Design Manual Disclaimer

This design book is envisioned as a dynamic document that will continue to evolve in response to changing conditions and circumstances. As such, it is anticipated that over the life of the Novus Innovation Corridor, the guidelines herein will be refined, waived, or amended to incorporate new conditions, special opportunities, and/or circumstances.

As the master developer, Catellus Development Corporation (Catellus) advises any party acquiring an interest in the property to obtain a current copy of this manual before making any decisions about acquiring any such interest. Catellus makes no representations or warranties of any kind or character, express or implied, with respect to this manual. Each party acquiring an interest in property that is the subject of this design book, whether by purchase, lease, as collateral for a loan, or otherwise, acknowledges and agrees that it is acquiring such interest without relying upon any such representation, warranty, statement, or other assertion, oral or written, made by the master developer or any representative of, with respect to this design book, but rather, is relying upon its own examination and inspection.

Table of Contents

1 Streetscape Design Manual
   Intro and Design Approach 04
   1.01 Design Manual Overview and Purpose 06
   1.02 Streetscape Design Character and Goals 08
   1.03 Project Scope 10

2 University and Rural Mixed-Use Neighborhood
   General Overview 12
   2.01 Paving and Hardscape Overview 14
   2.02 Planting Overview 22
   2.03 Site Furnishings Overview 26

3 University and Rural Mixed-Use Neighborhood
   Detailed Streetscape Conditions 32
   3.01 G Street 36
   3.02 6th Street 52
   3.03 Packard Drive 60
   3.04 Rural Road 70
   3.05 University Drive 84
   3.06 Intersections 94
INTRO AND DESIGN APPROACH

1.01 Design Manual Overview and Purpose 06
1.02 Streetscape Design Character and Goals 08
1.03 Project Scope 10
The intent of this Streetscape Design Manual is to establish a design reference guide for prospective site developers working within the public streetscape of the University and Rural Mixed-Use Neighborhood. The standards, dimensions, and specifications described in this manual shall act as the basis of design for developers in order to ensure a consistent, and high-level of quality of construction in the public street areas. Site developers are responsible for the design, permitting and construction of the public streetscape adjacent to their sites. The Master Developer and Novus Architectural Review Committee (ARC) will review the designs for the streetscape to ensure compliance with these streetscape standards. This review process will be an integrated component of the overall design review process for each project within Novus.

In addition to the detailed design conditions provided in this manual, prospective site developers should also reference the Novus Innovation Corridor Master Plan and Design Standards, to which this manual is an appendix, to understand the overall design intent for the neighborhood buildings, streets, and other public spaces.
In partnership with Arizona State University (ASU), Catellus Development Corporation (Catellus) endeavors to transform 330 acres into an iconic, world-class, mixed-use urban neighborhood and destination known as the Novus Innovation Corridor (Novus).

Located adjacent to ASU’s campus in downtown Tempe and Tempe Town Lake, the neighborhood’s existing regional and local multi-modal transportation connections makes it ideal for redevelopment.

The Master Plan, developed by Sasaki, established a framework for realizing Catellus’ and ASU’s ambitious vision, placing the public realm as the foundation for creating a vibrant, authentic place. The plan proposed a network of public spaces ranging from linear landscapes to destination parks, shaded plazas, public squares, and most importantly for this manual, public streetscapes. Together, these public spaces create a signature Novus identity, support diverse programming, and reinforce community.

The standards and designs proposed in this manual further the vision created in the Master Plan by creating a set of public streetscape standards and guidelines that align with the Novus vision and identity. The design intent for the streetscape is to create a clean, elegant and contemporary public realm using a simple, yet refined palette of materials that conveys the forward-thinking vision of the Novus identity.

This manual begins with an overview of the materials, furnishings and plantings that will be employed throughout the streetscape of Novus, and concludes with a detailed description for each street within the University and Rural Mixed-Use Neighborhood. Within the sections for each street, dimensional criteria, materials specification, and design intent are defined in plan and section.

**STREETScape Design Character**

- Vision:
  - Create a world class contemporary and progressive streetscape which is unique for Novus, ties into the context of ASU and its location within the Sonoran Desert.

- Goals:
  - Develop a Coherence in the overall plan, focusing on Complete Streets; integrating a Green Network; and fostering a Full-Spectrum Environment.

**STREETScape Design Goals**

The overall goals for the streetscape design stem from the Development Principles established in the original Master Plan. The Development Principles created the foundational principles for transforming Novus into a world-class urban destination, and focused on the following:

- **Vibrant Public Realm**: Create an active and energetic streetscape promoting seating, lounging, walking, shopping, and biking.

- **Sustainable Development**: Demonstrate the Novus’ commitment to sustainability through best management practices by creating an accessible, shaded and walkable neighborhood.

- **Identity**: Create a cohesive identity and sense of place throughout Novus by establishing a unified ground plane.

- **Complete Streets**: Create a world class contemporary and progressive streetscape which is unique for Novus, ties into the context of ASU and its location within the Sonoran Desert.
1.03 Project Scope

**PROJECT SCOPE AREA**

This version of the Novus Innovation Corridor Streetscape Design Manual includes the public streetscape areas for the University and Rural Mixed-Use Neighborhood. The streets within this neighborhood include portions of G Street, 6th Street, Packard Drive, Rural Road and University Drive. The manual provides details and descriptions for typical conditions along each street, as well as typical conditions for priority intersections. The Streetscape Design Manual defines the elements within the streetscape. In most conditions the streetscape public realm is approximately 14’ wide on either side of the street, with some exceptions at the G Street social spaces, and along portions of Rural Road.
UNIVERSITY and RURAL MIXED-USE NEIGHBORHOOD

GENERAL OVERVIEW

2.01 Paving and Hardscape Overview 14
2.02 Planting Overview 22
2.03 Furnishings and Materials Overview 26
2.01 Paving and Hardscape

The paving and hardscape materials employed within the Novus streetscapes reflect an elegant and contemporary aesthetic consistent with the branding for the neighborhood. In order to achieve this cutting-edge visual character, the paving materials will need to be installed with precision and attention to detail. The materials selected are also durable, accessible, and locally sourced in order to minimize maintenance, and serve the sustainable goals of the project. While the manual indicates paving materials within the streetscape, paving in private areas shall be paved in a similar fashion, but with some flexibility to allow the private enterprises to have individual paving expression.

Concrete Pavement, Standard
Concrete pavement with light broom finish, sawcut joints, and optional integral color will define the sidewalk pavement along Rural and University. The light broom finish should extend the entire length of pavement with no visible border or disruptions at the edges. The sawcut joints should be 1/4" thick in all locations, and care should be taken to extend the saw-cut paving to the face of buildings. In order for each street to have a unique character and identity, the manual defines the specific saw-cut scoring pattern to be employed for each street. Expansion joints and construction joints should be coordinated with the paving patterns noted in the manual. Care should be taken to align and space concrete scoring with vaults and installed features. Standard concrete pavement includes the option to add integral Schofield SOLARCHROME High-SR Concrete Color in order to reduce heat-island effects and create SRI 29 values or greater. The decision to include integral color will be determined in the design phase.

Concrete Pavement, Acid-Etched
Concrete pavement with a light acid-etch finish, sawcut joints and optional integral color will be installed at the social spaces on G Street, and the Packard Drive sidewalks. The sawcut joints should be 1/4" thick in all locations, and care should be taken to extend the saw-cut paving to the face of buildings. On Packard, light acid-etching shall be used as the overall surface finish. At the G Street social spaces, additional medium-grade acid-etching patterns will be installed to reflect either the Novus branding identity (as shown later in this manual), or as a unique art installation coordinated with a local artist. All acid-etched concrete also includes the option to add integral Schofield SOLARCHROME High-SR Concrete Color.
Concrete Unit Pavers: Standard
Standard concrete unit pavers will be installed along the neighborhood’s major pedestrian and retail corridors. On G Street, standard pavers shall be installed along the sidewalks, parking areas, and roadway in order to distinguish the street as a high-end retail environment. On 6th Street, standard pavers will be installed on the sidewalk. Pavers are to be Acker-Stone Industries traffic-rated 6”x12”x3/8” thick pavers for the vehicular conditions, and 6”x12”x2 1/4” thick pavers for pedestrian areas. Paver colors and finishes are defined later in this manual. Paver layout patterns vary based on pedestrian or vehicular conditions. Prior to installation, mockups shall be provided for final approval of paver color selections, paver patterns and overall installation quality.

Concrete Unit Pavers: Detectable
Detectable concrete unit pavers will be utilized along G Street and at curb cuts at intersections. Detectable pavers shall be Acker-Stone Industries 6”x12”x2 1/4” thick truncated dome pavers. Paver colors and finishes are defined later in this manual. Pavers are to be laid in a stacked bond pattern. Concrete unit pavers follow colors and formats consistent with ASU standards for pedestrian pavers, but with some variations in order to create unique and distinct paving styles for the neighborhood. Detectable pavers shall be ADA compliant and installation shall conform with all ADA regulations.

Detectable Warning Dots
Stainless steel detectable warning dots shall be installed along the flush street condition at the G Street social spaces. The dots shall be model ADV-D-1281 (stainless steel) as manufactured by Advantage Tactile Systems. Spacing and detectable warning dots shall be ADA compliant installation shall conform with all ADA regulations.

Tree Grates
Cast iron trees grates will be installed at conditions where tree wells occur within the pavement conditions along G Street. Tree grates shall be model Metro (black cast iron) as manufactured by Ironsmith. Radial opening on tree grates should be avoided, unless custom tree grates are in order to reduce heat-island effects and create SRI 29 values or greater. The decision to include integral color will be determined in the design phase.

Concrete Unit Pavers: Standard
Concrete Unit Pavers: Detectable
Detectable Warning Dots, Stainless Steel
Tree Grate: Cast Iron
Concrete Unit Pavers: Standard - Detail Condition
Concrete Unit Pavers: Standard Example
Concrete Unit Pavers: Detectable
considered which reflect the Novus logo. The tree grate openings shall be aligned in the north-south direction.

