ACTION TRANSMITTAL No. 2014-39

DATE:	June 5, 2014
TO:	Transportation Advisory Board
FROM:	Technical Advisory Committee
PREPARED BY:	Carl Ohrn, Planning Analyst 651-602-1719
SUBJECT:	Scope Change for Hwy 61 and Hwy 97 Reconstruction and Roundabout
REQUESTED ACTION:	MnDOT requests a scope change to modify the scope of SP 8206-45 to eliminate one grade-separated pedestrian crossing and add various pedestrian facilities. The total project costs increase to $7,082,697 with $5,376,000 federal Surface Transportation Program (STP) funding and $1,744,000 MnDOT and other funding in 2016.
RECOMMENDED MOTION:	Recommend approval of the request to modify the scope and project cost for Hwy 61 and Hwy 97 project described above.

BACKGROUND AND PURPOSE OF ACTION:
In the 2011 solicitation, MnDOT received $5,376,000 in STP funding for the Trunk Highway 61 and Trunk Highway 97 Reconstruction and Roundabout Project. The project is programmed in 2015. The scope change request and supporting information are attached. A TIP amendment is not required because these changes, if approved, can be incorporated into the 2015-2018 TIP.

RELATIONSHIP TO REGIONAL POLICY: Projects that receive funding through the regional solicitation process are subject to the regional scope change policy. The purpose of this policy is to ensure that the project is designed and constructed according to the plans and intent described in the original application. Additionally, federal rules require that any federally-funded project scope change must go through a formal review and TIP amendment process if the project description or total project cost changes substantially. The scope change policy and process allow project sponsors to make adjustments to their projects as needed while still providing substantially the same benefits described in their original project applications.

STAFF ANALYSIS: The project changes the pedestrian and bicycle facilities provided in the project. The major project elements to reconstruct the north and south intersections of Hwy 61 and Hwy 97, removal of signals, construction of two roundabouts, replacing drainage system and other infrastructure, upgrading intersection and roadway lighting, constructing a dedicated school only driveway entrance for the south roundabout and many pedestrian and bicycle facilities will not change. The original project includes two pedestrian grade-separated crossings at the north roundabout, one to serve east-west movement and one to serve north-south movement which will be eliminated. In place of

the grade-separated crossing to serve the north-south movement, an at-grade pedestrian crossing will be provided.

East of the north roundabout near the school entrance, an at-grade Mid-Block Rapid Flashing Beacon signal system pedestrian crossing will be added. Also, the urban curb and gutter section will be extended further east of the north roundabout, reducing shoulder width, and constructing a center median which will serve as a refuge for pedestrians and students crossing Hwy 97.

At the south roundabout, the addition of an at-grade (east-west) crossing on the south side with extensions to local pedestrian trail facilities east and west of Hwy 61 will be added.

Pedestrian accommodations will meet ADA/PROWAG requirements.

The project received a score of 999. The integration of modes criteria had a total possible score of 75 points. The project received 74 points. Given the lowest scoring project to be funded had a score of 791, the project would have been funded even if it scored no points for integration of modes.

Based on review of the information provided in the scope change request and the original application, staff recommends approval of the requested scope change. The modified project description and budget should be incorporated into the 2015-2018 TIP.

COMMITTEE COMMENTS AND ACTION: At its May 15, 2014, meeting, the Funding and Programming Committee unanimously recommended approval of this scope change request. At its June 4, 2014 meeting, the Technical Advisory Committee unanimously recommended approval of this scope change request. It was noted that this project would have scored well in the initial scoring even if the pedestrian facility had been omitted originally.

ROUTING

TO	ACTION REQUESTED	DATE COMPLETED
TAC Funding & Programming Committee	Review & Recommend	May 15, 2014
Technical Advisory Committee	Review & Recommend	June 4, 2014
Transportation Advisory Board	Review & Approve	

Minnesota Department of Transportation
Metro District
1500 West County Road B-2
Roseville, MN 55113

May 1, 2014

Mr. Karl Keel
TAC Funding & Programing Committee
1700 West 98th Street
Bloomington MN 55431

RE: SP 8206-45 Hwy 61 & Hwy 97 Reconstruction and Roundabouts – Scope Change Request

INTRODUCTION

The Minnesota Department of Transportation (MnDOT) was successful in the 2011 Regional Solicitation for Federal Surface Transportation Program (STP) Funding to reconstruct Hwy 61 & Hwy 97 intersections in Forest Lake. The 2014-2017 State Transportation Improvement Program (STIP) has $5,376,000 in federal funding with a total project cost of $6,720,000 scheduled for improvements in state fiscal year 2016. Although the original project description has changed since its submittal, the objective and benefits remain unchanged and consistent with its original intent. Please consider this formal scope change request and the ability to retain federal funding levels in order to move forward with the projects revised scope.

