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**Planning Commission Staff Report**

**Project Type:** Site Development Section Plan

**Meeting Date:** October 13, 2014

**From:** Purvi Patel  
Project Planner

**Location:** North side of Olive Street Road, west of its intersection with Chesterfield Airport Road

**Applicant:** South Side Property, LLC

**Description:** **Chesterfield Blue Valley, Lot 1A (Site Development Section Plan - Gas Mart):** A Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and an Architect's Statement of Design for a 2.07 acre tract of land zoned "PC" Planned Commercial District located on the north side of Olive Street Road, west of its intersection with Chesterfield Airport Road.

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**PROPOSAL SUMMARY**

South Side Property, LLC, has submitted a request for a twenty-eight (28) foot tall, 13,785 square foot convenience store, car wash, gas station, and fast food restaurant located on the north side of Olive Street Road, west of its intersection with Chesterfield Airport Road. The subject site is zoned "PC" Planned Commercial District and is governed under the terms and conditions of City of Chesterfield Ordinance Number 2612. The exterior building materials will be comprised of stone, brick, simulated stucco (EFIS), and prefinished aluminum storefront windows. The proposal also includes a low sloping roof with parapet walls and metal roofing on the car wash and entry cupolas.

**HISTORY OF SUBJECT SITE**

St. Louis County originally zoned the area now known as Chesterfield Blue Valley "NU" Non-Urban District prior to the incorporation of the City of Chesterfield. Those areas north of the Chesterfield Monarch Levee also included a "FP" Flood Plain Overlay in addition to the "NU" Non-Urban District Zoning classification. In 2006, the first planned district was approved for the site and in the years since, the site-specific governing ordinance has been amended several times to include additional land into the planned district and to consolidate several ordinances.

In 2010, the City of Chesterfield approved Ordinance 2612 to change the zoning of the six (6) acre Brasher Property from "NU" Non-Urban District to a "PC" Planned Commercial District; and to consolidate the existing "PC" Planned Commercial District with this newly zoned "PC" Planned Commercial District to form one, 137.6 acre, "PC" Planned Commercial District governed under the same ordinance.

The most recent ordinance amendment occurred in early August, when the City of Chesterfield approved Ordinance 2805 to change the parking setback between internal lot lines from ten (10) feet to zero (0) feet; all the other setback requirements remained unchanged.

The Site Development Concept Plan for Chesterfield Blue Valley was approved by the City Council in May 2012; followed by a Record Plat approval in July 2012. Most recently, the Resubdivision Plat of Lot 1 was approved to subdivide Lot 1 into eight (8) smaller lots.

Lot 1A will be the second lot in Chesterfield Blue Valley to be developed, the first being Lot 2 (St. Louis Premium Outlets). The Site Development Section Plan and Amended Site Development Section Plan for Lot 2 were approved in February 2012 and March 2013, respectively. The Outlet Mall is planning a second phase which is currently under review with Staff.

Land Use and Zoning of Surrounding Properties

Direction	Land Use	Zoning
North	Chesterfield Blue Valley (Vacant)	"PC" Planned Commercial District
South	Gas Station/ C-Store	"C8" Planned Commercial District
East	Concrete Plant	"M-3" Planned Industrial District
West	Chesterfield Blue Valley (Vacant)	"PC" Planned Commercial District



**Figure 1** – Aerial

**STAFF ANALYSIS**

**Zoning**

The subject site is zoned “PC” Planned Commercial District under the terms and conditions of City of Chesterfield Ordinance 2805. The submittal was reviewed against and adheres to the requirements of this ordinance and all applicable City Code requirements.

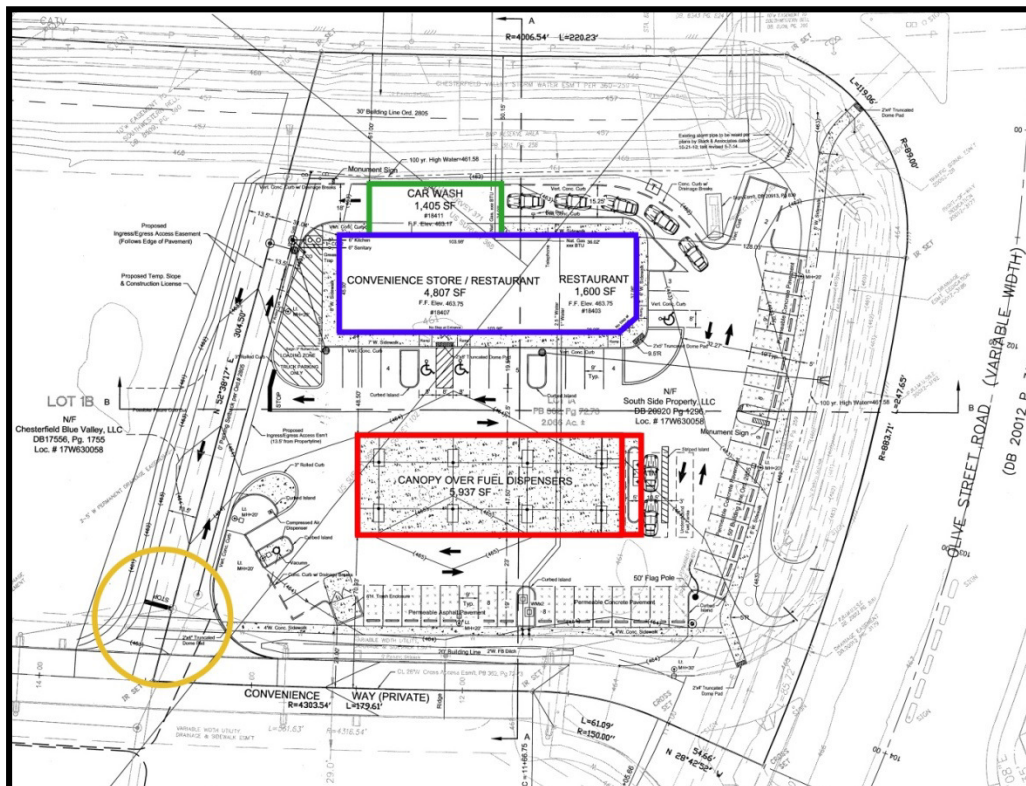
**Access and Site Circulation**

The proposal includes one access point off of Convenience Way which will serve as a shared access drive for Lot 1A and Lot 1B (shown in yellow on the image below). Convenience Way is a private drive accessed off of Olive Street Road and Outlet Boulevard. The proposed development will not have direct access on Chesterfield Airport Road or Olive Street Road. Furthermore, access to Convenience Way off Olive Street Road is a right-in/right-out access only and has a dedicated right turn lane up to its intersection with Outlet Boulevard.

Additionally, the developer has proposed a five (5) foot sidewalk along Olive Street Road which will tie into a four (4) foot sidewalk along Convenience Way. Both sidewalks will ultimately be tied into adjoining properties to provide a continuous pedestrian access throughout the development.

**Internal Circulation**

The gas canopy is centrally located on the site (shown in red on Figure 2) and immediately to the right of the canopy is the ATM. This is a stand-alone ATM and the canopy will not extend over this area. The convenience store/restaurant is located closer to Chesterfield Airport Road (shown in blue below) and will have an automated carwash attached to it (shown in green). The site circulation is configured around these structures and meets all the minimum City Code requirements.



**Figure 2 – Site Development Section Plan**

### **Parking**

Parking for the site is provided near the entrances to the main structure, as well as around the gas canopy. The number of parking spaces required by Off-Street Parking, Stacking, and Loading Regulations is 55 spaces and the proposal is for 55 spaces which include 3 ADA accessible spaces.

### **Landscaping and Open Space**

The request includes landscaping as directed by the City of Chesterfield Tree Preservation and Landscape Requirements. As required by code, street trees must be provided along public rights-of-way while no plantings are allowed in drainage swales or ditches. As there are two drainage swales along Olive Street Road and Chesterfield Airport Road, the applicant is not providing any trees along these rights-of-way. Due to the restrictions associated with the swales, the applicant is providing additional trees throughout the development. The Landscape Plan also depicts plantings along the private drive, Convenience Way, and within the site as required by the Tree Preservation and Landscape Requirements.

The planned district ordinance for the Chesterfield Blue Valley development requires a minimum of 30% open space for the development. However, the site as proposed shows 35% open space and most of the open space is provided on the outskirts of the property as majority of the interior site will be paved.

### **Lighting**

Several light standards in the parking lot and along the shared access drive as well as seven (7) building mounted fixtures are included by the developer. The parking area fixtures are LED outdoor and area lights that are fully shielded, full cut off optics which adhere to the City of Chesterfield Lighting Standards. The building mounted light fixtures are LED sconces and are full cut off optics which minimize glare and light trespass. The proposal also includes twenty-four (24) LED fixtures which will be mounted under the gas station canopy. The City of Chesterfield Lighting Standards requires an average illumination level of no greater than 22 footcandles around the pump islands and under canopies. The illumination level proposed with this development submittal is well under this requirement at 13.05 footcandles.

The cut-sheets for all these proposed fixtures are attached to this report.

### **Architectural Elevations**

The applicant is proposing a single story building of approximately twenty-eight (28) feet in height with a tunnel carwash. The building height is similar to properties in adjacent commercial and industrial developments. In addition to the carwash use, the convenience store will also be designed to accommodate a 1,600 square foot fast food restaurant tenant with no drive-thru component.

The building design features elevations that are articulated with stone, brick, simulated stucco (EFIS) and metal finishes. The building also includes a low sloping roof with parapet walls and a prefinished metal cap, which will screen roof-top equipment. Furthermore, the design includes entry cupolas that are enhanced with stone to match the column design on the corners of the building. This stone design will be wrapped around to the entrance and exit of the carwash tying the carwash into the convenience store, creating one seamless structure.

The material colors include light earth tones with dark accent colors, similar to the St. Louis Premium Outlet Mall in the same development. The simulated stucco (EFIS) will have a beige finish with brick

colored medallions on the front and side of the building and copper green patina finish in the rear to match the downspouts. The green patina finish will be carried over onto the standing seam metal roof as well as to tie in the colors and materials together.

Ordinance 2805 states “The developer shall submit an overall design package for the development, including, but not limited to architectural elevations, colored renderings and building materials”. This overall design package was approved by the Planning Commission on February 25th, 2013. The architectural standards for the development, as approved, are as follows:

**General**

*CBV, LLC envisions a project design based on the character, principles and theme of the Prairie Style of architecture which contains horizontal lines, flat or hipped roofs with broad overhanging eaves, and window groups in horizontal banks as the principle means of architectural expression. The goal is for a coordinated, upscale design theme present in every architectural and landscape feature including built form, lighting, exterior furniture and landscaping. The historic Brasher House, if reused, would be an exception. It is not the intent of these standards to limit or diminish use of “corporate trade dress” on store fronts.*

**Material Palette**

*Brick and stone veneer, exterior insulation plaster system (EIFS), smooth face architectural metal, exposed steel structure, painted concrete wall panels with sand texture finish, open metal trellises, glass and aluminum store fronts and curtain walls, canvas and metal awnings, and appropriate cornices and overhangs will be acceptable.*

**Color Palette**

*Earth tones accompanied by complimentary accent colors for view corridors and arrival points will be the standard.*

As discussed on Page 5, these architectural features have been included in the design of the building and tie into the Prairie Style theme of the Chesterfield Blue Valley development.

The project was reviewed by the Architectural Review Board (ARB) on July 10<sup>th</sup>, 2014. A motion to forward to the Planning Commission was approved by the ARB by a vote of 6-0 with the following two (2) recommendations:

1. Explore opportunities to provide additional greenspace with landscaping around the trash enclosure. If that is not possible, provide additional landscaping around the trash enclosure to decrease visibility.
2. Include additional landscaping beneath the trees in the three (3) parking islands closest to the building.

In response to the ARB’s recommendations, the applicant has increased the greenspace by including landscaping around the trash enclosure. The proposal includes red switch grass and hibiscus around the trash enclosure and both these plants can get up to five (5) feet tall and will provide the recommended screening. Additionally, the applicant added drift rose shrubs around the trees in the three (3) parking islands closest to the building. These plants will provide ground cover around the trees, enhancing the landscaping of the parking islands.

### **Signage**

Planning Commission approved a Sign Package for the overall Chesterfield Blue Valley development on February 25<sup>th</sup>, 2013. As this is a corner lot, two (2) monument signs are permitted per the Sign Package; however, the signs have to maintain a minimum distance of one hundred (100) feet of separation and there cannot be more than one (1) monument sign per street frontage. The applicant is proposing signs along Olive Street Road and Chesterfield Airport Road and these signs meet the minimum distance requirements stated in approved Sign Package. The size and design of the sign will be reviewed against the Sign Package prior to construction and if compliant will be approved by Staff.

### **DEPARTMENT INPUT**

Staff has reviewed the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations, and Architect's Statement of Design and has found the proposal to be in compliance with the site specific ordinance, the Site Development Concept Plan, Comprehensive Plan, and all City Code requirements. Staff recommends approval of the proposed development of Chesterfield Blue Valley, Lot 1A (Gas Mart).

### **MOTION**

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

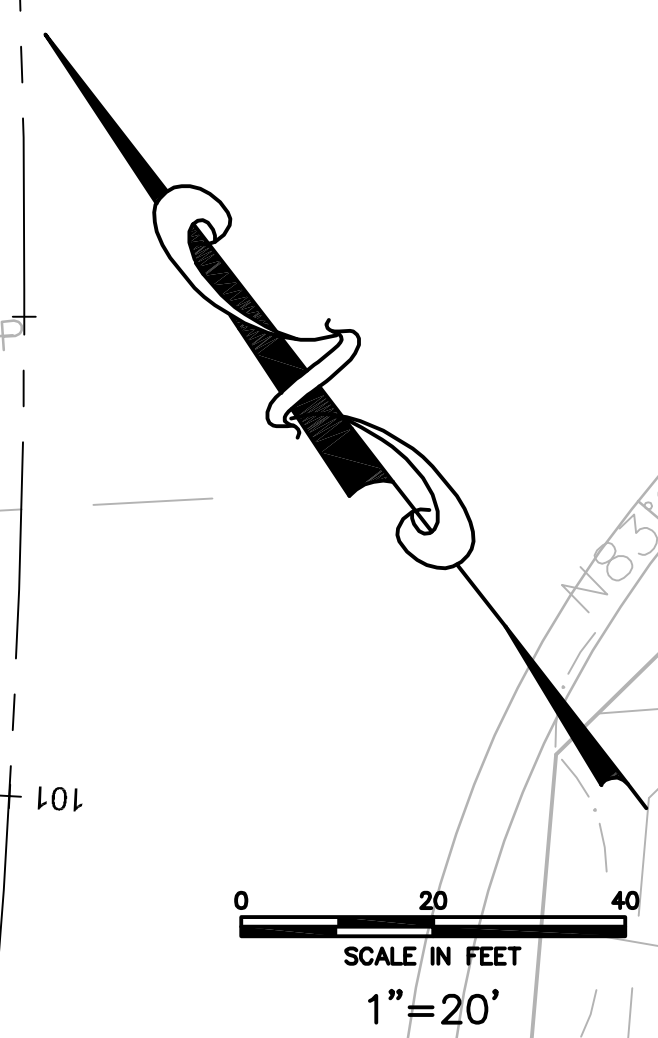
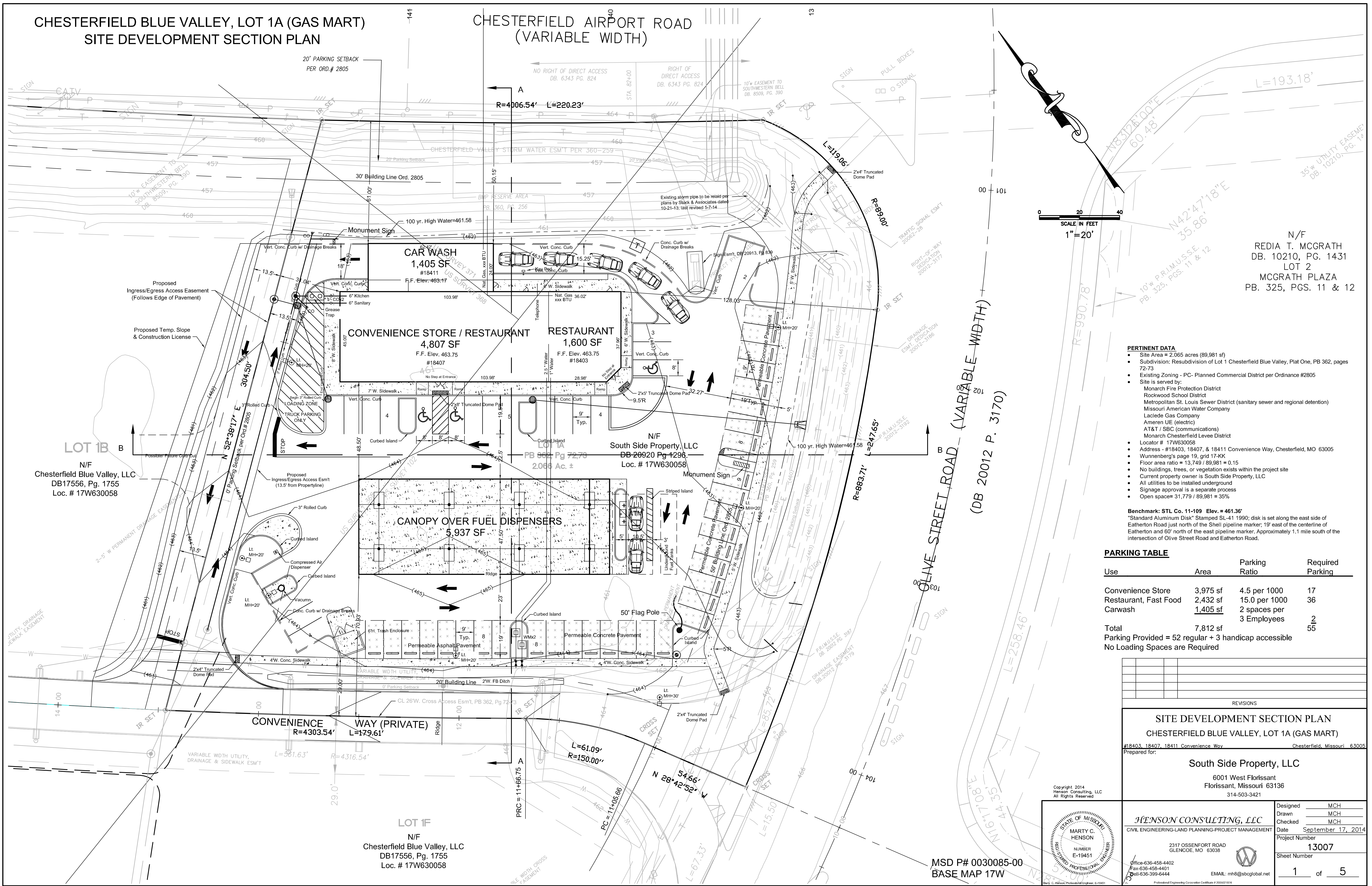
- 1) "I move to approve (or deny) the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for Chesterfield Blue Valley, Lot 1A (Gas Mart).
  
- 2) "I move to approve the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for Chesterfield Blue Valley, Lot 1A (Gas Mart), with the following conditions..." (Conditions may be added, eliminated, altered or modified)

CC: Aimee Nassif, Planning and Development Services Director

Attachments: Site Development Section Plan  
Landscape Plan  
Lighting Plan  
Lighting Cut-sheets  
Architect's Statement of Design  
Architectural Elevations

**CHESTERFIELD BLUE VALLEY, LOT 1A (GAS MART)  
SITE DEVELOPMENT SECTION PLAN**

**CHESTERFIELD AIRPORT ROAD  
(VARIABLE WIDTH)**



SCALE IN FEET  
1" = 20'

N/F  
REDIA T. MCGRATH  
DB. 10210, PG. 1431  
LOT 2  
MCCRATH PLAZA  
PB. 325, PGS. 11 & 12

- PERTINENT DATA**
- Site Area = 2,065 acres (89,981 sf)
  - Subdivision: Resubdivision of Lot 1 Chesterfield Blue Valley, Plat One, PB 362, pages 72-73
  - Existing Zoning - PC- Planned Commercial District per Ordinance #2805
  - Site is served by:
    - Monarch Fire Protection District
    - Rockwood School District
    - Metropolitan St. Louis Sewer District (sanitary sewer and regional detention)
    - Missouri American Water Company
    - Laclade Gas Company
    - Ameren UE (electric)
    - AT&T / SBC (communications)
    - Monarch Chesterfield Levee District
  - Locator # 17W630058
  - Address - #18403, 18407, & 18411 Convenience Way, Chesterfield, MO 63005
  - Wunnenberg's page 19, grid 17-KK
  - Floor area ratio = 13,749 / 89,981 = 0.15
  - No buildings, trees, or vegetation exists within the project site
  - Current property owner is South Side Property, LLC
  - All utilities to be installed underground
  - Signage approval is a separate process
  - Open space = 31,779 / 89,981 = 35%

Benchmark: STL Co. 11-109 Elev. = 461.36'  
 \*Standard Aluminum Disk\* Stamped SL-41 1990; disk is set along the east side of Eatherton Road just north of the Shell pipeline marker; 19' east of the centerline of Eatherton and 60' north of the east pipeline marker. Approximately 1.1 mile south of the intersection of Olive Street Road and Eatherton Road.

**PARKING TABLE**

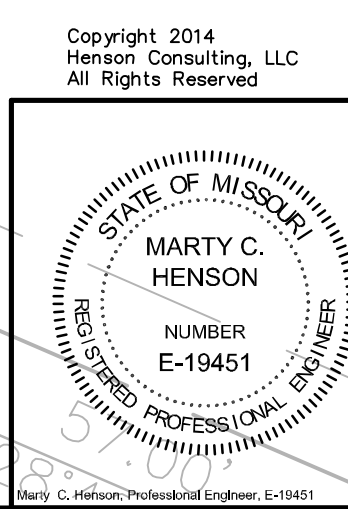
Use	Area	Parking Ratio	Required Parking
Convenience Store	3,975 sf	4.5 per 1000	17
Restaurant, Fast Food	2,432 sf	15.0 per 1000	36
Carwash	1,405 sf	2 spaces per	
		3 Employees	2
<b>Total</b>	<b>7,812 sf</b>		<b>55</b>

Parking Provided = 52 regular + 3 handicap accessible  
 No Loading Spaces are Required

REVISIONS

NO.	DATE	DESCRIPTION

**SITE DEVELOPMENT SECTION PLAN**  
**CHESTERFIELD BLUE VALLEY, LOT 1A (GAS MART)**  
 #18403, 18407, 18411 Convenience Way Chesterfield, Missouri 63005  
 Prepared for:  
**South Side Property, LLC**  
 6001 West Florissant  
 Florissant, Missouri 63136  
 314-503-3421



**HENSON CONSULTING, LLC**  
 CIVIL ENGINEERING-LAND PLANNING-PROJECT MANAGEMENT  
 2317 OSSENFORT ROAD  
 GLENCOE, MO 63038  
 Office-636-458-4402  
 Fax-636-458-4401  
 Cell-636-399-6444  
 EMAIL: mh8@sbglobal.net

