ROADWAY BEAUTIFICATION
PLAN ELEMENTS AND DESIGN STANDARDS

The goal of these plan elements and design standards is to provide for a feasible, economical, safe, more pedestrian friendly and aesthetically pleasing roadway system for the residents and motorists. These elements and standards are to be guides for preparing the final design and installation plans.

The Beautification M.S.T.U. Advisory Committee and the Collier County Government will need to continue in their public/private partnership in the planning, funding, design and maintenance of future M.S.T.U. roadway beautification projects. It is recommended that in the final design phase of future projects that a Florida Registered Landscape Architect be involved in the process.

The following will be a list of items to be considered and/or incorporated into final design plans:

Community colors

The community colors are to be forest green and cream. The forest green is to be equivalent to Tiger Drylac® powder coating color Ral 6016 and the cream equivalent to Sherman Williams exterior Gentry cream SW2332. The community colors are to be utilized singularly or in combination on site furnishing and fixtures such as benches, traffic control signage and decorative light fixtures.

Sight Distance Diagrams

These diagrams show the required sight distances for landscaping in medians at median crossover locations and at roadway intersections (See Figure 25)

Sight Window Diagrams

These diagrams or details show the required vertical sight window area that must be kept clear of foliage that can block a motorists view (See Figure 26).

Pedestrian / Bicycle Pathway Facilities

On many of the M.S.T.U. roadways, the pathway facilities are non-existent or are not continuous along the roadways. Refer to the Pedestrian/Bicycle Facilities Map for location of existing and proposed facilities within the M.S.T.U. roadway corridors.

The installation of proposed pathway facilities should be planned and be included in future roadway beautification projects. Coordination with the Naples (Collier County) Metropolitan Planning Organization Pathways Work Program and Advisory Committee will provide assistance and possible funding for pathways. Several of the M.S.T.U. roadways are shown in the FY 95/96 to FY 99/00 pathway work program (See Appendix E). This should be updated annually.

Pathways Facility Design Standards:

Due to the large amount of lineal feet and overall lack of facilities within the M.S.T.U. roadways it is recommended to use asphalt type facilities. The implementation of the "Uncurbed Roads /In-road Pathways Pavement Concepts" (See Figure 23 & 24), would shorten the time frame of installation. Installation should be incorporated, budgeted and scheduled with Collier County road resurfacing plans and schedules.

The minimum width of a one way pedestrian/bicycle facility concrete or asphalt should be 4.5 feet. The minimum width of a two way asphalt or concrete facility should be 8 feet.

Pedestrian Crosswalk Marking

All pedestrian crosswalk locations should be designated with the international pattern of alternating white bars running parallel with the roadway (See Figure 27).

Curbing

Median curbing shall be concrete (6) six vertical face Type "F" or "D" curb per F.D.O.T "Roadway and Traffic Design Standards" Index #300, 01/95 or the most current edition.

Decorative Paving

Medians 6 feet or under in width, concrete separators, and medians adjacent to turn lane stack areas shall be paved with decorative concrete interlocking pavers (See Figure 28). The paver pattern shall simulate a cobblestone pattern made up of a mix of three different paver sizes. The colors shall be dark emerald green and cream. The percentage ratio for each paver color shall be one third. The pavers shall be equivalent to Krehling Industries, Inc.'s Kobblestone interlocking pavers consisting of in 1/3 Dark emerald #80, 1/3 Green #79 and 1/3 Creme II #56 or approved equal.

Roadway and Pedestrian Decorative Lighting

The roadway lighting shall consist of green aggregate concrete poles with twin or single green colored fixtures and arms. The concrete shall be colored emerald green to match the decorative paver color. The poles shall be octagon in shaped and be direct burial and/or anchor based type poles. In order to maintain the F.D.O.T. minimum average light levels of 1.3 foot candles along the road the fixtures will need to be 200 to 220 feet on center.

Pole: Amerson Contemporary series green exposed aggregate round pole anchor based or embedded, topped with a single or double 6 foot fixture arm, color forest green.

Fixture: Lumec-Schreder Helios series H.B.M., forest green color.

The pedestrian lighting shall be a decorative pedestrian scaled pole and fixture. The color shall be one or a combination of the community colors. These fixtures are to be located at major intersection corners and pedestrian crosswalks (See Figure 27). These fixtures are to provide daytime accent and nighttime safety lighting.

Pole: Lumec, Inc. RS61A-16, 16 foot ht. pole with base cover or approved equal.

Fixture: Lumec, Inc. #175SMH-DMS30R1-QTA4-1A-RSV8094A-AM6F-16-GN-TX or approved equal.

Soil Analysis and Preparation

Prior to planning and design of any future projects it is recommended that test borings be performed in the road medians.

The existing soil within the medians shall be removed to a depth of 8 to 12 inches minimum; or to a depth to remove any limestone or construction debris. The areas shall then be filled with a specified soil mix or with a local clean sandy loam top soil. The ph level of the soil should be within the ranges of 5.5 to 6.8. If local top soils are used or existing soil is to be amended, it is recommended that 25 to 50 percent by volume of sewage sludge be incorporated into the soil. The Collier County Wastewater Treatment Facilities produce, and can provide, the sewage sludge. Water management polymers and wetting agents should be incorporated in the soil per manufacturers specifications.

Site Furnishings and Fixtures

Benches: Wausau Tile™ Model TF5047 with forest green concrete supports and cream colored recycled plastic seats and backing or approved equal.

Trash receptacles: Wausau Tile™ precast Model A, TF1205, cream weatherstone finish with forest green plastic arch lid or approved equal.

Bike Rack: Six cycle tubular loop rack with in ground mount. The color shall be forest green.

Street Identity and Traffic Control Signage

Typical existing standard metal roadway street name or traffic control signs shall be mounted on a wood backing and then framed and mounted on a decorative post system. The posts and frames shall be cream colored and the bands and sign backing or highlighted objects shall be forest green. The support posts for all stop signs, large traffic control or informational and street identity signs or combination of shall be a 6" x 6" square post (See Figure 31).

Landscape Sight Distance and Sight Windows

The landscape plantings must comply with the sight distance and sight window details (See Figures 25 and 26). These details graphically depict the clear sight requirements as set forth in Collier County Ordinance 93-64 and the "Construction Standards Handbook for Work Within The Public Right-of-Way". The details establish minimum tree setbacks, clear sight zones, and plant and canopy height requirements. Limit of clear sight zones shall be increased or adjusted at horizontal curve locations so to provide for the greatest clear sight zone possible.

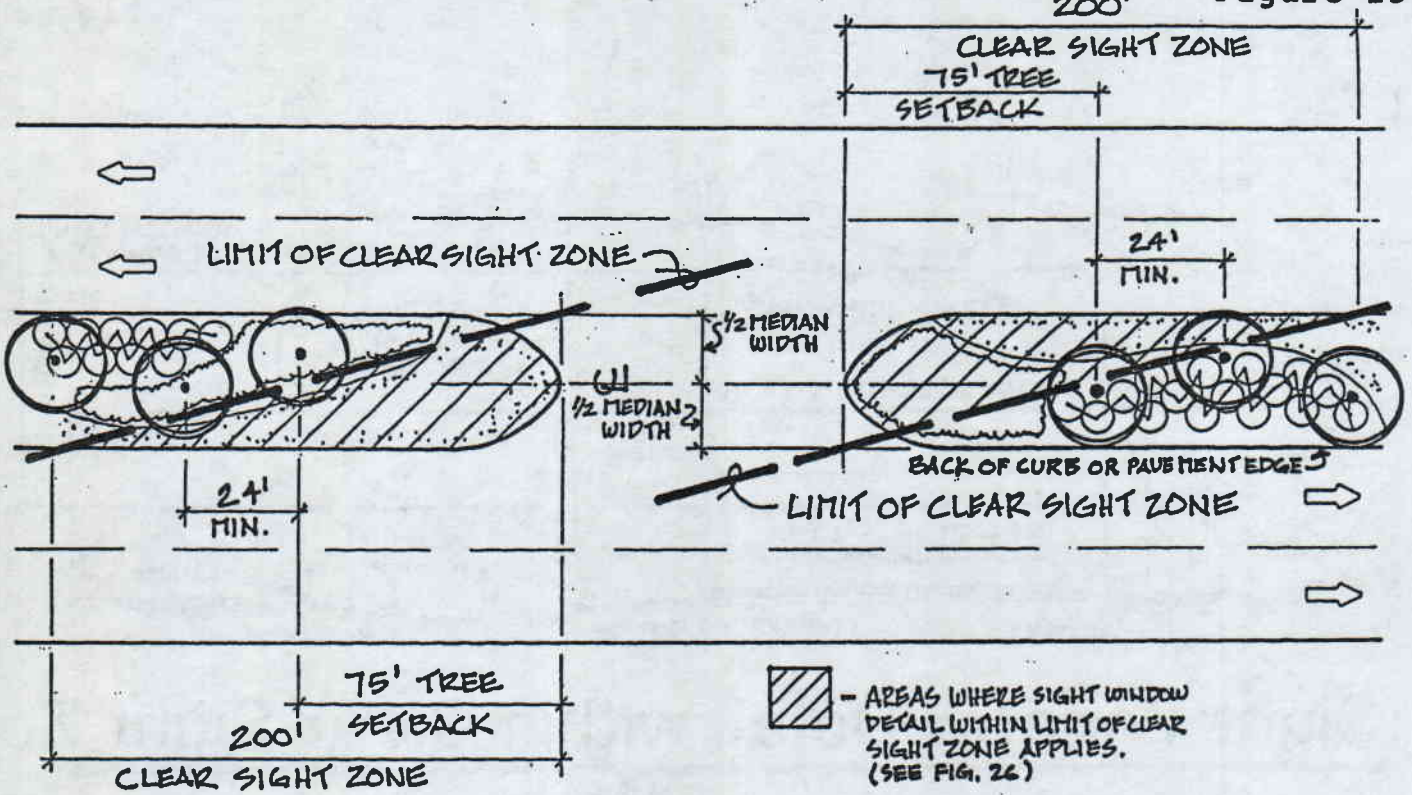
Major Intersections

Special landscape improvements should be implemented at major intersections in order to establish a pronounced entry into the Community. Major intersections would be defined as signalized or unsignalized intersections where two major County arterial roadways intersect.
The intersections within the M.S.T.U. which would be considered major are the Golden Gate Parkway, East and Santa Barbara Blvd., North intersection, C.R. 951 at Green Blvd. and Golden Gate Parkway intersection and the Santa Barbara Blvd., North and Green Blvd. intersection.

Major intersections should receive the following type improvements:

1. International pedestrian crosswalk markings of solid white bars.
2. Decorative street and pedestrian lighting fixtures.
3. Decorative street name, traffic control and Community entry signage.
4. Decorative mast arm traffic signal control pole systems
5. Site furnishing: Benches, trash containers and bike racks.
6. Pedestrian safe areas in medians and at corners delineated with decorative paving.

The Golden Gate Parkway and Santa Barbara Blvd., intersection is listed in the County approved 1988 "Corridor Management Study" as a major intersection per the study.



TYPICAL MEDIAN CROSSOVER SIGHT DISTANCE

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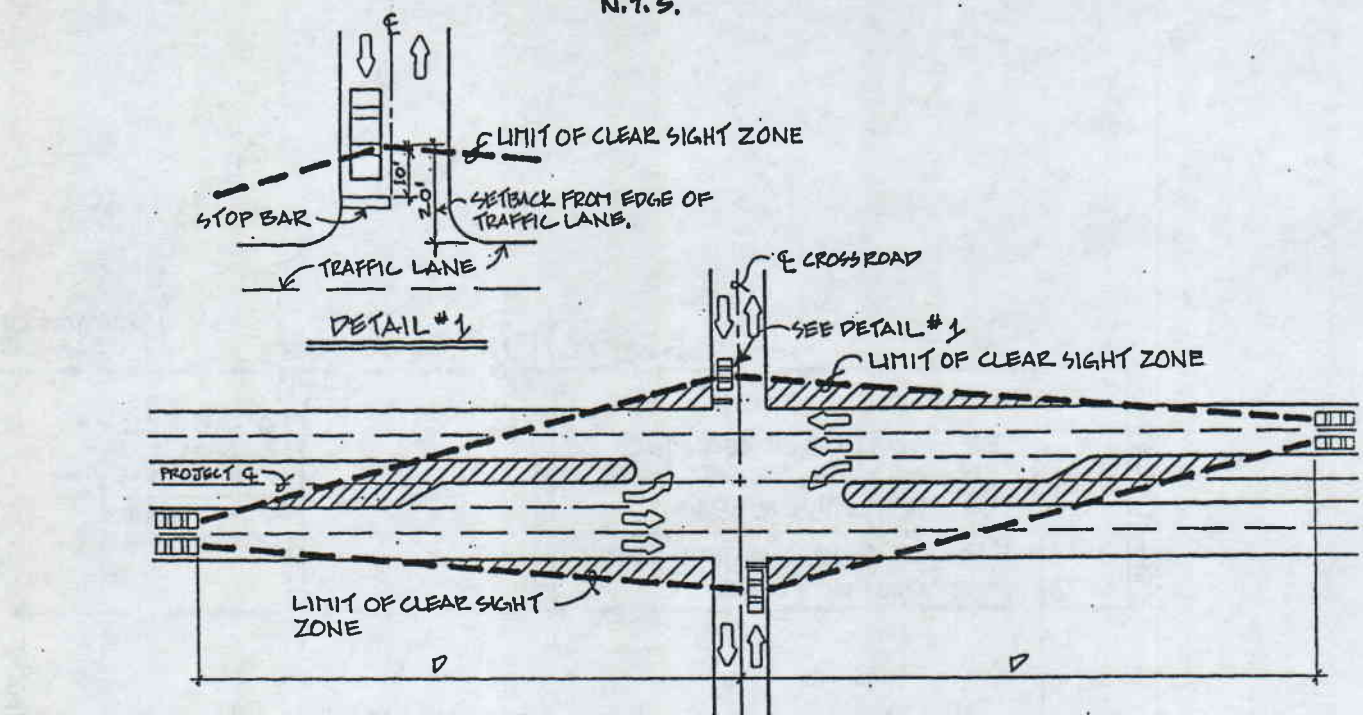
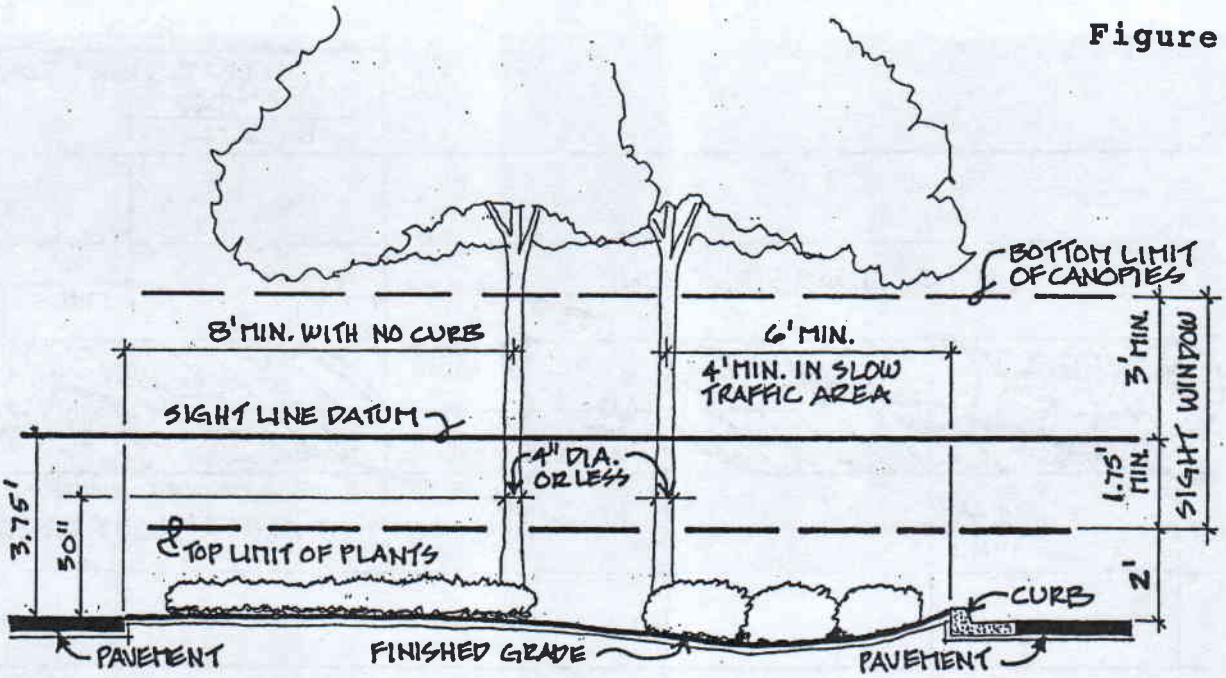


