



**SUPPLEMENTAL WORK AUTHORIZATION NO. 3  
TO  
WORK AUTHORIZATION NO. 2**

**WILLIAMSON COUNTY ROAD BOND PROJECT:  
SH 29 at DB Wood Road Intersection Improvements**

This Supplemental Work Authorization No. 3 to Work Authorization No. 2 is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated October 16, 2014 ("Contract") and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Unintech Consulting Engineering, Inc. (the "Engineer").

WHEREAS, the County and the Engineer executed Work Authorization No. 2 dated effective September 1, 2016 (the "Work Authorization");

WHEREAS, pursuant to Article 14 of the Contract, amendments, changes and modifications to a fully executed Work Authorization shall be made in the form of a Supplemental Work Authorization; and

WHEREAS, it has become necessary to amend, change and modify the Work Authorization.

**AGREEMENT**

NOW, THEREFORE, premises considered, the County and the Engineer agree that the Work Authorization shall be amended, changed and modified as follows:

- I. The Services to be provided by the County that were set out in the original Attachment "A" of the Work Authorization are hereby amended, changed and modified as shown in the attached revised Attachment "A".
- II.
- III. The Services to be provided by the Engineer that was set out in the original Attachment "B" of the Work Authorization are hereby amended, changed and modified as shown in the attached revised Attachment "B".
- IV. The Work Authorization shall terminate on June 30, 2019. The Services to be Provided by the Engineer shall be fully completed on or before said date unless extended by an additional Supplemental Work Authorization. The revised Work Schedule is attached hereto as Attachment "C".
- V. The maximum amount payable for services under the Work Authorization is hereby increased from \$985,855.37 to \$1,129,612.37. The revised Fee Schedule is attached hereto as Attachment "D".

Except as otherwise amended by prior or future Supplemental Work Authorizations, all other terms of the Work Authorization are unchanged and will remain in full force and effect.

This Supplemental Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

**IN WITNESS WHEREOF**, the County and the Engineer have executed this Supplemental Work Authorization, in duplicate, to be effective as of the date of the last party's execution below.

**ENGINEER:**  
By:   
Signature

**COUNTY:**  
By: \_\_\_\_\_  
Signature

Kum Wing (KW) Chan, P.E.  
Printed Name

\_\_\_\_\_  
Printed Name

Vice President  
Title

\_\_\_\_\_  
Title

11/30/2018  
Date

\_\_\_\_\_  
Date

*11/16/12/5/2018*

**LIST OF ATTACHMENTS**

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

## **ATTACHMENT A**

### **SERVICES TO BE PROVIDED BY THE COUNTY**

The **COUNTY** shall furnish to the **ENGINEER** the following items as required:

1. Existing traffic signal plans for the intersection of SH 29 and DB Wood Road
2. Existing traffic signal timing plan for the intersection of SH 29 and DB Wood Road
3. Available utility information at the intersection
4. Available ROW information at the intersection
5. Existing as-builts for SH 29 and DB Wood Road
6. Right-of-Entry documents for all properties within the project limits
7. Geologic Assessment
8. Timely review and decisions necessary for the **ENGINEER** to maintain project schedule.

## Attachment B

### WILLIAMSON COUNTY

#### SH 29 at D.B. Wood Road Improvements

#### **SUPPLEMENTAL AGREEMENT NO. 3 TO WORK AUTHORIZATION NO. 2** **SERVICES TO BE PROVIDED BY THE ENGINEER**

The SH 29 at D.B. Wood Road Improvement project ("Project") involves improvements to approximately 5,000 linear feet of SH 29 and 2,000 linear feet of D.B. Wood Road north of SH 29 and 1,000 linear feet south of SH 29. This intersection is in a high growth corridor for both Williamson County and the City of Georgetown. SH 29 is a major east-west corridor in central Williamson County, while DB Wood provides access along the west side of Georgetown in a north-south corridor. This area is within the study area for the future SW Bypass that will continue the SE Inner Loop from IH-35 around the southwest side of Georgetown connecting to DB Wood north of SH 29. Since the corridor has not been finalized, improvements to this intersection are critical to the efficient and safe movement of vehicles in the area.