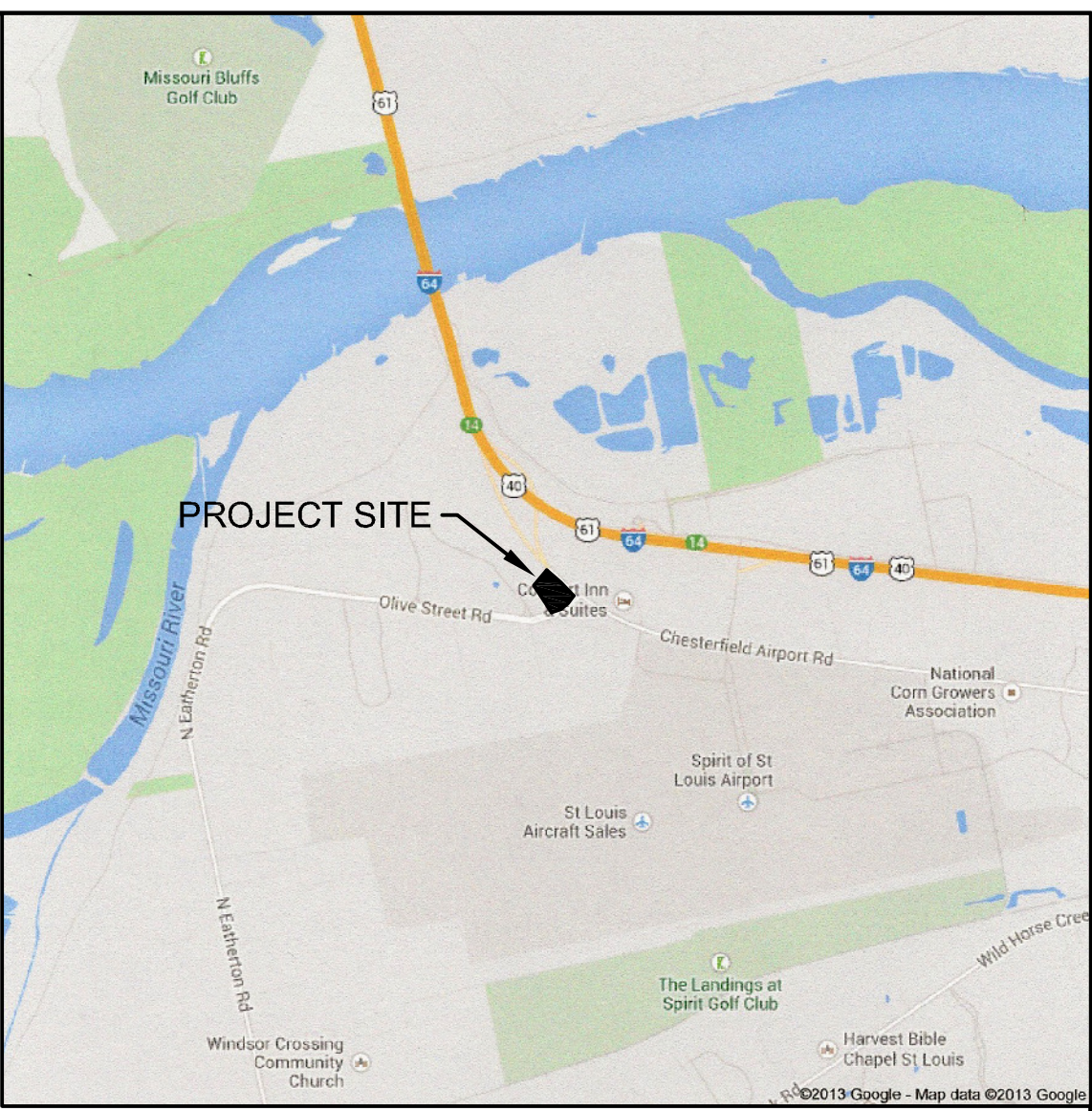
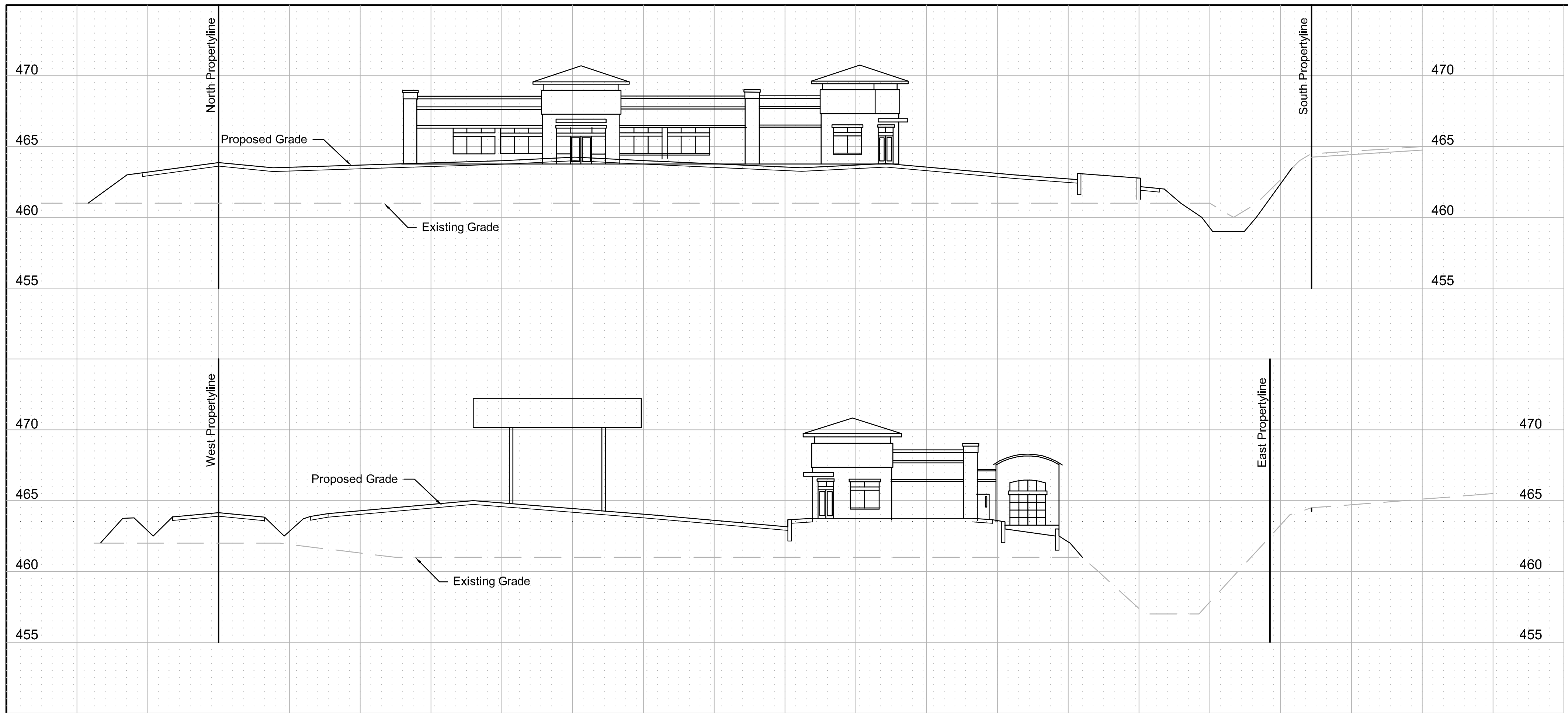
Designed \_\_\_\_\_ MCH  
 Drawn \_\_\_\_\_ MCH  
 Checked \_\_\_\_\_ MCH  
 Date September 17, 2014  
 Project Number 13007  
 Sheet Number 1 of 5

MSD P# 0030085-00  
 BASE MAP 17W

N/F  
 Chesterfield Blue Valley, LLC  
 DB17556, Pg. 1755  
 Loc. # 17W630058

N/F  
 South Side Property, LLC  
 DB 20920 Pg 4296  
 Loc. # 17W630058

N/F  
 Chesterfield Blue Valley, LLC  
 DB17556, Pg. 1755  
 Loc. # 17W630058



**LOCATION MAP**  
**CHESTERFIELD BLUE VALLEY, LOT 1A (GAS MART)**  
**SITE DEVELOPMENT SECTION PLAN**  
 LOT 1A of A RESUBDIVISION OF LOT 1 OF  
 CHESTERFIELD BLUE VALLEY PLAT ONE  
 per PLAT BOOK 362, PAGE 72-73  
 U.S. SURVEYS 102, 360, & 371, TOWNSHIP 45 NORTH, RANGE 3 EAST  
 CITY OF CHESTERFIELD, COUNTY OF ST. LOUIS, MISSOURI

**SURVEYOR'S CERTIFICATE**  
 This is to certify that Metron Surveying and Layout Company has prepared an ALTA survey, from which this Site Development Section Plan was prepared. The information shown is a correct representation of all existing and proposed land divisions.

Metron Surveying & Layout Company  
 313 Wood Street  
 O'Fallon, Missouri 63366

By: John E. Winkler, Jr. PLS 2006016644

Date: \_\_\_\_\_, 2014

**SCRIPT FOR SITE DEVELOPMENT PLAN**

DESCRIPTION: LOT 1A  
 A TRACT OF LAND BEING LOT 1A OF A RESUBDIVISION OF LOT 1 OF CHESTERFIELD BLUE VALLEY PLAT ONE, A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 362 PAGES 72 & 73 OF THE ST. LOUIS COUNTY, MISSOURI RECORDS, AND BEING PART OF U.S. SURVEYS 102, 368 AND 371 IN TOWNSHIP 45 NORTH, RANGE 3 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF CHESTERFIELD, ST. LOUIS COUNTY, MISSOURI AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE WESTERN LINE OF CHESTERFIELD AIRPORT ROAD WITH THE NORTHERN LINE OF RELOCATED OLIVE STREET ROAD AS SHOWN ON THE PLAT OF A RESUBDIVISION OF LOT 1A OF CHESTERFIELD BLUE VALLEY PLAT ONE, A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 362 PAGES 72 & 73 OF THE ST. LOUIS COUNTY, MISSOURI RECORDS; THENCE ALONG THE NORTHERN LINE OF RELOCATED OLIVE STREET ROAD IN A SOUTHWESTERLY DIRECTION ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 89.00 FEET, AN ARC LENGTH OF 119.06 FEET, AND A CHORD WHICH BEARS SOUTH 06 DEGREES 54 MINUTES 22 SECONDS WEST, A CHORD DISTANCE OF 110.37 FEET TO A POINT OF COMPOUND CURVATURE; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 883.71 FEET, AN ARC LENGTH OF 247.65 FEET, AND A CHORD WHICH BEARS SOUTH 53 DEGREES 15 MINUTES 27 SECONDS WEST, A CHORD DISTANCE OF 246.84 FEET TO A POINT; THENCE LEAVING SAID NORTHERN LINE NORTH 28 DEGREES 42 MINUTES 52 SECONDS WEST, A DISTANCE OF 54.66 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 150.00 FEET, AN ARC LENGTH OF 61.09 FEET, AND A CHORD WHICH BEARS NORTH 40 DEGREES 22 MINUTES 52 SECONDS WEST, A CHORD DISTANCE OF 60.67 FEET TO A POINT OF REVERSE CURVATURE; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 4303.54 FEET, AN ARC LENGTH OF 179.61 FEET, AND A CHORD WHICH BEARS NORTH 50 DEGREES 51 MINUTES 07 SECONDS WEST, A CHORD DISTANCE OF 179.60 FEET TO A POINT; THENCE NORTH 52 DEGREES 38 MINUTES 17 SECONDS EAST, A DISTANCE OF 304.50 FEET TO A POINT ON THE AFORESAID WESTERN LINE OF CHESTERFIELD AIRPORT ROAD; THENCE ALONG SAID WESTERN LINE IN A SOUTHEASTERLY DIRECTION ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 4006.54 FEET, AN ARC LENGTH OF 220.23 FEET, AND A CHORD WHICH BEARS SOUTH 52 DEGREES 09 MINUTES 30 SECONDS EAST, A CHORD DISTANCE OF 220.20 FEET BACK TO THE POINT OF BEGINNING AND CONTAINING 2.066 ACRES, MORE OR LESS.

South Side Property, LLC, the owner of the property shown on this plan for and in consideration of being granted approval of said plan to develop property under the provisions of Section 03.04.C, "PC" Planned Commercial District of the City of Chesterfield Unified Development Code, do hereby agree and declare that said property from the date of the recording of this plan shall be developed only as shown hereon, unless said plan is amended by the City of Chesterfield, or voided or vacated by order of ordinance of the City of Chesterfield Council.

Munji Abdeljabbar, Managing Member

STATE OF MISSOURI )  
 ) SS  
 COUNTY OF ST. LOUIS )

On this \_\_\_\_ day of \_\_\_\_\_, AD 2014, before me appeared Munji Abdeljabbar, to me personally known who, being by me sworn in, did say that he is the Managing Member of South Side Property, LLC, a limited liability company and that said instrument was signed on behalf of said limited liability company and acknowledged said instrument to be the free act and deed of said company.

IN Testimony Whereof, I have hereunto set my hand and affixed my Notarial Seal at my Office in St. Louis County, Missouri, the day and year last above written.

My term expires \_\_\_\_\_

\_\_\_\_\_  
 (Notary Public)

This Site Development Plan was approved by the City of Chesterfield Planning Commission and duly verified on the day of \_\_\_\_\_, 2014, by the Chairperson of said Commission, authorizing the recording of this Site Development Plan pursuant to the Chesterfield Ordinance Number 200, as attested by the Planning and Development Services Director and the City Clerk.

\_\_\_\_\_  
 Aimee Nassif, AICP  
 Planning and Development Services Director  
 City of Chesterfield, Missouri

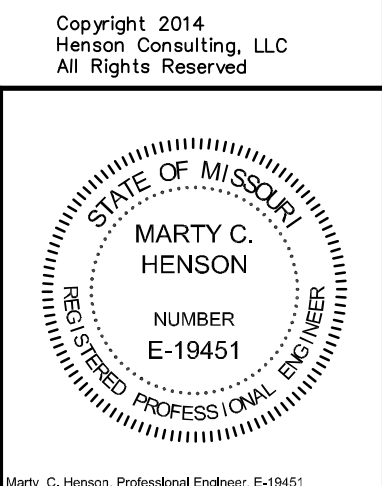
\_\_\_\_\_  
 Vickie Hass, City Clerk  
 City of Chesterfield, Missouri

**Land Corner Note**  
 Prior to issuance of final occupancy, the developer shall cause, at their expense the reestablishment, restoration or appropriate witnessing of all Corners of the United States Public Land Survey located within, or which define or lie upon, the out boundaries of the subject tract in accordance with the Missouri Minimum Standards relating to the preservation and maintenance of the United States Public Land Survey Corners, as necessary.

- MSD NOTES**
- Existing on-site sanitary discharge/septic tank shall be identified on the plans and abandoned per MSD standard specifications.
  - Property lines shall be shown to project plans, sewers crossing lease or property lines will be public. Public storm sewers shall be above the normal pool of wet basins.
  - The zoning shall be consistent with the regional sanitary pump station design capacity. The sanitary sewers shall be deep enough to serve by gravity the ends of the service area as outlined in the master plan for the pump stations (MSD P#27389-00)
  - Caulks Creek surcharge of \$2,750 per acre will apply for this area. For the total area (131 acres) provided in the application, this comes to \$360,250. Total acreage to be verified.
  - Disturbed areas being more than 1 acre, storm water management practices of water quality will be required. All water quality BMP's shall be designed per current MSD rules and regulations and should be located within the property boundaries. Water quality BMP's on each lot are consistent with low impact practices. Also, the water feature (lake) straddling the Brasher property line should not be degraded by this development. Additionally, a letter of floodplain management compliance from the Monarch-Chesterfield Levee District will be required.
  - Private water quality BMP's shall be designed per current MSD rules and regulations and shall be located within "reserve areas" or easements, as appropriate.
  - The 100-year ponding limits shall be labeled on all storm water storage basins.
  - Exterior grease traps will be required for any restaurants or commercial kitchens.

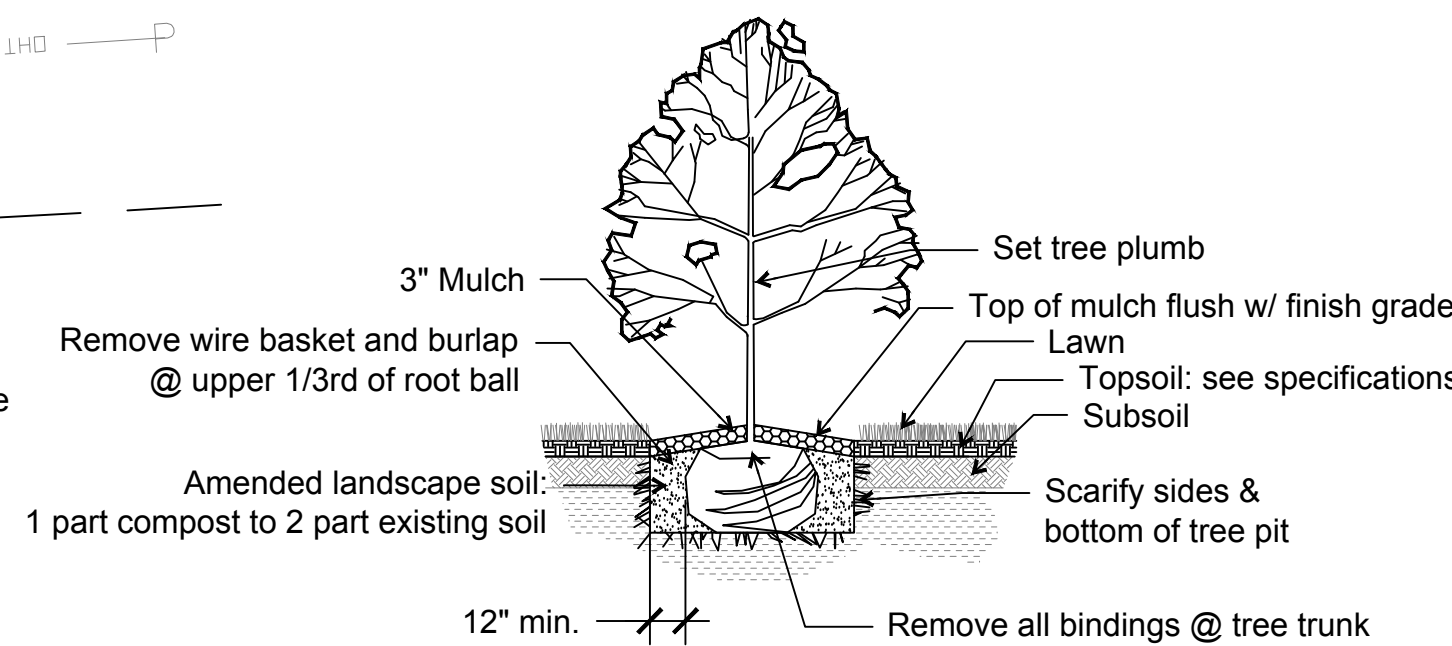
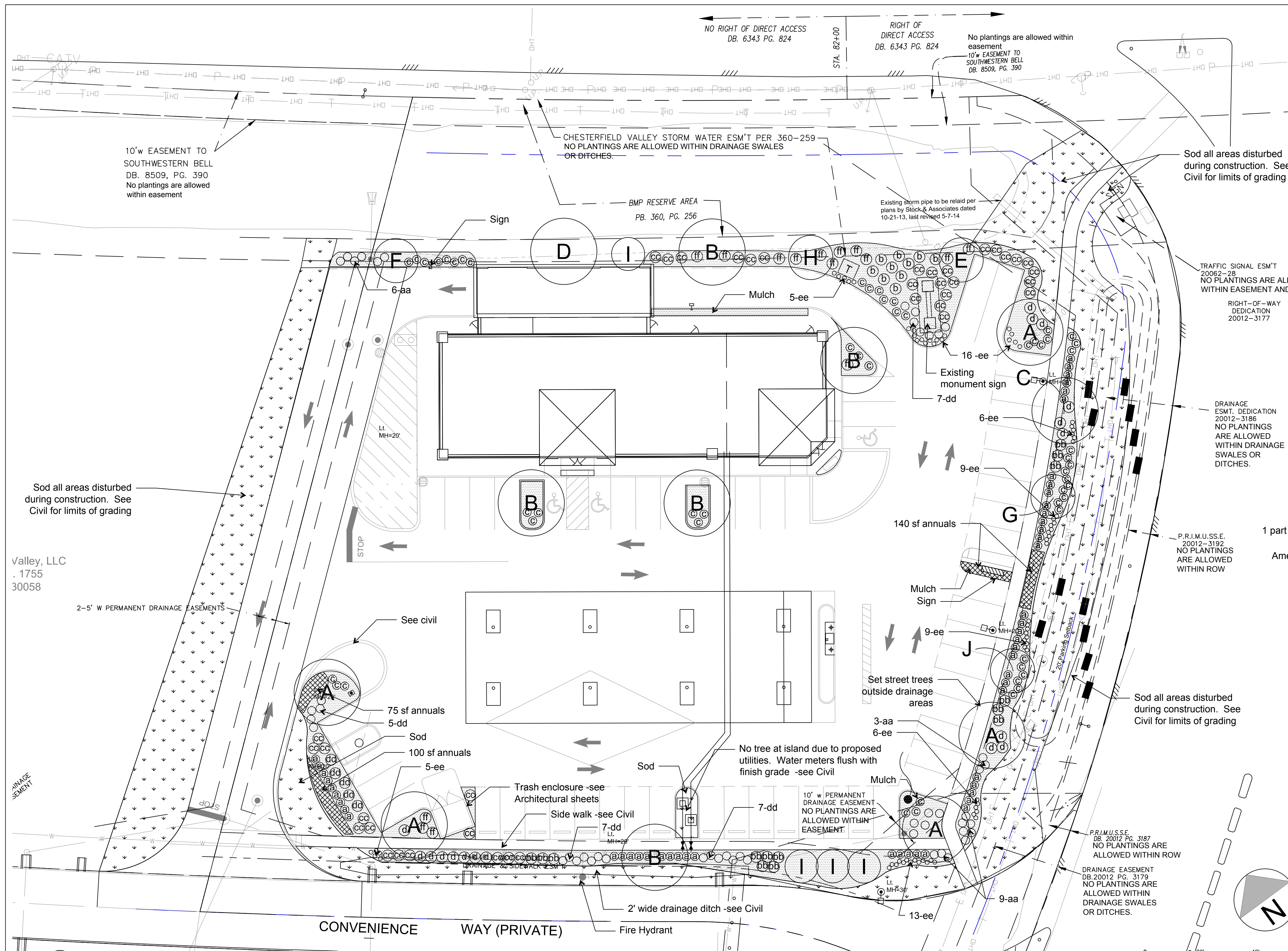
**FLOODPLAIN NOTE**  
 Subject property lies within Flood Zone "AE" (Special Flood Hazard Areas Inundated by 100 year flood), base flood elevation determined (Elevation 457) and Flood Zone "AH" Flood depths of one or three feet (usual areas of ponding). Base flood elevation determined (Elevation 461 and 462) and Shaded Zone "X" (areas of 500-year flood; areas of 100-year flood with average depths of less than one foot or with drainage areas less than one square ft and areas protected by levees from 100-year flood) according to the National Flood Insurance Program Flood Insurance Rate Map for St. Louis County, Missouri and Incorporated Areas. This map is identified as Map No. 29189CO120H with an effective date of August 2, 1995, and revised to reflect LOMR dated April 17, 2000.

