Staff Report

Coalville City
Community Development Director

To:	Coalville City Council and Mayor
From:	Don Sargent, Community Development Director
Date of Meeting:	March 9, 2026
Re:	Outdoor Lighting Standards - Development Code Amendment
Action:	Public Hearing and Possible Adoption

Development Code Outdoor Lighting Standards Amendment

REQUEST

Review, discuss, conduct a public hearing and consider proposed amendments to the development code outdoor lighting standards Sections 05-010-Purpose, 05-040-Definitions, and 05-060:H-Outdoor Recreation and Athletic Facility Lighting.

This item is scheduled for a public hearing and possible adoption.

BACKGROUND

Staff has been coordinating the development code and engineering standards with the architects, engineers, and other disciplines involved in the design and layout of the proposed new high school campus project.

Justin Carteton, with Musco Lighting requested an opportunity to review and discuss possible exceptions to the development code lighting standards with the City Council for the sports field lighting of a possible new high school. A discussion was held at the January 12th City Council meeting wherein the council directed Staff and Planning Commission to initiate amendments to the outdoor lighting standards of the code dealing with sports field lighting.

The Planning Commission conducted a work session on January 20, 2026 and a public hearing on February 17, 2026 and forwarded an approval recommendation of the amendments to the City Council.

ANALYSIS

The city development code includes an outdoor lighting chapter that was drafted with respect to general night sky protections. Outdoor Lighting Chapter 5 is included as *Attachment A* for reference. Section 05-060:H identifies the specific requirements for Outdoor Recreation and Athletic Facility Lighting which is highlighted in the attachment.

Musco Lighting suggested several modifications to the lighting standards consistent with current best practices in sports field lighting and provided an information packet included as *Attachment B* that was presented at the January 12, 2026 city council meeting and reviewed by the Planning Commission in a work session on January 20, 2026.

Attachment C includes the draft language for Sections 05-010-Purpose Statements, 05-040-Definitions, and 05-060:H-Outdoor Recreation and Athletic Facility Lighting.

The draft amendments are intended to establish clearer, more quantifiable performance criteria without being overly restrictive. While they are not as stringent as the Dark Sky Outdoor Sports Lighting program, they offer greater flexibility.

The key performance metric is the off-site candela limit. For reference:

A Candela is a measurement of the intensity of a light source and Glare is a disruptive light from a light source making it difficult to see, measured in candela.

1,000 candela – Dark Sky Outdoor Sports Lighting program

5,000 candela – Proposed code recommendation

7,500 candela – Maximum value for rural areas per CIE 150: Guide on the Limitation of the Effects of Obtrusive Light

10,000 candela – Maximum value for suburban areas per CIE 150

12,000 candela – Approximate luminous intensity of low-beam automobile headlights

30,000 candela – Approximate luminous intensity of high-beam automobile headlights

RECOMMENDATION

Staff recommends the City Council review, discuss, conduct a public hearing, and consider the draft code amendment language for possible adoption by Ordinance 2026-1, included as *Attachment D*, with the following findings addressing the standards for decision of a code text amendment in Section 03-080:E:

1. The amendment is consistent with the goals, objectives, and policies of the General Plan.
2. The amendment is harmonious with the overall character of existing development in the city.
3. The amendment is consistent with the standards of any applicable overlay zone.
4. The amendment will not adversely affect adjacent properties; and
5. The amendment will not have impact on the adequacy of facilities and services intended to serve property, including but not limited to roadways, parks and recreation facilities, police and fire protection, schools, stormwater drainage systems, water supplies, and wastewater and refuse collection.

As an alternative action, the City Council may provide additional direction to Staff regarding the proposed code amendment for continued review and consideration at a subsequent meeting.

Attachments:

A. Development Code Chapter 5 - Outdoor Lighting Regulations
B. Musco Lighting Information Overview
C. Draft Amendment Language
D. Ordinance 2026-1

ATTACHMENT A

05-010: - PURPOSE

The purpose of the Outdoor Lighting regulations is to:

A. Prevent the degradation of the nighttime visual environment by production of unsightly, annoying, or dangerous glare;

B. Minimize light pollution for the enjoyment of Coalville City residents and visitors;

C. Create lighting practices that promote the health and safety of Coalville City residents and visitors;

D. Prevent the unnecessary waste of energy and resources in production of excessive light or wasted light;

E. Prevent interference of the use or enjoyment of property which is not intended to be illuminated at night and the loss of the scenic view of the night sky due to increased urban sky-glow and light trespass.

05-020: - APPLICABILITY

All exterior outdoor lighting installed after the effective date of this Chapter in all zones in Coalville City shall conform to the requirements established by this Chapter.

A. These regulations do not apply to indoor lighting, except Window Display Lighting.

B. Should this Chapter be found to conflict with other sections of this Code, or a Development Agreement, Settlement Agreement or other agreement or regulation, the more restrictive shall apply.

05-030: - APPLICATION AND REVIEW PROCEDURES

A. **Lighting Plans Required.** All Development Project permit applications or submittals that propose exterior outdoor lighting or street lighting shall include a lighting plan that shows evidence that the proposed lighting fixtures and light sources comply with this Chapter and shall include the following:

1. Plans or drawings indicating the proposed location of lighting fixtures, height of lighting fixtures on the premises, and type of illumination devices, lamps, supports, shielding and reflectors used, with installation and electrical details.

2. Illustrations, including but not limited to a manufacturer's catalog cut sheets of all proposed lighting fixtures. For commercial, and industrial uses, photometric cut-sheet diagrams of proposed lighting fixtures are also required. In the event photometric diagrams are not

available, the applicant must provide enough information regarding the light fixture, lumens, degrees kelvin, and shielding mechanisms for the Planning Commission or Community Development Director to be able to determine compliance with the provisions of this Chapter.

