

*Fort Bend County, Texas
Invitation for Bid*



*Harlem Road Park Expansion for Fort Bend County
BID 23-025*

SUBMIT BIDS TO:

Fort Bend County
Purchasing Department
Travis Annex
301 Jackson, Suite 201
Richmond, TX 77469

Note: All correspondence must include the term
“Purchasing Department” in address to assist in
proper delivery

SUBMIT NO LATER THAN:

Tuesday, February 14, 2023
2:00 PM (Central)

LABEL ENVELOPE:

BID 23-025
Harlem Road Park

***ALL BIDS MUST BE RECEIVED IN AND TIME/DATE STAMPED BY THE PURCHASING OFFICE
OF FORT BEND COUNTY ON OR BEFORE THE SPECIFIED TIME/DATE STATED ABOVE.***

BIDS RECEIVED AS REQUIRED WILL THEN BE OPENED AND PUBLICLY READ.

BIDS RECEIVED AFTER THE SPECIFIED TIME, WILL BE RETURNED UNOPENED.

Results will not be given by phone.
Results will be provided to bidder in writing
after Commissioners Court award.

Requests for information must be in
writing and directed to:
Brooke Lindemann
Senior Buyer
Brooke.Lindemann@fortbendcountytexas.gov

Vendor Responsibilities:

- Download and complete any addendums. (Addendums will be posted on the Fort Bend County website no
Later than 48 hours prior to bid opening)
- Submit response in accordance with requirements stated on the cover of this document.
- DO NOT submit responses via email or fax.



COUNTY PURCHASING AGENT

Fort Bend County, Texas

Vendor Information

Jaime Kovar
Purchasing Agent

Office (281-341-8640)

Legal Company Name <small>(top line of W9)</small>				
Business Name <small>(if different from legal name)</small>				
Federal ID # or S.S. #		DUNS #		
Type of Business	<input type="checkbox"/> Corporation/LLC <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietor/Individual <input type="checkbox"/> Tax Exempt Organization	Age in Business?		
Publicly Traded Business	<input type="checkbox"/> No <input type="checkbox"/> Yes Ticker Symbol _____			
Remittance Address				
City/State/Zip				
Physical Address				
City/State/Zip				
Phone/Fax Number	Phone: _____ Fax: _____			
Contact Person				
E-mail				
Check all that apply to the company listed above and provide certification number.	DBE-Disadvantaged Business Enterprise <input type="checkbox"/>	Certification # _____ Certification # _____ Certification # _____ Certification # _____	<u>Cert Date</u>	<u>Exp Date</u>
	SBE-Small Business Enterprise <input type="checkbox"/>		_____	_____
	HUB-Texas Historically Underutilized Business <input type="checkbox"/>		_____	_____
	WBE-Women's Business Enterprise <input type="checkbox"/>		_____	_____
Company's gross annual receipts	<\$500,000 _____	\$500,000-\$4,999,999 _____		
	\$5,000,000-\$16,999,999 _____	\$17,000,000-\$22,399,999 _____		
	>\$22,400,000 _____			
NAICs codes (Please enter all that apply)				
Signature of Authorized Representative				
Printed Name				
Title				
Date				

THIS FORM MUST BE SUBMITTED WITH THE SOLICITATION RESPONSE

1.0 GENERAL REQUIREMENTS:

- 1.1 Read this entire document carefully. Follow all instructions. You are responsible for fulfilling all requirements and specifications. Be sure you understand them.
- 1.2 General Requirements apply to all advertised bids; however, these may be superseded, whole or in part, by the scope, special requirements, specifications, special specifications or other data contained herein.
- 1.3 Governing Law: Bidder is advised that these requirements shall be fully governed by the laws of the State of Texas and that Fort Bend County may request and rely on advice, decisions and opinions of the Attorney General of Texas and the County Attorney concerning any portion of these requirements.
- 1.4 Bid Form Completion: Fill out, sign, and return to the Fort Bend County Purchasing Department one (1) complete bid form. An authorized representative of the bidder must sign the Contract Sheet. The Contract will be binding only when signed by the County Judge, Fort Bend County and a purchase order authorizing the item(s) desired has been issued. The use of corrective fluid is not acceptable and may result in the disqualification of bid. If an error is made, the bidder must draw a line through error and initial each change.
- 1.5 Bid Returns: Bidders must return all completed bids to the Fort Bend County Purchasing Department at 301 Jackson, Suite 201 Richmond Texas no later than 2:00 P.M. on the date specified. Late bids will not be accepted. Bids must be submitted in a sealed envelope, addressed as follows: Fort Bend County Purchasing Agent, Travis Annex, 301 Jackson, Suite 201 Richmond, Texas 77469.
- 1.6 Addenda: No interpretation of the meaning of the drawings, specifications or other bid documents will be made to any bidder orally. All requests for such interpretations must be made in writing addressed to Brooke Lindemann, Senior Buyer, 301, Jackson, Suite 201, Richmond, Texas, 77469, E-mail: Brooke.Lindemann@fortbendcountytexas.gov. Any and all interpretations and any supplemental instructions will be in the form of written addenda to the contract documents which will be posted on Fort Bend County's website. Addenda will **ONLY** be issued by the Fort Bend County Purchasing Agent. It is the sole responsibility of each bidder to insure receipt of any and all addenda. All addenda issued will become part of the contract documents. Bidders must sign and include it in the returned bid package. Deadline for submission of questions and/or clarification is no later than **Monday, February 7, 2023 at 10:00AM (central)** Requests received after the deadline will not be responded to due to the time constraints of this bid process.
- 1.7 References: All bidders must submit, **WITH BID**, at least three (3) references from clients for whom a project similar to that specified herein has been

Initials of Bidder: _____

successfully accomplished. References must include clients name, contact person and telephone number.

- 1.8 Bid Bond: All bidders must submit, **WITH BID**, a cashier's check or certified check for at least five percent (5%) of the total bid price, payable to the order of Fort Bend County, or a Bid Bond in the same amount issued by a surety, acceptable to Fort Bend County, authorized to do business in the State of Texas, as a guarantee that the Bidder will do the work described herein at the rates stated herein. Unsuccessful bidder's Cashier's Check or Certified Check will be returned only after a written request to do so have been received in the Office of the Fort Bend County Purchasing Agent.
- 1.9 Material Safety Data Sheets: Under the "Hazardous Communication Act", commonly known as the "Texas Right to Know Act", a bidder must provide to Fort Bend County and using departments, with each delivery, material safety data sheets, which are, applicable to hazardous substances defined in the Act. Bidders are obligated to maintain a current, updated file in the Fort Bend County Purchasing Department. Failure of the bidder to maintain such a file will be cause to reject any bid applying thereto.
- 1.10 Pricing: Prices for all goods and/or services shall be firm for the duration of this Contract and shall be stated on the bid sheet. Prices shall be all inclusive. No price changes, additions, or subsequent qualifications will be honored during the course of the Contract. All prices must be written in ink or typewritten. If there are any additional charges of any kind, other than those mentioned above, specified or unspecified, bidder **MUST** indicate the items required and attendant costs or forfeit the right to payment for such items.
- 1.11 Term Contracts: If the Contract is intended to cover a specific time period, said time will be given in the specifications under scope.
- 1.12 Recycled Materials: Fort Bend County encourages the use of products made of recycled materials and shall give preference in purchasing to products made of recycled materials if the products meet applicable specifications as to quantity and quality. Fort Bend County will be the sole judge in determining product preference application.
- 1.13 Evaluation: Evaluation shall be used as a determinant as to which bid items or services are the most efficient and/or most economical for Fort Bend County. It shall be based on all factors which have a bearing on price and performance of the items in the user environment. All bids are subject to tabulation by the Fort Bend County Purchasing Department and recommendation to Fort Bend County Commissioners Court. Compliance with all bid requirements, delivery and needs of the using department are considerations in evaluating bids. Pricing is **NOT** the only criteria for making a recommendation. The Fort Bend County Purchasing Department reserves the right to contact any bidder, at any time, to clarify, verify or request information with regard to any bid.

Initials of Bidder: _____

- 1.14 Disqualification of Bidder: Upon signing this bid document, a bidder offering to sell supplies, materials, services, or equipment to Fort Bend County certifies that the bidder has not violated the antitrust laws of this state codified in section 15.01, et seq., Business & Commerce Code, or the federal antitrust laws, and has not communicated directly or indirectly the bid made to any competitor or any other person engaged in such line of business. Any or all bids may be rejected if Fort Bend County believes that collusion exists among the bidders. Bids in which the prices are obviously unbalanced may be rejected. If multiple bids are submitted by a bidder and after the bids are opened, one of the bids is withdrawn, the result will be that all of the bids submitted by that bidder will be withdrawn; however, nothing herein prohibits a vendor from submitting multiple bids for different products or services.

- 1.15 Awards: Fort Bend County reserves the right to award this Contract on the basis of lowest and best bid in accordance with the laws of the State of Texas, to waive any formality or irregularity, to make awards to more than one bidder, to reject any or all bids. In the event the lowest dollar bidder meeting specifications is not awarded a contract, the bidder may appear before the Commissioners Court and present evidence concerning its responsibility.

- 1.16 Contract Obligation: Fort Bend County Commissioners Court must award the Contract and the County Judge or other person authorized by the Fort Bend County Commissioners Court must sign the Contract before it becomes binding on Fort Bend County or the bidders. Department heads are not authorized to sign agreements for Fort Bend County. Binding agreements shall remain in effect until all products and/or services covered by this purchase have been satisfactorily delivered and accepted.

2.0 SCOPE:

It is the intent of Fort Bend County to contract with one (1) vendor for all materials, supplies, equipment, tools, services, labor and supervision necessary to complete the construction of Harlem Road Park Expansion, hereinafter referred to as the "Project," as specified herein.

3.0 PRE-BID CONFERENCE:

A pre-bid conference will be conducted on **Tuesday, January 31, 2023 at 9:30 AM (CST)**. The pre-bid conference will be held at the Fort Bend County Purchasing Department located in the Travis Annex at 301 Jackson, Suite 201, Richmond, Texas 77469. All bidders are encouraged to attend.

4.0 LIQUIDATED DAMAGES:

The County and the Contractor recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by the County if the work is not complete on time. Accordingly, instead of requiring any such proof, the County and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall

Initials of Bidder: _____

pay the County \$1,500.00 for each day that expires after the time specified herein for completion until the Work is complete, unless contract time has been adjusted by extension of time approved by Commissioner's Court.

The Contractor will be placed on one (1) year probation if liquidated damages are accrued. During the probation period, if the Contractor accrues liquidated damages on another project, they will be disqualified from being awarded any County work for two (2) years.

5.0 COMPLETION TIME & PAYMENT:

5.1 Fort Bend County shall pay the Contractor in current funds for the Contractor's performance of the Contract the contract sum, as stated herein, after receipt of notice to proceed and a purchase order issued by the Fort Bend County Purchasing Agent.

5.2 Based upon Applications for payment submitted to the County Auditor, Fort Bend County shall make progress payments on account of the contract sum to the Contractor as provided below and elsewhere in the contract documents.

5.2.1 The period covered by each application for payment shall be one calendar month ending on the last day of the month.

5.2.2 Provided an application for payment is received by the County Auditor not later than the 15th day of a month, Fort Bend County shall make payment to the Contractor not later than the 15th day of the next month. If an application for payment is received by the County Auditor after the application deadline fixed above, payment shall be made by Fort Bend County not later than 30 days after the County Auditor receives the application for payment.

5.2.3 Application for payment shall indicate the percentage of completion of each portion of the Project as of the end of the period covered by the application for payment.

5.2.4 Subject to the provisions of the contract documents, the amount of each progress payment shall be computed as follows:

5.2.4.1 Take that portion of the contract sum properly allocable to completed Project less retainage of ten percent (10%).

5.2.4.2 Add that portion of the contract sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved by Fort Bend County, suitably stored off the site at a location agreed upon in writing), less retainage of ten percent (10%).

Initials of Bidder: _____

5.2.4.3 Subtract the aggregate of previous payments made by Fort Bend County.

5.2.4.4 The progress payment amount as determined in above shall be further modified under the following circumstances:

Add, upon substantial completion of the Project, a sum sufficient to increase the total payments to one hundred percent (100%) of the contract sum, less such amounts as Fort Bend County shall determine for incomplete work and unsettled claims.

5.2.4.5 Final payment, constituting the entire unpaid balance of the contract sum, shall be made by Fort Bend County to the Contractor when the Contract has been fully performed by the Contractor.

5.3 Before the first application for payment, the Contractor shall submit to the Parks Department a schedule of values allocated to various portions of the work, prepared in such form and supported by such data to substantiate its accuracy as the Parks Department may require. This schedule, unless objected to by the Parks Department shall be used as a basis for reviewing the Contractor's application for payment.

5.4 Contractor must provide with each application for payment a contractor's affidavit certifying bills against the Contractor for labor, material and expendable equipment employed in the performance of Contractor have been paid in full prior to acceptance of final payment from Fort Bend County.

5.5 The Contractor will permit Fort Bend County, or any duly authorized agent of Fort Bend County, to inspect and examine the books and records of the Contractor for the purpose of verifying the amount of work performed under the Contract. Fort Bend County's right to inspect survives the termination of the Contract for a period of five years.

6.0 LIMIT OF APPROPRIATION:

Prior to the execution of this Contract, Contractor has been advised by County, and Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence to this Contract, that County shall have available only those funds specifically allocated in this Contract to fully discharge any and all liabilities which may be incurred by County in bringing this Project to an absolute conclusion, resulting in a complete, fully furnished, fully equipped and fully usable facility, and that the total of any and all basic construction costs, costs of providing the required services and materials, all fees and compensation of any sort to the Contractor, and any and all costs for any and all things or purposes coming inuring under or out of this Contract, irrespective of the nature thereof, shall not exceed said specifically allocated sum, notwithstanding any word, statement or thing contained in or inferred from the preceding provision of this Contract which might in any light by any person be interpreted to the contrary.

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7.0 RIGHT TO ASSURANCE:

Whenever Fort Bend County in good faith has reason to question the Contractor's intent to perform, Fort Bend County may demand that the Contractor give written assurance of its intent to perform. In the event that a demand is made and no assurance is given within five (5) days, Fort Bend County may treat this failure as an anticipatory repudiation of the Contract.

8.0 PERFORMANCE & PAYMENT BONDS:

Performance and Payment Bonds: In the event the total accepted bid price exceeds \$25,000 the Contractor must provide to the Office of the County Purchasing Agent, a performance bond and a payment bond, each in the amount of 100% of the total contract sum within ten (10) calendar days after receipt of notification of bid award. Such bonds shall be executed by a corporate surety duly authorized and admitted to do business in the State of Texas and licensed in the State of Texas to issue surety bonds with a Best Rating of "A" or better. Fort Bend County reserves the right to accept or reject any surety company proposed by the Contractor. In the event Fort Bend County rejects, the proposed surety company, the Contractor will be afforded five (5) additional days to submit the required bonds issued by a surety company acceptable to Fort Bend County.

9.0 POWER OF ATTORNEY:

An attorney-in-fact who signs a bid bond, performance bond or payment bond must file with each bond a certified and effectively dated copy of his or her power of attorney.

10.0 INSURANCE:

10.1 All respondents shall submit, with response, a current certificate of insurance indicating coverage in the amounts stated below. In lieu of submitting a certificate of insurance, respondents may submit, with response, a notarized statement from an Insurance company, authorized to conduct business in the State of Texas, and acceptable to Fort Bend County, guaranteeing the issuance of an insurance policy, with the coverage stated below, to the firm named therein, if successful, upon award of this Contract.

10.2 At contract execution, contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on 30 days prior written notice to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form (or a Claims Made form for Professional Liability insurance) from such companies having Best's rating of A/VII or better,

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licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

- 10.2.1 Workers' Compensation insurance. Substitutes to genuine Workers' Compensation Insurance will not be allowed.
- 10.2.2 Employers' Liability insurance with limits of not less than \$1,000,000 per injury by accident, \$1,000,000 per injury by disease, and \$1,000,000 per bodily injury by disease.
- 10.2.3 Commercial general liability insurance with a limit of not less than \$1,000,000 each occurrence and \$2,000,000 in the annual aggregate. Policy shall cover liability for bodily injury, personal injury, and property damage and products/completed operations arising out of the business operations of the policyholder.
- 10.2.4 Business Automobile Liability coverage with a combined Bodily Injury/Property Damage limit of not less than \$1,000,000 each accident. The policy shall cover liability arising from the operation of licensed vehicles by policyholder.
- 10.3 County and the members of Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation and Professional Liability (if required). All Liability policies including Workers' Compensation written on behalf of contractor, excluding Professional Liability, shall contain a waiver of subrogation in favor of County and members of Commissioners Court.
- 10.4 If required coverage is written on a claims-made basis, contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning from the time that work under the agreement is completed.
- 10.5 Contractor shall not commence any portion of the work under this Contract until it has obtained the insurance required herein and certificates of such insurance have been filed with and approved by Fort Bend County.
- 10.6 No cancellation of or changes to the certificates, or the policies, may be made without sixty (60) days prior, written notification to Fort Bend County.
- 10.7 Approval of the insurance by Fort Bend County shall not relieve or decrease the liability of the Contractor.

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11.0 INDEMNIFICATION:

Respondent shall save harmless County from and against all claims, liability, and expenses, including reasonable attorney's fees, arising from activities of respondent, its agents, servants or employees, performed under this agreement that result from the negligent act, error, or omission of respondent or any of respondent's agents, servants or employees.

- 11.1 Respondent shall timely report all such matters to Fort Bend County and shall, upon the receipt of any such claim, demand, suit, action, proceeding, lien or judgment, not later than the fifteenth day of each month; provide Fort Bend County with a written report on each such matter, setting forth the status of each matter, the schedule or planned proceedings with respect to each matter and the cooperation or assistance, if any, of Fort Bend County required by Respondent in the defense of each matter.
- 11.2 Respondent's duty to defend, indemnify and hold Fort Bend County harmless shall be absolute. It shall not abate or end by reason of the expiration or termination of any contract unless otherwise agreed by Fort Bend County in writing. The provisions of this section shall survive the termination of the contract and shall remain in full force and effect with respect to all such matters no matter when they arise.
- 11.3 In the event of any dispute between the parties as to whether a claim, demand, suit, action, proceeding, lien or judgment appears to have been caused by or appears to have arisen out of or in connection with acts or omissions of Respondent, Respondent shall never-the-less fully defend such claim, demand, suit, action, proceeding, lien or judgment until and unless there is a determination by a court of competent jurisdiction that the acts and omissions of Respondent are not at issue in the matter.
- 11.4 Respondent's indemnification shall cover, and Respondent agrees to indemnify Fort Bend County, in the event Fort Bend County is found to have been negligent for having selected Respondent to perform the work described in this request.
- 11.5 The provision by Respondent of insurance shall not limit the liability of Respondent under an agreement.
- 11.6 Respondent shall cause all trade contractors and any other contractor who may have a contract to perform construction or installation work in the area where work will be performed under this request, to agree to indemnify Fort Bend County and to hold it harmless from all claims for bodily injury and property damage that may arise from said Respondent's operations. Such provisions shall be in form satisfactory to Fort Bend County.
- 11.7 Loss Deduction Clause - Fort Bend County shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance

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policy. The payment of deductibles shall be the sole responsibility of Respondent and/or trade contractor providing such insurance.

12.0 PREVAILING WAGES:

This project is subject to the prevailing wage rate requirements of Chapter 2258 of the Government Code. All persons employed by Contractor shall be compensated at not less than the rates shown below. Contractor shall keep detailed records of each of its workers and said records shall be made available to County for inspection at all reasonable times. The Contractor shall pay Fort Bend County sixty dollars (\$60.00) for each worker employed by the Contractor for the provision of services described herein for each calendar day or part of the day that the worker is paid less than the below stated rates. Contractors may also visit www.wdol.gov/dba.aspx.

General Decision Number: TX20230247 01/13/2023

Superseded General Decision Number: TX20220247

State: Texas

Construction Type: Building

County: Fort Bend County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

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Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023

ASBE0022-009 06/01/2022	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)	\$ 26.88	15.41
BOIL0074-003 01/01/2021 BOILERMAKER	\$ 29.47	24.10
CARP0551-008 04/01/2021 CARPENTER (Excludes Acoustical Ceiling Installation, Drywall Hanging, Form Work and Metal Stud Installation)	\$ 25.86	9.08
ELEC0716-005 08/30/2021 ELECTRICIAN (Excludes Low Voltage Wiring and Installation of Alarms)	\$ 33.20	10.37
* ELEV0031-003 01/01/2023 ELEVATOR MECHANIC	\$ 49.15	37.335+a+b

FOOTNOTES:

A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

B. Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014 POWER EQUIPMENT OPERATOR Cranes	\$ 34.85	9.85
IRON0084-002 06/01/2022 IRONWORKER (ORNAMENTAL AND STRUCTURAL)	\$ 26.76	7.88
PLAS0783-001 04/01/2021 PLASTERER	\$ 26.04	9.02
*PLUM0068-002 10/01/2022 PLUMBER	\$ 37.83	11.71

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PLUM0211-010 10/01/2021

PIPEFITTER (Including HVAC Pipe Installation)	\$ 37.03	12.56
SHEE0054-003 04/01/2020		
SHEET METAL WORKER (Excludes HVAC Duct and Unit Installation)	\$ 29.70	13.85
*SUTX2014-023 07/21/2014		
ACOUSTICAL CEILING MECHANIC	\$ 16.41	3.98
BRICKLAYER	\$ 19.86	0.00
CAULKER	\$ 15.36**	0.00
CEMENT MASON/CONCRETE FINISHER	\$ 13.82**	0.00
DRYWALL FINISHER/TAPER	\$ 16.30	3.71
DRYWALL HANGER AND METAL STUD INSTALLER	\$ 17.45	3.96
ELECTRICIAN (Alarm Installation Only)	\$ 17.97	3.37
ELECTRICIAN (Low Voltage Wiring Only)	\$ 18.00	1.68
FLOOR LAYER: Carpet	\$ 20.00	0.00
FORM WORKER	\$ 11.87**	0.00
GLAZIER	\$ 19.12	4.41
INSULATOR – BATT	\$ 14.87**	0.73
IRONWORKER, REINFORCING	\$ 12.10**	0.00
LABORER: Common or General	\$ 10.79**	0.00
LABORER: Mason Tender – Brick	\$ 13.37**	0.00
LABORER: Mason Tender - Cement/Concrete	\$ 10.50**	0.00
LABORER: Pipelayer	\$ 12.94**	0.00
LABORER: Roof Tearoff	\$ 11.28**	0.00
LABORER: Landscape and Irrigation	\$ 9.49**	0.00

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LATHER	\$ 19.73	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	\$ 14.10**	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader	\$ 13.93**	0.00
OPERATOR: Bulldozer	\$ 20.77	0.00
OPERATOR: Drill	\$ 16.22	0.34
OPERATOR: Forklift	\$ 15.64**	0.00
OPERATOR: Grader/Blade	\$ 13.37**	0.00
OPERATOR: Loader	\$ 13.55**	0.94
OPERATOR: Mechanic	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	\$ 16.03**	0.00
OPERATOR: Roller	\$ 16.00**	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping	\$ 16.77	4.51
ROOFER	\$ 15.40**	0.00
SHEET METAL WORKER (HVAC Duct Installation Only)	\$ 17.81	2.64
SHEET METAL WORKER (HVAC Unit Installation Only)	\$ 16.00**	1.61
SPRINKLER FITTER (Fire Sprinklers)	\$ 22.17	9.70
TILE FINISHER	\$ 12.00**	0.00
TILE SETTER	\$ 16.17**	0.00
TRUCK DRIVER: 1/Single Axle Truck	\$ 14.95**	5.23
TRUCK DRIVER: Dump Truck	\$ 12.39**	1.18
TRUCK DRIVER: Flatbed Truck	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck	\$ 12.50**	0.00

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TRUCK DRIVER: Water Truck	\$ 12.00**	4.11
WATERPROOFER	\$ 14.39**	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Initials of Bidder: _____

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division

Initials of Bidder: _____

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

13.0 PERMITS:

It shall be the sole responsibility of the successful bidder to obtain all required permits in the name of Fort Bend County.

14.0 CONTRACTOR'S RESPONSIBILITY FOR WORK:

14.1 Preconstruction Work. Contractor shall do (or cause to be done) the following as preconstruction work:

14.1.1 On an as needed basis as determined by Fort Bend County, cause the Contractor's personnel to meet with Fort Bend County and the Engineer to discuss the status of the Project.

14.1.2 Review drawings and specifications with the Engineer to permit the Contractor and the Engineer to determine the compliance of the proposed facility with applicable building codes.

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14.2 Construction Work. Contractor shall do (or cause to be done) the following as construction work:

14.2.1 Perform (or cause to be performed) all preparatory work at the construction site required herein, including (without limitation) soil and concrete testing and demolition of improvements existing at the construction site and all actions necessary for compliance with all laws and regulations as to actions to be taken by owners or contractors before construction begins, including without limitation those in regard to archaeological and environmental requirements.

14.2.2 Construct and install (or cause to be constructed and installed) the Project on the construction site in accordance with this Contract and the drawings and specifications approved by Fort Bend County.

14.2.3 Furnish (or cause to be furnished) all materials, supplies, equipment, tools, labor, supervision, utilities, transportation, and other materials and services necessary to complete the Project described herein.

14.2.4 Materials testing necessary for the Project and required by laws and regulations, construction industry standards as approved by Fort Bend County and this Contract; the frequency of testing shall be approved by Fort Bend County. **It is the contractor's responsibility to engage a material testing laboratory to perform testing on the structural concrete to be used for foundation work in this project. The cost of testing shall be incidental to bid item for drill shaft foundation. Testing of concrete shall comply with current TXDOT criteria. Contractor has to submit the name of the testing laboratory, intended to be used by the contractor for this project, for County's approval.**

14.3 Standards for Review and Approval. Fort Bend County acknowledges that in order to meet the deadlines for the completion of the Project, and in order to accomplish the efficient completion of the Project, the Contractor may submit matters to Fort Bend County in stages for approval or consent. Upon receipt of any matter submitted by the Contractor for review and approval, Fort Bend County shall review the same and shall diligently and promptly (but in any event within 14 calendar days for any such matter, other than a proposed change order, and within 28 calendar days for a proposed change order) give the Contractor notice of Fort Bend County's approval or disapproval, setting forth in detail all reasons for any disapproval. Fort Bend County's right to disapprove any such matter submitted (other than a proposed change order) shall be limited to the

Initials of Bidder: _____

elements thereof (a) which do not conform substantially to matters previously approved, (b) which are new elements not previously presented and approved and the Contractor is unable to demonstrate that such new element is reasonably necessary for completion of the Project, or (c) which depict matters that are violations of this Contract or applicable laws and regulations.

14.3.1 If Fort Bend County disapproves of a particular matter or Proposed Change Order, the Contractor shall have the right to resubmit such matter or Proposed Change Order to Fort Bend County, altered to satisfy Fort Bend County's basis for disapproval. Any resubmission shall be subject to review and approval by Fort Bend County.

14.3.2 Fort Bend County and the Contractor shall attempt in good faith to resolve any disputes concerning the approval of any aspect of the Project expeditiously, so as not to delay the completion of the Project in accordance with this Contract.

14.3.3 Expedited Approvals. Fort Bend County recognizes the importance of expeditious action upon all matters submitted to Fort Bend County for review and approval and of expeditious response to those aspects of the Project requiring approval by governmental authorities having jurisdiction there over. Fort Bend County agrees to exercise its rights of review and approval hereunder with due diligence, reasonableness, and good faith. Fort Bend County shall use its reasonable efforts to expedite any required review of the Project or other matters by any governmental authority.

14.4 Changes.

14.4.1 General. Fort Bend County may make changes to the Project by altering, adding to, or deducting from the Project. All changes in the Project which (a) require an adjustment in the contract sum or an adjustment in the final completion date or (b) involve a material change in the overall scope or function of the Project shall be requested and authorized before commencing such changes by use of written change order notices, Proposed Change Orders and Change Orders, which change order procedure shall be the exclusive means to effect such changes in the Project.

14.4.2 Change Order Procedure. If at any time Fort Bend County desires to make any change in the Project requiring the issuance of a Change Order, Fort Bend County shall so advise the Contractor in writing by delivery to the Contractor of a written notice describing the change. Upon receipt of such notice initiated by Fort Bend County, the Contractor shall within a reasonable period of time advise Fort Bend County of the Contractor's proposal for the adjustments, if any, in the contract sum, the schedule of values, and the final completion date attributable to such change by delivering a written notice thereof (the "Proposed Change Order") to Fort

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Bend County. Such Proposed Change Order shall contain a description of the proposed change and shall set forth the Contractor's estimate of the increase or decrease, if any, in the contract sum and the change, if any, in the schedule of values and the final completion date attributable to such change. If the Contractor desires to make a change in the Project requiring the issuance of a change order, the Contractor shall deliver to Fort Bend County a Proposed Change Order. Upon execution by Fort Bend County, a Proposed Change Order shall constitute (and be defined herein as) a "Change Order" for purposes of this Contract. The Contractor shall forthwith perform the work as changed in accordance with such Change Order. All work performed pursuant to a Change Order shall be performed in accordance with the terms of this Contract. All Proposed Change Orders shall be submitted for approval by Fort Bend County. No action, acquiescence or inaction by Fort Bend County or any representative of Fort Bend County shall be construed to be a waiver of requirements set forth in this Contract in regard to Change Orders or ratification of a violation of such requirements, and all acts in violation of this provision shall be considered void.

14.4.3 Change Order Authorization. Each Change Order shall be signed by Fort Bend County and an authorized representative of the Contractor.

14.4.4 Contract Sum Adjustments. The contract sum and the schedule of values shall be adjusted only as a result of a Change Order requiring such adjustment. Any extra work performed without a proper Change Order shall be considered voluntary and not subject to additional compensation. The Contractor shall not be entitled to an adjustment in the contract sum (or a Change Order permitting such adjustment) or to damages as a result of any delays in the Project caused by the acts or omissions of Fort Bend County, provided that this sentence is not applicable to delays that constitute more than 90 days in any 365-day period or cause the Project to be interrupted for a continuous period of 45 days through no fault of the Contractor.

14.4.5 When Fort Bend County and the Contractor agree upon the adjustments in the contract sum, the schedule of values, and the final completion date attributable to such adjustment, such agreement will be documented by preparation and if approved by the Fort Bend County Commissioners Court, execution of an appropriate Change Order.

14.5 Site Access. Prior to the transfer date, Fort Bend County and the Contractor shall have uninterrupted access to the construction site. Subsequent to the transfer date, Fort Bend County will permit the Contractor, the Engineer, and their representatives and subcontractors to enter upon the Project at times reasonably necessary to complete the punch list items.