<b>ABBREVIATIONS</b>		<b>LEGEND</b>
AI Area Inlet	N/F Now or Formerly	
Asph Asphalt	OHE Overhead Electric	<ul style="list-style-type: none"> <li>- Wall Mounted Light</li> <li>- Proposed Light Standard</li> <li>- Connection (Proposed)</li> <li>- Existing Contour (Screened)</li> <li>- Existing Elevation</li> <li>- Proposed Elevation</li> <li>- Fire Hydrant</li> <li>- Concrete</li> <li>- Doorway Entrance</li> <li>- Drainage Flow</li> <li>- Swale</li> <li>- Direction Of Traffic</li> <li>- Water Meter Or Valve</li> <li>- Gas Meter Or Valve</li> <li>- Electric Service</li> <li>- Gas Service</li> <li>- Exist. Combination Sewer</li> <li>- Water Service</li> <li>- Exist. Sanitary Sewer</li> <li>- Exist. Storm Sewer</li> <li>- Proposed Sanitary Sewer</li> <li>- Proposed Storm Sewer</li> <li>- Utility Pole w/ Guy Wires</li> <li>- Right Angle</li> <li>- Proposed Gate Valve</li> <li>- MSD Grate Inlet</li> <li>- MSD Manhole</li> <li>- MSD Curb Inlet</li> <li>- Cleanout and Sampling Tee</li> <li>- Trench Drain</li> <li>- Electric Transformer</li> </ul>
ATG Adjust to Grade	PB Plat Book	
B Cor Building Corner	PS Page	
CB Catch Basin	PVC Polyvinyl Chloride	
CL Chord Bearing	Pvmt Pavement	
CL Centerline	R Radius	
CMP Corrugated Metal Pipe	RCP Reinforced Conc. Pipe	
CO Cleanout	R/W Right of Way	
Conc Concrete	ST Sampling Tee	
DB Dead Book	TC Top of Curb	
DCB Double Catch Basin	TBA To be Adjusted	
DFL Downstream Flowline	TBR To be Removed	
DS Downspout	TS Top of Slope	
EP Edge of Pavement	TP Top of Pavement	
Fen Fence	TW Top of Wall	
FES Flared End Section	Trans Transformer	
FH Fire Hydrant	TS Toe of Slope	
FF Finish Floor	Typ Typical	
FL Flowline	UE Underground Electric	
GI Grate Inlet	UFO Underground Communications	
Gr MH Grated manhole	UFL Upstream Flowline	
GM Gas Meter	UIP Use in Place	
GV Gate Valve	UP Utility Pole	
GW Guy Wire	WM Water Meter	
L Length	WMH Water Manhole	
LH Light	WV Water Valve	
MH Manhole	YI Yard Inlet	

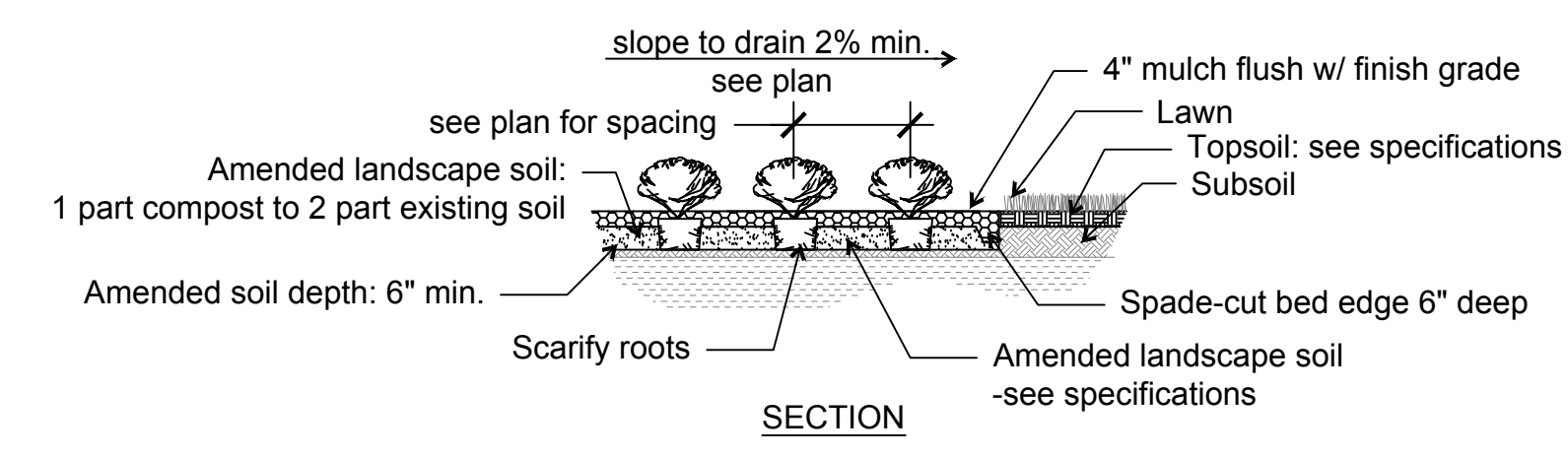
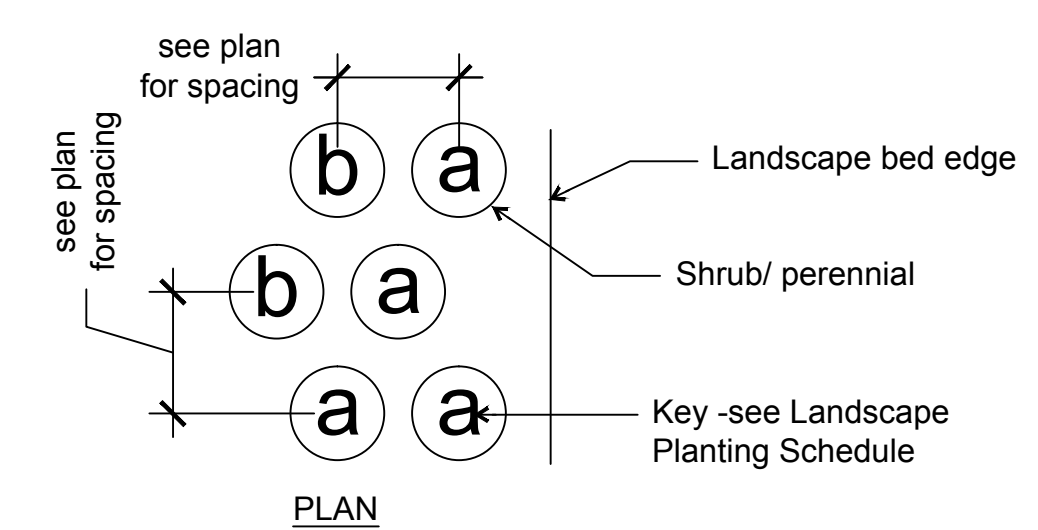


<b>REVISIONS</b>   	
<b>SITE DEVELOPMENT SECTION PLAN</b> <b>CHESTERFIELD BLUE VALLEY, LOT 1A (GAS MART)</b> #18403, 18407, 18411 Convenience Way Chesterfield, Missouri 63005 Prepared for:	
<b>South Side Property, LLC</b> 6001 West Florissant Florissant, Missouri 63136 314-503-3421	
Copyright 2014 Henson Consulting, LLC All Rights Reserved	Designed _____ MCH Drawn _____ MCH Checked _____ MCH Date September 17, 2014 Project Number <b>13007</b> Sheet Number <b>2</b> of <b>5</b>
<b>HENSON CONSULTING, LLC</b> CIVIL ENGINEERING-LAND PLANNING-PROJECT MANAGEMENT 2317 OSSENFORT ROAD GLENCOE, MO 63038 Office-636-458-4402 Fax-636-458-4401 Cell-636-399-6444 EMAIL: mh8@sbcglobal.net	Professional Engineering Corporation Certificate # 200021874





SHADE TREE PLANTING DETAIL



SHRUB/ PERENNIAL/ ANNUAL PLANTING DETAIL

- SITE DEVELOPMENT SECTION PLAN-LANDSCAPING NOTES:**
- See Civil sheets for specific information pertaining to existing and proposed easement, ROW and BMP Reserve Areas.
  - Existing site had been graded prior to proposed development and a part of the overall site development.
  - All trees shown on this plan are selected from TREE PRESERVATION AND LANDSCAPE REQUIREMENTS (Ordinance No. 2512).
  - Parking lots trees are located within 50 feet of parking stalls and 33.3% of parking lot trees species are a slow or medium growth rate (30% min. required).
  - Shrub border along parking lot and carwash egress will screen front of cars from roadway.
  - Street trees provided along Chesterfield Airport Road and Olive Street Road as required Ordinance 2512.
  - Located adjoining site improvements and parking lot
  - Located above 100 year flood levels
  - No one species comprises more than 20% of the total street trees to be planted.
- 6.3. Landscape not provided at frontage area due to Ordinance 2512 § 27.5-12 Landscape Proposal stipulates, "For all districts, landscape buffers must be outside of any right-of-way dedication" (b.4) and "for all districts, no plantings are allowed within drainage swales or ditches" (b.5). These areas are dedicated to existing easements, ROW and BMP along Chesterfield Airport Road and Olive Road.

**Open Space Site Calculations**

Description	Sq. Ft. Area	Site %
Property	89,981	100%
Non-Open Space Area	58,238	65%
Openspace	31,743	35%

1 SITE DEVELOPMENT SECTION PLAN-LANDSCAPING

**LANDSCAPE PLANTING SCHEDULE:**

Key	Qty	Scientific Name	Common Name	Size	Condition	Mature Height	Growth Rate	Type	PLANT TYPE	% PLANT SPECIES
A	4	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	2 1/2" Cal.	B&B	45+	Fast	Parking Lot Tree	SHADE TREES	33.3%
B	4	<i>Ginkgo biloba</i> -male species	Ginkgo tree -male species	2 1/2" Cal.	B&B	45+	Slow	Parking Lot Tree	TREES	33.3%
I	4	<i>Juniperus virginiana</i>	Eastern Red Cedar	6' Ht.	B&B	20-40'	Med	General	EVERGREEN	33.3%
a	53	<i>Buxus</i> 'Green Velvet'	Boxwood	18-20"	5 Gal.	Hedge	Slow	Buffer Planting	SHRUBS	39.8%
b	10	<i>Juniperus chinensis</i> 'Sea Green'	Juniper	18-24"	5 Gal.	Hedge	Fast	Buffer Planting		7.5%
c	54	<i>Rosa</i> 'Coral Drift'	Drift Rose	18-24"	3 Gal.	20-24"	Fast	Buffer Planting		40.3%
d	17	<i>Rosa</i> 'Home Run'	Home Run Rose	18-24"	3 Gal.	36-48"	Fast	Buffer Planting		12.7%
aa	23	<i>Schizachyrium scoparium</i>	Little Blue Stem	1 Gal.		20-36"	Fast	Buffer Planting		12.1%
bb	14	<i>Perovskia atriplicifolia</i> 'Little Spire'	Russian Sage	1 Gal.		40-48"	Fast	Buffer Planting		7.4%
cc	38	<i>Panicum virgatum</i> 'Shenandoah'	Red Switch Grass	1 Gal.		48-60"	Fast	Buffer Planting	GRASSES/ PERENNIALS	20.0%
dd	31	<i>Calamagrostis</i> × <i>acutiflora</i> 'Karl Foerster'	Feather Reed Grass	1 Gal.		38-60"	Fast	Buffer Planting		18.3%
ee	69	<i>Echinacea purpurea</i> 'Kim's Knee High'	Purple Cone Flower	1 Gal.		18-24"	Fast	Buffer Planting		36.3%
ff	15	<i>Hibiscus lasiocarpus</i>	Hibiscus	2 Gal.		48-60"	Fast	Buffer Planting		7.9%
	315	sf annuals	to be determined	1 Quart				Accent Plantings		
	6,850	sf Double Ground Bark Mulch								
	13,750	sf Fescue Sod								

**STREET TREE PLANTING SCHEDULE:**

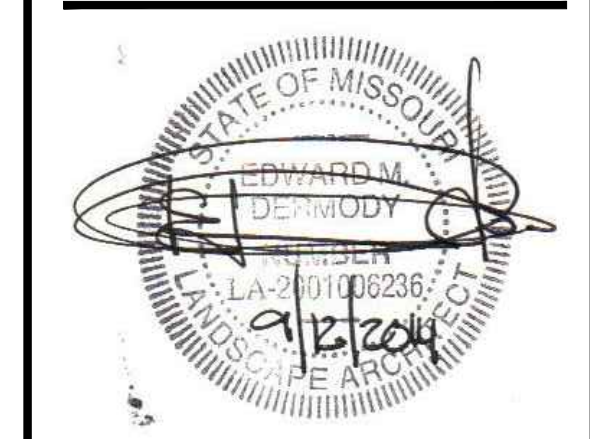
Key	Qty	Scientific Name	Common Name	Size	Condition	Mature Height	Growth Rate	Type	PLANT TYPE	% PLANT TYPE
A	1	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	2 1/2" Cal.	B&B	45+	Fast	Street Tree	TREES (9 TOTAL AT 50' O.C.)	11.1%
B	1	<i>Ginkgo biloba</i> -male species	Ginkgo tree -male species	2 1/2" Cal.	B&B	45+	Slow	Street Tree		11.1%
C	1	<i>Acer saccharum</i> 'October Glory'	Sugar Maple	2 1/2" Cal.	B&B	45+	Slow	Street Tree		11.1%
D	1	<i>Quercus bicolor</i>	Swamp White Oak	2 1/2" Cal.	B&B	45+	Med	Street Tree		11.1%
E	1	<i>Koelerutera paniculata</i>	Golden Rain Tree	2 1/2" Cal.	B&B	25-40'	Med/ Fast	Street Tree		11.1%
F	1	<i>Crataegus laevigata</i> 'Superba'	Crimson Cloud Hawthorn	2 1/2" Cal.	B&B	15-20'	Med	Street Tree		11.1%
G	1	<i>Carpinus betulus</i>	European Hornbeam	2 1/2" Cal.	B&B	35-40'	Slow/ Med	Street Tree		11.1%
H	1	<i>Carpinus caroliniana</i>	American Hornbeam	2 1/2" Cal.	B&B	25-30'	Med	Street Tree		11.1%
J	1	<i>Cladrasis kentuckea</i>	Yellowwood	2 1/2" Cal.	B&B	30-50'	Med	Street Tree		11.1%

- LANDSCAPE PLAN NOTES:**
- Contractor to review and field verify existing and proposed conditions prior to installation.
  - Contractor to notify owner of any discrepancies. Contractor to coordinate and cooperate with other trades.
  - Contractor to adjust plantings accordingly, notify owner and City of Chesterfield of any changes to landscape design due to unforeseen field conditions
  - Proposed plant material is to be selected by the contractor and approved by Owner prior to installation.
  - All planting beds and islands to receive 4 inch layer of mulch in a continuous bed. Apply a granular pre-emergent weed control prior to mulching.
  - 6" Spade cut landscape bed areas.
  - Repair all landscape and lawn areas disturbed during and due to construction. See Civil sheets for limits of site construction.
  - Contractor is responsible for installing all plant material, seed, topsoil and mulch as shown on plan.
  - Plant Schedule is for informational purposes only. Contractor is responsible for verifying and installation of quantities on drawings.
  - Finish grade to be a minimum of 5% away from all building foundations.
  - Contractor to provide in-ground automatic irrigation system. Coordinate point of connection, back-flow prevent and controller location with owner's representative.
  - Lawn areas to be irrigated with 6" pop-up spray heads with head-to-head coverage
  - Annuals to be irrigated with 12" pop-up spray heads with head-to-head coverage
  - Shrubs and grasses to be irrigated with drip irrigation
  - See Civil sheets for limits of disturbance and removal. Repair all lawn and landscape areas disturbed during construction.

Site Development Landscape Plan  
 Chesterfield Blue Valley, Lot 1A (Gas Mart)  
 18547, 1855 Olive Street Rd  
 Chesterfield, MO 63005  
 South Side Property, LLC  
 6001 West Florissant, MO 63136

Revisions:

No.	Description	Date:
1	City Comments	6/2/2014
2	City Comments	6/26/2014
3	City Comments	7/18/2014
4	City Comments	8/20/2014
5	City Comments	9/12/2014

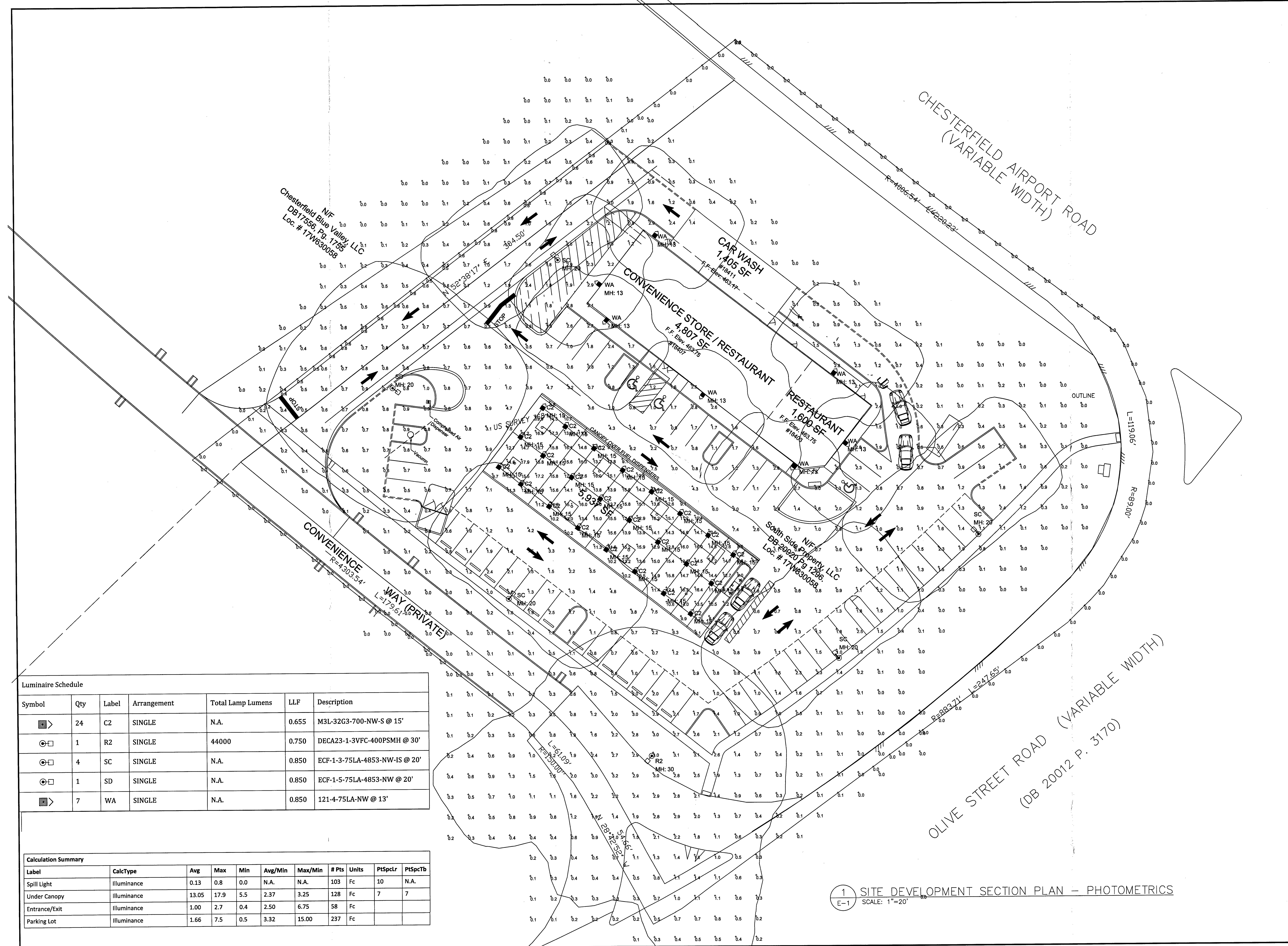


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Issue Date: April 24, 2014  
 Drawn by: EMD  
 Checked By: DD  
 Sheet Title

Site Development Section Plan-Landscaping

Project Number: 962.001



Chesterfield Blue Valley, LLC  
 DB17556, Pg. 1738  
 Loc. # 17W630058

South Side Property, LLC  
 DB 50620 Pg. 1206  
 Loc. # 17W630058

**Luminaire Schedule**

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
▶	24	C2	SINGLE	N.A.	0.655	M3L-32G3-700-NW-S @ 15'
⊕	1	R2	SINGLE	44000	0.750	DECA23-1-3VFC-400PSMH @ 30'
⊕	4	SC	SINGLE	N.A.	0.850	ECF-1-3-75LA-4853-NW-IS @ 20'
⊕	1	SD	SINGLE	N.A.	0.850	ECF-1-5-75LA-4853-NW @ 20'
▶	7	WA	SINGLE	N.A.	0.850	121-4-75LA-NW @ 13'

**Calculation Summary**

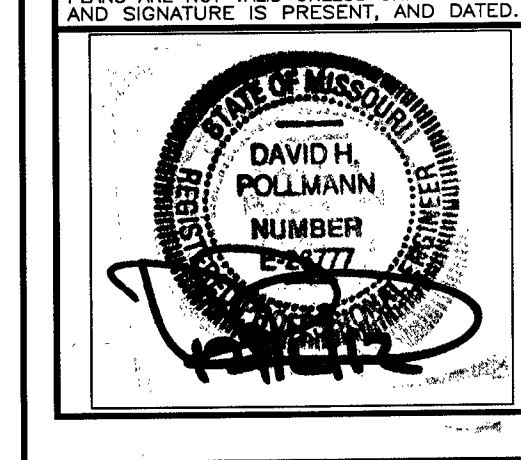
Label	CalcType	Avg	Max	Min	Avg/Min	Max/Min	# Pts	Units	PtSpLr	PtSpTb
Spill Light	Illuminance	0.13	0.8	0.0	N.A.	N.A.	103	Fc	10	N.A.
Under Canopy	Illuminance	13.05	17.9	5.5	2.37	3.25	128	Fc	7	7
Entrance/Exit	Illuminance	1.00	2.7	0.4	2.50	6.75	58	Fc		
Parking Lot	Illuminance	1.66	7.5	0.5	3.32	15.00	237	Fc		

1 SITE DEVELOPMENT SECTION PLAN - PHOTOMETRICS  
 E-1 SCALE: 1"=20'

**Design & Construction, Inc.**  
 Engineering Services - Construction - Construction Management  
 1131 Colomade Center, Des Peres, Missouri 63131  
 Phone 314-965-8037 Fax 314-965-8044  
 David H. Pollmann, P.E., C.B.O. - e-mail david@design-co.net  
 State of MO Engineering Corp. 1999141113  
 State of Missouri Prof. Engineer: E-26777  
 Registered Discipline: Mechanical Engineer

**Gas Mart**  
 18403,407 & 411 Convenience Way  
 Chesterfield, Missouri

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DRAWN BY: D.POLLMANN  
 CHECKED BY: D. POLLMANN  
 9-16-14 9085  
**E-1**  
 SHEET 4 OF 4



## Gas Mart

18539 - 18555 Olive Street Road  
Chesterfield, Missouri

### Statement of Design Intent

This new development for Gas Mart, will occupy an out lot of the Saint Louis Premium Outlet Mall at the northwest corner of Chesterfield Airport Road and Olive Street Road. The proposed building will include a 4807 sq.ft. "C" Store, a 1405 sq.ft. Car Wash, and a 1600 sq.ft. Subway Sandwich Shop all in one 7812 sq.ft. building. Also on the site will be 16 gas pump's covered by a canopy, a drive up A.T.M. machine, a Vacuum Island to complement the Car Wash, and a dumpster enclosure.

#### I) Site Layout

##### A. Physical Features

- 1) The existing flat site is currently vacant. There is a perimeter storm water diversion swale along the major roads to direct drainage to an existing development retention pond.

##### B. Vegetation

- 1) Currently, the site has no substantial vegetation worth retaining. The site has been stripped in preparation for development.

##### C. Site Relationship

- 1) The building is situated on a corner lot and will face away from Chesterfield Airport Road. The Car Wash will be visible from Chesterfield Airport Road with the Subway Sandwich Shop in the corner of the building off of the major intersection of the two main streets.

##### D. Vehicular Circulation

- 1) There is one entry/exit for the site which will be located off of a new road between outlots.
- 2) The site is used mainly for the circulation of cars to and from the gas pumps, the car wash and the A.T.M.
- 3) Delivery vehicles will be able to enter from the main entrance on the southend of the site and proceed directly to the various loading areas.

##### E. Pedestrian Circulation

- 1) The accessible parking spaces will be located directly in front of the building to allow easy access without needing to cross any drive lanes.
- 2) Additional parking will be provided around the perimeter of the site in front of the building.

#### II) Building Structure

##### A. Scale and Design

- 1) The building will be a one-story masonry and stone building with aluminum and glass punched windows. The building will also have an upper E.F.I.S. finish with metal parapet cap flashing between stone faced columns.

#### B. Relationship to Adjacent Development

- 1) This development is on an out lot of the Chesterfield Premium Outlet Mall and as such the "Prairie Style" design elements of the mall have been utilized in the design. Elements include: the Cupola design over the entrance to the "C" store and the Subway, the column design on the corners of the building, the medallions in the E.F.I.S. and the Car Wash design.

#### C. Materials and Colors

- 1) The exterior of the building will be predominately brick and natural stone, clear insulated glass in aluminum storefront punched window system and an E.F.I.S. system with metal flashing on parapets and standing seam metal roof system on the Car Wash and the Cupola's.
- 2) The masonry will have a soldier course as an accent.
- 3) The corner columns shall be a natural stone finish with a metal cap flashing to match the standing seam metal roof on the Cupola's and the Car Wash.
- 4) The standing seam metal roof shall have a copper green patina finish.
- 5) The E.F.I.S. shall have a beige finish with brick colored medallions on the front and sides and copper green patina finish in back to match the downspouts.

#### III) Landscape Design

- 1) The site will be carefully landscaped with trees and other shrubs/plantings to compliment the scale and reduce the impact of the development on Olive Street Road and Chesterfield Airport Road while maintaining commercial visibility.
- 2) A planter/retaining wall will be used to screen the rear entry doors from Chesterfield Airport Road.
- 3) Please refer to the submitted landscape plan for more information.

#### IV) Miscellaneous

##### A. Signage

- 1) This is not in for review at this time.

##### B. Lighting

- 1) The site lighting will be oriented toward the building, parking areas and gas pump canopy to avoid affecting adjacent properties while still giving a commercial presence.
- 2) The proposed monument sign will have internal lighting.

##### C. Utilities

- 1) All utilities will be installed underground.
- 2) Landscaping will be used to screen any exterior electrical transformers.

##### D. Storm Water Drainage

- 1) Storm water will be drained from the rooftop of the building with scuppers and downspouts on the main building and gutters and downspouts on the Car Wash and collected in the greater developments retention basin.
- 2) The parking area will be sloped to allow storm water to drain into the swales along the major roads along the perimeter of the site.

##### E. Energy Conservation

- 1) The building shall be constructed to meet energy guidelines that are enforced at the current time.

##### F. Screening

- 1) A parapet wall will screen all roof top equipment.
- 2) The trash dumpster will be screened from view by a three-sided structural concrete block wall with brick veneer and a metal cap to match the building.

