

EXHIBIT C2

Integrated Low Impact Development (LID) Stormwater Management System

LCMG Demonstration Garden — City Planning Department, Site Plan Review

1. Purpose and Scope

This exhibit describes the integrated Low Impact Development (LID) stormwater management system proposed for the LCMG Demonstration Garden. The system is designed for Cheyenne's semi-arid, high-wind climate and serves two purposes: capturing and productively reusing rainwater while substantially reducing peak stormwater flows into the municipal storm sewer system.

The City of Cheyenne has adopted LID standards in its Stormwater Management Manual and until recently was moving toward a new stormwater utility fee. The City Council is now advancing repeal of that fee before it ever takes effect. This strengthens, not weakens, the case for this project. The Garden's integrated LID system — active curb harvesting, bioswales, dome rainwater capture, and a vegetated forest sink — delivers the exact outcomes the fee was designed to fund: decreased peak runoff, improved infiltration, and reduced strain on downstream infrastructure. At zero cost to the City. The requested fee waiver is not merely reasonable — it is in the City's direct financial interest.

2. System Overview

Five complementary components work as a unified system, transforming the five 22-ft geodesic domes from potential stormwater contributors into a net-positive water management asset.

Total On-Site Storage Capacity 10,762 gallons 4,400 gal (80 rain barrels) + 6,362 gal (3 bioswales) | Captures 100% of dome runoff from storms up to 9.1 inches

Component	Function	Storage / Capacity
1 — Active Curb Harvesting	Captures Airport Parkway street runoff; routes to ROW native plants and site windbreak	Passive first-flush capture; no storage vessel
2 — Three-Element Bioswale Network	Three interconnected L-shaped swales on Lot 1 receive barrel overflow and curb-harvested flow	6,362 gal combined (3 × 2,121 gal)
3 — Dome Rainwater Harvesting	80 food-grade drums capture roof runoff; gravity overflow to bioswales	4,400 gal (80 × 55-gal drums)
4 — Vegetated Spillway / Forest Sink	Stone-armored spillway conveys overflow to Lot 2 orchard and forest sink	Regional infiltration and ET engine
5 — ROW Street Trees and Perennial Corridor	Six large-maturing ROW shade trees + 65 × 145 ft native perennial zone	Canopy ET, infiltration, biofilter — zero capital cost

Using standard hydrologic conversions, one inch of rainfall produces ~1,185 gallons of dome roof runoff. Under a 6-inch storm (7,110 gal) or an 8-inch extreme event (9,479 gal), the system captures 100% of dome-generated runoff. Bioswales fully drain within 24–48 hours, restoring capacity between events.

3. Component Descriptions

3.1 Component 1 — Active Curb Harvesting (Airport Parkway)

Rather than allowing street runoff from Airport Parkway to enter storm sewers, four 4-inch curb-cut inlets intercept sheet flow and route it by gravity through Schedule 40 PVC pipes bored beneath the sidewalk. PVC junction boxes at the property line allow volunteers to periodically remove street grit and debris, protecting long-term infiltration capacity. A portion of flow is directed to native plants in the Airport Parkway right-of-way; the remainder enters the north-to-south bioswale.

Western Precedent: Albuquerque (NM) has a fully legalized curb-cut ordinance. Colorado, California, Oregon, Washington, Nevada, Utah, and Idaho all permit curb-cut inlets through LID/GI frameworks. Wyoming has no prohibition. This project is an ideal pilot for Cheyenne to join the Western mainstream of source-capture practice.

3.2 Component 2 — Three-Element Bioswale Network (“The Swaddle”)

Three interconnected swales form the primary infiltration and conveyance infrastructure on Lot 1. All are 5.67 ft wide × 100 ft long, graded from each side toward a center depth of 12 inches (average depth 0.5 ft). Each provides 283.5 ft³ / 2,121 gallons of geometric storage. All three are unlined landscape contouring — not engineered drainage structures — planted with Western Wheatgrass, Blue Grama, and Nebraska Sedge.

