



DRAFT

METRO TEMPE STREETCAR

URBAN DESIGN GUIDELINES

NOVEMBER 2011



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CITY OF TEMPE EXISTING LIGHT RAIL LINE & PROPOSED STREETCAR ROUTE



INTRODUCTION

In 2001, Valley Metro Rail (METRO) undertook the development of the Central Phoenix/East Valley (CP/EV) Light Rail Urban Design Guidelines. This document resulted from numerous citizen-based task-force meetings and divided the project into an element-by-element system study. The study listed preferences and design guidelines to be passed on to the engineering and design teams involved in creating the first light rail alignment in the Valley of the Sun. Subsequently in 2007, when METRO began to plan to extend the CP/EV into downtown Mesa, a set of Mesa-specific guidelines was developed to again guide the design process. Now with the planning underway for the Tempe Streetcar, METRO has developed a specific set of guidelines for this new alignment.

In 2011, a consultant was engaged to develop a set of Urban Design Guidelines for the proposed Tempe Streetcar. Towards that end, the consultant undertook sixteen one-on-one interviews, attended numerous City of Tempe staff technical meetings, eight Community Working Group meetings and numerous METRO meetings. In addition, the consultant reviewed nine City of Tempe and three METRO design documents. The result of that work is included in this report.

GOAL

The goal of the Tempe Streetcar Urban Design Guidelines is to develop a set of design parameters for the designers who will be involved later during the design process. This is not a document that replaces other City of Tempe or METRO design guidelines, but rather assembles into one place some of the overarching aspirations of the community, the City of Tempe and METRO.

OVERARCHING DESIGN GOALS

During the investigative process with METRO, City of Tempe and the Community Working Group, the following were identified as overarching design goals:

- *Develop a base design for METRO that also includes Tempe-specific elements.*
- *Develop a system that is affordable, maintainable, timeless and safe.*
- *Support and enhance the identity of the different segments within the alignment as a whole.*
- *Understand and address climate protection requirements on a stop-by-stop basis.*
- *Become a seamless amenity for downtown.*
- *Address and incorporate the City of Tempe Design Guidelines.*

ONE SYSTEM WITH DISTINCT SEGMENTS

The Tempe streetcar alignment travels through residential, commercial, institutional and recreational neighborhoods. Just as the City of Tempe has developed specific design guidelines to protect and enhance the qualities of these places, this document seeks to do the same. The streetcar design will be developed with recommendations to enhance each of these separate identities. These guidelines are merely that--guides for further discussions among the designers, METRO and the City of Tempe (COT).

A WORD ABOUT THE STREETCAR EXPERIENCE

As has been seen in other cities, a streetcar can spur new development, deliver new transit patrons to new destinations, and enliven existing commercial and civic amenities. This experience is quite different than that of light rail transit. The streetcar vehicle is smaller; it moves at a slower pace; it integrates itself into the roadway; its platforms are much smaller and maybe the most distinct difference, its budgets are only a fraction of that of light rail. While the system itself breeds a wonderfully human-scaled, neighborhood atmosphere, the ability to accomplish all the design aspirations remains a challenge. The designers and engineers who take this document in hand will need to be creative, nimble, surgical and restrained.

TEMPE'S RESIDENTIAL NEIGHBORHOODS

The ability to provide access to where people live, work, and recreate is at the heart of transportation trip making. The Tempe Streetcar is fortunate that it has so many stable neighborhoods along the alignment that provide the "living" aspect of the equation.

DOWNTOWN AND NORTH OF UNIVERSITY DRIVE

Immediately to the west of Downtown and north of University Drive are the Riverside, Sunset and Lindon Park neighborhoods. The residents of these neighborhoods come from a diverse mix of cultural backgrounds and have long been involved in establishing and rehabilitating their neighborhood. The City of Tempe and the neighborhoods have partnered together to restore Jaycee Park, build a new multi-generational center, and provide streetscape and traffic calming enhancements to 5th Street from Farmer Avenue to Priest Drive. In addition, the vacant or under-utilized land between the neighborhoods and Ash Avenue (the western edge of Downtown) has seen a number of sensitively scaled infill development projects adding to the residential mix adjacent to Downtown. Additionally, in 2006, the City of

Tempe, in conjunction with the Downtown Tempe Community, produced the Community Design Principles for the Downtown/Mill Avenue District. Many of those principles are included within the Guidelines and the Selection Matrix from that document can be found in the appendix on page 51.

UNIVERSITY DRIVE AND BROADWAY ROAD

The most historic neighborhoods in Tempe lie roughly between University Drive and Broadway Road and along Mill Avenue. These include Maple /Ash, University Drive and Date Palm Manor. The Maple Ash neighborhood not only includes desirable historic homes, but also includes several structures occupied by businesses with complementary adaptive reuse. These historic neighborhoods were built with tree-lined and pedestrian scaled streets that are amenable to pedestrians and bicyclists. Recently, 13th Street has added traffic calming enhancements to further slow traffic. The addition of the streetcar line will only support the livability of these neighborhoods clustered adjacent to the Arizona State University (ASU) main campus.

SOUTH OF ASU TEMPE CAMPUS

Finally, the neighborhoods south of the ASU Tempe campus range from historic to typical suburban in scale. Many residents of these neighborhoods are long-time Tempe citizens, who have settled here to live nearby the University and enjoy the cultural attractions of ASU and Downtown.

BICYCLE AND PEDESTRIAN-ORIENTED STREETS

College Avenue is a bicycle friendly and pedestrian-oriented collector street that runs through the middle of these neighborhoods. This street is a unique multi-purpose transportation element that empties into the ASU campus on the north and continues south to the post office and several blocks to the west of the Tempe Public Library. Along its length (from Apache Boulevard to Southern Avenue) are found:

- A police station
- Daley Park
- Multiple churches
- Public schools

South of Southern Avenue, a pedestrian bridge provides a link across the US 60 Freeway to south Tempe and to Palmer Park. The City of Tempe has completed traffic calming along College Avenue.

PARTNERSHIPS AND COOPERATIVE PROGRAMMING

Understanding that this is a transportation system that touches many neighborhoods, opportunities exist to increase ridership, civic pride and community building parallel to the streetcar's design process. Current funding may not be in place now for any of these initiatives; however, beginning such a list and identifying potential responsible parties (see italics), can prove to be valuable later.

1. Consider the development of a cooperative maintenance program of downtown Mill Avenue, Ash and Rio Salado stops by the Downtown Tempe Association (*DTA*).

METRO and DTA

2. Identify and prioritize alignment-adjacent development opportunities that can be implemented over time.

City of Tempe (COT)

3. Improve connectivity from inside the neighborhoods to the stops through the use of wayfinding signage, bike lanes, landscaping, public art, streetlights or other pedestrian oriented improvements.

COT

4. Improve pedestrian connectivity to the alignment and stops where gaps and less than inviting connections exist. (Broadway & Ash/5th).

COT

5. Engage in the development of a program whereby the Streetcar Project could install new landscaping on public/private property adjacent to stops or extend existing irrigation from public/private property to streetcar platforms.

METRO/COT/private sector

6. Explore funding and opportunities within project to consider "green" and sustainable practices such as water conservation (rain water harvesting), energy efficiency (solar applications), resource efficiency (use of recycled or earth-friendly materials, green supply and construction practices).

METRO/COT

HOW THIS DOCUMENT IS TO BE USED

These Guidelines are not an end unto themselves. Rather they are intended to set the stage for design explorations in the development of the system and its associated elements. They will be used by the City of Tempe as a record of some of their aspirations and by METRO as a guide to engineering, operations and budget constraints. Designers will use them as a starting point to their work as well. The inherent challenge is to design a base system that can be replicated by METRO on future alignments while at the same time provide opportunities to make this system distinctly Tempean.

In the development of these Guidelines, twelve individual METRO and City of Tempe design documents were reviewed as well as comments from METRO and City of Tempe staff, Community Working Group members and citizens at large compiled. Below is a key that references the source of each of those guidelines listed in this document.

A KEY TO DOCUMENTS SITED IN THE URBAN DESIGN GUIDELINES

CDP - City of Tempe Community Design Principles

COMP - Compilations of Comments from Interviews

COT - City of Tempe Staff

CTP - City of Tempe Comprehensive Transportation Plan

CWG - Community Working Group

DPM - Date Palm Manor Historic District Report

MACS - Maple Ash Character Study

METRO - METRO Staff

TTLM - City of Tempe Transportation Landscape Maintenance Specifications

MLSP - City of Tempe Mill+Lake Streetscape Principles

NTDG - City of Tempe Northwest Tempe Design Guidelines

QLU - METRO - Qualitative Land Use/Economic Development Template

TSA - METRO- Tempe South Alternatives Analysis

UDG - METRO Central Phoenix/East Valley + Central Mesa Urban Design Guidelines

UOSP - City of Tempe Urban Open Space Plan

UPH - University Park Historic Register

STREETCAR STOP DESIGN

URBAN DESIGN

1. Design the stops to accommodate the maximum ridership potential and provide an environment that is safe and functional for the single rider.

UDG, page 30

2. Design the median-sited stops with the appropriate amount of improvements best suited for a platform at that location.

CWG

3. Explore opportunities along the alignment to combine bus and streetcar facilities.

COT

4. Design secure, open, inviting, well lit, and easily accessible waiting areas at transit stops.

CTP, page 4,3, Access to Transit

5. Improve pedestrian mobility and transit function by providing separate spaces for those waiting, passing through, transferring between buses and queuing to board and de-board.

CTP, page 4,3, Access to Transit

6. Enhance wayfinding via signage, landscape and hardscape materials, furnishings and other means.

MLSP, page 8

7. Create space directly adjacent to loading areas that are free of street level obstacles. Street furnishings such as benches, pay phones, light posts, shelters, kiosks, and garbage receptacles should be set back a minimum of eight-feet from the curb where adequate space is available. Where space is not available, provide three-feet of lateral clearance required by the ADA.

CTP, page 4,3, Access to Transit

8. Explore funding and opportunities within project to consider “green” and sustainable practices such as water conservation (rain water harvesting), energy efficiency (solar applications), resource efficiency (use of recycled or earth friendly materials, green supply and construction practices).

METRO/COT

ARCHITECTURE, SHADING & COOLING

1. The Tempe Streetcar Project shall include one or more of the following elements at stops along the alignment as determined during the design phases:

- Bench
- Single painted bike staple
- Single painted trash can (METRO or COT)
- Sign/logo/stop ID
- Schedule/map
- Real time/next train display (Transit Tracker)
- Defined platform or transit patron waiting area
- Domed platform edge warning strips
- Lighting
- Canopy
- Vertical shade device
- Public art

(Figure 1)

METRO, CWG

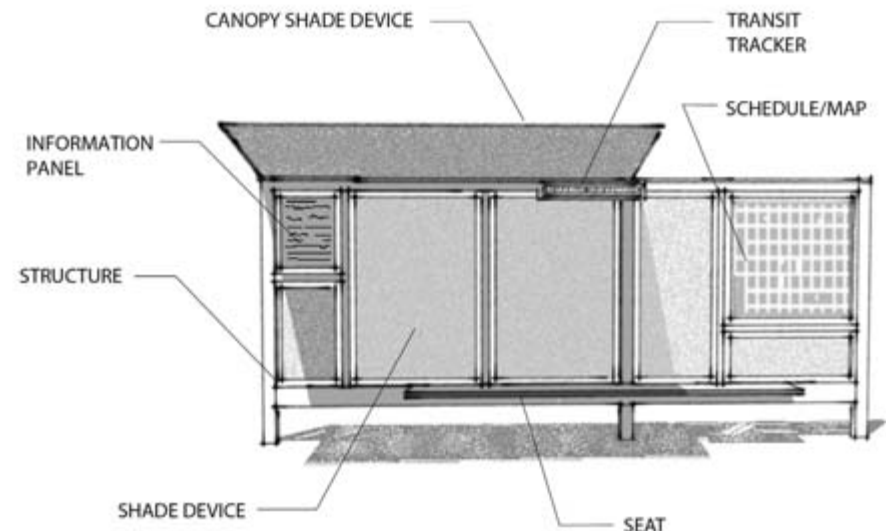


Figure 1

2. Architecture and shelter must be responsive to the desert climate and environment of the region.

UDG, page 12

3. Transit shelters should be designed to complement their immediate surroundings utilizing a palette of materials drawn from the streetscape and adjacent buildings. Artist-designed installations should be used at selected feature locations.

MLSP, page 15, Shelters

4. Enhance the community's quality of life for future generations by creating a memorable, sustainable, (socially and economically, as well as environmentally) sense of place with:

- An aesthetically pleasing theme
- Safe human-scaled pedestrian environments
- Adequate lighting, shade and pathways,
- Efficient circulation accessible to all

MLSP, page 7, Principles

5. Transit stops should include sheltered, visible, and comfortable seating areas and waiting spaces set back from the walkway. Protection from sun and wind are important considerations.

CTP, page 4-5, Access to Transit

6. Review the existing and anticipated future urban conditions of each stop to determine the stop-specific requirements for shading, weather protection, seating and other elements. Reduce urban clutter wherever possible.

CWG

7. Consider developing a menu of stop canopy and shading elements such as:

- Bench + map/schedule + transit tracker,
- Bench + map/schedule + transit tracker + vertical shade screen(s),
- Bench + map/schedule + transit tracker + vertical shade screen(s) + canopy. (Figure 2)

CWG

8. Reduce station elements at stops located adjacent to historic structures to lessen the visual impacts on the historical resource.

