COUNTRY CLUB TRAILHEAD IMPROVEMENTS

CONTRACT DOCUMENTS

Project Number: BPR-2011-2

October 20, 2011
BID DATE – NOVEMBER 10, 2011

City of Bloomington
Parks and Recreation

401 North Morton Street, Suite 250
Bloomington, IN 47402
812-349-3700

Prepared by:

Butler, Fairman & Seufert
8450 Westfield Blvd., Suite 300
Indianapolis, IN 46240
317-713-4615

COUNTRY CLUB TRAILHEAD IMPROVEMENTS

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INVITATION TO BIDDERS

NOTICE IS HEREBY GIVEN THAT THE BOARD OF PARK COMMISSIONERS OF THE CITY OF BLOOMINGTON, INDIANA WILL RECEIVE SEALED BIDS FOR THE BELOW-DESCRIBED WORK AT THE LOCATION INDICATED.

COUNTRY CLUB ROAD TRAILHEAD PROJECT

This project shall include, but is not limited to clearing, grading, pervious pavers, limestone retaining walls, flagstone walks, concrete curbing and sidewalks, installation of a pedestrian HAWK signal, site amenities and landscaping.

Project site is located on the south side of Country Club Drive, west of S. Walnut St, in Bloomington, Indiana.

The proposal and other data submitted will form the basis of the negotiation of a Lump Sum agreement for the work. Proposals are to be submitted in proper form, as described in the "Instructions to Bidders". Sealed proposals shall be received by the Department of Parks and Recreation at Showers City Hall, 401 North Morton Street, Suite 250, Bloomington, Indiana, 47402 at or before **2:00 P.M. local time, on Thursday, November 10, 2011.** The sealed Bids will be publicly opened and read aloud immediately thereafter in the Parks and Recreation department conference room. Any proposals received after the designated time will be returned unopened. Proposals will be reviewed and the award may be made at a scheduled meeting of the Board of Park Commissioners on November 15, 2011.

The Contract Documents may be obtained online at the following web site: http://bloomington.in.gov/sections/viewSection.php?section_id=537

Each Bidder shall file with his or her sealed proposal: (1) a properly executed Non-collusion Affidavit as required by the laws of the State of Indiana; (2) a Questionnaire Form 96 of the State Board of Accounts, (3) a cashiers check or certified check drawn on an acceptable bank or a bid bond equal to five (5) percent of the total amount bid.

A pre-bid meeting shall be held in the Parks and Recreation department conference room located at Showers City Hall, 401 North Morton Street, Suite 250, Bloomington, Indiana on Wednesday, November 2, 2011 at 1:30 pm local time. The meeting is not mandatory, but is strongly recommended.

Each Bidder must ensure that to the greatest extent feasible, opportunities for training and employment should be give to lower income residents of the project area and purchases and/or contract for work in connection with the project should be awarded to small business concerns which are located in, or owned in substantial part, by person residing in the area of the project.

Any bidder/quoter seeking to qualify as a "local Indiana business" to gain a preference in the bidding/quoting process pursuant to Indiana Code 5-22-15-20.9 must contact Danise Alano, Director, City of Bloomington Economic and Sustainable Development Department (812-349-3477; alanod@bloomington.in.gov) to obtain information as to the qualification process, applicable rules, and required documentation. When submitting a bid/quote, the bidder/quoter must submit a statement claiming the preference. All information and documentation offered in support of the

claim for qualification as a “local Indiana business” must be included in the bidder’s/quoter’s sealed bid/quote.

The City of Bloomington is an equal opportunity employer, and Bidders shall meet all requirements for equal employment under Title VII of the 1964 Civil Rights Act as amended and under the Bloomington Human Rights Ordinance, as amended.

Each Bidder for proposals over $10,000.00 shall submit and have approved by the City of Bloomington Contract Compliance Officer, Barbara McKinney, their written Affirmative Action Plan at least twenty-four (24) hours prior to the deadline for submission of proposals. Bids received that do not have an approved Affirmative Action Plan will be returned unopened. Each Bidder must insure that all employees and applicants for employment are not discriminated against because of race, religion, color, sex, national origin, ancestry or handicap. All the protected classes must be included in your Affirmative Action Plan for it to be acceptable. In addition to other requirements, your plan MUST include a workforce breakdown, an internal grievance procedure, a non-retaliation statement, designation of a person by name or position who is responsible for implementation of the Plan, applicability to both applicants and employees, recruitment of minorities, equal access to training programs, and an explanation of your method of communicating the operations of your affirmative action plan to employees and prospective applicants. Barbara McKinney, Contract Compliance Officer, may be contacted at (812) 349-3429, 9:00 a.m. to 1:00 p.m. local time Monday through Friday.

Wage rates shall not be less than the common construction wage rates as determined in accordance with IC5-16-7.

The successful Bidder shall furnish performance and payment bonds for one-hundred (100) percent of the contract amount prior to execution of the contract, and said bonds shall remain in effect for a period of one (1) year after final acceptance of the work.

The Board of Park Commissioners reserves the right to waive any informalities and to accept or reject any or all proposals submitted. Bids may be held by the Board for a period not-to-exceed thirty (30) days, from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of the Bidder prior to awarding the contract.

John Carter, President
Board of Park Commissioners
City of Bloomington, Indiana

INSTRUCTIONS TO BIDDERS

1.00 **CONTRACT DOCUMENTS**: The "Invitation to Bid", "Instructions to Bidders," "Responsible Bidder Affidavit," "Bidders' Proposal", "Agreement", "General Conditions", "Special Conditions", "Specifications", and the "Contract Drawings" are the Contract Documents that will form the Contract.

1.01 **INSPECTION OF THE SITE:** Bidders shall examine each of the Contract Documents, visit the site of the work and thoroughly and fully inform themselves of the construction hazards procedures, labor, conditions and factors, which could affect the prosecution and completion of the work. Such considerations shall include; the conditions of existing structures and facilities which may be affected by the proposed work, the procedure necessary for maintenance of uninterrupted operation of existing facilities, the availability and cost of labor and methods for transporting, handling, and storage of materials and equipment. All such factors shall be properly investigated and considered in the preparation of the Bidder's proposal. There will be no subsequent financial adjustment to any contract for lack of such prior information or its effects on the cost of the work.

1.02 **OMISSIONS AND DISCREPANCIES:** Should Bidders find discrepancies in, or omissions from, the Contract Documents, or should they be in doubt as to their meaning, written notification should be made to the City Engineer. Interpretation of the proposed contract documents will be made only by written addendum. A copy of each addendum will be mailed or delivered to each person obtaining a set of contract documents from the City Engineer. The Owner will not be responsible for any other explanations or interpretations of the proposed contract documents.

2.00 **PROPOSALS:** Pursuant to the "Invitation to Bidders" sealed proposals for performing the work shall be received by Board of Park Commissioners, City of Bloomington Parks and Recreation Department, at Showers City Hall, 401 North Morton Street, Suite 250, Bloomington, Indiana, 47402 at or before 2:00 p.m. local time on November 10, 2011. Proposals will be opened and read at 2:00 p.m. by the Parks and Recreation department staff in the department conference room. Any proposals received after the designated time will be returned unopened. Proposals will be reviewed and the award will be made at the November 15, 2011 meeting of the Board of Park Commissioners.

2.01 **PROPOSAL FORM:** Each proposal shall be legibly written or printed in ink on the Proposal Form with Unit Prices provided. All addenda to the Contract Documents on which a Proposal is based, properly signed by the Bidder, shall accompany the Proposal when submitted. No alteration in any Proposal, or in the Proposal Form on which it is submitted, shall be made by any person after the Proposal has been submitted by the Bidder.

2.02 **PROPOSAL SIGNATURES:** Each Bidder shall sign their proposal using their usual signature and giving their full business address. Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or other authorized representative. Bids by corporations shall be signed with the name of the corporation followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation. The names of all persons signing should also be typed or printed below the signature. A bid by a person who affixes to their signature the word "president" or "secretary", "agent", or other designation without disclosing their principal may be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the person signing shall be furnished. No Bidder may submit more than one Proposal. Two Proposals under different names will not be accepted from one firm or association.

2.03 **PROPOSAL SUBMISSION:** Each Proposal submitted shall be enclosed in a sealed envelope or wrapping, addressed to the Board of Park Commissioners, City of Bloomington Parks and Recreation Department, Showers City Hall, 401 North Morton Street, Suite 250, Bloomington, Indiana, 47402, identified on the outside with the words "SEALED BID", and the name of the project and the project

number, and filed with the Operations Director at their office in Suite 250, Showers City Hall at 401 North Morton, Bloomington, Indiana.

2.04 **INDIANA LEGAL REQUIREMENTS:** Each Bidder shall submit under oath with their bid a statement of their experience, proposed plan for performing the Work, equipment available to perform the work, and a financial statement. The statements shall be submitted on Questionnaire Form No. 96 of the Indiana State Board of Accounts. Each Proposal shall be accompanied by a properly executed Non-Collusion Affidavit as required by the laws of the State of Indiana. Each Bidder shall also submit under oath with their bid the "Responsible Bidder Affidavit" as required by Chapter 2.31 of the Bloomington Municipal Code.

2.05 **PROPOSAL GUARANTEE:** Each Proposal shall be accompanied by a cashier's check or a certified check drawn on an acceptable bank, or an acceptable Bidder's bond in an amount of not less than five percent (5%) of the total bid. The proposal guarantee shall be made payable without condition to the City of Bloomington, Indiana, hereinafter referred to as "Owner", and the amount of said Proposal Guarantee may be retained by and forfeited to the Owner as liquidated damages if the Proposal covered thereby is accepted and a contract based thereon is awarded and the Bidder should fail to enter into a contract in the form prescribed, with legally responsible sureties, within fifteen (15) days after such award is made and confirmed by the Owner.

2.06 **RETURN OF PROPOSAL GUARANTEE:** The Proposal Guarantee deposit of each unsuccessful Bidder will be returned when their proposal is rejected. The Proposal Guarantee deposit of the Bidder to whom the Contract is awarded will be returned when the successful Bidder executes a contract and files a satisfactory performance bond. The Proposal Guarantee deposit of the second and third lowest responsible Bidders may be retained for a period not to exceed ninety (90) days pending the execution of the Contract and bond by the successful Bidder.

2.07 **WITHDRAWAL OF PROPOSAL:** No Contractor may withdraw their Proposal for a period of sixty (60) days after the date and hour set for the opening, and the Bidders submitting the three lowest bids may not withdraw their proposals for a period of one-hundred eighty (180) days after the opening date. A Bidder may withdraw their Proposal at any time prior to the expiration of the bid period during which Proposals may be submitted by a written request signed in the same manner and by the same person who signed the Proposal.

2.08 **ACCEPTANCE AND REJECTION OF PROPOSALS:** The Owner reserves the right to accept the proposal submitted by the lowest responsible and responsive Bidder; to reject any or all proposals; and to waive irregularities or informalities in any proposal. Proposals received after the specified time of closing will be returned unopened. The acceptance of a proposal will be a notice in writing signed by a duly authorized representative of the Board of Public Works, and no other act shall constitute acceptance of a proposal. The acceptance of a proposal shall bind the successful Bidder to execute the Contract and to be responsible for liquidated damages as provided in Section 8.00.

3.00 **QUALIFICATION OF BIDDERS:** Bidders shall submit satisfactory evidence that they have a practical knowledge of the particular work bid upon, and that they have the necessary financial resources to complete the proposed work. Each Bidder shall execute completely and accurately Questionnaire Form No. 96 of the Indiana State Board of Accounts and shall file the same with their Proposal. The information contained therein shall be used by the Owner to determine the ability, experience, and capital resources of the Bidder. In determining the Bidder's qualifications, the following factors will be considered: whether the Bidder (a) maintains a permanent place of business; (b) has adequate plant and equipment to do the work properly and expeditiously; (c) has the necessary financial resources to meet all obligations incident to the work; and (d) has appropriate technical experience. Each Bidder may be required to show that previous work performed has been handled in such a manner that there are no just and proper claims pending against such work. No bid will be accepted which is submitted by a Bidder who is engaged in any work which would impair their ability to finance the work covered by such bid or to provide suitable equipment for its proper prosecution and completion.

4.00 **EXECUTION OF CONTRACT**: Any Bidder whose proposal shall be accepted will be required to appear at the office of the City Engineer in person, or, if a firm or corporation, a duly authorized representative shall so appear, to execute the Contract within 15 days after notice that the Contract has been awarded to them. Failure or neglect to do so shall constitute a breach of the agreement effected by the

acceptance of the Proposal. The amount of the Proposal Guarantee accompanying the Proposal of such Bidder shall be retained by the City as liquidated damages for such breach. In the event that any Bidder whose Proposal shall be accepted shall fail or refuse to execute the Contract as hereinbefore provided, the Board of Public Works may at their option, determine that such Bidder has abandoned the Contract and thereupon their Proposal and the acceptance thereof shall be null and void and the Owner shall be entitled to liquidated damages as above provided.

4.01 **INSURANCE:** The Contractor will be required to carry insurance throughout the lifetime of the Contract, as provided in the General Conditions, the amount of insurance of the various types being not less than the amounts specified therein.

4.02 **PAYMENTS:** Payment for all work performed under the proposed contract will be made in cash, or its equivalent, by the Owner within thirty (30) days after completion and final acceptance of the work covered by the contract. Partial estimates will be issued and paid as provided in the General Conditions.

4.03 **TIME FOR BEGINNING AND COMPLETING THE WORK:** The Contractor shall start active and continuous work on the contract within 15 calendar days after the date of the notice to proceed and shall complete the work within 180 calender days. Calendar and work days shall be as defined in the General Conditions of these documents.

4.04 **TAXES AND PERMITS:** Attention is directed to the requirements of the General Conditions regarding payments of taxes and obtaining permits. The Contractor shall be responsible for obtaining all necessary permits.

4.05 **WORKER'S COMPENSATION:** Before any work is started, the Contractor shall obtain from the Indiana State Industrial Board and file with the Owner, a certificate as evidence of compliance with the provisions of the Indiana Worker's Compensation Act and the Indiana Worker's Occupational Diseases Act..

4.06 **PERFORMANCE BOND:** The Bidder to whom a contract is awarded will be required to furnish a Performance Bond to the Owner in an amount equal to one-hundred (100) percent of the contract price. The bond shall be executed on the form included in the Contract Documents by a surety company authorized to do business in the State of Indiana and acceptable as surety to the Owner. Accompanying the bond shall be a "Power of Attorney" authorizing the attorney-in-fact to bind the surety company and certified to include the date of the bond. The surety on the Performance Bond cannot be released for one year, and the bond must require that the surety will not be discharged for:

A. modifications, omissions, or additions;
B. defects in the contract; or
C. defects in the bidding or awarding process.

4.07 **PAYMENT BOND:** For all contracts a Payment Bond is required to insure payment of subcontractors, laborers, material suppliers, and persons furnishing services. The bond is executed by the Contractor to the state, approved by and for the benefit of the Owner, in an amount equal to the contract price. It is deposited with the board, and its surety cannot be released until one year after the board's final settlement with the Contractor. The bond must provide the same assurances as does the Performance Bond against conditions discharging the surety.

4.08 **LOCAL MATERIALS:** Preference will be given to materials, products, supplies, and all other articles produced, manufactured, made, or grown in the State of Indiana.

4.09 **NON-DISCRIMINATION IN EMPLOYMENT:** Each Bidder for proposals over $10,000.00 shall submit and have approved by the City of Bloomington Contract Compliance Officer, Barbara McKinney, their written Affirmative Action Plan at least twenty-four (24) hours prior to the deadline for submission of proposals. Bids received that do not have an approved Affirmative Action Plan will be returned unopened. Each Bidder must insure that all employees and applicants for employment are not discriminated against because of race, religion, color, sex, national origin, ancestry or handicap. All the protected classes must be included in your Affirmative Action Plan for it to be acceptable. In addition to other requirements, your plan MUST include a workforce breakdown, an internal grievance procedure, a non-retaliation statement, designation of a person by name or position who is responsible for implementation of the Plan, applicability to both applicants and employees,

recruitment of minorities, equal access to training programs, and an explanation of your method of communicating the operations of your affirmative action plan to employees and prospective applicants. Barbara McKinney, Contract Compliance Officer, may be contacted at (812) 349-3429, 9:00 a.m. to 1:00 p.m. Monday through Friday. The successful Bidder must comply with each section of its affirmative action plan and be prepared to comply in all respects with the contract provisions regarding non-discrimination which are included in the Employment Requirement and Wage Rate section. For contracts paid in whole or in part with federal funds, the Bidder must submit a signed statement as to whether he or she has previously performed work subject to Executive Order 11246. For contracts paid in whole or in part with federal funds, the successful Bidder must, if requested, submit a list of all subcontractors who will perform work on the project, and written and signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work, together with supporting information to the effect that said labor pools' practices and policies are in conformity with Executive Order 11246, and that said labor pools will affirmatively cooperate in, or offer no hindrance to, recruitment, employment, and equal treatment of employees seeking employment, and performing work under the Contract, or a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same, prior to the award of the Contract.

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. The General Contractor must specify all subcontractors in the bid submittal.

    a. Pervious pavement contractors must have successfully completed a minimum of four (4) installations of a minimum of 40,000 s.f. each of similar size and complexity to the work specified in the contract documents. Photographs of the projects and all reference information must accompany the bid package.

CONTRACTOR BID FORM

Country Club Trailhead Improvements
City of Bloomington Parks and Recreation Department
BPR-2011-02

Designer:
Butler, Fairman & Seufert
8450 Westfield Blvd.
Indianapolis, IN 46240
Telephone: 317-713-4615 Fax: 317-713-4616

Submitted by (Contractor Name):
_____
_____
_____
_____

The undersigned as bidder declares that they have carefully examined the location of the proposed work, that they have examined the Special Provisions and read the accompanying instructions to bidders, and hereby proposes and agrees, if the proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the said Standard Specifications, Special Provisions, and Plans in the time and manner therein prescribed for the unit price set forth in the following schedule.

I. Base Bid Total $_____

II. Alternates:

	Quantity	Unit Price	Total Price
Alternate #1 Add: Two (2) shelter benches as shown on the plans and described within the specifications.	2 Each	$_____	$_____
Alternate #2 Add: Drinking Fountain as shown in the plans and described within the specifications.	1 Each	$_____	$_____
Alternate #3 Add: Ornamental Grass – Lirope muscari 'Big Blue' as shown in the plans	635 Each	$_____	$_____
Alternate #4 Add: HAWK Pedestrian Signal System	1 Lump Sum	$_____	$_____

All work shall be completed within 180 calendar days from Notice to Proceed.

Any Subcontractors to be employed shall be listed below:

Subcontractor	Address	Type of Work
1._____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6._____	_____	_____

BID BOND

KNOW ALL MEN THESE PRESENTS, that we, the undersigned, _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto _____ as OWNER in the penal sum of _____for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20____.

The condition of the above obligation is such that whereas the Principal has submitted to _____ a certain Document1, attached hereto and hereby made a part hereof to enter into a contract in writing, for the _____

_____

NOW, THEREFORE,

1. If said BID shall be rejected, or
2. If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attachment hereto (properly completed in accordance with said BID) and shall furnish a BOND for faithful performance of said contract, and for the payment of all persons performing labor furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

_____
Surety

By: _____

City of Bloomington
Legal Department

2011

RE: Affirmative Action and Living Wage Ordinance

To Prospective Bidders:

Affirmative Action: All bidders with the City of Bloomington for projects in excess of $10,000.00 must submit an affirmative action plan to my office. This plan must insure that applicants are employed and that employees are treated in a manner that provides equal employment opportunity and tends to eliminate inequality based upon race, religion, color, sex, national origin, ancestry or disability.

In addition, some City bidders are covered by the City's Living Wage Ordinance. The purpose of this letter is to explain what is required to be included in your plan for it to be acceptable under the Contract Compliance Regulations of the City of Bloomington and to make sure you are aware of the City's Living Wage Ordinance.

Even if your company already has a plan on file with the City, you must check with me to make sure that it complies with our current requirements. If you already have a plan, but it does not cover all of the City's current requirements, you may submit a separate supplement with your plan to fill any gaps.

You must submit your written affirmative action plan (or supplement) to me AT LEAST TWENTY- FOUR HOURS BEFORE THE BID DEADLINE. You must submit your plan to me separately from your bid. The twenty-four hours will give me sufficient time to review your and the other bidders' plans. I advise you to submit your affirmative action plan to me earlier, if possible, so that you and I will have time to work out any problems that may be in your plan. BIDDERS WHO FAIL TO SUBMIT ACCEPTABLE PLANS BY THE DEADLINE ARE SUBJECT TO DISQUALIFICATION. NON-DISCRIMINATION CLAUSES WILL BE INCLUDED IN ALL CONTRACTS AWARDED.

I strongly advise you to confirm with me that I have received your plan and that it meets our requirements well before the bid deadline. We will make every effort to work with you to clear up problems. But it remains your responsibility to confirm that I received your plan and that it complies with our requirements. If you fail to confirm that I received and approved your plan, you risk losing your eligibility to bid. We will be glad to provide a receipt upon request. Please let us know if you want a receipt when you submit your plan.

You must insure that all the protected classes listed above are included in your plan. In addition

401 North Morton Street – Bloomington, IN 47404 Phone: (812) 349.3426 - Fax: (812) 349.3441
www.bloomington.in.gov
email: mckinneb@bloomington.in.gov

to other requirements, your plan MUST include a workforce breakdown, an internal grievance procedure, a non-retaliation statement, designation of a person by name or position who is responsible for implementing the plan, applicability to both applicants and employees, recruitment of minorities, equal access to training programs, and an explanation of your methods of communicating the operations of your affirmative action plan to your employees and prospective applicants.

Accompanying this letter you will find the following materials:

(1) A workforce breakdown form. You MUST submit a workforce breakdown (sometimes called a "utilization report") with your Affirmative Action plan. This form is provided for your convenience. If you already have a current form you have completed for another jurisdiction that includes the same type of information, you may substitute a copy of that form instead of using our form. YOUR WORKFORCE BREAKDOWN FIGURES MUST BE UPDATED EVERY SIX MONTHS. Even if you already have an acceptable affirmative action plan on file with my office, you should submit a new workforce breakdown each time you bid for a City Contract, to be sure we have up-to-date figures.

(2) An affirmative action plan checklist. I will use this checklist to review your affirmative action plan. If you compare your plan with this list, you should be able to tell whether your plan fulfills the City's requirements. If you omit any of the elements on the checklist, YOUR PLAN WILL NOT BE APPROVED.

(3) A sample affirmative action plan. This may be useful if your company has never designed an affirmative action plan before. Feel free to adopt this plan as your own or to amend it to meet your needs.

Additional materials, such as the City of Bloomington's Contract Compliance Regulations, are available from my office upon request.

Living Wage: Also, please be aware that you may be required to comply with the Bloomington Living Wage Ordinance. Whether the LWO applies to your project depends upon the size and type of your project and the number of people you employ. If you have questions about the applicability of the LWO, click on the LWO flow chart at www.bloomington.in.gov/livingwage or call me. For 2010, the living wage is $11.25 an hour.

If you have any questions, contact me at (812) 349-3429 or e-mail me at mckinneb@ bloomington.in.gov. My office hours are Monday through Friday, 8-5. Thank you.

Barbara E. McKinney, Human Rights Director/Contract Compliance Officer

BLOOMINGTON HUMAN RIGHTS COMMISSION
Model Affirmative Action Plan

Policy Statement

_____, Inc., declares its policy to provide equal opportunity in employment, training and advancement, and to administer its employment practices without regard to race, color, religion, sex, national origin, ancestry or disability. Our policy of nondiscrimination will prevail throughout every aspect of our employment practices, including recruitment, hiring, training and all other terms and conditions of employment. We shall implement an affirmative action plan to make it widely known that equal employment opportunities are available on the basis of individual merit. We shall survey and analyze our employment workforce annually to determine what steps, if any, are needed to conform effectively with this equal employment policy.

Responsible Officer

Mr. or Ms. _____ (or the _____ officer) is the equal employment opportunity officer for our company and is responsible for implementing this affirmative action policy.

Publication of Policy

Our employees will be made aware of our commitment to affirmative action through the following procedures:

- posting notices on employee bulletin boards,
- including our policy statement and plan in our personnel manual,
- regularly sending out notice of our policy in paycheck envelopes, and
- training supervisors to recognize discriminatory practices.

We will make potential employees aware of our policy through the following

procedures:

- including the words "Equal Opportunity Employer" in all of our advertisements and notices for job openings,
- notifying employment agencies about our commitment, and
- sending notice of our policy to unions.

Implementing Our Policy

Our affirmative action plan will be implemented by widening our recruitment sources. We shall advertise in newspapers and other media that reach people in protected classes. We shall send job notices to schools with large percentages of students in the protected classes and to local groups that serve these classes.

We shall examine our hiring practices periodically to insure that we consider only job-related qualifications in filling our positions. We shall discard irrelevant educational requirements and unnecessary physical requirements. We shall retain only job-related questions on our employment application.

We shall keep affirmative action information on each applicant, but separate from his or her application. We shall keep records on our hiring decisions to evaluate the success of our affirmative action measures. We shall decide placement, duties, benefits, wages, training prospects, promotions, layoffs and terminations without regard to race, sex, religion, color, national origin, ancestry or disability.

Grievance Procedure

If an employee feels he or she has been discriminated against on the basis of race, sex, religion, color, national origin, ancestry or disability he or she may bring the complaint to his or her immediate supervisor. If the complaint is not resolved readily at that level, he or she may submit it to _____ _____ (personnel officer, corporate president, other) who will make a final decision on its validity. This grievance process does not preclude his or her complaining to local, state or federal civil

rights agencies. We will not retaliate against an employee or applicant for voicing a grievance or for filing a complaint with the appropriate agency.

Our current workforce breakdown is shown on the attached form.

_____ _____

Corporate President Date

COMMON CONSTRUCTION WAGE SCALE

Date AUG 16, 2011

City: BLOOMINGTON **County:MONROE**

Project Description and Scope:BOARD OF PARK COMMISSIONERS
1. 3RD QUARTER PROJECTS

TYPE OF CONSTRUCTION

The three common construction wage rates listed below are for the following type of construction work **(Mark One):**

(X) Commercial Building
( ) Heavy/Highway

B. WAGE RATES

Classification	Class	Hourly Rate	FRINGE BENEFIT Compensation	Total Hourly Wage Rate
Asbestos Workers				
	Skilled	$32.34	$14.69	$47.03
	Semiskilled	$18.77	$8.37	$27.14
	Unskilled	$13.71	$8.10	$21.81
Asbestos Abatement				
	Skilled	$29.90	$13.48	$43.38
	Semiskilled	N/A	N/A	N/A
	Unskilled	N/A	N/A	N/A
Boilermakers				
	Skilled	$33.43	$22.48	$55.91
	Semiskilled	$26.74	$22.48/	$49.22
	Unskilled	$20.06	$22.48	$42.54
Bricklayers				
	Skilled	$27.20	$10.32	$37.52
	Semiskilled	$20.40	$10.32	$30.72
	Unskilled	$13.60	$10.32	$23.92
Carpenters				
	Skilled	$27.01	$14.15	$41.16
	Semiskilled	$24.31	$10.78	$35.09
	Unskilled	$21.61	$10.67	$32.28

Carpet Layers

Skilled	$25.75	$12.07	$37.82
Semiskilled	$23.18	$11.49	$34.67
Unskilled	$20.60	$10.92	$31.52

Cement Masons

Skilled	$26.90	$11.13	$38.03
Semiskilled	$26.40	$11.13	$37.53
Unskilled	$24.00	$11.13	$35.13

Drywall Finishers

Skilled	$24.95	$9.81	$34.76
Semiskilled	$17.47	$8.51	$25.98
Unskilled	$12.48		$20.12

DRYWALL FINISHERS USING AUTOMATIC TOOLS (AMES,TAPE TECH, ETC)ADD $1.00 TO HOURLY PAY

Drywall Installers

Skilled	$26.91	$13.40	$40.31
Semiskilled	$24.22	$12.72	$36.94
Unskilled	$21.53	$12.03	$33.56

Electricians

Skilled	**$33.04**	**$12.52**	**$45.55**
Semiskilled	$19.82	$9.61	$29.43
Unskilled	$16.52	$8.88	$25.40

Elevator Constructors

Skilled	$30.28	$12.12	$42.40
Semiskilled	$24.22	$12.12	$36.34
UNskilled	$21.20	$12.12	$33.32

Glaziers

Skilled	$25.86	$11.95	$37.81
Semiskilled	$18.11	$10.36	$28.47
Unskilled	$12.93	$9.30	$22.23

Iron Workers

Skilled	$27.90	$18.76	46.66

	Semiskilled	$22.32	$18.76	$41.08
	Unskilled	$16.74	$18.76	$35.50
Laborers	Skilled	$22.42	$11.20	$33.62
	Semiskilled	$21.82	$11.20	$33.02
	Unskilled	$21.18	$11.20	$32.38
LABOREERS/ ASBESTOS ABATEMENT	SKILLED	$21.82	$11.20	$33.02
	SEMISKILLED	N/A	N/A	N/A
	UNSKILLED	N/A	N/A	N/A
Millwrights				
	Skilled	$26.34	$16.33	$42.67
	Semiskilled	$23.71	$12.74	$36.45
	Unskilled	$21.07	$12.42	$33.49
Operating Engineers				
Class 1 or A				
	Skilled	$29.00	$14.07	$43.07
	Semiskilled	$25.65	$14.07	$39.72
$	Unskilled	$21.85	$14.07	$35.92
Painters/Brush/Roll				
	Skilled	$25.96	$9.81	$35.76
	Semiskilled	$18.57	$8.51	$25.98
	Unskilled	$13.48	$7.64	$20.12
Painters/Spray/Sandblast				
	Skilled	$25.95	$9.81	$35.76
Semiskilled $18.57	$8.51	$27.08		
	Unskilled	$13.48	$7.64	$21.12
Pipefitters & Steamfitters				
	Skilled	$32.27	$14.86	$47.13
	Semiskilled	$20.98	$14.86	$35.84
	Unskilled	$14.86	$14.86	$30.03
Plasters				
	Skilled	$23.48	$9.54	$33.02
	Semiskilled	$21.98	$9.54	$30.67
	Unskilled	$18.78	$9.54	$28.32
Plumbers				
	Skilled	$32.27	$14.86	$47.13
	Semiskilled	$20.98	$14.86	$35.84
	Unskilled	$15.17	$14.86	$30.03
Pointer/Caulker/Cleaners				
	Skilled	$27.45	$10.07	$37.52
	Semiskilled	$20.59	$10.07	$30.66