Swale	Orientation	Receives From	Discharges To	Storage
North Bioswale	W–E along north side of domes	Dome north-side barrel overflow ports (gravity)	West end connects to N–S swale	2,121 gal
N–S Bioswale	N–S between windbreak and dome cluster	Curb harvesting system; north bioswale	ROW plantings (partial diversion); south bioswale	2,121 gal
South Bioswale	S of dome cluster toward Lot 2	Dome south-side barrel overflow ports (gravity); N–S swale	Vegetated spillway to Lot 2 forest sink	2,121 gal

3.3 Component 3 — Dome Rainwater Harvesting System

Each dome captures roof runoff through a 360° looping aluminum gutter, passed through a Leaf Beater / Debris Excluder and a First Flush Diverter before entering storage. All 16 drums per dome are connected at their base by a 2-inch PVC header pipe, employing the Principle of Communicating Vessels: water levels equalize across all drums simultaneously without mechanical switching.

Function	Component	Specification	Notes
Capture	360° looping rain gutter	Aluminum or vinyl; hub brackets every 24"	237 gal/in/dome; 1,185 gal/in for 5-dome cluster
Filtration	Leaf Beater / Debris Excluder	Standard rain harvesting spec	Protects edible-plant water quality
First Flush	First Flush Diverter	Standard first-flush kit	Discards high-sediment initial runoff
Storage	16 food-grade HDPE 55-gal drums	FDA-approved HDPE Recycle #2	880 gal/dome; 4,400 gal total; embedded in raised bed; serves as thermal mass

Equalization	2" PVC header pipe (daisy chain)	Schedule 40; buried 12" deep	Communicating-vessels equalization across all 16 drums
North Overflow	3" port on northernmost drum	PVC threaded fitting; high-set	Gravity discharge to north bioswale when 880 gal capacity reached
South Overflow	3" port on southernmost drum	PVC threaded fitting; high-set	Gravity discharge to south bioswale when 880 gal capacity reached

3.4 Component 4 — Vegetated Spillway to Lot 2 Forest Sink

During 10-year or 100-year storm events, excess water that cannot be absorbed by the bioswale network or dome barrels is directed through a non-erosive vegetated spillway — a gently sloped, stone-armored channel planted with native grasses — conveying overflow to Lot 2.

Lot 2 functions as a regional infiltration and evapotranspiration engine. 30+ fruit trees and 60+ berry shrubs, combined with native perennial understory plantings, create a forest sink that actively transpires moisture back into the atmosphere while stabilizing soils and preventing erosion. Water delivered to the orchard during wet periods reduces the need for supplemental irrigation during dry periods, closing the on-site water cycle.

3.5 Component 5 — Airport Parkway ROW Street Tree Canopy and Native Perennial Corridor

The LID system extends beyond the lot boundary through a fifth component: six shade trees and a native perennial corridor in the Airport Parkway right-of-way. LCMG has formally requested this planting through Rooted in Cheyenne — the City's designated urban forestry nonprofit — at zero cost to LCMG's capital budget. All six species are on the Cheyenne Urban Forestry recommended list for Zone 4a, alkaline clay soils, and high-wind exposure. The site has no overhead powerline conflicts.

#	Species	Distance S of Airport Court	Expected Height in Cheyenne	Stormwater / LID Function
1	Boxelder 'Sensation' (Acer negundo)	30 ft	35–45 ft	Canopy interception; wind buffer protecting bioswales
2	Elm 'Accolade' (Ulmus japonica × wilsoniana)	57 ft	45–55 ft	Canopy ET; reduces wind evaporation from bioswales
3	Hackberry (Celtis occidentalis)	84 ft	40–50 ft	Deep root infiltration; soil stabilization; drought-adapted
4	Bur Oak (Quercus macrocarpa)	111 ft	40–55 ft	Highest ET; massive root network improves long-term infiltration
5	Linden 'Centry American' (Tilia americana)	138 ft	40–50 ft	Shade moderates evaporation in adjacent perennial bed
6	Honeylocust, thornless (Gleditsia triacanthos)	165 ft	40–50 ft	Light filtered canopy; infiltration beneath; transitions to perennial zone

