholders with the ability to accomplish the following:

- Build a long term development strategy
- Create a community-based vision
- Outline a framework for future redevelopment along the corridor
- Provide products to market the corridor vision
- Improve communication among stakeholders through documentation

Concept Plan

Future streetscape improvements to the Troost Avenue corridor are based upon seven Development Principles.

Development Principle 1: Diverse Corridor

The action plan promotes development of mixed-use structures offering residential, institutional, and office uses above retail and institutional uses at street level.

Development Principle 2: Preserve 'Gems' and Seek Infill Opportunities

Preserving and enhancing existing structures that provide a strong urban edge, typically those structures that are oriented towards the street. Promote infill development projects, primarily with medium-density residential units, such as townhouses.

Development Principle 3: Neighborhood Preservation and Enhancement

Promote preservation of surrounding neighborhoods by focusing redevelopment practices on parcels fronting on Troost Avenue. Promote City sponsored 'grass-roots' programs and efforts that stabilize neighborhoods.

Development Principle 4: Promote Private Property Enhancement

Promote property enhancements for existing surface parking lots through the

use of landscaping to buffer and screen parking lots from surrounding land uses and Troost Avenue.

Development Principle 5: Troost Corridor as Distinctive Place

By using themes, such as 'Scholars Row', to celebrate the educational institutions along Troost Avenue, promote the Troost Corridor from Volker Boulevard to 63rd Street as a distinctive place in the city.

Development Principle 6: Troost Avenue Neighborhood Centers

Promote a diverse, 24-hour, mixed-use corridor by focusing retail neighborhood centers at the key intersections of 55th and 59th Streets and infuse medium-density residential between the neighborhood centers.

Development Principle 7: Seek and Market Development and Businesses that are Conducive to a Neighborhood-Oriented Environment

Promote the establishment of businesses that cater to nearby residents, employees, and students. In addition, actively seek businesses that promote Troost Avenue as a destination place by offering goods and services with wide market appeal.

Urban Design

The City of Kansas City, Missouri and the Southtown Council should partner in creating a future street-scape program. Key urban design elements for the Troost Avenue Corridor should include:

Campus Boulevard

The Campus boulevard is intended to create visual continuity among the institutional campuses along Troost Avenue while providing an improved pedestrian experience with the use of traffic calming techniques.

Recommendations include a landscaped median from Volker Boulevard to 53rd Street. Various trees, shrubs, seasonal color, and signature accent lighting should be incorporated into the median. On each side of Troost Avenue, the City should coordinate with the educational institutions to provide landscape enhancements that create a visual seam along the corridor.

Gateways

The use of gateways provides a sense of arrival and helps to distinguish an area as a special place within the city. The Action Plan envisions the use of four hierarchical gateway monuments to

be used along Troost Avenue. Each entity would incorporate their own design elements into corresponding monuments that reflect their master plan initiatives.

Institutional Gateways

Institutional gateways help to identify UMKC, Rockhurst University, The Stower’s Institute, and St. Francis Xavier Catholic Church and School as distinct campuses along the corridor.

Scholar's Row Gateways

Promote the identity of redevelopment initiatives around the intersections of Troost Avenue at Volker Boulevard, 55th, 59th, and 63rd Streets.

Neighborhood Gateways

Neighborhood gateways reinforce the sense of arrival and place for the neighborhoods adjacent to Troost Avenue. These gateways may also include other amenities, such as additional landscaping and accent lighting and traffic calming facilities. Each neighborhood gateway should be programmed with each individual neighborhood on a project-by-project basis.

Village Gateways

In conjunction with the 63rd Street Corridor Plan, a Scholar's Row gateway

monument should be incorporated at the intersection of Troost Avenue and 63rd Street.

Streetscape

Future streetscape improvements should enhance the pedestrian experience utilizing the following primary features:

On-Street Parking

City representatives informed participants that the City would investigate strategies to include dedicated on-street parking along Troost Avenue. This action is supported by the Troost Corridor Action Plan for its traffic calming effects and as additional parking for Troost Avenue businesses.

Amenity Zone

This zone includes the area between the back-of-curb and the public sidewalk. Streetscape elements include:

Illumination

Lighting standards should be a more traditionally styled pole as opposed to the more contemporary which can become 'dated'. Light standards should include other elements, such as street signage, traffic safety signage, artwork, banners, electrical outlets for street tree lighting and sidewalk events, and audi-

INVENTORY OF EXISTING PLANS

ble speakers.

Signalization

Traffic control standards should match the selected lighting standards. Traffic control standards should also incorporate visual and audible pedestrian crossing signals and street and traffic signage to reduce the visual clutter along the corridor.

Landscape

Street trees should be non-fruit-bearing and selected based on urban survivability characteristics and they must meet city requirements. Larger caliper trees should be installed to provide for instant clear canopies that do not screen business signage and display windows. Seasonal planting beds can be incorporated into street tree well, seasonal planters, and around gateway features to add color to the environment.

Street Signage

A distinctive street signage system should be incorporated along Troost Avenue from Volker Boulevard to 63rd Street emphasizing the identity of Scholar's Row.

Pedestrian Walks

Sidewalks will primarily be constructed of formed concrete because of its cost savings in installation and maintenance. Accent features in front of business entrances, at crosswalks, and other areas of importance may be highlighted with recycled brick pavers.

Crosswalks

Crosswalks define the pedestrian zone from one side of the street to the other. Highly delineated crosswalks inform motorists that pedestrian activity is likely to occur.

Gateway Crosswalks

Gateway crosswalks incorporate additional paving materials that enhance key intersections creating a more 'plaza-like' visual. An additional signal cycle may be incorporated to allow pedestrians to cross the intersection diagonally.

General Crosswalks

General crosswalks are intended to simply delineate the pedestrian zone through simple treatments, such as stamped concrete or asphalt, brick pavers, or geometrically formed concrete. Mid-block crossings with minor enhancement may be incorporated

along Troost Avenue between Volker Boulevard and 55th Street

Brush Creek 2020 Master Plan

Parks and Recreation, 2003

Study Area

Brush Creek from State Line to the Blue River

Purpose

Create a storm water facility that also doubles as an urban amenity

Plan Summary

The Brush Creek 2020 Master Plan graphically proposes how past, current, and future changes to Brush Creek can be made to create a flood control facility that is also a mixed use project benefiting adjacent neighbors and land uses. When completed, pedestrian users will be able to navigate Brush Creek from State Line to the Blue River. While the majority of the route will be primarily recreational in nature, several areas have been called out for residential, commercial, and office use.

Pedestrian elements include:

- Creative and pedestrian lighting
- Fountains
- Planting beds
- Park amenities
- Benches

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Section E - Planning Process

A public planning process was extensively used during the planning and development of Troost Streetscape Plan. This public process was designed to garner stakeholder input and buy-in, establish a core group of individuals with a significant vested interest in the corridor and to allow residents and business owners the opportunity to guide the design decisions for future streetscape enhancements to Troost Avenue.

