

# CITY OF URBANA, ILLINOIS DEPARTMENT OF PUBLIC WORKS

#### **ADMINISTRATION**

# MEMORANDUM

TO: Mayor Laurel Lunt Prussing and Members of the City Council

FROM: William R. Gray, P.E., Public Works Director

**DATE:** March 1, 2012

**RE:** Goodwin Avenue and Green Street Intersection Improvements

Attached please find the completed copies:

- Preliminary Engineering Services Agreement for Federal Participation
- Local Agency Agreement for Federal Participation



# **Local Agency Agreement** for Federal Participation

METHOD C---LA's Share \_\_\_\_\_

Local Agency	State Contract	Day Labor	Local Contract	RR Force Account
Urbana, City of			Х	
Section	Fund Type		ITEP Number	
12-00518-00-TI	TCSD			

Const	ruction	Engin	eering	Right-of-Way		
Job Number	Project Number	Job Number	Project Number	Job Number	Project Number	
		P-95-338-12	TCSP-IL10(105)			

This Agreement is made and entered into between the above local agency hereinafter referred to as the "LA" and the state of Illinois, acting

designated	ough its Department d location as describe policies and procedur	ed below. The impro	ovement sl	nall be constructe	d in accordance	ce with plans ap	proved by the	STATE and the
				Location				
Local Nam	ne Goodwin Avenu	e and Green Street		Route	FAU 7	7175 & 7126	Length _(	0.52 mile
Termini	Goodwin Avenue fr	om Springfield Aven	ue to Illino	is Street and Gre	en Street from	Mathews Aven	ue to Gregory	Street
Current Ju	risdiction City o	f Urbana				Existing	g Structure No	)
			Р	roject Descriptio	on			
Preliminar	y Engineering							
				Division of Cost				
Type of W		TCSP	%	STATE	%	LA	%	Total
	g Construction pating Construction	(		)	(	)	( )	
	Engineering	112,000 (	*	)	(	) 28,000	( BAL )	140,000
-	n Engineering	112,000 (		)	(	) 20,000	( DAL )	140,000
Right of Wa	0 0	(		)	(	)	( )	•
Railroads	,	(		)	(	)	( )	1
Utilities		(		)	(	)	( )	
Materials		,		,	`	,	,	
TOTAL		\$ 112,000		\$	<u></u>	\$ 28,000		\$ 140,000
		·	nde NTF \$	112,000 (shortfall	to be covered	•	ency in the	,
				n differs from this		by the local ag	ericy in the	_
NOTE.	The control book in				•	. C	den en de et e e	— ::::::::::::::::::::::::::::::::::::
NOTE:		the Division of Cost tab The actual costs will be					aepenaent on i	ine final Federal and
	If funding is not a pe	rcentage of the total, p	lace an aste	erisk in the space pr	ovided for the p	ercentage and ex	plain above.	
	The Federal share o	f construction engineer	ring may not	exceed 15% of the	Federal share	of the final constru	uction cost.	
			Local	Agency Approp	riation			
	on of this Agreemen funds will be approp				set aside to c	over the local s	hare of the pro	oject cost and
		Met	hod of Fir	nancing (State C	ontract Work	)		
	ALump Sum (80%					<u> </u>		
METHOD	B	Monthly Paym	ents of			_		

(See page two for details of the above methods and the financing of Day Labor and Local Contracts)

\_\_\_\_\_ divided by estimated total cost multiplied by actual progress payment.

#### **Agreement Provisions**

#### THE LA AGREES:

- (1) To acquire in its name, or in the name of the state if on the state highway system, all right-of-way necessary for this project in accordance with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and established state policies and procedures. Prior to advertising for bids, the **LA** shall certify to the **STATE** that all requirements of Titles II and III of said Uniform Act have been satisfied. The disposition of encroachments, if any, will be cooperatively determined by representatives of the **LA**, and **STATE** and the **FHWA**, if required.
- (2) To provide for all utility adjustments, and to regulate the use of the right-of-way of this improvement by utilities, public and private, in accordance with the current Utility Accommodation Policy for Local Agency Highway and Street Systems.
- (3) To provide for surveys and the preparation of plans for the proposed improvement and engineering supervision during construction of the proposed improvement.
- (4) To retain jurisdiction of the completed improvement unless specified otherwise by addendum (addendum should be accompanied by a location map). If the improvement location is currently under road district jurisdiction, an addendum is required.
- (5) To maintain or cause to be maintained, in a manner satisfactory to the **STATE** and **FHWA**, the completed improvement, or that portion of the completed improvement within its jurisdiction as established by addendum referred to in item 4 above.
- (6) To comply with all applicable Executive Orders and Federal Highway Acts pursuant to the Equal Employment Opportunity and Nondiscrimination Regulations required by the U.S. Department of Transportation.
- To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the department; and the **LA** agrees to cooperate fully with any audit conducted by the Auditor General and the department; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the **STATE** for the recovery of any funds paid by the **STATE** under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
- (8) To provide if required, for the improvement of any railroad-highway grade crossing and rail crossing protection within the limits of the proposed improvement.
- (9) To comply with Federal requirements or possibly lose (partial or total) Federal participation as determined by the FHWA.
- (10) (State Contracts Only) That the method of payment designated on page one will be as follows:
  - Method A Lump Sum Payment. Upon award of the contract for this improvement, the **LA** will pay to the **STATE**, in lump sum, an amount equal to 80% of the **LA**'s estimated obligation incurred under this Agreement, and will pay to the **STATE** the remainder of the **LA**'s obligation (including any nonparticipating costs) in a lump sum, upon completion of the project based upon final costs.
  - Method B Monthly Payments. Upon award of the contract for this improvement, the **LA** will pay to the **STATE**, a specified amount each month for an estimated period of months, or until 80% of the **LA**'s estimated obligation under the provisions of the Agreement has been paid, and will pay to the **STATE** the remainder of the **LA**'s obligation (including any nonparticipating costs) in a lump sum, upon completion of the project based upon final costs.
  - Method C Progress Payments. Upon receipt of the contractor's first and subsequent progressive bills for this improvement, the LA will pay to the STATE, an amount equal to the LA's share of the construction cost divided by the estimated total cost, multiplied by the actual payment (appropriately adjusted for nonparticipating costs) made to the contractor until the entire obligation incurred under this Agreement has been paid.
- (11) (Day Labor or Local Contracts) To provide or cause to be provided all of the initial funding, equipment, labor, material and services necessary to construct the complete project.
- (12) (Preliminary Engineering) In the event that right-of-way acquisition for, or actual construction of the project for which this preliminary engineering is undertaken with Federal participation is not started by the close of the tenth fiscal year following the fiscal year in which this agreement is executed, the **LA** will repay the **STATE** any Federal funds received under the terms of this Agreement.
- (13) (Right-of-Way Acquisition) In the event that the actual construction of the project on this right-of-way is not undertaken by the close of the twentieth fiscal year following the fiscal year in which this Agreement is executed, the **LA** will repay the **STATE** any Federal Funds received under the terms of this Agreement.

(14) (Railroad Related Work Only) The estimates and general layout plans for at-grade crossing improvements should be forwarded to the Rail Safety and Project Engineer, Room 204, Illinois Department of Transportation, 2300 South Dirksen Parkway, Springfield, Illinois, 62764. Approval of the estimates and general layout plans should be obtained prior to the commencement of railroad related work. All railroad related work is also subject to approval be the Illinois Commerce Commission (ICC). Final inspection for railroad related work should be coordinated through appropriate IDOT District Bureau of Local Roads and Streets office.

Plans and preemption times for signal related work that will be interconnected with traffic signals shall be submitted to the ICC for review and approval prior to the commencement of work. Signal related work involving interconnects with state maintained traffic signals should also be coordinated with the IDOT's District Bureau of Operations.

The **LA** is responsible for the payment of the railroad related expenses in accordance with the **LA**/railroad agreement prior to requesting reimbursement from IDOT. Requests for reimbursement should be sent to the appropriate IDOT District Bureau of Local Roads and Streets office.

Engineer's Payment Estimates in accordance with the Division of Cost on page one.

