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Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

## Planning Commission Staff Report

**Project Type:** 6<sup>th</sup> Partial Amended Site Development Plan

**Meeting Date:** June 25, 2012

**From:** Mara Perry, AICP  
Senior Planner

**Location:** Northwest corner of Olive Boulevard and Arrowhead Estates Lane  
(15201 Olive Boulevard)

**Applicant:** Friendship Village of West County

**Description:** **Friendship Village of West County (15201 Olive Boulevard):** 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for a 34.5 acre tract of land zoned "R4" Residence District with a "CUP" Conditional Use Permit at the northwest corner of Olive Boulevard and Arrowhead Estates Lane.

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### **PROPOSAL SUMMARY**

Civil Engineering Design Consultants, on behalf of Friendship Village of West County, have submitted a 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for Planning Commission review. The project is located on a 34.5 acre tract of land zoned "R4" Residence District with a "CUP" Conditional Use Permit at the northwest corner of Olive Boulevard and Arrowhead Estates Lane

The request is for approval of a new thirty (30) unit independent living addition with underground parking and three (3) independent living villas. The materials for the addition are masonry and fiber-cement siding/panels. The roof is comprised of a sloped shingle metal roof and a single-ply membrane at the roof wells.

### **LAND USE AND ZONING HISTORY OF SUBJECT SITE**

The subject tract was zoned "NU" Non-Urban District by St. Louis County prior to the incorporation of the City of Chesterfield.

The site was granted CUP #264 from St. Louis County in 1973 for a "full life retirement center". The permit was amended by St. Louis County in March 1988 to increase the number of beds allowed in the nursing facility and to add setbacks for an addition. In August 1989, the City of Chesterfield City Council approved CUP #02 which allowed for limited service and retail

commercial uses. In 2008, CUP #02 was repealed with the approval of City of Chesterfield CUP #29 which added additional property to the existing lot governed by the CUP.

A Boundary Adjustment Plat was approved by City Council in February of 2008 to add the additional lots into the development. The original Site Development Plan for the site has been amended multiple times for additions to the existing building, additional villas and for parking.

In January 2012, the site was rezoned to an “R4” Residence District and the existing CUP was reestablished within that district as CUP #35. CUP #35 was repealed and replaced with CUP #36 to allow for additional units within the development, additional square footage for the accessory commercial uses and changes to the landscape requirements.

During the Public Hearings and meetings in 2011 and 2012, there were concerns about required development conditions by adjacent property owners. One adjacent owner had concerns about the location of parking and a buffer to his property. The area of his concern is not being amended at this time but will be in a future phase of development. The adjacent owners along Olive Boulevard had concerns about the shared drive location between their property and Friendship Village’s boundary. A new easement has been put in place to address those concerns.

**Land Use and Zoning of Surrounding Properties:**

Direction	Land Use	Zoning
North	Residential	“NU” Non-Urban District
South	Residential	“R4” and “R3” Residence District
East	St. Louis County Park and Residential	“PS” Park and Scenic and “R3” Residence District
West	Residential	“NU” Non-Urban District and “R4” Residence District



## **STAFF ANALYSIS**

The request is for approval of a new thirty (30) unit independent living addition with underground parking and three (3) independent living villas.

Please note that the three (3) villas were before the Architectural Review Board and Planning Commission in 2007 as part of a larger approval for a Multi-Purpose Building and seven (7) villas. The plan was given unanimous approval by both the Board and Commission. The three units did get developed to building permit stage and then were put on hold. The permits have expired and will need to be reapproved. As all the improvements will be constructed at the same time, the plan is being amended to include both the newly proposed addition with the previously approved villas.

### **Zoning**

The subject site is zoned "R4" Residence District. The submittal was reviewed against the requirements of City of Chesterfield CUP #36, and all applicable Zoning Ordinance requirements. The submittal as presented adheres to CUP #36 and all applicable Zoning Ordinance requirements.

### **Traffic/Access and Circulation**

The existing vehicular circulation makes a loop through the site with parking locations at the various entrances to different structures. The existing road is being altered to expand out past the addition while still providing the same connectivity through the development. The new sidewalks proposed with the addition provide logical pedestrian connections between buildings and to amenities. Parking spaces are provided off the loop road as well as in the lower level within the building.

This phase of the project builds on the pattern of the existing independent living facility and villas. Pedestrian connections are being made to the other buildings on the site and connecting to the existing pathways and trails. A landscape entry courtyard with a water feature is being added to the south side of the new addition.

### **Parking**

Parking for the site is provided through both garage and surface parking. The addition will have thirty (30) parking spaces in the lower level of the building and seventeen (17) surface parking spaces adjacent to the courtyard. Three (3) existing spaces located near the wellness center are being relocated along the loop road and two (2) will be removed. The three (3) villas have been designed with attached garages.

The number of parking spaces provided has been reviewed against the requirements of the Off-Street Parking, Stacking, and Loading Regulations section of the City of Chesterfield Zoning Ordinance. For the addition, the number of spaces provided in the lower level meets the required number for group homes for the elderly. The surface spaces adjacent to the addition are provided above the requirements.

With existing and new parking spaces, the site will provide thirty-seven (37) parking spaces for the development above the code requirements. There is no maximum parking requirement for this use type.

### **Landscaping**

A Landscape Plan was submitted showing new trees and shrubs to be installed throughout the site. Water quality features are being provided per the requirements of the Metropolitan Sewer District and the proposed plantings were reviewed to ensure no sight distance issues existed.

New landscaping for the addition and villas is intended to match the level of landscaping around the existing areas of the development. Low level plantings are provided in the courtyard and around the base of the buildings. Trees will provide shade along the pedestrian walkways.

The Landscape Plan meets all requirements of the City of Chesterfield Tree Preservation and Landscape Requirements. The City Arborist has reviewed the Landscape Plan and had no additional comments.

### **Lighting**

A Lighting Plan has been submitted with light fixtures that provide lighting for the internal roadways in the development in addition to fixtures for the pedestrian areas. The fixtures are decorative and are not shielded. City of Chesterfield Ordinance 2228, under the exemptions section, allows for an exemption for Fixture Design.

### **13. EXEMPTIONS**

- 2) Fixture design exemptions. The Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare light trespass in excess of 0.5 foot candle and the proposed fixtures will improve the appearance of the site.

The proposed lighting is all within the confines of the site and no light trespass is occurring.

### **Architectural Elevations**

The project was reviewed by the Architectural Review Board (ARB) on June 14, 2012. A motion was passed by a vote of 4-0 to forward the project to Planning Commission for approval with the following recommendation:

Recommend adding architectural detailing, material change or some type of offset where the south and east corners of the proposed addition intersect with the existing brick building to give a solid differential statement of design between the two buildings.

Due to the constraints which exist with the proposal, the ARB did not make any suggestions on how to achieve this recommendation. The ARB overall approved of the addition as it was a great improvement over the existing buildings that have very little mix of materials and articulation. The Architect submitted new renderings showing a change to the connection between the buildings, in an effort to address the single concern from the ARB. The addition now has a slight offset at its points of connection with the existing building. At the offset, the brick has been carried all the way to the top of the façade.

Staff shared the amended elevations with the Chair of the ARB. While the Chair stated that she did not believe this achieved what ARB was hoping for, she also commented how much they liked the new building and understood that there are limitations to what could be done. There was a concern that the new building design not be simplified in order to match the existing.

### **DEPARTMENTAL INPUT**

Staff has reviewed the 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and Architect's Statement of Design and has found the application to be in conformance with City of Chesterfield CUP #36, and all other applicable Zoning Ordinance requirements.

Upon review of the proposed project with the City's Code, the recommendation from the ARB, and the site constraints within this scope of work, Staff recommends approval of the architectural elevations as submitted herein. Please refer to page 4 for more information on the recommendation and comment from the ARB and the ARB Chair.

Staff recommends approval of the 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for Friendship Village of West County.

**MOTION**

The following options are provided to the Planning Commission for consideration relative to this application:

- 1) "I move to approve (or deny) the 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for Friendship Village of West County."
  
- 2) "I move to approve the 6<sup>th</sup> Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for Friendship Village of West County with the following conditions..." (Conditions may be added, eliminated, altered or modified)

Cc: City Administrator  
City Attorney  
Department of Planning, Public Works, and Parks

Attachments: 6<sup>th</sup> Partial Amended Site Development Plan  
Amended Landscape Plan  
Amended Lighting Plan  
Lighting Cut Sheets  
Architectural Elevations  
Architect's Statement of Design



May 29, 2012

RE: Friendship Village of West County Independent Living Building  
Chesterfield, Missouri

## **ARCHITECTS STATEMENT**

The following items identify how the City of Chesterfield Architectural Review Board guidelines are being addressed for the above mentioned project.

### **INTRODUCTION**

Located at 15201 Olive Boulevard, Friendship Village of West County (also known as Friendship Village Chesterfield) provides quality living and continuing care for senior adults and consists of Independent Living Apartments, Cottages, Assisted Living, Skilled Nursing, and Memory Care facilities, along with multiple resident use facilities. In response to the anticipated demands of the senior living market, Friendship Village has developed a multi-phase masterplan to improve the overall quality and effectiveness of its services and facilities. Phase I of the masterplan consists of a new three-story Independent Living Building with one level of under-building parking below. The new building will contain 30 one and two bedroom apartments. The design will both complement and bridge the gap between the adjacent existing "modern" three and four story independent living buildings and the newer cottage-style Multi-purpose Wellness facility and the nearby duplex cottages through the use of scale, materials and site orientation.

### **GENERAL REQUIREMENTS FOR SITE DESIGN**

#### **A. Site Relationships**

The disturbed site consists of 3.17 acres at the rear of the developed portion of the Friendship Village property. The building will attach to an existing Independent Living Building for interior pedestrian access to the remainder of the facilities and is bound on one side by a wooded hillside and the existing retention pond on the other and is adjacent to the Multi-purpose Wellness facility. The existing ring road runs through the site and will require relocation. The building's orientation and shape is intended to allow for easy access to the adjacent existing facilities and to clearly delineate a separation between pedestrian and vehicular circulation. The landscaping will further articulate the circulation paths and provide a transition from the roadway to the building. A bubbling fountain will be the focus of the new courtyard formed between the building and the existing Independent Living Building. The resident

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apartments are oriented to provide scenic views of the pond, the wooded hillside, or the landscaped courtyard.

## **B. Circulation System & Access**

The circulation patterns are clear, safe, and direct. The ring road will be relocated to form the boundary for the new building pad. It drops one level in elevation as it moves around the new building so that the entrance to the under-building parking is at the far end of the building away from the pedestrian traffic and on-grade with the lower level parking. Parking is provided for the building residents at the parking level with excess resident and visitor parking provided along the ring road. The building's main pedestrian entrance is on the level above and faces the Multi-purpose Wellness facility. The building's L-shape forms a courtyard with the existing Independent Living Building (also at the level above the parking). The new sidewalks are integrated into the existing sidewalks to maintain direct access between buildings without crossing traffic. The new sidewalk on the pond side of the ring road connects with the existing walking trail that runs around the pond. Finally, the new building is connected to the existing building on all three resident floors so all the other facilities at Friendship Village are accessible without having to go out into the weather.

## **C. Topography**

1. The topography slopes gently down and around the building following the slope of the relocated ring road along the hillside. There is no need for natural berms, screening, or buffering of equipment or structures.
2. The modifications to the topography will appear be a natural extension of the surrounding areas.
3. All grade changes will be smooth. There is a small retaining wall for grade transition between the new building and the adjacent Multi-purpose Wellness building and a substantial retaining wall on the outside edge of the ring road along the wooded hillside.

## **D. Retaining Walls**

1. The height and length of the retaining wall at the outside of the ring road along the wooded hillside has been designed to meet the slope and radius requirements of the ring road. The retaining wall adjacent to the Multi-purpose Wellness building is minimized but necessary to accomplish the change in grade.
2. The top of the ring road retaining wall will be screened with landscaping from the ring road and a fence installed above grade. The Multi-purpose Wellness retaining wall will be screened on both sides with lush landscaping.

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3. Terracing was not used at the ring road because it would impact the adjacent wooded hillside by requiring that additional trees be removed. This is not considered a visual problem since the retaining wall is only visible from the unpopulated wooded area.
4. The retaining walls will be modular masonry segmental walls.

## **GENERAL REQUIREMENTS FOR BUILDING DESIGN**

### **A. Scale**

The building is designed to harmonize with the adjacent existing buildings while providing appropriate scale and detail for both pedestrians and viewing from a distance. The colors and materials are derived from the existing Independent Living Building and the Multi-purpose Wellness building, along with the detailing. The roof design and the entrances and building projections will identify the residential nature of the building and provides interest in the elevations.

### **B. Design**

1. The building is shaped and oriented to be a natural extension of the existing Friendship Village campus. The simple use of a limited number of materials combined with the balconies and projecting living areas and the roof elements create variety and architectural rhythm appropriate to a residential building. The colors are neutral and have been selected to work with the adjacent buildings while giving an updated fresh appearance to the new building.
2. Variety in landscape and building elevation is provided along the ring road.
3. The building is a unique design created for this particular site.
4. The masonry, siding, and panels are articulated to provide interest and detail at the pedestrian level.
5. There are not any art elements currently proposed.
6. The building will have a state-of-the-art energy efficient mechanical and electrical systems and an energy efficient exterior building envelope. Energy Recovery Units will be located in the roof well to serve the resident units. A feasibility study is being performed to evaluate if a geothermal heat pump system is a viable alternative for the HVAC system.
7. A vestibule is provided to clearly identify the main building entrance and to provide shelter when entering and for visitors to process through security.
8. There are no current plans for temporary barriers/walls.
9. The rooftop equipment is located in a roof well and will not be visible from grade or adjacent buildings.

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### **C. Materials and Colors**

The building incorporates a combination of masonry, fiber-cement siding, fiber-cement panels w/ battens, and residential scale windows and doors, painted aluminum balcony rails, along with architectural grade asphalt shingles and metal roofing at corner elements or building projections. The materials are durable and will require minimal maintenance over the lifetime of the building. The neutral colors will be integral other than on the painted fiber-cement materials.

### **D. Landscape Design and Screening**

The landscape design compliments the sidewalks and provides a transition between the pedestrian areas and the new and existing buildings. The intent is to tie into the existing mature Friendship Village landscape through the use of trees, shrubs, and groundcover to provide interest and color throughout the year. The bubbler fountain in the courtyard will provide visual and auditory interest from the adjacent residential units and to passersby. There are also seating areas in the courtyard to encourage residents to enjoy the outdoors in nice weather.

### **E. Signage**

The only signage will be either on-grade building identification signage or other site-circulation/vehicular/regulatory related signage matching the standard Friendship Village site signage requirements.

### **F. Lighting**

The Site Lighting has been submitted and is being reviewed through a separate process.

### **CONCLUSION**

The design for the new three story Independent Living Building has been thoughtfully developed to integrate into the existing campus while significantly improving the residential unit options. This building will set the stage for the future planned development at Friendship Village. The addition of the Phase I Independent Living Building at Friendship Village will have a positive impact on both Friendship Village and the City of Chesterfield.

Respectfully Submitted by:  
THW Design

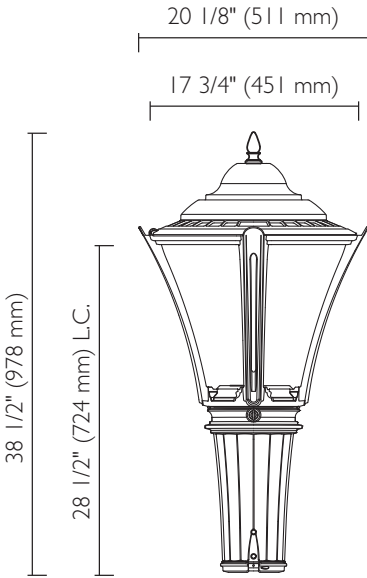
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# MetroScape

## Data Sheet



### MPTR

Conform to the UL 1598 and CSA C22.2 No. 250.0-08 standards  
 Suitable for operation in an ambient temperature up to 40°C / 104°F - UL certified  
 (Runs cool in almost every climate).  
 The MetroScape meets the ANSI C136.31-2001 table 2, American National Standard for  
 Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G  
 over 100 000 cycles by an independent lab)

**EPA:**  
 1.97 sq ft

**Weight:**  
 31.1 lbs (14.1 kg)

MetroScape is approved by:



## LED Lamp Details

Lamps #	Rated life hrs. <sup>1</sup>	LED Model	CRI	Color Temperature <sup>2</sup>	Initial Lumens	Wattage		Max System AC current: 120v	LED mA	HPS equivalent <sup>4</sup>
						Lamp	System <sup>3</sup>			
35W32LED4KES	100,000	Philips Lumileds Rebel ES	70	4000K	3872	35W	40	0.36A	350mA	70W
42W32LED4KES	100,000		70	4000K	4576	42W	45	0.42A	400mA	100W
55W32LED4KES	100,000		70	4000K	5632	55W	60	0.54A	530mA	100W
55W48LED4KES	100,000		70	4000K	5808	55W	60	0.54A	350mA	100W
65W48LED4KES	100,000		70	4000K	6864	65W	72	0.63A	400mA	100W
80W48LED4KES	100,000		70	4000K	8448	80W	88	0.82A	530mA	150W
70W64LED4KES	100,000		70	4000K	7744	70W	77	0.72A	350mA	100W
85W64LED4KES	100,000		70	4000K	9152	80W	94	0.84A	400mA	150W
110W64LED4KES	100,000		70	4000K	11264	110W	120	1.9A	530mA	200W
90W80LED4KES	100,000		70	4000K	9680	90W	100	0.90A	350mA	150W
105W80LED4KES	100,000		70	4000K	11440	110W	115	1.05A	400mA	200W
135W80LED4KES	100,000		70	4000K	14080	135W	150	1.36A	530mA	250W

<sup>1</sup> Rated life represents the time it takes for the LED system to reach 70% of initial lumen output (as described in LM-80). Calculated with an ambient temperature of 25°C / 77°F  
<sup>2</sup> On average.  
<sup>3</sup> System wattage includes the lamp and the LED driver.  
<sup>4</sup> Compared to the Philips Lumec Ancestra with SHA3M optic.

