



PURCHASING DEPARTMENT
REQUEST FOR BID

16-025

**BOULEVARD 26 UTILITY BURIAL
PROJECT (ED0601)**

BIDS DUE TUESDAY, OCTOBER 11, 2016

BY 2:00 P.M.

TABLE OF CONTENTS

SECTION I

BIDDING DOCUMENTS

Notice to Bidders

Special Instructions to Bidders

Financial Statement

Liabilities and Net Worth

Experience Record

Equipment Schedule

Bid Form

- Bid Schedule
- Bid Item Descriptions
- Conflict of Interest Questionnaire

SECTION II

CONTRACTUAL DOCUMENTS

Standard Form of Construction Agreement
(Contract)

General Conditions

Insurance Requirements

Performance Bond

Payment Bond

Maintenance Bond

Non-Collusion Affidavit of Bidder

Bid Certification

Compliance with House Bill 1295

Contractor's Release to City

Contractor's Affidavit of Final Payment

SECTION III

TECHNICAL SPECIFICATIONS

SECTION IV

SPECIAL PROVISIONS

SECTION I

BIDDING DOCUMENTS

NOTICE TO BIDDERS

SEALED BIDS on forms prepared by the Engineer will be received by the office of the Purchasing Manager of the City of North Richland Hills at City Hall (4301 City Point Dr., North Richland Hills, TX 76180) until 2:00 p.m. (local time) on Tuesday, October 11, 2016, for furnishing all labor, material, equipment and the performance of all work required for:

BOULEVARD 26 UTILITY BURIAL PROJECT

at which time and place the bids will be publicly opened, read aloud and retained by the Purchasing Department for tabulation, checking and evaluation.

COMPLETED BID FORMS shall be submitted in sealed envelopes upon the blank Bid Form furnished in the Construction Specifications. Sealed envelopes shall be marked: "BOULEVARD 26 UTILITY BURIAL PROJECT" – DO NOT OPEN UNTIL 2:00 p.m. on Tuesday, October 11, 2016.

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

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

PLANS AND SPECIFICATIONS and contract documents may be examined without charge at the City of North Richland Hills City Hall (4301 City Point Dr.) Purchasing Department. Copies of said documents may be obtained from Cobb, Fendley & Associates (2801 Network Boulevard Suite 800, Frisco, TX 75034) upon a non-refundable payment of \$50.00 per set, accompanied by the contractor's name, contact name, address, telephone number and fax number. Plans will also be available online at www.civcastusa.com and www.publicpurchase.com under the project name "**Boulevard 26 Utility Burial Project**".

A NON-MANDATORY PRE-BID CONFERENCE has been scheduled for this Project at City Hall in the Community Room, (4301 City Point Dr., North Richland Hills, Texas 76180), at 10:00 AM Tuesday, October 4, 2016. The City will not respond to any questions and/or comments regarding this Project after this date.

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

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

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

CITY OF NORTH RICHLAND HILLS

Scott Kendall
Purchasing Manager

ADVERTISEMENT DATES:

- **Friday, September 16, 2016**
- **Wednesday, September 21, 2016**

SPECIAL INSTRUCTIONS TO BIDDERS

1. BID SECURITY:

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

2. QUALIFICATION OF BIDDERS:

No pre-qualification of bidders is required. However, in consideration of the bids, the City of North Richland Hills may require bidders to furnish a written experience record and a financial statement or the most recent audited financial statement of the firm. The City of North Richland Hills reserves the right to use these items of data to influence a decision as to the award of the contract. Bidders need not submit a statement of experience and financial condition unless requested to do so by the City of North Richland Hills.

3. CONFLICT OF INTEREST QUESTIONNAIRE:

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

4. WAGE RATES:

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

5. PRE-BID CONFERENCE:

A **NON-MANDATORY** Pre-Bidders Conference will be conducted at City Hall in the Community Room, 4301 City Point Dr., North Richland Hills, Texas, 76180 at 10:00 AM on Tuesday, October 4, 2016.

6. BID SCHEDULE FORMS:

Bidders may submit their bids on their own Bid Schedule form; however, any discrepancies between the Bid Schedule in this document and a bidder's own Bid Schedule may be reason for the City to reject such bid.

7. BONDS:

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

8. POWER OF ATTORNEY:

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

9. STANDARD SPECIFICATIONS:

All work required by this project shall be in accordance with the "Public Works Design Manual" adopted by the City of North Richland Hills and the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), October 2004 Edition, except as modified in the Contract Documents. Where a conflict exists between the "Public Works Design Manual" and the "Public Works Construction Standards - North Central Texas", the "Public Works Design Manual" shall govern. Copies of both of these standards are included in the Contract Documents by reference and are made a part thereof. Omission of any section from this project's Contract Documents does not mean that such section is not applicable to this project.

10. UNIT PRICE CONTRACT:

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

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

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

11. MEASUREMENT AND PAYMENT:

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

12. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

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

13. CONDITIONS OF WORK / OBLIGATION OF BIDDER:

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

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

14. ADDENDA AND INTERPRETATIONS:

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to the Engineer at least eight (8) days prior to bid opening. Answers to all such requests will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

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

No interpretation of the meaning of plans, specifications or other pre-bid documents will be made to any bidder orally. Every request for such interpretation shall be in writing, addressed to the Director of Public Works, City of North Richland Hills, 4301 City Point Dr., North Richland Hills, TX 76180 and to be given consideration, must be received at least eight (8) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications and plans which, if issued, will be mailed to all prospective bidders (at the respective addresses furnished on the Plan Holders Sheet), not later than three (3) days prior to the date fixed for opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from any obligation under his/her bid submitted. All addenda shall become part of the Contract Documents.

15. LAWS AND REGULATIONS:

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

16. SUBMITTALS:

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

FINANCIAL STATEMENT

Condition of Bidder at close of Business month, _____, 20____		ASSETS	LIABILITIES
1.	Cash on Hand	\$ _____	\$ _____
	Cash in Bank	\$ _____	\$ _____
	Cash Elsewhere	\$ _____	\$ _____
2.	Accounts receivable from completed contracts (exclusive of claims not approved for payment)	\$ _____	\$ _____
3.	Accounts receivable from other sources than above	\$ _____	\$ _____
4.	Amounts earned on uncompleted contracts (not included in Item 3) (Contract price on completed portion of uncompleted contracts less total cost of completed portion)	\$ _____	\$ _____
5.	Deposits for bids on other guarantees		\$ _____
6.	Notes Receivable Past Due	\$ _____	
	Due 90 days	\$ _____	
	Due Later	\$ _____	
7.	Interest Earned	\$ _____	
8.	Real Estate, Business Property, present value	\$ _____	
	Other property, present value	\$ _____	\$ _____
9.	Stocks and Bonds, Listed on Exchange	\$ _____	\$ _____
	Unlisted	\$ _____	\$ _____
10.	Equipment, Machinery, Fixtures	\$ _____	\$ _____
	Less Depreciation	\$ _____	\$ _____
11.	Other Assets	\$ _____	
TOTAL ASSETS		\$ _____	\$ _____

LIABILITIES AND NET WORTH

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

EXPERIENCE RECORD

List of Projects your Organization has successfully completed:

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

List of Projects your Organization is now engaged in completing:

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

List of Surety Bonds in Force on above Uncompleted Work:

Date of Contract Award	Type of Bond	Amount of Bond ¹	Name and Address of Surety

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

EQUIPMENT SCHEDULE

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

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

BID FORM
FOR
BOULEVARD 26
UTILITY BURIAL PROJECT
FOR THE
CITY OF NORTH RICHLAND HILLS, TEXAS

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

Bid Opening Date: October 11, 2016

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

FOR: BOULEVARD 26 UTILITY BURIAL PROJECT

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

BOULEVARD 26 UTILITY BURIAL 16-025					
CITY OF NORTH RICHLAND HILLS					
BID SCHEDULE					
ITEM NO.	EST. QTY.	UNIT	ITEM DESCRIPTION AND UNIT PRICE (FILL IN SCRIPT)	UNIT PRICE	TOTAL AMOUNT
BASE BID GENERAL 'G' ITEMS					
G1.1	1	LS	TEMPORARY TRAFFIC CONTROL complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$	\$
G1.2	1	LS	SWPPP / EROSION CONTROL DEVICES complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$	\$
G1.3	1	LS	TRENCH SAFETY SYSTEM complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$	\$
G1.4	1	LS	REMOVE AND REPLACE EXISTING FENCE complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$	\$
BASE BID UTILITY 'U' ITEMS					
U1.1	3,163	LF	UTILITY TRENCH (6 FEET AND UNDER) complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.2	766	LF	UTILITY TRENCH (OVER 6 FEET) complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.3	9,045	LF	4" PVC CONDUIT complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.4	4,708	LF	6" PVC CONDUIT complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.5	779	LF	MULTI-DUCT ELECTRIC CONDUIT BY BORE complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.6	701	LF	MULTI-DUCT TELECOMMUNICATIONS CONDUIT BY BORE complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.7	79	LF	8" STEEL CASING complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$

BOULEVARD 26 UTILITY BURIAL 16-025					
CITY OF NORTH RICHLAND HILLS					
U1.8	1,401	LF	16" STEEL CASING complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
U1.9	1	EA	METER PEDESTAL complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
U1.10	5	EA	PRECAST ELECTRIC PULLBOX complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
U1.11	8	EA	GUARD POST complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
U1.12	8	EA	PRECAST AT&T MANHOLE complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
U1.13	2	EA	PRECAST CHARTER COMMUNICATIONS HANDHOLE complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
U1.14	68	LF	WATER LINE RELOCATION complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
BASE BID MISCELLANEOUS - 'M' ITEMS					
M1.1	1	LS	MISCELLANEOUS PAVING (ALLOWANCE) complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$ 10,000.00	\$ 10,000.00
M1.2	1	LS	MISCELLANEOUS UTILITY (ALLOWANCE) complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$ 10,000.00	\$ 10,000.00
M1.3	1	LS	MISCELLANEOUS LANDSCAPING (ALLOWANCE) complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$ 15,000.00	\$ 15,000.00
M1.4	1	LS	MISCELLANEOUS IRRIGATION (ALLOWANCE) complete in place, the sum of, _____ Dollars and _____ Cents per LUMP SUM	\$ 10,000.00	\$ 10,000.00
TOTAL AMOUNT BASE BID			_____ Dollars and _____ Cents		

BOULEVARD 26 UTILITY BURIAL 16-025					
CITY OF NORTH RICHLAND HILLS					
ALTERNATE BID - 'A' ITEMS					
A1.1	2,187	LF	2" PVC CONDUIT complete in place, the sum of, One Hundred Fifty Thousand _____ Dollars and No _____ Cents per LINEAR FOOT		\$ -
A1.2	348	LF	2" PVC CONDUIT BY BORE complete in place, the sum of, _____ Dollars and _____ Cents per LINEAR FOOT	\$	\$
A1.3	348	LF	4" STEEL CASING complete in place, the sum of, One Hundred Fifty Thousand _____ Dollars and No _____ Cents per LINEAR FOOT		\$ -
A1.4	11	EA	STREET LIGHT complete in place, the sum of, _____ Dollars and _____ Cents per EACH	\$	\$
TOTAL AMOUNT ALTERNATE BID			_____ Dollars and _____ Cents		
BID SCHEDULE - SUMMARY					
TOTAL BID AMOUNT					
BASE BID TOTAL					
_____ Dollars and _____ Cents \$ _____					
ALTERNATE BID TOTAL					
_____ Dollars and _____ Cents \$ _____					
BASE BID + ALTERNATE BID TOTAL					
_____ Dollars and _____ Cents \$ _____					

Description of General Bid Items:

- G1.1 Item 001 – Temporary Traffic Control. Payment shall include the preparation and implementation of traffic control plans prepared, signed, and sealed by an Engineer licensed to practice by the state of Texas, detailing the construction sequencing in accordance with the Plans and TMUTCD to be accepted by the Engineer and the City of North Richland Hills; supply, installation, maintenance, adjustments, replacements, removal, materials, equipment, labor, tools, and incidentals necessary for the placement and maintenance of all traffic control items, paid as a lump sum.
- G1.2 Item 002 – SWPPP/Erosion Control Devices. Payment shall include preparation of a Storm Water Pollution Prevention Plan (SWPPP) according to the State of Texas requirements and placement, maintenance, removal, and proper offsite disposal of erosion control devices as specified in the plans for the duration of the project including revegetation of disturbed areas (not otherwise paid for directly) paid as a lump sum.
- G1.3 Item 003 – Trench Safety System. Payment shall include the preparation and execution of a trench safety plan prepared, signed, and sealed by an Engineer licensed to practice by the state of Texas as required paid per lump sum.
- G1.4 Item 004 – Remove and Replace Existing Fence. Payment shall include the complete removal and subsequent replacement of existing chain link or wood fence and posts as necessary to perform the utility relocations indicated in the plans and disposed of offsite paid as a lump sum.

Description of Utility Bid Items:

- U1.1 Item 005 – Utility Trench (6 feet and under). Payment shall include the excavation of utility trench to a width sufficient to carry out utility conduit and/or appurtenance installations, at a depth of six (6) feet and less, complete with embedment, backfill and compaction as indicated in the Plans paid per linear foot of trench.
- U1.2 Item 006 – Utility Trench (Over 6 feet). Payment shall include the excavation of utility trench to a width sufficient to carry out utility conduit and/or appurtenance installations, at a depth greater than six (6) feet, complete with embedment, backfill and compaction as indicated in the Plans paid per linear foot of trench.
- U1.3 Item 007 – 4" PVC Conduit. Payment shall include furnishing and placing 4" Schedule 40 PVC conduit including conduit and all fittings (bends,

sweeps, caps, etc.), pull strings, and other incidental items complete in place at the depth shown in the Plans paid per linear foot of conduit placed measured horizontally along the conduit alignment. Trenching, backfill, and compaction are paid separately in items U1.1 or U1.2. Exact location(s) of the conduit shall be as indicated on the Plans.

- U1.4 Item 008 – 6" PVC Conduit. Payment shall include furnishing and placing 6" Schedule 40 PVC conduit including conduit and all fittings (bends, sweeps, caps, etc.), pull strings, and other incidental items complete in place at the depth shown in the Plans paid per linear foot of conduit placed measured horizontally along the conduit alignment. Trenching, backfill, and compaction are paid separately in items U1.1 or U1.2. Exact location(s) of the conduit shall be as indicated on the Plans.
- U1.5 Item 009 – Multi-Duct Electric Conduit by Bore. Payment shall include installation of multi-duct electric conduit by bore. Conduit shall be of the number and size indicated in the Plans, and shall include placement of grout in the casing after conduit is placed, and all incidental items complete in place as shown in the Plans paid per linear foot of bore measured horizontally from beginning to end of bore. Conduit and steel casing are included separately in pay items for 4" conduit and casing pipe, respectively. Exact location(s) of the bore shall be as indicated on the Plans.
- U1.6 Item 010 – Multi-Duct Telecommunications Conduit by Bore. Payment shall include installation of multi-duct telecommunications conduit by bore. Conduit shall be of the number and size indicated in the Plans, including all incidental items complete in place as shown in the Plans paid per linear foot of bore measured horizontally from beginning to end of bore. Conduit and steel casing are included separately in pay items for 4" conduit and casing pipe, respectively. Exact location(s) of the bore shall be as indicated on the Plans.
- U1.7 Item 011 – 8" Steel Casing. Payment shall include furnishing and installing 8" steel casing (3/8" wall thickness) by bore, including casing pipe and spacers to accommodate the number and size of conduits indicated in the Plans, and all other incidental items complete in place as shown in the Plans paid per linear foot of casing placed measured horizontally from beginning station to end station. Exact location(s) of the casing shall be as indicated on the Plans.
- U1.8 Item 012 – 16" Steel Casing. Payment shall include furnishing and installing 16" steel casing (3/8" wall thickness) by bore, including casing pipe and spacers to accommodate the number and size of conduits indicated in the Plans, and all other incidental items complete in place as shown in the Plans paid per linear foot of casing placed measured

horizontally from beginning station to end station. Exact location(s) of the casing shall be as indicated on the Plans.

