

R-2519A

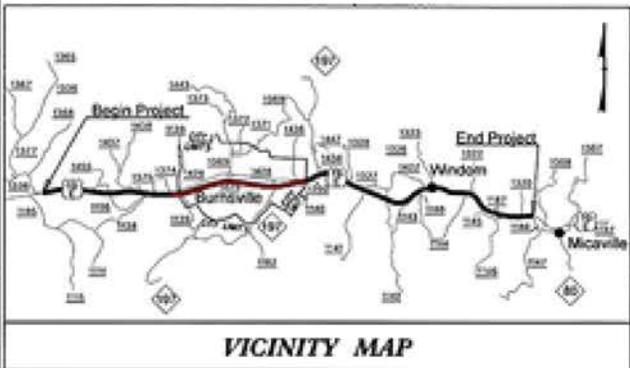
CONTRACT: C202332

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

YANCEY COUNTY

TOWN of BURNSVILLE

Highway 19-E Art Program



Prepared for the Town of Burnsville in collaboration with the Toe River Arts Council, NCDOT, & North Carolina Arts Council by:
Jack Mackie studioMackie llc
8510 Main Street A202
Edmonds WA 98026
206.550.1493
jack@jackmackie.com

Background

TRAC and the Town of Burnsville believe that community input can have the most positive impact on:

Design and visual impact, including public art
Economic development

Building social capital and enhancing quality of life in the community

Environmentally conscious and sustainable features

Strategies to accommodate pedestrian, bicycle and other alternative forms of transportation

Building Partnerships between: Toe River Arts Council, NC Trails, Healthy Yancey, Yancey County Economic Development, Burnsville Chamber of Commerce and local governments of Burnsville and Yancey County and the **citizens** and visitors to Burnsville

Concepts for Gateways and Downtown Burnsville Public Art Master Plan

Public Art GOALS:

- Provide concepts for three gateway/landmark entries into downtown Burnsville
- Incorporate green practices/materials when possible
- Include artwork concepts that are both functional & educational
- Reflect the strong arts and cultural identity of the community
- Reflect historic and cultural heritage, and consider economic development potential
- Support pedestrian activities & vehicular traffic
- Consider climate, maintenance, safety and longevity in construction materials & techniques

HIGHWAY 19-E PUBLIC ART ELEMENTS

Phase I:

- *Telescope Markers* at the intersections of Highway 19E at East Main and West Main Streets.
- Lighted glass gabions running through the landscape.
- Large native stone sculptures shaped into individual and group seatings bearing the names, height, and distance from Burnsville of nearby high mountains and the highest mountain of each of the 7 continents, their height, and distance.
- Wall-mounted glass gabions on the retaining wall at South Main.
- Stone quilts on the southwest embankment of South Main.
- Artist's cut-metal wraps on traffic light poles at 3 intersections.

Phase II:

- Artist's sculptural works inserted into the fence railing running along sections of the highway.
- Artist's images laid over three utilitarian traffic control boxes set adjacent to sidewalks at three intersections.



PHASE I

Telescope Entry Markers
Landscape Glass Gabions
South Main Stone Quilts
South Main Wall Gabions
Traffic Light Pole Wraps

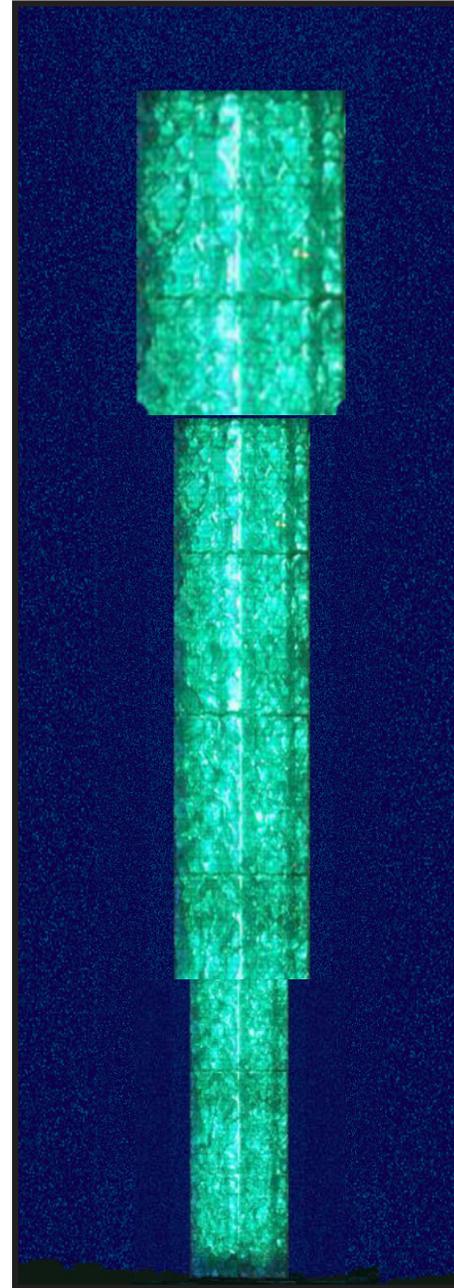
GATEWAY MARKERS - CONCEPT DESIGN

The Burnsville 19E Entry Gateways are placed in sets of three at the East and West intersections with Main Street. The Gateway Markers reference two of Burnsville's stories - one a deep-rooted tradition, the other a new adventure around which stories will grow.

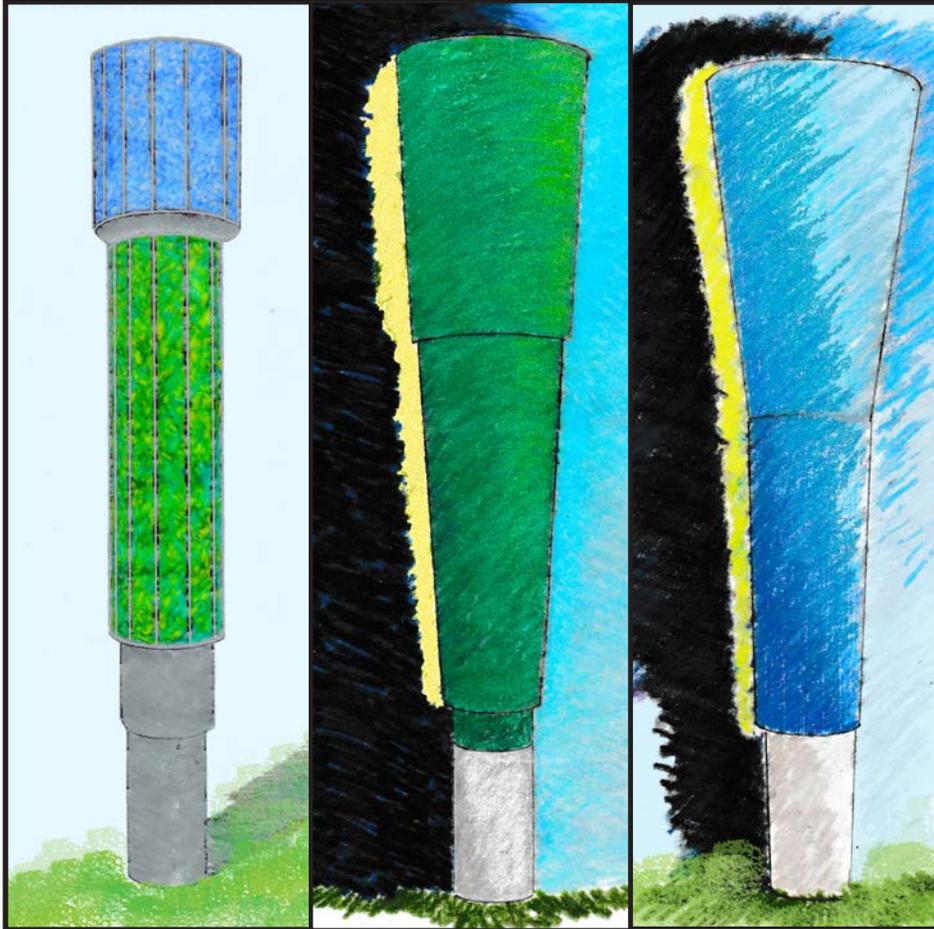
Drawing on the recent certification as one of twenty-seven International Dark Sky Communities, the new Star Park and its 34-inch telescope, the largest observatory telescope in North Carolina and largest dark sky public telescope in the southeastern United States, the sculptural Entry Markers derive their shapes using early telescopes, similar to that used by Admiral Otway Burns - Burnsville's namesake, as structural form.

Internationally renown Burnsville Yancey resident glass artists are also a component of these Markers. Local artists will be commissioned to fabricate multi-color blown and cast glass shapes that will fill the bodies of the scopes.

These Marker telescopes are internally lit to a quiet glow by use of solar powered LEDs. Respecting the requirements of Dark Sky, there will be no light spill and none shining up into the night sky.

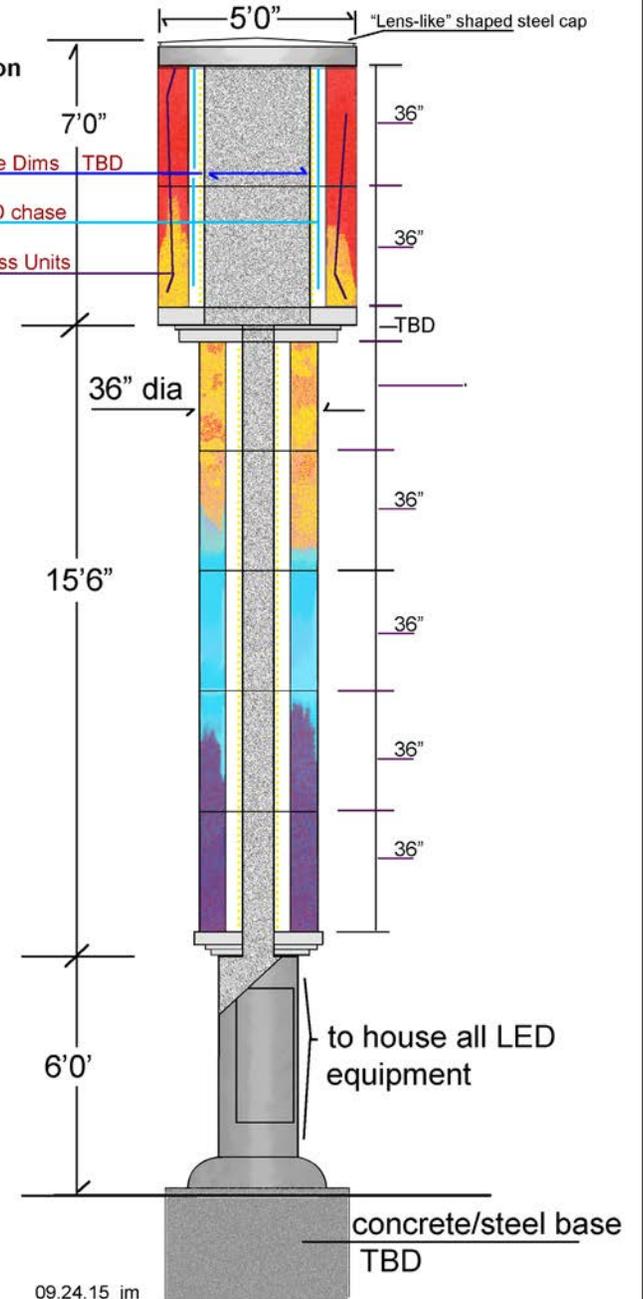


CONCEPT STUDIES

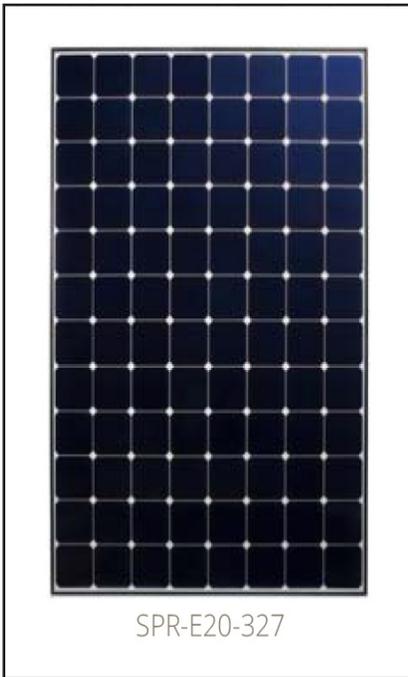


BURNSVILLE - 19E
Telescope Sculpture
 Schematic vertical section
 Dims as shown

Lighting provided by LEDs behind glass & will be on a timer. Lighting will be contained within the sculpture and will be held to an interior glow with no spill. Lighting & clock works are housed in the sculpture base. Power provided by on-site solar array / battery system.



