

**AGREEMENT FOR ENGINEERING SERVICES
BETWEEN THE
CITY OF NORTH RICHLAND HILLS
AND
BINKLEY & BARFIELD, INC.**

I.

This Agreement is executed by and between the City of North Richland Hills, a municipal corporation located in Tarrant County, Texas, acting by and through Mark Hindman, its duly authorized City Manager (hereinafter called "CITY"), and **BINKLEY & BARFIELD, INC.**, a Texas corporation, acting by and through **REPRESENTATIVE**; its duly authorized Principal (hereinafter called "ENGINEER").

WITNESSETH, that CITY desires professional engineering services in connection with the **GLENVIEW DRIVE (WEST) PROJECT**

NOW, THEREFORE, CITY and ENGINEER, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

II. PROJECT

In this Agreement, the "PROJECT" means the engineering design of the **GLENVIEW DRIVE (WEST) PROJECT** in accordance with the Public Works Design Manual, applicable CITY codes, regulations and standards.

III. BASIC AGREEMENT

ENGINEER is an independent contractor and undertakes and agrees to perform professional engineering services in connection with the PROJECT, as stated in the sections to follow. It is understood and agreed that ENGINEER is not and will not by virtue of this contract be deemed to be an agent or employee of CITY and that CITY will not be entitled to direct the performance by ENGINEER's employees or subcontractors of the tasks contemplated by this contract. All engineering services shall be performed with diligence and in accordance with professional standards customarily obtained for such services in the State of Texas. For rendering such services CITY agrees to pay ENGINEER as set forth in Section VIII: "Compensation" and Exhibit F: "Compensation".

IV. SCOPE OF ENGINEER'S SERVICES

ENGINEER shall render the professional services necessary for development of the PROJECT, in accordance with the schedule in Exhibit A: "Project Schedule" and as detailed in Exhibit B: "Basic Engineering Services", said exhibits being attached hereto and incorporated herein for all purposes. ENGINEER shall be responsible, to the level of competency presently maintained by other practicing professional engineers in the same type of work in the Dallas/Fort Worth Metroplex area, for professional and technical soundness, accuracy, and adequacy of all designs, drawings, specifications, and other work and materials furnished under this Agreement.

V. SPECIAL ENGINEERING SERVICES

The CITY will pay the ENGINEER for Special Engineering Services as indicated in Exhibit C: "Special Engineering Services", attached hereto and made a part of this Agreement.

VI. ADDITIONAL ENGINEERING SERVICES

Additional Engineering Services are defined in Exhibit D: "Additional Engineering Services", attached hereto and made a part of this Agreement. No Additional Engineering Services are authorized unless authorization for specified additional services are provided to ENGINEER by CITY in writing and approved by CITY.

VII. SCOPE OF CITY SERVICES

The City will furnish items and perform those services as identified in Exhibit E: "Services to be provided by the City", attached hereto and made a part of this Agreement.

VIII. COMPENSATION

- A. In consideration of the services described herein, CITY shall pay and ENGINEER shall receive compensation in accordance with Exhibit F: "Compensation".
- B. Total payments including without limitation reimbursable expenses, to ENGINEER by CITY for the services stated in Section IV and Section V above shall not exceed **PROJECT COST (\$352,400.00)**.
- C. CITY may authorize additional services to be provided by ENGINEER as mutually agreed upon by the parties. Any authorization for additional services shall be given to ENGINEER by CITY in writing and approved by CITY.

D. CITY and ENGINEER understand that the variables in ENGINEER's cost of performance may fluctuate. The parties agree that any fluctuation in ENGINEER's costs will in no way alter ENGINEER's obligations under this Agreement nor excuse performance or delay on ENGINEER's part.

IX. OWNERSHIP OF DOCUMENTS

All completed or partially completed evaluations, reports, surveys, designs, drawings and specifications prepared or developed by ENGINEER under this Agreement, including any original drawings, computer disks, mylars or blue lines, shall become the property of CITY when the Agreement is concluded or terminated, and may be used by CITY in any manner it desires; provided, however, that ENGINEER shall not be liable for the use of such drawings for any project other than the PROJECT described in this Agreement.

X. INDEMNITY

ENGINEER AND ITS SUBCONSULTANTS SHALL INDEMNIFY AND HOLD CITY AND ALL OF ITS OFFICERS, AGENTS, SERVANTS, AND EMPLOYEES HARMLESS FROM ANY LOSS, DAMAGE, LIABILITY OR EXPENSES, ON ACCOUNT OF DAMAGE TO PROPERTY AND INJURIES, INCLUDING DEATH, TO ANY AND ALL PERSONS, INCLUDING BUT NOT LIMITED TO OFFICERS, AGENTS OR EMPLOYEES OF ENGINEER OR ITS SUBCONSULTANTS, AND ALL OTHER PERSONS PERFORMING ANY PART OF THE WORK AND IMPROVEMENTS, WHICH MAY ARISE OUT OF ANY NEGLIGENT ACT, ERROR, OR OMISSION IN THE PERFORMANCE OF ENGINEER'S PROFESSIONAL SERVICES OR IN THE PREPARATION OF EVALUATIONS, REPORTS, SURVEYS, DESIGNS, WORKING DRAWINGS, SPECIFICATIONS AND OTHER ENGINEERING DOCUMENTS INCORPORATED INTO ANY IMPROVEMENTS CONSTRUCTED IN ACCORDANCE THEREWITH; ENGINEER SHALL DEFEND AT ITS OWN EXPENSE ANY SUITS OR OTHER PROCEEDINGS BROUGHT AGAINST CITY AND ITS OFFICERS, AGENTS, SERVANTS AND EMPLOYEES OR ANY OF THEM ON ACCOUNT OF THE FOREGOING DESCRIBED NEGLIGENT ACTS, ERRORS OR OMISSIONS, AND SHALL PAY ALL EXPENSES AND SATISFY ALL JUDGMENTS WHICH MAYBE INCURRED BY OR RENDERED AGAINST CITY, ITS OFFICERS, AGENTS, SERVANTS AND EMPLOYEES OR ANY OF THEM, IN CONNECTION WITH THE FOREGOING DESCRIBED NEGLIGENT ACTS, ERRORS, OR OMISSIONS; PROVIDED AND EXCEPT HOWEVER, THAT THIS INDEMNIFICATION PROVISION SHALL NOT BE CONSTRUED AS REQUIRING ENGINEER TO INDEMNIFY OR HOLD CITY OR ANY OF ITS OFFICERS, AGENTS, SERVANTS OR EMPLOYEES HARMLESS FROM ANY LOSS, DAMAGES, LIABILITY OR EXPENSE, ON ACCOUNT OF DAMAGE TO PROPERTY OR INJURIES TO PERSONS CAUSED BY DEFECTS OR DEFICIENCIES IN DESIGN CRITERIA AND INFORMATION FURNISHED TO ENGINEER BY CITY, OR ANY SIGNIFICANT DEVIATION IN CONSTRUCTION FROM ENGINEER'S DESIGNS, WORKING DRAWINGS, SPECIFICATIONS OR OTHER ENGINEERING DOCUMENTS.

