


**Iowa Department of Natural Resources**  
Engineering Section - 6200 Park Ave., Suite 200 Des Moines, IA 50321-1270

### Project Location

The map displays the project location in Harlan County, Iowa. The county is outlined in black, and the project area is highlighted in red. The map includes Harlan, Kimballton, Elk Horn, and Walnut. Key roads shown are IA-44, US-59, Road M47, and Interstate 80. Prairie Rose State Park is also marked. An inset map shows the location of Harlan County within the state of Iowa.

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

 Digitally signed by Zach Gunsolley  
DN: C=US, E=zach.gunsolley@dmr.iowa.gov,  
CN=Zach Gunsolley  
Date: 2025.12.15 08:38:28-06'00'

Zach Gunsolley Date  
License Number: 18702  
My license renewal date is December 31, 2027  
Pages or sheets covered by this seal:  
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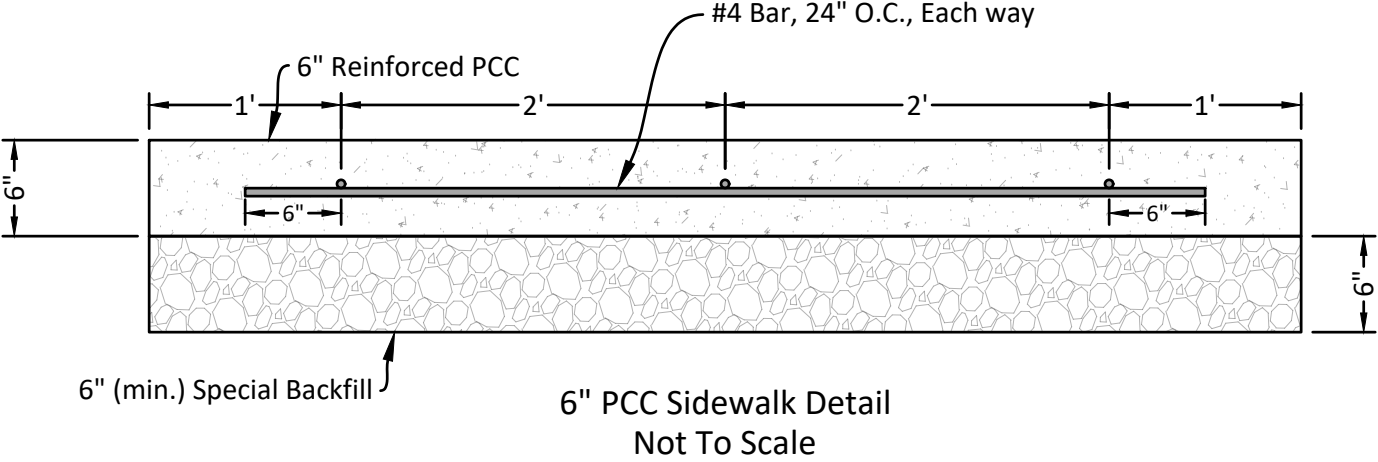
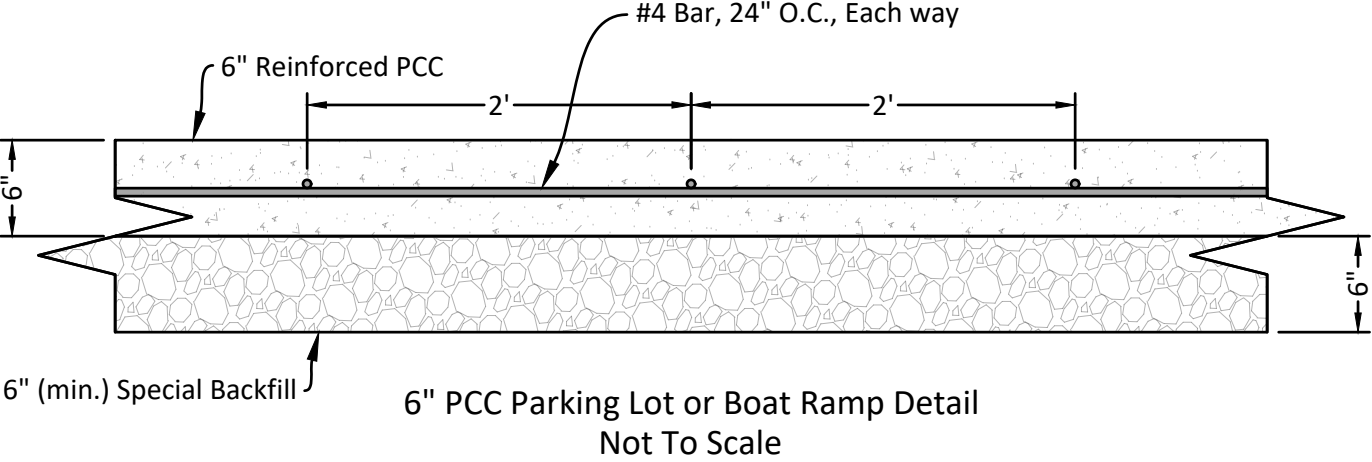
## South Boat Ramp Improvements Prairie Rose State Park, Shelby County



