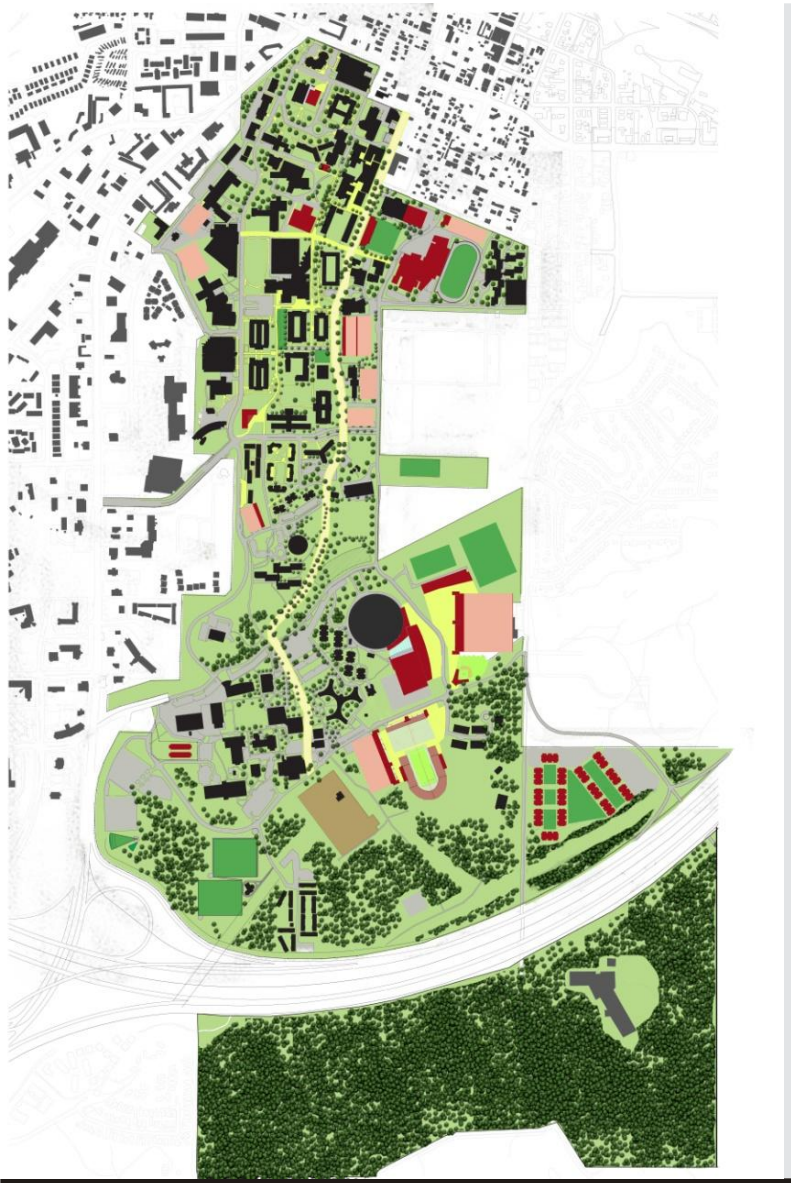

Northern Arizona University

Master Site Lighting Plan

Northern Arizona University

LIGHTING MASTER PLAN

Goals and Objectives

- Provide safe night environment
- Bring exterior lighting system into compliance with current Flagstaff Outdoor Lighting Code
- Unify and improve campus identity & aesthetic
- Eliminate overhead wiring
- Standardize system components to simplify & economize maintenance
- Establish common power sources and controls grid site lighting

LIGHTING MASTER PLAN

Campus Impact

- Phasing & priorities for relighting projects should be coordinated with Campus Master Plan.
- Relighting should be coordinated with any paving projects planned for parking lots, pedways, or roadways.
- New building projects should correct deficiencies & power any parking lots, pedways, or roadway lighting systems adjoining or serving their site.
- New building construction projects should follow any new NAU Technical Standards even if design is under way.

