



COLLIN COUNTY

Office of the Purchasing Agent
2300 Bloomdale Road
Suite 3160
McKinney, Texas 75071
www.collincountytx.gov

COLLIN COUNTY, TEXAS

ADDENDUM No. One (1)

IFB No. 2023-090

INVITATION FOR BID

FOR

CONSTRUCTION, EMERGENCY GENERATOR FUELING SYSTEM REPLACEMENT

DATE: FEBRUARY 9, 2023

NOTICE TO ALL PROSPECTIVE BIDDERS:

PLEASE MAKE THE FOLLOWING CHANGES TO THE INVITATION FOR BID:

CHANGE BID DUE DATE: FROM: FEBRUARY 9, 2023 AT 2:00 PM
TO: FEBRUARY 23, 2023 AT 2:00 PM

CHANGE QUESTION DEADLINE: FROM: JANUARY 31, 2023 AT 5:00 PM
TO: FEBRUARY 14, 2023 AT 5:00 PM

ADD DOCUMENT: ATTACHMENT A - PRE-BID CONFERENCE SIGN-IN SHEETS

ADD DOCUMENT: ATTACHMENT B - PRE-BID CONFERENCE QUESTIONS & ANSWERS

ADD DOCUMENT: ATTACHMENT C – GEOTECH REPORT

DELETE: SHEET D-1
REPLACE WITH: SHEET D-1 REVISED 1/27/23

DELETE: SHEET F-1
REPLACE WITH: SHEET F-1 REVISED 2/6/23

DELETE: SHEET F-4
REPLACE WITH: SHEET F-4 REVISED 1/25/23

DELETE: SHEET GN-1
REPLACE WITH: SHEET GN-1 REVISED 1/27/23

ADD UNIT PRICE ITEM: LINE 2, ATTRIBUTE 3
ADD UNIT PRICE ITEM: LINE 2, ATTRIBUTE 4

ADD ATTRIBUTE: #23-ADDENDUM No. 1 ACKNOWLEDGEMENT

DELETE DOCUMENT: SECTION 004100-BID FORM

REPLACE WITH: SECTION 004100-BID FORM ADDENDUM 1

ALL OTHER TERMS AND CONDITIONS OF THE BID AND SPECIFICATIONS REMAIN THE SAME.

SINCERELY,
MICHELLE CHARNOSKI, NIGP-CPP, CPPB
PURCHASING AGENT

JDG



IFB # 2023-090 MANDATORY PRE-BID CONFERENCE SIGN IN SHEET

| | | | |
|---------------------|--|----------------------|-------------------------------|
| Project: | Construction, Emergency Generator Fueling System Replacement | Meeting Date: | February 24, 2023 |
| Facilitator: | J. D. Griffin | Place/Room: | Central Plant Conference Room |

| Name | Company | Phone | E-Mail |
|------------------------|-------------------------------|----------------|---------------------------------|
| Tommy Triggs | W-INDUSTRIES | 713-299-3241 | MICHAEL_CLASEN@W-INDUSTRIES.COM |
| STUART Holloway | HWP | 972-562-5033 | STUART@HollowayWP-CO |
| Kevin Holloway | HWP | 972-562-5033 | Kevin@hollowaywp.com |
| Michael Holloway | HWP | 972-562-5033 | michael@Hollowaywp.com |
| RICK MONK | CC | 972-547-5331 | rmonk@co.collin.tx.us |
| CHRISTINA PEREZCHIN | Collin County Sheriffs Office | 972-547-5216 | CPerezchin@collincountytx.gov |
| MICHAEL SMITH | MD ENGINEERING | 469-467-0200 | msmith@md-eng.com |
| STEVE ASHER | Collin County | 972-548-3712 | sasher@co.collin.tx.us |
| Nathaniel D. Pritchett | Collin County | 972-548-3729 | npritchett@co.collin.tx.us |
| Charles Scott | Collin County | 903-821-2754 | CScott@co.collin.tx.us |
| Mark Hines | | 972-548-3714 | m_hines |
| Eileen Ding | CC Purchasing | 972-548-4115 | edding@co.collin.tx.us |
| Susan Hayes | CC Purchasing | (972) 548-4122 | shayes@co.collin.tx.us |
| J. D. Griffin | CC Purchasing | | |



IFB # 2023-090

MANDATORY PRE-BID CONFERENCE SIGN IN SHEET

| | | | |
|---------------------|--|----------------------|-------------------------------|
| Project: | Construction, Emergency Generator Fueling System Replacement | Meeting Date: | February 26, 2023 |
| Facilitator: | J. D. Griffin | Place/Room: | Central Plant Conference Room |

| Name | Company | Phone | E-Mail |
|------------------------|-------------------------------|--------------|-------------------------------|
| Randy Lorber | UST Fuel | 817 995 4418 | rlorber@ustfuel.com |
| Mike Blankenship | UST Fuel | 817 829-3775 | MBLANKESHIP@USTFUEL.COM |
| Randy Ritter | UST Fuel | 817 829-3779 | RRITTER@USTFUEL.COM |
| Colton Ritter | UST Fuel | 817 994 7622 | Critter @ ustfuel.com |
| Charles Scott | Collin County | 903-821-2754 | CScott@co.collin.tx.us |
| Nathaniel D. Pritchett | Collin County | 972-548-3729 | npritchett@co.collin.tx.us |
| STEVE ASHER | Collin County | 972-548-3712 | sasher@co.collin.tx.us |
| Michael Holloway | AWP | 972-562-5033 | michael@HollowayWP.com |
| CHRISTOPHER PASCOTECH | Collin County Services Office | 972-547-5216 | CPASCOTECH@COLLINCOUNTYTX.GOV |
| Susan Hayes | CC Purchasing | 972-548-4122 | shayes@co.collin.tx.us |
| MICHAEL SMITH | MD ENGINEERING | 469-467-0200 | msmith@md-eng.com |
| | | | |

Attachment B

Pre-Bid Conference Questions & Answers

1/24/2023 Pre-bid conference Questions & Answers

1. Will there be soil borings?

Answer: Yes, as specified in the bid documents. TECQ is aware of the issue, says boring is required every 20 ft. All test holes shall be protected until filled back in.

2. Is Remediation in the bid?

Answer: No. However, testing IS in the bid. The initial bid shall be prepared assuming the site is clean and no soil or ground water will have to be disposed of.

3. If the soil is contaminated, does the work stop?

Answer: No, the work does not stop but progress may be affected. No, this was bid as a clean site, and work shall continue until the TCEQ directs the County to stop work.

4. Is Collin County removing the fuel from the tanks?

Answer: Contractor shall be responsible for testing the existing fuel, approximately 16,500 gallons, located in the existing 20,000 gallon underground storage tank to determine if it can be re-used. The diesel fuel quality testing shall be conducted by a firm experienced in filtration and maintenance of diesel fuel. Testing shall be in accordance with applicable ASTM standards and include, but are not limited to: a) Bottom Sediments, both Solids and Water, b) Cetane, (Cetane number(ASTM D6890)), c) Microbe Growth, d) Thermal Stability, and any other test deemed necessary by the fuel quality firm to determine the quality of the existing fuel. The contractor shall report the results of these tests in writing to the County stating that it is usable or not usable for emergency generators. If the fuel is useable, it shall be stored and used to fill the new daytanks. If the fuel is not reuseable, it shall be sold to a firm licensed to transport and dispose of used fuel. The county will be responsible for filling any tanks not filled from the existing fuel supply. The contractor will provide a unit price credit to remove and sell the fuel as indicated on the bid form: 1) Contractor to remove fuel and dispose of at a licensed used oil facility and 2) Contractor to remove fuel and resell.

5. Is there any fuel leaking now?

Answer: Not that we can tell because the gauges have remained the same since we noticed the initial leak and stopped usage of the tank and lines.

6. Is there piping under concrete?

Answer: Yes

7. Will soil samples be taken with core cuts?

Answer: Yes, price accordingly.

8. Is this a Veeder Root system?

Answer: Yes, the system is a Veeder Root panel TLS-450+

9. Do you have an expected timeline to complete the project?

Answer: Bidder shall state the number of calendar days to complete services at the County's designated location after receipt of notice to proceed on Attribute 3. This number should be calculated from date of notice to proceed, plus lead time for equipment and material plus the days needed to complete the project.

10. Will the existing 20K gal. tank be removed, and then replaced with what?

Answer: Yes, 20K gal being removed from underground and replaced with two above ground 12K gal day tanks.

11. Do the new units going in need to be operational before the old unit come out?

Answer: Does not matter as the current unit is not operational as of today.

12. Are lines to be repaired in sections or all at once?

Answer: That will be left up to the contractor.

13. Will there be access to the work site?

Answer: Yes, however there will be escorts that will be coordinated between both Facilities and the Detention Center due to the location of lines and mechanical rooms.

14. Will badges be required, and an orientation?

Answer: Yes, badges required and no orientation. Inmates will not be in the work site even though the work will be within the perimeter of the fence where inmates have access.

15. Is there a road access around the Detention center for cement trucks?

Answer: Yes

16. Will there be a kick-off/pre-construction meeting?

Answer: Yes

18. When is work to be conducted, during business hours?

Answer: It is anticipated that work will be performed during normal business hours (7-7) Monday through Friday

1/26/2023 Pre-bid conference Questions & Answers

1. Fuel lines (Sump pump) supplies how many generators?

Answer: Supplies 2 main generators and 4 smaller generators.

2. Is there an existing layout on the routing of pipelines?

Answer: Yes, it is included in the bid documents.

3. How deep will the digging need to go to reach the pipelines, 20FT?

Answer: Some could be 20FT but due to the rise in elevation, some of the lines could be deeper than 20FT.

4. Is there a Geotech survey available?

Answer: Please see attached to this addendum the information the county has.

5. Is the piping 2" inside of 3", and is the piping expected to be filled with grout/concrete?

Answer: Yes both the fuel (inner) and containment (outer) pipes will be required to be filled. We are not sure of the exact sizes except where the pipe is visible. Where it is visible the fuel pipe is a 2" and the containment pipe is 3"

6. Will there be personnel background checks, even on drivers going in and out of secured areas?

Answer: Only in secured areas with inmates present, but for this project it will not be needed.

7. Timing in processing badges for construction team?

Answer: 1 business day.

8. How are the fuel tanks monitored, possibility of changing systems to wireless remote? +

Answer: A New Veeder Root system shall be added to monitor the housing cluster ASTs and the existing central plant veeder root panel shall monitor the two new central plant ASTs. Veeder Root panels to be hardwired to probes and sensors on the ASTs.

9. Will the Veeder Root system be removed?

Answer: No.

10. When will the final addendum be published?

Answer: The intent is to publish by 1/31/23.

11. Will working areas within the secured fenced area need to be barricaded with caution tape or other type of barricade if areas are to be left unattended, say overnight?

Answer: Yes.

12. Will permits be required, and who to notify?

Answer: Yes. The contractor shall communicate with TCEQ and the City of McKinney (which includes the Fire Marshal)

13. How much pipe is steel?

Answer: Assume it is approximately 60-70%

14. Will the pea-gravel need to be removed and where are the two new tanks going?

Answer: The pea-gravel is to be removed and replaced with concrete and two 12,000 gal tanks will be placed above ground on the new concrete foundation on select fill.

15. How many total linear feet of piping?

Answer: It was originally answered at 6400 in previous meeting. Corrected to 3200.

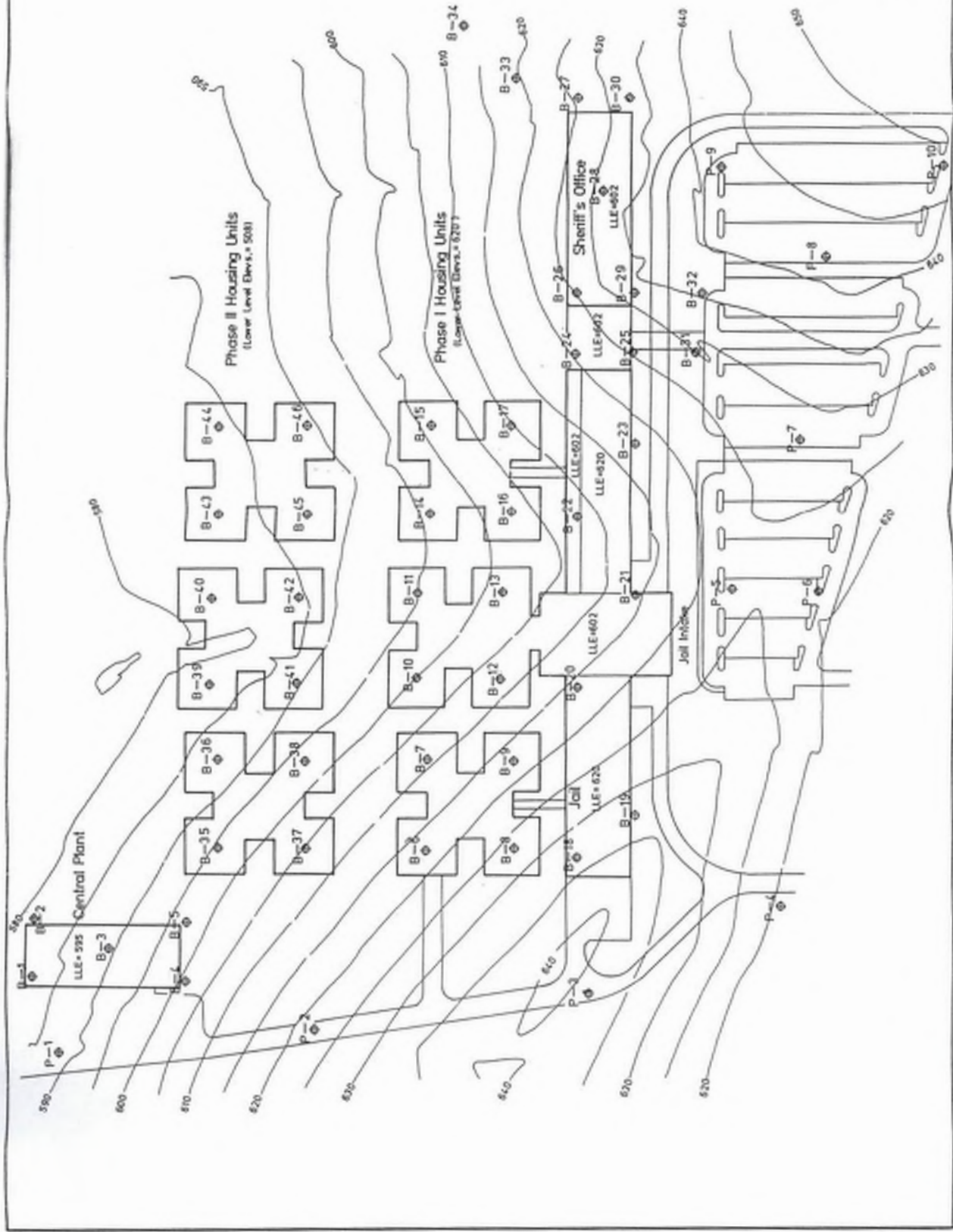
Clarification

1. The 12,000 gallon above ground fuel tanks shown on the construction documents near the physical plant are labeled as 8.5 feet in diameter and 21 feet long. The tanks are to be labeled 10 feet in diameter by 21 feet long.

Plan of Borings
Collin County Detention Facility
McKinney, Texas
Job No. 0701-0082

PLATE 2

Scale: 1" = 150'



McClelland Consultants

LOG OF BORING NO. B-1

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF | |
|-----------|--------|---------|-------------------------------|--|--------------------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|---------|
| | | | | SURF. EL. 581.8 | | | | | | | | | |
| 5 | | | | Very stiff brown clay (CH), with roots and calcareous particles (Terrace Deposit) - with some fine gravel and limestone fragments below 2.0' - tan below 6.0' - stiff below 14.0' | | 16 | | | | | | 2.7 (P) | |
| | | | | | | | 16 | | | | | | 2.7 (P) |
| | | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | | 20 | | | | | | 2.7 (P) |
| 15 | | | | | | 21 | | | | | | 1.6 (P) | |
| 20 | | | | | | 30 | | | | | | 1.9 (P) | |
| 25 | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 558.8 23.0 | | | | | | | | |
| | | | | | | 27 | | | | | | 1.2 (P) | |
| 30 | | | 100/ 1.25" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) - highly weathered 26.0' to 27.0' | 555.8 26.0 553.8 28.0 | | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | | |
| 35 | | | 100/ 0.6" | | | | | | | | | | |
| 40 | | | 100/ 0.4" | | | | | | | | | | |
| | | | | | 538.8 43.0 | | | | | | | | |

COMPLETION DEPTH: 43.0' DEPTH TO WATER: 17.8

DATE: 6-20-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-2

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF | |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|---------|
| | | | | SURF. EL. 581.4 | | | | | | | | | |
| | | | | Very stiff brown clay (CH), with roots and some sand (Terrace Deposit) - light brown below 4.5' | | 18 | | | | | | 2.7 (P) | |
| | | | | | | 19 | | | | | | | 2.7 (P) |
| 5 | | | | | | 18 | 51 | 22 | 29 | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | | 2.7 (P) |
| | | | | | | 22 | | | | | | 2.4 (P) | |
| 10 | | | | | | | | | | | | | |
| | | | | - with some medium to coarse gravel below 15.0' | | 23 | | | | | | 2.4 (P) | |
| | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | |
| | | | | | | 26 | 55 | 20 | 35 | | 101 | 1.6 (U) | |
| 20 | | | | | | | | | | | | | |
| | | | | | 558.4 | | | | | | | | |
| | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 23.0 | | | | | | | | |
| 25 | | | | | | 30 | | | | | | 1.8 (P) | |
| | | | | | 553.4 | | | | | | | | |
| 30 | | | 100 (50) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) - highly weathered from 30.0' to 31.0' - steep, iron stained fracture at 32.0' - moderate, iron stained fracture at 33.0' | 28.0 | | | | | | | | |
| | | | 90 (80) | | 547.4 | | | | | | | | |
| 35 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) - steep, iron stained fracture at 35.2' - tan limestone layer 37.0' to 37.5' | 34.0 | | | | | | 117 | 77.8(U) | |
| | | | 96 (86) | | | | | | | | | | |
| 40 | | | | | | 15 | | | | | 116 | 31.3(U) | |
| | | | 96 (96) | | | | | | | | | | |

COMPLETION DEPTH: 48.0'

DEPTH TO WATER: 16.3

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated- T=Torvane
Undrained Triaxial

DATE: 6-25-90

DATE: 7-6-90

LOG OF BORING NO. B-2

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 581.4 | | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 533.4 | 14 | | | | | 123 | 423(U) |
| | | | | -shale seam at 47.7' | 48.0 | | | | | | | |
| 50 | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 48.0'

DEPTH TO WATER: 163

DATE: 6-25-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-3

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 589.3 | | | | | | | | |
| | | | | Stiff brown clay (CH), with limestone fragments (Residual Soil) | 587.3 | | | | | | | |
| | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 2.0 585.3 | | | | | | | |
| 5 | | | 100 (42) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -steep, iron stained fracture at 7.5' | 4.0 | | | | | | | |
| | | | 98 (54) | | | | | | | | | |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -tan limestone seam at 12.1' -steep fracture at 16.7' | 577.3 | 13 | | | | | 125 | 65.0 (U) |
| | | | 96 (46) | | | 12.0 | | | | | | |
| 15 | | | | | | 14 | | | | | 122 | 53.8 (U) |
| | | | 90 (74) | | | | | | | | | |
| 20 | | | | | | 12 | | | | | 128 | 63.9 (U) |
| | | | 100 (100) | | | | | | | | | |
| 25 | | | | | | 11 | | | | | 115 | 68.4 (U) |
| | | | 90 (90) 98 (74) | | | | | | | | | |
| 30 | | | | | | 80 | | | | | 78 | 118 (U) |
| | | | | -bentonitic seam at 33.0' | | | | | | | | |
| 35 | | | | | 555.3 34.0 | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 34.0'

DEPTH TO WATER: 23.1

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-25-90

DATE: 7-6-90

LOG OF BORING NO. B-4

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 601.3 | | | | | | | | |
| 5 | | | | Hard brown clay (CH), with limestone fragments and fine gravel (Residual Soil) | | 12 | | | | | | 2.7 (P) |
| | | | | | 595.3 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 6.0 | 19 | | | | | 123 | 11.9 (U) |
| | | | | | 593.8 | | | | | | | |
| | | | | | 7.5 | | | | | | | |
| 10 | | | 92 (68) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -steep to moderate fractures from 9.0' to 11.0' | 590.1 | | | | | | | |
| | | | | | 11.2 | 13 | | | | | 126 | 111 (U) |
| 15 | | | 98 (98) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -tan weathered limestone layer 12.8' to 13.4' | | | | | | | | |
| | | | | | | 12 | | | | | 127 | 138 (U) |
| 20 | | | 98 (92) | | | | | | | | | |
| | | | | | | 12 | | | | | 130 | 101 (U) |
| 25 | | | 96 (92) | | | | | | | | | |
| | | | | | | 12 | | | | | 126 | 65.7 (U) |
| 30 | | | | | 572.3 | | | | | | | |
| | | | | | 29.0 | | | | | | | |

COMPLETION DEPTH: 29.0'

DEPTH TO WATER: 28.0

DATE: 6-28-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-5

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-------------------------|--------|---------|-------------------------------|--|-------------------|---|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 597.8 | | | | | | | | |
| | | | | Very stiff to hard brown clay (CH), with calcareous particles and roots (Residual Soil) | 595.2 | 14 | | | | | | 2.7 (P) |
| | | | | | 2.6 | 17 | | | | | | 2.7 (P) |
| 5 | | | 100/9.6" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| | | | 100/0.75" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 590.9 | | | | | | | |
| 10 | | | | | 6.9 | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| | | | 100/0.4" | | 575.4 | | | | | | | |
| 25 | | | | | 22.4 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |
| COMPLETION DEPTH: 22.4' | | | | | | U=Unconfined P=Pocket Penetrometer Q=Unconsolidated-Undrained Triaxial T=Torvane | | | | | | |
| DATE: 6-20-90 | | | | | | | | | | | | |

LOG OF BORING NO. B-6

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 618.4 | | | | | | | | |
| | | | | Very stiff to hard brown clay (CH), with calcareous particles and iron deposits (Residual Soil) | 616.4 | 14 | 53 | 19 | 34 | | | 2.7 (P) |
| | | | | | 2.0 | 15 | | | | | | 2.7 (P) |
| 5 | | | 98 (54) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| | | | | -highly weathered 2.0' to 4.0' | | | | | | | | |
| | | | | -steep, iron stained fracture 2.0' to 5.0' | | | | | | | | |
| | | | 96 (74) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 611.9 | | | | | | | |
| 10 | | | | | 6.5 | 12 | | | | | 121 | 110 (U) |
| | | | | -steep, iron stained fracture at 11.5' | | | | | | | | |
| | | | 96 (96) | | | | | | | | | |
| 15 | | | | | | 12 | | | | | 121 | 91.5 (U) |
| | | | 98 (94) | | | | | | | | | |
| 20 | | | | | | 12 | | | | | 122 | 157 (U) |
| | | | 94 (78) | | | | | | | | | |
| 25 | | | | | | 12 | | | | | 122 | 136 (U) |
| | | | 100 (100) | | | | | | | | | |
| 30 | | | | | 588.4 | | | | | | | |
| | | | | | 30.0 | | | | | | | |