- AREAS WHERE SIGHT WINDOW DETAIL WITHIN LIMIT OF CLEAR SIGHT ZONE APPLIES. (SEE FIG. 26)

POSTED SPEED (MPH)	35	45	55
SIGHT DISTANCE (D) FT.	D	D	D
MINIMUM	250	300	450
DESIRABLE	300	400	550

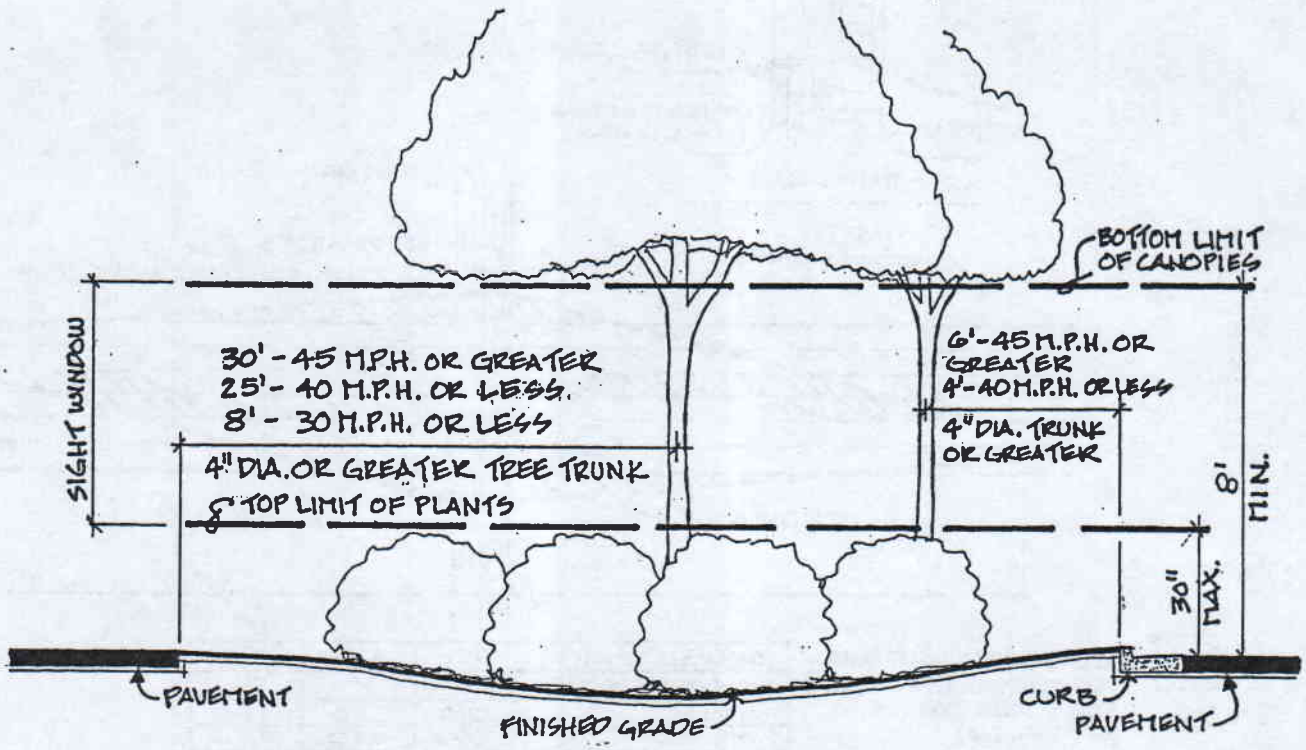
SIGHT DISTANCE DETAIL FOR MULTILANE DIVIDED ROADWAY

N.T.S.



Sight Window Detail within Clear Sight Zone

N.T.S.

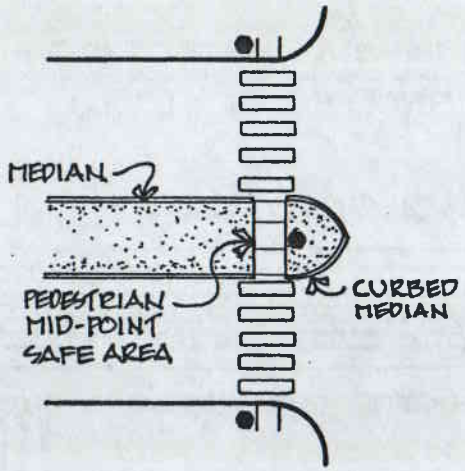


Typical Sight Window Detail

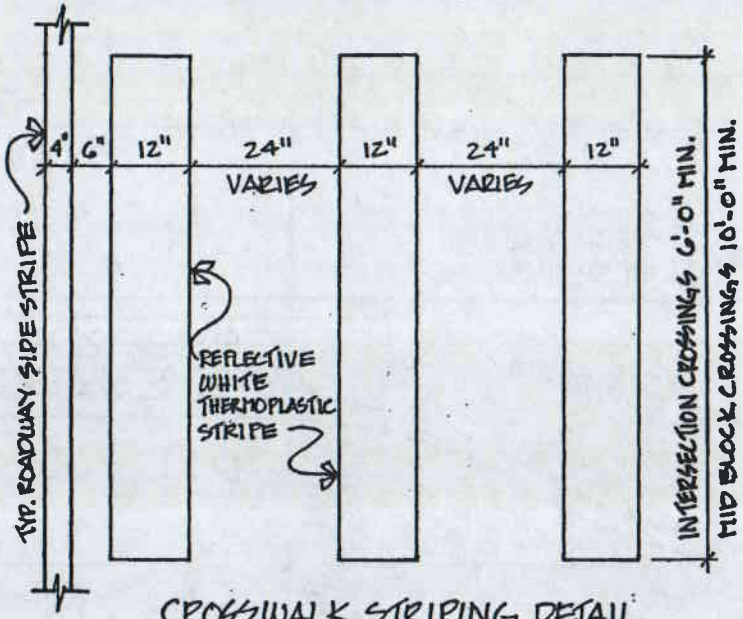
N.T.S.

