

**CONTRACT DOCUMENTS  
AND  
CONSTRUCTION SPECIFICATIONS  
FOR  
HARMONSON ROAD PROJECT  
(DAWN DRIVE TO MACKEY CREEK  
CHANNEL)  
FOR THE  
CITY OF NORTH RICHLAND HILLS**



**September 2025**

**City of North Richland Hills  
Public Works Department**

**Project RFB 26-001**

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# **SECTION I**

## **NRH PURCHASING GUIDANCE**



**PURCHASING DEPARTMENT**  
**REQUEST FOR BID**

**26-001 HARMONSON ROAD  
PROJECT (DAWN DRIVE TO  
MICKEY CREEK CHANNEL)**

**BIDS DUE TUESDAY, OCTOBER 21, 2025**

**BY 2:00 P.M.**

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## INVITATION TO BID

The City of North Richland Hills is accepting sealed bids from all interested parties for:

- Bid Number: 26-001
- Bid Type: REQUEST FOR BID
- Bid Name: Harmonson Road Project (Dawn Drive to Mackey Creek Channel)
- Bid Due Date: Tuesday, October 21, 2025
- Bid Due Time: 2:00 P.M. Central Standard Time
- Pre-Bid Conference: 10:00 A.M. Central Standard Time, Tuesday, September 30, 2025
- Location: Community Room, 4301 City Point Dr, North Richland Hills, TX 76180
- Deadline for questions:
  - Date: Friday, October 10, 2025
  - Time: 12:00 P.M. Central Standard Time

DOCUMENTS MUST BE SUBMITTED ELECTRONICALLY VIA:

[www.publicpurchase.com](http://www.publicpurchase.com)

No oral explanation in regards to the meaning of the specifications will be made, and no oral instructions will be given after the pre-bid meeting and before the award of the contract. Requests from interested vendors for additional information or interpretation of the information included in the specifications should be directed in writing as a question related to this bid on Public Purchase and the question will be answered on Public Purchase. All addendums will also be posted to Public Purchase. It will be the vendor's responsibility to check all information related to this bid on Public Purchase before submitting a response.

**All bid responses must be turned in complete from cover page to end of Section 2 – pages in order. Should any page not be filled out (in Section 2 based on Qualification of Bidders), that page is still required to be a part of the bid response; however, Contractor to write 'to be provided with Contract Documents if awarded to the construction contract.'**

The City of North Richland Hills reserves the right to reject in part or in whole all bids submitted, and to waive any technicalities for the best interest of the City of North Richland Hills.

## GENERAL CONDITIONS

In submitting this bid, the Bidder understands and agrees to be bound by the following terms and conditions. These terms and conditions shall become a part of the purchase order or contract and will consist of the invitation to bid, specifications, the responsive bid and the contract with attachments, together with any additional documents identified in the contract and any written change orders approved and signed by a city official with authority to do so. All shall have equal weight and be deemed a part of the entire contract. If there is a conflict between contract documents, the provision more favorable to the City shall prevail.

### 1. **BID TIME**

It shall be the responsibility of each Bidder to ensure his/her bid are submitted to the Public Purchase website on or before **2:00 P.M. Tuesday, October 21, 2025**. The official time shall be determined by the Public Purchase Website. The Public Purchase Website will NOT allow bid responses to be uploaded after the closing time.

All attached bid documents are to be returned completely filled out, totaled, and signed. The City of North Richland Hills will not accept any bid documents other than the attached.

### 2. **WITHDRAWING BIDS/PROPOSALS/QUOTES**

Bids may be withdrawn at any time prior to the official opening; request for non-consideration of bids must be made in writing to the Purchasing Manager and received prior to the time set for opening bids. The bidder warrants and guarantees that his/her bid has been carefully reviewed and checked and that it is in all things true and accurate and free of mistakes. Bidder agrees that a bid price may not be withdrawn or canceled by the bidder for a period of ninety (90) days following the date designated for the receipt of bids.

### 3. **IRREGULAR BIDS/PROPOSALS/QUOTES**

Bids will be considered irregular if they show any omissions, alterations of form, additions, or conditions not called for, unauthorized alternate bids, or irregularities of any kind. However, the City of North Richland Hills reserves the right to waive any irregularities and to make the award in the best interest of the City.

### 4. **REJECTION/DISQUALIFICATION**

Bidders will be disqualified and/or their bids rejected, among other reasons, for any of the specific reasons listed below:

- a) Bid received after the time set for receiving bids as stated in the advertisement;
- b) Reason for believing collusion exists among the Bidders;
- c) Bid containing unbalanced value of any item; bid offering used or reconditioned equipment;
- d) Where the bidder, sub-contractor or supplier is in litigation with the City of North Richland Hills or where such litigation is contemplated or imminent;
- e) Uncompleted work which in the judgment of the City will prevent or hinder the prompt completion of additional work, or having defaulted on a previous contract;
- f) Lack of competency as revealed by reference checks, financial statement, experience and equipment, questionnaires, or qualification statement;
- g) Bid containing special conditions, clauses, alterations, items not called for or irregularities of any kind, which in the Owner's opinion may disqualify the Bidder.

However, the City of North Richland Hills reserves the right to waive any irregularities and to make the award in the best interest of the City of North Richland Hills.

**5. BID EVALUATION**

Award of bid, if it be awarded, will be made to the lowest responsible bidder or may be awarded to the bidder that offers the goods and/or services at the *best value* for the City (Texas Local Government Code, 252.043). In determining the best value the City will consider the following:

- a) The purchase price; terms and discounts; delivery schedule;
- b) The reputation of the bidder and of the bidder's goods or services;
- c) The quality of the bidders' goods or services;
- d) The extent to which the bidder's goods or services meet the City specifications and needs;
- e) The bidder's past relationship with the City;
- f) Total long term cost to the city to acquire the bidder's goods or services;
- g) Any relevant criteria specifically listed in the specifications;
- h) Compliance with all State and local laws, General Conditions and Specifications;
- i) Results of testing, if required;
- j) Warranty and/or guarantee, maintenance requirements and performance data of the product requested;
- k) City's evaluation of the bidder's ability to perform to specifications.

**6. AWARD OF BID**

The bid award will be made within sixty (60) days after the opening of bids. No award will be made until after investigations are made as to the responsibilities of the best bidder.

The City of North Richland Hills reserves the right to award bids whole or in part when deemed to be in the best interest of the City. Bidder shall state on bid form if their bid is "all or none", otherwise it shall be considered as agreeing to this section.

Information contained in submitted bid documents shall not be available for inspection until after the award has been made by the City Council. Requests for this information must be submitted in writing.

**7. ASSIGNMENT**

The successful bidder may not assign his/her rights and duties under an award without the written consent of the North Richland Hills City Manager. Such consent shall not relieve the assignor of liability in the event of default by his assignee.

**8. SUBSTITUTIONS/EXCEPTIONS**

Exceptions/variations from the specifications may be acceptable provided such variations, in each instance, is noted and fully explained in writing and submitted with bid. NO substitutions or changes in the specifications shall be permitted after award of bid without prior written approval by the Purchasing Manager.

**9. DELIVERY/ACCEPTANCE**

The delivery date is an important factor of this bid and shall be considered during the evaluation process. The City considers delivery time the period elapsing from the time the order is placed until the City receives the order at the specified delivery location. All



material shall be delivered F.O.B. City of North Richland Hills to the address specified at the time of order. Acceptance by the City of North Richland Hills of any delivery shall not relieve the Contractor of any guarantee or warranty, expressed or implied, nor shall it be considered an acceptance of material not in accordance with the specifications thereby waiving the City of North Richland Hills right to request replacement of defective material or material not meeting specifications.

**10. NOTICE OF DELAYS**

Whenever the contractor encounters any difficulty which is delaying or threatens to delay timely performance, written notice shall immediately be given to the Purchasing Manager, stating all relevant information. Such notice shall not in any way be construed as a waiver by the City of any rights or remedies to which it is entitled by law. Delays in performance and/or completion may result in cancellation of agreement.

**11. SALES TAX**

The City of North Richland Hills is exempt from Federal Excise and State sales tax; therefore tax must not be added to bid.

**12. TIE BIDS**

In the event of a tie bid, State Law provides the bid or contract shall be awarded to the local bidder. In cases where a local bidder is not involved, tie bids shall be awarded by drawing lots at the City Council meeting, or as otherwise directed by the Mayor.

**13. BRAND NAME OR EQUAL**

If items are identified by a "brand name" description, such identification is intended to be descriptive, not restrictive, and is to indicate the quality and characteristics of products that will be satisfactory. As used in this clause, the term "brand name" includes identification of products by make and model.

Such products must be clearly identified in the bid as an equal product and published specifications of the equal products offered must be included with the bid reply.

Bids offering equal products will be considered for award if determined by the Purchasing Manager and the user department to be equal in all material respects to the brand name products referenced. The decision of acceptable "equal" items or variations in the specifications will solely be the City of North Richland Hills. Unless the bidder clearly indicates in his/her bid that he is offering an "equal" product, his bid shall be considered as offering the brand name product referenced in the invitation for bids.

**14. REFERENCES**

A minimum of three (3) references, preferably located within the Dallas/Fort Worth Metroplex, must be submitted with each bid. Company name, contact and phone number must be included with each reference.

**15. PROHIBITION AGAINST PERSONAL FINANCIAL INTEREST IN CONTRACTS**

No employee of the City of North Richland Hills shall have a direct or indirect financial interest in any proposed or existing contract, purchase, work, sale or service to or by the City (CMA-074, Standards of Conduct, Section IV).

**16. TERMINATION/NON PERFORMANCE**

Continuing non-performance of the vendor in terms of Specifications shall be a basis for the termination of the contract by the City. The City of North Richland Hills reserves the right to enforce the performance of this contract in any manner prescribed by law or deemed to be in the best interest of the City in the event of breach or default of this contract. The City reserves the right to terminate the contract immediately in the event the successful bidder fails to 1.) Meet delivery schedules or, 2.) Otherwise not perform in accordance with these specifications.

Breach of contract or default authorizes the City to award to another bidder, and/or purchase elsewhere and charge the full increase in cost and handling to the defaulting successful bidder.

The contract may be terminated by either party upon written thirty (30) days' notice prior to cancellation without cause.

**17. ATTORNEYS FEES**

Neither party to this contract shall be entitled to attorney fees for any matter arising under this contract, whether for additional work, breach of contract, or other claim for goods, services, or compensation. All claims for attorney's fees are hereby WAIVED.

**18. INDEMNITY**

**City shall not be liable or responsible for, and shall be saved and held harmless by Contractor from and against any and all suits, actions, losses, damages, claims, or liability of any character, type, or description, including claims for copyright and patent infringement, and including all expenses of litigation, court costs, and attorney's fees for injury or death to any person, or injury to any property, received or sustained by any person or persons or property, arising out of, or occasioned by, directly or indirectly, the performance of Contractor under this agreement, including claims and damages arising in part from the negligence of City, without; however, waiving any governmental immunity available to the CITY under Texas law and without waiving any defenses of the parties under Texas law. The provisions of this indemnification are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity.**

**It is the expressed intent of the parties to this Agreement that the indemnity provided for in this section is an indemnity extended by Contractor to indemnify and protect City from the consequences of City's own negligence, provided, however, that the indemnity provided for in this section shall apply only when the negligent act of City is a contributory cause of the resultant injury, death, or damage, and shall have no application when the negligent act of City is the sole cause of the resultant injury, death, or damage, unmixed with the legal fault of another person or entity. Contractor further agrees to defend, at its own expense, and on behalf of City and in the name of City, any claim or litigation brought in connection with any such injury, death, or damage.**

**The Contractor will secure and maintain Contractual Liability insurance to cover this indemnification agreement that will be primary and noncontributory as to any insurance maintained by the City for its own benefit, including self-insurance.**

**19. PERFORMANCE AND PAYMENT BONDS**

In the event the total contract amount exceeds \$100,000, the Contractor shall be required to execute a performance bond in the amount of one hundred (100) percent of the total contract price; if the total contract amount exceeds \$50,000 the contractor shall be required to execute a payment bond in the amount of one hundred (100) percent of the total contract price, each in standard forms for this purpose, guaranteeing faithful performance of work and guaranteeing payment to all persons supply labor and materials or furnishing any equipment in the execution of the contract. It is agreed that this contract shall not be in effect until such performance and payment bonds are furnished and approved by the City of North Richland Hills. No exceptions to this provision allowed.

Unless otherwise approved in writing by the City of North Richland Hills, the surety company underwriting the bonds shall be acceptable according to the latest list of companies holding certificates of authority from the Secretary of the Treasury of the United States.

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and current copy of their power of attorney.

**20. INTERLOCAL AGREEMENT**

Successful bidder agrees to extend prices and terms to all entities who have entered into or will enter into joint purchasing interlocal cooperation agreements with the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree

**21. ELECTRONIC PROCUREMENT**

The City of North Richland Hills has adopted policies and procedures complying with Local Government Code Section 252.0415, Section 271.906 and Section 2155.062. The City of North Richland Hills may receive submittals in electronic form in response to procurement requests. However, a bid that is submitted non-electronically by the due date and time will be accepted and then entered electronically by Purchasing after the bid opening.

**22. COMPLIANCE WITH SB 89:**

Vendor agrees per HB 89 of the 85th Texas Legislative Session, and in accordance with Chapter 2270 of the Texas Government Code, vendor has not and shall not boycott Israel at any time while providing products or services to the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree

**23. COMPLIANCE WITH SB 252:**

Vendor agrees per SB 252 of the 85<sup>th</sup> Texas Legislative Session, and in accordance with Chapter 2252 of the Texas Government Code, vendor shall not do business with Iran, Sudan or a foreign terrorist organization while providing products or services to the City of North Richland Hills.

☐ Yes, we agree

☐ No, we do not agree \*

\* By selecting no, vendor certifies that it is affirmatively excluded from the federal sanctions regime by the United States government and is not subject to the contract prohibition under Section 2252.154 of the Texas Government Code. Vendor shall provide sufficient documentation to the City of such exclusion prior to award of any contract for goods or services.

**24. ETHICS AND COMPLIANCE POLICY**

The City's Ethics and Compliance Policy can be found at The City of North Richland Hills Purchasing Division webpage - Or you may request a copy from the Purchasing Division. Acknowledgment - The City of North Richland Hills' Internal Ethics and Compliance Policy has been made available to me. I understand the expectations of ethical behavior and compliance with the law, and agree to adhere to the City's ethics policies.

<https://www.nrhtx.com/DocumentCenter/View/389/Code-of-Ethics---PDF?bidId>

☐ I agree

☐ I do not agree

**25. COMPLIANCE WITH CHAPTER 2274**

Pursuant to Chapter 2274, Texas Government Code, Prohibition on Contracts with Companies Boycotting Certain Energy Companies, as enacted by S.B. 13, 87th Legislature, the City of North Richland Hills is prohibited from using public funds to contract with a for-profit Company as defined by Government Code 809.01 who boycotts energy companies. If Seller has more than 10 employees and this Contract has a value of \$100,000 or more, by signing this agreement/contract, the Seller verifies that it does not discriminate against energy companies and will not discriminate during the term of the Contract. By submitting a bid response, Seller certifies compliance with these requirements.

**26. COMPLIANCE WITH CHAPTER 2274**

Pursuant to Chapter 2274, Texas Government Code, Prohibition on Contracts with Companies that Discriminate Against Firearm and Ammunition Industries, as enacted by S.B. 19, 87th Legislature, the City of North Richland Hills is prohibited from using public funds to contract with a for-profit Company as defined by Chapter 2274.001, who discriminates against firearm and ammunition industries. If Seller has at least 10 full-time employees and this Contract has a value of \$100,000 or more, by signing this agreement/contract, the Seller agrees that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Agreement. By submitting a bid response, Seller certifies compliance with these requirements. This section does not apply if Seller is a sole-source provider.

**27. DEPARTMENT OF TRANSPORTATION (TXDOT) RELATED BIDS**

"The City of North Richland Hills, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated

against on the grounds of race, color, or national origin in consideration for an award.” Due care and diligence has been used in preparation of this information, and it is believed to be substantially correct. However, the responsibility for determining the full extent of the exposure and the verification of all information presented herein shall rest solely with the bidder. The City of North Richland Hills and its representatives will not be responsible for any errors or omissions in these specifications, nor for the failure on the part of the proposer to determine the full extent of the exposures.

## MINIMUM INSURANCE REQUIREMENTS

Contractors performing work on City property or public right-of-way for the City of North Richland Hills shall provide the City a certificate of insurance evidencing the coverages and coverage provisions identified herein. Contractors shall provide the City evidence that all subcontractors performing work on the project have the same types and amounts of coverages as required herein or that the subcontractors are included under the contractor's policy. The City, at its own discretion, may require a certified copy of the policy.

**All insurance companies and coverages must be authorized by the Texas Department of Insurance to transact business in the State of Texas and must be acceptable to the City of North Richland Hills.**

The following guidelines are designed to show the most common minimum insurance requirements for standard contracts and agreements with the City. Non-standard agreements may require additional coverage and/or higher limits. Coverage Amounts required for non-standard agreements to be determined by the department and the City Manager.

### **General Contracts for Services:**

Service work, and general maintenance agreements, etc.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Payment and Maintenance Bond (if applicable)

\*See Exhibit A for insurance language to include in general contracts for services\*

### **Professional Services:**

Consultants or other professionals including: accountants, attorneys, architects, engineers, medical professionals, medical services, etc.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability or equivalent Errors & Omissions (appropriate to Contractor's profession)

\*See Exhibit B for insurance language to include in professional services contracts\*

### **Construction:**

Building contractors for construction projects.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability (if applicable for design function)

- ☐ Builder's Risk (required for new or existing property under construction)
- ☐ Payment and Maintenance Bond (if applicable)

\*See Exhibit C for insurance language to include in construction contracts\*

**Information Technology/Network Access Services:**

For the purchasing and installation of technology-related software and equipment or contracting services that support, maintain or interact with the CITY'S technology systems.

- ☐ Commercial General Liability
- ☐ Automobile Liability
- ☐ Workers' Compensation & Employer's Liability
- ☐ Professional Liability (if applicable)
- ☐ Cyber Liability

\*See Exhibit D for insurance language to include in IT/network access services agreements\*

**Standard Minimum Required Insurance Coverage**

Insurance Type	Limit	Provision
Commercial General Liability	\$1,000,000 Each Occurrence \$2,000,000 Aggregate	City to be listed as additional insured and provided 30-day notice of cancellation or material change in coverage
	For Construction Projects: \$2,000,000 Each Occurrence \$4,000,000 Aggregate	
Automobile Liability	\$1,000,000 Combined Single Limit	
Workers' Compensation	Texas Statutory Requirements	Waiver of subrogation in favor of City
Employer's Liability	\$500,000 injury - each accident \$500,000 disease - each employee \$500,000 disease - policy limit	
Professional Liability (or equivalent Errors & Omissions coverage appropriate to the Contractor's profession)	\$1,000,000 Each Occurrence	
Builder's Risk (required for new or existing property under construction)	100% Value	
Cyber Liability	\$1,000,000 Each Occurrence	
Payment/Maintenance Bonds	In accordance with Chapter 2253 of the Texas Government Code	

## **EXHIBIT A**

### **GENERAL CONTRACTS FOR SERVICES**

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

**A. Workers' Compensation and Employer's Liability Insurance:**

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

**B. Commercial General Liability:**

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

**C. Automobile Liability:**

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be submitted on a form approved by the Texas Department of Insurance.



Payment and Maintenance Bonds (if applicable): CONTRACTOR shall procure Payment and Maintenance Bonds as applicable and in accordance with Chapter 2253 of the Texas Government Code.

## **EXHIBIT B**

### **PROFESSIONAL SERVICES**

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

D. Professional Liability (Errors and Omissions)

CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, describe type of services, with a limit no less than \$1,000,000 per occurrence or claim.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be submitted on a form approved by the Texas Department of Insurance.

## **EXHIBIT C**

### **CONSTRUCTION**

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

A. Workers' Compensation and Employer's Liability Insurance:

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

B. Commercial General Liability:

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$2,000,000 per occurrence and \$4,000,000 aggregate.

C. Automobile Liability:

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

D. Professional Liability (if contract involves design work)

CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, with a limit no less than \$1,000,000 per occurrence or claim

E. Builder's Risk

CONTRACTOR shall maintain Builder's Risk Insurance providing All-Risk (Special Perils) coverage in an amount equal to one hundred percent (100%) of the completed value of the project in question and no coinsurance penalty provisions. The policy shall list the CITY as loss payee as their interests may appear.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be submitted on a form approved by the Texas Department of Insurance.

Payment and Maintenance Bonds (if applicable): CONTRACTOR shall procure Payment and Maintenance Bonds as applicable and in accordance with Chapter 2253 of the Texas Government Code.

## **EXHIBIT D**

### **INFORMATION TECHNOLOGY/NETWORK ACCESS SERVICES**

For the duration of this Agreement, CONTRACTOR shall maintain the following minimum insurance which shall protect CONTRACTOR, its subcontractors, its sub-consultants and CITY from claims for injuries, including accidental death, as well as from claims for property damage which may arise from the performance of work under this Agreement.

**A. Workers' Compensation and Employer's Liability Insurance:**

Workers' Compensation	Texas Statutory
Employer's Liability	\$500,000 injury - each accident
	\$500,000 disease - each employee
	\$500,000 disease - policy limit

**B. Commercial General Liability:**

On an "occurrence" basis, including, property damage, bodily injury, products and completed operations and personal & advertising injury with limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

**C. Automobile Liability:**

Covering any auto, or if CONTRACTOR has no owned autos, covering hired and non-owned autos with a Combined Single Limit no less than \$1,000,000 per accident for bodily injury and property damage.

**D. Professional Liability (Errors and Omissions)**

If appropriate for CONTRACTOR'S work, CONTRACTOR shall maintain Professional Liability (or equivalent) errors and omissions insurance appropriate to the CONTRACTOR'S profession, with a limit no less than \$1,000,000 per occurrence or claim.

**E. Cyber Liability**

CONTRACTOR shall maintain cyber liability (or equivalent) insurance. Such insurance shall provide limits of no less than \$1,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as undertaken by the CONTRACTOR.

Insurance limits can be met with a combination of primary and excess/umbrella coverage.

The CITY, its officers, officials and employees are to be covered as "Additional Insured" on the commercial general liability and automobile liability policies as respects liability arising out of activities performed by or on behalf of the CONTRACTOR.

A waiver of subrogation in favor of the CITY, its officers, officials and employees shall be contained in the Workers' Compensation insurance policy.

Policies of insurance shall not be cancelled non-renewed, terminated, or materially changed unless and until thirty (30) days' notice has been given to CITY.

All insurance shall be issued by responsible insurance companies eligible to do business in the State of Texas and having an A.M. Best Financial rating of A- VI or better.

CONTRACTOR shall furnish the CITY certificates of insurance affecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance must be submitted on a form approved by the Texas Department of Insurance.

## **Other Insurance Requirements - To Be Included As Applicable**

### **CONTRACTORS who serve or distribute liquor:**

Liquor Legal Liability - CONTRACTOR shall maintain Liquor Legal Liability coverage covering the selling, serving, or furnishing of any alcoholic beverage performed by CONTRACTOR, or on its behalf. Such insurance shall provide limits of no less than \$1,000,000.00 per occurrence.

### **CONTRACTORS who hold long-term leases:**

Property Insurance – LESSEE shall maintain Property Insurance against all risks of loss to any improvements or betterments, at full replacement cost with no coinsurance penalty provision. The CITY shall be added as a Loss Payee to the policy as interests may appear.

### **CONTRACTOR's whose work involves chemicals or otherwise has a pollution exposure:**

Contractors' Pollution Liability (or equivalent) – CONTRACTOR shall maintain Contractors' Pollution Liability with limits no less than \$1,000,000.00 per occurrence or claim and \$2,000,000 policy aggregate.

### **CONTRACTORS who take possession of City or public vehicles (e.g., parking lots operators, auto repair shops):**

Garage Keepers Liability (or equivalent) – CONTRACTOR shall maintain Garage Keepers Liability or equivalent coverage for applicable property while in the CONTRACTOR'S care, custody or control. Coverage must include Comprehensive and Collision coverage. Such insurance shall provide limits equal to no less than the total value of CITY or public property in the CONTRACTOR'S care, custody and control at any one time.

### **CONTRACTORS who own and operate unmanned aircraft (drones):**

UAS Liability (or equivalent) - CONTRACTOR shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damage to property which may arise from or in connection with the ownership, maintenance or use of Unmanned Aerial Systems (Drones). Coverage must include limits no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

**A PURCHASE ORDER WILL NOT BE ISSUED WITHOUT EVIDENCE OF INSURANCE.**



## NON-COLLUSION AFFIDAVIT OF BIDDER

State of \_\_\_\_\_ County of \_\_\_\_\_

\_\_\_\_\_  
(Name) verifies that:

- (1) He/She is owner, partner, officer, representative, or agent of \_\_\_\_\_, has submitted the attached bid: (Company Name)
- (2) He/She is fully informed in respect to the preparation, contents and circumstances in regard to attached bid;
- (3) Neither said bidder nor any of its officers, partners, agents or employees has in any way colluded, conspired or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with attached bid and the price or prices quoted herein are fair and proper.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
PRINTED NAME

Subscribed and sworn to before me this  
\_\_\_\_\_ Day of \_\_\_\_\_ 20\_\_.

\_\_\_\_\_  
NOTARY PUBLIC in and for

\_\_\_\_\_ County, Texas.

My commission expires: \_\_\_\_\_

**THIS FORM MUST BE COMPLETED, NOTARIZED AND SUBMITTED WITH BID**

## BID CERTIFICATION

The Undersigned, in submitting this bid, represents and certifies:

- a. He/she is fully informed regarding the preparation, contents and circumstances of the attached bid;
- b. He/she proposes to furnish all equipment/service at the prices quoted herein and bid is in strict accordance with the conditions and specifications stated herein;
- c. There will be at no time a misunderstanding as to the intent of the specifications or conditions to be overcome or pleaded after the bids are opened;
- d. He/she is an equal opportunity employer, and will not discriminate with regard to race, color, national origin, age or sex in the performance of this contract.
- e. The undersigned hereby certifies that he/she has read, understands and agrees that acceptance by the City of North Richland Hills of the bidder's offer by issuance of a purchase order will create a binding contract. Further, he/she agrees to fully comply with documentary forms herewith made a part of this specific procurement.

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY, STATE & ZIP: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FAX \_\_\_\_\_

EMAIL: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

## COMPLIANCE WITH HOUSE BILL 1295

In 2015, the Texas Legislature adopted [House Bill 1295](#), which added section 2252.908 of the Government Code. The law states that a governmental entity may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity at the time the business entity submits the signed contract to the governmental entity.

The law applies only to a contract of a governmental entity that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

The Texas Ethics Commission has adopted rules necessary to implement the law, prescribed the disclosure of interested parties form, and posted a copy of the form on the commission's website.

### **Filing Process:**

The commission has made available on its website a new filing application that must be used to file Form 1295. A business entity must:

- 1) Use the application to enter the required information on Form 1295,
- 2) Print a copy of the completed form, which will include a certification of filing that will contain a unique certification number.
- 3) Contract Number should be the Bid/RFP Number and Bid Title.
- 4) Sign the printed copy of the form (an authorized agent of the business entity must sign),
- 5) Either include your personal information or have the form notarized,
- 6) File the completed Form 1295 with the certification of filing with the governmental body with which the business entity is entering into the contract.

The governmental entity must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The commission will post the completed Form 1295 to its website within seven business days after receiving notice from the governmental entity.

Information regarding how to use the filing application may be found at [https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm).

## FOR DISADVANTAGED BUSINESS ENTERPRISES ONLY

**Disadvantaged Business Enterprises (DBE)** are encouraged to participate in the City of North Richland Hills bid process. Representatives from DBE Companies should identify themselves as such and submit a copy of their Certification.

The City of North Richland Hills recognizes the certifications of both the State of Texas Building and Procurement Commission HUB Program and the North Central Texas Regional Certification Agency. All companies seeking information concerning DBE certification are urged to contact:

**Texas Building and Procurement Commission  
Statewide HUB Program**

**1711 San Jacinto Blvd., Austin TX 78701-1416**

**P O Box 13186, Austin, TX 78711-3186**

**(512) 463-5872**

<http://www.window.state.tx.us/procurement/prog/hub/hub-certification/>

**North Central Texas**

**Regional Certification Agency**

**624 Six Flags Drive, Suite 216**

**Arlington, Texas 76011**

**(817) 640-0606**

<http://www.nctrca.org/certification.html>

**If your company is already certified, attach a copy of your certification to this form and return as part of your packet.**

**Company Names:** \_\_\_\_\_

**Representative:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City, State, Zip:** \_\_\_\_\_

**Telephone No.** \_\_\_\_\_ **Fax No.** \_\_\_\_\_

**Email address:** \_\_\_\_\_

**INDICATE ALL THAT APPLY:**

\_\_\_\_ **Minority-Owned Business Enterprise**  
\_\_\_\_ **Women-Owned Business Enterprise**  
\_\_\_\_ **Disadvantaged Business Enterprise**

## **CONFLICT OF INTEREST QUESTIONNAIRE**

Pursuant to Chapter 176 of the Texas Local Government Code, a person, or agent of a person, who contracts or seeks to contract for the sale or purchase of property, goods, or services with the City of North Richland Hills must file a completed conflict of interest questionnaire. The conflict of interest questionnaire must be filed with the City Secretary of the City of North Richland Hills no later than the seventh business day after the person or agent begins contract discussions or negotiations with the City of North Richland Hills or submits to the City of North Richland Hills an application, response to a request for proposal or bid, correspondence, or another writing related to a potential agreement with the City of North Richland Hills. An updated conflict of interest questionnaire must be filed in accordance with Chapter 176 of the Local Government Code. An offense under Chapter 176 is a Class C misdemeanor.

The Conflict of Interest Questionnaire is included as part of this document and can be found at:

<https://www.ethics.state.tx.us/data/forms/conflict/CIQ.pdf>

**CONFLICT OF INTEREST QUESTIONNAIRE**  
For vendor doing business with local governmental entity

**FORM CIQ**

<p><b>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</b></p> <p>This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).</p> <p>By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p>	<p><b>OFFICE USE ONLY</b></p> <hr/> <p>Date Received</p>
<p><b>1 Name of vendor who has a business relationship with local governmental entity.</b></p>	
<p><b>2</b> <input type="checkbox"/> <b>Check this box if you are filing an update to a previously filed questionnaire.</b> (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)</p>	
<p><b>3 Name of local government officer about whom the information is being disclosed.</b></p> <p style="text-align: center;">_____</p> <p style="text-align: center;">Name of Officer</p>	
<p><b>4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.</b></p> <p style="margin-top: 40px;">A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?</p> <p style="margin-left: 100px;"> <input type="checkbox"/> Yes      <input type="checkbox"/> No         </p> <p style="margin-top: 20px;">B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?</p> <p style="margin-left: 100px;"> <input type="checkbox"/> Yes      <input type="checkbox"/> No         </p>	
<p><b>5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.</b></p>	
<p><b>6</b> <input type="checkbox"/> <b>Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).</b></p>	
<p><b>7</b></p> <p style="margin-top: 20px;">             _____              Signature of vendor doing business with the governmental entity             <span style="float: right; margin-left: 100px;">             _____              Date           </span> </p>	

**CONFLICT OF INTEREST QUESTIONNAIRE**  
**For vendor doing business with local governmental entity**

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

**Local Government Code § 176.001(1-a):** "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

**Local Government Code § 176.003(a)(2)(A) and (B):**

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

\*\*\*

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;

or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

**Local Government Code § 176.006(a) and (a-1)**

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

- (a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

## CONTRACT CHANGES GRID

The Contractor has the obligation to review all documents that make up the contract documents in their entirety and include any objections or requests for modifications to the Terms and Conditions, or any of the Contract Documents, in the Contract Changes Grid included with the Notice to Bidders. No changes or modifications will be made to the contract documents unless such changes are set forth in the Contract Changes Grid, submitted to the City along with the Contractor's proposal, and agreed to by the City.

