ASE
Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning

Application for Site Plan & Special Permit

Pursuant to Stow Zoning Bylaw and Rules & Regulations for Site Plan Approval & Special Permit

February 5, 2015

Project Location:

0 Barton Road, Stow, MA
586 Main Street, Hudson, MA

Stow Assessors Map/Lot:

U-2/54; R-25/13, 16A, 16B, 17

Hudson Assessors Map/Lot:

35/3

Owner/Applicant:

Collings Foundation, Inc.
P.O. Box 248
Stow, MA 01775

Representative:

Andrews Survey & Engineering, Inc.
104 Mendon Street
Uxbridge, MA 01569

Table of Contents

TOWN OF STOW PLANNING BOARD

APPLICATION

FOR

SITE PLAN APPROVAL

File completed Application with the Town Clerk and then present 14 separate copies of the Application, folded to fit neatly within a letter-sized file folder, to the secretary for the Planning Board along with a filing fee payable to "Town of Stow" in the amount required by the Rules and Regulations for Site Plan Approval. Refer to the "Rules and Regulations for Site Plan Approval" for details on the information required.

Please type or print this Application.

APPLICANT'S NAME: Collings Foundation, Inc. PHONE #: 978-562-9182
MAILING ADDRESS: 137 Barton Road, Stow, MA 01775
LOCATION AND STREET ADDRESS OF SITE: 137 Barton Road, Stow, MA 01775
586 Main Street, Hudson

AREA OF SITE: 832,206+/- sq. ft. FRONTAGE: 153.3+/- in Stow (non-contiguous) linear feet

ZONING DISTRICT: Res ASSESSOR'S MAP NO.(s): U-2; R-25 PARCEL NO.(s): 54; 13,16A,16B,17

SOUTH MIDDLESEX REGISTRY OF DEEDS BOOK NO.(s): 13361/267; 55607/530
PAGE NO.(s) or LAND COURT CERTIFICATE OF TITLE NO.(s): _____
PROPERTY OWNER: Robert & Caroline Collings Collings Foundation, Inc. PHONE #: 978-562-9182
MAILING ADDRESS: 137 Barton Road, Stow, MA 01775
REASON FOR APPLICATION: Proposed Building Construction

Please complete the following check list for your Application indicating with a check mark the information included. If an item is not applicable to your Application, write "N/A" in the blank. If any applicable items are missing attach additional sheets explaining the omission. Note that this list is not a complete description of the requirements for a complete Application; it is each Applicant's responsibility to prepare a complete Application according to the "Rules and Regulations for Site Plan Approval" as adopted by the Planning Board and available from the Planning Board's secretary. An Application lacking any required information in the appropriate format may not be accepted or may be cause for denial of said Application.

If any Special Permits or variances have been filed previously for this site please attach copies of the decisions.

__X__ DEVELOPMENT IMPACT STATEMENT

- __X__ Description of proposed or possible uses
- __X__ Building coverage, total coverage, and open space areas
- __X__ Drainage calculations
- __X__ Earth removal calculations
- __X__ Traffic study (8 copies)
- __X__ List variances and Special Permits previously issued by the Planning Board of Appeals and any needed for this proposal
- __X__ Provide copies of any "approval not required" subdivisions
- __X__ List any Special Permits or Health Permits required and provide copies of any received
- __X__ Note if Conservation Commission approval needed and provide copy of approval if received

__X__ LOCUS PLAN

__X__ SITE COMPOSITE PLAN

Design certifications

Legends

General site characteristics -

- Existing and proposed buildings and structures
- Driveway entrances for abutting properties and those across a public way with dimensions
- All underground tanks/structures existing or proposed or abandoned
- Zoning, Flood Plain, and Groundwater Protection District boundaries if applicable
- Yards/setbacks dimensioned
- Names of abutting property owners

Natural site characteristics -

- Waterways

Wetland boundaries and buffers

- Existing and proposed contours
- Open space with square footage calculations

Site improvements -

- Dimensions of traffic lanes
- Label all paved surfaces and note materials

Parking spaces and parking lot landscaping with dimensions

- Building areas for each floor
- Exterior lighting
- Existing and proposed signage
- Outdoor storage areas labeled
- Parking calculations

Site utilities -

Stormwater drainage facilities shown & dimensioned
Underground storage containers with capacities and contents
Water services
Fire hydrants on or off site
Underground utilities
Fire alarm master box
Sprinkler feed line
Solid waste disposal facilities
Sewage disposal system
Erosion and sedimentation controls

__X__ CONSTRUCTION DETAIL PLAN

Detail of structures
Landscaping details
Parking details in compliance with the Stow Zoning Bylaw
Tabulations of building coverage and open space
Details of outdoor lighting

__X__ LANDSCAPE PLAN

Certifications
Legend
Number, type, & size of trees and shrubs
Landscape buffers
Land contours
Site features
Limits of work
Perimeter of trees
Outdoor lighting structures

__X__ BUILDING ELEVATION PLAN

Certifications
Scale
Front, rear, & side elevations with maximum height

__X__ FLOOR PLAN

Certifications
Scale
Net floor area/s

Any additional maps, plans, photographs, deeds, or documents which the Applicant wishes to submit should be enclosed with each copy of this Application.

The undersigned hereby apply to the Planning Board for a public hearing and site plan approval under the Town of Stow Zoning Bylaw approving the Application as described above.

The undersigned hereby certify that the information on this Application and plans submitted herewith are correct, and that all applicable provisions of Statutes, Regulations, and Bylaws will be complied with.

The above is subscribed to and executed by the undersigned under the penalties of perjury in accordance with Section 1-A of Chapter 268, General Laws of the Commonwealth of Massachusetts.

2-5-2015 Rob Collings

Date Signature of Applicant

OWNER'S KNOWLEDGE AND CONSENT

I hereby assert that I have knowledge of and give my consent to the Application presented above.

2/5/15 Robert Collings Caroline J. Collings

Date Signature of Owner

TOWN OF STOW PLANNING BOARD

PETITION

FOR

SPECIAL PERMIT

File completed Petition with the Town Clerk and then present 14 separate copies of the Petition, folded to fit neatly within a letter-sized file folder, to the secretary for the Planning Board along with a Petition fee payable to "Town of Stow" in the amount required by the Rules and Regulations for Special Permits. Refer to the "Rules and Regulations for Special Permits" for details on the information required.

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Fire hydrants on or off site
Underground utilities
Fire alarm master box
Sprinkler feed line
Solid waste disposal facilities
Sewage disposal system
Erosion and sedimentation controls – citation?
Names of abutting property owners
Parking calculations

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Certifications
Scale
Front, rear, & side elevations with maximum height

__X__ FLOOR PLAN

Certifications
Scale
Net floor area/s

Any additional maps, plans, photographs, deeds, or documents which the Petitioner wishes to submit should be enclosed with each copy of this Petition.

The undersigned hereby Petition the Planning Board for a public hearing and a Special Permit under the Town of Stow Zoning Bylaw approving the Special Permit Petition including the Site Plan described above.

The undersigned hereby certify that the information on this Petition and plans submitted herewith are correct, and that all applicable provisions of Statutes, Regulations, and Bylaws will be complied with.

The above is subscribed to and executed by the undersigned under the penalties of perjury in accordance with Section 1-A of Chapter 268, General Laws of the Commonwealth of Massachusetts.

Rob Collings 2-5-2015

Date Signature of Petitioner

OWNER'S KNOWLEDGE AND CONSENT

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2/5/15 Robert Collings Caroline J. Collings

Date Signature of Owner

MAP R-25 PARCELS 13,16A,16B,17 MAP U-2 PARCEL 54

MAP/PARCEL	PROPERTY LOCATION	OWNER NAME 1	OWNER NAME 2	MAILING ADDRESS	CITY	STATE	ZIP CODE	DEED BOOK	DEED PAGE
000U-1 000051	BARTON RD	TOWN OF STOW	LAKE BOONE DAM	TOWN HALL	STOW	MA	01775	10194	35
00R-25 00016B	OFF BARTON RD	COLLINGS ROBERT F	CAROLINE J COLLINGS	137 BARTON RD	STOW	MA	01775	13361	267
000U-1 000037	104 PINE POINT RD	SPAULDING DOROTHY A		104 PINE POINT RD	STOW	MA	01775	12513	665
000U-1 000052	81 BARTON RD	DOWNEY HAROLD F JR	DOWNEY GAIL A	81 BARTON RD	STOW	MA	01775	58257	1
000U-1 000053	57 BARTON RD	MCKAY DARYL B	MCKAY JULIE W	57 BARTON RD	STOW	MA	01775	63014	479
000U-2 000001	112 BARTON RD	DOUGAN H AXEL	DIANA E DOUGAN	23 MYRTLE AVE	KEYPORT	NJ	07735	23689	350
000U-2 000002	114 BARTON RD	MEHIGAN BRIAN		114 BARTON RD	STOW	MA	01775	61521	26
000U-2 000003	116 BARTON RD	TARBI HENRY	TARBI KATHERINE	116 BARTON ROAD	STOW	MA	01775	45540	487
000U-2 000004	120 BARTON RD	MERTZ MICHELLE N		120 BARTON RD	STOW	MA	01775	57180	483
000U-2 000005	122 BARTON RD	CHRISTMAS PETER B	BELSKY JANET L	122 BARTON ROAD	STOW	MA	01775	45741	475
000U-2 000006	124 BARTON RD	BOON REALTY TRUST	TRAMONTOZZI NINO & ELIZABETH J & DONNA	124 BARTON RD	STOW	MA	01775	51015	438
000U-2 000007	128 129 BARTON RD	REYNOLDS LAUREL E		128 BARTON RD	STOW	MA	01775	57034	249
000U-2 000009	130 BARTON RD	CASE MICHAEL A	CASE CAROLYN S	130 BARTON ROAD	STOW	MA	01775	46009	298
000U-2 000010	136 BARTON RD	MCCAUSLAND KELLY A	ANNE LECOURT	136 BARTON RD	STOW	MA	01775	25731	151
000U-2 000011	138 BARTON RD	LARKIN ROBERT W	NANCY M LARKIN	138 BARTON ROAD	STOW	MA	01775	25492	139
000U-2 000012	140 145 BARTON RD	HOUSE MARY E		51 POWDER MILL ROAD	MAYNARD	MA	01754	61450	461
000U-2 000013	150 BARTON RD	MCNEIL LIVING TRUST	MCNEIL LEE T & DEBRA D TF	150 BARTON RD	STOW	MA	01775	64468	284
000U-2 000014	152 BARTON RD	DEWOLFE BRIAN E		152 BARTON ROAD	STOW	MA	01775	30001	16
000U-2 000015	156 BARTON RD	HURWITZ DEBRA 2007 REVOCABL	HURWITZ DEBRA	156 BARTON RD	STOW	MA	01775	63156	254
000U-2 000016	164 BARTON RD	CANTIN ROBERT L TRUST OF 2010	CANTIN ROBERT L & CATHEI	164 BARTON ROAD	STOW	MA	01775	58610	20
000U-2 000017	166 BARTON RD	CURLEY CINDY J		166 BARTON ROAD	STOW	MA	01775	30704	489
000U-2 00018A	168 BARTON RD	HAM MARY ANNE TR	TR 168 BARTON REALTY TRU	135 UNION AVENUE	SUDBURY	MA	01776	33325	577
000U-2 000019	174 BARTON RD	HART DIRK H	PATRICIA L SORN	174 BARTON RD	STOW	MA	01775	23573	242
000U-2 000020	176 BARTON RD	PINE BLUFFS REALTY TRUST	SIEWIERSKI DAVID TRUSTEE	178 BARTON RD	STOW	MA	01775	51186	271
000U-2 000021	178 BARTON RD	SIEWIERSKI DAVID J		178 BARTON RD	STOW	MA	01775	28890	87
000U-2 000022	180 BARTON RD	GREGORY CAROL A	GREGORY SCOTT D	PO BOX 361	STOW	MA	01775	27903	582
000U-2 000024	191 BARTON RD	KARKMAN ALANA M		191 BARTON ROAD	STOW	MA	01775	22026	413
000U-2 00025A	194 BARTON RD	CURLEY FAMILY TRUST	CURLEY CINDY J TRUSTEE	194 BARTON RD	STOW	MA	01775	58561	93
000U-2 000027	202 BARTON RD	FISHER 1993 FAMILY TRUST	FISHER WESTON C TRUSTEE	202 BARTON RD	STOW	MA	01775	46436	362
000U-2 000030	208 BARTON RD	WINTERS THOMAS H	LORI M. WINTERS	208 BARTON RD	STOW	MA	01775	20835	481
000U-2 000031	210 BARTON RD	ROTHWELL SHIRLEY		214 BARTON RD	STOW	MA	01775	60228	202
000U-2 000032	214 BARTON RD	ROTHWELL SHIRLEY	KOJABASHIAN SARKIS G	214 BARTON RD	STOW	MA	01775	60228	206
000U-2 000033	216 BARTON RD	SMITH BRIAN E	CATHERINE K SMITH	216 BARTON ROAD	STOW	MA	01775	24737	151
000U-2 000034	220 BARTON RD	SCHULTZ MICHAEL	SCHULTZ ERICA M	220 BARTON RD	STOW	MA	01775	53256	273
000U-2 000035	222 BARTON RD	CORNELL LINDA S		222 BARTON RD	STOW	MA	01775	27638	232
000U-2 000036	15 OCONNELL WY	BENOIT JOHN P	BENOIT KAREN B	15 OCONNELL WY	STOW	MA	01775	35782	46
000U-2 000039	11 OCONNELL WY	HARTWELL SCOTT A	MARCIA L HARTWELL	11 OCONNELL WAY	STOW	MA	01775	25656	237