Pedestrian Crosswalk Marking Details

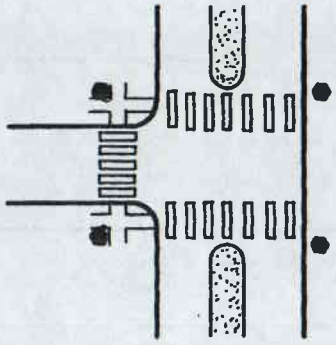
● - INDICATES POTENTIAL DECORATIVE PEDESTRIAN LIGHTING LOCATIONS



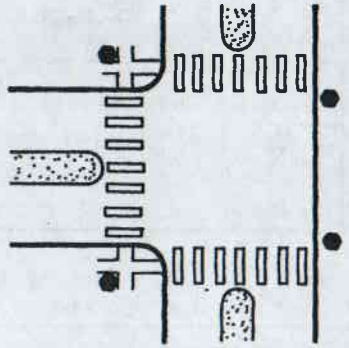
PEDESTRAIN CROSSING FOR NEW CONSTRUCTION



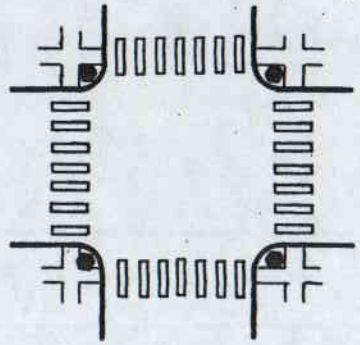
CROSSWALK STRIPING DETAIL



TWO LANE TEE INTERSECTION FOR EXISTING ROADWAY

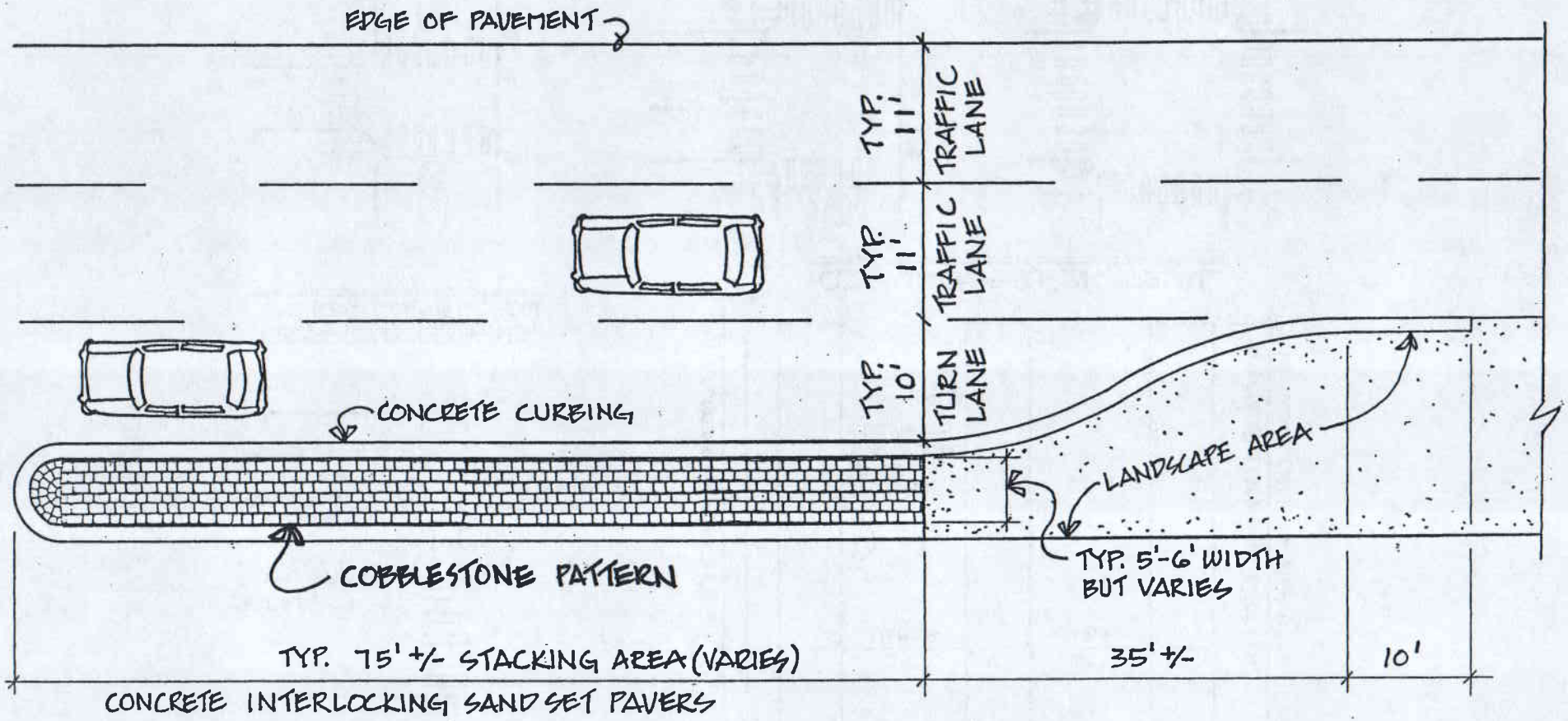


MULTI-LANE TEE INTERSECTION FOR EXISTING ROADWAYS



MULTI-LANE 4-WAY INTERSECTION FOR EXISTING ROADWAYS

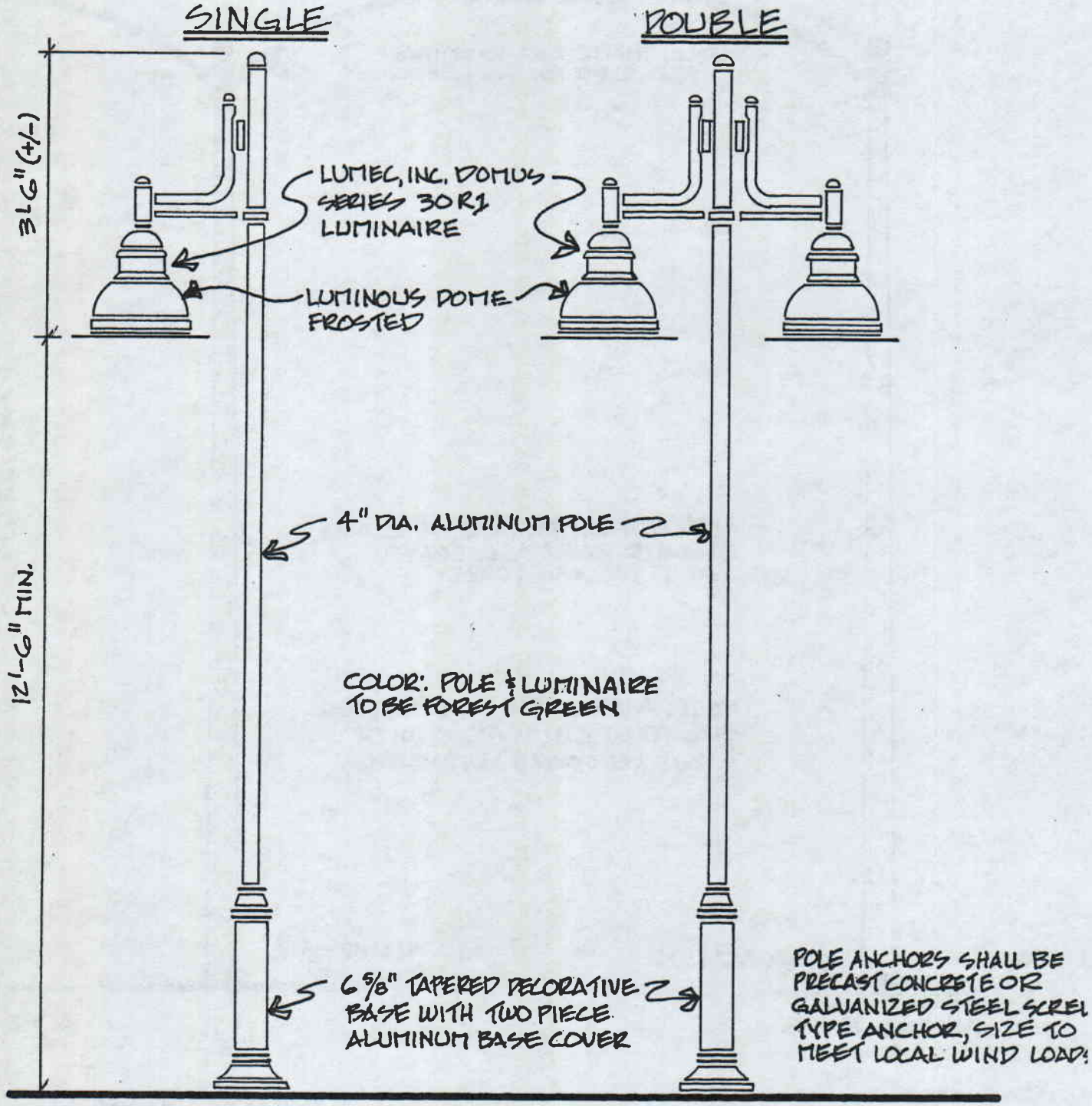
Figure 27



Curbed Turn Lane & Decorative Paving Detail

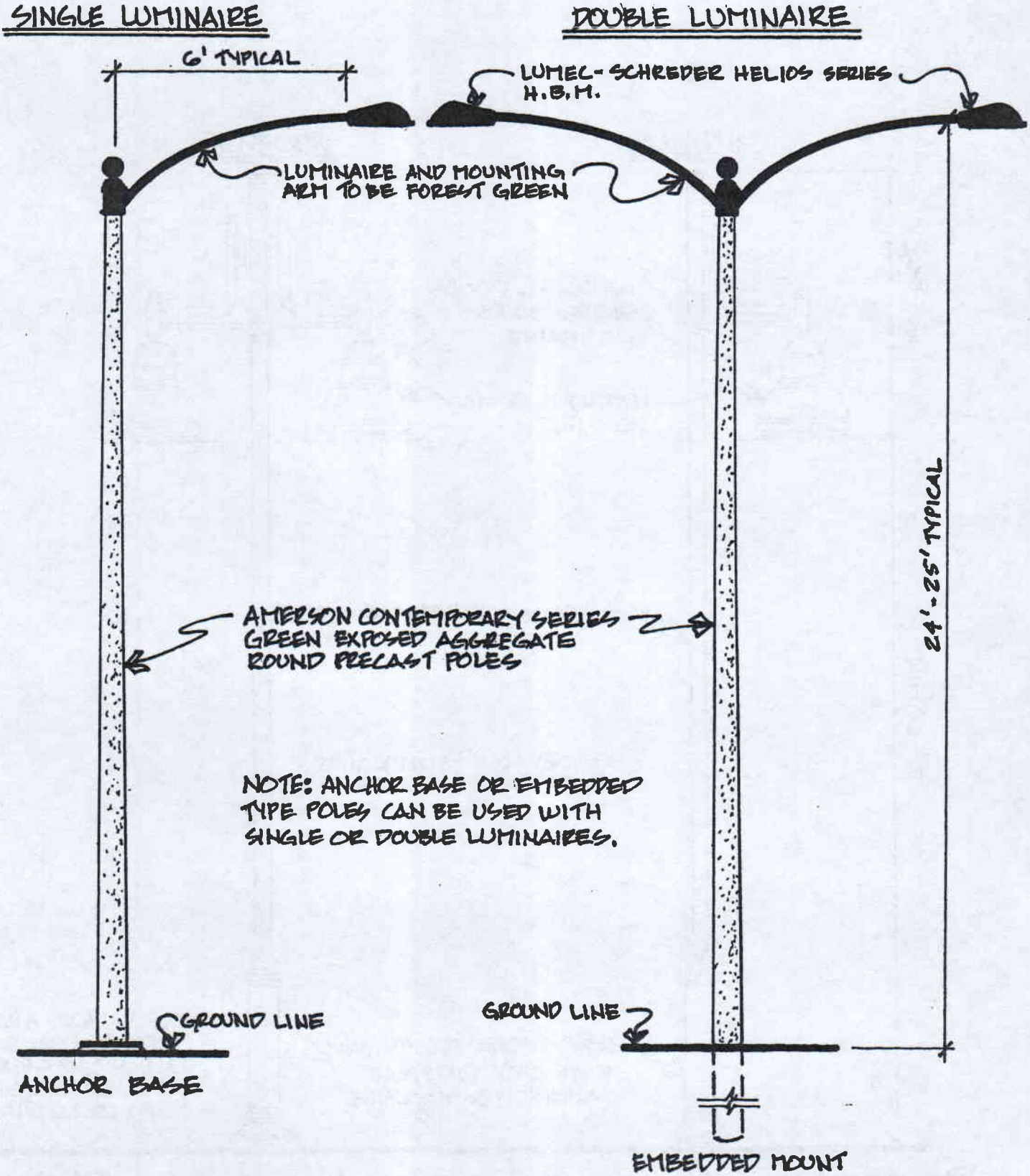
N.T.S.

Figure 28



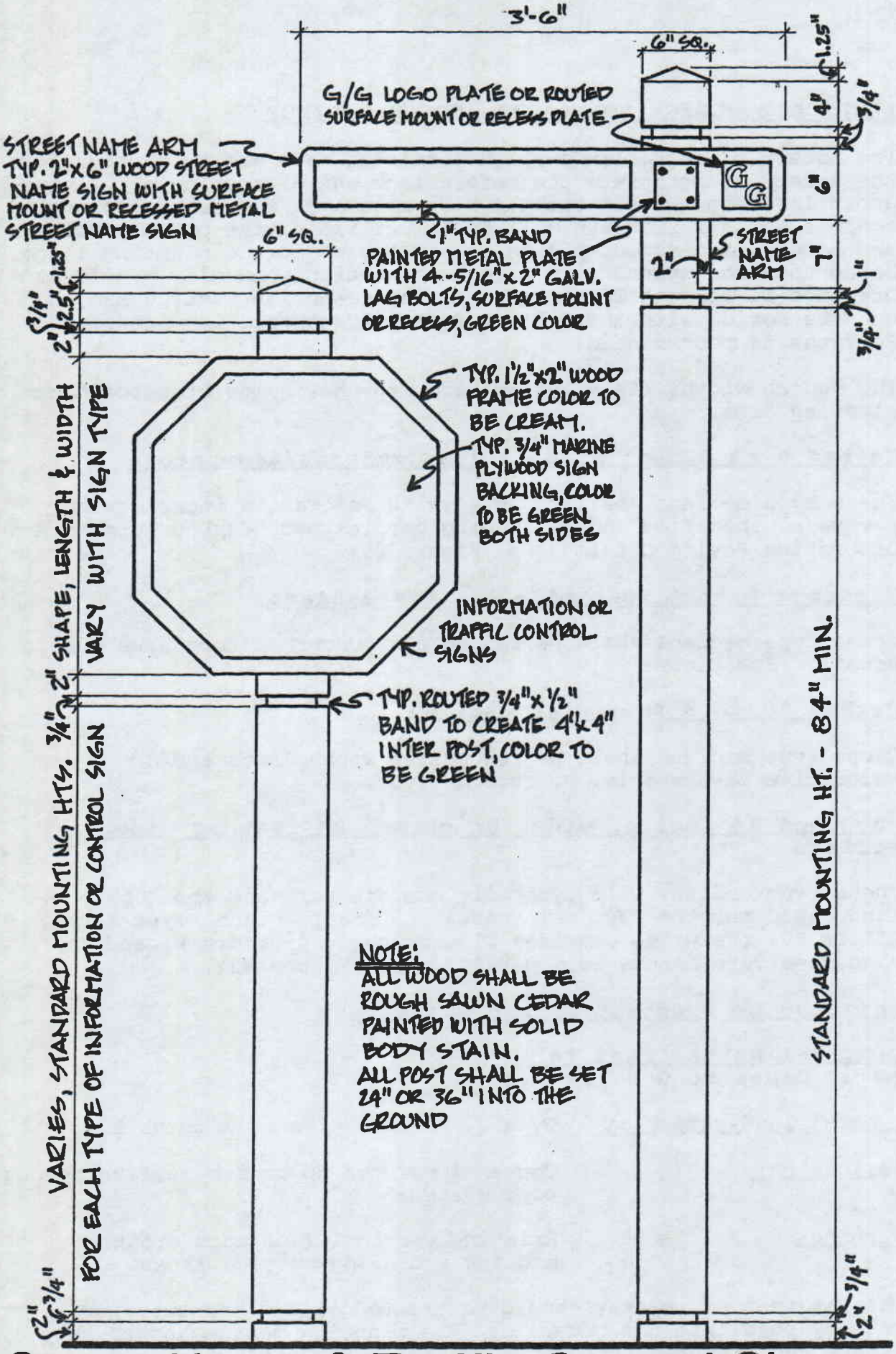
Pedestrian/Accent Decorative Light Fixtures

Figure 29



Street/Roadway Decorative Light Fixtures

Figure 30



Street Name & Traffic Control Signage

Figure 31

LANDSCAPE DESIGN STANDARDS AND GUIDELINES

The intent of these landscape design standards are to provide for the safety of motorists and pedestrians while creating a thriving urban landscape within the M.S.T.U. roadways. The general planting concept for all roadways will be to utilize native plant species and naturalized accent plants to try and restore a planting image based upon the upland pine forest vegetation community, (Refer to Drawings T1 through T6 Appendix A). A pre-design meeting and an on-site review with the Collier County Transportation Landscape Services is recommended.

The median widths listed below refer to the inside of curbing or planting area.

Curbed 8 to 6 feet wide or less medians/separators

These type medians shall be paved with decorative interlocking pavers as specified and as funding permits per "Curbed Turn Lane & Decorative Paving Detail" (See Figure 28).

Uncurbed 8 to 6 feet wide or less medians

These type medians shall be bermed per "Uncurbed Turn Lane & Berm Detail" (See Figure 32).

Curbed 20 to 8 foot wide medians

These type medians shall be landscaped with plants and/or decorative pavers only. No turf grasses.

