



Engineering Department

DATE: March 16, 2021

FROM: Gabe Schell, City Engineer

ITEM: Amendment to Existing Agreement for Professional Services with KLJ for 43rd Avenue Reconstruction – HC 131

REQUEST

Approval of Amendment to Existing Agreement for Professional Services with KLJ for 43rd Avenue Reconstruction - HC 131

Please place this item on the 3/23/2021 City Commission meeting agenda.

BACKGROUND INFORMATION

KLJ is under contract to perform preliminary engineering services relating to the reconstruction of 43rd Avenue NE between State Street and N 26th Street as part of federal aid project NHU-1-981(123). Staff was directed on February 23, 2021 to advance construct using local funds pending 2022 budget approval with reimbursement of the federal share (\$4.8 million) in 2024 if federal funds are available.

This request is for authorization of scope and fee to include the design engineering of the improvements as selected by the Commission on February 23, 2021. This scope would take the project through final design and bid for a 2022 construction. This agreement could be amended in the future to include construction engineering at a later date.

The 2021 CIP includes \$1,100,000 for this project to include design engineering (\$800,000) and right of way purchase (\$300,000). A budget amendment increase of \$400,000 is also requested to authorize the ½ cent sales tax funds to accomplish the design engineering and right of way acquisition in 2021.

RECOMMENDED CITY COMMISSION ACTION

Request approval of amendment 1 with KLJ.

Budget amendment of \$400,000 from ½ cent sales tax transferred to highway construction fund.

STAFF CONTACT INFORMATION

Gabe Schell, PE | City Engineer, 355-1505 or gschell@bismarcknd.gov



Amendment to Agreement for Professional Services

City Number: HC 131

Amendment # 1

Background Data

- a. Effective Date of Agreement for Professional Services June 17, 2020
- b. Engineer Kadrmass, Lee & Jackson, Inc.
- c. Owner City of Bismarck
- d. Project 43rd Avenue NE Reconstruction (N State Street to N 26th Street)
- e. This Part of the Project Phase II - Final Design

Nature of Amendment (check all that apply)

- Additional services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications to payment to Engineer
- Modifications to time(s) for rendering Services

Description of Modifications

Refer to Attachment "C", Phase II - Final Design Scope of Services

Agreement Summary

a. Original Agreement amount	<u>\$491,333.84</u>
b. Net change for prior Amendments	<u>\$0</u>
c. This Amendment amount	<u>\$1,124,611.46</u>
d. Adjusted Agreement amount	<u>\$1,615,945.30</u>

Engineer and Owner hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is March 23, 2021.

Owner City of Bismarck
Signed _____
Name Steve Bakken
Title President, Board of City Commissioners
Date _____

Attest _____
Name Keith J. Hunke
Title City Administrator

Engineer Kadrmass, Lee & Jackson, Inc.
Signed _____
Name Mark Anderson, PE
Title VP, Environment & Public Works
Date _____

Attest _____
Name Erika Lorenz
Title _____



ATTACHMENT “C”
March 23, 2021
PHASE II - FINAL DESIGN
SCOPE OF SERVICES
43rd Avenue NE Reconstruction Project
Location: 43rd Avenue NE from N State Street to N 26th Street and
N 19th Street from 43rd Avenue NE to N Valley Loop

PURPOSE

The purpose of this attachment is to describe the scope of services and responsibilities required to conduct final design services. Services include final design and preparation of final construction plans, specifications, and estimates; develop utility conflict plans for adjustments and relocations; and right of way acquisition.

The limits of the project are defined as 43rd Avenue NE from N State Street to N 26th Street and N 19th Street from 43rd Avenue NE to N Valley Loop, as described in the March 2021 Final Documented CATEX. The following is a summary of the improvements that are planned.

