

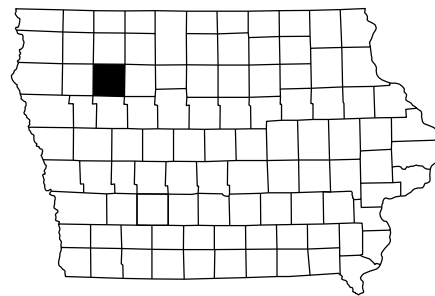
IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS FOR STORM LAKE MARINA PAVEMENT STRIPING AND REPAIR

BUENA VISTA COUNTY, IOWA

PROJECT # 24-01-11-02

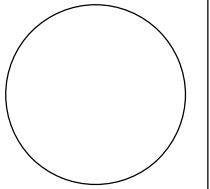
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|--|---|
| | I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME UNDER THE LAWS OF THE STATE OF IOWA. |
| | SIGNATURE _____ DATE _____ HEATH B. DELZELL PRINTED OR TYPED NAME MY LICENCE RENEWAL DATE IS DECEMBER 31, 20 <u>25</u> PAGES COVERED BY THIS SEAL: <u>All</u> |



SHEET INDEX

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CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



COVER SHEET

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

| NO. | BY DATE | REVISION |
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A.01

DIRECTORY

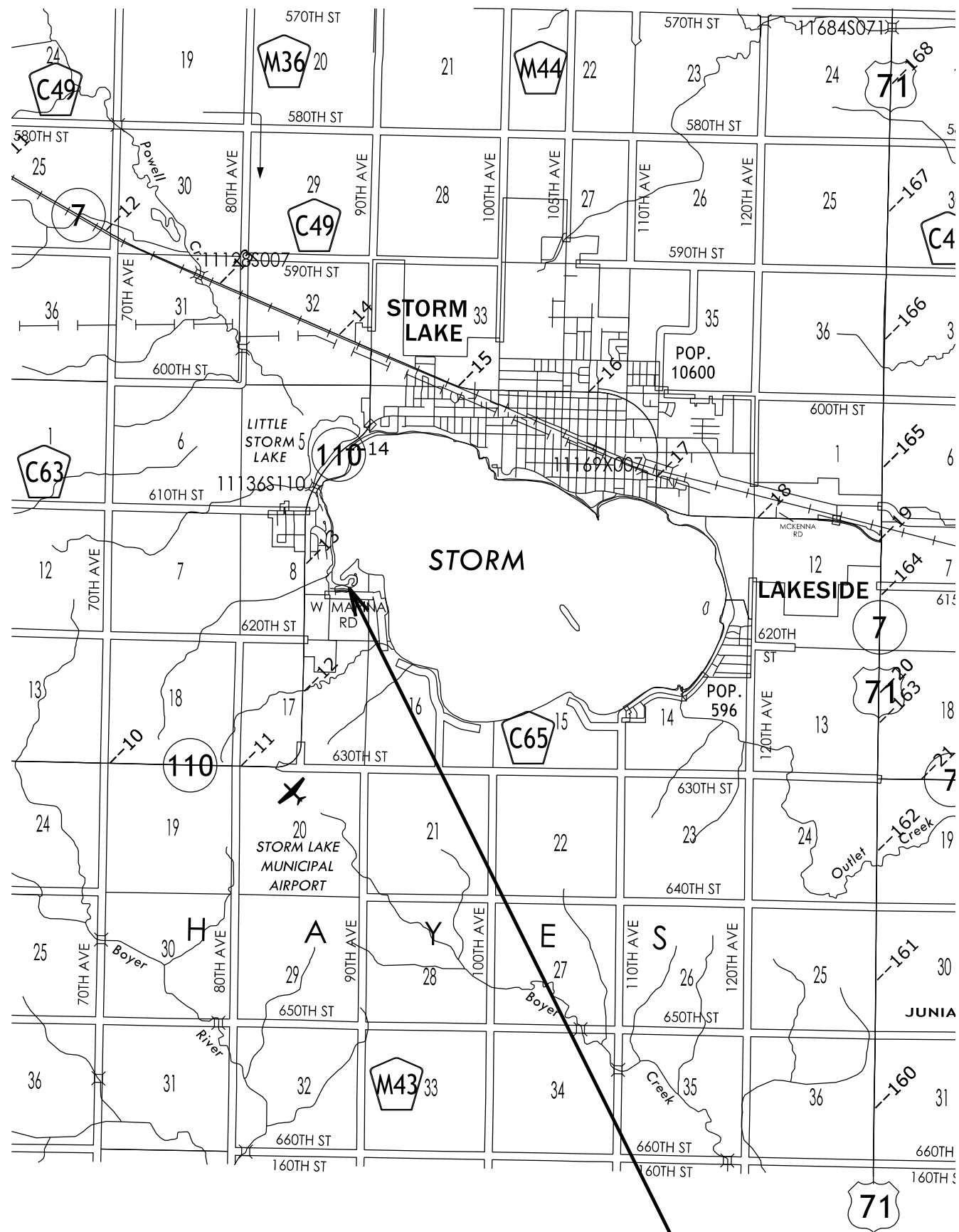
| PROJECT MANAGER | | CONSTRUCTION INSPECTOR | |
|------------------|--------------------------------------|------------------------|--------------------------------------|
| COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES |
| ADDRESS | 502 EAST 9TH STREET | ADDRESS | |
| CITY, STATE, ZIP | DES MOINES, IA, 50319 | CITY, STATE, ZIP | |
| CONTACT | HEATH DELZELL | CONTACT | JEFF FELTS |
| TELEPHONE | 515-979-0104 | TELEPHONE | 515-250-3712 |
| FAX | 515-281-8685 | FAX | |
| EMAIL | heath.delzell@dnr.iowa.gov | EMAIL | jeff.felts@dnr.iowa.gov |