Respectfully submitted by

Adams Architectural Associates



**CORNER VIEW RENDERING**

SCALE: NONE  
APRIL 25, 2014

ARCHITECTURAL REVIEW BOARD SUBMISSION

# GAS MART

18539-18555 OLIVE STREET ROAD  
CHESTERFIELD, MISSOURI

**ADAMS ARCHITECTURAL ASSOCIATES - P.C.**

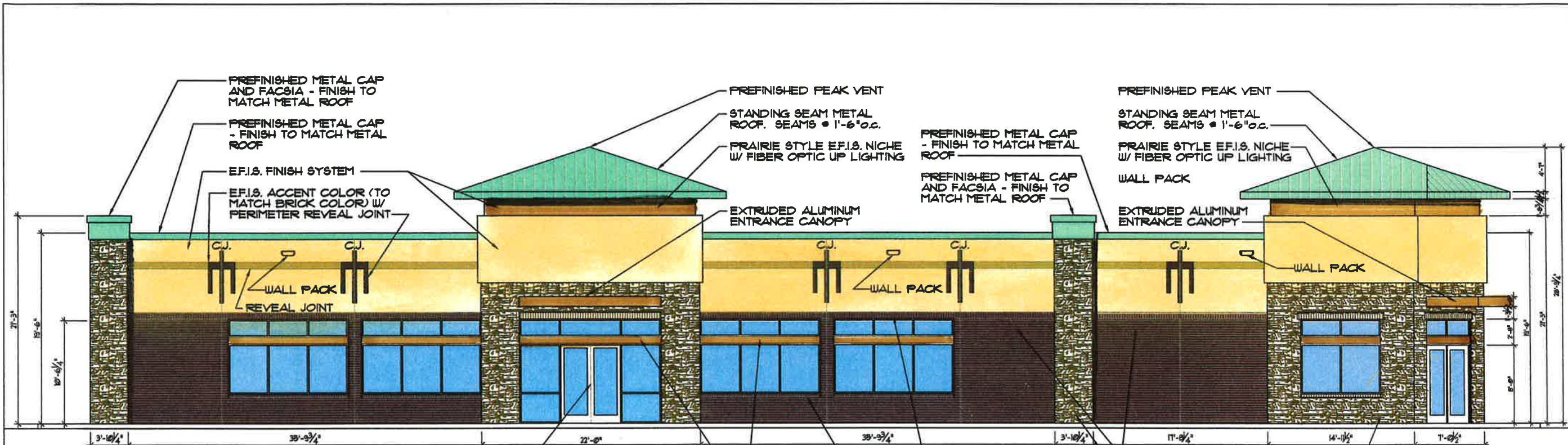
MATT C. ADAMS - ARCHITECT AIA / NCARB

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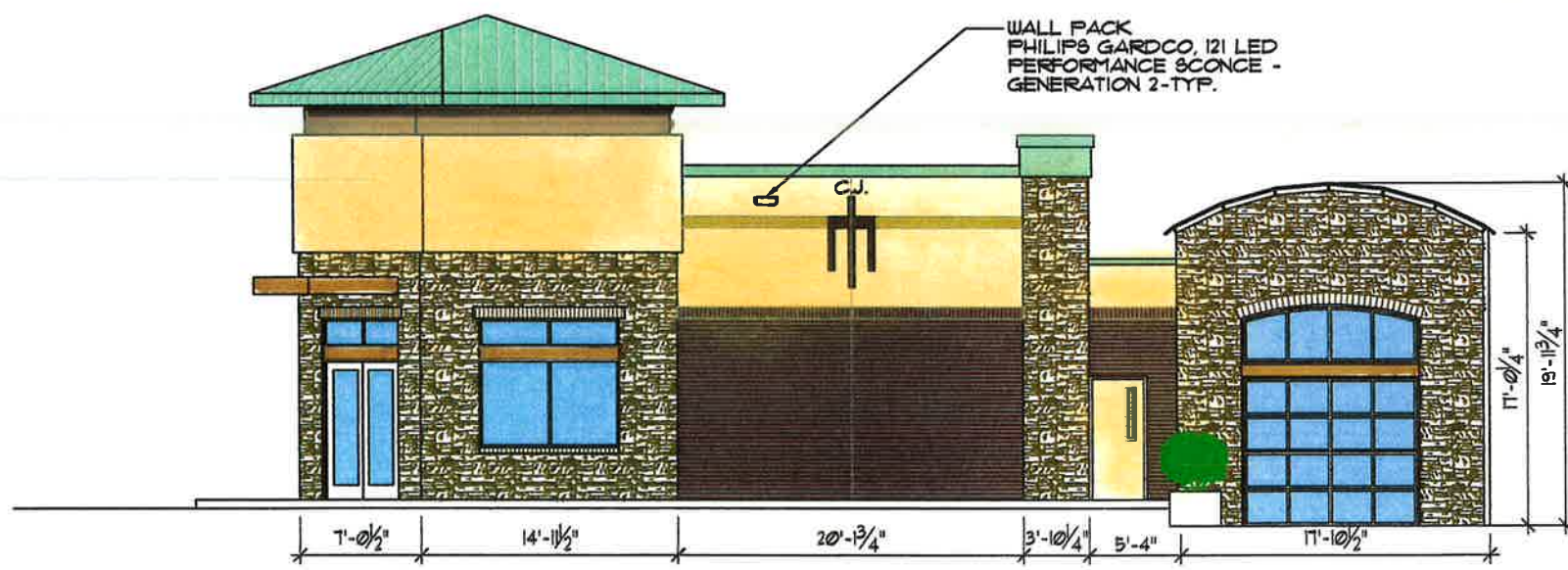
P.O. BOX 2007  
CHESTERFIELD, MO 63008-0200  
(636) 637-4333  
(636) 637-1267 - FAX



MED. STILE FLUOROPON FINISH ALUM. FRAME DOORS WITH 10" (4) BOTTOM RAIL - 1/4" CLEAR TRMP. GLASS W/ LOW 'E' COATING - PROVIDE 3" BLACK ANOD. OFFSET PULLS - PROVIDE CENTER MULLION

BRICK SILL  
BRICK SOLDIER COURSE  
PRE-FINISHED ALUM. CLOSURE - FINISH SHALL MATCH WINDOW FINISH.

1 FRONT ELEVATION  
EL-1 SCALE 1/8"=1'-0"



4 RIGHT SIDE ELEVATION  
EL-1 SCALE 1/8"=1'-0"

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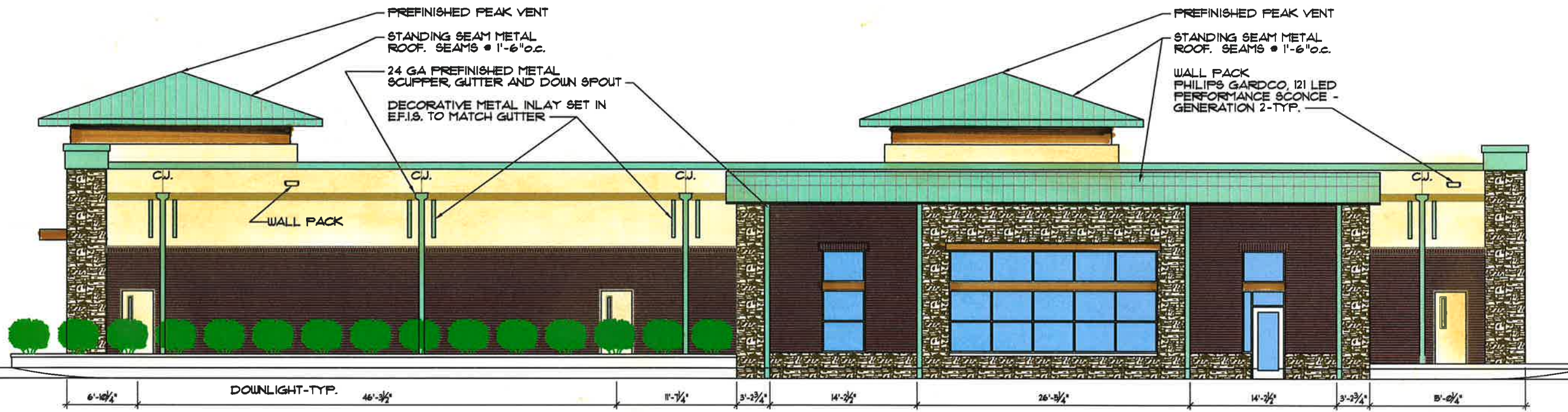


C-STORE LAYOUT FOR  
**GAS MART**  
18539 - 18555 OLIVE STREET ROAD  
CHESTERFIELD, ST. LOUIS, COUNTY, MISSOURI

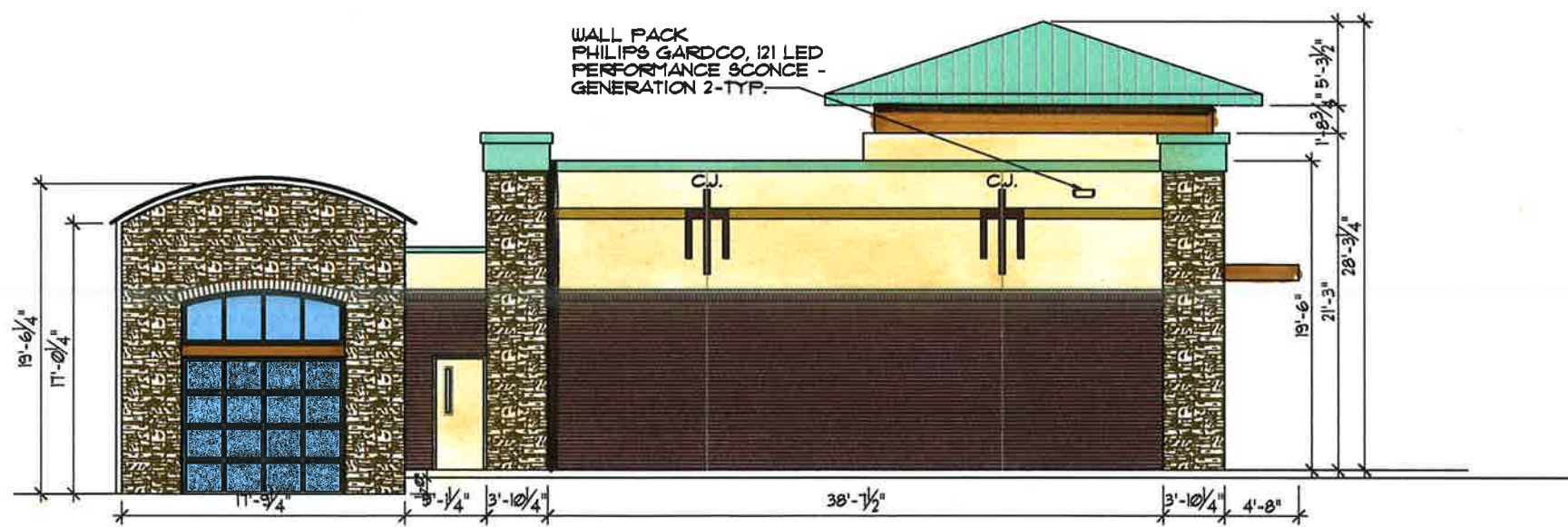
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10/06/14	MA	RB	

SHEET  
**EL-1**

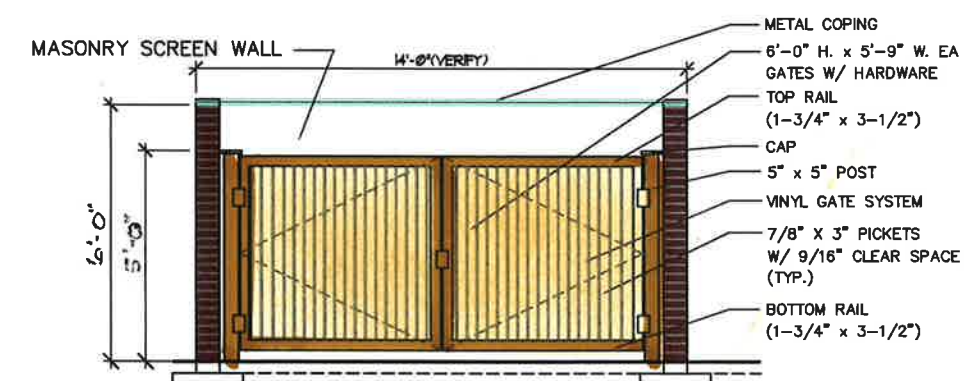
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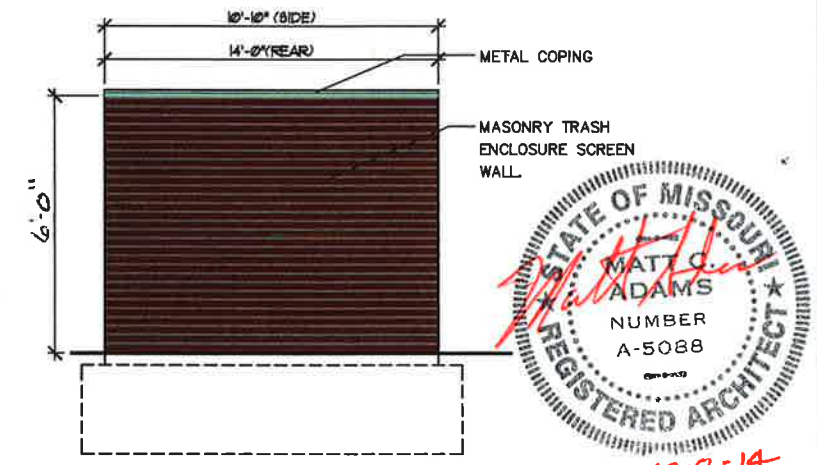
2 REAR ELEVATION  
EL-1 SCALE 1/8"=1'-0"



3 LEFT SIDE ELEVATION W/ CANOPY  
EL-1 SCALE 1/8"=1'-0"



3 ELEV @ TRASH ENCLOSURE  
EL-2 SCALE N.T.S.



4 REAR & SIDE ELEV. TRASH ENCLOSURE  
EL-2 SCALE N.T.S.



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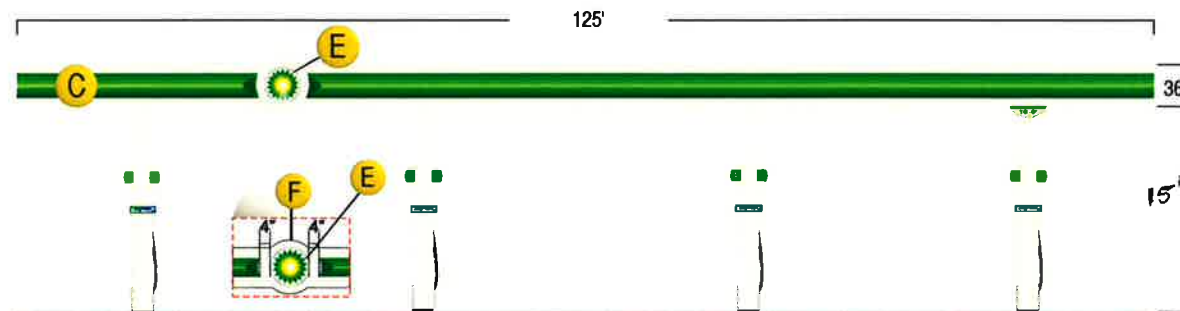


C-STORE LAYOUT FOR  
**GAS MART**  
18539 - 18555 OLIVE STREET ROAD  
CHESTERFIELD, ST. LOUIS, COUNTY, MISSOURI

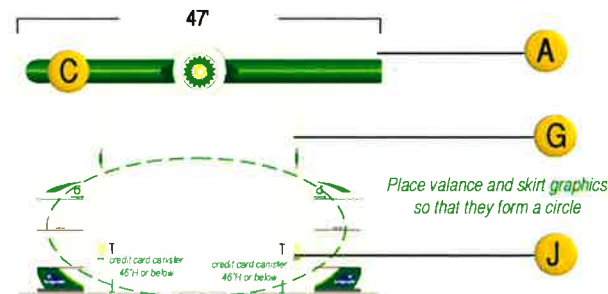
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SHEET  
**EL-2**

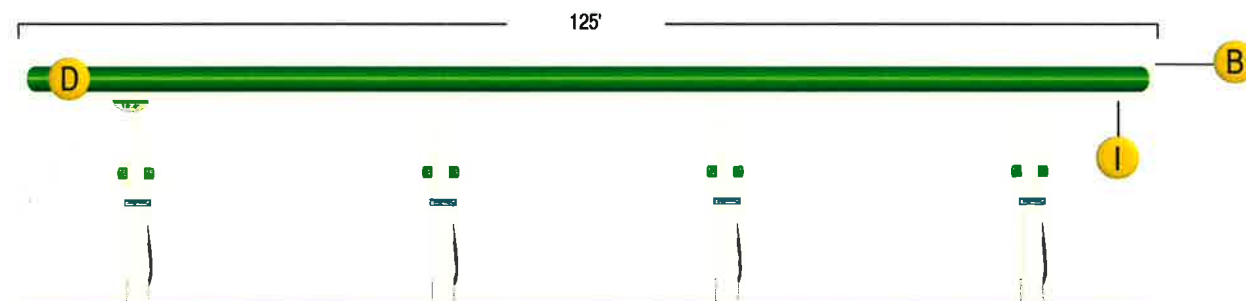
FRONT ELEVATION



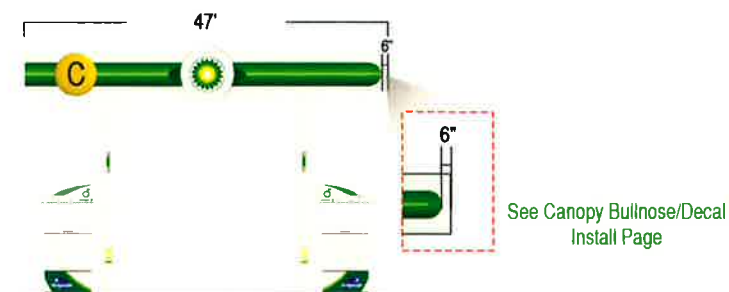
SIDE 2



SIDE 3



SIDE 4



CANOPY Code Check

Work to be Performed on CANOPY 1 of 1

--

- See Site Notes page for specific pain codes and contact info.
- \*REMOVE ALL EXISTING SIGNAGE\***
- A Canopy fascia to be **BP Pearl (c.09)**
    - Install New ACM w/ pre-applied 3D bullnose decal
    - Install New ACM to entire canopy (w/out 3D Decal applied)
    - Paint fascia (only w/ BP Marketing Engineer, Michelle Knapp's approval)

Canopy Notes

--

- B Canopy Corners
  - BP will require corners to be squared
  - Radius corners to remain (only with BP Jobber Engineer approval)
- C Install 3D Bullnose Decal & Green LED Light Bar (Blair certified installer)
  - 15" (If fascia height is >24" and <31")
  - 21" (If fascia height is ≥31")
- D  Install 3D Bullnose Decal ("C" level only)
  - 15" (If fascia height is >24" and <31")
  - 21" (If fascia height is ≥31")
- E Install Illuminated Helios (Qty: 3)
  - 30" (Restricted P & Z only)
  - 36"

Aerial Map

--

- F  Install BP Pearl Helios Arc behind each Helios (Not required if fascia is >40")
- G  Paint canopy columns **BP Pearl (c.09)**
- H  Install Invigorate column wrap. Please install at a minimum of 3' above ground and level with bottom edge of valance.
- I Canopy Decking (under-canopy) to be painted **BP High Hiding White**
- J Install Credit Card Application Canister (install 46"H on column or below)

Wallis Petroleum  
 SVB# 9726944  
 Location: 18403 CONVENIENCE WA, CHESTERFIELD, MO 63005

Site Level:  
**B**  
 09.17.2014

**BIG RED ROOSTER FLOW**  
 2 Northfield Plaza, Suite 211, Northfield, IL 60093  
 Office 847.423.0338



This is an original concept drawing created by Big Red Rooster Flow, LLC. It is submitted for use in connection with the project being planned for you by BRRFlow. All or any part of this design (except registered trademarks) remains the property of BRRFlow. This drawing is not to scale. For all questions regarding the scope of the project, please contact **Emily Wendt 847.423.0338** or **The Brand Marketing Engineer, Michelle Knapp 847.346.712**.



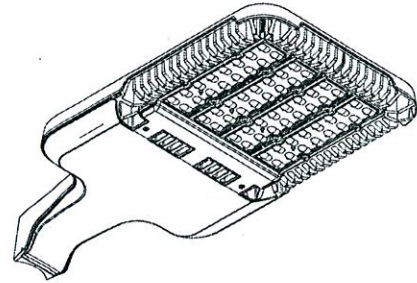
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SD ECF-1-5-75LA-4853

Redefining value

with outstanding performance

ECOFORM  
OUTDOOR SITE & AREA



PHILIPS GARDCO, LED SITE & AREA LUMINAIRE, ECOFORM

The Philips Gardco EcoForm combines economy with performance in an LED area luminaire. Capable of delivering up to 20,000 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. EcoForm features an innovative retrofit arm kit, simplifying site conversions to LED by eliminating the need to drill additional holes in most existing poles. Integral control systems available for further energy savings.

DESIGNLIGHTS CONSORTIUM



Project: **GAS MINT**  
 Location:  
 Catalog No.: **TYPE SC/SD**  
 Fixture Type:  
 Mfg: Qty:  
 Notes:

Ordering guide

Prefix	Mounting	Optics	LED Array & LED Wattage	LED Selection	Voltage	Finish	Options
ECF	EcoForm Standard Luminaire	1 Single	530 mA	CW 5,700K 70 CRI	UNV 120-277V	BRP Bronze Paint	TL Tool-Less entry & driver removal hardware
ECF-DIM	EcoForm with 0-10V Dimming	2 2@180 3 3@90	55LA-3253' 75LA-4853 100LA-6453	NW 4,000K 70 CRI	HVU 347-480V	BLP Black Paint	TB <sup>4</sup> Terminal Block
ECF-APD <sup>1</sup>	EcoForm with Auto Profile Dimming	3@120 4 4@90	700mA 70LA-3270 105LA-4870 135LA-6470	WW <sup>6</sup> 3,000K 70 CRI	120 208 240 277 347 480	WP White Paint	IS <sup>5</sup> Internal Shield
ECF-MR50 <sup>3</sup>	EcoForm with Motion Response at 50% low Pole mounted sensor	WS Wall mount including Surface conduit Rear entry permitted	1050mA 105LA-321A' 160LA-481A 215LA-641A			NP Natural Paint	LF <sup>6,10</sup> Line Fusing
ECF-APD-MRO <sup>2</sup>	EcoForm with Auto Profile Dimming and Motion Response Override Pole mounted sensor	MA Mast Arm Filter (requires 2-3/8" O.D. Mast Arm)				OC Optional Color Specify optional color or PAL, ex: OC-LGP or OC-RA-7024	LFC <sup>6,10</sup> Line Fusing for Canada
ECF-MRI <sup>2,4</sup>	EcoForm with Motion Response at 50% low Luminaire mounted sensor					SC Special Color Specify. Must supply color chips. Requires factory quote.	PCR Photocell Receptacle Only
ECF-APD-MRI <sup>2,4</sup>	EcoForm with Auto Profile Dimming with Motion Response Override Luminaire mounted sensor						PC <sup>6,7,10</sup> Receptacle with Photocell
							PCB <sup>6,7,10</sup> Photocell Button
							RAM Retrofit Arm Mount Kit
							PTF2 <sup>8</sup> Pole Top Fitter for 2-3/8"-3" Tenon
							PTF3 <sup>8</sup> Pole Top Fitter for 3"-3.5" Tenon
							PTF4 <sup>8</sup> Pole Top Fitter for 3.5"-4" Tenon
							RPA <sup>9</sup> Round Pole Adaptor for 3" to 3.5" OD
							BD Bird Deterrent (field installed only)

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1. Available in 120V thru 277V only.  
 2. Available in 120V or 277V only.  
 3. Contact factory for lead times on warm white.

4. ECF-MRI requires outboarded sensor when used with Terminal Block (TB) option.  
 5. Not available with Type 5 optics.

6. Voltage must be specified.  
 7. Not available in 480V.  
 8. Not available in 3 @ 120.

9. No adaptor required for 4" round poles. RPAs provided with Black Paint standard.  
 10. Not available with UNV (120-277V).

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# ECOFORM

## OUTDOOR SITE & AREA

### Accessories (Order Separately)

**FS1R-100** MR hand held programmer (For use with 'MRI' motion response when field programming is required). If desired, only one is needed per job.

**MS-A-120V** 120V input - Motion Sensor for MR50 or APD-MRO

**MS-A-277V** 277V input - Motion Sensor for MR50 or APD-MRO

### LED Wattage and Lumen Values - Standard EcoForm Luminaire

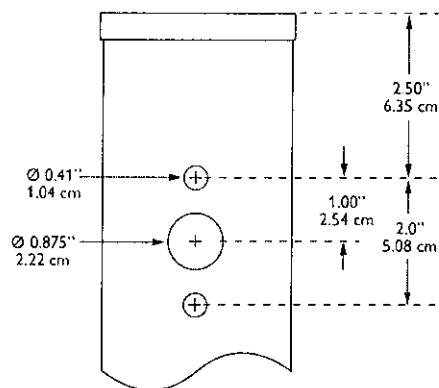
Order Code (standard units)	Array Quantity	Total LEDs	LED Current (mA)	Average System Watts <sup>11</sup>	LED Selection	Initial Lumens <sup>12</sup>			
						2 Type 2	3 Type 3	4 Type 4	5 Type 5
55LA-3253	2	32	530	52	NW	5,994 (s)	5,895 (s)	5,823 (s)	5,588 (s)
75LA-4853	3	48	530	77	NW	8,899 (s)	8,753 (s)	8,646 (s)	8,297 (s)
100LA-6453	4	64	530	103	NW	11,896 (s)	11,700	11,558	11,091
70LA-3270	2	32	700	69	NW	7,385 (s)	7,576 (s)	7,293 (s)	7,068 (s)
105LA-4870	3	48	700	104	NW	10,965 (s)	11,249 (s)	10,828 (s)	10,494 (s)
135LA-6470	4	64	700	139	NW	14,657 (s)	15,037	14,475 (s)	14,028
105LA-321A	2	32	1050	107	NW	10,199 (s)	10,458	10,072 (s)	9,767
160LA-481A	3	48	1050	158	NW	15,144 (s)	15,565	14,955 (s)	14,465
215LA-641A	4	64	1050	211	NW	20,243	20,252	19,991	19,880

11. System input wattage may vary based on input voltage, by up to +/- 10%, and based on manufacturer forward voltage, by up to +/- 8%.

12. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

(s). Data is scaled based on tests of similar, but not identical, luminaires.