**How to calculate the system lumen per watt ratio (LER):** First, visit our website at [www.lumec.com](http://www.lumec.com) and download the IES file (photometric file) of your selected Philips Lumec product. Then, use a photometric software to get the absolute system lumens value and divide by the system wattage. (Example: 35W32LED4KES : Absolute system lumens / 42W = LER)

## Optical System



LEDGINE

Composed of high performance acrylic refractors lenses to achieve desired distribution, optimized to get maximum spacing, target lumen and a perfect lighting uniformity. Performance shall be tested per LM63 and LM79 and TM15 (IESNA) certifying its photometric performance.

- LE2: Asymmetrical
- LE3: Asymmetrical
- LE4: Asymmetrical
- LE5: Symmetrical (square)

## Voltages

120 / 208 / 240 / 277 / 347<sup>1,2</sup> / 480<sup>1,2</sup>

<sup>1</sup> Stepdown transformer required with Dynadimmer  
<sup>2</sup> Stepdown transformer required with driver options listed below

# Luminaire Options

## PH8

Photoelectric cell  
Complete with a decorative cap  
Allows a 90° rotation

## RC

Receptacle for  
photoelectric cell

## TN3

Fitter to fit over a 3" (76 mm) O.D.  
by 4" (102 mm) long tenon

## TN3.5

Fitter to fit over a 3 1/2" (89 mm) O.D.  
by 4" (102 mm) long tenon

## Finials



# Smart luminaire options

MetroScape allows you many options in order to get different smart functionalities.

- DMG** → Driver is compatible with dimmer from 0 to 10 volts.
- CDMG** → Dynadimmer standard dimming functionalities including pre-programmed scenarios to suit many applications and needs from safety to maximum energy savings.
- CDMGP** → Dynadimmer custom dimming scenario allowing the user to program up to 5 time periods and multiple dimming levels from 100% to 10% of total wattage.
- OVR** → Dynadimmer override function offering the possibility to go back to full power at any time via an electrical signal of 120VAC to 277VAC from a motion sensor, a switch, a relay or else.
- CLO** → Pre-set driver to manage the lumen depreciation by adjusting the power given to the LEDs offering the same lighting intensity during the entire lifespan of the lamp.
- AST** → Pre-set driver for progressive start-up of the lamp to optimize energy management and enhance user visual comfort at start-up.
- OTL** → Pre-set driver to signal end of life of the lamp for better fixture management.
- DALI** → Pre-set driver compatible with the DALI control system.

# Smart system options

Different options are available according to your needs. Please contact us for more information.

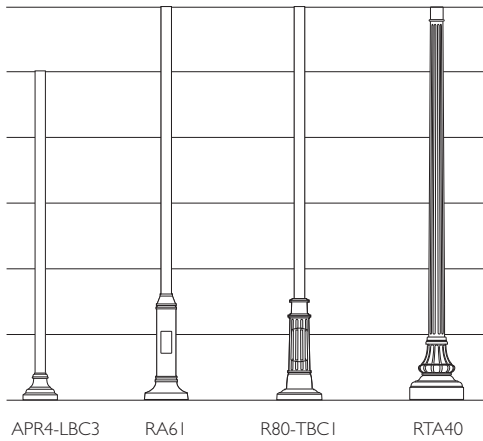
# Smart city options

- AMPLIGHT** → Amplight is the intelligent monitoring and control, automated management system that delivers up to 35% streetlight energy savings and makes it easy to monitor and manage the entire system, in real time. Please contact us for more information.

Other options are also available according to your needs. Please contact us for more information.

# Poles

Consult the Philips Lumec Pole Guide for details and the complete line of poles.



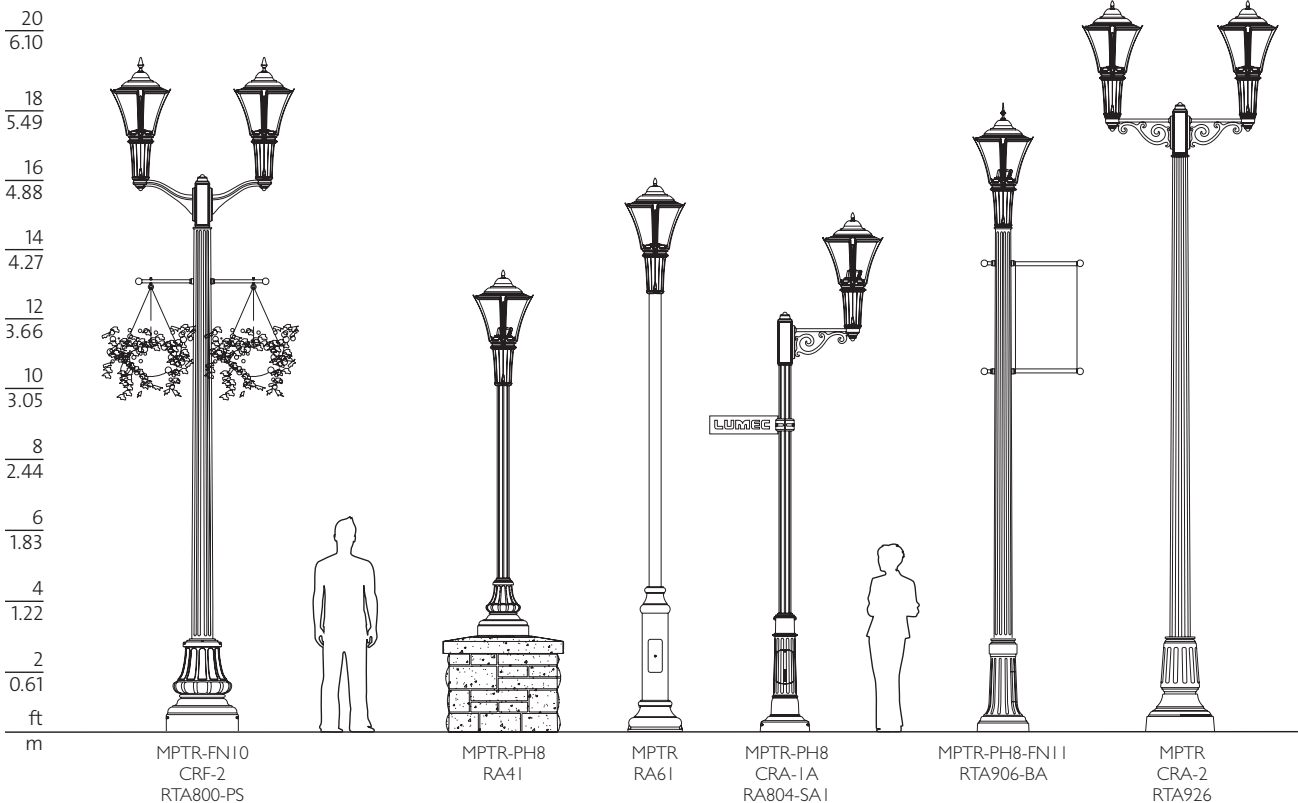
# Finish

- GR    Gray Sandtex
- WHTX    Textured White
- BKTX    Textured Black
- GY3TX    Textured Medium Grey
- BRTX    Textured Bronze
- BG2TX    Textured Sandstone
- BE2TX    Textured Midnight Blue
- BE6TX    Textured Ocean Blue
- BE8TX    Textured Royal Blue
- GNTX    Textured Green
- GN4TX    Textured Blue Green
- GN6TX    Textured Forest Green
- GN8TX    Textured Dark Forest Green
- RD2TX    Textured Burgundy
- RD4TX    Textured Scarlet
- TS    Hammertone Silver
- TG    Hammertone Gold
- NP    Natural Aluminum

# Ordering example

Luminaire	Lamp	Optical System	Voltage	Driver Options	Luminaire Options	Pole	Finish
MPTR	42W32LED4KES	LE3	120	DMG	PH8	APR4-LBC4-16	BKTX

# Assembly examples



**www.lumec.com**

<b>PHILIPS LUMEC HEAD OFFICE</b>	:	<b>ONTARIO OFFICE</b>	:	<b>MEXICO OFFICE</b>
640, Curé-Boivin Boulevard	:	189 Bullock Drive	:	Zempoala #217
Boisbriand, Québec	:	Markham, Ontario	:	Col. Anenor Sales (Narvarte)
Canada J7G 2A7	:	Canada L3P 1W4	:	Mexico, D.F. 03010
<b>T</b> : 450.430.7040	:	<b>T</b> : 416.223.7255	:	<b>T</b> : (5255) 5564.5242
<b>F</b> : 450.430.1453	:	<b>F</b> : 866.971.2825	:	<b>F</b> : 450.971.2816

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**PHILIPS**  
**LUMEC**

landscapeforms®

## Concord

Designed by Robert A.M. Stern Architects

**Greater energy efficiency:**  
LED's use less energy,  
consume fewer resources

**Better color:**  
Warm white light supports  
ecology and human health

**Better Light Control:**  
Engineered Awen™ optics  
eliminate wasted light  
and light pollution

**Longer Life:**  
Exceptional thermal  
management extends  
useful life

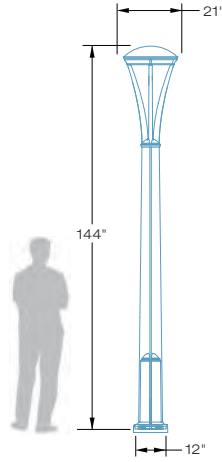


# Alcott

LED Pedestrian Lighting



# Alcott



Alcott Pedestrian Lighting Dimensions

## General Description

Pedestrian light for outdoor walkways. Light is highly designed using state-of-the-art LED lamp technology. Durable cast aluminum LED lamp housing sealed with thermoformed lens works with the integrated pole to provide outstanding heat management. Sealed housing uses the latest LED technology and improves lamp life by using more LEDs driven with less current; may be removed for servicing. Diffused lens technology provides exceptional performance against glare as evident in the BUG rating. A warm white 3,500°K lamp color was chosen for its warm aesthetic and ecological benefits.

## Electrical

110V-277V 50/60 Hz Dimmable, Class 2 LED driver is standard and mounted within integrated cast aluminum base cabinet. Alcott ships prewired; fully assembled and ready for installation.

## Finish

Pangard II®, offered exclusively by Landscape Forms, is a 19 step program of cleaning, priming, and powder-coating that produces the finest metal finish available for site furniture. In addition, Pangard II® contains no heavy metals and is free of Hazardous Air Pollutants.

## Warranty

Six years (50,000hr) on LED cartridge and three years on finish and manufacturing defects.

## To Order

Specify Alcott and powdercoat color for frame. Specify with Type 3 or Type 5 light. Specify optional cover plate. Alcott is surface mounted and ships with installation template and hardware. Mounting hardware can be pre-ordered.

## Other

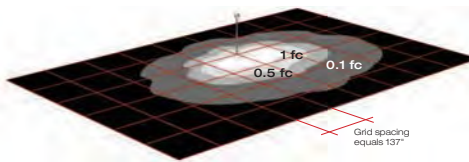
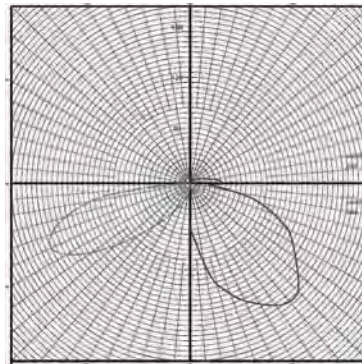
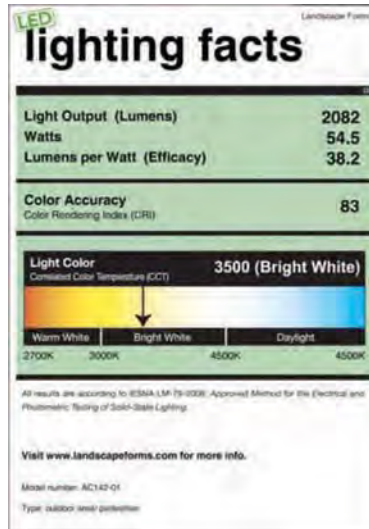
UL Listed, RoHS  
International Dark Sky Pending  
Patent #: US Pat Pending

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## Type 3

**Structure:** Housing and cabinet are cast aluminum, pole is aluminum extrusion.  
**Lamp:** 48 Cree XP-E  
**TM21 L70 Life:** 60,500 h  
**Drive Current:** 350mA  
**Optic:** Proprietary Awen™ Optic  
**Diffuser:** Impact Modified Acrylyte®  
**Power Supply:** 110V-277V  
**LED Driver:** 1 Dimmable TRC-075S210DT  
**BUG Rating:** B0U1G1  
**IP Rating:** IP66  
**Weight:** 170 lbs (complete assembly)



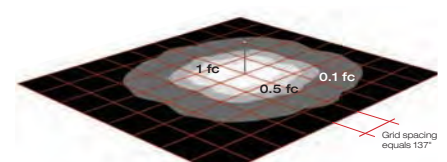
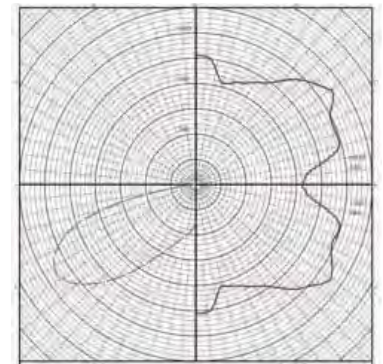
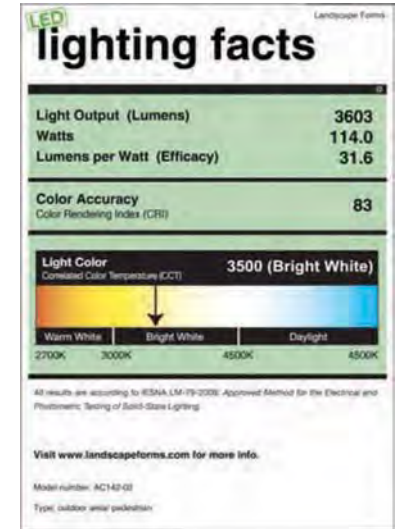
## Alcott Light Distribution and Spacing

Alcott meets or exceeds the IESNA DG-5 standard for Park walkways, Class I bikeways, and Residential sidewalks at 80' pole spacing, Intermediate sidewalks at 60' pole spacing, and Commercial sidewalks at 50' pole spacing. Alcott, at 50' pole spacing, also meets the "Special Conditions" criteria where increased vertical illuminance levels are needed for safety by improving facial recognition. Outside of North America, Alcott meets CIE-136-2000 standard for Residential parks at 60' pole spacing, and City Center/Arcades at 50'.

Concord  
landscapeforms®

## Type 5

**Structure:** Housing and cabinet are cast aluminum, pole is aluminum extrusion.  
**Lamp:** 96 Cree XP-E  
**TM21 L70 Life:** 60,500 h  
**Drive Current:** 350mA  
**Optic:** Proprietary Awen™ Optic  
**Diffuser:** Impact Modified Acrylyte®  
**Power Supply:** 110V-277V  
**LED Driver:** 2 Dimmable TRC-075S210DT  
**BUG Rating:** B2U1G1  
**IP Rating:** IP66  
**Weight:** 170 lbs (complete assembly)



800.521.2546 269.381.3455 fax  
 431 Lawndale Avenue, Kalamazoo, MI 49048  
[www.landscapeforms.com](http://www.landscapeforms.com)  
[specify@landscapeforms.com](mailto:specify@landscapeforms.com)

landscapeforms®

## Concord

Designed by Robert A.M. Stern Architects

**Greater energy efficiency:**  
LED's uses less energy,  
consume fewer resources

**Better color:**  
Warm white light supports  
ecology and human health

**Better Light Control:**  
Engineered optics  
eliminate wasted light  
and light pollution

**Longer Life:**  
Exceptional thermal  
management extends  
useful life



# Hawthorne

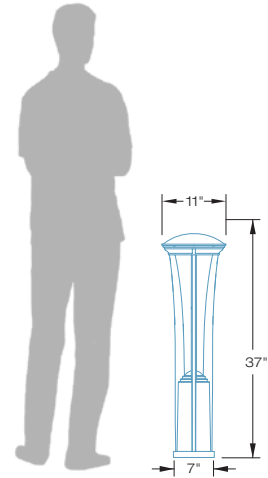
LED Pathway Lighting





# Hawthorne

**Structure:** Housing, LED cartridge and cabinet are cast aluminum. Base plate is stainless steel.  
**Lamp:** 6 Cree XRE 1.3W LED's  
**Optic:** 6 Khatod Collimators  
**Diffuser:** 85% transmissive Cyro Acrylyte  
**Power Supply:** 110V-277V  
**LED Driver:** MagTech LP1020  
**BUG Rating:** BOU1G1  
**IP Rating:** 66 for sealed LED cartridge  
**Weight:** 50 lbs  
**LED Working life:** 60,000h



Hawthorne Pathway Lighting Dimensions

## General Description

Pathway light for outdoor walkways. Light is highly designed using state-of-the-art LED lamp technology. Durable cast aluminum LED lamp housing sealed with thermoformed lens works with the integrated pole to provide outstanding heat management. Sealed housing uses the latest LED technology and improves lamp life by using more LED's driven with less current; may be removed for servicing. A warm white 3,500°K lamp color was chosen for its warm aesthetic and ecological benefits.