	Unskilled	$13.73	$10.07	$23.80
Roofers				
	Skilled	$23.78	$8.61	$32.39
	Semiskilled	$16.65	$6.01	$22.66
	Unskilled	$11.90	$2.35	$14.25
Sheet Metal Workers				
	Skilled	$31.46	$16.88	$48.34
	Semiskilled	$23.60	$15.73	$39.33
	Unskilled	$15.73	$14.69	$30.42
Sound and Communication Workers				
	Skilled	$27.56	$11.96	$39.52
	Semiskilled	$23.43	$10.89	$34.32
	Unskilled	$19.84	$10.01	$29.85
Sprinkler Fitters				
	Skilled	$31.29	$12.75	$44.04
	Semiskilled	$20.34	$12.75	$33.09
	Unskilled	$15.65	$6.81	$22.46
Stone Masons				
	Skilled	$27.20	$10.32	$37.52
	Semiskilled	$20.40	$10.32	$30.72
	Unskilled	$13.60	$10.32	$23.92
Teamsters	Skilled	$25.76	$10.30	$36.06
	Semiskilled	N/A	N/A	N/A
	Unskilled	N/A	N/A	N/A
Technical Engineers				
	Skilled	$25.81	$7.23	$32.64
	Semiskilled	$25.93	$7.23	$31.34
	Unskilled	$23.81	$7.23	$31.04
Tile, Marble Setters				
	Skilled	$28.90	$9.56	$38.46
	Semiskilled	$26.01	$9.56	$35.57
unskilled		$13.00	$9.56	$22.56

Terrazzo Setters

	Skilled	$29.50	$9.66	$39.16
	Semiskilled	$26.55	$9.66	$36.21
	Unskilled	$13.28	$9.66	$22.94

Tile, Marble, Terrazzo Finishers

Journeyman	Skilled	$19.80	$5.86	$25.66
2nd Year Apprentice	Semiskilled	$17.95	$5.86	$24.76
1st Year Apprentice	Unskilled	$12.66	$5.86	$18.13

Truck Mechanics

	Skilled	$25.76	$10.30	$36.06
	Semiskilled	N/A	N/A	N/A
	Unskilled	N/A	N/A	N/A

COMMON CONSTRUCTION WAGE SCALE

1. 3RD QUARTER PROJECTS

A. TYPE OF CONSTRUCTION

The common construction wage rates listed below are for the following type of construction work **(Mark One):**

( ) Commercial Building
(X) Heavy/Highway

B. WAGE RATES

Classification	Class	Hourly Rate	FRINGE BENEFIT Compensation	Total Hourly Wage Rate
Carpenters				
	Skilled	$24.76	$14.97	$39.73
	Semiskilled	$22.28	$11.35	$33.63
	Unskilled	$19.81	$11.24	$31.05
Electricians				
	Skilled	$29.63	$10.78	$40.41
	Semiskilled	$17.78	$8.53	$26.31
	Unskilled	$14.82	$7.97	$22.79
Iron Workers				
	Skilled	$27.90	$18.76	$46.66
	Semiskilled	$22.32	$18.76	$41.08
	Unskilled	$16.74	$18.76	$35.50
Laborers	Skilled	$23.62	$11.21	$34.83
	Semiskilled	$22.92	$11.21	$34.13
	Unskilled	$22.62	$11.21	$33.83

Operating Engineers

Class 1 or A

Journeyman	Skilled	$28.95	$15.31	$44.26
	Semiskilled	$22.70	$15.31	$38.01
	Unskilled			

Painters

Journeyman	Skilled	$28.10	$9.70	$37.80
	Semiskilled	$24.70	$9.70	$34.40
	Unskilled	**$14.20**	**$9.70**	**$23.90**

Sprinkler Fitters

Skilled	$31.29	$12.75	$44.04
Semiskilled	$20.34	$12.75	$33.09
Unskilled	$15.65	$6.81	$22.46

Teamsters

Skilled	$25.76	$10.30	$36.06
Semiskilled	N/A	N/A	N/A
Unskilled	N/A	N/A	N/A

A. TYPE OF CONSTRUCTION

The common construction wage rates listed below are for the following type of construction work **(Mark One):**

( ) Commercial Building
( ) Heavy/Highway
(X) UTILITY

B. WAGE RATES

	Classificati	Rate	FRINGE BENEFIT Rate	TOTAL HOURLY Compensation	Wage Rate
Asbestos Workers					
	Skilled	$27.83	$11.54	$39.37	
	Semiskilled	$20.25	$7.48		$27.73
	Unskilled	$17.72	$7.36	$25.08	
Bricklayers					
	Skilled	$27.20	$10.32		$37.52
	Semiskilled	$20.40	$10.32		$30.72
	Unskilled	$13.60	$10.32		$23.92
Carpenters					
	Skilled	$24.32	$14.97		$39.59
	Semiskilled	$21.89	$11.35		$33.24
	Unskilled	$19.46	$11.24		$30.70
Electricians					
	Skilled	$31.70	$11.91		$43.61
	Semiskilled	$19.02	$9.24		$28.26
	Unskilled	$15.85	$8.58	$24.43	
Iron Workers					
	Skilled	$27.90	$18.76		$46.66
	Semiskilled	$22.32	$18.76		$41.08
	Unskilled	$16.74	$18.76		$35.50
LABORERS	Skilled	$23.62	$11.21		$34.83
	Semiskilled	$22.92	$11.21		$34.13
	Unskilled	$22.62	$11.21		$33.83
Operating Engineers					
Class 1 or A					
	Skilled	$28.95	$15.31		$44.26
	Semiskilled	$22.70	$15.31		$38.01

Class 2 or B				
	Skilled	$21.20	$13.91	$35.11
Pipefitters & Steamfitters				
	Skilled	$32.17	$14.96	$47.13
	Semiskilled	$20.91	$14.96	$35.87
	Unskilled	$15.12	$14.96	$30.08
Plumbers				
	Skilled	$32.17	$14.96	$47.13
	Semiskilled	$20.91	$14.96	$35.87
	Unskilled	$15.12	$14.96	$30.08
Pointer/Caulker/Cleaners				
	Skilled	$27.45	$10.07	$37.52
	Semiskilled	$20.59	$10.07	$30.66
	Unskilled	$13.73	$10.07	$23.80
Sheet Metal Workers				
	Skilled	$30.43	$16.17	$46.60
	Semiskilled	$22.82	$15.08	$37.90
	Unskilled	$15.22	$14.09	$29.31
Sprinkler Fitters				
	Skilled	$31.29	$12.75	$44.04
	Semiskilled	$20.34	$12.75	$33.09
	Unskilled	$15.65	$6.81	$22.46
Stone Masons				
	Skilled	$27.20	$10.32	$37.52
	Semiskilled	$20.40	$10.32	$30.72
	Unskilled	$13.60	$10.32	$23.92
Teamsters	Skilled	$25.76	$10.30	$36.06
	Semiskilled	N/A	N/A	N/A
	Unskilled	N/A	N/A	N/A
Truck Mechanics				
	Skilled	$25.76	$10.30	$36.06
	Semiskilled	N/A	N/A	N/A
	Unskilled	N/A	N/A	N/A

(ADD CLASSIFICATIONS AS REQUIRED BY PROJECT)
Definitions:

Skilled: An individual who performs work in a classification listed on the scale of wages. It shall be presumed that an employee is a skilled worker in that classification, and entitled to receive compensation at the skilled rate, unless the worker satisfies all of the criteria for being categorized as a semi-skilled or unskilled worker.

Semi-skilled: An individual registered in a bona fide apprenticeship program registered with the United States Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. Apprentices are paid pursuant to their individually warranted percentage for the classification of work that they perform as set forth in the apprentice program standards.

Unskilled: An individual with less than twelve months of cumulative experience in the construction trades and who is not registered in a bona fide apprenticeship program.

The above definitions shall not apply to workers in the classification of Laborer.

Apprenticeship Programs:

The Wage Committee determines that the common practice in the county is for contractors to participate in bona fide apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and that the rate of pay for the classifications of labor that participate in such programs is based in part on a percentage of the journeyman's rate (skilled rate herein) depending on the individual's progress in the program.

Workers engaged in such an apprenticeship program will be permitted to work at less than the predetermined rate set out above for the work they perform. Such apprentices must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate which is the skilled hourly rate in this wage scale.

Any worker who is not registered or otherwise employed in a bona fide apprenticeship program registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training and has twelve or more months of cumulative experience in the construction trades shall be paid at the skilled wage rate on this wage determination for the classification of work actually performed by the worker regardless of how the employer classifies such a worker.

Disputes regarding the appropriate classification of workers and the amounts said workers should be paid may be submitted to the Indiana Department of Labor for investigation.

Indiana State AFL-CIO Representative

Awarding Agency Representative

abc Representative

Taxpayer Named by Appointing Agency

Taxpayer Named by County Legislative Body

08/16/2011
Date

CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R / 9-10) / Form 96 (Revised 2010)
Prescribed by State Board of Accounts

PART I
(To be completed for all bids. Please type or print)

Date *(month, day, year):*_____

1. Governmental Unit (Owner):_____
2. County :_____
3. Bidder (Firm):_____

   Address:_____

   City/State/ZIPcode:_____
4. Telephone Number:_____
5. Agent of Bidder *(if applicable):*_____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____ (Governmental Unit) in accordance with plans and specifications prepared by _____ _____ and dated _____ for the sum of _____ $_____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, _____, subject to the following conditions: _____

_____

Contracting Authority Members:

_____ _____

_____ _____

_____ _____

PART II

(For projects of $100,000 or more – IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm) _____

Date *(month, day, year):* _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

_____

_____

_____

4. List references from private firms for which you have performed work.

_____

_____

_____

_____

_____

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. *(Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)*

_____

_____

_____

_____

_____

2. Please list the names and addresses of all subcontractors *(i.e. persons or firms outside your own firm who have performed part of the work)* that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

_____

_____

_____

_____

_____

3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

_____

_____

_____

_____

_____

4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

_____

_____

_____

_____

_____

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

_____

_____

_____

_____

_____

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

SECTION IV CONTRACTOR'S NON – COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES FOR PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT.

Dated at _____ this _____ day of _____, _____

_____
(Name of Organization)

By_____

_____
(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) ss
COUNTY OF_____)

Before me, a Notary Public, personally appeared the above-named _____ and

swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____, _____.

_____
Notary Public

My Commission Expires:_____

County of Residence:_____

Part of State Form 52414 (R / 9-10) / Form 96 (Revised 2010)

BID OF

_____
(Contractor)

_____
(Address)

_____

FOR

PUBLIC WORKS PROJECTS

OF

_____

_____

_____

Filed _____, _____

Action taken _____

_____

Responsible Bidder Affidavit

Contractor and any subcontractor performing **more than $150,000 worth of work on the project** shall complete this *Responsible Bidder Affidavit* as required by Chapter 2.31 of the Bloomington Municipal Code. Contractor must submit this affidavit with its bid. Failure to comply with all submission requirements may result in a determination that the Contractor is not a responsible and responsive bidder.

The undersigned _____, as _____ and on behalf of
(Name) (Title)
_____ certifies the following:
(Contractor)

Contractor is compliant with all applicable laws pre-requisite to doing business in Indiana.

Yes [ ] No [ ]

Does Contractor have a Federal Employer Identification Number (EIN) (also known as a Federal Tax Identification Number)?

Yes [ ] No [ ]

Please list your Federal Employer Identification Number: _____

Alternatively, for sole proprietors, list your social security number: _____

Contractor is in compliance with Section 2000(e) of Chapter 21, Title 42 of the United States Code and Federal Executive Order Number 11375 (known as the Equal Opportunity Employer Provisions).

Yes [ ] No [ ]

Contractor has submitted an affirmative action plan as required under § 2.21.070(8) of the Bloomington Municipal Code.

Yes [ ] No [ ]

Contractor affirms that all of its workers who qualify as employees are covered under a current worker's compensation insurance policy, and that all workers who will be part of the project are properly classified as employees or independent contractors.

Yes [ ] No [ ]

Contractor will comply with Indiana Code § 5-16-7 et. seq., known as the Indiana Common Construction Wage Act.

Yes [ ] No [ ]

Contractor confirms that any of its employees designated as apprentices are properly registered with an apprenticeship and training program approved and registered with the United States Department of Labor, Bureau of Apprenticeship and Training.

Yes [ ] No [ ]

Contractor currently has a substance abuse testing policy in place.

Yes [ ] No [ ]

Please list any professional or trade license(s) required by law for any trade or specialty area required to complete work on the present project.

_____

_____

_____

_____

Has the Contractor, or any directors, officers, or managers employed by the Contractor, had any professional or trade license suspended or revoked within the last five (5) years?

Yes [ ] No [ ]

Verification

I certify that I am authorized to execute this affidavit on behalf of the Contractor set forth above, that I have personal knowledge of all the information set forth herein, and that all statements representations, and information contained in this affidavit are true and accurate.

_____
Signature of Authorized Officer

_____
Name of Authorized Officer

_____
Title

_____
Date

GUIDELINES FOR QUALIFYING FOR
INDIANA LOCAL BUSINESS PRICE PREFERENCE

Under Indiana Code 5-22-15-20.9 regarding public purchasing of supplies, and Indiana Code 36-1-12-22 regarding public construction, a bidder/quoter can attempt to qualify as a "local Indiana business" and get preferential treatment in the bidding/quoting process. The bidder/quoter must meet **at least one** of five criteria to qualify for the preference. Bidders/quoters must submit a claim for the preference and documentation supporting that claim along with and enclosed in their sealed bid/quote. The criteria included in the statute are set out below along with the documentation that must be supplied to be considered for the preference. The "affected counties" referenced in the criteria include Monroe, Brown, Greene, Jackson, Lawrence, Morgan and Owen Counties.

Criteria for qualifying as a "local Indiana business"	**Documentation required**
The business's principal "place of business" is located in an affected county	A statement identifying the location of the business's principal "place of business" and stating the reasons the business considers the location named as the business's principal place of business.
The business pays a majority of its payroll (in dollar volume) to residents of affected counties	A statement of the amount of the business's total payroll and the amount of the business's payroll paid to residents of affected counties.
The business employs residents of affected counties as a majority of its employees	A statement of the number of the business's employees and the number of the business's employees who are residents of affected counties.
The business makes significant capital investment in the affected counties as defined in rules adopted by the political subdivision	A statement which includes (1) a description of the capital investments made in the affected counties, (2) a statement of the amount of those capital investments, and (3) an accounting of the percentage of capital investment made in Monroe County as compared to the percentage of capital investment made in the other affected counties
The business has a substantial positive economic impact on affected counties as defined in rules adopted by the political subdivision	A statement including (1) a description of the substantial positive economic impact the business has on the affected counties, and (2) a description specifically of the substantial positive economic impact the business has on Monroe County

The purchasing agency will seek a recommendation from the Economic & Sustainable Development Director, the Planning Director and the City Controller to determine whether a bidder/quoter qualifies for a local Indiana business price preference. The purchasing agency reserves the right to seek additional information and clarification from a bidder/quoter claiming the preference if it is necessary in order to determine whether the bidder/quoter qualifies for it.

GENERAL CONDITIONS

FOR

CONSTRUCTION

INDEX TO THE ARTICLES OF THE GENERAL CONDITIONS

1. DEFINITIONS
2. EXECUTION OF DOCUMENTS
3. CORRELATION, INTERPRETATION AND INTENT OF DOCUMENTS
4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS
5. BONDS AND INSURANCE
6. CONTRACTOR'S RESPONSIBILITIES
7. WORK BY OTHERS
8. OWNER'S RESPONSIBILITIES
9. ENGINEER'S RESPONSIBILITIES DURING CONSTRUCTION
10. CHANGES IN THE WORK
11. CHANGES IN CONTRACT PRICE
12. CHANGE OF CONTRACT TIME
13. LIQUIDATED DAMAGES
14. WARRANTY AND GUARANTEE: TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.
15. PAYMENTS AND COMPLETION.
16. SUSPENSION OF WORK AND TERMINATION.
17. ARBITRATION.
18. ENVIRONMENTAL REQUIREMENTS.
19. MISCELLANEOUS.

1.00. DEFINITIONS.

The Owner, the Contractor and the Engineer, are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if each were of the singular number and masculine gender. Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

1.01. ADDENDA. Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Documents, by additions, deletions, clarifications, or corrections. Addenda will become part of the Contract Documents when the Agreement is executed.

1.02. AGREEMENT. The contractual agreement between the Contractor and the Owner.

1.03. APPLICATION FOR PAYMENT. The form used by Contractor in requesting payments, including accompanying documentation required by the Contract Documents.

1.04. BID. The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.05. BIDDER. Any person, firm, or corporation submitting a Bid for the Work.

1.06. BOARD. The City of Bloomington Board of Park Commissioners.

1.07. BONDS. Bid, performance, and payment bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.

1.08. CHANGE ORDER. A written order to the Contractor signed by the Owner authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

1.09. CONTRACT. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Engineer and the Contractor, (2) between the Owner and a Subcontractor or Sub subcontractor, or (3) between any persons or entities other than the Owner and Contractor.

1.10. CONTRACT DOCUMENTS. The Agreement, Addenda (whether issued prior to the opening of Bids or the execution of the Agreement), Change Orders issued by the Owner or Engineer, Invitation to Bid, Instructions to Bidders, Proposal, Non-Collusion Affidavit, Questionnaire, Contractor's Bid, the Bonds, Employment Requirements and Wage Rates, Notification Procedures, General Equipment Stipulations, the Notice of Award, the Notice to Proceed, these General Conditions, the Special Conditions, the Specifications, Drawings, and Modifications.

1.11. CONTRACT PRICE. The total amount payable to the Contractor under the Contract Documents.

1.12. CONTRACT TIME. The number of days stated in the Agreement for the completion of the Work, computed as provided in these General Conditions; or by the date set forth in the Agreement. Contract days are not to be determined from the usage of the Indiana Department of Transportation (I.N.D.O.T.) Standard Specifications Manual.

1.13. CONTRACTOR. The person, firm, or corporation with whom the Owner has executed the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative. The relationship of the Contractor to the Owner shall be that of an independent contractor.

1.14. DAY. A calendar day of twenty-four hours measured from midnight to the next midnight.

1.15. DATE OF CONTRACT. The date written in the first paragraph of the Contract Agreement.

1.16. **DRAWINGS OR PLANS.** The graphic and pictorial portions of the Contract Documents, wherever located or whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

1.17. **ENGINEER.** The City Engineer, person, firm, or corporation named by the Owner "the City of Bloomington", or the duly authorized agents of the Engineer, acting within the scope of the duties entrusted to them.

1.18. **FIELD ORDER.** A written order issued by the Engineer which clarifies or interprets the Contract Documents or orders minor changes in the Work.

1.19. **MODIFICATION.** (a) A written amendment of the Contract Documents signed by both parties. (b) A Change Order. (c) A written clarification or interpretation issued by the Engineer. (d) A written order for a minor change or alteration in the Work issued by the Engineer. A Modification may be issued only after execution of the Agreement.

1.20. **NOTICE OF AWARD.** The Written notice by the Owner to the apparent successful Bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified, the Owner will execute and deliver the Agreement to him.

1.21. **NOTICE TO PROCEED.** A written notice given to the Contractor by the Owner (with a copy to the Engineer) fixing the date on which the Contract Time will commence to run and on which the Contractor shall start to perform his obligations under the Contract Documents.

1.22. **OWNER.** The City of Bloomington named and designated in the Agreement as "Owner" acting through its Board of Public Works and its authorized agents. All notices, letters, and other communication directed to the Owner shall be addressed and delivered to the Office of the City Engineer, 401 North Morton, Bloomington, Indiana, 47401.

1.23. **PROJECT.** The total construction of which the Work performed under the Contract Documents may be the whole or a part, and which may include construction by the Owner or by separate contractors.

1.24. **QUOTE.** The offer or proposal of the Quoter submitted on the prescribed form setting forth the prices for the Work to be performed.

1.25. **QUOTER** Any person, firm, or corporation submitting a Quote for the Work.

1.26. **RESPONSIBLE Bidder.** One who is fully capable of performing the contract requirements and who has the integrity and reliability to insure faithful performance.

1.27. **RESPONSIVE Bidder.** One who has submitted a bid conforming in all material respects to the Contract Documents.

1.28. **SHOP DRAWINGS.** All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the Work.

1.29. **SPECIFICATIONS.** Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work, and performance of related services.

1.30. **SUBCONTRACTOR.** An individual, firm, or corporation having a direct contact with the Contractor or with any other Subcontractor for the performance of a part of the Work to a special design at the site, but does not include a firm which merely furnishes material.

1.31. **SUBSTANTIAL COMPLETION.** The date as determined by the Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it was intended; or if there be no such determination, the date of final completion.

1.32. **WORK.** Any and all obligations, duties, and responsibilities necessary to the successful completion of the Project assigned to, or undertaken by, the Contractor under the Contract Documents, including all labor, materials, equipment, and other incidentals, and the furnishing thereof.

1.33. MISCELLANEOUS DEFINITIONS

1.33.1. **AS ORDERED, AS DIRECTED, AS REQUIRED, AS PERMITTED, AS ALLOWED.** The order, directions, requirement, permission, or allowance of the Owner or Engineer is intended only to the extent of judging compliance with the Contract Documents. The terms do not imply that the Owner or Engineer has any authority or responsibility for supervision of the Contractor's forces or construction operations. Such supervision is the sole responsibility of the Contractor.

1.33.2. **REASONABLE, SUITABLE, ACCEPTABLE, PROPER, SATISFACTORY.** The terms reasonable, suitable, acceptable, proper, and satisfactory mean such to the Owner or Engineer and are intended only to the extent of judging compliance with the Contract Documents.

1.33.3. **UNDERSTOOD AND AGREED.** Whenever in these Contract Documents the expression "it is understood and agreed" or an expression of like import is used, such expression means the mutual understanding and agreement of the parties executing the Contract Agreement.

2.00. **EXECUTION OF AGREEMENT.**

2.01. **EXECUTION OF AGREEMENT.** The Agreement and other Contract Documents will be executed as set forth in the Special Conditions.

2.02. **DELIVERY OF BONDS.** When the executed Agreements are delivered to the Owner, the Contractor shall also deliver to the Owner such Bonds as he may be required to furnish in accordance with the Agreement.

2.03. **COPIES OF DOCUMENTS.** The Owner shall furnish to the Contractor the number of copies of the Contract Documents set forth in the Special Conditions or a minimum of 3 sets of complete documents.

2.04. **CONTRACTOR'S PRE-AWARD REPRESENTATIONS.** The Contractor represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, state, and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work, and represents that he has correlated his study, observations and site visits with the requirements of the Contract Documents. The Contractor also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

2.05. **COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED.** Unless otherwise provided in the SPECIAL CONDITIONS**,** the Contractor will be expected to start active and continuous work on the contract within 15 calendar days after the date of the Notice to Proceed. In **no case** shall work begin prior to the date of the Notice to Proceed unless this time is waived and mutually agreed upon and indicated on the Notice to Proceed.

If a delayed starting date is indicated in the proposal, the 15 calendar day limitation shall be waived. Work day charges will then begin on a date mutually agreed upon, but not later than the delayed starting date specified. In the event that any contract is canceled after an award has been made but prior to the issuing of the Notice to Proceed, no reimbursement will be made for any expenses accrued relative to this contract during that period.

2.06. **STARTING THE PROJECT.** The Engineer shall be notified at least 3 days in advance of the date on which the work is expected to begin. Should the prosecution of the work for any reason be discontinued, the Engineer shall be notified at least 24 hours in advance of resuming operations.

2.07. **BEFORE STARTING CONSTRUCTION.** Before undertaking each part of the Work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to the Engineer any conflict, error, or discrepancy which he may discover.

However, he shall not be liable to the Owner or Engineer for his failure to discover any conflict, error, or discrepancy in the Drawings or Specifications.

2.08. **SUBMISSION OF SCHEDULES.** Within ten days after delivery of the executed Agreement by the Owner to the Contractor, the Contractor shall submit to the Engineer for review, an estimated progress schedule that shall be in 'Critical Path' format and indicating the starting and completion dates of the various stages of the Work, and a preliminary schedule of Shop Drawing submissions and other specified schedules. The 'Critical Path' schedule must include all possible overlapping work that can be accomplished should one action or function not be available or accessible to the contractor in order to show that the Contractors interrelated activities that will control the work path to complete the project within the time limits set forth for the project.

Contracts with less than 60 calendar days completion time, less than 35 work days, or less than 60 days between the notice to proceed and the completion date do not need to submit a progress schedule.

The progress schedule may be used as a basis for establishing major construction operations and as a check on the progress of the work. The Engineer shall be notified at least 3 days in advance of the date on which the work is expected to begin.

Sufficient materials, equipment, labor shall be provided by the Contractor to meet the progress schedule (if required) and to guarantee the completion of the project in accordance with the plans and specifications.

3.00. **CORRELATION, INTERPRETATION, AND INTENT OF CONTRACT DOCUMENTS.**

It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between the Owner and the Contractor. They may be altered only by a Modification.

The Contract Documents are complementary. What is called for by one is as binding as if called for by all. If the Contractor finds a conflict, error, or discrepancy in the Contract Documents, he shall call it to the Engineer's attention in writing at once. Before proceeding with the Work affected thereby, he shall not be liable to the Owner or Engineer for his failure to discover any conflict, error or discrepancy in the Specifications or Drawings. Any Work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

In case of discrepancy, calculated dimensions will govern over scaled dimensions; plans will govern over specifications; special conditions will govern over the plans and specifications. The instructions to bidders and the description of the pay items listed in the itemized proposal will govern over plans, specifications, and special conditions. The precedence outlined herein shall not absolve the Contractor of his responsibility with regard to errors and omissions, or from his requirement to follow all IOSHA, OSHA, any local safety ordinances, and general good construction practices.

Advantage shall not be taken of any apparent error or omission in the plans or specifications. In the event such an error or omission is discovered, the Engineer shall be notified immediately in writing. Such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications will then be made.

4.00. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS.

4.01. AVAILABILITY OF LANDS. The Owner shall furnish, as indicated in the Contract Documents and not later than the Notice to Proceed, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for use by the Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by Owner, unless otherwise specified in the Contract Documents. If the Contractor believes that any delay in the Owner's furnishing these lands or easements entitles him to an extension of the Contract Time, he may make a claim therefor as provided in these General Conditions

4.02. PHYSICAL CONDITIONS; SURVEYS AND REPORTS. Refer to **Instructions to Bidders**. For identification of those surveys and investigation reports of subsurface and latent physical conditions at the Project site or otherwise affecting performance of the Work which have been relied upon by the Engineer in preparation of the Drawings and Specifications, refer to **SPECIAL CONDITIONS**.

4.03. UNFORESEEN PHYSICAL CONDITIONS. The Contractor shall promptly notify the Owner and Engineer in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents. The Engineer will promptly investigate those conditions and advise the Owner in writing if further surveys or subsurface tests are necessary. Promptly thereafter, the Owner shall obtain the necessary additional surveys and tests and furnish copies to the Engineer and Contractor. If the Engineer finds that the results of such surveys or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by the Contractor, a Change Order shall be issued incorporating the necessary revisions.

4.04. REFERENCE POINTS. The Owner shall provide engineering surveys for construction to establish reference points which in his judgment are necessary to enable the Contractor to proceed with the Work. The Contractor shall be responsible for surveying and laying out the Work (unless otherwise provided in the Special Conditions), and shall protect and preserve the established reference points and shall make no changes or reallocations without the prior written approval of the Owner. He shall report to the Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. The Contractor shall replace and accurately relocate all reference points so lost, destroyed or moved at the Contractor's expense.**5.00.**

BONDS AND INSURANCE.

5.01. PERFORMANCE, PAYMENT AND OTHER BONDS. The Contractor shall furnish a Performance Bond, Payment Bond, and other Bonds specified in **AGREEMENT** as security for the faithful performance and payment of all his obligations under the Contract Documents. The Performance Bond shall be in an amount at least equal to *100%* of the Contract Price, unless otherwise listed in **SPECIAL CONDITIONS**. Bonds shall be executed on the forms (when provided) included in the Contract Documents and with such sureties as are licensed to conduct business in the state of Indiana and are named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The surety shall have an "A" minimum rating of performance and a financial rating strength of five times the Contract Price, all as stated in "Best's Key Rating Guide, Property-Liability". Each Bond shall be accompanied by a "Power of Attorney" authorizing the attorney-in-fact to bind the surety and certified to include the date of the Bond.

5.02. TERMINATION OF SURETY. If the surety on any Bond furnished by the Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated or revoked in any state where any part of the Project is located, the Contractor shall within five days thereafter substitute another Bond and surety, both of which shall be acceptable to the Owner.

5.03. **CONTRACTOR'S LIABILITY INSURANCE.** The Contractor shall purchase and maintain such insurance as will protect him from claims under worker's compensation laws, disability benefit laws, or similar employee benefit laws, from claims for damages because of bodily injury, occupational sickness or disease, or death of his employees, and claims insured by personal injury liability coverage; from claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees including claims insured by personal injury liability coverage; and from claims for injury to or destruction of tangible property, including loss of use resulting therefrom - any or all of which may arise out of or result from the Contractor's operations under the Contract Documents, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable. This insurance shall include the specific coverage's and be written for not less than any limits of liability and maximum deductibles specified in the Supplementary Conditions or required by law, whichever is greater, shall include contractual liability insurance and shall include the Owner and Engineer as additional insured parties. Before starting the Work, the Contractor shall file with the Owner and Engineer certificates of such insurance, acceptable to the Owner; these certificates shall contain a provision that the coverage afforded under the policies will not be canceled or materially changed until at least fifteen days prior written notice has been given to the Owner and Engineer.

6.00. CONTRACTOR'S RESPONSIBILITIES.

6.01. **SUPERVISION AND SUPERINTENDENCE.** The Contractor shall supervise and direct the Work efficiently and with his best skill and attention. He shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but he shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.02. **RESIDENT SUPERINTENDENT.** The Contractor shall keep on the Work site at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to the Owner and Engineer except under extraordinary circumstances. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

6.03. **LABOR, MATERIALS AND EQUIPMENT.** The Contractor shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities, and all other facilities and incidentals necessary for the execution, testing, initial operation, and completion of the Work.

All materials and equipment shall be new, except as otherwise provided in the Contract Documents. If required by the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the contract Documents.

The Contractor shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them, and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him.

Nothing in the Contract Documents shall create any contractual relationship between the Owner or Engineer and any Subcontractor or other person or organization having a direct contact with the Contractor, nor shall it create any obligation on the part of the Owner or Engineer to pay or to see to the payment of any monies due any Subcontractor or any other person or organization, except as may otherwise be required by law. The Owner or Engineer may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done in accordance with the schedule of values.

The divisions and sections of the Specifications and the identification of any Drawings shall not control the Contractor in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.

The Contractor agrees to bind specifically every Subcontractor to the specific terms and conditions of the Contract Documents for the benefit of the Owner.

All Work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance, except such rights as they may have to the proceeds of such insurance. The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor.