**Trench Drain Grates (By Others)**

Cast iron trench drains (black matte finish) enclosed in a dark gray colored concrete cradle shall be installed along the west side of G Street. The grates, per civil plan, shall meet AASHTO H-20 load rating. The design, detail and installation will be by others. Grate openings shall be linear in the north-south direction (along the drain and vehicular directions), and openings should be ADA compliant and heel-proof. The color shall be black, matte finish.

**Flush Metal Banding**

Flush metal banding is only employed at the edges of specialty pavement areas along G Street. The flush metal banding shall be 3/4” to 1” thick 316 stainless steel metal edging to act as accent elements in the pavement and help to distinguish the social spaces from the adjacent pavement.

**Raised Metal Edging**

Cast iron or black metal edging is used at the edges of open, linear planting areas throughout the public space areas. The raised metal banding shall be 1/4” thick and shall fasten to adjacent pavement or staked.

**Pebble Stone Mulch**

Pebble stone shall be employed as the base stone for linear planter areas. Pebble stone should be locally sourced, and sizes should range from 1/2” to 3” in size. Color shall be a variation of red tones for Rural Road and University, and light gray tones for the areas along Packard and 6th Street.
The Planting palette established for the Streetscape Design Manual responds to the Sonoran Desert climate while helping to create a unique identity for the area. The planting employed along the streetscapes focuses on three key principles: 1) creating ample shade for the outdoor spaces and sidewalk areas; 2) promoting water conservation and minimizing maintenance demands; and 3) developing unique streetscape elements by planting different tree/plant species and creating a planting variety along streetscape.
Fraxinus udhei
Shamel Ash

Pistacia chinensis
Chinese pistachie

Phoenix dactylifera
Date Palm

Quercus virginiana 'Heritage'
'Heritage' Live Oak

Assorted tree species mix
(see detailed plans)

Assorted shrubs and ground cover (see detailed plans)

NEIGHBORHOOD PLANTING PLAN

- Fraxinus udhei
- Shamel Ash
- Pistacia chinensis
- Chinese pistachie
- Phoenix dactylifera
- Date Palm
- Quercus virginiana 'Heritage'
- 'Heritage' Live Oak
- Assorted tree species mix
  (see detailed plans)
- Assorted shrubs and ground cover
  (see detailed plans)
The site furnishings palette established for this manual aims to create an active and energetic streetscape. Contributing to the overall usability and functionality of the proposed neighborhood, selected furnishings encourage seating, lounging, walking, shopping, and biking.

The selected elements also assist in establishing a unified ground plane and cohesive neighborhood identity. The palette of fixed benches, movable tables and chairs, bike racks, waste receptacles, bollards, and lighting are minimal in style and function, reflecting the contemporary aesthetics of the forward thinking Novus brand. Placement of furnishings varies per street type and streetscape programming. Identified locations coincide with areas of regular pedestrian traffic and are in proximity of canopy trees to allow for ample shading.

The material properties of the furnishings respond to the extreme conditions of the Tempe climate. In order to minimize maintenance and increase durability, the selected materials coincide with ASU's recommendations for site furnishing and finishes.

**Street Lighting (By Others)**
The street lights will be installed by others, but the light spacing, fixture types, and light levels emitted by each fixture should align with each streetscape’s program requirements. In order to provide outlets for street functions and holiday lighting, street lights shall be designed and fitted with duplex outlets that are circuited separately and controlled from the house panels. Between each street light, two additional conduits shall be placed in a trench which should run just through the edge of the tree well locations.

**Pedestrian Lighting**
The pedestrian lighting fixtures are to provide a sense of security and legibility in the neighborhood’s nighttime environment. The fixture spacing, fixture types, and light levels emitted by each fixture should align with each streetscape’s program requirements. Although pedestrian lighting elements are to be selected during the design phase of the development, care should be taken to select a limited group of fixtures with a simple, modern profile. Selected fixtures shall also meet the requirements of the Maricopa County Dark Sky Ordinance which includes provisions designed to control the use of outdoor artificial illuminating devices emitting rays into the night sky.

**Waste and Recycling Receptacles**
Waste and Recycling Receptacles are placed at regular intervals throughout the neighborhood for maximum convenience. Maximum distance between receptacle...
sets shall be 200’. Waste and recycling bins are to be model Chase Park, as supplied by Landscape Forms. Trash, recycling, and other waste signage graphics are to be used to designate litter type.

**Metal Bollards**
The use of bollards are confined to the flush curbed conditions of the pedestrian oriented G Street. The metal bollard shall be model SSF06080 (6” dia, 36” ht, stainless steel) as manufactured by Calpipe Security Bollard. The bollard is used as a vertical element to separate vehicular and pedestrian corridors. In order to prevent vehicular traffic from entering the streetscape, bollards shall be installed per manufacturer’s recommendation and employ an engineered footing.

**Bicycle Racks**
Strategically located in areas with high public use, the selected bike racks provide secure and accessible areas for bike storage. In line with ASU’s campus standard furnishings, bike racks shall be Bola Bike Rack model (embedded, mercury color powdercoat finish) as manufactured by Landscape Forms.

**Movable Tables and Chairs**
The selected movable tables and chairs permit informal, flexible gathering appropriate in supporting the ground floor retail uses of the neighborhood connector, G Street. Movable chairs shall be the Chipman Armless Chairs and Tables shall be the Chipman 31” Dining Table both manufactured by Landscape Forms.

**Fixed Benches**
Located at regular intervals through the streetscape, fixed benches provide pedestrians respite and a place for pause. Benches employed throughout the neighborhood shall be the Parc Vue Bench (backed, no arms, mercury color powdercoat finish) as manufactured by Landscape Forms. Benches shall be installed and anchored per the manufacturer’s recommendations.

**Parking Kiosk (By Others)**
Parking kiosks will be located along the linear row of concrete pavers and in-line with the street trees on G Street. The specifications and locations of the parking kiosk are to be determined during the design phase. Site developers shall coordinate with Master Developer.

**Site Utility Elements (By Site Developer)**
All transformers, water meters, backflow preventers, gas meters, electric meters, etc. shall be located within the site developer’s property outside the public streetscape realm and have architectural screening. Transformers, backflow preventers, etc. will be installed by site developers.
UNIVERSITY and RURAL MIXED-USE NEIGHBORHOOD

DETAILED STREETSCAPES

3.01 G Street 36
3.02 6th Street 52
3.03 Packard Drive 60
3.04 Rural Road 70
3.05 University Drive 84
3.06 Intersections 92
The implementation and consistency of design elements described in the paving, planting, and furnishing overviews is critical in establishing the visual streetscape hierarchy as defined in the Master Plan. The following section of the Streetscape Design Manual details each street’s unique condition in plan enlargements, sections, and technical detail assemblies. Site developers are responsible for the design, permitting and construction of the public streetscape adjacent to their sites.

The enclosed drawings and their proposed dimensions, specifications, and details shall serve as design standards for prospective site developers to ensure a consistent, and high-level of quality of construction. The Novus Architectural Review Committee (ARC) will review the designs for the public streetscapes to ensure compliance with the standards set forth in this manual. All transformers, water meters, backflow preventers, gas meters, electric meters, etc. shall be located within the site developers property outside the public sidewalk realm and have architectural screening.

STREETSAPES

TheNovus Streetscape Design Manual
G Street serves as the heart of the Novus Innovation Corridor with its signature pedestrian-oriented streetscape. Its compact urban form houses offices, hotels, and residential units while the ground floor attracts visitors to its specialty shops, cafes, and restaurants.

The layout of this mixed-use core reinforces the perception of the pedestrian right-of-way as a public, shared space. The predominately curbless streetscape maximizes its flexibility and allows the street to be closed from vehicular traffic on weekends or for special events. Concrete unit pavers in both the roadways and pedestrian areas will provide G Street with a unique character and visual identity.

On-street parallel parking is provided adjacent to G Street's ground-level retail. Vehicular traffic is blocked from the remaining pedestrian corridor by a collection of bollards, tactile warning strips, light fixtures, and a continuous tree alley distributed along a band of accent unit pavers. Together, these elements create a visual and physical barrier, protecting the high-demand pedestrian way from vehicular interference.

The sidewalk area is intermittently expanded to create social spaces, larger pedestrian areas, for passive social interaction. Social spaces assist in animating the streetscape through vehicular traffic and a shared bike lane. A continuous drainage channel and a flush concrete band divides the asphalt travel lanes from the concrete pedestrian realm.
G STREET - SECTIONS

SECTION A-A' Typical Condition

specialized paving and movable gray furniture that reflects the contemporary style of the Novus brand. Social spaces are to be spaced approximately every 85’ on alternating sides of the road. To sufficiently respond to the Sonoran Desert Climate, G Street’s pedestrian zones are shaded through multiple strategies. Continuous shade trees are centrally positioned between the on-street parking zone and pedestrian walks. This alignment not only provides a comfortable deep-shade environment, but assists in cooling parked vehicles. Cantilevered awnings positioned above retail frontages strengthens this shaded network while highlighting building program.