Preliminary public meetings were held with the community and the advisory committee in which the design team gathered needed information regarding the community's concerns and perceptions of the corridor and identified opportunities for improvements. The community members identified many concerns and issues that focused on Troost Avenue functions as a major traffic and pedestrian corridor. Many focused on safety over design issues. The following are the public's concerns/comments as they relate to how possible streetscape elements could improve the function-ability of Troost Avenue as both a vehicular corridor and a pedestrian corridor:

1. Maintenance

- Street trees must be maintained
- Trash receptacles must be emptied regularly
- Do not install site furnishings unless they will be regularly maintained
- Easy maintenance of:
 - Graffiti removal
 - Plantings
- Use off-the-shelf lighting fixtures and other amenities to reduce replacement and maintenance costs
- Street trees and site furnishings only if maintained

2. Pedestrian Safety

- Institute measures to slow and calm traffic
- Time traffic signals to improve efficiency of pedestrian and automobile traffic
- Install "countdown" pedestrian signals
- Automatic pedestrian signals that cycle through with traffic signals
- Make sure all street crossings are convenient, safe, and clearly marked
- Install textured pavers at and in crosswalks
- Install safety call boxes

3. Design Consistency

- Do not use custom designed street furnishings
- Create an architectural overlay district for Troost Avenue addressing:
 - Redevelopment, materials, setbacks, scale, etc.
- Retain character through commercial area
 - Incorporate good, existing design elements
 - Maintain some design consistency
 - Streetscape elements should be consistent

4. Parking and Traffic Management

- Institute traffic calming measures and increase speed enforcement
 - Reduce lane width to reduce speeding
- Allow 24-hour on-street parking on both sides of Troost Avenue
- Amend Kansas City's Bicycle Transportation Initiative, "Bike KC", to include Troost Avenue as a bicycle route and add bicycle lanes
- Stripe parallel parking stalls
 - Helps to organize parking and reduces land width
- Introduce planters to help define on-street parking
- 51st Street should not be signalized

PLANNING PROCESS

The Community and Advisory Committee provided the following comments/preferences regarding any planned streetscape elements which included:

- Amenities, such as benches, trash receptacles, etc., must be durable
- Benches
 - Designed for comfortable seating but not sleeping
 - There must be a minimum of one bench on each side of Troost every one or two blocks
- Maintain a planted green space between the sidewalk and the street
- Install street trees
 - Vary the spacing of the trees in some areas to create somewhat naturalized effect
- Place trash receptacles at street corners
- Utilities
 - Place electrical lines underground
 - Retain the use of wooden light poles for street lighting

The design team, made up of representatives of HNTB's Urban Design and Planning group, led discussion meetings with the following groups:

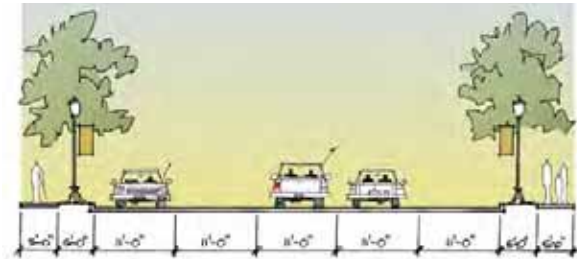
- City of Kansas City, Streets and Traffic
- Kansas City Area Transportation Authority
- Troost Avenue Streetscape Advisory Committee

The following is a summary of the meeting with City of Kansas City, Streets and Traffic:

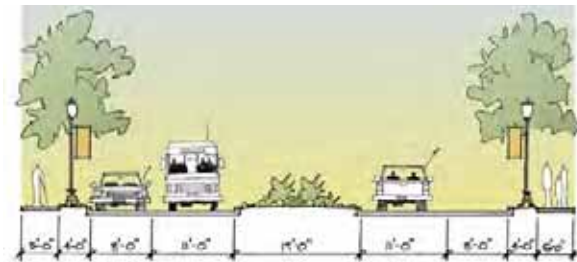
- The primary role of Streets and Traffic include:
 - Mobility
 - Access
 - Function

Several street configuration concepts were explored to determine how the input from the Community and the Advisory Committee could be incorporated in the streetscape design.

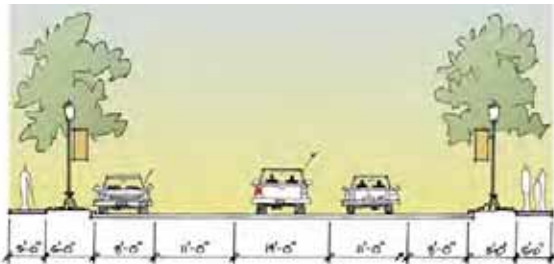
- Troost:
 - 55 feet in width
 - Center turn lane south of Brush Creek Boulevard
 - Two travel lanes and on street parking north of Brush Creek Boulevard



- Troost with a median and on-street parking
 - Median width of 19 feet to allow for median minimum width of 6 feet at left turn
 - One travel lane with a lane width of 11 feet in each direction
 - One parking lane with a lane width of 8 feet in each direction
 - Requires 57 feet of pavement (2 additional feet)



- Troost with a continuous center turn lane
 - Center turn lane width of 14 feet
 - One travel lane with a lane width of 11 feet in each direction
 - One parking lane with a lane width of 8 feet in each direction
 - Requires 52 feet of pavement (3 feet fewer)



- Troost with a median and no on-street parking
 - Median width of 19 feet to allow for median minimum width of 6 feet at left turn
 - One travel lane with a lane width of 14 feet in each direction
 - Requires 47 feet of pavement (8 feet fewer)



The City of Kansas City, Streets and Traffic Division preferred options with a continuous center turn lane. They were not opposed to other options as long as there were two travel lanes in each direction. One travel lane could be used for parking as well as a travel lane during certain hours of the day.

The following is a summary of the meeting with Kansas City Area Transportation Authority:

- Troost is the busiest transit corridor in KCATA system
- Troost from 25th to 55th was identified as a potential fixed guideway corridor in Central Business Corridor Fixed Guideway Study (CBC)
- The KCATA prefers two travel lanes in each direction to accommodate continued passenger vehicle traffic while buses are stopped at bus tops loading and off-loading passengers

Alternatives Explored

Based on the information gathered in the initial advisory committee meeting and public meeting, the design team developed three design alternatives.

The three overall design concepts were presented. Each of these themes studied options for vehicular traffic, pedestrian zones, and street tree planting patterns. The three alternatives presented were:

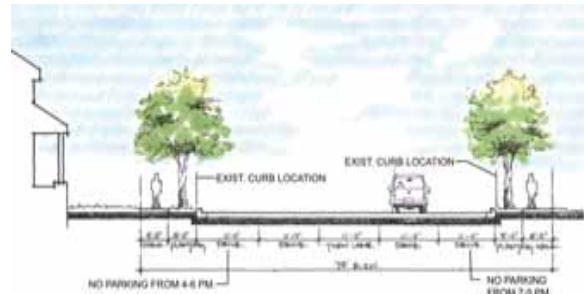
- Common Theme
- District Theme
- Modified District Theme

These themes were presented to the advisory committee. Following the presentation, it was the recommendation of the advisory committee to move forward with a concept that combined elements from the District and Modified District Themes.

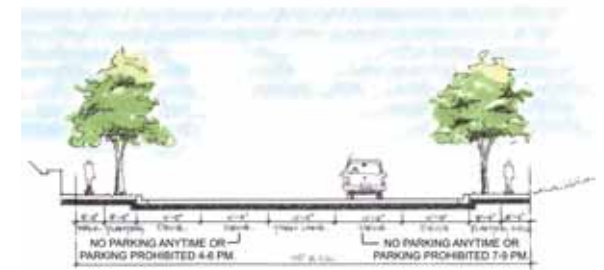
Alternative 1: Common Theme

The Common Theme treats Troost Avenue as a the unifying element running through the various neighborhoods. From 42nd Street to 52nd Street, the streetscape elements do not vary. Street tree spacing is consistent; intersection treatments are consistent; the look of the streetscape looks the same at 42nd Street as it does at 52nd Street. The primary design

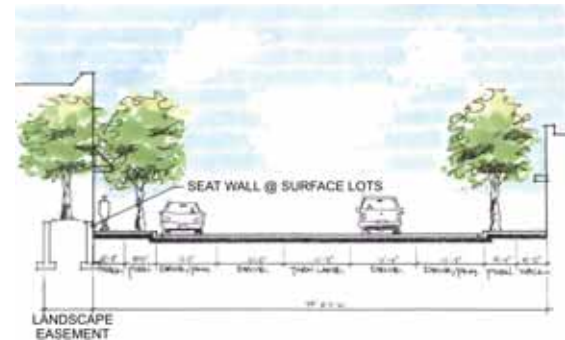
- Two travel lanes in each direction
- Continuous center turn lane
- Planting and landscape zone at the back of curb
- Street furnishing area between Brush Creek Boulevard and 48th Street
- Green space between back of curb and sidewalk north of Brush Creek Boulevard and south of 48th Street