- (15) And certifies to the best of its knowledge and belief its officials:
  - (a) are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) have not within a three-year period preceding this Agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements receiving stolen property;
  - (c) are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, local) with commission of any of the offenses enumerated in item (b) of this certification; and
  - (d) have not within a three-year period preceding the Agreement had one or more public transactions (Federal, State, local) terminated for cause or default.
- (16) To include the certifications, listed in item 15 above and all other certifications required by State statutes, in every contract, including procurement of materials and leases of equipment.
- (17) (State Contracts) That execution of this agreement constitutes the **LA**'s concurrence in the award of the construction contract to the responsible low bidder as determined by the **STATE**.
- (18) That for agreements exceeding \$100,000 in federal funds, execution of this Agreement constitutes the LA's certification that:
  - (a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or any employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan or cooperative agreement;
  - (b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress, in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions;
  - (c) The **LA** shall require that the language of this certification be included in the award documents for all subawards at all ties (including subcontracts, subgrants and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- (19) To regulate parking and traffic in accordance with the approved project report.
- (20) To regulate encroachments on public right-of-way in accordance with current Illinois Compiled Statutes.
- (21) To regulate the discharge of sanitary sewage into any storm water drainage system constructed with this improvement in accordance with current Illinois Compiled Statutes.
- (22) That the **LA** may invoice the **STATE** monthly for the **FHWA** and/or **STATE** share of the costs incurred for this phase of the improvement. The **LA** will submit supporting documentation with each request for reimbursement from the **STATE**. Supporting documentation is defined as verification of payment, certified time sheets, vendor invoices, vendor receipts, and other documentation supporting the requested reimbursement amount.
- (23) To complete this phase of the project within three years from the date this agreement is approved by the **STATE** if this portion of the project described in the Project Description does not exceed \$1,000,000 (five years if the project costs exceed \$1,000,000).
- Upon completion of this phase of the improvement, the **LA** will submit to the **STATE** a complete and detailed final invoice with all applicable supporting supporting documentation of all incurred costs, less previous payments, no later than one year from the date of completion of this phase of the improvement. If a final invoice is not received within one year of completion of this phase of the improvement, the most recent invoice may be considered the final invoice and the obligation of the funds closed.

- (25) (Single Audit Requirements) That if the **LA** expends \$500,000 or more a year in federal financial assistance they shall have an audit made in accordance with the Office of Management and Budget (OMB) Circular No. A-133. **LA**'s that expend less than \$500,000 a year shall be exempt from compliance. A copy of the audit report must be submitted to the **STATE** with 30 days after the completion of the audit, but no later than one year after the end of the **LA**'s fiscal year. The CFDA number for all highway planning and construction activities is 20.205.
- That the **LA** is required to register with the Central Contractor Registration (CCR), which is a web-enabled government-wide application that collects, validates, stores, and disseminates business information about the federal government's trading partners in support of the contract award and the electronic payment processes. If you do not have a CCR number, you must register at <a href="https://www.bpn.gov/ccr">https://www.bpn.gov/ccr</a>. If the **LA**, as a sub-recipient of a federal funding, receives an amount equal to or greater than \$25,000 (or which equals or exceeds that amount by addition of subsequent funds), this agreement is subject to the following award terms: <a href="http://edocket.access.gpo.gov/2010/pdf/2010-22705.pdf">http://edocket.access.gpo.gov/2010/pdf/2010-22706.pdf</a>.

#### THE STATE AGREES:

- (1) To provide such guidance, assistance and supervision and to monitor and perform audits to the extent necessary to assure validity of the **LA**'s certification of compliance with Titles II and III requirements.
- (2) (State Contracts) To receive bids for the construction of the proposed improvement when the plans have been approved by the **STATE** (and **FHWA**, if required) and to award a contract for construction of the proposed improvement, after receipt of a satisfactory bid.
- (3) (Day Labor) To authorize the **LA** to proceed with the construction of the improvement when Agreed Unit Prices are approved and to reimburse the **LA** for that portion of the cost payable from Federal and/or State funds based on the Agreed Unit Prices and Engineer's Payment Estimates in accordance with the Division of Cost on page one.
- (4) (Local Contracts) That for agreements with Federal and/or State funds in engineering, right-of-way, utility work and/or construction work:
  - (a) To reimburse the **LA** for the Federal and/or State share on the basis of periodic billings, provided said billings contain sufficient cost information and show evidence of payment by the **LA**;
  - (b) To provide independent assurance sampling, to furnish off-site material inspection and testing at sources normally visited by **STATE** inspectors of steel, cement, aggregate, structural steel and other materials customarily tested by the **STATE**.

#### IT IS MUTUALLY AGREED:

- (1) Construction of the project will utilize domestic steel as required by Section 106.01 of the current edition of the Standard Specifications for Road and Bridge Construction.
- (2) That this Agreement and the covenants contained herein shall become null and void in the event that the **FHWA** does not approve the proposed improvement for Federal-aid participation or the contract covering the construction work contemplated herein is not awarded within three years of the date of execution of this Agreement.
- (3) This Agreement shall be binding upon the parties, their successors and assigns.
- For contracts awarded by the **LA**, the **LA** shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any USDOT assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The **LA** shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of USDOT assisted contracts. The **LA**'s DBE program, as required by 49 CFR part 26 and as approved by USDOT, is incorporated by reference in this Agreement. Upon notification to the recipient of its failure to carry out its approved program, the department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.). In the absence of a USDOT approved **LA** DBE Program or on State awarded contracts, this Agreement shall be administered under the provisions of the **STATE**'s USDOT approved Disadvantaged Business Enterprise Program.
- (4) In cases where the **STATE** is reimbursing the **LA**, obligations of the **STATE** shall cease immediately without penalty or further payment being required if, in any fiscal year, the Illinois General Assembly or applicable Federal Funding source fails to appropriate or otherwise make available funds for the work contemplated herein.
- (5) All projects for the construction of fixed works which are financed in whole or in part with funds provided by this Agreement and/or amendment shall be subject to the Prevailing Wage Act (820 ILCS 130/0.01 et seq.) unless the provisions of that Act exempt its application

ADDENDA
Additional information and/or stipulations are hereby attached and identified below as being a part of this Agreement.
Number 1 Location Map
(Insert addendum numbers and titles as applicable)

The LA further agrees, as a condition of payment, that it accepts and will comply with the applicable provisions set forth in this Agreement and all exhibits indicated above.

APPROVED	APPROVED						
Local Agency	State of Illinois Department of Transportation						
Laurel Lunt Prussing  Name of Official (Print or Type Name)	Ann L. Schneider, Secretary of Transportation	Date					
Mayor	By:	Date					
Title (County Board Chairperson/Mayor/Village President/etc.)	(Delegate's Signature)						
	(Delegate's Name - Printed)						
(Signature) Date	,						
The above signature certifies the agency's TIN number is 376000524 conducting business as a Governmental Entity.	William R. Frey, Interim Director of Highways/Chief Engineer	Date					
DUNS Number	Ellen J. Schanzle-Haskins, Chief Counsel	Date					
NOTE: If signature is by an APPOINTED official, a resolution	Matthew R. Hughes, Director of Finance and Administration	Date					

**NOTE:** If signature is by an APPOINTED official, a resolution authorizing said appointed official to execute this agreement is required.

Local Agency City of Urbana	L	Illinois Department of Transportation	Consultant Clark Dietz, Inc.					
County Champaign Section 12-00518-00-TL Project No. FCSP-IL10(105) Iob No. P-95-338-12 Contact Name/Phone/E-mail Address Mr. Gale Jamison, P.E. 217-384-2343 gljamison@city.urbana.il.us		Preliminary Engineering Services Agreement For Federal Participation		C Address 125 W. Church Street City Champaign State IL Zip Code 61820 Contact Name/Phone/E-mail Address Mr. Julian Jones, P.E. 217-373-8900 julian.jones@clarkdietz.com				
THIS AGREEMENT is made and entered into this day of, between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.								
		Ducinet Description						
Name Goodwin Avenue and Green Street	t	Route FAU 7175 & 7126 Leng	gth	0.52 mi. Structure No. n/a				
Termini _ Springfield Avenue (North) to II	llino	s Street (South) and Mathews Ave	enue	e (West) to Gregory Street (East).				
Description: The project will consist of Phase I & II preliminary engineering services to improve the intersection of Goodwin Avenue and Green Street in Urbana, Illinois.								
		Agreement Provisions						

#### I. THE ENGINEER AGREES,

- 1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
- 2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
- 3. To complete the services herein described within 11 months from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
- 4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated manhours shown in EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
- 5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
- 6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
- 7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Local Roads and Streets manual published by the STATE.
- 8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.