METRO, UDG, page 12

9. In examining all the components of the system, appropriate consideration should be given to establishing an architectural kit of parts. The economy of "duplicity" will allow for design unity, universal functionality, and most importantly, overall system identity.

UDG, page 12

10. The architectural program shall develop a palette of colors, materials, textures, and vocabulary of design solutions, which will serve as a foundation for system identity.

UDG, page 12

11. The design of the canopy, shading devices and other architectural elements shall comply with the associated budgetary limits of the project and conform to the traditional "modest level of improvements" as seen in built streetcar systems in other cities.

METRO

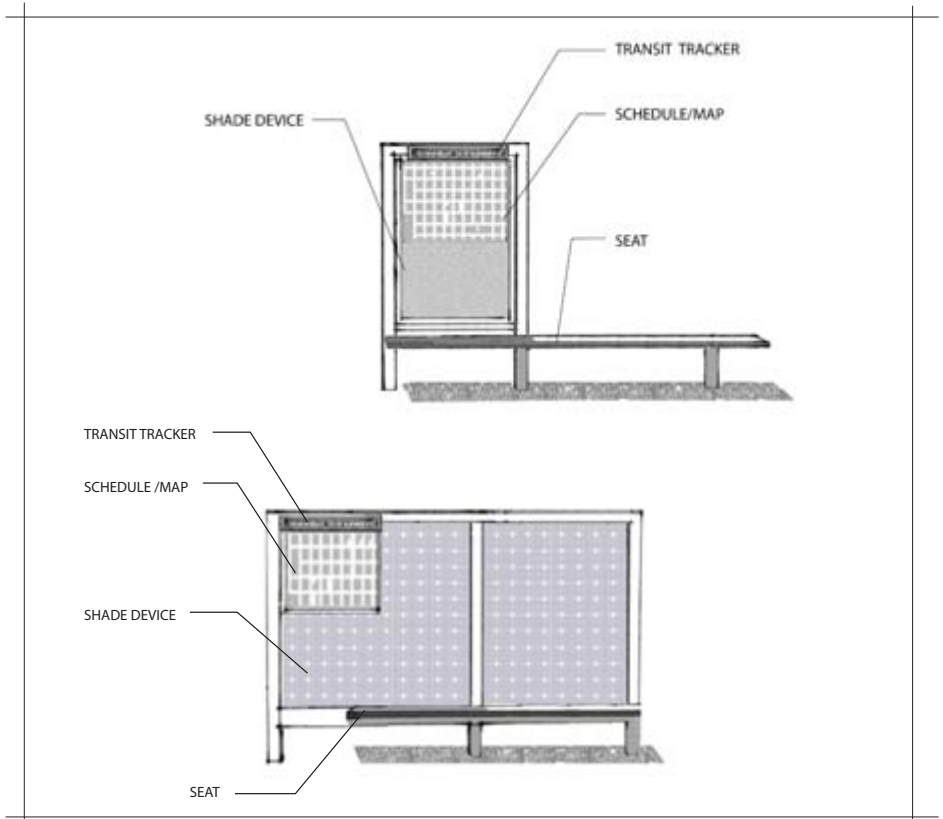


Figure 2

12. Develop shading systems to assure shaded conditions occur wherever pedestrians/transit users congregate while waiting for the train by:

- Making use of existing shade devices such as buildings, architectural features or trees, and/or,
- Providing appropriately designed and well-sited shade devices.

UDG, page 34

13. Design vertical shade screens to blend appropriately with station architecture and site the screen so as to fit contextually with adjacent land uses.

UDG, page 34

14. Explore opportunities for shading devices to interact with pavement and lighting to project changing patterns of light, shadow and color images throughout the day and seasonally.

UDG, page 35

15. Take advantage of unique opportunities for fully integrated artist/architect/engineer collaboration.

UDG, page 35

16. The design of the canopy, shading devices and other architectural elements shall be easily adapted as a “base design” for future METRO streetcar alignments within the region and outside of the City of Tempe.

METRO

17. Canopy and screens could be a new design, or “off-the-shelf” (customized to meet shading requirements), or a customized/existing shelter type already used in the City of Tempe. (Figure 3)

CWG, COT

18. Colors, materials and finishes should be light and heat reflective, rather than heat absorptive.

UDG, page 31

19. Ensure that the design of the shade screens, map enclosures and other vertical surfaces provide for a substantial amount of air to flow between/through both sides of the structure.

COMP



PORTLAND STREETCAR



ASU BUS CANOPY



TEMPE TRANSPORTATION CENTER



TEMPE/MILL AVENUE BUS



TEMPE BUS SHELTER



PORTLAND STREETCAR



SEATTLE STREETCAR

Figure 3

20. Concepts for vertical shading devices could include, but need not be limited to:

- Fritted glass
- Integrated photo voltaic, etched or “thin film” laminated solar screens (Figure 4)
- Cut and painted metal panels as designed by artists or architects
- A variegated series of horizontal bars (metal, recycled material, wood, etc.) (Figure 5)
- Use of vertical landscape applications

CWG, COMP

21. If glass is included on any portion of the structure within the touch zone, apply a thin layer of “sacrificial” vinyl to guard against vandalism.

(Figure 4)

COMP

22. If metal is used within the structures, it should be painted and easily maintained in the field.

COT

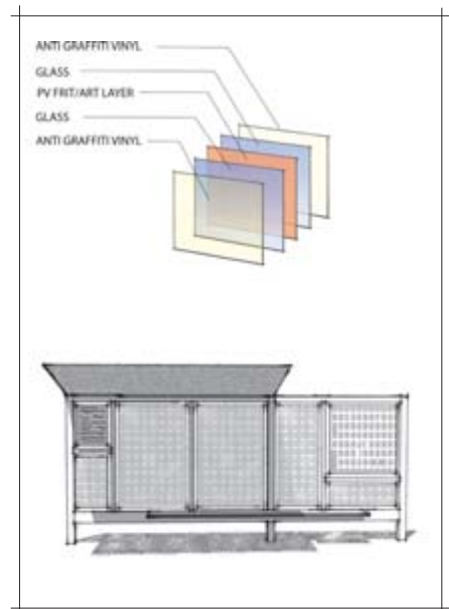


Figure 4

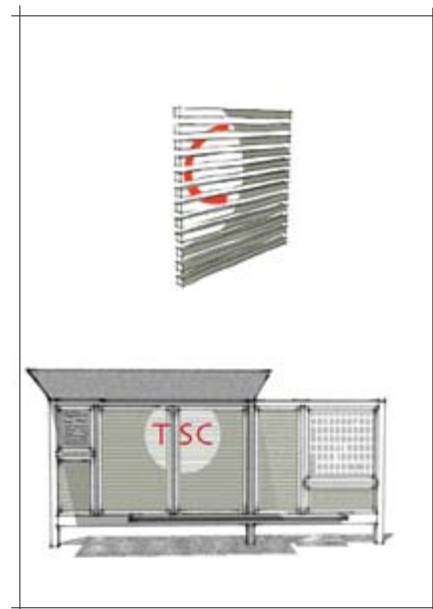


Figure 5

PLATFORM PAVING

1. Design pavement surfaces to be non-slip when wet, comfortable under foot, and able to withstand heavy use and maintenance by power washing.

UDG, page 32

2. Provide color variety in pedestrian paving, to achieve a more human scale with the material. (Figure 6)

UDG, page 32

3. Provide design continuity in paving patterns, colors and materials from station platform onto adjacent sidewalks, plazas and pedestrian crosswalks throughout station area zones.

UDG, page 32

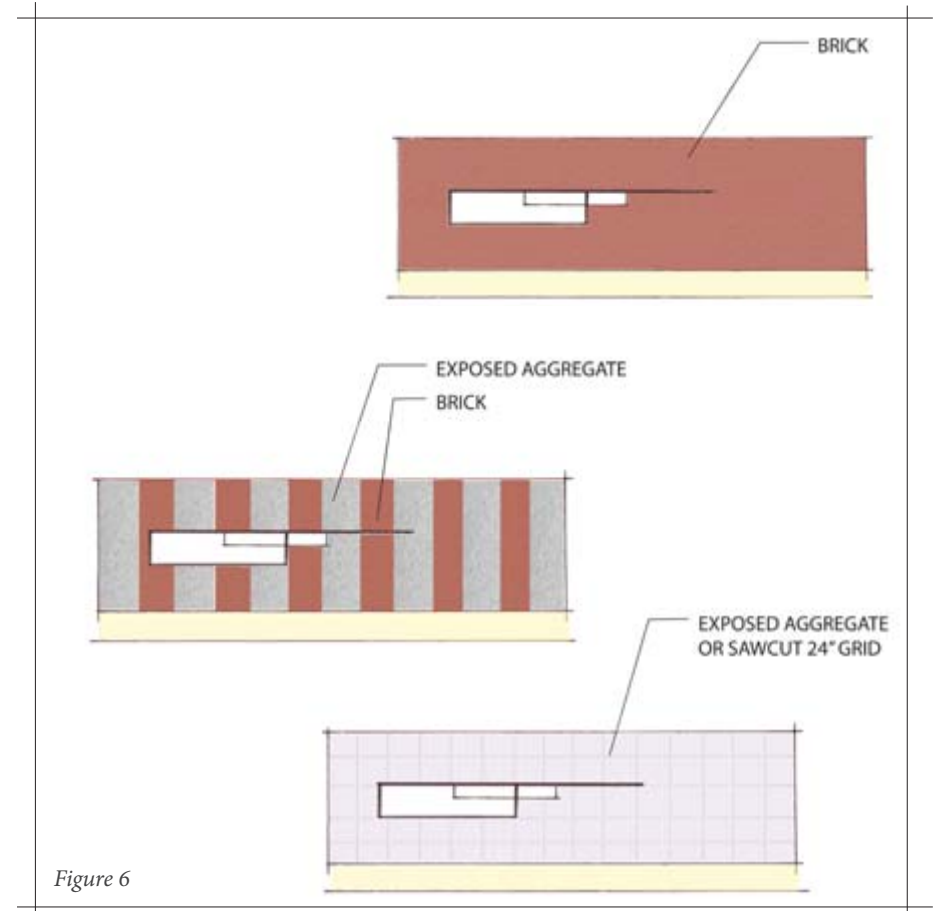


Figure 6

4. Utilize a variety of paving materials, ranging from all brick on the Signature street (downtown Mill Avenue) to compatible combinations of brick of varying proportions elsewhere. See Selection Guide/Matrix for acceptable materials and approximate percentages.

MLSP, page 19, Sidewalks

5. Seek design solutions that reduce the visual impact of “massive pour” surfaces and appearances of traditional cast-in-place concrete through texture, materials, scoring or other detailing.

CWG

6. Provide tactile paving strips at active edges of platforms.

UDG, page 18

7. At locations where streetcar stops may/will also serve bus transit, develop a warning strip/edge treatment, which is able to withstand the continued contact of bus lugs. (Figure 7)

COMP



Figure 7

CIRCULATION

1. Design side platforms and adjacent activity areas in concert so that they are mutually supportive spaces.

UDG, page 36

2. Exceed ADA requirements, wherever possible, in providing sufficient maneuvering space, surfaces and accommodations for wheelchairs, bicycles, strollers, and walkers.

UDG, page 30

3. Provide access ramps with less than 5% slopes onto station platforms wherever possible. (Figure 8)

UDG, page 31

4. Keep entry ramps free of conflicting landscape and other elements that impede free circulation.

CWG

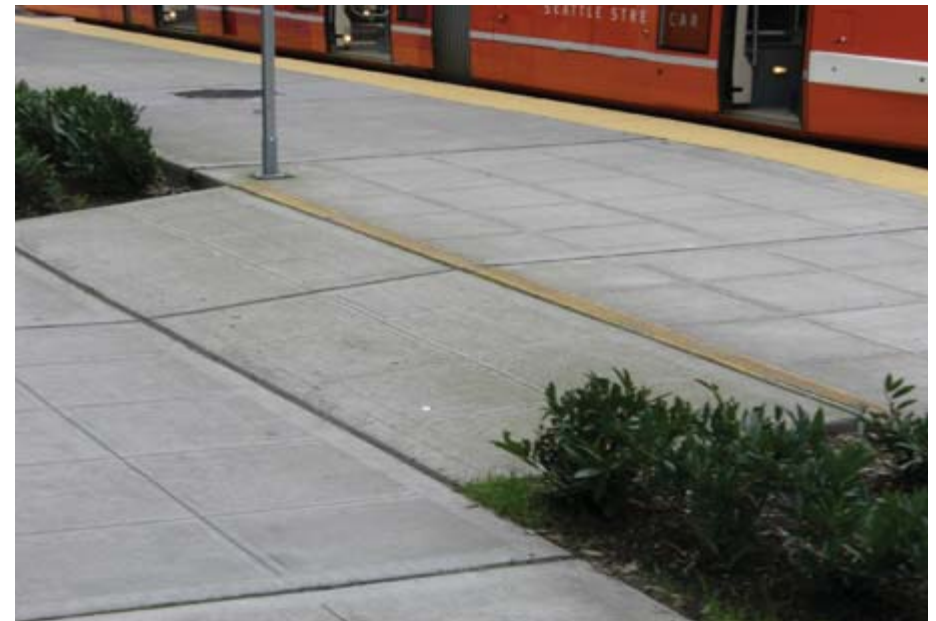


Figure 8

5. When an accessible route is greater than 1:20, it is considered a ramp (except for sidewalks along roadways) and must have handrails and landings.