Certified by the Stow Board of Assessors: _____ Date Certified or Re-Certified: 12/18/14 Planning Board

MAP R-25 PARCELS 13,16A,16B,17 MAP U-2 PARCEL 54

000U-2 000040	7 OCONNELL WY	HODSDON JAMES G	BITTER BARBARA J	7 O'CONNELL WAY	STOW	MA	01775	32905	115
000U-2 000041	3 OCONNELL WY	ORMOND JOSEPH	SUSAN D ORMOND	3 O'CONNELL WAY	STOW	MA	01775	18215	567
000U-2 000042	209 BARTON RD	KELLEHER STEPHEN D	KAREN KELLEHER	209 BARTON RD	STOW	MA	01775	15288	475
000U-2 00043A	213 BARTON RD	BAILEY SEAN		213 BARTON RD	STOW	MA	01775	44285	195
000U-2 000045	207 BARTON RD	HARVIE JOHN B	DUNN ANDREW J	207 BARTON ROAD	STOW	MA	01775	43068	42
000U-2 000046	205 BARTON RD	PHANEUF KERSTIN A		205 BARTON ROAD	STOW	MA	01775	63566	341
000U-2 000048	203 BARTON RD	SPENCER DENISE G		203 BARTON RD	STOW	MA	01775	46996	295
000U-2 000049	199 BARTON RD	CRESSMAN MICHAEL B	CRESSMAN CORINNE M	199 BARTON ROAD	STOW	MA	01775	40583	211
000U-2 00004A	BARTON RD	REYNOLDS LINDA J		123 BARTON ROAD	STOW	MA	01775	32621	375
000U-2 000052	187 BARTON RD	HAYNES KAMLYN ROXANN	PARSE JOSEPH	187 BARTON ROAD	STOW	MA	01775	49843	223
000U-2 000054	BARTON RD	COLLINGS ROBERT F	CAROLINE J COLLINGS	137 BARTON RD	STOW	MA	01775	13361	267
000U-2 000058	BARTON RD	DEBRA HURWITZ 2007 REVOCABL	DEBRA HURWITZ TRS	156 BARTON RD	STOW	MA	01775	50560	204
000U-2 000060	123 BARTON RD	REYNOLDS LINDA J		123 BARTON RD	STOW	MA	01775	25231	171
000U-2 000061	109 BARTON RD	CONLEY WILLIAM P		109 BARTON RD	STOW	MA	01775	42331	487
000U-2 000062	105 BARTON RD	TREESE ALLISON	TREESE ERIK	105 BARTON RD	STOW	MA	01775	48240	141
000U-2 00013A	151 BARTON RD	FRENCH THOMAS M	CARLA J FRENCH	151 BARTON ROAD	STOW	MA	01775	24526	169
00R-13 00013A	ALONG ASSABET RV	UNITED STATES OF AMERICA	C/O U.S. FISH AND WILDLIFE	300 WESTGATE CENTER DR	HADLEY	MA	01775	51666	177
00R-13 000015	OFF BARTON RD	CORNELL LINDA S		222 BARTON ROAD	STOW	MA	01775	34461	520
00R-14 00016A	138 SUDBURY RD	HONEY POT HILL ORCHARDS INC		144 SUDBURY RD	STOW	MA	01775	13142	474
00R-25 000013	OFF BARTON RD	COLLINGS FOUNDATION		PO BOX 248	STOW	MA	01775	63108	519
00R-25 00016A	OFF BARTON RD	COLLINGS FOUNDATION	COLLINGS RBT JR & DON RIS	PO BOX 248	STOW	MA	01775	55607	530
00R-25 000017	137 BARTON RD	COLLINGS ROBERT F	CAROLINE J COLLINGS	137 BARTON RD	STOW	MA	01775	12684	426
000U-2 000053	171 BARTON RD	ATWELL CHAD W	ATWELL AMANDA B	171 BARTON RD	STOW	MA	01775	58219	469

Certified by the Stow Board of Assessors: Lynn Nyer Asst Assessor **Date Certified or Re-Certified:** 12/18/14 **Planning Board**

Abutters Report

Abutters

ACCOUNT NUMBER	OWNER NAME	ADDRESS
35096	KANE INDUSTRIAL TRUST	5 KANE INDUSTRIAL DR
35036	KANE SHIRLEY M ESTATE OF	569 MAIN ST
35097	KANE INDUSTRIAL TRUST	7 KANE INDUSTRIAL DR
35004	SHEMIN REAL ESTATE	570 MAIN ST
35035	FIELDS MICHAEL J TR	567 MAIN ST
35116	KANE ROGER K & SHIRLEY M	MAIN ST
35079	KANE INDUSTRIAL TRUST	2 KANE INDUSTRIAL DR
35084	KANE INDUSTRIAL TRUST	1 KANE INDUSTRIAL DR
35080	KANE INDUSTRIAL TRUST	4 KANE INDUSTRIAL DR
25046	KANE ALDEN H	16 KANE INDUSTRIAL DR
35081	KANE INDUSTRIAL TRUST	6 KANE INDUSTRIAL DR
35083	KANE INDUSTRIAL TRUST	3 KANE INDUSTRIAL DR
35098	KANE ALDEN H	12 KANE INDUSTRIAL DR
35082	KANE INDUSTRIAL TRUST	8 KANE INDUSTRIAL DR
25055	DERBY CHRISTINE A	76 HUNTER AVE
25047	MARY B LAGE FAMILY TRUST	90 HUNTER AVE
35003	MAYNARD SAND & GRAVEL INC	568 MAIN ST
35002	KANE INDUSTRIAL TRUST	10 KANE INDUSTRIAL DR
35105	KANE ALDEN H	9 KANE INDUSTRIAL DR
25039	KANE ALDEN H	14 KANE INDUSTRIAL DR
25040	KANE ALDEN H	15 KANE INDUSTRIAL DR
25040	KANE ALDEN H	11 KANE INDUSTRIAL DR
25054	PISKOR GARRETT K	78 HUNTER AVE
25053	BREAU ROBERT A & ELIZABET	80 HUNTER AVE
25052	HUNTER AVENUE REALTY TRUS	82 HUNTER AVE
25034	KANE ALDEN H	17 KANE INDUSTRIAL DR
25036	KANE ALDEN H	18 KANE INDUSTRIAL DR
25051	BEAUDETTE GUY	84 HUNTER AVE
25038	KANE ALDEN H	22 KANE INDUSTRIAL DR
25050	CARRIE C & BERNARD M BROW	86 HUNTER AVE
25059	MELLO ROBERT J	88 HUNTER AVE
25049	BURKHART MARY ANN	92 HUNTER AVE

Abuts Town of Stow

Date: **January 13, 2015**

To: **Town of Hudson Zoning Board of Appeals**

From: **Town of Hudson Board of Assessors**

Above is a certified list of abutters for the below referenced parcel.

Map & Lot	Owner	Address
35-003	Maynard Sand & Gravel Inc	568 Main Street

Joanne F. McIntyre
Administrative Secretary

Andrews Survey & Engineering, Inc.

Land Surveying • Civil Engineering • Site Planning

PROJECT DESCRIPTION

The Collings Foundation, Inc. ("CF") is a non-profit, Educational Foundation (501c-3) that has been in operation since 1979 and founded as its current organization in Massachusetts on September 30, 2014. The purpose of the Collings Foundation, Inc. is to organize and support "living history" events that enable Americans to learn more about their heritage through direct participation. The original focus of the Foundation was transportation-related events such as antique car rallies, hill climbs, carriage and sleigh rides, along with a winter ice-cutting festival in the surrounding areas. During the mid-1980's, these activities were broadened to include aviation-related events such as air shows, barnstorming, historical reunions, Wings of Freedom Tour, Vietnam Memorial Flights, joint museum displays, and living history events.

CF intends to construct a new service road from Main Street in Hudson to a proposed 66,000± s.f. museum building on their property located at 137 Barton Road in Stow, MA. The service road will be located on land at 568 Main Street and also provide access to an existing 32,000± s.f.museum building. The existing 7,500± s.f. barn/office building and single-family dwelling will continue to be accessed from Barton Road. The proposed building will house new exhibits being acquired by CF. The proposed museum building will be serviced by overhead and underground electricity and telephone from Barton Road, a public on-site water supply well, and an on-site sewage disposal system.

With the exception of the entrance immediately off Main Street, the proposed service road will be 30 feet wide and constructed of Reclaimed Asphalt Pavement (RAP) for a width of 20 feet with a 5-foot wide shoulder of compacted gravel on each side. For the first 200± feet, the proposed service road has a 30-foot wide RAP surface with a 5-foot shoulder of compacted gravel on each side. This added width at the entrance shall accommodate up to three lanes of vehicles entering the site and two lanes exiting the site. Stormwater runoff generated from the proposed service road will be conveyed to several stormwater infiltration basins as illustrated on the plans.

