

www.cityofrhome.com | citysecretary@cityofrhome.com

NOTICE OF SPECIAL MEETING OF THE RHOME PLANNING & ZONING COMMISSION Meeting Date: Monday, August 22, 2022

Regular Session Meeting Time: 6:00 pm

Meeting Location: Rhome Community Center, 261 North School Road, Rhome, TX 76078

LIVE Streaming: In an effort to be as accessible as possible, we will be Live Streaming the meeting using GoToMeeting.

Please call 1 (571) 317-3116/ Access Code 492-970-565

Toll Free 1 866 899 4679

Regular Session – 6:00pm

Call to Order and Establish a Quorum

Public Presentations and Input

The Commission is not permitted to take action on or discuss any presentations made to the Commission at this time concerning an item not listed on the agenda. The Commission will hear comments on specific agenda items during this designated time.

If you are attending the meeting via **Live Streaming**, and you would like to make a Public Presentation, you must email Shaina Odom at <u>citysecretary@cityofrhome.com</u> prior to **4:00pm on the day of meeting** to be recognized.

If you are attending the meeting **in person**, sign up forms will be available at the meeting to fill out and submit prior to meeting start time.

Regular Agenda – Old Business

A. Discussion and any necessary action regarding the minutes of the July 11, 2022 Planning & Zoning Commission.

Public Hearing

- B. Planning and Zoning Commission to conduct a Public Hearing to consider a replat by the City of Rhome, Texas of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078
- C. Planning and Zoning Commission will hold a Public Hearing on Monday, August 22, 2022, and The City of Rhome City Council will hold a Public Hearing on Thursday August 25, 2022 for the purpose of hearing comments regarding a text amendment to the City of Rhome Zoning Code that will amend the sections to create the uses of "Brewery" and "Small Event Venue", Defining said uses and permitting said uses withing the "C" Commercial Zoning District, and to define the use to "Tourist Home (Bed and Breakfast)"; providing a cumulative clause; providing a severability

clause; providing a penalty clause; providing a savings clause; providing a publication clause; and providing for an effective date.

<u>Regular Agenda – New Business</u>

- D. Discussion and any necessary action regarding a request for replat by the City of Rhome, Texas of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR just west of Taco Casa located at 201 School Road, Rhome, Texas 76078 (City Administrator)
- E. Discussion and any necessary action regarding text amendment to the City of Rhome Zoning Code that will amend the sections to create the uses of "Brewery" and "Small Event Venue", Defining said uses and permitting said uses withing the "C" Commercial Zoning District, and to define the use to "Tourist Home (Bed and Breakfast)"; providing a cumulative clause; providing a severability clause; providing a penalty clause; providing a savings clause; providing a publication clause; and providing for an effective date.
- F. Discussion and any necessary action regarding QT Site Plan (City Administrator)

Future Agenda Items

<u>Adjourn</u>

A quorum of Council Members may be present at this meeting

*Pursuant to the Open Meetings Act, Chapter 551, Section 551.071 of the Texas Government Code, the Planning & Zoning Commission may convene into executive session at any time during the meeting if any of them need to seek advice from the City Attorney concerning any item on this agenda, to discuss pending and contemplated litigation, or a settlement offer, or to discuss a matter in which the duty of the city's attorney to the City under the Texas Disciplinary Rules of Professional Conduct of the State Board of Texas clearly conflicts with Chapter 551.

The Planning & Zoning Commission may vote and / or act upon each of the items listed in this Agenda. Except for Public Presentation and Input and items in the Agenda designated as public hearing or otherwise designated for public input, there will be no public input during the course of this meeting without express authorization from the presiding officer.

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours prior to the meeting. Please contact City Hall at 817-636-2462 for further information.

CERTIFICATION: I do hereby certify that the above Planning & Zoning Commission Agenda was posted on the designated bulletin board located at City Hall, 501 South Main Street, Rhome, Texas no later than 6pm on August 19, 2022.

Shaina Odom, City Secretary

I certify that the attached notice and agenda of items to be considered by the Rhome Planning & Zoning Commission was removed by me from the designated bulletin board located at City Hall, 501 South Main Street, Rhome, Texas, on the ______ day of ______, 2022.

, Title:



Physical Address: 501 South Main Street Mailing Address: PO Box 228 Rhome, Texas 76078 Telephone: 817-636-2462 | Metro: 817-638-2758 www.cityofrhome.com cityadministrator@cityofrhome.com

AGENDA ITEM A



www.cityofrhome.com | citysecretary@cityofrhome.com

MINUTES OF REGULAR MEETING OF THE RHOME PLANNING & ZONING COMMISSION Meeting Date: Monday, July 11, 2022 Regular Session Meeting Time: 6:00pm

Meeting Location: Rhome Community Center, 261 North School Road, Rhome, TX 76078

LIVE Streaming: In an effort to be as accessible as possible, we will be Live Streaming the meeting using GoToMeeting. Please call 1 (571) 317-3116/ Access Code 434-276-173 Toll Free 1 866 899 4679

Regular Session – 6:00pm

Call to Order and Establish a Quorum

Chairman Knight called the meeting to order at 6 pm

Public Presentations and Input

The Commission is not permitted to take action on or discuss any presentations made to the Commission at this time concerning an item not listed on the agenda. The Commission will hear comments on specific agenda items during this designated time.

If you are attending the meeting via **Live Streaming**, and you would like to make a Public Presentation, you must email Shaina Odom at <u>citysecretary@cityofrhome.com</u> prior to **4:00pm on the day of meeting** to be recognized.

If you are attending the meeting **in person**, sign up forms will be available at the meeting to fill out and submit prior to meeting start time.

Regular Agenda – Old Business

A. Discussion and any necessary action regarding the minutes of the May 2, 2022 Planning & Zoning Commission.

Commissioner Knight made a motion to approve the minutes as presented, commissioner King seconded the motion. Motion passed unanimously.

Public Hearing

B. Planning and Zoning Commission to conduct a Public Hearing to consider a replat by the City of Rhome, Texas of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078 Commissioner Knight opened the Public Hearing at 6:04 pm and recessed until the next scheduled Planning and Zoning meeting on August 1, 2022 at 6 pm. Commissioner Knight closed the Public Hearing at 6:04 pm

Regular Agenda – New Business

C. Discussion and any necessary action regarding a request for replat by the City of Rhome, Texas of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078 (City Administrator)

Commissioner Knight recessed this agenda item to the next scheduled Planning and Zoning meeting on August 1, 2022

D. Discussion and any necessary action regarding Site Plan for a new residential home legally described as being Legal Acres: 0.161, Lot: 1R, Blk: 2 BC Rhome Addition, also known as 298 E Aurora Street, Rhome, TX 76078 (City Administrator)

Commissioner Knight made a motion to recommend approval to the City Council for 298 E Aurora Site Plan. Commissioner King seconded the motion. Motion passed unanimously.

Future Agenda Items

Chair and Vice Chair appointment at next scheduled meeting – City Secretary

Ordinance regarding lighting throughout the City – Steven Knight

Rezoning for City – Christi Cox

<u>Adjourn</u>

Commissioner Cox made a motion to adjourn, Chairman Knight seconded the motion. Motion passed unanimously. Meeting adjourned at 6:11 pm

Steve Knight, Chair Shaina Odom City Secretary



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AGENDA ITEM D



Agenda Commentary

Meeting Date: August 1, 2022

Department: P&Z

Contact: Cynthia Northrop

Agenda Item: E. Discussion and any necessary action regarding a request for replat of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078

Type of Item:	_Ordinance _	Resolution	Contract/	Agreement	Public Hearing	
_XPlat	_	Discussion &	Direction	Other		

Summary-Background: The City of Rhome, working with QT, annexed the property on the hard corner of Hwy 287 NB Service Road and BC Rhome and approved a re-zoning request. The action before the Planning & Zoning Commission is the replat; to combine the two pieces of property described above the QT store site.

Public Notice was published and 200 ft notices were sent out, as required.

City staff and engineering have reviewed the replat. This item has been in recess for P&Z Commission until August 1 and for City Council until August 11, 2022.

Funding Expected: YesNo	Revenue N/A	Expenditure	e _XN/A	Budgeted Item:								
Funding Account: _			Amount:									
Legal Review Required:	N/A	_XRequired	Date Completed:									
Engineering ReviewX_	ingineering ReviewX FD ReviewFD PD ReviewX PW Review _X											
Supporting Documents a	ttached: Yes											

Recommendation: Recommend P&Z Commission to recommend Council approve the replat



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APPLICATION FOR FINAL PLAT

Proposed Subdivis	ion Name: QT 1	1873 Addition									
Property Owner Ir	formation										
Name: QT S	outh, LLC – Attn: C	raig Honeywell									
Address: 4705	5 South 129 th East A	Avenue, Tulsa, OK	74134								
Phone Number:	817-786-3182	Email:	choneywe@qu	iktrip.com							
Applicant Informa	tion – if different f	rom Property Ow	ner								
Name: k	Kirkman Engineerin	g – Attn: Jonathar	n Schindler								
Address: 5	Address: 5200 State Highway 121, Colleyville, TX 76034										
Phone Number:	817-488-4960	Email:	Jonathan.schin	dler@trustke.com							
Developer Informa	ation										
Name: Sam	e as Owner										
Address:											
Phone Number:		Email:									
Engineer Informat	ion										
Name: Same	e as Applicant										
Address:											
Phone Number:		Email:									
Legal	Lot 1 Block A O	1873 Addition									
Description:		10/0/10000									
Property ID:	791344 & 744890	0									
Type of											
Proposed	SE Residential	□ MF		🗙 Commercial/	□ Other						
Development:		Residential		Industrial							
Total # of Acres		Total Number		Current Zoning							
in Plan:	4.854	of Lots in Plan:	1	Classification:	PD						
The following is to	he completed only	, if a nerson other	than the proper		is application:						
I Craig Honeywell	– OT South LLC	property owner of	f the previously	described property of	lo hereby certify						
that I have given	my permission to	Ionathan Schind	ller – Kirkman F	ingineering, to mak	e this Final Plat						
application. Signat	ture of property ov	vner: malen		<u>, and an </u>							
Basic Fee for Final	Plat:				\$ 400.00						
+ Single Fami	ily: Number of Lot	s:	at \$20 per lot	for the first 10							
lots and \$7	.50 for each additi	onal lot, plus \$25.	00 per acre for a	reas not platted	\$ 0						
+ into lots				_	\$0						
+ Commercia	I/Industrial: \$50.0	0 per acre; Numb	er of Acres: <u>4.85</u> 4	<u>4</u>	Ş 242.70						
Multi Fami	l y/Duplex: Numbe	r of Units:	at	\$25.00 per unit	4						
				Application Fee:	Ş 642.70						

I hereby certify that I am, or represent, the legal owner of the property described above and do hereby submit this Final Plat.

Date: 7/6/2022

Printed Name:	Jonathan Schindler
Signature:	Jonathan Schindler

Kimley »Horn

July 29, 2022

Jonathan Schindler, P.E. Kirkman Engineering 5200 State Highway 121 Colleyville, Texas 76034

RE: Quick Trip Store #1873 Re-Plat Review (Intersection of HWY 81/287 and HWY 114) KHA No. 061274207

Dear Mr. Schindler:

As requested, Kimley-Horn and Associates, Inc. has reviewed the Re-Plat submittal for Quick Trip Store #1873 in accordance with the *City of Rhome Code of Ordinances*. The Re-Plat appears to be in general conformance with the *City of Rhome Code of Ordinances* and ready for approval at Planning and Zoning Commission and City Council.

For review and acceptance by the City of Rhome, it is the developer's responsibility to confirm with the City Administrator for placement on the agenda for Planning and Zoning and subsequently City Council. The Plat is currently anticipated to be on agenda for the August 1st Planning and Zoning Meeting. Please provide 10 paper copies of the Re-Plat submittal to the City of Rhome prior to this meeting.

If you have any questions regarding your Re-Plat submittal, please do not hesitate to call.

Very truly yours, KIMLEY-HORN AND ASSOCIATES, INC. Texas Registration No. F-928

P.E.

Kyle Welden, P.E. KLW/sdw Copy to: Ms. Cynthia Northrop, City Administrator Ms. Shaina Odom, City Secretary

Mr. Eric Debus, Chief of Police

817 335 6511



TO:	Wise County Messenger	DATE:	June 20, 2022
FROM:	Shaina Odom	PAGES:	1
	City Secretary		
RUN	1 Time:	SUBJECT:	Legal Notices
DATE:	Wednesday, June 22, 2022		

CITY OF RHOME, TEXAS

NOTICE OF PUBLIC HEARING PROPOSED REPLAT

The Rhome Planning & Zoning Commission and the City Council of the City of Rhome, Texas will conduct a Public Hearing on Monday, July 11, 2022 at 6 pm and a Public Hearing on Thursday, July 14, 2022, respectively, where all interested persons will have the right to appear and be heard on the proposed replat by the City of Rhome, Texas of two tracts of land; one tract being legally described as Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome; and one tract of land being legally described as Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078.

Please check <u>www.cityofrhome.com</u> for meeting details. You are welcome to attend all Public Hearings to provide oral testimony. Written testimony is also accepted, addressed to City Secretary, City of Rhome, PO Box 228, Rhome, Texas 76078 or by email to <u>citysecretary@cityofrhome.com</u>. If you have any questions, please contact City Administrator Cynthia Northrop at 817-636-2462 or <u>cityadministrator@cityofrhome.com</u>.



501 South Main Street | PO Box 228 Rhome, Texas 76078 Telephone: 817-636-2462 www.cityofrhome.com | citysecretary@cityofrhome.com

June 23, 2022

Commercial Services TXU Energy Retail Company LLC PO Box 650764 Dallas, Texas 75265-0764

RE: Public Hearings for Replat Request

Dear Commercial Services,

The City of Rhome Planning and Zoning Commission will hold a Public Hearing on Monday, July 11, 2022 at 6:00pm for the purpose of hearing comments regarding a change to the plat of properties being legally described as:

- a tract of land, legal description being Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome just west of Taco Casa located at 201 School Road, Rhome, Texas 76078.
- a tract of land, legal description being: Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR and is located On BC Rhome just west of Taco Casa located at 201 School Road, Rhome, Texas 76078.

In addition, the City of Rhome City Council will hold a Public Hearing on Thursday, July 15, 2022 at 6:00pm on the same matter.

Both meetings will be held at the Rhome Community Center, 261 North School Road, Rhome, Texas.

You are welcome to attend both Public Hearings to provide oral testimony. Both agendas will be posted no later than 72 hours prior to the meeting at <u>http://www.cityofrhome.com/calendar.html</u>.

The agendas will have call in information for LIVE streaming. If you prefer, you may return the enclosed Notification Reply Form in person to City Hall, 501 South Main Street, Rhome, Texas, by mail to PO Box 228, Rhome, Texas 76078, or by email to City Secretary at <u>citysecretary@cityofrhome.com</u>. The City Secretary will read your comments at both meetings.

Please do not hesitate to contact City Administrator Cynthia Northrop at 817-636-2462 or by email at <u>cityadministrator@cityofrhome.com</u> if you have any questions or concerns regarding this request.

Sincerely,

Shaina Odom City Secretary Enclosures



501 South Main Street | PO Box 228 Rhome, Texas 76078 Telephone: 817-636-2462 www.cityofrhome.com | citysecretary@cityofrhome.com

	PUBLIC HEARING NOTIFICATION REPLY
Public Hearing Notice for Property:	 a tract of land, legal description being Acres: 3.600, Abst: A-634 MEP & PRR and is located on the SE corner of US Highway 287 Northbound Service Road and B.C. Rhome - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078. a tract of land, legal description being: Acres: 1.253, Lot: 1, Blk: 1, Subd: TACO CASA RHOME ADDITION, Abst: A-634 MEP & PRR and is located on B.C. Rhome - just west of Taco Casa located at 201 School Road, Rhome, Texas 76078.
Type of Request:	Replat
P&Z PH Date	Monday, July 11, 2022 at 6:00pm
Council PH Date:	Thursday, July 15, 2022 at 6:00pm
	PLEASE PRINT LEGIBLY
Property Owner	Name:

Property Owner Address:	

Property Owner Telephone:

Property Owner Email:

PLEASE CHECK ONE

I am IN FAVOR of the Proposed Request

I am **OPPOSED** to the Proposed Request

COMMENTS

Property Owner Signature





11	12	2		13	14	1		15	 		_
STATE OF TEXAS	§			SURVEYOR'S CE	RTIFICATE						
COUNTY OF WISE WHEREAS QT SOUTH, LLC is t	s the owner of all of	Lot 1, Block A d	of Taco Casa	Know All Men B	y These Present:					BCS	Q
Rhome Addition, an addition in to the plat recorded under C Texas, said Lot 1 being conveye Number 202121330, Official Pu	the City of Rhome, V abinet D, Slide 547, ed to QT South, LLC a ublic Records, Wise C	Vise County, Texa Plat Records, V as recorded unde County, Texas, (C	as, according Wise County, er Document D.P.R.W.C.T.).	That I, John H. notes made a p that the corne	Barton III, do herb part thereof from a r monuments sho	by certify that I an actual and own theron w	I prepared thi accurate surv vere properly	s plat and the field rey of the land and placed under my	BART SUI	TON CHAPP RVEYING	
and being all of a tract of la Number 634, in the City of Rł tract of land described by dee	home, Wise County, d to QT South, LLC a	P. & P.R.R. Surv Texas, and bein as recorded under	vey, Abstract ng that same er Document	of Rhome, Texas	s. /ap: June 22, 202 2	2			5200 St Colleyv Phone	tate Highway 121 ville, Texas 76034 e: 817-864-1957	D
Number 202120734, (O.P.R.W described by metes and bound Coordinate System, Texas Nort 1983 (NAD '83)):	7.C.T.) the subject to ds as follows (bearin th Central Zone (420	ract being more ngs are based on 2) North Americ	e particularly n State Plane can Datum of						info TBPLS	@bcsdfw.com Firm #10194474	
BEGINNING at a 1/2 inch rebar the northeast corner of said northernmost northeast corner the south right-of-way of State	with pink cap stamp QT South tract (2 r of the herein descri	ed, "BARTON CH 02120734), sam ibed tract, said p	HAPA" set for ne being the point being in	John H. Barton I SURVEYOR'S NO	II, RPLS# 6737 DTES:	_					Ν
State of Texas Final Right-Of-Way of State THENCE South 15 degrees 02 n QT South tract (202120734), a	ay Map (project num ninutes 08 seconds E distance of 3.65 feet	ber 352-2-9); ast, with the east to a 1/2 inch re	st line of said	1. Bearings an Central Zor surface wit	re based on the le (4202) North An h a combined scale the lies within Zone	State Plane C nerican Datum e factor of 1.00	of 1983 (NAD 0167052.	stem, Texas North) '83), distances are			
stamped, "BRITTAIN CRAWFOR THENCE with the perimeter and 1. South 71 degrees 37 minu	D" found for the nort d to the corners of sa ites 23 seconds East,	thwest corner of id Lot 1, the follo a distance of 72	said Lot 1; owing calls: 2.58 feet to a	County, Te effective da plotting.	ate of December 2	ated Areas, m 16, 2011, via s	nap no. 4849 scaled map lo	7C0500D, with an action and graphic		CT NO 1 2020 040 002	
1/2 inch rebar with cap beginning of a tangent cu with a delta angle of 06 de South 74 degrees 48 minut	stamped, "BRITTAIN irve to the left, having egrees 22 minutes 40 tes 43 seconds East a	I CRAWFORD" f ng a radius of 1) seconds, whose a distance of 161	found at the .,450.50 feet, e chord bears 37 feet	3. Monument 4. Elevations a 5. Site addres	s are found unless are North America s is "School Road	specifically des n Vertical Datu d" and "HWY	signated as se Im of 1988 (NA (287" Per Wis	et. AVD '88) se County Appraisal		Z	M
 Along said tangent curve inch rehar with can stamp 	to the left, an arc le	ngth of 161.46 f	feet to a 5/8	District. 6. No zoning r	eport or letter was	s provided to s	urveyor at tim	ne of survey.		1110 334	_
3. South 11 degrees 28 minu 5/8 inch rebar with cap sta	tes 04 seconds West amped, "JDJR" found;	, a distance of 72	2.86 feet to a	7. Site is loca State Highv 8. No marked	ted at the southe vay 114 (B.C. Rhom I parking spaces v	east intersection ne Avenue) were observed	on of U.S. Hig d on site duri	ghway 81/287 and ing the process of	73	E ADD F THE CT# 6 TEXAS	L
4. South 13 degrees 39 minut 5/8 inch rebar with cap sta	tes 42 seconds East, imped, "JDJR" found;	a distance of 186	6.87 feet to a	conducting 9. No evidenc	the fieldwork. e of recent earth r	moving work, k	building const	ruction, or building	100		
a point within a tree for th in the east line of said QT found bears North 79 degr	nes S6 seconds West ne southwest corner (South tract (202120 rees East, a distance c	of said Lot 1, said of said Lot 1, said 0734), from whic of 1.26 feet;	d point being ch a 60D nail	additions w 10. No wetlar during the	vas observed during nd delineation ma process of conduct	g the process c arkers were ob ting fieldwork	of conducting oserved on th	fieldwork. e subject property	0	SA RH ND OU 7, ABS	
THENCE with the perimeter (202120734), the following calls	and to the corne s:	rs of said QT	South tract	NOTE REGARDIN Utility locations	NG UTILITIES are per observed e	evidence and tl	he below sour	rces		P CA F LA WISE	К
1. South 15 degrees 02 minur point from which a 3/8 ind of land described by deed	tes 08 seconds East, ch rebar found for th to Rhome No. 1 Join	a distance of 421 ne northeast corr nt Venture as rec	1.06 feet to a ner of a tract corded under	DigTess - Ticket The below me Associated resp	#2071608264 mbers were inclu onse/lack of respo	ides as part o inse is shown b	of the above below:	referenced ticket.		, TACC ACT O R. SUI	—
Volume 156, Page 381, distance of 1.70 feet;2. South 89 degrees 38 minu	(O.P.R.W.C.T.) bears	south 89 degr	h line of said	ZAYO GROUATMOS MII	JP DTX	(MAF (NOT OBSE	RKED) FIFIED "ALL C ERVED)	"LEAR" - MARKING	uik	OCK A A TR & P.R. OF RI	J
found with cap stamped, ' distance of 2.43 feet, sa Highway 81/287, having a	"ESLLC 1869-5627" build be a point for the formation of t	ears South 74 de he east right-of- nt-of-way per St	egrees East, a -way of U.S. ate of Texas	 CENTURYLI ONCOR ELE Maps or Plans - 	NK CTRIC DISTRIBUTIO City of Rhome Ope	(MAF) ON (NOF) en Records Req	RKED) RESPONSE) quest #2020-23	35	Q	1, BL AND AND CITY	_
Final Right-Of-Way Map (p the beginning of a non-1 2,689.79 feet, with a del whose chord bears Nort	project number(s) 13- tangent curve to th ta angle of 02 degr h 07 degrees 55 m	-8-36 and 13-8-3 ne right, having ees 04 minutes ninutes 18 seco	 34) and being a radius of 40 seconds, nds West, a 	Utility Map prov CERTIFICATE OF	vided by the City of APPROVAL BY TH	f Rhome IE CITY COUNC	CIL OF THE CIT	Y OF RHOME:		LOT	н
 distance of 97.54 feet; 3. Along said non-tangent cu "X" cut set in concrete; 	rve to the right, an a	arc length of 97.	55 feet to an	APPROVED TH COUNCIL OF TH	IS DAY OF_ E CITY OF RHOME,	, TEXAS.	, 202	, BY THE CITY			
 4. North 02 degrees 42 minur brass monument found; 5. North 11 degrees 58 minur 	tes 20 seconds East, tes 20 seconds East,	a distance of 188 a distance of 464	8.50 feet to a 4.40 feet to a	MAYOR							G
concrete monument found 6. North 44 degrees 13 minu the POINT OF BEGINNING of land, more or less.	d; utes 54 seconds East and enclosing 4.854	t, a distance of 4 4 acres (211,425	49.58 feet to square feet)	CITY SECRETAR	(© COPYRIGHT ANY UNAUTHO PUBLICATION, WHOLE OR IN I	T QUIKTRIP CORPORATION 2011 RIZED USE, REPRODUCTION, DISTRIBUTION, OR SALE IN PART, IS STRICTLY FORBIDDEN.	_
NOW, THEREFORE, KNOW ALL	MEN BY THESE PRES	ENTS							PROTOTYP	PE:	
THAT , QT SOUTH, LLC, owner, above described property as L in Wise County, Texas, and do	does hereby adopt t OT 1, BLOCK A, QT 1 hereby dedicate to t	this final plat des 873 ADDITION , s the public use th	signating the a subdivision a easements						DIVISION:	DALLAS / FORT WORTH	F
and rights-of-way shown hereo WITNESS my hand this the	n. day of	20	0						ISSUE DAT	= 60' TE: 5-25-2022	
BY:											E
Joe Faust, Vice President										12-3)
STATE OF OKLAHOMA	§										
COUNTY OF	§ a Notary Public in an	nd for the State o	of Oklahoma								D
on this day personally appeared the person whose name is	dd subscribed to the	foregoing inst	n to me to be trument and						TION		5
acknowledged to me that he/ consideration therein expressed	/she executed the sa d, and in the capacity	ame as for the therein stated.	purpose and						ESCRIP		
Notary Public	County, Oklahoma								REV DATE		C
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Physical Address: 501 South Main Street Mailing Address: PO Box 228 Rhome, Texas 76078 Telephone: 817-636-2462 | Metro: 817-638-2758 www.cityofrhome.com cityadministrator@cityofrhome.com

AGENDA ITEM E

ORDINANCE NO. 2022-15

AN ORDINANCE AMENDING SECTIONS 34 AND APPENDIX A-3 OF EXHIBIT A OF CHAPTER 14 "ZONING" OF THE CODE OF ORDINANCES, CITY OF RHOME, TEXAS TO REVISE THE SECTIONS TO CREATE THE USES OF "BREWERY" AND "SMALL EVENT VENUE", DEFINING SAID USES AND PERMITTING SAID USES WITHIN THE "C" COMMERCIAL ZONING DISTRICT, AND TO DEFINE THE USE "TOURIST HOME (BED AND BREAKFAST)"; PROVIDING A CUMULATIVE CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A PUBLICATION CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Rhome is a Type-A general law municipality located in Wise County, created in accordance with the provisions of Chapter 6 of the Texas Local Government Code and operating pursuant to the enabling legislation of the State of Texas; and

WHEREAS, the City Council desires to amend the Zoning Ordinance to create the uses of "Brewery" and "Small event venue", defining said uses and permitting said uses within the "C" Commercial zoning district; and

Whereas, the City Council desires to amend the Zoning Ordinance to define the use "Tourist home (bed and breakfast)" which is currently undefined within the Zoning Ordinance; and

WHEREAS, a public hearing was held by the Planning and Zoning Commission on August 1, 2022, and thereafter by the City Council on August 11, 2022, with respect to the proposed use changes described herein; and

WHEREAS, all requirements of law dealing with notice to other property owners, publication and all procedural requirements have been complied with in accordance with the comprehensive zoning ordinance and chapter 211 of the Local Government Code; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RHOME, TEXAS:

SECTION 1.

Section 34.7 "Amusement & Commercial", Exhibit A of Chapter 14 "Zoning" of the Code of Ordinances, City of Rhome, Texas is hereby amended to have Brewery be a permitted use, listed as "P" in the C zoning district.

SECTION 2.

Section 34.7 "Amusement & Commercial", Exhibit A of Chapter 14 "Zoning" of the Code of Ordinances, City of Rhome, Texas is hereby amended to have Small event venue be a permitted use, listed as "P" in the C zoning district.

SECTION 3.

Appendix A-3 "Definitions", Exhibit A of Chapter 14 "Zoning" of the Code of Ordinances, City of Rhome, Texas is hereby amended to add the following definitions to be inserted appropriately in alphabetical order:

 $\underline{Brewery}$ – an establishment holding a "Brewer's Permit or a Brewer's Self Distribution Permit" issues by the Texas Alcoholic Beverage Commission in accordance with the Texas Alcoholic Beverage Code.

<u>Small event venue</u> –a building, facility, room, or portion thereof, which is rented, leased or otherwise made available to any person or group for a private event function, that is not open to the general public, whether or not a fee is charged. This use also includes meeting halls for civic organizations or social groups.

<u>Tourist home (bed and breakfast)</u> - A house, townhome, or portion thereof, where short-term lodging rooms and meals are provided. The operator or a caretaker of the Tourist home may live on the premises.

SECTION 5.

This Ordinance shall be cumulative of all provisions and ordinances of the Code of Ordinances of the City of Rhome, Texas, as amended, except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances and such Code, in which event the conflicting provisions of such ordinances and such Code are hereby repealed.

SECTION 6.

It is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause sentence, paragraph or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph or section.

SECTION 7.

Any person, firm, or corporation who violates, disobeys, omits, neglects, or refuses to comply with or who resists the enforcement of any of the provisions of this Ordinance shall be guilty of a misdemeanor and, upon conviction, shall be fined an amount not to exceed \$2,000.00. Each day that a violation continues shall be deemed a separate offense.

SECTION 8.

All rights and remedies of the City of Rhome, Texas are expressly saved as to any and all violations of the City's Zoning Ordinance, as amended, which have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

SECTION 9.

The City Secretary of the City of Rhome, Texas is hereby directed to publish at least twice in the official newspaper of the City of Rhome, Texas, the caption and the penalty clause of this Ordinance in accordance with Section 52.011 of the Local Government Code.

SECTION 10.

This Ordinance shall be in full force and effect from and after its passage and publication as required by law,

AND IT IS SO ORDAINED.

Passed on this 11th day of August, 2022.

CITY OF RHOME, TEXAS

By:

Patricia Mitchell, Mayor

ATTEST:

Shaina Odom, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Carvan E. Adkins, City Attorney



Physical Address: 501 South Main Street Mailing Address: PO Box 228 Rhome, Texas 76078 Telephone: 817-636-2462 | Metro: 817-638-2758 www.cityofrhome.com cityadministrator@cityofrhome.com

AGENDA ITEM F

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SITE DEVELOPMENT PLANS FOR UIKTRIP STORE #1873

U.S. HIGHWAY 81/287 & STATE HIGHWAY 114 RHOME, TX



Vicinity Map



MUNICIPAL CONTACT LIST:

CITY OF RHOME

PUBLIC WORKS 501 SOUTH MAIN ST RHOME, TEXAS 76078 TEL: (817) 636–0885 CONTACT: SEAN DENSMORE, DIRECTOR OF PUBLIC WORKS

<u>CITY FIRE DEPARTMENT</u> 261 NORTH SCHOOL ROAD RHOME, TEXAS 76078 TEL: (817) 636–2001 CONTACT: DARRELL FITCH FIRE CHIEF PLANNING AND INSPECTIONS DEPARTMENT-INSPECTIONS DIVISION 501 SOUTH MAIN STREET RHOME, TEXAS, 76078 TEL: (817) 636-2462 CONTACT: SHAINA ODOM, PERMIT AND INSPECTIONS CLERK

CITY OF WATER UTILITIES TEL: (817) 636-2462

<u>ONCOR ELECTRIC</u> TEL: (888) 313-6862

ATMOS GAS COMPANY TEL: (888) 944-0447

<u>CENTURYLINK</u> TEL: (877) 862–9343

PROJECT CONTACT LIST:

SURVEYOR OF RECORD BARTON CHAPA SURVEYING JACK BARTON 5200 STATE HIGHWAY 121 COLLEYVILLE, TEXAS, 76034 TEL: (817) 864-1957

ENGINEER OF RECORD KIRKMAN ENGINEERING JONATHAN SCHINDLER, P.E. 5200 STATE HIGHWAY 121 COLLEYVILLE, TEXAS, 76034 TEL: (817) 488-4960 QT REAL ESTATE PROJECT MANAGER QUIKTRIP CORPORATION CRAIG HONEYWELL 1120 N. INDUSTRIAL BLVD. EULESS, TEXAS, 76039 TEL: (817) 786-3182

QT CIVIL PROJECT MANAGER QUIKTRIP CORPORATION JOSH POTTER P.E. 4705 SOUTH 129TH EAST AVE. TULSA, OK 74134 TEL: (918) 615-7685

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RETAINING WALL 2

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WHEREAS QT SOUTH, LLC is the owner of all of Lot 1, Rhome Addition, an addition in the City of Rhome, Wise Co to the plat recorded under Cabinet D, Slide 547, Plat Texas, said Lot 1 being conveyed to QT South, LLC as reco Number 202121330, Official Public Records, Wise County, and being all of a tract of land out of the M.E.P. & P. Number 634, in the City of Rhome, Wise County, Texas, tract of land described by deed to QT South, LLC as record Number 202120734, (O.P.R.W.C.T.) the subject tract be described by metes and bounds as follows (bearings are Coordinate System, Texas North Central Zone (4202) Nort

BEGINNING at a 1/2 inch rebar with pink cap stamped, "BA the northeast corner of said QT South tract (2021207 northernmost northeast corner of the herein described tra the south right-of-way of State Highway 114, having a 100 State of Texas Final Right-Of-Way Map (project number 352

THENCE South 15 degrees 02 minutes 08 seconds East, with QT South tract (202120734), a distance of 3.65 feet to a 1 stamped, "BRITTAIN CRAWFORD" found for the northwest THENCE with the perimeter and to the corners of said Lot 2

- 1. South 71 degrees 37 minutes 23 seconds East, a dista 1/2 inch rebar with cap stamped, "BRITTAIN CRAW beginning of a tangent curve to the left, having a ra with a delta angle of 06 degrees 22 minutes 40 second South 74 degrees 48 minutes 43 seconds East, a distan
- 2. Along said tangent curve to the left, an arc length of
- inch rebar with cap stamped, "JDJR" found;
- 3. South 11 degrees 28 minutes 04 seconds West, a dista 5/8 inch rebar with cap stamped, "JDJR" found;
- 4. South 13 degrees 39 minutes 42 seconds East, a distar 5/8 inch rebar with cap stamped, "JDJR" found;
- 5. South 74 degrees 13 minutes 56 seconds West, a dista a point within a tree for the southwest corner of said in the east line of said QT South tract (202120734), found bears North 79 degrees East, a distance of 1.26

THENCE with the perimeter and to the corners of (202120734), the following calls:

- 1. South 15 degrees 02 minutes 08 seconds East, a distar point from which a 3/8 inch rebar found for the north of land described by deed to Rhome No. 1 Joint Vent Volume 156, Page 381, (O.P.R.W.C.T.) bears South distance of 1.70 feet;
- 2. South 89 degrees 38 minutes 20 seconds West, with Young tract, a distance of 333.92 feet to a point from found with cap stamped, "ESLLC 1869-5627" bears So distance of 2.43 feet, said point being in the east Highway 81/287, having a variable width right-of-wa Final Right-Of-Way Map (project number(s) 13-8-36 a the beginning of a non-tangent curve to the right 2,689.79 feet, with a delta angle of 02 degrees 04 whose chord bears North 07 degrees 55 minutes distance of 97.54 feet;
- 3. Along said non-tangent curve to the right, an arc leng "X" cut set in concrete;
- 4. North 02 degrees 42 minutes 20 seconds East, a distar brass monument found;
- 5. North 11 degrees 58 minutes 20 seconds East, a distar concrete monument found;
- 6. North 44 degrees 13 minutes 54 seconds East, a dista the POINT OF BEGINNING and enclosing 4.854 acres of land, more or less.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

THAT, QT SOUTH, LLC, owner, does hereby adopt this fina above described property as LOT 1, BLOCK A, QT 1873 AD in Wise County, Texas, and do hereby dedicate to the pub and rights-of-way shown hereon.

WITNESS my hand this the _____ day of __

Joe Faust, Vice President STATE OF OKLAHOMA BEFORE ME, the undersigned, a Notary Public in and for the on this day personally appeared _

the person whose name is subscribed to the foreg acknowledged to me that he/she executed the same as consideration therein expressed, and in the capacity therein