3. A table showing the total number of proposed exterior lights, by fixture type, degrees kelvin, lumens, and lamp type.

05-040: - DEFINITIONS

For purposes of these regulations the following terms, phrases, and words shall have the meaning herein given:

Color Temperature (Kelvins). Color temperature (correlated color temperature) is a way to describe the light appearance provided by a light fixture and is a gauge of how yellow or blue the color of light emitted from a light source appears. It is measured in degrees of kelvin on a scale from one thousand (1,000) to ten thousand (10,000).

Development Project. Any residential, commercial, industrial or mixed-use subdivision plan, development plan or building permit application which is submitted to the City for approval.

Diffuse. To spread or scatter widely, or thinly.

Direct Illumination. Illumination resulting from light emitted directly from a lamp or luminaire, not light diffused through translucent fixtures or reflected from other surfaces such as the ground or building facades.

Display Lot or Area. Outdoor areas where active nighttime sales activity occurs and where accurate color perception of merchandise by customers is required. To qualify as a display lot, one of the following specific uses must occur: automobile sales, boat sales, tractor sales, building supply sales, gardening or nursery sales, assembly lots, swap meets. Uses not on this list must be approved as display lot uses by the City.

Flood Lamp or Light. A specific form of lamp designed to direct its output in a specific direction (a beam) with a diffusing glass envelope.

Full Cut-Off Light Fixture. A luminaire light distribution where no light is emitted above the horizontal.

Fully Shielded Light Fixture. A lighting fixture constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection of refraction from any part of the luminaire, is projected below the horizontal as determined by photometric cut-sheets as certified by the manufacturer. Any structural part of the light fixture providing this shielding must be permanently affixed.

Glare. A light ray emanating directly from a lamp, reflector or lens such that it falls directly on the eye of the observer.

Installed. The attachment, or assembly fixed in place, whether or not connected to a power source, of any outdoor light fixture.

Light Pollution. Any adverse effect of man-made light.

Light Trespass. Light falling where it is not needed or wanted, typically across property boundaries.

Lumens. The measurement of the total amount of visible light (to the human eye) from a lamp or light source. The higher the lumen rating the "brighter" the lamp or light source will appear. The acceptability of a light fixture is determined by its Lumen output, not wattage.

Luminaire. The complete lighting assembly, less the support assembly. For purposes of determining total light output from luminaire, lighting assemblies which include multiple unshielded or partially shielded lamps on a single pole or standard shall be considered as a single unit.

Opaque. Opaque means that a material does not transmit light from an internal illumination source.

Outdoor Light Fixture. An outdoor illuminating device, outdoor lighting or reflective surface, lamp or similar device, permanently installed or portable, used for illumination or advertisement. Such devices shall include but are not limited to lights used for:

A. Parking lot lighting;
B. Roadway lighting;
C. Buildings and structures;
D. Recreational areas;
E. Landscape lighting;
F. Signs (advertising or other);
G. Product display area lighting;
H. Building overhangs and open canopies.

Outdoor Recreation Facility. An area designed for active recreation, whether publicly or privately owned, including, but not limited to, baseball diamonds, soccer and football fields, golf courses, tennis courts and swimming pools.

Person. Any individual, tenant, lessee, owner, or any commercial entity including, but not limited to firm, business, partnership, joint venture or corporation.

Special Uses/Events. Uses and Events because of their temporary nature, uniqueness or public purpose, that warrant special lighting consideration. Special Uses and Events include schools and events, community events, churches, publicly owned buildings, civic centers and events, filming activities, or similar uses and events.

Spot Lamp or Light. A specific form of lamp designed to direct its output in a specific direction (a beam) and with a clear or nearly clear glass envelope.

Temporary Lighting. Lighting which will not be used on a continuous or permanent basis which by their nature are of limited duration, such as holiday lighting decorations, civic events or construction projects.

Total Outdoor Light Output. The total outdoor light output is the maximum total amount of light, measured in lumens, from all outdoor light fixtures. For lamp types that vary in their output as they age (such as high-pressure sodium, fluorescent and metal halide), the initial output, as defined by the manufacturer, is the value to be considered.

Translucent. Permitting light to pass through but diffusing it so that the light source is not directly visible.

Window Display Lighting. Window display lighting includes glass enclosures, top of window or side valance lighting at the exterior frontage walls of a building. They are often designed with elaborate displays intended to attract and draw customers instore.

05-050: - LIGHTING STANDARDS AND FIXTURES

A. **Full-Cutoff Fixture Requirements.**

1. Unless specifically exempted by this Chapter, all outdoor lighting shall use full cutoff fixtures and shall be installed so light is directed downward with no light emitted above the horizontal plane of the fixture.
2. Lighting shall not be placed at a location, angle, or height that directs illumination or horizontal trespass outside the property boundaries where the light fixtures are located.
3. In order to qualify as a "full cutoff" fixture, a light fixture top and sides must be opaque material so that light only escapes through the bottom of the fixture. Any glass or diffuser on the bottom of the fixture must be flush with the fixture (no drop lenses). Merely placing a light fixture under an eave, canopy, patio cover, or other similar cover does not qualify as full cutoff.
4. In certain cases, such as but not limited to steep topography, significant changes in grade, development near or within identified ridgelines may require additional shielding to mitigate glare or light trespass. Requirements for additional shielding will be considered as part of the

lighting plan review process.

5. Lighting intensities shall be controlled so that neighboring areas will not be adversely affected by reflectivity including glare, indirect illumination, or light trespass.

B. **Prohibited Lighting.** The following types of lights are prohibited:

1. Floodlights or spotlights affixed to buildings or poles for the purpose of lighting parking lots or sales display areas where the light source is directly visible.
2. Search lights, laser source lights or any similar high intensity lighting is prohibited except in emergencies by police and fire personnel or at their direction.
3. Flashing, blinking, intermittent or other lights that move or give the impression of movement, unless approved with a sign permit.
4. Neon or luminous tube lighting except as permitted in the Sign Regulations of Chapter 9.
5. Window Display Lighting between the hours of ten o'clock (10:00) pm and seven o'clock (7:00) am.
6. Completely transparent light fixture materials, such as clear glass.
7. Single or multiple light bulb fixtures that directly emit light.