CTP, page 2-6, Accessibility

6. Cross-slopes on sidewalks and walkways should not exceed 2% and should facilitate positive drainage to avoid water accumulating on the surface.

CTP, page 2-7, Accessibility

7. Surfaces and travel routes shall meet ADA standards and, in addition, allow for six-foot direct, unobstructed pedestrian circulation within an eight-foot clear passage space throughout to avoid bottlenecks. Provide a minimum three-foot smooth, level path.

TTLM, page 18, Sidewalks

8. Provide a minimum width of 44 inches (required/60 inches desirable) for exterior ramps, with a minimum clear space of 36 inches between handrails.

CTP, page 2-8, Accessibility

9. Sidewalks within the public right-of-ways should not be considered as ramps, and are not required to comply with the same criteria that ADAAG specifies for site and building conditions. Thus handrails would not normally be required within the public right-of-ways.

CTP, page 2-11, Accessibility

10. A minimum of 70% contrast in light reflectance between the detectable warning and an adjoining surface should exist, or the detectable warning should be "safety yellow".

CTP, page 2-16, Accessibility

11. Fully integrate side platform functions into existing surrounding sidewalks and/or a pedestrian plaza without obstructing pedestrian flow along circulation portion of sidewalk.

UDG, page 31

12. Ensure that peak transit loads associated with special events can be accommodated.

CTP, page 4-4, Transit

13. Sidewalks shall be designed as a continuous hardscape from building frontage to street/curb line accommodating streetscape elements: street trees, landscaping, lights, street furniture, kiosks, etc., while ensuring accessibility. Level changes due to grade differentials will integrate steps and/or ramps with planters or other architectural elements to maintain continuity of the landscape. (Figure 9)

TTLM, page 18, Sidewalks



Figure 9

14. Employ curb/sidewalk "bulb outs" to define on-street parking areas.

MLSP, page 18, Sidewalks

15. Achieve clarity of areas where patrons can and cannot circulate if the top of the platform is elevated from the top of the adjacent sidewalk. Employ the use of any of the following to achieve this goal: planting strips, raised beds, street trees, art works, railings, reflective warning strips, etc. (Figure 10)

COMP



Figure 10

FURNISHINGS, SIGNAGE & OTHER PLATFORM ELEMENTS

1. Furnishings should be bolt-down (with vandal proof connections) for easy replacement and flexibility.

UDG, page 32

2. Furnishings should reflect a modern, progressive and “timeless” design vocabulary consistent with the theme of the system.

UDG, page 32

3. Bicycle racks and lockers should be provided at each station’s adjacent pedestrian area.

UDG, page 32

4. Furnishings are for the use and comfort of system riders; design, layout, and locations should discourage unauthorized use.

UDG, page 32

5. Consider the use of WR-1A waste receptacles in place of METRO standard on Mill Avenue from Rio Salado to 11th, on Rio Salado from Mill to Ash and on Ash from Rio Salado Parkway to University Avenue.

MLSP, page 38

6. Consider the use of BR-1 bike racks in place of METRO standard on Mill Avenue from Rio Salado Parkway to 11th Street.

MLSP, page 38

7. Consider the use of BR-2B bike racks in place of METRO standard on Rio Salado from Mill Avenue to Ash Avenue and on Ash Avenue from Rio Salado Parkway to University Avenue.

MLSP, page 38

8. Consider the utilization of CP/EV railing type that includes a top rail suitable for leaning. *(Figure 11)*

COMP

9. Develop railings for platforms, which provide the appropriate amount of safety protection for patrons. Note that art panels can provide a pleasing addition and community pride as infill devices to traditional pipe railings.

(Figure 12)

COMP



Figure 11



Figure 12

SAFETY & SECURITY

1. Ensure that all vertical shading devices promote transparency, visibility and a sense of safety for the transit patron.

CWG

2. Avoid the use of materials that can be easily vandalized, cannot withstand prolonged heat, and/or become an invitation to theft.

CWG

3. Ensure that trash receptacles meet FTA Homeland Security shrapnel requirements.

METRO

4. All potential design hazards must be eliminated from architectural forms and furnishings such as sharp edges or poorly finished welds. Elements that could cause tripping and snagging should be avoided.

UDG, page 30

5. All materials should be durable, easily maintained, and vandal resistant.

UDG, page 30

6. Avoid providing a canvas for graffiti or using surfaces that can be easily scratched such as glass or non-textured stainless steel.

UDG, page 32

7. Undertake security reviews of all architecture, engineering, landscape and public art.

UDG, page 49

8. Create clear and logical circulation routes and deter circulation in areas that could foster undesirable activities.

UDG, page 48

9. Provide natural “eyes on the street” opportunities by opening up views from stations to adjacent community areas.

UDG, page 48

10. Provide at least two routes in and out of stations whenever possible.

UDG, page 48

11. Keep the station platforms open and uncluttered by locating station furnishings in a way that maximizes views throughout the area.

UDG, page 48

LIGHTING

1. Meet or exceed minimum requirements for exterior light levels as specified by the Illuminating Engineering Society (IES) and following local CPTED ordinances.

UDG, page 50

2. Platform/stop lighting shall have a five-foot candle minimum.

METRO

3. All lighting systems should be designed for ease of maintenance energy-efficient operation, highest quality of light, and architectural compatibility with system-wide standards.

UDG, page 50

4. Select fixture types based on high reliability and the availability of future replacement components. Parts must be readily available to maintenance crews so that lighting quality can be maintained.

UDG, page 50

5. Contribute to the overall ambiance and safety of the streetscape while meeting Dark Sky and energy efficiency requirements.

MLSP, page 17, Lighting

PUBLIC ART

PROGRAM FRAMEWORK

1. METRO shall work closely with the Tempe Commission on the Arts in:

- Identifying the project opportunities
- Creating the public art Requests For Qualifications (RFQ)
- Creating Artist Selection Committees and,
- Selecting artists

METRO

2. Consider any and all menus of a public art program including stand alone/landmark works, human scaled stop-oriented, integrated, collaborative and ephemeral.

METRO

3. Consider all forms of artist engagement including design teams, individual artists, or groups of artists.

METRO

4. Understanding that the alignment contains three, possibly four distinct segments and urban conditions (Downtown/North Mill Avenue, Rio Salado Parkway, Ash and South Mill Avenues), consider that a different type of art program might be undertaken in different segments. (Figure 13)

COMP

ARTIST DESIGNED SHADE SCREENS

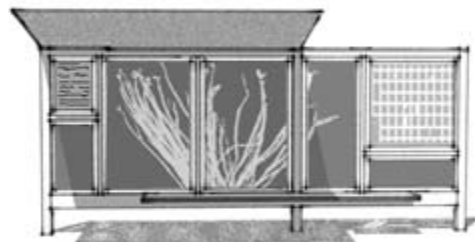


Figure 13

5. Assign budgets with a site-specific approach to best support the urban design of the existing and anticipated future conditions rather than a parity approach to funding.

METRO

6. Humanize the built environment through a sense of scale, wonder, touch, discovery and richness of materials.

UDG, Page 44

7. Create artwork that is respectful of its adjacencies, but not dictated by it. (Figure 14)

UDG, page 44



Figure 14

8. Assure that the art ultimately becomes a good partner to the transit system and the citizens it serves.

UDG, page 44

9. Assure that works and designs are timeless and enduring in both materials and content.

(Figure 15)

UDG, page 44

10. Create works that respond appropriately to the close proximity of the human touch.

UDG, page 44



Figure 15

11. Seek opportunities to engage and delight the passer-by. Utilize technology; employ whimsy, incorporate architecture; serve a purpose...or not.

MLSP, page 17, Public Art

12. Consider gateway “statements”, where appropriate. (Figure 16)

CDP, page 11



Figure 16

13. Consider public art as an integral component

CDP, page 10, 2.a.

14. Public artwork creates interest in a place as a destination and enhances the pedestrian environment. (Figure 17)

CTP, page 9-13, Site Design



Figure 17

SELECTION OF ARTISTS/CONCEPT REVIEWS

1. Solicit applications from local, regional, and national artists having past experiences that relate to the scope of the project for which they are applying.

UDG, page 44

2. Take extra care to solicit applications from diverse minorities where traditional application procedures are not effective.

UDG, page 44

METRO TECHNICAL DESIGN REVIEW

1. Review and provide opportunities for comment on all art projects within the agency, and at public/neighborhood meetings.

UDG, page 44

2. Assure that all art meets the rigorous demands of ADA compliance, maintenance, and other standard design criteria for this transit system.

UDG, page 44

3. Public art is for the enjoyment of all METRO patrons. However, there is no statute that requires the art to be 100% accessible.

METRO

4. Extra precautions should be taken to ensure that public artwork integrity is not compromised by potential future decisions to add advertising to the system.

UDG, page 45

LANDSCAPE

A NOTE ABOUT LANDSCAPE

Landscape provides shade and cooling. The wonder of nature, becomes an urban softener, and contributes to the pride of community. These attributes are expressed in numerous City of Tempe design documents that speak to landscape requirements within right-of-way and transit improvement projects. Within a streetcar development such as this, landscape longevity becomes a challenge. A list of these challenges could include:

- The project's ability to afford irrigation systems' installation and on-going maintenance.
- Selecting the right plant for the right place (COT guidelines vs. transit activity).
- The addition of infrastructure to protect plants from transit patrons (tree grates, tree and plant enclosures, etc).
- Ensuring that landscape does not negatively impact ADA and general circulation as well as safety, operations, and CPTED requirements.
- The project's ability to maintain the plant materials on a regular basis.

During the writing of this document, the current conditions of each stop was reviewed to determine if irrigation lines (private or public) existed that could be potentially "piggy-backed" for new plantings. It is recommended that the opportunity to include landscape should be made on a stop-by-stop basis. Consideration should be given to the points above, while also pursuing a discussion with the operators of stop-adjacent irrigation systems to explore potential partnerships. (Figure 18)

LANDSCAPE DESIGN STANDARDS

1. Identify conditions where irrigation currently exists adjacent to the stop and explore opportunities to form a partnership and "tap into" the line to facilitate the installation of additional plant materials. (Figure 18)

COMP

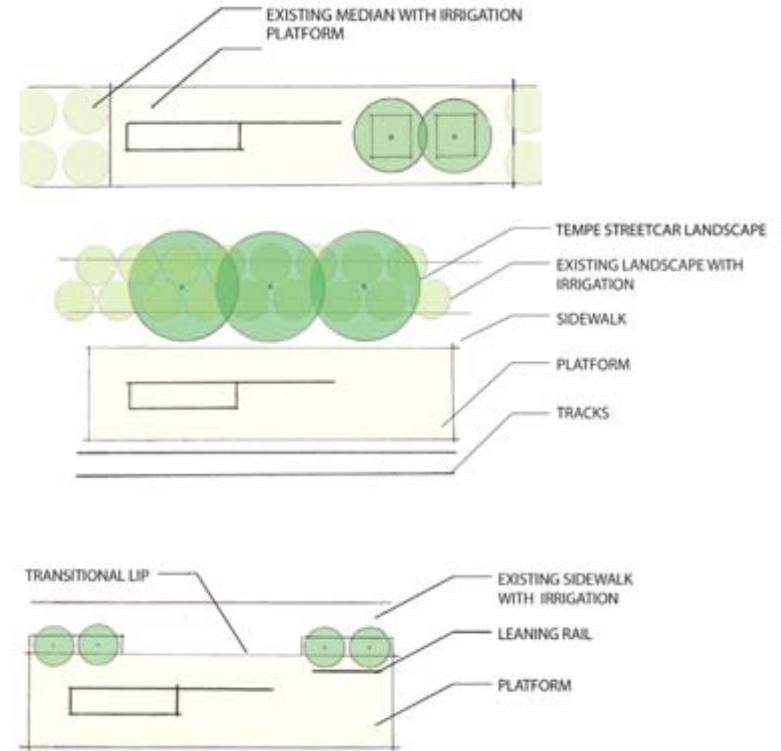


Figure 18

2. Plants that represent the local and natural environment should be encouraged. Trees that will provide maximum shade should be planted around the station. Transit authorities should seek partnerships with surrounding businesses and/or neighborhoods to create small gardens or parks to enhance the pedestrian environment around stations.

CTP, page 4-6, Access to Transit

3. Plant selection shall consist primarily of indigenous or arid-adapted deciduous and evergreen varieties appropriate to their location in form and surface characteristics. Consideration should be given to growing conditions within an urban hardscape environment relative to sun exposure, protection of visual corridors and close proximity to pedestrian circulation.

TLLM, page 15, Landscape

4. Balance the prehistoric and historic tradition of an irrigated “oasis” with contemporary needs for water conservation, drought tolerance and mitigation of heat island effect.

MLSP, page 7, Principles

5. Develop a coherent visual landscape with large- and small-scale elements within a meaningful theme; establish continuity and rhythm via streetlights, banners, and other repetitive elements.

MLSP, page 8

6. Integrate tree spacing with streetlights to minimize conflicts.

MLSP, page 15, Trees

7. Provide a landscape window for visibility between groundcover and shrubs less than two-feet and a tree canopy at greater than seven-feet.