South ROW Native Perennial Corridor (65 ft × 145 ft). Immediately south of Lots 1 and 2, a 65 × 145 ft right-of-way corridor will be planted with a three-layer palette — shrubs, perennials, and native grasses — providing year-round ground cover, passive biofilter function between Airport Parkway and the on-site bioswale network, and pollinator habitat from early spring through late fall. Species include Golden Currant, Leadplant, Rabbitbrush, Western Sand Cherry, Shrubby Cinquefoil (shrubs); Blanketflower, Rocky Mountain Penstemon, Prairie Coneflower, Blue Flax, Yarrow (perennials); Blue Grama, Little Bluestem, Indian Ricegrass (grasses). All are ROW-appropriate and require zero supplemental irrigation once established.

LCMG commits to all post-planting establishment care including Gator watering bags filled to 10–15 gallons per tree throughout Year 1. This component adds a zero-cost, institutionally-supported canopy and ecological LID layer at no additional City cost.

4. Stormwater Capture Performance: System Sizing and 1985-Scale Analysis

All calculations are based on five 22-ft domes, three bioswales (5.67 ft × 100 ft × 0.5 ft avg depth), and 80 food-grade 55-gallon drums.

Parameter	Value	Formula / Basis	Interpretation
Catchment area per dome	≈ 380 ft ²	$A = \pi \times 11^2 = 380.1 \text{ ft}^2$	Roof footprint only
Total catchment (5 domes)	≈ 1,901 ft ²	5×380.1	Roofs only; no hardscape
Barrel storage per dome	880 gal	16×55	Per-dome primary storage
Total barrel storage (5 domes)	4,400 gal	5×880	Roof-fed primary storage
Storage per bioswale	≈ 2,121 gal	$283.5 \text{ ft}^3 \times 7.48 \text{ gal/ft}^3$	5.67 ft × 100 ft × 0.5 ft avg depth
Total bioswale storage (3 swales)	≈ 6,362 gal	$3 \times 283.5 \text{ ft}^3 = 850.5 \text{ ft}^3 \times 7.48$	Combined geometric capacity
Total system storage	≈ 10,762 gal	$4,400 + 6,362$	Barrels + all 3 bioswales
Gallons per inch of rain (per dome)	≈ 237 gal/in	$380.1 \text{ ft}^2 \times (1/12) \text{ ft} \times 7.48$	Single dome roof runoff
Gallons per inch of rain (5 domes)	≈ 1,185 gal/in	237×5	Full cluster roof runoff
Rain to fill barrels alone	≈ 3.7 in	$4,400 \div 1,185$	After this, barrels overflow to bioswales
Rain to fill full system	≈ 9.1 in	$10,762 \div 1,185$	Barrels + all 3 bioswales at capacity
6-in storm runoff (1985-scale)	7,110 gal	$1,185 \times 6$	Well below 10,762 gal — 100% captured ✓
8-in extreme storm runoff	9,479 gal	$1,185 \times 8$	Still below 10,762 gal — 100% captured ✓
Annual diversion (5 domes)	≈ 17,775 gal/yr	$3,555 \times 5$	Total sewer load reduction per year
Bioswale drawdown time	24–48 hours	Field behavior in clay-dominant soils	Storage capacity restored between events

These calculations apply to dome roof runoff only. The site's pervious areas, bioswales, ROW perennial corridor, and street tree canopy contribute substantial additional infiltration capacity not included in this analysis — making the 10,762-gallon figure a conservative floor.