COMPLETION DEPTH: 30.0'

DEPTH TO WATER: 26.3

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-18-90

DATE: 7-6-90

LOG OF BORING NO. B-7

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 609.4 | | | | | | | | |
| | | | | Very stiff to hard brown clay (CH), with roots (Residual Soil) -light brown below 2.0' | | 13 | | | | | | 2.7 (P) |
| | | | | | 604.9 | | | | | | | |
| | | | | | 4.5 | 19 | | | | | | 2.7 (P) |
| 5 | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 602.9 | 21 | | | | | | 2.7 (P) |
| | | | | | 6.5 | 20 | | | | | | 2.7 (P) |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 6.5' to 7.5' | 600.9 | | | | | | | |
| 10 | | | 100/3.5" | | 8.5 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 15 | | | 100/0.6" | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| | | | 100/0.25" | | 585.9 | | | | | | | |
| 25 | | | | | 23.5 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 23.5'

DATE: 6-20-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B- 8

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 627.8 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous nodules and roots (Residual Soil) | 626.3 | 16 | | | | | | 2.7 (P) |
| | | | | | 1.5 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 624.9 | 21 | | | | | | 2.7 (P) |
| 5 | | | 100/0.9" | | 2.9 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 619.6 | | | | | | | |
| 10 | | | | -highly weathered 2.9' to 4.2' | 8.2 | | | | | | | |
| | | | | -with unweathered layers below 6.0' | | | | | | | | |
| | | | 100/0.75" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| | | | 100/0.4" | | 604.1 | | | | | | | |
| 25 | | | | | 23.7 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 23.7'

DATE: 6-19-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-9

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 618.6 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous particles and roots (Residual Soil) | 616.6 | 16 | 54 | 20 | 34 | | | 2.7 (P) |
| | | | | | 2.0 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 614.6 | 17 | | | | | | 2.7 (P) |
| 5 | | | 87 (42) | | 4.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| 10 | | | 94 (38) | -steep, iron stained fracture 4.0' to 8.0' | | | | | | | | |
| | | | | | 606.6 | | | | | | 117 | 107 (U) |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 12.0 | | | | | | | |
| 15 | | | 98 (98) | | | | | | | | 121 | 93.7 (U) |
| | | | | -steep fracture at 16.7' | | | | | | | | |
| 20 | | | 96 (86) | | | | | | | | 121 | 111 (U) |
| | | | | | | | | | | | | |
| 25 | | | 98 (78) | | | | | | | | 122 | 139 (U) |
| | | | | | | | | | | | | |
| 30 | | | 90 (56) | | | | | | | | | |
| | | | | | 587.6 | | | | | | 120 | 112 (U) |
| | | | | | 31.0 | | | | | | | |

COMPLETION DEPTH: 31.0'

DEPTH TO WATER: 29.0

U=Unconfined P=Pocket Penetrometer
O=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-18-90

DATE: 7-6-90

LOG OF BORING NO. B-10

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 600.4 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with limestone fragments (Residual Soil) | | 14 | | | | | | 2.7 (P) |
| | | | | | 596.4 | 17 | | | | | | 2.7 (P) |
| 5 | | | 100 (40) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 4.0 | 18 | | | | | | 2.7 (P) |
| | | | 94 (46) | -highly weathered 4.0' to 5.0' -with fewer clay seams below 8.0' | | | | | | | | |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 589.4 | | | | | | | |
| | | | 96 (72) | -with tan, moderately weathered seams 13.0' to 18.0' | 11.0 | 12 | | | | | 123 | 120 (U) |
| 15 | | | | | | | | | | | | |
| | | | 98 (80) | | | | | | | | | |
| 20 | | | | | | 13 | | | | | 118 | 89.7 (U) |
| | | | 100 (100) | | | | | | | | | |
| 25 | | | | | | 12 | | | | | 123 | 82.3 (U) |
| | | | 100 (100) | | | | | | | | | |
| 30 | | | | | 570.4 | 13 | | | | | 123 | 94.1 (U) |
| | | | | | 30.0 | | | | | | | |

COMPLETION DEPTH: 30.0'

DEPTH TO WATER: 25.7

U=Unconfined P=Pocket Penetrometer

DATE: 6-19-90

DATE: 7-18-90

Q=Unconsolidated- Undrained Triaxial
T=Torvane

LOG OF BORING NO. B-11

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 594.4 | | | | | | | | |
| 5 | | | | Very stiff dark brown clay (CH), with some calcareous particles (Terrace Deposit) | | 21 | | | | | | 2.7 (P) |
| | | | | -with some shell fragments and fine gravel below 5.0' | | 19 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | 20 | | | | | | 2.7 (P) |
| 10 | | | | | | | | | | | | |
| | | | | -stiff, light brown below 12.5' | | | | | | | | |
| 15 | | | | | | 24 | | | | | | 1.8 (P) |
| 20 | | | | | | 25 | | | | | | 1.8 (P) |
| 25 | | | | | | 24 | | | | | | 2.4 (P) |
| 30 | | | | -with slickensided fissures below 30.0' | | 32 | | | | | | 2.1 (P) |
| 35 | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 560.9 33.5 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 558.7 35.7 | 21 | | | | | | 2.7 (P) |
| | | | 100/ 0.5" | -highly weathered 35.7' to 36.5' | 557.3 37.1 | | | | | | | |
| 40 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| | | | 100/ 0.4" | | | | | | | | | |

COMPLETION DEPTH: 52.3' DEPTH TO WATER: 18.0

DATE: 6-21-90

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-11

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 594.4 | | | | | | | | |
| 50 | | | 100/ 0.25' | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 542.1 | | | | | | | |
| 55 | | | | | 52.3 | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 52.3' DEPTH TO WATER: 18.0

DATE: 6-21-90

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. B-12

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 608.0 | | | | | | | | |
| | | | | Very stiff brown silty clay (CL), with limestone fragments (Residual Soil) | | 13 | | | | | | 2.7 (P) |
| | | | | -with calcareous particles below 4.0' | | 17 | 48 | 22 | 26 | | 111 | 3.8 (U) |
| 5 | | | | | 601.8 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 6.2 | 19 | | | | | | 2.7 (P) |
| | | | | | 600.0 | | | | | | | |
| | | | | | 8.0 | 19 | | | | | | 2.7 (P) |
| 10 | | | 100/ 5.75' | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 597.7 | | | | | | | |
| | | | | | 10.3 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 594.3 | | | | | | | |
| 15 | | | | | 13.7 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 20 | | | | -tan, moderately weathered layer 19.7' to 21.2' | | | | | | | | |
| 25 | | | 100/ 0.6' | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | 100/ 0.5' | | 579.3 | | | | | | | |
| 30 | | | | | 28.7 | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 28.7'

DATE: 6-21-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-13

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 601.7 | | | | | | | | |
| | | | | Very stiff dark brown clay (CH), with roots (Terrace Deposit) | | 23 | | | | | | 2.7 (P) |
| | | | | | | 20 | 56 | 23 | 33 | | | 2.7 (P) |
| 5 | | | | -light brown with shell fragments and calcareous particles below 4.0' | | 19 | | | | | | 2.7 (P) |
| | | | | | | 20 | | | | | | 2.7 (P) |
| | | | | -stiff to very stiff below 8.0' | | 22 | | | | | | 2.1 (P) |
| 10 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 15 | | | | -with limestone fragments and iron staining below 15.0' | | 24 | | | | | 91 | 1.6 (U) |
| | | | | | | | | | | | | |
| 20 | | | | | | 24 | 59 | 21 | 38 | | | 2.5 (P) |
| | | | | | | | | | | | | |
| 25 | | | | | | 26 | | | | | | 2.4 (P) |
| | | | | | | | | | | | | |
| 30 | | | | -with slickensided fissures below 30.0' | | 26 | | | | | | 1.9 (P) |
| | | | | | | | | | | | | |
| | | | | | 567.7 | | | | | | | |
| 35 | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 34.0 | | | | | | | |
| | | | | | | | | | | | | |
| | | | 74 (36) | -iron staining at 39.8' | 561.9 | | | | | | | |
| 40 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 39.8 | 13 | | | | | 125 | 104 (U) |
| | | | 94 (94) | | | | | | | | | |

COMPLETION DEPTH: 56.0'

DEPTH TO WATER: 25.2

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-13-90

DATE: 7-6-90

LOG OF BORING NO. B-13

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|---|--------|---------|-------------------------------|--|-------------------|--|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 601.7 | | | | | | | | |
| 50 | | | 100 (98) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | 13 | | | | | 124 | 143 (U) |
| 55 | | | 100 (100) | | | 14 | | | | | 119 | 60.6 (U) |
| | | | | | 545.7 56.0 | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |
| COMPLETION DEPTH: 56.0' DEPTH TO WATER: 25.2 | | | | | | U=Unconfined P=Pocket Penetrometer | | | | | | |
| DATE: 6-13-90 DATE: 7-6-90 | | | | | | Q=Unconsolidated-Undrained Triaxial T=Torvane | | | | | | |

LOG OF BORING NO. B-14

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 595.6 | | | | | | | | |
| 5 | | | | Very stiff brown and dark brown silty clay (CL), with some limestone fragments (Terrace Deposit) | | 16 | 33 | 20 | 13 | | | 2.7 (P) |
| | | | | -with some calcareous particles and iron staining below 5.0' | | 22 | | | | | | 2.7 (P) |
| | | | | -light brown with some fine gravel below 8.0' | | 19 | | | | | | 2.7 (P) |
| | | | | -stiff below 15.0' | | 19 | | | | | | 2.7 (P) |
| | | | | -firm below 20.0' | | 20 | | | | | 107 | 2.9 (U) |
| 15 | | | | | | | | | | | | |
| | | | | | | 23 | 46 | 20 | 26 | | 94 | 1.2 (P) |
| 20 | | | | | | | | | | | | |
| | | | | | | 27 | 44 | 20 | 24 | | 95 | 0.9 (P) |
| 25 | | | | | | | | | | | | |
| | | | | | | 25 | | | | | | 0.9 (P) |
| 30 | | | 89 (25) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 566.6 29.0 | | | | | | | |
| 35 | | | 69 (51) | | 560.6 35.0 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 40 | | | 96 (96) | | | 13 | | | | | 124 | 108 (U) |
| | | | | | | | | | | | | |
| | | | | | | 12 | | | | | 126 | 157 (U) |

COMPLETION DEPTH: 50.0'

DEPTH TO WATER: 20.9

U=Unconfined P=Pocket Penetrometer

DATE: 6-12-90

DATE: 7-6-90

Q=Unconsolidated- Undrained Triaxial T=Torvane



LOG OF BORING NO. B-14

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 595.6 | | | | | | | | |
| | | | 92 (92) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 545.6 50.0 | | | | | | | |
| 50 | | | 100 (100) | | | | 13 | | | | | 122 |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 50.0'

DEPTH TO WATER: 20.9

DATE: 6-12-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-15

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-------------------------|--------|---------|-------------------------------|--|-------------------|---|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 600.8 | | | | | | | | |
| | | | | Very stiff brown and dark brown clay (CH), with calcareous particles (Residual Soil) | | 16 | | | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| 5 | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 596.3 | | | | | | | |
| | | | | | 4.5 | 20 | | | | | | 2.7 (P) |
| | | | | | 593.6 | | | | | | | |
| | | | | | 7.2 | 23 | | | | | | 2.7 (P) |
| 10 | | | 100/ 3.5" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| | | | | -highly weathered 7.2' to 9.0' | 589.7 | | | | | | | |
| | | | | | 11.1 | | | | | | | |
| 15 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| | | | | -shallow, iron stained fracture at 13.9' | | | | | | | | |
| 20 | | | 100/ 0.25" | -tan, moderately weathered layer 19.5' to 20.0' | | | | | | | | |
| | | | | -wide, horizontal joints below 20.0' | | | | | | | | |
| 25 | | | 100/ 0.3" | | | | | | | | | |
| | | | | | 574.8 | | | | | | | |
| | | | | | 26.0 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |
| COMPLETION DEPTH: 26.0' | | | | | | U=Unconfined P=Pocket Penetrometer O=Unconsolidated- T=Torvane Undrained Triaxial | | | | | | |
| DATE: 6-12-90 | | | | | | | | | | | | |

LOG OF BORING NO. B-16

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-------------------------|--------|---------|-------------------------------|---|-------------------|---|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 603.2 | | | | | | | | |
| 5 | | | | Very stiff brown and dark brown clay (CH), with some shell fragments and calcareous particles (Terrace Deposit) -light brown below 4.5' | | 17 | | | | | | 2.7 (P) |
| | | | | | | 17 | | | | | | 2.7 (P) |
| | | | | | | 17 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 20 | | | | | | 2.7 (P) |
| 15 | | | | | | 22 | | | | | | 2.7 (P) |
| | | | | | 585.7 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 17.5 | | | | | | | |
| 20 | | | 100/11.25" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 583.7 | 18 | | | | | | 2.7 (P) |
| | | | | | 19.5 | | | | | | | |
| 25 | | | | | 577.9 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -shallow fracture at 27.0' -vertical, healed fractures 28.0' to 28.6' and 29.5' to 30.3' | 25.3 | | | | | | | |
| 30 | | | 100/0.25" | | | | | | | | | |
| 35 | | | 100/0.4" | | | | | | | | | |
| 40 | | | | | 563.9 | | | | | | | |
| | | | | | 39.3 | | | | | | | |
| COMPLETION DEPTH: 39.3' | | | | | | U=Unconfined P=Pocket Penetrometer O=Unconsolidated-Undrained Triaxial T=Torvane | | | | | | |
| DATE: 6-11-90 | | | | | | | | | | | | |



LOG OF BORING NO. B-17

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 610.0 | | | | | | | | |
| | | | | Very stiff to hard brown and dark brown silty clay (CL), with some calcareous particles (Residual Soil) | 606.5 | 15 | 48 | 25 | 23 | | | 2.7 (P) |
| | | | | | | 21 | | | | | | 2.7 (P) |
| 5 | | | 100 (55) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 3.5 | 21 | | | | | | 2.7 (P) |
| | | | | | | 14 | | | | | 116 | 80.1 (U) |
| | | | 94 (84) | - highly weathered layer 7.0' to 7.5' - steep fracture at 8.6' | 600.7 | 15 | | | | | 120 | 84.1 (U) |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 9.3 | | | | | | | |
| | | | 96 (92) | - tan, moderately weathered seams 12.5' to 17.5' | | | | | | | | |
| 15 | | | | | | 17 | | | | | 115 | 78.4 (U) |
| | | | 94 (92) | | | | | | | | | |
| 20 | | | | - tan limestone layer at 20.5 | | | | | | | | |
| | | | 100 (100) | | | | | | | | | |
| 25 | | | | | 584.5 | 12 | | | | | 127 | 115 (U) |
| | | | | | 25.5 | | | | | | | |

COMPLETION DEPTH: 25.5'

DATE: 6-10-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane



LOG OF BORING NO. B-18

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 632.8 | | | | | | | | |
| | | | | Very stiff brown silty clay (CL), with limestone fragments (Residual Soil) | | 18 | | | | | | 2.7 (P) |
| | | | | | 628.8 | 18 | | | | | | 2.7 (P) |
| 5 | | | 100 (45) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 4.0 | | | | | | | |
| | | | 96 (80) | -moderate fracture at 6.7' | | | | | | | | |
| 10 | | | | -highly weathered with iron staining 6.7' to 9.0' | 623.8 | 13 | | | | | 124 | 423 (U) |
| | | | 96 (80) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 9.0 | | | | | | | |
| | | | | -bentonitic seam at 13.0' | | 11 | | | | | 130 | 128 (U) |
| 15 | | | | -iron staining at 15.0' | | | | | | | | |
| | | | 98 (98) | | | 12 | | | | | 128 | 143 (U) |
| 20 | | | | | | | | | | | | |
| | | | 100 (54) | | | 19 | | | | | 119 | 124 (U) |
| 25 | | | | | | | | | | | | |
| | | | 90 (90) | | | | | | | | | |
| 30 | | | | | 601.8 | | | | | | | |
| | | | | | 31.0 | | | | | | | |

COMPLETION DEPTH: 31.0'

DEPTH TO WATER: 26.9

U=Unconfined P=Pocket Penetrometer

DATE: 6-15-90

DATE: 7-6-90

Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-19

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 629.0 | | | | | | | | |
| | | | | Very stiff to hard brown silty clay (CL), with roots and limestone fragments (Residual Soil) | 627.5 | 13 | | | | | | 2.7 (P) |
| | | | | | 1.5 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 626.0 | 16 | | | | | | 2.7 (P) |
| 5 | | | 100/10.25" | | 3.0 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 624.0 | | | | | | | |
| | | | 100/4.4" | | 5.0 | | | | | | | |
| 10 | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| | | | 100/0.9" | | 616.5 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 12.5 | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| | | | 100/0.25" | | 601.0 | | | | | | | |
| | | | | | 28.0 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 28.0'

DATE: 6-20-90

U=Unconfined P=Pocket Penetrometer
 Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-20

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 616.6 | | | | | | | | |
| | | | | Very stiff to hard brown silty clay (CL), with roots and some limestone fragments (Residual Soil) | 613.1 | 12 | 45 | 23 | 22 | | | 2.7 (P) |
| | | | | | 3.5 | 20 | | | | | | 2.7 (P) |
| 5 | | | 100/5.75" | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 610.1 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 6.5 | | | | | | | |
| 10 | | | | | 608.5 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 8.1 | | | | | | | |
| 15 | | | 100/0.75" | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| | | | 100/0.4" | | | | | | | | | |
| 25 | | | | | 593.5 | | | | | | | |
| | | | | | 23.1 | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 23.1'

DEPTH TO WATER: 19.2

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-20-90

DATE: 7-6-90

LOG OF BORING NO. B-21

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF | |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|---------|
| | | | | SURF. EL. 613.5 | | | | | | | | | |
| | | | | Very stiff dark brown and brown clay (CH), with some gravel and calcareous particles (Terrace Deposit) -light brown with limestone and shell fragments below 4.5' | | 17 | | | | | | 2.7 (P) | |
| | | | | | | | 30 | | | | | | 2.7 (P) |
| 5 | | | | | | | 20 | | | | | | 2.7 (P) |
| | | | | | | | 21 | | | | | | 2.7 (P) |
| | | | | | | | 23 | 59 | 23 | 36 | | 101 | 2.6 (P) |
| 10 | | | | | | | | | | | | | |
| | | | | | | 26 | | | | | | 2.4 (P) | |
| | | | | | | | | | | | | | |
| 20 | | | | | | 23 | 54 | 23 | 31 | | 100 | 3.0 (U) | |
| | | | | | | | | | | | | | |
| 25 | | | | | 588.5 | | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 25.0 | 26 | | | | | | 2.1 (P) | |
| | | | | | | | | | | | | | |
| 30 | | | 100 | | 582.5 | | | | | | | | |
| | | | (50) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 31.0 | | | | | | | | |
| | | | 92 | -occasional gray limestone seams below 34.3' | | | | | | | | | |
| | | | (54) | -moderate to steep, iron stained fractures below 35.3' | | | | | | | | | |
| 35 | | | | | | | | | | | | | |
| | | | 94 | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 575.2 | 14 | | | | | 117 | 60.7 (U) | |
| | | | (94) | -tan limestone seam 39.1' | 38.3 | | | | | | | | |
| 40 | | | | | | | | | | | | | |
| | | | 96 | | | 12 | | | | | 122 | 85.0 (U) | |
| | | | (96) | | | 12 | | | | | 126 | 115 (U) | |

COMPLETION DEPTH: 53.0'

DATE: 6-19-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated- Undrained Triaxial T=Torvane



LOG OF BORING NO. B-21

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|-------------------------|--------|---------|-------------------------------|---|-------------------|---|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 613.5 | | | | | | | | |
| 50 | | | 98 (78) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -shallow fracture at 48.0' -bentonitic seam at 52.1' | 560.5 53.0 | 13 | | | | | 118 | 83.7 (U) |
| 55 | | | | | | 14 | | | | | 117 | 136 (U) |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |
| COMPLETION DEPTH: 53.0' | | | | | | U=Unconfined P=Pocket Penetrometer Q=Unconsolidated- T=Torvane Undrained Triaxial | | | | | | |
| DATE: 6-19-90 | | | | | | | | | | | | |

LOG OF BORING NO. B-22

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 607.8 | | | | | | | | |
| 5 | | | | Very stiff dark brown and brown clay (CH), with calcareous particles (Terrace Deposit) -light brown below 4.0' | | 17 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | 22 | | | | | | 2.4 (P) |
| | | | | | | 25 | | | | | | 2.4 (P) |
| | | | | | 591.3 | | | | | | | |
| | | | 100/6.25" | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 16.5 | | | | | | | |
| | | | 100/1.75" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -thin bedded 18.0' to 20.3' | 589.8 | | | | | | | |
| | | | 100/0.4" | | 18.0 | | | | | | | |
| | | | | | 574.6 | | | | | | | |
| | | | | | 33.2 | | | | | | | |

COMPLETION DEPTH: 33.2'

DATE: 6-12-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-23

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 617.0 | | | | | | | | |
| | | | | Very stiff brown and dark brown clay (CH), with limestone fragments (Residual Soil) | 615.0 | 19 | | | | | | 2.7 (P) |
| | | | | | 2.0 | 18 | | | | | | 2.7 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 613.0 | | | | | | | |
| 5 | | | 100/ 8.25" 98 | | 4.0 | | | | | | | |
| | | | (92) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 609.6 | | | | | | | |
| 10 | | | 99 | -highly weathered 4.0' to 5.0' | 7.4 | | | | | | | |
| | | | (99) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 15 | | | 100 | -tan, moderately weathered seam at 14.5' | | | | | | | | |
| | | | (100) | | | | | | | | | |
| 20 | | | 98 | -tan, moderately weathered, vertical, healed fracture at 18.4' | | | | | | | | |
| | | | (98) | | | | | | | | | |
| 25 | | | 100 | | | | | | | | | |
| | | | (100) | | | | | | | | | |
| 30 | | | | -steep fracture at 29.0' | 587.5 | | | | | | | |
| | | | | | 29.5 | | | | | | | |

COMPLETION DEPTH: 29.5'