- U1.9 Item 013 – Meter Pedestal. Payment shall include furnishing and installing an electric meter pedestal, complete in place including meter pedestal and all incidental items, as indicated on the plans, per Oncor Specification.
- U1.10 Item 014 – Precast Electric Pullbox. Payment shall include furnishing and installing an electric pullbox, complete in place including pullbox and all incidental items, as indicated on the plans, per Oncor Specifications.
- U1.11 Item 015 – Guard Post. Payment shall include furnishing and installing guard posts around electric equipment where indicated in the Plans including all incidental items necessary for construction paid per each guard post installed, per Oncor Specification (DDS-4)
- U1.12 Item 016 – Precast AT&T Manhole. Payment shall include furnishing and installing a 4x8x6 precast manhole, including precast manhole, excavation and backfill and all incidental items, as indicated on the plans, per AT&T standards.
- U1.13 Item 017 – Precast Charter Communications Handhole. Payment shall include furnishing and installing a 3x5x3 precast handhole, including precast handhole, excavation and backfill and all incidental items, as indicated in the plans.
- U1.14 Item 018 – Water Line Relocation. Payment shall include the relocation of public water main including fittings, valves, appurtenances, and all connections to existing water line, complete in place per City of North Richland Hills Standard Details and Specifications.

Description of Miscellaneous Bid Items:

- M1.1 Item 019 – Miscellaneous Paving (Allowance). Payment shall include the removal offsite of and replacement of existing concrete or asphalt pavement and concrete sidewalk according to the City of North Richland Hills and/or TxDOT standard details and specifications. This item is an allowance and will be paid based on the “actual field cost” of the work provided plus fifteen percent (15%). The fifteen percent (15%) of the “actual field cost” to be paid to the Contractor shall cover and compensate him/her for his/her profit, overhead, and all other elements of cost and expense not embraced within the “actual field cost” or covered elsewhere by these specifications. Contractor shall furnish all invoices and other documentation required by Owner in order to determine the “actual field cost” of miscellaneous work covered under this item.

- M1.2 Item 020 – Miscellaneous Utility (Allowance). Payment shall include the adjustment as necessary to existing utilities not included in the scope of work indicated in the plans. This item is an allowance and will be paid based on the “actual field cost” of the work provided plus fifteen percent (15%). The fifteen percent (15%) of the “actual field cost” to be paid to the Contractor shall cover and compensate him/her for his/her profit, overhead, and all other elements of cost and expense not embraced within the “actual field cost” or covered elsewhere by these specifications. Contractor shall furnish all invoices and other documentation required by Owner in order to determine the “actual field cost” of miscellaneous work covered under this item.
- M1.3 Item 021 – Miscellaneous Landscaping (Allowance). Payment shall include the removal offsite of and replacement of existing landscaping elements that may be disturbed during utility construction operations, including but not limited to sod, shrubs, ornamental trees, canopy trees, flower bed edging, and mulch. This item is an allowance and will be paid based on the “actual field cost” of the work provided plus fifteen percent (15%). The fifteen percent (15%) of the “actual field cost” to be paid to the Contractor shall cover and compensate him/her for his/her profit, overhead, and all other elements of cost and expense not embraced within the “actual field cost” or covered elsewhere by these specifications. Contractor shall furnish all invoices and other documentation required by Owner in order to determine the “actual field cost” of miscellaneous work covered under this item.
- M1.4 Item 022 – Miscellaneous Irrigation (Allowance). Payment shall include the removal offsite of and replacement of existing irrigation items that may be disturbed during utility construction operations, including but not limited to sprinkler heads, piping, and control valves. This item is an allowance and will be paid based on the “actual field cost” of the work provided plus fifteen percent (15%). The fifteen percent (15%) of the “actual field cost” to be paid to the Contractor shall cover and compensate him/her for his/her profit, overhead, and all other elements of cost and expense not embraced within the “actual field cost” or covered elsewhere by these specifications. Contractor shall furnish all invoices and other documentation required by Owner in order to determine the “actual field cost” of miscellaneous work covered under this item.

Description of Alternate Bid Items:

- A1.1 Item 023 – 2” PVC Conduit. Payment shall include furnishing and placing 2” Schedule 40 PVC conduit including conduit and all fittings (bends, sweeps, caps, etc.), pull strings, and other incidental items complete in place at the depth shown in the Plans paid per linear foot of conduit placed measured horizontally along the conduit alignment. Trenching,

backfill, and compaction are paid separately in items U1.1 or U1.2. Exact location(s) of the conduit shall be as indicated on the Plans.

- A1.2 Item 024 – 2" PVC Conduit by Bore (Lighting Conduit). Payment shall include installation of 2" Schedule 40 PVC conduit by bore, including all incidental items complete in place as shown in the Plans paid per linear foot of bore measured horizontally from beginning to end of bore. Conduit and steel casing are included in pay items for 2" conduit and casing pipe, respectively. Exact location(s) of the bore shall be as indicated on the Plans.
- A1.3 Item 025 – 4" Steel Casing. Payment shall include furnishing and installing 4" steel casing (3/8" wall thickness) by bore, including casing pipe and spacers to accommodate the number and size of conduits indicated in the Plans, and all other incidental items complete in place as shown in the Plans paid per linear foot of casing placed measured horizontally from beginning station to end station. Exact location(s) of the casing shall be as indicated on the Plans.
- A1.4 Item 026 – Street Light. Payment shall include furnishing and installing streetlights, complete in place including light standards, bulbs, and streetlight foundations and all incidental items, at the locations indicated in the Plans, per the model number indicated in the Plans.

Additional Information:

1. Any Item generally described in the above paragraphs shall be provided complete, in place, with all necessary components and incidentals as detailed in the plans, specifications, and per the following references:
 - a. North Central Texas Council of Government's Public Works Standard Construction Specifications and Drawings, latest revision.
 - b. Texas Department of Transportation's Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, latest revision.
 - c. Texas Manual on Uniform Traffic Control Devices, latest revision.
 - d. City of North Richland Hills Standard Details and Specifications.
2. Items will only be paid if installed per plans, specifications and standards and verified by the Engineer and/or the City of North Richland Hills, and/or the Utility Owner. In no circumstances shall the estimated quantities be exceeded without prior written authorization of the Owner per Section 9-5 of the Specifications.

3. Construction materials testing will be paid for by the City of North Richland Hills. Any retests required due to failed tests shall be paid by the Contractor.

Bids will be evaluated on the total construction cost, including all alternates, the use of alternates notwithstanding.

CONFLICT OF INTEREST QUESTIONNAIRE**FORM****CIQ****For vendor or other person doing business with local governmental entity**

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1

Name of person doing business with local governmental entity.

2

☐ Check this box if you are filing an update to a previous filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3	<p>Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.</p>
4	<p>Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.</p>
<div style="display: flex; justify-content: space-between;"> <div> <p>CONFLICT OF INTEREST QUESTIONNAIRE</p> <p>For vendor or other person doing business with local governmental entity</p> </div> <div style="text-align: right;"> <p>FORM</p> <p>CIQ</p> <p>Page 2</p> </div> </div>	
5	<p>Name of local government officer with whom filer has affiliation or business relationship. (Complete this section only if the answer to A, B, or C is YES.)</p> <p style="margin-top: 20px;">This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or business relationship. Attach additional pages to this Form CIQ as necessary.</p>

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

☐ YES ☐ NO

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local government entity?

☐ YES ☐ NO

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ YES ☐ NO

D. Describe each affiliation or business relationship.

6

Describe any other affiliation or business relationship that might cause a conflict of interest.

7

Signature of person doing business with the governmental entity

Date

Adopted 01/13/2006

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

Addendum No. 1 - Date Received _____

Addendum No. 2 - Date Received _____

The undersigned bidder agrees to execute and file with the Owner a contract and bonds on the forms provided within ten (10) days after written notification of award of the contract to him and to begin the work to be performed under the contract within ten (10) days after written authorization to begin the work (Work Order) and to complete the work in full within **180 Consecutive Calendar Days**, after the date specified in the "Notice to Proceed/Work Order".

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

Respectfully Submitted,

Signed: _____

Company: _____

Address: _____

SEAL
(If Bidder is a Corporation)

Telephone: _____

Fax: _____

Submitted by: _____ an individual
a partnership

Doing
Business As: _____

SECTION II

CONTRACTUAL DOCUMENTS

STANDARD FORM OF CONSTRUCTION AGREEMENT

THE STATE OF TEXAS §
 §
COUNTY OF TARRANT §

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

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

ARTICLE 1. WORK.

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

BOULEVARD 26 UTILITY BURIAL PROJECT

ARTICLE 2. CONTRACT PRICE.

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

_____ (\$ _____)

ARTICLE 3. CONTRACT TIME / LIQUIDATED DAMAGES.

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

- a. When **time is of** the essence, the CONTRACTOR shall be liable for failure to deliver or delay in delivery occasioned by and including without limitation strikes, lock-outs, inability of obtaining material or shopping space, breakdowns, delays of carriers or suppliers, and preexisting governmental acts and regulations of the Federal and State governments or any subdivision thereof, unless such governmental acts and regulations affecting delivery could not be found, recognized, or discovered by due diligence on the part of the CONTRACTOR prior to submission of his/her bid and City Council's acceptance thereof.
- b. When **time is not of** the essence, this agreement shall be inoperative during such period of time that aforesaid delivery or acceptance may be rendered impossible by reason of fire, strike, Acts of God, or government regulation. Provided, however, to the extent that the CONTRACTOR has any commercially reasonable alternative method of performing this contract by purchase on the market or otherwise, he/she shall not be freed of his/her obligation hereunder by this clause, even though the goods intended for this contract were destroyed or their delivery delayed because of any event described above.

As time is of the essence on this contract, CONTRACTOR agrees to commence work under this contract within ten (10) days from the date specified in the "Notice to Proceed" and to totally complete the Work within **180** consecutive calendar
(Contract Time per City Council Award)

days after the date specified in the "Notice to Proceed", subject to such extensions of time as noted below or as indicated in the Special Provisions.

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

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

$$E = R - P \quad \text{where } P \text{ is greater than or equal to } R, \text{ and}$$

E = Extra Precipitation Days

P = Average Precipitation Days

R = Total Precipitation Days

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

<u>Average Precipitation</u>						
Month	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>
Number of Days	6	6	7	7	8	6
Month	<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Number of Days	4	4	6	6	6	6

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

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

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

This contract time is both multi-tiered and cumulative. The CONTRACTOR further agrees to pay the following as liquidated damages:

- (1) \$150 per calendar day for any unfinished work for the first 30 days beyond the 180th day. This \$150 rate will start on the 181st consecutive calendar day after the "Notice to Proceed" issuance date and continue through the 210th consecutive calendar day after the "Notice to Proceed" issuance date.
(Contract Time per City Council Award) (Day After Contract Time Expires)
- (2) \$300 per calendar day for any unfinished work beyond the 210th consecutive calendar day after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER.
(Day 30 After Contract Time Expires)

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

ARTICLE 4. PARTIAL PAYMENT.

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

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

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

ARTICLE 5. DISCRIMINATION.

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

- a. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, creed, color, sex, religion, national origin or ancestry. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff, termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- b. The CONTRACTOR agrees to include this non-discrimination clause in any subcontracts connected with the performance of this agreement.
- c. In the event of the CONTRACTOR's non-compliance with the above non-discrimination clause, the contract may be canceled or terminated by the OWNER. The CONTRACTOR may be declared by the OWNER to be ineligible for future contracts with the OWNER, until satisfactory proof of intent to comply shall be made by the CONTRACTOR.

ARTICLE 6. ENTIRE CONTRACT.

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

ARTICLE 7. MODIFICATION.

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

ARTICLE 8. VARIABLES IN COST.

The parties hereto assume and understand that the variables in the CONTRACTOR's cost of performance may fluctuate; consequently, the parties hereto agree that any fluctuations in the CONTRACTOR's costs will in no way alter the CONTRACTOR's obligations under this contract nor excuse nonperformance or delay on his/her part.

ARTICLE 9. VENUE.

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

ARTICLE 10. CONTRACT DOCUMENTS.

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

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds
- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Special Specifications
- (14) Project Construction Plans/Drawings
- (15) Special Material and/or Equipment Specifications
- (16) Special Material and/or Equipment Drawings
- (17) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), October 2004 Edition
- (18) North Central Texas Council of Government references

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

City of North Richland Hills

OWNER

CONTRACTOR

By: _____
Mark Hindman, City Manager

By: _____

Title: _____

Attest: _____
Alicia Richardson, City Secretary

Attest: _____

Title: _____

Approved as to form and legality:

George Staples, City Attorney

NRH Council Action Yes / No

Date Approved: _____

Agenda No.: _____

Ord. / Res. No.: _____

CONFLICT OF INTEREST QUESTIONNAIRE

FORM

CIQ

For vendor or other person doing business with local governmental entity

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1

Name of person doing business with local governmental entity.

2

☐

Check this box if you are filing an update to a previous filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3

Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.

4

Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.

CONFLICT OF INTEREST QUESTIONNAIRE

FORM

CIQ

For vendor or other person doing business with local governmental entity Page 2

5

Name of local government officer with whom filer has affiliation or business relationship. (Complete this section only if the answer to A, B, or C is YES.)

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or business relationship. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

☐ YES ☐ NO

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local government entity?

☐ YES ☐ NO

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ YES ☐ NO

D. Describe each affiliation or business relationship.

6

Describe any other affiliation or business relationship that might cause a conflict of interest.

7

Signature of person doing business with the governmental
entity

Date

Adopted 01/13/2006

GENERAL CONDITIONS

In submitting this bid, the Bidder understands and agrees to be bound by the following terms and conditions. These terms and conditions shall become a part of the purchase order or contract and will consist of the invitation to bid, specifications, the responsive bid and the contract with attachments, together with any additional documents identified in the contract and any written change orders approved and signed by a city official with authority to do so.

All shall have equal weight and be deemed a part of the entire contract. If there is a conflict between contract documents, the provision more favorable to the City shall prevail.

1. **BID TIME**

It shall be the responsibility of each Bidder to ensure his/her bid is turned in to the City of North Richland Hills on or before Error! Reference source not found. Error! Reference source not found.. The official time shall be determined by the clock located at the switchboard in the North Richland Hills City Hall lobby. Bids received after the time stated above will be considered ineligible and returned unopened.

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

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

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

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

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

4. **REJECTION/DISQUALIFICATION**

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

- a) Bid received after the time set for receiving bids as stated in the advertisement;
- b) Reason for believing collusion exists among the Bidders;
- c) Bid containing unbalanced value of any item; bid offering used or reconditioned equipment;
- d) Where the bidder, sub-contractor or supplier is in litigation with the City

of North Richland Hills or where such litigation is contemplated or imminent;

- e) Uncompleted work which in the judgment of the City will prevent or hinder the prompt completion of additional work, or having defaulted on a previous contract;
- f) Lack of competency as revealed by reference checks, financial statement, experience and equipment, questionnaires, or qualification statement;
- g) Bid containing special conditions, clauses, alterations, items not called for or irregularities of any kind, which in the Owner's opinion may disqualify the Bidder.