5. Dual-Function Role of Embedded Drums: Water and Thermal Mass

By embedding the 16 HDPE drums within the 3-ft raised bed surrounding each dome, the drums serve a second critical function beyond water storage: they act as a surface-level thermal battery, buffering raised bed soil temperatures against freeze events and extending the growing season for perennial plantings.

Water has one of the highest volumetric heat capacities of any common material ($\approx 62 \text{ BTU/ft}^3/\text{°F}$), far exceeding soil or gravel. At 880 gallons ($\sim 117.6 \text{ ft}^3$) per dome, the drums hold a substantial thermal reservoir. This is complementary to, but distinct from, the subterranean Climate Battery described in Exhibit C1: the drum thermal mass operates at the soil surface level, while the Climate Battery operates at depth to condition dome interior air.

6. Distribution: Managing Water to the Orchard on Lot 2

The orchard and berry shrubs on Lot 2 receive water via the south bioswale and vegetated spillway. Three distribution strategies are available in combination:

1. Gravity-fed swale (passive primary): 1–2% grade provides a 1-ft drop per 50–100 ft of run; overflow moves to the orchard without energy input or erosion.
2. Solar-powered submersible pump (active supplement): A low-voltage DC solar pump in one primary drum pushes water through $\frac{1}{2}$ -inch poly-drip line directly to fruit trees during dry periods.
3. Buried PVC header (passive pressurized): The drum equalization header pipe can be extended underground to the orchard, delivering water passively without a pump.

7. Public Health, Winterization, and Materials Longevity

7.1 Mosquito Control

1. Sealed system: Closed-head drum design with fine mesh screen ($1/16''$ or smaller) at inlet prevents adult mosquito access.
2. Biological controls: Mosquito Dunks (BTI — *Bacillus thuringiensis israelensis*) provide EPA-approved, organic larval control safe for edible plants.
3. Bioswale drawdown: Designed to infiltrate within 24 hours — well within the 48–72-hour window required for larvae to reach biting stage.

7.2 Winterization Protocol

1. October drain-down: Drums drained to 10% capacity, leaving an air gap that allows remaining water to expand upward rather than bursting drum walls.
2. Winter Bypass Diverter: Manual diverter redirects gutter flow away from drums, preventing ice-damming.
3. Soil insulation: Drum burial in 3 ft of soil slows freezing significantly compared to exposed barrels.
4. Wind resistance: Drums contained within the timber-and-metal raised bed remain stationary during 60+ mph Cheyenne wind events.

7.3 Materials Longevity and Food Safety

1. Extended drum lifespan: UV protection from soil burial extends HDPE drum service life from the typical 5–10 years (exposed) to an estimated 20–25 years.

2. Food safety: FDA-approved food-grade HDPE (Recycle Code #2) only. No chemical leaching into soil or edible plants.
3. Structural longevity: Corrugated metal sheeting in the raised bed provides a protective barrier with a 20+ year design life.

8. Meeting Low Impact Development (LID) Criteria

LID Pillar	Mechanism	Site Implementation	Measured / Expected Benefit
Pillar 1	Source Control	Rain barrels capture precipitation where it falls on dome roofs (237 gal/in/dome; 1,185 gal/in for 5 domes)	Prevents peak-flow runoff; removes up to 17,775 gal/yr from municipal storm sewer
Pillar 2	Infiltration & Filtration	Three-element bioswale network (6,362 gal combined) allows infiltration; native grass roots filter pollutants	Recharges local aquifer; removes sediment, heavy metals, hydrocarbons before reaching Crow Creek
Pillar 3	Evapotranspiration	Harvested water grows perennial living screen and fruit orchard; ROW canopy ET from 6 shade trees	Combats Urban Heat Island; transpires moisture to atmosphere; stabilizes soils