D. Professional Liability:
Errors and Omissions \$ 1,000,000

The Certificate of Insurance shall contain a provision that such insurance cannot be canceled or modified without thirty (30) days prior written notice to CITY.

XII. ARBITRATION

No arbitration arising out of or relating to this Agreement shall occur without both parties' written approval.

XIII. TERMINATION AND SUSPENSION

- A. CITY may terminate this Agreement at any time for convenience or for any cause by a notice in writing to ENGINEER. Either CITY or ENGINEER may terminate this Agreement in the event the other party fails to perform in accordance with the provisions of this Agreement. Upon receipt of such notice, ENGINEER shall immediately discontinue all services and work and the placing of all orders or the entering into contracts for supplies, assistance, facilities, and materials, in connection with the performance of this Agreement and shall proceed to cancel promptly all existing contracts insofar as they are chargeable to this Agreement.

- B. If CITY terminates this Agreement under the foregoing Paragraph A, CITY shall pay ENGINEER a reasonable amount for services performed prior to such termination, which payment shall be based upon the payroll cost of employees engaged on the work by ENGINEER up to the date of termination of this Agreement and for subcontract and reproduction in accordance with the method of compensation stated in Section VIII: "Compensation" hereof. In the event of termination, the amount paid shall not exceed the amount appropriate for the percentage of work completed.

XIV. SUCCESSORS AND ASSIGNS

CITY and ENGINEER each bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Agreement; except as above, neither CITY nor ENGINEER shall assign, sublet or transfer its interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of CITY.

XV. AUTHORIZATION, PROGRESS, AND COMPLETION

CITY and ENGINEER agree that the PROJECT is planned to be completed in accordance with the Exhibit A: "Project Schedule" which is attached hereto and made a part hereof. ENGINEER shall employ manpower and other resources and use professional skill and diligence to meet the schedule; however, ENGINEER shall not be responsible for schedule delays resulting from conditions beyond ENGINEER's control. With mutual agreement, CITY and ENGINEER may modify the Project Schedule during the course of the PROJECT and if such modifications affect ENGINEER's compensation, it shall be modified accordingly, subject to City Council approval.

For Additional Engineering Services, the authorization by CITY shall be in writing and shall include the definition of the services to be provided, the schedule for commencing and completing the services and the basis for compensation as agreed upon by CITY and ENGINEER.

It is understood that this Agreement contemplates the full and complete Engineering services for this PROJECT including any and all services necessary to complete the work as outlined in Exhibit B: "Basic Engineering Services". Nothing contained herein shall be construed as authorizing additional fees for services to provide complete services necessary for the successful completion of this PROJECT.

XVI. SUBCONTRACTS

ENGINEER shall be entitled, only if approved by CITY, to subcontract a portion of the services to be performed by ENGINEER under this Agreement.

XVII. RIGHT TO AUDIT

ENGINEER agrees that CITY shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any directly pertinent books, design calculations, quantity take-offs, documents, papers and records of ENGINEER involving transactions relating to this Agreement. ENGINEER agrees that CITY shall have access during normal working hours to all necessary ENGINEER facilities and shall be provided adequate and appropriate work space in order to conduct

audits in compliance with the provisions of this section. CITY shall give ENGINEER reasonable advance notice of intended audits.

ENGINEER further agrees to include in all its subconsultant agreements hereunder a provision to the effect that the subconsultant agrees that CITY shall, until the expiration of three (3) years after final payment under the subcontract, have access to and the right to examine and photocopy any directly pertinent books, design calculations, quantity take-offs, documents, papers and records of such subconsultant, involving transactions to the subcontract, and further, that CITY shall have access during normal working hours to all subconsultant facilities, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of this article. CITY shall give subconsultant reasonable advance notice of intended audits.

XVIII. EXHIBITS

Both parties agree to the following exhibits and as such, the following exhibits are made a part of this Agreement:

Exhibit "A"	Project Schedule
Exhibit "B"	Basic Engineering Services
Exhibit "C"	Special Engineering Services
Exhibit "D"	Additional Engineering Services
Exhibit "E"	Services to be provided by the City
Exhibit "F"	Compensation
Exhibit "G"	Form 1295

XIX. MISCELLANEOUS

- A. Authorization to Proceed. Signing this Agreement shall be construed as authorization by CITY for ENGINEER to proceed with the work, unless otherwise provided for in the authorization.

- B. Legal Expenses. In the event legal action is brought by CITY or ENGINEER against the other to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions of this Agreement, the prevailing party in any litigation between the parties to this agreement shall be entitled to reasonable attorney fees.