43rd Avenue NE and N 19th Street

The project will consist of reconstructing 43rd Avenue Northeast to a 4-lane roadway with raised median from N State Street to N 19th Street and a 3-lane roadway from N 19th Street to a point east of N 26th Street that will tie-in with the Burleigh County project to be constructed in 2021. Street improvements include a raised median, 10-foot-wide shared-use path along the south side of the roadway, 6-foot-wide sidewalk along the north side of the roadway, roundabouts at the N 19th Street and N 26th Street intersections, storm sewer, box culvert, lighting, traffic signal modification and pavement markings at State Street, retaining walls and landscaping. Utility improvements include a 24-inch water transmission line from State Street to N 26th Street and an 8-inch sanitary sewer extension in N 19th Street approximately 300 feet south of the 43rd Avenue NE intersection, along with applicable appurtenances. The project also consists of reconstructing N 19th Street to a 2-lane roadway from 43rd Avenue NE to approximately 300 feet south of N Valley Loop with one additional box culvert.

SERVICES TO BE PERFORMED BY KLJ

1. PROJECT MANAGEMENT & COORDINATION

Project Management

KLJ will manage the project and provide overall coordination of the work completed by the planning and design team. This work shall consist of managing work assignments, internal team meetings, subconsultants, client coordination, project budget and schedule.

Progress Reports (Bi-weekly updates) (Est. 12 Updates)

KLJ shall submit a biweekly status report via email to City of Bismarck and NDDOT Local Government Representative which will summarize the work performed in the current period, upcoming activities in



the next period, summary of project decisions and potential out of scope work activities. The reports shall include percent complete for key project activities. The status report shall also identify any milestone activity that is not completed or anticipated not to be completed on time. The report shall include the reasons why any milestone date was missed and what actions will be taken to get the project back on schedule.

Project Schedule

KLJ will submit and maintain a schedule for the completion of Phase II of the project. The schedule will include the establishment of milestone dates for the major work items. The schedule will be reviewed and adjusted as necessary to incorporate changes in the work concept and progress to date.

2. FINAL STORM WATER REPORT

Final Report

KLJ will evaluate the proposed storm drainage system and prepare a Final Storm Water Report documenting the design calculations for the project. A draft report will be submitted for review which will include design calculations and preliminary layouts. After comments are received and the drainage system is approved, a final report will be submitted that the design will be based upon. Analysis will confirm contributing flows of project area and non-project areas to determine the federal funding ratio of the storm sewer. Detention ponds will not be designed with this project.

3. ROADWAY DESIGN & PLAN PREPARATION

Roundabout Design

KLJ will develop up to two preliminary single lane roundabout options for each intersection showing potential inscribed circle locations at each location (four total exhibits). The exhibits will be used to select the final roundabout locations with input from City of Bismarck.

KLJ will perform design analysis and refinement on the selected roundabout location including fast-path, phi-angle, sight distance, and design vehicle swept path analysis. The roundabout design will follow guidance from NCHRP 672 and achieved design criteria will be documented in a memorandum provided to City of Bismarck.

KLJ will produce a refined roundabout layout (approximately a 30% design) showing the recommended roadway geometrics and other features including construction limits. The final roundabout geometry for each intersection will be placed onto an exhibit or roll plot. The exhibit will show all the roundabout design parameters and design vehicle turning paths.

KLJ will complete a detailed design of a roundabouts at the N 19th Street and N 26th Street intersections. All roundabouts are assumed to be single lane roundabouts within inscribed circle diameter of approximately 130 feet. A 40FT Bus design vehicle will be accommodated for all turning movements. A WB-67 design vehicle will be accommodated for east-west through traffic along 43rd Avenue NE; however, in order to make a right turn the WB-67 vehicle may have to first travel around the roundabout and then conclude the right turn movement from a different angle.

The design assumes a shared-use path on the south side of 43rd Avenue NE and a sidewalk on the north side. Pedestrian connections will be provided around the roundabouts with ADA ramps. On-street



bicycle accommodations for the roundabouts are not anticipated. The roundabout at N 19th Street will include a dedicated eastbound right turn lane. The roundabout at N 26th Street includes a high-speed approach on the east leg. Preliminary and final roundabout design will be completed, which includes the roundabout intersection layout sheets, intersection details, curb line profiles, lighting, and signing and marking sheets.