C. **Kelvins (Color Temperature) Per Fixture.** The maximum correlated color temperature for Outdoor Light Fixtures is as follows:

1. All lighting shall make use of lamps with correlated color temperature not exceeding four thousand (4,000) degrees kelvin, except for roadway lighting as specified in Section 05-060(E) herein. Color temperature in the range of two thousand seven hundred (2,700) to four thousand (4,000) degrees kelvin is recommended.
2. The correlated color temperature of lighting may exceed four thousand (4,000) degrees kelvin in situations where the City determines that accurate color rendition is crucial to public safety or the activities of law enforcement. In no case shall the correlated color temperature of such critical lighting exceed six thousand (6,000) degrees kelvin.

D. **Lumens (Brightness) Per Fixture.** The maximum lumens allowed for Outdoor Light Fixtures are as follows:

1. For single-family and multi-family residential uses, fixtures up to two thousand five hundred (2,500) Lumens output per lamp.
2. For commercial and industrial, fixtures up to four thousand (4,000) lumens output per lamp.
3. **Total Outdoor Light Output.** Total outdoor light output, excluding streetlights used to illuminate public rights-of-way and under gas station canopy lighting, shall not exceed the following limits averaged over the entire project:
   a. For single-family detached dwellings and duplexes, the maximum total outdoor light output shall not exceed twenty-five thousand (25,000) lumens per parcel.

b. For commercial, industrial and multi-family dwelling units, the maximum total outdoor light output shall not exceed one hundred fifty thousand (150,000) lumens per acre.

05-060: - SPECIFIC REQUIREMENTS FOR LIGHTING APPLICATIONS

A. **Light Trespass.** Fixtures shall be located at the necessary distance from property boundary lines to ensure light does not trespass onto adjacent property.

B. **Wall-Mounted Area Lighting.** All wall mounted or building mounted fixtures shall not exceed twelve feet (12') above Finished Grade, measured directly below the light fixture. In cases where there is second story access directly from the outdoors, a single fixture may be placed above or adjacent to the access.

C. **Parking Lot Lighting.**

1. Pole top mounted fixtures shall not be mounted higher than twenty feet (20') above Finished Grade, as measured to the top of the fixture.
2. All parking lot lighting shall include Full Cut-Off Fixtures.
3. All pole mounted parking lot lights shall be set back from property lines a distance equal to two (2) times the height of the pole.
4. Pole mounted fixtures shall be limited to two (2) light sources per pole.
5. Spotlighting of parking lots from a building, pole or other structure is prohibited.
6. On parking lots greater than ¼ acre in size, programmable full cut-off fixtures shall be used. These fixtures shall be dimmable and paired with motion sensors that are incorporated into the lighting system. Commercial businesses located within the Highway (HC) Zone are exempt from this requirement.

D. **Walkway/Pathway Lighting.** All pathway pole top fixtures shall not be mounted higher than ten feet (10') above Finished Grade directly below the fixture, as measured to the top of the fixture.

E. **Roadway Lighting.**

1. Residential Street Lighting shall not exceed fourteen feet (14') above Finished Grade to the top of the fixture. All residential streetlights shall utilize lamp types that are full cut-off with correlated color temperature not exceeding four thousand (4,000) degrees kelvin.
2. Major Roadway lighting, including arterial and collector roads, shall not exceed twenty feet (20') above Finish Grade to the top of the fixture. All major roadway lighting fixtures shall utilize lamp types that are full cut-off with correlated color temperature not exceeding five thousand (5,000) degrees kelvin.

F. **Gas Station Canopy Lighting.**

1. Lighting levels of gasoline station canopies shall be limited to illuminating the activities taking place under the canopy, not to attract attention to the business.

2. Gas station canopies may be illuminated provided all light fixtures are mounted on the undersurface of the canopy and all light fixtures are full cut-off. The undersurface of the canopy shall be a nonreflective material and non-gloss color.
3. Under gas station canopy lighting shall be exempt and not included in the total outdoor light output calculation for the property in which the canopy is located.

G. **Soffit Lighting.**

1. For Detached Single-Family Dwellings if lighting with fixtures mounted in the soffit of a building, the fixture shall not be mounted above twelve feet (12') in height, as measured from the fixture to Finish Grade.
2. For Commercial, Industrial and Multi-Family Dwellings, if lighting with fixtures mounted in the soffit of a building, the fixture shall not be mounted above twenty feet (20') in height, as measured from the fixture to Finish Grade.
3. Light fixtures mounted in soffits shall be recessed so that the lens cover is recessed or flush with the bottom surface of the soffit and/or shielded by the fixture.

H. **Outdoor Recreation and Athletic Facility Lighting.** Recreational lighting shall minimize the Glare of spill light and up-light by using louvers, hoods, or shielding.

1. Recreational lighting shall only illuminate the field or court area avoiding any direct illumination beyond those areas or into adjoining properties.
2. Pole mounted recreational lighting shall be limited to twenty feet (20') in height.
3. Pole mounted recreational lighting must be set back a minimum of fifty feet (50') from adjacent residential properties.
4. Lighting for outdoor sports fields and courts shall be shut-off no later than eleven o'clock (11:00) pm.
5. Lighting for non-field and non-court areas shall conform to the provisions of this Chapter.

   Exemption-Public Recreational Facilities: Because of their unique requirements for nighttime visibility and limited hours of operation, lighting fixtures for public baseball diamonds, playing fields and tennis courts may exceed the twenty-foot (20') height limit subject to the following:

   a. All applications for pole height greater than twenty feet (20') shall be reviewed by the City Staff and approved by the City Council.
   b. In no case shall any lighting fixture exceed sixty feet (60') in height as measured from the top of the fixture to the adjacent grade.
   c. Maximum lumens per fixture shall not exceed eighty thousand (80,000) lumens.
   d. Lighting fixtures shall be subject to all other requirements in this Chapter.