ORIGINAL PROJECT DESCRIPTION AND BENEFITS

To better address traffic flow in the area, the project will:

- Reconstruct the North and South intersections of Hwy 61 (Forest Lake Blvd) and Hwy 97 (Scandia Trail North) in Forest Lake
- Remove signals and construct roundabouts
- Construct a dedicated school only driveway entrance from the South roundabout to the Forest Lake High school
- Improve pedestrian and bicycle facilities including a grade separated crossing
- Replace drainage systems other infrastructure
- Upgrade intersection and roadway lighting

The objective and benefits of Hwy 61 & Hwy 97 reconstruction and roundabouts project is to:

- Improve traffic flow and safety
- Solve capacity problems
- Reduce delays and congestion
- Better pedestrian and bicycle connections and accessibility
- Improved drainage

The overall original project objectives and benefits as defined above remain unchanged and will be achieved with the project. The change in scope will also maintain the original project objectives and benefits as identified under the *Integration of Modes Section* of the STP application where the scope change applies.

REQUESTED CHANGE OF SCOPE

Since the 2011 STP application, MnDOT project management team has been working closely with City of Forest Lake, Forest Lake School District, MnDOT Bicycle/Pedestrian, ADA , and other functional units, to evaluate the overall pedestrian and bicyclist needs along this corridor. During the geometric layout development process we identified that the 2011 STP Application concept did not fully accommodate all user needs at both intersections and along the corridor. There were questions raised regarding the projects ability to serve all community users as well as students. We also evaluated ADA accessibility and usability with respect to direct and shortest route options, and to provide pedestrian or bicyclist access at the south roundabout.

This further project development yielded a hybrid grade separated and at-grade alternative which included the following changes to the scope which falls under the *Integration of Modes Section* of the STP application (*Attached*).

- Construct one (East West) grade separated pedestrian crossing on the south side at the North roundabout and eliminate the (North-South) elevated crossing as proposed in the original STP application.
- Addition of at-grade crossings at the North roundabout.
- Addition of an at-grade Mid-Block Rapid Flashing Beacon signal system pedestrian crossing near the school entrance. Extending the urban curb and gutter section further east of the North roundabout, reducing shoulder width, and constructing a center median which will serve as a refuge for pedestrians and students crossing Hwy 97.
- Addition of at-grade (East-West) crossing on the south side at the South roundabout with extensions to local pedestrian/trail facilities east and west of Hwy 61.
- Pedestrian accommodations to meet ADA/PROWAG requirements.

Attached are the 2011 STP application concept and the current hybrid grade separated and at-grade alternative layout.

The scope change revision improvements as noted add to and maintain all identified benefits under the original *Integration of Modes* category by maintaining a grade separated pedestrian crossing option at the northern junction of Hwy 61 and Hwy 97, new pedestrian/shared use path connections to existing trails and planned shared use facilities. It also provides the connections between the Hardwood Creek Trail, residential areas and pedestrian improvements that City of Forest Lake is planning with its Safe Routes to School projects. These improvements will in total increase usability and facilitate a safer pedestrian & bicycle environment for all users in the community.

MODIFIED PROJECT DESCRIPTION AND COST ESTIMATE

The overall original project description, objectives, and benefits will remain unchanged and will be achieved with this project. Change in scope as defined in the new hybrid grade separated and at-grade alternative will also maintain the original project objectives and benefits as identified under the *Integration of Modes Category* where the requested scope change applies.

The 2014-2017 State Transportation Improvement Program (STIP) has $5,376,000 in federal funding with a total project cost of $6,720,000 improvements in state fiscal year 2016. A Formal STIP Amendment will not be required for this project. The scope change and funding levels will be updated in the 2015-2018 TIP.

In order to be consistent with the revised scope and proposed hybrid grade separated and at-grade alternative design, a new cost estimate was developed. Although the revised project scope eliminates the North-South elevated ramp, the updated total project cost has increased slightly. Table 1 summarizes the 2011 STP application project estimate and 2014-2017 STIP totals. Table 2 summarizes the updated layout project estimate and 2015-2018 TIP totals.