SunPower Solar Panel E20-327

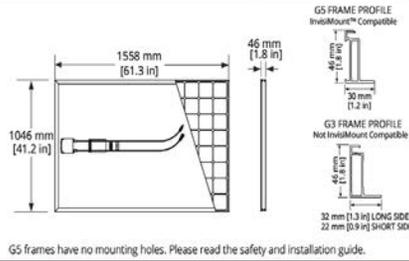


Combined Power and Product defect 25 year coverage that includes panel replacement costs. ⁸

Tests And Certifications	
Standard tests ¹³	UL1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Quality Certs	ISO 9001:2008, ISO 14001:2004
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC-155, PV Cycle
Sustainability	Cradle to Cradle (eligible for LEED points) ¹⁴
Ammonia test	IEC 62716
Desert test	10.1109/PVSC.2013.6744437
Salt Spray test	IEC 61701 (maximum severity)
PID test	Potential-Induced Degradation free: 1000V ⁹
Available listings	UL, CEC, CSA, TUV, JET, MCS, FSEC

Operating Condition And Mechanical Data		
Temperature	- 40°F to +185°F (- 40°C to +85°C)	
Impact resistance	1 inch (25mm) diameter hail at 52 mph (23 m/s)	
Appearance	Class A	
Solar Cells	96 Monocrystalline Maxeon Gen II	
Tempered Glass	High transmission tempered Anti-Reflective	
Junction Box	IP-65, MC4 Compatible	
Weight	41 lbs (18.6 kg)	
Max load	G5 Frame: Wind: 62 psf, 3000 Pa, 305 kg/m ² front & back Snow: 125 psf, 6000 Pa, 611 kg/m ² front	
	G3 Frame: Wind: 50 psf, 2400 Pa, 244 kg/m ² front & back Snow: 112 psf, 5400 Pa, 550 kg/m ² front	
	Frame	Class 1 black anodized (highest AAMA rating)

Electrical Data		
	SPR-E20-327	SPR-E19-320
Nominal Power (P _{nom}) ¹¹	327 W	320 W
Power Tolerance	+5/-0%	+5/-0%
Avg. Panel Efficiency ¹²	20.4%	19.9%
Rated Voltage (V _{mpp})	54.7 V	54.7 V
Rated Current (I _{mpp})	5.98 A	5.86 A
Open-Circuit Voltage (V _{oc})	64.9 V	64.8 V
Short-Circuit Current (I _{sc})	6.46 A	6.24 A
Max. System Voltage	600 V UL & 1000 V IEC	
Maximum Series Fuse	15 A	
Power Temp Coef.	-0.38% / °C	
Voltage Temp Coef.	-176.6 mV / °C	
Current Temp Coef.	3.5 mA / °C	



SolidApollo LED Lighting

Ultra High Brightness WATERPROOF LED Strip Light - 300 Units SMD 5050

DESCRIPTION

The high brightness 5050 waterproof strip is the perfect solution to light up areas in a linear format when outstanding illumination is needed for an area subjected to moisture such as outdoor hospitality lighting or near pools and water features. The strip is 16.4 ft. long. Brackets are included with the spool to make installation a simple process. It includes a jack connector so you can light it up with any of our power supplies that have a corresponding jack connector. No need to solder or cut cables. Each Flexible LED strip contains 300 surface mounted SMD 5050 LED Chips individually picked by BIN Number in order to have a very steady Color Rendering Index (CRI). Solid Apollo's Ultra High Brightness Flexible LED strip can be cut every 5 LED's or every 3.75". Its 300 SMD 5050 LED's, run at 24V, an advantage because the LED strip can operate at a lower current maximizing its estimated lifetime of 50,000 Hrs. Printed on white circuit board (PCB), the finishing look has more reflective capabilities compared to traditional LED Strips.



RELATED PRODUCTS



iTouch LED Dimmer ON/OFF switch and control brightness of the LED strip. SKU# SA-CTR-0088



Power Supply 48 W Power Supply is perfect for supplying steady current to one spool. SKU# SA-PS-24V-3A-48W



15 ft. Waterproof LED Strip Extension Cable includes watertight connection with screw-on covers to make each connection 100% waterproof. SKU# SA-LS-ACC-0033



Silicone 0.5 oz. Waterproofing Adhesive keep silicone end caps in place, enough to waterproof around 30 silicone end caps. SKU# SA-ACC-0046



10mm Silicon End Cap cut waterproof LED strips to desired length, protect the end by using silicone end cap. SKU# SA-ACC-10MM



10mm Silicone Bracket silicone bracket is used to mount waterproof LED strip lights. SKU# SA-ACC-10mm Bracket



Essential Product Features

- Waterproof/Weatherproof
- Operating Voltage 24V DC
- White Printed Circuit Board (PCB)
- 3 Year Warranty
- Dimensions: 16.4 ft. X 0.40 in.
- LED/Spool = 300/16.4 ft.
- Weights Only 1.5 lbs
- Watts Per Foot = 4.4W
- Beam Angle = 120°
- IP Rating = IP67

Typical Applications

- Water Feature Lighting
- Outdoor Architectural Lighting
- Outdoor Hospitality Lighting
- Garden Path Illumination
- Landscape Lighting
- Lawn/Tree Installations

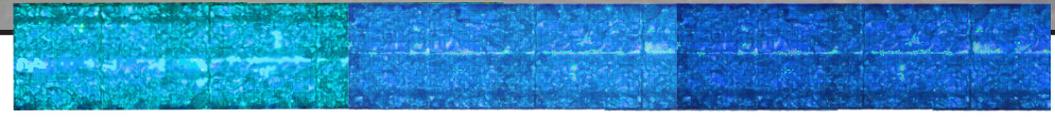
TECHNICAL INFORMATION

LED COLOR	SKU#	TEMP (K)	LED / FT.	LUMENS / FT.	WATTS / FT.	LED TYPE	TOTAL (W)	(CRI) Color Rendering Index	MINIMUM CUT
Warm White	SA-LS-WW-5050-300-IP67-24V	3100°K	18	265 lm	4.4W	SMD 5050	72W	80	3" ¹⁴ in.
Pure White	SA-LS-W-5050-300-IP67-24V	6000°K	18	274 lm	4.4W	SMD 5050	72W	82	3" ¹⁴ in.





West Main @ 19-E
After



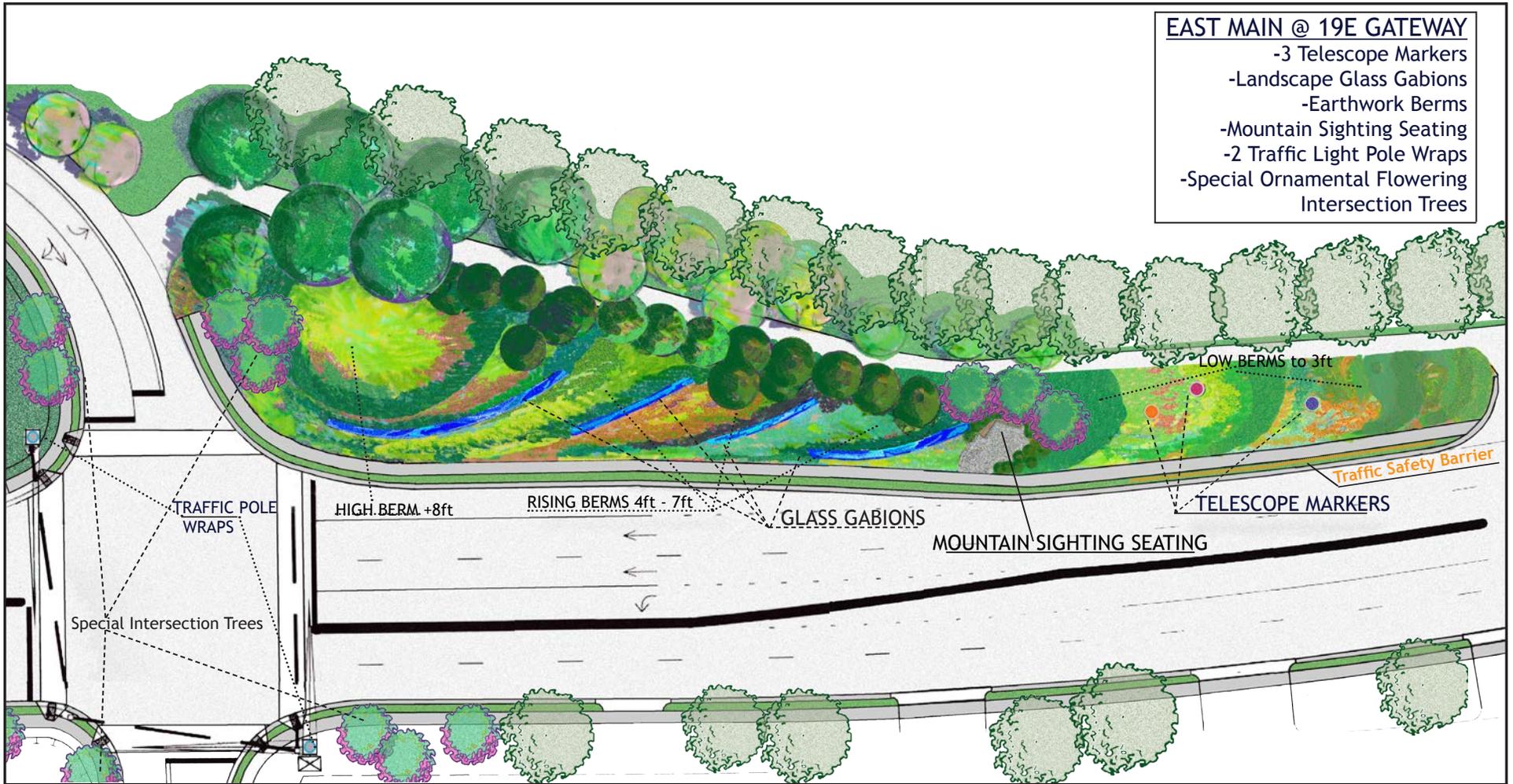
West Main Scope Marker colors drawn from *Appalachian sunsets*
East Main Scope Marker colors drawn from *Appalachian sunrises*
Glass Gabion colors drawn from *Appalachian streams*

East Main @ 19-E to the West
Before



East Main @ 19-E to the West
After

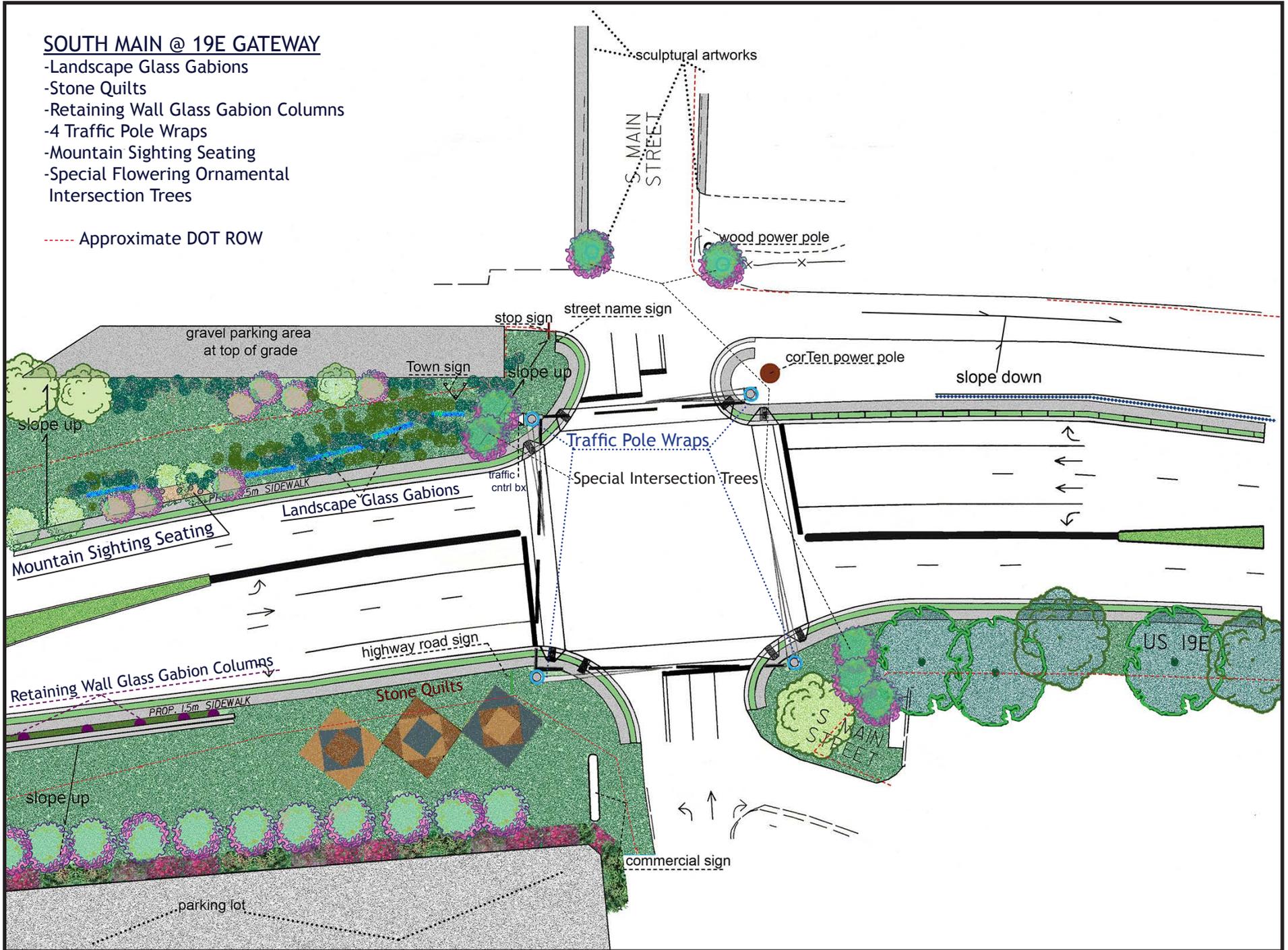




SOUTH MAIN @ 19E GATEWAY

- Landscape Glass Gabions
- Stone Quilts
- Retaining Wall Glass Gabion Columns
- 4 Traffic Pole Wraps
- Mountain Sighting Seating
- Special Flowering Ornamental Intersection Trees

