

Engineering
Surveying
Architecture
Construction Management

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Professional Engineer
No. PE150035
STATE OF INDIANA
PROFESSIONAL ENGINEERING

11-11-19

The Reserve at Hidden Lake
First National Bank of Carmi

Amendment to the Final Drainage Plan

Scale: 1" = 40'

Designed by: LAM Job Number: 8716.4.002-B
Drawn by: DWN Date: 10/15/14
Checked by: DWN Date: 10/15/14

Project Name: 8716 Civil Base - 2019
Drawing Title: Drainage Addendum.dwg

C101A

Proposed Legend

- Rip Rap Channel Lining
- Turf Reinforcement Mat (TRM)
- Erosion Control Blanket (ECB)
- Area Drain, Structure No.
- Storm Sewer, Pipe No.
- Swale and Direction of Flow, Swale No.
- Contour

Existing Legend

- Area Drain
- Curb Inlet
- Flared End Section
- Storm Sewer Manhole
- Concrete Ribbon
- Center Line
- Easement Line
- Property Boundary Line
- Right-of-Way Line
- Utility Easement
- D.A.U.G.P.U.E. Drainage & Underground Public Utility Easement
- L.M. & S.D.E. Lake Maintenance & Storm Drainage Easement
- Existing Storm Sewer
- Existing Contour Line
- Existing Swale Flow Line
- Existing Curb and Gutter

SCALE 1" = 40'

40 0 40 80

Additional Storm Sewer Structure Data Table

| Structure Number | Location Station | Size (Inches) | Description | Length (feet) | Up Stream Elevation | Down Stream Elevation | Slope % | AD/MH=Rim or CI-FG Elevation |
|------------------|------------------|---------------|--------------------------|---------------|---------------------|-----------------------|---------|------------------------------|
| AD#2000 | 1+40.86 | 12 | 24"x24" Box or Nyloplast | 41 | 450.38 | 450.38 | 0.44 | 452.48 |
| PH#2001 | 1+81.84 | 12 | 24"x24" Box or Nyloplast | 41 | 450.20 | 450.20 | 0.44 | 452.80 |
| AD#2002 | 2+54.08 | 12 | 24"x24" Box or Nyloplast | 72.24 | 450.20 | 449.72 | 0.66 | 452.22 |
| PH#2003 | 3+26.69 | 12 | 24"x24" Box or Nyloplast | 72.8 | 449.72 | 449.03 | 0.95 | 451.13 |
| AD#2004 | 3+26.69 | 12 | 24"x24" Box or Nyloplast | 48.84 | 449.03 | 446.50 | 5.18 | 451.13 |

Amended Storm Swale Data Table

Manning's Coefficient = 0.035 (Table 13.04.200)

| Station | Slope (%) | Length (ft) | US Elev. | DS Elev. | |
|---------|-----------|-------------|----------|----------|--------|
| S-1 | 0.009 | 0.93 | 3.0 | 40.8 | 402.48 |
| S-2 | 0.008 | 0.81 | 3.0 | 37.0 | 402.80 |
| S-3 | 0.015 | 1.51 | 3.0 | 89.7 | 402.22 |
| S-4 | 0.062 | 4.51 | 3.0 | 31.7 | 402.07 |
| S-5 | 0.082 | 6.18 | 3.0 | 56.8 | 453.00 |
| S-6 | 0.174 | 17.44 | 3.0 | 89.4 | 463.08 |
| S-7 | 0.287 | 28.74 | 3.0 | 31.3 | 446.32 |
| S-8 | 0.184 | 18.44 | 3.0 | 98.4 | 452.58 |
| S-9 | 0.141 | 14.12 | 3.0 | 17.0 | 416.48 |
| S-10 | 0.132 | 13.18 | 3.0 | 55.0 | 463.26 |
| S-11 | 0.170 | 17.00 | 3.0 | 47.1 | 446.00 |
| S-12 | 0.100 | 10.00 | 3.0 | 41.1 | 451.00 |
| S-13 | 0.291 | 29.14 | 3.0 | 16.3 | 451.00 |
| S-14 | 0.143 | 14.10 | 3.0 | 86.3 | 446.00 |
| S-15 | 0.126 | 12.63 | 3.0 | 49.5 | 436.31 |
| S-16 | 0.184 | 18.44 | 3.0 | 31.3 | 446.32 |
| S-17 | 0.068 | 6.83 | 3.0 | 43.6 | 425.95 |
| S-18 | 0.147 | 14.70 | 3.0 | 27.9 | 422.00 |