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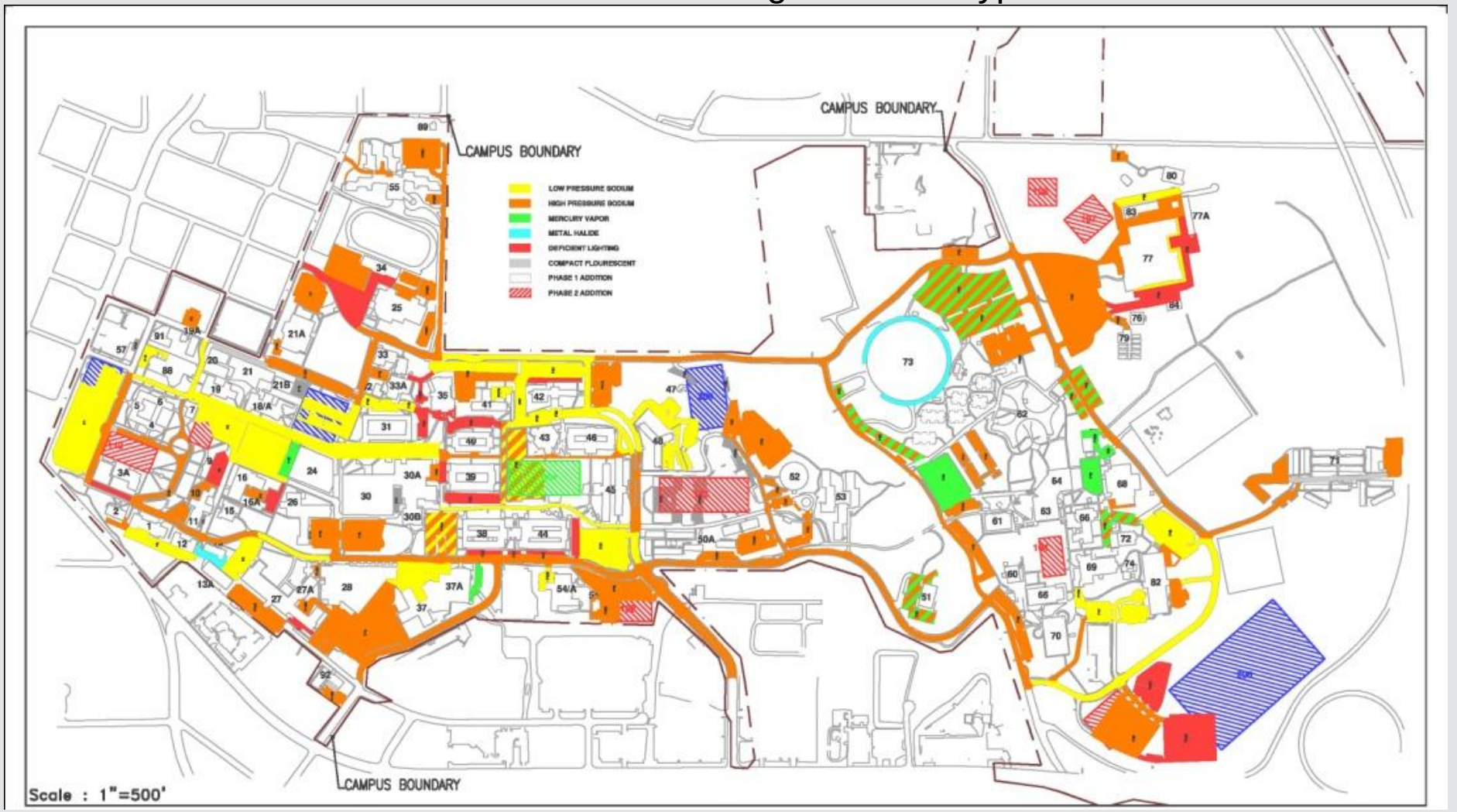