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- 14.6 Applicable Laws and Regulations. Contractor shall in its performance of the Project comply with all applicable laws and regulations. Any delays in the prosecution of the Project caused by any changes in the laws and regulations or the application or enforcement of the laws and regulations may entitle the Contractor to an extension of time.
- 14.7 Familiarity with Project. The Contractor represents and accepts that it has: (a) visited the property(ies), (b) taken such other steps as may be necessary to ascertain the nature and location of the Project and the general and local conditions which affect the Project or the cost thereof, (c) investigated the labor situation as regards to the Project, (d) examined the property(ies), the obstacles which may be encountered and all other observable conditions having a bearing upon the performance of the Project, the superintendence of the Project, the time of completion and all other relevant matters, and (e) reported to Fort Bend County the results of all of the foregoing. The Contractor represents that it is familiar with all phases of the Project and the matters that may affect the Project or its prosecution under this Contract.
- 14.8 Standard of Performance. The Contractor shall prosecute (or cause to be prosecuted) the Project in accordance with the best efforts for the construction and development of projects similar to the Project in the State of Texas, using qualified, careful, and efficient contractors and workers and in conformity with the provisions of this Contract. The Contractor shall perform the work in a good and workmanlike manner.
- 14.9 Warranty of Contractor. The Contractor warrants to Fort Bend County that: (i) the Contractor possesses the skill and knowledge ordinarily possessed by well-informed members of its trade or profession and the Contractor will use its best efforts to ensure that the services provided under this Contract will be performed, delivered, and conducted in accordance with the best professional standards and in accordance with industry standards, and (ii) the Contractor is fully experienced and properly qualified to perform the class of work provided for herein, and that it is properly equipped, organized and financed to perform such work, and (iii) following the date of acceptance of this Contract, the services provided by the Contractor to Fort Bend County will conform to the representations contained in this Contract, including all attachments, schedules and exhibits. All warranties provided by the Contractor in this Contract shall be cumulative, shall be deemed consistent and not in conflict, are intended to be given full force and effect and to be interpreted expansively to give the broadest warranty protection to Fort Bend County.
- 14.10 Contractor's Personnel. Contractor shall employ only competent, skilled personnel for the Project. Prior to the final completion date, the Contractor shall maintain a superintendent who shall be authorized to act on behalf of the Contractor and with whom Fort Bend County may consult at all reasonable times. The superintendent shall not be transferred from the Project without Fort Bend County's consent (which shall not be unreasonably withheld or delayed); provided, however, the

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superintendent shall not be assigned solely to the Project and shall be entitled to spend reasonable time working on matters unrelated to the Project so long as such work on other matters does not render the superintendent unavailable to the Project or unavailable to Fort Bend County. However, such obligation to furnish the superintendent and such staff personnel shall not be construed (a) to preclude the promotion within the Contractor's organization of any person assigned to the Project or (b) to give rise to any liability of the Contractor if any person assigned to the Project (including, without limitation, the superintendent) leaves the Contractor's employment. If the superintendent is transferred from the Project, Fort Bend County shall have the right to approve the replacement superintendent (which approval will not be unreasonably withheld or delayed). The Contractor, the Architect, and the other subcontractors shall comply with all applicable health, safety, and loss prevention rules of applicable governmental authorities. The Contractor shall, at its own expense, remove from the Project any person who fails to comply with such rules and instructions. The Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ on the Project any unfit person or anyone not skilled in the work assigned to him. Fort Bend County may, upon written notice to the Contractor, require the Contractor to remove an individual immediately from providing services for the following reasons: violation of the terms and conditions of this Contract; violation of Fort Bend County's or the Contractor's work rules and regulations; criminal activity; or violation of state, federal, or municipal statutes. Fort Bend County may, upon thirty (30) days written notice to the Contractor, require the removal of any individual from providing services without cause.

- 14.11 Inspection. The Project and all parts thereof shall be subject to inspection from time to time by inspectors designated by Fort Bend County. No such inspections shall relieve The Contractor of any of its obligations hereunder. Neither failure to inspect nor failure to discover or reject any of the work as not in accordance with the drawings and specifications or any provision of this Contract shall be construed to imply an acceptance of such work or to relieve the Contractor of any of its obligations hereunder. Fort Bend County agrees that its right of inspection shall be used reasonably and in a timely manner so as not to delay orderly completion of the Project.
- 14.12 Protection Against Risks. The Contractor shall take all precautions which are necessary and adequate, against conditions created during the progress of the Project which involve a risk of bodily harm to persons or a risk of damage or loss to any property. The Contractor shall regularly inspect all work, materials and equipment to discover and determine any such conditions and shall be responsible for discovery, determination, and correction of any such conditions. The Contractor shall comply with all federal, state, and local occupational hazard and safety standards, codes and regulations applicable in the jurisdiction where the Project is being performed. The Contractor shall include the substance of this clause in its entirety in all subcontracts for any work to be performed at the construction site.

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14.13 Equipment. Except as expressly provided herein to the contrary, the Contractor shall furnish (or cause to be furnished) all construction, transportation, installation, tools, and other equipment and facilities required for the performance of the Project within the times specified herein. Such equipment and facilities shall be serviceable and kept fit for the uses intended. Defective items shall be removed from the construction site promptly and at the Contractor's cost. The Contractor shall schedule (or cause to be scheduled) its other operations so as to not interfere with its duty to timely furnish the necessary equipment and facilities and personnel to operate the same at the times necessary for the orderly completion of the Project.

14.14 Materials. Except as may be specifically provided otherwise in the Contract or approved in advance by Fort Bend County, the Contractor shall provide Fort Bend County with copies of material testing reports and to cause all materials, equipment, and fabricated items incorporated in the Project to be new and of a suitable grade of their respective kinds for their intended use.

15.0 TERMINATION:

15.1 Fort Bend County may terminate the Contract if the Contractor:

15.1.1 Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials.

15.1.2 Fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractor.

15.1.3 Persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction.

15.1.4 Otherwise is guilty of substantial breach of a provision of the Contract Documents.

15.2 When any of the above reasons exists, Fort Bend County may, without prejudice to any other rights or remedies of Fort Bend County and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

15.2.1 Take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor.

15.2.2 Finish the Project by whatever reasonable method Fort Bend County may deem expedient.

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- 15.3 Either party may terminate this Contract at any time by providing thirty (30) days written notice.
- 15.4 When Fort Bend County terminates the Contract for one of the reasons stated in this section, the Contractor shall not be entitled to receive further payment until the Project is finished. Therefore, the Contractor shall be promptly paid for all work actually and satisfactorily completed.

16.0 COMPLETION, TRANSFER, & ACCEPTANCE:

- 16.1 Final Completion. Upon the occurrence of the final completion date, the punch list items shall be promptly commenced and thereafter completed within thirty (30) days after final completion.
- 16.2 Transfer and Acceptance. Upon the occurrence of final completion, care, custody and control of the Project shall pass to Fort Bend County. As referenced herein, the "Transfer Date" shall mean the date on which the care, custody and control of the Project passes to Fort Bend County. Subsequent to the Transfer Date all risk of loss with respect to the Project shall be by Fort Bend County and the Contractor shall be thereafter obligated to cover the Project with their Insurance.

17.0 SUSPENSION BY FORT BEND COUNTY FOR CONVENIENCE:

- 17.1 Fort Bend County may, without cause, order the Contractor in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as Fort Bend County may determine.
- 17.2 An adjustment shall be made for increase in the cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent:
 - 17.2.1 That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible.
 - 17.2.2 That an equitable adjustment is made or denied under another provision of this Contract.
- 17.3 Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

18.0 INDEPENDENT CONTRACTOR:

The Contractor shall be an independent contractor and any provisions of this Contract that may appear to give Fort Bend County the right to direct the Contractor as to the details of the manner of doing the Project shall be deemed to mean that the Contractor shall follow the desires of Fort Bend County in the results of the Project only and not in the means whereby the Project is to be accomplished. The Contractor shall be responsible as to the details of completing the Project.

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Neither the agents, representatives, nor employees of the Contractor, shall be deemed to be the agents, representatives, or employees of Fort Bend County. The Contractor further represents that it accepts a fiduciary role and responsibility with respect to Fort Bend County and will, to its best abilities, act in the best interests of Fort Bend County and the timely completion of the Project. The Contractor agrees and understands that neither it nor any of its agents or employees may act in the name of Fort Bend County except and unless specifically authorized in writing by Fort Bend County to do so. The Contractor shall furnish construction administration and management services and use the Contractor's best efforts to complete the Project in an expeditious and economical manner consistent with the interests of Fort Bend County.

19.0 NOTICE

- 19.1 All written notices, demands, and other papers or documents to be delivered to Fort Bend County under this Contract shall be delivered to the Parks Department, 5855 Sienna Springs Way Suite 149, Missouri City, Texas 77459, or at such other place or places as Fort Bend County may from time to time designate by written notice delivered to the Contractor. For purposes of notice under this Contract, a copy of any notice or communication hereunder shall also be forwarded to the following address: Fort Bend County, 301 Jackson Street, Richmond, Texas 77469, Attention: County Judge.
- 19.2 All written notices, demands, and other papers or documents to be delivered to the Contractor under this Contract shall be delivered to the Authorized Representative identified in the Contract documents or such other place or places as the Contractor may designate by written notice delivered to Fort Bend County.

20.0 RECORDS:

- 20.1 Fort Bend County shall be the absolute and unqualified owner of all drawings, preliminary layouts, record drawings, sketches and other documents prepared pursuant to the Contract by Contractor.
- 20.2 The Contractor agrees to maintain and preserve for a period of at least five years after the earlier of the expiration of the defects period or termination of this Contract, accurate and complete records relating to the performance of the Project. The Contractor agrees to, upon request, provide Fort Bend County with such records.

21.0 SUCCESSORS & ASSIGNS:

- 21.1 Fort Bend County and the Contractor bind themselves and their successors, executors, administrators and assigns to the other party of this Contract and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Contract.
- 21.2 Neither Fort Bend County nor the Contractor shall assign, sublet or transfer its interest in this Contract without the prior written consent of the other.

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21.3 Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public and/or governmental body that may be a party hereto.

22.0 PUBLIC CONTACT:

Contact with the news media, citizens of Fort Bend County or governmental agencies shall be the sole responsibility of Fort Bend County. Under no circumstances, whatsoever, shall Contractor release any material or information developed in the performance of its services hereunder without the express written permission of Fort Bend County, except where required to do so by law.

23.0 MODIFICATIONS:

This instrument contains the entire Contract between the parties relating to the rights herein granted and obligations herein assumed. Any oral or written representations or modifications concerning this instrument shall be of no force and effect excepting a subsequent written modification signed by both parties hereto.

24.0 SILENCE OF SPECIFICATIONS:

The apparent silence of specifications as to any detail, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and that only material and workmanship of the finest quality are to be used. All interpretations of specifications shall be made on the basis of this statement. The items furnished under this contract shall be new, unused of the latest product in production to commercial trade and shall be of the highest quality as to materials used and workmanship. Manufacturer furnishing these items shall be experienced in design and construction of such items and shall be an established supplier of the item bid.

25.0 SEVERABILITY:

In the event one or more of the provisions contained in these requirements or the specifications shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and these requirements or the specifications shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

26.0 GOVERNING FORMS:

In the event of any conflict between the terms and provisions of these requirements and the specifications, the specifications shall govern. In the event of any conflict of interpretation of any part of this overall document, Fort Bend County's interpretation shall govern.

27.0 TAX EXEMPT:

Fort Bend County is exempt from state and local sales and use taxes under Section 151.309 of

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the Texas Tax Code. This Contract is deemed to be a separate contract for Texas tax purposes, and as such, Fort Bend County hereby issues its Texas Exemption for the purchase of any items qualifying for exemption under this Contract. Contractor is to issue its Texas Resale Certificate to vendors and subcontractors for such items qualifying for this exemption, and further, contractor should state these items at cost.

28.0 ENTIRE AGREEMENT:

The Parties agree that this Contract contains all of the terms and conditions of the understanding of the parties relating to the subject matter hereof. All prior negotiations, discussions, correspondence and preliminary understandings between the parties and others relating hereto are superseded by this Contract. By entering into this Contract, the parties do not intend to create any obligations, express or implied, other than those specifically set out in this Contract.

29.0 APPLICABLE LAW & VENUE

This Contract shall be construed under and in accord with the laws of the State of Texas, and all obligations of the parties created hereunder are performable in Fort Bend County, Texas, and that venue for any litigation arising out of or related to this Contract shall lie solely in the court of appropriate jurisdiction located in Fort Bend County, Texas.

30.0 ENCLOSURE:

The following being incorporated herein by reference for all purposes as though fully set forth herein word for word.

Enclosure #1 – Specifications and Plans

31.0 PRICING: Complete excel unit pricing form.

32.0 PROJECT DURATION:

Bidder agrees, if awarded the contract, to complete all work required by the contract documents **within _____ calendar days (maximum 120 days)** after issuance of a purchase order by the County Purchasing Agent and notice to proceed by the Parks Department.

33.0 AWARD:

This contract will be awarded to the overall lowest and best bid.

34.0 TEXAS ETHICS COMMISSION FORM 1295:

34.1 Effective January 1, 2016 all contracts executed by Commissioners Court, regardless of the dollar amount, will require completion of Form 1295 "Certificate of Interested Parties", per the new Government Code Statute §2252.908. All vendors submitting a response to a formal Bid, RFP, SOQ or any contracts, contract amendments, renewals or change orders are required to complete the

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Form 1295 online through the State of Texas Ethics Commission website. Please visit: <https://www.ethics.state.tx.us/filinginfo/1295/>

34.2 On-line instructions:

34.2.1 Name of governmental entity is to read: Fort Bend County.

34.2.2 Identification number used by the governmental entity is: B23-025.

34.2.3 Description is the title of the solicitation: Harlem Road Park Expansion.

34.3 Apparent low bidder(s) will be required to provide the Form 1295 within three (3) calendar days from notification; however, if your company is publicly traded you are not required to complete this form.

35.0 STATE LAW REQUIREMENTS FOR CONTRACTS:

The contents of this section are required by Texas Law and are included by County regardless of content.

35.1 Agreement to Not Boycott Israel Chapter 2271 Texas Government Code: Contractor verifies that if Contractor employs ten (10) or more full-time employees and this Agreement has a value of \$100,000 or more, Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

35.2 Texas Government Code Section 2251.152 Acknowledgment: By signature on vendor form, Contractor represents pursuant to Section 2252.152 of the Texas Government Code, that Contractor is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153.

36.0 HUMAN TRAFFICKING:

By acceptance of this contract, Contractor acknowledges that Fort Bend County is opposed to human trafficking and that no County funds will be used in support of services or activities that violate human trafficking laws

37.0 ADDITIONAL REQUIRED FORMS:

All vendors submitting are required to complete and return with submission:

37.1 Vendor Form

37.2 W9 Form

37.3 Tax Form/Debt/Residence Certification

Initials of Bidder: _____

37.4 Contractor Acknowledgement of Stormwater Management Program

37.5 Unit Pricing Form

Initials of Bidder: _____

**Contract Sheet
Bid 23-025**

**THE STATE OF TEXAS
COUNTY OF FORT BEND**

This memorandum of agreement made and entered into on the _____ day of _____, 20____, by and between Fort Bend County in the State of Texas (hereinafter designated County), acting herein by County Judge KP George, by virtue of an order of Fort Bend County Commissioners Court, and _____ (hereinafter designated Contractor).

(company name)

WITNESSETH:

The Contractor and the County agree that the bid and specifications for the **Harlem Road Park Expansion for Fort Bend County** which are hereto attached and made a part hereof, together with this instrument and the bond (when required) shall constitute the full agreement and contract between parties and for furnishing the items set out and described; the County agrees to pay the prices stipulated in the accepted bid.

It is further agreed that this contract shall not become binding or effective until signed by the parties hereto and a purchase order authorizing the items desired has been issued.

Executed at Richmond, Texas this _____ day of _____ 20_____.

Fort Bend County, Texas

By: _____
County Judge, KP George

By: _____
Signature of Contractor

By: _____
Printed Name and Title

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number									
-				-					
or									
Employer identification number									
-									

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note. ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

Limited Liability Company (LLC). If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note. You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.ssa.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/businesses and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting IRS.gov or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee ¹ The actual owner ¹
5. Sole proprietorship or disregarded entity owned by an individual	The owner ³
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity ⁴
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

*Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: spam@uce.gov or contact them at www.ftc.gov/idtheft or 1-877-IDTHEFT (1-877-438-4338).

Visit IRS.gov to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

Job No.: _____

TAX FORM/DEBT/ RESIDENCE CERTIFICATION
(for Advertised Projects)

Taxpayer Identification Number (T.I.N.): _____

Company Name submitting Bid/Proposal: _____

Mailing Address: _____

Are you registered to do business in the State of Texas? Yes No

If you are an individual, list the names and addresses of any partnership of which you are a general partner or any assumed name(s) under which you operate your business

I. **Property:** List all taxable property in Fort Bend County owned by you or above partnerships as well as any d/b/a names. Include real and personal property as well as mineral interest accounts. (Use a second sheet of paper if necessary.)

Fort Bend County Tax Acct. No.*

Property address or location**

* This is the property account identification number assigned by the Fort Bend County Appraisal District.

** For real property, specify the property address or legal description. For business personal property, specify the address where the property is located. For example, office equipment will normally be at your office, but inventory may be stored at a warehouse or other location.

II. **Fort Bend County Debt** - Do you owe any debts to Fort Bend County (taxes on properties listed in I above, tickets, fines, tolls, court judgments, etc.)?

Yes No

If yes, attach a separate page explaining the debt.

III. **Residence Certification** - Pursuant to Texas Government Code §2252.001 *et seq.*, as amended, Fort Bend County requests Residence Certification. §2252.001 *et seq.* of the Government Code provides some restrictions on the awarding of governmental contracts; pertinent provisions of §2252.001 are stated below:

(3) "Nonresident bidder" refers to a person who is not a resident.

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

I certify that _____ is a Resident Bidder of Texas as defined in Government Code §2252.001.
[Company Name]

I certify that _____ is a Nonresident Bidder as defined in Government Code §2252.001 and our principal place of business is _____.

[City and State]

Mandatory Form



Contractor Acknowledgement of Storm Water Management Program

I hereby acknowledge that I am aware of the stormwater management program and standard operating procedures developed by Fort Bend County in compliance with the TPDES General Permit No. TXR040000. I agree to comply with all applicable best management practices and standard operating procedures while conducting my services for Fort Bend County. I agree to conduct all services in a manner that does not introduce illicit discharges of pollutants to streets, stormwater inlets, drainage ditches or any portion of the drainage system. The following materials and/or pollutant sources must not be discharged to the drainage system as a result of any services provided:

1. Grass clippings, leaves, mulch, rocks, sand, dirt or other waste materials resulting from landscaping activities, (except those materials resulting from ditch mowing or maintenance activities)
2. Herbicides, pesticides and/or fertilizers, (except those intended for aquatic use)
3. Detergents, fuels, solvents, oils and/or lubricants, other equipment and/or vehicle fluids,
4. Other hazardous materials including paints, thinners, chemicals or related waste materials,
5. Uncontrolled dewatering discharges, equipment and/or vehicle wash waters,
6. Sanitary waste, trash, debris, or other waste products
7. Wastewater from wet saw machinery,
8. Other pollutants that degrade water quality or pose a threat to human health or the environment.

Furthermore, I agree to notify Fort Bend County immediately of any issue caused by or identified by:

(Company/Contractor)

that is believed to be an immediate threat to human health or the environment.

Contractor Signature

Date

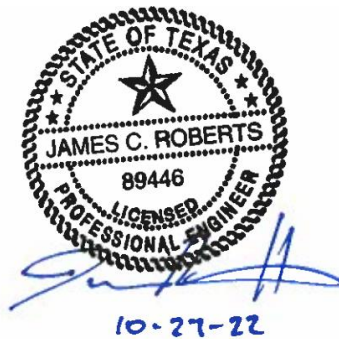
Printed Name

Title

FORT BEND COUNTY PARKS DEPARTMENT

HARLEM ROAD PARK EXPANSION

TECHNICAL SPECIFICATIONS



OCTOBER 2022



PREPARED BY



20239 SH 249, Suite 350, Houston, Texas 77070 Tel: 281-883-0103

TECHNICAL SPECIFICATIONS

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ITEM 205

SUBGRADE

- 205.1 Description. This Item shall govern the proof rolling and compaction of the subgrade for pavements. When the road is to be surfaced or paved and after the earthwork has been substantially completed and after all storm sewer and drains have been laid, the subgrade shall be brought to the lines, grades and typical cross-section shown on the plans and in accordance with these Standard Specifications.
- 205.2 Construction Methods. After stripping, the Contractor shall proof roll the subgrade, i.e. verify that the subgrade is firm and able to support construction equipment and correct any soft or yielding areas by:
- A. scarifying and aerating,
 - B. replacing unsuitable material with suitable material from the project site, or borrow as per Item 130 "Borrow" and authorized by the Engineer,
 - C. stabilization, etc.

Proof rolling equipment shall meet the requirements of Item 216 "Proof Rolling" of the Texas Department of Transportation's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges", Latest Edition.

Whenever unsuitable natural material is encountered below the top of subgrade elevation and cannot be economically amended to make it suitable, then the following requirements shall apply:

- A. The unsuitable material shall be excavated to a depth deemed sufficient by the Engineer and the excavated material shall be disposed of legally outside the project limits as per Item 110.
- B. The excavated area shall be filled to its original level with suitable material from the project site; or borrow as per Item 130 as directed by the Engineer. The fill material shall be compacted to 95 percent of standard proctor density in accordance with ASTM D698 "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))", using a moisture content between optimum and plus/minus 3 percent of optimum.

All holes and depressions shall be filled with approved material.

Stabilized Subgrade. If the subgrade is to be stabilized, refer to the appropriate Standard Specification Item for additional construction requirements.

Unstabilized Subgrade. If the subgrade is not to be stabilized, it shall be compacted to 95 percent of standard proctor density in accordance with ASTM D698, using a moisture content between optimum and plus/minus 3 percent of optimum. Any subgrade, without stabilization, shall be compacted to a minimum depth of 9 inches. The subgrade shall be brought to the lines and grades required.

The subgrade shall be kept free from all ruts and weak spots. Any ruts and weak spots that develop under construction traffic shall be repaired with suitable material as they develop.

205.3 Quality Assurance. The Testing Laboratory's representative shall determine the Moisture-Density Relationship in accordance with ASTM D698, on material secured from the roadway or borrow source, for each type of material encountered or used.

The Testing Laboratory's representative shall determine the in-place density in accordance with ASTM D6938, "Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)" or ASTM D1556, "Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method." The minimum level of testing shall consist of the following:

- A. at least one test per station per lane of roadway.
- B. a lane is defined as 12' wide section of pavement regardless of its use.

205.4 Measurement and Payment. The work prescribed under this Item, shall not be paid for directly, but shall be considered as subsidiary work of the Item 110 "Roadway Excavation" and/or Item 130 "Borrow".

There are no line codes for this Item.

NOTE: This Item requires other Standard Specifications

Item 110 "Roadway Excavation"
Item 130 "Borrow"

END OF ITEM 205

NOTE: Item 360 is a general specification. Specific to the pickleball courts, see also Spec Item AT-001 for Concrete Preparation which shall govern if Items conflict. Concrete strength shall be 3,500 psi, revise mix accordingly.

FOR PROJECTS INITIATED
AFTER SEPTEMBER 1, 2017
REVISION 18

ITEM 360

CONCRETE PAVEMENT

- 360.1 Description. This Item shall govern for a pavement of portland cement concrete with reinforcement. The pavement shall be as shown on the drawings, and may or may not include monolithic curbs. The pavement includes any driveways that are included in the project bid.

The pavement shall be constructed as herein specified on the prepared subgrade or other base course in conformity with the thickness and typical cross-sections shown on the drawings, and to the lines and grades established by the Engineer. All materials shall be provided from an approved Texas Department of Transportation (TxDOT) supplier and it shall be the responsibility of the Contractor to provide certification that such approval has been met. In addition, other tests or approvals may be required at the discretion of the Engineer.

- 360.2 Materials. Harris County's standard mix design shall contain minimum 5-1/2 sacks (94 pounds per sack) of cementitious material (including fly ash as necessary) per cubic yard and achieve a minimum compressive strength of 3,000 psi at 28 days.

The use of fly ash is acceptable and when used, the mix design shall contain 5-1/2 sacks of cementitious material per cubic yard with a fly ash content of not more than 25 percent by weight, and will achieve a minimum compressive strength of 3,000 psi at 28 days. It is recommended that the percent of fly ash by weight be reduced to a maximum of 20 percent during cold weather concreting (average ambient temperature, over a 24 hour period after placement, less than 50° F). Fly ash shall be Class C or Class F, conforming to the requirements of ASTM C618 "Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete." Fly ash shall have a minimum combined Oxide content of 50 percent for Class C or 70 percent for Class F. Do not use Class C fly ash in sulfate-resistant (Type II cement) concrete.

"High Early Strength Concrete" shall contain 7 sacks of portland cement (only) per cubic yard and may be produced from either Type I, Type II, or Type III portland cement with other chemical admixtures.

Concrete Components:

Concrete shall be composed of portland cement, fly ash (if required), water, chemical admixtures and coarse and fine aggregates, as outlined below:

- A. Portland cement shall meet the requirements of ASTM C150 "Standard Specification for Portland Cement." Unless otherwise permitted or required, cement shall be Type I, Type II, or Type III.
- B. Fly Ash for concrete pavement (if applicable) shall meet the requirements of TxDOT's DMS-4610, "Fly Ash." Fly ash is not allowed for use in High Early Strength Concrete.
- C. Mixing water for concrete shall conform to the requirements of ASTM C1602 "Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete."
- D. Chemical admixtures shall conform to the following specifications:
 - 1. Air-entraining admixtures shall conform to the requirements of ASTM C260 "Standard Specification for Air-Entraining Admixtures for Concrete"
 - 2. Chemical admixtures shall conform to the requirements of ASTM C494 "Standard Specification for Chemical Admixtures for Concrete."
- E. Aggregates shall conform to ASTM C33 "Standard Specification for Concrete Aggregates."

Coarse aggregate shall consist of durable particles of gravel, crushed stone, or combinations thereof, free from frozen material or injurious amounts of salt, alkali, vegetative matter, or other objectionable material either free or as an adherent coating, and its quality shall be reasonably uniform throughout. It shall contain no more than 0.25 percent by weight of clay lumps and not more than 1.0 percent by weight of laminated and/or friable particles. When tested by ASTM C136 "Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates" and C117 "Standard Test Method for Minerals Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing", it shall meet the following grading requirements:

TABLE 1

COARSE AGGREGATE GRADATION

SIEVE SIZE	% RETAINED, BY WEIGHT
1-3/4 Inch	0
1-1/2 Inch	0 – 5

SIEVE SIZE	% RETAINED, BY WEIGHT
3/4 Inch	30 – 65
3/8 Inch	70 – 90
No. 4	95 – 100

The loss by decantation shall be a maximum of 1 percent

- F. Fine aggregate shall consist of clean, hard, durable and uncoated particles of natural or manufactured sand or a combination thereof, with or without mineral filler. It shall be free from frozen material, or injurious amounts of salt, alkali, vegetative matter or other objectionable material and it shall not contain more than 0.5 percent, by weight, of clay lumps. When subjected to the color test for organic impurities, ASTM C40 “Standard Test Method for Organic Impurities in Fine Aggregates for Concrete”, the fine aggregate shall show a color not darker than the standard.

Unless otherwise specified, fine aggregate shall meet the following grading requirements:

TABLE 2

FINE AGGREGATE GRADATION

SIEVE SIZE	% RETAINED BY WEIGHT
3/8 Inch	0
No. 4	0 – 5
No. 8	0 – 20
No. 16	15 – 50
No. 30	35 – 75
No. 50	65 – 90
No. 100	90 – 100
No. 200	97 – 100

Fine aggregate shall be subjected to ASTM D2419 “Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate”. The sand equivalent shall be not less than 80.

Mineral filler shall consist of stone dust, clean crushed sand or other approved inert material.

Reinforcing Steel:

Unless otherwise designated on the drawings, or herein, all bar reinforcement shall be deformed and shall conform to ASTM A615 "Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement", Grade 60, open hearth, basic oxygen or electric furnace new billet steel. The use of Grade 40 is permissible for bars that must be bent. The use of prefabricated deformed steel bar mats, conforming to ASTM A184 "Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement", is not permitted.

Tie bars (including L-bars) shall be the same spacing and diameter as the transverse or longitudinal bars (as the case may be), and shall be tied to the transverse or longitudinal reinforcing steel being used in the pavement. Tie bars shall be a minimum of 30 inches in length. Type III adhesives meeting the requirements of TxDOT Material Specification DMS-6100 "Epoxy and Adhesives" shall be used for installing drilled-in reinforcing steel and dowels, into the existing concrete pavements.

Expansion Joints:

Boards for expansion joint filler shall be 3/4 inch finished thickness. The material for the boards shall consist of "All Heart Merchantable Redwood" or composite material as approved by the Engineer. The joint filler shall meet the testing requirements of ASTM D545 "Standard Test Methods for Preformed Expansion Joint Fillers for Concrete Construction (Non-extruding and Resilient Types)."

If the joint filler used is a bituminous composite, it shall meet the requirements of ASTM D1751 "Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)."

Joint sealant shall meet the requirements of ASTM D6690 "Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements", Type II or III. Joint sealant for expansion joints shall be installed 1/4 inch below the top of pavement elevation. Prefabricated expansion joints may be used with approval by the Engineer.

Load transmission devices shall consist of an 18 inch smooth dowel placed as shown on the Standard Civil Drawing. The dowel size varies with pavement thickness as shown on the Concrete Pavement Details of the Harris County Standard Civil Drawings. Dowels may be sheared or saw cut to the desired length.

360.3

Storage of Materials. Cement shall be stored in well ventilated weathertight buildings, bins, or silos which shall exclude moisture and contaminants.

Aggregate stockpiles shall be arranged and used in such a manner as to avoid contamination, with other materials or with other sizes of like aggregates. To ensure that this condition is met, any test for determining conformance to requirements for cleanliness and grading shall be performed on samples secured in accordance with ASTM D75 "Standard Practice for Sampling Aggregates." Frozen or partially frozen aggregates shall not be used. Unless otherwise authorized by the Engineer, all aggregate shall be stockpiled at least 24 hours prior to use, to reduce free moisture content.