PROJECT DESCRIPTION

This project consists of striping the parking lot, replacing two sections of permeable brick pavers with concrete, constructing an ADA curb ramp to the ramp dock, removing and disposal of the fish cleaning station, reconfiguring and relocating the courtesy dock, and installing ADA parking signage.

AUTHORIZATION TO BID

| | |
|---|------|
| AUTHORIZATION - PARKS WILDLIFE FISHERIES LAW ENFORCEMENT FORESTRY | DATE |
| | |
| ENGINEERING BUREAU CHIEF | DATE |

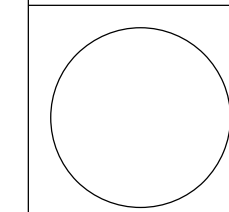


R-37W

PROJECT LOCATION



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



PROJECT LOCATION MAP

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

NO. BY DATE REVISION

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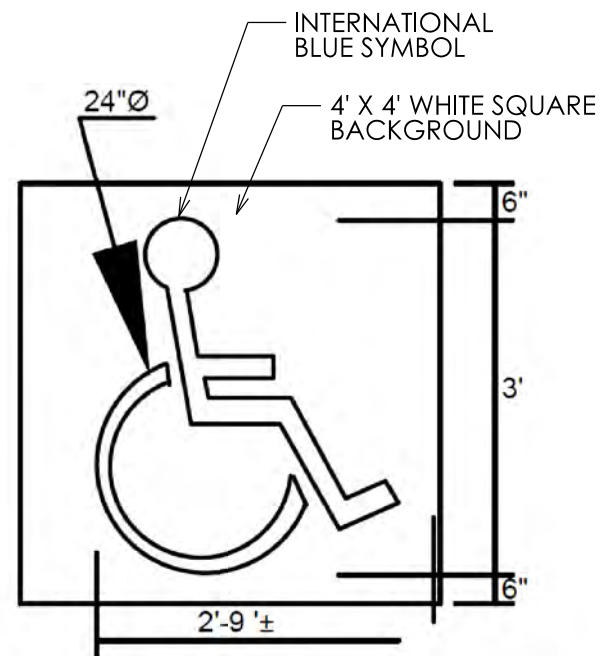
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A.02