OWNER

QT SOUTH, LLC

_ County, Oklahoma

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, a distan acres (2	nce of 49.58 feet to 11,425 square feet)	CITY SECI	RETARY						© Copyri Any Unau Publicati Whole Or	GHT QUIK THORIZED ON, DISTR IN PART,	TRIP CORPO USE, REPRO IBUTION, O IS STRICTL	ORATION 20 ODUCTION, OR SALE IN Y FORBIDDE)11 EN.	
ENTS his final 873 ADD he public	plat designating the I TION , a subdivision use the easements							-	PROTOT DIVISIO	TYPE: DN: DAL BY: BC	LAS / FO	RT WOR	TH	F
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							BENCHMARKS	BENCHMARK IN AN RETE ISLAND AT ON OF S.H. 114 AN CATED IMMEDIATELY N SAID ISLAND. ELEY BENCHMARK IS A SEAM IMMEDIATELY SEWER MANHOLE L CORNER OF THE BRADING GENERAL REFER TO C110 FOR C PLACING FRAMEWORK ON CONTRACTOR SHALL SUBN L SURVEY DATA TO THE C LIZE RAMP DESIGN AND F	"X" CUT SET WITHIN THE SOUTHEAST D US 81/287, AND EAST OF A STOP /ATION= 895.46' MAG NAIL SET IN ADJACENT TO A OCATED NEAR THE SITE. ELEVATION= NOTES RADING NOTES.	GRADING LE XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXXX	GEND MAJOR COL MINOR COL MINOR COL MINOR COL MINOR COL MINOR COL MINOR COL MINOR COL MINOR COL MINOR COL XXXXX TOP OF CL XXX.XX FINISHED COL XXX.XX FINISHED COL FINISHED COL FINISHED COL FINISHED COL FINISHED COL FINISHED COL FINISHED COL FINISHED COL FINISHED	NTOUR (NEW) NTOUR (NEW) NTOUR (EXISTING) NTOUR (EXISTING) DISTURBANCE JRB ELEVATION (NEW) EVATION (NEW) SRADE ELEVATION (NEW) SRADE ELEVATION (NEW) CADE ELEVATION (NEW) SRADE ELEVATION (NEW) NOTING ELEVATIO	FOR REVIEW ONLY FOR REVIEW ONLY NOT INTENDED FOR PURPOSES OF CONSTRUCT BIDDING OR PERMIT. T WERE PREPARED BY, UNDER THE SUPERVISION JONATHAN E. SCHINDL P.E.# 108864 DATE: July 25, 2022 PROJECT NO::QT20005_1873 CONSTRUCT S200 State Highway 121 Colleyville, Texas 76034 Phone: 817-488-4960 Texas Firm No: 15874
+ - <u></u> <u> </u>	FG 901.23	FG 901.17	<u>909</u> <u>CC 18.02</u> FG 901.21	/ / / / / 									QuikTrip No U.S. HIGHWAY 81/287 & RHOME,
<u>.34</u> .34 <u>901.11</u>	FG 901.00 FG 901.08 MAX FG 900.78	FG 901.13 TF 898.13 2.0% 901 Max 901 FG 900.99		907									© COPYRIGHT QUIKTRIP CORPORATION 2 ANY UNAUTHORIZED USE, REPRODUCTION PUBLICATION, DISTRIBUTION, OR SALE IN WHOLE OR IN PART, IS STRICTLY FORBIDD PROTOTYPE: P-108 (11/01/21)
<u>201.08</u>	2.0% MAX <u>TI 901.42</u> FG 900.90 <u>FG 900.93</u>	FG 900.52 FG 900.52 FG 900.88 TF 897.88 FG 900.73	FG 900.49 + + + + + + + + + + + + + + + 	<u> </u>									VERSION: 001 DESIGNED BY: DRAWN BY: REVIEWED BY:
		903	FG 900.70 <u>TC 900.88</u> G 900.38	- 902	- 904								NOL I
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								1.	THE SITE A CONC INTERSECT BEING LO SIGN WITH	BENCH CRETE FION OF DCATED HIN SAID	MARK IN AN "X" ISLAND AT T S.H. 114 AND IMMEDIATELY EA ISLAND. ELEVAT
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Ļ	F <u>G</u>	899.50		/	/				PRIOR TO DESIGNS, ADDITION. WILL FIN) PLACING CONTRAC AL SURVE ALIZE RAM	FRAMEWORK ON CO TOR SHALL SUBMIT / Y DATA TO THE CONS IP DESIGN AND RESP
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CUT SET WITHIN E SOUTHEAST S 81/287, AND T OF A STOP N= 895.46' S NAIL SET IN DJACENT TO A TED NEAR THE TE. ELEVATION=	GRADING LEGEND XXXX MAJOR XXXX MINOR XXXX MINOR XXXX MINOR XXX MINOR IMINOR XXXX MAJOR IMIN	CONTOUR (NEW) CONTOUR (NEW) CONTOUR (EXISTING) CONTOUR (EXISTING) OF DISTURBANCE CURB ELEVATION (NEW) ELEVATION (NEW) D GRADE ELEVATION (NEW) CLEARANCE ELEVATION (NEW) D GRADE ELEVATION (NEW) CLEARANCE ELEVATION (NEW) FISLAND ELEVATION (NEW) FOOTING ELEVATION (NEW) FOOTING ELEVATION (NEW) CLEVATION (EXISTING) - STANDARD CANOPY COLUMN FOOTING ISPENSER WITH ND BOLLARDS	P R E L I M I N A R Y F O R R E V I E W O N L Y THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR THE PURPOSES OF CONSTRUCTION, BIDDING OR PERMIT. THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF: JONATHAN E. SCHINDLER P.E.# 108864 DATE: July 25, 2022 PROJECT NO.:QT20005_1873
	 GAS CANOPY INSTALLER SHALL COLUMN DRAIN PIPE AND OVER WATER INSTALLER SHALL CONN GAS INSTALLER'S OVERFLOW FIT TO AVOID ANY DEFINED CRESTS BREAKS" SHALL BE CONSTRUCT SURVEYOR & CONTRACTOR SHA CONSTRUCTION MANAGER PRIOR OR CONCRETE PLACEMENT RELA WHEN PLAN GRADES DEPICT RL FROM THE CURB, USE DRAIN A "CURB DETAIL-BARRIER" PD009 ALL DISPENSER ISLAND FORMS VERTICAL HEIGHT OF 6 1/4" AI GRADE CORNER. 	INSTALL THE CANOPY RELOW FITTING. THE STORM IECT THEIR PIPING TO THE TTING. S OR SUMPS, "GRADE TED AS A "VERTICAL CURVE". ALL CONFER WITH QUIKTRIP TO CONSTRUCTION STAKING ATIVE TO ANY GRADE BREAKS. JNOFF TO BE DIRECTED AWAY WAY CURB ALTERNATE. (RE: 0A00X DETAIL) SHALL BE PLACED AT A BOVE ADJACENT HIGHEST	QuikTrip No. 1873 U.S. HIGHWAY 81/287 & STATE HIGHWAY 114 RHOME, TX
			© COPYRIGHT QUIKTRIP CORPORATION 2011 ANY UNAUTHORIZED USE, REPRODUCTION, PUBLICATION, DISTRIBUTION, OR SALE IN WHOLE OR IN PART, IS STRICTLY FORBIDDEN. PROTOTYPE: P-108 (11/01/21) DIVISION: VERSION: 001 DESIGNED BY: DRAWN BY: REVIEWED BY:
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								Design Point 0	Inlet G No. S (f	CAPAC utter Cro lope Slo So" 0 Paver :./ft.) (ft./ 2 3	CITY OF wn Gu pe Fi f "C ment ft.) (c.	F CURE ow of G ov f	B OPEN Poth D Sutter low Dep Yo" ft.) 5	NING I Depth of ression at "a" (ft.) 6	NLETS Depth of Flow Opening "y" (ft.) 7	S AND Capacity Inlet / Foot of Length "Q/L" (c.f.s./ft.) 8	DROP Length of Inlet Opening "L" (ft.) 9	F Capac of Inle "Q" (c.f.s. 10	TSINS bity Carry et Inte Over I .) (c.f. 11	SUMPS Over Per o Q [°] Flow Cap s.) 1 1	Cent 100 tured	Notes 13									5200 State Highwar Colleyville, Texas 7 Phone: 817-488-4 Texas Firm No: 15
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Runoff	F Pipe	Dra	rainage Area					Time of Concent	ration													Hea	Loss Calculati	ions		In	vert Elevation		Comments		
Design Po strm D	oint Length wnstrm Between	Increme Area	ental Area	Total R Area (Runoff Incr. Coeff	Total	Inlet Time	Travel Time	Total Time	5-Year Intensity	100-Year Intensity	Q 5 Runoff	Q 100 Runoff	Inlet Bypass	Q in Pipe	Storm Pipe	Manning n	Hydr Grade	Hydraulic Gra Line Elevatio	ade on V	'1 V	2		Loss	Head Loss at Structure	Design Dwns HGL	trm Upstrm	TC / FG Elev			
tion S	Station Points	No.	(Acres) ((Acres)	"C" "CA"	"CA"	(min.)	(min.)	(min.)	" " (in./hr)	" " (in./hr)	"Q" (c.f.s.)	"Q" (c.f.s.)	"Q" (c.f.s.)	"Q" (c.f.s.)	Diameter (in.)	Value	"Sf" D (ft./ft.)	Ownstrm Up	pstrm Flow (f.p	(In) Flow .s.) (f.p.	(Out) V1^2 / 2g s.) (feet)	V2^2 / 2g (feet)	Coeff KjV1^2 / (Kj) (feet)	2g "Hk" E (feet)	Elevation (feet) (fee	et) (feet)	(feet)			
1 RM DRAIN	2 3 N LINE SD-A	4	5	6	7 8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23 2	4 2	26	27	28 29	30	31 32	2 33	34			n C
3.10 2	88 58 116 82	A4 & OS-1	0.67	0.67	0.49 0.33	0.33	10.00	1.06	11.06	5.67	9.23	1.88	3.05	0.00	3.05	15	0.013 (0.0022	899.03 89	99.39	2.4	19 52 0 10	0.10	1.25	0.12	899.51 897.	00 897.79 68 897.00	901.73			
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5.00 1	144.09 140.91	TXDOT	0.87	0.87	0.80 0.70	0.70	10.00	0.88	10.88	5.67	9.23	3.95	6.42	0.00	6.42	21	0.013 (0.0016	891.74 89	91.97	2.6	87	0.11	1.25	0.14	892.11 889.	03 892.00	896.50			
4.09	0.00 144.09	В	2.14	3.01	0.82 1.75	2.45	10.88	0.26	11.14	5.48	8.97	13.44	21.98	0.00	21.98	21	0.013 (0.0192	887.75 89	90.52 2.0	67 9.1	4 0.11	1.30	0.75 0.08	1.21	891.74 896.	00 889.03	894.25			© COPYRIGHT QUIKTRIP CORF
																															PUBLICATION, DISTRIBUTION, WHOLE OR IN PART, IS STRICT
	27.36 20.37	B2 & B3 & OS-2	2 2.12	2.12	0.63 1.34	1.34	10.00	0.05	10.05	5.67	9.23	7.58	12.33	0.00	12.33	18	0.013 (0.0138	892.76 89	93.04	6.9	08	0.76	1.25	0.94	893.98 890.	55 891.50	895.50			PROTOTYPE: P-108 (1 DIVISION:
7.36	13.99 13.37	B1	0.67	2.79	0.90 0.60	1.94	10.05	0.02	10.07	5.66	9.21	10.98	17.86	0.00	17.86	18	0.013 (0.0289	891.35 89	91.74 6.9	98 10.	11 0.76	1.59	0.75 0.57	1.02	892.76 889.	65 890.55	895.00			DESIGNED BY:
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RM DRAIN	N LINE SD-B.2																														
.76	10.00 41.76	B1	0.67	0.67	0.90 0.60	0.60	10.00	0.10	10.10	5.67	9.23	3.42	5.56	0.00	5.56	12	0.013 (0.0244	892.04 89	93.05	7.0)8	0.78	1.25	0.97	894.03 890.	98 892.25	896.25			
.00	0.00 10.00			0.67	0.00	0.60	10.10	0.02	10.12	5.67	9.23	3.42	5.56	0.00	5.56	12	0.013 (0.0244	891.52 89	91.76 7.0	08 7.0	08 0.78	0.78	0.35 0.27	0.27	892.04 890.	68 890.98	895.00			
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PAVING GENERAL NOTES

- DURING CONSTRUCTION, CONTRACTION JOINTS SHALL BE REPLACED BY CONSTRUCTION JOINTS AS DETERMINED AND AGREED UPON BY THE GC AND QT CONSTRUCTION MANAGER BASED ON THE PROJECT SCHEDULE FOR CONCRETE PAVING PLACEMENT. CONSTRUCTION JOINTS SHALL BE CONSTRUCTED PER DETAIL L1-C521 & F1-C524.
- FOR JOINT LOCATIONS WITHIN ADA LOCATIONS, RE: ADA COMPLIANCE REFERENCE SHEET C113.
 FOR CONSTRUCTION TOLERANCES OF SEALANT DEPOSITE IN JOINTO DEPOSITE OF SEALANT
- PLACEMENT IN JOINTS, RE: L11-C523.







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	SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	DESCRIPTION	TOTAL WATTS FINISH	-		0
	Ē	A	05	SINGLE	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1 BLACK			~
		В	03	2 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1 BLACK			
		с	01	2 @ 180°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1 BLACK	PROJECT NO.:#####	+	Ρ
		D	03	3 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1 BLACK			
		E	32	SINGLE	15' TO 19'	12,793	0.90	SCV-LED-13L-SC-40	83.6 WHITE			
		F	18	SINGLE	15' TO 19'	12,793	0.90	SCV-LED-13L-SC-40	83.6 BRONZE	_		N
		G	13	SINGLE	10' TO 12'	6,041	0.90	XSPS-S-LED-VHO-NW-DFL	48.7 WHITE			
		н	06	SINGLE	12'	6,275	0.90	XWM-3-LED-06-40	54.0 BLACK			M
	Ţ_Ţ	J	05	DOUBLE	35'	67,023	0.90	MRL-LED-65L-SIL-FT-40-70CRI	592 BLACK			
		_	A STATE OF THE STA					-	· ·		114	
b.0 c $b.0$ $b.0$ $b.1$ $b.2$ $b.2$ $b.2$ $b.2$ $b.2$ $b.2$ $b.3$ $b.2$	3 b.3 b.3 b.	з b.з b.з t	b.3 b.3	b.3 b.4 b.5 b.7	ð.9 1.1 1.4 1.	7 2.0 2.2 2.	3 ¹ .7 ¹	.1 b.8 b.6 b.5 b.4 b.3 b.2 b.2	b.1 b.1 b.1 b.1 b.1	73	1WAY	L
b.0 b.0 b.1 b	4 0.5 0.5 0.7 7 0.7 0.7 0.	7 b.7 b.5 t	b.4 b.3 b.5 b.4	0.4 0.4 0.6 0.8 0.4 0.5 0.7 1.0	1.3 1.8 2.4 3. 1.6 2.6 4.2 5.	0 [*] 3.6 [*] 4.4 [*] 3. 9 [*] 7.4 [*] 7.5 [*] 5.	8 2.6 1 6 4.1 2	.8 1.2 1.0 0 0.7 0.5 0.4 0.2 .8 2.2 1.8 1.5 1.1 0.8 0.5 0.3	b.2 b.1 b.1 b.1 b.1 b.2 b.2 b.1 b.1 b.1	8		I
ð. b.1 ð.7 ð.1 ð.1 ð.1 ð.1 ð.1 ð.2 ð.2 ð.2 ð.3 ð.3 ð.3 ð.3 ð.4 ð.4 ð.4 ð.4 ð.5 ð.6 ð.7 d.9 t	1.1 1.1 1.	1 1.0 b.7 t	ð.6 ð.5	Ď.5 Ď.6 Ď.8 ĺ.2	1.8 3.1 5.1 7.	9 10.1 10.1 8.	4 6.2 4	.6 3.7 3.0 3 1.2 5.8 5.5	ზ.4 ზ.3 ზ.2 ზ.2 ზ.1			
b.1 b.1 b.1 b.1 b.1 b.2 b.2 b.2 b.2 b.3 b.3 b.4 b.4 b.4 b.4 b.4 b.5 b.4 b.5 b.6 b.7 b.9 1.1 1.4 1.	6 1.8 2.0 2.	0 1.5 1.1 8	ò.8 ò.7	ð.7 ð.8 1.0 1.4	2.2 3.8 6.3 9.	7 12.6 13.3 11 TYPE LP		<u>5.1</u> 5.2 5.2 1.7 1.2 5.8	b.5 b.4 b.3 b.2 b.2	9	& ST ME, 1	K
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0.6 0.5 0.4 0.3 0.3 0.4 0.6 0.8 1.1 1.4 1.8 2.2 2.6 2.9 2.4 1.7 1.4 1.3 1.5 1.9 2.8 4.3 6.9 10 1.5 0.9 0.5 0.4 0.9 0.5 0.7 1.1 1.7 2.4 3.2 3.9 5.0 5.0 5.0 5.8 2.2 2.2 2.4 2.9 3.7 5.4 10	.1 12.4 12.4 10	6.2 ž	4.8 4 0 6.0 5.2	4.6 4.3 4.4 4.9	5.4 6.8 8.4 9. 5.8 7.0 8.1 8.	7 10.1 10.1	5 8 <u>1</u> 7	.4 7.6 6.7 5.6 4 3.6 2.8 2.1 .6 6.9 6.1 5.3 4.5 3.7 2.9 2.3	1.5 1.1 0.8 0.6 0.4 1.8 1.3 1.0 0.7 0.5		ЙНД	J
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conform to the Sta	indard Specifications for	r Public Works Constru	ction, published by the	North Central Te	xas Council of	Governments					ip No	81/287 & S RHOME,	К
ide of rear lot lines	s. Easements along side	lot lines shall be not les	ss than ten (10) feet in	width. However,	while deemed 1	necessary by t	he Planning and Zo	oning Commission			KT T	HWAY 8	J
wers, water lines, o erty owner. All ease	pen drains, gas lines or ements may be included	other utilities. Such eas in the computation of l	ements may be require ot sizes, with the excep	d across parts of a tion of drainage of	lots (including a casements, which	side lines) oth ch will be in a	er than as described ddition to the speci	d above if the City fied lot size.			Qui	S. HIG	_
eet, there shall be pr y be required in cor	rovided a storm easement nection with these ease	nt or drainage right-of- ments. The drainage sh	way conforming substa all be designed to elimi	antially with such inate erosion of a	course and of ljoining proper	such additionates such additionates the such additionates and to facil	al width as may be itate routine mainte	designated by the enance.				Ū.	н
													 _
l approve and file a l shall require a Cor	s part of the amending (nceptual Plan of the pro	Ordinance appropriate p posed project. A Detail	blans and standards for ed Site Plan may be sul	each Planned Dev bmitted in lieu of	velopment Distr the Conceptual	rict. To facilita Plan.	ate understanding o	of the request					G
an shall show the a form(s) which furthe	applicant's intent for the er describe and explain t	e use of the land within the following requirement	n the proposed Planned ents:	l Development D	istrict in a grap	hic manner ai	nd, as may be requ	ired, supported by			© COPYRIGHT QUIKTRIP C ANY UNAUTHORIZED USE, I PUBLICATION, DISTRIBUTIO WHOLE OR IN PART, IS STR	CORPORATION 2011 REPRODUCTION, DN, OR SALE IN LICTLY FORBIDDEN.	-
ughfares and prelin creening, parking a	ninary arrangements. Fo reas, landscaped areas, p	or residential developme project scheduling, and	ent such as multifamily other pertinent develop	y, which does not oment data.	propose individ	lual platted lo	ts; the conceptual p	olan shall set forth			PROTOTYPE: P-108 DIVISION:	(11/01/21)	F
the land use proposition of use(s), topographic topographic terms and the provides data to th	als in a manner which a hy and boundary, physic for approval to be used i	dequately illustrates the cal features, existing str in drafting the final Det	e type and nature of the reets, alleys and easeme railed Site Plan.	proposed develo ents, location of f	pment. Data wh uture public fac	nich may be su vilities, buildir	abmitted by the app ng height and location	blicant, or required ion, parking ratios,			DESIGNED BY: DRAWN BY: REVIEWED BY:		_
nned Development operty (the uses pe d Site Plan shall be	District and shall conformitted, increase the determination of the basis for issuance of	orm to the data present ensity, building height, f a building permit, but	ed and approved on th coverage, off-street p does not release the ap	e Conceptual Pla arking ratio, redu plicant's responsil	n. Changes in the sards poility to submit	he Detailed S rovided at the plans	Site Plan that differ e boundary of the	from the original site, and does not					E —
e Detailed Site Plan	n may be submitted for t	the total area of the PD	or for any sections or p	oart as approved o	n the Conceptu	al Plan.					7	DATE:	D
ving major existing	vegetation, natural wat	ercourses, creeks or bo	odies of water and an a	nalysis of planne	d changes in su	ich natural fea	atures as a result of	f the development.			DESCRIPTIO	. ISSUE [-
or lots; and areas res g size of water and	served as parks, parkway sewer mains; the location	ys, playgrounds, utility on and width for all cur	easements, school sites b cuts and the land are	s, street widening a of all abutting s	and street char sites and the zo	nges; the point ning classifica	ts of ingress and eg ation thereof on an	gress from existing accurate survey of			LEV DATE	ORIGINAL	с
nd the minimum dis	stance between buildings	s, and between building	g and property lines, str	reet lines, and alle	ey lines. Also to	be included	on the site plan is a	a plan showing the					'
oded areas and trees	to be planted.										CITY DET	AILS	В
opment in all distrie	cts except single-family	and two-family may be	e required by the Planni	ing and Zoning C	ommission or C	City Council if	deemed appropria	te.			SHEET NU	MBER:	
er data pertinent to t	the development of the F	Planned Development D	District as appropriate to	adequately expla	ain or understar	nd the request.						50	
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6		7		8	9	10		11		12	13	I	14	15				
oles, wires, cond	duits, storm	n and sanita	ry sewers,	gas, cable TV an	d water mains, or oth	ner utility lines	if necess	ary or advisable	in the op	oinion of the Pla	nning and Zoning	F 2				PRELIMIN FORREVIEW THESE DOCUMENTS DESIGN REVIEW OI NOT INTENDED F PURPOSES OF CONST BIDDING OR PERM WERE PREPARED UNDER THE SUPERV	N A R Y O N L Y ARE FOR NLY AND OR THE RUCTION, IIT. THEY BY, OR ISION OF: IINDLER	Q
itorial jurisdictio d Sanitary Sewe	on shall be p er, shall be a	provided wi	th an appro of plat appr	wed water supply oval.	and distribution syste	em and with an	approved	sewage collect	ion and di	isposal system. A	An adequate water					P.E.# 108864 DATE: July 25, 20 PROJECT NO.:QT20005_1)22 1873	Р
ewer facilities ne	eeded to ser	rve the deve	elopment an	nd shall extend al	water and sanitary se	ewer mains and	d appurten	ances necessary	to conne	ct the developm	ent with the City's							-
ver lines to serve e extensions, the	newly sub City shall l	divided or p have the aut	latted land hority to de	shall be authoriz etermine the mos	ed by the City only up appropriate alternative	oon determinat ve. The City sh	ion that al all retain	l facilities neces the authority to	sary to se reject any	rve the develops extension not d	ment are adequate. eemed to be in the							N
mediate prospec pection by the C	ts for the in ity.	nstallation o	f sanitary s	ewer, on-site sew	ver systems of an appr	roved type may	/ be install	ed in conformit	y with the	rules, regulation	ns, and ordinances	5				5200 State Highway Colleyville, Texas 7(Phone: 817-488-4' Texas Firm No: 15	y 121 6034 960 1874	
development an er mains shall be e with the Wate	nd a minimu e a minimu er System M	um of eight m of six (6) /laster Plan.	t (8) inch l include [in All water	ines for all other nch] lines for resi and sanitary sew	development as deten dential development a er mains shall be exte	rmined by the and a minimum ended through	City or as of eight (the develo	s required to se (8) inch lines for opment or acros	rve the de all other s the fron	evelopment. The development as tage of the prop	City may require determined by the erty along streets,	2				114		
tenances thereto	necessary t	to serve plat	ted land sh	all be in accordar	nce with the City's Ma	aster Plan for w	vater and s	anitary sewer fa	cilities.							M ∧ M		L
nes required to se	erve land a	reas and imp	provements	beyond the subd	ivision and the terms	of such partici	pation sha	ll be approved b	y the City	y Council.								
equired by these surance, and the	regulations currently a	s shall be in adopted Uni	accordanc form Fire (e with the require Code, which are i	ements and specificati ncorporated herein by	ions contained reference and	in the Des made a pa	sign Standards f art hereof.	or the Cit	y of Rhome, the	regulations of the	2				. 1 б тате н	X	-
conform to the	Standard Sj	pecification	s for Public	e Works Construc	tion, published by the	e North Central	l Texas Co	ouncil of Govern	iments.							ip No	RHOME, -	к
ide of rear lot li	nes. Easem	ents along s	side lot line	es shall be not les	s than ten (10) feet in	width. Howev	er, while o	deemed necessa	ry by the	Planning and Zo	oning Commission	l				IKTr HWAY 8		J
wers, water lines erty owner. All e	s, open drai easements n	ins, gas lines nay be inclu	s or other u ided in the	tilities. Such ease computation of lo	ements may be require ot sizes, with the excep	ed across parts ption of draina	of lots (in ge easeme	cluding side lin nts, which will	es) other t be in addi	than as described tion to the speci	l above if the City fied lot size.	7				Qui S. HIGI		_
eet, there shall be y be required in	e provided connection	a storm eas with these	ement or di easements.	rainage right-of-v The drainage sha	vay conforming subst ll be designed to elim	cantially with spinate erosion of	uch course of adjoinin	e and of such ac g property and t	lditional v o facilitat	width as may be re routine mainte	designated by the mance.							н
l approve and fil	le as part of	f the amendi	ing Ordinar	nce appropriate p	ans and standards for	each Planned	Developm	ent District. To	facilitate	understanding o	f the request							
an shall show the	Conceptual he applican	t's intent for	r the use of	f the land within	the proposed Planned	d Developmen	t Of the Co	nceptual Plan. n a graphic ma	nner and,	as may be requ	ired, supported by	7				© COPYRIGHT QUIKTRIP CORPOR ANY UNAUTHORIZED USE, REPROI PUBLICATION, DISTRIBUTION, OR	RATION 2011 DUCTION,	
ughfares and pre	eliminary a	rrangements	s. For resid	ential developme	nts: nt such as multifamily	y, which does 1	not propos	e individual pla	tted lots;	the conceptual p	lan shall set forth					PROTOTYPE: P-108 (11/	FORBIDDEN.	
the land use prop	g areas, Ian	manner whi	ch adequate	ely illustrates the	type and nature of the	pment data. e proposed dev	elopment.	Data which ma	y be subn	nitted by the app	licant, or required					VERSION: 001 DESIGNED BY: DRAWN BY:		F
hich provides da	raphy and b ata for appro	oval to be u	sed in draft	ting the final Deta	alled Site Plan.	lents, location (of future p	oublic facilities,	building I	neight and locati	on, parking ratios	,				REVIEWED BY:		
nned Developme operty (the uses d Site Plan shall	ent District permitted, be the basis	and shall c increase th s for issuance	conform to ne density, ce of a build	the data presente building height, ding permit, but o	d and approved on th coverage, off-street p loes not release the ap	ne Conceptual parking ratio, r pplicant's respo	Plan. Cha educe the nsibility to	nges in the Det yards provided submit plans	ailed Site l at the b	Plan that differ oundary of the	from the original site, and does not							-
e Detailed Site I	Plan may be	e submitted	for the tota	l area of the PD o	or for any sections or j	part as approve	ed on the C	Conceptual Plan								X	DATE:	D
ving major exist	ing vegetat	ion, natural	watercours	ses, creeks or boo	lies of water and an a	analysis of pla	nned chan	ges in such nat	ural featu	res as a result of	f the development	•				DESCRIPTIC	. ISSUE	-
or lots; and areas g size of water a	reserved as and sewer m	s parks, par nains; the lo	kways, play ocation and	ygrounds, utility width for all curl	easements, school site o cuts and the land are	es, street widen ea of all abutti	ing and st ng sites an	reet changes; th id the zoning cla	e points o assificatio	f ingress and eg n thereof on an	ress from existing accurate survey of	f				REV DATE	ORIGINAL	с
nd the minimum	distance be	etween build	dings, and b	between building	and property lines, st	reet lines, and	alley lines	s. Also to be inc	luded on	the site plan is a	plan showing the					SHEET TITLE	:	
oded areas and tr	rees to be pl stricts excer	lanted. pt single-far	nily and tw	o-family may be	required by the Plann	ing and Zoning	g Commis	sion or City Co	uncil if de	emed appropriat	te.					CITY DETAILS	S	B
er data pertinent	to the devel	lopment of 1	the Planned	l Development D	istrict as appropriate t	to adequately e	xplain or u	understand the r	equest.	-rr-pine						SHEET NUMBE	R:	-
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6		7		8	9	10		11		12	13		14	15	J			