--- Approximate DOT ROW



WEST MAIN @ 19E GATEWAY

- 3 Telescope Markers
- Landscape Glass Gabions
- Mountain Sighting Seating
- Special Flowering Ornamental Intersection Trees



Special Flowering Ornamental Intersection Trees

Rising Landscape Berms

Telescope Markers

Mountain Sighting Seating

Solar Array

NCDOT ROW

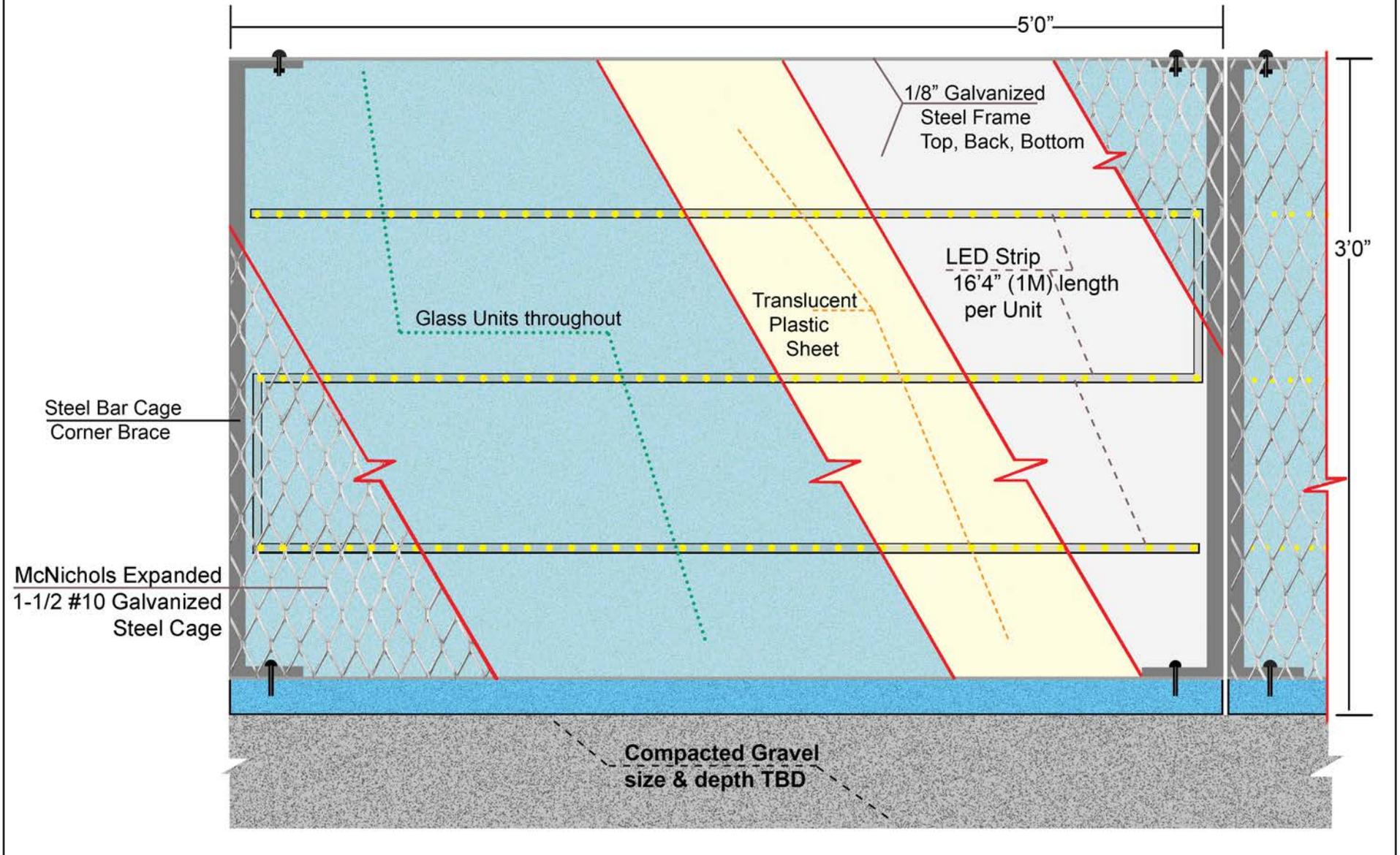
Markers @ 30ft setback

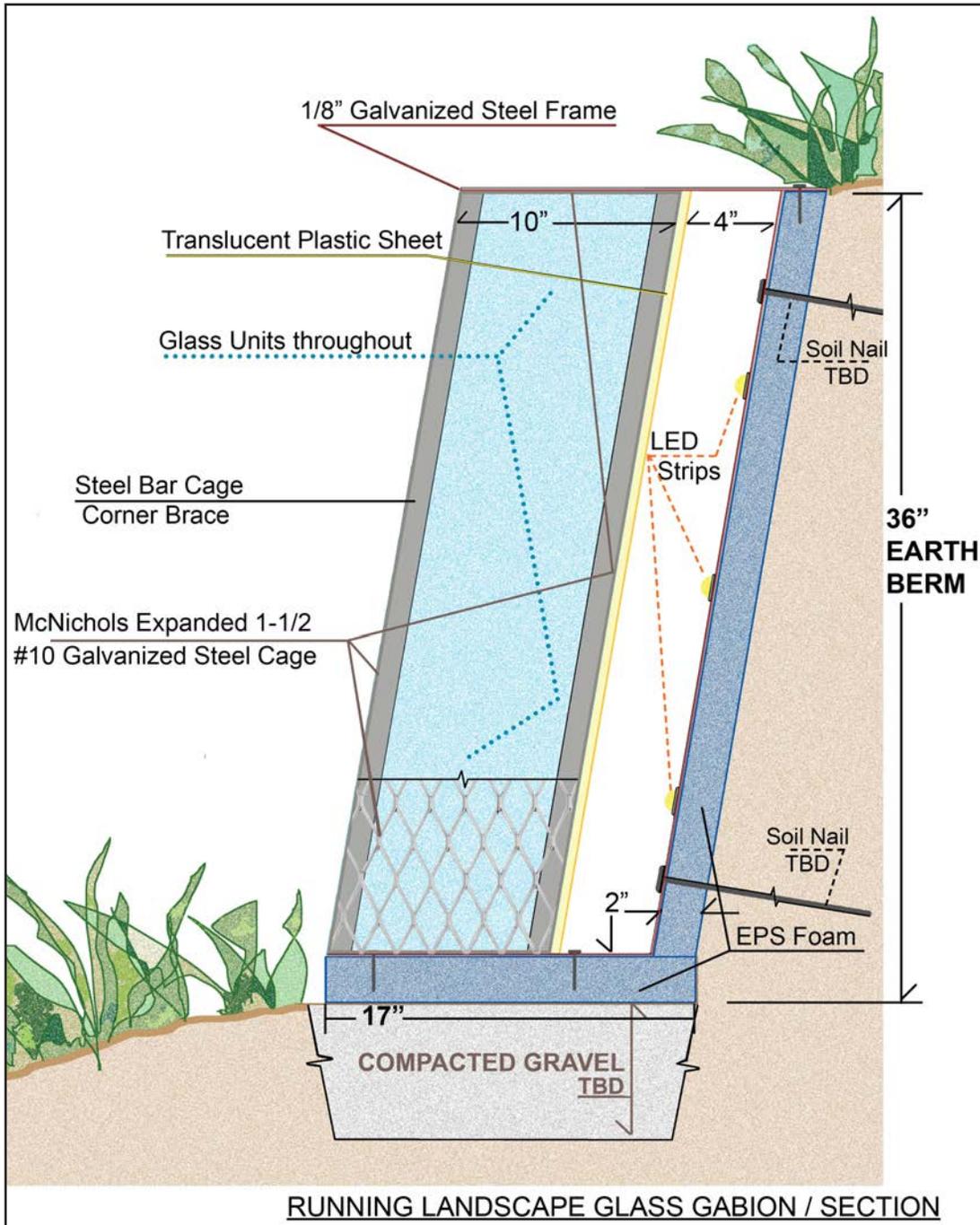
5ft sidewalk

Landscape Glass Gabions

Landscape Lighted Glass Gabion

RUNNING LANDSCAPE GLASS GABION / ELEVATION
TYPICAL 5'0"X3'0" UNIT





NOTE: Landscape glass gabions are sited within the landscape, behind plant materials, and are designed to crush upon impact by automobiles. Specific locations will be determined during Final Design.

South Main Gateway

At this location, the center-point of the Burnsville Scenic By-way, the Gateway takes a different expression and is unlike the East and West Gateways. Here the numerous signs, power and traffic light poles, the large sloping hillside, and "Great Wall" require a combination of ideas to form a whole.

30' X 30' Stone Quilts



Lighted Glass Gabions across wall face

The artistic and landscape elements making this a Gateway include large quilts made with carefully selected and placed native stone, lighted glass gabion columns built onto the south-side retaining wall, flowering and/or fall color vines set between the columns, running landscape gabions on the north side of 19E, and indigenous trees, grasses, and plantings completing this Gateway.

