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## MEMORANDUM

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TO: RANDY HILL, PUBLIC WORKS DIRECTOR  
FROM: JON LUTZ, CITY ENGINEER  
SUBJECT: LOGAN CULVERT EXTENSIONS - AWARD  
DATE: OCTOBER 11, 2013

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### INTRODUCTION:

The City of Muscatine has proceeded toward the installation of a roundabout at the intersection of Cedar and Logan as part of the Cedar Street Reconstruction Project. The preliminary Logan design showing no culvert extensions and a 7% approach slope was submitted to IDOT. After thorough review and consensus of the geometric requirements by roundabout experts, Iowa DOT and the city engineer, the profile of Logan Street needed to be raised in order to obtain an approach slope of approximately 4%. In order to raise the roadway, an existing box culvert under Logan Street must have extension on both sides. Other elements such as tree clearing, erosion protection, and grading are necessary to install the extensions. The cost to benefit ratio of leveling the approach slope below 4% did not warrant additional construction and expenditures. Minimal safety and comfort benefits are obtained by decreasing slope from 4% to 2%.

The city engineer prepared construction plans with intent of culvert construction yet this fall. An alternate bid was added allowing installation of round concrete pipe versus matching the square pipe size and shape. Cast in place pipe connections are required for both options; therefore, round pipe is an acceptable option. The City of Muscatine received bids on the Logan Culvert Extensions Project on October 11<sup>th</sup>, 2013.

### BACKGROUND:

The engineer's estimate was \$82,902 for the base bid and \$63,452 for the alternate bid.

Bids were received as follows:

	Base	Alternate
1. Hagerty Earthworks, LLC	\$ 77,027.00	\$ 53,457.00
2. Sulzberger Excavating	\$101,383.00	\$ 81,202.00
3. Brandt Construction Co.	\$121,867.50	\$106,572.38

The bids varied significantly due to overhead and operation costs and the contractor's current schedule and availability to perform work. Detailed bid tabulation is attached. Hagerty Earthworks has successfully performed similar work on Muscatine projects such as Maiden Lane Sanitary Sewer and Cook Street Storm Sewer and significant other work for City of Davenport and Muscatine County. Hagerty Earthworks is currently under contract with the City of Muscatine for the Harbor Dredge Pipe project on the riverfront.

**RECOMMENDATION/RATIONALE:**

The city engineer recommends awarding the Logan Culvert Extensions Project alternate bid option to Hagerty Earthworks LLC at the October 17th, 2013 City Council meeting for \$53,457.00 and that Council authorize the administrator and mayor to enter into contract. This project is recommended to be funded through the Collection & Drainage Fund.

**ADDITIONAL INFORMATION:**

1. Bid Tabulation
2. Construction plans
3. Preliminary Logan profile at 7% - sheet E.01

**RESOLUTION NO. \_\_\_\_\_**

**AWARD AND APPROVE CONTRACT FOR  
LOGAN CULVERT EXTENSION PROJECT**

WHEREAS, competitive bids were received for the Logan Culvert Extension Project as detailed in the project specifications prepared by the City Engineer.

WHEREAS, the following bid is determined to be the lowest responsible bid for the Logan Culvert Extension Project.

<u>NAME &amp; ADDRESS CONTRACTOR</u>	<u>AMOUNT OF BID</u>
Hagerty Earthworks, LLC 300 East 2 <sup>nd</sup> Street, Suite 304 Muscatine, Iowa 52761	Alternate Bid Option \$53,457.00

NOW, THEREFORE, BE IT RESOLVED, that the bid be awarded to Hagerty Earthworks, LLC in the amount of \$53,457.00 and that the Mayor and City Administrator are authorized to enter into a contract in this amount for the Logan Culvert Extension project.

PASSED, APPROVED, AND ADOPTED THIS 17<sup>th</sup> DAY OF OCTOBER, 2013.