SECTION B-B' Social Space

parked vehicles. Cantilevered awnings positioned above retail frontages strengthens this shaded network while highlighting building program.
Concrete Unit Pavers: Standard Pedestrian
Pedestrian unit pavers are to be 6"x12"x2 1/4" thick pavers, with a Sandblast Finish, as manufactured by Acker-Stone Industries. Pavers are to be laid in a running bond pattern, with sand-swept joints, and placed on a sand setting bed over a reinforced concrete slab. Pedestrian unit pavers on the sidewalk portions of G Street shall be a random mix of colors with the following distribution:

- 60% Granada White w/Slag FM
- 30% Israel Pewter FSMB-122
- 10% Light Gray FSMB-124

The darker color accent band of pavers along the G Street tree line shall be:
- 100% Light Gray FSMB-124

Concrete Unit Pavers: Standard Vehicular
Vehicular unit pavers are to be 6"x12"x3 1/8" thick pavers, with a Sandblast Finish, as manufactured by Acker-Stone Industries. Pavers are to be laid in a herring bone pattern (perpendicular to direction of travel), with sand-swept joints, and placed on a sand setting bed over a reinforced concrete slab. Vehicular unit pavers on the vehicular areas of G Street shall be a random mix of colors with the following distribution:

- 25% Granada White w/Slag FM
- 50% Israel Pewter FSMB-122
- 25% Light Gray FSMB-124

Concrete Unit Pavers: Detectable
Detectable unit pavers are to be Acker-Stone Industries 6"x12"x2 1/4" thick truncated dome pavers. Pavers are to be laid in a stacked bond pattern, with sand-swept joints, and placed on a sand setting bed over a reinforced concrete slab. Detectable unit pavers will be utilized along G Street accent band and at curb cuts at intersections. Detectable pavers shall be ADA compliant and installation shall conform with all ADA regulations. The darker color accent band of detectable pavers along the G Street tree line shall be as follows:

- 100% Light Gray FSMB-124

Concrete Pavement, Acid-Etched
Acid-etched concrete pavement will be employed at social spaces on G Street. The etching patterns could reflect the Novus branding identity as shown in this manual, or the etching could become a unique art installation. Acid-etched concrete pavement shall be a light-acid etch for the field pavement, and a medium to heavy acid-etch for the patterned areas. All acid-etched concrete shall not expose any large aggregate but rather be designed to show contrast. Acid-etched concrete pavement shall include 1/4" thick sawcut joints, and care should be taken to extend the saw-cut paving to the face of buildings. All acid-etched

Detectable Warning Dots
concrete includes the option to add integral Schofield SOLACHROME High-SR Concrete Color in order to reduce heat-island effects and create SRI 29 values or greater. The decision to include integral color will be determined in the design phase.

Detectable Warning Dots
Stainless steel detectable warning dots shall be model ADV-D-1281 (stainless steel) as manufactured by Advantage Tactile Systems, and expoxy set into pavement per manufacturer’s recommendations. Spacing and detectable warning dots shall be ADA compliant and installation shall conform with all ADA regulations. Stainless steel detectable warning dots shall be installed along the flush street condition at the G Street Social Spaces.

Tree Grates
Tree grates shall be model Metro as manufactured by Ironsmith. The color of the tree grate shall be a black cast iron. Radial opening on tree grates should be avoided, unless custom tree grates are considered which reflect the Novus logo. The tree grate openings shall be aligned in the north-south direction, and shall conform with all ADA regulations.

Trench Drain Grates (By Others)
Cast iron trench drains enclosed in a dark gray colored concrete cradle shall be installed along the west side of G Street. The grates shall meet AASHTO H-20 load rating. The design, detail and installation will be by others. Grate openings shall be linear in the direction of drain, and openings shall conform with all ADA regulations. The trench drain grate color shall be a black, matte finish.

Flush Metal Banding
The flush metal banding shall be 3/4” to 1” thick 316 stainless steel metal edging to act as accent elements in the pavement and help to distinguish the social spaces from the adjacent pavement. Flush metal banding is only employed at the edges of specialty pavement areas along G Street.
G STREET - PLANTING AND FURNISHINGS

Street Trees
A consistent alle of Shamel Ash (Fraxinus uhdei) assist in shading G Street’s pedestrian and vehicular realm. The selected large-canopy species is drought and heat tolerant and provides ample shade to create a comfortable pedestrian-oriented retail corridor. All installed trees shall be consistent in size, height, and canopy form and be a minimum of 3" caliper inches upon installation.

Street Lights
G Street should be appropriately illuminated to support its high-quality commercial focus while providing a sense of security and legibility in nighttime environment. The fixture type, to be selected and installed by others, should have a simple, modern profile. Selected fixtures shall also meet the requirements of the Maricopa County Dark Sky Ordinance which includes provisions designed to control the use of outdoor artificial illuminating devices emitting rays into the night sky.

Waste and Recycling Receptacles
Waste and recycling bins are to be model Chase Park as supplied by Landscape Forms. Waste Receptacles shall be side-open, Mercury powdercoat finish. Receptacles shall be placed at regular intervals throughout G Street to provide users with maximum convenience. Trash, recycling, and other waste signage graphics are to be used to designate litter type.

Bollards
The metal bollard shall be model SSF06080 (6" dia, 36" ht, brushed stainless steel) as manufactured by Calpipe Security Bollard. The bollard is used as a vertical element to visually define the street’s vehicular and pedestrian corridors. In order to prevent vehicular traffic from entering the streetscape, bollards shall be installed per manufacturer’s recommendation and employ an engineered footing.

Bike Racks
Bike racks shall be the Bola Bike Rack, manufactured by Landscape Forms, in Mercury powder coat finish. Strategically located adjacent to G Street’s intersections, the selected bike racks provide secure and accessible areas for bike storage. See pages on intersections for bike rack locations on G Street.

Movable Tables and Chairs
Movable chairs shall be the Chipman Armless Chairs, and Tables shall be the Chipman 31” Dining Table both manufactured by Landscape Forms. Tables and chairs shall be Mercury powdercoat finish.
### G STREET - TREE PLANTING CONDITION

#### Materials

1Aa Concrete Pavement: Standard - Pedestrian
- Light Broom Finish / Light Gray Integral color

1Ab Concrete Pavement: Acid Etched - Pedestrian
- Acid Etched Finish / Medium Gray integral color

1Ac Concrete Pavement: Standard - Vehicular (By Others)
- Light Broom Finish / Light Gray integral color

1Ad Concrete Pavement: Standard - Vehicular (By Others)
- Light Broom Finish / Dark Gray integral color

1B Concrete Pavement Score Joint
- 1/4" Sawcut

1Ca Concrete Unit Pavers: Pedestrian
- 6" X 12" X 2 1/4" thick paver, Acker-Stone Industries
- Sandblast Finish, Color Varies (See Section)
- Running Bond Pattern

1Cb Concrete Unit Paver: Detectable (Pedestrian)
- 12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries
- Sandblast Finish, Color Varies (See Section)
- Running Bond Pattern

1D Concrete Unit Paver: Vehicular
- 6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
- Sandblast Finish, Color Varies (See Section)
- Herring Bone Pattern

1E Pebble Stone
- 1/2" to 3" sizes
- Light Gray colors

1F Roadway Pavement (By Others)

1G Metal Tree Grate
- Ironsmith 60" x 60" Metro Grate, Black Cast Iron

1Ha Metal Edging
- Raised - 1/4" thick (12" height)
- Cast-Iron, Ground Staked

1Hb Metal Edging
- Flush - 3/4" thick Stainless Steel (G Street Social Spaces only)

1J Metal Detectable Pile - ADA Compliant spacing
- Platipus Plati-Mat or similar

1K Metal Trench Drain (By Others)
- Cast Iron, Dark Gray Color

1L Roadway Curb (Per Civil Design)

1M Sand Setting Bed

1N Wasp Hole
- 1" X 2" Filter Fabric, 2" Wasp Hole

1O Concrete Base

#### Planting and Soils

2A Street Tree
- Street trees shall have root barrier on all four sides; see specific sections for size and species

2B Tree Trunk Flare (To be visible)

2C Arbor Tie Anchoring Kit

2D Footing Anchoring Kit

2E Rootball Anchor System
- Platipus Plati-Mat or similar

2F Filter Fabric
- Cut Hole At Plant Rootball, Typ.

2G Horticulture Subsoil / Structural Soil

2H Planting Soil Mix

2I Compacted Aggregate Base

2J Compacted Or Undisturbed Sub-Grade

2K Compacted Aggregate Base

2L Compaction and Soils Mix

2Ma Irrigation: Main Line

2Mb Irrigation: Root Zone drip irrigation

2N Pipe or Planter Pot

#### Site Furnishings

3Aa Street Light (By Others)

3Ab Pedestrian Light

3B Metal Bollard
- Calpipe Security Bollard - 6" diam, 36" visible ht, SS bollard

3C Trash And Recycling Receptacles
- Landscape Forms - Chase Letter Receptacles

3D Fixed Bench
- Landscape Forms - Park View Bench

3E Moveable Chair
- Landscape Forms - Champion Chair

3F Moveable Table
- Landscape Forms - Champion 36" Table

3G Electrical Conduit (2)
- Connected to Street light wiring - Future use
G STREET - SOCIAL SPACES CONDITION

DETAILED LEGEND

Materials

1Aa Concrete Pavement: Standard - Pedestrian
   Light Broom Finish / Light Gray integral color

1Ab Concrete Pavement: Acid Etched - Pedestrian
   Acid Etched Finish / Medium Gray integral color

1Ac Concrete Pavement: Standard - Vehicular
   Light Broom Finish / Light Gray integral color (By Others)

1Ad Concrete Pavement: Standard - Vehicular
   Light Broom Finish / Dark Gray integral color (By Others)

1B Concrete Pavement Score Joint
   3/4" Sawcut

1Ca Concrete Unit Pavers: Pedestrian
   6" X 12" X 2 1/4" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section)
   Running Bond Pattern

1Cb Concrete Unit Pavers: Pedestrian
   12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section)

1D Concrete Unit Pavers: Vehicular
   6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section)
   Herring Bone Pattern

1E Pebble Stone - 1/2" to 3" sizes
   Light Gray colors

1F Roadway Pavement (By Others)

1G Metal Tree Grate
   Ironsmith 60" x 60" Metro Grate, Black Cast Iron

1H Metal Edging
   Raised - 1/4" thick (12" height)
   Cast-Iron, Ground Staked

1Ib Metal Edging: Flush - 3/4" thick
   Stainless Steel (Street Social Spaces only)

1J Metal Detectable Pines - ADA Compliant spacing
   Advantec Tactile Systems Stainless Steel Dots, Spowed

1Kb Metal Trench Drain (By Others)
   Cast Iron, Dark Gray Color

1L Roadway Curb (By Civil Design)

1Mb Thread Setting Bed - 3" thick (4" End Power Condition)

1N Weep Holes
   1" Ada-2" Filter Fabric, 2" Weep Holes

1O Concrete Base

Planting and Soils

2A Street Tree
   Street trees shall have root barrier on all four sides, see specific sections for size and species