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GENERAL NOTES . THIS DESIGN WAS PREPARED BY IRRIGAT DESIGN AND CONSULTING, BASED SOLELY THE DRAWINGS AND INFORMATION PROVID THE OWNER, AND HOLDS NO RESPONSIBI FOR ACCURACY OR THAT INFORMATION C ANY INSTALL OR WARRANTIES. INSTALL CONTRACTOR IS SOLELY RESPONSIBLE FO

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- PROPER INSTALL AND FUNCTION OF THE IRRIGATION SYSTEM. 2. THE IRRIGATION DESIGN IS CONCEPTUAL DIAGRAMMATIC. THE INTENT OF THE DRAV IS TO SHOW THE GENERAL LAYOUT AND OF THE SYSTEM. SCALED MEASUREMENT NOT BE ACCURATE. ACTUAL LOCATIONS QUANTITIES OF PIPE AND FITTINGS MAY DUE TO FIELD ADJUSTMENTS FOR EXISTIN CONDITIONS AND OTHER OBSTRUCTIONS
- 3. FLOW RATES ARE ESTIMATED AND AS SU VARY IF ALTERNATE NOZZLES ARE SELEC CONTRACTOR,
- 4. <u>CONTRACTOR MUST BE A LICENSED IRRIG.</u> <u>THE STATE OF TEXAS</u> AND WILL ASSUME RESPONSIBILITY FOR FLOW, PIPE SIZING HYDRAULIC CALCULATIONS, INSTALL, ADJUSTMENTS AND WARRANTIES.
- 5. CONTRACTOR IS RESPONSIBLE FOR PROPI NOZZLE ADJUSTMENT SO AS NOT TO OVE SPRAY OR WATER ANY SIDEWALKS, PARKI AREAS, OR ANY OTHER NON PERVIOUS A
- . TREE RINGS ARE TO BE ON SEPARATE " ZONES". WHEN POSSIBLE PIPE IS TO BE TRENCHES WITH OTHER PIPE. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PROPI SIZING FOR TREE ZONES.
- . CONTRACTOR SHALL INSTALL ALL EQUIPMI PER MANUFACTURE'S CURRENT SPECIFICA AND IN ACCORDANCE WITH ALL LAWS AN CODES THAT GOVERN RHOME TX.
- 8. EXACT STATIC WATER PRESSURE IS UNKN AT TIME OF THE DESIGN CONTRACTOR SH CAREFULLY VERIFY A MINIMUM DYNAMIC PRESSURE OF 70psi WITH A FLOW OF 30 AT THE WATER METER LOCATION PRIOR INSTALLATION. CONTRACTOR SHALL NOTI ARCHITECT IF WATER PRESSURE IS LESS OR SIGNIFICANTLY HIGHER THAN NOTED.
- 9. CONTRACTOR WILL COORDINATE EXACT LOCATIONS OF WATER METER, BACK FLOW PREVENTER, CONTROLLER AND CLIMATE S WITH THE ARCHITECT AND GENERAL CONTRACTOR.
- 10. WHEN TRENCHING UNDER THE DRIP LINE EXISTING TREES EXTREME CARE MUST BE TO AVOID ROOT DAMAGE. IF AT ALL POS AVOID TRENCHING INSIDE THE DRIP LIN GOING AROUND THE TREE RATHER THAN UNDER IT. IF TRENCHING MUST OCCUR THE DRIP LINE, USE EITHER TUNNELING HAND-DIGGING METHODS RATHER MECHAN TRENCHER. MINIMIZE THE IMPACTS OF F SEVERING BY AVOIDING CONSTRUCTION DURING HOT, DRY WEATHER, KEEPING TRE WELL WATERED BEFORE AND AFTER DIGGI COVERING ROOTS WITH SOIL OR MULCH SOON AS POSSIBLE.
- 1. CONTRACTOR SHALL BE RESPONSIBLE FO DAMAGE CAUSED TO ALL UTILITIES (BOTH OVERHEAD AND UNDER GROUND) DURING IRRIGATION INSTALLATION. CONTRACTOR SEEK THE ASSISTANCE OF LOCAL UTILITIE THE OWNER IN THE LOCATION OF THE UT PRIOR TO PERFORMING TRENCHING OPERA IN THE WORK AREA.
- 12. ALL MAINLINE SHALL BE SCH40 PVC. LATERAL PIPING SHALL BE SCH40 PVC PI ALL PVC FITTINGS SHALL BE PVC TYPE MUST BE OF DOMESTIC MANUFACTURE. SOLVENT CEMENT AND PRIMER SHALL BE RECOMMENDED / APPROVED BY THE MANUFACTURE OF THE PIPE
- 13. ALL SLEEVES WILL BE SCH40 AND MUST MINIMUM OF TWO PIPE SIZES LARGE THE COLLECTIVE SIZES OF ALL PIPES TO PLACED IN SLEEVE

CRITICAL ANALYSIS Generated: 2022-05-26 P.O.C. NUMBER: 01 Water Source Information: FLOW AVAILABLE Water Meter Size: 1-1/2" 47.03 GPM Flow Available PRESSURE AVAILABLE 70.00 PSI Static Pressure at POC: Elevation Change: 5.00 ft Service Line Size: 2" Length of Service Line: <u>10 ft</u> 68.00 psi Pressure Available: DESIGN ANALYSIS Maximum Station Flow: 35.9 GPM Flow Available at POC: 47.03 GPM 11.13 GPM **Residual Flow Available:** Critical Station: 18 40 PSI Design Pressure: 1.2 PSI Friction Loss: Fittings Loss: 0.06 PSI 0 PSI Elevation Loss: Loss through Valve: 3.54 PSI Pressure Req. at Critical Station: 44.79 PSI Loss for Fittings: 0.19 PSI Loss for Main Line: 3.9 PSI Loss for POC to Valve Elevation: 0 PSI Loss for Backflow: 13.4 PSI Loss for Master Valve: 2.67 PSI Loss for Water Meter: 2.73 PSI Critical Station Pressure at POC: 67.68 PSI 68 PSI

0.32 PSI

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IRRIGATION	SCHEDULE		600000	2000000.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION Bain Bird 1806-U-PRS 15 Strip Series	QTY	3500000 61201 1 M	
EST LCS RCS CST SST	Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	21	Matthew C.	McFarling
© © © © Q T H F	Rain Bird 1806-U-PRS U8 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	30		
() Q () H F	Rain Bird 1806-U-PRS U10 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Begulating	41	DATE SIGNED: PROJECT NO.:QT20	05/26/2022
	Rain Bird 1806-U-PRS U12 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure	10		
0000000	Regulating. Rain Bird 1806-U-PRS U15 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure	28		
ат́н́тта́ѓ SYMBOL	Regulating. MANUFACTURER/MODEL/DESCRIPTION	QTY		
(35)	Rain Bird 5004-PC-MPR Turf Rotor, 4.0" Pop-Up, Plastic Riser, Matched Precipitation Rotor (MPR nozzle). Arc and Radius as per Symbol. 25 ft=red, 30 ft=green_35ft=beige	62	Irrigation Design Email:contactus@i Website: www.ir Phone: (914	& Consulting LLC irrigationplan.com rigationplan.com
04	π=green, 35π=beige. Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded	4	Phone: (910	<i>s)</i> 215-4010
08	Inlet. Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal A Matic Check Valve, 1" Female Threaded	13		4
10	Inlet. Rain Bird F4-PC, FC			чү 11
▲ ^I °	With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	3		/MH
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION Rain Bird XCZ-100-PRF 1" Modum Elow Drip Control Kit dll Diversion di	QTY		HIG
	Medium Flow Drip Control Kit, 1" DV valve, 1" pressure regulating filter, 40psi pressure regulator. 3 GPM-15 GPM.	2		ATE X
©	Netafim TLCV-06-12 tree ring referance install detail	20	<u> </u> .	& ST IE, T
	Netafim TLCV-06-12 Techline Pressure Compensating Landscape Dripline with Check	458.1 l.f.		287 8 HOM
SYMBOL	valve. 0.6 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. 17mm. MANUFACTURER/MODEL/DESCRIPTION	QTY		81/. R
•	Rain Bird PEB 1-1/2" Plastic Industrial Valves. Low Flow Operating Capability, Globe	9		WAY
•	Rain Bird PEB 1" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	9) Juil	HIGH
M	Landscape Products Inc. BBV Full Port Brass Ball Valve. Suitable for a full range of liquids and gases in residential and commercial applications. Sized to match pipe	6		U.S.
Ŵ	Rain Bird PGA Globe 1-1/2" Electric Master Valve, Globe.	1		
BF	Reduce Priciple Pressure Backflow Device 1-1/2" See utility sheet for make and model	1		
С	Weathermatic SL9600TW SmartLine 96-zone 2-wire controller, internal 120VAC/230VAC transformer, large backlit LCD display, Multi-station simultaneous operation	1		
(FS)	Weathermatic RFS5 Wireless Rain/Freeze Sensor - 900mhz at 1500` line of site range	1		
W	Water Meter 1-1/2"	1	© COPYRIGHT QUIKTRIP ANY UNAUTHORIZED USE	CORPORATION 2011
	- Irrigation Lateral Line: PVC Schedule 40 3/4"	2,606 l.f.	PUBLICATION, DISTRIBUT WHOLE OR IN PART, IS ST	ION, OR SALE IN IRICTLY FORBIDDEN.
	- Irrigation Lateral Line: PVC Schedule 40 1"	1,037 l.f.	PROTOTYPE: P-10 DIVISION:	8 (11/01/21)
	- Irrigation Lateral Line: PVC Schedule 40 1 1/2"	621.5 l.f.	VERSION: 001 DESIGNED BY: MC	M
	- Irrigation Lateral Line: PVC Schedule 40 2"	52.6 I.f.	DRAWN BY: MCM REVIEWED BY:	
	- Irrigation Mainline: PVC Schedule 40 2"	2,164 l.f.		
	- Pipe Sleeve: PVC Schedule 40	440.3 l.f.		
# • I	Valve Callout Valve Number			
#" #•-	Valve Flow			
	Valve Size		NO	DATE
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			SHEET	TITLE:
			IRRIGATIC SHEE)n plan Et 1
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RRIGATION	SCHEDULE			900000
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION Bain Bird 1806-U-PBS 15 Strip Series	QTY	3500000 (3500)	
A A A A A A A A A A A A A A A A A A A	Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	21	Matthew C.	McFarling
© © © © Q T H F	Rain Bird 1806-U-PRS U8 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	71 0° 4 3 0000 4 3 RR 19 3 3 19 3 3 3 19 3 3 3 19 3 3 3 19 3 3 19 3 3 19 3 3 19 3 3 19 3 3 19 3 19
	Rain Bird 1806-U-PRS U10 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	41	DATE SIGNED	05/26/2022
	Rain Bird 1806-U-PRS U12 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	10		
	Rain Bird 1806-U-PRS U15 Series Turf Spray 6" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet. Pressure Regulating.	28		
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION Rain Bird 5004-PC-MPR Turf Rotor, 4.0" Pop-Up, Plastic Riser, Matched Precipitation Rotor	QTY 62	Irrigation Design Email:contactus@	& Consulting LLC rrigationplan.com
04	(MPR hozzle). Arc and Radius as per Symbol. 25 it=red, 30 ft=green, 35ft=beige. Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle.	4	Website: www.ir Phone: (918	rigationplan.com 8) 215-4010
– 08	With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet. Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle.	10		4
1 8	With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet. Rain Bird F4-PC, FC Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle.	13		AY 11 [,]
SYMBOL	With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet. MANUFACTURER/MODEL/DESCRIPTION	3 QTY	37.5	IIGHW
5	Rain Bird XCZ-100-PRF 1" Medium Flow Drip Control Kit, 1" DV valve, 1" pressure regulating filter, 40psi pressure regulator. 3 GPM-15 GPM.	2	1	АТЕ Н Х
© ======	Netafim TLCV-06-12 tree ring referance install detail	20	0	& ST 1E, T
	Netafim TLCV-06-12 Techline Pressure Compensating Landscape Dripline with Check Valve. 0.6 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. 17mm.	458.1 l.f.	d	31/287 RHON
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION Rain Bird PEB 1-1/2"	QTY		AY 8
\bullet	Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	9		'MHξ
•	Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	9	n C	S. HIG
	Full Port Brass Ball Valve. Suitable for a full range of liquids and gases in residential and commercial applications. Sized to match pipe.	6		U.S
	Hain Bird PGA Globe 1-1/2" Electric Master Valve, Globe. Reduce Priciple Pressure Backflow Device 1-1/2"	1	L	
(BF)	See utility sheet for make and model Weathermatic SL9600TW	1		
	SmartLine 96-zone 2-wire controller, internal 120VAC/230VAC transformer, large backlit LCD display, Multi-station simultaneous operation	1		
89 (1)	Wireless Rain/Freeze Sensor - 900mhz at 1500` line of site range Water Meter 1-1/2"	1	© COPYRIGHT OUIKTRIP	CORPORATION 2011
	Irrigation Lateral Line: PVC Schedule 40 3/4"	2,606 I.f.	ANY UNAUTHORIZED USE PUBLICATION, DISTRIBUT WHOLE OR IN PART, IS S	, REPRODUCTION, ION, OR SALE IN IRICTLY FORBIDDEN.
	Irrigation Lateral Line: PVC Schedule 40 1"	1,037 l.f.	PROTOTYPE: P-10 DIVISION:	8 (11/01/21)
	Irrigation Lateral Line: PVC Schedule 40 1 1/2"	621.5 l.f.	VERSION: 001 DESIGNED BY: MC	Μ
	Irrigation Lateral Line: PVC Schedule 40 2"	52.6 l.f.	REVIEWED BY:	
	Irrigation Mainline: PVC Schedule 40 2"	2,164 l.f.		
	Pipe Sleeve: PVC Schedule 40	440.3 l.f.		
# •	Valve Callout Valve Number			
#" #•-	Valve Flow Valve Size			_u
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			SHEET	TITLE:
	N		IRRIGATIC SHEE)n plan T 2
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	30 15 0 30	60	L1	11
	1" = 30'			









Two-wire notes:

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NOTES:

 Specific wire polarity is required. Maintain red and black wire polarity throughout installation.

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- Maintain independent wire path for each controller. No splicing or joining wire paths for multiple controls.
- 3. Up to three independent wire paths may be run for each controller.
- 4. Maximum distance from SLDEC decoders to remote control valve not to exceed 100' (30,5m).
- 5. Each 2-wire run may be laid out in straight run, complete loop, star, or combination layouts as shown in details. Always terminate and ground each leg of the wire path using manufacturer's recommended grounding methods.
- 6. Use a continuous loop wire path whenever possible to provide the best communication and power path for the system. Looping provides a redundant path for the power and signal allowing the system to continue operation in the event the wire path is cut.
- 7. Mark each zone number on the SLDEC decoder. For multi-valve decoders record the zone in order of wire color code: orange, yellow, green, and blue.
- 8. Mark all zone numbers and decoder locations on the as-built plan for final submittal.
- 9. Secure all Red and Black 2—wire connections using only manufacturer's supplied SLCONN aluminum connectors and grease filled waterproof connectors.
- 10. All remote control valve wire splices shall be secured using an encapsulated, gel-filled waterproof wire connector suitable for direct burial and installed according to manufacturer's specifications.
- 11. Use SmartWire SLWIRE cable supplied by Weathermatic sprinkler division of Telsco Industries to comply with the following specifications:

a. Conductors must be soft drawn, annealed, solid copper conforming to ASTM 33.

b. Conductor insulation must be 4/64—inch thick polyvinyl chloride (PVC) conforming to UL #493.

c. The two insulated conductors laid in parallel and encased in a single outer jacket of 3/64—inch thick, high—density, sunlight resistant polyethylene conforming to ICEA S—61—402 and NEMA WC5, having a minimum wall thickness of .045—inch.

d. The two conductors must be color—coded: normally one conductor red and the other black. Both conductors shall be the same size.

e. The following brands meet the above specifications for direct burial cable: Weathermatic SLWIRE12; Weathermatic SLWIRE14.