Chemical admixtures shall be stored in such a manner as to avoid contamination, evaporation, or damage. For those used in the form of suspensions or non-stable solutions, agitating equipment shall be provided to assure thorough distribution of the ingredients. Liquid admixtures shall be protected from freezing and from temperature changes which would adversely affect their characteristics.

- 360.4 Proportioning of Concrete. Concrete for all parts of the work shall be of the specified quality, capable of being placed without excessive segregation and, when hardened, shall develop all characteristics required by this Item and the contract documents.

The specified compressive strength of the concrete, for each portion of the structure, shall be as designated in the contract documents. Strength requirements shall be based on the 28 day and 7 day compressive strength, respectively.

- 360.5 Concrete Classification. Concrete shall be classified as shown in Table 3 of Item 421 "Structural Concrete".

- 360.6 Selection of Proportions. Proportions of materials for concrete shall be established to provide:

- A. Workability and consistency to permit concrete to be worked readily into forms and around reinforcement under conditions of placement to be employed without segregation or excessive bleeding.
- B. Strength requirements in accordance with Table 3 of Item 421.
- C. Resistance to special exposure as required by the Engineer and as specified in the contract documents or in Special Provisions.

Unless otherwise permitted, the concrete mix design shall be proportioned to provide a slump between 1 and 6 inches. A slump range of 1 to 3-1/2 inches shall be used for concrete placed with a slip form paver, while

vibrated concrete shall have a slump range of 2-1/2 to 6 inches, when tested in accordance with ASTM C143 "Standard Test Method for Slump of Hydraulic-Cement Concrete." A slump test will be made for each sample of concrete obtained, or when slumps appear to be outside specification requirements. The allowable air content for moderate exposure is:

AGGREGATE SIZE	% AIR CONTENT
1-1/2 Inch	2.5 - 4.5
3/4 Inch	3.5 – 5.0

The Engineer may reject any concrete shown to be outside of these requirements.

All concrete pavement shall have a minimum design compressive strength of 3,000 psi at 28 days. A minimum of 4 test cylinders shall be made for each 150 cubic yards, or portion thereof, placed each day. Samples shall be taken in accordance with ASTM C172 "Standard Practice for Sampling Freshly Mixed Concrete" and molded and cured in accordance with ASTM C31 "Standard Practice for Making and Curing Concrete Test Specimens in the Field."

All test specimens shall be prepared in accordance with ASTM C617 "Standard Practice for Capping Cylindrical Concrete Specimens" and tested in accordance with ASTM C39 "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens." Two specimens shall be tested at 7 days and two specimens shall be tested at 28 days. The acceptance test results shall be the average of the two specimens tested for each age interval. If one specimen in a test age indicates evidence of improper sampling, handling, molding or testing, it shall be discarded and the strength of the remaining specimen shall be considered the test result. Should both specimens in a test interval show any of the aforementioned defects, the Engineer may request that cores be taken in the affected area.

Additional test specimens may be required due to concrete placing conditions and due to use of high early strength concrete. No extra compensation shall be allowed for materials and work involved in fulfilling these requirements.

360.7

Equipment. All equipment necessary for the construction of concrete pavement shall be on the job and shall have been approved by the Engineer as to condition, before the Contractor will be permitted to begin construction operations on which the equipment is to be used.

Side forms shall be of metal of approved cross-section. The preferred depth of the form shall be equal to the required edge thickness of the pavement. Forms with depths less than the required edge thickness of the pavement will be permitted, provided the difference between the form depth and the edge thickness is not greater than 1 inch, and further provided that forms of a depth, less than the pavement edge are brought to the required edge thickness by securely attaching wood or metal strips, of approved section, to the bottom of the form, or by grouting under the form.

The length of form sections shall be not less than 10 feet and each section shall provide for staking in position with not less than 3 pins. Flexible or curved forms of wood or metal of proper radius shall be used for curves of 100 foot radius or less. Forms shall be of ample strength and shall be provided with adequate devices for secure setting so that when in-place they will withstand without visible springing or settlement, the impact and vibration of the finishing machine. The forms shall be free from warp, bends or kinks and shall be sufficiently true to provide a reasonably straight edge on the concrete. The top of each form section, when tested with a straight edge, shall conform to the requirements specified for the surface of the completed pavement. Sufficient forms shall be provided for satisfactory prosecution of the work.

A minimum of two hand vibrators is required at the jobsite when placing concrete. A hand vibrator shall be used around all load transfer devices and intersections where screeds or slip form pavers cannot be operated.

Pavement shall be finished by machine, except as hereinafter provided. Placement shall be the Contractor's responsibility and shall be based upon equipment sequences utilized in accordance with the recommendations and practices of ACI 304R "Guide for Measuring, Mixing, Transporting, and Placing Concrete", and with the approval of the Engineer.

The Contractor shall furnish and maintain at least two standard 10 foot steel or aluminum straight edges.

Where applicable, the Contractor shall furnish a sufficient number of bridges equipped to ride on the forms and span the pavement for finishing operations and for the installation and finishing of joints and center strips. All necessary finishing and edging tools shall be furnished as may be required to complete the pavement in accordance with the drawings.

360.8

Slip Form Paver. Slip form pavers are allowed by Harris County.

360.9 Subgrade and Forms. The subgrade shall be prepared as required by the applicable subgrade specification items. Rolling and sprinkling shall be performed as necessary, or as directed. The roadbed shall be completed to the elevation as required on the typical sections shown on construction drawings. Drainage of the roadbed shall be maintained at all times.

The subgrade shall be finished to the exact section of the bottom of the pavement as shown on plans. The subgrade shall be maintained in a smooth, compacted condition, in conformity with the required section and established grade until the pavement is placed, and shall be kept thoroughly wetted down sufficiently in advance of placing any pavement to insure its being in a firm and moist condition for at least 2 inches below the prepared surface. No equipment or hauling shall be permitted on the prepared subgrade, except on special permission of the Engineer, which will be granted only in exceptional cases and only where a suitable protection in the form of two-ply timber mats or other approved material is provided.

The subgrade under the forms shall be firm and cut true to grade so that each form section when placed will be firmly in contact for its whole length and base width, and exactly at the established grade. Any subgrade under the forms below established grade shall be corrected, using suitable material, placed, sprinkled and rolled as directed. Forms shall be staked with at least 3 pins for each 10 foot section. A pin shall be placed at each side of every joint. Form sections shall be tightly joined and keyed to prevent relative displacement. Forms shall be cleaned and oiled each time they are used.

Sufficient subgrade shall be prepared far enough in advance of concrete placement to allow a minimum of 300 feet of forms to be set in place in advance of concrete placement at all times (with exception of intersections, etc.) or as approved by the Engineer. Conformity of the grade and alignment of forms shall be checked immediately prior to placing concrete and all necessary corrections made by the Contractor. Where any form has been disturbed or any subgrade has become unstable, the form shall be reset and rechecked. In exceptional cases, the Engineer may require suitable stakes driven to the grade of the bottom of the forms to afford additional support. Sufficient stability of forms to support the equipment operated thereon and to withstand its vibration without springing or settlement shall be required. If forms settle over 1/8 inch under finishing operation, paving operations shall be stopped and the forms shall be reset to line and grade.

Forms shall remain in place for a minimum of 8 hours after the concrete has been placed. They shall be carefully removed so that there is little or no damage done to the edge of the pavement. Any damage resulting

from this operation shall be immediately repaired. After the forms have been removed, the ends of all joints shall be cleaned, and any honeycombed areas pointed up with an approved mortar.

Immediately after pointing is complete, the form trench shall be filled with earth from the shoulders in such manner as to shed water from rainfall or curing away from the edge of the pavement. On completion of the required curing, the subgrade or shoulders adjacent to the pavement shall be placed in condition to maintain drainage.

360.10 Reinforcing Steel and Joint Assemblies. All reinforcing steel, tie bars, load transmission units and splices used in accordance with plan provisions meeting the requirements of Item 440 "Reinforcing Steel", shall be accurately placed and secured in position in accordance with the details shown on drawings.

Reinforcing bars shall be secured at all splices and at alternating intersections. The tie bars shall be installed in required position by the method and device shown on drawings, or by approved method and device equivalent thereto. Bar coatings required by plans, and of material specified, shall be completed and the bars and coating shall be free of rust, dirt or other foreign matter at the time of installation in the concrete. Reinforcing bars shall be supported on bar chairs or other approved devices placed on maximum 36 inches center each way, and placed so that the reinforcing bar is located at the centerline of the concrete.

Where plans require an assembly of parts at pavement joints, the assembly shall be completed, placed at required location and elevation, and all parts rigidly secured in required position as shown on plans, or by approved method and devices equivalent thereto. Dowel bars shall be accurately installed in joint assemblies in accordance with drawings, each parallel to the pavement, and shall be rigidly secured in required position by such means (as shown on plans, or approved equivalent thereto) that will prevent displacement of the dowels during placing and finishing of the concrete. The assembled units comprising the load transmission devices shall be accurately installed in joint assemblies in accordance with plans. Each unit shall be vertical with its length perpendicular to the centerline of the pavement, and all units shall be rigidly secured in required position by such means (as shown on drawings, or approved equivalent thereof) that will prevent displacement of the expansion joint during placing and finishing of the concrete. Joint filler shall be accurately notched to receive each load transmission unit. All load transmission units shall be free of rust and clean when installed in the concrete.

360.11 Concrete Placing. Except by specific written authorization of the Engineer, concrete shall not be placed when the ambient temperature is

below 40°F and falling. Concrete may be placed when the ambient temperature is above 35°F and rising, the ambient temperature being taken in the shade and away from artificial heat.

The Contractor shall have available a sufficient supply of approved cotton mats, polyethylene sheeting or other approved covering materials to immediately protect concrete if the air temperature falls to 32°F, or below, if the concrete has been in place for less than 4 hours. Such protection shall remain in place during the period the temperature continues 32°F or below, or for a period of not more than 5 days. Neither salt nor other chemical admixtures shall be added to the concrete to prevent freezing. The Contractor shall be responsible for the quality and strength of concrete under cold weather conditions and any concrete damaged by freezing shall be removed and replaced at the Contractor's expense.

When the concrete reaches a temperature of 85°F, retarders shall be introduced into the mixture.

If the concrete temperature continues to rise and reaches 95°F, a plasticizer shall be introduced into the mixture. Above 95°F, ice may be used to control temperature, in lieu of a plasticizer.

For concrete between temperatures of 85°F through 95°F, the slump shall be as specified in this Item. For concrete with temperatures between 95-100°F, slumps shall be as specified by the Engineer. The temperature of the concrete shall at no time exceed 100°F. Once concrete has reached a temperature above 100°F, it shall be rejected.

The amount of retarder or plasticizer, introduced into a mixture, shall be in accordance with the manufacturer's recommendations. See Section 360.2, Materials, for requirements of admixtures.

No concrete shall be used if:

- A. the concrete has developed initial set, or
- B. the concrete has not been placed within 1-1/2 hours after the initial water has been added.

Pouring concrete during inclement weather, which would adversely affect the quality and/or finish of the concrete pavement does not relieve the Contractor of his responsibility to provide a pavement that complies with the Item.

360.12 Joints. All transverse and longitudinal joints in the pavement shall be at the locations and of the type shown on the drawings.

Expansion Joints:

Transverse expansion joints shall be formed perpendicular to the centerline and surface of the pavement, and shall be constructed in accordance with the drawings.

The seal space shall be created by either of the following methods:

- A. Seal Space Form (aka Rip Strip) After the transverse finishing machine and before the longitudinal finishing machine has passed over the joint, the Contractor shall test the joint assembly for correctness of position and make any required adjustment in position of the joint assembly. After removal of the seal space form, the seal space above the joint assembly shall be thoroughly cleaned and the concrete faces of the seal space shall be left true to line and section throughout the entire length of the joint.
- B. Other method as approved by the Engineer.

On completion of curing of the pavement, the expansion joint sealant of the type specified shall be placed in accordance with drawings. The faces of the seal space shall be washed and cleaned and surface-dry at the time sealant is placed. On completion of sealing, the pavement surface (adjacent to the joint) shall be left free of sealing material.

Sawcut Joints: - Transverse Contraction and Longitudinal

All contraction joints (transverse or longitudinal) that are not at the edge or end of a pour shall be saw cut. Metal or fiber "rip" strips placed in the uncured concrete will not be permitted. Where sawed joints are required, they shall be sawed as soon as sawing can be accomplished, without damage to the pavement, and as directed by the Engineer. Once sawing has commenced, it shall be continued until completed. The saw cut shall be made with one pass of the concrete saw. Sawing must be accomplished even in rain or cold weather. All sawing must be completed within 24 hours of the concrete pavement placement. Within 24 hours of completing the concrete pour, all sawcut joints shall be sawed and washed of all residue. Should the sawing for any day's placement fail to be completed within 48 hours; the following concrete placement shall be limited to the amount that was sawed on time. The limitation shall continue until the sawing crew demonstrates it can handle a larger volume of sawing.

The sawed cut shall be a minimum of 1/4 inch width and have a depth of one-fourth the thickness of the pavement. After sawcutting, the joint shall

be sealed with joint sealer, in accordance with the instructions supplied by the manufacturer of the joint sealant. Sealant shall fill the joint from bottom to 1/4 inch below concrete surface. Use of backer rods in sawcut joints is prohibited.

Unless otherwise specified, transverse sawed control joints shall be constructed at 20 foot intervals measured along the centerline of the pavement section, or as directed by the Engineer.

Longitudinal Construction Joints:

When constructing a longitudinal construction joint, all applicable provisions of Section 360.7 shall apply in addition to the following requirements:

The face of the bulkhead at the joint shall be grooved or recessed as necessary to provide the required spaces for the top and bottom breaker strips as shown on plans. The bulkhead shall be either drilled or notched to receive the tie bars. Tie bars shall be secured in required position by use of adequate transverse bracing and vertical supports meeting the approval of the Engineer.

360.13 Terminating Concrete Placement:

Normal Terminating Procedures. Concrete placement shall be terminated at an expansion joint or a transverse construction joint that is coincidental with a location of a proposed contraction joint.

When the concrete placement is terminated at an expansion joint or a transverse construction joint, the complete joint assembly shall be installed and rigidly secured in the required position as shown on the plans.

A bulkhead of sufficient cross-sectional area to:

- A. prevent deflection and
- B. accommodate the dowels

shall be provided. The bulkhead shall be shaped accurately to the cross-section of the pavement and installed as a back-up for the expansion joint header or transverse construction joint header and rigidly secured in the required position to permit accurate finishing of the concrete up to the joint.

After the concrete has been finished to the joint, formation of the joint seal space and finishing of the joint shall be executed as specified herein and in accordance with plan requirements. The back-up bulkhead shall remain in place until immediately prior to the time when concrete placement is resumed. It shall then be carefully removed in such manner that no element of the joint assembly will be disturbed. The exposed portions of the joint assembly shall be free of adherent concrete, dirt or other material.

Unscheduled Terminating Procedures. When concrete placement must be terminated at a location other than an expansion joint or transverse construction joint, all applicable provisions of Section 360.7 shall apply, in addition to the following requirements:

A bulkhead shall be installed as a vertical form to pour the concrete against. The bulkhead adjoining the pavement end shall consist of upper and lower panels, with a gap of approximately two inches between, through which the reinforcing steel mat extends. During the concrete pouring process, some concrete will extrude through the gap, which is to be left in place to create a roughly formed "keyway" into the subsequent pour section.

Concrete shall be placed and finished to this bulkhead. Any concrete that falls onto the subgrade ahead of the bulkhead shall be removed and disposed of as directed. The seam created by a construction joint of this type shall have a saw-cut seal space and shall be sealed as required for construction joints.

360.14 Finishing. All finishing shall be in accordance with ACI 325.6R "Texturing Concrete Pavements".

The Engineer shall approve the straightedge. The surface of the concrete shall not vary from the straightedge by more than 1/16 inch per foot from the nearest point of contact, and in no case shall the maximum deviation from a ten foot straightedge to the pavement be greater than 1/8 inch. Any high spots causing a departure from the straightedge in excess of that specified shall be ground down by the Contractor to meet the surface test requirements, when required by the Engineer.

360.15 Curing. The Contractor shall prevent surface drying of the pavement before application of curing system by means that may include water fogging, use of wind screens or the use of evaporation retardants. He shall provide for protection of freshly laid concrete against pitting and washing from rain, by placement of canvas and/or waterproof covering material to protect all placed concrete. The covering material is required to be on the jobsite at the time and place of pouring.

The curing system may be:

- A. Liquid Membrane. Liquid membrane curing shall be used as per Item 526 "Membrane Curing".
- B. Additional Curing Methods. Other methods meeting the requirements of ACI 308R "Standard Practice for Curing Concrete" must be submitted by the Contractor in writing prior to concrete placement and approved by the Engineer.

360.16

Protection of Pavement and Opening to Traffic. The Contractor shall erect and maintain the barricades required by the plans, and such other barricades and approved devices necessary to exclude public traffic and traffic of his employees and agents from the newly placed pavement for the periods of time hereinafter prescribed. Portions of the roadway, or crossings of the roadbed required to be maintained open for use by traffic, shall not be obstructed by the above required barricades. Crossings of the pavement required by plans, or by construction sequence, during the period prior to opening to traffic as herein specified, shall be provided with an adequate and substantial bridge, approved by the Engineer.

Cracked pavement shall be cored by Harris County any time after the 28 day cure time is complete. The location of these cores shall be selected by the Engineer. Pavement that has developed full depth cracks (greater than $t/4$ inch depth, where t = thickness of pavement) may, at the County's option, be left in place and repaired by the epoxy injection method. Otherwise the cracked pavement shall be removed and replaced. There shall be no additional payment for repairs or replacement. Basis of removal for cracked pavement shall be determined by the engineer and the extent of this pavement removal shall be based on the crack pattern and number of cracks in each panel. If the cracks are wide spread (vertically or horizontally) or close to expansion joint or control joint, and over a large area of 12 foot wide panel, then entire panel shall be removed and replaced as determined by the Engineer.

Surface cracks $t/4$ inches and less in depth may be repaired by the epoxy injection method at no cost to the County.

Prior to epoxy injection, the Contractor shall submit to the County for approval, the injection method to be used. The Contractor shall furnish a minimum of 2 year warranty when utilizing the epoxy injection method.

New pavement sections shall be closed to all traffic, both PUBLIC and CONSTRUCTION, until the concrete has attained a compressive strength of 2,700 psi. If the Contractor or the County desires to open the new

pavement section to traffic early, an additional set of test cylinders must be requested for an early test. If the early test indicates that the minimum compressive strength requirement has been met, and if all other requirements of this Item have been met, the pavement section can be opened to traffic. If the Contractor requests the early test, the Contractor will pay the cost. If the County requests the early test, the County will pay the cost. Such opening of a new pavement section, to PUBLIC or CONSTRUCTION traffic, shall in no manner relieve the Contractor from his responsibility of the work.

On those sections of pavement to be opened to PUBLIC traffic, the pavement shall be thoroughly cleaned, stable material shall be placed, graded, and compacted against the pavement edge or curb unless otherwise specified. Joints shall be sealed and cured, and all required traffic control work shall be performed for the safety of the traffic.

The Engineer may require the opening of pavement to traffic prior to the minimum strength specified above under conditions of emergency, which in his opinion, require such action in the interest of the public. In no case shall the Engineer order opening of the pavement to traffic within less than 72 hours after the last concrete in the sections is placed unless an approved high early strength concrete was used. The Contractor shall remove any curing mats, place earth against the pavement edges, and perform other work involved in providing for the safety of traffic as required by the Engineer in ordering emergency opening. Orders for emergency opening of the pavement to traffic will be issued by the Engineer in writing.

360.17 Backfilling Behind Curbs and in Medians and Directional Islands. The Contractor is required to backfill behind all curbs and within medians and directional islands, after completion of the paving operation. The backfill material shall be on-site material having the prior approval of the Engineer. No separate payment shall be made for backfilling behind curbs and in medians and directional islands, but it shall be considered incidental to this Item.

360.18 Deficient Pavement Thickness. It is the intent of this Item that the pavement be constructed in strict conformity with the thickness and typical sections shown on plans.

Concrete Placement Method.

A. Conventional Side Form Paving: The Engineer will check the pavement thickness in accordance with the dimensions shown on the plans. The Engineer will perform 1 thickness test consisting of 1 reading at approximately the center of the paving equipment

every 500 feet or fraction thereof. All deficiencies from plan thickness shall be corrected prior to concrete placement.

- B. Slip Form Paving: The Engineer will check the pavement thickness in accordance with TxDOT's Test Procedure Tex-423-A. The Engineer will perform 1 thickness test consisting of 1 reading at approximately the center of the paving equipment every 500 feet or fraction thereof. Verify deficiencies of more than 0.2 inches from plan thickness and determine the limits of deficiencies of more than 0.75 inches from plan thickness by coring. Core where directed, in accordance with ASTM C174 "Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores." Fill core holes using a concrete mixture and method approved by the Engineer.

Thickness Deficiencies Greater than 0.2 inches. When any depth test measured in accordance with Tex-423-A is deficient by more than 0.2 inches from the plan thickness, take one core at that location to verify the measurement.

If the core is deficient by more than 0.2 inches but less than 0.75 inches from the plan thickness, take 2 additional cores from the unit (500 foot length) at intervals of at least 150 feet and at locations selected by the Engineer, and determine the thickness of the unit for payment purposes by averaging the lengths of the 3 cores. (See Table for "Deficient Pavement Thickness price Adjustment Factor").

Thickness Deficiencies Greater than 0.75 inches. If a core is deficient by more than 0.75 inches, take additional cores at 10 foot intervals in each direction parallel to the centerline to determine the boundary of the deficient area. The Engineer will evaluate any area of pavement found deficient in thickness by more than 0.75 inches. As directed, the Contractor shall remove and replace the deficient areas with concrete pavement of thickness shown on the plans, without additional compensation.

Pavement Units for Payment Adjustment. Limits for applying a payment adjustment for deficient pavement thickness from 0.20 inches to not more than 0.75 inches are 500 feet of pavement in each lane. Lane width will be shown on typical sections and pavement design standards.

For pavement thickness deficiencies greater than 0.75 inches, the limits for requiring removal will be defined by coring as determined by the Engineer. The remaining portion of the unit determined to be less than 0.75 inches deficient will be subject to the payment adjustment based on

the average core thickness at each end of the 10 foot interval investigation as determined by the Engineer.

Shoulders will be measured for thickness unless otherwise shown on the plans. Shoulders 6 feet wide or wider will be considered as lanes. Shoulders less than 6 feet wide will be considered part of the adjacent lane.

Limits for applying payment adjustment for deficient pavement thickness for ramps, widenings, acceleration and deceleration lanes, and other miscellaneous areas are 500 feet in length. Areas less than 500 feet in length will be individually evaluated for payment adjustment based on the plan area.

TABLE FOR DEFICIENT PAVEMENT THICKNESS PRICE
ADJUSTMENT FACTOR

DEFICIENCY IN THICKNESS DETERMINED BY CORES IN INCHES	PROPORTIONAL PART CONTRACT PRICE ALLOWED
0.00 to 0.20	100 Percent
0.21 to 0.30	80 Percent
0.31 to 0.40	72 Percent
0.41 to 0.50	68 Percent
0.51 to 0.75	57 Percent
Over 0.75	Remove and Replace

Any area found deficient in thickness by more than 0.75 inches shall be removed and replaced, at the Contractor's entire expense, with concrete of the thickness shown on drawings.

No additional payment over the contract unit price will be made for any pavements of a thickness exceeding that required on drawings and planing of concrete pavement shall not be allowed.

360.19 Non-Conforming Concrete. Any concrete deemed non-conforming, which in the opinion of the Engineer is unsatisfactory, shall be removed and replaced at the expense of the Contractor.

360.20 Quality Assurance. The Testing Laboratory's representative will sample concrete delivered to the site in accordance with ASTM C172 and will mold four specimens for each 150 cubic yards. Each time a set of specimens is molded, the slump will be determined in accordance with ASTM C143 and the air content in accordance with ASTM C173

“Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method” or ASTM C231 “Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.” Concrete cores, if required, shall be tested in accordance with ASTM C174 (9 point procedure) and ASTM C39.

360.21 Measurement. Concrete pavement shall be measured by the square yard of the specified mix design and thickness of completed and accepted pavement. Dowels, when required, are incidental to this Item, and do not require measurement.

360.22 Payment. The work performed and the materials furnished as prescribed by this Item and measured as provided under "Measurement" shall be paid for at the unit price bid for "Concrete Pavement", or "Concrete Pavement, High Early Strength", as required, or the adjusted unit price for pavement of deficient thickness as provided under "Penalty for Deficient Pavement Thickness", which price shall be full compensation for shaping and fine grading the roadbed, including furnishing and applying all water required; for furnishing, loading and unloading, storing, handling all concrete ingredients, including all freight and royalty involved; for mixing, placing, finishing and curing all concrete; for furnishing all materials for and placing longitudinal, warping, expansion, sawed control and contraction joints, and load transmission units, and joint filler material in proper position; for coating steel bars where required by plans, for furnishing and placing all reinforcing steel, for drilling dowel holes in the existing concrete pavement, providing and installing dowels and epoxy grouting them where required by the plans; and for all manipulations, labor, equipment, appliances, tools, traffic provisions and incidentals necessary to complete the work.

There are line code(s), description(s) and unit(s) for this Item.

NOTE: This Item requires other Standard Specifications

Item 205 “Subgrade”
Item 421 “Structural Concrete”
Item 440 “Reinforcing Steel”
Item 526 “Membrane Curing”

END OF ITEM 360

ITEM 530

CONCRETE CURB, CONCRETE CURB & GUTTER,
SIDEWALKS AND DRIVEWAYS

530.1 Description. This Item shall govern for curb, monolithic curb and gutter, sidewalks and/or driveways, with or without reinforcing steel, composed of portland cement concrete constructed on approved subgrade, foundation material, or finished surface in accordance with the lines and grades established by the Engineer and in conformance with the details shown on the plans. ADA compliance is required for sidewalks and ramps.

As used in this Item the word "curb" refers to standard 6 inch, doweled, and mountable concrete curbs, and monolithic curb and gutter.

530.2 Materials. Concrete used in conventionally formed construction shall be minimum Class D2 concrete, meeting the requirements of Item 421 "Structural Concrete". Concrete for extruded construction shall also be minimum Class D2.

Cement mortar shall conform to ASTM C270 "Standard Specification for Mortar for Unit Masonry", Type M. Aggregate for mortar shall conform to ASTM C144 "Standard Specification for Aggregate for Masonry Mortar."

In construction of concrete curb, concrete curb and gutter, sidewalks and driveways, the Contractor has the option of using portland cement or portland cement plus fly ash, as defined herein. Cement plus fly ash shall be composed of portland cement and 20-30 percent fly ash, by weight. Fly ash shall be Class C or Class F, conforming to the requirements of ASTM C618 "Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete."

Reinforcing steel shall conform to the requirements of Item 440 "Reinforcing Steel".

Membrane curing materials shall meet the requirements of the Item 526 "Membrane Curing".

Bank sand, used as bedding material for concrete sidewalks, shall meet the requirements of Item 402 "Bank Sand Backfill".

530.3 Construction Methods. Any required excavation and backfill shall be completed in accordance with Item 400 "Structural Excavation and Backfill", except for measurement and payment, and/or in accordance with Item 110 "Roadway Excavation" and Item 132 "Embankment".

For conventionally formed concrete, the subgrade, foundation, or pavement surface shall be shaped to the line, grade and cross-section and if considered necessary by the Engineer, hand tamped and sprinkled. If dry, the subgrade or foundation material shall be sprinkled lightly immediately before concrete is deposited thereon.

Outside forms shall be of wood or metal, of a section satisfactory to the Engineer, straight, free of warp and of a depth equal to the depth required. They shall be securely staked to line and grade, and maintained in a true position during the depositing of concrete. Inside forms for curbs shall be of approved material, shall be of such design as to provide the curb required and shall be rigidly attached to the outside forms.

The reinforcing steel and/or dowels, if required, shall be placed in the position shown by the plans. Care shall be exercised to keep all steel in its proper location.

After the concrete has been struck off and after it has become sufficiently set, the exposed surfaces shall be thoroughly worked with a wooden float. The exposed edges shall be rounded by the use of an edging tool to the radius indicated on the plans. Unless otherwise specified on the plans, when the concrete has become sufficiently set, the inside form for curbs shall be carefully removed and the surface shall be plastered with a mortar consisting of one part of portland cement and two parts of fine aggregate. The mortar shall be applied with a template made to conform to the dimensions as shown on the plans. All exposed surfaces shall be brushed to a smooth and uniform surface.

Sidewalks shall be constructed in sections of the lengths shown on the plans. Unless otherwise provided by the plans, no section shall be of a length less than 8 feet and any section less than 8 feet shall be removed by the Contractor at his own expense. The different sections shall be separated by a premolded or board joint of the thickness shown on the plans, placed vertically and at right angles to the longitudinal axis of the sidewalk. Where the sidewalks or driveways abut a curb or retaining wall, approved expansion material shall be placed along their entire length. Similar expansion material shall be placed around all obstructions protruding through sidewalks or driveways. Sidewalks shall be marked into separate sections, each 4 feet in length, by the use of approved jointing tools. The reinforced concrete sidewalk shall be placed on a bedding material of bank sand, at a minimum of 2" thick.

Curbs, gutters and curb and gutters shall be placed in sections of 80 foot maximum length unless otherwise shown on the plans. Joints shall be

constructed at such locations and of the type as directed and specified on the plans.

All concrete placed under this Item shall contain 4 percent \pm 1-1/2 percent entrained air. The completed work shall be cured for a period of not less than 72 hours in accordance with the requirements of the Item 526 "Membrane Curing". Color of concrete shall be in accordance with Item 531 "Coloring Concrete for ADA Ramps".

Extruded Concrete Curbs:

For extruded concrete construction, the concrete shall be placed by an extrusion machine approved by the Engineer. When placement is directly on subgrade or foundation materials the foundation shall be hand-tamped and sprinkled if considered necessary by the Engineer. If the concrete is placed directly on the surface material or pavement, such surface shall be thoroughly cleaned. If required by plan details, the cleaned surface shall then be coated with an approved or other coating as specified at the rate of application per vendor recommendations.

The horizontal alignment shall be maintained from a "guide" line set by the Contractor. The alignment shall strictly conform to the details shown on the plans. The forming tube of the extrusion machine shall be readily adjustable vertically, during the forward motion of the machine to provide variable heights necessary to conform to the established grade line. To provide a continuous check on the grade, a pointer or gauge shall be attached to the machine in such a manner that a comparison can be made between the extruded work and the grade line. Other methods may be used if approved by the Engineer.

The mix shall be fed into the machine in such a manner and at such consistency that the finished work will present a well compacted mass with a surface free from voids and honeycomb and true to the established shape, line and grade.

