



CITY OF HOUSTON

INVITATION TO BID

Issued: April 15, 2011

Bid Opening:

Sealed bids, in duplicate, will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002 until **10:30 A.M. Thursday, May 12, 2011**, and all bids will be opened and publicly read in the City Council Chamber, City Hall Annex, Public Level, 900 Bagby at 11:00 A.M. on that date for the purchase of:

**CONSTRUCTION OF A PARKING LOT AT 5614 NECHES STREET
FOR THE GENERAL SERVICES DEPARTMENT
Bid No. S50-C23894
NIGP Code: 913-75 / 913-94**

Buyer:

Questions regarding this solicitation should be addressed to Arturo Lopez, Senior Procurement Specialist, at **832-393-8731** or e-mail to **arturo.lopez@houstontx.gov**

Electronic Bidding:

In order to submit a bid for the items associated with this procurement, you must fill in the pricing information on the "**PLACE BID**" page.

Prebid Conference:

A Pre-Bid Conference will be held for all Prospective Bidders in the Strategic Purchasing Division, Concourse Level (Basement), Conference Room #1, City Hall, 901 Bagby, at 10:00 am. on Wednesday, April 27, 2011. The site visit will be scheduled at the pre-bid conference.

All Prospective Bidders are urged to be present. It is the bidder's responsibility to ensure that they have secured and thoroughly reviewed all aspects of the solicitation documents prior to the Pre-Bid Conference. Any revisions to be incorporated into this solicitation document arising from discussions before, during and subsequent to the Pre-Bid Conference will be confirmed in writing by Letter(s) of Clarification prior to the bid due date. Verbal responses will not otherwise alter the specifications, terms and conditions as stated herein.

Bidding forms, specifications, and all necessary information should be downloaded from the Internet at www.purchasing.houstontx.gov. By registering and downloading this solicitation document, all updates to this solicitation document will be automatically forwarded via e-mail to any registered bidders. This information may also be obtained from the Supplier Assistance Desk, Strategic Purchasing Division, 901 Bagby, Concourse Level, Houston, Texas 77002.

The place of the bid opening may be transferred in accordance with Paragraph (b), (5) of Section 15-3 of The Code of Ordinances, Houston, Texas. The bid-opening meeting may be rescheduled in accordance with Paragraph (b), (6) of said Section 15-3.

The City reserves the right to reject any or all bids or to accept any bid or combination of bids deemed advantageous to it.

City employees are prohibited from bidding on this solicitation in accordance with the Code of Ordinances Section 15-1.

***CONTENTS:**

- A. OFFER
- B. SCOPE OF WORK/SPECIFICATIONS
- C. GENERAL TERMS AND CONDITIONS, GENERAL, SUPPLEMENTAL CONDITIONS AND BOND FORMS

*NOTE 1: Actual page numbers for each section may change when the solicitation document is downloaded from the Internet or because of letters of clarification. Therefore, bidders must read the solicitation document in its entirety and comply with all the requirements set forth therein.

*NOTE 2: To be considered for award please submit the electronic bid form and the forms listed in section A, including the signature page, which must be signed by a company official authorized to bind the company and a **10% Bid Bond**.

SECTION A



**FORMAL ONE-TIME BID
CONSTRUCTION OF A PARKING LOT AT 5614 NECHES STREET
FOR THE GENERAL SERVICES DEPARTMENT
Bid No. S50-C23894
NIGP Code: 913-75 / 913-94**

To The Honorable Mayor
and City Council Members
of the City of Houston, Texas (the "City"):

The undersigned hereby offers to provide services necessary for the **Construction of a Parking Lot at 5614 Neches Street for the General Services Department**, F.O.B. destination point Houston, Texas, in accordance with the City's Specifications and General Terms & Conditions and/or samples/drawings provided herein. When issued by the City of Houston, Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with Letters of Clarification. It is the responsibility of the bidder to ensure that it has obtained all such letters. By submitting a bid on this project, bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into the bid.

The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order at any time on or before the 120th day following the day this Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.

The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Prime Contractor/Supplier to honor the same bid price.

The City reserves the option, after bids are opened, to adjust the quantities listed on the electronic bid form upward or downward, subject to the availability of funds, and/or make award (s) on a line item basis.

SECTION A

Documents/forms must be downloaded from the City's Website
<http://www.houstontx.gov/purchasing/index.html>

Additional Required Forms to be Included with this bid:

In addition to the electronic Bid Form and the Official Signature Page, the Forms listed in Table 1 **must be completed and submitted to the Office of the City Secretary on or before the date and time the bid is due:**

Table 1
Affidavit of Ownership
Fair Campaign Ordinance
Statement of Residence
Conflict of Interest Questionnaire
10% Bid Bond
Contractor References / Questionnaire
Pay or Play Health Insurance Program Acknowledgement Form 1A

Table 2 lists other documents and forms that should be viewed/downloaded from the City's website, but are not required to be submitted with the bid. The City will request these forms, as applicable, to be completed and submitted to the City by the recommended/successful bidder:

Table 2
Formal Instructions for Bid Terms
Drug Forms
Sample Insurance Certificate / Over \$50,000
Construction Insurance OCP
Construction 2011 Engineering Construction Wage Rate
Pay or Play Certification of Agreement Form 2
Pay or Play Form 3 / List of all Subcontractors
Bonds for Construction

Questions concerning the Bid should be submitted in writing to: City of Houston, Strategic Purchasing Division, 901 Bagby, Room B506, Houston, TX 77002, Attn: Arturo Lopez or via fax: 832-393-8759 or via email (preferred method) to arturo.lopez@cityofhouston.net no later than **4:00 PM, Monday, May 2, 2011.**

QUALITY AND WORKMANSHIP

The bidder must be able to demonstrate upon request that it has performed satisfactorily, services similar to the services specified herein. The bidder will provide records of warranty and repair services performed for others upon request. The City of Houston shall be the sole judge whether the services performed are similar to the scope of services specified herein.

PERMITS:

Successful Contractor shall be responsible for securing any and all permits for proposed work. Any fee charged for these permits should be the responsibility of the Contractor and not the City of Houston.

CITY BUILDING CODES:

All work performed or equipment installed shall be in strict accordance with the City of Houston Building Codes. The Contractor will immediately correct any deficiencies discovered during work or after completion. Failure to correct deficiencies will result in the City having corrections made at the Contractor's expense.

BID BOND:

The Contractor shall be required to provide and submit with the bid a Bid Bond in the amount of 10% of the total amount bid by the Contractor. The Bid Bond shall be in the same form as that distributed by the City, and attached hereto, all duly executed by this Bidder (as "Principal") and by a corporate surety company licensed to do business in the State of Texas, and if the amount of the bond is greater than \$100,000.00 the surety must hold a certificate of authority from the United States Secretary of the Treasury, or a Cashier's or a Certified check in a like amount. Company or personal checks are not acceptable.

PERFORMANCE BOND and PAYMENT BOND:

The successful Contractor(s) shall be required to provide a Performance and Payment Bond in the total amount (100%) of the Contract if the award is in excess of \$25,000.00.

The Performance and/or Payment Bond shall be in the same form as that distributed by the City, and attached hereto, all duly executed by this bidder (as "Principal") and by an incorporated surety company licensed to do business in the State of Texas. If the amount of the bond is greater than \$100,000.00 the surety must hold a certificate of authority from the United States Secretary of the Treasury.

The Contractor(s) shall be required to provide a Performance and/or Payment Bond as outlined above, which will be delivered to the City Purchasing Agent of the City, on or before the tenth (10th) day following the day the bidder receives notice from the City.

MAINTENANCE BOND:

The Contractor shall furnish a maintenance bond in the total (100%) bid amount in the form required by the City (samples attached). One bond, also referred to as the One Year Maintenance Bond, will be conditioned upon Contractor's repair, replacement or restoration of any work or any portion of the work which is found to be defective or fails in any way to comply strictly with this contract or the plans and specifications for such work within a period of one (1) year from the date of acceptance of such work by the City Council or after the date that the "CO", or his designee in writing, determines, in a written notice to the Contractor, to be the date upon which the project is both substantially complete and available for the full and beneficial occupancy or use of the City.

CONTRACTOR'S QUESTIONNAIRE

In order to receive bid award consideration, the bidder must be able to demonstrate that they are currently providing or have had at least one contract, similar in size and scope, for **parking lot construction** that is similar in size and scope to this contract. **Bidder must have references documenting that it has constructed a parking lot of similar size and scope as stipulated in the scope of work / specifications and attendant drawings.** The reference(s) should be included in the space provided below. Please attach another piece of paper if necessary. If references are not included with the bid, the bidder shall be required to provide such references to the City of Houston within five working days from receipt of a written request from the City of Houston to do so. **Bidder's capability and experience shall be a factor in determining the Contractor's responsibility.**

1. Business Name: _____

Business Address: _____

City, State, Zip: _____

Name of Owner/Contact Person: _____

Phone: _____ Fax: _____ Email: _____

No. of Years providing Service to this business: _____

2. Business Name: _____

Business Address: _____

City, State, Zip: _____

Name of Owner/Contact Person: _____

Phone: _____ Fax: _____ Email: _____

No. of Years providing Service to this business: _____

3. Business Name: _____

Business Address: _____

City, State, Zip: _____

Name of Owner/Contact Person: _____

Phone: _____ Fax: _____ Email: _____

No. of Years providing Service to this business: _____

4. Business Name: _____

Business Address: _____

City, State, Zip: _____

Name of Owner/Contact Person: _____

Phone: _____ Fax: _____ Email: _____

No. of Years providing Service to this business: _____

SITE INSPECTION

The City of Houston reserves the right to inspect the bidder's current place of business to evaluate equipment condition and capabilities, staff experience, training and capabilities, and storage capabilities as they relate to the performance of this contract.

**SECTION B
SCOPE OF WORK/SPECIFICATIONS**

1.0 General:

1.1 The Contractor shall provide all labor, equipment, tools, supervision, transportation, insurance, permits, bonds and other services necessary for the construction of a new parking lot. The scope of work includes but is not limited to site demolition, new paving, construction of curbs, landscaping, relocate the detention pond, new concrete bases for relocated light poles and provide electrical service for light poles at 5614 Neches Street, in strict accordance with City of Houston specifications and structural drawings included herein:

2.0 Performance Time:

2.1 The Contractor shall have ***90 calendar days*** to complete all work associated with and required by the contract after receipt of the written Notice to Proceed from City.

3.0 Warranty:

3.1 The Contractor shall warranty all materials, equipment and workmanship for ***one year***. The warranty shall begin subsequent to certification and acceptance of the final performance of work by the City.

4.0 Table of Contents:

CITY OF HOUSTON SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

DOC. NO.	DOCUMENT TITLE	DOC. DATE
01110	Summary of Work,	02-09-2011
01255	Change Order Procedures.....	08-01-2003
01270	Measurement and Payment.....	08-01-2003
01292	Schedule of Values.....	08-01-2003
01312	Coordination and Meetings.....	08-01-2003
01321	Construction Photographs.....	08-01-2003
01325	Construction Schedule.....	09-28-2007
01330	Submittal Procedures.....	08-01-2003
01340	Shop Drawings, Product Data, and Samples.....	08-01-2003
01410	TPDES Requirements (with Attachments).....	08-01-2003
01422	Reference Standards.....	08-01-2003
01450	Contractor's Quality Control.....	08-01-2003
01452	Inspection Services.....	08-01-2003
01454	Testing Laboratory Services.....	08-01-2003
01502	Mobilization.....	08-01-2003
01504	Temporary Facilities and Controls.....	08-01-2003
01506	Diversion Pumping.....	08-01-2003
01555	Traffic Control and Regulation.....	08-01-2003

01562	Tree and Plant Protection.....	08-01-2003
01570	Storm Water Pollution Control.....	08-01-2003
01575	Stabilized Construction Exit.....	08-01-2003
01576	Waste Material Disposal.....	08-01-2003
01578	Control of Ground Water.....	08-01-2003
01610	Basic Product Requirements.....	08-01-2003
01630	Product Substitution Procedures.....	08-01-2003
01725	Field Surveying.....	08-01-2003
01731	Cutting and Patching.....	08-01-2003
01740	Site Restoration.....	08-01-2003
01755	Starting Systems	08-01-2003
01770	Closeout Procedures.....	09-28-2007
01782	Operations and Maintenance Data.....	09-28-2007
01785	Project Record Documents	09-28-2007

DIVISION 2 - SITE WORK - REFER TO DRAWINGS

DIVISION 3 - CONCRETE - REFER TO DRAWINGS

DIVISION 4 - MORTAR - REFER TO DRAWINGS

DIVISION 5 - METALS - REFER TO DRAWINGS

DIVISION 6 - WOOD AND PLASTICS - NOT USED

DIVISION 7 - THERMAL AND MOISTURE PROTECTION - NOT USED

DIVISION 8 - DOORS AND WINDOWS - NOT USED

DIVISION 9 - FINISHES - NOT USED

DIVISION 10 - SPECIALTIES - NOT USED

DIVISION 11 - EQUIPMENT- NOT USED

DIVISION 12 - FURNISHINGS - NOT USED

DIVISION 13 - SPECIAL CONSTRUCTION - NOT USED

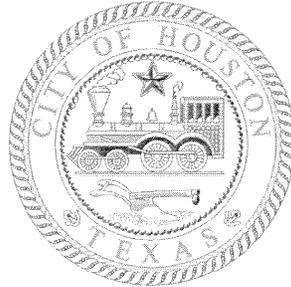
DIVISION 14 - CONVEYING SYSTEMS - NOT USED

DIVISION 15 - MECHANICAL - NOT USED

DIVISION 16 - ELECTRICAL - REFER TO DRAWINGS

- 4.1 The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

END OF SECTION



**City of Houston
General Services Department
Design & Construction Division**

**PROJECT MANUAL
SWD New Parking Lot
5614 Neches
Houston, Texas 77026**

WBS NO.: L-000079-0001-4

Divisions 00 and 01

December 2010

Brave Architecture
4617 Montrose Blvd., Suite C230
Houston, Texas 77006
713-524-5858

TECHNICAL SPECIFICATIONS

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Summary of the Work including work by the City, City-furnished Products, work sequence, future work, Contractor use of Premises, special conditions for substantial completion and City occupancy.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of the Contract is for demolition and construction of new concrete paving, curbs, landscaping, grading of detention area, new oil/water separator and power to relocated electrical pole mounted light.

1.03 CASH ALLOWANCES

- A. Include the following specific Cash Allowances in Contract Price under provision of General Conditions Paragraph 3.11:

1.04 ALTERNATES

- A. From the following list of Alternates, include cost in Contract Price for only those Alternates accepted by the City and listed in the fully executed Document 00520 -Agreement, Paragraph 3.2:

1.05 CITY-FURNISHED PRODUCTS

- A. Items Furnished by the City for Installation and final connection by Contractor: Water meter.
- B. Contractor's Responsibilities:
 - 1. Arrange and pay for Product delivery to the site.
 - 2. Receive and unload Products at the site; jointly with the City, inspect for completeness or damage.
 - 3. Handle, store, Install, and finish Products.
 - 4. Repair or replace damaged items.

1.06 WORK SEQUENCE

- A. Construct the Work in Phases during the construction period, coordinate construction schedule and operations with the City:
 - 1. Phase 1: No Phases.
- B. For projects with no Phases, do not disturb more than 50% of total project linear feet of disturbed right-of-way and easement until site restored in accordance with Section 01740 - Site Restoration.

C. Coordination of the Work: Refer to Section 01312 - Coordination and Meetings.

1.07 CONTRACTOR USE OF PREMISES

- A. Comply with procedures for access to the site and Contractor's use of rights-of-way as specified in Section 01145 - Use of Premises.
- B. Construction Operations: Limited to the City's rights-of-way provided by the City and areas shown or described in the Contract documents.
- C. Utility Outages and Shutdown: Provide a minimum of 48 hours notice to the City and private utility companies (when applicable), excluding weekends and holidays, in advance of required utility shutdown. Coordinate all work as required.

1.08 STREET CUT ORDINANCE

- A. Excavations on or under pavement in the City's right-of-way must have a permit. Comply with City of Houston, Texas Ordinance No. 2000-1115, an ordinance amending Chapter 40 of the Code of Ordinances, Houston, Texas, relating to excavating in the Public right-of-way.
- B. Comply with the latest edition of street cut New Pavement Repair and Pavement Replacement details.
- C. Quantities are included for street cut pavement repair and replacement in applicable Specification sections for Unit Price contracts.
- D. Include payment for street cut pavement repair and replacement in lump sum bid for Stipulated Price contracts.

1.09 WARRANTY

- A. Comply with warranty requirements in accordance with Document 00700 - General Conditions.

1.10 ADDITIONAL CONDITIONS FOR SUBSTANTIAL COMPLETION

- A. In addition to requirements outlined in Document 00700 - General Conditions, for Contractor to be substantially complete with the Work and call for inspection by Project Manager to confirm, the following conditions must be met or completed:
 - 1. All testing shall be completed and accepted by Project Manager.
- B. No additional condition to those described in Paragraph 1.10 may be included in Contractor's punch list.

PART 2 PRODUCTS -Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01255

CHANGE ORDER PROCEDURES

PART 1 GENERAL

1.0 SECTION INCLUDES

- 1.1 Procedures for processing Change Orders, including:
- 1.2 Assignment of a responsible individual for approval and communication of changes in the Work;
- 1.3 Documentation of change in Contract Price and Contract Time;
- 1.4 Change procedures, using proposals and construction contract modifications, work change directive, stipulated price change order, unit price change order, time and materials change order;
- 1.5 Execution of Change Orders;
- 1.6 Correlation of Contractor submittals.

2.0 REFERENCES

- 2.1 Blue Book is defined as the Rental Rate Blue Book for Construction Equipment (a.k.a. Data Quest Blue Book).
- 2.2 Rental Rate is defined as the full-unadjusted base rental rate for the appropriate item of construction equipment.

3.0 RESPONSIBLE INDIVIDUAL

- 3.1 Contractor shall provide a letter indicating the name and address of the individual authorized to execute change documents, and who shall also be responsible for informing others in Contractor's employ and Subcontractors of changes to the Work. The information shall be provided at the Preconstruction Conference.

4.0 DOCUMENTATION OF CHANGE IN CONTRACT PRICE AND CONTRACT TIME

- 4.1 Contractor shall maintain detailed records of changes in the Work. Provide full information required for identification and evaluation of proposed changes, and to substantiate costs of changes in the Work.
- 4.2 Contractor shall document each proposal for a change in cost or time with sufficient data to allow evaluation of the proposal.
- 4.3 Proposals shall include, as a minimum, the following information as applicable:

- 4.3.1 Quantities of items in the original Document 00410 – Bid Form with additions, reductions, deletions, and substitutions.
- 4.3.2 Quantities and cost of items in original Schedule of Values with additions, reductions, deletions, and substitutions.
- 4.3.3 Provide Unit Prices for new items, with supporting information, for inclusion in Schedule of Unit Price Work.
- 4.3.4 Justification for any change in Contract Time.
- 4.3.5 Additional data upon request.
- 4.4 For changes in the Work performed on a time-and-material basis, the following additional information may be required:
 - 4.4.1 Quantities and description of products and equipment.
 - 4.4.2 Taxes, insurance and bonds.
 - 4.4.3 Overhead and profit as noted in Document 00700 – General Conditions.
 - 4.4.4 Dates and times work was performed, and by whom.
 - 4.4.5 Time records and certified copies of applicable payrolls.
 - 4.4.6 Invoices and receipts for products, rented equipment, and subcontracts, similarly documented.
- 4.5 For changes in the work performed on a time-and-materials basis, rental equipment will be paid as follows:
 - 4.5.1 Rented equipment will be paid by actual invoice cost for the duration of time required to complete the extra work without markup for overhead and profit. If the extra work comprises only a portion of the rental invoice where the equipment would otherwise be on the site, the Contractor shall compute the hourly equipment rate by dividing the actual monthly invoice by 176. (One day equals 8 hours and one week equals 40 hours.)
 - 4.5.2 Operating costs shall not exceed the estimated operating costs given in the Blue Book for the item of equipment. Overhead and profit will be allowed on operating cost.
- 4.6 For changes in the work performed on a time-and-materials basis using Contractor-owned equipment, use Blue Book rates as follows:

- 4.6.1 Contractor-owned equipment will be paid at the Blue Book Rental Rate for the duration of time required to complete the extra work without markup for overhead and profit. The Rental Rate utilized shall be the lowest cost combination of hourly, daily, weekly or monthly rates. Use 150 percent of the Rental Rate for double shifts (one extra shift per day) and 200 percent of the Rental Rate for more than two shifts per day. Standby rates shall be 50 percent of the appropriate Rental Rate shown in the Blue Book. No other rate adjustments shall apply.
- 4.6.2 Operating costs shall not exceed the estimated operating costs given in the Blue Book for the item of equipment. Overhead and profit will be allowed on operating cost. Operating costs will not be allowed for equipment on standby.

5.0 CHANGE PROCEDURES

- 5.1 Changes to Contract Price or Contract Time can only be made by issuance of a Change Order. Issuance of a Work Change Directive will be formalized into a Change Order. All changes will be in accordance with the requirements of - General Conditions,
- 5.2 The City Engineer will advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Time as authorized by the General Conditions by issuing supplemental instructions.
- 5.3 Contractor may request clarification of Drawings, Specifications or Contract Documents or other information by using Document 00660 - Request for Information. Response by the City Engineer to a Request for Information does not authorize the Contractor to perform tasks outside the scope of the Work. All changes must be authorized as described in this section.

6.0 PROPOSALS AND CONTRACT MODIFICATIONS

- 6.1 Project Manager may issue Document 00932 - Request for Proposal, which includes a detailed description of a proposed change with supplementary or revised Drawings and Specifications. Project Manager may also request a proposal in the response to a Request for Information. Contractor shall prepare and submit a proposal within 7 days or as specified in the request.
- 6.2 The Contractor may propose an unsolicited change by submitting a proposal to the City Engineer describing the proposed change and its full effect on the Work, with a statement describing the reason for the change and the effect on the Contract Price and Contract Time including full documentation.
- 6.3 Design Consultant may review Change Orders.

7.0 WORK CHANGE DIRECTIVE

- 7.1 City Engineer may issue a signed Work Change Directive instructing the Contractor to proceed with a change in the Work. A Work Change Directive will subsequently be incorporated in a Change Order.
- 7.2 The document will describe changes in the Work and will designate a method of determining any change in Contract Price or Contract Time.

7.3 Contractor shall proceed promptly to execute the changes in the Work in accordance with the Work Change Directive.

8.0 STIPULATED PRICE CHANGE ORDER

8.1 A stipulated price Change Order will be based on an accepted proposal including the Contractor's lump sum price quotation with Schedule of Values.