### EcoForm Drill Template (Standard Arm Mount)

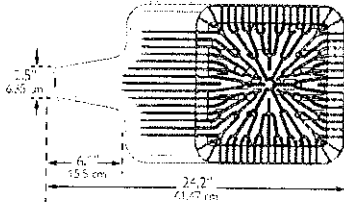


Note: For reference only. Drawing not to scale.

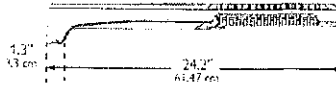
# ECOFORM OUTDOOR SITE & AREA

## Dimensions - Standard EcoForm Luminaire

Top View



Side View



End View



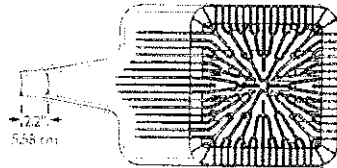
EPA (Fc<sup>2</sup>/M<sup>2</sup>)

Single	Iwin (2@180)	3/4@90
0.2 / 0.019	0.5 / 0.046	0.5 / 0.046

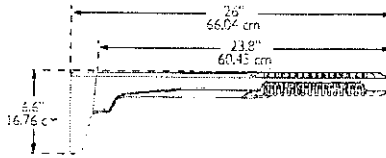
Approximate Luminaire Weight:  
20 Lbs (9.07 Kg)

## Dimensions - EcoForm with Retrofit Arm Mount (RAM)

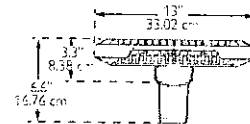
Top View



Side View



End View



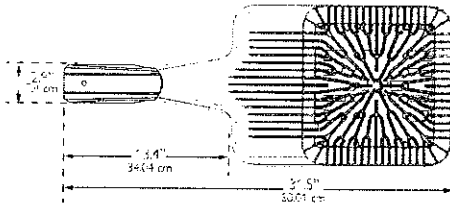
EPA (Fc<sup>2</sup>/M<sup>2</sup>)

Single	Twins (2@180)	3/4@90
0.3 / 0.028	0.6 / 0.056	0.7 / 0.065

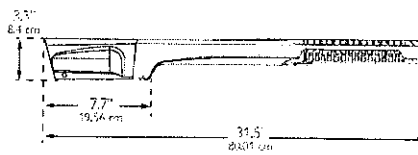
Approximate Luminaire Weight:  
21 Lbs (9.53 Kg)

## Dimensions - EcoForm with Mast Arm Fitter (MA)

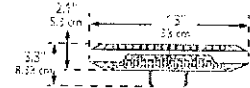
Top View



Side View



End View



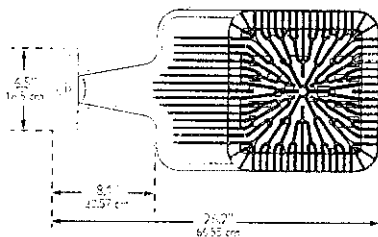
EPA (Fc<sup>2</sup>/M<sup>2</sup>)

Single
0.51 / 0.047

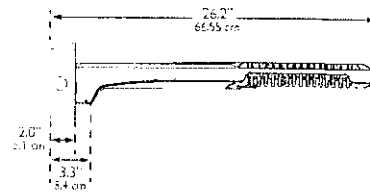
Approximate Luminaire Weight:  
21.5 Lbs (9.77 Kg)

## Dimensions - EcoForm with Wall Mount (WS)

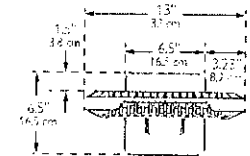
Top View



Side View



End View



Approximate Luminaire Weight:  
23.36 Lbs (10.6 Kg)

# ECOFORM OUTDOOR SITE & AREA

## Luminaire Configuration Information

### ECF

Philips Gardco EcoForm LED standard luminaire providing constant wattage and constant light output when power to the luminaire is energized.

### ECF-DIM

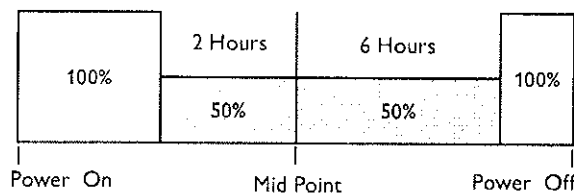
Philips Gardco EcoForm LED luminaire provided with 0-10V dimming for connection to a control system provided by others.

### ECF-APD

Philips Gardco EcoForm LED luminaire with Automatic Profile Dimming. Luminaire is provided with a Philips DynaDimmer module, programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously recalculated by the Philips DynaDimmer module based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

ECF-APD is available in 120V through 277V input only.

ECF-APD Dimming Profile:

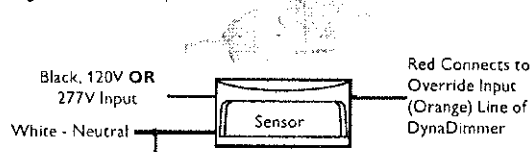


### ECF-MR50

Philips Gardco EcoForm LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

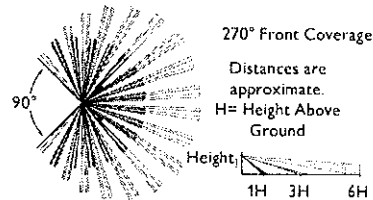
ECF-MR50 is available in 120V through 277V input only to the luminaire. Motion sensors require single voltage 120V or 277V input.

The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V). One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.



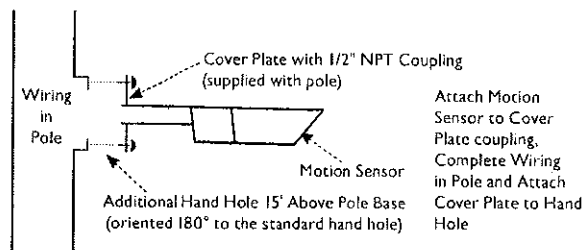
The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:



Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.

Mounting to a Philips Gardco Pole



### ECF-APD-MRO

Philips Gardco EcoForm LED luminaire with Automatic Profile Dimming, with Motion Response Override. The ECF-APD-MRO combines the benefits of both automatic profile dimming and motion response, using the Philips DynaDimmer module. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for the ECF-APD. If motion is detected during the time that the luminaire is operating at 50%, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

#### NOTES:

ECF-APD-MRO is available in 120V through 277V input only to luminaire. The motion sensor requires either 120V or 277V input to the motion sensor.

The ECF-APD-MRO has the same pole requirements and utilizes the same motion sensors as the ECF-MR50. The motion sensor mounts and wires identically as well. The ECF-APD-MRO utilizes the identical dimming profile as shown for the ECF-APD.

By combining the benefits of automatic profile dimming and motion response, the ECF-APD-MRO assures maximum energy savings, and insures that adequate light is present if motion is detected.

All motion sensors utilized consume 0.0 watts in the off state.

## Luminaire Configuration Information (Continued)

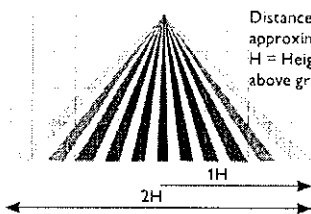
### ECF-MRI

Luminaires with Motion Response include a LED driver and an integral programmable motion sensor. The motion sensor is set to a constant 50%. When motion is detected, the luminaire goes to 100%. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes. Available with 120V or 277V only.

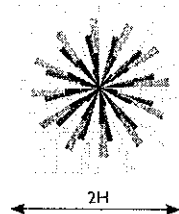
Luminaires include a passive infrared (PIR) motion sensor, WattStopper® FSP-211 equipped with an FSP-L3 lens, capable of detecting motion within 20 feet of the sensor, 180° around the luminaire, when placed at a 20 foot mounting height, or mounted on a wall. Available in 120V or 277V input only. Motion sensor off state power is 0.0 watts.

The approximate motion sensor coverage pattern is as shown below.

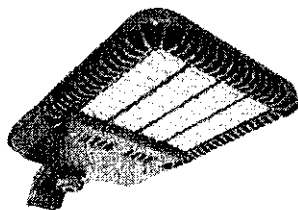
#### Side Coverage Pattern



#### Top Coverage Pattern



Distances are approximate.  
H = Height above ground.



### ECF-APD- MRI

Luminaires with Automatic Profile Dimming and Motion Response Override combine the benefits of both automatic profile dimming and motion response. APD-MRI luminaires utilize Philips DynaDimmer. The luminaire will dim to 50% power, 50% light output, per the dimming profile shown for APD luminaires (see page 4). If motion is detected during the time that the luminaire is operating at 50%, the luminaire goes to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns to low. Duration period is factory set at 5 minutes.

APD-MRI luminaires are available with 120V or 277V input voltages only.

APD-MRI luminaires use the identical motion sensor as MRI luminaires. See motion sensor details for ECF-MRI.

### FS1R-100 Wireless Remote Programming Tool

The FS1R-100 Remote Programming Tool accessory permits adjustment of ECF-MRI and ECF-APD-MRI sensor settings, including duration and dimming level on low, without the need to connect any wires to the luminaire.

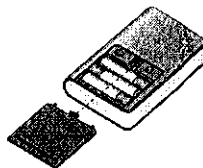
The FS1R-100 Wireless IR Programming Tool is a handheld tool for setup and testing of WattStopper FSP-211. It provides wireless access to the FSP-211 sensors for setup and parameter changes.

The FS1R-100 display shows menus and prompts to lead you through each process. The navigation pad provides a familiar way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FS1R-100 allows modification of the system without requiring ladders or tools simply with a touch of a few buttons.

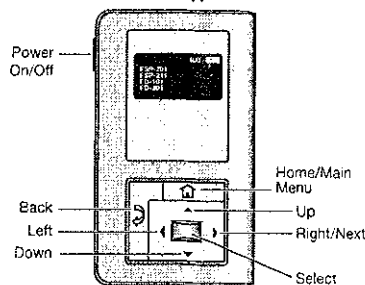
The FS1R-100 IR transceiver allows bi-directional communication between the FSP-211 and the FS1R-100 programming tool. Simple menu screens let you see the current status of the system and make changes. It can change FSP-211 sensor parameters such as high/low mode, sensitivity, time delay, cut off and more. With the FS1R-100 you can also establish and store FSP-211 parameter profiles.

The FS1R-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to BAT= indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FS1R-100 automatically shuts off 10 minutes after the last key press.



You navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates between yellow text on black background and black text on yellow background.)

Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using (left) and (right) arrow keys. In general the up key increments and the down key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost. More information on the FS1R-100 Remote Programming Tool is available at [wattstopper.com](http://wattstopper.com).



# ECOFORM

## OUTDOOR SITE & AREA

### Specifications

#### General Description

The Philips Gardco EcoForm combines economy with performance in an LED area luminaire. Capable of delivering up to 20,000 lumens or more in a compact, low profile LED luminaire, EcoForm offers a new level of customer value. Integral control systems including motion response are available for further energy savings during off peak hours.

#### Housing

One piece die cast aluminum housing with integral arm and separate, self retained hinged, one piece die cast door frame.

#### IP Rating

LED light engine rated IP66.

#### Vibration Resistance

EcoForm with Standard Arm carries a 3G vibration rating that conforms to standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

#### Electrical

Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant. Surge protector standard. 10KA per ANSI/IEEE C62.41.2.

#### LED Board and Array

32, 48, or 64 LEDs. Color temperatures: 3000K, 4000K, 5700K +/- 250K. Minimum CRI of 70. Aluminum metal clad board. RoHS compliant.

#### Energy Saving Benefits

System efficacy up to 95 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

#### Motion Sensors

ECF-MR50, ECF-APD-MRO, ECF-MRI, ECF-APD-MRI luminaires may be specified for additional energy savings during unoccupied periods. See pages 4-6 for complete details.

#### LED Thermal Management

The housing design allows the one piece housing to provide excellent thermal management critical to long LED system life.

#### Optical Systems

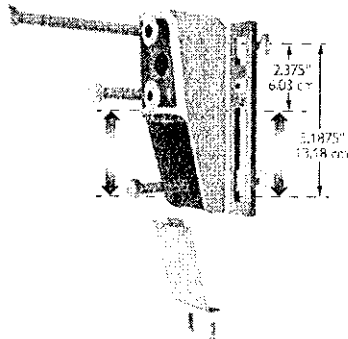
Type 2, 3, 4, and 5 distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, and 4 distributions to control backlight.

#### Mounting

Standard luminaire arm mounts to 4" round poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles.

#### Retrofit Arm Mount

EcoForm features an innovative retrofit arm kit. When specified with the retrofit arm (RAM) option, EcoForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately.



#### Listings

ETL/cETL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -30° to 40°C (-22° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. All EcoForm luminaires equipped with NW and CW are DesignLights Consortium® qualified.

#### Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WVP), and natural aluminum (NP). Consult factory for specs on optional or custom colors.

#### Warranty

EcoForm luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED Drivers also carry a 5 year limited warranty. Motion sensors are covered by warranty for 5 years by the motion sensor manufacturer.

### LED Performance:

PREDICTED LUMEN DEPRECIATION DATA <sup>13</sup>				
Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours <sup>13,14</sup>	L <sub>70</sub> Per TM-21 <sup>14,15</sup>	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 1050 mA	> 350,000 Hours	> 60,000 Hours	97%

<sup>13</sup> Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

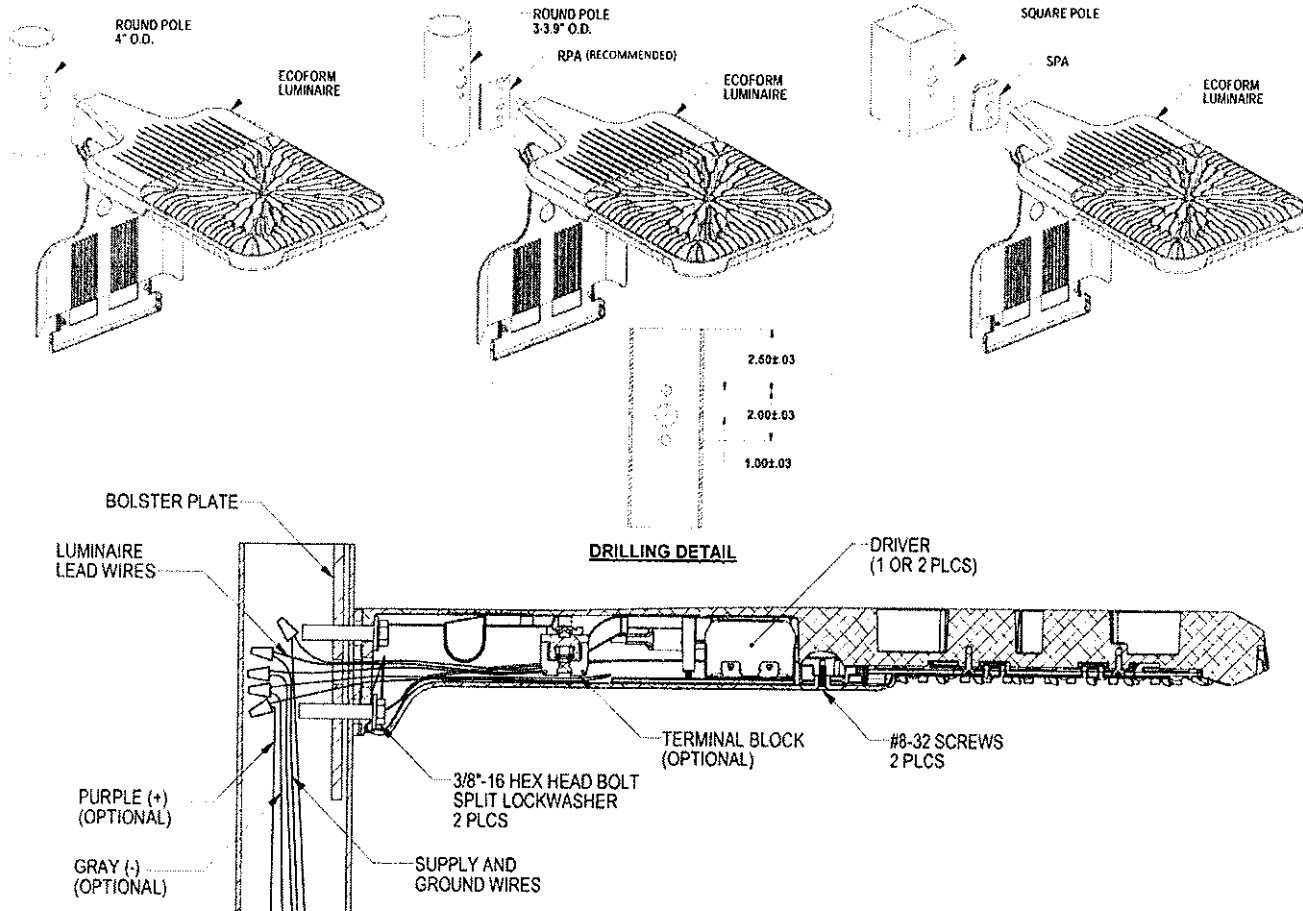
<sup>14</sup> L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output.

<sup>15</sup> Calculation per IESNA TM-21 methodology. L<sub>70</sub> hours limited to 6 times actual LED life hours.

# INSTALLATION INSTRUCTIONS

## ECOFORM LUMINAIRE

**IMPORTANT: READ ALL INSTRUCTIONS BEFORE PERFORMING ANY WORK. BE SURE ALL POWER IS OFF PRIOR TO INSTALLING LUMINAIRES.**



- ⚠ **NOTE FOR ROUND POLES 3.0 TO 3.9 INCH O.D.:** OPTIONAL ROUND POLE ADAPTOR (RPA) CAN BE PURCHASED AND INSTALLED BETWEEN POLE AND LUMINAIRE.
  - ⚠ **NOTE FOR ROUND POLES GREATER THAN 4 INCH O.D.:** INSERT PROVIDED SHIMS BETWEEN POLE AND LUMINAIRE (TOP AND BOTTOM BOLT) ENSURING THERE IS A METAL TO METAL CONTACT BETWEEN POLE AND LUMINAIRE ON LEFT AND RIGHT (LUMINAIRE SHOULD NOT SWAY LEFT TO RIGHT WHEN BOLTS ARE TIGHTENED).
  - ⚠ **NOTE FOR SQUARE POLES:** USE SQUARE POLE ADAPTOR (STANDARD WITH MOST LUMINAIRES).
1. LOCATED ON THE BOTTOM OF THE ARM ASSEMBLY, LOOSEN (2) #8-32 SCREWS. OPEN ARM ASSEMBLY (SCREWS ARE CAPTIVE AND WILL REMAIN ON DOOR).
  2. INSERT BOLSTER PLATE INSIDE OF POLE (OPTIONALLY USING BLACK PUTTY TO HOLD). INSTALL LOCKWASHER TO THE 3/8-16 HEX HEAD BOLT AND THREAD INTO THE TOP MOUNTING HOLE.
  3. THREAD 3/8-16 HEX HEAD BOLT WITH LOCKWASHER INTO THE BOTTOM TAPPED HOLE IN THE BOLSTER PLATE.  
**TIGHTEN THE TWO MOUNTING BOLTS TO 18 FT-LB.**
  4. CONNECT SUPPLY AND GROUND WIRES TO LUMINAIRE LEAD WIRES. IF DIMMING OPTION WAS PURCHASED, THEN CONNECT GRAY(-) AND PURPLE(+) WIRES THAT ARE DEDICATED TO THE 0-10V LEADS COMING FROM DRIVER. MAKE WIRE CONNECTIONS PER NEC OR APPLICABLE LOCAL CODES.
  5. SECURE THE SUPPLY WIRES WITH CABLE TIE, (STRAIN RELIEF), IN THE ARM.
  6. CLOSE ARM DOOR AND SECURE WITH THE TWO CAPTIVE #8-32 SCREWS.
  7. ENERGIZE LUMINAIRE TO TEST INSTALLATION.

# INSTALLATION INSTRUCTIONS

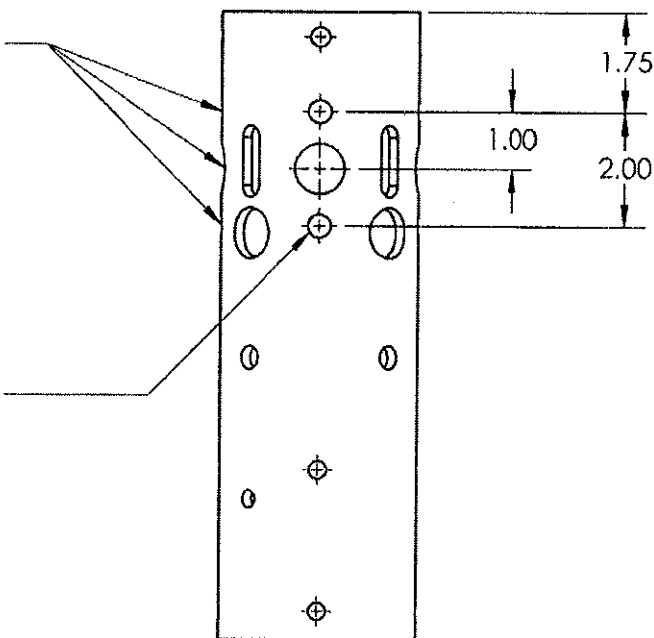
## ECOFORM LUMINAIRE MOUNTED ON PTF2 (3-1/2" O.D.), PTF3 (4-1/2" O.D.), OR PTF4 (5" O.D.) POLE TOP FITTER

**IMPORTANT: READ ALL INSTRUCTIONS BEFORE PERFORMING ANY WORK. BE SURE ALL POWER IS OFF PRIOR TO INSTALLING LUMINAIRES.**

1. LOCATED ON THE BOTTOM OF THE ARM ASSEMBLY, LOOSEN (2) #8-32 SCREWS USING PHILLIPS HEAD SCREWDRIVER. OPEN ARM ASSEMBLY (SCREWS ARE CAPTIVE AND WILL REMAIN ON DOOR).
2. ATTACH LUMINAIRE/ARM ASSEMBLY TO POLE TOP FITTER BY LINING UP THE THREADED HOLE ON POLE TOP FITTER TO BOTTOM HOLE ON ARM.
3. THREAD THE BOTTOM 3/8" BOLT AND LOCK WASHER INTO THE LOWER TAPPED HOLE OF THE POLE TOP FITTER FROM INSIDE OF ARM ASSEMBLY AND TIGHTEN.  
**TIGHTEN THE TWO MOUNTING BOLTS TO 18 FT-LB.**
4. NUT INSIDE FITTER, THEN HOLD. THREAD THE TOP 3/8" BOLT AND LOCK WASHER THROUGH POLE TOP FITTER FROM INSIDE OF ARM ASSEMBLY AND TIGHTEN.  
**ENSURE PRIOR TO TIGHTENING MOUNTING BOLTS THAT THERE IS METAL TO METAL CONTACT BETWEEN POLE TOP FITTER AND LUMINAIRE (LUMINAIRE SHOULD NOT SWAY LEFT TO RIGHT WHEN BOLTS ARE TIGHTENED).**
5. APPLY SUITABLE WEATHERPROOF SEALANT AROUND (HORIZONTAL, TOP, VERTICAL, LEFT, RIGHT) OF ARM WHERE IT CONTACTS POLE TO INHIBIT WATER ENTRY.
6. INSTALL THE POLE TOP FITTER/LUMINAIRE ONTO THE TENON. TOP OF THE TENON MUST SEAT AGAINST THE FITTER STOP. LEVEL AND SECURE WITH (8) 3/8" SOCKET SET SCREWS.
7. ROUTE SUPPLY AND GROUND WIRES OVER THE STRAIN RELIEF ROD. TIE OFF WITH TAPE OR WIRE TIE AS SHOWN.
8. CONNECT FIELD SUPPLY AND GROUND WIRES TO LUMINAIRE LEADS. MAKE WIRE CONNECTIONS PER NEC OR APPLICABLE LOCAL CODES.
9. INSTALL POLE TOP FITTER CAP AND SECURE WITH (2) #10-32 PHILLIPS PAN HEAD SCREWS.
10. CLOSE ARM ASSEMBLY AND SECURE WITH THE (2) 8-32 SCREWS.
11. ENERGIZE LUMINAIRE TO TEST INSTALLATION.

REMOVE HOLE PLUGS IF MORE THAN ONE LUMINAIRE IS NEEDED.