TABLE 1 - STP Application	Estimate	(+) Inflation
Ped Bridge & Elevated Ped Ramp	$1,578,000	$1,771,477.21
Roadway and Other Elements	$4,408,055	$4,948,522.79
	$5,986,055	**$6,720,000**

	Federal	State	Other	Total
2014-2017 STIP	$5,376,000	$1,344,000	$0	**$6,720,000**

TABLE 2 - Revised Scoping	Estimate	(+) Inflation
East-West Pedestrian Bridge - North RAB	$1,980,000	$2,162,160
Additional Pedestrian Improvements	$258,500	$282,282
Roadway and Other Elements	$4,247,486	$4,638,255
	$6,485,986	**$7,082,697**

	Federal	State	Other	Total
2015-2018 TIP	$5,376,000	$1,344,000	$400,000	**$7,082,697**

The updated construction total cost estimate has increased to $7,082,697. Also note that the updated estimate for the East-West Pedestrian Bridge at the North roundabout and Additional Pedestrian Improvements cost is higher than the Pedestrian Bridge & Elevated Pedestrian Ramp estimate at the time of the 2011 STP Application. This cost estimate better represents the proposed improvements associated with Hwy 61 & Hwy 97 Reconstruction and Roundabouts Project.

MnDOT would propose that the formal scope change request and the ability to retain federal funding levels for the project is allowed to move forward. If you have any questions, I can be reached at 651-234-7715 or by e-mail dmitry.tomasevich@state.mn.us

Sincerely,

Dmitry Tomasevich, P.E.
East Area Engineer
MnDOT Metro District

Cc: Adam Josephson, MnDOT Metro East Area
Colleen Brown, MnDOT Metro State Aid
Brian Isaacson, MnDOT Metro Program Management
Ryan Gaug, MnDOT Metro Program Management

Attachments:
(1) 2011 STP Application Cover Page
(2) 2011 STP Application Integration of Modes Section
(3) 2011 STP Application Layout Concept
(4) Hybrid Grade Separated and At-Grade Alternative
(5) 2011 STP Application Cost Estimate
(6) Updated Hybrid Grade Separated and At-Grade Alternative Construction Cost Estimate

Federal STP-UG Funding Application (Form 1)

INSTRUCTIONS: Complete and return completed application to Kevin Roggenbuck, Transportation Coordinator, Transportation Advisory Board, 390 North Robert St., St. Paul, Minnesota 55101. (651) 602-1728. Form 1 needs to be filled out electronically. Please go to Metropolitan Council's Regional Solicitation website for instructions. **Applications must be received by 5:00 PM at the Metropolitan Council FTP site or postmarked on July 18, 2011. *Be sure to complete and attach the Project Information form.**	Office Use Only

I. GENERAL INFORMATION

1. APPLICANT: Minnesota Department of Transportation			
2. JURISDICTIONAL AGENCY (IF DIFFERENT): Mn/DOT			
3. MAILING ADDRESS: 1500 W County Road B2			
CITY: Roseville	STATE: MN	ZIP CODE:55113	4. COUNTY: Ramsey
5. CONTACT PERSON: Adam Josephson	TITLE: East Area Manager		PHONE NO. (651)234-7719
CONTACT E-MAIL ADDRESS: adam.josephson@state.mn.us			

II. PROJECT INFORMATION

6. PROJECT NAME: TH 97/TH 61 Intersection Reconstruction with Multi-Lane Roundabouts

7. BRIEF PROJECT DESCRIPTION (Include location, road name, type of improvement, etc...):
This project will reconstruct the TH 97 / TH 61 intersections in Forest Lake. It will remove signals at the south junction of TH 97/TH 61/210th St. and at the north junction of TH 97/TH 61 and construct multi-lane roundabouts at both junctions. It will also construct a dedicated school-only entrance from northbound TH 61 to the Forest Lake High School as well as bike/pedestrian improvements at the northern portion of the project including a grade seperated crossing. The project will solve capacity and safety problems at the intersections and support adjacent land use throughout the project area.

8. STP PROJECT CATEGORY - Check only one project grouping in which you wish your project to be scored.

"A" Minor Arterials:

☐ Reliever	☒ Expander	☐ Non-Fwy. Principal Arterial
☐ Connector	☐ Augmenter	☐ Bikeway/Walkway

III. PROJECT FUNDING

9. Are you applying or have you applied for funds from another source(s) to implement this project? Yes ☐ No ☒
If yes, please identify the source(s):

10. FEDERAL AMOUNT: $4,800,000	13. MATCH % OF PROJECT TOTAL: 20%
11. MATCH AMOUNT: $1,200,000	14. SOURCE OF MATCH FUNDS: Mn/DOT
12.* PROJECT TOTAL: $6,000,000	15. REQUESTED PROGRAM YEAR (CIRCLE): ☒2015 ☐2016
16. SIGNATURE Scott L 2	17. TITLE: Metro District Engineer

classifications, the existing access locations inconsistent with the proposed access management approach and any access locations that will be modified:

e. Private Residential Driveways/Field Entrances

RESPONSE:

There are two private driveways in the project area. They are located in the Northwest Quadrant of the south junction of TH97/TH61 and the Northeast Quadrant of the north junction. These two driveways will be closed as a result of the proposed project.

f. Low-Volume Private Driveways * (Under 500 trips per day)

RESPONSE:

TH 97 does not contain any private driveways with volumes under 500 trips per day.

g. High-Volume Private Driveways * (Over 500 trips per day)

RESPONSE:

There is one high volume private access in the project area. The high volume school access located in the Southeast Quadrant of the north junction of TH 97/TH61 will be closed on TH 97 and replaced with a right in only access that will be established on TH 61.

h. Public Streets

RESPONSE:

Four public street access points will be closed and consolidated into one intersection at the south roundabout. The geometrics of these public streets cause a condition in which they act more like separate access points slowing traffic at four locations rather than one consolidated intersection.