9.0 UNIT PRICE CHANGE ORDER

9.1 Where Unit Prices for the affected items of Work are included in the Bid Line Item Detail, the unit price Change Order will be based on the unit prices, subject to Articles 7 and 9 of the General Conditions.

9.2 Where unit prices of Work are not pre-determined in the Bid Line Item Detail, the Work Change Directive or accepted proposal will specify the unit prices to be used.

10.0 TIME-AND-MATERIAL CHANGE ORDER

10.1 Contractor shall provide an itemized account and supporting data after completion of change, within time limits indicated for claims in the General Conditions.

10.2 City Engineer will determine the change allowable in Contract Price and Contract Time as provided in the General Conditions.

10.3 Contractor shall maintain detailed records of work done on time-and-material basis as specified in paragraph 10.4, Documentation of Change in Contract Price and Contract Time.

10.4 Contractor shall provide full information required for evaluation of changes and shall substantiate costs for changes in the Work.

11.0 EXECUTION OF CHANGE DOCUMENTATION

11.1 City Engineer will issue Change Orders, Work Change Directives, or accepted proposal for signatures of parties as described in Document 00700 - General Conditions.

12.0 CORRELATION OF CONTRACTOR SUBMITTALS

12.1 For Stipulated Price Contracts, Contractor shall promptly revise the Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item.

12.2 For Unit Price Contracts, the next monthly estimate of work after acceptance of a Change Order will be revised to include any new items not previously included and the appropriate unit rates.

12.3 Contractor shall promptly revise progress schedules to reflect any change in Contract Time, and shall revise schedules to adjust time for other items of work affected by the change, and resubmit for review.

12.4 Contractor shall promptly enter changes to the on-site and record copies of the Drawings, Specifications or Contract Documents as required in Section 01785 - Project Record Documents.

PART 2 PRODUCTS -* Not Used*****

PART 3 EXECUTION -* Not Used*****

END OF SECTION

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Procedures for measurement and payment plus conditions for nonconformance assessment and nonpayment for rejected products.

2.0 AUTHORITY

2.1 Measurement methods delineated in Specification sections are intended to complement the criteria of this section. In the event of conflict, the requirements of the Specification section shall govern.

2.2 Project Manager will take all measurements and compute quantities accordingly.

2.3 Contractor shall assist by providing necessary equipment, workers, and survey personnel as required by City Engineer.

2.4 Measurement and Payment paragraphs are included only in those Specification sections of Division 01 where direct payment will be made. Include costs in the total bid price for those Specification sections in Division 01 that do not contain Measurement and Payment paragraphs.

3.0 UNIT QUANTITIES SPECIFIED

3.1 Quantity and measurement estimates stated in the Agreement are for contract purposes only. Quantities and measurements supplied or placed in the Work and verified by City Engineer shall determine payment as stated in Article 9 of the General Conditions.

3.2 If the actual Work requires greater or lesser quantities than those quantities indicated in the Bid Form, provide the required quantities at the unit prices contracted, except as otherwise stated in Article 9 of the General Conditions.

4.0 MEASUREMENT OF QUANTITIES

- 4.1 Measurement by Weight: Reinforcing steel, rolled or formed steel or other metal shapes will be measured by CRSI or AISC Manual of Steel Construction weights. Welded assemblies will be measured by CRSI or AISC Manual of Steel Construction or scale weights.
- 4.2 Measurement by Volume:
 - 4.2.1 Stockpiles: Measured by cubic dimension using mean length, width, and height or thickness.
 - 4.2.2 Excavation and Embankment Materials: Measured by cubic dimension using the average end area method.
 - 4.2.3 Measurement by Area: Measured by square dimension using mean length and width or radius.
 - 4.2.4 Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
 - 4.2.5 Stipulated Price Measurement: By unit designated in the agreement.
 - 4.2.6 Other: Items measured by weight, volume, area, or lineal means or combination, as appropriate, as a completed item or unit of the Work.
 - 4.2.7 Measurement by Each: Measured by each instance or item provided.
 - 4.2.8 Measurement by Lump Sum: Measure includes all associated work.

5.0 PAYMENT

- 5.1 Payment Includes: Full compensation for all required supervision, labor, products, tools, equipment, plant, transportation, services, and incidentals; and erection, application or installation of an item of the Work; and Contractor's overhead and profit.
- 5.2 Total compensation for required Unit Price Work shall be included in Unit Price bid in the Bid Line Item Detail. Claims for payment as Unit Price Work, but not specifically covered in the list of unit prices contained in the Bid Line Item Detail, will not be accepted.
- 5.3 Interim payments for stored materials will be made only for materials to be incorporated under items covered in unit prices, unless disallowed in Supplementary Conditions.
- 5.4 Progress payments will be based on the City Engineer's observations and evaluations of quantities incorporated in the Work multiplied by the unit price.
- 5.5 Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities determined by City Engineer multiplied by the unit price for Work which is incorporated in or made necessary by the Work.

6.0 NONCONFORMANCE ASSESSMENT

- 6.1 Remove and replace the Work, or portions of the Work, not conforming to the Contract Documents.
- 6.2 If, in the opinion of City Engineer, it is not practical to remove and replace the Work, the City Engineer will direct one of the following remedies:
 - 6.2.1 The nonconforming Work will remain as is, but the unit price will be adjusted to a lower price at the discretion of City Engineer.
 - 6.2.2 The nonconforming Work will be modified as authorized by the City Engineer, and the unit price will be adjusted to a lower price at the discretion of City Engineer, if the modified work is deemed to be less suitable than originally specified.
 - 6.2.3 Specification sections may modify the above remedies or may identify a specific formula or percentage price reduction.
- 6.3 The authority of City Engineer to assess the nonconforming work and identify payment adjustment is final.

7.0 NONPAYMENT FOR REJECTED PRODUCTS

- 7.1 Payment will not be made for any of the following:
 - 7.1.1 Products wasted or disposed of in a manner that is not acceptable to City Engineer.
 - 7.1.2 Products determined as nonconforming before or after placement.
 - 7.1.3 Products not completely unloaded from transporting vehicle.
 - 7.1.4 Products placed beyond the lines and levels of the required Work.
 - 7.1.5 Products remaining on hand after completion of the Work, unless specified otherwise.
 - 7.1.6 Loading, hauling, and disposing of rejected products.

END OF SECTION

SECTION 01292

SCHEDULE OF VALUES

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01312

COORDINATION AND MEETINGS

PART 1 GENERAL

1.0 SECTION INCLUDES

- 1.1 Section includes general coordination including pre-construction conference, site mobilization conference, and progress meetings.

2.0 RELATED DOCUMENTS

- 2.1 Coordination is required throughout the documents. Refer to all of the Contract Documents and coordinate as necessary.

3.0 CITY ENGINEER AND REPRESENTATIVES

- 3.1 The City Engineer may act directly or through designated representatives as defined in the General Conditions and as identified by name at the pre-construction conference.

4.0 CONTRACTOR COORDINATION

- 4.1 Coordinate scheduling, submittals, and Work of the various Specifications sections to assure efficient and orderly sequence of installation of interdependent construction elements.
- 4.2 Verify that utility requirement characteristics of operating equipment are compatible with existing or planned utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- 4.3 Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- 4.4 Conceal pipes, ducts, and wiring within the construction in finished areas, except as otherwise indicated. Coordinate locations of fixtures and outlets with finish elements.
- 4.5 Coordinate completion and clean up of Work for Substantial Completion and for portions of Work designated for City's partial occupancy.
- 4.6 Coordinate access to site for correction of nonconforming Work to minimize disruption of City's activities where City is in partial occupancy.

5.0 PRE-CONSTRUCTION CONFERENCE

- 5.1 Project Manager will schedule a pre-construction conference.
- 5.2 Attendance Required: City Engineer's representatives, Architect/Engineer, Contractor, and major Subcontractors.
- 5.3 Agenda:
 - 5.3.1 Distribution of Contract Documents.

- 5.3.2 Designation of personnel representing the parties in Contract, and the Architect/Engineer.
- 5.3.3 Review of insurance.
- 5.3.4 Discussion of formats proposed by the Contractor for schedule of values, and construction schedule.
- 5.3.5 Procedures and processing of shop drawings and other submittals, substitutions, pay estimates or applications for payment, Requests for Information, Request for Proposal, Change Orders, and Contract closeout.
- 5.3.6 Scheduling of the Work and coordination with other contractors.
- 5.3.7 Review of Subcontractors.
- 5.3.8 Appropriate agenda items listed for Site Mobilization Conference, paragraph 6.3, when pre-construction conference and site mobilization conference are combined.
- 5.3.9 Procedures for testing.
- 5.3.10 Procedures for maintaining record documents.

6.0 SITE MOBILIZATION CONFERENCE

- 6.1 When required by the Contract Documents, Project Manager will schedule a conference at the Project site prior to Contractor occupancy.
- 6.2 Attendance Required: City Engineer representatives, Architect/Engineer, Special Consultants, Contractor's Superintendent, and major Subcontractors.
- 6.3 Agenda:
 - 6.3.1 Use of premises by City and Contractor.
 - 6.3.2 Safety and first aid procedures.
 - 6.3.3 Construction controls provided by City.
 - 6.3.4 Temporary utilities.
 - 6.3.5 Survey and layout.
 - 6.3.6 Security and housekeeping procedures.
 - 6.3.7 Field office requirements.

7.0 PROGRESS MEETINGS

- 7.1 Project meetings shall be held at Project field office or other location as designated by the City Engineer. Meeting shall be held at monthly intervals, or

more frequent intervals if directed by City Engineer.

- 7.2 Attendance Required: Job superintendent, major Subcontractors and suppliers, City Engineer representatives, and Architect/Engineer as appropriate to agenda topics for each meeting.
- 7.3 Project Manager will make arrangements for meetings, and recording minutes.
- 7.4 Project Manager will prepare the agenda and preside at meetings.
- 7.5 Contractor shall provide required information and be prepared to discuss each agenda item.
- 7.6 Agenda:
 - 7.6.1 Review minutes of previous meetings.
 - 7.6.2 Review of construction schedule, pay estimates, cash flow curve, payroll and compliance submittals.
 - 7.6.3 Field observations, problems, and decisions.
 - 7.6.4 Identification of problems which impede planned progress.
 - 7.6.5 Review of submittals schedule and status of submittals.
 - 7.6.6 Review of RFI and RFP status.
 - 7.6.7 Modification status.
 - 7.6.8 Review of off-site fabrication and delivery schedules.
 - 7.6.9 Maintenance of progress schedule.
 - 7.6.10 Corrective measures to regain projected schedules.
 - 7.6.11 Planned progress during succeeding work period.
 - 7.6.12 Coordination of projected progress.
 - 7.6.13 Maintenance of quality and work standards.
 - 7.6.14 Effect of proposed Modifications on Construction Schedule and coordination.
 - 7.6.15 Other item relating to Work.

END OF SECTION

SECTION 01321

CONSTRUCTION PHOTOGRAPHS

The City of Houston Division 1 Specifications can also be viewed on the project website

END OF SECTION

SECTION 01325

CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.0 GENERAL

- 1.1 Provide Construction Schedules for Work included in this Contract in accordance with requirements in this Section. Create a Construction Schedule using Critical Path Method (CPM) computer software capable of mathematical analysis of Precedence Diagramming Method (PDM) schedules. Provide printed activity listings and bar charts in formats described in this Section.
- 1.2 Combine activity listings and bar charts with a narrative report to form the Contractor's Construction Schedule submittal for the City Engineer.

2.0 SCHEDULING STAFF

- 2.1 Employ or retain services of an individual experienced in critical path scheduling for the duration of the Contract. This person shall cooperate with the City Engineer and shall update the Contractor's schedule at least monthly as required to indicate current status of the Work.

3.0 SUBMITTALS

- 3.1 Make Construction Schedule submittals for review by the City Engineer in accordance with requirements of Section 01330 - Submittal Procedures.
- 3.2 During the pre-construction meeting, as described in Section 01312 - Coordination and Meetings, provide sample bar charts and activity listings produced from the scheduling software proposed. Scheduling software is subject to approval of the City Engineer and must meet requirements provided in this Section. Review of the samples will be provided by the City Engineer within 7 days of the submittal.
- 3.3 Within 10 days of receipt of approval of the Contractor's format, or 14 days of the Notice to Proceed, whichever is later, submit a proposed Construction Schedule for review. The Construction Schedule submittal shall be based on the following:
 - 3.3.1 The level of detail and number of activities required in the schedule are dependent on the project type.
 - 3.3.1.1 For wastewater projects, the work shall be categorized by Work Type and Area Code in the schedule.
 - 3.3.1.1.1 For wastewater rehabilitation projects, there are 6 work-type categories. An area code will be assigned for each Meter Service Area or Basin. The schedule shall include at

least one activity for each unique combination of work type and area code. Normal schedules of wastewater rehabilitation projects contain between 35 and 100 activities, depending on the number of basins and the work types involved in each basin.

- 3.3.1.1.2 For wastewater relief projects (line work), area codes will be assigned geographically.
- 3.3.1.1.3 For wastewater plant or facility work, other criteria may apply to the assignment of area codes, such as a combination of geographical and craft categories.
- 3.3.2 For projects with multiple types of tasks within the scope, these types of work shall be indicated separately within the schedule.
- 3.3.3 For projects with work at different physical locations or service areas, or different facilities within a site, each location or facility shall be indicated separately within the schedule. Work on each floor of a multi-story building shall be shown as separate tasks.
- 3.3.4 For projects with multiple crafts or significant subcontractor components, these elements shall be indicated separately within the schedule. Unless permitted by the Project Manager, tasks shall consist of work covered by only one division of the Project Manual.
- 3.3.5 Unless permitted by the Project Manager, each schedule task shall be the same as a schedule of values line item, and vice versa.
- 3.3.6 For projects with significant major equipment items or materials representing over 5 percent of the Total Contract Price, the schedule shall indicate dates when these items are to be purchased, when they are to be delivered, and when installed. Activities for testing, adjustment, and delivering O & M manuals shall be included.
- 3.3.7 No task except the acquisition of major equipment items shall represent more than one percent of the Total Contract Price for facility projects and 3 percent of the Total Contract Price for other projects. The duration of tasks may not exceed 40 calendar days.
- 3.3.8 For projects where operating **facilities** are involved, each period of work which will **impact** any process or operation shall be identified in the schedule and must be agreed to by the Project Manager and the facility operator prior to starting work in the area
- 3.3.9 Construction Schedule submittals shall include:
 - 3.3.9.1 Printed bar charts which meet the criteria outlined in this Section and which are produced by the Contractor's approved scheduling software.
 - 3.3.9.2 Activity listings which meet the criteria outlined in this Section and which are produced by the Contractor's approved scheduling

software.

3.3.9.3 Predecessor/successor listing sorted by Activity ID which meets the criteria outlined in this Section and which is produced by the Contractor's approved scheduling software.

3.3.9.4 A logic network diagram shall be required with the first construction schedule submittal for facilities projects.

3.3.9.5 A graphic or tabular display of estimated monthly billings for the Work shall be prepared and submitted by the Contractor with the first schedule submittal. This information is not required in monthly updates, unless significant changes in work require resubmittal of the schedule for review. The display shall allocate units indicated in the bid schedule or the schedule of values to Construction Schedule activities. (Weighted allocations are acceptable, where appropriate).
The dollar value associated with each allocated unit will be spread across the duration of the activity on a monthly basis. The total for each month and a cumulative total will be indicated. These monthly forecasts are only for planning purposes of the Project Manager. Monthly payments for actual work completed will be made by the Project Manager in accordance with Document 00700 - General Conditions.

3.3.9.6 A narrative report which shall provide the information outlined in this Section.

3.4 No payment will be made until the Construction Schedule and billing forecast are accepted by the City Engineer.

3.5 If the Contractor desires to make changes in his method of operating and scheduling, after approval of the original schedule has been given by the City Engineer, the Contractor shall notify the City Engineer in writing, stating the reasons for the change. If the City Engineer considers these changes to be of significant nature, the Contractor may be required to revise and resubmit for approval all or the affected portion of the Contractor's Construction Schedule to show the effect on the Work.

3.6 Upon written request from the City Engineer, the Contractor shall revise and submit for approval all or any part of the Construction Schedule submittal to reflect changed conditions in the Work or deviations made from the original plan and schedule.

3.7 The Contractor's Construction Schedule shall thereafter be updated with Actual Start and Actual Finish Dates, Percent Complete, and Remaining Duration of each Activity and submitted monthly. The data date to be used in updating the monthly Construction Schedule shall be the same data date as is used in the monthly Application for Payment. This monthly update of the schedule shall be required before the monthly Application for Payment will be processed for payment.

3.8 Submit electronic copies of original Baseline Schedule and updates monthly.

4.0 SCHEDULING COMPUTER SOFTWARE REQUIREMENTS

A. Contractor's scheduling software shall be capable of creating bar charts and activity listings,

which can be sorted by various fields (i.e. Activity ID, Early Start, Total Float, Area Code, Specification Section number, and Subcontractor). Use software capable of producing logic network diagram.

- B. Use scheduling software capable of creating bar charts and activity listings and bar charts with the following information for each activity in the schedule:
 - 1. Activity ID
 - 2. Activity Description
 - 3. Estimated (Original) Duration
 - 4. Remaining Duration
 - 5. Actual Duration
 - 6. Early Start Date
 - 7. Late Start Date
 - 8. Early Finish Date
 - 9. Late Finish Date
 - 10. Free Float
 - 11. Total Float
 - 12. Activity codes (such as Area Code, Work Type, Specification Section, Subcontractor)
- C. Use scheduling software capable of printing calendars using mathematical analysis of schedule, indicating standard workdays of week and scheduled holidays.
- D. Use scheduling capable of printing activity listings that indicates predecessors and successors, lag factors and lag relationships used in creating logic of the schedule.
- E. Use scheduling software to provide monthly time in Bar Chart format and scale with 12-month scale not to exceed one page width. Bar charts may be printed or plotted on 8-1/2 by 14-inch or 11 by 17-inch sheet sizes. Over-size plots are not acceptable.

5.0 NARRATIVE SCHEDULE REPORT

- 5.1 The Narrative Report shall include a listing of the Activities Started This Month; Activities Completed This Month; Activities Continued This Month; Activities Scheduled to Start or Complete Next Month; Problems Encountered This Month; Actions Taken to Solve These Problems.
- 5.2 The narrative Schedule Report shall include a description of changes made to the Construction Schedule Logic (i.e., changes in Predecessors and Lags); Activities Added to the Schedule; Activities Deleted from the Schedule; any other changes made to the Schedule other than the addition of Actual Start Dates and Actual Finish Dates and changes of Data Date and Remaining Durations for re-calculation of mathematical analysis.

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Submittal procedures for:

- 1.1.1 Schedule of Values.
- 1.1.2 Construction Schedules.
- 1.1.3 Shop Drawings, Product Data, and Sampler/
- 1.1.4 Operations and Maintenance Data.
- 1.1.5 Manufacturer's Certificates.
- 1.1.6 Construction Photographs.
- 1.1.7 Project Record Documents.
- 1.1.8 Video Tapes.
- 1.1.9 Design Mixes.

2.0 SUBMITTAL PROCEDURES

2.1 Scheduling and Handling:

- 2.1.1 Submit Shop Drawings, data and Samples for related components as required by Specifications and Project Manager.
- 2.1.2 Schedule submittals well in advance of the need for the material or equipment for construction. Allow time to make delivery of material or equipment after submittal is approved.
- 2.1.3 Develop a submittal schedule that allows sufficient time for initial review, correction, resubmission and final review of all submittals. The City Engineer will review and return submittals to the Contractor as expeditiously as possible but the amount of time required for review will vary depending on the complexity and quantity of data submitted. In no case will a submittal schedule be acceptable which allows less than 30 days for initial review by the City Engineer. This time for review shall in no way be justification for delays or additional compensation to the Contractor.
- 2.1.4 Project Manager's review of submittals covers only general conformity to the Drawings, Specifications and dimensions which affect the layout. The Contractor is responsible for quantity determination. No quantities will be verified by the City Engineer. The Contractor is responsible for any errors, omissions or deviations from the Contract requirements; review of submittals in no way relieves the Contractor from his obligation to furnish required items according to the Drawings and Specifications.
- 2.1.5 Submit 5 copies of documents unless otherwise specified in the following paragraphs or in the Specifications.

- 2.1.6 Revise and resubmit submittals as required. Identify all changes made since previous submittal.
- 2.1.7 The Contractor shall assume the risk for material or equipment which is fabricated or delivered prior to approval. No material or equipment shall be incorporated into the Work or included in periodic progress payments until approval has been obtained in the specified manner.

2.2 Transmittal Form and Numbering:

- 2.2.1 Transmit each submittal to Project Manager with a Transmittal letter which includes:
 - a. Date and submittal number
 - b. Project title and number
 - c. Names of Contractor, Subcontractor, Supplier, and manufacturer
 - d. Identification of Product being supplied
 - e. Location of where Product is to be installed
 - f. Applicable Specification section number
- 2.2.2. Identify deviations from Contract documents clouding submittal drawings. Itemize and detail on separate 8-1/2 by 11-inch sheets entitled "DEVIATIONS FOR _____." When no deviations exist, submit a sheet stating no deviations exist.
- 2.2.3 Have design deviations signed and sealed by an appropriate design professional, registered in the State of Texas.
- 2.2.4 Sequentially number each transmittal form beginning with the number 1. Resubmittals shall use the original number with an alphabetic suffix (i.e., 2A for first resubmittal of Submittal 2 or 15C for third resubmittal of Submittal 15). Each submittal shall only contain one type of work, material, or equipment. Mixed submittals will not be accepted.

2.3 Contractor's Stamp:

- 2.3.1 Apply Contractor's stamp, certifying that the items have been reviewed in detail and are correct and in accordance with Contract Documents, except as noted by any requested variance.
- 2.3.2 As a minimum, Contractor's Stamp shall include:
 - 2.3.2.1 Contractor's name.
 - 2.3.2.2 Job number.
 - 2.3.2.3 Submittal number.

2.3.2.4 Certification statement that the Contractor has reviewed the submittal and it is in compliance with the Contract Documents.

2.3.2.5 Signature line for Contractor.

2.3.3 Submittals will be returned with one of the following Responses:

2.3.3.1 "ACKNOWLEDGE RECEIPT" when no response and resubmittal is required.

2.3.3.2 "NO EXCEPTION" when sufficient information has been supplied to determine that item described is accepted and that no resubmittal is required.

2.3.3.3 "EXCEPTION AS NOTED" when sufficient information has been supplied to determine that item will be acceptable subject to changes, or exceptions, which will be clearly stated. When exceptions require additional changes, the changes must be submitted for approval. Resubmittal is not required when exceptions require no further changes.

