

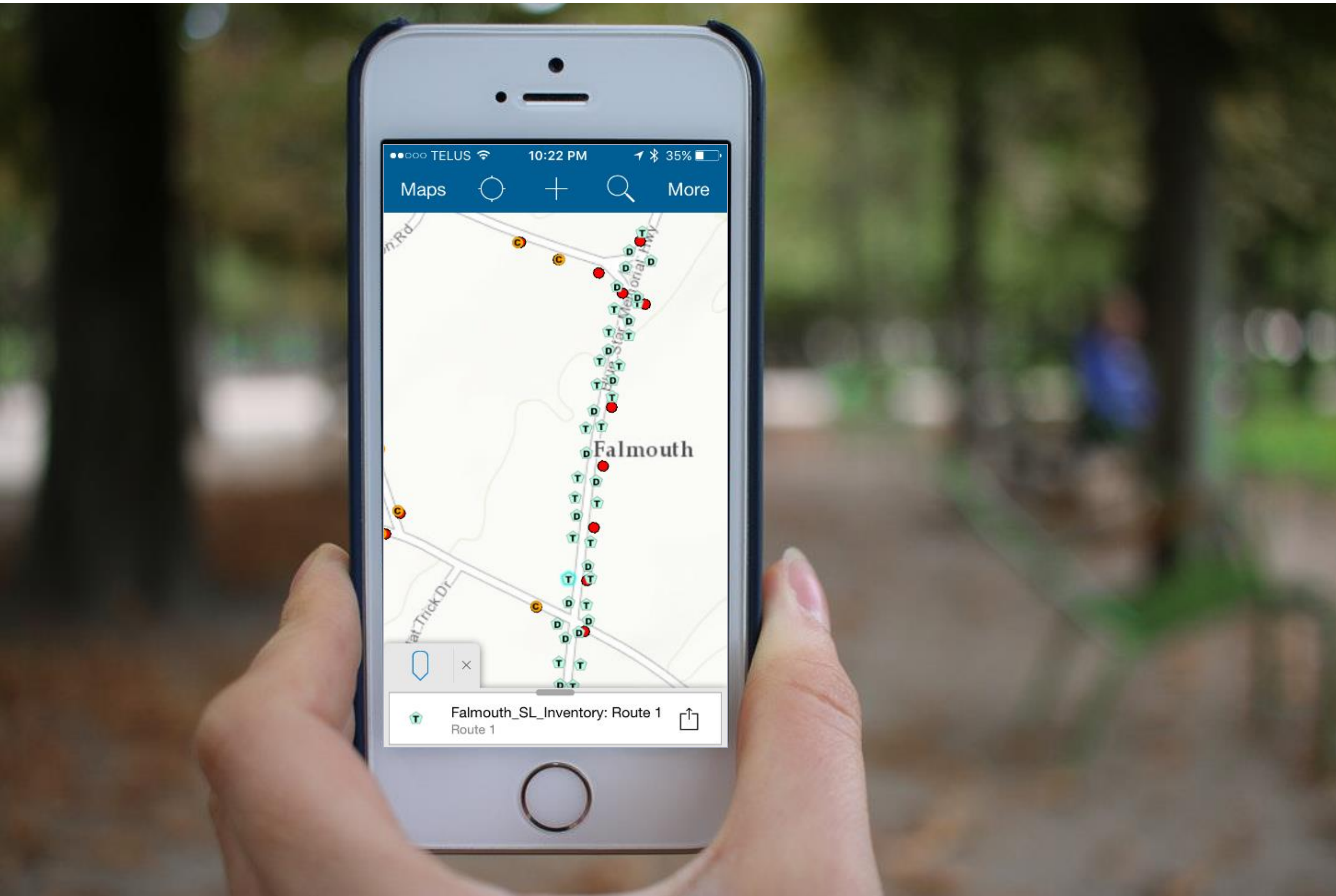


City of Bath, ME

LED Streetlight Project Update

March 15, 2023





Field Audit

- Streetlight Asset Management seldom a priority with municipalities or utilities
- First step in Asset Management: True-up the existing database
- **RealTerm Energy's proprietary, customized ESRI data collection app**
- The app clarifies:
 - Location of each asset
 - Ownership
 - Physical attributes
 - Site/asset conditions
 - 3rd party hardware
- Essential for optimizing design and efficiency of LED replacements
- Becomes the foundation for future management of existing and new assets



