

**City of Goshen, IN
CSO 002 River Crossing
Project No. 2008-0036**

Addendum No. 1

August 25, 2009

To All Plan Holders:

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for City of Goshen, CSO 002 River Crossing, signed and dated August 6, 2009, as fully and completely as if the same were fully set forth therein:

I. SPECIFICATIONS

A. TABLE OF CONTENTS

Add the following entry after "02936 Seeding" in Division 2 – Site Work:

"02950 Trees, Plants, and Ground Cover"

B. Section 00300 – BID FORM

A revised version of Section 00300 – Bid Form has been included with this Addendum No. 1. The footer in the revised Bid Form indicates Addendum No. 1 and is dated August 25, 2009. Replace the existing Section 00300 – Bid Form with the revised Section 00300 – Bid Form. The revised Bid Form shall be the only Bid Form to be completed and submitted for Bid.

C. Section 00310 – MEASUREMENT AND PAYMENT

1. Add the following after Paragraph D in Section 4.24:

"4.25 TREE REPLACEMENT

- A. Measurement: Measurement of for tree replacement shall be measured on a per Each basis, as stated in the Bid Form.
- B. Payment: Payment for tree replacement shall be made on a per Each basis, as stated in the Bid Form.
- C. Items Included: Tree replacement shall include the following items:
 - 1. Identifying the number of trees required to be replanted
 - 2. Preparing an illustration of tree layout for Engineering review prior to planting.
 - 3. Providing all trees, fertilizer, soil amendment materials,

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- mulch materials, tree supports, protectors and wrapping materials, herbicides, pesticides, and other accessories required to ensure vigorous plant growth.
4. Cutting into existing geogrid material, erosion control mat, and/or turf reinforcing mat to facilitate planting of trees.
 5. Raking and/or dragging of areas for preparation of planting base.
 6. Supporting all newly planted trees, and adjusting support systems as required.
 7. Providing all required trimming, pruning, weeding, maintenance, and watering of trees within the required 1 year warranty time.
 8. Removing and replacing dead or unhealthy trees during the warranty period.
 9. Final site cleaning after the planting process.
 10. Maintaining of natural drainage ways.
 11. All other work including labor, equipment, and materials incidental to complete the tree replacement in accordance with the drawings and these specifications."

D. Section 00500 – AGREEMENT FORM

Replace Section 4.02 Days to Achieve Substantial Completion and Final Completion, including Parts A, B, & C with the following:

"4.02 Days to Achieve Substantial Completion, Interim Final Completion, and Final Completion

- A. The anticipated Notice to Proceed Date will be on or about October 23, 2009. Owner reserves the right to modify the anticipated Notice to Proceed date for any reason. If the Contractor can show a reasonable cost increase due to the Owner's modification of the Notice to Proceed date, Owner shall modify the total cost of the Contract by the negotiated amount via change order.
- B. Substantial Completion: Work shall be considered substantially completed and ready for its intended use in accordance with paragraph 14.04 – Substantial Completion, of the General Conditions within 81 calendar days after the construction mobilization, except if a "hold" on contract times is initiated (see below Part E for explanation of placing contract times on "hold").
- C. Interim Final Completion: Work shall be considered at interim final completion and ready for interim final payment in accordance with paragraph 14.07 – Final Completion, of the General Conditions within

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130 calendar days after the construction mobilization, except if a "hold" on contract times is initiated (see below Part E for explanation of placing contract times on "hold"). Work considered under the Interim Final Completion will be all work except work identified in the Bid Form Line Item 20 – Permanent Plugging of Existing CSO. It is anticipate that all retainage for work completed to date will be released for payment at Interim Final Completion.

- D. Final Completion: Work shall be considered finally completed and ready for final payment in accordance with paragraph 14.07 – Final Completion, of the General Conditions at approximately 574 calendar days after the Notice to Proceed is issued. Work considered under the Final Completion is the work identified in the Bid Form Line Item 20 – Permanent Plugging of Existing CSO. It is anticipate that all this work will be completed within the time frame of one pay application and that all costs, including retainage, will be approved for payment on that final pay application.