2B Tree Trench Plane (To be visible)

2C Arbor Tie Anchoring Kit

2D Shrubs/Herbaceous Plants
   See specific sections for size and species

2E Bollard Anchor System
   Butterfly Plate-Mix or similar

2F Filter Fabric
   Cut Hole At Plant Rootball, Type

2G Horticulture Subsoil / Structural Soil

2H Planting Soil Mix

2I Compacted Aggregate Base

2J Compacted Or Undisturbed Sub-Grade

2K Drainage Pipe (Drawn for potential use only)
   4" Perforated Pipe from Stone and Filter Fabric

2L Irrigation: Main Line

2Mb Irrigation: Root Zone drip irrigation

2M Plant Box or Planter Pot (Optional, By Others)

Site Furnishings

3Aa Street Light (By Others)

3Ab Pedestrian Light

3B Metal Bollard
   Colpipe Security Bollard - 8" diam, 36" visible ht, SS bollard

3C Trash And Recycling Receptacles
   Landscape Forms - Chrome Liner Receptacles

3D Fixed Bench
   Landscape Forms - Precast Bench

3E Moveable Chair
   Landscape Forms - Chapman Chair

3F Moveable Table
   Landscape Forms - Chapman 30" Table

3G Electrical Conduit (2)
   Connection to street light wiring - Future use
## G STREET - TYPICAL CONDITION

### DETAIL LEGEND

#### Materials

1Aa Concrete Pavement: Standard - Pedestrian  
Light Broom Finish / Light Gray integral color

1Ab Concrete Pavement: Acid Etched - Pedestrian  
Acid Etched Finish / Medium Gray integral color

1Ac Concrete Pavement: Standard - Vehicular  
Light Broom Finish / Dark Gray integral color

1Ad Concrete Pavement: Standard - Vehicular  
Light Broom Finish / Dark Gray integral color

1B Concrete Pavement Score Joint

1Ba Concrete Unit Pavers: Pedestrian

6" X 12" X 2 1/4" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section)  
Running Bond Pattern

1Bb Concrete Unit Pavers: Detectable (Pedestrian)

12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section)

1D Concrete Unit Paver: Vehicular

6" X 12" X 3 1/8" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section)  
Herring Bone Pattern

1E Pebble Stone - 1/2" to 3" sizes  
Light Gray colors

1F Roadway Pavement (By Others)

1G Metal Tree Grate

Vernon 60" x 60" Metro Grates, Black Coat von

1Ha Metal Edging: Standard - 9" high  
Sawtooth Top

1Hb Metal Edging: Flush - 3/4" thick  
Stainless Steel IS Street Social (Spares only)

1I Metal Detectable Rims - ADA Compliant spacing

1Jc Metal Trench Drain (By Others)

Cast von, Dark Gray Color

1K Roadway Curb (By Civil Design)

1L Sand Setting Bed  
0" thick (Drainage)

1M Mirror Setting Bed - 3" thick (End Power Condition)

1N Weep Hole - 1/2" x 1/2" Filter Fabric, 2" Weep Hole

1O Concrete Base

#### Planting and Soils

2A Street Tree  
Street trees shall have root barrier on all four sides; see specific sections for size and species

2B Tree Trench Plane (To be visible)

2C Arbor Tie Anchoring Kit

2D Shrub/Herbaceous Plants  
(see specific sections for size and species)

2E Rodent Anchor System

2F Filter Fabric

2G Horticulture Subsoil / Structural Soil

2H Planting Soil Mix

2I Compacted Aggregate Base

2J Compacted Or Undisturbed Sub-Grade

2K Drainage Pipes (Shown for potential use only)

2L Drainage Pipe and Filter Fabric

2Ma Irrigation: Main Line  
2Mb Irrigation: Root Zone drip irrigation

2N Planter Box or Planter Pot (Optional, By Others)

#### Site Furnishings

3Aa Street Light (By Others)

3Ab Pedestrian Light

3B Metal Bollard

Calpipe Security Bollard - 6" diam, 36" visible ht, SS bollard

3C Trash And Recycling Receptacles

Landscape Forms - Chase Littler Receptacles

3D Fixed Bench  
Landscape Forms - Prie Van Bench

3E Movable Chair  
Landscape Forms - Chapman Chair

3F Movable Table  
Landscape Forms - Chapman 36" Table

3G Electrical Conduit (2)  
Connected to Street light wiring - Future use

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[Diagram of G Street - Typical Condition]

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[Diagram with Street Tree and Roadway Pavement]
As the primary east-west pedestrian and bicycle connection from the ASU campus to the University’s future Athletics Village, 6th Street’s streetscape forms an urban and athletic spine. Activated through ground floor restaurants and shops, 6th Street’s grand urban form is seen as the neighborhood’s ceremonial way.

The University and Rural Mixed-Use Neighborhood includes 6th Street’s southern edge: a 10’ sidewalk with a 4’ planting and amenity zone. Concrete unit pavers serve as the primary paving material extending throughout the pedestrian walk and amenity zone. The sidewalk is to be clear of fixed or movable furnishing elements to allow for unobstructed pedestrian flow.

To clarify use, the amenity zone is to contain one furnishing element: street lighting, fixed seating, or litter receptacle between each street tree. Keeping with 6th Street’s ceremonial character, street light poles shall be centered in the paved amenity zones. Fixed benches shall be centered and be placed every 200’. Two trash receptacles shall be positioned toward the western edge of each zone and placed every 200’.

Linear planting beds are placed every 12’ and are defined by an raised cast iron edge. Street trees, centered in each bed, are placed every 20’. Palms shall alternate with the canopy trees to ensure a comfortable, shaded pedestrian environment.
Concrete Unit Pavers: Standard Pedestrian
Pedestrian unit pavers are to be 6"x12"x2 1/4" thick pavers, with a Sandblast Finish, as manufactured by Acker-Stone Industries. Pavers are to be laid in a running bond pattern, with sand-swept joints, and placed on a sand setting bed over a reinforced concrete slab. Pedestrian unit pavers shall be a random mix of different width color bands (as shown) with the following paver colors used in each of the bands:
- Granada White w/Slag FM
- Israel Pewter FSMB-122
- Light Gray FSMB-124
- Charcoal w/Slag FM (limited to 10% of the bands)

The darker color accent band of pavers along the amenity zone shall be color:
- Light Gray FSMB-124

Raised Metal Edging
Raised metal banding shall be 1/4" thick and shall fasten to adjacent pavement or staked. Color shall be standard cast iron or black metal finish. The raised metal edging will define 6th Streets planting zones at the base of each tree.

Pebble Stone Mulch
Pebble stone shall be employed as the base stone for linear planter areas. Pebble stone should be locally sourced, and sizes should range from 1/2" to 3" in size. Color shall be light grey tones.
6TH STREET - PLANTING AND FURNISHINGS

6th Street’s planting palette alternates the use of sculptural Date Palms with Chinese Pistache canopy trees to ensure a comfortable pedestrian environment while maintaining its ceremonial identity. Grasses will characterize the base plantings.

**Palm Trees**

Palms shall be Date Palms (*Phoenix dactylifera*). The selected palms are intended to match ASU’s iconic palm walk and provide the street with an identifiable structural quality. Palm shall be consistent in size, height, and canopy form and have a minimum height of 12-15’ at installation.

**Canopy Trees**

Canopy trees shall be Chinese Pistache (*Pistacia chinensis*). Selected for its maroon and gold December foliage, Chinese Pistache exemplifies the ASU Sun Devil spirit. The species oval form also provides the street with dense shade. All installed trees shall be consistent in size, height, and canopy form and be a minimum of 3” caliper at installation.

**Grasses**

Grasses at the base of the trees shall be Mexican Feather Grass (*Nassella tenuissima*). The grasses form the planting zone’s groundcover. The heat tolerant perennial softens the streetscape with its light, wispy texture and shall be spaced 1’ on center.

**Street Lighting**

The street lights will be installed by others, but the light spacing, fixture types, and light levels emitted by street light fixtures should align with each streetscape’s program requirements. The fixture type, to be selected by others, should have a simple, modern profile. Selected fixtures shall meet the requirements of the Maricopa County Dark Sky Ordinance and applicable standards set by the City of Tempe.

**Waste Receptacles**

Waste Receptacles shall be Chase Park Litter Receptacles manufactured by Landscape Forms. Receptacles shall be placed every 200’ in the street’s amenity zone to provide users with maximum convenience. Trash, recycling, and other waste signage are to be used to designate trash type. Color shall be Mercury powder coat finish.