- C. Notices. Any notice or correspondence required under this Agreement shall be sent by certified mail, return receipt requested, or by personal delivery and shall be effective upon receipt, if addressed to the party receiving the notice or correspondence at the following address:

If to ENGINEER:

Binkley & Barfield, Inc.
Attn: Richard A. Arvizu, PE, CFM
1801 Gateway Boulevard, Suite 101
Richardson, Texas 75080

If to CITY:

City of North Richland Hills
Attn: Caroline Waggoner, PE, CFM
Public Works & Engineering Department
4301 City Point Drive
North Richland Hills, Texas 76180

With Copies to the City Manager and City Attorney at the same address.

- D. Independent Contractor. ENGINEER shall perform services hereunder as an independent contractor, and not as an officer, agent, servant or employee of the CITY and ENGINEER shall have the exclusive right to control services performed hereunder by ENGINEER, and all persons performing same, and shall be responsible for the negligent acts and omissions of its officers, agents, employees, and subconsultants. Nothing herewith shall be construed as creating a partnership or joint venture between CITY and ENGINEER, its officers, agents, employees and subconsultants; and the doctrine of respondent superior has no application as between CITY and ENGINEER.
- E. Venue. This Agreement shall be governed by the laws of the State of Texas, and venue in any proceeding relating to this Agreement shall be in Tarrant County, Texas.
- F. Entire Agreement. This Agreement represents the entire agreement between CITY and ENGINEER and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both CITY and ENGINEER.
- G. Severability. If any provision in this Agreement shall be held illegal by a valid final judgment of a court of competent jurisdiction, the remaining provisions shall remain valid and enforceable.
- H. Disclosure. By signature of this Agreement, ENGINEER warrants to CITY that it has made full disclosure in writing of any existing conflicts of interest or potential conflicts of interest, including but not limited to personal financial interests, direct or indirect, in property abutting the PROJECT and business relationships with abutting property owners. ENGINEER further warrants that it will make disclosure in writing

of any conflicts of interest which develop subsequent to the signing of this Agreement and prior to final payment under this Agreement.

This Agreement is executed in two (2) counterparts.

IN TESTIMONY WHEREOF, the parties hereto have executed this Agreement this the _____ day of _____, 2021.

CITY OF NORTH RICHLAND HILLS
(CITY)

BINKLEY & BARFIELD, INC.
(ENGINEER)

By: _____
Mark Hindman, City Manager

By: _____
Richard A. Arvizu, PE, CFM
Managing Director - Infrastructure

Date: _____

Date: _____

ATTEST:

ATTEST:

Alicia Richardson, City Secretary

Notary Public in and for the State of Texas

APPROVED TO FORM AND LEGALITY:

Maleshia B. McGinnis, City Attorney

Type or Print Notary's Name

My Commission Expires:

CITY SEAL

CORPORATE SEAL

EXHIBIT A

**PROJECT SCHEDULE
FOR
GLENVIEW DRIVE (WEST) PROJECT**

The Scope of Services for this PROJECT is based on the following schedule:

Activity	Duration	Due Date
Notice to Proceed from City	1 Day	January 26, 2021
Survey	8 Weeks	March 23, 2021
Conceptual Design (30%)	8 Weeks	May 18, 2021
City Review	4 Weeks	June 15, 2021
Preliminary Design (60%)	8 Weeks	August 10, 2021
City Review	4 Weeks	September 7, 2021
Pre-Final Design (90%)	10 Weeks	November 16, 2021
City Review Comments	4 Weeks	December 14, 2021
Final Design (100%)	4 Weeks	January 11, 2022
City Review	2 Weeks	January 25, 2022
Advertise for Construction Bids	3 Weeks	February 15, 2021
Open Construction Bids	4 Weeks	March 15, 2021
Begin Construction	4 Weeks	April 12, 2021

Notes:

1. Design time from Notice to Proceed to Submittal of Final Design is less than twelve (12) months.
2. Schedule assumes City review time will be four (4) weeks for Conceptual Design, Preliminary Design and Pre-Final Design with two (2) weeks for Final Design.

EXHIBIT B

**BASIC ENGINEERING SERVICES
FOR
GLENVIEW DRIVE (WEST) PROJECT**

The scope of services for this project includes preparation of construction plans, specifications, estimates, bid phase support and construction phase services for roadway improvements on Glenview Drive from just west of Honey Lane westward to the City limit for approximately 3,100 linear feet. The existing 4-lane asphalt roadway is not proposed for widening, but rather reconstruction to current City standards. The project will include construction of sidewalk along the corridor, and basic wet utility replacement as needed to ensure subsurface infrastructure has an expected life span that exceeds the proposed pavement work.

BASIC Engineering Services includes Project Management, Conceptual Design, Preliminary Design, Pre-Final Design, Final Design, Bid Phase Services, Construction Phase Services, Project Plans, Specifications and Engineer's Opinion of Construction Cost.

I. PROJECT MANAGEMENT

ENGINEER will manage the work outlined in this scope to ensure efficient and effective use of ENGINEER's and CITY's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CITY's Project Manager and others as necessary to make progress on the work.

Team Management:

- Lead, manage and direct design team activities
- Ensure quality control is practiced in performance of the work
- Communicate internally among team members
- Allocate team resources

Communications and Reporting:

- Attend a pre-design project kickoff meeting with CITY staff to confirm and clarify scope, understand CITY objectives, and ensure economical and functional designs that meet CITY requirements
- Conduct and document monthly project update meetings with CITY Project Manager
- Conduct review meetings with the CITY at the end of each design phase.
- Conduct and document monthly design team meetings.
- Prepare and submit monthly invoices in the format acceptable to the CITY.
- Prepare and submit monthly progress reports.
- Prepare and submit baseline Project Schedule initially and Project Schedule updates.
- Coordinate with other agencies and entities as necessary for the design of the proposed infrastructure and provide and obtain information needed to prepare the design.
- With respect to coordination with permitting authorities, ENGINEER shall communicate with permitting authorities such that their regulatory requirements are appropriately reflected in the designs.
- Personnel and Vehicle Identification: When conducting site visits to the project location, the ENGINEER or any of its sub-consultants shall carry readily visible information identifying the name of the company and the company representative.