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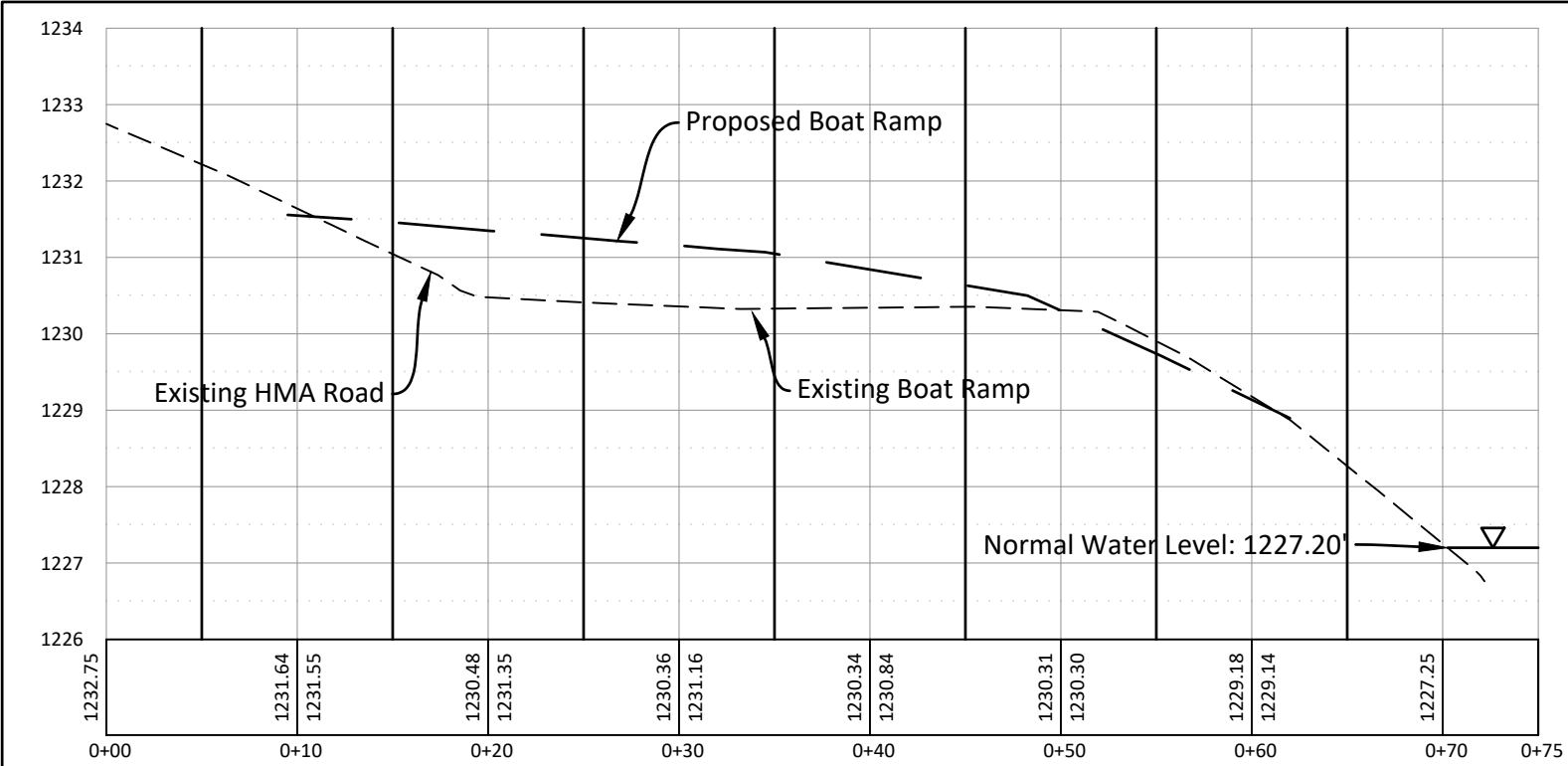