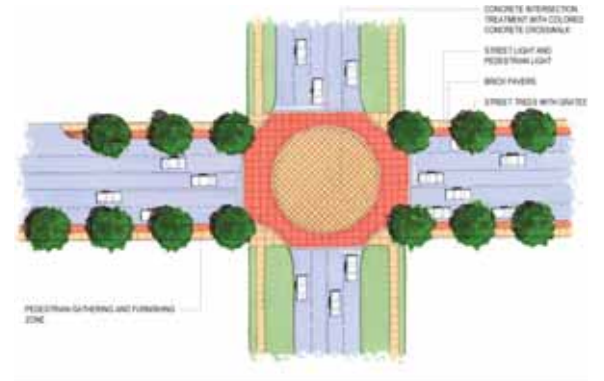
Section through Troost at 43rd Street



Section through Troost at Brush Creek Boulevard



Section through Troost at 51st Street



Major intersection pavement treatment



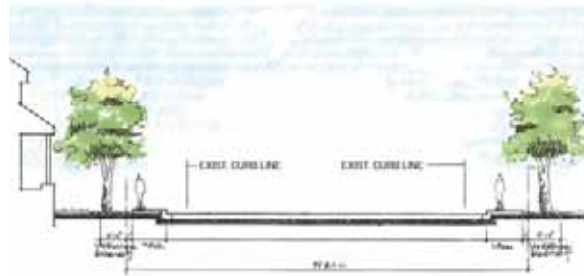
Troost Corridor Streetscape Plan - Common Theme

PLANNING PROCESS

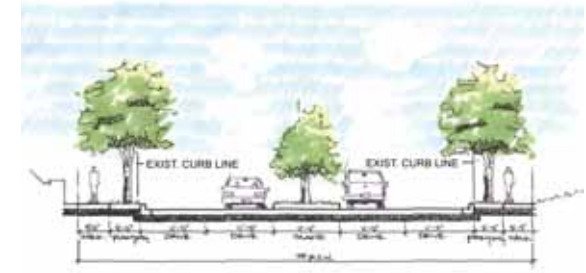
Alternative 2: District Theme

The District theme recognizes and respects that Troost Avenue runs through several different neighborhoods, each with its own unique character. The streetscape design highlights the differing neighborhoods through differing street tree species and spacing; intersection treatments only at major intersections. The primary design elements of the District Theme include:

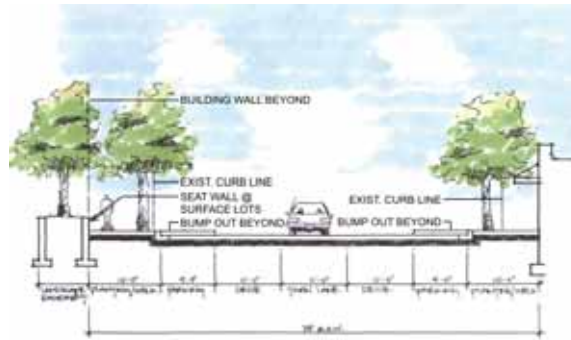
- Single travel lanes in each direction
- Designated left turn lane
- Three distinct streetscapes:
 - 42nd Street to Brush Creek Boulevard
 - Brush Creek Boulevard to 48th Street
 - 48th Street to 52nd Street
- Dedicated parking and curb extensions
- Center median option
- Landscape easements



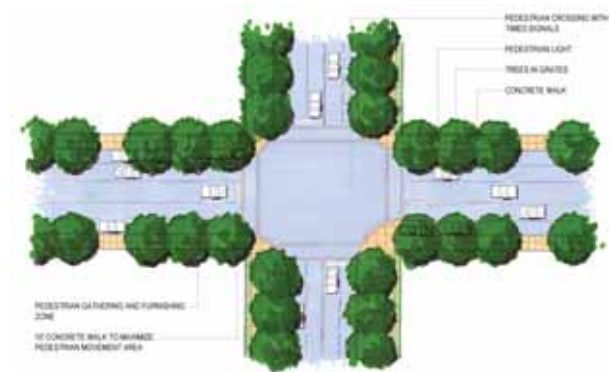
Section through Troost at 43rd Street



Section through Troost at Brush Creek Boulevard



Section through Troost at 51st Street



Major intersection pavement treatment

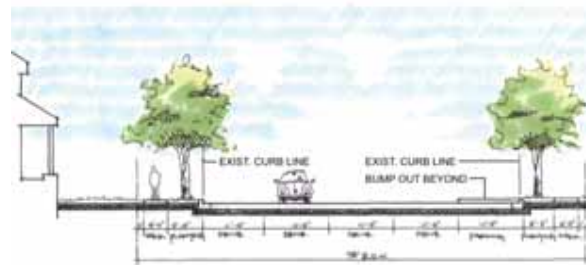


Troost Corridor Streetscape Plan - District Theme

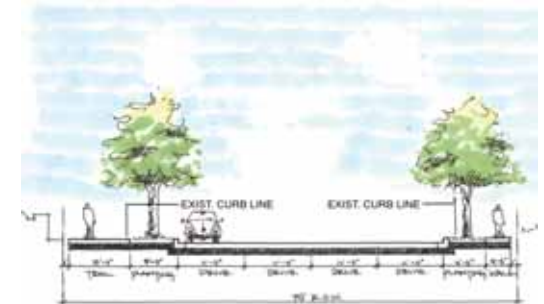
Alternative 3: Modified District Theme

The Modified District Theme reflects that unique neighborhoods reside along the Troost Avenue Corridor. The Modified District Theme recognizes the differing neighborhoods through varied street tree species and spacing; two levels of intersection treatments for major and minor intersections. The primary design elements of the Modified District Theme include:

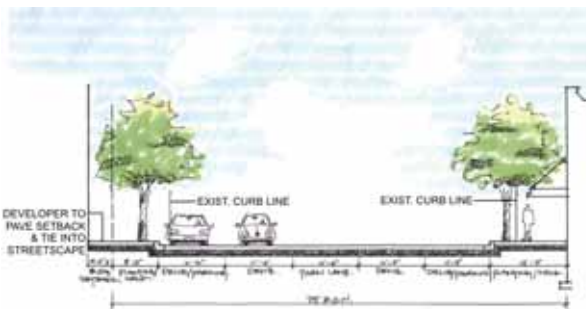
- Two travel lanes in each direction
- Continuous center turn lane
- Three distinct streetscapes with common elements:
 - 42nd Street to Brush Creek Boulevard
 - Brush Creek Boulevard to 48th Street
 - 48th Street to 52nd Street
- Street furnishing area between Brush Creek Boulevard and 48th Street



Section through Troost at 43rd Street



Section through Troost at Brush Creek Boulevard



Section through Troost at 51st Street



Major intersection pavement treatment



Troost Corridor Streetscape Plan - Modified District Theme

Section F - Streetscape Recommendations

The recommended streetscape design is a combination of the District Theme and the Modified District Theme. The Advisory Committee and the Community believes that Troost Avenue, from 42nd Street to 52nd Street, is a unifying element running through three areas with three individual identities. The final recommendation includes the following key design factors:

- Three distinct streetscape districts
 - a. Residential District - 42nd Street to Brush Creek Boulevard
 - b. Commercial District - Brush Creek Boulevard to 48th Street
 - c. Institutional District - 48th Street to 52nd Street
- Dedicated parking and curb extensions north of Brush Creek Boulevard
- Single traffic lane with center turn lane North of Brush Creek Boulevard
- Center landscape median south of Brush Creek Boulevard
- Two traffic lanes with dedicated left turn lanes south of Brush Creek Boulevard