THREADED FOR 3/8"-16  
2 PLCS

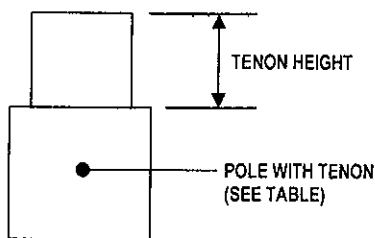
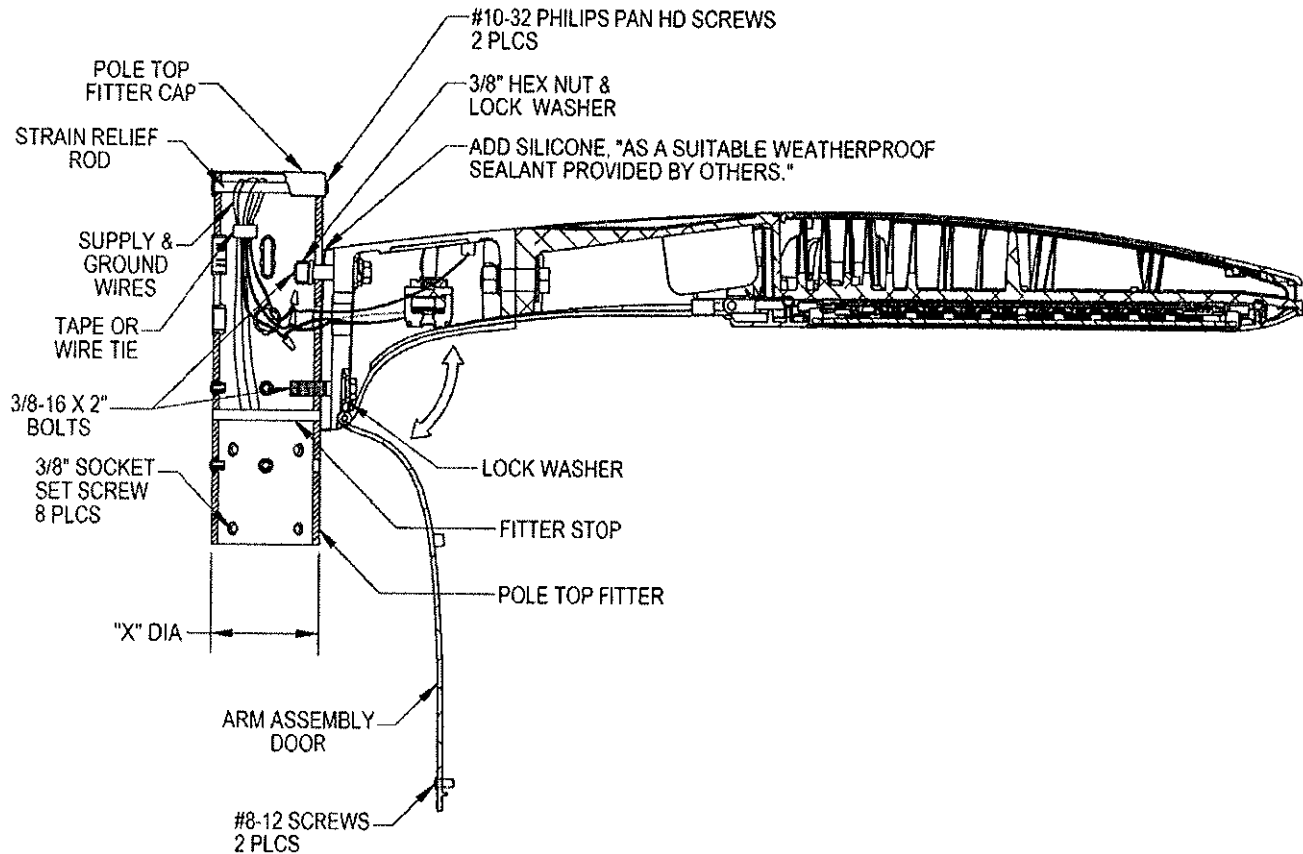




# INSTALLATION INSTRUCTIONS

ECOFORM LUMINAIRE MOUNTED ON PTF2 (3-1/2" O.D.), PTF3 (4-1/2" O.D.), OR PTF4 (5" O.D.) POLE TOP FITTER

**IMPORTANT: READ ALL INSTRUCTIONS BEFORE PERFORMING ANY WORK. BE SURE ALL POWER IS OFF PRIOR TO INSTALLING LUMINAIRES.**



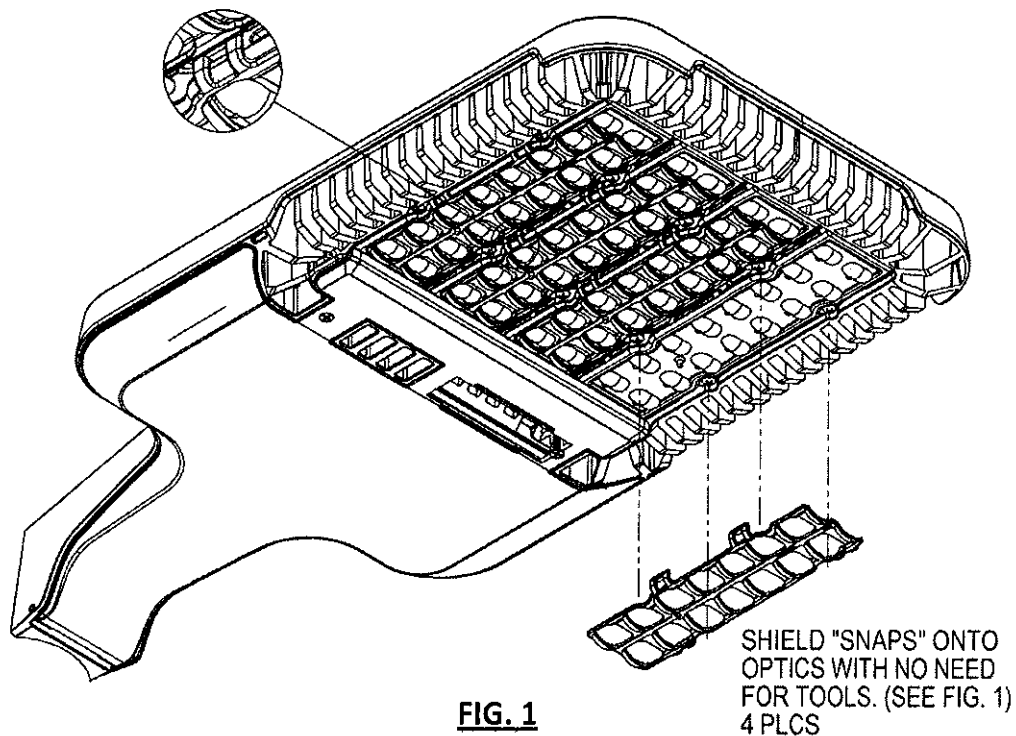
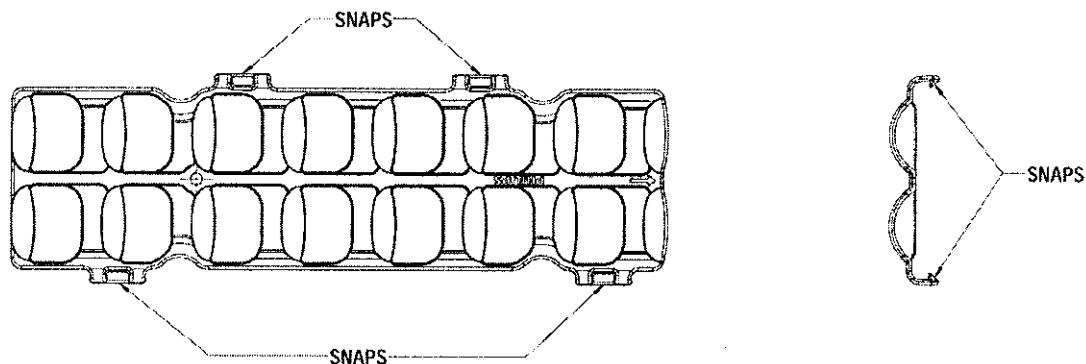
FITTER TYPE	"X" DIA. (Ø)	USED ON TENON SIZE
PTF2	3-1/2"	2-3/8" TO 2-7/8" O.D. X 4" HIGH
PTF3	4-1/2"	3" TO 3-1/2" O.D. X 6" HIGH
PTF4	5"	3-1/2" TO 4" O.D. X 6" HIGH

# INSTALLATION INSTRUCTIONS

## ECOFORM FIELD INTERNAL SHIELD

**IMPORTANT: READ ALL INSTRUCTIONS BEFORE PERFORMING ANY WORK. BE SURE ALL POWER IS OFF PRIOR TO INSTALLING LUMINAIRES.**

IF INTERNAL SHIELDING PURCHASED WITH LUMINAIRE, THEN SEE FIGURE 1 FOR ORIENTATION AND INSTALLATION.



**FIG. 1**



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[www.philips.com/luminaires](http://www.philips.com/luminaires)

443561200740 Rev. C  
Page 4 of 4

Philips Lighting Company  
200 Franklin Square Drive  
Somerset, NJ 08873  
Phone: 855-486-2216

Philips Lighting Company  
281 Hillmount Road  
Markham ON, Canada L6C 2S3  
Phone: 855-486-2216

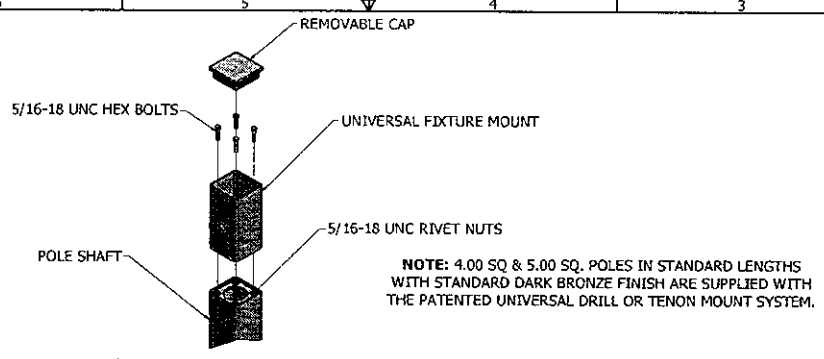
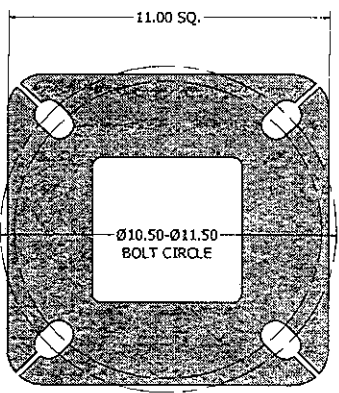
20' POLE  
TYPE SC

POLE SHAFT SPECIFICATIONS				
1.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.			
2.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL PLATE (ASTM A-36 HRS) WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.			
3.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVANIZED PER ASTM A153 SPECIFICATIONS AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.			
4.	POLES SHALL HAVE A POLYESTER POWDER COAT FINISH IN A STANDARD COLOR.			
POLE DIMENSIONS				
POLE HGT. (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
20'	5.00	5.00	11 GA.	20'
BASE PLATE DIMENSIONS				
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)	
10.50-11.50	11.00 SQ.	1.00	.75	
ANCHOR BOLT DIMENSIONS				
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)		20.00	
.75	20.00			
ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	16.0	12.9	10.4	7.4

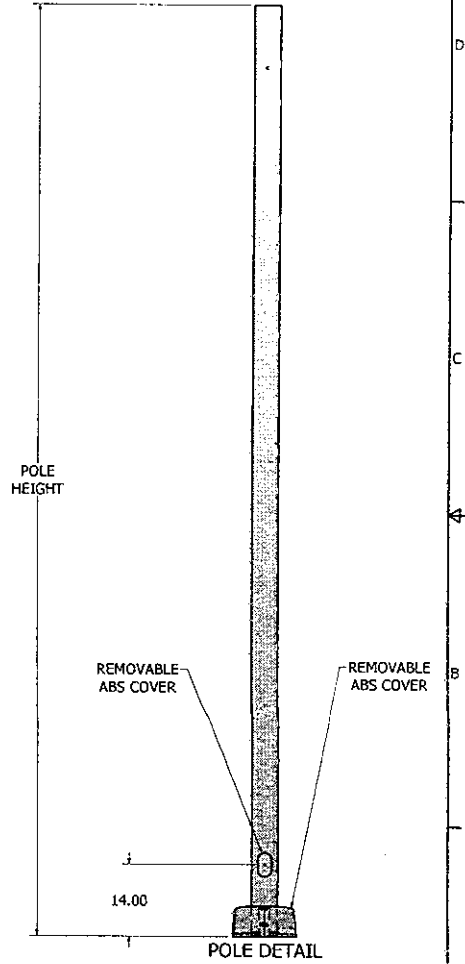
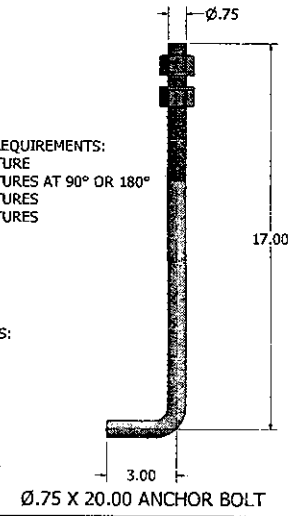
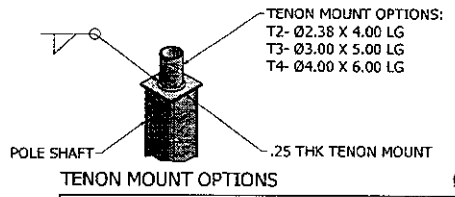
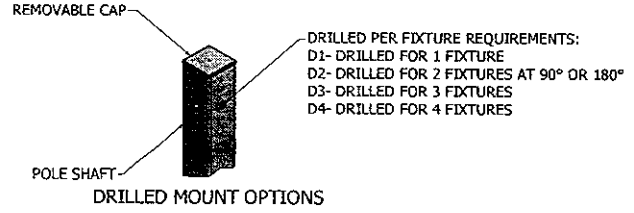
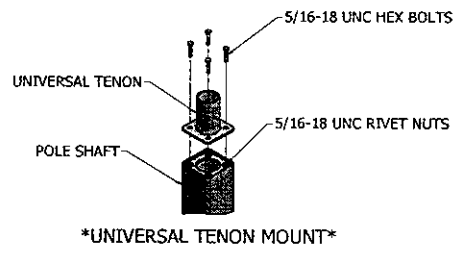
\*WITH 1.3 GUST FACTOR



3.00 X 5.00 HAND HOLE COVER



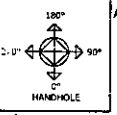
NOTE: 4.00 SQ & 5.00 SQ. POLES IN STANDARD LENGTHS WITH STANDARD DARK BRONZE FINISH ARE SUPPLIED WITH THE PATENTED UNIVERSAL DRILL OR TENON MOUNT SYSTEM.



**LP**  
LYTE  
POLES INCORPORATED

P.O. BOX 340 • EASTPOINT, MI 48021  
PHONE: 586-771-4610 • FAX: 586-771-5527  
WWW.LYTEPOLES.COM

DRAWN: M. MARVALA	3/31/2014	SOME OROGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAUSE LOCAL WIND INDUCED VIBRATIONS CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREDICTING DESTRUCTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNKNOWN AND CANNOT BE GUARANTEED AGAINST. AND ARE THE RESPONSIBILITY OF A LOCAL SITE ENGINEER.
CHECKED:		
REVISION:	DATE:	TITLE:
APPROVED:		CATALOG:
QUOTE: S.D.B		DWG NO: 101-5011-20
REF:	SCALE: NONE	SIZE: D
		SHEET 1 OF 1



Job:  
Type:  
Notes:

**GASMA RT**

**TYPE R2**

**DECA23-1-3VFC-400PSMH**

**Emco**

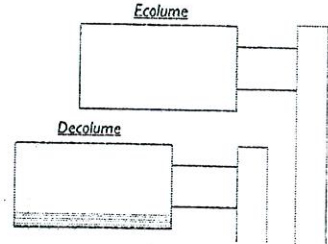
**Ecolume and Decolume**

Page 1 of 3

**Arm Mount - Vertical Lamp Flat Glass Lens**

The Ecolume ECA and Decolume DECA are rectilinear area luminaires. Utilizing a flat glass lens, the vertical lamp full-cutoff segmented optical systems provide required light levels, even illumination, wide pole spacings and excellent glare control. The housing is die formed and the door frame is extruded aluminum. Luminaires are completely sealed and gasketed, preventing intrusion from moisture, insects and contaminants.

Flat glass lens luminaires provide full cutoff performance.



PREFIX	MOUNTING	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

**PREFIX**

	<u>Ecolume</u>	<u>Decolume</u>	
Arm Mount to Pole*	ECA23	DECA23	23" Square Luminaire

\*Arm mounting on round poles is designed to mount to poles measuring 3.5" OD or larger only.

**MOUNTING**

- 1 Single Pole Mount
- 2 Twin Pole Mount at 180°
- 2@90° Twin Pole Mount at 90°
- 3 3-way Pole Mount at 90°
- 3@120° 3-way Pole Mount at 120°
- 4 4-way Pole Mount

**DISTRIBUTION**

Vertical Lamp

- 3VFC Type III Vertical Lamp - Full Cutoff
- FVFC Type IV Forward Throw Vertical Lamp - Full Cutoff
- QVFC Type V Vertical Lamp - Full Cutoff



1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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79215-54/0612

**PHILIPS**



### WATTAGE *Featuring the MasterColor Elite Electronic HID System*

23"		
Pulse Start MH Magnetic Ballast	400PSMH Ⓢ 450PSMH Ⓢ 750PSMH	775PSMH 875PSMH 1000PSMH
MasterColor Elite Electronic System	210MCE-3K <sup>Ⓢ</sup> 210MCE-4K <sup>Ⓢ</sup>	315MCE-3K <sup>Ⓢ</sup> 315MCE-4K <sup>Ⓢ</sup>
Standard MH Magnetic Ballast**	400MH**	1000MH <sup>1</sup>
High Pressure Sodium Magnetic Ballast	400HPS	750HPS
**175MH, 250MH and 400MH not available for sale in the United States.		
*** 250PS9S includes a 90% efficient magnetic PSMH ballast, meeting the requirements of California Title 20, effective 1/1/2010.		
Ⓢ Wattages marked with circle "E" meet federal energy efficiency standards applicable to 150 watt through 500 watt metal halide luminaires only.		

### OPTIONS

<b>HS<sup>3</sup></b> Internal House Side Shield	<b>QS<sup>7</sup></b> Quartz Standby
<b>F</b> Fusing	<b>QST<sup>7</sup></b> Quartz Standby - Timed Delay
<b>LF<sup>4</sup></b> In-Pole/In-Line Fusing	<b>Q924<sup>7</sup></b> Quartz Emergency
<b>PCT<sup>5</sup></b> Locking Type Photocontrol	<b>QT924<sup>7</sup></b> Quartz Emergency - Timed Delay
<b>PCR</b> Locking Type Photocontrol Receptacle	<b>GMR<sup>10</sup></b> Provision for Gardco Motion Response
<b>PCB<sup>6</sup></b> Button Photocontrol	
<b>MF<sup>6A</sup></b> Mast Arm Fitter	
<b>PTF3</b> Pole Top Fitter 3 - 3 1/2" X 6"	
<b>PTF4</b> Pole Top Fitter 3 1/2 - 4" X 6"	
<b>AP<sup>7A</sup></b> Adjustable Knuckle - Square Pole Mount	
<b>CR<sup>11</sup></b> Colored Reveals	

### VOLTAGE

120  
208  
240  
277  
347  
480  
**QUAD**  
120/208/240/277  
factory tied to 277V.  
  
200-277  
MCE types only.

### FINISH

**BRP** Bronze Paint  
**BLP** Black Paint  
**WP** White Paint  
**NP** Natural Aluminum Paint  
**OC** Optional Color Paint  
Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.  
**SC** Special Paint  
Specify. Must supply color chip.

1. 1000MH requires 8T-37 or E-37 lamp.
2. MCE types available in 120V, 200-277V, 347V, or 480V. 120V, 347V and 480V require and include an auxiliary transformer. For MCE types, "-3K" indicates a 3,000°K lamp, "-4K" indicates a 4,000°K lamp.
3. Supplied standard for FVFC.
4. Kit includes In-Line Fuses.
5. Not Available with 480V.
6. Requires 2 3/8" O.D. Mast Arm.
7. Only available with single and twin luminaires @ 180°.
8. Square pole mount only.
9. See QS/Q924 Table.
10. Available only with 400PSMH or 400HPS wattages. Includes dual-level capacitor and wiring to connect to Gardco Motion Response System.
11. Available with Decolume only. Specify color. Contact factory for availability.

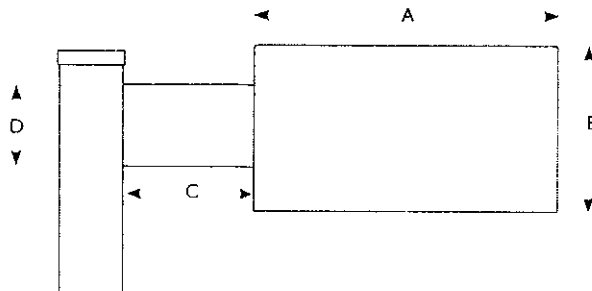
(Note 9) QS / Q924 Table	
HID Lamp Watts	Maximum Quartz Lamp Watts
175 watts or less	100 Watts
Above 175 watts up to 400 watts	150 Watts

QS, QST, Q924 and QT924 options are not available in luminaires above 400 watt HID.

### DIMENSIONS AND EPA

ECOLUME / DECOLUME	EPA (Effective Projected Area) ft <sup>2</sup> / m <sup>2</sup>			Single Luminaire Weight (lbs / kg)
	Single	Twin 180°	Quad	
Arm Mount 23" units	3.6 / .335	7.3 / .679	8.8 / .818	90 / 40.83

ARM MOUNT	
	23"
<b>A</b>	23" sq 58.42cm
<b>B</b>	14.5" 36.83cm
<b>C Arm Length</b>	12" 30.48cm
<b>D Arm Height</b>	8" 20.32cm



1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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79215-54/0612

**PHILIPS**



### **SPECIFICATIONS**

**GENERAL DESCRIPTION:** Each Emco Ecolume and Decolume is a full cutoff luminaire for high intensity discharge lamps. Internal components are totally enclosed, rain-tight, dust-tight, and corrosion resistant. No venting of the optical system or electrical components is required or permitted. Lamping requires no lifting or hinging of the luminaire housing, disturbing wiring or exposing uninsulated live parts.

**HOUSING:** The housing wrapper is one-piece dieformed aluminum. The housing has an integral reinforcing spine and no welded corners. Silicone seals provide a weathertight seal at all points of material transition.

**LENS:** A mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. A single flush 1/4 turn captive fastener permits easy access to the luminaire.

**OPTICAL SYSTEMS:** The segmented reflector system consists of two levels of highly specular aluminum facets precisely aligned to achieve specified photometric distributions. The entire optical system is field rotatable in 90° increments. The mogul base socket is glazed porcelain with a nickel plated screw shell.

**ELECTRICAL:** All electrical components are UL recognized and factory tested. Electronic and magnetic HID ballasts are high power factor. Magnetic HID ballasts are the separate component type. The ballast is mounted on a unitized tray and secured within the luminaire, above the reflector system. Electronic and magnetic HID ballasts are capable of providing reliable lamp starting down to -20°F / -29°C.

Luminaires provided with the MasterColor® Elite high performance ceramic metal halide electronic system include high power factor electronic ballasts, designed specifically for the system selected.

**FINISH:** Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally-cured polyester powder finish after fabrication.

**LABELS:** All luminaires bear UL or CUL (where applicable) Wet Location labels.

**WARRANTY:** Luminaires in the Emco product family feature a 1 year limited warranty. See Warranty Information on [www.sitelighting.com](http://www.sitelighting.com) for complete details and exclusions.