Design & Plan Preparation

The roadway design will include design and plan development for the following plan sections per NDDOT Design Manual:

- Section 1 Title Sheet
- Section 2 Table of Contents/Standard Drawings
- Section 4 Scope of Work
- Section 6 Plan Notes
- Section 8 Estimate of Quantities
- Section 10 Basis of Estimate
- Section 11 Data Tables
- Section 20 General Details
 - Details will include ADA ramps, municipal utilities, erosion control, pipe bedding, and concrete joints.
- Section 30 Typical Sections
- Section 40 Removals
- Section 50 Inlet & Manhole Summary
- Section 57 Water Main and Sanitary Sewer Plan and Profile (performed by subconsultant)
- Section 60 Plan & Profile (to include storm sewer)
- Section 75 Wetlands Mitigation and Environmental
- Section 76 Temporary Sediment & Erosion Control
- Section 77 Permanent Sediment & Erosion Control
- Section 81 Survey Data Layouts
- Section 85 Landscaping Layouts
 - KLJ will prepare detailed planting plans within the project right of way corridor (median and boulevard areas) as well as within the central island. Planting plans to include street tree locations, planting details, and notes for installation, irrigation, warranty, and process of plant establishment period. Tree selections will be based upon current City Forestry approved species listed in the latest version of the “Street Tree Guide”. Roundabout landscaping is anticipated to only include plants, ground cover and irrigation. Prior to development of 50% plans, KLJ will facilitate a meeting with the City Forester to determine scope of desired planting levels to be included in the plans.
- Section 90 Pavement Layouts
- Section 100 Work Zone Traffic Control
 - This activity includes completing the traffic control layouts with the assumption 43rd Avenue NE will be closed from State Street to N 19th Street in one phase, and from N 19th Street to N 26th Street in another phase, and that N 19th Street will be closed within the project limits during a separate phase. Business and residential access will be

accommodated. This scope also includes temporary span wire signals for the State Street intersection.

- Section 110 Signing & Pavement Marking
- Section 140 Lighting
- Section 150 Traffic Signals
 - KLJ will complete a detailed design of a modified traffic signal site at the State Street intersection. The signal standard on the west leg of the intersection will remain and all other legs, including median signals will be replaced. Pedestrian phasing will be added to the signal site along the north, south, and east legs. Preliminary and final traffic signal design will be completed, which includes the signal layout, wiring diagram, details, and mast arm signs.
 - KLJ will provide 1 timing plan based on time-of-day for the one traffic signal site.
- Section 170 Reinforced Concrete Box Culverts (RCBC)
 - Hydraulic analysis will include floodplain mitigation (channel excavation) needs downstream of the N 19th Street crossing, and sedimentation mitigation options for consideration during final RCBC design.
 - KLJ will develop structural details and design to match the hydraulic requirements determined during the hydraulic design for two Precast RCBC sites. The details will include Precast RCBC layouts and elevations, fill requirements and riprap layout.
 - KLJ will prepare Precast RCBC plan sheets and documents to be used to bid and construct the project.
 - KLJ will perform Engineer of Record services, such as Work Drawing review and AASHTOWare BrR Load Rating Model.
- Section 171 Retaining Walls
 - Three retaining walls are required, and the final extents are to be determined. One will be on the north side west of N 15th Street; another will be on the south side west of N 19th Street; and the third will be adjacent to the Plains Commerce Bank property. This work will include structural design, layout sheets, details, plan notes, quantities and updating the cost estimate.
 - KLJ anticipates two retaining wall types along the project: a concrete cast in place wall on the north side west of N 15th Street, and modular block wall for the other two.
 - KLJ will coordinate with a geotechnical subconsultant to determine the retaining wall base requirements, wall thickness, backfill requirements and drainage components needed for the wall.
- Section 200 Cross Sections
- Opinion of Construction Cost

4. MUNICIPAL UTILITY DESIGN (Subconsultant/AE2S)

Water Main

Final Design will be completed consistent with the preliminary design drawings and technical memorandum prepared during the Phase I services, and will include a 24-inch transmission line in 43rd Avenue NE and an 8-inch watermain in N 26th Street from 43rd Avenue NE to Seneca Avenue, including appurtenances. The new 24-inch crossing of Hay Creek and railroad will likely be directional drilling or boring, and the existing 16-inch Zone 2 watermain will also be replaced at the Hay Creek crossing.