- 12. Wire sizing and maximum distance shall not exceed manufacturer's recommendations to avoid voltage loss and insure proper operation of the system.
- 13. All 2-wire paths under hardscape surfaces shall be sleeved and include no splices of the 2-wire path within 5' of sleeves. Secure a 2' (0,6m) expansion loop in the two-wire path at each change of direction and entry and exit of sleeve locations during wire installation. Release the expansion loops prior to direct burial.
- 14. Install one SLGDT surge arrestor at the following locations along the 2-wire path: within 25' (7.5m) of each controller, the farthest distance on the 2-wire path from the controller, every 300' along the wire path, at any independent branch termination greater than 50' (15m) from than main 2-wire path.
- 15. Connect each SLGDT to an 8' copper clad UL approved grounding round or other approved grounding method to obtain 12 ohms or less resistance. Use CADWELD TM permanent welded, low-resistance connection to assure best grounding performance. Consult ASIC specification 100-2002 for additional grounding specifications for appropriate for local soil conditions.
- 16. Use care in stripping all wire connections to avoid damage to the 2-wire shield and red and black wire path. Remove and discard any damaged 2-wire sections and repair using two SLCONN splice kits.
- 17. Use expansion coils on the red and black wires at each decoder installation. No expansion coils are necessary for the SLGDT.
- 18. Adhere to all local and national building and electrical codes.

Scale: Not to Scale

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FL 886.00	The use of these plans and	to the original shar the restruct they were prepared. Any reproduction or distribution is evenessly limited to such use	Any other reproduction, reuse, o disclosure by any method, in whole, or in part, is prohibited.	These drawings and specification contain proprietary information and title remains in FALKOFSKE ENGINEERING.	
	MASONRY RETAINING WALLS – SITE PLAN AUIKTRIP STORF #1873	CONTRACTION OF A CONTRACT OF A	OF TO WHITE		
	JO	B NC	895 EHSE D. 1	8 6-21-2 19.2	2
		S	Р	2	



NOTE: DURING INSTALLATION OF

GENERAL NOTES

<u>1. Design</u>

1.3

1.1. Design Codes

International Building Code, 2012 Edition

1.2. Geotechnical Report

2000, 2500 psf			
	Friction Angle	Cohesion (psf)	Unit Weight (pcf)
	26 deg	0 psf	120 pcf
	26 deg	0 psf	120 pcf
	26 deg	0 psf	120 pcf
1	tion of each Soil Tv	Friction Angle 26 deg 26 deg 26 deg 26 deg	Friction Angle Cohesion (psf) 26 deg 0 psf 26 deg 0 psf 26 deg 0 psf 26 deg 0 psf

Factors of Safety:

Externa	al Stability	
a.	Minimum Factor of Safety Against Base Sliding (Static Condition)	1.5
b.	Minimum Factor of Safety Against Overturning	2.0
C.	Minimum Factor of Safety Against Global Stability	1.5
d.	Minimum Factor of Safety for Bearing Capacity	3.0

Design Loading:

Lateral earth pressures are calculated using Coulombs Lateral Earth Pressure Theory. Designs have been performed to accept loading per the proposed loading conditions based on the Civil Grading Plans. A live loading of 250 psf has been used for all walls supporting areas subject to firelane loading.

Retaining walls should not have solid fence (such as wood fence) placed on top of wall other than that shown on these plans. Retaining walls shall not have additional surcharge placed above wall other than that shown on these plans. Retaining walls shall not have slope at base or top of wall that exceed that which is shown on these plans. The retaining walls noted above require special design.

2. Materials

2.1.Soil Types

- a. Retained Backfill a.a. On site clayey soils
- a.b. Properly compacted on-site fill soils, verification by others.
- b. Foundation Soils (Allowable Bearing = 2000 psf min)
- b.a. Bearing on Hard Natural Undisturbed Clayey or Sandy Soils b.b. Friction Angle between Base of Wall and Soil - 19 deg
- e. Foundation Soils (Allowable Bearing = 2500 psf min)
- e.a. Bearing on Bedrock
- e.b. Friction Angle between Base of Wall and Soil 23 deg e.c. Bedrock Passive Pressure at toe = 400 psf
- f. Drainage Material

f.a. Free draining granular backfill, clean, non-plastic, relatively well-graded.

2.2. Dimension Stone

- a. Average Density of masonry wall varies from 135pcf to 145pcf. b. Stone size varies from 4" to 18".
- c. Face stone shall be coordinated between contractor and owner/developer.
- d. Recycled concrete 4" to 18" may be used in place of dimension stone, contractors option.

2.3. Rebar/Welded Wire Fabric (If Required)

- a. All steel reinforcement shall be new billet steel conforming to ASTM A-615, Grade 60 with fy=60ksi.
- b. All reinforcement shall not have deleterious material on it. c. All welded wire fabric shall have minimum fy=65ksi and be hot dip galvanized.

2.4. Drainage Materials

- a. Weep pipes shall be PVC or corrugated HDPE pipe.
 b. Drainage zone shall be separated from retained backfill by mirafi 140N filter fabric or approved equal.

2.5 Portland Cement Mortar for Retaining Wall Construction.

The portland cement mortar used for construction of the masonry stone retaining walls shall be provided with the following proportions per cubic yard of concrete. The portland cement mortar supplier shall provide "batch tickets" clearly indicating that the appropriate amount of materials are provided in each truck load. The batch tickets shall clearly indicate the amount batched, the date, the project name and shall be provided to Falkofske Engineering, Inc. for review, documentation, and file.

Contents	Amount per cubic yard	Specific Gravity	Volume ft^3		
Type 1 Portland cement:	451 lbs	3.15	2.29		
Type F Fly Ash	113 lbs	2.93	0.62		
Fine Aggregate (sand):	2746 lbs	2.59	16.99		
Potable Water	367 Ibs	44 Gallons	5.88		
Sika Air (or equivalent)	(AS REQ'D) oz	4.5%	1.22		
			27.0 Total		

Note: the portland cement mortar supplier material weights may vary slightly based on the specific gravity of the materials used.

Concrete retarders may be used at the discretion of the masonry wall contractor. A greater amount of retarder is typically used during hot periods and a less amount of retarder is typically used during cool weather.

Please note that the above proportions will provide a portland cement mortar with a compressive strength of about f'c = 2500 psi. Falkofske Engineering, Inc. does not require any concrete testing provided the above proportions are verified by way of the "batch tickets".

2.6. Portland Cement Mortar for Retaining Wall Construction. (Hand Mixing)

It is acceptable to hand mix mortar on site. The hand mixed mortar shall be in accordance with TMS 402/602-16 Building Code Requirements and Specification for Masonry Structures on SC-1 Part 2.1. This is a proportion specification by volume, and is as follows:

1-part Portland cement $\frac{1}{4}$ to $\frac{1}{2}$ part lime (optional)

2-1/4 to 3 parts the sum of the separate volumes of cementitious materials - aggregate ratio measured in damp, loose conditions.

For instance, 1 cu. ft. of Portland cement, $\frac{1}{2}$ cu.ft. of lime and (1.5 x 3) 4.5 cu. ft. of sand could be used to make the Type S mortar. I would recommend that boxes be built for sand so that the proportions can be easily controlled. For instance, a box made with 2 x 6 boards with an interior square dimension of 1'-5.5" would create of a box of 1 cu.ft.

If the contractor does not want to use lime, the ratio would be 1-part Portland cement to 3-parts sand.

3. Construction

3.1 Preparation Work

- a. Prior to grading or excavation of the site, confirm the location of the retaining walls and all
- underground features, including utility location within the area of construction. Ensure surrounding structures are protected from effects of wall excavation, and construction.
- b. Coordinate installation of underground utilities and other improvements with wall installation.

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3.2 Excavation					Æ
 a. If a mortared footing is over-excavated, then the dimension stone shall be placed mortared. If a dry stone footing is over excavated, then the dimension stone does not need to be mortared. b. Fill over-excavated area in front of the wall footing with compacted on site soils before the wall 					
construction exceeds 4 feet in height.c. In areas where the walls are installed in a cut, the required excavation shall extend horizontally to					
the extent of the width of the retaining wall. The wall may be built to the cut. If the wall is over cut, then soil shall either be compacted or the drainage zone may be widened.					VISION
3.3 Wall Construction					RE
a. The wall shall be constructed to the dimensions as shown on these plans. Front leads, back leads,and string lines shall be set for each wall. Care shall be taken to install the mortar zones					
 b. Control joints shall be installed at a maximum of 16'-0" o.c. per these plans. c. Weep pipes shall be placed at 8'-0" o.c. max. 					
d. Face rock type shall be coordinated between the architect, owner, and retaining wall contractor.					ATE
a. Retained backfill shall be placed per the recommendations of the geotechnical engineer, but					0 0
should not be less than 93% Standard Proctor Maximum Dry Density (ASTM D698). b. Fill should be placed in maximum 8" thick compacted lifts.		m	2	m	Z
c. Large compaction equipment (equipment heavier than 7,500 lb) shall remain a minimum of 1.5x the height of the wall away from the back of the wall for a period of 2 weeks from the time of construction	'n	AM		AM	
 After a period of 2 weeks from the time of construction large compaction equipment may be used behind the wall but shall stay a minimum of 5'-0" away from the back of the wall. 	DATE	-25-22	i–25–22	-25-22	
 e. Soil placed with in 5'-0" of the back of the wall shall be placed using handheld compaction equipment. f. If the wall is in a cut situation the wall may be built up to the cut. If the wall is overcut the drainage 		С.	N.	<u>ده</u> ۲	
zone may be widened to the cut or compacted fill may be placed between the drainage zone and the cut.		DE	DR	CH	
3.6 Retaining Wall Performance, Maintenance, and Other Comments		ants	038		
a. Control joints are provided in the retaining wall to allow for minor movements due to settlement and shrink swell of the soils. Some cracking may occur in the face of the retaining wall. This		c. nsult	1 F-4		
cracking, if minor (less than 3/8"), may be cosmetically repaired as desired. b. The retaining walls are designed to allow surface water to flow over the tops of the retaining walls.	, -		Firm ad	[2]	
walls, as this can have a negative impact on the stability of the retaining walls. c. If downspouts are located near the back of the retaining wall they should either be plumbed			ring r Roá	760]	
through the retaining wall to drain below the wall or collected and tied into the storm sewer system. Perforated subsurface pipes shall not be used behind the retaining walls.			ginee elder	exas	3
If swales are placed behind the wall they shall remain clean and free draining. If water is found to be ponding in the swale it shall be fixed to allow water to freely drain as soon as possible.	F	al Er	. Eng th Fi	n, T 1_83	C0-10
 Any broken sprinklers behind the retaining wall shall be turned off and repaired as soon as possible. 	1~J~		Reg Nor	ingtc	77 (1
3.7 Cold Weather Construction of Retaining Walls		Stru	T22	Arli (81	10)
Construction Requirements for temperatures between 40°F and 32°F:				Ю	0 Z
 a. Water and aggregates used in mortar shall not be heated above 140°F. b. Mortar sand or mixing water shall be heated to produce mortar temperatures between 40°F and 120°F at the time of mixing. 				FSK	N N N
Construction Requirements for temperatures between 32°F and 25°F:				<u>Š</u>	ENGI
a. The guidelines above for construction requirements for temperatures between 40°F and 32°F and the following shall be met.					
 b. The mortar temperature shall be maintained above freezing until used in masonry stone retaining wall. 					
c. Visible ice and snow shall be removed from the top surface of existing foundations and masonry to receive new construction. These surfaces shall be heated to above freezing, using methods that do not result in damage.	_	h is	se, or n ted.	ations ion SKE	
 Newly constructed masonry shall be completely covered with weather-resistive membrane for 48 hours after being completed. 	ans and	be restri for whic Any ribution	on, reus iethod, i prohibi	specific nformati FALKOF	
Construction Requirements for temperatures between 25°F and 20°F:	these plc s shall b s shall b all site f or distri- nited to : or distri- nited to : or any me production production production or distri- rietary ir				
a. The guidelines above for construction requirements for temperatures between 40°F and 32°F, the construction guidelines for temperatures between 32°F and 25°F, and the following shall be met.	use of t iffications were pr were pr were pr oduction other re osure o osure o osure o osure o an n NEERING.				
 b. Masonry (raw stone) surfaces under construction shall be neated to 40°F. c. Wind breaks or enclosures shall be provided when the wind velocity exceeds 15 miles per hour. d. Newly constructed masonry shall be completely covered with weather-resistive insulating blankets, 	The	spec to th they repro	Any discl	Thes contr and ENGI	
or equal protection, for 48 hours after being completed.					
of the International Building Code, and is in compliance with Masonry Standards Joint Committee recommendations for cold weather construction of masonry structures.					
4. Construction Observations	ILS				
4.1 Construction Observations by Falkofske Engineering, Inc.	DETA				
a. Falkofske Engineering, Inc. will perform construction observation, but only as a means	RD I				
 b. Falkofske Engineering, Inc. will act as the Special Inspector for this project. Contractor shall contact Falkofske Engineering to set up inspections, at least 1 day before 	NDA	<u> </u>			
construction starts. c. All required materials testing shall be performed by an approved materials testing	STA	114			
laboratory. d. Falkofske Engineering, inc. is not responsible for means, methods, and material furnished by the retaining wall contractor	& ()	WAΥ			
4.2 Construction Observations by Others	OTES	HGH			
a. Construction observations as required by the city shall be coordinated by the contractor.		Π		Z	
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MASONRY WALL SCHEDULE 2500 psf - BEARING CAPACITY (BEARING ON BEDROCK SEE GENERAL NOTES SHEET RW1)												
WALL HEIGHT H	BASE WIDTH B	тое B1	BASE DEPTH (TOE) C	BASE DEPTH (HEEL) C1	BATTER	FULLY MORTARED ZONE E	THICKNESS OF WALL T	DRAINAGE ZONE THICKNESS G	BEARING CAPACITY			
1'-0"	1'-2"	0'-2"	0'-6"	0'-3"	0'-2"	FULLY MORTARED	1'-0"	1'-0"				
2'-0"	1'-2"	0'-2"	0'-6"	0'-3"	0'-4"	FULLY MORTARED	1'-0"	1'-0"				
3'-0"	1'-7"	0'-3"	0'-9"	0'-4"	0'-6"	FULLY MORTARED	1'-4"	1'-0"				
4'-0"	2-0"	0'-4"	0'-9"	0'-5"	0'-8"	FULLY MORTARED	1'-8"	1'-0"				
5'-0"	2-11"	0'-5"	1'-0"	0'-7"	0'-10"	0'-8"	2'-6"	1'-0"				
6'-0"	3'-6"	0'-6"	1'-3"	0'-8"	1'-0"	0'-10"	3'-0"	1'-0"				
7'-0"	4'-1"	0'-7"	1'-3"	0'-9"	1'-2"	0'-10"	3'-6"	1'-0"				
8'-0"	4'-10"	0'-8"	1'-6"	0'-11"	1'-4"	1'-0"	4'-2"	1'-0"	2500 psf			
9'-0"	5'-6"	0'-9"	2'-0"	1'-0"	1'-6"	1'-0"	4'-9"	1'-0"				
10'-0"	6'-3"	0'-9"	2'-6"	1'-2"	1'-8"	1'-2"	5'-6"	1'-0"				
11'-0"	7'-2"	1'-0"	2'-9"	1'-4"	1'-10"	1'-2"	6'-2"	1'-0"				
12'-0"	8'-4"	1'-6"	3'-0"	1'-6"	2'-0"	1'-4"	6 ' -10"	1'-0"				
13'-0"	9'-0"	1'-8"	2'-9"	1'-8"	2'-2"	1'-4"	7'-4"	1'-3"				
14'-0"	9'-11"	1'-9"	3'-6"	1'-9"	2'-4"	1'-6"	8'-2"	1'-3"				
15'-0"	10'-10"	2'-0"	3'-9"	1'-11"	2'-6"	1'-6"	8'-10"	1'-3"				
16'-0"	11'-10"	2'-4"	4'-0"	2'-2"	2'-8"	1'-8"	9'-6	1'-3"				
		WAL	L DESIGN C	RITERIA								
BEARING Qa	SLOPE TOP β	SLOPE BOT β1	ACTIVE PRESSURE Фа	PASSIVE PRESSURE	$\begin{array}{c} FRICTION\\ ANGLE \ \ BASE\\ \delta \end{array}$	SLOPE OF BACK OF WALL α	SURCHARGE 9					
2500psf	14 deg	7.13 deg	26 deg	400	23 deg	99.46 deg	0 psf]				
			USE T	THIS SCHEDU	LE FOR 2/RI	N2						

RW2

TYPICAL WALL SECTION BEARING IN BEDROCK MAX. SLOPE ABOVE WALL 1V:4H MAX. SLOPE BELOW WALL 1V:8H

	RE:	1/F	RW 1	ALS	50
F GR RF·	OR EATE WEL	WALI ER II .DED RW2	LS 1 N HI WIF	I 3'- EIGH RE I	-0 -1T -Al











W RW2

TYPICAL WALL SECTION BEARING IN CLAYS MAX. SLOPE ABOVE WALL 1V:4H MAX. SLOPE BELOW WALL 1V:8H

. 0 ЭН IRIP IIGHW $\leq O$ MASC QUIK US RHOI QUI THOMAS J WHITECOTTON 108958 19 CENS ONAL 3-2 JOB NO. 119.22

NIKING[®]

TECHNICAL DATA

MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

The Viking Microfast[®] Quick Response Upright Sprinkler VK300 is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive atmospheres and are listed/approved as corrosion resistant as indicated in the Approval Charts. (Note: **FM global approves the ENT coating as corrosion resistant**. FM Global has no approval classification Polyester coatings as corrosion resistant.)

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

FM Approved: Classes 2002 and 2020



Refer to Approval Chart 1 and Design Criteria on for cULus Listing requirements and refer to Approval Chart 2 and Design Criteria FM Approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)* Maximum Working Pressure: 175 psi (12 bar) wwp. Factory tested hydrostatically to 500 psi (34.5 bar) Testing: U.S.A. Patent No. 4,831,870 Thread size: 1/2" NPT, 15 mm BSP Nominal K-Factor: 5.6 U.S. (80.6 metric**) Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Overall Length: 2-3/16" (56 mm)

*cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass Deflector: Brass UNS-C23000 or Copper UNS-C19500 Bulb: Glass, nominal 3 mm diameter Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape

Screw: Brass UNS-C36000

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

For Polyester Coated Sprinklers: Belleville Spring-Exposed

For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pipcap - ENT plated

Ordering Information: (Also refer to the current Viking price list.)

Order Viking Microfast[®] Quick Response Upright Sprinkler VK300 by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.

Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN

Temperature Suffix (°F/°C): 135°/57° = A, 155°/68° = B, 175°/79° = D, 200°/93° = E, and 286°/141° = G

For example, sprinkler VK300 with a 1/2" NPT thread, Brass finish and a 155 °F/68 °C temperature rating = Part No. 12978AB **Available Finishes And Temperature Ratings:** Refer to Table 1.

Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrench: Standard Wrench: Part No. 10896W/B (available since 2000)

Sprinkler Cabinets:

A. Six-head capacity: Part No. 01724A (available since 1971)

B. Twelve-head capacity: Part No. 01725A (available since 1971)

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

Viking Technical Data may be found on The Viking Corporation's Web site at http://www.vikinggroupinc.com. The Web site may include a more recent edition of this Technical Data Page.



MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Viking Microfast® Quick Response Upright Sprinkler VK300 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome, White Polyester, Black Polyester, and ENT

Corrosion-Resistant Coatings3: White Polyester, Black Polyester, and Black PTFE. ENT in all temperature ratings except 135 °F (57 °C)

Footnotes

¹ The sprinkler temperature rating is stamped on the deflector.
 ² Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

³ The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed on sprinklers with Polyester, ENT, and PTFE coatings. For ENT coated automatic sprinklers, the waterway is coated.