The site where the building is proposed was previously wooded but recently cleared of trees. The corridor for the proposed access road from Hudson is primarily wooded except for portions of existing gravel access roads that have historically provided access to the various adjoining properties in Hudson and Stow. Topography can be classified as undulating with areas that are relatively flat and other areas with slopes in excess of 10%. A narrow wetland crossing is proposed to construct the proposed access road out to Main Street in Hudson.

The U.S. Natural Resources Conservation Service (NRCS), formerly SCS Soil Survey, maps indicate that soils with hydrologic soil group classification A are predominant throughout the site. The mapped soil conditions were confirmed by soil explorations.

104 Mendon Street, P.O. Box 312
Uxbridge, MA 01569
Phone (508) 278-3897
Fax (508) 278-2289

500 East Washington Street
North Attleboro, MA 02760
Phone (508) 316-0452
Fax (508) 316-0963

www.andrews-engineering.com

According to the DEP's Priority Resources Map, there are public water supply wells within one mile of the property; however, the project site is not located within the Zone II water supply protection area. Portions of the property lie within the 100-year flood plain according to the current Flood Insurance Rate Maps (FIRM), but no work is proposed within these areas.

According to the latest Edition of the Massachusetts Natural Heritage Atlas, Priority Habitat of Rare Species and Estimated Habitat of Rare Wetlands Wildlife are not located on or bordering the property. No known certified vernal pools or Areas of Critical Environmental Concern (ACEC) are located on or bordering the property.

The proposed road to Main Street in Hudson will be the main entrance for the existing museum building and the proposed museum building. All patron will be directed to 586 Main Street for attendance at all future events at the facility. Access to Barton Road will be restricted to all patrons, except for emergency vehicles.

Enclosed in the application package is a Traffic Impact Analysis Memorandum prepared by Conley Associates, Inc. ("CAI"). CAI has analyzed the anticipated traffic impacts from the development of the proposed museum building and the existing events that occur at the Collings Foundation facility. The proposed museum will generate 40 trips to and from Main Street over the course of the average weekday and 6 trips during the weekday peak hours. During a typical operational Saturday, 100 new vehicle trips will be generated by the proposed museum. The museum will generate 14 new peak hour trips during the Saturday midday peak hour. In short, the trips to the museum are a minor impact with no decreases to existing Levels of Service. The relocation of the special event traffic from Barton Road to the proposed Main Street service road may result in lengthy delays on the proposed service road. However, coordinated traffic management during the special events would ensure that the site driveway intersection with Main Street would operate well.

Planning Board **Form DIS**

DEVELOPMENT IMPACT STATEMENT

Please type or print information in blanks below.

1. Name of Proposed ~~Subdivision~~ Site Collings Foundation, Inc.
2. Location 137 Barton Road, Stow, MA 01775
3. Name of Applicant(s) Collings Foundation, Inc.
4. Brief Description of the Proposed Project Proposed Buiding Construction and associated site and utility work.
5. Name of Individual Preparing this DIS Stephen O'Connell, E.I.T.
   Address P.O. Box 312 Business Phone 508-278-3897
   Uxbridge, MA 01569
6. Professional Credentials Massachusetts E.I.T. #19238

A. Site Description

7. Present permitted and actual land uses by percentage of the site.

   ___% Industrial ___% Commercial 5 % Residential 20 % Forest ___% Agricultural 75 % Other (specify) Museum Building (5%); Recreation/Conservation (61B) (70%)

8. Total acreage on the site: 67.6+/- acres.

Approximate Acreage	Present	After Completion
Meadow or Brushland (non agriculture)	19.4	24.1
Forested	38.0	28.5
Agricultural (includes orchards, cropland, pasture)	0	0
Wetland	2.3	2.3
Water Surface Area	1.15	1.15
Flood Plain	5.1	5.1
Unvegetated (rock, earth, or fill)	0	0
Roads, buildings and other impervious surfaces	1.67	6.5
Other (indicate type)		

9. List the zoning districts in which the site is located and indicate the percentage of the site in each district.
Note: be sure to include overlay zoning districts.

District	%
Residential	90
Recreation-Conservation	10

10. Predominant soil type(s) on the site: Hinckley Loamy Sand (HSG A)

Soil drainage (Use the U.S. Soil Conservation Service's definition)

Well drained:	100 % of site
Moderately well drained	____% of site
Poorly drained	____% of site

11. Are there bedrock outcroppings on the site? ☐ yes ☒ no

12. Approximate percentage of proposed site with slopes between:

0-10%	100
10-15%	____
greater than 15%	____

13. Does the project site contain any species of plant or animal life that is identified as rare or endangered? ☐ yes ☒ no

If yes, specify: _____

14. Are there any unusual or unique features on the site such as trees larger than 30 inches D.B.H., bogs, kettle ponds, eskers, drumlins, quarries, distinctive rock formation or granite bridges? ☒ yes ☐ no

If yes, specify: Former kettle pond permitted for use as a fire pond.

15. Are there any established foot paths running through the site or railroad right of ways? ☐ yes ☒ no

If yes, specify: _____

16. Is the site adjacent to conservation land or a recreation area? ☒ yes ☐ no

If yes, specify: The site abuts the Assabet River and is partially located in the Recreation-Conservation Zoning District

17. Does the site include scenic views or will the proposed development cause any scenic vistas to be obstructed from view? ☐ yes ☒ no

If yes, specify:

18. Are there wetlands, lakes, ponds, streams, or rivers within or contiguous to the site? ☒ yes ☐ no

If yes, specify: The site abuts the Assabet River and an existing kettle hole, permitted for use as a fire pond, is partially located on the site.

19. Is there any farmland or forest land on the site protected under Chapter 61A or 61B of the Massachusetts General Laws? ☒ yes ☐ no

If yes, specify: Map U-2, parcel 54 and map R-25, parcel 16A are protected under MGL Chapter 61B.

20. Has the site ever been used for the disposal of hazardous waste? Has a 21E Study been conducted for the site? ☐ yes ☒ no

If yes, specify results:

21. Will the proposed activity require use and/or storage of hazardous materials, or generation of hazardous waste? ☒ yes ☐ no

If yes, specify results: Small quantities of automotive and other engine fluids associated with the operation and maintenance of the museum exhibits.

22. Does the project contain any buildings or sites of historic or archaeological significance? ☐ Yes ☒ no

If yes, please describe

B. Circulation System

23. What is the average weekday traffic and peak hour traffic volumes generated by the proposed ~~subdivision?~~ site?

    a. Average weekday: (see enclosed Traffic Memo)
    b. Average peak hour: _____ morning
    _____ evening

24. Existing street(s) providing access to proposed ~~subdivision~~ site:
    Name Main Street (Hudson) Classification Major Street (Hudson)

25. Existing intersection(s): list intersections located within 1000 feet of any access to the proposed development:

    Name of ways West Avenue in Hudson.

26. Location of existing sidewalks within 1000 feet of the proposed site? None

27. Location of proposed new sidewalks and their connection to existing sidewalks: None

C. Utilities and Municipal Services

28. If dwelling units are to be constructed, what is the total number of bedrooms proposed?
    N/A

29. If the proposed use of the site is nonresidential, what will the site be specifically used for and how many feet of Gross floor area will be constructed? 67,000+/- s.f. museum building

30. Storm Drainage

    a. Describe nature, location and surface water body receiving current surface water of the site: Portion of runoff to be conveyed to existing fire pond with remainder conveyed overland to a proposed infiltration basins. Receiving water body is a wetland adjacent to the Assabet River.

    b. Describe the proposed storm drainage system and how it will be altered by the proposed development: There are no proposed increases in peak runoff flows or volumes. Increases in runoff will be infiltrated through infiltration BMP's.

31. In the event of fire, estimate the response time of the fire department (consult with Fire Dept.)

32. Schools (if residential) N/A (Nonresidential)

    a. Projected number of new school age children.

E. Measures to Mitigate Impacts

Attach brief descriptions of the measures that will be taken to:

33. Prevent surface water contamination.
34. Prevent groundwater contamination.
35. Maximize groundwater recharge.
36. Prevent erosion and sedimentation.
37. Maintain slope stability.
38. Design the project to conserve energy.
39. Preserve wildlife habitat.
40. Preserve wetlands.
41. Ensure compatibility with the surrounding land uses.
42. Control peak runoff from the site so that the post-development rate of runoff will be no greater than the predevelopment.
43. Preserve historically significant structure sand features on the site.
44. To mitigate the impact of the traffic generated by the development.

Andrews Survey & Engineering, Inc.

Land Surveying • Civil Engineering • Site Planning

Supplement to Development Impact Statement

E. Measures to Mitigate Impacts

33. The site has never been used for disposal of hazardous waste and the proposed use will not require the storage of hazardous materials. The design of the stormwater management system meets the standards set forth by the Massachusetts DEP and construction phase measures for erosion and sediment controls are proposed on the plans.

34. The site has never been used for disposal of hazardous waste and the proposed use will not require the storage of hazardous materials. The design of the stormwater management system meets the standards set forth by the Massachusetts DEP, proposed infiltration BMP's will recharge treated runoff.

35. All increases in stormwater runoff will be recharged to the groundwater through proposed infiltration BMP's. Stormwater computations demonstrate that the minimum required recharge volumes are exceeded.

36. An erosion and sediment control plan has been included on the plans and within the Stormwater Management Report. Furthermore, this project will be subject to the U.S. EPA NPDES program. A Stormwater Pollution Prevention Plan will be prepared prior to the start of construction.

37. Appropriate erosion control measures have been specified on the plans and within the Stormwater Management Report.

38. The project will be constructed of new materials exceeding many of the current building code requirements.

39. The proposed project will only disturb a small percentage of the overall land in control by the Collings Foundation and there are no mapped endangered species areas on the project site.

40. No wetland resource areas are proposed to be impacted or filled by this project. Stormwater runoff directed toward resource areas are pretreated.

41. The proposed building will be an extension of the existing use of the property as a museum.

42. Computations with Stormwater Management Report demonstrate the post-development rates of runoff do not exceed pre-development rates.

104 Mendon Street, P.O. Box 312
Uxbridge, MA 01569
Phone (508) 278-3897
Fax (508) 278-2289

500 East Washington Street
North Attleboro, MA 02760
Phone (508) 316-0452
Fax (508) 316-0963

www.andrews-engineering.com

43. There are no known historically significant structures or features on the site.

44. The enclosed Traffic Study details trip generation, roadway capacities, and other traffic related topics.

F:\Acad\2014 Projects\2014-021\documents\Planning\DIS Narrative.doc

CONLEY
ASSOCIATES

Memorandum

To: Bob Collings, Collings Foundation

From: Jennifer Conley, PE, PTOE

Date: October 21, 2014

Re: Traffic Impacts of the Proposed Museum

Conley Associates, Inc. has determined the traffic impacts anticipated with the development of a proposed museum at the Collings Foundation site in Stow, Massachusetts. Access to the proposed site will be via the existing driveways on Barton Road as well as by a proposed driveway onto Main Street in Hudson, Massachusetts.

