

PROJECT LOCATION

CONSULTANT:

IOWA DEPARTMENT OF  
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION

LAGOON LINER REPLACEMENT

MAQUOKETA CAVES STATE PARK

JACKSON COUNTY

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
24-06-49-01

CHK'D BY: DATE:

SHEET No:

2

TWO HALF ACRE  
WASTEWATER LAGOONS



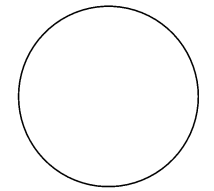
NOTES:

THE LAGOONS WILL BE LOWERED TO 2 FT. DEPTH BY DNR

AFTER THE LAGOONS HAVE BEEN LOWERED TO 2' DEPTH,  
THE CONTRACTOR WILL REMOVE BIOSOLIDS AND HAUL  
THEM FOR LAND APPLICATION AS PER IOWA STATE STANDARDS.

THE EXISTING LINER WILL BE REMOVED AND HAULED TO  
A LAND FILL FOR DISPOSAL.

CONSULTANT:

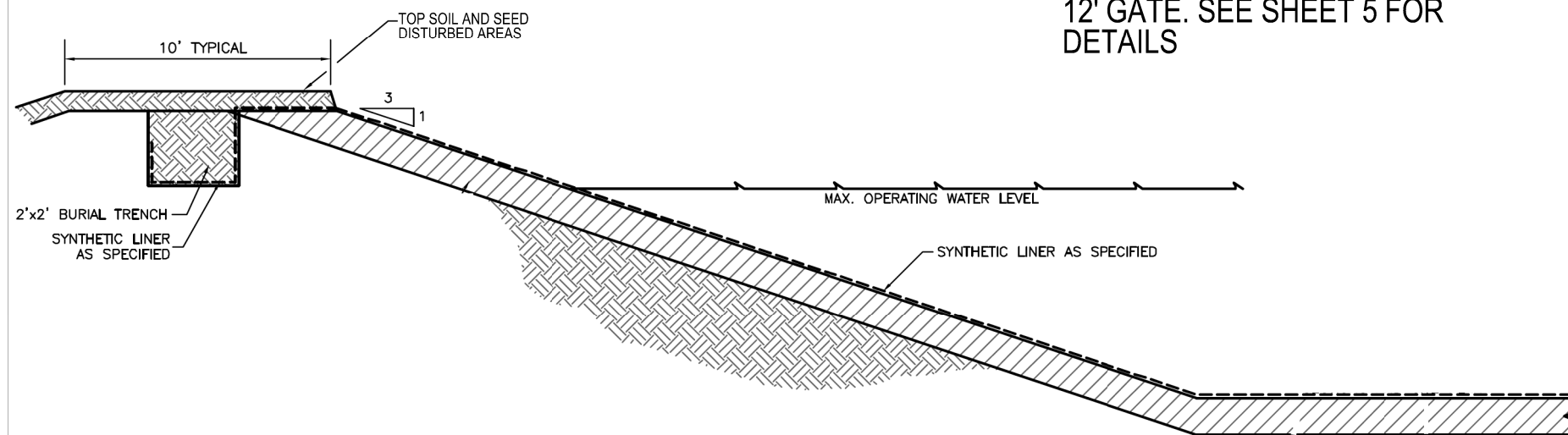


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12' WIDE CHAIN LINK GATE

REMOVE 1,300 FT. OF EXISTING  
FENCE & REPLACE IT WITH NEW  
8' TALL CHAIN LINK FENCE AND  
12' GATE. SEE SHEET 5 FOR  
DETAILS