2.3.3.4 "REJECTED-RESUBMIT" when submittal does not contain sufficient information, or when information provided does not meet Contract requirements. Additional data or details requested by Project Manager must be submitted to obtain approval.

3.0 SCHEDULE OF VALUES

3.1 Submit a Schedule of Values in accordance with Section 01292 - Schedule of Values

4.0 CONSTRUCTION SCHEDULES

4.1 Submit Construction Schedules as provided in Project Manual.

5.0 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

5.1 Submit shop drawings in accordance with Section 01340 - Shop Drawings, Product Data, and Samples.

6.0 OPERATIONS AND MAINTENANCE DATA

6.1 Submit Operations and Maintenance data in accordance with Section 01782 - Operations and Maintenance Data.

7.0 MANUFACTURER'S CERTIFICATES

7.1 When specified in Specification sections, submit manufacturers' certificate of compliance for review by City Engineer.

7.2 Contractor's Stamp, as described in paragraph 2.3, page 42, shall be placed on front page of the certification.

7.3 Submit supporting reference data, affidavits, and certifications as appropriate.

7.4 Certificates may be recent or previous test results on material or product, but must be acceptable to City Engineer.

8.0 CONSTRUCTION PHOTOGRAPHS

8.1 Submit Construction Photographs in accordance with Section 01321 - Construction Photographs.

9.0 PROJECT RECORD DOCUMENTS

9.1 Submit Project Record Documents in accordance with Section 01785 - Project Record Documents.

10.0 VIDEO

10.1 Submit television video tapes as required in Section 02533 - Acceptance Testing for Sanitary Sewers.

10.2 Transmittal forms for video tapes shall be numbered sequentially beginning with T01, T02, T03, etc.

11.0 DESIGN MIXES

11.1 When specified in Specifications, submit design mixes for review.

11.2 Contractor's Stamp, as described in paragraph 2.3, on page 42, shall be placed on front page of each design mix.

11.3 Mark each design mix to identify proportions, gradations, and additives for each class and type of design mix submitted. Include applicable test results on samples for each mix.

11.4 Maintain a copy of approved design mixes at mixing plant.

12.0 CHANGES TO CONTRACT

A. Changes to Contract may be initiated by completing a Request for Information form. Project Manager will provide a response to Contractor by completing the form and returning it to Contractor.

1. If Contractor agrees that the response will result in no increase in cost or time, a Minor Change in the Work will be issued by City Engineer.

2. If Contractor and Project Manager agree that an increase in time or cost is warranted, Project Manager will forward the Request for Proposal for negotiation of a Change Order.

END TO SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01410

TPDES REQUIREMENTS (WITH ATTACHMENTS)

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

END OF SECTION

SECTION 01422

REFERENCE STANDARDS

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Section includes general quality assurance as related to Reference Standards and a list of references.

2.0 QUALITY ASSURANCE

2.1 For Products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

2.2 Conform to reference standard by date of issue current on the date as stated in the General Conditions.

2.3 Request clarification from City Engineer before proceeding should specified reference standards conflict with Contract Documents.

3.0 SCHEDULE OF REFERENCES

3.1 AASHTO American Association of State Highway
and Transportation Officials
444 North Capitol Street, N.W.
Washington, DC 20001

3.2 ACI American Concrete Institute
P.O. Box 9094
Farmington Hills, MI 48333-9094

3.3 AGC Associated General Contractors of America
1957 E Street, N.W.
Washington, DC 20006

- 3.4 AI Asphalt Institute
Asphalt Institute Building
College Park, MD 20740

- 3.5 AITC American Institute of Timber Construction
333 W. Hampden Avenue
Englewood, CO 80110

- 3.6 AISC American Institute of Steel Construction
400 North Michigan Avenue
Eighth Floor,
Chicago, IL 60611

- 3.7 AISI American Iron and Steel Institute
1000 16th Street, N.W.
Washington, DC 20036

- 3.8 ASME American Society of Mechanical Engineers
345 East 47th Street
New York, NY 10017

- 3.9 ANSI American National Standards Institute
1430 Broadway
New York, NY 10018

- 3.10 APA American Plywood Association
Box 11700
Tacoma, WA 98411

- 3.11 API American Petroleum Institute
1220 L Street, N.W.
Washington, DC 20005

- 3.12 AREA American Railway Engineering Association
50 F Street, N.W.
Washington, DC 20001

- 3.13 ASTM American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

- 3.14 AWWA American Wood-Preservers' Association
7735 Old Georgetown Road
Bethesda, MD 20014

- 3.15 AWS American Welding Society
P.O. Box 35104
Miami, FL 33135

- 3.16 AWWA American Water Works Association
6666 West Quincy Avenue
Denver, CO 80235

- 3.17 COH City of Houston
900 Bagby Street
P.O. Box 1562
Houston, TX 77251-1562
- 3.18 CLFMI Chain Link Fence Manufacturers Institute
1101 Connecticut Avenue, N.W.
Washington, DC 20036
- 3.19 CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Road
Schaumburg, IL 60173-4758
- 3.20 EJMA Expansion Joint Manufacturers Association
707 Westchester Avenue
White Plains, NY 10604
- 3.21 FS Federal Standardization Documents
General Services Administration
Specifications Unit (WFSIS)
7th and D Streets, S.W.
Washington, DC 20406
- 3.22 ICEA Insulated Cable Engineer Association
P.O. Box 440
S. Yarmouth, MA 02664
- 3.23 IEEE Institute of Electrical and Electronics Engineers
445 Hoes Lane
P.O. Box 1331
Piscataway, NJ 0855-1331
- 3.24 ISA International Society of Arboriculture
303 West University
P.O. Box GG
Savoy, IL 61874
- 3.25 MIL Military Specifications
General Services Administration
Specifications Unit (WFSIS)
7th and D Streets, S.W.
Washington, DC 20406
- 3.26 NACE National Association of Corrosion Engineers
1440 South Creek Drive
Houston, TX 71084
- 3.27 NEMA National Electrical Manufacturers' Association
2101 L Street, N.W., Suite 300
Washington, DC 20037

- 3.28 NFPA National Fire Protection Association
Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
- 3.29 OSHA Occupational Safety Health Administration
U.S. Department of Labor
Government Printing Office
Washington, DC 20402
- 3.30 PCA Portland Cement Association
5420 Old Orchard Road
Skokie, IL 60077-1083
- 3.31 PCI Prestressed Concrete Institute
201 North Wacker Drive
Chicago, IL 60606
- 3.32 SDI Steel Deck Institute
Box 9506
Canton, OH 44711
- 3.33 SSPC Steel Structures Painting Council
4400 Fifth Avenue
Pittsburgh, PA 15213
- 3.34 TAC Texas Administrative Code
Texas Water Commission
P. O. Box 13087, Capitol Station
Austin, TX 78711-3087
- 3.36 TxDOT Texas Department of Transportation
11th and Brazos
Austin, TX 78701 2483
- 3.37 UL Underwriters' Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062
- 3.38 UNI-BELL UNI-BELL Pipe Association
2655 Villa Creek Drive, Suite 155
Dallas, TX 75234

PART 2 PRODUCTS-* Not Used*****

PART 3 EXECUTION-* Not Used*****

END OF SECTION

SECTION 01450

CONTRACTOR'S QUALITY CONTROL

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Quality assurance and control of installation and manufacturer's field services and reports.

2.0 MEASUREMENT AND PAYMENT

2.1 No payment will be made for this item. Include the cost of Contractor's quality control in overhead cost for this project.

3.0 QUALITY ASSURANCE/CONTROL OF INSTALLATION

3.1 Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship, to produce Work of specified quality.

3.2 Comply fully with manufacturers' installation instructions, including each step in sequence.

3.3 Request clarification from City Engineer before proceeding should manufacturers' instructions conflict with Contract Documents.

3.4 Comply with specified standards as minimum requirements for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

3.5 Perform work by persons qualified to produce the specified level of workmanship.

4.0 REFERENCES

4.1 Obtain copies of standards and maintain at job site when required by individual Specification sections.

5.0 MANUFACTURERS' FIELD SERVICES AND REPORTS

5.1 When specified in individual Specification sections, provide material or product suppliers' or manufacturers' technical representative to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, operator training, test, adjust, and balance of equipment as applicable, and to initiate operation, as required. Conform to minimum time requirements for start-up operations and operator training if defined in Specification sections.

5.2 At the Project Manager's request, submit qualifications of manufacturer's representative to City Engineer 15 days in advance of required representative's services. The representative shall be subject to approval of City Engineer.

5.3 Manufacturer's representative shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to

manufacturers' written instructions. Submit report within 14 days of observation to City Engineer for review.

PART 2 PRODUCTS -* Not Used*****

PART 3 EXECUTION -* Not Used*****

END OF SECTION

SECTION 01452

INSPECTION SERVICES

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Inspection services and references

2.0 INSPECTION

2.1 City Engineer will appoint an Inspector as a representative of the City to perform inspections, tests, and other services specified in individual specification Sections

2.3 Alternately, City Engineer may appoint, employ, and pay an independent firm to provide additional inspection or construction management services as indicated in Section 01454 - Testing Laboratory Services.

2.4 Reports will be submitted by the independent firm to Project Manager, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

2.5 Assist and cooperate with the Inspector; furnish samples of materials, design mix, equipment, tools, and storage.

2.6 Notify Project Manager 24 hours prior to expected time for operations requiring services. Notify Architect/Engineer and independent firm when noted.

2.7 Sign and acknowledge report for Inspector.

PART 2 PRODUCTS -*Not Used*****

PART 3 EXECUTION -* Not Used*****

END OF SECTION

SECTION 01454

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Testing laboratory services and Contractor responsibilities related to those services.

2.0 REFERENCES

2.1 ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.

2.2 ASTM D 3666 - Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials.

2.3 ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

2.4 ASTM E 329 - Specification for Minimum Requirements for Agencies Engaged the Testing and/or Inspection of Materials Used in Construction.

2.5 ISO/TEC Guide 25 - General Requirements for the Competence of Calibration and Testing Laboratories.

3.0 SELECTION AND PAYMENT

3.1 The City will select, employ, and pay for services of an independent testing laboratory to perform inspection and testing identified in Part 3, Execution, of individual Specification sections.

3.2 The Contractor shall employ and pay for services of an independent testing laboratory or laboratories to perform inspection and testing identified in Part 2, Products, of individual Specification sections.

3.3 Employment of a testing laboratory by the City shall not relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.

3.4 The Contractor will have the minimum 2-hour charge for testing laboratory time deducted from the estimate for payment if operations requiring testing or inspection are canceled without prior notification.

3.5 The Contractor will have the cost of retesting deducted from the estimate for payment whenever failed work must be removed and replaced and retested.

4.0 QUALIFICATION OF LABORATORY

4.1 Meet laboratory requirements of ASTM E 329 and applicable requirements of ASTM C 1077, ASTM D 3666, and ASTM D 3740.

4.2 Meet the ISO/TEC Guide 25 conditions for accreditation by the American Association for Laboratory Accreditation (A2LA) in specific fields of testing required in individual Specification sections.

4.3 Where a laboratory subcontracts any part of the testing services, such work shall be placed with a laboratory complying with the requirements of this Section.

5.0 LABORATORY REPORTS

5.1 The testing laboratory shall provide and distribute copies of laboratory reports to the distribution list provided by the City Engineer at the pre-construction conference.

5.2 One copy of each laboratory report distributed or faxed to the Contractor shall be kept at the site field office for the duration of the project.

5.3 Before close of business on the working day following test completion and review, reports which indicate failing test results shall be transmitted immediately via fax from the testing laboratory to the material supplier, Contractor, and Project Manager.

6.0 LIMITS ON TESTING LABORATORY AUTHORITY

6.1 Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

6.2 Laboratory may not approve or accept any portion of the Work.

6.3 Laboratory may not assume any duties of the Contractor.

6.4 Laboratory has no authority to stop the Work.

7.0 CONTRACTOR RESPONSIBILITIES

7.1 Provide safe access to the Work and to manufacturer's facilities for the City Engineer and for testing laboratory personnel.

7.2 Provide to the testing laboratory a copy of the construction schedule and a copy of each update to the construction schedule.

7.3 Notify the Project Manager and the testing laboratory during normal working hours of the day previous to the expected time for operations requiring inspection and testing services. If the Contractor fails to make timely prior notification, then the Contractor shall not proceed with the operations requiring inspection and testing services.

7.4 Notify the Architect/Engineer 24 hours in advance if the Specification requires the presence of the Architect/Engineer for sampling or testing.

7.5 Request and monitor testing as required to provide timely results and to avoid delay to the Work. Provide samples to the laboratory in sufficient time to allow the required test to be performed in accordance with specified test methods before the intended use of the material.

7.6 Cooperate with laboratory personnel in collecting samples on site. Provide incidental labor and facilities for safe access to the Work to be tested; to obtain and handle

samples at the site or at source of products to be tested; and to facilitate tests and inspections including storage and curing of test samples.

7.7 Make arrangements with laboratory for additional testing. Payment for additional testing will be made in accordance with Document 00700- General Conditions:

1. Re-testing required for failed tests.
2. Re-testing for non-conforming work.
3. Additional sampling and tests requested beyond specified requirements.
4. Insufficient notification of cancellation of tests for work scheduled but not performed.

PART 2 PRODUCTS -* Not Used*****

PART 3 EXECUTION

1.0 CONDUCTING TESTING

- 1.1 Laboratory sampling and testing specified in individual Specification sections shall conform to the latest issues of ASTM standards, TxDOT methods, or other recognized test standards as approved by the City Engineer.
- 1.2 The requirements of this section shall also apply to those tests for approval of materials, for mix designs, and for quality control of materials as performed by the testing laboratories employed by the Contractor.

END OF SECTION

SECTION 01502

MOBILIZATION

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01504

TEMPORARY FACILITIES AND CONTROLS

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01506

DIVERSION PUMPING

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

END OF SECTION

SECTION 01555

TRAFFIC CONTROL AND REGULATION

PART 1 GENERAL

1.0 SECTION INCLUDES

- 1.1 Requirements for signs, signals, control devices, flares, lights and traffic signals, as well as construction parking control, designated haul routes and bridging of trenches and excavations.
- 1.2 Requirement for and qualifications of flagmen.

2.0 SUBMITTALS

- 2.1 A traffic control plan responsive to the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and sealed by a Registered Professional Engineer is incorporated into the Drawings. If the Contractor proposes to implement traffic control without modification to the plan provided, he shall submit a letter confirming that decision. If the Contractor proposes to implement traffic control different than the plan provided, he shall submit a traffic control plan in conformance with the TMUTCD and sealed by a Registered Professional Engineer.
- 2.2 For both the traffic control plan and flagmen use, submit schedules of values within 30 days following the Notice to Proceed. Refer to Section 01292 - Schedule of Values.
- 2.3 The Contractor shall provide such information and records regarding the use of qualified flagmen to verify that the Contractor's use of "peace officers" as flagmen is in compliance with the Contract Documents and Texas law, including but not limited to, Article 4413 (29bb), commonly referred to as the Private Investigators and Private Security Agencies Act, and Article 2.12, Texas Code of Criminal Procedure.
- 2.4. The Contractor shall provide such information and records regarding the use of qualified flagmen to verify that the Contractor's use of "certified flagmen" as flagmen is in compliance with the Contract Documents and applicable City ordinance.
- 2.5. Make submittals in accordance with Section 01330 - Submittal Procedures. (page 41)

3.0 UNIT PRICES

- 3.1. Traffic Control and Regulation. Measurement is on a lump sum basis for traffic control and regulation, including submittal of a traffic control plan if different from the plan shown on the Drawings, provision of traffic control devices, and provision of equipment and personnel as necessary to protect the work and the public. The amount invoiced shall be determined based on the schedule of values submitted for traffic control and regulation.
- 3.2 Flagmen. Measurement is on a lump sum basis for flagmen as required for the Project. The amount invoiced shall be determined based on the schedule of values submitted for flagmen.
- 3.3 Refer to Section 01270 - Measurement and Payment for unit price procedures.

4.0 FLAGMEN

- 4.1. Use flagmen, qualified as described under paragraph 4.2, Uniformed Peace Officers, or paragraph 4.4, Certified Flagmen, to control, regulate, and direct the even flow or movement of vehicular or pedestrian traffic when construction operations encroach on public traffic lanes.
- 4.2. Uniformed Peace Officer: A person who has full-time employment as a peace officer and who receives compensation as a flagman for private employment as an individual employee or independent contractor. Private employment may be either an employee-employer relationship or on an individual basis. A flagman may not be in the employ of another peace officer and may not be a reserve peace officer.
 - 4.2.1 A peace officer is defined as:
 - 4.2.1.1 Sheriffs and their deputies;
 - 4.2.1.2 Constables and deputy constables;
 - 4.2.1.3 Marshals or police officers of an incorporated city, town, or village; or
 - 4.2.1.4 As otherwise provided by Article 2.12, Code of Criminal Procedure, as amended.
- 4.3 A person who has full-time employment as a peace officer is one who is actively employed in a full-time capacity as a peace officer working, on average, a minimum of 32 paid hours per week, being paid at a rate of pay not less than the prevailing minimum hourly wage rate as set by the federal Wage and Hour Act and entitled to the full benefits of participation in any retirement plan, vacation, holidays, and insurance benefits. A reserve peace officer does not qualify, under this definition, as a peace officer.
- 4.4 Certified Flagman: A person who receives compensation as a flagman and who meets the following qualifications and requirements:
 - 4.4.1 Formally trained and certified in traffic control procedures through the City's Department of Public Works & Engineering's E. B. Cape Center.
 - 4.4.2 Required to wear a distinctive uniform, bright-colored vest, and be equipped with appropriate flagging and communication devices.
 - 4.4.3 English speaking, with Spanish as an advantageous, but not required, primary or secondary language.
 - 4.4.4 Paid as a Certified Flagman, equivalent to the hourly wage rate set for Rough Carpenter under, Wage Scale for Engineering Construction, "SECTION B-3".
 - 4.4.5 Required to carry proof of training / certification, such as photographic identification card issued by the training institute, to allow the City Engineer to easily determine that necessary full-time traffic control is actually provided, when and where construction work encroaches upon traffic lanes.

PART 2 PRODUCTS

1.0 SIGNS, SIGNALS, AND DEVICES

- 1.1 Comply with Texas State Manual on Uniform Traffic Control Devices.
- 1.2 Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.

PART 3 EXECUTION

1.0 PUBLIC ROADS

- 1.1 Abide by laws and regulations of governing authorities when using public roads. If the Contractor's work requires that public roads be temporarily impeded or closed, approvals shall be obtained from governing authorities and permits paid for before starting any work. Coordinate activities with the City Engineer.
- 1.2 Contractor shall maintain at all times a 10-foot-wide all-weather lane adjacent to work areas which shall be kept free of construction equipment and debris and shall be for the use of emergency vehicles, or as otherwise provided in the traffic control plan.
- 1.3 Contractor shall not obstruct the normal flow of traffic from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on designated major arterials or as directed by the City Engineer.
- 1.4 Contractor shall maintain local driveway access to residential and commercial properties adjacent to work areas at all times.
- 1.5 Cleanliness of Surrounding Streets:
 - 1.5.1 Keep streets used for entering or leaving the job area free of excavated material, debris, and any foreign material resulting from construction operations. Comply with City of Houston Ordinance No. 5705, Construction or Demolishing Privileges.

2.0 CONSTRUCTION PARKING CONTROL

- 2.1 Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and City's operations.
- 2.2 Monitor parking of construction personnel's vehicles in existing facilities. Maintain vehicular access to and through parking areas.
- 2.3 Prevent parking on or adjacent to access roads or in non-designated areas.

3.0 FLARES AND LIGHTS

- 3.1 Provide flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

4.0 HAUL ROUTES

- 4.1 Utilize haul routes designated by authorities or shown on the Drawings for construction traffic.
- 4.2 Confine construction traffic to designated haul routes.

- 4.3 Provide traffic control at critical areas of haul routes to regulate traffic and minimize interference with public traffic.

5.0 TRAFFIC SIGNS AND SIGNALS

- 5.1 Install traffic control devices at approaches to the site and on site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- 5.2 Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
- 5.3 Relocate traffic signs and signals as Work progresses to maintain effective traffic control.

6.0 BRIDGING TRENCHES AND EXCAVATIONS

- 6.1 Whenever necessary, bridge trenches and excavation to permit an unobstructed flow of traffic.
- 6.2 Secure bridging against displacement by using adjustable cleats, angles, bolts or other devices whenever bridge is installed:
 - 6.2.1 On an existing bus route;
 - 6.2.2 When more than five percent of daily traffic is comprised of commercial or truck traffic;
 - 6.2.3 When more than two separate plates are used for the bridge; or
 - 6.2.4 When bridge is to be used for more than five consecutive days.
- 6.3 Install bridging to operate with minimum noise.
- 6.4 Adequately shore the trench or excavation to support bridge and traffic.
- 6.5 Extend steel plates used for bridging a minimum of one foot beyond edges of trench or excavation. Use temporary paving materials (premix) to feather edges of plates to minimize wheel impact on secured bridging.
- 6.6 Use steel plates of sufficient thickness to support H-20 loading, truck or lane, that produces maximum stress.

7.0 REMOVAL

- 7.1 Remove equipment and devices when no longer required.
- 7.2 Repair damage caused by installation.
- 7.3 Remove post settings to a depth of 2 feet.

END OF SECTION

SECTION 01562

TREE AND PLANT PROTECTION

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01570

STORM WATER POLLUTION CONTROL

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01575

STABILIZED CONSTRUCTION EXIT

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01576

WASTE MATERIAL DISPOSAL

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Disposal of waste material and salvageable material.

2.0 UNIT PRICES

2.1 No separate payment will be made for waste material disposal under this Section. Include payment in unit price for related sections.

3.0 SUBMITTALS

3.1 Submittals shall conform to requirements of Section 01330 - Submittal Procedures.

3.2 Submit a copy of an approved "Development Permit", as defined in Chapter 19 of the Flood Plain Ordinance (City Ordinance Number 81-914 and Number 85-1705), prior to disposal of excess material in areas designated as being in a "100-year Flood Hazard Area" within the City. Contact the City of Houston Floodplain Manager, 3300 Main Street, at (713) 525-7605 for floodplain information.

3.3 Obtain and submit disposal permits for proposed disposal sites if required by local ordinances.

3.4 Submit a copy of written permission from property owner, along with description of property, prior to disposal of excess material adjacent to the Project. Submit a written and signed release from property owner upon completion of disposal work.