**Fixed Benches**

Fixed benches shall be the Parc Vue Bench manufactured by Landscape Forms. Benches shall be located every 200’ within the streetscape’s amenity zone to provide pedestrians respite and a place for pause. Benches shall be installed and anchored per the manufacturers recommendations. Color shall be Mercury powder coat finish.
**6TH STREET - TREE IN GROUND COVER CONDITION**

**DETAIL LEGEND**

### Materials

1Aa Concrete Pavement: Standard - Pedestrian  
Light Broom Finish / Light Gray Integral color

1Ab Concrete Pavement: Acid Etched - Pedestrian  
Acid Etched Finish / Medium Gray integral color

1Ac Concrete Pavement: Standard - Vehicular  
Light Broom Finish / Light Gray integral color

1Ad Concrete Pavement: Standard - Vehicular  
Light Broom Finish / Dark Gray integral color

1B Concrete Pavement Score Joint  
1/4" Sawcut

1Ca Concrete Unit Pavers: Pedestrian  
6" X 12" X 2 1/4" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section) Running Bond Pattern

1Cb Concrete Unit Paver: Detectable (Pedestrian)  
12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section)

1D Concrete Unit Paver: Vehicular  
6" X 12" X 3 1/8" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section) Herring Bone Pattern

1E Pebble Stone - 1/2" to 3" sizes  
Light Gray colors

1F roadway Pavement (By Others)  
1G Metal Tree Grate  
Ironsmith 60" x 60" Metro Grate, Black Cast Iron

1Ha Concrete Unit Pavement: Pedestrian  
6" X 12" X 2.24" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section) Running Bond Pattern

1Cb Concrete Unit Pavement: Detectable (Pedestrian)  
6" X 12" X 2.24" thick truncated domes, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section)

1D Concrete Unit Pavement: Vehicular  
6" X 12" X 2.24" thick paver, Acker-Stone Industries  
Sandblast Finish, Color Varies (See Section) Running Bond Pattern

1P Pebble Stone - 1/2" to 3" sizes  
Light Gray colors

1F Roadway Pavement (By Others)  
1G Metal Tree Grate  
Ironsmith 60" x 60" Metro Grate, Black Cast Iron

1Ha Metal Edging: Raised - 1/4" thick (12" height)  
Cast Iron, Ground Staked

1Hb Metal Edging: Flush - 3/4" thick  
Stainless Steel (6" wide) (See Section)

1I Metal Detectable Rings - ADA Compliant spacing  
Advanced Tactile Systems Stainless Steel Bollards, Extruded

1J Metal Trench Drains (By Others)  
Cast Iron, Dark Gray Color

1K Metal Tree Grate  
Landscape Forms Parc Vue Bench  
Landscape Forms Chipman Chair

1L Sand Setting Bed - 2" thick

1M Mortar Setting Bed - 2" thick

1N Weep Hole - 12" x 2" Filter Fabric, 2" Weep Hole

1O Concrete Base

### Planting and Soils

2A Street Tree  
(Straight tree shall have root barrier on all four sides, see specific sections for size and species)

2B Tree Trunk Flare (To Be Visible)

2C Arbor Tie Anchoring Kit

2D Shrub/Herbaceous Plants  
(See specific sections for size and species)

2E Irrigation: Main Line

2F Filter Fabric

2G Irrigation: Root Zone drip irrigation

2H Planting Soil Mix

2I Compacted Aggregate Base

2J Compacted Undisturbed Sub-Grade

2K Drainage Pipe  
Typ. 4" Perforated Pipe: Item Stone and Filter Fabric

2M Irrigation: Main Line

2N Planter Box or Planter Pot (Optional, By Others)

### Site Furnishings

3Aa Street Light (By Others)  
3Ab Pedestrian Light

3B Metal Bollard  
Caliper Security Bollard - 6" diam, 36" visible ht, SS bollard

3C Trash And Recycling Receptacles  
Landscape Forms - Chase Single Receptacles

3D Fixed Bench

3E Moveable Chair

3F Moveable Table

3G Electrical Conduct (12)  
Connected to Street Light wing - Future use

### 6TH STREET - TREE PLANTING IN GROUND COVER CONDITION
3.03 Packard Drive

PACKARD DRIVE - LAYOUT

Centrally located in the University and Rural Mixed-Use Neighborhood, Packard Drive forms a service road offering primary vehicular access to parking, service, and loading areas. The Street’s overall dimension and design reinforces its vehicular use with four lanes of traffic while accommodating two designated bike lanes. Its secondary use as a pedestrian way allows for an 8-foot-wide sidewalk and 6-foot-wide planting and amenity zone.

The street’s concrete walks are defined by its unique scoring, as dimensioned in the enlargement plan, and acid-etched finish. The 6'-wide linear planting zones are defined by a raised metal edge and pea-stone rock mulch. To provide adequate shade, canopy trees are placed every 30’ and are centered in the planting zone. Trees shall be consistent in size, height, and canopy form and be a minimum of 3” caliper inches upon installation.

The 6'-wide planting zone also accommodates the streetscape’s amenities. Street light poles, specified and installed by others, are placed every 30 feet and are sitting on 2-foot-wide concrete band that extends from the sidewalk. Fixed benches and two waste receptacles are placed on 14x3’ concrete pads and are located every 200’ for maximum pedestrian convenience.
SECTION A-A' Planting Condition

SECTION B-B' Streetscape Lighting
PACKARD DRIVE - PAVEMENT, FURNISHINGS AND PLANTING

Concrete Pavement, Acid-Etched
Acid-etched concrete pavement will be employed along Packard Drive. The etching patterns could reflect the Novus branding identity as shown in this manual, or the etching could become a unique art installation. Acid-etched concrete pavement shall be a light-acid etch for the field pavement, and a medium to heavy acid-etch for the patterned areas. All acid-etched concrete shall not expose any large aggregate but rather be designed to show contrast. Acid-etched concrete pavement shall include 1/4” thick sawcut joints, and care should be taken to extend the saw-cut paving to the face of buildings. All acid-etched concrete includes the option to add integral Schofield SOLACHROME High-SR Concrete Color in order to reduce heat-island effects and create SRI 29 values or greater. The decision to include integral color will be determined in the design phase.

Raised Metal Edging
Raised metal banding shall be 1/4” thick and shall fasten to adjacent pavement or staked. Color shall be standard cast iron or black metal finish. The raised metal edging will define the planting zones at the base of each tree.

Pebble Stone Mulch
Pebble stone shall be employed as the base stone for linear planter areas. Pebble stone should be locally sourced, and sizes should range from 1/2” to 3” in size. Color shall be light gray tones.

Street Tree
Street trees on Packard shall be Heritage Live Oaks (Quercus virginiana ‘Heritage’). The Live Oaks improve pedestrian comfort by providing a broad canopy. All street trees shall be consistent in size, height, and canopy form and be a minimum of 3” caliper at installation.

Base Plantings
Base plantings at the Packard Drive tree pits shall be Barbados Aloe (Aloe barbadensis) to provide accent color, and a unique planting layout for the street.

Waste Receptacles
Waste Receptacles shall be Chase Park Litter Receptacles manufactured by Landscape Forms. Receptacles shall be placed every 200’ in the street’s amenity zone to provide users with maximum convenience. Trash, recycling, and other waste signage are to be used to designate trash type. Color shall be Mercury powder coat finish.

Fixed Benches
Fixed benches shall be the Parc Vue Bench manufactured by Landscape Forms. Benches shall be located every 200’ within the streetscape’s amenity zone to provide pedestrians respite and a place for pause. Benches shall be installed and anchored per the manufacturer’s recommendations. Color shall be Mercury powder coat finish.

Concrete Pavement: Acid-Etched

Raised Metal Edging

Pebble Stone Mulch: Light Gray

Street Tree

Heritage Live Oak

Barbados Aloe

Waste Receptacles

Fixed Benches
PACKARD DRIVE - TREE IN GROUND COVER CONDITION

**DETAIL LEGEND**

**Materials**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Aa</td>
<td>Concrete Pavement: Standard - Pedestrian&lt;br&gt;Light Broom Finish / Light Gray Integral color</td>
</tr>
<tr>
<td>1Ab</td>
<td>Concrete Pavement: Acid Etched - Pedestrian&lt;br&gt;Acid Etched Finish / Medium Gray Integral color</td>
</tr>
<tr>
<td>1Ac</td>
<td>Concrete Pavement: Standard - Vehicular (By Others)&lt;br&gt;Light Broom Finish / Light Gray Integral color</td>
</tr>
<tr>
<td>1Ad</td>
<td>Concrete Pavement: Standard - Vehicular (By Others)&lt;br&gt;Light Broom Finish / Dark Gray Integral color</td>
</tr>
<tr>
<td>1B</td>
<td>Concrete Pavement Score Joint&lt;br&gt;1/4” Sawcut</td>
</tr>
<tr>
<td>1Ca</td>
<td>Concrete Unit Pavers: Pedestrian&lt;br&gt;6” x 12” x 3 1/8” thick paver, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section)&lt;br&gt;Running Bond Pattern</td>
</tr>
<tr>
<td>1Cb</td>
<td>Concrete Unit Paver: Detectable (Pedestrian)&lt;br&gt;12” x 12” x 2 1/4” thick truncated domes, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section)</td>
</tr>
<tr>
<td>1D</td>
<td>Concrete Unit Paver: Vehicular&lt;br&gt;6” x 12” x 3 1/8” thick paver, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section)&lt;br&gt;Herring Bone Pattern</td>
</tr>
<tr>
<td>1E</td>
<td>Pebble Stone&lt;br&gt;- 1/2” to 3” sizes&lt;br&gt;Red colors</td>
</tr>
<tr>
<td>1F</td>
<td>Roadway Pavement (By Others)</td>
</tr>
<tr>
<td>1G</td>
<td>Metal Tree Grate&lt;br&gt;Ironsmith 60” x 60” Metro Grate, Black Cast Iron</td>
</tr>
<tr>
<td>1Ha</td>
<td>Metal Edging: Raised - 1/4” thick (12” height)&lt;br&gt;Cast Iron, Ground Staked</td>
</tr>
<tr>
<td>1Hb</td>
<td>Metal Edging: Flush - 3/4” thick&lt;br&gt;Stainless Steel (For Street Social Spaces only)</td>
</tr>
<tr>
<td>1I</td>
<td>Metal Detectable Pins - ADA Compliant spacing&lt;br&gt;Advantageous Trench Systems Stainless Steel Bola, Spaced</td>
</tr>
<tr>
<td>1J</td>
<td>Metal Trench Drain (By Others)&lt;br&gt;Cast Iron, Dark Gray Color</td>
</tr>
<tr>
<td>1K</td>
<td>Roadway Curb (Per Civil Design)</td>
</tr>
<tr>
<td>1L</td>
<td>Sand Setting Bed - 1” thick</td>
</tr>
<tr>
<td>1M</td>
<td>Mirror Setting Bed - 1” thick (Not End Power Condition)</td>
</tr>
<tr>
<td>1N</td>
<td>Weep Hole&lt;br&gt;6” x 2” Filter Fabric, 2” Weep Hole</td>
</tr>
<tr>
<td>1O</td>
<td>Concrete Base</td>
</tr>
</tbody>
</table>