6.04. **PATENT FEES AND ROYALTIES.** The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of the Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the Owner in the Contract Documents. The Contractor shall indemnify and hold harmless the Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

6.05. **PERMITS.** The Contractor shall obtain and pay for all construction permits and licenses and shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of his Bid. The Owner shall assist the Contractor, when necessary, in obtaining such permits and licenses. The Contractor shall also pay all public utility charges.

6.06. **LAWS AND REGULATIONS.** The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the Contractor observes that the Specifications or Drawings are in conflict therewith, he shall give the Engineer prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, he shall bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Specifications and Drawings are in accordance with such laws, ordinances, rules and regulations.

6.07. **TAXES.** The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the law of the place where the work is to be performed.

6.08. **USE OF PREMISES.** The Contractor shall confine his equipment, the storage of materials and equipment and the operations of his workmen to areas permitted by law,

ordinances, permits, or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with materials or equipment. No assumptions of allowable traffic closures shall be made by the Contractor unless specifically called for in a "Maintenance of Traffic" plan should one exist. All roadway and lane closures must be approved by the Engineer prior to implementing the closure and a 'Notice of Intent' to close a lane or roadway must be delivered in writing to the Engineer by the Wednesday preceding the week of the desired closure date or time so proper notification can be given to the required personnel.

The Contractor shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

6.09. **RECORD DRAWINGS.** The Contractor shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Engineer and shall be delivered to him for the Owner upon completion of the Project and prior to final payment.

6.10. **SAFETY AND PROTECTION.** The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1) all employees on the Work and other persons who may be affected thereby.
2) all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and
3) other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.
4) The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall notify owners of adjacent utilities when prosecution of the Work may affect them. All damage, injury or loss to any property caused directly or indirectly, in whole or in part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor: except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of the Owner or Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor. The Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and the Engineer has issued a notice to the Owner and Contractor in accordance with Supplementary Conditions that the Work is acceptable.

6.11. **SUPERINTENDENT OF SAFETY.** The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner. The Superintendent of Safety shall be responsible for the maintenance of traffic control devices and personnel in accordance with the Manual on Uniform Traffic Control Devices (M.U.T.C.D.) for work zone safety.

6.12. **EMERGENCIES.** In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. He shall give the Engineer prompt written

notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved. If the Contractor believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefore.

6.13. **INDEMNIFICATION.** The Contractor shall indemnify and hold harmless the Owner and Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense:

1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting there from and

2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Owner or Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

The indemnification obligations of the Contractor shall not extend to the liability of the Engineer, his agents or employees arising out of:

1) the preparation of maps, drawings, opinions, reports, surveys, Change Orders, designs, or specifications or

2) the giving of or the failure to give directions or instructions by the Engineer, his agents or employees, provided such giving or failure to give is the primary cause of injury or damage.

7.00. WORK BY OTHERS.

The Owner may perform additional work related to the Project by himself, or he may let other direct contracts therefore which shall contain General Conditions similar to these. The Contractor shall afford the other contractors who are parties to such direct contracts (or the Owner, if he is performing the additional work himself) reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.

If any part of the Contractor's Work depends for proper execution or results upon the work of any such other contractor (or Owner), the Contractor shall inspect and promptly report to the Engineer in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. His failure to so report shall constitute an acceptance of the other work as fit and proper for the relationship of his Work except as to defects and deficiencies which may appear in the other work after the execution of his Work.

The Contractor shall do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. The Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work

with the written consent of the Engineer and of the other contractors whose work will be affected.

If the performance of additional work by other contractors or the Owner is not noted in the Contract Documents prior to the execution of the contract, written notice thereof shall be given to the Contractor prior to starting any additional work. If the Contractor believes that the performance of any such additional work by the Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor.

8.00. OWNER'S RESPONSIBILITIES.

The Owner shall issue all communications to the Contractor through the Engineer.

In case of termination of the employment of the Engineer, the Owner shall appoint an engineer against whom the Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer. Any dispute in connection with such an appointment shall be subject to arbitration.

The Owner shall furnish the data required of him under the Contract Documents promptly and shall make payments to the Contractor promptly after they are due.

In addition to his rights to request changes in the Work, the Owner shall be obligated to execute Change Orders.

9.00. ENGINEER'S STATUS DURING CONSTRUCTION.

9.01. OWNER'S REPRESENTATIVE. The Engineer will be the Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of the Engineer as the Owner's representative during construction are set forth in these General Conditions and shall not be extended without the written consent of the Owner and the Engineer.

9.02. CLARIFICATIONS AND INTERPRETATIONS. The Engineer will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If the Contractor believes that a written clarification and interpretation entitles him to an increase in the Contract Price, he may make a claim therefor.

9.03. REJECTING DEFECTIVE WORK. The Engineer will have authority to reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Specifications, or has been damaged prior to the Engineer's recommendation of final payment). He will also have authority to require special inspection or special testing of the Work whether or not the Work is fabricated, installed or completed.

9.04. DECISIONS ON DISAGREEMENTS. The Engineer will be the interpreter of the requirements of the Contract Documents and the judge of the performance hereunder. In his capacity as interpreter and judge he will exercise his best efforts to insure faithful performance by both Owner and Contractor. He will not show partiality to either and will not be liable for the result of any interpretation or decision rendered in good faith. Claims, disputes, and other matters relating to the execution and progress of the Work or the interpretation of or performance under the Contract Documents shall be referred to the Engineer for decision, which he will render in writing within a reasonable time.

9.05. ARBITRATION. Either the Owner or the Contractor may demand arbitration with respect to any such claim, dispute, or other matter that has been referred to the Engineer, except any which have been waived by the making or acceptance of final payment, such arbitration to be in accordance with these General Conditions. However,

no demand for arbitration of any such claim, dispute, or other matter shall be made until the earlier of (a) the date on which the Engineer has rendered his decision or (b) the tenth day after the parties have presented their evidence to the Engineer if he has not rendered his written decision before that date. No demand for arbitration shall be made later than thirty days after the date on which the Engineer rendered his written decision in respect to the claim, dispute or other matter as to which arbitration is sought; and the failure to demand arbitration within said thirty days' period shall result in the Engineer's decision being final and binding upon the Owner and the Contractor. If the Engineer renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but shall not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned.

9.06. LIMITATIONS ON THE ENGINEER'S RESPONSIBILITIES. Neither the Engineer's authority to act under this article or elsewhere in the Contract Documents nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any material, man, fabricator, supplier or any of their agents or employees or any other person performing any of the Work.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, and he will not be responsible for the Contractor's failure to perform the Work in accordance with the Contract Documents.

The Engineer will not be responsible for the acts or omissions of the Contractor, or any Subcontractors, or any of his or their agents or employees or any other persons at the site or otherwise performing any of the Work.

10.00. CHANGES IN THE WORK.

Without invalidating the Agreement, the Owner may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by Change Orders and initiated through a Field Order from the Engineer or Owner. Upon receipt of a Change Order, the Contractor shall proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in these General Conditions on the basis of a claim made by either party.

The Engineer may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the Contractor believes that any minor change or alteration authorized by the Engineer entitles him to an increase in the Contract Price, he may make a claim therefor.

Additional work performed by the Contractor without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except as otherwise provided herein.

The Owner shall execute appropriate Change Orders prepared by the Engineer covering changes in the Work to be performed as provided herein and any other claim of the Contractor for a change in the Contract Time or the Contract Price which is confirmed by the Engineer.

It is the Contractor's responsibility to notify his Surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable Bonds shall be adjusted accordingly.

11.00. CHANGE OF CONTRACT PRICE.

The Contract Price constitutes the total compensation payable to the Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the Contractor shall be at his expense without change in the Contract Price.

The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered to the Owner and Engineer within fifteen days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within forty-five days of such occurrence unless the Engineer allows an additional period of time to ascertain accurate cost data. All claims for adjustments in the Contract Price shall be determined by the Engineer if the Owner and the Contractor cannot otherwise agree on the amount involved. Any change in the Contract Price resulting from any such claim shall be incorporated in a Change Order. All changes requested by the Engineer or Owner must be submitted to the Contractor in the form of a Field Order, at which time, the contractor shall provide in return a request for a change order with the prices for said requested work detailed by item and quantity for the Engineer and Owner to review for acceptance and so they can issue a Change Order for the approved work.

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

1) Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
2) By mutual acceptance of a lump sum.
3) On the basis of the Cost of the Work plus a Contractor's Fee for overhead and profit (determined in accordance with the following paragraphs).

11.01. COST OF THE WORK. The term "Cost of the Work" means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, and shall include only the following items:

1) Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications set forth in the Wage Scale Determination. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by the Owner.
2) The cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith. All cash discounts shall accrue to the Contractor unless the Owner deposits funds with the Contractor with which to make payments, in which case the cash discounts shall accrue to the Owner. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to the Owner, and the Contractor shall make provisions so that they may be obtained.

3) Payments made by the Contractor to the Subcontractors for Work performed by the Subcontractors. If required by the Owner, the Contractor shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such bids to the Owner, who will then determine with the advice of the Engineer which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as the Contractor's Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

4) Costs of special consultants (including, but not limited to, engineers, architects, testing laboratories, surveyors, lawyers and accountants) employed for services specifically related to the Work.

11.02. **SUPPLEMENTAL COSTS** include the following:

1) The proportion of necessary transportation, traveling and subsistence expenses of the Contractor's employees incurred in discharge of duties connected with the Work.

2) The cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of the Contractor.

3) Rentals of all construction equipment and machinery and the parts thereof whether rented from the Contractor or others in accordance with the rental agreements approved by the Owner with the advice of the Engineer, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - all in accordance with the terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

4) Sales, use or similar taxes related to the Work, and for which the Contractor is liable, imposed by any governmental authority.

5) Deposits lost for causes other than the Contractor's negligence, royalty payments and fees for permits and licenses.

6) Losses, damages and expenses, not compensated by insurance or otherwise, sustained by the Contractor in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of the Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of the Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining the Contractor's fee. If, however, any such loss or damage requires reconstruction and the Contractor is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated under Contractor's Fee.

7) The cost of utilities, fuel and sanitary facilities at the site.

8) Minor expenses such as telegrams, long distance phone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

9) The cost of premiums for additional bonds and insurance required because of changes in the Work.

11.03 The term "**COST OF THE WORK**" shall *not* include any of the following:

1) Payroll costs and other compensation of the Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by the Contractor, whether at the site or in his principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications - all of which are to be considered administrative costs covered by the Contractor's Fee.
2) Expenses of the Contractor's principal and branch offices other than his office at the site.
3) Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work and charges against the Contractor for delinquent payments.
4) Cost of premiums for all bonds and for all insurance policies whether or not the Contractor is required by the Contract Documents to purchase and maintain the same (except as otherwise provided above).
5) Costs due to the negligence of the Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
6) Other overhead or general expense costs of any kind not specifically and expressly included in the Cost of the Work.

11.04. CONTRACTOR'S FEE. The Contractor's Fee which includes his overhead and profit shall be determined as follows:

1) A mutually acceptable fee; or , if none can be agreed upon,
2) A fee based on the following percentages of the various portions of the Cost of the Work:
   - for payroll costs and the cost of all materials and equipment included in the Work, the Contractor's Profit shall be ten percent.
   - for payments to Subcontractors, the Contractor's Profit shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee for overhead and profit shall be ten percent, and
   - no fee shall be payable on the basis of costs of special consultants or supplemental costs.

11.05. CREDIT. The amount of credit to be allowed by the Contractor to the Owner for any such change which results in a net decrease in cost, will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any.

Whenever the cost of any Work is to be determined pursuant to preceding paragraphs, the Contractor will submit in form prescribed by the Engineer an itemized cost breakdown together with supporting data.

12.00. CHANGE OF CONTRACT TIME.

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Owner and Engineer

within fifteen days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless the Engineer allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by the Engineer if the Owner and the Contractor cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order. Computation of Contract time shall be in accordance with the contract agreement and not that of the Indiana Department of Transportation (INDOT)

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of the Contractor if he makes a claim therefore as provided in the preceding paragraph. Such delays shall include, but not be restricted to, acts or neglect by any separate contractor employed by the Owner, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions made herein shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party.

13.00. LIQUIDATED DAMAGES.

Liquidated damages shall be paid to the Owner in accordance with the Special Conditions if specified therein. If no provision is made in the Special Conditions, liquidated damages shall be paid as follows:

In the event the Contractor fails to satisfactorily complete the entire Work contemplated and provided for under this contract on or before the date of completion as determined and described elsewhere herein, the Owner shall deduct from the amount due the Contractor the sum as indicated on the table below for each calendar day (Sundays and legal holidays excluded) of delay, which sum is agreed upon not as a penalty, but as a fixed and liquidated damage for each day of such delay, to be paid in full and subject to no deduction, it being understood and agreed that timely completion is of the essence. If the monies due the Contractor are less than the amount of such liquidated damages, then the Contractor or his surety shall pay the balance to the Owner.

SCHEDULE FOR LIQUIDATED DAMAGES FOR EACH DAY OF OVERRUN IN CONTRACT TIME

Original Contract Amount		Daily Charge	
From More Than	To and Including	Calendar Day or Fixed Date	Work Day
$0	$100,000.00	$200.00	$200.00
$100,000.00	$500,000.00	$300.00	$400.00
$500,000.00	$2,000,000.00	$400.00	$800.00
$2,000,000.00	$7,000,000.00	$500.00	$1,500.00
$7,000,000.00	----------	$700.00	$2,000.00

14.00. WARRANTY AND GUARANTEE: TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK.

14.01. WARRANTY AND GUARANTEE. The Contractor warrants and guarantees to the Owner and Engineer that all materials and equipment will be new unless otherwise specified and that all Work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents and of any inspections, tests or approvals referred to in the Tests and Inspection paragraph. All unsatisfactory Work, all faulty or defective Work, and all Work not conforming to the requirements of the Contract Documents at the time of acceptance thereof or of such inspections, tests or approvals, shall be considered defective. Prompt notice of all defects shall be given to the Contractor. All defective Work, whether or not in place, may be rejected, corrected, or accepted as provided herein.

14.02. TESTS AND INSPECTIONS. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by some public body, the Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish the Engineer the required certificates of inspection, testing, or approval. All other inspections, tests, or approvals required by the Contract Documents shall be performed by organizations acceptable to the Owner and the Contractor and the costs thereof shall be borne by the Owner unless otherwise specified.

The Contractor shall give the Engineer timely notice of readiness of the Work for all inspections, tests or approvals. If any such Work required so to be inspected, tested or approved is covered without written concurrence of the Engineer, it must, if requested by the Engineer, be uncovered for observation, and such uncovering shall be at the Contractor's expense unless the Contractor has given the Engineer timely notice of his intention to cover such Work and the Engineer has not acted with reasonable promptness in response to such notice. This timeframe of notification shall be no less than 2 hours, and occur during normal working hours of the City of Bloomington (Monday through Friday – 8:00a.m. to 5:00p.m.) Requests for inspection during all other hours shall receive 48 hours notice

Neither observations by the Engineer nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the Work in accordance with the Contract Documents.

14.03. ACCESS TO WORK. The Engineer and his representatives and other representatives of the Owner will at reasonable times have access to the Work. The Contractor shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.

14.04. UNCOVERING WORK. If any Work is covered contrary to the written request of the Engineer, it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.

If any Work has been covered which the Engineer has not specifically requested to observe prior to its being covered, or if the Engineer considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction if he makes a claim therefor.

14.05. Owner May Stop the Work. If the Work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payment to Subcontractors or for labor, materials or equipment, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other party.

14.06. Correction or Removal of Defective Work. If required by the Engineer prior to his recommendation of final payment, the Contractor shall promptly, without cost to the Owner and as specified by the Engineer, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Engineer, remove it from the site and replace it with nondefective Work. If the Contractor does not correct such defective Work within a reasonable time, all as specified in a written notice from the Engineer, the Owner may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by the Contractor, and an appropriate deductive Change Order shall be issued. The Contractor shall also bear the expenses of making good all Work of others destroyed or damaged by his correction, removal or replacement of his defective Work.

14.07. Correction Period. If, after final payment and prior to the expiration of one year after the date of Substantial Completion (unless a longer period is set forth in the Supplementary Conditions) or such longer period as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be defective, the Contractor shall promptly, without cost to the Owner and in accordance with the Owner's written instructions, either correct such defective Work or, if it has been rejected by the Owner, remove it from the site and replace it with nondefective Work. If the Contractor does not promptly comply with the terms of such instructions, the Owner may have the defective Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by the Contractor.

14.08. Acceptance of Defective Work. If, instead of requiring correction or removal and replacement of defective Work, the Owner (and, prior to final payment, the Engineer) prefers to accept it, he may do so. In such case, if acceptance occurs prior to final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; or, if the acceptance occurs after final payment, an appropriate amount shall be paid by the Contractor to the Owner.

14.09. Neglected Work by the Contractor. If the Contractor should fail to prosecute the Work in accordance with the Contract Documents, including any requirements of the

progress schedule, the Owner, after seven days written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and the cost thereof (including compensation for additional professional services) shall be charged against the Contractor if the Engineer agrees with such action, in which case a Change Order shall be issued incorporating the necessary revisions in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

15.00. PAYMENTS AND COMPLETION.

15.01. APPLICATION FOR PROGRESS PAYMENT. The Contractor may, no more frequently than every two weeks, make an estimate of the value of the Work completed, and submit an Application for Payment. The estimated cost of repairing, replacing, or rebuilding any part of the Work or replacing materials which do not conform to the Contract Documents will be deducted from the estimated value. The Application for Payment shall be submitted to the Engineer for review and approval.

15.02. CONTRACTOR'S WARRANTY OF TITLE. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the Owner at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens").

15.03. REVIEW OF APPLICATION FOR PAYMENT. The Contractor shall furnish to the Engineer such detailed information as he may request to aid in the review and approval of such Estimates. The Engineer will, within five working days after receipt of each Application for Payment, either recommend payment and present the Application to the Owner, or return the Application to the Contractor indicating in writing his reasons for refusing to recommend payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application. The Owner will pay to the Contractor within forty-five days after receipt of Application. Retainage shall be withheld from each payment in the amount of 10% of each Application up to 50% completion. At 50% completion further payments shall be made in full to the contractor and no further amounts may be retained unless the Engineer certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid to the Contractor. At 50% completion or any time thereafter when the progress of the Work is not satisfactory, additional amounts may be retained, but in no event shall the total retainage be more than 10% of the value of the work completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the work has been substantially completed except for the work which cannot be completed due to weather conditions, lack of materials or other reasons which in the judgment of the Owner are valid reasons for noncompletion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed. Such Applications for Payment are processed on a regular biweekly schedule, which will be provided to the Contractor.

15.04. FINAL INSPECTION. When the Work has been substantially completed and at a time mutually agreeable to the Owner, Engineer, and Contractor, the Engineer and Contractor shall make a final walk-through inspection of the Work. The Engineer shall report to the Owner his findings as to the acceptability and completeness of the Work.

15.05. APPLICATION FOR FINAL PAYMENT. Upon written notice from the Engineer that Work is completed and acceptable as provided in the Supplementary Conditions, the Contractor shall make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all other documentation called for in the Contract Documents and such other data and schedules as the Engineer may reasonably require.

15.06. **FINAL PAYMENT.** If, on the basis of his observation and review of the Work during construction, his final inspection and his review of the final Application for Payment, all as required by the Contract Documents, the Engineer is satisfied that the Work has been completed and the Contractor has fulfilled all of his obligations under the Contract Documents, he will, within ten days after receipt of the final Application for Payment, present the Application to the Owner for Payment. Thereupon the Engineer will give written notice to the Contractor that the Work is acceptable subject to the provisions of the paragraph regarding waiver of claims. Otherwise, he will return the Application to the Contractor, indicating in writing his reasons for refusing to recommend final payment, in which case the Contractor shall make the necessary corrections and resubmit the Application. The Owner shall, within thirty days of presentation to him of the final Application for Payment, pay the Contractor the entire sum found to be due after deducting all amounts to be retained under any provision of the Contract Documents.

15.07. **CONTRACTOR'S CONTINUING OBLIGATION.** The Contractor's obligation to perform the Work and complete the Project in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the Engineer, nor the issuance of a certificate of Substantial Completion, nor any payment by the Owner to the Contractor under the Contract Documents, nor any use or occupancy of the Project or any part thereof by the Owner, nor any act of acceptance by the Owner nor any failure to do so, nor any correction of defective Work by the Owner shall constitute an acceptance of Work not in accordance with the Contract Documents.

15.08. **WAIVER OF CLAIMS.** The making and acceptance of final payment shall constitute:

1) a waiver of all claims by the Owner against the Contractor other than those arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the requirements of the Contract Documents or the terms of any special guarantees specified therein, and

2) a waiver of all claims by the Contractor against the Owner other than those previously made in writing and still unsettled.

16.00. **SUSPENSION OF WORK AND TERMINATION.**

16.01. **OWNER MAY SUSPEND WORK.** The Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of ninety days by notice in writing to the Contractor, which shall fix the date on which Work shall be resumed. The Contractor shall resume the Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefor as provided in these General Conditions.

16.02. **OWNER MAY TERMINATE.** If the Contractor is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction, or if he disregards the authority of the Engineer, or if he otherwise violates any provision of the Contract Documents, then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and his Surety seven days written notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such

excesses shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. Such costs incurred by the Owner shall be incorporated in a Change Order.

1) Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any rights of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from liability.

2) Upon seven days written notice to the Contractor, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Agreement. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus a reasonable profit.

16.03. **CONTRACTOR MAY STOP WORK OR TERMINATE.** If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any Application for Payment within thirty days after it is submitted, or the Owner fails to pay the Contractor any sum recommended by the Engineer or awarded by arbitrators within thirty days of its approval and presentation, then the Contractor may, upon seven days written notice to the Owner and Engineer, terminate the Agreement and recover from the Owner payment for all Work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Agreement, if the Engineer has failed to act on an Application for Payment or the Owner has failed to make any payment as aforesaid, the Contractor may upon seven days notice to the Owner and Engineer stop the Work until he has been paid all amounts then due.

17.00. ARBITRATION.

Except as otherwise required by the Supplementary Conditions, all claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof except for claims which have been waived by the making or acceptance of final payment, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining. This agreement so to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

Notice of the demand for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy shall be filed with the Engineer. The demand for arbitration shall be made within thirty days after the Engineer has rendered his decision where applicable, and in all other cases within a reasonable time after the claim, dispute, or other matter in question has arisen, and in no event shall it be made after institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

The Contractor will carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise agreed by him and the Owner in writing.

18.00. ENVIRONMENTAL REQUIREMENTS.

The Contractor, when constructing a project involving trenching and/or other related earth excavation, shall comply with the following environmental constraints and be required to install appropriate erosion control devices as determined by the City of Bloomington, which may include, but not be limited to the placement of inlet protection, silt fencing, check dams, temporary seeding and/or mulching. All costs for this work shall be included in the cost of the base bid with work performed by the contractor to ensure that all erosion in contained on site.

18.01. WETLANDS. The Contractor, when disposing of excess, spoil, or other related earth construction materials on public or private property, shall not fill in or otherwise convert wetlands

18.02. FLOODPLAINS. The Contractor, when disposing of excess, spoil, or other related earth construction materials on public or private property, shall not fill in or otherwise convert 100 year flood plain areas delineated on the latest FEMA Floodplain Maps.

18.03. HISTORIC PRESERVATION. Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the City Engineer's Office. Construction shall be temporarily halted pending the notification process and further directions issued by the City after consultation with the State Historic Preservation Officer (SHPO).

18.04. ENDANGERED SPECIES. The Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species or their critical habitat be brought to the attention of the contractor, the contractor shall immediately report this evidence to the City Engineer. Construction shall be temporarily halted pending the notification process and further directions issued by the OWNER after consultation with the U.S. Fish and Wildlife Service.

19.00. MISCELLANEOUS.

19.01. GIVING NOTICE. Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to be validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by first class, registered or certified mail, postage prepaid, to the business address provided on the Contractual Agreement.

19.02. COMPUTATION OF TIME. Computation of time shall be set forth by the number of calendar days allowed for in the contract agreement. Calendar days shall consist of Monday through Friday excluding Saturday, Sunday, and City of Bloomington observed holidays. The usage of Indiana Department of Transportation (I.N.D.O.T.) standard specifications with regard to time usage or computation does not apply to this contract and therefore is not applicable.

19.03. ADDITIONAL SPECIFICATION REQUIREMENTS. Areas of work not covered under Special Conditions will be required to meet specifications covered in applicable sections of Indiana Department of Transportation Specifications 2010 Edition (or latest edition and supplement at time of bid) for the installation and placement of materials to ensure quality workmanship. INDOT Specifications shall not be interpreted to contradict current Public Works, or Bloomington Utility Specifications which shall override and supersede INDOT Specifications.

CITY OF BLOOMINGTON
parks and recreation

AGREEMENT

BETWEEN

DEPARTMENT OF PARKS AND RECREATION
BOARD OF PARK COMMISSIONERS
AND

_____

FOR

COUNTRY CLUB TRAILHEAD
PROJECT NO. BPR 2011-02

THIS AGREEMENT, executed by and between the City of Bloomington, Indiana, Department of Parks and Recreation (hereinafter CITY), and _____ , (hereinafter CONTRACTOR);

WITNESSETH THAT:

WHEREAS, CITY desires to retain CONTRACTOR'S services for Construction of the Country Club Trailhead, Project No. BPR 2011-02 (more particularly described in Attachment A, "Scope of Work"; and

WHEREAS, CONTRACTOR is capable of performing all applicable work for the Country Club Trailhead and

WHEREAS, CONTRACTOR was determined to be the lowest responsible and responsive bidder for said project.

NOW, THEREFORE, in consideration of the mutual promises hereinafter enumerated, the parties agree as follows:

ARTICLE 1. TERM

1.01 This Agreement shall be in effect upon execution of this Agreement by all parties.

ARTICLE 2. SERVICES

2.01 CONTRACTOR shall complete all work required under this Agreement within one hundred eighty (180) calender days from the written Notice to Proceed. Substantial Completion shall mean completion of all work.

2.02 It is hereby understood by both parties that time is of the essence in this Agreement. Failure of CONTRACTOR to complete all work as herein provided will result in monetary damages to CITY. It is hereby agreed that CITY will be damaged for every day the work has not been performed in the manner herein provided and that the measure of those damages shall be determined by reference to the then current INDOT Schedule of Liquidated Damages for Each Day of Overrun in Contract Time. CONTRACTOR agrees to pay CITY said damages or, in the alternative, CITY, at its sole discretion, may withhold monies otherwise due CONTRACTOR. It is expressly understood by the parties hereto that these damages relate to the time of performance and do not limit CITY's other remedies under this Agreement, or as provided by applicable law, for other damages.

2.03 CONTRACTOR agrees that no charges or claims for damages shall be made by him for any delays or hindrances, from any cause whatsoever during the progress of any portion of the services specified in the Agreement. Such delays or hindrances, if any, may be compensated for by an extension of time for a reasonable period as may be mutually agreed upon between the parties, it being understood, however, that permitting CONTRACTOR to proceed to complete any service, or any part of the services / project, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of CITY of any of its rights herein.

ARTICLE 3. COMPENSATION

3.01 CONTRACTOR shall provide services as specified in Attachment A, "Scope of Work", attached hereto and incorporated into this Agreement.

3.02 Upon the submittal of approved claims, CITY shall compensate CONTRACTOR in lump sum of _____ ($_____.__). CITY may withhold payment, in whole or in part, to the extent necessary to protect itself from a loss on account of any of the following:

Defective work.

Evidence indicating the probable filing of claims by other parties against CONTRACTOR which may adversely affect CITY.

Failure of CONTRACTOR to make payments due to subcontractors, material suppliers or employees.

Damage to CITY or a third party.

3.03 The submission of any request for payment shall be deemed a waiver and release by CONTRACTOR of all liens and claims with respect to the work and period to which such payment request pertains except as specifically reserved and noted on such request.

3.04 CONTRACTOR shall maintain proper account records for the scope of all services of this Agreement and provide an accounting for all charges and expenditures as may be necessary for audit purposes. All such records shall be subject to inspection and examination by CITY's representatives at reasonable business hours.

3.05 CONTRACTOR shall submit time sheets (WH-347) for his own and all subcontracted employees, to City Engineer or his representative for approval and review, including review for compliance with Prevailing Wage requirements.

ARTICLE 4. GENERAL PROVISIONS

4.01 CONTRACTOR agrees to indemnify and hold harmless CITY and its officers, agents, officials and employees for any and all claims, actions, causes of action, judgments and liens arising out of any negligent act or omission by CONTRACTOR or any of its officers, agents, officials, employees, or subcontractors or any defect in materials or workmanship of any supply, materials, mechanism or other product or service which it or any of its officers, agents, officials, employees, or subcontractors has supplied to CITY or has used in connection with this Agreement and regardless of whether or not it is caused in part by a party indemnified hereinunder. Such indemnity shall include attorney's fees and all costs and other expenses arising therefrom or incurred in connection therewith and shall not be limited by reason of the enumeration of any insurance coverage required herein.

4.02 Abandonment, Default and Termination

4.02.01 CITY shall have the right to abandon the work contracted for in this Agreement without penalty. If CITY abandons the work described herein, CONTRACTOR shall deliver to CITY all surveys, notes, drawings, specifications and estimates completed or partially completed and these shall become the property of CITY. The earned value of the work performed shall be based upon an estimate of the proportion between the work performed by CONTRACTOR under this Agreement and the work which CONTRACTOR was obligated to perform

under this Agreement. This proportion shall be mutually agreed upon by CITY and CONTRACTOR. The payment as made to CONTRACTOR shall be paid as a final payment in full settlement of his services hereunder.

4.02.02 If CONTRACTOR defaults or fails to fulfill in a timely and proper manner the obligations pursuant to this Agreement, CITY may, after seven (7) days' written notice has been delivered to CONTRACTOR, and without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due to CONTRACTOR. In the alternative, CITY, at its option, may terminate this Agreement and take possession of the site and of all materials, equipment, tools and construction equipment and machinery thereon owned by CONTRACTOR, and may finish the project by whatever method it may deem expedient, and if the such action exceeds the unpaid balance of the sum amount, CONTRACTOR or his surety, shall pay the difference to CITY.

4.02.03 Default: If CONTRACTOR breaches this Agreement or fails to perform the work in an acceptable manner, he shall be considered in default. Any one or more of the following will be considered a default:

1. Failure to begin the work under this Agreement within the time specified.
2. Failure to perform the work with sufficient supervision, workmen, equipment and materials to insure prompt completion of said work within the time limits allowed.
3. Unsuitable performance of the work as determined by CITY ENGINEER or his representative.
4. Neglecting or refusing to remove defective materials or failure to perform anew such work as shall have been rejected.
5. Discontinuing the prosecution of the work or any part of it.
6. Inability to finance the work adequately.
7. If, for any other reason, CONTRACTOR breaches this Agreement or fails to carry on the work in an acceptable manner.