### CONTRACT CHANGES GRID

Proposed Contractor/Bidder \_\_\_\_\_ ("Contractor" or "Bidder"), submits the following modifications to the City's Standard \_\_\_\_\_ ("Agreement") requesting changes to such provisions be accepted by the City and incorporated into the Agreement. Contractor understands and acknowledges that the City is under no obligation to accept the modification(s) proposed by Contractor; however, the City agrees to negotiate in good faith in consideration of Contractor's request, subject to legal requirements, City policies and advice of the City Attorney.

Section / Page	Term, Condition or Specification	Exception/Proposed Modification	Disposition (For City of NRH Use Only)
			City Response: ____ Accepted  ____ Not Accepted  ____ Modified



## **CONFIDENTIALITY OF PROPRIETARY INFORMATION**

During the evaluation process of this RFB, to the extent permitted by law, the City of North Richland Hills will maintain all contents of the Proposers' responses and discussions related to the Proposers' proposals as confidential. The City will treat all proposals as confidential until negotiations are completed, the successful Proposer has been selected, and a contract has been awarded. During the evaluation process, the City intends to disseminate information submitted by all Proposers to selected staff, any consultants employed by the City, and the evaluation committee, as the City deems appropriate in its sole discretion. Such staff, consultants, and committee members shall maintain the Proposers' information as confidential to the extent permitted by law. All materials submitted in response to this RFP shall become the property of the City of North Richland Hills and will not be returned. After a Proposer is selected and the contract is awarded, all submissions shall be subject to release in accordance with Texas Government Code Chapter 552, the Texas Public Information Act (the "Act").

If a Proposer does not desire proprietary information in the proposal to be disclosed, it is required to identify all proprietary information in the proposal prior to submission of the proposal to the City. The identification shall be done by individually marking each page with the words "Proprietary Information" on which such proprietary information is found. If the Proposer fails to identify such information as proprietary, the Proposer agrees by submission of its proposal that those sections shall be deemed non-proprietary and made available to the public upon request as authorized by law upon completion of the RFP process and award of contract.

Proposers are advised that the City, to the extent permitted by law, will protect the confidentiality of their proposals. Proposers shall consider the implications of the Act, particularly after the RFP process has ceased and a contract has been awarded. If a public information request is made for a Proposer's response following award of a contract, proprietary information submitted in an RFP process may only be withheld from public disclosure pursuant to Section 552.1101 of the Act. A determination as to whether Section 552.1101 applies will not be decided by the City of North Richland Hills, but by the Office of the Attorney General of the State of Texas. In the event a request for public information is made, the City will notify the Proposer, and the Proposer is required to request an opinion as to the confidentiality and proprietary nature of the information from the Attorney General pursuant to Section 552.305 of the Act. The City is not authorized to make the request on the Proposer's behalf.

## **SPECIFICATIONS**

The Contractor shall refer to the following for additional project specifications and relevant details:

1. HARMONSON ROAD PROJECT CONTRACT
2. HARMONSON ROAD PROJECT SIGNED/SEALED PLANS

## **SECTION II**

### **BIDDING DOCUMENTS**

## NOTICE TO BIDDERS

**UPLOADED BIDS** on forms prepared by the Engineer will be received by the office of the Purchasing Manager of the City of North Richland Hills until **2:00 p.m. on Tuesday, October 21, 2025** for furnishing all labor, material, equipment and the performance of all work required for:

### **HARMONSON ROAD PROJECT (DAWN DRIVE TO MACKEY CREEK CHANNEL)**

**COMPLETED BID FORMS** DOCUMENTS MUST BE SUBMITTED ELECTRONICALLY VIA: [www.publicpurchase.com](http://www.publicpurchase.com) at which time and place the bids will be publicly opened, read aloud and retained by the Public Works Department for tabulation, checking and evaluation. The “as read” bid results will be posted on [www.publicpurchase.com](http://www.publicpurchase.com)

**COMPLETED BID FORMS** shall be accompanied by a Bid Guaranty consisting of either a cashier's check or a Bid Bond on the form included or similar form of Surety Company (FACSIMILES WILL NOT BE CONSIDERED RESPONSIVE) made payable to The City of North Richland Hills, and in the amount of five percent (5%) of the total amount of the largest amount bid as a guarantee that if the bid is accepted, the bidder will execute the Contract and furnish the required Bonds, within the time-frame indicated in the Bid Form, to the City of North Richland Hills.

**BIDDERS** should carefully examine the plans, specifications and other documents; visit the site of the work; fully inform themselves as to all conditions and matters that can in any way affect the work or the costs thereof. Should a bidder find discrepancies or omissions from the plans, specifications or any other documents or should he/she be in doubt as to the meaning, he/she should at once notify the Purchasing Manager and obtain clarification prior to submitting any bid.

**PLANS AND SPECIFICATIONS** can be downloaded from **Public Purchase** (see below).

**A NON-MANDATORY PRE-BID CONFERENCE** will be held at **10:00 a.m. on Tuesday, September 30, 2025**, at **Community Room, 4301 City Point Dr, North Richland Hills, TX 76180**.

**PUBLIC PURCHASE:** Bidders are encouraged to register with the City of North Richland Hills Buyer, Xiomara Abad, via email at [purchasing@nrhtx.com](mailto:purchasing@nrhtx.com). All Bidders who have registered with Public Purchase (<http://www.publicpurchase.com>) will receive automatic email notifications pertaining to this Bid, such as addendums and other related information released subsequent to the initial release of plans, specifications, bid forms, and contract documents. **It is the sole responsibility of the Bidder to register as a planholder with the City of North Richland Hills. Questions pertaining to this project should be submitted via Public Purchase where the bid is advertised.**

Minimum wage rates to all laborers and mechanics on the project must not be less than as provided in the Contract Documents and Wage Provisions must particularly comply with all other applicable wage laws of the State of Texas.

The right is reserved, as the interest of the City of North Richland Hills may require, to reject any and all bids, to waive any informality in the bids received, and to select a bid best suited to the City of North Richland Hills' best interest.

In case of ambiguity or lack of clearness in stating bid prices, the City of North Richland Hills reserves the right to adopt the most advantageous construction thereof, or to reject any or all bids. No bid may be withdrawn within sixty (60) days after the date on which bids are opened.

**SUMMARY OF WORK:** Harmonson Road will be reconstructed from Dawn Drive to Mackey Creek Channel including concrete pavement, concrete sidewalk, drainage, and water improvements.

## **CITY OF NORTH RICHLAND HILLS**

Xiomara Abad  
Buyer

### **ADVERTISEMENT DATES:**

- **September 19, 2025**
- **September 22, 2025**

## **SPECIAL INSTRUCTIONS TO BIDDERS**

### **1. BID SECURITY:**

A certified check or cashier's check or acceptable bidder's bond made payable to the City of North Richland Hills, Texas, in an amount of five percent (5%) of the bid submitted must accompany each bid as a guarantee that if awarded the contract, the bidder will promptly enter into a contract and execute such bonds as are required.

### **2. QUALIFICATION OF BIDDERS:**

No pre-qualification of bidders is required. However, in consideration of the bids, the City of North Richland Hills may require bidders to furnish a written experience record and a financial statement or the most recent audited financial statement of the firm. The City of North Richland Hills reserves the right to use these items of data to influence a decision as to the award of the contract. Bidders need not submit a statement of financial condition unless requested to do so by the City of North Richland Hills. Contractors are required to submit the Experience and Current Workload page shown on page II-9, showing that the following items will be met:

- At a minimum, the general contractor shall show minimum 3 projects in similar size and scope completed within the last 10 years and provide reference contact information.

### **3. CONFLICT OF INTEREST QUESTIONNAIRE:**

Bidders are required to complete the Conflict of Interest Questionnaire and to submit this completed form along with their bid form documents.

### **4. WAGE RATES:**

Attention is called to the fact that not less than the prevailing wage rates as hereinafter set forth in the Special Provisions of these Contract Documents, which are made a part hereof, must be paid on this project.

### **5. PRE-BID CONFERENCE:**

A non-mandatory pre-bid conference will be held at 10:00 A.M. Central Standard Time Tuesday, September 30, 2025, at Community Room, 4301 City Point Dr, North Richland Hills, TX 76180.

6. BONDS:

A performance bond and a payment bond, each in the amount of not less than one hundred percent (100%) of the contract price, conditioned upon the faithful performance of the contract and upon payment of all persons supplying labor or furnishing materials, will be required on this project. Additionally, a two (2) year maintenance bond, in the amount of not less than twenty percent (20%) of the final contract price, will be required on this project.

7. POWER OF ATTORNEY:

Attorneys-in-Fact who sign bid bonds or contract bonds must file with each bond a certified and current copy of their power of attorney.

8. STANDARD SPECIFICATIONS:

All work required by this project shall be in accordance with the "Public Works Design Manual" adopted by the City of North Richland Hills and the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition (November 2017), except as modified in the Contract Documents. Where a conflict exists between the "Public Works Design Manual" and the "Public Works Construction Standards - North Central Texas", the "Public Works Design Manual" shall govern. Copies of both of these standards are included in the Contract Documents by reference and are made a part thereof. Omission of any section from this project's Contract Documents does not mean that such section is not applicable to this project.

9. UNIT PRICE CONTRACT:

The contract for this project is a "Unit Price" Contract. As such, the City of North Richland Hills reserves the right to add and/or delete quantities to specific pay items. The City of North Richland Hills may further delete an entire unit price pay item if the City of North Richland Hills desires. The City of North Richland Hills reserves the right to increase or decrease the amount of work to be done by any amount not to be exceeded by twenty-five percent (25%) of the original contract amount. In the event the increase pertains to items not originally bid, the Contractor shall submit a bid in writing to the City of North Richland Hills for approval.

It is further agreed that lump sum prices may be increased to cover additional work ordered by the City of North Richland Hills but not shown on the plans or required by the specifications, in accordance with the provisions of the general conditions; similarly, lump sum prices may be decreased to cover deletion of work so ordered.

The City of North Richland Hills reserves the right to reject the Contractor's bid on such extra work and secure such work to be done other than by said Contractor.

10. MEASUREMENT AND PAYMENT:

The basis of payment for the pay items noted in the proceeding pages shall be full compensation for furnishing all labor, materials, equipment and incidentals required to complete the work as specified and as shown in the project plans/drawings. Any item of work not specifically listed for payment but required by the project documents shall be considered an incidental item of the project and no specific payment will be made.

11. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

The successful bidder, upon his/her failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he/she has received notice of the acceptance of his/her bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bond.

12. CONDITIONS OF WORK / OBLIGATION OF BIDDER:

Each bidder must inform himself/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation(s) to furnish all material, labor, equipment and incidentals necessary to carry out the provisions of this contract. Insofar as possible, the Contractor, in carrying out his/her work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor or City of North Richland Hills public employees.

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or documents shall in no way relieve the bidder from any obligation in respect to his/her bid.

13. ADDENDA AND INTERPRETATIONS:

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to Xiomara Abad, Buyer by **12:00pm (noon) CST on Friday, October 10, 2025**. Answers to all such requests will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

Should a bidder find discrepancies in, or omission from the Contract Documents,



or should he/she be in doubt as to their meaning, he/she should at once notify Xiomara Abad, Buyer in order that a written addendum may be sent to all bidders. Any addenda issued will be delivered via Public Purchase. The bid form as submitted by the bidder must be so constructed as to include any addenda issued by the City prior to 24 hours of the opening bids, with the appropriate recognition of addenda so noted in the bid form.

No interpretation of the meaning of plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation shall be in writing, addressed to Xiomara Abad, Buyer or directly through Public Purchase and to be given consideration, must be received by **12:00PM (noon) on Friday, October 10, 2025**. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications and plans which, if issued, will be published on Public Purchase, not later than three (3) days prior to the date fixed for opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from any obligation under his/her bid submitted. All addenda shall become part of the Contract Documents.

#### 14. LAWS AND REGULATIONS:

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

#### 15. SUBMITTALS:

Prior to any construction commencing on this project the Contractor shall submit the required submittals to the City Engineer and have his approval for all such submittals as required in the Technical Specifications.

## FINANCIAL STATEMENT

Condition of Bidder at close of Business month, \_\_\_\_\_, 20\_\_\_\_

	ASSETS	LIABILITIES
1. Cash on Hand	\$ _____	\$ _____
Cash in Bank	\$ _____	\$ _____
Cash Elsewhere	\$ _____	\$ _____
2. Accounts receivable from completed contracts (exclusive of claims not approved for payment)	\$ _____	\$ _____
3. Accounts receivable from other sources than above	\$ _____	\$ _____
4. Amounts earned on uncompleted contracts (not included in Item 3) (Contract price on completed portion of uncompleted contracts less total cost of completed portion)	\$ _____	\$ _____
5. Deposits for bids on other guarantees		\$ _____
6. Notes Receivable Past Due	\$ _____	
Due 90 days	\$ _____	
Due Later	\$ _____	
7. Interest Earned	\$ _____	
8. Real Estate, Business Property, present value	\$ _____	
Other property, present value	\$ _____	\$ _____
9. Stocks and Bonds, Listed on Exchange	\$ _____	\$ _____
Unlisted	\$ _____	\$ _____
10. Equipment, Machinery, Fixtures	\$ _____	\$ _____
Less Depreciation	\$ _____	\$ _____
11. Other Assets	\$ _____	
<b>TOTAL ASSETS</b>	<b>\$ _____</b>	<b>\$ _____</b>

## LIABILITIES AND NET WORTH

	ASSETS	LIABILITIES
1. Notes Payable to Banks Regular	\$ _____	
(For Certified Checks)	\$ _____	
Equipment Obligations	\$ _____	
Others	\$ _____	\$ _____
2. Accounts Payable Current	\$ _____	
Past Due	\$ _____	
3. Real Estate Mortgages	\$ _____	\$ _____
4. Other Liabilities		\$ _____
5. Reserves	\$ _____	
6. Capital Stock Paid Up		
Common	\$ _____	
Preferred	\$ _____	
7. Surplus	\$ _____	
<b>TOTAL LIABILITIES</b>	<b>\$ _____</b>	<b>\$ _____</b>

## EXPERIENCE RECORD

**List of Projects your Organization has successfully completed:**

Amount of Contract Award	Type of Work	Date Accepted	Name and Address of Owner

**List of Projects your Organization is now engaged in completing:**

Amount of Contract Award	Type of Work	Anticipated Date of Completion	Name and Address of Owner

**List of Surety Bonds in Force on above Uncompleted Work:**

Date of Contract Award	Type of Bond	Amount of Bond <sup>1</sup>	Name and Address of Surety

1. List every type of bond separately. If one project has more than one type of bond, list each and every bond for that project on a separate line.

# EQUIPMENT SCHEDULE

List of Equipment owned by bidder that is in serviceable condition and available for use:

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Portions of work Bidder proposes to sublet if Awarded the Contract including amount and type:

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**BID FORM**  
**FOR**  
**HARMONSON ROAD PROJECT**  
**(DAWN DRIVE TO MACKEY CREEK**  
**CHANNEL)**

**FOR THE**  
**CITY OF NORTH RICHLAND HILLS, TEXAS**

**(THIS BID FORM MUST BE COMPLETED IN ITS ENTIRETY, SUBMITTED IN ITS  
ENTIRETY AND NOT REMOVED FROM THE CONTRACT DOCUMENTS)**

Bid Opening Date: 2:00PM (CST), Tuesday, October 21, 2025

TO: City of North Richland Hills  
4301 City Point Drive  
North Richland Hills, Texas 76180

FOR: HARMONSON ROAD PROJECT  
(DAWN DRIVE TO MACKEY CREEK CHANNEL)

Pursuant to the foregoing "Notice to Bidders", the undersigned bidder, having thoroughly examined the Contract Documents, the site of the project and understanding the amount of work to be done and the prevailing conditions, hereby proposes to fully complete all of the work and requirements as provided in the plans and Contract Documents and binds himself/herself upon acceptance of this bid form to execute a contract and furnish such bonds as required and proposes to complete the work within the time stated and for the following prices:



## BID SCHEDULE

Total Amount Bid: Base Bid:

Section I – General Items and Removals \$ \_\_\_\_\_

Section II – Paving Improvements \$ \_\_\_\_\_

Section III – Storm Sewer Improvements \$ \_\_\_\_\_

Section IV – Water and Sanitary Improvements \$ \_\_\_\_\_

Section V – Pavement Marking and Signing \$ \_\_\_\_\_

Section VI – Construction Allowances \$ \_\_\_\_\_

\$ \_\_\_\_\_  
(Total Amount Bid, Numerical Value)

Total Amount Bid: Bid Alternate #1\*:

Pavement Improvements \$ \_\_\_\_\_

\$ \_\_\_\_\_  
(Total Amount Bid Alternate #1, Numerical Value)

**\*- The Owner reserves the right to delete any bid items or portions thereof. It is the intent of the City to evaluate the Alternate Bid and at the cities sole discretion choose to accept or reject the Alternate Bid with no effect on the Base Bid.**

The undersigned bidder acknowledges receipt of the following Addenda: **(If none is received, then write NONE across the blanks.)**

Addendum No. 1 - Date Received \_\_\_\_\_

Addendum No. 2 - Date Received \_\_\_\_\_

Addendum No. 3 - Date Received \_\_\_\_\_

Addendum No. 4 - Date Received \_\_\_\_\_

The undersigned bidder agrees to execute and file with the Owner a contract and bonds on the forms provided within ten (10) days after written notification of award of the contract to him and to begin the work to be performed under the contract within ten (10) days after written authorization to begin the work (Work Order) and to complete the work in full within **480 Consecutive Calendar Days** after the date specified in the "Notice to Proceed". See contract for additional schedule / time requirements.

Enclosed with this bid form is a certified check or cashier's check or bid bond payable to the City of North Richland Hills in the amount of five percent (5%) of the total bid, which is to become the property of the City of North Richland Hills, or the attached Bidder's Bond is to be forfeited in the event the contract and bond are not executed within the time set forth, as liquidated damages for delay and additional work caused thereby.

Respectfully Submitted,

**Signed:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SEAL  
(If Bidder is a Corporation)

**Telephone:** \_\_\_\_\_

**Fax:** \_\_\_\_\_

Submitted by: \_\_\_\_\_ an individual  
A partnership  
A corporation

Doing Business As: \_\_\_\_\_

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BASE BID						
UNIT I - GENERAL ITEMS & REMOVALS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
A1	NCTCOG 203.1	GENERAL SITE PREPARATION per unit	1	LS	\$	\$
A2	TXDOT 500	MOBILIZATION per unit	1	LS	\$	\$
A3	NCTCOG 107.20	PROJECT SIGN per unit	2	EA	\$	\$
A4	NCTCOG 202	JOINT STORM WATER POLLUTION PREVENTION PLAN AND EROSION CONTROL per unit	1	LS	\$	\$
A5	NCTCOG 203.1	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT AND FLATWORK per unit	22,985	SF	\$	\$
A6	NCTCOG 203.1	REMOVE EXISTING ASPHALT PAVEMENT AND BASE per unit	52,522	SF	\$	\$
A7	NCTCOG 203.1	REMOVE EXISTING PAVEMENT (MISC) per unit	923	SF	\$	\$
A8	NCTCOG 203.1	SAWCUT AND REMOVE EXISTING CONCRETE CURB AND GUTTER per unit	2,879	LF	\$	\$
A9	NCTCOG 203.1	REMOVE TREES (3" to 12" DIA) per unit	7	EA	\$	\$
A10	NCTCOG 203.1	REMOVE TREES (GREATER THAN 12" DIA) per unit	2	EA	\$	\$
A11	NCTCOG 203.1	REMOVE AND REPLACE BOLLARD per unit	2	EA	\$	\$
A12	TXDOT 560	EXISTING MAILBOXES (REMOVE & REPLACE) per unit	12	EA	\$	\$
A13	TXDOT 560	EXISTING MASONRY/ORNAMENTAL MAILBOXES (REMOVE & REPLACE) per unit	4	EA	\$	\$
A14	TXDOT 560	INSTALL MAILBOX per unit	2	EA	\$	\$
A15	NCTCOG 801.4.3.5	REMOVE AND REPLACE GATE per unit	1	EA	\$	\$
A16	NCTCOG 203.2	EXCAVATION per unit	1,004	CY	\$	\$
SUBTOTAL - SECTION I - GENERAL ITEMS & REMOVALS					\$	
UNIT II - PAVING IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
B1	TXDOT 160 & 162	FURNISH AND PLACE TOPSOIL AND BLOCK SODDING per unit	3,137	SY	\$	\$
B2	NCTCOG 202.1	TREE PROTECTION per unit	15	EA	\$	\$
B3	NCTCOG 801.2	INTEGRAL RETAINING WALL FOR SIDEWALK per unit	423	LF	\$	\$
B4	TXDOT 340 & NCTCOG 302.9	2-INCH THICK, MILL & OVERLAY per unit	117	SY	\$	\$
B5	TXDOT 360	6-INCH REINFORCED CONCRETE PAVEMENT W/ MONOLITHIC CURB per unit	7,588	SY	\$	\$
B6	NCTCOG 301.2	6-INCH LIME STABILIZED SUBGRADE per unit	7,987	SY	\$	\$
B7	NCTCOG 301.2	LIME per unit	129	TON	\$	\$
B8	TXDOT 530	6" CONCRETE DRIVEWAY per unit	618	SY	\$	\$
B9	TXDOT 340	TIE-IN FOR DRIVEWAY (ASPHALT) per unit	50	SY	\$	\$
B10	NCTCOG 247	TIE-IN FOR DRIVEWAY (MIX) per unit	86	SY	\$	\$
B11	TXDOT 360 & 531	4" CONCRETE SIDEWALK per unit	945	SY	\$	\$
B12	TXDOT 531	TXDOT TYPE 1 CURB RAMP per unit	4	EA	\$	\$
B13	TXDOT 531	TXDOT TYPE 2 CURB RAMP per unit	6	EA	\$	\$
B14	TXDOT 531	NORTH RICHLAND HILLS - NO CORNER CLIP RAMP per unit	2	EA	\$	\$
SUBTOTAL - UNIT II - PAVING IMPROVEMENTS					\$	

# BID FORM

UNIT III - STORM SEWER IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
C1	NCTCOG 203.1	DEMOLISH EXISTING INLET (VARIOUS SIZES) per unit	8	EA	\$	\$
C2	NCTCOG 701.2 & 502.1.2	STORM DRAIN MANHOLE LID ADJUSTMENT per unit	1	EA	\$	\$
C3	TXDOT 464	18" CONCRETE REINFORCED PIPE, ASTM C76 per unit	31	LF	\$	\$
C4	NCTCOG 107.20.3	TRENCH SAFETY FOR STORM DRAIN PIPE per unit	31	LF	\$	\$
C5	TXDOT 465	10-FOOT STORM INLET per unit	5	EA	\$	\$
C6	TXDOT 465	15-FOOT STORM INLET per unit	4	EA	\$	\$
C7	TXDOT 465	10-FOOT STORM INLET WITH INTEGRAL RETAINING WALL per unit	1	EA	\$	\$
C8	NCTCOG 502.1	5' STORM DRAIN JUNCTION BOX per unit	1	EA	\$	\$
SUBTOTAL - UNIT III - STORM SEWER IMPROVEMENTS					\$	
UNIT IV - WATER AND SANITARY IMPROVEMENTS						
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words	Est. Quantity	Unit	Unit Bid Price	Amount Bid
D1	NCTCOG 203.3	REMOVE AND SALVAGE EXISTING WATER VALVES per unit	9	EA	\$	\$
D2	NCTCOG 203.1	ADJUST EXISTING VALVE BOX TO GRADE per unit	2	EA	\$	\$
D3	NCTCOG 203.3	REMOVE AND SALVAGE EXISTING FIRE HYDRANT per unit	4	EA	\$	\$
D4	NCTCOG 203.3	ADJUST EXISTING FIRE HYDRANT per unit	1	EA	\$	\$
D5	NCTCOG 501.14	8-INCH PVC DR 18 WATER PIPE (OPEN CUT) per unit	113	LF	\$	\$
D6	NCTCOG 501.14	10-INCH PVC DR 18 WATER PIPE (OPEN CUT) per unit	779	LF	\$	\$
D7	NCTCOG 501.14	12-INCH PVC DR 18 WATER PIPE (OPEN CUT) per unit	1,250	LF	\$	\$
D8	NCTCOG 503.3	12-INCH PVC DR 18 WATER PIPE (BORE) per unit	110	LF	\$	\$
D9	NCTCOG 501.14	16-INCH PVC DR 18 WATER PIPE (OPEN CUT) per unit	18	LF	\$	\$
D10	DWU 111A	ENCASEMENT FOR WATER MAINS BELOW WASTEWATER per unit	89	LF	\$	\$
D11	NCTCOG 107.20.3	TRENCH SAFETY FOR WATER LINES per unit	2,160	LF	\$	\$
D12	NCTCOG 502.6	8-INCH RESILIENT SEATED GATE VALVE per unit	3	EA	\$	\$
D13	NCTCOG 502.6	10-INCH RESILIENT SEATED GATE VALVE per unit	2	EA	\$	\$
D14	NCTCOG 502.6	12-INCH RESILIENT SEATED GATE VALVE per unit	4	EA	\$	\$
D15	NCTCOG 502.6	16-INCH RESILIENT SEATED GATE VALVE per unit	1	EA	\$	\$
D16	NCTCOG 502.3	FIRE HYDRANT ASSEMBLY per unit	4	EA	\$	\$
D17	NCTCOG 502.10	CONNECT TO EXISTING 8-INCH WATER LINE per unit	3	EA	\$	\$
D18	NCTCOG 604	CONNECT TO EXISTING 10-INCH AC WATER LINE per unit	1	EA	\$	\$
D19	NCTCOG 502.10	CONNECT TO EXISTING 12-INCH WATER LINE per unit	1	EA	\$	\$
D20	NCTCOG 604	CONNECT TO EXISTING 12-INCH AC WATER LINE per unit	1	EA	\$	\$
D21	NCTCOG 502.10	CONNECT TO EXISTING 16-INCH WATER LINE per unit	1	EA	\$	\$
D22	NCTCOG 502.10	1-INCH WATER SERVICE LINE (SHORT SERVICE) per unit	19	EA	\$	\$
D23	NCTCOG 502.10	1-INCH WATER SERVICE LINE (LONG SERVICE) per unit	8	EA	\$	\$
D24	NCTCOG 502.10	WATER METER BOX REPLACEMENT per unit	28	EA	\$	\$
D25	NCTCOG 502.5	DUCTILE IRON FITTINGS per unit	3.5	TON	\$	\$
D26	NCTCOG 701.2 & 502.1.2	ADJUSTING EXISTING SANITARY SEWER MANHOLE RING AND COVER per unit	10	EA	\$	\$
D27	NCTCOG 203.3	REMOVE SANITARY SEWER MANHOLE CONE per unit	1	EA	\$	\$

### BID FORM

D28	NCTCOG 502.1.4	SANITARY SEWER MANHOLE CONE OFFSET	per unit	1	EA	\$	\$
D29	NRH 15P-2	TEMPORARY PAVEMENT REPAIR (WATER)	per unit	2,160	LF	\$	\$
<b>SUBTOTAL - SECTION IV - WATER &amp; SANITARY IMPROVEMENTS</b>							
						\$	
<b>UNIT V - PAVEMENT MARKING AND SIGNING</b>							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words		Est. Quantity	Unit	Unit Bid Price	Amount Bid
E1	TXDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	per unit	16	MO	\$	\$
E2	TXDOT 636	RELOCATE SIGN PANEL ON NEW POST	per unit	13	EA	\$	\$
E3	TXDOT 636	FURNISH/INSTALL ALUM SIGN GROUND MOUNT CITY STD.	per unit	6	EA	\$	\$
E4	TXDOT 666 & 678	6" WHITE SOLID REF. PVMT MARKING	per unit	237	LF	\$	\$
E5	TXDOT 666 & 678	12" WHITE SOLID REF. PVMT MARKING	per unit	79	LF	\$	\$
E6	TXDOT 666 & 678	24" WHITE SOLID REF. PVMT MARKING	per unit	50	LF	\$	\$
E7	NCTCOG 804	INSTALL PAINTED CURB ADDRESSES	per unit	25	EA	\$	\$
<b>SUBTOTAL - UNIT V - PAVEMENT MARKING AND SIGNING</b>							
						\$	
<b>UNIT VI - CONSTRUCTION ALLOWANCES</b>							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words		Est. Quantity	Unit	Unit Bid Price	Amount Bid
401	NA	IRRIGATION RESTORATION ALLOWANCE	per unit	1	LS	\$ 10,000.00	\$ 10,000.00
402	NA	PROJECT CONTINGENCY AS DIRECTED BY OWNER	per unit	1	LS	\$ 30,000.00	\$ 30,000.00
403	NA	UTILITY CONTINGENCY AS DIRECTED BY OWNER	per unit	1	LS	\$ 20,000.00	\$ 20,000.00
404	NA	PAVING CONTINGENCY AS DIRECTED BY OWNER	per unit	1	LS	\$ 20,000.00	\$ 20,000.00
<b>SUBTOTAL - UNIT VI - CONSTRUCTION ALLOWANCES</b>							
<b>Eighty Thousand DOLLARS and Zero CENTS</b>						\$	<b>80,000.00</b>
<b>TOTAL - BASE BID</b>							
						\$	

<b>BID ALTERNATE #1</b>							
<b>UNIT II - PAVEMENT IMPROVEMENTS</b>							
Item No.	Spec. Item	Name of Pay Item with Unit Price in Words		Est. Quantity	Unit	Unit Bid Price	Amount Bid
301(a)	NCTCOG 203.4	6-INCH THICK FLEX BASE	per unit	7,987	SY	\$	\$
301(b)	NCTCOG 203.4	EXCAVATION	per unit	1,330	CY	\$	\$
305(a)	NCTCOG 302	6-INCH LIME STABILIZED SUBGRADE	per unit	-7,987	SY	\$	\$
305(b)	NCTCOG 302	LIME	per unit	-129	TON	\$	\$
<b>SUBTOTAL - UNIT II - PAVEMENT IMPROVEMENTS</b>							
						\$	
<b>TOTAL - ALT BID</b>							
						\$	

# BID FORM

## **SECTION III**

# **CONTRACTUAL DOCUMENTS**

# STANDARD FORM OF CONSTRUCTION AGREEMENT

THE STATE OF TEXAS       §  
  §  
COUNTY OF TARRANT     §

THIS AGREEMENT is entered into this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the CITY OF NORTH RICHLAND HILLS, a municipal corporation, of the County of Tarrant and State of Texas, hereinafter called "OWNER" and \_\_\_\_\_ of the City of \_\_\_\_\_, County of \_\_\_\_\_ and State of \_\_\_\_ hereinafter called "CONTRACTOR."

OWNER and CONTRACTOR in consideration of the mutual covenants contained in this Agreement, agree as follows:

## ARTICLE 1. WORK.

CONTRACTOR covenants and agrees to perform the Work in every detail, in a good and first-class workmanlike manner as specified and indicated in the Contract Documents, of which are incorporated in this Agreement in their entirety as if they were herein set out at length written word for word. The CONTRACTOR shall furnish all labor, materials, tools and equipment required to perform and complete the Work in strict accordance with these Contract Documents. The Work is described as follows:

### HARMONSON ROAD PROJECT (DAWN DRIVE TO MACKEY CREEK CHANNEL)

## ARTICLE 2. CONTRACT PRICE.

OWNER agrees to pay CONTRACTOR for completion of the Work in accordance with the Contract Documents, the price or prices shown in the bidder's proposal, which total the following amount:

\_\_\_\_\_ DOLLARS AND \_\_\_\_\_ CENTS (\$ \_\_\_\_\_)  
(“Contract Price”).