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DeWayne Hopkins, Mayor

ATTEST:

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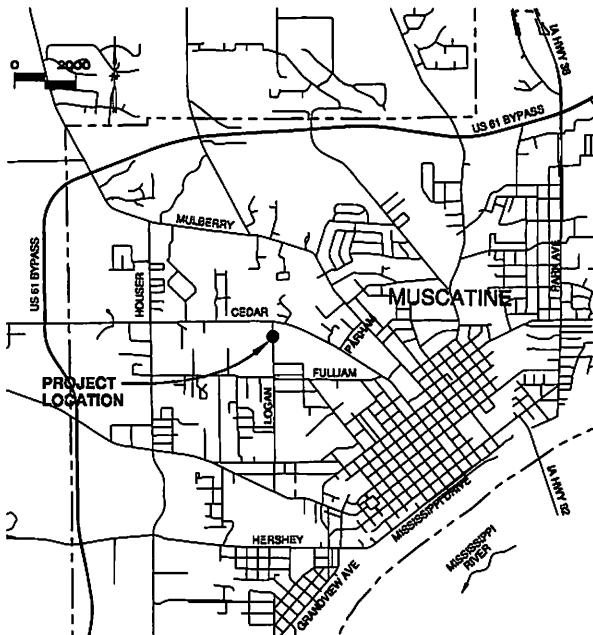
Gregg Mandsager, City Administrator

**Logan Street Culvert Extensions - Bid Tabulation**

10/11/2013

Base Bid				Engineer's Estimate		Hagerty Earthworks		Sulzberger		Brandt Construction	
#	ITEM	QUANTITY	UNIT	Price/ Unit	TOTAL	Price/ Unit	Total	Price/Unit	Total	price/Unit	Total
1	Mobilization	1	LS	\$2,500.00	\$2,500.00	\$1,000.00	\$1,000.00	\$6,375.00	\$6,375.00	\$3,800.00	\$3,800.00
2	Grading	1	LS	\$9,420.00	\$9,420.00	\$5,500.00	\$5,500.00	\$7,000.00	\$7,000.00	\$14,350.00	\$14,350.00
3	6'W x 5' Ht Precast RCB Culvert	90	LF	\$510.00	\$45,900.00	\$525.00	\$47,250.00	\$439.00	\$39,510.00	\$641.25	\$57,712.50
4	Cast in place connections	2	EA	\$2,242.00	\$4,484.00	\$2,500.00	\$5,000.00	\$11,000.00	\$22,000.00	\$8,775.00	\$17,550.00
5	1" Ballast Stone (Place Only)	45	CY	\$32.00	\$1,440.00	\$15.00	\$675.00	\$24.50	\$1,102.50	\$53.00	\$2,385.00
6	12' x 3' x 8" PCC Base	2	EA	\$800.00	\$1,600.00	\$1,200.00	\$2,400.00	\$2,000.00	\$4,000.00	\$1,825.00	\$3,650.00
7	Concrete Revetment	76	CY	\$64.00	\$4,864.00	\$20.00	\$1,520.00	\$19.50	\$1,482.00	\$30.00	\$2,280.00
8	Clearing & Grubbing	1	LS	\$9,797.00	\$9,797.00	\$10,000.00	\$10,000.00	\$13,000.00	\$13,000.00	\$15,650.00	\$15,650.00
9	Seeding	0.71	ACRE	\$1,800.00	\$1,278.00	\$2,200.00	\$1,562.00	\$3,850.00	\$2,733.50	\$2,250.00	\$1,597.50
10	4" PCC sidewalk	23	SY	\$40.50	\$931.50	\$65.00	\$1,495.00	\$110.00	\$2,530.00	\$85.00	\$1,955.00
11	Silt Fence	250	LF	\$2.75	\$687.50	\$2.50	\$625.00	\$6.60	\$1,650.00	\$3.75	\$937.50
					\$82,902.00		\$77,027.00		\$101,383.00		\$121,867.50