4.02.04 CITY shall send CONTRACTOR a written notice of default. If CONTRACTOR, or his Surety, within a period of ten (10) days after such notice, fails to remedy the default, then CITY shall have full power and authority, without violation of the Contract, to take the prosecution of the work out of the hands of said CONTRACTOR, to appropriate or use any or all materials and equipment on the ground as may be suitable and acceptable, and may, at its option, turn the work over to the Surety, or enter into an agreement with another Contractor for the completion of the Contract according to the terms and provisions thereof, or CITY may use such other methods as, in its opinion, shall be required for the completion of said Contract in an acceptable manner.

4.02.05 All cost of completing the work under the Contract shall be deducted from the monies due or which may become due to said CONTRACTOR. In case the expenses so incurred by CITY shall be less than the sum which would have been payable under the Contract if it had been completed by said CONTRACTOR, CONTRACTOR shall be entitled to receive the difference. However, in case such expense shall exceed the sum which would have been payable under the Contract, CONTRACTOR and his Surety will be liable and shall pay to CITY the amount of said excess. By taking over the prosecution of the work, CITY does not forfeit the right to recover damages from CONTRACTOR or his Surety for his failure to complete the work in the time specified.

4.02.06 Notwithstanding any other provision of this Agreement, if funds for the continued fulfillment of the Agreement by CITY are at any time not forthcoming or are insufficient, through failure of any entity to appropriate the funds or otherwise, then CITY shall have the right to terminate this Agreement without penalty by giving prior written notice documenting the lack of funding in which instance, unless otherwise agreed to by the parties, this Agreement shall terminate and become null and void.

4.02.07 CITY agrees that it will make its best effort to obtain sufficient funds, including but not limited to, including in its budget for each fiscal period during the term hereof a request for sufficient funds to meet its obligations hereunder in full.

4.03 Successors and Assigns

4.03.01 Both parties agree that for the purpose of this Agreement, CONTRACTOR shall be an Independent Contractor and not an employee of CITY.

4.03.02 No portion of this Agreement shall be sublet, assigned, transferred or otherwise disposed of by CONTRACTOR except with the written consent of CITY being first obtained. Consent to sublet, assign, transfer, or otherwise dispose of any portion of this Agreement shall not be construed to relieve CONTRACTOR of any responsibility of the fulfillment of this Agreement.

4.04 Extent of Agreement: Integration

4.04.01 This Agreement consists of the following parts, each of which is as fully a part of this Agreement as if set out herein:

1. This Agreement
2. Technical Specification (Attachment A, “Scope of Work”)
3. Where applicable, Bid Prices (Attachment B)
4. Upfront Specifications (Definitions and Bidder's Responsibilities)
5. Information for Bidders

6. Advertisement
7. CONTRACTOR'S submittals
8. The current Indiana Department of Transportation Standard Specifications and the latest addenda
9. All plans as provided for the work that is to be completed

4.04.02 In resolving conflicts, errors, discrepancies and disputes concerning the Scope of Work to be performed by CONTRACTOR, and other rights and obligations of CITY and CONTRACTOR, the document expressing the greater quantity, quality or other scope of work in question, or imposing the greater obligation upon CONTRACTOR and affording the greater right or remedy to CITY shall govern; otherwise the documents shall be given precedence in the order as enumerated above.

4.05 Insurance

4.05.01 CONTRACTOR shall, as a prerequisite to this Agreement, purchase and thereafter maintain such insurance as will protect him from the claims set forth below which may arise out of or result from CONTRACTOR'S operations under this Agreement, whether such operations be by CONTRACTOR or by any SUBCONTRACTORS or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

Coverage		Limits
A.	Worker's Compensation & Disability	Statutory Requirements
B.	Employer's Liability Bodily Injury by Accident	$100,000 each accident
	Bodily Injury by Disease	$500,000 policy limit
	Bodily Injury by Disease	$100,000 each employee
C.	Commercial General Liability (Occurrence Basis) Bodily Injury, personal injury, property damage, contractual liability, products-completed operations, General Aggregate Limit (other than Products/Completed Operations)	$1,000,000 per occurrence and $2,000,000 in the aggregate
	Products/Completed Operation	$1,000,000

	Personal & Advertising Injury Limit	$1,000,000
	Each Occurrence Limit	$1,000,000
	Fire Damage (any one fire)	$50,000
D.	Comprehensive Auto Liability (single limit, owned, hired and non-owned)	$1,000,000 each accident
	Bodily injury and property damage	
E.	Umbrella Excess Liability	$5,000,000 each occurrence and aggregate
	The Deductible on the Umbrella Liability shall not be more than	$10,000

4.05.02 CONTRACTOR'S comprehensive general liability insurance shall also provide coverage for the following:

1. Premises and operations;

2. Contractual liability insurance as applicable to any hold-harmless agreements;

3. Completed operations and products; which also must be maintained for a minimum period of two (2) years after final payment and CONTRACTOR shall continue to provide evidence of such coverage to CITY on an annual basis during the aforementioned period;

4. Broad form property damage - including completed operations;

5. Fellow employee claims under Personal Injury; and

6. Independent Contractors.

With the prior written approval of CITY, CONTRACTOR may substitute different types or amounts of coverage for those specified as long as the total amount of required protection is not reduced.

4.05.04 Certificates of Insurance showing such coverage then in force (but not less than the amount shown above) shall be on file with CITY prior to commencement of work. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled or non renewed until at least sixty (60) days' prior written notice has been received by CITY. The CITY shall be named as an additional insured on the Commercial General Liability, Automobile Liability, and Umbrella Excess Liability policies. The CONTRACTOR shall agree to a waiver of subrogation on its Worker's Compensation policy.

4.06 Necessary Documentation CONTRACTOR certifies that it will furnish CITY any and all documentation, certification, authorization, license, permit or registration required by the laws or rules and regulations of the City of Bloomington, the State of Indiana and the United States. CONTRACTOR further certifies that it is now and will maintain in good standing with such governmental agencies and that it will keep its license, permit registration, authorization or certification in force during the term of this Agreement.

4.07 Applicable Laws CONTRACTOR agrees to comply with all federal, state, and local laws, rules and regulations applicable to CONTRACTOR in performing work pursuant to this Agreement, including, but not limited to, discrimination in employment, prevailing wage laws, conflicts of interest, public notice, accounting records and requirements. This Agreement shall be governed by the laws of the United States, and the State of Indiana, and by all Municipal Ordinances and Codes of the City of Bloomington. Venue of any disputes arising under this Agreement shall be in the Monroe Circuit Court, Monroe County, Indiana.

4.08 Non-Discrimination

4.08.01 CONTRACTOR and subcontractors shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to hire, tenure, terms, training, conditions or privileges of employment, because of race, sex, color, religion, national origin, ancestry, age, handicap, or disabled veteran status. Breach of this covenant may be regarded as a material breach of the Agreement.

4.08.02 CONTRACTOR certifies for itself and all its subcontractors compliance with existing laws of the State of Indiana and the United States regarding:

1. Prohibition of discrimination in employment practices on the basis of race, sex, color, religion, national origin, ancestry, age, handicap, or any other legally protected classification;

2. The utilization of Minority and Women Business Enterprises. CONTRACTOR further certifies that it:

a. Has formulated its own Affirmation Action plan for the recruitment, training and employment of minorities and women, including goals and timetable; which has been approved by the City's Contract Compliance Officer.

b. Encourages the use of small business, minority-owned business and women-owned business in its operations.

4.08.03 FURTHER, PURSUANT TO INDIANA CODE 5-16-6-1, CONTRACTOR AGREES:

A) That in the hiring of employees for the performance of work under this Agreement or any subagreement hereunder, no contractor, or subcontractor, nor any person acting on behalf of such CONTRACTOR or subcontractor, shall by reason of race, sex, color, religion, national origin, ancestry, or any other legally protected classification, discriminate against any citizen of the State of Indiana who is qualified and available to perform the work to which the employment relates.

B) That no contractor, subcontractor, or any person on their behalf, shall, in any manner, discriminate against or intimidate any employee hired for performance of work under this Agreement on account of race, religion, color, sex, national origin, ancestry, handicap, or any other legally protected classification.

C) That there may be deducted from the amount payable to CONTRACTOR, by CITY, under this Agreement, penalty of Five Dollars ($5.00) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of this Agreement. Any such person discriminated against retains the right to file a discrimination complaint with the appropriate civil rights agency or court.

D) That this Agreement may be canceled or terminated by CITY and all money due or to become hereunder may be forfeited, for a second or any subsequent violations of the terms or conditions under this section of the Agreement.

4.09 Workmanship and Quality of Materials

4.09.01 CONTRACTOR shall guarantee the work for a period of one (1) year from the date of substantial completion. Failure of any portion of the work within one (1) year due to improper construction, materials of construction, or design may result in a refund to CITY of the purchase price of that portion which failed or may result in the forfeiture of CONTRACTOR's Performance Bond.

4.09.02 OR EQUAL: Wherever in any of the Contract Documents an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer or vender, the term "Or Equal" or the term "The Equivalent" if not inserted, shall be implied, and it is done for the express purpose of establishing a basis of durability and efficiency and not for the purpose of limiting completion. Whenever material or equipment is submitted for approval as being equal to that specified, the submittal shall include sufficient information and data to demonstrate that the material or equipment conforms to the Contract requirements. The decision as to whether or not such material or equipment is equal to that specified shall be made by the ENGINEER. The approval by the ENGINEER of alternate material or equipment as being equivalent to that specified, shall not in any way relieve CONTRACTOR of responsibility for failure of the material or equipment due to faulty design, material, or workmanship, to perform the function required by the Contract Documents. Specifications as determined by other entities within the City of Bloomington such as City Utilities shall only be substituted or changed by their approval which shall be submitted in writing to the ENGINEER.

4.09.03 CITY shall be the sole judge of the sufficiency of workmanship and quality of materials. Disputes shall be resolved by the Director of Public Works and are not subject to arbitration.

4.10 **Safety**. CONTRACTOR shall be responsible for the safety of employees at all times and shall provide all equipment necessary to insure their safety. CONTRACTOR shall ensure the enforcement of all applicable safety rules, regulations, ordinances and laws, whether federal, state or local. Contractor's Superintendent of Safety shall make daily inspections upon the arrival and leaving of the site at the close of each workday.

4.11 Amendments/Changes

4.11.01 Except as provided in Paragraph 4.11.02, this Agreement may be amended only by written instrument signed by both CITY and CONTRACTOR.

4.11.02 Without invalidating the Agreement and without notice to any surety, CITY may at any time or from time to time, order, in writing, additions, deletions or revisions in the work. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the work involved, which will be performed under the applicable conditions of the Contract Documents.

4.11.03 If CONTRACTOR believes that any direction of CITY under paragraph 4.11.02, or any other event or condition, will result in an increase in the Contract time or price, he shall file written notice with CITY no later than twenty (20) days after the occurrence of the event giving rise to the claim and stating the general

nature of the claim with supporting data. No claim for any adjustment of the Contract time or price will be valid if not submitted in accordance with this Paragraph.

4.11.04 CONTRACTOR shall carry on the work and adhere to the progress schedule during all disputes or disagreements with CITY. No work shall be delayed or postponed pending resolution of any dispute or disagreement except as CONTRACTOR and CITY may otherwise agree in writing.

4.12 Performance Bond and Payment Bond

4.12.01 CONTRACTOR shall provide CITY with a Performance Bond and Payment Bond in the amount of one hundred percent (100%) of the contract amount.

4.12.02 Failure by CONTRACTOR to perform the work in a timely or satisfactory fashion may result in forfeiture of CONTRACTOR'S Performance Bond.

4.12.03 If the surety on any bond furnished by CONTRACTOR becomes a party to supervision, liquidation, or rehabilitation action pursuant Indiana Code 27-9 et seq. or its right to do business in the State of Indiana is terminated, CONTRACTOR shall, within thirty (30) days thereafter, substitute another bond and surety, both of which must be acceptable to CITY.

4.13 Payment of Subcontractors CONTRACTOR shall pay all subcontractors, laborers, material suppliers and those performing services to CONTRACTOR on the project under this Agreement. CITY may, as a condition precedent to any payment hereunder, require CONTRACTOR to submit satisfactory evidence of payments of any and all claims of subcontractors, laborers, material suppliers, and those furnishing services to CONTRACTOR. Upon receipt of a lawful claim, CITY shall withhold money due to CONTRACTOR in a sufficient amount to pay the subcontractors, laborers, material suppliers, and those furnishing services to CONTRACTOR.

4.14 Written Notice Written notice shall be considered as served when delivered in person or sent by mail to the individual, firm, or corporation, or to the last business address of such known to CONTRACTOR who serves the Notice. Notice shall be sent as follows:

TO CITY: TO CONTRACTOR:

, Project Manager		Contact Person
City of Bloomington, Showers City Hall		Company Name
401 N. Morton, Suite 250		Address
Bloomington, Indiana 47402		City, State Zip Code

4.15 **Severability and Waiver** In the event that any clause or provision of this Agreement is held to be invalid by any court of competent jurisdiction, the invalidity of such clause or provision shall not affect any other provision of this Agreement. Failure of either party to insist on strict compliance with any provision of this Agreement shall not constitute waiver of that party's right to demand later compliance with the same or other provisions of this Agreement.

4.16 **Notice to Proceed** CONTRACTOR shall not begin the work pursuant to the "Scope of Work" of this Agreement until it receives an official written Notice to Proceed from the City Engineer. Contractor shall start active and continuous work on the contract within fifteen (15) calendar days after the date of the Notice to Proceed. In no case shall work begin prior to the date of the Notice to Proceed. If a delayed starting date is indicated in the proposal, the fifteen (15) calendar day limitation will be waived. Work day charges will then begin on a date mutually agreed upon, but not later than the delayed starting date specified. In the event that any contract is canceled after an award has been made but prior to the issuing of the Notice to Proceed, no reimbursement will be made for any expenses accrued relative to this contract during that period.

4.17 **Steel or Foundry Products**

4.17.01 To comply with Indiana Code 5-16-8, affecting all contracts for the construction, reconstruction, alteration, repair, improvement or maintenance of public works, the following provision shall be added: If steel or foundry products are to be utilized or supplied in the performance of any contract or subcontract, only domestic steel or foundry products shall be used. Should CITY feel that the cost of domestic steel or foundry products is unreasonable; CITY will notify CONTRACTOR in writing of this fact.

4.17.02 Domestic Steel products are defined as follows:

"Products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two (2) or more of such operations, from steel made in the United States by open hearth, basic oxygen, electric furnace, Bessemer or other steel making process."

4.17.03 Domestic Foundry products are defined as follows:

"Products cast from ferrous and nonferrous metals by foundries in the United States."

4.17.04 The United States is defined to include all territory subject to the jurisdiction of the United States.

4.17.05 CITY may not authorize or make any payment to CONTRACTOR unless CITY is satisfied that CONTRACTOR has fully complied with this provision.

IN WITNESS WHEREOF, the parties of this Agreement have hereunto set their hands.

DATE: _____

	Company Name
City of Bloomington **Department of Parks and Recreation** **Board of Park Commissioners**	Address City, State Zip Code
BY:	BY:
_____ John Carter, President Date Board of Park Commissioners	_____ Contractor Representative Date
_____ Mick Renneisen, Director Date Parks and Recreation	_____ Printed Name
_____ Mark Kruzan, Mayor Date City of Bloomington	_____ Title of Contractor Representative

CITY OF BLOOMINGTON
Legal Department
Reviewed By:
_____
DATE:_____

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SUMMARY OF WORK

GENERAL

WORK COVERED BY CONTRACT DOCUMENTS

All applicable requirements of the Project Manual, including Bidding Requirements, General and Supplemental Conditions, and General Requirements, apply to each section of the Specifications.

Project Location: Country Club Drive between Rogers and Walnut. The site is an existing unimproved trailhead on the south side Country Club Drive, Bloomington, Indiana.

Work consists of, but not limited to, furnishing all labor, tools, materials, transportation, and equipment necessary for the construction of an Trailhead, Parking Lot, Limestone Retaining Wall. And all other associated work indicated on the drawings.

Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from injury or loss. He shall erect and maintain, as required by existing conditions and progress of work, all reasonable safeguards for safety and protection including posting danger signs and other warnings against hazards. All requirements of the Occupational Safety and Health Act are to be followed explicitly and are the responsibility of the Contractor.

INSPECTION OF SITE

All prospective Bidders are urged to visit the project site and to examine existing conditions and make note of any conditions, which may pertain to their work. Failure to do so will not relieve Bidder of responsibility in connection with his work.

- See also, Instruction to Bidders.

SALES TAX EXEMPTION

Owner is exempt from sales tax on products permanently incorporated in the work.

Obtain sales tax exemption certificate number from the Office of the City Controller, (812) 349-3412.

Upon completion of the work, file with the Owner, a notarized statement that all purchases made under exemption certificate were entitled to be exempt.

Pay legally assessed penalties for improper use of certificate number.

CONTRACTOR'S USE OF PREMISES

Temporary Facilities.

- Toilet facilities are not available.
- Contractor will be responsible for obtaining all utilities necessary to perform their work.

Contract Limits.

- Contract limits shall be restricted to those areas shown on plans.

Protection of Property.

- Contractor shall provide adequate protection for portion of existing property where no new work occurs. Contractor shall assume all costs resulting from any damages.

PARKING AND STORAGE

Parking areas for use of Contractor and his employees shall be on site.

Storage and staging areas will be as designated by the Engineer.

While the Owner may designate storage areas for temporary storage of material, the Owner cannot guarantee the security of items placed there by Contractor.

OWNER OCCUPANCY

The Contractor shall cooperate with Owner's Representative in all construction operations to minimize conflicts, and to facilitate owners of adjacent property.

Do not unreasonably encumber site with materials or equipment.

Unless streets, sidewalks, and other pathways are to be closed to traffic, Contractor is to provide for traffic control through the project.

Assume full responsibility for protection and safekeeping of products stored at work site.

FINAL CLEAN-UP

Remove all debris, rubbish, and unused materials. Repair all damaged surfaces.

Clean all finished surfaces by means of sweeping or as directed by the Engineer.

CLOSE-OUT

Owner's Representative and Contractor shall make a joint final inspection. Contractors to deliver a complete release of all liens up to any retained amount and clarify that all bills for labor and materials or services have been paid.

PROTECTION

Protect trees, shrubs, lawns, and other features to remain.

Protect existing structures, roads, sidewalks, paving and curbs that are to remain.

Repair damage to the satisfaction of the Engineer and in accordance with these Specifications.

All lawns that are damaged due to work operations shall be replanted with Sod.

Topsoil Fill For Damaged Areas: Natural, friable loam, typical of locality; free of subsoil, roots, grass, excessive amounts of weeds, stone and foreign matter; containing minimum of 4 percent and maximum of 25 percent organic matter.

Protect all traffic signs and markings designated to remain. All signs indicated to be removed shall be removed by the Owner upon proper notification.

Base Bid

This project shall include, but is not limited to the installation of a trailhead with site clearing, pervious pavers, limestone retaining wall, earthwork, curbing, exposed aggregate walks, and landscaping improvements. This

shall include the placement of A.D.A. accessible ramps per the plans and specifications, and the installation of stormwater infrastructure according to the most recent set of City of Bloomington Utilities Specifications at the time of bidding. All other work shall be completed as shown on the plans and specifications included with this packet and by the 2012 INDOT Specifications for all other work not specifically listed in these plans and specifications. It shall be noted that INDOT Specifications to time and the computation of time are not followed with this project, and that a project completion deadline of 180 calender days has been set and clearly noted for this project

Alternates Add Alternates are included within the form.

a. Add Alternate #1
    i. Contractor shall include within his price per each all required materials, tools, and incidentals for the cost to furnish and install the shelter bench.
b. Add Alternate #2
    i. Contractor shall include within his price per each all required materials, tools, and incidentals for the cost to furnish and install the drinking fountain. The base bid shall contain the cost to install the water service connection.
c. Add Alternate #3
    i. Contractor shall include within his price per each the cost to furnish and install Ornamental Grass – Lirope muscari 'Big Blue' as shown in the plans.
d. Add Alternate #4
    i. Contractor shall include within his lump sum cost to furnish and install this item including but not limited to all wiring, connections, bases, testing and appurtenances necessary for the installation of the HAWK pedestrian crossing system.

Scheduling

Project shall be completed within 180 calendar days from notice to proceed.

Contractor shall prepare a schedule of work for Owner's review prior to commencing work on the project.

- Schedule shall indicate all construction activities and sequencing.
- Include on schedule, all required submittals and shop drawings.

Guarantee

The Contractor shall guarantee in writing on his letterhead in four (4) copies that all labor, materials, and performances for a period of two (2) years from the date of acceptance.

END OF SECTION

SP 1 CUTTING AND PATCHING

GENERAL

REQUIREMENTS INCLUDED

Contractor shall be responsible for all cutting and patching as required to complete the work.

PREPARATION

Provide devises and methods to protect other portions of project from damage.

PERFORMANCE

Execute cutting and demolition by methods, which will present no damage to other work, and will provide surfaces to receive installation of repairs.

Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.

Restore work, which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.

DUST PROTECTION

Contain dust from cutting operations by utilizing wet-cutting equipment.

PRODUCTS

MATERIALS

Unless otherwise noted on the plans, use materials of similar quality, color and finish to compliment or match existing.

EXECUTION

PREPARATION

Prepare existing surfaces to receive new materials.

Provide blocking or fillers where necessary for flush surfaces.

INSTALLATION

Install materials plumb, level, flush and true to line and grade.

Finish surfaces to blend in with existing to fully finished appearance.

END OF SECTION

SP 2 FIELD ENGINEERING

GENERAL

SUMMARY

General: This section specifies administrative and procedural requirements for field engineering services, including:

- Land survey work.
- Civil engineering services.

SUBMITTALS

Certificates:

- Submit a certificate signed by the Land Surveyor or Professional Engineer certifying that the location and elevation of improvements comply with the Contract Documents.

Project Record Documents:

- Submit a record of work performed and record survey data.

QUALITY ASSURANCE

Surveyor:

- Engage a Registered Land Surveyor registered in the State of Indiana, to perform land-surveying services required.

Engineer:

- Engage a Professional Engineer, as necessary, of the discipline required, and registered in the State of Indiana, to perform required engineering services.

PRODUCTS (NOT APPLICABLE)

EXECUTION

EXAMINATION

The Owner will identify existing control points and property line corner stakes.

Verify layout information shown on the Drawings, in relation to the property survey and existing benchmark before preceding to layout the work. Locate and protect existing benchmark and control points. Preserve permanent reference points during construction.

Do not change or relocate benchmark or control points without prior written approval. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.

Establish and maintain a minimum of two permanent benchmark on the site, referenced to data established by survey control points. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

Existing Utilities and Equipment:

- The existence and location of underground and other utilities and construction indicated as existing are not guaranteed.
- Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

PERFORMANCE

Working from lines and levels established by the property survey, establish benchmark and markers to set lines and levels at each stage of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale drawings to determine dimensions.

Advise entities engaged in construction activities, of marked lines and levels provided for their use.

As construction proceeds, check every major element for line, level and plumb.

Surveyor's Log:

- Maintain a surveyor's log of control and other survey work. Make this log available for reference.
- Record deviations from required lines and levels, and advise the Engineer when deviations that exceed indicated or recognized tolerances are detected.
- On Project Record Drawings, record deviations that are accepted and not corrected.

Site Improvements:

- Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement by instrumentation and similar appropriate means.

Existing Utilities:

- Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction. Existing utilities include those utilities that have been installed during this project.

END OF SECTION

SP 3 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

GENERAL

REQUIREMENTS INCLUDED

Submit shop drawings, Product Data and Samples required by Contract Documents.

See individual Sections for specific requirements.

RELATED REQUIREMENTS

Definitions and Additional Responsibilities of Parties: Conditions of the Contract.

Designate in the construction schedule, or in a separate coordinated schedule, the dates for submissions and the dates that reviewed Shop Drawings, Product Data and Samples will be needed.

SHOP DRAWINGS

Drawings shall be presented in a clear and thorough manner.

Details shall be identified by reference to sheet and detail, as shown on Contract Drawings.

PRODUCT DATA

Preparation

- Clearly mark each copy to identify pertinent products or models.
- Show performance characteristics and capacities.
- Show dimensions and clearances required.
- Show wiring or piping diagrams and controls.
- Manufacturer's standard schematic drawings and diagrams:

Modify drawings and diagrams to delete information, which is not applicable to the work.

Supplement standard information to provide information specifically applicable to the work.

SAMPLES

Office samples shall be of sufficient size and quantity to clearly illustrate:

Functional characteristics of the product, with integrally related parts and attachment devices.

Full range of color, texture and pattern.

CONTRACTOR RESPONSIBILITIES

Review Shop Drawings, Product Data and Samples prior to submission.

Determine and verify:

- Field measurements.
- Field construction criteria.
- Catalog numbers and similar data.
- Conformance with specifications.

Coordinate each submittal with requirements of the work and of the Contract Documents.

Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of contract Documents.

Do not begin fabrication or work, which requires submittals until return of submittals with Engineer approval.

SUBMISSION REQUIREMENTS

Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other Contractor.

Number of submittals required:

- Shop Drawings: Submit number of opaque reproductions, which Contractor requires, plus two copies which will be retained by the Engineer.
- Product Data: Submit the number of copies, which the Contractor requires, plus two which will be retained by the Engineer.
- Samples: Submit the number stated in each specification section.

Submittals shall contain:

- The date of submission and the dates of any previous submissions.
- The Project title and number.
- Contract identification.
  The names of:
  Contractor
  Supplier
  Manufacturer
- Identification of the product with the specification section number.
- Field dimensions, clearly stated as such.
- Relation to adjacent or critical features of the work or materials.
- Applicable standards, such as ASTM or Federal Specification numbers.
- Identification of deviations from Contract Documents.
- Identification of revisions or re-submittals.
- An 8 inch by 3 inch blank space for Contractor and Engineer stamps.
- Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and Contract Documents.

RESUBMISSION REQUIREMENTS

Make any corrections or changes in the submittals required by the Engineer and resubmit until approved.

Shop Drawings and Product Data:

- Revise initial drawings or data, and resubmit as specified for the initial submittal.

- Indicate any changes that have been made other than those requested by the Engineer.

DISTRIBUTION

Distribute reproductions of Shop Drawings and copies of Product Data which carry the Engineer's stamp of approval to:

- Job site file.
- Subcontractors.

ENGINEER's DUTIES

Review submittals with reasonable promptness and in accord with schedule.

Affix stamp and initials or signature, and indicate requirements for re-submittal, or approval of submittal.

Return submittals to Contractor for distribution, or for resubmission.

END OF SECTION

SP 4 SUBSTITUTIONS AND PRODUCT OPTIONS

GENERAL

REQUIREMENTS INCLUDED

Furnish and install products specified under options and conditions for substitutions stated in this Section.

PRODUCTS LIST

Within 30 days after award of Contract, submit to Engineer, five copies of complete list of major products, which are proposed for installation.

Tabulate products by specification section number and title.

For products specified only by reference standards, list for each such product:

- Name and address of Manufacturer.
- Trade name.
- Model or catalog destination.
- Manufacturer's data.
- Reference standards.
- Performance test data.

CONTRACTOR'S OPTIONS

For products specified by reference standard, select product meeting that standard, by any Manufacturer.

For products specified by naming several products or Manufacturers, select any one of products and Manufacturers named which complies with Specifications.

For products specified by naming one or more products or Manufacturers and stating "or equal", submit a request as for substitutions, for any product or Manufacturer which is not specifically named.

For products specified by naming only one product and Manufacturer, there is no option and no substitution allowed.

Approval and determination of quality is vested in the Owner and Engineer, whose decision is final and binding upon all concerned. Should it be determined that the substituted product is not equal to the product specified, the Owner and Engineer have a right to choose either the product specified or one of equal quality without cost to the Owner.

SUBSTITUTIONS

Within a period of 30 days after award of Contract, Engineer will consider formal requests from the Contractor for substitution of products in place of those specified.

After the end of that period, requests will be considered only in the case of product unavailability or other conditions beyond the control of the Contractor.

Submit a separate request for each substitution. Support each request with:

- Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:
- Product identification, including Manufacturer's name and address.

- Manufacturer’s literature; identify:
- Product description.
- Reference standards.
- Performance and test data.
- Samples, as applicable.
- Name and address of similar projects on which product has been used, and date of each installation.
- Itemized comparison of the proposed substitution with product specified; list significant variations.
- Data relating to changes in construction schedule.
- Any effect of substitution on separate contracts.
- List any changes required in other work or products.
- Accurate cost data comparing proposed substitutions with product specified.
- Amount of any net change to Contract sum.
- Designation of required license fees or royalties.
- Designation of availability of maintenance services and sources of replacement materials.

Substitutions will not be considered for acceptance when:

- They are indicated or implied on shop drawings or product data submittals without a formal request from Contractor.
- They are requested directly from a Subcontractor or Supplier.
- Acceptance will require substantial revision of Contract Documents.

Substitute products shall not be ordered or installed without written acceptance of the Engineer.

The Engineer will determine acceptability of proposed substitutions.

CONTRACTOR’S REPRESENTATION

In making formal request for substitution, Contractor represents that:

- He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.
- He will provide same warranties or bonds for substitution as for product specified.
- He will coordinate installation of accepted substitution into the work and will make such changes as may be required for the work to be complete in all respects.
- He waives claims for additional costs caused by substitution which may subsequently become apparent.
- Cost data is complete and includes related costs under his contract, but not:
- Costs under separate contracts.
- Engineer’s costs for redesign or revision of Contract Documents.

ENGINEER's DUTIES

Review Contractor’s requests for substitutions with reasonable promptness.

Notify Contractor, in writing, of decision to accept or reject requested substitutions.

END OF SECTION

SP 5 SITE CLEARING

GENERAL

WORK INCLUDED

Clear areas shown on the accompanying drawings and specifications therein.
Remove surface debris, gravel, and soil.
Remove concrete and asphalt.
Remove trees noted to be removed or necessary to complete the work as shown.
All materials and site elements to be excavated or demolished will be removed off site to an approved landfill or recycled.

RELATED WORK

SP01 Cutting and Patching
SP06 Earthwork
SP07 Excavation
SP09 Finish Grading

UTILITIES

Notify the Owner and the Engineer in advance of any utilities needing to be disconnected.

NOT USED

EXECUTION

CLEARING

Remove unsatisfactory soil materials, stones, obstructions, deleterious material and debris from ground surface prior to placement of new work.

TREE AND PLANT PROTECTION

Before any work is begun, or any equipment is moved onto site, the Owner's Representative and Contractor will inspect the site to verify trees, shrubs, and bushes which are to be protected, pruned, relocated or removed.