Uncurbed 14 feet or wider or curbed 20 feet or wider medians

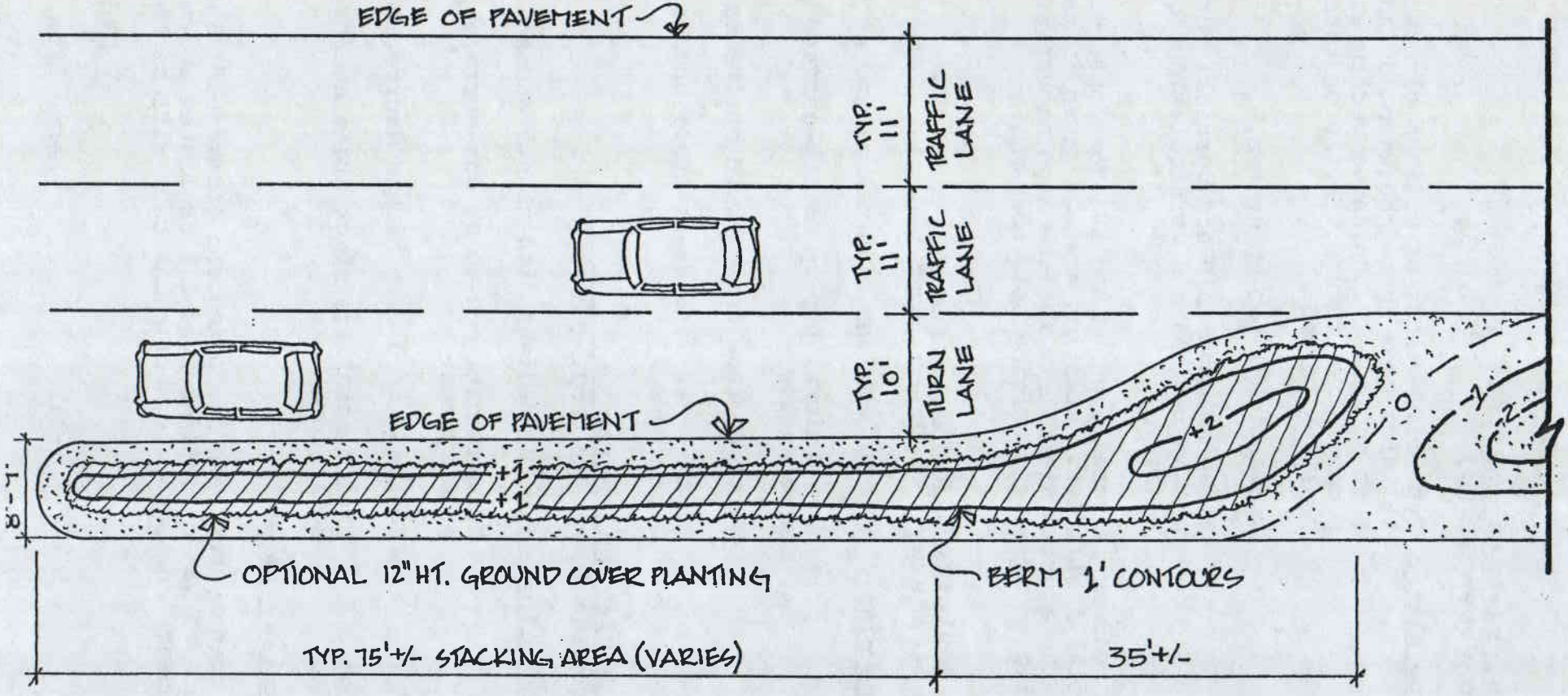
These type medians will typically contain turf and shall be landscaped per the "Typical Roadway Landscape Plans" Type I, II, III or IV, (Refer to drawings T1 through T4 Appendix A) and "Uncurbed Turn Lane & Berm Detail", (See Figure 32).

Existing or Proposed Curbed Roadways

C.R. 951 South, Part "A"
(G.G. Canal to G.G. Pkwy.)

Typical landscape plan:	Type V, medians planted with no turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Existing vertical face curb around medians and along outside lanes.

This segment of roadway should be treated as a major entry or gateway road into the community. The planting design should have a mature and dramatic appearance to create an entrance.



Uncurbed Turn Lane & Berm Detail

N.T.S.

Figure 32

C.R. 951 South, Part "B"
(G.G. Pkwy. to Green Blvd.)

Typical landscape plan:	Type III, center of medians planted with 18' wide beds spaced between 100 and 200 foot on center. Unplanted median areas proposed for future traffic or turn lanes shall be turfed.
Irrigation:	Conventional pop-up system.
Curbing:	Existing mountable and vertical curb around medians and vertical along outside lanes.

This segment of roadway is totally zoned and 90% developed with roadside commercial facilities. Attention must be given in the landscape design to address visibility for the high amount of automobile traffic entering and exiting this roadway.

Santa Barbara Boulevard, North
Phase I, (Coronado Pkwy. to Green Blvd.)

Typical landscape plan:	Type V, medians with plants and no turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Vertical face curb around entire medians.
Decorative paving:	Within turn lane stack areas and/or separators.

Santa Barbara Boulevard, North
Phase II, (Coronado Pkwy. to G.G. canal)

Typical landscape plan:	Type V, medians with plants and no turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Vertical face curb around entire medians.
Decorative paving:	Within turn lane stack areas and/or separators.

Golden Gate Parkway East

This segment of roadway has been irrigated and landscaped. The landscape design used was a modified Type III as listed above. Continued maintenance and renovation of plant beds will be needed.

Existing Uncurbed Roadways

Coronado Parkway

Typical landscape plan:	Type III, medians with plant beds and turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Curb around median noses and turn lanes.

Green Boulevard

Typical landscape plan:	Type III, medians with plant beds and turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Existing curb around median noses.

Hunter Boulevard

Typical landscape plan:	Type III, medians with plant beds and turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Curb around median noses and turn lanes.

Lucerne Road

Typical landscape plan:	Type III, medians with plant beds and turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Curb around median noses and turn lanes.

Sunshine Boulevard

Typical landscape plan:	Type III, medians with plant beds and turf.
Irrigation:	Conventional pop-up or sub-surface porous pipe system.
Curbing:	Curb around median noses and turn lanes.

IRRIGATION WATER RESOURCES AND IRRIGATION SYSTEMS

The following information evaluates the potential use and cost effectiveness of water resources and irrigation systems that would be available for use within the Beautification M.S.T.U. area.

Reclaimed water transmission line systems

Two reclaimed water transmission line systems were studied and analyzed (See Appendix A). The systems would provide reclaimed water for all roadways within the M.S.T.U. boundary. One system utilized the Florida Cities Utilities Company's existing wastewater treatment plant as the source (See Appendix A for Study Maps). The estimated cost to install this system would be $2,380,300.00. The other alternate system was a reclaimed water transmission line system connected and supplied from the proposed Collier County reclaimed water pipe line to cross at the intersection of C.R. 951 and Vanderbilt Beach Road Extension. The estimated cost for installing this system is $2,044,212.00. The cost of both systems are unrealistic based upon present revenues.

Reclaimed water tanker applied

This method of watering would not require in place irrigation system equipment or components. The water would be applied with a special equipped tanker truck on medians with a width of 20 feet or less. This type of watering method is a very successful and cost effective system for watering landscape areas where the potable or treated water cost is high or where a well and pump system is not feasible such as in coastal areas. This type method of irrigating is presently being utilized within another Collier County Beautification M.S.T.U. on Marco Island. To implement this method the estimated cost in the first year would be $105,000 for the purchase of a tanker and the annual operational cost. Thereafter the annual operational cost would be estimated at $65,000 to $70,000 per year. This methods annual operational cost would use to much of the M.S.T.U. present annual revenues.

Well and pump transmission line system

This study was based on installing a inter connected well and pump system to all roadway areas (See Appendix A). The system would utilize the existing wells, pumps and transmission lines located along Golden Gate Parkway East. The estimated cost to implement this system would be $400,000. With the present M.S.T.U. revenues this system unrealistic in construction time and cost.

Potable / Treated water

The internal roadways of Coronado, Sunshine, Tropicana and Lucerne could be connected to the existing Florida Cities potable water system. The initial connection cost would be very low, but the long term use cost per gallon would be very high. If the roadways are improved using sub-surface pipe systems then the use of this type of water source would become very cost effective.

Conventional pop-up spray systems

The conventional irrigation system remains the most cost effective system to install and maintain. The system shall be designed so as not to permit or reduce to the greatest extent possible, overspray and seeping onto the paved areas. The pop-up systems must utilize low volume, low angle spray nozzles and pressure reducing devices. Systems designed for medians using pop-up mist type spray sprinklers should have the sprinklers spaced on a triangular layout verses a square layout whenever possible. This will reduce the total number of sprinklers required in the medians. Systems designed for medians using pop-up rotor sprinklers should be designed so the sprinklers are spaced on a square head to head layout and installed at the back of curb. In medians wider than 20 feet with center plantings of drought tolerant plants should only a head to head coverage along the sides of the medians and not necessarily across the median width. The center median plantings of drought tolerant plants naturally requires less water. Medians 20 feet or wider with just turf should have an additional center row of sprinklers in order to reduce the sprinkler radius requirements. Also a combination of sub-surface and pop-up systems can be used to reduce overspray onto the paving. The above pop-up sprinkler layouts combined with utilizing drought tolerant plants provides for water coverage while minimizing the chance of overspray and seeping. All sprinklers within the roadways should be installed on flexible plastic pipe off the lateral mains.

Sub-surface pipe systems

There are several types of sub-surface pipe irrigation systems which are water conserving and safer alternatives to the conventional pop-up spray systems. The most common types are the porous pipe and the internal emitter type pipes. These systems provide for maximum water conservation and eliminate overspray onto the roads. The emitter and porous pipe type systems work well within plant beds and turf areas. In medians with large turf areas the sub-surface systems are not cost effective and should be used in combination with conventional pop-up systems. These systems are most effective when the existing soils are amended or replaced with one containing high amounts, 50 percent or more by volume, of organic materials.

The sub-surface systems are long range cost effective irrigation systems, but have a high installation cost. During the final design phases of a roadway beautification project, it would be recommended to perform a cost analysis of sub-surface irrigation verses conventional above ground spray system. In some situations, the high cost of installing large casings for large main and lateral lines required by conventional pop-up systems can make a sub-surface pipe systems installation cost comparable

It is recommended that uncurbed 20 foot or less wide medians be only irrigated with a sub-surface porous pipe system.

IRRIGATION SPECIFICATIONS AND PLANS

The following irrigation specification outline is intended to provide the minimum amount of information required within the plans, specifications and details for either conventional pop-up or sub-surface pipe irrigation systems.

1. **Scope of Work and Coordination**
2. **General Requirements and Approvals**
3. **Inspection of Site and Protection of Existing Site conditions**
4. **Water and Soil analysis**
5. **Diagrammatic Design Statement**
6. **Verification of Quantities**
7. **Verification of Dimensions Statement**
8. **Materials and/or Installation of:**

Backflow Preventer

Well and Pump system and Components

Reclaimed Water and Filtration

Master and/or Zone Control Valves

a. Electric remote control pressure reducing valves
b. Gate valves metal or PVC
c. Air relief valve
d. Automatic or manual drain or flush valves or assemblies
e. Valve boxes or enclosures
f. Valve sizes and type

Controllers for Conventional or Sub-surface Systems

a. Prior approval of controller by owner
b. Power source and/or type
c. Automatic and manual operation per station and program.
d. Capable of receiving and displaying moisture sensor data
e. Override of watering cycle in each zone so not to exceed set watering time limits regardless of sensor data.
f. Drip program
g. Double surge protection
h. Battery back-up and low battery indicator
i. Enclosure type or Weatherproof box
j. Water budgeting
k. Rain / Freeze shut-off by-pass switch
l. Flexible multi start times and programs
m. Non-volatile memory and time
n. Master valve/pump start circuit
o. Installation and grounding
p. Remote control capabilities

Low voltage valve wiring

a. Type, gauge, and color coding or numbering.
b. Waterproof connections
c. Wire splices, splice boxes and lengths of run.

Pipe

a. Pipe size, type, color for reclaimed water use, PVC schedule or class, manufactures name, and ASTM quality standard.
b. PVC main lines shall be Schedule 40 IPS (1120, 1220) C = 150 or Class - 200 IPS (1120, 1220) SDR 21 C =150 plastic pipe. Lateral pipes shall be PVC Class - 160 IPS (1120, 1220) SDR 26 C = 150 plastic pipe.
c. Connection type solvent weld or ring casket.
d. Solvents and joint compounds
e. Reaction blocks on main lines 3" or greater
f. Reclaimed water coloring or markings

Main line drain assembly

Filters or screens

Flow and pressure regulators

Sub-surface irrigation pipe

a. Pipe type, material, design standards and limitations.
b. Flow rates and operating pressure

Pipe fittings type and strength

Moisture Control Sensors

Pressure gauges

Valve by-pass assembly

Operation indicators

Quick coupling valves

a. Reclaimed water coloring
b. 300 feet on center

Sprinkler Heads and Nozzles

Casings or Sleeving

a. Sizes and type material
b. Type of installation, directional bore, Jack & Bore or Open cut.

9. **Pipe Trenching and Backfilling**
   a. Depth, placement, backfill quality & grade and underground utility locate before digging.
10. **Flushing Lines, Sprinklers and Pressure Check**
   a. Pressure limits and time duration
11. **Balancing and Adjustment**
12. **Final Acceptance**
13. **Clean up**
14. **Shop and As-Built Drawings**
15. **Warranty and Guarantee**
16. **Water use data schedule:**

Station/zone **Valve size** **GPM/zone** **Min./Day** **Days/week** **GPM/week**

RECOMMENDED ROADWAY PLANT MATERIAL TABLES

These tables provide a list of plant materials that have been successfully planted and maintained within the Collier County Urban and Golden Gate area roadway corridors. The plants listed are considered native or naturalized material. This list is not to be considered inclusive, but only a guide for plant selection. There are many other existing plants and new varieties of plants being developed that could be considered for use. When selecting plant material it is encouraged to utilize native drought tolerant plant materials.