**FULL CUTOFF PERFORMANCE:** Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

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**PHILIPS**



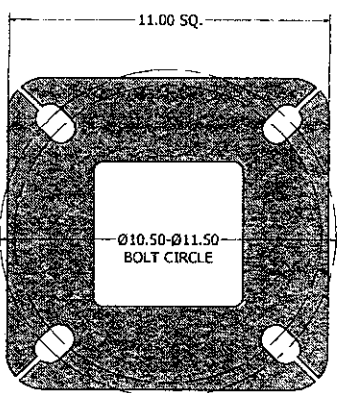
# 30' POLE TYPE R2

POLE SHAFT SPECIFICATIONS				
NO.	SHAFTS ARE ONE SECTION DESIGN FABRICATED FROM A WELDABLE GRADE CARBON STEEL STRUCTURAL TUBING WITH A UNIFORM WALL THICKNESS. MATERIAL SHALL CONFORM TO ASTM A-500 GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 P.S.I.			
1.	BASE PLATES ARE CONSTRUCTED OF A STRUCTURAL QUALITY HOT ROLLED CARBON STEEL PLATE (ASTM A-36 HRS) WITH A GUARANTEED MINIMUM YIELD STRENGTH OF 36,000 P.S.I.			
2.	ANCHOR BOLTS (F1554 GRADE 55) ARE "L" BENT BARS HAVING A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. THE BOLTS ARE FULLY GALVANIZED PER ASTM A153 SPECIFICATIONS AND FURNISHED COMPLETE WITH 2 HEX NUTS AND 2 FLAT WASHERS.			
3.	POLES SHALL HAVE A POLYESTER POWDER COAT FINISH IN A STANDARD COLOR.			
POLE DIMENSIONS				
POLE HGT. (FT.)	TOP SQ. SIZE (IN.)	BOT. SQ. SIZE (IN.)	GAGE	MTG. HGT. (FT.)
30'	5.00	5.00	11 GA.	30'
BASE PLATE DIMENSIONS				
BOLT CIRCLE (IN.)	BASE PLATE DIM. (IN.)	BOLT HOLE (IN.)	PLATE THK. (IN.)	
10.50-11.50	11.00 SQ.	1.00	.75	
ANCHOR BOLT DIMENSIONS				
ANCHOR BOLT DIA. (IN.)	ANCHOR BOLT LENGTH (IN.)			
.75	20.00			
ALLOWABLE WIND LOADING (SQ. FT.)				
WIND*	80 MPH	90 MPH	100 MPH	120 MPH
EPA	4.2	3.4	2.7	1.9

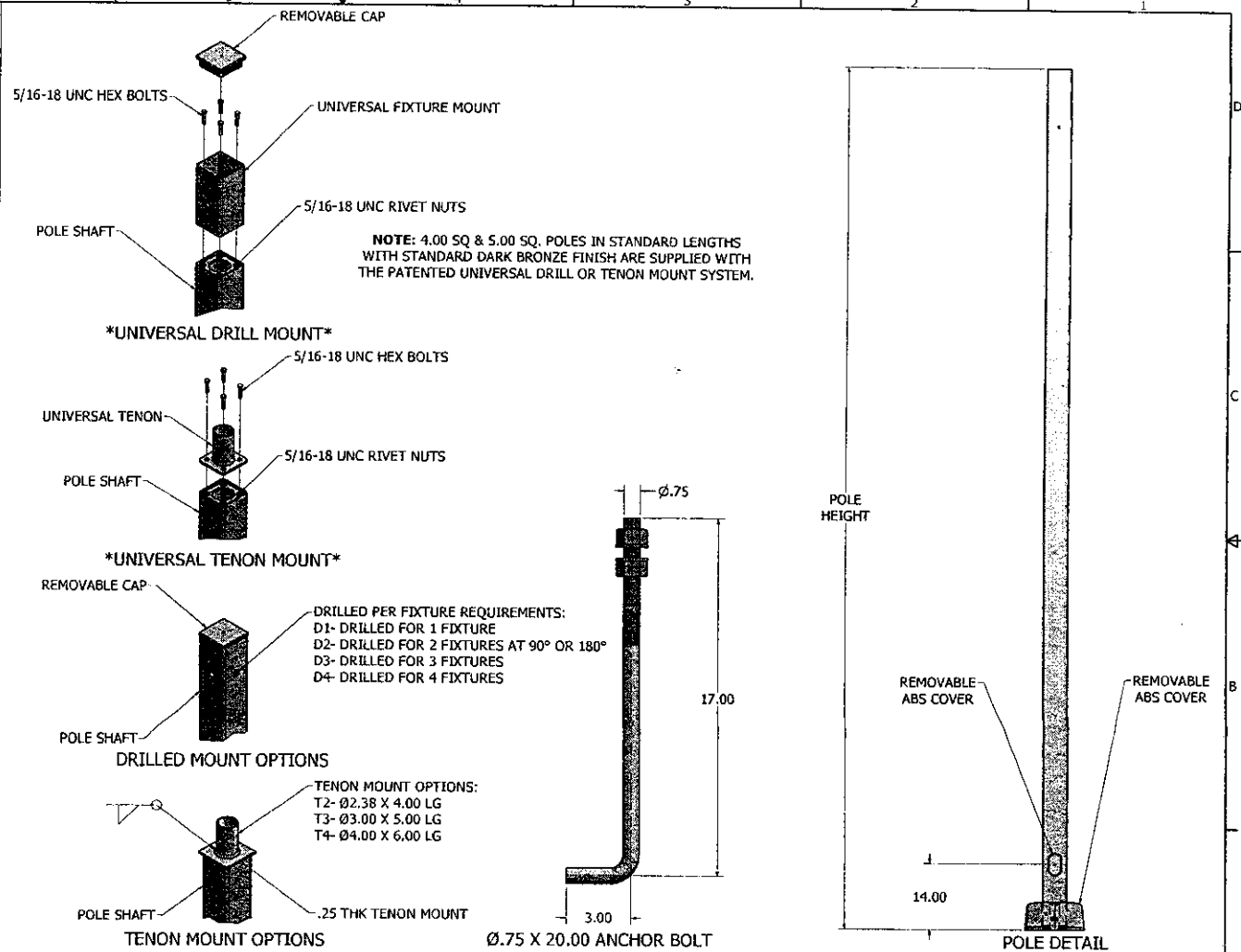
\*WITH 1.3 GUST FACTOR



3.00 X 5.00 HAND HOLE COVER



11.00 X 11.00 X .75 THK. BASE PLATE



**LYTE POLES INCORPORATED**

PO. BOX. 140 • EAST POINTE, MI 48021  
PHONE: 586-771-4610 • FAX: 586-771-5577  
WWW.LYTEPOLESINC.COM

DRAWN: M. HARVALA	13/31/2014	<p>SOME GEOGRAPHICAL AREAS HAVE SPECIAL WIND CONDITIONS THAT CAN CREATE WIND INDUCED VIBRATION CAUSING A FATIGUE PROBLEM. NO METHOD HAS YET BEEN FOUND FOR PREVENTING EXTRACTIVE LIGHTING POLE VIBRATION. THESE CONDITIONS ARE UNKNOWN AND CANNOT BE GUARANTEED AGAINST, AND ARE THE RESPONSIBILITY OF A LOCAL SITE ENGINEER.</p>
CHECKED:	DATE:	
REVISION:	DATE:	
APPROVED:	DATE:	
QUOTE:		TITLE:
S.O.#		CATALOG:
REP:	SCALE: NONE	DWG NO: 101-5011-30

180°

270°

90°

HANDHOLE

Job: **GAS MOUNT, CHESTERFIELD**  
 Type:  
 Notes: **TYPE WA 121-4-75LA-NW**

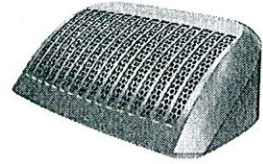
09-17-14 P03:48 REF:

# 120 LINE LED

Page 1 of 4

## 121 LED Performance Sconce - Generation 2

The Philips Gardco 121 LED Performance Sconce provides an energy efficient, architecturally pleasing solution for wall mount applications. The sloped surface ribs of the die cast aluminum housing create a distinctly unique aesthetic element, and perform important functions in the Philips Gardco thermal management system. 121 Generation 2 luminaires feature high performance Class 1 LED systems. The high performance LED optical systems produce full cutoff performance, minimizing glare and light trespass. Philips Gardco's LED technology provides maximized light output and maximum energy savings.



PREFIX	OPTICAL SYSTEM	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

<b>121</b>	121 LED Performance Sconce - Constant Wattage / Full Light Output
<b>121-MR</b>	121 LED Performance Sconce - Motion Response
<b>121-DIM</b>	121 LED Performance Sconce - 0 - 10V Dimming
<b>121-APD</b>	121 LED Performance Sconce - Automatic Profile Dimming
<b>121-DCC</b>	121 LED Performance Sconce - Dual Circuit Control

### OPTICAL SYSTEM

<b>2</b>	Type 2
<b>3</b>	Type 3
<b>4</b>	Type 4
<b>MT</b>	Medium Throw

RECEIVED  
 City of Chesterfield  
 All optical systems are supplied with a clear glass lens standard. A Diffuse Lens (DL) option is available. See OPTIONS on Page 2.

SEP 17 2014

Department of Public Services

### LED WATTAGE AND LUMEN VALUES

Single LED Array Wattages, Available in 121, 121-MR, 121-DIM and 121-APD Only								
Ordering Code	Average System Watts <sup>1</sup>	LED Current (mA)	LED Quantity - Single LED Array	LED Selection	Luminaire Initial Absolute Lumens <sup>2</sup>			
					TYPE 2	TYPE 3	TYPE 4	MT
18LA	18	350	16	NW	1,298 (s)	1,324 (s)	1,248 (s)	1,568 (s)
26LA	26	530	16	NW	1,817 (s)	1,849 (s)	1,745 (s)	2,178 (s)
35LA-700	36	700	16	NW	2,373 (s)	2,401 (s)	2,273 (s)	2,792 (s)
35LA-350	35	350	32	NW	2,596	2,647	2,496	3,135
50LA	52	530	32	NW	3,634	3,698	3,490	4,356
75LA	72	700	32	NW	4,745	4,801	4,546	5,584

Dual LED Array Wattages, Available in 121-DCC Only									
Ordering Code	Average System Watts <sup>1</sup>	LED Current (mA)	LED Quantity - Dual LED Arrays		LED Selection	Luminaire Initial Absolute Lumens <sup>3</sup>			
			Per LED Array	Total LEDs		TYPE 2	TYPE 3	TYPE 4	MT
35LA-2	35	350	16	32	NW	2,596	2,647	2,496	3,135
50LA-2	52	530	16	32	NW	3,634	3,698	3,490	4,356
75LA-2	72	700	16	32	NW	4,745	4,801	4,546	5,584

1. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.  
 2. Values shown are for luminaires without the DL option. Tests are in process for configurations not shown. "(s)" following the value indicates that values are scaled from tests on similar, but not identical luminaire configurations. Contact Gardco.applications@philips.com if any approximate estimates are required for design purposes. Lumen values based on tests performed in compliance with IESNA LM-79

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G200-037/1012

PHILIPS







# 120 LINE LED

## 121 LED Performance Sconce - Generation 2

### LED SELECTION

<b>CW</b>	Cool White - 5700°K - 75 CRI Nominal
<b>NW</b>	Neutral White - 4000°K - 70 CRI Nominal
<b>WW</b>	Warm White - 3000°K - 80 CRI Nominal

### VOLTAGE

<b>UNIV</b>	Accepts 120V through 277V input, 50hz to 60hz.
<b>347</b>	347V - Requires Extended Back Box, which is provided standard. Requires and includes auxiliary transformer mounted in Extended Back Box.

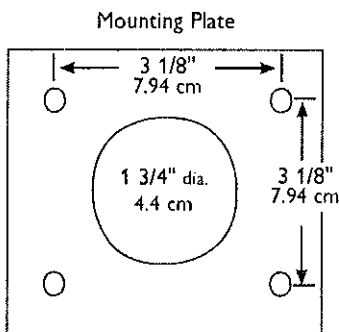
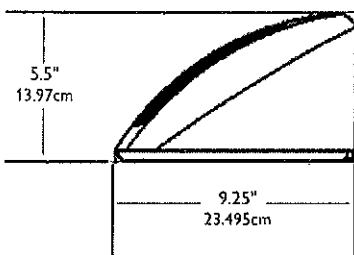
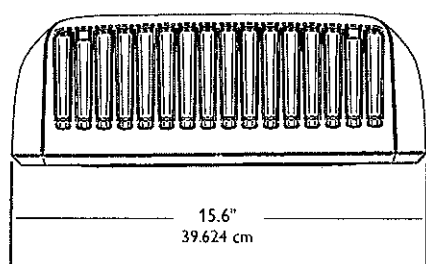
### FINISH

<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>BGP</b>	Beige Paint
<b>OC</b>	Optional Color Paint Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.
<b>SC</b>	Special Paint Specify Must supply color chip.

### OPTIONS

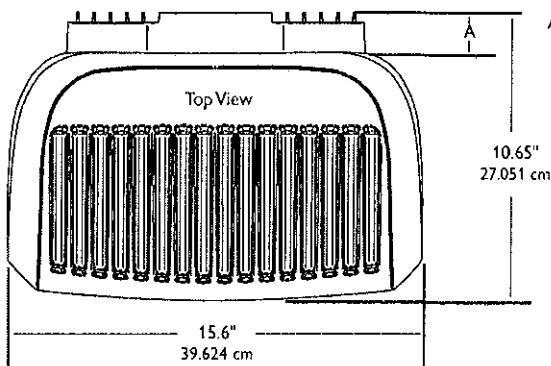
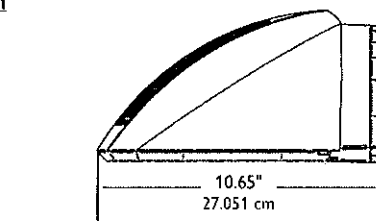
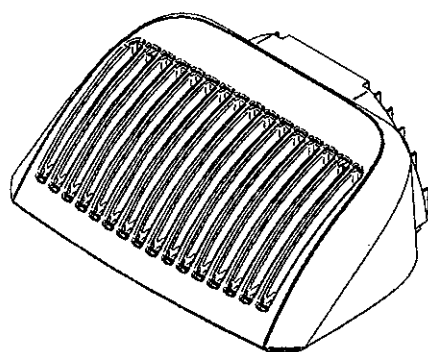
<b>F</b>	Fusing (Provide specific input voltage)	3. Not available with Fusing (F) option. DCC luminaires require one (1) surge protector per circuit.
<b>DL</b>	Solite® Diffusing Glass Lens (Reduces performance significantly)	
<b>PCB</b>	Button Type Photocontrol (Provide specific input voltage)	
<b>WS</b>	Wall Mounted Box for Surface Conduit (Rear entry permitted)	
<b>EBB</b>	Extended Back Box (Provided standard with 347V luminaires)	
<b>SPR<sup>2</sup></b>	Surge Protection 120V thru 277V Input meeting ANSI C62.41. 2	
<b>SPRH<sup>3</sup></b>	Surge Protection 347V thru 480V Input meeting ANSI C62.41. 2	

### DIMENSIONS



Mounting Bolt Pattern

### With Extended Back Box (EBB) Option



Note: Mounting plate center is located in the center of the luminaire width and 2.38" (6.03cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

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G200-037/1012

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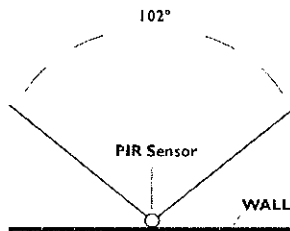


### LUMINAIRE CONFIGURATION INFORMATION

**121-CWL:** 121 LED sconce providing constant wattage and constant light output when power to the luminaire is energized.

**121-MR:** 121 LED sconce including a passive infrared (PIR) motion sensor capable of detecting motion within 30 feet of the 121 LED Sconce. The PIR sensor is mounted in the center of the luminaire, near the wall edge of the door frame, approximately 1.5" forward from the wall, and is less than .75" in diameter. When no motion is detected for 5 minutes, the Motion Response system reduces the wattage by 75%, to 25% of the normal constant wattage, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. The PIR sensor is capable of motion detection across a total angle of 102° from the center of the sensor (51° to either side of center.) The sensor may be adjusted directionally to maximize detection of motion to one side of the luminaire if desired based on site traffic patterns. PIR sensor provided is the Panasonic EKMB1203112. If the PIR sensor fails, the luminaire will operate in default-high mode. Motion sensors utilized consume 0.0 watts in the off state.

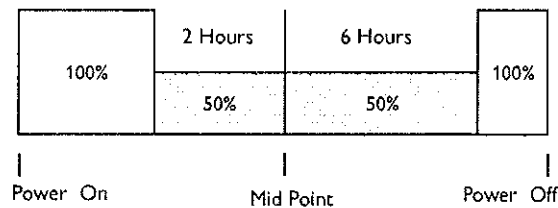
Sensor Coverage Pattern



**121-DIM:** 121 LED sconce provided with 0 -10V dimming for connection to a control system provided by others.

**121-APD:** Philips Gardco performance LED sconces with Automatic Profile Dimming are provided with the Philips DynaDimmer included. The DynaDimmer is factory programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously calculated by the DynaDimmer based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

APD Dimming Profile



**121-DCC:** 121 LED sconce provided with dual circuiting, and dual arrays, permitting separate switching of each led array. Available in LED wattages shown on Page 1 only.



# 120 LINE LED

## 121 LED Performance Sconce - Generation 2

### SPECIFICATIONS

**GENERAL:** Each Philips Gardco 121 luminaire is a wall mounted full cutoff luminaire with integrated lensed LEDs mounted in a fixed array. Internal components are totally enclosed in a rain-tight, dust-tight and corrosion resistant housing. The housing, back plate and door frame are die cast aluminum. A choice of four (4) optical systems is available. Luminaires are suitable for wet locations, mounted in the normal downlight position.

**HOUSING:** The single-piece stylized housing is die cast aluminum. A memory retentive gasket seals the housing with the door frame to exclude moisture, dust, insects and pollutants from the luminaire. A black, die cast ribbed backplate is included.

**IP RATING:** Luminaires are rated IP66.

**DOOR FRAME:** A single-piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with two (2) captive stainless steel fasteners.

**OPTICAL SYSTEMS:** Philips Gardco 121 Generation 2 LED luminaires utilize lensed LED arrays set to achieve IES Type II, Type III, and Type IV distributions, as well as a Medium Throw distribution. Individual LED arrays are replaceable. Luminaires feature high performance Class 1 LED systems. Luminaires are supplied standard with a clear glass lens.

**ELECTRICAL:** Luminaires are equipped with an LED driver that accepts 120V through 277V, 50hz to 60hz, input. Driver output is either 350 mA, 530 mA or 700 mA, based on the LED wattage selected. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 302°F/150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

**LED THERMAL MANAGEMENT:** The 121 design provides deep integral thermal radiation fins cast into the upper housing to assist in the thermal management so critical to long LED system life. Metallic screens are placed over the fins and integrated to the housing to prevent the buildup of dust, dirt and contaminants, while permitting required air flow for cooling

### LED PERFORMANCE:

PREDICTED LUMEN DEPRECIATION DATA <sup>4</sup>		
Ambient Temperature °C	Driver mA	L <sub>70</sub> Hours <sup>5</sup>
25 °C	350 mA	180,000
	530 mA	150,000
	700 mA	120,000
40 °C	350 mA	170,000
	530 mA	130,000
	700 mA	100,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

5. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output.

**FINISH:** Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors include bronze (BRP), black (BLP), white (WPP), natural aluminum (NP) and beige (BGP). Consult factory for specifications on custom colors.

**LABELS:** All luminaires bear either UL or CUL (where applicable) Wet Location labels.

**WARRANTY:** Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays and LED drivers. See Warranty Information on [www.sitelighting.com](http://www.sitelighting.com) for complete details and exclusions.

**FULL CUTOFF PERFORMANCE:** Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

# Mini 300 LED

Gas Station Under Canopy

**RECEIVED**  
City of Chesterfield  
**SEP 17 2014**

Type: <b>C2</b>	Job: <b>GASMAKT - CHESTERFIELD</b>	Approvals:							
Catalog Number:	<b>M3L 32 G3 - 700 - NW S</b>	Department of Public Services							
M3L - 700		Date:							
Series	# of LEDs	Driver	LED Color	Distribution	Voltage	Mounting	Options	Finish	Accessories

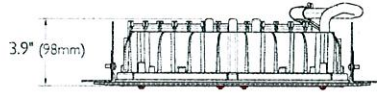
**Overall Dimensions**  
*for reference only*

**Double Skin (DS)  
Recessed Mount**  
Weight: 19.8 lbs 8.98 kgs

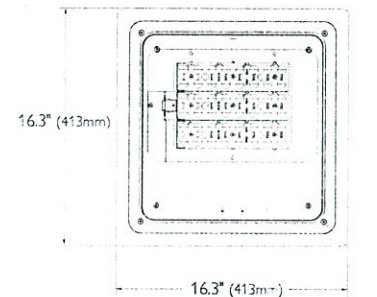
**Single Skin (SS)  
Thru Canopy Mount**  
Weight: 17.6 lbs 7.9 kgs

**Surface Mount (SM)** Weight: 18.8 lbs 8.5 kgs

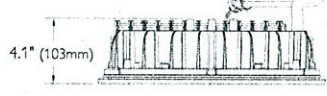
Front View



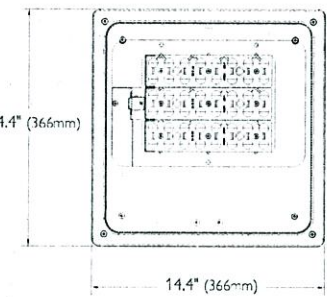
Top View



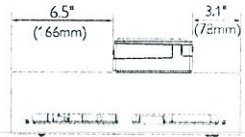
Front View



Top View



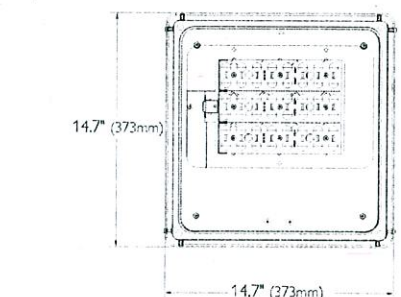
Side View



Front View



Top View



## Specifications

### Rated System Life (L<sub>70</sub>)

Driver and LED life for all 25°C configurations rated 100,000 hours. Driver and LED Life @ below 40°C:

	32G3	48G3
Single Skin/Double Skin	100,000	100,000
Surface Mount	85,000	50,000
RK-1 (Option)	80,000	42,000
Single Skin w/ EPC (option)	80,000	50,000

All values are tested to meet LM-79 & LM-80 standards.

### Construction

Integrated die cast aluminum heat management system for maximum heat dissipation and exposure to outside air flow resulting in cooling of electronics and long life. LEDs are protected by a tempered flat glass lens sealed with gasket to provide a clean dust tight optical assembly and easy luminaire cleaning. Available with 120V-277V as well as 347V-480V input voltages.

### Driver

Electronic LED driver; Class I, with Constant Current ensures all LEDs are operated consistently and are regulated with proper electrical characteristics over their entire life. The driver features include: THD < 20%, high level of voltage regulation, high power factor > 0.9, and built in thermal protection to prevent system from over-heating. Surge

protector standard. The surge protector is in accordance with IFF / ANSI C62.41.2 guidelines, with a surge current rating of 10,000 amps.

### LED And Board Array

Aluminum backed printed circuit board, with a choice of 5700K and 4000K color temperatures, with typical 70 CRI for Cool White (CW) and Neutral White (NW). The custom LED board includes specially designed tracings for efficient heat dissipation; -40°C minimum start temperature. Employs Philips LEDGINE technology & Rebel R LEDs.

### Distribution

A choice of LED optical systems available with symmetrical and asymmetrical medium beam distributions. Shine optics provide an enhanced brightness from a distance to direct visual interest and appeal. IES full-off classification providing night friendly lighting, no glare in driving direction and improved safety for drivers.

### Mounting

'SS' Single Skin (Thru Canopy) ; 'DS' Double Skin (Recessed); 'SM' Surface Mount and 'RK1' Retrofit #1 LSI Dakota (2' x 2' Box). The "Dakota" luminaire is a product manufactured by Lighting Services, Inc ("LSI"). For Single Skin mounting configuration, a six foot cord is included.

### Retrofit Accessories

'RK2-M3L' Retrofit #2 (LSI Scottsdale or similar, must be ordered separately). The "Scottsdale" luminaire is a product manufactured by Lighting Services, Inc ("LSI").  
'RK3-M3L' Retrofit #3 (LSI Richmond or similar, must be ordered separately). The "Richmond" luminaire is a product manufactured by Lighting Services, Inc ("LSI").

### Controls & Dimming

Optional Dimming luminaires are equipped with dimming driver to allow light on demand and reduce energy consumption. Dimming leads shall be exiting the luminaire for use with secondary controls.

### Listings

LED luminaire suitable for outdoor single skin or double skin canopy mounting usage; -40°C to 40°C ambient temperature, IP65 Ingress Protection with Single Skin (Thru Canopy) and Surface mounting styles. Mini 300 is listed on the DesignLights Consortium Qualified Products List (QPL).

### Finish

Standard finish is painted smooth white.

### Warranty

5-year limited warranty.  
See terms and conditions for details.