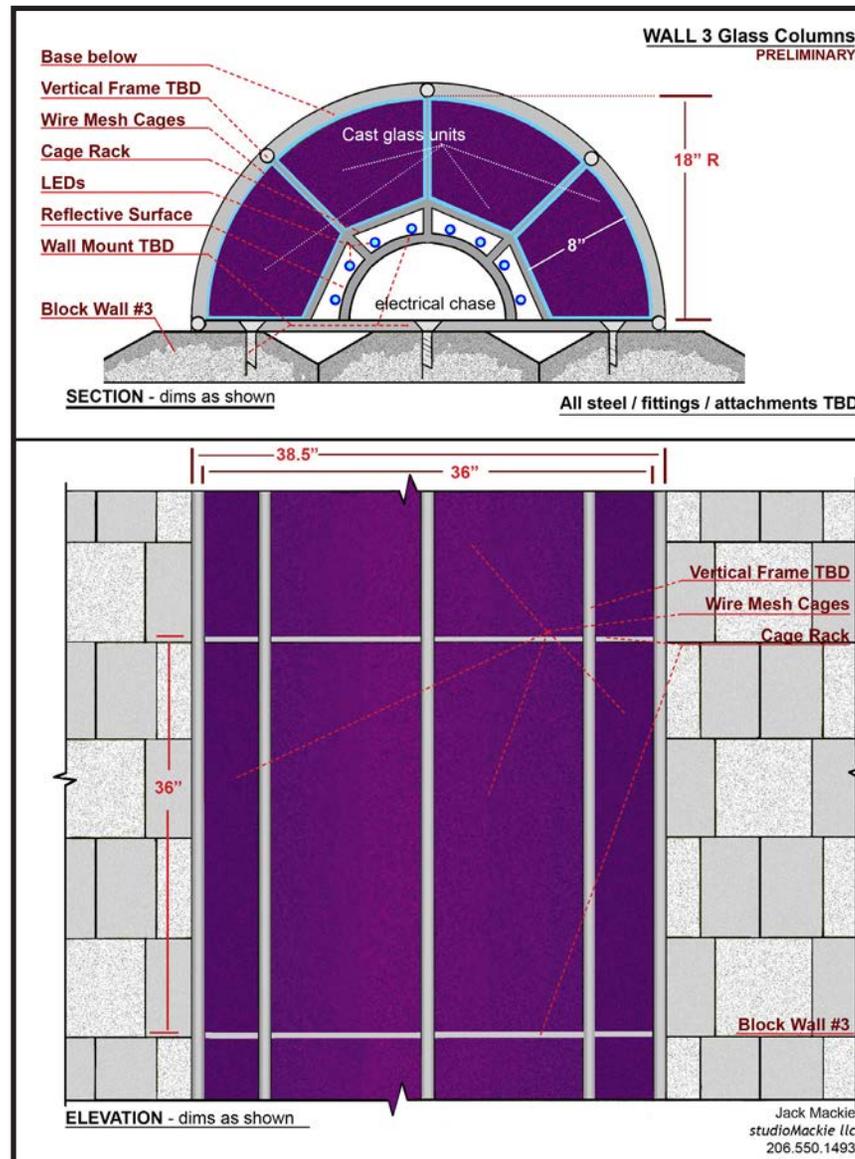
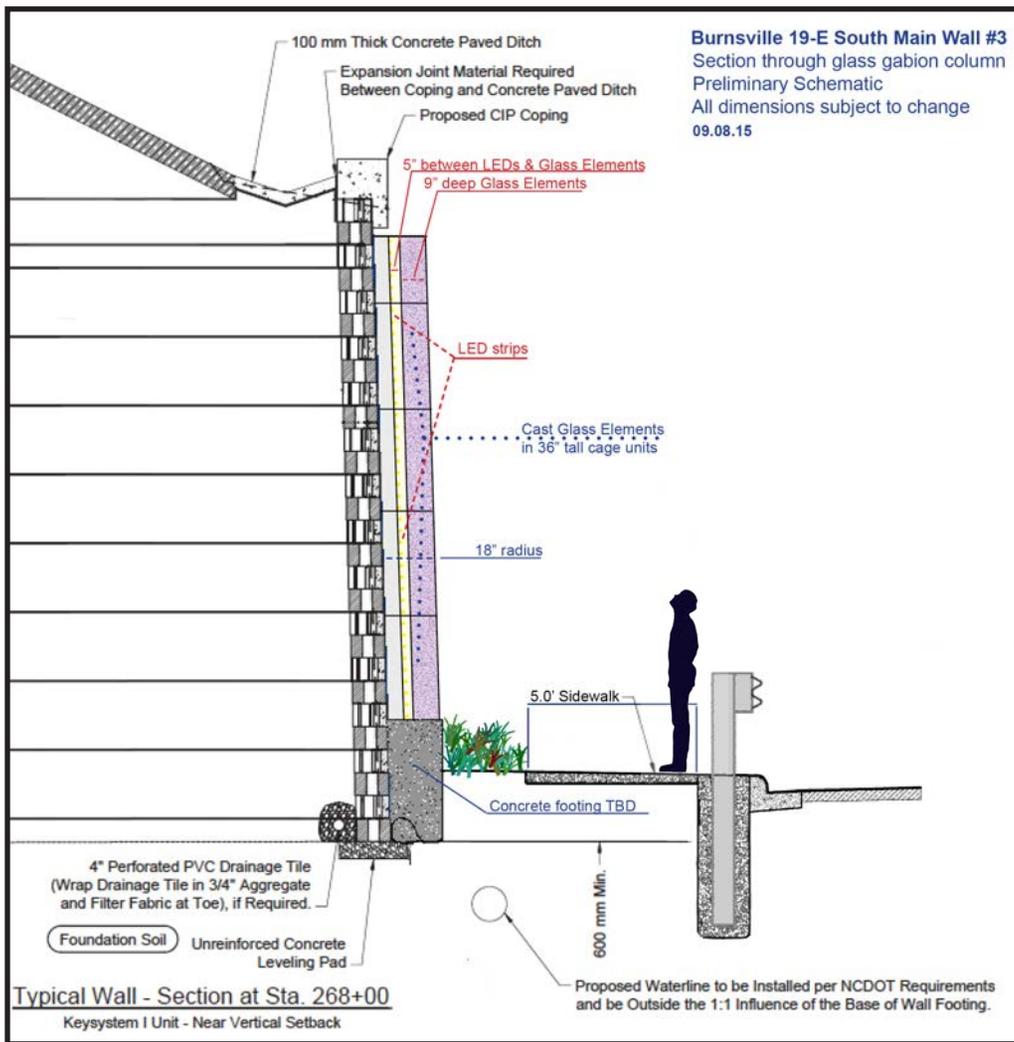


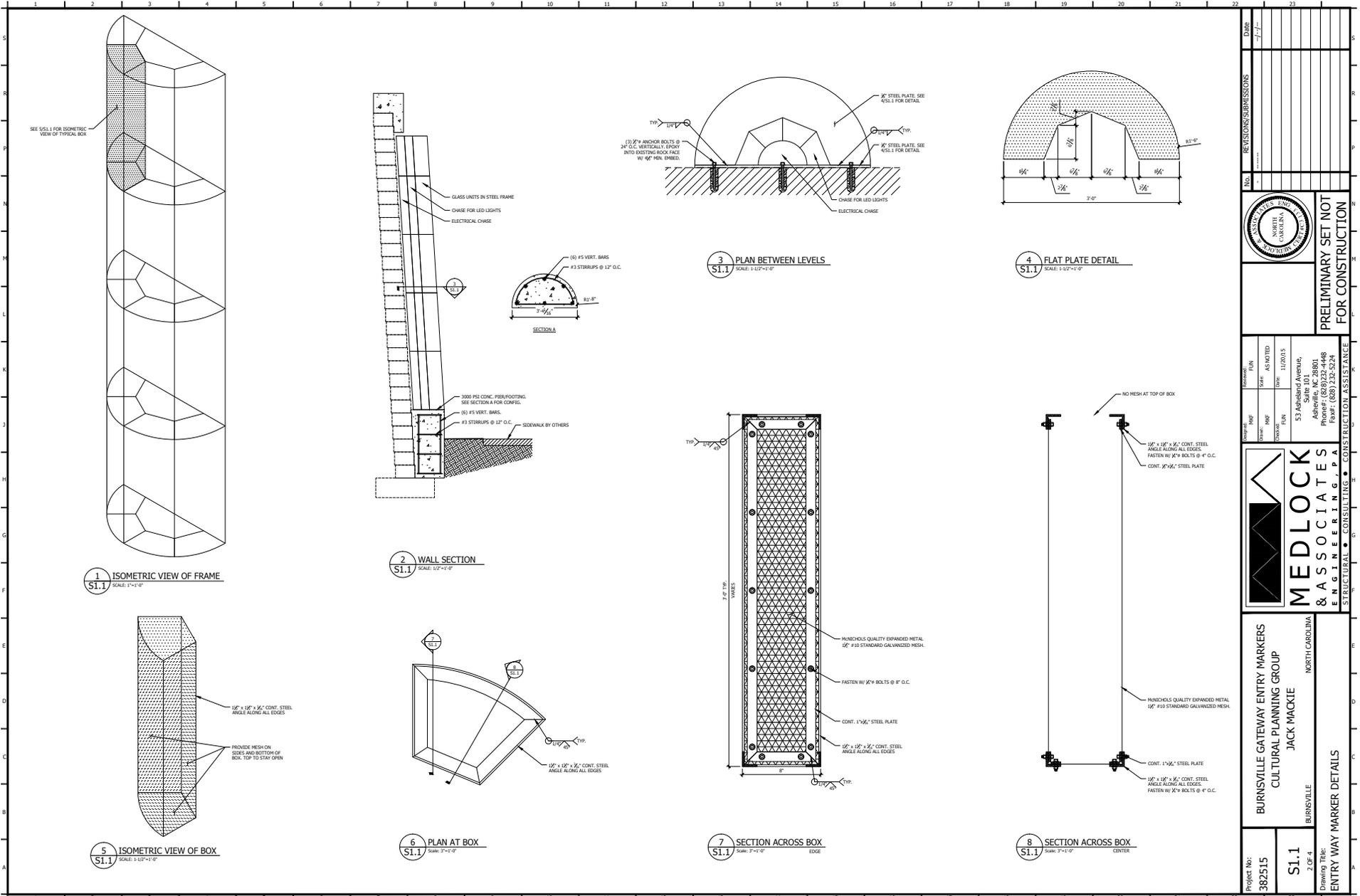


GLASS GABIONS & WALL VINING

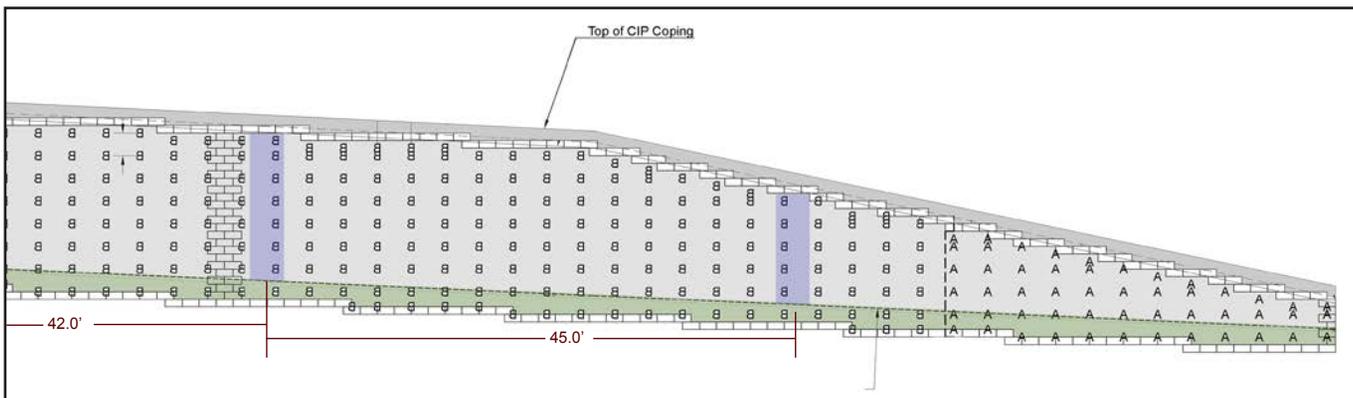
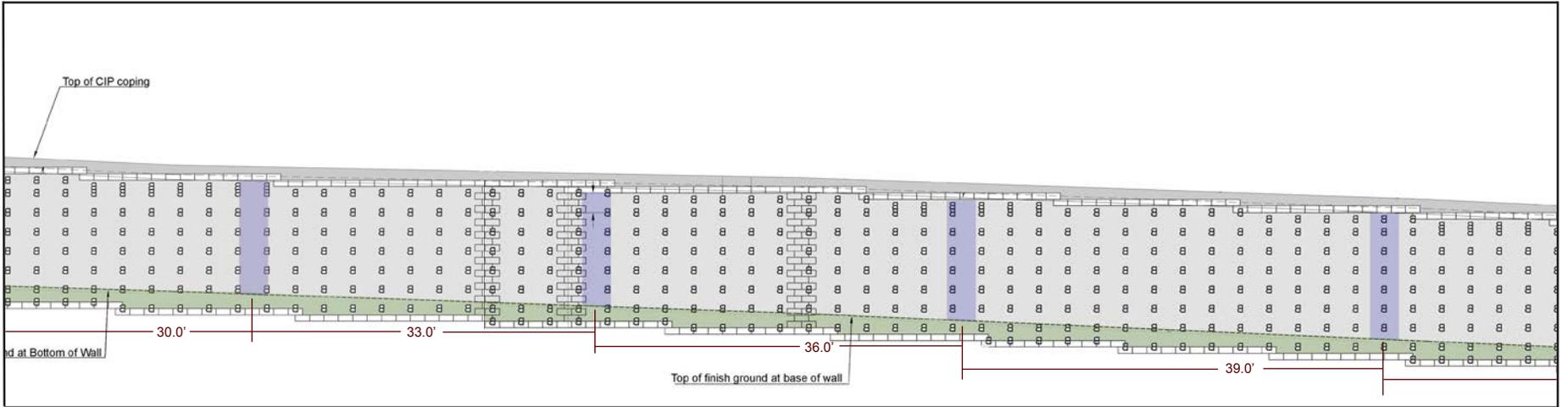
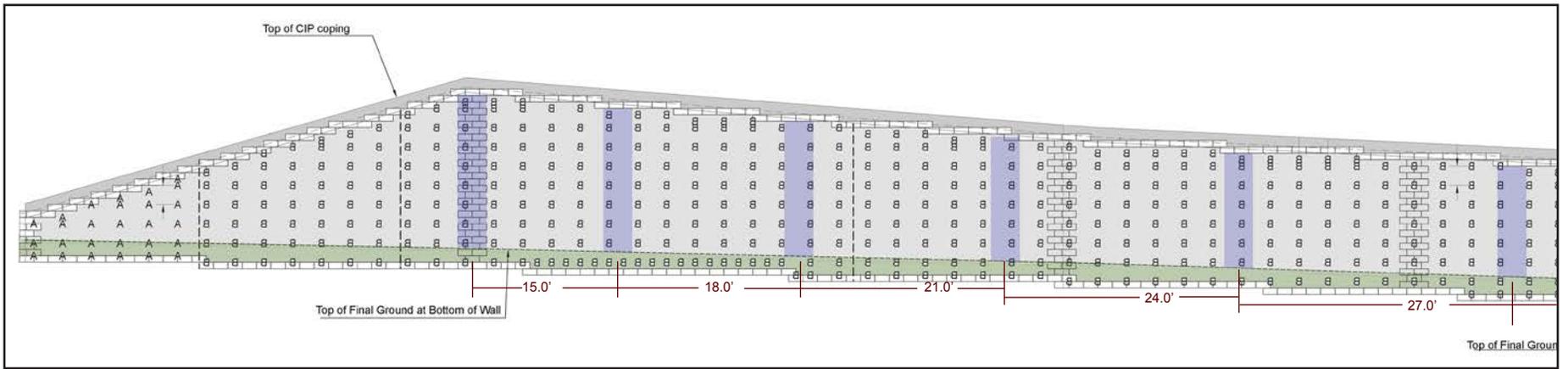
WALL ELEVATION & SECTION