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- Notes:
- 1. Minimum Lap Splice Length shall be 12".
  - 2. Special Backfill - Place with variable depths, minimum 6", to reach the proposed subgrade for new ramp, parking lot and sidewalk . Maximum 6" lifts.

Existing and Proposed Boat Ramp Profile



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Quantities			
Item	Description	Quantity	Unit
1	Mobilization	1	LS
2	Pavement Removal, Boat Ramp	70	SY
3	Pavement Removal, Parking Lot	178	SY
4	Pavement Removal, Sidewalk	22	SY
5	Special Backfill	155	Tons
6	Revetment, Class E	13	Tons
7	6" Reinforced PCC Boat Ramp	87	SY
8	6" Reinforced PCC Parking Lot	172	SY
9	6" Reinforced PCC Sidewalk	12	SY
10	Erosion Control Waddle	80	LF
11	Site Restoration	1	LS
12	Traffic Control	1	LS
13	Construction Staking	1	LS

Estimate Reference Information			
2.	Pavement Removal, Boat Ramp - Shall include removal of existing PCC boat ramp. Sawcutting of concrete and rebar shall be incidental. Offsite disposal shall be incidental. Refer to Iowa DOT Specification 2510.	10.	Erosion Control Waddle - Install and maintain 9" straw waddles around disturbed areas to prevent sediment from leaving the site or entering the lake. Remove after completion.
3.	Pavement Removal, Parking Lot - Shall include removal of existing PCC/HMA parking lot/road pavement. Sawcutting shall be incidental. Offsite disposal shall be incidental. Refer to Iowa DOT Specification 2510.	11.	Site Restoration - All disturbed areas shall receive seeding, mulch, and watering per Iowa DOT Specification 2601. No fertilizer shall be used. Use the Permanent Urban seed mixture. Seeding shall occur between March 1 and May 31. Grading of topsoil fillets between the edge of new pavement and the existing ground shall be incidental to site restoration.
4.	Pavement Removal, Sidewalk - Shall include removal of existing PCC Sidewalk. Sawcutting shall be incidental. Offsite disposal shall be incidental. Refer to Iowa DOT Specification 2511.	12.	Traffic Control - Close south boat ramp with Type III barricades during construction. Coordinate closure with DNR Engineer. Refer to Iowa DOT Specification 2528.
5.	Special Backfill - Furnish and place special backfill as necessary after pavement removal to bring subbase to required depth. Minimum depth 6". Maximum 6" lifts. Refer to Iowa DOT Specification 2102.	13.	Construction Staking - The contractor shall be responsible for construction staking. The survey of the existing ground was completed with NAD 1983 (2011)/Iowa State Plane South (ftUS) and NAVD88(GEOID18) (ftUS) datums. No control was set.
6.	Revetment, Class E - Furnish and install revetment stone along the edge of the ramp as directed by the DNR Engineer. Refer to Iowa DOT Specification 2507.		
7.	Boat Ramp, Reinforced PCC, 6" - Cast in place. Iowa DOT C4 Mix shall be used, Class 2 durability is required. <ul style="list-style-type: none"><li>Reinforcement shall be #4 Grade 40 deformed steel bars, placed on 24" centers, each way, supported by chairs or blocks. Epoxy coating is not required. Reinforcement shall be tied into existing boat ramp slab.</li><li>Expansion joints and sealant between slabs shall be incidental. Concrete shall have grooved finish to match existing slabs.</li></ul>		
8.	Parking Lot, Reinforced PCC, 6" - Cast in place. Iowa DOT C4 Mix shall be used, Class 2 durability is required. <ul style="list-style-type: none"><li>Reinforcement shall be #4 Grade 40 steel bars, placed on 24" centers, each way, supported by chairs or blocks. Epoxy coating is not required. Rebar shall be continuous with adjacent sidewalk reinforcement.</li><li>Joints shall be sawcut at 12' maximum spacing and sealed. Expansion joints and sealant between the parking lot and sidewalk/boat ramp shall be incidental.</li></ul>		
9.	Sidewalk, Reinforced PCC, 6" - Cast in place. Iowa DOT C4 Mix shall be used, Class 2 durability is required. Refer to Iowa DOT Specification 2511. <ul style="list-style-type: none"><li>Reinforcement shall be #4 Grade 40 steel bars, placed per detail, supported by chairs or blocks. Epoxy coating is not required. Rebar shall be continuous with adjacent parking lot reinforcement.</li><li>Joints shall be sawcut at 6' maximum spacing and sealed. Expansion joints and sealant adjacent to the parking lot or existing sidewalk shall be incidental.</li></ul>		