### ARTICLE 3. CONTRACT TIME / TERMINATION / LIQUIDATED DAMAGES.

Unless otherwise stated in this agreement, **time shall be considered of the essence.**

- a. When **time is of** the essence, the CONTRACTOR shall be liable for failure to deliver or delay in delivery occasioned by and including without limitation strikes, lock-outs, inability of obtaining material or shopping space, breakdowns, delays of carriers or suppliers, and preexisting governmental acts and regulations of the Federal and State governments or any subdivision thereof, unless such governmental acts and regulations affecting delivery could not be found, recognized, or discovered by due diligence on the part of the CONTRACTOR prior to submission of his/her and City Council's acceptance thereof.
- b. When **time is not of** the essence, this agreement shall be inoperative during such period of time that aforesaid delivery or acceptance may be rendered impossible by reason of fire, strike, Acts of God, or government regulation. Provided, however, to the extent that the CONTRACTOR has any commercially reasonable alternative method of performing this contract by purchase on the market or otherwise, he/she shall not be freed of his/her obligation hereunder by this clause, even though the goods intended for this contract were destroyed or their delivery delayed because of any event described above.
- c. **As time is of the essence on this contract**, CONTRACTOR agrees to commence work under this contract within ten (10) days from the date specified in the "Notice to Proceed" and complete each phase of construction within the durations specified in the following table. The durations specified are consecutive calendar days and are subject to such extensions of time as are indicated in the Special Provisions. Each subsequent phase after Phase 1 (Phase 2 and 3) shall start immediately following the previous phase. There shall be no stopping of work or delay of work between phases.

<b>Traffic Control Phase</b>	<b>Duration (Calendar Days)</b>	<b>Anticipated Start Timeframe</b>
<b><u>Phase 1</u></b> <i>(Waterline)</i>	140 Days	Within 10 days from date on "Notice to Proceed"
<b><u>Phase 2</u></b> <i>(Harmonson Road reconstruction from beginning of project to STA 19+75)</i>	145 Days	Immediately after Phase 1 is complete
<b><u>Phase 3</u></b> <i>(Harmonson Road reconstruction from STA 19+75 to end of project)</i>	195 Days	Immediately after Phase 2 is Complete
<b><u>Final Acceptance</u></b>	Within 480 days from date on "Notice to Proceed"	

Any modifications to the durations provided for each phase of construction must be agreed upon in writing by the CONTRACTOR and the OWNER. Additionally, CONTRACTOR agrees to totally complete work within **480** consecutive calendar days after the date specified in the "Notice to Proceed," subject to such extensions of time as are indicated in the Special Provisions.

d. Milestones included in this contract are as follows:

- 1) **Development and Implementation of Traffic Control Phase 1 per the Traffic Control Notes and Narratives** provided in the Construction Drawings within 140 calendar days and starting within 10 days from the date on the "Notice to Proceed" (subject to such extensions of time as are indicated in the Special Provisions). For purposes of this section, to be considered completed, all construction activities included in the Sequence of Construction provided in the Construction Drawings must:
  - a. be in place;
  - b. be functional;
  - c. all temporary and permanent water and sewer connections and appurtenances shall be operational as determined by the OWNER;
  - d. all storm drain pipes, inlets, and structures within Phase 1 must be completed and operational as determined by the OWNER;
  - e. outfall storm drain connection must be complete as determined by the OWNER;
  - f. all temporary surfaces must be smooth and traversable by property owners;
  - g. all proposed pavement within Phase 1 shall be paved and traversable, AND;
  - h. all erosion control devices shall be inspected, repaired, and/or modified as needed.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 1 to the OWNER's satisfaction.

- 2) **Development and Implementation of Traffic Control Phase 2 per the Traffic Control Notes and Narratives** provided in the Construction Drawings within 145 calendar days starting from the completion of Traffic Control Phase 1 (subject to such extensions of time as are indicated in the Special Provisions).
  - a. be in place;
  - b. be functional;
  - c. all temporary and permanent water and sewer connections and appurtenances shall be operational as determined by the OWNER;
  - d. all storm drain pipes, inlets, and structures within Phase 2 must be completed and operational as determined by the OWNER;

- e. all temporary surfaces must be smooth and traversable by property owners;
- f. all proposed pavement within Phase 2 shall be paved and traversable, AND;
- g. all erosion control devices shall be inspected, repaired, and/or modified as needed.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 2 to the OWNER's satisfaction.

**3) Development and Implementation of Traffic Control Phase 3 per the Traffic Control Notes and Narratives** provided in the Construction Drawings within 195 calendar days starting from the completion of Traffic Control Phase 2 (subject to such extensions of time as are indicated in the Special Provisions).

- a. be in place;
- b. be functional;
- c. all temporary and permanent water and sewer connections and appurtenances shall be operational as determined by the OWNER;
- d. all storm drain pipes, inlets, and structures within Phase 3 must be completed and operational as determined by the OWNER;
- e. all proposed pavement within Phase 3 shall be paved and traversable;
- f. all temporary signal modifications are removed and the signal at the 820 Access Ramp is brought to the original working condition as determined by the OWNER and TXDOT, AND;
- g. all erosion control and traffic control devices shall be removed and the site is cleaned.

In the event that this milestone is not met, OWNER shall have the right to terminate the contract upon thirty (30) days' written notice to CONTRACTOR, if CONTRACTOR does not complete all items within the limits of Phase 3 to the OWNER's satisfaction.

Calendar Days is defined as any day of the week or month; no days being excepted, such as, Saturdays, Sundays, holidays and inclement weather days. Counting of contract time will only be stopped when the Owner issues a written notice stating this fact, or when the project is noted as substantially complete by written notice from the Owner. OWNER shall determine when such action is necessary.

Extensions of time due to weather delays shall be determined in accordance with the following formula:

$E = R - P$  where R is greater than or equal to P, and

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

Average Precipitation Days (P) is defined as a day of rain, sleet, hail, snow or any combination thereof, and shall be based upon the average precipitation for each month of the year as defined in the Local Climatological Data summaries issued by the National Climatic Data Center in Asheville, North Carolina, and for this contract shall be as follows:

Average Precipitation

Month	Jan	Feb	Mar	Apr	May	June
Number of Days	6	6	7	7	8	6
Month	July	Aug	Sept	Oct	Nov	Dec
Number of Days	4	4	6	6	6	6

Partial months shall be prorated uniformly for the entire month and the sum of all the months used will be rounded to the nearest whole number. This number shall be P.

Total Precipitation Days (R) is defined as a day of rain, sleet, hail, snow or any combination thereof, if determined by the Owner's Project Representative that the Contractor's construction cannot progress substantially due to precipitation and thus be put in the Daily Inspection Logs as a precipitation day. The sum of all precipitation days shall be R.

The total number of Extra Precipitation Days (E) shall be granted to the Contractor as extension of time due to weather delays, and no additional time due to drying time for saturated soil will be allowed. This contract time is both multi-tiered and cumulative.

e. **Liquidated Damages.** The CONTRACTOR further agrees to pay the following as liquidated damages:

- (1) \$1,000 per Calendar Day for any unfinished work beyond 480 consecutive calendar days after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER

- (2) It is understood between the parties hereto that these sums shall be treated as liquidated damages and not as a penalty, and the OWNER may withhold from the CONTRACTOR's compensation such sums as liquidated damages.

The parties consider the CONTRACTOR's failure to complete performance of the entire contract within the 480<sup>th</sup> calendar day after the "Phase I Notice to Proceed" date a substantial breach of this agreement, and the amount of liquidated damages set forth herein is a reasonable and fair estimate of just compensation for CONTRACTOR's failure to timely perform the contract.

If there is any conflict between any provision of this Article 3, and any other Provision in this agreement, or in any attachment hereto or any other Contract Document, this Article 3 shall control.

#### **ARTICLE 4. PARTIAL PAYMENT.**

OWNER shall make payments to the CONTRACTOR in the following manner. On or about the first of each month, the OWNER, or the OWNER's Authorized Representative, will make accurate estimates of the value, based on contract prices, of the work done and materials incorporated in the work and of materials suitably stored at the site during the preceding calendar month. The CONTRACTOR shall furnish to the OWNER, or the OWNER's Representative, such detailed information as the OWNER may request to aid OWNER as a guide in the preparation of the monthly estimate.

Within the following thirty (30) days, OWNER shall make partial payments to the CONTRACTOR for work performed during the preceding calendar month as estimated by the OWNER or OWNER's Representative. Ten percent (10%) of each estimate shall be retained by the OWNER until final completion and acceptance of all work covered by the Contract for contracts less than four hundred thousand dollars (\$ 400,000). Five percent (5%) of each estimate shall be retained by the OWNER until final completion and acceptance of all work covered by the Contract for contracts greater than four hundred thousand dollars (\$ 400,000). Upon completion and acceptance of all work in compliance with the Contract, the OWNER shall, within thirty (30) days, pay the CONTRACTOR the balance due under the terms and conditions of the Contract.

It is understood that the monthly estimates shall be approximate only, and all monthly estimates and partial payments shall be subject to correction in the estimate rendered following the discovery of an error in any previous estimate, and such estimate shall not in any respect be taken as an admission of the OWNER of the amount of work done or of its quality or sufficiency nor as an acceptance of the work or the release of the CONTRACTOR of any of its responsibility under the Contract.

## **ARTICLE 5. DISCRIMINATION.**

The CONTRACTOR agrees, in connection with the performance of work under this contract as follows:

- a. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, creed, color, sex, religion, national origin or ancestry. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff, termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- b. The CONTRACTOR agrees to include this non-discrimination clause in any subcontracts connected with the performance of this agreement.
- c. In the event of the CONTRACTOR's non-compliance with the above non-discrimination clause, the contract may be canceled or terminated by the OWNER. The CONTRACTOR may be declared by the OWNER to be ineligible for future contracts with the OWNER, until satisfactory proof of intent to comply shall be made by the CONTRACTOR.
- d. The OWNER shall be provided a list of subcontractors who are to be paid \$10,000 or more. The CONTRACTOR must ensure that such subcontractors meet the requirements as outlined in Title VI of the Civil Rights Act of 1964 (42 USC 2000d et seq), execute required assurances and provide the OWNER a copy of the signed assurance of all such subcontractors prior to final payment. In the event of a claim of \$10,000 or more against the CONTRACTOR by a subcontractor under this section, no further payment shall be processed unless and until each required subcontractor assurance is provided the OWNER.

## **ARTICLE 6. ENTIRE CONTRACT.**

This Contract and Agreement contains the entire understanding and agreement of the parties upon the subject matter hereof. There is no agreement, oral or otherwise, which is not set forth in writing as part of this Agreement or the Contract Documents.

## **ARTICLE 7. MODIFICATION.**

This contract cannot be modified except by a writing signed by both parties.

## **ARTICLE 8. VARIABLES IN COST.**

The parties hereto assume and understand that the variables in the CONTRACTOR's cost of performance may fluctuate; consequently, the parties

hereto agree that any fluctuations in the CONTRACTOR's costs will in no way alter the CONTRACTOR's obligations under this contract nor excuse nonperformance or delay on his/her part.

#### **ARTICLE 9. VENUE.**

This contract shall be governed by the laws of the State of Texas. Venue for any court proceedings shall be in Tarrant County, Texas.

#### **ARTICLE 10. CONTRACT DOCUMENTS.**

Documents Listed. The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR for the performance of and payment for the Work, consist of the following:

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds
- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Project Construction Plans/Drawings
- (14) Special Material and/or Equipment Specifications
- (15) Special Material and/or Equipment Drawings
- (16) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, Adopted November 2017
- (17) TxDOT Standard Specifications for Construction and Maintenance of Highways, Street, and Bridges (TxDOT Specifications)
- (18) North Central Texas Council of Government references

#### **ARTICLE 11. DEFAULT**

OWNER may declare CONTRACTOR in default of this Contract in the event Contractor fails to comply with the terms and conditions set forth in this Contract or any of the Contract Documents.

## ARTICLE 12. SUBCONTRACTORS

Any subcontractor who furnishes labor or materials to fulfill an obligation to CONTRACTOR under this Contract or who performs all or part of the work required by this Contract, must comply with all notice and filing requirements of Texas Property Code, Chapter 53 in order to perfect a mechanic's, contractor's or materialman's lien. If a subcontractor complies with Chapter 53 of the Texas Property Code, Owner shall be authorized to withhold payment from the CONTRACTOR for payment of the claim. Owner shall release any such payment to the CONTRACTOR upon written notice and sufficient documentation to Owner from subcontractor that the claim has been paid or otherwise settled.

IN TESTIMONY WHEREOF, the CITY OF NORTH RICHLAND HILLS has caused this instrument to be signed in its corporate name, and on its behalf by the Mayor or City Manager, duly authorized to execute this instrument by action of the City Council and \_\_\_\_\_ a corporation, partnership, individual  
(Name of Contractor) ("X" out the inappropriate wording)  
acting by and through its duly authorized officials, thereby binding themselves for the faithful and full performance of the terms and provisions of this Agreement.

### CITY OF NORTH RICHLAND HILLS:

By: \_\_\_\_\_  
Paulette Hartman  
City Manager  
Date: \_\_\_\_\_

### ATTEST:

By: \_\_\_\_\_  
Alicia Richardson  
City Secretary/Chief Governance Officer

### CONTRACTOR:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

### ATTEST:

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

### APPROVED TO FORM AND LEGALITY:

By: \_\_\_\_\_  
Bradley A. Anderle, City Attorney



Bond No. \_\_\_\_\_

**PERFORMANCE BOND**

**STATE OF TEXAS           §**  
**COUNTY OF TARRANT   §**           **KNOW ALL MEN BY THESE PRESENTS:**

**THAT** \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and fully authorized to transact business in the State of Texas, whose address is \_\_\_\_\_ of the City of \_\_\_\_\_, County of \_\_\_\_\_, and State of \_\_\_\_\_, (hereinafter referred to as "Principal"), and \_\_\_\_\_ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of \_\_\_\_\_ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") in the penal sum \_\_\_\_\_ DOLLARS AND \_\_\_\_\_ CENTS (\$XXX,XXX.00) [not less than 100% of the approximate total amount of the contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

**WHEREAS**, the Principal has entered into a certain written Contract with the Owner, dated the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

**Harmonson Road Project  
(Dawn Drive to Mackey Creek Channel)**

**NOW, THEREFORE,** the condition of this obligation is such, that if the said Principal fully and faithfully executes the work and performance of the Contract in accordance with the plans, specifications and Contract Documents, including any extensions thereof which may be granted with our without notice to Surety, during the original term thereof, and during the life of any guaranty required under the Contract, and according to the true intent and meaning of said Contract and the plans and specifications hereto annexed, if the Principal shall repair and/or replace all defects due to faulty materials or workmanship that appear within a period of two years from the date of final completion and final acceptance of the work by owner; and if the Principal shall fully indemnify and save harmless the Owner from all costs and damages which Owner may suffer by reason of failure to so perform herein and shall fully reimburse and repay Owner all outlay and expense which the Owner may incur in making good any default or deficiency, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said contractor shall fail to do so, it is agreed that the Owner may do said work and supply such materials and charge the same against said contractor and Surety on this obligation.

In the event that the Principal is declared in default under the said Contract by Owner, the Surety will within fifteen (15) days of Owner's declaration of such default take all action necessary to take over the project from Contractor and assume completion of said Contract. The Surety shall become entitled to the payment of the balance of the Contract Price upon the Surety's faithful performance of its obligations under this bond.

The Surety agrees to pay to Owner, upon demand, all loss and expense, including reasonable attorney's fees, incurred by Owner by reason of or on account of any breach of this obligation by the Surety.

Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

**PROVIDED, HOWEVER,** that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases the Contract price with or without notice to the Surety, but in no event shall a Change Order or supplemental agreement which reduces the Contract price decrease the penal sum of this Bond. And further that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

Surety agrees that this Bond provides for the repairs and/or replacement of all defects due to faulty materials and workmanship that appear within a period of two (2) years from the date of completion and acceptance of the improvement by the Owner.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

**IN WITNESS WHEREOF,** the said Principal and Surety have signed and sealed this instrument on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

_____ <i>(Company Name of Principal)</i>	_____ <i>(Company Name of Surety)</i>
_____ <i>(Signature)</i>	_____ <i>(Signature)</i>
_____ <i>(Printed Name)</i>	_____ <i>(Printed Name)</i>
_____ <i>(Title)</i>	_____ <i>(Title)</i>
_____ <i>(Address Line 1)</i>	_____ <i>(Address Line 1)</i>
_____ <i>(Address Line 2)</i>	_____ <i>(Address Line 2)</i>
_____ <i>(City, State and Zip Code)</i>	_____ <i>(City, State and Zip Code)</i>
_____ <i>(Witness)</i>	_____ <i>(Witness)</i>

The name and address of the Resident Agent of Surety is:

_____ <i>(Name)</i>	
_____ <i>(Address Line 1)</i>	
_____ <i>(Address Line 2)</i>	
_____ <i>(City, State and Zip Code)</i>	
_____ <i>(Telephone Number)</i>	_____ <i>(Fax Number)</i>

Bond No. \_\_\_\_\_

**PAYMENT BOND**

**STATE OF TEXAS           §**  
**§** **KNOW ALL MEN BY THESE PRESENTS:**  
**COUNTY OF TARRANT §**

**THAT** \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and fully authorized to transact business in the State of Texas, whose address is \_\_\_\_\_ of the City of \_\_\_\_\_, County of \_\_\_\_\_, and State of \_\_\_\_\_, (hereinafter referred to as "Principal"), and \_\_\_\_\_ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of \_\_\_\_\_ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") and unto all persons, firms and corporations who may furnish materials for or perform labor upon the buildings, structures or improvements referred to in the attached Contract, in the penal sum DOLLARS AND           CENTS (\$XXX,XXX.00) [not less than 100% of the approximate total amount of the Contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

**WHEREAS**, the Principal has entered into a certain written Contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

**Harmonson Road Project  
(Dawn Drive to Mackey Creek Channel)**

**NOW, THEREFORE,** the condition of this obligation is such, that the Bond guarantees the full and proper protection of all claimants supplying labor and material in the prosecution of the work provided for in said Contract and for the use of each claimant, and that conversely should the Principal faithfully perform said Contract and in all respects duly and faithfully observe and perform all and singular the covenants, conditions, and agreements in and by said Contract, agreed to by the Principal, and according to the true intent and meaning of said Contract and the claims and specifications hereto annexed, and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modification to Surety being hereby waived, then this obligation shall be void; otherwise, to remain in full force and effect. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

**PROVIDED, HOWEVER,** that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Article 7.19-1 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases to the Contract price with or without notice to the Surety and that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

**IN WITNESS WHEREOF**, the said Principal and Surety have signed and sealed this instrument on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

_____ <i>(Company Name of Principal)</i>	_____ <i>(Company Name of Surety)</i>
_____ <i>(Signature)</i>	_____ <i>(Signature)</i>
_____ <i>(Printed Name)</i>	_____ <i>(Printed Name)</i>
_____ <i>(Title)</i>	_____ <i>(Title)</i>
_____ <i>(Address Line 1)</i>	_____ <i>(Address Line 1)</i>
_____ <i>(Address Line 2)</i>	_____ <i>(Address Line 2)</i>
_____ <i>(City, State and Zip Code)</i>	_____ <i>(City, State and Zip Code)</i>
_____ <i>(Witness)</i>	_____ <i>(Witness)</i>

The name and address of the Resident Agent of Surety is:

_____ <i>(Name)</i>	
_____ <i>(Address Line 1)</i>	
_____ <i>(Address Line 2)</i>	
_____ <i>(City, State and Zip Code)</i>	
_____ <i>(Telephone Number)</i>	_____ <i>(Fax Number)</i>

Bond No. \_\_\_\_\_

**MAINTENANCE BOND**

**STATE OF TEXAS**  
**COUNTY OF TARRANT**

§  
§ **KNOW ALL MEN BY THESE PRESENTS:**  
§

**THAT** \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and fully authorized to transact business in the State of Texas, whose address is \_\_\_\_\_ of the City of \_\_\_\_\_, County of \_\_\_\_\_, and State of \_\_\_\_\_, (hereinafter referred to as "Principal"), and \_\_\_\_\_ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of \_\_\_\_\_ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") in the penal sum of DOLLARS AND /100 CENTS (\$ \_\_\_\_\_) in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

**WHEREAS**, the Principal has entered into a certain written Contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, to which said Contract is hereby referred to and made a part hereof and as fully and to the same extent as if copied at length herein for the construction of:

**Harmonson Road Project  
(Dawn Drive to Mackey Creek Channel)**



The maintenance under this Bond contemplates the complete restoration of the work to a functional use if that should be necessary. It is the intended purpose of this bond to require the correction of all defective conditions resulting from materials furnished or work and labor performed by the Contractor under the Contract; and in case the Contractor or Surety shall fail or refuse to commence and actively pursue such corrections within ten (10) days after written notification has been furnished to them by the Owner, it is agreed that the Owner may do the work and supply such materials and the Contractor and Surety shall be liable for the payment of all costs thereby incurred, jointly and severally.

It is further understood and agreed that the obligation under this bond shall be a continuing one against the Contractor and Surety, and that successive recoveries may be had hereon for successive breaches until the full amount shall have been exhausted. It is further understood that the obligation to maintain the work shall continue throughout the maintenance period, and the same shall not be changed, diminished, or in any manner affected from any cause during that time.

**NOW, THEREFORE,** the condition of this obligation is such, that the Bond guarantees the full and proper maintenance and repair of the work herein contracted to be done and performed for a period of two (2) years from the date of acceptance and Principal will do all necessary backfilling that may arise on account of sunken conditions in ditches, or otherwise, and do and perform all necessary work and repair any defective condition growing out of or arising from the improper laying or construction of same, or on account of any breaking of same caused by said Contractor in construction of same, or account of any defect arising in any of said work laid or constructed by said Contractor or on account of improper excavation or backfilling, it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by said Contractor, then this obligation shall be void; otherwise, to remain in full force and effect; and in case said Contractor shall fail to do so, it is agreed that the Owner may do said work and supply such materials and charge the same against said Contractor and Surety on this obligation. Provided further, that if any legal action be filed on this Bond, venue shall lie in Tarrant County, Texas.

The Owner shall be entitled to its reasonable attorneys' fees and costs in any legal proceeding to enforce the Owner's rights under this bond.

**PROVIDED, HOWEVER,** that said Surety, for value received, stipulates and agrees that the Bond shall automatically be increased by the amount of any Change Order or supplemental agreement with increases the Contract price with or without notice to the Surety and that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work performed thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder.

The undersigned and designated agent is hereby designated by Surety herein as the agent resident to whom any requisite notice may be delivered and on whom service of process may be had in matters arising out of such suretyship.

**IN WITNESS WHEREOF,** the said Principal and Surety have signed and sealed this instrument on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

_____ (Company Name of Principal)	_____ (Company Name of Surety)
_____ (Signature)	_____ (Signature)
_____ (Printed Name)	_____ (Printed Name)
_____ (Title)	_____ (Title)
_____ (Address Line 1)	_____ (Address Line 1)
_____ (Address Line 2)	_____ (Address Line 2)
_____ (City, State and Zip Code)	_____ (City, State and Zip Code)
_____ (Witness)	_____ (Witness)

The name and address of the Resident Agent of Surety is:

---

*(Name)*

---

*(Address Line 1)*

---

*(Address Line 2)*

---

*(City, State and Zip Code)*

---

*(Telephone Number)*

---

*(Fax Number)*

NOTE:    Date of Maintenance Bond must not be prior to date of Contract.  
            Power of Attorney must be attached.  
            Amount and Term of Maintenance Bond shall be as stated in the  
            "Special Conditions".

## CONTRACTOR'S RELEASE TO CITY

TO: CITY OF NORTH RICHLAND HILLS

RE: **HARMONSON ROAD (DAWN DRIVE TO MACKEY CREEK CHANNEL)**

This is to certify that \_\_\_\_\_, by acceptance  
(NAME OF CONTRACTOR)  
of this final payment, hereby releases the OWNER, the City of North Richland Hills, from all claims and all liabilities of the City of North Richland Hills for all things done or furnished in connection with work on this project and further releases the City of North Richland Hills from any and all liabilities arising from any act of the OWNER or his/her agent arising in connection with this project. This release in no way operates to release the CONTRACTOR or his/her Surety from any obligations under this contract or the bond tendered pursuant thereto.

\_\_\_\_\_  
(NAME OF CORPORATION)

\_\_\_\_\_  
(AUTHORIZED AGENT)

## CORPORATION ACKNOWLEDGMENT

STATE OF TEXAS           §  
  §  
COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority in and for Tarrant County, Texas, on this day personally appeared \_\_\_\_\_ known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he/she is the \_\_\_\_\_ of the said \_\_\_\_\_, a corporation, and that he/she is authorized by said corporation to execute the foregoing instrument as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

**CONTRACTOR'S RELEASE TO CITY *(Continued)***

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the \_ day of  
\_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
*(Notary Public in and for the State of Texas)*

\_\_\_\_\_  
*(Type or Print Notary's Name)*

My Commission Expires: \_\_\_\_\_

## CONTRACTOR'S AFFIDAVIT OF FINAL PAYMENT

STATE OF TEXAS           §

§

COUNTY OF TARRANT   §

BEFORE ME, the undersigned authority, on this day personally appeared \_\_\_\_\_, (hereinafter referred to as "Affiant"), who, \_\_\_\_\_  
(NAME)

after being by me duly sworn, deposes and says that he/she is the \_\_\_\_\_  
(TITLE)  
\_\_\_\_\_ of \_\_\_\_\_ (a  
(NAME OF COMPANY)

corporation, partnership, trade name) of \_\_\_\_\_ County, State of  
(~~"X"~~ OUT THE INCORRECT)

Texas (hereinafter referred to as "Contractor"), which said Contractor was awarded the contract dated the \_\_\_\_\_ day of \_\_\_\_\_, 2025, for the construction of the **HARMONSON ROAD PROJECT (DAWN DRIVE TO MACKEY CREEK CHANNEL)** (hereinafter referred to as the "Work"), for a total consideration of \_\_\_\_\_ and XX/100 Dollars (\$ XXX,XXX.00) to be paid to the said Contractor (the "Contract"), and that Affiant has full power of authority to make this affidavit.

That THE CITY OF NORTH RICHLAND HILLS, (hereinafter referred to as "Owner"), has approved the final estimate on said Work, and that the said Contractor has fully satisfied and paid any and all claims that may be covered by Texas Government Code, Chapter 2253, as amended, or any other applicable statutes or charter provisions, and that all just bills for labor and materials have been paid and discharged by said Contractor insofar as they pertain to the Work in question.

That in addition to any funds which may have been previously paid by the Owner, the Contractor hereby accepts the amount of and \_\_\_\_/100 Dollars (\$\_\_\_\_\_) as **FULL AND FINAL PAYMENT** under the aforementioned Contract resulting in a total revised contract amount Of and \_\_\_\_/100 Dollars ( \$ \_\_\_\_\_), and hereby waives and releases any right Affiant and/or the Contractor may have to pursue claims of any nature against the Owner arising out of or in any manner connected with the performance of the Work and/or the Contract, including but not limited to claims of third parties that supplied material and/or labor for the Work for or through the Contractor (hereinafter referred to as "Subcontractors"), as well as claims for delay, additional compensation or for recovery of liquidated damages which may have been withheld by the Owner. The Contractor shall defend, hold harmless and indemnify the Owner from any such claims of such Subcontractors. The Contractor further releases the Owner from any claim or liability arising from any act of negligence of the Owner related to or connected with the Contract. This affidavit is given pursuant to the final payment provisions of the Contract, and shall not be deemed to alter or modify the terms and provisions of said Contract.

This affidavit is made in compliance with the law and in compliance especially with Chapter 2253 of the Texas Government Code, as amended, and that the undersigned, upon his/her oath, states that the facts indicated in the above instrument of writing are true and correct and that he/she is not incapacitated an any way from making this affidavit.

WITNESS my hand this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(Affiant)

\_\_\_\_\_  
(Printed Name)

SUBSCRIBED AND SWORN TO BEFORE ME, this the \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

\_\_\_\_\_  
(Notary Public in and for the State of Texas)

\_\_\_\_\_  
(Type or Print Notary's Name)

My Commission Expires: \_\_\_\_\_

## **SECTION IV**

# **TECHNICAL SPECIFICATIONS**



## **TECHNICAL SPECIFICATIONS**

*For this contract, the Site Protection & Preparation (Division 200), Roadway Construction (Division 300), Roadway Maintenance & Rehabilitation (Division 400), Underground Construction & Appurtenances (Division 500), Conduit and Appurtenance Rehabilitation (Division 600), Structures (Division 700) and Miscellaneous Construction & Materials (Division 800) of the "Public Works Construction Standards – North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), November 2017 Edition, with all amendments thereto, shall govern and shall constitute as the Technical Specifications except as herein amended, modified or supplemented. Omission of any section from the Project's Contract Documents does not mean that such section is not applicable to this Project. The NCTCOG Technical Specifications will be referred to as the Technical Specifications (TS) and will not be physically bound with the other contract documents. Copies may be obtained from the North Central Texas Council of Governments.*

### **EXPLANATION OF BID ITEMS**

In this section, NCTCOG Items refer to "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), November 2017 Edition. TxDOT Standard Specification Item refers to Texas Department of Transportation's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" 2014.

### **SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

#### **12.1.00 GENERAL**

##### **12.1.01 DESCRIPTION**

This section covers the requirements for submittal data for equipment and material items to be furnished on this project.

#### **12.2.00 MATERIAL**

##### **12.2.01 GENERAL EXECUTION**

The CONTRACTOR shall submit to the Engineer, with such promptness as to cause no delay in his/her own work or in that of any other CONTRACTOR, five (5) copies of all shop drawings, manufacturer's catalog sheets, brochures, performance charts, diagrams, schedules and other standard descriptive data required for the work. The Engineer shall review these submittals with reasonable promptness, making any necessary corrections. If the submittals

indicate variances from the requirements of the contract, the CONTRACTOR shall make specific mention of such variation in his/her letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise, the CONTRACTOR shall not be relieved of the responsibility of executing the work in compliance with the contract even though the submittals have been reviewed.

#### **12.2.02 FORM OF SUBMITTALS**

The submittals shall be numbered consecutively and shall present the following data as applicable:

- A. Name of project
- B. Date of submittal
- C. References to applicable section(s) of the specifications
- D. Applicable standards
- E. Identification of revisions on re-submittals
- F. Kinds of materials and finishes
- G. All working and erection dimensions and clearances
- H. All arrangement and section views
- I. Connections between functional parts

The Engineer may decline to consider any submittal that does not contain complete data on the work and full information on related matters.

#### **12.2.03 SUBMITTAL PROCEDURE**

The procedure for review of submittals shall be as follows:

- A. **The CONTRACTOR shall submit three (3) copies of the submittal to the Engineer for his/her approval.** The submittal shall be accompanied by a letter of transmittal containing the following:
  - 1. Name of the project
  - 2. Name of the CONTRACTOR
  - 3. Name of the submittal
  - 4. References to applicable section(s) of the specifications
  - 5. Other pertinent information as indicated in Section 12.2.02: "Form of Submittals"
- B. When the submittal is satisfactory to the Engineer, all three (3) copies will be stamped and/or marked "Approved" or "Approved as Noted", be dated, receive the signature of the Engineer and two (2) copies will be returned to the CONTRACTOR by separate letter.

- C. Should a submittal be unsatisfactory to the Engineer, he/she will stamp and/or mark thereon "Revise and Resubmit" or "Rejected" and will send two (2) copies to the CONTRACTOR with necessary corrections and changes indicated. The CONTRACTOR must make such corrections and/or changes and submit at least three (3) copies of the re-submittal for approval to the Engineer. The CONTRACTOR shall review and resubmit as required by the Engineer until his/her approval is obtained.
- D. The CONTRACTOR shall allow sufficient time for preliminary review, corrections, resubmission and final review of all submittals. The CONTRACTOR shall allow not less than fourteen (14) days for each review. Submittals critical to the progress of the project, when requested in writing by the CONTRACTOR, will be given priority review.

#### **12.2.04 LIST OF REQUIRED SUBMITTALS**

- A. List of all subcontractors
- B. Project Construction Schedule
- C. Pipe manufacturer certification that the pipe meets specifications.
- D. Proposed Concrete Mix Designs, including the documentation of all proposed concrete admixtures.
- E. Stormwater Pollution Prevention Plan
- F. Construction signing and traffic control plan. Contractor may use the provided traffic control plans for intersection signing. Contractor to provide construction signing and traffic control plan for portions of roadway where detailed traffic control has not been provided. Construction signing and traffic control plan must be in accordance with TMUTCD and be signed by a licensed professional engineering in the state of Texas.
- G. Trench Safety Plan
- H. Proposed Concrete Placement Machine Information (slip-form required)
- I. Hot-mix Design and Material

#### **12.3.00 CONSTRUCTION**

N/A

## **12.4.00 MEASUREMENT AND PAYMENT**

Any and all Work called for in the Contract Documents or which is required for the proper construction of items called for in the Contract Documents is to be performed by CONTRACTOR unless specifically noted otherwise. The cost of all work for which there is no separate pay item in the proposal shall be included in the price for a related pay item such that work called for or required by the Contract Documents will be constructed for the Contract Price.