Assumptions:

- 11 Monthly Update/Coordination Meetings w/Project Manager
- 11 Internal Design Team Meetings
- 11 Monthly Progress Reports

Deliverables:

- Meeting summaries with action items
- Monthly invoices
- Monthly progress reports
- Project design schedule

II. CONCEPTUAL DESIGN (30%)

The Conceptual Design shall be submitted to CITY per the approved Project Schedule. The purpose of the conceptual design is for the ENGINEER to identify, develop, communicate through the defined deliverables, and recommend the design concept that successfully addresses the design problem, and to obtain the CITY's endorsement of this concept. ENGINEER will utilize concepts and criteria contained in the current CITY standards and Mater Thoroughfare Plan and Roadway Rightsizing Plan for conceptual planning and design including conceptual roadway corridor. Also included in this scope of work is the conceptual design of the water, sanitary sewer and storm drainage improvements within the project limits.

ENGINEER will develop the conceptual design of the infrastructure

- In addition to data obtained from the CITY, ENGINEER will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project. ENGINEER will also identify and seek to obtain data for existing conditions that may impact the project including utilities, agencies (TxDOT), City Master Plans, and property ownership as available from the Tax Assessor's office.
- Prepare conceptual design plans. The documents will represent a 30% complete review set. The conceptual design plans will include:
 - Conceptual cover and index of sheets including project limits, area location map and beginning and end station limits.
 - Existing typical sections of the roadway to be constructed along with proposed typical sections which outline the proposed improvements. Typical sections shall include existing and proposed ROW, existing and proposed lane widths and direction arrows, existing and proposed curbs, sidewalks, and retaining walls.
 - Conceptual plan and profile sheets showing existing and proposed horizontal and vertical roadway alignments, existing and proposed ROW, existing and proposed easements, existing and proposed sidewalks and driveways, proposed lane dimensions and lane arrows, existing drainage structures, City-owned and franchise utilities.
 - Confirm location, size and age of all CITY owned utilities.
 - Confirm location of existing franchise utilities (Atmos Gas, Oncor, Verizon, Frontier, AT&T, etc.). Contact the utility companies regarding the location of their facilities (Level C & D SUE Services).

- Existing drainage area map showing existing storm drainage system layout including pipe sizes, inlets, junction structures and outfall locations within the project limits.
- Pre and post condition Drainage area map with supporting drainage computation in the CITY's standard tabular format.
- Conceptual storm drainage system layout identifying extents of the storm system expansion including locations of proposed inlets, junction structures and outfall locations within the project limits.
- Conceptual water system improvements layout within the project limits. This effort includes the layout of approximately 3,200 LF of 8" and 16" water main replacement with appurtenances.
- Conceptual sanitary sewer system improvements within the project limits. This effort includes the layout of approximately 1,200 LF of 8" sanitary sewer main replacement with appurtenances.
- Completed variance request forms
- QAQC checklists
- Transmittal letter including a summary of conflicts and know troublesome areas to be further addressed in subsequent plan sets
- The ENGINEER shall prepare a project decision log identifying resolutions to previously identified conflicts and design challenges.
- The ENGINEER shall prepare an opinion of probable construction cost and submit this opinion to the CITY.
- The ENGINEER shall not proceed with Preliminary Design activities without written approval by the CITY of the Conceptual Design Package.

Assumptions:

- 2 sets of 22"x34" full sized plans will be delivered for the 30% design
- 2 sets of 11"x17" half sized plans will be delivered for the 30% design
- PDF files created from design CAD drawings will be digitally submitted to the City
- 1 Concept Design Review Meeting w/ City Staff

Deliverables:

- Conceptual Design Package (hard copy and PDF format)

III. PRELIMINARY DESIGN (60%)

- The Preliminary Design shall be submitted to CITY per the approved Project Schedule.
- Prepare preliminary design plans. The documents will represent a 60% complete review set. The preliminary design plans will include:
 - Preliminary cover and index of sheets including project limits, area location map and beginning and end station limits.
 - General Notes Sheet
 - Project Control Sheet, showing all Control Points, used or set while gathering data. Benchmarks shall tie into the City's GPS monuments set in 2008 and 2011. Horizontal datum is NAD83(2011) and the vertical datum is NAVD88.
 - Updated existing and proposed typical section sheets.
 - Demolition Sheets showing limits for removal of street pavement, driveways, lead walks, sidewalks, and trees
 - Updated Paving Plan and Profile sheets displaying station and coordinate data for all horizontal alignment P.C.'s, P.T.'s, P.I.'s; station and elevation data of all vertical profile P.C.'s, P.T.'s, P.I.'s, low points, and high points; lengths of vertical curves, grades, K values, e, and vertical clearances where required.
 - No less than two benchmarks plan/profile sheet.
 - Bearings given on all proposed centerlines, or baselines.
 - Intersection layout sheets including ROW lines, horizontal alignments, utilities, curbs, sidewalks, driveways, lane dimensions and arrows, and existing and proposed contours (0.25' intervals).
 - ENGINEER will delineate the watershed based on contour data and field verification and document existing street, right-of-way and storm drain capacities for the subject site. A drainage area map will be drawn at maximum 1" = 200' scale from available 2' contour data with the contours labeled. Data source and year will be provided by the CITY. Calculations regarding street and right-of-way capacities and design discharges (5-year, 25-year and 100-year frequencies) at selected critical locations will be

provided. Other frequencies as required by City Drainage Manual may be appropriate for outfalls and sensitive locations. Capacities of existing storm drain will be calculated and shown. Design shall conform to CITY criteria delineated in the CITY's current Drainage Criteria Manual. All locations in the project area where 100-year runoff exceeds available storm drain and right-of-way capacities shall be clearly identified. The ENGINEER's responsibility includes recommendations for improvements of the existing system as deemed reasonable and consistent with CITY standards.