Alternate bid				Engineer's Estimate		Hagerty Earthworks		Sulzberger		Brandt Construction	
#	ITEM	QUANTITY	UNIT	Price/ Unit	Total	Price/ Unit	Total	Price/Unit	Total	price/Unit	Total
1	Mobilization	1	LS	\$2,500.00	\$2,500.00	\$1,000.00	\$1,000.00	\$5,500.00	\$5,500.00	\$3,800.00	\$3,800.00
2	Grading	1	LS	\$9,420.00	\$9,420.00	\$5,500.00	\$5,500.00	\$7,000.00	\$7,000.00	\$14,350.00	\$14,350.00
3	72" RCP 2000D Culvert	73.5	LF	\$300.00	\$22,050.00	\$280.00	\$20,580.00	\$264.00	\$19,404.00	\$534.25	\$39,267.38
4	Cast in place connections	2	EA	\$2,242.00	\$4,484.00	\$2,500.00	\$5,000.00	\$11,000.00	\$22,000.00	\$6,225.00	\$12,450.00
5	1" Ballast Stone (Place Only)	45	CY	\$32.00	\$1,440.00	\$15.00	\$675.00	\$24.50	\$1,102.50	\$53.00	\$2,385.00
6	72" RCP Apron (RF3)	2	EA	\$3,000.00	\$6,000.00	\$2,750.00	\$5,500.00	\$2,400.00	\$4,800.00	\$5,950.00	\$11,900.00
7	Concrete Revetment	76	CY	\$64.00	\$4,864.00	\$20.00	\$1,520.00	\$19.50	\$1,482.00	\$30.00	\$2,280.00
8	Clearing & Grubbing	1	LS	\$9,797.00	\$9,797.00	\$10,000.00	\$10,000.00	\$13,000.00	\$13,000.00	\$15,650.00	\$15,650.00
9	Seeding	0.71	ACRE	\$1,800.00	\$1,278.00	\$2,200.00	\$1,562.00	\$3,850.00	\$2,733.50	\$2,250.00	\$1,597.50
10	4" PCC sidewalk	23	SY	\$40.50	\$931.50	\$65.00	\$1,495.00	\$110.00	\$2,530.00	\$85.00	\$1,955.00
11	Silt Fence	250	LF	\$2.75	\$687.50	\$2.50	\$625.00	\$6.60	\$1,650.00	\$3.75	\$937.50
					\$63,452.00		\$53,457.00		\$81,202.00		\$106,572.38



LOCATION MAP

UTILITY NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING ALL UNDERGROUND UTILITIES.

IOWA 1-CALL# 1-800-292-8989



## CITY OF MUSCATINE, IOWA LOGAN CULVERT EXTENSIONS 2013

Referenced specifications for this project shall be Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, latest series. Exceptions to the referenced specifications are: "Instructions to Bidders", "Special Conditions", and "Estimate Reference Information" listed in the contract document which shall take precedence over the referenced specifications.

INDEX OF SHEETS	
NO.	DESCRIPTION
A.01	COVER
A.02	QUANTITIES & ESTIMATE REFERENCE INFORMATION
E.01	LOGAN PLAN & PROFILE
V.01	CULVERT PLAN & PROFILE
V.02	CLEARING PLAN

UTILITY CONTACTS

MUSCATINE POWER & WATER  
3205 CEDAR STREET  
MUSCATINE, IOWA 52761  
WATER – KRIS HATFIELD (563)262-3360  
ELECTRIC – ANDY KURRIGER (563)262-3391  
COMMUNICATIONS – TOM LEWIS (563)262-3206

ALLIANT ENERGY  
215 OAK STREET  
MUSCATINE, IOWA 52761  
GAS – ANN KRIESS (563)288-3322

CENTURYLINK  
420 SYCAMORE STREET  
MUSCATINE, IOWA 52761  
TELEPHONE – MATTHEW KEARNEY (319)399-7600

IOWA COMMUNICATIONS NETWORK (ICN)  
400 E 14TH ST.  
DES MOINES, IA 50319  
FIBER – KENT FRESE (515)725-4725  
(515)229-2046 CELL

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.