Note that the time frame indicated for Final Completion is based upon the construction schedule of the Combined Sewer Overflow Control Basin. Contractor will be given a 14 calendar day notice of anticipated substantial completion date in order to schedule the final work. All final work shall be completed within 21 calendar days of the notice of substantial completion for the Combined Sewer overflow Control Facility.

- E. The Contractor has the following three options for working with the indicated contract times:
1. Option 1 - Delay in Initial Mobilization: At the Contractor's option, the Construction Mobilization may be delayed up to a maximum of 250 days or until June 30, 2010 before the time for Substantial Completion and Interim Final Completion begins to take effect. Contractor shall provide written notice of construction mobilization a minimum of 5 working days prior to construction mobilization. No construction activities may commence prior to the date indicated in the notice of construction mobilization, without Engineer's approval. The time for Substantial Completion and Interim Final Completion will commence on the date indicated in the Contractor's notice of construction mobilization.
 2. Option 2 - Contract Time Splitting: At the Contractor's option, the times for Substantial Completion and Interim Final Completion may be placed on "hold" for a maximum of 250 days. A "hold" may be placed on the contract times only once during execution of this Contract. Splitting the contract times will allow the Contractor to initiate mobilization and proceed with construction

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work, but then to halt all construction activities for a period of time, then to return to construction at a later date, without losing the allowable contract time.

Contractor shall provide a written notice of placing contract times on "hold" and halting construction activities a minimum of 5 working days prior to actually halting construction activities. In addition, the Contractor shall provide written notice of construction remobilization a minimum of 5 working days prior to construction remobilization. No construction activities may occur during the contract "hold" time without Engineer's approval. In addition, the job site must be left in an appropriate "idle" condition as acceptable to the Engineer. Should the job site not be left in acceptable "idle" conditions before the "hold", the Contractor shall return to the job site to remedy the outstanding items. The contract times will continue to be in effect until an acceptable "idle" jobsite condition is achieved.

The time for Substantial Completion and Interim Final Completion will remain the same as previously identified, regardless if a the contract times are put on hold or not. The contract times will be assessed during each day the contract times are not on "hold".

3. Option 3 - Combination Delay in Notice to Proceed and Contract Time Splitting: At the Contractor's option, Contractor may utilize a combination of Item 1 and Item 2 as stated above. The total combined time for delay and "hold" time is 250 days."

2. Paragraph 6.02 Progress Payments; Retainage, Part A, Line 6. Replace "Section 01295" with "Section 01027 – Applications for Payment".

E. Section 01011 – SEQUENCE OF CONSTRUCTION

1. Paragraph 1.4 River Crossing Sequence of Construction, Part A, Line 1: Replace "April 1" with "December 21".

2. Paragraph 1.4 River Crossing Sequence of Construction, Part A: Add the following sentence after the first sentence:

"River access is prohibited between the dates indicated above due to the potential of ice flows in the winter months, which could cause catastrophic damage to the portable coffer dam, seasonal high flows during the spring, which could lead to coffer dam overtopping or washout,

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and the fish spawning season between April and June, as directed by the U.S. Fish & Wildlife Service.”

F. Section 01020 – Permits and Easements

1. Paragraph 1.1 Permits, Part A: Add the following after bullet item 4:
 “5. Erosion Control Permit”
2. Paragraph 1.1 Permits, Part B: Delete bullet item 1 “Erosion Control Permit”.