- Storm drain plan and profile sheets showing location and size of all inlets, manholes, junction boxes, culverts and piping. Storm drain profiles shall include existing and proposed flow lines, flows, flow velocities, 25-year and 100-yr HGL, lengths and slopes of pipe, top of ground profile over pipe and connections to existing or proposed storm sewer systems.
- Preliminary water plans for replacement of existing water mains with appurtenances including modifications to existing infrastructure at locations where conflicts have been identified with the proposed roadway, storm drain, sanitary sewer or other utilities and address CITY comments.
- Preliminary sanitary sewer plans for the replacement of existing sanitary sewer mains with appurtenances and structures including modifications to existing infrastructure at locations where conflicts have been identified with the proposed roadway, storm drain, water or other utilities and address CITY comments.
- Preliminary erosion control plan and details.
- Preliminary signing, pavement marking layouts.
- Preliminary construction phasing layout
- Roadway Cross Section Sheets.
 - Cross sections shall be at centerline of each street intersection, 50' intervals and at the centerline of each driveway and intersecting street.
 - Cross sections shall include existing and proposed grades, pavement section, sidewalk and top of curb elevations.
- Preliminary roadway details to include curbs, curb expansion joints, driveways, sidewalks, and pavement details.

- Preliminary plans will be of sufficient detail for submission for franchise utility review.
- The requirements for preliminary plans will be in accordance with the City of North Richland Hills Design Criteria Standards.
- Preliminary design shall be in compliance with TCEQ Standards and TDLR standards
- The ENGINEER will perform a constructability review.
- The ENGINEER will perform QA/QC of preliminary plans.
- An opinion of probable construction cost for proposed capital improvements will be updated based on the preliminary design.
- Submit preliminary plans to franchise utility companies.
- The ENGINEER will consult with the CITY's Transportation and Public Works Department, Water Department, and other CITY departments, public utilities, private utilities, private utilities and government agencies to determine the approximate location of above and underground utilities, and other facilities (current and future) that have an impact or influence on the project. ENGINEER will design CITY facilities to avoid or minimize conflicts with existing utilities, and where known and possible consider potential future utilities in designs.
- The ENGINEER shall prepare a project decision log identifying resolutions to previously identified conflicts and design challenges.
- Preliminary plans must be approved by CITY prior to ENGINEER commencing with the preparation of the pre-final design plans.

Assumptions:

- 2 sets of 22"x34" full sized plans will be delivered for the 60% design
- 2 sets of 11"x17" half sized plans will be delivered for the 60% design
- PDF files created from design CAD drawings will be digitally submitted to the City
- All submitted documents and checklists will be uploaded to the City.
- The ENGINEER shall provide technical specifications as needed.
- 1 Preliminary Design Review Meeting w/ City Staff
- Traffic Control Plans not required
- Streetlight/Illumination Plans not required
- Traffic Signal Modifications not required

- Landscaping and Irrigation Plans not required
- Water/Wastewater Capacity Analysis not required

Deliverables:

- Preliminary Design Package (hard copy and pdf format)
- Estimates of probable construction cost
- Completed variance request forms
- QA/QC Checklist

IV. PRE-FINAL DESIGN PLANS (90%)

- A review meeting to discuss the preliminary design plans and project walkthrough with the CITY will be conducted.
- Upon acceptance of preliminary design plans by the CITY, the Engineer shall prepare pre-final design plans and specifications.
- The pre-final design plans will represent a 90% complete review set. The pre-final plans shall be consistent with previous sections.
- Confirm driveway grades, limits of reconstruction and driveway cross sections
- Confirm retaining wall locations and proposed height (if needed)
- Confirm proposed grades for sidewalks, lead walks and barrier free ramps
- Revise/adjust street grades as required
- Confirm fire hydrant and water valve spacing and locations
- Confirm sanitary sewer manhole spacing and locations
- Incorporate all CITY review comments from the preliminary design phase
- Prepare bid proposal
- Prepare special specifications (as needed)
- Provide recommendation and justification for liquidated damages beyond those set forth in the current NCTCOG General Provisions and consider incentives for the construction contractor to complete the project early and/or meet intermediate project milestones.

- The ENGINEER will perform a constructability review.
- The ENGINEER will perform QA/QC of pre-final plans.
- An opinion of probable construction cost for proposed capital improvements will be updated based on the pre-final design.
- Pre-final plans must be approved by CITY prior to ENGINEER commencing with the preparation of the final design plans.

Assumptions:

- 2 sets of 22"x34" full sized plans will be delivered for the 90% design
- 2 sets of 11"x17" half sized plans will be delivered for the 90% design
- PDF files created from design CAD drawings will be digitally submitted to the City
- All submitted documents and checklists will be uploaded to the City.
- The ENGINEER shall provide technical specifications as needed.
- 1 Pre-Final Design Review Meeting w/ City Staff

Deliverables:

- Pre-Final Design Package (hard copy and pdf format)
- Estimates of probable construction cost
- QA/QC Checklist
- Bid Proposal

V. FINAL DESIGN PLANS (100%)

- A review meeting to discuss the pre-final design plans with the CITY will be conducted.
- Upon acceptance of pre-final design plans by the CITY, the Engineer shall prepare final design plans and specifications.
- The final design plans will represent a 100% complete review set. The final plans shall be consistent with previous sections.
- Incorporate all CITY review comments from the pre-final design phase
- Revise bid proposal as needed
- Revise special specifications (as needed)
- The ENGINEER will perform QA/QC of final plans.

- An opinion of probable construction cost for proposed capital improvements will be updated based on the final design.
- Upon approval by the CITY, the ENGINEER will prepare final signed and sealed construction plans.