Preserve and protect existing trees and plants at site, which are designated to remain, and those adjacent to site.

Consult with the Owner, and remove agreed on trees, roots, branches and stumps, which interfere with the construction. Employ qualified tree surgeon to remove and to treat cuts. Saw cut roots 1" diameter or larger and treat with Pruning Paint.

Protect root zones of trees and plants:

- Do not allow vehicular traffic or parking.
- Do not store materials or products.
- Prevent dumping of refuse or chemically injurious materials or liquids.
- Prevent puddling or continuous running water.
- Carefully supervise excavating, grading, filling, and subsequent construction operations, to prevent damage.

Existing trees and shrubs that are damaged or die as a result of construction shall be suitably repaired or replaced with plant material of same kind and size or as approved by Owner. Low hanging branches and unsound or unsightly branches on trees and shrubs designated to remain shall be pruned as required and directed by Owner's Representative.

REMOVAL

Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by Owner's Representative.

Remove stumps and roots, on trees and shrubs indicated to be removed, to a depth of 24 inches.

Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, clean the area, and remove debris from the site.

END OF SECTION

SP 6 EARTHWORK

GENERAL

RELATED DOCUMENTS

Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

Related Sections: The following Sections contain requirements that relate to this Section.

- Division 2 Section "Site Clearing" for site stripping, grubbing, topsoil removal, and tree protection.

SUMMARY

This section includes the following:

- Preparing and grading subgrades for slabs-on-grade, walks, pavements, and landscaping.
- Excavating and backfilling for structures.
- Sub-base course for walks and pavements.
- Excavating and backfilling trenches within building lines.
- Excavating and backfilling for underground mechanical and electrical utilities and appurtenances.

DEFINITIONS

Excavation consists of the removal of materials encountered to subgrade elevations and reuse or disposal of materials removed.

Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below sub-base, drainage fill, or topsoil materials.

Borrow: soil material obtained off-site when sufficient approved soil material is not available from excavations.

Sub-base Course: The layer placed between the subgrade and base course in paving system or the layer placed between the subgrade and surface of a pavement or walk.

Base Course: The layer placed between the sub-base and surface pavement in a paving system.

Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the Engineer. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be at the Contractor's expense.

Structures: Manholes, buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surfaces.

Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within building lines.

PROJECT CONDITIONS

Existing Utilities: Do not interrupt existing utilities serving facilities occupied by the owner or others except when permitted in writing by the Owner and then only after acceptable temporary utility services have been provided.

Provide a minimum 48-hours' notice to the Owner and receive written notice to proceed before interrupting any utility. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with Owner to shutoff services if lines are inactive.

PRODUCTS

SOIL MATERIALS

General: Provide approved borrow soil materials from off-site when sufficient approved soil materials are not available from excavations.

Satisfactory Soil Materials: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP and SM; free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious matter.

Unsatisfactory Soil Materials: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OH, and PT.

Backfill and Fill Materials: Satisfactory soil materials.

Sub-base and Base Materials: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, ASTM D 2940, with at least 95 percent passing a 1-1/2 inch sieve and not more than 8 percent passing a No. 200 sieve or as noted otherwise on drawings.

Engineered Fill: sub-base or base materials.

Bedding Material: Sub-base or base materials with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

Execution

PREPARATION

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.

Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

Tree protection is specified in Division 2 Section "Site Clearing".

DEWATERING

Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

Protect Subgrades and foundation soils from softening and damage by rain or water accumulation.

EXPLOSIVES

Do not use explosives.

STABILITY OF EXCAVATIONS

Comply with all codes, ordinances, and requirements of authorities having jurisdiction to maintain stable excavations.

EXCAVATION FOR STRUCTURES

Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.10 foot. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, installing services and other construction, and for inspections.

Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

EXCAVATION FOR WALKS AND PAVEMENTS

Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades.

EXCAVATION FOR UTILITY TRENCHES

Excavate trenches to indicated slopes, lines, depths and invert elevations.

Excavate trenches to uniform width to provide a working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.

Clearances: As indicated.

Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove stones and sharp objects to avoid point loading.

For pipes or conduit less than 6 inches in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.

For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumferences. Fill depressions with tamped sand backfill.

Where encountering rock or another unyielding bearing surface, carry trench excavation 6 inches below invert elevation to receive bedding course.

APPROVAL OF SUBGRADE

Notify engineer when excavations have reached required subgrade.

When the Engineer determines that unforeseen unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed by the Engineer.

Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by the Engineer.

APPROVAL OF SUBGRADE

Fill unauthorized excavation under foundations or wall footings by extending indicated bottom elevations of concrete foundation or footing to excavation bottom, without altering required top elevation. Lean concrete

fill may be used to bring elevations to proper position when acceptable to the Engineer.

Where indicated widths of utility trenches are exceeded, provide stronger pipe, or special installation procedures, as required by the Engineer.

STORAGE OF SOIL MATERIALS

Stockpile excavated materials acceptable for backfill and fill soil materials, including acceptable borrow materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent wind-blown dust.

Stockpile soils materials away from edge of excavations. Do not store within drip line of remaining trees.

BACKFILL

Backfill excavations promptly, but not before completing the following:

- Acceptance of construction below finish grade.
- Surveying locations of underground utilities for record documents.
- Testing, inspecting, and approval of underground utilities, unless noted otherwise.
- Concrete formwork removal.
- Removal of trash and debris from excavation.
- Removal of temporary shoring and bracing, and sheeting.

UTILITY TRENCH BACKFILL

Place and compact bedding course on rock and other unyielding bearing surfaces and to fill unauthorized excavations. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.

Place and compact initial backfill of satisfactory material or sub-base material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe of conduit.

Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of utility system.

Coordinate backfilling with utilities testing.

Fill voids with approved backfill materials as shoring and bracing, and sheeting is removed.

Place and compact final backfill of satisfactory soil material to final subgrade.

FILL

Preparation: Remove vegetation, topsoil, debris, wet, and unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placing fills.

Plow strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing surfaces.

When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface to a depth required, pulverize, moisture-condition or aerate soil and re-compact to required density.

Place fill material in layers to required elevations for each location listed below.

- Under grass, use satisfactory excavated or borrow soil material.
- Under walks and pavements, use sub-base or base material, or satisfactory excavated or borrow soil material.
- Under steps and ramps, use sub-base material.
- Under structures, footings and foundations, use engineered fill.

MOISTURE CONTROL

Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.

Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

Remove and replace, scarify and air-dry satisfactory soil material that is too wet to compact to specified density.

Stockpile or spread and dry removed wet satisfactory soil material.

COMPACTION

Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for materials compacted by hand operated tampers.

Place backfill and fill materials evenly on all sides of structures to required elevations. Place backfill and fill uniformly along the full length of each structure.

Percentage of Maximum Dry Density Requirements: Compact soil to not less than the following percentages of maximum dry density according to ASTM D 1557:

- Under structures, building slabs, steps, and pavements, compact the top 12 inches below subgrade and each layer of backfill or fill material at 95 percent maximum dry density.
- Under walkways, compact the top 6 inches below subgrade and each layer of backfill or fill material at 95 percent maximum dry density.
- Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material at 90 percent maximum dry density.

GRADING

General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines and elevations indicated.

Provide a smooth transition between existing adjacent grades and new grades.

Cut out soft spots, fill low spots, and trim high spots to conform to required surface tolerances.

Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

- Walks: Plus or minus 0.10 foot.
- Lawn or Unpaved Areas: Plus or minus 0.10 foot.

SUB-BASE AND BASE COURSES

Under pavements and walks, place sub-base course material on prepared subgrades. Place base course material over sub-base to pavements.

Compact sub-base and base courses at optimum moisture content to required grades, lines, cross section and thickness to not less than 95 percent of ASTM D 4254 relative density.

Shape sub-base and base to required crown elevations and cross-slope grades.

When thickness of compacted sub-base of base course is 6 inches or less, place materials in a single layer.

When thickness of compacted sub-base of base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.

PROTECTION

Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

Repair and re-establish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or loose compaction due to subsequent construction operations or weather conditions.

Scarify or remove and replace material to a depth directed by the Engineer; reshape and re-compact at optimum moisture content to the required density.

Settling: Where settling occurs during the Project correction period, remove finished surfacing, backfill with additional approved material, compact, and reconstruct surfacing.

Restore appearance, quality, and condition of finished surfacing to match adjacent work and eliminate evidence of restoration to the greatest extent possible.

DISPOSAL OF SURPLUS AND WASTE MATERIALS

Disposal: Transport surplus satisfactory soil to designated storage areas on the Owner's property. Stockpile or spread soil as directed by the Engineer.

Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the owner's property.

END OF SECTION

SP 7 EXCAVATION

GENERAL

WORK INCLUDED

Excavation for utilities, curbs, wall footings, light bases, storm drains, and other improvements.

Additional work as indicated on drawings.

RELATED WORK

SP06 Earthwork: Topsoil and subsoil removal from site surface.
SP08 Backfilling.
SP09 Finish Grading.

PROTECTION

Protect excavations by shoring, bracing, sheet piling, underpinning or other methods required to prevent cave-in or loose soil from falling into excavation.

Notify Owner of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.

Protect bottom of excavations and soil adjacent to and beneath foundations from frost.

Grade excavation top perimeter to prevent surface water run-off into excavation.

PRODUCTS

MATERIALS

Subsoil: Excavated material, graded free of lumps larger than 6 inches, rocks larger than 3 inches and debris.

EXECUTION

PREPARATION

Identify required lines, levels, contours and datum.

Maintain and protect existing utilities remaining which pass through work area.

EXCAVATION

Excavate subsoil and loose rock required for installation of site elements.

Excavate to working elevations.

Remove lumped subsoil, boulders, and rock up to 1/3 cu. yd. measured by volume.

Correct unauthorized excavation at no cost to Owner.

Stockpile excavated material in area designated on site and remove excess subsoil not being reused from site.

FIELD QUALITY CONTROL

Provide for visual inspection of bearing surfaces.

END OF SECTION

SP 8 BACKFILLING

GENERAL

WORK INCLUDED

Site Backfilling
Compaction requirements
Fill under slab-on-grade.

RELATED WORK

SP06 Earthwork.
SP07 Excavation.
SP09 Finish Grading: Final backfilling of topsoil.

PRODUCTS

FILL MATERIALS

Granular Fill: No. 53 stone.
Subsoil: Reused; free of lumps larger than 4 inches, rocks larger than 2 inches and debris.
Topsoil in accordance with SP10.

EXECUTION

INSPECTION

Verify stockpiled fill to be reused is approved.
Verify areas to be backfilled are free of debris, snow, ice, or water and ground surfaces are not frozen.
Areas to be backfilled shall be inspected and approved by the Engineer prior to backfilling.

PREPARATION

When necessary, compact subgrade surfaces to density requirements for backfill material.
Cut out soft areas of subgrade not readily capable of compaction. Backfill with appropriate type fill as called for. Compact to density equal to requirements for subsequent backfill material.

BACKFILLING

Backfill areas to contours and elevations. Use unfrozen materials.
Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.
Place and compact crushed stone fill materials in continuous layers not exceeding 6 inches loose depth.
Place and compact subsoil fill material in continuous layers not exceeding 8 inches loose depth.
Maintain optimum moisture content of backfill materials to attain required compaction density.

Make changes in grade gradual. Blend slopes into level areas.
Remove surplus backfill materials from site.
Leave stockpile areas completely free of excess fill materials.

SCHEDULE OF LOCATIONS

The paragraphs below identify location, fill material to be used identified from lower to upper fill type, compacted thickness of each fill, and compaction expressed as a percentage of maximum density and optimum moisture in comparison with ANSI/ASTM D 1557 and D 698.

- Fill under grasses areas: Subsoil fill, to 6 inches below finish grade, compacted to 88 percent.
- Fill under asphalt and concrete: compacted to 95 percent.

END OF SECTION

SP 9 FINISH GRADING

GENERAL

WORK INCLUDED

Finish grade sub-soil.

Replenish topsoil in areas where clearing has been completed and not scheduled to receive new base course materials.

Place, finish grade, and compact topsoil.

RELATED WORK

SP06 Earthwork

SP10 Seeding and Mulching

PROTECTION

Prevent damage to existing features. Correct damage at no cost to the Owner.

PRODUCTS

MATERIALS

Existing topsoil on site: Existing topsoil shall be removed where advantageous. This soil may be reused for lawns and plantings provided that it meets the topsoil requirements below.

- Topsoil: Friable loam free from subsoil, roots, grass, excessive amount of weeds, stones and foreign matter; acidity range pH of 6.0 to 7.0; containing a minimum of 6% and a maximum of 25% organic matter; soluble salts shall be higher than 500 parts per million.
- Lime: Shall be ground limestone containing not less than 85% passing through a 100-mesh sieve and 90% passing through a 20-mesh sieve.

TESTING

Soil sample tests: The Landscape Contractor shall take three representative samples from the topsoil source and submit them for soil tests. If the pH range of topsoil is not between 6.0 and 7.0, then it shall be amended by the Landscape Contractor according to the guide below or the Landscape Contractor may select another topsoil source and submit new soil sample tests.

- If the pH level is below 6.0, add limestone at a rate of 2.5 lbs. per cubic yard or 92 lbs. Per 1,000 square feet to raise pH one full point.
- If the pH level is above 7.0, add aluminum sulfate at a rate of 2.5 lbs. Per cubic yard or 92 lbs. Per 1,000 square feet to lower pH one full point.

All testing sill be at the Contractor's expense.

EXECUTION

SUB-SOIL PREPARATION

Rough grade subsoil systematically to allow for a maximum amount of settlement and compaction. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, etc. Remove subsoil which has been contaminated with petroleum products.

Excavate and fill where necessary to bring sub-soil to required levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

Cultivate sub-grade to depth of 6 inches where topsoil is to be placed. Repeat cultivation in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

Compact materials to meet the following minimum percentages of modified proctor density, ASTM D1557, method C or D. Compact subsoil to the following:

- 88% where topsoil is to be placed.
- 95% where stabilizing base for asphalt and concrete is to be placed.

PLACING TOPSOIL

Use topsoil in relatively dry state. Place during dry weather.

Fine grade topsoil eliminating rough or low areas to ensure positive drainage. Maintain levels, profiles and contours of sub-grades.

Remove stone, roots, grass, weeds, debris and other foreign material while spreading.

Manually spread topsoil around trees to prevent damage which may be caused by grading equipment.

Lightly compact placed topsoil.

SURPLUS MATERIAL

Remove surplus subsoil and topsoil from site.

Leave stockpile areas and entire job site clean and raked, ready to receive landscaping.

END OF SECTION

SP 10 LANDSCAPE WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and Standard General Conditions of Construction Contract, apply to work of this section.

1.02 DESCRIPTION OF WORK

A. Extent of landscape development work of this section includes, but is not limited to, the following:
   1. Soil preparation
   2. Trees, shrub, groundcover, and perennial installation
   3. Planting mixes
   4. Fertilizing, mulching, trimming, guying, wrapping, and edging.
   5. Maintenance of installed plant material
   6. Warranty

B. Subgrade Elevations:
   1. Excavation, filling and grading required to establish elevations shown on drawings are not specified in this section.

D. Definitions:
   1. When used throughout this specification section and on the plans, the term “Landscape Architect” refers to the Design Landscape Architect.
   2. All approvals and reviews required in this section of work must be referred to the Design Landscape Architect.

1.03 REFERENCES

A. American Joint Committee on Horticultural Nomenclature Publication: “Standardized Plant Names” will govern nomenclature issues.

B. ANSI Z60.1 – American Standard for Nursery Stock

C. ASTM D2607 – Classification of peats, mosses, humus, and related products.

D. FS 0-F-241 – Fertilizers, Mixed, Commercial.

1.04 SUBMITTALS

A. List of Plant Material Growers: Submit complete list four (4) weeks prior to digging plants and include names of individuals to contact, phone numbers, addresses, and latest possible date for completion of tagging.

B. Waterproof Tags: Submit prior to tagging trip. Tags to contain the following:

   1. Contractor’s name.

2. Plant genus, species, and cultivar/variety.
3. Plant common name.
4. Name of nursery.
5. Size of plant.
6. Quantity of plant (i.e. 2 of 10)

C. Submit seed vendor's certified statement for each seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each seed species.

D. Planting Schedule:
   1. Indicate dates for each type of landscape work during normal seasons,
      a. Once accepted, revise dates only when approved in writing after documentation of reasons for delay
   2. Coordinate landscape work with maintenance periods to provide maintenance from date of Substantial Completion.
   3. Coordinate schedule with all other applicable trades.

E. Owner's Maintenance Instructions:
   1. Include pruning and trimming methods and types, fertilizer application frequency and recommended coverage, and water requirements for year-round care of installed plants. Document is to be in bound 8½" x 11" format. Submit prior to expiration of required maintenance period(s).

F. Contractor's Maintenance Procedures and Schedule: For storage of plant materials. Trees, shrubs, groundcover, perennials, and annuals stored on and off site shall be watered, fertilized, mulched, and sprayed for infestation and disease to maintain a healthy condition. Plants stored off site shall be available for inspection by the Landscape Architect.

G. Samples of each of the following:

   1. Mulch (5 pound sample) for each type required for the Project, in labeled plastic bags.
   2. Top Soil (5 pound sample) as described below, in labeled plastic bag.

H. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include list of at least three (3) completed projects of similar scope with project names and addresses, names and addresses of Landscape Architects and Owners, and other information.

I. Invoice: Vendor's or grower's invoice for each shipment of plant material (Bill of Lading) shall show sizes, quantities, and root treatment of all plants delivered to the site (i.e., containerized, balled and burlapped, and/or bare root). These invoices should be included with any contractor pay applications to verify size and quantities of materials on site. **Failure to provide shall be considered grounds for rejection of that pay application.**

J. Certification:
   1. Submit certificates of inspection as required by governmental authorities.

a. Submit manufacturer's or vendors certified analysis for soil amendments and fertilizer materials.
b. Submit other data substantiating that materials comply with specified requirements.

1.05 QUALITY ASSURANCE

A. Tagging:
1. Allow Landscape Architect option of traveling to grower's facility to select trees from available stock. Allow (4) weeks, after receipt of list of Grower's, to complete tagging. Trees dug prior to tagging by Landscape Architect are subject to rejection. Unacceptable trees will not be tagged and Contractor will select a different grower at no expense to Owner. A second tagging trip will be scheduled thereafter. Decision by Landscape Architect to forego tagging trip does not release Contractor from responsibility of obtaining plant material which meets standards and conditions.
    a. Comply with ANSI Z60.1 and special conditions:
        i. Measure trees and shrubs with branches and trunks or canes in their normal position. Do not prune to obtain required sizes.
        ii. Measure caliper measurements six (6) inches above ground for trees up to four (4) inch caliper size, and twelve (12) inches above ground for larger sizes.
        iii. Measure main body of tree or shrub for height and spread. Do not measure branches or roots tip-to-tip.
    b. Legibly tag every tree and shrub of each variety.

B. Installer: Shall be, and have been, actively and directly engaged in the type of landscape work specified for a minimum of (3) years.

C. Grower: Minimum five (5) years' experience specializing in growing and cultivating materials of this type.

1.06 REGULATORY REQUIREMENTS

A. Comply with regulatory requirements for fertilizer and herbicide composition and application.

1.07 SOURCE QUALITY CONTROL

A. General:
1. Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.
2. Comply with all applicable local, state and federal requirements regarding materials, methods of work, and disposal of excess and waste materials.
3. Plant names indicated; comply with "Standardized Plant Names" as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true to botanical name and legibly tagged.
4. All plants shall be nursery grown under climatic conditions similar to those of the locality of the project for a minimum of two years.

B. Do not make substitutions.
   1. If specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material.
   2. Landscape Architect reserves the right to determine material equivalency.

C. Analysis and Standards:
   1. Package standard products with manufacturer's certified analysis.
   2. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.

D. Trees, Shrubs and Plants:
   1. Provide trees, shrubs and other plants of quantity, size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".
   2. Provide healthy, vigorous stock, grown in recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.
   3. Plant material to be grown in this zone or higher.

E. Formal Arrangements:
   1. Where formal arrangements or consecutive order of plants are shown, select stock for uniform height and spread, and label with number to assure symmetry in planting.

G. Inspection:
   1. The Landscape Architect may inspect plants either at place of growth or at site before planting, for compliance with requirements for genus, species, variety, size and quality.
   2. Landscape Architect retains right to further inspect plant materials for size and condition of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during progress of work.
   3. Remove all trunk wrappings from trees for inspection.
   4. Remove rejected plant materials immediately from project site.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Packaged Materials:
   1. Deliver packaged materials in original, unopened containers
   2. Labels should show weight, chemical analysis, and name of manufacturer.
   3. Protect materials from deterioration during delivery, and while stored at site.
   4. Keep in dry storage away from contaminants

B. Trees and Shrubs:
   a. Provide freshly dug trees and shrubs.
   b. Do not prune prior to delivery unless otherwise approved by Landscape Architect.
   c. Do not bend or bind-tie trees or shrubs in such manner as to damage bark, break branches or destroy natural shape.
   d. Provide protective covering during transport such as a tarpaulin.
   e. Do not drop balled and burlapped stock during delivery.
   f. Protect plants until installed to prevent damage to root balls or desiccation of leaves.

g. If digging bare root stock, immediately pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

C. Storage and Handling:
   a. Deliver trees and shrubs after preparations for planting have been completed and plant immediately.
   b. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.
   c. Bare root stock shall be heeled in. Soak roots in water for two hours if dried out.
   d. Trees installed in the fall shall have trunk wrap applied after Landscape Architect's inspection of plant material on the site.
   e. All trees planted must have trunk wrap removed in the spring of the year.
   f. Provide water to staged material as required to keep root ball moist.
   g. Do not remove container grown stock from containers until planting time.

1.09 PROJECT CONDITIONS

A. Utilities:
   1. Determine location of all underground utilities and perform work in a manner which will avoid possible damage.
   2. Hand excavate, as required.

B. Excavation:
   1. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.

C. Maintain grade stakes set by others until removal is mutually agreed upon by all parties concerned.

D. Install plants after final grades are established and prior to establishment of lawns or native seeding, unless otherwise approved by Landscape Architect. If planting occurs in undisturbed lawn areas or after new lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Proceed with and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.
   1. Conduct planting operations during recommended planting seasons. The planting periods may be extended by approval from the Landscape Architect. Extension of the planting season will not void the warranty or guarantee period by the contractor.
      a. Spring Planting: March 15 to May 15
      b. Fall Planting: September 15 to November 15
   2. Do not install plants when ambient temperatures may drop below 30 degrees F or may rise above 90 degrees F.
   3. Do not install plants when wind velocity exceeds 30 mph.
   4. Do not install plants when ground is frozen, snow covered, or in an otherwise unsuitable condition.

5. At Installers option, and under Installer's full responsibility, planting may be conducted under unseasonable conditions without additional compensation for work or death of plant material.

1.11 COORDINATION

A. Coordinate landscape work after installation of asphalt and concrete paving.
B. Coordinate landscape work with all other applicable trades.
C. Coordinate landscape work with installation of underground utilities

PART 2 - PRODUCTS

2.01 TOPSOIL

A. Existing topsoil shall be tested and amended as needed to provide the quality listed below as part of this contract.

B. Pit Backfill: Excavated material amended with fertilizer only

C. Topsoil:
   1. Fertile, friable, natural or sandy loam, surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 2" in any dimension, and other extraneous or toxic matter harmful to plant growth or aerification equipment.
   2. Existing topsoil shall be amended to provide a loam or sandy loam with greater than 2% organic matter, pH between 6 and 7, and minimum P205 level/acre of 10#, minimum K20 level/acre of 100#.
   3. If existing soil is not suitable for amendment (or incapable of amendment) to provide specified quality, or soil does not exist in proposed planting area, new topsoil shall be placed in planting area to depths specified in plans and Part 3 of this Special Provision.

C. See Section 3.02 for Preparation of Planting Soil.

D. Landscape Subcontractor shall inspect topsoil placed by Contract and verify quality and depth. Commencement of Landscape Work indicates acceptance of earthwork operations.

2.02 SOIL AMENDMENTS

A. Peat Humus:
   1. 1. FS Q-P-166 partially decomposed peat with no identifiable fibers and with pH range of 3.4 to 4.8.
B. Bonemeal:
   1. Commercial, raw, finely ground; 4% nitrogen and 20% phosphoric acid.

C. Mulch:
   1. Organic mulch free from deleterious materials and suitable for top dressing of trees, shrubs or plants and consisting of the following:

a. Shredded and processed composted hardwood bark mulch
b. At least 6 months old
c. Not more than 3" in length and 1/2" in width
d. Free from sawdust, wood chips, pallets, and any recycled construction materials
e. Slow decomposition rate, with a minimum of one year longevity
f. Landscape Architect to approve.

2. Clean, seed-free threshed straw of wheat, rye, oats, or barley for seeded areas only.
   a. NO NOXIOUS WEED SEED ALLOWED.

D. Commercial fertilizers:
1. Complete formula manufactured standard products complying with local, state, and Federal regulations and laws.
2. Shrub and Tree Fertilizer: Tightly compressed, slow release granular or pelleted fertilizer consisting of fifty (50) percent water-insoluble nitrogen, phosphorous, and potassium in the following composition:
   a. 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium
   b. Apply nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil testing agency.
3. Groundcover Fertilizer:
   a. FS-0-F-241 Type 1, Class 1 with fifty (50) percent of elements derived from organic sources.
   b. N.P.K. ratio of 1:2:1 fro groundcover beds
   c. N.P.K. ratio of 2:1:1 for bedding plants.

E. Lime:
1. ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent. Provide in the form of dolomitic limestone.

F. Aluminum Sulfate:
1. Commercial grade.

G. Sand:
1. Hard, granular natural sand washed free of materials or chemicals deleterious to plant growth.

H. Perlite:
1. NBS PS 23.

I. Sawdust:
1. Rotted sawdust free of chips and stones.

2.03 PLANT MATERIALS

A. Quality:
1. Provide trees, shrubs, and other plants of size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".

B. Deciduous Trees:
1. Provide specimen grade trees of height and caliper scheduled or shown and with branching configuration recommended by ANSI Z60.1 for type and species required.

2. Provide single stem trees except where special forms are shown or listed.
3. Provide balled and burlapped (B&B) deciduous trees.
4. Provide deciduous trees with branching structure beginning at five foot above grade for lawn trees and six foot above grade for trees adjacent to streets, parking areas, or sidewalks; or as requested by Landscape Architect.

C. Deciduous Shrubs:
1. Provide shrubs of the height shown or listed and with not less than minimum number of canes required by ANSI Z60.1 for type and height of shrub required.
2. Container grown deciduous shrubs will be acceptable in lieu of balled and burlapped deciduous shrubs subject to specified limitations for container grown stock only when approved by Landscape Architect.

2.04 MISCELLANEOUS LANDSCAPE MATERIALS

A. Stakes and Guys:
1. Install tree anchors immediately upon installation of all plant material over four feet in height, following manufacturer's recommended sizes.
   a. Manufacturers:
      i. Duckbill Earth Anchors by Foresight Industries Inc.; Cheyenne, Wyoming
      iii. Arrowhead Earth Anchors by MSA Industries; Alexander City, Alabama
      iii. Twister Tie Downs by Anchor Tie Down Systems, Inc.; Bradenton, Florida
2. Provide #12 ga. galvanized annealed wire and 1/2" x 6" galvanized turnbuckles, 3 per tree (typical) at 120°.
3. Install brightly colored flags on all guys and maintain proper tension of wires throughout duration of tree anchor system use.
4. Provide not less than 1/2" diameter rubber or plastic hose of solid black or green color, cut to required lengths and size to protect tree trunks and branches from damage by wires.
   a. Wrap wires/hoses around tree trunk 40-50% of the distance up the trunk from finish grade.
5. Maintain proper installation of tree anchor system throughout period of installation and warranty period, or longer, as required by local conditions.

B. Dry well fill:
1. #9 or el- stone shall be free of dust, dirt, or other small particles which may inhibit drainage.

C. Filtration Fabric:
1. Water permeable fiberglass or polypropylene fabric.

PART 3 - EXECUTION

3.01 PREPARATION

A. Layout individual tree and shrub locations and areas for multiple plantings.
1. Stake locations and outline areas and secure Landscape Architect's acceptance before start of planting work.
2. Make minor adjustments as may be requested.

3.02 PREPARATION OF PLANTING SOIL

A. Before planting, clean topsoil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.

B. Mix specified soil amendments and fertilizers with topsoil at rates specified from soil tests to be provided by Contractor.
   1. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.

C. For pit and trench type (trees and shrubs):
   1. Backfill with excavated soil unless directed otherwise by Landscape Architect.

D. For planting beds and lawn areas:
   1. Mix planting soil either prior to planting or apply on surface of existing soil and mix thoroughly before planting.
   2. Where lime is required, mix lime with dry soil prior to mixing of fertilizer.
   3. Where phosphoric acid is required, apply phosphoric acid fertilizer (other than that constituting a portion of complete fertilizers) directly to subgrade before applying planting soil and tilling.

3.03 PREPARATION OF PLANTING BEDS

A. Re-grade planting soil mixture if necessary to meet lines, grades and elevations shown, after light rolling and natural settlement.

3.04 EXCAVATION FOR TREES AND SHRUBS

A. Excavate pits, beds and trenches with sloped sides and with bottom of excavation slightly raised at center to provide proper drainage.
   1. Scarify all sides of pits, trenches dug mechanically or by hand to eliminate glazing of soil.
   2. For balled and burlapped (B&B) trees and shrubs, make excavations equal to the ball depth. Width of excavation should be three time the ball diameter.
   3. For container grown stock, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.

B. Fill excavations for trees and shrubs with water and allow to percolate out before planting.
   1. If water does not percolate out within 24 hours, notify Landscape Architect for further instructions.

C. Dry well:
   1. If tree pit drainage requires the use of a dry well below root ball (as dictated by Landscape Architect), install clean stone up to top of soil cone compacted to 95% density, after scarifying all sides of excavation.

3.05 PLANTING TREES AND SHRUBS

A. Remove wire basket from top 1/3 of tree root ball after acceptance of tree.

B. Balled and Burlapped Stock:

1. Set balled and burlapped (B&B) stock on layer of compacted planting soil mixture, plumb and in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades.
2. Remove burlap from top 1/3 of ball (after cutting twine).
3. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets.
4. When excavation is approximately 2/3-full, water thoroughly before placing remainder of backfill.
5. Repeat watering until no more is absorbed.
6. Water again after placing final layer of backfill.
7. Remove all wrappings from trunks in the spring of the year.

C. Set container grown stock as specified for balled burlapped stock.
   1. Remove cans using an approved can cutter.

D. Dish top of backfill to allow for mulching.

E. Apply Mulch to Pits, Trenches and Planted Areas:
   1. Provide not less than following thickness of mulch and finish level with adjacent finish grades:
      a. Provide 3" thickness of mulch on all planting areas except perennial beds.
      b. Provide 2" thickness of mulch (max.) in perennial beds.