PART 2 PRODUCTS -* Not Used*****

PART 3 EXECUTION

1.0 SALVAGEABLE MATERIAL

- 1.1 Excavated Material: When indicated on Drawings, load, haul, and deposit excavated material at a location or locations shown on Drawings outside the limits of Project.
- 1.2 Base, Surface, and Bedding Material: Load shell, gravel, bituminous, or other base and surfacing material designated for salvage into City of Houston trucks.
- 1.3 Pipe Culvert: Load culverts designated for salvage into City of Houston trucks.
- 1.4 Other Salvageable Materials: Conform to requirements of individual Specification Sections.
- 1.5 Coordinate loading of salvageable material on City of Houston trucks with City Engineer.

2.0 EXCESS MATERIAL

- 2.1 Vegetation, rubble, broken concrete, debris, asphaltic concrete pavement, excess soil, and other materials not designated for salvage, shall become the property of Contractor and shall be removed from the job site and legally disposed of.
- 2.2 Excess soil may be deposited on private property adjacent to the Project when written permission is obtained from property owner. See Paragraph 1.03 D above.
- 2.3 Verify the flood plain status of any proposed disposal site. Do not dispose of excavated materials in an area designated as within the 100-year Flood Hazard Area unless a "Development Permit" has been obtained. Excess material placed in a "100-year Flood Hazard Area" within the City, without a "Development Permit", shall be removed by Contractor at no additional cost to the City.
- 2.4 Waste materials shall be removed from the site on a daily basis, such that the site is maintained in a neat and orderly condition.

END OF SECTION

SECTION 01578

CONTROL OF GROUND WATER

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01581

EXCAVATION IN PUBLIC WAY PERMIT SIGNS

The City of Houston Division 1 Specifications can also be viewed on the project website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

END OF SECTION

SECTION 01610

BASIC PRODUCT REQUIREMENTS

PART 1 GENERAL

1.0 SECTION INCLUDES

- 1.1 Requirements for transportation, delivery, handling, and storage of material and equipment.

2.0 PRODUCTS

- 2.1 Products: Means material, equipment, or systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components designated for reuse.
- 2.2 Do not reuse materials and equipment, designated to be removed, except as specified by the Contract Documents.
- 2.3 Provide equipment and components from the fewest number of manufacturers as is practical, in order to simplify spare parts inventory and to allow for maximum interchangeability of components. For multiple components of the same size, type or application, use the same make and model of component throughout the project.

3.0 TRANSPORTATION

- 3.1 Make arrangements for transportation, delivery, and handling of equipment and materials required for timely completion of the Work.
- 3.2 Transport and handle products in accordance with instructions.
- 3.3 Consign and address shipping documents to the proper party giving name of Project, street number, and City. Shipments shall be delivered to the Contractor.

4.0 DELIVERY

- 4.0 Arrange deliveries of products to accommodate the short term site completion schedules and in ample time to facilitate inspection prior to installation. Avoid deliveries that cause lengthy storage or overburden of limited storage space.
- 4.1 Coordinate deliveries to avoid conflict with Work and conditions at the site and to accommodate the following:
 - 4.1.1 Work of other contractors or the City.
 - 4.1.2 Limitations of storage space.
 - 4.1.3 Availability of equipment and personnel for handling products.

4.1.4 City's use of premises.

4.2 Have products delivered to the site in manufacturer's original, unopened, labeled containers.

4.3 Immediately upon delivery, inspect shipment to assure:

4.3.1 Product complies with requirements of Contract Documents.

4.3.2 Quantities are correct.

4.3.3 Containers and packages are intact; labels are legible.

4.3.4 Products are properly protected and undamaged.

5.0 PRODUCT HANDLING

5.1 Coordinate the off-loading of materials and equipment delivered to the job site. If necessary to move stored materials and equipment during construction, Contractor shall relocate materials and equipment at no additional cost to the City.

5.2 Provide equipment and personnel necessary to handle products, including those provided by the City, by methods to prevent damage to products or packaging.

5.3 Provide additional protection during handling as necessary to prevent breaking, scraping, marring, or otherwise damaging products or surrounding areas.

5.4 Handle products by methods to prevent over bending or overstressing.

5.5 Lift heavy components only at designated lifting points.

5.6 Handle materials and equipment in accordance with Manufacturer's recommendations.

5.7 Do not drop, roll, or skid products off delivery vehicles. Hand carry or use suitable materials handling equipment.

6.0 STORAGE OF MATERIAL

6.1 Store and protect materials in accordance with manufacturer's recommendations and requirements of these Specifications.

6.2 Make necessary provisions for safe storage of materials and equipment. Place loose soil materials, and materials to be incorporated into the Work to prevent damage to any part of the Work or existing facilities and to maintain free access at all times to all parts of the Work and to utility service company installations in the vicinity of the Work. Keep materials and equipment neatly and compactly stored in locations that will cause a minimum of inconvenience to other contractors, public travel, adjoining owners, tenants, and occupants. Arrange storage in a manner to provide easy access for inspection.

6.3 Restrict storage to areas available on the construction site for storage of material and equipment as shown on Drawings or approved by the City Engineer.

- 6.4 Provide off-site storage and protection when on-site storage is not adequate.
- 6.5 Do not use lawns, grass plots, or other private property for storage purposes without written permission of the owner or other person in possession or control of such premises.
- 6.6 Protect stored materials and equipment against loss or damage.
- 6.7 Store in manufacturers' unopened containers.
- 6.8 Materials delivered and stored along the line of the Work shall be neatly, safely, and compactly stacked along the work site in such manner as to cause the least inconvenience and damage to property owners and the general public, and shall be not closer than 3 feet to any fire hydrant. Public and private drives and street crossings shall be kept open.
- 6.9 Damage to lawns, sidewalks, streets or other improvements shall be repaired or replaced to the satisfaction of the City Engineer. The total length which materials may be distributed along the route of construction at any one time is 1000 lineal feet, unless otherwise approved in writing by the City Engineer.

PART 2 PRODUCTS -* Not Used*****

PART 3 EXECUTION -* Not Used*****

END OF SECTION

SECTION 01725

FIELD SURVEYING

PART 1 GENERAL

1.0 QUALITY CONTROL

- 1.1 Conform to State of Texas laws for surveys requiring licensed surveyors. Employ a land surveyor acceptable to City Engineer, if required.

2.0 SUBMITTALS

- 2.1 Submit to City Engineer the name, address, and telephone number of Surveyor before starting survey work.
- 2.2 Submit documentation verifying accuracy of survey work on request.
- 2.3 Submit certificate signed by surveyor, that the elevations and locations of the Work are in conformance with Contract Documents.
- 2.4 Submit information under provisions of Section 01330 - Submittal Procedures.

3.0 PROJECT RECORD DOCUMENTS

- 3.1 Maintain a complete and accurate log of control and survey work as it progresses.
- 3.2 Prepare a certified survey setting forth dimensions, locations, angles, and elevations of construction and site Work upon completion of foundation walls and major site improvements.
- 3.3 Submit Record Documents under provisions of Section 01785 - Project Record Documents.

4.0 EXAMINATION

- 4.1 Verify locations of survey control points prior to starting Work.
- 4.2 Notify City Engineer immediately of any discrepancies discovered.

5.0 SURVEY REFERENCE POINTS

- 5.1 Control datum for survey is that established by City-provided survey as required in the General Conditions and indicated on Drawings.
- 5.2 Locate and protect survey control points prior to starting site work; preserve permanent reference points during construction.
- 5.3 Notify City Engineer 48 hours in advance of need for relocation of reference points due to changes in grades or other reasons.
- 5.4 Report promptly to City Engineer the loss or destruction of any reference point.
- 5.5 Contractor shall reimburse City for cost of re-establishment of permanent reference points disturbed by Contractor's operations.

6.0 SURVEY REQUIREMENTS

- 6.1 Utilize recognized engineering survey practices.
- 6.2 Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- 6.3 Establish elevations, lines and levels to provide quantities required for measurement and payment and to provide appropriate controls for the Work. Locate and lay out by instrumentation and similar appropriate means:
 - 6.3.1 Site improvements including pavements; stakes for grading; fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 6.3.2 Grid or axis for structures.
 - 6.3.3 Building foundation, column locations, ground floor elevations.

6.4 Verify periodically layouts by same means.

END OF SECTION

SECTION 01731

CUTTING AND PATCHING

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01740

SITE RESTORATION

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01755

STARTING SYSTEMS

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

END OF SECTION

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.0 SECTION INCLUDES

- 1.1 Substantial Completion Procedures.
- 1.2 Closeout procedures for final submittals, operation and maintenance data, warranties, spare parts and maintenance materials.
- 1.3 Texas Department of Licensing and Regulation (TDLR) inspection for ADA compliance.

2.0 SUBSTANTIAL COMPLETION

- 2.1 Comply with Document 00700 - General Conditions, regarding substantial completion when Contractor considers the Work, or portion thereof designated by City Engineer, to be substantially complete.
 - 2.1.1 Insure the following items have been completed when included in the Work, prior to presenting a list of items to be inspected by Project Manager for issuance of a Certificate of Substantial Completion:
 - 2.1.1.1 cutting, plugging, and abandoning of water, wastewater, and storm

sewer lines, as required by specifications for each item;

2.1.1.2 construction of, and repairs to, pavement, driveways, sidewalks and curbs and gutters;

2.1.1.3 sodding and hydromulch seeding, unless waived by City Engineer in writing;

2.1.1.4 general clean up including pavement markings, transfer of services, successful testing and landscape;

2.1.1.5 installation of all bid items, and

2.1.1.6 any additional requirements in Section 01110-Summary of Work.

2.2 Assist Project Manager with inspection of Contractor's list of items and complete or correct the items, including items added by project Manager, within a time period of 30 days or as mutually agreed.

2.3 Should Project Manager's inspection show failure of Contractor to comply with substantial completion requirements, including those items in Paragraph 2.1.1 of this specification, Contractor shall complete or correct the items, before requesting another inspection by Project Manager.

2.4 Comply with Document 00700 - General Conditions, Iregarding Final Completion and Final Payment when Work is complete and ready for City Engineer's final inspection.

2.5 Provide Project Record Documents in accordance with Section 01785 - Project Record Documents.

2.6 Complete or correct items on punch list, with no new items added. Address new items during warranty period.

2.7 City will occupy portions of Work as specified in other Sections.

3.0 FINAL CLEANING

3.1 Execute final cleaning prior to final inspection.

3.2 For facilities, clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

3.3 Clean equipment and fixtures to sanitary condition.

3.4 Clean or replace filters of operating equipment.

3.5 Clean debris from roofs, gutters, down spouts, and drainage systems.

3.6 Clean site; sweep paved areas, rake landscaped surfaces clean.

3.7 Remove waste and surplus materials, rubbish, and temporary construction facilities from site following final test of utilities and completion of Work.

4.0 ADJUSTING

- 4.1 Adjust operating equipment to ensure smooth and unhindered operation. Value of this testing and adjusting is 5 percent of Lump Sum Price in Schedule of Values for item being tested.

5.0 OPERATION AND MAINTENANCE DATA

- 5.1 Submit operations and maintenance data as noted in Section 01330 - Submittal Procedures.
- 5.2 Five percent of lump sum amount of each piece of equipment as indicated in Schedule of Unit Price Work or Schedule of Values shall be paid after required O&M data submissions are received and approved by City Engineer.

6.0 WARRANTIES

- 6.1 Provide one original and two copies of each warranty from subcontractors, suppliers, and manufacturers.
- 6.2 Provide Table of Contents and assemble warranties in 3-ring/D binder with durable plastic cover.
- 6.3 Submit warranties prior to final progress payment.
- 6.4 Warranties shall commence in accordance with requirements in Document 00700 - General Conditions.

7.0 SPARE PARTS AND MAINTENANCE MATERIALS

- 7.1 Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification sections.
- 7.2 Deliver to location within City limits as directed by City Engineer; obtain receipt prior to final Payment Application.

8.0 TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR) INSPECTION

- 8.1 Contact TDLR's Houston Regional Office, 5425 Polk Street, Houston, Texas, 77023, telephone 713-924-6303, fax 713-921-3106, to verify schedule an inspection for ADA compliance prior to final completion.
- 8.2 Provide results of TDLR's inspection to City prior to final inspection.

9.0 FINAL PHOTOS

- 9.1 Provide per Specification Section 01322 - Construction Photographs for Facility Projects.

10.0 PROJECT RECORD DOCUMENTS

- 10.1 Provide per Specification Section 01785 - Project Record Documents.

PART 2 PRODUCTS -*Not Used*****

PART 3 EXECUTION -* Not Used*****

END OF SECTION

SECTION 01782

OPERATIONS AND MAINTENANCE DATA

The City of Houston Division 1 Specifications can also be viewed on the project website
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION 01785

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.0 SECTION INCLUDES

1.1 Maintenance and Submittal of Record Documents and Samples.

2.0 MAINTENANCE OF DOCUMENTS AND SAMPLES

2.1 Maintain one record copy of documents at the site in accordance with Document 0700 - General Conditions, paragraph 3.14, Documents and Samples at the Site.

2.2 Store Record Documents and samples in field office if a field office is required by Contract Documents, or in a secure location. Provide files, racks, and secure storage for Record Documents and samples.

2.3 Label each document "PROJECT RECORD" in neat, large, printed letters.

2.4 Maintain Record Documents in a clean, dry, and legible condition. Do not use Record Documents for construction purposes.

2.5 Keep Record Documents and Samples available for inspection by City Engineer.

3.0 RECORDING

3.1 Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

3.2 Contract Drawings and Shop Drawings: Legibly mark each item to record all actual construction, or "as built" conditions, including:

- 3.2.1 Measured depths of elements of foundation in relation to finish first floor datum.
 - 3.2.2 Measured horizontal locations and elevations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3.2.3 Elevations of underground utilities referenced to City of Houston bench mark utilized for project.
 - 3.2.4 Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
- 3.3 Field changes of dimension and detail.
- 3.3.1 Changes made by modifications.
 - 3.3.2 Details not on original contract drawings.
 - 3.3.3 References to related shop drawings and Modifications.
- 3.4 Record information with a red felt-tip marking pen on a set of blue line opaque drawings, provided by City Engineer.
- 4.0 SUBMITTALS
- 4.1 At contract closeout, deliver Project Record Documents to City Engineer.

PART 2 PRODUCTS - *Not Used*****

PART 3 EXECUTION - *Not Used*****

END OF SECTION

DOCUMENT 00320

GEOTECHNICAL INFORMATION

- 1.0 DOCUMENT INCLUDES
 - A. Soils investigation reports.
 - B. Bidder's responsibilities.
- 2.0 RELATED DOCUMENTS
 - A. Document 00340 - Environmental Information
 - B. Section 02260 - Trench Safety Systems
- 3.0 SITE INVESTIGATION REPORTS

- A. In the design and preparation of Contract documents for this Project, the City and Design Consultant have used information in geotechnical reports for the investigation and analysis of soils and subsurface conditions at the Project site.
- B. A copy of each report is available for examination at the City Hall Annex, Building Services Department offices located at 900 Bagby Street, 2nd Floor, Houston, Texas 77002.
- C. Neither the City nor Design Consultant is responsible for accuracy or completeness of any information or data.

4.0 GEOTECHNICAL REPORTS

- A. Report No. 110011, prepared by the firm of Rekha Engineering, Inc., entitled Geotechnical Investigation Light Pole Foundation and Pavement Design, Solid Waste Facility, City of Houston, 5614 Neches, Houston, Texas, dated February 12, 2010, consisting of 16 pages.

5.0 BIDDER RESPONSIBILITIES

- A. Bidder shall take full responsibility for interpretation and use of information contained in above listed reports for its bidding and construction purposes.
- B. Bidder may perform additional soils investigations as Bidder deems appropriate.

END OF DOCUMENT

GEOTECHNICAL INVESTIGATION REPORT

The Geotechnical Investigation Report for the Solid Waste Department New Parking Lot begin on the following pages

GEOTECHNICAL INVESTIGATION REPORT FOR THE SOLID WASTE DEPARTMENT
NEW PARKING LOT
AT 5614 NECHES STREET

can also be viewed on the following website

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

GEOTECHNICAL INVESTIGATION
LIGHT POLE FOUNDATION AND PAVEMENT DESIGN
SOLID WASTE FACILITY, CITY OF HOUSTON
5614 NECHES
HOUSTON, TEXAS

REPORT TO:

REKHA ENGINEERING, INC.
HOUSTON, TEXAS

BY

BANDY & ASSOCIATES, INC.
HOUSTON, TEXAS

FEBRUARY 2010

February 12, 2010
Report No. 110011

Rekha Engineering, Inc.
5301 Hollister, Suite 190
Houston, Texas 77040

Attention: Mr. John English

**GEOTECHNICAL INVESTIGATION
LIGHT POLE FOUNDATION AND PAVEMENT DESIGN
SOLID WASTE FACILITY, CITY OF HOUSTON
5614 NECHES
HOUSTON, TEXAS**

Gentlemen:

We are pleased to submit our report on the geotechnical investigation for the referenced project. This study was authorized by Mr. John English.

INTRODUCTION

This report presents field and laboratory data and recommendations for the light pole foundation and design and construction of pavement. Two (2) copies of the report are being transmitted herewith.

The purpose of this investigation was to determine the various soil profile components, the engineering characteristics of the sub soils at the site and to develop recommendations for light pole foundation and designs of pavement.

The scope of the exploration and analysis included the subsurface exploration field and laboratory testing and engineering analysis and evaluation of the subsurface materials.

The soils engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been promulgated after being prepared in accordance with generally accepted professional engineering practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

This report shall not be reproduced except in full, without the written approval of Bandy & Associates, Inc.

FIELD EXPLORATION

Subsurface conditions at the site were defined by two (2) undisturbed sample borings, B-1 and B-2, located in plan as shown on Plate 1.

The borings were drilled to depths of ten (10) feet below the existing ground surface. The soils encountered are shown on the log of borings, Plates 2 and 3. Where possible, undisturbed samples were obtained using thin-walled Shelby tube samplers in

general accordance with the procedure outlined in ASTM D-1587. In cohesionless soils, the standard penetration test and split-barrel sampling were conducted simultaneously using ASTM Specification D-1586 as a guide. Depth to water was measured in open boreholes after completion of drilling and when possible at different intervals during the course of the field operation. Unless notified to the contrary, all samples will be disposed of after sixty (60) days subsequent to submittal of this report.

LABORATORY TESTING PROGRAM

Classification tests consisting of liquid and plastic limits, percent fines and moisture content determinations were performed to evaluate general uniformity of the soil conditions and shrink-swell potential of these soils. Results of these tests are tabulated on the boring logs at respective sample depth.

Undrained shear strength properties of cohesive soils were defined by unconfined compression tests on undisturbed samples. Results of these tests are tabulated on the boring logs.

All phases of the laboratory-testing program were conducted in general accordance with applicable ASTM Specifications.

SITE AND SUBSURFACE CONDITIONS

General

The stratification of the soils, as shown on the boring logs, represents the soil conditions in the actual boring

locations, and other variations may occur between the borings. Lines of demarcation represent the approximate boundary between the soil types, but the transition may be gradual. Should conditions be found to vary between boring locations during construction, Bandy & Associates, Inc. should be contacted to review recommendations and revise them, if necessary.

Description of Foundation Materials

The surface of the proposed construction site is presently covered with very stiff to stiff dark gray and brown to light gray and yellow clay, continuing to completion depth of the borings. The clay stratum is medium in plasticity with Liquid Limits of 23 to 36 and Plasticity Indices of 10 to 21. Moisture content ranges from 14 to 21 percent.

Groundwater Observation

No groundwater was encountered in open borehole at the time of drilling.

ANALYSES AND RECOMMENDATIONS

Foundation Type and Depth

Various foundation types have been considered for the support of the light poles. The foundation types considered included underream footings.

Underream footings are used most advantageously when relatively soft or expansive strata overlie a firm to stiff foundation material. Soil conditions at the boring locations

and the magnitude of the proposed loads indicate that underream footings may be used. It is recommended that **underream footings be founded at depths of seven feet (7') below the existing grade.** A representative of soils engineers should be present during drilling of underream footing so that depth of footings be adjusted, if needed, depending on soil conditions at each footing location. Concrete should be placed in the drilled piers immediately after excavation to reduce the risk of groundwater seepage, deterioration of the foundation bearing surface and underream collapse.

Allowable Bearing Values

The field and laboratory strength data were utilized to determine allowable soil loading as a function of foundation shape and depth. Analyses indicate that underream footings can be dimensioned for net allowable bearing capacity of 2600 psf. This bearing capacity can be increased by 25 percent for transient loads. A shaft to bell ratio of 1:2 to 1:3 is recommended. Underream footings should not be spaced closer than two (2) underream diameters (edge to edge) based on the diameter of the larger underream. If a clearance of two bell diameter cannot be maintained in every case, the above bearing capacities should be reduced by 25 percent for a clearance between one and two bell diameters. Drilled footings closer than a clearance of one bell diameter are not recommended. The uplift force on the

piers, due to swelling of the expansive clays, can be approximated by assuming a uniform uplift pressure of 1000 psf acting over the perimeter of the shaft. The shafts should contain sufficient full length reinforcing steel to resist uplift forces.

Foundations proportioned in accordance with the above value will have a factor of safety greater than two with respect to shear failure. Footing weight below final grade can be neglected in the determination of design loading. It is estimated that underream footings will experience total settlements of less than one-inch after construction.

For underream footings, **ultimate** uplift capacity can be computed from the following equation provided that ratio of pier depth to bell diameter is equal or greater than 1.5.

$$Q_u = 5.2C (D^2 - d^2)$$

Where:

- Q_u = **Ultimate** uplift capacity, psf
- C = Shear strength of soil = 800 psf
- D = Diameter of bell in feet
- d = Diameter of shaft in feet

A factor of safety of at least two (2.0) is recommended.

Because of the potential for the upper two feet of the soil to shrink and pull away from drilled piers during dry periods,

we recommend soil resistance to lateral loads on drilled piers be ignored in the upper 2-feet of the soil profile. For resistance of lateral loads on drilled piers, we recommend the following parameters that include a factor of safety of 3.

Depth (ft)	Soil Type	Effective Soil Unit Weight (pcf)	Allowable Cohesion (psf)	Angle of Internal Friction, ϕ (degrees)	Strain at $\frac{1}{2}$ Peak Strength, ϵ_{50}	Horizontal Modulus of Subgrade Reaction (tons per cubic foot)
0 - 2	Clay	120	0	0	NA	NA
2 - 10	Clay	120	700	0	0.007	110

PAVEMENT DESIGN

Traffic

The traffic mainly will consist of heavy trucks. Concrete pavement structure is recommended.