G. Section 02110 – SITE CLEARING

Replace the Tree Removal Tracking Table in its entirety and replace it with the following table:

Tree Removal Tracking Table		
Tree Type	Trees at 10" or Greater Diameter*	
	West Side of River	East Side of River
1.		
2.		
3.		
4.		
5.		
6.		
7.		
* Diameter of tree shall be taken at breast height		

H. Section 02822 – Erosion Control

1. Paragraph 1.1 Description of Work: Delete Part B in its entirety.
2. Paragraph 3.1 – Installation, Inspection and Maintenance, Part E, line 2: Insert "and a written report immediately following each half-inch precipitation event" at the end of the first sentence.
3. Paragraph 3.1 – Installation, Inspection and Maintenance, Part F: Insert the following sentence after the first sentence:

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"Included on or with the Erosion Control Plan shall be the NOI, permit number, Owner, Engineer, and Contractor contact information, and location of the SWPPP."

I. Section 02950 – Trees, Plants, and Ground Cover

Add Section 02950 – Trees, Plants, and Ground Cover, which is attached to this Addendum No. 1 and dated August 25, 2009, directly after Section 02936 – Seeding.

(Continued on next Page)

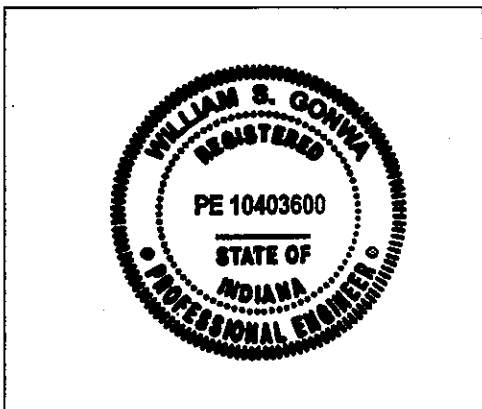
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II. DRAWINGS

1. DRAWING C-2
 1. Replace "April 1" with "December 21" in Line 2 of General Note 3.
 2. As clarification, the last line of Keyed Note 4 reads "(APPROXIMATELY 5,310 SQ FT)"
 3. As clarification, the first line of Keyed Note 5 reads "PROTECT EXISITNG OVERFLOW PIPE AND"
2. DRAWING C-3
 1. Replace "April 1" with "December 21" in Line 2 of General Note 3.
3. DRAWING C-4
 1. Replace "April 1" with "December 21" in Line 2 of General Note 3.
4. DRAWING C-5
 1. Replace "April 1" with "December 21" in Line 2 of General Note 3.

This Addendum was prepared under the direction of: William S. Gonwa, P.E.



Signed W S Gonwa

Date 8/25/2009



BID FORM

PROJECT IDENTIFICATION:

CITY OF GOSHEN
CSO 002 RIVER CROSSING
GOSHEN, INDIANA

CITY JOB NUMBER: 2008-0036

THIS BID IS SUBMITTED TO:

Clerk-Treasurer's Office
City Hall
202 South 5th Street
Goshen, Indiana 46528

- 1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.
- 2.01 Bidder accepts all of the terms and conditions of the Official Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. Bidder has not added any conditions or qualifying statements to the Bid. The Bid will remain subject to acceptance for the bid withdrawal time stated in the Official Notice to Bidders, or for such longer period of time that Bidder may agree to in writing upon request of Owner. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds, evidence of insurance coverage, and other documents required by the Bidding Requirements within 15 days after the date of Owner's Notice of Award.
- 3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:
- A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

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- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
 - D. Bidder has carefully studied all: (1) reports of explorations and test of subsurface conditions at or contiguous to the Site which have been identified in the Supplementary Conditions SC - 4.02.
 - E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
 - F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
 - G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
 - H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.
 - I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
 - J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
 - K. Bidder shall comply with Section 1605 of the American Recovery and Reinvestment Act (ARRA) of 2009, which requires that none of the appropriated funds may be used for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project is produced in the United States unless (a) a waiver is provided to the recipient by EPA or (b) compliance would be inconsistent with United States obligations under international agreements.
- 4.01 Bidder further represents that:
- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;
 - B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid;
 - C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

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D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