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

5. BID EVALUATION

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

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

6. AWARD OF BID

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

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

Information contained in submitted bid documents shall not be available for

inspection until after the award has been made by the City Council. Requests for this information must be submitted in writing.

7. ASSIGNMENT

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

8. SUBSTITUTIONS/EXCEPTIONS

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

9. DELIVERY / ACCEPTANCE

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

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

10. NOTICE OF DELAYS

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

11. SALES TAX

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

12. TIE BIDS

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

13. BRAND NAME OR EQUAL

If items are identified by a "brand name" description, such identification is intended to be descriptive, not restrictive, and is to indicate the quality and characteristics of

products that will be satisfactory. As used in this clause, the term "brand name" includes identification of products by make and model. Such products must be clearly identified in the bid as an equal product and published specifications of the equal products offered must be included with the bid reply. Bids offering equal products will be considered for award if determined by the Purchasing Manager and the user department to be equal in all material respects to the brand name products referenced. The decision of acceptable "equal" items or variations in the specifications will solely be the City of North Richland Hills, unless the bidder clearly indicates in his/her bid that he is offering an "equal" product, his bid shall be considered as offering the brand name product referenced in the invitation for bids.

14. REFERENCES

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

15. PROHIBITION AGAINST PERSONAL FINANCIAL INTEREST IN CONTRACTS

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

16. DISCLOSURE OF INTEREST

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

17. TERMINATION/NON PERFORMANCE

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

perform in accordance with these specifications.

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

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

18. ATTORNEYS FEES

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

19. INDEMNITY

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

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

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

20. PERFORMANCE AND PAYMENT BONDS

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

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

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

21. INTERLOCAL AGREEMENT

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

22. ELECTRONIC PROCUREMENT

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

23. DEPARTMENT OF TRANSPORTATION (TXDOT) RELATED BIDS

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

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

INSURANCE REQUIREMENTS

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

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

Listed below are the types and amounts of insurance required. The City reserves the right to amend or require additional types and amounts of coverages or provisions depending on the nature of the work

Type of Insurance	Amount of Insurance	Provision
1. Commercial General Liability to include coverage for: a) Premises/Operations b) Products/Completed Operations c) Independent Contractors d) Personal Injury e) Contractual Liability f) Personal/Advertising Injury g) Medial Expense h) Fire Legal Liability i) Underground Hazard j) Explosion/Collapse Hazard k) Patent Infringement l) Copyright Law Violations	\$1,000,000 each occurrence, \$1,000,000 general aggregate; Or \$1,000,000 combined single limits	City to be listed as additional insured and provided 30 day-notice of cancellation or material change in coverage City prefers that insurer be rated B+V1 or higher by A. M. Best or A or higher by Standard & Poors
2. Consultants, architects, engineers, Landscape design specialist, other professional services	\$500,000 Professional Liability with proof that aggregate is still available.	
3. Workers' Compensation & Employers' Liability	Statutory Limits \$500,000 each accident	Alternate employer endorsement required
4. Comprehensive Automobile Liability Insurance, including coverage for loading and unloading hazards, for a) Owned/Leased Vehicles b) Non-Owned Vehicles c) Hired Vehicles	\$500,000 Combined single limit for bodily injury and property damage	

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

Bond No. _____

PERFORMANCE BOND

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

THAT _____, a corporation organized and existing under the laws of the State of _____, and fully authorized to transact business in the State of Texas, whose address is _____ of the City of _____, County of _____, and State of _____, (hereinafter referred to as "Principal"), and _____ (hereinafter referred to as "Surety"), a corporation organized under the laws of the State of _____ and authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto THE CITY OF NORTH RICHLAND HILLS (hereinafter referred to as "Owner") in the penal sum of _____ Dollars (\$ _____)

[not less than 100% of the approximate total amount of the contract as evidenced in the bid proposal] in lawful money of the United States, for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents:

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

BOULEVARD 26 UTILITY BURIAL PROJECT

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

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Chapter 3503 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

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

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

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

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

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

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

Bond No. _____

PAYMENT BOND

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

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

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

BOULEVARD 26 UTILITY BURIAL PROJECT

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

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Texas Government Code, Chapter 2253, as amended, and Chapter 3503 of the Insurance Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length herein.

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

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

(Company Name of Principal)

(Company Name of Surety)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Address Line 1)

(Address Line 1)

(Address Line 2)

(Address Line 2)

(City, State and Zip Code)

(City, State and Zip Code)

(Witness)

(Witness)

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

(Name)

(Address Line 1)

(Address Line 2)

(City, State and Zip Code)

(Telephone Number)

(Fax Number)

Bond No. _____

MAINTENANCE BOND

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

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

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

BOULEVARD 26 UTILITY BURIAL PROJECT

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

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

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

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

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

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

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument on this the ____ day of _____, 20__.

(Company Name of Principal)

(Company Name of Surety)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

(Address Line 1)

(Address Line 1)

(Address Line 2)

(Address Line 2)

(City, State and Zip Code)

(City, State and Zip Code)

(Witness)

(Witness)

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

(Name)

(Address Line 1)

(Address Line 2)

(City, State and Zip Code)

(Telephone Number)

(Fax Number)

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

NON-COLLUSION AFFIDAVIT OF BIDDER

State of _____ County of _____

_____ verifies that:
(Name)

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

SIGNATURE

PRINTED NAME

Subscribed and sworn to before me this

_____ Day of _____ 2015.

NOTARY PUBLIC in and for

_____ County, Texas.

My commission expires: _____

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

BID CERTIFICATION

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

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

COMPANY: _____

ADDRESS: _____

CITY, STATE & ZIP: _____

TELEPHONE: _____

FAX _____

EMAIL: _____

SIGNATURE: _____

PRINTED NAME: _____

DATE: _____

COMPLIANCE WITH HOUSE BILL 1295

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

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

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

Filing Process:

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

- 1) use the application to enter the required information on Form 1295,
- 2) print a copy of the completed form, which will include a certification of filing that will contain a unique certification number.
- 3) sign the printed copy of the form (an authorized agent of the business entity must sign),
- 4) have the form notarized,
- 5) file the completed Form 1295 with the certification of filing with the governmental body with which the business entity is entering into the contract.

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

Information regarding how to use the filing application may be found at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm.

CONTRACTOR'S RELEASE TO CITY

TO: CITY OF NORTH RICHLAND HILLS

RE: **BOULEVARD 26 UTILITY BURIAL PROJECT**

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

(NAME OF CORPORATION)

(AUTHORIZED AGENT)

CORPORATION ACKNOWLEDGMENT

STATE OF TEXAS §
 §
COUNTY OF _____ §

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

CONTRACTOR'S RELEASE TO CITY *(Continued)*

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

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

STATE OF TEXAS §
§
COUNTY OF _____ §

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

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

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

WITNESS my hand this the ____ day of _____, 20__.

(Affidant)

(Printed Name)

SUBSCRIBED AND SWORN TO BEFORE ME, this the ____ day of _____, 20 ____.

(Notary Public in and for the State of Texas)

(Type or Print Notary's Name)

My Commission Expires: _____

SECTION III

TECHNICAL SPECIFICATIONS

SECTION 1 SUBMITTALS

1.1.00 GENERAL

1.1.01 DESCRIPTION

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

1.2.00 MATERIAL

1.2.01 GENERAL EXECUTION

The CONTRACTOR shall submit to the Engineer, with such promptness as to cause no delay in his/her own work or in that of any other CONTRACTOR, five (5) copies of all shop drawings, manufacturer's catalog sheets, brochures, performance charts, diagrams, schedules and other standard descriptive data required for the work. The Engineer shall review these submittals with reasonable promptness, making any necessary corrections. If the submittals indicate variances from the requirements of the contract, the CONTRACTOR shall make specific mention of such variation in his/her letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise, the CONTRACTOR shall not be relieved of the responsibility of executing the work in compliance with the contract even though the submittals have been reviewed.

1.2.02 FORM OF SUBMITTALS

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

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

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

1.2.03 SUBMITTAL PROCEDURE

The procedure for review of submittals shall be as follows:

- A. **The CONTRACTOR shall submit five (5) copies of the submittal to the Engineer for his/her approval.** The submittal shall be accompanied by a letter of transmittal containing the following:
 - 1. Name of the project
 - 2. Name of the CONTRACTOR
 - 3. Name of the submittal
 - 4. References to applicable section(s) of the specifications
 - 5. Other pertinent information as indicated in Section 7.2.02: "Form of Submittals"
- B. When the submittal is satisfactory to the Engineer, all five (5) copies will be stamped and/or marked "Approved" or "Approved as Noted", be dated, receive the signature of the Engineer and two (2) copies will be returned to the CONTRACTOR by separate letter.
- C. Should a submittal be unsatisfactory to the Engineer, he/she will stamp and/or mark thereon "Revise and Resubmit" or "Rejected" and will send two (2) copies to the CONTRACTOR with necessary corrections and changes indicated. The CONTRACTOR must make such corrections and/or changes and submit at least five (5) copies of the re-submittal for approval to the Engineer. The CONTRACTOR shall review and resubmit as required by the Engineer until his/her approval is obtained.
- D. The CONTRACTOR shall allow sufficient time for preliminary review, corrections, resubmission and final review of all submittals. The CONTRACTOR shall allow not less than fourteen (14) days for each review. Submittals critical to the progress of the project, when requested in writing by the CONTRACTOR, will be given priority review.

1.2.04 LIST OF REQUIRED SUBMITTALS

- A. List of all subcontractors
- B. Project Construction Schedule
- C. Pipe manufacturer certification that the pipe and fittings meet the minimum specified physical properties, and has sufficient ultraviolet stability for a minimum two (2) year storage life.

- D. Documentation that the pipe manufacturer is listed with the Plastic Pipe Institute as meeting the recipe and mixing requirements of the resin manufacturer for the resin used to manufacture the pipe for this Project.
- E. Precast concrete manufacturer shop drawings that indicate that the materials and dimensions of the various precast hand holes, manholes, vaults, equipment pads, etc. correspond to the Contract Documents.
- F. Proposed Concrete Mix Design, including the documentation of all proposed concrete admixtures.
- G. Construction signing and traffic control plan.
- H. Trench Safety Plan.
- I. Erosion and Sediment Control Plan / SWPPP.

1.3.00 CONSTRUCTION

N/A

1.4.00 MEASUREMENT AND PAYMENT

There will be neither a measurement nor a payment made for this item. If there is a cost associated with this item, it shall be included in the unit bid prices of other contract items.

APPENDIX A – UTILITY OWNER SPECIFICATIONS



Specifications for Electrical Underground Distribution Systems from Padmounted Transformation, Secondary Service Accounts

Specification DDS-4 UG
Revision 11, March 2010

**ONCOR ELECTRIC DELIVERY COMPANY
SPECIFICATIONS FOR ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEMS
FROM PADMOUNTED TRANSFORMATION, SECONDARY SERVICE ACCOUNTS
SPECIFICATION NUMBER DDS-4 UG**

TABLE OF CONTENTS

SECTION 1- SCOPE	Page 1
SECTION 2- REFERENCES	Page1
SECTION 3- DEFINITIONS	Page 1
SECTION 4- GENERAL	Page 1
SECTION 5- COMPANY RESPONSIBILITY	Page 2
SECTION 6- CONTRACTOR RESPONSIBILITY	Page 3
SECTION 7- ACCEPTANCE	Page 6

ATTACHMENTS:

DDS-4 UG Detail Sheets 1- 57

**ONCOR ELECTRIC DELIVERY COMPANY
SPECIFICATIONS FOR ELECTRICAL UNDERGROUND DISTRIBUTION SYSTEMS
FROM PADMOUNTED TRANSFORMATION, SECONDARY SERVICE ACCOUNTS
SPECIFICATION NUMBER DDS-4 UG**

1. SCOPE

This document represents the minimum requirements and specifications for the installation of the electrical underground distribution systems fed from padmounted transformation, serving Secondary Service Accounts, to be transferred to Oncor Electric Delivery Company ownership.

2. REFERENCES

This specification shall be used in conjunction with the latest edition of the following publications.

- 2.1 The Electric Service Guidelines, Oncor Electric Delivery Company.

3. DEFINITIONS

- 3.1 Company: Oncor Electric Delivery Company and its designated representatives.
- 3.2 Contractor: Individual or firm installing electric underground service to Secondary Service Accounts.
- 3.3 Authority Having Jurisdiction: Generally an incorporated City or Town, but may be an agency of the County, State or Federal Government.
- 3.4 Point of Delivery: The point where Company's conductors are connected to premise's conductors, typically at the padmounted transformer secondary terminals or the padmounted connection enclosure.

4. GENERAL

- 4.1 The latest edition of all applicable building and safety codes shall be followed in the installation of the electrical underground distribution system. Included, but not limited to, are the:

4. GENERAL (continued)

- 4.1.1 Local City Building and Fire Codes or any other applicable Codes for a particular project location
- 4.1.2 National Electrical Safety Code (NESC)
- 4.1.3 U.S. Occupational Safety and Health Act of 1970 (OSHA)
- 4.1.4 The American Concrete Institute (ACI)
- 4.1.5 The American Society for Testing and Materials (ASTM)
- 4.2 Upon receipt of all necessary information from the Contractor, a project sketch showing the route of the conduit line and other pertinent information will be furnished by the Company.
- 4.3 Prior to construction a meeting shall be held to discuss and coordinate construction and inspection.
- 4.4 The Company will require a signed easement at no cost or a filed plat incorporating Company easement requirements prior to the Company installing any electrical facilities.
- 4.5 Joint use ditch will be determined by the Company on an individual basis.
- 4.6 No electrical facilities shall be connected by the Company until after the final inspection is made and approval by the Authority Having Jurisdiction, as required by code, has been received.

5. COMPANY RESPONSIBILITY- The following shall be performed by, and the responsibility of, the Company:

- 5.1 The Company inspector is to inspect all conduit installations prior to the placing of backfill.
- 5.2 The Company inspector is responsible for all field changes and coordinates changes with the local Engineering office.
- 5.3 The Company inspector is to inspect all equipment pad installations prior to the laying of concrete.

5. COMPANY RESPONSIBILITY (continued)

- 5.4 After approval of the installed conduit system by the Company inspector, and after the Contractor has signed all appropriate contracts, agreements, easements and has paid any required CIAC (contribution in aid of construction), the Company shall install service lateral cables up to the line side of the point of delivery.
- 5.5 Upon notification of final electrical inspection from the Authority Having Jurisdiction, the Company is to make final electrical connections at the point of delivery.

6. CONTRACTOR RESPONSIBILITY- The following shall be performed by, and the responsibility of, the Contractor:

- 6.1 The Contractor is to provide the Company a Site Plan, a Dimension Control Plan, an Elevation Plan, a Grading Plan and loading information.
- 6.2 The Contractor is to coordinate with the Company inspector for inspection of work prior to backfilling.
- 6.3 The Contractor is to provide personnel and vehicular access to the facility at all times.
- 6.4 The Contractor is to be held responsible for the full direction and supervision of all work being performed by his employees, agents or contractors. The Contractor shall also be responsible for the area at all times prior to acceptance, particularly in the prevention of damage to the electrical distribution system by the activities of other trades and utilities.
- 6.5 All testing of concrete and backfill which is deemed necessary by the Company is to be performed by an independent testing laboratory at the Contractor's expense.
- 6.6 The Contractor is to replace at his expense any damaged equipment or work not in compliance with the requirements in these specifications, the project sketch, the DDS-4 UG Detail Sheets or as specified by the Company.
- 6.7 The Contractor is to furnish equipment and labor to lay out ditch, set grade, dig ditches, place conduit in ditch, set equipment pads and place electrical connection boxes. The line shall run in as straight alignment as practicable. All conduit and bends shall be Schedule 40 PVC or Schedule 80 PVC and shall be electrical grade. All PVC conduit and bends shall be gray in color.
- 6.8 The Contractor may be required to furnish a spare conduit in the same ditch with service conduit(s) and cap both ends at bends.