**TREATMENT POND-TYPICAL SECTION**  
NOT TO SCALE

**LAGOONS AND LINER**

LAGOON LINER REPLACEMENT

MAQUOKETA CAVES STATE PARK

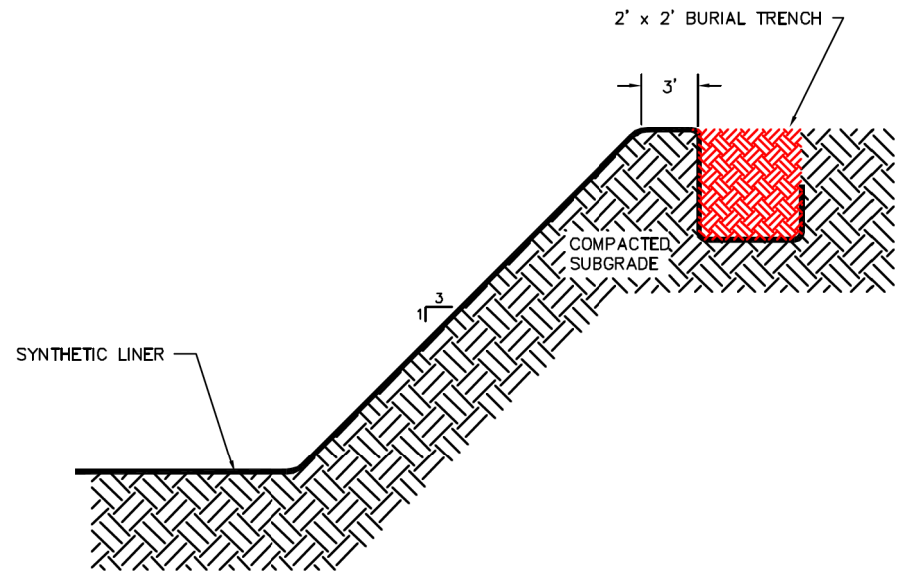
JACKSON COUNTY

NO.	BY	REVISION

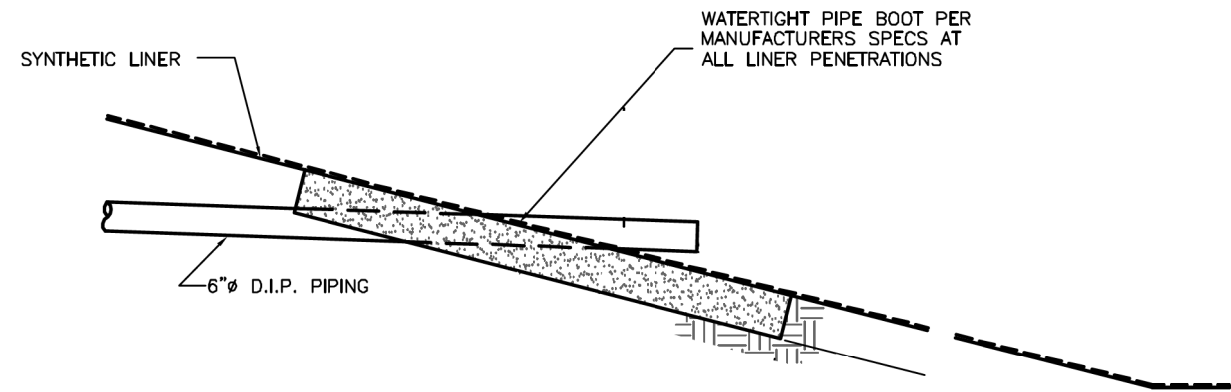
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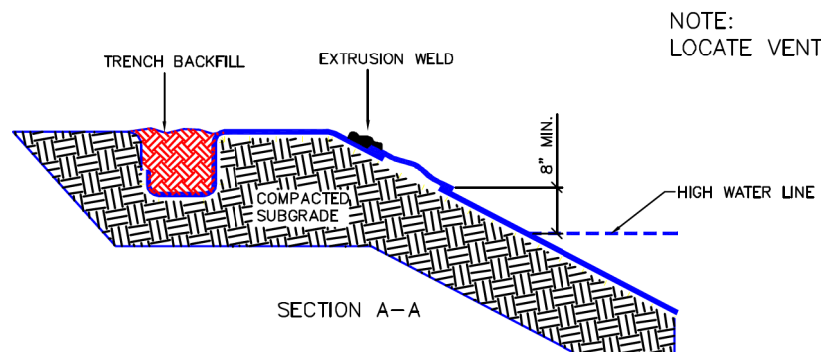
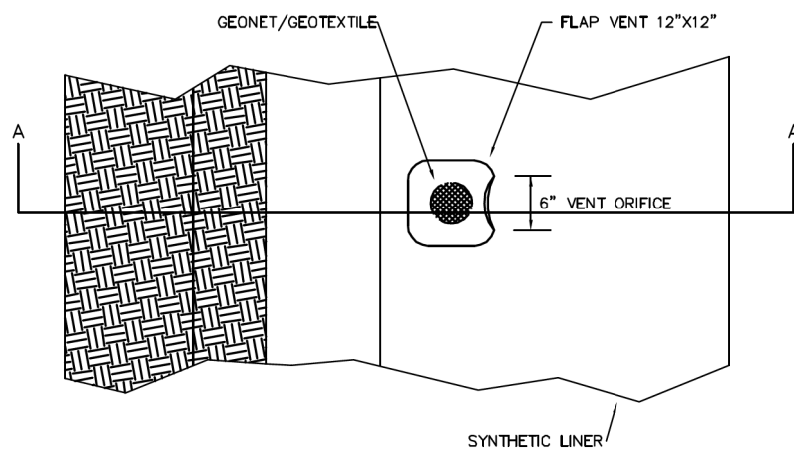
SHEET No:



**LINER ANCHOR DETAIL**

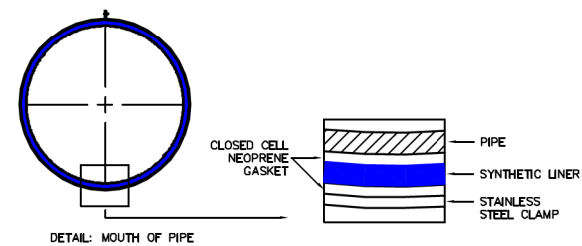
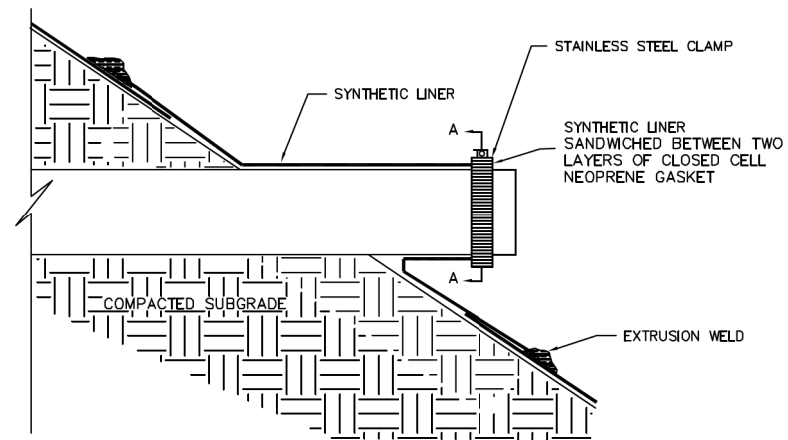


**TYPICAL LAGOON PIPING**  
NOT TO SCALE



NOTE:  
LOCATE VENTS EVERY 50'

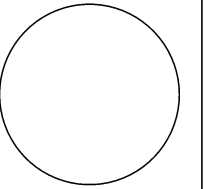
**FLAP VENT DETAIL**



SECTION A-A

**PIPE PENETRATION DETAIL**

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**LINER INSTALLATION DETAILS**