Existing Conditions

The existing transportation conditions in the study area were assessed in May of 2014. The existing site is located at 137 Barton Road in Stow, Massachusetts. The site is accessed via a main paved driveway along the northern edge and a gravel driveway further south along Barton Road. In the vicinity of the proposed site, Main Street in Hudson, Massachusetts is a two-lane roadway with a speed limit of 40 miles per hour.

Traffic Volume Data

Traffic volume data was collected in September and October of 2014. Automatic Traffic Recorders (ATRs) collected traffic volume data from Friday, September 26, 2014, through Monday, October 6, 2014. The ATR data determined that **11,630** vehicles traveled on Main Street on the average weekday. The peak hours of traffic vary by day but typically are 6:30 to 7:30 AM and 4:30 to 5:30 PM. During the weekday AM peak hour, 1,085 vehicles travel on Main Street and during the weekday PM peak hour, 1,170 vehicles travel on Main Street. The traffic volume on Main Street varied significantly on the two Saturdays. A total of **9,000** vehicles traveled on Main Street on the higher day, September 27, 2014. The peak hour occurred from 1:45 to 2:45 PM when 859 vehicles passed the proposed driveway location. On Sundays, approximately 7,700 vehicles pass the proposed driveway location over the course of the day, with approximately 850 during the Sunday midday peak hour.

The traffic volumes collected were evaluated to determine monthly traffic variations. Conley Associates, Inc. researched traffic volume data from MassDOT permanent count stations within the area to determine an appropriate seasonal traffic volume adjustment. Based on permanent count stations on I-495 and on Route 2, September and October traffic volumes are two to five percent higher than average month volumes. Conley Associates, Inc. has not decreased the September and October traffic volumes in order to present a conservatively high average month condition.

Future Conditions

The proposed addition of the Museum to the Collings Foundation site in addition to the new access point onto Main Street in Hudson will create different levels of traffic impact. On a typical weekday, the impact of Collings Foundation employees using the access point as well as visitors to the site will not be significant. During special event weekends, the traffic impact will be more considerable.

Future Conditions on Typical Days

The Collings Foundation is anticipating adding five staff members to their full time roster in order to run the museum and account for future growth. These staff members will oversee the museum, maintain vehicles, and perform office functions.

Currently, on a daily basis, there are seven employees that work at the site. As per industry standards, Conley Associates, Inc. calculated the trip generation of the existing site based on the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 9th Edition. Land Use Code (LUC) 710, Office, is the appropriate land use code for the existing day-to-day operations on the site. Based on LUC 710, 24 vehicle trips are generated over the course of the average weekday and four trips over the course of the average Saturday. During the weekday peak hours, according to ITE, the site generates four trips.

Based on LUC 710, an additional 16 vehicle trips are generated over the course of the average weekday and two additional trips over the course of the average Saturday. During the typical weekday peak hours, according to ITE, the site will generate an additional two trips. The anticipated typical weekday PM peak hour trip generation is illustrated in Table 1.

Table 1: Weekday Proposed Museum Trip Generation Impact

Period	Existing Seven Employees	Proposed Twelve Employees	Net Increase
Weekday Daily			
In	12	20	8
Out	12	20	8
Total	24	40	16
Weekday AM Peak Hour			
In	3	5	2
Out	1	1	0
Total	4	6	2
Weekday PM Peak Hour			
In	1	1	0
Out	3	5	2
Total	4	6	2

Based on Trip Generation Manual, 9th Edition Institute of Transportation Engineers, LUC 710

The proposed military vehicle museum is anticipated to be similar to the Wright Museum in Wolfboro, New Hampshire; the American Armor Museum formerly of Danville, VA now relocating to Long Island, NY; and the Virginia Museum of Military Vehicles. These museums have 6,000 to 10,000 visits annually. The Wright Museum is open six months a year, seven days a week, and is located in the Lake Winnipesaukee summer resort area. The proposed museum will be open typically only for weekends (Fridays, Saturdays, Sundays) for the summer season. It will also be available by appointment and for special events. Based on this information, the projections for the proposed museum are approximately 5,000 visitors per year in addition to the existing visitors to the site, with approximately 4,000 of those visitors occurring during regular operating hours.

Breaking the visitor volume down into an individual Saturday daily volume results in approximately 100 patrons during an operating Saturday. Conley Associates, Inc. estimates a lower vehicle occupancy (2.5 patrons per vehicle) for a museum visit than for a festival weekend (3.0 patrons per vehicle), resulting in 40 visitor vehicles visiting the site on an open Saturday. Based on approximately six hours of arrival times and the corresponding exiting trips, 14 peak hour trips (7 in and 7 out) are anticipated during the Saturday midday peak hour.

Future Conditions for Events

The Collings Foundation hosts three event weekends over the course of the year: Wings & Wheels Open House Event in June; Race of the Century in July; and the World War II Re-enactment in October. The largest of these events is the World War II Re-enactment weekend with 5,000 participants over the course of the weekend. Included in the 5,000 participants are 300 re-enactors, volunteers, staff and caterers. The remaining attendees were 4,700 patrons over the course of the two-day event. Based on data from the Collings Foundation, the attendance at these events is split between Saturday and Sunday. With 2,350 patrons visiting on a Saturday, there are 1,175 patrons visiting for each show, one at 11:00 AM and another at 3:00 PM. The critical time period trafficwise would be the time period between the two shows, when the first show's traffic is exiting and the second show's traffic is entering. Although there is a three hour time period between the two shows, to provide a conservative analysis, it was estimated that 50 percent of morning attendees will be exiting during the same time period that 50 percent of the afternoon attendees are arriving. Three patrons per vehicle is the typical vehicle occupancy for events of this type resulting in 200 vehicles exiting and 200 vehicles entering during the highest hour for this analysis.

Currently, the special event traffic travels to the site from Main Street via West Street, Hunter Avenue, and Barton Road. In the future, with the proposed access in place, traffic will access the site via a direct connection that provides a wider, safer and more efficient method of accessing the site.

Trip Distribution

The vehicle trips visiting the site on a typical weekday and on an event weekend were distributed to the new access driveway to Main Street. Based on counts at the existing site driveway, it is

anticipated that 60 percent of site traffic will be oriented to and from the west and 40 percent will be oriented to and from the east. The new trips were added to the existing traffic on Main Street to determine the future typical conditions as well as the future event conditions. Traffic volume data can be found attached to this memorandum.

Intersection Operations

The traffic operations of the study area intersections were determined. Analysis was based on methodologies outlined in the Highway Capacity Manual (HCM).

Level of Service (LOS) is a calculation of control delay for an intersection. LOS is an indication of driver discomfort, frustration, fuel consumption, and lost time. LOS is defined by an index from A (free flow) to F (long delays). LOS control delay values are given in Table 2.

For unsignalized intersections, delay values apply only to the controlled movements, since the main street movements are not restricted. Control delay is the elapsed time for deceleration, queue time, stopped delay, and final acceleration. Average control delay for unsignalized intersections is a function of the capacity of the approach and the degree of saturation.

Table 2: Level of Service Criteria

Level of Service	Average Delay (seconds)
A	≤ 10
B	>10 and ≤ 15
C	>15 and ≤ 25
D	>25 and ≤ 35
E	>35 and ≤ 50
F	>50

Source: 2010 Highway Capacity Manual

Synchro 8 software was used as the analysis tool for determining the LOS at the study area intersections. Synchro implements the methods of the 2010 Highway Capacity Manual (HCM) to analyze intersection capacity and determine LOS.

The LOS procedures described were used to determine peak hour operating levels of service at the unsignalized study area intersection. Table 3 summarizes the LOS and average delay per vehicle for the stop controlled approaches to the unsignalized intersections during the peak hours.

Table 3: Main Street at the Site Driveway Operations

	LOS	Delay	95th
Typical Conditions with Museum and Access to Main Street (Driveway Approach)			
AM Peak Hour	A	9.9	0
PM Peak Hour	C	24.9	0
Sat Peak Hour	C	17.6	0

Delay is experienced by Driveway Approach

As shown in Table 3, during typical conditions, the LOS of the Main Street site driveway will be LOS A during the typical weekday AM peak hour conditions, and LOS C during the typical weekday PM peak hour and Saturday midday peak hour conditions. As shown in Table 3, the delays indicated are for the driveway approach only. In addition, there is no queuing anticipated on the driveway.

When special events occur only a few days a year, the site driveway will experience delays of approximately 50 seconds. Because 50 seconds is the threshold between LOS E and LOS F, the site driveway will operate at LOS F. In order to address the delay at this location, traffic control could be implemented at this location during these special events. The LOS would improve to a LOS A condition with traffic control during special events. In addition, the wide driveway can be modified to provide the largest number of lanes in the peak direction. During the morning of a large event, the driveway could be used as enter only and traffic be processed into the site in three lanes to ensure no backup onto Main Street. During the afternoon, when more traffic is exiting, separate left and right turn lanes can be provided accessing Main Street to ensure that the traffic control processes the traffic most efficiently. The direct driveway connection to Main Street would reduce the impact to the narrow roadways of West Street, Hunter Avenue and Barton Road.

Percentage Increase

Although vehicles may experience delays exiting the site driveway, the impacts of the project are quite minor on the traffic volumes on Main Street. Once distributed to each direction along Main Street, the site traffic will increase the traffic on Main Street by 0.3 to 0.4 percent during the weekday AM and PM peak hours. During the typical Saturday peak hour, the site traffic will increase Main Street traffic by only 0.9 percent. During the peak event, the site traffic will increase Main Street Saturday midday traffic more significantly, although much of this traffic is currently traveling on Main Street and accessing the site via West Street, Hunter Avenue, and Barton Road. As outlined above, this condition will only occur a few days each year. On a daily basis, these percentages are significantly less. The data presented in the hour of highest site impact.

Conclusions

Conley Associates, Inc. has analyzed the anticipated impacts of the development of the Museum proposed on the site of the Collings Foundation as well as the new access point to Main Street. As outlined, the proposed Museum will generate 40 trips to and from Main Street over the course of the average weekday and 6 trips during the weekday peak hours. During a typical operational Saturday, 100 new vehicle trips will be generated by the proposed Museum. The museum will generate 14 new peak hour trips during the Saturday midday peak hour. The trips to the museum are a minor impact.

During the few special event days already being held each year, the traffic will be relocated from the existing access via West Street, Hunter Avenue, and Barton Road to a safer, wider entrance directly from Main Street to access the site. Traffic management of the driveway configuration, as well as traffic control personnel, during the few special event days each year would ensure that the site driveway intersection with Main Street would operate very well.

The Commonwealth of Massachusetts
William Francis Galvin

Minimum Fee: $35.00

Secretary of the Commonwealth, Corporations Division
One Ashburton Place, 17th floor
Boston, MA 02108-1512
Telephone: (617) 727-9640

Articles of Organization
(General Laws, Chapter 180)

Federal Employer Identification Number: 471954671 *(must be 9 digits)*

ARTICLE I

The exact name of the corporation is:

THE COLLINGS FOUNDATION, INC.