Proposed Troost Avenue Streetscape Plan

STREETSCAPE RECOMMENDATIONS

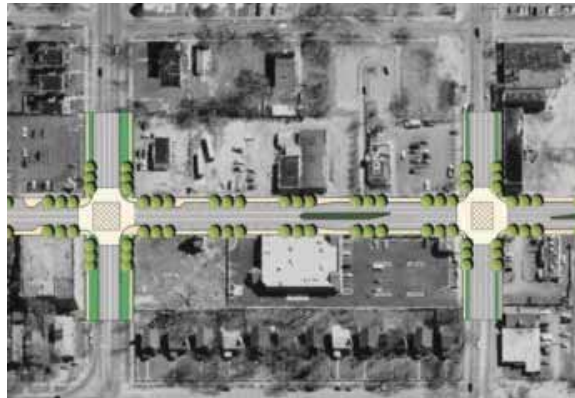
The overall concept responds to the five key design issues identified in the community and advisory committee meetings. The following is summary of how the design responds to those issues:

Maintenance:

Standard materials are proposed for the walks, streets and enhanced intersections. By using standard furnishing and amenity materials, installation and maintenance costs are reduced because the materials are readily available and do not require special tools. Decorative accents are limited to key areas where their impact

Pedestrian Safety:

Traffic calming is achieved by use of landscaped medians and curb extensions. Pedestrian crossing signals and buttons at signalized intersections and pavement change at major signalized intersections allow for safer street crossings. Curb extensions are provided north of Brush Creek Boulevard to reduce the distance pedestrians are required to cross. Placement of street trees between the travel lanes and sidewalks are intended to provide an increased feeling of safety.



Traffic calming through curb extensions and landscaped medians

Design Consistency:

Protected, left turn lanes at intersections along the entire corridor provide consistent turn movements. A center, left turn only lane allows turning movements north of Brush Creek Boulevard. A center median is broken at intersections to provide turning movements south of Brush Creek Boulevard. A consistent finish color on all furnishings, lights and utilities is recommended.

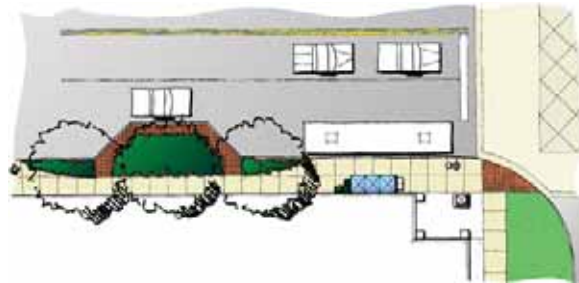
Street Furnishings “Off-the-shelf” :

All street and pedestrian lights and furnishings are standard items. The design elements are not custom designs

Parking and Traffic Management:

On-street parking is eliminated in areas south of Brush Creek boulevard with a landscaped median. Dedicated on-street parking north of Brush Creek Boulevard is clearly marked with curb extensions. Where on-street parking occurs in the plan, there are no periods where parking is not allowed.

Curb extensions are located to allow transit vehicles to pull out of the travel lane at intersections.



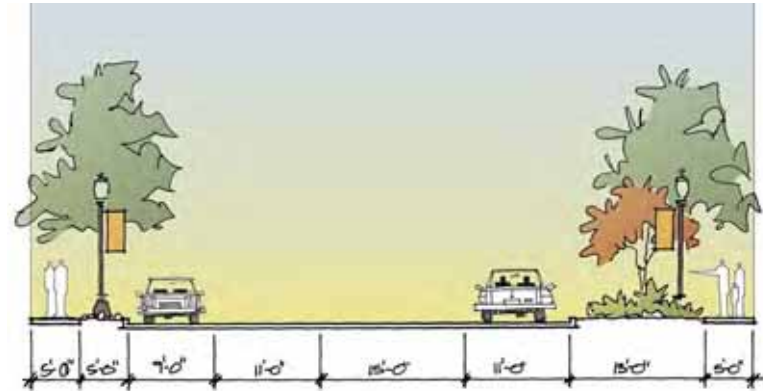
Curb extension incorporated with bus stop

STREETSCAPE RECOMMENDATIONS

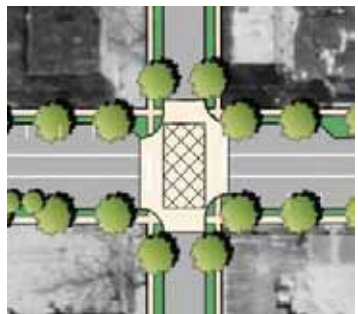
Residential District - 42nd Street to Brush Creek Boulevard

The residential district is predominantly fronted with single-family homes. The street serves as the primary parking area for these residents, therefore, full time on-street parking has been provided in the plan. Curb extensions will clearly mark the parking lanes and will reduce the distance pedestrians have to walk in the street while crossing Troost Avenue. A landscape buffer is provided between the back of curb and the sidewalk to further separate pedestrian and vehicular traffic. Evenly spaced street trees are proposed in the residential district to signify this district.

Some commercial uses occur within this district. Where commercial uses front onto and directly access the Troost streetscape, special elements shown in the commercial district will be carried included in this district. Those elements include full width pavement, accent pavers, and landscape planters.



Section through Troost Avenue in the Residential District



Residential District Intersection Treatment

Streetscape Plan - Residential District

STREETSCAPE RECOMMENDATIONS



Existing Streetscape



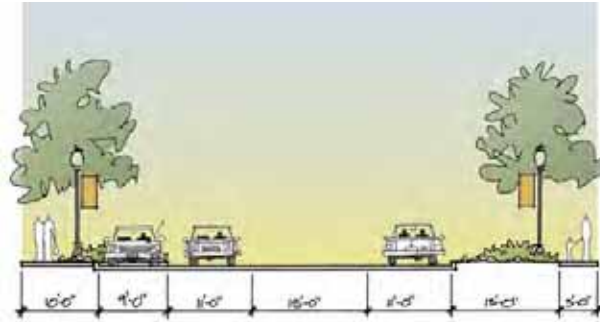
Streetscape Improvements - Residential District

STREETSCAPE RECOMMENDATIONS

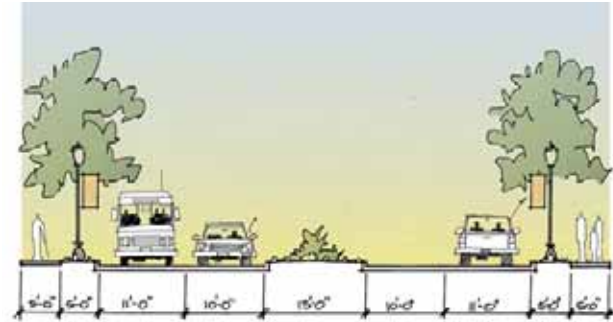
Commercial District – Brush Creek Boulevard to 48th Street

The commercial district is predominantly made up with commercial retail stores. The businesses between 45th Street and Brush Creek Boulevard have limited off-street parking areas. Along this area, permanent on-street parking has been recommended with curb extensions. The area generally bounded by Brush Creek Boulevard and 48th Street contains commercial businesses that have been developed with off-street parking facilities. A landscape median is recommended along this stretch of Troost to slow traffic and improve the appearance of the street while also avoiding access issues with existing driveways as much as possible.

A five foot paved furnishing zone is planned along the back of curb. This zone will be paved to provide additional pedestrian circulation areas, contain street trees, light fixtures, benches, and landscape planters. In addition to the furnishing zone, a five foot pedestrian walk is shown to allow for easy pedestrian circulation. Street trees are recommended to create a buffer for pedestrians to increase the pedestrian friendliness of Troost. The trees are placed in groups of three along the commercial district to create a unique feel for the district. This grouping of trees will also allow for larger planting zones to allow the trees improved urban growing conditions.