LAGOON LINER REPLACEMENT

**MAQUOKETA CAVES STATE PARK**

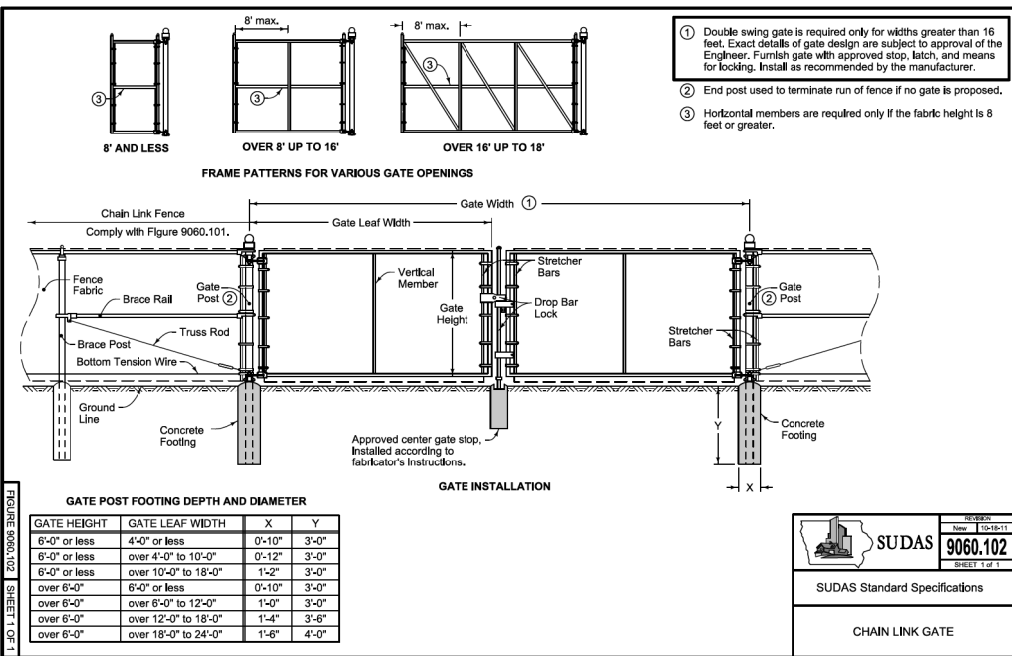
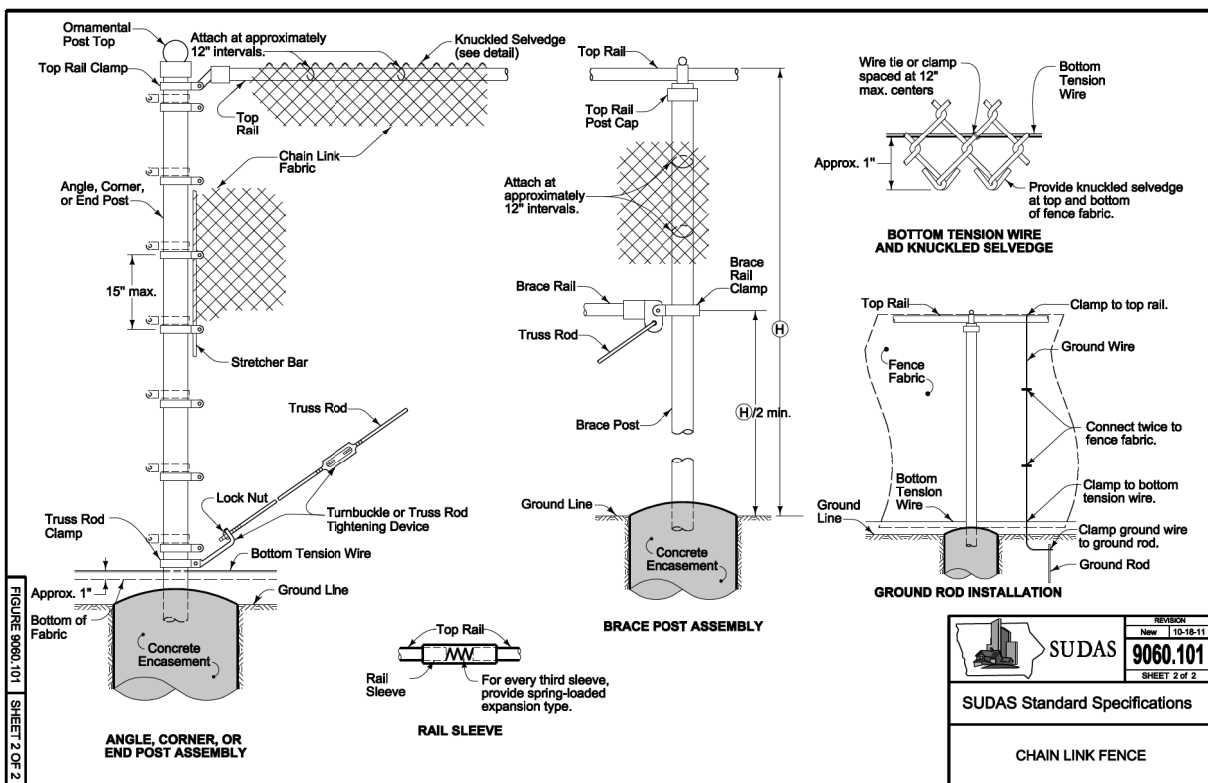
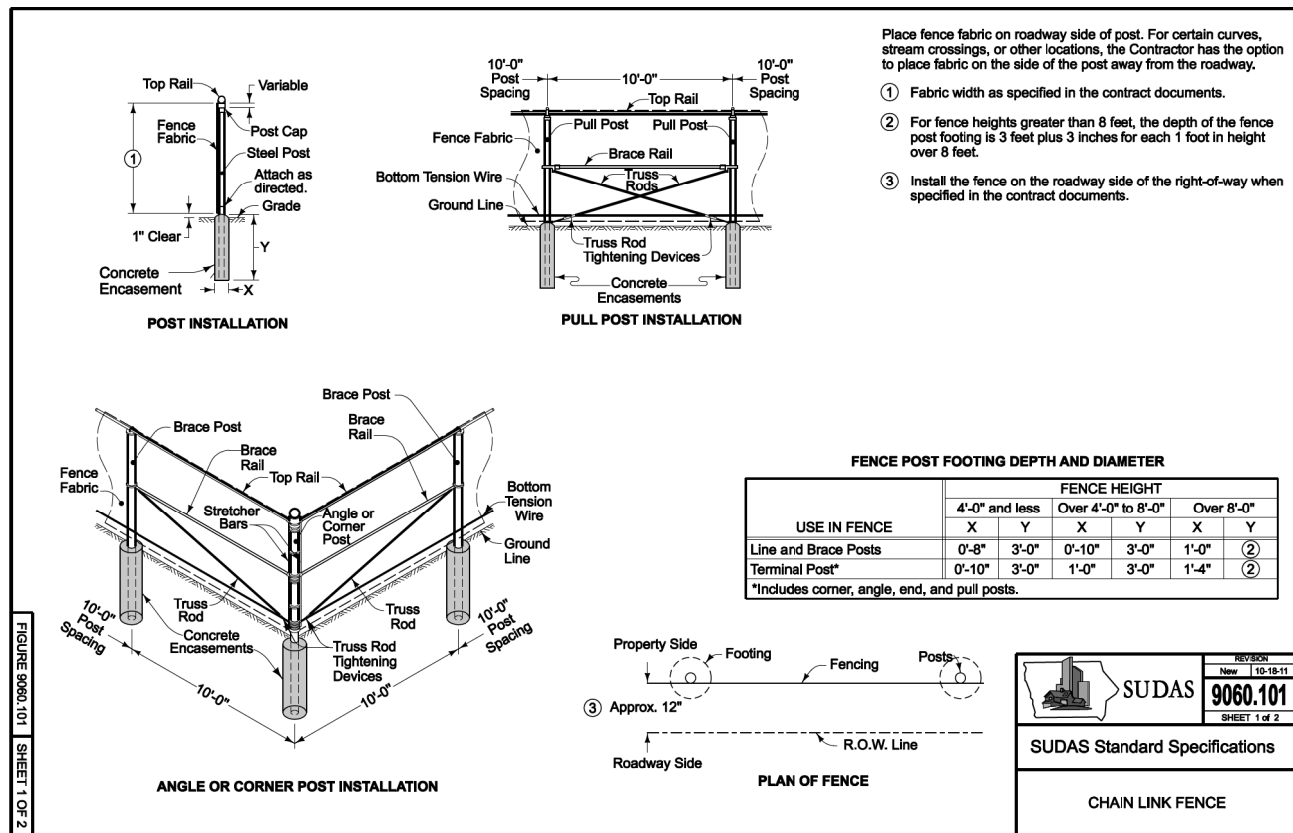
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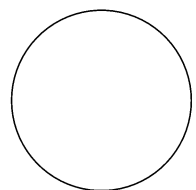
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CHAIN LINK FENCE