The following descriptions are intended to clarify the nature of the work required for this project, the provisions of the standard technical specifications shall apply, except as otherwise noted herein.

### **SUB-SECTION A – GENERAL AND REMOVAL**

#### **Bid Item No. N/A– Construction Staking**

The provisions of Item 105.4 of the COG Specifications are hereby revised to state that Construction Stakes shall be provided by the Contractor. There shall be no separate pay provided for Construction Staking. Construction Staking shall be considered subsidiary to Mobilization.

#### **Bid Item No. A1–General Site Preparation**

General Site Preparation shall be in accordance with 203.1 of the N.C.T.C.O.G Specifications. This pay item will include removal of improvements or obstructions not specifically provided for in other pay items of the Bid Proposal which includes but is not limited to removing gravel, riprap, stumps (all sizes), landscaping, planter boxes, shrubbery, plantings, fences, brick columns, and other items located within the right-of-way. This bid item shall also include abandoning any utility pipes or conduits called out on the plans by. The remaining ends of all abandoned storm, culverts, sanitary sewer, or water pipes shall be plugged with adequate quantity of concrete to form a tight closure.

In addition, the work will consist of trimming, if required, removal of above ground foliage and tree formations, and complete removal of all root systems below grade for trees / shrubs less than 3" in trunk diameter which are not specifically identified for removal on the plans but which must be removed because they are in conflict with the proposed sidewalk or will have exposed roots due to parkway grading. Any backfill necessary after stump removal is subsidiary to this bid item. The City's representative shall authorize any tree/shrub removal which is not specifically identified in the plans.

Only trees, landscaping and plantings located within the right-of-way and designated for removal on the plans shall be removed. Trees or shrubs which

overhand the proposed sidewalk and roadway shall be trimmed to be clear of the sidewalk to a height of 72". Tree limbs that interfere with paving operations shall be trimmed. Tree/shrub trimming is subsidiary to this bid item. All other trees and landscaping shall be protected from damage as shown in the plan details. This item includes all safety measures and additional traffic control as needed to complete the work. All trees and plant materials shall be properly disposed of offsite.

Pavements and sidewalks shall be patched if necessary to allow for vehicular and pedestrian traffic. All excavated areas shall be backfilled and compacted to prevent additional damage to pavement or other structures. Any damage to yard areas shall be restored at no additional pay, including planters and landscape edging and irrigation systems.

Contractor will be responsible for minimum dust on a daily basis and when instructed by the City. Dust control shall include, but is not limited to, operations such as watering stockpiles, subgrade, pavement, sawing, concrete joint sealing, routing, and crack sealing. Equipment necessary for capturing particulate matter during the process of routing, cleaning, and sealing cracks and joints shall be considered subsidiary. The necessary application of water for dust shall be considered subsidiary.

Irrigation systems that extend into the ROW shall be capped at the property line prior to pavement removal, leaving the system operable on the resident's property. This item includes all safety measures and additional traffic control as needed to complete work associated with site preparation beyond what is shown in the traffic control plan.

Right-of-way maintenance shall include providing temporary all-weather access to local residences after working hours and during weekends and holidays. Unless otherwise provided, existing storm sewer pipe, inlets or other concrete structures to be removed, shall be paid under this pay item.

**MEASUREMENT AND PAYMENT:** Payment for this item shall be at the contract unit price of Lump Sum.

#### **Bid Item No. A2– Mobilization**

The work under this item shall include establishment of facilities on the project site and the movement of personnel, construction equipment and supplies to the project site or to the vicinity of the project site in order to enable the Contractor to begin work on the contract. The cost of all bonds and insurance for the project will also be considered part of this specification. Construction Staking is also considered subsidiary to Mobilization.

Mobilization will be measured as a lump sum item as the work progresses. Partial payments for mobilization shall be paid for at the Total Unit Price as shown in the bid proposal with the regular monthly estimates as follows: The adjusted contract amount for construction items as used below is defined as the total contract amount less the lump sum for Mobilization.

- A. When 1% and less than 5% of the adjusted contract amount for construction items is completed, 50% of the mobilization lump sum bid will be paid.
- B. When 5% and less than 10% of the adjusted contract amount for construction items is completed, 75% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- C. When 10% or more of the adjusted contract amount for construction items is completed, 95% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- D. Payment for the remainder of the lump sum bid for "Mobilization" will be made on the final estimate.

**Bid Item No. A3– Project Sign**

The provisions of Item 107.20 of the N.C.T.C.O.G Specifications and City Specifications shall govern for the erection of project signs.

The Contractor shall install two (2) Project Signs on Harmonson Road Project (Dawn Drive to Mackey Creek Channel). The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in accordance with Figure 2M (R 07-01-2009) of the City of North Richland Hills' Public Works Design Manual. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be removed within 15 calendar days after the OWNER's acceptance of the project improvements. The Contractor shall maintain the signs for the duration of the construction.

Sign Data:

Project Name: Harmonson Road Project

Project - \$: To Be Determined After Contract Award

Projected Completion: To Be Determined After Contract Award

MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each project sign furnished.

**Bid Item No. A4– Joint Stormwater Pollution Prevention Plan and Erosion Control**

The provisions of N.C.T.C.O.G. Item 202 shall apply except as modified below:

- A. The work under this item shall be as specified on the plans and as per N.C.T.C.O.G. Items 202 (Temporary Erosion, Sedimentation, and Water Pollution Prevention and Control) and
- B. 203.6 (Dust Control).
- C. This item shall consist of furnishing, installing, maintaining, and removing erosion controls throughout the duration of the project in accordance with the Texas Commission on Environmental Qualities (TCEQ) permitting procedures and requirements.
- D. The work shall include the provision, installation and maintenance of silt fence, rock check dam, erosion control logs, inlet protection, construction entrance, and any additional erosion control measures required by the SWPPP
- E. No work shall be allowed to commence until the stormwater pollution prevention plan has been received and reviewed by the City.
- F. The Contractor shall provide a Joint Storm Water Pollution Prevention Plan. An Erosion Control Plan shall be prepared by a Licensed Civil Engineer in the State of Texas. Contractor shall prepare on behalf of all primary operators the Notice of Intent (NOI) and file Notice of Intent (NOI) to the appropriate authorities prior to beginning construction (if required by EPA or TCEQ.) The City shall be copied on all NOI's and Construction Site Notices required by the General Permit.
- G. This pay item is intended to include all materials, labor, and maintenance necessary to complete and file with the Texas Commission for Environmental Quality (TCEQ) a Storm Water Pollution Prevention Plan (SWPPP), inspect the project in accordance with the SWPPP and TCEQ General Permit and maintain the SWPPP document current during the construction until the site is stabilized
- H. The Contractor shall post copies of the NOI's for all Primary Operators and copy of the construction site notice as required by the General Permit and maintain all erosion and Storm Water Pollution Prevention appurtenances during the duration of the project.
- I. The Contractor shall file the proper notice of completion with the Texas Commission for Environmental Quality when the project nears completion.
- J. Contractor shall conform activities to the SWPPP and to the approved erosion control plan included in the plans, including installing, maintaining inspections of pollution controls, conducting and documenting inspections of pollution controls, sprinkling for dust control, maintaining spill response equipment on-site, and "good housekeeping". Pollution controls include silt

- fences (or erosion control mats), stabilized construction entrance, rock filter berms, establishing grass, sprinkling for dust control.
- K. Contractor shall be solely responsible for any and all damage which might be occasioned by the Contractor's failure to follow the SWPPP and "good housekeeping" practices.
- L. Locations without specific SWPPP, shall adopt the same procedures as shown on the SWPPP sheets, or as follows (if no SWPPP sheet) silt fence installation around project's perimeter, inlet protection and rock filter berms at inlets and/or entrance to channels, creeks, etc. and as required and directed by the Engineer.
- M. MEASUREMENT AND PAYMENT: Payment for this item shall be on a lump sum basis and shall be full compensation for all labor, material, and other incidentals to satisfactorily design and implement the SWPPP. Partial payments shall be made as a percentage of the overall work completed.

**Bid Item No. A5, A6, A7 – Pavement Removal**

1. Pavement removal covered by this specification shall be only where designated on the Construction Plans or upon specific direction from the Owner's Project Representative.
2. The Contractor shall make every effort to remove pavement along existing joints. The Contractor shall saw cut at no extra cost full-depth at the existing joint or along straight, neat lines to remove the area of pavement specified in the Construction Plans. If the adjacent pavement is damaged during the removal process, the Contractor shall be responsible to saw cut the damaged portion of the pavement until a clean edge is achieved at no cost to the Owner. The Contractor will not be compensated for the additional pavement removal or replacement if the damage was caused by the Contractor during the removal process. If the pavement is in poor condition prior to the Contractor beginning the removal process, the Contractor shall coordinate with the Owner's Project Representative to determine the limits of the concrete removal. In this case, the Contractor shall be compensated for the removal and replacement of the additional pavement; however, the Contractor will only be paid for the original length saw cut detailed in the construction plans.
3. The Contractor shall exercise appropriate care not to damage other improvements in the process, and the Contractor shall be responsible for correction of any such damage caused during the removal process. All material removed shall become the property of the Contractor and be disposed in accordance with local, state and federal guidelines. Item 203.1



of the N.C.T.C.O.G Specifications shall govern the removal of existing material.

4. MEASUREMENT AND PAYMENT: Refer to the Unit Price Bid Form. Removal of any concrete or asphalt shall include the cost of saw cutting.

**Bid Item No. A8 – Sawcut and Remove Existing Concrete Curb and Gutter**

The provisions of N.C.T.C.O.G Item 203.1 shall apply except as modified below:

- A. This item shall include the cost of sawcutting existing pavement at locations indicated on the plans.
- B. No sawcutting shall be performed in streets until temporary traffic measures are in place.
- C. Flatwork shall be neatly sawcut along straight lines as shown on the plans and to the nearest joint.
- D. MEASUREMENT AND PAYMENT: Payment shall be made by the linear foot (LF) of curb and gutter removed and shall include off-site disposal of rubble, debris, and reinforcing steel.

**Bid Item No. A9, A10 – Remove Trees**

- A. Remove Tree in accordance with N.C.T.C.O.G Specification 201.1 and the Plans.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each.

**Bid Item No. A11 – Remove and Replace Bollard**

- A. This item shall consist of the work, labor, equipment, and materials necessary to install new bollards consisting of 6-in diameter sch. 40 galvanized standard-weight steel pipe filler with 3,000 psi concrete (flush to top of pipe) and with form-domed cap. Provide steel parts in accordance with TxDOT 2024 Specification Item 442 “Metal for Structures.” Paint or galvanize steel parts in accordance with TxDOT 2024 Specification Item 441, “Steel Structures” and Item 445, “Galvanizing.” Provide welding in accordance with TxDOT 2024 Specification Item 448, “Structural Field Welding.” Color to match existing bollard and must be approved by the City prior to ordering.
- B. MEASUREMENT AND PAYMENT: Payment shall be per each (EA).

**Bid Item No. A12 –Existing Mailbox (Remove & Replace)**

- A. This item shall be used for the remove, salvage, and replace of existing standard pole (or non-masonry) mailboxes. Contractor is responsible for coordinating with postal office for mailbox identification and access. Standard pole (or non-masonry) mailboxes are to be replaced in locations specified or as directed by the Engineer and as per USPS guidelines. Damaged mailboxes will be replaced at the Contractor's expense. Mailboxes shall be replaced in kind.
- B. Temporary mailboxes are required and considered subsidiary to this item and no additional pay will be made to remove, adjust and re-install. Any damage to the mailbox or its support is required to be fixed to provide a mailbox and/or support equal to or better than the original mailbox and/or support, at no additional cost to the City.
- C. The Contractor shall get the property owner's signature on the City provided form after mailbox replacement is complete. Signed forms shall be returned to the City prior to final acceptance and payment is issued. This shall be considered subsidiary to this pay item.
- D. MEASUREMENT AND PAYMENT: Payment for this item shall be made on the basis of price bid per each and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete this work. Work shall be in accordance with TxDOT 2024 Specifications Item 560 "Mailbox Assemblies".

**Bid Item No. A13- Existing Masonry/Ornamental Mailbox (Remove & Replace)**

- A. This item shall be used for the remove, salvage, and replacement of masonry or ornamental mailboxes. Contractor is responsible for coordinating with postal office for mailbox identification and access. Brick and Stone mailboxes are to be replaced in locations specified or as directed by the Engineer and as per USPS guidelines. Damaged mailboxes will be replaced at the Contractor's expense. All mailboxes, such as brick and stone mailboxes, shall be replaced in kind.
- B. Temporary mailboxes are required and considered subsidiary to this item and no additional pay will be made to remove, adjust and re-install. Any damage to the mailbox or its support is required to be fixed to provide a mailbox and/or support equal to or better than the original mailbox and/or support, at no additional cost to the City.
- C. The Contractor shall get the property owner's signature on the City provided form after mailbox replacement is complete. Signed forms shall be returned to the City prior to final acceptance and payment is issued. This shall be considered subsidiary to this pay item.

- D. MEASUREMENT AND PAYMENT: Payment for this item shall be made on the basis of price bid per each and shall be total compensation for furnishing all materials, tools, equipment, labor, and any other incidentals necessary to complete this work. Work shall be in accordance with TxDOT Item 560 "Mailbox Assemblies".

**Bid Item No. A14- Install Mailbox**

1. This item governs the work, labor, equipment, and materials necessary to install mailboxes and posts. Mailbox shall be 18" W x 49.6" H. Mailbox and post shall be black. If mailbox is to be mounted in an area of no sidewalk in front of house, payment shall include 18"x18"x6" housekeeping concrete pad reinforced with #3 bars at 4" centers each way. Payment shall also include furnishing and installing house numbers matching city standards.
2. The Contractor shall get the property owner's signature on the City provided form after mailbox replacement is complete. Signed forms shall be returned to the City prior to final acceptance and payment is issued. This shall be considered subsidiary to this pay item.
3. MEASUREMENT AND PAYMENT: Payment shall be by the contract unit price bid per each (EA) mailbox and shall be full compensation for materials, labor, equipment, tools, and incidentals necessary to complete the work.

**Bid Item No. A15- Remove and Replace Gate**

The portion of N.C.T.C.O.G Item 801.4.3.5 shall apply with the following modifications:

- A. Gate and any supporting posts/structures shall be removed from their present location, stored in a safe location during construction and replaced in a permanent location as shown on the plans. Any supporting posts/structures found to be set in concrete at the time of their removal shall be reset in the permanent location in concrete.
- B. If construction can be accomplished without disturbing the gate then the Contractor may choose to leave the gate in place. Any damage to the gate, posts, supporting members, braces etc., caused by negligence of the Contractor shall be remedied by the Contractor at his expense. All such repairs shall be made in such a manner so as to insure the unit to be in as good as, or better condition than it was originally. Any such repairs shall be subject to approval by the Engineer
- C. The Contractor shall coordinate with the property owner when removing gate

to ensure that access is maintained at all times.

- D. MEASUREMENT AND PAYMENT: Payment shall be the contract unit price bid per each (EA) gate location and shall be full compensation for materials, labor, equipment, tools, and incidentals necessary to complete the work.

#### **Bid Item No. A16 –Excavation**

- A. Excavation shall consist of all the required excavation within the project limits as shown on the Plans, the removal, proper utilization or disposal of all excavated material including but not limited to any abandoned utilities, and the shaping and finishing of all earthwork in conformity with the lines and grades as shown on the Plans or as established by the OWNER. Any usable material from excavation shall be compacted in the areas of the project limits needing fill, and the required compaction testing of this excess material shall be included in this bid item and be completed in accordance with City standards. Excavation (Roadway) shall meet the requirements of Item 203.2 of the N.C.T.C.O.G Specifications.
- B. MEASUREMENT AND PAYMENT: Unclassified Street Excavation shall be measured and paid for by the cubic yard for excavation from its original position, and shall include all materials excavated without regard to the materials encountered. **There shall be no compensation for any quantities in addition to what is provided in the Bid documents unless the lines and grades are changed by the Engineer.**

#### **SUB-SECTION B – PAVING IMPROVEMENTS**

##### **Bid Item No. B1- Furnishing and Placing Topsoil and Block Sodding**

1. Topsoil and Sod shall be installed per TxDOT 2024 Specification Items 160 and 162. The type of sod placed shall match the type of grass in the adjacent lawn area. A 4-inch layer of topsoil, furnished in accordance with Item 162, shall be placed on all areas to be sodded. Suitable on-site topsoil may be utilized, or topsoil shall be imported to achieve 4-inches. Fertilizer shall be furnished in accordance with Item 166 and applied at time of initial sodding only. Fertilizer shall be considered subsidiary to Block Sod placement. Watering during construction will be considered subsidiary to block sodding and will be done in accordance with Item 168. Watering shall be done until accepted by the owner and the City.
2. The topsoil shall be uniformly distributed on the designated area(s) and it shall be a minimum of 4 inches (75 mm) deep after firming. Spreading shall be performed in such a manner that sod installation can proceed with a

- minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed for turfgrass sod installation.
3. After the topsoil has been spread and the final grade approved, it shall be cleared of all grade stakes, surface trash or other objects that would hinder installation and/or maintenance of turfgrass sod and other plantings. Paved areas over which hauling operations are conducted shall be kept clean and any soil which may be brought upon the surfacing shall be promptly removed. The wheels of all vehicles shall be kept clean to avoid tracking soil on the surfacing of roads, walks or other paved areas.
  4. The first row of turfgrass sod shall be laid in a straight line, with subsequent rows placed parallel to and tightly against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Care shall be exercised to insure that the pieces are not stretched or overlapped and that all joints are butted tightly to prevent voids that would cause air drying of the roots.
  5. The installation Contractor shall water the turfgrass sod immediately after transplanting to prevent drying. As sodding is completed in any one section, the entire area shall be lightly rolled. It shall then be thoroughly watered to a depth sufficient to ensure the underside of the new sod pad and soil immediately below the pad are thoroughly wet. The general contractor shall be responsible for having adequate water available at the site prior to and during installation.
  6. The general Contractor shall supply adequate water to the site. The single-most important factor in the successful rooting of newly installed turfgrass sod is adequate, regular watering. Watering should begin immediately after installation. The amount of water required will vary depending upon season, weather, temperature, wind, slope and turfgrass variety. The general Contractor shall designate the party responsible to ensure adequate water supply and application.
- A. MEASUREMENT AND PAYMENT: Topsoil and block sodding shall be measured and paid per square yard of block sod installed. Both items include all labor, equipment and materials necessary to complete the work including preparation of topsoil, watering, fertilizing and maintenance until accepted by the property owner and the City. The cost of fertilizer and watering is considered subsidiary. **Please note that the Engineer has included additional 10% quantity to be used at the discretion of the City.**

**Bid Item No. B2 – Tree Protection**

This item shall govern for the installation, maintenance, removal and area cleanup related to tree protection as shown on the Plans and as specified herein.

- A. Protect the trunk with strapped-on-planking two inches by four inches (2"x4") wood slats to a height of eight (8) feet, or to the limits of lower branching in addition to the reduced fencing provided. Trees most heavily impacted by construction activities should be watered deeply once a week during periods of hot, dry weather. Tree crowns should be sprayed with water periodically to reduce dust accumulation on the leaves. Any trenching required for the installation of landscape irrigation shall be placed as far from existing tree trunks as possible.
- B. No landscape topsoil dressing greater than four (4) inches shall be permitted within the dripline of a tree. No soil is permitted on the root flare of any tree. Any roots exposed by construction activity shall be pruned flush with the soil. Backfill root areas with good quality top soil as soon as possible. If exposed root areas are not backfilled within two (2) days, cover them with organic material in a manner which reduces soil temperature, and minimizes water loss due to evaporation. Prior to excavation or grade cutting within tree dripline, make a clean cut between the disturbed and undisturbed root zones with a rock saw or similar equipment, to minimize damage to remaining roots.
- C. Pruning to provide clearance for structures, vehicular traffic and equipment shall take place before construction starts and is subsidiary to this pay item.
- D. Repair or replace any wood slats damaged by construction activities.
- E. Once the site has been fully stabilized and construction completed adjacent to the tree dispose of materials in proper manner.
- F. MEASUREMENT AND PAYMENT: Payment shall be by the contract unit price bid per each (EA) and shall be full compensation for materials, labor, equipment, tools, and incidentals necessary to complete the work. No separate payment will be made for all other work performed in accordance with this specification, and the cost thereof shall be subsidiary to this bid item. Contractor shall provide the machinery, tools and equipment necessary for proper prosecution of the work. All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

**Bid Item No. B3 – Integral Retaining Wall for Sidewalk**

The following provisions of N.C.T.C.O.G Item 802.2 shall apply except as modified below:

- A. MEASUREMENT AND PAYMENT: Payment for this bid item shall be made on the basis of the price per linear foot and shall be full compensation for all the labor, tools, equipment, materials, and necessary to complete this work. Structural excavation, reinforcing steel, filter fabric, temporary shoring, gravel, perforated pipe, cladding and paint shall be subsidiary to the work. The sidewalk in front of the wall shall be paid for under the Sidewalk bid item.

**Bid Item No. B4 – 2-inch Thick, Mill and Overlay**

The following provisions shall apply:

a. Mill

- a. Mill depth transitions perpendicular to direction of travel.
- b. No peeling, flaking, or scabbing HMAC may remain after milling (i.e if the existing HMAC layer is just over 2" thick); Contractor shall mill or otherwise remove peeling layer to the base or top of culvert, and this is subsidiary to this bid item.
- c. Overlay after milling shall occur within 72 hours on arterial and collector streets, and 5 working days on all other street unless otherwise indicated in the plans. The Owner may extend duration between milling and overlay. Once the surface is milled, the Contractor shall be responsible for protecting the milled surface and any exposed base from damage due to weather and vehicle traffic. Any damage that occurs before the street receives an overlay or during the milling operation shall be repaired by the Contractor at no additional expense to the Owner.
- d. Do not mill or overlay concrete pavement.
- e. Milling shall be done to match the grade of new and existing surfaces at aprons and valleys, utility vaults, concrete street tie-ins.
- f. Where, due to milling, there is a transverse joint greater than 1/2" in depth in a travel way a temporary ramp shall be placed. The Inspector or City Representative shall approve the ramp prior to opening the roadway to traffic.

b. Overlay

- a. Asphaltic concrete shall meet the requirements for Type “D” of Item 340 of Standard Specifications for Construction of Highways, Streets and Bridge, latest edition and shall be installed per N.C.T.C.O.G Item 302.9.
  - b. The thickness of hot-mix asphaltic concrete surface course shall be 2-inch minimum.
  - c. A tack coat shall be applied to the base course before placement of the surface course.
  - d. Tack coat shall be in accordance with TxDOT 2024 Specification Items 340 and 300. Tack coat must achieve uniform coverage over 100% of the base course asphalt prior to placing the Type D asphalt.
- c. MEASUREMENT AND PAYMENT: Payment for this item shall be by the square yard and is full compensation for milling to the depth shown; loading, hauling, and unloading; disposing of milled material; quarrying, furnishing all materials, heating, mixing, hauling, cleaning existing base course or pavement, placing asphaltic mixtures, rolling and finishing, and all labor, tools, equipment and incidentals necessary to complete the work, including the work and materials involved in the application of prime coat and tack coat

**Bid Item No. B5 – 6-inch Reinforced Concrete Pavement w/ Monolithic Curb**

- A. Reinforced concrete paving shall be constructed with 3,600 psi Class “C” Portland Cement Concrete and shall be furnished and placed in accordance with the details provided in the Plans and TxDOT 2024 Specification Item 360. Admixtures shall otherwise adhere to the applicable provisions of TxDOT 2024 Specification Item 360. Fly ash will not be approved as an admixture. Reinforcement shall be in accordance with the Plans and City Standard Details. This item shall include all necessary materials, labor, tools and incidentals required to construct 6” thick reinforced concrete paving on Harmonson Road in conformance with the lines and grades shown on the Plans.
- B. Concrete Quality and Workmanship
  - a. The finished concrete pavement construction under these specifications is expected to meet certain quality standards for surface of the concrete including the durability, texture, riding surface and appearance.
  - b. For this project, the main lane pavement shall be slip-form machine (or approved equal) placed concrete with a broom finish in accordance with the specifications below. The Contractor shall complete the first 100 ft in the presence of the City Inspector. The quality of the broom finish shall be acceptable to the City Inspector prior to proceeding with additional panels.



- c. The surface must be durable, firm, dense and well bonded to the aggregate to maintain an appearance and texture that is satisfactory to the Owner. Concrete pavement having a poor surface that has spalled (exposed aggregate) due to poor quality paste, high water-cement ratio, over-vibration, improper curing, extreme weather or any other reason, or does not have a satisfactory riding surface shall be removed and replaced at the Contractor's expense. It is extremely important that the pavement have a good riding surface, free from undulations and rough joints. The City Engineer shall determine the acceptability of the pavement.

#### C. Broom Finish

- a. If the surface texture is to be a broom finish, it shall be applied when the water sheen has practically disappeared. The broom shall be drawn from the center to the edge of the pavement with adjacent strokes slightly overlapping in the direction of vehicular travel. The broom operation shall be so executed that the corrugation produced in the surface shall be uniform in appearance and not more than 1/16-inch in depth. Brooming shall be completed before the concrete is in such condition that the surface will be torn or unduly roughened by the operation. The surface thus finished shall be free from rough and porous areas, irregularities, and depressions resulting from improper handling of the broom. Brooms shall be the quality, size, and construction and shall be operated to produce a surface finish meeting the approval of the Owner. Subject to the approval of the Owner, the Contractor may be permitted to substitute mechanical brooming in lieu of the manual brooming as herein described.

#### D. Hand Finishing

- a. Hand finishing of concrete pavement will be permitted in areas where it is not practical or possible to construct with finishing machines. These areas include, but are not limited to, intersections, left turn lanes, crossovers, transition areas and where the pavement width is not uniform. In hand finished areas, the concrete shall be struck off with an approved strike-off screed to such elevation that when consolidated and finished the surface of the pavement shall conform to the required section and grade. The strike template shall be moved forward with a combined transverse and longitudinal motion in the direction the work is progressing, maintaining a slight excess of material in front of the cutting edge. The concrete shall then be tamped with an approved tamping template to compact the concrete thoroughly and eliminate surface voids and the surface screeded to required section. After completion of a strike-off, consolidation and

transverse screeding; a hand-operated longitudinal float shall be operated to test and level the surface to the required grade.

- b. Workmen shall operate the float from approved bridges riding on the forms and spanning the pavement. The longitudinal float shall be held in contact with the surface and parallel to the centerline and operated with short longitudinal strokes while being passed from one side of the pavement to the other. If contact with the pavement is not made at all points, additional concrete shall be placed, if required, and-screeded, and the float shall be used to produce a satisfactory surface. Care shall be exercised to keep the ends of the float from digging into the surface of the pavement. After a section has been smoothed so that the float maintains contact with the surface at all points in being passed from one side to the other, the bridges may be moved forward half the length of the float and the operation repeated. Other operations and surface tests shall be as required for machine finishing.

E. Edging at Forms and Joints

- a. After the final finish, but before the concrete has taken its initial set, the edges of the pavement along each side of each slab, and on each side of transverse expansion joints, formed joints, transverse construction joints, and emergency construction joints shall be worked with an approved tool and rounded to the radius required by the plans. A well-defined and continuous radius shall be produced and a smooth, dense, mortar finish obtained. The surface of the slab shall not be unduly disturbed by tilting of the tool during use.
- b. At all joints, any tool marks appearing on the slab adjacent to the joints shall be eliminated by brooming the surface. In doing this, the rounding of the edge shall not be disturbed. All concrete on top of the joint filler shall be completely removed.
- c. All joints shall be tested with a straightedge before the concrete has set, and correction shall be made if one side of the joint is higher than the other or if they are higher or lower than the adjacent slabs.

- F. MEASUREMENT AND PAYMENT: Measurement and Payment for this item shall be at the contract unit price per square yard, complete in place and include all concrete, monolithic curb, reinforcing steel, required joint work, expansion material, approved elastomeric joint seal material, and other incidentals. Measurement and payment by the square yard for concrete pavement shall be made to the back of curb. Payment shall be based on Plan dimensions and no separate payment shall be provided for monolithic curb or extra thickness of concrete pavement placed.

**Bid Item No. B6 – 6” Lime Stabilized Subgrade**

The provisions of N.C.T.C.O.G Item 301.2 shall apply except as modified below:

- A. Subgrade shall be proof rolled with heavy pneumatic equipment. Any soft or pumping areas should be undercut to a firm subgrade and properly backfilled. Proof rolling shall be subsidiary to the unit cost of subgrade.
- B. MEASUREMENT AND PAYMENT: Payment for 6-inch Lime Treatment shall be by the square yard. Hydrated lime shall be paid for separately, by the ton, under the item “Lime”.

**Bid Item No. B7– Lime**

The provisions of N.C.T.C.O.G Item 301.2 shall apply except as modified below:

- A. Contractor shall be responsible for obtaining a lime series for the project to establish the appropriate rate of lime or cement application. Lime series shall be conducted by a City approved lab and a Licensed Geotechnical Engineer subsidiary to this bid item. Hydrated lime or cement shall be placed by slurry method.
- B. For bidding purposes, Contractor shall assume a rate for lime application of 36 pounds per square yard on the 6-inch subgrade. Contractor shall only be paid for the amount of lime actually placed in accordance with lab recommendations.
- C. Measurement and payment for this pay item shall be made per ton (TON).

**Bid Item No. B8 – 6” Concrete Driveway**

- A. Construct 6” Concrete Driveway in accordance with TxDOT 2024 Specification 530 and the Plans.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard.

**Bid Item No. B9, B10 –Driveway Transition/ Tie-In**

Contractor shall construct new driveway tie-in pavement to its original alignment, material, and grade. Existing material of the existing driveway is noted on the plans. Specific specifications are as follows:

- A. Gravel: new gravel pavement shall be a minimum of 6” flex base material over 6” compacted subgrade. Provisions of Item 247 in the TxDOT Standard Specifications, latest edition shall apply to the flex base material. The

subgrade shall be compacted to 95% maximum density according to ASTM D698 to +4% above optimum moisture content.

- B. Flexbase: TYA Grade 1 or 2 shall be used.
- C. Asphalt: Asphalt Transition Pavement shall be 2" of TY D Asphalt on 4" TY B Asphalt. Asphaltic concrete shall meet the requirements for Type "D" or "B" of TxDOT Specification 340. A prime coat shall be applied to the prepared subgrade before placing the first lift. Prime coat is considered subsidiary to the asphalt item.
- A. MEASUREMENT AND PAYMENT: Payment shall be made by the square yard (SY) for the type of pavement replaced, including, but not limited to, gravel, asphalt, and flexbase. The pay limits and type of material are shown on the Plans. Replacement of pavement beyond those limits shall be at the Contractor's expense. The Contractor is responsible for coordinating with property owners for access.

**Bid Item No. B11 – 4" Concrete Sidewalk**

- A. Four inch (4") thick reinforced concrete sidewalk, including reinforcing steel, shall be constructed in accordance with the width and details shown on the Plans and TxDOT 2024 Specification Items 360 and 531. Reinforced concrete paving shall be constructed in accordance with TxDOT Specification Items 360 and 531 with the appropriate strength. One (1") inch thick layer of cushion sand under the sidewalk is subsidiary to the unit price of the sidewalk.
- B. Sidewalk widths vary and shall be installed per the Plans. Expansion joint material and elastomeric filler shall be placed along the full length of the sidewalk between the back of curb and sidewalk (for areas where sidewalk is adjacent to back of curb) and shall be included in the unit price for the sidewalk. Sidewalks located adjacent to the back of curb shall have a sidewalk lug installed per Figure 11P-3 on the Plans. This is subsidiary to sidewalk installation.
- C. Sidewalks with monolithic wall shall be constructed per City of Fort Worth detail D546 and per Plans. Monolithic curbs (8" or less) shall be considered subsidiary to this bid item. Any wall greater than 8" will be paid for with separate bid item.
- D. The Contractor shall be responsible to ensure all sidewalk construction is in accordance with the Americans with Disabilities Act (ADA) and Texas Accessibility Standards (TAS). Any portions of sidewalks which are constructed and do not meet the requirements of ADA and TAS will be

required to be removed and replaced at the Contractor's Expense.