UDG, page 42 (Figure 19)

8. A low maintenance landscape will have materials native or well adapted to the local climate with minimal requirements for resources such as fertilizer, pesticides, and water as well as personnel and budget resources.

LMS, page 1

9. Shrubs and ground covers should not intrude into or block walkways or interfere with visibility and security.

CTP, page 9-13, Site Design

10. Products/locations for tree grates per Selection Guide/Matrix; installation per Tempe Standard Details where applicable (with the addition of screw-to-frame mounting where applicable, to prevent upward migration of the grate surface over time). Utilize recycled metal products with minimal surface preparation whenever possible.

MLSP, page 16, Tree Grates

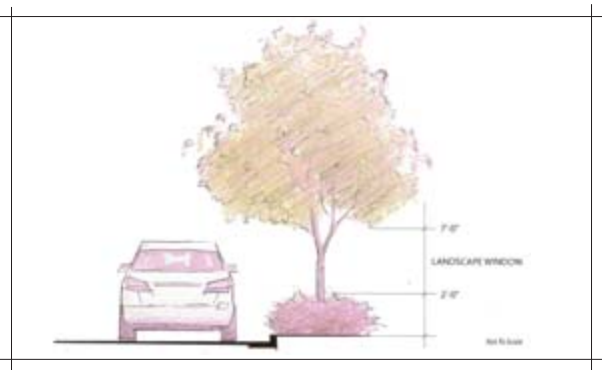


Figure 19

11. Replace existing landscape medians in kind along the corridor so as not to lose landscape character.

UDG, page 42

12. Minimize the removal of significant trees whenever possible.

UDG, page 42

13. Provide the soil requirements that are necessary for trees to survive in the desert heat and urban conditions: minimum 48 square feet per tree and add structural soil at a minimum of 600 cubic feet per tree.

UDG, page 43

14. METRO shall work with the City of Tempe to explore the plant lists, irrigation guidelines, maintenance standards and pruning guidelines as contained within the City of Tempe Transportation Department Landscape Maintenance Specifications.

COT

15. All landscape types must be planned, designed and maintained in a sustainable way.

MLSP, page 1

LANDSCAPE AS SHADING

1. Evaluate sun angles and likely shade patterns from adjacent buildings and likely street tree locations to determine the best layout to achieve shading of the station platform. (Figure 20)

UDG, page 42

2. Site’s landscaping theme should provide appropriate trees for a shade canopy near or around the shelter.

COT

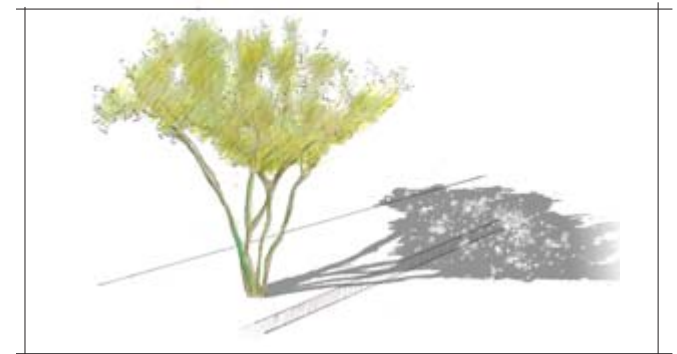


Figure 20

ACCESSIBILITY

1. Meet or exceed all standards prescribed in the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG).

UDG, page 26

2. Integrate accessible paths into primary pedestrian pathways rather than providing separated routes.

UDG, page 26

3. Locate all information and wayfinding devices in a well-marked, easily accessible and similar location in each station.

UDG, page 26

4. Curb radii at street corners/intersections shall typically be the minimum allowed by applicable standards. Provide dual ADA access ramps aligned with paths of travel (in lieu of a single, 45 degree orientation) at intersections wherever possible, per Tempe Standard Detail T-328.

MLSP, page 18, Sidewalks

See “Stations”, “Platforms” and “Intersections” sections for additional accessibility guidelines.

BICYCLE CIRCULATION

LINKING BICYCLES TO TRANSIT

1. Work with the City and the biking community to link transit stations to existing and future bike facilities.

UDG, page 39

2. Site bike racks and lockers in “eyes on the bikes” conditions.

UDG, page 39

3. Provide sufficient and attractive bicycle parking and storage facilities to prevent ad hoc attachment of bicycles to trees, poles, etc.

UDG, page 36

4. Implement improvements on designated Transit Streets and Green Streets to increase use by pedestrians, bicyclists and public transit.

CTP, page 2-6, Pedestrian Networks

5. Improve the bikeway system in Tempe to ensure that the travel network and facilities will accommodate all types of bicyclists.

CTP, page 3-6, Bikeways

6. Improve the bikeways network by including bike lanes on all arterial streets and street crossing improvements. (Figure 21)

CTP, page 3-6, Bikeways

7. Ensure that bicycles are welcomed into the streetcar vehicles in small numbers as long as they do not conflict with other riders.

CWG



Figure 21

BICYCLE TECHNICAL DESIGN CONSIDERATIONS

1. When designing paved surfaces (trackway, ADA paths, sidewalks), make sure that they are skid-resistant and easy for bicyclists to cross.

UDG, page 39

2. Develop the alignment to minimize conflicts between parked vehicles and bicycle lines of travel.

CWG

3. Clearly define bicycle travel lanes/routes through the use of surface-painted universal symbols and/or text. (*Figure 22*)

COMP



Figure 22

CIRCULATION & TRACKWAY

TRACKWAY TREATMENT

1. Pave area between the rails in cast-in-place concrete.

UDG, page 18

2. Consider the use of asphalt as a topcoat to the trackway.

METRO

3. Utilize materials and fabrication details to develop a trackway paving treatment, which compliments the scale and urban context of each segment of the alignment.

COMP

4. Develop a trackway paving treatment, which meets or exceeds all current METRO system safety, maintenance, and operations requirements.

COMP

5. Trackway paving treatments shall clearly differentiate themselves from pedestrian zones and crosswalks.

COMP

6. Consider the use of textures such as exposed aggregate finish, raked finish, and other affordable and maintainable surfaces, which would help to reduce glare, heat gain, and discoloration from road scum.

(Figure 23)

COMP



Figure 23

TRACK DELINEATION

1. Consider the use of a painted dashed line or a continuous fog line with/without low profile stutter buttons to delineate the outside travel lane.

(Figure 24)

COMP

2. Identify curbs where no auto parking is allowed through the use of a regulatory paint color. *(Figure 25)*

COMP

3. Utilize a system of bollards and cables, as needed to safely control pedestrians at high boarding and/or at special activity sites such as sports venues, schools, entertainment facilities and parks.

UDG, page 18



Figure 24



Figure 25

TRACKWAY AT INTERSECTIONS

1. With the complexities of inserting a streetcar into an existing right of way, new intersection materials and designs must meet the operational and maintenance requirements of METRO and City of Tempe so as not to unduly impact streetcar operations or conventional auto, truck, bus, bike and pedestrian movements. (Figure 26)

METRO



Figure 26

2. Trackway paving treatment shall be pre-eminent within all intersections. (Figure 27)

METRO



Figure 27

GENERAL CIRCULATION

1. Avoid widening streets as a solution to traffic congestion.

CTP, Page 5-5, Streets and Travelways

2. Whenever possible, minimize the number of signal phases at any given intersection to ensure the highest traffic volumes desired.

CWG

3. Give priority to preserve auto left turn lanes when siting alignment and stops.

CWG

4. Develop and implement projects that offer and promote alternative transportation choices (such as walking, bicycling, transit) within the street network of Tempe.

CTP, page 5-5, Streets and Travelways

5. Design station areas with direct lines-of-sight and convenient walking paths at easy distances between community features and stations.

UDG, page 52

6. Should loading zones be impacted through the siting of the alignment, City of Tempe, METRO and affected business/property owners shall convene to create a menu of solutions.

CWG, METRO

7. Emphasize efficient use of the street space by encouraging slow automobile speeds, multi-modal transportation, and shared use of streets.

MLSP, page 8

8. Where applicable, locate any transit facilities (rails, overhead power lines, etc.) to minimize landscape and bicycle conflicts, and maximize pedestrian interface and amenities. The intention is to achieve a balanced visual appearance while contributing to overall shared-use concept of the associated street space.

MLSP, page 20, Streets

9. Recognize, preserve and enhance the unique character of the pedestrian districts in Tempe and the attractiveness of alternative modes of transportation.

CTP, page 1-6, Special Pedestrian-Oriented Districts

CROSSWALKS

1. Maintain all existing full and mid-block crosswalks. *(Figure 28)*

METRO

2. Clearly identify crosswalks that legally define the zone of pedestrian use.

METRO

4. Trackway paving treatment shall be pre-eminent within all crosswalks.

METRO

5. Accommodate linkages to existing community amenities and activity spaces.

UDG, page 36

6. Preserve-in-place 4' x 4' sections of concrete sidewalk in which a WPA stamp is found.

MLSP, page 19, Sidewalks



Figure 28

BUS CONNECTIONS

1. Seek to provide direct lines of sight between (streetcar) stops and bus stops.

UDG, page 38

2. Explore the design opportunities for developing shared adjacent pedestrian areas.

UDG, page 38

OVERHEAD CATENARY SYSTEM

CATENARY POLE TYPES & COLORS

1. Provide a visually non-intrusive overhead catenary system (OCS) within the streetscape environment.

UDG, page 16

2. Unless otherwise noted, poles shall be painted the same color as the existing, adjacent street light poles.

COMP, METRO

3. Utilize an OCS pole profile and color, which is best suited to integrate itself into the existing urban design conditions within each segment of the alignment.

COMP

4. The design process for Mill Avenue from 13th Street to Rio Salado Parkway, Rio Salado Parkway from Mill Avenue to Ash Avenue and along Ash Avenue from Rio Salado Parkway to 13th Street should explore joint use of street lights and strain poles, and traffic lights to reduce urban clutter.

COMP

5. Possible additional functions that may be served by OCS poles include neighborhood identity elements and lighting.

UDG, page 16

POLE INSTALLATION

1. Endeavor to site poles in locations where they do not compromise: pedestrian circulation, ADA paths, existing mature tree canopies, adjacent storefront activities, loading zones, connections to other amenities and security required sight-lines.

COMP

2. When a refined urban condition warrants it, install OCS connection bolts below grade to provide a more seamless and finished urban design condition. (Figure 29)

COM



Figure 29

STREET LIGHTING

1. Evaluate the conditions of existing street lighting along the route; conform to the existing light pole architecture and lamp types; relocate and reuse existing fixtures when possible.

UDG, page 50

2. Utilize SL-1 streetlight (where existing fixtures are replaced) on Mill Avenue from Rio Salado Parkway to 11th Street, on Rio Salado Parkway from Mill Avenue to Ash Avenue and on Ash Avenue from Rio Salado Parkway to University Drive.

MLSP, page 38

3. All lighting systems should be designed for ease of maintenance, energy-efficient operation, highest quality of light, and architectural compatibility with system-wide standards.

UDG, page 50

4. Select fixture types based on high reliability and the availability for future replacement components. Parts must be readily available to maintenance crews so that lighting quality can be maintained.

UDG, page 50

5. Select fixture and pole types based on the City of Tempe Design Standards for each segment.

COMP

6. Employ Dark Sky principles.

UDG, page 51

7. Contribute to the overall ambiance and safety of the streetscape while meeting Dark Sky and energy efficiency requirements.

MLSP, page 17, lighting

WAYFINDING/SIGNAGE & SYSTEM IDENTITY

SYSTEM IDENTITY/BRANDING

1. Develop a system logo/graphic that will be distinctive, elegant, timeless and immediately recognizable.

UDG, page 46

2. The logo/graphic should be effective on signs, tickets, letterheads, maps and when viewed on moving trains.

UDG, page 46

3. Develop streetcar maps, which also include bike paths, light rail stations, community destinations, and bus connections to further the "Total Transit Network" approach to Valley transportation awareness.