DATE: 6-12-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-24

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH T _{9F} |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------------------|
| | | | | SURF. EL. 619.7 | | | | | | | | |
| | | | | Very stiff to hard brown silty clay (CL), with limestone fragments and iron staining (Residual Soil) | | 11 | 48 | 23 | 25 | | 104 | 2.7 (P) |
| | | | | | 615.7 | | | | | | | |
| 5 | | | 92 (54) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -moderate fracture at 7.6' | 4.0 | | | | | | | |
| 10 | | | 92 (72) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 609.2 | 13 | | | | | 122 | 52.8 (U) |
| 15 | | | 96 (92) | -tan, moderately weathered layer at 14.5' | 10.5 | | | | | | | |
| 20 | | | 92 (52) | -tan, moderately weathered layer 18.8' to 19.6' | | | | | | | | |
| 25 | | | 98 (72) | | | | | | | | | |
| 30 | | | | -moderate fracture at 28.3' | | | | | | | | |
| | | | | | 589.7 | | | | | | | |
| | | | | | 30.0 | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 30.0'

DEPTH TO WATER: 26.6

DATE: 6-20-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
 O=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-25

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./ROD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 624.7 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous particles (Residual Soil) | 622.7 | 20 | | | | | | 2.7 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 621.2 | 15 | | | | | | 2.7 (P) |
| 5 | | | 100/12" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 616.7 | | | | | | | |
| | | | | -highly weathered 3.5' to 4.5' | 3.5 | | | | | | | |
| 10 | | | 100/0.5" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 616.7 | | | | | | | |
| | | | | -vertical fracture 8.7' to 9.8' | 8.0 | | | | | | | |
| | | | | -with few calcite veins 9.0' to 13.0' | | | | | | | | |
| 30 | | | 100/0.25" | | 594.2 | | | | | | | |
| | | | | | 30.5 | | | | | | | |

COMPLETION DEPTH: 30.5'

DATE: 6-13-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-26

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./ROD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 623.7 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous particles (Residual Soil) | 621.7 | 18 | | | | | | 27 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 2.0 619.7 | 19 | | | | | | 27 (P) |
| 5 | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 4.0 | 12 | | | | | | 27 (P) |
| | | | | -moderately weathered below 6.5' | | | | | | | | |
| | | | 100/ 1.75" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 616.7 | 14 | | | | | | 27 (P) |
| 10 | | | | -sandy calcite seams along shallow fractures 7.0' to 8.0' | | | | | | | | |
| 15 | | | | -pyrite crystals at 13.0' | 7.0 | | | | | | | |
| 20 | | | 100/ 0.3" | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | 100/ 0.2" | | 593.6 30.1 | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 30.1'

DATE: 6-13-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-27

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|-----------|-----------------------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 624.5 | | | | | | | | |
| | [Diagonal Hatching] | | | Very stiff brown silty clay (CL), with calcareous particles, iron staining and shell fragments (Residual Soil) | | 18 | | | | | | 2.7 (P) |
| | | | | | 620.5 | | | | | | | |
| 5 | [Wavy Hatching] | | 78 (0) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 4.0 | | | | | | | |
| 10 | [Horizontal Hatching] | | 94 (78) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 615.5 | | | | | | | |
| | | | | | 9.0 | 11 | | | | | 125 | 115 (U) |
| 15 | | | 92 (78) | | | | | | | | | |
| | | | | | | 11 | | | | | 128 | 97.8 (U) |
| 20 | | | 86 (80) | | | | | | | | | |
| | | | | | | 13 | | | | | 126 | 155 (U) |
| 25 | | | 100 (36) | | | | | | | | | |
| | | | | | | 12 | | | | | 127 | 100 (U) |
| 30 | | | 100 (94) | | | | | | | | | |
| | | | | | | 12 | | | | | 125 | 107 (U) |
| 35 | | | 100 (42) | | | | | | | | | |
| | | | | | | 10 | | | | | 130 | 196 (U) |
| 40 | | | 100 (28) | | | | | | | | | |
| | | | | | 579.5 | | | | | | | |

COMPLETION DEPTH: 45.0'

DATE: 6-19-90

U=Unconfined P=Pocket Penetrometer
 Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-28

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 631.2 | | | | | | | | |
| | | | | Very stiff to hard brown silty clay (CL), with limestone fragments (Residual Soil) | 629.2 | 8 | | | | | | 2.7 (P) |
| | | | | | 2.0 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 627.2 | 16 | | | | | | 2.7 (P) |
| 5 | | | 92 (60) | | 4.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | | | | | | | | |
| 10 | | | 94 (32) | -iron stained 9.2' to 10.6' | 620.6 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 10.6 | | | | | | | |
| | | | 92 (92) | | | 11 | | | | | 129 | 81.2 (U) |
| 15 | | | | | | 12 | | | | | 125 | 79.9 (U) |
| | | | 96 (88) | | | | | | | | | |
| 20 | | | | | | 12 | | | | | 127 | 145 (U) |
| | | | 90 (80) | | | | | | | | | |
| 25 | | | | | | 12 | | | | | 128 | 96.8 (U) |
| | | | 100 (100) | | | | | | | | | |
| 30 | | | | | | 13 | | | | | 124 | 156 (U) |
| | | | 100 (100) | | | | | | | | | |
| 35 | | | 92 (5) | | | | | | | | | |
| | | | 100 (75) | | | | | | | | | |
| 40 | | | | | | 11 | | | | | 131 | 94.1 (U) |
| | | | | | 586.2 | | | | | | | |

COMPLETION DEPTH: 45.0'

DATE: 6-20-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane



LOG OF BORING NO. B-29

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOIS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 632.0 | | | | | | | | |
| | | | | Very stiff to hard brown silty clay (CL), with limestone fragments (Residual Soil) | 629.0 | 8 | | | | | | 2.7 (P) |
| | | | | | 3.0 | 17 | | | | | | 2.7 (P) |
| 5 | | | 92 (0) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 3.0' to 4.0' | | | | | | | | |
| 10 | | | 94 (32) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 623.0 | | | | | | | |
| | | | | | 9.0 | 12 | | | | | 125 | 78.2 (U) |
| 15 | | | 92 (92) | | | | | | | | | |
| | | | | | | 11 | | | | | 130 | 82.8 (U) |
| 20 | | | 96 (88) | | | | | | | | | |
| | | | | | | 11 | | | | | 129 | 91.5 (U) |
| 25 | | | 90 (80) | | | | | | | | | |
| | | | | | | 8 | | | | | 132 | 89.0 (U) |
| 30 | | | 100 (90) | | | | | | | | | |
| | | | | | | 12 | | | | | 129 | 82.9 (U) |
| 35 | | | 100 (90) | | | | | | | | | |
| | | | | | | 13 | | | | | 126 | 117 (U) |
| 40 | | | 100 (64) | | | | | | | | | |
| | | | | | | 12 | | | | | 127 | 91.3 (U) |
| | | | | | 587.0 | | | | | | | |

COMPLETION DEPTH: 45.0'

DATE: 6-14-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-30

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 632.5 | | | | | | | | |
| | | | | Very stiff to hard tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 630.0 | 16 | 47 | 24 | 23 | | 111 | 2.7 (P) |
| | | | | | 2.5 | 15 | | | | | | 2.7 (P) |
| 5 | | | 100/4.5 | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 628.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 623.5 | | | | | | | |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 9.0 | | | | | | | |
| 15 | | | 100/0.5 | | | | | | | | | |
| 25 | | | 100/0.25 | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| | | | | | 600.7 | | | | | | | |
| | | | | | 31.8 | | | | | | | |

COMPLETION DEPTH: 31.8'

DATE: 6-15-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-31

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 629.5 | | | | | | | | |
| | | | | Very stiff brown and tan silty clay (CL), calcareous particles (Residual Soil) | | 16 | | | | | | 2.7 (P) |
| | | | | | 625.5 | 18 | | | | | | 2.7 (P) |
| 5 | | | 87 (65) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 4.0 | 16 | | | | | 120 | 35.3 (U) |
| 10 | | | 94 (76) | -steep fracture at 9.7' | 618.5 | 12 | | | | | 128 | 90.0 (U) |
| 15 | | | 96 (84) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -steep fracture at 12.0' | 11.0 | | | | | | | |
| 20 | | | 90 (82) | | | 14 | | | | | 123 | 37.9 (U) |
| 25 | | | 96 (90) | | | 12 | | | | | 127 | 105 (U) |
| 30 | | | 100 (50) 100 (93) | | | 12 | | | | | 127 | 133 (U) |
| 35 | | | 98 (96) | | | 12 | | | | | 127 | 87.8 (U) |
| 40 | | | 98 (48) | | | | | | | | | |
| | | | 98 (40) | | | | | | | | | |

COMPLETION DEPTH: 46.5'

DEPTH TO WATER: 27.6

DATE: 6-14-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-31

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|---|--------|---------|-------------------------------|--|-------------------|---|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 629.5 | | | | | | | | |
| 50 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 583.0 46.5 | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |
| COMPLETION DEPTH: 46.5' DEPTH TO WATER: 27.6 | | | | | | U=Unconfined P=Pocket Penetrometer | | | | | | |
| DATE: 6-14-90 DATE: 7-6-90 | | | | | | Q=Unconsolidated- Undrained Triaxial T=Torvane | | | | | | |

LOG OF BORING NO. B-32

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./REQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|--------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 635.3 | | | | | | | | |
| | | | | Very stiff to hard brown and tan silty clay (CL), with limestone fragments (Residual Soil) | 632.8 | 12 | | | | | | 2.7 (P) |
| | | | | | 2.5 | 13 | | | | | | 2.7 (P) |
| 5 | | | 100/ 10.75" | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 630.7 | | | | | | | |
| | | | | | 4.6 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 628.2 | | | | | | | |
| | | | | | 7.1 | | | | | | | |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| | | | | -tan, moderately weathered seam at 13.3' | | | | | | | | |
| 15 | | | | -bentonitic layer 15.5' to 15.8' | | | | | | | | |
| 20 | | | 100/ 0.4" | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | 100/ 0.25" | | 605.2 30.1 | | | | | | | |

COMPLETION DEPTH: 30.1'

DATE: 6-13-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-33

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 618.7 | | | | | | | | |
| | | | | Very stiff to hard brown and light brown silty clay (CL), with calcareous particles (Residual Soil) | 616.5 | 14 | | | | | | 2.7 (P) |
| | | | | | 2.2 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 614.5 | 20 | | | | | | 2.7 (P) |
| 5 | | | 100/3.6 | | 4.2 | 18 | | | | | | 2.7 (P) |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 610.7 | | | | | | | |
| 10 | | | | -highly weathered 4.2' to 5.2' | 8.0 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 15 | | | 100/0.4 | | 603.5 | | | | | | | |
| | | | | | 15.2 | | | | | | | |

COMPLETION DEPTH: 15.2'

DATE: 6-16-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. B-34

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 614.2 | | | | | | | | |
| | | | | Very stiff brown silty clay (CL), with limestone fragments (Residual Soil) | 613.2 | 15 | | | | | | 27 (P) |
| | | | 100/8.75' | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 1.0 | | | | | | | |
| 5 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 609.4 | | | | | | | |
| | | | | -tan, moderately weathered layer 7.0' to 7.8' | 4.8 | | | | | | | |
| 10 | | | | -shallow, iron stained fracture at 11.3' | | | | | | | | |
| 15 | | | 100/0.3' | | 598.4 | | | | | | | |
| | | | | | 15.8 | | | | | | | |
| 20 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 15.8'

DATE: 6-16-90

U=Unconfined P=Pocket Penetrometer
 Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-35

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 597.0 | | | | | | | | |
| | | | | Hard brown (CH), with some limestone fragments (Residual Soil) | | 13 | 51 | 26 | 25 | | | 2.7 (P) |
| | | | | | 593.0 | 18 | | | | | 109 | 10.7 (U) |
| 5 | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 4.0 | 17 | | | | | | 2.7 (P) |
| | | | 100 (50) | | 591.5 | | | | | | | |
| | | | 98 (0) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 5.5 | 13 | | | | | 125 | 89.9 (U) |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 587.5 | | | | | | | |
| | | | 98 (80) | -tan limestone layer with moderate fracture at 10.3' | 9.5 | | | | | | | |
| 15 | | | | -shaley, iron stained layer at 16.6' | | | | | | | | |
| | | | 92 (80) | | | 12 | | | | | 127 | 137 (U) |
| 20 | | | | | | | | | | | | |
| | | | 96 (80) | -steep fracture at 24.9' to 25.2' | | 13 | | | | | 127 | 77.8 (U) |
| 25 | | | | | | | | | | | | |
| | | | 100 (100) | | | 11 | | | | | 128 | 84.5 (U) |
| 30 | | | | | 567.0 | | | | | | | |
| | | | | | 30.0 | | | | | | | |

COMPLETION DEPTH: 30.0'

DEPTH TO WATER: 27.5

U=Unconfined P=Pocket Penetrometer

DATE: 6-28-90

DATE: 7-6-90

Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-36

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSP |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 588.2 | | | | | | | | |
| 5 | | | | Very stiff dark brown and brown clay (CH), with some calcareous particles (Terrace Deposit) | | 16 | | | | | | 2.7 (P) |
| | | | | | | 17 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| 10 | | | | -light brown with some limestone fragments below 8.0' | | 21 | | | | | | 2.6 (P) |
| | | | | | | | | | | | | |
| 15 | | | | -stiff to very stiff below 14.0' | | 24 | 52 | 22 | 30 | | | 1.8 (P) |
| | | | | | | | | | | | | |
| 20 | | | | | | 26 | | | | | | 2.4 (P) |
| | | | | | | | | | | | | |
| 25 | | | | -with sand below 24.0' | | | | | | | | 1.2 (P) |
| | | | | | 562.2 | | | | | | | |
| | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 26.0 | | | | | | | |
| | | | | | 561.2 | | | | | | | |
| | | | | | 27.0 | | | | | | | |
| 30 | | | 100/ 3.9" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 559.7 | | | | | | | |
| | | | | | 28.5 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 35 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | 100/ 0.6" | | 544.7 | | | | | | | |
| | | | | | 43.5 | | | | | | | |

COMPLETION DEPTH: 43.5' DEPTH TO WATER: 16.6

DATE: 6-19-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-37

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH T _{9F} |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------------------|
| | | | | SURF. EL. 606.7 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous particles (Residual Soil) | 605.2 | 31 | | | | | | 27 (P) |
| | | | | | 1.5 | | | | | | | |
| | | | 100/4.5' | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 604.5 | 17 | | | | | | 27 (P) |
| 5 | | | | | 2.2 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 2.2' to 3.0' | 601.2 | | | | | | | |
| 10 | | | | | 5.5 | | | | | | | |
| | | | 100/0.7' | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 20 | | | 100/0.5' | | | | | | | | | |
| | | | | | 585.7 | | | | | | | |
| | | | | | 21.0 | | | | | | | |
| 25 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 21.0'

DATE: 6-19-90

U=Unconfined P=Pocket Penetrometer
G=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-38

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./ROD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 598.0 | | | | | | | | |
| 5 | | | | Very stiff dark brown and brown clay (CH) with some limestone and shell fragments (Terrace Deposit) | | 16 | 58 | 26 | 32 | | | 2.7 (P) |
| | | | | -light brown below 4.5' | | 16 | 54 | 24 | 30 | | | 2.7 (P) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | 2.7 (P) |
| | | | | | | 23 | | | | | | 2.7 (P) |
| 10 | | | | -with slickensided fissures 8.0' to 10.0' | | | | | | | | |
| 15 | | | | -hard at 15.0' | | | | | | | | |
| | | | | | 578.0 | 25 | 64 | 27 | 37 | | 100 | 4.1 (U) |
| 20 | | | | | 20.0 | 21 | | | | | | 2.7 (P) |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 577.0 | | | | | | | |
| | | 90 (90) | | | 21.0 | 17 | | | | | 112 | 33.8 (U) |
| 25 | | 94 (86) | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| | | | | | | 13 | | | | | 119 | 93.9 (U) |
| 30 | | 98 (98) | | | | | | | | | | |
| | | | | | | 14 | | | | | 117 | 125 (U) |
| 35 | | 98 (90) | | | | | | | | | | |
| | | | | -bentonitic seam at 37.8' | 560.0 | | | | | | | |
| 40 | | | | | 38.0 | | | | | | | |

COMPLETION DEPTH: 38.0'

DEPTH TO WATER: 31.2

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-20-90

DATE: 7-6-90

LOG OF BORING NO. B-39

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 582.4 | | | | | | | | |
| | | | | Very stiff dark brown and brown clay (CH), with some calcareous particles (Terrace Deposit) | | 19 | | | | | | 27 (P) |
| | | | | | | 20 | | | | | | 27 (P) |
| 5 | | | | -light brown with iron staining and some fine gravel below 4.5' | | 19 | | | | | | 27 (P) |
| | | | | | | 19 | | | | | | 21 (P) |
| | | | | | | 21 | | | | | | 21 (P) |
| 10 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 15 | | | | -stiff to very stiff below 15.0' | | 23 | | | | | | 13 (P) |
| | | | | | | | | | | | | |
| 20 | | | | | | 23 | | | | | | 22 (P) |
| | | | | | | | | | | | | |
| 25 | | | | | | 24 | | | | | | 21 (P) |
| | | | | | | | | | | | | |
| 30 | | | | -with slickensided fissures below 30.0' | | 37 | | | | | | 15 (P) |
| | | | | | | | | | | | | |
| 35 | | | | | 547.4 | | | | | | | |
| | | | 97 (37) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 35.0 | | | | | | | |
| | | | | | 545.4 | | | | | | | |
| | | | | | 37.0 | | | | | | | |
| | | | 98 (94) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | 13 | | | | | 121 | 105 (U) |
| 40 | | | | -tan moderately weathered seams 37.0' to 39.0' | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | 14 | | | | | 116 | 74.5 (U) |

COMPLETION DEPTH: 54.0'

DEPTH TO WATER: 14.9

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

DATE: 6-27-90

DATE: 7-6-90

LOG OF BORING NO. B-39

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 582.4 | | | | | | | | |
| 50 | | | 98 (98) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | | | | | | | | |
| | | | 98 (98) | | | | | | | | | |
| 55 | | | | | 528.4 54.0 | 13 | | | | | 121 | 54.5 (U) |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 54.0'

DEPTH TO WATER: 14.9

DATE: 6-27-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
 G=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-40

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH T _{SP} |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------------------|
| | | | | SURF. EL. 582.2 | | | | | | | | |
| | | | | Stiff dark brown and brown clay (CH), with some calcareous particles (Terrace Deposit) -very stiff below 2.0' | | 28 | | | | | | 1.9 (P) |
| | | | | | | 27 | | | | | | 2.1 (P) |
| 5 | | | | | | 46 | 55 | 19 | 36 | | 85 | 1.1 (U) |
| | | | | | | 21 | | | | | | 1.5 (P) |
| | | | | -light brown below 8.5' | | 21 | | | | | | 2.0 (P) |
| 10 | | | | | | | | | | | | |
| | | | | | | 24 | | | | | | 1.8 (P) |
| 15 | | | | | | | | | | | | |
| | | | | -with some shell fragments below 17.6' | | 25 | | | | | | 1.3 (P) |
| 20 | | | | | | | | | | | | |
| | | | | | | 26 | 58 | 20 | 38 | | 100 | 1.2 (U) |
| 25 | | | | | | | | | | | | |
| | | | | -with numerous calcareous particles below 27.6' | | 28 | | | | | | 1.6 (P) |
| 30 | | | | | | | | | | | | |
| | | | | | 548.7 | 33 | | | | | | 1.2 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 33.5 | | | | | | | |
| | | | | | 547.2 | 22 | | | | | | 2.7 (P) |
| 35 | | | 100/10" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 35.0' to 36.5' | 35.0 | | | | | | | |
| | | | | | 544.2 | | | | | | | |
| 40 | | | 100/0.6" | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 38.0 | | | | | | | |

COMPLETION DEPTH: 53.0'

DEPTH TO WATER: 7.0

DATE: 6-18-90

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-40

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 582.2 | | | | | | | | |
| 50 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 529.2 | | | | | | | |
| 55 | | | | | 53.0 | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 53.0' DEPTH TO WATER: 7.0

DATE: 6-18-90

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane



LOG OF BORING NO. B-41

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF | |
|-----------|--------|---------|-------------------------------|--|--|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|---------|
| | | | | SURF. EL. 589.4 | | | | | | | | | |
| 5 | | | | Very stiff to hard dark brown and brown clay (CH), with some shell fragments and calcareous particles (Terrace Deposit) | | 18 | | | | | | 2.7 (P) | |
| | | | | | | 17 | 53 | 21 | 32 | | | | 2.7 (P) |
| | | | | | | 18 | | | | | | | 2.7 (P) |
| | | | | | | 19 | | | | | | | 2.7 (P) |
| | | | | | | 21 | | | | | | | 2.7 (P) |
| 10 | | | | Stiff light brown silty clay (CL), with some fine gravel and shell fragments (Terrace Deposit) -tan with some limestone fragments below 14.0' | 580.4 9.0 | | | | | | | | |
| 15 | | | | | | 26 | | | | | | | 1.3 (P) |
| 20 | | | | | | 23 | 46 | 23 | 23 | | 102 | | 1.1 (U) |
| 25 | | | | | | | | | | | | | |
| 25 | | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 565.4 24.0 | 28 | | | | | | 1.9 (P) |
| 30 | | | 100/ 3.75" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 29.5' to 31.5' | 559.9 29.5 | 24 | | | | | | 2.7 (P) | |
| 35 | | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 555.7 33.7 | | | | | | | |
| 40 | | | | | | | | | | | | | |

COMPLETION DEPTH: 48.7'

DEPTH TO WATER: 15.7

DATE: 6-18-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-41

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 589.4 | | | | | | | | |
| 50 | | | 100/ 0.5' | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 540.7 48.7 | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 48.7'

DEPTH TO WATER: 15.7

DATE: 6-18-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-42

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF | |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|----------|
| | | | | SURF. EL. 584.8 | | | | | | | | | |
| 5 | | | | Very stiff dark brown and brown clay (CH), with some calcareous particles and trace of sand (Terrace Deposit) | | 18 | | | | | | 2.7 (P) | |
| | | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | | 17 | | | | | | 2.7 (P) |
| | | | | | | | 19 | | | | | | 2.7 (P) |
| | | | | | | | 21 | | | | | | 2.7 (P) |
| 15 | | | | -stiff to very stiff, light brown below 15.0' | | 24 | | | | | | 1.5 (P) | |
| 20 | | | | | | | 25 | | | | | 1.8 (P) | |
| 25 | | | | | | | 26 | | | | | 2.4 (P) | |
| 30 | | | | | | 22 | | | | | | 2.7 (P) | |
| 35 | | | 100 (0) 88 (56) | Tan limestone, moderately weathered, low to moderately hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 32.0' to 33.0' -moderate to steep, iron stained fracture at 32.0' -occasional gray limestone seams below 36.0' | 552.8 32.0 | | | | | | | | |
| 40 | | | 94 (78) 94 (78) | | | 546.8 38.0 | 17 | | | | | 111 | 28.3 (U) |
| | | | | | | 15 | | | | | 116 | 71.3 (U) | |
| | | | | | | 13 | | | | | 116 | 49.8 (U) | |