Work Authorization No. 2, approved on September 1, 2016, was developed to implement a 4-lane raised median section with two turn lanes along SH 29, with concrete curb & gutter and open ditches behind the curb, utilizing swales for WPAP requirements. It will also include between a 5-lane and 6-lane section along DB Wood, with concrete curb & gutter, retaining walls, storm drain and open ditches behind the curb, utilizing both for WPAP.

The construction plan set (plan set) for this project shall contain the required drawings and details pertaining to grading, paving, signing, pavement marking, delineation, retaining walls, traffic signal modification, sequence of construction, traffic control, drainage and utility coordination. The plan set shall be prepared in English units and shall be suitable for the bidding and award of a contract through the County construction contracting system.

The tasks and products contained in this supplemental agreement are more fully described in the following TASK OUTLINE.

#### **TASK OUTLINE**

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#### **I. GEOTECHNICAL SERVICES (BY KLEINFELDER)**

The following tasks have been completed for the design of an MSE retaining wall and design and construction of pavements for the SH 29 and DB Wood Road Widening:

1. Kleinfelder provided engineering analysis for the external (bearing, sliding, overturning, and eccentricity) and global stability to provide design recommendations for a proposed MSE wall, labeled Retaining Wall No. 5 (RW #5), located on the west side of DB Wood and near the northern boundary of the project. The design recommendations included the following items:
  - Minimum lengths of the reinforcements that meet the minimum requirements by TxDOT in terms of bearing capacity, sliding, overturning, eccentricity, and global stability analysis. A cross section of the retaining wall that is representative of the design was provided by the client. Our scope of work included the analysis of one representative cross section.
  - Soil parameters for the foundation soils and retained soils. Evaluation of other foundation improvement alternatives is not included in this scope.
  - Internal stability evaluation will be performed by others.
2. The deliverable for the MSE retaining wall for this amendment is the TxDOT Design Data sheet and a summary cover letter.

## **II. ROADWAY GRADING & CROSS SECTIONS AND DRAINAGE DESIGN SERVICES (BY CP&Y)**

Additional effort for the SH 29 at DB Wood road project includes changes not anticipated from the original schematic and multiple efforts to 90% submittals, including:

- Additional right turn lane on SH29 affecting cross sections grading design, drainage design, drainage calculations, inlet design and storm sewer layout.
- Revisions to driveways affecting cross sections and grading design. New driveway at SH29 station 130+90 left – (Speedy Stop development), 148+60 right; removed driveways at, 132+40 left, 150+25 left & right; modified driveways at station 133+90 left, 136+20 right
- Modifications to median curb islands affecting cross sections and grading design
- Extend roadway construction limit to accommodate median left turn lane extension due to Morrison development from station 150+76 to 153+30, affecting cross sections and grading design.
- New alternative revisions for sidewalk alignment and profile on DB Wood Rd to 3' offset from ROW, northbound side, north of SH-29 affecting the cross sections and grading design.

The tasks and products contained in this supplemental agreement are more fully described in the following TASK OUTLINE.

### **TASK OUTLINE**

#### **A. ROADWAY DESIGN CONTROLS**

##### **1. GRADING AND CROSS SECTIONS**

- a. Additional EB right turn lane at First Baptist Church
- b. Driveway revisions affecting grading, and cross sections
- c. Additional cross section iterations for changes in median layouts
- d. Update earthwork quantities

#### **B. DRAINAGE**

##### **2. DRAINAGE DESIGN**

Storm Sewer Design, 10-yr design frequency

- a. Re-delineation of drainage areas due to changes in project and median locations.
- b. Additional area computation effort for changes to project limit.
- c. Additional storm sewer computation effort for changes to project.
- d. Additional effort on Drainage plan and profile sheets for changes to project.
- e. Update quantities and summary sheet

#### **E. PROJECT MANAGEMENT AND ADMINISTRATION**

7. Additional internal project coordination/meetings

## **III. ADDITIONAL DESIGN & COORDINATION (BY UNINTECH)**

There were several design changes listed below after Work Authorization No. 2 and Supplemental Work Authorization No. 1 executed that required a greater effort and different challenges that needed to be evaluated and designed in accordance with TxDOT, Williamson County and the City of Georgetown standards, including:

- ❖ Changes related to additional right turn lane to FBC
  - Add SH 29 EB right turn lane to FBC driveway at +/- Sta 141+00.
  - Add additional storage for WB left turn lane at +/- Sta 141+00.
  