Section through Troost in the Commercial District with permanent on-street parking



Section through Troost in the Commercial District with landscaped median



Commercial District Intersection Treatment

Streetscape Plan - Commercial District



Existing Streetscape



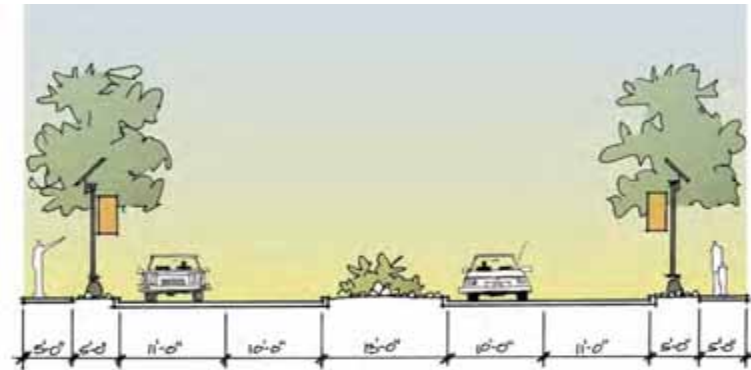
Streetscape Improvements - Commercial District

STREETSCAPE RECOMMENDATIONS

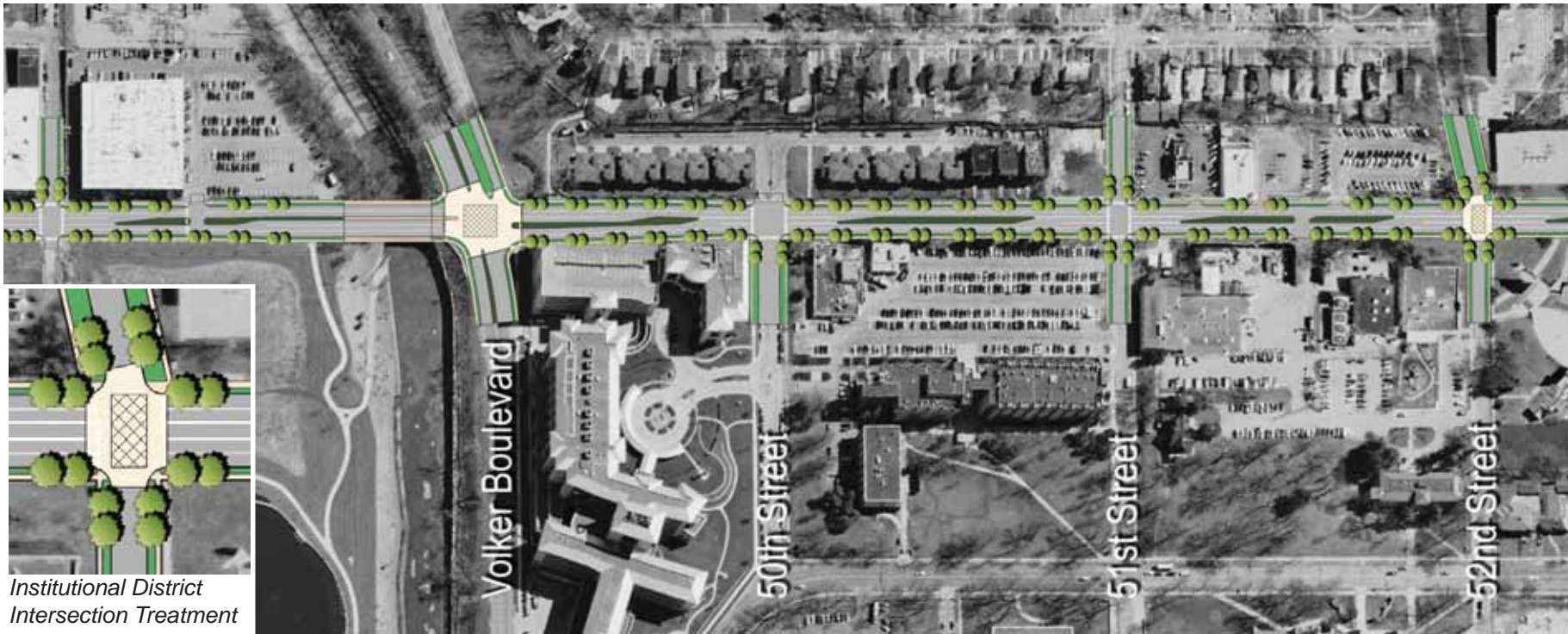
Institutional District - 48th Street to 52nd Street

The institutional district includes four significant public and private institutions along with residential homes. Parking is accommodated for the residents in small parking lots located behind the buildings east of Troost. The institutional users accommodate their parking needs with off-street parking facilities. All on-street parking shall be eliminated in this district and a landscape median has been proposed. This landscape median will slow traffic and help to beautify the street.

A landscape buffer is provided between the back of curb and the sidewalk to separate pedestrian and vehicular traffic. Street trees, street lights and pedestrian light fixtures will be placed in this district. A third distinctive planting pattern is created by planting street trees in groups of two along Troost Avenue.



Section through Troost in the Institutional District



Institutional District Intersection Treatment

Streetscape Plan - Institutional District



Existing Streetscape



Streetscape Improvements - Institutional District

STREETSCAPE RECOMMENDATIONS

Section G - Streetscape Amenities

Streetscape elements play a primary role in defining the character and image of the street. The elements identified in this section accommodate the needs of the pedestrians, business owners, residents, visitors and drivers. The design elements work in harmony to complete the overall design concept while creating a new vision for Troost Avenue.

The Troost Avenue Corridor will be visually strengthened and unified by using the same street furnishings in all three districts:

- a. Residential District - 42nd Street to Brush Creek Boulevard
- b. Commercial District - Brush Creek Boulevard to 48th Street
- c. Institutional District - 48th Street to 52nd Street

The design concept will be further reinforced by using a consistent finish color on all recommended design elements. Each of the materials recommended are readily available and can be easily replaced if damage or vandalism occurs with the exception of the regulation sign mounting frame.

This plan includes recommendations for the following elements:

- Sidewalks
- Street Lighting
- Pedestrian Lighting
- Signage
- Street Furnishings
- Public Art
- Gateways and Transitions
- Landscape
- Intersection Improvements
- Curb Extensions / Medians

STREETSCAPE AMENITIES - Sidewalks

Residential District

Recommendation:

Five foot wide concrete walks with a five foot landscape zone between the walk and the back of curb.

At transit stops, it is recommended that the concrete walk be extended to the back of curb.

Where commercial businesses front Troost Avenue, the walk is recommended to be extended to the back of curb.



Concrete walk with landscape zone

Commercial District

Recommendation:

Ten foot wide concrete walks with brick paver accents. Utilities, brick accents and street trees are recommended in a five foot zone adjacent to the back of curb.



Concrete walk with brick accents

Institutional District

Recommendation:

Five foot wide concrete walks with a five foot landscape zone between the walk and the back of curb.

At transit stops, it is recommended that the concrete walk be extended to the back of curb.



Concrete walk with landscape zone

STREETSCAPE AMENITIES - Street Lighting

Residential District

Recommendation:

Standard Cobra head fixture and metal pole.
Finish color to be black. Spacing to be consistent.

Commercial District

Recommendation:

Standard Cobra head fixture and metal pole.
Finish color to be black. Spacing to be consistent.

Institutional District

Recommendation:

Standard Cobra head fixture and metal pole.
Finish color to be black. Spacing to be consistent.

Street lighting near the bridge over Brush Creek will be designed to minimum safe lighting levels to allow for dramatic lighting of the new structure. This lighting arrangement will accentuate the



Cobra head street light with black finish

STREETSCAPE AMENITIES - Pedestrian Lighting

Residential District

Recommendation:

Architectural Area Lighting - Providence fixture on a 14 foot pole. Finish color black. Spacing to be consistent.

Commercial District

Recommendation:

Architectural Area Lighting - Providence fixture on a 14 foot pole. Finish color black. Spacing to be consistent.

Institutional District

Recommendation:

Architectural Area Lighting - Providence fixture on a 14 foot pole. Finish color black. Spacing to be consistent.



Pedestrian light fixture with black finish

STREETSCAPE AMENITIES - Signage and Banners

Residential District

Recommendation:

Regulation signage to be mounted on a Troost Corridor frame which is mounted to the street and pedestrian lights. Regulation signage shall be mounted at a height of 7 foot.