No.	Item	Qty	Unit	Bid Unit Price	Bid Price
1	Mobilization/ Demobilization/Job Administration	1	LS	\$_____ per LS	\$_____
2	Manhole No. 1	1	LS	\$_____ per LS	\$_____
3	Manhole No. 2	1	LS	\$_____ per LS	\$_____
4	Manhole No. 3	1	LS	\$_____ per LS	\$_____
5	36" DIP	233	LF	\$_____ per LF	\$_____
6	42" RCP	185	LF	\$_____ per LF	\$_____
7	West Bank Access Road	1	LS	\$_____ per LS	\$_____
8	Crane Pad	1	LS	\$_____ per LS	\$_____
9	Temporary Cofferdam & Scour Protection Liner (Construction on West Side of River)	1	LS	\$_____ per LS	\$_____
10	Temporary Cofferdam & Scour Protection Liner (Construction on East Side of River)	1	LS	\$_____ per LS	\$_____
11	Rounded Glacial Stone Backfill	595	SY	\$_____ per SY	\$_____
12	Geogrid Installation	2,300	SF	\$_____ per SF	\$_____
13	Clearing and Grubbing	1	LS	\$_____ per LS	\$_____
14	Tree Removal	1	LS	\$_____ per LS	\$_____

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No.	Item	Qty	Unit	Bid Unit Price	Bid Price
15	Surface Restoration	1,860	SY	\$ _____ per SY	\$ _____
16	Permanent Seeding	1,860	SY	\$ _____ per SY	\$ _____
17	Turf Reinforcing Mat	478	SY	\$ _____ per SY	\$ _____
18	Concrete Encasement / Miscellaneous Concrete	160	CY	\$ _____ per CY	\$ _____
19	Temporary Construction Facilities	1	LS	\$ _____ per LS	\$ _____
20	Permanent Plugging of Existing CSO	1	LS	\$ _____ per LS	\$ _____
21	Erosion Control	1	LS	\$ _____ per LS	\$ _____
22	Traffic Control	1	LS	\$ _____ per LS	\$ _____
23	Construction Surveying	1	LS	\$ _____ per LS	\$ _____
24	Project Record Documents	1	LS	\$ _____ per LS	\$ _____
25	Tree Replacement	150	EA	\$ _____ per EA	\$ _____

TOTAL OF ALL BID PRICES (Sum of Bid Price for Each Item)	\$ _____
	(figures)
	_____ Dollars
	(words)
<p>Qty = Estimated Quantity Estimated Price (for each Item) = Qty x Unit Price (for each item) LS = Lump Sum, LF = Lineal Foot, SY=Square Yard, EA = Each</p>	

- Unit Prices have been computed in accordance with paragraph 11.03 of the General Conditions.
 - Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.
- 6.01 Bidder agrees that the Work will be substantially completed and completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Times.
- 7.01 The following documents are attached to and made a condition of this Bid:
- A. Required Bid security in the form of _____
(Certified Check or Bid Bond)
- in the amount of _____
(Dollars or Percent of Lump Sum Bid Price)
- B. Required bidder qualifications statement with supporting data (Indiana Form 96).

- 8.01 The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.
- 8.02 Bid Form shall be notarized.

SUBCONTRACTORS

The Bidder shall identify all Subcontractors who will be performing work that is included in the Total Contract Amount. This includes any outside firm providing material and/or equipment. At the minimum, the following suppliers shall be listed:

- RCP Pipe Manufacturer: _____
- DIP Pipe Manufacturer: _____
- Portable Coffe Dam Supplier: _____
- Erosion Control / Restoration Contractor: _____

SUBMITTED ON _____, 20____.

State Contractor License No. _____ (If applicable)

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____ (SEAL)
(Individual's signature)

Doing business as: _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

Business Address: _____

Phone No.: _____ FAX No.: _____

Date of Authorization to do business is _____

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Phone and FAX Number, and Address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Section 02950
TREES, PLANTS, AND GROUND COVER

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. New trees, plants, and ground cover.
- B. Mulch and fertilizer.
- C. Maintenance.