ArcGIS Bath_ME_P1369_Survey Open in Map Viewer Modify Map Sign In

Details Edit Basemap Share Print Measure Find address or place

Legend

Bath_ME_Recon_V2

- + City-owned - HPS
- x City-owned - LED
- x MDOT - out of scope of work
- x No Replacement - PVT in CMP Data
- x Private - out of scope of work
- + Waiting Confirmation
- + City-owned - design pending
- Other

Bath_ME_P1369_20221214_Survey

- D Building Light - Decorative
- O Building Light - Other
- W Building Light - Wallpack
- C Cobrahead
- D Decorative - Acorn Post Top
- D Decorative - Bell Downlighting
- D Decorative - Caged Acorn
- D Decorative - Globe Post Top
- L Decorative - Lantern Pendant
- L Decorative - Lantern Post Top
- L Decorative - Lantern Side Mount
- D Decorative - Other Downlighting
- D Decorative - Other Post Top
- D Decorative - Shoe Box

(1 of 2)

Bath_ME_P1369_20221214_Survey:
NORTHWOOD COURT

Fixture Type	Cobrahead
Deco Subtype	
Deco Color	
Technology	HPS
Lamp Wattage	70 W
Lamp Height (ft)	27
Arm Length (ft)	6 ft
Setback (ft)	2
Road Width (ft)	30
Road Class	
Pedestrian	Low

[Zoom to](#) [Edit](#)

Color Temperature Selection



Photo: SuperbrightLEDs.com

2700K

- Best color match to current HPS lights
- Minimal blue light exposure
- Most preferred by International Dark-Sky Association (IDA)
- Use RP-8-18 as a guideline, or customized for client preferences
- Excellent choice for residential areas
- Lower CRI & Energy Savings

3000K

- Most selected color temperature following AMA report regarding effects of blue light
- Compliant with International Dark-Sky Association (IDA)
- Creates a mild, yet pleasant atmosphere