Any additional surface finishing specified and/or required, shall be performed immediately after extrusion. Joints shall be constructed at such location as directed by the Engineer and to the details shown on the plans.

All concrete placed under this item shall contain 4 percent \pm 1-1/2 percent entrained air. The completed work shall be cured for a period of not less than 72 hours in accordance with the requirements of the Item 526, "Membrane Curing".

530.4 Measurement. Work and accepted material as prescribed by this Item for concrete curb, will be measured by the linear foot, complete in place.

Work and accepted material as prescribed by this Item for concrete sidewalks shall be measured by the square yard of surface area, complete in place including bank sand bedding material, as indicated on the plans.

Work and accepted material as prescribed by this Item for ADA curb ramps shall be measured by units of each, or square yard of surface area at specified depth, complete in place. When required, the Contractor's coordination of a TDLR inspection shall be an integral part of each ADA compliant sidewalk construction site.

Work and accepted material as prescribed by this Item for concrete driveways, shall be measured by the square yard of surface area, at specified depth complete in place.

530.5 Payment. The work performed and the materials furnished as prescribed by this Item and measured as provided under measurement will be paid for at the unit price bid for:

- A. "Concrete Curb" of the type indicated on the plans
- B. "Concrete Sidewalks" of the width, and type indicated on the plans.
- C. "ADA Curb Ramps"
- D. "Concrete Driveways"

The price for each item shall be full compensation for:

- A. Cleaning and coating the base
- B. Furnishing and applying all water, mortar, adhesives or other material, including reinforcing steel and dowel bars, if required
- C. For furnishing, loading and unloading, storing, hauling and handling all ingredients, including all freight and royalty involved
- D. For mixing, placing, finishing, sawing, cleaning and sealing joints and curing all concrete
- E. For furnishing all materials for sealing joints and placing joints and joint filler material in proper position
- F. For all manipulations, labor, equipment, appliances, tools, traffic provisions and incidentals necessary to complete the work.

There are line code(s), description(s), and unit(s) for this Item.

NOTE: This Item requires Standard Civil Drawings that shall be incorporated into the contract documents.

NOTE: This Item requires other Standard Specifications.

Item 110 "Roadway Excavation"
Item 132 "Embankment"
Item 360 "Concrete Pavement"
Item 400 "Structural Excavation and Backfill"
Item 402 "Bank Sand Backfill"
Item 440 "Reinforcing Steel"
Item 526 "Membrane Curing"
Item 531 "Coloring Concrete for ADA Ramps"

END OF ITEM 530



APPLICATION OF ACRYTECH OVER CONCRETE

Concrete can be a long lasting base for the application of ACRYTECH if the concrete is prepared properly. Acrylic coatings on concrete have a tendency to bubble or blister, leading to de-lamination of the surface. This condition is not necessarily the fault of the installer but is caused by the nature of concrete itself.

Concrete has strong chemicals that may migrate up through the surface and leave a residue. Water and water vapor are absorbed and released by concrete and can cause peeling and blistering. There are some steps that must be taken when pouring new concrete that can help ensure better bonding of the surface coatings. Most resurfacing over concrete slabs, whether driveways or tennis courts, are on slabs that were not prepared correctly for accepting surface coatings so owners should be made aware of possible bonding problems.

These steps should be taken on new concrete slabs before surface coating:

1. A vapor barrier should be installed under new slabs. Vapor barriers should generally consist of two layers perpendicular to each other with taped joints.
2. On the concrete, a broom finish is necessary to ensure a mechanical bond of the coatings.
3. Concrete should naturally cure a minimum of 30 days, preferably 60, to allow proper curing. Spring and Fall seasons tend to require longer curing times.
4. Curing agents can cause substantial issues and are not recommended as they may interfere with bonding. Moisture curing is recommended. If a curing agent is requested, verify with the manufacturer there won't be adhesion issues using a latex product over the concrete.
5. New concrete should be acid etched with a water diluted muriatic or phosphoric acid solution and thoroughly rinsed or pressure washed.
6. A latex or epoxy primer is necessary to ensure good chemical bonding.
7. Concrete should be dry so water vapor transmission won't affect bonding.

Helpful Hints

1. Existing paint may need to be removed if there is delamination or peeling.
2. If the acid solution does not bubble on the concrete surface it is not going to etch the concrete.
3. To acid etch fill an empty bucket with 4 gallons of water and pour the acid into the bucket. This helps with splattering and potential acid burns. Wear protective clothing, boots and goggles. Pour the solution onto the surface and scrub using stiff brushes. Push brooms work well. Once the solution stops bubbling you are finished with that area and you can move to the next. It is very important to rinse off the spent acid. Pressure washing is recommended.
4. A quick test of how well the new surface will bond is to stick a piece of masking tape on the

slab. If it doesn't stick, then the paint may not stick without more preparation. Another test is to paint a small test area with surfacing materials and after drying stick a piece of masking tape on it. Peel off the tape. If the paint sticks to the tape instead of the concrete, there could be a problem.

5. A good test for moisture content is to tape a piece of plastic onto the surface and see how much condensation occurs under the plastic after 24 hours.
6. Concrete that has been slick finished with commercial finishing equipment is difficult to obtain a good bond. Shot blasting, scarifying or extreme etching may be necessary.
7. Fewer coats are better than many coats. More coats seal off water vapor transmission and promote blistering.
8. Cushion courts are not recommended for outdoor concrete surfaces because of the thickness of the coatings.
9. Fibers in the poured concrete can be problematic but can also aid in bonding of the surface coatings. If the concrete has fibers, they may not be evident until an acid bath is completed. After the first coat of ACRYTECH the fibers may stick out from the surface. This gives the coatings a stronger bond than without fibers in the concrete. Before the final coat is applied the visible fibers can be scraped or burned off with a propane torch resulting in a fiber reinforced coating.

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Surfacing and Resurfacing Specification for Tennis Courts and Recreational Surfaces

PART 1 – GENERAL

1.1 General Description

A. This specification is for a colored and textured acrylic surfacing system for use on asphalt and concrete tennis courts, basketball courts, running tracks, volleyball courts, and other recreational surfaces.

B. This specification is for the surfacing/resurfacing of tennis courts/recreational surfaces located at Fort Bend County Harlem Road Park, Richmond, Texas.

City

State

Zip

1.2 Quality Assurance

A. All work shall conform to American Sports Builders Association (ASBA) guidelines.

B. All coatings, patching and resurfacing compounds shall be ACRYTECH by Stegas, Inc. of Decatur, GA or approved equal.

C. For Tennis Courts, the surfacing system must be International Tennis Federation court pace classified as category 3 medium.

D. The contractor shall record the batch number of each product used on site and maintain it through the warranty period.

E. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on site. For volume estimates, visit www.tennispaint.com and see the Paint Estimator.

1.3 Submittals (see www.tennispaint.com for items A-C)

A. Technical Data Sheets (TDS) for system components and one color chart

B. Material Safety Data Sheets (MSDS) for system components

C. Manufacturer's warranty of no less than one year

D. Installer Certification from the manufacturer

1.4 Material Handling and Storage

A. Store and move materials in accordance with the manufacturer's TDS and MSDS.

PART 2 – PRODUCTS

2.1 Manufacturer

A. Stegas, Inc., Decatur, GA, Product: ACRYTECH, www.tennispaint.com

B. Approved Equal: Submit documentation to demonstrate to the owner that alternate products are of equal quality to the specified product.

2.2 Materials

A. ACRYTECH Sport Patch (Deep Patch): A 100% acrylic latex emulsion, that when mixed with Portland cement and sand, produces semi flexible latex concrete that is ideal for patching depressions over 1/4" deep and filling cracks larger than 3/8" wide. ACRYTECH Sport Patch is appropriate for use when applied to asphalt or concrete surfaces, or to previously coated surfaces.

1. Percent solids by weight: 47%
2. Weight: 8.8 lbs/gal

B. ACRYTECH AcryLock: A 100% self-crosslinking, ultra-low VOC acrylic emulsion, that when mixed with 1 part water, penetrates, primes and creates a topside vapor barrier in concrete surfaces.

1. Percent solids by weight: 43%
2. Weight 8.7 lbs/gal

C. ACRYTECH Acrylic Resurfacer: A 100% acrylic latex emulsion concentrate designed for the addition of water and silica sand on site for hiding patchwork, smoothing, and preparing for ACRYTECH Colorguard. Apply 1-2 coats as according to section 3.5.

1. Percent solids and pigments by weight: 45%
2. Weight: 9.5 lbs/gal

D. ACRYTECH Colorguard: A 100% acrylic latex emulsion concentrate designed for the addition of water and silica sand (texture) on site to be used as a secondary and final coating.

1. Percent solids and pigments by weight: 47%
2. Weight: 9.8 lbs/gal

E. ACRYTECH Colorguard Premix: Colorguard factory mixed with silica sand at the ITF Medium court pace classification rate.

1. Percent solids by weight: 65%
 2. Weight: 12.5 lbs/gal
- F. ACRYTECH Line Primer: Optional clear drying primer to prevent line bleeding and create the most precise lines. Recommended for professional courts.
1. Percent solids and pigments by weight: 29%
 2. Weight: 10 lbs/gal
- G. ACRYTECH White Line Paint: A 100% acrylic latex emulsion textured bright white line marking paint. 20-25% of White Line Paint may be added to Colorguard colors to create lighter colors commonly used for QuickStart lines.
1. Percent solids and pigments by weight: 71%
 2. Weight: 12.4 lbs/gal

PART 3 – EXECUTION

3.1 Limitations

- A. DO NOT APPLY WHEN:
1. Rain is in the near forecast.
 2. Surface temperatures exceed 54°C (130°F). Surface temperatures may be reduced by misting surface with water prior to application except on the final coat of Colorguard.
 3. When ambient air temperatures are or will be below 1°C (34°F) within 48 hours.

3.2 New Construction (asphalt)

- A. Allow asphalt to cure a minimum of 14 days.
- B. Inspect asphalt for irregularities, including contamination and unevenness. Findings, if any, shall be reported to general contractor.
- C. Remove any mold, mildew, algae, dirt, grease, oil and other debris from surface using issue-specific cleaners and rinse as needed.
- D. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to completely cure.

3.3 New Construction (concrete) – see ACRYTECH concrete prep TDS

- A. For proper bonding, concrete should have a broom finish and a vapor barrier installed.
- B. Allow concrete to cure a minimum of 30 days.
- C. Inspect concrete for irregularities, including contamination and unevenness. Findings, if any, shall be reported to general contractor.

- D. Acid bath concrete using muriatic acid. Follow manufacturers' recommendations. Pressure wash and rinse as needed.
- E. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed.
- F. Prepare concrete with ACRYTECH AcryLock.

3.4 Existing Construction (asphalt or concrete)

- A. Pressure wash surface to remove mold, mildew, algae, dirt, grease, oil and other debris.
- B. Inspect surface for irregularities, including contamination and unevenness. Findings, if any, shall be reported to general contractor.
- C. Fill cracks with ACRYTECH Sport Patch (Deep Patch).
- D. Use other specified crack repair method if specified.

3.5 Application - No coatings shall be applied until inspector has approved the surface.

- A. All Surfaces-apply coatings with soft rubber squeegee. Allow each coat to completely dry (usually 1-3 hours) prior to applying next coat.
- B. Mix Acrylic Resurfacer and Colorguard according to the charts below. If Colorguard Premix is used, only add 15-18 gallons of water per 40 gallons of Premix.
 1. Apply one to two coats of Acrylic Resurfacer (new or rough surfaces require two coats).
 2. Apply two coats of Colorguard - Standard durability suitable for most courts.
 3. Apply a third coat of Colorguard - Supreme durability for high use professional courts.

ACRYTECH Acrylic Resurfacer Mixing Chart
27.5 gal concentrate - 1 or 2 coats

Filling Power	Greater Filling (e.g. New asphalt)	Standard Filling
Sand Grade	80 mesh	80 mesh
Sand Qty	250 pounds	200 pounds
Water	15-18 gallons	15-18 gal

ACRYTECH Colorguard Mixing and Court Speed of Play chart
27.5 gal concentrate - 2 to 3 coats

Speed of Play	Medium-Slow	ITF Medium (Standard)	Medium-Fast
Sand Grade	80 mesh	80 mesh	80 mesh
Sand Qty	225 pounds	200 pounds	150 pounds
Water	15-18 gallons	15-18 gallons	15-18 gallons

3.6 Line Markings

- A. Apply only after ACRYTECH Colorguard is thoroughly dry, up to 24 hours after final coat.
- B. Lines shall be laid out in accordance with USTA guidelines
- C. Lines shall be applied by painting in between machine laid masking tape with a soft bristle brush or high-quality roller.
- D. Apply one coat of ACRYTECH Line Primer (optional) – Recommended for professional courts.
- E. Apply one coat of ACRYTECH White Line Paint. Depending on brush or roller quality, a second coat may be required.
 - 1. Up to 20 feet at a time if ambient air temperature exceeds 30°C (86°F).
 - 2. Up to 40 feet at a time if ambient air temperature is under 30°C (86°F).

3.7 Completion

- A. Remove all construction equipment, leftover materials and waste from site.
- B. No traffic of any kind shall be allowed on the surface for a period of 24 to 72 hours. After that period, check surface to make sure the surface has sufficiently dried. Cloudy conditions, rain showers or temperatures below 70 degrees may extend the required drying time. ACRYTECH Recreational Coatings are fully cured in 30 days.

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ACRY-Lock

ACRY-Lock is a specifically engineered Styrene-Butadiene latex-based product for use over painted and unpainted asphalt and concrete surfaces. ACRY-Lock both seals and waterproofs underlying paint or substrates and prevents the leeching of concrete salts (efflorescence) or asphalt impurities into following layers of paint.

1.0 PREPARATION

1.1 New Construction (asphalt)

- a. Allow asphalt to cure a minimum of 14 days.
- b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.

1.2 New Construction (concrete)

- a. For proper bonding concrete should have a broom finish and a vapor barrier installed.
- b. Allow concrete to cure a minimum of 28 days.
- c. Acid bath concrete using muriatic acid and pressure wash. Follow manufacturers' recommendations.
- d. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed.

1.3 Existing Coatings (asphalt or concrete)

- a. Pressure wash surface to remove dirt, mildew and other contaminants.
- b. Fill cracks with ACRYTECH Sport Patch (Deep Patch) or other crack repair method.

2.0 APPLICATION (DO NOT DILUTE)

- 2.1 Apply one coat of ACRY-Lock over the entire surface using a roller, brush, or sprayer. Do not use a squeegee, as it may leave puddles or thick spots. Coverage rate will vary depending on surface texture, porosity, and application tool. Ensure an average coverage rate of .05-.07 gallons per square yard.
- 2.2 Do NOT leave puddles or thick spots.
- 2.3 Apply an additional coat or spot treat only if:
 - a. there are visible pin holes or bare spots
- 2.4 Allow to thoroughly dry before applying other ACRYTECH surfacing products. 3 to 4 hours.

3.0 LIMITATIONS

Do not apply when temperatures are under 50°F or will be under 50°F within 24 hours.

Do not apply when surface temperatures exceed 100 °F. Temperatures may be reduced by misting with water.

Do not apply when rain is expected within 24 hours.

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www.Tennispaint.com

2660 Easterly Place Decatur, GA 30035

The logo for ACRYTECH™ SPORTS SURFACES is displayed in a dark blue rectangular box with a yellow border. The word "ACRYTECH" is in a large, bold, yellow sans-serif font, with a trademark symbol (™) to its upper right. Below it, the words "SPORTS SURFACES" are in a smaller, bold, yellow sans-serif font.

ACRYTECH™

SPORTS SURFACES

4.0 PHYSICAL PROPERTIES

Color	Neutral/Natural
Weight per gallon	10.2 lbs
Application Temp.	50-100°F
Coverage Rate	.05-.07 gal/yd ²
Dry time (minimum)	3 hours
Shelf Life	1 year
Tensile Strength (ASTM D412)	827 psi
Elongation (ASTM D412)	355%
Alkali Resistance (PCA14 Test Procedure)	Excellent

A product of Stegas, Inc.

www.Tennispaint.com

2660 Easterly Place Decatur, GA 30035



COLORGUARD TDS

1.0 General Description

ACRYTECH Colorguard (Made in America since 1995) is a 100% Acrylic Latex Emulsion Concentrate Surfacing System designed to be a playing surface for asphalt or concrete based tennis courts, basketball courts, running tracks, volleyball courts, and other recreational surfaces. ACRYTECH Colorguard is highly resistant to wear and ultra-violet degradation and does not contain any asbestos, lead or mercury.

ACRYTECH Colorguard is available in two forms, a concentrate, where sand is added on site and pre-mixed (sand factory added at the rate to achieve a Medium court pace). The speed of play is directly related to the size of sand and sand content. Less sand results in a faster speed of play. Larger sand results in a slower speed of play. See 7.0 for speed of play adjustments.

ACRYTECH Colorguard colors: Beige, Bright Red, Competition Blue, Competition Green, Forest Green, Gray, Light Blue, Medium Green, Maroon, Pro Blue, Pro Green, Purple, Red, Standard Blue, and Terra Cotta. Custom colors are available upon request.

2.0 Safety Guidelines

Avoid contact with eyes, skin and clothing. Refer to MSDS for additional information.
Wear proper NIOSH approved respirator when handling silica sand.

3.0 Storage and Handling

Protect from freezing. Store between 4°C (40°F) and 32°C (90°F).
Packaging: 55 gallon drum (560 lbs.), 30 gallon drum (300 lbs.), 5 gallon pail (53 lbs.). Drums are heavy.
Use caution when moving.

4.0 Coverage

Coverage varies upon surface condition and porosity.
Texture coat: .04-.05 gal of concentrate per square yard.
Finish coat (top layer on inline skating surface): .03-.04 gal of concentrate per square yard.

5.0 Preparation Guidelines

5.1 New Construction (asphalt)

- a. Allow asphalt to cure a minimum of 14 days.
- b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.

5.2 New Construction (concrete)

- a. For proper bonding concrete should have a broom finish and a vapor barrier installed.
- b. Allow concrete to cure a minimum of 30 days.
- c. Acid bath concrete using muriatic acid. Follow manufacturers' recommendations.
- d. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed.
- e. Prime concrete with ACRYTECH Adhesion Promoter.

5.3 Existing Construction (asphalt or concrete)

- a. Pressure wash surface to remove dirt, mildew and other contaminants.
- b. Fill cracks with ACRYTECH Sport Patch (Deep Patch) or other crack repair method.

6.0 Application

6.1 All Surfaces-apply with soft rubber squeegee. Allow 1 to 3 hours for drying time between coats.

- a. Apply one to two coats of Acrylic Resurfacer (rougher surfaces may require two coats).
- d. Apply at least two coats of Colorguard.

7.0 Mixing Instructions

ACRYTECH Acrylic Resurfacer Chart 27.5 gal concentrate - 1 or 2 coats

Filling Power	Greater Filling (e.g. New asphalt)	Standard Filling
Sand Grade	80 mesh	80 mesh
Sand Qty	250 pounds	200 pounds
Water	15-18 gallons	15-18 gal

ACRYTECH Colorguard Court Speed of Play chart 27.5 gal concentrate - 2 or 3 coats

Speed of Play	Medium-Slow	ITF Medium (standard)	Medium-Fast
Sand Grade	80 mesh	80 mesh (#7)	80 mesh
Sand Qty	225 pounds	200 pounds	150 pounds
Water	15-18 gallons	15-18 gallons	15-18 gallons

8.0 Limitations

DO NOT APPLY WHEN:

1. Rain is in the near forecast.
2. Surface temperatures exceed 54°C (130°F). Surface temperatures may be reduced by misting surface with water prior to application except on the final coat of Colorguard.
3. When ambient air temperatures are or will be below 1°C (34°F) within 48 hours.

9.0 Physical Properties

Warranty	2 years
Weight per gallon	9.8 lbs
Application and curing Temp.	34-130°F
Average dry time	2 - 4 hours
Cure time before use (min)	48 hrs



WHITE LINE PAINT TDS

1.0 General Description

ACRYTECH White Line Paint is a 100% Acrylic Latex Emulsion textured line marking paint. It is uniquely formulated to leave crisp, clean lines without needing a line primer/sealer and only in one coat. It is designed for use on asphalt or concrete based tennis courts, basketball courts, running tracks, volleyball courts, and other recreational surfaces. ACRYTECH White Line Paint is highly resistant to wear and ultra-violet degradation and does not contain any asbestos, lead or mercury.

2.0 Safety Guidelines

Avoid contact with eyes, skin and clothing. Refer to MSDS for additional information.

3.0 Storage and Handling

Protect from freezing. White Line Paint should be stored between 4°C (40°F) and 32°C (90°F).

Packaging: 1 gallon squeeze bottles (11 lbs).

4.0 Coverage

1 gallon covers one tennis court (480 linear feet at 2" wide)

5.0 Application

Apply only after ACRYTECH Colorguard is thoroughly dry, up to 24 hours after final coat. Apply 1 (2nd optional) coat with soft bristle brush or high quality roller. Apply up to 20 feet at a time if ambient air temperature exceeds 30°C (86°F). Apply up to 40 feet at a time if ambient air temperature is under 30°C (86°F).

8.0 Limitations

DO NOT APPLY WHEN:

1. Rain is in the near forecast
2. Surface temperatures exceed 54°C (130°F).
3. Do not apply when ambient air temperatures are below 10°C (50°F)

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www.Tennispaint.com

2988 Angelletta Dr. Austell, GA 30106



Acrylic Resurfacer TDS

1.0 General Description

ACRYTECH Acrylic Resurfacer is a 100% Acrylic Latex Self-Crosslinking Concentrate designed to be a filling and repair layer for asphalt or concrete based tennis courts, basketball courts, running tracks, volleyball courts, and other recreational surfaces. ACRYTECH Acrylic Resurfacer is highly resistant to wear and ultra-violet degradation and does not contain any asbestos, lead, mercury, heavy metals, PCB, or formaldehyde.

Acrylic Resurfacer is available in two forms, a concentrate, where sand is added on site and textured (sand factory added).

2.0 Safety Guidelines

Avoid contact with eyes, skin and clothing. Refer to Safety Data Sheet for additional information. Wear proper NIOSH approved respirator when handling silica sand.

3.0 Storage and Handling

Protect from freezing. Store between 4°C (40°F) and 32°C (90°F).

Concentrate: 55 gallon drum (560 lbs.), 30 gallon drum (300 lbs.), 5 gallon pail (53 lbs.)

Textured (with sand): 39 gal in 55 gal drum (520 lbs.), 30 gallon drum (390 lbs.), 5 gallon pail (65 lbs.)

4.0 Coverage

Coverage varies upon surface condition, porosity, and sand size.

Acrylic Resurfacer concentrate: .04-.07 gal of concentrate per square yard.

Textured: .065-.075 gal of concentrate per square yard.

5.0 Preparation Guidelines

5.1 New Construction (asphalt)

- a. Allow asphalt to cure a minimum of 14 days.
- b. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed and allow to cure.

A product of Stegas, Inc.

www.Tennispaint.com

770.734.3000



5.2 New Construction (concrete)

- a. For proper bonding concrete should have a broom finish and a vapor barrier installed.
- b. Allow concrete to cure a minimum of 30 days.
- c. Acid bath concrete using muriatic acid. Follow manufacturers' recommendations.
- d. Flood surface with water to check for depressions 1/16" or greater. Fill with ACRYTECH Sport Patch (Deep Patch) as needed.
- e. Prime concrete with ACRYTECH Acry-Lock.

5.3 Existing Construction (asphalt or concrete)

- a. Pressure wash surface to remove dirt, mildew and other contaminants.
- b. Fill cracks with ACRYTECH Sport Patch (Deep Patch) or other crack repair method.

6.0 Application

- 6.1 All Surfaces-apply with soft rubber squeegee. Allow 1 to 3 hours for drying time between coats.
- a. Mix Acrylic Resurfacer, sand, and water according to the mixing chart in 7.1 and apply at least one coat.

7.0 Mixing Instructions

7.1. ACRYTECH Acrylic Resurfacer Chart
27.5 gal concentrate - 1 or 2 coats

Filling Power	Greater Filling (e.g. New asphalt)	Standard Filling
Sand Grade	40-50 mesh	80 mesh
Sand Qty	200-250 pounds	200 pounds
Water	15-18 gallons	15-18 gal

8.0 Limitations

DO NOT APPLY WHEN:

- 1. Rain is in the near forecast.
- 2. Surface temperatures exceed 54°C (130°F). Surface temperatures may be reduced by misting surface with water prior to application.
- 3. When ambient air temperatures are or will be below 1°C (34°F) within 48 hours.

A product of Stegas, Inc.
www.Tennispaint.com
770.734.3000

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ACRYTECH™

SPORTS SURFACES

9.0 Physical Properties

Warranty	2 years
Color	Black
Weight per gallon	9.4-9.6 lbs/gal
Application and curing Temp.	34-130°F (1-54°C)
Average dry time	1 - 3 hours
Cure time before use (min)	24 hrs

A product of Stegas, Inc.
www.Tennispaint.com
770.734.3000



SPORT PATCH TDS

AcryTech Sport Patch is a 100% acrylic latex binder, that when mixed with portland cement and sand, produces a semi flexible latex concrete that is ideal for patching depressions over 1/4" deep and filling cracks larger than 3/8" wide. AcryTech Sport Patch is appropriate for use when applied to asphalt or concrete surfaces, or to previously coated surfaces.

AcryTech Sport Patch is quick drying and has a working time of approximately 30-45 minutes. Please be careful to mix only the amount that can be applied in that time span.

1.0 SCOPE

Mix with sand and cement to form a patching compound for filling depressions greater than 1/4" in depth, or to fill cracks larger than 3/8" in width.

2.0 MATERIALS

2.1 AcryTech Sport Patch

2.2 Sand

2.3 Portland Cement

3.0 MIXING

3.1 Mix sand and cement first, then add ASP and mix again.

3.2	<u>ASP</u>	<u>Type 1 Port. Cem.</u>	<u>Sand</u>
	1 Gal	1/3 Gal	33 lb.

4.0 APPLICATION

4.1 Apply with squeegee, straight edge, trowel or spatula.

4.2 Scrape edges of patch with scraper or sand edges of patch with grinding stone.

4.3 Allow 24 hours for curing. Very deep patches 3/4"-1" may require longer curing time.

5.0 LIMITATIONS

Deep patch applications in extremely hot weather can experience a false curing. The surface will skim over and the patch will appear to be hard in a matter of hours. Caution should be taken to ensure that the patch has cured throughout, estimated at 24 hours. Do not apply when temperatures are under 50°F or rain is expected within 24 hours.

6.0 PHYSICAL PROPERTIES

Color	Milky White
Weight per gallon	8.8 lbs
Application & curing temp.	50-130°F
Cure time (min)	24 hours

A product of Stegas, Inc.

www.tennispaint.com | 888-294-0428
2660 Easterly Place | Decatur, GA 30035

FORT BEND COUNTY PARKS DEPARTMENT

HARLEM ROAD PARK EXPANSION

VINCENT M. MORALES, JR.
COMMISSIONER PRECINCT 1

GRADY PRESTAGE
COMMISSIONER PRECINCT 2

KP GEORGE
COUNTY JUDGE

ANDY MEYERS
COMMISSIONER PRECINCT 3

DEXTER L. MCCOY
COMMISSIONER PRECINCT 4


SHEET INDEX

SHEET	DESCRIPTION
1	COVER
2	GRADING PLAN
3	OUTFALL PROFILE
4	CULVERT PROFILE
5	LIGHTING & ELECTRICAL
5A	LIGHTING DETAIL
6	PICKLEBALL COURT DETAIL
7	EROSION CONTROL PLAN


THE DESIGN OF THIS PROJECT, AS SHOWN ON THESE SIGNED AND SEALED CONSTRUCTION PLANS, HAS BEEN ANALYZED IN ACCORDANCE WITH THE FORT BEND COUNTY DRAINAGE CRITERIA MANUAL AND THE INTERIM ATLAS 14 DRAINAGE CRITERIA MANUAL AND MINIMUM SLAB ELEVATION CRITERIA (SEPT. 2021 REVISION) AND IT HAS BEEN FOUND THAT FOR STORMS UTILIZING ATLAS 14 RAINFALL UP TO AND INCLUDING THE ONE PERCENT ANNUAL EXCEEDANCE PROBABILITY EVENT: (1) FLOODWATER WILL NOT INUNDATE ANY EXISTING STRUCTURES, AND (2) PROPOSED FINISHED FLOOR ELEVATIONS OF NEW STRUCTURES WILL COMPLY WITH FORT BEND COUNTY FLOODPLAIN REGULATIONS.

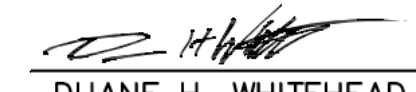
MAINTENANCE OF THE DETENTION BASIN SHALL BE THE RESPONSIBILITY OF THE FORT BEND COUNTY PARKS DEPARTMENT.

* THE STANDARD SHEETS, SPECIFICALLY IDENTIFIED IN THIS DRAWING SHEET INDEX, HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.