6. CONTRACTOR RESPONSIBILITY (continued)

- 6.9 The Contractor is to complete rough site grading, establish final grade at padmounted equipment locations and clear these locations of all obstructions. Any change in final grade which requires the lowering or raising of electrical conductors or associated equipment is at the expense of the Contractor.
- 6.10 Minimum vertical crossing clearance of electrical conduits from other utilities' conduits is twelve (12) inches.
- 6.11 A lateral separation of five (5) feet from electrical conduits to other utilities' conduits is required on private property.
- 6.12 No foreign pipes are permitted under the equipment pad area except gas, telephone and cable T.V. that are installed at the same time as the electrical facilities. Gas is allowed only if sleeved in polyethylene or Schedule 40 PVC. Telephone and cable T.V. are allowed only if installed in conduit.
- 6.13 Backfilling of conduit trenches under paved areas, around conduit bends and under transformer pad areas is to be compacted to 95% of the density of surrounding undisturbed soil as per ASTM D 698. Stabilization must be uniform to bottom of ditch. Alternative stabilization methods for backfilling around under transformer pad consist of two (2) sacks of cement mixed with earth backfill or the pouring of concrete backfill with transformer pad. An alternative method for backfilling around conduit bends consists of concrete backfill with bend. The method and location where used will be at the discretion of the Company.
- 6.14 Equipment pads are to be installed a minimum of three (3) inches above finished grade. No equipment pad shall be installed in a pit below the finished grade of the surrounding area.
- 6.15 Equipment pads are to have a clear area surrounding the pad installation for safety, operation and maintenance purposes. Refer to DDS-4 UG Detail Sheets 51, 52, 53 and 54 for layout and dimensions.
- 6.16 Piers and/or beams are required on all equipment pads unless waived by the Company inspector. If required, stabilization method(s) will be determined by the Company inspector. The depth shall extend to rock or a change in soil conditions sufficient to bear the load of pad and transformer to prevent settlement due to undercutting for conduit bend installation or washing due to drainage.
- 6.17 The Contractor has the option of installing manufactured transformer pads or poured in place pads. However, where terrain will not permit the installation of a manufactured equipment pad as determined by the Company, the Contractor is to install a poured in place equipment pad. For details, refer to the DDS-4 UG Detail Sheets.

6. CONTRACTOR RESPONSIBILITY (continued)

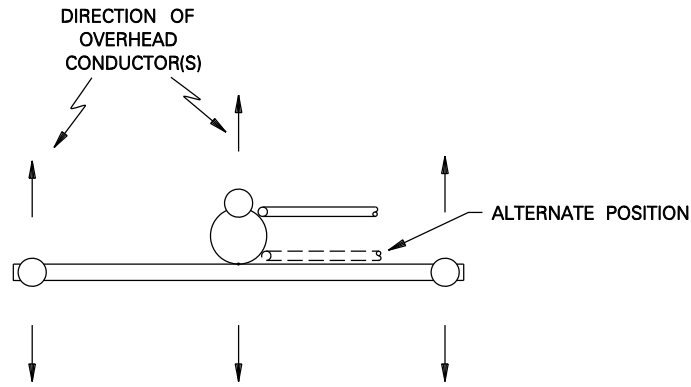
- 6.18 Concrete forms are to be tight and aligned so when forms are removed the finished surface shall require little, if any, corrective measures. Concrete work is to have an acceptable finish free of honeycombs, sharp or irregular surfaces.
- 6.19 Contractor is to pull a mandrel through each conduit to check and clear blockage and leave an approved pull tape in each conduit. Pull tape shall be furnished by the party providing conduit and shall be installed by Contractor. Mandrel shall be furnished by Contractor. Conduit shall be plugged at both ends. Reference DDS-4 UG Detail Sheet 7 for approved pull tapes.
- 6.20 Approved self-contained meter sockets or approved meter packs are to be provided and installed by the Contractor. Transocket meter bases and service enclosures (when required) are to be provided by the Company and installed by the Contractor. Reference the Electric Service Guidelines for approved self-contained meter sockets. **Contact Company for approval of meter packs prior to letting bids and installing equipment.**
- 6.21 For single occupant, C. T. metered Secondary Service accounts fed from padmounted transformation, the Contractor is to provide, install and maintain the underground raceway(s) and conductors to the secondary terminals of the transformer. The Contractor shall provide compression type connectors and the Company shall install these connectors on the Contractor's conductors and connect to the secondary terminals of the transformer. The meter will be located at or on the transformer secondary terminal enclosure. Reference the Electric Service Guidelines for approved compression type connectors.
- 6.22 In cases where the number of service conductors to a padmounted transformer is in excess of the physical connection capabilities of the secondary terminals, a padmounted connection enclosure separate from the transformer shall be used. The Contractor is to (1) provide, install and maintain the underground raceways and conductors to the load side of the connection enclosure, and (2) provide and install the underground raceways between the connection enclosure and the transformer pad. The service lateral conductors between the transformer secondary terminals and the source side of the connection enclosure shall be supplied, installed, connected and maintained by the Company. The Contractor shall provide compression type connectors and the Company shall install these connectors on the Contractor's conductors and connect to the load side of the connection enclosure. Reference the Electric Service Guidelines for approved compression type connectors.

6. CONTRACTOR RESPONSIBILITY (continued)

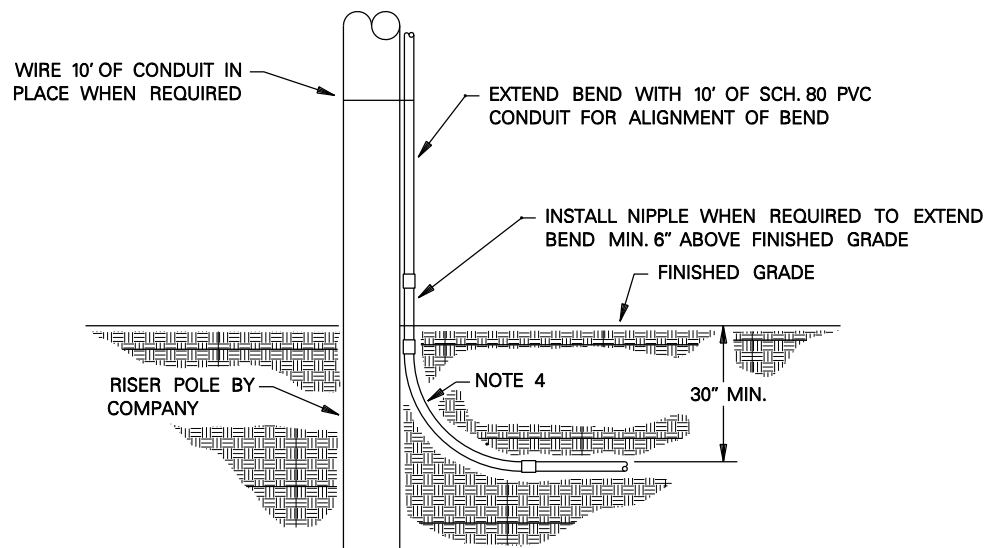
- 6.23 If socket type metering fed from padmounted transformation is utilized, the Contractor is to mount the meter socket on the building(s) with the location approved by the Company and provide, install and maintain the underground raceway(s) and conductors to the transformer secondary terminals. The Contractor shall provide compression type connectors and the Company shall install these connectors on the Contractor's conductors and connect to the secondary terminals of the transformer. Reference the Electric Service Guidelines for approved compression type connectors.
- 6.24 For multiple occupancy Secondary Service accounts fed from padmounted transformation, the Contractor is to provide, install and maintain (1) the conductors and associated raceways from the service enclosure to the padmounted transformer and (2) the conductors and associated raceways from the service enclosure to the line side of the meters. The Contractor shall provide compression type connectors and the Company shall connect the Contractor's conductors to the secondary terminals of the transformer. Reference the Electric Service Guidelines for approved compression type connectors.
- 6.25 For multiple occupancy Secondary Service accounts utilizing meter packs fed from padmounted transformation, the Contractor is to provide, install and maintain the conductors and associated raceways from the meter pack enclosure to the padmounted transformer. The Contractor shall provide compression type connectors and the Company shall connect the Contractor's conductors to the secondary terminals of the transformer. Reference the Electric Service Guidelines for approved compression type connectors.
- 6.26 The Contractor is to secure inspection and approval of premise's facilities by the Authority Having Jurisdiction prior to the connection of electrical facilities.
- 6.27 Meter sockets to multi-metered locations shall be clearly and permanently marked by Contractor on the exterior and interior of the meter socket to indicate each location served. Engraved or stamped metal, weather resistant placards shall be used on the exterior of the meter socket and be permanently affixed. Permanent marker or other acceptable method shall be used to mark the location on the inside of the meter socket (at a location other than the cover) where it can be easily read.

7. ACCEPTANCE

- 7.1 The Company inspector shall meet with the Contractor and review the project prior to acceptance. Electrical facilities will be installed as approved by the Company inspector only after acceptance of the project.



TOP VIEW



PLAN VIEW

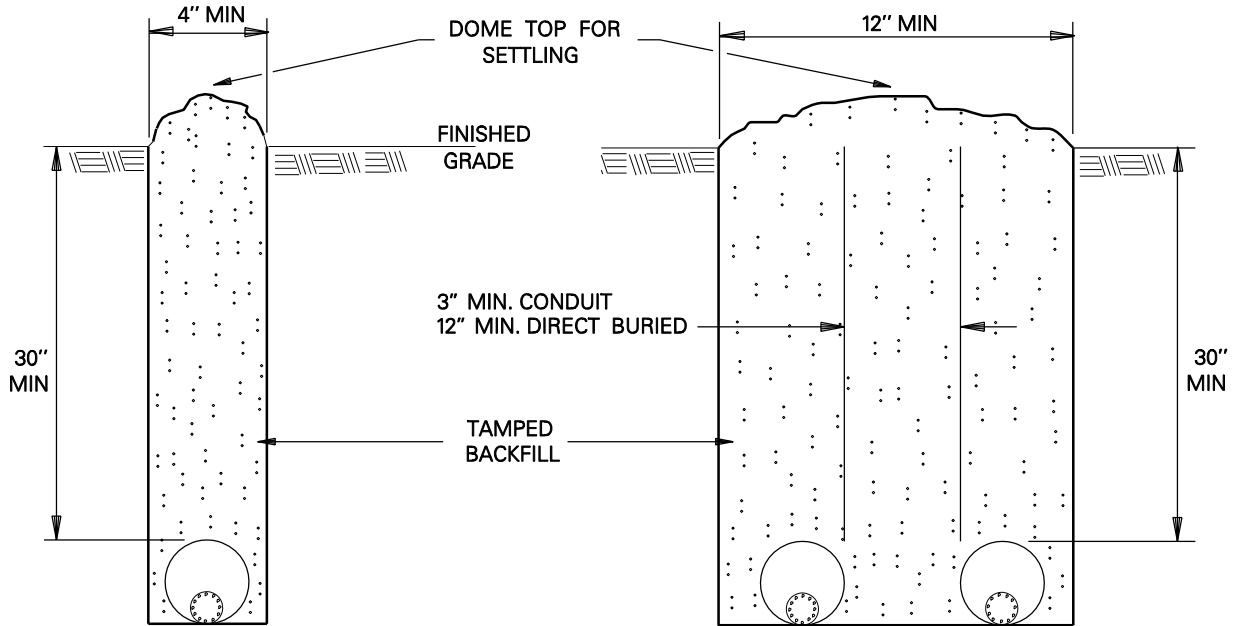
NOTES

1. CONTACT COMPANY REPRESENTATIVE FOR (1) ROUTING OF CONDUIT LINE, (2) SIZE OF CONDUIT, AND (3) INSTALLATIONS REQUIRING MORE THAN ONE RISER ON POLE.
2. LIMIT RACEWAY TO THREE 90° BENDS. IF MORE THAN THREE 90° BENDS ARE REQUIRED, CONTACT COMPANY REPRESENTATIVE.
3. DISTANCE BETWEEN 90° BENDS SHALL BE FIVE FEET MINIMUM.
4. REFERENCE DETAIL SHEET 12 FOR BEND RADIUS FOR ALL HORIZONTAL AND VERTICAL CONDUIT BENDS.



