

SUPPLEMENT NO. 2
SCOPE OF WORK
WOLF ROAD, 143RD STREET TO 167TH STREET
WIDENING PROJECT
November 18, 2014

SCOPE OF WORK

Tasks included within this Scope of Work provide for completing the necessary studies and documentation for the Wolf Road, 143rd Street to 167th Street widening project in Orland Park. The tasks to complete the project are detailed in the following work elements:

- I. Update Traffic Data.
- II. Update Crash Data and Analysis
- III. Update Topographic Survey
- IV. Update Noise Analysis
- V. Preliminary Design Studies
- VI. Location and Drainage Studies
- VII. Update Environmental Surveys
- VIII. Project Development Report
- IX. Meetings
- X. Administration
- XI. QA/QC

I. UPDATE TRAFFIC DATA

Previously prepared Intersection Design Studies will be revised to reflect current traffic volumes as well as pending improvements along the corridor. Four intersections will be revised; 167th Street, 159th Street, 153rd Street, and 151st Street. The Intersection Design Study at Wolf Road and 143rd Street is being performed by others and will be incorporated into the Wolf Road Project. Updated peak hour traffic counts will be obtained at all four intersections along with projected 2040 traffic volumes. Updated Capacity Analyses will be performed at the four intersections and revisions made as needed to the Intersection Design Studies.

II. UPDATE CRASH DATA AND ANALYSIS

Updated crash data will be obtained along the corridor for the years 2011-2014. The analysis will be revised to reflect the new data.

III. UPDATE TOPOGRAPHIC SURVEY

A field investigation will be performed to compare the previously performed survey with new developments that have occurred. Detailed topographic survey will then be performed at locations where the previously performed survey has been outdated. Approximately 5000 feet of new survey is estimated.

IV. UPDATE NOISE ANALYSIS

A new Noise Analysis will be performed based on the new Noise Policy effective July 13, 2011.

V. PRELIMINARY DESIGN STUDIES

The proposed typical section will be reviewed and compared to changed conditions and desires of the Village of Orland Park. The horizontal and vertical alignment will be reviewed and modified to reflect a possible new typical section and right-of-way conditions.

VI. LOCATION DRAINAGE STUDIES

The drainage design will be revised to reflect the elimination of the proposed bio-swales. A Location Drainage Study will be prepared and submitted to the Village and IDOT for approval based on IDOT's typical design standards for conveyance, detention and mitigation. The existing culverts at Marley Creek and Spring Creek will be inspected to determine their condition and a recommendation made as to whether to extend or replace the culverts.

VII. UPDATE ENVIRONMENTAL SURVEYS

An ESR Addendum will be prepared to update the various environmental clearances needed for the project including wetlands, biological and PESA.

VIII. PROJECT DEVELOPMENT REPORT

The Project Development Report will be revised and updated to reflect the modifications made.

IX. MEETINGS

Preparation and attendance at one Public Meeting, one FHWA/IDOT Coordination Meeting, and four agency coordination meetings.

X. ADMINISTRATION

Miscellaneous administration including invoicing, correspondence, etc.

XI. QA/QC

Perform QA/QC reviews of the project.

PHASE I ENGINEERING
SUPPLEMENTAL MANHOUR ESTIMATE
Wolf Road (143rd Street to 167th Street)
SUPPLEMENT NO. 2

ATTACHMENT A

Project Name: Wolf Road (143rd Street to 167th Street)
Client: Village of Orland Park
Date: November 11, 2014

I. UPDATE TRAFFIC DATA (Based on 2040 CMAP Traffic Modeling)

- | | |
|---|---------|
| A. Update Traffic Data and HCS Analysis for 4 intersections | 48 hrs |
| B. Update IDS sheets for 4 intersections | 320 hrs |
| C. Update COSIM analysis for 4 interesections | 32 hrs |

TOTAL UPDATE TRAFFIC DATA = 400 hrs

II. UPDATE CRASH DATA AND ANALYSIS (Need 2011-2014 data)

- | | |
|--|--------|
| A. Request and obtain crash data from IDOT | 4 hrs |
| B. Update crash analysis | 24 hrs |

TOTAL UPDATE CRASH DATA AND ANALYSIS = 28 hrs

III. UPDATE TOPO SURVEY

- | | |
|---|---------|
| A. Perform field visit to determine areas where updated topo needed | 8 hrs |
| B. Perform Topographic Survey (assumes 5,000 feet, one side needed) | 160 hrs |
| C. Download Survey data and update topo base sheet | 12 hrs |