## Electrical

110V-277V 50/60 Hz, Class 2 LED driver is standard and mounted within integrated cast aluminum base cabinet. Hawthorne ships prewired; fully assembled and ready for installation.

## Finish

Pangard II®, offered exclusively by Landscape Forms, is a 19 step program of cleaning, priming, and powder-coating that produces the finest metal finish available for site furniture. In addition, Pangard II® contains no heavy metals and is free of Hazardous Air Pollutants.

## Warranty

Six years (50,000hr) on LED cartridge and three years on finish and manufacturing defects.

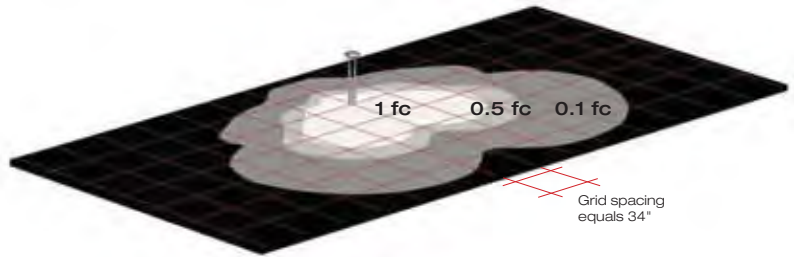
## To Order

Specify Hawthorne and powdercoat color for frame. Surface mount only.

## Other

UL Listed, RoHS  
 International Dark Sky Pending  
 Patent #: US Pat Pending

© 2012 Landscape Forms, Inc.



## Hawthorne Light Distribution and Spacing

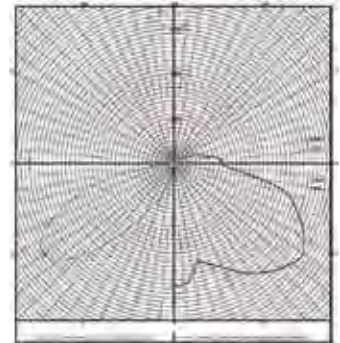
Hawthorne distribution is an IES Type 4 pattern and meets or exceeds IESNA DG-5 for Park walkways, Class I bikeways, Residential sidewalks and Intermediate sidewalks at 25' pole spacing, and Commercial sidewalks at 15' pole spacing. Path Lights can also be spaced 15' apart on both sides of a 10' path for Public-Way Emergency Egress. Outside of North America, Hawthorne meets CIE-136-2000 for Residential Parks at 25' pole spacing.

Landscape Forms Inc.

## lighting facts

A Program of the U.S. DOE

Light Output (Lumens)	261
Watts	8
Lumens per Watt (Efficacy)	32
<b>Color Accuracy</b>	
Color Rendering Index (CRI)	80
<b>Light Color</b>	
Correlated Color Temperature (CCT) 3500 (Bright White)	
2700K	3000K
4000K	6500K
All results are according to IESNA LM-79-000: Approved Method for the Electrical and Photometric Testing of Solid State Lighting. The U.S. Department of Energy (DOE) will release product test data and results.	
Visit <a href="http://www.lightingfacts.com">www.lightingfacts.com</a> for the Label Reference Guide.	
Registration Number: ENEC/FINCAR	
Model Number: HW140	
Type: Outdoor pedestrian light.	



# Concord

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800.521.2546 269.381.3455 fax  
 431 Lawndale Avenue  
 Kalamazoo, MI 49048  
[www.landscapeforms.com](http://www.landscapeforms.com)  
[specify@landscapeforms.com](mailto:specify@landscapeforms.com)



QUICK FIND #: QF-23

**Construction:** Body and cap machined from 6061-16 ALUMINUM; faceplate die cast from 356-16 ALUMINUM. Lens cut from tempered borosilicate glass for superior clarity and strength.

**LED Unit:**

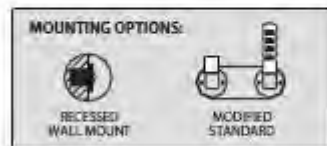
**3002 & 3005:** Winscape proprietary unit using three (3) High Output LEDs and an integral low voltage (10.5V-15.5V) AC LED driver. Available in Warm White (3000K) and Cool White (6500K) color temps. Units have constant light output when supplied with 10.5V-15.0V. Units are **not dimmable**.

**3012 & 3015:** Winscape proprietary unit using a single (1) High Output four (4) Diode LED with an integral low voltage (14.0V max) AC dimmable LED driver. Available in Warm White (3000K) and Cool White (5000K) color temps. Dimmable using standard LOW VOLTAGE MAGNETIC dimming systems.

**Finishes:** Available in 12 standard TGK polyester powder coat finishes. Custom powdercoat finishes available (contact factory for more information).

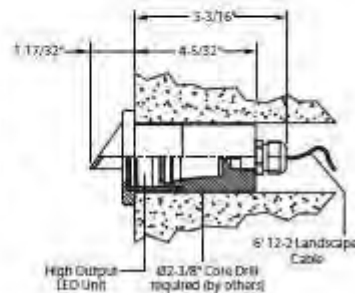
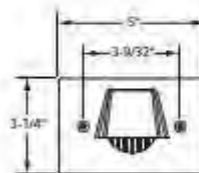
**Features:** Includes a linear spread lens for lateral distribution. Optional color filter held securely by a removable stainless steel clip ring. Fixture includes 6 feet of T2/T7 landscape cable (UL rated for direct burial).

**General:** This fixture requires a low voltage MAGNETIC transformer to function properly. Magnetic transformer must be purchased separately (see Accessories section on our website). Mounting requires installer to drill a 1/2-3/8" hole, a minimum of 5-1/2" deep and a thru wiring hole of 1/4" or larger. Includes wall anchors and stainless mounting screws.



Fixture w/ LED units 3002 & 3005  
 UL/cUL Listed: Wet Location  
 Indoor/Outdoor

Fixture w/ LED units 3012 & 3015  
 ETL Listed:  
 Indoor/Outdoor Complies to UL STD 2108



Note: Winscap Lighting reserves the right to make design revisions without prior notice.

1. **HOLED**  
 SERIES: HOLED - HOOPER LED
2. **3002**  
 LIGHT SOURCE:
 

Warm White, 3000K, 360 lumens ** 3002 - 7.5W/10' SP/WW LED	Cool White, 6500K, 450 lumens ** 3005 - 7.5W/10' SP/CW LED
Warm White, 3000K, 370 lumens ** 3012 - 3.5W/12' SP/WW LED - DIM	Cool White, 5000K, 420 lumens ** 3015 - 3.5W/12' SP/CW LED - DIM

\*\* Lumens are at the LED under ideal conditions.
3. **12V**  
 VOLTAGE: 12V - 12 VOLT
4. **BKS**  
 FINISH COLOR:
 

BKS - BLACK SMOOTH	IVS - IVORY SMOOTH
BKT - BLACK TEXTURED	CNS - CHROME SMOOTH
BRS - BRONZE SMOOTH	NBS - NATURAL BRONZE SMOOTH
BRT - BRONZE TEXTURED	VET - VERDE TEXTURED
WRS - WHITE SMOOTH	SAT - SAND TEXTURED
WRT - WHITE TEXTURED	CPE - CUSTOM FINISH
SIS - SILVER SMOOTH	
5. **F0**  
 COLOR FILTER:
 

F0 - NONE	FG - GREEN
FM - MERCURY VAPOR	FOD - GREEN DICHROIC
FR - RED	FLB - LIGHT BLUE
FRO - RED OR HROIC	FMB - MEDIUM BLUE
FP - PINK	FMBD - MEDIUM BLUE DICHROIC
FA - AMBER	
6. **STD**  
 SPECIAL:
 

STD - STANDARD
MOD - MODIFIED

Modification Descriptions: (if needed)



Type SH



# 4415 BASE OR YOKE MOUNT

## LED FOUNTAIN FIXTURE

### DESCRIPTION

The 4415 Fountain and Reflecting Pool light is a versatile light source offering a low profile and LED lamping.

### FEATURES & SPECIFICATIONS

**FIXTURE HOUSING, ROCK GUARD & BASE:** Heavy wall cast bronze construction. Natural bronze finish.

**LED:** 6 LEDs driven at 615 mA with maximum power consumption of 12 watts. Lumen maintenance of individual LED light sources have been individually tested to IESNA LM-80 standards.

**LENS:** Tempered borosilicate clear glass.

**GASKET:** Single piece molded U-shaped silicone.

**MOUNTING:** **ALB** - Adjustable Locking Base. **BM** - Base Mount with pre-focus feature. **YM** - Yoke Mount with singlehole for 3/8" (10mm) fastener.

**RISER:** **RSR6** if no length specified and **ALB** is chosen. 4"-24" Riser stem, available in 2" increments.

**CORD:** Minimum of 10' of #16-3ST US standard submersible rated cord for 120V fixtures. Cord entrance is brass water-tight seal and epoxy encapsulated. **Cord length must be specified.**

**LED DRIVER:** 12 watt, 120 volt. **Driver included.**

**FACTORY LEAK TESTED:** Fixtures are tested at 10 PSI (0.70kg/cm<sup>2</sup>) internal pressure while totally submerged in water.

**LOW WATER CUT-OFF:** Temperature sensing low water cut-off standard.

**FASTENERS:** Stainless steel.

**LISTING:** CSA, CSA<sub>cc</sub>

TYPE	JOB NAME							
PART NUMBER								
Model	Lamp Type	Voltage	Distribution	Mounting	Mounting Access	Cord	Lamp	Option

WIDTH	A INSIDE HEIGHT	B STANDARD CLEARANCE	C YOKE (CUT STEM)	B MIN.
	10 1/2	12 5/8	5 1/2	8 5/8

NOTE: HYDREL RESERVES THE RIGHT TO MODIFY SPECIFICATION WITHOUT NOTICE. Any dimension on this sheet is to be assumed as a reference dimension; "Used for information purposes only. It does not govern manufacturing or inspection requirements." (ANSI Y14.5-1973)

APPROVALS

©2010 Acuity Brands Lighting, Inc.  
10/6/10  
4415\_BM\_YM\_LED

2960 Northhoff Dr., Suite B  
Chatsworth, CA 91311  
Phone: 866.532.9901  
Fax: 866.532.5251  
[www.hydril.com](http://www.hydril.com)

## Type SF



Cedar LED  
12V LED-11



UL Listed: Wet location  
Indoor/Outdoor  
cUL Listed: Wet location  
Indoor/Outdoor

QF#: 2

**CELED - CEDAR LED**

**SERIES**

CELED - Cedar LED

**LIGHT SOURCE** - 12V LED-11 - (see foldout after pg. 562)  
1002 1003 1004 1005 1006 1007

**VOLTAGE**  
12V - 12 Volt

**ACCESSORY LENS** - (see winscape technical section)  
L0 - None  
L1 - Prismatic  
L2 - Linear  
L3 - Softening  
L4 - Watershed™

**FINISH** - (see pg. 562)  
BKS BKT BRS BRT WHS WHT SIS IVS CHS NBS VET SAT CPF

**COLOR FILTER** - (see foldout after pg. 562)  
F0 FM FR FRD FP FA FG FGD FLB FMB FMBD

**SHIELDING**  
SH0 - None  
SH6 - Honeycomb Louver

**CAP STYLE** - (see foldout after pg. 562)  
C1 C2 C3 C4

**SPECIAL**  
STD - Standard  
MOD - Modified  
350R - 2 Piece 350° Rotation Knuckle

Cedar Brass LED  
12V LED-11



UL Listed: Wet location  
Indoor/Outdoor  
cUL Listed: Wet location  
Indoor/Outdoor

QF#: 2

**CEBRLED - CEDAR BRASS LED**

**SERIES**

CEBRLED - Cedar Brass LED

**LIGHT SOURCE** - 12V LED-11 - (see foldout after pg. 562)  
1002 1003 1004 1005 1006 1007

**VOLTAGE**  
12V - 12 Volt

**ACCESSORY LENS** - (see winscape technical section)  
L0 - None  
L1 - Prismatic  
L2 - Linear  
L3 - Softening  
L4 - Watershed™

**FINISH** - (see pg. 562)  
POL NAT BRZ CPF

**COLOR FILTER** - (see foldout after pg. 562)  
F0 FM FR FRD FP FA FG FGD FLB FMB FMBD

**SHIELDING**  
SH0 - None  
SH6 - Honeycomb Louver

**CAP STYLE** - (see foldout after pg. 562)  
C1 C2 C3 C4

**SPECIAL**  
STD - Standard  
MOD - Modified

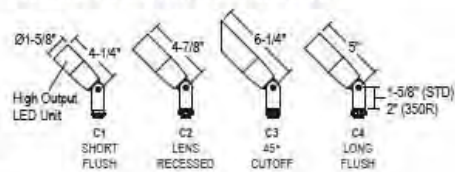
**CEDAR LED / CEDAR BRASS LED**

- Luminaire machined from ALUMINUM or BRASS
- LED unit uses one High Output LED with a integral low voltage driver
- Three beam spreads (10°, 20°, 36°)
- Warm White (3000K) and Cool White (6500K) color temps
- Field replaceable lens
- Tapered knuckle seat for infinite aiming and locking
- Any combination of up to three lens accessories/color filter/shielding (purchased separately, see winscape mounting and accessories section)
- **Low Voltage MAGNETIC TRANSFORMER** required to function properly (purchased separately, see winscape mounting and accessories section)
- **Mounting required** (purchased separately, see winscape mounting and accessories section)
- Technical lamp (pg. 558-559) / photometric information ([www.winonaighting.com](http://www.winonaighting.com))
- Winona Lighting reserves the right to make design revisions without prior notice

**PRODUCT SPECIFICATION**

12V								
Series	Light Source	Voltage	Accessory Lens	Finish	Color Filter	Shielding	Cap Style	Special

**CAP STYLE - CEDAR LED / CEDAR BRASS LED**



**Type SD**



# NOVARA



[www.hessamerica.com/3730](http://www.hessamerica.com/3730)

## NOVARA 260 Illuminating Bollard

Cast aluminum and stainless steel create a synthesis of form and function in the NOVARA. The angular cast aluminum housing is punctuated by distinctive cooling fins. Mounting knobs are constructed of polished high-grade stainless steel. Single or twin configurations may be fitted with a clear, etched, or optional prismatic lens. Electrical conductor is housed in attractive braided stainless-steel line. Straight round steel bollard shaft with flush basehole and mounting bracket are hot-dip galvanized prior to being finished in finely textured paint. All hardware is stainless steel. Standard color: matte silver grey metallic. Special colors available. <sup>UL</sup> Listed for Wet Locations.

## NOVARA 260-VTB Illuminating Bollard

Vandal resistant model same as NV 260 bollard except with concealed wire way, rigid luminaire mounting, and larger diameter shaft. <sup>UL</sup> Listed for Wet Locations.

Model	Height	Lamp
NV260-E	25.4"	26 CFL / 100 Halogen
NV260-VTB	32.8"	26 CFL / 100 Halogen



## Type SC2



**Available Finishes:** Anvil Iron, Anvil Iron

### Leeds - Outdoor Wall 2Lt Fluorescent

49111AVIFL

Outdoor Wall 2Lt Fluorescent

**Dia./Width:** 5.75 IN

**Body Height:** 17.75 IN

This 2 light fluorescent wall lantern from the soft contemporary Leeds collection is a striking statement for any home. It features a Cased Opal glass rectangular shade with a distinctive rectangular accent. Width: 6, Height: 18, Extension: 5, Height from Center of Wall Opening:9. Uses 2 18W (GU24) bulbs. Rated for wet locations. Meets Title 24 requirements. Bulb included.