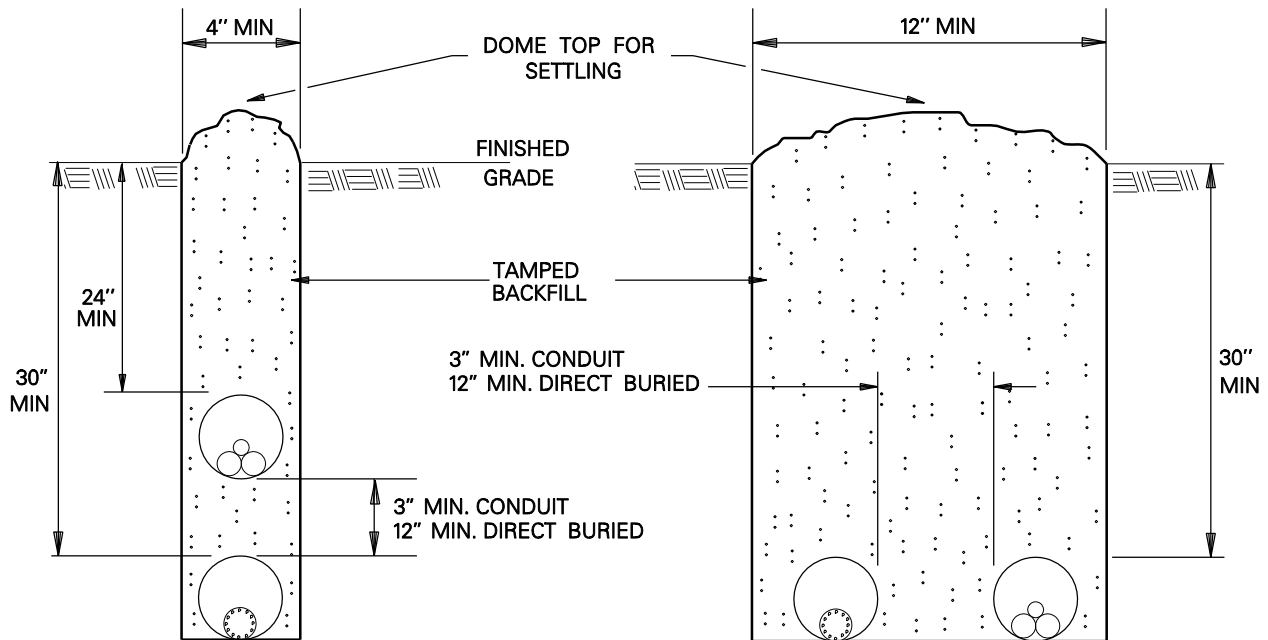
**TERMINATION OF
PRIMARY CONDUIT
AT RISER POLE**

DDS-4 UG DETAIL SHEET 1 OF 57



1 PRIMARY CONDUIT

2 PRIMARY CONDUITS



**1 PRIMARY CONDUIT AND
1 SECONDARY CONDUIT
VERTICALLY ARRANGED**

**1 PRIMARY CONDUIT AND
1 SECONDARY CONDUIT
HORIZONTALLY ARRANGED**

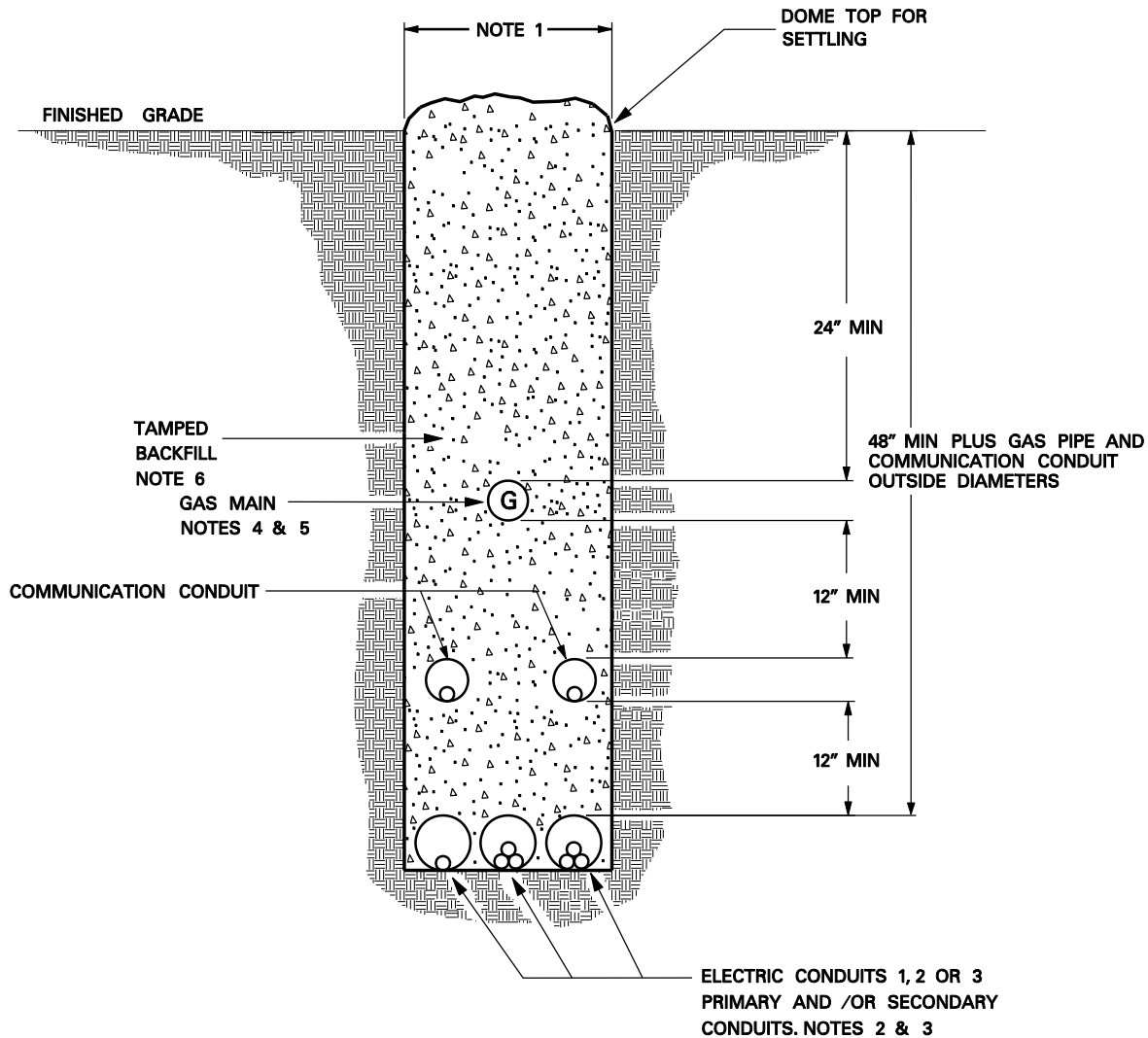
NOTES:

1. CONSULT COMPANY REPRESENTATIVE FOR CONDUIT SIZE.
2. SEE DETAIL SHEETS 7 AND 8 FOR NOTES AND INSTRUCTIONS.
3. SEPARATION DIMENSIONS APPLY TO COMPANY CONDUITS OR CABLES ONLY. MAINTAIN 12" SEPARATION BETWEEN COMPANY CONDUITS OR CABLES AND FOREIGN CONDUITS OR CABLES.



TRENCH REQUIREMENTS

DDS-4 UG DETAIL SHEET 2 OF 57



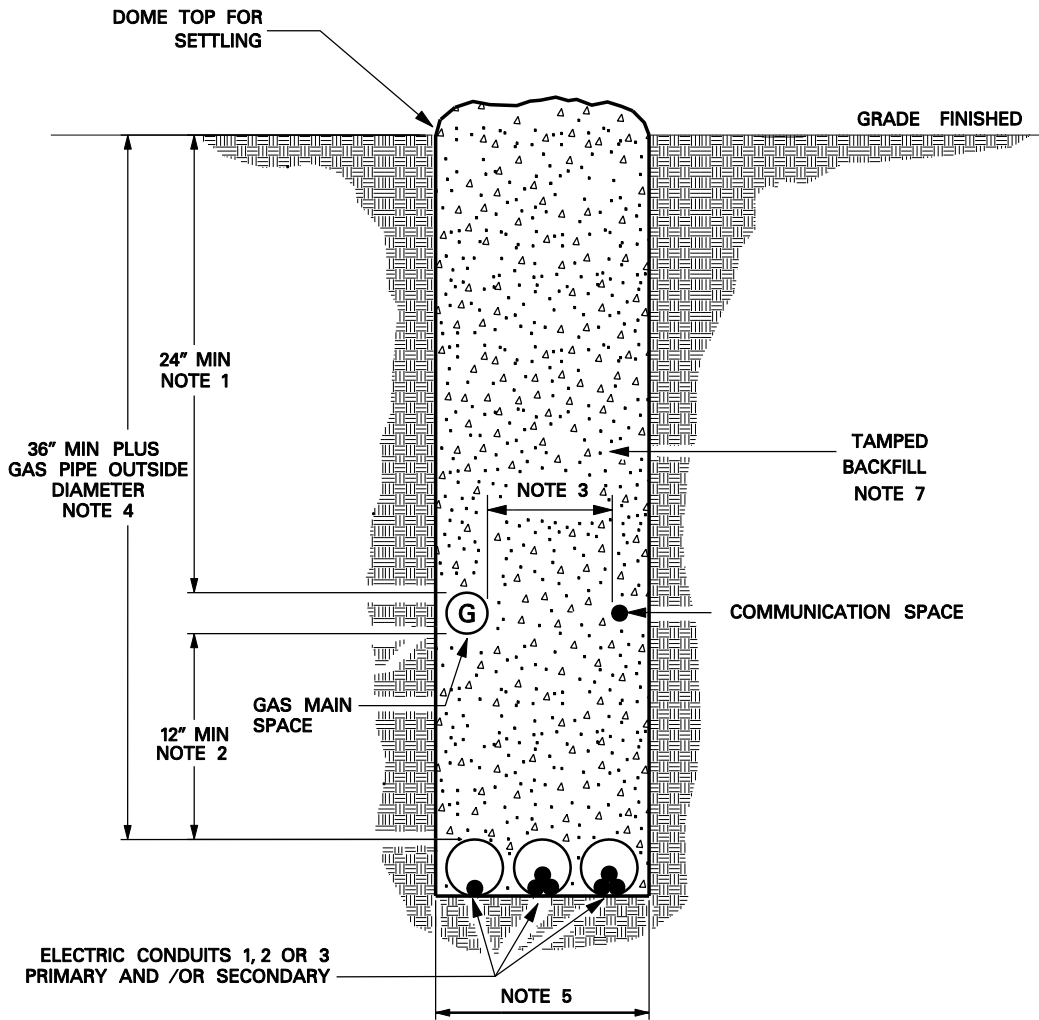
NOTES:

1. 12" MIN. WITH MORE THAN ONE ELECTRICAL SUPPLY CONDUIT.
4" MIN. WITH ONE ELECTRICAL SUPPLY CONDUIT (IN SOLID ROCK PIPE DIAMETER DETERMINES MIN. WIDTH).
2. AMPACITIES ARE REDUCED FOR MULTIPLE CIRCUITS IN A TRENCH.
3. SEE DETAIL SHEETS 7 AND 8 FOR NOTES AND INSTRUCTIONS.
4. THE GAS LINE IN A JOINT TRENCH SHALL BE POLYETHYLENE.
5. WHEN A GAS LINE CROSSES UNDER AN ENCLOSURE SUCH AS A PEDESTAL, PADMOUNT TRANSFORMER OR SPLICE/PULL BOX, IT WILL BE SLEEVED IN A SECTION OF POLYETHYLENE OR SCHEDULE 40 PVC. THE SLEEVE WILL EXTEND A MINIMUM OF THREE FEET BEYOND THE EDGE OF THE ENCLOSURE ON EACH SIDE. MAINTAIN A 12" SEPARATION BETWEEN GAS LINE AND ELECTRICAL SUPPLY CONDUIT(S).
6. BACKFILL MATERIAL AND COMPACTION SHALL MEET OR EXCEED EACH UTILITY'S SPECIFICATIONS.



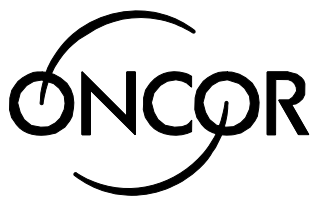
**TRENCH REQUIREMENTS
JOINT USE ELECTRIC, GAS
AND COMMUNICATION**

DDS-4 UG DETAIL SHEET 3 OF 57



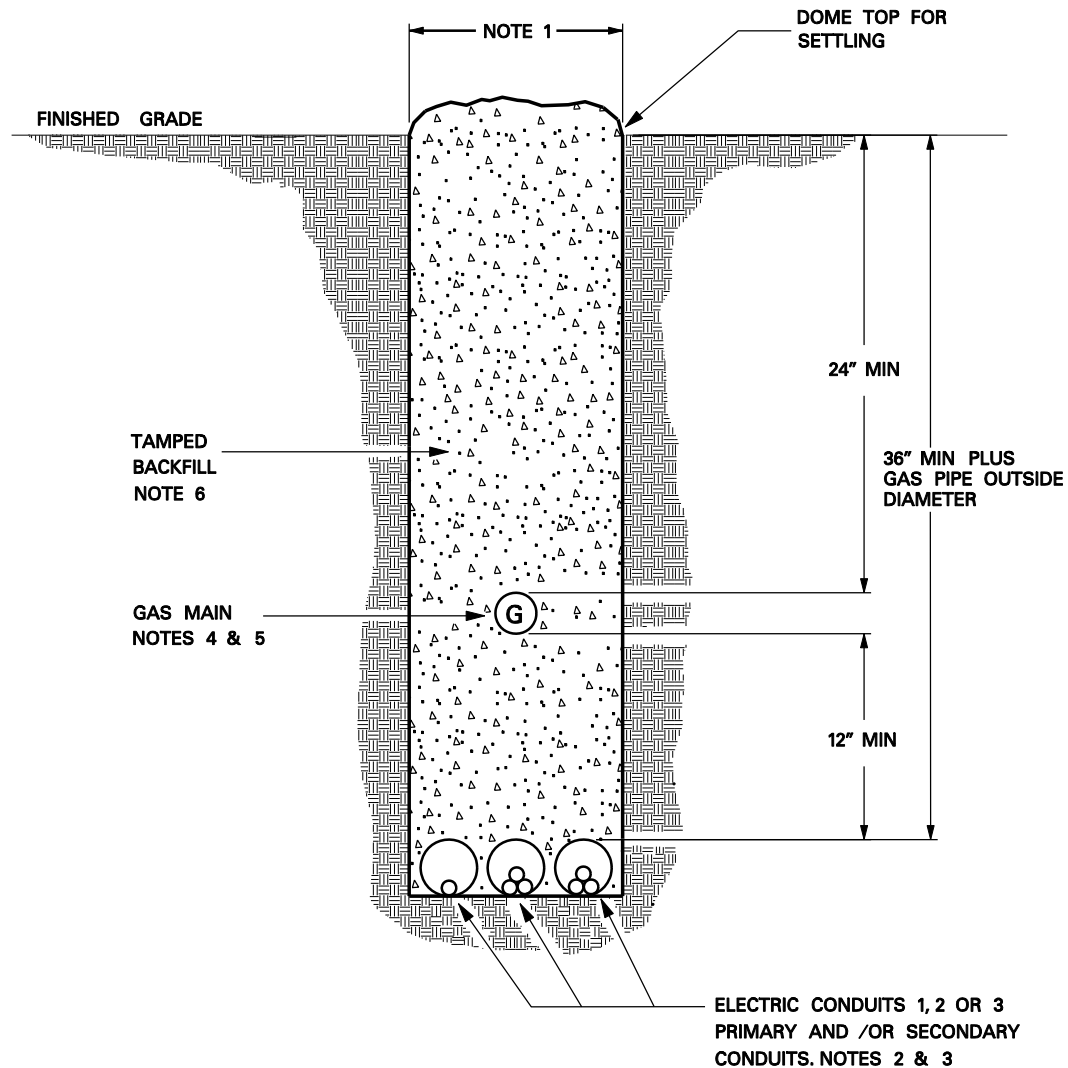
NOTES:

1. MINIMUM 24" DEPTH TO TOP OF BOTH GAS PIPE AND COMMUNICATION FACILITIES. TELCO SHALL NOT BE PLACED ABOVE THE GAS PIPE.
2. MINIMUM 12" VERTICAL SEPARATION BETWEEN SURFACE OF GAS, COMMUNICATION FACILITIES AND ELECTRICAL CONDUITS.
3. MINIMUM 12" HORIZONTAL SEPARATION BETWEEN SURFACE OF COMMUNICATION FACILITIES AND GAS PIPE.
4. MINIMUM 36" DEPTH PLUS PIPE OUTSIDE DIAMETER TO TOP OF ELECTRICAL CONDUITS.
5. TRENCH MUST BE WIDE ENOUGH TO ENSURE 12" SEPARATION AT ALL POINTS BETWEEN THE GAS MAIN AND COMMUNICATION FACILITIES.
6. THE GAS PIPE SHALL ONLY BE PLACED AGAINST UNDISTURBED SOIL THAT IS FREE OF STONES AND WHERE THERE ARE NO HARD PARTICLES LARGER THAN ONE-HALF INCH.
7. BACKFILL MATERIAL AND COMPACTION SHALL MEET OR EXCEED EACH UTILITY'S SPECIFICATIONS.