BOTTOM EDGE OF THE PAVEMENT MARKING SHALL BE 2' FROM THE ENTRANCE OF THE PARKING SPACE



**HANDICAP PARKING
PAVEMENT MARKING**
NOT TO SCALE

MUTCD R7-8
SOLID GREEN LEGEND
AND BORDER
REFLECTIVE WHITE
BACKGROUND
WHITE ACCESSIBILITY
SYMBOL ON
BLUE BACKGROUND



1'-6"

MUTCD R7-8P
SOLID GREEN LEGEND
AND BORDER
REFLECTIVE WHITE
BACKGROUND
REQUIRED FOR VAN
ACCESSIBLE
SPACES ONLY



6"

"U"-CHANNEL
POST (2 LBS./FT.)

7'

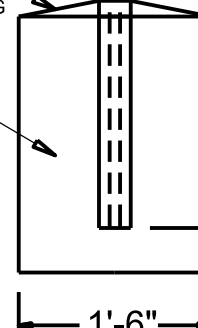
USE 6" PIPE BOLLARD
FILLED W/CONCRETE
AND PAINTED TRAFFIC
YELLOW ONLY WHEN
SIGN IS IN PAVED AREA
OR SIDEWALK

3'

SLOPE TOP OF
CONCRETE

GROUND/PAVING
SURFACE

3500 P.S.I. P.C.
CONCRETE
(WHEN PIPE
BOLLARD IS NOT
INSTALLED,
FOUNDATION
NOT REQUIRED)



3'

6"

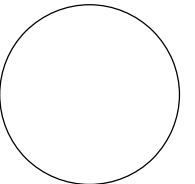
1'-6"

NOTES

1. 12"x18" ACCESSIBILITY SIGN (R7-8) SHALL BE MOUNTED 7' FROM FINISH GRADE TO BOTTOM EDGE OF SIGN FACE. MOUNTING HEIGHT MAY BE REDUCED TO 5' IF PLACED IN A LANDSCAPE AREA IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.
2. BOLLARD MAY BE OMITTED IF INSTALLED IN LANDSCAPE AREAS. WHEN INSTALLED IN LANDSCAPE AREAS, MOUNTING POST SHALL BE DRIVEN A MINIMUM OF 3' BELOW FINISHED GRADE. ALTERNATE MOUNTING POSTS MUST BE APPROVED BY THE FIELD INSPECTOR PRIOR TO CONSTRUCTION.
3. SIGNAGE SHALL BE INSTALLED IN FRONT OF EACH ACCESSIBLE SPACE, CENTERED ON THE WIDTH OF THE SPACE.
4. REFER TO AMERICANS WITH DISABILITIES ACT AND ARCHITECTURAL BARRIERS ACT ACCESSIBILITY GUIDELINES (ADAAG), LATEST EDITION, FOR REQUIRED NUMBER OF ACCESSIBLE SPACE. PER ADAAG, ONE VAN ACCESSIBLE SPACE SHALL BE PROVIDED, MINIMUM, WITH ADDITIONAL VAN ACCESSIBLE SPACES PER ADAAG REQUIREMENTS.
5. ALL SIGNAGE SHALL BE ENGINEER GRADE .080 ALUMINUM REFLECTIVE SIGN MEETING THE REQUIREMENTS OF THE MUTCD AND ADAAG.