Plant Material Table Legend:

Native
Y - Yes N - None

Planting Use
M - In Medians 14' or wider, R - Along right-of-ways,
U - Under utility lines

Drought Tolerance
H - High M - Medium L - Low

Water Tolerance
H - High (Tolerates standing surface water table, wetland plant)
M - Medium (Tolerates seasonal surface water table)
L - Low (Low tolerance of high surface water table)

Ph Range
AC - Acid soil AK - Alkaline soil W - Wide range tolerated

Plant Type
C - Conifer D - Deciduous E - Evergreen SD - Semi-Deciduous

Height Range - Boulevard/Canopy Trees

M - Medium	25' to 40'
L - Large	40' to 60 '

Height Range - Single Trunk Palm Trees

S - Small	25' or Less
M - Medium	25' to 60'
L - Large	60' or greater

Height Range - Understory/Accent Plants

Small Trees / Large Shrubs:...	ST / LS - 10' to 25'
Shrubs:.....	SM - 16" to 24"
	MT - 24" to 48"
Ground Covers:.....	SM - 6" to 12"
	MT - 12" to 24"

Color/Fruit
B - Blue F- Fruit Fol - Foliage color G - Green
I - Inconspicuous L - Lavender O - Orange Pk - Pink
Pur - Purple W - White Y - Yellow

Maintenance Level
H - High, Fertilization, pruning, insect control, water
M - Medium
L - Low

Table 1

RECOMMENDED ROADWAY PLANT MATERIALS - TREES

CANOPY / BOULEVARD TREES

Botanical Name	Common Name	Native	Planting Use	Drought Tolerant	Water Tolerant	Ph Range	Plant Type	Height Range	Color/ Fruit	Maintenance Level
Acer barbatum	Florida maple	Y	M/R	M	M	W	D	M	I	L
Acer rubrum	Red maple	Y	M/R	M	H	W	D	M	F	L
Bauhinia blakeana	White Orchid tree	N	M/R/U	H	M	W	D	M	W	L
Ilex cassine	Dahoon holly	Y	M/R/U	L	H	AC	E	M	F	L
Ilex attenuata	'East Palatka'	Y/F	M/R/U	H	L	W	E	M	F	M
Juniperus silicola	Southern red cedar	Y	M	H	L	W	C	M	I	L
Magnolia virginiana	Southern magnolia	Y	M/R	M	H	AC	SD	M	W	M
Pinus elliottii 'densa'	Southern Slash pine	Y	M/R	H	M	W	C	L	I	M
Peltophorum pterocarpum	Yellow poinciana	N	M/R	H	L	W	D	L	Y	M
Quercus virginiana	Live oak	Y	M/R	H	M	W	SD	L	I	L
Tabebuia impetiginosa	Purple trumpet tree	N	M/R	H	L	W	D	M	Pur.	L
Taxodium ascendens	Pond cypress	Y	M/R	M	H	W	D	L	I	L

RECOMMENDED ROADWAY PLANT MATERIALS

SINGLE TRUNK PALM TREES

Botanical Name	Common Name	Native	Planting Use	Drought Tolerant	Water Tolerant	Ph Range	Height Range	Color/ Fruit	Maintenance Level
Carpentaria acuminata	Carpentaria palm	N	M/R	L	L	W	M	I	L
Coccothranax argentata	Silver palm	Y	M/R/U	H	L	W	S	Fol	L
Livistonia chinensis	Chinensis fan palm	N	M/R/U	H	M	W	M	I	M
Roystonia elata	Florida royal palm	Y	M/R	M	H	W	L	I	M
Sabal palmetto	Cabbage palm	Y	M/R	H	H	W	M	I	L
Thrinax radiata	Florida thatch palm	Y	M/U	H	M	W	S	I	L
Washingtonia robusta	Washington palm	N	M/R	H	M	W	L	I	L

RECOMMENDED ROADWAY PLANT MATERIALS

Table 3 (Continued)

UNDERSTORY PLANTS

Botanical Name	Common Name	Native	Planting Use	Drought Tolerant	Water Tolerant	Ph Range	Height Range	Color/ Fruit	Maintenance Level
Small Trees / Large Shrubs									
Callistemon viminalis	'Red cluster'	N	M/U	H	M	W	ST	R	L
Conocarpus erectus'Seri.'	Silver buttonwood	Y	M/U	H	M	W	LS	F	M
Cordia boissieri	Geiger tree	Y	M/U	H	M	W	ST	W	L
Ilex vomitoria	Yaupon holly	Y	M/U	H	M	W	LS	I	M
Ilex vomitoria'pendula'	Weeping holly	Y	M/U	H	M	W	LS	I	M
Engenia spp.	Stoppers	Y	M/U	H	M	W	LS	I	L
Forestiera segregata	Florida privet	Y	M/U	H	M	W	LS	I	L
Lagerstroemia indica	Crape myrtle	N	M/U	H	L	W	LS	Multi	M
Lagerstroemia speciose	Queen crape myrtle	N	M/U	H	L	W	LS	Multi	M
Ligustrun japonicum	Japanese privet	N	M/U	H	L	W	LS	I	M
Myrica cerifera	Wax myrtle	Y	M/U	H	H	W	LS	I	L
Myrsine guianensis	Rapanea	Y	M/U	H	M	W	LS	I	L
Psidium littorale	Cattley guava	N	M/U	M	M	W	LS	F	L
Tecoma stan	Yellow elder	N	M/U	H	M	W	LS	Y	L
Viburnum odoratissimum	Sweet viburnum	N	M/U	M	L	W	LS	I	L
Zanthoxylem fagura	Wild lime	Y	M/U	H	M	W	ST	I	L

RECOMMENDED ROADWAY PLANT MATERIALS

Botanical Name	Common Name	Native	Planting Use	Drought Tolerant	Water Tolerant	Ph Range	Height Range	Color/ Fruit	Maintenance Level
Shrubs / Accent Plants									
Acrostichum daneifolium	Leather fern	Y	M	L	H	AC	MT	I	L
Bougainvillea spp.	Dwarf bougainvillea	N	M	H	L	W	SM	R	M
Dietes spp.	African iris	N	M	M	M	W	MT	W/Y	L
Galphimia gracilis	Thryallis	N	M	M	M	W	MT	Y	M
Hymenocallis latifolia	Spider lily	Y	M	H	M	W	MT	W	L
Ilex vomitoria	'Schellings dwarf'	N	M	H	M	W	SM	I	L
Ixora spp.	'Nora grant'	N	M	H	M	W	MT	R	M
Pittosporum tobira	Varigated	N	M	M	M	W	MT	Fol	M
Plumbago auriculata	Plumbago	N	M	M	M	W	MT	B	L
Raphiolepis indica'Alba'	Indian hawthorn	N	M	H	L	W	SM	W	L
Russelia equisetiformis	Firecracker plant	N	M	H	M	W	MT	R	L
Serenoa repens	Saw palmetto	Y	M	H	H	W	MT	I	L
Spartina bakeri	Sand cordgrass	Y	M	H	H	W	SM	I	L
Tripsacum dactyloides	Fakahatchee grass	Y	M	L	H	W	MT	I	M
Tripsacum floridana	Florida gama grass	Y	M	L	H	W	SM	I	L
Tunera ulmifolia	Alder, Yellow	N	M	H	M	W	MT	Y	M

PLANTING SPECIFICATIONS

The following planting specification outline is intended to provide the minimum amount of information required within the plans, specifications and details for the installation and post maintenance care of the plant materials.

1. **General**
    - a. Description or Scope of Work
    - b. Quantities
2. **Products and/or Materials**
    - a. Plant material
        - Quality and size
        - Rejection of materials
        - Substitutions
    - b. Fertilizer and application
    - c. Planting soils
        - Planting soil backfill
        - Top soil
        - Annual bed soil
    - d. Mulch
        - Type, grade and depth
3. **Plant installation**
    - a. Site preparation
        - Grading
        - Removal of debris
        - Plant material inspection and location
    - b. Protection of plants
        - Root protection
            - Balled & burlapped plants
            - Container grown plants
        - Protection during transportation
        - Protection of palms
        - Protection during planting
    - c. Planting operation
        - Layout
        - Soil preparation
        - Excavation for plantings
        - Field grown plants
        - Container grown plants
        - Planting pit sizes
        - Backfilling
        - Setting of plants
        - Pruning
        - Staking and/or guying
    - d. Mulch application
    - e. Sod or turf grass
        - Soil preparation
        - Grades
        - Type of sod and quality
        - Pad sizes
        - Moisture contents and requirements
        - Time limitations

Defective sod
Acceptance
Laying of sod
Watering
Establishment period
Post establishment
Activation of irrigation if present
Rolling
Fertilization

f. Clean up
g. Post transplant care and maintenance
h. Inspections and acceptance
i. Guarantee / warranty
j. Replacement
k. Post care and maintenance schedules
l. Compensation
m. Special requirements or specifications

4. **As-built drawings**
Installed plant quantities
Installed turf square foot quantity
Installed mulch quantities

MAINTENANCE SPECIFICATION AND GUIDELINES

Collier County Transportation Landscape Services has developed and is utilizing a standardized set of roadway grounds maintenance specifications for the Golden Gate Parkway East roadway. Prior to designing future roadway beautification project within the M.S.T.U. a pre-design meeting with Transportation Landscape Services to review the site and grounds maintenance specifications should occur. Future roadway beautification projects within the M.S.T.U. should utilize the existing "Golden Gate Beautification M.S.T.U. Roadway Grounds Maintenance Specifications" format for Golden Gate Parkway East (See Appendix G), and incorporate additional maintenance requirements or sections as necessary.

COST ESTIMATES AND ANALYSIS

The cost information utilized in these estimates are based upon Collier County Government, fiscal year 95/96 bids and/or existing contract pricing information and previous construction cost related to the Golden Gate Parkway, East landscape improvements.

Planting cost

The plant material costs were based upon the following sizes:

Canopy trees:	10'- 12'ht.,2.5" cal., 50'o.c.
Slash pine tree groupings:	1 - 25 gal. 9'ht., 50'o.c.
	1 - 15 gal. 8'ht.
	1 - 10 gal. 6'ht.
Cabbage palms:	10'- 15'ht. clear or booted trunks
Large shrubs:	10 gal. 4'-5' ht.
Small shrubs:	3 gal. 18"-24" ht.
Ground covers:	1 gal. 6"-12" ht.

Irrigation

The irrigation costs include an installed 100 percent coverage, conventional, sub-surface pop-up system. The cost covers casing/sleeves, main lines, wiring, valves, sprinkler heads and connecting to existing pump & well systems located on Golden Gate Parkway or installation of new well & pumps.

Design fee

These fees are for professional design services and/or consultation from a registered landscape architect.

Initial plant watering

These costs cover the labor and tanker for hand watering of the plants for a 90 day establishment period.

Watering turf

These costs cover the labor and tanker for hand watering sod for a two week establishment period.

Site preparation

Covers the cost for vegetation removal, soil removal and replacement, as well as final grading per typical landscape plan concept for uncurbed roads.

Bahia and St. Augustine grass

Covers cost for laid in place sod.

Curbing noses

Cost for installation of concrete curbing at the nose or end of the medians. Based upon 50 linear feet per nose.

Curbing turn lanes

Includes cost for concrete curbing of both sides of the turn lane stack area and taper. Based upon 200 linear feet per turn lane.

Curbing entire median
Cost to install concrete curbing along both sides of the medians in connecting the noses and turn lane curbing.

Decorative paving
Covers cost to install sand set concrete interlocking pavers.

Pedestrian pathway, asphalt
Cost for installation of a 5 (+/-) foot wide asphalt based pedestrian facility.

Two or four lane road in-road pathway facility
The cost shown under this item applies to implementing the bike facilities concept based on the " Uncurbed Collector Roadways Development Concept" section/elevations. Four lane in-road facility cost only includes cost of striping roadway.

Roadway decorative lights
Cost to install total systems of decorative concrete poles and light fixtures as listed in the plan.

Pedestrian decorative lights
Cost to install decorative pedestrian scale lighting at major pedestrian oriented intersections or crossings with roadway lighting systems.

Annual landscape maintenance
These costs are based upon current contract pricing and cover services as specified under the technical maintenance specifications being presently implemented by Collier County Transportation Services. Types II, IV, and VI typical landscape plan annual maintenance cost cover the entire right-of-way area. Types I, III and V only include annual maintenance cost for the median areas.

Table 6

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

CORONADO PARKWAY, ROADWAY #1

(Golden Gate Parkway, East to Santa Barbara Blvd., North)

Roadway length .90 mile, Medians green area length .74 mile, (3,907 l.f.)
Total median area - 52,643 s.f., Total right-of-way maintenance area - 181,500 s.f.

Median area per type	52,643 s.f.	52,193 s.f.	49,493 s.f.	43,593 s.f.	39,548 s.f.	39,548 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 11,722	$ 41,122	$ 41,079	$ 65,582	$ 62,486	$ 91,886
Irrigation	-0-	-0-	$ 41,079	$ 36,182	$ 32,825	$ 32,825
Design fee (5%)	$ 586	$ 2,056	$ 4.108	$ 5,088	$ 4,765	$ 6,235
Sub-totals:	$ 12,308	$ 43,178	$ 86,266	$106,852	$100,076	$130,946
Initial plant watering	$ 5,635	$ 24,955	-0-	$ 19,320	-0-	$ 19,320
Watering turf	$ 1,579	$ 1,579	-0-	-0-	-0-	-0-
Site preparation	$ 15,793	$ 15,793	$ 13,858	$ 12,206	$ 11,073	$ 11,073
Bahia grass	$ 5,790	$ 5,790	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 5,692	$ 5,013	-0-	-0-
Curbing noses	-0-	$ 3,300*	$ 3,300	$ 3,300	$ 3,300	$ 3,300
Curbing turn lanes	-0-	-0-	$ 18,000*	$ 18,000*	$ 18,000	$ 18,000
Curbing entire median	-0-	-0-	-0-	$ 39,300*	$ 39,300	$ 39,400
Decorative paving	-0-	-0-	-0-	-0-	$ 14,175*	$ 14,175
Contingency (5%)	$ 2,055	$ 4,730	$ 6,356	$ 10,200	$ 9,296	$ 11,810
Totals:	$ 43,160	$ 99,325	$133,472	$214,191	$195,220	$248,024
Annual maintenance	$ 9,475	$42,065	$ 16,333	$ 47,056	$ 9,096	$41,766

Pedestrian path, asphalt	$ 56,306	(5' wide facility each side)
Two lane rd. in-road bike facility	$ 46,570	(4.5' wide facility each side)
Four lane rd. in-road bike facility	$ 4,752	(8' wide facility each side)
Roadway decorative lights	$ 52,500	(21 double head fixtures within medians 220' o.c.)
Pedestrian decorative lights	$ 10,800	(6 fixtures 2 at each intersections, Golden Gate Pkwy, Hunter Blvd., and Lucerne Road)

Note: 1. (*) Indicates items that could be considered optional. Deletion of optional items will increase landscape area and landscape items cost will need to be adjusted.

2. Irrigation cost based on connecting to existing well & pump system on G. G. Parkway, East.

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

C. R. 951, Part "A", ROADWAY #2
(Golden Gate Canal to Golden Gate Parkway, East)
Roadway length 1 mile, Medians green area length .9 mile, (4,750 l.f.)
Total median area - 71,250 s.f., Total right-of-way maintenance area - 157,000 s.f.