I. **Towers.**

1. All monopole, antenna, tower or support facility lighting not required by the Federal Aviation Administration (FAA) or the Federal Communication Commission (FCC) is prohibited.
2. When lighting is required by the FAA or the FCC, such lighting shall not exceed the minimum requirements of those agencies. Collision markers should have a dual mode for day and night to minimize impact to the night sky and migrating birds.
3. All other lighting used on the property not regulated by the FAA or FCC shall conform to this Chapter.

J. **Subdivision Street Lighting.** Lighting along subdivision streets shall include, at a minimum, lighting poles and fixtures at entry intersections, other street intersections, end of cul-de-sacs, all crosswalks, and other locations as determined necessary for safety by the City engineer.

05-070: - EXEMPTIONS

A. The following lighting shall be exempt from the requirements and review standards of this Chapter, provided such lighting does not create dangerous glare on adjacent streets or properties, is maintained, and does not constitute a public hazard or nuisance:
   1. **Exemptions to Full Cut-off Fixture Requirements.**
      a. Fixtures having a total light output less than one thousand (1,000) lumens (allowing a maximum of a 60-watt incandescent or a 15-watt compact fluorescent bulb) are exempted from the full cut-off requirement provided:
         i. The fixture has a top that is completely Opaque such that no light is directed upwards.
         ii. The fixture has sides that completely cover the light source and are made of Opaque or semi-Opaque material. Fixtures with Opaque sides may have incidental decorative perforations that emit small amounts of light.
         iii. Semi Opaque material such as dark tinted glass or translucent plastic may be used if the light source is not discernable behind the material.
         iv. The direct light source is not visible beyond the property on which the fixture is located.
   2. Low voltage lights used to illuminate pathways, provided the lights are installed no more than eighteen inches (18") above finish grade.
   3. **Holiday Lighting.** Holiday lighting which is temporary (forty-five (45) days before a holiday and fifteen (15) days after a holiday) shall be exempt from the provisions of this Chapter.
   4. Traffic control signals and devices.
   5. Temporary emergency lighting in use by law enforcement or government agencies or at their direction.
   6.

The lighting of federal or state flags, provided that the light is a narrow beam aimed and shielded to illuminate only the flag. Flag lighting should use appropriate illumination levels to light the flag, while at the same time fulfilling the purposes of this Chapter.

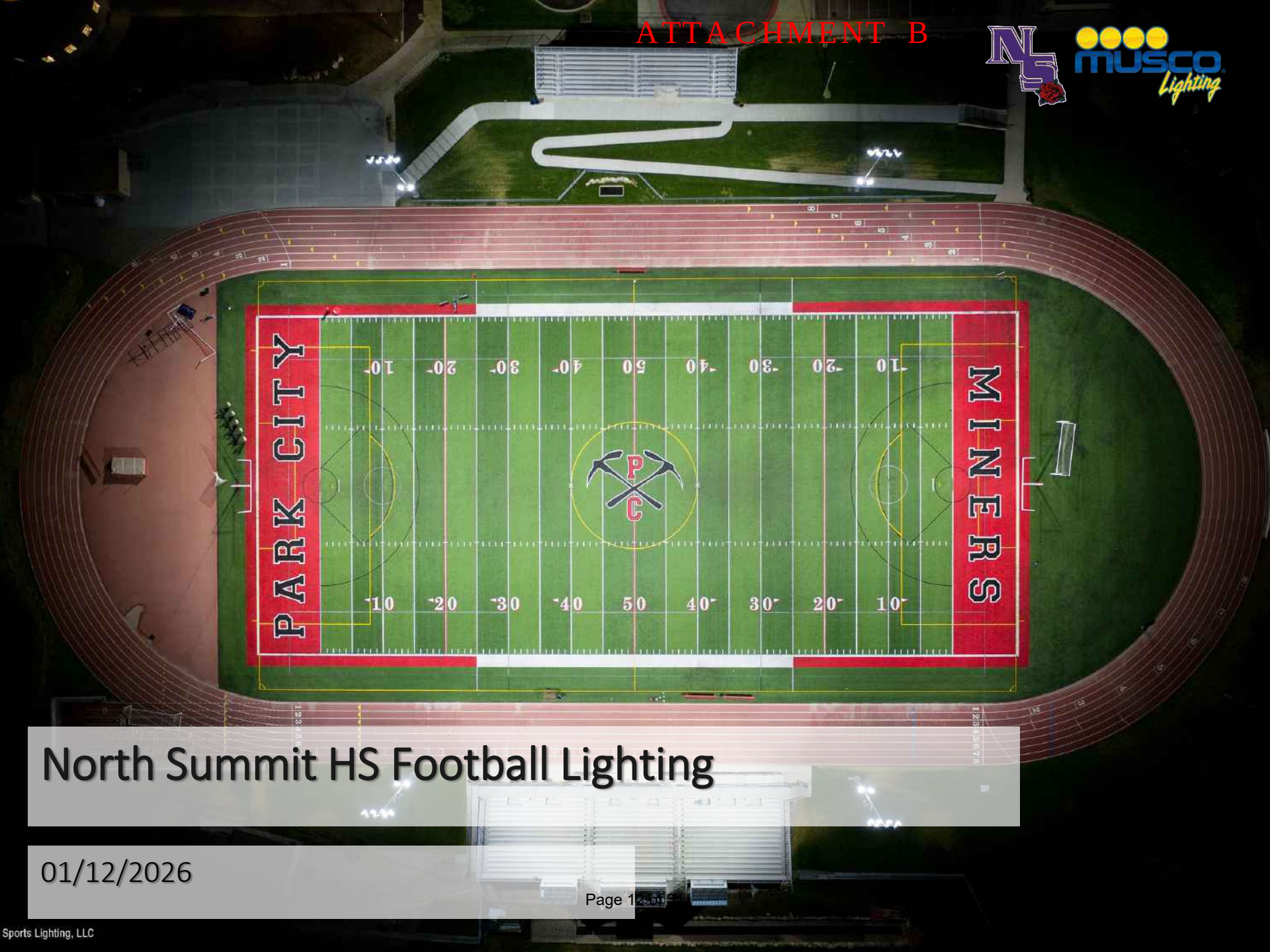
7. Historic lighting in the Historic Downtown Commercial District if the lighting is consistent with the exterior lighting provisions of the Coalville City Architectural Design Guidelines.
8. Architectural lighting intended to accent or draw attention to architectural features of a building or structure within the property boundary and not trespass off-site.
9. Landscape lighting intended to accent or draw attention to landscape elements of the property and not trespass off-site.
10. **Agriculture Lighting.** Lighting for agriculture activities or agricultural buildings is exempt from the requirements of this Chapter, provided such lighting is directed downward and shielded to prevent Glare on adjacent streets or properties.
11. **Special Uses and Events Lighting.** Uses, events and buildings, defined as Special Uses/Events, may include lighting to illuminate buildings and other structures or activities.