- 9. The undersigned certifies neither the ENGINEER nor I have:
  - a. employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT.
  - b. agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
  - c. paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
  - d. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
  - e. have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
  - f. are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
  - g. have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.
- 10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LA.
- 11. To submit all invoices to the LA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.
- 12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).

ope of Services to be provided by the ENGINEER:
Make such detailed surveys as are necessary for the planning and design of the PROJECT.
Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
Design and/or approve cofferdams and superstructure shop drawings.
Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge of culvert types and high water effects on roadway overflows and bridge approaches).
Prepare the necessary environmental and planning documents including the Project Development Report, Environmental Class Action Determination or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.
Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient do for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficie data for the design of the proposed improvement.
Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordan with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
Furnish the LA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borro pit and channel change agreements including prints of the corresponding plats and staking as required.

13

#### II. THE LA AGREES,

- 1. To furnish the ENGINEER all presently available survey data and information
- 2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

	Cost Plus Fixed Fee	CPFF :	= 14.5%[DL + R(DL) + OH(DL) + IHDC], or = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or = 14.5%[(2.3 + R)DL + IHDC] tached Fixed Cost Plus Worksheet
		Where:	DL = Direct Labor IHDC = In House Direct Costs OH = Consultant Firm's Actual Overhead Factor R = Complexity Factor
	Specific Rate	☐ (Pay pe	er element)
	Lump Sum		
3.	To pay the ENGINEER usi	ing one of th	ne following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:
	☐ With Retainage		

- a) **For the first 50% of completed work**, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 90% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) After 50% of the work is completed, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 95% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) Final Payment Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
- a) For progressive payments Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) **Final Payment** Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum o money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.
- 4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

#### III. IT IS MUTALLY AGREED,

- 1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
- 2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use.

- 3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
- 4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this agreement.
- 5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
- 6. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they be actually enumerated in this AGREEMENT.
- 7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
- 8. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
- 9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
  - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
  - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
  - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
    - (a) abide by the terms of the statement; and
    - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
  - (3) Any available drug counseling, rehabilitation and employee assistance program; and
  - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

10.	The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

# **Agreement Summary**

Prime Consultant:		TIN Number	Agreement Amount		
Clark Dietz, Inc.		37-1212051 \$140,000.0			
olan Blotz, mo.		0. 1212001	Ψ110,000.00		
Sub-Consultants:		TIN Number	Agreement Amount		
		Sub-Consultant Total:	\$0.00		
		Prime Consultant Total:			
		Total for all Work:	\$140,000.00		
		100011011011	<b>************</b>		
Executed by the LA:					
Executed by the LA.		(Municipality/Township/Cou	intu)		
		(Municipality/Township/Cot	inty)		
ATTEST:					
By:	Ву:				
Ву:	Бу				
Clerk	Title:				
(SEAL)					
(OLAL)					
Executed by the ENGINEER:					
ATTEST:	Clark D	ietz, Inc.			
		ietz, iiio.			
Ву:	Ву:				
Title:	Title:	Senior Vice President			
	1100.	2001 1100 1 100100110			

# **Exhibit A - Preliminary Engineering**

Route: F	FAU 7175 & 71	26					
Local Agency:	: City of Urba	ana			*Firm's approved rates	on file with	IDOT'S
	(Municipality/	Township/County)			Bureau of Accounting a	nd Auditing:	
Section:	12-00518-00-	-TL					
Project:	TCSP-IL10(1	05)			Overhead Rate (OH)	173.67	%
Job No.:	P-95-338-12				Complexity Factor (R)	0	
					Months 11		
Method of Cor	mpensation:						
Cost Plus Fixe	ed Fee 1	☐ 14.5%[DL + R(DL) + OH(	DL) + IHDC]				
Cost Plus Fixe	ed Fee 2	☐ 14.5%[DL + R(DL) + 1.4(	DL) + IHDC]				
Cost Plus Fixe	ed Fee 3	☐ 14.5%[(2.3 + R)DL + IHD	C]				
Specific Rate							
Lump Sum							

# **Cost Estimate of Consultant's Services in Dollars**

Element of Work	Employee Classification	on	Man- Hours	Payroll Rate	Payroll Costs (DL)	Overhead*	Services by Others	In-Hous Direct Co (IHDC)	sts	Profit	Total
	_										
								}			
				Please	refer to the at	ttached CECS	form	-			
				for I	Preliminary E	ngineering Cos	sts.	-			
								-			
							Τ				
Totals			0.00								

# **Exhibit B**



# **Engineering Payment Report**

#### **Prime Consultant**

Name

Address	125 W. Church Street	
Telephone	217-373-8900	
TIN Number	37-1212051	
Project Information		
Local Agency	City of Urbana	
Section Number	12-00518-00-TL	
Project Number	TCSP-IL10(105)	
Job Number	P-95-338-12	

Signature and title of Prime Consultant

Clark Dietz, Inc.

This form is to verify the amount paid to the Sub-consultant on the above captioned contract. Under penalty of law for perjury or falsification, the undersigned certifies that work was executed by the Sub-consultant for the amount listed below.

Sub-Consultant Name	TIN Number	Actual Payment from Prime			
	Sub-Consultant Total:				
	Prime Consultant Total:	\$140,000.00			
	Total for all Work Completed:	\$140,000.00			

Note: The Department of Transportation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under state and federal law. Disclosure of this information is REQUIRED and shall be deemed as concurring with the payment amount specified above.

Date

# PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME PRIME/SUPPLEMENT	Clark Dietz, Inc. Prime		DATE 02/29/12 PTB NO.	
	CONTRACT T START E RAISE E	DATE 4/1/2011	OVERHEAD RATE COMPLEXITY FACTOR % OF RAISE	173.67% 0 3.00%
		ESCALATION PER YEAR		
	4/1/2011 - 1/1/2012	1/2/2012 - 3/1/2012		
	9 11	2 11		
	= 81.82% = 1.0055 The total escalation for	18.73%	0.55%	

# **PAYROLL RATES**

FIRM NAME PRIME/SUPPLEMENT PSB NO.

Clark Dietz, Inc.	DATE	02/29/12
Prime		

**ESCALATION FACTOR** 

0.55%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
P9/8	\$68.28	\$68.65
P7/6	\$51.26	\$51.54
P5/4	\$38.64	\$38.85
P3/P1-2	\$28.55	\$28.71
T5/T4	\$34.71	\$34.90
T3/T2	\$27.99	\$28.14
A5	\$47.35	\$47.61
A4/A3/A2	\$23.80	\$23.93
C3/C2	\$22.25	\$22.37
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00

# COST PLUS FIXED FEE COST ESTIMATE OF CONSULTANT SERVICES

DF-82	4-039
REV	12/04
02/2	9/12

DATE

FIRM	Clark Dietz, Inc.		
PSB		OVERHEAD RATE	1.7367
PRIME/SUPPLEMENT	Prime	COMPLEXITY FACTOR	0

DBE				OVERHEAD	IN-HOUSE		Outside	SERVICES			% OF
DROP	ITEM	MANHOURS	PAYROLL	&	DIRECT	FIXED	Direct	BY	DBE	TOTAL	GRAND
вох	,			FRINGE BENF	costs	FEE	Costs	OTHERS	TOTAL		TOTAL
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(B-G)	
	DEVELOP PROJECT BA	4	126.08	218.97	30.00	46.65				421.71	0.30%
	TYPICAL SECTION & H/	24	786.95	1,366.69	255.00					2,699.81	1.93%
	DRAINAGE STUDIES	32	1,050.36	1,824.16	15.00	388.63				3,278.15	2.34%
	PAVEMENT DESIGN	8	295.00	512.33	15.00	109.15				931.48	0.67%
	ROADWAY LIGHTING S	48	1,722.81	2,992.00	55.00	637.44				5,407.24	3.86%
	UTILITY LOCATIONS/CO	40	1,364.62	2,369.94	125.00		:			4,364.47	3.12%
	ROADWAY PLANS	410	13,626.17	23,664.57	2,310.00		:			44,642.43	31.89%
	ESTIMATE	70	2,335.09	4,055.35	285.00	863.98				7,539.42	5.39%
	SPECIAL PROVISIONS	60	2,138.88	3,714.60	70.00	791.39				6,714.87	4.80%
	BIDDING ASSITANCE	8	270.23	469.30	10.00	99.98				849.51	0.61%
	PROJECT COOR/MGMT	84	2,840.93	4,933.85	115.00	1,051.14				8,940.92	6.39%
	DATA COLLECTION	54	1,802.62	3,130.61	80.00	666.97	12,500.00			18,180.20	12.99%
	ENVIRONMENTAL CLEA	40	1,229.39		15.00	454.87				3,834.34	2.74%
	PUBLIC COORDINATION	6	271.17	470.94	69.33	100.33				911.78	0.65%
	PROJECT STUDIES	195	6,443.25	11,190.00	465.00	2,384.00	8,880.00			29,362.26	20.97%
	QA/QC	12	618.48	1,074.11	0.00	228.84				1,921.42	1.37%
									,		
									<u> </u>		
						0.00		;		0.00	0.000/
	Subconsultant DL					0.00				0.00	0.00%
	TOTALS	1095	36,922.03	64,122.49	3,914.33	13,661.15	21,380.00	0.00	0.00	140,000.00	100.00%