Sanitary Sewer

Final Design will be completed consistent with the preliminary design drawings and technical memorandum prepared during the Phase I services. Sanitary sewer improvements consist of extending an 8-inch sewer pipe approximately 300 feet south on N 19th Street from the existing manhole.

5. PLAN SUBMITTAL

Design Team Meetings (2 Meetings Estimated)

The KLJ project team will meet with representatives from City of Bismarck and NDDOT during the design and plan development to complete preliminary reviews at the various stages of the design. There will be a maximum of 2 meetings in an estimated four-month period.

50% and 90% Plans Submittal and PS&E Review

KLJ will assemble and distribute plans at approximately 50% and 90% completion for review by City of Bismarck and NDDOT. KLJ will also conduct and document internal QC/QA reviews within this activity. After the agencies have completed their review, KLJ will coordinate and facilitate a review meeting at each stage. Written responses will be provided to all comments from the PS&E review meeting.

Final Plans – Revision and Submittal

Revisions from the PS&E will be incorporated into the final plans. KLJ will complete and document a final internal QA review for the final plan submittal. The final plan submittal will include the special provisions (up to five special provisions are anticipated), engineer's opinion of costs, design certification, utility certification, railroad and right of way certification.

Electronic Design Files

KLJ will generate staking reports and surface models (.xml) for the subgrade and finished grade elevations for the Contractor to use with GPS Machine Control. KLJ will provide a text document to support the surface information. An electronic version of the plan drawings and base files will be submitted to City of Bismarck in Civil3D format.

Bid Opening

KLJ will be available to answer pre-bid questions from the contractors and assist NDDOT in preparation of bid documents. We will provide staff to prepare addendums, if necessary. KLJ will review the bid results and provide a recommendation to award the project.

6. UTILITY COORDINATION

Utility Coordination

KLJ will identify utility conflicts and work with utility companies and City of Bismarck to inventory and develop any relocation or replacement plans for existing utility facilities. KLJ will obtain a utility relocation agreement template from City of Bismarck, then customize for this project and work with the utility companies to complete the agreements. Utility certification will be provided concurrent with the final plan submission.



Utility Conflict Plans

KLJ will develop the utility conflict plans, utility coordination special provision and the utility coordination table for the plans.

Utility Coordination Meetings

KLJ will conduct up to two utility coordination meetings with affected utility companies to review conflicts and discuss relocation or plans for adjusting the utility.

Pothole Existing Utilities

KLJ will work with the utility companies to identify locations for potholing to determine the actual elevations of the line. KLJ will provide survey for utilities that are potholed.

7. RIGHT OF WAY

Obtain Ownership Information

KLJ will compile a listing of properties that will be affected along the project (estimated 19 fee acquisition parcels and 39 easement parcels for 23 affected landowners). KLJ will obtain surface ownership reports for the easement parcels and the permanent acquisition parcels.

Determine Right of Way Limits

KLJ will identify the limits and quantify the areas of the permanent right of way and temporary easements.

Prepare Right of Way Plats

KLJ will prepare right of way plats for all affected parcels. KLJ will prepare legal descriptions of the easement parcels and provide them to City of Bismarck for review and approval prior to negotiations.

Prepare Right of Way Documents

KLJ will assemble right of way packages for an estimated 19 fee acquisition parcels and 39 easement parcels for 23 affected landowners. KLJ will complete the following for each parcel:

- Memorandum of Offer
- Notification & Waiver Form
- Memorandum of Agreement
- Easement Documents
- Warranty Deeds
- W-9 Forms
- Title VI Public Participation Survey
- Negotiator Reports

Right of Way Negotiation

KLJ will meet and conduct negotiations for each parcel. It is anticipated that 3 meetings will be required with each landowner. KLJ will provide justification for any increases or deviations from the approved values and submit to the City of Bismarck for final acceptance. Any deviations from the approved offers will require advance approval by the City of Bismarck.