05-080: - PENALTY

Any person found guilty of violating any of the provisions, rules and regulations of this Chapter, is guilty of a Class "C" misdemeanor, pursuant to Utah Cade Annotated, as amended. Each violation shall be subject up to a one hundred dollar ($100.00) fine for each day the violation continues beyond the correction notice date issued by the City for such violation.

05-090: - APPEALS

Any Person aggrieved by an administrative action by the Staff or Planning Commission may appeal the decision to the Administrative Law Judge who shall have authority to reverse, affirm or modify the decision of the Staff or Planning Commission.



North Summit HS Football Lighting

01/12/2026

Who are We

Musco has been a leader in sports lighting for 50 years. We specialize in delivering responsible, high-performance lighting solutions that expand recreational opportunities while minimizing environmental impact. Our experience includes professional baseball and football stadiums, racetracks, and Olympic venues around the world. Our equipment is manufactured in the United States.

Utah Presence

Football

Bear River High School
Bountiful High School
Box Elder High School
Deseret Peak High School
Dixie High School
New Herriman High School
Park City High School
Providence Hall Charter School
Rich High School
Southern Utah University
Tooele High School
Weber State University Stewart Stadium

Baseball / Softball

Bloomington Park
Daybreak Field
Lindquist Field
Logan High School
Manti City Multi Recreational Facility
Murray Park Softball Field
Providence City Softball
Riverside Ballfields
Sandy Quarry Bend Park
Saratoga Springs – Patriot Park
Serge at Miles Goodyear Park
Snow Canyon High School
Southfork Park Ballfields
South Summit High School
The Old Spanish Trail Arena Complex
Utah Valley University Softball

Pickleball

Art Dye Pickleball Courts
Farmington Park Pickleball Courts
Fields at Little Valley Pickleball
Hillcrest Park Pickleball
Kaysville City Pickleball Courts
Southfork Pickleball Courts
South Jordan Pickleball Court

Complexes

Art Dye Sports Complex
Cedar City Fields at The Hills
Clinton Recreation Complex
Constitution Park Ballfields
Cook Family Park
C R Hamilton Sports Complex
Farmington Park Sports Complex
Fields at Little Valley
Garden City Ballfields and Pickleball
Hillman Recreation Complex North & South
Ivins Recreation Complex
Lakeside Sports Park Soccer
Lone Peak Park
Ron Wood Sports Complex
Spanish Fork Sports Park
Washington City Complex

Equestrian / Rodeo

Bluffdale Rodeo
Cache County Rodeo Arena
Hurricane Rodeo Arena
Oakley City Rodeo Arena
Spanish Fork
West Jordan Rodeo

Soccer

Salt Lake City Regional Athletic Complex
Santaquin City Soccer
University of Utah
Weber State University
Westminster College, Demke Field

Other

Delta Center, Utah Jazz
Pioneer Park
Washington Wheel Park
West Valley Skatepark

Why are We Here?

While well intentioned, the current City of Coalville Land Use and Development Management Code contains lighting provisions that restrict the ability to implement best-practice sports lighting solutions.

Specific Ordinance Challenges

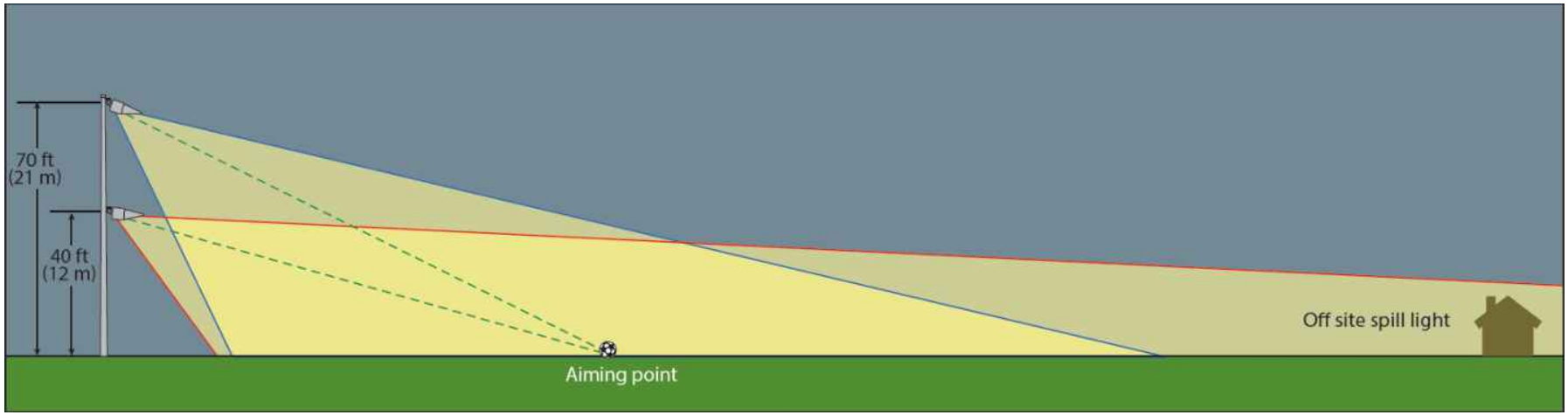
The following provisions present limitations or ambiguity:

- §05-050 H5b: Maximum pole height limited to 60 feet
- §05-050 H5c: Fixture output limited to 80,000 lumens
- §05-050 A1 vs. §05-060 H: Conflict between “no light emitted above the horizontal plane” and language calling to “minimize uplight”
- §05-060 A: Requirement that light not trespass onto adjacent properties without defining measurable limits

Why This Matters

Pole Height

Pole height directly affects aiming angles and off-site light impacts. Taller poles allow fixtures to be aimed more steeply downward, keeping more light on the field and reducing spill and glare.



Why This Matters

Fixture Lumens

Lighting a football field to an average of 50 footcandles requires approximately 5.4 to 6.2 million lumens. Limiting fixtures to 80,000 lumens would require roughly 40% more fixtures (≈ 20 more), increasing system cost by tens of thousands of dollars. Importantly, total lumen output can be delivered in different ways which doesn't accurately reflect the desired intent. Flashlight example.

Why This Matters

Aerial Sports

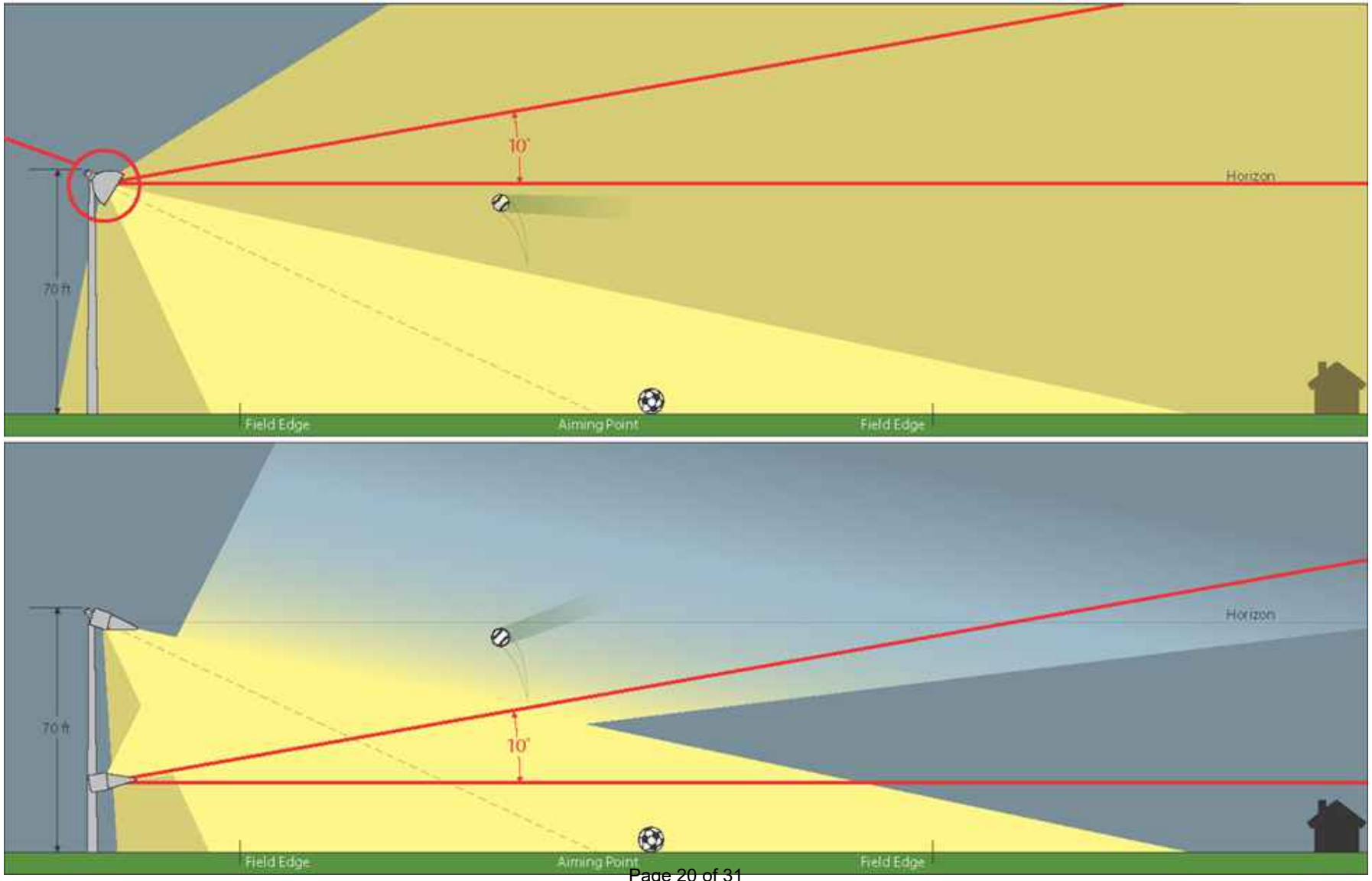
Football is an aerial sport, requiring some uplight to track the ball during punts and kicks. This can be achieved in two ways:

- Open the fixture aiming angle, or
- Providing a separate lower-mounted, targeted uplight fixture to enhance ball visibility

Musco utilizes the second approach through our **BallTracker** system, which improves visibility while minimizing unnecessary uplight.