PRELIMINARY SCHEMATIC 090815





DATE: 11/17/15	
REVISIONS/SUBMISSIONS	
PRELIMINARY SET NOT FOR CONSTRUCTION	
PROJECT: BURNVILLE GATEWAY ENTRY MARKERS CLIENT: JACK MACKIE LOCATION: BURNVILLE, NORTH CAROLINA	DRAWING TITLE: ENTRY WAY MARKER DETAILS SHEET: 2 OF 4 PROJECT NO: 382515 DRAWING NO: S1.1
PREPARED BY: JFM CHECKED BY: JFM DATE: 11/02/15	53 Ashland Avenue, Suite 101 Ashboro, NC 27801 Phone: (888) 232-4448 Fax: (888) 232-5224
MEDLOCK & ASSOCIATES ENGINEERS, P.A. STRUCTURAL • CONSULTING • CONSTRUCTION ASSISTANCE	

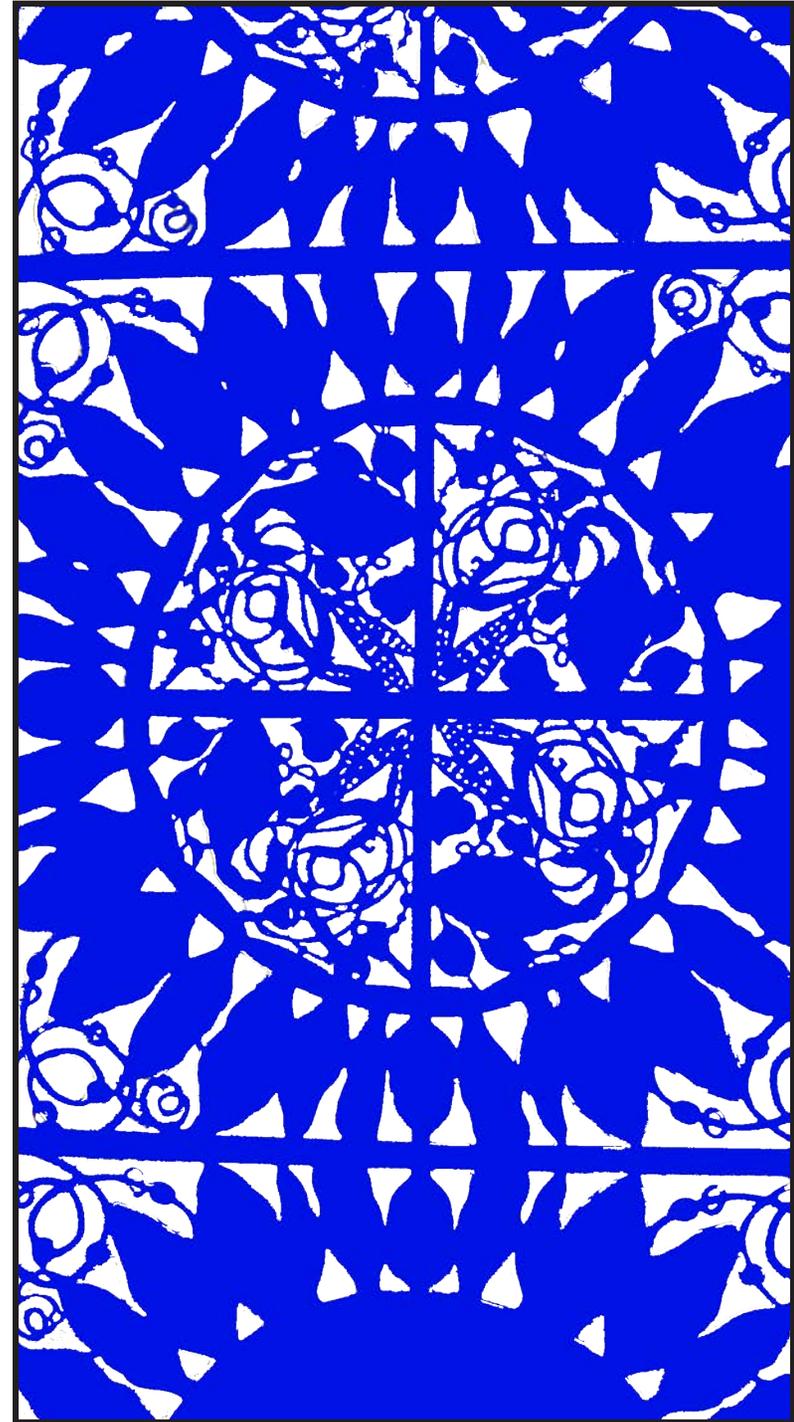


Burnsville 19E Wall 2
 Glass Wall Column Placement
 36" Diameter Columns
 Dimensions as shown

TRAFFIC LIGHT POLE WRAPS

Improvements on Burnsville 19-E include new traffic control lights at three intersection - South Main, Pensacola Road, and East Main. Each intersection will have four silver galvanized poles located on each of the four corners with traffic lights on over-road extended arms and WALK - DON'T WALK signals.

As a part of the *Endless Gate* sequencing, a regional artist will be commissioned to create "*Pole Wraps*," sleeves made from panels of light-weight steel. These steel sheets will be water-jet or laser-cut to reveal artist-designed images or patterns drawn from the vast array of flora and fauna in the mountains surrounding Burnsville - the patterns of wind rushing across an open field, images derived from the intricate design of native plant seed pods, the fine texture seen in the antennae of a Luna moth, the water running in the Toe. The artist's panels are then rolled to match the pole circumference, painted or powder-coated per the artist's specification, and mounted to the base of the traffic light pole. These poles can be installed as stand-alone artworks with three placed on South Main between 19E and the Town Square.

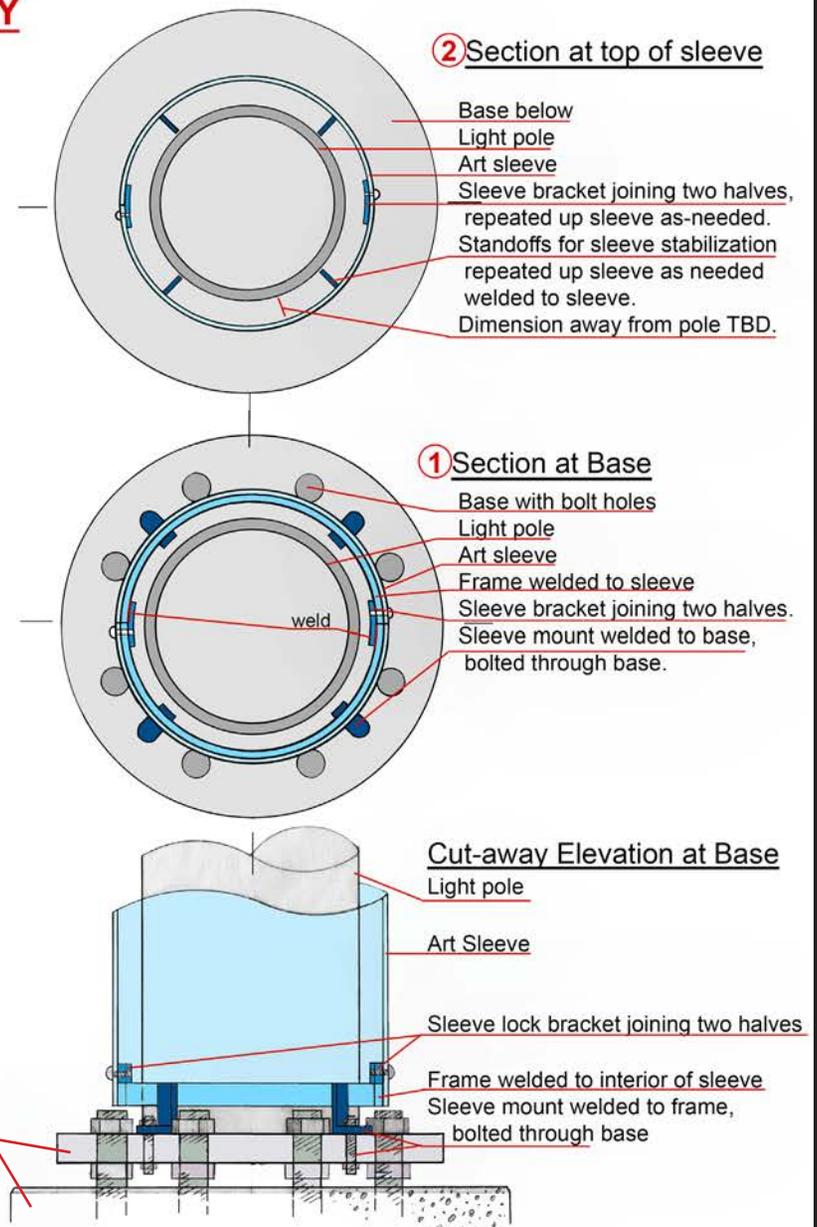
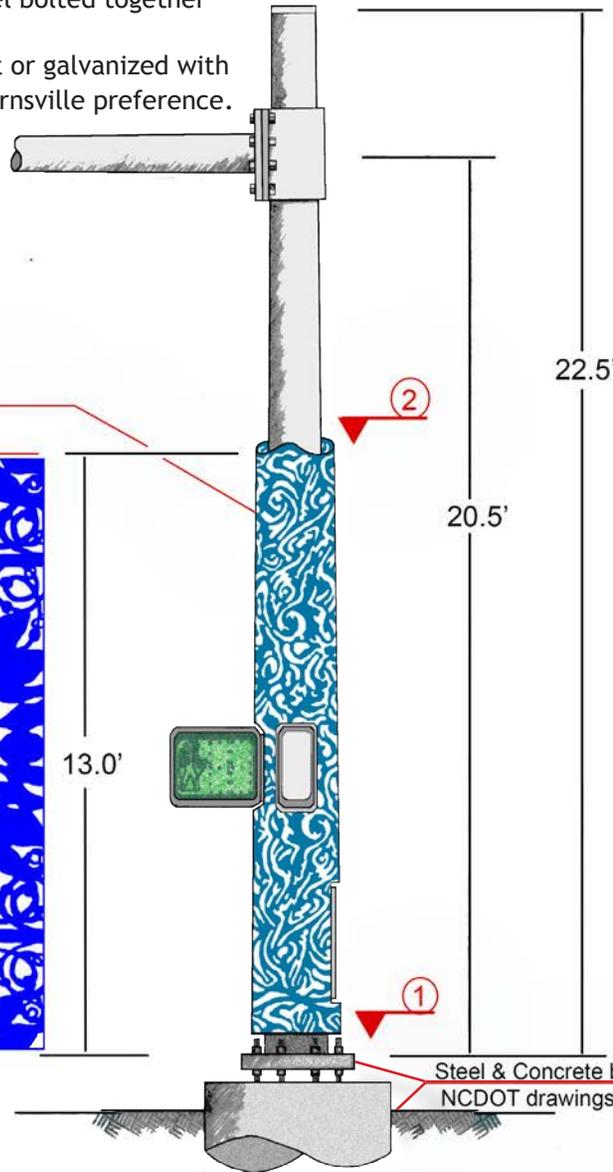
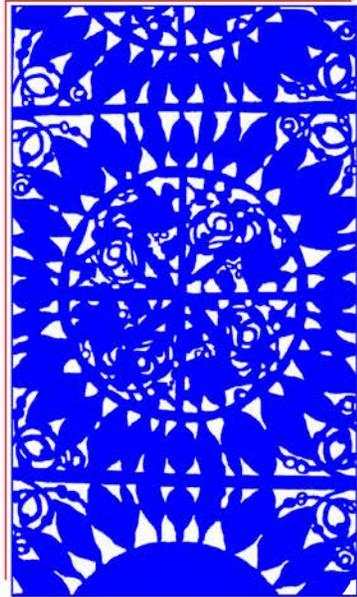


