CITY OF LA CROSSE

400 La Crosse Street
La Crosse, Wisconsin 54601
(608) 789-CITY
www.cityoflacrosse.org

LEGISLATION STAFF REPORT FOR COUNCIL

File ID: 25-0686

Caption: Resolution to appropriate funding to design Airport Storm Drainage Improvements.

Staff/Department Responsible for Legislation

Airport

Requestor of Legislation

Jeffrey Tripp, Airport Director

Location, if applicable

La Crosse Regional Airport

Summary/Purpose

The Airport is experiencing deterioration of the storm drainage system and increased negative impacts from rain events. Flooding on the airfield has become more common in recent years and standing water after major rain events has increased in depth, expanse, and time. During major rain events and spring thaw events water levels have reached the edge of taxiways connecting to the terminal apron, threatening to delay or reroute commercial aircraft.

The Airport's intent is to complete the design and release construction phases 1 & 2 for bid in early 2026, subject to Federal Aviation Administration (FAA) and WDOT - Bureau of Aeronautics (BOA) notice to proceed. Phase 3 will be designed and ready to bid should FAA discretionary grant funds become available in 2026. If not, it will be requested for bidding in 2027.

Background

The LSE Drainage Study Report (2023) presents a condition assessment of the existing stormwater infrastructure, a review of the effects of the Airport Master Plan's recommended infrastructure improvements on stormwater and investigated alternatives to alleviate negative impacts of rain events at the Airport.

The stormwater system is required to be consistent with safe air travel and meet statutory and rule requirements intended to protect water quality, limit or prevent flooding, and promote healthy ecosystems in downstream receiving waters. Federal, state, and local agencies have jurisdiction over some or all the aspects of the Project's drainage requirements.

Fiscal Impact

The estimate to complete design is $349,530. The Airport is requesting to pay for the design in advance using Airport Operating Budget (600) funds. FAA and BOA agree to reimburse the Airport for their design cost shares through the construction grant(s) at 95% - $332,053 and 2.5% - $8,738 respectively.

Staff Recommendation

Staff recommends approval of the resolution.

DESIGN ENGINEERING SERVICES ESTIMATE

AIRPORT: La Crosse Regional Airport
PROJECT DESCRIPTION: Drainage Improvements: Bid packages 1, 2 and 3
PROJECT NUMBER: BOA LSE # AIP #
STIMATED CONSTRUCTION AND CA COST: $3,500,000

DATE 6/12/2025

PHASE I	DIRECT LABOR COST	OVERHEAD ON LABOR 1.8672	FEE @ 11%	TOTAL LABOR COST	EXPENSES	TOTAL
TASK A. DESIGN KICK OFF MEETING	$1,267	$2,366	$400	$4,032	$224	$ 4,257
TASK B. DESIGN SURVEYS, RECORD DRAWING REVIEW	$2,753	$5,140	$868	$8,762	$1,229	$ 9,991
TASK C. GEOTECHNICAL INVESTIGATION AND REPORT, TELEVISING, DIGGERS LOCATES	$5,628	$10,509	$1,775	$17,912	$20,092	$ 38,004
TASK D. REVIEW AND ANALYZE REPORTS	$968	$1,807	$305	$3,081		$ 3,081
TASK E.TRANSPORTATION, CONSTRUCTION GENERAL PERMIT (TCGP) SUBMITTAL	$2,114	$3,947	$667	$6,727		$ 6,727
TASK F. MEETINGS	$4,684	$8,746	$1,477	$14,907	$616	$ 15,523
TASK G. COORDINATION	$4,330	$8,085	$1,366	$13,781		$ 13,781
TASK H. 60% COST ESTIMATE	$1,453	$2,712	$458	$4,623		$ 4,623
TASK I. ALP PEN AND INK SUMBITTAL	$980	$1,830	$309	$3,119		$ 3,119
TASK J. ALP APPROVAL AUTHORITY	$279	$521	$88	$888		$ 888
TASK K. PAVEMENT/STRUCTURAL DESIGN	$1,034	$1,930	$326	$3,289		$ 3,289
TASK L. OBTAIN ENVIRONMENTAL PERMITS	$8,787	$16,406	$2,771	$27,964	$9,791	$ 37,755
~~TASK M. PREPARE WETLAND MITIGATION PLAN~~						$ -
SUBTOTAL:	$34,275	$63,999	$10,810	$109,084	$31,953	$ 141,038
PHASE I TASKS TOTAL COST						**$141,038**

