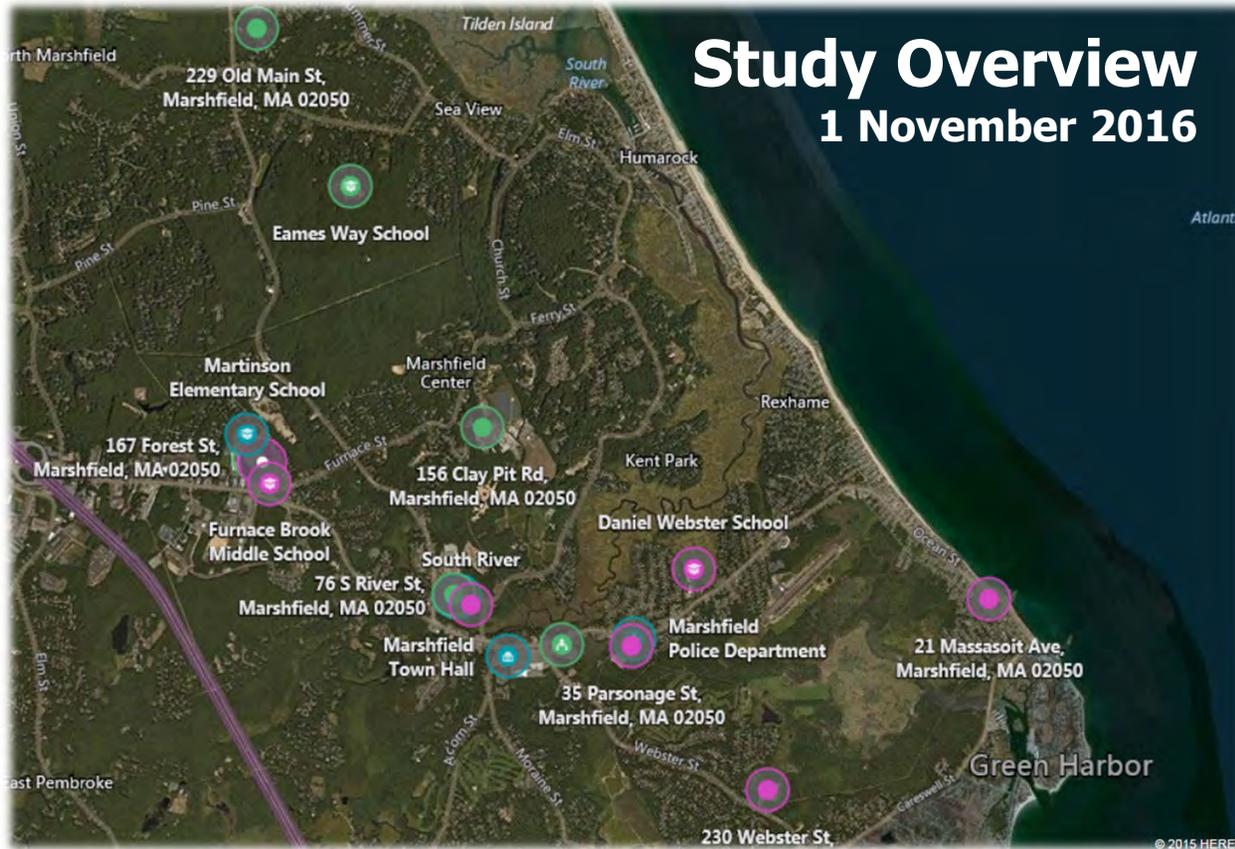




Town of Marshfield

Municipal and School Facilities Capital Assessment



Experience

who we are

- 50+ person architectural firm
- 20+ year history
- specialize in public buildings
- expertise in master planning

leadership team

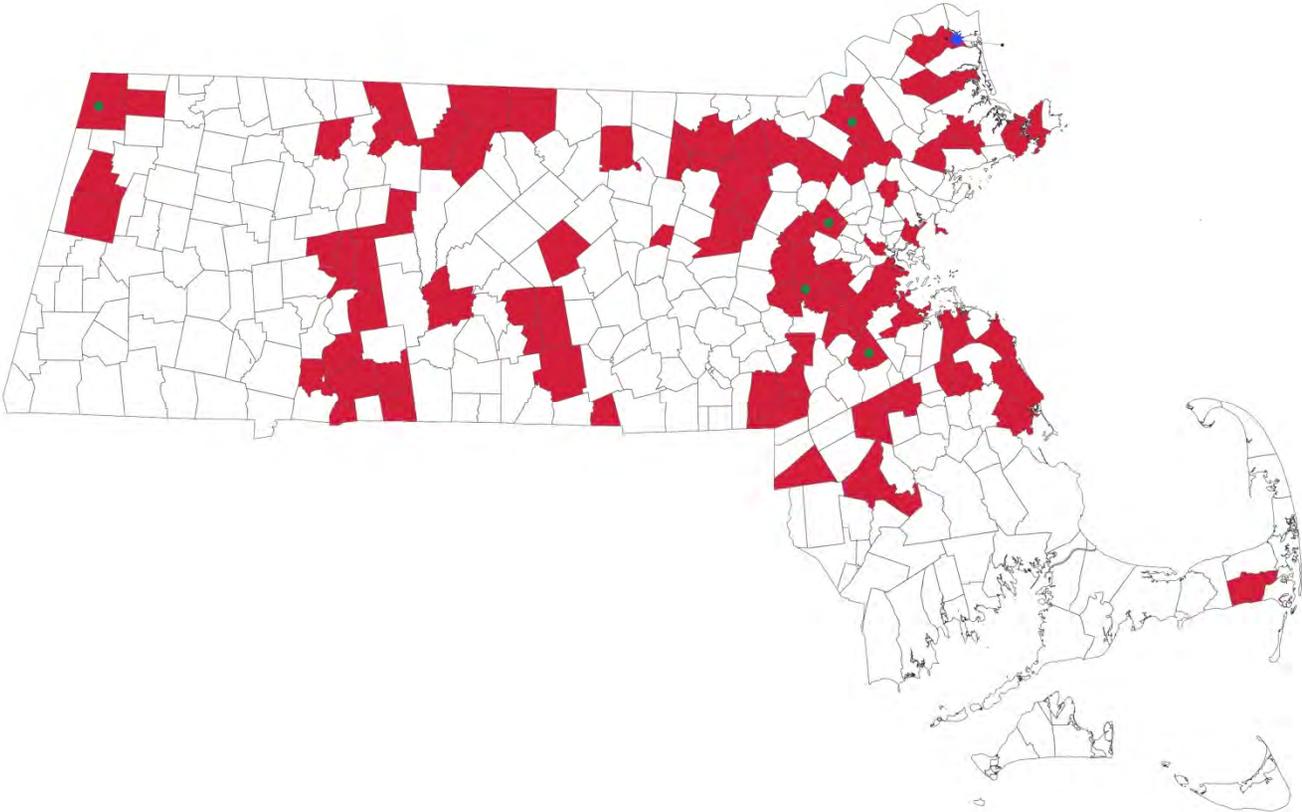


Town of Marshfield

Municipal and School Facilities Capital Assessment

Recent Similar Work

- Easton
- Acton-Boxborough
- Webster
- Billerica
- Gloucester
- Dedham
- Needham
- Hanover
- Chelmsford



Town of Marshfield
Municipal and School Facilities Capital Assessment

Sustainability



12

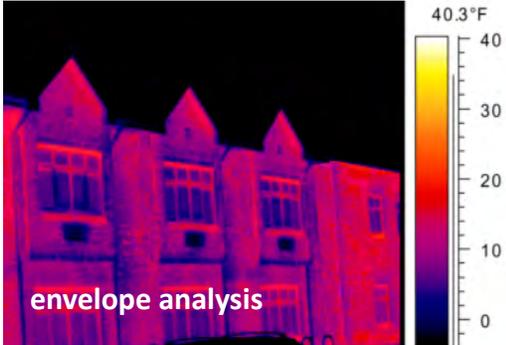


2

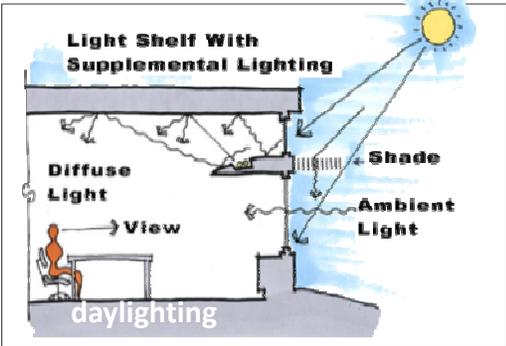
LEED accredited projects



rain gardens



envelope analysis



daylighting



solar orientation



renewable power



material choice

Agenda

- Goals, Process and Scope
- Existing Conditions Overview
- Capital Improvement Plan (CIP)- Overview
 - What is it? How is it Used?
- Summary of Findings- Schools
- Summary of Findings- Municipal
- Cost Estimate Summary
- Next Steps
- Questions



Town of Marshfield

Municipal and School Facilities Capital Assessment

GOALS & PROCESS

GOALS

1. Provide a database of information based on a professional, comprehensive, independent assessment of buildings and grounds
2. Transform the way we maintain buildings:
From: a **REACTIVE**, emergency-based approach
To: a **PROACTIVE**, planned and methodical approach



Town of Marshfield

Municipal and School Facilities Capital Assessment

Summary of Work

Assess and report on the condition of the building envelope, interior, & grounds of each building, including:

- architectural
- structural
- HVAC
- electrical
- plumbing
- fire protection
- site civil, landscape and playgrounds
- hazardous materials

Recommend improvements to provide capital recommendations so the Town may utilize for future planning



Town of Marshfield

Municipal and School Facilities Capital Assessment

Process

Phase 1 –
site & building assessments

initiate

gather existing documents
(June-July 2015)

investigate

19 facility/site assessments
(July-October 2015)

draft reports
(November 2015-May 2016)



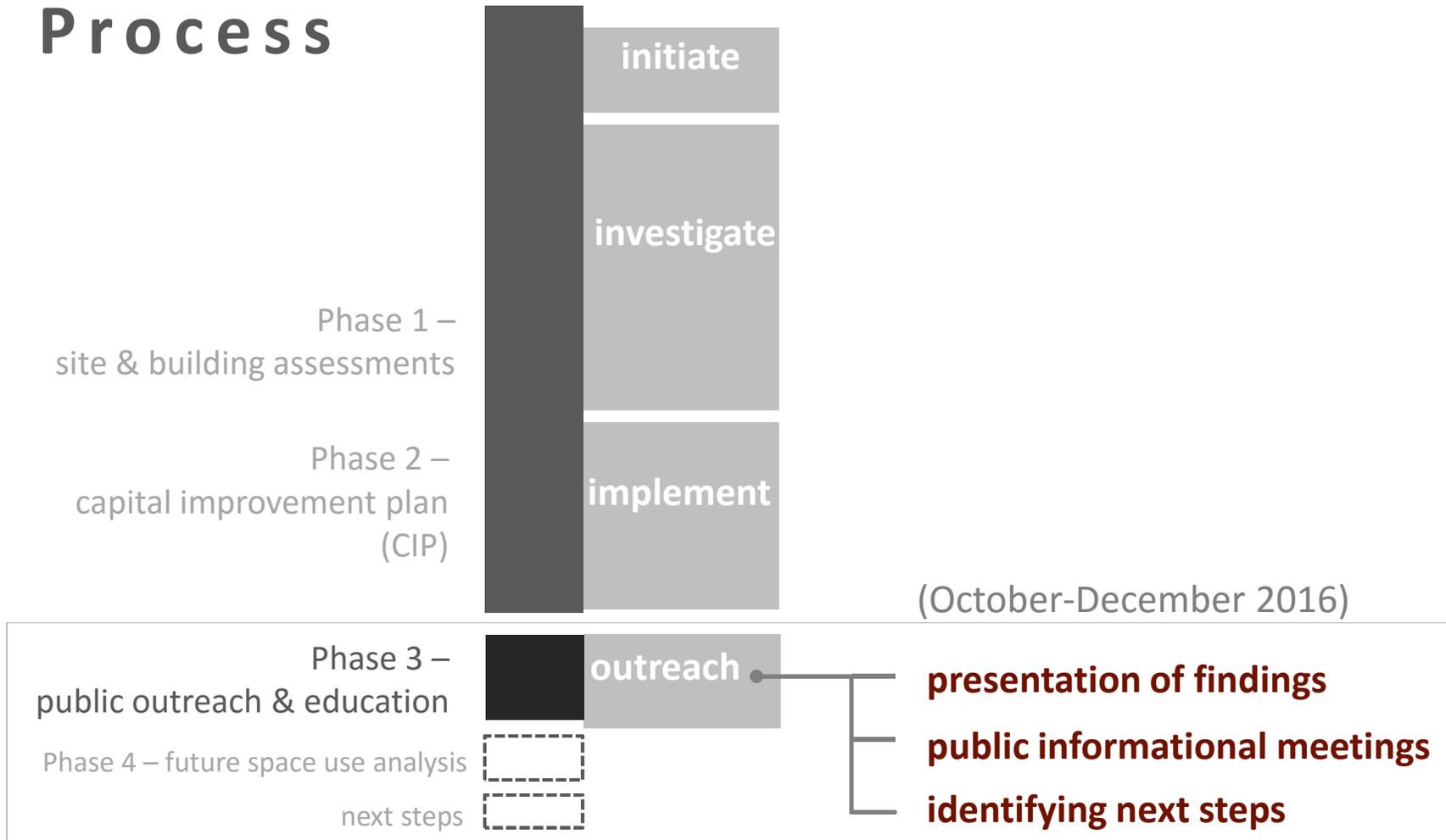
Process



Town of Marshfield

Municipal and School Facilities Capital Assessment

Process



Town of Marshfield

Municipal and School Facilities Capital Assessment

SCOPE

Scope of Work

Phase 1: Site & Building Assessments

- Evaluate the physical condition of each building and site
- Document – narratively and with photographs
- Provide Recommendations