Seasonal banners are proposed to be mounted on the pedestrian and street lights. Seasonal banners shall be mounted no less than 9 feet above the walk elevation. The banners shall be approximately 18 inches by 36 inches.

Commercial District

Recommendation:

Regulation signage to be mounted on a Troost Corridor frame which is mounted to the street and pedestrian lights. Regulation signage shall be mounted at a height of 7 foot.

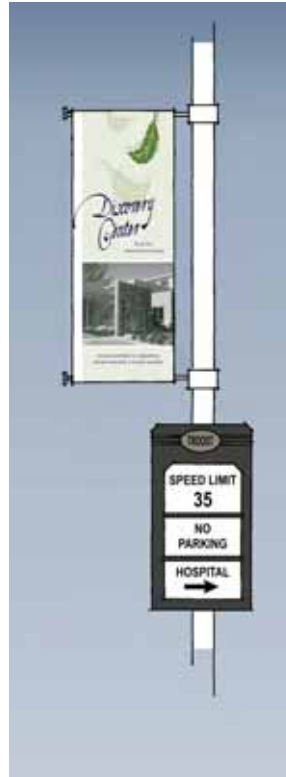
Seasonal banners are proposed to be mounted on the pedestrian and street lights. Seasonal banners shall be mounted no less than 9 feet above the walk elevation. The banners shall be approximately 18 inches by 36 inches.

Institutional District

Recommendation:

Regulation signage to be mounted on a Troost Corridor frame which is mounted to the street and pedestrian lights. Regulation signage shall be mounted at a height of 7 foot.

Seasonal banners are proposed to be mounted on the pedestrian and street lights. Seasonal banners shall be mounted no less than 9 feet above the walk elevation. The banners shall be approximately 18 inches by 36 inches.



Regulation signage mounted on custom frame

STREETSCAPE AMENITIES - Street Furnishings

Residential District

Recommendation:

6-foot Landscape Forms Plainwell benches with intermediate arms, finish color black.

Six benches per block are proposed.

Commercial District

Recommendation:

6-foot Landscape Forms Plainwell benches with intermediate arms, finish color black.

Six benches per block are proposed.

Institutional District

Recommendation:

6-foot Landscape Forms Plainwell benches with intermediate arms, finish color black.

Six benches per block are proposed.



Bench with black finish

STREETSCAPE AMENITIES - Street Furnishings

Residential District

Recommendation:

Landscape Forms Plainwell trash receptacles, finish color black.

Six trash receptacles per block are proposed.

Commercial District

Recommendation:

Landscape Forms Plainwell trash receptacles, finish color black.

Six trash receptacles per block are proposed.

Institutional District

Recommendation:

Landscape Forms Plainwell trash receptacles, finish color black.

Six trash receptacles per block are proposed.



Trash receptacle with black finish

STREETSCAPE AMENITIES - Street Furnishings

Residential District

Recommendation:

Bicycle racks to be Landscape Forms Pi, finish color black. Bike racks will be provided by private development where needed.

Commercial District

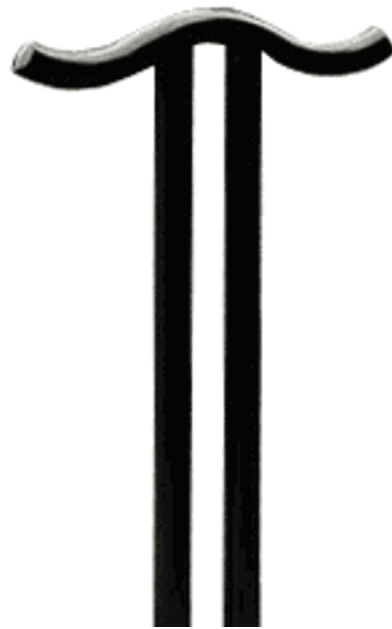
Recommendation:

Landscape Forms Plainwell planters, finish color black. Bicycle racks to be Landscape Forms Pi, finish color black. One bike rack will be provided per block on each side of the Troost Avenue.

Institutional District

Recommendation:

Bicycle racks to be Landscape Forms Pi, finish color black. Bike racks will be provided by private development where needed.



Bike Rack with black finish



Landscape planter with black finish

Residential District

Recommendation:

None specified. Public art may be integrated into private development.

Commercial District

Recommendation:

None specified. Public art may be integrated into private development.

Institutional District

Recommendation:

Public art may be integrated into private development as well as with large-scale, public improvements, such as the art piece included with the proposed Troost Bridge replacement. The Troost Bridge project will also connect Troost Avenue to the Brush Creek Cultural Trail, a link to the Brush Creek Corridor's cultural amenities.



Proposed Troost Avenue bridge with integrated art

STREETSCAPE AMENITIES - Gateways and Transitions

Residential District

Recommendation:

None included in the public right-of-way. Neighborhoods may restore or construct neighborhood markers on private property along Troost or within public right-of-way at cross street locations.

Commercial District

Recommendation:

None included in the public right-of-way. Neighborhoods may restore or construct neighborhood markers on private property along Troost or within public right-of-way at cross street locations.

Institutional District

Recommendation:

The unique design of the proposed Troost Bridge over Brush Creek, with its flared arches and central art component, serves as a significant gateway along the Troost corridor and the Brush Creek corridor. Neighborhoods may restore or construct neighborhood markers on private property along Troost or within public right-of-way at cross street locations.



Proposed Troost Avenue bridge with integrated art as a gateway

STREETSCAPE AMENITIES - Landscaping

Residential District

Recommendation:

Street trees are uniformly spaced at 40 foot on center. Type "A" trees are used in this district. Root barriers will be installed along the edge of sidewalk to limit future tree root damage. Trees to be limbed up so as not to interfere with pedestrian and vehicular traffic. Species to be approved by City Forester.



Street tree Type "A"

Commercial District

Recommendation:

Street trees are placed in groups of three to provide a continuous root zone. The groups of trees are spaced at approximately 80 foot on center. Type "B" trees are used in this district. Root barriers will be installed along the edge of sidewalk to limit future tree root damage. Structural soil will be placed under the paved walks to provide an adequate growing environment for the trees. Trees to be limbed up so as not to interfere with pedestrian and vehicular traffic. Species to be approved by City Forester.



Street tree Type "B"

Institutional District

Recommendation:

Street trees are placed in groups of two to provide a continuous root zone. The groups of trees are spaced at approximately 60 foot on center. Type "C" trees are used in this district. Root barriers will be installed along the edge of sidewalk to limit future tree root damage. Trees to be limbed up so as not to interfere with pedestrian and vehicular traffic. Species to be approved by City Forester.



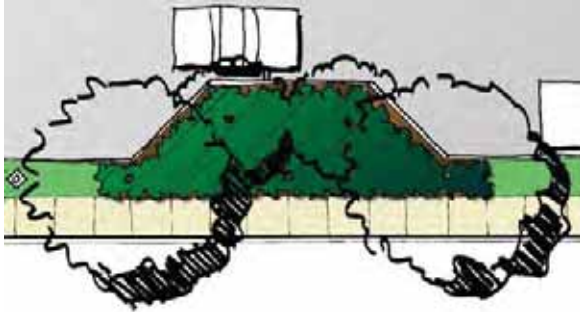
Street tree Type "C"

STREETSCAPE AMENITIES - Landscaping

Residential District

Recommendation:

Native or adaptive shrub plantings will be placed in the curb extension area growing to a mature height of approximately three foot. The shrub beds will be finished with a hard wood mulch. All shrub planting areas will be irrigated.



Curb extension with low landscape planting

Commercial District

Recommendation:

Native or adaptive shrub plantings will be placed in the curb extension areas, medians and in the tree planting zones. The shrubs will grow to a mature height of approximately three foot. The shrub beds will be finished with a hard wood mulch. Seasonal annual plantings will be used in all planters. All trees and shrub planting areas will be irrigated.



Planting zone with low landscape planting

Institutional District

Recommendation:

Native or adaptive shrub plantings will be placed in the median growing to a mature height of approximately three foot. The shrub beds will be finished with a hard wood mulch. All shrub planting areas will be irrigated.