Basic Data Book (Subconsultant)

KLJ will complete the Basic Data Book for the project which will be used to create the Waiver Valuations for the project.

Appraisal (Subconsultant)

KLJ will complete the appraisals for the project. It is assumed three appraisals will be required for the necessary railroad crossing permits.

Review Appraisal (Subconsultant)

An independent appraiser will complete the review appraisal for the project. The Basic Data Book and three appraisals will be reviewed.

Waiver Valuations

KLJ will complete waiver valuations based off the valuations produced by the Basic Data Book provided. KLJ will submit the waiver valuations to City of Bismarck for final acceptance.

Assemble and Submit Right of Way Package

KLJ will assemble complete packages of right of way forms and reports for each parcel and submit to City of Bismarck.

8. PERMITTING

Canadian Pacific/Dakota Missouri Valley Western Rail Crossings

It is anticipated that road and utility crossings will require coordination and permitting with the rail owner and operator. This permitting process is also anticipated to include additional ROW or permanent easements. KLJ will coordinate with the owner and operator and provide information required to obtain necessary permits. Fees will be paid by City of Bismarck.

Wetlands and US Army Corps of Engineers

Nationwide Permit Application

KLJ will complete the permit application and provide supporting documentation for a Corps of Engineers 404 permit for wetland impacts created by roadway improvements. KLJ assumes the project will be permitted under Nationwide Permit 23 for Approved Categorical Exclusions.

Wetland Mitigation Plan

A Wetland Mitigation Plan will be completed for USACE jurisdictional wetland impacts associated with development of the property. KLJ will provide written documentation, monitoring requirements and design considerations for the Wetland Mitigation Plan. The Wetland Mitigation Plan will be submitted with the 404 Permit Application to the USACE.

Wetland Mitigation Easement

Wetland mitigation areas are required to be permanently preserved as wetland through easement stipulations or other means to prohibit the conversion of the mitigation areas to other uses. KLJ will prepare a restrictive easement or other restrictive documentation over the mitigation area per USACE guidelines under cooperation and direction of the developer. Financial assurances such as escrow accounts or bonds may be required by the USACE until said wetland mitigation site is deemed a success.



Preparation of said financial assurances is excluded from this scope and will be completed by the developer. This task is only applicable if the City elects to mitigate on parcels owned by others; if the City chooses to purchase property for mitigation and/or purchase wetland credits, this task is not applicable.

Mitigation Site Monitoring

A monitoring plan would be established in accordance with the USACE October 10, 2008 Regulatory Guidance (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment and/or Enhancement of Aquatic Resources). KLJ will prepare the plan and the City of Bismarck will be responsible for ongoing monitoring and reporting.

Floodplain Analysis and No-Rise Documentation

Phase I services included a technical memorandum documenting the potential impacts to the Hay Creek and 4th Street Drainage regulatory floodways, and concluded that the required improvements can be completed with mitigation measures that result in a “no-rise” situation for the Hay Creek crossing under 43rd Avenue and the improved / widened 4th Street/North Valley Drainage crossing under 19th Street.

While a “no-rise” condition can be approved at the City level, we recommend that in addition to City review, North Dakota State Water Commission (SWC) also review the analysis given the SWC’s ongoing RiskMap efforts to remap Hay Creek.

The Hay Creek crossing under 43rd Avenue and the 4th Street/North Valley Drainage crossing under 19th Street will need to meet all three of these regulatory requirements:

- FEMA floodplain/floodway standards as outlined 44 CFR 65.7
- State of North Dakota Stream Crossing Standards as documented in ND Century Code Chapter 24 and Administrative Code Chapter 89-14-01
- City of Bismarck road crossing standards as outlined in the City’s Stormwater Design Standards Manual

No-Rise Documentation services will include:

- Prepare No-Rise Analysis Report to document that the final design and hydraulic structure result in a “no-rise” condition for the Hay Creek and 4th Street regulatory floodways.
- Submit the “no-rise” documentation to the City and North Dakota State Water Commission for review and concurrence.
- Respond to comments provided by the City and/or SWC.
- Prepare a Floodplain Development Permit application through the City of Bismarck Building Department.