Median area per type	71,250 s.f.	71,250 s.f.	71,250 s.f.	71,250 s.f.	71,250 s.f.	71,250 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 15,050	$ 44,100	$ 59,137	$ 88,187	$112,575	$141,625
Irrigation	-0-	-0-	$ 60,562	$ 60,562	$ 60,562	$ 60,562
Design fee (5%)	$ 752	$ 2,205	$ 5,985	$ 7,437	$ 8,657	$ 10,109
Sub-totals:	$ 15,802	$ 46,305	$125,684	$156,186	$181,794	$212,296
Initial plant watering	$ 9,890	$ 28,980	-0-	$ 19,090	-0-	$ 19,090
Watering turf	$ 1,069	$ 1,069	-0-	-0-	-0-	-0-
Site preparation	$ 21,375*	$ 21,375*	$ 21,375	$ 21,375	$ 21,375	$ 21,375
Bahia grass	$ 7,837	$ 7,837	-0-	-0-	-0-	-0-
St. augustine grass	-0-	-0-	$ 8,194	$ 8,194	-0-	-0-
Curbing noses	-0-	-0-	-0-	-0-	-0-	-0-
Curbing turn lanes	-0-	-0-	-0-	-0-	-0-	-0-
Curbing entire median	-0-	-0-	-0-	-0-	-0-	$ 9,100*
Decorative paving	-0-	-0-	-0-	-0-	-0-	$ 8,000*
Contingency (5%)	$ 2,799	$ 5,278	$ 7,763	$ 10,242	$ 10,158	$ 13,493
Totals:	$58,772	$110,844	$163,016	$200,299	$213,327	$283,354
Annual maintenance	$ 12,825	$ 41,085	$ 23,512	$ 51,772	$ 16,387	$ 44,647

Pedestrian path, asphalt	$ 52,500	(8' wide facility on west r/w line.)
Roadway decorative lights	$127,500	(51 fixtures along both r/w lines, triangular spacing 200' o.c.)
Pedestrian decorative lights	$ 7,200	(4 fixtures 2 at each intersection, Golden Gate Pkwy., and SW 25th Ave.)

Note: 1. (*) Indicates items that could be considered optional. Removal of optional items will increase landscape area and landscape items cost will need to be adjusted.
2. Irrigation cost based on connecting to existing well & pump on G. G. Parkway, East.

Table 8

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

C. R. 951, South, Part "B", ROADWAY #2
(Golden Gate Parkway, East to Green Blvd.)
Roadway length 1 mile, Medians green area length .9 mile, (4,750 l.f.)
Total median area - 119,500 s.f., Planting area base on 95,000 s.f. , Right-of-way maintenance area - 112,850 s.f.

Median area per type	119,500 s.f.	119,500 s.f.	119,500 s.f.	119,500 s.f.
Typical landscape plan	**Type I**	**Type II**	**Type III**	**Type IV**
Improvement items:				
Plant materail	$ 11,200	$ 44,275	$ 78,850	$111,925
Irrigation	-0-	-0-	$103,965	$103,965
Design fee (5%)	$ 560	$ 2,214	$ 9,140	$ 10,794
Sub-totals:	$ 11,760	$ 46,489	$191,955	$226,684
Initial plant watering	$ 7,360	$ 29,095	-0-	$ 21,735
Watering turf	$ 1,425	$ 1,425	-0-	-0-
Site preparation	$ 28,500*	$ 28,500*	$ 33,460	$ 33,460
Bahia grass	$ 5,225	$ 5,225	-0-	-0-
St. augustine grass	-0-	-0-	$ 16,560	$ 16,560
Curbing noses	-0-	-0-	-0-	-0-
Curbing turn lanes	-0-	-0-	-0-	-0-
Curbing entire median	-0-	-0-	-0-	-0-
Decorative paving	-0-	-0-	-0-	-0-
Contingency (5%)	$ 2,713	$ 5,536	$ 12,099	$ 14,922
Totals:	$ 56,978	$116,265	$254,074	$313,361
Annual maintenance	$ 21,510	$ 41,823	$ 39,435	$ 76,676

Pedestrian path, asphalt (Existing 5' wide facility on west r/w line.)
Roadway decorative lights $97,200 (replace 54 existing fixtures along both r/w lines.)
Pedestrian decorative lights $ 7,200 (4 fixtures 2 at each intersection, Golden Gate Pkwy. and Green Blvd.)

Note: 1. (*) Indicates items that could be considered optional. Removal of optional items will increase square footage and cost will need to be adjusted.
2. Type IV plan based on 18' (+/-) wide planting beds and remaining width of median to be turf.
3. Type V & VI landscape plantings are not cost effective on roadways to be six laned.
4. Irrigation cost based on installation of new well & pump system at Green Blvd.

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

GOLDEN GATE PARKWAY, East, ROADWAY #3
(C.R. 951, South to Santa Barbara Blvd., North)
Roadway length 2.5 miles, Medians green area length 1.9 miles, (10,000 l.f.)
Total median area - 295,179 s.f., Total right-of-way maintenance area - 274,500 s.f.

Median area per type	295,179 s.f.
Typical landscape plan	Type III
Total development cost from 1984 to 1993. Landscape, irrigation & curbing	$824,706.16
Annual maintenance	$104,000

Pedestrian path, asphalt	$ 52,000	(Existing 5' wide facility on north r/w line and proposed 5' facility on south r/w line.)
Roadway decorative lights	$277,500	(111 fixtures along both r/w lines 200' o.c.)
Pedestrian decorative lights	$ 28,800	(16 fixtures 2 at each intersections with Santa Barbara N., Coronado Pkwy., 47th St. SW, & 44th St. SW and 4 fixtures at 50th St. SW & Tropicana Blvd.)

Note: 1. Existing 8" well and 15 hp pump in medians #7 and 12 and 6" well and 7 hp pump in median #21. Refer to well & pump transmission line map for existing irrigation system sources.

Table 10

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

GREEN BOULEVARD, ROADWAY #4
(C. R. 951, South, Part "B" to Santa Barbara Blvd. North)
Roadway length 2 miles, Medians green area length .90 mile, (4,500 l.f.)
Total median area - 87,750 s.f., Total right-of-way maintenance area - 517,000 s.f.

Median area per type	87,750 s.f.	87,750 s.f.	87,750 s.f.	74,865 s.f.	74,864 s.f.	74,864 s.f.
Typical landscape plan Improvement items:	Type I	Type II	Type III	Type IV	Type V	Type VI
Plant material	$ 14,700	$ 85,575	$ 72,833	$133,013	$118,287	$189,162
Irrigation	-0-	-0-	$ 65,812	$ 56,148	$ 56,148	$ 56,148
Design fee (5%)	$ 735	$ 4,278	$ 6,932	$ 9,458	$ 8,722	$ 12,265
Sub-totals:	$ 15,435	$ 89,853	$145,577	$198,619	$183,157	$257,575
Initial plant watering	$ 9,660	$ 46,575	-0-	$ 46,575	-0-	$ 46,575
Watering turf	$ 1,316	$ 1,316	-0-	-0-	-0-	-0-
Site preparation	$ 26,325	$ 26,325	$ 26,325	$ 20,962	$ 20,962	$ 20,962
Bahia grass	$ 9,653	$ 9,653	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 10,091	$ 10,091	-0-	-0-
Curbing noses	-0-	-0-	-0-	-0-	-0-	-0-
Curbing turn lanes	-0-	-0-	-0-	-0-	-0-	-0-
Curbing entire median	-0-	-0-	-0-	$ 85,900*	$ 85,900	$ 85,900
Decorative paving	-0-	-0-	-0-	-0-	-0-	-0-
Contingency (5%)	$ 3,119	$ 8,686	$ 9,100	$ 18,107	$ 14,500	$ 20,550
Totals:	$ 65,508	$182,408	$191,093	$380,254	$304,519	$431,562
Annual maintenance	$ 15,795	$ 59,422	$ 28,958	$ 84,127	$ 17,219	$ 76,641

Pedestrian path, asphalt	(Existing 5' wide facility on south r/w line Sunshine Blvd. to Santa Barbara N.)	
In-road bike facility	(Existing 8' wide facility on each side of eastern 1 mile of roadway C.R. 951 to Sunshine.)	
Roadway decorative lights	$130,000	(52 double head fixtures within medians and along south edge of pavement 200' o.c.)
Pedestrian decorative lights	$ 10,800	(6 fixtures 2 at each intersections with C.R. 951, Sunshine Blvd., and Santa Barbara N.)

Note: 1. (*) Indicates items that could be considered optional. Removal of optional items will increase square footage and cost will need to be adjusted.
2. Irrigation cost based on connecting to proposed well & pump at C.R. 951 & Green Blvd.

March 12th, 1997

Table 11

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

HUNTER BOULEVARD, ROADWAY #5

(Coronado Parkway to Santa Barbara Blvd., North)
Roadway length .90 mile, Medians green area length .84 mile, (4,435 l.f.)
Total median area - 69,589 s.f., Total right-of-way maintenance area - 181,000 s.f.

Median area per type	69,589 s.f.	69,064 s.f.	65,389 s.f.	56,118 s.f.	49,817 s.f.	49,817 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 11,550	$ 44,975	$ 54,273	$ 80,004	$ 78,714	$112,139
Irrigation	-0-	-0-	$ 49,696	$ 42,650	$ 37,861	$ 37,861
Design fee (5%)	$ 578	$ 2,249	$ 5,198	$ 6,133	$ 5,829	$ 7,500
Sub-totals:	$ 12,128	$ 47,224	$109,167	$128,787	$122,404	$157,500
Initial plant watering	$ 7,590	$ 28,980	-0-	$ 21,965	-0-	$ 21,965
Watering turf	$ 2,088	$ 2,088	-0-	-0-	-0-	-0-
Site preparation	$ 20,877	$ 20,877	$ 18,309	$ 15,713	$ 13,949	$ 13,949
Bahia grass	$ 7,655	$ 7,655	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 7,520	$ 6,454	-0-	-0-
Curbing noses	-0-	$ 4,000*	$ 4,000	$ 4,000	$ 4,000	$ 4,000
Curbing turn lanes	-0-	-0-	$ 28,000*	$ 28,000*	$ 28,000	$ 28,000
Curbing entire median	-0-	-0-	-0-	$ 57,800*	$ 57,800	$ 57,800
Decorative paving	-0-	-0-	-0-	-0-	$ 22,050*	$ 22,050*
Contingency (5%)	$ 2,517	$ 5,541	$ 8,350	$ 13,136	$ 12,410	$ 15,263
Totals:	$ 52,855	$116,365	$175,346	$275,855	$260,613	$320,527
Annual maintenance	$ 12,526	$45,106	$ 21,578	$ 51,099	$ 11,458	$ 44,030

Pedestrian path, asphalt	$ 56,306	(5' wide facility on both r/w lines.)
Two lane rd. in-road bike facility	$ 46,570	(4.5' wide facility each side.)
Four lane rd. in-road bike facility	$ 4,752	(8' wide facility each side.)
Roadway decorative lights	$ 52,500	(21 double head fixtures within medians 220' o.c.)
Pedestrian decorative lights	$ 7,200	(4 fixtures 2 at each intersections, Santa Barbara Blvd. & Coronado Pkwy.)

Note: 1. (*) Indicates items that could be considered optional. Deletion of optional items will increase landscape area and landscape items cost will need to be adjusted.

2. Irrigation cost based on connecting to proposed well & pump on Santa Barbara Blvd. N.

Table 12

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

LUCERNE ROAD, ROADWAY #6
(Sunshine Blvd. to Coronado Parkway)
Roadway length .20 mile, Medians green area length .19 mile, (1,000 l.f.)
Total median area - 18,620 s.f., Total right-of-way maintenance area - 47,000 s.f.

Median area per type	18,620 s.f.	18,095 s.f.	17,794 s.f.	15,004 s.f.	14,556 s.f.	144,556 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 2,450	$ 10,500	$ 14,770	$ 20,504	$ 22,997	$ 31,047
Irrigation	-0-	-0-	$ 14,947	$ 12,603	$ 12,227	$ 12,227
Design fee (5%)	$ 123	$ 525	$ 1,486	$ 1,655	$ 1,761	$ 2,164
Sub-totals:	$ 2,573	$ 11,025	$ 31,203	$ 34,762	$ 36,985	$ 42,582
Initial plant watering	$ 1,610	$ 6,900	-0-	$ 5,290	-0-	$ 5,290
Watering turf	$ 279	$ 279	-0-	-0-	-0-	-0-
Site preparation	$ 5,586	$ 5,429	$ 4,983	$ 4,201	$ 4,075	$ 4,075
Bahia grass	$ 2,048	$ 1,990	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 2,046	$ 1,726	-0-	-0-
Curbing noses	-0-	$ 3,500*	$ 3,500	$ 3,500	$ 3,500	$ 3,500
Curbing turn lanes	-0-	-0-	$ 2,000*	$ 2,000*	$ 2,000	$ 2,000
Curbing entire median	-0-	-0-	-0-	$ 18,600*	$ 18,600	$ 18,600
Decorative paving	-0-	-0-	-0-	-0-	$ 1,575*	$ 1,575
Contingency (5%)	$ 605	$ 1,456	$ 2,187	$ 3,504	$ 3,337	$ 4,023
Totals:	$ 12,701	$ 30,579	$ 45,919	$ 73,583	$ 70,072	$ 84,483
Annual maintenance	$ 3,352	$ 11,717	$ 5,872	$ 13,412	$ 3,348	$ 11,808

Pedestrian path, asphalt	$ 15,275	(5' wide facility on each side)
Two lane rd. in-road bike facility	$ 4,000	(4.5' wide facility each side)
Four lane rd. in-road bike facility	$ 1,500	(8' wide facility each side)
Roadway decorative lights	$ 15,000	(6 double head fixtures within medians 200' o.c.)
Pedestrian decorative lights	$ 3,600	(2 fixtures at intersections with Sunshine Blvd.)

Note: 1. (*) Indicates items that could be considered optional. Deletion of optional items will increase landscape area and landscape items cost will need to be adjusted.