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# General Information

- 1. Verify actual locations and elevations with DNR Engineer.
- 2. All work shall conform to and be performed in accordance with all applicable codes and ordinances.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

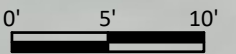
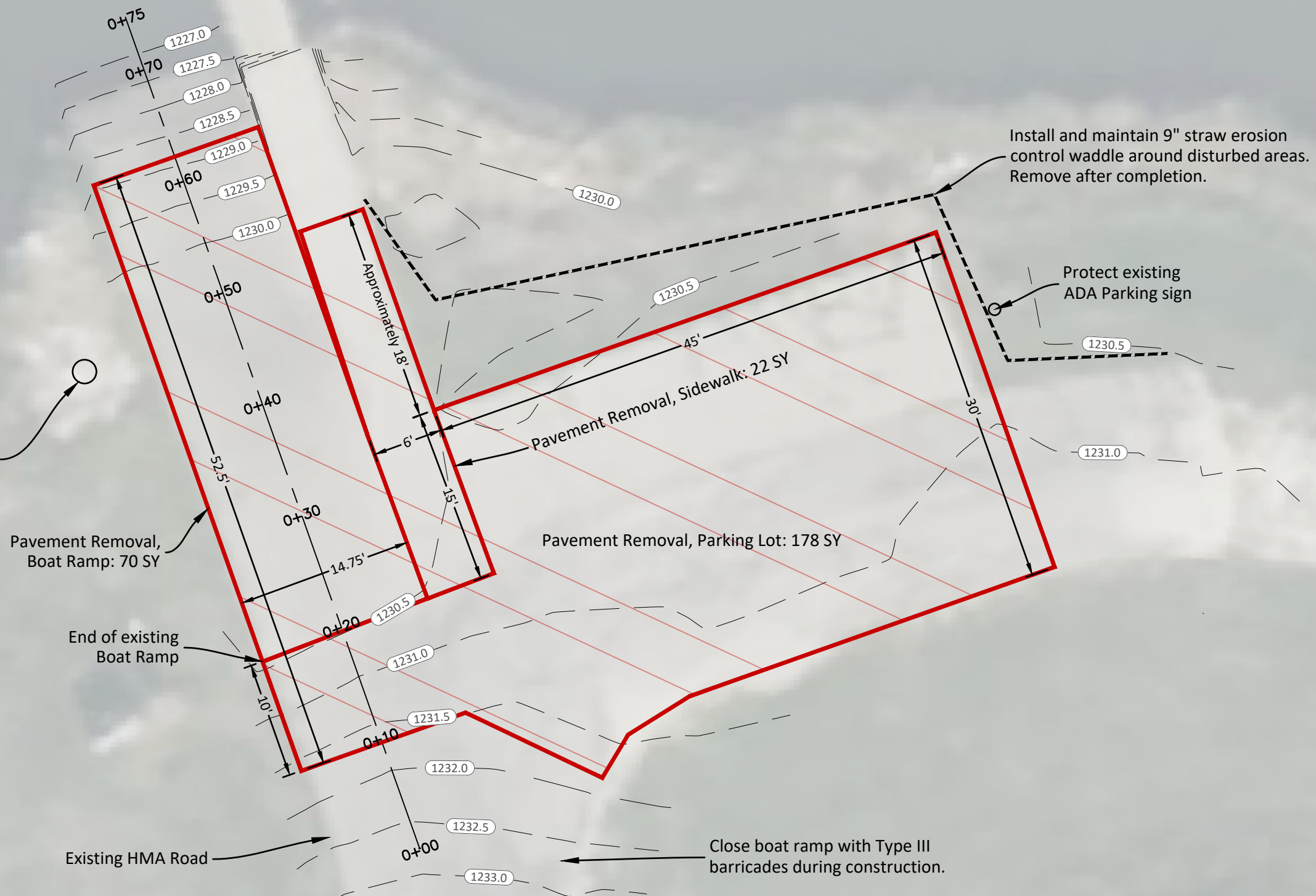