**JOINT USE TRENCH WITH
GAS, ELECTRIC
AND COMMUNICATION**

DDS-4 UG DETAIL SHEET 4 OF 57



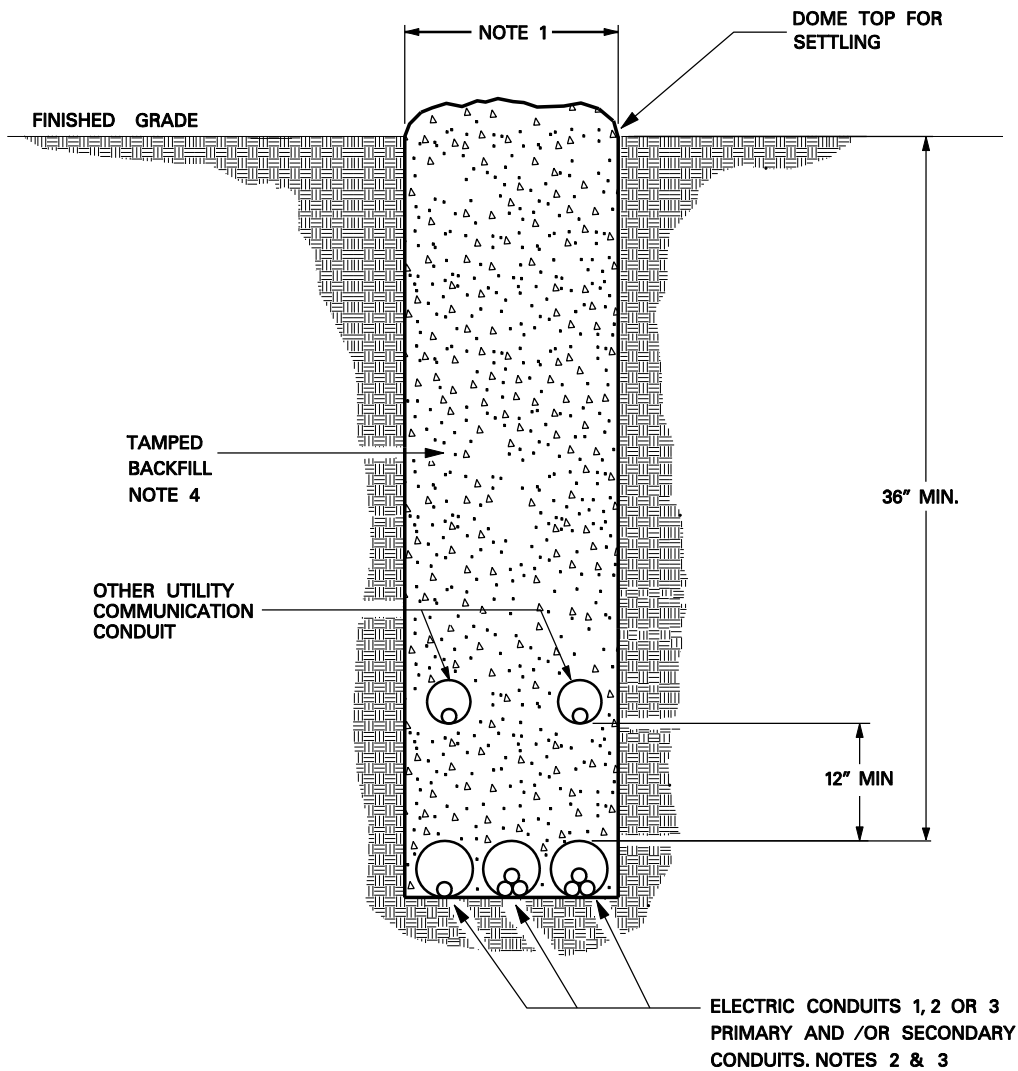
NOTES:

1. 12" MIN. WITH MORE THAN ONE ELECTRICAL SUPPLY CONDUIT.
4" MIN. WITH ONE ELECTRICAL SUPPLY CONDUIT (IN SOLID ROCK PIPE DIAMETER DETERMINES MIN. WIDTH).
2. AMPACITIES ARE REDUCED FOR MULTIPLE CIRCUITS IN A TRENCH.
3. SEE DETAIL SHEETS 7 AND 8 FOR NOTES AND INSTRUCTIONS.
4. THE GAS LINE IN A JOINT TRENCH SHALL BE POLYETHYLENE.
5. WHEN A GAS LINE CROSSES UNDER AN ENCLOSURE SUCH AS A PEDESTAL, PADMOUNT TRANSFORMER OR SPLICE/PULL BOX, IT WILL BE SLEEVED IN A SECTION OF POLYETHYLENE OR SCHEDULE 40 PVC. THE SLEEVE WILL EXTEND A MINIMUM OF THREE FEET BEYOND THE EDGE OF THE ENCLOSURE ON EACH SIDE. MAINTAIN A 12" SPARATION BETWEEN GAS LINE AND ELECTRICAL SUPPLY CONDUIT(S).
6. BACKFILL MATERIAL AND COMPACTION SHALL MEET OR EXCEED EACH UTILITY'S SPECIFICATIONS.



**TRENCH REQUIREMENTS
JOINT USE ELECTRIC AND GAS**

DDS-4 UG DETAIL SHEET 5 OF 57



NOTES:

1. 12" MIN. WITH MORE THAN ONE ELECTRICAL SUPPLY CONDUIT.
4" MIN. WITH ONE ELECTRICAL SUPPLY CONDUIT (IN SOLID ROCK PIPE DIAMETER DETERMINES MIN. WIDTH).
2. AMPACITIES ARE REDUCED FOR MULTIPLE CIRCUITS IN A TRENCH.
3. SEE DETAIL SHEETS 7 AND 8 FOR NOTES AND INSTRUCTIONS.
4. BACKFILL MATERIAL AND COMPACTION SHALL MEET OR EXCEED EACH UTILITY'S SPECIFICATIONS.



**TRENCH REQUIREMENTS
JOINT USE
ELECTRIC AND COMMUNICATION**

DDS-4 UG DETAIL SHEET 6 OF 57

1. TRENCH ALIGNMENT SHALL BE AS STRAIGHT AS CONDITIONS PERMIT. ANY DEVIATIONS FROM PLANNED ALIGNMENT SHALL HAVE PRIOR APPROVAL BY THE PROJECT ENGINEER/INSPECTOR. ALL TRENCH CUTS SHALL BE IN ACCORDANCE WITH EXISTING SAFETY REGULATIONS IN EFFECT.
2. TRENCH BOTTOM SHOULD BE UNDISTURBED, TAMPED, OR RELATIVELY SMOOTH EARTH. WHERE EXCAVATION IS IN ROCK, THE CONDUIT SHOULD BE LAID ON A LAYER OF CLEAN BACKFILL.
3. ALL BACKFILL SHOULD BE FREE OF DEBRIS OR OTHER MATERIAL THAT MAY DAMAGE THE CONDUIT SYSTEM OR CAUSE SETTLING. THE MATERIAL SHOULD FILL THE VOIDS AROUND THE CONDUIT TO PREVENT HOT SPOTS & SETTLING.
4. BACKFILL SHOULD BE ADEQUATELY COMPACTED. BACKFILL NOT UNDER PAVEMENT SHOULD BE COMPACTED TO THE DENSITY OF THE SURROUNDING UNDISTURBED SOIL. BACKFILL UNDER PAVEMENT SHOULD BE COMPACTED TO NOT LESS THAN 95% OF THE DENSITY OF UNDISTURBED SOIL AS DETERMINED BY ASTM D-698.
5. SEE SHEET 8 FOR INSTRUCTIONS FOR JOINING PVC CONDUIT.
6. EACH CONDUIT RUN SHALL BE CHECKED BY PULLING A MANDREL THROUGH THE ENTIRE LENGTH AT THE COMPLETION OF THE CIVIL INSTALLATION.
7. A PULL TAPE SHALL BE LEFT IN EACH CONDUIT. CONDUIT SHALL BE PLUGGED AT BOTH ENDS.

APPROVED PULL TAPES

CONDUIT SIZE	MANUFACTURER	CATALOG NO.	TSN
1", 2", 3" & 4"	ARNCO NEPTCO, INC.	BL-WP25 WP2500P	321068
6"	ARNCO NEPTCO, INC.	BL-WP60 RP6000N	397616

8. CONTACT COMPANY REPRESENTATIVE FOR TRENCH DIMENSIONS FOR MORE THAN 2 CONDUITS IN SAME DITCH.



INSTALLATION OF CONDUITS NOTES AND INSTRUCTIONS

DDS-4 UG DETAIL SHEET 7 OF 57

THE CHEMICALS USED IN SOLVENT WELDING OF CONDUIT ARE INTENDED TO PENETRATE THE SURFACE OF BOTH PIPE AND FITTING, WHICH AFTER CURING RESULT IN A COMPLETE FUSION AT THE JOINT. THE OVER-USE OR UNDER-USE OF CHEMICALS RESULTS IN LEAKY JOINTS OR WEAKENED PIPE.

A. CLEAN CONDUIT BY WIPING OFF ALL DUST, DIRT AND MOISTURE FROM SURFACES TO BE CEMENTED EITHER BY MECHANICAL OR CHEMICAL CLEANING.

1. MECHANICAL CLEANING – FINE ABRASIVE PAPER OR CLOTH (180 GRIT OR FINER) OR CLEAN OIL-FREE STEEL WOOL.
2. CHEMICAL CLEANING – CLEANER RECOMMENDED BY MANUFACTURER OR EQUIVALENT (METHYL ETHYL KETONE – MEK).

B. WITH A NON-SYNTHETIC BRISTLE BRUSH APPLY AN EVEN COATING OF CEMENT TO THE OUTSIDE OF THE PIPE AND INSIDE THE SOCKET. MAKE SURE THAT THE AMOUNT OF CEMENT APPLIED TO THE CONDUIT IS EQUAL TO THE DEPTH OF THE SOCKET. BEFORE ASSEMBLY, IF SOME EVAPORATION OF SOLVENT FROM THE SURFACES TO BE JOINED IS NOTED, REAPPLY CEMENT, THEN ASSEMBLE.

IF CEMENT BEING USED HAS AN APPRECIABLE CHANGE IN VISCOSITY OR SHOWS SIGNS OF JELLING, IT SHALL BE DISCARDED. IN NO CASE SHALL THINNER BE USED IN AN ATTEMPT TO RESTORE JELLED PVC CEMENT. THINNER MAY ONLY BE USED TO CHANGE THE VISCOSITY OF A MEDIUM BODIED CEMENT TO THAT OF A REGULAR BODIED CEMENT FOR APPLICATION ON PVC PIPE SMALLER THAN 2 1/2 INCH DIAMETER. A MEDIUM BODIED CEMENT SHALL BE USED ON 2 1/2 TO 6 INCH PVC PIPE.

IN COLD WEATHER, USE A PRIMER TO SOFTEN THE JOINING SURFACES BEFORE APPLYING CEMENT. ALLOW LONGER CURE TIME. (SEE ITEM E).

C. JOIN PIPE WITHIN 20 SECONDS OF APPLYING CEMENT. TURN THE PIPE 1/4 TURN TO ENSURE EVEN DISTRIBUTION OF CEMENT ON SURFACES TO BE BONDED. MAKE SURE THAT PIPE IS INSERTED TO THE FULL DEPTH OF THE SOCKET.

D. CLEAN OFF ANY BEAD OR EXCESS CEMENT THAT APPEARS AT THE OUTER SHOULDER OF THE FITTING. EXCESS CEMENT ALLOWED TO REMAIN IN CONTACT WITH THE MATERIAL IS APT TO CAUSE WEAKENING OF THE MATERIAL, AND SUBSEQUENT FAILURE.

E. NEWLY ASSEMBLED JOINTS SHOULD BE HANDLED CAREFULLY UNTIL THE CEMENT HAS CURED TO THE RECOMMENDED SET PERIOD. SET PERIODS ARE RELATED TO THE AMBIENT TEMPERATURE AS FOLLOWS:

- 30 MIN. MINIMUM AT 60° TO 100°F
- 1 HR. MINIMUM AT 40° TO 60°F
- 2 HR. MINIMUM AT 20° TO 40°F
- 4 HR. MINIMUM AT 0° TO 20°F



INSTRUCTIONS FOR JOINING PVC CONDUIT

DDS-4 UG DETAIL SHEET 8 OF 57

CONDUIT NOMINAL SIZE (IN.)	MINIMUM BEND RADIUS (IN.)	TYPE OF BEND MATERIAL FOR PULLS:
1	18	PVC
2	24	PVC
3	24	PVC
4	24	PVC
6	36	PVC

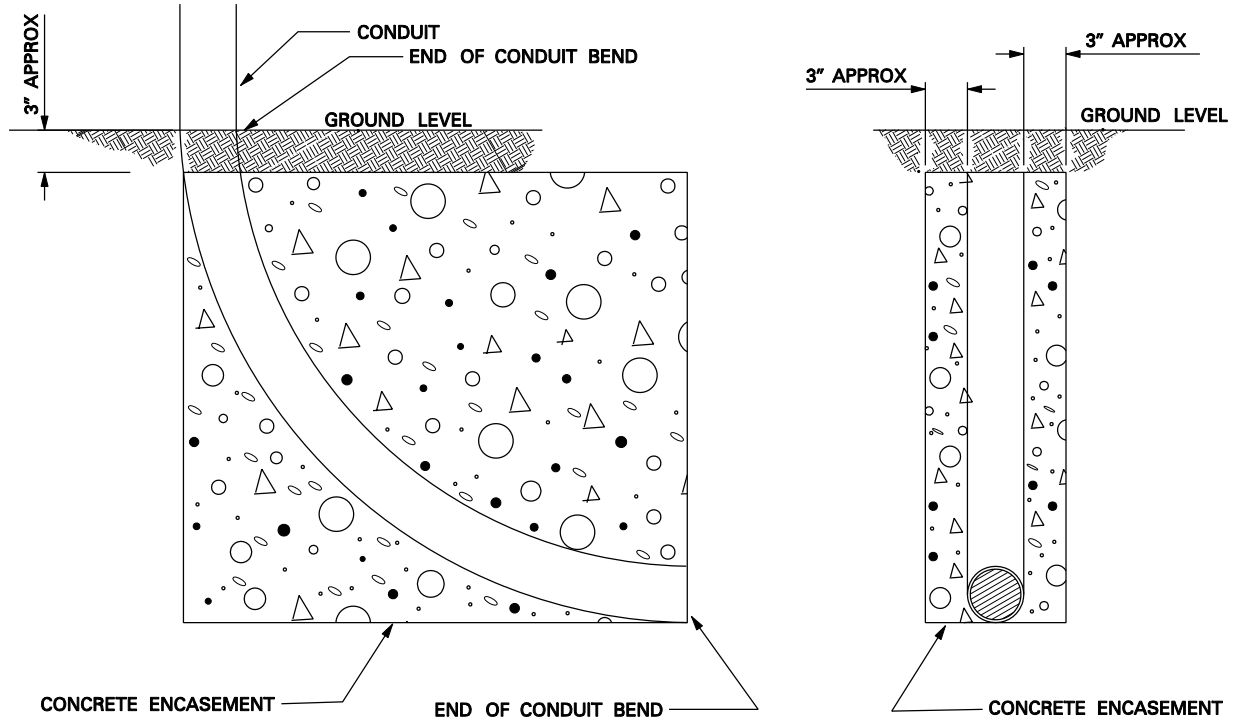
NOTES:

1. SCH. 80 PVC CONDUIT SHALL BE USED FOR ALL ABOVE GROUND INSTALLATIONS (POLE AND METER RISERS). SCH. 40 MAY BE USED FOR ALL BELOW GROUND INSTALLATIONS.



**CONDUIT BEND RADIUS
AND MATERIAL**

DDS-4 UG DETAIL SHEET 9 OF 57



BEND	CONCRETE
1 INCH BEND	1.2 CUBIC FT.
2 INCH BEND	1.5 CUBIC FT.
3 INCH BEND	1.6 CUBIC FT.
4 INCH BEND	3.2 CUBIC FT.
6 INCH BEND	8.9 CUBIC FT.