COT

4. Explore the design of a unique, stand-alone platform element that can be easily recognized as a "brand/logo" element for the streetcar. Consider the use of a distinctive light. (Figure 30)

CWG

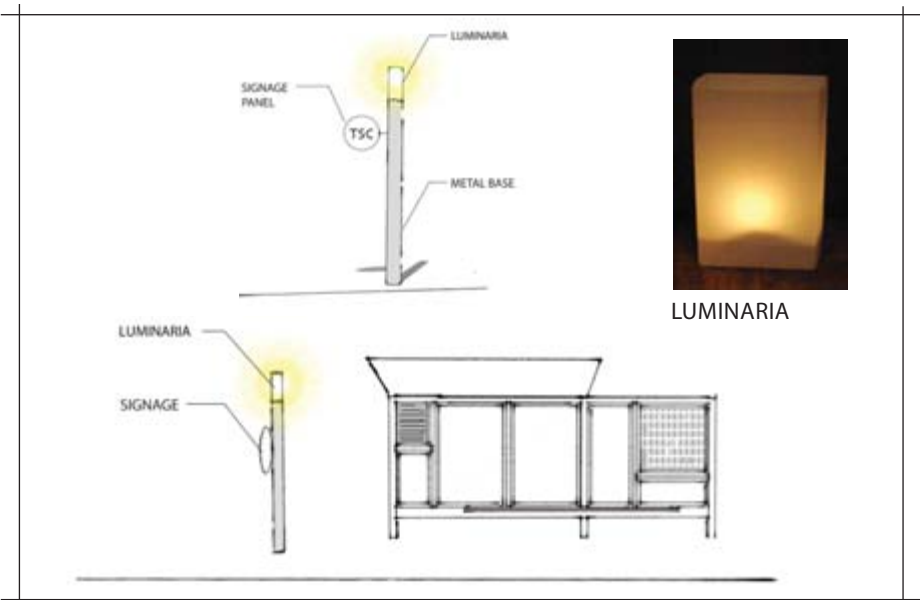


Figure 30

5. Seek ways in which the colors, architecture, or graphics of stops can somehow be included within the design of the vehicle thus being a rolling or a stable reinforcement of the transit system. (Figure 31)

COT, COMP

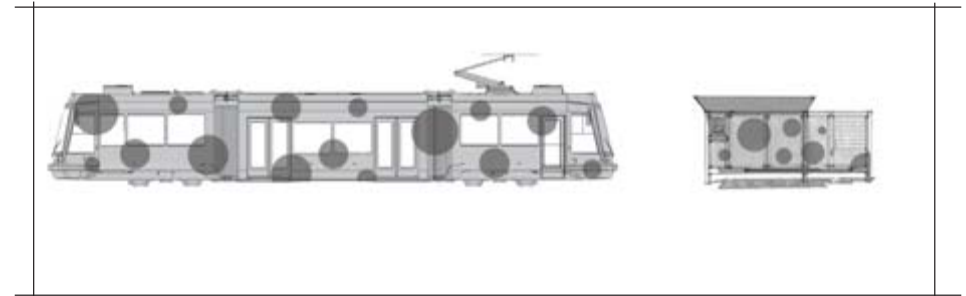


Figure 31 This is a diagram only; not a design proposal.

PLATFORM AND WAYFINDING SIGNAGE

1. The language of the signage should be able to communicate to both seasoned riders and new or potential riders of the system.

UDG, page 46

2. Design of signage should be consistent, visible, highly durable, vandal-resistant, easily maintained and should have easily obtainable replacement parts.

UDG, page 46

3. Signage should provide excellent visibility and high contrast during both day and night.

UDG, page 46

4. Define through signage, the location of the streetcar stop and the location of the bus stop (if they share the same location).

(Figure 32)

COMP, CWG



Figure 32

5. Provide schedules, system maps, fare rates, and user instructions about the LRT system, to be located consistently at each station. The system should use automatic vehicle locating technology to provide accurate and up to date information on train arrivals. (Figure 33)

UDG, page 47



Figure 33

6. Signage should direct pedestrians to stations from bus connections, park and ride lots, adjacent pedestrian areas, major neighborhood intersections, and key cultural, educational, and recreational facilities.

UDG, page 47

7. Identify each station by name and location. The names and/or signage of the stations should assist easy recognition of the station location and nearby community facilities.

UDG, page 47

8. Work with local transit agencies to identify the location of stops clearly from the light rail station.

UDG, page 47

REGULATORY AND WARNING SIGNAGE

1. Provide instructions about the use of parking lots, ADA parking spaces, prohibitions and regulations for uses on the system, vehicular (auto and bicycle) and pedestrian traffic regulatory information.

UDG, page 47

2. Carefully integrate regulatory and warning signage so as not to block other features.

UDG, page 47

3. Provide a clear and concise set of signage elements that convey information regarding parking/no parking adjacent to the trackway, and diagram streetcar alignment blocking diagrams. (Figure 34)

COMP



Figure 34

ADVERTISING

A NOTE ABOUT ADVERTISING

A broad, unbiased review of other Streetcar and LRT systems identified some potential advertising opportunities within the Tempe Streetcar system, which could include:

- Vehicle “wraps”
- Vehicle interior cards
- Station (stop) vertical applications - static, backlit or digital (Figure 35)
- Station sponsorships
- Ads woven into the content of real-time “next train” reader-board devices

Currently METRO has an advertising policy, which allows for various applications (see appendix in this document). The City of Tempe currently does not allow any kind of stationary advertising in their transit facilities.

Because the resolution between specific opportunities and the limitations of advertising placement within the Tempe Streetcar Project cannot be determined within the scope of the Urban Design Guidelines, it is recommended that METRO and the City of Tempe engage in a series of dialogues that will result in the development of advertising guidelines.



Figure 35

SYSTEM BUILDINGS

SITING

1. When siting systems buildings, ensure that the location will not preclude or adversely impact future development.

COMP

2. Locate within a nearby office building or parking structure; or occupy a location that is buffered from or not readily visible from the public right-of-way.

UDG, page 20

3. Site the systems buildings to allow sufficient access for maintenance and operations workers and equipment.

UDG, page 20

4. Consider security of stations and surrounding areas and utilize CPTED principles when placing systems buildings.

UDG, page 20

5. Consider adjacent neighborhoods, existing paths of pedestrian travel, neighborhood amenities and “eyes on the street” from adjacent businesses and residences when siting the systems buildings.

UDG, page 20

DESIGN

1. Emphasize pedestrian-oriented and human-scale treatment of enclosures in terms of materials used, artwork, landscaping, screening and other treatments.

UDG, page 20

2. Consider the use of enhanced screening walls, landscape, public art, etc., which will help to weave the structures into the existing site-specific urban conditions of each location.

COMP

3. Utilize design solutions for details such as doors, vents, and drains that show care and avoid a “tough-shed” appearance.

UDG, page 20

4. Utilize landscaping, art elements and other means to screen or otherwise minimize the impact of utility service structures.

MLSP, page 14

ENHANCING NEIGHBORHOODS

1. Design and plan for appropriate development zones in station areas that have present or future market opportunities.

UDG, page 52

2. Work with the cities to facilitate adjacent land uses that provide 24-hour-a-day activity and pedestrian-oriented mixed-use in the station area to enhance security and livability.

UDG, page 52

3. Spaces that are attractive to business patrons and neighbors support the livability of the area and should be included in private and public developments.

NTDG, page 31, Element 5, Building Design Strategy

4. Promote legitimate activity in public spaces and maximize “eyes on the street” to discourage crime.

NTDG, page 33, Element 6, Safety and Security Strategy

5. Retain existing lush landscape, while incorporating indigenous building and landscape materials and encouraging water and energy-saving strategies.

NTDG, page, 21, strategy (residential)

6. Utilize landscape/hardscape for continuity and rhythm.

CDP, page 11

7. Think of streets as public spaces.

UOSP, page 97, 3.

8. Maximize street use--not in terms of the traffic they carry, but by alternate activities they accommodate (driving, walking, parking, bicycling and events).

CDP, page 13

9. Provide amenities for human comfort--shading, seating, information and delight.

CDP, page 13

10. Utilize technology (for) lighting, energy conservation, visual art and communications.

CDP, page 13

11. Strive for sustainability by incorporating passive and active strategies; use durable, and energy-efficient materials. Design to accommodate a variety of uses and tenants over time.

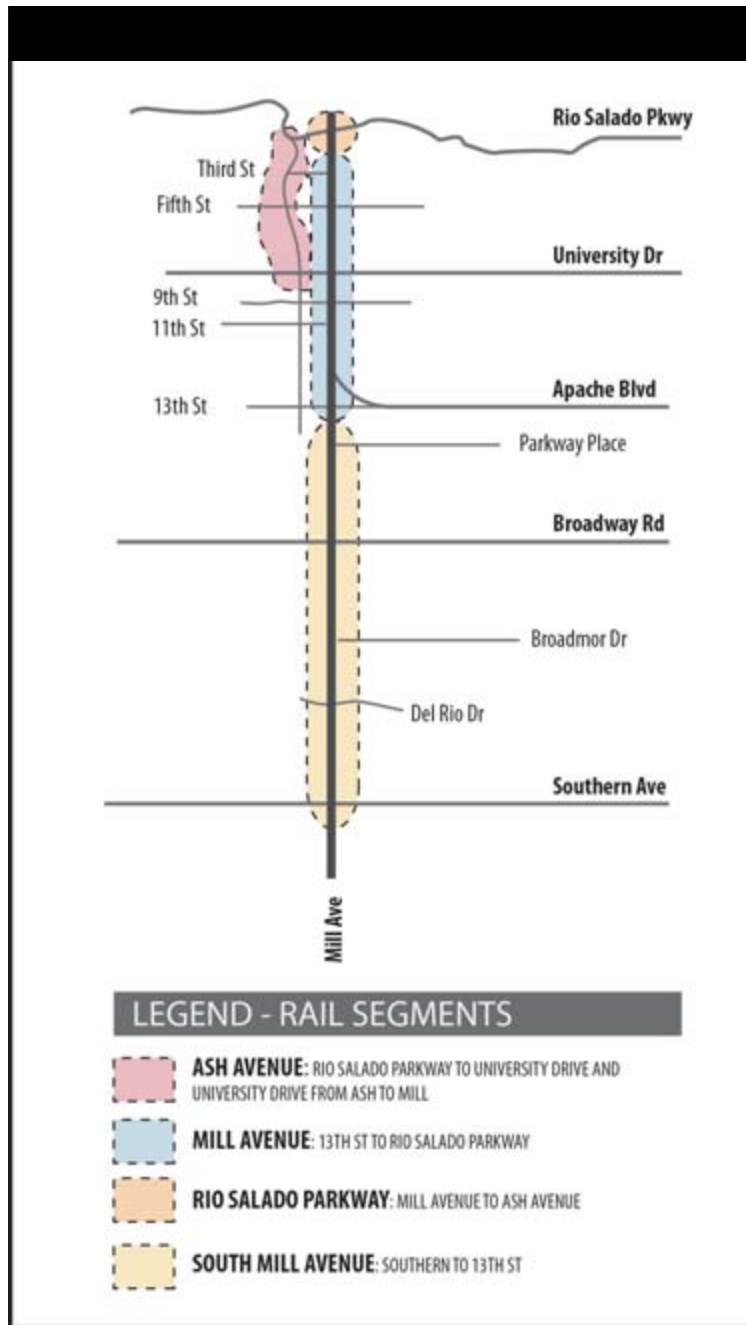
CDP, page 10, 3.d.

12. Express materials honest, durable, traditional and contemporary.

CDP, page 13

SEGMENT SPECIFIC URBAN DESIGN GUIDELINES

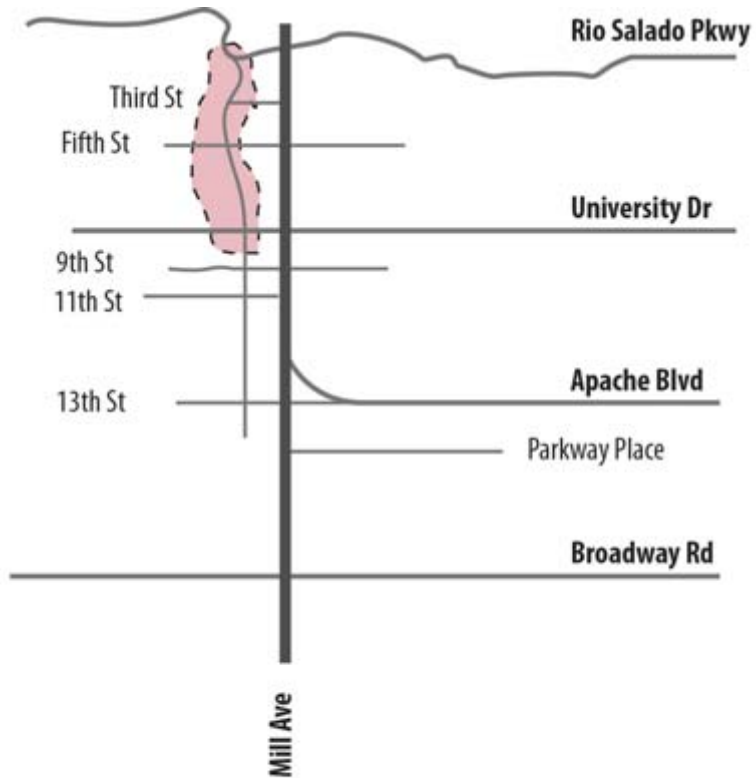




SEGMENT-SPECIFIC URBAN DESIGN GUIDELINES

As mentioned earlier in the document, distinct segments make up the entire alignment. Each segment tends to house specific activities and plays a unique role in defining the community of Tempe. Design opportunities within some of the streetcar improvements reinforce and enhance these specific neighborhood identities. They also follow the various City of Tempe design requirements while developing a system that fits into the regional METRO family of facilities.

What follows is a general description of the characteristics and specific guidelines which could enhance the identity of these segments and within each segment we have included streetcar stop-specific guidelines and opportunities.