HANDICAP SIGN DETAIL
NOT TO SCALE

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



TYPICAL CROSS SECTIONS AND DETAILS

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

NO. BY DATE REVISION

DATE

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DRAWN BY: PROJECT NUMBER:
24-01-11-02

CHK'D BY: DATE:

SHEET NO:

B.01

ESTIMATED PROJECT QUANTITIES

| ITEM NO. | ITEM | UNIT | TOTAL |
|----------|--|----------|-------|
| 1 | Mobilization | Lump Sum | 1 |
| 2 | Construction Staking | Lump Sum | 1 |
| 3 | Pavement Removal | SY | 10 |
| 4 | Paver Removal | SY | 112 |
| 5 | Remove Curb | Lump Sum | 1 |
| 6 | Remove and Replace Curb and Gutter | LF | 107 |
| 7 | Excavation, Core Out | CY | 2 |
| 8 | Special Backfill | Tons | 3 |
| 9 | 6" PCC (parking) | SY | 110 |
| 10 | 5" PCC (sidewalk) | SY | 10 |
| 11 | Truncated Domes | SF | 20 |
| 12 | Pavement Striping Removal | LF | 2,212 |
| 13 | Pavement Symbol Removal | Each | 13 |
| 14 | Pavement Striping | LF | 6,763 |
| 15 | ADA Pavement Symbol | Each | 13 |
| 16 | ADA Parking Sign | Each | 2 |
| 17 | ADA Van Parking Sign | Each | 7 |
| 18 | Demolish Fish Cleaning Station | Lump Sum | 1 |
| 19 | Relocate and Reconfigure Courtesy Dock | Lump Sum | 1 |
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ESTIMATE REFERENCE INFORMATION

| ITEM NO. | DESCRIPTION |
|----------|---|
| 1 | A. Site restoration, including backfilling and seeding along the sidewalk, is incidental to this line item. |
| 2 | A. Control points and an electronic design file will be provided to the contractor. |
| 5. | A. Curb may be ground flush with the roadways and sidewalk or removed and replaced with concrete. Final surface shall meet ADA requirements for grade and smoothness. |
| 4. | A. Relocating rectangular border pavers and any necessary cutting of square pavers is incidental to this line item. |
| 9. | A. Polyethylene moisture barrier is required under parking lot pavement. B. Control joints shall match existing joints as directed by the engineer, incidental to this line item. C. Concrete shall be C-Mix. |
| 10. | A. Control joints shall be cut into sidewalk at 5 ft. intervals, approximately, and are incidental to this line item. |
| 16. | A. Sign posts shall be located either 2.5 ft from the back of the curb or centered between the curb and the sidewalk. |
| 17. | A. Sign posts shall be located either 2.5 ft from the back of the curb or centered between the curb and the sidewalk. |
| 18. | A. Disconnect and dispose of the existing fish cleaning station. This includes the transition plate and beyond. |
| 19. | A. Minor grading required to reinstall the courtesy dock is incidental to this line item. B. All necessary hardware required to relocate and reconfigure dock is incidental to this line item. |

GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

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.

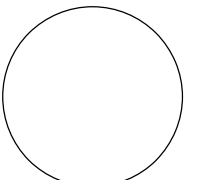
The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of 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 shall shape graded area to maintain surface drainage. All elevations are to finish grade.

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.

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

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



QUANTITIES AND GENERAL INFORMATION

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

| NO. | BY | REVISION |
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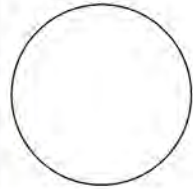


Storm Lake

W Marina Road



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



SITE PLAN

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

NO. OF REVISION

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CHECKED BY: DATE:

DRAFT NO.:

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Relocate and reconfigure courtesy dock - Lump Sum

Existing Courtesy Dock

Demolish fish cleaning station - Lump Sum

Install Truncated Domes - 10 SF

Remove curb, core out, and place 5" PCC over 6" of compacted Special Backfill Pavement Removal - 7 SY
Excavation, Core Out - 1 CY
Special Backfill - 2 tons
5" PCC (sidewalk) - 7 SY

Remove and replace existing curb ramp to match existing sidewalk and new pavement Pavement Removal - 3 SY
Excavation, Core out - 1 CY
Special Backfill - 1 tons
5" PCC (sidewalk) - 3 SY