Detailed Assessment Categories

1. Civil / Site

- Paving, Drives, Sidewalks
- Storm water Management
- Water & Waste Water
- Landscape/playgrounds

2. Structural Assessment

- Foundation
- Exterior Walls
- Columns & Beams

3. Architectural Assessment

- Exterior – roofing, brick/siding, windows, doors
- Interior – walls, floors, ceilings
- HC Accessibility
- Life Safety Code Compliance

4. MEP/ FP

- Heating & Cooling Systems
- Electrical, Power & Data, Life Safety
- Plumbing
- Energy & Water Efficiency
- Fire Protection

5. Hazardous Materials

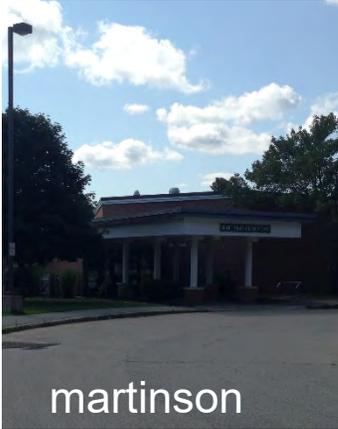
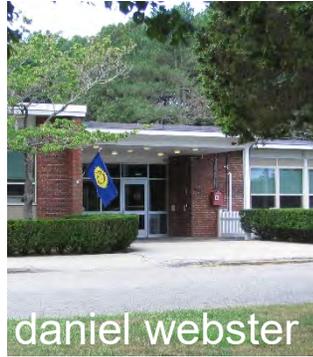
- Materials in poor condition or that need to be abated or removed per code
- Materials that need to be abated at the time of renovation or demolition



Town of Marshfield

Municipal and School Facilities Capital Assessment

8 Facilities Reviewed Schools



Town of Marshfield
Municipal and School Facilities Capital Assessment

11 Facilities Reviewed Municipal



Facilities/Parks Not Reviewed in Study

Municipal Facilities:

- Waste Water Treatment Plant
- Transfer Station
- Hancock Paint Building
- The Alamo Building
- Library Plaza
- Recreation Center Coast Guard Hill
- Harbormasters Trailer
- Rexhame Refreshment/ Comfort Station
- Brant Rock Comfort Station
- Water Department Facilities

Municipal Parks:

- Little League Fields
- Kids at Play Playground
- Peter Igo Park
- Tower Ave Park
- Skate Park
- Enterprise Park Fields
- Grace Ryder Fields
- Veterans Memorial Park
- South River Park
- Dandelion Park
- Street Hockey and Basketball Court
- Conservation Land



Town of Marshfield

Municipal and School Facilities Capital Assessment

Scope of Work

Phase 2: Capital Improvement Plan

- Input recommendations into a spreadsheet/database software
- Sort into categories and prioritize
- Provide cost estimates



Town of Marshfield

Municipal and School Facilities Capital Assessment

Sort into Categories of Work

1. Health and Welfare

- Potential Indoor Air Quality
- Structural Issues of Concern
- Leaks/moisture in building (roof, walls, slab)

2. Life Safety

- Poor Electrical Devices
- Egress
- Fire Safety

3. Code Compliance

- Issues not in compliance with CURRENT Codes

4. Functional Use of Building

- Programmatic / space analysis of existing facilities done on a **limited basis**

5. Handicap Accessibility

- Accessibility to the building and site per ADA & MAAB requirements

6. Maintenance

- Deterioration of fixtures, finishes, and building systems

7. Energy Efficiency

- Mechanical, Electrical & Plumbing Systems
- Building Envelope



Town of Marshfield

Municipal and School Facilities Capital Assessment

EXISTING CONDITIONS OVERVIEW

Town-Wide Overview



Existing Conditions Overview

- Buildings have been maintained but a number of buildings are in need of significant capital improvements
- The buildings undergo annual maintenance and equipment upgrades, including re-roofing, hvac, plumbing, fire alarm, and electrical components.
- Here are some examples of the work that have been completed over the past 7 years:
 - New High School - 2014
 - New Massasoit Ave Fire Station – 2014
 - Seth Ventress Building Renovations- 2009
 - Various boiler, hvac and window replacement projects-completed at 6 schools and 5 municipal buildings
 - Library Plaza Renovations - Ongoing



Existing Conditions Overview

- **Codes have changed significantly over the past 60 years:**
 - fire and life safety
 - handicap accessibility
 - ventilation
 - energy and water efficiency

- **Building infrastructure systems and components can be expected to last 25 to 35 years before needing replacement.**



Town of Marshfield

Municipal and School Facilities Capital Assessment

Age of Buildings and Renovations – General Overview

Color Key

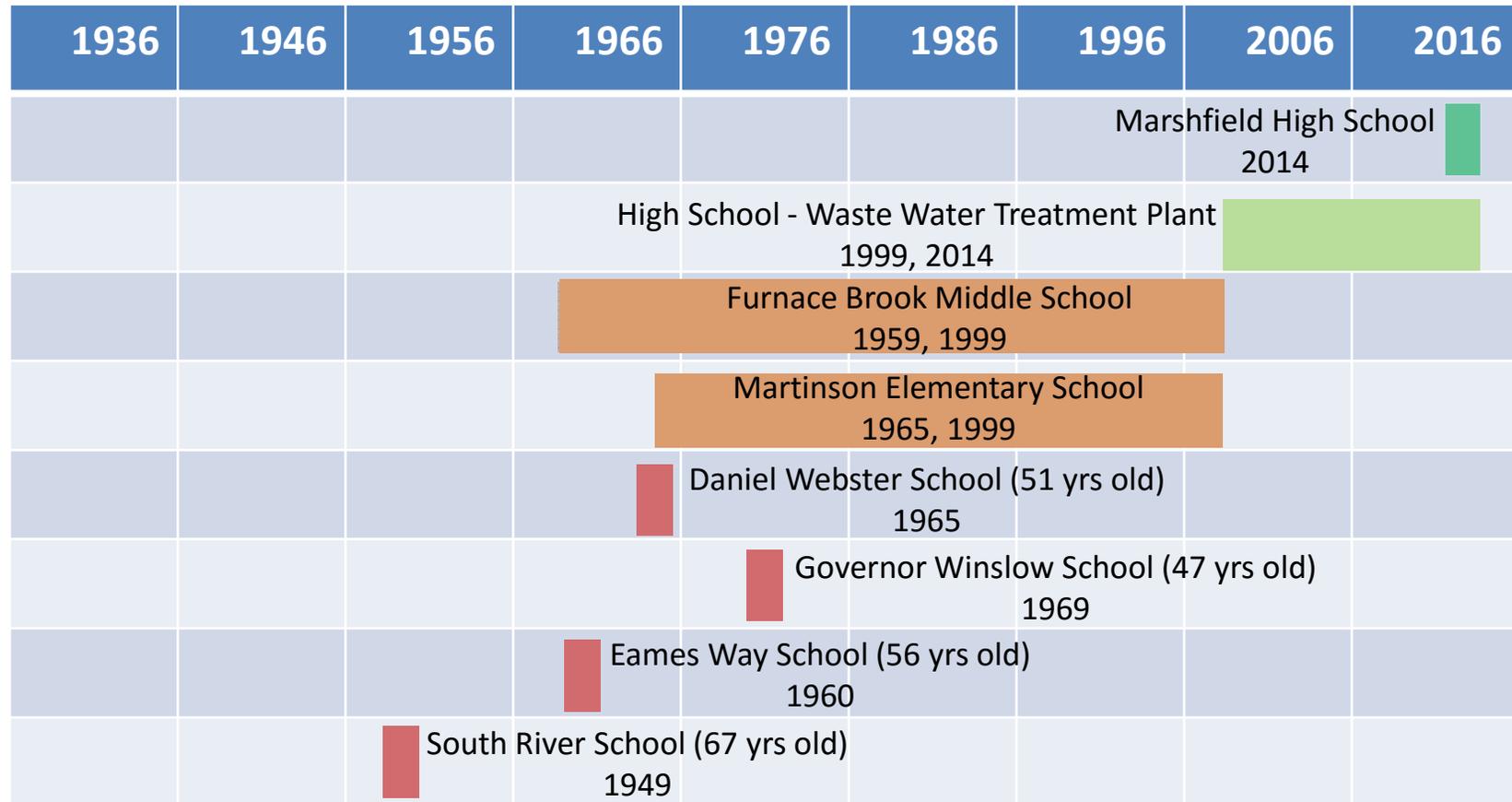
Excellent Condition		New (within past 3 years)
Very Good Condition		New or Extensive Renovation (within past 10 yrs)
Good to Fair Condition		Limited Renovations (within past 25 yrs)
Fair to Poor Condition in numerous categories		25 to 45 years since significant renovation
In need of Significant Upgrades		45 + yrs old (original construction)



Town of Marshfield

Municipal and School Facilities Capital Assessment

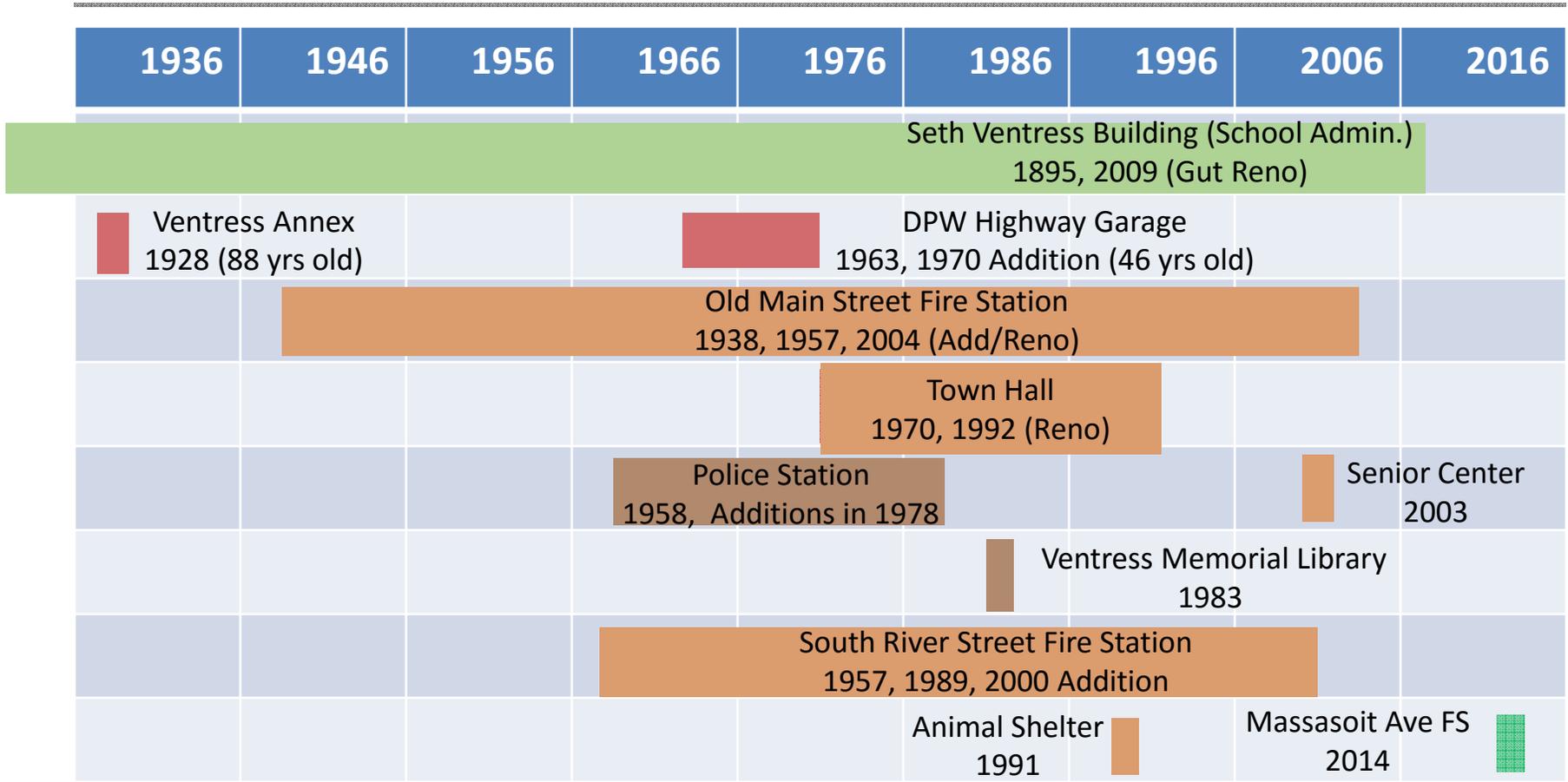
Age of Buildings and Renovations – School Facilities



Town of Marshfield

Municipal and School Facilities Capital Assessment

Age of Buildings and Renovations – Municipal Facilities



CAPITAL IMPROVEMENT PLAN OVERVIEW

Capital Improvement Plan – What is it?

- **Prioritized needs** per building in categories of :
 - “short term” = 1 – 2 years
 - “mid term” = 3 – 6 years
 - “long term” = 7 + years
- Estimate of Cost for **replacement** or **repair** of items noted in the site and building assessment recommendations



Short Term Needs

1-2 years (2016-2018)

1. Health and Welfare

- Potential Indoor Air Quality
- Structural Issues of Concern
- Leaks/moisture in building (roof, walls, slab)

2. Life Safety

- Poor Electrical Devices
- Egress
- Fire Safety



Mid Term Needs

3 -6 years (2019 - 2022)

3. Handicap Accessibility

- Accessibility to the building and site per ADA & MAAB requirements

4. Maintenance

- Deterioration of fixtures,
- exterior and interior finishes,
- building infrastructure systems (HVAC, Plumbing, Electrical, Fire Protection);
end of service life



Long Term Needs

7+ years (2023-beyond)

5. Code Compliance

- Issues not in compliance with CURRENT Codes

6. Functional Use of Building

- Programmatic / space analysis of existing facilities done on a **limited basis**

7. Energy Efficiency

- Improving efficiency of Mechanical, Electrical & Plumbing Systems
- Improving thermal envelope



Capital Improvement Plan – How is it used?