DELIVERABLES PROVIDED BY KLJ

1. Progress reports at two (2) week intervals.
2. Agendas and minutes for all project meetings.
3. Submit plans and special provisions for 90% and Final Plan Submittals.
4. Electronic version of plan drawings and base files in Civil3D format.
5. Surface models (.xml)
6. Final Stormwater Report



7. Documentation of right-of-way and easement acquisition process.
8. NDDOT Local Government Certifications (Utility Coordination, Railroad Crossing, ROW, LPA, Design)
9. Permits
10. Other deliverables identified in the above scope of work.

SERVICES NOT INLCUDED IN THIS SCOPE

1. Relocation Assistance
2. Environmental Clearance for Borrow/Waste sites
3. Litigation and Court Testimony Associated with Any of the Proposed Acquisitions
4. Borrow/Waste Options
5. Geotechnical Services, beyond those required for wall design
6. Updates to the Documented CATEX
7. Detention Pond Analysis/Design

Project Budget



Task Code	Description	Job Classification:							DIRECT LABOR Subtotal	Expenses (person x days)	Reimbursable Rate	REIMBURSABLE EXPENSE ¹ Total	Subcontractor Bill	KLJ's % Markup Subcontractant's Name	Subcontractor Fee	DIRECT EXPENSE ²	Bal to: Lump Sum or Agreed Fee	TASK TOTAL
		ROW Agent	Senior Professional	Professional Land Surveyor	Engineer	Senior Project Manager	Engineer in Training II	Project Assistant II										
1.1.1	Project Management & Coordination	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00	32	\$ 14,680.00	\$ 150.00							\$ 14,830.00
	Process Management & Coordination									1,520.00								\$ 1,520.00
	Process Reports									2,240.00								\$ 2,240.00
	Project Schedule								32	16,920.00								\$ 16,920.00
1.2.2	Final Stormwater Report	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00	40	\$ 7,280.00	\$ 150.00							\$ 7,430.00
	Final Report								20	4,196.00								\$ 4,196.00
	Design & Plan Preparation								8	2,566.00								\$ 2,566.00
	Section 50 - Inlet & Manhole Summary								12	7,073.00								\$ 7,073.00
	Section 60 - Storm Sewer Plans & Profile								100	64	310							\$ 21,114.00
1.2.3	Design and Plan Preparation	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 256.00	\$ 150.00							\$ 406.00
	Section 1 - Title Sheet									488.00								\$ 488.00
	Section 2 - Table of Contents/Standard Details									346.00								\$ 346.00
	Section 4 - Scope of Work								4	2,110.00								\$ 2,110.00
	Section 6 - Plan Notes									2,504.00								\$ 2,504.00
	Section 10 - Basis of Estimate									712.00								\$ 712.00
	Section 14 - Drain Tables									264.00								\$ 264.00
	Section 20 - General Details									2,596.00								\$ 2,596.00
	Section 30 - Typical Sections									2,116.00								\$ 2,116.00
	Section 40 - Retenards									2,124.00								\$ 2,124.00
	Section 57 - Water and Sanitary Sewer									3,440.00		\$ 145,350.00		\$ 145,350.00				\$ 148,790.00
	Section 60 - Plan & Profile									2,184.00								\$ 2,184.00
	Section 66 - Roadway Design								16	40,280.00								\$ 40,280.00
	Section 75 - Wetlands Mitigation								8	7,964.00								\$ 7,964.00
	Section 76 - Temperature Sediment & Erosion								8	2,340.00								\$ 2,340.00
	Section 77 - Permanent Sediment & Erosion								8	2,340.00								\$ 2,340.00
	Section 81 - Survey Data Layouts								40	3,616.00								\$ 3,616.00