F. Apply anti-desiccant using power sprayer to provide an adequate film over trunks, branches, stems, twigs and foliage.
   1. If deciduous trees or shrubs are moved in full leaf, spray with anti-desiccant at nursery before moving and again 2 weeks after planting.

G. Pruning:
   1. Prune, thin out and shape trees and shrubs in accordance with standard horticultural practice.
   2. Prune trees to retain required height and spread.
   3. Unless otherwise directed by Landscape Architect, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any.
   4. Prune shrubs to retain natural character.

H. Remove and replace excessively pruned or malformed stock resulting from improper pruning or storage conditions.

I. Guy and stake trees immediately after planting, as indicated.

J. Wrap all tree trunks installed in the fall.
   1. Remove tree wrap from all trees in the spring of the year.

3.06 PLANTING GROUND COVER

A. Space plants as shown or scheduled.

B. Planting:
   1. Dig holes large enough to allow for spreading of roots and backfill with planting soil.
   2. Split side of peat pot or remove bottom immediately prior to placing in soil.

3. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
4. Water thoroughly after planting, taking care not to cover crowns of plants with wet soils.
5. Mulch around plants to a depth of 3" minimum.
   a. Do not plant groundcover in mulch layer.

C. Mulch areas between ground cover plants to a depth of 3".

3.07 PLANTING PERENNIALS

A. Space plants as shown or scheduled.

B. Plant as listed above for shrubs and ground cover, using the most appropriate method according to size and root condition.
   1. Plant at same depth as in nursery.

C. Mulch around plants to a depth of 2".

D. Planting Flowers:
   1. Space plants as shown on drawings.
   2. Plant perennials as listed above for shrubs and as further defined.
   3. Plant annuals as listed above for groundcovers.

3.08 MAINTENANCE

A. Definitions:
   1. Establishment of Seed:
      a. Consists of protection of areas and operations of maintenance including watering, mowing, weeding, repairing, and reseeding of areas damaged or eroded as a result of the Contractor's operations, negligence, or by normal rains or storm, prior to acceptance.
   2. Establishment of Sod:
      a. Consists of preserving, protecting, replacing, watering, and maintenance necessary to keep the sod in satisfactory condition until acceptance.

B. Maintenance by Contractor:
   1. Begins immediately after each plant and/or seeding is planted and continues final closeout.
   2. Includes watering, weeding, cultivating, mowing, removal of dead materials, resetting plants to proper grades and other necessary operations.
   3. Lawn Areas:
      a. Mowing shall begin twenty-one days after planting and continue every fourteen days until final closeout.
      b. Perform mowing with rotary or reel mowers- no bushhogs or flail mowers allowed.
      c. Provide protection to lawn areas. Repair damage resulting from construction operations promptly.

C. Maintenance by Owner:

1. Owner will provide adequate maintenance during the guarantee period; however, Contractor shall fully explain the watering and mowing needs of the work to the Owner in writing, submitted with the closeout documents.
2. Contractor is responsible for planting until the guarantee period is up, unless the Owner is grossly negligent in his maintenance of the work.
3. MAINTENANCE BY OWNER shall not begin until final closeout.

3.09 GUARANTEE, INSPECTION AND ACCEPTANCE

A. Plants and Shrubs
   1. Warranty trees and shrubs for a period of one (1) year, including one continuous growing season, after date of final closeout against defects including death, unsatisfactory growth, and unsuitable installation.

   2. Landscape Architect will inspect planting to determine its acceptance eleven (11) months following date of final closeout.

   3. Plants will not be accepted unless they are alive and healthy.
      a. Replace plants that are dead, or in the opinion of the Landscape Architect are in an unhealthy or unsightly condition.
      b. Plants that have lost their natural shape due to dead branches, excessive pruning, inadequate or improper maintenance, or other causes shall be replaced.
      c. Plants shall be replaced with same size and species originally installed.
      d. Plants found to be unsatisfactory shall be replaced at end of warranty period; unless, in opinion of Landscape Architect, it is advisable to wait until the next growing season.
      e. A new warranty shall commence on the date of replacement at no cost to the Owner.

B. The Contractor will not be responsible for defects resulting from neglect by the Owner, abuse or damage by others, or unusual phenomena or incidents beyond the landscape installer's control which results form natural causes such as floods, lightening, storms, freezing rains, winds over 60 mph, fires or vandalism.

C. Final Acceptance of Landscape Work:
   1. Made by Owner following final inspection and approval by the Architect.
   2. Deficiencies in the work must be corrected before final acceptance will be made.

D. Reports by Landscape Contractor:
   1. Beginning at final closeout and during the guarantee period, make periodic inspections of the work to verify minimal maintenance by Owner.
   2. Inspections shall be made once every 30 days. File a written report with the Owner and the Landscape Architect.
   3. Failure to do so shall relieve the Owner of his maintenance requirements during the guarantee period.

3.10 CLEANUP AND PROTECTION

A. During landscape work, keep pavements clean and work area in an orderly condition.

1. Eliminate undesirable vegetation growth (ie. weeds, etc.) within contract limits for the duration of the contract.

B. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers.
   1. Maintain protection during installation and maintenance periods.
   2. Treat, repair or replace damaged landscape work as directed.

PART 4 - METHOD OF MEASUREMENT

A. The work performed and the materials furnished in accordance with this item will not be measured. This includes all items (ie tree, shrub, groundcover, etc.) and installation of each item, including materials, labor, tools machinery and incidentals.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of landscape work shall be included in the lump sum price of the project. This price and payment will be full compensation for furnishing and placing all materials, including soil amendments.

Liriope Muscari will be paid for at the unit price of planting perennial for the specified material installed complete in place as approved by the Landscape Architect. This price and payment will be full compensation for furnishing and placing all materials, including soil amendments.

B. Payment will be made under:

Pay Item	**Pay Unit**
Project	LUMP SUM
Plant, Perennial	EACH

C. No additional payment over the lump sum price will be made for planted areas which are installed greater/larger than specified or for the use of additional plant material/seed/mulch without the prior written consent of the Landscape Architect.

END OF SECTION

SP 11 CRUSHED STONE

GENERAL

WORK INCLUDED

Crushed stone.

STANDARD SPECIFICATION

Indiana Department of Transportation Standard Specification (INDOTSS).

PRODUCTS

PAVING MATERIALS

Aggregate materials shall conform to the requirements of Section 904, INDOTSS and to the requirements of subsections referenced therein.

Asphalt sub-base course: #53 aggregate. Eight (8) inches of aggregate is to be placed under asphalt pavement.

Concrete sidewalk sub-base course: Four (4) inches of #53 aggregate.

Concrete driveway apron sub-base course: Six (6) inches of #53 aggregate.

EXECUTION

SUBGRADE

The subgrade shall be shaped to true lines and elevations. Adequate drainage shall be provided at all times to prevent water from standing on the subgrade. Work shall conform to the requirements of Section 207, INDOTSS.

All boulders, organic materials, soft clay, spongy material and any other objectionable material shall be removed and replaced with approved materials. Subgrade shall be properly shaped, rolled and uniformly compacted to conform to the accepted cross-section.

GRANULAR BASE CONSTRUCTION

Placement: The Contractor shall use skilled workers, up to date methods and modern equipment suitable to the size of the work in spreading, compacting and finishing the gravel base. Other requirements are as follows:

Section 303, INDOTSS. Compacted to 95% of maximum dry density.

An approved vibrating device shall be used to compact gravel base. It may be supplemented by a 10 ton, three wheel, tandem or pneumatic-tire roller conforming to Section 401.09 of the INDOTSS. Contractor shall use such construction procedures, including sufficient wetting and number of passes to insure that the above density is attained.

All edges should be neatly cut and made uniform. All surplus and remainders should be carried away from the work site.

Include placement of aggregate reinforcement structures as directed by the Engineer.

REPAIRING FINAL WORK

The gravel pavement shall be checked as specified herein.

Granular base shall be free of low spots, pockets or high spots and shall be sloped as required for proper drainage.

END OF SECTION

SP 12 ASPHALT CONCRETE PAVING

GENERAL

WORK INCLUDED

Publications of the following institutes, associations, societies and agencies are referred to in this Section.

- Indiana Department of Transportation Standard Specifications, Latest Edition, (INDOTSS).
- American Society for Testing and Materials, ASTM.
- Federal Specifications, FS.

QUALITY REQUIREMENTS

Provide final surface of uniform texture conforming to required grades and cross sections.

Surface smoothness, when tested with 10 foot straight-edge:

- Base Course: ¼" in 10' max.
- Surface Course: ¼" in 10' max.
- Provide Owner with duplicate copy of all crushed stone base and asphalt delivery tickets.

PRODUCTS

MATERIALS

Materials shall conform with the following requirements:

- Coarse Aggregates: Class A or B, crushed or uncrushed gravel or;
- Fine Aggregates: Natural sand, well graded from coarse to fine conforming to INDOTSS, Section 913.01.
- Tack: Raped cure liquid asphalt or asphalt emulsion conforming to ISHC Standard Specification, Section 409.
- Bituminous Materials: Petroleum asphalt cement conforming to INDOTSS, Section 902.

PAVING MIXES

Asphalt materials shall conform to the requirements of Section 403 Hot Asphaltic Concrete Pavement (HAC), INDOTSS and to the requirements of subsections referenced therein.

The HAC mixtures shall be made using suitably graded coarse aggregate and fine aggregate of the size and combination as indicated in Table 1 and 3, Section 403.04, preparation of mixtures, INDOTSS.

- Surface course overlay: HAC Type 11.
- Base course: HAC Type 5.

EXECUTION

ASPHALT PAVEMENT CONSTRUCTION

Subgrade shall be proof-rolled using pneumatic tired roller capable of exerting minimum of 90 psi pressure uniformly over the subgrade surface. Conforming to INDOTSS, Section 401.09.

Proof-rolling shall provide two complete coverages.

Remove and replace soft spots with stable material, compact and re-proof.

All materials shall be spread using approved spreading equipment. Tailgating of aggregates directly onto subgrade will not be accepted.

Asphalt pavers shall be self-propelled with receiving hopper of sufficient capacity to provide a uniform spreading operation.

Contact surfaces of curbs, manholes, catch basins, etc., shall be painted with thin uniform coating of bituminous material prior to placing mixture against them.

The mix temperature at the site shall be a minimum of 285° F. - maximum of 325° F.

All joints shall be carefully made in such a manner as to insure a neat junction, thorough compaction, continuous band and seal.

The pavement shall be compacted to 95%

All edges shall be neatly cut and made uniform. All asphalt surplus and remainders shall be removed from work site.

Contractor shall have on hand at the site prior to paving operations, all necessary portable and hand tools and one stand-by-roller.

Compaction

Subgrade and compacted aggregate base courses shall be compacted to 95% of maximum dry density in accordance with ASTM designation D698.

Each lift of aggregate base shall be compacted to density specified above.

Soft spots found during proof rolling which are replaced with fill material, shall be compacted to density specified above.

Spreading and Rolling

Base Course:

- Spread and roll to minimum finish depths indicated on details.
- Surface Course:
- Spread and roll to minimum finish depths indicated on details.

Finish installation shall be true to line and grade and within 1/2" true elevation.

Compacting

Compacting shall conform to requirements of INDOTSS Section 401.12. Compaction shall be completed before temperature of the mixture has dropped below 180° F.

Density tests shall be made at each lift if so directed by the Engineer.

Tests shall made by soils engineer approved by the Engineer.

Results of each test shall be certified to the Engineer within 72 hours after tests are made.

Surface Tolerances

Surface of pavement shall meet requirements of INDOTSS Section 401.15.

Paving shall be free of low spots, pockets, or high spots and shall be sloped as required for proper drainage.

Any areas which develop an excess of bitumen shall be removed and replaced with proper materials.

Contractor shall maintain courses during the curing period.

END OF SECTION

SP 13 PAVEMENT MARKING

GENERAL

SUMMARY

This section includes the following:
Pavement markings for driving lanes and islands.

SUBMITTALS

Manufacturer's product literature and instruction sheet for thermoplastic markings.

QUALITY ASSURANCE

Applicator Qualifications.

- Striping contractor shall be experienced in this trade and shall have completed 20 jobs within the last 3 years. At least 10 jobs shall include public road projects.

REFERENCES

The latest issues of the following documents form a part of this specification to be extent indicated hereinafter.
Indiana Department of Transportation Standard Specification (INDOTSS).

PROJECT/SITE CONDITIONS

Environmental Requirements.

- Thermoplastic shall not be applied on wet surfaces, during wet or damp weather.
- Temperature during application shall be consistent with INDOTSS Section 808.06.

SEQUENCING/SCHEDULING

Time of application: Elapsed time between pavement placement and application of thermoplastic shall be 7 days minimum.
Contractor shall notify Owner in advance of pavement markings and coordinate with the Owner's representative.

PRODUCTS

MATERIALS

Performed reflective thermoplastic markings.
Standard: Product shall comply with INDOTSS 913.14.
Sizes, shapes, and colors: As indicated on the Drawings, thickness 1.5 mm.

EXECUTION

PREPARATION

All lines shall be laid out by the striping contractor and then inspected by the Engineer before application.

Surfaces which are to receive painted stripes or markings shall be thoroughly cleaned of all dirt, dust, grease, oil, curing compounds if used, and other foreign substances and shall be completely dry before paint is applied, per INDOTSS Section 808.03.

APPLICATION

Application of thermoplastic shall comply with INDOTSS Section 808.06.
Size and shape of markings shall be as indicated on the drawings.

PROTECTION

All markings shall be protected from traffic until they have dried sufficiently to prevent tracking.

CLEAN UP

Waste materials shall be removed at the end of each work day. Upon completion of the work, all containers and debris shall be removed from the site. Striping material spots upon adjacent surfaces shall be removed and the entire job left clean and acceptable.

END OF SECTION

SP 14 STORM SEWERAGE

GENERAL

SUMMARY

This section includes the following:
Storm sewerage system piping and appurtenances.

SUBMITTALS

Certificates.

- Prior to delivery, submit two copies of all certificates specified herein.
- Certificates shall be notarized and attest to compliance with the applicable specifications for grades, types or classes.

Shop Drawings.

- Precast concrete structures indicating dimension, reinforcing steel size and placement and location of all pipe openings, sizes and inverts.

Product Data.

SECTION I. Submit manufacturers or trade association installation instructions for the following items:

- Pipe.
- Jointing method.
- Manhole gaskets.

QUALITY ASSURANCE

Testing.

- Testing laboratory services responsibility shall be as specified in Division 1.

REFERENCES

The latest issues of the following documents form a part of this specification to the extent indicated hereinafter.

- American Society of Testing and Materials (ASTM).
- C55 Concrete Building Brick.
- C270 Mortar for Unit Masonry.
- C478 Precast Reinforced Concrete Manhole Section.
- Indiana Department of Transportation Standard Specification (INDOTSS).
- Manufacturer's Associations.
- Corrugated Polyethylene Pipe Association (CPPA).
- The City of Bloomington Utilities Construction Specifications for Sanitary, Water, and Storm Project (CBUCS).

DELIVERY, STORAGE, AND HANDLING

Pipe delivery, storage and handling shall comply with latest edition of the installation manual of the following organizations:

- CPPA.

PROJECT/SITE CONDITIONS

Protection of people and work.

- Place protective fencing around all excavations.
- Shore and brace excavations as necessary to prevent cave-ins.
- Cover holes and trenches when work is not in progress.
- Keep trenches and excavated areas free of water.
- Grade to drain surface water away from excavations.
- Keep bottom of trenches free of water by use of sump pits and pumps. Provide a standby pump.

PRODUCTS

MATERIALS

Pipe.

- Corrugated polyethylene/high density polyethylene (HDPE) pipes with smooth interiors liners, up to 36” diameter.
- Hancor, Inc., P.O. Box 1047, Findlay, OH 45839, (419)422-6521.
- Or approved equal.
- Contractor shall submit list of pipe to be used including certificate that confirms that pipe meets applicable local, city, state and federal codes.

Precast reinforced concrete manholes and inlets shall conform to INDOTSS 907.04, air entrained concrete is required, certificate required.

Sealant for precast reinforced concrete manholes shall be performed, vulcanized butyl rubber, complying with the requirements of FS SS-S-00210. Size shall be ¾ inch diameter and of the manufacturer’s standard length.

Precast concrete segmental blocks shall be at least five (5) inches, but not more than eight (8) inches, in length and such shape that the joints can be effectively sealed and bonded with cement mortar. Units shall be solid.

Brick shall conform to ASTM Specification C62, Grade SW or ASTM C55, grade N-1 or N-11.

Mortar shall conform to ASTM Specification C270, type M.

Concrete shall conform to Division 3 – Concrete.

Waterproofing.

- Material shall comply with INDOTSS 902.06.
- Manhole steps shall be galvanized steel, vinyl coated steel, nylon coated steel, or cast iron. Size and shape as indicated on the drawings.

Frames and covers or gratings shall be cast iron conforming to FS QQ-1-652, with tensile-strength test not less than class 25. Weight, shape, size, and waterway openings for grates and curb inlets shall be as indicated. Frames and covers for curb inlets and for areas not subject to vehicular traffic or storage may be of malleable iron. Malleable iron frames and covers shall conform to ASTM Specification a47 and shall be of the weight, shape and size indicated.

EXECUTION

PREPARATION

Locate and mark all existing underground utilities in the area of operations.

Establish line and grade by offset control point stakes, grade stakes and grade boards as per ACPA installation manual.

Inspection of layout is required by the Engineer before proceeding.

INSTALLATION

Excavating, backfilling and compacting for utilities shall be as detailed on the drawings and as recommended by CPPA and the pipe manufacturer.

Drainage structures shall be of the following types, constructed of the materials specified for each type and in accordance with the drawings.

Manholes and inlets shall be constructed in accordance with the drawings. All manholes and inlets shall be complete with frames and covers or gratings and with rungs where deeper than 4 feet.

Holes for connection of storm sewer pipes shall be preformed by the manufacturer, or field cut or drilled. At no time shall the pipe hole exceed the outer pipe diameter plus two (2)-inches. The annular space between the pipe and the precast manhole or box inlet wall shall be filled inside and outside with a grout mixture composed of 2 parts of No. 23 fine aggregate and one part of Portland cement.

Precast concrete structures shall have riser joints sealed with preformed sealant in accordance with the manufacturer's instructions.

Brick and segmental concrete block structures shall be laid with joints completely filled and shall be smooth and free of surplus mortar on the inside of the structure. The outside of the structure shall be plastered with ½ inch of mortar over the entire surface of the walls.

Raise or lower existing manhole and inlet casting to new grade as indicated.

Placing Pipe.

- Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Pipelines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Pipe shall not be laid in water, nor when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary.
- All pipe in place, including joints, shall have been inspected before backfilling.
- Pipe laying shall proceed upgrade with the spigot ends of bell and spigot pipe and the tongue ends of tongue and groove pipe pointing in the direction of the flow.

Pipe Joints.

- Pipes shall be joined in accordance with CPPA and pipe manufacturer's recommendations.
- Do not lay storm sewer lines closer horizontally than 10' from water line(s). Where storm sewers and water line cross with a vertical of less than 18", construct storm sewer of "Water Works" grade mechanical joint pipe and extend mechanical

joint storm sewer construction not less than 10' on each side of the crossing and/or entire parallel length of run which does not maintain the 10' minimum horizontal dimension.

FIELD QUALITY CONTROL

The Contractor shall meet the elevations and dimensions shown on the plans. Construction tolerances shall be .05 feet horizontally and .02 feet vertically. All work not meeting tolerances shall be removed and replaced at the Contractor's expense.

All concrete testing shall comply with the requirements of Division 3 – Concrete.

Do not backfill any pipe or structures until pipe and joints are inspected and approved.

Once constructed, all storm sewer pipes and manholes shall be soil tight. The contractor shall repair to the satisfaction of the Department all visible points of possible bedding and/or backfill infiltration into the system. The method of repair shall be per the approval of the Department. When necessary, the Contractor shall remove and reconstruct as much of the work as is necessary to obtain a system that passes the minimum tests prescribed herein.

HDPE Inspections.

Manhole and Box Inlet Inspection.

WORK WITHIN PUBLIC RIGHTS-OF-WAY

All work shall comply with the latest edition of CBUCS.

Contact the City of Bloomington Utilities (CBU) a minimum of seven (7) days prior to beginning work.

Schedule inspections with CBU before backfilling.

Pay for permits, bonds, etc. as required by CBU and the City of Bloomington.

END OF SECTION

SP 15 CAST-IN-PLACE CONCRETE

GENERAL

WORK INCLUDED

Poured-in-place concrete.
Concrete form work.
Concrete reinforcement.
Sealing concrete.

RELATED WORK

SP06 Earthwork

DESCRIPTION OF WORK

Provide concrete paving as shown and indicated, including curbs, slabs, walks, and pavement.

QUALITY ASSURANCE

ACI-347 - Recommended Practice for Concrete Form work.

ACI-318 – Reinforced Concrete; ACI-315 Manual of Standard Practice; CRSI-63; ASTM-A615.

ASTM-C94 – Ready-Mixed Concrete; ACI-304, 305, 306; ASTM-C150; ASTM-C260; ASTM-C33.

Codes and Standards: Comply with Indiana Department of Transportation, Standard Specifications Section 501, unless more stringent requirements are herein indicated.

All cast-in-place concrete to be installed by a concrete contractor with at least five (5) years experience in similar concrete work.

SUBMITTALS

Furnish samples, manufacturer's product data, mix designs, test reports, and materials' certifications of all materials used in this section and as required by Division One Specifications.

PRODUCTS

MATERIALS

Forms: Steel, wood or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

Use flexible spring steel forms or laminated boards to form radius bends as required. Coat forms with a nonstaining form release agent that will not discolor or deface surface of concrete.

Fine and Coarse Aggregate: ASTM C33. ¾" max. size of coarse aggregate.

Concrete Reinforcing Fibers: Polypropylene, collated, fibers from Fiber Mesh, Inc., 4019 Industry Drive, Chattanooga, TN 37417, or equal.

Air Entraining – ASTM C260; equal to W.R. Meadows Air Entraining Agent.

Expansion Joint Materials: ½" x respective thickness resilient, closed cell polyurethane foam material; equal to W.R. Meadows Sealtight Rescore Expansion Joint Filler.

Sealant: One part self-leveling polyurethane sealant like Sonneborn's "Sonolastic SL1", ASTM C-920, Type S, Grade P, Class 25, Limestone color.

Liquid-Membrane Forming Curing Compound: Complying with ASTM C309, Type 1, Class A, clear unless other type acceptable to Engineer/Engineer. Moisture loss not more than 0.055 gr./sq. cm. When applied at 200 sq. ft./gal.

Products: Subject to compliance with requirements, provide one of the following:

- "Masterseal"; Master Builders
- "A-H 3 Way Sealer"; Anti-Hydro Waterproofing Co.
- "Ecocure"; Euclid Chemical Co.
- "Clear Seal"; A.C. Horn
- "J-20 Acrylic Cure"; Dayton Superior
- "Sure Cure"; Kaufman Products, Inc.
- Spartan-Cote"; The Burke Co.
- "Sealkure" Toch Div.-Carboline
- "Kure-N-Seal"; Sonneborn-Contech
- "Polyclear"; Upco. Chemical/USM Corp.
- "L&M Cure"; L&M Construction Chemicals
- "Klearseal"; Setcon Industries
- "LR-152"; Protex Industries
- "Hardtop"; Gifford-Hill
- Refer to paragraph 3.08 for integral color concrete curing.

Epoxy Bonding Adhesive: Unitex Pro-Poxy 284.

Welded Wire Fabric: ASTM A 185, Welded Steel Wire Fabric.

Reinforcing Bars: ASTM A 615, grade 60, deformed.

CONCRETE MIX, DESIGN AND TESTING

Design mix to produce standard weight concrete consisting of Portland cement, aggregate, water reducing, or high range water reducing admixture (superplasticize), air entrancing admixture and water to produce the following properties:

- Compressive Strength: 4000psi, minimum at 28 days.
- Slump Range: 8" for concrete containing high range water reducing (superplasticizer); 3" for other concrete.
- Air Content: Type 1A (5-7% air), Portland Type, ASTM C150.

Mix concrete in accordance with ASTM C94.

Provide the specified reinforcing fibers in all concrete. Add fibers to mix at a rate of 1.0 lb. Per cubic yard, unless otherwise recommended by Manufacturer.

EXECUTION

WORKMANSHIP AND INSTALLATION

Inspect prepared subgrade surface to check for unstable areas and need for additional compaction. Do not begin concrete work until such conditions have been corrected and are ready to proceed.

AGGREGATE BASE

Place aggregate base where required to conform with Section 02200 Earthwork and Section 02511 Crushed Stone.

Remove loose material from compacted subgrade or aggregate base surface immediately before placing concrete.

FORM CONSTRUCTION

Set forms to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

Check completed form work for grade and alignment to following tolerances:

Top of forms not more than 1/8" in 10'.

Vertical face on longitudinal axis, not more than ¼" in 10'.

Clean forms after each use, and coat with form release agent as often as required to ensure separation from concrete without damage.

REINFORCEMENT

Place reinforcing supported and secured against displacement. Before placing concrete, ensure reinforcing is clean, free of loose scale, dirt or other foreign coating which would reduce bond to concrete.

CONCRETE PLACEMENT

Do not place concrete until forms have been checked for line and grade. Moisten subgrade or aggregate base if required to provide a uniform damped condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

Place concrete using methods which prevent segregation of mix. Consolidate concrete along face of forms and adjacent to traverse joints with internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels, and joint devices.

Deposit and spread concrete in a continuous operation between transverse joints, as far as possible. If interrupted for more than ½ hour, place a construction joint.

JOINTS

General: Construct expansion, weakened plane (contraction), and construction joints true to line with face perpendicular to surface of concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated.

- When joining existing structures, place transverse joints to align with previously placed joints, unless otherwise indicated.

Weakened Plane (Contraction) Joints: Provide weakened plane (contraction) joints, sectioning concrete into areas as shown on drawings. Construct weakened plane joints for a depth equal to at least ¼ concrete thickness, as follows:

Tooled Joints: Form weakened plane joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.

Sawed Joints: Form weakened plane joints using powered saws equipped with shatterproof abrasive or diamond rimmed blades. Cut joints into hardened concrete as soon as surface will not be torn, abraded, or otherwise damaged by cutting action.

Inserts: Use embedded strips of metal or sealed wood to form weakened plane joints. Set strips into plastic concrete and carefully remove strips after concrete has hardened.

Construction Joints: Place construction joints where placement operations are stopped for a period of more than ½ hour, except where such pours terminate at expansion joints.

Construct joints as shown or, if not shown, use standard metal keyway section forms.

Where load transfer slip dowel devices are used, install so that one end of each dowel bar is free to move.

Expansion Joints: Provide expansion joints of pre-molded joint filler at a maximum of 30' O.C., unless otherwise indicated, and at all curb radii and locations abutting concrete curbs, catch basins, manholes, inlets, structures, walks, or other fixed objects.

- Extend joint filler full width and depth of joint, and not less than ½" or more than 1" below finished surface.
- Furnish joint fillers in one piece lengths for full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together.
- Protect top edge of joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
- Install Fillers and Sealants: Comply with the requirements of this Section Paragraph 2.01 E & F.

CONCRETE FINISHING

After striking off and consolidating concrete, smooth surface by screeding and floating. Use hand method only where mechanical floating is not possible. Adjust floating to compact surface and produce uniform texture.

After floating, test surface for trueness with a 10' straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.

Work edges of slabs and formed joints with an edging took, and round to ½" radius, unless otherwise indicated. Eliminate tool marks on concrete surface.

After completion of floating and troweling when excess moisture or surface sheen has disappeared, complete surface finishing as indicated on plans or, if not shown, finish as follows:

Trowel Finish:

- Initial troweling shall be delayed as long as practicable to avoid troweling while concrete is too soft. Water sheet shall have disappeared from the surface. Dry cement and sand shall not be used to take up surface moisture.
- First troweling shall be sufficient to produce a smooth surface.
- Final troweling shall be done with a tilted trowel and heavy pressure after the concrete has become hard enough to give a ringing sound under the trowel and shall produce a smooth plane surface free of defects.

Sweat Finish: After screeding and floating, an initial troweling shall be given surface when it has hardened enough so that water and fine material are not worked to the top.

- Final troweling shall be done with the trowel worked flat on the surface producing a fine, non-slip, swirled sandy texture.
- Walks and Steps Finish; medium broom finish, perpendicular to the line of traffic. Repeat operation if required to provide texture acceptable to the Engineer.
- On entrance drive surfaces, provide a course, non-slip finish by scoring surface with a stiff bristled broom, perpendicular to the line of traffic.

Exposed concrete light bases: Remove all form marks and rub to a smooth finish.

Do not remove forms for 24 hours after concrete has been placed unless otherwise approved by the Engineer. After form removal, clean ends of joints and point up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed by the Engineer.

Concrete Curing and Protection

General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. In hot, dry, and windy weather, protect concrete from rapid moisture loss before and during finishing operations with an evaporation control material. Apply, according to manufacturer's instructions after screeding and bull floating, but before power floating and troweling.

Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting; keep continuously moist for not less than 7 days.

Curing Methods: Cure concrete by curing compound, by moist curing, by moisture-retaining cover curing, or by combining these methods, as specified.

Provide moisture curing by the following methods:

- Keep concrete surface continuously wet by covered with water.
- Use continuous water-fog spray.
- Cover concrete surface with specified absorptive cover, thoroughly saturate cover with water, and keep continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with a 4-inch lap over adjacent absorptive covers.
- Provide moisture-retaining cover curing as follows:

- Cover concrete surface with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3 inches and sealed by waterproofed tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
- Apply curing compound on exterior slabs, walks, and steps as follows:
- Apply curing compound to concrete as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller according to manufacturer's directions. Re-coat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.
- Use membrane curing compounds that will not affect surfaces to be covered with finish materials applied directly to concrete.

REPAIRS AND PROTECTIONS

Repair or replace broken or defective concrete, as directed by Engineer.

Drill test cores where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy resin grout.

Protect concrete from damage and graffiti until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

Sweep concrete pavement and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION

SP 16 STONE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Section 100 of INDOT Standard Specifications, apply to this Section.

1.2 DESCRIPTION OF WORK

A. Extent of stone work is shown on drawings. Work includes but is not necessarily limited to the following:
   1. Limestone pavement for bench areas and trailheads.
   2. Limestone block, 27” Square.

1.3 SUBMITTALS

A. Samples:
   1. Submit the following samples to Engineer:
      a. Stone samples for type and variety of stone required and consisting of stones not less than 8" square.
      b. Include 2 or more stone samples showing the full range of variations in appearance characteristics to be expected in completed work.
   2. Engineer's review will be for color and texture only.
   3. Compliance with all other requirements is the exclusive responsibility of the Contractor.