ARTICLE II

The purpose of the corporation is to engage in the following business activities:

THIS NONPROFIT CORPORATION IS FORMED AND SHALL BE OPERATED EXCLUSIVELY FOR THE CHARITABLE, SCIENTIFIC AND EDUCATIONAL PURPOSES OF ESTABLISHING AND OPERATING A MUSEUM FOR THE STUDY, PRESERVATION AND PUBLIC EXHIBITION OF ARTICLES OF CULTURAL, SCIENTIFIC AND HISTORICAL IMPORTANCE AND FOR THE EDUCATION OF THE PUBLIC WITH RESPECT TO SUCH ARTICLES. UPON THE DISSOLUTION OF THIS CORPORATION, ASSETS SHALL BE DISTRIBUTED FOR ONE OR MORE EXEMPT PURPOSES WITHIN THE MEANING OF SECTION 501(C)(3) OF THE INTERNAL REVENUE CODE, OR CORRESPONDING SECTION OF ANY FUTURE FEDERAL TAX CODE, OR SHALL BE DISTRIBUTED TO THE FEDERAL GOVERNMENT, OR TO A STATE OR LOCAL GOVERNMENT, FOR A PUBLIC PURPOSE.

ARTICLE III

A corporation may have one or more classes of members. If it does, the designation of such classes, the manner of election or appointments, the duration of membership and the qualifications and rights, including voting rights, of the members of each class, may be set forth in the by-laws of the corporation or may be set forth below:

NOT APPLICABLE. THE CORPORATION HAS ONE CLASS OF MEMBERS.

ARTICLE IV

Other lawful provisions, if any, for the conduct and regulation of the business and affairs of the corporation, for its voluntary dissolution, or for limiting, defining, or regulating the powers of the corporation, or of its directors or members, or of any class of members, are as follows:
(If there are no provisions state "NONE")

NONE

Notes: The preceding four (4) articles are considered to be permanent and may only be changed by filing appropriate Articles of Amendment.

ARTICLE V

The by-laws of the corporation have been duly adopted and the initial directors, president, treasurer and clerk or other presiding, financial or recording officers, whose names are set out on the following page, have been duly elected.

ARTICLE VI

The effective date of organization of the corporation shall be the date approved and filed by the Secretary of the Commonwealth. If a *later* effective date is desired, specify such date which shall not be more than *thirty days* after the date of filing.

ARTICLE VII

The information contained in Article VII is not a permanent part of the Articles of Organization.

a. The street address *(post office boxes are not acceptable)* of the principal office of the corporation *in Massachusetts* is:

No. and Street: 137 BARTON ROAD
City or Town: STOW State: MA Zip: 01775 Country: USA

b. The name, residential street address and post office address of each director and officer of the corporation is as follows:

Title	Individual Name First, Middle, Last, Suffix	Address (no PO Box) Address, City or Town, State, Zip Code	Expiration of Term
PRESIDENT	ROBERT FRANK COLLINGS JR.	32 SKYVIEW LANE SUDBURY, MA 01776 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
TREASURER	MARIE CAROLINE COLLINGS	32 SKYVIEW LANE SUDBURY, MA 01776 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
CLERK	HUNTER BOSWORTH CHANEY	755 PLEASANT STREET PAXTON, MA 01612 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
DIRECTOR	WILLIAM BOLLER	19701 THREE OAKS WAY SARATOGA, CA 95070 USA P O BOX 248 STOW, MA 01775 USA	06/01/2015
DIRECTOR	DONALD RISING	30 ELM STREET STOW, MA 01775 USA P O BOX 248 STOW, MA 01775 USA	09/01/2015
DIRECTOR	FRANK DWORAK	329 PLEASANT VALLEY ROAD ROCKY HILL, CT 06067 USA P O BOX 248 STOW, MA 01775 USA	12/01/2015

c. The fiscal year (i.e., tax year) of the business entity shall end on the last day of the month of:
December

d. The name and business address of the resident agent, if any, of the business entity is:

Name:
No. and Street:
City or Town: State: Zip: Country:

I/We, the below signed incorporator(s), do hereby certify under the pains and penalties of perjury that I/we have not been convicted of any crimes relating to alcohol or gaming within the past ten years.

I/We do hereby further certify that to the best of my/our knowledge the above-named officers have not been similarly convicted. If so convicted, explain:
NOT APPLICABLE

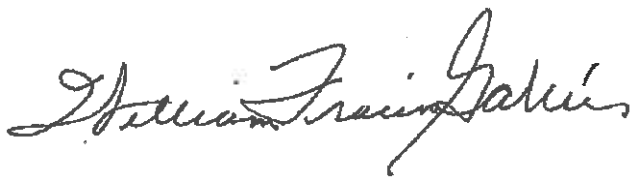
IN WITNESS WHEREOF AND UNDER THE PAINS AND PENALTIES OF PERJURY, I/we, whose signature(s) appear below as incorporator(s) and whose name(s) and business or residential address (es) beneath each signature do hereby associate with the intention of forming this business entity under the provisions of General Law, Chapter 180 and do hereby sign these Articles of Organization as incorporator(s) this 30 Day of September, 2014. *(If an existing corporation is acting as incorporator, type in the exact name of the business entity, the state or other jurisdiction where it was incorporated, the name of the person signing on behalf of said business entity and the title he/she holds or other authority by which such action is taken.)*
/S/ ROBERT F. COLLINGS, JR. 32 SKYVIEW LANE SUDBURY, MA 01776 /S/ HUNTER B. CHANEY 755 PLEASANT STREET PAXTON, MA 01612 /S/ WILLIAM BOLLER 19701 THREE OAKS WAY SARATOGA, CA 95070

MA SOC Filing Number: 201497551280 Date: 9/30/2014 3:50:00 PM

THE COMMONWEALTH OF MASSACHUSETTS

I hereby certify that, upon examination of this document, duly submitted to me, it appears that the provisions of the General Laws relative to corporations have been complied with, and I hereby approve said articles; and the filing fee having been paid, said articles are deemed to have been filed with me on:

September 30, 2014 03:50 PM



WILLIAM FRANCIS GALVIN

Secretary of the Commonwealth

Charity Registration Form

Registration and Annual Filing are two separate requirements. A charity must register to conduct operations in Massachusetts (see M.G.L. c. 12, § 8E). Once registered, the charity must submit annual filings (see M.G.L. c. 12, § 8F). Those annual filings are posted on the AGO website for public review.

- **Please include all the items on the checklist and include a copy of the completed checklist itself as a cover sheet. Any omission will delay your registration.**
- There is a one-time fee of $100 to register a charity in MA.
- You may need to submit additional forms, attachments and fees depending on whether your initial FYE date has passed or is in the future, and on whether you have solicited or intend to solicit funds (or have solicitation conducted on your behalf). Please attend to the detailed instructions provided for your situation through the links below.

Part I (for ALL filers)

1. Name of Organization: The Collings Foundation, Inc.

   Organization Address: 137 Barton Road

   City/Town: Stow State: Massachusetts Zip: 01775

   Organization Phone Number: 978.562.9182 Organization Fax Number: 978.568.8231

   Email address for organization: info@collingsfoundation.org

2. Website for your organization (if you have no website, please state "no website"):
   ollingsfoundation.org

3. EIN: 47-1954671

4. Type of organization: ☒ Corporation ☐ Trust ☐ Unincorporated Association

5. For a Massachusetts entity: Date that your organization was formed? 09/30/2014

6. For a non-Massachusetts entity: Date that your organization began operating in and/or soliciting funds in Massachusetts? 10/01/2014

7. Fiscal year end ("FYE") date (this MUST match the fiscal year end date on your Articles of Incorporation or trust document, as applicable). 12/31

8. Has the organization applied for or been granted IRS tax exempt status?
   a. Applied for ☒ Yes ☐ No
   b. Received ☐ Yes ☐ No
   c. If received, under what section 501(c)
   d. If received, date of determination letter:

9. Name of Primary Contact Person: Robert Collings

   Email address for primary contact: rcollings@collingsfoundation.org

   Phone Number: 978.562.9182

THE COLLINGS FOUNDATION

17518

EFERENCE NO.	DESCRIPTION	INVOICE DATE	INVOICE AMOUNT	DISCOUNT TAKEN	AMOUNT PAID
21214-2	COMMONWEALTH ATTORNEY GENERAL SCHEDULE 14-2 TF "INC"	12/12/14	50.00		50.00

CHECK DATE	CHECK NO.	PAYEE	DISCOUNTS TAKEN	CHECK AMOUNT
12/11/14	17518	Commonwealth of Massachusetts		$50.00

SECURITY FEATURES INCLUDE TRUE WATERMARK PAPER. HEAT SENSITIVE ICON AND FOIL HOLOGRAM.

CITIZENS BANK OF MASSACHUSETTS
5-7017/2110

17518

THE COLLINGS FOUNDATION
RIVER HILL FARM
PO BOX 248
STOW, MA 01775

Check Number: 17518

DATE
Dec 11, 2014

Memo:

AMOUNT
$ 50.00

PAY TO THE ORDER OF: Fifty and 00/100 Dollars

Commonwealth of Massachusetts

AUTHORIZED SIGNATURE

⑈017518⑈ ⑆211070175⑆ 110249918⑈

THE COLLINGS FOUNDATION

17517

EFERENCE NO.	DESCRIPTION	INVOICE DATE	INVOICE AMOUNT	DISCOUNT TAKEN	AMOUNT PAID
21214	CITIZENSHIP REGISTRATION "INC"	12/12/14	100.00		100.00

CHECK DATE	CHECK NO.	PAYEE	DISCOUNTS TAKEN	CHECK AMOUNT
12/11/14	17517	Commonwealth of Massachusetts		$100.00

SECURITY FEATURES INCLUDE TRUE WATERMARK PAPER, HEAT SENSITIVE ICON AND FOIL HOLOGRAM

CITIZENS BANK OF MASSACHUSETTS
5-7017/2110

17517

FRAUDARMOR

THE COLLINGS FOUNDATION
RIVER HILL FARM
PO BOX 248
STOW, MA 01775

Check Number: 17517

DATE
Dec 11, 2014

AMOUNT
$ 100.00

Memo:

PAY TO THE ORDER OF: One Hundred and 00/100 Dollars

Commonwealth of Massachusetts

AUTHORIZED SIGNATURE

⑈017517⑈ ⑆211070175⑆ 110249918⑈

b. The name, residential street address and post office address of each director and officer of the corporation is as follows:

Title	Individual Name First, Middle, Last, Suffix	Address (no PO Box) Address, City or Town, State, Zip Code	Expiration of Term
PRESIDENT	ROBERT FRANK COLLINGS JR.	32 SKYVIEW LANE SUDBURY, MA 01776 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
TREASURER	MARIE CAROLINE COLLINGS	32 SKYVIEW LANE SUDBURY, MA 01776 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
CLERK	HUNTER BOSWORTH CHANEY	755 PLEASANT STREET PAXTON, MA 01612 USA P O BOX 248 STOW, MA 01775 USA	12/31/2015
DIRECTOR	WILLIAM BOLLER	19701 THREE OAKS WAY SARATOGA, CA 95070 USA P O BOX 248 STOW, MA 01775 USA	06/01/2015
DIRECTOR	DONALD RISING	30 ELM STREET STOW, MA 01775 USA P O BOX 248 STOW, MA 01775 USA	09/01/2015
DIRECTOR	FRANK DWORAK	329 PLEASANT VALLEY ROAD ROCKY HILL, CT 06067 USA P O BOX 248 STOW, MA 01775 USA	12/01/2015

BYLAWS
OF
THE COLLINGS FOUNDATION, INC.