2. Irrigation cost based on connecting to proposed main on Sunshine Blvd. or Coronado Pkwy. from existing well & pump system on G. G. Parkway, East.

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

SANTA BARBARA BOULEVARD, NORTH, ROADWAY #7

(Golden Gate Canal to Green Blvd.)

Roadway length 2.1 miles, Medians green area length 1.6 miles, (8,448 l.f.)
Total median area - 144,485 s.f., Total right-of-way maintenance area - 352,200 s.f.

Median area per type	144,485 s.f.	143,510 s.f.	138,260 s.f.	118,928 s.f.	105,328 s.f.	105,328 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 26,075	$ 94,675	$114,756	$ 98,710	$166,418	$235,018
Irrigation	-0-	-0-	$120,286	$103,467	$ 91,635	$ 91,635
Design fee (5%)	$ 1,304	$ 4,734	$ 11,752	$ 10,109	$ 12,903	$ 16,333
Sub-totals:	$ 27,379	$ 99,409	$246,794	$212,286	$270,956	$342,986
Initial plant watering	$ 17,135	$ 62,215	-0-	$ 45,080	-0-	$ 45,080
Watering turf	$ 2,167	$ 2,152	-0-	-0-	-0-	-0-
Site preparation	$ 43,346	$ 43,053	$ 38,713	$ 33,300	$ 29,492	$ 29,492
Bahia grass	$ 15,893	$ 15,861	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 15,900	$ 13,677	-0-	-0-
Curbing noses	-0-	$ 6,500*	$ 6,500	$ 6,500	$ 6,500	$ 6,500
Curbing turn lanes	-0-	-0-	$ 35,000*	$ 35,000*	$ 35,000	$ 35,000
Curbing entire median	-0-	-0-	-0-	$128,800*	$128,800	$128,800
Decorative paving	-0-	-0-	-0-	-0-	$ 60,543*	$ 60,543
Contingency (5%)	$ 5,296	$ 11,460	$ 17,149	$ 23,732	$ 26,564	$ 32,420
Totals:	$111,216	$240,650	$360,052	$498,375	$557,855	$680,821
Annual maintenance	$ 26,007	$ 89,403	$ 45,626	$102,642	$ 34,729	$ 87,621

Pedestrian path, asphalt	$105,300	(5' wide facility each side)
Four lane rd. in-road bike facility	$ 76,032	(4.5' wide facility each side)
Roadway decorative lights	$235,000	(94 fixtures triangular spacing 200' o.c.)
Pedestrian decorative lights	$ 14,400	(8 fixtures 2 at each intersections, Golden Gate Pkwy, Coronado Pkwy., Hunter Blvd., and Green Blvd.)

Note: 1. (*) Indicates items that could be considered optional. Deletion of optional items will increase landscape area and landscape items cost will need to be adjusted.

2. Irrigation cost based on installation of new well & pump system at Hunter Blvd.

Table 14

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

SUNSHINE BOULEVARD, ROADWAY #8
(Golden Gate Parkway, East to Green Blvd.)
Roadway length 1.1 miles, Medians green area length .78 mile, (4,118 l.f.)
Total median area - 69,135 s.f., Total right-of-way maintenance area - 205,000 s.f.

Median area per type	69,135 s.f.	68,085 s.f.	65,385 s.f.	55,557 s.f.	51,057 s.f.	51,057 s.f.
Typical landscape plan	Type I	Type II	Type III	Type IV	Type V	Type VI
Improvement items:						
Plant material	$ 10,150	$ 44,450	$ 54,269	$ 80,412	$ 80,670	$114,970
Irrigation	-0-	-0-	$ 51,654	$ 43,890	$ 40,335	$ 40,335
Design fee (5%)	$ 508	$ 2,222	$ 5,296	$ 6,215	$ 6,050	$ 7,765
Sub-totals:	$ 10,658	$ 46,676	$ 111,219	$130,517	$127,055	$163,070
Initial plant watering	$ 6,670	$ 29,210	-0-	$ 22,540	-0-	$ 22,540
Watering turf	$ 1,037	$ 1,021	-0-	-0-	-0-	-0-
Site preparation	$ 20,740	$ 20,426	$ 18,308	$ 15,556	$ 14,296	$ 14,296
Bahia grass	$ 7,605	$ 7,489	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 7,519	$ 6,389	-0-	-0-
Curbing noses	-0-	$ 7,000*	$ 7,000	$ 7,000	$ 7,000	$ 7,000
Curbing turn lanes	-0-	-0-	$ 18,000*	$ 18,000*	$ 18,000	$ 18,000
Curbing entire median	-0-	-0-	-0-	$ 65,520*	$ 65,520	$ 65,520
Decorative paving	-0-	-0-	-0-	-0-	$ 15,750*	$ 15,750
Contingency (5%)	$ 2,336	$ 5,591	$ 8,102	$ 13,276	$ 12,381	$ 15,309
Totals:	$ 49,046	$117,409	$170,142	$278,798	$260,002	$321,485
Annual maintenance	$ 12,444	$ 49,155	$ 21,577	$ 58,477	$ 11,743	$ 48,643

Pedestrian path, asphalt	$ 30,550	(5' wide facility on west side)
Two lane rd. in-road bike facility	$ 37,062	(4.5' wide facility each side)
Four lane rd. in-road bike facility	$ 5,808	(8' wide facility each side)
Roadway decorative lights	$ 65,000	(26 double head fixtures within medians 200' o.c.)
Pedestrian decorative lights	$ 18,000	(10 fixtures 2 each at intersections, Golden Gate Pkwy, Lucerne Road, 23rd Ave. SW, 20th PL. SW & Green Blvd.)

Note: 1. (*) Indicates items that could be considered optional. Deletion of optional items will increase landscape area and landscape items cost will need to be adjusted.
2. Irrigation cost based on connecting to existing well & pump system on G. G. Parkway, East.

TYPICAL BEAUTIFICATION IMPROVEMENT COST FOR ROADWAYS

TROPICANA BOULEVARD, ROADWAY #9

(Golden Gate Parkway, East to 32nd Ave. SW)

Roadway length .80 mile, Medians green area length .70 mile, (3,696 l.f.)

Total median area - 55,059 s.f., Total right-of-way maintenance area - 152,000 s.f.

Median area per type	55,059 s.f.	54,459 s.f.	51,759 s.f.	43,074 s.f.	39,024 s.f.	39,024 s.f.
Typical landscape plan	**Type I**	**Type II**	**Type III**	**Type IV**	**Type V**	**Type VI**
Plantings	$ 9,450	$ 37,625	$ 42,960	$ 63,926	$ 61,658	$ 89,833
Irrigation	-0-	-0-	$ 39,854	$ 31,167	$ 30,048	$ 30,048
Design fee (5%)	$ 473	$ 1,881	$ 4,141	$ 4,855	$ 4,585	$ 5,994
Sub-totals:	$ 9,923	$ 39,506	$ 86,955	$101,948	$ 96,291	$125,867
Initial plant watering	$ 6,210	$ 24,725	-0-	$ 18,515	-0-	$ 18,515
Watering turf	$ 825	$ 1,188	-0-	-0-	-0-	-0-
Site preparation	$ 16,518	$ 16,338	$ 14,492	$ 12,061	$ 10,927	$ 10,927
Bahia grass	$ 6,056	$ 5,990	-0-	-0-	-0-	-0-
St. Augustine grass	-0-	-0-	$ 5,952	$ 4,953	-0-	-0-
Curbing noses	-0-	$ 4,000*	$ 4,000	$ 4,000	$ 4,000	$ 4,000
Curbing turn lanes	-0-	-0-	$ 18,000*	$ 18,000*	$ 18,000	$ 18,000
Curbing entire median	-0-	-0-	-0-	$ 57,900*	$ 57,900	$ 57,900
Decorative paving	-0-	-0-	-0-	-0-	$ 14,175*	$ 14,175
Contingency (5%)	$ 1,977	$ 4,587	$ 6,470	$ 10,869	$ 10,065	$ 12,469
Totals:	$41,509	$ 96,334	$135,869	$228,246	$211,358	$261,853
Annual maintenance	$ 9,911	$ 37,271	$ 17,080	$ 41,574	$ 8,975	$ 36,335

Pedestrian path, asphalt	$ 24,050	(5' wide facility east side)
Two lane rd. in-road bike facility	$ 33,264	(4.5' wide facility each side)
Four lane rd. in-road bike facility	$ 4,224	(8' wide facility each side)
Roadway decorative lights	$ 52,500	(21 double head fixtures within medians 200' o.c.)
Pedestrian decorative lights	$ 18,000	(10 fixtures 2 at each intersections, Golden Gate Pkwy, 26th Pl. SW, 28th Ave. SW, 30th PL. SW & 32nd Ave. SW)

Note: 1. (*) Indicates items that could be considered optional. Removal of optional items will increase square footage and cost will need to be adjusted.

2. Irrigation cost based on connecting to existing well & pump on G. G. Parkway, East.

PHASING AND FUNDING SCHEDULES

Golden Gate Beautification Master Plan
Five Year Roadway Phasing & Funding Schedule

The phasing and funding schedule was developed to address the Collier County major arterial roadways within the M.S.T.U. first. It is apparent these roadways are the Gateway roads within the Golden Gate community, as well as the southeast Collier County/ Naples Urban Area (See Table 16). This phasing schedule is in keeping with the Master plan goals and original philosophy behind the Golden Gate Parkway East roadway beautification project, which was to beautify the main roadways that would best benefit the Golden Gate community and Collier County.

The phasing and funding schedule is based upon the concept to continue the public/private partnership with the Collier County Board of County Commissioners. This schedule is also consistent with the Collier County's past actions to assist in funding and implementation of roadway beautification within the Naples Urban Area on a case by case basis. The schedule is also consistent with the adopted "Collier County Streetscape Master Plan" methodology, intent, and streetscape network of roadways to be improved. The methodology of the five year schedule is to assist the County in reducing the time frame and funding cost of the roadway landscape improvements by utilizing local residents tax dollars and volunteer services for administration of the projects. This five year schedule benefits the County as a whole and local residents by saving money and beautifying Collier County roadways.

The schedule cost does not take into account potential outside funding from grants or private local organizations. The cost shown in Table 16 for maintenance has a three percent cost of living increase per year and the M.S.T.U. capital revenues include a conservative three percent yearly increase. The 1996-1997 M.S.T.U. revenues showed a six percent increase. The Planning/Design and Capital improvement cost are based upon 1996 -1997 dollars. Based upon past and present improvement cost for County roadway landscape projects the five percent contingency listed in the "Typical Beautification Improvement Cost for Roadways" tables would be anticipated to cover cost increases over the five year schedule.

#1: C.R. 951, Part "A"
(Golden Gate Canal to Golden Gate Parkway, East)

Implementation date:	FY 1997-1998
Typical landscape plan:	Type V
Annual maintenance:	Based on median area only.
Curbing:	Existing curbed roadway.

#2: C.R. 951, Part "B"
(Golden Gate Parkway, East to Green Blvd.)

Implementation date:	FY 1998-1999
Typical landscape plan:	Type III
Annual maintenance:	Based on median area only.
Curbing:	Existing curbed roadway.

#3: Santa Barbara Blvd., North, Phase I
(Coronado Parkway to Green Blvd.)

Implementation date:	FY 1999-2000
Typical landscape plan:	Type V
Annual maintenance:	Based on median area only.
Curbing:	New & existing median curbing.

#4: Santa Barbara Blvd., North, Phase II
(Golden Gate Canal to Coronado Parkway)

Implementation date:	FY 2000-2001
Typical landscape plan:	Type V
Annual maintenance:	Based on median area only.
Curbing:	New & existing median curbing.