DBE 0.00%

# **AVERAGE HOURLY PROJECT RATES**

FIRM	Clark Dietz, Inc.	
PSB		DATE 02/29/12
PRIME/SUPPLE	MENT Prime	·
		<b>SHEET 1</b> OF <b>5</b>

PAYROLL	AVG	TOTAL PROJECT RATES			DEVEL	OP PROJE	CT BASE	TYPICA	SECTIO	N & H/V	DRAINA	GE STUD	IES	PAVEMI	ENT DESI	GN	ROADW	'AY LIGH'	TING ST
	HOURLY	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd
CLASSIFICATION	RATES		Part.	Avg	1	Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg
P9/8	68.65	0																	
P7/6	51.54	19	1.74%	0.89															
P5/4	38.85	407	37.17%	14.44				4	16.67%	6.48	2	6.25%	2.43	4	50.00%	19.43	34	70.83%	27.52
P3/P1-2	28.71	334	30.50%	8.76				2	8.33%	2.39	12	37.50%	10.76				14	29.17%	8.37
T5/T4	34.90	175	15.98%	5.58	2	50.00%	17.45	10	41.67%	14.54	18	56.25%	19.63	4	50.00%	17.45			
T3/T2	28.14	144	13.15%	3.70	2	50.00%	14.07	8	33.33%	9.38									
A5	47.61	0																	
A4/A3/A2	23.93	16	1.46%	0.35															
C3/C2	22.37	0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	<u> </u>
		0																	
		0									<u> </u>								
		0																	
		0							***************************************		<u> </u>								
	İ	0																	
		0																	<u> </u>
		0									<u> </u>					ļ			
		0									<u> </u>								
TOTALS		1095	100%	\$33.72	4	100.00%	\$31.52	24	100%	\$32.79	32	100%	\$32.82	8	100%	\$36.88	48	100%	\$35.89

# **AVERAGE HOURLY PROJECT RATES**

FIRM	Clark Dietz, Inc.				
PSB		DATE	02/29/12		
PRIME/SUPPLEMEN	T Prime				
		SHEET	2 (	OF	5

PAYROLL	AVG	UTILITY	LOCATIONS	S/CONFLI	ROADWA			ESTIMAT			SPECIAL	. PROVISIO	NS	BIDDING	ASSITANC	E	PROJECT COOR/MGM		<b>GMT</b>
	HOURLY	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd
CLASSIFICATION	RATES		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg
P9/8	68.65																		
P7/6	51.54				1	0.24%	0.13												
P5/4	38.85	18	45.00%	17.48	124	30.24%	11.75	24	34.29%	13.32	42	70.00%	27.20	4	50.00%	19.43	48	57.14%	22.20
P3/P1-2	28.71	10	25.00%	7.18	108	26.34%	7.56	24	34.29%	9.84	16	26.67%	7.65	4	50.00%	14.35	24	28.57%	8.20
T5/T4	34.90	6	15.00%	5.23	100	24.39%	8.51	14	20.00%	6.98									
T3/T2	28.14	6	15.00%	4.22	77	18.78%	5.29	8	11.43%	3.22									
A5	47.61																		
A4/A3/A2	23.93										2	3.33%	0.80				12	14.29%	3.42
C3/C2	22.37																		
****																			
				1															
TOTALS		40	100%	\$34.12	410	100%	\$33.23	70	100%	\$33.36	60	100%	\$35.65	8	100%	\$33.78	84	100%	\$33.82

# **AVERAGE HOURLY PROJECT RATES**

FIRM	Clark Dietz, Inc.							
PSB				DATE	02/29			
PRIME/SUPPLEMEN	IT Prime			SHEET		 OF	_	
				NHFF!	- 4	( ) b	_	

PAYROLL	AVG	DATA CO	LLECTION		ENVIRON	IMENTAL C	LEARAN	PUBLIC	COORDINA	TION	PROJEC	T STUDIES		QA/QC					
	HOURLY	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd	Hours	%	Wgtd
CLASSIFICATION	RATES		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg		Part.	Avg
P9/8	68.65																		
P7/6	51.54							3	50.00%	25.77	3	1.54%	0.79	12	100.00%	51.54			
P5/4	38.85	26	48.15%	18.71	8	20.00%	7.77	3	50.00%	19.43	66	33.85%	13.15						
P3/P1-2	28.71	8	14.81%	4.25	32	80.00%	22.96				80	41.03%	11.78						
T5/T4	34.90										21	10.77%	3.76						
T3/T2	28.14	20	37.04%	10.42							23	11.79%	3.32						
A5	47.61																		
A4/A3/A2	23.93										2	1.03%	0.25						
C3/C2	22.37																		
<del></del>																			
······································																			
***************************************																			
***************************************																		***************************************	1
																		······································	
***************************************					1														
																			1
																			1
TOTALS		54	100%	#00.00	40	4000/	\$30.73	6	100%	\$45.20	105	100%	\$33.04	12	100%	\$51.54	0	0%	\$0.00





Firm Name: Clark Dietz, Inc. PTB/Item No:

REQUIRED – DIRECT COSTS WILL ONLY BE ACCEPTED FOR INCLUSION IN CONTRACT WHEN DOCUMENTED ON THIS FORM. (Indicate only rate and quantities for this specific project.)

Item	Allowable	Contract (1) Rate	Quantity (n/a for work orders)	Total
Per Diem	Up to State Rate Maximum	\$0.00		\$0.00
Lodging (Overnight)	Up to State Rate Maximum	\$0.00		\$0.00
Lodging (Extended)	Actual Cost (based on IDOT's and firm's policy)			\$0.00
Air Fare Coach Rate (with two weeks' notice)	As Approved			\$0.00
Vehicles:		\$0.55	180.00	Ψ0.00
Mileage	Up to State Rate Maximum			\$99.00
Daily Rate (owned or leased)	\$45/day			\$0.00
Overtime	(Premium Portion)			\$0.00
Tolls	Actual Cost			\$0.00
Digital Photo Processing	Actual Cost			\$0.00
Photo Processing	Actual Cost			\$0.00
Cell Phones – (traffic systems, survey, phase III only)	\$70/month/phone (maximum) – Phase III (max. of three without IDOT approval)			\$0.00
Telephone Usage (traffic system monitoring)	Actual Cost			\$0.00
2-Way Radio (survey or phase III only)	Actual Cost			\$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost	\$10.00	12.00	\$120.00
Copies of Deliverables/Mylars (in-house)	Actual Cost	\$0.10	600.00	\$60.00
Copies of Deliverables/Mylars (outside)	Actual Cost			\$0.00
Specific Insurance (required for project)	Actual Cost			\$0.00
CADD	Actual Cost (max. \$15.00/hour)	\$15.00	205.00	\$3,075.00
Monuments (permanent)	Actual Cost			\$0.00
Advertisements	Actual Cost			\$0.00
Web Site	Actual Cost			\$0.00
Facility Rental for Public Meetings &				
Exhibits/Renderings & AV	Actual Cost			\$0.00
Transcriptions (specific to project)	Actual Cost			\$0.00
Recording Fees	Actual Cost			\$0.00
Courthouse Fees	Actual Cost			\$0.00
Testing of Soil Samples	Actual Cost			\$0.00
Lab Services	Actual Cost			\$0.00
Storm Sewer Cleaning and Televising	Actual Cost (requires 2-3 quotes)			\$0.00
Traffic Control and Protection	Actual Cost (requires 2-3 quotes)			\$0.00
Aerial Photography and Mapping	Actual Cost (requires 2-3 quotes)			\$0.00
Utility Exploratory Trenching	Actual Cost (requires 2-3 quotes)			\$0.00
Shift Differential	Actual Cost (based on firm's policy)			\$0.00
PROJECT Site Travel	Actual Cost (based on IDOT's and firm's policy)			\$0.00
	Actual Cost (requires 2-3 quotes)			\$0.00
	Actual Cost (requires 2-3 quotes)			\$0.00
	Include 2-3 vendor quotes and explanation for necessity.			\$0.00
Copies of Deliverables/Mylars (in-house - 8.5x11 color)	- Actual Cost	\$0.50	370.00	\$185.00
Copies of devliverables/mylars (in-house - 24"x36")	Actual Cost	\$6.00	40.00	\$240.00