- “Living-Breathing” Document
- “Big Picture” Budget
- Recommendations for Capital Improvements as well as on-going maintenance
- Assist in deciding if continued investment in a particular facility is economically prudent vs. replacement



Capital Improvement Plan – Considerations

- Due to the conceptual nature, limited documents available and the complexity of existing conditions:
 - multiple solutions are possible
 - detailed analysis of specific projects is recommended
 - some work may “trigger” additional scope



Town of Marshfield

Municipal and School Facilities Capital Assessment

Capital Improvement Plan – Considerations

Possible Code Triggers:

➤ Handicap Accessibility

- where the cost of the work amounts to 30% or more of the assessed value of the building then the entire building is required to comply.
- where the cost of the work amounts to \$100,000 then an accessible entrance and restroom must be provided



Town of Marshfield

Municipal and School Facilities Capital Assessment

Capital Improvement Plan – Considerations

➤ Seismic / Structural Upgrades

- if renovations, additions or alterations of an existing building exceed 50% of the aggregate area of the building then the entire facility may need to be upgraded to address seismic code requirements.

➤ Fire Protection (Sprinklers)

- Major alterations to buildings over 7,500 sq ft would require an automatic fire suppression system to be provided.
- for additions to existing buildings that cause the entire building to exceed 7500 sq.ft. the entire facility must be equipped with a fire suppression system.

- Flood Zone: The Town has recently adopted the FEMA Flood Maps. This was not part of this study. Any future work should take this into consideration.



Town of Marshfield

Municipal and School Facilities Capital Assessment

SUMMARY OF FINDINGS

Site & Building Assessments

SCHOOL DISTRICT FACILITIES



Town of Marshfield
Municipal and School Facilities Capital Assessment

Marshfield High School



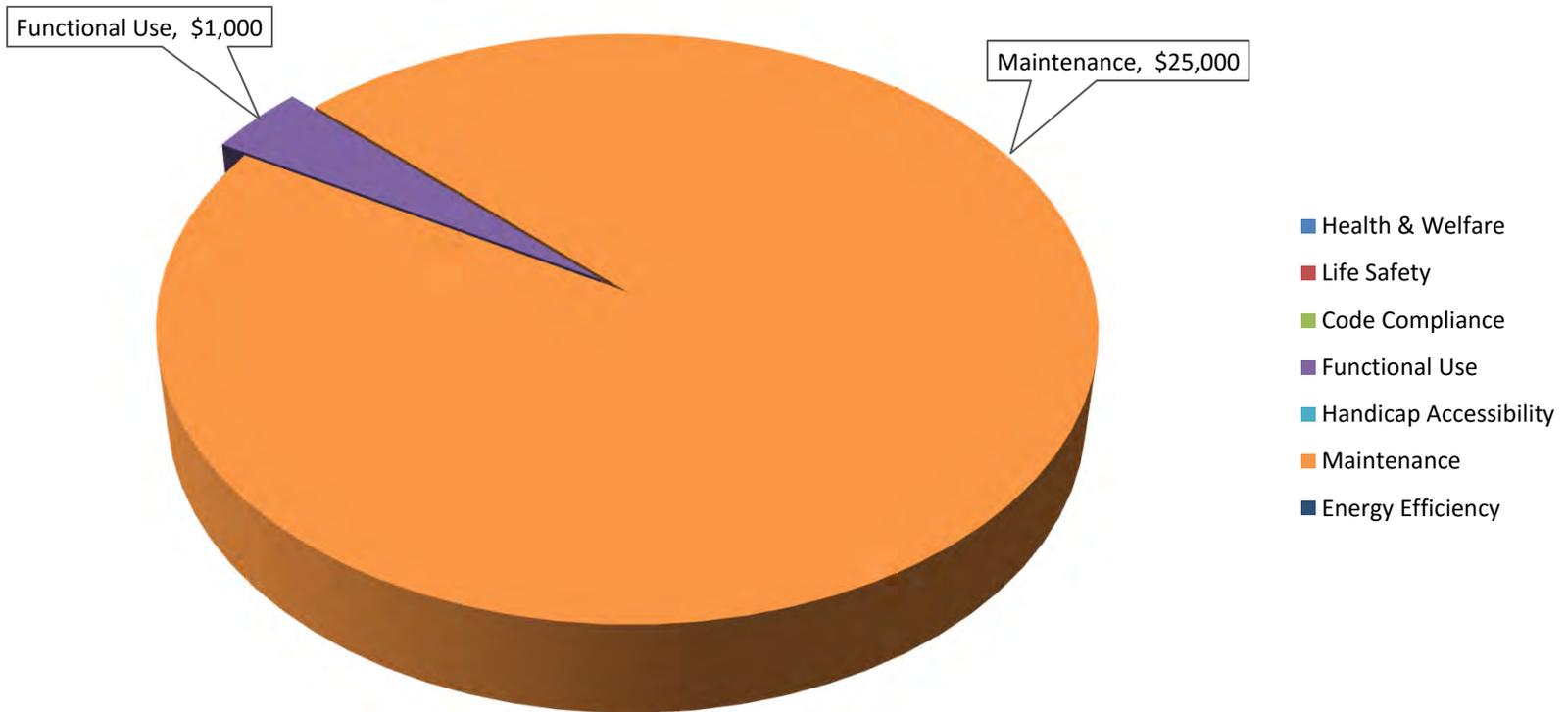
267,400 sf building
2014 Original Building
Grades 9-12
1,319 Students
194 Staff



Town of Marshfield
Municipal and School Facilities Capital Assessment

Marshfield High School

Total CIP Cost:
\$26,000



Furnace Brook Middle School



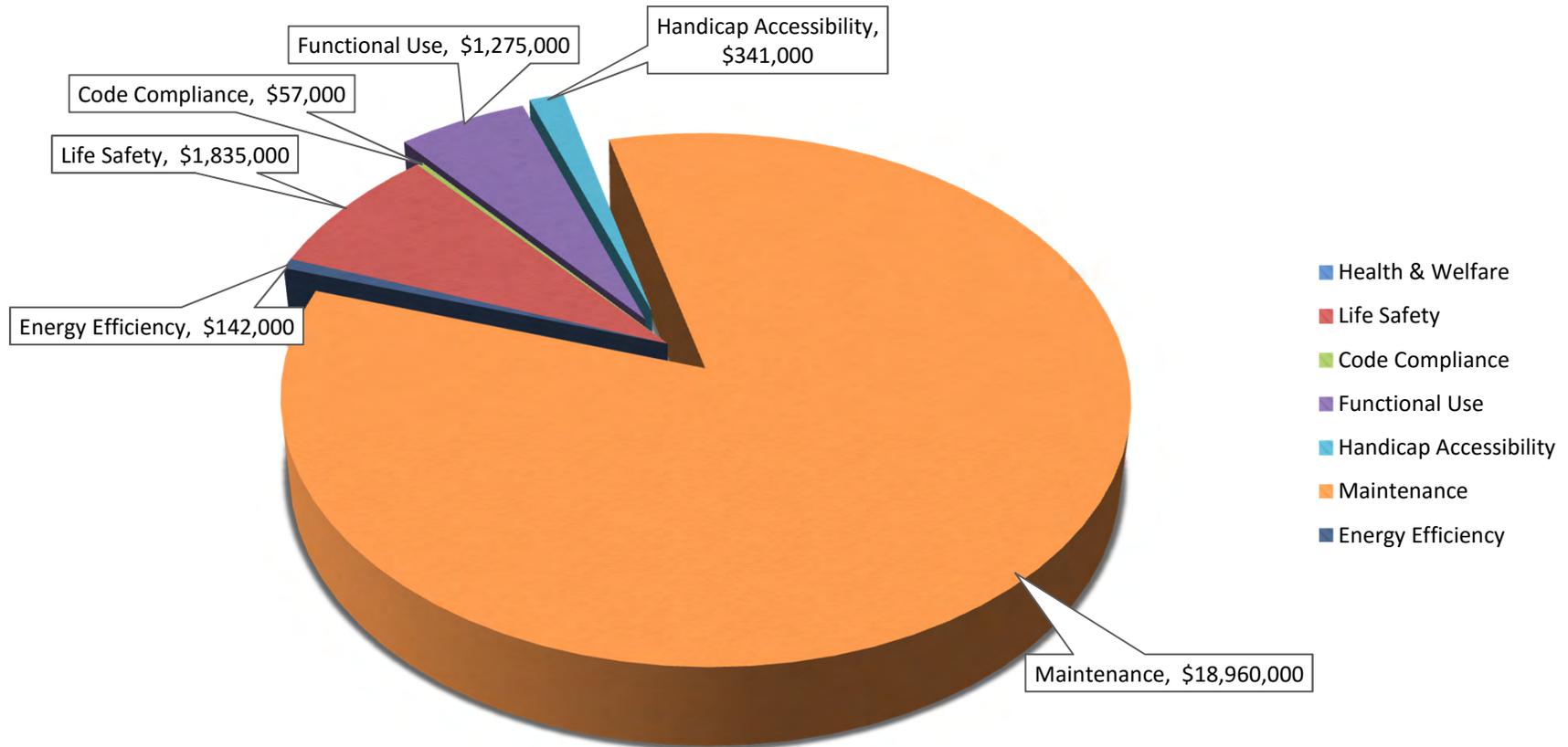
159,000 sf building
1959 Original Building
1999 Reno/Addition
Grades 6-8
1,024 Students
138 Staff



Town of Marshfield
Municipal and School Facilities Capital Assessment

Furnace Brook Middle School

Total CIP Cost:
\$22,610,000



Martinson Elementary School



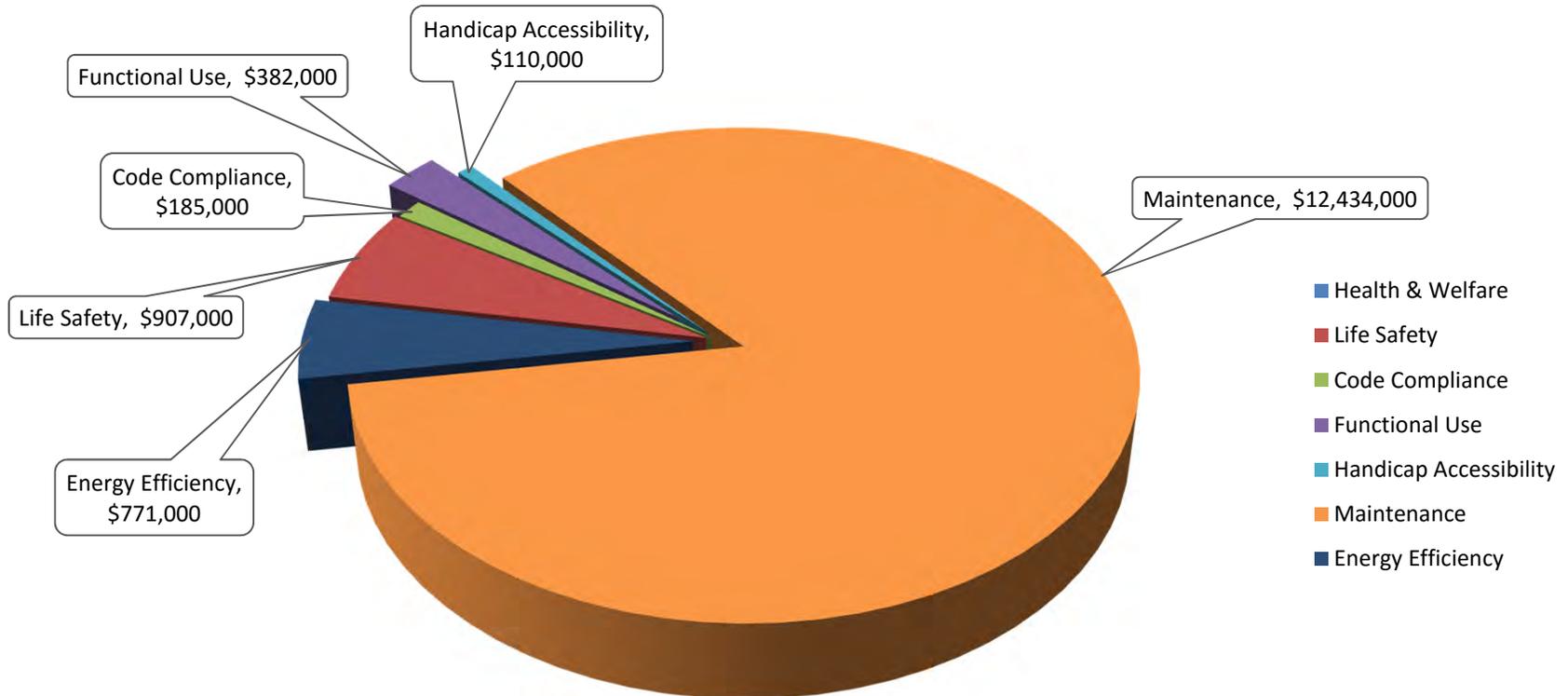
92,900 sf building
1965 Original Building
1999 Reno/Addition
Grades K-5
441 Students
106 Staff