1.2 RELATED SECTIONS

- A. Section 02211 – Rough Grading.
- B. Section 02936 – Seeding.

1.3 REFERENCES

- A. ANSI Z60.1 – Nursery Stock.

1.4 DEFINITIONS

- A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.
- B. Plants: Living trees, plants, and ground cover specified in this Section, and described in ANSI Z60.1.

1.5 SUBMITTALS – PROJECT CLOSEOUT

- A. In accordance with Section 01700 – Contract Closeout.
- B. Maintenance Data: Include cutting and trimming method; types, application frequency, and recommended coverage of fertilizer.
- C. Submit list of plant life sources.

1.6 QUALITY ASSURANCE

- A. Nursery Qualifications: Company specializing in growing and cultivating the plants with 3 years documented experience.

- B. Installer Qualifications: Company specializing in installing and planting the plants with 3 years documented experience approved by nursery.

1.7 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.
- B. Plant Materials: Certified by federal department of agriculture; free of disease or hazardous insects.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect and handle products to site under provisions of Section 01600 – Materials and Equipment.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- C. Protect and maintain plant life until planted.
- D. Deliver plant life materials immediately prior to placement. Keep plants moist.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Do not install plant life when ambient temperatures may drop below 35 degrees F or rise above 90 degrees F.
- B. Do not install plant life when wind velocity exceeds 30 mph.

1.10 COORDINATION

- A. Coordinate work under provisions of Section 02936 - Seeding.

1.11 WARRANTY

- A. Provide 1 year warranty under provisions of Section 01740 - Warranties.
- B. Warranty: Include coverage for one continuous growing season; replace dead or unhealthy trees and/or plants.
- C. Replacements: Plants of same size and species as specified, planted in the next growing season, with a new warranty commencing on date of replacement.

1.11 MAINTENANCE SERVICE

- A. Maintain plant life immediately after placement until plants are well established and exhibit a vigorous growing condition. Continue maintenance until termination of warranty period.

B. Maintenance to include:

1. Cultivation and weeding plant beds and tree pits.
2. Applying herbicides for weed control in accordance with manufacturer's instructions. Remedy damage resulting from use of herbicides.
3. Remedy damage from use of insecticides.
4. Irrigating sufficient to saturate root system.
5. Pruning, including removal of dead or broken branches, and treatment of pruned areas or other wounds.
6. Disease control.
7. Maintaining wrapping, guys, turnbuckles, and stakes. Adjust turnbuckles to keep guy wires tight. Repair or replace accessories when required.

PART 2. PRODUCTS

2.1 TREES, PLANTS, AND GROUND COVER

- A. Trees, Plants and Ground Cover: Species native to the area, grown in climatic conditions similar to those in locality of the Work.

2.2 SOIL MATERIALS

- A. Topsoil: Excavated from site.

2.3 SOIL AMENDMENT MATERIALS

- A. Fertilizer: Containing 50 percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil.
- B. Peat Moss: Shredded, loose, sphagnum moss; free of lumps, roots, inorganic material or acidic materials; minimum of 85 percent organic material measured by oven dry weight, pH range of 4 to 5; moisture content of 30 percent.
- C. Bone Meal: Raw, finely ground, commercial grade, minimum of 3 percent nitrogen and 20 percent phosphorous.
- D. Lime: Ground limestone, dolomite type, minimum 95 percent carbonates.
- E. Water: Clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants.

2.4 MULCH MATERIALS

- A. Mulching Material: Wood shavings or shredded bark, free of growth or germination inhibiting ingredients.
- B. Wrapping Materials: Burlap.
- C. Stakes: Softwood lumber, pointed end.