Table 16

GOLDEN GATE BEAUTIFCIATION MASTER PLAN FIVE YEAR ROADWAY PHASING AND FUNDING SCHEDULE

Road # / Roadway	Road Segement	Planning & Design		Capital		Annual Maintenance		M. S. T.U.
		M.s.t.u.	County	M.s.t.u.	County	M.S.T.U.	County	Capital Revenues
Fiscal Year 1996-1997								
2. C. R. 951, South Part "A"	Golden Gate Canal to G. G. Pkwy.	-0-	$8,657	-0-	-0-	-0-	-0-	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barabara Blvd.	Complete		Complete		$ 52,000	$ 52,000	
	Totals:	-0-	$8,657	-0-	-0-	$52,000	$52,000	Oct.97/ $156,000
Fiscal Year 1997-1998								
2A. C. R. 951, South								
Part "A"	Golden Gate Canal to G. G. Pkwy.	-0-	-0-	$106,663	$106,663	-0-	$ 8,194	
Part "B"	Golden Gate Pkwy. to Green Blvd.	$9,140	-0-	-0-	-0-	-0-	-0-	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barabara Blvd.	Complete		Complete		$42,000	$ 107,366	
	Totals:	$9,140	-0-	$106,663	$106,663	$42,000	$115,560	Oct.98/ $155,427
Fiscal Year 1998-1999								
2. C. R. 951, South								
Part "A"	Golden Gate Canal to G. G. Pkwy.	Complete	-0-	Complete	-0-	$23,304	$ 17,370	
Part "B"	Golden Gate Pkwy. to Green Blvd.	Complete	-0-	$127,037	$127,037	-0-	$ 20,900	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barbara Blvd.	Complete	-0-	Complete	-0-	$23,304	$110,587	
7. Santa Barbara Blvd., North	Golden Gate Canal to Green Blvd.	$6,452	$6,452	-0-	-0-	-0-	-0-	
	Totals:	$6,452	$6,452	$127,037	$127,037	$46,608	$148,857	Oct.99/ $123,986
Fiscal Year 1999-2000								
2. C. R. 951, South								
Part "A"	Golden Gate Canal to G. G. Pkwy.	Complete	-0-	Complete	-0-	$17,118	$ 17,891	
Part "B"	Golden Gate Pkwy. to Green Blvd.	Complete	-0-	Complete	-0-	$17,118	$ 43,054	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barbara Blvd.	Complete	-0-	Complete	-0-	$17,118	$113,905	
7. Santa Barbara Blvd., North Phase I	Coronado Pkwy. to Green Blvd.	Complete	-0-	$123,986	$154,942	-0-	$ 9,464	
	Totals:	-0-	-0-	$123,986	$154,942	$51,354	$184,314	Oct.00/ $112,551
Fiscal Year 2000-2001								
2. C. R. 951, South								
Part "A"	Golden Gate Canal to G. G. Pkwy.	Complete	-0-	Complete	-0-	$14,060	$ 18,428	
Part "B"	Golden Gate Pkwy. to Green Blvd.	Complete	-0-	Complete	-0-	$14,060	$ 44,346	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barbara Blvd.	Complete	-0-	Complete	-0-	$14,060	$117,322	
7. Santa Barbara Blvd., North								
Phase I	Coronado Pkwy. to Green Blvd.	Complete	-0-	Complete		$14,060	$ 19,496	
Phase II	Golden Gate Canal to Coronado Pkwy.	Complete	-0-	$112,551	$166,377	-0-	$ 9,748	
	Totals:	-0-	-0-	$112,551	$166,377	$56,240	$209,340	Oct.01/ $115,927
	Cumulative Five Year Totals:	$15,592	$15,109	$470,237	$549,569	$196,202	$710,071	
(Note: 5 percent added to planning/design and capital cost beyond this point)								
Fiscal Year 2001-2002 2002-2003								
2. C. R. 951, South								
Part "A"	Golden Gate Canal to G. G. Pkwy.	Complete	-0-	Complete	-0-	$13,292	$ 18,428	
Part "B"	Golden Gate Pkwy. to Green Blvd.	Complete	-0-	Complete	-0-	$13,292	$ 44,346	
3. Golden Gate Pkwy., East	C.R. 951 to Santa Barbara Blvd.	Complete	-0-	Complete	-0-	$13,292	$117,322	
7. Santa Barbara Blvd., North								
Phase I	Coronado Pkwy. to Green Blvd.	Complete	-0-	Complete	-0-	$13,292	$ 20,080	
Phase II	Golden Gate Canal to Coronado Pkwy.	Complete	-0-	Complete	-0-	$13,292	$ 10,040	
8. Sunshine Blvd.	Golden Gate Pkwy to Green Blvd.	$5,561	-0-	$178,649	-0-	$12,730	-0-	
	Totals:	$5,561	-0-	$178,649	-0-	$79,190	$210,216	Oct.03/ $235,331

March 12th 1997

Table 17

COLLIER COUNTY TRANSPORTATION SERVICES GOLDEN GATE COMMUNITY ROADWAYS LANDSCAPE MEDIAN PRIORITIES

ROAD# / ROADWAY		ROAD SEGEMENT	ROADWAY DISTANCE	GREEN DISTANCE	COUNTY SCHEDULE	M.S.T.U. SCHEDULE	CAPITAL COST	MAINTENANCE COST
Golden Gate Community Arterial / Collector Roads					From 1995	From 1996		
1. Coronado Parkway		Golden Gate Pkwy. to Santa Barb.	.90 mi.	.74 mi.	Not listed	10 yr/cycle	$129,500	$ 37,000
2. C. R. 951, SOUTH	*	Golden Gate Canal to Green Blvd.	2.0 mi.	1.8 mi.	15 yr/cycle			
Part "A"	*	Golden Gate Canal to G. G. Pkwy.	1.0 mi.	.90 mi.		Fy 97/98	$175,000	$ 50,000
Part "B"	*	Golden Gate Pkwy. to Green Blvd.	1.0 mi.	.90 mi.		Fy 98/99	$175,000	$ 50,000
3. Golden Gate Pkwy., East	*	C.R. 951 to Santa Barabara Blvd.	2.5 mi.	1.9 mi.	Complete	Complete	$824,700 (#1)	$104,000 (#2)
4. Green Blvd.		C.R. 951 to Santa Barbara Blvd. N.	2.0 mi.	.90 mi.	Not listed	15 yr/cycle	$157,500	$ 45,000
5. Hunter Blvd.		Coronado Pkwy to Santa Barb., N	.90 mi.	.84 mi.	Not listed	15 yr/cycle	$147,000	$ 42,000
6. Lucerne Road		Sunshine Blvd. to Coronado Pkwy.	.20 mi.	.19 mi.	Not listed	15 yr/cycle	$ 32,250	$ 9,500
7. Santa Barbara Blvd., North	*	Golden Gate Canal to Green Blvd.	2.1 mi.	1.6 mi.	15 yr/cycle	Fy 99/01	$367,500	$105,000
8. Sunshine Blvd.		Golden Gate Pkwy to Green Blvd.	1.1 mi.	.78 mi.	Not listed	10 yr/cycle	$136,500	$ 39,000
9. Tropicana Blvd.		Golden Gate Pkwy to 32nd Ave. SW	.80 mi.	.70 mi.	Not listed	10 yr/cycle	$122,500	$ 35,000
		Sub-Totals:	14.5 mi.	11.2 mi.		**Sub-Totals:**	**$2,111,525**	**$516,500**
Collier County Major Arterial Roads								
10. C. R. 951, NORTH		Green Blvd. to Golden Gate Blvd.	2.0 mi.	1.9 mi.	15 yr/cycle	Not listed	$350,000	$100,000
11. Golden Gate Pkwy., West		Santa Barbara Blvd. to I-75	.90 mi.	.63 mi.	15 yr/cycle	Not listed	$157,500	$ 45,000
12. Golden Gate Blvd., West		C.R. 951 to 25th Street NW	2.0 mi.	1.3 mi.	Not listed	Not listed	$350,000	$100,000
13. Logan Blvd.		Green Blvd. to Pine Ridge Road	.90 mi.	.38 mi.	15 yr/cycle	Not listed	$157,500	$ 45,000
14. Pine Ridge Rd. Ext. East		C.R. 951 to Logan Blvd.	2.0 mi.	1.7 mi.	15 yr/cycle	Not listed	$350,000	$100,000
15. Santa Barbara Blvd., South		Davis Blvd. to Golden Gate Canal	2.0 mi.	1.6 mi.	15 yr/cycle	Not listed	$350,000	$100,000
		Sub-Totals:	9.8 mi.	7.5 mi.		**Sub-Totals:**	**$1,715,000**	**$490,000**
		Totals:	**24.3 mi.**	**18.7 mi.**		**Totals:**	**$3,826,525**	**$1,006,500**

NOTES:

* - Indicates Collier County major Arterial roadways that are located within the Golden Gate Beautification M.S.T.U.

(#1). Golden Gate Parkway East installation costs are completed construction cost including landscape, curbing, electric, sleeving and irrigation. The other roadways cost and scheduling information come from the Collier County Transportation Services October 31st, 1995 "Landscape Median Priorities schedule". Installation cost are based upon a $175,000 per mile (50,000 s.f. area per mile), for roadway median landscape development. These cost include median landscape, irrigation and electric.

(#2). Maintenance costs for Golden Gate Parkway East are based upon annual contract cost. All other roadways are based upon a County figure of $50,000 per mile (50,000 s.f. area per mile).

FUNDING SOURCES ANALYSIS

The Golden Gate Beautification Municipal Services Taxing Unit (M.S.T.U.), was established by a voter referendum that created an ordinance to levy taxes for local roadway beautification. The M.S.T.U. covers a four square mile unicorporated area of Collier County known as Golden Gate City. The current ordinance provides for a maximum tax levy of one half mill.

The Beautification Advisory Committee at the public's request investigated expanding the Beautification M.S.T.U. to the same boundary as the Golden Gate Community Center's M.S.T.U. The Community Center M.S.T.U. was also a voter referendum which created an ordinance to levy taxes for the development and operaton of the Golden Gate Community Center. The Community Center M.S.T.U. covers a 13.5 square mile area overlaying the Beautification M.S.T.U. The current Community Center ordinance provides for a maximum tax levy of nine tenths of a mill.

It should be noted that upon review of both M.S.T.U.'s ordinances it is apparent that expanding or changing the boundaries to encompass more parcels or using funds for any purposes other than as written in the ordinances would require Board of County Commissioners and/or a voter referendum to amend the ordinances.

The following cost analysis has been created to show the results of an expansion or combination of the two M.S.T.U. areas.

Golden Gate Beautification, M.S.T.U.

Master Plan area roadway miles:	9.9 miles	
Beautification taxing Area:	4 square miles.	
Collier County Fund 136		
1995 Taxable property value:		$339,142,800
M.S.T.U. millage rate:		x .0005
Total annual revenue at:		$ 169,571
1996 Taxable property value:		$361,000,000
M.S.T.U. millage rate:		x .0005
Total annual revenue:		$ 180,500
		(6% increase over 1995)
Potential revenue at .75 mill:		$ 270,750
Potential revenue at 1 mill:		$ 361,000

Golden Gate Community Center, M.S.T.U.

Master Plan feeder roadway miles: 12 miles
Community Center taxing Area: 13.5 square miles
Collier County Fund 130

1996 Taxable property value:	$633,258,857
M.S.T.U. millage rate:	x .0003133
Total annual revenue presently designated to Community Center operations.	$ 198,400
Potential revenue at 1/2 mill:	$ 316,297
Potential revenue at 3/4 mill:	$ 474,944
Potential revenue at 9/10 mill:	$ 569,933

Expanded boundary

1996 Taxable property value:	$633,258,857
Expanded M.S.T.U. millage rate of:	x .0005
Estimated total annual revenue:	$ 316,629
Present Beautification M.S.T.U. revenues:	-$ 180,500
Increase in total Beautification M.S.T.U. revenues:	$ 136,129 (75% increase)

Expansion of the Beautification M.S.T.U. boundary to match the Community Center boundary would add 12 miles of roadways into the Beautification M.S.T.U. improvement program. Increasing the improvement area by 121 percent and increase the revenues by 75 percent.

The following cost estimate figures are used only for analysis purposes to show the percentage of increases. They are not intended to suggest a degree of improvement. Collier County Government uses for budgeting purposes a roadway median landscape development cost of $175,000 per linear mile and a $50,000 per linear mile for maintenance (based on median landscape areas of 50,000 s.f.per mile).

Estimated beautification improvement and maintenance cost

Existing Beautification M.S.T.U.

Improvement cost of 9.9 miles:	$1,732,500.00
Annual maintenance cost of 12.4 miles:	$ 620,000.00

(Maintenance miles includes existing 2.5 miles of Golden Gate Parkway East)

Expanded boundary and roadways

Improvement cost of 19.7 miles:	$3,447,500.00
Annual maintenance cost of 22.2 miles:	$1,110,000.00

By expanding the Beautification M.S.T.U. boundary the total roadway landscape improvement costs would increase by 99 percent and annual maintenance costs would increase by 79 percent.

The following are potential funding sources for roadway beautification improvement projects. each of the sources listed may be able to provide partial funding for future projects.

Public Sector Funding

Municipal Services Taxing Unit

Expansion and/or adjusting millage rate to generate improvement and maintenance revenues to accelerate projects. Millage rate adjustments could be implemented for specific periods and then reduced.

State and Federal Grants:

Urban & Community Forestry Grant
I.S.T.E.A. Federal Grant
State Water Management

Collier County Funding

Collier County/M.S.T.U. Partnerships and or Loans
Collier County M.S.T.D. Road District Fund
Collier County M.S.T.D. General Fund, (Unicorporated Areas)
Collier County Facilities Management County wide, CIP
Collier County Streetlight Fund
Collier County Road Construction Fund
Collier County MPO Pathways Advisory Committee

Private Sector Funding

Civic organization and fund raisers
Foundations
Individual, Corporate or Business donations
Volunteer labor for project installations and certain maintenance items.
Plant material planting programs or donations.

TRAFFIC CALMING AND MANAGEMENT

Traffic calming or management is the implementation of techniques and devices along the local collector or neighborhood roadways to improve safety, security, and livability. The intent of the traffic calming concept is to reclaim the roadways back from just the motorist and allow pedestrians, bicyclist and the motorist to share the roadway as a slower and safer common place for all.

The Golden Gate community roadways, as well as the roadways within the M.S.T.U. boundaries are typical examples of in need of traffic calming as a result of poor zoning, planning and road design. The area roadways are typically one to two mile long straight sections of road. These types of roads commonly permit or provide the motorist the opportunity to travel at faster than posted speeds because of the unlimited visibility.

Some recommended traffic calming techniques that could be considered implementation within and along the Master plan roadways are as follows:

1. Median landscaping or Gateway/Entry treatments
2. Pavement texture changes (e.g.Asphalt to brick at pedestrian crossovers)
3. Periodic monitoring by police
4. Signs Indicating traffic calming devices
5. Speed humps
6. Rumble strips prior to pedestrian crossings
7. Raised crosswalk / speed hump
8. Road striping
9. Speed monitoring display devices placed periodically along the roadways.
10. Modified tee intersections
11. Deviation in linear layout to create S-shape alignment for proposed roadway upgrades.
11. Education: Workshops, meetings, pamphlets, school programs, speed watch and signing campaign.

Collier County has developed and is implementing a Neighborhood Traffic Management Program. The program allows for Communities or Neighborhoods to petition the Board of County Commissioners in order to implement traffic calming techniques and devices along local roadways.

The following Master plan roadways could be considered for a Neighborhood Traffic Management Program:

1. Coronado Parkway
2. Hunter Boulevard
3. Lucerne Road
4. Sunshine Boulevard
5. Tropicana Boulevard

Presently the Collier County program has listed roadways not considered to be local roads. C.R. 951, Green Blvd., Golden Gate Parkway and Santa Barbara Blvd. are on this list and will not be considered for traffic management programs. It is recommended that Green Blvd. be removed from this list and if a program is submitted that Green Blvd. be allowed to be included.

Traffic calming and management techniques and devices should be a very important part of any roadway beautification program. It is recommended that as the Master plan roadways go into their final planning and design phase that a Neighborhood Traffic Management Program be developed and submitted to the Collier County Board of County Commissioners for approval and implementation.

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Current Planning Section, Landscape Architect
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Golden Gate Beautification Advisory Committee
Metropolitan Planning Organization, M.P.O.
Pathways Advisory Committee
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