Subgrade

The existing subgrade consists of low to medium plasticity clay with low swell potential over time. For low to medium plasticity subgrade, it is recommended that upper six (6) inches of the subgrade be stabilized with six percent (6%) lime (28 lb per sq. yd.) or four percent (4%) Portland cement (20 lb per sq. yd.) by dry weight. The stabilization may be performed in accordance with Item 260 and 275 of TxDOT Specifications.

Base

A base course should always be used under concrete pavements. The choice of type of base course depends essentially upon the economics of the area. The primary function of the base is to prevent pumping and, hence, it must be either free-draining or highly resistant to the erosive action of water. To provide drainage, the base must contain little or no fines.

A nontreated granular base course placed under a concrete pavement to control pumping must fulfill two requirements. They are: (1) it must prevent the subgrade soil from pumping through the base, and (2) it must not pump itself. To be a nonpumping material, a nontreated base course must contain little or no fines and experience has shown that they should be open textured.

If the open-graded and drained concept is to be used under concrete pavements, it is necessary to provide adequate drainage facilities so that water can escape from under the pavement. This can be accomplished by extending the base course through the shoulder or providing edge drains depending on the economics of the situation.

Crushed limestone base is recommended for the base course. Bases that are used under concrete pavements should be at least six (6) inches in thickness. The base material should be compacted to at least 95-percent of its Standard Proctor Density

(ASTM D-698). A void ratio of 0.43 may be used for the base course.

Jointed Reinforced Concrete Pavement

Concrete pavement thickness has been determined based on AASHTO design method (AASHTO Guide for Design of Pavement Structures). The following parameters are used for the design:

K = Effective Modulus of subgrade reaction for base
= 600 pci

E_c = Concrete Elastic Modulus = 5×10^6 psi

S_c = Mean Concrete Modulus of Rupture = 650 psi

J = Load transfer Coefficient = 3.2

C_d = Drainage Coefficient = 1.0

S_o = Overall Standard Deviation = 0.25

R = Reliability = 95%

PSI_{Δ} Design Serviceability Loss = 2.0

W_{18} = Design 18-Kip Equivalent Single Axle Load
= 5×10^6 ESAL

Using Figure 3.7, Part II, Design Chart for Rigid Pavement, design thickness of concrete pavement is 8.5 in. for 5×10^6 ESAL.

Recommended Design Section:

a. Design Traffic = 5×10^6 ESAL

Concrete thickness = 8.5 in.

Crushed Limestone Base Thickness = 6.0 in.

Lime or Cement Stabilized Subgrade = 6.0 in.

(6% lime or 4% cement by dry weight)

Estimated void ratio: 0.43

PAVEMENT REINFORCEMENT DESIGN

The purpose of distributed steel reinforcement in reinforced concrete pavement is not to prevent cracking, but to hold tightly closed any cracks that may form, thus maintaining the pavement as an integral structural unit. The physical mechanism through which cracks develop is affected by (1) moisture-related slab contractions, and (2) frictional resistance from the underlying material. As temperature drops or moisture content decreases, the slab tends to contract. This contraction is resisted by the underlying material through friction and shear between it and the slab. The restraint of slab contraction results in tensile stresses which reach a maximum at midslab. If these tensile stresses exceed the tensile strength of the concrete, a crack will develop and all the stresses are transferred to the steel reinforcement. Thus, the reinforcement must be designed to carry these stresses without any appreciable elongation that would result in excessive crack width.

Using Figure 3.8, the steel reinforcement required is 0.08% for slab length of 30 feet, Friction factor of 1.5 and steel

working stress of 30,000 psi.

Proper finishing of concrete pavements requires the use of sawed and sealed joints, which should be designed in accordance with current Portland Cement Association guidelines. Joint spacing is recommended at 30 feet intervals for jointed reinforced concrete pavement. Dowel bars should be used to transfer loads at the joints.

Related civil design factors such as drainage, cross-sectional configurations, surface elevations and environmental factors, which will significantly affect the service life, must be included in the preparation of the construction drawing and specifications. Normal periodic maintenance will be required.

SLOPE STABILITY ANALYSES FOR DETENTION POND

Slope stability analyses of the proposed detention pond were performed in accordance with procedures enumerated in Design Manual NAVFAC DM-7, Department of the Navy, Alexandria, Virginia, as shown below. The soil is uniform in stratigraphy and can be termed as low to medium plasticity clay with moderate shear strength.

Rotational Failure in Cohesive Soil

Refer to Figure 7-1 of the manual (Attached). Use lowest undrained shear strength value of the soil from the borings obtained from unconfined compression tests and reduce the

shear strength by 50 percent to account for strength loss due to weathering of the exposed soil.

$$H = 4 \text{ ft}$$

$$\text{Assume } D = 0$$

$$d = D/H = 0$$

Lowest Laboratory Shear Strength: 800 psf

Reduce Shear Strength by 50% to account for weathering and other causes

$$\text{Design } C = 0.50 \times 800 \approx 400 \text{ psf}$$

$$\gamma_T = 115 \text{ pcf}$$

$$\text{Slope } b = 3$$

For Toe Circle failure, $d = 0$

From Chart, Stability Number $N_o = 11$

$$\begin{aligned} \text{Factor of Safety } F_s &= \frac{N_o C}{\gamma_T H} = \frac{(11) 400}{(115) (4)} \\ &= 9.6 \\ &\text{O.K} \end{aligned}$$

We appreciate the opportunity to perform this study.
Please call upon us if you have any questions.

Very truly yours,

BANDY & ASSOCIATES, INC.

S. S. Bandy, Ph.D., P.E.
President

SSB/mh
Copies Submitted: 2

STANDARD NOTES

1. Geotechnical Engineering and Quality Control Testing services by this firm are recommended during construction.
2. We have endeavored to analyze the site foundation conditions in accordance with basic geotechnical engineering principles; however, we are not aware of all the loading or structural conditions; therefore, we suggest that your professional staff carefully review our report for any design criteria for which we may not be familiar, or for which we may have inadvertently omitted. Accordingly, the contractual documents should advise that no claims will be allowed as a result of our geotechnical investigation and recommendations.
3. If any conditions are encountered during final design and/or during construction which are materially different than those presented in this report or assumed to exist at the site, this firm should be notified at once so that we may have an opportunity to make further studies and recommendations.
4. This publication is intended for the use of professional personnel competent to evaluate the significance and limitations for its contents and who will accept responsibility for the applications of the material it contains.
5. It is considered prudent and recommended that the soils engineer be consulted further during the final stages of design, and the preparation of plans and specifications, to ascertain that the earthwork and foundation recommendations have been interpreted and implemented basically in accordance with our intent. It thus may be necessary to submit supplementary recommendations to these items. All communications concerning this report must be made in writing.
6. This geotechnical engineering investigation report is not intended to be utilized as an earthwork specification for construction.

ILLUSTRATIONS

GEOTECHNICAL REPORT FOR SOLID WASTE DEPARTMENT NEW PARKING LOT
AT 5614 NECHES STREET

can also be viewed on the following website

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

STRUCTURAL DRAWINGS

DOCUMENT 00015

LIST OF DRAWINGS

Sheet No. Drawing Title

0.000	Cover Page
G.001	General Information
G.002	General Information
G.020	Texas Accessibility Standards
G.021	Texas Accessibility Standards
D.010	Demolition Site Plan
A.010	Site Plan
C101	Partial Topographic Survey
C102	Site Dimensional Plan & Demolition Plan
G103	Paving & Drainage Plan & Drainage Area Map & Detention Plan
C104	Storm Water Quality Plan & Details
C105	Storm Water Pollution Prevention Plan
C106	Civil Details
C107	Storm Water Pollution Prevention Plan Details
C108	Standard Notes
S1.0	Lighting Foundation Plan and Details
E.010	Electrical Site Plan Parking Lot Lighting
L1.00	Planting Plan
L2.00	Irrigation Plan
L2.01	Irrigation Details

Structural Drawings for the Solid Waste Department New Parking Lot begin on the following pages

STRUCTURAL DRAWINGS FOR SOLID WASTE DEPARTMENT NEW PARKING LOT
AT 5614 NECHES STREET

can be viewed on the following website

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

CITY OF HOUSTON

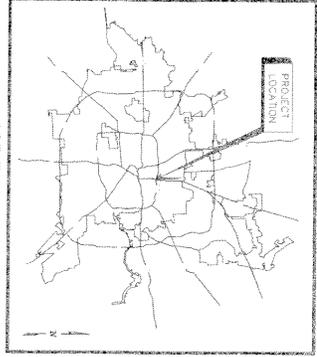
GENERAL SERVICES DEPARTMENT

SWD New Parking Lot Design

5614 Neches, Houston, TX 77026

APPROVED FOR REVISION ONLY
CITY OF HOUSTON
OFFICE OF THE CITY CLERK
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NOTICE
The City of Houston is a public body and its actions are subject to the provisions of the Texas Open Meetings Act. Any meeting of the City of Houston shall be open to the public unless otherwise provided by law. This notice is posted to inform the public of the location and time of the meeting.



10103895

MAYOR
ANNISE D. PARKER

COMPTROLLER
RONALD C. GREEN

DISTRICT COUNCIL MEMBERS

BRENDA STABBE DISTRICT A	JAMES JOHNSON DISTRICT B
WANDA ADAMS DISTRICT C	MARK SULLIVAN DISTRICT E
CHARLES BARNETT DISTRICT D	EDUARDO GONZALEZ DISTRICT H
	JAMES S. RODRIGUEZ DISTRICT I

AT-LARGE COUNCIL MEMBERS

STEPHEN C. COSTELLO POSITION 1	MARISA MONTEA POSITION 3
SHIRLEY L. LINDSEY POSITION 2	C.O. RYAN RAYBOND POSITION 4
	ADAM L. VORZAKIS POSITION 5

CONTRACTING AUTHORITY
FOR THE
CITY OF HOUSTON:

GENERAL SERVICES DEPARTMENT
FOREST R. CHRISTY, JR., INTERIM DIRECTOR

CITY DWG. NO. _____
SHEET NO. 1

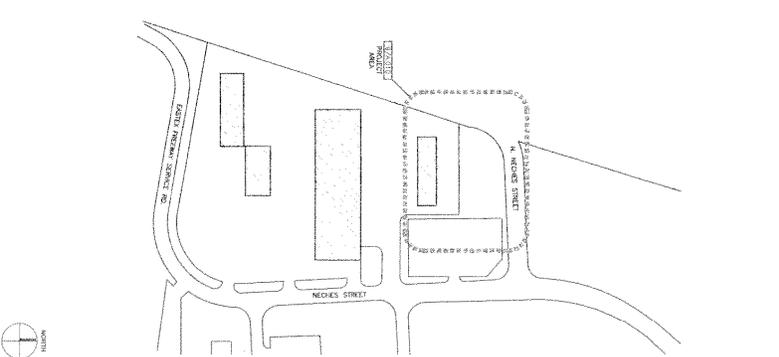
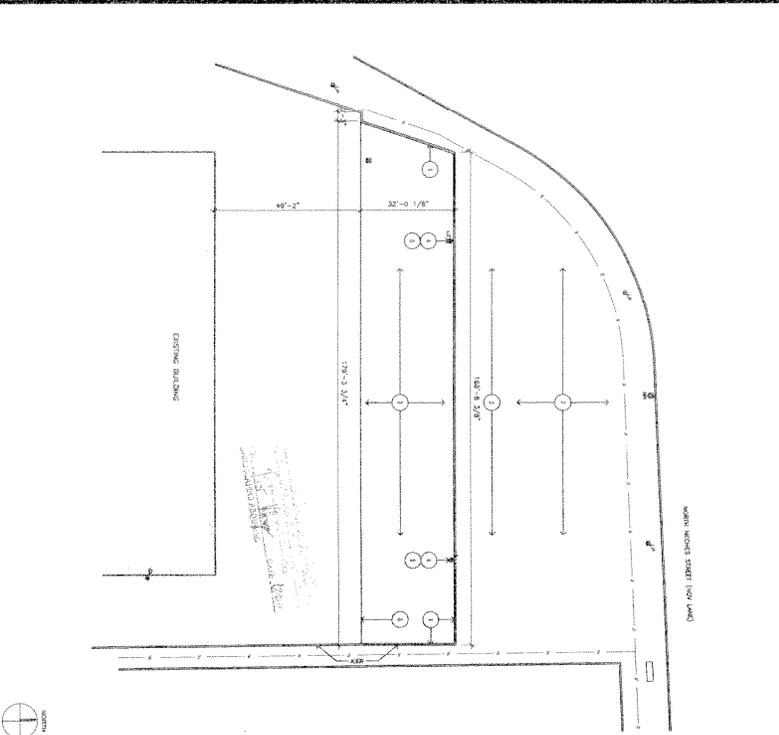
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ENLARGED SITE PLAN

1/8" = 1'-0" | 9' SITE PLAN

1" = 100' | 5' GENERAL NOTES

CITY DWG NO. 1



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KEY NOTES

4

1. CONCRETE CURB AT LANDSCAPE RE: CIVIL
2. NEW LANDSCAPING RE: CIVIL FOR REQUIREMENTS
3. NEW LANDSCAPING FOR REQUIREMENTS
4. NEW CONCRETE LIGHT POLE BASES REQUIREMENTS
5. REUSE EXISTING LIGHT POLES & MONUMENTS
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APPROVED
FOR BUILDING PERMIT ONLY
CITY OF HOUSTON
CODE ENFORCEMENT DIVISION

This notice is intended to inform the public that the above information is for informational purposes only and does not constitute an offer of insurance or any other financial product. The information is provided for informational purposes only and is not intended to be used as a basis for any investment decision. The information is provided for informational purposes only and is not intended to be used as a basis for any investment decision.

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- SP-1 REFER TO INDEX SHEET 01001 & 01002 FOR INDEX.
- SP-2 REFER TO 01001 & 01002 FOR ACCESSIBILITY.
- SP-3 CIVIL DOCUMENTS TAKE PRECEDENCE OVER ALL ARCHITECTURAL DOCUMENTS UNLESS NOTED OTHERWISE.
- SP-4 WORK SHALL BE TIED TO EXISTING ADJACENT CONSTRUCTION TO VERIFY ACCURACY OF STAKES.
- SP-5 CLEAN AREAS AFFECTED BY WORK & REPLACE IN KIND. ALL VEGETATION DESTROYED OR REMOVED AS SHOWN SHALL BE REPLACED WITH EQUIVALENT PLANTING.
- SP-6 EXISTING CHAIN LINK PERIMETER FENCING IS TO REMAIN UNLESS OTHERWISE NOTED.
- SP-7 ALL WORK NOT ANTICIPATED THAT THE WORK IN THIS PROJECT WILL AFFECT THE EXISTING PERMITTER EVALUATION THE CONTRACTOR DETERMINES THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF THE PROJECT.

NO.	DATE	DESCRIPTION
1	05/20/2010	ISSUED FOR PERMIT
2	05/20/2010	ISSUED FOR PERMIT

CONSULTANTS:
 Architecture: BrewArchitecture
 Houston, TX 77008
 Phone: 713.562.5888
 Fax: 713.562.5888
 Website: www.brewarch.com
 Andrew Turner, AIA
 Civil: RESEA Engineering, Inc.
 5501 Hollister, Suite 180
 Houston, Texas 77056
 Phone: 713.866.4700
 Fax: 713.866.7988
 Website: www.resea.com
 Construction: T. English
 1155
 Houston, Texas 77008
 Phone: 713.866.4700
 Fax: 713.866.7988
 Website: www.tenglish.com

PROJECT NAME:
 SMD New Parking Lot Design
 5514 Neches
 Houston, TX 77028

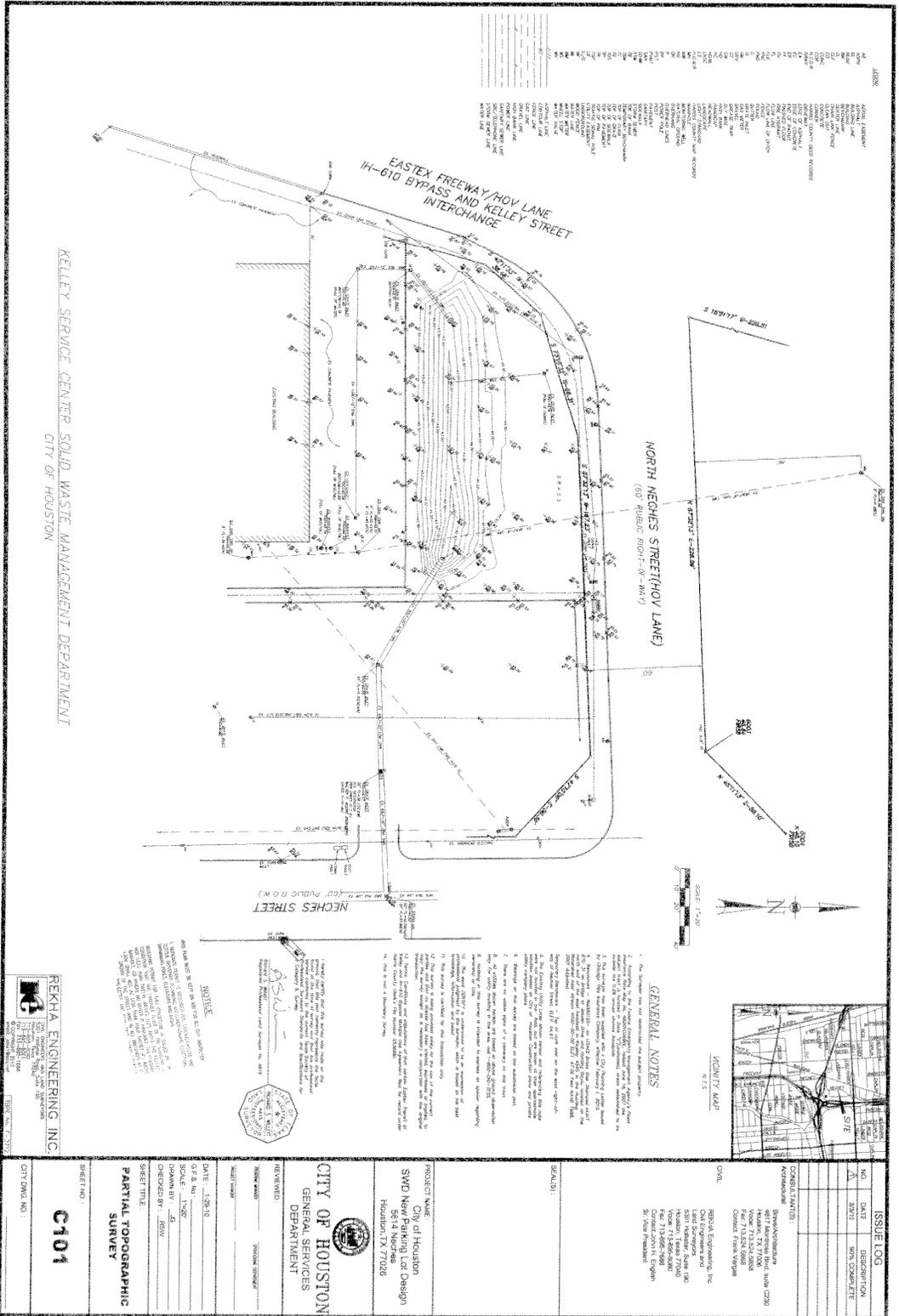
DESIGNED BY:
 Andrew Turner, AIA
 3500 Richmond Dr., Suite 400
 Houston, Texas 77006
 Phone: 713.866.4700
 Fax: 713.866.7988
 Website: www.tenglish.com
 Checked: Andrew King
 CSF Consulting LP
 Houston, Texas 77060
 Office: 802.678.2110
 Contract: 002.678.2110
 Contract: 002.678.2110