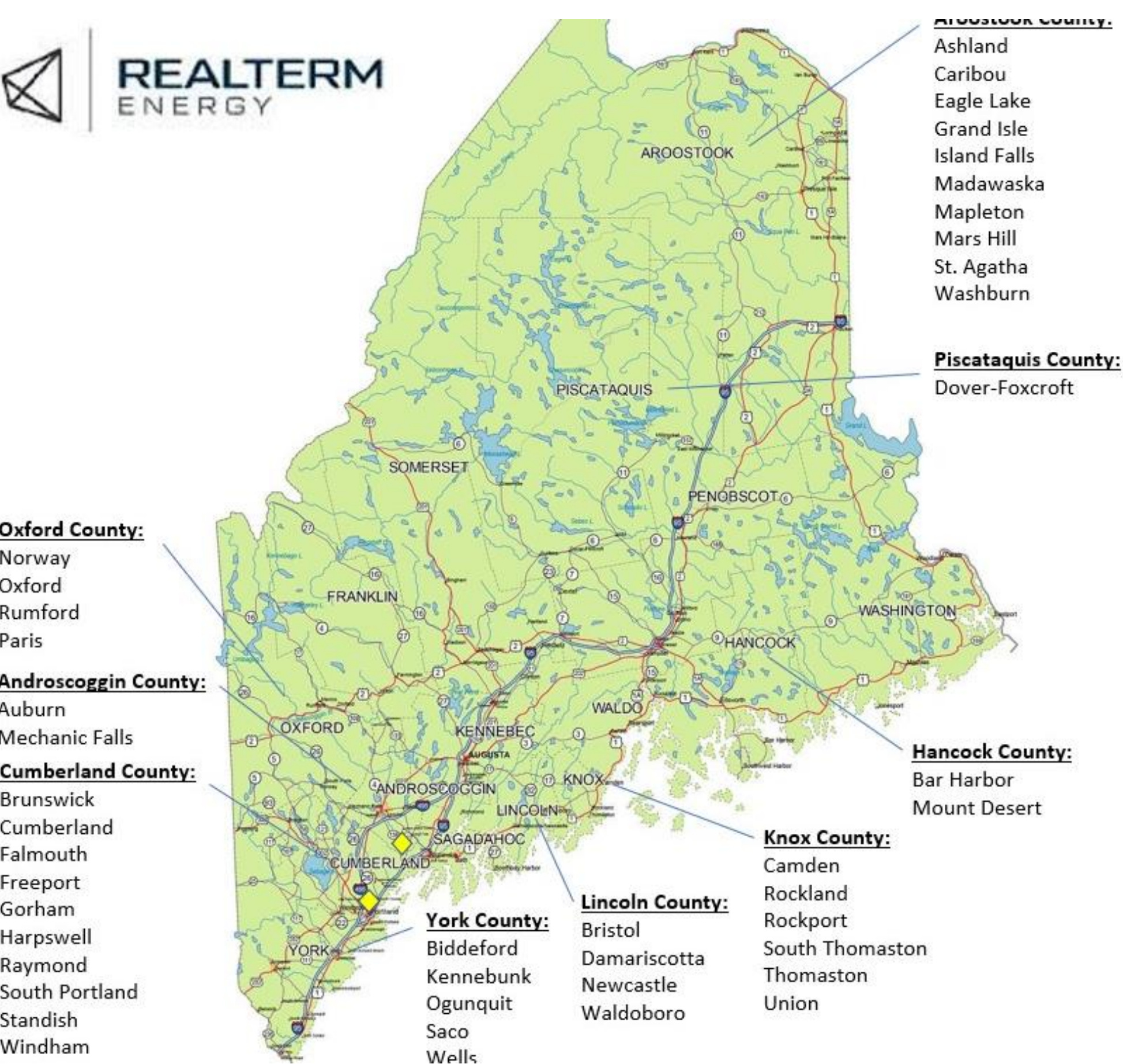
4000K

- Commonly used in working environments or commercial areas
- Preferred by most governmental departments of Transportation for non-residential roadway
- Highest energy savings
- Not compliant with International Dark-Sky Association

COLOR TEMPERATURE, VISUAL ACUITY AND SAFETY



RealTerm Energy – LED Streetlight Conversion



Municipality	LED Fixture	Color Temp	Municipality	LED Fixture	Color Temp
City of Biddeford	Cooper	3000K	Town of Freeport	Acuity	3000K
City of So. Portland	Cree	2700K	Town of Thomaston	Acuity	2700K
City of Auburn	Acuity	4000K	Town of Standish	GE	3000K
City of Rockland	Acuity	2700K	Town of Ashland	Cooper	3000K
Town of York	Acuity	3000K	Town of Washburn	Cooper	3000K
Town of Rumford	Acuity	3000K	Town of Raymond	GE	3000K
Town of Falmouth	Acuity	3000K	Town of Mars Hill	Cooper	3000K
City of Caribou	Cooper	3000K	Town of Waldoboro	Acuity	2700K
Town of Wells	Acuity	2.7K/3K	Town of Eagle Lake	Cooper	3000K
Town of Madawaska	Cooper	3000K	Town of Oxford	Acuity	3000K
Town of Gorham	GE	3000K	Town of Island Falls	Cooper	3000K
Town of Bar Harbor	GE	3000K	Town of Saint Agatha	Cooper	3000K
Town of Paris	Acuity	3000K	Town of S. Thomaston	Acuity	2700K
Town of Windham	GE	3000K	Town of Mapleton	Cooper	3000K
Town of Dover-Foxcroft	Acuity	2.7K/3K	Town of Union	Acuity	2700K
Town of Camden	Acuity	2700K	Town of Grand Isle	Cooper	3000K
Town of Mount Desert	Cree	2700K	Town of Bristol	Acuity	2700K
Town of Norway	Acuity	3000K	Town of Newcastle	Acuity	2700K
Town of Rockport	Acuity	2700K	Town of Damariscotta	Acuity	2700K
Town of Cumberland	Acuity	3000K	Town of Yarmouth	Cooper	3000K
City of Saco*	Acuity	3000K	Town of Ogunquit**	Cooper	3000K
Town of Brunswick *	Acuity	3000K	Town of Harpswell**	Cooper	2200K
Town of Kennebunk**	TBD		Town of Mechanic Falls**	Acuity	2700K