B. Mockups: Before installing stone pavement, build mockup to verify selections made under sample submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for the completed Work:
   1 Locate mockup where indicated or, if not indicated, as directed by the Inspecting Engineer.
   2 Build mockup with specified materials in patterns indicated on Drawings.
   3 Mockup area to be approximately 48” by 72”.
      a Show typical components, mortar setting bed, and methods of installation.
   4 Notify Inspecting Engineer seven days in advance of dates and times when mockup will be constructed.
   5 Obtain Inspecting Engineer 's approval of mockup before starting installation.
   6 Maintain mockup during construction in an undisturbed condition as a standard for judging the completed Work.
      a Approval of mockup does not constitute approval of deviations from the Contract Documents contained in mockup unless such deviations are specifically approved by Inspecting Engineer in writing.
   7 Demolish and remove mockup when directed or approved mockup may become part of the completed Work with Inspecting Engineer approval.

1.4 QUALITY ASSURANCE

A. Engage an Installer who has successfully completed stonework similar in material, design and extent to that indicated for this project.
   1. Submit list of completed projects; include project names, addresses, and names of Architects and Owners.

B. Fabricator Qualifications:
   1. Fabricators shall be established firms regularly engaged in the fabrication of limestone.
      a. They shall have adequate equipment and qualified personnel to fabricate quality stone products with past experience in the fabrication for projects of a similar nature in quantity required for not less than the past five (5) years.

C. Industry Standards:
   1. Publications of the following institutes, associations, societies, and agencies are referred to in this Section.
      a. American Society for Testing and Materials: ASTM,
      b. Indiana Limestone Institute of America, Inc.: ILI.

D. Compliance:
   1. Except as otherwise specified or called for on the Drawings, all stone work shall comply with the current specifications and the "Indiana Limestone Handbook" as published by ILI.

E. Field Dimensions:
   1. Check dimensions of supporting structure at the site by accurate field measurements.
   2. Coordinate fabrication schedule with construction progress as directed by the Contractor to avoid delay of the work.
   3. Where necessary, proceed without field measurements and coordinate installation tolerances to insure proper fit of stonework.

1.5 DELIVERY, STORAGE AND HANDLING

A. Loading and Shipment:
   1. Stone supplier shall carefully pack stone for transportation and exercise all customary and reasonable precautions against damage in transit.

B. Deliver masonry materials to project in undamaged condition.

C. Store and handle stone and related materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breakage, chipping, or other causes.

D. Do not use pinch or wrecking bars without protecting edges of stone with wood or other rigid materials.
   1. Lift with wide-belt type slings wherever possible; do not use wire rope or ropes containing tar or other substances which might cause staining.
   2. Use wood rollers and provide cushion at end of wood slides.

E. Unloading and Storage at Job Site:
   1. Receive and unload at the site with necessary care in handling to avoid damaging or

soiling.

2. Stone shall be stored clear of the ground on non-staining skids (cypress, white pine, poplar, or yellow pine without an excessive amount of resin).
   a. Chemically treated wood should not be used.
   b. DO NOT use chestnut, walnut, oak, certain firs, and other woods containing tannin.

F. Store stone on wood skids or pallets, covered with non-staining waterproof membrane.
   1. Place and stack skids and stones to distribute weight evenly and to prevent breakage or cracking of stones.

1.6 PROJECT CONDITIONS

A. Protect stonework as follows:
   1. Prevent staining of stone from mortar, grout, sealants and other sources.
      a. Immediately remove such materials from stone without damage to latter.

B. Cold Weather Protection: Comply with the following requirements:
   1. Remove ice and snow formed on stonework beds by carefully applying heat until top surface is dry to the touch.
   2. Remove stonework damaged by freezing conditions.
   3. Perform the following construction procedures while stonework is progressing:
      a. Temperature ranges indicated apply to air temperatures existing at time of installation.
      b. In heating mortar materials, maintain mixing temperatures selected within 10 deg. F; do not heat water for mortar to above 160 deg. F.
      c. Mortar: for 40 deg. F and below, produce mortar temperatures between 40 deg. F and 120 deg. F by heating mixing water and, at temperatures of 32 deg. F and below, sand as well.
         i. Always maintain temperature of mortar on boards above freezing.
   4. Protect completed stonework and stonework in progress to comply with the following requirements:
      a. Temperature ranges indicated apply to mean daily air temperatures existing at time of installation. Stone shall not be laid when weather is below 32 deg. F.
      b. At 50 deg. F to 32 deg. F protect stonework from rain and snow at least 24 hours by covering with non-staining weather-resistive membrane.

PART 2 - PRODUCTS

2.1 INDIANA LIMESTONE:

A. Description:
   1. Limestone Pavement:
      a. Random triangular, rectangular, and trapezoidal shapes, 8" to 18" size range.
      b. Smooth sawn on bed and surface faces; split or broken side faces.
      c. 2” to 2-3/8” thickness
      d. Uniform color and appearance; buff or variegated stone acceptable.

   2. Limestone Block, 27”
      a. Quarry Block

b. Finish:
   I. Smooth face as indicated, according to ILI finish specifications
   II. Rock face as indicated, according to ILI finish specifications
c. Uniform color and appearance; buff or variegated stone acceptable.

B. Source: C&H Stone, 4000 South Rockport Road, Bloomington, Indiana 47426, 812-336-2560 (or approved equal).
C. All stone for the project will be from the same quarry and free from all defects that will impair its strength, durability, or appearance..

2.2 STONE FABRICATION:

A. Comply with recommendations of the Indiana Limestone Institute (ILI) as published in the "Indiana Limestone Handbook".

B. Joints (unless otherwise shown):
   1. Mortared, maximum 3/8" joint.

C. Cutting and Drilling for Other Trades:
   1. Cutting and fitting due to job site conditions, will be the responsibility of the Contractor.

D. Cut stones to produce pieces of thickness, size and shape indicated or required and within fabrication tolerances recommended by applicable stone association or, if none, stone source, for faces, edges, beds, and backs.

E. Clean saw backs of stones to remove rust stains and free iron particles.

F. Mortar Materials:
   1. Cement - Non-staining - Waterproofed, White Portland Cement, ASTM C 150, Type I or II.
   2. Lime - Hydrated Lime for Masonry Purposes, Type S, conforming to ASTM C207-49 (reapproved 1968).
   3. Water - Clean and Potable.
   4. Aggregate: ASTM C144.
   5. Colored Mortar Pigments: Iron oxides and chromium oxides.
   6. Latex Additive: Water emulsion type.

2.3 CONCRETE:

A. Concrete base for stone paving shall comply with INDOT Standard Specifications, Section 501.

2.4 SUBBASE:

A. Compacted #53 aggregate base, type “O” shall comply with INDOT Standard Specifications Section 303.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive stonework and conditions under which stonework will be installed.
   1. Installer must examine the conditions under which the stonework is to be installed, and notify the Contractor in writing of any conditions detrimental to the proper and timely completion of the Work.
   2. Do not proceed with the installation of stone work until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
   3. Starting of work shall be construed as acceptance of conditions.

B. Do not proceed with installation until surfaces and conditions comply with requirements indicated in specifications or elsewhere for execution of other work which affects stonework.

3.2 PREPARATION

A. Clean stone surfaces which have become dirty or stained prior to setting to remove soil, stains and foreign materials.
   1. Clean stones by thoroughly scrubbing stones with fiber brushes followed by a thorough drenching with clear water.
   2. Use only mild cleaning compounds that contain no caustic or harsh filler or abrasives.

B. Mortar and Grout Mixes:
   1. Mortar Mix: 1 part cement, 1 part lime putty and not more than 6 parts sand.
   2. Mortar for grouting - 1 part cement, 1 1/2 parts fine sand.

3.3 SETTING STONE

A. Execute stonework by skilled mechanics, and employ skilled stone fitters at the site to do necessary field cutting as stones are set.
   1. Use power saws to cut stones; for exposed edges, produce edges which are cut straight and true.
   2. Do not use stone units with chips, cracks, voids, stains or other defects which might be visible on surface of the finished work.

B. Wet stones which are dry at time of setting by drenching or sponging them with water.

C. Set stones on mortar bed with 3/8” maximum joints.

D. Mortar joints to be flush with stone surface.

3.4 ADJUSTING AND CLEANING

A. Remove and replace stonework of the following description:
   1. Broken, chipped, stained or otherwise damaged stones.
   2. Defective joints.
   3. Stonework not complying with other requirements indicated.

B. Replace in manner which results in stonework matching approved samples complying with other requirements and showing no evidence of replacement.

C. Clean stonework not less than 6 days after completion of work, using clean water and stiff bristle fiber brushes.
   1. Do not use wire brushes, acid type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods which could damage stone.
   2. Keep exposed faces of stone free from mortar and other stain-producing materials.
      a. Immediately remove adhered matter.

3.5 PROTECTION

A. Provide final protection and maintain conditions, in a manner which ensures stonework being without damage or deterioration at time of substantial completion.

PART 4 - METHOD OF MEASUREMENT

A. Limestone Pavement, including mortar, concrete base, compacted aggregate, and all accessories and incidentals necessary for a complete installation, shall not be measured. Limestone Block, 27”, including all accessories and incidentals necessary for a complete installation, shall not be measured.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of Limestone Pavement shall be paid for as part of the lump sum price for the project, including mortar, concrete base, compacted aggregate, and all accessories and incidentals necessary for a complete installation. The accepted quantities of Limestone Block shall be paid for as part of the lump sum price for the project, including the item and all incidentals necessary for a complete installation. This price and payment shall be full compensation for furnishing and placing all materials complete in place.

B. Payment will be made under:

Pay Item	**Pay Unit**
Project	Lump Sum

END OF SECTION

SP 17 SITE FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Section 100 of the INDOT Standard Specifications, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Extent and location of each type of furnishing shown on drawings and as follows:
   1. Shelter/Bench Combo

1.3 QUALITY ASSURANCE

A. Manufacturing Standards -
   1. Provide each furnishing as a complete unit produced by a single manufacturer, including fittings, accessories, and anchorage devices as applicable.

B. All items shall be manufactured by firm(s) presently specializing in the manufacture of such items.

1.4 SUBMITTALS

A. Product Data:
   1. Submit manufacturer's technical data, specifications and installation instructions for each type of furnishing.

B. Shop Drawings:
   1. Submit shop drawings of furnishings showing material, general layout, color and complete anchoring and supporting systems.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver furnishings and accessories completely identified for installation procedure.
   1. Handle and store to prevent damage or soiling.

PART 2 - PRODUCTS

2.1 FURNISHINGS

B. Bench Type A
   1. Manufacturer:
   Wabash Valley Manufacturing, Inc,
   505 East Main Street
   Silver Lake, Indiana 46982,

1.800.253-8619

2. Product name: Shadeland Series 3-Seat Double, Diamond Pattern
3. Model # SH400D
4. Length: 6’
5. Materials: Galvanized steel tubing, zinc coated steel mesh and aluminum pipe
6. Finish color
   a. Body Plastisol Color: Black
   b. Frame Powder Coat Color: Black
7. Mounting: In Ground
   a. Comply with manufacturer's installation recommendations and INDOT Standard Specifications for mounting requirements as shown on plans.
8. Sign Support Brackets:
   a. Manufacturer shall fabricate and install sign support brackets as indicated on drawings.
   b. Manufacturer shall coordinate bracket locations and dimensions with owner.
   c. Owner will supply the sign and sign design.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Installation of all items shall be complete so as to provide fully operational systems unless noted otherwise.
   1. Install all items per manufacturer's installation specifications and requirements.

PART 4 - METHOD OF MEASUREMENT

A. Site and Street furnishings, including all necessary and specified fabrication, installation, anchorage materials and miscellaneous requirements, will be measured for payment.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of each site unit shall be paid for as part of the project lump sum price including all anchorage devices and installation requirements. This price and payment will be full compensation for furnishing and placing all materials complete as shown or detailed.

B. Payment will be made under:

Pay Item	**Pay Unit**
Shelter Bench Combo	Each

END OF SECTION

SP 18 EXPOSED AGGREGATE TRAIL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions.

1.2 SUMMARY

A. This Section includes exterior cement concrete with seeded exposed aggregates for the following:

1. Driveways

B. Related Sections include the following:

1. Article 502 of the Indiana Department of Transportation Standard Specifications.

2. Article 910 of the Indiana Department of Transportation Standard Specifications.

1.3 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Samples: 10-lb sample of each exposed aggregate.

C. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:

1. Cementitious materials.
2. Steel reinforcement and reinforcement accessories.
3. Fiber reinforcement.
4. Admixtures.
5. Curing compounds.
6. Applied finish materials.
7. Bonding agent or epoxy adhesive.
8. Joint fillers.

1.4 QUALITY ASSURANCE

A. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, color, and standard of workmanship.

1. Build mockup 5 ft x 5ft or, as directed by Landscape Architect.

2. Notify Landscape Architect seven days in advance of dates and times when mockups will be constructed.

3. Obtain Landscape Architect's approval of mockups before starting construction.

4. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.

5. Demolish and remove approved mockups from the site when directed by Landscape Architect.

6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

2. Products: Subject to compliance with requirements, provide one of the products specified.

3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Exposed Aggregate: Selected, hard, and durable; washed; free of materials with deleterious reactivity to cement or that cause staining; from a single source, with gap-graded coarse aggregate as follows:

1. Aggregate Characteristics.

a. Name: Ebony Blend-small or approved equal
   1) Source: Indianapolis, In. Stone Center
   2) Shape: rounded
   3) Color: deep earth tones with a red cast
   4) Size: 1/2 inch to 1 inch nominal

b. Name: Northern Lights or approved equal
   1) Source: Indianapolis, IN Stone Center
   2) Shape: rounded
   3) Color: Translucent tan and beige with occasional oranges
   4) Size: 3/4 inch to 1-1/4 inch nominal

1.6 RELATED MATERIALS

A. Chemical Surface Retarder: Water-soluble, liquid-set retarder with color dye, for horizontal concrete surface application, capable of temporarily delaying final hardening of concrete to a depth of 1/4 inch.

1. Products:
a. Burke by Edeco; True Etch Surface Retarder.
b. ChemMasters; Exposee.
c. Conspec Marketing & Manufacturing Co., Inc.; Delay S.
d. Euclid Chemical Company (The); Surface Retarder S.
e. Kaufman Products, Inc.; Expose.
f. Metalcrete Industries; Surftard.
g. Nox-Crete Products Group, Kinsman Corporation; Crete-Nox TA.
h. Scofield, L. M. Company; Lithotex.
i. Sika Corporation, Inc.; Rugasol-S.
j. Vexcon Chemicals, Inc.; Certi-Vex Envioset.

B. Water Based Sealer
1. Products:
a. Euclid, Color: Brown

PART 2 –

2.1 PLACING CONCRETE

A. Place concrete in accordance with Article 502 of the Indiana Department of Transportation Standard Specifications.

2.2 SPECIAL FINISHES

A. Seeded Exposed-Aggregate Finish: Immediately after initial floating, spread a single layer of aggregate uniformly on pavement surface. Tamp aggregate into plastic concrete, and float finish to entirely embed aggregate with mortar cover of 1/16 inch.

1. Spray-apply chemical surface retarder to pavement according to manufacturer's written instructions.

2. Cover pavement surface with plastic sheeting, sealing laps with tape, and remove sheeting when ready to continue finishing operations.

3. Without dislodging aggregate, remove excess mortar by lightly brushing surface with a stiff, nylon-bristle broom.

4. Fine-spray surface with water and brush. Repeat water flushing and brushing cycle until cement film is removed from aggregate surfaces to depth required.

5. Apply even coat of water based sealer.

2.3 PROTECTION

A. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

B. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

PART 3 - BASIS OF PAYMENT

A. The accepted quantity of PCCP for drives, 6 in., Exposed Aggregate Surface, including reinforcing, finishing, decorative aggregates, and all products used to construct the desired texture shall be included in the lump sum price of the project.

B. Payment will be made under:

Pay Item	Pay Unit
Project	LUMP SUM

C. The cost of all labor and material indicated in this special provision, including the mock-up, curing, finishing, and necessary incidentals shall be included in the lump sum price of the project.

SP 19 DRINKING FOUNTAIN

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract and Section 100 of INDOT Standard Specifications, apply to work of this section.
B. Section “Water Service Connection”

1.2 SUMMARY

A. This Section includes installation of a new drinking fountain.
   1. The Contractor shall furnish and install all fixtures, piping, pits, and drinking fountains as shown on drawings and as recommended by the manufacturer necessary for a complete installation.

1.3 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Section 100 of the INDOT Standard Specifications.

B. Submit copies of manufacturer's special provisions and instructions for all manufactured materials and products, including, but not limited to, piping, valves, drinking fountain, valve boxes,

C. Manufacturer’s standard maintenance instructions.

1.4 QUALITY ASSURANCE

A. Comply with requirements of utility supplying water to the project.

1.5 DELIVERY, STORAGE, AND HANDLING

A. All materials furnished by the contractor, including pipe, fittings, valves, drinking fountains and other accessories, shall, unless otherwise directed, be unloaded at the point of delivery, hauled to and distributed at the site of the project by the contractor.
   1. All materials shall be handled with care to avoid damage at all times.
   2. In loading and unloading, materials shall be lifted by hoists or slid or rolled on skidways in such manner as to avoid shock.
   3. Under no circumstances shall materials be dropped.

B. Pipe shall be handled so as to avoid damage to the coating and lining.
   1. If any part of the coating or lining is damaged, repair shall be made by the contractor at his/her expense in a manner satisfactory to the Engineer, before such damaged pipe is installed.

C. Valves and drinking fountains, before installation, shall be drained and stored in a manner that will protect them from damage by freezing.

1.6 WARRANTY

A. The contractor shall furnish a manufacturer's written warranty for a period of no less than two years to be free from defects and faulty workmanship, and that any defective parts shall be promptly repaired or replaced without additional cost to the Owner in accordance with that warranty.

B. All materials other than those referred to in Paragraph A above shall be warranted for a period of one full year from the date of final acceptance by the Owner.

1.06 SEQUENCING AND SCHEDULING

A. Coordinate with other work in vicinity of drinking fountain.

PART 2 - PRODUCTS

2.1 IDENTIFICATION

A. Plastic Underground Warning Tapes:
   1. Metallic-lined Polyethylene plastic tape, 6 inches wide by 4 mils thick, solid blue in color with continuously printed caption in black letters "CAUTION - WATER LINE BURIED BELOW."

2.2 PIPE, TUBING

A. Copper Tubing 2 Inches and Smaller:
   1. Copper water tubing, Type K, soft temper for underground service conforming to ASTM B-88, ASTM B-251, and AWWA C800 in accordance with City of Indianapolis Standards.
   2. Tubing shall be marked with the Manufacturer's name or trademark and mark indicative of type.
   3. Outside diameter of the tubing and minimum weight per foot of the tubing shall not be less than listed in ASTM B-251, Table II.

2.3 DRINKING FOUNTAIN

A. Drinking Fountain to comply with the Americans with Disabilities Act (ADA) and the following:
   1. Manufacturer:
      Murdock
      15125 Proctor Avenue
      City of Industry, CA 91746
      1-800-591-9880
   2. Model GRMBL-PF (Surface Mount)
   3. Materials: 18 gage, 304 stainless steel bowls; 11 gage galvanized pedestal with **black** powder coated finish.
   4. Options, Provide the Following:
      i. PF - Attached pet fountain

ii. JF2 - Jug Filler, recessed
iii. FRU3– Freeze resistant valve
iv. SSB – Polished Stainless Steel Bubbler

5. Mounting: Surface mount as shown on plan and in accordance with manufacturer's instructions.

2.4 MISCELLANEOUS ACCESSORIES

A. Connections:
   1. Provide Mueller B25008 ball corporation valve or Ford QJ ball corporation valve (or approved equal) for connection of 1" and smaller tubing to water main.
   2. Provide Mueller or Ford Quick compression connectors at all other tubing connections in accordance with the City of Bloomington Standards.

PART 3 - EXECUTION

3.1 ALIGNMENT AND GRADE

A. General:
   1. All pipe shall be laid and maintained to the required lines and grades; with fittings, valves, and drinking fountains at the required locations; with joint centered and spigot home; and with all valve and drinking fountain stems plumb.

B. Depth of Pipe Cover:
   1. All pipe shall be laid to the depth shown on the contract drawings, or as required in specifications, measured from the established grade or the surface of the permanent improvement to the top of the barrel of the pipe.
   2. In the absence of definite measurements, the minimum depth of cover shall be four (4) feet.

C. Protecting Underground and Surface Structures:
   1. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers and other obstructions encountered in the progress of the work shall be furnished by the contractor at his/her own expense to the satisfaction of the Engineer.

3.2 PIPE LAYING

A. Materials Inspection:
   1. Before lowering any materials into the trench for assembly, the pipe, fitting, valve, or drinking fountain shall be thoroughly inspected in an appropriate manner so as to determine any defects, damage or unsoundness of the material.
   2. Any defective, damaged, or unsound pipe, valve, drinking fountain or fitting shall be rejected.

B. Unsuitable Conditions for Laying Pipe:
   1. No pipe shall be laid in water, or when the trench conditions or the weather is unsuitable for such work, except by permission of the Engineer.

C. Pipe to be Clean:

1. When the pipe is laid, it shall be free of all foreign matter.
2. Pipe may be cleaned by flushing in place under the supervision of the Engineer if in his/her opinion, the pipe contains dirt that can be removed; if not, then the pipe shall be cleaned by swabbing and flushing before it is placed in the trench.

D. Connections:
1. Piping and connection shall be heated and the clamp shall be re-tightened while assembly is still hot.

E. Preventing Trench Water From Entering Pipe:
1. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means, and at no time shall trench water be permitted to enter the pipe.

3.3 ANCHORAGE OF BENDS, TEES AND PLUGS

A. General Requirements:
1. Adequate precautions shall be taken to prevent the separation of joints at tees, elbows and plugged ends. This shall be done by the use of restrained joints, as shown in the Construction Standards, on the appropriate plans, or as directed by the Engineer.
2. In absence of specific details, on all pipe lines, all tees, plugs, caps and bends in excess of twenty-two and one-half (22 1/2) degrees shall be securely anchored to prevent the joints from parting and leaking.
3. Reaction blocking may be used only upon written approval of the Engineer.
4. Pipe blocking when used shall comply with minimum specifications for construction of local community water and sewer systems.

3.4 INSTALLATION OF DRINKING FOUNTAIN

A. Follow manufacturer’s standard detail for installation of drinking fountain, freeze resistant valve assembly, and valve box.

3.5 BACKFILL, RESTORATION AND CLEAN-UP

A. Backfill Material:
1. All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, boulders, rocks, stones, frozen soil or other material that in the opinion of the Engineer, is unsuitable.
2. Backfill material shall be one of the following two (2) types, as directed by the Engineer:
   a. Type "B" Backfill:
      i. Granular material meeting the gradation set forth in the Indiana Department of Transportation Standard Specifications, B Borrow Fill and Backfill, except that no more than twelve percent (12%) or less than five percent (5%) shall pass the no. 200 sieve (silt or clay).
   b. Type "C" Backfill:
      i. Excavated material of acceptable quality, free from rocks, boulders, large or frozen lumps, wood or other extraneous matter.

B. Compaction:

1. Type "B" backfill material shall be compacted to ninety-five (95%) density as determined by the Standard Proctor Test.
2. Compaction may be obtained by mechanical tamping the material in six (6) inch lifts.
3. It shall be the Contractor's responsibility to prove that he has achieved the required ninety-five (95%) percent test compaction.

3.6 TESTING WATER SERVICE SYSTEM

A. Test for leaks and defects in all new water distribution piping systems. If testing is performed in segments, submit a separate report for each test, complete with a diagram of the portion of the system tested.
   1. Leave a system uncovered and unconcealed until all new water distribution piping has been tested and approved. Expose all such work for testing, that has been covered or concealed before it has been tested and approved.
   2. Cap and subject the piping system to a static water pressure of 50 psig above the operating pressure without exceeding the pressure rating of the piping system materials. Isolate the test source and allow to stand for a period of four (4) hours. Leaks and loss in test pressure constitute defects which shall be repaired by Contractor.
   3. Repair all leaks and defects using new materials and retest system or portion thereof until satisfactory results are obtained.
   4. Prepare reports for all tests and require corrective action.

3.7 CLEANING WATER SERVICE SYSTEM

A. Clean and disinfect water distributing piping by purging the new completed system. Use the purging and disinfecting procedure prescribed by the authority having jurisdiction, or in case a method is not prescribed by that authority, the procedure described in AWWA C651 or AWWA D105 or as described as follows:
   1. Flush the piping system with clean, potable water until dirty water does not appear at the point of outlet.
   2. Fill the system or part thereof, with a water/chlorine solution containing at least 50 parts per million of chlorine. Isolate (valve off) the system, or part thereof, and allow to stand for 24 hours.
   3. Drain the system, or part thereof, of the previous solution, and refill with water/chlorine solution containing at least 2000 parts per million of chlorine and isolate and allow to stand for 3 hours.
   4. Following the allowed standing time, flush the system with clean potable water until chlorine does not remain in the water coming from the system.
   5. Submit water samples in sterile bottles to the authority having jurisdiction. Repeat the procedure if the biological examination made by the authority shows evidence of contamination.

B. Prepare reports for all purging and disinfecting activities.

C. The Contractor shall be solely responsible for the final delivery of potable water approved by the Indiana State Board of Health.

PART 4 - METHOD OF MEASUREMENT

A. Drinking Fountain will not be measured. Installation of the drinking fountain shall include all necessary appurtenances as recommended by manufacturer for a complete installation.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of drinking fountains will be paid for at the lump sum price for the project complete in place. These prices and payments will be full compensation for furnishing and placing all materials and accessories, including excavation and backfill.

B. Payment will be made under:

Pay Item	**Pay Unit**
Project	LUMP SUM

C. No additional payment over the lump sum price will be made for any item installed in quantities in excess of that shown on the plans.

END OF SECTION

SP 20 BIKE RACK

1.1 SUMMARY

A. This section includes the following:
   1. Bicycle Parking Racks

1.2 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed installation of bicycle parking racks similar in material, design, and extent to that indicated for this project and whose work has resulted in construction with a record of successful in-service performance.
B. Manufacturer Qualifications: A firm experienced in manufacturing bicycle parking racks similar to those required for this project and with a record of successful in-service performance.
C. Source Limitations: Obtain each color, finish, shape and type of bicycle parking rack from a single source with resources to provide components of consistent quality in appearance and physical properties.
D. Product Options: Drawings indicate size, shape and dimensional requirements of bicycle parking racks and are based on the specific system indicated.

1.3 REFERENCES

A. Steel Pipe:
   1. ASTM A53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
   2. ASTM A312 Standard Specification for Seamless and Welded Stainless Steel Pipes
   3. ASME SA312 Standard Specification for Seamless and Welded Stainless Steel Pipes
B. Hot-Dipped Galvanized Finish:
   1. ASTM A123 Standard Specification for Zinc (Hot-Dipped Galvanized) Coating on Iron and Steel Products

1.4 SUBMITTALS

A. Product Data: Include physical characteristics such as shape, dimensions, bicycle parking capacity and finish for each bicycle parking rack.
B. Shop Drawings: Show installation details for each bicycle parking rack.

C. Samples for Verification: For the following bicycle parking rack/s, showing; (1) the color of the powder coat finish. Prepare 2 inch by 3.5-inch (50.8 mm by 87.5mm) powder coat samples (or larger) from the same material to be used to finish the product, (2) the actual galvanized finish. Prepare a sample piece of sufficient size to judge its quality, (3) Stainless steel. Submit a sample piece for review.
D. Maintenance Data: For each bicycle parking rack.
   1. Include recommended methods for repairing damage to the powder coat finish.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store bicycle parking racks in original undamaged packages and containers until ready for installation.
B. Handle powder coated bicycle parking racks with sufficient care to prevent any scratches or damage to the finish.

1.6 WARRANTY

A. Bicycle parking racks are to carry a one year manufacturer's limited warranty against defects in materials and workmanship. The one year warranty period begins the date the product is shipped from the manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Madrax, a division of Trilary, Inc.
1080 Uniek Drive
Waunakee, WI 53597
1-800-448-7931
sales@madrax.com

2.2 MATERIALS

A. Powder Coating: Triglycidyl isocyanurate (TGIC) powder, a polyester coating.
1. Color: Black
B. Surface Preparation: Surface of bike rack shall receive a zinc rich epoxy primer before powder coating to help with adhesion and corrosion.

2.3 MODEL

A. CIR-4-SF-IG
Rack shall be constructed of ASTM A53, 1-1/2" Schedule 40 steel pipe (1.90" O.D x 0.145" thick wall (48.3mm x 3.7mm)) or better. Height is 34" (863.6mm). Width is 20" (508.0mm).

PART 3 – EXECUTION

3.1 INSTALLATION

A. Handle and install bicycle parking racks in accordance with manufacturer's recommendations and installation instructions.
B. Set bicycle parking racks secured to construction, level and true to line, in correct relationship to adjacent materials.

PART 4 – METHOD OF MEASUREMENT

4.1 Bike racks will not be measured. Installation of the bike rack shall include all necessary appurtenances as recommended by manufacturer for a complete installation.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of bike racks will be paid for at the contract unit price per unit specified complete in place. These prices and payments will be full compensation for furnishing and placing all materials and accessories, including excavation and backfill.

B. Payment will be made under:

Pay Item	**Pay Unit**
Project	LUMP SUM

C. No additional payment over the lump sum price of the project will be made for any item installed in quantities in excess of that shown on the plans.

END OF SECTION

SP 21 WATER SERVICE CONNECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and standard general conditions of the construction contract, apply to work of this section.

1.02 SUMMARY

A. This Section includes installation of a service connection for an accessible drinking fountain.
   1. The Contractor shall furnish and install all fixtures, piping, and pits as shown on drawings.

1.03 QUALITY ASSURANCE

A. Comply with requirements of the City of Bloomington Construction Specifications dated January 1, 2008.

1.04 DELIVERY, STORAGE, AND HANDLING

A. All materials furnished by the contractor, including pipe, fittings, valves and other accessories, shall, unless otherwise directed, be unloaded at the point of delivery, hauled to and distributed at the site of the project by the contractor.
   1. They shall at all times be handled with care to avoid damage.
   2. In loading and unloading, they shall be lifted by hoists or slid or rolled on skidways in such manner as to avoid shock.
   3. Under no circumstances shall they be dropped.
   4. Pipe handled on skidways must not be allowed to roll against pipe already on the ground.

B. Pipe shall be handled so as to avoid damage to the coating and lining.
   1. If any part of the coating or lining is damaged, repair shall be made by the contractor at his/her expense in a manner satisfactory to the Engineer or Inspector assigned to the project, before such damaged pipe is installed.