REVISIONS:
 DATE: _____
 BY: _____
 DESCRIPTION: _____

CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

SHEET NO.:
A.010

CITY DWG NO. 1



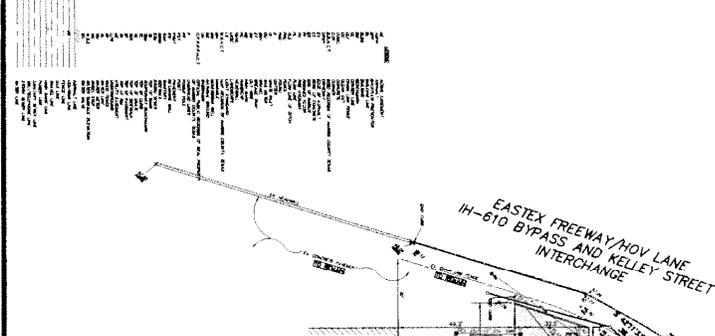
KELLEY SERVICE CENTER SOLID WASTE MANAGEMENT DEPARTMENT
 CITY OF HOUSTON

LEGEND

1/4" = 1' (VERTICAL)	1/4" = 1' (HORIZONTAL)
1/8" = 1' (VERTICAL)	1/8" = 1' (HORIZONTAL)
1/16" = 1' (VERTICAL)	1/16" = 1' (HORIZONTAL)
1/32" = 1' (VERTICAL)	1/32" = 1' (HORIZONTAL)
1/64" = 1' (VERTICAL)	1/64" = 1' (HORIZONTAL)
1/128" = 1' (VERTICAL)	1/128" = 1' (HORIZONTAL)
1/256" = 1' (VERTICAL)	1/256" = 1' (HORIZONTAL)
1/512" = 1' (VERTICAL)	1/512" = 1' (HORIZONTAL)
1/1024" = 1' (VERTICAL)	1/1024" = 1' (HORIZONTAL)
1/2048" = 1' (VERTICAL)	1/2048" = 1' (HORIZONTAL)
1/4096" = 1' (VERTICAL)	1/4096" = 1' (HORIZONTAL)
1/8192" = 1' (VERTICAL)	1/8192" = 1' (HORIZONTAL)
1/16384" = 1' (VERTICAL)	1/16384" = 1' (HORIZONTAL)
1/32768" = 1' (VERTICAL)	1/32768" = 1' (HORIZONTAL)
1/65536" = 1' (VERTICAL)	1/65536" = 1' (HORIZONTAL)
1/131072" = 1' (VERTICAL)	1/131072" = 1' (HORIZONTAL)
1/262144" = 1' (VERTICAL)	1/262144" = 1' (HORIZONTAL)
1/524288" = 1' (VERTICAL)	1/524288" = 1' (HORIZONTAL)
1/1048576" = 1' (VERTICAL)	1/1048576" = 1' (HORIZONTAL)
1/2097152" = 1' (VERTICAL)	1/2097152" = 1' (HORIZONTAL)
1/4194304" = 1' (VERTICAL)	1/4194304" = 1' (HORIZONTAL)
1/8388608" = 1' (VERTICAL)	1/8388608" = 1' (HORIZONTAL)
1/16777216" = 1' (VERTICAL)	1/16777216" = 1' (HORIZONTAL)
1/33554432" = 1' (VERTICAL)	1/33554432" = 1' (HORIZONTAL)
1/67108864" = 1' (VERTICAL)	1/67108864" = 1' (HORIZONTAL)
1/134217728" = 1' (VERTICAL)	1/134217728" = 1' (HORIZONTAL)
1/268435456" = 1' (VERTICAL)	1/268435456" = 1' (HORIZONTAL)
1/536870912" = 1' (VERTICAL)	1/536870912" = 1' (HORIZONTAL)
1/1073741824" = 1' (VERTICAL)	1/1073741824" = 1' (HORIZONTAL)
1/2147483648" = 1' (VERTICAL)	1/2147483648" = 1' (HORIZONTAL)
1/4294967296" = 1' (VERTICAL)	1/4294967296" = 1' (HORIZONTAL)
1/8589934592" = 1' (VERTICAL)	1/8589934592" = 1' (HORIZONTAL)
1/17179869184" = 1' (VERTICAL)	1/17179869184" = 1' (HORIZONTAL)
1/34359738368" = 1' (VERTICAL)	1/34359738368" = 1' (HORIZONTAL)
1/68719476736" = 1' (VERTICAL)	1/68719476736" = 1' (HORIZONTAL)
1/137438953472" = 1' (VERTICAL)	1/137438953472" = 1' (HORIZONTAL)
1/274877906944" = 1' (VERTICAL)	1/274877906944" = 1' (HORIZONTAL)
1/549755813888" = 1' (VERTICAL)	1/549755813888" = 1' (HORIZONTAL)
1/1099511627776" = 1' (VERTICAL)	1/1099511627776" = 1' (HORIZONTAL)
1/2199023255552" = 1' (VERTICAL)	1/2199023255552" = 1' (HORIZONTAL)
1/4398046511104" = 1' (VERTICAL)	1/4398046511104" = 1' (HORIZONTAL)
1/8796093022208" = 1' (VERTICAL)	1/8796093022208" = 1' (HORIZONTAL)
1/17592186044416" = 1' (VERTICAL)	1/17592186044416" = 1' (HORIZONTAL)
1/35184372088832" = 1' (VERTICAL)	1/35184372088832" = 1' (HORIZONTAL)
1/70368744177664" = 1' (VERTICAL)	1/70368744177664" = 1' (HORIZONTAL)
1/140737488355328" = 1' (VERTICAL)	1/140737488355328" = 1' (HORIZONTAL)
1/281474976710656" = 1' (VERTICAL)	1/281474976710656" = 1' (HORIZONTAL)
1/562949953421312" = 1' (VERTICAL)	1/562949953421312" = 1' (HORIZONTAL)
1/1125899906842624" = 1' (VERTICAL)	1/1125899906842624" = 1' (HORIZONTAL)
1/2251799813685248" = 1' (VERTICAL)	1/2251799813685248" = 1' (HORIZONTAL)
1/4503599627370496" = 1' (VERTICAL)	1/4503599627370496" = 1' (HORIZONTAL)
1/9007199254740992" = 1' (VERTICAL)	1/9007199254740992" = 1' (HORIZONTAL)
1/18014398509481984" = 1' (VERTICAL)	1/18014398509481984" = 1' (HORIZONTAL)
1/36028797018963968" = 1' (VERTICAL)	1/36028797018963968" = 1' (HORIZONTAL)
1/72057594037927936" = 1' (VERTICAL)	1/72057594037927936" = 1' (HORIZONTAL)
1/144115188075855872" = 1' (VERTICAL)	1/144115188075855872" = 1' (HORIZONTAL)
1/288230376151711744" = 1' (VERTICAL)	1/288230376151711744" = 1' (HORIZONTAL)
1/576460752303423488" = 1' (VERTICAL)	1/576460752303423488" = 1' (HORIZONTAL)
1/1152921504606846976" = 1' (VERTICAL)	1/1152921504606846976" = 1' (HORIZONTAL)
1/2305843009213693952" = 1' (VERTICAL)	1/2305843009213693952" = 1' (HORIZONTAL)
1/4611686018427387904" = 1' (VERTICAL)	1/4611686018427387904" = 1' (HORIZONTAL)
1/9223372036854775808" = 1' (VERTICAL)	1/9223372036854775808" = 1' (HORIZONTAL)
1/18446744073709551616" = 1' (VERTICAL)	1/18446744073709551616" = 1' (HORIZONTAL)
1/36893488147419103232" = 1' (VERTICAL)	1/36893488147419103232" = 1' (HORIZONTAL)
1/73786976294838206464" = 1' (VERTICAL)	1/73786976294838206464" = 1' (HORIZONTAL)
1/147573952593676412928" = 1' (VERTICAL)	1/147573952593676412928" = 1' (HORIZONTAL)
1/295147905187352825856" = 1' (VERTICAL)	1/295147905187352825856" = 1' (HORIZONTAL)
1/590295810374705651712" = 1' (VERTICAL)	1/590295810374705651712" = 1' (HORIZONTAL)
1/1180591620749411303424" = 1' (VERTICAL)	1/1180591620749411303424" = 1' (HORIZONTAL)
1/2361183241498822606848" = 1' (VERTICAL)	1/2361183241498822606848" = 1' (HORIZONTAL)
1/4722366482997645213696" = 1' (VERTICAL)	1/4722366482997645213696" = 1' (HORIZONTAL)
1/9444732965995290427392" = 1' (VERTICAL)	1/9444732965995290427392" = 1' (HORIZONTAL)
1/18889465931990580854784" = 1' (VERTICAL)	1/18889465931990580854784" = 1' (HORIZONTAL)
1/37778931863981161709568" = 1' (VERTICAL)	1/37778931863981161709568" = 1' (HORIZONTAL)
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1/151115727455924646838272" = 1' (VERTICAL)	1/151115727455924646838272" = 1' (HORIZONTAL)
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1/604462909823698587353088" = 1' (VERTICAL)	1/604462909823698587353088" = 1' (HORIZONTAL)
1/1208925819647397174706176" = 1' (VERTICAL)	1/1208925819647397174706176" = 1' (HORIZONTAL)
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1/309485009829733676724781056" = 1' (VERTICAL)	1/309485009829733676724781056" = 1' (HORIZONTAL)
1/618970019659467353449562112" = 1' (VERTICAL)	1/618970019659467353449562112" = 1' (HORIZONTAL)
1/1237940039318934706899124224" = 1' (VERTICAL)	1/1237940039318934706899124224" = 1' (HORIZONTAL)
1/2475880078637869413798248448" = 1' (VERTICAL)	1/2475880078637869413798248448" = 1' (HORIZONTAL)
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1/19807040629102955310385955584" = 1' (VERTICAL)	1/19807040629102955310385955584" = 1' (HORIZONTAL)
1/39614081258205910620771911168" = 1' (VERTICAL)	1/39614081258205910620771911168" = 1' (HORIZONTAL)
1/79228162516411821241543822336" = 1' (VERTICAL)	1/79228162516411821241543822336" = 1' (HORIZONTAL)
1/158456325032823642483087646672" = 1' (VERTICAL)	1/158456325032823642483087646672" = 1' (HORIZONTAL)
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1/633825300131294569932350586688" = 1' (VERTICAL)	1/633825300131294569932350586688" = 1' (HORIZONTAL)
1/1267650600262589139864701173376" = 1' (VERTICAL)	1/1267650600262589139864701173376" = 1' (HORIZONTAL)
1/2535301200525178279729402346752" = 1' (VERTICAL)	1/2535301200525178279729402346752" = 1' (HORIZONTAL)
1/5070602401050356559458804693504" = 1' (VERTICAL)	1/5070602401050356559458804693504" = 1' (HORIZONTAL)
1/10141204802100713118917609387008" = 1' (VERTICAL)	1/10141204802100713118917609387008" = 1' (HORIZONTAL)
1/20282409604201426237835218774016" = 1' (VERTICAL)	1/20282409604201426237835218774016" = 1' (HORIZONTAL)
1/40564819208402852475670437548032" = 1' (VERTICAL)	1/40564819208402852475670437548032" = 1' (HORIZONTAL)
1/81129638416805704951340875096064" = 1' (VERTICAL)	1/81129638416805704951340875096064" = 1' (HORIZONTAL)
1/162259276833611409902681501920128" = 1' (VERTICAL)	1/162259276833611409902681501920128" = 1' (HORIZONTAL)
1/324518553667222819805363003840256" = 1' (VERTICAL)	1/324518553667222819805363003840256" = 1' (HORIZONTAL)
1/649037107334445639610726007680512" = 1' (VERTICAL)	1/649037107334445639610726007680512" = 1' (HORIZONTAL)
1/1298074214688891279221452015361024" = 1' (VERTICAL)	1/1298074214688891279221452015361024" = 1' (HORIZONTAL)
1/2596148429377782558442904030722048" = 1' (VERTICAL)	1/2596148429377782558442904030722048" = 1' (HORIZONTAL)
1/5192296858755565116885808061444096" = 1' (VERTICAL)	1/5192296858755565116885808061444096" = 1' (HORIZONTAL)
1/10384593717511130233771616122881992" = 1' (VERTICAL)	1/10384593717511130233771616122881992" = 1' (HORIZONTAL)
1/20769187435022260467543232245763984" = 1' (VERTICAL)	1/20769187435022260467543232245763984" = 1' (HORIZONTAL)
1/41538374870044520935086464491527968" = 1' (VERTICAL)	1/41538374870044520935086464491527968" = 1' (HORIZONTAL)
1/83076749740089041870172928983055936" = 1' (VERTICAL)	1/83076749740089041870172928983055936" = 1' (HORIZONTAL)
1/166153499480178083740345857966111872" = 1' (VERTICAL)	1/166153499480178083740345857966111872" = 1' (HORIZONTAL)
1/332306998960356167480691715932223744" = 1' (VERTICAL)	1/332306998960356167480691715932223744" = 1' (HORIZONTAL)
1/664613997920712334961383431864447488" = 1' (VERTICAL)	1/664613997920712334961383431864447488" = 1' (HORIZONTAL)
1/1329227995841424669922766863728894976" = 1' (VERTICAL)	1/1329227995841424669922766863728894976" = 1' (HORIZONTAL)
1/2658455991682849339845533727457789952" = 1' (VERTICAL)	1/2658455991682849339845533727457789952" = 1' (HORIZONTAL)
1/5316911983365698679691067454915579904" = 1' (VERTICAL)	1/5316911983365698679691067454915579904" = 1' (HORIZONTAL)
1/10633823966731397359382134909831159808" = 1' (VERTICAL)	1/10633823966731397359382134909831159808" = 1' (HORIZONTAL)
1/21267647933462794718764269819662319616" = 1' (VERTICAL)	1/21267647933462794718764269819662319616" = 1' (HORIZONTAL)
1/42535295866925589437528539639324639232" = 1' (VERTICAL)	1/42535295866925589437528539639324639232" = 1' (HORIZONTAL)
1/85070591733851178875057079278649278464" = 1' (VERTICAL)	1/85070591733851178875057079278649278464" = 1' (HORIZONTAL)
1/170141183467702357750114158557298557128" = 1' (VERTICAL)	1/170141183467702357750114158557298557128" = 1' (HORIZONTAL)
1/340282366935404715500228317114597114256" = 1' (VERTICAL)	1/340282366935404715500228317114597114256" = 1' (HORIZONTAL)
1/68056473387080943100045663422919422512" = 1' (VERTICAL)	1/68056473387080943100045663422919422512" = 1' (HORIZONTAL)
1/136112946774161886200091326845838845024" = 1' (VERTICAL)	1/136112946774161886200091326845838845024" = 1' (HORIZONTAL)
1/27222589354832377240018265369167770048" = 1' (VERTICAL)	1/27222589354832377240018265369167770048" = 1' (HORIZONTAL)
1/54445178709664754480036530738335540096" = 1' (VERTICAL)	1/54445178709664754480036530738335540096" = 1' (HORIZONTAL)
1/10889035741932950896007306147667108192" = 1' (VERTICAL)	1/10889035741932950896007306147667108192" = 1' (HORIZONTAL)
1/217780714838659017920146122953342163872" = 1' (VERTICAL)	1/217780714838659017920146122953342163872" = 1' (HORIZONTAL)
1/435561429677318035840292245906684327744" = 1' (VERTICAL)	1/435561429677318035840292245906684327744" = 1' (HORIZONTAL)
1/871122859354636071680584491813368655488" = 1' (VERTICAL)	1/871122859354636071680584491813368655488" = 1' (HORIZONTAL)
1/1742245718709272143361168983626736908976" = 1' (VERTICAL)	1/1742245718709272143361168983626736908976" = 1' (HORIZONTAL)
1/3484491437418544286722337967253473817952" = 1' (VERTICAL)	1/3484491437418544286722337967253473817952" = 1' (HORIZONTAL)
1/6968982874837088573444675934506947535904" = 1' (VERTICAL)	1/6968982874837088573444675934506947535904" = 1' (HORIZONTAL)
1/13937965749674177146889351869013895071808" = 1' (VERTICAL)	1/13937965749674177146889351869013895071808" = 1' (HORIZONTAL)
1/27875931499348354293778703738027790143616" = 1' (VERTICAL)	1/27875931499348354293778703738027790143616" = 1' (HORIZONTAL)
1/55751862998696708587557407476055580287232" = 1' (VERTICAL)	1/55751862998696708587557407476055580287232" = 1' (HORIZONTAL)
1/111503725997393417175114814952111160574464" = 1' (VERTICAL)	1/111503725997393417175114814952111160574464" = 1' (HORIZONTAL)
1/2230074519947868343502296299042223211488" = 1' (VERTICAL)	1/2230074519947868343502296299042223211488" = 1' (HORIZONTAL)
1/44601490398957366870045925980844464228768" = 1' (VERTICAL)	1/44601490398957366870045925980844464228768" = 1' (HORIZONTAL)
1/89202980797914733740091851961688924457536" = 1' (VERTICAL)	1/89202980797914733740091851961688924457536" = 1' (HORIZONTAL)
1/17840596159582946748018370392337784915072" = 1' (VERTICAL)	1/17840596159582946748018370392337784915072" = 1' (HORIZONTAL)
1/35681192319165893496036740784675569830144" = 1' (VERTICAL)	1/35681192319165893496036740784675569830144" = 1' (HORIZONTAL)
1/7136238463833178699207348156935113660288" = 1' (VERTICAL)	1/7136238463833178699207348156935113660288" = 1' (HORIZONTAL)
1/14272476927666357398414696313870227320576" = 1' (VERTICAL)	1/14272476927666357398414696313870227320576" = 1' (HORIZONTAL)
1/28544953855332714796829392627740454401152" = 1' (VERTICAL)	1/28544953855332714796829392627740

DEMOLITION NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES TO BE DEMOLISHED.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING UTILITIES AND TO PROTECT ALL UTILITIES TO REMAIN.
3. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING FOUNDATIONS AND TO PROTECT ALL FOUNDATIONS TO REMAIN.
4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING CURBS AND TO PROTECT ALL CURBS TO REMAIN.
5. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING DRIVEWAYS AND TO PROTECT ALL DRIVEWAYS TO REMAIN.
6. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING SIDEWALKS AND TO PROTECT ALL SIDEWALKS TO REMAIN.
7. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING STAIRS AND TO PROTECT ALL STAIRS TO REMAIN.
8. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ELEVATORS AND TO PROTECT ALL ELEVATORS TO REMAIN.
9. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING MECHANICAL ROOMS AND TO PROTECT ALL MECHANICAL ROOMS TO REMAIN.
10. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ELECTRICAL ROOMS AND TO PROTECT ALL ELECTRICAL ROOMS TO REMAIN.
11. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING PLUMBING ROOMS AND TO PROTECT ALL PLUMBING ROOMS TO REMAIN.
12. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ROOF STRUCTURES AND TO PROTECT ALL ROOF STRUCTURES TO REMAIN.
13. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING FOUNDATIONS AND TO PROTECT ALL FOUNDATIONS TO REMAIN.
14. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING CURBS AND TO PROTECT ALL CURBS TO REMAIN.
15. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING DRIVEWAYS AND TO PROTECT ALL DRIVEWAYS TO REMAIN.



- GENERAL NOTES:**
1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES TO BE DEMOLISHED.
 2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING UTILITIES AND TO PROTECT ALL UTILITIES TO REMAIN.
 3. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING FOUNDATIONS AND TO PROTECT ALL FOUNDATIONS TO REMAIN.
 4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING CURBS AND TO PROTECT ALL CURBS TO REMAIN.
 5. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING DRIVEWAYS AND TO PROTECT ALL DRIVEWAYS TO REMAIN.
 6. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING SIDEWALKS AND TO PROTECT ALL SIDEWALKS TO REMAIN.
 7. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING STAIRS AND TO PROTECT ALL STAIRS TO REMAIN.
 8. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ELEVATORS AND TO PROTECT ALL ELEVATORS TO REMAIN.
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 12. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ROOF STRUCTURES AND TO PROTECT ALL ROOF STRUCTURES TO REMAIN.
 13. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING FOUNDATIONS AND TO PROTECT ALL FOUNDATIONS TO REMAIN.
 14. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING CURBS AND TO PROTECT ALL CURBS TO REMAIN.
 15. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING DRIVEWAYS AND TO PROTECT ALL DRIVEWAYS TO REMAIN.

APPROVED

FOR BUILDING PERMIT ONLY
 CITY OF HOUSTON
 CODE ENFORCEMENT DIVISION

356

DEMOLITION LEGEND

TO BE DEMOLISHED: (Symbol) TO BE DEMOLISHED IN THE NEAR FUTURE

TO BE DEMOLISHED: (Symbol) TO BE DEMOLISHED IN THE NEAR FUTURE

TO BE DEMOLISHED: (Symbol) TO BE DEMOLISHED IN THE NEAR FUTURE

TO BE DEMOLISHED: (Symbol) TO BE DEMOLISHED IN THE NEAR FUTURE

TO BE DEMOLISHED: (Symbol) TO BE DEMOLISHED IN THE NEAR FUTURE

REKHA ENGINEERING, INC.

10000 Katy Road, Suite 1000
 Houston, TX 77054
 Phone: 281-410-1111
 Fax: 281-410-1112

DATE: 2-10-10
 D.F.S. No. 1702
 SCALE: 1/8" = 1'-0"
 CHECKED BY: JME

ISSUE LOG	
NO.	DESCRIPTION
1	ISSUED FOR PERMIT
2	FOR COMMENTS
3	FOR COMMENTS
4	FOR COMMENTS

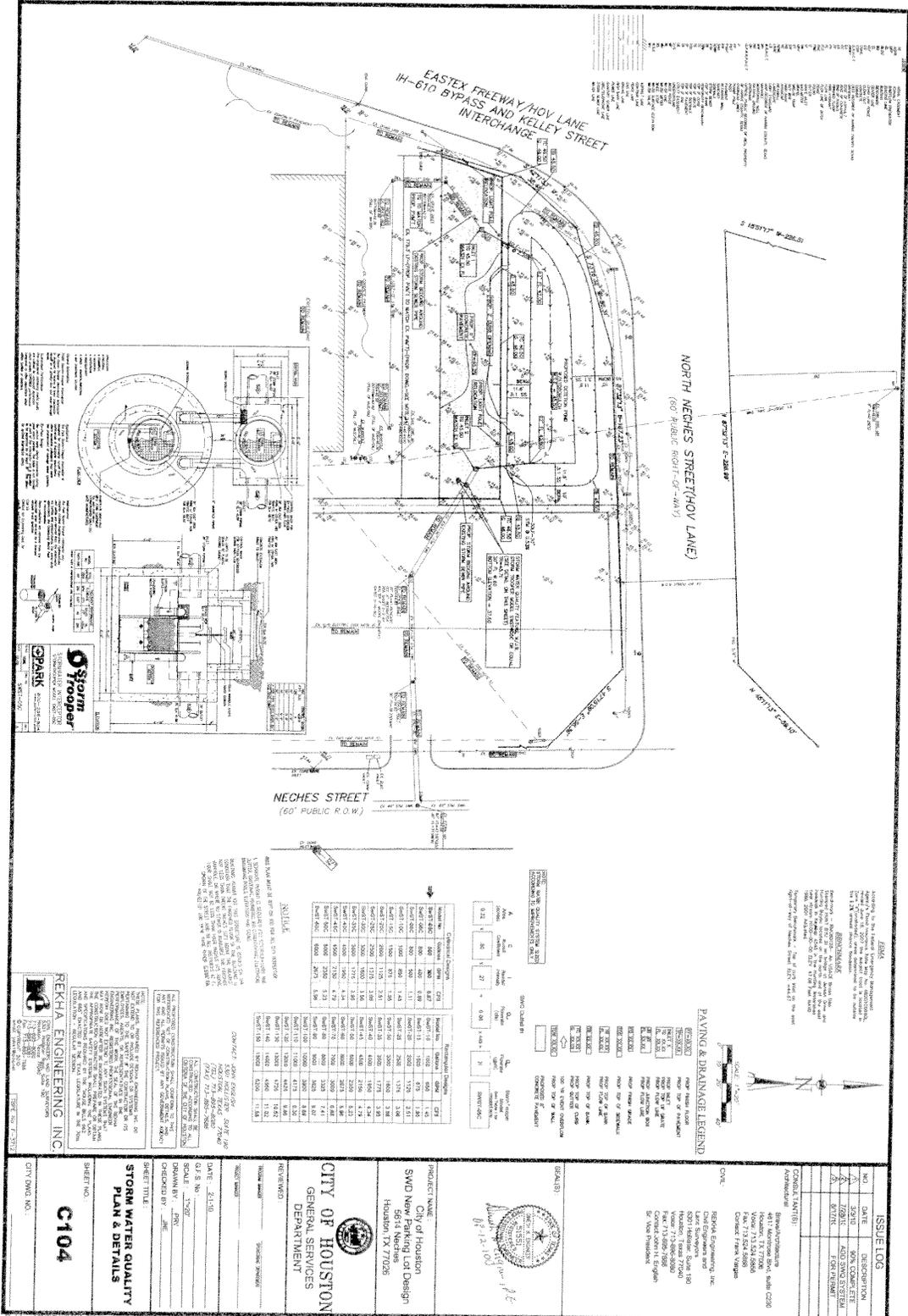
CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

PROJECT NAME:
 City of Houston
 SMD New Parking Lot Design
 5814 Neches
 Houston, TX 77026