Printed 2/29/2012 BDE 436 (Rev. 06/16/09)

ltem	Allowable	Contract (1) Rate	Quantity (n/a for work orders)	Total
Copies of deliverables/mylars (in-house - 36x96 - scroll)	Actual Cost			\$0.00
				\$0.00
postage	Actual Cost	\$0.50	20.00	\$10.00
Miscellaneous field equipment (stakes, ribbon, etc.)		\$65.33	1.00	\$65.33
phone/fax usage		\$60.00	1.00	\$60.00
TOTAL				\$3,914.33

<sup>1)</sup> Used to determine upper limit of compensation for direct cost. Unless maximum is specified under allowable, bill at actual cost.

# Clark Dietz, Inc. Summary of Estimated Direct Expenses

# IN-HOUSE DIRECT COSTS

		Mileage	Reproduction	Telephone/ Fax	Postage	Misc.	CADD	Totals
Α.	DEVELOP PROJECT BASE SHEETS (PLOT)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.00	\$30.00
B.	TYPICAL SECTION & H/V ALIGNMENT DESIGN (ALGN)	\$0.00	\$15.00	\$0.00	\$0.00	\$0.00	\$240.00	\$255.00
C.	DRAINAGE STUDIES (DRNG)	\$0.00	\$15.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.00
D.	PAVEMENT DESIGN (PVMT)	\$0.00	\$15.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.00
E.	ROADWAY LIGHTING STUDY (RWL)	\$10.00	\$15.00	\$0.00	\$0.00	\$0.00	\$30.00	\$55.00
F.	UTILITY LOCATIONS/CONFLICTS/MITIGATION (UTIL)	\$0.00	\$25.00	\$20.00	\$20.00	\$0.00	\$60.00	\$125.00
G.	ROADWAY PLANS (PLAN)	\$20.00	\$245.00	\$0.00	\$20.00	\$0.00	\$2,025.00	\$2,310.00
H.	ESTIMATES (EST)	\$0.00	\$25.00	\$0.00	\$0.00	\$0.00	\$260.00	\$285.00
I.	SPECIAL PROVISIONS (SPEC)	\$0.00	\$50.00	\$0.00	\$20.00	\$0.00	\$0.00	\$70.00
J.	BIDDING ASSISTANCE (BID)	\$0.00	\$0.00	\$10.00	\$0.00	\$0.00	\$0.00	\$10.00
K.	PROJECT COORDINATION & MANAGEMENT (ADMN)	\$20.00	\$25.00	\$20.00	\$50.00	\$0.00	\$0.00	\$115.00
L.	DATA COLLECTION (DATA)	\$20.00	\$0.00	\$10.00	\$0.00	\$50.00	\$0.00	\$80.00
M.	ENVIRONMENTAL CLEARANCES (ENVR)	\$0.00	\$15.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.00
N.	PUBLIC COORDINATION AND INFORMATION MEETINGS (PIM)	\$10.00	\$10.00	\$0.00	\$0.00	\$19.33	\$30.00	\$69.33
Ο.	PROJECT STUDIES (STUD)	\$20.00	\$25.00	\$0.00	\$20.00	\$0.00	\$400.00	\$465.00
P.	QA/QC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	TOTALS	\$100.00	\$480.00	\$60.00	\$130.00	\$69.33	\$3,075.00	\$3,914.33

3/1/2012 Page 8

Worksheet Multiplier = 1.00	Proj. Dir. P7/6	Proj. Mgr. P5/4	Elec. Engr. P5/4	Proj. Engr. P3	PLS P5/4	Technician T5/4	Technician T3/2	Clerk A2-4	Total Hours	Total Salary
Project Element										
A. DEVELOP PROJECT BASE SHEETS (PLOT)										
<ol> <li>Plan sheets - 500' per sheet (1"=20'); 1,000' total - 2 sheets</li> <li>Roadway cross section sheets (1,000' @ 50' @ 5/sheet = 4 sheets.</li> </ol>						2	2		4 0	\$0.00 \$0.00
Total Hours Section A.	0	0	0	0	0	2	2	0	4	
B. TYPICAL SECTION & H/V ALIGNMENT DESIGN (ALGN)										
<ol> <li>Existing/proposed typical section elements.</li> <li>Develop H/V alignments.</li> </ol>		3 1		2		8 2	6 2		19 5	\$0.00 \$0.00
Total Hours Section B.	0	4	0	2	0	10	8	0	24	
C. DRAINAGE STUDIES (DRNG)										
Determine/quantify drainage areas and compute discharges. Compute pavement ponding/inlet spacing requirements and size storm sewers for capacity in areas with curb and gutters.		1		6		2 8			2 15	\$0.00 \$0.00
Determine necessary flowline modifications to maintain positive drainage within intersection (assume curb bump-outs will be included with proposed improvements).		1		6		8			15	\$0.00
Total Hours Section C.	0	2	0	12	0	18	0	0	32	
D. PAVEMENT DESIGN (PVMT)										
<ol> <li>Review soil information, geotechnical pavement design recommendations &amp; traffic</li> <li>Develop final pavement design.</li> </ol>		2				4			2 6	\$0.00 \$0.00
Total Hours Section D.	0	4	0	0	0	4	0	0	8	

Works	sheet Multiplier = 1.00	Proj. Dir. P7/6	Proj. Mgr. P5/4	Elec. Engr. P5/4	Proj. Engr. P3	PLS P5/4	Technician T5/4	Technician T3/2	Clerk A2-4	Total Hours	Total Salary
Proje	ct Element										
<u>E.</u>	ROADWAY LIGHTING STUDY (RWL)										
i	Establish appropriate lighting design criteria for class of roadway and function at Goodwin intersection and along Green Street from Wright Street to Lincoln Avenue. Perform photometric analysis to obtain proper illumination level and uniformity.										\$0.00
	Develop RP-8 design criteria.     Perform roadway photometrics for Green Street and update intersection photometrics at Goodwin Avenue.			2 8						2 8	\$0.00 \$0.00
	<ol> <li>Field reconnaissance and coordination with power company to determine locations for power connection.</li> </ol>			2	2					4	\$0.00
	Determine location and dimensions of proposed light poles, wattage, and distribution of luminaires.			2	12					14	\$0.00
	5. Perform voltage drop calculations.			20						20	\$0.00
	Total Hours Section E.	0	0	34	14	0	0	0	0	48	
	Note: E2. City to provide pole heights required, davit lengths, luminaire type and light wattages.										
F.	UTILITY LOCATIONS/CONFLICTS/MITIGATION (UTIL)										
	<ol> <li>Coordinate with Utility Owners for revised utility mapping &amp; verification of location of facilities.</li> </ol>		2		4	2	2	2		12	\$0.00
:	<ol><li>Plot revised utility locations per data furnished by Utility Companies and from field survey.</li></ol>						2	2		4	\$0.00
:	3. Analyze definite vs. potential conflicts - revise designs as possible to mitigate.		2		4		2			8	\$0.00
	4. Meet with Utility Owners to discuss results & request hard Locates. (Assume 1 Meeting).		2		2					4	\$0.00
	5. Pick-up survey for hard locates.					2		2		4	\$0.00
(	6. Coordinate with Utility Companies for relocations of their facilities.		6							6	\$0.00
•	7. Review Utility Company relocation plans and advise the City on issuing permits.		2							2	\$0.00
	Total Hours Section F.	0	14	0	10	4	6	6	0	40	

Note:

F6. Includes preparation of hi-lighted utility plans to be sent to each utility owner.