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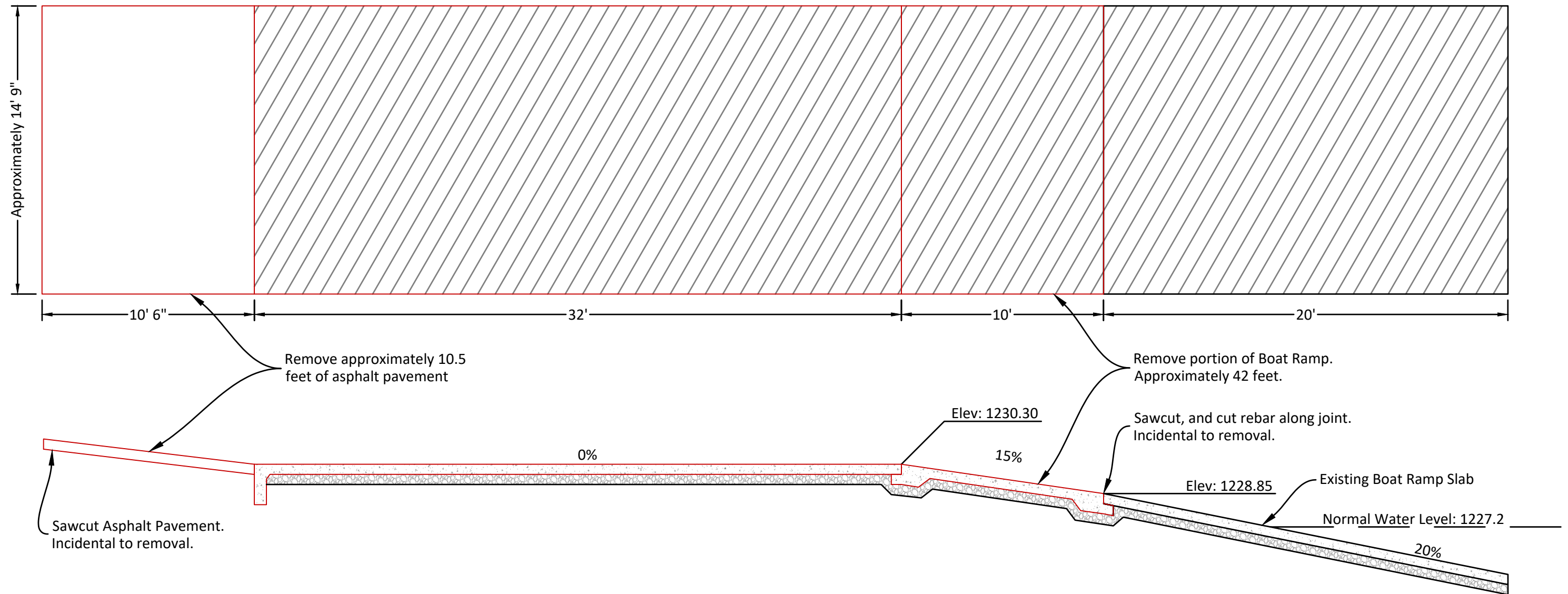
Protect existing dry Hydrant. Ensure dry hydrant is accessible to fire department vehicles at all times, coordinate with DNR Field Engineer.