#### Technical Information

Type	Outdoor Lights	Primary Bulb Count	2
Style	Contemporary / Modern	Primary Max Watt	18W
Finish Group	Metallic	Primary Lamp Type	MLS18GUWW
Weight	6.5 LBS	Switching	Photocell
Body Height	17.75 IN	UL CSA Listed	Yes
Width	5.75 IN	Diffuser Description	SATIN ETCHED CASED OPAL GLASS
Extension	5 IN	Body Material	Cast Aluminum
Height from Junction Box	8.75 IN	Title 24	Yes
Backplate Dimensions	17.6875 X 4.50 IN	Energy Efficient	Yes
Bulb Included	Included		















May 29, 2012

Response to Design Guidelines

**Chapter One / Site Layout**

**A. Physical Features**

1. Site improvements include an new villa units with new drives and parking areas. The new apartments are situated on the southeast corner of the site to work with existing topography.
2. The new apartments at the southwest corner of the property will be on the lower street level allowing for a buffer zone between the apartments and Olive Street. The buildings will set below the grade and have a similar feel to the houses at Braefield, just to the west of Friendship Village. The design is residential in feel.
3. In accordance with Chesterfield's Tree Preservation Ordinance, tree removal has been kept to a minimum. Several areas have received additional trees to accommodate the removal of existing trees.
4. The apartments have been designed to cause minimal disturbance to existing topography. The existing contours surrounding the buildings will be maintained.
5. Construction of retaining walls has been contained on the southwest corner of the site.

**B. Vegetation**

1. Every effort has been made to preserve the trees and plants that surround the site and visually buffer the surrounding homes from the campus.
2. There is extensive tree planting at the new apartments.

**C. Site Relationships of Design**

1. The apartment buildings are set in the southwest corner of the site to take advantage of existing topography and open space.

2. The additions to the campus are well contained within the Friendship Village property. Existing off-site traffic patterns will be maintained. Distribution of smaller parking lots around the site will reduce concentration of lighting, and any new lighting will be shielded as to not adversely affect neighboring property. The closest proximity of development to neighboring property is at the east property line which borders permanent open space and is buffered by landscape design.
3. Air conditioning units will be located between apartments. Other service facilities, e.g., trash dumpster, deliveries, etc. are unaffected by this development.
4. Buildings are setback a minimum of 50' feet on the east and west, and 130' on the north.
5. Security of the campus is essential, restricting public access to visitors and staff. Residents, however, take great pride in designing and maintaining inviting common areas on the campus.
6. All buildings are designed for continuity with the existing building and facilities through the use of similar materials and a continued updating of the simple rectangular masses of the original facility to a more residential appeal consistent with the recent addition to the dining and administrative areas.

**D. Pedestrian and Vehicular Circulation**

1. A new walking path is proposed from the new apartments and will travel down to the health center.
2. Extensive landscaping, new and existing, is utilized to enhance the parking and new apartment buildings.
3. The design maintains the existing access from Olive Boulevard. Primary vehicular circulation is by a drive that loops the entire site. All parking areas are directly linked to this drive. Sidewalks are placed along major pedestrian routes throughout the development.  
Site circulation has been designed to allow vehicles close access to the buildings, so that the entries are accessible to as many people as possible. Sidewalks have been provided throughout the parking lots to allow pedestrians to walk from their cars to the buildings with a minimum amount of time spent walking in drive aisles.
4. Not applicable.
5. The site will be accessed primarily by car.
6. Bicycle traffic to the site is minimal. Therefore, new bicycle racks have not been provided at this phase of the project.
7. Not applicable.
8. Not applicable.
9. The buildings have been designed with landscaping, including trees, bushes and flowering planting beds.



### **Pedestrian Orientation**

1. Although the buildings are primarily accessed by automobile, the design has several walking paths with several amenities, including benches, planting areas as well as future areas for water features.
2. Not applicable.
3. Not applicable.
4. The apartments have decks and patios for outside siting and are tied into the walking paths.
5. Not applicable.
6. Not applicable.

### **Chapter Two/ Buildings**

#### **I. All Structures**

##### **A. General Architectural Guidelines**

1. The new apartments are designed as one story attached residences. This allows for small footprints. The exteriors have brick veneer, composite shingle roofs, clad wood windows, and aluminum wrapped trim. The style blends with the main entry addition. Bay windows, turrets, ornamental garage doors, and dormers are provided to give character to the buildings. The exterior design also includes both gables and hip roofs to also give variety to the exterior appearance.

##### **B. Scale**

1. The scale of the new apartments is residential and provides a transition from the existing campus to adjacent residential property.
2. As stated above, the use of bays, bows, turrets and porches contribute to the residential scale of the apartments.
3. As stated above, the design, height and scale of the new apartments are intended to update and transition the existing buildings rather than mimic them.

##### **C. Design**

1. The design provides diversity at a residential scale.
2. Offsets, material details, and building components provide variety. The different units are combined into various size buildings and mirrored to provide an attractive streetscape.
3. Not applicable.
4. Not applicable.
5. All elevations are covered in the same materials, given similar window treatments and fenestration patterns, and coordinated in their detailing.
6. Materials, forms and colors are harmoniously related.
7. Not applicable.
8. To provide protection while moving from inside to outside, the entry doors have been recessed, or have a porch.
9. Exterior materials with good thermal insulating qualities (brick, double-pane insulated glass windows) have been chosen. Efficient HVAC units are being installed in all living units. The buildings will be built with 2x6 exterior construction to allow for increased insulation.
10. Not applicable.

### **D. Relation to Adjacent Development**

1. There are similar patterns among the new buildings and the most recent additions to the campus. The brick exterior is intended to blend in size and color to the original campus buildings.
2. The buildings relate primarily to other campus buildings as noted above.
3. All new buildings have the same detailing, materials, and scale to add a cohesive relationship.
4. The colors of the new buildings match the colors of the existing complex. The brick is a dark red, the shingles will be a green gray, the trims will be bronze and medium beige, copper for decorative roof (turret), and pebble gray (beige) window and door colors will accent the project. See rendering and finish materials sample board.
5. The apartments will have both a front porch as well as back patio. These areas will be landscaped as well as lighted. A common space with landscaped walks is proposed between the new apartments to providing outdoor living space.

### **E. Materials / Colors**

1. Materials were chosen to harmonize with the existing campus. Masonry veneer surrounds the buildings, giving them a feeling of permanence. Trim and detailing will be complementary colors to the brick, but contrasting to each other.
2. The color changes occur in materials, as well as in different planes. The fascia and gutter board are medium beige, the gutters and downspouts will be bronze. The shingle mold on gable ends will also be bronze. The windows and doors will match the pebble gray (beige). The roof planes will be a green/gray, except on decorative roofs that will have copper.
3. Architectural continuity shall occur with regards to color and materials on all new buildings. The design is for the buildings to blend together with variety.
4. Driveways are residential in scale, leading to individual units.
5. All exterior elements will be quality residential materials.

### **II. Residential Architecture**

#### **A. General Residential Architecture**

1. The area between the new apartments and the existing complex will have landscape buffers and a loop drive. There is a distinct change in scale and relationship in the new development to provide a transition to adjacent uses.
2. Not applicable.
3. The apartments introduce numerous offsets and space between the smaller footprints. Retaining walls are kept to a minimum and will be heavily landscaped.
4. All sides of the buildings are consistent in design.
5. All sides of the buildings are consistent in the use of design elements where possible within the spacing of the buildings.

### **B. Multiple-Family Architecture**

1. The new apartments are compatible in scale and design with adjacent residential development. Views to the development are significantly screened by existing and planned landscape design.
2. The buildings have various architectural elements to maintain a residential character. Plate heights change in addition to elements projecting at different levels on the front facade.
3. Each apartment unit has a distinct look giving the resident a feeling of independence from the main building.
4. The backyard for the units lays on common ground designed with walks, vistas, and landscape features.
5. The units were designed with a front porch as well as a rear patio, allowing for outdoor living space to benefit the residents. Landscaping was designed to enhance the outdoor living space.
6. Brick, aluminum wrapped trim and quality shingles are intended to minimize maintenance.

### **III. Non-Residential Architecture**

Not applicable

#### **Chapter Three/ Landscaping**

1. The concept of this design was to give the residence of Friendship Village West County several amenities that would provide a unique place to congregate. Including a large number of trees in this design, both proposed and existing created a park-like setting. Other amenities include improved parking, and clear pedestrian circulation.
2. Throughout this plan, the landscape design maintains a consistency of design and materials that both complement and accentuate the existing buildings and their surroundings.
3. The campus currently has a park-like setting. All common areas and yards of proposed apartments are landscaped.
4. All vehicle pavements will be bordered by a six-inch curb. Sidewalks will be raised six inches above the road to protect not only the plant material, but to give safety to those walking on the sidewalk, as well.
5. The landscape design is to include trees, shrubs and flower beds at all new parking areas.
6. Residents take great pride in designing, decorating, and maintaining inviting common areas on the campus.
7. Landscaping has been designed for all parts of this development.
8. Landscape permit documents will indicate site lighting. As noted above, service facilities, e.g., trash, deliveries, etc. are unchanged.
9. Preservation of the existing woodland provides a majority of the tree species on this site mature enough to blend with the existing buildings. New plant species introduced to the site will complement the existing trees.
10. Existing site features and landscape elements are incorporated into the landscape design wherever possible.
11. Irrigation specifications prohibit over spraying and will be field inspected for compliance.
12. Not applicable.
13. As noted previously, the perimeter of the parking areas contain various species of canopy trees to not only give shade to the parking area, but also to give a sense of greenery throughout an otherwise desolate asphalt parking lots.

#### **Chapter Four/ Miscellaneous**

##### **A. Signage**

1. There are no plans for additional exterior signage in this phase of construction.
2. Not applicable.
3. Not applicable.
4. Not applicable.

### **B. Lighting**

1. There will be additional lighting for the loop road, matching existing fixtures, and shielded to avoid spillage to adjacent property. The apartments will have exterior lights at the garage doors, entry doors and back patio, having no impact on adjacent property.
2. Not applicable.
3. Lantern-style accent lights for the garages and apartments will match the style and character of the buildings.
4. The mounting heights for lights on the apartments shall be approximately 7' high.
5. Landscape lighting of common areas will be reviewed and incorporated where appropriate.
6. Light poles in the parking lot and new drive shall match those existing on campus.
7. Not applicable.

### **C. Utilities**

1. Existing power is provided to the site by underground service from Olive Boulevard. The new construction will maintain underground connections.

### **D. Stormwater Drainage**

1. All roofs drain water into gutters and downspouts. These will be booted to underground connections. The drives and parking will be directed to new inlets that will be connected to existing storm water system.
2. See above.
3. Landscape areas shall be designed so as not to drain water across the walks in the parking lot.
4. The future detention area will be an expansion to the existing detention area on the north/northeast corner of the site. The area is used as a pond for the resident's recreation and enjoyment.

### **E. Energy Conservation**

1. Building materials are selected with quality insulating values in mind.

### **F. Screening (Fences and Walls)**

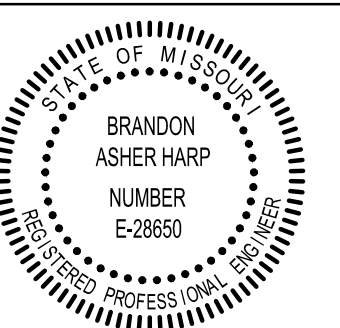
1. The retaining wall at the southeast end of the site will not be visible from Olive Blvd. The site slopes down toward that wall, so the view will be from the low end of the wall. Landscaping is provided at the top and bottom of wall.
2. Not applicable.
3. Not applicable.
4. Not applicable.
5. Not applicable.
6. Not applicable.



# 6th AMENDED (Partial) SITE DEVELOPMENT PLAN

## FRIENDSHIP VILLAGE OF CHESTERFIELD

LOT A OF  
FRIENDSHIP VILLAGE OF WEST COUNTY BOUNDARY ADJUSTMENT PLAT  
CITY OF CHESTERFIELD  
ST. LOUIS COUNTY, MISSOURI



BRANDON A. HARP, P.E., E-28650  
PROFESSIONAL ENGINEER  
CEDC LICENSE NO. 2003004674

11402 Gravois Road  
Suite 100  
Saint Louis, Missouri 63126  
314.729.1400  
Fax: 314.729.1404  
www.cedc.net

**CEDC**  
CIVIL ENGINEERING  
DESIGN CONSULTANTS

6th Amended (Partial) Site Development Plan  
Friendship Village Chesterfield  
15201 Olive Blvd.  
Chesterfield, Missouri 63017

Site Development  
Section Plan

SD1

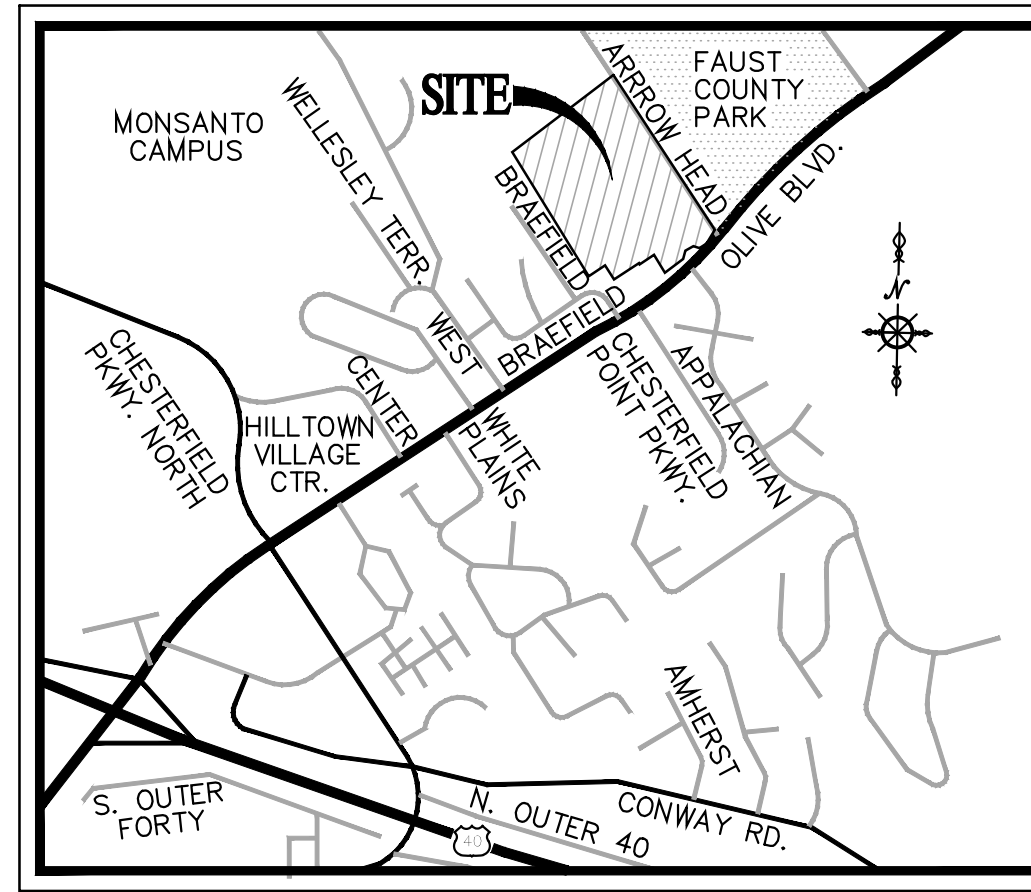
### INDEX OF SHEETS

SD1	TITLE SHEET
SD2	SITE DEVELOPMENT PLAN
SD3	SITE DEVELOPMENT PLAN

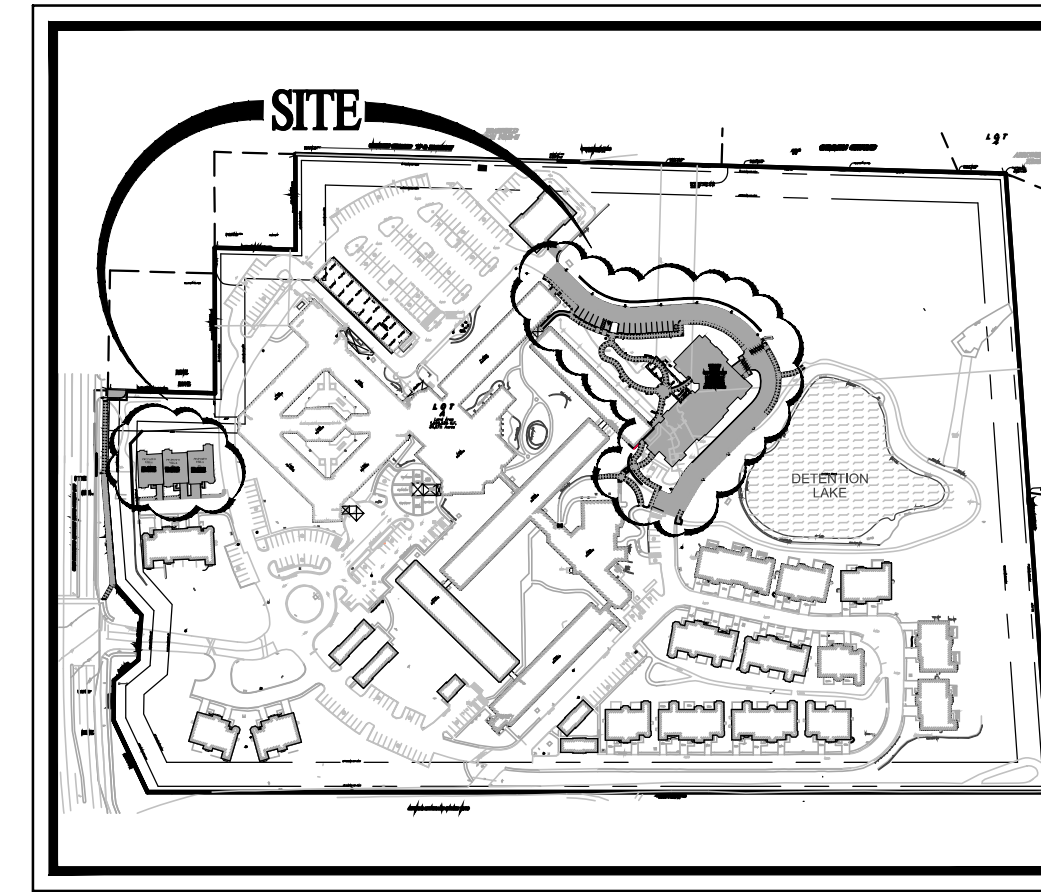
### GENERAL NOTES

- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO VERIFY ALL UTILITIES COMPANIES, PRIOR TO ANY CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED. THE CONTRACTOR SHALL BE ON RECORD WITH THE MISSOURI ONE CALL SYSTEM.
- ALL ELEVATIONS IN AREAS OF PROPOSED PARKING IMPROVEMENTS ARE BASED ON M.S.D. BENCHMARK.
- BOUNDARY AND TOPOGRAPHIC SURVEY BY MARLER SURVEYING COMPANY.
- PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS.
- GRADING & STORM WATER PER M.S.D. STANDARD SPECIFICATIONS & THE CITY OF CHESTERFIELD STANDARDS.
- DRIVE ENTRANCES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CHESTERFIELD STANDARDS.
- SEEDING, SODDING, MULCHING AND PLANTINGS FOR ALL DISTURBED AREAS SHALL BE SPECIFIED ON THE LANDSCAPE PLAN.
- SIDEWALKS ALONG THE ACCESSIBLE ROUTE SHALL NOT HAVE A SLOPE EXCEEDING 1%:20". SLOPES GREATER THAN 1%:20" MUST BE DESIGNED AS A RAMP.
- SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ADAAG GUIDELINES AND THE INFORMATION ON THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION.
- SETBACKS PER ZONING
 