COMPLETION DEPTH: 53.0'

DEPTH TO WATER: 14.0

U=Unconfined P=Pocket Penetrometer

DATE: 6-27-90

DATE: 7-6-90

Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-42

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|---|--------|---------|-------------------------------|--|-------------------|--|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 584.8 | | | | | | | | |
| 50 | | | 88 (76) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) -shallow, iron stained fracture at 42.0' | | | | | | | | |
| | | | | | 531.8 | | | | | | | |
| | | | | | 53.0 | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |
| COMPLETION DEPTH: 53.0' DEPTH TO WATER: 14.0 | | | | | | U=Unconfined P=Pocket Penetrometer | | | | | | |
| DATE: 6-27-90 DATE: 7-6-90 | | | | | | Q=Unconsolidated-Undrained Triaxial T=Torvane | | | | | | |

LOG OF BORING NO. B-43

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH T _{SP} |
|-----------|--------|---------|-------------------------------|---|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------------------|
| | | | | SURF. EL. 583.3 | | | | | | | | |
| 5 | | | | Very stiff dark brown and brown clay (CH), with some calcareous particles (Terrace Deposit) -stiff, light brown below 4.0' | | 22 | | | | | | 27 (P) |
| | | | | | | 25 | | | | | | 20 (P) |
| | | | | | | 23 | | | | | | 19 (P) |
| | | | | | | 21 | | | | | | 21 (P) |
| | | | | | | 23 | | | | | | 15 (P) |
| 10 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| | | | | | | 26 | | | | | | 1.2 (P) |
| 20 | | | | -firm below 20.0' | | | | | | | | |
| | | | | | | 26 | | | | | | 0.9 (P) |
| 25 | | | | | 558.3 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 25.0 | 19 | | | | | | |
| | | | 100 (75) | | 555.8 | | | | | | | |
| | | | 98 (74) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 27.5 | 16 | | | | | 117 | 73.3 (U) |
| 30 | | | | -moderate fracture at 29.5' -gray limestone layer 30.0' to 30.7' -moderate fracture at 31.0' | 552.3 | | | | | | | |
| | | | 98 (68) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 31.0 | | | | | | | |
| | | | | -tan limestone layer 34.0' to 34.5' -tan limestone layer 36.6' to 36.9' | | | | | | | | |
| 35 | | | | | | 13 | | | | | 126 | 114 (U) |
| 40 | | | 96 (92) | | | | | | | | | |
| | | | | | | 15 | | | | | 117 | 53.6 (U) |
| | | | | | | 12 | | | | | 121 | 92.4 (U) |

COMPLETION DEPTH: 49.0'

DEPTH TO WATER: 7.8

DATE: 6-21-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
O=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. B-43

Collin County Detention Facility
McKinney, Texas

TYPE: Auger and Rotary Wash

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|----------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 583.3 | | | | | | | | |
| | [Symbol] | | 96 (92) | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 534.3 49.0 | 15 | | | | | 117 | 46.9 (U) |
| 50 | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 49.0'

DEPTH TO WATER: 7.8

DATE: 6-21-90

DATE: 7-6-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. B-44

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 584.5 | | | | | | | | |
| | | | | Very stiff dark brown clay (CH), with calcareous particles (Residual Soil) | 583.0 | 21 | | | | | | 2.5 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 1.5 | 19 | | | | | | 2.7 (P) |
| 5 | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 579.0 | 23 | | | | | | 2.7 (P) |
| | | | 100/ 2.9" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 5.5 577.0 | 16 | | | | | | 2.7 (P) |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 7.5 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 571.5 | | | | | | | |
| 15 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 13.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 567.6 | | | | | | | |
| 20 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 16.9 | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 560.0 | | | | | | | |
| 25 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 24.5 | | | | | | | |
| | | | 100/ 0.6" | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 40 | | | 100/ 0.75" | | 544.5 40.0 | | | | | | | |

COMPLETION DEPTH: 40.0'

DEPTH TO WATER: 10.3

U=Unconfined P=Pocket Penetrometer

DATE: 6-16-90

DATE: 7-6-90

O=Unconsolidated- Undrained Triaxial
T=Torvane

LOG OF BORING NO. B-45

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 586.8 | | | | | | | | |
| 5 | | | | Stiff to very stiff dark brown clay (CH), with calcareous particles (Terrace Deposit) | 580.8 | 22 | | | | | | 2.7 (P) |
| | | | | | 6.0 | 25 | 59 | 24 | 35 | | 97 | 1.9 (U) |
| | | | | | | 19 | | | | | | 2.7 (P) |
| 10 | | | | Stiff light brown silty clay (CL), with some limestone fragments, iron staining and calcareous particles (Terrace Deposit) | | 20 | | | | | | 2.2 (P) |
| | | | | | | 22 | | | | | | 1.8 (P) |
| 15 | | | | -with some shell fragments below 14.0' | | | | | | | | |
| | | | | | | 23 | | | | | | 1.2 (P) |
| 20 | | | | | | 24 | 43 | 20 | 23 | | | 1.2 (P) |
| 25 | | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 563.8 | | | | | | | |
| | | | | | 23.0 | 22 | | | | | 103 | 1.9 (U) |
| 30 | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 558.8 | | | | | | | |
| | | | 100/ 2.5" | | 28.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 556.8 | 19 | | | | | | 2.7 (P) |
| | | | | | 30.0 | | | | | | | |
| 35 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 554.3 | | | | | | | |
| | | | 100/ 0.6" | | 32.5 | | | | | | | |
| 40 | | | | | | | | | | | | |
| | | | 100/ 0.25" | | | | | | | | | |

COMPLETION DEPTH: 47.5' DEPTH TO WATER: 7.0
DATE: 6-17-90 DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-45

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH T _{9F} |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------------------|
| | | | | SURF. EL. 586.8 | | | | | | | | |
| | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 539.3 47.5 | | | | | | | |
| 50 | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | |

COMPLETION DEPTH: 47.5' DEPTH TO WATER: 7.0

DATE: 6-17-90

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer
Q=Unconsolidated-Undrained Triaxial T=Torvane

LOG OF BORING NO. B-46

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION: See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV./DEPTH | WATER CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------|------------------|-----------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL. 589.8 | | | | | | | | |
| | | | | Very stiff brown clay (CH), with calcareous nodules (Residual Soil) | 587.8 | 16 | 50 | 23 | 27 | | | 2.7 (P) |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 2.0 585.8 | 19 | | | | | | 2.7 (P) |
| 5 | | | 100 (0) | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) | 4.0 | | | | | | | |
| | | | 94 (70) | -gray limestone seams at 10.5' and 11.6' | | 14 | | | | | 123 | 44.4 (U) |
| 10 | | | | Gray limestone, moderate hardness, fossiliferous, with few shaley clay seams. (Austin Group) | 577.8 | | | | | | | |
| | | | 98 (94) | -moderate, iron stained fracture at 14.5' | 12.0 | 14 | | | | | 121 | 79.9 (U) |
| 15 | | | | | | | | | | | | |
| | | | 98 (92) | -steep, iron stained fracture at 20.8' | | 13 | | | | | 125 | 95.6 (U) |
| 20 | | | | | | | | | | | | |
| | | | 96 (96) | | | 13 | | | | | 125 | 80.8 (U) |
| 25 | | | | | | | | | | | | |
| | | | 100 (100) | | 559.8 | 14 | | | | | 123 | 82.1 (U) |
| 30 | | | | | 30.0 | | | | | | | |
| 35 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

COMPLETION DEPTH: 30.0'

DATE: 6-21-90

U=Unconfined P=Pocket Penetrometer
G=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P- 1

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|-----------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 587.8 | | | | | | | | |
| | [Hatched] | | | Very stiff to hard tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 585.1 | 11 | 43 | 22 | 21 | | | 2.7 (P) |
| | | | | | 2.7 | 14 | | | | | | 2.7 (P) |
| 5 | | | 100/ - 3" | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) -moderately weathered below 4.5' | 582.8 | | | | | | | |
| 5.0 | | | | | 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P- 2

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|-----------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 623.2 | | | | | | | | |
| | [Hatched] | | | Very stiff dark brown and brown clay (CH), with limestone fragments (Residual Soil) | 620.2 | 17 | | | | | | 2.7 (P) |
| | | | | | 3.0 | 16 | | | | | | 2.7 (P) |
| 5 | | | 100/ 9.75" | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 3.0' to 4.0' | 618.2 | | | | | | | |
| 5.0 | | | | | 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P- 3

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|---|-------------------------|------------------|--------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 638.0 | | | | | | | | |
| | | | | Very stiff to hard light brown silty clay (CL), with trace of limestone fragments (Residual Soil) | 636.7 | 10 | 42 | 24 | 18 | | | 2.7 (P) |
| | | | | | 1.3 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 636.0 | 14 | | | | | | 2.7 (P) |
| 5 | | | 100/ 1.25" | | 2.0 | | | | | | | |
| | | | | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 2.0' to 2.8' | 633.0 | | | | | | | |
| | | | | | 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P- 4

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 619.0 | | | | | | | | |
| | | | | Very stiff to hard tan and light brown silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 616.0 | 14 | 48 | 27 | 21 | | | 2.7 (P) |
| | | | | | 3.0 | | | | | | | |
| 5 | | | 100/ 3.75" | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 614.0 | | | | | | | |
| | | | | | 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial



LOG OF BORING NO. P-5

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|------------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 622.5 | | | | | | | | |
| | [Hatched] | | | Stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 619.5 | 15 | | | | | | 2.7 (P) |
| | | | | | 20 | 20 | | | | | | 2.7 (P) |
| 5 | [Diagonal] | | 100/11.5 | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 3.0 617.5 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P-6

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|------------|---------|-------------------------------|--|------------------------------|------------------|--------------|------------------|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 621.8 | | | | | | | | |
| | [Hatched] | | | Very stiff to hard brown clay (CH), with limestone fragments (Residual Soil) | 620.3 | 12 | | | | | | 2.7 (P) |
| | | | | | 1.5 | | | | | | | |
| 5 | [Diagonal] | | 100/11.75 | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 619.8 2.0 616.8 5.0 | 16 | | | | | | 2.7 (P) |
| 10 | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) -moderately weathered below 4.0' | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P-7

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------------------------------|----------|---------|-------------------------------|--|-------------------------|------------------|--------------|--|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 628.5 | | | | | | | | |
| | [Symbol] | | | Very stiff to hard brown silty clay (CL), with limestone fragments (Residual Soil) | 627.0 | 11 | | | | | | 2.7 (P) |
| | | | | | 1.5 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 626.5 | 17 | | | | | | 2.7 (P) |
| | | | | | 2.0 | | | | | | | |
| 5 | | | 100/-10" | | 623.5 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 5.0 | | | | | | | |
| | | | | -moderately weathered below 3.7 | | | | | | | | |
| 10 | | | | | | | | | | | | |
| COMPLETION DEPTH: 5.0 | | | | | | DATE: 6-22-90 | | U=Unconfined P=Pocket Penetrometer | | | | |
| DEPTH TO WATER: Dry on Completion | | | | | | DATE: 6-22-90 | | Q=Unconsolidated- T=Torvane Undrained Triaxial | | | | |

LOG OF BORING NO. P-8

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX(PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------------------------------|----------|---------|-------------------------------|--|-------------------------|------------------|--------------|--|-------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 642.3 | | | | | | | | |
| | [Symbol] | | | Very stiff light brown clay (CH), with limestone fragments (Residual Soil) | 640.8 | | | | | | | |
| | | | | | 1.5 | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 640.3 | | | | | | | |
| | | | | | 2.0 | | | | | | | |
| 5 | | | 100/11.75" | | 637.3 | | | | | | | |
| | | | | Tan limestone, highly weathered, low hardness, thin bedded, with clay layers. (Austin Group) | 5.0 | | | | | | | |
| | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| COMPLETION DEPTH: 5.0 | | | | | | DATE: 6-22-90 | | U=Unconfined P=Pocket Penetrometer | | | | |
| DEPTH TO WATER: Dry on Completion | | | | | | DATE: 6-22-90 | | Q=Unconsolidated- T=Torvane Undrained Triaxial | | | | |

LOG OF BORING NO. P-9

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 641.2 | | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 640.5 0.7 | | | | | | | |
| 5 | | | 100/8.5' | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 0.7' to 2.3' | 636.2 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial

LOG OF BORING NO. P-10

Collin County Detention Facility
McKinney, Texas

TYPE: Auger

LOCATION See Plate 2

| DEPTH, FT | SYMBOL | SAMPLES | BLOWS PER FOOT OR REC./RQD, % | STRATUM DESCRIPTION | LAYER ELEV. / DEPTH, FT | WATER CONTENT, % | LIQUID LIMIT | PLASTIC LIMIT, % | PLASTICITY INDEX (PI), % | PASSING NO. 200 SIEVE, % | UNIT DRY WEIGHT, PCF | COMPRESSIVE STRENGTH TSF |
|-----------|--------|---------|-------------------------------|--|-------------------------|------------------|--------------|------------------|--------------------------|--------------------------|----------------------|--------------------------|
| | | | | SURF. EL 646.7 | | | | | | | | |
| | | | | Very stiff tan silty clay (CL), with limestone fragments. (Completely Weathered Limestone) | 645.2 1.5 | | | | | | | |
| 5 | | | 100/5.9' | Tan limestone, moderately weathered, low to moderate hardness, thin bedded, with some clay seams. (Austin Group) -highly weathered 1.5' to 3.3' | 641.7 5.0 | | | | | | | |
| 10 | | | | | | | | | | | | |

COMPLETION DEPTH: 5.0

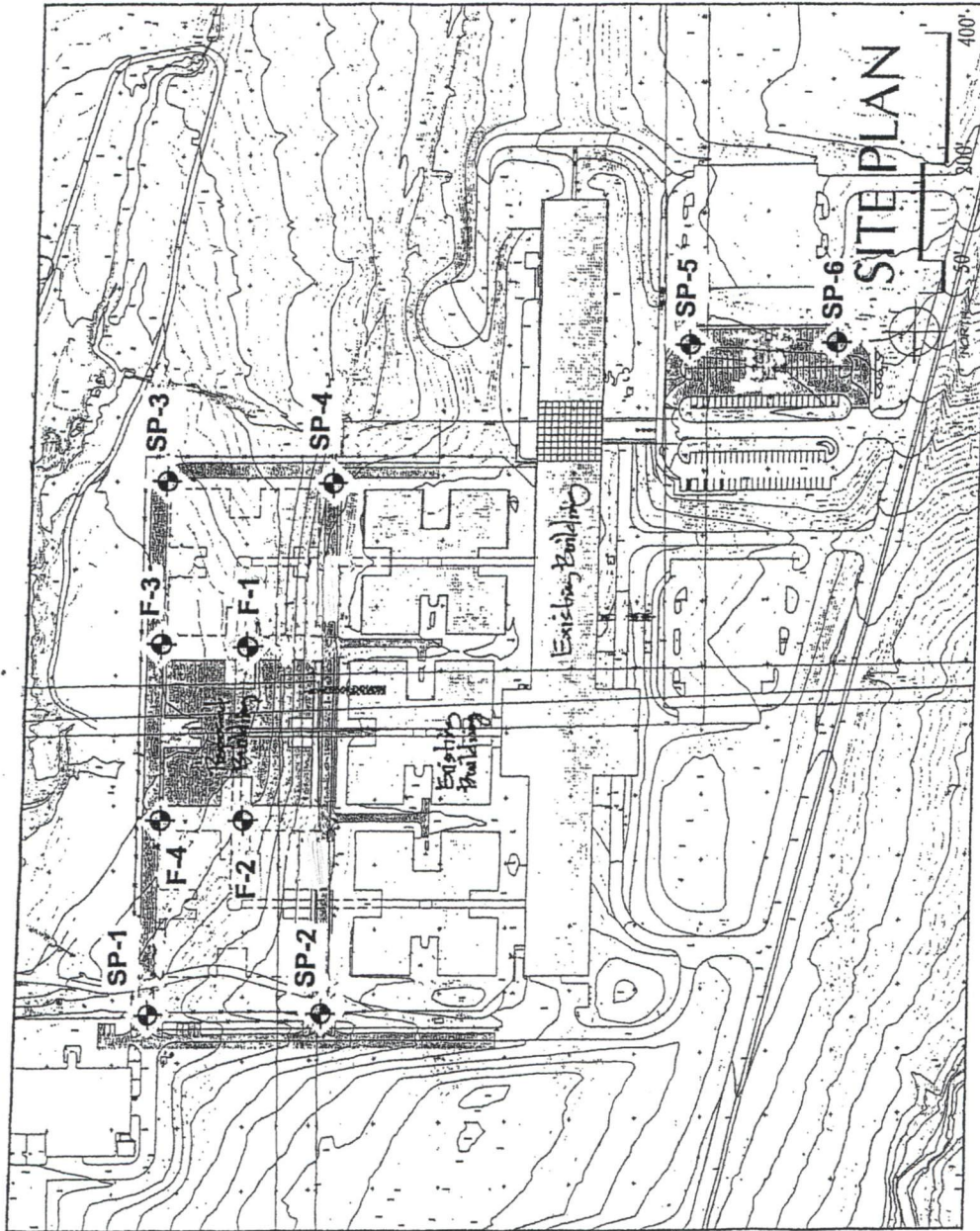
DATE: 6-22-90

U=Unconfined P=Pocket Penetrometer

DEPTH TO WATER: Dry on Completion

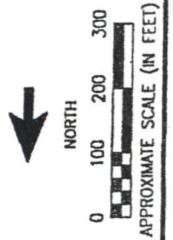
DATE: 6-22-90

Q=Unconsolidated- T=Torvane
Undrained Triaxial



LEGEND

- Approximate Boring Location



TERRA-MAR U.S. LABS
 11050 Ables Lane
 Dallas, TX 75229
 (972) 488-8800

Proposed Adult Detention Center Addition
 Collin County, Texas

Drawn by: AKH
 Date: 07JUN04
 Revised: --

PLAN OF BORINGS

Scale: 1 inch = 300 feet
 Project No. DE04-062 (71789)

LOG OF BORING F-1

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **06/16/2004**

Elev.:

Location: **See Figure 1**




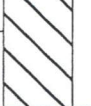






Depth to water at completion of boring: **7'**

Depth to water when checked: **During Drilling**

was: **16'**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|---|---|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 |  | FILL - Hard gray <u>calcareous CLAY</u> w/ limestone layers & rock fragments (CH) | 17 | | | | | | 4.5+ | | |
| |  | Hard brown <u>CLAY</u> (CH) | 24 | 62 | 24 | 38 | | 98.4 | 4.25 | | |
| |  | Hard light brown <u>CLAY</u> (CH) | 20 | | | | | | 4.5+ | | |
| |  | Very stiff to hard tan <u>CLAY</u> w/ trace sand (CH) | 20 | | | | | | 4.25 | | |
| |  | -seepage @ 16' | 21 | 50 | 18 | 32 | | 107.0 | 3.25 | | |
| |  | | 22 | 49 | 20 | 29 | | 106.1 | 4.5 | | |
| |  | | 23 | | | | | | 4.5+ | | |
| |  | | 26 | | | | | | 4.5 | | |
| |  | | 28 | 66 | 26 | 40 | | 98.0 | 4.25 | | |
| |  | Gray <u>LIMESTONE</u> | | | | | | | | | |

Notes: **Completion Depth: 60.0'**

FIGURE 2

LOG OF BORING F-1

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|---|--|------------------------------|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">50/0.25"</div> <div style="margin-bottom: 10px;">50/0.50" 50/0.00"</div> <div style="margin-bottom: 10px;">50/0.50" 50/0.50"</div> <div style="margin-bottom: 10px;">50/0.25" 50/0.25"</div> <div style="margin-bottom: 10px;">50/0.75" 50/0.25"</div> <div style="margin-bottom: 10px;">50/0.50" 50/0.25"</div> </div> | | <p>Gray <u>LIMESTONE</u></p> | | | | | | | | | |
| <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">65</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">75</div> </div> | | | | | | | | | | | |

Notes: **Completion Depth: 60.0'**

FIGURE 3

LOG OF BORING F-2

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **06/11/2004** Elev.:

Location: **See Figure 1**

Depth to water at completion of boring: **13.5**

Depth to water when checked: **During Drilling**

was: **22'**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | 200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|--|---|---------|---------|---------|----|----------|-----------|--------------|--------------|-------------|
| 0 | [Symbol] | FILL - Very stiff brown <u>CLAY</u> w/ limestone fragments (CH) | 24 | | | | | | 3.5 | | |
| | [Symbol] | Very stiff brown to tan <u>CLAY</u> w/ trace sand (CH) | 22 | | | | | | 4.0 | | |
| | [Symbol] | Soft to hard tan <u>CLAY</u> (CH) | 19 | 47 | 20 | 27 | | 110.0 | 4.5+ | | |
| | [Symbol] | | 22 | | | | | | 2.25 | | |
| | [Symbol] | | 21 | 55 | 20 | 35 | | 107.8 | 4.5+ | | |
| | [Symbol] | | 23 | | | | | | 3.0 | | |
| | [Symbol] | -seepage @ 22' | 29 | 50 | 22 | 28 | | 94.8 | 0.25 | | |
| | [Symbol] | Tan weathered <u>LIMESTONE</u> | | | | | | | | | |
| | [Symbol] | Gray <u>LIMESTONE</u> | | | | | | | | | |
| | [Symbol] | - w/ weathered seams from 34 to 36' | | | | | | | | | |

Notes: **Completion Depth: 55.0'**

FIGURE 4

LOG OF BORING F-2

Project: Proposed Adult Detention Center - McKinney, Texas

Project No.: DE04-062

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|--|--|-----------------------|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">65</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">75</div> </div> | | <p>Gray LIMESTONE</p> | | | | | | | | | |

Notes: Completion Depth: 55.0'

FIGURE 5

LOG OF BORING F-3

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **06/01/2004** Elev.: _____

Location: **See Figure 1**

Depth to water at completion of boring: **11'**

Depth to water when checked: **During Drilling**

was: **12'**

Depth to caving when checked: **At Completion**

was: **55'**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|--|--|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 | | Medium stiff to very stiff brown & gray <u>CLAY</u> (CH) | 24 | 56 | 21 | 35 | | 100.6 | 2.5 | | |
| 5 | | Hard tan & gray <u>CLAY</u> w/ trace calcareous nodules (CH) | 19 | | | | | 107.7 | 4.5 | | |
| 10 | | | 19 | 50 | 18 | 32 | | 109.6 | 4.25 | | |
| 15 | | Very stiff tan <u>CLAY</u> w/ trace calcareous nodules (CH) - seepage @ 12' | 23 | 51 | 18 | 33 | | 105.9 | 3.5 | | |
| 20 | | | 22 | | | | | 107.7 | 3.5 | | |
| 25 | | Very stiff to hard brown and gray <u>CLAY</u> w/ calcareous nodules (CH) | 24 | | | | | 105.2 | 4.5+ | | |
| 30 | | | 32 | | | | | 92.0 | 4.0 | | |
| 35 | | Tan weathered <u>LIMESTONE</u> | | | | | | | | | |