PHASE II	DIRECT LABOR COST	OVERHEAD ON LABOR 1.8672	FEE @ 11%	TOTAL LABOR COST	EXPENSES	TOTAL
TASK A. FINAL ENGINEER'S REPORT	$2,450	$4,575	$773	$7,797		$ 7,797
TASK B. BID PROPOSAL PACKET	$13,730	$25,637	$4,330	$43,697		$ 43,697
TASK C. CONSTRUCTION PLANS	$30,948	$57,786	$9,761	$98,495		$ 98,495
TASK D. PRE-BID MEETING	$2,892	$5,400	$912	$9,204	$763	$ 9,967
TASK E. CONSTRUCTION COST ESTIMATE	$4,134	$7,719	$1,304	$13,157		$ 13,157
TASK F. CONSTRUCTION OPERATION PLAN	$6,954	$12,985	$2,193	$22,132		$ 22,132
TASK G. FURNISHING OF PLANS & SPECIFICATIONS	$524	$977	$165	$1,666		$ 1,666
TASK H. ASSISTANCE IN SECURING BIDS	$3,639	$6,795	$1,148	$11,581		$ 11,581
SUBTOTAL:	$65,271	$121,873	$20,586	$207,729	$763	$ 208,492
PHASE II TASKS TOTAL COST						**$208,492**

PHASE I & II TOTAL COST:	**$349,530**

DRAFT

Exhibit A

Drainage Improvements: Bid Packages 1, 2 and 3
Design Services Work Scope
La Crosse Regional Airport
La Crosse, Wisconsin
June 9, 2025

General Project Description

The La Crosse Regional Airport is experiencing deterioration of the drainage system and increased negative impacts from rain events. Flooding on the airfield has become more common in recent years and standing water after major rain events has increased in depth, expanse, and time from that seen historically. During major rain events and spring thaw events water levels have reached the edge of taxiways connecting to the terminal apron, threatening to delay or reroute commercial aircraft.

Many of the airfield drainage pipes and inlets are known to be old and approaching the end of their design life. Multiple structure and pipe cave-ins have been observed by Airport staff in the location of existing stormwater infrastructure. Silted-in structures and prolonged water retention times in drainage basins have also been observed. These are indications of a deteriorated stormwater system.

Under a previous project an airfield wide drainage study was completed. The drainage study final report presented an inventory and condition assessment of the existing stormwater infrastructure, a review of the effects of the Airport Master Plan's recommended infrastructure improvements on stormwater, and alternatives to alleviate negative impacts of rain events at the Airport. The information presented in the drainage planning study will be used as a reference planning document and starting point for design and construction work.

This project implements some of the solutions present in the drainage report that are best suited for this standalone drainage improvement project. Future projects will need to be completed to implement other recommendations and continue to improve the drainage conditions at the airport and are not included in this scope of work.