(See attachment 32 for graphic of access closures)

* *Private driveways may be commercial, industrial or institutional uses such as school or hospitals.*

5. Integration of Modes

0-75 points

The *Transportation Policy Plan* requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects. The integration of modes criteria evaluate the value of the proposed project in providing better accommodations for pedestrians, bicyclists, transit and freight vehicles. Such accommodation should be provided within the existing right-of-way and provide the same level of access as motor vehicles unless it is shown to be impractical. In such cases, the project may include facilitation of such travel outside of the roadway right-of-way along a close parallel route. "A" Minor Expanders are routes that make connections between developing areas outside the interstate ring. These roads may or may not be able to be served by transit but serve rapidly growing areas of the region. Roadway improvements provide an opportunity to improve non-motorized connectivity between these growing areas.

Pedestrians: Examples of pedestrian improvements include construction or reconstruction of walkways or multi-use paths, separating pedestrian walkways from vehicle traffic through the installation of a buffer such as a boulevard, and providing pedestrian lighting. Equally important to improving pedestrian movement along the project area is improving the safety and ease of pedestrian crossings of the roadways. Some examples of these kinds of improvements are installation of pedestrian countdown signals with crosswalks, reducing the effective crossing distance by installing curb extensions and

(2) 2011 STP Integration Of Modes (1 of 2)

pedestrian medians, and reducing the speed of vehicles making turning movements at intersections. Different treatments are appropriate for different types of roadway conditions.

Include a map that shows all new or reconstructed walkways or multi-use paths that will be constructed as part of this project as well as all pathways that these walkways will connect to and any potential pedestrian destinations such as schools, residences, transit stops, parks, and businesses within ¼ mile of the project area that will be accessible to pedestrians. In the response field, indicate the characteristics of these pedestrian facilities (i.e. multi-use trail, sidewalk, or crosswalk etc.) and whether they are brand new facilities or a replacement of an existing facility.. All pedestrian facilities must be designed to be ADA-compliant at a minimum.

RESPONSE:

Currently the pedestrian crossings at the northern junction of TH 97 and TH61 are at grade and are not connected to any sidewalks or trails leading north. There are no pedestrian connections north of the intersection leading to a condition in which pedestrians walk along the shoulder of the roadway (See attachments 33, 34, & 35). The only pedestrian facilites in the corridor are a shared use path that was recently built that connects the Hardwood Creek trail to the Junction of TH 97 and TH 61 west of the school, and the shared use path between the school and the same junction and sidewalks at the school. The junction of TH 97 and TH 61 has crosswalks at all legs of the intersection