- D. Cable, Wire, Eye Bolts and Turnbuckles: Non-corrosive, of sufficient strength to withstand wind pressure and resulting movement of plant life.
- E. Plant Protectors: Rubber sleeves over cable to protect plant stems, trunks, and branches.
- F. Membrane: 20 mil.
- G. Wrapping: Waterproof fabric.
- H. Tree Protectors: Plastic with galvanized rings.

2.5 PLANT SOIL MIX

- A. A uniform mixture of 1 part peat and 3 parts topsoil by volume.

2.6 SOURCE QUALITY CONTROL AND TESTS

- A. In accordance with Section 01400 – Quality Control.
- B. Provide testing and analysis of existing topsoil.
- C. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt and organic matter; and pH value.

PART 3. EXECUTION

3.1 QUANTITY DETERMINATION

- A. Determine the number of trees required to plant based on the number of trees identified in the Tree Removal Tracking Table located in Specification Section 02110 – Site Clearing (as modified by this Addendum No. 1) and which was to be completed during the site clearing process.
- B. Contractor shall plant a total of five (5) native trees of at least 2” in diameter for every tree of 10” or more in diameter that was removed during construction. Trunk diameter shall be taken at breast height.
- C. The number of replacement trees to be planted on each side of the Elkhart River shall be based on the number of trees greater than 10” in diameter that were removed from each side of the river.

3.2 EXAMINATION

- A. Verify that prepared subsoil is ready to receive work.
- B. Saturate soil with water to test drainage.

3.3 PREPARATION OF SUBSOIL

- A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas, except along sloping river bank.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. Scarify subsoil to a depth of 3 inches where plants are to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- D. Dig pits and beds 6 inches larger than plant root system.

3.4 PLACING TOPSOIL

- A. Spread topsoil to a minimum depth of 6 inches over area to be planted. Rake smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Install topsoil into pits and beds intended for plant root balls, to a minimum thickness of 6 inches.

3.5 FERTILIZING

- A. Apply fertilizer in accordance with manufacturer's instructions.
- B. Apply after initial raking of topsoil.
- C. Mix thoroughly into upper 2 inches of topsoil.
- D. Lightly water to aid the dissipation of fertilizer.

3.6 PLANTING

- A. Provide an illustration of tree type and location to Engineer prior to placing any trees. Evenly space trees over entire disturbed areas previously occupied by trees.
- B. Set plants vertical.
- C. Remove non-biodegradable root containers.

- D. Neatly slice any turf reinforcing mat or erosion control mat into "pie" shape slices in order to fold back the material from the pit. Upon backfilling the pit, replace the pieces of reinforcing mat or erosion control mat to cover the exposed portion of the pit.
- E. Utilize a adequate cutting utensils to cut any geogrid material that may be encountered during preparing the root ball pit.
- F. Set plants in pits or beds, partly filled with prepared plant mix, at a minimum depth of 6 inches under each plant. Loosen burlap, ropes, and wires, from the root ball.
- G. Place bare root plant materials so roots lie in a natural position. Backfill soil mixture in 6 inch layers. Maintain plant life in vertical position.
- H. Saturate soil with water when the pit or bed is half full of topsoil and again when full.

3.7 INSTALLATION OF ACCESSORIES

- A. Wrap deciduous shade and flowering tree trunks and place tree protectors.

3.8 PLANT SUPPORT

- A. Brace plants vertically with plant protector wrapped guy wires and stakes to the following:

Tree Caliper	Tree Support Method
2 – 4 inches	3 guy wires

3.9 FIELD QUALITY CONTROL

- A. In accordance with Section 01400 – Quality Control.
- B. Plants will be rejected if a ball of earth surrounding roots has been disturbed or damaged prior to or during planting.

3.10 MAINTENANCE

- A. Neatly trim plants where necessary.
- B. Immediately remove clippings after trimming.
- C. Water to prevent soil from drying out.
- D. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions.
- E. Apply pesticides in accordance with manufacturer's instructions.

END OF SECTION