Proposed Drainage Improvement Project Focus Areas Summary

Focus Area Description	Exhibit Number	Planning Level Est. Construction Cost***	Likely Bid Package**
Pipe and Structure Cave-Ins	A1	$250,000	1
Fanta Reed Road Storm Water Outlet Improvements	A20*	$20,000	1
Infiltration Basin Improvements	A19*	$639,500	1
Infield Between Runway (area between 13/31 and Taxiway B)	A10*	$388,700	2
Terminal Apron Infield	A16*	$1,775,700	3
	Construction Only Costs	**$3,073,900**	
	CA Costs (3 projects over 3 years)	**$399,607**	
	Total Est Const	**$3,473,507**	

**Exhibit and exhibit number is from the drainage report and has not been renumbered to provide consistency in Exhibit nomenclature between this scope and the drainage study.*

***Exact elements in each bid packages will be determined after discussion with LSE and will consider runway closures, costs and airport operation needs.*

**** Construction costs based on 2023 estimates from the LSE Drainage Study Report.*

Work Scope for Project Improvement Items

Work Areas, grading areas, potential haul routes, and excess material placement locations are shown on Exhibit A2.

Improvement Item 1: Pipe and Structure Cave-Ins

Cave-Ins 1 and 2
These cave-ins are located between Runway 13-31 and Taxiway B, near the Runway 31 end and the east ramp. The structures are INS1, INS4, INS5, INS6, AE1 and the pipes that connect these structures. The existing manholes will be removed and the pipe replaced. Pipes that go under pavement may be lined and cleaned if in good condition. If the pipe is not in good condition, the pavement will be cut and replaced with a new pipe.

See Exhibit A1, Existing Storm Water Infrastructure for the structure locations.

Cave-In 4
This cave-in is located at INR1 off the north end of Runway 13 near the end of the runway. It is believed that cave-in 4 is the result of a drywell silting in or collapsing and causing ground slumping.

Preliminary investigation shows that the drywell did not collect a large amount of water and only a small area was graded toward the drywell. The design scope assumes the structure will be removed and the

area graded. The drywell will not be replaced as the DNR no longer allows drywells. If during design, a different solution is recommended and additional design work is needed, it will be added via contract addendum.

See Exhibit A1, Existing Storm Water Infrastructure for the structure locations.

Cave-Ins 3 and 5

Cave-ins 3 and 5 have been observed in the infield between Runway 18-36, Taxiway D, and Taxiway B and in the proximity of structure INS-21 and a pipe cave in between INS19 and INS18. These structures and adjacent pipes were found to be in poor condition and exceeding their design life as noted in Chapter 1 of the drainage study report. The manholes are constructed with brick and mortar that is collapsing and deteriorating. The observed ground slumping is likely a result of sediment being eroded and piped into the drainage system through holes in the structure and adjacent pipes. It is also believed that a section of pipe has also collapsed. The erosion of sediment and blocking of drainage pipes with sediment will continue unless damage is repaired.

The design scope for cave-ins 3 and 5 is addressed in the discussion on the terminal apron infield.

Improvement Item 2: Infield between Runway's 13-31, 4-22, 18-36 and Taxiway B

The infield located between the three airfield runways and Taxiway B is currently divided into multiple drainage areas by grading that was left behind by previous pavement removals. The proposed Runway 13-31 to Taxiway B connector recommended in the master plan and shown on the ALP was considered during the drainage study. The future connector will create a new drainage divide within the existing infield. It is being proposed that the infields on either side of the future taxiway connector be regraded to prepare for the future taxiway project and that the berm left behind from the previous Taxiway C removal project be excavated.

The proposed grading improvements will reduce the conveyance demand of the storm sewer system draining to the southwest by increasing stormwater storage volume and promoting infiltration with large flat field bottoms. Modeling of this proposed scenario has shown that the reduction in flow rate entering the storm sewer system will help address the existing undersized pipes between the project area and the discharge apron near Taxiway E.

The existing storm sewer in the project area would be removed and replaced with new inlets to drain the regraded infields. In this alternative a new discharge pipe would be routed to the northeast, cross under Runway 13-31, and would discharge to a new infiltration basin. This routing would require a pavement cut and temporary closure of Runway 13-31. The existing pipe under Taxiway B could be filled with flowable fill to fill the pipe permanently without cutting the Taxiway B pavement. New pipes would be sized to convey the 10-year storm event.