Protective Sprinkler Cap	
Wrench Flat	
10896	D
Figure 1: Standard Sprinkler Wrench 10896W/B	



MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Approval Chart 1 (UL) Temperature **KEY** Microfast[®] Quick Response Finish A1X - Escutcheon (if applicable) **Upright Sprinkler VK300** Maximum 175 PSI (12 bar) WWP **Thread Size Nominal K-Factor Overall Length** Listings and Approvals³ **Base Part** SIN Number¹ NPT **BSP** U.S. metric² Inches cULus VdS LPCB NYC⁸ mm CE 12978 VK300 1/2" 15 mm 5.6 80.6 2-3/16 56 A1, B2 See footnote 7. NOTICE - Product Below - Limited Availability (Contact Local Viking Office) 5.6 06661B VK300 1/2" 80.6 2-3/16 56 A1, B2 15 mm -----See footnote 7. --Approved Temperature Ratings **Approved Finishes** A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 1 - Brass, Chrome, White Polyester^{5,6}, and Black Polyester^{5,6} 286 °F (141°C) 2 - ENT⁶ B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) Footnotes ¹Base part number is shown. For complete part number, refer to Viking's current price schedule. ² Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. ³ This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals. ⁴ Listed by Underwriters Laboratories Inc. for us in the U.S. and Canada ⁵ Other colors are available on request with the same Listings and Approvals as the standard colors.

⁶ cULus Listed as corrosion resistant.

7 Meets New York City requirements, effective July 1, 2008

⁸ Accepted for use, City of New York Board of Standards and Appeals, Calendar Number 219-76-SA and City of New York Department of Buildings, MEA 89-92-E, Vol. 16.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

The Viking Microfast[®] Quick Response Upright Sprinkler VK300 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray upright sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page QR1-3 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



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Approval Chart 2 (FM) Microfast® Quick Response Upright Sprinkler VK300 Maximum 175 PSI (12 bar) WWP									
Base Part	SIN	Thread Size		Nominal K-Factor		Overall Length		FM Approvals ³	
Number ¹	SIN	NPT	BSP	U.S.	metric ²	Inches	mm	(Refer also to Design Criteria below.)	
12978	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2	
		ΝΟΤΙΟ	E - Product	Below - Lim	nited Availab	ility (Contact I	ocal Vikin	g Office)	
06661B	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2	
A - 135 °F (57 B - 155 °F (68	Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C) B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)							Approved Finishes s, Chrome, White Polyester ⁵ , and Black ster ⁵	
					Footnotes	i			

¹Base part number is shown. For complete part number, refer to Viking's current price schedule.

² Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

³ This table shows the FM Approvals available at the time of printing. Check with the manufacturer for any additional approvals.

⁵ Other colors are available on request with the same Approvals as the standard colors.

⁶ FM approved as corrosion resistant.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

FM Approval Requirements:

The Microfast[®] Quick Response Upright Sprinkler VK300 is FM Approved as a quick response **Non-Storage** upright sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page QR1-3 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

MIRAGE[®] QUICK RESPONSE CONCEALED PENDENT SPRINKLER VK464 (K8.0)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com.

TECHNICAL DATA

1. DESCRIPTION

Viking Mirage[®] Quick Response Concealed Pendent Sprinkler VK464 is a thermosensitive glass-bulb spray sprinkler designed for installation on concealed pipe systems where the appearance of a smooth ceiling is desired.

The sprinkler is pre-assembled with a threaded adapter for installation with a low-profile cover assembly that provides up to $\frac{1}{2}$ " (13 mm) of vertical adjustment. The two-piece design allows installation and testing of the sprinkler prior to installation of the cover plate. The The "push-on" and "thread-on" designs of the concealed cover plate assemblies allow easy easy installation of the cover plate after the system has been tested and the ceiling finish has been applied. The cover assembly can be removed and reinstalled, allowing temporary removal of ceiling panels without taking the sprinkler system out of service or removing the sprinkler.

The Electroless Nickel PTFE (ENT) coating has been investigated for installation in corrosive environments and is listed and approved as indicated in the Approval Charts. The ENT finish is only available for the sprinkler assembly, the cover plate is not plated.

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

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NYC Approved: MEA 89-92-E, Volume 32

Refer to the Approval Chart and Design Criteria for cULus Listing requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Available since 2006. Minimum Operating Pressure: 7 psi (0.5 bar). Maximum Working Pressure: 175 psi (12 bar). Factory tested hydrostatically to 500 psi (34.5 bar). Thread size: 3/4" (20 mm) NPT Nominal K-Factor: 8.0 U.S. (115.2 metric*)

- * Metric K-factor measurement is shown in bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
- Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Patents Pending

Material Standards: Sprinkler Body: Brass UNS-C84400 Deflector: Phosphor Bronze UNS-C51000 Deflector Pins: Stainless Steel UNS-S30300 Bulb: Glass, nominal 3 mm diameter Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400 Button: Brass UNS-C36000 Screws: 18-8 Stainless Steel Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with Teflon Tape Yoke: Phosphor Bronze UNS-C51000 Cover Adapter: Cold Rolled Steel UNS-G10080, Finish: Clear Chromate over Zinc Plating **Cover Assembly Materials:** Cover: Copper UNS-C11000 Base: Brass UNS-C26000 or UNS-C26800 Springs: Nickel Alloy Solder: Eutectic

Ordering Information: The sprinkler and cover plate must be ordered separately. Refer to Tables 1 and 2.

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, when the temperature around the sprinkler approaches its operating temperature, the cover plate detaches. Continued heating of the exposed sprinkler causes the heat-sensitive liquid in the glass bulb to expand and the bulb to shatter, releasing the yoke, pip-cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.







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7. AVAILABILITY

The Viking Mirage[®] Quick Response Concealed Pendent Sprinkler VK464 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

TABLE 1: SPRINKLER ORDERING INFORMATION

Instructions:

(1) Select a Sprinkler Base Part Number

(2) Add the suffix for the desired Finish

(3) Add the suffix for the desired Sprinkler Temperature Rating

(4) Order a cover plate (refer to Table 2)

Example:

13614AE = 200 °F (93 °C) Temperature Rated Sprinkler with a standard Brass finish.

	Sprinkler	S	ize	1: Finis	hes		2: Temp	perature Rat	ings		
SIN Ba	Base Part Number	Base Part Number	NPT Inch	BSPT mm	Description	Suffix ¹	Sprinkler Temperature Classification	Nominal Rating	Bulb Color	Max. Ambient Ceiling Temperature²	Suffix
VK464	13614	3/4		Brass	А	Ordinary	155 °F (68 °C)	Red	100 °F (38 °C)	В	
				ENT 3,4	JN	Intermediate	175 °F (79 °C)	Yellow	150 °F (65 °C)	D	
						Intermediate	200 °F (93 °C)	Green	150 °F (65 °C)	E	

Accessories

Sprinkler Wrenches and tools:

- A. Heavy Duty Part Number: 14047W/B⁵ (available since 2006)
- B. Head Cabinet Wrench Part Number: 14031⁶ (available since 2006)
- C. Optional Concealed Cover Plate Installer Tool Part Number: 144127 (available since 2007)
- D. Optional Large Concealed Cover Plate Installer Tool Part No. 148677 (available since 2007)

Sprinkler Cabinet:

Holds up to 6 sprinklers: Part number 01731A (available since 1971).

Footnotes

- 1. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
- Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

^{3.} cULus Listed as corrosion resistant.

4. The corrosion resistant and corrosion proofing coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the ENT coating is applied to all exposed exterior surfaces, including the waterway.

5. Requires a ¹/₂" ratchet (not available from Viking).

6. Also optional for removal of the protective cap. Ideal for sprinkler cabinets.

7. The installer tool is for push-on style cover plates only.



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TABLE 2: COVER PLATE ORDERING INFORMATION

Instructions:

(1) Select a Cover Plate Base Part Number

(2) Add the suffix for the desired Finish

(3) Add the suffix for the required Cover Plate Nominal Rating.

Example:

23190MC/W = 165 °F (74 °C) Temperature Rated 2-3/4" (70 mm) diameter Round Cover Plate with a Painted White finish.

	1: Sele	ect a Cover Pla	ate Base Par	t Number ³		2: Soloct a Finish				
Т	hread-On St	yle		Push-On Sty	yle					
Base Part Number	Size Inch (mm)	Туре	Base Part Size Number Inch (mm) Type			Description	Suffix⁵			
23190	2-3/4 (70)	Round	23447	2-3/4 (70)	Round	Polished Chrome	F			
23174	3-5/16 (84)	Round	23463	3-5/16 (84)	Brushed Chrome	F-/B				
23179	3-5/16 (84)	Square	23482	3-5/16 (84)	Square	Bright Brass	В			
						Antique Brass	B-/A			
						Brushed Brass	B-/B			
						Brushed Copper	E-/B			
						Painted White	M-/W			
						Painted Ivory	M-/I			
						Painted Black	M-/B			
			3: T	emperature	Rating Matrix ^{1,2}					
		T								

Cover Plate Nominal Rating (Required)	Temperature Classification	Sprinkler Nominal Rating	Sprinkler Maximum Ambient Ceiling Temperature ²	Suffix
UL: 135 °F (57 °C)	Ordinary	155 °F (68 °C)	100 °F (38 °C)	Α
165 °F (74 °C)	Intermediate	175 °F (79 °C)	150 °F (65 °C)	С
165 °F (74 °C)	Intermediate	200 °F (93 °C)	150 °F (65 °C)	С

Footnotes

1. The sprinkler temperature rating is stamped on the deflector.

2. Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

3. Part number shown is the base part number. For complete part number, refer to current Viking price list schedule.

4. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.

5. Square cover plate 23179 cULus Listing is for the 135 °F (57 °C) temperature rated cover plate only. Refer to the Approval Chart.



DO NOT PAINT	
	1
3-5/16" (84 mm)	ĺ



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	Approval Chart Mirage [®] Quick Response Concealed Pendent Sprinkler VK464 Maximum 175 PSI (12 bar) WWP											
Sprinkler Base Part	SIN	NPT T	hread Size	Nomina	I K-Factor		Listings a (Refer also te	nd Approvals ³ o Design Criteria)				
Number ¹		Inch	mm	U.S.	metric ²	cUl	₋us⁴	NYC⁵				
13614A	VK464	3/4"	20	8.0	115.2	AW1	, BX1	AW1, BX1				
13614JN ⁸	VK464	3/4"	20	8.0	115.2	AW1	, BX1	AW1, BX1				
Sprinkler A - 155°F (68°C B - 175°F (79°C	Temperature C) C) and 200°F (9	Ratings 93°C)	Cover W - 135°F (23463 ¹ (la cover plate X - 165°F (74' (large diar	Plate Assen 57°C) cover, rge diameter e) ℃) cover 231 neter)	nbly Temp. Ra , 23190 ¹ , 234), or 23179 ¹ , 2 190 ¹ , 23447 ¹ 2	a tings⁶ 1471 231741, 34821 (square 31741, 234631	Finishes o 1 - Polished C Brass, Ai Brushed (Ivory, or P	f the Cover Plate Assembly ⁷ Chrome, Brushed Chrome, Bright ntique Brass, Brushed Brass, Copper, Painted White, Painted Painted Black				
^{1.} Part number sh 2. Metric K-factor n	own is the base p	part number. Fo	or complete part nur	Foot nber, refer to c Bar When press	tnotes urrent Viking prio	ce list schedule. in kPa_divide the	metric K-factor sl	hown by 10.0				

Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in KPa, divide the metric K-factor shown by 10.0.
 This chart shows the listings and approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.

Fins chart shows the listings and approvals available at the time of pr
 Listed by Underwriter's Laboratories for use in the U.S. and Canada.

Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. 32.

The 135°F cover has an orange label. The 165°F cover has a white label.

 Standard painted finishes consist of Polyester Baked Enamel. Other paint colors are available on request with the same listings as the standard paint colors. Listings and approvals apply for any paint manufacturer. Contact Viking for additional information.

cULus Listed as corrosion resistant.

NOTE: Custom colors are indicated on a label inside the cover assembly. Refer to Figure 1.

DESIGN CRITERIA

(Also refer to the Approval Chart.)

cULus Listing Requirements:

Mirage[®] Quick Response Concealed Pendent Sprinkler VK464 is cULus Listed for installation in accordance with the latest edition of NFPA 13 for standard coverage pendent spray sprinklers as indicated below:

- · For hazard occupancies up to and including Ordinary Hazard, Group II.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13. Maximum spacing allowed is 15 ft. (4.6 m).
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from walls is 4 in. (102 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler obstruction rules contained in NFPA 13 for standard coverage pendent spray sprinklers must be followed.

NOTE: Concealed sprinklers must be installed in neutral or negative pressure plenums only.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080416 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, Assemblee Pleniere, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



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1. DESCRIPTION

desired.

2. LISTINGS AND APPROVALS

of service or removing the sprinkler.

cULus Listed: Category VNIV FM Approval: Class 2015 NYC Approved: MEA 89-92-E, Volume 32 LPC Approved: Ref. No. 096e/12 CE Certified: Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2032 Refer to the Approval Chart on page 54c and Design Criteria on page 54d for cULus Listing requirements that must be followed.

3. TECHNICAL DATA Specifications:

Available since 2006. Minimum Operating Pressure: 7 psi (0.5 bar) Maximum Working Pressure: Sprinkler VK463 is rated for use with water working pressures ranging from the minimum 7 psi (0.5 bar) up to 250 psi (17.2 bar) for high-pressure systems. High-pressure (HP) sprinklers can be identified by locating "250" stamped on the deflector. Sprinkler VK462 is rated to a maximum 175 psi (12 bar) wwp.

allowing temporary removal of ceiling panels without taking the sprinkler system out

Factory tested hydrostatically to 500 psi (34.5 bar) Testing: U.S.A. Patent No. 4,831,870 Thread size: 1/2" (15 mm) NPT

Nominal K-Factor: 5.6 U.S. (80.6 metric*)

*Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. Glass-bulb fluid temperature rated to -65 °F (-55 °C) Patents Pending

Material Standards:

Sprinkler Body: Brass UNS-C84400 Deflector: Copper UNS-C19500 for Sprinkler VK462 Phosphor Bronze UNS-C51000 for Sprinkler VK463 Deflector Pins: Stainless Steel Alloy Bulb: Glass, nominal 3 mm diameter Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400 Button: Brass UNS-C36000 Screws: 18-8 Stainless Steel Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with Teflon Tape Yoke: Phosphor Bronze UNS-C51000 Cover Adapter: Cold Rolled Steel UNS-G10080, Finish: Clear Chromate over Zinc Plating

TECHNICAL DATA SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com Viking Mirage® Standard and Quick Response Concealed Pendent Sprinkler VK462 and HP Sprinkler VK463 are thermosensitive glass-bulb spray sprinklers designed for installation on concealed pipe systems where the appearance of a smooth ceiling is The sprinkler is pre-assembled with a threaded adapter for installation with a lowprofile cover assembly that provides up to $\frac{1}{2}$ " (12.7 mm) of vertical adjustment. The two-piece design allows installation and testing of the sprinkler prior to installation of the cover plate. The "push-on", "thread-off" design of the concealed cover plate assembly allows easy installation of the cover plate after the system has been tested and the ceiling finish has been applied. The cover assembly can be removed and reinstalled,

MIRAGE[®] STANDARD AND

QR CONCEALED PENDENT

Viking Technical Data may be found on The Viking Corporation's Web site at http://www.vikinggroupinc.com. The Web site may include a more recent edition of this Technical Data Page.

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MIRAGE[®] STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

Cover Assembly Materials:

Cover: Copper UNS-C11000 Base: Brass UNS-C26000 or UNS-C26800 Springs: Nickel Alloy Solder: Eutectic

Ordering Information: (Also refer to the current Viking price list.)

Viking Mirage[®] Standard and Quick Response Concealed Pendent Sprinklers and Cover Plate Assemblies must be ordered separately: **Sprinkler:** Base Part No. 13503A, 14697A, or HP Base Part No. 13667A

Specify sprinkler temperature rating by adding the appropriate suffix for the temperature rating to the base part number:

Temperature Suffix (°F/°C): 155°/68° = B, 175°/79° = D, 200°/93° = E

For example, sprinkler VK463 with a 155 °F/68 °C temperature rating = 13667AB.

Cover Plate Assembly: Base Part No. 13504 (2-3/4" diameter) or Base Part No. 13642 (3-5/16" diameter)

Specify finish and temperature rating of the cover plate assembly by first adding the appropriate suffix for the finish and then the appropriate suffix for the cover temperature rating to the base part number:

Finish Suffix: Polished Chrome = F, Painted White = M-/SW1004, Painted Ivory = M-/SW1634, Painted Black = M-/SW1007

Temperature Suffix (°F/°C): 135°/57° UL (139°/59° FM) = A, 165°/74° = C

For example, cover 13504 with a Polished Chrome finish and a 165 °F/74 °C temperature rating = 13504FC.

Available Finishes And Temperature Ratings:

Refer to Table 1

Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrenches**:

A. Heavy Duty Wrench Part No. 14047W/B (available since 2006), or

- B. Head Cabinet Wrench Part No. 14031*** (available since 2006)
- C. Optional Concealed Cover Plate Installer Tool Part No. 14412 for cover 13504, or Part No. 14867 for the large diameter cover (available since 2007)

Requires a ½" ratchet (not available from Viking). *Optional for removal of the protective cap. Ideal for sprinkler cabinets.

Sprinkler Cabinet: Part No. 01731A, Capacity: five (5) sprinklers (available since 1971)

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, when the temperature around the sprinkler approaches its operating temperature, the cover plate detaches. Continued heating of the exposed sprinkler causes the heat-sensitive liquid in the glass bulb to expand and the bulb to shatter, releasing the yoke, pip-cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Sprinklers VK462 and VK463 are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.



MIRAGE® STANDARD AND **QR CONCEALED PENDENT SPRINKLER VK462 AND HP** SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

				I	Mirage®	Appro Concealed Pende	oval Ch	n art lers VK4	162 and VK	463	Sprink Cover	ler Temperature R Plate Temperatur Plate Finish K	ating e Rating (EY	
Sprinkler Base Part	SIN	NPT T Si	'hread ze	No K-F	minal actor	Maximum Water Working	Overall (Sprinkle	Length r Body)	(Refe	Listing r also to De	is and App esign Crite	and Approvals⁴ gn Criteria on page 54d.)		
Number ¹		Inch	mm	U.S.	metric ²	Pressure	Inches	mm	cULus⁵	FM	NYC ⁶	LPCB		
						Standard Res	ponse Ap	plicatio	ns			•		
13503A	VK462	1/2"	15	5.6	80.6	175 psi (12 bar)	2-3/16"	56		AW1, BX1		-	-	
14697A	VK462	1/2"	15	5.6	80.6	175 psi (12 bar)	2-3/16"	56		_		AW1, BX1	AW1, BX1	
						Quick Resp	onse App	lications	5					
13503A	13503A VK462 1/2" 15 5.6 80.6 175 psi (12 bar) 2-3/16" 56 AW1, BX1 AW1, BX1 AW1, BX1													
14697A	14697A VK462 1/2" 15 5.6 80.6 175 psi (12 bar) 2-3/16" 56 AW1, BX1 AW1, BX1											-		
13667A VK463 1/2" 15 5.6 80.6 250 psi (17.2 bar) ³ 2-3/16" 56 AW1, BX1 AW1, BX1														
Sprinkler Temperature Ratings A - 155 °F (68 °C) B - 175 °F (79 °C) and 200 °F (93 °C)Cover Plate Assembly Temp. Ratings³ W - 135 °F (57 °C) UL Listed cover 135041 or 136421 (large diameter) FM Approved as 139 °F (59 °C) X - 165 °F (74 °C) cover 135041 or 136421 (large diameter)Finishes of the Cover Plate Assembly³ 1 - Polished Chrome, Painted White, Painted Ivory, or Painted Black											sembly ⁹ ite, Painted			
1 Dart numb		ia tha h				Fo	otnotes		na naine liet d					
² Metric K-fa	ictor meas	urement	shown i	s when	pressure i	s measured in Bar. V	Vhen pressi	ure is mea	asured in kPa	. divide the n	netric K-facto	r shown by 1	0.0.	
³ The Water	Working	Pressure	e rating	is stam	ped on th	e deflector.				,		· ·······		
⁴ This chart additional	shows th approvals	e listing	s and a	pprova	ls availab	le at the time of pri	nting. Othe	r approva	als may be ii	n process. C	Check with the	ne manufact	urer for any	
⁵ Listed by	Underwrite	er's Labo	oratories	s for us	e in the U	.S. and Canada.								
 ⁶ Accepted ⁷ C Certifie ⁸ The 135/1 	tor use, C ed, Standa 39 °F cov	ity of Ne ird EN 1 er has a	w York 2259-1, n orang	Departi EC-cei e label.	nent of B rtificate of . The 165	Conformity 0832-CF °F cover has a whit	er 89-92-E PD-2032. e label.	, Vol. 32.						
⁹ Painted fir	hish consis	sts of Po	lyester	Baked I	Enamel. C	other paint colors are	e available	on reque	st with the sa	me listings a	as the stand	ard paint col	ors. Listings	
and appro	vals apply	/ for any	paint m	nanufac	turer. Cor	ntact Viking for addit	ional inform	nation.						
NOTE: Cus	tom colors	s are ind	licated o	on a lab	el Inside 1	ine cover assembly.	Refer to F	igure 1.						
TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES														
Sprinkl Cla	er Tempe Issificatio	erature on	S Te	prinkle mperat	er Nomina ture Ratir	al Maximu ng ¹ Ceiling Te	m Ambien emperatur	t e ²	Temperatur Assemi	e Rating of bly (Require	Cover ed)	Bulb C	olor	
	Ordinary			155 °F	(68 °C)	100 °F	- (38 °C)		135 °F	= (57 °C) U		Rec	k	

Cover Plate Finishes: Polished Chrome, Painted White, Painted Ivory, or Painted Black

175 °F (79 °C)

200 °F (93 °C)

Footnotes

150 °F (65 °C)

150 °F (65 °C)

139 °F (59 °C) FM

165 °F (74 °C)

165 °F (74 °C)

Yellow

Green

¹ The sprinkler temperature rating is stamped on the sprinkler deflector.