Median with low landscape planting

STREETSCAPE AMENITIES - Intersection Improvements

Residential District

Recommendation:

Count down type pedestrian signals and actuators are provided at the 43rd Street and 45th Street intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.

Commercial District

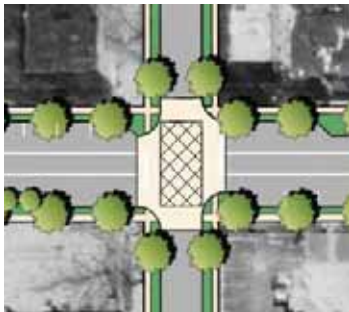
Recommendation:

Count down type pedestrian signals and actuators are provided at the Brush Creek Boulevard and Emanuel Cleaver II Boulevard intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.

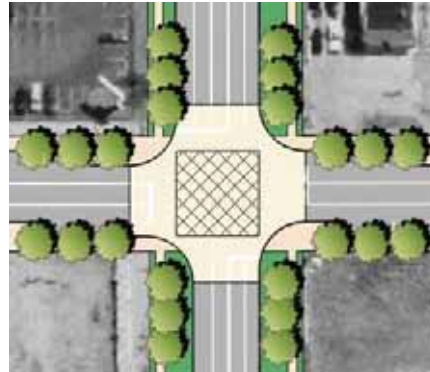
Institutional District

Recommendation:

Count down type pedestrian signals and actuators are provided at the Volker Boulevard and 52nd Street intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.



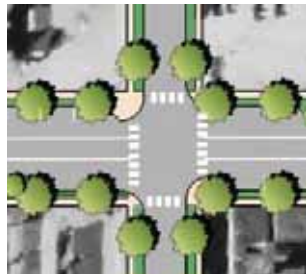
Intersection improvements at signalized intersections



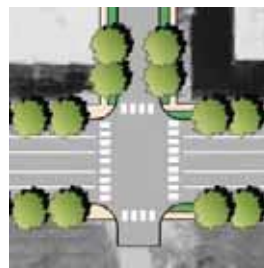
Intersection improvements at signalized intersections



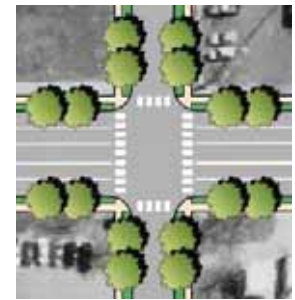
Intersection improvements at signalized intersections



Intersection improvements at non-signalized intersections



Intersection improvements at non-signalized intersections



Intersection improvements at non-signalized intersections

STREETSCAPE AMENITIES - Curb Extensions and Medians

Residential District

Recommendation:

Curb extensions are provided to designate on-street parking areas. These curb extensions are proposed to be 9 foot wide with varying lengths.

Count down type pedestrian signals and actuators are provided at the 43rd Street and 45th Street intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.

No transit shelters are planned for this area. Future shelters shall match the shelter specified in the commercial district.

No transit shelters are planned for this area. Future shelters shall match the shelter specified in the commercial district.



Curb extension, transit stop and proposed intersection improvements.

Commercial District

Recommendation:

Curb extensions are provided to designate on-street parking areas between 45th Street and Brush Creek Boulevard. These curb extensions are proposed to be 9 foot wide with varying lengths. Ten foot wide medians are provided from Brush Creek Boulevard to 48th Street except at designated left turn areas.

Count down type pedestrian signals and actuators are provided at the Brush Creek Boulevard and Emanuel Cleaver II Boulevard intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.

Transit shelters exist at the southwest and northwest corners of Troost Avenue and Emanuel Cleaver II Boulevard. The integral shelter at the northwest corner shall remain. The shelter at the southwest corner shall be replaced with a standard shelter type.



Curb extension, transit stop and proposed intersection improvements.

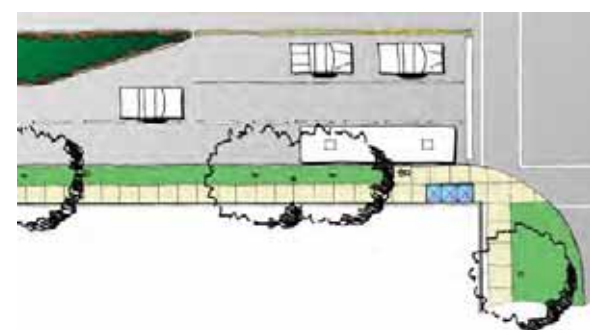
Institutional District

Recommendation:

Ten foot wide medians are provided from Brush Creek Boulevard to 48th Street except at designated left turn areas.

Count down type pedestrian signals and actuators are provided at the Volker Boulevard and 52nd Street intersections. Accessible ramps will be provided at each corner and will be designed to meet the current recommendations. Non-signalized intersections will be treated with piano key style stripping as described in the Walkability Plan.

One transit shelter exists at the southeast corner of Troost Avenue and Volker Boulevard. This shelter shall remain. Future shelters shall match the shelter specified in the commercial district.



Landscape median, transit stop and proposed intersection improvements.

STREETSCAPE AMENITIES - Additional Recommendations

Residential District

Additional Recommendations:

Landscape Easements -

Landscape easements to screen surface parking lots and to provide an extension of the building vertical edge.

Building Setbacks -

Buildings should be setback at 4-6' for commercial uses. Private development should provide an additional concrete walk from the front of the new or refurbished building to the right-of-way. Primary entry doors should front on to Troost. Any side building elevation that may occur along Troost should be designed to appear as a primary store front.

Utility Poles -

Replace existing utility poles with metal poles, finish color to be black.

Commercial District

Additional Recommendation:

Landscape Easements -

Landscape easements to screen surface parking lots and to provide an extension of the building vertical edge.

Building Setbacks -

Buildings should be setback at 4-6' for commercial uses. Private development should provide an additional concrete walk from the front of the new or refurbished building to the right-of-way. Primary entry doors should front on to Troost. Any side building elevation that may occur along Troost should be designed to appear as a primary store front.

Utility Poles -

Replace existing utility poles with metal poles, finish color to be black.

Institutional District

Additional Recommendation:

Landscape Easements -

No additional screening.

Building Setbacks -

Buildings should be setback at 4-6' for commercial uses. Private development should provide an additional concrete walk from the front of the new or refurbished building to the right-of-way. Primary entry doors should front on to Troost. Any side building elevation that may occur along Troost should be designed to appear as a primary store front.

Utility Poles -

Replace existing utility poles with metal poles, finish color to be black.

STREETSCAPE AMENITIES

Section H - Implementation

Implementation of the Troost Avenue Streetscape Plan will require significant resources and capital investment. Given the vision for the future of Troost Avenue developed through significant public input, it is anticipated that the full project will be installed in phases. The recommended phasing for streetscape implementation is:

- Phase 1 – Cleaver II Boulevard to 49th Street
- Phase 2 – 49th Street to 52nd Street
- Phase 3 – 45th Street to Cleaver II Boulevard
- Phase 4 – 42nd Street to 45th Street

This phasing approach places a priority on completing the sections of Troost Avenue first to the north of the proposed bridge over Brush Creek and second south of the Troost Avenue and Volker Intersection improvements. Subsequent phases will continue the streetscape improvements to the north.

Private Development Investment

The improvements detailed in the previous sections of this report mark a significant step in the ongoing efforts to improve the Troost Avenue Corridor. Private investment in the form of adaptive reuse of existing facilities and façade improvements will play a key role in the ultimate success of this effort. It is recommended that the City develop an incentive program in which a commitment from private land-owners for reinvestment in Troost properties triggers the public investment for streetscape construction.