Jonathan H. Lutz  
Date \_\_\_\_\_ Reg. No. 13164  
My license renewal date is December 31, 2014  
Pages or sheets covered by this seal: ALL

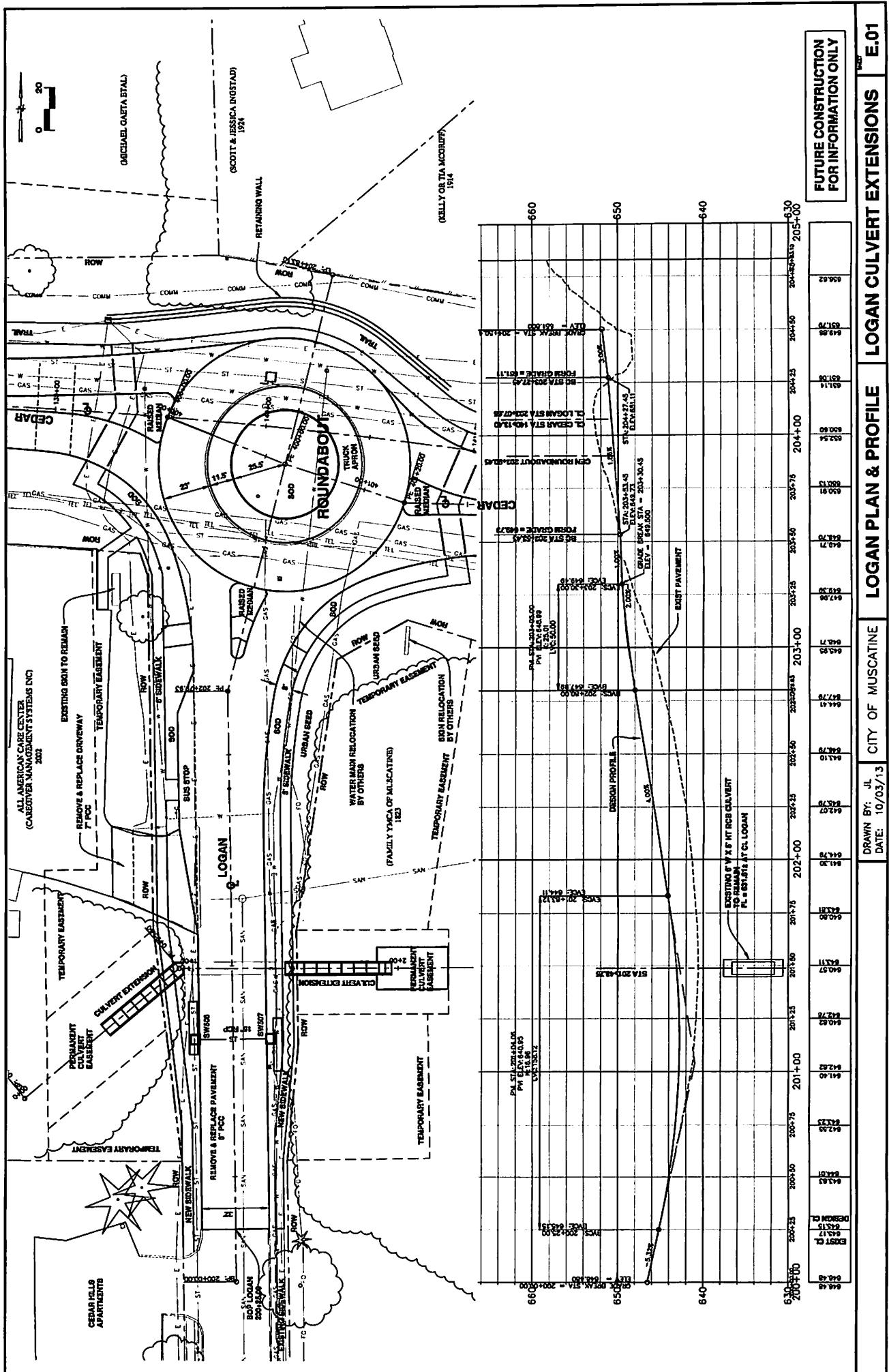


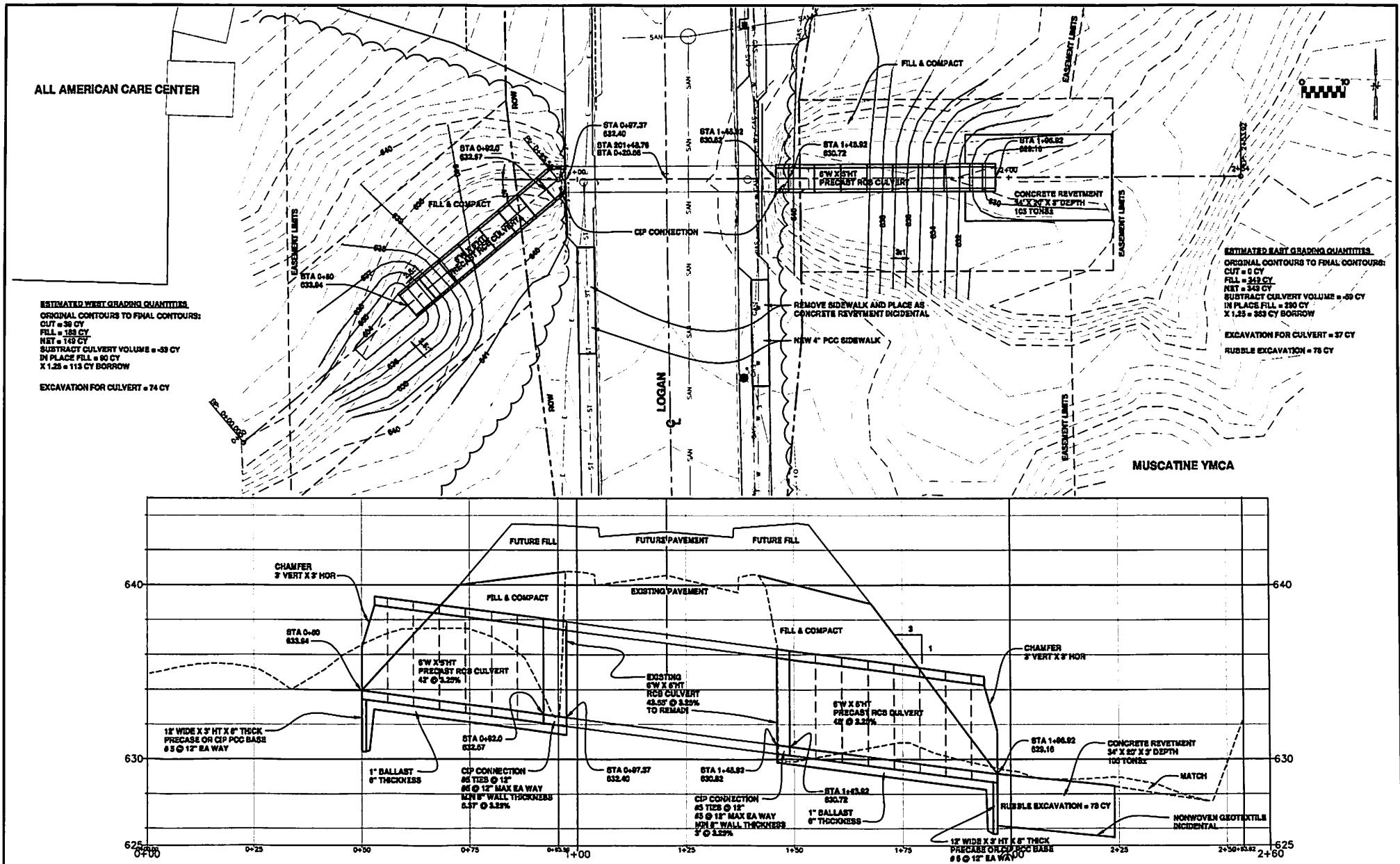
Estimated Project Quantities			
Item #	Item	Unit	Quantity
1	MOBILIZATION	LS	1
2	GRADING	LS	1
3	6'W X 5' HT PRECAST RCB CULVERT	LF	90
4	CAST IN PLACE CONNECTIONS	EA	2
5	1" BALLAST	CY	45
6	12' X 3' X 6" PCC BASE	EA	2
7	CONCRETE REVETMENT	CY	76
8	CLEARING & GRUBBING	LS	1
9	SEEDING	ACRE	0.66
10	4" PCC SIDEWALK	SY	23
11	SILT FENCE	LF	250