Intermediate

Intermediate

² Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.



MIRAGE[®] STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

DESIGN CRITERIA (Also refer to the Approval Chart on page 54c.)

cULus Listing Requirements:

Mirage[®] Standard and Quick Response Concealed Pendent Sprinklers VK462 and VK463 are cULus Listed for installation in accordance with the latest edition of NFPA 13 for standard coverage pendent spray sprinklers as indicated below.

- For hazard occupancies up to and including Ordinary Hazard, Group II.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13. Maximum spacing allowed is 15 ft. (4.6 m).
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- · Minimum distance from walls is 4 in. (102 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler obstruction rules contained in NFPA 13 for standard coverage pendent spray sprinklers must be followed.

NOTE: Concealed sprinklers must be installed in neutral or negative pressure plenums only.

FM Approval Requirements: Mirage[®] Concealed Pendent Sprinkler VK462 is FM Approved as a standard response standard spray sprinkler as indicated in the Approval Chart for hazard occupancies up to and including Ordinary Hazard, Group II. For installation in accordance with the latest applicable FM Loss Prevention Data Sheets (including 2-8N) and Technical Advisory Bulletins. FM Global Loss Prevention Data Sheets and Technical Advisory Bulletins contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page SR1-3 or QR1-3 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



Figure 1: Identification of Custom Paint Color for Concealed Covers

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January 4, 2008
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MIRAGE[®] STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com





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NIKING®

TECHNICAL DATA

QUICK RESPONSE DRY PENDENT SPRINKLERS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

1. DESCRIPTION

Viking Quick Response Dry Pendent Sprinklers are thermosensitive spray sprinklers suitable for use in areas subject to freezing. The sprinklers are designed for dry systems and preaction systems where it is necessary to prevent water or condensation from entering the drop nipple before sprinkler operation. They may also be installed in spaces subject to freezing and supplied from a wet system in an adjacent heated area.

Viking Quick Response Dry Pendent Sprinklers are available in various finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings have been investigated for installation in corrosive atmospheres and are listed/approved as corrosion resistant as indicated in the Approval Charts. (Note: FM Global has no approval classification for Polyester coatings as corrosion resistant.)

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

> **FM Approved:** Classes 2013 and 2015

NYC Approved: MEA 89-92-E Volume 15

Refer to Approval Chart 1 and Design Criteria on page 105d for cULus Listing requirements, and refer to Approval Chart 2 and Design Criteria on page 105e for FM Approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar) Maximum Working Pressure: 175 psi (12 bar). Factory tested hydrostatically to 500 psi (34.5 bar) Thread size: 1" NPT or 25 mm BSP

- Nominal K-Factor: 5.6 U.S. (80.6 metric*) for all listed and approved lengths.
- * Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Covered by the following U.S. Patents: 8,636,075 and 10,220,231

Material Standards:

Frame Casting: Brass UNS-C84400 Deflector: Brass UNS-C26000 Bulb: Glass, nominal 3 mm diameter Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape Compression Screw: Brass UNS-C36000 Pip Cap: Brass UNS-C31400 or UNS-C31600 Pip Cap Adapter: Brass UNS-C36000 Orifice: Copper UNS-C22000 or UNS-C11000 Tube: ERW Hydraulic Steel Tube Support (Internal): Stainless Steel UNS-S30400 Barrel: Steel Pipe UNS-G10260, Electrodeposited Epoxy Base finish Barrel End and Threads: QM Brass Sleeve (for Adjustable Standard style only): Brass UNS-C26000 or UNS-C26800 **Escutcheon Materials:** Adjustable Standard Dry Escutcheons: Brass UNS-C26000 or UNS-C26800 Recessed Dry Escutcheons: Cold Rolled Steel UNS-G10080 ENT Coated Adjustable and Recessed Escutcheons: Stainless Steel UNS-S30400

Ordering Information: (Also refer to the current Viking price list.)



WARNING: Cancer and Reproductive Harmwww.P65Warnings.ca.gov

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TECHNICAL DATA

QUICK RESPONSE DRY PENDENT SPRINKLERS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

- Order Quick Response Dry Pendent Sprinklers by first adding the appropriate suffix for the sprinkler finish, the appropriate suffix for the temperature rating, and then the suffix for the length ("A" dimension) to sprinkler base part number. Order in a specific length noted as the "A" dimension. The "A" dimension is the distance from the face of the fitting (tee) to the desired finished surface of the ceiling.
- These sprinklers are listed and approved in lengths from 1-1/2" to 45-1/2" (38.1 mm to 1,156 mm) for the adjustable standard style, 3" to 47" (76.2 mm to 1,194 mm) for the plain barrel style, and 3-1/4" to 47-1/2" (82.5 mm to 1,207 mm) for the adjustable recessed style.
- Lengths exceeding the standard lengths are available, with no approvals, on a "made-to-order" basis: Recessed Dry Pendent up to 65-1/2" (1,664 mm). Adjustable Standard Dry Pendent up to 63-1/2" (1,613 mm). Plain Barrel Dry Pendent up to 65" (1,651 mm). Contact the manufacturer for more information.
- Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, and ENT = JN
- Temperature Suffix: 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, 286 °F (141 °C) = G
- For example, sprinkler VK176 with a Chrome finish and a 155 °F (68 °C) temperature rating, and "A" length of 10" = Part No. 08383UFB10.

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrenches:

A. Standard Wrench: Part No. 07297W/B (available since 1991)

B. Wrench for recessed sprinklers: Part No. 07565W/B** (available since 1991)

**A $\frac{1}{2}$ " ratchet is required (not available from Viking).

Sprinkler Guard: Chrome, with no listings or approvals, for installation on dry pendent sprinklers made after May 1994 only (Part No. 08954). **Replacement Escutcheons:**

A. Adjustable Standard Dry Escutcheon: Base Part No. 07741

B. Recessed Dry Escutcheon Cup: Base Part No. 05459A

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the internal parts to open the waterway. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS & MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Viking Quick Response Dry Pendent Sprinkler is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.



Figure 1: Standard Sprinkler Wrench 07297W/B



NIKING®

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QUICK RESPONSE DRY PENDENT SPRINKLERS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com



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QUICK RESPONSE DRY PENDENT SPRINKLERS

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	Approval Chart 1 (UL)													
				(Quick Re	sponse Dry	Pendent Sprin	klers		AIX	Finis	, sh itcheon (if a	pplicable	
Maximum 175 PSI (12 bar) WWP														
Sprinkler	SIN	Style	Thre	ad Size	Nomina	I K-Factor ²	Order Length	Listings and Approvals ⁴						
Base Part No. ¹	Onv	Otyle	NPT BSP		U.S.	metric ³	Inches	mm	cULus⁵	NYC ⁶	VdS	LPCB	CÉ	۲
08383U	1/1/470	Adjustable	1"		5.6	80.6	1/2"	12.7	A1, A5	A1				
16457U	VK1/0	Standard		25 mm		80.6	1/2"	12.7	A1, A5					
08385U	VI/100	Adjustable	1"		5.6	80.6	1/4"	6.35	B2, B6	B2				
16453U	VKIOU	Recessed		25 mm		80.6	1/4"	6.35	B2, B6					
08387U	VK172	Plain	1"		5.6	80.6	1/2"	12.7	A3	A4				
16455U	16455U VK172 Barrel 25 mm 80.6 1/2" 12.7 A3 <													
	Approved Finishes and "A" Dimensions													
Approx	1 - Chrome or White Polyester ⁷ sprinkler with a Chrome or White Polyester Sleeve and Escutcheon													
				(00 %0)	with '	"A" dimensior	is 1-1/2" to 45-1/2	2" (38.1 mm 1	to 1,156 m	im)	_ ,	4 007	,	
A - 155 °F (68	C), 175	F (79°C), 2	200 F	(93 °C),	2 - Chror	ne or White P	olyester' with "A" o	dimensions 3-	1/4″ to 47-	1/2" (82.	5 mm t	o 1,207 i	nm)	
	141 ())	000 °⊏	3 - Chron	ne, Brass, wr	lite Polyester', or t	=INI'WILLIA		S 3 104	·/ (/0.	2 mm to	1,194 1	nm)
D - 155 F (00	C), 17	5 F (19 C), and	200 F	5 - ENT	⁷ sprinkler wit	th an ENT ⁷ Sleev	ve and Escut	ro.z mm t cheon wit	ο 1,194 h "Δ" di	mensia	ns 1-1/2	2" to 4	5-1/2"
(93 C)					(38.1	mm to 1.156					menaid	5113 1-172	2 10 4	0-1/2
					6 - ENT7	with "A" dime	nsions 3-1/4" to 47	7-1/2" (82.5 m	m to 1,207	mm)				
						Footr	notes							
¹ Part number sl	hown is tl	he base par	t numb	er. For c	omplete p	art number, r	efer to current Vil	king price list	schedule.					
² K-Factor applie	es for sta	ndard length	าs ("A"	Dimensi	ons indica	ited above).								
³ Metric K-factor	r measure	ement show	n is wl	nen pres	sure is me	easured in Ba	r. When pressure	e is measure	d in kPa, d	divide th	e metr	ic K-fact	or sho	wn by
10.0.				·										,
⁴ This chart show additional appl	ws the lis rovals.	tings and ap	oproval	s availab	le at the t	ime of printing	g. Other approval	s may be in	process. C	heck wi	th the	manufac	turer fo	or any
⁵ Listed by Unde	erwriter's l	Laboratories	for us	e in the L	J.S. and C	anada.								
⁶ Accepted for u	se, City c	of New York	Depar	tment of	Buildings,	MEA Numbe	er 89-92-E, Vol. 1	5.						
7 ol II up Liptod o		on registant												

culus listed as corrosion resistant.

DESIGN CRITERIA - UL (Also refer to Approval Chart 1 above.)

NOTE: When using CPVC fittings with Viking dry sprinklers, use only new Nibco Model 5012-S-BI tees. When selecting other CPVC fittings, contact Viking Technical Services.

cULus Listing Requirements:

Standard Dry Pendent Sprinklers are cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- · Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler installation and obstruction rules contained in NFPA 13 for standard spray pendent sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

KING

TECHNICAL DATA

QUICK RESPONSE DRY PENDENT SPRINKLERS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

	Approval Chart 2 (FM) Quick Response Dry Pendent Sprinklers Maximum 175 PSI (12 bar) WWP														
Sprinkler Base	SIN	Style	Threa	d Size	Nomina	al K-Factor ²	Order Lengt	h Increment	FM Approvals ^₄						
Part No.1	SIN	Style	NPT	BSP	U.S.	metric ³	Inches	mm	(Refer also to Design Criteria below.)						
08383U	1/1/176	Adjustable Standard	1"		5.6	80.6	1/2"	12.7	A1						
16457U	VKI/O	Aujustable Standard		25 mm		80.6	1/2"	12.7	A1						
08385U	1/1/2120	Adjustable Recessed	1"		5.6	80.6	1/4"	6.35	B2						
16453U	VICTOU	Aujustable Recessed		25 mm		80.6	1/4"	6.35	B2						
08387U	1/1/170	Diain Darral	1"		5.6	80.6	1/2"	12.7	A3						
16455U	VK1/2	Plain Barrei		25 mm		80.6	1/2"	12.7	A3						
						A		All Discourses							

Approved Temperature Ratings

A - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)

Approved Finishes and "A" Dimensions

1 - Brass, Chrome, White Polyester, or ENT⁵ sprinkler with a Brass, Chrome, White Polyester, or ENT⁵ Sleeve and Escutcheon with "A" dimensions 1-1/2" to 45-1/2" (38.1 mm to 1,156 mm) 2 - Brass, Chrome, White Polyester, or ENT⁵ with "A" dimensions 3-1/4" to 47-1/2" (82.5 mm to 1,207 mm)

B - 155 °F (68 °C), 175 °F (79°C), and 200 °F (93 °C) 3 - Brass, Chrome, White Polyester, or ENT⁵ with "A" dimensions 3" to 47" (76.2 mm to 1,194 mm)

Footnotes

¹ Part number shown is the base part number. For complete part number, refer to current Viking price list schedule.

² K-Factor applies for standard lengths ("A" Dimensions indicated above).

³ Metric K-Factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0

⁴ This chart shows the FM Approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.

⁵ FM approved as corrosion resistant.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

NOTE: When using CPVC fittings with Viking dry sprinklers, use only new Nibco Model 5012-S-BI tees. When selecting other CPVC fittings, contact Viking Technical Services.

FM Approval Requirements:

The Dry Pendent Sprinklers in the Approval Chart above are FM Approved as quick response Non-storage standard spray sprinklers as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including 2-0) and Technical Advisory Bulletins. FM Global Loss Prevention Data Sheets and Technical Advisory Bulletins contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



NIKING®

TECHNICAL DATA

QUICK RESPONSE DRY PENDENT SPRINKLERS

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Figure 6: Dry Pendent Sprinkler Required Minimum Barrel Length Based on Ambient Temperature in the Protected Area (Adjustable Standard Dry Pendent Sprinkler is Shown)



Figure 7: Dry Sprinkler Seal (Adjustable Standard Dry Pendent Sprinkler is Shown)



MICROFAST® QUICK RESPONSE PENDENT SPRINKLER VK302 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

1. DESCRIPTION

The Viking Microfast[®] Quick Response Pendent Sprinkler VK302 is a small thermosensitive glass bulb spray sprinkler available with various finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive environments and are Listed and Approved as indicated in the Approval Charts.

2. LISTINGS AND APPROVALS

c(Սլ){սs} cULus Listed: Category VNIV

- FM Approved: Class Series 2000
- VdS VdS Approved: Certificates G414009, G414010, G4040095, and 4880045
- LPCB Approved: Certificate 096e/06
- CE: Standard EN 12259-1, Declaration of Performance DOP_Sprinklers_LPCB_5-2-19, DOP_VK302ENT_29-1-20 & DOP_VK302-57C_30-9-20

China Approval: Approved according to China GB standard

MED Certified: Standard EN 12259-1, EC-certificate of conformity 0832-MED-1003

Refer to Approval Chart 1 and Design Criteria cULus Listing requirements, and refer to Approval Chart 2 and Design Criteria for FM Approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar) Rated to 175 psi (12 bar) water working pressure Factory tested hydrostatically to 500 psi (34.5 bar) Thread size: 1/2" NPT, 15 mm BSP Nominal K-Factor: 5.6 U.S. (80.6 metric**) Glass-bulb fluid temperature rated to -65 °F (-55 °C) Overall Length: 2-1/4" (58 mm) *cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar). Material Standarda

Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass Deflector: Phosphor Bronze UNS-C51000 or Copper UNS-C19500 Bulb: Glass, nominal 3 mm diameter Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape Screw: Brass UNS-C36000 Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400 For Polyester Coated Sprinklers: Belleville Spring-Exposed For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pipcap - ENT plated. Ordering Information: (Also refer to the current Viking price list.) Order Quick Response Pendent Sprinklers by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.





MICROFAST® QUICK RESPONSE PENDENT SPRINKLER VK302 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN Temperature Suffix: 135 °F (57 °C) = A, 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, 286 °F (141 °C) = G For example, sprinkler VK302 with a Brass finish and a 155 °F (68 °C) temperature rating = Part No. 12979AB

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the current Viking price list.)

Sprinkler Wrenches:

- A. Standard Wrench: Part No. 21475M/B.
- B. Wrench for Recessed Pendent Sprinklers: Part No. 13655W/B** (available since 2006)
- C. Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool*** Part No. 15915 (available since 2010) **A ½" ratchet is required (not available from Viking).
 - ***Allows use from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Ideal for sprinkler cabinets. Refer to Bulletin F_051808.

Sprinkler Cabinets:

A. Six-head capacity: Part No. 01724A (available since 1971)

B. Twelve-head capacity: Part No. 01725A (available since 1971)

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Viking Microfast[®] Quick Response Pendent Sprinkler VK302 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.





MICROFAST® QUICK RESPONSE PENDENT SPRINKLER VK302 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES												
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Bulb Color									
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange									
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red									
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow									
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green									
High	286 °F (141 °C)	225 °F (107 °C)	Blue									

Sprinkler Finishes: Brass, Chrome, White Polyester, Black Polyester, and ENT Corrosion-Resistant Coatings³: White Polyester, and Black Polyester. ENT in all temperature ratings except 135 °F (57 °C)

Footnotes

¹ The sprinkler temperature rating is stamped on the deflector.

² Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

³ The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed on sprinklers with Polyester and ENT coatings. For ENT coated automatic sprinklers, the waterway is coated.





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	Approval Chart 1 (UL) The Viking Microfast® Quick Response Pendent Sprinkler VK302 Maximum 175 PSI (12 Bar) WWP													
Base	SIN	Sprinkler	Thre	ad Siz	e N K	ominal Factor	Ove Len	ength Listings and Approvals (Refer also to Design Crite			nd Approvals³ Design Criteria.)			
Number ¹		Style	NPT	BSF	v U.S.	metric ²	Inches	mm	cULus⁴	VdS	LPCB	CE ⁷	MED ⁸	China Approval
12979	VK302	Pendent	1/2"	15 m	m 5.6	80.6	2-1/4	58	A1Z, B1Y, D2, C2X	A1	A1Z, B1Y	D1Z, C1Y, D2, A1Z, B1Y	D1	
21354 ⁹ VK302 Pendent 15 mm 5.6 80.6 2-1/4 58 D3 D3											D3			
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)														
06662B	VK302	Pendent	1/2"	15 m	m 5.6	80.6	2-1/4	58	A1Z, B1Y, D2, C2X					
18021	VK302	Pendent	1/2"	15 m	m 5.6	80.6	2-1/4	58	A1Z, B1Y	A1	A1Z, B1Y	D1Z, C1Y, D2	D1	
Appr A - 135 °F (79 °C), 20 B - 135 °F (79 °C), ar C - 155 °F 200 °F (93 D - 155 °F (93 °C), 28	18021 VK302 Pendent 1/2" 15 mm 5.6 80.6 2-1/4 58 A1Z, B1Y A1 A1Z, B1Y D1Z, C1Y, D2 D1 Approved Temperature Ratings Approved Finishes Approved Finishes Approved Finishes Approved Escutcheons A - 135 °F (57 °C), 155 °F (68 °C), 175 °F °F (93 °C), 286 °F (141 °C) Polyester ^{5.6} , Black Polyes- 1 - Brass, Chrome, White Polyester ^{5.6} , Black Polyes- Viking Micromatic® Model E-1 Recessed Escutcheon or the Viking Micromatic® Model E-1 Recessed Escutcheon Y - Standard surface-mounted escutcheon or recessed with the Viking Micromatic® 79 °C), and 200 °F (93 °C) C - 155 °F (68 °C), 175 °F (79 °C), and 3 - Chrome 3 - Chrome Z - Standard surface-mounted escutcheon Z - Standard surface-mounted escutcheon 200 °F (93 °C) D - 155 °F (68 °C), 175 °F (79 °C), 200 °F 3 - Chrome Z - Standard surface-mounted escutcheon Z - Standard surface-mounted escutcheon Z - Standard surface-mounted escutcheon													
								Footr	notes					
¹ Base par ² Metric K- ³ This tabl	rt number -factor me e shows t	shown. For easurement the listings a	r comple shown and app	ete par is whe provals	t number, n pressur available	refer to Vi e is measu at the time	king's cur red in Bai of printin	rent pri r. Wher g. Othe	ce schedule. n pressure is measure er approvals may be i	ed in kl n proce	Pa, divide the ess.	e metric K-factor sh	own by 1	0.0.