Streetscape Phasing Plan

IMPLEMENTATION

Estimated Construction Costs

Costs for the proposed streetscape construction have been prepared for a single block in each district. These costs include estimates for demolition, new construction, encompassing the medians, bumpouts and major intersection improvements, and streetscape elements. The following are the estimated construction costs for one block:

Residential District -	\$534,400
Commercial District -	\$709,600
Institutional District -	\$483,300

The estimated construction cost per phase is as follows:

Phase 1 – Cleaver II Boulevard to 49th Street –	\$1,441,545
Phase 2 – 49th Street to 52nd Street –	\$1,239,975
Phase 3 – 45th Street to Cleaver II Boulevard –	\$1,291,840
Phase 4 – 42nd Street to 45th Street –	\$1,670,020

The total estimated construction cost for implementation of the Troost Avenue Streetscape not including design fees is \$5,643,380.

Streetscape Elements

The following table includes the unit pricing for streetscape elements that has been used to estimate the probable construction costs:

IMPLEMENTATION

ITEM/DESCRIPTION	UNIT	UNIT PRICE	PHASE 1 QTY	PHASE 1 COST	PHASE 2 QTY	PHASE 2 COST
<i>CURB AND GUTTER IMPROVEMENTS</i>						
Curb Demo. & Excavation	LF	\$ 4.00	3,620	\$ 14,480.00	3,780	\$ 15,120.00
Street Demo. & Excavation	SY	\$ 10.00	680	\$ 6,800.00	535	\$ 5,350.00
C-1 Concrete Curb (3000 psi, 8" width)	LF	\$ 20.00	3,980	\$ 79,600.00	4,155	\$ 83,100.00
Curb Inlet Replacement (5' x 3')	EA	\$ 3,500.00	8	\$ 28,000.00	15	\$ 52,500.00
<i>SIDEWALK IMPROVEMENTS</i>						
Demo. & Excavation	SY	\$ 15.00	2,380	\$ 35,700.00	1,900	\$ 28,500.00
Concrete Sidewalk (3000 psi, unreinforced, 4" depth)	SY	\$ 45.00	2,120	\$ 95,400.00	1,060	\$ 47,700.00
Excavation for Structural Soil	SY	\$ 7.00	370	\$ 2,590.00	0	\$ 0.00
Driveway Curb Cuts (4000 psi, unreinforced, 24' wide avg.)	EA	\$ 2,000.00	8	\$ 16,000.00	10	\$ 20,000.00
Structural Soil	CY	\$ 75.00	125	\$ 9,375.00	0	\$ 0.00
Brick Pavers	SF	\$ 15.00	1,000	\$ 15,000.00	0	\$ 0.00
ADA Ramp Detectable Warning	SF	\$ 30.00	40	\$ 1,200.00	80	\$ 2,400.00
<i>LANDSCAPE IMPROVEMENTS</i>						
Top Soil	CY	\$ 30.00	585	\$ 17,550.00	855	\$ 25,650.00
Sod (between sidewalk and back of curb, 5' width)	SY	\$ 5.00	1,200	\$ 6,000.00	2,400	\$ 12,000.00
Shade Tree (3" cal.)	EA	\$ 400.00	69	\$ 27,600.00	85	\$ 34,000.00
Ornamental Tree (2" cal.)	EA	\$ 350.00	0	\$ 0.00	0	\$ 0.00
Small Ornamental Shrubs (#3 container)	EA	\$ 60.00	600	\$ 36,000.00	0	\$ 0.00
Groundcover (#1 container)	EA	\$ 15.00	670	\$ 10,050.00	0	\$ 0.00
<i>STREET IMPROVEMENTS</i>						
Demo. & Excavation	SY	\$ 12.00	1,050	\$ 12,600.00	1,470	\$ 17,640.00
Concrete Pavement (5000 psi, reinforced, 12" depth)	SY	\$ 60.00	460	\$ 27,600.00	310	\$ 18,600.00
Concrete Sawing	LF	\$ 3.00	800	\$ 2,400.00	535	\$ 1,605.00
Striping	LF	\$ 3.00	2,400	\$ 7,200.00	1,470	\$ 4,410.00
<i>LIGHTING IMPROVEMENTS</i>						
Remove Street Lights and Poles	EA	\$ 1,000.00	25	\$ 25,000.00	30	\$ 30,000.00
Street Lights and Poles (80' o.c.)	EA	\$ 5,000.00	40	\$ 200,000.00	45	\$ 225,000.00
Pedestrian Lights and Poles (40' o.c.)	EA	\$ 4,500.00	74	\$ 333,000.00	84	\$ 378,000.00
Signal Equipment Removal	LS	\$ 25,000.00	2	\$ 50,000.00	1	\$ 25,000.00
Install New Traffic Signal	LS	\$ 175,000.00	2	\$ 350,000.00	1	\$ 175,000.00
<i>FURNISHINGS</i>						
Bench	EA	\$ 1,500.00	12	\$ 18,000.00	16	\$ 24,000.00
Waste Receptacle	EA	\$ 1,200.00	12	\$ 14,400.00	16	\$ 14,400.00
TOTAL				\$ 1,441,545		\$ 1,239,975

IMPLEMENTATION

ITEM/DESCRIPTION						
<i>CURB AND GUTTER IMPROVEMENTS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
LF	\$ 4.00	3,465	\$ 13,860.00	5,025	\$ 20,100.00	
SY	\$ 10.00	820	\$ 8,200.00	720	\$ 7,200.00	
LF	\$ 20.00	3,805	\$ 76,100.00	5,530	\$ 110,600.00	
EA	\$ 3,500.00	24	\$ 84,000.00	35	\$ 122,500.00	
<i>SIDEWALK IMPROVEMENTS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
SY	\$ 15.00	2,855	\$ 42,825.00	4,410	\$ 66,150.00	
SY	\$ 45.00	3,175	\$ 142,875.00	500	\$ 22,500.00	
SY	\$ 7.00	735	\$ 5,145.00	0	\$ 0.00	
EA	\$ 2,000.00	10	\$ 20,000.00	20	\$ 40,000.00	
CY	\$ 75.00	250	\$ 18,750.00	0	\$ 0.00	
SF	\$ 15.00	2,000	\$ 30,000.00	0	\$ 0.00	
SF	\$ 30.00	75	\$ 2,250.00	110	\$ 3,300.00	
<i>LANDSCAPE IMPROVEMENTS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
CY	\$ 30.00	320	\$ 9,600.00	1,000	\$ 30,000.00	
SY	\$ 5.00	0	\$ 0.00	1,560	\$ 7,800.00	
EA	\$ 400.00	55	\$ 22,000.00	100	\$ 40,000.00	
EA	\$ 350.00	0	\$ 0.00	40	\$ 14,000.00	
EA	\$ 60.00	1,200	\$ 48,000.00	2,100	\$ 126,000.00	
EA	\$ 15.00	1,340	\$ 20,100.00	2,250	\$ 33,750.00	
<i>STREET IMPROVEMENTS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
SY	\$ 12.00	635	\$ 7,620.00	475	\$ 5,700.00	
SY	\$ 60.00	615	\$ 36,900.00	460	\$ 27,600.00	
LF	\$ 3.00	1,070	\$ 3,210.00	800	\$ 2,400.00	
LF	\$ 3.00	3,335	\$ 10,005.00	2,140	\$ 6,420.00	
<i>LIGHTING IMPROVEMENTS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
EA	\$ 1,000.00	20	\$ 20,000.00	30	\$ 30,000.00	
EA	\$ 5,000.00	30	\$ 150,000.00	50	\$ 250,000.00	
EA	\$ 4,500.00	64	\$ 288,000.00	100	\$ 450,000.00	
LS	\$ 25,000.00	1	\$ 25,000.00	1	\$ 25,000.00	
LS	\$ 175,000.00	1	\$ 175,000.00	1	\$ 175,000.00	
<i>FURNISHINGS</i>						
UNIT	UNIT PRICE	PHASE 3 QTY	PHASE 3 COST	PHASE 4 QTY	PHASE 4 COST	
EA	\$ 1,500.00	12	\$ 18,000.00	20	\$ 30,000.00	
EA	\$ 1,200.00	12	\$ 14,400.00	20	\$ 24,000.00	
TOTAL			\$ 1,291,840	\$ 1,670,020		