**Planting and Soils**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A</td>
<td>Street Tree&lt;br&gt;Street trees shall have root barrier on all four sides; see specific sections for size and species</td>
</tr>
<tr>
<td>2B</td>
<td>Tree Tie Anchor Kit</td>
</tr>
<tr>
<td>2C</td>
<td>Arbor Tie Anchoring Kit</td>
</tr>
<tr>
<td>2D</td>
<td>Shrub/Herbaceous Plants&lt;br&gt;See specific sections for size and species</td>
</tr>
<tr>
<td>2E</td>
<td>Bollard Anchor System&lt;br&gt;Rope or Pipe Mat or similar</td>
</tr>
<tr>
<td>2F</td>
<td>Filter Fabric&lt;br&gt;Plastic or Polyethylene, Typ</td>
</tr>
<tr>
<td>2G</td>
<td>Horticulture Subsoil/ Structural Soil</td>
</tr>
<tr>
<td>2H</td>
<td>Planting Soil Mix</td>
</tr>
<tr>
<td>2J</td>
<td>Compacted Aggregate Base</td>
</tr>
<tr>
<td>2K</td>
<td>Compacted Or Undisturbed Sub-Grade</td>
</tr>
<tr>
<td>2L</td>
<td>Drainage Pipe&lt;br&gt;(Drawn for potential use only)</td>
</tr>
<tr>
<td>2M</td>
<td>Irrigation: Main Line</td>
</tr>
<tr>
<td>2Mb</td>
<td>Irrigation: Drip Irrigation (Optional, By Others)</td>
</tr>
<tr>
<td>2N</td>
<td>Planter Box or Planter Pot (Optional, By Others)</td>
</tr>
</tbody>
</table>

**Site Furnishings**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Aa</td>
<td>Street Light (By Others)</td>
</tr>
<tr>
<td>3Ab</td>
<td>Pedestrian Light</td>
</tr>
<tr>
<td>3B</td>
<td>Metal Bollard&lt;br&gt;Culpeper Security Bollard - 6’ drain, 36” visible ht, SS bollard</td>
</tr>
<tr>
<td>3C</td>
<td>Trash And Recycling Receptacles&lt;br&gt;Landscape Forms - Chase Inner Receptacles</td>
</tr>
<tr>
<td>3D</td>
<td>Fixed Bench&lt;br&gt;Landscape Forms - Park Vue Bench</td>
</tr>
<tr>
<td>3E</td>
<td>Movable Chair&lt;br&gt;Landscape Forms - Chapman Chair</td>
</tr>
<tr>
<td>3F</td>
<td>Movable Table&lt;br&gt;Landscape Forms - Chapman 31” Table</td>
</tr>
<tr>
<td>3G</td>
<td>Electrical Conduit (2)&lt;br&gt;Connects to Street Light w/ future use</td>
</tr>
</tbody>
</table>
PACKARD DRIVE - STREET LIGHT CONDITION

DETAIL LEGEND

Materials
1Aa Concrete Pavement: Standard - Pedestrian
Light Broom Finish / Light Gray integral color
1Ab Concrete Pavement: Acid Etched - Pedestrian
Acid Etched Finish / Medium Gray integral color
1Ac Concrete Pavement: Standard - Vehicular (By Others)
Light Broom Finish / Light Gray integral color
1Ad Concrete Pavement: Standard - Vehicular (By Others)
Light Broom Finish / Dark Gray integral color
1B Concrete Pavement Score Joint
3/8" Sawcut
1Ca Concrete Unit Pavers: Pedestrian
6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
Sandblast Finish, Color Varies (See Section) Running Bond Pattern
1Cb Concrete Unit Paver: Detectable (Pedestrian)
12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries
Sandblast Finish, Color Varies (See Section)
1D Concrete Unit Paver: Vehicular
6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
Sandblast Finish, Color Varies (See Section) Herring Bone Pattern
1E Pebble Stone - 1/2" to 3" sizes
Red colors
1F Broadway Pavement (By Others)
1G Metal Tree Grate
Various 60" x 60" Metro Grates, Black Steel
1Ha Metal Edging: Raised - 4" high (3" height)
Cast Iron, Ground Staked
1Hb Metal Edging: Flush - 3/4" thick
Stainless Steel (Street Social Spaces only)
1I Metal Detectable Pino - ADA Compliant spacing
Advantage Tactile Systems Stainless Steel Domes, Silvered
1J Metal Trench Drain (By Others)
Cast iron, Dark Gray Color
1K Broadway Curb (Per Civil Design)
1L Sand Setting Bed - 2" thick
1M Mirror Setting Bed - 1" thick (End Power Condition)
1N Wasp Hole - 1/4" x 1/2" Filter Fabric, 2" Wasp Hole
1O Concrete Base

Planting and Soils
2A Street Tree
Street trees shall have root barrier on all four sides, see specific sections for size and spacing
2B Tree Trench Plan (To be visible)
2C Arbor Tie Anchoring Kit
2D Shrubs/Herbaceous Plants
(see specific sections for size and spacing)
2E Rootball Anchor System
Rcptl. is Pole-Mat or similar
2F Filter Fabric
Cut Hole At Plant Rootball, Type
2G Horticulture Subsoil/ Structural Soil
2H Planting Soil Mix
2I Compacted Aggregate Base
2J Compacted Or Undisturbed Sub-Grade
2L Drainage Pipe (Not for use on street only)
4" Perforated Pipe, 3/4" Stone and Filter Fabric
2Mc Irrigation: Main Line
2Mb Irrigation: Root Zone drip irrigation
2N Planter Box or Planter Pot (Optional, By Others)

Site Furnishings
3Aa Street Light (By Others)
3Ab Pedestrian Light
3B Metal Bollard
Galv. Security Bollard - 8" diam., 36" visible ht, SS bollard
3C Trash And Recycling Receptacles
Landscape Forms - Chase Little Receptacles
3D Fixed Bench
Landscape Forms - Parisian Bench
3E Movable Chair
Landscape Forms - Gnome Chair
3F Movable Table
Landscape Forms - Gnome 31" Table
3G Electrical Conduit (2)
Connected to Street light wiring - Future use
Packard Drive - Bench Area Condition

**Detail Legend**

**Materials**

1Aa Concrete Pavement: Standard - Pedestrian
   Light Broom Finish / Light Gray integral color
1Ab Concrete Pavement: Acid Etched - Pedestrian
   Acid Etched Finish / Medium Gray integral color
1Ac Concrete Pavement: Standard - Vehicular (By Others)
   Light Broom Finish / Light Gray integral color
1Ad Concrete Pavement: Standard - Vehicular (By Others)
   Light Broom Finish / Dark Gray integral color
1B Concrete Pavement Score Joint
   1/4" Sawcut
1Ca Concrete Unit Pavers: Pedestrian
   6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section) Running Bond Pattern
1Cb Concrete Unit Paver: Detectable (Pedestrian)
   12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section)
1D Concrete Unit Paver: Vehicular
   6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section) Herring Bone Pattern
1E Pebble Stone
   - 1/2" to 3" sizes
   Red colors
1F Roadway Pavement (By Others)
1G Metal Tree Grate
   Ironsmith 60" x 60" Metro Grate, Black Cast Iron
1Ha Metal Edging
   Raised - 1/4" thick (12" height)
   Cast iron, Ground Staked
1Hb Metal Edging - Flush - 3/4" thick
   Stainless Steel (In Street Social Spaces only)
1I Metal Detectable Pines - ADA Compliant spacing
   Advantage Tactile Systems Stainless Steel Domes, Epoxyed
1J Metal Trench Drains (By Others)
   Cast iron, Dark gray color
1K Roadway Curb (By Civil Design)
1L Sidewalk Setting Bed - 1" thick
1M Mirror Setting Bed - 1" thick w/ End Power Condition
1N Weep Hole - 1" x 1/2" Filter Fabric, 2" Weep Hole
1O Concrete Base

**Planting and Soils**

2A Street Tree
   (Freedom trees shall have root barrier on all four sides, see specific sections for size and spacing)
2B Arbor Tie Anchoring Kit
   Not shown at Plant Location
2C Shrub/Herbaceous Plants
   (See specific sections for size and spacing)
2D Boadball Anchor System
   Round or Flat or similar
2F Filter Fabric
   Cut Hole At Plant Location, Type

**Horticulture Subsoil/ Structural Soil**

2H Planting Soil Mix

**Compacted Aggregate Base**

2J Compacted Or Undisturbed Sub-Grade

**Drainage**

2L Drainage Pipe
   Perforated Pipe, flush stone & filter fabric
2M Irrigation: Main Line
2Mb Irrigation: Root Zone drip irrigation
2N Planter Box or Planter Pot (Optional, By Others)

**Site Furnishings**

3Aa Street Light (By Others)
3Ab Pedestrian Light
3B Metal Bollard
   Copper Security Bollard - 6" diam, 36" visible ht, SS bollard
3C Trash And Recycling Receptacles
   Landscape Forms - Chase Lettuce Receptacles
3D Fixed Bench
   Landscape Forms - Pvc Visa Bench
3E Moveable Chair
   Landscape Forms - Chapman Chair
3F Moveable Table
   Landscape Forms - Chapman 31" Table
3G Electrical conduit (2)
   Connected to Street light wiring - Future use
As the Neighborhood’s major arterial way, Rural Road forms a north-south axis that provides the neighborhood with a regional connection. Its multi-modal layout accommodates larger vehicular volumes, featuring six travel lanes and a desert park buffer. Although the streetscape serves as the neighborhood’s vehicular gateway, its relatively inactive street frontage reduces the need to emphasize a pedestrian identity and amenities within this neighborhood.

The University and Rural Mixed-Use Neighborhood contains Rural Road’s western edge that includes a sidewalk with intermittent amenity zones, and a planted buffer along the western edge.

The Street trees shall be placed 4’ from the eastern edge of the sidewalk and be spaced 30’ on center. Street lights, specified and installed by others, shall be spaced in accordance with the applicable City of Tempe Standards and align with the street tree allee where appropriate.

The sidewalk is paved with standard concrete and scored according to dimensions provided in the enlargement plan. A concrete pad serves as the amenity zone and contains a fixed bench and two trash receptacles. Amenity zones shall be placed every 200’ and be an extension of the sidewalk’s western edge. To ensure pedestrian comfort, amenity zones shall be strategically located under, or closely adjacent to, canopy trees. Pedestrian light fixtures are to be placed off the sidewalk’s western edge.