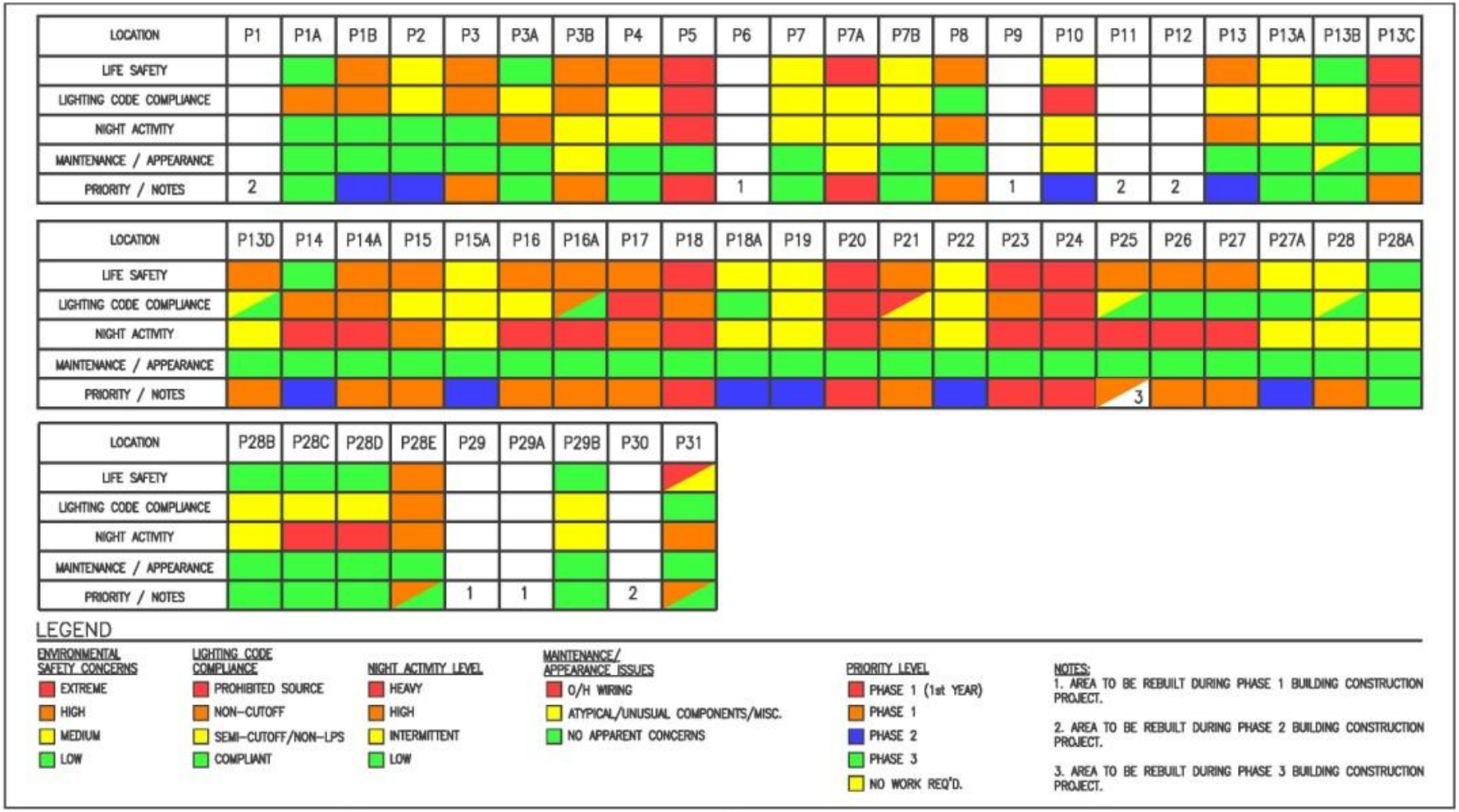
LIGHTING MASTER PLAN