 JAMES C. ROBERTS, PE

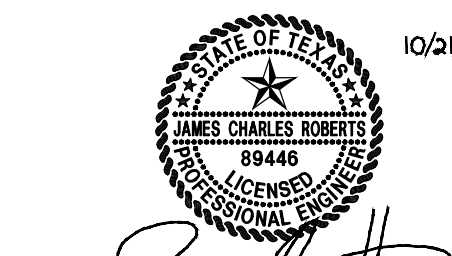
APPROVED
 CITY OF RICHMOND

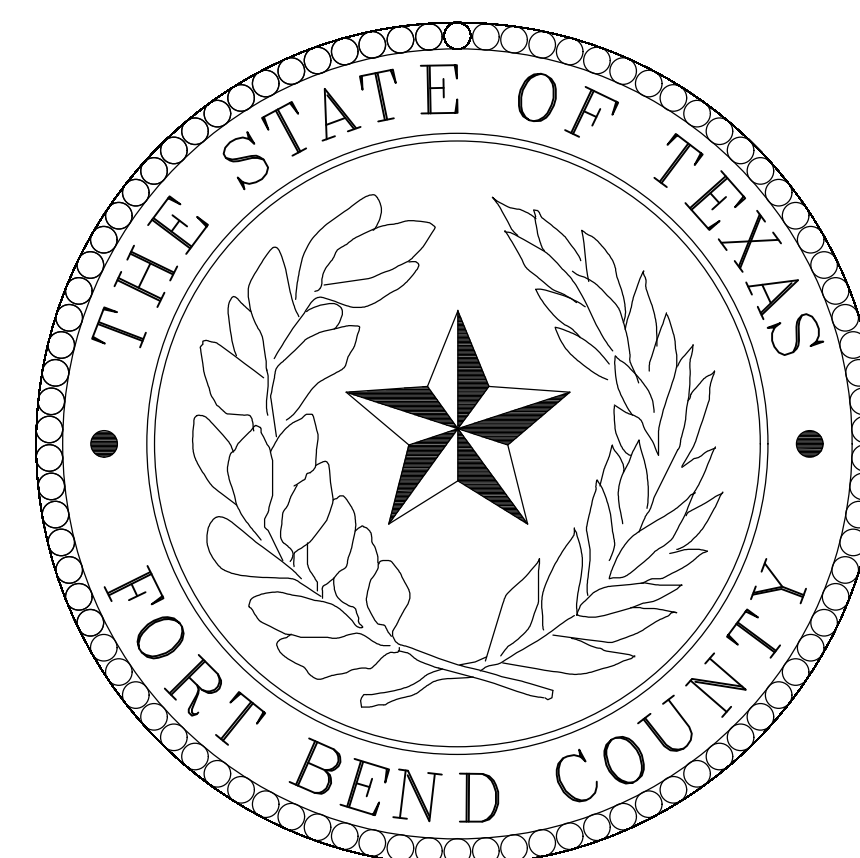

 TERRI VELA
 CITY MANAGER 10/27/22
DATE


 DUANE H. WHITEHEAD, P.E.
 CITY ENGINEER 10/27/22
DATE

PREPARED BY

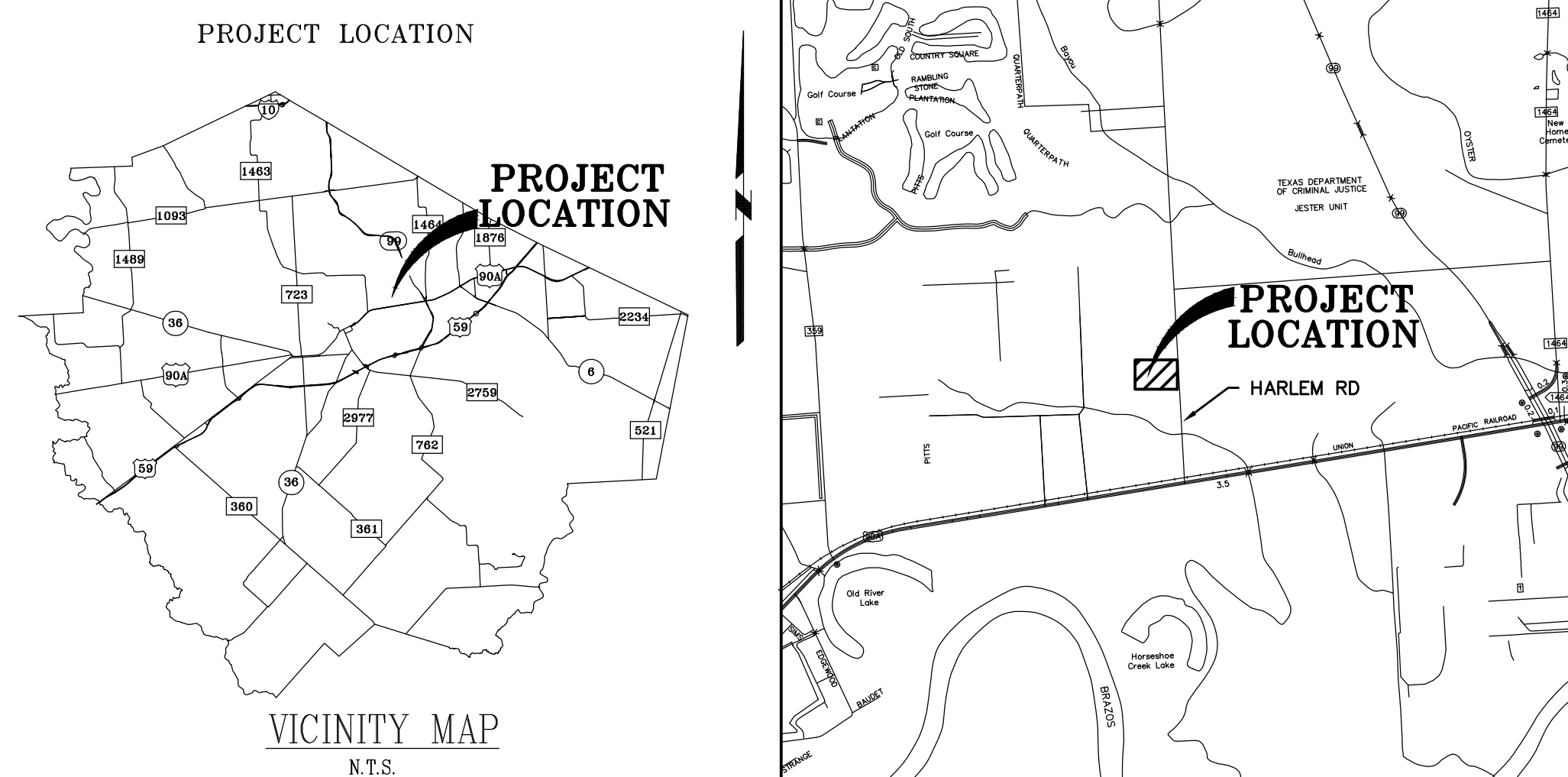

Pacheco Koch
 a Westwood company
 20329 STATE HWY 249 ■ STE. 350 ■ HOUSTON, TX 77070 ■ 281.883.0103
 TX REG. ENGINEERING FIRM F-469
 TX REG. SURVEYING FIRM LS-10193805

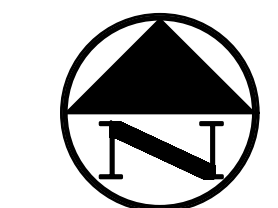

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OCTOBER 2022
 PRECINCT #1

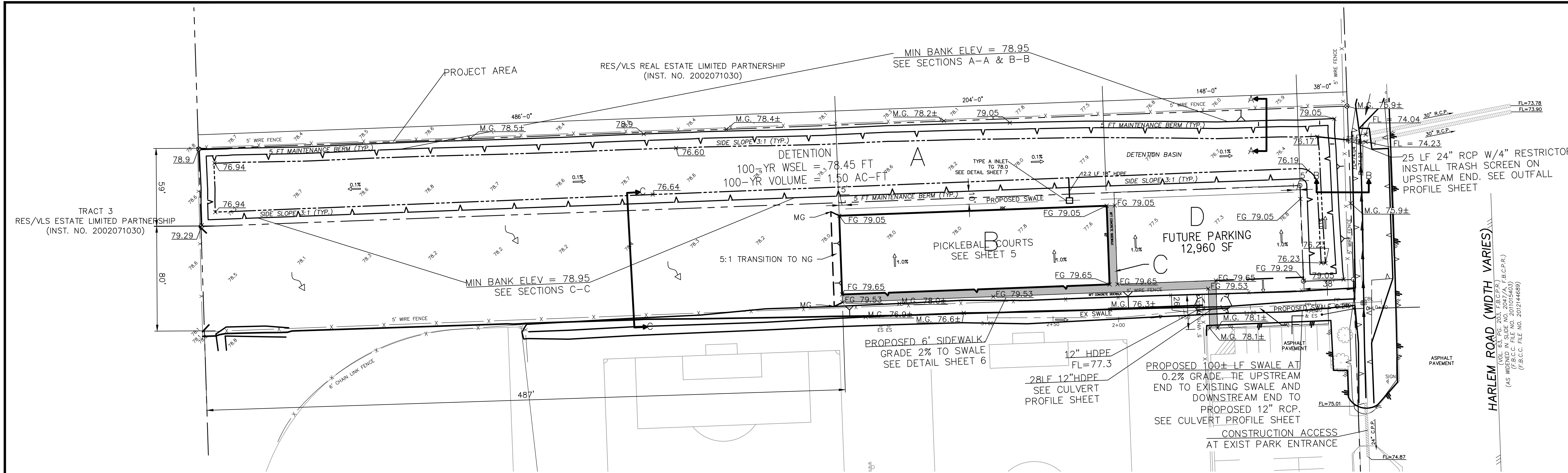
Fort Bend County, Texas





LEGEND

- (C.M.) CONTROLLING MONUMENT
- PROPERTY LINE
- x- FENCE
- OHL- OVERHEAD UTILITY LINE
- G1- EXIST CONTOUR
- E1.39- EXIST SPOT ELEVATION
- T.C. E1.39- EXIST TOP OF CURB ELEVATION
- G. 61.92- EXIST GUTTER ELEVATION
- (57) PROPOSED CONTOUR
- FG 61.90x PROPOSED SPOT ELEVATION
- M.G. 61.50x MATCH EXISTING GRADE
- PROPOSED DRAINAGE FLOW DIRECTION
- - - PROPOSED SWALE
- ∇ HIGH BANK
- - - TOE
- SIDEWALK
- - - PROJECT AREA BOUNDARY
- ∇ NATURAL DRAINAGE FLOW



TOTAL PROJECT AREA (AC)	1.92
IMPERVIOUS AREA (AC)	1.53
MINIMUM BANK ELEVATION (FT)	78.95
100-YEAR WSEL (FT)	78.45
DETENTION VOLUME REQUIRED (AC-FT)	1.50
DETENTION VOLUME PROVIDED (AC-FT)	1.50
ESTIMATED EXCAVATION (CY)	2,600
OUTFALL PIPE	4-INCH PVC

AC	PERVIOUS AREAS	% IMPERV
0.12	MAINTENANCE BERMS	0%
0.28	PICKLEBALL COURTS	100%
0.05	SIDEWALK	100%
0.30	FUTURE PARKING LOT	100%
0.90	DETENTION POND BANK AREA	100%
1.53	TOTAL IMPERVIOUS AREA	100%
EXISTING IMPERVIOUS AREA		
PROPOSED IMPERVIOUS AREA		
INCREASE IN IMPERVIOUS AREA		
REQUIRED DETENTION STORAGE RATE (AC-FT/AC) PER FBCDD DCM		
REQUIRED DETENTION (AC-FT)		
PROVIDED DETENTION (AC-FT)		

MAXIMUM ALLOWABLE RELEASE RATE RATIO (CFS/ACRE)	0.125
DETENTION BASIN SERVICE AREA (ACRE)	1.98
MAXIMUM ALLOWABLE RELEASE RATE (CFS)	0.19
ORIFICE DIAMETER (FT)	0.17
*ORIFICE DIAMETER (IN)	2.0
**PROPOSED RELEASE RATE BASED ON 2-IN DIAMETER (CFS)	0.22
*RECOMMENDED ORIFICE DIAMETER (IN)	4.0

AREA	CUT	FILL
A	2600	750
B	0	730
C	0	320
D	0	800
TOTAL	2600	2600

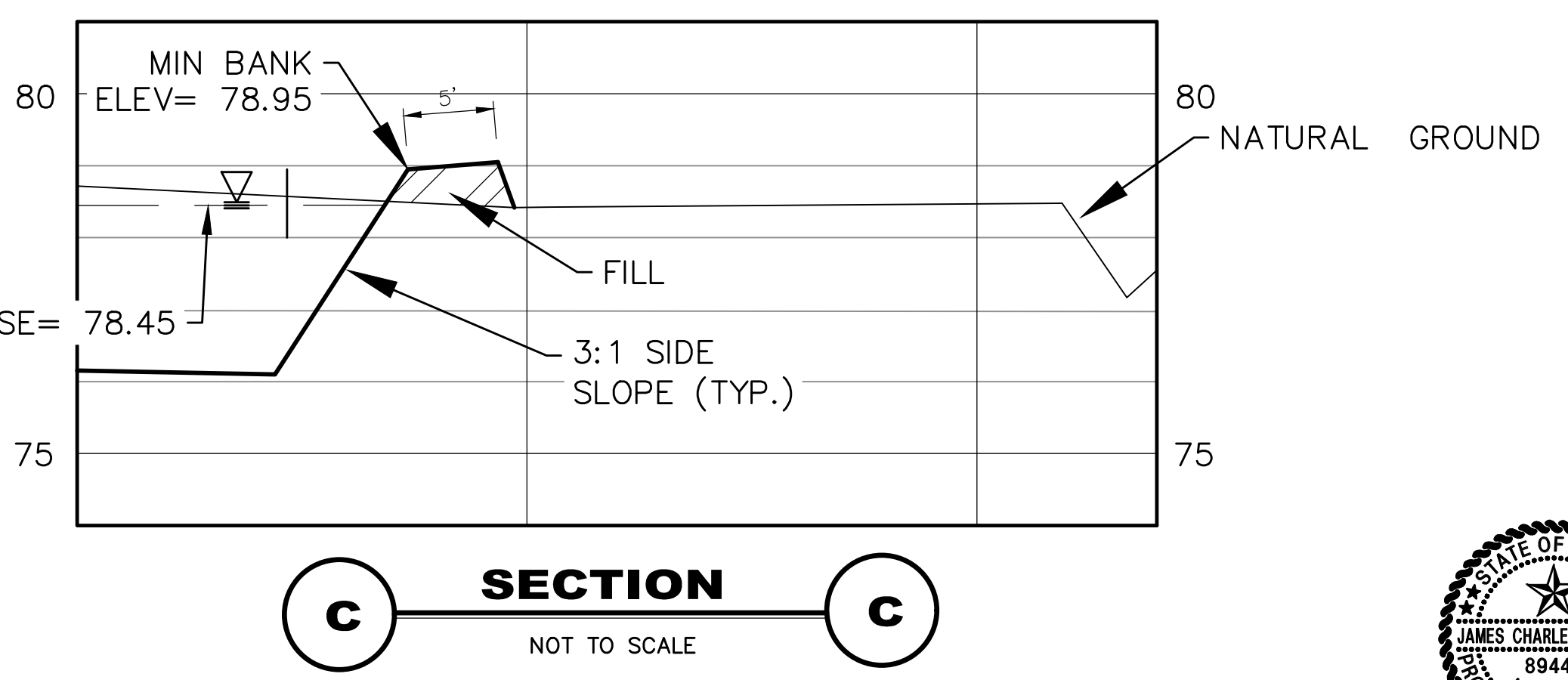
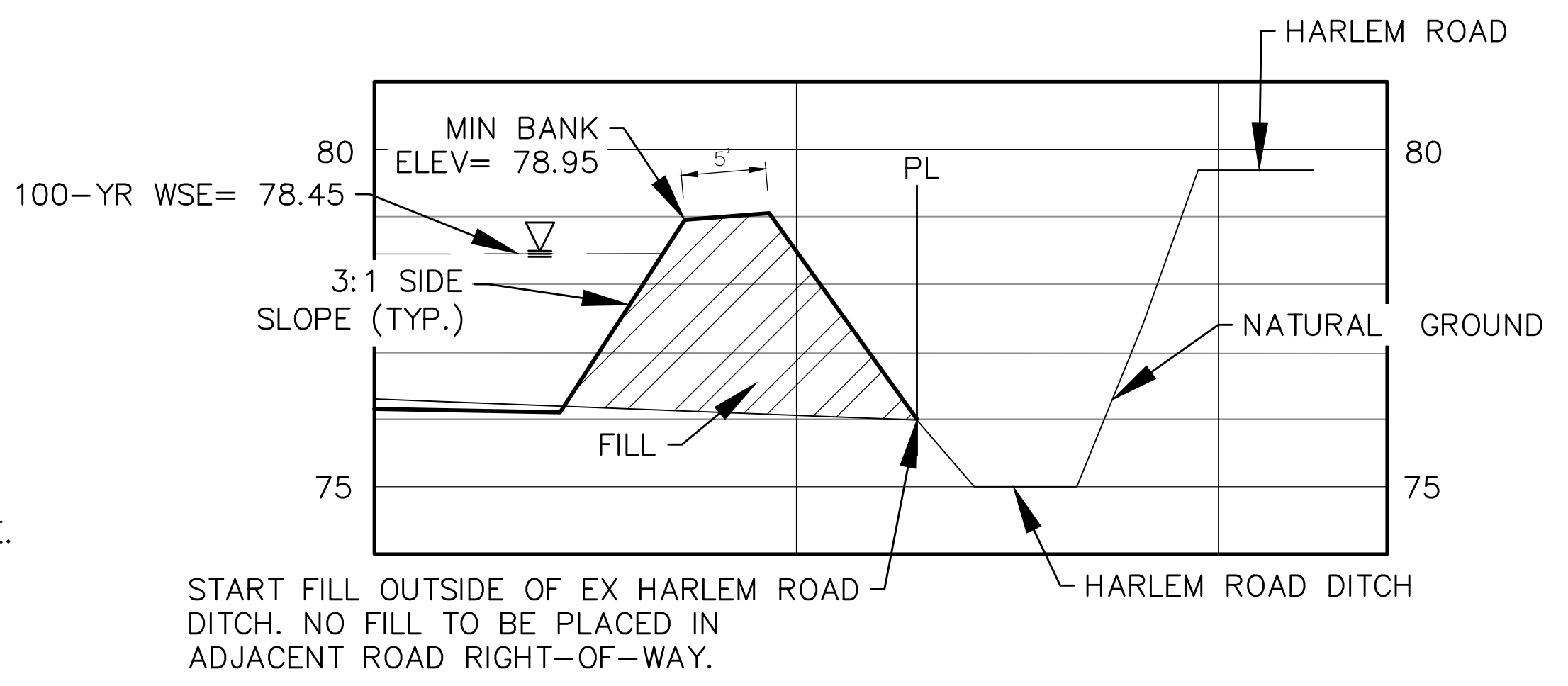
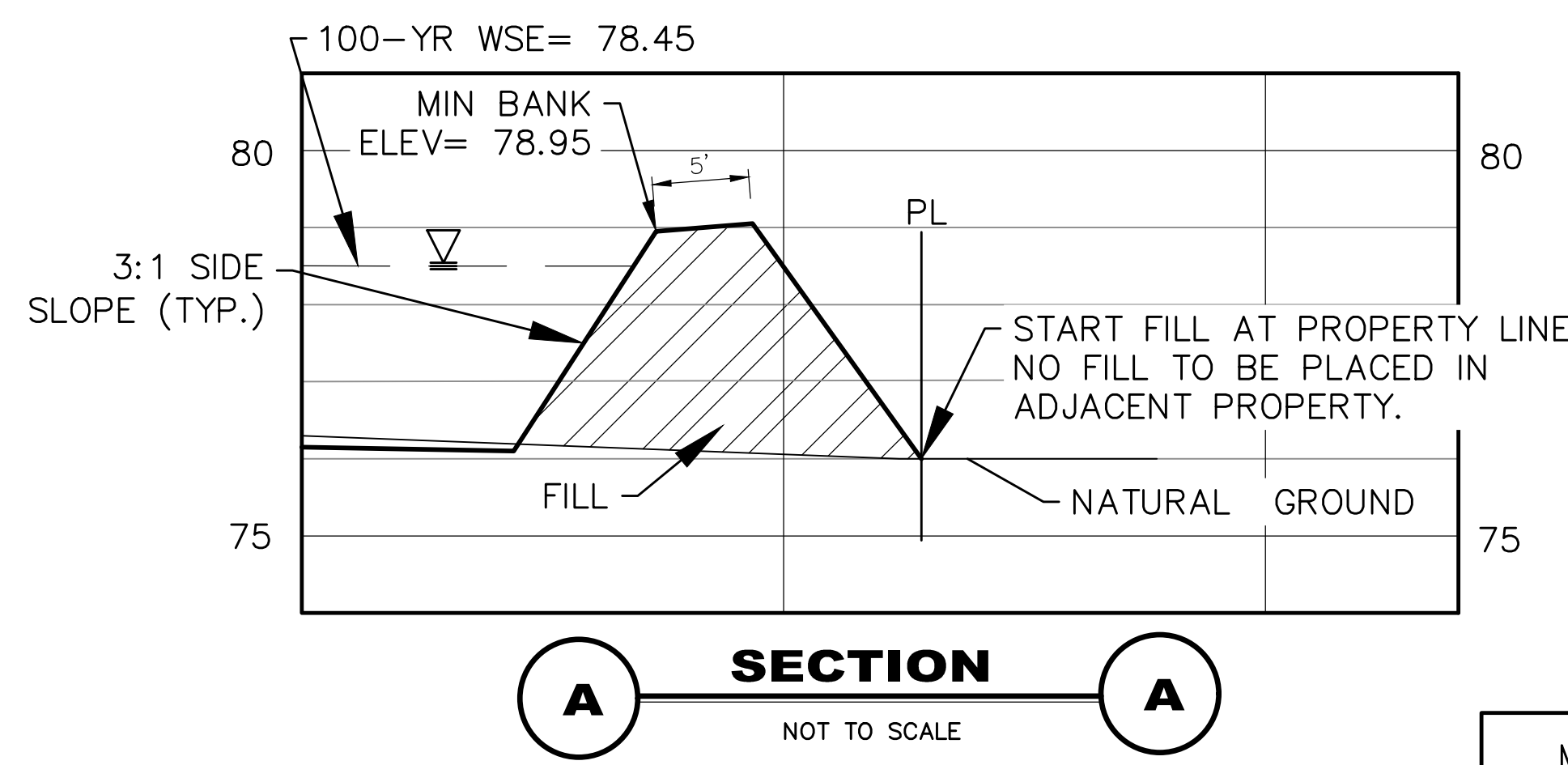
NOTES: *ORIFICE EQUATION CALCULATIONS RESULT IN A 2-INCH DIAMETER RESTRICTOR. A 4-INCH DIAMETER RESTRICTOR OPENING IS RECOMMENDED TO PREVENT FREQUENT CLOGGING OF THE OUTFALL.

**DUE TO THE LOW CAPACITY OF THE RECEIVING ROADSIDE DITCH, THE HEAD DIFFERENCE BETWEEN THE RECEIVING DITCH AND PROPOSED BASIN WILL BE MINIMAL DURING STORMS UP TO AND INCLUDING THE 100-YEAR STORM.

BM# 4 A 58 IRON ROD CAPPED WITH "WEISER CONTROL" ON THE TOP NORTH OF A FENCE POST ± 85 FEET OFF THE TRACT WE'RE SURVEYING AND HALF A FOOT OFF THE EAST OF THE FENCE.	N:13783299.29 E:3011657.50 ELEV=78.65
BM# 3 A 58 IRON ROD CAPPED WITH "WEISER CONTROL" ON THE TOP APPROXIMATELY 5 FEET WEST OF HARLEM ROAD 56 FEET NORTH EAST OF THE ASPHALT CORNER AND 37 NORTH EAST OF THE POWER POLE.	N:13783309.48 E:3012561.97 ELEV=78.50

COORDINATE!!

CONTACT:
DIG-TESS 1-800-DIG-TESS
ATMOS ENERGY 1-800-332-8667
ONCOR ELECTRIC 972-888-1359
AT&T 1-817-589-1056
CHARTER SPECTRUM 1-817-205-8177
TXU 1-800-711-9112
TEXAS ONE CALL 811
48 HOURS PRIOR TO CONSTRUCTION



GRADING & DRAINAGE GENERAL NOTES

- UNLESS NOTED, ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT. FILL TO BE PLACED IN MAXIMUM LIFTS OF 8 INCHES.
- ALL PROPOSED AND EXISTING GRADES IN NON-PAVED AREAS ARE "FINISHED GRADE" (i.e. IN LANDSCAPE BEDS, TOP OF MULCH/BEDDING MATERIAL).
- FINAL PAVING, CURB, AND SIDEWALK ELEVATIONS WILL BE PLACED AT PLUS OR MINUS 0.03 FOOT.
- ANY CONCRETE, ROCK, OR MATERIAL DEEMED BY THE ENGINEER TO BE UNSUITABLE FOR SUBGRADE SHALL BE DISPOSED OF OFFSITE AT CONTRACTOR'S EXPENSE.
- TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED IN 8-INCH LIFTS TO THE TOP OF SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
- EMBEDMENT SHALL CONFORM TO THE STANDARD CITY SPECIFICATIONS.
- ALL CONCRETE FOR INLETS AND DRAINAGE STRUCTURES SHALL BE CLASS "A" (3500 PSI) UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN STANDARD CITY SPECIFICATIONS.
- CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM FOR CRUSHED STONE BEDDING.
- IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.
- CONSTRUCTION ACCESS FROM EXISTING PARK ENTRANCE

FEMA FLOODPLAIN NOTE

ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL NUMBER 48157C0255L, EFFECTIVE APRIL 2, 2014, THE SUBJECT TRACT LIES WITHIN ZONE AE (100-YEAR FLOODPLAIN) FROM THE BRAZOS RIVER. THE BASE FLOOD ELEVATION (BFE) IN THIS LOCATION IS 81.0 FEET. THE EFFECTIVE FORT BEND COUNTY DRAINAGE DISTRICT DRAINAGE CRITERIA MANUAL DATED 2011 STATES FLOODPLAIN STORAGE MITIGATION SHALL BE REQUIRED FOR ALL CREEKS AND STREAMS EXCEPT THE BRAZOS RIVER. THE FLOODPLAIN REQUIREMENT EXCEPTION WAS CONFIRMED WITH FORT BEND COUNTY DRAINAGE DISTRICT.

ISSUED FOR PRELIMINARY PRICING PURPOSES ONLY
(SUBJECT TO REVISION PRIOR TO CONSTRUCTION)

THESE DOCUMENTS HAVE BEEN PREPARED BY THE ENGINEER WITH THE INTENT OF COMPLYING WITH ALL CITY STANDARD REQUIREMENTS. THESE DOCUMENTS HAVE NOT BEEN APPROVED AND RELEASED FOR CONSTRUCTION BY THE COUNTY AS OF THIS DATE AND, THEREFORE, REVISIONS MAY BE REQUIRED PRIOR TO CONSTRUCTION. BY ANY USE OF THESE DOCUMENTS, THE USER AFFIRMS THEIR UNDERSTANDING OF THE PRELIMINARY STATUS OF THE PLANS AND THE POTENTIAL FOR REVISION PRIOR TO ANY CONSTRUCTION.

NO.	DATE	REVISION

Pacheco Koch a Westwood company
20329 STATE HIGHWAY 249
SUITE 350
HOUSTON, TX 77070
281.883.0103

HARLEM ROAD PARK EXPANSION

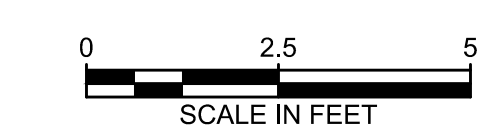
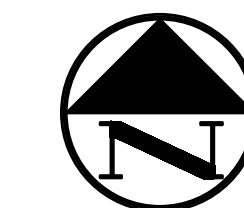
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RJD	RAR	10/21/22	1"=40' 24" x 36"			2

10/21/22

STATE OF TEXAS
JAMES CHARLES ROBERTS, P.E. 89446
89446
LICENSED PROFESSIONAL ENGINEER

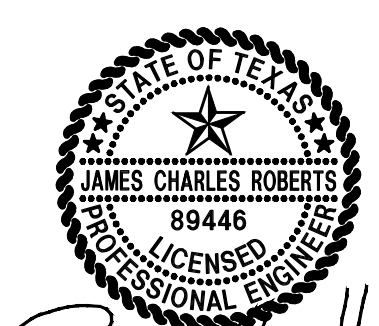
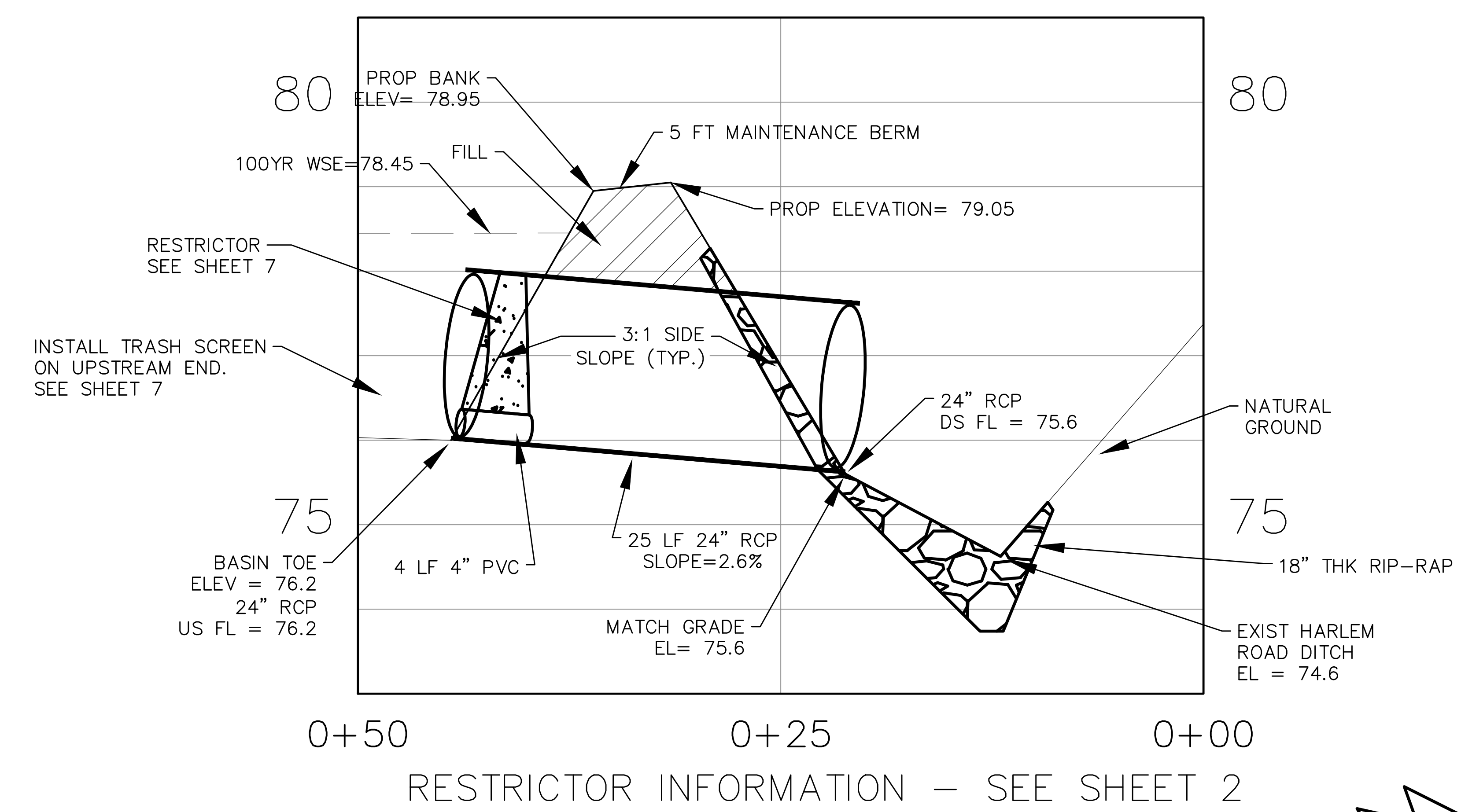
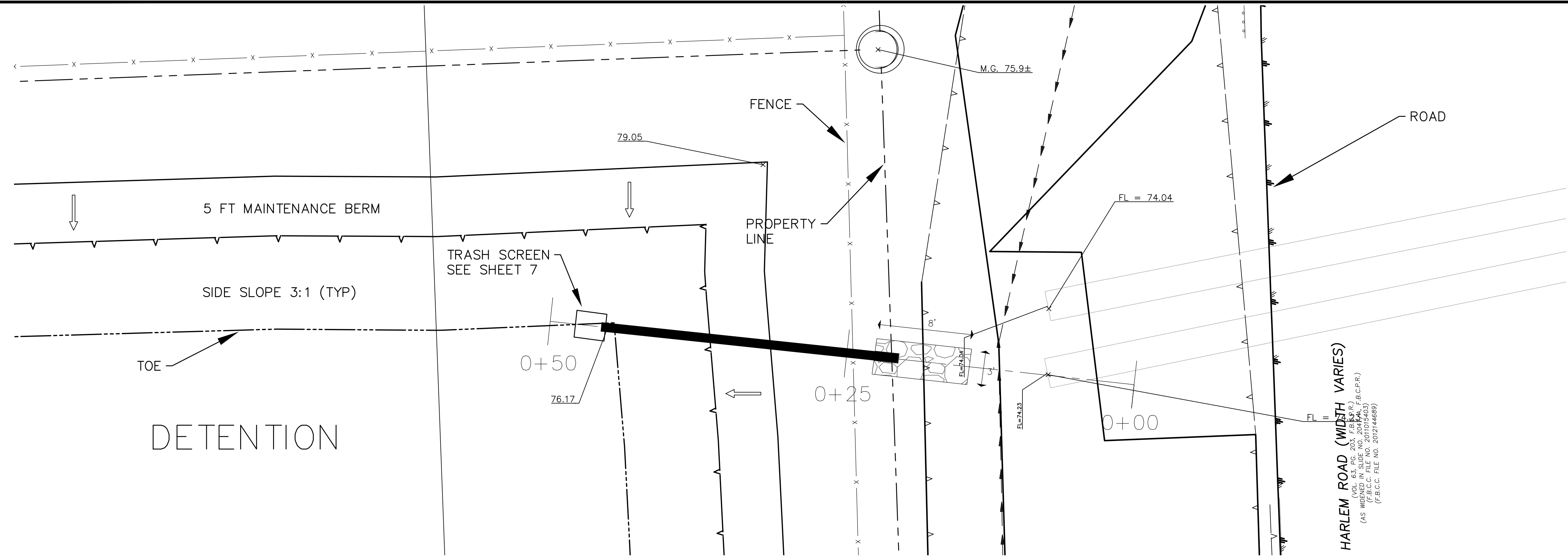
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TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10193805