Assumptions:

- 4 sets of 22"x34" full sized plans will be delivered for the 100% final design
- 4 sets of 11"x17" half sized plans will be delivered for the 100% final design
- 2 sets of hard copy specifications
- PDF files created from design CAD drawings will be digitally submitted to the City
- All submitted documents and checklists will be uploaded to the City.
- The ENGINEER shall provide technical specifications as needed.
- 1 Final Design Review Meeting w/ City Staff

Deliverables:

- Final Design Package (hard copy and PDF format)
- Estimates of probable construction cost
- QA/QC Checklist
- Bid Proposal

VI. BID PHASE SERVICES

- The ENGINEER shall provide Bid Phase assistance as requested by CITY.
- Attend the prebid conference in support of the CITY.
- When substitution prior to award of contracts is allowed in the contract documents, the ENGINEER will advise the CITY as to the acceptability of alternate materials and equipment proposed by bidders.
- Incorporate all addenda into the contract documents and issue conformed sets.
- Tabulate and review all bids received for the construction project, assist the CITY in evaluating bids, and recommend award of the contract. A copy of the Bid Tabulation and letter of recommendation of award will be provided to the CITY.
- Check references and make contractor recommendation award for construction.

- Final conformed Contract Documents incorporating all addenda and other bid phase modifications shall be submitted as an Adobe Acrobat PDF format (version 6.0 or higher) file.

Assumptions:

- 4 sets of 22"x34" full sized plans (conformed, if applicable)
- 4 sets of 11"x17" half sized plans (conformed, if applicable)
- 4 sets of hard copy specifications (conformed, if applicable)
- PDF files uploaded to the City

Deliverables:

- Addenda (if necessary)
- Bid Tabulation
- Recommendation Letter for Award of contract
- Construction documents (conformed, if applicable)

VII. CONSTRUCTION PHASE SERVICES

ENGINEER will support the construction phase of the project as needed on an hourly basis as follows:

- The ENGINEER shall attend the preconstruction conference.
- The ENGINEER shall visit the project site at requested intervals as construction proceeds to observe and report on progress.
- As requested by the CITY, the ENGINEER shall provide necessary interpretations and clarifications of contract documents and make recommendations as to the acceptability of the work.
- The ENGINEER shall attend the "Final" project walk through and assist with preparation of final punch list.
- The ENGINEER shall prepare record drawings from information provided by the CITY depicting any changes made to the Final Drawings during construction. The following information shall be provided by the CITY:
 - As-Built Survey
 - Red-Line Markups from the Contractor
 - Red-Line Markups from City Inspector

- Copies of Approved Change Orders
- Approved Substitutions
- The ENGINEER shall submit a set of sealed Final Drawings, modified and stamped as Record Drawings. The ENGINEER may keep copies of the information provided by the CITY for their files, but all original, red-lined drawings shall be returned to the CITY with the mylars.

Assumptions:

- 4 site visits
- 2 RFIs
- Construction staking to be provided by construction contractor

Deliverables:

- Response to Contractor's Request for Information
- Final Punch List Items
- Record drawings

EXHIBIT C

**SPECIAL ENGINEERING SERVICES
FOR
GLENVIEW DRIVE (WEST) PROJECT**

The scope of work for SPECIAL Engineering Services involves Field Survey, Property Owner Survey Notice Letter, Traffic Counts and Forecasting, and Geotechnical Investigation/Pavement Design. The scope of work for the Special Engineering Services is more generally described as follows:

I. FIELD SURVEY

ENGINEER will perform an on the ground survey of the property under the direct supervision of a Registered Professional Land Surveyor. Included in this item:

- Survey area generally includes Glenview Drive (West) from the City limits eastward to Honey Lane.
- Establish horizontal and vertical survey control for the length of the project. Control points will need to be set within City right-of-way.
- Identify properties by street address, owner name, lot number and block number
- Locate existing right-of-way lines, property corners and easements per the subdivision plats of record. Enough property corners will be located so that the location of the City right-of-way is defined for use in construction. Locate iron pins or other monumentation that can be readily located with a pin finder or visual inspection only. Full boundary survey is not required.
- Locate and tie existing pavement, top of curb, gutter elevations, sidewalks, lead walkways, concrete steps, driveways, concrete pads & mailboxes. Limits to be surveyed also include portions of the intersection at connecting streets, (a minimum of fifty feet (50') from PC/PT).
- Minimum cross sections shall be taken every 50' and shall include edges of sidewalk, natural ground line at right-of-way limits and natural ground line twenty-five (25') from right-of-way.
- Driveways locates shall include elevations at street curb return, edge of sidewalks, right-of-way line, end of driveway at edge of building and at any vertical grade breaks.

- Locate and tie existing fences, trees, bushes, retaining walls, and other above ground ancillary features within the right-of-way. Estimate caliper and tree type. Detailed tree survey is not required.
- Locate and tie all water appurtenances such as water valves, water meters and fire hydrants.
- Locate and tie all sanitary sewer appurtenances such as cleanouts and manholes. Obtain flowline and rim elevations for all sanitary sewer manholes. Provide directional flow arrows for sanitary sewer manholes.
- Locate and tie all drainage structures, channels, swales and/or creeks. Field survey of invert elevations for accessible storm drain inlets.
- Contact Texas811 to request locates of all utilities within the project limits. Have them designated in the field. Identify utility markings and incorporate field locates into design survey.
- Submit a list of franchise utility companies with utilities in the area based on e-mail response from Texas811 request. All e-mails will be placed in a folder called "One Call" and provided to the client.
- Develop base map from field survey in AutoCAD Civil 3D. CAD drawing to include features noted above and one-foot contours.