BUILDING	
FRONT	= 50'
SIDE	= 20'
REAR	= 20'
- SUBJECT PROPERTY LIES WITHIN UNSHADED FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN) ACCORDING TO THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ST. LOUIS COUNTY, MISSOURI AND INCORPORATED AREAS. THE MAP IS IDENTIFIED AS MAP NO. 29189C0145 H WITH AN EFFECTIVE DATE OF AUGUST 2, 1995.
- NO ON-SITE ILLUMINATION SOURCE SHALL BE SO SITUATED THAT LIGHT IS CAST DIRECTLY ON ADJOINING PROPERTIES OR PUBLIC ROADWAYS. ILLUMINATION LEVELS SHALL COMPLY WITH THE PROVISIONS OF SECTION 1005.320 STREET AND PARKING AREA LIGHTING OF THE CITY OF CHESTERFIELD SUBDIVISION ORDINANCE.
- APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIGNAGE. SIGN APPROVAL IS A SEPARATE PROCESS.
- ALL PROPOSED IMPROVEMENTS WITHIN R.O.W. SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY, CITY OF CHESTERFIELD, OR MGDOT STANDARDS.
- ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH ST. LOUIS COUNTY, CITY OF CHESTERFIELD AND M.S.D. STANDARDS.
- NO SLOPES WITHIN COUNTY RIGHT-OF-WAY SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL)
- STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.
- CONTRACTOR TO COORDINATE CONSTRUCTION PARKING WITH OWNER. NO PARKING ALLOWED IN OLIVE BOULEVARD RIGHT OF WAY.



LOCATION MAP  
NOT TO SCALE



KEY MAP  
NOT TO SCALE

### PROPERTY DATA

OWNER	= FRIENDSHIP VILLAGE OF WEST COUNTY
ADDRESS	= 15201 OLIVE BOULEVARD
LOCATOR NO.	= 17S320445
ACREAGE	= 34.57 AC ±
EXISTING ZONING	= "R-4" W/C.U.P. #36
M.S.D. P-NO.	= 15793-06
M.S.D. BASE MAP	= 17S3
SCHOOL DISTRICT	= PARKWAY
SEWER DISTRICT	= METROPOLITAN ST. LOUIS SEWER DISTRICT
WATER SHED	= MISSOURI RIVER
FEMA MAP	= 29189C0145 (SUBJECT PROPERTY LIES WITHIN UNSHADED ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN))

### UTILITIES AND REVIEW AGENCIES

<b>ELECTRIC COMPANY</b> CHARTER COMMUNICATIONS 280 OLD STATE ROAD ELLISVILLE, MO 63021 ATTN: ENGINEERING PH. (314) 992-8992	<b>CABLE TELEVISION</b> CHARTER COMMUNICATIONS 941 CHARTER COMMONS TOWN & COUNTRY, MO 63017 ATTN: MAPPING & DESIGN DEPT. PH. (636) 220-2174
<b>PHONE COMPANY</b> AT&T 402 NORTH THIRD STREET ST. CHARLES, MO 63301 ATTN: FIRE MARSHAL PH. (636) 949-4228	<b>FIRE DISTRICT</b> MONARCH FIRE PROTECTION DISTRICT 13725 OLIVE BLVD. CHESTERFIELD, MO 63017 ATTN: FIRE MARSHAL PH. (314) 514-0900
<b>GAS COMPANY</b> LACLERE GAS COMPANY ROOM 1408 720 OLIVE STREET ST. LOUIS, MO 63101 ATTN: MIKE LANGAN PH. (314) 342-0702	<b>SEWER AUTHORITY</b> METROPOLITAN ST. LOUIS SEWER DISTRICT 2350 MARKET STREET ST. LOUIS, MO 63103 PH. (314) 768-6200
<b>WATER COMPANY</b> MISSOURI AMERICAN WATER CO. 1050 RESERVOIR BLVD. ST. LOUIS, MO 63132 ATTN: ENGINEERING PH. (314) 996-2464	<b>HWY. DEPARTMENT</b> MISSOURI DEPARTMENT OF TRANSPORTATION 1580 WOODLAKE DRIVE CHESTERFIELD, MO 63017 ATTN: DAVID BRUNJES PH. (314) 565-6715

### LEGAL DESCRIPTION

Lot A of Friendship Village of West County Boundary Adjustment Plat, according to the plat thereof recorded in Plot Book 356 page 143 of the St. Louis County Records. And being more particularly described in the following:

A TRACT OF LAND CONSISTING OF TWO TRACTS OF LAND IN PART OF LOTS 1 AND 2 OF THE HUGO ESSEN FARM IN U.S. SURVEYS 154 AND 157, TOWNSHIP 45 NORTH, RANGE 4 EAST, LESS AND EXCEPTING THOSE PORTIONS TAKEN FOR RIGHT OF WAY PURPOSES, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A SET 1/2" X 18" REBAR WITH CAP STAMPED "MARLER L.S. 347-D" (TYPICAL), MARKING THE SOUTHWESTERN CORNER OF PROPERTY NOW OR FORMERLY OF FRIENDSHIP VILLAGE OF WEST COUNTY PER DEED BOOK 13864 PAGE 1987 OF THE ST. LOUIS COUNTY LAND RECORDS, BEING A POINT ON THE NORTHWESTERN CORNER OF AN EXCEPTION FOR RIGHT OF WAY PURPOSES RECORDED IN DEED BOOK 8828 PAGE 1831 OF THE ST. LOUIS COUNTY LAND RECORDS, THENCE ALONG THE SOUTHWESTERN PROPERTY LINE OF SAID FRIENDSHIP VILLAGE PROPERTY, AND ITS EXTENSION, WHICH IS THE PROPERTY LINE OF ANOTHER TRACT OF LAND OF FRIENDSHIP VILLAGE OF WEST COUNTY, LISTED WITH THE TAX ASSESSOR AS DEED BOOK 8484 PAGE 2019, TO A SET REBAR, FROM WHICH A FOUND 3/4 INCH IRON PIPE BEARS SOUTH 00 DEGREES 43 MINUTES WEST A DISTANCE OF 0.11 FEET; THENCE ALONG THE FRIENDSHIP VILLAGE TRACT LISTED AS DEED BOOK 8484 PAGE 2019, SOUTH 57 DEGREES 45 MINUTES 10 SECONDS WEST A DISTANCE OF 242.96 FEET TO A POINT FROM WHICH A FOUND 3/4 INCH IRON PIPE BEARS NORTH 16 DEGREES 00 MINUTES EAST A DISTANCE OF 0.13 FEET; THENCE NORTH 30 DEGREES 35 MINUTES 40 SECONDS WEST A DISTANCE OF 134.92 FEET TO A FOUND 3/4 INCH IRON PIPE; THENCE SOUTH 57 DEGREES 43 MINUTES 34 SECONDS WEST A DISTANCE OF 159.39 FEET TO A SET REBAR, FROM WHICH A FOUND 3/4 INCH IRON PIPE BEARS SOUTH 57 DEGREES 10 MINUTES WEST A DISTANCE OF 1.97 FEET; THENCE NORTH 30 DEGREES 32 MINUTES 03 SECONDS WEST A DISTANCE OF 1184.67 FEET TO A SET REBAR, FROM WHICH A FOUND "U" POST BEARS SOUTH 47 DEGREES 23 MINUTES EAST A DISTANCE OF 0.49 FEET; THENCE NORTH 53 DEGREES 49 MINUTES 20 SECONDS EAST A DISTANCE OF 103.70 FEET TO A SET REBAR, THENCE SOUTH 32 DEGREES 06 MINUTES 20 SECONDS EAST A DISTANCE OF 1503.73 FEET TO A POINT IN THE NORTHWESTERN RIGHT OF WAY LINE OF OLIVE BOULEVARD (VARIABLE WIDTH) ALSO KNOWN AS HIGHWAY 340, FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 32 DEGREES 06 MINUTES WEST A DISTANCE OF 0.28 FEET; THENCE ALONG THE SAID NORTHWESTERN RIGHT OF WAY LINE OF SAID OLIVE BOULEVARD SOUTH 32 DEGREES 30 MINUTES 32 SECONDS WEST A DISTANCE OF 132.28 FEET TO A POINT FROM WHICH A FOUND IRON ROD WITH CAP STAMPED "L.S. 134-D" BEARS NORTH 21 DEGREES 49 MINUTES WEST A DISTANCE OF 0.12 FEET; THENCE SOUTH 58 DEGREES 18 MINUTES 40 SECONDS WEST A DISTANCE OF 66.98 FEET TO A POINT FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 24 DEGREES 05 MINUTES EAST A DISTANCE OF 0.10 FEET; THENCE NORTH 72 DEGREES 06 MINUTES 11 SECONDS WEST A DISTANCE OF 53.16 FEET TO A FOUND 5/8 INCH REBAR; THENCE SOUTH 61 DEGREES 49 MINUTES 45 SECONDS WEST A DISTANCE OF 75.01 FEET TO A POINT FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 06 DEGREES 01 MINUTES WEST A DISTANCE OF 0.13 FEET; THENCE SOUTH 16 DEGREES 21 MINUTES 14 SECONDS WEST A DISTANCE OF 68.59 FEET TO A FOUND 5/8 INCH REBAR; THENCE SOUTH 53 DEGREES 21 MINUTES 40 SECONDS WEST A DISTANCE OF 172.33 FEET TO A POINT FROM WHICH A FOUND RIGHT OF WAY MARKER BEARS NORTH 22 DEGREES 41 MINUTES EAST A DISTANCE OF 0.16 FEET; THENCE SOUTH 59 DEGREES 01 MINUTES 29 SECONDS WEST A DISTANCE OF 151.14 FEET TO THE POINT OF BEGINNING, CONTAINING 1,056,236 SQUARE FEET, OR 34.57 ACRES, MORE OR LESS, AS SURVEYED BY MARLER SURVEYING CO., INC. DURING THE MONTH OF MARCH, 2007.

Friendship Village of West County, the owner of the property shown on this plan for and in consideration of being granted a permit to develop property under the provisions of Chapter 1003.100, of the City of Chesterfield Conditional Use Permit #36, do hereby agree and declare that said property from the date of recording of this plan shall be developed only as shown thereon, unless said plan is amended by the Planning Commission, or voided or vacated by order of ordinance of the City of Chesterfield Council.

State of \_\_\_\_\_ s.s.  
County of \_\_\_\_\_  
On this \_\_\_\_\_ day of \_\_\_\_\_ A.D., 20\_\_\_\_ before me personally appeared \_\_\_\_\_  
(Officer of Corporation) to me known, who, being by me sworn in, did say that he/she is the \_\_\_\_\_ (Title) of Friendship Village of West County, a corporation in the State of Missouri, and that the seal affixed to the foregoing instruments is the corporate seal of said corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and the said \_\_\_\_\_ acknowledged said instrument to be the free act and deed of said corporation.

In Testimony Whereof, I have hereunto set my hand and affixed my Notarial Seal at my Office in \_\_\_\_\_ the day and year last above written.  
(County and State)

My term expires \_\_\_\_\_  
(Notary Public)

This 6th Amended (Partial) Site Development Plan was approved by the City of Chesterfield Planning Commission and duly verified on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the Chairman of said Commission, authorizing the recording of the Amended Site Plan pursuant to Chesterfield Ordinance Number 200 as attested by the Planning and Development Services Director and the City Clerk.

Planning and Development Services Director \_\_\_\_\_  
City Clerk \_\_\_\_\_

### PARKING CALCULATIONS

<b>PARKING REQUIRED:</b>	
GROUP HOMES FOR ELDERLY (APARTMENTS):	= 285 SPACES
285 @ 1 SPACE PER APARTMENT	
NURSING HOME (HEALTH CENTER):	= 324 SPACES
117 BEDS @ 1 SPACE PER 3 BEDS	
DWELLINGS, MULTIPLE-FAMILY, ROW HOUSES, OR OTHER GROUP HOUSE ARRANGEMENTS (VILLAS):	= 69 SPACES
39 @ 1.75 SPACES PER LIVING UNIT	
<b>TOTAL PARKING REQUIRED:</b>	<b>324 + 69 = 393 SPACES</b>
<b>PARKING PROVIDED:</b>	
9'x19':	
SURFACE PARKING	= 293 SPACES
GARAGE PARKING	= 98 SPACES
FLA PARKING	= 32 SPACES
	430 SPACES
<b>TOTAL SPACES PROVIDED:</b>	<b>293 + 98 + 39 = 430 SPACES</b>
(INCLUDES 17 HANDICAP SPACES)	

### PROJECT BENCHMARK

St. Louis County Benchmark 12-157 Elev. 638.32' "Sq." on the curb at center of rounding along island; 60' West of centerline of Olive Street Road and 5' North of centerline of Chesterfield Village Parkway.

### SITE BENCHMARKS

- Site Benchmark # 1 Elev. 634.10' top of 1/2" iron pipe with cap "L.S. 134-D" as shown on plan.
- Site Benchmark # 2 Elev. 631.73' "O" in open on Fire Hydrant as shown on plan.
- Site Benchmark # 3 Elev. 627.87' "O" in open on Fire Hydrant as shown on plan.
- Site Benchmark # 4 Elev. 624.92' P.K. Nail in asphalt curb as shown on plan.
- Site Benchmark # 5 Elev. 627.70' P.K. Nail in asphalt curb as shown on plan.
- Site Benchmark # 6 Elev. 620.18' 60-D Nail as shown on plan.

### SURVEYOR'S CERTIFICATION

This is to certify that this Plat is a correct representation of all existing and proposed land divisions.

Marler Surveying Company, Inc.  
MISSOURI CORP. NO. L.S. 347-D

Marty L. Marler, R.L.S.

NOTE: CIVIL ENGINEERING DESIGN CONSULTANTS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS, METHODS & MATERIALS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. CIVIL ENGINEERING DESIGN CONSULTANTS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

UTILITY NOTE: UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

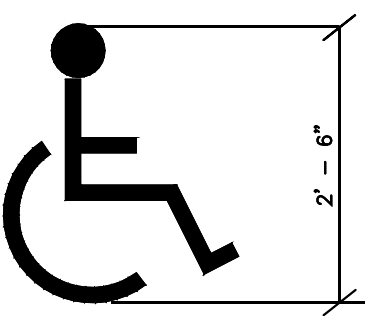
NOTE: The underground utilities have been plotted from available sources and their locations must be considered approximate only. The verification of the actual locations of all underground utilities, either shown or not shown on this drawing, shall be the responsibility of the contractor and shall be located prior to grading or construction of improvements.

MISSOURI ONE CALL TICKET NUMBER 112300421

The Utilities Contacted by Missouri One Call were Ameren Missouri, Att. Distribution, City of Chesterfield, Charter Communications, Laclede Gas Company, Lightco, a Century Link Co., Missouri American Water Co., Mopet District & Parkway School District and Metropolitan St. Louis School District.