- E. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard including excavation, concrete, reinforcing steel, cushion sand, joint sealer, expansion joint material and elastomeric filler complete in place.

**Bid Item No. B12-B14– Curb Ramps**

This item shall govern the installation of Curb Ramps in accordance with the details provided in the Plans and TxDOT 2024 Specification Item 531.

- A. Concrete for curb ramps shall be constructed with 3,000 psi Class "A" Portland Cement Concrete with 5 sacks of cement per cubic yard, with a maximum slump of 5 inches. Rebar shall be #3 bars spaced at 18" o.c.e.w. Concrete shall meet the requirements of Item 421.
- B. The Contractor shall be responsible to ensure all barrier free ramp construction is in accordance with the Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG). Any portions of the barrier free ramp which are constructed and do not meet the requirements of ADA and PROWAG will be required to be removed and replaced at the Contractor's Expense.
- C. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with the current Public Right-of-Way Accessibility Guidelines (PROWAG) standards. Truncated dome surface shall be provided by using precast detectable warning plates or approved equal in a color approved by the City representative. Truncated dome pavers will not be allowed.
- D. "In accordance with Administrative Rules 68.102, the Department is allowing the detectable warning surface to be a minimum of 24" in depth (in the direction of pedestrian travel) in lieu of the full depth of the curb ramp. The deviation from this particular technical requirement does not require a variance. The truncated domes must still extend the full width of the curb ramp (or landing as applicable at parallel curb ramps) and follow PROWAG section R305."
- E. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each basis furnished and installed and shall include all concrete, reinforcement, formwork, truncated domes, monolithic curb, labor, materials, and incidentals necessary to complete the work per provided details.

## **SUB-SECTION C – STORM SEWER IMPROVEMENTS**

### **Bid Item No. C1 - Demolish Existing Inlet (Various sizes)**

The provisions of N.C.T.C.O.G Item 203.1 shall apply except as modified below:

1. This item includes complete removal and disposal of the inlets where specified on the plans and plugging ends of abandoned pipe where necessary.
2. MEASUREMENT AND PAYMENT: Payment shall be made for each inlet removed and shall include excavation, concrete removal and disposal, pipe plugging, backfill and all labor and materials necessary to remove the inlet. Removal of pipes associated with the demolition of the inlet will be subsidiary. Pipes damaged during inlet demolition shall be replaced at no additional cost.

### **Bid Item No. C2, D26 –Manhole Lid Adjustment**

- A. Adjust existing manholes in accordance with N.C.T.C.O.G Specification 701.2 and 502.1.2 and the Plans.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each.

### **Bid Item No. C3 – 18” Concrete Reinforced Pipe, ASTM C76**

- A. Install all concrete pipe in accordance with TxDOT Standard Details, TxDOT 2024 Specification Item 464, and the Plans. All storm pipe connections to existing and proposed storm infrastructure, including but not limited to, junction boxes, pipe, box culvert, structures, and inlets is considered subsidiary to storm pipe and box culvert. There will be no separate pay for connections.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

### **Bid Item No. C4, D10– Trench Safety**

- A. The provisions of Item 107.20.3 of the N.C.T.C.O.G Specifications shall govern for “Trench Safety”. A trench safety plan shall be submitted for approval as required under “**SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**” of these technical specifications. All trenches must be backfilled at the end of the workday. No open trenches will be allowed outside of working hours.

- B. The Contractor is required to modify the trench safety and protection plan whenever necessary to accommodate for existing utilities.
- C. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot.

**Bid Item No. C5 – C7 – Storm Inlets**

- A. Storm drain inlets shall be constructed in accordance with City Standard Details and TxDOT 2024 Specification Item 465.
- B. Where applicable, the depth shall be adjusted per the Plan elevations at no additional cost.
- C. All inlets shall be cast-in-place. Concrete for inlet shall be Class “C” with a minimum 5 sacks per cubic yard of cement content and a 3,000 psi compressive strength when tested at 28 days.
- D. All storm pipe connections, including collars, removal, or lengthening needed to tie into proposed storm inlets is considered subsidiary to storm inlets bid item. There will be no separate pay for connections.
- E. MEASUREMENT AND PAYMENT: Payment for Standard Curb Inlets shall be on a “per each” basis and shall include excavation, backfill, form work, concrete, reinforcing steel, ring and lid, and labor to perform the work. Existing curb removal and replacement where applicable is incidental to this bid item. When necessary, the integral retaining wall for curb inlets shall be considered subsidiary to this bid item.

**Bid Item No. C8 – 5’ x 5’ Storm Drain Junction Box**

The provisions of N.C.T.C.O.G Item 502.1 shall apply except as modified below:

- A. Junction Boxes shall be constructed as per City of North Richland Hills Standard Details.
- B. All junction boxes and manholes shall be cast in place. Precast junction boxes are not allowed. Lids shall be per standard details. Where specified, lid shall be a Bass & Hays manhole grate, or approved equal. Lids shall be subsidiary to junction box and shall not be a separate pay item.
- C. Concrete for junction boxes shall be Class “C” with a minimum of 5 sacks per cubic yard cement content and a 3,600 psi minimum compressive strength when tested at 28 days.
- D. MEASUREMENT AND PAYMENT: Payment shall be per each (EA) for each

size junction box at all depths, complete in place including excavation, form work, concrete, reinforcing steel, and labor to perform the work.

## **SUB-SECTION D – WATER AND SANITARY SEWER IMPROVEMENTS**

### **Bid Item No. D1 – Remove and Salvage Existing Water Valves**

1. Existing water valves on main lines and fire hydrant leads shall be removed and salvaged where shown on the plans and shall follow the provisions of N.C.T.C.O.G Item 203.3. The City maintains salvage rights on existing water valves removed and shall provide a location for the Contractor to transport the assembly. If the City does not wish to obtain the salvaged assembly, the Contractor shall dispose of the assembly offsite in a lawful manner.
2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract price per each and shall include excavation, removal, backfill, and transporting the water valve to location specified by the City.

### **Bid Item No. D2 – Adjust Existing Valve Box to Grade**

The provisions of N.C.T.C.O.G Item 203.1 shall apply except as modified below:

- A. This item will govern for the elevation adjustment of existing water valve boxes.
- B. The Contractor shall adjust the existing water valve box to match the proposed pavement surface elevation.
- C. If the existing valve box is damaged or cannot be adjusted, the Contractor shall furnish and install a new valve box subsidiary to this bid item.
- D. MEASUREMENT AND PAYMENT: Measurement and payment shall be made per each (EA) and shall include the labor and all necessary material necessary to adjust the existing valve boxes to grade.

### **Bid Item No. D3 – Remove and Salvage Existing Fire Hydrant**

1. Existing fire hydrant assembly shall be removed and salvaged where shown on the plans and shall follow the provisions of N.C.T.C.O.G Item 203.3. Associate gate valve shall be removed and salvaged subsidiary to this bid item. The City maintains salvage rights on existing fire hydrants removed and shall provide a location for the Contractor to transport the assembly. If the City does not wish to obtain the salvaged assembly, the Contractor shall dispose of the assembly offsite in a lawful manner.



2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract price per each and shall include excavation, removal, backfill, and transporting the fire hydrant assembly to location specified by the City.

**Bid Item No. D4 – Adjust Existing Fire Hydrant**

- A. This item will govern for the location and elevation adjustment of existing fire hydrants.
- B. The Contractor shall adjust the existing fire hydrant to match the proposed location of the fire hydrant and the proposed surface elevation.
- C. If the existing fire hydrant is damaged or cannot be adjusted, the Contractor shall furnish and install a new fire hydrant subsidiary to this bid item.
- D. MEASUREMENT AND PAYMENT: Payment shall be made per each and shall include the labor and all necessary material necessary to adjust the fire hydrant location and elevation adjustment.

**Bid Item No. D5 – D7, D9– PVC DR18 Water Pipe (Open Cut) (Various Sizes)**

- A. Install water pipe in accordance with N.C.T.C.O.G Specification 501.14 and the Plans. All mains installed by direct bury shall be laid with #14 AWG tracer wire with blue 30 mil HDPE coating.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

**Bid Item No. D8 –12-inch PVC DR18 Water Pipe (Bore)**

- A. Bore: The hole shall be bored mechanically with a suitable boring assembly designed to produce a smooth, straight shaft and so operated that the completed shaft shall be at the established line and grade. The size of the bored hole shall be of such diameter to provide ample clearance for bells or other joints. The holes are to be bored mechanically. The boring shall be done by using either a pilot hole or a dry bore method:
  - a. A pilot hole boring shall be constructed by the following method: An approximate 2-in. pilot hole shall be bored the entire length of the crossing and shall be checked for line and grade on the opposite end of the bore from the work pit. The pilot hole shall serve as the

centerline of the larger diameter hole to be bored.

- b. The dry bore shall be constructed as follows: The casing pipe shall be advanced as the soil is removed by augers. Bentonite may only be used as a lubricant. Casing shall be new or used steel conduit approved by the Owner, with a minimum inside diameter sufficiently larger than the outside diameter of the carrier pipe or ducts to accommodate placement or removal. All carrier pipe installed by boring shall be supported by a quarter point cradle of Class B or Class PB concrete as specified by the Owner across the boring pit and to the first joint in the ditch section on each end.
- B. Any pipe damaged during boring operations shall be repaired if approved by the Owner or removed and replaced by the Contractor at their own expense.
- C. All mains installed by directional boring shall include #12 AWG copper clad steel wire.
- D. The location of the bore pits shall be as specified in the Plans.
- E. All pits should have crushed rock and sump areas to remove water. Where groundwater is found, pits shall be lined with filter fabric. Dewatering shall be subsidiary to this bid item.
- F. All voids shall be grouted per ASTM C476 Grout for Masonry and shall be considered a part of the unit price of the boring operation. In addition to the requirements stated above, the applicable provisions of N.C.T.C.O.G Item 503.3.3.2. Construction by Jacking in regard to the construction of trench, tolerance in line and cradle, methods of operations, backfilling, etc. shall govern construction by boring.
- G. The bore pit excavated to facilitate operations shall be filled immediately after the boring of the pipe has been completed. The bore pit shall then be backfilled and compacted in 6" lifts. Embedment and backfill minimum dimensions, material, compaction, and testing shall be in accordance with the City of North Richmond Hills' Standard Details.
- H. MEASUREMENT AND PAYMENT: Boring shall be measured for payment in linear feet (LF) along the centerline of the pipe measured from face to face of the trench ends or pit walls between which the jacking, boring or tunneling traverses and shall not be classified for payment according to depth. Open pits required for the boring or tunneling shall be considered incidental and shall not be paid for separately. The contract unit price shall be the total compensation for furnishing and placing all materials including encasement pipe, if required, and grout backfill; for all jacking, boring, tunneling, excavation and backfill; for all sheeting, shoring, bracing and

drainage; for disposal of all surplus materials; and for all labor, tools, equipment and incidentals necessary to complete the work, all in accordance with the plans and these specifications. Structural support of existing utilities is considered subsidiary to this item. The carrier pipe, when required, shall be subsidiary to this item.

- I. MEASUREMENT AND PAYMENT: Payment for the item shall include all costs required to have utility companies repair any damage inflicted to their lines by the Contractor and any cleanup, property damage, fines, etc. resulting from damage inflicted to any utility line by the Contractor.

**Bid Item No. D10 – Encasement for Water Mains Below Wastewater**

- A. Placement of a new waterline below an existing sewer line shall be limited wherever possible. If necessary, the Contractor is responsible for ensuring the installation, materials, and encasement follows the requirements outlined in 30 TAC 290.44. The Contractor will be required to replace any section that fail to comply with these requirements at no additional cost to the Owner.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot (LF) and shall include excavation, backfill, labor, materials, encasement pipe, spacers, and all incidentals necessary to complete the work in accordance with 30 TAC 290.44 and plan details.

**Bid Item No. D12-D15 – Resilient Seated Gate Valves**

- A. Install Resilient Seated Gate Valve in accordance with NCTCOG Specification 502.6 and the Plans.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work. Valve box shall be installed and considered subsidiary to this item.

**Bid Item No. D16 – Fire Hydrant Assembly**

- 1. Install Fire Hydrant Assembly in accordance with N.C.T.C.O.G Specification 502.3 and the Plans. Type II B-B (Blue Reflector) pavement markers shall be used to identify fire hydrant locations; installation of these markers shall be considered subsidiary to this bid item.
- 2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each (EA) and shall include excavation, backfill, labor, materials, gate valves, thrust blocking, and incidentals necessary to install a complete assembly.

**Bid Item No. D17, D19, D21– Connect to Existing Water Line (Various Sizes)**

1. Connect proposed water line to existing water line in accordance with N.C.T.C.O.G Specification 502.10 and the Plans.
2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each.

**Bid Item No. D18, D20– Connect to Existing AC Water Line (Various Sizes)**

This item shall govern the connections to existing asbestos-cement (AC) pipe, including the removal, handling, disturbance, cutting, and disposal. N.C.T.C.O.G Item 604 and the following provisions shall apply:

- A. For connections to asbestos cement (AC) pipe, the Contractor shall observe and comply with all federal, state and local laws, ordinances and regulations regarding the management of asbestos containing materials. At the minimum, work involving AC pipe should be overseen by a person who has received asbestos training and is familiar with the National Emissions Standards for Hazardous Air Pollutants (NESHAP).
- B. All required notifications to State regulatory agencies shall be made by the Contractor with copies provided to Owner's Representative, including but not limited to the TDH Demolition/Renovation Notification Form. If 260 linear feet or greater of AC pipe is crushed, crumbled or pulverized, then the project is subject to NESHAP regulations and a Demolition/Renovation Notification Form shall be sent to TDH by the Contractor. This form shall be post-marked no later than 11 working days prior to the start of any asbestos disturbance.
- C. Prior to commencing any preparation of the work areas for asbestos disturbance, the Contractor shall post all required documents, warning signs, and as necessary, erect physical barriers to secure the work area.
- D. The Contractor shall be responsible for site safety and for taking all necessary precautions to protect the Contractor's workers, City of North Richmond Hill's personnel, and the public from asbestos exposure and/or injury. The Contractor shall be responsible for maintaining the integrity of the work area.
- E. If AC pipe is required to be stored overnight, it shall be properly labeled, secured, and containerized to preclude unauthorized disturbance of the waste materials.
- F. The Contractor shall be responsible for the transport and disposal of ACWM to a duly licensed landfill facility permitted to accept asbestos waste. The

Contractor shall be responsible for obtaining and coordinating waste disposal authorization from a TCEQ licensed landfill. Waste manifests shall be used to transport the AC pipe from the project site to the final landfill disposal site. The Contractor shall sign manifests as the generator of the AC pipe and shall provide copies to the Owner's Representative for before final payment. All uncovering, dislodging, handling, or disposing of AC pipe and associated written handling and removal plans, such as an abatement plan, required to comply with federal and state regulations shall be subsidiary to this item.

- G. The work performed as prescribed by these items shall be paid for at the contract unit price per each (EA), which prices shall be full compensation for the work herein including the furnish all materials, equipment, tools, material disposal, submittals, and labor necessary to complete the work in accordance with state and federal regulations.

#### **Bid Item No. D22 – D23 – Water Service (Short and Long)**

1. Install water services to waterline in accordance with N.C.T.C.O.G Specification 502.10 and the Plans.
2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each for short connection and long connection and shall include excavation, backfill, labor, materials, and incidentals necessary to complete the work.

#### **Bid Item No. D24 – Water Meter Box Replacement**

- A. Install all water meter boxes as shown on the plans. Measurement and payment for this item shall be at the unit price bid for each (EA) and shall be full compensation for all labor, materials, equipment, and incidentals necessary to complete the work, including hauling and disposal of excess material.
- B. MEASUREMENT AND PAYMENT: Price paid shall be payment in full for all labor, materials, and equipment required for furnishing and installing new meter box, removing existing meter box, and shall include, but is not limited to, all excavation, removing the existing meter box, installing the new meter box, backfilling and grading the for positive drainage around the new meter box, delivering salvaged meter box to the Owner, cleanup, restoration, and all other items necessary to complete the job, whether specifically mentioned or implied.

#### **Bid Item No. D25 – Ductile Iron Fittings**

1. Install Ductile Iron Fittings in accordance with N.C.T.C.O.G Specification 502.5 and the Plans.
2. Fittings shall be full body fittings.
3. Any restraint joints or full body fittings necessary to complete the work shall be considered subsidiary to this bid item and Water Main Installation bid item.
4. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per ton. Please note that the Engineer has included additional tonnage to be used at the discretion of the City.

**Bid Item No. D27 – Remove Sanitary Sewer Manhole Cone**

- A. The Contractor shall follow the provisions of N.C.T.C.O.G Item 203.3. The City maintains salvage rights on existing sewer rings and covers and shall provide a location for the Contractor to transport the material. The Contractor shall dispose other components offsite in a lawful manner.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract price per each (EA) and shall include excavation, removal, backfill, disposal, and transporting the ring and covers (if necessary) to location specified by the City.

**Bid Item No. D28– Sanitary Sewer Manhole Cone Offset**

- A. Construct Sanitary Sewer Manhole with Cone Offset in accordance with applicable City Details and the Plans.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each (EA).

**Bid Item No. D29 – Temporary Pavement Repair (Water)**

- A. Place a temporary surface on any cut opening as per City of North Richland Hills Detail Figure 15P-2 (R07-01-2009). Temporary surfaces shall be adequately compacted and sealed to prevent degradation of the repair during the temporary period. Any temporary surface that fails to provide a nondegraded riding surface shall be removed and replaced at the Contractor's expense.
- B. MEASUREMENT AND PAYMENT: Payment for Temporary Pavement Repair shall be at the contract unit price per linear foot (LF).

**SUB-SECTION E – PAVEMENT MARKINGS AND SIGNING**

**Bid Item No. E1– Barricades, Signs, and Traffic Handling**

1. This item shall include the furnishing and installing traffic control devices in accordance with the Traffic Control Plan in the Plans. Traffic control shall comply with the Texas Manual of Uniform Traffic Control Devices, Item 502 of the TxDOT 2024 Specifications, and City Specifications. All traffic control items required to implement the Traffic Control Plan shall be subsidiary to this item. This shall include, but is not limited to, barrels, barricades, panels, signs, removal of existing pavement markings, installation of and removal of temporary pavement markings, concrete traffic barrier, signal modifications, and temporary water/sewer connections.
2. The standard details and plan details shall be considered the minimum requirements necessary to construct the project. Additional measures may be needed to address local traffic control issues and additional sequencing.
3. Prior to construction, the Contractor will be required to submit a detailed construction sequencing and temporary traffic control plan to address all portions of the project. The Contractor shall also submit a signal modification plan if necessary.
4. A schedule shall also be submitted to address times of completion of each stage of the construction sequence and projected dates of road closings, detours, and utility interruptions. The Contractor shall update this schedule on a monthly basis.
5. The Contractor shall follow the sequence of construction provided in these plans. Any deviations from the plans must be submitted in writing to the City for approval. Proper notification must be given to all affected property owners at least 48 hours in advance of all construction operations. No street shall be closed except upon written authority from the Owner.
6. Access to adjacent properties must be maintained except for short periods of time when construction actually blocks the driveway.
7. This item shall include the furnishing and installing of traffic control devices, signing, and portable message boards used in accordance with the Detour Maps in the Plans.
8. The Contractor is required to install low profile concrete barrier in areas where open excavations are located near live traffic. This includes, but is not limited to, location requiring bore pits and trenching. The Contractor is responsible for installing the barriers and end treatments in compliance with applicable standards and details. This cost is considered subsidiary to this bid item.
9. The amount bid for this item shall be paid over the duration of the project

with the amount paid on each monthly progress estimate determined by the percent complete on all other bid items.

10. MEASUREMENT AND PAYMENT: The monthly (MO) unit price shall include, but not be limited to all labor, equipment, and materials necessary to implement, maintain, move and remove traffic control devices during all phases of construction.

#### **Bid Item No. E2-E3 – Relocate Sign Panel on New Post**

1. For locations shown on the Plans, remove the existing sign panels, clean and salvage panels and dispose of the existing signpost. Refer to the Plans for the location of sign panels to be salvaged and installed on a new post per TxDOT 2024 Specification Item 636.
2. Signage shall be installed in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), latest revision. The City of North Richland Hills reserves the salvage rights on surplus/replaced signage. New Street signs will be provided by the Contractor to be mounted and installed by the Contractor.
3. MEASUREMENT AND PAYMENT: This item shall be on the bases of price bid per each sign post removed. Salvaging and cleaning all sign panels on the existing post and disposing of the existing post is subsidiary to the existing post.

#### **Bid Item No. E4-E6 – Pavement Markings**

1. Pavement markings shall be performed in accordance with TxDOT 2024 Standard Specifications and the Manufacturer recommendations. This item shall consist of the work, labor, materials, and equipment necessary to install pavement markings as shown on the Plans in accordance with the Texas Department of Transportation Items 666 and 678. All work, labor, materials, and equipment required for surface preparation, installation of pavement markings, and pavement marking sealant shall be subsidiary to each pavement marking bid item placed. Each pavement marking shall be thermoplastic.
2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per linear foot and shall include all labor, materials, equipment, and incidentals necessary to complete the work, including removal of existing signage, markings, surface preparations, sealing, etc. as called for on the plans and in TxDOT specifications. Any damage to existing facilities, markings, sod, etc. as a result of this work will be



subsidiary to the cost of this bid item.

**Bid Item No. E7– Install Painted Curb Addresses**

1. Painted curb address are to be installed on each residence driveway and shall meet the City's Code and Fire Department regulations. Addresses are to be white numbers on black background with any variation to be approved prior to installation by the City.
2. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per each and shall include all required labor, materials, equipment, and appurtenances for the address painting.

**SUB-SECTION - ADD ALT NO. 1**

**NEW ALT BID LINE ITEM DESCRIPTIONS**

Repeated bid items are identified in Base Bid Items above.

**Bid Item No. 301(a) – 6-inch Thick Flex Base**

- A. Flexbase Type A, Grade 1 or 2 for subgrade shall be furnished in accordance with TxDOT 2024 Specification 247.
- B. MEASUREMENT AND PAYMENT: Payment for this item shall be at the contract unit price per square yard of subgrade thickness as specified in the construction plans.

**Bid Item No. 301(b) –Excavation**

- A. Excavation shall consist of all the required excavation within the project limits as shown on the Plans, the removal, proper utilization or disposal of all excavated material including but not limited to any abandoned utilities, and the shaping and finishing of all earthwork in conformity with the lines and grades as shown on the Plans or as established by the OWNER. Any usable material from excavation shall be compacted in the areas of the project limits needing fill, and the required compaction testing of this excess material shall be included in this bid item and be completed in accordance with City standards. Excavation (Roadway) shall meet the requirements of Item 203.2 of the N.C.T.C.O.G Specifications.
- B. MEASUREMENT AND PAYMENT: Unclassified Street Excavation shall be measured and paid for by the cubic yard for excavation from its original position, and shall include all materials excavated without regard to the materials encountered. **There shall be no compensation for any quantities in addition to what is provided in the Bid documents unless the lines and grades are changed by the Engineer.**

**Bid Item No. 305(a) – 6” Lime Stabilized Subgrade**

The provisions of N.C.T.C.O.G Item 301.2 shall apply except as modified below:

- C. Subgrade shall be proof rolled with heavy pneumatic equipment. Any soft or pumping areas should be undercut to a firm subgrade and properly backfilled. Proof rolling shall be subsidiary to the unit cost of subgrade.
- D. MEASUREMENT AND PAYMENT: Payment for 6-inch Lime Treatment shall be by the square yard. Hydrated lime shall be paid for separately, by the ton, under the item “Lime”.

**Bid Item 305(b) – Lime**

The provisions of N.C.T.C.O.G Item 301.2 shall apply except as modified below:

- D. Contractor shall be responsible for obtaining a lime series for the project to establish the appropriate rate of lime or cement application. Lime series shall be conducted by a City approved lab and a Licensed Geotechnical Engineer subsidiary to this bid item. Hydrated lime or cement shall be placed by slurry method.
- E. For bidding purposes, Contractor shall assume a rate for lime application of 36 pounds per square yard on the 6-inch subgrade. Contractor shall only be paid for the amount of lime actually placed in accordance with lab recommendations.
- F. Measurement and payment for this pay item shall be made per ton.

**SUB-SECTION -ALLOWANCES****Bid Item No. 401 – Irrigation Restoration Allowance**

- 1. Irrigation Restoration Allowance shall consist of restoring all existing irrigation systems affected by the construction to an equal or better condition. This work shall include, but not be limited to, any relocation/replacement of spray heads, backflow preventors, control valves, piping, sleeving, and all other irrigation equipment that may be encountered during construction.
- 2. The Contractor shall only utilize this item when approved and should avoid damaging existing irrigation whenever possible. This item should only be used if damaging the existing irrigation is unavoidable. It is the Contractor's responsibility to verify the existing conditions and types of irrigation appurtenances (spray heads, drip irrigation, piping, etc) within landscape areas prior to construction. This item may be used with approval by the Owner. Owner reserves the right to delete any or all of this item from the Contract if it is not needed.

3. MEASUREMENT AND PAYMENT: Payment for irrigation restoration will be provided out of the allowance for Irrigation Restoration Allowance. Payment will be based on a price agreed upon prior to the work being performed. The Contractor will only charge the fraction of the allowance that yields the agreed upon price which will be considered payment in full for all labor, materials, tools, equipment, and incidentals.

**Bid Item No. 402 – Project Contingency as Directed By Owner**

1. This pay item shall be used at the discretion of the City for unforeseen items. This item will only pay for work performed at the direction of the City.
2. The Contractor shall only utilize this item when approved by the City in writing. Any work performed without the authorization of the City shall not be paid for under this bid item.
3. The bidder shall include this amount within their bid and understand the intent is not to utilize this item.
4. At the completion of the project, funds not utilized under this item shall be removed from the contract agreement via construction change order

**Bid Item No. 403 – Utility Contingency as Directed By Owner**

1. This pay item shall be used at the discretion of the City for unforeseen items. This item will only pay for work performed at the direction of the City.
2. The Contractor shall only utilize this item when approved by the City in writing. Any work performed without the authorization of the City shall not be paid for under this bid item.
3. The bidder shall include this amount within their bid and understand the intent is not to utilize this item.
4. At the completion of the project, funds not utilized under this item shall be removed from the contract agreement via construction change order

**Bid Item No. 404 – Paving Contingency as Directed By Owner**

5. This pay item shall be used at the discretion of the City for unforeseen items. This item will only pay for work performed at the direction of the City.
6. The Contractor shall only utilize this item when approved by the City in writing. Any work performed without the authorization of the City shall not be paid for under this bid item.
7. The bidder shall include this amount within their bid and understand the intent is not to utilize this item.
8. At the completion of the project, funds not utilized under this item shall be removed from the contract agreement via construction change order

## **TxDOT SPECIFICATIONS**

*The following are governing specifications for the Plans for the Harmonson Road Project (Dawn Drive to Mackey Creek Channel)*

*TxDOT Standard Specifications, adopted by the Texas Department of Transportation September 1, 2024, are incorporated into the contract by reference.*

Item 160	Topsoil
Item 162	Sodding for Erosion Control
Item 166	Fertilizer
Item 168	Vegetative Watering
Item 247	Flexible Base
Item 300	Asphalts, Oils, and Emulsions
Item 340	Dense-Graded Hot-Mix Asphalt (Small Quantity)
Item 360	Concrete Pavement
Item 421	Hydraulic Cement Concrete
Item 441	Steel Structures
Item 442	Metal for Structures
Item 445	Galvanizing
Item 448	Structural Field Welding
Item 464	Reinforced Concrete Pipe
Item 465	Junction Boxes, Manholes, and Inlets
Item 502	Barricades, Signs, and Traffic Handling
Item 530	Intersections, Driveways, and Turnouts
Item 531	Sidewalks
Item 560	Mailbox Assemblies
Item 636	Signs
Item 666	Retroreflectorized Pavement Markings
Item 678	Pavement Surface Preparation for Markings

## **SECTION V**

### **SPECIAL PROVISIONS**

## **SPECIAL PROVISIONS**

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## **SPECIAL PROVISIONS**

### **SP-1: GENERAL**

For this contract, the General Provisions (Division 100) of the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, adopted in November 2017, with all amendments thereto, shall govern and shall constitute as the Special Provisions except as herein amended, modified or supplemented. Omission of any section from this Project's Contract Documents does not mean that such section is not applicable to this Project. The NCTCOG General Provisions will be referred to as the General Provisions (GP) and will not be physically bound with the other contract documents. Copies may be obtained from the North Central Texas Council of Governments.

The following Special Provisions shall take precedence over all other contract conditions, specifications and agreements.

### **SP-2: PROJECT DESCRIPTION**

The work associated with this Project includes, but is not limited to, the following tasks:

1. Construction Staking
2. Traffic and Erosion Control
3. Roadway Grading
4. Concrete and Asphalt Paving
5. Driveway Reconstruction
6. Storm Drain Improvements
7. Water Improvements
8. City Utility Adjustments
9. Pavement Marking and Signage

### **SP-3: DEFINITIONS**

Modify GP Item 101.1 Definitions as follows:

The word "City" or "OWNER" in these documents shall be understood as referring to:

The City of North Richland Hills, Texas  
4301 City Point Drive  
North Richland Hills, Texas 76180

The word "Engineer" in these documents shall be understood as referring to a professional engineer employed by the City of North Richland Hills.

The word "Inspector" in these documents shall be understood as referring to the technical construction inspector within the OWNER's Public Works Department.

The word "OWNER's Representative" in these documents shall be understood as referring to the OWNER's Director of Public Works, Public Works Technical Construction Inspector(s), Engineer of the OWNER, or such other Engineer or Supervisor as may be authorized by the OWNER to act in any particular position.

Any reference to "Special Conditions" or "Supplemental Special Conditions" shall be understood as referring to these Special Provisions.

#### **SP-4: INFORMATION CONCERNING CONDITIONS**

Add the following to GP Item 102.3. Examination of Plans, Specifications and Site of the Work:

Prospective bidders shall make a careful examination of the entire site of the project and shall make such explorations as may be necessary to determine the subsoil and water conditions to be encountered; improvements and obstructions which may be encountered, especially those to be protected; methods of providing ingress and egress to private as well as public property; methods of handling traffic during construction and maintenance of the entire project as well as any section thereof; protection of all existing structures both above and below ground; and how the plans fit the proposed project and especially if any discrepancies exist.

The accuracy of the information furnished by the Engineer or the plans and specifications as to underground structures and surface structures, foundation conditions, character of soil, position and quality of ground and subsoil water, etc., are not guaranteed by the OWNER.

Subsurface exploration, to ascertain the nature of the soils at the project site, including the amount of rock, if any, is to be the responsibility of any and all prospective bidders. Whether prospective bidders perform this subsurface exploration jointly or independently, it shall be left to the discretion of such prospective bidders. Subsurface exploration shall not be attempted without the approval of the Engineer.



#### **SP-5:     ADDENDA**

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to the Engineer **at least seven (7) days prior to the Bid Opening**. Answers to all such requests will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

Should a bidder find discrepancies in, or omission from the Contract Documents, or should he/she be in doubt as to their meaning, he/she should at once notify the Engineer in order that a written addendum may be sent to all bidders. Any addenda issued will be mailed or be delivered to each prospective bidder who has requested and received a bid packet. The bid proposal as submitted by the bidder must be so constructed as to include any addenda issued by the Engineer prior to 24 hours of the bid opening, with the appropriate recognition of addenda so noted in the bid proposal.

#### **SP-6:     PROPOSED GUARANTY**

Modify GP Item 102.5. Proposal Guaranty to include:

The five percent (5%) proposal guaranty shall be five percent (5%) of the largest possible total for the bid submitted.

#### **SP-7:     FILING OF PROPOSAL**

Add the following to GP Item 102.6. Filing of Proposals:

Bids, affidavits and proposed construction schedules must be submitted in sealed envelopes within the time limit for receiving proposals, as stated in the "NOTICE TO BIDDERS", which envelopes bear a legible notation, "PROPOSAL", and the name of the project. The original copy shall be filed with the City of North Richland Hills in the office of the City Secretary at City Hall.