⁴ Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.

⁵ cULus Listed as corrosion-resistant.

⁶ Other colors are available on request with the same Listings and Approvals as the standard colors.

⁷ CE: Standard EN 12259-1, Declaration of Performance DOP Sprinklers LPCB_5-2-19, DOP_VK302ENT_29-1-20 & DOP_VK302-57C_30-9-20.

⁸ MED Certified, Standard EN 12259-1, EC-0832-MED-1003.

⁹ Approved according to China GB Standard.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

The Viking Microfast[®] Quick Response Pendent Sprinkler VK302 is cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light and Ordinary occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray pendent sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



MICROFAST® QUICK RESPONSE PENDENT SPRINKLER VK302 (K5.6)

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	Approval Chart 2 (FM) The Viking Microfast® Quick Response Pendent Sprinkler VK302 Maximum 175 PSI (12 Bar) WWP												
Base Part	SIN	Sprinkler	Thre	ad Si	ze	Nomina	I K-Factor	Ove	erall Le	ength	FM Approvals ³		
Number ¹	311	Style	NPT	B	SP	U.S.	metric ²	Inc	hes	mm	(Refer also to Design Criteria.)		
12979	VK302	Pendent	1/2"	15	mm	5.6	80.6	2-	1/4	58	A1Z, B1Y, D2X, C2		
21354 ⁶	VK302	15	mm	5.6	80.6	2-	1/4	58	C3				
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)													
06662B	VK302	Pendent	1/2"	15	mm	5.6	80.6	2-	1/4	58	A1Z, B1Y, D2X, C2		
18021	VK302	Pendent	1/2"	15	mm	5.6	80.6	2-	2-1/4 58		A1Z, B1Y		
Approved Temperature Ratings Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C) Approved Finishes B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C) 1-Brass, Chrome, White Polyester ⁴ , and Black Polyester ⁴ X - Standard surface-rise C - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), °F (141 °C) S - Chrome Note that the viking Micromatic [®] A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F S - Chrome Approved Finishes 1 - Brass, Chrome, White Polyester ⁴ S - Chrome Y - Standard surface-rise 2 - ENT ⁵ S - Chrome S - Chrome										Approved Escutcheons d surface-mounted escutcheon or the romatic® Model E-1 Recessed Escutcheon surface-mounted escutcheon or recessed Viking Micromatic® Model E-1 or E-2 Escutcheon surface-mounted escutcheon			
¹ Base part nun ² Metric K-facto 10.0.	2 - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C) 2 - Standard surface-mounted escutcheon Footnotes 1 Base part number shown. For complete part number, refer to Viking's current price schedule. 2 Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by												

³ This table shows the FM Approvals available at the time of printing. Other approvals may be in process.

⁴ Other colors are available on request with the same Approvals as the standard colors.

⁵ FM approved as corrosion resistant.

⁶ Approved according to China GB Standard.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

FM Approval Requirements:

The Viking Microfast[®] Quick Response Pendent Sprinkler VK302 is FM Approved as quick response **Non-storage** pendent sprinklers as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



MICROFAST® QUICK RESPONSE PENDENT SPRINKLER VK302 (K5.6)

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MICROMATIC[®] STANDARD RESPONSE PENDENT SPRINKLER VK102 (K5.6)

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TECHNICAL DATA

1. DESCRIPTION

The Viking Micromatic® Standard Response Pendent VK102 Sprinkler is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester, and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive environments and are listed/approved as indicated in the Approval Charts.

Viking standard response sprinklers may be ordered and/or used as open sprinklers (glass bulb and pip cap assembly removed) on deluge systems. Refer to Ordering Instructions.

2. LISTINGS AND APPROVALS

c(ULus Listed: Category VNIV

NIKING®

FM Approved: Classes 2001, 2002, 2015, 2017, 2043

VdS VdS Approved: Certificate G414006 & G414004

LPCB Approved

CE: Standard EN 12259-1, DOP_Sprinklers_LPCB_5-2-19 & DOP_VK102WAX_2-12-19

MED Certified: Standard EN 12259-1, EC-certificate 0832-MED-1003

China Approval: Approved according to China GB standard.

NOTE: Other International approval certificates are available upon request. Refer to Approval Charts and Design Criteria for listing and approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)* Maximum Working Pressure: 175 psi (12 bar) wwp Factory tested hydrostatically to 500 psi (34.5 bar) Thread size: 1/2" NPT, 15 mm BSPT Nominal K-factor: 5.6 U.S. (80.6 metric**) Glass-bulb fluid temperature rated to -65 °F (-55 °C) Overall Length: 2-1/4" (57 mm) cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar). **Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. Material Standards: Frame Casting: Brass UNS-C84400 or QM Brass Deflector: Phosphor Bronze UNS-C51000 (Not for FM Approval) or Copper UNS-C19500 Bulb: Glass, nominal 5 mm diameter Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape Screw: Brass UNS-C36000 Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

For Polyester Coated Sprinklers: Belleville Spring-Exposed For ENT coated Sprinklers: Belleville Spring - Exposed, Screw and Pipcap - ENT plated.

Ordering Information: Refer to Table 1

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.


IKING

TECHNICAL DATA

MICROMATIC® STANDARD RESPONSE PENDENT SPRINKLER VK102 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

7. AVAILABILITY

The Viking Micromatic® Standard Response Upright Sprinkler VK100 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

TABLE 1: ORDERING INFORMATION Instructions: Using the sprinkler base part number, (1) add the suffix for the desired Finish (1) add the suffix for the desired Finish (2) add the suffix for the desired Temperature Rating.										
Sprinkler	Size		1: Finishes		2: Temperature Ratings					
Base Part No.	NPT Inch	BSPT mm	Description	Suffix ¹	Nominal Rating	Bulb Color	Hazard Classification	Max. Ambient Ceiling Temperature ²	Suffix	
12987	1/2		Brass	А	135 °F (57 °C)	Orange	Ordinary	100 °F (38 °C)	Α	
12989		15	Chrome	F	155 °F (68 °C) Red Ordinary		Ordinary	100 °F (38 °C)	В	
20229		15	White Polyester 3,5	M-/W	175 °F (79 °C)	Yellow	Intermediate	150 °F (65 °C)	D	
			Black Polyester 3,5	M-/B	200 °F (93 °C)	Green	Intermediate	150 °F (65 °C)	E	
			Wax	С	212 °F (100 °C)	Green	Intermediate	150 °F (65 °C)	М	
			Wax over Polyester	V-/W	286 °F (141 °C)	Blue	High	225 °F (107 °C)	G	
			ENT 3,4,5	JN	360 °F (182 °C)	Mauve	Extra High	300 °F (149 °C)	н	
					500 °F (260 °C)	Black	Ultra High ⁶	465 °F (240 °C)	L	
 Corrosion Resistant Coatings^o White Polyester and Black Polyester in all temperature ratings. ENT in all temperature ratings except 135 °F (57 °C). Wax-Coated Brass and Wax over Polyester⁷ for sprinklers with the following temperature ratings: 155 °F (62 °C) It Brave Max 175 °F (70 °C) Brave Max 200 °F (62 °C) Brave Max 200 °F (144 °C) Black Brave Max 175 °F (70 °C). 										
Accessorie	s				200 1 (00 0) 01		200 1 (141 0			
 Sprinkler Wrenches (see Figure 1): A. Standard Wrench: Part No. 21475M/B B. Standard Wrench for Wax Coated Sprinklers: Part No. 10896W/B C. Socket Wrench for Recessed Pendent Sprinklers: Part No. 13655W/B (A 1/2" ratchet is required, not available from Viking) D. Socket Wrench for Wax Coated Sprinklers: Part No. 13577W/B (A 1/2" ratchet is required, not available from Viking) E. Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool⁹: Part No. 15915 Sprinkler Cabinet: A. Up to 6 sprinklers: Part number 01724A (available since 1971). B. 6-12 Sprinklers: Part number 01725A (available since 1971). 										
Footnotes										
 Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards. UL Listed as corrosion resistant. FM Approved corrosion resistant. The corrosion resistant and corrosion proofing coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart(s). These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or 										

suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed Sprinklers, with Polyester and ENT coatings. For ENT coated automatic sprinklers, the waterway is coated.
Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinklers. For more inforamation regarding wax coatings, refer to Bulletin Form No. F_010201.
Allows use from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Ideal for sprinklers. Refer to Bulletin F_051808.



MICROMATIC[®] STANDARD RESPONSE PENDENT SPRINKLER VK102 (K5.6)

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Approval Chart 1 (UL)													
Micromatic [®] Standard Response Pendent Sprinkler VK102													
Maximum 175 PSI (12 bar) WWP													
Sprinkler Base Part		Threa	Thread Size		Nominal K-factor		ength	(Refe	sungs er also f	o UL Design C	riteria.)		
	SIN	NDT	REDT		motric ²	Inchos	mm		Vde		CE8	MED 9	China
Number			DOFI	0.3.	metric	inches		COLUS	vus	LFOD	CE.		Approval
12987	VK102	1/2"	15 mm	5.6	80.6	2-1/4"	57	A1, B3, B1Y, C4, D2, E5, G5Z	A1	A1, B3, B1Y	F1, G1Y, B4 ¹²	F2X	
12989	VK102		15 mm	5.6	80.6	2-1/4"	57	A1, B3, B1Y, C4, D2, E5, G5Z	A1	A1, B3, B1Y	F1, G1Y, B4 ¹²	F2X	
2022910	VK102		15 mm	5.6	80.6	2-1/4"	57	E6					E6
10100	1//// 00	4 /0"	45	5.0	N	OTICE - P	Product	Below - No longer offered.	1	1	1		
10139	VK102	1/2″	15 mm	5.6	80.6	2-1/4"	57	A1, B3, B1Y, C4, D2, E5, G5Z					
10173	VK102		15 mm	5.6	80.6	2-1/4	5/	A1, B3, B1Y, C4, D2, E5, G5Z	A1	A1, B3, B1Y		F2X	
18020	VK102	1/2	15 mm	5.6	80.6	2-1/4	57	A1, B3, B1Y, C4, D2, E5, G5Z	A1	A1, B3, B1Y	[F1, G1X]	F2X	
Approved	lempe	erature	e Rating	j Code	S								
B = 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C) C = 286 °F (141 °C) D = 500 °F (260 °C) ⁷ E = 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), 360 °F (182 °C), and 500 °F (260 °C) ⁷ F = 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C) G = 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)													
Approved Finish Codes													
1 = Brass, Chrome, White Polyester ^{5,6} and Black Polyester ^{5,6} 2 = Brass and Chrome 3 = Wax-Coated Brass and Wax Over Polyester ⁵ 4 = High Temperature 200 °F (93 °C) Wax Coating (corrosion resistant); maximum ambient temperature allowed at ceiling = 150 °F (65 °C) 5 = ENT ⁵ 6 = Chrome													
Approved Escutcheon Codes													
X = Recessed with the Viking Model E-1, E-2, or E-3 Recessed Escutcheon Y = Standard surface-mounted escutcheon or recessed with the Viking Model E-1, E-2, or E-3 Recessed Escutcheon Z = Standard surface-mounted escutcheon or recessed with the Viking Model E-1 Recessed Escutcheon													
Footnotes	Footnotes												
 Base part number is shown. For complete part number, refer to Viking's current price schedule. Metric K-factor shown is for use when pressure is measured in bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals. Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada. CULus Listed as corrosion resistant. Other colors are available on request with the same Listings and Approvals as the standard colors. Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature round the Ultra-High temperature rated sprinkler may be severely retarded. CE: Standard EN 12259-1, EC-certificate of conformity 0832-CPD-0021. MED Certified, Standard EN 12259-1, EC-certificate of conformity 0832-MED-1003 and 0832-MED-1008. Approved according to China GB standard. CE: Standard EC 12259-1, Declaration of Performance DOP_Sprinklers_LPCB_5-2-19 & DOP_VK102WAX_2-12-19 													
DESIGN CRITERIA - UL (Also refer to Approval Chart 1.)													

cULus Listing Requirements:

The Viking Micromatic0[®] Standard Response Pendent Sprinkler VK102 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light, Ordinary, and Extra Hazard occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray pendent sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



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Approval Chart 2 (FM)								
Micromatic [®] Standard Response Pendent Sprinkler VK102								
Maximum 175 PSI (12 bar) WWP								
Sprinkler Base	SIN	I hread Size		Nominal K-Factor		Overall Length		FM Approvals ³
Part Number ¹		NPT	BSPT	U.S.	metric ²	Inches	mm	(Refer also to Design Criteria below.)
12987	VK102	1/2"	15 mm	5.6	80.6	2-1/4"	57	A1, B2, C3, D1, E4, G1Y, G4Z
12989	VK102		15 mm	5.6	80.6	2-1/4"	57	A1, B2, C3, D1, E4, G1Y, G4Z
202297	VK102		15 mm	5.6	80.6	2-1/4"	57	E5
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)								
10139	0139 VK102 1/2" 15 mm 5.6 80.6 2-1/4" 57 A1, B2, C3, D1, E4, C		A1, B2, C3, D1, E4, G1Y, G4Z					
10173	VK102		15 mm	5.6	80.6	2-1/4"	57	A1, B2, C3, D1, E4, G1Y, G4Z
18020	VK102	1/2"	15 mm	5.6	80.6	2-1/4"	57	A1, B2, C3, D1, G1Y
Approved Temperature Rating Codes								
B = 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 212 °F (100 °C) C = 286 °F (141 °C) D = 500 °F (260 °C) ⁵ E = 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), 360 °F (182 °C), and 500 °F (260 °C) ⁵ F = 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C) G = 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)								
Approved Finish	Codes							
1 = Brass, Chrome, White Polyester ^{5,6} and Black Polyester ^{5,6} 2 = Wax-Coated Brass (corrosion resistant) 3 = High Temperature 200 °F (93 °C) Wax Coating (corrosion resistant); maximum ambient temperature allowed at the ceiling = 150 °F (65 °C) 4 = ENT ⁶ 5 = Chrome								
Approved Escutcheon Codes								
Y = Standard surface-mounted escutcheon or recessed with the Viking Model E-1, E-2, or E-3 Recessed Escutcheon Z = Standard surface-mounted escutcheon or recessed with the Viking Model E-1 Recessed Escutcheon								
Footnotes								
 Base part number is shown. For complete part number, refer to Viking's current price schedule. Metric K-factor shown is for use when pressure is measured in bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals. Other colors are available on request with the same Approvals as the standard colors. 								

5. Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F (149 °C), the response time of the Ultra-High temperature rated sprinkler may be severely retarded.

FM approved as corrosion resistant.
 Approved according to Chipa CB standa

Approved according to China GB standard.

DESIGN CRITERIA - FM (Also refer to Approval Chart 2.)

FM Approval Requirements:

The Viking Micromatic[®] Standard Response Pendent Sprinkler VK102 is is FM Approved as standard response **Non-Storage** pendent sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



MICROMATIC[®] STANDARD RESPONSE PENDENT SPRINKLER VK102 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com





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15 14 **GENERAL NOTES**

1. THIS WET SYSTEM SHALL BE INSTALLED PER NFPA-13 AND THE CITY OF RHOME.

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2. THIS SYSTEM IS CALCULATED PER NFPA-13 (SEE CALCULATION DESIGN INFORMATION).

3. FOR ALL INSPECTIONS AND TESTS, AN APPOINTMENT SHALL BE MADE WITH THE APPROPRIATE FIRE PREVENTION OFFICE TWO DAYS PRIOR TO SUCH.

4. ALL SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR TWO HOURS OR AT 50 PSI ABOVE THE OPERATIONAL STATIC PRESSURE OF THE SYSTEM, WHICHEVER IS GREATER.

5. FIRE DEPARTMENT CONNECTIONS SHALL BE VISIBLE, ACCESSIBLE, WITH NATIONAL STANDARD THREADS, FEMALE OUTLETS, PROTECTIVE CAPS AND A CHECK VALVE LOCATED IN THE MAIN LINE. CHECK VALVE IS TO BE LOCATED AS CLOSE TO THE F.D.C. AS POSSIBLE. OUTLET CONNECTIONS TO BE LOCATED 3'-6'' A.F.F. OR GRADE.

6. EACH VALVE SHALL HAVE A PERMANENTLY AFFIXED SIGN INDICATING ITS FUNCTION. ALL VALVE HANDLES TO BE LOCATED 7'-0" MAX. A.F.F.

7. A SUPPLY OF AT LEAST SIX SPARE SPRINKLERS (NEVER FEWER THAN SIX) SHALL BE MAINTAINED ON THE PREMISES PER. NFPA 13 2016 ED. IN ROOMS NOT EXCEEDING 100 DEGREES.

8. THIS SYSTEM IS TO BE SUPERVISED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE STATION SERVICE OR A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.

9. ALL MATERIALS USED IN THE INSTALLATION OF THIS SYSTEM(S) SHALL BE NEW AND OF CURRENT ISSUE. ALL MATERIALS SHALL BE APPROVED BY U.L. (UNDERWRITERS LAB) AND BE IN CONFORMANCE WITH THE MOST CURRENT ISSUE OF THE NFPA-13 AS WELL AS THE AUTHORITY HAVING JURISDICTION.

10. JOINING OF PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH NFPA-13.

11. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-13.

12. ALL SYSTEM PIPING TO HAVE A CORROSION RESISTANCE RATIO (CRR) OF 1.00 MIN. ALL MAIN PIPING TO BE 'EDDY-FLOW' PER ASTM-795 OR EQUIVALENT. PIPING UP TO 2" IN DIA. TO BE 'EDDY-THREAD' PER ASTM-A795 OR EQUIVALENT. SCREWED FITTINGS TO BE 125# CAST IRON. MAINS TO USE GROOVED FITTINGS.

13. SYSTEM PIPING WILL BE SUPPORTED WITH HANGERS IN ACCORDANCE WITH NFPA-13 AND THE TRUSS MANUFACTURER'S REQUIREMENTS.

14. PROVISIONS OF SEISMIC SWAY BRACING SHALL BE IN ACCORDANCE WITH NFPA-13.

15. PAINTING OF THE SYSTEM PIPING AND COMPONENTS IS NOT PART OF THIS SCOPE AND, IF REQUIRED, IT SHALL BE PERFORMED BY THE PAINT CONTRACTOR.

16. ELECTRICAL WORK IS NOT A PART OF THIS SCOPE AND SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR.

17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE INTEGRITY OF THE SPRINKLER SYSTEM DURING CONSTRUCTION. 18. ALL PIPE LENGTHS SHOWN ARE CENTER TO CENTER.

19. ELEVATIONS AND DIMENSIONS SHOWN ON THESE DRAWINGS ARE NOMINAL. ACTUAL MEASUREMENTS MAY VARY AND SHALL BE DETERMINED BY THE INSTALLING CONTRACTOR.



GENERAL NOTES

RISER SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR TWO

2. PROVIDED A 18" MINIMUM CLEARANCE AROUND THE RISER

KEY NOTES

ed by electrical	8. FLANGE
ell w/ I.D. sign	9. D.I. UNDG UNDER BLDG
RICAL	10. FINISHED FLOOR SLAB
V _ (CEE	11. DO NOT POUR SOLID
A - (SEE 2 DETAILS)	12. THRUST BLOCK
IN - (PIPED TO	13. EXTERIOR WALL
HIECIS	14. UL LISTED PRESSURE GAUGE AND 3-WAY VALVE
200 DOUBLE CHECK	15. 4 WAY SWAY BRACING
SEATED	16. CHECK VALVE
F VALVE WITH LISTED OR FM ON FIRE	17. FIRE DEPT. CONNECTION
-	

N.T.S.

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These plans were prepared by:

FIRE

PROTECTION

APPROVAL STAMP

JMS2207221-1A

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