9. Alignment with City of Cheyenne Goals

City / Agency Goal	Policy Objective	LCMG Implementation
PlanCheyenne — Foundations Pillar (Resource Stewardship)	Encourage water conservation and xeriscaping throughout the city	Captures 1,185 gal/in across 5 domes; reduces site effective impervious area to near zero; diverts ≈17,775 gal/yr from sewer
BOPU Water Conservation Program	Rain Barrel Rebate Program (\$50/barrel); smart irrigation promotion	80 barrels planned (4,400 gal total storage); BOPU rebate program leveraged; site serves as Living Lab for residents
Stormwater Fee Repeal (March 2026)	City Council advancing repeal on 2nd and 3rd readings; fee never took effect	1,901 ft ² of dome roofs converted to net-zero impact; 10,762 gal total storage plus ROW canopy ET and perennial infiltration zone — measurable LID performance at zero City cost; fee waiver both reasonable and in City's direct interest
UDC LID Compliance	Site plan must demonstrate LID standards are met or exceeded	Five-component integrated system documented in this exhibit meets or exceeds all applicable LID standards in the Cheyenne Stormwater Management Manual

10. Annual Maintenance Calendar

LCMG volunteers will follow this schedule under a recorded Operation and Maintenance Plan. The City incurs zero ongoing maintenance costs.

Month	Focus	Key Actions
March	System Wake-Up	Close all drain valves; inspect 2" PVC header pipes for frost damage; clear debris from looping gutters on all 5 domes
April	Activation	Switch downspout diverter from Winter Bypass to Collect mode; add first round of Mosquito Dunks to each drum
May	Planting & Flow Test	Plant annual fillers; test gravity flow through all three bioswales; inspect swale grades
June–July	Peak Irrigation	Flush 100-micron filters weekly; inspect soil moisture near fruit trees to verify south bioswale and drip efficiency
August	Mosquito Check	Refresh Mosquito Dunks; ensure perennial screen not overgrowing gutter inlets
September	Pre-Fall Clean	Deep-clean First Flush diverters before fall rains
October	WINTERIZATION — CRITICAL	Open drain valves; drain drums to 10% capacity; switch diverter to Winter Bypass to prevent ice-bursting
Nov–Feb	Dormancy Monitoring	Monthly visual inspection of timber retaining wall for frost-heave; ensure bioswale paths clear of snow blockage

11. Quantified Benefits Summary

Benefit	Metric	Notes
Runoff reduction	100% of dome runoff captured up to 9.1-inch storm	Encompasses historic 6-inch and 8-inch 1985-scale events
Peak flow attenuation	10,762 gal of combined storage detains and controls release	Reduces peak flows that can overwhelm downstream culverts
Pollutant removal	Three bioswales with native grass bio-filtration	Removes sediment, heavy metals, hydrocarbons, nutrients before reaching Crow Creek and South Platte watershed
Annual sewer diversion	≈17,775 gal/yr from 5-dome cluster	Equivalent to filling a typical residential swimming pool
ROW canopy and perennial corridor	6 shade trees + 65 × 145 ft perennial zone	Canopy ET, infiltration improvement, passive biofilter via Rooted in Cheyenne partnership at zero capital cost
Municipal maintenance cost	Zero	LCMG O&M Plan; full volunteer responsibility
Municipal construction cost	Zero	Grant-funded and volunteer-built

12. Engineering Summary

The integrated LID stormwater management system provides a technically sound, quantitatively verified, and publicly beneficial approach to on-site water management. Key design decisions:

Parameter	Value / Description	Significance
Dome roof catchment	1,901 ft ² (5 × 380 ft ²)	Drives all runoff and storage calculations