Town of Marshfield
Municipal and School Facilities Capital Assessment

Martinson Elementary School

Total CIP Cost:
\$14,789,000



Daniel Webster Elementary School



58,200 sf building

1965 Original Building

Grades K-5

330 Students

73 Staff

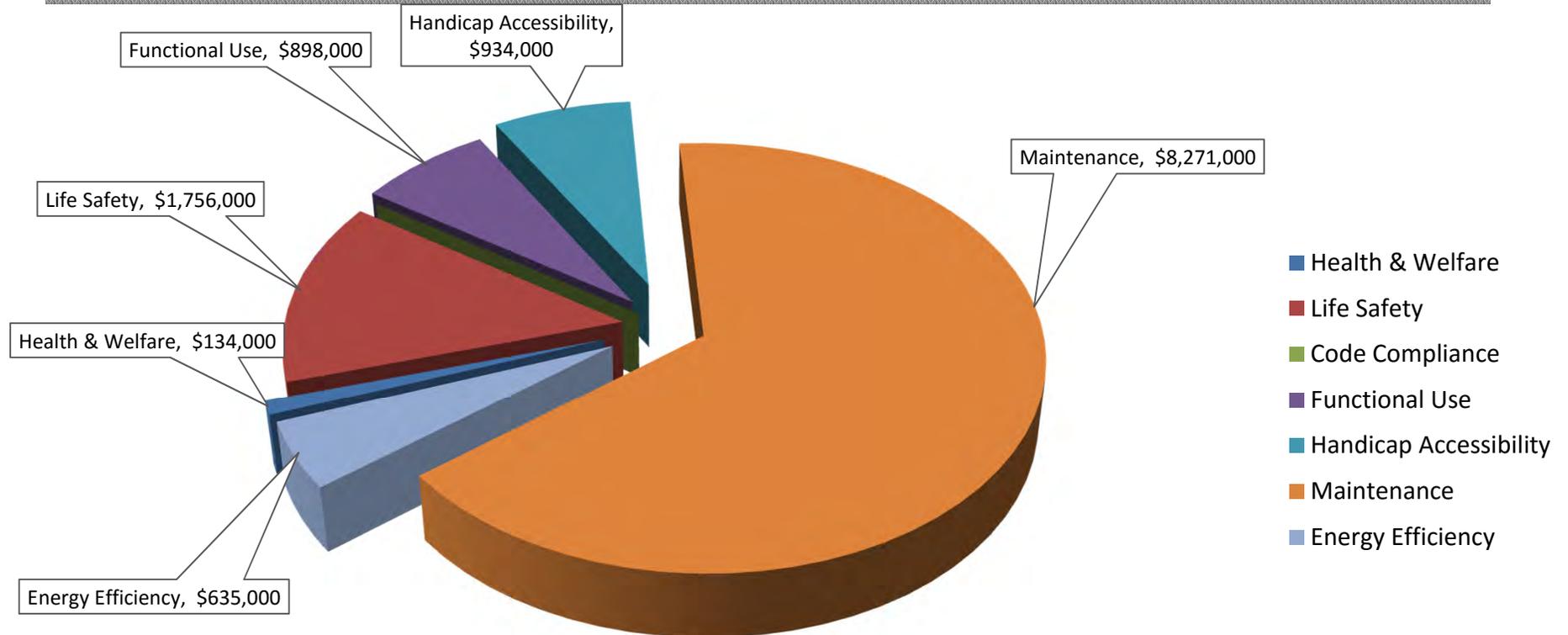


Town of Marshfield

Municipal and School Facilities Capital Assessment

Daniel Webster Elementary School

Total CIP Cost:
\$12,628,000



Governor Winslow Elementary School



65,790 sf building

1969 Original Building

Grades K-5

427 Students

72 Staff

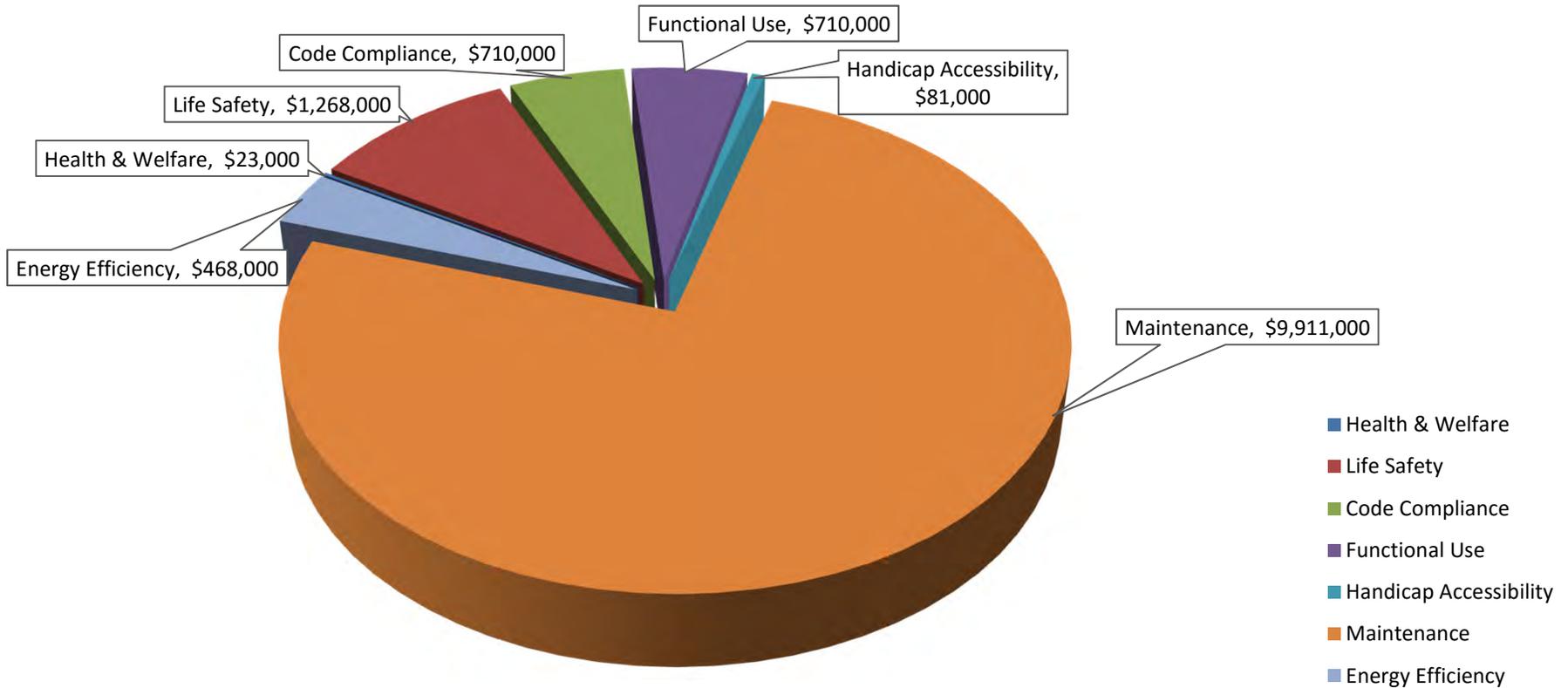


Town of Marshfield

Municipal and School Facilities Capital Assessment

Governor Winslow Elementary School

Total CIP Cost:
\$13,171,000



Eames Way Elementary School



40,200 sf building

1960 Original Building

Dormant 1990-1995

Limited Upgrades: 1994

08/19/2015

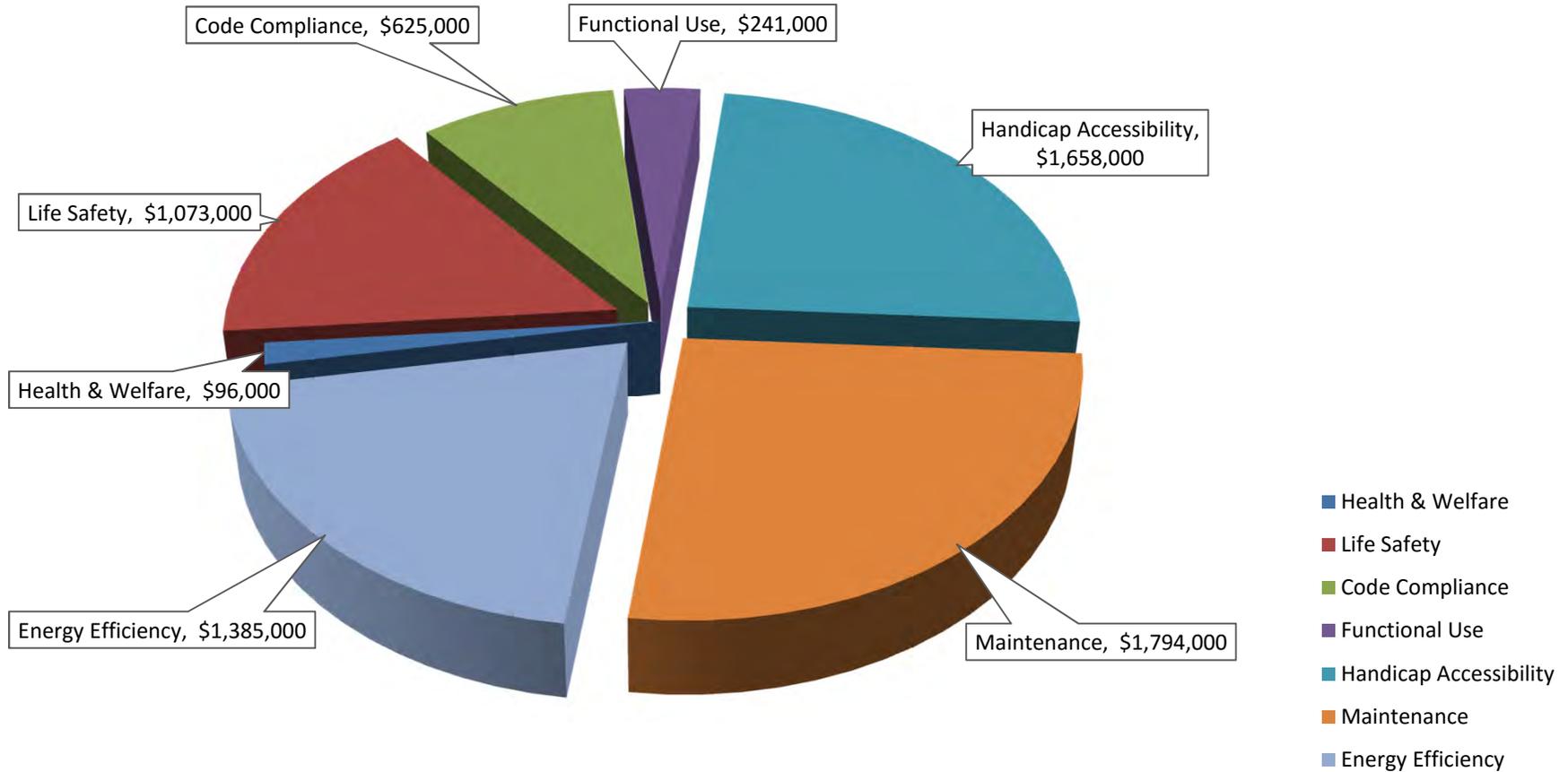


Town of Marshfield

Municipal and School Facilities Capital Assessment

Eames Way Elementary School

Total CIP Cost:
\$6,872,000