Total Tota Hours Salar	Clerk A2-4	Technician T3/2	Technician T5/4	PLS P5/4	Proj. Engr. P3	Elec. Engr. P5/4	Proj. Mgr. P5/4	Proj. Dir. P7/6	Worksheet Multiplier = 1.00
									Project Element
									G. ROADWAY PLANS (PLAN)
8 \$0.00		2	4				2		Title sheet (w/sheet index).
6 \$0.00		2	2		1		1		2. General notes (1sheet).
4 \$0.00					2		2		<ol><li>Standards list and legend (1 sheet).</li></ol>
14 \$0.00		4	4		3		3		<ol><li>Summary of quantities (2 sheets).</li></ol>
16 \$0.00		4	4		4		4		<ol><li>Quantity schedules (1 sheet).</li></ol>
14 \$0.00		4	4		3		3		<ol><li>Typical section Green Street (existing/proposed combined, 1 sheet).</li></ol>
11 \$0.00		1	1	4	2		3		<ol><li>Horizontal layout &amp; control (1 sheet).</li></ol>
14 \$0.00		4	4		3		3		<ol><li>Removals/Relocation plans (2 plan sheets @ 1" = 20').</li></ol>
40 \$0.00		6	8		13		13		9. Plan sheets (2 sheets @ 1" = 20").
20 \$0.00		6	8		3		3		Stage construction/maintenance of traffic plan.
0 \$0.00		_					_		11. Storm water pollution prevention plan (1 DBL PNL plan sheet @ 1" = 20').
48 \$0.00		8	15		17		8		<ol> <li>Intersection details (1 sheet-geometrics, joints, sidewalk ramps &amp; spot elevations for 1 intersection).</li> </ol>
16 \$0.00		4	6		4		2		<ol> <li>Pavement marking plans (1 plan sheets @ 1" = 20' &amp; 1 sheet of typical marking details).</li> </ol>
74 \$0.00		6	8		24	4	32		14. Traffic signal plans for Goodwin/Green intersection (4 sheets @ 1"=20' scale)(signal
									layout plan, phase diagram/cable plan, mast arm detail, bill of materials and misc.
66 \$0.00		12	12		18	16	8		15. Roadway Lighting plans.
18 \$0.00		4	6		5		3		16. Miscellaneous details (1 sheet).
0 \$0.00									17. Cross sections (4 sheets @ 1:10 H & 1:5 V).
33 \$0.00		8	10		6		8	1	<ol> <li>Update plans for additional comments or IDOT changes to standard drawings after final plans have been approved.</li> </ol>
8 \$0.00		2	4				2		<ol><li>Convert plans and submit to the City in AutoCAD and PDF formats.</li></ol>
410	0	77	100	4	108	20	100	1	Total Hours Section G.
									H. ESTIMATES (EST)
48 \$0.00		8	14		16	2	8		Pay item determination & quantity calculations.
16 \$0.00					4	4	8		<ol><li>Estimate of construction cost.</li></ol>
6 \$0.00					4		2		Estimate of construction time.
70	0	8	14	0	24	6	18	0	Total Hours Section H.
									I. SPECIAL PROVISIONS (SPEC)
54 \$0.00	2				16	0	20		1 Technical anguising
	2				16	8	28		
							6		
φσ							Ü		specifications have been approved.
60	2	0	0	0	16	8	34	0	Total Hours Section I.
54 0 6	2	0	0	0	16	8	28 6 <b>34</b>	0	

Note

I1-2. Assumes project will be included on state letting and proposal/contract booklet will not be required.

Worksheet Multiplier = 1.00	Proj. Dir. P7/6	Proj. Mgr. P5/4	Elec. Engr. P5/4	Proj. Engr. P3	PLS P5/4	Technician T5/4	Technician T3/2	Clerk A2-4	Total Hours	Total Salary
Project Element										
J. BIDDING ASSISTANCE (BID)										
<ol> <li>Advertising.</li> <li>Attend Pre-Bid conference.</li> <li>Plan distribution.</li> <li>Prequalification evaluation of bidders.</li> <li>Bidders questions - issue clarification/addenda.</li> <li>Attend bid opening.</li> <li>Review bids and prepare tabulation of bids.</li> </ol>		4		4					0 0 0 0 8 0	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00
Total Hours Section J.	0	4	0	4	0	0	0	0	8	
Note: J1-7. Assumes project is on state letting and bidding services are limited to bidder question.  K. PROJECT COORDINATION & MANAGEMENT (ADMN)	ns & clarifications.									
<ol> <li>Organization &amp; setup of project work plan and files.</li> <li>Project review/coordination meetings (assume 4 meetings with project stakeholders</li> <li>Preparation of meeting minutes.</li> <li>General project administration (12 months).</li> </ol>	).	6 10 4 28		6 6 4 8				12	12 16 8 48	\$0.00 \$0.00 \$0.00 \$0.00
Total Hours Section K.	0	48	0	24	0	0	0	12	84	
DATA COLLECTION (DATA)      Update 2007 topographic survey & miscellaneous pick-up     Review existing Green Street plans     Obtain aerial information		1		8	24		20		45 9 0	\$0.00 \$0.00 \$0.00
Total Hours Section L.	0	2	0	8	24	0	20	0	54	
<ul><li>L2. Existing plans to be provided by the City.</li><li>L3. Aerial data to be provided by CUUATS</li></ul>										
ENVIRONMENTAL CLEARANCES (ENVR)      Perform Environmental Surveys     Perform screening for special waste.     Perform preliminary environmental sight assessment (PESA)		4 2 2		4 10 18					8 12 20	\$0.00 \$0.00 \$0.00
Total Hours Section M.	0	8	0	32	0	0	0	0	40	
Note: M1. ESR includes biological and cultural surveys. M3. Assumes special waste screening will require PESA.										
N. PUBLIC COORDINATION AND INFORMATION MEETINGS (PIM)										
Meet with interested council members and citizens to discuss geometric alternatives	ъ. 3	3							6	\$0.00
Total Hours Section N.	3	3	0	0	0	0	0	0	6	
2/4/2012		Cationat	مرا المرسم							Pogo F

Worksheet Multiplier = 1.00	Proj. Dir. P7/6	Proj. Mgr. P5/4	Elec. Engr. P5/4	Proj. Engr. P3	PLS P5/4	Technician T5/4	Technician T3/2	Clerk A2-4	Total Hours	Total Salary
Project Element										
O. PROJECT STUDIES (STUD)										
1. Define design criteria 2. Review traffic volume, peak hour volumes and growth projections. 3. Intersection Design Studies for Goodwin/Green Intersection 4. Prepare initial coordination meeting data form (BLR 22410) and submit to IDOT. 5. Attend one bi-monthly coordination meeting. 6. Review crash summary provided by the CUUATS and identify countermeasures 7. Determine preferred alternative and preliminary construction cost 8. Prepare approval of design variance form (BLR 22120) and submit to IDOT. 9. Prepare local project development report (BLR 22110) and submit to IDOT. 10. Incorporate review comments and resubmit final documents.	2	1 1 14 4 4 2 10 6		1 1 22 6 4 4 8 9		16 2 3	16 3 4	2	2 2 68 10 8 6 20 20 47 12	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00
10. Incorporate review comments and resubmit final documents.		4		8					12	\$0.00
Total Hours Section O.	3	66	0	80	0	21	23	2	195	
Note: O1. CUUATS to provide traffic volumes and projections to be used for design studies. O5. Assumes location within Champaign-Urbana. O7. Includes preliminary roundabout/fatal flaw analysis.  P. QA/QC										
Perform QA/QC on Plans, Specifications and Estimates	12								12	\$0.00
Total Hours Section P.	12	0	0	0	0	0	0	0	12	
GRAND TOTAL HOURS - ITEMS A THRU P	19	307	68	334	32	175	144	16	1095	



#### PLANNING & COMMUNITY DEVELOPMENT

1776 East Washington Street Urbana, IL 61802

Phone 217.328.3313 Fax 217.328.2426

www.ccrpc.org

To: Jerry Payonk, CDI Vicepresident

From: Rita Morocoima-Black, Planning and Community Development Director

Date: February 26, 2012

Re: Goodwin Avenue and Green Street Intersection Improvements Proposal

Clark Dietz, Inc. (CDI) has requested a proposal from Champaign County Regional Planning Commission for traffic data collection and operational analysis for proposed intersection improvements at the intersection of Goodwin Avenue and Green Street. The traffic analysis can be completed in one month. The work is described in the proposed scope of services tasks and cost estimates are provided for each task below.