Why This Matters

Aerial Sports



Light Pollution: Spill vs Glare

Many lighting ordinances focus on limiting **spill light**, measured in footcandles (fc), which represents wasted light falling into unintended areas. **Glare**, however, is often the greater concern for residents and is measured in candela (cd).

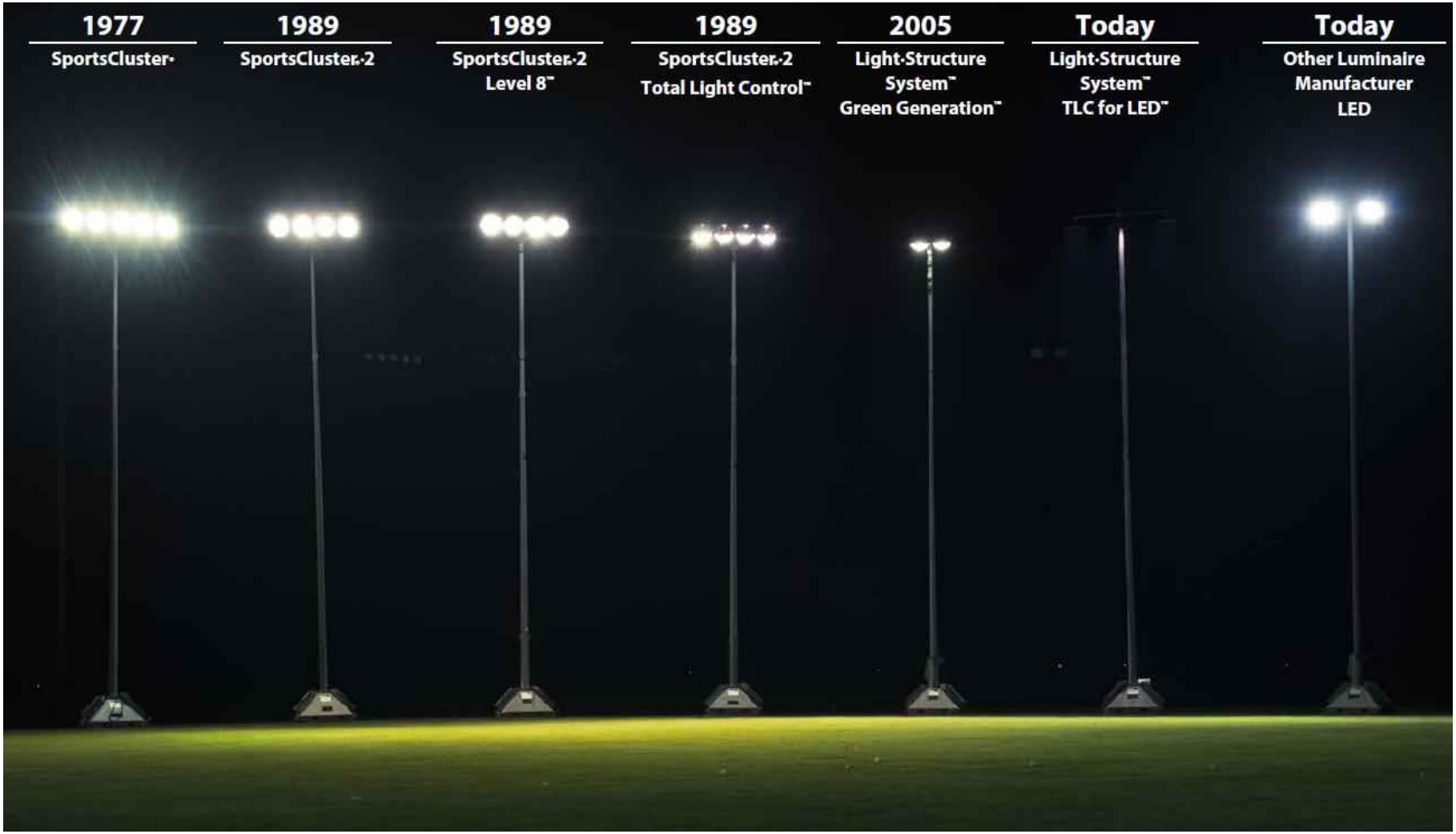
This example shows a bedroom impacted by glare from a single 52,000 lumen fixture located more than 500 feet away. While spill light is negligible, glare remains significant. This occurs because footcandles diminish over distance, while candela does not. For reference, vehicle headlights measure approximately 12,000 candela on low beam and 30,000 candela on high beam.

Prescriptive vs. Performance-Based Approaches

The current code relies primarily on prescriptive requirements, which specify exact limits such as pole height and fixture lumen output. A performance-based approach instead defines measurable outcomes—such as maximum glare or uplight—while allowing flexibility in how those outcomes are achieved.

The next image shows the evolution of our fixtures. Refer to the last two. It demonstrates this distinction by comparing two modern LED fixtures with identical wattage, mounting height, aiming angles, and full cutoff visors. Despite these similarities, the visual impact differs dramatically due to optical design.

Prescriptive vs. Performance-Based Approaches



Last two poles have identical fixture wattage, lumens, mounting height, aiming angles, and full cutoff visors.

Musco's Proposed Alternative

Musco proposes a performance-based solution that aligns with the stated purpose of Outdoor Lighting §05-010 by complying with the Dark Sky International Outdoor Sports Lighting (OSL) program and providing Phase 1 Certification.

Key requirements include:

- Maximum glare of 1,000 candela, measured 150 feet from the field perimeter
- Uplight limited to 8% of total on-field lumens

Additional details are available at:
https://darksky.org/what-we-do/darksky-approved/outdoor-sports-lighting/

The program also maintains a list of Phase 2 certified facilities. This project would be among the first Dark Sky-approved sports lighting installations in Utah.