C. Pipe should be distributed on the site of the work parallel with and opposite or near the place it is to be laid in the trench and with bell ends facing the direction in which the work will proceed, unless otherwise directed.

1.05 SEQUENCING AND SCHEDULING

A. Coordinate with other work in vicinity.

PART 2 - PRODUCTS

2.01 IDENTIFICATION

A. Plastic Underground Warning Tapes:
   1. Metallic-lined Polyethylene plastic tape, 6 inches wide by 4 mils thick, solid blue in color with continuously printed caption in black letters "CAUTION - WATER LINE BURIED BELOW."

2.02 PIPE, TUBING

A. Copper Tubing 2 Inches and Smaller:
   4. Copper water tubing, Type K, soft temper for underground service conforming to ASTM B-88, ASTM B-251, and AWWA C800 in accordance with City of Bloomington Standards.
   5. Tubing shall be marked with the Manufacturer's name or trademark and mark indicative of type.
   6. Outside diameter of the tubing and minimum weight per foot of the tubing shall not be less than listed in ASTM B-251, Table II.
   7. Compression or solder joints will not be allowed on any service line between the main and the meter.

2.03 MISCELLANEOUS ACCESSORIES

A. Connections:
1. All valves other than air release valves and tapping valves shall be manufactured by American AVK Company (www.americanavk.com), M & H Valve Company (www.mh-valve.com), American Flow Control (www.acipco.com), Kennedy Valve Company (www.kennedyvalve.com), Mueller Company (www.muellersales.com), or U.S. Pipe and Foundry Company (www.uspipe.com). No other valves will be considered.
2. Provide Mueller B25008 ball corporation valve, or approved equal, for connection of 1" and smaller tubing to water main.
3. Provide Mueller, or approved equal compression connectors at all other tubing connections in accordance with the local utility Standards.
4. All fittings shall bee in conformance with ANSI/AWWA C800. Only flared fittings will be permitted on Type K copper.
5. The corp stop shall have a single O-ring.

PART 3 - EXECUTION

3.01 ALIGNMENT AND GRADE

A. General:
   1. All pipe shall be laid and maintained to the required lines and grades; with fittings, valves at the required locations; with joint centered and spigot home; and with all valve and stems plumb.

B. Depth of Pipe Cover:
   1. All pipe shall be laid to the depth shown on the contract drawings, or as required in specifications, measured from the established grade or the surface of the permanent improvement to the top of the barrel of the pipe.

2. In the absence of definite measurements, the minimum depth of cover shall be 60 inches.

C. Protecting Underground and Surface Structures:
1. Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers and other obstructions encountered in the progress of the work shall be furnished by the contractor at his/her own expense to the satisfaction of the Inspector or Engineer.

3.02 EXCAVATION AND PREPARATION OF TRENCH AND TUNNELS

A. Description:
1. The trench shall be dug to the alignment and depth required but only so far in advance of pipe laying as the Project Engineer shall permit.
2. The trench shall be so braced and drained such that workmen may perform their duties therein safely and efficiently.
3. It is essential that the discharge from pumps be led to natural drainage channels, to drains, or to sewers.

B. Tree Protection
1. Due to the location of the project should any tree roots be encountered during excavation, then the roots shall be hand pruned to ensure survival of the tree.

B. Width:
1. The trench width may vary with and depend upon the depth of trench and the nature of the excavated material encountered; but in any case, shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly.
2. The minimum width of unsheeted trench, if the soil shows a tendency to cave or slide, shall be one foot greater than the nominal diameter of the pipe, except by consent of the Project Engineer.
3. The maximum clear width of trench shall be not more than two feet greater than the external diameter of the pipe.

C. Pipe Foundation:
1. The trench, unless otherwise specified shall have a flat bottom conforming to the grade to which the pipe is to be laid.
2. The pipe shall be laid upon sound soil cut true and even, so that the barrel of the pipe will have equal bearing for its full length.

D. Correcting Faulty Grade:
1. Any part of the trench excavated below grade shall be corrected with approved material, thoroughly compacted.

E. Removal of Excavated Material:
1. All material removed from the trench and not found suitable for use shall be hauled away from the site of the work or excavation and shall be deposited at a dump provided by the contractor.

F. Manner of Piling Excavated Materials:

1. All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways.
2. Gutters shall be kept clear or other satisfactory provisions made for street drainage.

G. Care of Surface Material for Reuse:
1. If local conditions permit their reuse, all surface materials suitable for reuse in restoring the surface shall be kept separate from the general excavation materials.

H. Trenching By Machine or By Hand:
1. The use of trench-digging machinery will be permitted except in places where operation of same will cause damage to trees, buildings, or existing structures above or below ground; in which case, hand methods shall be employed.

3.03 PIPE LAYING

A. Materials Inspection:
1. Before lowering any materials into the trench for assembly, the pipe, fitting, valve, or drinking fountain shall be thoroughly inspected in an appropriate manner so as to determine any defects, damage or unsoundness of the material.
2. Any defective, damaged, or unsound pipe, valve, drinking fountain or fitting shall be rejected.

B. Unsuitable Conditions for Laying Pipe:
1. No pipe shall be laid in water, or when the trench conditions or the weather is unsuitable for such work, except by permission of the Project Engineer.

C. Pipe to be Clean:
1. When the pipe is laid, it shall be free of all foreign matter.
2. Pipe may be cleaned by flushing in place under the supervision of the Project Engineer if in his/her opinion, the pipe contains dirt that can be removed; if not, then the pipe shall be cleaned by swabbing and flushing before it is placed in the trench.

D. Connections:
1. Piping and connection shall be heated and the clamp shall be re-tightened while assembly is still hot.

E. Preventing Trench Water from Entering Pipe:
1. At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means, and at no time shall trench water be permitted to enter the pipe.

3.04 ANCHORAGE OF BENDS, TEES AND PLUGS

A. General Requirements:
1. Adequate precautions shall be taken to prevent the separation of joints at tees, elbows and plugged ends. This shall be done by the use of restrained joints, as shown in the Construction Standards, on the appropriate plans, or as directed by the Project Engineer.
2. In absence of specific details, on all pipe lines, all tees, plugs, caps and bends in excess of twenty-two and one-half (22 1/2) degrees shall be securely anchored to prevent the joints from parting and leaking.
3. Reaction blocking may be used only upon written approval of the Project Engineer.

4. Pipe blocking when used shall comply with minimum specifications for construction of local community water and sewer systems.

3.05 BACKFILL, RESTORATION AND CLEAN-UP

A. Backfill Material:
   1. All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, boulders, rocks, stones, frozen soil or other material that in the opinion of the Engineer, is unsuitable.
   2. Backfill material shall be one of the following two (2) types, as directed by the Engineer:
      a. Type "B" Backfill:
         i. Granular material meeting the gradation set forth in the Indiana Department of Transportation Standard Specifications, 1995, Section 211, B Borrow Fill and Backfill, except that no more than twelve percent (12%) or less than five percent (5%) shall pass the no. 200 sieve (silt or clay).
      b. Type "C" Backfill:
         i. Excavated material of acceptable quality, free from rocks, boulders, large or frozen lumps, wood or other extraneous matter.

B. Compaction:
   1. Type "B" backfill material shall be compacted to ninety-five (95%) density as determined by the Standard Proctor Test.
   2. Compaction may be obtained by mechanical tamping the material in six (6) inch lifts.
   3. It shall be the Contractor's responsibility to prove that he has achieved the required ninety-five (95%) percent test compaction.

C. Backfill Zones:
   1. For purposes of defining the specific backfill requirements, the excavated trench area is divided into three (3) backfill zones: pipe zone, backfill zone and restoration zone.
   2. Pipe Zone:
      a. The pipe zone is that area of the trench from the undisturbed soil below the pipe to the top of the bedding material.
      b. The pipe is to be bedded in sand, gravel or crushed stone to a depth of 1/8 pipe diameter, or a minimum of four (4) inches below the pipe.
      c. Backfill is to be compacted, minimum eighty (80%) percent Standard Proctor, to top of pipe.
   3. Backfill Zone:
      a. The backfill zone is that area above the pipe zone and below the restoration zone, or surface.
      b. Backfill material used in this area may be Type "B" or Type "C", as directed by the Project Engineer.
   4. Restoration Zone:
      a. Grassed areas which have been damaged in the construction of water mains shall be restored by seeding or sodding.
      b. This zone shall be backfilled with Type "C" backfill material.

3.06 TESTING WATER SERVICE SYSTEM

B. Test for leaks and defects in all new water distribution piping systems. If testing is performed in segments, submit a separate report for each test, complete with a diagram

of the portion of the system tested.

5. Leave a system uncovered and unconcealed until all new water distribution piping has been tested and approved. Expose all such work for testing, that has been covered or concealed before it has been tested and approved.
6. Cap and subject the piping system to a static water pressure of 50 psig above the operating pressure without exceeding the pressure rating of the piping system materials. Isolate the test source and allow to stand for a period of four (4) hours. Leaks and loss in test pressure constitute defects which shall be repaired by Contractor.
7. Repair all leaks and defects using new materials and retest system or portion thereof until satisfactory results are obtained.
8. Prepare reports for all tests and require corrective action.

3.07 CLEANING WATER SERVICE SYSTEM

C. Clean and disinfect water distributing piping by purging the new completed system. Use the purging and disinfecting procedure prescribed by the authority having jurisdiction, or in case a method is not prescribed by that authority, the procedure described in AWWA C651 or AWWA D105 or as described as follows:

6. Flush the piping system with clean, potable water until dirty water does not appear at the point of outlet.
7. Fill the system or part thereof, with a water/chlorine solution containing at least 50 parts per million of chlorine. Isolate (valve off) the system, or part thereof, and allow to stand for 24 hours.
8. Drain the system, or part thereof, of the previous solution, and refill with water/chlorine solution containing at least 2000 parts per million of chlorine and isolate and allow to stand for 3 hours.
9. Following the allowed standing time, flush the system with clean potable water until chlorine does not remain in the water coming from the system.
10. Submit water samples in sterile bottles to the authority having jurisdiction. Repeat the procedure if the biological examination made by the authority shows evidence of contamination.

D. Prepare reports for all purging and disinfecting activities.

C. The Contractor shall be solely responsible for the final delivery of potable water approved by the Indiana State Board of Health.

PART 4 - METHOD OF MEASUREMENT

A. Site Water Service Piping, including all necessary and specified piping, fittings, valves, and other accessories, including excavation and backfill, will be not be measured for payment.

PART 5 - BASIS OF PAYMENT

A. The accepted quantities of site water service piping with fittings and furnishings will be paid for at the contract unit price per unit specified complete in place within the drinking fountain add alternate lump sum price for the drinking fountain.

B. No additional payment over the unit contract price will be made for any item installed in quantities in excess of that shown on the plans.

E. Payment will be made under:

Pay Item	**Pay Unit**
Water line, 3/4 in.	Lump Sum

SP 22 INTERLOCKING CONCRETE PAVERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete pavers
B. Bedding and void opening aggregates
C. Aggregate Base
D. Edge restraint

1.02 REFERENCES

A. American Society of Testing and Materials (ASTM) (latest edition)

1.	C 33	Specification of Concrete Aggregates.
2.	C 136	Method for Sieve Analysis for Fine and Course Aggregate.
3.	C 140	Sampling and Testing Concrete Masonry Units.
4.	C 144	Standard Specification for Aggregate for Masonry Mortar.
5.	C 936	Specification for Solid Interlocking Concrete Paving Units.
6.	C 979	Specification for Pigments for Integrated Colored Concrete.
7.	D 698	Test Methods for Moisture Density Relations of Soli and Soil Aggregate. Mixtures Using a 5.5-lb (24.4 N) Rammer and 12 in. (305 mm) drop.
8.	D1557	Test Method for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 10-lb (44.5 N) Rammer and 18 in. (457 mm) drop.
9.	D 2940	Graded Aggregate Material for Bases or Subbases for Highway or Airports.
10.	C-29	Bulk Density and Voids in Aggregate Materials.

1.03 QUALITY ASSURANCE

A. Installation shall be by a contractor and crew with at least four (4) ECOLOC projects of 40,000 square feet and references on placing interlocking concrete pavers on projects of similar nature.

B. The Contractor shall conform to all local, state/provisional licensing and bonding requirements.

1.04 SUBMITTALS

A. Shop or product drawings and product data shall be submitted.

B. Full size samples of the concrete paving unit shall be submitted to indicate color and product shape. Color will be selected by Landscape Architect/Owner from manufacturer's available colors. Standard color will be selected.

C. Sieve analysis for grading of bedding and joint opening aggregates shall be submitted.

D. Test results shall be submitted form an independent testing laboratory for compliance of paving unit requirements to ASTM C 936 or other applicable requirements.

E. The layout, pattern, and relationship of paving joints to fixtures and project formed details shall be indicated.

F. Manufacturer's recommendation on standard maintenance procedures.

1.05 MOCK-UPS

A. A 7 ft. x 7 ft. (2 m x 2 m) paver area shall be installed.

B. This area will be used to determine joint sizes, lines, laying pattern(s), color(s), and texture of the project.

C. This area shall be the standard from which the work will be judged.

1.06 DELIVERY, STORAGE AND HANDLING

A. Concrete pavers shall be delivered to the site in steel banded, plastic banded, or plastic wrapped cubes capable of transfer by fork lift or clamp lift. The pavers shall be unloaded at the job site in such a manner that no damage occurs to the product.

B. Delivery and paving schedules shall be coordinated in order to minimize interference with normal use of land adjacent to paving.

1.07 ENVIRONMENTAL CONDITIONS

A. Do not install bedding aggregates or pavers during heavy rain or snowfall.

B. Do not install bedding aggregates or pavers over frozen base materials.

C. Do not install frozen bedding aggregates.

PART 2 MATERIALS

2.01 ACCEPTABLE MANUFACTURERS AND PRODUCTS

A. Supplied by: Concrete Pavers:
ECOLOC – OPTILOC
Unilock Chicago, Inc.
301 East Sullivan Road
Aurora, Illinois 60504
Office 630-892-9191
Fax 630-892-9215

StormLock Permeable Concrete Pavers HydraBric
Reading Rock, Inc.
4600 Devitt Drive
Cincinnati, OH 45246

513-874-2345

B. Pavers: Concrete paving stone, 7.88 in. x 7.88 in. (200 mm x 200 mm) L-shaped paver units with peripheral indented profile, and 3 1/8 in. (80 mm) thick.

C. Finish: Standard Color to be selected by Owner.

D. Paver units shall meet the minimum material and physical properties set forth In ASTM C 936, Standard Specification for Interlocking Concrete Paving Units. Efflorescence shall not be a cause for rejection.

1. Average compressive strength 8000 psi (55 MPa) with no individual unit under 7,200 psi (50 MPa).

2. Average absorption of 5% with no unit greater than 7% when tested according to ASTM C 140.

3. Resistance to 50 freeze-thaw cycles when tested according to ASTM C 67.

4. Pigment in concrete pavers shall conform to ASTM C 979. ACI Report No. 212.3R provides guidance on the use of pigments.

2.02 GRANULAR SUBBASE

The granular subbase material shall consist of granular material graded in accordance with ASTM D 2940 and shall meet INDOT specifications for #2 coarse aggregate. Aggregates materials used in the construction of permeable pavements shall be clean and contain no #200 sieve size materials.

2.03 GRANULAR BASE

The granular base material shall be graded in accordance with the requirements of ASTM D 2940, shall meet INDOT specifications for coarse aggregate.

Gradation Analysis

Sieve	Specification
1.5"	100%
1"	90-100%
3/4"	45-75%
1/2"	30-46%
#4	0-10%

Aggregates materials used in the construction of permeable pavements shall be clean and contain no #200 sieve size materials.

2.04 BEDDING AND VOID OPENING AGGREGATES

The granular bedding material shall be graded in accordance with the requirements of ASTM D 2940 and shall meet INDOT specifications for fine aggregates with the following gradation analysis.

Gradation Analysis

Sieve	Specification
1/2"	100%
3/8"	94-100%
#4"	15-45%
#8	
#16	0-4%

Aggregates materials used in the construction of permeable pavements shall be clean and contain no #200 sieve size materials.

2.05 EDGE RESTRAINTS

The provision of suitable edge restraints is critical to the satisfactory performance of interlocking concrete block pavement. The pavers must abut tightly against the restraints to prevent rotation under load and any consequent spreading of joints. The restraints must be sufficiently stable that, in addition to providing suitable edge support for the paver units, they are able to withstand the impact of vehicular traffic and/or snow removal equipment.

Curbs, gutters or curbed gutter, constructed to the dimensions of municipal standards (noting that these standards generally refer to cast-in-place concrete sections), are considered to be acceptable edge restraints for heavy duty installations. Where extremely heavy industrial equipment is involved such as container handling equipment, the flexural strength of the edge restraint should be carefully reviewed, particularly if a section that is flush with the surface is used and may be subjected to high point loading.

3.01 EXAMINATION

A. Verify that subgrade preparation, compacted density and elevations conform to the specifications.

B. Verify that geotextiles, if applicable, have been placed according to specifications and drawings.

C. Verify that aggregate base materials, thickness, compaction, surface tolerances and elevations conform to the specifications.

The aggregate base shall be spread and roller compacted in uniform layers not exceeding 6 in. (150 mm) thickness. Base surface tolerance shall be plus or minus 3/8 in. (10 mm) over a 10 ft. (3 m) straight edge. The Owner/Owner's representative shall inspect geotextile materials and placement (if applicable), base preparation, surface tolerances, elevations. Contractor shall conduct density tests for conformance to specifications.

Mechanical tampers (jumping jacks) are recommended for compaction of soil subgrade and aggregate base around lamp standards, utility structures, building edges, curbs, tree wells and other protrusions. Areas not accessible to roller compaction equipment shall be compacted to the specified density with mechanical tampers.

CAUTION - Care shall be taken around the perimeters of excavations, curbs, etc. These areas are especially prone to consolidation and settlement. Wedges of backfill should not be placed in

these areas. If possible, backfilling and compacting in these areas particularly should proceed in shallow lifts, parallel to the finished surface.

D. Verify the proper installation of the concrete curbing,-in terms of location, elevation, and adherence to the specifications.

E. Verify that the base is dry, uniform, even and ready to support aggregate, pavers and imposed loads.

F. Beginning of bedding course aggregates and paver installation shall signify acceptance of the base and concrete curb edge restraints.

3.02 SITE PREPARATION

A. The site must be stripped of all topsoil and other objectionable materials to the grades specified.

B. All subdrainage of underground services within the pavement area must be completed in conjunction with subgrade preparation and before the commencement of subbase construction.

C. After trimming to the grades specified, the pavement subgrade is to be proof rolled to 95% of Standard Proctor Maximum Dry Density. Soft spots or localized pockets of objectionable material shall be excavated and properly replaced with approved granular material.

D. The subgrade shall be trimmed to within 0 to 3/8 in. (0 to 10 mm) of the specified grades. The surface of the prepared subgrade shall not deviate by more than 3/8 in. (10 mm) from the bottom edge 39 in. (1 m) straight edge laid in any direction. A soil sterilant to inhibit weed growth may be applied at the direction of the Owner.

E. The Contractor shall insure that the prepared subgrade is protected from damage from inundation by surface water. **No traffic** shall be allowed to cross the prepared subgrade. Repair of any damage resulting shall be the responsibility of the Contractor and shall be repaired.

F. Under no circumstances shall further pavement construction proceed until the subgrade has been inspected by the Owner or the Consultant.

3.03 GRANULAR SUBBASE AND BASE INSTALLATION

A. After proper construction of the concrete curb edge restraints for the interlocking pavement as per Section 3.04, and upon approval by the Owner or Owner's representative, aggregate subbase (as specified in design) and base shall be placed in uniform lifts not exceeding 6 in (150 mm) loose thickness and roller compacted according to the AASHTO guidelines for installing open graded aggregates.

Subbase thickness shall be 4 inches.

Base thickness shall be 5 inches

B. The granular base shall be trimmed to within to within 0 to 3/8 in. (0 to 10 mm) of the specified grade. The surface of the prepared base shall not deviate more than 3/8 in. (10 mm) from the bottom edge of a 10 ft. (3 m) straight edge laid in any direction.

C. Before commencing the placing of bedding aggregate course and the placement of the concrete pavers, the base shall be inspected by the Owner.

3.04 EDGE RESTRAINTS

A. Adequate concrete edge restraint shall be provided along the perimeter of all paving as specified. The face of the concrete edge restraint, where it abuts pavers, shall be vertical down to the subbase.

B. All concrete edge restraints shall be constructed to dimensions and level specified and shall be supported on a compacted subbase not less than 6 in (150 mm) thick.

C. Concrete used for the construction of the edge restraints shall be air-entrained and have a minimum compressive strength as specified. All concrete shall be in accordance with ASTM C 94 requirements.

3.05 PAVER INSTALLATION

A. Spread the bedding aggregate evenly over the base course and screed to a nominal 1 ½ in. to 2 in. (28 mm to 51 mm) thickness. The bedding aggregate should not be disturbed. Place sufficient bedding aggregate to stay ahead of the laid pavers. Do not use the bedding aggregate to fill depressions in the base surface.

B. Initiation of paver placement shall be deemed to represent acceptance of the pavers.

C. Pavers shall be free of foreign material before installation.

D. Pavers shall be inspected for color distribution and all chipped, damaged or discolored pavers shall be replaced.

E. The pavers shall be laid in pattern(s) as shown on the drawings.

F. Joints between the pavers shall be maintained according to the spacer bars.

G. Gaps at the edges of the paved area shall be filled with cut pavers. Units cut no smaller than one-third of a whole paver are recommended along edges subject to vehicular traffic.

H. Pavers to be placed along the edge shall be cut with a double blade paver splitter or masonry saw.

I. The paver surface shall be swept clean of all debris before compacting, in order to avoid damage from point loads.

J. A low amplitude, high frequency plate compactor shall be used to compact the pavers into the bedding aggregate.

TABLE 5
PAVER THICKNESS AND REQUIRED MINIMUM COMPACTIVE FORCE

PAVER THICKNESS	**COMPACTIVE FORCE**
3 1/8 in. (80 mm)	5000 lbs (22kN)

H. The pavers shall be compacted and bedding aggregate shall be swept into all joints and void openings until they are full. This will require a least two or three passes with the compactor. Do not compact within 3 ft. (1 m) of any unrestrained edges of the laid paving units.

I. All work to within 3 ft. (1 m) of the laying face must be fully compacted at the completion of each day.

J. Excess surface bedding and void opening aggregates shall be swept off when the job is complete.

K. The final surface elevations shall not deviate more than 3/8 in. (10 mm) under a 10 ft. (3 m) straight edge.

L. The surface elevation of pavers shall be 1/8 in. to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.

3.06 FIELD QUALITY CONTROL

A. Final elevations shall be checked for conformance to the drawings after removal of excess joint sand.

END OF SECTION

SP 23 LIMESTONE MASONRY WALL

1.0 DESCRIPTION

This work shall consist of furnishing, fabrication and installation of all limestone components of the limestone masonry wall in accordance with these requirements, City of Bloomington Standards, and INDOT Standards, and as shown on the plans

2.0 MATERIALS. Materials shall be in accordance as follows:

A. Limestone: Grade – Variegated, details per construction plans
B. Waterproofing: Thermoseal or approved equal.

2.1 Submittals.

Submit shop drawings

a. Shop Drawings: Indicate pertinent dimensions, general construction, component connections anchoring methods, hardware and installation procedures. In addition provide specific fabrication drawings of limestone masonry wall.

2.2 Quality Assurance – Qualifications of Manufacturer: Manufacturer to be pre-qualified by specifier prior to 10 days before bidding. Failure to comply will result in disqualification of bid. Manufacturer to have at least five years experience in the manufacturer of limestone masonry field proven for at least five years.

2.3 Warranty – Manufacturer shall submit a written warranty for work for the period of two years upon acceptance of products.

3.0 CONSTRUCTION. Shall be in accordance with plans and specifications. Waterproofing of masonry wall shall be completed prior to backfilling operations.

4.0 METHOD OF PAYMENT

The work performed and the materials furnished in accordance with this item will be measured as noted below. Cost to include installation of each item, including materials, labor, fabrication, connectors, aggregate base and incidentals on construction plans and within special provision.

5.0 BASIS OF PAYMENT

This payment will include materials, shipping, placing, fabrication and installation and all incidentals necessary to complete the work. Aggregate base, aggregate backfill behind wall, 4” subdrain tile will be paid under the Lump Sum Price for the Trailhead Improvements.

Payment will be made under:

Pay Item	Pay Unit
Limestone Masonry Wall	LSUM

SP 24 HAWK SIGNAL

PEDESTRIAN HYBRID BEACON SIGNAL HEAD

DESCRIPTION

This work shall consist of constructing and installing a pedestrian hybrid beacon signal head assembly as described herein.

MATERIALS

Materials shall be in accordance with 922-T-168, Traffic Signal Materials and Equipment Recurring Special Provision, sections 922.01 - Description, 922.03 - Signal Head Components, 922.07 - Free Swinging Signal Support Assemblies, 922.08 - Mid-Mast Arm Mount Signal Bracket, and 922.11 - Signal Cable. Unless otherwise specified, all materials shall have a type C certification in accordance with section 916 - Materials Certification.

CONSTRUCTION REQUIREMENTS

805-T-169:

Construction shall be in accordance with 805-T-169, Traffic Signals Recurring Special Provision.

FHWA MUTCD Chapter 4F - Pedestrian Hybrid Beacons:

The pedestrian hybrid signal head shall meet the following standards of the FHWA MUTCD, dated December 2009, Chapter 4F - Pedestrian Hybrid Beacons:

1. FHWA MUTCD Section 4F.02 - Design of Pedestrian Hybrid Beacons

   The pedestrian hybrid beacon face shall consist of three signal sections, with a CIRCULAR YELLOW signal indication centered below two horizontally aligned CIRCULAR RED signal indications (see Figure 4F-3 of the FHWA MUTCD).

2. FHWA MUTCD Section 4F.03 - Operation of Pedestrian Hybrid Beacons

   a. Pedestrian hybrid beacon indications shall be dark (not illuminated) during periods between actuations.

   b. Upon actuation by a pedestrian, a pedestrian hybrid beacon face shall display a flashing CIRCULAR YELLOW signal indication, followed by a steady CIRCULAR YELLOW signal indication, followed by both steady CIRCULAR RED signal indications during the pedestrian walk interval, followed by alternating flashing CIRCULAR RED signal indications during the pedestrian clearance interval (see Figure 4F-3 of the FHWA MUTCD). Upon termination of the pedestrian clearance interval, the pedestrian hybrid beacon faces shall revert to a dark (not illuminated) condition.

   c. The pedestrian signal head shall continue to display a steady UPRAISED HAND (symbolizing DONT WALK) signal indication when the pedestrian hybrid beacon faces are either dark or displaying flashing or steady CIRCULAR YELLOW signal indications. The pedestrian signal heads shall display a WALKING PERSON (symbolizing WALK) signal indication when the pedestrian hybrid beacon faces are displaying steady CIRCULAR RED signal indications. The pedestrian signal

heads shall display a flashing UPRAISED HAND (symbolizing DON'T WALK) signal indication when the pedestrian hybrid beacon faces are displaying alternating flashing CIRCULAR RED signal indications. Upon termination of the pedestrian clearance interval, the pedestrian signal heads shall revert to a steady UPRAISED HAND (symbolizing DON'T WALK) signal indication.

Controller Assembly (CA):

The contractor shall configure and program all units of the controller assembly (CA), including but not limited to the controller unit (CU), malfunction management unit (MMU), bus interface units (BIU), cabinet power supply and load switches, in accordance with FHWA MUTCD Section 4F.03 - Operation of Pedestrian Hybrid Beacon.

The signal controller timings will be provided by the Department and the Engineer shall be present when the pedestrian hybrid beacon installation is to be placed in operation.

SIGNAL CANTILEVER STRUCTURES

The Indiana Department of Transportation Signal Cantilever Structure Detail Drawings dated 2011.01.20 shall be used with these plans.

STANDARD RECURRING SPECIAL PROVISION 922-T-168 TRAFFIC SIGNAL MATERIALS AND EQUIPMENT, SECTION 922.10, DELETE LINES 1272 THROUGH 1518 AND INSERT AS FOLLOWS:

(c) Signal Cantilever Structures

1. Materials

The signal cantilever pole, arms, base plates, arm flange plates, gusset plates, ring stiffeners, and pole splice plates shall be in accordance with ASTM A 595 or A 572 with minimum yield strength of 50,000 psi (345 mPa).

2. Hardware

Bolts for the pole splice shall be in accordance with ASTM A 490 and shall be galvanized. The contact area for both pole splice plates shall be Class B in accordance with AASHTO 10.32.3c with a minimum slip coefficient of 0.5. The surfaces shall be blast cleaned with class B coatings. The arm flange plate connection bolts shall be in accordance with ASTM A 325. All other hardware shall be in accordance with ASTM A 307 and galvanized in accordance with ASTM A 153, or be mechanically galvanized and in accordance with the coating thickness, adherence, and quality requirements of ASTM A 153, class C. A cast pole cap shall be in accordance with ASTM A 126 and shall be galvanized with a minimum coating of 2 oz/ft2 (0.610 kg/m2).

3. Anchor Bolts

Four steel anchor bolts, each fitted with 2 hex nuts and 2 flat washers, shall be furnished with each pole. The anchor bolt shall be as shown on the plans with a minimum of 15 in. (380 mm) of 7 NC threads on the upper end. The threads, nuts, and washers shall be galvanized in accordance with ASTM A 153 or be mechanically galvanized and conform to the coating thickness, adherence, and quality requirements of ASTM A 153. The steel for the bolt shall be in accordance with ASTM F 1554with a yield strength of 36,000 psi (248mPa) or 55,000 psi (379 mPa), or approved equal.

4. Finish

All steel material shall be fully galvanized. Galvanizing shall take place after all welding is accomplished and holes cut.

METHOD OF MEASUREMENT

Pedestrian hybrid beacon signal head will be measured by the number of units installed.

BASIS OF PAYMENT

The cost of all wiring, hardware, anchor bolts, and associated equipment to operate the pedestrian hybrid beacon installation shall be included in the cost of the controller and cabinet in accordance with 805-T-169, Traffic Signals Recurring Special Provision, section 805.16 - Basis of Payment.

The cost of signal face hook-up wire, pole plates and arms for side mounts, mid-mast arm mount, pipe arms, signal brackets, visors, louvers, bulbs, span hanger, backplates, balance adjuster, weatherhead, and all additional hardware required to assemble the pedestrian hybrid signal head shall be included in the cost of pedestrian hybrid beacon signal head.

Pedestrian hybrid beacon signal head will be paid for at the contract unit price per each.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Pedestrian Hybrid Beacon Signal Head	Each