ASH AVENUE

*RIO SALADO PARKWAY TO UNIVERSITY DRIVE AND
UNIVERSITY DRIVE FROM ASH AVENUE TO MILL AVENUE*

ASH AVENUE: RIO SALADO PARKWAY TO UNIVERSITY DRIVE
AND UNIVERSITY DRIVE FROM ASH TO MILL AVENUES

ASH AVENUE

Characteristics:

- Extensive opportunities for future large-scale, vertical, mixed-use developments
- A unique and graceful curvilinear alignment
- Presence of an existing desert/rural, big sky, freight rail right-of-way bordering the western edge
- Proximity of a highly cherished, human-scaled desert/urban “downtown” bordering the east, and a vibrant civic open space (Tempe Beach Park) to the north
- Major arterial connection to freeway east/west via University

Guidelines For This Segment

LANDSCAPE

1. Employ typical characteristics of Green Streets (Ash) including:

- Street trees and landscaping
- Shade and shelter (in the transit waiting area), Benches and low seat walls or other seating in the resting structures (transit areas)
- Integrate public art and creative expression with design
- On-street parking where feasible

CTP, page 3-2 & 5-10, Friendly Streets and Sidewalks

2. Utilize ST-5, ST-2 and ST-8 street trees (if planted or replaced) on Rio Salado from Mill to Ash and on Ash from Rio Salado to University. (Figure 36)

MLSP, page 38

3. Consider the use of GR-3A and GR-2A tree grates in place of METRO standard on Rio Salado from Mill to Ash and on Ash from Rio Salado to University (when the platforms are integrated into or physically abuts the existing sidewalk).

MLSP, page 38



Figure 36

4. Review and explore select opportunities to incorporate xeriscape landscaping (per COT standards) or use distinctive riparian style landscape materials to reinforce this distinctive segment. Note that any applications must be achievable and responsive within the transit environment and a METRO transit maintenance plan.

*(Figure 37)
COT, COMP*

5. Consider the use of BR-2B bike racks in place of METRO standard on Rio Salado from Mill to Ash and on Ash from Rio Salado to University.

MLSP, page 38

OCS POLE COLORS AND TYPES

1. Utilize a painted, faceted OCS pole to address cost and maintenance considerations.

COMP

2. Explore using a unique color for this segment’s OCS poles, system buildings and stop architecture, which might reinforce the unique identity of this segment. Weigh these considerations with the need to establish the base identity for the Tempe Streetcar system and the METRO family of systems.

COMP



Figure 37



FIFTH STREET AND ASH AVENUE STOP

FIFTH STREET/ASH AVENUE

Stop-specific considerations:

- Opportunities to create “place” and comfort through the installation of additional landscaping
- Eastern, overhead and western shading challenges
- Opportunity to create connectivity to Farmer Avenue through art, landscape and stop design
- Opportunity to reinforce Ash Avenue’s identity through design elements
- Future development opportunities on Farmer Avenue



UNIVERSITY DRIVE/ASH AVENUE

UNIVERSITY DRIVE AND ASH AVENUE STOP

Stop-specific considerations:

- Opportunities to create “place” and comfort through the installation of additional landscaping
- Eastern, overhead and western shading challenges
- Opportunity to reinforce Ash Avenue’s identity through design elements
- Future development opportunities immediately to the west

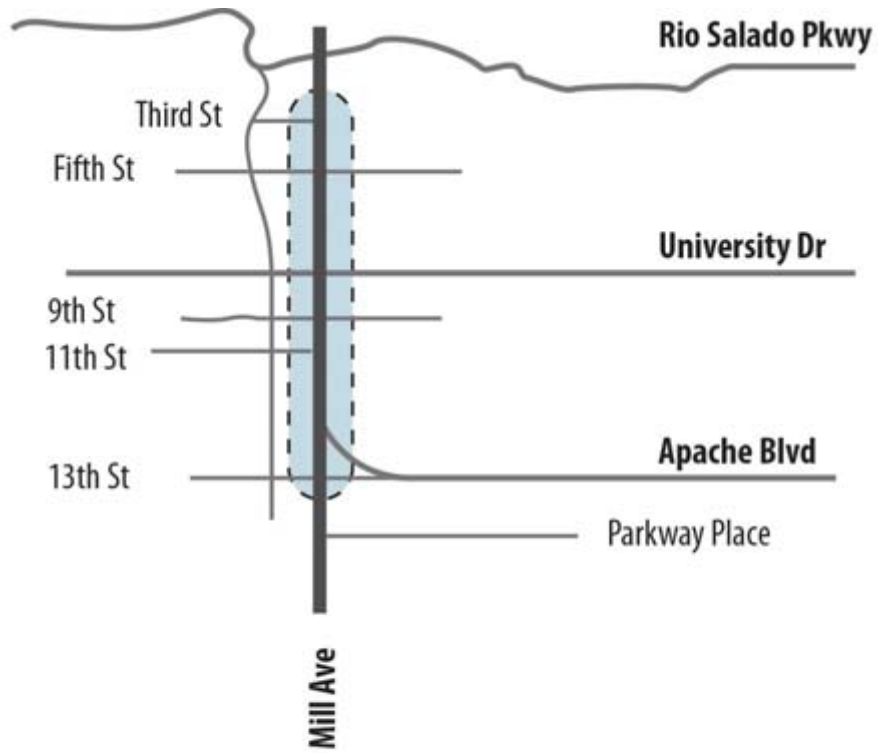


THIRD STREET/ ASH AVENUE

THIRD STREET AND ASH AVENUE STOP

Stop-specific considerations:

- Opportunities to create “place” and comfort through the installation of additional landscaping
- Eastern, overhead and western shading challenges
- Opportunity to create visual connectivity to LRT on Third Street through art, landscape and stop design
- Opportunity to reinforce Ash Avenue’s identity through design elements
- Future development opportunities to east



MILL AVENUE

13th STREET TO RIO SALADO PARKWAY

 **MILL AVENUE: 13th ST TO RIO SALADO PARKWAY**

MILL AVENUE: 13th STREET TO RIO SALADO PARKWAY

For centuries this segment of the alignment has served as the trading/commercial/cultural hub for the diverse communities inhabiting it. From Native American “ball” games to Arizona State University football, from milling grain to a dance hall and from bookstores to stores that sell burritos, this part of Tempe continues to be the meeting place, the marketplace and the playground.



Characteristics:

- Extensive pedestrian, bicycle, commercial and private vehicular circulation
- Thriving and highly active retail/commercial environment

Guidelines for This Segment

URBAN DESIGN

1. Maintaining the current, and enhancing the future pedestrian quality of Mill Avenue must remain of utmost importance within the Streetcar project.

CWG, COT

2. Maintain the Mill Avenue pedestrian experience by exploring opportunities to reduce vertical shade screens, canopies (where appropriate) associated with the downtown Mill Avenue stops.

CWG

3. The system should be comfortable, “fitting in” to Downtown, becoming a piece of an assembly of parts with attention to craft and finishes.

COT

4. Avoid the disruption and/or removal of seat locations, public art, trees and tree wells, civic information maps and other street furnishings. If elements are disrupted, review the existing adjacent businesses/uses to best determine the new patterns and rhythms to best serve the street’s overall flow and activities.

COMP

5. All existing public art impacted by the streetcar alignment shall be re-sited by METRO under the direction of the Tempe Commission on the Arts (after METRO determines there are no safety, security or operational conflicts with the newly specified locations). (Figure 38)

COMP



Figure 38

MILL AVENUE: 13th STREET TO RIO SALADO PARKWAY

6. If stand-alone benches are used at stops, use BE-1 for Mill Avenue from Rio Salado to 11th, Rio Salado from Mill to Ash from Rio Salado to University.

MLSP, page 38

STOP ARCHITECTURE AND SYSTEM ELEMENTS

1. While it is assumed that each stop in the entire alignment will be studied for its site-specific shade and rain protection needs, this segment of the alignment is the most fragile in terms of visual impact. Critical to the foundation of the economic and civic amenities of the city, the system must not block retail sightlines and the sense of an open pedestrian-scaled commercial core.

COT, CWG

2. Consider the use of BR-1 bike racks in place of METRO standard on Mill Avenue from Rio Salado to 11th.

MLSP, page 38

CIRCULATION

1. Work with the City, DTC and the individual property owners and business operators to develop a feasible alternative to the impact of parking and loading along Mill (between 3rd and 7th Streets).

CWG, COT

LANDSCAPING

1. Utilize ST-2, ST-8 and ST-1 street trees (if planted or replaced) on Mill Avenue from Rio Salado to 11th.

MLSP, page 38

2. Consider the use of GR-3A and GR-2A tree grates in place of METRO standard on Mill Avenue from Rio Salado to 11th (when the platforms are integrated into or physically abuts the existing sidewalk).

MLSP, page 38

OCS POLE COLORS, TYPES AND LOCATIONS

1. Take extra care in siting OCS poles. Ensure they are located in sites, which do not adversely impact existing street trees, ADA or other circulation, block doorways to businesses or impact critical connections to other uses and activities.

COMP

2. Utilize a painted, round OCS pole to achieve the least visual intrusion within downtown.

COMP

3. Paint OCS poles and other associated system elements (“Tempe Brown”) to match existing light poles and traffic signal poles within this segment.

COMP

4. Explore the use of strain poles and “wire mounts” for traffic signals to reduce urban clutter. (*Figure 39*)

COMP, CWG



Figure 39

MILL AVENUE: 11th STREET AND MILL AVENUE STOP



11th STREET/ MILL AVENUE

MILL AVENUE: 11th STREET AND MILL AVENUE STOP

Stop-specific considerations:

- Cultural crossroads (Gammage Auditorium, ASU School of Music, Nelson Fine Arts Center, open space, etc.)
- Explore opportunities to include landscaping on platform and tap into already existing irrigation in median
- Review projected ridership for event uses of stop to ensure proper amount of shading, seating, queuing, etc. is provided
- Seek ways to design platform railings to ensure that ridership surges can be accommodated
- Consider opportunities to enliven stop at night through art and design (lighting)
- Consider the prominence of the Maple/Ash Neighborhood
- “Gateway to Downtown” design opportunity



11th STREET/ MILL AVENUE

MILL AVENUE: 9th STREET AND MILL AVENUE STOP



9th STREET/ MILL AVENUE

MILL AVENUE: 9th STREET AND MILL AVENUE STOP

Stop-specific considerations:

- Explore opportunities to include landscaping on platform. Tap into already existing irrigation in the traffic median to provide additional shade for transit patrons.
- Adjacent mixed-use development potential



SIXTH STREET/ MILL AVENUE

SIXTH STREET AND MILL AVENUE STOP

Stop-specific considerations:

- Highly-valued urban commercial core and pedestrian experience
- Brick intersections, brick buildings, brick sidewalks create a consistent environment
- Existing and future opportunities for sidewalk cafes



THIRD STREET/ MILL AVENUE

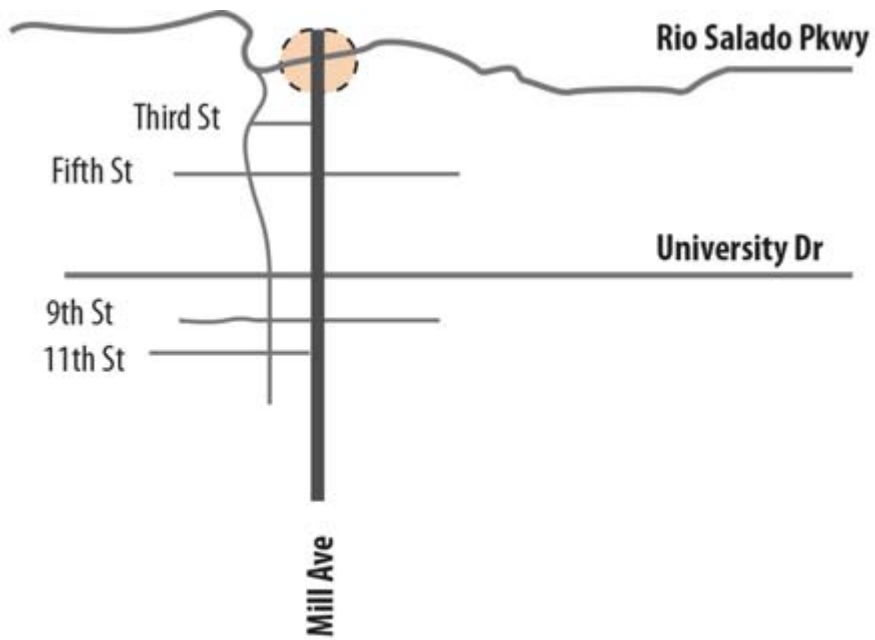


THIRD STREET/ MILL AVENUE

THIRD AND MILL AVENUE STOP

Stop-specific considerations:

- Tempe Hayden Butte is a cultural, visual and morning shade amenity
- Potential mixed-use development site
- Connectivity to Third Street LRT
- Potential 9-5 ridership from adjacent development across Mill Avenue
- Future opportunities for sidewalk dining



RIO SALADO PARKWAY

MILL AVENUE TO ASH AVENUE

 **RIO SALADO PARKWAY: MILL AVENUE TO ASH AVENUE**

RIO SALADO PARKWAY: MILL AVENUE TO ASH AVENUE STOP

Although this may be a relatively short piece of the alignment, it certainly is not short on history, community and commerce. Hayden Mill, Monti's Restaurant, U.S. Airways headquarters, a historic baseball diamond and Tempe Beach Park all co-exist here to generate their own distinct peaks and types of ridership. Additionally, this location may also serve as the connection to a future streetcar alignment that could extend east along Rio Salado Parkway.