South River Elementary School



62,790 sf building

1949 Original Building

370 Students

62 Staff

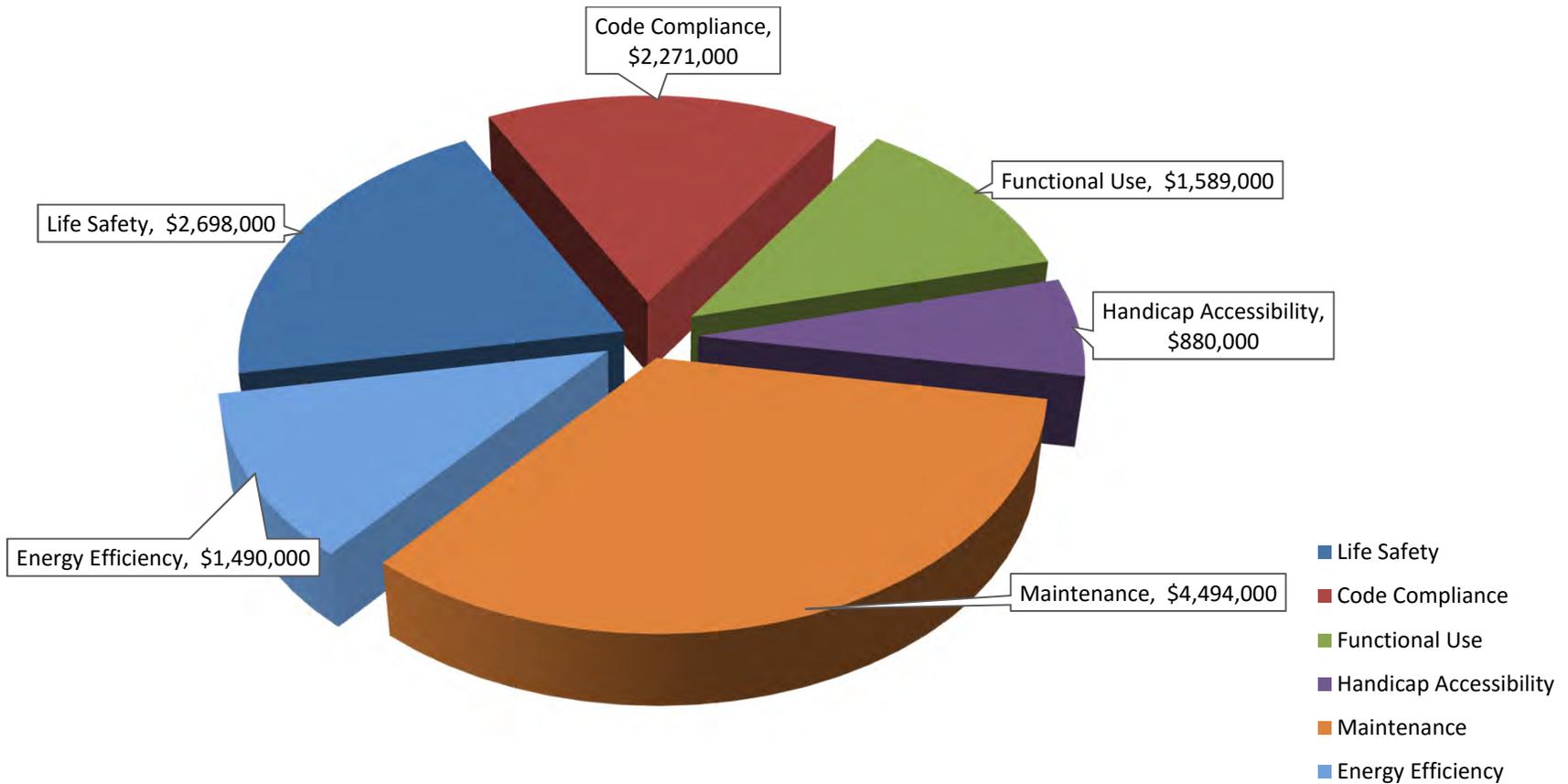


Town of Marshfield

Municipal and School Facilities Capital Assessment

South River Elementary School

Total CIP Cost:
\$13,422,000



High School Waste Water Treatment Plant



2,500 sf building

1999 Original Building

Reno. 2014

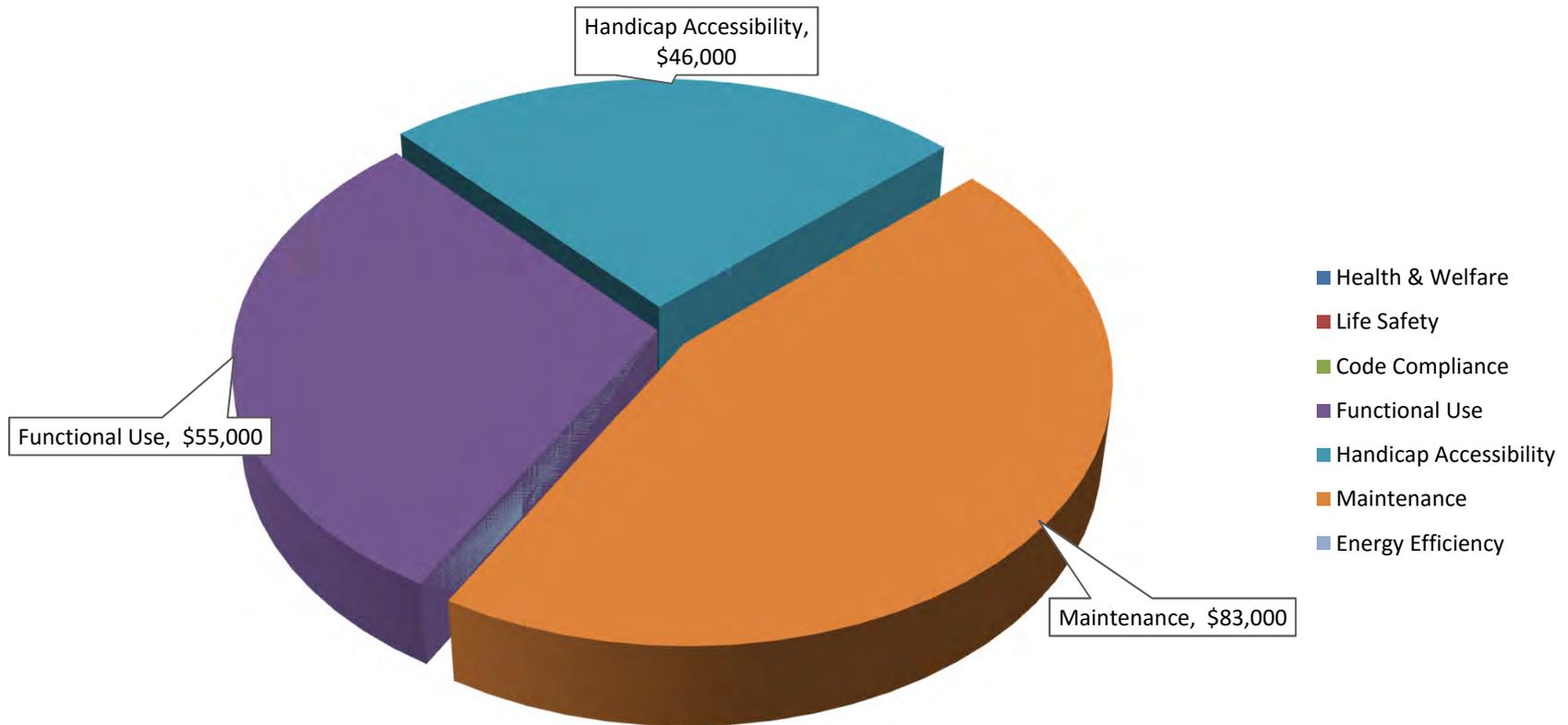


Town of Marshfield

Municipal and School Facilities Capital Assessment

High School Waste Water Treatment Plant

Total CIP Cost:
\$184,000



MUNICIPAL FACILITIES



Town of Marshfield

Municipal and School Facilities Capital Assessment

Seth Ventress Building (School Admin)

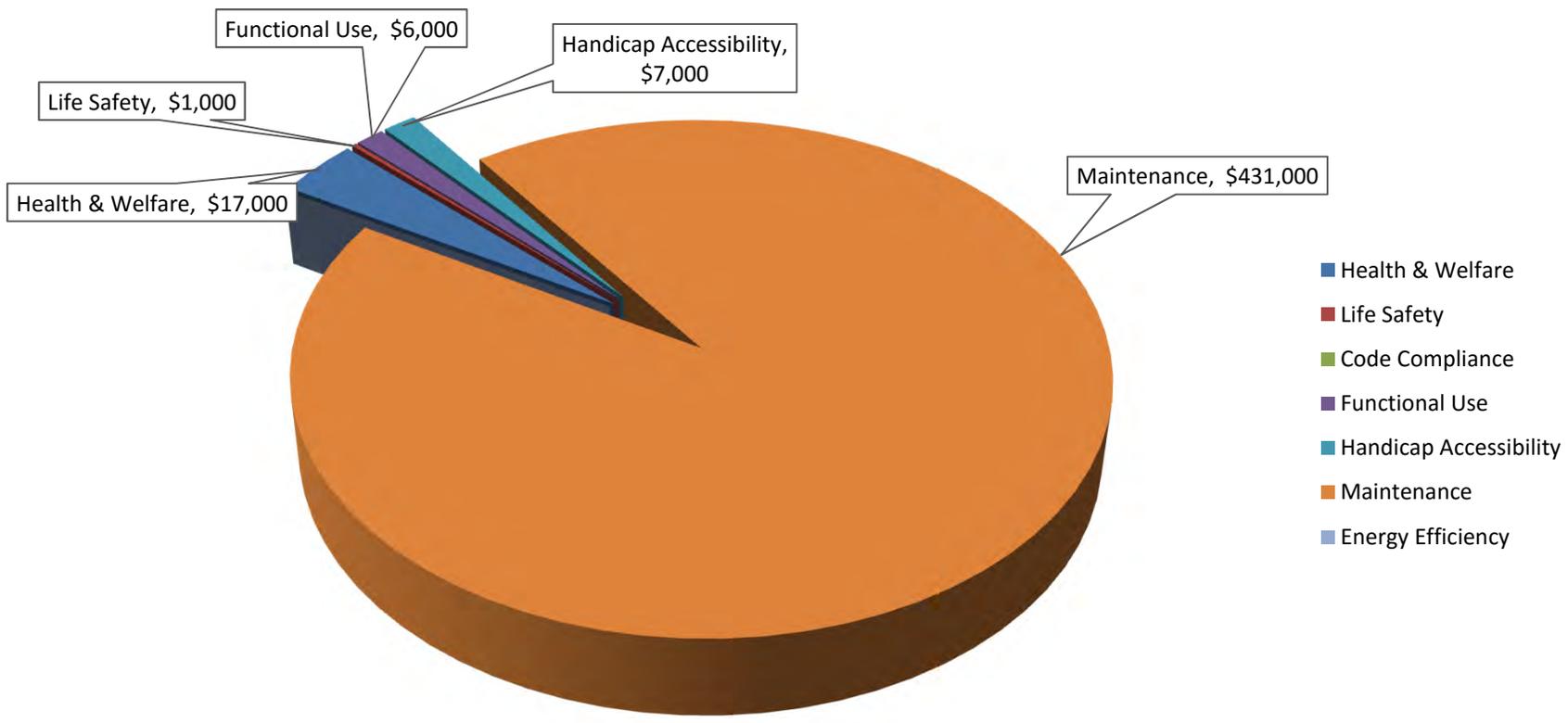


10,440 sf building
1895 Construction
2009-2010 Renovation



Town of Marshfield
Municipal and School Facilities Capital Assessment

Seth Ventress Building (School Admin) Total CIP Cost: \$462,000



Ventress Annex



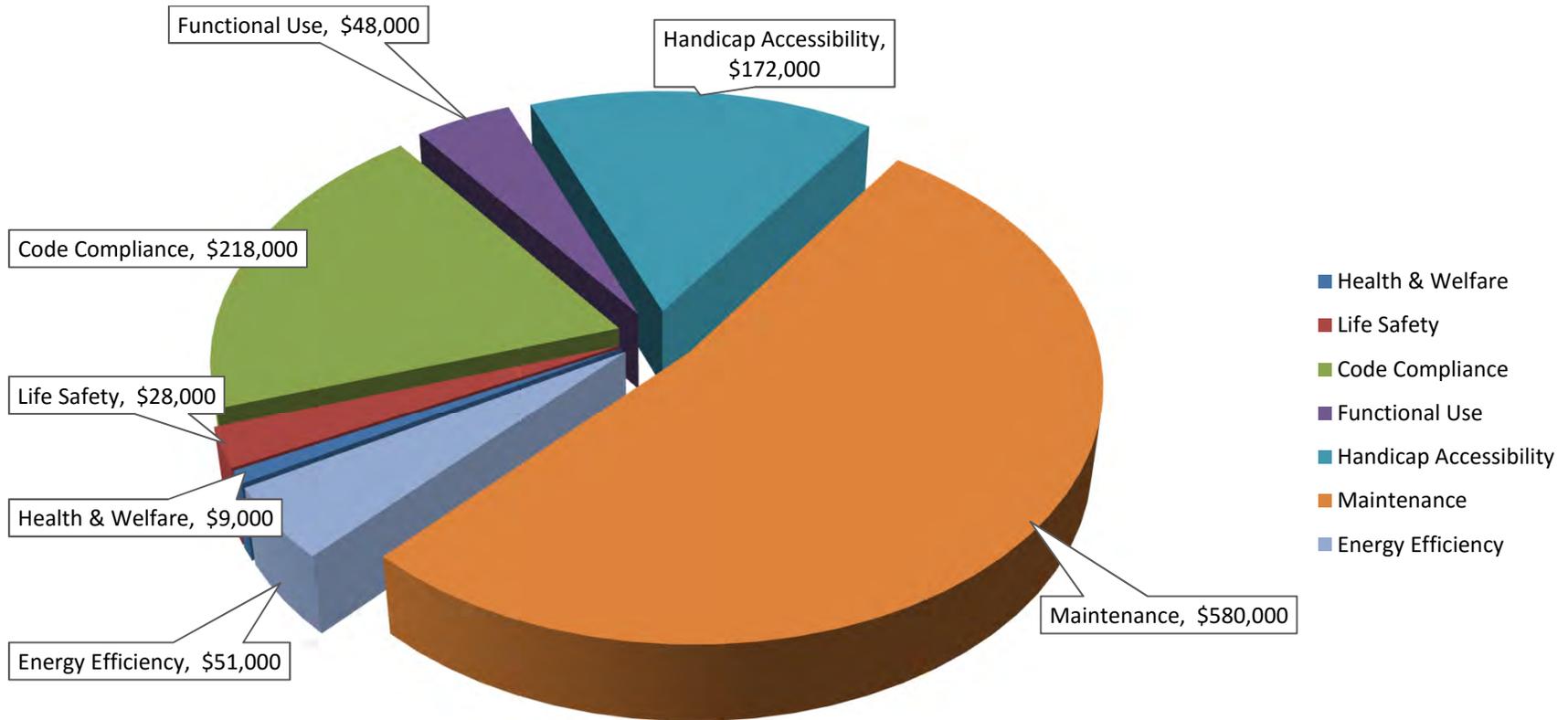
1,200 sf Building
1928 Original Building