The name of the organization is The Collings Foundation, Inc.. The organization is organized in accordance with the General Law of the Commonwealth of Massachusetts, Title XXII, Chapter 180, as amended. The organization has not been formed for the making of any profit, or personal financial gain. The assets and income of the organization shall not be distributable to, or benefit the trustees, directors, or officers or other individuals. The assets and income shall only be used to promote corporate purposes as described below. Nothing contained herein, however, shall be deemed to prohibit the payment of reasonable compensation to employees and independent contractors for services provided for the benefit of the organization. This organization shall not carry on any other activities not permitted to be carried on by an organization exempt from federal income tax. The organization shall not endorse, contribute to, work for, or otherwise support (or oppose) a candidate for public office. The organization is organized exclusively for purposes subsequent to section 501(c)(3) of the Internal Revenue Code.

ARTICLE I
MEETINGS

Section 1. Annual Meeting. An annual meeting shall be held once each calendar year for the purpose of electing directors and for the transaction of such other business as may properly come before the meeting. The annual meeting shall be held at the time and place designated by the Board of Directors from time to time.

Section 2. Special Meetings. Special meetings may be requested by the President or the Board of Directors.

Section 3. Notice. Written notice of all meetings, whether regular or special meetings, shall be provided under this section or as otherwise required by law. The Notice shall state the place, date, and hour of meeting, and if for a special meeting, the purpose of the meeting. Such notice shall be mailed to all directors of record at the address shown on the corporate books, at least 10 days prior to the meeting. Such notice shall be deemed effective when deposited in ordinary U.S. mail, properly addressed, with postage prepaid.

Section 4. Place of Meeting. Meetings shall be held at the organization's principal place of business unless otherwise stated in the notice.

Section 5. Quorum. A majority of the directors shall constitute a quorum at a meeting. In the absence of a quorum, a majority of the directors may adjourn the meeting to another time without further notice. If a quorum is represented at an adjourned meeting, any business may be transacted that might have been transacted at the meeting as originally scheduled. The directors present at a meeting represented by a quorum may continue to transact business until adjournment, even if the withdrawal of some directors results in representation of less than a quorum.

Section 6. Informal Action. Any action required to be taken, or which may be taken, at a meeting, may be taken without a meeting and without prior notice if a consent in writing, setting forth the action so taken, is signed by the directors with respect to the subject matter of the vote.

ARTICLE II
DIRECTORS

Section 1. Number of Directors. The organization shall be managed by a Board of Directors consisting of 3 director(s).

Section 2. Election and Term of Office. The directors shall be elected at the annual meeting. Each director shall serve a term of 18 months year(s), or until a successor has been elected and qualified.

Section 3. Quorum. A majority of directors shall constitute a quorum.

Section 4. Adverse Interest. In the determination of a quorum of the directors, or in voting, the disclosed adverse interest of a director shall not disqualify the director or invalidate his or her vote.

Section 5. Regular Meeting. The Board of Directors shall meet immediately after the election for the purpose of electing its new officers, appointing new committee chairpersons and for transacting such other business as may be deemed appropriate. The Board of Directors may provide, by resolution, for additional regular meetings without notice other than the notice provided by the resolution.

Section 6. Special Meeting. Special meetings may be requested by the President, Vice-President, Secretary, or any two directors by providing five days' written notice by ordinary United States mail, effective when mailed. Minutes of the meeting shall be sent to the Board of Directors within two weeks after the meeting.

Section 7. Procedures. The vote of a majority of the directors present at a properly called meeting at which a quorum is present shall be the act of the Board of Directors, unless the vote of a greater number is required by law or by these by-laws for a particular resolution. A director of the organization who is present at a meeting of the Board of Directors at which action on any corporate matter is taken shall be presumed to have assented to the action taken unless their dissent shall be entered in the minutes of the meeting. The Board shall keep written minutes of its proceedings in its permanent records.

Section 8. Informal Action. Any action required to be taken at a meeting of directors, or any action which may be taken at a meeting of directors or of a committee of directors, may be taken without a meeting if a consent in writing setting forth the action so taken, is signed by all of the directors or all of the members of the committee of directors, as the case may be.

Section 9. Removal / Vacancies. A director shall be subject to removal, with or without cause, at a meeting called for that purpose. Any vacancy that occurs on the Board of Directors, whether by death, resignation, removal or any other cause, may be filled by the remaining directors. A

director elected to fill a vacancy shall serve the remaining term of his or her predecessor, or until a successor has been elected and qualified.

Section 10. Committees. To the extent permitted by law, the Board of Directors may appoint from its members a committee or committees, temporary or permanent, and designate the duties, powers and authorities of such committees.

ARTICLE III
OFFICERS

Section 1. Number of Officers. The officers of the organization shall be a President, a Treasurer , and a Secretary.

a. **President/Chairman.** The President shall be the chief executive officer and shall preside at all meetings of the Board of Directors and its Executive Committee, if such a committee is created by the Board.

b. **Secretary.** The Secretary shall give notice of all meetings of the Board of Directors and Executive Committee, if any, shall keep an accurate list of the directors, and shall have the authority to certify any records, or copies of records, as the official records of the organization. The Secretary shall maintain the minutes of the Board of Directors' meetings and all committee meetings.

c. **Treasurer/CFO.** The Treasurer shall be responsible for conducting the financial affairs of the organization as directed and authorized by the Board of Directors and Executive Committee, if any, and shall make reports of the organizations finances as required, but no less often than at each meeting of the Board of Directors and Executive Committee.

Section 2. Election and Term of Office. The officers shall be elected annually by the Board of Directors at the first meeting of the Board of Directors, immediately following the annual meeting . Each officer shall serve a one year term or until a successor has been elected and qualified.

Section 3. Removal or Vacancy. The Board of Directors shall have the power to remove an officer or agent of the corporation. organization. Any vacancy that occurs for any reason may be filled by the Board of Directors.

ARTICLE IV
CORPORATE SEAL, EXECUTION OF INSTRUMENTS

The organization shall not have a corporate seal. All instruments that are executed on behalf of the organization which are acknowledged and which affect an interest in real estate shall be executed by the President or any Vice-President and the Secretary or Treasurer. All other instruments executed by the organization, including a release of mortgage or lien, may be executed by the President or any Vice-President. Notwithstanding the preceding provisions of this section, any written instrument may be executed by any officer(s) or agent(s) that are specifically designated by resolution of the Board of Directors.

ARTICLE V
AMENDMENT TO BYLAWS

The bylaws may be amended, altered, or repealed by the Board of Directors by a two-thirds majority of a quorum vote at any regular or special meeting.

ARTICLE VI
INDEMNIFICATION

Any director or officer who is involved in litigation by reason of his or her position as a director or officer of this organization shall be indemnified and held harmless by the organization to the fullest extent authorized by law as it now exists or may subsequently be amended (but, in the case of any such amendment, only to the extent that such amendment permits the organization to provide broader indemnification rights).

ARTICLE VII
DISSOLUTION

The organization may be dissolved only with authorization of its Board of Directors given at a special meeting called for that purpose, and with the subsequent approval by no less than two-thirds (2/3) vote of the members. In the event of the dissolution of the organization, the assets shall be applied and distributed as follows:

All liabilities and obligations shall be paid, satisfied and discharged, or adequate provision shall be made therefore. Assets not held upon a condition requiring return, transfer, or conveyance to any other organization or individual shall be distributed, transferred, or conveyed, in trust or otherwise, to charitable and educational organization, organized under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, of a similar or like nature to this organization, as determined by the Board of Directors.

Certification

Hunter B. Chaney, Secretary of The Collings Foundation, Inc. hereby certifies that the foregoing is a true and correct copy of the bylaws of the above-named organization, duly adopted by the initial Board of Directors on 9/30/14.

Hunter B. Chaney, Secretary

MASSACHUSETTS ATTORNEY GENERAL

THE COMMONWEALTH OF MASSACHUSETTS
OFFICE OF THE ATTORNEY GENERAL

ONE ASHBURTON PLACE
BOSTON, MASSACHUSETTS 02108

(617) 727-2200, ext. 2101
www.mass.gov/ago/charities

SCHEDULE A-2
SOLICITATION ACTIVITIES DURING FISCAL YEAR COVERED BY THIS REPORT

Organization Name: The Collings Foundation, Inc.

Report for the Fiscal Period: 10/01/2014 to 12/31/2014

Attorney General's Account # applied for

Federal ID #: 47-1954671

List any names which will be used by the organization in connection with the solicitation of funds, other than the official name which appears on page 1.

Types of solicitation activities in which you expect to engage (*check all that apply*):

Mass mailing	✔	Via the Internet	✔
Door-to-door		Raffle, beano, bingo or gaming event	
Entertainment event	✔	Sale of goods other than by telephone	
Telemarketing without sale of goods or ads		Individual mailings	
Telemarketing with sale of goods		Corporate solicitations	✔
Telemarketing with sale of ad		Grant proposals	

Other (*please describe*):

Identify the method or methods you expect to use for fundraising (*check all that apply*):

Professional solicitor*		Own employees	✔
Professional fundraising counsel*		Volunteers	
Commercial co-venturer*			

* Provide applicable names and addresses:

Professional Solicitor Name:

Address:

City: State: Zip:

Professional Fundraising Counsel Name:

Address:

City: State: Zip:

Commercial Co-Venturer Name:

Address:

City: State: Zip:

LUMARK

SustainabLEDesign™

Wal-Pak

Wall Mount Luminaire

COOPER Lighting

WP WAL-PAK WALL SERIES

WALL MOUNT LUMINAIRE

THE NEW STANDARD

The Wal-Pak Series of wall luminaires offers traditional architectural styling, rugged construction and superior performance. Coupled with available Light Emitting Diode [LED] technology, full cutoff removable door, standard IP65 Ingress Protection and emergency egress options, Wal-Pak is an exceptionally flexible platform that offers undisputed appeal for wall mount applications.

ENERGY SAVINGS

Conservation of energy, expertise in design and rigourous reliability testing ensure superior luminaire performance. With advancements in LED technology combined with Cooper Lighting's expertise in fixture and optical design, the Wal-Pak Series demonstrates that new technology saves energy without compromising performance.

ABUNDANT SELECTION

The Wal-Pak Series provides a choice of three [3] hinged, removable doors including IESNA full cutoff, Solite™ flat glass lens and refractive, tempered borosilicate glass along with six [6] unique lamp sources incldng energy efficient LED, pulse start metal halide, compact fluorescent, ceramic metal halide, standard metal halide and high pressure sodium.