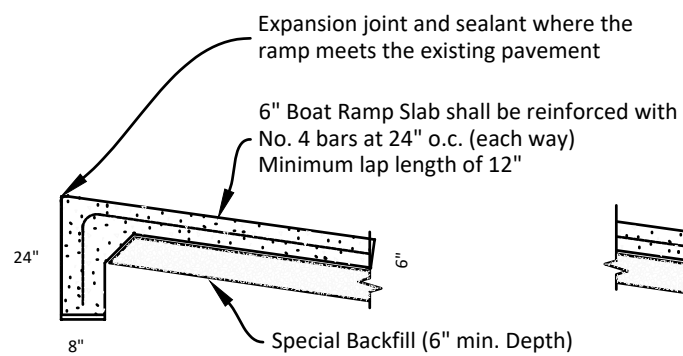
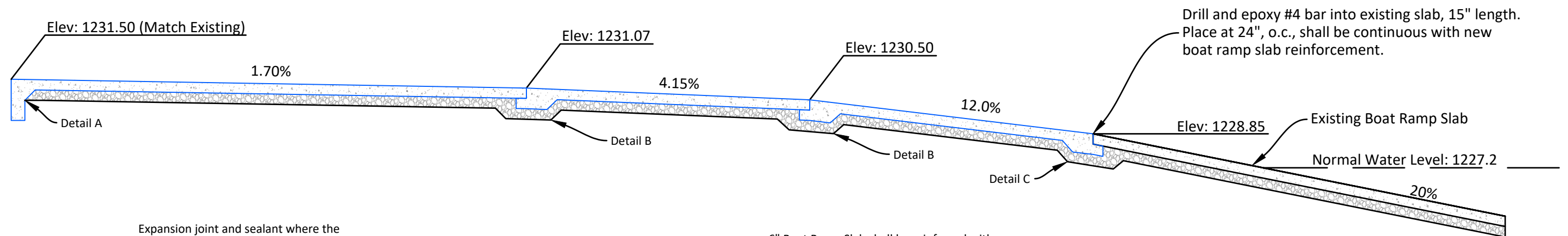
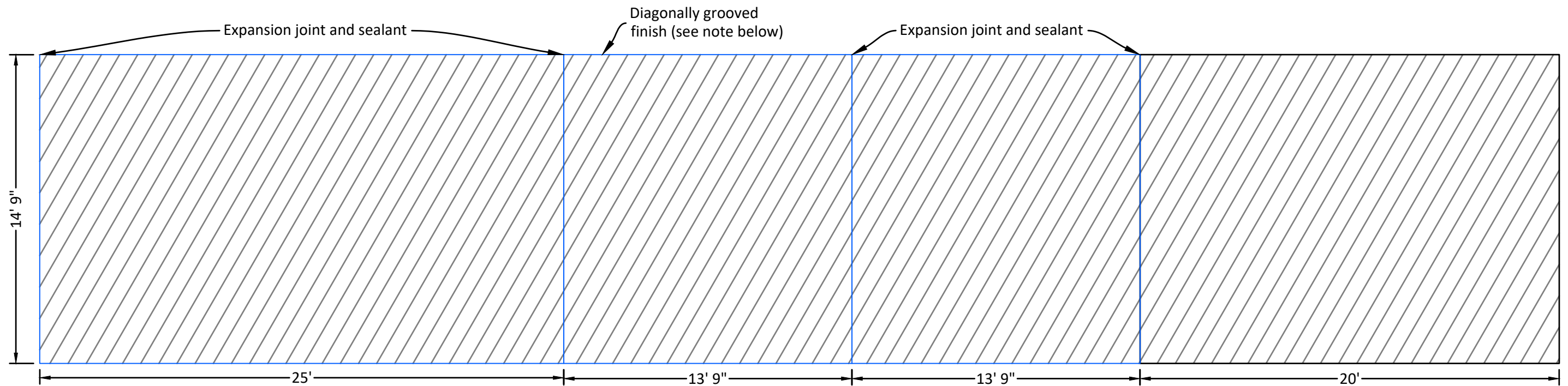