Town of Marshfield
Municipal and School Facilities Capital Assessment

Ventress Annex

Total CIP Cost:
\$1,106,000



Town DPW Garage



23,000 sf building

1963 Original Building

Addition ca 1970

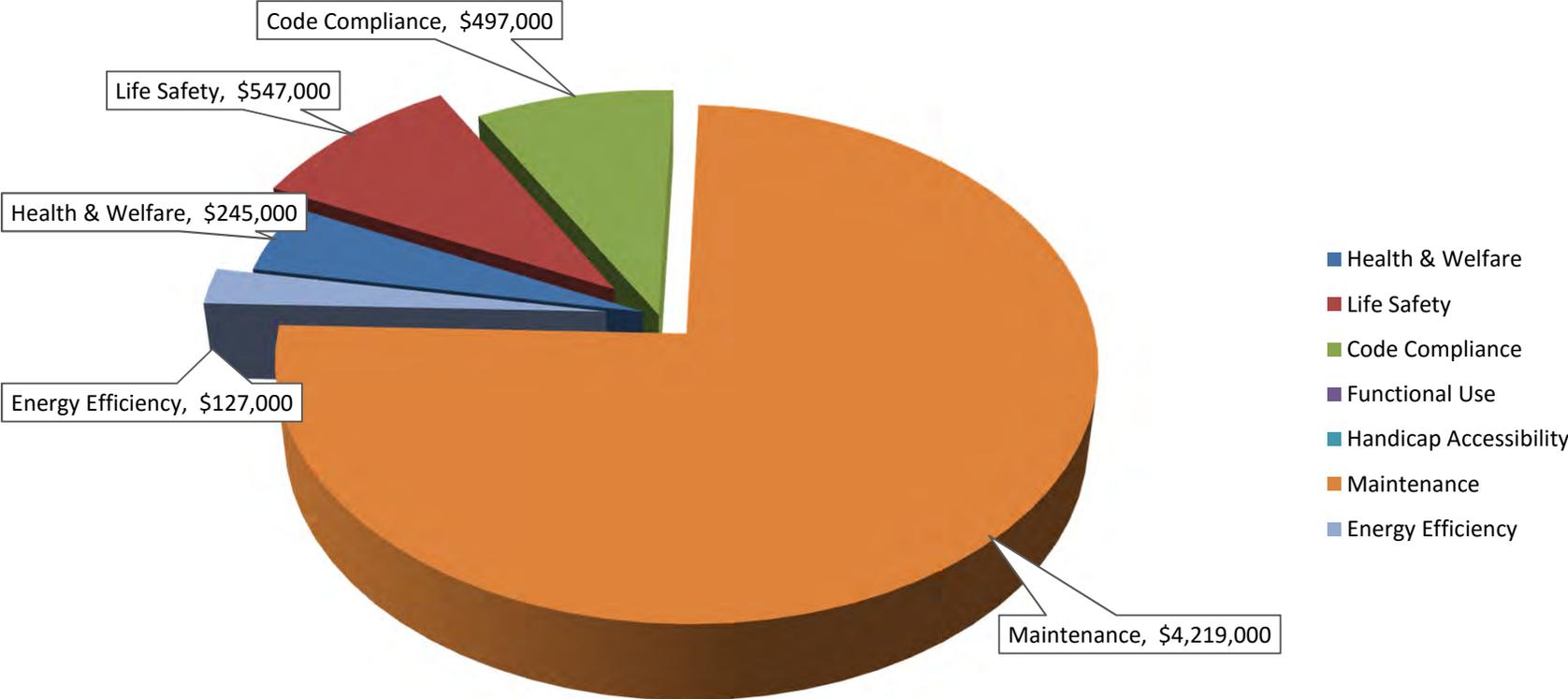


Town of Marshfield

Municipal and School Facilities Capital Assessment

Town DPW Garage

Total CIP Cost:
\$5,635,000



Town Hall



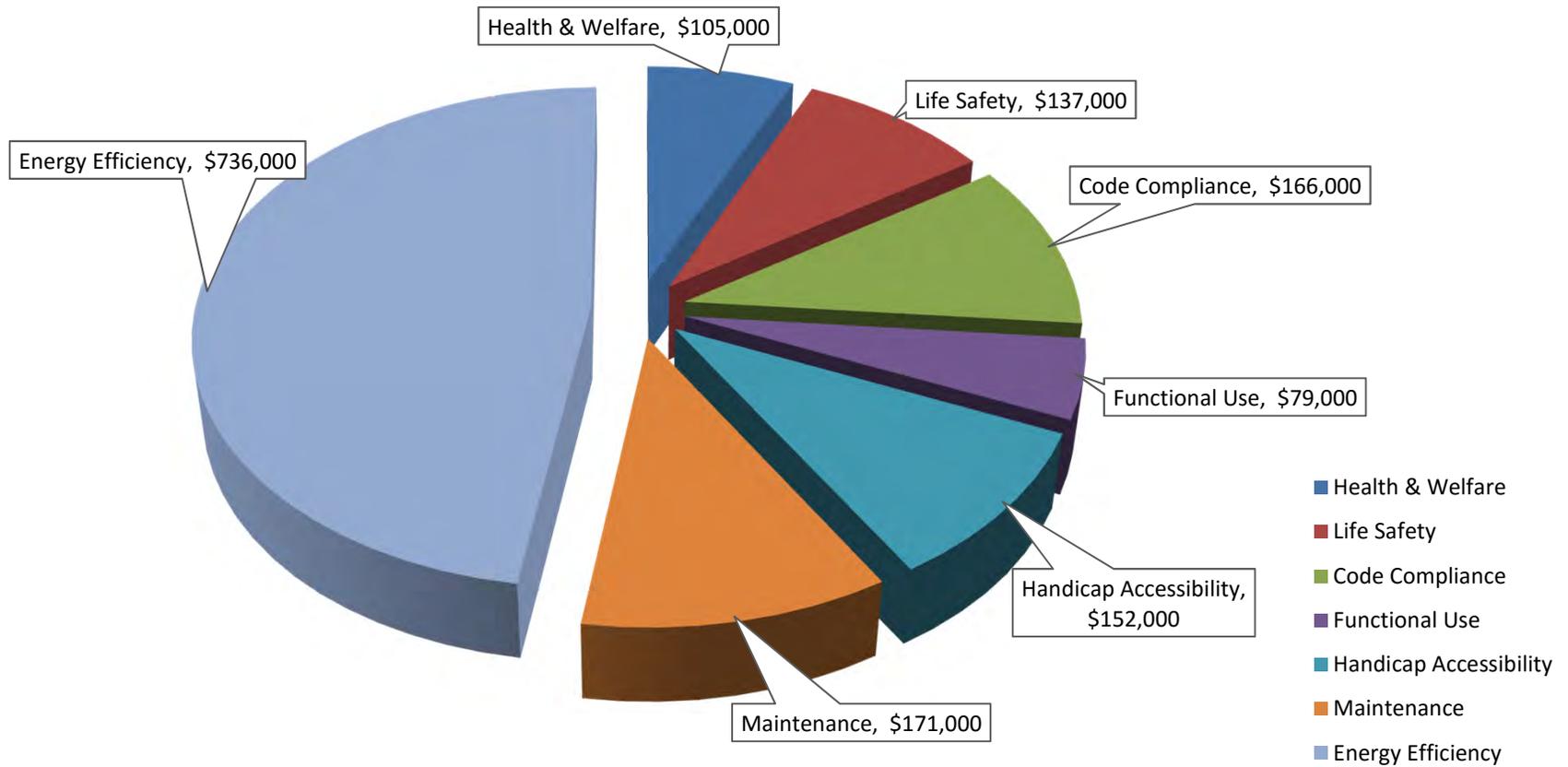
20,000 sf building
1970 Original Building
1992 Renovation