- ❖ Changes related to Morris Development
  - Add median opening at Sta 148+60(+/-) to accommodate the new development on the south side of SH 29.
  - Add new driveway at Sta. 148+60 (+/-) on the south side of SH 29 for the new south side development.
  - Add SH 29 EB left-turn lane at the new median at Sta. 148+60 (+/-).
  - Add SH 29 WB left-turn lane at the new median at Sta. 148+60 (+/-).
  - Prepare design waiver on the above SH 29 WB or EB left-turn lanes at the new median in case the left turn lanes deceleration length does not meet TxDOT design criteria.

- Extend roadway construction limit to accommodate median left turn lane extension due to Morrison development UP TO 2,500 ft east of DB Wood Road Include deceleration lane (at new driveway on north side development) widening for portion of deceleration lane within construction limits.

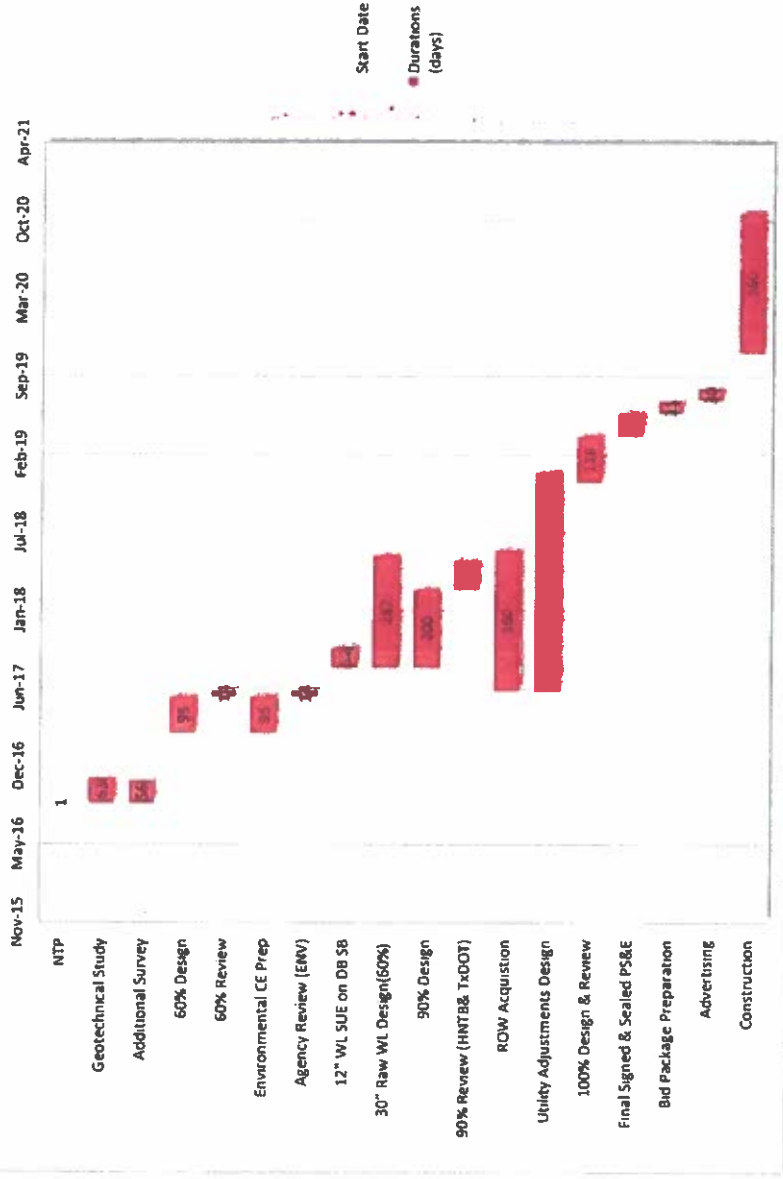
The following plan modifications are included in relate to the above changes:

- I. Roadway Design Controls
  - A. Miscellaneous Plans
  - B. Roadway Plans & Geometry
  - C. New Intersection Layout at Sta. 148+60 (+/-)
- II. Drainage
  - A. Erosion Control Plan - SWPPP Plan
  - B. Water Pollution Abatement Plan
- III. Signing and Pavement Markings
- IV. Miscellaneous Roadway
  - A. Traffic Control Plan
  - B. Quantities and Summary
  - C. Standards, Specifications and Estimate
- V. QA/QC Reviews for Additional Design Items.
- VI. Additional Project Management
  - A. Prepare & submit additional monthly invoices
  - B. Prepare additional monthly Progress Reports
  - C. Meetings with County/HNTB (3)
  - D. Prepare project meeting summaries (3)
  - E. Design Team coordination meetings (1 per month)
  - F. Review sub consultants monthly invoices, progress reports, etc.
  - G. Review & coordinate subconsultants designs
    - i. Review final geotechnical report & pavement designs – Kleinfelder
    - ii. Review additional drainage designs & cross sections – CP&Y
    - iii. Review intersection traffic study & temporary signal designs for TCP - HDR

# Attachment C - Work Schedule

Start Date	End Date	Description	Durations (days)
9/1/2016	9/2/2016	NTP	1
9/2/2016	11/4/2016	Geotechnical Study	63
9/2/2016	10/28/2016	Additional Survey	56
2/27/2017	6/2/2017	60% Design	95
6/2/2017	6/16/2017	60% Review	14
2/27/2017	6/2/2017	Environmental CE Prep	95
6/2/2017	6/16/2017	Agency Review (ENV)	14
8/15/2017	10/6/2017	12" WL SUE on DB S8	52
8/15/2017	5/29/2018	30" Raw WL Design(60%)	287
8/15/2017	3/3/2018	90% Design	200
3/3/2018	5/17/2018	90% Review (HNTB& TxDOT)	75
6/16/2017	6/11/2018	ROW Acquisition	360
6/16/2017	12/28/2018	Utility Adjustments Design	560
12/3/2018	3/31/2019	100% Design & Review	118
3/31/2019	5/30/2019	Final Signed & Sealed PS&E	60
5/30/2019	6/30/2019	Bid Package Preparation	31
7/2/2019	8/1/2019	Advertising	30
10/31/2019	10/25/2020	Construction	360

## DB Wood @ SH 29\_PS&E Schedule



**ATTACHMENT D - FEE SCHEDULE SUMMARY**

**SH 29 AT DB WOOD ROAD**

**Supplemental Work Authorization No. 3 to Work Authorization No. 2  
Williamson County**

Task Description		Total Cost
<b><u>I</u></b>	<b><u>LABOR COSTS ASSOCIATE WITH FBC RIGHT TURN LANE</u></b>	
A	GEO TECHNICAL SERVICE (See Separate Kleinfelder Fee Proposal)	\$ 7,725.00
B	ROADWAY GRADING & CROSS SECTIONS AND DRAINAGE DESIGN SERVICES (See Separate CP&Y Fee Proposal)	\$ 10,645.20
C	ROADWAY PS&E MODIFICATIONS	\$ 70,974.00
	<b>TOTAL LABOR EXPENSES - A + B + C</b>	<b>\$ 89,344.20</b>
<b><u>II</u></b>	<b><u>LABOR COSTS ASSOCIATE WITH MORRIS DEVELOPMENT</u></b>	
E	ROADWAY GRADING & CROSS SECTIONS AND DRAINAGE DESIGN SERVICES (40%) (See Separate CP&Y Fee Proposal)	\$ 7,096.80
F	ROADWAY PS&E MODIFICATIONS	\$ 47,316.00
	<b>TOTAL LABOR ASSOCIATE WITH MORRIS DEVELOPMENT</b>	<b>\$ 54,412.80</b>
	<b><u>TOTAL LABOR COSTS (I + II)</u></b>	<b>\$ 143,757.00</b>