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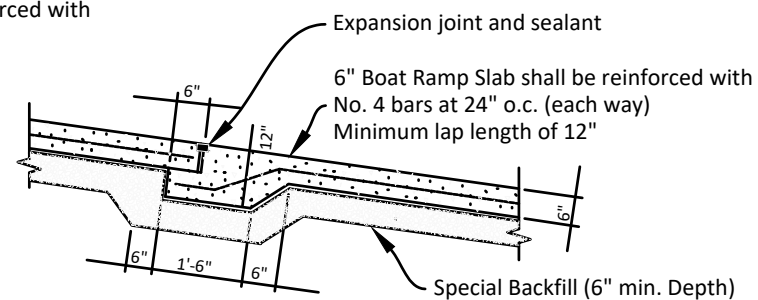




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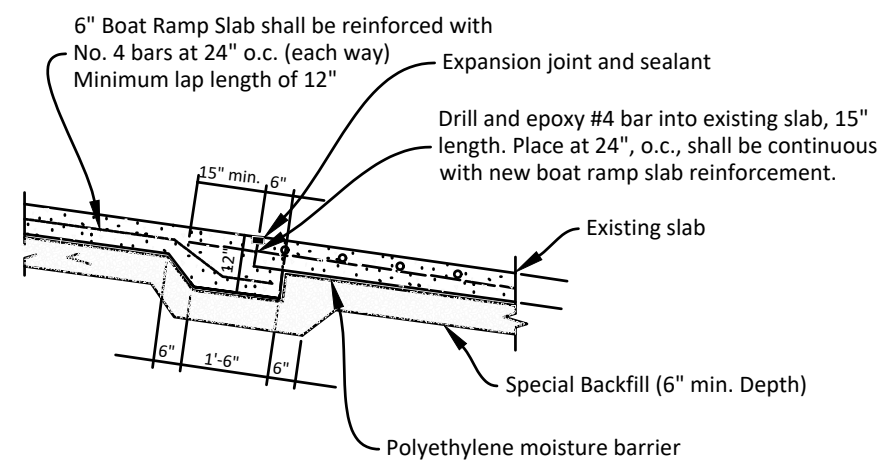


Detail A  
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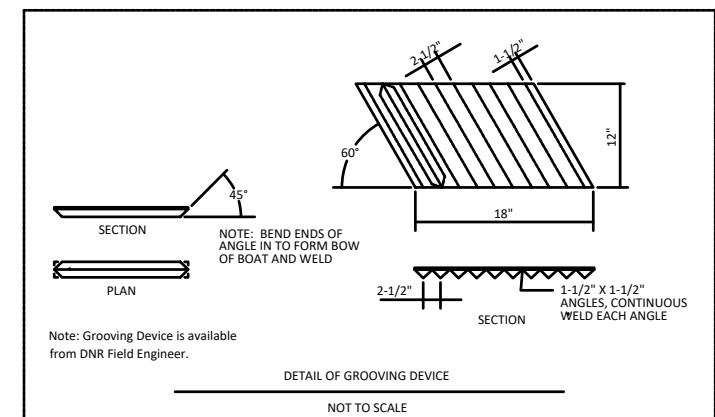


Detail B  
Not to scale

Note:  
Expansion joint material,  
reinforcing steel, and tie  
bars to be incidental to  
boat ramp bid item.



Detail C  
Not to scale



Note: Ramp finish shall be grooved diagonally to form a non-skid surface - min 1" depth, max. 2-1/2 between grooves and/or as directed by the inspector. On river ramps, grooves shall slope towards downstream side. **Grooving Device may be obtained from the DNR Field Engineer.**