Existing bus stops within the project limits shall be detailed in accordance with the City of Tempe Construction Standards. The remaining dimension of streetscape is utilized as a planted buffer to provide the western lying neighborhood with sound.
mitigation and a visual screen. Planting in this zone shall reflect the desert park character and be a mixture of single and multi-stem canopy trees. Unlike the street’s road planting area, trees in this zone shall be placed sporadically throughout its width while assuring a maximum 30’ spacing along the north-south walk. The buffer and tree lawn’s ground plane shall contain a mix of shrubs, groundcovers, and cacti and be mulched with an earth red pebble stone.

**Concrete Pavement, Standard**

Concrete Pavement with light broom finish, sawcut joints, and optional integral color will define the sidewalk pavement along Rural Road. The light broom finish should extend the entire length of pavement with no visible border or disruptions at the edges. The sawcut joints should be ¼” thick in all locations, and care should be taken to extend the saw-cut paving to the face of buildings. In order for each street to have a unique character and identity, the manual defines the specific saw-cut scoring pattern to be employed for each street. Expansion joints and construction joints should be coordinated with the paving patterns noted in the manual. Care should be taken to align and space concrete scoring with vaults and installed features. Standard concrete pavement includes the option to add integral Schofield SOLACHROME High-SR Concrete Color in order to reduce heat-island effects and create SRI 29 values or greater. The decision to include integral color will be determined in the design phase.

**Pebble Stone Mulch**

Pebble stone shall be employed as the base stone for the planting areas. Pebble stone should be locally sourced, and sizes should range from ¼” to 3” in size. Color shall be red, earth tones.
**RURAL ROAD - FURNISHINGS**

**Pedestrian Lighting**
The pedestrian lighting fixtures are to provide a sense of security and legibility in the neighborhood’s nighttime environment. The fixture spacing, fixture types, and light levels emitted by each fixture should align with each streetscape’s program requirements. Although pedestrian lighting elements are to be selected during the design phase of the development, care should be taken to select a limited group of fixtures with a simple, modern profile. Selected fixtures shall also meet the requirements of the Maricopa County Dark Sky Ordinance which includes provisions designed to control the use of outdoor artificial illuminating devices emitting rays into the night sky.

**Waste Receptacles**
Waste Receptacles shall be Chase Park Litter Receptacles manufactured by Landscape Forms. Receptacles shall be placed every 200’ in the street’s amenity zone to provide users with maximum convenience. Trash, recycling, and other waste signage are to be used to designate trash type. Color shall be Mercury powder coat finish.

**Fixed Benches**
Fixed benches shall be the Parc Vue Bench manufactured by Landscape Forms. Benches shall be located every 200’ within the streetscape’s amenity zone to provide pedestrians respite and a place for pause. Benches shall be installed and anchored per the manufacturers recommendations. Color shall be Mercury powder coat finish.

**RURAL ROAD - PLANTING: TREES AND PALMS**

**Street Tree**
Rural Road’s primary street tree shall be the Escarpment Live Oak (Quercus fusiformis). All street trees shall be placed within the planting area directly adjacent to Rural Road and spaced uniformly along the street edge. Trees shall be consistent in size, height, and canopy form and be a minimum of 3” caliper inches at installation.

**Planted Buffer Trees**
To reflect the streetscape’s desert park character, the planted buffer shall be sporadically planted with a variety of palm, single, and multi-stem trees. Unlike the adjacent street trees, trunk size and height of installed trees can vary from 2-4” caliper or 10-16’ in height. This variation will allow for a more natural feeling landscape while creating visual interest. Planted buffer trees shall be a mix of the following:
- Date Palm (Phoenix dactylifera)
- Little Leaf Palo Verde (Parkinsonia microphylla)
- Mugla (Acacia aneura)
The ground plane of the streetscape’s tree lawn shall be a variety of ground covers, cacti, and shrubs. The proposed palette of plants has been selected for their proven horticultural performance, visual interest, and drought tolerant qualities.

Selected planting shall be spaced according to best local practices. The palette below represents the variety of selected species applicable for installation.
RURAL ROAD - BENCH WITH TREE AND SHRUB PLANTING

**Materials**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Aa</td>
<td>Concrete Pavement: Standard - Pedestrian</td>
</tr>
<tr>
<td>1Ab</td>
<td>Concrete Pavement: Acid Etched - Pedestrian</td>
</tr>
<tr>
<td>1Ac</td>
<td>Concrete Pavement: Standard - Vehicular</td>
</tr>
<tr>
<td>1Ad</td>
<td>Concrete Pavement: Acid Etched - Vehicular</td>
</tr>
<tr>
<td>1B</td>
<td>Concrete Pavement Score Joint</td>
</tr>
<tr>
<td>1Ca</td>
<td>Concrete Unit Pavers: Pedestrian</td>
</tr>
<tr>
<td>1Cb</td>
<td>Concrete Unit Paver: Detectable (Pedestrian)</td>
</tr>
<tr>
<td>1D</td>
<td>Concrete Unit Paver: Vehicular</td>
</tr>
<tr>
<td>1E</td>
<td>Pebble Stone - 1/2&quot; to 3&quot; sizes</td>
</tr>
<tr>
<td>1F</td>
<td>Roadway Pavement (By Others)</td>
</tr>
<tr>
<td>1G</td>
<td>Concrete Tree Grate</td>
</tr>
<tr>
<td>1H</td>
<td>Concrete Unit Pavement: Pedestrian</td>
</tr>
<tr>
<td>1I</td>
<td>Concrete Unit Pavement: Vehicular</td>
</tr>
<tr>
<td>1J</td>
<td>Concrete Tree Grate</td>
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**Planting and Soils**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2A</td>
<td>Street Tree</td>
</tr>
<tr>
<td>2B</td>
<td>Tree Tie Anchoring Kit</td>
</tr>
<tr>
<td>2C</td>
<td>Arbor Tie Anchoring Kit</td>
</tr>
<tr>
<td>2D</td>
<td>Shrub/Herbaceous Plants</td>
</tr>
<tr>
<td>2E</td>
<td>Irrigation: Main Line</td>
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</table>

**Site Furnishings**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>3Aa</td>
<td>Street Light (By Others)</td>
</tr>
<tr>
<td>3Ab</td>
<td>Pedestrian Light</td>
</tr>
<tr>
<td>3B</td>
<td>Metal Bollard</td>
</tr>
<tr>
<td>3C</td>
<td>Fixed Bench</td>
</tr>
<tr>
<td>3E</td>
<td>Movable Chair</td>
</tr>
<tr>
<td>3F</td>
<td>Movable Table</td>
</tr>
<tr>
<td>3G</td>
<td>Electrical Conduit</td>
</tr>
</tbody>
</table>

**Additional Details**

- Street trees shall have root barrier on all four sides; see specific sections for size and species.
- Tree Tie anchoring kit is to be visible.
- See specific sections for size and species.
- Pebble Stone is to be used as fill.

---

**SECTION A-A**

[Diagram showing RURAL ROAD - BENCH WITH TREE AND SHRUB PLANTING details]
RURAL ROAD - TREE AND GROUND COVER PLANTING

**Detail Legend**

### Materials

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Aa</td>
<td>Concrete Pavement: Standard - Pedestrian&lt;br&gt;Light Broom Finish / Light Gray integral color</td>
</tr>
<tr>
<td>1Ab</td>
<td>Concrete Pavement: Acid Etched - Pedestrian&lt;br&gt;Acid Etched Finish / Medium Gray integral color</td>
</tr>
<tr>
<td>1Ac</td>
<td>Concrete Pavement: Standard - Vehicular (By Others)&lt;br&gt;Light Broom Finish / Light Gray integral color</td>
</tr>
<tr>
<td>1Ad</td>
<td>Concrete Pavement: Standard - Vehicular (By Others)&lt;br&gt;Light Broom Finish / Dark Gray integral color</td>
</tr>
<tr>
<td>1B</td>
<td>Concrete Pavement Score Joint&lt;br&gt;1/4&quot; Sawcut</td>
</tr>
<tr>
<td>1Ca</td>
<td>Concrete Unit Pavers: Pedestrian&lt;br&gt;6&quot; X 12&quot; X 3 1/8&quot; thick paver, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section) Running Bond Pattern</td>
</tr>
<tr>
<td>1Cb</td>
<td>Concrete Unit Paver: Detectable (Pedestrian)&lt;br&gt;12&quot; X 12&quot; X 2 1/4&quot; thick trucated domes, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section)</td>
</tr>
<tr>
<td>1D</td>
<td>Concrete Unit Paver: Vehicular&lt;br&gt;6&quot; X 12&quot; X 3 1/8&quot; thick paver, Acker-Stone Industries&lt;br&gt;Sandblast Finish, Color Varies (See Section) Herring Bone Pattern</td>
</tr>
<tr>
<td>1E</td>
<td>Pebble Stone - 1/2&quot; to 3&quot; sizes&lt;br&gt;Red colors</td>
</tr>
<tr>
<td>1F</td>
<td>Roadway Pavement (By Others)</td>
</tr>
<tr>
<td>1G</td>
<td>Roadway Grate&lt;br&gt;Vonum 60&quot; x 60&quot; Metro Grates, Black Cast Iron</td>
</tr>
<tr>
<td>1Ha</td>
<td>Metal Edging: Raised - 1/4&quot; thick (12&quot; height)</td>
</tr>
<tr>
<td>1Hb</td>
<td>Metal Edging: Flush - 3/4&quot; thick&lt;br&gt;Stainless Steel (Street Social Spaces only)</td>
</tr>
<tr>
<td>1I</td>
<td>Metal Detectable Pines - ADA Compliant spacing&lt;br&gt;Advantage Tackle Systems Stainless Steel Bollard, Epoxyed</td>
</tr>
<tr>
<td>1J</td>
<td>Metal Trench Drain (By Others)&lt;br&gt;Cast iron, Dark gray color</td>
</tr>
<tr>
<td>1K</td>
<td>Roadway Curb&lt;br&gt;Per Civil Design</td>
</tr>
<tr>
<td>1L</td>
<td>Sand Setting Bed - 2&quot; thick</td>
</tr>
<tr>
<td>1M</td>
<td>Mirror Setting Bed - 1/2&quot; thick&lt;br&gt;At End Pavement Condition</td>
</tr>
<tr>
<td>1N</td>
<td>Weep Hole - 1/2&quot; ID Filter Fabric, 2&quot; Weep Hole</td>
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<tr>
<td>1O</td>
<td>Concrete Base</td>
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</table>