DATE: 2-10-10
D.F.S. No.: 1702
SCALE: 1/8" = 1'-0"
CHECKED BY: JME

SHEET TITLE:
 4 DIMENSIONAL PLAN
 & DEMOLITION PLAN

SHEET NO.:
 C102



EXISTING UTILITIES

1. 12" WATER MAIN (EAST OF NECHES STREET)

2. 12" WATER MAIN (WEST OF NECHES STREET)

3. 12" WATER MAIN (NORTH OF NECHES STREET)

4. 12" WATER MAIN (SOUTH OF NECHES STREET)

5. 12" WATER MAIN (EAST OF NECHES STREET)

6. 12" WATER MAIN (WEST OF NECHES STREET)

7. 12" WATER MAIN (NORTH OF NECHES STREET)

8. 12" WATER MAIN (SOUTH OF NECHES STREET)

9. 12" WATER MAIN (EAST OF NECHES STREET)

10. 12" WATER MAIN (WEST OF NECHES STREET)

11. 12" WATER MAIN (NORTH OF NECHES STREET)

12. 12" WATER MAIN (SOUTH OF NECHES STREET)

13. 12" WATER MAIN (EAST OF NECHES STREET)

14. 12" WATER MAIN (WEST OF NECHES STREET)

15. 12" WATER MAIN (NORTH OF NECHES STREET)

16. 12" WATER MAIN (SOUTH OF NECHES STREET)

17. 12" WATER MAIN (EAST OF NECHES STREET)

18. 12" WATER MAIN (WEST OF NECHES STREET)

19. 12" WATER MAIN (NORTH OF NECHES STREET)

20. 12" WATER MAIN (SOUTH OF NECHES STREET)

PROPOSED UTILITIES

1. 12" WATER MAIN (EAST OF NECHES STREET)

2. 12" WATER MAIN (WEST OF NECHES STREET)

3. 12" WATER MAIN (NORTH OF NECHES STREET)

4. 12" WATER MAIN (SOUTH OF NECHES STREET)

5. 12" WATER MAIN (EAST OF NECHES STREET)

6. 12" WATER MAIN (WEST OF NECHES STREET)

7. 12" WATER MAIN (NORTH OF NECHES STREET)

8. 12" WATER MAIN (SOUTH OF NECHES STREET)

9. 12" WATER MAIN (EAST OF NECHES STREET)

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17. 12" WATER MAIN (EAST OF NECHES STREET)

18. 12" WATER MAIN (WEST OF NECHES STREET)

19. 12" WATER MAIN (NORTH OF NECHES STREET)

20. 12" WATER MAIN (SOUTH OF NECHES STREET)

STORM DRAINAGE LEGEND

1. 12" WATER MAIN (EAST OF NECHES STREET)

2. 12" WATER MAIN (WEST OF NECHES STREET)

3. 12" WATER MAIN (NORTH OF NECHES STREET)

4. 12" WATER MAIN (SOUTH OF NECHES STREET)

5. 12" WATER MAIN (EAST OF NECHES STREET)

6. 12" WATER MAIN (WEST OF NECHES STREET)

7. 12" WATER MAIN (NORTH OF NECHES STREET)

8. 12" WATER MAIN (SOUTH OF NECHES STREET)

9. 12" WATER MAIN (EAST OF NECHES STREET)

10. 12" WATER MAIN (WEST OF NECHES STREET)

11. 12" WATER MAIN (NORTH OF NECHES STREET)

12. 12" WATER MAIN (SOUTH OF NECHES STREET)

13. 12" WATER MAIN (EAST OF NECHES STREET)

14. 12" WATER MAIN (WEST OF NECHES STREET)

15. 12" WATER MAIN (NORTH OF NECHES STREET)

16. 12" WATER MAIN (SOUTH OF NECHES STREET)

17. 12" WATER MAIN (EAST OF NECHES STREET)

18. 12" WATER MAIN (WEST OF NECHES STREET)

19. 12" WATER MAIN (NORTH OF NECHES STREET)

20. 12" WATER MAIN (SOUTH OF NECHES STREET)

NOTES

1. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

2. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

3. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

4. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

5. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

6. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

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8. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

9. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

10. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARDS AND SPECIFICATIONS FOR UTILITIES.

REKHA ENGINEERING INC.

12345 GOLF COURSE ROAD, SUITE 100
HOUSTON, TEXAS 77056
TEL: 713-469-1000
FAX: 713-469-1001
WWW.REKHAENGINEERING.COM

CITY OF HOUSTON

GENERAL SERVICES DEPARTMENT

PROJECT NAME: SMD New Parking Lot Design
LOCATION: Houston, TX 77056

DATE: 2/1/10
SCALE: 1"=50'
DRAWN BY: JMC
CHECKED BY: JMC

SHEET TITLE
STORM WATER QUALITY PLAN & DETAILS

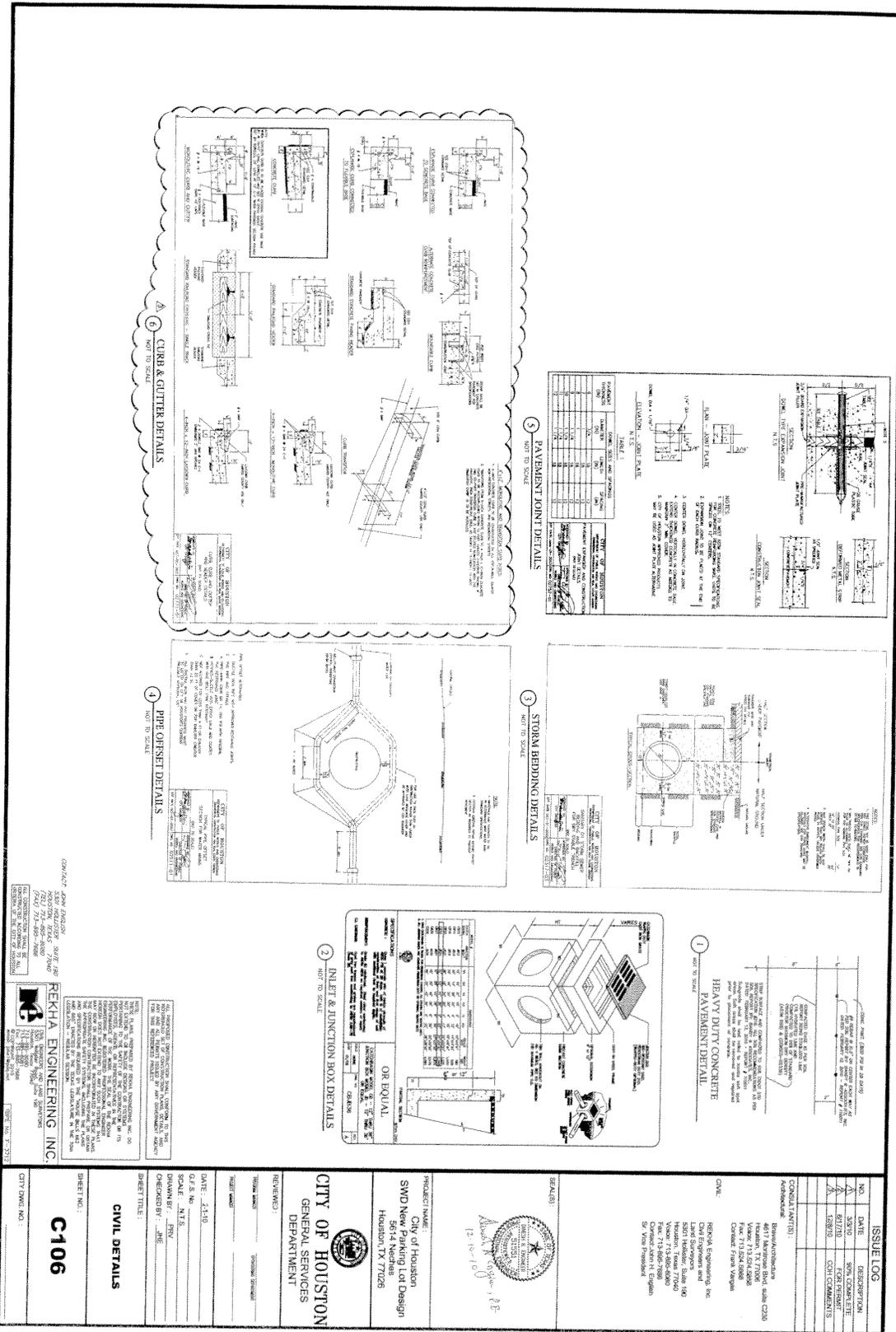
SHEET NO.
C104

CITY DWG. NO.:

ISSUE LOG

NO.	DATE	DESCRIPTION
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3	2/1/10	ISSUE LOG
4	2/1/10	ISSUE LOG
5	2/1/10	ISSUE LOG
6	2/1/10	ISSUE LOG
7	2/1/10	ISSUE LOG
8	2/1/10	ISSUE LOG
9	2/1/10	ISSUE LOG
10	2/1/10	ISSUE LOG

REKHA ENGINEERING, INC.
12345 GOLF COURSE ROAD, SUITE 100
HOUSTON, TEXAS 77056
TEL: 713-469-1000
FAX: 713-469-1001
WWW.REKHAENGINEERING.COM



DESIGNED BY: JOHN ENGELBY
 DRAWN BY: REKHA ENGINEERING INC.
 CHECKED BY: JNE
 DATE: 12-10-10

REKHA ENGINEERING INC.
 1100 WEST 19TH STREET, SUITE 100
 HOUSTON, TEXAS 77058
 TEL: 713-865-4800
 FAX: 713-865-4800
 WWW.REKHAENGINEERING.COM

CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

PROJECT NAME:
 SMD New Parking Lot Design
 5614 Neches
 Houston, TX 77026

DATE: 12-10-10
 SCALE: N.T.S.
 DRAWN BY: JNE
 CHECKED BY: JNE

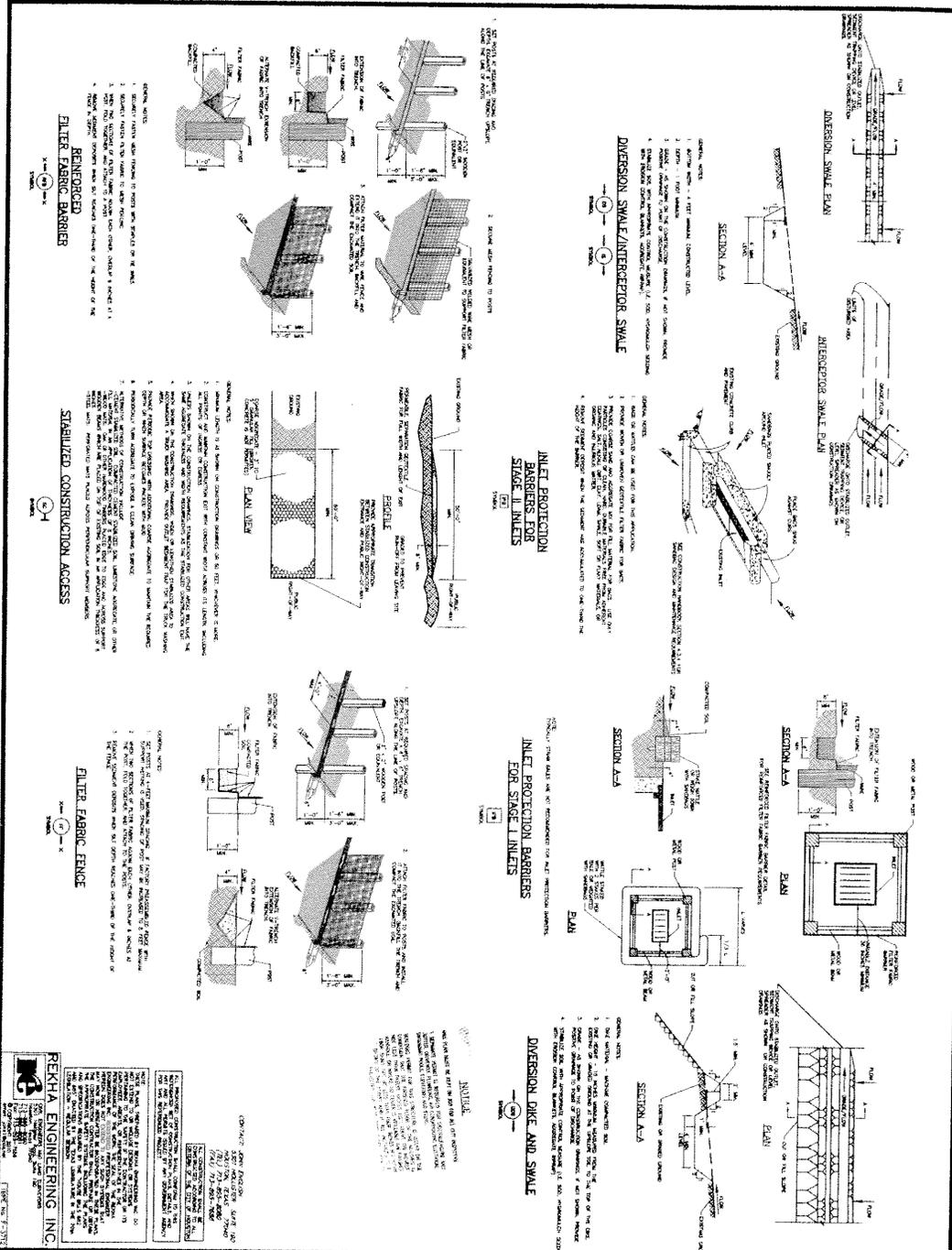
C106

ISSUE LOG

NO.	DATE	DESCRIPTION
1	12/10/10	ISSUE FOR PERMIT
2	12/10/10	ISSUE FOR PERMIT
3	12/10/10	ISSUE FOR PERMIT

CONTRACT NO.:
 4617 METROPOLITAN ROAD
 4617 METROPOLITAN ROAD
 HOUSTON, TEXAS 77058
 VALUE: \$1,500,000.00
 CONTRACTOR: [Name]
 CONTRACTOR: [Name]

DESIGNED BY: JOHN ENGELBY
 DRAWN BY: REKHA ENGINEERING INC.
 CHECKED BY: JNE
 DATE: 12-10-10



ISSUE LOG		
NO.	DATE	DESCRIPTION
1	8/17/03	FOR PRELIMINARY REVIEW
2	8/27/03	FOR PRELIMINARY REVIEW
3	9/10/03	FOR PRELIMINARY REVIEW
4	9/24/03	FOR PRELIMINARY REVIEW
5	10/14/03	FOR PRELIMINARY REVIEW
6	10/28/03	FOR PRELIMINARY REVIEW
7	11/11/03	FOR PRELIMINARY REVIEW
8	11/25/03	FOR PRELIMINARY REVIEW
9	12/9/03	FOR PRELIMINARY REVIEW
10	12/23/03	FOR PRELIMINARY REVIEW
11	1/6/04	FOR PRELIMINARY REVIEW
12	1/20/04	FOR PRELIMINARY REVIEW
13	2/3/04	FOR PRELIMINARY REVIEW
14	2/17/04	FOR PRELIMINARY REVIEW
15	3/3/04	FOR PRELIMINARY REVIEW
16	3/17/04	FOR PRELIMINARY REVIEW
17	3/31/04	FOR PRELIMINARY REVIEW
18	4/14/04	FOR PRELIMINARY REVIEW
19	4/28/04	FOR PRELIMINARY REVIEW
20	5/12/04	FOR PRELIMINARY REVIEW
21	5/26/04	FOR PRELIMINARY REVIEW
22	6/9/04	FOR PRELIMINARY REVIEW
23	6/23/04	FOR PRELIMINARY REVIEW
24	7/7/04	FOR PRELIMINARY REVIEW
25	7/21/04	FOR PRELIMINARY REVIEW
26	8/4/04	FOR PRELIMINARY REVIEW
27	8/18/04	FOR PRELIMINARY REVIEW
28	9/1/04	FOR PRELIMINARY REVIEW
29	9/15/04	FOR PRELIMINARY REVIEW
30	9/29/04	FOR PRELIMINARY REVIEW
31	10/13/04	FOR PRELIMINARY REVIEW
32	10/27/04	FOR PRELIMINARY REVIEW
33	11/10/04	FOR PRELIMINARY REVIEW
34	11/24/04	FOR PRELIMINARY REVIEW
35	12/8/04	FOR PRELIMINARY REVIEW
36	12/22/04	FOR PRELIMINARY REVIEW
37	1/5/05	FOR PRELIMINARY REVIEW
38	1/19/05	FOR PRELIMINARY REVIEW
39	2/2/05	FOR PRELIMINARY REVIEW
40	2/16/05	FOR PRELIMINARY REVIEW
41	2/28/05	FOR PRELIMINARY REVIEW
42	3/13/05	FOR PRELIMINARY REVIEW
43	3/27/05	FOR PRELIMINARY REVIEW
44	4/10/05	FOR PRELIMINARY REVIEW
45	4/24/05	FOR PRELIMINARY REVIEW
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47	5/22/05	FOR PRELIMINARY REVIEW
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49	6/19/05	FOR PRELIMINARY REVIEW
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51	7/17/05	FOR PRELIMINARY REVIEW
52	7/31/05	FOR PRELIMINARY REVIEW
53	8/14/05	FOR PRELIMINARY REVIEW
54	8/28/05	FOR PRELIMINARY REVIEW
55	9/11/05	FOR PRELIMINARY REVIEW
56	9/25/05	FOR PRELIMINARY REVIEW
57	10/9/05	FOR PRELIMINARY REVIEW
58	10/23/05	FOR PRELIMINARY REVIEW
59	11/6/05	FOR PRELIMINARY REVIEW
60	11/20/05	FOR PRELIMINARY REVIEW
61	12/4/05	FOR PRELIMINARY REVIEW
62	12/18/05	FOR PRELIMINARY REVIEW
63	1/1/06	FOR PRELIMINARY REVIEW
64	1/15/06	FOR PRELIMINARY REVIEW
65	1/29/06	FOR PRELIMINARY REVIEW
66	2/12/06	FOR PRELIMINARY REVIEW
67	2/26/06	FOR PRELIMINARY REVIEW
68	3/12/06	FOR PRELIMINARY REVIEW
69	3/26/06	FOR PRELIMINARY REVIEW
70	4/9/06	FOR PRELIMINARY REVIEW
71	4/23/06	FOR PRELIMINARY REVIEW
72	5/7/06	FOR PRELIMINARY REVIEW
73	5/21/06	FOR PRELIMINARY REVIEW
74	6/4/06	FOR PRELIMINARY REVIEW
75	6/18/06	FOR PRELIMINARY REVIEW
76	7/2/06	FOR PRELIMINARY REVIEW
77	7/16/06	FOR PRELIMINARY REVIEW
78	7/30/06	FOR PRELIMINARY REVIEW
79	8/13/06	FOR PRELIMINARY REVIEW
80	8/27/06	FOR PRELIMINARY REVIEW
81	9/10/06	FOR PRELIMINARY REVIEW
82	9/24/06	FOR PRELIMINARY REVIEW
83	10/8/06	FOR PRELIMINARY REVIEW
84	10/22/06	FOR PRELIMINARY REVIEW
85	11/5/06	FOR PRELIMINARY REVIEW
86	11/19/06	FOR PRELIMINARY REVIEW
87	12/3/06	FOR PRELIMINARY REVIEW
88	12/17/06	FOR PRELIMINARY REVIEW
89	1/3/07	FOR PRELIMINARY REVIEW
90	1/17/07	FOR PRELIMINARY REVIEW
91	1/31/07	FOR PRELIMINARY REVIEW
92	2/14/07	FOR PRELIMINARY REVIEW
93	2/28/07	FOR PRELIMINARY REVIEW
94	3/13/07	FOR PRELIMINARY REVIEW
95	3/27/07	FOR PRELIMINARY REVIEW
96	4/10/07	FOR PRELIMINARY REVIEW
97	4/24/07	FOR PRELIMINARY REVIEW
98	5/8/07	FOR PRELIMINARY REVIEW
99	5/22/07	FOR PRELIMINARY REVIEW
100	6/5/07	FOR PRELIMINARY REVIEW

REKHA ENGINEERING INC.
 10000 Katy Road, Suite 100, Houston, TX 77054
 Phone: 281-460-8800
 Fax: 281-460-8801
 Email: rekha@rekha.com

CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

STORM WATER POLLUTION PREVENTION PLAN DETAILS

C107

DATE: 2-11-03
SCALE: N.T.S.
DRAWN BY: JRE
CHECKED BY: JRE

PROJECT NAME: City of Houston SHD New Parking Lot Design Houston, TX 77028

REVIEWED:

APPROVED:

CONTRACT: 03-000000-0000-0000-0000-0000-0000-0000-0000-0000-0000-0000

CONTRACT NO.: 03-000000-0000-0000-0000-0000-0000-0000-0000-0000-0000

CONTRACT VALUE: \$1,000,000.00

CONTRACT DATE: 02/11/03

CONTRACT OWNER: City of Houston

CONTRACT ADDRESS: 10000 Katy Road, Suite 100, Houston, TX 77054

CONTRACT PHONE: 281-460-8800

CONTRACT FAX: 281-460-8801

CONTRACT EMAIL: rekha@rekha.com

CONTRACT WEBSITE: www.rekha.com

CONTRACT CONTACT: Rekha Engineering, Inc.

CONTRACT CONTACT NAME: Rekha Engineering, Inc.

CONTRACT CONTACT PHONE: 281-460-8800

CONTRACT CONTACT FAX: 281-460-8801

CONTRACT CONTACT EMAIL: rekha@rekha.com

CONTRACT CONTACT WEBSITE: www.rekha.com

CONTRACT CONTACT ADDRESS: 10000 Katy Road, Suite 100, Houston, TX 77054

CONTRACT CONTACT CITY: Houston

CONTRACT CONTACT STATE: TX

CONTRACT CONTACT ZIP: 77054

CONTRACT CONTACT COUNTRY: USA

CONTRACT CONTACT LANGUAGE: English

CONTRACT CONTACT CURRENCY: USD

CONTRACT CONTACT TIMEZONE: CST

CONTRACT CONTACT GREETING: Hello

CONTRACT CONTACT SIGNATURE: Rekha Engineering, Inc.

CONTRACT CONTACT SIGNATURE DATE: 02/11/03

CONTRACT CONTACT SIGNATURE LOCATION: Houston, TX

CONTRACT CONTACT SIGNATURE TITLE: President

CONTRACT CONTACT SIGNATURE POSITION: President

CONTRACT CONTACT SIGNATURE DEPARTMENT: Rekha Engineering, Inc.