This alternative disconnects the infield area from the terminal apron drainage corridor and the OUT-2 watershed which was shown in Chapter 1 of the drainage study to experience the worst flooding on the airfield. Instead, runoff will be discharged to the underutilized space in drainage area 0-6. Excavation will be required to allow the proposed pipe to outlet.

Improvement Item 3: Terminal Apron Airfield

Currently runoff from approximately 168 acres of airfield north and east of the terminal apron is routed through the narrow corridor between the terminal apron and Taxiway C. The stormwater infrastructure contributing to the terminal apron area was found to be in the worst condition and is likely the oldest on the airfield. These two factors make the area susceptible to flooding and pavement inundation. The goal of the solutions presented below is to address the condition of the infrastructure and to reroute runoff away from the terminal apron corridor.

The existing OUT-2 watershed will be split into two watersheds using Taxiway C4 as the dividing line. A new infiltration basin, the North Basin, will be constructed north of Taxiway E and will serve as a termination basin for the rerouted drainage areas. This basin will be sized to store and infiltrate runoff while preventing pavement inundation during the 100-year storm event. Creation of this basin will reduce conveyance requirements in front of the terminal apron, free up storage in the OUT-2 basin, and will reduce flooding in the infields adjacent to the terminal apron. The North Basin will need approximately 200,000 CF of storage with the current drainage patterns.

The watershed division will be achieved by abandoning the culvert under Taxiway C4 and filling it with grout. The culvert beneath Taxiway E will be removed and replaced with a culvert sloping to the north. Minimal grading may be required at the bottom of the infield between Taxiway C4 and Taxiway E to promote drainage north to the new culvert. The culvert under Taxiway C3 will continue to drain south; however, it is currently installed at a flat slope and will be replaced with twin culverts to provide sufficient capacity to protect the apron pavement.

There are currently three storm sewer lines that cross under Runway 18-36 and Taxiway C, which flow from east to west. Crossing 1 is north of Taxiway E and will discharge directly into the proposed North Basin. Crossing 2 is between Taxiway C3 and C4 while crossing 3 is south of Taxiway C3. The pipes in crossing 1 were found to be under capacity in the existing condition assessment; however, solutions presented address the pipe capacity by reducing or eliminating flow. This will allow pipelining to be used to address the poor condition of the pipe rather than replacement. The existing structures in poor condition will be replaced.

The existing pipes and structures east of Runway 18-36 will be removed and, if needed, infield bottoms will be regraded to drain to proposed inlet structures. The crossing 2 and crossing 3 pipes beneath Runway 18-36 will be reinforced with cure-in-place-pipe lining to address the poor condition and exceeded design life. The crossing 2 storm sewer line will be rerouted to the south, between Runway 18-36 and Taxiway C, with twin pipes and connected to crossing 3 to avoid the terminal apron area. The existing pipe under Taxiway C will be abandoned and filled with grout.