Barrel storage	4,400 gal (80 × 55-gal food-grade HDPE drums)	Primary capture; embedded in raised beds; also functions as thermal mass
Bioswale dimensions	3 swales × 5.67 ft wide × 100 ft long × 0.5 ft avg depth	6,362 gal combined; unlined; native grass bio-filtration
Total on-site storage	10,762 gallons	Captures 100% of dome runoff from 6-inch and 8-inch events
Annual diversion from sewer	≈17,775 gal/yr	Based on 15-in avg annual precip; system cycles ≈4×/yr per dome
Curb-cut inlets	4 × 4-inch apertures; Schedule 40 PVC subsurface conveyance	Western precedent in 8 of 9 states surveyed; Cheyenne has no prohibition
ROW component	6 shade trees + 65 × 145 ft native perennial zone	Rooted in Cheyenne partnership; zero capital cost; ET and infiltration benefits
Winterization	Annual October drain-down; Winter Bypass Diverter; soil burial insulation	Addresses Cheyenne freeze risk; sealed drums; BTI biological mosquito control
Municipal cost	Zero construction, zero maintenance	Fee waiver is both reasonable and in the City's direct financial interest

This system requires no mechanical infrastructure, no ongoing municipal maintenance, and no capital expenditure by the City. It is designed, built, and maintained by volunteers, funded by public and private grants, and delivers measurable stormwater management benefits that directly serve the goals the Cheyenne Stormwater Management Manual was written to advance.

13. PE Licensure Exemption: Why Exhibit C2's Bioretention Features Do Not Require a Licensed Professional Engineer

Overview of the City's Concern

The City of Cheyenne Department of Engineering and Development has indicated that the design professional responsible for any bioretention feature must be a Professional Engineer (PE) licensed in the State of Wyoming. This exhibit provides a substantive, evidence-based rationale for why the bioretention and stormwater infiltration components described in Exhibit C2 are exempt from that requirement, or in the alternative, why they satisfy any applicable standard through the qualifications already embedded in this project's design, documentation, and community oversight.

Grounds for Exemption

Ground 1 — The Bioswales Are Unlined Landscape Grading, Not Engineered Drainage Structures

As stated explicitly in Section 3.2 of this exhibit, the three bioswales in the LCMG system are “unlined landscape contouring — not engineered drainage structures.” They are shallow, grass-planted earthen channels: 5.67 feet wide, 100 feet long, and 12 inches deep at center. They do not involve structural concrete, piped conveyance, retaining walls, subsurface engineered systems, or any element that alters load-bearing soil conditions. Under Wyoming Statute §33-29-301(b) and the general definition of engineering practice, PE licensure is required when work involves the application of engineering science to public safety, structures, or systems where failure poses a risk to life, property, or public welfare. Shallow, vegetated earthen swales — functionally identical to contoured landscaping — do not meet that threshold. These are the same features installed by homeowners, landscape contractors, and municipalities throughout the Mountain West without PE involvement.

Ground 2 — The System Is Designed for a Non-Commercial, Public-Benefit Demonstration Project on Private Lots

The LCMG Demonstration Garden is a nonprofit, volunteer-operated community garden and living laboratory. It is not a commercial development, a public infrastructure project, or a facility serving a large occupancy load. The stormwater system is entirely contained within privately held lots (Lot 1 and Lot 2), with overflow directed to on-site vegetation and an orchard, never onto adjacent parcels or into municipal infrastructure. Wyoming's PE licensure requirement is designed to protect public safety on projects where engineering failure creates risk to persons beyond the applicant. This system's worst-case failure mode is that bioswales absorb less water than modeled — an outcome with no safety consequence. The regulatory intent does not apply here.

Ground 3 — The Design Is Fully Quantified, Peer-Documented, and Grounded in Published LID Standards

Section 4 of this exhibit provides a complete, formula-based hydrologic analysis — catchment areas, volumetric storage calculations, storm-event performance tables, and drawdown timing — derived from standard engineering conversions (ft² to gallons, rain depth to runoff volume). The bioswale dimensions, plant species selection, and overflow conveyance pathways are drawn from the EPA's Low Impact Development Urban Design Tools guidance, the Cheyenne Stormwater Management Manual, and widely established Western LID practice. The system does not require novel engineering judgment. It applies established, publicly documented methods to a small-scale, low-risk site. The presence of a written, quantified design document of this caliber — more detailed than the majority of residential stormwater submittals the City reviews — satisfies any reasonable standard of design adequacy without requiring a licensed PE stamp.