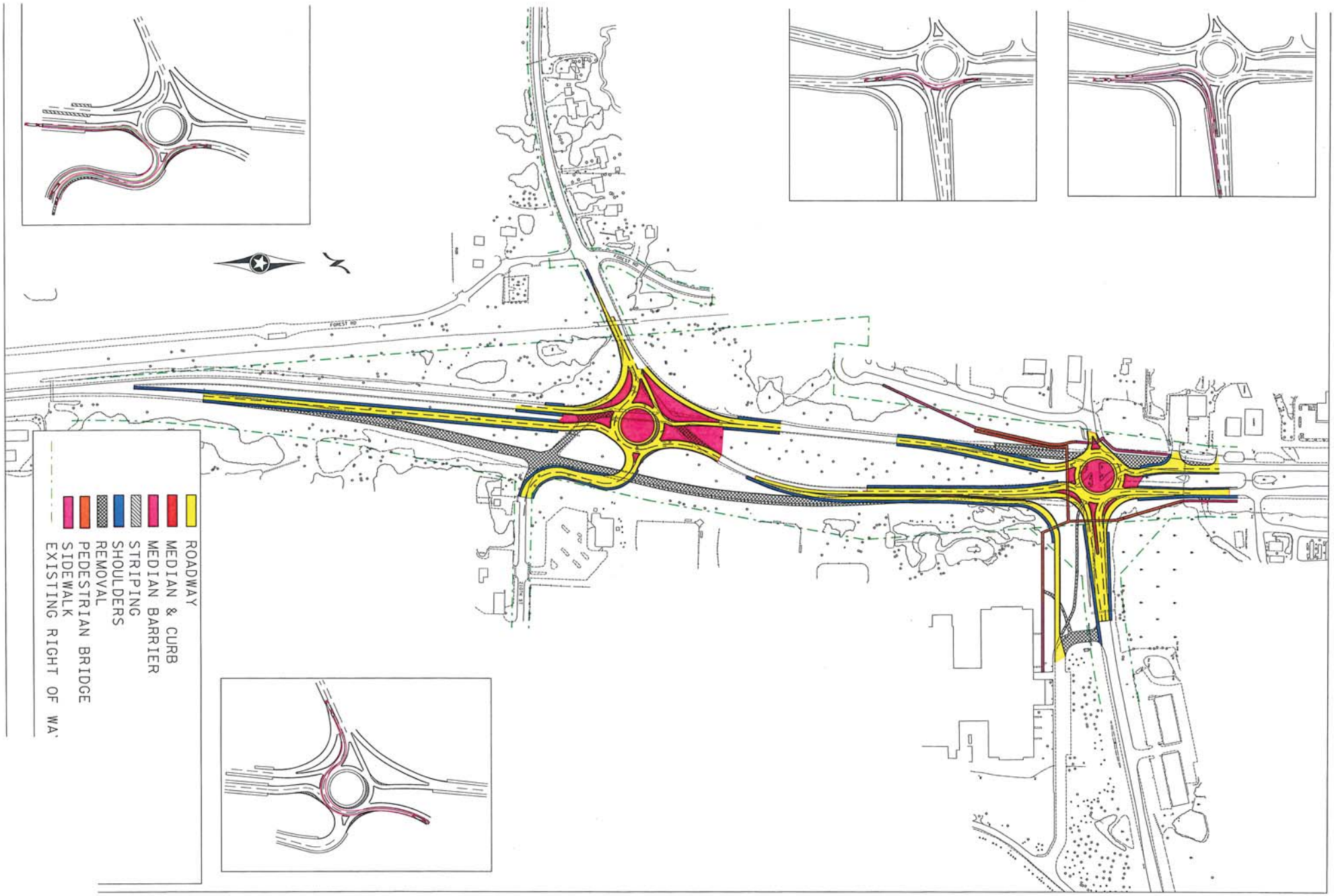
The proposed project includes two grade seperated pedestrian crossings at the northern junction of TH 97 and TH 61, new shared use paths to connect to existing trails and planned shared use facilities. The two grade seperated crossings will complete the connection between the Hardwood Creek Trail and residential areas west of TH 61 as well as residential areas north of TH 97 to the High and Middle Schools. As part of the project, shared use paths will connect to pedestrian improvements that the City of Forest Lake is proposing that will be adjacent to TH 61 in the downtown area as indicated in their Capital Improvement Plan.

Bicyclists: Examples of bicycle improvements include striping a bike lane or a marked shoulder that is 5 feet wide or greater, installing an off-road pathway where conditions favor one, and intersection treatments designed to reduce motor vehicle and bicycle conflict. Different treatments are appropriate for different types of roadway conditions.