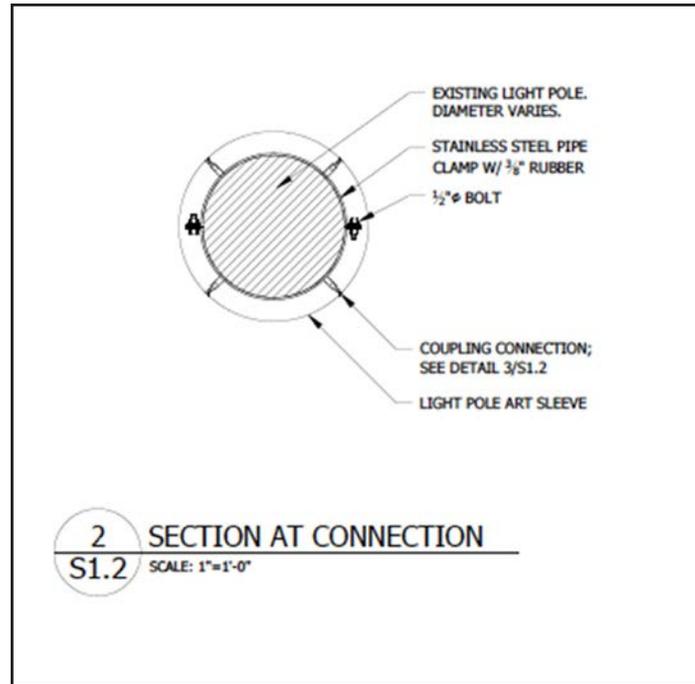
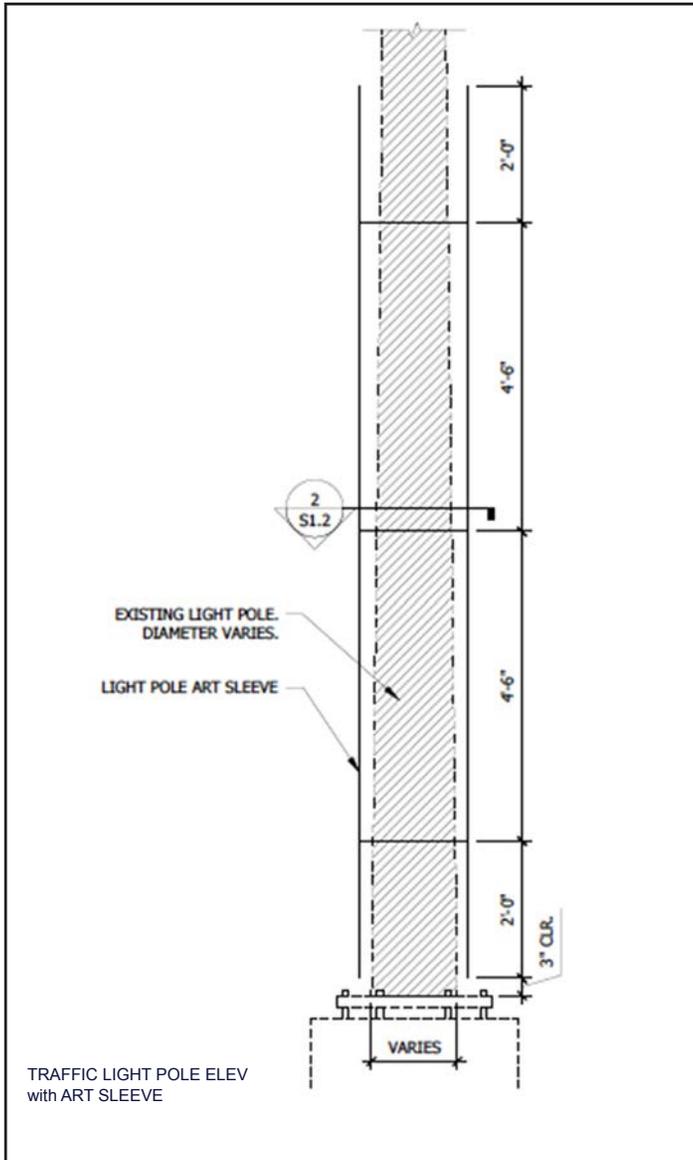
Burnsville NCDOT Light Pole Sleeves

Two pieces - 3/16" mild steel bolted together around pole.
Waterjet cut or powder-coat or galvanized with enamel paint per NCDOT/Burnsville preference.

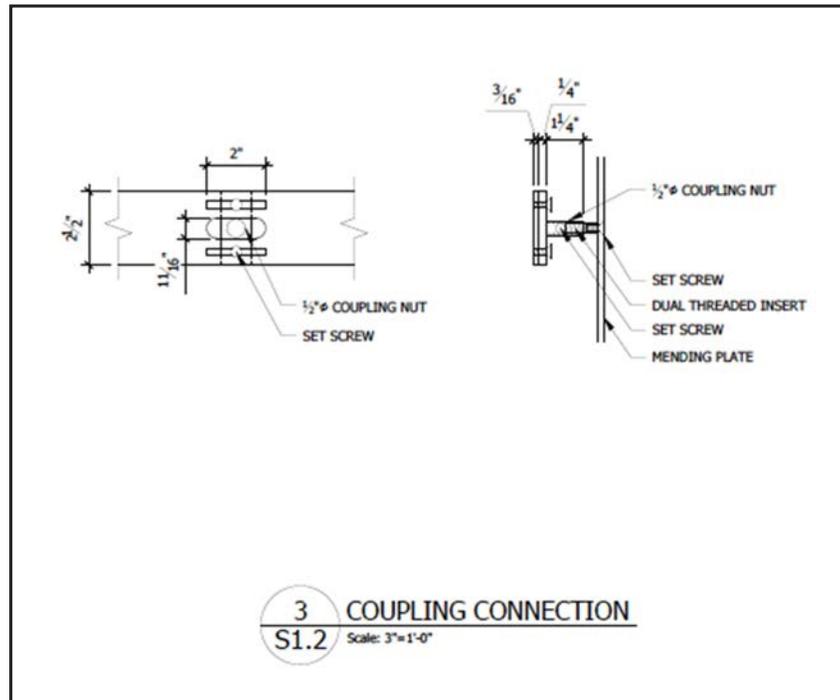
CONCEPT STUDY

Light Pole Art Sleeve
images shown as examples only





TRAFFIC LIGHT POLE ART SLEEVES
WATER-JET CUT STEEL
 Details by Medlock & Associates Engineers
NOTE: Artwork attachment by strap is selected due to all traffic light poles having differing diameters and tapers.