Light Source Types



LIGHTING MASTER PLAN

Exterior Lighting Matrix North Campus



LIGHTING MASTER PLAN

Exterior Lighting Matrix South Campus

LOCATION	P31A	P32	P32A	P32B	P32C	P32D	P33	P34	P35	P36	P37	P38	P39	P40	P40A	P41	P42	P43	P44	P45	P45A	P45B
LIFE SAFETY																						
LIGHTING CODE COMPLIANCE																						
NIGHT ACTIVITY																						
MAINTENANCE / APPEARANCE																						
PRIORITY / NOTES		1	1			1					2	2	2									

LOCATION	P46	P47	P47A	P48	P50	P51	P52	P53	P60	P62	P62A	P62B	P63	P64	P65	P66	P66A	P67	P68	P69	P69A	P70
LIFE SAFETY																						
LIGHTING CODE COMPLIANCE																						
NIGHT ACTIVITY																						
MAINTENANCE / APPEARANCE																						
PRIORITY / NOTES										1	1&2	1&2										

LEGEND

ENVIRONMENTAL SAFETY CONCERNS
- EXTREME
- HIGH
- MEDIUM
- LOW

LIGHTING CODE COMPLIANCE
- PROHIBITED SOURCE
- NON-CUTOFF
- SEMI-CUTOFF/NON-LPS
- COMPLIANT

NIGHT ACTIVITY LEVEL
- HEAVY
- HIGH
- INTERMITTENT
- LOW

MAINTENANCE/ APPEARANCE ISSUES
- O/H WIRING
- ATYPICAL/UNUSUAL COMPONENTS/MISC.
- NO APPARENT CONCERNS

PRIORITY LEVEL
- PHASE 1 (1st YEAR)
- PHASE 1
- PHASE 2
- PHASE 3
- NO WORK REQ'D.

NOTES:
1. AREA TO BE REBUILT DURING PHASE 1 BUILDING CONSTRUCTION PROJECT.
2. AREA TO BE REBUILT DURING PHASE 2 BUILDING CONSTRUCTION PROJECT.

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LIGHTING MASTER PLAN

Strategies & Phasing (Year One)

- Relight areas that are an extreme level of concern as prioritized in Matrix & Phasing Plan.
- Replace mercury vapor and non-cutoff fixtures with code compliant full cutoff fixtures.
- Develop a palette of materials that will become part of NAU's Technical Standards.
- Charge new building construction projects to establish common power sources and controls for nearby site lighting.

Northern Arizona University

LIGHTING MASTER PLAN

Strategies & Phasing (Phase I)

- Relight areas that are a high level of concern as prioritized in Matrix & Phasing Plan.
- Replace any remaining mercury vapor and
- Replace non-cutoff fixtures with code compliant full cutoff fixtures.
- Install white-light luminaires at relit roadway crosswalks.
- Replace overhead wiring with underground.

Northern Arizona University

LIGHTING MASTER PLAN

Strategies & Phasing (Phase II)

- Relight areas that are a medium level of concern as prioritized in Matrix & Phasing Plan.
- Replace Semi-cutoff / non-LPS fixtures with code compliant full cutoff fixtures.
- Install white-light luminaires at relit roadway crosswalks.
- Replace any remaining overhead wiring with underground.

LIGHTING MASTER PLAN

Strategies & Phasing (Phase III)

- Relight areas that are a medium level of concern as prioritized in Matrix & Phasing Plan.
- Relight areas that are a low level of concern as prioritized in Matrix & Phasing Plan.
- Replace any remaining non-LPS fixtures with code compliant full cutoff fixtures.
- Install white-light luminaires at any remaining roadway crosswalks.
- Replace any light fixtures that do not comply with NAU's Technical Standard - Palette of Materials developed in Phase 1

LIGHTING MASTER PLAN
Luminaires

LIGHTING MASTER PLAN
Luminaires

Kim Theory of Relativity

The Relationship of Outdoor Lighting to Site and Architecture


RA25 Large Era[a]


RA17 Small Era[a]