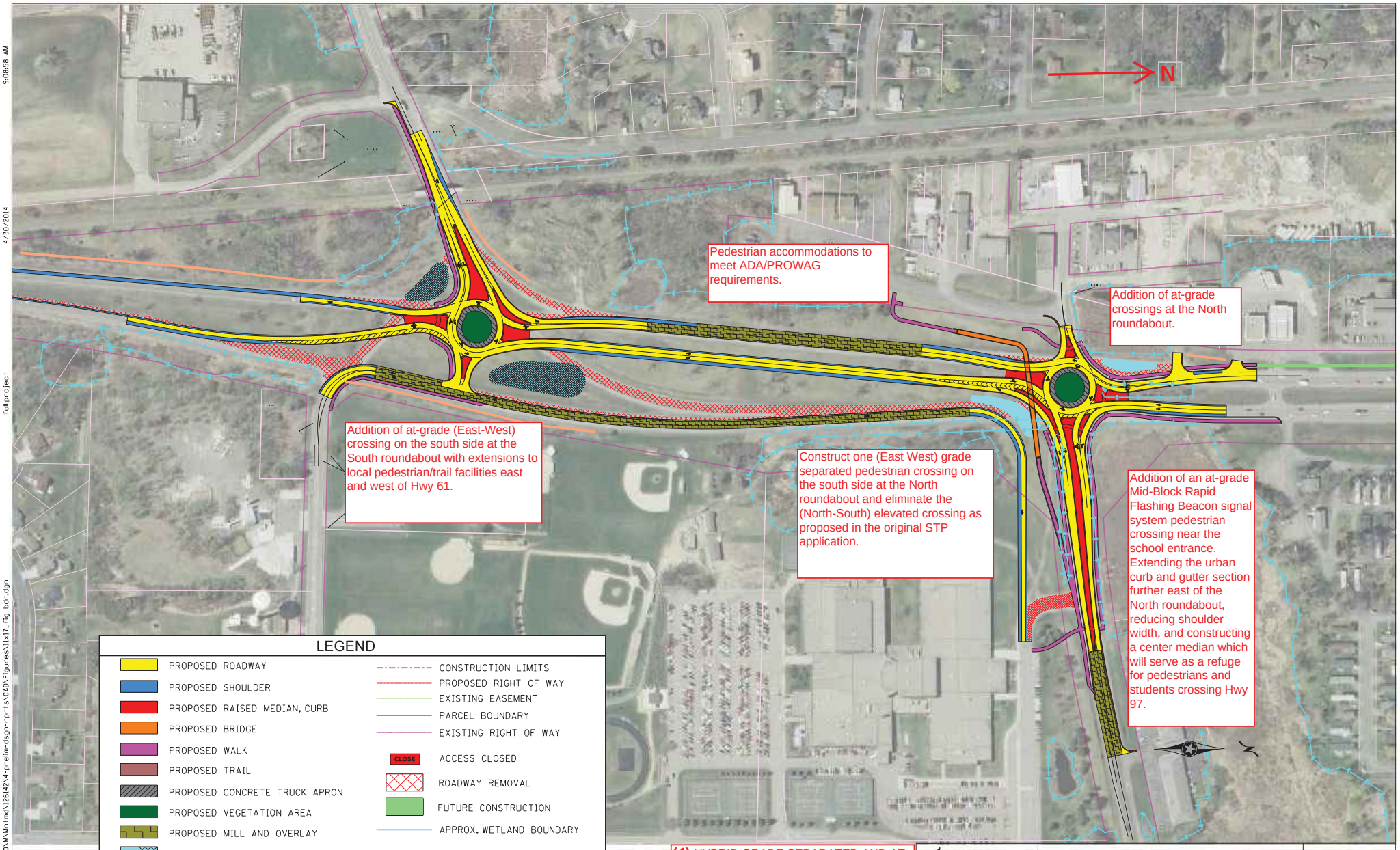
Include a map that shows all new or reconstructed bikeways that will be constructed (or striped) with this project, and show how they connect to an existing or planned bikeway network. Also show potential destinations along the roadway segment and within a ¼ mile of the project area that will be accessible with this bikeway network such as schools, parks residences, transit stops, and businesses. In the response field, indicate the characteristics of these bicycle facilities (i.e. bike lane, striped shoulder, cycle track, multi-use trail etc.) and whether they are brand new facilities or a replacement of an existing facility.

RESPONSE:

The proposed project includes two grade seperated pedestrian crossings at the northern junction of TH 97 and TH 61, new shared use paths to connect to existing trails and planned shared use facilities (See attachment 36). The two grade seperated crossings will complete the connection between the Hardwood Creek Trail and residential areas west of TH 61 as well as residential areas north of TH 97 to the High and Middle Schools. As part of the project, shared use paths will connect to pedestrian improvements that the City of Forest Lake is planning that will be adjacent to TH 61 in the downtown area as indicated in their Capital Improvement Plan.



(3) 2011 STP Application Layout Concept



(4) HYBRID GRADE SEPARATED AND AT-GRADE ALTERNATIVE
SUBJECT TO CHANGE 05-01-14

SEH
PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

TH 61 / TH 97 Roundabouts
S.P. 8206-45

ESTIMATE FOR: ROUNDABOUT CONSTRUCTION ON TH 61 AT NORTH & SOUTH JUNCTURES WITH TH 97 IN FOREST LAKE

MSD PROJ. ID: XXX

GRADING, SURFACING, DRAINAGE, & UTILITIES

VALIDATED ESTIMATE DATE

ESTIMATE

ESTIMATE DATE 07/27/11

ESTIMATE COMPLETED BY:

NAME: Elmer E. Pladers

SP 8207-55, TH 61, LETTING DATE / YEAR: XX/XX/XX
LOCATED ON TH 61 FROM SOUTH JUNCTION TO NORTH JUNCTION WITH TH 97.