Notes: **Completion Depth: 57.0'**

FIGURE 6

LOG OF BORING F-3

Project: Proposed Adult Detention Center - McKinney, Texas

Project No.: DE04-062

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|--|--|---|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">65</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">75</div> </div> | | <p>Gray <u>LIMESTONE</u></p> <p>- w/ weathered seams from 42 to 44'</p> | | | | | | | | | |

Notes: Completion Depth: 57.0'

FIGURE 7

LOG OF BORING F-4

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.: _____

Location: **See Figure 1**

Depth to water at completion of boring: **12'**

Depth to water when checked: **During Drilling**

was: **17'**

Depth to caving when checked: **At Completion**

was: **50'**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|--|-----------------------------|--|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 | | Hard brown <u>CLAY</u> (CH) | 18 | | | | | | 4.5+ | | |
| | | | 18 | 53 | 20 | 33 | | 102.8 | 4.5+ | | |
| | | | Very stiff to hard reddish brown to brown <u>CLAY</u> (CH) | 18 | | | | | 4.5+ | | |
| | | | | 18 | | | | | 4.5+ | | |
| | | | | 19 | 53 | 20 | 33 | | 104.5 | 4.0 | |
| | | | Very stiff light reddish brown <u>CLAY</u> (CH) | 24 | | | | | 3.0 | | |
| | | | -seepage @ 17' | | | | | | | | |
| | | | Very stiff tan <u>CLAY</u> w/ calcareous seams (CH) | 25 | | | | | 2.5 | | |
| | | | Very stiff brown to reddish brown <u>CLAY</u> w/ calcareous nodules (CH) | 29 | 72 | 23 | 49 | | 95.4 | 3.25 | |
| | | | | 27 | | | | | 3.0 | | |
| | | | Tan weathered <u>LIMESTONE</u> | | | | | | | | |

Notes: **Completion Depth: 60.0'**

FIGURE 8

LOG OF BORING F-4

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | 200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|--|--|------------------------------|---------|---------|---------|----|----------|-----------|--------------|--------------|-------------|
| <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">40</div> <div style="margin-bottom: 10px;">45</div> <div style="margin-bottom: 10px;">50</div> <div style="margin-bottom: 10px;">55</div> <div style="margin-bottom: 10px;">60</div> <div style="margin-bottom: 10px;">65</div> <div style="margin-bottom: 10px;">70</div> <div style="margin-bottom: 10px;">75</div> </div> | | <p>Gray <u>LIMESTONE</u></p> | | | | | | | | | |

Notes: **Completion Depth: 60.0'**

FIGURE 9

LOG OF BORING SP-1

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.:

Location: **See Figure 1**


Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|---|--|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 |  | Very stiff brown <u>CLAY</u> (CH) | | | | | | | 3.5 | | |
| 4.0 | | Very stiff tan <u>calcareous CLAY</u> (CH) | | | | | | | 4.0 | | |
| 5.0 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |

Notes: **Completion Depth: 5.0'**

FIGURE 10

LOG OF BORING SP-2

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.: _____

Location: **See Figure 1**


Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|---|---|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 |  | FILL - Very stiff tan, gray & brown <u>CLAY</u> w/ limestone fragments, organics & iron stains (CH) | | | | | | | 3.5 | | |
| 5 | | Tan severely weathered <u>LIMESTONE</u> | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |

Notes: **Completion Depth: 5.0'**

FIGURE 11

LOG OF BORING SP-3

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.: _____

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | 200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|--|--|---------|---------|---------|----|----------|-----------|--------------|--------------|-------------|
| 0 | | Very stiff tan & gray <u>calcareous CLAY</u> w/ limestone fragments (CH) | | | | | | | | 2.75 | |
| 5 | | Tan <u>weathered LIMESTONE</u> | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |

Notes: **Completion Depth: 5.0'**

FIGURE 12

LOG OF BORING SP-4

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.:

Location: **See Figure 1**


Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | 200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|---|--|---------|---------|---------|----|----------|-----------|--------------|--------------|-------------|
| 0 |  | FILL - Brown <u>CLAY</u> w/ limestone fragments & organics (CH) | | | | | | | | | |
| 5 | | Very stiff brown to tan <u>CLAY</u> w/ tan limestone layers & iron stains (CH) | | | | | | | 2.75 | | |
| 5 | | Tan <u>severely weathered Limestone</u> | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |

Notes: **Completion Depth: 5.0'**

FIGURE 13

LOG OF BORING SP-5

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.:

Location: **See Figure 1**

Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | -200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|--|--|---------|---------|---------|----|-----------|-----------|--------------|--------------|-------------|
| 0 | | Hard brown <u>CLAY</u> w/ sand & calcareous nodules (CH) | | | | | | | 4.5+ | | |
| 5 | | Soft brown <u>CLAY</u> w/ limestone fragments (CH) | | | | | | | 0.25 | | |
| 5.0 | | Tan <u>weathered LIMESTONE</u> | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |

Notes: **Completion Depth: 5.0'**

FIGURE 14

LOG OF BORING SP-6

Project: **Proposed Adult Detention Center - McKinney, Texas**

Project No.: **DE04-062**

Date: **05/27/2004** Elev.:

Location: **See Figure 1**

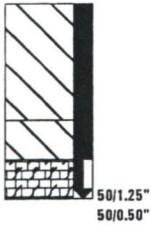
Depth to water at completion of boring: **Dry**

Depth to water when checked: **During Drilling**

was: **Dry**

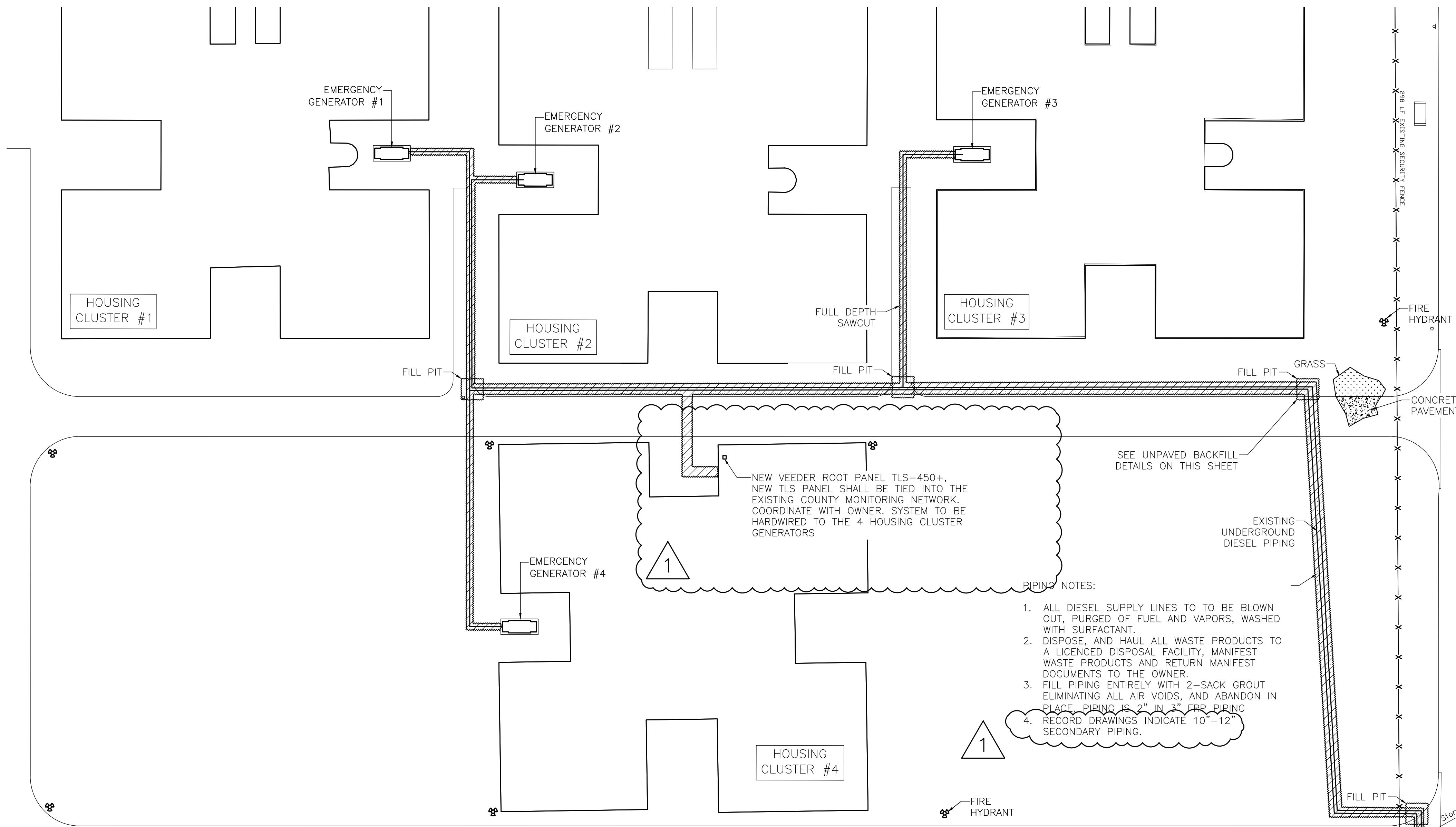
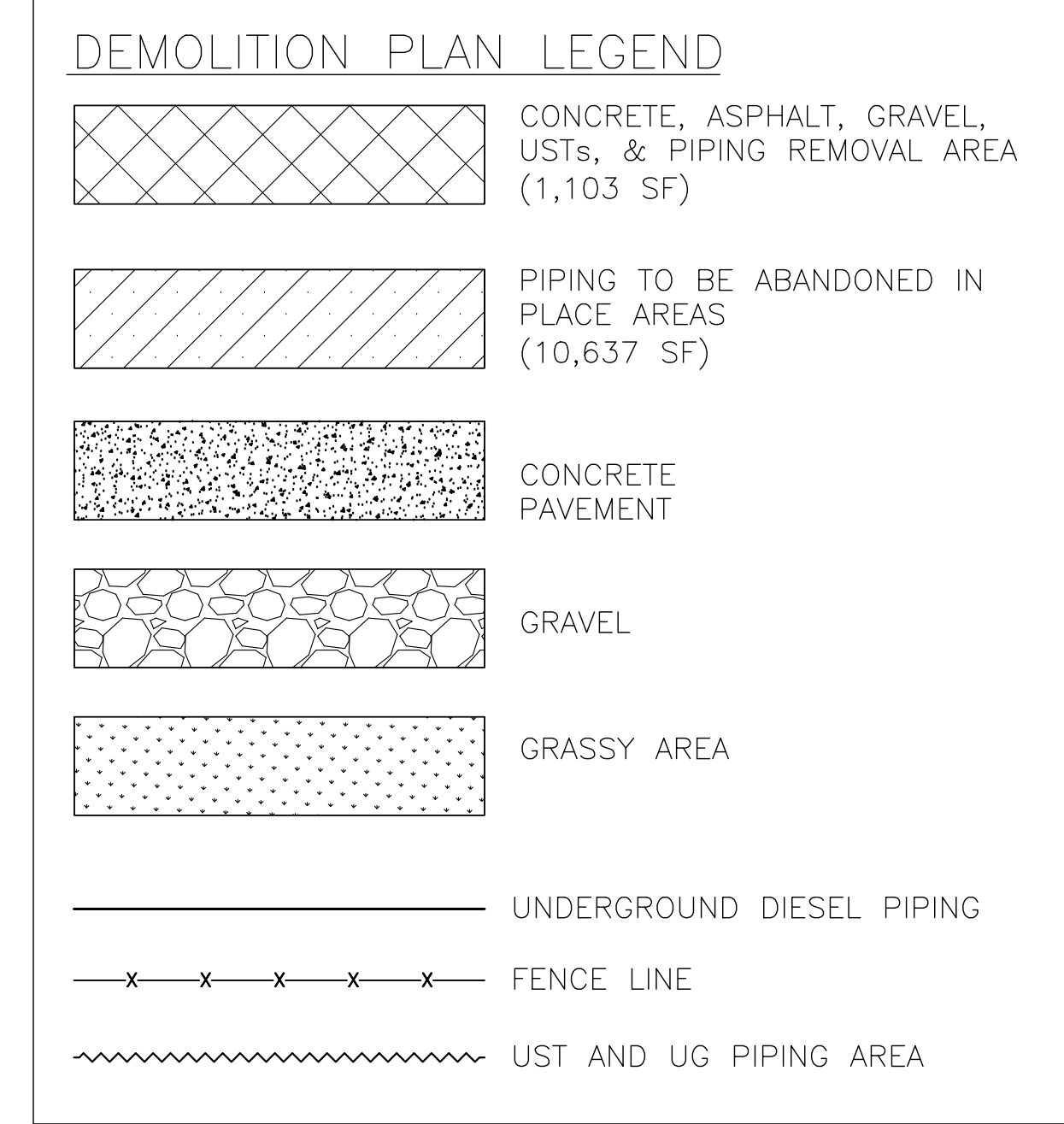
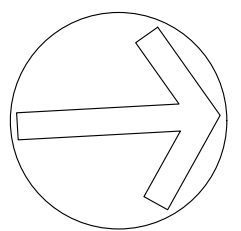
Depth to caving when checked: **N/A**

was: **N/A**

| ELEVATION/ DEPTH (feet) | SOIL SYMBOLS SAMPLER SYMBOLS & FIELD TEST DATA | DESCRIPTION | MC % | LL % | PL % | PI | 200 % | DD pcf | P.PEN tsf | UNCON tsf | Strain % |
|-------------------------------|---|--------------------------------------|---------|---------|---------|----|----------|-----------|--------------|--------------|-------------|
| 0 |  | Hard brown <u>CLAY</u> (CH) | | | | | | | 4.5+ | | |
| -5 | | Hard tan <u>calcareous CLAY</u> (CH) | | | | | | | 4.5+ | | |
| -5 | | Tan <u>weathered LIMESTONE</u> | | | | | | | | | |
| -10 | | | | | | | | | | | |
| -15 | | | | | | | | | | | |
| -20 | | | | | | | | | | | |
| -25 | | | | | | | | | | | |
| -30 | | | | | | | | | | | |
| -35 | | | | | | | | | | | |

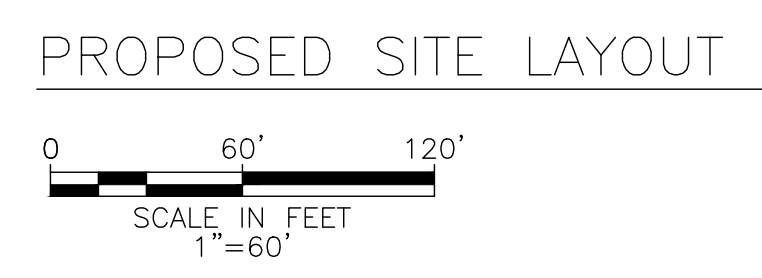
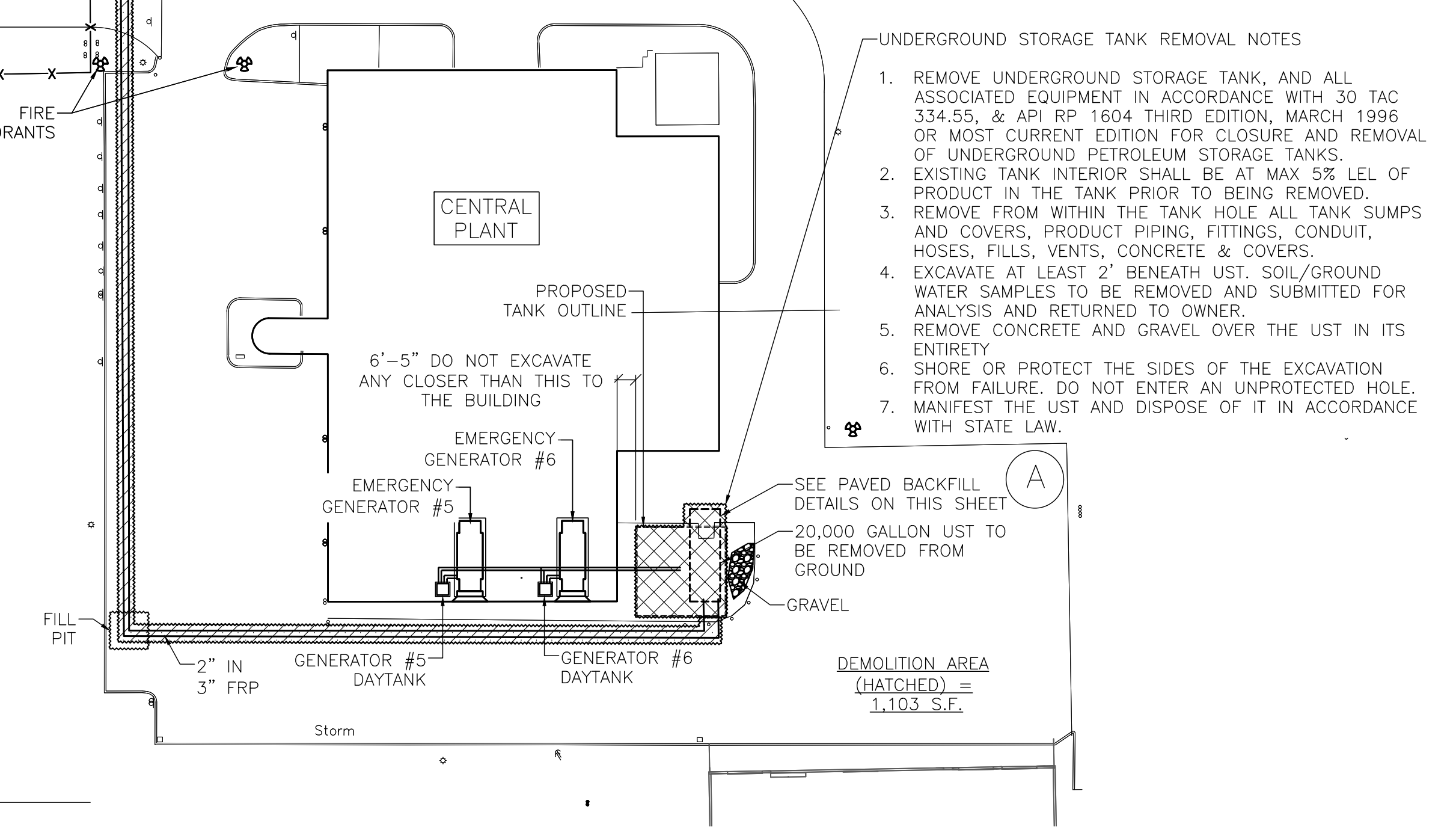
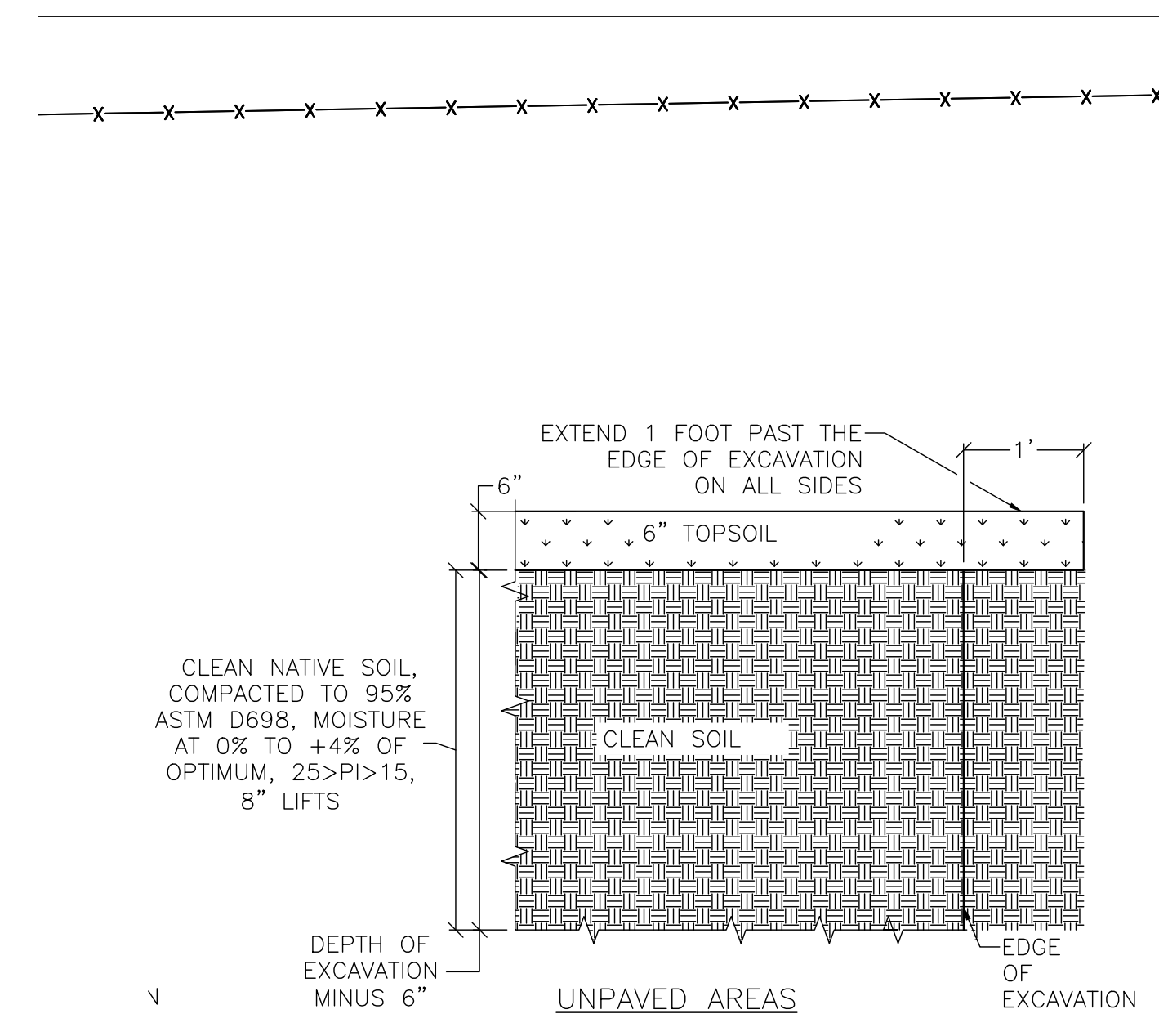
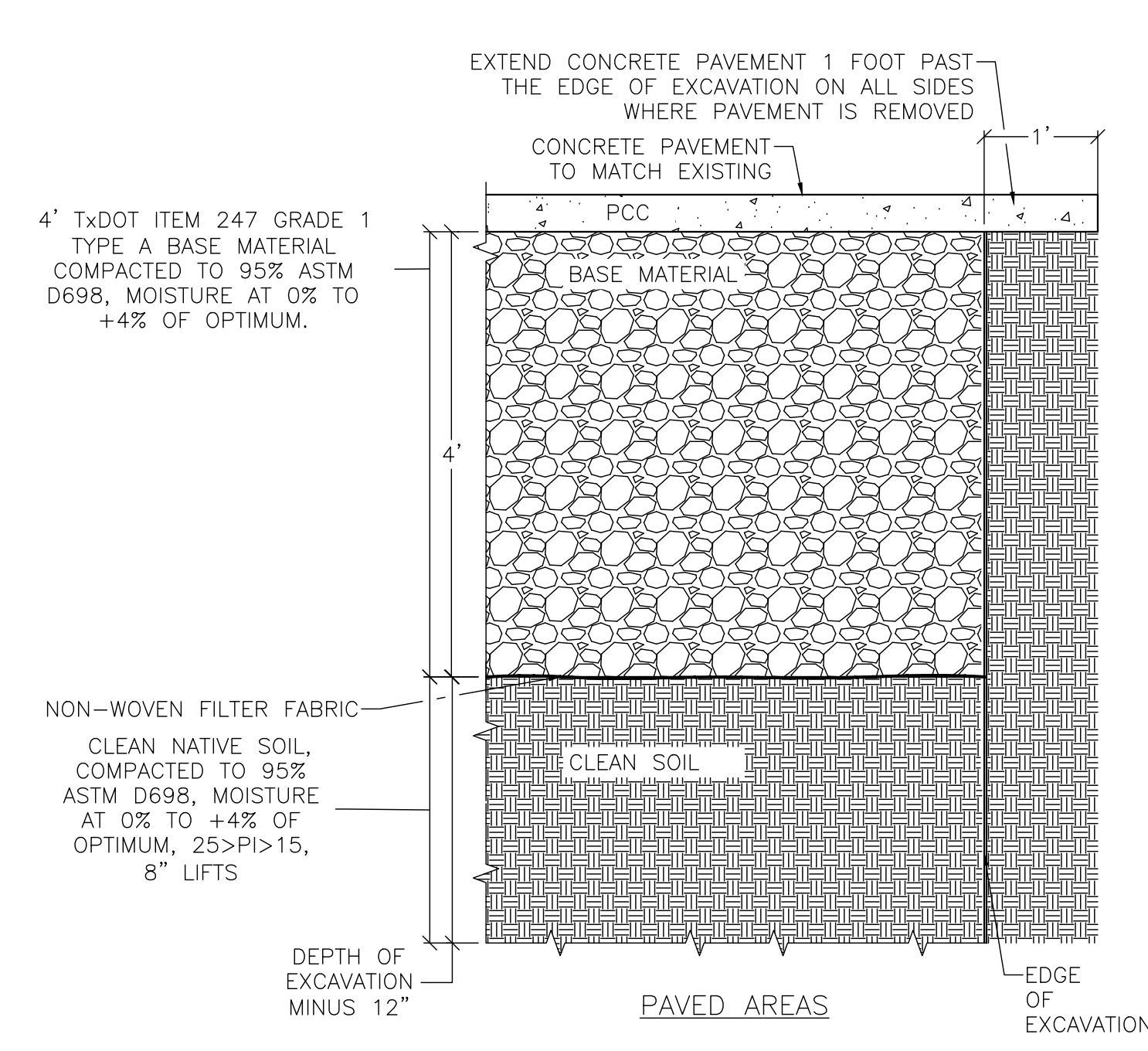
Notes: **Completion Depth: 5.0'**