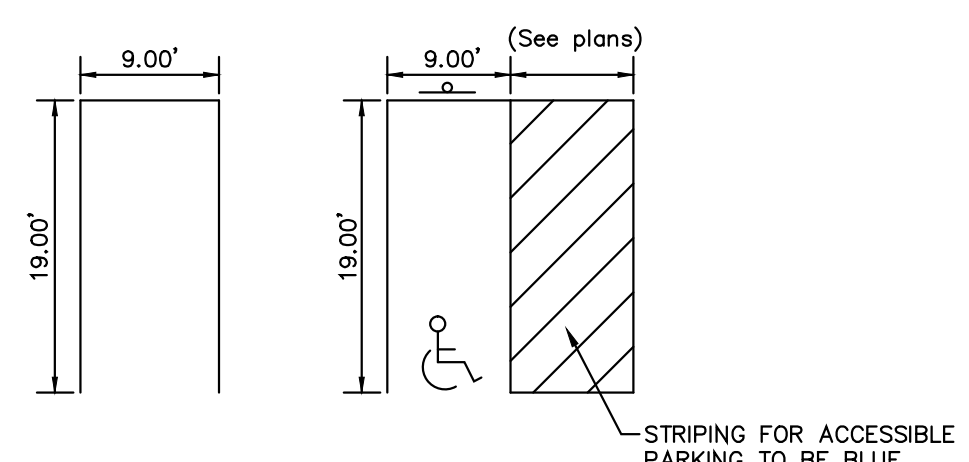
### LEGEND

EXISTING CONTOURS	--- 433 ---
PROPOSED CONTOURS	--- 433 ---
EXISTING STORM SEWER	== 10 ==
PROPOSED STORM SEWER	== ST ==
EXISTING SANITARY SEWER	== 10 ==
PROPOSED SANITARY SEWER	== SS ==
RIGHT-OF-WAY	---
EASEMENT	---
CENTERLINE	---
EXISTING TREE	(Symbol)
EXISTING SPOT ELEVATION	> 433.28
PROPOSED SPOT ELEVATION	433.28
SWALE	(Symbol)
TO BE REMOVED	T.B.R.
TO BE REMOVED & RELOCATED	T.B.R. & R.
TO BE USED IN PLACE	U.I.P.
ADJUST TO GRADE	A.T.G.
BACK OF CURB	B.C.
FACE OF CURB	F.C.
WATER MAIN	--- W ---
GAS MAIN	--- G ---
UNDERGROUND TELEPHONE	--- T ---
OVERHEAD WIRE	--- O.H. ---
UNDERGROUND ELECTRIC	--- E ---
FIRE HYDRANT	(Symbol)
POWER POLE	(Symbol)
WATER VALVE	(Symbol)
LIGHT STANDARD	(Symbol)

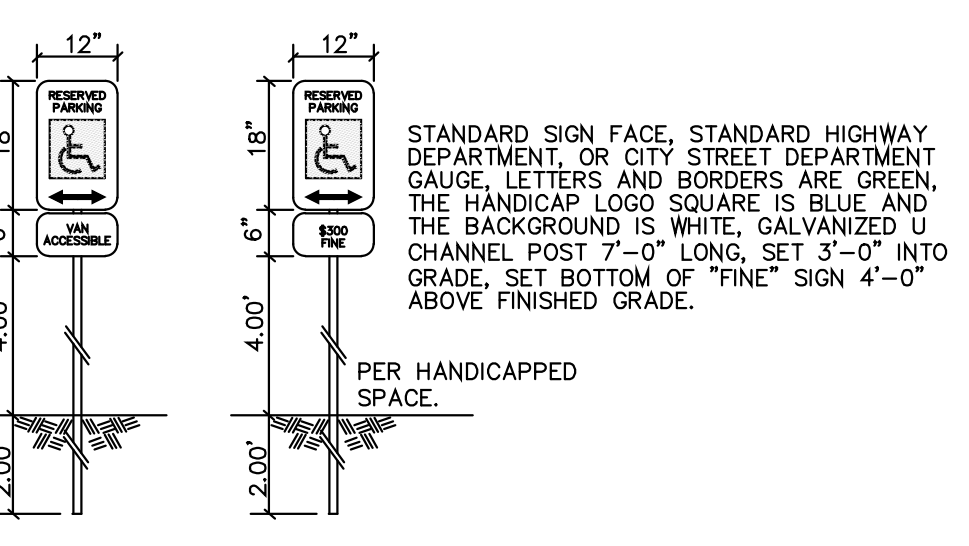


PAINT GRAPHIC ON PAVING  
Ø N.D.C.P. STALLS  
PAINTED BLUE

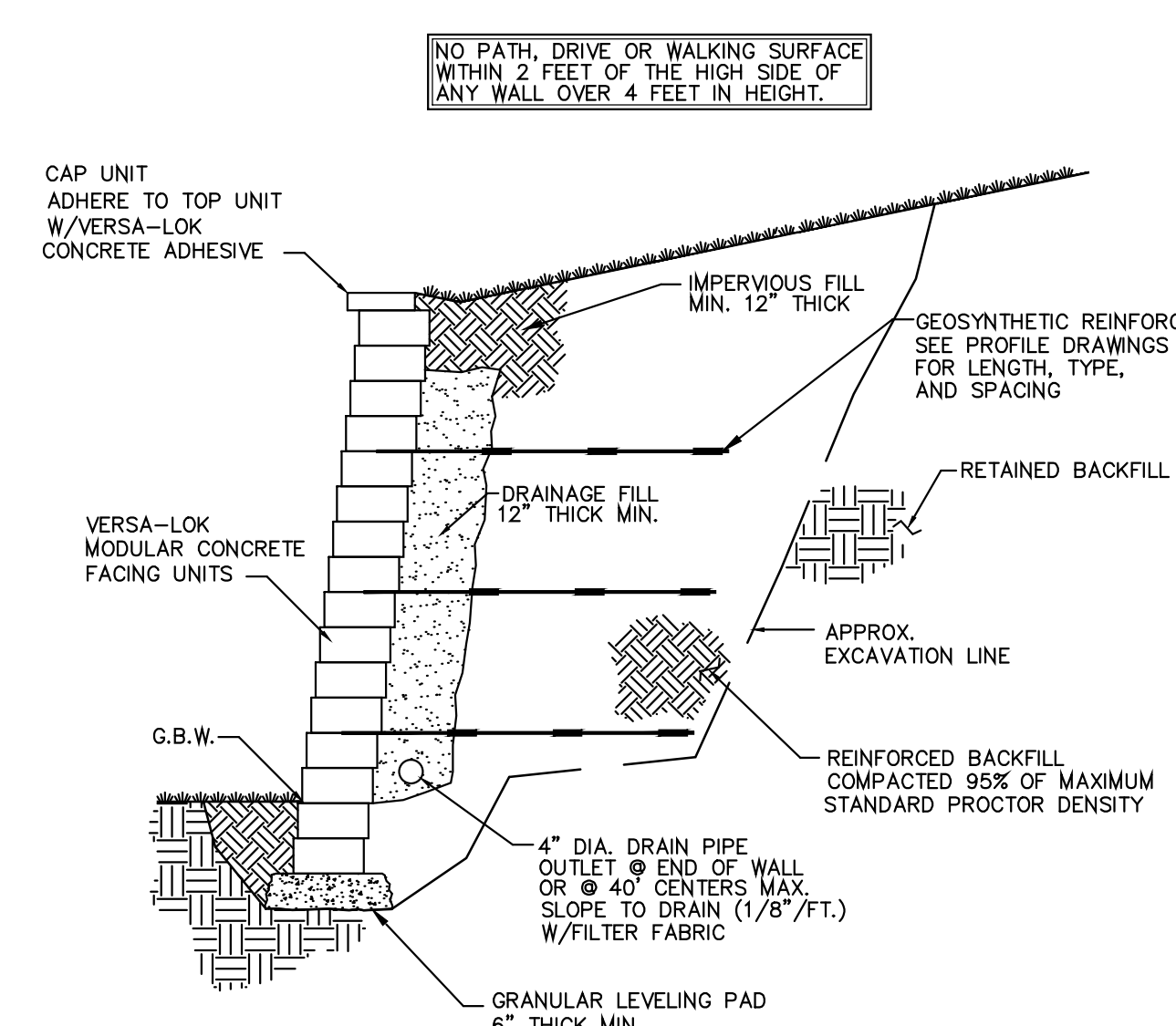
### HANDICAP SIGN



TYPICAL PARKING STALLS  
(n.t.s.)



HANDICAP PARKING SIGN  
(n.t.s.)

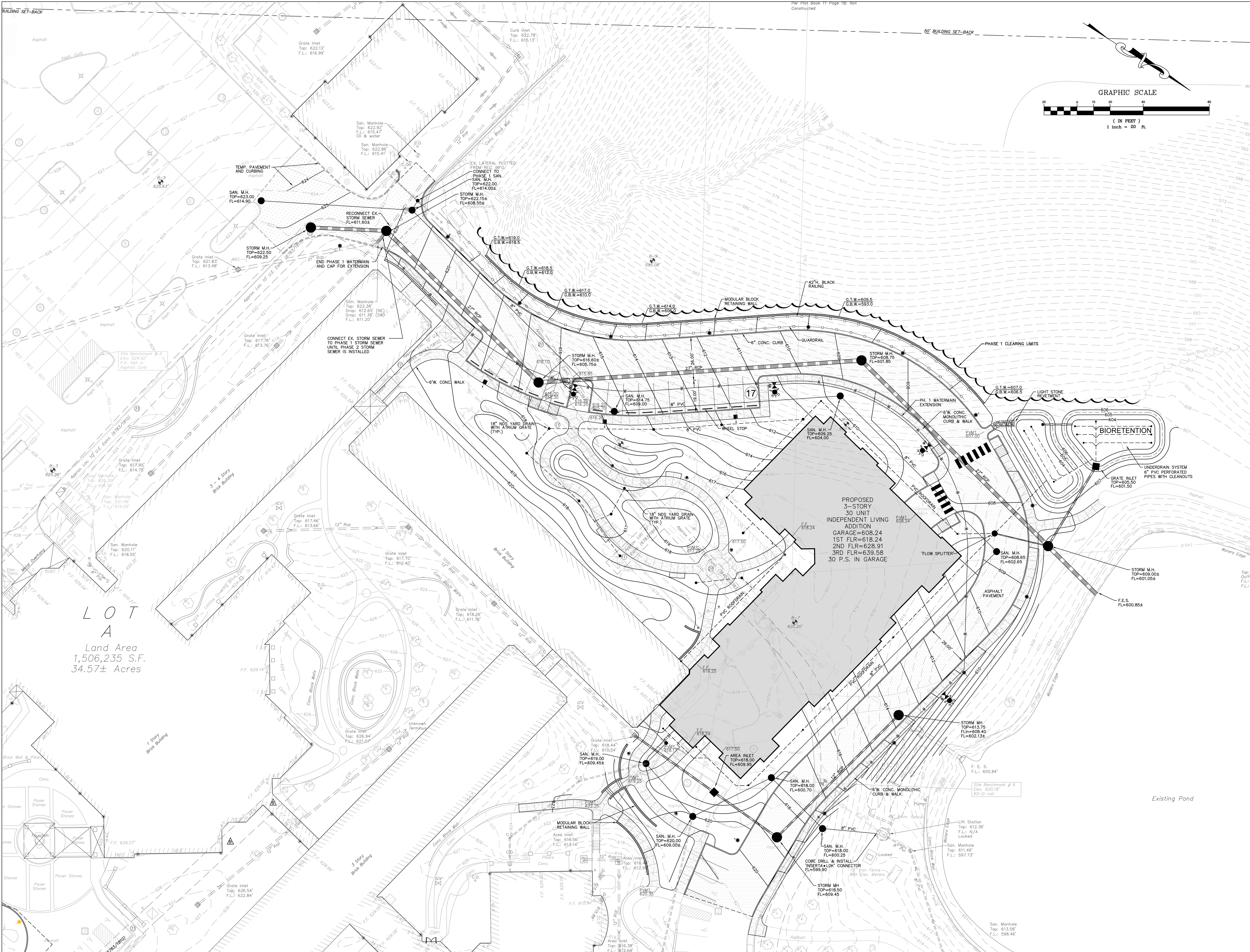


TYPICAL SECTION-REINFORCED RETAINING WALL  
MODULAR CONCRETE UNIT SCALE: NONE

PREPARED FOR:  
FRIENDSHIP VILLAGE CHESTERFIELD  
15201 OLIVE BOULEVARD  
CHESTERFIELD, MISSOURI 63017  
PH. (636) 532-1515

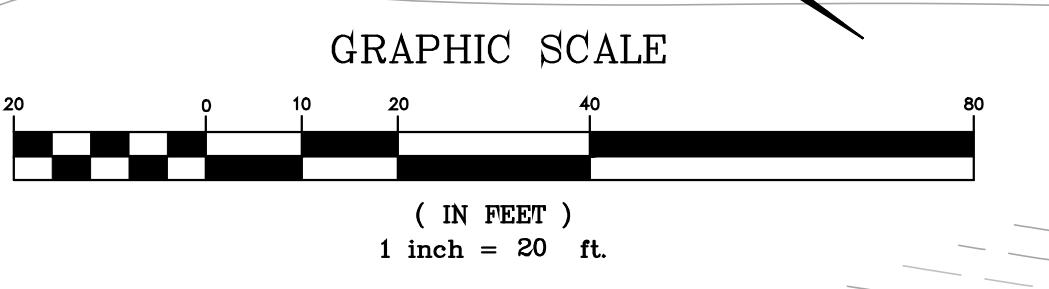
PREPARED BY:  
**CEDC**  
CIVIL ENGINEERING  
DESIGN CONSULTANTS  
11402 Gravois Road  
Suite 100  
Saint Louis, Missouri 63126  
314.729.1400  
Fax: 314.729.1404  
www.cedc.net





**LOT A**  
 Land Area  
 1,506,235 S.F.  
 34.57± Acres

PROPOSED  
 3-STORY  
 30 UNIT  
 INDEPENDENT LIVING  
 ADDITION  
 GARAGE=608.24  
 1ST FLR=618.24  
 2ND FLR=628.91  
 3RD FLR=639.58  
 30 P.S. IN GARAGE



BRANDON A. HARP, P.E. E-28650  
 PROFESSIONAL ENGINEER  
 CEDC LICENSE NO. 2003004674

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 314.729.1400  
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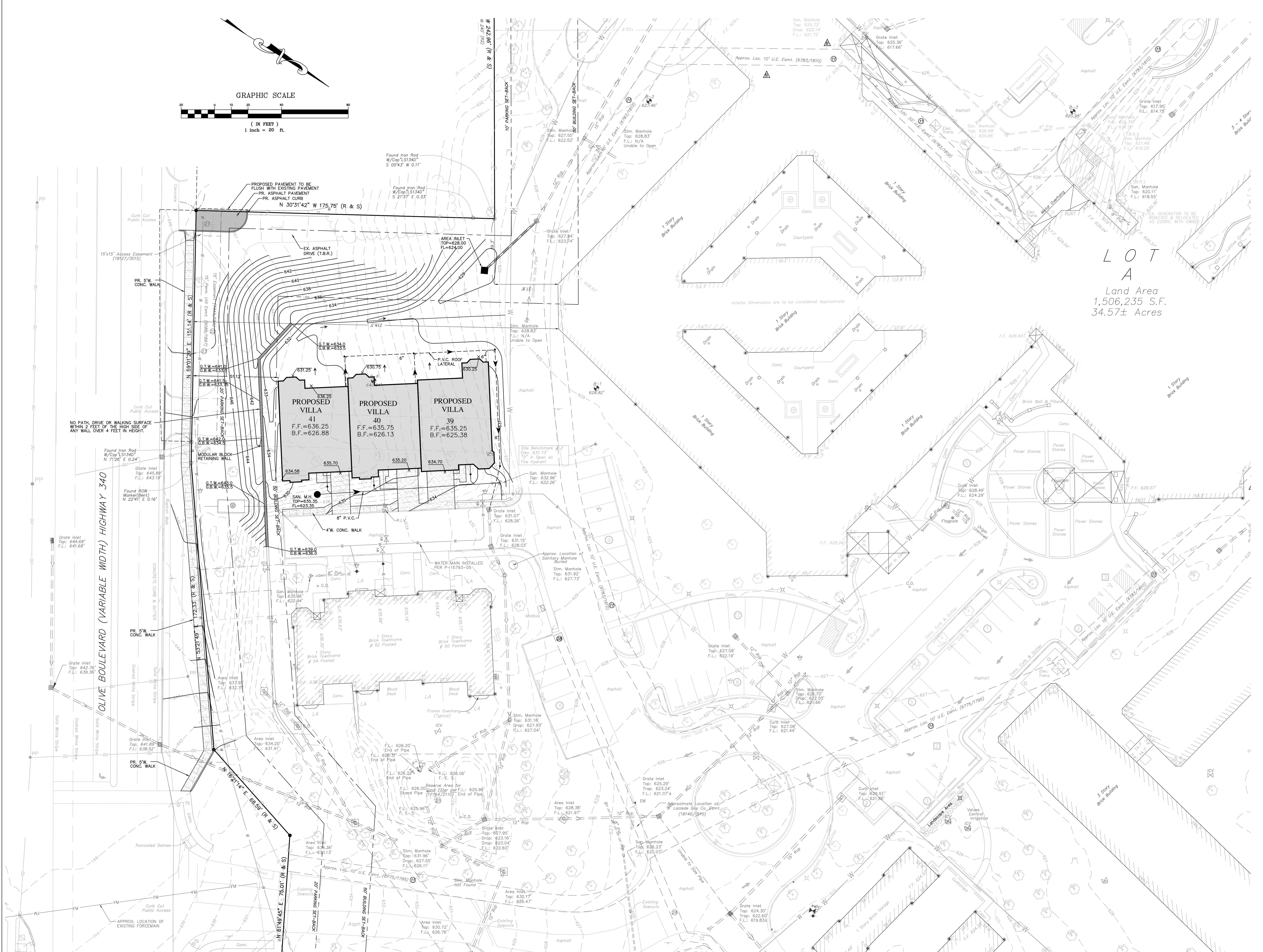
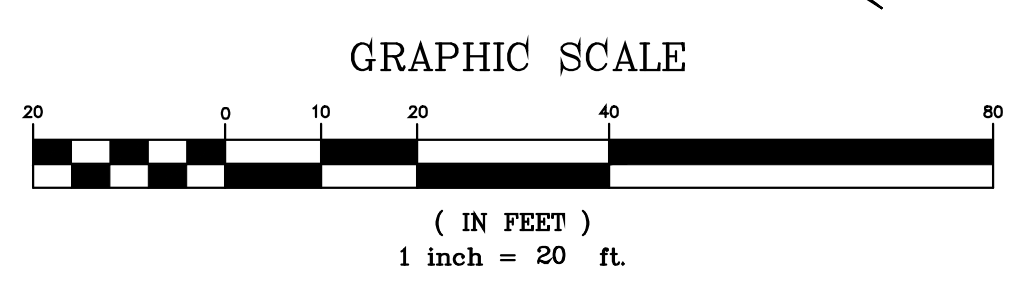
6th Amended (Partial) Site Development Plan  
**Friendship Village Chesterfield**  
 15201 Olive Blvd.  
 Chesterfield, Missouri 63017