LEGEND

- B. BOLLARD
- EM. ELECTRIC METER
- PP. POWER POLE
- LS. LIGHT STANDARD
- WM. WATER METER
- WV. WATER VALVE
- ICV. IRRIGATION CONTROL VALVE
- FR. FIRE HYDRANT
- CL. CLEANOUT
- MH. MANHOLE
- TSC. TRAFFIC SIGNAL CONTROL
- TSP. TRAFFIC SIGNAL POLE
- TELE. TELEPHONE BOX
- FL. FLOOD LIGHT
- FP. FLAG POLE
- SI. TRAFFIC SIGN
- (C.M.) CONTROLLING MONUMENT
- PROPERTY LINE
- x FENCE
- OVERHEAD UTILITY LINE
- G1 EXIST CONTOUR
- 61.39 EXIST SPOT ELEVATION
- 57 PROPOSED CONTOUR
- FG 61.50 PROPOSED SPOT ELEVATION
- M.G. 61.50 MATCH EXISTING GRADE
- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED SWALE
- HIGH BANK
- TOE



10/21/22
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NO.	DATE	REVISION

Pacheco Koch
 a Westwood company
 20329 STATE HIGHWAY 249
 SUITE 350
 HOUSTON, TX 77070
 281.883.0103

HARLEM ROAD PARK EXPANSION

OUTFALL PROFILE
FORT BEND COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RJD	RAR	10/21/22	H: 1" = 5' V: 1" = 1'			3

COORDINATE!!
 CONTACT:
 DIG-TESS 1-800-DIG-TESS
 ATMOS ENERGY 1-800-332-8667
 ONCOR ELECTRIC 972-888-1359
 AT&T 1-817-589-1056
 CHARTER SPECTRUM 1-817-205-8177
 TXU 1-800-711-9112
 TEXAS ONE CALL 811
 48 HOURS PRIOR TO CONSTRUCTION

BENCH MARK LIST

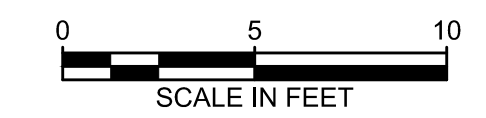
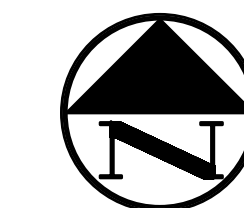
BM# 4 A 5/8 IRON ROD CAPPED WITH "WEISER CONTROL" ON THE TOP NORTH OF A FENCE POST ± 85 FEET OFF THE TRACT WE'RE SURVEYING AND HALF A FOOT OFF THE EAST OF THE FENCE
 N: 13783299.29
 E: 3011657.50
 ELEV = 78.68

BM# 3 A 5/8 IRON ROD CAPPED WITH "WEISER CONTROL" ON THE TOP APPROXIMATELY 5 FEET WEST OF HARLEM ROAD 56 FEET NORTH EAST OF THE ASPHALT CORNER AND 37 NORTH EAST OF THE POWER POLE
 N: 13783309.48
 E: 3012561.97
 ELEV = 78.50

TX REG. ENGINEERING FIRM F-469
 TX REG. SURVEYING FIRM LS-10193805

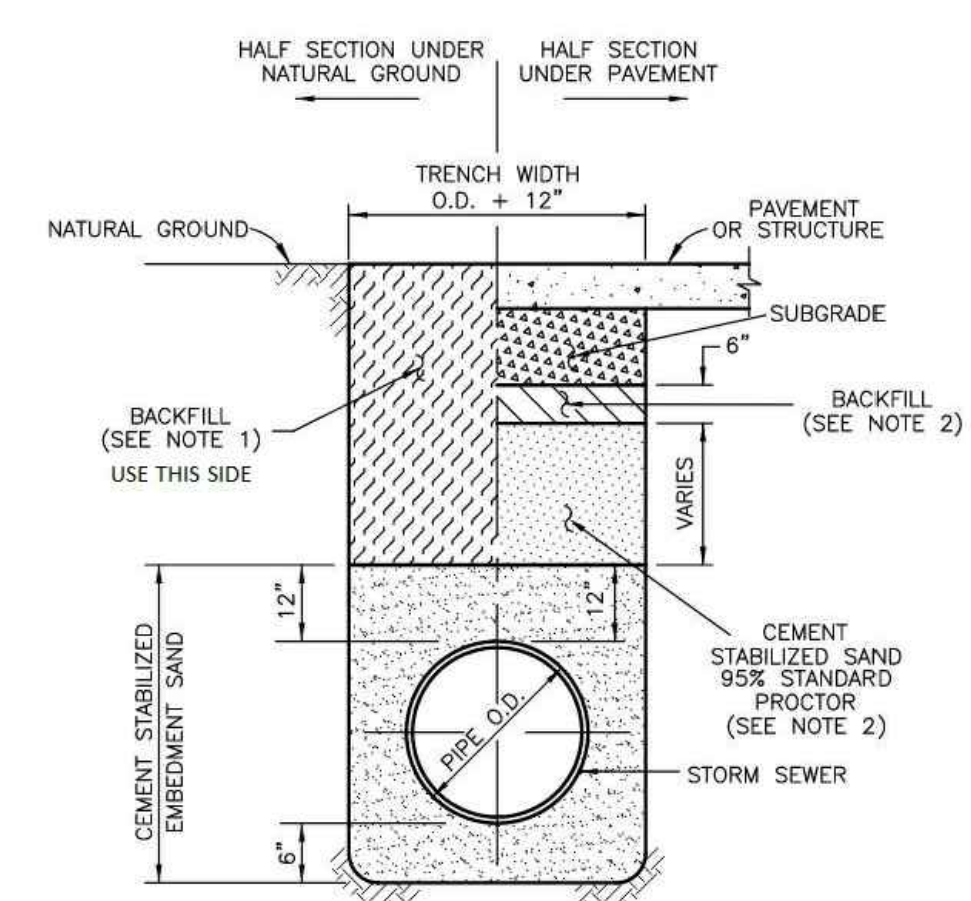
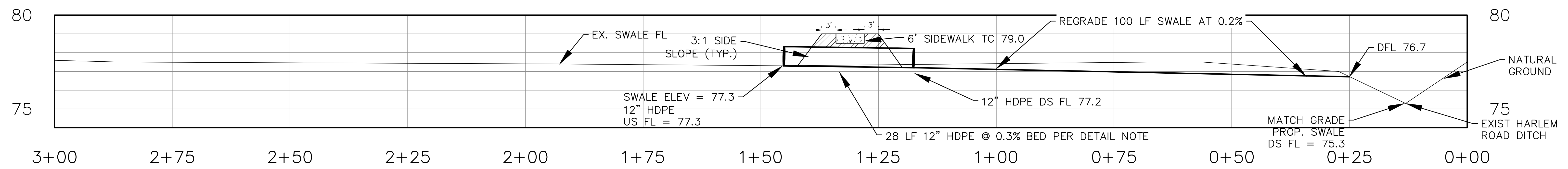
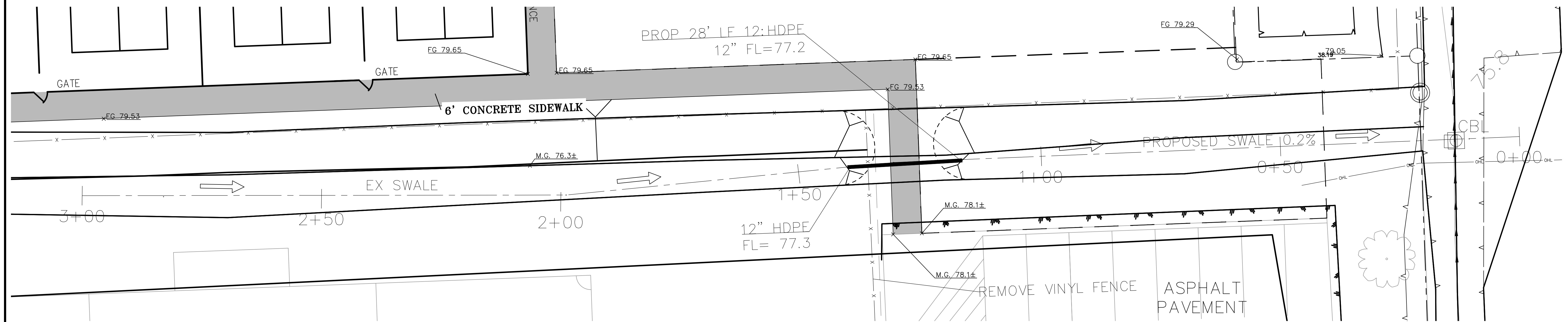
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HARLEM ROAD PARK EXTENSION DETENTION & GRADING

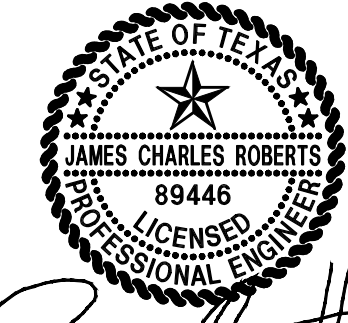


LEGEND

- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED SWALE
- ∨ HIGH BANK
- TOE
- CBL
- (C.M.) CONTROLLING MONUMENT
- PROPERTY LINE
- x FENCE
- OHL OVERHEAD UTILITY LINE
- 61 EXIST CONTOUR
- 61.32 EXIST SPOT ELEVATION
- 57 PROPOSED CONTOUR
- FG 61.50 x PROPOSED SPOT ELEVATION
- M.G. 61.50 x MATCH EXISTING GRADE



- NOTES
- BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS, 8" THICK OR LESS, COMPACTED TO 90% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED BELOW.
 - BACKFILL UNDER AND WITHIN 3 FEET OF DRIVEWAYS AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 BAGS OF CEMENT PER CUBIC YARD OF SAND), EXCEPT THE TOP 6" SHALL BE NATIVE SOIL, FREE OF DEBRIS. ALL BACKFILL UNDER PAVING SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.



10/21/22

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COORDINATE!!

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ONCOR ELECTRIC	972-888-1359
AT&T	1-817-589-1056
CHARTER SPECTRUM	1-817-205-8177
TXU	1-800-711-9112
TEXAS ONE CALL	811

48 HOURS PRIOR TO CONSTRUCTION

BENCH MARK LIST

BM# 4 A 5/8 IRON ROD CAPPED WITH "WEISER CONTROL" ON THE TOP NORTH APPROXIMATELY 5 FEET WEST OF HARLEM ROAD 56 FEET NORTH EAST OF THE FOOT OF THE EAST OF THE FENCE

N: 13783299.29
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ELEV=78.68

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N: 13783309.48
E: 3012561.97
ELEV=78.50

1 STORM SEWER BEDDING

NOT TO SCALE

NO.	DATE	REVISION				
<p>Pacheco Koch a Westwood company</p>						
<p>HARLEM ROAD PARK EXPANSION</p>						
<p>CULVERT PROFILE</p>						
<p>FORT BEND COUNTY, TEXAS</p>						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RJD	RAR	10/21/22	1"=10' 24" x 36"			4

TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10193805

R:\DAN 1/11/2023 9:13 AM
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HARLEM ROAD PARK EXTENSION DETENTION & GRADING

Specifications:

RSSP

Height
10' - 30'

Pole Shaft
The pole shaft material is a weldable grade hot rolled commercial quality steel tubing with a minimum yield of 46,000 psi. Conforms to ASTM A500 Grade B Standards. Poles have ground lug welded inside hand-hole opposite side of the hand-hole. Pole shaft is welded to base plate on top and bottom of base plate.

Base Plate
The Base Plate is manufactured from structural hot rolled steel that meets or exceeds a minimum yield strength of 36,000 psi, conforms the ASTM-A36 standards. Base Plate vary in size from 1' thick for poles 21 feet and over, 3/4" thick for poles 10 to 20 feet.

Anchor Bolts
All anchor bolts are hot dipped galvanized steel and come with two galvanized nuts and washers per bolt. Minimum yield strength 50,000 psi. Anchor bolts are not included for Custom Bolt Circle.

Base Cover
All base covers are fabricated two-piece 6063 aluminum and powder coated to match the pole. Square base cover comes standard, Round base cover optional.

Hand-Hole
A reinforced hand-hole is 12" on center from the base plate and is constructed of 3" x 5" rectangular steel tubing which is welded to pole shaft for added strength. The hand-hole covers are provided with internal bridge support and powder coated to match pole finish.

Pole Cap
All poles come with a removable polymer pole cap installed. All pole caps are black finish.

Finish
All poles are treated with shot blast media for a near white finish, power blasted with 100 psi prior to powder coat application. Electrostatically applied polyester powder coat with a 3 to 5 mil thickness for maximum adherence.

Marine Grade Finish
All poles are washed through a 5-stage cleaning system with a deionized rinse, a 3 to 5 mil zinc rich durable polyester primer powder coat, followed by a 3 to 5 mil super durable polyester powder coat finish.

Galvanized Finish
All poles are Hot Dipped Galvanized in a multi stage process. Galvanizing Specification, Zinc (Hot Dipped Galvanized) per ASTM A 123/A 123M - 02 Zinc coatings on threaded materials shall conform to specification A 153 /A153M. The coating shall be continuous and reasonably smooth and uniform in thickness and in weight.

Galvanizing Adherence - The Zinc coating shall withstand handling consistent with the nature and thickness of the coating and normal use of the article without peeling or flaking.

Galvanized Under Power
Galvanized Under Powder (GUP) adheres to above galvanized specification, and the second stage is a light sand blast on the outside of the pole, third stage is a 3-5 mils polyester powder coat finish for maximum adherence.

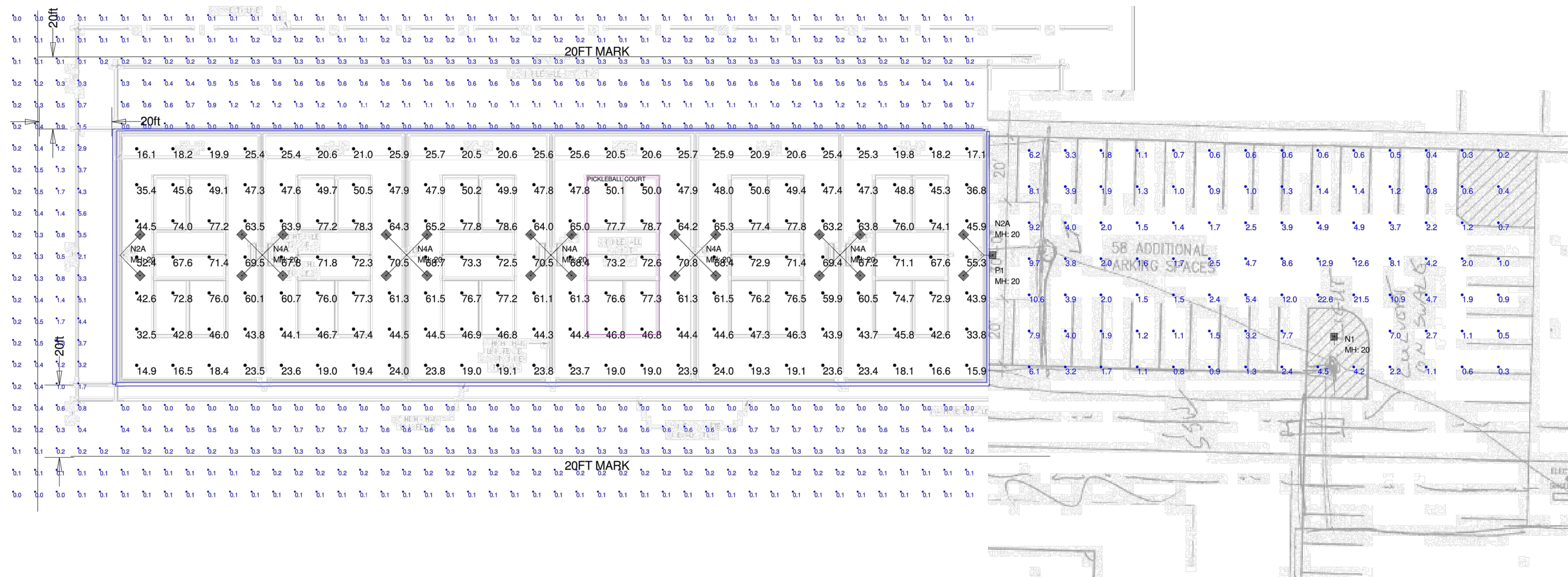
Vibration Dampener
The Vibration Dampener is factory installed. The Vibration Dampener consists of a rugged galvanized chain coated with heavy duty polyester tubing that is factory secured at the bottom 2-3rds of the pole and field secured by contractor at the base during installation.

Per Section 2.5, no recreational facility shall be illuminated by nonconforming means from 11pm local time to sunrise except to conclude a specific recreational activity already in progress.

Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts
↖	2	N2A	2 @ 90 DEGREES	0.900	VUE-3-TT-40-50K7-FSS-D90° @ 20FT W/4FT POLES	397
↕	5	N4A	4 @ 90 DEGREES	0.900	VUE-3-TT-40-50K7-FSS-QUAD @ 20FT W/4FT POLES	397
—	1	N1	SINGLE	1.000	VUE-2-TT-80L-1-50K-SINGLE DPS6 @ 20FT	263
—	1	P1	SINGLE	0.950	VUE-1-T4-48L-1-50K-SINGLE DPS6 @ 20FT	156


Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING AREA	Illuminance	Fc	3.48	22.6	0.2	17.40	113.00
PICKLEBALL	Illuminance	Fc	48.45	78.7	14.9	3.25	5.28
SPILL CALC	Illuminance	Fc	0.38	5.6	0.0	N.A.	N.A.
PICKLEBALL COURT	Illuminance	Fc	64.98	78.7	46.8	1.39	1.68

HRP EXPANSION
PICKLEBALL
BILL HEIN
DATE: 09/12/22



NOTE: THIS SHEET IS CONCEPTUAL, TO BE COMPLETED UPON FINAL CONFIGURATION.

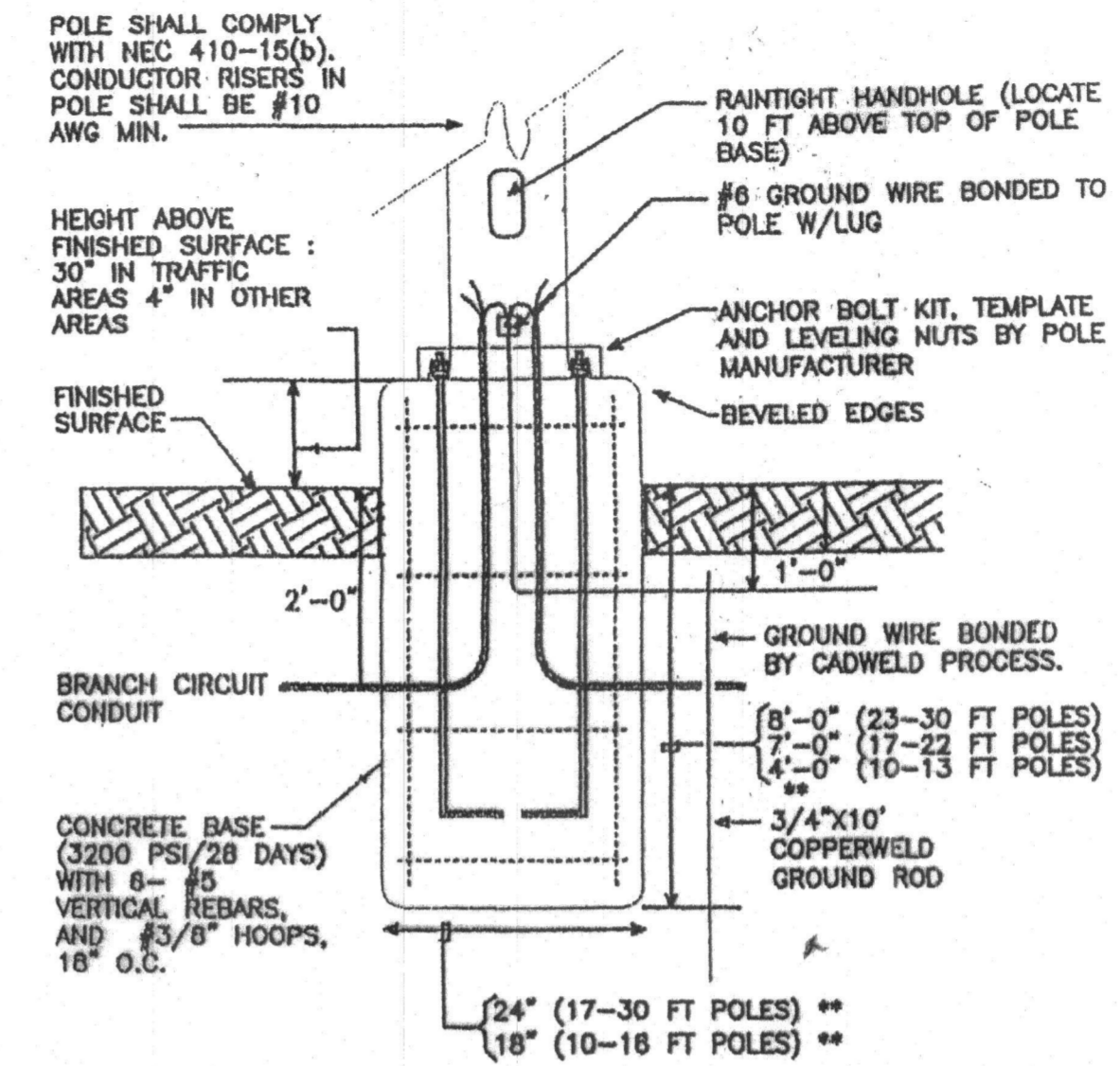
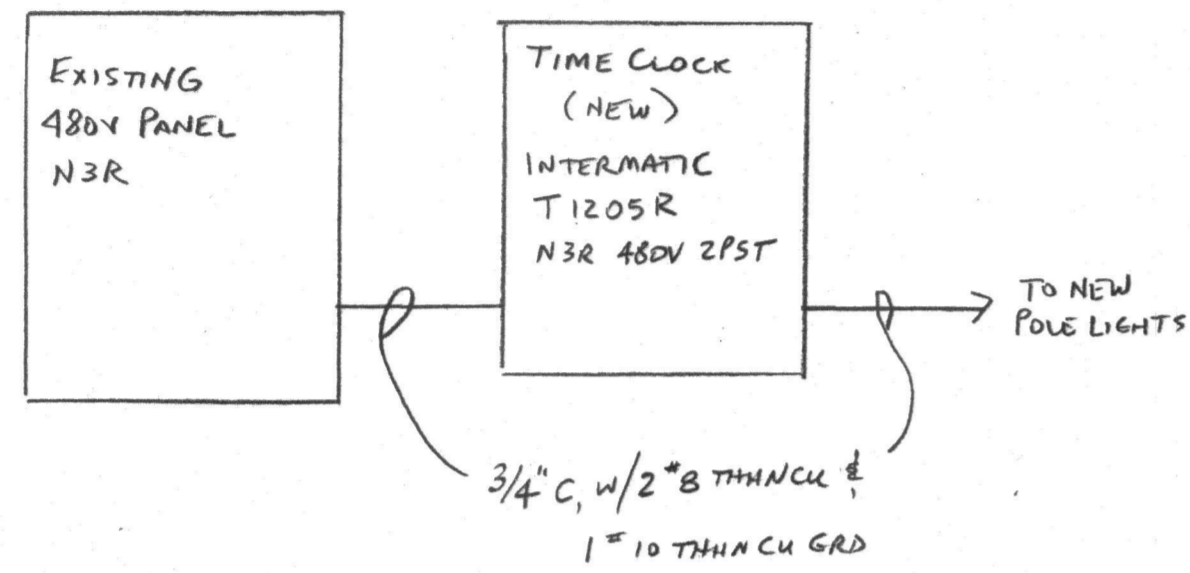
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NO.	DATE	REVISION
 20329 STATE HIGHWAY 249 SUITE 350 HOUSTON, TX 77070 281.883.0103		
HARLEM ROAD PARK EXPANSION		
LIGHTING PLAN & ELECTRICAL		
FORT BEND COUNTY, TEXAS		
DESIGN	DRAWN	DATE
NRA	NRA	09/13/22
SCALE	NOTES	FILE
NTS		
NO.		
5		

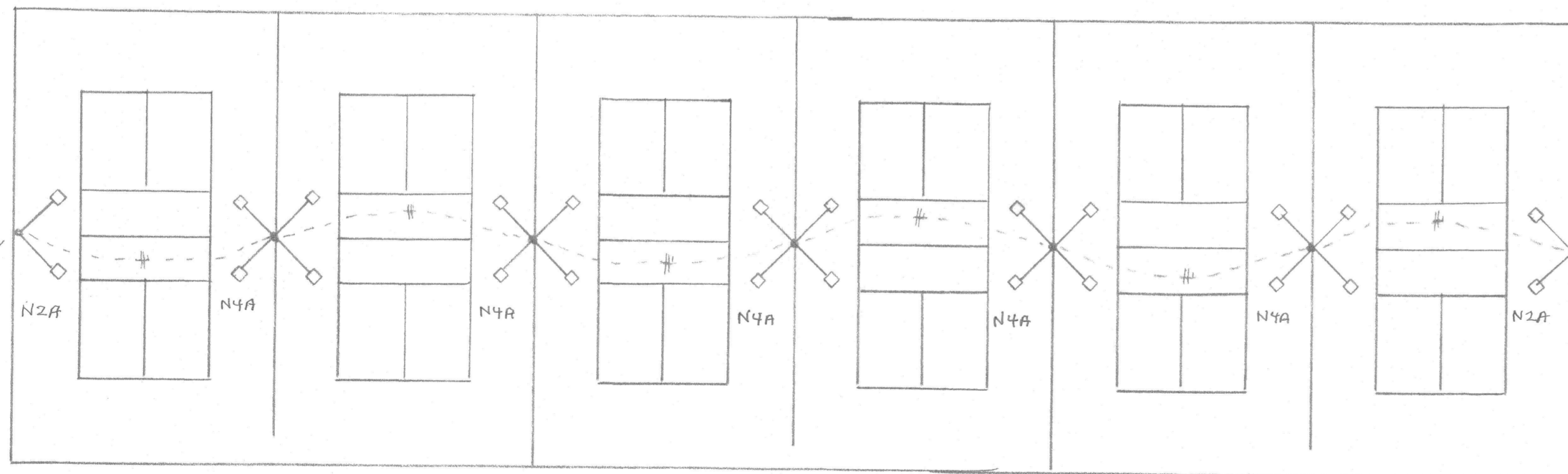
HARLEM ROAD PARK EXTENSION DETENTION & GRADING

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts
◁	2	N2A	2 @ 90 DEGREES	0.900	VUE-3-TT-40-50K7-FSS-D90V @ 20FT W/4FT POLES	397
+	5	N4A	4 @ 90 DEGREES	0.900	VUE-3-TT-40-50K7-FSS-QUAD @ 20FT W/4FT POLES	397
■	1	N1	SINGLE	1.000	VUE-2-TT-80L-1-50K-SINGLE DP56 @ 20FT	263
■	1	P1	SINGLE	0.950	VUE-1-T4-48L-1-50K-SINGLE DP56 @ 20FT	156

LIGHTING CONTROLS
NTS



1 POLE LIGHT BASE DETAIL
NOT TO SCALE
** POLE BASE DIAMETERS AND VERTICAL DEPTHS INTO EARTH ARE TO BE VERIFIED/MODIFIED ACCORDING TO POLE MANUFACTURER'S ENGINEERED CALCULATIONS WHICH TAKE INTO ACCOUNT THE ACTUAL POLE DIAMETER AND GEOTECHNICAL CONDITIONS.