FIGURE 15



- PIPING NOTES:**
1. ALL DIESEL SUPPLY LINES TO BE BLOWN OUT, PURGED OF FUEL AND VAPORS, WASHED WITH SURFACTANT.
 2. DISPOSE, AND HAUL ALL WASTE PRODUCTS TO A LICENCED DISPOSAL FACILITY, MANIFEST WASTE PRODUCTS AND RETURN MANIFEST DOCUMENTS TO THE OWNER.
 3. FILL PIPING ENTIRELY WITH 2-SACK GROUT ELIMINATING ALL AIR VOIDS, AND ABANDON IN PLACE. PIPING IS 2" IN 3" FRP PIPING
 4. RECORD DRAWINGS INDICATE 10'-12" SECONDARY PIPING.

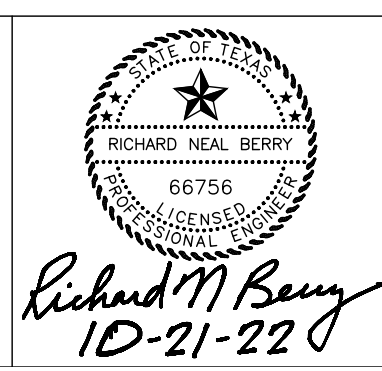
- CONTRACTOR NOTES:**
1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES IN THE AREA PRIOR TO DIGGING.
 2. CONTRACTOR TO LOCK OUT/TAG OUT ALL ELECTRICAL TO THIS SYSTEM IN ACCORDANCE WITH 40 CFR 1926.417. THIS INCLUDES, BUT IS NOT LIMITED TO, IMPRESSED CURRENT SYSTEM, PUMP MOTOR, LIGHTS, LEAK DETECTION, AND FUEL MANAGEMENT SYSTEM.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING THE EXISTING FUEL, APPROXIMATELY 16,500 GALLONS, LOCATED IN THE EXISTING 20,000 GALLON UNDERGROUND STORAGE TANK TO DETERMINE IF IT CAN BE RE-USED. THE DIESEL FUEL QUALITY TESTING SHALL BE CONDUCTED BY A FIRM EXPERIENCED IN FILTRATION AND MAINTENANCE OF DIESEL FUEL. TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE ASTM STANDARDS AND INCLUDE, BUT ARE NOT LIMITED TO: A) BOTTOM SEDIMENTS - BOTH SOLIDS AND WATER, B) CETANE, (CETANE NUMBER(ASM D6890)), C) MICROBE GROWTH, D) THERMAL STABILITY, AND ANY OTHER TEST DEEMED NECESSARY BY THE FUEL QUALITY FIRM TO DETERMINE THE QUALITY OF THE EXISTING FUEL. THE CONTRACTOR SHALL REPORT THE RESULTS OF THESE TESTS IN WRITING TO THE COUNTY STATING THAT IT IS USABLE OR NOT USABLE FOR EMERGENCY GENERATORS. IF THE FUEL IS USABLE, IT SHALL BE STORED AND USED TO FILL THE NEW DAYTANKS. IF THE FUEL IS NOT REUSEABLE, IT SHALL BE SOLD TO A FIRM LICENCED TO TRANSPORT AND DISPOSE OF USED FUEL. THE COUNTY WILL BE RESPONSIBLE FOR FILLING ANY TANKS NOT FILLED FROM THE EXISTING FUEL SUPPLY. THE CONTRACTOR WILL PROVIDE A UNIT PRICE CREDIT TO REMOVE AND SELL THE FUEL AS INDICATED ON THE BID FORM: 1) CONTRACTOR TO REMOVE FUEL AND DISPOSE OF AT A LICENCED USED OIL FACILITY AND 2) CONTRACTOR TO REMOVE FUEL AND RESELL.
 4. CONTRACTOR TO HAVE TEST SAMPLES 1 FOOT BELOW EVERY 20 FEET. ALL TEST HOLES TO BE PROTECTED UNTIL FILLED BACK IN.



A BACKFILL DETAIL
NOT TO SCALE

D-1

| | | | |
|-------------|------------|---|-----|
| DESIGNED BY | CDS | | |
| DRAWN BY | DAG | | |
| CHECKED BY | RNB | | |
| REVIEWED BY | RNB | | |
| DATE | 10-21-2022 | | |
| NO | DATE | REVISION | BY |
| 1 | 1/27/23 | CONTRACTORS FUEL NOTES, EXISTING PIPE SIZE NOTE, AND VEEDER ROOT NOTE ADDED | RNB |



CDS muery
ENGINEERS | SURVEYORS

100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
(210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

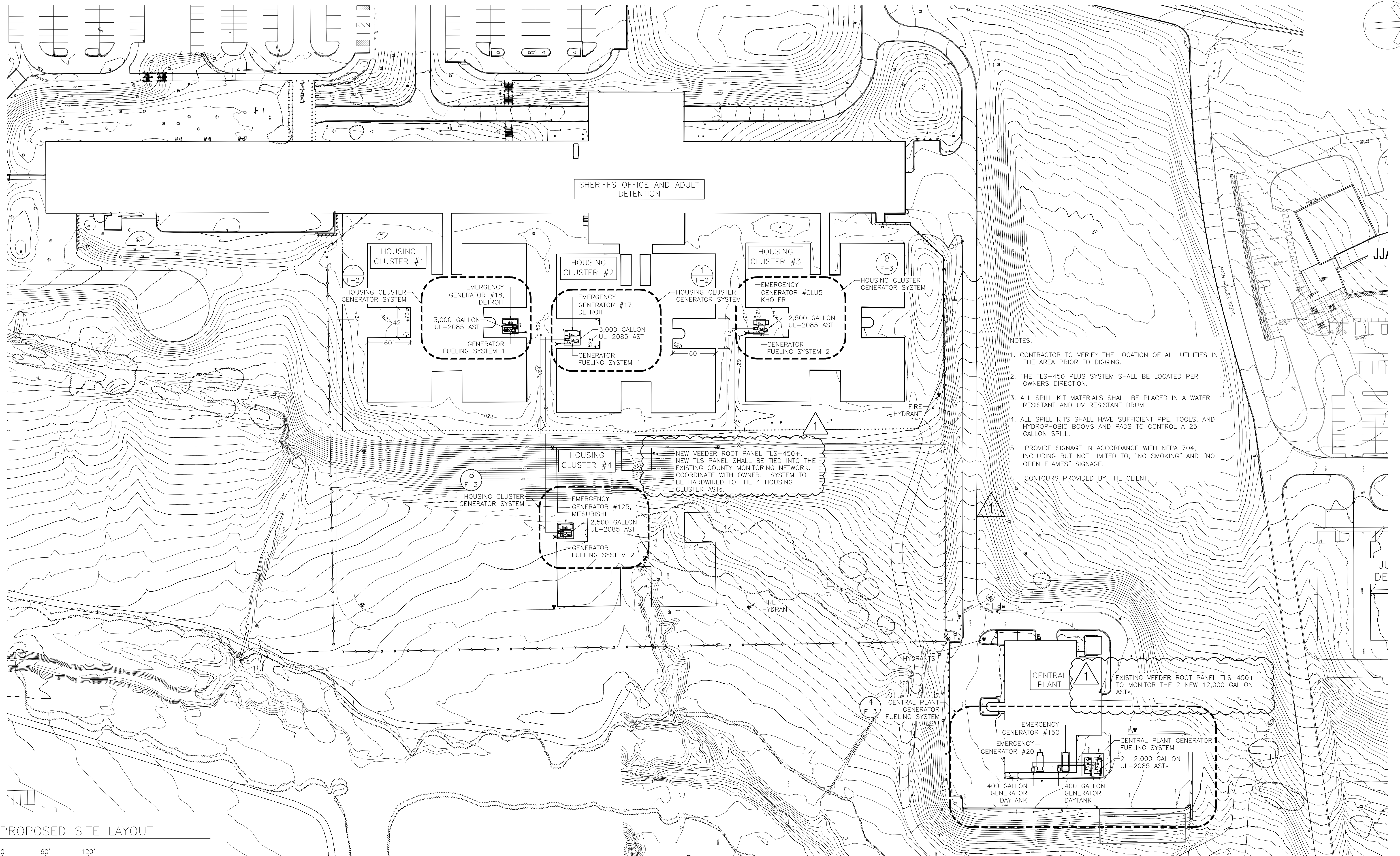
MD ENGINEERING

Texas Registered Firm No. F-7489
1255 West 15th Street, Suite 300
Plano, TX 75075
469.467.0200
Email: mdengco@md-eng.com
Project Number: 221449

DEMOLITION PLAN

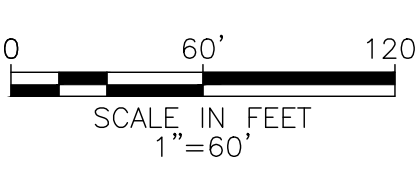
COLLIN COUNTY JUSTICE CENTER
EMERGENCY GENERATOR FUELING SYSTEM REPLACEMENT
4300 COMMUNITY AVENUE
MCKINNEY, TEXAS 75071

| | |
|-----------|-----------|
| SHEET NO. | 3 |
| OF | 16 SHEETS |
| FILE NO. | 122010 |



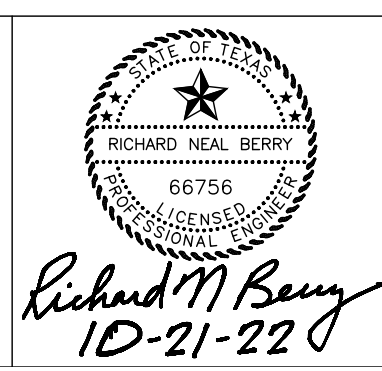
- NOTES:
1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES IN THE AREA PRIOR TO DIGGING.
 2. THE TLS-450 PLUS SYSTEM SHALL BE LOCATED PER OWNERS DIRECTION.
 3. ALL SPILL KIT MATERIALS SHALL BE PLACED IN A WATER RESISTANT AND UV RESISTANT DRUM.
 4. ALL SPILL KITS SHALL HAVE SUFFICIENT PPE, TOOLS, AND HYDROPHOBIC BOOMS AND PADS TO CONTROL A 25 GALLON SPILL.
 5. PROVIDE SIGNAGE IN ACCORDANCE WITH NFPA 704, INCLUDING BUT NOT LIMITED TO, "NO SMOKING" AND "NO OPEN FLAMES" SIGNAGE.
 6. CONTOURS PROVIDED BY THE CLIENT.

PROPOSED SITE LAYOUT



F-1

| | | | | | |
|-------------|------------|---------------------------------|----------|-----|----|
| DESIGNED BY | CDS | | | | |
| DRAWN BY | DAG | | | | |
| CHECKED BY | RNB | | | | |
| REVIEWED BY | RNB | | | | |
| DATE | 10-21-2022 | | | | |
| NO | DATE | VEEDER ROOT PANEL NOTES REVISED | REVISION | RNB | BY |
| 2/6/23 | | | | | |



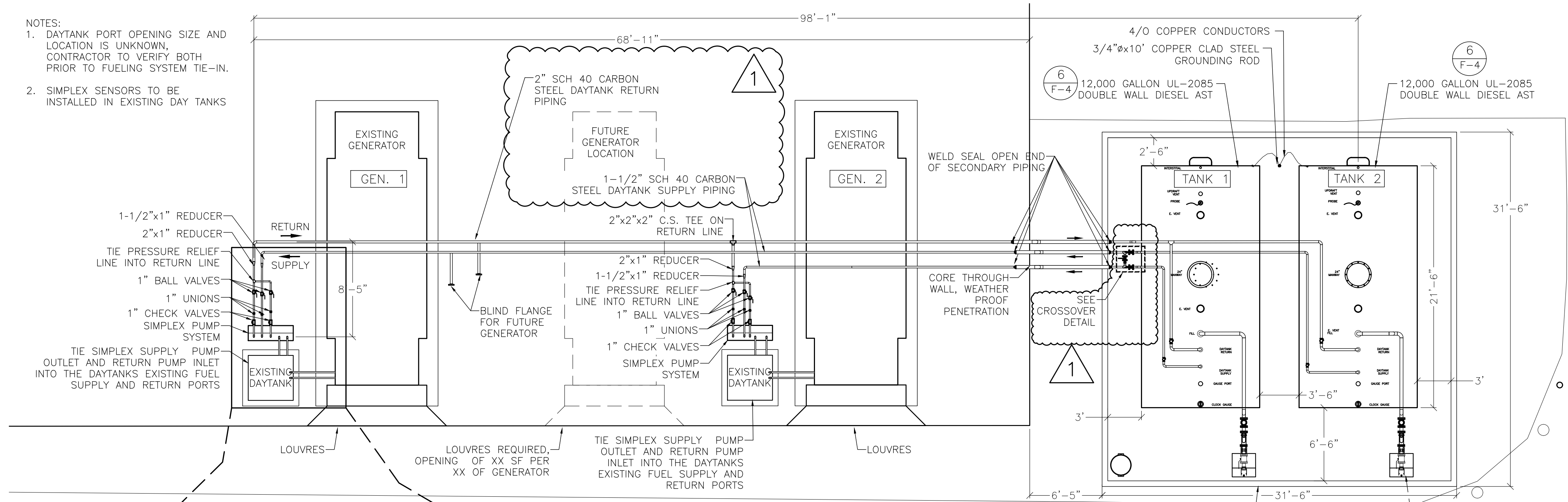
CDS muery
ENGINEERS | SURVEYORS
 100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
 (210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

MD ENGINEERING
 Texas Registered Firm No. F-7489
 1255 West 15th Street, Suite 300
 Plano, TX 75075
 469.467.0200
 Email: mdengco@md-eng.com
 Project Number: 221449

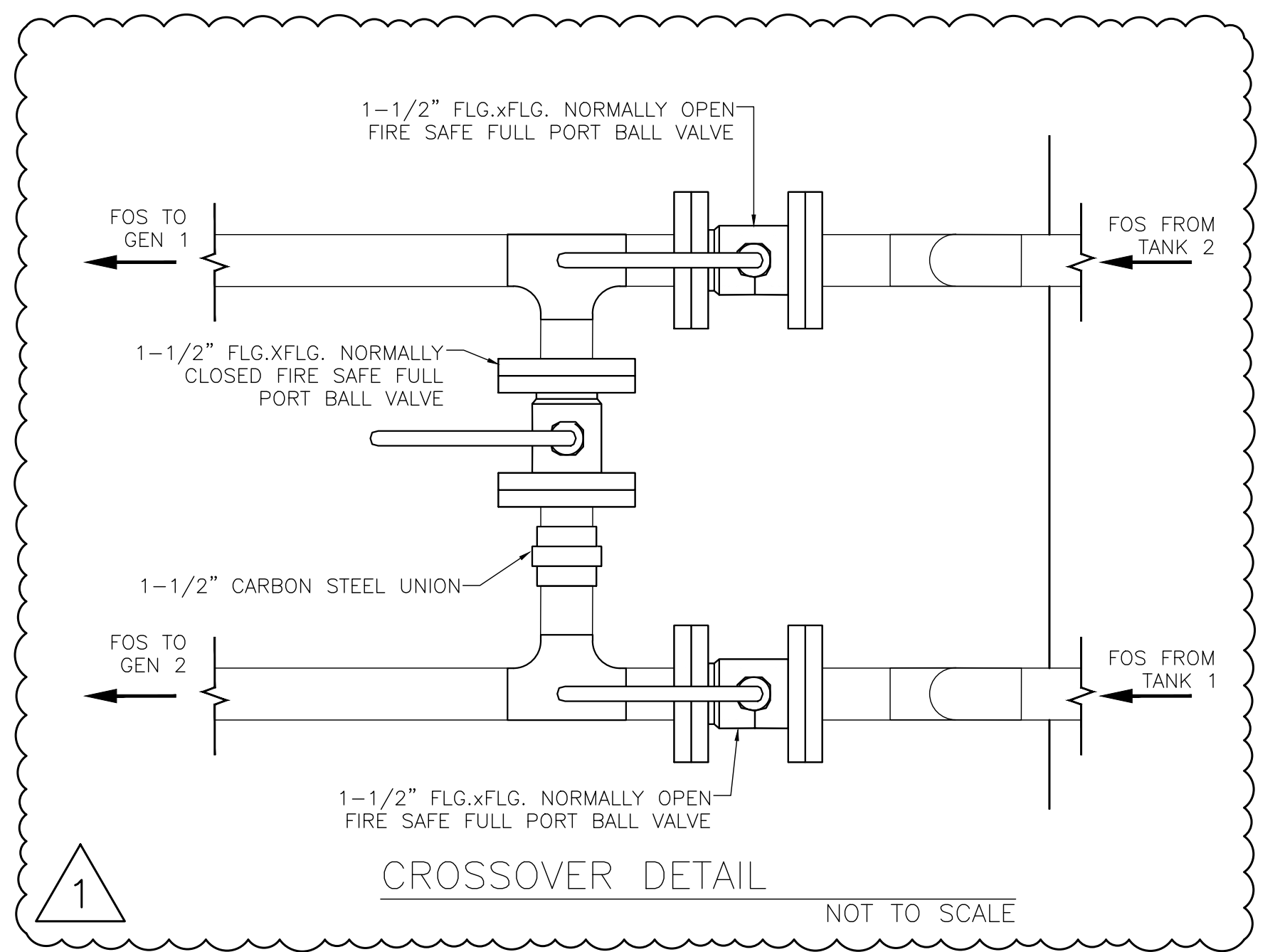
PROPOSED SITE LAYOUT
COLLIN COUNTY JUSTICE CENTER
EMERGENCY GENERATOR FUELING SYSTEM REPLACEMENT
 4300 COMMUNITY AVENUE
 MCKINNEY, TEXAS 75071

| | |
|-----------|-----------|
| SHEET NO. | 5 |
| OF | 16 SHEETS |
| FILE NO. | 122010 |

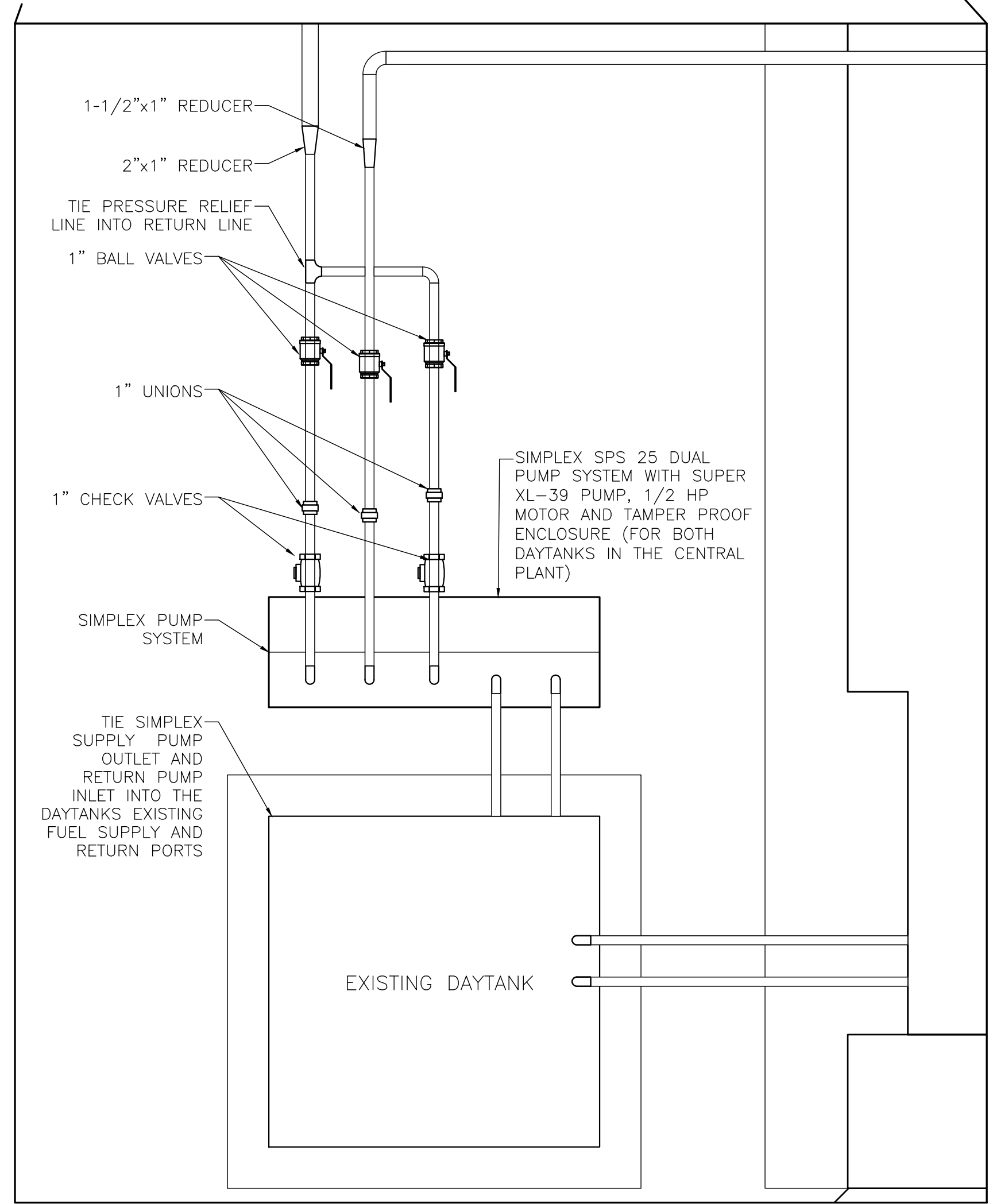
- NOTES:
 1. DAYTANK PORT OPENING SIZE AND LOCATION IS UNKNOWN, CONTRACTOR TO VERIFY BOTH PRIOR TO FUELING SYSTEM TIE-IN.
 2. SIMPLEX SENSORS TO BE INSTALLED IN EXISTING DAY TANKS