#### **SP-8:     REJECTION OF PROPOSALS**

Add the following reasons to GP Item 102.11. Rejection of Proposals:

- (7)     Proposals that are incomplete insofar as the required signatures, proposal guaranty, or containing any material irregularities.

#### **SP-9: DISQUALIFICATION OF BIDDERS**

Add the following reason to GP Item 102.12. Disqualification of Bidders:

- (9) where more than one proposal for an individual firm, partnership, or corporation is filed under the same or different names and where such proposals are not identical in every respect.

#### **SP-10: QUALIFICATION TO PERFORM**

The OWNER may make such investigations as he/she deems necessary to determine the bidder's ability to perform the work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted fails to satisfy the OWNER that such bidder can properly carry out the obligations of the contract and to complete the work contemplated therein.

#### **SP-11: AWARD OF CONTRACT**

Add the following to GP Item 103.2. Award of Contract and Commencement of Work:

The award, if made, shall be on the basis of the lowest acceptable bid submitted by a qualified responsible bidder, as determined by the OWNER, within 60 days after the opening of proposals. In determining the lowest acceptable bid, the OWNER will consider all relative factors such as: efficiency of a single contractor in the project area, increase in public safety due to a single contractor's operations, length of construction, coordination of construction activities, previous experience the OWNER may have had with the bidder, effects on area traffic due to construction detours and efficient use of City funds. The right is reserved, as the interest of the OWNER may require, to reject any and all bids and to waive any formality in bids received. It is the intention of the OWNER to award a single contract for this work.

#### **SP-12: BONDS - AMOUNT AND TERMS**

In addition to GP Item 103.3. Surety Bonds, add the following:

With the execution and delivery of the contract, the CONTRACTOR shall furnish and file with the City in the amount herein required, the following surety bonds:

- (1) A good and sufficient Performance Bond in an amount equal to one hundred percent (100%) of the total awarded contract price, guaranteeing the full and faithful execution of the work and performance

of the contract and for the protection of the City against any improper execution of the work or the use of inferior materials.

- (2) A good and sufficient Payment Bond in an amount equal to one hundred percent (100%) of the total awarded contract price, guaranteeing payment for all labor, materials and equipment used in the construction of the project.
- (3) A good and sufficient Maintenance Bond in an amount equal to twenty percent (20%) of the final contract price, guaranteeing the maintenance in good condition of such project for a period of two (2) years from and after the time of its completion and acceptance by the City.

General conditions for bonds are as follows:

- 1. The surety on each bond must be a responsible surety company which is licensed and qualified to do business in the State of Texas (surplus lines carriers are not acceptable) and satisfactory to the City. No surety will be accepted who is in default or delinquent on any bond or who is interested in any litigation against the City. Should any surety on the contract be determined unsatisfactory at any time by the City, notice will be given to the CONTRACTOR to the effect, and the CONTRACTOR shall forthwith substitute a new Surety or Sureties satisfactory to the City. (Texas Lloyd's Plan carriers are not acceptable.) No payment will be made under the contract until the new Surety or Sureties, as required, have qualified and have been accepted by the City. The contract shall not be operative nor shall any payments be due until approval of the bonds has been made by the City.
- 2. The surety company should be listed in the current circular of the "Federal Register - Department of the Treasury - Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsurance Companies".
- 3. The surety shall/must have an underwriting limitation (as shown in the Federal Register) to cover 110% of the project cost. Exceptions to a requirement may be made in unusual circumstances, subject to approval by the Office of Risk Management and the City Attorney's Office.
- 4. All bonds shall be made on forms furnished by the City and shall conform to the requirements as set forth herein.
- 5. Each Bond shall be executed by the CONTRACTOR and the Surety. The name and residence of each individual party to the bond shall be

inserted in the body thereof, and each such party shall sign the bond with his/her usual signature on the line opposite the scroll seal, and if signed in the States of Main, Massachusetts, or New Hampshire, an adhesive seal shall be fixed opposite the signature.

6. If the principals are partners, their individual names will appear in the body of the bond or on proceeding pages to be included with said bond with the recital that they are partners composing a firm, naming it, and all the members of the firm shall execute the bond as individuals.
7. The signature of a witness shall appear in the appropriate place, attesting the signature of each individual party to the bond.
8. The principal or surety shall be a corporate surety; the name of the state in which incorporated shall be inserted in the appropriate place in the body of the bond or on proceeding pages to be included with said bond, and said instrument shall be executed and attested under the corporate seal, the fact shall be stated, in which case a scroll or adhesive seal shall appear following the corporate name.
9. The official character and authority of the person or persons executing the bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary according to the form attached hereto. In lieu of such certificate, records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.
10. The date of any bond must not be prior to the date of the contract in connection with which it is given.

### **SP-13: INSURANCE REQUIREMENTS**

In addition to the provisions of GP Item 103.4. Insurance, add the following:

Workmen's Compensation Insurance: Statutory requirements as specified by the Workmen's Compensation Law of the State of Texas and adopted by the Texas Workers' Compensation Commission per Title 28, TAC §110.110.  
Workers' Compensation Insurance Coverage:

#### **A. Definitions:**

- (1) Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission or a coverage agreement (TWCC-81, TWCC-82,

TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees (including those subject to a coverage agreement) providing services on a project for the duration of the project.

- (2) Building or construction - Has the meaning defined in the Texas Labor Code, §406.096(e)(1).
- (3) Contractor - A Person bidding for or awarded a building or construction project by a governmental entity.
- (4) Coverage - Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).
- (5) Coverage Agreement - A written agreement on form TWCC-81, form TWCC-82, form TWCC-83, or form TWCC-84, filed with the Texas Workers' Compensation Commission which establishes a relationship between the parties for purposes of the Workers' Compensation Act, pursuant to the Texas Labor Code, Chapter 406, Subchapters F and G, as one of employer/employee and establishes who will be responsible for providing workers' compensation coverage for persons providing services on the project.
- (6) Duration of the project - Includes the time from the beginning of the work on the project until the work on the project has been completed and accepted by the governmental entity.
- (7) Persons providing services on the project ("subcontractor" in §406.096) - Includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the CONTRACTOR and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- (8) Project - Includes the provision of all services related to a building or construction contract for a governmental entity.
- B. The CONTRACTOR shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the CONTRACTOR providing services on the project for the duration of the project.
- C. The CONTRACTOR must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the project the CONTRACTOR must prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The CONTRACTOR shall obtain from each person providing services on the project and provide to the governmental entity:
  - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
  - (2) no later than seven days after receipt by the CONTRACTOR, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The CONTRACTOR shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The CONTRACTOR shall notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the CONTRACTOR knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.
- H. The CONTRACTOR shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

- I. The CONTRACTOR shall contractually require each person with whom it contracts to provide services on a project, to:
- (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
  - (2) provide to the CONTRACTOR, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
  - (3) provide the CONTRACTOR, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
  - (4) obtain from each other person with whom it contracts, and provide to the CONTRACTOR:
    - (a) a certificate of coverage, prior to the other person beginning work on the project; and
    - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
  - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
  - (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
  - (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.

- J. By signing this contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the governmental entity that all employees of the CONTRACTOR who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The CONTRACTOR's failure to comply with any of these provisions is a breach of contract by the CONTRACTOR which entitles the governmental entity to declare the contract void if the CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

In accordance with statutory requirements, the CONTRACTOR shall:

- (1) provide coverage for its employees providing services on the project, for the duration of the project based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements;
- (2) provide a certificate of coverage showing workers' compensation coverage to the governmental entity prior to beginning work on the project;
- (3) provide the governmental entity, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the project;
- (4) obtain from each person providing services on the project, and provide to the governmental entity:
  - (A) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and



- (B) no later than seven (7) days after receipt by the contract, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
- (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project;
- (7) post a notice on each project site informing all persons providing services on the project that they are required to be covered, and stating how a person may verify current coverage and report failure to provide coverage. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30 point bold type and text in at least 19 point normal type, and shall be in both English and Spanish and any other language common to the worker population. The text for the notices shall be the following text in Figure 1 provided by the commission on the sample notice, without any additional words or changes:

Figure 1:

#### REQUIRED WORKERS' COMPENSATION COVERAGE

"The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling, or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee"

"Call the Texas Workers' Compensation Commission at (512) 440-3789 to receive information on the legal requirement for

coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

In GP Item 103.4.1.2. Commercial General Liability, change the respective limits as follows:

Contractor's General Liability and Property Damage Insurance:

Bodily Injury (or Death)     \$ 600,000 each occurrence

Property Damage               \$ 600,000 each occurrence

**SP-14:    POLICY ENDORSEMENTS AND SPECIAL CONDITIONS**

In addition to the provisions of GP Item 103.4.5. Policy Endorsements and Special Conditions, add the following:

- (a)    CONTRACTOR will not be issued a Work Order to commence work on this Contract until he/she has obtained all the insurance required under this section and such insurance has been approved by the OWNER or his representative.
- (b)    CONTRACTOR shall procure and shall maintain during the life of this Contract, insurance coverage as herein specified, and in case of any work sublet, shall require any subcontractor in like manner to secure and maintain such minimum limits of insurance coverage, also.
- (c)    The CONTRACTOR shall furnish the OWNER with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of policies. Such certificates shall contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered except after thirty (30) days written notice has been received by the OWNER."

**SP-15:    ORDER OF WORK**

Add the following to GP Item 103.6. Notice to Proceed and Commencement of Work:

The CONTRACTOR shall be fully responsible for proper coordination for the relocation of utilities (i.e. power poles, electrical lines, gas lines, telephone lines, television (TV) cable lines, buried cables, etc.) public and private unless otherwise noted on the plans/drawings.

## **SP-16: PRIORITY OF CONTRACT DOCUMENTS**

Delete GP Item 105.1.1. Priority of Contract Documents and substitute the following:

In case of conflict between contract documents, priority of interpretation shall be in the following order:

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds
- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Special Specifications
- (14) Project Construction Plans/Drawings
- (15) Special Material and/or Equipment Specifications
- (16) Special Material and/or Equipment Drawings
- (17) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), Fifth Edition, Adopted November 2017
- (18) TxDOT Standard Specifications for Construction and Maintenance of Highways, Street, and Bridges (TxDOT Specifications)
- (19) North Central Texas Council of Government references

## **SP-17: WARRANTY**

In GP Item 105.2.2. Special Warranty, change all references from one year to two (2) years and add the following:

Notwithstanding any certificate which may have been given by the Engineer, if any materials, equipment or any workmanship which does not comply with the requirements of this contract shall be discovered within two (2) years after completion of construction of the project, and acceptance by the OWNER, the CONTRACTOR shall replace such defective materials or equipment, or remedy any such defective workmanship within ten (10) days after notice in writing of the existence thereof shall have been given by the OWNER or City Engineer. In the event of failure of the CONTRACTOR to replace any such defective materials or equipment or to remedy defective workmanship as herein

provided, the OWNER may replace such defective materials or equipment or remedy such workmanship as the case may be and in such event the CONTRACTOR shall pay to the OWNER the cost and expense thereof.

#### **SP-18: LINES AND GRADES**

Add the following to GP Item 105.4. Construction Stakes:

The CONTRACTOR is responsible to provide all construction staking under this contract.

All work under this contract shall be constructed in accordance with the lines and grades shown on the plans/drawings. The full responsibility for the holding to alignment and grade shall rest upon the CONTRACTOR.

The CONTRACTOR shall protect all property corner markers, and when any such markers or monuments are in danger of being disturbed, they shall be properly referenced and if disturbed shall be reset at the expense of the CONTRACTOR.

#### **SP-19: INSPECTION AND TESTING**

Add the following to GP Item 106.5. Samples and Tests of Materials:

The CONTRACTOR shall be responsible for paying for all testing and testing related items (acquiring specimens, proper specimen control, etc.) on this Project.

During the progress of the work, all materials, equipment and workmanship shall be subjected to such inspections and tests as will assure conformance with the contract requirements.

The CONTRACTOR shall furnish at his/her expense all necessary specimens and samples for testing.

Sampling and testing of all materials or construction methods shall be performed by a commercial laboratory, approved by the City Engineer, and permitted with the City of North Richland Hills' Public Works Department.

When the CONTRACTOR's materials, construction items or products incorporated in the project fail to satisfy the minimum requirements of the initial test and he/she has to bear the cost of any retesting, he/she shall be responsible for any and all cost associated with such retesting. If in this situation, the CONTRACTOR utilizes the same testing laboratory as the OWNER, the CONTRACTOR shall pay said testing laboratory in full or the

testing laboratory shall be able to gain recourse through the CONTRACTOR's Payment Bond.

In the event a conflict arises concerning the interpretation of A.S.T.M., A.C.I., A.W.W.A., etc., specifications/standards, the City Engineer shall make his/her determination of the interpretation and his/her determination shall be final.

#### **SP-20: INDEMNIFICATION**

The CONTRACTOR shall familiarize himself/herself with GP Item 107.3. Indemnification and GP Item 107.20.3.2. Indemnification. Additionally, the following shall be added to both Indemnification items:

This agreement, however, does not waive any governmental immunity available to the OWNER under Texas law and nor any defenses of the parties under Texas law. The provisions of this paragraph are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

#### **SP-21: SALES TAX**

Add the following to GP Item 107.15. State and Local Sales and Use Taxes:

The OWNER qualifies for exemption from state and local sales and use taxes, pursuant to the provisions of Section 151.309 of the Texas Limited Sales, Excise and Use Tax Act, as amended. Therefore, the OWNER shall not be liable for, or pay the CONTRACTOR's cost of such sales and use taxes which would otherwise be payable in connection with the performance of this contract.

#### **SP-22: TRAFFIC CONTROL**

Add the following to GP Item 107.20.2. Protection of Persons and Property:

The CONTRACTOR shall not remove any regulatory sign, instructional sign, street name sign, or other sign which has been erected by the City. If it is determined that a sign must be removed to permit required construction, the CONTRACTOR shall contact the City to remove the sign. In the case of regulatory signs, the CONTRACTOR must replace the permanent sign with a temporary sign meeting the requirements of the above referenced manual and such temporary sign must be installed prior to the removal of the permanent sign. If the temporary sign is not installed correctly or if it does not meet the required specifications, the permanent sign shall be left in place until the temporary sign requirements are met. When construction work is completed to the extent that the permanent sign can be reinstalled, the CONTRACTOR

shall again contact the City to reinstall the permanent sign and shall leave his temporary sign in place until such installation is completed.

The CONTRACTOR shall prosecute his traffic control work in such a manner as to create a minimum of interruption to traffic and pedestrian facilities and to the flow of vehicular and pedestrian traffic within the project area.

Access to adjacent property shall be maintained at all times unless otherwise approved by the OWNER.

#### **SP-23: TRENCH SAFETY**

Add the following paragraph to GP Item 107.20.3. Trench Safety:

Per Chapter 756, Texas Health & Safety Code, it shall be the responsibility of the CONTRACTOR to provide and maintain a viable trench safety system at all times during construction activities. The CONTRACTOR is directed to become knowledgeable and familiar with the standards as set forth by the Occupational Safety and Health Administration for trench safety that will be in effect during the period of construction of the project and the CONTRACTOR is responsible for conforming to such regulations as prescribed by Occupational Safety and Health Administration standards.

#### **SP-24: WORK-SITE AREA AND CLEAN-UP**

Add the following to GP Item 107.22. Working Area:

During construction the CONTRACTOR shall at all times keep the job site free from waste, debris and rubbish, and shall maintain a daily routine of clean-up.

The working operations of the CONTRACTOR shall at all times be conducted so as to create a minimum of inconvenience to the OWNER or to the public. Stringing of pipe, stockpiling of materials, etc., will be allowed only where no inconvenience is caused and only in amounts that can be readily used by the CONTRACTOR.

All trees, stumps, slashings, brush or other debris to be removed from the site, shall be disposed of in a manner consistent with Local Ordinances and all State Regulations. Burning of trash, etc., will only be permitted where allowed by Local Ordinances and State Pollution Regulations.

All excavated earth in excess of that required for project embankments and/or backfilling shall be removed from the job site and disposed of in a satisfactory manner. Disposal of excess material into area creeks and drainageways will not be allowed.

Any trees or other landscape features scarred or damaged by the CONTRACTOR's operations shall be restored or replaced at the CONTRACTOR's expense. Trimming or pruning to facilitate the work will be permitted only by experienced workmen in an approved manner. Pruned limbs of one inch (1") diameter or larger, shall be thoroughly treated as soon as possible with a tree wound dressing.

The CONTRACTOR shall take all precautions required to prevent soil erosion during construction. If, in the opinion of the City Engineer, excessive erosion occurs, the CONTRACTOR shall take immediate measure to prevent further erosion and restore the disturbed surface with topsoil at completion of the work.

All property along and adjacent to the CONTRACTOR's operations including lawns, yards, shrubs, trees, etc., shall be preserved or restored after completion of the work, to a condition equal to or better than existed prior to start of work.

Upon completion of the work as a whole and prior to final acceptance, the CONTRACTOR shall clean and remove from the site all surplus and discarded materials, temporary structures and all debris. He/She shall leave the site in a neat and orderly condition with an appearance satisfactory to the City Engineer and OWNER. Method and location of disposal or surplus and waste materials shall be satisfactory to the City Engineer.

The CONTRACTOR shall then thoroughly clean all equipment and materials installed by him/her and shall present for final inspection materials and equipment in a clean, bright and new condition.

No extra payment will be made for any of this type of work required on the project.

#### **SP-25: EXISTING STRUCTURES, FACILITIES AND IMPROVEMENTS**

Add the following to GP Item 107.24. Existing Structures, Facilities and Appurtenances:

The CONTRACTOR's attention is directed to the necessity of taking adequate measures to protect all existing structures, facilities, improvements and utilities, including sprinkler systems, encountered.

The plans show the locations of most known surface and subsurface structures. However, the OWNER assumes no responsibility for failure to show any or all of these structures on the plans or in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work, or for increasing the pay quantities in any manner,

unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades, or requires the building of special works not provided for in the Contract Documents.

Any non-City utilities (cable, electric, gas, telephone, etc.) damaged by the CONTRACTOR shall be the responsibility of the CONTRACTOR for relocation and/or repair as well as the costs associated with the relocation and/or repair of utilities. Any City utilities (sanitary sewer main and water distribution main) damaged by the non-negligent acts of the CONTRACTOR will not be the responsibility of the CONTRACTOR for repair. Any delays associated with the relocation and/or repair of utilities shall not be basis for a claim for extra pay.

In the progress of the work, the CONTRACTOR may have to relocate certain existing utility service lines. All relocation, repairs and replacement work shall be done at the expense of the CONTRACTOR to the satisfaction of the OWNER, except those for which specific pay items appear in the Bid Proposal.

Any utilities damaged during construction work shall be immediately repaired at the CONTRACTOR's expense.

The CONTRACTOR shall at all times maintain streets and drives in a condition which will provide easy ingress and egress and upon completion of the work, repair all damages to roads and streets used during construction, to a condition at least as good as existed prior to the start of work.

#### **SP-26: PROSECUTION OF CONSTRUCTION**

Add the following to GP Item 108.2. Prosecution of the Work:

The CONTRACTOR will, unless otherwise approved by the City Engineer, prosecute the construction of this project during normal working hours as defined below:

- (a) Normal Work Day shall mean the normal eight (8) hour working day between the hours of 8:00am and 5:00pm
- (b) Normal Work Week shall mean the forty (40) hour work week encompassing the five (5) eight-hour days, Monday through Friday.



- (c) Holidays to be observed and to be included into the normal work week will be:

New Years Day	January 1 <sup>st</sup>
Martin Luther King Day	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4 <sup>th</sup>
Labor Day	First Monday in September
Thanksgiving Holiday	Fourth Thursday in November and the following Friday
Christmas Holiday	December 24 <sup>th</sup> & December 25 <sup>th</sup>

Any of the above dates falling on a Sunday shall be observed on the following Monday.

- (d) All work contemplated to be done which will not be in accordance with the normal hours will require prior approval from the City Engineer. The CONTRACTOR shall request permission by the City Engineer 72 hours in advance of the time he/she intends to work.

Work which is of necessity performed at times other than normal working hours will not require prior approval unless construction scheduling can be arranged to prevent such conflict of time requirements.

All work performed other than the normal working hours, whether scheduled or required, will in no way increase the cost to the OWNER for the performance of such work. The CONTRACTOR shall pay the OWNER for inspection services, city administrative fees, etc. when work has been approved to be performed on Weekends, Holidays and outside any normal working hours. These services shall be charged at the rate of \$75.00 per hour and shall include a four (4) hour minimum charge.

- (e) Calendar Days is defined as any day of the week or month; no days being excepted, such as, Saturdays, Sundays, holidays and inclement weather days. Counting of contract time will only be stopped when the Owner issues a written notice stating this fact, or when the project is noted as substantially complete by written notice from the Owner. The Owner shall determine when such action is necessary.

Extensions of time due to weather delays shall be determined in accordance with the following formula:

$E = R - P$  where P is greater than or equal to R, and

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

Average Precipitation Days (P) is defined as a day of rain, sleet, hail, snow or any combination thereof, and shall be based upon the average precipitation for each month of the year as defined in the Local Climatological Data summaries issued by the National Climatic Data Center in Asheville, North Carolina, and for this contract shall be as follows:

Average Precipitation

Month No. of Days	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
	6	6	7	7	8	6	4	4	6	6	6	6

Partial months shall be prorated uniformly for the entire month and the sum of all the months used will be rounded to the nearest whole number. This number shall be P.

Total Precipitation Days (R) is defined as a day of rain, sleet, hail, snow or any combination thereof, if determined by the Owner's Project Representative that the Contractor's construction cannot progress substantially due to precipitation and thus be put in the Daily Inspection Logs as a precipitation day. The sum of all precipitation says shall be R.

The total number of Extra Precipitation Days (E) shall be granted to the Contractor as extension of time due to weather delays, and no additional time due to drying time for saturated soil will be allowed.

**SP-27: LIQUIDATED DAMAGES FOR FAILURE TO COMPLETE ON TIME**

Delete the Table [Schedule 108.8.1.(a) Liquidated Damages] within GP Item 108.8.1. Liquidated Damages for Failure to Complete on Time and substitute the following:

The contract time for the entire project is based on three project phases. The contract time for Phase I from the "Notice to Proceed" issuance date through completion of Phase 1 is 140 consecutive calendar days. The contract time for Phase 2 from the end of Phase 1 through final completion of Phase 2 is 145

consecutive calendar days. The contract time for Phase 3 from the end of Phase 2 through final completion of Phase 3 is 195 consecutive calendar days. For additional information, refer to Article 3 of the Standard Form of Construction Agreement.

Liquidated damages will be assessed at the rate of **\$1,000** per consecutive calendar day for any unfinished work beyond the 480<sup>th</sup> calendar day after the "Phase I Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER.

#### **SP-28: OCCUPATIONAL SAFETY AND HEALTH ACT**

All work performed under this contract shall meet the requirements of the Occupational Safety and Health Act. It is the responsibility of the CONTRACTOR to familiarize himself/herself with the latest provisions of regulations published by the Occupational Safety and Health Administration in the Federal Register and to perform all of his/her responsibilities thereunder.

The CONTRACTOR shall comply with the provisions of the Occupational Safety and Health Act and the standards and regulations issued thereunder and warrant that all work, materials and products furnished under this contract will conform to and comply with said standards and regulations which are in existence on the date of this contract. The CONTRACTOR further agrees to indemnify, defend, and hold harmless the OWNER for all damages suffered by the OWNER as a result of the CONTRACTOR's failure to comply with the Act and the Standards issued thereunder and for the failure of any material and/or equipment furnished under this contract to so comply.

The CONTRACTOR shall also comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., if not in conflict with those of the Occupational Safety and Health Act and shall maintain an accurate record of all cases of death, occupational disease and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the contract.

The CONTRACTOR alone shall be responsible for the safety, efficiency and adequacy of his/her equipment and employees and for any damage which may result from their failure or their improper construction, maintenance or operation.

#### **SP-29: EASEMENTS/RIGHTS-OF-WAY**

Without cost to the CONTRACTOR, the OWNER will provide the necessary easements or rights-of-way required for the project. However, the CONTRACTOR may desire additional temporary easements for the duration of the work for his/her

construction, storage or access. All such temporary easements shall be obtained by the CONTRACTOR at no additional cost to the contract or the OWNER.

Unless specifically provided otherwise, the CONTRACTOR, as part of his/her work, shall clear all easements or rights-of-way of all obstructions to the work. On conclusion of his/her operations, he/she shall replace, repair or restore any improvements which may have been removed or damaged, as directed by the City Engineer.

#### **SP-30: RIGHT OF ENTRY**

The OWNER reserves the right to enter the property or location on which the works herein contracted for are to be constructed or installed, by such agent or agents as he/she may elect, for the purpose of inspecting the work, or for the purchase of constructing or installing such collateral work as said OWNER may desire.

#### **SP-31: AUTHORITY AND DUTIES OF INSPECTOR**

Inspectors, designated by and acting under the direction of the OWNER, shall have the authority to inspect all work done and all materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. He/She is authorized to call to the attention of the CONTRACTOR any failure of the work or materials to conform to the plans, specifications and contract documents. He/She shall have the authority to reject materials or suspend the work until any situation at issue can be referred to and decided by the OWNER.

The Inspector is not authorized to revoke, alter or waive any requirements of the plans and specifications. He/She shall in no case act as foreman or perform other duties for the CONTRACTOR, interfere with the management of the work by the latter. Any advice which the Inspector may give the CONTRACTOR shall otherwise not be construed as binding the City Engineer in any way, or releasing the CONTRACTOR from fulfilling all of the terms of the Contract.

If the CONTRACTOR refuses to suspend operations on verbal order of the Inspector, a written order will be presented to the CONTRACTOR by the Inspector giving the reason for suspension of work. After placing the order in the hand of the "man-in-charge", the Inspector shall immediately leave the job. Work performed during the absence of the Inspector will not be accepted nor paid for, and shall be removed and replaced.

Notwithstanding any other provision of this agreement or any other Contract Documents, the Inspector shall not be in any way responsible or liable for any act, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR's or subcontractor's agents, servants or employees or any

other person, firm or corporation performing or attempting to perform any of the work.

**SP-32: OWNER-ENGINEER RELATIONSHIP**

The Engineer will be the OWNER's representative during construction. The duties, responsibilities and limitations of authority of the Engineer as the OWNER's Representative during construction are as set forth in the Contract Documents and shall not be extended or limited without written consent of the OWNER and Engineer. The Engineer will advise and consult with the OWNER, and all of OWNER's instructions to the CONTRACTOR shall be issued through the Engineer.

**SP-33: PROFESSIONAL INSPECTION BY ENGINEER**

The Engineer shall make periodic visits to the Site to familiarize himself/herself generally with the progress of the executed work and to determine if such work generally meets the essential performance and design features and the technical and functional engineering requirements of the Contract Documents; provided and except, however, that the Engineer shall not be responsible for making any detailed, exhaustive, comprehensive or continuous on-site inspection of the quality or quantity of the work or be in any way responsible, directly or indirectly, for the construction means, methods, techniques, sequences, quality, procedures, programs, safety precautions or lack of same incident thereto or in connection therewith.

Notwithstanding any other provision of this agreement or any other Contract Documents, the Engineer shall not be in any way responsible or liable for any acts, errors, omissions or negligence of the CONTRACTOR, any subcontractor or any of the CONTRACTOR's or subcontractor's agents, servants or employees or any other person, firm or corporation performing or attempting to perform any of the work.

**SP-34: COPIES OF PLANS AND SPECIFICATIONS FURNISHED**

Four (4) sets of plans and specifications (not including the General Provisions) shall be furnished to the CONTRACTOR at no charge for construction purposes. Additional sets may be obtained from the Engineer at **\$ 50.00 per set**.

**SP-35: VERIFICATION OF MEASUREMENTS**

Before ordering any material or doing any work, the CONTRACTOR shall verify all measurements involved and shall be responsible for the correctness of these measurements. No extra charge or compensation will be allowed because of differences between actual dimensions and the dimensions shown on the

drawings; any difference which may be found shall be called to the attention of the Engineer for consideration before proceeding with the work.

#### **SP-36: PAY ITEMS - INCIDENTAL CONSTRUCTION**

The CONTRACTOR shall be paid only for those items which are listed in the proposal or which are added to the job through a change order. All construction or removal considerations which are not listed as a separate pay item shall be considered as incidental construction. Cost for these items shall be considered in the most appropriate item listed in the schedule(s) of pay items.

#### **SP-37: OMISSIONS**

- (a) In the event that the specifications inadvertently omit some of the usual and customary work, auxiliary equipment or material required for the satisfactory installation and operation of all work, equipment or material, the CONTRACTOR shall provide these items as directed by the Engineer at his/her own expense. The CONTRACTOR will be assumed to be an experienced and qualified CONTRACTOR in this type of work, and to have studied the purpose of operation of the equipment and the results to be obtained, and is to furnish equipment suitable for the work to be done.
- (b) In the event that the specifications inadvertently fail to contain a specification for work to be done and material to be furnished, then the Standard Current Specification or Requirements of the A.W.W.A., A.S.T.M., A.S.C.E., A.S.E.E., A.S.M.E., N.B.F.U., N.E.C., N.E.M.A., O.S.H.A., NCTCOG "Standard Specifications for Public Works Construction" or TxDOT "Standard Specifications for Construction of Highways, Streets and Bridges" shall apply. Should the above specifications not apply, then the work done, equipment or material furnished shall be as directed by the Engineer.

#### **SP-38: MINIMUM WAGE RATES**

For the work required of this project, the CONTRACTOR and all sub-contractors shall pay his/her employees the prevailing wage rates in accordance with the Texas Government Code, Chapter 2258. The prevailing wage rates determined applicable for this project are the current prevailing wage rate schedules of the United States Department of Labor adopted in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a, et. seq.) and its subsequent amendments. These prevailing wage rates can be obtained from the following web page: [www.access.gpo.gov/davisbacon/tx.html](http://www.access.gpo.gov/davisbacon/tx.html) (Tarrant County).

A CONTRACTOR or sub-contractor who does not pay his/her employees in accordance with these prevailing wages shall pay \$ 60.00 for each worker

employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in these prevailing wage rates to the CITY.

**SP-39: LOSSES FROM NATURAL CAUSES**

Unless otherwise specified, all loss or damage to the CONTRACTOR arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the CONTRACTOR at his/her own cost and expense.

**SP-40: EXPLOSIVES, BLASTING, ETC.**

Neither explosives nor blasting shall be allowed or used on this project.

**SP-41: WORK WITH OWN FORCES**

The CONTRACTOR shall perform with his own forces work of a value of not less than fifty percent (50%) of the contract amount.

**SP-42: PROJECT NAME CONSTRUCTION SIGNS**

The CONTRACTOR shall install two (2) Project Name Construction Signs on Harmonson Road. One sign shall be at or near the intersection of Dawn Drive and Harmonson Drive and one sign shall be at or near the intersection of Rufe Snow Drive and Harmonson Road. The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in general accordance with Figure 2M (R 07-01-2009) of the City of North Richland Hills' Public Works Design Manual, but the sign verbiage must be approved by the OWNER prior to fabrication. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be removed within 15 calendar days after the OWNER's acceptance of the project improvements.

Sign Data:

Project Name:

**Harmonson Road Project**

Projected Completion:

*To Be Determined After Contract Award*

**SP-43: WATER FOR CONSTRUCTION**

The CONTRACTOR shall make the necessary arrangements for securing and transporting all water required in the construction, including water required for mixing of concrete, sprinkling, testing, flushing or jetting.

The CONTRACTOR may remit the City a deposit for a fire hydrant water meter; additionally, the CONTRACTOR will be billed for the water used on the construction of this contract and measured by such fire hydrant meter. Additionally, the cost of any temporary pipe line, metering or other equipment which may be necessary to make use of such fire hydrant water meter and water, shall be considered as incidental to the work and payment therefore shall be included in the various bid items of the proposal. If the CONTRACTOR chooses to use such fire hydrant water meter, he/she shall assume full responsibility for it and return it in the same or similar condition as received otherwise the CONTRACTOR will not be returned his/her deposit.