FULL CUTOFF DOOR
[FC]

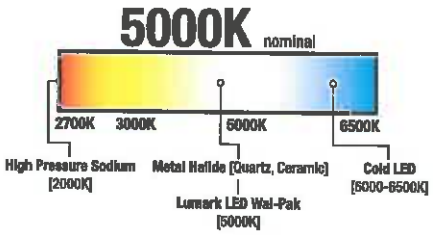
FLAT SOLITE® GLASS DOOR
[FL]

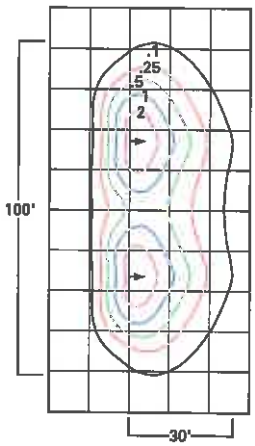
BOROSILICATE GLASS/
POLYCARBONATE REFRACTOR DOOR
[GL/PL]

LED SPECIFICATION FEATURES

UNIFORM ILLUMINATION

Wal-Pak's patent pending LED light engine is optimized for energy efficient performance. With effective thermal management, precise positioning of the LED package assembly and a highly reflective anodized aluminum reflector; Wal-Pak LED provides glare free, uniform illumination while providing a safe and comfortable visual experience.





LED TECHNOLOGY

Light emitting diodes are solid state devices that offer uniform illumination, reliable long life, eco-friendly low maintenance, and superior energy savings. Over 70% of the initial light output is maintained after 50,000 hours of operation. In application, an LED fixture can last up to six [6] times longer than metal halide lamped sources.

SUPERIOR ILLUMINATION

Wal-Pak LED luminaires produce up to 4000 initial lumens. Brilliant white 5000K color temperature LED's provide uniform white light similar to traditional metal halide light sources. Combining excellent color rendering with superior thermal management, optimized reflector technology and premium glare-free Solite™ glass make the Wal-Pak LED luminaire a superior performer.

LED WAL-PAK FULL CUTOFF 4A MODEL TYPICAL APPLICATION:

- 100' Illumination Distribution Pattern [2 fixtures]
- 30' Forward Throw
- 75% Street Side Illumination
- IESNA Full Cutoff Compliant
- Replaces up to 175W Metal Halide

REDUCED ENERGY CONSUMPTION

Operating and maintenance costs of a lighting system are dramatically impacted by the specified lamp source and electrical system. Total system input watts and fixture operating life should be the driving considerations when addressing energy consumption and total cost of ownership. Energy savings increase when energy consumption is reduced and maintenance intervals are extended.

ANNUALIZED ENERGY SAVINGS/COST COMPARISON

FIXTURE	HOURS/ YEAR	LIFE [hrs.]	TOTAL INPUT WATTS	COST/YEAR @ $.10 KWH	RELAMP/FIXTURE	TOTAL ANNUALIZED COST/FIXTURE	SAVINGS PER FIXTURE	OVERALL % SAVINGS
LED Wal-Pak [2400 Lumens]	11/4015	50,000	22	$8.83	$0	$8.83	$92.96	91%
100W MP Wall Pack		12,000	128	$51.79	$50	$101.79		
LED Wal-Pak [4000 Lumens]	11/4015	50,000	40	$16.06	$0	$16.06	$138.26	90%
175W MH Wall Pack		12,000	210	$84.32	$70	$154.32		

NOTES: Cost = (Watts x 11 Hours Per Day x 365 Days per Year) /1000 = Daily Kilowatt hour (kWh). kWh x $.10 cents/kWh = Cost/year at $.10 cents/kWh. Relamp is once per every 2.5 years, $125/100W and $175/175W averaged over 2.5 years.

HID/LED CROSS REFERENCE CHART

HID SYSTEMS	HID WATTAGE	RATED AVG. LIFE [hrs.]	WAL-PAK LED SYSTEM LUMEN PACKAGE[1]	LED WATTAGE[2]	LED LIFE [hrs.]	ENERGY SAVINGS
50W Pulse Start Metal Halide	72	12,000	2A	22	50,000	69%
70W Pulse Start Metal Halide	90	12,000	2A	22	50,000	76%
100W Pulse Start Metal Halide	128	12,000	2A	22	50,000	83%
150W Pulse Start Metal Halide	189	12,000	4A	40	50,000	79%
175W Probe Start Metal Halide	210	12,000	4A	40	50,000	81%
50W High Pressure Sodium	66	24,000	2A	22	50,000	67%
70W High Pressure Sodium	91	24,000	2A	22	50,000	76%
100W High Pressure Sodium	130	24,000	4A	40	50,000	69%
150W High Pressure Sodium	188	24,000	4A	40	50,000	79%

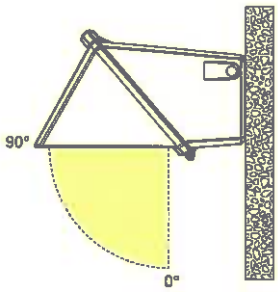
NOTES: 1 Nominal lumens prior to optical and configuration losses based on 87 CRI. 5000K package at 25°C ambient. 2A=2400 [Lumens], 4A=4000 [Lumens]. 2 LED Wattage varies by Wal-Pak configuration. Hours of life based on 70% lumen maintenance.

DARK SKY FRIENDLY + OPTIONS + ACCESSORIES

DARK SKY FRIENDLY ILLUMINATION

The Wal-Pak Series with full cutoff door meets The Illuminating Engineering Society of North American [IESNA] classification for full cutoff illumination [zero light at or above the 90° plane]. Full cutoff luminaires minimize light trespass and light pollution.

DARK SKY COMPLIANT FCO Full Cutoff



BACK-UP POWER OPTIONS

Wal-Pak solves the requirement for providing back-up power illumination along the path of egress during critical power outage situations. Select from LED or compact fluorescent integral NiCad battery packs, quartz restrike, low or line voltage DC remote or separate circuit emergency back-up options.

SINGLE OR DUAL LAMP COMPACT FLUORESCENT EMERGENCY BATTERY PACK OPTIONS [CF-EM, EMI40, CF-EM-2L, EMI40-2L]

Integral UL924 emergency lighting NiCad battery pack provides emergency lighting illumination for single or dual lamp compact fluorescent light sources. The CF-EM battery pack is designed for 0°C/32°F illumination for up to 70W. The EMI40 provides up to 70W of cold temperature -18°C/-4°F emergency back-up illumination. For two [2] 32W lamp operation use CF-EM-2L or EMI40-2L.

LED BATTERY PACK OPTIONS [EM-LED, EM-LED-CD]

Integral NiCad battery pack provides battery back-up illumination for 4A models. The LED-EM battery pack is designed for 0°C/32°F applications. EM-LED-CD is designed for -18°C/-4°F cold temperature applications.

EMERGENCY LOW VOLTAGE 12V DC REMOTE OPTIONS [EM/SC/12V, 2EM/SC/12V]

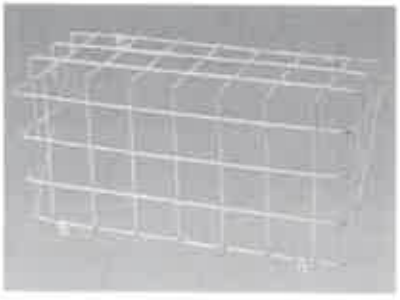
Single or dual lamp low voltage 12V DC bi-pin remote lamp provides fixture illumination in the emergency mode. The 12V DC lamps are energized from a remote DC battery source [provided by others].

SEPARATE CIRCUIT QUARTZ RESTRIKE AND EMERGENCY QUARTZ RESTRIKE OPTION [2QMR/SC]

MR16 halogen lamp source illuminates upon the reactivation of the HID lamp. The secondary source provides separate circuit emergency illumination upon loss of utility power.

QUARTZ RESTRIKE OPTIONS [Q, QMR, 2QMR, EM, EM/SC]

T4 quartz restrike [120V] and sngle or dual MR16 halogen lamps allow adequate time for main HID lamp to reignite to full brilliance. EM option allows for cold start of HID lamps as it includes a time delay relay. The EM/SC emergency separate circuit option allows for the quartz lamps to be wired to an independent emergency back-up power source.



WIRE GUARD [WG/ITM]

Galvanized coated steel wire guard option prevents lens damage due to projected elements.

SPECIFICATION FEATURES

CONSTRUCTION AND RATINGS

Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber against performance degrading contaminates. UL 1598 wet location listed and IP65 ingress protection provides complete defense against dust entry while virtually eliminating moisture. Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance.

OPTICAL

Custom engineered highly reflective anodized aluminum reflectors provide high efficiency illumination. Impact resistant tempered borosilicate refractive glass provides maximum photometric performance and beam efficiency. Solite™ flat diamond patterned glass ensures smooth illumination coupled with a clean aesthetic appearance. Patent pending solid state LED luminaires are thermally optimized with 2400 or 4000 lumen package modules. Tradition light source optical assemblies are offered standard with horizontal medium or mogul-based metal halide [MH / MP] or high pressure sodium [HP] lamps. High efficiency T6 ceramic metal halide [CM] offers excellent color rendering and energy efficient 4-pin compact fluorescent [CF] lamps provide excellent lumen maintenance.

ELECTRICAL

Ballasts, LED driver and related electrical components are safely secured and hard mounted to the die-cast housing for optimal heat sinking and operating efficiency. All wiring is extended through a silicone gasket at the back of the housing to prevent entry of debris, moisture, dust and insects. Three 1/2" threaded conduit entry points allow for thru-branch wiring. Patent pending Wal-Pak LED thermal management system incorporates both conductive and natural convection to transfer heat rapidly away from the LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3kV line surge and is Class 2 rated for 120-277V with an operating temperature of -30°C to 60°C. Wal-Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class H insulation rated [metal halide: 150, 175, 200, 250, 320, 350, 400W [-30°C /-20°F], high pressure sodium: 50, 70, 100, 150, 250, 400W [-40°C/-40°F]. High efficiency HID ballasts are available in a multitude of voltage configurations including 120, 208, 240, 277, 347 and 480V. Compact fluorescent high power factor ballasts are Class P insulation rated for 120-277V and have a starting temperature of -18°C/0°F.

DARK SKY COMPLIANT FCO Full Cutoff

NOTE: In full cutoff door [FC] configuration only.

FLAT SOLITE® GLASS DOOR
[FL]

FULL CUTOFF DOOR
[FC]

BOROSILICATE GLASS/
POLYCARBONATE REFRACTOR DOOR
[GL/PL]

FINISH

Housing and door are protected with a 5-stage TGIC dark bronze polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Optional premium colors include black, white and grey.

STANDARD COLOR

BZ
Bronze

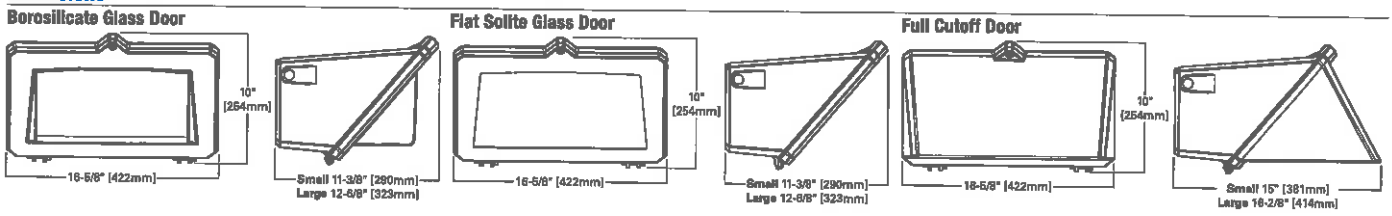
OPTIONAL COLORS

BK
Black

AP
Grey

WH
White

DIMENSIONS



WATTAGE TABLE

Lamp Type	Lamp Wattage
Pulse Start Metal Halide	50, 70, 100, 150, 200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
T6 Ceramic Metal Halide	39, 70, 100, 150W
Compact Fluorescent	[1] 32, [1] 42, [1] 57, [1] 70, [2] 32, [2] 42, [2] 57, [2] 70W
LED	2400, 4000 [Lumens]

VOLTAGE CHART

DT=Dual-Tap	120/277V [wired 277V]
MT=Multi-Tap	120/208/240/277V [wired 277V]
TT=Tri-Tap	120/277/347V [wired 347V]
5T=5 Tap	120/208/240/277/480V [wired 480V]
E=Electronic Ballast	120-277V [Universal, 50/60Hz]
ED=Electronic LED Driver	120-277V [Universal, 50/60Hz]

CERTIFICATIONS

- 40°C Ambient Temperature Rating
- UL and cUL Listed
- IP65 Rated
- ISO 9001
- FCO [Full Cutoff]
- EISA, ARRA and Title 20 Compliant

SHIPPING DATA

Approximate Net Weight: 32-42 [15-19 kgs.]