#### SCOPE OF SERVICES

#### 1. Traffic Data Collection

The City of Urbana staff will collect necessary traffic operational data at the study intersection. This data will include: turning movement counts during the morning, midday, and afternoon peak periods. The turning movement counts will be classified into automobiles and heavy vehicles. Also, pedestrian and bicycle counts will be collected at the intersection during all three periods; and transit volume and operation data during peak hours on a regular weekday will be collected

### 2. Traffic Crash Data Collection

CCRPC staff will collect the five most recent years of crash data at or near the study intersection.

# 3. Data Analysis for Existing Conditions

CCRPC staff will analyze existing traffic operational conditions at the study intersection during peak hours. Staff will prepare a micro-simulation model (using Synchro® software suite) of the study intersection and evaluate the existing conditions at the study intersection. Crash data for the five most recent years at the study location will be analyzed with an emphasis on pedestrian and bicycle related crashes.

**Deliverables:** A Technical Memorandum summarizing the results of the existing traffic conditions at the intersection and crash analyses will be prepared including summary delay, level of service, and queue analysis.

#### 4. Data Analysis for Proposed Improvements

CCRPC staff will analyze traffic operational conditions at the study intersection during peak hours for the proposed improvements. Staff will prepare a micro-simulation model (using Synchro® software suite) of the study intersection for AM and PM peak hour and evaluate the proposed improvements for the study intersection for the design year 2032.

**Deliverables:** A Technical Memorandum summarizing the results of the proposed improvements will be prepared including summary delay, level of service, and queue analysis for the design year 2032.

# 5. Local Officials Meeting

CCRPC staff will attend one local board meeting to present the study results to local officials including City Council Boards and/or Planning Boards prior to preparation of the final Concept Development Report detailing the analyses that were performed for Phase 1.

#### **COST**

Personnel including fringe benefits and indirect charges

Tasks 1, 2, 3: \$ 6,735 Task 4: \$ 1,645 Task 5: \$ 450

Personnel Costs include:

Project Manager
Project Engineer
15 hours
1,925
79 hours
6,905

Commodities and services including travel: \$ 50

Total not to exceed amount: \$ 8,880

Please contact Rita Morocoima-Black, CCRPC Planning and Community Development Director, with any questions or concerns at 328-3313 or rmorocoi@ccrpc.org.

providing engineering solutions to improve pavement performance



www.appliedpavement.com

February 17, 2011

Mr. Jerry Payonk Clark Dietz - Engineers 125 West Church Street Champaign, IL 61820-3510

Subject: Proposal for Pavement Testing and Evaluation Services for Green Street at the Goodwin Avenue Intersection (APTech Proposal 2012-021-RE01)

Dear Mr. Payonk:

Applied Pavement Technology, Inc. (APTech) is pleased to submit this detailed scope of work and associated cost estimate for conducting pavement testing, evaluation, and rehabilitation design analysis for Green Street at the Goodwin Avenue intersection in Urbana, Illinois. The tasks included in the scope of work reflect our understanding of the project, as obtained through recent discussions between you and members of our staff.

Mr. Kelly Smith will serve as Project Manager for the proposed effort. He will be direct all of APTech's activities on the study and will work closely with Clark Dietz and pertinent government bodies to successfully complete the study. He will be supported by our engineering and technician staff, and assisted by Mr. Todd Hoerner and Mr. Kurt Smith, who will serve as Technical Advisors. I will serve as Principal-in-Charge and will ensure that the overall needs and expectations for the project are fully met.

We are excited about the opportunity to assist Clark Dietz by conducting this study. Please feel free to contact me at (217) 398-3977 or by e-mail (kzimmerman@appliedpayement.com) if you have any questions regarding our proposal.

Sincerely,

Applied Pavement Technology, Inc.

Kathryn A. Zimmerman, P.E.

President

# PROPOSAL FOR PAVEMENT TESTING AND EVALUATION SERVICES FOR GREEN STREET AT THE GOODWIN AVENUE INTERSECTION

#### **SCOPE OF WORK**

Under the proposed work effort, APTech will perform pavement coring, dynamic cone penetrometer (DCP) testing, and falling weight deflectometer (FWD) testing (optional) on a short section of Green Street for the purpose of obtaining existing pavement layer information and assessing pavement foundational support and structural load-carrying capacity. APTech will conduct analyses of the test results and other available data (including pavement distress data obtained through a cursory condition survey) to develop feasible rehabilitation design alternatives for consideration by City and Clark Dietz personnel. The results of the study will be presented in an Evaluation Report that includes recommendations for pavement improvement.

As illustrated in figure 1, the limits of the project extend along Green Street from a point 300 ft west of the western edge of the Goodwin Avenue intersection to a point 300 ft east of the eastern edge of the intersection (for a total length of approximately 660 ft when including the intersection proper). The project includes both through lanes in each direction as well as both the eastbound and westbound left turn lanes. Further descriptions of the entire proposed work effort are provided in the task write-ups below.



Figure 1. Project location and limits.

#### Task 1. Street/Pavement Records and Cursory Pavement Condition Survey

Through Clark Dietz's lead, the APTech team will solicit, compile, and review all available information on the Green Street section. This includes historical and projected future traffic levels (Average Daily Traffic [ADT] and, where applicable, commercial truck counts and bus operations/loadings), pavement history (years of construction, rehabilitation, and maintenance treatments) and cross-sectional information (material layer types and thicknesses), pertinent subgrade information (soil types and strength/stiffness characteristics), and past pavement condition/performance information, as available.

APTech will also perform a detailed condition survey of the subject pavement, with the main objectives being:

- Determining the type, severity, and extent of the predominant distresses and assessing their uniformity throughout the section.
- Checking/verifying geometrics (e.g., lane configurations and widths) and vertical constraints (e.g., curb-and-gutter, manholes), and identifying utility locations.
- Identifying special problem areas (e.g., locations of particularly poor drainage and/or weak foundation).

The information gathered will be used to identify distinct segments of pavement (in terms of design, construction, traffic loadings, and condition/performance) and to develop specific coring and testing protocols that will aid the development of feasible rehabilitation alternatives. It is expected that this initial task will take 1 to 2 weeks to complete.

#### Task 2. Pavement Coring and DCP Testing

In this task, APTech will perform pavement coring and conduct limited DCP testing on the Green Street section. The cores will be used to determine the thickness of the existing asphalt surface and the underlying layers, to assess the integrity of the pavement layer materials, and to examine the condition of the layer interfaces.

A total of 16 cores are proposed, consisting of 8 cores in each direction and staggered by lane. For a given direction, it is anticipated that 4 cores will be extracted from the inside travel lane, 3 cores from the outside travel lane, and 1 core from the left turn lane (4 cores per direction x 2 directions = 8 total cores). Moreover, it is anticipated that 4 cores will be extracted from the intersection approach pavement, 2 cores from the intersection itself, and 2 cores from the intersection leave pavement (8 total cores). It is anticipated that all of the coring can be completed in 5 to 6 hours (based on an assumed production rate of 20 to 24 cores per day). All cores will be 4 inches in diameter and core holes will be patched with an appropriate cold-mix patching material.

In conjunction with the coring, APTech will conduct DCP tests at 4 core hole locations. These tests measure the in situ strength of subgrade soils or unstabilized base and subbase layers. The penetration rate values obtained can then be converted to Illinois Bearing Ratio (IBR) values for use in the Illinois Department of Transportation (IDOT) design procedures. The expected time for performing the 4 DCP tests is 1 hr. Hence, the combined coring and DCP work can be completed within 1 day.

To minimize traffic control problems during the coring and DCP operations, APTech will restrict work done within the intersection to a weekend day morning (such as a Sunday morning when traffic volumes are expected to be light). Work done outside the intersection will take place on a weekday between the hours of 9 am and 3 pm.

# Task 3. FWD Testing (Optional)

Under this <u>optional</u> task, APTech will perform deflection testing on the subject pavement using its Dynatest 8082 heavyweight model FWD. The deflection data obtained will provide information on the overall strength and integrity of the pavement structure and the degree of support provided by the subgrade and foundation materials. While not a requirement to performing overlay designs using the IDOT procedures, FWD testing can help identify particularly weak areas of pavement and can be used to characterize the properties of the existing pavement material layers for use in the IDOT design procedures.

If the existing pavement is a composite pavement (i.e., asphalt on concrete) and the transverse joints in the underlying PCC have reflected up through the asphalt surface and are readily apparent, then APTech will also perform FWD testing at a few (say, 5 or 6) of these cracks/joints to assess their load transfer efficiency (LTE).