Assumptions:

- Species names of trees not required
- Detailed tree survey not required
- Boundary survey not required
- Survey for SUE not required
- Construction staking not required

Deliverables:

- Field survey points and descriptions in AutoCAD format.
- Base map in AutoCAD format

II. PROPERTY OWNER SURVEY NOTICE LETTER

- Prior to beginning the survey efforts for the project, the ENGINEER shall prepare property notification maps and letters with owner contact information based on current appraisal district data identifying all impacted landowners for and submit for City review and approval prior to mailing. Notifications shall be mailed 10 working days prior to beginning field surveying efforts.

- The documentation shall be provided in conformance with the City's criteria for property owner's notification.

Deliverables:

- Letters to property owners

III. TRAFFIC COUNTS AND FORECASTING

Traffic forecasting shall be obtained and provided to the Geotechnical Engineer as part of the analysis/recommendation for the proposed pavement section

- 48-hr bi-directional traffic counts at two locations
- Research and data collection on existing traffic studies/counts
- Traffic forecasting for 50-year pavement lifecycle for use in pavement section design/confirmation

Deliverables:

- Traffic Counts and Forecasting Summary

IV. GEOTECHNICAL INVESTIGATION/PAVEMENT DESIGN

- Soil investigations, including field and laboratory tests, borings, related engineering analysis and recommendations for determining soil conditions will be made. In addition to the above investigations, borings and appropriate field and laboratory analysis will be made at reasonable intervals along the project alignment for the Contractor's use in determining soil conditions for preparing bids and a Trench Safety Plan.
- 6 borings will be completed to depths of about 10 feet below grade at pavement locations. Please note that it is our intent to conduct all geotechnical testing within the appropriate soil strata so that results are consistent with the final in-place conditions. However additional construction phase testing may be required to confirm final subgrade recommendation.
- Field personnel will complete the borings using truck-mounted equipment. Cohesive and non-cohesive soil samples will be obtained using three-inch diameter Shelby tube samplers (ASTM D1587) and two-inch diameter standard split-spoon samplers (ASTM D1586), respectively. In addition, rock encountered will be evaluated by use of the Texas Department of Transportation cone penetration tests. Rock coring is not included in this scope

of work. At the completion of drilling operations, bore holes will be backfilled and plugged with bentonite and plugged at the surface with concrete.

- A soils technician will extrude the samples in the field, check the samples for consistency with a hand penetrometer, carefully wrap them to preserve their condition, and return them to the laboratory for testing. A log of each boring will be prepared to document field activities and results.
- Traffic control during as necessary
- Laboratory testing of the recovered materials will be required to perform engineering analysis and prepare recommendations for the proposed improvements. The laboratory testing will include the following:

Test Type	Test Count
Moisture Content (ASTM D2216)	6
Atterberg Limits (ASTM D4318)	6
Unconfined Compressive Strength of Soil (ASTM D2166)	6
Unit Weight	6
Free Swell Tests (ASTM D4546)	6
Eades and Grim Lime Series Tests	6
Soluble Sulfate Tests (Tex 145-E)	6

- Testing will be in accordance with ASTM or TxDOT procedures. The specific types and quantities of tests will be determined based on subsurface conditions encountered in the borings.
- The engineering report will be prepared by a registered engineer and will present the results of the field and laboratory data together with the analyses of the results and recommendations. The report will address:
 - General soil and groundwater conditions
 - Comments on excitability of materials
 - Guidelines for pavement subgrade stabilization
 - Pavement thickness calculations using City of North Richland Hills Paving Design Standards
 - Earthwork recommendations
 - Construction considerations related to soil and groundwater conditions at the borings
- The ENGINEER shall prepare a detailed geotechnical engineering study and pavement design in conformance with the City of North Richland Hills Pavement Design Criteria. Should the study deem that the City standard pavement structure will result in a lifecycle of less than 50 years additional recommendations will be included to prolong the expected life of the pavement.

The study shall include recommendations regarding utility trenching and identify existing groundwater elevation at each boring.

Assumptions:

- Utility research and record drawings will be provided by the City.
- Franchise utility locates will be limited to One-Call designation services and excludes subsurface location services. Surveying services related to franchise utilities will include field surveying of all readily available surface improvements including pin flags and paint markings provided by One-Call and City services.

Deliverables:

- Geotechnical report summarizing analyses and recommendations for pavement section.

EXHIBIT D

ADDITIONAL ENGINEERING SERVICES FOR GLENVIEW DRIVE (WEST) PROJECT

The scope of work for Additional Engineering Services involves Level A SUE Services – Test Holes, Permitting. The scope of work for the Additional Engineering Services is more generally described as follows:

I. LEVEL A SUE SERVICES – TEST HOLES

The ENGINEER shall only provide Level A SUE Services if requested by the CITY. Through a qualified subcontractor, ENGINEER shall:

- Perform SUE Services – Level A Test Holes for approximately two (2) test holes. Location to be recommended by ENGINEER and approved by the CITY.
- Traffic control for test holes shall be provided (as needed).

Assumptions:

- 2 test holes (as needed)

Deliverables:

- SUE report detailing depth of utility, location and material type

II. PERMITTING

The ENGINEER will provide permitting support for the CITY to obtain any and all agreements and/or permits normally required for a project of this size and type, as follows.

Franchise Utility Coordination

- Meet, negotiate, and coordinate to obtain approval of the agency issuing the agreement and/or permit
- Completing all forms/applications for the City.
- Submitting forms/applications for City.
- Submitting revised forms for agency review

- Responding to agency comments and requests.

Texas Department of Licensing and Regulation (TDLR)

- Identify and analyze the requirements of the Texas Architectural Barriers Act, Chapter 68 Texas Administrative Code, and become familiar with the governmental authorities having jurisdiction to approve the design of the Project.
- Submit construction documents to the TDLR
- Completing all TDLR forms/applications necessary
- Obtain the Notice of Substantial Compliance from the TDLR
- Request an inspection from TDLR or a TDLR locally approved Registered Accessibility Specialist no later than 30 calendar days after construction substantial completion. Advise the CITY in writing of the results of the inspection.
- Responding to agency comments and requests.