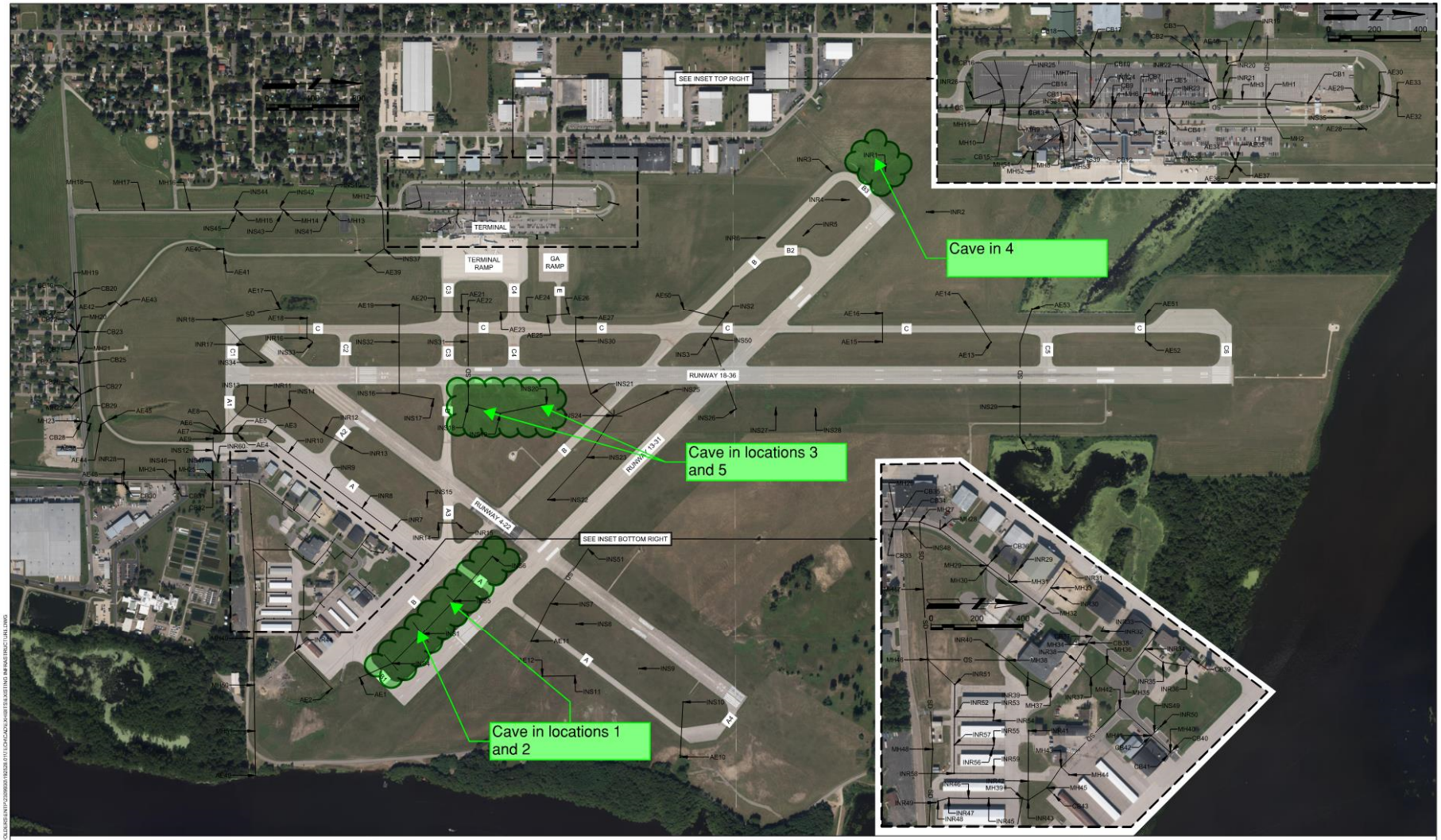
The crossing 3 pipe under Taxiway C will be replaced with twin pipes with sufficient capacity for the combined storm sewer lines. This alternative will require temporary closure of Taxiway C and Taxiway C3 for pavement cut, pipe installation, and repaving.