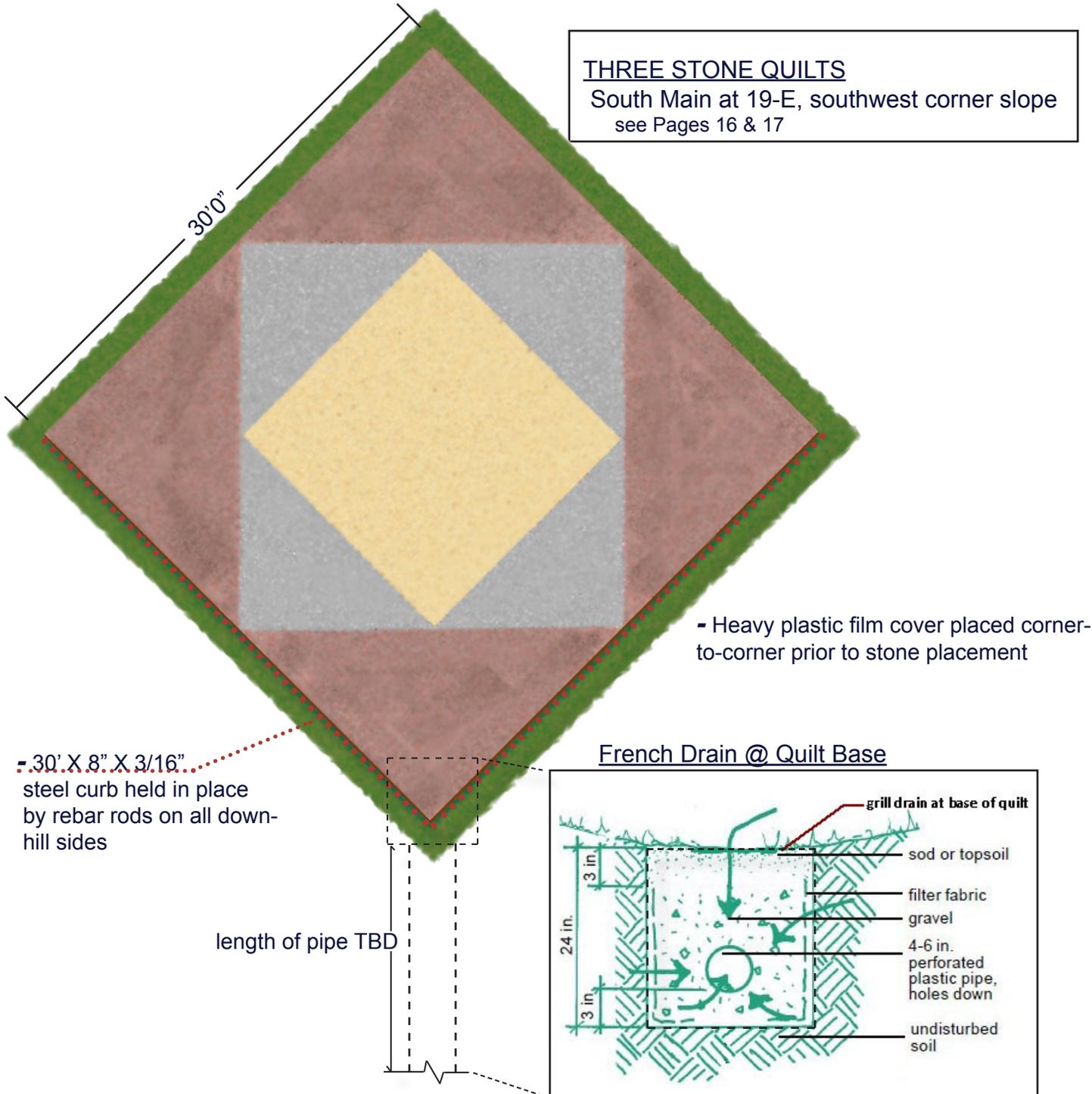
Rosa Patio



Sandalwood



Dove Gray



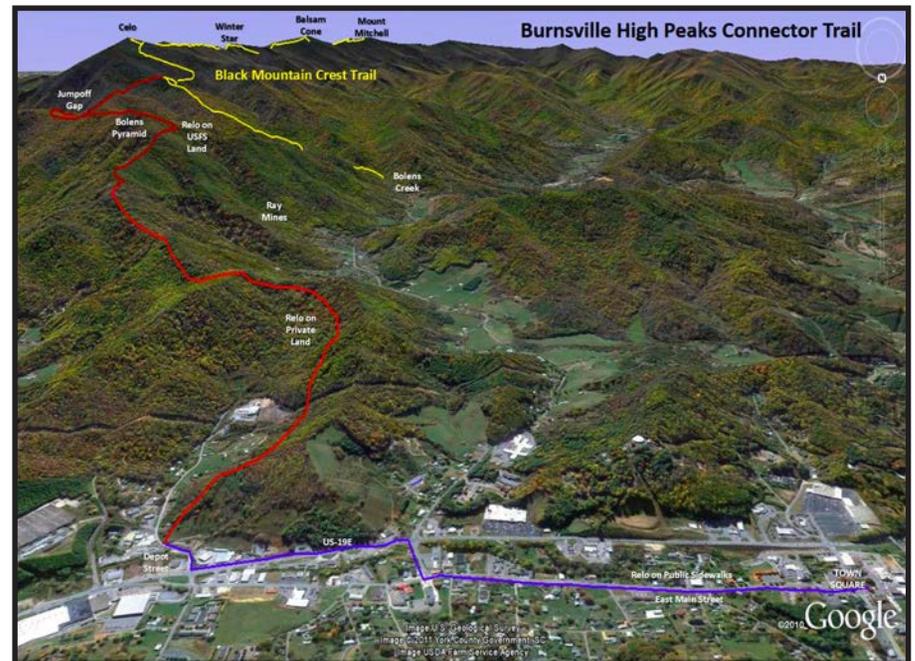
MOUNTAIN SIGHTING SEATINGS

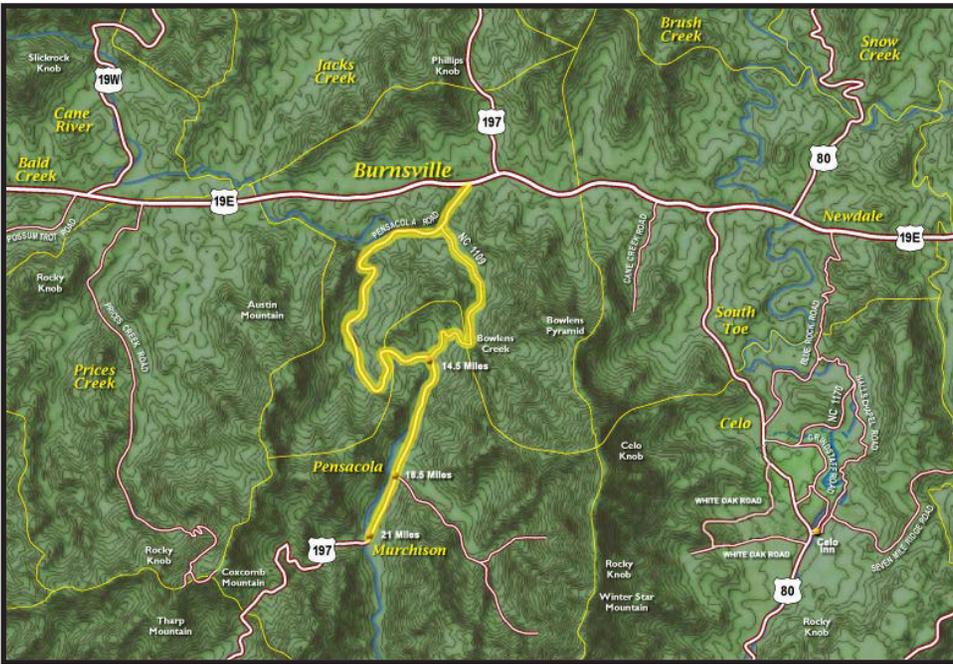
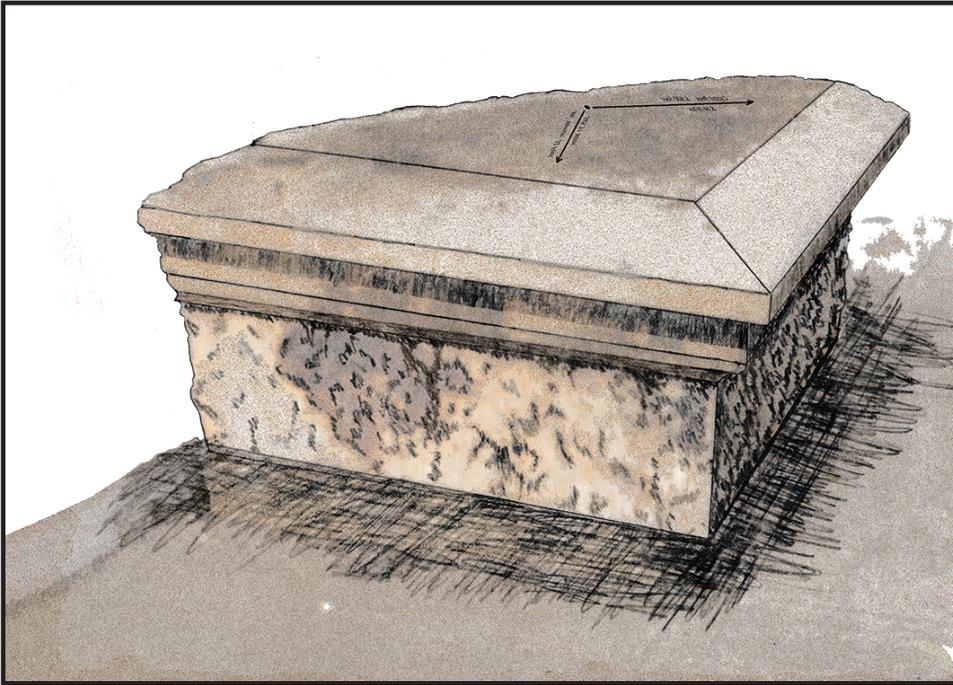
Healthy Yancey has designated the Town Square as the heart and starting point of their regional Walking Trails. From the Square, walkers will take mapped short walks, long walks, short day hikes, and longer hikes that will take a hiker to the Mt. Mitchell and beyond. Many of these trails make use of the new sidewalks along Highway 19-E where new landscaping will provide summer shade.

To further support walkers and hikers, artists will be commissioned to create carved stone benches as resting points along the walks. These benches could all be made by one artist or the Town can engage a number of regional artists to sculpt the benches. The only bench prerequisite is that they provide comfortable seating for two people and carry marks pointing to the nearby and foreign mountains.

These sculptures, the *Mountain Sighting Seatings*, will be set alongside the sidewalk trails offering a place meet others in your walking / hiking group or just to have a seat provided by Burnsville's Public Art Program. Each bench will hold the name, height from sea-level, and distance from Burnsville (as a crow might fly) of a local mountain, many of them the highest peaks east of the Mississippi River - Mt. Mitchell, Mt. Craig, Balsam Cone, Cattail Peak and Mount Gibbes - paired with one of the 7 tallest mountains on Earth's 7 continents, all members of the family of global peaks which include those close by in Burnsville's neighborhood.

Mt. Mitchell	6,684 ft	10.75 miles from Burnsville
Mt. Everest	29,028 ft	7,974.93 miles from Burnsville
Mt. Craig	6,647 ft	9.91 miles from Burnsville
Mt. Kilimanjaro	19,341 ft	7,993.42 miles from Burnsville
Cattail Peak	6,600 ft	8.66 miles from Burnsville
Vinson Massif	16,066 ft	7,917.27 miles from Burnsville
Balsam Cone	6,611 ft	345.51 miles from Burnsville
Mt. Aconcagua	13,793 ft	4,809.40 miles from Burnsville
Clingman's Peak	6,557 ft	12.63 miles from Burnsville
Mt. Kosciuszko	7,310 ft	9,661.12 miles from Burnsville

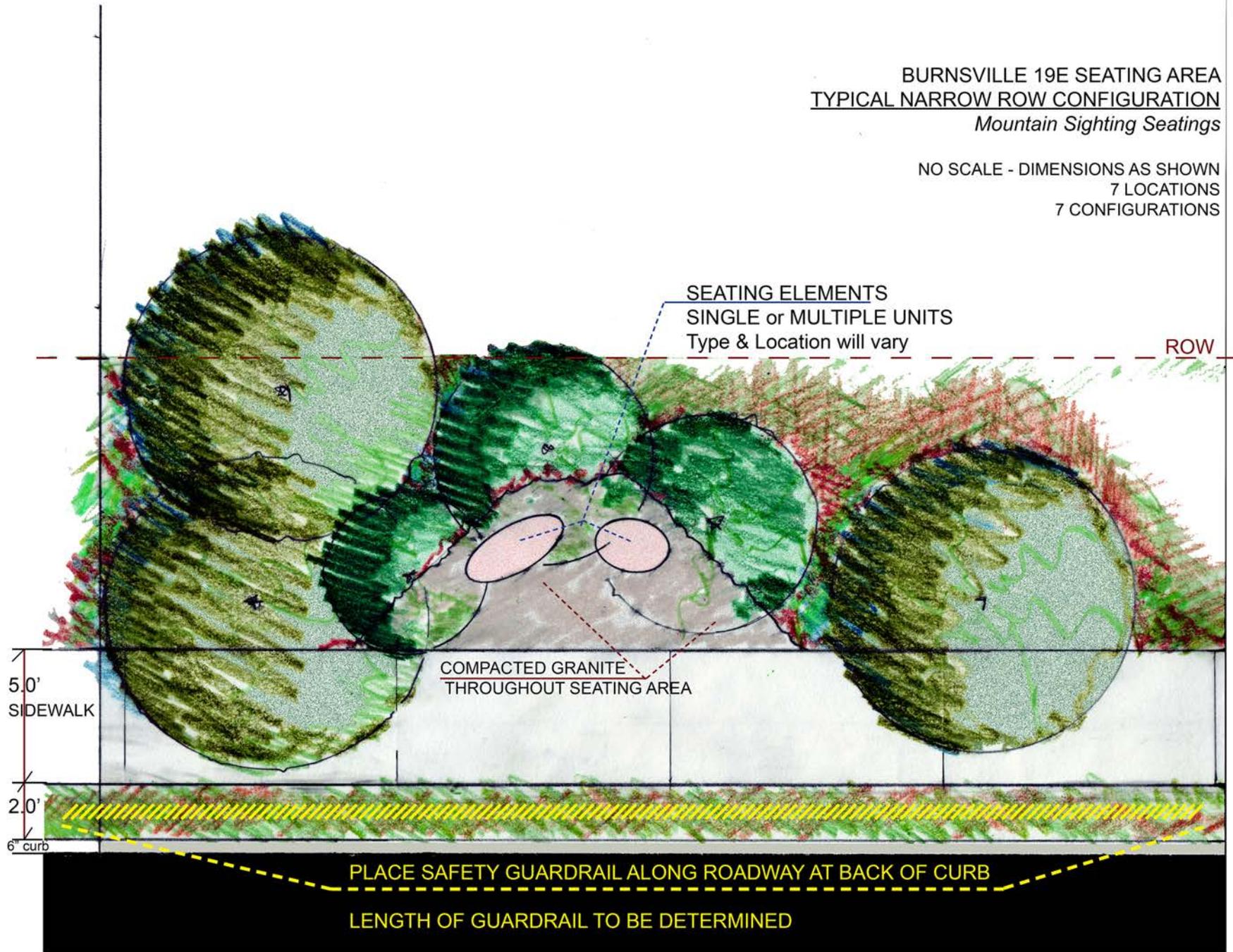




BURNSVILLE 19E SEATING AREA
TYPICAL NARROW ROW CONFIGURATION

Mountain Sighting Seatings

NO SCALE - DIMENSIONS AS SHOWN
7 LOCATIONS
7 CONFIGURATIONS



BURNSVILLE 19E SEATING AREA
TYPICAL WIDE ROW CONFIGURATION
Mountain Sighting Seatings

NO SCALE - DIMENSIONS AS SHOWN
7 LOCATIONS
7 CONFIGURATIONS

ROW

SEATING ELEMENTS
SINGLE or MULTIPLE UNITS
Type & Location will vary

COMPACTED GRANITE
THROUGHOUT SEATING AREA

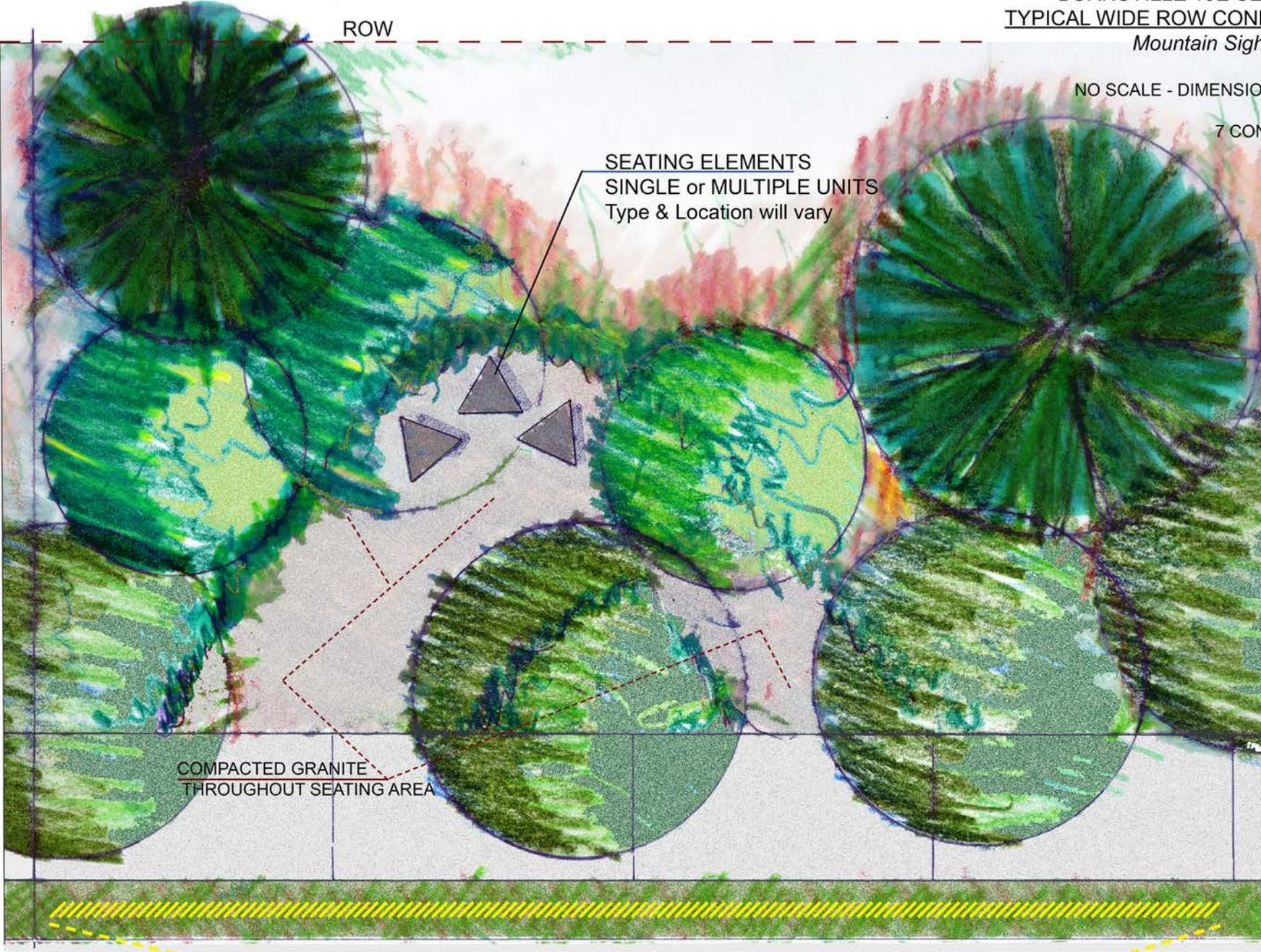
5.0'
SIDEWALK

2.0'