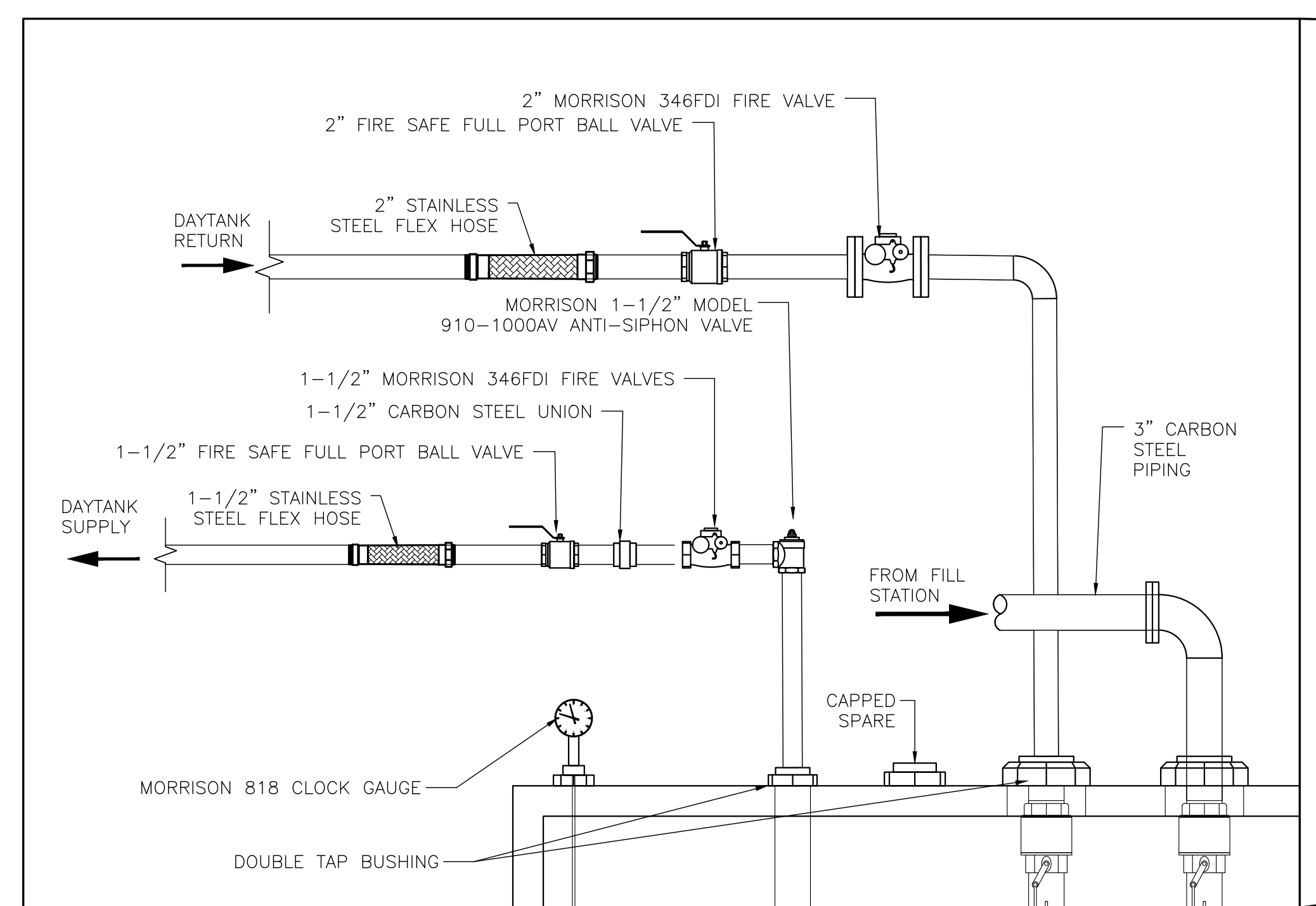
4
F-1
CENTRAL PLANT GENERATOR FUELING SYSTEM
SCALE IN FEET 1"=6'



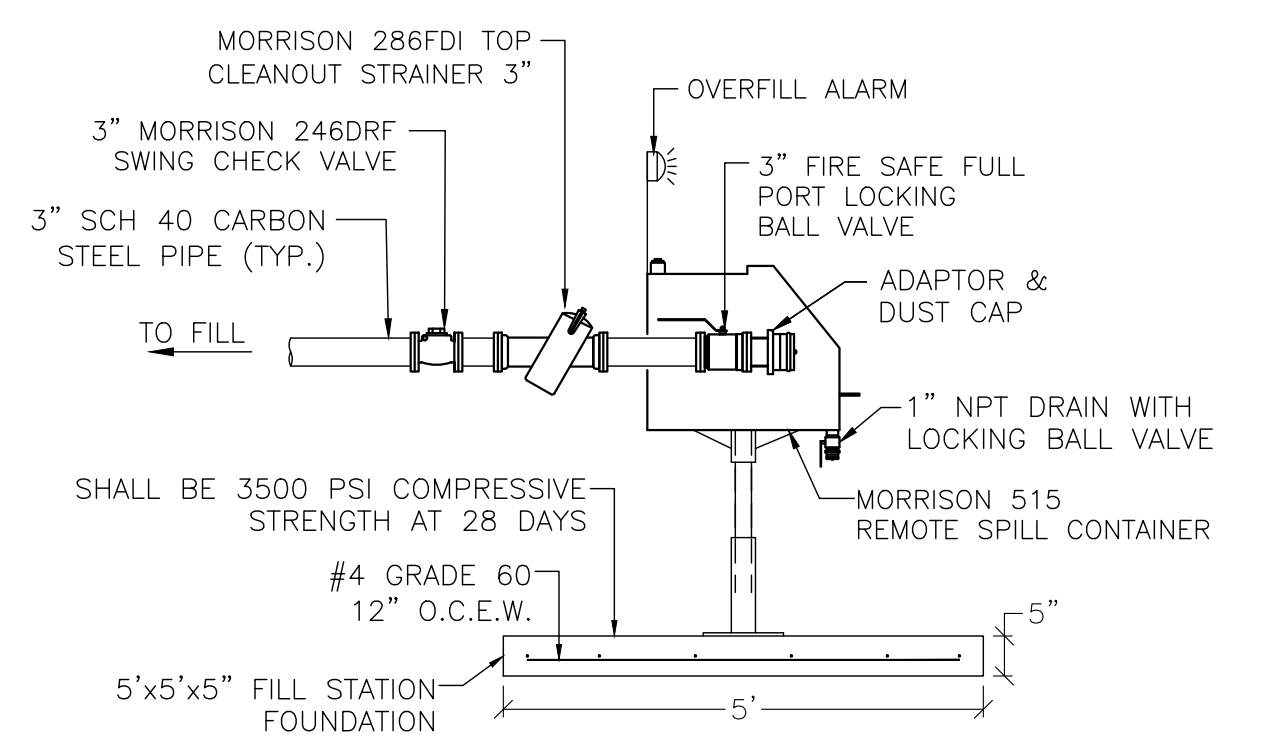
1
CROSSOVER DETAIL NOT TO SCALE



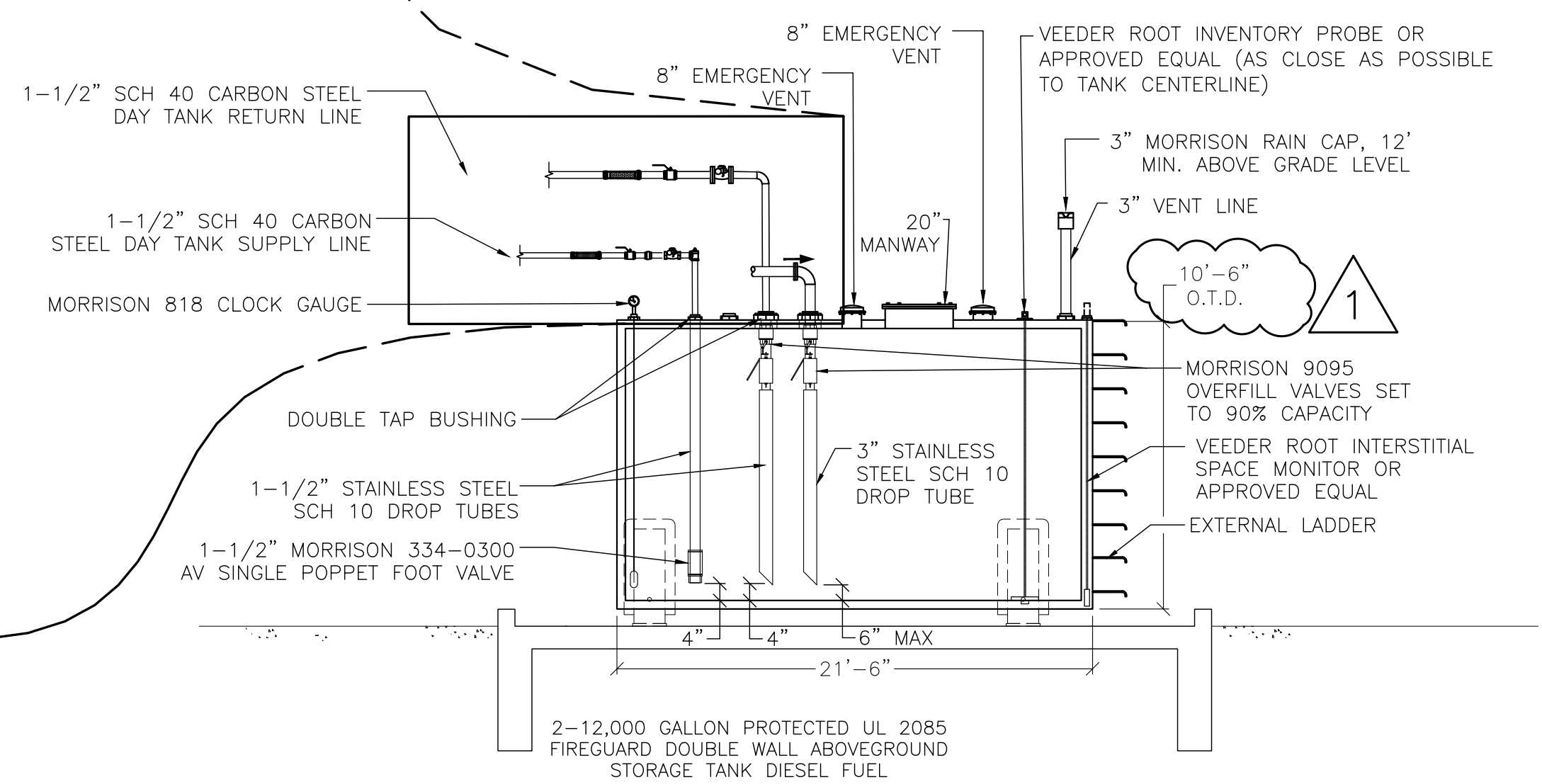
SIMPLEX PIPING DETAIL NOT TO SCALE



PUMP PIPING DETAIL NOT TO SCALE

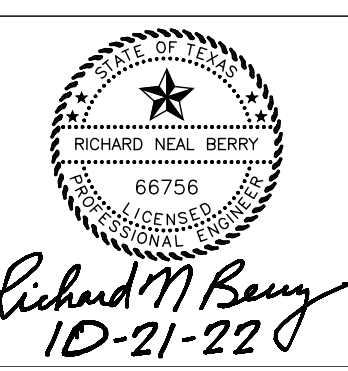


5
F-4
DIESEL FILL STATION NOT TO SCALE



6
F-3
12,000 GALLON DIESEL AST DETAIL NOT TO SCALE

| | | | |
|-------------|------------|--|-----|
| DESIGNED BY | CDS | | |
| DRAWN BY | DAG | | |
| CHECKED BY | RNB | | |
| REVIEWED BY | RNB | | |
| DATE | 10-21-2022 | | |
| NO | DATE | ADDED CROSSOVER ASSEMBLY, PIPING NOTE AND TANK DIMENSION REVISED | RNB |
| | | REVISION | BY |



SCDS muery
 ENGINEERS | SURVEYORS
 100 NE LOOP 410, STE. 300 | SAN ANTONIO, TEXAS 78216
 (210) 581-1111 | TBPE NO. F-1733 | TBPLS NO. 100495-00

MD ENGINEERING
 Texas Registered Firm No. F-7489
 1255 West 15th Street, Suite 300
 Plano, TX 75075
 469.467.0200
 Email: mdengco@md-eng.com
 Project Number: 221449

CENTRAL PLANT GENERATOR FUELING SYSTEM
 COLLIN COUNTY JUSTICE CENTER
 EMERGENCY GENERATOR FUELING SYSTEM REPLACEMENT
 4300 COMMUNITY AVENUE
 MCKINNEY, TEXAS 75071

| | |
|-----------|-----------|
| SHEET NO. | 8 |
| OF | 16 SHEETS |
| FILE NO. | 122010 |

F-4

**COLLIN COUNTY JUSTICE CENTER
GENERATOR FUELING SYSTEM
GENERAL NOTES AND SPECIFICATIONS**

General Notes

- This project includes the removal of one underground storage tank and the installation of six above ground storage tanks (ASTs) for the storage of diesel fuel. Two of the Four of the proposed diesel tanks located adjacent to the housing clusters will be 2,500 gallons in nominal capacity, and the other two will be 3,000 gallon in capacity. The two proposed diesel ASTs adjacent to the Central Plant will both be 12,000 gallons in nominal capacity. All ASTs will be UL-2085 listed. The existing generators and day tanks will remain as is, and the piping components connecting them together will be replaced as needed with sch 40 carbon steel piping in the sizes indicated on the plan sheets.
- All electrical work will be completed in accordance with McKinney codes and regulations, NFPA 30, and the NEC.
- It shall be the Contractor's responsibility to submit the Texas Commission on Environmental Quality (TCEQ) 30-day construction notification, to notify the appropriate Fire Marshal having jurisdiction, and to obtain any and all permits for the construction of the system.
- The Contractor is solely responsible for the means and methods of construction. OSHA regulations regarding the construction activities, including but not limited to, trenches and excavations, and operations above four feet shall be strictly followed. All Site Supervisors shall be 40 hour OSHA trained.
- A site specific Health and Safety Plan shall be prepared and kept on site in case of an emergency. All personnel shall be briefed on the plan and know its location.
- The site will be kept clean of trash and debris. A Storm Water Pollution Prevention Plan (SWP3) has been developed for this site by others and its provisions shall be followed by the fuel system contractor.
- The Contractor installing the fuel systems shall be a TCEQ licensed contractor, and this Contractor shall have a TCEQ licensed on site supervisor ("A" license) on site at all times that construction activities are taking place. The licensed on site supervisor shall sign all manifests or other documentation as required for record keeping purposes. This documentation includes, but is not limited to, the TCEQ registration form, AST warranty and installation forms, and "Red Lined" drawings to be used in the development of "Record Drawings."
- Pressure testing of the new piping and other diesel system components shall be in accordance with the local Fire Marshal's requirements, or as required by PEI RP-100. In any case, pressure shall be left on all piping (both primary and secondary) until all paving has been placed over all UST system components. Any loss of pressure shall be investigated immediately.
- Upon completion of the installation of all equipment and piping, third party precision line tests shall be performed on this system. Copies of these data shall be submitted to the Engineer.
- A project manual shall be submitted to the Owner in a three ring binder that includes all maintenance, operations and warranty documents associated with this project. Additionally, any and all test data such as the precision line results shall be included.
- All new fuel tank installations shall be permitted through the Fire Marshal's Office separate from the building permit by selected contractor.
- Removal of underground fuel tanks shall be permitted through the Fire Marshal's office by selected contractor.
- No hazardous waste is expected as there is no apparent source, but hydrocarbon contamination is likely to be encountered during the UST removal. If any contamination is encountered, the contractor shall haul the contaminated soil or groundwater to a licensed facility and return the weight ticket and manifest to the owner. The contractor shall provide a separate line item when bidding for the haul and disposal of hydrocarbon contaminated soils and hydrocarbon contaminated liquids. The pay unit for the disposal of hydrocarbon contaminated soils is by the ton as weighed by certified scales, and the pay unit for hydrocarbon contaminated liquids is by the gallon as measured by a certified truck discharge meter.
- All required permits to be obtained and paid for by the contractor.
- The contractor shall communicate with TCEQ, City of McKinney, and the Fire Marshal.

1

Earthwork Specifications

- All subgrade under concrete structures shall be prepared such that the PVR is less than one inch.
- All base material grades shall be prepared and finished to within 0.05 ft of the design grades.
- Maintain the specified moisture content of the select fill until placement of the concrete is complete. If the surface becomes dry and loose, it must be re-compacted to meet the minimum compaction and moisture requirements.
- Select fill shall be TxDOT Item 247 grade 1 TYPE A 2 base material compacted to 95% ASTM D698, moisture at 0% to +4% of optimum.
- Backfill under the tank shall be TxDOT Item 247 Grade 1 Type A base material four feet deep, see backfill detail on sheet D-1.

Concrete Specifications

- All concrete used on this project shall be normal weight concrete having a minimum compressive strength of 4000 psi at 28 days unless otherwise specified. This concrete shall be placed with a maximum slump of 4 inches. The concrete shall be wet cured through the use of burlap or blankets that are continuously kept wet, or by thoroughly and completely coating the concrete with a liquid membrane curing compound. This curing must be placed on the concrete as soon as finishing operations are complete, and damage to the surface will not occur by placing blankets or applying the curing compound.
- No air entrainment will be used in the concrete on this project.
- Forms shall be constructed to withstand the placement of the concrete, and shall be sufficiently tight as to prevent leakage of mortar during concrete placement. Forms shall remain in place at least 48 hours after concrete placement. Formed elements shall have square faces and shall be chamfered as specified on the plans.
- Contraction joints shall be saw cut in neat, straight lines as indicated on the plans, and as soon as initial set has taken place and damage to the surface will not occur.
- Expansion joints as specified shall be ¾ inch Redwood, with a depth equal to the thickness of concrete adjacent to the joint. The top one inch of all expansion joints shall be sealed with an elastic type sealer that is resistant to gasoline and diesel. Prior to the application of the joint sealer, the joint shall be thoroughly cleaned, carefully removing all loose debris, and the surface clean and dry such that the sealant permanently adheres to the concrete.
- Steel used in the reinforcement of all concrete on this project shall be sized as indicated on the specific detail, and shall be new, Grade 60 steel. No steel shall rest directly on the soil or any base or fill material, and all shall be supported with chairs or concrete bricks. Clay bricks are not acceptable.
- Horizontal concrete surfaces shall be finished as a "Broom" finish. The edges of the new pavement shall match the existing pavement grades.

Piping Specifications

- All aboveground piping shall be schedule 40 carbon steel, unless otherwise noted. All piping where possible, shall be welded with no threaded connections.
- All stainless steel flex hoses used on this project shall be UL listed for above ground use. Flex hoses UL approved for underground use are not acceptable.
- No FRP piping shall be visible in dispenser pans or other above ground applications. Only UL approved aboveground steel flex connectors and/or steel piping shall be visible in above ground applications.
- Pressure testing meeting the requirements of the AHJ shall be performed on both the primary and secondary piping systems.
- Pressure shall remain on all piping until all pavement construction is completed in the vicinity of the piping.
- The fill connection piping shall be 3 inch in diameter with flanged and welded connections. This piping does not normally contain fuel, but threaded connections are not acceptable.
- All piping shall be thoroughly cleaned from oils, corrosion, and other debris and primed and coated with an epoxy based enamel resistant to diesel fuel. The color shall be white. The paint shall be evenly applied and no drips or runs shall be allowed. Do not paint over any product plates or labels.
- Diesel piping shall be labeled "DIESEL FUEL", with a yellow label color and black label text in the sizes indicated in the table below.

| OUTSIDE DIAMETER OF PIPE OR COVERING | SIZE OF LETTERS |
|--------------------------------------|-----------------|
| 3/4" TO 1-1/4" | 1/2" |
| 1-1/2" TO 2" | 3/4" |
| 2-1/2" TO 6" | 1-1/4" |
| 8" TO 10" | 2-1/2" |
| OVER 10" | 3-1/2" |

- Labels should be applied close to valves and adjacent to changes in direction, branches, and where pipes pass through walls or floors, and as frequently as needed along straight runs to provide clear positive identification.
- Labels shall have the following minimum information: fluid being conveyed and direction of flow.
- Pipe markers shall be either a) plastic factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering, with printed markings, or b) flexible, adhesive backed vinyl with printed markings.
- Pipe marking should be highly visible and in the line of vision of personnel.