PROJECT SCOPE

HIGHWAY MAINLINE IMPROVEMENTS DESCRIPTION:
- ROUNDABOUT AND APPROACH CONSTRUCTION
- PAVEMENT REMOVAL

SIDE STREET IMPROVEMENT DESCRIPTION:
- ROUNDABOUT AND APPROACH CONSTRUCTION

INTERSECTION IMPROVEMENTS DESCRIPTION (SIGNALS, GEOMETRIC, INTERCHANGES)
- ROUNDABOUT AND APPROACH CONSTRUCTION

PROJECT ROADWAY COST CALCULATIONS

ROADWAY	LOCATION (FROM/TO)	AREA (square feet)	DEPTH (inch) IN INCHES	LWD FACTOR	LWD COST MULTIPLIER	CONST. COST
MAINLINE/RAMP RDWY.		62,400	11.0	10.83	$120,000	$1,299,600
MAINLINE/RAMP SHOULDER		5,700	4.0	0.35	$120,000	$42,000
RDBT. CIRC. RDWY.		22,200	12.0	4.20	$120,000	$504,000
RDBT. TRUCK APRON		4,800	8.0	0.60	$120,000	$72,000
MAINLINE/RAMP RDWY. SURFACING		77,900	4.0	4.91	$120,000	$589,200
MAINLINE/RAMP SHLD. SURFACING		22,900	2.0	0.72	$120,000	$86,400
LOCAL ROAD RDWY.		34,100	8.5	4.57	$120,000	$548,400
LOCAL ROAD RDWY. SURFACING		13,800	2.5	0.54	$120,000	$64,800
LOCAL ROAD NAME		0	0.0	0.00	$120,000	$0
LOCAL ROADS NAMES:		0	0.0	0.00	$120,000	$0
LOCAL ROAD NAME		0	0.0	0.00	$120,000	$0
LOCAL ROAD NAME		0	0.0	0.00	$120,000	$0
FRONTAGE ROAD AND LOCAL ROADS		0	0.0	0.00	$120,000	$0
NEED MORE LINES? ADD ADDITIONAL ROWS HERE (HIGHLIGHT THIS LINE, RIGHT CLICK, SELECT INSERT)		0	0.0	0.00	$120,000	$0
		243,800		26.72		$3,206,400

PROJECT BRIDGE COST CALCULATIONS

LOCATION	BRIDGE NUMBER	LENGTH (FEET)	WIDTH (FEET)	SQUARE FEET	$ / SQ FT	COST
PED. BRIDGE @ TH 61/TH 97 NO. JUNCTION	82XXX	435.0	12.0	5,220	$120	$626,400
ELEVATED PED. RAMP	N.A.	1,060.0	12.0	12,720	$50	$636,000
		0.0	0.0	0	$0	$0
		0.0	0.0	0	$0	$0
		0.0	0.0	0	$0	$0
NEED MORE LINES? ADD ADDITIONAL ROWS HERE (HIGHLIGHT THIS LINE, RIGHT CLICK, SELECT INSERT)		0.0	0.0	0	$0	$0
					BRIDGE COST TOTALS	$1,262,400

PROJECT COST TOTALS

CONSTRUCTION SUB-ITEM	PROJECT RISK DETAILS	% OF RISK	CONST. COST	CONST + RISK
ROADWAY COST (PAVEMENT)	RISK FOR / NEED #:	20%	$3,206,400	$3,847,680
BRIDGE COST	RISK FOR / NEED #:	25%	$1,262,400	$1,578,000
WRE COSTS ABOVE NORMAL PROJECT NEEDS	RISK FOR / NEED #:	5%	$95,000	$99,750
ROADWAY LIGHTING COST	RISK FOR / NEED #:	5%	$100,000	$105,000
BIKE/PED PATH (0.5 MI.* @ $200,000)	*Includes misc. paths @ So. Junction	10%	$46,000	$50,600
PAVEMENT REMOVAL (116,200 Sq. Ft.)	RISK FOR / NEED #:	5%	$290,500	$305,025
RETAINING WALL COST	RISK FOR / NEED #:	0%	$0	$0
TMS - TRAFFIC MANAGEMENT SYSTEM	RISK FOR / NEED #:	0%	$0	$0
ADDITIONAL COST ITEM	RISK FOR / NEED #:	0%	$0	$0
NEED MORE LINES? ADD ADDITIONAL ROWS HERE (HIGHLIGHT THIS LINE, RIGHT CLICK, SELECT INSERT)			$0	$0

PVMT. $ / SQ FT	$13.15

LWD PORTION COST	OTHER COSTS
64.3%	35.7%

ROADWAY ONLY	PVMT. $ / MILE	$3,206,400
	$ / LANE MILE	$801,600
TOTAL PROJECT	PROJ. $ / MILE	$5,986,055
	$ / LANE MILE	$1,496,514

TOTAL PROJECT MILES	1
TOTAL PROJECT LANE MILES	4
TOTAL PROJECT AUX. LANE MILES	0.5

PROJECT ENGINEERING COSTS	
Pre-Letting 12% of Construction Cost	$718,327
Construction 8% of Construction Cost	$478,884
Engineering Total 20% of Construction	$1,197,211