TABLE 1

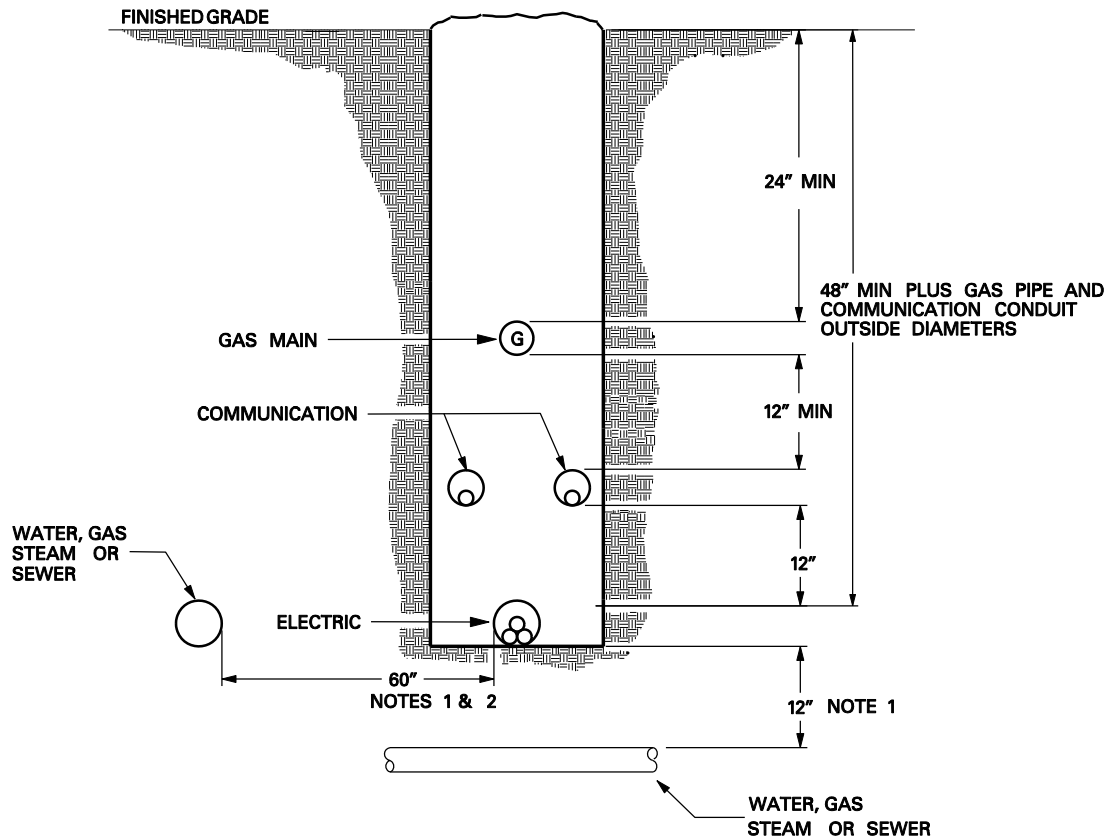
NOTES:

1. CONTACT COMPANY INSPECTOR TO DETERMINE REQUIREMENT FOR BEND ENCASEMENT.
2. DO NOT BOND CONCRETE TO POLE WHEN ENCASING A POLE RISER BEND.



CONCRETE ENCASED BENDS

DDS-4 UG DETAIL SHEET 10 OF 57



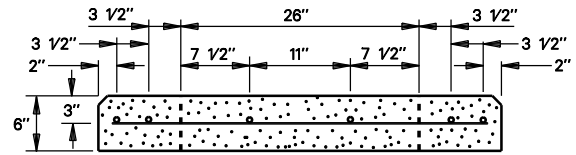
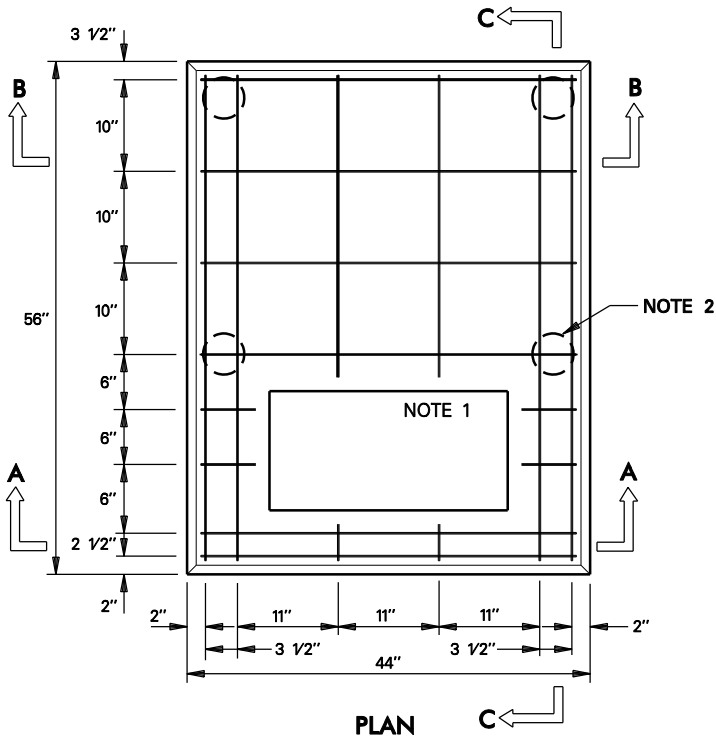
NOTES:

1. VERTICAL CROSSING CLEARANCE FROM OTHER UTILITIES SHALL BE 12 INCHES. A 60 INCH LATERAL SEPARATION OF PARALLELING FOREIGN UTILITIES (EXCLUDING GAS AND COMMUNICATIONS) SHALL BE REQUIRED. AN EXCEPTION WOULD BE TO ALLOW GAS, TELEPHONE AND /OR CATV IN THE SAME DITCH AS COMPANY CONDUIT SYSTEM PROVIDING THE NESC REQUIREMENTS FOR CONDUIT SEPARATION ARE MET OR EXCEEDED AND THE COMMUNICATIONS CIRCUITS ARE INSTALLED IN CONDUIT.
2. IT IS UNDERSTOOD THAT ONLY 12 INCH SEPARATION IS REQUIRED ON PUBLIC RIGHTS-OF-WAY. PERSONNEL INVOLVED IN EXCAVATION ON PUBLIC RIGHTS-OF-WAY ARE FULLY AWARE OF THE HAZARDS INVOLVED. HOWEVER, EXCAVATION ON PRIVATE PROPERTY CAN BE DONE BY INDIVIDUALS WHO ARE NOT LIKELY TO BE FULLY AWARE OF THE HAZARDS. THEREFORE, THE 60 INCH LATERAL SEPARATION IS REQUIRED TO HELP PREVENT INJURY TO PERSONNEL DOING EXCAVATION ON PRIVATE PROPERTY.

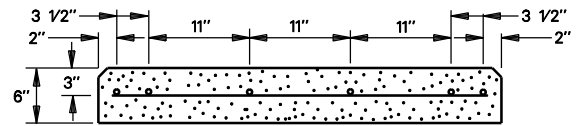


**CLEARANCE REQUIREMENTS
FROM FOREIGN UTILITIES
ON PRIVATE PROPERTY**

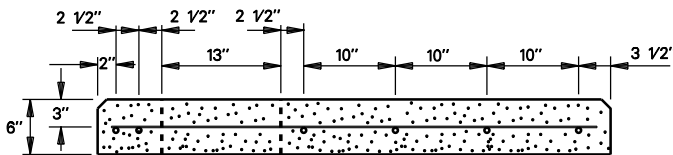
DDS-4 UG DETAIL SHEET 11 OF 57



SECTION "A - A"



SECTION "B - B"



SECTION "C - C"

REINFORCING SCHEDULE		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
4	53"	7.02
2	33"	2.13
2	4"	.19
6	41"	7.71
4	6"	.75

.28 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 1,160 LBS

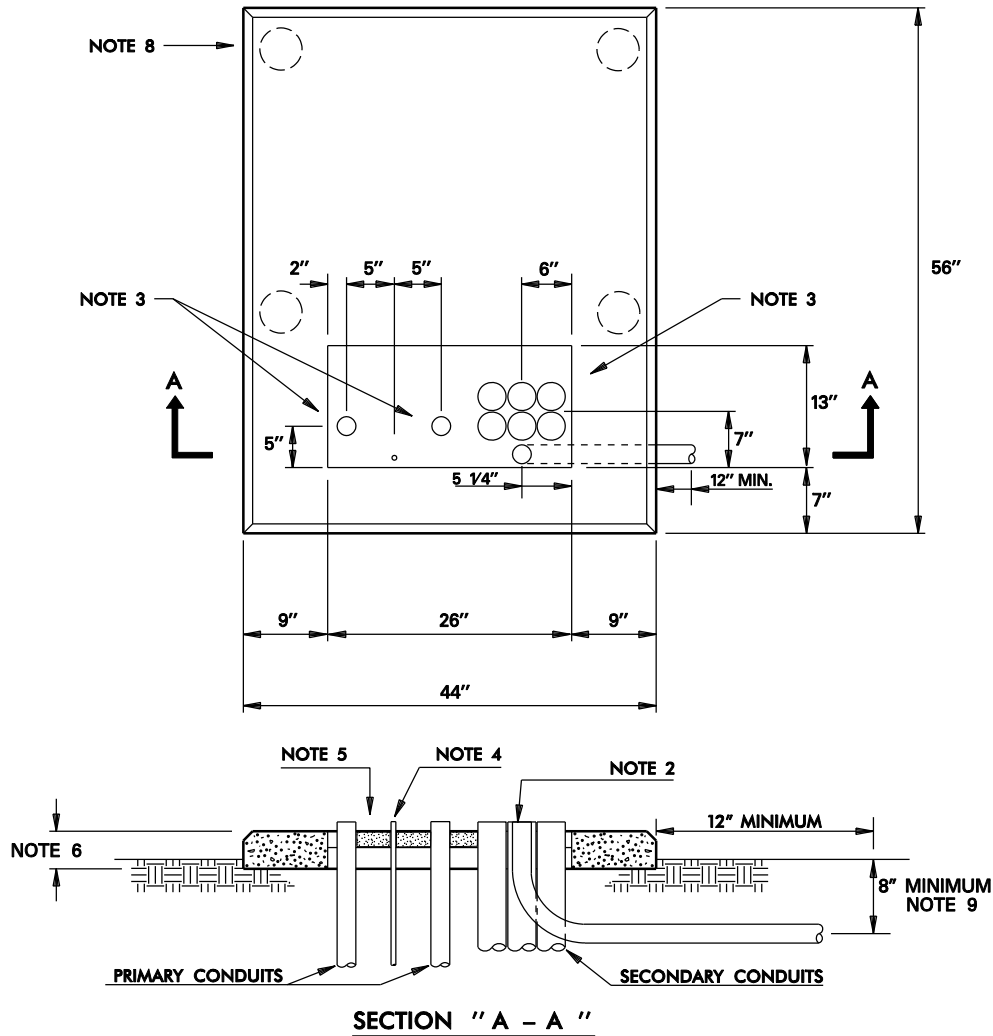
NOTES:

1. SEE DETAIL SHEET 13 AND 14 FOR LOCATIONS OF CONDUITS AND GROUND ROD AND OTHER APPLICABLE NOTES.
2. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 17 FOR PIER INSTALLATION.
3. ALL STEEL TO BE A MINIMUM OF 1 1/2" FROM SURFACE OF CONCRETE.
4. ALL CHAMFERS TO BE 1 1/2" x 45 DEGREES. ROUNDING OF EDGES WITH ROUNDING TROWEL IS ACCEPTABLE IN LIEU OF CHAMFERING.
5. CONSULT COMPANY REPRESENTATIVE FOR APPROVED PREFABRICATED PADS.
6. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
7. GROUT WINDOW AS PER DETAIL SHEET 15.



**POURED IN PLACE PAD
FOR SINGLE PHASE
TRANSFORMERS**

DDS-4 UG DETAIL SHEET 12 OF 57



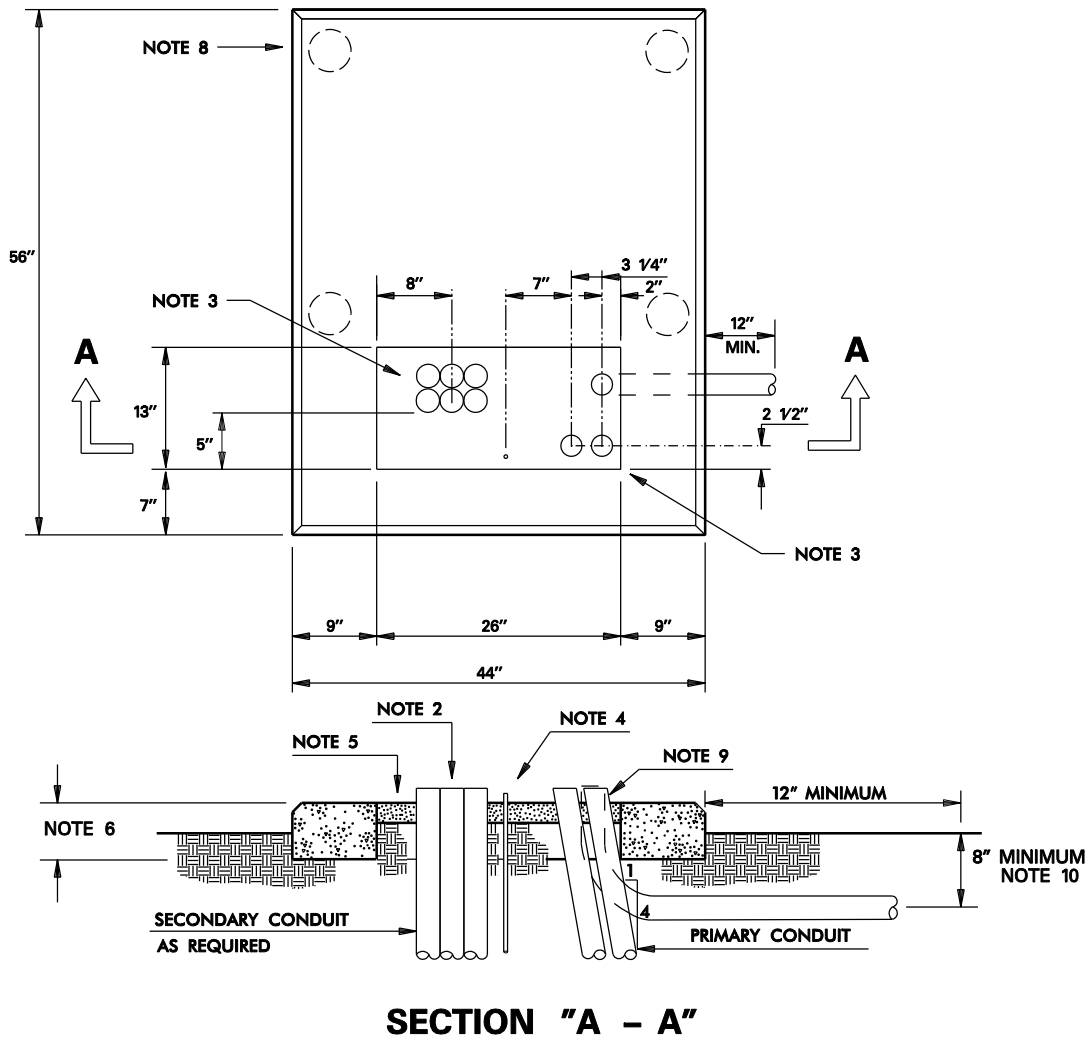
NOTES:

1. CONSULT COMPANY REPRESENTATIVE FOR (1) NUMBER, SIZE AND LOCATION OF CONDUITS IN PAD WINDOW AND (2) WHETHER DESIGN IS TYPE I OR TYPE II CONDUIT ARRANGEMENT.
2. NO MORE THAN 8- 2 INCH, 6- 3 INCH OR 4- 4 INCH CONDUITS INCLUDING SPARES SHALL BE PLACED IN THE SECONDARY SIDE OF PAD WINDOW.
3. REFERENCE DETAIL SHEET 9 FOR BEND RADIUS FOR ALL HORIZONTAL AND VERTICAL CONDUIT BENDS.
4. CONSULT COMPANY REPRESENTATIVE ON WHERE TO OBTAIN 5/8" X 8' COPPER CLAD GROUND ROD. GROUND ROD TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7'- 6".
5. GROUT WINDOW AS PER DETAIL SHEET 15.
6. THIS DIMENSION IS 6 INCHES FOR PRECAST CONCRETE PAD AND 4 INCHES FOR POLYMER CONCRETE PADS.
7. REFERENCE DETAIL SHEET 16 FOR FOREIGN UTILITY EQUIPMENT GROUND.
8. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY COMPANY INSPECTOR. REFERENCE DETAIL SHEET 17 FOR PIER DETAIL.
9. THE 3" FLEX CONDUIT SHALL HAVE A MINIMUM OF 8" OF COVER AS IT EXITS ON THE RIGHT HAND SIDE OF THE TRANSFORMER PAD.