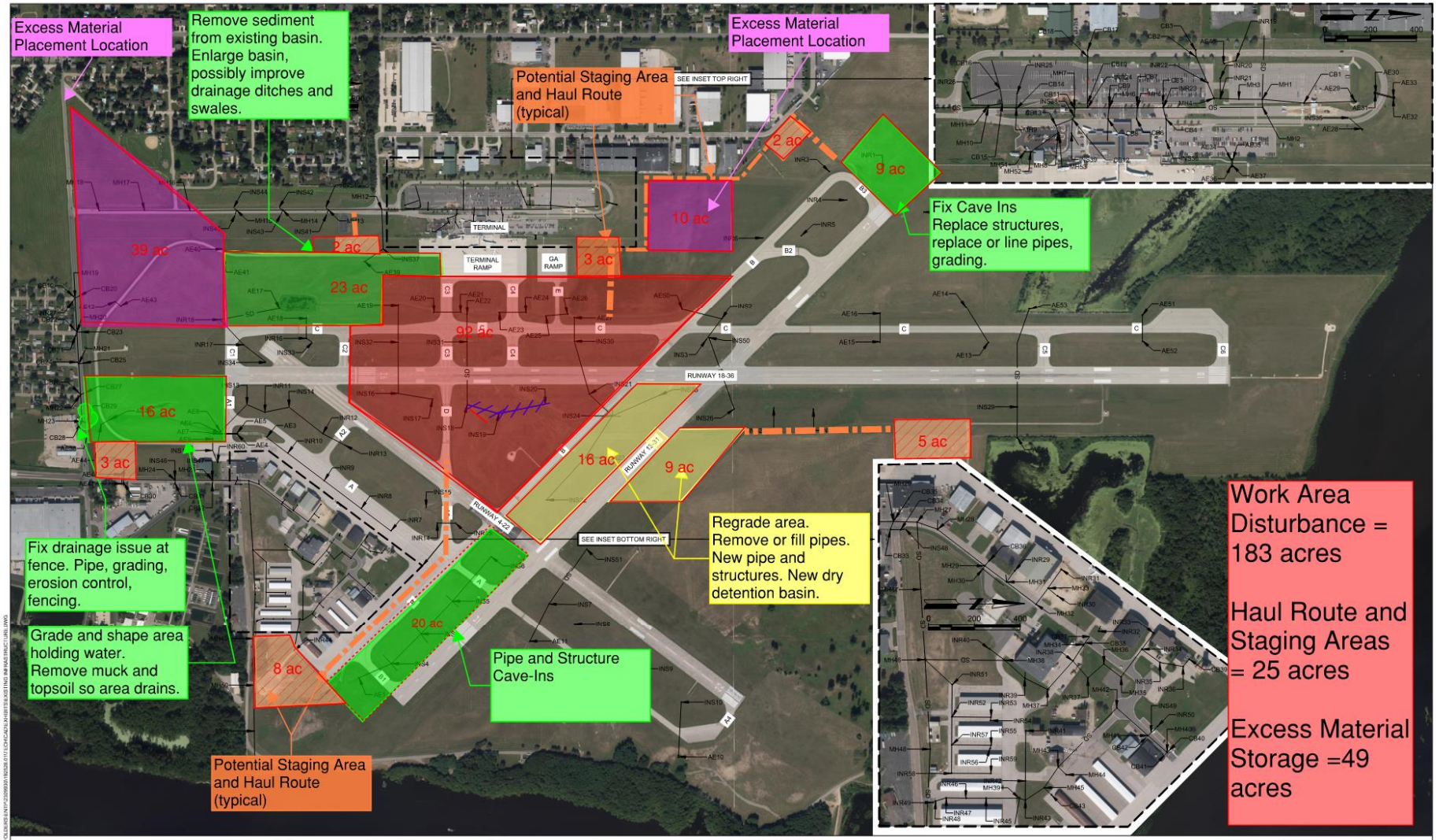
Improvement Item 4: Fanta Reed Road Outlet Pipe

La Crosse City storm sewer along Fanta Reed Rd discharges onto airport property between Fanta Reed Rd and the perimeter road, just south of the OUT-1 basin. The discharge apron is approximately 25 feet outside of the security fence and discharges water toward the fence. The discharge pipe was found to have a relatively steep slope resulting in a high discharge velocity. Airport personnel have observed continued erosion and fence damage at this outlet, despite repair efforts. To address this issue discharge velocities must be decreased, and erosion control must be installed to dissipate energy and resist scour. Two solutions were presented in the drainage report and are shown on Exbibit A20.