CONTRACT CONTACT SIGNATURE ADDRESS: 10000 Katy Road, Suite 100, Houston, TX 77054

CONTRACT CONTACT SIGNATURE CITY: Houston

CONTRACT CONTACT SIGNATURE STATE: TX

CONTRACT CONTACT SIGNATURE ZIP: 77054

CONTRACT CONTACT SIGNATURE COUNTRY: USA

CONTRACT CONTACT SIGNATURE LANGUAGE: English

CONTRACT CONTACT SIGNATURE CURRENCY: USD

CONTRACT CONTACT SIGNATURE TIMEZONE: CST

CONTRACT CONTACT SIGNATURE GREETING: Hello

ENLARGED DEMOLITION SITE PLAN

1/16" = 1'-0" 9 DEMOLITION SITE PLAN

1" = 100' 5 GENERAL NOTES

CITY ENV. NO.

D.010

SHEET NO.:
**DEMOLITION
SITE PLAN**

DATE: _____
SCALE: ASSIGNED
DRAWN BY: BH
CHECKED BY: PV

**CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT**

PROJECT NAME:
City of Houston
SMD No. 5614
5614 Nading Land Design
Houston, TX 77066



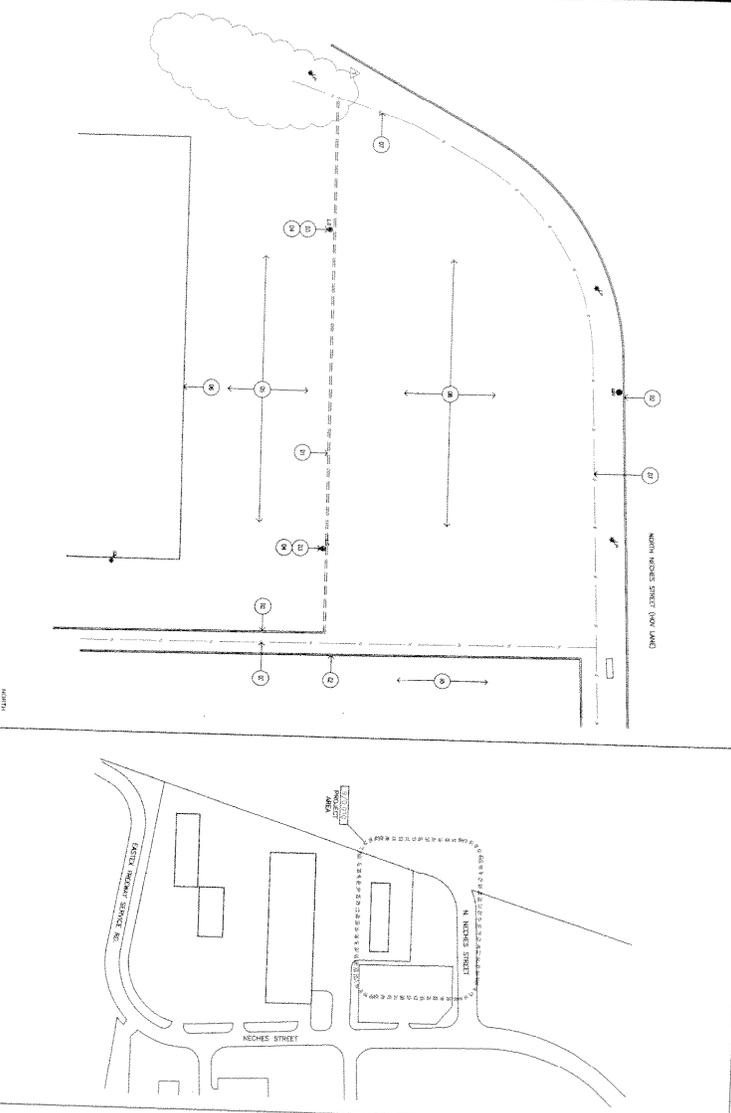
DESIGNER:
Andrew Thompson
6014 Sarno Drive
Houston, Texas 77066
Office: 713.597.4500
Cell: 713.597.4500
Fax: 713.597.4500
Contract: Andrew Thompson

CONSULTANTS:
4617 Woodhollow
Houston, TX 77056
Tel: 713.597.4500
Fax: 713.597.4500
City Project # 5614
City Project # 5614

OWNER:
REHSA Engineering, Inc.
5301 Holbrook, Suite 180
Houston, Texas 77056
Tel: 713.597.4500
Fax: 713.597.4500
City Project # 5614

REVISIONS:
NO. DATE DESCRIPTION
1 08/12/2010 PRELIMINARY
2 08/12/2010 PERMIT REVISION
3 12/28/2010 PERMIT REVISION

ISSUE LOG



- SP-1 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-2 REFER TO SHEET C-021 FOR ACCESSORY BUILDINGS.
- SP-3 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-4 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-5 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-6 EXISTING BUILDING TO REMAIN.
- SP-7 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-8 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-9 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-10 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-11 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-12 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-13 EXISTING BUILDING TO REMAIN.
- SP-14 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-15 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-16 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-17 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-18 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-19 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-20 EXISTING BUILDING TO REMAIN.
- SP-21 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-22 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-23 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-24 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-25 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-26 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-27 EXISTING BUILDING TO REMAIN.
- SP-28 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-29 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-30 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-31 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-32 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-33 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-34 EXISTING BUILDING TO REMAIN.
- SP-35 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-36 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-37 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-38 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-39 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-40 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-41 EXISTING BUILDING TO REMAIN.
- SP-42 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-43 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.
- SP-44 REFER TO SHEET C-011.1 FOR COORDINATE FROM TYPICAL GRADEWORK SYMBOLS AND DIMENSIONS.
- SP-45 DIMENSIONS ARE DIMENSIONS OVER ALL ADJUTANTIAL.
- SP-46 WORK MUST BE DONE TO EXISTING FINISH ON GROUND.
- SP-47 MATCH EXISTING FINISH TO EXISTING FINISH.
- SP-48 EXISTING BUILDING TO REMAIN.
- SP-49 EXISTING CHAIN LINK FENCE TO REMAIN - N.I.C.
- SP-50 REFER TO EXISTING CHAIN LINK FENCE FOR EXTENT OF DEMOLITION.

NOT USED

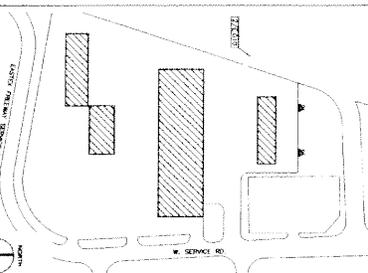
NOT USED

KEY NOTES

4

PANEL "A" -		SCHEDULE	
NO.	DESCRIPTION	QTY	UNIT
1	10' TALL LIGHT FIXTURE	4	EA
2	4" DIA. 10' TALL LIGHT FIXTURE	4	EA
3	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
4	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
5	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
6	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
7	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
8	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
9	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
10	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
11	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
12	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
13	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
14	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
15	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
16	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
17	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
18	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
19	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
20	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
21	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
22	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
23	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
24	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
25	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
26	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
27	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
28	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
29	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
30	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
31	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
32	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
33	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
34	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
35	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
36	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
37	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
38	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
39	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
40	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
41	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
42	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
43	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
44	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
45	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
46	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
47	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
48	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
49	1" DIA. 10' TALL LIGHT FIXTURE	4	EA
50	1" DIA. 10' TALL LIGHT FIXTURE	4	EA

LIGHTING FIXTURE SCHEDULE	
NO.	DESCRIPTION
1	10' TALL LIGHT FIXTURE
2	4" DIA. 10' TALL LIGHT FIXTURE
3	1" DIA. 10' TALL LIGHT FIXTURE
4	1" DIA. 10' TALL LIGHT FIXTURE
5	1" DIA. 10' TALL LIGHT FIXTURE
6	1" DIA. 10' TALL LIGHT FIXTURE
7	1" DIA. 10' TALL LIGHT FIXTURE
8	1" DIA. 10' TALL LIGHT FIXTURE
9	1" DIA. 10' TALL LIGHT FIXTURE
10	1" DIA. 10' TALL LIGHT FIXTURE
11	1" DIA. 10' TALL LIGHT FIXTURE
12	1" DIA. 10' TALL LIGHT FIXTURE
13	1" DIA. 10' TALL LIGHT FIXTURE
14	1" DIA. 10' TALL LIGHT FIXTURE
15	1" DIA. 10' TALL LIGHT FIXTURE
16	1" DIA. 10' TALL LIGHT FIXTURE
17	1" DIA. 10' TALL LIGHT FIXTURE
18	1" DIA. 10' TALL LIGHT FIXTURE
19	1" DIA. 10' TALL LIGHT FIXTURE
20	1" DIA. 10' TALL LIGHT FIXTURE
21	1" DIA. 10' TALL LIGHT FIXTURE
22	1" DIA. 10' TALL LIGHT FIXTURE
23	1" DIA. 10' TALL LIGHT FIXTURE
24	1" DIA. 10' TALL LIGHT FIXTURE
25	1" DIA. 10' TALL LIGHT FIXTURE
26	1" DIA. 10' TALL LIGHT FIXTURE
27	1" DIA. 10' TALL LIGHT FIXTURE
28	1" DIA. 10' TALL LIGHT FIXTURE
29	1" DIA. 10' TALL LIGHT FIXTURE
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33	1" DIA. 10' TALL LIGHT FIXTURE
34	1" DIA. 10' TALL LIGHT FIXTURE
35	1" DIA. 10' TALL LIGHT FIXTURE
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43	1" DIA. 10' TALL LIGHT FIXTURE
44	1" DIA. 10' TALL LIGHT FIXTURE
45	1" DIA. 10' TALL LIGHT FIXTURE
46	1" DIA. 10' TALL LIGHT FIXTURE
47	1" DIA. 10' TALL LIGHT FIXTURE
48	1" DIA. 10' TALL LIGHT FIXTURE
49	1" DIA. 10' TALL LIGHT FIXTURE
50	1" DIA. 10' TALL LIGHT FIXTURE

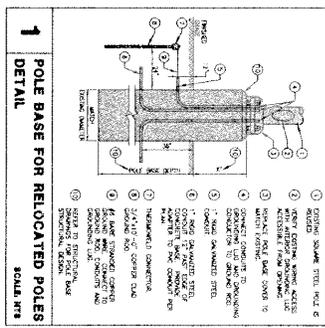


ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/10/2010	ISSUE FOR REVIEW
2	02/17/2010	REVISION

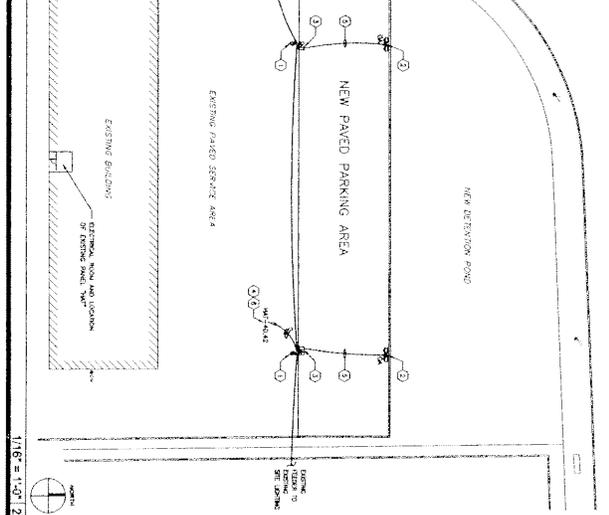
PROJECT: 4411 McArthur Blvd, Suite 100
 HOUSTON, TEXAS 77056
 CLIENT: GENERAL SERVICES DEPARTMENT
 DESIGNER: HOK
 DATE: 02/10/2010
 DRAWN BY: J. BROWN
 CHECKED BY: M. SMITH
 SCALE: AS SHOWN

ELECTRICAL SCHEDULES



1. 6" DIA. GALVANIZED STEEL POLE
2. 1" DIA. GALVANIZED STEEL
3. 1" DIA. GALVANIZED STEEL
4. 1" DIA. GALVANIZED STEEL
5. 1" DIA. GALVANIZED STEEL
6. 1" DIA. GALVANIZED STEEL
7. 1" DIA. GALVANIZED STEEL
8. 1" DIA. GALVANIZED STEEL
9. 1" DIA. GALVANIZED STEEL
10. 1" DIA. GALVANIZED STEEL
11. 1" DIA. GALVANIZED STEEL

ELECTRICAL DETAIL



GENERAL NOTES

1. EXISTING POLE BASES AND Poles (40' TALL) SHALL BE REMOVED AND REPLACED WITH NEW POLES AS SHOWN ON THIS PLAN. ALL POLES SHALL BE GALVANIZED STEEL AND SHALL BE 6" DIA.
2. NEW POLE LOCATION, REMOVE EXISTING POLE BASE AND POLE. ALL POLES SHALL BE GALVANIZED STEEL AND SHALL BE 6" DIA. ALL POLES SHALL BE GALVANIZED STEEL AND SHALL BE 6" DIA.
3. WITH THE LOCATION OF EXISTING POLE BASES, THE LOCATION OF NEW POLES SHALL BE AS SHOWN ON THIS PLAN. ALL POLES SHALL BE GALVANIZED STEEL AND SHALL BE 6" DIA.
4. EXISTING POLE BASES AND Poles (40' TALL) SHALL BE REMOVED AND REPLACED WITH NEW POLES AS SHOWN ON THIS PLAN. ALL POLES SHALL BE GALVANIZED STEEL AND SHALL BE 6" DIA.

KEY PLAN

1" = 100'

APPROVED FOR CONSTRUCTION

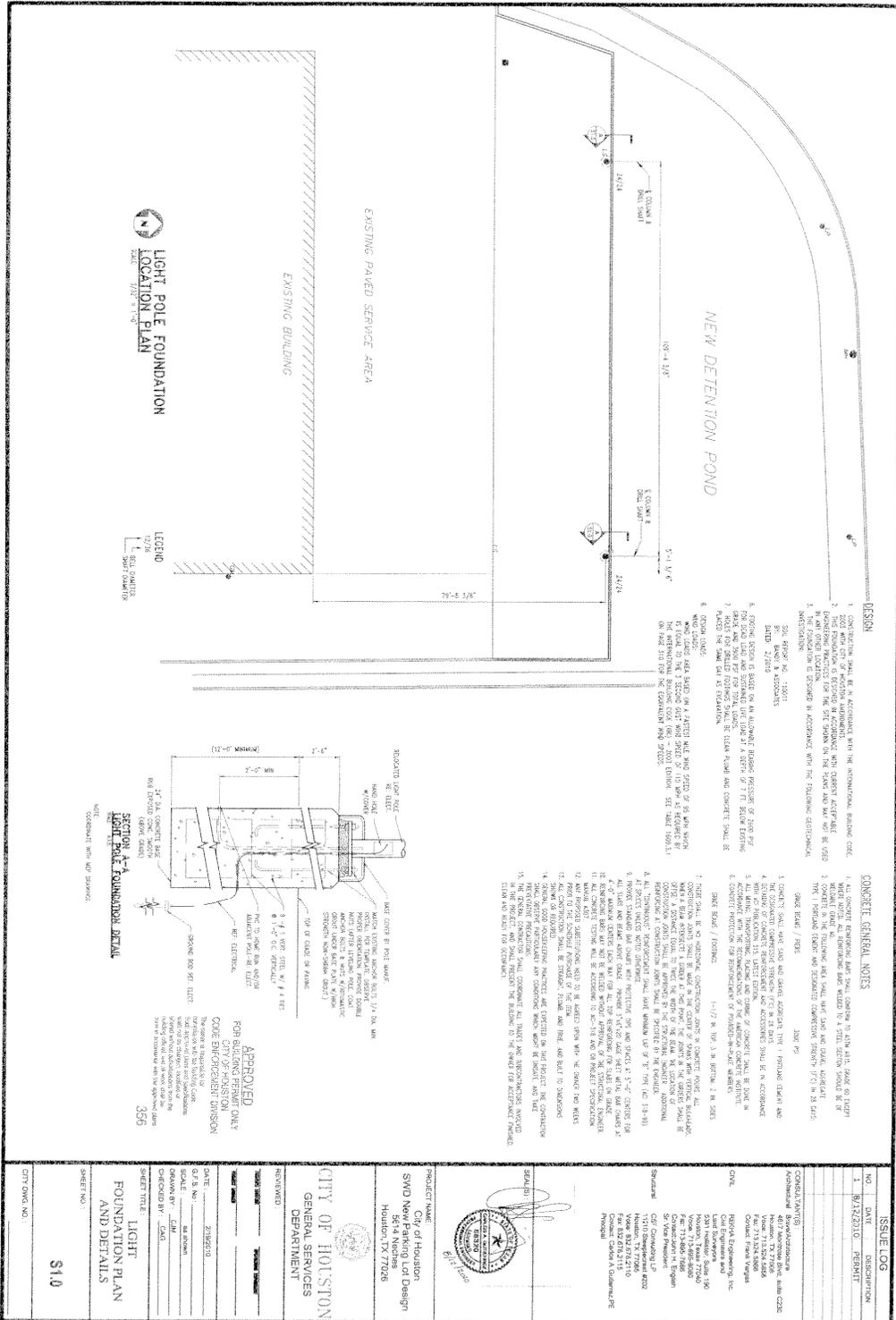
CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

HOUSTON, TEXAS 77002

E010

ELECTRICAL SITE PLAN
PARKING LOT LIGHTING

DATE: 02/10/2010
 SCALE: AS NOTED
 DRAWN BY: J. BROWN
 CHECKED BY: M. SMITH



STRUCTURAL DRAWINGS FOR SOLID WASTE DEPARTMENT NEW PARKING LOT AT 5614 NECHES STREET can be viewed on the following website <https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

SECTION C

A PDF version of this 2011 Engineering Wage Scale
can be viewed on the following web link

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

GENERAL TERMS AND CONDITIONS

A PDF version of the General Terms and Conditions can be viewed on the
following web link

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23894>

Document 00800

SUPPLEMENTARY CONDITIONS

The following Paragraphs amend and supplement the 2005 edition of General Conditions.
Unaltered portions of General Conditions remain in effect.

ARTICLE 3 - THE CONTRACTOR

3.5 *LABOR: Insert the following Paragraph 3.5.3.1.1.*

3.5.3.1.1 Contractor shall make good faith efforts to comply with the City ordinances regarding Minority and Women Business Enterprises (MWBE) and Persons with Disabilities Business Enterprises (PDBE) participation goals which are as follows:

- .1 the MWBE goal is 0 percent, and
- .2 the PDBE goal is 0 percent.

3.28 **CONTRACTOR DEBT**

3.28.1 **IF CONTRACTOR, AT ANY TIME DURING THE TERM OF THIS AGREEMENT, INCURS A DEBT, AS THE WORD IS DEFINED IN SECTION 15-122 OF THE HOUSTON CITY CODE OF ORDINANCES, IT SHALL IMMEDIATELY NOTIFY CITY CONTROLLER IN WRITING. IF CITY CONTROLLER BECOMES AWARE THAT CONTRACTOR HAS INCURRED A DEBT, IT SHALL IMMEDIATELY NOTIFY CONTRACTOR IN WRITING. IF CONTRACTOR DOES NOT PAY THE DEBT WITHIN 30 DAYS OF EITHER SUCH NOTIFICATION, CITY CONTROLLER MAY DEDUCT FUNDS IN AN AMOUNT EQUAL TO THE DEBT FROM ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS AGREEMENT, AND CONTRACTOR WAIVES ANY RECOURSE THEREFORE.**

ARTICLE 8 - TIME

8.1 *PROGRESS AND COMPLETION: Delete Paragraph 8.1.6. and replace with the following 8.1.6.*

8.1.6.1 Contractor shall credit the City by Change Order for inspection services for overtime work or work performed on Sundays or Legal Holidays. The amount

Contractor credits the City will be **\$50.00 per hour** per inspector for inspection services.

ARTICLE 9 - PAYMENTS AND COMPLETION

- 9.1 *UNIT PRICE WORK: Delete Section 9.1 in its entirety and insert the following Section 9.1.*
- 9.1 References to Unit Prices in individual Specification sections are not applicable to the Contract. Include payment for portions of the Work required by these sections in the Stipulated Price for the Contract.
- 9.12 ***LIQUIDATED DAMAGES:*** *Insert the following Paragraph 9.12.1.1.*
- 9.12.1.1 The amount of liquidated damages provided in General Conditions Paragraph 9.12.1 payable by Contractor or Surety for each and every day of delay beyond Contract Time, are **\$800.00 per day.**

ARTICLE 11 - INSURANCE AND BONDS

- 11.2 ***INSURANCE TO BE PROVIDED BY CONTRACTOR:*** *Delete Paragraph 11.2.8. and replace with the following 11.2.8.*
- 11.2.1.4 Contractor shall provide Owners and Contractor's Protective Liability Insurance only if the contractor's bid price is equal to or greater than \$100,000.00.
- 11.2.8 ***Endorsement of Primary Insurance:*** Each policy except Workers' Compensation Insurance must contain an endorsement that the policy is primary insurance to any other insurance available to additional insured with respect to claims arising under the Contract.

**Document 00612
ONE-YEAR MAINTENANCE BOND**

THAT WE, _____, as Principal, hereinafter called Contractor, and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation, in the sum of \$_____, for the payment of which sum well and truly to be made to the City of Houston and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City of Houston for _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall comply with the provisions of Paragraph 11.5.1 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

Legal Assistant

Date

Document 00610
PERFORMANCE BOND

THAT WE, _____, as Principal, (the "Contractor"), and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston (the "City"), a municipal corporation, in the penal sum of \$_____ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City for _____, _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract documents and in the Work to be done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety therefrom.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract; or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

EXECUTED in multiple originals this _____ day of _____, 20_____.

ATTEST/SEAL: (if a corporation)
WITNESS: (if not corporation)

(Name of Principal)

(Address of Principal)

By: _____
Name:
Title:
Date:

By: _____
Name:
Title:
Date:

ATTEST/SEAL
SURETY WITNESS:

(Name of Surety)

(Address of Surety)

By: _____
Name:
Title:
Date:

By: _____
Name:
Title:
Date:

REVIEWED:

This Bond has been reviewed as to form by the undersigned Paralegal and has been found to meet established Legal Department criteria.

Date

Paralegal

Document 00611
STATUTORY PAYMENT BOND

THAT WE, _____, as Principal, hereinafter called Contractor and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City of Houston, a municipal corporation, in the sum of \$_____ for the payment of which sum, well and truly to be made to the City of Houston, and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a contract in writing with the City of Houston for _____, _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein;

NOW, THEREFORE, if the said Contractor shall pay all claimants supplying labor and materials to him or a Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise the same is to remain in full force and effect;

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

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

ATTEST, SEAL: (if a corporation)
WITNESS: (if not a corporation)

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

Legal Assistant

Date