Assumptions:

- 404/US Army Corps of Engineers Permitting not required
- Jurisdictional Waters of the United States delineation not required
- Cultural Resources Desktop Analysis and THC coordination not required
- Coordination with FEMA not required (Zone A)

Deliverables:

- TDLR registration document
- TDLR approval letter

EXHIBIT E

SERVICES TO BE PROVIDED BY THE CITY FOR GLENVIEW DRIVE (WEST) PROJECT

The CITY will provide the following services to the ENGINEER in the performance of the PROJECT upon request:

- I.** Provide any existing data the CITY has on file concerning the PROJECT, if available.
- II.** Provide any available As-Built plans for existing streets and drainage facilities, if available.
- III.** Provide any available As-Built plans for existing water and sanitary sewer mains, if available.
- IV.** Assist the ENGINEER, as necessary, in obtaining any required data and information from TxDOT and/or other local utility companies.
- V.** Provide standard details and specifications in digital format.
- VI.** Assist the ENGINEER by requiring appropriate utility companies to expose underground utilities within the Right-of-Way, when required.
- VII.** Give prompt written notice to ENGINEER whenever CITY observes or otherwise becomes aware of any development that affects the scope or timing of the ENGINEER's services.

EXHIBIT F
COMPENSATION
FOR
GLENVIEW DRIVE (WEST) PROJECT

I. COMPENSATION

For and in consideration of the services to be rendered by the ENGINEER, the CITY shall pay, and the ENGINEER shall receive the compensation hereinafter set forth for the Design and Construction Phases of the work and additionally for Special Engineering Services and/or Additional Engineering Services that are in addition to the Basic Engineering Services. All remittances by CITY of such compensation shall either be mailed or delivered to the ENGINEER's home office as identified in the work authorization.

A. Compensation for the Basic Engineering Services provided herein shall be as follows:

Conceptual Design (30%): **\$87,000.00**
Preliminary Design (60%): **\$85,600.00**
Pre-Final Design (90%): **\$62,600.00**
Final Design (100%): **\$29,800.00**
Bid Phase Services: **\$7,000.00**

Design and Bid phases shall be completed for an hourly not to exceed fee of **\$272,000.00**. and Construction Phase services will be completed for an hourly not to exceed fee of **\$18,200.00**.

B. Compensation for Special Engineering Services not covered by the Basic Engineering Services provided herein above shall be as follows:

Design Surveys: Lump Sum Fee of **\$31,800.00**
Property Owner Survey Notice Letter: Lump Sum Fee of **\$1,200.00**
Traffic Counts and Forecasting: Lump Sum Fee of **\$3,000.00**
Geotechnical Investigation/Pavement Design (Incl. traffic control): Lump Sum Fee of **\$11,500.00**

C. Compensation for Additional Engineering Services not covered by Basic Engineering Services or Special Engineering Services provided herein shall be as follows:

Level A SUE Test Holes: **2** Test Holes at **\$1,500.00** each for a maximum not to exceed Fee of **\$3,000.00**

Level A SUE Traffic Control for Test Holes: Lump Sum Fee of **\$2,700.00**

Utility Coordination/Permitting: Lump Sum Fee of **\$6,200.00**

TDLR Permitting: Lump Sum Fee of **\$2,800.00**

For all direct non-labor and/or subcontract expense, including mileage, travel and living expenses at invoice or internal office cost times a multiplier of **1.1**.

Payments to the ENGINEER for authorized Additional Engineering Services will be due monthly, upon presentation of monthly statement by the ENGINEER for such services.

II. AUDIT AND SCOPE CHANGE

Cost budgets are set forth above and are subject to the audit provisions of this Agreement, Section XVII: "Right to Audit". It is also understood that the cost budgets are based upon ENGINEER's best estimate of work and level of effort required for the proposed scope of services. As the PROJECT progresses, it is possible that the level of effort and/or scope may differ up or down from that assumed. If there are no scope changes, the ENGINEER shall receive the full amount of lump sum and unit price fees, regardless of the cost. If at any time it appears that the cost budget may be exceeded, the ENGINEER shall notify the CITY as soon as possible in writing.

If there is a scope change, the ENGINEER shall notify the CITY as soon as possible in writing and shall include a revised scope of services, estimated cost, revised fee schedule, and a revised time of completion. Upon negotiation and agreement via a signed amendment by both parties, the cost budget, fee schedule, and total budget will be adjusted accordingly.

CITY shall not be obligated to reimburse the ENGINEER for costs incurred in excess of the cost budget. The ENGINEER shall not be obligated to perform on any change in scope of work or otherwise incur costs unless and until the CITY has notified the ENGINEER in writing that the total budget for Engineering Services has been increased and shall have specified in such notice a revised total budget which shall thereupon constitute a total budget for Engineering Services for performance under this Agreement.

A detailed scope of work, total budget, and schedule will be prepared by the ENGINEER and executed by the CITY if the ENGINEER is authorized to perform any Additional Engineering Service(s).

III. PAYMENT

Payments to the ENGINEER will be made as follows:

A. Invoice and Time of Payment

Monthly invoices will be issued by the ENGINEER for all work performed under this Agreement. Invoices are due and payable on receipt. Invoices will be prepared in a format approved by the CITY prior to submission of the first monthly invoice. Once approved, the CITY agrees not to require changes in the invoice format, but reserves the right to audit. Monthly payment of the fee will be in proportion to the percent completion of the total work (as indicated in Exhibit B: "Basic Engineering Services").

Upon completion of services enumerated in Exhibit B: "Scope of Basic Engineering Services", the final payment of any balance will be due upon receipt of the final invoice.

EXHIBIT G
FORM 1295
FOR
GLENVIEW DRIVE (WEST) PROJECT

[Form 1295 is submitted as the following page]