**SP-44: OWNER'S RIGHT TO SUSPEND WORK AND ANNUL CONTRACT**

Delete GP Item 108.9.(2) and replace it with the following:

- (2) failure of the CONTRACTOR to make the progress set out in the Progress Schedule;

**SP-45: OWNERSHIP OF DRAWINGS**

All drawings, specifications and copies thereof furnished by the Engineer shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the OWNER.

**SP-46: ADEQUACY OF DESIGN**

It is understood that the OWNER believes it has employed competent engineers and designers. It is, therefore, agreed that the Engineer shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, the safety of the structure and the practicability of the operations of the completed project; provided the CONTRACTOR has complied with the requirements of the Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the OWNER. The burden of proof of such compliance shall be upon the CONTRACTOR to show that he/she has complied with the requirements of the Contract Documents, approved modifications thereof and all approved additions and alternations thereto.



## **SECTION VI**

# **GEOTECHNICAL REPORT**

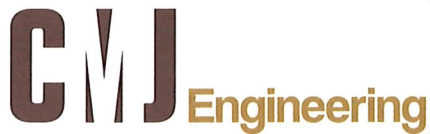
**GEOTECHNICAL ENGINEERING STUDY  
HARMONSON ROAD RECONSTRUCTION  
DAWN DRIVE TO W. OF RUFÉ SNOW DRIVE  
NORTH RICHLAND HILLS, TEXAS**

Presented To:

**Quiddity Engineering, LLC**

July 2024

**PROJECT NO. 3187-24-01 (Revised)**



July 30, 2024  
Report No. 3187-24-01 (Revised)

Quiddity Engineering, LLC  
4500 Mercantile Plaza Drive, Suite 210  
Fort Worth, Texas 76137

Attn: Mr. Steve Templer, Senior Client Manager

**GEOTECHNICAL ENGINEERING STUDY  
HARMONSON ROAD RECONSTRUCTION  
DAWN DRIVE TO W. OF RUFÉ SNOW DRIVE  
NORTH RICHLAND HILLS, TEXAS**

Dear Mr. Templer:

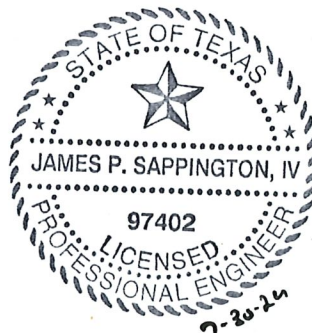
Submitted here are the results of a geotechnical engineering study for the referenced project. This study was performed in general accordance with CMJ Proposal No. 24-9505 dated March 5, 2024. The geotechnical services were authorized via Professional Services Agreement with Quiddity Engineering, LLC dated May 14, 2024.

Engineering analyses and recommendations are contained in the text section of the report. Results of our field and laboratory services are included in the appendix of the report. We would appreciate the opportunity to be considered for providing geotechnical engineering services for any future projects.

We appreciate the opportunity to be of service to Quiddity Engineering, LLC. Please contact us if you have any questions or if we may be of further service at this time.

Respectfully submitted,  
**CMJ ENGINEERING, INC.**  
TEXAS FIRM REGISTRATION NO. F-9177

Daniel R. Green, Ph.D., E.I.T.  
Graduate Engineer  
Texas No. 54428



James P. Sappington IV, P.E.  
President  
Texas No. 97402

copies submitted: (2) Mr. Steve Templer; Quiddity Engineering, LLC (mail & email)

**CMJ Engineering**  
p: 817.284.9400  
f: 817.589.9993

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Fort Worth, TX 76118  
[www.cmjengr.com](http://www.cmjengr.com)



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## **1.0 INTRODUCTION**

### **1.1 General**

The project, as currently planned, consists of reconstructing Harmonson Road from Dawn Drive eastward to the drainage channel culvert located approximately 600 feet west of Rufe Snow Drive in North Richland Hills, Texas. The approximate total project length is 2,100 linear feet. In addition, the existing culvert structure is planned to be replaced. Plate A.1, Plan of Borings, depicts the project vicinity and approximate locations of the exploration borings.

### **1.2 Purpose and Scope**

The purpose of this geotechnical engineering study has been to determine the general subsurface conditions, evaluate the engineering characteristics of the subsurface materials encountered, develop recommendations for the type or types of foundations suitable for the project, provide pavement design guidelines, and earthwork recommendations.

To accomplish its intended purposes, the study has been conducted in the following phases: (1) drilling sample borings to determine the general subsurface conditions and to obtain samples for testing; (2) performing laboratory tests on appropriate samples to determine pertinent engineering properties of the subsurface materials; and (3) performing engineering analyses, using the field and laboratory data, to develop geotechnical recommendations for the proposed construction.

The design is currently in progress and the locations and/or elevations of the structures could change. Once the final design is near completion (80-percent to 90-percent stage), it is recommended that CMJ Engineering, Inc. be retained to review those portions of the construction documents pertaining to the geotechnical recommendations, as a means to determine that our recommendations have been interpreted as intended.

### **1.3 Report Format**

The text of the report is contained in Sections 1 through 9. All plates and large tables are contained in Appendix A. The alpha-numeric plate and table numbers identify the appendix in which they appear. Small tables of less than one page in length may appear in the body of the text and are numbered according to the section in which they occur.

Units used in the report are based on the English system and may include tons per square foot (tsf), kips (1 kip = 1,000 pounds), kips per square foot (ksf), pounds per square foot (psf), pounds per cubic foot (pcf), and pounds per square inch (psi).

## **2.0 FIELD EXPLORATION AND LABORATORY TESTING**

### **2.1 Field Exploration**

Subsurface materials at the project site were explored by seven (7) vertical soil borings. Borings B-5, B-6, and B-6a were drilled to depths of 3 to 20 feet in the area of the proposed culvert replacement. The remaining borings were drilled to depths of 8 to 15 feet along the existing roadway. Borings B-4 and B-6 were terminated at depths of 8 and 3 feet respectively due to possible utility lines. The borings were drilled using truck-mounted drilling equipment at the approximate locations shown on the Plan of Borings, Plate A.1. The boring logs are included on Plates A.4 through A.10 and keys to classifications and symbols used on the log are provided on Plates A.2 and A.3.

Undisturbed samples of cohesive soils were obtained with nominal 3-inch diameter thin-walled (Shelby) tube samplers at the locations shown on the log of boring. The Shelby tube sampler consists of a thin-walled steel tube with a sharp cutting edge connected to a head equipped with a ball valve threaded for rod connection. The tube is pushed into the soil by the hydraulic pulldown of the drilling rig. The soil specimens were extruded from the tube in the field, logged, tested for consistency with a hand penetrometer, sealed, and packaged to limit loss of moisture.

The consistency of cohesive soil samples was evaluated in the field using a calibrated hand penetrometer. In this test a 0.25-inch diameter piston is pushed into the relatively undisturbed sample at a constant rate to a depth of 0.25 inch. The results of these tests, in tsf, are tabulated at respective sample depths on the log. When the capacity of the penetrometer is exceeded, the value is tabulated as 4.5+.

To evaluate the relative density and consistency of the harder formations, a modified version of the Texas Cone Penetration test was performed at selected locations. Texas Department of Transportation (TXDOT) Test Method Tex-132-E specifies driving a 3-inch diameter cone with a 170-pound hammer freely falling 24 inches. This results in 340 foot-pounds of energy for each blow. This method was modified by utilizing a 140-pound hammer freely falling 30 inches. This

results in 350 foot-pounds of energy for each hammer blow. In relatively soft materials, the penetrometer cone is driven 1 foot and the number of blows required for each 6-inch penetration is tabulated at respective test depths, as blows per 6 inches on the log. In hard materials (rock or rock-like), the penetrometer cone is driven with the resulting penetrations, in inches, recorded for the first and second 50 blows, a total of 100 blows. The penetration for the total 100 blows is recorded at the respective testing depths on the boring logs.

Groundwater observations during and after completion of the borings are shown on the upper right of the boring logs. Upon completion of the borings, the bore holes were backfilled with sand and patched at the surface with asphalt or quick-set concrete, as applicable.

## **2.2 Laboratory Testing**

Laboratory soil tests were performed on selected representative samples recovered from the borings. In addition to the classification tests (liquid limits, plastic limits, and percent passing the No. 200 sieve), moisture content, unconfined compressive strength, and unit weight tests were performed. Results of the laboratory classification tests, moisture content, unconfined compressive strength, and unit weight tests conducted for this project are included on the boring logs.

Soluble sulfate testing was accomplished to check for the potential of lime-induced heaving. Plate A.11 presents the soluble sulfate test results.

An Eades and Grim Lime Series test was performed on a selected sample to identify the appropriate concentration of lime to add to soils for stabilization purposes. The results of the lime series test are presented on Plate A.12.

The above laboratory tests were performed in general accordance with applicable ASTM procedures, or generally accepted practice.

## **3.0 SUBSURFACE CONDITIONS**

### **3.1 Soil Conditions**

Specific types and depths of subsurface strata encountered at the boring location are shown on the boring log in Appendix A. The generalized subsurface stratigraphy encountered in the boring are discussed below. Note that depths on the boring refer to the depth from the existing grade or

ground surface present at the time of the investigation, and the boundaries between the various soil types are approximate.

Borings B-1 through B-6a were drilled in the existing street. Pavement encountered consists of 4 to 5 inches of asphalt in Borings B-1 through B-5 and 7½ inches of concrete in Borings B-6 and B-6a. Crushed limestone base material was observed beneath the asphalt paving in Boring B-4 with a thickness of 12 inches. No base material was observed beneath the paving in the remaining borings.

Fill and possible fill materials consisting of dark brown, brown, light brown, reddish brown, and tan clays, sandy clays, silty clays, and sands are present beneath the paving structure in Borings B-1 and B-4 through B-6a, extending to depths of 1 through 8 feet. The fills contain asphalt fragments, gravel, ironstone nodules, and calcareous nodules.

Natural soils encountered consist of dark brown, brown, light brown, and reddish brown clayey sands, sandy clays, silty clays, and clays containing ironstone nodules, calcareous nodules, and occasional gravel. Fractured limestone layers and tan limestone seams and layers are noted within the silty clays in Borings B-1 and B-5 below depths of 10 to 11 feet.

The various clayey soils encountered are generally firm to hard in consistency (soil basis), with pocket penetrometer values of 1.5 to over 4.5 tsf. Lower pocket penetrometer values reflect the presence of more granular sand and gravel materials. The various soils encountered in the borings had tested Liquid Limits (LL) ranging from 33 to 58 with Plasticity Indices (PI) ranging from 14 to 41 and are classified as CL and CH by the USCS. Tested unit weight values were 101 to 116 pcf and unconfined compressive strengths varied from 2,290 to 13,900 psf.

Tan limestone is present in Borings B-3 and B-6a at depths of 5 to 11 feet below existing grade and continues through boring termination at a depth of 15 feet in Boring B-3. The tan limestone contains clay seams and layers and varies from moderately hard to very hard (rock basis) with Texas Cone Penetrometer values of ¾ to 3¼ inches of penetration for 100 hammer blows.

Gray limestone is present in Borings B-5 and B-6a at a depth of 15 feet below existing grade and continues through boring termination at a depth of 20 feet. Shaly limestone seams and shale seams are present within the gray limestone in Boring B-6a. The gray limestone is considered very



hard (rock basis) with Texas Cone Penetrometer values of  $\frac{3}{8}$  to  $\frac{5}{8}$  inch of penetration for 100 hammer blows.

The Atterberg Limits tests indicate the various soils encountered at this site vary from moderately active to highly active with respect to moisture induced volume changes. Active clays can experience volume changes (expansion or contraction) with fluctuations in their moisture content.

### **3.2 Groundwater Observations**

The borings were drilled using continuous flight augers in order to observe groundwater seepage during drilling. Groundwater seepage was encountered at 9 feet during drilling in Boring B-6a. The remaining borings were dry during drilling. All borings were dry at completion of drilling operations.

While it is not possible to accurately predict the magnitude of subsurface water fluctuation that might occur based upon these short-term observations, it should be recognized that groundwater conditions will vary with fluctuations in rainfall.

Fluctuations of the groundwater level can occur due to seasonal variations in the amount of rainfall; site topography and runoff; hydraulic conductivity of soil strata; and other factors not evident at the time the boring was performed. During wet periods of the year, seepage can occur in joints in the clays, via more permeable strata, or atop/within the tan limestones. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

## **4.0 CULVERT FOUNDATION RECOMMENDATIONS**

### **4.1 General Foundation Considerations**

Two independent design criteria must be satisfied in the selection of the type of foundation to support the proposed culvert structure. First, the ultimate bearing capacity, reduced by a sufficient factor of safety, must not be exceeded by the bearing pressure transferred to the foundation soils. Second, due to consolidation or expansion of the underlying soils during the operating life of the structure, total and differential vertical movements must be within tolerable limits.

## **4.2 Foundations**

Proper identification of the bearing material by qualified geotechnical personnel during construction is paramount; therefore, the foundation bearing depth may be deeper, depending on materials encountered. Based on the logs and field observations, the majority of the excavation will be through clays and silty clays (Borings B-5 through B-6a locations). If groundwater is encountered care should be taken to dewater these areas and cause as minimal disturbance as possible.

If disturbance occurs due to the soft soil and/or groundwater conditions, the box culvert should be founded upon a minimum 1-foot crushed stone pad with a geotextile “separator” fabric below the stone pad. Otherwise, with minimal disturbance, the box culvert may rest atop clay soils.

Mat type foundations should be a minimum of 2 feet in least dimension, but must be widened as required, based on allowable bearing capacity given below. Mat type foundations should be founded within the stiff to hard clays or silty clays. The mat may be designed for a net allowable bearing capacity of 2,000 psf. This bearing value assumes that the excavation base is dry and little to no disturbance of the soils is allowed. The allowable foundation pressure given above is for the maximum pressure induced by the foundation loads, and not the average pressure under the foundation base.

Soils existing in a soft or loose state should be evaluated on a case-by-case basis. Close inspection of soils strength should be conducted by a geotechnical engineer to allow designation and removal of soft soils not meeting the bearing capacity stated above. It should be noted that box culvert foundation is typically subjected to non-uniform pressure across the foundation, and possibly negative pressure (separation of foundation from soil) under a portion of the foundation, due to the overturning moment induced by the lateral earth pressures. The allowable foundation pressures given above are for the maximum pressure induced by the foundation loads, and not the average pressure under the foundation base.

The horizontal base of the mat foundation will develop resistance to sliding by means of a combination of friction and adhesion (for cohesive foundation materials). Given the nature of the foundation materials, an adhesion of 400 psf may be used for earth formed footings. An ultimate friction factor of 0.3 may be used to calculate sliding resistance of the footings bearing on stiff to hard clayey soils.

Foundations designed in accordance with these recommendations will have a minimum factor of safety of 3 with respect to a bearing capacity failure and should experience a total settlement of 1 inch or less and a differential settlement of ½ inch or less, after construction, providing all fill has been properly placed and compacted as described in the Earthwork section.

In addition, where proposed pavement extends beyond the edge of the proposed culvert (approaches), the potential exists for differential movement at this interface. The culvert excavation backfill below and three feet beyond the approaches should consist of either flowable fill or properly compacted flexible base in order to reduce backfill settlement and the potential for differential movement/distress.

#### **4.3 Mat Type Foundation Construction**

Mat type foundation construction should be monitored by a representative of the geotechnical engineer to observe, among other things, the following items:

- Identification of bearing material
- Adequate penetration of the foundation excavation into the bearing layer
- The base and sides of the excavation are clean of loose cuttings
- When seepage is encountered, whether it is of sufficient amount to require the use of excavation dewatering methods

The footing excavations should be neat vertical cuts and maintained throughout construction. Precautions should be taken during the placement of reinforcing steel and concrete to prevent loose, excavated soil from falling into the excavation. Concrete should be placed as soon as practical after completion of the excavating, cleaning, reinforcing steel placement and observation. Excavation for a mat type foundation should be filled with concrete before the end of the workday, or sooner if required, to prevent deterioration of the bearing material. Prolonged exposure or inundation of the bearing surface with water will result in change in strength and compressibility characteristics. If delays occur, the excavation should be deepened as necessary and cleaned, in order to provide a fresh bearing surface. If more than 24 hours of exposure of the bearing surface is anticipated in the excavations, a “mud slab” should be used to protect the bearing surfaces. If a mud slab is used, the foundation excavations should initially be over-excavated by approximately 4 inches and a lean concrete mud slab of approximately 4 inches in thickness should be placed in the bottom of the excavations immediately following exposure of the bearing surface by excavation. The mud slab will protect the bearing surface, maintain more uniform moisture in the

subgrade, facilitate dewatering of excavations if required, and provide a working surface for the placement of formwork and reinforcing steel.

The concrete should be placed in a manner that will prevent the concrete from striking the reinforcing steel or the sides of the excavation in a manner that would cause segregation of the concrete.

#### **4.4 Lateral Earth Pressures**

##### **4.4.1 General**

The below grade walls, culvert walls, or wingwalls must be designed for lateral pressures including, but not necessarily limited to, earth, water, surcharge, swelling, and vibration. In addition, the lateral pressures will be influenced by whether the backfill is drained or undrained, and above or below the groundwater table.

##### **4.4.2 Equivalent Fluid Pressures**

Lateral earth pressures on retaining walls will depend on a variety of factors, including the type of soils behind the wall, the condition of the soils, and the drainage conditions behind the wall. Recommended lateral earth pressures expressed as equivalent fluid pressures, per foot of wall height, are presented in Table 4.4.2-1 for a wall with a level backfill behind the top of the wall. The equivalent fluid pressure for an undrained condition should be used if a drainage system is not present to remove water trapped in the backfill and behind the wall. Pressures are provided for the at-rest condition for a rigid-walled box culvert.

<b>TABLE 4.4.2-1 – Equivalent Fluid Pressures</b>		
<b>Backfill Material</b>	<b>At-Rest Equivalent Fluid Pressure (pcf)</b>	
	<b>Drained</b>	<b>Undrained</b>
Excavated on-site soils or clay fill material	100	110
Select fill / flowable fill / on-site soils meeting material specifications	65	95
Free draining granular backfill material	50	90

For the select fill, flowable fill, or free draining granular backfill these values assume that a “full” wedge of the material is present behind the wall. The wedge is defined where the wall backfill limits extend outward at least 2 feet from the base of the wall and then upward on a 1H:2V slope. For narrower backfill widths of granular or select fill soils, the equivalent fluid pressures for the on-site soils should be used.

#### **4.4.3 Additional Lateral Pressures**

The location and magnitude of permanent surcharge loads (if present) should be determined, and the additional pressure generated by these loads such as the weight of construction equipment and vehicular loads that are used at the time the structure is being built must also be considered in the design. The effect of this or any other surcharge loading may be accounted for by adding an additional uniform load to the full depth of the side walls equivalent to one-half of the expected vertical surcharge intensity for select backfill materials, or equal to the full vertical surcharge intensity for clay backfill. The equivalent fluid pressures, given here, do not include a safety factor. Analysis of surcharge loads (if any) should be performed on a case-by-case basis. This is not included in the scope of this study. These services can be provided as additional services upon request.

#### **4.5 Wall Backfill Material Requirements**

On-Site Clay Backfill: For wall backfill areas with site-excavated materials or similar imported materials, all oversized fragments larger than four inches in maximum dimension should be removed from the backfill materials prior to placement. The backfill should be free of all organic and deleterious materials, and should be placed in maximum 8-inch compacted lifts at a minimum of 95 percent of Standard Proctor density (ASTM D698) within a moisture range of plus to minus 3 percentage points of optimum moisture. Compaction within five feet of the walls should be accomplished using hand compaction equipment, and should be between 90 and 95 percent of the Standard Proctor density.

Select Fill Backfill: All wall select backfill should consist of clayey sand and/or sandy clay material with a Plasticity Index between 4 and 16, with a Liquid Limit not exceeding 35. The select fill should be placed in maximum 8-inch lifts and compacted to between 95 and 100 percent of Standard Proctor density (ASTM D698) within a moisture range of plus to minus 3 percentage points of the optimum moisture. Compaction within five feet of the walls should be accomplished

using hand compaction equipment and should be compacted between 90 and 95 percent of the Standard Proctor density.

Flowable Backfill: Item 401, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition.

Free Draining Granular Backfill: All free draining granular wall backfill material should be a crushed stone, sand/gravel mixture, or sand/crushed stone mixture. The material should have less than 3 percent passing the No. 200 sieve and less than 30 percent passing the No. 40 sieve. The minus No. 40 sieve material should be non-plastic. Granular wall backfill should not be water jetted during installation.

#### **4.6 Drainage Requirements**

In order to achieve the “drained” condition for low-permeability walls (concrete, masonry, etc.), a vertical drainage blanket or geocomposite drainage member must be installed adjacent to the wall on the backfill side. The drainage must be connected to an outlet drain at the base of the wall. Drainage could be provided using a collector pipe or weep holes near the base of the wall. Drains should be properly filtered to minimize the potential for erosion through these drains, and/or the plugging of drain lines. Design or specific recommendations for drainage members is beyond the scope for this study. These services can be provided as an additional service upon request.

## **5.0 PAVEMENTS**

### **5.1 Pavement Subgrade Considerations**

The performance of the pavement for this project depends upon several factors including: the characteristics of the supporting soil; the magnitude and frequency of wheel load applications; the quality of construction materials; the contractor's placement and workmanship abilities; and the desired period of design life. The success of the pavement subgrade is subgrade soil strength and control of water. Adequate subgrade performance can be achieved by modifying or stabilizing the existing soils used to construct the pavement subgrade.

Pavement sections are susceptible to edge distress as edge support deteriorates over time. Therefore, care must be taken to provide and maintain proper edge support. In conjunction with a stabilized subgrade underlying the pavement, it is recommended that the stabilized subgrade

extend a minimum of 12 inches beyond the riding surface on each side of the proposed pavement. Maintenance should be provided when edge support deteriorates.

The typical subgrade soils encountered in the borings are moderately plastic to highly plastic silty clays and clays. These moderate to high plasticity silty clays and clays, with a PI of 20 or greater, are subject to loss in support value with the moisture increases which occur beneath pavement sections. They react with hydrated lime, which serves to improve and maintain their support value. Treatment of these soils with hydrated lime will improve their subgrade characteristics to support area paving.

Adequate subgrade performance can be achieved by stabilizing existing soils or placing a flexible base below the pavement surfacing. The flexible base option is accomplished by compacting the existing soils in accordance with report Section 7.2 and placing compacted flexible base. The option of using a flexible base in lieu of lime stabilizing the subgrade presents a relatively quick, straight forward solution to preparing the materials prior to pavement placement and relieves soluble sulfate heave concerns as discussed below.

## **5.2 Potential Vertical Movements**

On-site soils are subject to expansive movement with wetting and drying. Estimates of expansive movement potential have been estimated using TxDOT Test Method Tex 124-E. Potential vertical movements on the order of 1¾ to 3½ inches are estimated. Movements in excess of the estimated value can occur if poor drainage, excessive water collection, leaking pipelines, etc. occur. Any such excessive water conditions should be rectified as soon as possible. In order to minimize rainwater infiltration through the pavement surface, and thereby minimizing future upward movement of the pavement slabs, all cracks and joints in the pavement should be sealed on a routine basis after construction.

## **5.3 Lime-Induced Heaving**

Soluble sulfate testing was conducted to check for lime-induced heaving potential. Lime-induced heaving is caused when calcium-based stabilizer is added to a soil with high sulfate concentration. The lime reacts with the sulfates to cause potentially large volumetric changes in the soil.

Soluble sulfate levels in soils on the order of 2,000 parts-per-million (ppm) or less are usually of low concern and warrant only observation of the subgrade during the stabilization process. Soluble sulfate levels on the order of 2,000 to 6,000 ppm usually warrant a double lime process, with the first treatment of lime consisting of ½ the recommended concentration and a second lime treatment consisting of the full recommended concentration. Sulfate levels on the order of 6,000+ ppm may require a double-lime process, with the two full concentration lime treatments.

Recovered samples were tested for soluble sulfate levels and these results are presented on Plate A.11. Tested soluble sulfate levels were less than 100 ppm. Since the samples tested were below 2,000 ppm, a single treatment process is recommended at this time. Additional subgrade soil testing is recommended during construction to check for any soluble sulfate levels in excess of 2,000 ppm. The single treatment is described in Section 5.4. In addition, it is recommended that during the curing period of the lime treatment, the subgrade be supplied with ample moisture to allow proper hydration, and it should be checked for any volumetric changes that may indicate a sulfate-induced heaving condition.

## **5.4 Pavement Subgrade Preparation**

### **5.4.1 Lime Stabilization**

Finished grades near the presently existing grade will generally consist of moderately to highly plastic silty clays and clays. These moderately to highly plastic silty clays and clays, those with a PI of 20 or more, are subject to loss in support value with the moisture increases which occur beneath pavement sections. They react with hydrated lime, which serves to improve and maintain their support value. Treatment of these soils with hydrated lime will improve their subgrade characteristics to support paving. Lime treatment is recommended for all subgrade areas.

Prior to lime stabilization, the subgrade should be proofrolled with heavy pneumatic equipment weighing a minimum 25 tons, with particular attention given to areas of existing fill. Any soft or pumping areas should be undercut to a firm subgrade and properly backfilled as described in the Earthwork section.

In lieu of a lime stabilized subgrade for this project, a flexible base meeting TxDOT Item 247, Type A, Grade 1/2 may be utilized on an equal basis as previously discussed. The option of using a flexible base in lieu of lime stabilizing the subgrade presents a relatively quick, straight forward solution to preparing the materials prior to pavement placement.



The stabilized subgrade should be scarified to a minimum depth of 6 (or 8) inches and uniformly compacted to a minimum of 95 percent of ASTM D698, to minus 2 to plus 4 percentage points of the optimum moisture content determined by that test. It should then be protected and maintained in a moist condition until the pavement is placed.

We recommend a minimum of 7 percent hydrated lime be used to modify the clay subgrade soils. The estimated amount of hydrated lime required to stabilize the subgrade should be on the order of 32 pounds per square yard for a 6-inch depth or 42 pounds per square yard for an 8-inch depth, based on a soil dry unit weight of 100 pcf. The hydrated lime should be thoroughly mixed and blended with the upper 6 or 8 inches of the clay subgrade, (TxDOT Item 260). The hydrated lime should meet the requirements of Item 260 (Type A) in the Texas Department of Transportation (TxDOT) Standard Specifications for Construction of Highways, Streets and Bridges, 2014 Edition. The presence of calcareous nodules, ironstone nodules, gravel, and asphalt fragments in the surficial soils can complicate mixing of the soil and lime.

It is recommended that subgrade stabilization extend to at least one foot beyond pavement edge to aid in reducing pavement movements and cracking along the curb line due to seasonal moisture variations after construction. Each construction area should be shaped to allow drainage of surface water during earthwork operations, and surface water should be pumped immediately from each construction area after each rain and a firm subgrade condition maintained. Water should not be allowed to pond in order to prevent percolation and subgrade softening, and lime should be added to the subgrade after removal of all surface vegetation and debris. Sand should be specifically prohibited beneath pavement areas, since these more porous soils can allow water inflow, resulting in heave and strength loss of subgrade soils (lime-stabilized soil will be allowed for fine grading). After fine grading each area in preparation for paving, the subgrade surface should be lightly moistened, as needed, and recompacted to obtain a tight non-yielding subgrade.

## **5.5 Pavement Sections**

At the time of this investigation, site paving plans or vehicle traffic studies were not available. Pavement analyses were performed using methods outlined in the AASHTO Guide for Design of Pavement Structures, 1993 Edition, published by the American Association of State Highway and Transportation Officials. The design equations were solved using AASHTO Pavement Analysis Software. In the AASHTO method, traffic loads are expressed in Equivalent 18-kip Single Axle Loads (ESAL) over the design life of the pavement structure.

Both asphalt concrete and Portland cement concrete (PCC) sections are provided in the sections below, but these pavement types are not considered equal in performance. Over the life of the pavement, PCC sections would be expected to require less maintenance.

It is understood Harmonson Road is classified as a *Residential Street* facility. Based on the results of the field and laboratory investigation, soil plasticity properties, and our experience with similar projects, the following design parameters were used in our thickness design calculations for the roadway reconstruction. If the street classification or actual values are different than assumed, our office should be contacted to review the recommended sections.

Subgrade Soils .....	Clay
Design Life .....	20 and 30 years
Initial Serviceability .....	4.5 (rigid), 4.2 (flexible)
Terminal Serviceability .....	2.5
Reliability .....	90%
Overall Deviation .....	0.39 (rigid) 0.45 (flexible)
Load Transfer Coefficient .....	3.0 (w/ curb and gutter)
Drainage Coefficient .....	1.0
Assumed CBR value of subgrade soil:.....	3
Assumed CBR value for lime treated soil: .....	15
Loss of Support Value: .....	0
Concrete Modulus of Elasticity .....	4,000,000 psi
Concrete Modulus of Rupture .....	600 psi

The following pavement sections are provided for the Residential Street classification with associated allowable truck traffic. The traffic loadings are based on the daily frequency of fully-loaded, 80-kip, five-axle tractor semi-trailers over a 20- and 30-year service period. Tractor semi-trailers were assumed for calculations as 2.4 ESAL's each. These sections are suitable for the previously mentioned assumptions. Any deviation from these assumptions should be brought to our attention immediately in order to assess their impact on our recommendations.

Rigid Pavement Section		Design ESAL	Allowable Daily Truck Repetitions (20-year life)	Allowable Daily Truck Repetitions (30-year life)
Thickness (in.)	Material			
6*	PCC	523,300	29	19
6*	Lime Stabilized Subgrade or Flexible Base			

\* City of North Richland Hills minimum pavement section for residential facility

Flexible Pavement Sections		Design ESAL	Allowable Daily Truck Repetitions (20-yr life)	Allowable Daily Truck Repetitions (30-yr life)
Thickness (in.)	Material			
2*	HMAC Type D	980,400	55	37
7*	HMAC Type B			
8*	Lime Stabilized Subgrade or Flexible Base			

\* City of North Richland Hills minimum pavement section for residential facility

Proper surface drainage in the shoulders is also critical to long-term performance of the pavement. Water allowed to pond adjacent to the pavement will be detrimental resulting in loss of edge and subgrade support and an increase in post-construction heave of the pavement.

The above sections should be considered minimum pavement thicknesses and higher traffic volumes and heavy trucks may require thicker pavement sections and configurations. Periodic maintenance should be anticipated for minimum pavement thickness. This maintenance should consist of sealing cracks and timely repair of isolated distressed areas.

## 5.6 Pavement Material Requirements

Material and process specifications developed by the Texas Department of Transportation (TxDOT) have been utilized. These specifications are outlined in the TxDOT Standard Specifications for Construction of Highways, Streets and Bridges, 2014 Edition. Specific construction recommendations for rigid pavements are given below.

Reinforced Portland Cement Concrete: Reinforced Portland cement concrete pavement should consist of Portland cement concrete having a 28-day compressive strength of at least 3,600 psi in accordance with the City of North Richland Hills standard details. The mix should be designed in accordance with the ACI Code 318 using 3 to 6 percent air entrainment. The pavement should be adequately reinforced with temperature steel and all construction joints or expansion/contraction joints should be provided with load transfer dowels. The spacing of the joints will depend primarily on the type of steel used in the pavement. We recommend using No. 3 steel rebar spaced at 18 inches on center in both the longitudinal and transverse direction for Residential Street facilities in accordance with City Standard details. Control joints formed by sawing are recommended every

12 to 15 feet in both the longitudinal and transverse direction. The cutting of the joints should be performed as soon as the concrete has “set-up” enough to allow for sawing operations.

Hot Mix Asphaltic Concrete Surface Course: Item 340, Type D, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition.

Hot Mix Asphaltic Concrete Base Course: Item 340, Type B, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition.

Lime Stabilized Subgrade: Lime treatment for base course (road mix) - Item 260, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition.

Flexible Base: Crushed Stone Flexible Base – Item 247, Type A, Grade 1/2, Texas Department of Transportation Standard Specifications for Construction of Maintenance of Highways, Streets, and Bridges, 2014 Edition.