Requested Code Modification

Permit taller pole heights, limited uplight, and higher-lumen fixtures than currently allowed under the Land Use and Development Management Code **provided the lighting system achieves Phase 1 Certification under the Dark Sky International Outdoor Sports Lighting (OSL) program**.

Pole heights could be 90’

Individual fixtures could be 181,000 lumens

Do It Right the First Time

DRAFT OUTDOOR LIGHTING AMENDMENTS – 03/09/2026

Section 05-010: Purpose: *Recommend adding a new purpose statement as follows:*

F. Implement performance standards that uphold dark sky protection objectives, while allowing adaptable approaches aligned with contemporary best practices in outdoor lighting design.

Section 05-040: Definitions: *Recommend revising the definition of "glare" and adding a definition for candela, as follows:*

Candela: Measure of the intensity of a light source.

Glare: Disruptive light from a light source making it difficult to see. Measured in candela.

05-060: H. Outdoor Recreation and Athletic Sports Field Lighting: *Recommend replacement language as follows:*

Sport and recreational lighting shall minimize light spill while ensuring safe and appropriate illumination levels for athletic activities. In the event of a conflict between this section and other provisions, this section shall govern.

1. *The most current version of ANSI/IES RP-6, Recommended Illuminance Criteria for Sports and Recreational Areas Lighting Designs, may be considered for the applicable Class of Play.*

1. *The correlated color temperature (CCT) of luminaires shall be between 4000K and 5700K.*

2. *The maximum luminous intensity from any luminaire serving a field shall not exceed 5,000 candelas, measured along a perimeter located 150 feet from the field edge and 5 feet above grade. For retrofit projects involving existing installations with non-ideal pole heights, higher candela values may be permitted provided mitigation measures are clearly described, and the proposed candela levels are identified. Such exceptions shall be reviewed and approved by the City on a case-by-case basis.*

3. *Lighting systems shall include automatic or manual shutoff capability. Field lighting shall not operate later than the established curfew of 11:00 pm.*

4. *There shall be no limitations on pole height or luminaire lumen output, provided all other requirements of this section are met.*

5. *Up light (light emitted above the horizontal plane) shall be permitted for aerial sports such as baseball / softball and football.*

ATTACHMENT D

ORDINANCE NO. 2026-1

AN ORDINANCE TO ADOPT REVISED AMENDMENTS FOR THE DEVELOPMENT CODE FOR COALVILLE CITY

BE IT ORDAINED AND ENACTED by the City Council of Coalville City, Summit County, State of Utah, as follows:

WHEREAS, the Coalville City Council determined, after recommendations and input from the Coalville City Planning Commission, to amend provisions of the Development Code relating to modifying and correcting code provisions; and

WHEREAS, that revisions to the Development Code are needed to update and amend regulations regarding the City Development Code; and

WHEREAS, the Coalville City Council has determined that revisions to the Development Code are needed to protect the health, safety, and welfare of Coalville City citizens; and

WHEREAS, following the holding of a public hearing as required by law, the City Council approved the following revisions to the Development Code at its regular meeting held March 9, 2026.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF COALVILLE, UTAH ORDAINS AS FOLLOWS:

Section I
COALVILLE CITY DEVELOPMENT CODE AMENDMENTS

The attached Exhibit "A" is provisions relating to amendments to the Coalville City Development Code. The Provisions are incorporated herein and made a part of this Ordinance by this reference and are hereby adopted by the Coalville City Council.

Section II
Effective Date

This Ordinance shall take effect and the revisions to the Development Code referred to herein shall take effect upon the date of posting at Coalville City Hall, Coalville City Website, and Utah State Posting Website.

PASSED, APPROVED AND ADOPTED by the City Council of Coalville City, Utah this 9th day of March, 2026.

Councilmember Brady	Voted: _____
Councilmember Boyer	Voted: _____
Councilmember Wood	Voted: _____
Councilmember Powis	Voted: _____
Councilmember Peterson	Voted: _____

ATTEST:

_____ _____

City Recorder Mayor Swensen

EXHIBIT "A"

OUTDOOR LIGHTING DEVELOPMENT CODE AMENDMENTS – 03/09/2026

Section 05-010: Purpose: *Recommend adding a new purpose statement as follows:*

F. Implement performance standards that uphold dark sky protection objectives, while allowing adaptable approaches aligned with contemporary best practices in outdoor lighting design.

Section 05-040: Definitions: *Recommend revising the definition of "glare" and adding a definition for candela, as follows:*

Candela: Measure of the intensity of a light source.

Glare: Disruptive light from a light source making it difficult to see. Measured in candela.

05-060: H. Outdoor Recreation and Athletic Sports Field Lighting: *Recommend replacement language as follows:*

Sport and recreational lighting shall minimize light spill while ensuring safe and appropriate illumination levels for athletic activities. In the event of a conflict between this section and other provisions, this section shall govern.

1. *The most current version of ANSI/IES RP-6, Recommended Illuminance Criteria for Sports and Recreational Areas Lighting Designs, may be considered for the applicable Class of Play.*
2. *The correlated color temperature (CCT) of luminaires shall be between 4000K and 5700K.*
3. *The maximum luminous intensity from any luminaire serving a field shall not exceed 5,000 candelas, measured along a perimeter located 150 feet from the field edge and 5 feet above grade. For retrofit projects involving existing installations with non-ideal pole heights, higher candela values may be permitted provided mitigation measures are clearly described, and the proposed candela levels are identified. Such exceptions shall be reviewed and approved by the City on a case-by-case basis.*
4. *Lighting systems shall include automatic or manual shutoff capability. Field lighting shall not operate later than the established curfew of 11:00 pm.*
5. *There shall be no limitations on pole height or luminaire lumen output, provided all other requirements of this section are met.*
6. *Up light (light emitted above the horizontal plane) shall be permitted for aerial sports such as baseball / softball and football.*