	Section 85 - Landscaping Layouts									6,716.00								\$ 6,716.00
	Section 90 - Erosion Control									8,084.00		\$ 8,500.00		\$ 8,500.00				\$ 16,584.00
	Section 100 - Work Zone Traffic Control									8,084.00								\$ 8,084.00
	Section 110 - Signing & Pavement Marking									2,392.00								\$ 2,392.00
	Section 140 - Lighted									5,820.00								\$ 5,820.00
	Section 150 - Traffic Signals									6,810.00								\$ 6,810.00
	Section 170 - Box Culverts									8,572.00								\$ 8,572.00
	Section 171 - Retention Walls									13,184.00		\$ 4,000.00	Teresco	\$ 4,000.00				\$ 17,184.00
	Section 200 - Cross Sections									2,040.00								\$ 2,040.00
	Quantities & Order of Cost								8	68	24	68						\$ 157,850.00
1.2.4	Plan Subtotal	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 4,192.00	\$ 150.00							\$ 4,342.00
	Design Team Meetings								8	2,432.00								\$ 2,432.00
	50% Plan Subtotal and Review								8	7,432.00								\$ 7,432.00
	90% Plan Subtotal and PS&E Review								24	48								\$ 19,056.00
1.2.5	Utility Coordination	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 3,096.00	\$ 150.00							\$ 3,246.00
	Utility Coordination								2	60								\$ 6,706.00
	Utility Conflict Plans								1	1,164.00								\$ 2,292.00
	Utility Coordination Meetings								24	8								\$ 1,164.00
	Posthole Existing Utilities								24	5	90							\$ 13,328.00
1.2.6	Right of Way	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 3,620.00	\$ 150.00							\$ 3,770.00
	Obtain Ownership Information	80	20							1,440.00								\$ 1,440.00
	Determine Right of Way Limits									2,824.00								\$ 2,824.00
	Prepare Right of Way Plans	55	24	32						2,950.00								\$ 2,950.00
	Prepare Right of Way Documents									5,560.00								\$ 5,560.00
	Right of Way Negotiation	2	2							158.00								\$ 158.00
	Basic Data Book									543.00		\$ 32,000.00		\$ 32,000.00				\$ 32,543.00
	Approach & Appraisal Coordination	8	6							904.00								\$ 904.00
	Water Valuations	16	8							1,764.00								\$ 1,764.00
	Assemble and Submit Right of Way Packets	36	12							3,762.00								\$ 3,762.00
1.2.7	Final Submittal and Bidding	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 15,950.00								\$ 15,950.00
	Final Plans - Revision and Submittal								8	3,200.00								\$ 3,200.00
	Electronic Design Files									2,456.00								\$ 2,456.00
	Bid Opening								8	50								\$ 21,606.00
1.2.8	Permitting	\$ 34.00	\$ 45.00	\$ 42.00	\$ 45.00	\$ 76.00	\$ 33.00	\$ 25.00		\$ 760.00								\$ 760.00
	Floodplain No-Rise Documentation									2,924.00								\$ 2,924.00
	Railroad Coordination & Permitting									2,000.00								\$ 2,000.00
	Wetlands/NWP								8	6,684.00								\$ 25,650.00
									337	112	64	168	133	566	32	6620		\$ 268,254.00
																		\$ 215,500.00
																		\$ 483,754.00

To be billed at actual with an \$150 maximum (Meals \$35- Lodging \$115)
Includes: equipment, rental/subscriptions, mileage... etc.

Summary of Costs: NDDOT

		Indirect Costs - 193.73%	
Direct Labor		\$	268,254.00
Subtotal		\$	516,008.47
On bill rate	Fixed Fee - 15.00%	\$	118,191.37
Raw labor cost	COF - 1.11%	\$	2,977.62
Direct Expenses		\$	
Subcontractors		\$	215,500.00
Reimbursables		\$	
Balance to Lump Sum or Agreed Fee		\$	
Total Estimated Engineering Costs		\$	1,124,611.46