### Planting and Soils

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<td>2A</td>
<td>Street Tree&lt;br&gt;Street trees shall have root barrier on all four sides; see specific sections for size and species</td>
</tr>
<tr>
<td>2B</td>
<td>Tree Trench Plane (To be visible)</td>
</tr>
<tr>
<td>2C</td>
<td>Arbor Tie Anchoring Kit</td>
</tr>
<tr>
<td>2D</td>
<td>Shrub/Herbaceous Plants&lt;br&gt;See specific sections for size and species</td>
</tr>
<tr>
<td>2E</td>
<td>Beard Anchor System&lt;br&gt;Stainless Steel or similar</td>
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<tr>
<td>2F</td>
<td>Filter Fabric&lt;br&gt;12&quot;H X 12&quot;W, At Plant Rootball, Typ</td>
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<tr>
<td>2G</td>
<td>Horticulture Subsoil/ Structural Soil</td>
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<tr>
<td>2H</td>
<td>Planting Soil Mix</td>
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<tr>
<td>2I</td>
<td>Compacted Aggregate Base</td>
</tr>
<tr>
<td>2J</td>
<td>Compacted Or Undisturbed Sub-Grade</td>
</tr>
<tr>
<td>2L</td>
<td>Drainage Pipe&lt;br&gt;(drawn for potential use only)</td>
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<tr>
<td>2Ma</td>
<td>Irrigation: Main Line</td>
</tr>
<tr>
<td>2Mb</td>
<td>Irrigation: Root Zone drip irrigation</td>
</tr>
<tr>
<td>2N</td>
<td>Planter Box or Planter Pot (Optional, By Others)</td>
</tr>
</tbody>
</table>

### Site Furnishings

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Aa</td>
<td>Street Light (By Others)</td>
</tr>
<tr>
<td>3Ab</td>
<td>Pedestrian Light</td>
</tr>
<tr>
<td>3B</td>
<td>Metal Bollard&lt;br&gt;Galv. Security Bollard - 6&quot; diam, 36&quot; overall ht, SS bollard</td>
</tr>
<tr>
<td>3C</td>
<td>Trash And Recycling Receptacles&lt;br&gt;Landscape Forms - Chase Little Receptacles</td>
</tr>
<tr>
<td>3D</td>
<td>Fixed Bench&lt;br&gt;Landscape Forms - Piac Vix Bench</td>
</tr>
<tr>
<td>3E</td>
<td>Moveable Chair&lt;br&gt;Landscape Forms - Chapman Chair</td>
</tr>
<tr>
<td>3F</td>
<td>Moveable Table&lt;br&gt;Landscape Forms - Chapman 31&quot; Table</td>
</tr>
</tbody>
</table>
| 3G  | Electrical Conduit (2)
Connects to Street light wiring - Future use |

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**NOTE:**

- Specifications may vary based on specific site conditions and municipal regulations.
- Colors and materials listed are typical; actual installations may differ.
- All materials should conform to local building codes and regulations.

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*NGVS Streetscape Design Manual*
University Drive frames the neighborhood’s southern edge as a major multi-modal arterial street. Along with accommodating large vehicular volumes, its secondary use as a pedestrian way contains an existing bus stop and an 8’ sidewalk.
UNIVERSITY DRIVE - SECTION

SECTION A-A’ Typical Condition

UNIVERSITY DRIVE - PAVEMENT, FURNISHINGS AND PLANTING

Concrete Pavement, Standard
Concrete Pavement with light broom finish, sawcut joints, and optional integral color will define the sidewalk pavement along University Drive. Refer to concrete pavement defined for Rural Road.

Raised Metal Edging
Raised metal banding shall be 1/4” thick and shall fasten to adjacent pavement or staked. Color shall be standard cast iron or black metal finish. The raised metal edging will define the planting zones at the base of each tree.

Pebble Stone Mulch
Pebble stone shall be employed as the base stone for the planting areas. Pebble stone should be locally sourced, and sizes should range from 1/2” to 3” in size. Color shall be red, earth tones.

Waste Receptacles
Waste Receptacles shall be Chase Park Litter Receptacles manufactured by Landscape Forms. Receptacles shall be placed every 200’ to provide users with maximum convenience. Trash, recycling, and other waste signage are to be used to designate trash type. Color shall be Mercury powder coat finish.

Street Tree
Street trees on Packard shall be Heritage Live Oaks (*Quercus virginiana ‘Heritage’*) The Live Oaks improve pedestrian comfort by providing a broad canopy. All street trees shall be consistent in size, height, and canopy form and be a minimum of 3” caliper at installation.

Base Plantings
Base plantings at the Packard Drive tree pits shall be Barbados Aloe (*Aloe barbadensis*) to provide accent color, and a unique planting layout for the street.
UNIVERSITY DRIVE - DETAIL CONDITION

**Materials**

1Aa Concrete Pavement: Standard - Pedestrian
   Light Broom Finish / Light Gray Integral color

1Ab Concrete Pavement: Acid Etched - Pedestrian
   Acid Etched Finish / Medium Gray Integral color

1Ac Concrete Pavement: Standard - Vehicular
   Light Broom Finish / Light Gray Integral color

1Ad Concrete Pavement: Standard - Vehicular
   Light Broom Finish / Dark Gray Integral color

1B Concrete Pavement Score Joint
   1/4" Sawcut

1Ca Concrete Unit Pavers: Pedestrian
   6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section) Running Bond Pattern

1Cb Concrete Unit Paver: Detectable (Pedestrian)
   12" X 12" X 2 1/4" thick truncated domes, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section)

1D Concrete Unit Paver: Vehicular
   6" X 12" X 3 1/8" thick paver, Acker-Stone Industries
   Sandblast Finish, Color Varies (See Section) Herring Bone Pattern

1E Pebble Stone
   - 1/2" to 3" sizes
   - Red colors

1F Broadway Paver (By Others)

1G Metal Tree Grate
   Ironsmith 60" x 60" Metro Grate, Black Cast Iron

1H Metal Edging
   1/4" thick (12" height)
   Cast iron, Ground Staked

1I Metal Detectable Pines - ADA Compliant spacing
   Advantage Tactile Systems Stainless Steel Dome, Epoxy

1J Metal Trench Drain (By Others)
   Cast iron, Dark Gray Color

1K Broadway Curb (Per Civil Design)

1L Sand Setting Bed - 1" thick

1M Mirror Setting Bed - 1" thick (End Power Condition)

1N Weep Hole - 1/2" x 1/2" Filter Fabric, 2" Weep Hole

1O Concrete Base

**Planting and Soils**

2A Street Tree
   Street trees shall not have root barrier on all four sides, see specific sections for size and species

2B Tree Trench Plane (To be visible)

2C Arbor Tie Anchoring Kit

2D Shrub/Herbaceous Plants
   See specific sections for size and species

2E Elevated Water System

2F Filter Fabric
   Curtail At Plant Rootball, Type

2G Horticulture Subsoil / Structural Soil

2H Planting Soil Mix

2I Compacted Aggregate Base

2J Compacted Or Undisturbed Sub-Grade

2L Drainage Pipe
   (Drawn for potential use only)

2M Irrigation: Main Line

2Nb Irrigation: Root Zone drip irrigation

2N Planter Box or Planter Pot
   (Optional, By Others)

**Site Furnishings**

3Aa Street Light (By Others)

3Ab Pedestrian Light

3B Metal Bollard
   Calpipe Security Bollard - 6" diam, 36" visible ht, SS bollard

3C Trash And Recycling Receptacles
   Landscape Forms - Chase Little Receptacles

3D Fixed Bench
   Landscape Forms - Parc Vue Bench

3E Movable Chair
   Landscape Forms - Chapman Chair

3F Movable Table
   Landscape Forms - Chapman 31" Table

3G Electrical Conduit (2)
   Connected to Street light wiring - Future use
3.06 Intersections

INTERSECTIONS
Intersections are key to maximizing pedestrian accessibility and connectivity between the University and Rural Neighborhood and future phases of Novus. To ensure a complete sidewalk and crosswalk network, the following enlargement plans detail the unique conditions for each intersection’s paving, planting, and furnishings.
G STREET and 6th STREET

- Future Development Area
- Future Street Extension
- Detectable Warnings (Typ.)
- Pedestrian Crosswalks (By Others)
- Curb ramps + Detectable Warning Pavers (Typ.)
- Transition Curb (Typ.)
- Align ramps to pavement, planting, and artwork (Typ.)
- Parking Kiosk (By Others)
- Bike Sheds (Typ.)
- Building Limit or Public Easement Limit
- See G Street Layout Drawing for Typical Materials, Furniture, and Planting
- Raised Curb (Typ.)
- Transition Curb to Flush Roadway (Typ.)
- Palm - Planting Bed (Typ.)
- Litter + Recycling Receptacles (Typ.)
- Proposed Building Overhang / Canopy

G STREET and PACKARD DRIVE

- Future Development Area
- Parking Kiosk (By Others)
- Building Limit or Public Easement Limit
- Raised Metal Edging at Planter (Typ.)
- See G Street Layout Drawing for Typical Materials, Furniture, and Planting
- Raised Curb (Typ.)
- Transition Curb to Flush Roadway (Typ.)
- Palm - Planting Bed (Typ.)
- Litter + Recycling Receptacles (Typ.)
- See Packard St Layout Drawing for Typical Materials, Furniture, and Planting
- Bicycle Racks (Typ.)