**ATTACHMENT D**

**SH 29 AT DB WOOD ROAD**

**Supplemental Work Authorization No. 3 to Work Authorization No. 2**

**Fee Schedule/Budget for Unitech Consulting Engineers, Inc.**

Task Description	Project Manager	Senior Engineer	Project Engineer	Design Engineer	E.I.T.	Drainage Engineer	Senior CADD Operator	Admin / Clerical	Total Labor Hours	Total Direct Labor Costs
	\$195.00	\$160.00	\$135.00	\$110.00	\$95.00	\$130.00	\$95.00	\$45.00		\$ 7,725.00
<b>GEOTECHNICAL SERVICE (See Separate Kleinfielder Fee Proposal)</b>										
<b>ROADWAY GRADING &amp; CROSS SECTIONS AND DRAINAGE DESIGN SERVICES (See Separate CP&amp;Y Fee Proposal)</b>										
<b>ROADWAY P&amp;E PREPARATION/IV</b>										
<b>I Roadway Design Controls - F&amp;C</b>										
<b>A MISCELLANEOUS PLANS</b>										
1 Site visit to update project information	4	4	-	-	-	-	-	-	8	\$ 1,420.00
2 Update Title Sheet	1	1	2	-	-	-	2	-	6	\$ 815.00
3 Update index sheet	1	1	2	2	-	-	2	-	8	\$ 1,035.00
4 Update project layouts sheets	2	1	2	4	2	-	8	-	19	\$ 2,210.00
<b>B ROADWAY PLANS &amp; GEOMETRY</b>										
1 Update demolition plan	1	2	2	2	2	-	8	-	17	\$ 1,955.00
2 Update typical sections - Add three (3) Typical Sections on SH 29	3	4	8	8	8	-	16	-	47	\$ 5,465.00
3 Update Roadway P&P Sheets	8	12	12	12	20	-	40	-	104	\$ 12,120.00
4 Update driveways layout and details	2	4	8	12	12	-	32	-	70	\$ 7,610.00
<b>C INTERSECTION LAYOUT</b>										
1 New intersection layouts @ Sta. 148+60 (+/-) - SH 29 and DB Wood	2	4	8	12	12	-	24	-	62	\$ 6,850.00
2 Wheelchair Ramp Layout and Details @ New intersection above	1	2	4	6	2	-	12	-	27	\$ 3,045.00
<b>TOTAL - I</b>										<b>\$ 42,525.00</b>
<b>II Drainage Erosion Control and WPAP</b>										
<b>A DRAINAGE AND EROSION CONTROL DESIGN</b>										
1 Update SW3P plan	2	4	4	4	4	-	16	-	38	\$ 4,430.00
<b>B WATER POLLUTION ABATEMENT PLAN</b>										
1 Update WPAP	4	4	8	8	4	-	20	-	52	\$ 6,180.00
2 Submit WPAP	2	2	4	4	-	-	12	4	28	\$ 3,010.00
<b>TOTAL - II</b>										<b>\$ 13,620.00</b>