Estimate Reference Information		
Item #	Item	Description
1	MOBILIZATION	Refer to requirements of section 2533 Mobilization in the Standard Specifications.
2	GRADING	Place clean fill in culvert extension areas as shown on plans. Compact to 90% standard proctor density. Quantities are shown on sheet V.01. excavate as necessary for culvert installation.
3	6'W X 5' HT PRECAST RCB CULVERT	Furnish and install 6' wide x 5' high precast reinforced concrete box culvert sections per IDOT standard plan xxxx. Plans show 6' segments. All segments shall be tied. Furnish submittal to engineer for approval.
4	CAST IN PLACE CONNECTIONS	Form and place C4 concrete between existing culvert and new precast segments. Tie to existing and precast. adjust dimensions to match each side with minimum wall thickness of 8". Cold weather protection incidental.
5	1" BALLAST	Haul 1" ballast from public works yard on Washington street and install below culvert. Cubic yard quantity to be measured in field and agreed upon at placement. City shall load ballast. City to furnish at no fee to contractor.
6	12' X 3' X 6" PCC BASE	Furnish and install precast or cast in place base below culvert ends. Tie to ends with minimum 3 #5 or equal. Use 4000 psi concrete.
7	CONCRETE REVETMENT	Haul concrete revetment from Public Works yard on Washington Street to place downstream of culvert over nonwoven geotextile. Contractor shall load revetment. City to furnish at no fee to contractor.
8	CLEARING & GRUBBING	Clear and grub tree as shown on sheet V.02. Contractor shall not damage trees to remain. Haul to City compost site at 1000 House Street. Remove individual trees east of Parham along Cedar. Confirm all removal with engineer before clearing operations.
9	SEEDING	Seed, mulch and fertilize per IDOT urban or rural specifications on all disturbed areas. Dormant seeding is anticipated. No watering required.
10	4" PCC SIDEWALK	Replace sidewalk sections damaged and removed for access. Sidewalk removal incidental. Place removed sidewalk on site as concrete revetment. Use IDOT C4 concrete. Cold weather protection incidental.
11	SILT FENCE	Furnish and install standard IDOT slit fence as directed by engineer.

#### GENERAL NOTES

1. City to provide traffic control signage. Contractor shall provide flagger as incidental.
2. Contractor shall immediately remove any dirt from Logan Street pavement.
3. Logan Street shall have 2 lanes of traffic open at all times. Contractor shall not park vehicles or equipment on street.
4. Contractor shall be responsible to control and manage stream flow during construction.
5. Contractor shall erect safety fence as incidental around excavations and areas unsuitable for public access.
6. Contractor shall provide all construction staking as incidental.





LOGAN CULVERT EXTENSIONS V.02

CLEARING PLAN

DRAWN BY: JL  
DATE: 10/03/13 CITY OF MUSCATINE