Guidelines For This Segment

OCS POLE COLORS, TYPES AND LOCATIONS

1. Utilize a round OCS pole to achieve the least visual intrusion
COMP
2. Explore using the current Tempe Beach Park "Blue," which would serve to visually connect the stop to the Park. Otherwise, use the Tempe "Brown" already used on the adjacent light fixtures.
COMP

FURNISHINGS

1. If stand-alone benches are used at stops, use BE-1 for Mill Avenue from Rio Salado to 11th, Rio Salado from Mill to Ash from Rio Salado to University.
MLSP, page 38

RIO SALADO PARKWAY: MILL AVENUE TO ASH AVENUE STOP



RIO SALADO PARKWAY

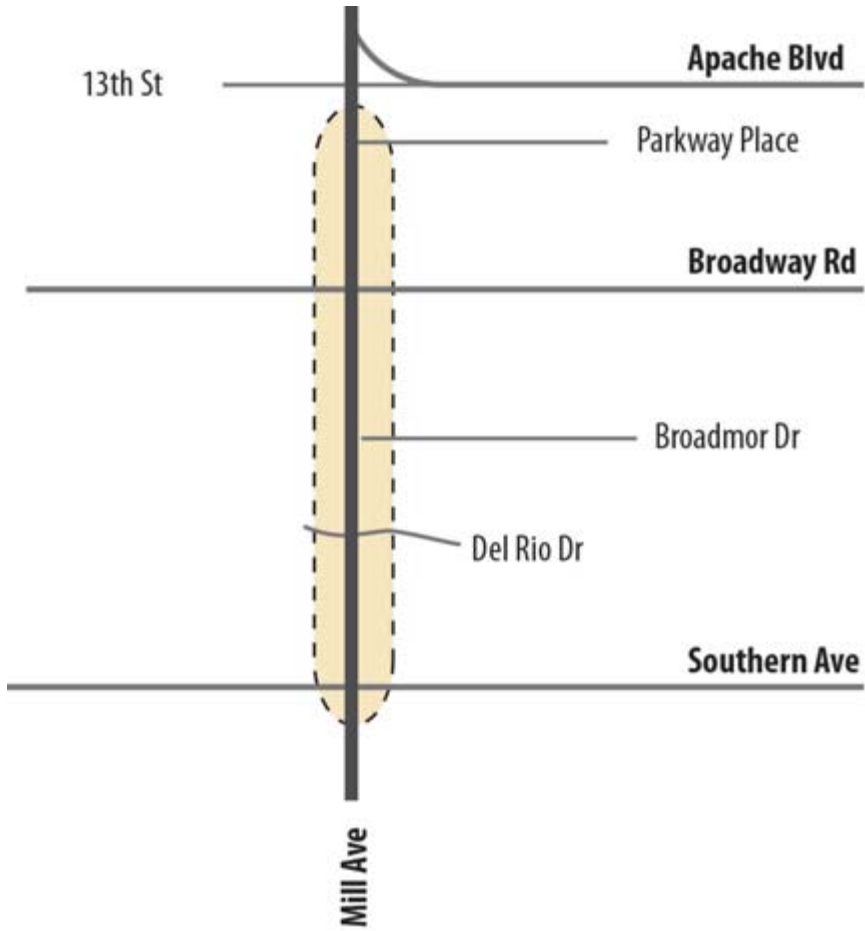
RIO SALADO PARKWAY STOP

Stop-specific considerations:

- Ensure that Tempe Beach Park event equipment loading and off-loading is not compromised by streetcar improvements
- Review projected ridership for event uses of stop to ensure that the proper amount of shading, seating, cueing, etc. is provided
- Seek ways to design platform railings to ensure that ridership surges can be accommodated
- Opportunity to include personality of Park in stop design, lighting and art
- Ridership opportunities from adjacent office uses
- Stop design should be compatible with existing historical baseball field and Monti's Restaurant



EXISTING RIO SALADO PARKWAY LIGHT POLE COLORS



SOUTH MILL AVENUE

SOUTHERN AVENUE TO 13th STREET

 **SOUTH MILL AVENUE: SOUTHERN TO 13th ST**



Once rich agricultural farmlands, the land surrounding South Mill Avenue has blossomed into a collection of single and multi-family neighborhoods, houses of worship and local commercial developments. Much of the area's charm is rooted in the lush, garden-like landscaping and Leave-it-to-Beaver-scaled neighborhood streets and activities. This is a segment that is rich in history, rich in family and rich in its proximity to downtown Mill Avenue and Arizona State University. This segment's population and their associated activities represent a major part of the Tempe Streetcar ridership backbone.

Guidelines For This Segment

OCS POLE COLORS, TYPES AND LOCATIONS

1. Utilize a faceted OCS pole.

COMP

2. Consider a painting scheme, which would be applied only to the first 12 feet of the base. This would provide a lower surface to be easily maintained in the event of vandalism and would leave the upper, galvanized portion to blend in with the sky and the OCS cross arms. Another option would be to paint the entire OCS poles the same color of the existing light poles (grey). (Figure 40)

COMP



Figure 40



ST. LUKES HOSPITAL

PARKWAY PLACE AND MILL AVENUE STOP

Stop-specific considerations:

- Opportunity for “pride of neighborhood” design for north bound stop, and “healing” on south bound stop



BROADMOR DRIVE

BROADMOR AND MILL AVENUE STOP

Stop-specific considerations:

- Opportunity for partnership landscaping at north bound stop
- Opportunity for placemaking through landscape, art and stop design



BROADMOR DRIVE



BROADWAY ROAD



EXISTING ART BUS CANOPY

BROADWAY AND MILL AVENUE STOP

Stop-specific considerations:

- Explore opportunities to reuse the existing Tempe Union High School "artist designed bus canopy" for adjacent bus stops or streetcar stops.
- Opportunity for partnership landscaping at north and south bound stops



BROADWAY ROAD



DEL RIO DRIVE

DEL RIO DRIVE AND MILL AVENUE STOP

Stop-specific considerations:

- Mature residential neighborhood context
- Shading challenges for stop
- Opportunities for public/private landscaping at stop



DEL RIO DRIVE



SOUTHERN AVENUE

SOUTHERN AVENUE AND MILL AVENUE STOP

Stop-specific considerations:

- Opportunities to create “place” and comfort through the installation of additional landscaping on already existing private planting bed.
- Shading challenges for stop

APPENDIX



STREET TYPES & CHARACTER

(From *Tempe, Mill + Lake District: Streetscape Principles + Guidelines*)



SELECTION MATRIX

(From Tempe, Mill + Lake District: Streetscape Principles + Guidelines)

	SIGNATURE STREET	RIPARIAN TRANSITION	EXTERNAL CONNECTOR	INTERNAL CONNECTOR	TOWN + GOWN	LIVE/WORK TRANSITION	AUTO COURT
BENCHES	BE-1	BE-3	BE-1	BE-1	BE-3	BE-2	BE-2
BIKE RACKS	BR-1	BR-2A	BR-2B	BR-2B	BR-2A	BR-2A	BR-2A
BOLLARDS	BL-1	BL-3	BL-3	BL-3	BL-3	BL-3	BL-2
GRATES, primary ³ GRATES, secondary ⁴	GR-3A GR-2A	GR-1B or 3B ⁶ GR-2B	GR-3A GR-2A	GR-3A GR-2A	GR-1B or 3B ⁶ GR-2B	GR-2A or 3A ⁶ GR-2A	GR-2B or 3B ⁶ GR-2B
PLANTERS	PL-1B	PL-1A	PL-1B	PL-1B	PL-1A	PL-1B	PL-1A
SIDEWALK PAVING ²	100%	15%	70%	70%	30%	15%	30%
STREET LIGHTS	SL-1	SL-3	SL-1	SL-1	SL-2	SL-2	SL-2
TREES, primary ³ TREES, secondary ⁴ TREES, tertiary ⁵	ST-1 ST-8 ST-2	ST-3 ST-4 ST-7	ST-5 ST-2 ST-8	ST-5 ST-2 ST-8	ST-5 ST-2 ST-6	ST-5 ST-7 ST-8	ST-5 ST-8 ST-6
WASTE, ETC. RECEPTACLES	WR-1A	WR-2	WR-1A	WR-1A	WR-2	WR-1B	WR-1B

- 1 Substitutions may be acceptable where specific products are identified, subject to approval by City Architect.
- 2 Approximate minimum percentage of brick, per typical 100 SF.
- 3 The main, repetitive tree located along a street; regularly-spaced, in grates between street lights.
- 4 Used in accessory planting areas such as parking islands, bulb-outs and medians; typically in grates but not always (may be interchanged with *tertiary*).
- 5 Used, space permitting, as second row behind the *primary* trees, or in adjacent planting areas or as accents; typically not in grates (may be interchanged with *secondary*).
- 6 Use 'PaveGrate' (3) if primary paving material consists of unit pavers; 1B if primarily cast-in-place concrete.

CITY OF TEMPE STREETCAR LAND USE PLAN SUMMARY

Background

The City of Tempe Streetcar Project will run in mixed-flow traffic along Mill Avenue –Ash Avenue in the downtown area between Rio Salado Parkway and University Drive and will run on Mill Avenue south of downtown to Southern Avenue. The streetcar will connect via transfers to the existing 20-mile Metro light rail system at the Third Street and Mill Avenue station. There are currently 12 stops proposed, with seven of the stops on the downtown loop.

Context

The City of Tempe lies in the heart of the Phoenix metropolitan area and has traditionally been at the focal point of transportation and regional facilities. Historically, the area that became Tempe was first known as Hayden’s Ferry, after a ferry service across the Salt River operated by Charles T. Hayden. Today, Tempe is a 40-square mile land-locked city that is essentially built-out; it is surrounded by other cities in the metropolitan area and is expected to rank tenth in population by the year 2030.¹ With the dedicated sales tax for transit that passed in 1996 and supplemented by the regional sales tax for transportation projects that passed in 2004, Tempe has laid in place a network of transportation services that include: frequent bus service with weekday peak hour 15 minute frequency, four free bus shuttles, more than 150 miles of bikeways, and seven miles of light rail as part of the 20-mile regional system that connects to Mesa, the airport, downtown Phoenix and beyond.² The study area for the Tempe Streetcar project includes the Tempe downtown area (Mill + Lake District), the adjacent Arizona State University (ASU) Tempe campus, and several northwest and central Tempe neighborhoods.

EXISTING LAND USE AND NEIGHBORHOOD PLANS

Citywide Planning

Tempe is a city that plans to embody livability, creating “a community of vital neighborhoods, visually attractive, transit sensitive, with resident participation in making crucial decisions about the future.”³

- *The Land Use Element of the Tempe General Plan 2030 references the 2001 Post World War II Subdivision Study and the fact that it is desirable to the city to maintain the character of these areas as Cultural Resource Areas. Specifically, the study found that post World War II was a time of great growth in the city of Tempe and, because*

there is currently a fairly high level of integrity within the subdivisions, there are many subdivisions that have the potential for historic significance (with the majority of the houses in the neighborhood at least fifty years old or will become so shortly).^{3,4}

- *The Economic Development Element of the Tempe General Plan 2030 describes Tempe’s build-out condition as the impetus for an array of redevelopment activities that includes the redevelopment of the downtown, the development of Tempe Town Lake in the Salt River riverbed in 1999, and the promotion of five regional job centers and two community job centers. In 2002, total employment exceeded the population of the city (175,538 vs. 163,296).³*

- *The Transportation Element of the Tempe General Plan 2030 strongly endorses the coordination of land use and transportation decisions within the city of Tempe and “highlights the ability to move people, instead of focusing solely on improving the ability to move vehicles.” Transportation considerations include: 1) sustained mobility/greater accessibility, 2) enhanced quality of life and preservation of neighborhood character, 3) enhanced environmental quality, and 4) increased economic opportunities. The Transportation Element also realizes the great importance of pedestrian and bicycle trips to the citizens of Tempe.³*

Comprehensive Transportation Plan

As detailed in the Tempe Comprehensive Transportation Plan, “The city of Tempe prides itself on being “transit friendly” and became the first city in the metropolitan area, in 1996, to vote a specific sales tax to support transit programs. The city’s transportation program maintains the goal to create a “balanced system that: is environmentally sustainable; is accessible to all Tempe residents, employees, and visitors; helps preserve neighborhoods; provides long-range transportation planning; promotes transit-oriented development; and involves citizens in the process and keeps them informed along the way.” The Transportation Plan also introduces the idea of both “transit streets” and “green streets” to the Tempe street network:

- *Transit streets are typically arterial streets that serve important functions as transit routes. Transit streets in the Streetcar study area include Mill Avenue, Rio Salado Parkway, University Drive, Apache Boulevard, Broadway Road, and Southern Avenue. Transit streets should have wider sidewalks, bike lanes, intersection improvements and sidewalk extensions, street trees and landscaping.*

- *Green streets usually are collector streets that already serve as high volume bicycle and pedestrian corridors and are important for access to parks, shopping, schools, civic places, and other community destinations. Green streets in the Streetcar study area include 1st Street, Ash Avenue, 5th Street, 13th Street, College Avenue, and Alameda Drive. Green streets should have wider sidewalks, bike lanes, intersection improvements and sidewalk extensions, access to transit at intersections, pedestrian amenities, public art, street trees, landscaping, and on-street parking where feasible.*

The Transportation Plan also summarizes quality of life issues important to Tempe citizens as captured by the General Plan 2030 survey. This survey finds that Tempe residents look for good schools, open spaces, proximity to friends, safety, family activities, access to mass transit, restaurants, access to freeways, central location, and a small town atmosphere. These are all things that it is important for Tempe to maintain as it plans for the future.¹

Mill + Lake District Placemaking Guidelines (renamed May 2009 from Tempe Urban Open Space Plan)