III SIGNING, PAVEMENT MARKINGS, SIGNALIZATION									
<b>A Signing and Pavement Markings</b>									
1	Update Small signs, pavement markings plan sheets	4	8	8	12	12	24	68	\$ 7,880.00
2	Small signs detail sheets	2	4	6	8	12	38	\$ 4,400.00	
<b>TOTAL - III</b>									\$ 12,280.00
<b>IV Miscellaneous Roadway</b>									
<b>A Traffic Control Plan</b>									
1	Update traffic control plans	4	4	4	4	4	12	32	\$ 3,920.00
2	Update TCP Narrative	2	4	-	-	-	2	8	\$ 1,220.00
<b>B Quantities and Summary</b>									
1	TCP by phase	1	2	2	2	4	4	11	\$ 1,385.00
2	Earthwork and Roadway	2	4	10	6	12	44	\$ 5,190.00	
3	Pavement markings and Small signs	1	2	4	6	4	21	\$ 2,445.00	
4	Erosion Control and SWGP	1	2	2	4	4	13	\$ 1,605.00	
<b>C Standards, Specifications and Estimate</b>									
1	Update and Modify Standards	2	4	6	-	-	8	20	\$ 2,600.00
2	Update General Notes	4	4	-	-	-	8	\$ 1,420.00	
3	Update Construction Cost Estimate	2	4	4	4	4	22	\$ 2,770.00	
4	Update Specifications	2	4	-	-	2	8	\$ 1,220.00	
<b>TOTAL - IV</b>									\$ 23,775.00
<b>V QA/QC Review For Additional Design Items</b>									
1	QA/QC Review For Additional Design Items	8	16	8	-	-	16	48	\$ 6,720.00
<b>TOTAL - V</b>									\$ 6,720.00
<b>VI Additional Project Management</b>									
A	Prepare and submit monthly invoices	10	-	-	-	-	-	15	\$ 2,175.00
B	Prepare monthly progress reports	5	-	-	-	-	-	5	\$ 975.00
C	Monthly coordination meetings with County/HNTB	24	-	-	-	-	-	24	\$ 4,680.00
D	Prepare project meeting summaries	16	-	-	-	-	-	16	\$ 3,120.00
E	Design Team coordination meetings (2 per month)	10	10	-	-	-	20	\$ 3,550.00	
F	Review of sub consultants monthly invoices, progress reports, etc.	6	6	-	-	-	12	\$ 2,130.00	
G	Review & Coordinate Sub consultant Designs	-	-	-	-	-	0	\$ -	
i)	Review final geotechnical report & pavement designs - Kleinfeider	4	4	-	-	-	4	\$ 780.00	
ii)	Review additional drainage designs & cross sections from CP&Y	4	4	-	-	-	4	\$ 1,960.00	
<b>TOTAL - VI</b>									\$ 19,370.00
<b>ADDITIONAL DESIGN &amp; COORDINATION (UNINTECH Fee Proposal)</b>									\$ 118,290.00
<b>SUBTOTAL SUPPLEMENTAL #3 FEE TASKS</b>									\$ 143,757.00



## Attachment D

### FEE ESTIMATE

**SH29 and DB Wood Widening  
DB Wood MSE Wall  
Williamson County, Texas**

<b>Engineering - MSE Wall</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>	<b>Cost</b>
CADD Operator MSE Wall Design Data Sheet	3	hour	\$ 70.00	\$ 210.00
Senior Engineer, MSE Wall Design Information includes external and global stability, embankment settlement, and soil parameters for foundation and retained soils, minimum reinforcement length, and ground improvement depth if needed	13	hour	\$ 155.00	\$ 2,015.00
Senior Principal Professional, MSE Wall Review	6	hour	\$ 160.00	\$ 960.00
Senior Principal Professional, Project Management	4	hour	\$ 160.00	\$ 640.00
Assistant Project Manager	0	hour	\$ 95.00	-
Administrative I	2	hour	\$ 50.00	\$ 100.00
<b>Subtotal</b>				<b>\$ 3,925.00</b>
<b>Additional MSE Wall Consultation</b>				
Senior Principal Professional	4.25	hour	\$ 160.00	\$ 680.00
Senior Engineer	7	hour	\$ 155.00	\$ 1,085.00
<b>Subtotal</b>				<b>\$ 1,765.00</b>
<b>Additional Pavement Consultation</b>				
Senior Principal Professional	4	hour	\$ 160.00	\$ 640.00
Senior Engineer	6	hour	\$ 155.00	\$ 930.00
Project Professional	3	hour	\$ 130.00	\$ 390.00
Administrative I	0	hour	\$ 50.00	-
<b>Subtotal</b>				<b>\$ 1,960.00</b>
<b>Total</b>				<b>\$ 7,850.00</b>