WAL-PAK

ORDERING INFORMATION

SAMPLE NUMBER: LDWP-FC-4A-ED-EM-LED

LAMP TYPE
MP=Pulse Start Metal Halide
HP=High Pressure Sodium
LD=Solid State Light Emitting Diodes [LED]
CF=Compact Fluorescent[1]
CM=Ceramic Metal Halide[2]
MH=Metal Halide[3]

SERIES
WP=Wal-Pak

DOOR TYPE[4]
GL=Borosilicate Glass Door
FC=Full Cutoff Door
FL=Flat Solite Glass Door
PL=Polycarbonate Refractor Door

LAMP WATTAGE[5]

LED
2A=[2400 Initial Lumens]
4A=[4000 Initial Lumens]

MP
50=50W
70=70W
100=100W
150=150W
200=200W
250=250W
320=320W
350=350W
400=400W

HP
50=50W
70=70W
100=100W
150=150W
250=250W
400=400W

CF
32=32W
42=42W
57=57W
70=70W
64=[2] 32W
84=[2] 42W
114=[2] 57W
140=[2] 70W

CM
39=39W
70=70W
100=100W
150=150W

MH
175=175W
250=250W
400=400W

VOLTAGE[6]
120V=120V
277V=277V
347V=347V[7]
480V=480V
DT=Dual-Tap
MT=Multi-Tap
TT=Triple-Tap
5T=5-Tap
E=Electronic Ballast[8]
ED=Electronic LED Driver

OPTIONS + ACCESSORIES
[see below]

STOCK ORDERING INFORMATION

SAMPLE NUMBER: WPP40C

SERIES	LAMP TYPE	LAMP WATTAGE	DOOR/GLASS TYPE
WP=Wal-Pak	P=Pulse Start Metal Halide S=High Pressure Sodium	10=100W 15=150W 25=250W 32=320W 40=400W	__=Standard C=Full Cutoff Door

NOTES: 1 Options not available with stock products. Refer to standard ordering information to add options. MT is standard. MP not available in 100W HPS not available in 320W Borosilicate glass door standard.

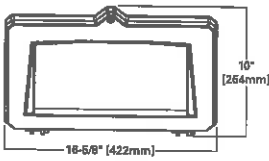
OPTIONS AND ACCESSORIES [Must be listed in the order shown and separated by a dash]

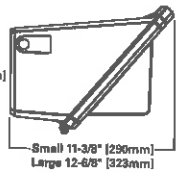
OPTIONS [add as suffix][9]
F1=Single Fuse[10]
F2=Double Fuse[10]
PE=Photocontrol Button[10]
LL=Includes Lamp[2]
BK=Black
WH=White
AP=Grey
DIMA=CF Dimming Ballast[11]
DIMB=CF Dimming Ballast[11]
SGL=Solite Glass Lens[12]
Q=Quartz Restrike T4 Lamp[10,13]
EM=Emergency Quartz Restrike T4 Lamp with Time Delay Relay[10,13]
EM/SC=Emergency Separate Circuit T4 Lamp[10,13,16]
QMR=Emergency Back-Up [1] MR16 Lamp[14,15]
2QMR=Emergency Back-Up [2] MR16 Lamps[14,15]
2QMR/SC=Emergency Back-Up MR16 and EM Separate Circuit [2] MR16 Lamp[14,16]
EMMR=Emergency Back-Up [1] MR16 Lamp with Time Delay Relay[14,15]
2EMMR=Emergency Back-Up [2] MR16 Lamps with Time Delay Relay[14,16]
2EMMR/SC=Emergency Back-Up [1] MR16 Lamp with Time Delay Relay and EM Separate Circuit[14,15,16]
EM/SC/MR=Emergency Back-Up Separate Circuit [1] MR16 Lamp[14,15,16]
2EM/SC/MR=Emergency Back-Up Separate Circuit [2] MR16 Lamps[14,15,16]
EM/SC/12V=Emergency Separate Circuit 12V [1] MR16 Lamp[14,15,17]
2EM/SC/12V=Emergency Separate Circuit 12V [2] MR16 Lamps[14,15,17]
EM140=Emergency Cold Temperature UL 924 CF Power Pack [1] Lamp[18]
EM140/2L=Emergency Cold Temperature UL 924 CF Power Pack [2] Lamp[18]
CF-EM=Emergency UL924 CF Power Pack [1] Lamp[19]
CF-EM/2L=Emergency UL924 CF Power Pack [1] Lamp[19]
EM-LED=LED Battery Back-up[20]
EMLED-CD=LED Battery Back-Up Cold Temperature[20]

ACCESSORIES [order separately]
WG/WPGL=Wire Guard Borosilicate Glass Lens Door
WG/WPFC=Wire Guard Full Cutoff Door
WG/WPFL=Wire Guard Flat Glass Lens Door
TR/WP=Tamper Resistant Screw and Bit

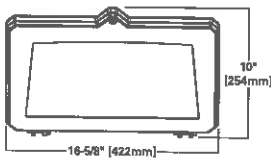
DIMENSIONS

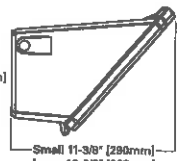
Borosilicate Glass Door



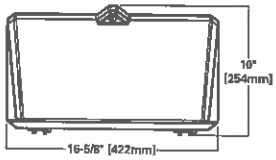


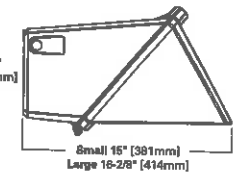
Flat Solite Glass Door





Full Cutoff Door





WATTAGE TABLE

Lamp Type	Lamp Wattage
Pulse Start Metal Halide	50, 70, 100, 150, 200, 250, 320, 350, 400W
Metal Halide	175, 250, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
T6 Ceramic Metal Halide	39, 70, 100, 150W
Compact Fluorescent	[1] 32, [1] 42, [1] 57, [1] 70, [2] 32, [2] 42, [2] 57, [2] 70W
LED	2400, 4000 [Lumens]

VOLTAGE CHART

DT=Dual-Tap	120/277V [wired 277V]
MT=Multi-Tap	120/208/240/277V [wired 277V]
TT=Tri-Tap	120/277/347V [wired 347V]
5T=5 Tap	120/208/240/277/480V [wired 480V]
E=Electronic Ballast	120-277V [Universal, 50/60Hz]
ED=Electronic LED Driver	120-277V [Universal, 50/60Hz]

CERTIFICATIONS

40°C Ambient Temperature Rating
UL and cUL Listed
IP65 Rated
ISO 9001
FCO [Full Cutoff]
EISA, ARRA and Title 20 Compliant

SHIPPING DATA

Approximate Net Weight: 32-42 [15-19 kgs.]

NOTES: 1 CF Single lamp offered in all door configurations. CF dual lamp models not offered with FL door type. 70W models not available with EM140-2L, CF-EM, CF-EM-2L. CF not available in 347V. 2 All CM models offered with T6 envelope G12 lamp base. T6 Lamp included with CM models. Order LL with CM models. Ceramic Metal Halide (CM) is available with (MP) pulse start metal halide or E - Electronic Ballast. 3 MH products available for non-US markets only. 4 Small housing offered for 175W and below, CF and LD models. Large housing for 200W-400W. FL door not available with CF or 200-400W models. Polycarbonate lens available in models up to 175W max including LD. Polycarbonate lens not available with full cutoff door or FL models. Solite stipple glass is standard for FL lens. Clear glass is standard for full cutoff door types except for LD. LD full cutoff door is standard with solite glass. 5 LD nominal initial lumens prior to optical and configuration losses based on 67 CRI/5000K package at 25°C ambient. MH and MP 175W and below are medium base all others are mogul base. CF 64, 84, 114 and 140 models are offered in borosilicate glass and full cutoff doors only. In cold temperatures, compact fluorescent lamps produce lower illumination levels. 6 See Voltage Chart for descriptions. 5T available in 400W MH models only. 80°C Rated wire required for thru-branch wiring for units 175W and lower. 105°C Rated wire required for thru-branch wiring for units 200W and higher. Thru-branch wiring is rated for 40°C for LD and 175W and below. Higher wattage thru-branch wiring is rated for use in 25°C ambient operating environments. 7 347V not available with thru-branch wiring. For 347 or 480V LD specify voltage. ED will be supplied with integral step down transformer. 347V not available with CF lamps. 8 Available with 70-150W MP or CM lamps. E is standard for all CF models. All electronic ballasts are universal 120-277V. 9 Not all options can be combined. Only one emergency or battery back-up option available within the fixture. 10 Specify voltage. F1 - 120, 277 or 347V, F2 - 208 or 240V, PE - 120, 208, 240, 277V. Q, EM, EM/SC available in 120V only. 11 DIMA dimming ballast, specify number of lamps, available for 1 or 2-26W or 1-32W, 1-42W. DIMB available for 2-42W, 1-57W or 1-70W. 12 SGL optional on HID and CF models only. See note 4. 13 Max 100W, T4 Quartz lamp. Lamp supplied by others. 14 Not available with LD. Lamps supplied by others. 15 1 or 2 GU10 base 50 watt max - 120V Halogen lamps supplied by others. 16 Emergency lamp leads out of the back of the unit to auxiliary power. Lamps independently wired to separate circuits. 17 Low Voltage 1 or 2 GU5.3 MR16 base, 12V DC, 35W max. Lamp supplied by others. 18 For use in 25°C ambient operating temperature environments. EM140, EM140/2L used for CF lamps. Specify 120 or 277V. EM140 supports 1-70W CF max, EM140/2L supports 2-32W CF max. Minimum -18°C/-4°F. 19 For use in 25°C ambient operating temperature environments. Specify 120 or 277V. CF-EM supports up to 1-57W CF. CF-EM/2L supports 2-18W CF, 18W lamps supplied by others. Minimum temperature is 0°F/32°C. 20 EM-LED and EMLED-CD available with 4A models only. For use in 25°C ambient operating temperature environments. Specify 120 or 277V EM-LED minimum 0°C/32°F; EMLED-CD minimum -20°C/-4°F. Battery pack is a UL recognized component. 21 Specifications and dimensions subject to change without notice.

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