TOTAL UPDATE CRASH DTA AND ANALYSIS = 180 hrs

IV. UPDATE NOISE ANALYSIS (Based on new Noise Policy effective July 13, 2011)

- | | |
|------------------------------|--------|
| A. Data Collection | 70 hrs |
| B. Noise Impact Analysis | 20 hrs |
| C. Noise Study Documentation | 32 hrs |
| D. Update Air Quality | 8 hrs |

TOTAL NOISE ANALYSIS = 130 hrs

V. PRELIMINARY DESIGN STUDIES

- | | |
|---|--------|
| A. Review and revise proposed typical sections | 16 hrs |
| B. Review currently proposed horizontal alignment | 8 hrs |
| C. Review currently proposed vertical alignment/R.O.W. requirements | 12 hrs |
| D. Revise horizontal and vertical alignments based on new typical section | 60 hrs |

TOTAL NOISE ANALYSIS = 96 hrs

**PHASE I ENGINEERING
SUPPLEMENTAL MANHOUR ESTIMATE
Wolf Road (143rd Street to 167th Street)**

ATTACHMENT A

VI.	LOCATION DRAINAGE STUDIES (Update based on elimination of bio-swales)		
	A. Existing Drainage Plan (EDP)	8 hrs	
	B. Marley Creek and Spring Creek culvert inspection and report	24 hrs	
	C. Drainage Design and Modeling	32 hrs	
	D. Proposed Drainage Plan and Profile (PDP)	60 hrs	
	E. Floodplain Encroachment Evaluation	12 hrs	
	F. Permitting	40 hrs	
	G. Study Assembly	24 hrs	
	TOTAL LOCATION DRAINAGE STUDIES =		200 hrs
VII.	UPDATE ENVIRONMENTAL SURVEYS		
	A. Prepare and Submitt AddendumESR	6 hrs	
	B. Update PESA Submittal	6 hrs	
	C. Submit PSI request, Evaluate PSI (PSI by IDOT)	8 hrs	
	D. Update Wetlands (Wetland delineations by INHS/IDOT)	8 hrs	
	TOTAL UPDATE ENVIRONMENTAL SURVEYS =		28 hrs
VIII.	PROJECT DEVELOPMENT REPORT		
	A. Draft	40 hrs	
	B. Pre-final	40 hrs	
	C. Final	32 hrs	
	D. Cost Estimate	16 hrs	
	TOTAL PROJECT DEVELOPMENT REPORT =		128 hrs
IX.	MEETINGS		
	A. Public Information Meeting; Assume 1 Meeting	16 hrs	
	B. FHWA Coordination Meetings	8 hrs	
	C. Agency Coordination Meetings; Assume 4 meetings	24 hrs	
	TOTAL PUBLIC MEETINGS =		48 hrs
X.	ADMINISTRATION		40 hrs
XI.	QA/QC		24 hrs
	SUPPLEMENT SUBTOTAL		1302 hrs

COST ESTIMATE SUPPLEMENT NO. 2



Payroll Escalation Table
Fixed Raises

FIRM NAME
PRIME/SUPPLEMENT

URS

DATE 11/18/14
PTB NO.

CONTRACT TERM
START DATE
RAISE DATE

12 MONTHS
1/1/2015
1/1/2015

OVERHEAD RATE
COMPLEXITY FACTOR
% OF RAISE

118.54%
0
3.00%

ESCALATION PER YEAR

1/1/2015 - 1/1/2015	1/2/2015 - 1/1/2016		
0	12		
12	12		

= 0.00%
= 1.0300

103.00%

The total escalation for this project would be:

3.00%



Payroll Rates

3.00%

[illegible]



**Cost Estimate of
Consultant Services
(CPFF)**

Date	11/18/14
Overhead Rate	118.54%
Complexity Factor	0

DBE 0.00%

Consultant
URS

1

[illegible]



Average Hourly Project Rates

Route	Wolf Road
Section	
County	Cook
Job No.	
PTB/Item	

Consultant URS

Date 11/18/14

Sheet 2 OF 1

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**Illinois Department
of Transportation**

Summary of Direct Costs

Firm URS Corporation
Route Wolf Road
Section _____
County Cook
Job No. _____
Project No. _____

Date 11/18/14

WORK ITEM	DESCRIPTION	UNITS	UNIT COST	QTY	# SETS / TRIPS	COST
Update Noise Analysis	Mileage	Day	45.000	1	1	45.00
					Sub-total	45.00
Location Drainage Studies	Mileage	Day	45.000	1	1	45.00
					Sub-total	45.00
Meetings	Mileage	Day	45.000	1	6	270.00
						270.00

TOTAL DIRECT COSTS 0 **\$ 360.00**