Proj. #	1092
No. Description	Date
CITY SUBMITTAL	05-04-12
PER CITY	06-07-12

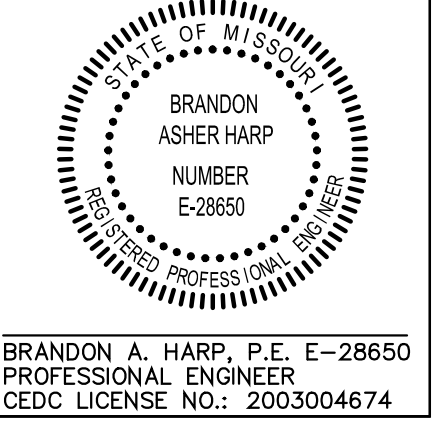
Site Development  
 Section Plan

**SD2**





**LOT A**  
 Land Area  
 1,506,235 S.F.  
 34.57± Acres



BRANDON A. HARP, P.E., E-28650  
 PROFESSIONAL ENGINEER  
 CEDC LICENSE NO.: 2003004674

**CEDC**  
 CIVIL ENGINEERING  
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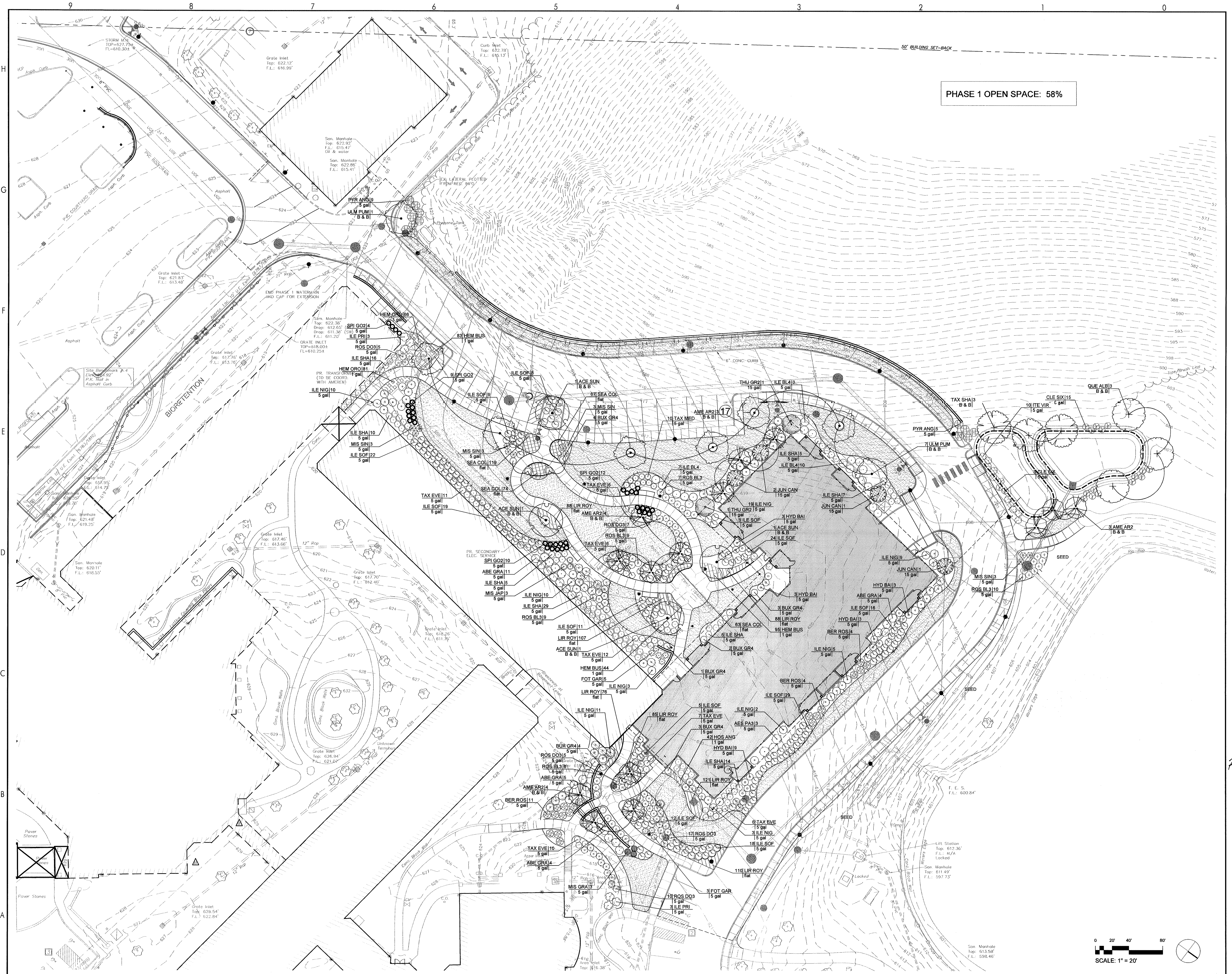
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Proj. #	1092
No. Description	Date
CITY SUBMITTAL	05-04-12
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Site Development  
 Section Plan

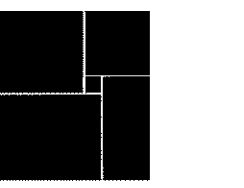
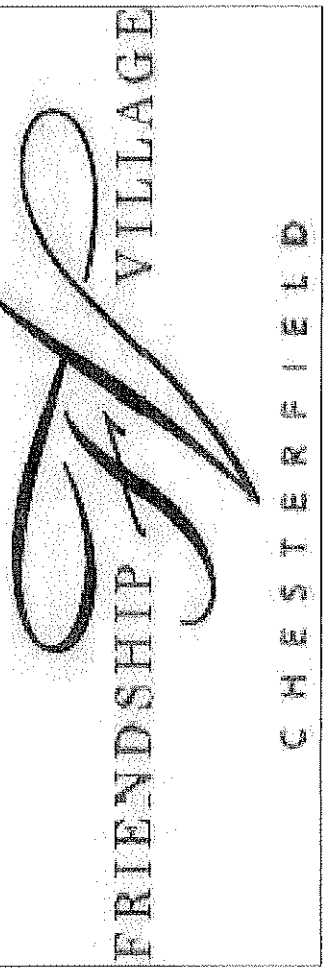
**SD3**





PHASE 1 OPEN SPACE: 58%

Rev	Date	Description
2012-06-08		CITY COMMENTS



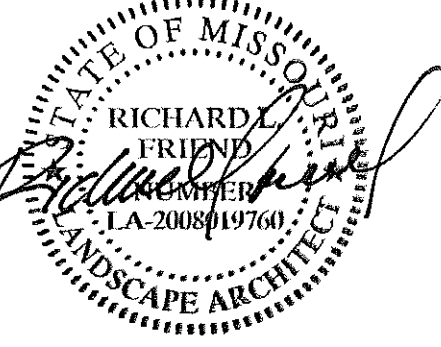
**THW**  
DESIGN

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THOMPSON HANCOCK WHITE &  
ASSOCIATES, INC.

2100 RiverEdge Parkway  
Suite 900  
Atlanta, GA 30328

PH: 770 916 2220  
FAX: 770 916 2299

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6.8.2012

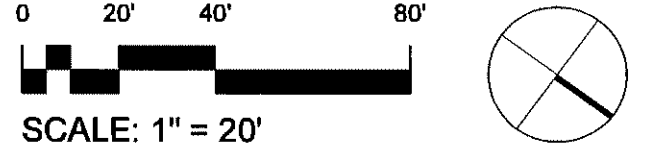
SCHEMATIC DESIGN  
PHASE B2

NOT ISSUED FOR  
CONSTRUCTION

Project No.: 1121  
Date: 05/25/2012  
Drawn By: BOD  
Checked By: RLF

PHASE ONE  
PLANTING PLAN

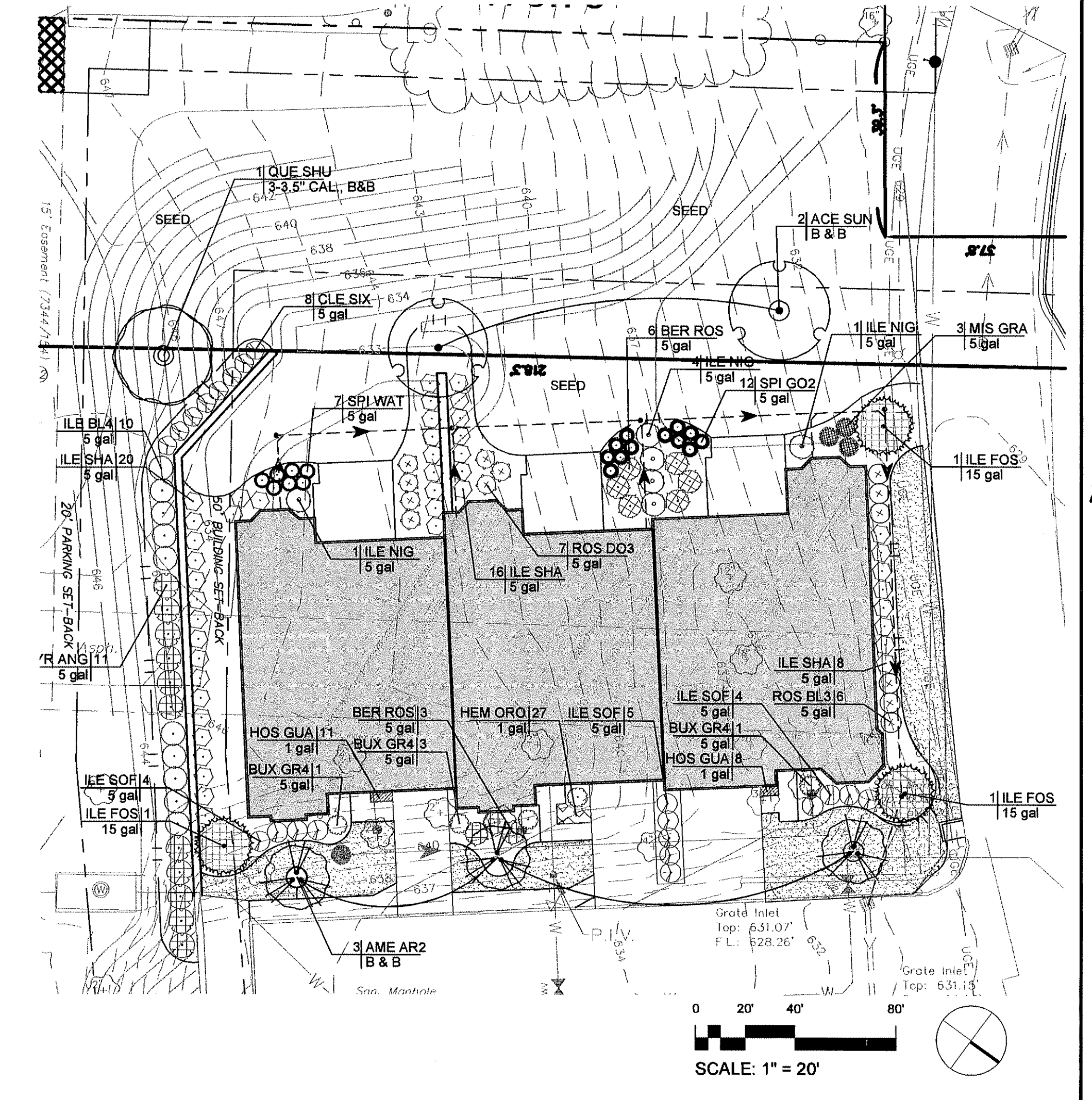
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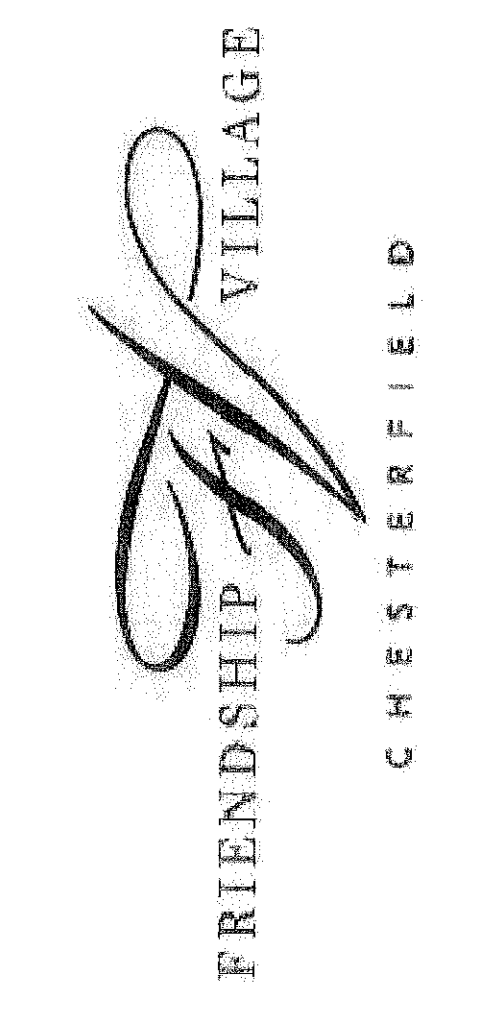