LAGOON LINER REPLACEMENT

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**ESTIMATED PROJECT QUANTITIES**

ITEM NO.	ITEM	UNIT	TOTAL
1	Mobilization	LS	1
2	Biosolid Removal & Disposal	GALLONS	360,000
3	Removal & Disposal of Existing Liner	LS	1
4	New Liner & Installation	LS	1
	ATLERNATES		
5	Remove & Replace Existing Fence with 8 FT. High Chain Link Fence	LF	1300
6	12 ft. Wide Fence Gate	LS	1

**ESTIMATE REFERENCE INFORMATION**

ITEM NO.	DESCRIPTION
2.	A. Iowa DNR will lower the lagoons to 2' level. Contractor will be responsible for pumping, hauling and land application of Biosolds as specified in section 11380 of the specifications. Contractor is also responsible for testing and reporting to Iowa DNR Field Office 1 in Manchester Phone 563-927-2640.
3.	A. Contractor will remove and dispose of the old liner to a landfill.
4.	A. Refer to section 02661 of the specification.
5,6	A. Refer to Division 9 Section 9060 of SUDAS. Contractor is responsible for disposal of old fence.

**GENERAL NOTES**

Verify actual locations and elevations with DNR Engineer.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

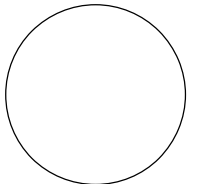
It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.

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**QUANTITIES AND GENERAL INFORMATION**

LAGOON LINER REPLACEMENT  
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