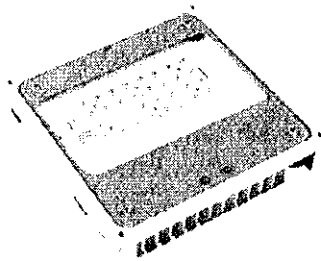
**PHILIPS**



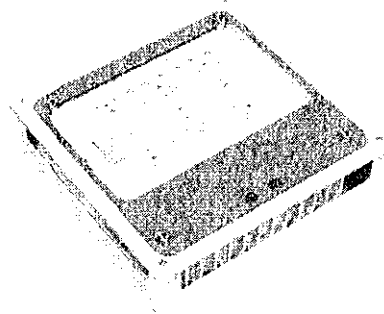
# Mini 300 LED

## Gas Station Under Canopy

Type:	Job:
-------	------



M3L-32G3 with EPC option



M3L-48G3 with EPC option

Series	# of LEDs	Driver	LED Color	Distribution	Voltage	Mounting
<input type="checkbox"/> M3L Mini 300 LED	<input type="checkbox"/> 32G3 32 LEDGINE Generation 3 (6500 lumens approx.)	<input type="checkbox"/> 700 700 mA driver	<input type="checkbox"/> CW Cool White (5700K +/- 250K)	<input type="checkbox"/> S Symmetrical <input type="checkbox"/> A Asymmetrical	<input type="checkbox"/> 120 120 volt	<input type="checkbox"/> SS <sup>4,5</sup> Single Skin (thru canopy) <input type="checkbox"/> DS Double Skin (recessed mount) <input type="checkbox"/> SM Surface Mount <input type="checkbox"/> RK1 <sup>1</sup> Retrofit Kit (LSI Dakota (2' x 2' Box))
	<input type="checkbox"/> 48G3 48 LEDGINE Generation 3 (9500 lumens approx.)		<input type="checkbox"/> NW Neutral White (4000K +/- 250K)		<input type="checkbox"/> 208 208 volt <input type="checkbox"/> 240 240 volt <input type="checkbox"/> 277 277 volt <input type="checkbox"/> 347 347 volt <input type="checkbox"/> 480 480 volt <input type="checkbox"/> UNV Universal Voltage (270-277, restrictions apply)	

Options	Finish	Accessories (must be ordered separately <sup>8</sup> & field installed)
<input type="checkbox"/> F1 <sup>2</sup> Single Fusing (120, 277, 347V) <input type="checkbox"/> F2 <sup>2</sup> Double Fusing (208, 240, 480V) <input type="checkbox"/> DD <sup>3</sup> 0-10V Dimming Driver (includes dimming driver with leads exiting the luminaire for secondary controls) <input type="checkbox"/> EPC <sup>4</sup> Environmental Protection Cover (single skin only)	<input type="checkbox"/> WHT Smooth white powder coat	<b>General Accessories</b> <input type="checkbox"/> F1-KIT Single Fusing Field Install Kit (120, 277, 347V) <input type="checkbox"/> F2-KIT Double Fusing Field Install Kit (208, 240, 480V)  <b>Retrofit Accessories</b> <input type="checkbox"/> RK2-M3L <sup>4</sup> Retrofit Kit #2 (LSI Scotsdale or similar) <input type="checkbox"/> RK3-M3L <sup>5</sup> Retrofit Kit #3 (LSI Richmond or similar) <input type="checkbox"/> M3L-SCN <sup>6</sup> Install Silicone

**Notes:**

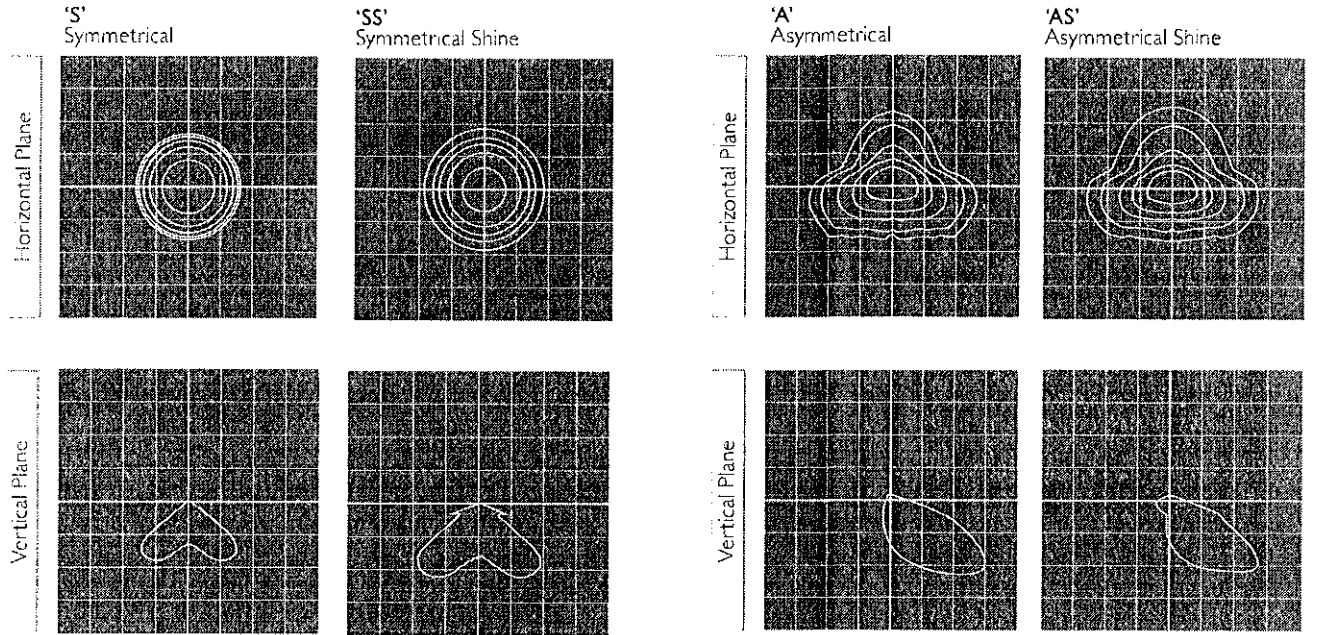
- 1) RK1 Retrofit kit designed for field replacement of LSI's Dakota surface mount luminaire only. Refer to installation instructions IS801571 for details. The "Dakota" luminaire is a product manufactured by Lighting Services, Inc. ("LSI").
- 2) Specify voltage. Fusing not available with UNV voltage option.
- 3) Dimming driver options are only available in 120-277 V. Dimming driver included.
- 4) RK2-M3L is a retrofit kit for the single skin mount. Designed to replace an LSI Scotsdale recessed luminaire or similar product. Can accommodate an existing cutout up to 13.1" x 13.1". Refer to installation instructions IS801559 for details. The "Scotsdale" luminaire is a product manufactured by Lighting Services, Inc. ("LSI").
- 5) RK3-M3L is a retrofit kit for the single skin mount. Designed to replace an LSI Richmond luminaire or similar product. Can accommodate an existing cutout up to 18.4" x 13.1". Refer to installation instructions IS801558 for details. The "Richmond" luminaire is a product manufactured by Lighting Services, Inc. ("LSI").
- 6) Available only for thru canopy mounting. Vented sheet metal environmental top cover provides protection from direct sun and debris accumulation.
- 7) Not available with RK1 retrofit kit.
- 8) Silicone may be required for installation. Can be provided by others as needed. Refer to installation instructions for details.

# Mini 300 LED

## Gas Station Under Canopy

Type: \_\_\_\_\_ Job: \_\_\_\_\_

### Optics (for distribution pattern reference only)



### Technical Performance Matrix

Cat No.	Optic (distribution)	Total System Wattage @ 25°C ambient	Fixture Lumens @ 25°C ambient	Efficacy (lm/W) @ 25°C ambient	Fixture Lumens @ 40°C ambient	Efficacy (lm/W) @ 40°C ambient	Color Temperature (CCT)
M3L-32G3-700-CW	Symmetrical (S)	72	6,497	90	6,367	88	5700K
	Symmetrical Shine (SS)	72	6,425	89	6,296	87	5700K
	Asymmetrical (A)	72	6,149	85	6,026	84	5700K
	Asymmetrical Shine (AS)	72	6,148	85	6,025	84	5700K
M3L-48G3-700-CW	Symmetrical (S)	104	10,240	98	10,035	96	5700K
	Symmetrical Shine (SS)	104	10,086	97	9,894	95	5700K
	Asymmetrical (A)	104	9,587	92	9,391	90	5700K
	Asymmetrical Shine (AS)	104	9,679	93	9,485	91	5700K
M3L-32G3-700-NW	Symmetrical (S)	72	6,873	95	6,735	94	4000K
	Symmetrical Shine (SS)	72	6,670	92	6,478	90	4000K
	Asymmetrical (A)	72	6,192	86	6,063	84	4000K
	Asymmetrical Shine (AS)	72	6,289	87	6,160	86	4000K
M3L-48G3-700-NW	Symmetrical (S)	104	10,286	99	10,080	97	4000K
	Symmetrical Shine (SS)	104	10,131	97	9,928	95	4000K
	Asymmetrical (A)	104	9,626	93	9,433	91	4000K
	Asymmetrical Shine (AS)	104	9,726	94	9,531	92	4000K

Always download the current photometric files at [www.philips.com/luminaires.com](http://www.philips.com/luminaires.com) for the most accurate technical and performance data.

### Predicted Lumen Depreciation Data (L70)

Predicted Lumen Depreciation Data*			
Ambient Temperature	TM-21 Calculated L <sub>70</sub> hrs <sup>-1</sup> **	Reported L <sub>70</sub> per TM-21 <sup>10,11</sup>	Lumen Maintenance @ 60,000 hours
40°C	316,000 hrs	>10,000	95.9%

9. Calculated performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

10. L70 is the predicted time when LED performance deprecates to 70% of initial lumen output.

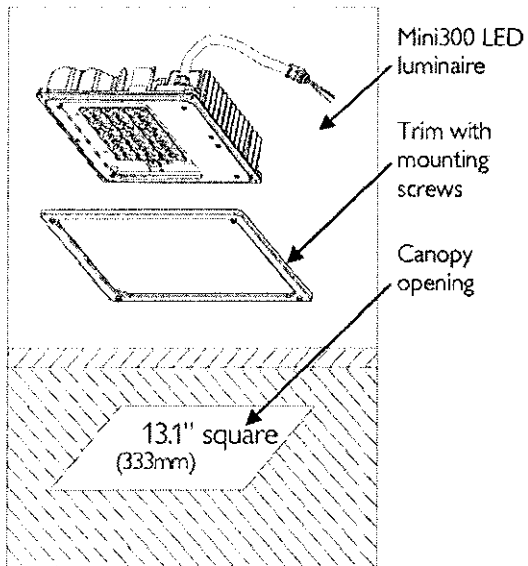
11. Reported per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

# Mini 300 LED

## Gas Station Under Canopy

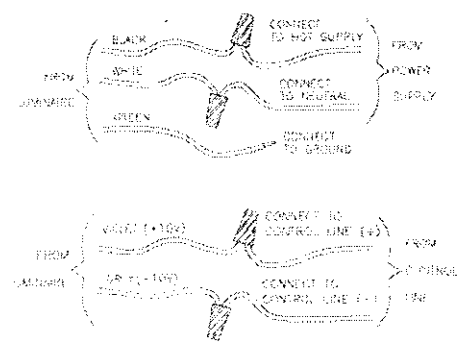
Type: \_\_\_\_\_ Job: \_\_\_\_\_

### Mounting Details: 'SS' Single Skin - Thru Canopy

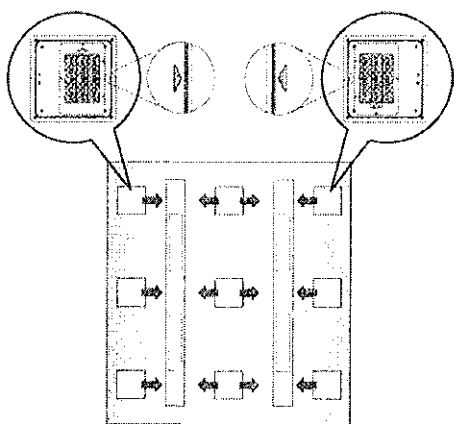


Note:  
Refer to installation instructions IS801554 for complete installation details.

### Wiring Diagram



### Asymmetrical Beam Orientation



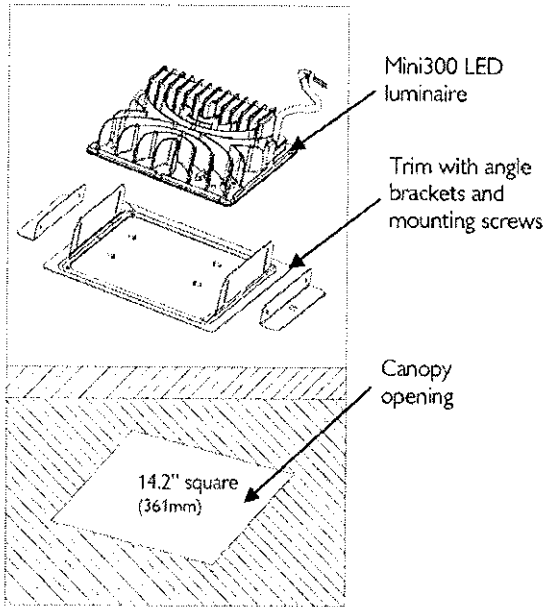
**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

# Mini 300 LED

## Gas Station Under Canopy

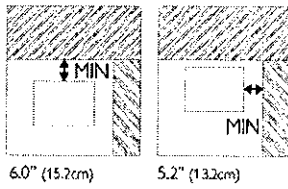
Type: \_\_\_\_\_ Job: \_\_\_\_\_

### Mounting Details: 'DS' Double Skin - Recessed Mount



**Note:**  
Refer to installation instructions IS801556 for complete installation details.

#### Spacing Requirements



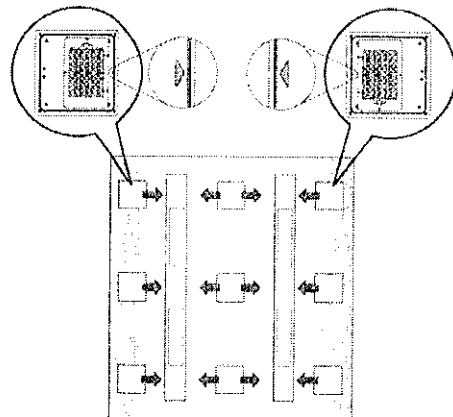
#### Wiring Diagram



**For dimming luminaires only:**



#### Asymmetrical Beam Orientation



**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

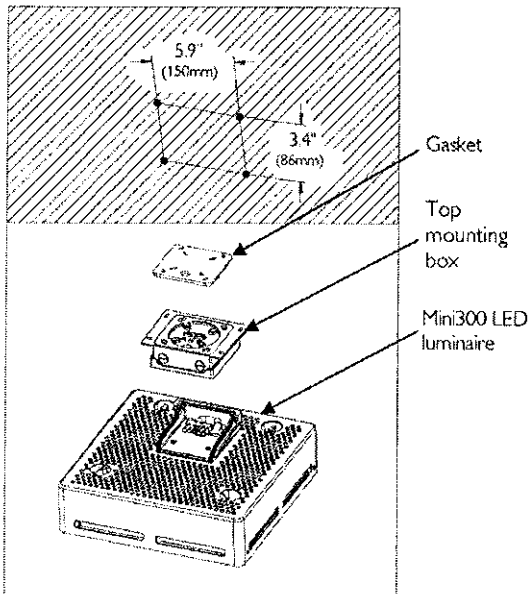


# Mini 300 LED

## Gas Station Under Canopy

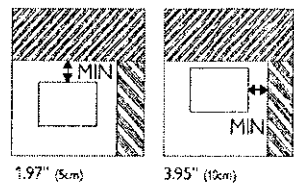
Type: \_\_\_\_\_ Job: \_\_\_\_\_

### Mounting Details: 'SM' Surface Mount

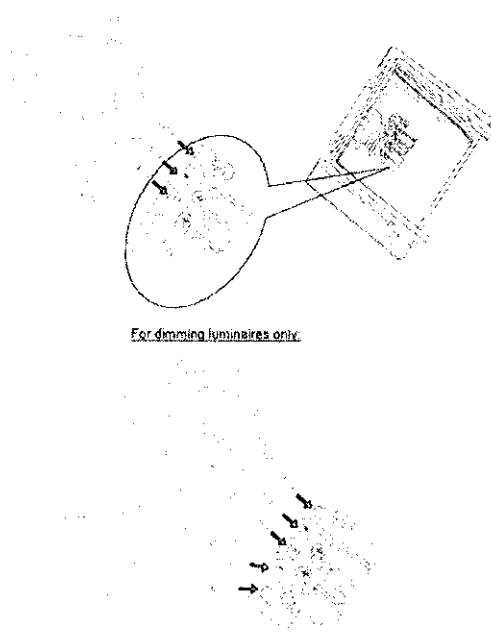


**Note:**  
Refer to installation instructions IS801557 for complete installation details.

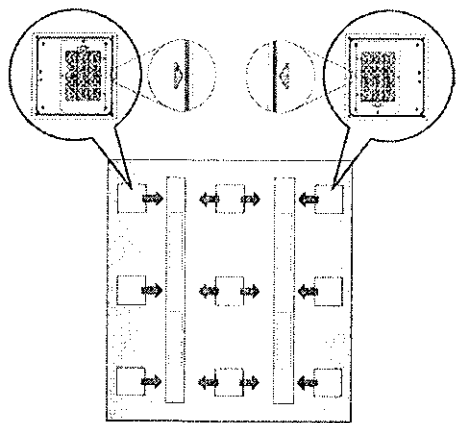
### Spacing Requirements



### Wiring Diagram



### Asymmetrical Beam Orientation



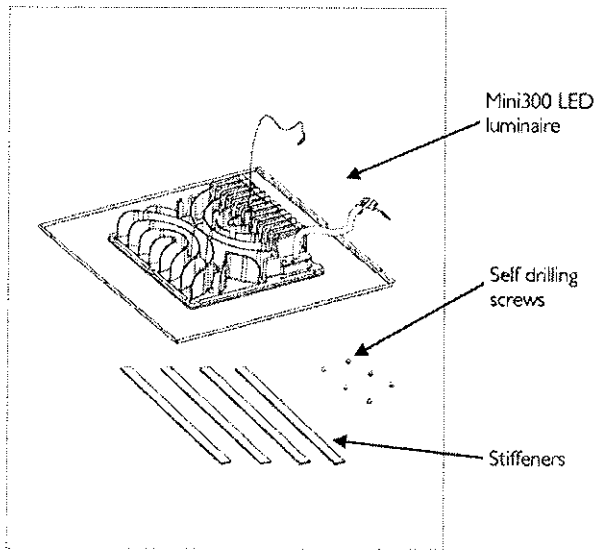
**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

# Mini 300 LED

## Gas Station Under Canopy

Type:	Job:
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### Mounting Details: Retrofit - 'RK1' Retrofit #1<sup>1,2</sup> LSI Dakota (2' x 2' Box)



**Notes:**

1. Refer to installation instructions IS801571 for complete installation details.
2. The "Dakota" luminaire is a product manufactured by Lighting Services, Inc ("LSI").
3. 'RK1' is designed for use with LSI's Dakota only.
4. 3. 0-10V Dimming Driver not available with RK1 retrofit kit.

**WARNING:** – Risk of fire or electric shock. Luminaires wiring, power supply, or other electrical parts may be damaged when drilling for installation of retrofit assembly hardware. Inspect wiring and components for damage.

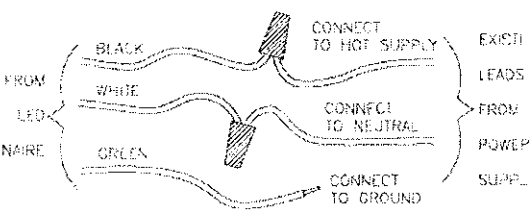
**WARNING:** – Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of luminaires electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

**WARNING:** – Risk of fire or electric shock. Install this kit only in the luminaires that have the construction features and dimensions shown in the photographs and/or drawings.

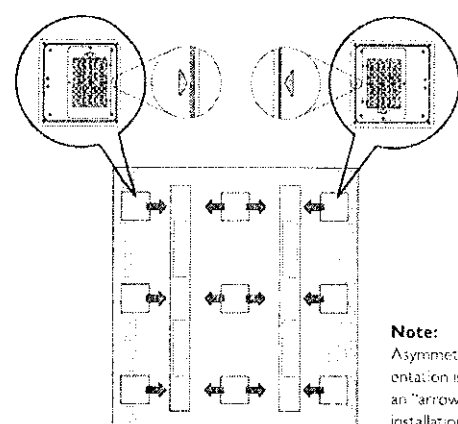
**WARNING:** – To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an electrical enclosure of wiring or electrical components.

### Wiring Diagram



### Asymmetrical Beam Orientation



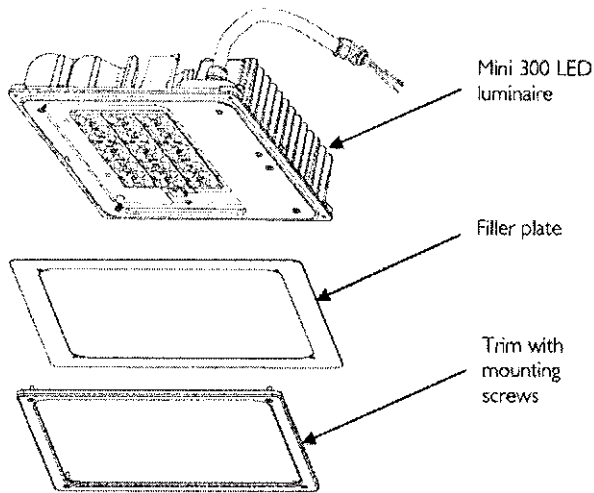
**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

# Mini 300 LED

## Gas Station Under Canopy

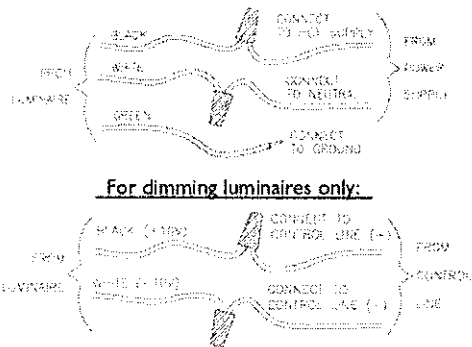
Type: \_\_\_\_\_ Job: \_\_\_\_\_

Retrofit Accessory Details: 'RK2-M3L' Retrofit #2<sup>1,2</sup> (LSI Scottsdale or similar, must be ordered separately)

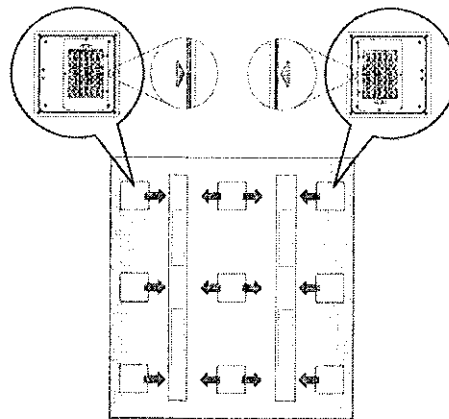


- Notes:**
1. Refer to installation instructions IS801559 for complete installation details.
  2. The "Scottsdale" luminaire is a product manufactured by Lighting Services, Inc ("LSI").
  3. 'RK2' designed to retrofit LSI Scottsdale semi-recessed luminaire or similar product with similar dimensions.

### Wiring Diagram



### Asymmetrical Beam Orientation



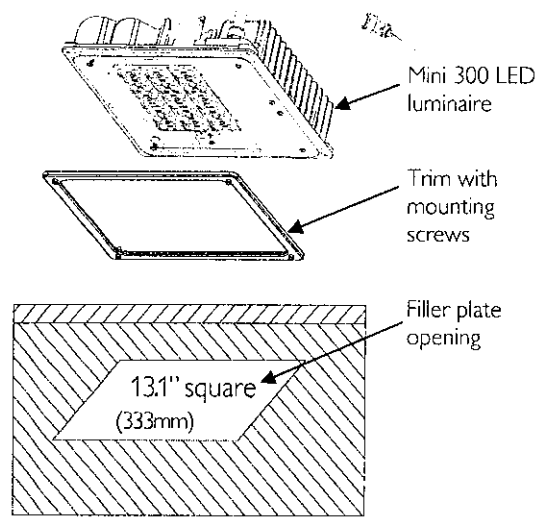
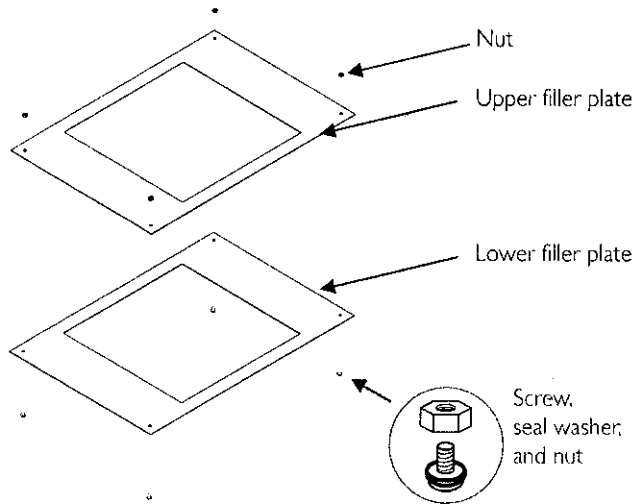
**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

# Mini 300 LED

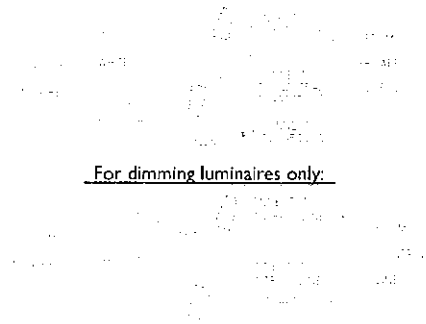
## Gas Station Under Canopy

Type: \_\_\_\_\_ Job: \_\_\_\_\_

Retrofit Accessory Details: 'RK3-M3L' Retrofit #3<sup>1,2</sup> (LSI Richmond or similar; must be ordered separately)

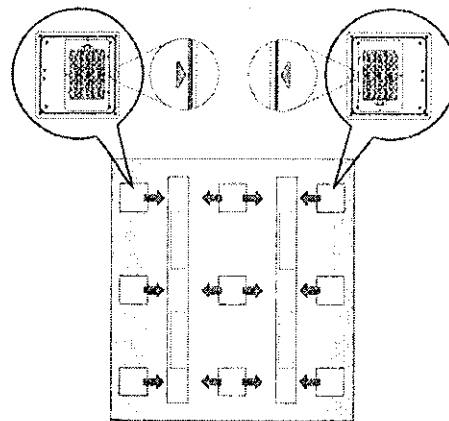


### Wiring Diagram



For dimming luminaires only:

### Asymmetrical Beam Orientation



**Note:**  
Asymmetrical Beam Orientation is denoted with an "arrow" to guide proper installation.

- Notes:
1. Refer to installation instructions IS801558 for complete installation details.
  2. The "Richmond" luminaire is a product manufactured by Lighting Services, Inc ("LSI").
  3. 'RK3' designed to retrofit LSI Richmond recessed luminaire or similar product with similar dimensions.