In general, the proposed testing pattern consists of testing in the center of each travel lane and/or left turn lane at nominal 100-ft intervals in each direction of traffic. The test locations in each direction (and each lane within a direction) will be staggered to ensure a test point every 50 ft along the roadway. This testing pattern will result in approximately 30 total test points.

At each FWD test location, a three-drop load sequence of 9,000, 12,000, and 15,000 lbs (plus an initial seating drop) will be used, which covers the typical range of traffic loadings on this type of street. Deflections will be measured using a standard sensor configuration that consists of eight sensors: one sensor located directly under the load plate, six sensors in front of the load plate spaced at 8, 12, 18, 24, 36, 48, and 60 in from the load plate, and one sensor 12 in behind the load plate. Given normal FWD production rates (3 to 4 minutes per test location), it is expected that the proposed FWD testing will be completed within ½ day. It should be noted that it is critical that the testing be done at a time when the base and subgrade layers are not frozen, as these conditions can lead to inflated foundational strength values. Hence, if FWD testing is selected, it is advised that the testing be conducted after March 31, 2012.

To minimize traffic control problems during FWD testing, APTech proposes to conduct this work on a weekend morning.

# **Task 4. Test Results Summary Report (Optional)**

In this task, APTech will summarize and present the results of the coring, DCP testing, and FWD testing activities (if conducted) in a short Test Results Summary Report. This report will include pertinent information collected under Task 1, such as traffic loading estimates, pavement cross-section and history, subgrade soil types, and predominant pavement distresses. It will also include a detailed coring log that identifies core locations and dates, presents material layer types and thicknesses, describes core conditions (i.e., layer debonding, asphalt stripping, or other noteworthy items), and provides DCP test results (penetration rates and corresponding IBR values). If FWD testing is conducted, the report will include the FWD deflection profiles (normalized to a 9,000-lb load), which are helpful in indicating the quality and uniformity of the pavement support conditions and areas of particularly weak pavement.

The Test Results Summary Report is expected to take 1 to 2 weeks to complete.

### **Task 5. Backcalculation Analysis (Optional)**

If FWD testing is conducted, APTech will perform backcalculation analyses using the measured deflection data and available cross-section information (from historical records and coring), along with a backcalculation method appropriate for the specific pavement structure of each pavement section. "Backcalculation" is the process whereby the fundamental engineering properties of the pavement structure (elastic modulus, E) and underlying subgrade soil (subgrade resilient modulus, Mr) are estimated based on the surface deflections measured with the FWD. The resulting estimates of E and M<sub>r</sub> values will be of great value in the assessment of existing material layer structural coefficients for the IDOT design procedures and in the subsequent development of recommended improvements for the subject pavement. If the existing pavement is composite and FWD tests are performed at transverse cracks/joints, the deflection data from those tests will be used to compute LTE values.

The backcalculation and LTE computation effort (if performed) is expected to take 1 week to complete.

# Task 6. Rehabilitation Design Alternatives and Pavement Improvement Recommendations

This task will entail identifying feasible rehabilitation design alternatives, performing detailed designs for each feasible alternative, and developing recommendations for improving the subject pavement. Various rehabilitation treatments will be identified (such that they adequately address the specific deficiencies that currently exist) and considered in conjunction with localized pretreatment repair quantities and locations. Each feasible treatment will then be structurally designed using the IDOT rehabilitation design procedures. Based on costs and various other

considerations, preliminary recommendations will then be developed regarding the alternative that best satisfies the structural and functional needs of the road.

It is expected that this task will take 3 to 4 weeks to complete, depending in part on whether FWD testing is selected as part of the work.

# **Task 7. Evaluation Report**

Task 7 includes the following two subtasks:

- <u>Subtask 7a—Draft Evaluation Report</u>. A Draft Evaluation Report will be prepared that fully documents the study results and includes the preliminary recommendations for pavement improvements. The Draft Evaluation Report will be completed and submitted in electronic (.pdf) form by the end of the 8<sup>th</sup> week of the contract, assuming the optional tasks are selected as part of the work. If not, the report could be completed and submitted 1 to 2 weeks earlier.
- <u>Subtask 7b—Final Evaluation Report</u>. In this final subtask, APTech will review the comments on the preliminary recommendations, conduct additional analyses as necessary, and prepare final sets of recommendations for improvements. A revised Final Evaluation Report containing the final recommendations will be completed and submitted in electronic (.pdf) form by the end of the 10<sup>th</sup> week of the contract, assuming the optional tasks are selected as part of the work. If not, the report could be completed and submitted 1 to 2 weeks earlier.

#### PROJECT SCHEDULE

Table 1 shows APTech's proposed project schedule, broken down by task. It is anticipated that the project will start in late March or early April 2012. As table 1 shows, the work is spread across a 10-week time period stretching from the notice to proceed (NTP) to the submission of the Final Evaluation Report (Task 7). This time schedule includes the three optional tasks (Tasks 3, 4, and 5). The project could be compressed by a week or two if those tasks are not selected.

The proposed time schedule recognizes the desire for quick and timely results, yet provides a reasonable cushion for completing each of the project tasks, particularly in light of the possibility of inclement weather during the proposed time period.

Table 1. Proposed project time schedule.

	Project Week											
Tasks	1	2	3	4	5	6	7	8	9	10	11	12
Task 1 – Street/Pavement Records and Cursory Pavement Condition Survey	NTP											
Task 2 – Pavement Coring & DCP Testing												
Task 3 – FWD Testing (Optional)												
Task 4 – Test Results Summary Report (Optional)												
Task 5 – Backcalculation Analysis (Optional)												
Task 6 – Rehabilitation Design Alternatives and Pavement Improvement Recommendations												
Task 7 – Evaluation Report								PR		FR		

NTP = Notice to Proceed

**PR** = Preliminary Recommendations Submission

FR = Final Recommendations Submission

# **COST PROPOSAL**

The proposed fixed-price cost details for this work effort are shown in table 2. All costs are estimates based on APTech's understanding of the required scope and the assumptions listed below. Separate sets of costs are provided corresponding to a basic set of tasks (Tasks 1, 2, 6, and 7) and a full set of tasks that includes both the basic tasks and the three optional tasks (Tasks 3, 4, and 5). As can be seen, the total fixed-price cost for the basic set of tasks is \$12,500. The total fixed-price cost for the full set of tasks is \$18,465.

Table 2. Cost estimate.

		Est	imated Cost
Task	Activity Descriptions	Basic Tasks	Basic and Optional Tasks
Task 1 – Street/Pavement Records and Cursory Pavement Condition Survey	<ul> <li>Current and Forecasted Traffic Data</li> <li>Historical Pavement Information</li> <li>Pavement Condition Survey</li> </ul>	\$980	\$980
Task 2 – Pavement Coring & DCP Testing <sup>1</sup>	<ul><li>Coring and DCP Testing Plan</li><li>Coring</li><li>DCP Testing</li></ul>	\$3,875	\$3,875
Task 3 – FWD Testing (Optional) <sup>2</sup>	■ FWD Testing Plan ■ FWD Testing	\$0	\$2,490
Task 4 – Test Results Summary Report (Optional)	<ul> <li>Summary Report containing traffic and pavement data, pavement conditions, coring log, and FWD deflection profiles</li> </ul>	\$0	\$1,515
Task 5 – Backcalculation Analysis (Optional)	<ul><li>Backcalculated pavement properties</li><li>Crack/Joint LTE percentages</li></ul>	\$0	\$1,960
Task 6 – Rehabilitation Design Alternatives and Pavement Improvement Recommendations	<ul> <li>Feasible Rehabilitation Treatment         Alternatives</li> <li>Rehabilitation Treatment Designs</li> <li>Estimated Repair Quantities and         Locations</li> <li>Preliminary Recommendations</li> </ul>	\$3,350	\$3,350
Task 7 – Evaluation Report	<ul> <li>Draft Evaluation Report</li> <li>City and Clark Dietz Comments on Draft Report</li> <li>Additional Analyses, as needed</li> <li>Final Evaluation Report</li> </ul>	\$4,295	\$4,295
TOTAL		\$12,500	\$18,465

<sup>&</sup>lt;sup>1</sup> In addition to labor costs and fees for other direct costs, the coring costs include charges for equipment (coring rig and support vehicle), core hole patching, and traffic control.

<sup>&</sup>lt;sup>2</sup> In addition to labor costs and fees for other direct costs, the FWD testing costs include equipment charges (FWD and support vehicle) and traffic control charges.