Install Truncated Domes - 10 SF

Raise grade here to flatten slab slope to 1.5%

Remove and replace curb and gutter to match new slab grade 40 LF

Remove existing pavers and replace with 6" of PCC. Match existing concrete grade, slope last 2' to match existing pavers Reinforcing tie bars (#4 x 30" @ 30" O.C.) to be placed to tie slab to curb and gutter (BT joint).
Paver Removal - 29 SY
6" PCC (parking) - 28 SY

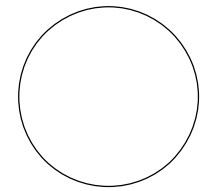
Remove existing pavers and replace with 6" of PCC. Match existing concrete grade. Reinforcing tie bars (#4 x 30" @ 30" O.C.) to be placed to tie slab to curb and gutter (BT joint).
Paver Removal - 83 SY
6" PCC (parking) - 82 SY

Remove and replace curb and gutter to match new slab grade. Extend removal and replacement 2' beyond new slab 67 LF

Note:
The rectangular edge pavers shall be reinstalled adjacent to the new concrete in order to match the existing pattern. If the existing paver edge is parallel with the new concrete, the concrete area may be adjusted to eliminate the need to cut pavers as allowed by the Engineer. Otherwise, existing pavers shall be cut to match the new edge.



CONSULTANT:



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



RAMP PARKING SITE PLAN

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

NO. BY REVISION

DATE

DRAWN BY: PROJECT NUMBER:

24-01-11-02

CHK'D BY: DATE:

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D.02

Storm Lake

Remove pavement striping from the pavers and all painted symbols
Pavement Striping Removal - 511 LF
Pavement Symbol Removal - 4 Each

Remove pavement striping from the pavers and all painted symbols
Pavement Striping Removal - 280 LF
Pavement Symbol Removal - 3 Each

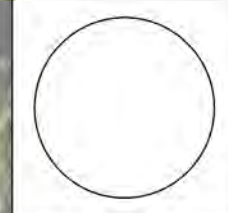
Remove pavement striping from the pavers and all painted symbols
Pavement Striping Removal - 529 LF
Pavement Symbol Removal - 4 Each

Remove pavement striping from the pavers and all painted symbols
Pavement Striping Removal - 892 LF
Pavement Symbol Removal - 2 Each

W Marina Road



CONSULTANT:



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NATURAL RESOURCES

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



PAVEMENT MARKING REMOVAL PLAN

PAVEMENT STRIPING AND REPAIRS FOR:

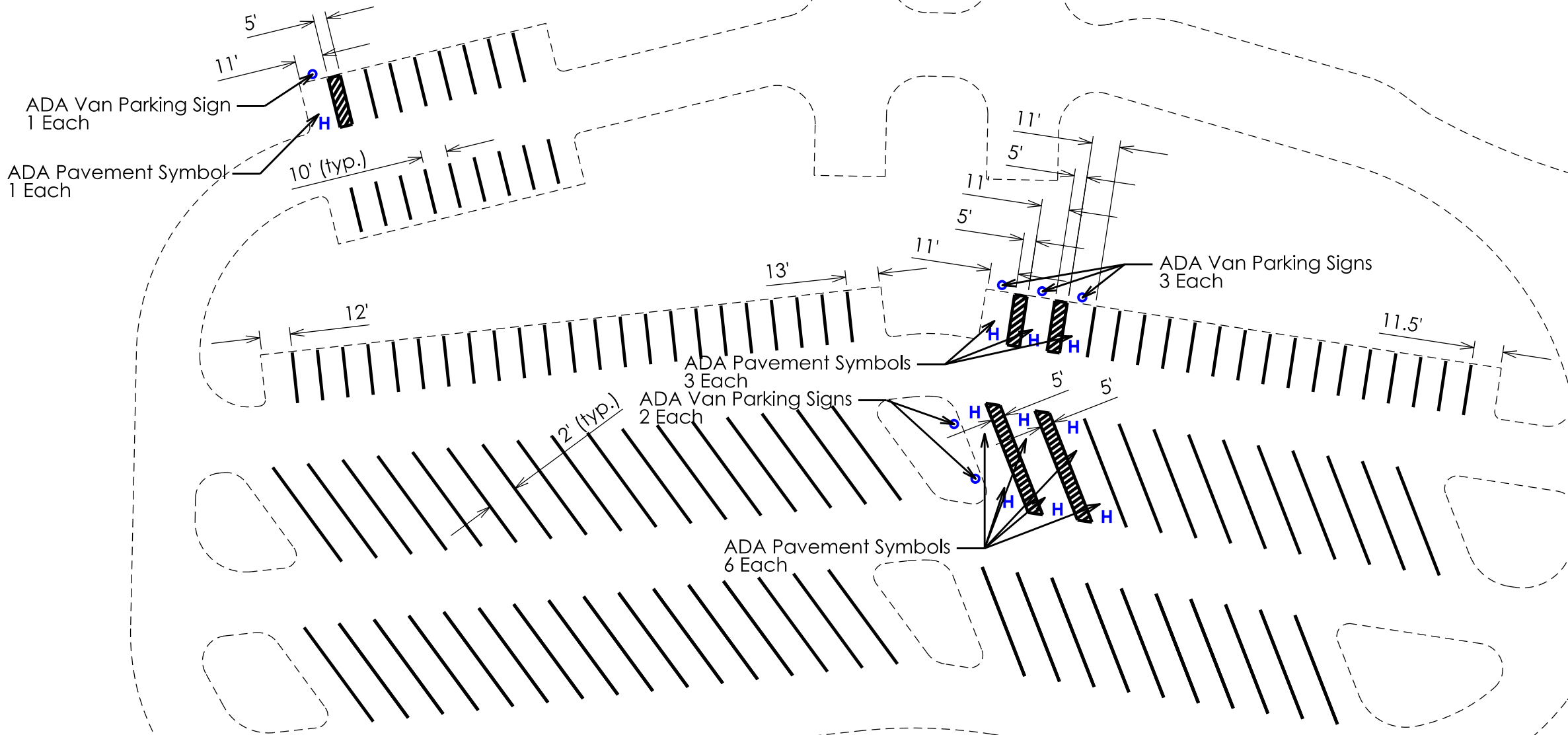
STORM LAKE MARINA

BUENA VISTA COUNTY

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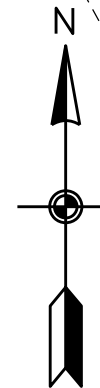


Note:
Single vehicle parking space striping shall be 10' center-to-center and 20' long; car+trail space striping shall be 12' center-to-center and 46' long, unless otherwise dimensioned.

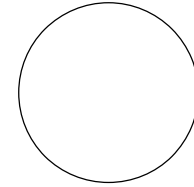
Access aisle hatching shall be 2' center-to-center.

All striping shall be yellow.

Pavement Striping - 5,365 LF



CONSULTANT:



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



RAMP PARKING STRIPING PLAN

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

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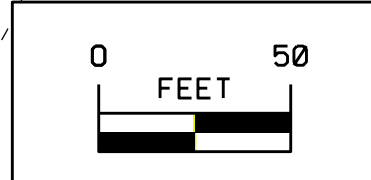
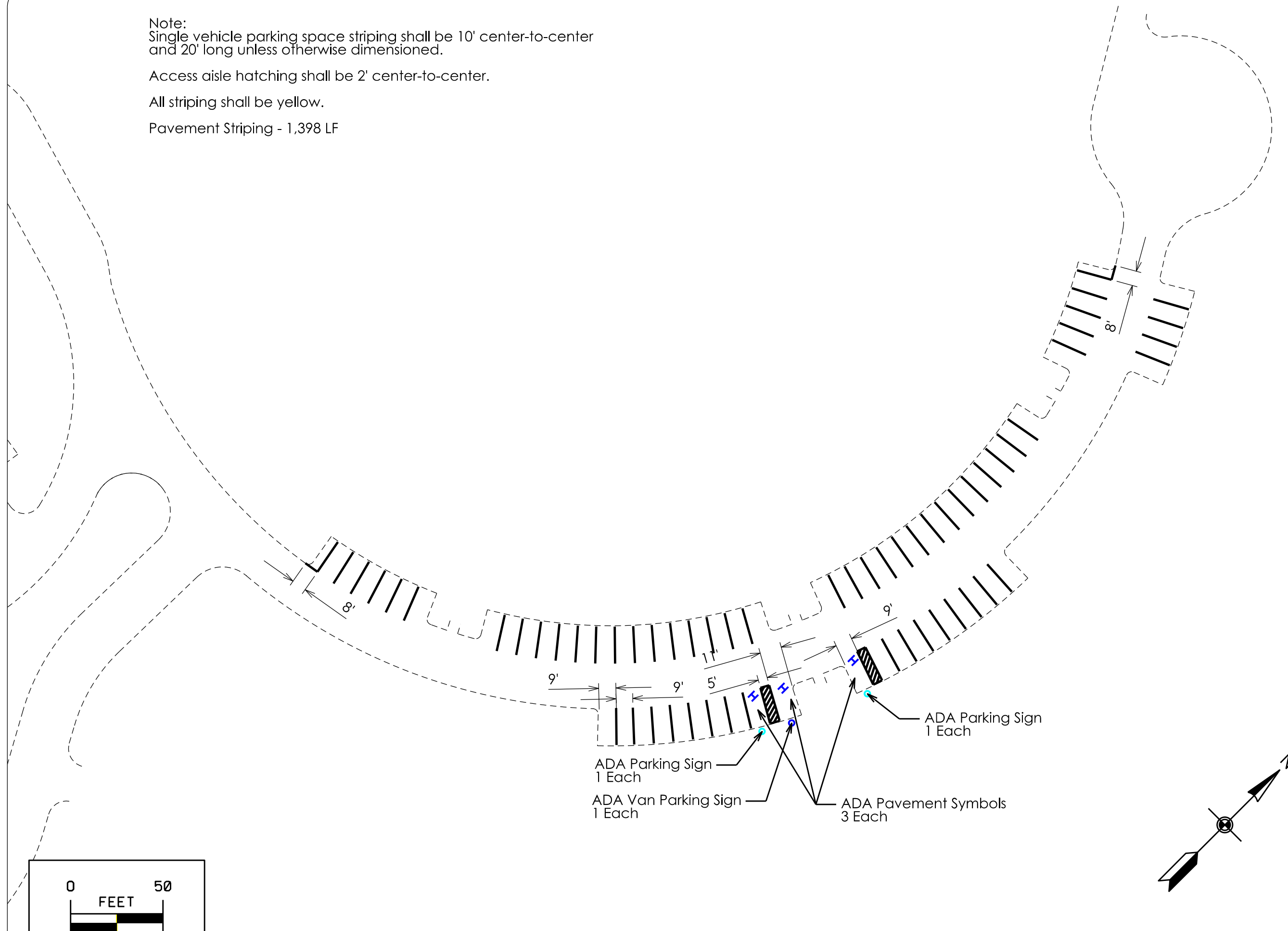
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Note:
 Single vehicle parking space striping shall be 10' center-to-center and 20' long unless otherwise dimensioned.

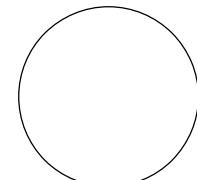
Access aisle hatching shall be 2' center-to-center.

All striping shall be yellow.

Pavement Striping - 1,398 LF



CONSULTANT:



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 NATURAL RESOURCES**

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



BOAT SLIP PARKING STRIPING PLAN

PAVEMENT STRIPING AND REPAIRS FOR:

STORM LAKE MARINA

BUENA VISTA COUNTY

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SHEET No: **D.05**