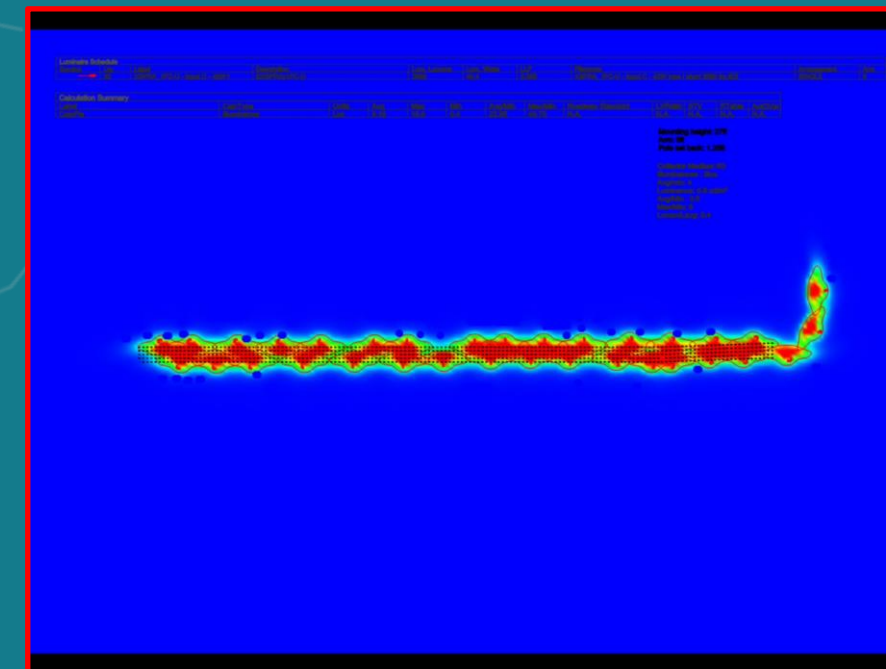
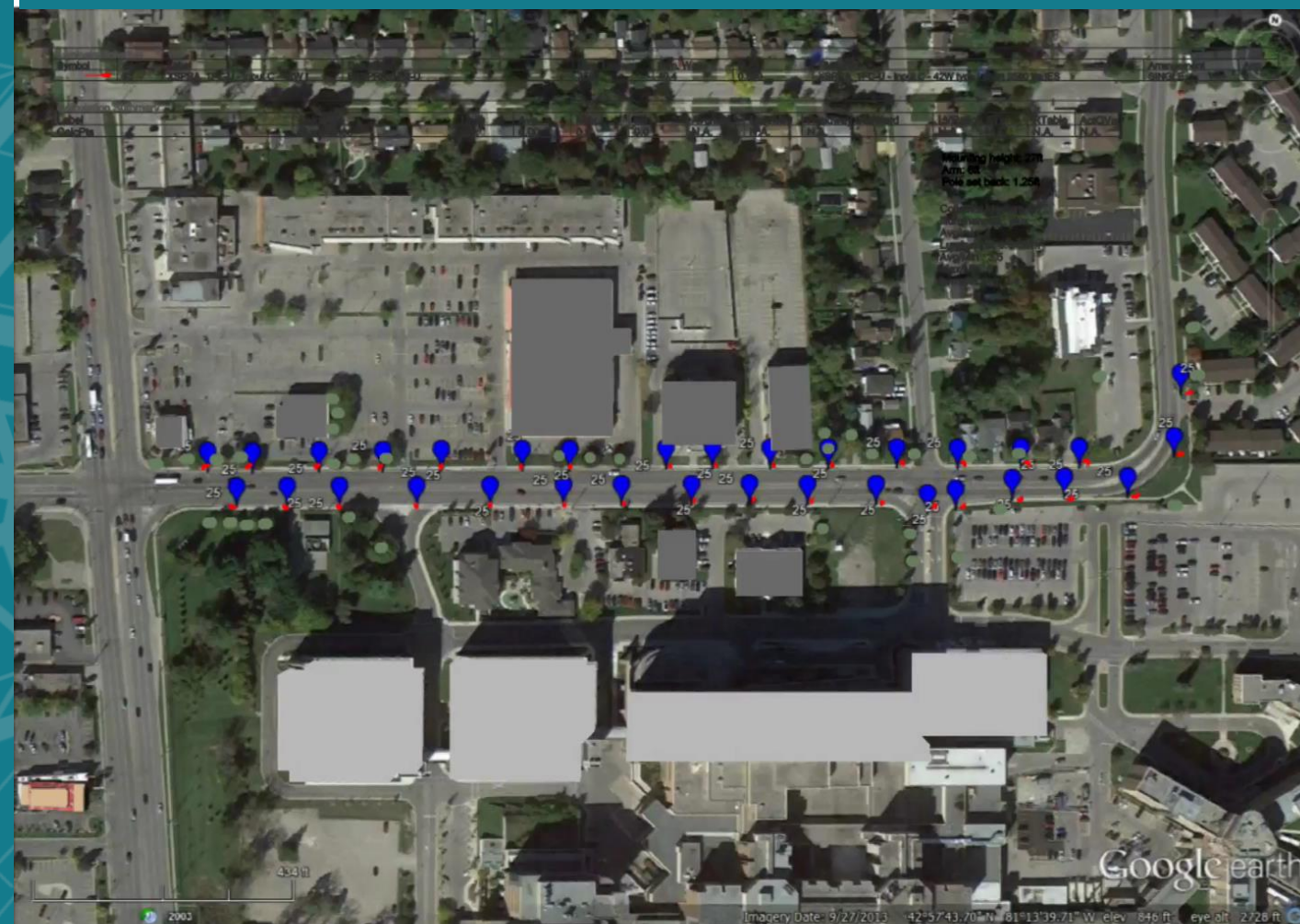
* In Deployment stage
 ** In Audit & Design stage



Comprehensive Lighting Designs

- Designs calculated for each unique street
- Use RP-8-18 as a guideline, or customized for client preferences
- Optimized energy savings
- Dimming profiles can be specified
- Custom designs eliminate the mistakes of the past. Local input gathered from stakeholders.
- Adjusted for various color temperatures and roadway classifications
- Additional energy savings over traditional 1 for 1 replacement methodology

Result: Optimized Lighting for Each Roadway





Business Case Analysis

Investment Grade Audit

- Updated inventory and fixture/control selection results
- Detailed breakdown and comprehensive analysis of costs & benefits
- Full financials including ROI & payback, financing options for decision-makers
- Installation costs with historically-derived, responsible provisional calculations (fuses, holders, arms, etc.)
- Forms the basis of our contract, minimizing the chances of overruns and delays