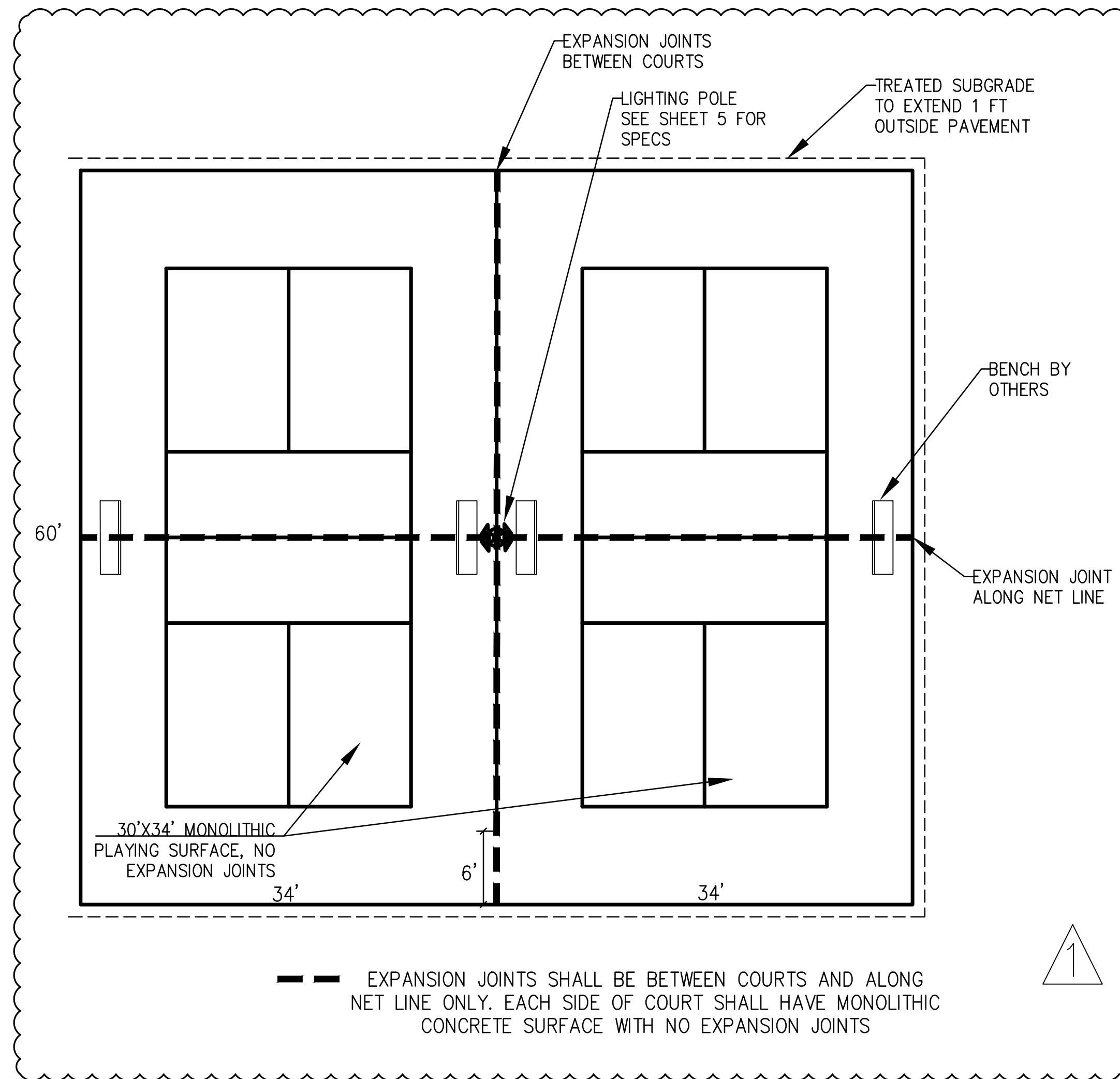
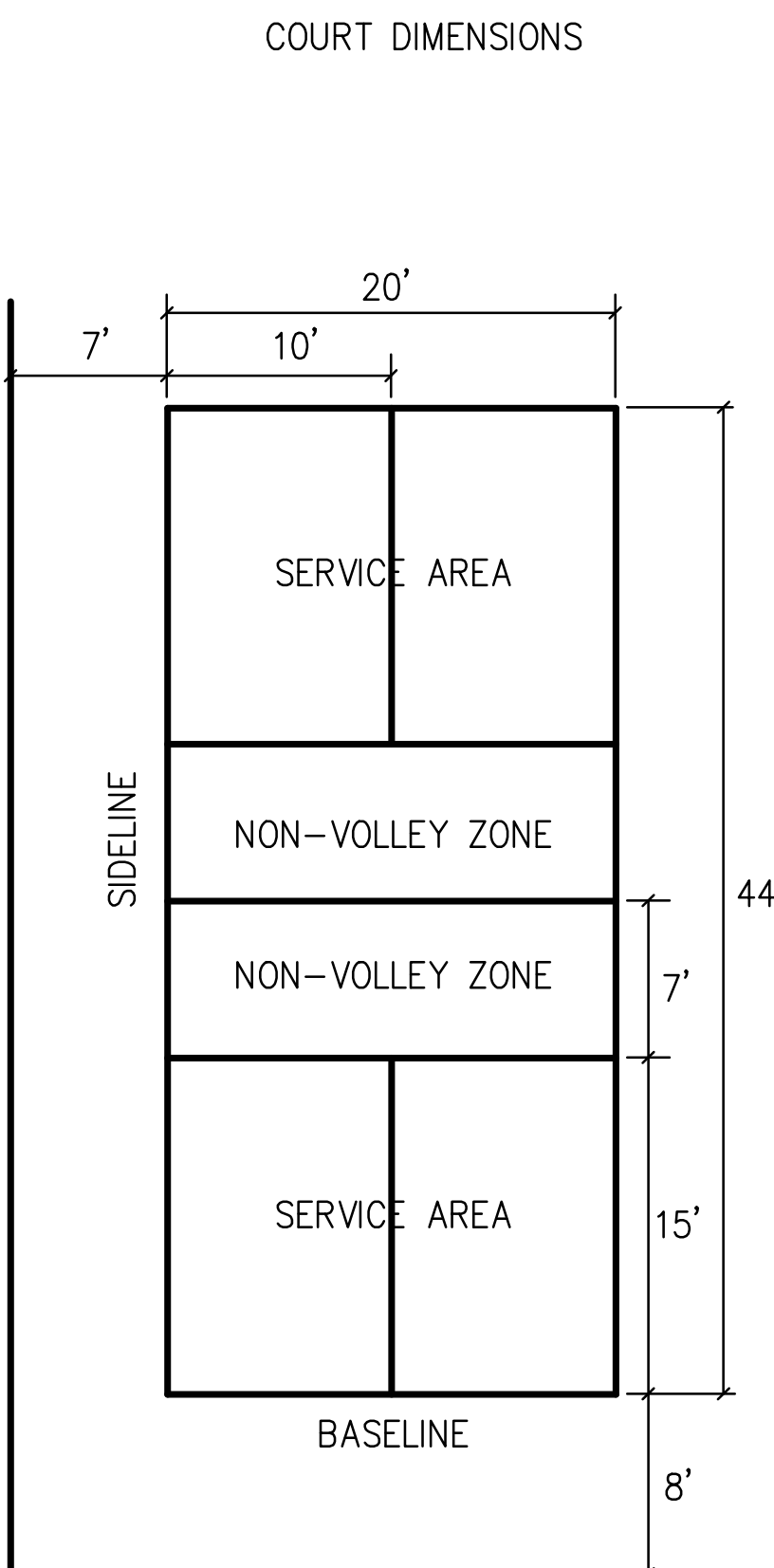


3/4\"/>

EXISTING 480V PANEL
NEW



HARLEM PARK PICKLEBALL COURTS		
SCALE: NTS	APPROVED BY	DRAWN BY
DATE: 11/01/2022		CFS
HIGHLIGHTS ELECTRICAL 7510 LANGTRY STREET HOUSTON, TEXAS 77040	713-246-6464 TELE #18946	
		5A



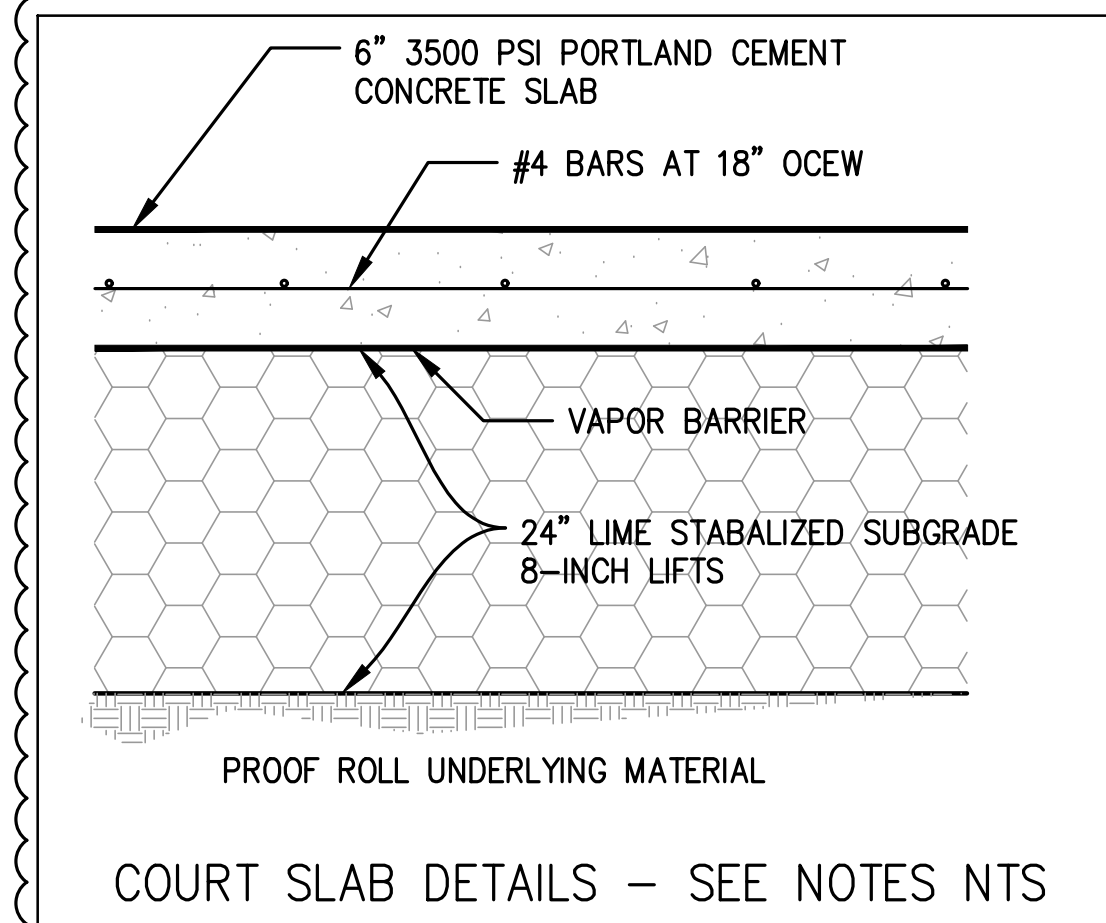
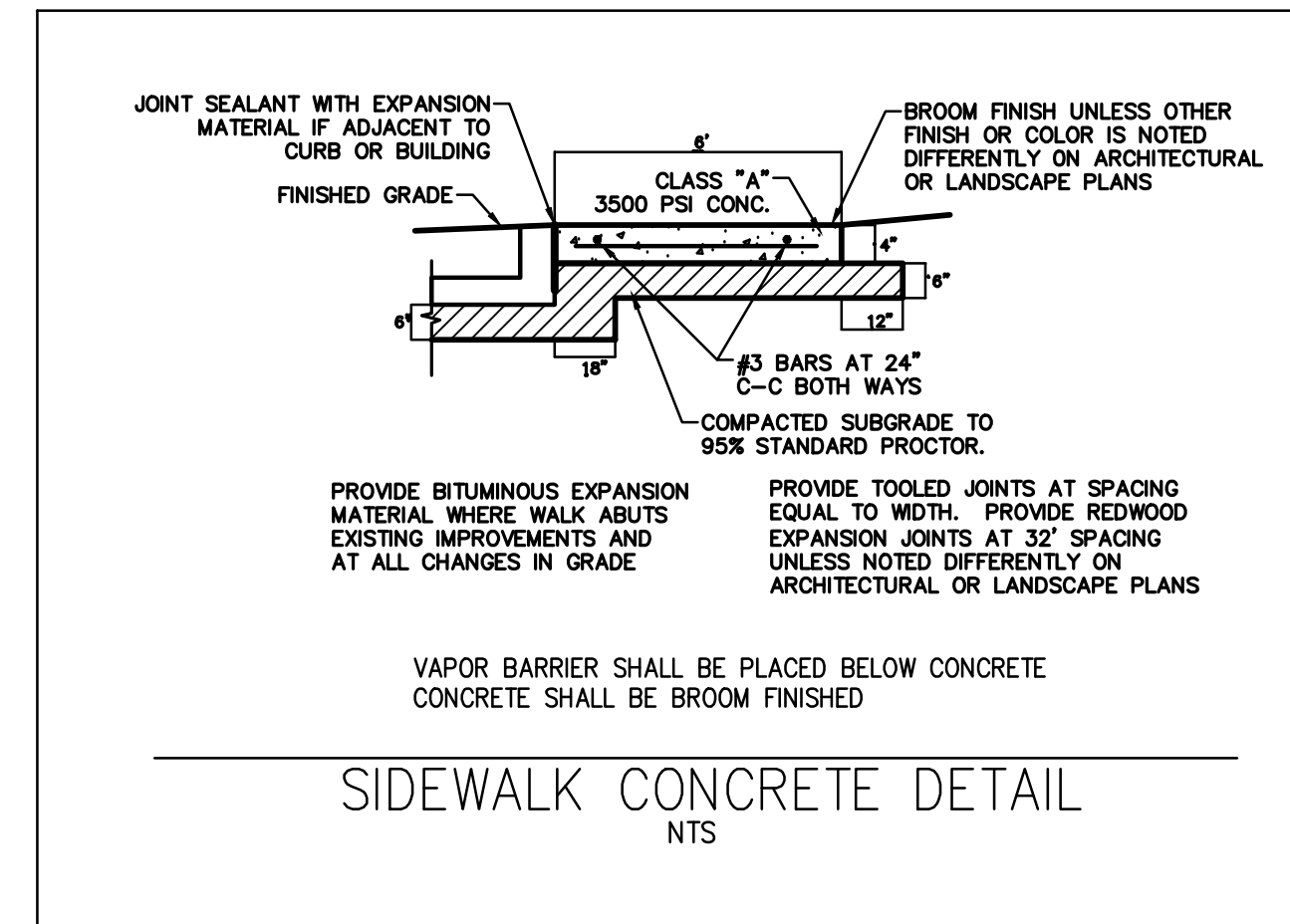
PICKLE BALL COURT SPECIFICATIONS
 NET: USAPA REGULATION SIZE 36" H AT SIDELINE X 22" W, 34" H IN CENTER.
 NET TO EXTEND 12" OUTSIDE OF SIDELINES.
 NET SHALL BE ONYX SKU: KZ3003-3 OR APPROVED EQUAL.

COURT SURFACE COLORS
 BASELINE, PERIMETER AREA: GREEN
 SERVICE AREA: DARK BLUE
 NON-VOLLEY ZONE (KITCHEN): BRICK RED
 STRIPING: WHITE, 2" WIDE. PLACE STRIPING LAST AFTER OTHER COLORS.

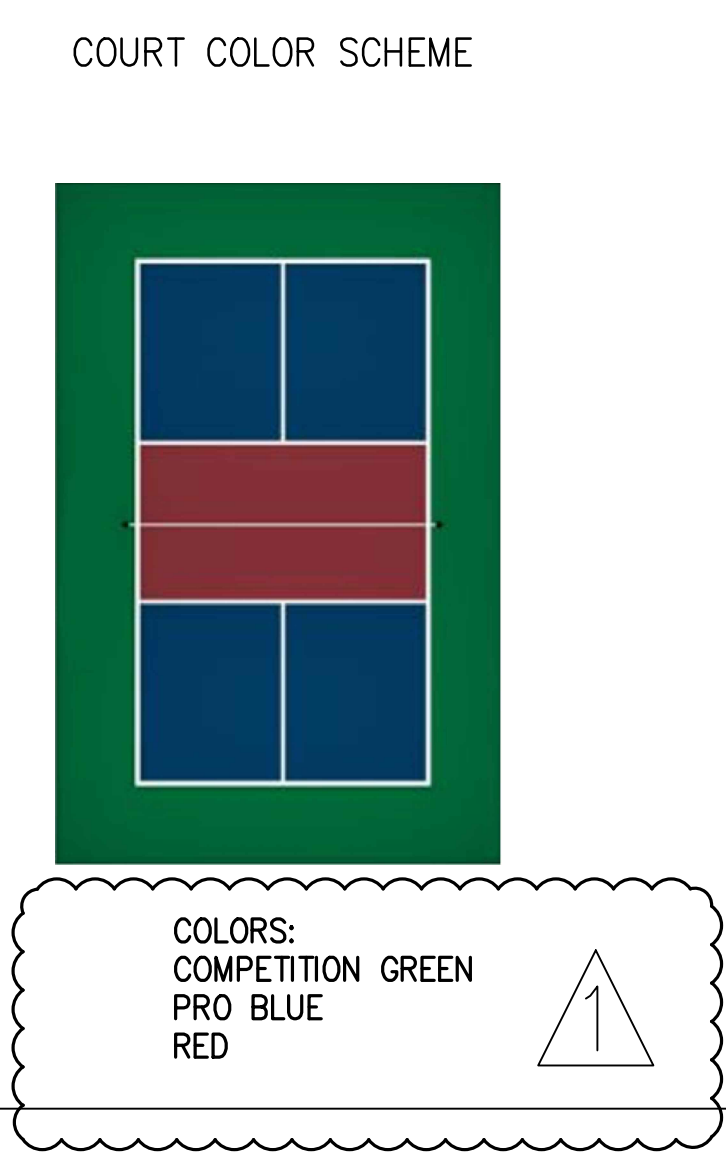
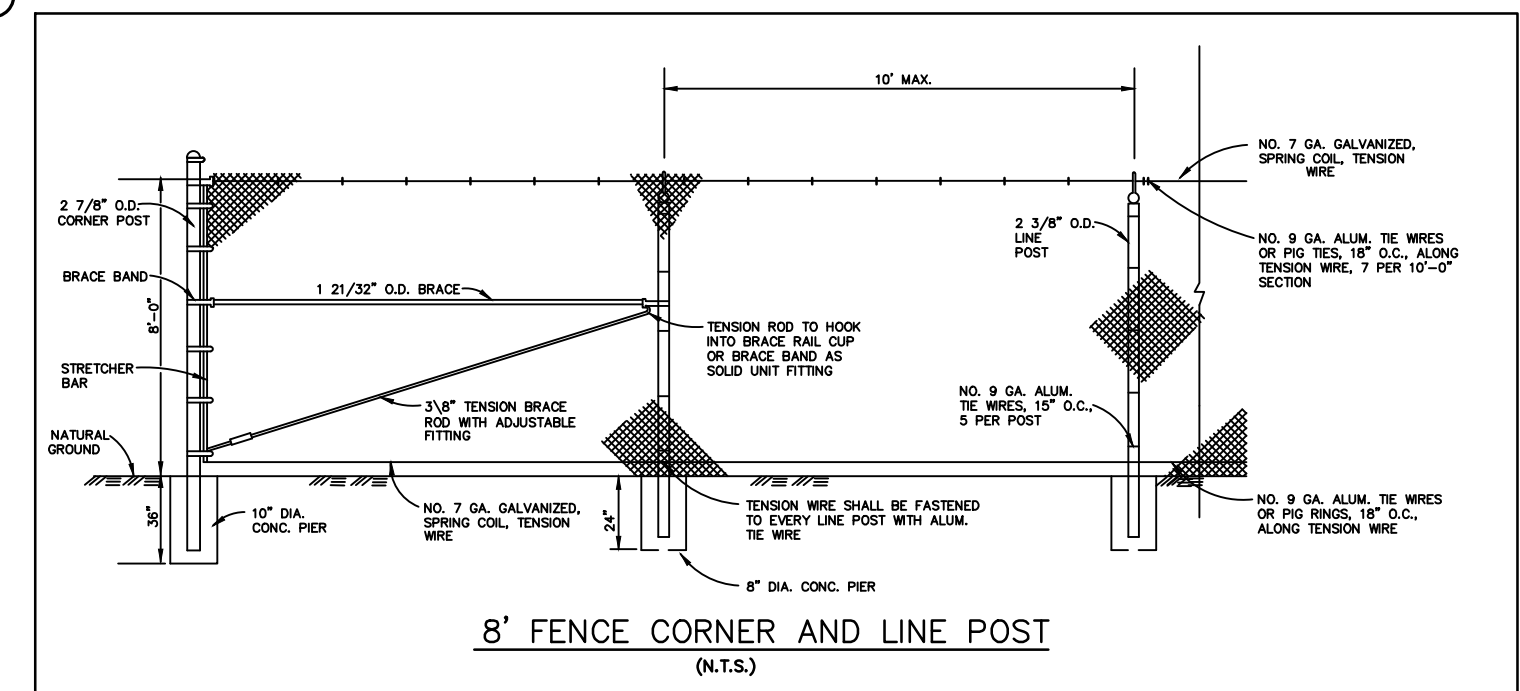
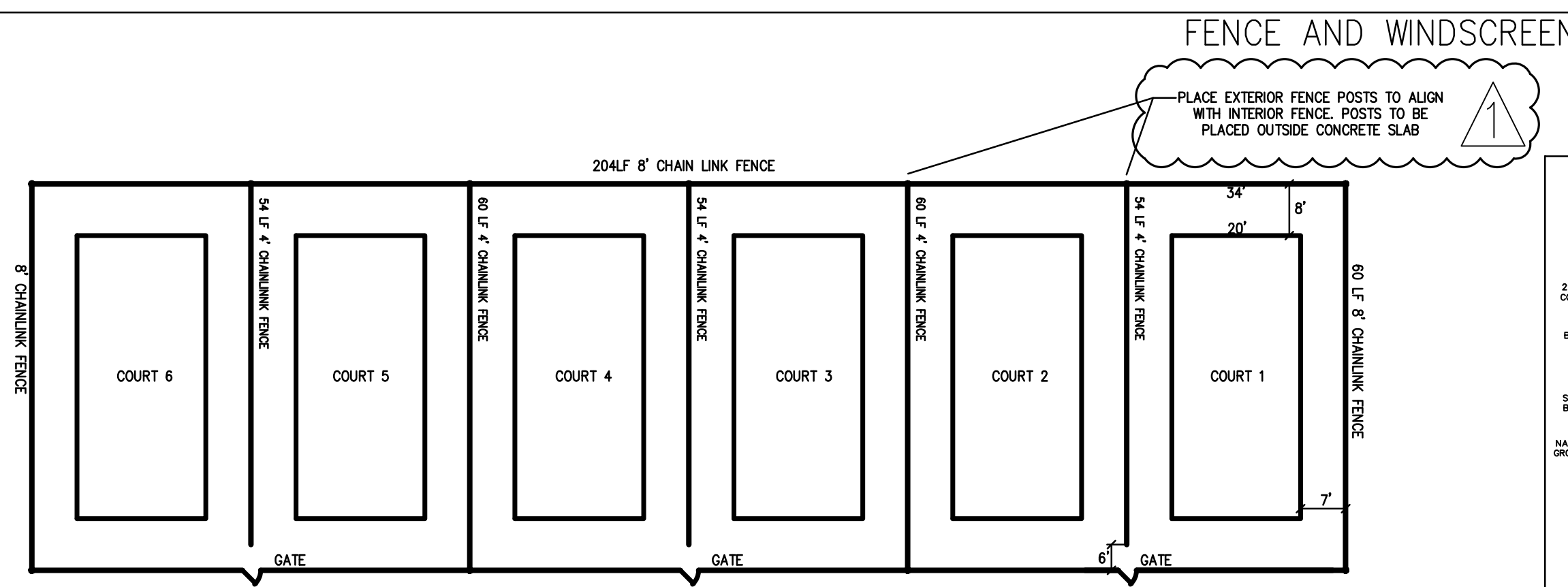
COURT SURFACE PAINT AND MATERIALS
 ALL COURT SURFACE PREPARATION AND COATINGS SHALL BE ACRYTECH PER ACRYTECH SYSTEM SPECIFICATION 020821 AND REFERENCED SPECS INCLUDED IN THE SPECIFICATIONS.

ACRYTECH COLORGUARD MIXING FOR SPEED OF PLAY IS ITF MEDIUM. APPLY TWO COATS OF COLORGUARD, NO THIRD COAT.

NOTE: ALL PRODUCTS FEATURED AND SPECIFIED ARE APPROVED. CONTRACTOR MAY SUBMIT EQUAL PRODUCT TO ENGINEER FOR CONSIDERATION. ALL APPROVAL OF ALTERNATE PRODUCTS MUST BE IN WRITING.



- NOTES:
- SPEC ITEM 360 PAVEMENT IS A GENERAL SPECIFICATION. THESE NOTES SHALL SUPERCEDE SPEC ITEM 360.
 - SPECIFIC TO THE PICKLEBALL COURTS, SEE ALSO SPEC ITEM AT-001 FOR CONCRETE PREPARATION WHICH SHALL GOVERN IF THE ITEMS CONFLICT.
 - CONCRETE STRENGTH SHALL BE 3500 PSI.
 - PRIOR TO PLACEMENT ALL VEGETATION AND DELETERIOUS MATERIALS SHALL BE REMOVED FROM THE COURTS AREA TO A DISTANCE OF 3 FT OUTSIDE COURT AREA.
 - CONCRETE SHALL BE CONSTRUCTED USING PORTLAND CEMENT WITH MINIMUM 5.5 SACK CEMENT CONTENT.
 - EXPOSED SURFACE SHALL BE PROOF ROLLED IN ACCORDANCE WITH TXDOT ITEM 216 (2014).
 - EXISTING SURFACE SOIL HAS A HIGH PI. TO BE USED AS SUBGRADE IT SHALL BE TREATED WITH HYDRATED LIME AT 30 POUNDS PER SQUARE YARD FOR 6-INCH DEPTH.
 - SUBGRADE LAYERS SHALL BE COMPACTED IN MAXIMUM 8-INCH LIFTS TO 95% STANDARD PROCTOR DENSITY PER ASTM D-698 AT OPTIMUM MOISTURE CONTENT OF 0 TO +/- 3% AND EXTEND TO 1 FT OUTSIDE PAVEMENT AREA.
 - VAPOR BARRIER TO BE PLACED BELOW CONCRETE.



FENCE QUANTITIES AND MATERIAL
 8' PERIMETER FENCE: 510 LF (WITHOUT GATES)
 4' INTERIOR FENCE: 270 LF
 6" SWING MAN GATES: 3 EA.