Town of Marshfield
Municipal and School Facilities Capital Assessment

Town Hall

Total CIP Cost:
\$1,546,000



Senior Center



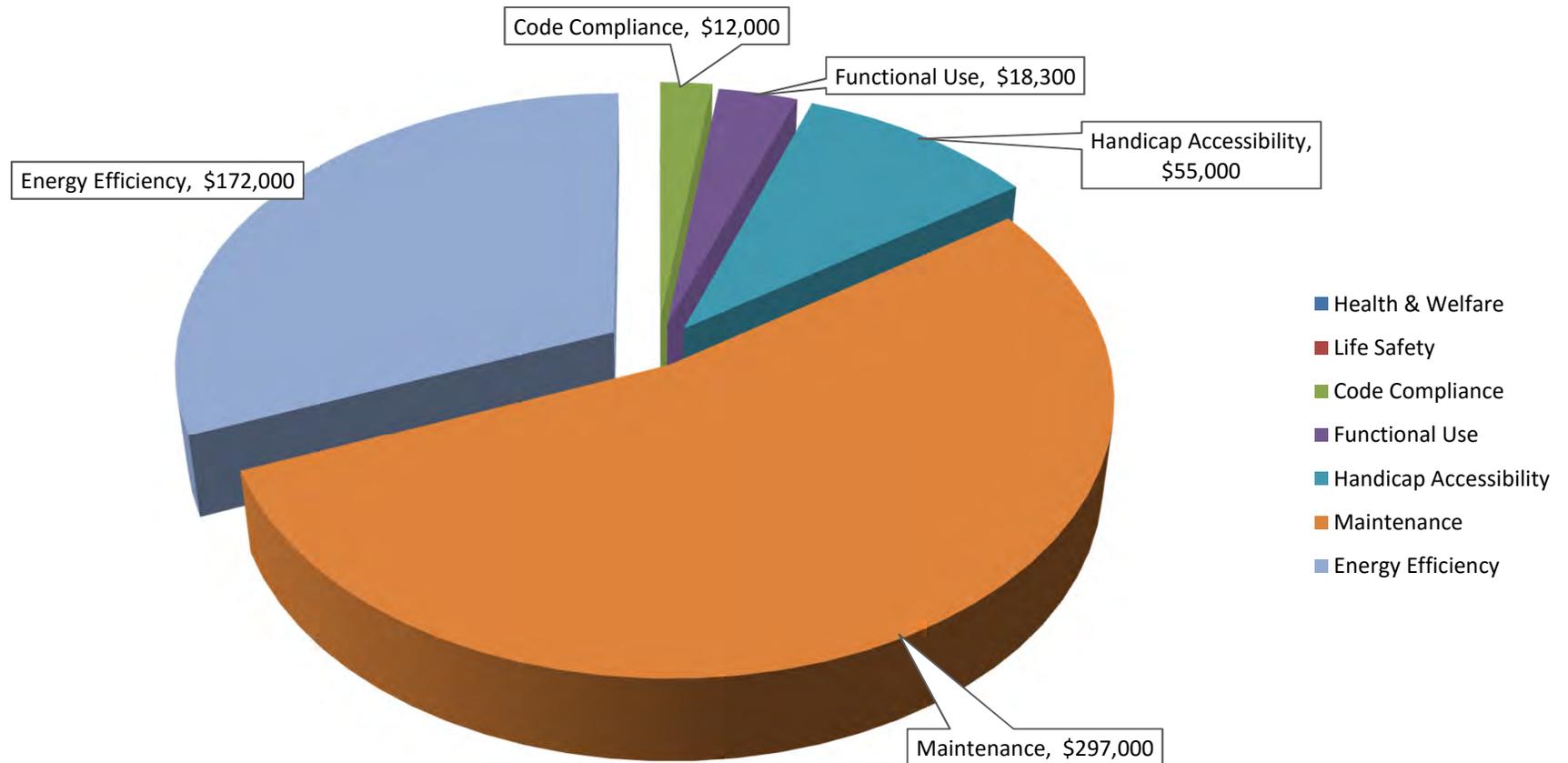
12,600 sf building
2003 Construction



Town of Marshfield
Municipal and School Facilities Capital Assessment

Senior Center

Total CIP Cost:
\$554,300



Ventress Memorial Library



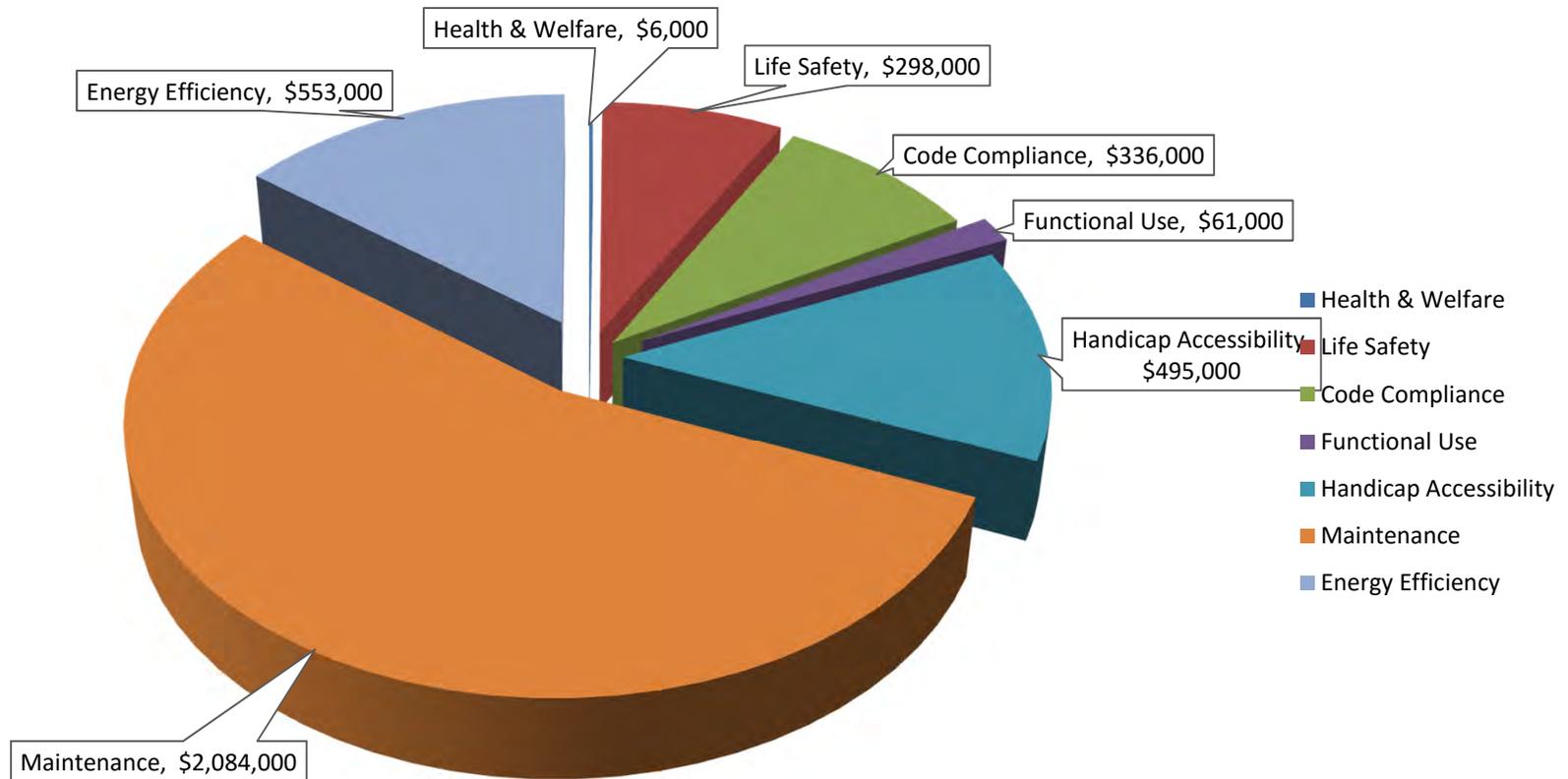
18,500 sf building
1983 Renovations



Town of Marshfield
Municipal and School Facilities Capital Assessment

Ventress Memorial Library

Total CIP Cost:
\$3,833,000



South River Street Fire Station HQ



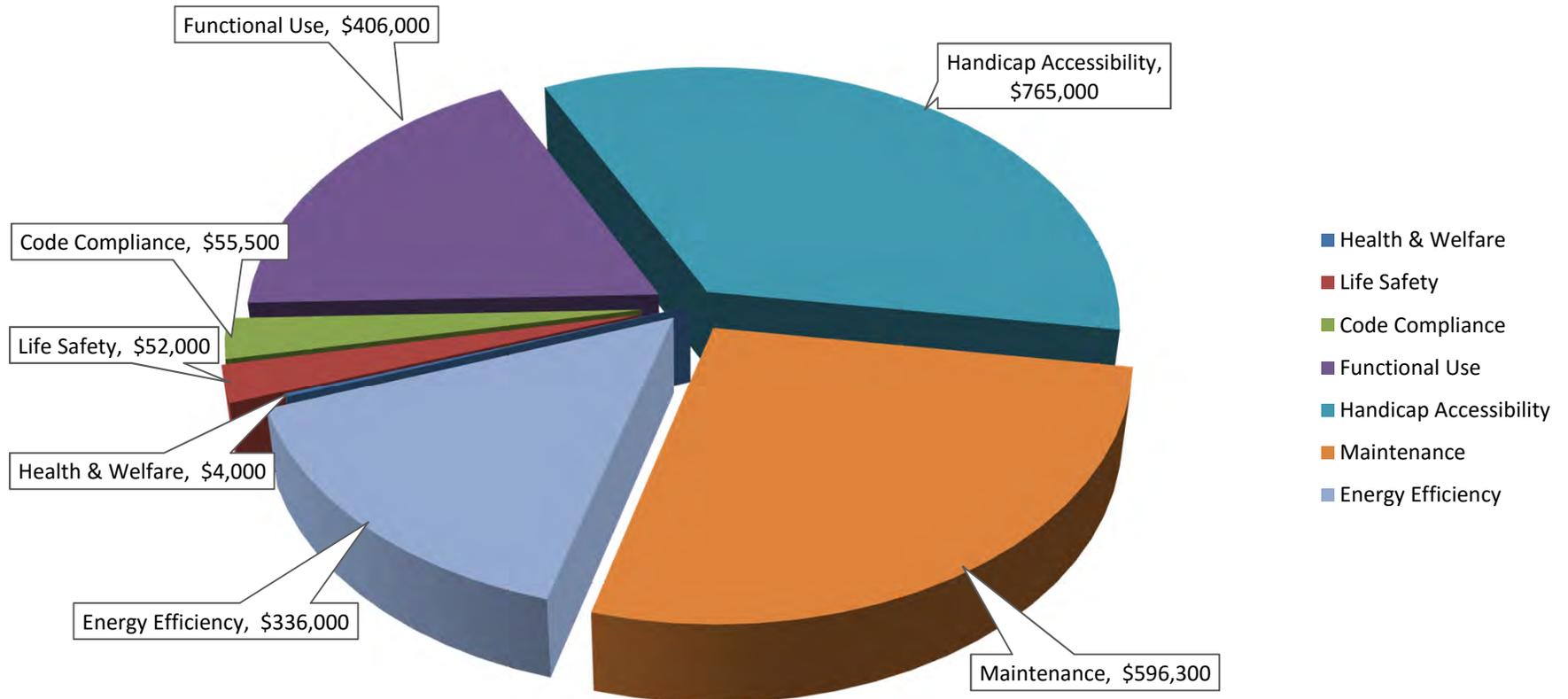
12,000 sf building
1957 Construction
1989, 2000 Renovations