PLANT SCHEDULE												
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	FIELD5	FIELD6	Slow	Moderate	Fast
	ACE SUN	6	Acer rubrum 'Red Sunset'	Red Sunset Maple	B & B	3"Cal	14'-16'	45'+	Deciduous			X
	AME AR2	17	Amelanchier arborea 'Autumn Brilliance'	Downy Serviceberry	B & B	2.5"Cal	12' - 14'		Ornamental	X	X	
	ILE FDS	3	Ilex x amabilis 'Foster'	Foster's Holly	15 gal		8'-9'			X	X	
	JUN CAN	4	Juniperus virginiana 'Canaertii'	Canaertii Juniper	15 gal		8'-9'	30-40'	Evergreen		X	
	QUE ALB	3	Quercus alba	White Oak	B & B	2.5"Cal	14'-16'	45'+	Deciduous		X	
	QUE SHU	1	Quercus shumardii	Shumard Red Oak	3-3.5" CAL., B&B	2.5"Cal	14'-16'	45'+	Deciduous	X		X
	TAX SHA	3	Taxodium distichum 'Shawnee Brave' TM	Shawnee Brave Bald Cypress	B & B	2.5"Cal	14'-16'	45'+	Deciduous		X	
	THU GR2	2	Thuja standishii x plicata 'Green Giant'	Green Giant Arborvitae	15 gal		10'-12'					
	ULM PUM	8	Ulmus x 'Homestead'	Homestead Elm	B & B	3"Cal	14'-16'	60-80'	Deciduous		X	X
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT					Slow	Moderate	Fast
	ABE GRA	24	Abelia x grandiflora	Glossy Abelia	5 gal						X	
	AES PA3	3	Aesculus parviflora	Botlebrush Buckeye	5 gal							
	BER ROS	28	Berberis thunbergii 'Rose Glow'	Rosy Glow Barberry	5 gal					X	X	
	BUX GR4	22	Buxus x 'Green Mountain'	Green Mountain Boxwood	5 gal					X	X	
	CLE SIX	26	Clethra alnifolia 'Sixteen Candles'	Summersweet Clethra	5 gal					X		
	FOT GAR	8	Fothergilla gardenii	Dwarf Fothergilla	5 gal					X		
	HYD BAI	21	Hydrangea macrophylla 'Endless Summer' TM	Endless Summer Hydrangea	5 gal						X	X
	ILE SOF	189	Ilex crenata 'Soft Touch'	Soft Touch Japanese Holly	5 gal					X		
	ILE NIG	78	Ilex glabra 'Nigra'	Nigra Inkberry	5 gal					X		
	ILE SHA	135	Ilex glabra 'Shamrock'	Shamrock Inkberry	5 gal					X		
	ILE BL4	30	Ilex x meserveae 'Blue Princess' TM	Blue Princess Holly	5 gal					X	X	
	ILE PRI	6	Ilex x meserveae 'Blue Prince' TM	Blue Prince Holly	5 gal					X	X	
	ITE VIR	10	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	5 gal						X	
	MIS JAP	3	Miscanthus sinensis	Japanese Silver Grass	5 gal							X
	MIS SIN	12	Miscanthus sinensis 'Adagio'	Adagio Eulalia Grass	5 gal							X
	MIS GRA	6	Miscanthus sinensis 'Gracillimus'	Maiden Grass	5 gal							X
	PYR ANG	25	Pyracantha angustifolia 'Gnozam Gnome' TM	Gnome Pyracantha	5 gal							X
	ROS BL3	49	Rosa x 'Blushing Knockout'	Blushing Knockout Rose	5 gal						X	
	ROS DO3	51	Rosa x 'Double Knockout'	Double Knockout Rose	5 gal						X	
	SPI WAT	7	Spiraea japonica 'Anthony Waterer'	Spiraea	5 gal					X	X	
	SPI GO2	47	Spiraea japonica 'Goldmound'	Goldmound Spiraea	5 gal					X	X	
	TAX MED	10	Taxus x media 'Brownii'	Brown Hybrid Yew	5 gal					X	X	
	TAX EVE	58	Taxus x media 'Everlow'	Everlow Yew	5 gal					X	X	
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT					Slow	Moderate	Fast
	HEM BUS	222	Hemerocallis x 'Little Business'	Little Business Daylily	1 gal @ 12" oc							X
	HEM ORO	174	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 gal @ 12" oc							X
	HOS ANG	42	Hosta x 'Blue Angel'	Blue Angel Hosta	1 gal @ 12" oc							
	HOS GUA	19	Hosta x 'Guacamole'	Guacamole Hosta	1 gal @ 12" oc							
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT					Slow	Moderate	Fast
	LIR ROY	675	Liriope muscari 'Royal Purple'	Royal Purple Liriope	flat @ 12" oc							X
	SEA COL	323	Seasonal Color	Seasonal Color	flat @ 12" oc							
	TUR SOD	18,344 sf	Turf Sod	Drought Tolerant Fescue Blend	sod							

- ### PLANTING NOTES
- THE LANDSCAPE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE SITE CONDITIONS AND VERIFY THEM TO THEIR SATISFACTION. THE LANDSCAPE CONTRACTOR SHALL ACCEPT THE SITE CONDITIONS AND DO THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION FOR POSSIBLE VARIATION FROM GRADES AND CONDITIONS SHOWN.
  - PRIOR TO CONSTRUCTION THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING CONSTRUCTION. SHOULD THE LANDSCAPE CONTRACTOR CAUSE DAMAGE TO ANY UTILITIES, THEY SHALL MAKE NECESSARY REPAIRS AS QUICKLY AS POSSIBLE WITHOUT ADDITIONAL COMPENSATION.
  - ALL PLANT MATERIAL SIZES AND MEASUREMENTS, INCLUDING TRUNK, HEAD AND SPREAD SIZES, CONTAINER AND ROOTBALL SIZES, QUALITY AND CONDITION SHALL CONFORM TO THE STANDARD SET FORTH IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z6.01).
  - ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
  - ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
  - ALL TREES MUST BE STRAIGHT TRUNKED AND FULL-HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
  - ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE ARCHITECT BEFORE, DURING AND AFTER INSTALLATION.
  - ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
  - ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
  - THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING 5 (FIVE) SOIL SAMPLES FROM TOPSOIL AND NATIVE OR FILL SOILS AT THE SITE AND SUBMIT THEM TO AN APPROVED SOIL TESTING LABORATORY. THEY SHALL THEN OBTAIN ANALYSES AND RECOMMENDATIONS FOR AMENDING THESE SOILS AND FERTILIZATION OF SPECIFIED PLANT MATERIAL.
  - PRIOR TO MULCHING, APPLY A PRE-EMERGENT HERBICIDE (APPROVED BY ARCHITECT) AS RECOMMENDED BY THE MANUFACTURER TO PREVENT RECURRING WEED AND GRASS GROWTH.
  - ALL WORK WITHIN ANY R.O.W. SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTIONS.
  - ALL DISTURBED AREAS TO BE GRASSED OR PLANTED SHALL RECEIVE 4" MINIMUM OF APPROVED TOPSOIL (LIGHTLY COMPACTED).
  - FERTILIZATION AND SOIL AMENDMENTS FOR ALL GRASSED AREAS SHALL BE AS PER LABORATORY ANALYSIS (SEE NOTE #10).
  - SHRUB BEDS IN PARKING LOT ISLANDS SHALL BE MOUNTED WITH TOPSOIL 6" MIN. IN HEIGHT ABOVE TOP OF CURB ELEVATION.
  - TREES SHALL BE PLANTED NO CLOSER THAN FIVE (5) FEET, AND SHRUBS, NO CLOSER THAN 3-1/2 FEET FROM BACK-OF-CURB OR EDGE OF ASPHALT.
  - NO PARKING, STORAGE, OR OTHER CONSTRUCTION SITE ACTIVITIES ARE TO OCCUR WITHIN TREE PROTECTION AREAS.
  - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
  - THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRINKLING, MULCHING, FERTILIZING, ETC.) OF PLANTING AREAS AND LAWNS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE ARCHITECT.
  - THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD (AS PER DIRECTION OF THE ARCHITECT).
  - THE ARCHITECT WILL APPROVE THE STAKED LOCATION OF ALL MAJOR (OVER 3" CAL.) PLANT MATERIAL PRIOR TO INSTALLATION.
  - ALL TREES IN LEAF AFTER BEING DUG AT THE NURSERY SOURCE SHALL BE ACCLIMATED FOR TWO (2) WEEKS MINIMUM UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
  - ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS AT NO ADDITIONAL COST TO OWNER.
  - TREES ADJACENT TO PARKING AREAS SHALL BE PLANTED A MINIMUM OF 12-1/2' (FEET) FROM BACK OF CURB.
  - VEGETATION MUST BE LOCATED SO AS TO PREVENT VEHICLES FROM HANGING OVER OR STRIKING THEM (SEE NOTE #16 FOR MINIMUM DISTANCE).
  - NO AUGER TOOLS TO BE USED ABOVE SEGMENTAL RETAINING WALLS WHILE DIGGING IN ORDER TO PROTECT THE GEO-GRID. ANY MODIFICATION TO THE GEO-GRID FOR INSTALLATION OF PLANTS MUST BE CONSULTED AND APPROVED BY VERSALOCK DESIGNER/CONTRACTOR.
  - NO PLANTS OVER 18" IN HT. ARE TO BE PLACED WITHIN A THREE (3) FEET RADIUS OF A FIRE HYDRANT.
  - NO PLANTING IS TO OCCUR WITHIN THREE (3) FEET OF TRANSFORMERS AND TEN (10) FEET IN FRONT OF TRANSFORMER DOORS.
  - PRIOR TO INSTALLATION OF PLANTING MATERIAL IN PLANTERS, PLANTER DRAIN HOLES MUST HAVE A SCREEN MATERIAL/FILTER FABRIC AND THE BASE IS TO BE FILLED WITH MIN. 3" OF PEA GRAVEL.
  - ALL DISTURBED AREAS NOT OTHERWISE PLANTED TO BE SEEDED.
  - IRRIGATION SYSTEM WILL BE DESIGNED WITHIN BUDGETED ALLOWANCE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED SLEEVING.



Rev	Date	Description



**THW DESIGN**

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2100 RiverEdge Parkway  
Suite 900  
Atlanta, GA 30328

PH: 770 916 2220  
FAX: 770 916 2299

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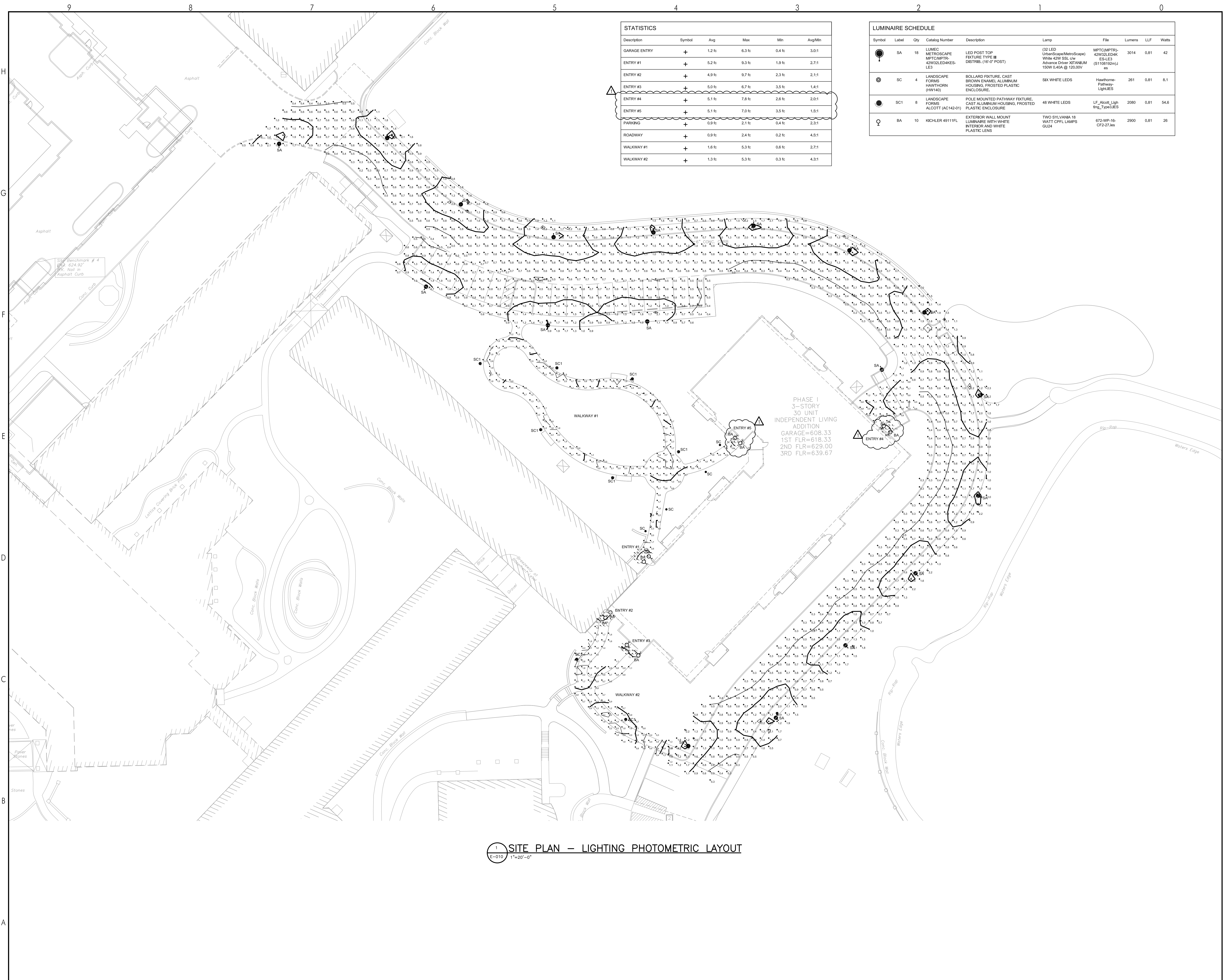
**SCHEMATIC DESIGN PHASE B2**

**NOT ISSUED FOR CONSTRUCTION**

Project No.: 1121  
Date: 05/25/2012  
Drawn By: BDD  
Checked By: RLF

**PHASE ONE VILLA PLANTING PLAN**





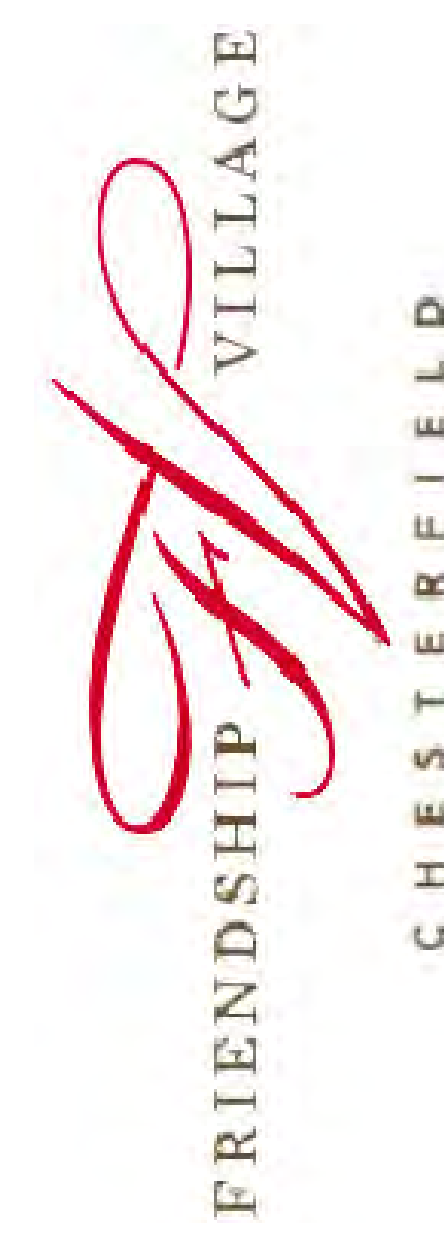
STATISTICS					
Description	Symbol	Avg	Max	Min	Avg/Min
GARAGE ENTRY	+	1.2 fc	6.3 fc	0.4 fc	3.0:1
ENTRY #1	+	5.2 fc	9.3 fc	1.9 fc	2.7:1
ENTRY #2	+	4.9 fc	9.7 fc	2.3 fc	2.1:1
ENTRY #3	+	5.0 fc	6.7 fc	3.5 fc	1.4:1
ENTRY #4	+	5.1 fc	7.8 fc	2.8 fc	2.0:1
ENTRY #5	+	5.1 fc	7.0 fc	3.5 fc	1.5:1
PARKING	+	0.9 fc	2.1 fc	0.4 fc	2.3:1
ROADWAY	+	0.9 fc	2.4 fc	0.2 fc	4.5:1
WALKWAY #1	+	1.6 fc	5.3 fc	0.6 fc	2.7:1
WALKWAY #2	+	1.3 fc	5.3 fc	0.3 fc	4.3:1

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens LUF Watts
+	SA	18	LUMEC METROSCAPE MPTC/MPTR-42W32LED4KES-LES	LED POST TOP FIXTURE TYPE III DISTRIB. (16'-0" POST)	(32 LED UltraScape/MetroScape) White 42W SSL c/w Advance Driver XITANIUM 150W @ 40A @ 120.00V	MPTC(MPTR)-42W32LED4KES-LES (S1108192m) es	3014 0.81 42
+	SC	4	LANDSCAPE FORMS HAWTHORN (PWY40)	BOLLARD FIXTURE, CAST BROWN ENAMEL ALUMINUM HOUSING, FROSTED PLASTIC ENCLOSURE	SIX WHITE LEDS	HamHome-Pathway-Light.LES	261 0.81 8.1
+	SC1	8	LANDSCAPE FORMS ALCOTT (AC142-01)	POLE MOUNTED PATHWAY FIXTURE, CAST ALUMINUM HOUSING, FROSTED PLASTIC ENCLOSURE	48 WHITE LEDS	LF_Alcott_Light @9_Type3.LES	2080 0.81 54.6
+	BA	10	KICHLER 49111FL	EXTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS	TWO SYLVANIA 18 WATT CFL LAMPS GU24	672-WP-16-CF2-27.Les	2900 0.81 26

PHASE I  
30 UNIT  
INDEPENDENT LIVING  
ADDITION  
GARAGE=608.33  
1ST FLR=618.33  
2ND FLR=629.00  
3RD FLR=639.67

1 SITE PLAN - LIGHTING PHOTOMETRIC LAYOUT  
E-010 1"=20'-0"

Rev	Date	DESCRIPTION



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SCHEMATIC DESIGN  
PHASE B2

NOT ISSUED FOR  
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Project No.: 11760  
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Drawn By: CV  
Checked By: CV

SITE PLAN  
LIGHTING  
PHOTOMETRIC

E-010