AST Specifications

- The ASTs used on this project shall be UL-2085 listed. The two of the four housing cluster ASTs shall be 2,500 gallons cylindrical with a 5'-10" in diameter, the other two shall be 3,000 gallons cylindrical with a 5'-10" in diameter. The two central plant ASTs shall be 12,000 gallons cylindrical, with a 10'-6" foot diameter. The Contractor shall request a letter from the tank manufacturer proving that air testing has been successfully completed for both the inner and outer tank during the manufacturing process. This letter must be available for inspection by the Fire Marshall upon arrival of the ASTs to the site, and shall be made a part of the permanent records upon completion of the construction of the systems.
- Upon arrival at the site, the ASTs shall be carefully inspected for damage. Any damage noted shall be reported to the Engineer immediately. Damaged tanks are not acceptable for use at this facility.
- The ASTs shall be placed in the containment structure as indicated on the plans. All fittings and equipment necessary to complete the system shall be placed on the ASTs.
- The Contractor shall complete all documentation necessary to comply with the TCEQ regulations and to cause the warranty to come into force.
- A one inch diameter by 10 foot long copper clad steel ground rod shall be placed near the ASTs. A 4/0 copper conductor shall bond the three tanks and provide a common ground plane. This grounding rod shall be in place before the placement of the concrete such that the concrete is placed around the grounding rod forming a tight seal.

Equipment Specifications

- The pump systems to be used on this project shall be Simplex SPS 25 pump systems or prior approved equal for all generators, the housing cluster systems shall have Super XL-11, 12 GPM pumps and the central plant system shall have Super XL-39, 7 GPM pumps.
- Vent shall be at minimum 12 feet above finished grade. A rain cap shall be used on the diesel tank.
- An above ground pressure rated overfill prevention valve shall be placed at the fill position. This fill limiter shall stop flow into the AST when the liquid level reaches 90 percent of the total volume.

Leak Detection Equipment

- The Leak detection for the piping and ASTs at this facility shall consist of the following equipment.
 - A Veeder Root TLS-450 Plus console or approved equal
 - Each AST shall have an interstitial sensor
 - Each AST shall have an in tank probe to monitor and report fuel levels. Due to diurnal heating, inventory reconciliation cannot be performed in ASTs.
 - Each transition sump shall have a liquid sensing sensor placed in the bottom of the sump.
 - An overfill alarm with acknowledgement switch shall be mounted on the fill connection of each fuel type. This alarm shall be used to alert the truck driver to a near full level.
- Any liquid sensed by an interstitial monitor or liquid sensor shall cause an the fuel pumps to be de-energized, and all dispensers to stop pumping. The pumps shall not be re-energized until the cause of the alarm has been identified and rectified.
- A current copy of the Veeder Root program or approved equal that allows remote sensing, monitoring and operation of the system shall be provided to the Owner, placed on the Owner's selected computer, and the program initiated.
- The system shall not interfere with the fuel management system, and shall perform all functions in conjunction with the fuel management system.

Start Up

Once all equipment has been installed, the Contractor shall perform a complete start up of all equipment. During this start up procedure, all meters shall be calibrated, and tests to ensure the proper operation of all equipment shall be performed. The Veeder Root system or approved equal shall be programmed to the specified settings, and verification of proper operation shall occur.

Training

Training of select Collins County Justice Center personnel in the proper operation of all equipment shall take place within 3 business days of start up. This training shall be sufficiently thorough so that CCJC personnel may use the equipment correctly and in compliance with the current tank and line monitoring regulations.

GN-1

| | | | | | | | | |
|----|---------|--|------------------------|---|---|---|--|--------------|
| | | | DESIGNED BY <u>CDS</u> |  |  |  | GENERAL NOTES & SPECIFICATIONS | SHEET NO. 11 |
| | | DRAWN BY <u>DAG</u> | OF 16 SHEETS | | | | | |
| | | CHECKED BY <u>RNB</u> | FILE NO. 122010 | | | | | |
| | | REVIEWED BY <u>RNB</u> | | | | | | |
| | | DATE <u>10-21-2022</u> | | | | | COLLIN COUNTY JUSTICE CENTER EMERGENCY GENERATOR FUELING SYSTEM REPLACEMENT 4300 COMMUNITY AVENUE MCKINNEY, TEXAS 75071 | |
| Δ | 1/27/23 | NOTES ABOUT PERMITTING AND CONTRACTOR RESPONSIBILITIES ADDED | RNB | | | | | |
| NO | DATE | REVISION | BY | | | | | |

Section 004100-Bid Form Addendum 1



Collin County Purchasing

2023-090 Addendum 1

Construction, Emergency Generator Fueling System Replacement

Issue Date: 1/10/2023

Questions Deadline: 2/14/2023 05:00 PM (CT)

Response Deadline: 2/23/2023 02:00 PM (CT)

Collin County Purchasing

Contact Information

Contact: JD Griffin, CPPB Senior Buyer

Address: Purchasing

Admin. Building

Ste. 3160

2300 Bloomdale Rd.

Ste. 3160

McKinney, TX 75071

Phone: (972) 548-4116

Fax: (972) 548-4694

Email: jgriffin@co.collin.tx.us

Event Information

Number: 2023-090 Addendum 1
Title: Construction, Emergency Generator Fueling System Replacement
Type: Invitation for Bid - Construction
Issue Date: 1/10/2023
Question Deadline: 2/14/2023 05:00 PM (CT)
Response Deadline: 2/23/2023 02:00 PM (CT)
Notes: SCOPE OF WORK INCLUDES all materials, labor, equipment and services to produce or be incorporated in such construction. Contract will be a general contract for removal of one underground storage tank and the installation of six above ground storage tanks (ASTs) for the storage of diesel fuel. Two of the four proposed diesel ASTs located adjacent to the housing clusters will be 2,500 gallons, and the other two will be 3,000 gallons. The two diesel ASTs adjacent to the Central Plant will both be 12,000 gallons. The existing generators and day tanks will remain as is, and the piping components connecting them together will be replaced as needed with schedule 40 carbon steel piping in the sizes indicated on the plan sheets. Please log in to view bid documents.

Ship To Information

Address: Central Plant
4600 Community Ave.
McKinney, TX 75071

Billing Information

Address: Auditor
Admin. Building
Ste. 3100
2300 Bloomdale Rd.
Ste. 3100
McKinney, TX 75071

Bid Activities

Mandatory Pre-Bid Conference

1/24/2023 1:30:00 PM (CT)

A MANDATORY PRE-BID CONFERENCE AND SITE WALK will be held at Collin County Central Plant, 2nd Floor Conference Room, 4600 Community Ave., McKinney, TX., 75071, at 1:30 PM, Tuesday, January 24, 2023 for bidders to ask questions regarding the proposed work. All Bidders desiring to bid the work shall have a representative at a minimum of one of the two pre-bid conferences. Bidders may attend both conferences but it is not required.

Mandatory Pre-Bid Conference

1/26/2023 10:00:00 AM (CT)

A MANDATORY PRE-BID CONFERENCE AND SITE WALK will be held at Collin County Central Plant, 2nd Floor Conference Room, 4600 Community Ave., McKinney, TX., 75071, at 10:00 AM, Thursday, January 26, 2023 for bidders to ask questions regarding the proposed work. All Bidders desiring to bid the work shall have a representative at a minimum of one of the two pre-bid conferences. Bidders may attend both conferences but it is not required.

Bid Attachments

LEGAL NOTICE, 2023-090.doc

Legal Notice

[Download](#)

CCJC Generator Fueling System - Project Manual.pdf

Project Manual

[View Online](#)

CCJC Generator Fueling System - Project Drawings.pdf

Drawings

[View Online](#)

Addendum_1_2023-090.doc

Addendum 1

[View Online](#)**Attachment A-Pre-Bid Sign-In Sheets.pdf**

Attachment A

[View Online](#)**Attachment B - Pre-Bid Questions and Answers.docx.pdf**

Attachment B

[View Online](#)**Attachment C-Geotech Report.pdf**

Attachment C

[View Online](#)**Sheet D-1_Rev. 1-27-23.pdf**

Sheet D-1 Rev. 1-27-23

[View Online](#)**Sheet F-1_Rev. 2-6-23.pdf**

Sheet F-1 Rev. 2-6-23

[View Online](#)**Sheet F-4_Rev. 1-25-23.pdf**

Sheet F-4 Rev. 1-25-23

[View Online](#)**Sheet GN-1_Rev. 1-27-23.pdf**

Sheet GN-1 Rev. 1-27-23

[View Online](#)**Requested Attachments**

Bid Bond*(Attachment required)*

BID SECURITY: All Bidders must submit, prior to the bid opening time, a Certified Check, Cashier's Check or acceptable Bid Bond payable without recourse to Collin County in the amount of not less than five percent (5%) of the total bid plus alternates as submitted.

1. Bid Bond, certified check or Cashier's Check may be mailed or hand delivered to the Office of the Collin County Purchasing Agent, Collin County Administration Building, 2300 Bloomdale Road, Ste 3160, McKinney, TX 75071 and shall be delivered in an envelope, marked plainly on the outside with the Bid Name and Number.
2. Bidders submitting a bid via Collin County eBid shall upload a Bid Bond at <https://collincountytx.ionwave.net>

Regardless of delivery method, all Bid Bonds shall be received prior to the bid opening time to be considered. Failure to submit a copy of bid security prior to bid opening shall be cause for rejection of bid.

The original Bid Bond shall be received in the Collin County Purchasing Department no later than close of business on the third working day after the bid opening. Late receipt of or failure to submit original Bid Bond shall be cause for rejection of bid.

W-9*(Attachment required)***Conflict of Interest Questionnaire**

Bid Attributes

| | |
|----------|---|
| 1 | eBid Notice Collin County exclusively uses IonWave Technologies, Inc. (Collin County eBid) for the notification and dissemination of all solicitations. The receipt of solicitations through any other means may result in your receipt of incomplete specifications and/or addendums which could ultimately render your bid/proposal non-compliant. Collin County accepts no responsibility for the receipt and/or notification of solicitations through any other means. Please initial. <hr/> <hr/> <hr/> <i>(Required: Maximum 1000 characters allowed)</i> |
| 2 | Contact Information List the contact name, email address and phone number of the main person(s) Collin County should contact in reference to this solicitation. Contact(s) shall be duly authorized by the company, corporation, firm, partnership or individual to respond to any questions, clarification, and or offers in response to this solicitation. <hr/> <hr/> <hr/> <hr/> <hr/> <i>(Required: Maximum 4000 characters allowed)</i> |
| 3 | Calendar Days Bid Please state the consecutive calendar days bid from notice to proceed through completion of project. <input data-bbox="110 1060 321 1102" type="text"/> <i>(Required: Numbers only)</i> |
| 4 | Exceptions (for IFB - Construction) If you take any exceptions to the specifications, you must submit the exception/s as a Question via the public eBid portal before the Question Cutoff Date for County consideration. The County will review and publish a response via eBid. If you would like to offer any substitutions, please review the Instruction to Bidders Document 002113, Section 1.7 and submit by separate attachment. Please initial. <hr/> <hr/> <hr/> <i>(Required: Maximum 1000 characters allowed)</i> |
| 5 | Insurance Acknowledgement – Construction/Public Works I understand that the insurance requirements of this solicitation are required and are included in the submitted pricing. The Contractor shall furnish certificates of insurance for both the Contractor and any subcontractor to the Purchasing department if awarded all or a portion of the resulting contract. Please initial. <hr/> <hr/> <hr/> <i>(Required: Maximum 1000 characters allowed)</i> |

6 Bonding Requirement Acknowledgement

I understand that the bonding requirements of this solicitation are required and are included in the submitted pricing. A bond certificate (payment, performance, and/or maintenance) as stated in the specification document shall be submitted to the Purchasing department if I am awarded all or a portion of the resulting contract. Please initial.

(Required: Maximum 1000 characters allowed)

7 Subcontractors

State the business name of all subcontractors and the type of work they will be performing under this contract. If you are fully qualified to self-perform the entire contract, please respond with "Not Applicable-Self Perform".

(Required: Maximum 4000 characters allowed)

8 Reference No. 1

List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references are preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail. It is the responsibility of the Bidder/Proposer to ensure submitted references will be responsive to the County's requests. The County reserves the right to contact references other than those listed, and to consider any information acquired from all references during the evaluation process.

(Required: Maximum 4000 characters allowed)

9 Reference No. 2

List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references are preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail. It is the responsibility of the Bidder/Proposer to ensure submitted references will be responsive to the County's requests. The County reserves the right to contact references other than those listed, and to consider any information acquired from all references during the evaluation process.

(Required: Maximum 4000 characters allowed)

| | |
|----------------------|---|
| 1 0 | Reference No. 3 <p>List a company or governmental agency, other than Collin County, where these same/like products/services, as stated herein, have been provided. Texas references are preferred. Include the following: Company/Entity, Contact, Address, City/State/Zip, Phone, and E-Mail. It is the responsibility of the Bidder/Proposer to ensure submitted references will be responsive to the County's requests. The County reserves the right to contact references other than those listed, and to consider any information acquired from all references during the evaluation process.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p><i>(Required: Maximum 4000 characters allowed)</i></p> |
|----------------------|---|

| | |
|----------------------|--|
| 1 1 | Preferential Treatment <p>The County of Collin, as a governmental agency of the State of Texas, may not award a contract to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located (Government Code, Title 10, V.T.C.A., Chapter 2252, Subchapter A).</p> <ol style="list-style-type: none">1. Is your principal place of business in the State of Texas?2. If your principal place of business is not in Texas, in which State is your principal place of business?3. If your principal place of business is not in Texas, does your state favor resident bidders (bidders in your state) by some dollar increment or percentage?4. If your state favors resident bidders, state by what dollar amount or percentage. <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p><i>(Required: Maximum 4000 characters allowed)</i></p> |
|----------------------|--|

| | |
|----------------------|--|
| 1 2 | Debarment Certification <p>I certify that neither my company nor an owner or principal of my company has been debarred, suspended or otherwise made ineligible for participation in Federal Assistance programs under Executive Order 12549, "Debarment and Suspension," as described in the Federal Register and Rules and Regulations. Please initial.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p><i>(Required: Maximum 1000 characters allowed)</i></p> |
|----------------------|--|

1
3 **Immigration and Reform Act**

I declare and affirm that my company is in compliance with the Immigration and Reform Act of 1986 and all employees are legally eligible to work in the United States of America. I further understand and acknowledge that any non-compliance with the Immigration and Reform Act of 1986 at any time during the term of this contract will render the contract voidable by Collin County. Please initial.

(Required: Maximum 1000 characters allowed)

1
4 **Disclosure of Certain Relationships**

Chapter 176 of the Texas Local Government Code requires that any vendor considering doing business with a local government entity disclose the vendor's affiliation or business relationship that might cause a conflict of interest with a local government entity. Subchapter 6 of the code requires a vendor to file a conflict of interest questionnaire (CIQ) if a conflict exists. By law this questionnaire must be filed with the records administrator of Collin County no later than the 7th business day after the date the vendor becomes aware of an event that requires the statement to be filed. A vendor commits an offense if the vendor knowingly violates the code. An offense under this section is a misdemeanor. By submitting a response to this request, the vendor represents that it is in compliance with the requirements of Chapter 176 of the Texas Local Government Code. Please send completed forms to the Collin County County Clerk's Office located at 2300 Bloomdale Rd., Suite 2104, McKinney, TX 75071. Please initial.

(Required: Maximum 1000 characters allowed)

1
5 **Anti-Collusion Statement**

Bidder certifies that its Bid/Proposal is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a Bid/Proposal for the same materials, services, supplies, or equipment and is in all respects fair and without collusion or fraud. No premiums, rebates or gratuities permitted; either with, prior to, or after any delivery of material or provision of services. Any such violation may result in Agreement cancellation, return of materials or discontinuation of services and the possible removal from bidders list. Please initial.

(Required: Maximum 1000 characters allowed)

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6 **Disclosure of Interested Parties**

Section 2252.908 of the Texas Government Code requires a business entity entering into certain contracts with a governmental entity to file with the governmental entity a disclosure of interested parties at the time the business entity submits the signed contract to the governmental entity. Section 2252.908 requires the disclosure form (Form 1295) to be signed by the authorized agent of the contracting business entity, acknowledging that the disclosure is made under oath and under penalty of perjury. Section 2252.908 applies only to a contract that requires an action or vote by the governing body of the governmental entity before the contract may be signed or has a value of at least \$1 million. Section 2252.908 provides definitions of certain terms occurring in the section. Section 2252.908 applies only to a contract entered into on or after January 1, 2016. Please initial.

(Required: Maximum 1000 characters allowed)

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Critical Infrastructure Affirmation

Pursuant to section 2274.0102 of the Texas Government Code, Respondent certifies that neither it nor its parent company, nor any affiliate of Respondent or its parent company, is: (1) majority owned or controlled by citizens or governmental entities of China, Iran, North Korea, Russia, or any other country designated by the Governor under Government Code Section 2274.0103, or (2) headquartered in any of those countries. Please initial.

(Required: Maximum 1000 characters allowed)

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Energy Company Boycotts

Pursuant to Section 2274.002 of the Texas Government Code, should the contract have a value of \$100,000 or more and the company employs 10 or more full-time employees, Respondent represents and warrants that: (1) it does not, and will not for the duration of the contract, boycott energy companies, and (2) will not boycott energy companies during the term of the contract. If circumstances relevant to this provision change during the course of the contract, Respondent shall promptly notify Agency. Please initial.

(Required: Maximum 1000 characters allowed)

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Firearm Entities and Trade Associations Discrimination

Pursuant to section 2274.002 of the Texas Government Code, should the contract have a value of \$100,000 or more and the company employs 10 or more full-time employees, Respondent verifies that: (1) it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and (2) will not discriminate during the term of the contract against a firearm entity or firearm trade association. If circumstances relevant to this provision change during the course of the contract, Respondent shall promptly notify Agency. Please initial.

(Required: Maximum 1000 characters allowed)

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Notification Survey

In order to better serve our offerors, the Collin County Purchasing Department is conducting the following survey. We appreciate your time and effort expended to submit your bid. Should you have any questions or require more information please call (972) 548-4165. How did you receive notice of this request?

- Plano Star Courier Plan Room Collin County eBid Notification Collin County Website
 Other

(Required: Check only one)

2
1 Bid Bond Acknowledgement

I understand that accompanying this bid, is a certified check, cashier's check or Bid Bond in the amount of five percent (5%) of the total amount bid. Bidders submitting a bid via Collin County eBid shall upload a Bid Bond at <https://collincountytx.ionwave.net>. Regardless of delivery method, all Bid Bonds shall be received prior to the bid opening time to be considered.

I understand that the original Bid Bond shall be received in the Collin County Purchasing Department no later than close of business on the third working day after the bid opening. **Late receipt of original Bid Bond shall be cause for rejection of bid.** Please initial.

(Required: Maximum 4000 characters allowed)

2
2 Construction Acknowledgement

Bidder, declares that the only person or parties interested in this bid are those principals named herein, that his/her bid is made without collusion with any other person, firm or corporation, that he/she has carefully examined the Contract Documents including the Advertisement for Bids, Instruction to Bidders, Construction Agreement, Specifications and the Drawings, therein referred to and has carefully examined the locations, conditions and classes of materials for the proposed work, and agrees that he/she will provide all the necessary labor, machinery, tools, equipment, apparatus and other items incidental to construction and will do all the work and furnish all the materials called for in the Contract Documents in the manner prescribed therein. Bidder hereby declares that he/she has visited the site of the Work and has carefully examined the Contract Documents pertaining to the Work covered by the above Bid, and he/she further agrees to commence work within ten (10) consecutive calendar days after date of written Notice to Proceed and to substantially complete the work on which he/she has bid within the number of days specified subject to such extensions of time allowed by Specifications. Bidder certifies that the bid prices contained in this bid have been carefully checked and are submitted as correct and final. The prices have been shown in words and figures for each item listed in this bid and it is understood that in the event of a discrepancy, the words shall govern. Please initial.

(Required: Maximum 1000 characters allowed)

2
3 Addendum No. 1 Acknowledgement

Please initial to verify your receipt of the addendum.

(Required: Maximum 1000 characters allowed)

Bid Lines

1 Package Header

Bid Grand Total

Quantity: 1 UOM: lump sum Total: \$

Item Notes: Lines 1.1 and 1.2 must add up to the Bid Grand Total

Supplier Notes: _____

- No bid
- Alternate specification
(Attach separate sheet)

Additional notes
(Attach separate sheet)

Package Attributes

1. Bid Grand Total- Written in Words

The contract award will be based on the total bid price.

(Required: Maximum 4000 characters allowed)

Package Items

1.1 Total Material Cost Incorporated in Project

(Response required)

Quantity: 1 UOM: lump sum Price: \$ Total: \$

Supplier Notes: _____

No bid
 Additional notes
(Attach separate sheet)

1.2 Total Labor Cost Incorporated in Project

(Response required)

Quantity: 1 UOM: lump sum Price: \$ Total: \$

Supplier Notes: _____

No bid
 Additional notes
(Attach separate sheet)

2 Unit Prices

(Line excluded from response total)

Supplier Notes: _____

Additional notes
(Attach separate sheet)

Item Attributes

1. Unit Price Per Ton for Disposal of Hydrocarbon Contaminated Soils

Refer to Sheet GN-1, General Notes, Paragraph 13.

\$

(Required: Numbers only)

2. Unit Price Per Gallon for Disposal of Hydrocarbon Contaminated Liquids

Refer to Sheet GN-1, General Notes, Paragraph 13.

\$

(Required: Numbers only)

3. Unit Price Credit to County Per Gallon to Remove Unusable Fuel and Dispose of at a Licensed Used Oil Facility

Refer to Sheet D-1 Rev. 1-27-23, Contractor Notes Paragraph 3

\$

(Required: Numbers only)

4. Unit Price Credit to County Per Gallon to Remove Unusable Fuel and Resell

Refer to Sheet D-1 Rev. 1-27-23, Contractor Notes Paragraph 3

\$

(Required: Numbers only)

Supplier Information

Company Name: _____

Contact Name: _____

Address: _____

Phone: _____

Fax: _____

Email: _____

Supplier Notes

The undersigned hereby certifies the foregoing bid submitted by the company listed below hereinafter called "bidder" is the duly authorized agent of said company and the person signing said bid has been duly authorized to execute same. Bidder affirms that they are duly authorized to execute this contract; this company; corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder or other person or persons engaged in the same line of business; and that the contents of this bid as to prices, terms and conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this bid.

Print Name

Signature