ESTIMATED CONSTRUCTION COST		$5,000,300	
SUB-TOTAL (CONSTRUCTION + RISK) >>>			$5,986,055
OVERALL PROJECT RISK	19.71%		$985,755
RIGHT-OF-WAY COST	0%	$0	$0
RAILROAD AGREEMENT COST	0%	$0	$0
MAJOR UTILITY RELOCATION COST	0%	$0	$0
OTHER EXTERNAL PROJECT COST	0%	$0	$0
ESTIMATED PROJECT LANDSCAPE COST (LANDSCAPING NOT INCLUDED IN TOTAL COST BUT IS A REMINDER FOR FUTURE PROGRAMMING NEEDS)	0%	$0	$0
TOTAL COST OF CONSTRUCTION, R-O-W, RAILROAD AGREEMENTS AND UTILITIES >>>		$5,986,055	

DATE

CURRENT PROJECT COST TOTAL (CONSTRUCTION + RISK + OTHER EXTERNAL COSTS) >>> $5,986,055

DATE		FISCAL YEAR	PERCENT INFLATION	
	INFLATION ADJ. CONST. COST ONLY (w/o R/W, Util, RR, etc.)	2011	#N/A	#N/A
	REVISED **SCOPING DATABASE** INFLATION ADJUSTED COST	2010	#N/A	#N/A

TEMPLATE CURRENT AS OF: 10/28/2010 LWD DATABASE REFERENCE JOB NUMBER IF AVAILABLE: 0XXXXX

File Name and Path
c:\projectwise\pw_working\plad1elm\d1421166\[TH 61-8207-55_LWD_11.xlsx]SP XXXX-XX TH XXX

(5) 2011 STP Application Cost Estimate

Construction Cost Estimate

TH 61 / TH 97 Roundabouts

Item Description	Units	Unit Cost	Quantity	Total
PAVING AND GRADING (P & G) COSTS				
Bituminous Pavement (1)	ton	$65.00	15,801	$ 1,027,061
4" Concrete Walk	sq ft	$3.50	30,534	$ 106,869
8" Concrete pavement	sq yd	$35.00	1,016	$ 35,576
Structural Concrete	cu yd	$70.00	226	$ 15,811
Class 5 Aggregate Base (1)	cu yd	$15.00	9,455	$ 141,818
Subgrade Excavation (1)	cu yd	$6.50	23,202	$ 150,811
Common Excavation	cu yd	$5.00	18,571	$ 92,853
Common Borrow	cu yd	$4.00	18,571	$ 74,282
Select Granular Borrow	cu yd	$14.00	23,202	$ 324,824
Mill Pavement	sq yd	$5.00	10,035	$ 50,177
Curb and Gutter Design B624	lin ft	$15.00	14,198	$ 212,970
(a) Subtotal Paving and Grading				**$ 2,233,052**
UTILITIES, REMOVALS, DRAINAGE, ETC.				
Removals/Clear and Grub		4.0%		$ 109,242
Minor City Utilities		4.0%		$ 109,242
Signing, Striping, Traffic Control		5.0%		$ 136,553
Erosion Control and Turf Establishment		4.0%		$ 109,242
(b) Subtotal Utilities, Removals, Drainage, Etc.				**$ 464,279**
DRAINAGE				
Storm Sewer		15.0%		$ 409,658
(c) Subtotal Drainage				**$ 409,658**
STRUCTURES/SIGNALS/MISC. COST				
Bridge	sqft	$140		$ 1,800,000
Retaining Wall	sqft	$ 85.00		$ -
Roundabout Lighting		$7,000	24	$ 168,000
Between Roundabout Lighting		$7,000	6	$ 42,000
Roundabout Landscaping		$30,000	2	$ 60,000
Intersection ADA	each	$ 4,000.00	27	$ 108,000
RRFB System	each	$ 120,000.00	1	$ 120,000
Temp Signals	each	$ 100,000.00	2	$ 200,000
(d) Subtotal Structural				**$ 2,298,000**
(a+b+c+d) Subtotal Construction				**$ 5,404,988**
Risk & Contingency		10.0%		$ 540,499
TMP		5.0%		$ 270,249
Mobilization		5.0%		$ 270,249
(e) Subtotal Miscellaneous				**$ 1,080,998**
(a+b+c+d+e) Total Construction				**$ 6,485,986**
Administrative & Engineering				
RW Cost				
Total RW				**$ -**
Total Estimated Cost				**$ 6,485,986**
Inflation Adjusted Cost (9.20%)				**$ 7,082,696**

Version 2 SP 8206-45 (TH 61-TH97 Roundabouts) cost estimate 4-30-14
Printed on 5/1/2014

Short Elliott Hendrickson, Inc

(6) Updated Hybrid Grade Separated and At-Grade Alternative Construction Cost Estimate