VRB Vandal Resistant Bollard

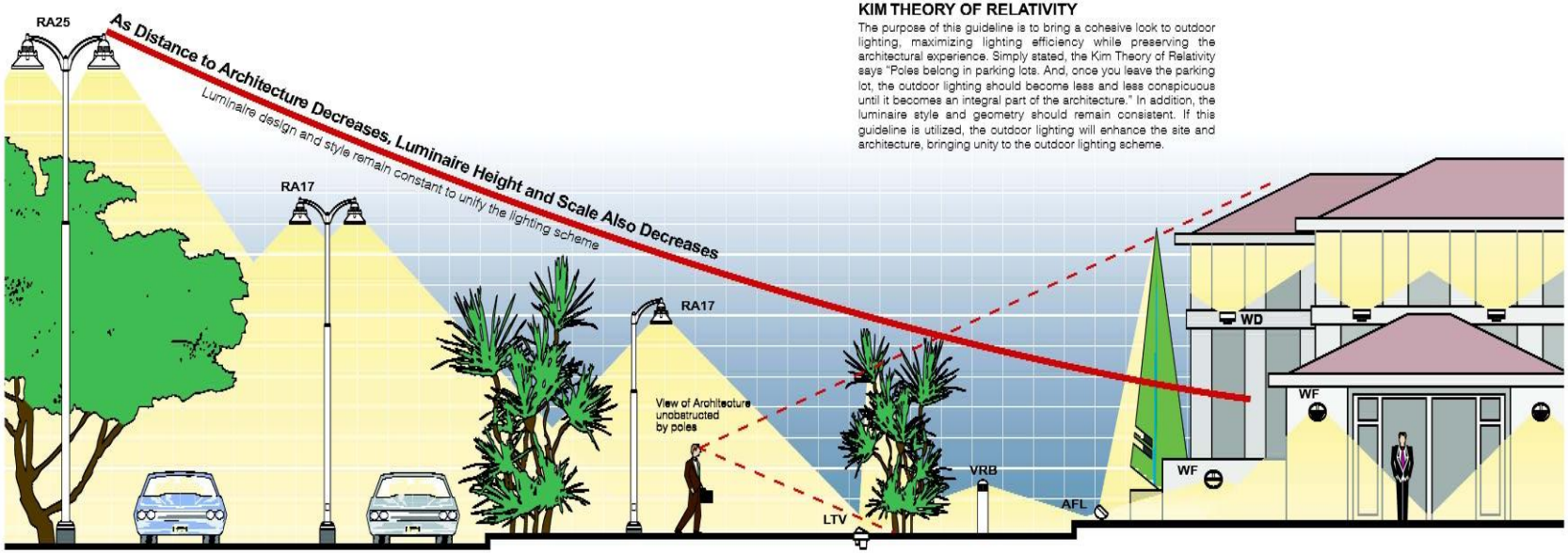

LTV Lightvault[a]


AFL Architectural Floodlight


WF Wall Forms[a]


WF Wall Forms[a]


WD Wall Director[a]



KIM THEORY OF RELATIVITY

The purpose of this guideline is to bring a cohesive look to outdoor lighting, maximizing lighting efficiency while preserving the architectural experience. Simply stated, the Kim Theory of Relativity says "Poles belong in parking lots. And, once you leave the parking lot, the outdoor lighting should become less and less conspicuous until it becomes an integral part of the architecture." In addition, the luminaire style and geometry should remain consistent. If this guideline is utilized, the outdoor lighting will enhance the site and architecture, bringing unity to the outdoor lighting scheme.

SITE / ROADWAY ZONE
Parking lots and roadways require luminaires on 20' - 40' poles to efficiently light these large areas. Therefore, this lighting becomes dominant, and sets the design and style for all other lighting as you progress towards the building.

PEDESTRIAN ZONE
As you leave the parking lot and transition to pedestrian areas, poles should decrease in height to 10' - 16'. In addition, luminaires should decrease in scale, and can have more decorative features to be appreciated at the pedestrian level.

LANDSCAPE / PATH ZONE
Near the building, luminaires should begin to disappear, blending into the landscape and hardscape elements.

BUILDING / PERIMETER ZONE
No pole mounted luminaires should ever be used near the building, as they will dominate the architecture. The only exception would be the use of decorative luminaires to delineate entrances to the structure. Building mounted, architecturally compatible fixtures should be almost invisible.

Northern Arizona University

LIGHTING MASTER PLAN
Luminaires

Northern Arizona University

LIGHTING MASTER PLAN
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