Ground 4 — Comparable LID Features Throughout Cheyenne Are Installed Without PE Certification

Rain barrels, and vegetated swales identical in principle and scale to those described in this exhibit are regularly installed by residential and commercial property owners in Cheyenne and across Wyoming under the BOPU Rain Barrel Rebate Program and general landscaping permits — none of which require PE involvement. Applying a PE requirement selectively to a community nonprofit's well-documented, quantitatively verified, publicly beneficial LID system — while not requiring the same of neighbors installing similar features informally — would be inconsistent and would not serve the City's stated LID policy objectives. The City's Stormwater Management Manual is designed to encourage exactly the outcomes this system delivers. Requiring a PE stamp as a barrier to those outcomes contradicts the Manual's intent.

Ground 5 — The Municipal Cost of Requiring a PE Is Disproportionate to Any Identified Risk

PE engagement for a bioswale design of this scale typically costs between \$3,000 and \$8,000 — a sum that would consume a substantial portion of the grant budget for a volunteer-built, zero-municipal-cost community facility. The City Engineering Department has itself acknowledged it cannot recommend PEs, placing the full burden of locating, vetting, and funding a licensed engineer on the applicant. This creates an effective denial-by-cost of a project that delivers measurable public stormwater benefit at zero City expense. Regulatory proportionality — a principle recognized in administrative law — holds that the burden imposed by a regulatory requirement must bear a reasonable relationship to the risk being mitigated. No such relationship exists here. The risk of a 12-inch-deep grass swale underperforming does not justify a \$5,000+ compliance cost on a nonprofit demonstration garden.

Ground 6 — The Curb-Cut Inlets Are a Standard Western LID Practice With No Wyoming Prohibition

As documented in Section 3.1, the curb-cut harvesting component is an established practice permitted in eight of nine western states surveyed, including states with stormwater regulatory frameworks comparable to Wyoming's. Albuquerque has a fully codified curb-cut ordinance. Cities in Colorado, California, Oregon, Washington, Nevada, Utah, and Idaho all permit this approach under LID or Green Infrastructure frameworks. Wyoming has no statutory or regulatory prohibition. The Schedule 40 PVC subsurface conveyance involved is standard plumbing practice, routinely installed without PE oversight. Treating this feature as requiring PE licensure would place Wyoming outside the mainstream of Western LID regulatory practice and would create a precedent discouraging future LID adoption in the City.

Alternative Position: If PE Review Is Required, LCMG Proposes a Peer Review in Lieu of Full Design Certification

Should the City determine that some form of licensed engineering review is nonetheless required, LCMG respectfully proposes a peer review model in lieu of full PE design certification. Under this approach, a Wyoming-licensed PE would review the calculations, component specifications, and maintenance plan contained in this exhibit — documents already prepared to engineering-grade detail — and provide a written letter of no objection or conditional approval. This is a recognized alternative in many jurisdictions for small-scale LID features and would substantially reduce cost while satisfying the City's stated concern about design professional oversight. LCMG requests that the City Engineering Department consider this alternative as a condition of approval rather than a barrier to it.

Conclusion

The bioretention and stormwater infiltration features described in Exhibit C2 are shallow, unlined, vegetated earthen features designed and documented using established LID methodology. They pose no structural risk, serve no commercial purpose, impose zero cost on the City, and align directly with the City's stated stormwater policy goals. The PE licensure requirement as applied to these features is disproportionate, inconsistent with comparable City-supported LID installations, and contrary to the regulatory purpose that licensure requirement is designed to serve. LCMG respectfully requests that the City Engineering Department exercise its administrative discretion to waive the PE requirement for this project, or in the alternative, accept a licensed PE peer review letter in lieu of full design certification. Either resolution would allow this model public-benefit project to proceed and demonstrate the LID outcomes Cheyenne's own stormwater policy was designed to achieve.

End of Exhibit C2 — Integrated LID Stormwater Management System