Town of Marshfield
Municipal and School Facilities Capital Assessment

South River Street Fire Station HQ

Total CIP Cost:
\$2,214,800



Old Main Street Fire Station



2,200 sf building

1938 Original Building

Reno/Add 1957, 2004

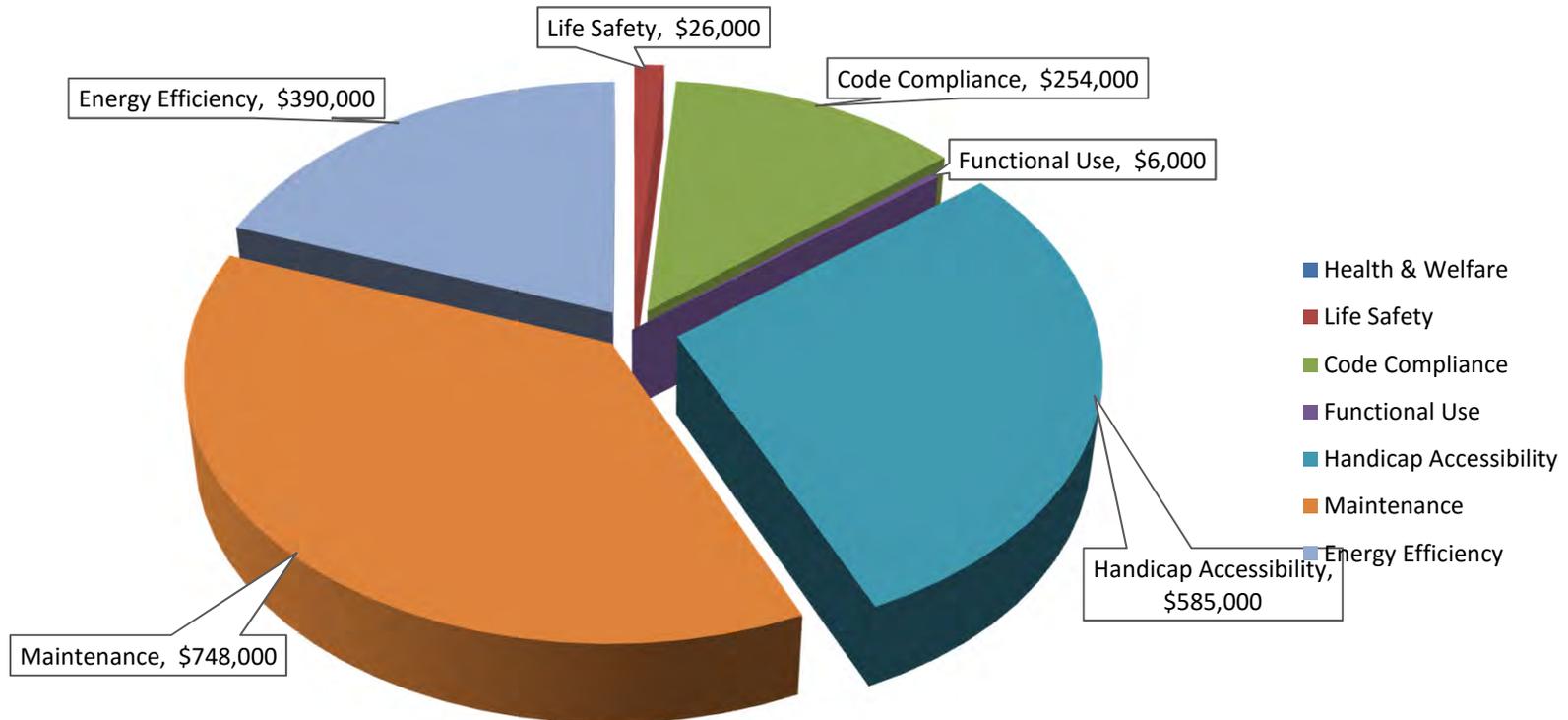


Town of Marshfield

Municipal and School Facilities Capital Assessment

Old Main Street Fire Station

Total CIP Cost:
\$2,009,000



Marshfield Police Headquarters



19,130 sf building

1958 Original Building

1978 Reno/Addition

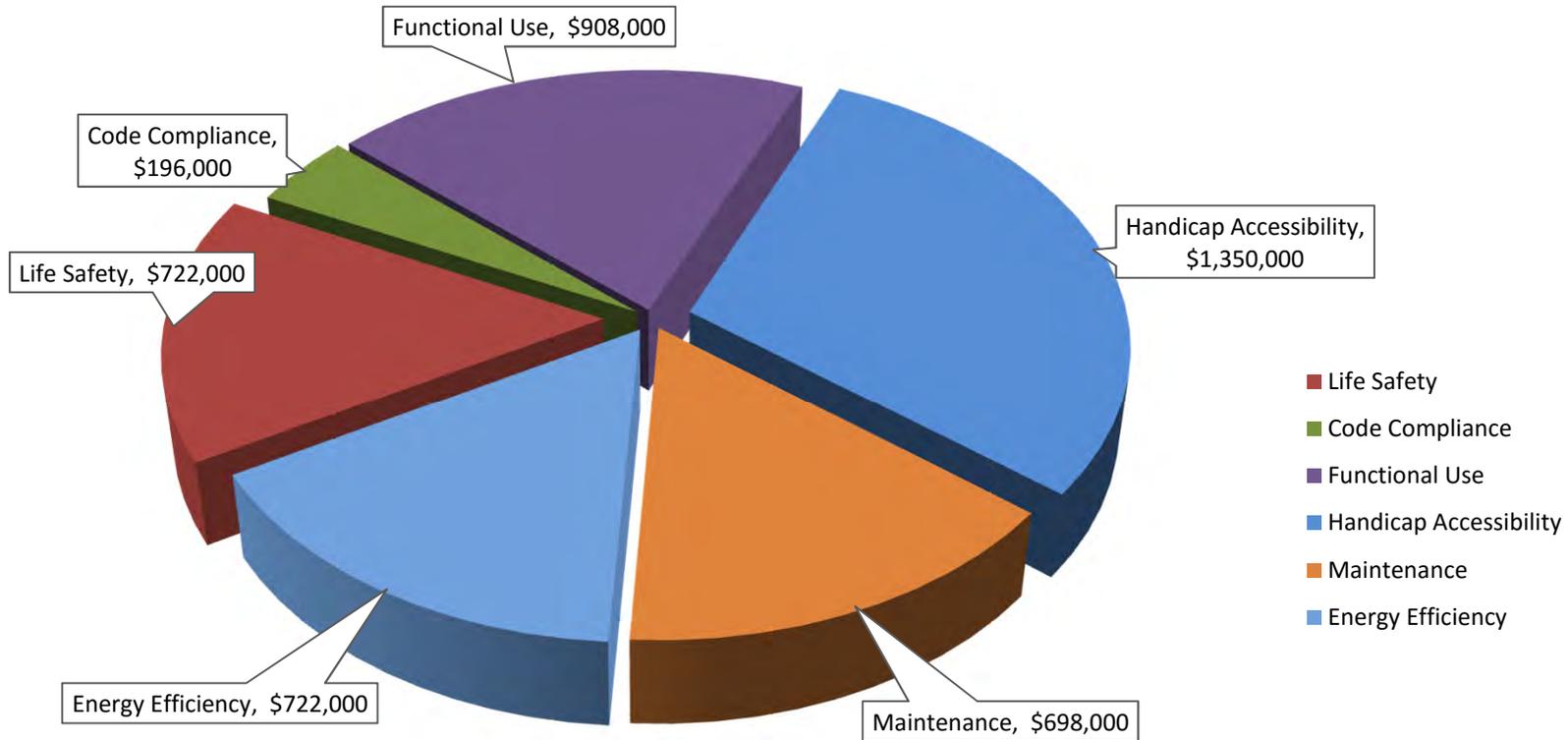


Town of Marshfield

Municipal and School Facilities Capital Assessment

Marshfield Police Headquarters

Total CIP Cost:
\$4,596,000



Massasoit Avenue Fire Station



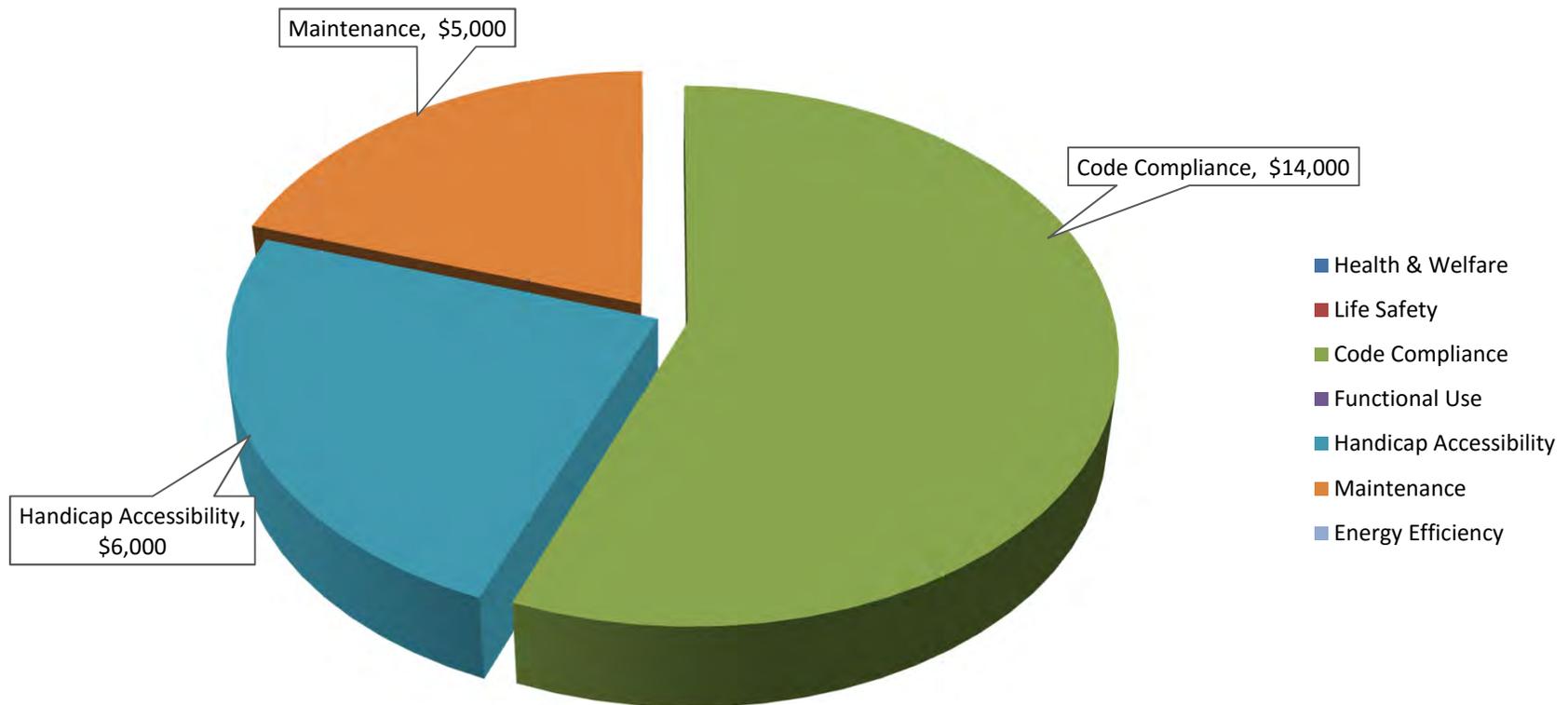
7,250 sf building
2014 Construction



Town of Marshfield
Municipal and School Facilities Capital Assessment

Massasoit Avenue Fire Station

Total CIP Cost: **\$25,000**



Marshfield Animal Shelter



400 sf building

Ca 1990 Original Building

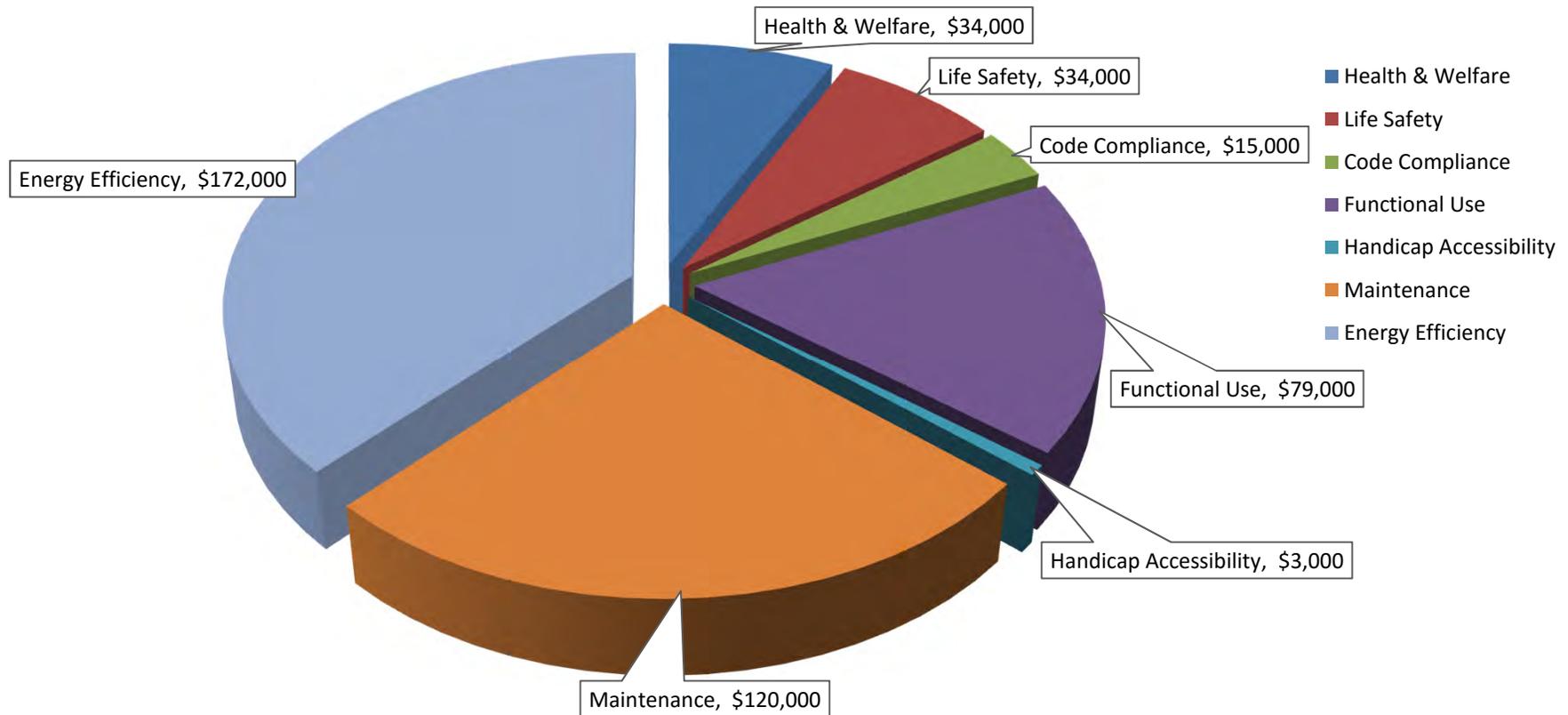


Town of Marshfield

Municipal and School Facilities Capital Assessment

Marshfield Animal Shelter

Total CIP Cost:
\$457,000



COST ESTIMATE SUMMARY

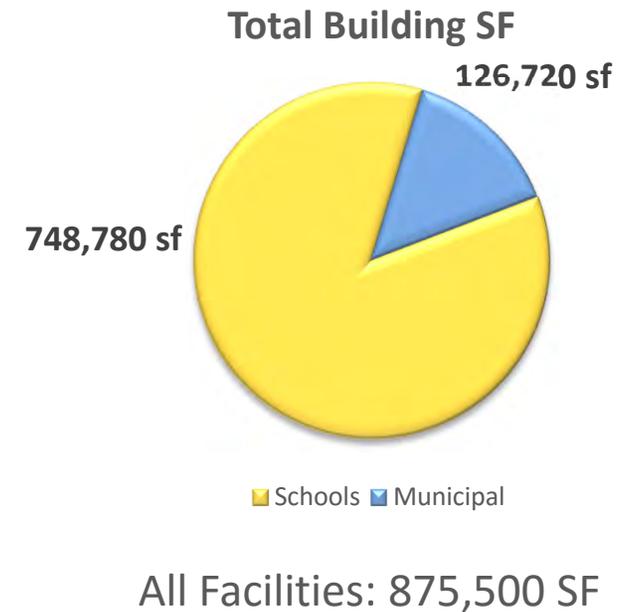
Cost Estimates - Inclusions/Exclusions/Assumptions

1. Cost Estimates are identified as “Project Costs” and include:
 - a. contractor mark-ups (general conditions, overhead & profit, bonds, insur.)
 - b. design and estimating contingencies
 - c. “soft” costs (including owner’s contingency, permitting, architect/engineer fees, legal costs, etc.)
2. Conceptual in nature - based on current (2016) market conditions
3. No cost for hazardous materials, phasing or portable classrooms has been included
4. Costs should be adjusted for inflation, construction market conditions and specific project requirements once a detailed scope of work is developed

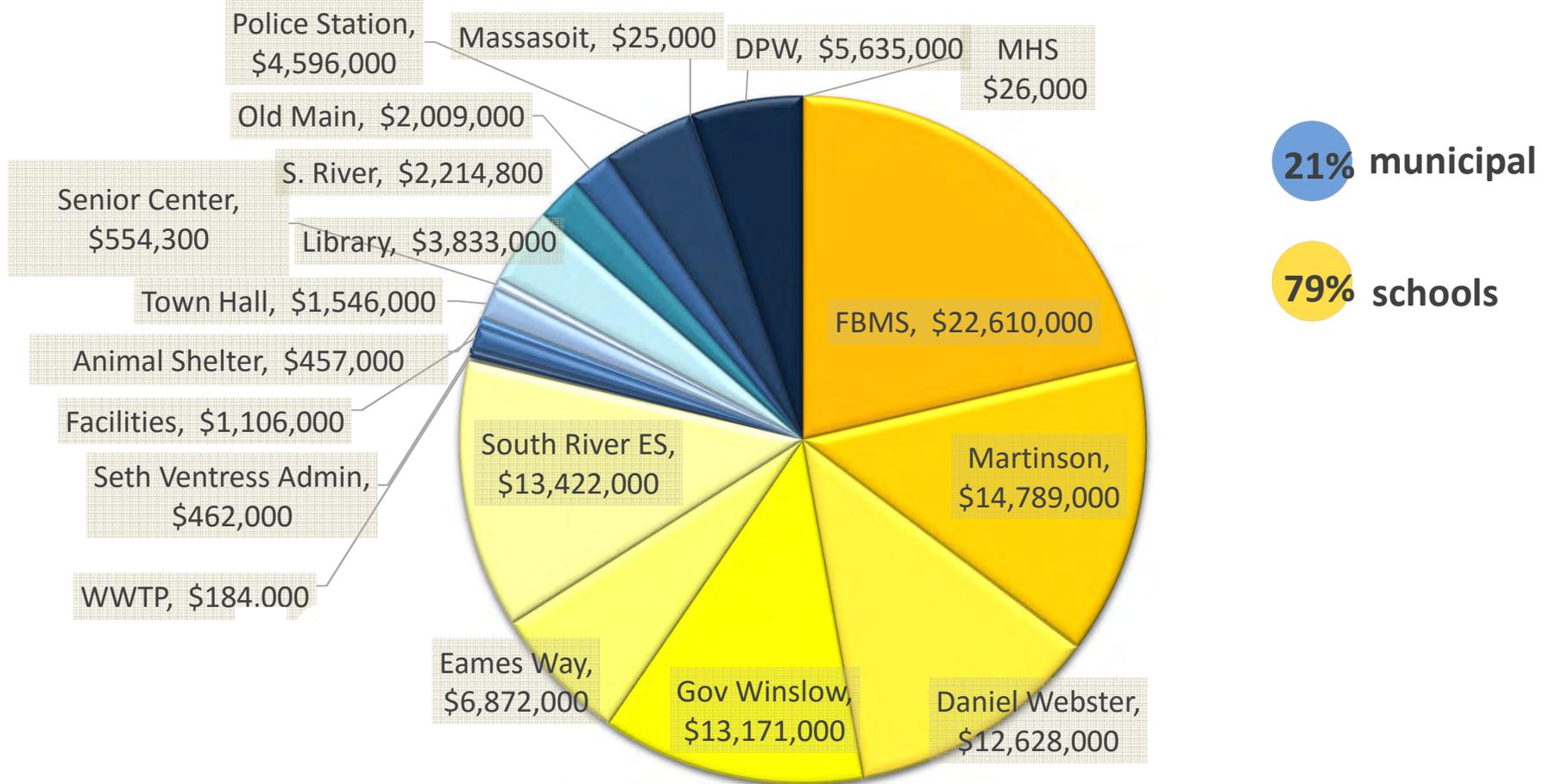


Cost Summary (2017 – 2027)

Facilities	Project Cost	Total
Schools Facilities		
Marshfield High School	\$ 26,000	
Waste Water Treatment Plant	\$ 184,000	
Furnace Brook Middle School	\$ 22,613,000	
Martinson Elementary School	\$ 14,789,000	
Daniel Webster School	\$ 14,004,000	
Governor Winslow School	\$ 13,171,000	
Eames Way School	\$ 6,872,000	
South River School	\$ 13,422,000	
Subtotal - School Facilities		\$ 85,081,000
Municipal Facilities		
Seth Ventress Building	\$ 462,000	
Facilities Building	\$ 1,106,000	
Highway DPW Garage	\$ 5,635,000	
Town Hall	\$ 1,546,000	
Senior Center	\$ 554,300	
Ventress Memorial Library	\$ 3,836,000	
South River Street Fire Station HQ	\$ 2,214,800	
Old Main Street Fire Station	\$ 2,009,000	
Police Station	\$ 4,596,000	
Massasoit Avenue Fire Station	\$ 25,000	
Animal Shelter	\$ 457,000	
Subtotal - Municipal Facilities		\$ 22,441,100
GRAND TOTAL		\$ 107,522,100



Cost Summary



Next Steps

- Board of Selectmen – Public Meeting- date TBD
- School Committee – Public Meeting- date TBD
- Develop Process for Prioritizing Work and developing Action Plan
- Possible Town-Wide Permanent Building Committee



Town of Marshfield

Municipal and School Facilities Capital Assessment

QUESTIONS