6" curb

PLACE SAFETY GUARDRAIL ALONG ROADWAY AT BACK OF CURB

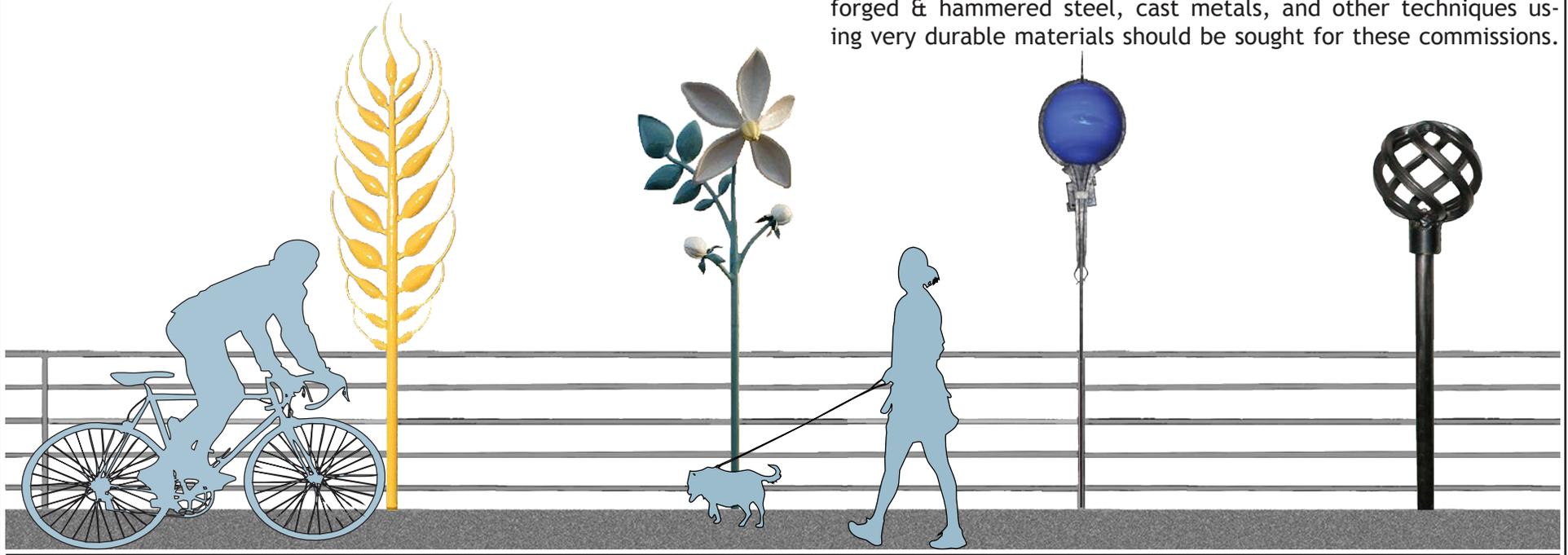
LENGTH OF GUARDRAIL TO BE DETERMINED



PHASE II

Safety Railing Sculptural Inserts Traffic Control Box Wraps

North Carolina DOT will be placing a “5-Bar Railing” along 2500+ feet of the new 19E roadway. Opportunity is presented to commission artists to create sculptural artworks to be attached to the rail posts as simple retrofits. The railing length suggests the possibility of having numerous artists involved. Artists working in forged & hammered steel, cast metals, and other techniques using very durable materials should be sought for these commissions.



Traffic Control Boxes located at each signalized intersection (three) will be wrapped with artists’ designs using “bus wrap” vinyl sign material. This technology is affordable, highly vandal resistant, and will be applied / maintained by the contracted sign company.



South Main at Highway 19E



Quilt Cover, Ketchum Idaho



Compass Flower Cover, Ft. Worth Texas

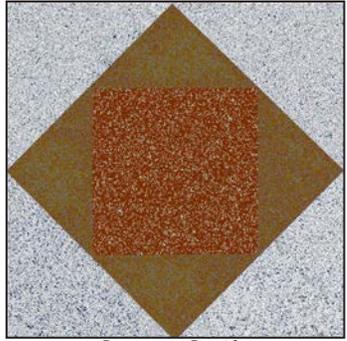
BURNSVILLE HIGHWAY 19E PUBLIC ART ELEMENTS



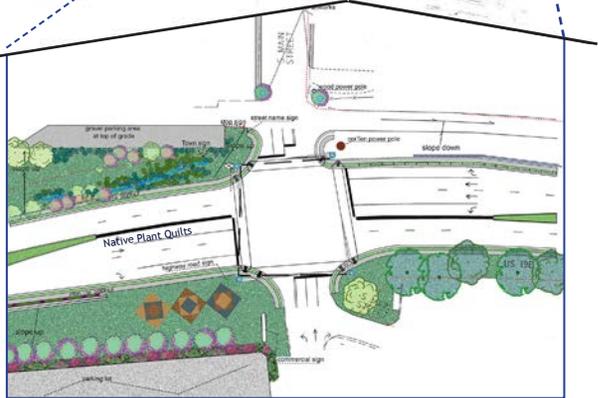
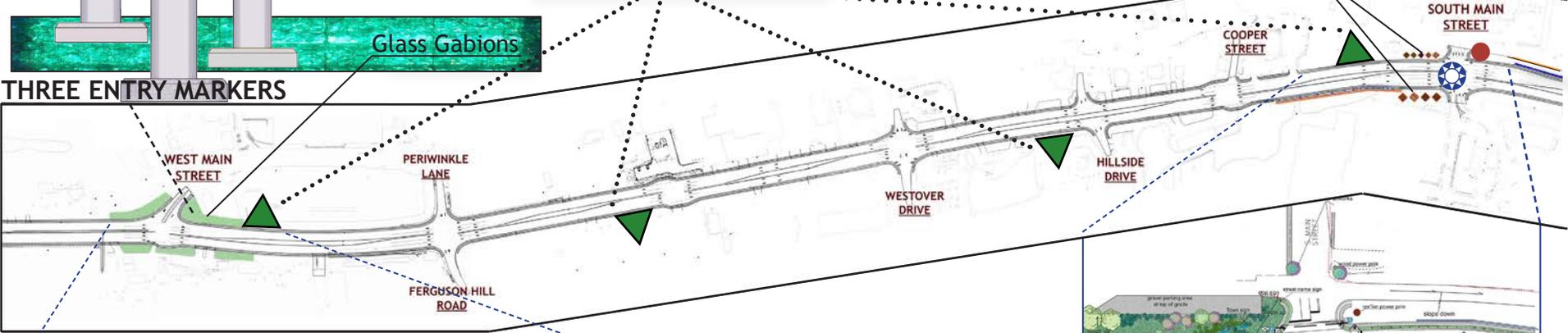
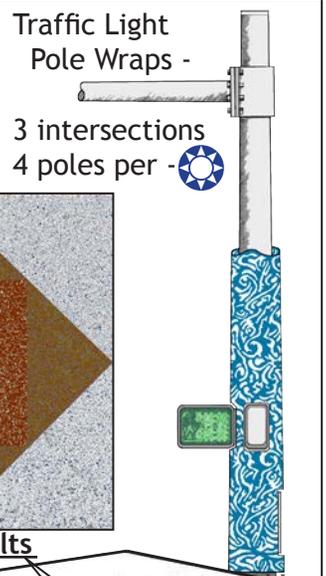
THREE ENTRY MARKERS



Mountain Sighting Seatings

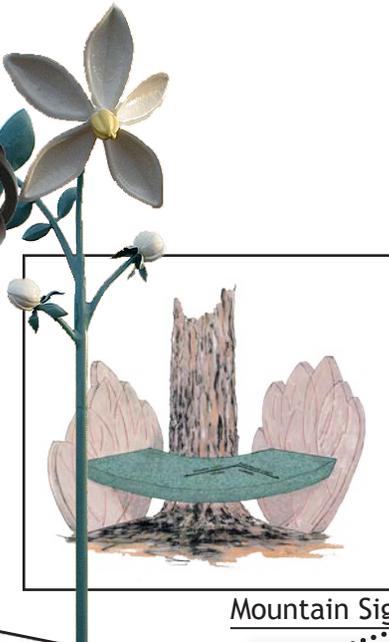


Stone Quilts

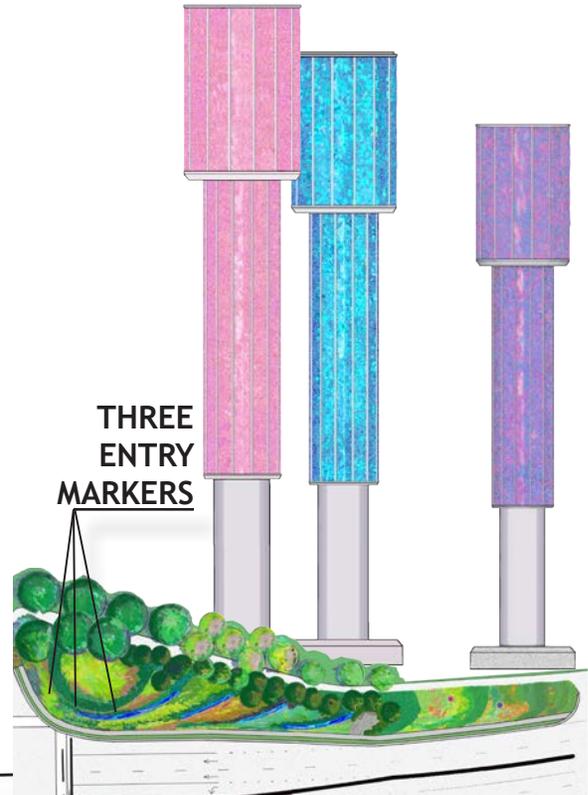
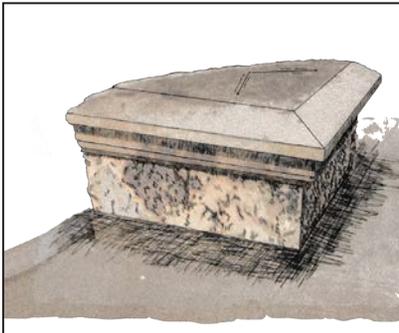




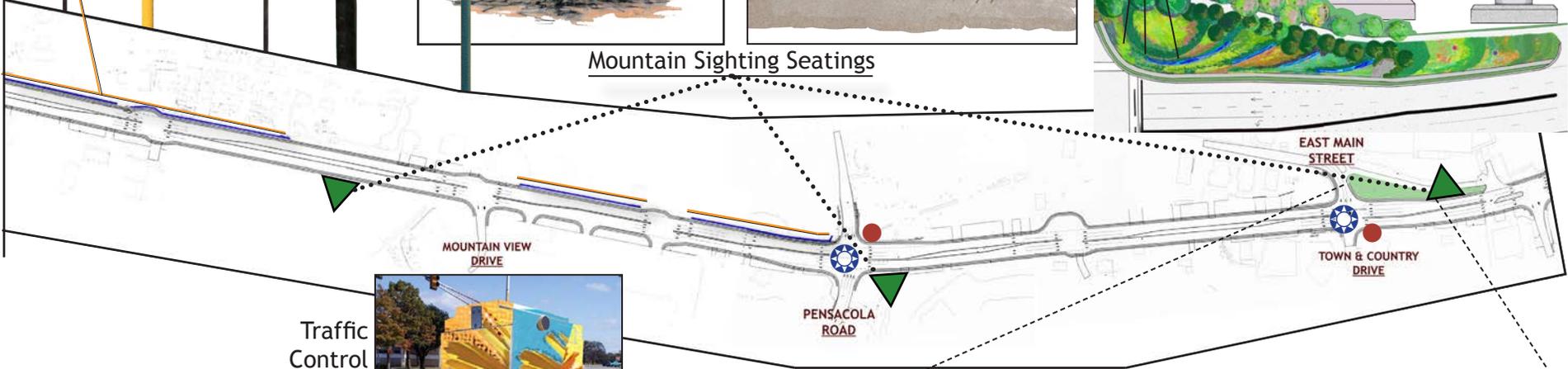
Safety Rail Enhancements



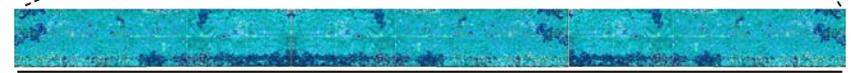
Mountain Sighting Seatings



THREE ENTRY MARKERS



Traffic Control Box Wraps
3 intersections
● 1 box per



GLASS GABIONS