FENCE WINDBREAK
 8' GREEN DOUGLAS SPORTS VCP WINDSCREEN OR APPROVED EQUAL,
 ALL AROUND 528 LF, AFFIXED TO CHAIN LINK FENCE W/BLACK ZIP TIES

09/13/22

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NO.	DATE	REVISION
1	1-10-23	COURT SLAB, JCR

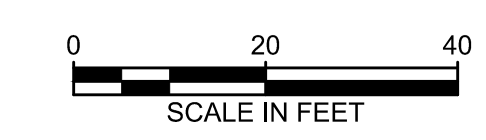
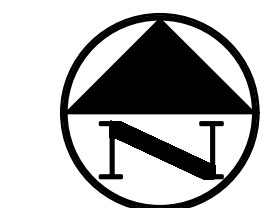
Pacheco Koch
 a Westwood company
 20329 STATE HIGHWAY 249
 SUITE 350
 HOUSTON, TX 77070
 281.883.0103

HARLEM ROAD PARK EXPANSION

PICKLEBALL COURT DETAIL
 FORT BEND COUNTY, TEXAS

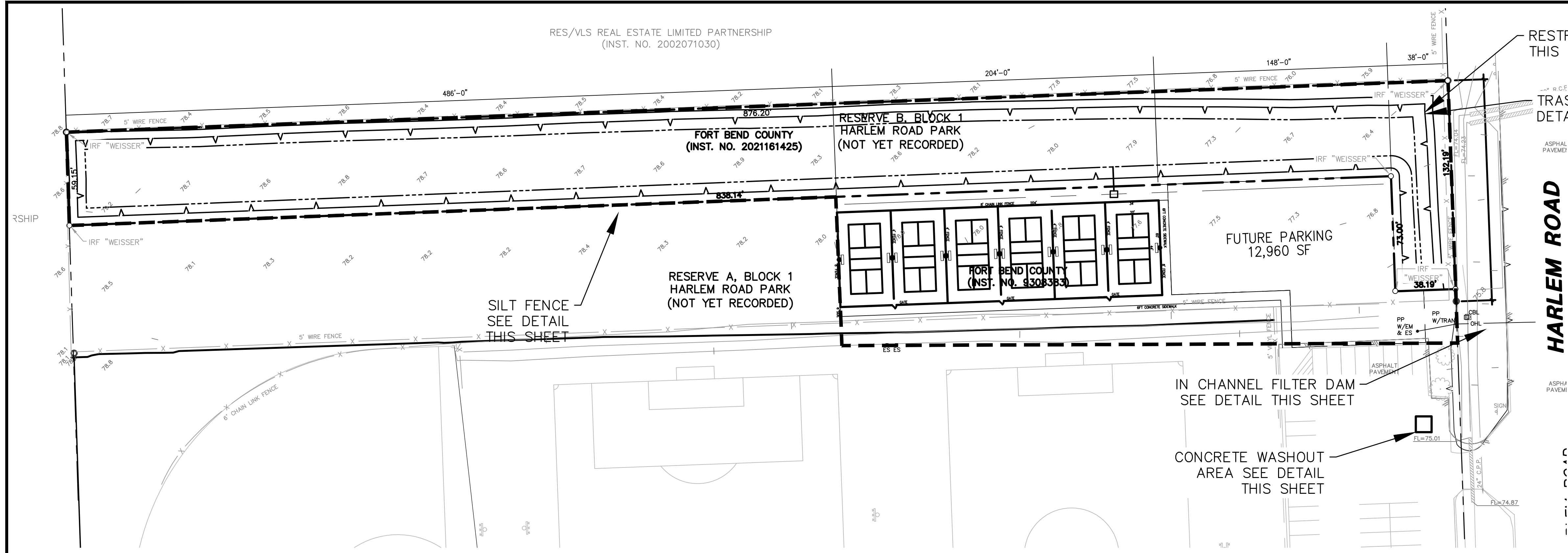
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RJD	NRA	09/13/22	NTS			6

HARLEM ROAD PARK EXTENSION DETENTION & GRADING



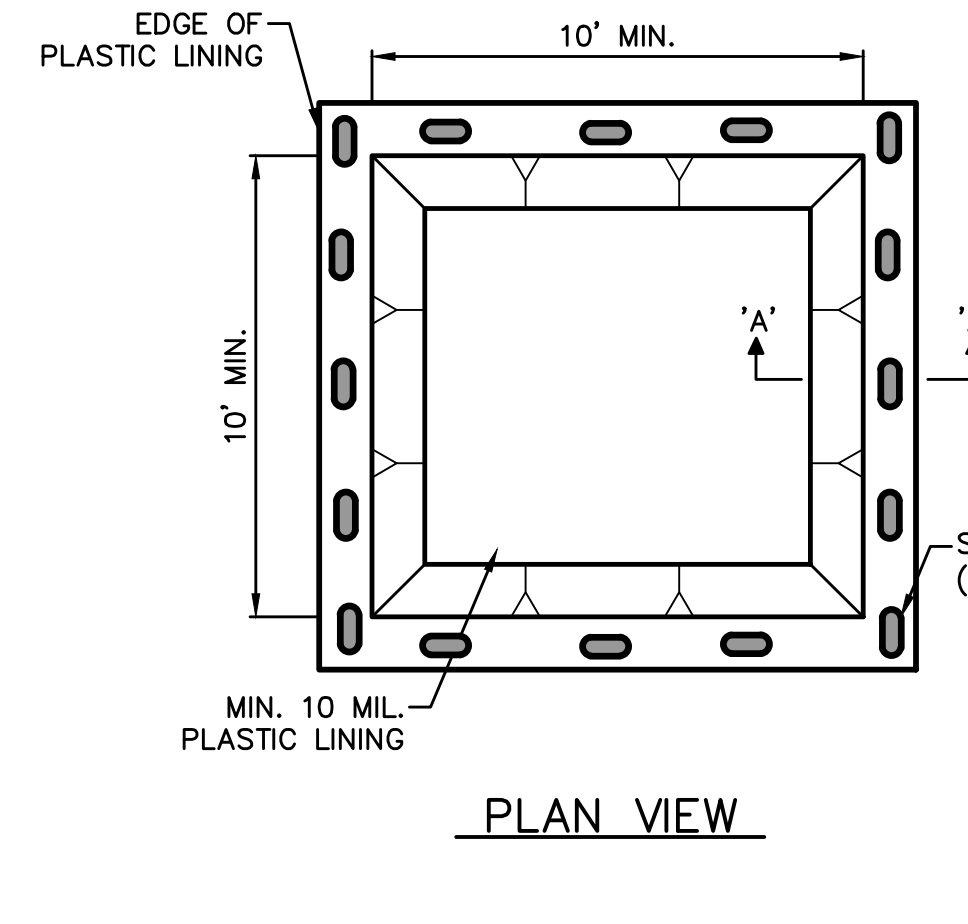
LEGEND

B	BOLLARD	(C.M.)	CONTROLLING MONUMENT
EM	ELECTRIC METER	---	PROPERTY LINE
PP	POWER POLE	-X-	FENCE
LS	LIGHT STANDARD	-OHL-	OVERHEAD UTILITY LINE
WM	WATER METER	-G1-	EXIST. CONTOUR
WV	WATER VALVE	-81.39-	EXIST. SPOT ELEVATION
ICV	IRRIGATION CONTROL VALVE	-57-	PROPOSED CONTOUR
FR	FIRE HYDRANT	EL. 61.50 x	PROPOSED SPOT ELEVATION
CL	CLEANOUT	M.G. 61.50 x	MATCH EXISTING GRADE
MH	MANHOLE	---	PROPOSED DRAINAGE FLOW DIRECTION
TSC	TRAFFIC SIGNAL CONTROL	---	PROPOSED SWALE
TSP	TRAFFIC SIGNAL POLE	---	---
TELE	TELEPHONE BOX	---	---
FL	FLOOD LIGHT	---	---
FP	FLAG POLE	---	---
SON	TRAFFIC SIGN	---	---



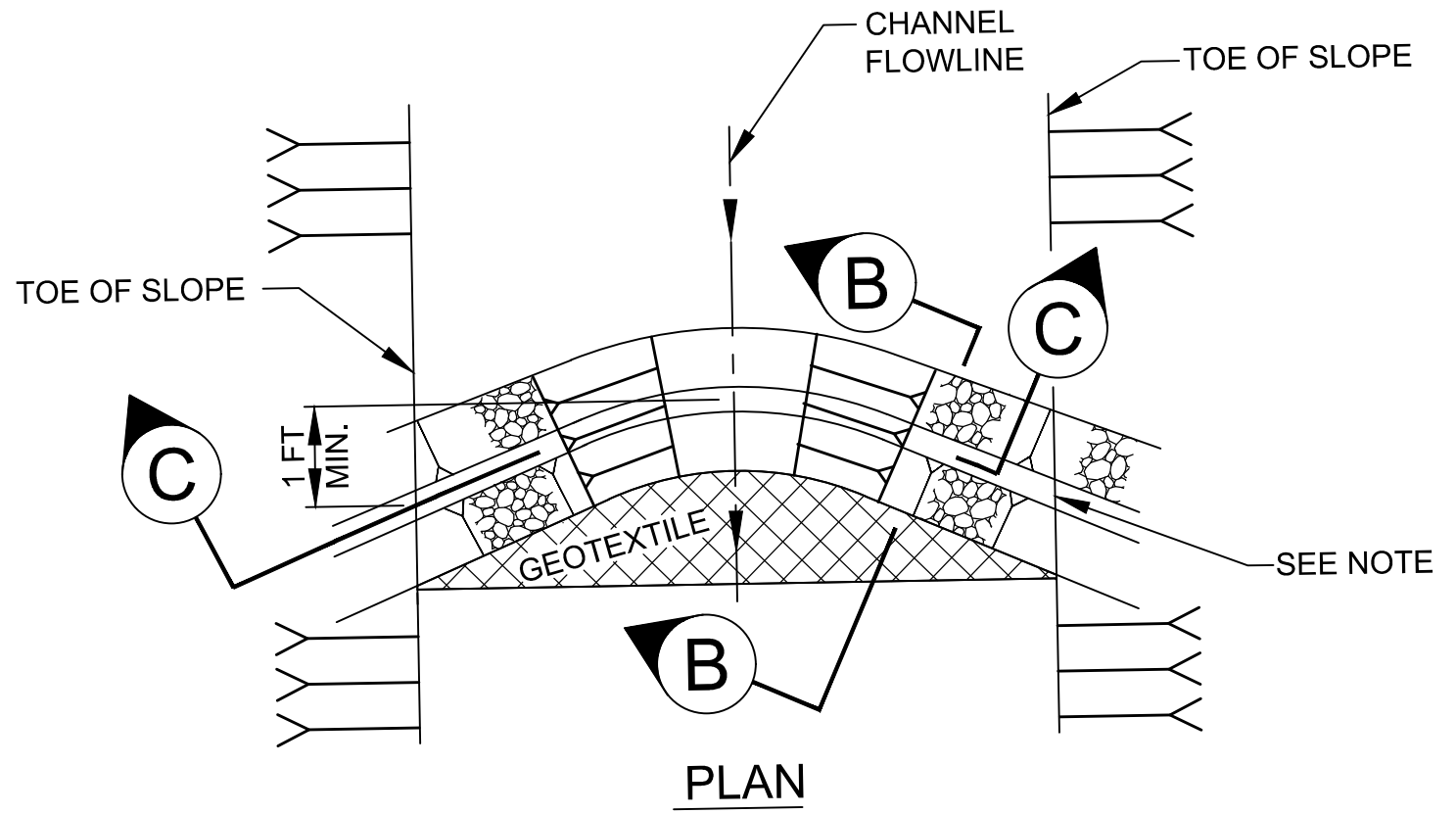
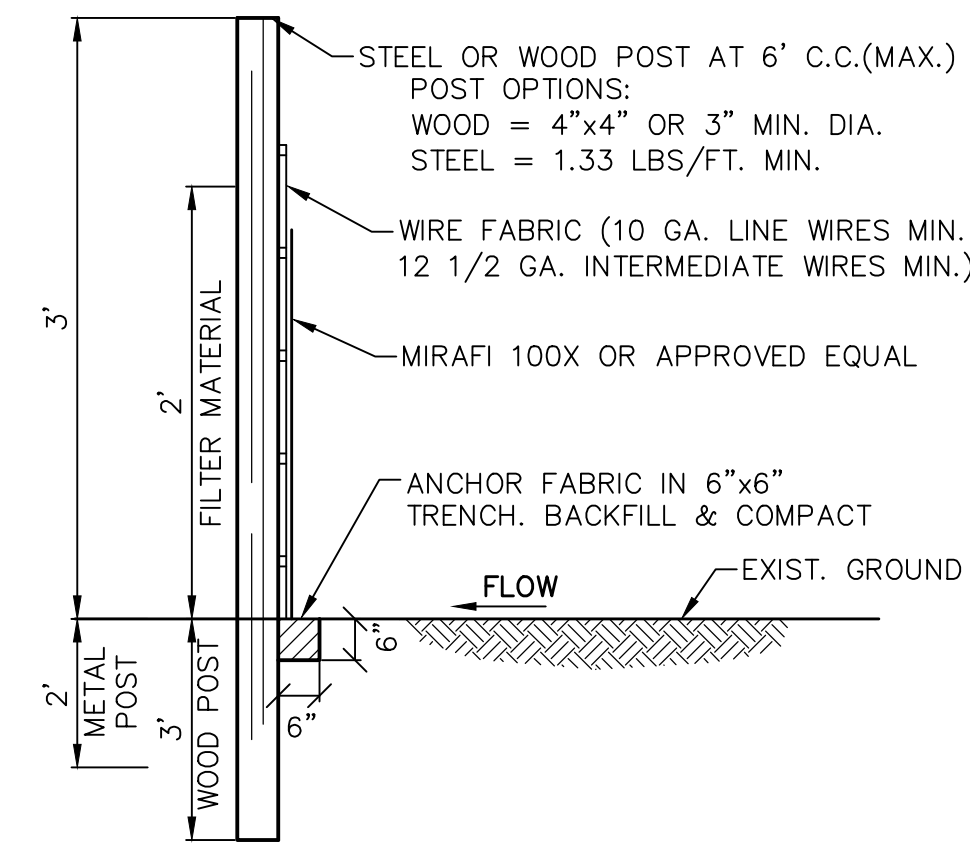
EROSION CONTROL GENERAL NOTES

- A COPY OF THIS PLAN, AS PART OF THE SWPPP, MUST BE KEPT AT THE CONSTRUCTION FACILITY DURING THE ENTIRE CONSTRUCTION PERIOD.
- MATERIAL STOCKPILES SHALL BE COVERED BY PLASTIC OR SURROUNDED BY EROSION CONTROL STRUCTURES TO CONTROL SEDIMENT RELEASES.
- CONTRACTOR SHALL PROTECT SLOPES IN EXCESS OF 15% IN ORDER TO MINIMIZE EROSION OF SOILS AND THE DISTURBANCE OF SLOPES.
28. VEGETATION TO BE PRESERVED WHERE EVER POSSIBLE TO HELP REDUCE EROSION. WHERE VEGETATION MUST BE REMOVED, PRESERVE NATIVE TOPSOIL IN ALL AREAS POSSIBLE.



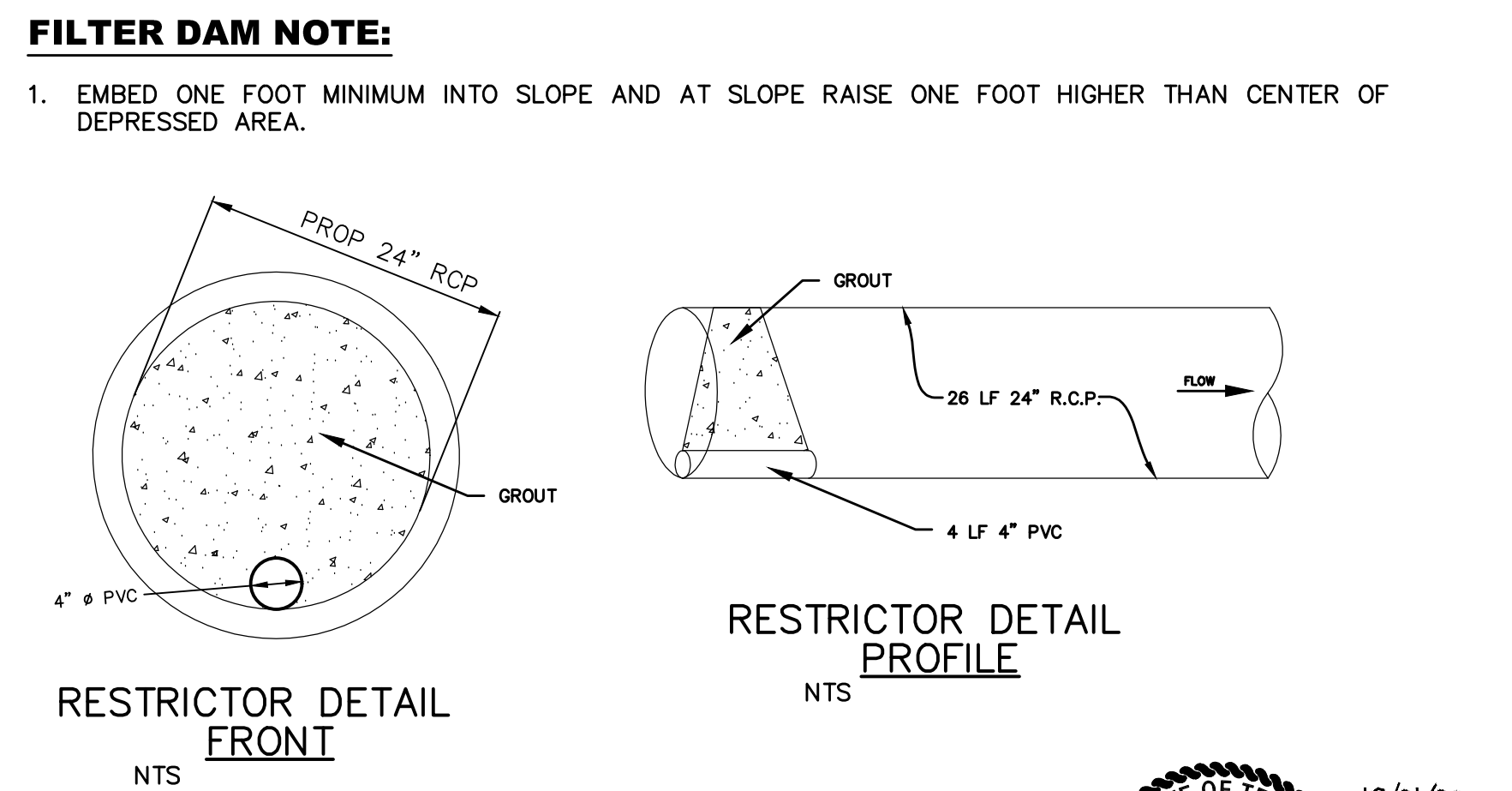
NOTE:

- SANDBAGS MAY BE REPLACED BY A SOIL BERM TO ANCHOR PLASTIC LINING.
- CONCRETE WASHOUT AREA TO BE CHECKED REGULARLY FOR REPAIRS. REGULARLY REMOVE CONCRETE WASTE TO PREVENT OVERFLOWING.
- PROVIDE MINIMUM 6 CF OF CONTAINMENT VOLUME FOR EVERY 10 CY OF CONCRETE PLACED. PROVIDE MINIMUM 1' FREEBOARD ABOVE CONTAINMENT VOLUME.



GEOTEXTILE NOTES:

MIN. AOS	SIEVE NO.	120 MIN
MAX. AOS	SIEVE NO.	50 MAX
WEIGHT	OZ/SY	4.0Z MIN

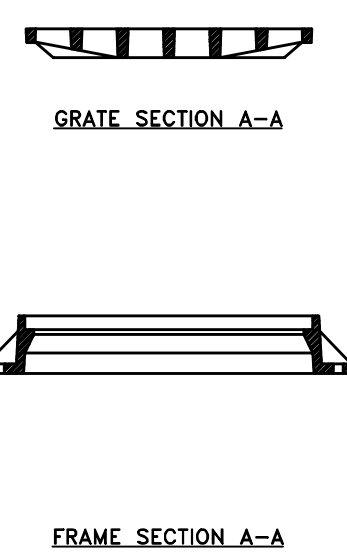
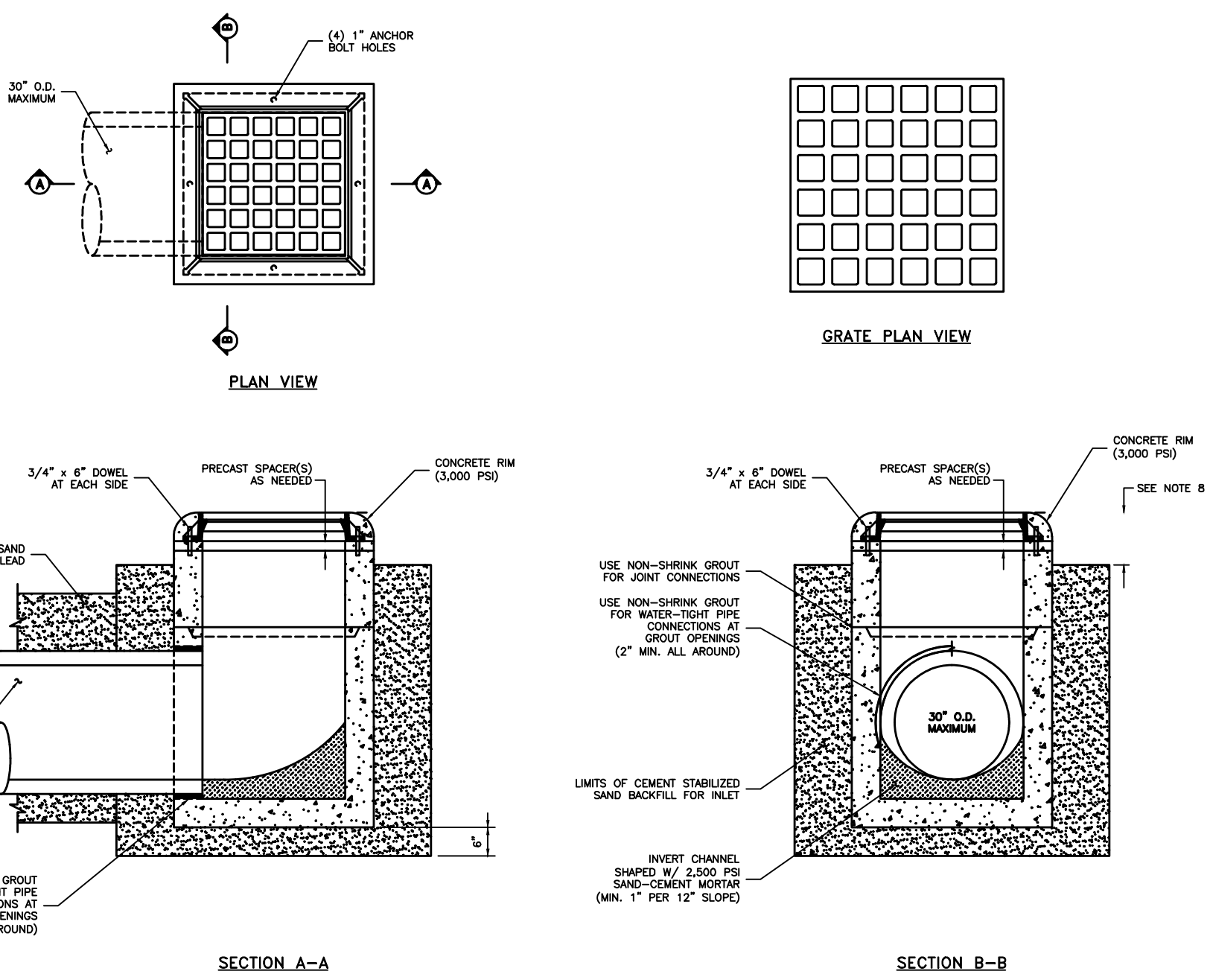


1 CONCRETE WASHOUT AREA
NOT TO SCALE

2 SILT FENCE
NOT TO SCALE

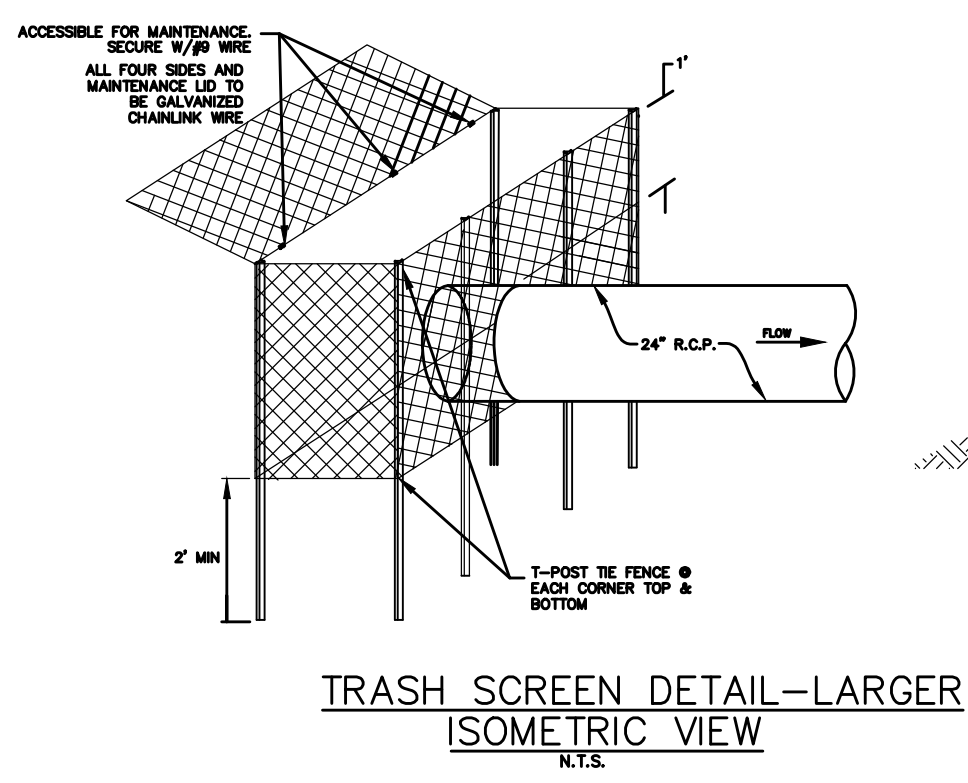
3 IN-CHANNEL FILTER DAM DETAIL
NOT TO SCALE

4 RESTRICTOR DETAIL
NOT TO SCALE

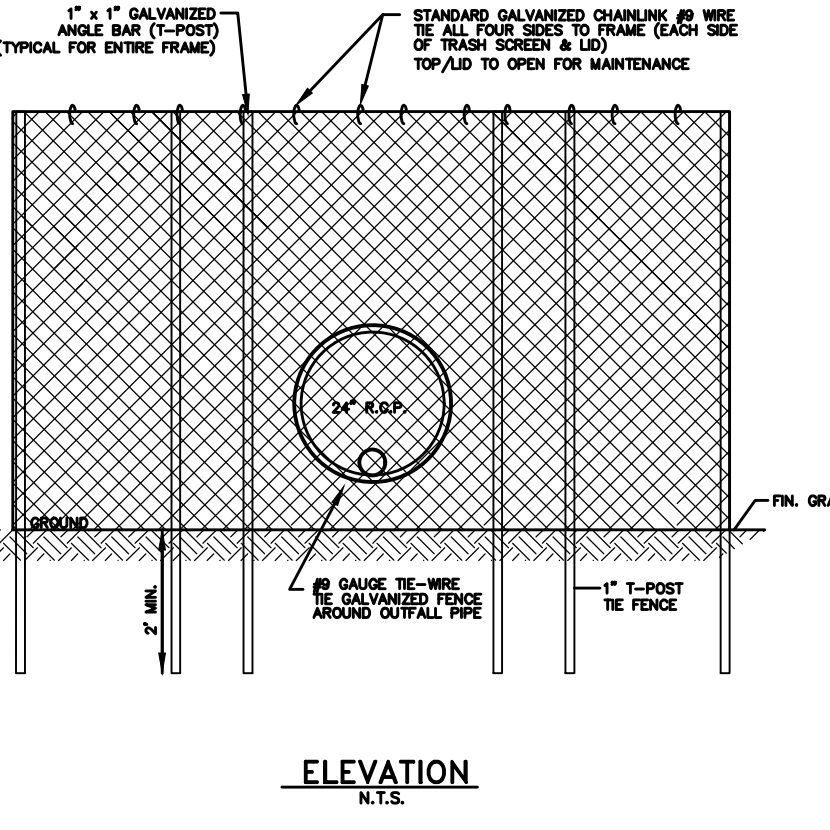


GRATE SECTION A-A

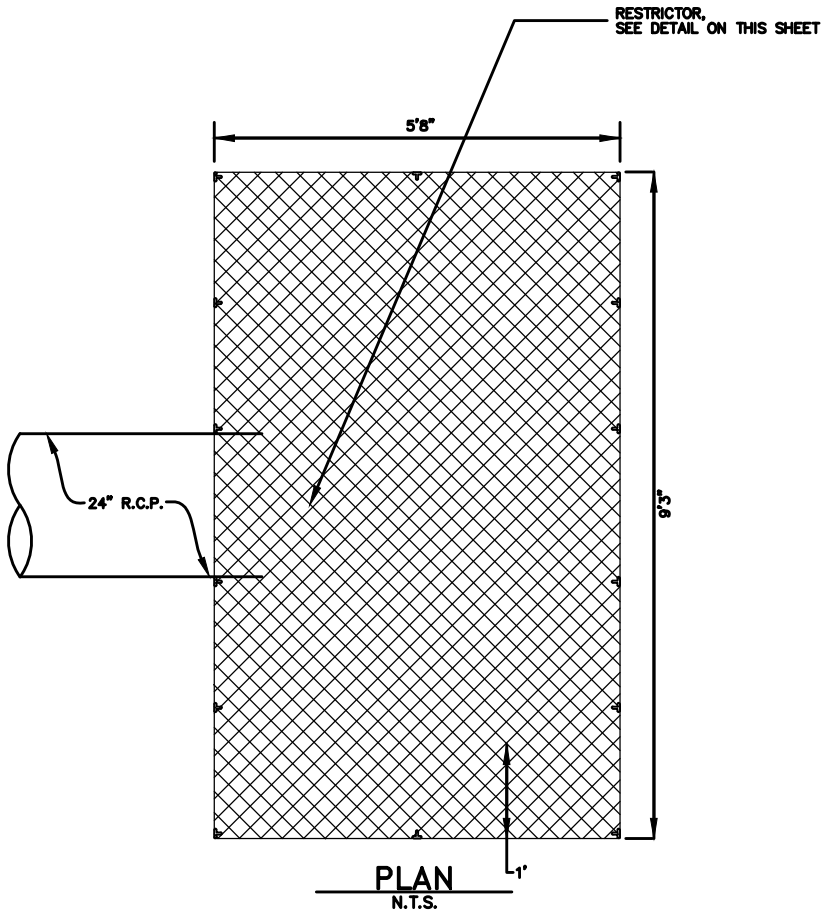
FRAME SECTION A-A



TRASH SCREEN DETAIL-LARGER ISOMETRIC VIEW
N.T.S.



ELEVATION
N.T.S.



PLAN
N.T.S.

6 TRASH SCREEN DETAIL
DETAIL NOT TO SCALE

GENERAL NOTES:

- CONSTRUCTION AND MATERIALS SHALL MEET REQUIREMENTS OF ITEM 472 INLET.
- CONCRETE FOR INLET MINIMUM 4,000 PSI IN 28 DAYS.
- PRECAST STRUCTURE TO MEET ASTM C815.
- FRAME AND GRATE SHALL BE CAST IRON OR STEEL WORKS MODEL V-ARCH (OPEN AREA 412 SQ. IN.) OR APPROVED EQUAL.
- IF THE ENGINEER OF RECORD SPECIFIES A CAST-IN-PLACE INLET, HE/SHE SHALL INCORPORATE A DETAILED DRAWING INTO THE CONTRACT DOCUMENTS. HOWEVER, IF THE CONTRACTOR ELECTS TO CONSTRUCT A CAST-IN-PLACE INLET, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A DETAILED DRAWING, SHOWING AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS.
- SHOP DRAWINGS SHALL BE REQUIRED FOR PRECAST CONSTRUCTION OF INLET.
- CONCRETE AND NOT PERMISSIBLE FOR PRECAST CONSTRUCTION OF INLET.
- CEMENT STABILIZED SAND SHALL EXTEND TO THE BOTTOM OF FRAME OR SLOPE FINISH OR 12 INCHES BELOW THE SURFACE IF INLET IS LOCATED IN AN UNPAVED AREA.

ISSUED FOR PRELIMINARY PRICING PURPOSES ONLY
(SUBJECT TO REVISION PRIOR TO CONSTRUCTION)

THESE DOCUMENTS HAVE BEEN PREPARED BY THE ENGINEER WITH THE INTENT OF COMPLYING WITH ALL CITY STANDARD REQUIREMENTS. THESE DOCUMENTS HAVE NOT BEEN APPROVED AND RELEASED FOR CONSTRUCTION BY THE COUNTY AS OF THIS DATE AND, THEREFORE, REVISIONS MAY BE REQUIRED PRIOR TO CONSTRUCTION BY ANY USE OF THESE DOCUMENTS. THE USER ASSUMES THEIR UNDERSTANDING OF THE PRELIMINARY STATUS OF THE PLANS AND THE POTENTIAL FOR REVISION PRIOR TO ANY CONSTRUCTION.

NO.	DATE	REVISION

Pacheco Koch
a Westwood company
20329 STATE HIGHWAY 249
SUITE 350
HOUSTON, TX 77070
281.883.0103

HARLEM ROAD PARK EXPANSION

EROSION CONTROL PLAN
FORT BEND COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RJD	RAR	10/21/22	1"=40' 24" x 36"			7

TX REG. ENGINEERING FIRM F-469
TX REG. SURVEYING FIRM LS-10193805

