



CITY of NOVI CITY COUNCIL

**Agenda Item C
December 20, 2010**

SUBJECT: Approval to award an amendment to the design engineering services contract for the 2010 Regional Detention Basin Improvements project to include the design of four failing culverts under Christina Lane to URS Corporation for a not-to-exceed design fee of \$3,950.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *BTC*

CITY MANAGER APPROVAL: *[Signature]* *PH* *[Signature]*

EXPENDITURE REQUIRED	\$ 3,950
AMOUNT BUDGETED	\$ 96,860
LINE ITEM NUMBER	210-211.00-865.134

BACKGROUND INFORMATION:

The 2010 Regional Detention Basin Improvements project was awarded to URS in January 2010 and includes the repair and improvement of two of the city's regional storm water detention basins: the C&O basin and the Cedar Springs basin. As part of the design phase, the culverts under Christina Drive were televised to evaluate their condition. It was determined that the culverts require repair to prevent damage to the road and sidewalk above. The Cedar Springs basin is located east of Christina Lane and serves an area to the west including a portion of Cedar Springs Estates and extending west beyond Taft Road (see attached location map).

The rehabilitation design of the culverts was not anticipated as part of the awarded design scope of the project. This task will include a hydraulic analysis, and will evaluate potential repairs such as slip-lining, cured-in-place pipe, or segment paneling. URS will provide a recommendation for the culvert repairs, and will resubmit an amended MDNRE permit application to include the culvert work. The scope for this task is detailed in the attached letter from URS.

Design engineering for this project will be completed this winter, bids solicited in early spring 2011, with construction anticipated in summer 2011.

RECOMMENDED ACTION: Approval to award an amendment to the design engineering services contract for the 2010 Regional Detention Basin Improvements project to include the design of four failing culverts under Christina Lane to URS Corporation for a not-to-exceed design fee of \$3,950.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Fischer				
Council Member Margolis				

	1	2	Y	N
Council Member Mutch				
Council Member Staudt				
Council Member Wrobel				

CHRISTINA LN CULVERT REPAIR

CEDAR SPRINGS REGIONAL DETENTION BASIN



FOUR CULVERTS
TO BE REPAIRED

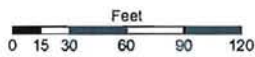
Map Author: Croy
Date: 12/13/10
Project: 2010 Basin Improvements
Version #: v1.0

Amended By:
Date:
Department:

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

Map Legend



1 inch = 100 feet



City of Novi
Department Division
Department Name
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org



December 3, 2010

City of Novi
Department of Public Services
Ben Croy, P.E., Civil Engineer
Field Services Complex
26300 Delwal Drive
Novi, MI 48375

Reference: Cedar Springs RDB Culvert Piping Improvements

Dear Mr. Croy:

At your request, URS Corporation (URS) has prepared this proposal for engineering services to evaluate, design and specify a method to repair structurally deficient culvert piping for the Cedar Springs Regional Detention Basin. The culvert piping consists of four parallel 49" x 33" arched corrugated metal pipes crossing Christina Lane. Recently, sinkholes have developed above the southernmost culvert pipe, indicating a localized failure in the piping.

Scope of Services

Initial project efforts will focus on a limited hydraulic analysis to determine the size and number of culvert pipes needed to convey the design storm flow to the retention basin. It may be possible to abandon one or more of the culverts, depending on the hydraulic requirements.

Alternatives for repair of the piping will be evaluated. Since open cutting of the roadway to replace the piping would be disruptive to the neighborhood, in-situ repairs will also be considered. In-situ alternatives to return the structural integrity to the piping include:

- Slip-lining
- Cured-in-place pipe (CIPP)
- Segment paneling

Evaluation of these alternatives will consider constructability, resulting capacity and cost. A brief letter report will be prepared documenting the results of the hydraulic analysis and alternative evaluation. Upon concurrence by the DPS, URS will revise the current plans and specifications to include the pipe repairs and/or abandonment.



Along with an updated construction cost estimate, the MDNRE permit will be amended to include the culvert work.

Fee Estimate and Schedule

URS proposes a lump sum fee of **\$3,950** to complete the above described services. It is anticipated that the work can be completed within two weeks of notice to proceed.

If you have any questions, please feel free to contact me at (248) 204-4246. URS appreciates the opportunity to work with the City of Novi on this project.

Sincerely,

URS CORPORATION

A handwritten signature in black ink, appearing to read "Jan M. Hauser".

Jan M. Hauser, PE
Vice President

Cc: T. Woodward – URS
N. Mehram - URS