The Guidelines used several fundamental placemaking principles to create a vision for a seamless district of destinations that are authentic to Tempe: 1) design for use by having a clear understanding of desired activities; 2) create a critical mass of spaces (at least ten); cluster activities-triangulation; and 3) remember that streets are places too. Within the Guidelines, open spaces in the city were divided into: regional anchors (Papago Park, Town Lake, Mill Ave District, and ASU); building blocks; and neighborhood places. The Guidelines has several recommendations that have specific relevance to the Tempe Streetcar project:

- *Tempe Beach Park is currently over utilized (about 100 event days/year) while other public venues are under utilized. As the City spreads the load of public events, the Tempe Streetcar can be part of providing transportation options to downtown event venues.*
- *The upgrading of public open spaces, development of alley parks, and linking of bicycle and pedestrian improvements will all contribute to an atmosphere that will encourage the use of the Tempe Streetcar for trips to the Mill + Lake District area.*
- *The Guidelines recommend that Rio Salado Parkway and Ash Avenue be narrowed and the pedestrian and bicycle components of these streets be enhanced.*⁵

Mill + Lake District Planning

The Mill + Lake District (Downtown Tempe) is roughly bounded by Rio Salado Parkway on the north, Farmer Avenue on the west, University Drive on the south, and College Avenue on the east. The downtown lies between the important destinations of the Tempe Town Lake to the north and the Tempe ASU campus to the east and south. Some highlights of activities in the Downtown/Mill Avenue District include: Thursday Night Market (farmers market), MADCAP Theaters (the reactivation of a vacant movie complex with film and live performances), the Downtown Tempe Urban Garden, APS Fantasy of Lights Opening Night Parade, Tempe Fall and Spring Festivals of the Arts, and Thursday Music on Mill (street performers).⁶

In 2006, the City of Tempe, in conjunction with the Downtown Tempe Community, produced the Community Design Principles for the Downtown/Mill Avenue District as a way to set design principles for the next great changes that will come to downtown. With the introduction of the light rail line, the opportunities for development around Tempe Town Lake, the transformation of ASU, and the infill and redevelopment that was set to occur in the downtown area, these Principles helped set the stage for high quality projects. The vision for the downtown is that of an “eclectic urban oasis of culture, lifestyle and commerce, permeated by the shared concept of a ‘creative knowledge district.’” Important precedents in the downtown include the historic Tempe Butte, the Hayden Flour Mill, the Mill Avenue Streetscape (and four block streetfront of historic and historic compatible buildings), Parks and Plazas, the Architectural Continuum, Tempe Town Lake, and the river Crossings.⁷ In Spring 2011, the City of Tempe has completed the Draft Mill + Lake District Streetscape Principles + Guidelines, which develop standards to guide future redevelopment and ongoing maintenance in the public realm. There are six core principles that include: achieve a level of detail and intensity of experience to promote human interaction and economic vitality; balance the tradition of an irrigated oasis with contemporary needs for water conservation; prevent slum and blight and encourage reinvestment and development; respond to competition by emphasizing the “authenticity” of the live-work-play downtown; enhance quality of life by creating a memorable and sustainable sense of place; and recognize that communities are by, for and about people – strive for diverse continuity. Among the objectives and guidelines, there are several that specifically address transit and streetcar elements:

- *Furnishings/Accessories – Establish a coordinated palette to minimize visual clutter while avoiding sterility.*
- *Shelters – Transit and other shelters should be designed to complement their immediate surroundings, utilizing a palette of materials drawn from the streetscape and adjacent building (s), with artist-designed installations at selected, feature locations.*
- *Streets – Where applicable, locate any transit facilities (rails, overhead power lines, etc.) so as to minimize landscape and bicycle conflicts, maximize pedestrian interface and amenities and achieve a balanced visual appearance while contributing to the overall shared-use concept of the associated street space.*⁸

Arizona State University (ASU) Planning

In 2005, ASU set a boldly different plan for the campus. The Comprehensive Development Plan for a New American University envisions four interrelated campuses (One University in Many Places) spread across the Phoenix metropolitan area, each with a distinct mission and student body. The four campuses include: the Tempe campus, West campus, Polytechnic campus,

and the Downtown Phoenix campus. The Tempe campus is the historic campus, enrolling more than 50,000 students, and is a transdisciplinary academic community advancing the core historical disciplines associated with comprehensive research-extensive universities, including the arts and humanities, the natural and social sciences, engineering, and the professional schools.⁹ The Tempe and Downtown Phoenix campuses have stations on the Metro light rail line.

Historic Districts

As discussed earlier, the Tempe General Plan 2030 has allocated Cultural Resource Areas which are neighborhoods that are considered culturally significant to the character of Tempe. GP 2030 states that it is desirable to maintain the character of these areas and specifies that the underlying zoning should remain the highest appropriate density. At the time GP 2030 was adopted in 2003, the following neighborhoods adjacent to the Tempe Streetcar route (bounded by Rio Salado Parkway on the north, Rural Road on the east, Southern on the south, and Priest Drive on the west) are designated as Cultural Resource Areas:

Roosevelt Addition 1946-1950, University Park 1946-1956, College View 1946-1956, Park Tract 1930-1960, Gage Addition 1909-1954, Goodwin Homes 1949-1959, Sunset Vista 1958-1960, University Heights 1954-1960, Boradmor Vista 1958-1960, University Terrace 1950-1955, Broadmor Manor 1955-1960, University Estates 1948-1960, Tempe Estates 1948-1960, Nu-Vista 1958-1960, Date Palm Manor 1953-1959, Campus Homes 1952-1955, University Homes 1951-1960, Laird Estates 1955-1959, Mitchell's Subdivisions 1950-1960, Tempe Terrace 1951-1960, Willacker Homes 1950-1955, D bar L Ranchos 1956-1960, and Parkside Manor 1956-1960.⁴

There are also neighborhoods that been formally listed on the Tempe Historic Property Register¹⁰:

- *Roosevelt Addition Historic District (1946-1950) listed on 8/17/06*
- *Date Palm Manor Historic District (1953-1959) listed on 5/28/09¹¹*

The following Tempe neighborhoods have been listed on the National Register of Historic Places¹²:

- *Roosevelt Addition Historic District (1946-1950) listed on 12/04/09*
- *University Park Historic District (1945-1952) listed on 2/28/08*

Each of these districts or neighborhoods may have their own distinct design guidelines or identified characteristics.

Neighborhood Plans

The city of Tempe is known for having actively engaged neighborhoods and there are many neighborhoods that line the proposed Tempe Streetcar route. Tempe neighborhoods were actively involved in the General Plan and Comprehensive Transportation Plan processes and so many of their specific concerns have been adopted into these documents.

- *Northwest Tempe neighborhoods have put together a plan known as the*

Northwest Tempe Community Plan that is an amendment to the Tempe General Plan 2030. This 2007 plan incorporates the results of almost two decades of planning efforts and includes the following neighborhoods that lie to the west and immediately south of downtown Tempe: Lindon Park, Sunset, Riverside, Gililand, Mitchell Park West, Mitchell Park East, Maple Ash, Holdeman, Marilyn Ann, and Clark Park. In general, the boundaries of this area includes from Broadway Road north to Rio Salado Parkway; from the railroad tracks west to Priest Drive (north of University Drive); and from Mill Avenue west to Priest Drive (south of University Drive). The land use element of the plan stresses the importance of the area's historic residential character and encourages appropriate transitions from high-density urban development to a lower-density development pattern. The design element designates specific character areas to assist the maintenance of this area's unique appeal. These areas include: classic suburban, evolving village, formal historic, eclectic historic, neighborhood mixed-use, Rio Salado/Downtown transition, and commercial corridor. Some transportation goals of this plan include: traffic calming on Hardy Drive; enhancing pedestrian and bicycle connections across University Drive and between First Street and Rio Salado Parkway; and the improvement of Beck Avenue, Roosevelt Street and Farmer Street as north-south pedestrian corridors. There is also the desire that bus shelters would be compatible with the design character of the surrounding neighborhood and that they will serve as public art pieces.¹³ These neighborhoods have also developed the Northwest Tempe Design Guidelines, which outline infill and development guidelines for this area.¹⁴

- *The Date Palm Manor neighborhood has been listed on the Tempe Historic Register and is located south of Broadway Road and west of Mill Avenue. The neighborhood's character is shaped by the fact that many of the date palms from the original date palm orchard were incorporated into the subdivision when it was developed shortly after World War II.¹¹*

- *The University Park neighborhood sits immediately south of the Tempe ASU campus and lies between Mill Avenue and McAllister Avenue south of Apache Boulevard. This neighborhood is registered on the National Register of Public Places and was largely developed between 1945 and 1960.¹²*

- *There are many neighborhoods that are either adjacent to College Avenue or have College Avenue as one of the north-south streets that run through the neighborhood. Within the Tempe Streetcar area, these neighborhoods include: University Park, University Estates, Daley Park, Broadmor, MACH 8, Brentwood-Cavalier, Alameda-Campus, Tempe Gardens and Superstition. College Avenue holds a special place in the city of Tempe and many residents use it for walking and biking trips of all sorts. Destinations along this portion of College Avenue include the post office, places of worship, elementary and junior high schools, and the southern entrance to the Tempe ASU campus. The City of Tempe is currently engaged in a reconstructive College Avenue project that includes traffic calming measures of raised intersections and medians, a four-way stop at Alameda, enhanced bike lanes, sidewalk improvements and landscaping. Construction is scheduled to be complete in July 2011.¹⁵*

Endnotes:

1. *Tempe Transportation Division. Tempe Comprehensive Transportation Plan.* (Tempe, AZ: City of Tempe. Updated March 2008.)
2. <http://www.tempe.gov/business/location/transportation.htm>. (Tempe, AZ: City of Tempe. Accessed 20 April 2011.)
3. *Development Services Department. General Plan 2030.* (Tempe, AZ: City of Tempe. 4 December 2003.)
4. *Tempe Historic Preservation Office. 2001 Post World War II Subdivision Study.* (Tempe, AZ: City of Tempe. December 2001.)
5. *Project for Public Spaces. Mill + Lake District Placemaking Guidelines.* (Tempe, AZ: City of Tempe Community Development Department. December 2007.)
6. *Downtown Tempe Community. DTC Annual Report 2009/2010.* (Tempe, AZ: DTC. 2010.)
7. *Community Development Department. DTC Community Design Principles 2006.* (Tempe, AZ: City of Tempe. 2006.)
8. *Community Development Department. DRAFT Mill + Lake District Streetscape Principles + Guidelines.* (Tempe, AZ: City of Tempe. 2011.)
9. *Arizona State University. Comprehensive Development Plan for a New American University 2005.* (Tempe, AZ: Arizona State University. 2005.)
10. <http://www.tempe.gov/historicpres/register.html>. (Tempe, AZ: City of Tempe. Accessed 20 April 2011.)
11. *Tempe Historic Preservation Office. Date Palm Manor Historic District Research Report.* (Tempe, AZ: City of Tempe. 2009.)
12. <http://www.tempe.gov/historicpres/NRHP.html>. (Tempe, AZ: City of Tempe. Accessed 20 April 2011.)
13. *Development Services Department. Northwest Tempe Community Plan.* (Tempe, AZ: City of Tempe. 2007.)
14. *Development Services Department. Northwest Tempe Design Guidelines.* (Tempe, AZ: City of Tempe. 2002.)
15. <http://www.tempe.gov/tim/Traffic/CollegeAve.htm>. (Tempe, AZ: City of Tempe. Accessed 20 April 2011.)



ADVERTISING POLICY

Page 2

METRO policies prohibit the display of advertising copy or graphics that:

1. Are false, misleading, or deceptive
2. Relate to an illegal activity
3. Are explicit sexual material, obscene material, or material harmful to minors as these terms are defined in Title 13, Chapter 35, Arizona Revised Statutes
4. Advertise alcohol or tobacco products
5. Depict violence and/or anti social behavior
6. Include language which is obscene, vulgar, profane or scatological
7. Relate to instruments, devices and items, products or paraphernalia which are designed for use in connection with "specified sexual activities" as defined in the City of Phoenix Zoning Ordinance.

All advertising is subject to approval by METRO and/or its designated representatives.

Adopted by Valley Metro Rail Board of Directors on January 19, 2011.

ADVERTISING POLICY

Valley Metro Rail, Inc. (METRO) believes that advertising on the light rail system is best performed using a standard set of established criteria. Therefore, the following criteria are established for advertising:

Vehicle Advertising

The advertising on the exterior of the articulated sections of the vehicle includes the entire fleet. Full wraps will be limited to a maximum of ten (10) vehicles. METRO reserves the right to wrap four (4) additional vehicles for its own purposes.

That advertising on the interior of the vehicle allow for ceiling decals. METRO staff will monitor the number of ceiling decals so as to avoid visual clutter.

That advertising on the interior of the vehicle allow for the installation of LCD-TV in vehicles.

Station Advertising

That station advertising be limited to wraps and display case posters. That station wraps occur in participating cities only and be limited to backdrop banners, vertical banners and wrapped beams; no floor decals. That any advertising at stations not be attached to, or obscure, station art.

That display case station posters occur in participating cities only and be limited to no more than 50% of map cases at any given station.

That advertising at station platforms allow for the installation of electronic or standard kiosks.

Advertising Standards

That any future METRO advertising policy be consistent with the City of Phoenix Public Transit Department's policy that establishes the following standard:

The subject matter of METRO system advertising is limited to speech that proposes a commercial transaction.

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