The preferred alternative will remove the existing concrete apron and a portion of the existing pipe. A new manhole structure will be installed on the slope from Fanta Reed Rd and will be connected to the existing storm sewer. A new pipe will extend from the new manhole to a new apron north of the security fence. The new pipe will be installed at a flatter slope than the existing pipe, which will help to reduce discharge velocity. The new outlet will be protected with turf reinforcement mat overlaid with erosion control mat.

A berm will need to be graded along the length of the pipe to provide sufficient cover. This will require the existing fence to be removed and reinstalled over the new surface. Maximum slopes shall be kept small to allow fence installation.


SEE INSET TOP RIGHT
Cave in 4
Cave in locations 3 and 5
SEE INSET BOTTOM RIGHT
Cave in locations 1 and 2
TERMINAL
TERMINAL RAMP
GA RAMP
RUNWAY 18-36
RUNWAY 13-31
RUNWAY 4-22
LA CROSSE REGIONAL AIRPORT
DRAINAGE STUDY
CLIENT PROJECT #
2309930-192528.01
XX/XX/XXXX
EXISTING STORM WATER INFRASTRUCTURE
EXHIBIT A1



La Crosse Regional Airport

LA CROSSE REGIONAL AIRPORT DRAINAGE STUDY

CLIENT PROJECT # 2309930-192528.01 XX/XX/XXXX

LSE Drainage Project: Preliminary Work Areas, Haul Routes and Staging Areas

Mead & Hunt

Exhibit A-2

La Crosse Regional AIRPORT

Low Stress Experience

June 12, 2025

Hanan Mustafa
Federal Aviation Administration
2300 E Devon Ave, Room 320
Des Plaines, IL 60018-4696

Andrew Trimble
Wisconsin Department of Transportation
4822 Madison Yards Way, 5th floor South
Madison, WI 53705-9100

Subject: ***Airport Storm Drain Improvements – Design (100%) Plans***

Dear Ms. Mustafa and Mr. Trimble:

Please consider this letter notice of La Crosse Regional Airport's intent to obligate 100-percent airport capital budget funding to complete the *Airport Storm Drain Improvements, Phases 1, 2, and 3 Preliminary* and *Final Design* plans in an amount not to exceed $350,000.

Total project design cost is budgeted at $350,000 with FAA contributing $332,500 (95%), BOA contributing $8,750 (2.5%), and the Airport contributing $8,750 (2.5%).

Our intent is to complete the *Preliminary and Final Design* to release the project for bidding in early 2026, subject to FAA and BOA providing notice to proceed, prior to the start of the 2026 construction season. FAA, BOA, Mead & Hunt and the Airport have agreed upon the final design contract amount (attached). This project will use a portion of LSE's 2023 Entitlement grant.

Per our discussions, FAA and BOA agree to reimburse the Airport for FAA's ninety-five percent share and the State's two and a half percent share of eligible design costs through the construction grant.

Sincerely,

Jeffrey S. Tripp

Jeffrey S. Tripp, A.A.E.
Airport Director

CC: Shaundel Washington-Spivey, Mayor
La Crosse Regional Airport Aviation Board
Chad Hawkins, La Crosse Finance Director

Attachment: Mead & Hunt Engineer's Estimate of Probable Design Cost

LA CROSSE LSE REGIONAL AIRPORT

La Crosse Regional AIRPORT

Low Stress Experience

June 17, 2025

Honorable Mayor Shaundel Washington-Spivey
Common Council Members

Ladies and Gentleman:

The Aviation Board, at their last regular meeting, approved by unanimous vote, the *Resolution approving funds to design the Airport Storm Drainage System Improvements* project.

Therefore, it is respectfully requested that the Common Council approve the same.

Respectfully Submitted,

Jeffrey S. Tripp

Jeffrey S. Tripp, A.A.E.
Airport Director

2850 Airport Road, La Crosse, WI 54603 • **Phone:** 608-789-7464 • **Fax:** 608-789-7469 • lseairport.com