SH 29 AT DB WOOD ROAD							
Williamson County							
Fee Schedule/Budget for CP&Y, Inc.							
Task Description	Project Manager	Senior Engineer	Design Engineer	E.I.T.	Chief Hydrologist	Total Labor Hours	Total Direct Labor Costs
	\$225.00	\$155.00	\$115.00	\$95.00	\$185.00		
<b>I thru V, PS&amp;E</b>							
<b>I Roadway Design Controls</b>							
A Grading & Design Cross Sections at 50-ft intervals	5	9	22	42		78	\$ 9,082.00
<b>II Drainage (A-1 through A-4)</b>							
B Storm sewer design, 10-yr frequency							\$ -
a Interior Drainage Areas	1		3	8	-	10	\$ 1,146.00
b Run-off Calculations	1		3	6	-	10	\$ 1,146.00
c Analyze Storm Sewer Systems	1		6	10	-	17	\$ 1,875.00
d Drainage Plan & Profile 1"=100' H and 1"=10' V	1		7	16	-	24	\$ 2,568.00
						61	\$ 6,733.00
<b>IV Miscellaneous (Roadway)</b>							
C-1 Earthwork	-	1	-	2	-	3	\$ 347.00
C-2 Drainage	-	1	-	2	-	3	\$ 347.00
C-3 Summary Sheets	-	-	-	-	-		\$ -
						6	\$ 694.00
<b>V Project Management (8 Months)</b>							
7 Internal Design Team Meetings (8)	2	3	-	3		8	\$ 1,203.00
						8	\$ 1,203.00
<b>I thru V, PS&amp;E- SUBTOTAL</b>							
HOURS SUB-TOTALS	11	14	41	87	0	153	\$ 17,712.00
SUBTOTAL	\$ 2,475.00	\$ 2,170.00	\$ 4,715.00	\$ 8,352.00	\$ -		\$ 17,712.00
DIRECT EXPENSES							\$ 30.00
WORK AUTHORIZATION 3 TOTAL							\$ 17,742.00
Estimated Portion of Fee Related to Changes due to Developments							40% \$ 7,096.80

Expense Item	Unit	Unit Cost	Amount	Total Cost
CADD Plotting	sf	\$ 1.50		\$ -
Mylar Plots (22x34 As-Builts)	#	\$ 6.00		\$ -
Digital Ortho Plotting	#	\$ 2.00		\$ -
11" X 17" Mylar	sheet	\$ 1.00		\$ -
8 1/2" X 11" B/W Paper Copies	sheet	\$ 0.10		\$ -
11" X 17" B/W Paper Copies	sheet	\$ 0.15	200	\$ 30.00
8 1/2" X 11" Color Paper Copies	sheet	\$ 1.00		\$ -
11" X 17" Color Paper Copies	sheet	\$ 1.80		\$ -
Fax Copies	sheet	\$ 0.10		\$ -
Film and Development	roll	\$ 8.00		\$ -
4 X 6 Digital Color Prints	picture	\$ 0.50		\$ -
Oversized Digital Color Prints	picture	\$ 50.00		\$ -
Standard Postage	letter	\$ 0.44		\$ -
Express Mail (Standard)	each	\$ 15.00		\$ -
Express Mail (Oversized)	each	\$ 30.00		\$ -
Deliveries	each	\$ 25.00		\$ -
Airfare	each	\$ 200.00		\$ -
Rental Car	day	\$ 80.00		\$ -
Lodging	day	\$ 85.00		\$ -
Meals	day	\$ 38.00		\$ -
Mileage	mile	\$ 0.550		\$ -
GPS Rental	day	\$ 80.000		\$ -
HazMat Database Search	each	\$ 250.000		\$ -
Miscellaneous Project Related Expenses	NA	at cost		\$ -
<b>SUBTOTAL DIRECT EXPENSES</b>				<b>\$ 30.00</b>