## **5.7 General Pavement Construction and Considerations**

The design of the pavement drainage and grading should consider the potential for differential ground movement due to future soil swelling on the order of 1¾ to 3½ inches. In order to minimize rainwater infiltration through the pavement surface, and thereby minimizing future upward movement of the pavement slabs, all cracks and joints in the pavement should be sealed on a routine basis after construction.

Where mature trees and water-intensive shrubs exist adjacent to the roadway, consideration may be given to installation of a vertical moisture barrier along the curb line in order to reduce the potential for moisture-induced volume change of the subgrade soils and restrict root systems from penetrating below the pavement. Such barriers can be accomplished by excavating narrow trench lines adjacent to the curb to depths on the order of 3 to 4 feet and filling this zone with lean concrete or flowable fill. This zone also can be filled with a geomembrane and proper backfilling using flowable fill or comparable material.

Proper surface drainage in the shoulders is also critical to long-term performance of the pavement. Water allowed to pond adjacent to the pavement will result in loss of edge and subgrade support and an increase in post-construction heave of the pavement.

## **6.0 UTILITY EXCAVATIONS**

### **6.1 Expected Subsurface Conditions**

Conventional earth moving equipment is expected to be suitable for excavating the various overburden clayey soils and fills encountered in the borings. Heavy duty excavation equipment will be necessary within the limestones below depths of 5 to 15 feet as encountered in Borings B-3, B-5, and B-6a, depending on rock hardness.

Where more granular materials or existing fills are present, caving may occur due to the low-plasticity nature of these materials or the possibility of undercompacted zones or voids. Notably the fill in Boring B-2 and B-5 consists of more granular materials above a depth of 1 foot and from 3 to 4 feet respectively, with a pocket penetrometer reading of 1.0 tsf. In addition, light brown and tan sand is present in Borings B-4 and B-6 below depths of 2 to 5 feet.

The limestones vary from moderately hard to very hard (rock basis) and will present difficulty with rippability using normal excavation equipment. Special techniques for ripping/rock removal can be expected through the limestones. In addition, overexcavation should be anticipated within the limestones. Overexcavation may result from large blocks or chunks breaking along clay seams or layers, or shale seams, or shaly limestone seams beyond the planned excavation.

### **6.2 Open Cut**

The trench excavations should be performed in accordance with OSHA Safety and Health Standards (29 CFR 1926/1919), Subpart P. For excavations less than 5 feet deep through the various clays, it is expected that near vertical excavation walls will be possible. However, in the case that excavations occur through soft clays, granular soils, non-compacted fill, or submerged soils, it will be necessary to either slope the excavation sidewalls or provide temporary bracing to control excavation wall instability. In addition, for excavations deeper than 5 feet, the excavation sidewalls must be sloped or temporary bracing must be provided, regardless of the soil conditions encountered.

### 6.3 Trench Dewatering

Groundwater seepage was encountered in Boring B-6a at a depth of 9 feet. As discussed in Section 3.2, Groundwater Observations, groundwater conditions can vary with seasonal fluctuations in rainfall. In the case that groundwater is encountered, controlling the groundwater is essential to construction of the various utility lines. Failure to control any encountered groundwater could result in trench wall collapse, trench bottom heave, an unstable trench bottom and detrimental pipeline settlement and pipe deflections after backfilling. Groundwater levels should be maintained at two feet below the base of the excavation for the full term of construction. Protection of the open excavations should be provided during periods of moderate to heavy rainfall, as surface water will most likely channel and collect in the excavations. The water level should be lowered prior to excavating and should be maintained at this lowered level until the pipe trench is backfilled. It is likely that seepage may be controlled by means of collection ditches, sumps, and pumping. However, in the event that water infiltration rates are high, it may be necessary to install a more elaborate dewatering system. The design of any dewatering system required is the contractor's responsibility.

### 6.4 Soft Trench Bottom Conditions

Soft or loose trench bottom conditions are unlikely where the trench bottom is situated in firm to hard (soil basis) natural clay soils or limestones; however, such conditions may exist in areas of existing fills or more granular materials as encountered in select borings. Control of groundwater as discussed above is the key to avoiding an unstable trench bottom in soils which are more granular, as well as cohesive soils. Unstable trench bottoms are considered to be unsuitable for support of the proposed utilities. Soft clays or loose sands could also occur where groundwater is present. In any areas where unsuitable clay or loose sand bearing materials are encountered at the planned invert elevation, the trench bottom can be prepared using the following method:

- Under-cut to a suitable bearing subgrade and replace with a structural compacted fill. The over-excavation should extend laterally a distance of at least 1 foot beyond the edges of the pipe, and then at least 1 foot laterally for every 1.5 feet of fill required beneath the pipe. The over-excavation backfill should be completely surrounded with a geotextile consisting of Mirafi 140N, Amoco ProPex 4545, or equivalent. The backfill should consist of a free draining aggregate (i.e., sands, gravels, crushed limestone, or crushed concrete) approved by the geotechnical engineer. The backfill should be placed in maximum 9-inch loose lifts and uniformly compacted to a minimum relative density of 65 percent as determined by test methods ASTM D 4253 and D 4254.

## **6.5 Excavation Considerations**

If open trench cuts are performed within 1.25 times the trench depth of any surface structure, trench shoring (not trench boxes) should be used within open trench cuts performed within this distance. Hydraulic shoring struts should be used and installed during excavation as needed to provide full lateral support to vertical trench sidewalls, and thereby help reduce lateral ground movements near existing structures. A pre-construction condition survey should be performed prior to beginning excavation near any structure that could be affected by the trench excavation to verify existing conditions (existing distress) prior to construction. Construction monitoring should be performed to verify that existing structures are not impacted or damaged by construction operations.

Any pavement structure (concrete, asphalt, base course material or stabilized subgrade) should extend a minimum of 12 inches beyond the edge of any excavation trench. This additional width of pavement structure greatly reduces the potential for reflective cracking upwards into the pavement. In addition, proper backfilling of the soils will result in no undue settlement of backfill material and resulting differential movement between the natural soils and backfill trench. If a high class bedding material or backfill material is desired, a lean concrete or flowable (CLSM) concrete will limit water intrusion into the trench and will not require compaction after placement.

## **6.6 Pipe Installation Bedding**

To assure adequate base support for the pipe, it is recommended that bedding/embedment material be placed around the pipe, 6 inches below the pipe, and 12 inches above the pipe. If concern exists of native backfill above the embedment migrating into the more coarse embedment (and causing backfill settlement), a filter cloth is recommended at the embedment/native soil interface. The filter cloth should cover the entire interface and up through the sidewall a minimum of 1 foot. The filter cloth should be TenCate Geosynthetics Mirafi 140N or equivalent.

Bedding material may consist of gravel/stone from 1" to No. 10 sieve size. Gravel should be consolidated upon placement by rodding or pneumatic vibration methods. Such methods should not cause harm or distress to the pipe. Controlled low-strength material (CLSM) may also be utilized as pipeline embedment as desired. The CLSM should meet the requirements of Item 401, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, 2014 Edition, and consist of an "Excavatable" mix per Table 2 of

the same specification, with a maximum 28-day compressive strength ranging between 80 and 200 psi.

## **6.7 Trench Backfill**

Site excavated materials are generally considered suitable for use as backfill above the pipe bedding materials. All trench backfill should be free of deleterious materials. Use of rock fragments greater than 4 inches in any dimension should be prohibited, since attaining a uniform moisture and density without voids would be difficult. Backfill should be compacted in maximum 8-inch loose lifts at a minimum of 95 percent of the Standard Proctor density (ASTM D698). The uncompacted lift thickness should be reduced to 4 inches for structure backfill zones requiring hand-operated power compactors or small self-propelled compactors.

Care should be taken not to use loose granular material, to prevent the backfilled trench from becoming a french drain and piping surface or subsurface water beneath structures, pipelines, or pavements. If a higher class bedding material or backfill material is desired, a lean concrete or flowable (CLSM) concrete will limit water intrusion into the trench and will not require compaction after placement.

Clay soils having a Plasticity Index greater than 20 should be compacted at a moisture content ranging from 0 to plus 4 percentage points above the optimum moisture content. Granular soils having a PI less than 20 should be compacted at a moisture content ranging from minus 3 to plus 3 percentage points of the optimum moisture content. Jetting to compact the pipe backfill should not be allowed. In areas where settlement of the backfill must be closely controlled, the trench excavation should be backfilled with either cement stabilized sand or flowable concrete having a 28-day compressive strength ranging between 50 and 200 psi.

## **6.8 Trench Backfill Settlement**

Settlement of the backfill soils should be anticipated. It is anticipated that properly compacted on-site clay fill soils will settle between about 1 and 2 percent of the fill thickness. For example, 10 feet of fill would be expected to settle on the order of 1.2 to 2.4 inches.

The trench backfill could be over-built in order to reduce the potential for a surface depression along the trench centerline. We recommend the backfill be crowned. The centerline of the



excavation should be over-built by one foot and sloped down to match grade at the edge of the excavation, as possible where site conditions allow.

## **6.9 Provisions to Reduce Backfill Settlement**

Field testing will be a critical element in controlling the compaction of the backfill to limit settlement. All trench backfilling in these critical areas shall include full-time observation of soil compaction by an experienced geotechnician under the supervision of the geotechnical engineer. The contractor should provide protection for the testing/inspection personnel while working in the trenches and shall move the protective shield/shoring such that areas to be tested are readily accessible. The compacted moisture/density of all backfill soils should be tested at a rate of one test per 250 linear feet of trench, for each lift of fill placed, during compaction. Digging through existing lifts of backfill to access and test underlying lifts should not be allowed.

In addition, to limit settlement, where crushed stone materials are used as pipe bedding materials, they should be wrapped with a suitable geotextile to limit the intrusion of fines into the crushed stone material, as previously discussed.

## **7.0 EARTHWORK**

### **7.1 Site Preparation**

The subgrade should be firm and able to support the construction equipment without displacement. Soft or yielding subgrade should be corrected and made stable before construction proceeds. The subgrade should be proof rolled to detect soft spots, which if exist, should be reworked to provide a firm and otherwise suitable subgrade. Proof rolling should be performed using a heavy pneumatic tired roller, loaded dump truck, or similar piece of equipment with a minimum weight of 25 tons. The proof rolling operations should be observed by the project geotechnical engineer or his/her representative. Prior to fill placement, the subgrade should be scarified to a minimum depth of 8 inches, its moisture content adjusted, and recompact to the moisture and density recommended for fill.

It is noted that some of the surficial soils consisted of more granular sandy clays and clayey sands. This type of material is difficult to compact, and can be difficult from a trafficability standpoint, particularly when wet. It may be desirable to blend them with more clayey soils during site grading

in building or pavement areas, mix with low percentages of Portland cement, or in some cases to remove them entirely.

## **7.2 Placement and Compaction**

Fill material should be placed in loose lifts not exceeding 8 inches in uncompacted thickness. The uncompacted lift thickness should be reduced to 4 inches for structure backfill zones requiring hand-operated power compactors or small self-propelled compactors. The fill material should be uniform with respect to material type and moisture content. Clods and chunks of material should be broken down and the fill material mixed by disking, blading, or plowing, as necessary, so that a material of uniform moisture and density is obtained for each lift. Water required for sprinkling to bring the fill material to the proper moisture content should be applied evenly through each layer.

The on-site soils are suitable for use in site grading. Imported fill material should be a clean soil with a Liquid Limit less than 60 and no rock greater than 4 inches in maximum dimension. The fill materials should be free of vegetation and debris.

General fill material should be compacted to a minimum of 95 percent of the maximum dry density determined by the Standard Proctor test, ASTM D698. In conjunction with the compacting operation, the fill material should be brought to the proper moisture content. The moisture content for general earth fill should range from 2 percentage points below optimum to 5 percentage points above optimum (-2 to +5). These ranges of moisture contents are given as maximum recommended ranges. For some soils and under some conditions, the contractor may have to maintain a more narrow range of moisture content (within the recommended range) in order to consistently achieve the recommended density.

Field density tests should be taken as each lift of fill material is placed. As a guide, one field density test per lift for each 5,000 square feet of compacted area is recommended. For small areas or critical areas the frequency of testing may need to be increased to one test per 2,500 square feet. For roadways, a minimum of 1 test per 100 linear feet is recommended. A minimum of 2 tests per lift should be required. The earthwork operations should be observed and tested on a continuing basis by an experienced geotechnician working in conjunction with the project geotechnical engineer.

Each lift should be compacted, tested, and approved before another lift is added. The purpose of the field density tests is to provide some indication that uniform and adequate compaction is being obtained. The actual quality of the fill, as compacted, should be the responsibility of the contractor and satisfactory results from the tests should not be considered as a guarantee of the quality of the contractor's filling operations.

### **7.3 Acceptance of Imported Fill**

Any soil imported from off-site sources should be tested for compliance with the recommendations for the particular application and approved by the project geotechnical engineer prior to the materials being used. The owner should also require the contractor to obtain a written, notarized certification from the landowner of each proposed off-site soil borrow source stating that to the best of the landowner's knowledge and belief there has never been contamination of the borrow source site with hazardous or toxic materials. The certification should be furnished to the owner prior to proceeding to furnish soils to the site. Soil materials derived from the excavation of underground petroleum storage tanks should not be used as fill on this project.

### **7.4 Excavation**

The side slopes of excavations through the overburden soils should be made in such a manner to provide for their stability during construction. Existing structures, pipelines or other facilities, which are constructed prior to or during the currently proposed construction and which require excavation, should be protected from loss of end bearing or lateral support.

Temporary construction slopes and/or permanent embankment slopes should be protected from surface runoff water. Site grading should be designed to allow drainage at planned areas where erosion protection is provided, instead of allowing surface water to flow down unprotected slopes.

Trench safety recommendations are beyond the scope of this report. The contractor must comply with all applicable safety regulations concerning trench safety and excavations including, but not limited to, OSHA regulations.

### **7.5 Soil Corrosion Potential**

Specific testing for soil corrosion potential was not included in the scope of this study. However, based upon past experience on other projects in the vicinity, the soils at this site may be corrosive.

Standard construction practices for protecting metal pipe and similar facilities in contact with these soils should be used.

## **7.6 Erosion and Sediment Control**

All disturbed areas should be protected from erosion and sedimentation during construction, and all permanent slopes and other areas subject to erosion or sedimentation should be provided with permanent erosion and sediment control facilities. All applicable ordinances and codes regarding erosion and sediment control should be followed.

## **8.0 CONSTRUCTION OBSERVATIONS**

In any geotechnical investigation, the design recommendations are based on a limited amount of information about the subsurface conditions. In the analysis, the geotechnical engineer must assume the subsurface conditions are similar to the conditions encountered in the boring. However, quite often during construction anomalies in the subsurface conditions are revealed. Should such anomalies be discovered Quiddity Engineering, LLC should immediately notify CMJ Engineering, Inc. before proceeding further with construction to allow CMJ Engineering, Inc. to reconsider its recommendations as necessary. It is also recommended that Quiddity Engineering, LLC retain CMJ Engineering, Inc. to observe earthwork and foundation installation and perform materials evaluation during the construction phase of the project. This enables the geotechnical engineer to stay abreast of the project and to be readily available to evaluate unanticipated conditions, to conduct additional tests if required and, when necessary, to recommend alternative solutions to unanticipated conditions. Until these construction phase services are performed by the project geotechnical engineer, the recommendations contained in this report on such items as final foundation bearing elevations, proper soil moisture condition, and other such subsurface related recommendations shall only be considered as preliminary, and not final, recommendations.

It is proposed that construction phase observation and materials testing commence by the project geotechnical engineer at the outset of the project. Experience has shown that the most suitable method for procuring these services is for the owner or the owner's design engineers to contract directly with the project geotechnical engineer. This results in a clear, direct line of communication between the owner and the owner's design engineers and the geotechnical engineer.

## **9.0 REPORT CLOSURE**

The boring locations for this study were selected by CMJ Engineering, Inc. The locations and elevations of the borings should be considered accurate only to the degree implied by the methods used in their determination. The boring logs shown in this report contain information related to the types of soil encountered at specific locations and times and show lines delineating the interface between these materials. The logs also contain our field representative's interpretation of conditions that are believed to exist in those depth intervals between the actual samples taken. Therefore, the boring logs contain both factual and interpretive information. Laboratory soil classification tests were also performed on samples from selected depths in the borings. The results of these tests, along with visual-manual procedures were used to generally classify each stratum. Therefore, it should be understood that the classification data on the logs of borings represent visual estimates of classifications for those portions of each stratum on which the full range of laboratory soil classification tests were not performed. It is not implied that the logs are representative of subsurface conditions at other locations and times.

With regard to groundwater conditions, this report presents data on groundwater levels as they were observed during the course of the field work. In particular, water level readings have been made in the borings at the times and under conditions stated in the text of the report and on the boring logs. It should be noted that fluctuations in the level of the groundwater table can occur with passage of time due to variations in rainfall, temperature and other factors. Also, this report does not include quantitative information on rates of flow of groundwater into excavations, on pumping capacities necessary to dewater the excavations, or on methods of dewatering excavations. Unanticipated soil conditions at a construction site are commonly encountered and cannot be fully predicted by mere soil samples, test borings or test pits. Such unexpected conditions frequently require that additional expenditures be made by the owner to attain a properly designed and constructed project. Therefore, provision for some contingency fund is recommended to accommodate such potential extra cost.

The analyses, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our field investigation and further on the assumption that the exploratory boring is representative of the subsurface conditions throughout the site; that is, the subsurface conditions everywhere are not significantly different from those disclosed by the boring at the time it was completed. If, during construction, different subsurface conditions from those encountered in our boring are observed, or appear to be present in excavations, we must be

advised promptly so that we can review these conditions and reconsider our recommendations where necessary. If there is a substantial lapse of time between submission of this report and the start of the work at the site (more than twelve months is considered a substantial lapse of time; however, depending on the circumstances, less than six months may be considered a substantial lapse of time), if conditions have changed due either to natural causes or to construction operations at or adjacent to the site, or if structure locations, structural loads or finish grades are changed, we urge that we be promptly informed and retained to review our report to determine the applicability of the conclusions and recommendations, considering the changed conditions and/or time lapse. In this regard, if (a) construction at the site does not start within twelve months of the date of this report and (b) CMJ Engineering, Inc. is not present at the site when construction starts to confirm that conditions have not changed since the date of this report, the information in this report cannot be relied upon or used for any purpose.

Further, it is urged that CMJ Engineering, Inc. be retained to review those portions of the plans and specifications for this particular project that pertain to earthwork and foundations as a means to determine whether the plans and specifications are consistent with the recommendations contained in this report. In addition, we are available to observe construction, particularly the compaction of structural fill, or backfill and the construction of foundations as recommended in the report, and such other field observations as might be necessary.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater or air, on or below or around the site.

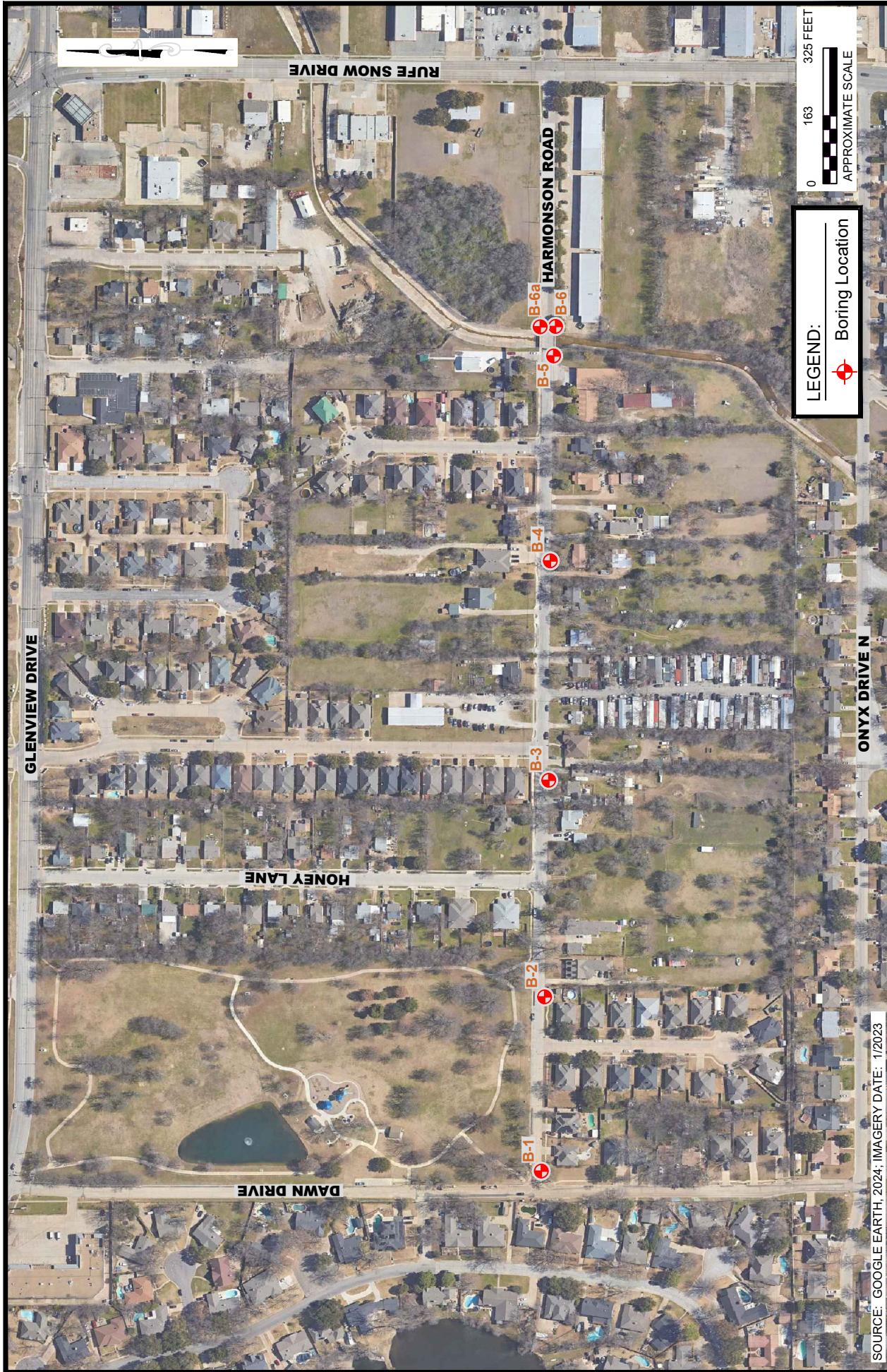
This report has been prepared for use in developing an overall design concept. Paragraphs, statements, test results, boring logs, diagrams, etc. should not be taken out of context, nor utilized without a knowledge and awareness of their intent within the overall concept of this report. The reproduction of this report, or any part thereof, supplied to persons other than the owner, should indicate that this study was made for design purposes only and that verification of the subsurface conditions for purposes of determining difficulty of excavation, trafficability, etc. are responsibilities of the contractor.

This report has been prepared for the exclusive use of Quiddity Engineering, LLC for specific application to design of this project only, and not for additions or modifications to the project. The

only warranty made by us in connection with the services provided is that we have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

\* \* \* \*





## PLAN OF BORINGS

Harmonson Road Reconstruction  
North Richland Hills, Texas

**CWJ** Engineering

CMJ Project No. 3187-24-01

Plate  
A.1



Major Divisions		Grp. Sym.	Typical Names	Laboratory Classification Criteria	
Coarse-grained soils (more than half of the material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)			Determine percentages of sand and gravel from grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent.....GW, GP, SW, SP More than 12 percent.....GM, GC, SM, SC 5 to 12 percent.....Borderline cases requiring dual symbols	$C_u = \frac{D_{60}}{D_{10}} \text{ greater than 4: } C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}} \text{ between 1 and 3}$
		GW	Well-graded gravels, gravel-sand mixtures, little or no fines		
		GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW
		GM	Silty gravels, gravel-sand-silt mixtures		Liquid and plastic limits plotting in hatched zone between 4 and 7 are borderline cases requiring use of dual symbols
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	GC	Clayey gravels, gravel-sand-clay mixtures		
		SW	Well-graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}} \text{ greater than 6: } C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}} \text{ between 1 and 3}$
		SP	Poorly graded sands; gravelly sands, little or no fines		Not meeting all gradation requirements for SW
		SM	Silty sands, sand-silt mixtures		Liquid and plastic limits plotting between 4 and 7 are borderline cases requiring use of dual symbols
		SC	Clayey sands, sand-clay mixtures		
Fine-grained soils (More than half of material is smaller than No. 200 sieve)	Silts and clays (Liquid limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity	<p>Plasticity Chart</p>	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean clays		
		OL	Organic silts and organic silty clays of low plasticity		
	Silts and clays (Liquid limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
		CH	Inorganic clays of high plasticity, fat clays		
		OH	Organic clays of medium to high plasticity, organic silts		
		Pt	Peat and other highly organic soils		
	Highly Organic soils				

SOIL OR ROCK TYPES											
	GRAVEL		LEAN CLAY		LIMESTONE						
	SAND		SANDY		SHALE						
	SILT		SILTY		SANDSTONE						
	HIGHLY PLASTIC CLAY		CLAYEY		CONGLOMERATE	Shelby Tube	Auger	Split Spoon	Rock Core	Cone Pen	No Recovery
TERMS DESCRIBING CONSISTENCY, CONDITION, AND STRUCTURE OF SOIL											
Fine Grained Soils (More than 50% Passing No. 200 Sieve)											
Descriptive Item		Penetrometer Reading, (tsf)									
Soft		0.0 to 1.0									
Firm		1.0 to 1.5									
Stiff		1.5 to 3.0									
Very Stiff		3.0 to 4.5									
Hard		4.5+									
Coarse Grained Soils (More than 50% Retained on No. 200 Sieve)											
Penetration Resistance		Descriptive Item				Relative Density					
(blows/foot)											
0 to 4		Very Loose				0 to 20%					
4 to 10		Loose				20 to 40%					
10 to 30		Medium Dense				40 to 70%					
30 to 50		Dense				70 to 90%					
Over 50		Very Dense				90 to 100%					
Soil Structure											
Calcareous		Contains appreciable deposits of calcium carbonate; generally nodular									
Slickensided		Having inclined planes of weakness that are slick and glossy in appearance									
Laminated		Composed of thin layers of varying color or texture									
Fissured		Containing cracks, sometimes filled with fine sand or silt									
Interbedded		Composed of alternate layers of different soil types, usually in approximately equal proportions									
TERMS DESCRIBING PHYSICAL PROPERTIES OF ROCK											
Hardness and Degree of Cementation											
Very Soft or Plastic		Can be remolded in hand; corresponds in consistency up to very stiff in soils									
Soft		Can be scratched with fingernail									
Moderately Hard		Can be scratched easily with knife; cannot be scratched with fingernail									
Hard		Difficult to scratch with knife									
Very Hard		Cannot be scratched with knife									
Poorly Cemented or Friable		Easily crumbled									
Cemented		Bound together by chemically precipitated material; Quartz, calcite, dolomite, siderite, and iron oxide are common cementing materials.									
Degree of Weathering											
Unweathered		Rock in its natural state before being exposed to atmospheric agents									
Slightly Weathered		Noted predominantly by color change with no disintegrated zones									
Weathered		Complete color change with zones of slightly decomposed rock									
Extremely Weathered		Complete color change with consistency, texture, and general appearance approaching soil									
KEY TO CLASSIFICATION AND SYMBOLS										PLATE A.3	

Project No. <b>3187-24-01</b>		Boring No. <b>B-1</b>		Project <b>Harmonson Road Reconstruction Dawn Drive to W. of Rufe Snow Drive - North Richland Hills, Texas</b>												
Location <b>See Plate A.1</b>				Water Observations <b>Dry during drilling; dry at completion</b>												
Completion Depth <b>15.0'</b>		Completion Date <b>5-29-24</b>														
Depth, Ft.	Symbol	Samples	Surface Elevation		Type <b>CME-55, w/ CFA</b>		REC %	RQD %	Blows/Ft. or Pen Reading, T.S.F.	Passing No 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Unit Dry Wt. Lbs./Cu. Ft.	Unconfined Compression Pounds/Sq. Ft.
			<b>Stratum Description</b>													
			<b>ASPHALT</b> , 5" thick						3.0					30		
			<b>SANDY CLAY</b> , dark brown and brown, w/ ironstone nodules and calcareous nodules, stiff to very stiff (possible fill)						2.75	92	48	14	34	24		
									2.0					24		
			<b>SILTY CLAY</b> , dark brown, w/ ironstone nodules and calcareous nodules, stiff to very stiff						2.5					22	103	3890
5									2.75					21		
									3.25					22		
			<b>CLAY</b> , brown, w/ ironstone nodules and calcareous nodules, very stiff						3.25		57	19	38	21		
10			<b>SILTY CLAY</b> , brown to light brown, w/ ironstone nodules, calcareous seams, and calcareous nodules, stiff													
			- w/ fractured limestone layers below 11'													
15									2.5					29		
	</															

Project No. <b>3187-24-01</b>		Boring No. <b>B-2</b>		Project <b>Harmonson Road Reconstruction</b> <b>Dawn Drive to W. of Rufe Snow Drive - North Richland Hills, Texas</b>										
Location <b>See Plate A.1</b>				Water Observations <b>Dry during drilling; dry at completion</b>										
Completion Depth <b>15.0'</b>		Completion Date <b>5-29-24</b>												
Surface Elevation		Type <b>CME-55, w/ CFA</b>												
Depth, Ft.	Symbol	Samples	Stratum Description		REC %	RQD %	Blows/Ft. or Pen Reading, T.S.F.	Passing No 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Unit Dry Wt. Lbs./Cu. Ft.	Unconfined Compression Pounds/Sq. Ft.
			<b>ASPHALT</b> , 5" thick				1.0	49	43	29	14	28		
			<b>CLAYEY SAND</b> , brown, w/ ironstone nodules and calcareous nodules				2.75					23	101	4060
			<b>SANDY CLAY</b> , reddish brown, w/ ironstone nodules and calcareous nodules, stiff to hard				4.5+					20		
			- w/ gravel below 4'				4.25					17		
5			- w/ brown, 7' to 8'				4.5+		39	13	26	12		
							3.25					18		
							4.5+					15		
10														
15			- firm to stiff below 14'				1.5					22		







Project No. <b>3187-24-01</b>		Boring No. <b>B-6</b>		Project <b>Harmonson Road Reconstruction Dawn Drive to W. of Rufe Snow Drive - North Richland Hills, Texas</b>												
Location <b>See Plate A.1</b>				Water Observations <b>Dry during drilling; dry at completion</b>												
Completion Depth <b>3.0'</b>		Completion Date <b>5-29-24</b>														
Depth, Ft.	Symbol	Samples	Surface Elevation		Type <b>CME-55, w/ CFA</b>		REC %	RQD %	Blows/Ft. or Pen Reading, T.S.F.	Passing No 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Unit Dry Wt. Lbs./Cu. Ft.	Unconfined Compression Pounds/Sq. Ft.
			Stratum Description													
			<b>CONCRETE</b> , 7.5" thick <b>CLAY</b> , dark brown, brown, and reddish brown, w/ ironstone nodules, calcareous nodules, and gravel, hard (FILL) <b>SAND</b> , tan (FILL) - terminated at 3' due to possible utility line					4.5+						7		
														9		





## **SOLUBLE SULFATE TEST RESULTS**

Project: Harmonson Road Reconstruction  
Dawn Drive to W. of Rufe Snow Drive – North Richland Hills, Texas

Project No.: 3187-24-01

<b>Boring No.</b>	<b>Depth (ft.)</b>	<b>Material</b>	<b>Soluble Sulfates (ppm)</b>
B-1	1 – 2	Silty Clay	<100
B-2	5" – 1	Clayey Sand	<100
B-3	1 – 2	Clay	<100
B-4	16" – 2	Clay (FILL)	<100
B-5	1 – 2	Clay (FILL)	<100

Note: Test Method TxDOT Tex 145-E.

## **LIME SERIES TEST RESULTS**

Project: Harmonson Road Reconstruction  
Dawn Drive to W. of Rufe Snow Drive – North Richland Hills, Texas

Project No.: 3187-24-01

Boring No.: B-3	Depth: 4½" to 1'
Material: Clay	
Percent Lime	pH
0	8.38
2	12.22
4	12.36
6	12.36
8	12.39
10	12.41