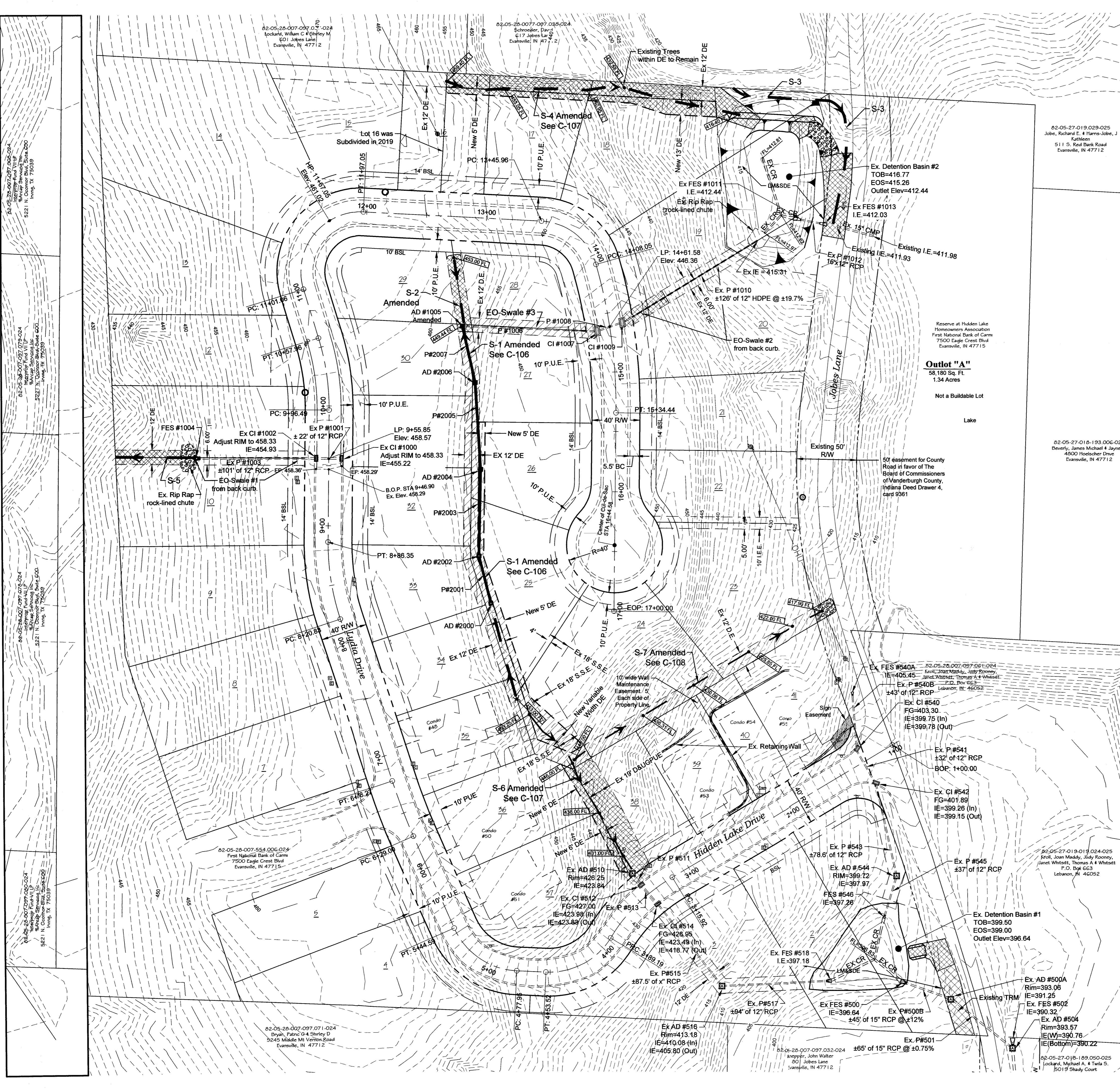
- Seeding Requirements**
- Seeding from November 15 to February 29:
 - Seed mixture will be applied at a rate of 3 to 4 pounds of Bluegrass and 1 pound of Tall Fescue per 1000 square feet.
 - Mulch will be placed at a rate of 100 pounds per 1000 square feet and crimped into place.
 - Fertilizer having a composition of 12-12-12 will not be applied until the following March. Fertilizer will be applied at a rate of 19 pounds per 1000 square feet.
 - Seeding from March 1 to November 14:
 - Seed mixture will be applied at a rate of 6 1/2 pounds of Kentucky 31 Fescue and 1 1/2 pounds of Perennial Ryegrass per 1000 square feet.
 - Fertilizer having a composition of 12-12-12 will be applied at a rate of 19 pounds per 1000 square feet.
 - Mulch will be placed at a rate of 100 pounds per 1000 square feet and crimped into place. Schedule when each disturbed area will be stabilized.

Design Notes:

- All pipe lengths are measured center of structure to center of structure except pipes ending in flared end sections. Pipes ending in flared end sections shall be measured to the end of the pipe.
- Design pipe slopes are calculated from the center of structure to the center of structure, or end of pipe for flared end sections. Construction pipe slopes may vary slightly if the structure cross slope does not match the design pipe slope. Flared end section slopes shall match design pipe slopes.
- Storm pipes under and within 5 feet of a roadway or under a sidewalk shall have compacted sand backfill.

General Notes:

- Contractor shall comply with all local, state and federal codes, ordinances, rules, regulations, orders and other legal requirements of municipal authorities which bear on the performance of the work.
- The contractor is cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of various utility companies, and where possible measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must contact the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities.
- Indiana Underground Utility Locates Service
Phone: 811
- Material specifications shall be in conformance with applicable portions of the INDOT standard specifications, (latest edition) unless specifically stated otherwise on these plans, contract documents or local code.
- Turf Reinforcement Mat (TRM) shall be LandLok 450 manufactured by Propex Operating Company, LLC.
- Swales S-1 and S-3 shall have the sides and bottom seeded and lined with Erosion Control Blankets (ECB) SC250 manufactured by North American Green, CS-3 manufactured by Western Excelsior, or approved equal installed in accordance with manufacturer's instructions.
- Swales S-2, S-4, S-5, S-6, S-7, EO-Swale #1, EO-Swale #2, EO-Swale #3, emergency spillway for existing Detention Basin #1 and #2 shall have sides and bottom lined with Turf Reinforcement Mat installed in accordance with manufacturer's instructions. Existing Contour Line (ECB) shall be 36" manufactured by North American Green or CS-3 manufactured by Western Excelsior or approved equal.
- For the recorded plan the Homeowners Association (HOA) is responsible for the maintenance of the storm sewer structures and pipes. If the HOA becomes dissolved the individual lot owner(s) shall be responsible for maintaining that part of the storm sewers located on their lot.



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