

Completed Projects - 2011

Liberty Avenue & Tremain Street Stormwater Inlet Reconstruction:

- The stormwater inlet between the entrance and exit of the boat trailer parking lot was set too high to take in the large amount of water flowing down Liberty Avenue.
- The inlet was removed and a new, open throat inlet was installed at a lower level and the street was re-paved to direct water into the inlet.
- This has reduced flooding in that intersection.



Inlet at boat ramp parking lot before modification



Inlet at boat ramp parking lot after modification

Pavement Milling Around Stormwater Inlets:

- Fifty stormwater inlets throughout the city had been rendered ineffective by successive layers of pavement building up around them.
- The pavement to both sides of the structures was milled down to below the grate level.
- The areas were re-paved to direct the stormwater runoff into the inlets thereby reducing street flooding.



Milled inlet on 11th Avenue

Sidewalk Installation at 4th Ave and Pisces Rising:

- The area along 4th Ave next to Pisces Rising had been an erosion problem and a pedestrian tripping hazard.
- Working with the staff at Pisces Rising, a new planter box was constructed behind the stormwater inlet to prevent people from walking over the structure.
- A sidewalk was laid down from the existing concrete sidewalk down toward the railroad tracks.
- The new sidewalk was made with Flex-a-path concrete paver rolls. The material conformed to the slope and curve of the sidewalk. Grass seed and pea gravel filled in the joints.
- This was one of the first installations of this product and is used as a demonstration for other installers.



Flex-a-mat sidewalk in front of Pisces Rising

South Johns Street Drainage Project:

- South Johns Street, off 2nd Avenue, had a history of flooding and erosion problems. Various solutions had been implemented in the past but residents still had stormwater problems during heavy rain events.
- Modifications were made to the drainage on adjoining properties to reduce the amount of runoff contributing to the problems.
- A StormTech underground storage system was installed at the south end of the street.
- The street was re graded to direct the water down the center of the road and into the inlet grate.
- Driveway approaches were raised to keep the stormwater from flooding the residences.



Retention area before re-grading



Grate and retention area after paving

Sunrise Blvd Ditch Dredging Project:

- The tributary of Wolf Branch Creek that flows from US Hwy 441 east through the Dora Pines Development had become filled by sediment
- . The reaches west of Sunrise Blvd and east between Sunrise Blvd and Croat Street had lost most of the capacity to move stormwater runoff through them.
- In a cooperative project with Lake County Public Work the stream was dredged to its original depth and configuration.
- In addition, two rusted metal culverts under Croat Street were replaced by one 48-inch diameter pipe and a retaining wall was installed to prevent erosion off the roadway.



Ditch after dredging and vegetation re-growth



Croat Street culvert and retaining wall

Sylvan Drive Stormwater Pipe Repair:

- The stormwater pipe that drains the area of Pine Way and Sylvan Drive had become rusted and the flume at the discharge point into Lake Gertrude was severely eroded.
- The old concrete was removed and a new flexible erosion mat was laid down to prevent further beach erosion.
- The pipe was re-lined using fusible HDPE pipe to prevent future root intrusion which would block the water flow.



Concrete and beach erosion around discharge of pipe



Erosion control mat and concrete headwall

New Retention Pond Maintenance Method:

- The retention pond at 5th Ave. and McDonald St. does an excellent job of capturing the leaves, sand and debris that is washed off the city streets during rain events.
- Periodically the accumulated material needs to be cleaned out so that the water can filter into the ground after each rain event.
- Rather than use mechanical means such as a back-hoe or a Bobcat loader that tear up the slope of the pond, the stormwater crew tried a new method.
- Using the large vacuum truck parked in the parking lot above the pond, we extended a long flexible pipe into the pond.
- The leaves and sand were raked into the pipe then were sucked up into the truck.
- This method removed all the materials down to the white sand at the bottom of the pond without damaging the banks of the pond as a loader would have done.
- A total of 25 cu yd of materials were removed using this method.



Vac truck used for cleaning retention pond

Donnelly St. & Lincoln Ave. Stormwater Pipe Repair:

- The stormwater pipe that runs under Donnelly St. directly in front of the Mt Dora Fire & Police Department had broken away from the headwall.
- Water was undermining the ground from the west side of Donnelly St. and eroding the hillside and creek bed.
- The situation required immediate attention.
- After discussions with the adjoining landowners, it was decided to install a drop structure and extend the pipe 140 ft further down the valley.
- The valley was cleared of trees that had fallen into the gully.
- The existing headwall was removed and a 17 ft tall drop structure was installed allowing the water to step down 5 ft before exiting the structure.
- One hundred and forty feet of HDPE pipe were installed and a new headwall closed off the downstream end.
- The valley was filled with dirt to establish an even slope from the higher south side down to the lower north side.
- The area was re-seeded using hydro-seeding with a variety of grasses in the blend.



Broken Pipe and Headwall Settled 5 ft Down



Drop structure with first section of HDPE pipe



HDPE pipe line running down valley



Valley filled in with even slope