**TRANSFORMER PAD- PRECAST
SINGLE PHASE DEADFRONT
TYPE I**

DDS-4 UG DETAIL SHEET 13 OF 57



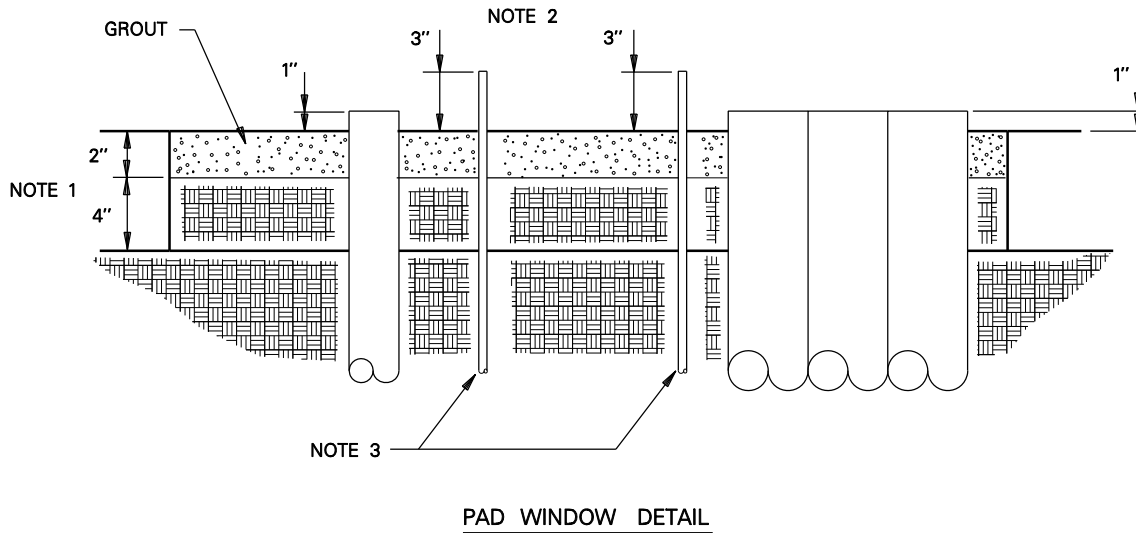
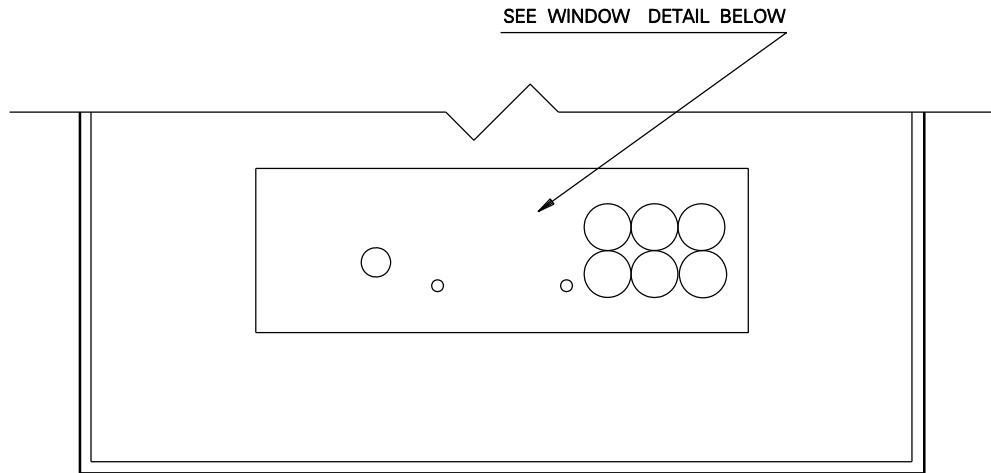
NOTES:

1. CONSULT COMPANY REPRESENTATIVE FOR (1)NUMBER, SIZE AND LOCATION OF CONDUITS IN PAD WINDOW AND (2) WHETHER TYPE I OR TYPE II CONDUIT ARRANGEMENT.
2. NO MORE THAN 8- 2 INCH, 6- 3 INCH OR 4- 4 INCH CONDUITS INCLUDING SPARES SHALL BE PLACED IN THE SECONDARY SIDE OF PAD WINDOW.
3. REFERENCE DETAIL SHEET 9 FOR BEND RADIUS FOR ALL HORIZONTAL AND VERTICAL CONDUIT BENDS.
4. CONSULT COMPANY REPRESENTATIVE ON WHERE TO OBTAIN 5/8" X 8' COPPER CLAD GROUND ROD. GROUND ROD TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7'- 6".
5. GROUT WINDOW AS PER DETAIL SHEET 15.
6. THIS DIMENSION IS 6 INCHES FOR PRECAST CONCRETE PAD AND 4 INCHES FOR POLYMER CONCRETE PADS.
7. REFERENCE DETAIL SHEET 16 FOR FOREIGN UTILITY EQUIPMENT GROUND.
8. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY COMPANY INSPECTOR. REFERENCE DETAIL SHEET 17 FOR PIER DETAIL.
9. THE CONDUITS MUST BE INSTALLED TO ENSURE THAT THE TOTAL MAXIMUM BENDING RADIUS FOR THE PRIMARY CABLE DOES NOT EXCEED 9 INCHES (ANGLE PRIMARY CONDUIT WHENEVER POSSIBLE).
10. THE 3" FLEX CONDUIT SHALL HAVE A MINIMUM OF 8" OF COVER AS IT EXITS ON THE RIGHT HAND SIDE OF THE TRANSFORMER PAD.



**TRANSFORMER PAD- PRECAST
SINGLE PHASE DEADFRONT
TYPE II**

DDS-4 UG DETAIL SHEET 14 OF 57



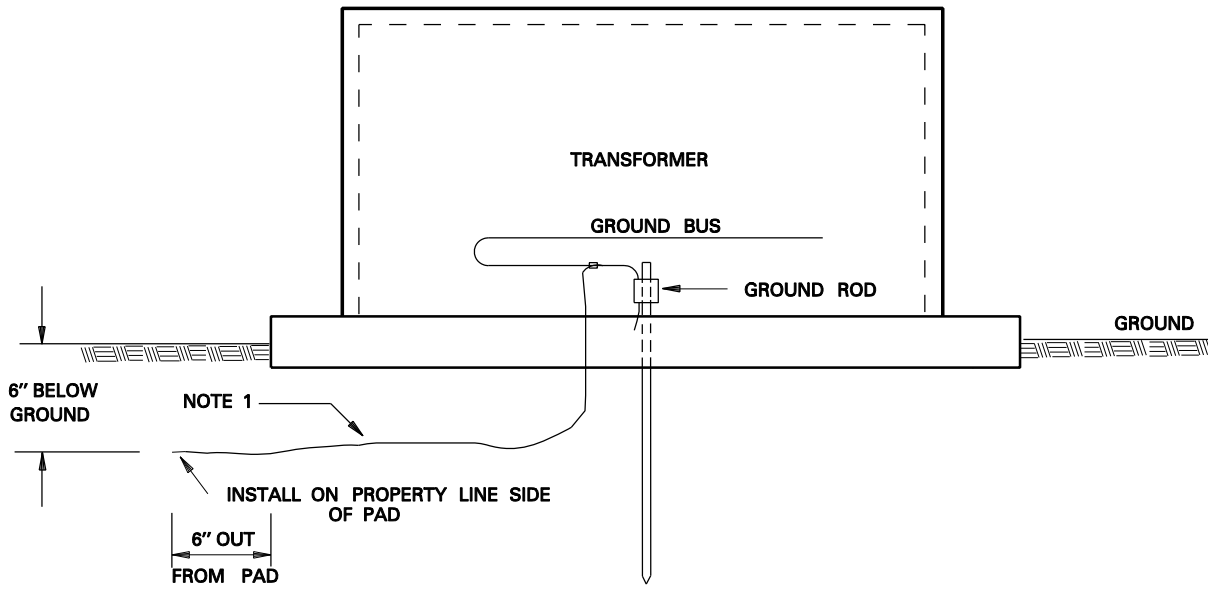
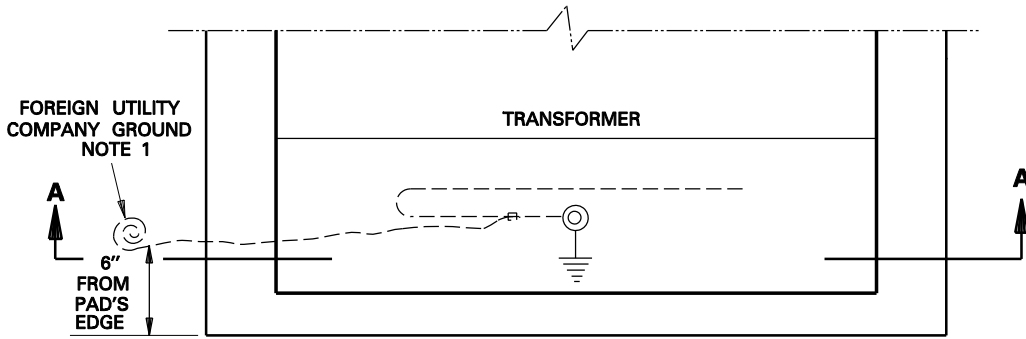
NOTES:

1. THE GROUT SHALL BE PORTLAND BASED AND SANDED. DO NOT USE CONCRETE.
2. FILL IN PAD WINDOW WITH 4 INCHES OF EARTH BACKFILL AND 2" OF GROUT.
3. GROUND RODS SHALL EXTEND A MAXIMUM OF 3 INCHES ABOVE GROUTING TO ASSURE ADEQUATE DRIVEN DEPTH AND ALLOW FOR ADEQUATE CONNECTING SPACE.
4. GROUND RODS SHALL EXTEND A MINIMUM OF 7' - 6" INTO EARTH.
5. GRAVEL FILL IS NOT ACCEPTABLE.



**GROUTING DETAIL
FOR TRANSFORMER
PAD WINDOWS**

DDS-4 UG DETAIL SHEET 15 OF 57



SECTION A-A

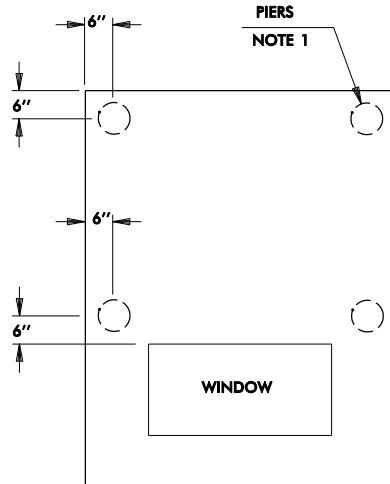
NOTES:

1. ON NEW INSTALLATIONS, INSTALL NO. 6 S.D. BARE COPPER AS SHOWN FOR FOREIGN UTILITY COMPANY BONDING.
2. THE NATIONAL ELECTRICAL SAFETY CODE RULE 384C RECOMMENDS BONDING OF ALL ABOVE GROUND METALLIC POWER AND COMMUNICATIONS APPARATUS (PEDESTALS, TERMINALS, APPARATUS CASES, TRANSFORMER CASES, ETC.) THAT ARE SEPARATED BY A DISTANCE OF 6 FEET OR LESS.

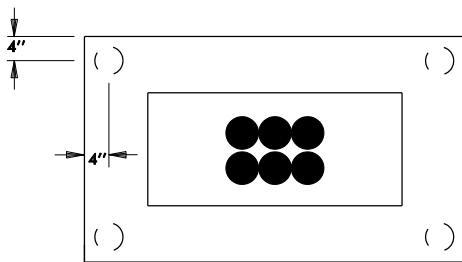


**METHOD OF PROVIDING
UTILITY COMPANY
EQUIPMENT GROUND**

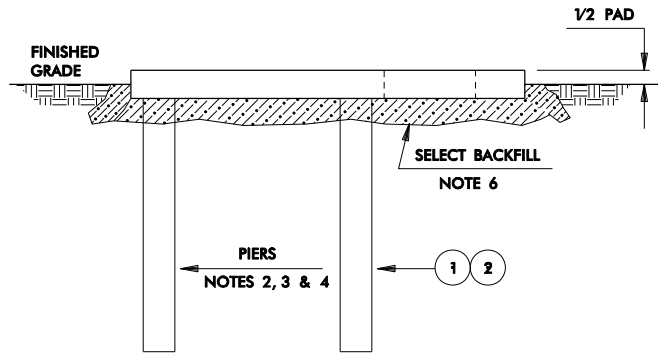
DDS-4 UG DETAIL SHEET 16 OF 57



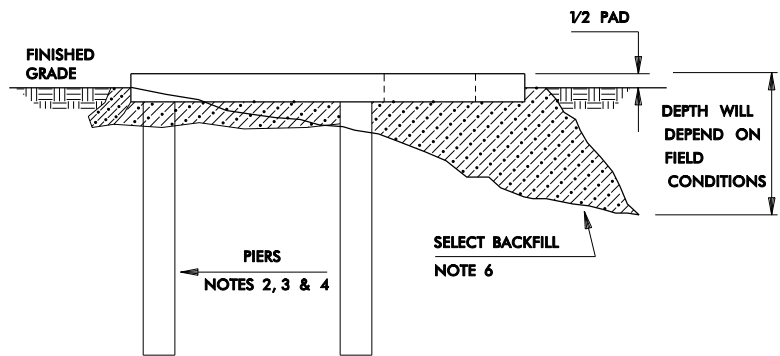
TRANSFORMER PAD



SERVICE ENCLOSURE



SIDE VIEW FOR LEVEL TERRAIN



SIDE VIEW FOR SLOPING TERRAIN

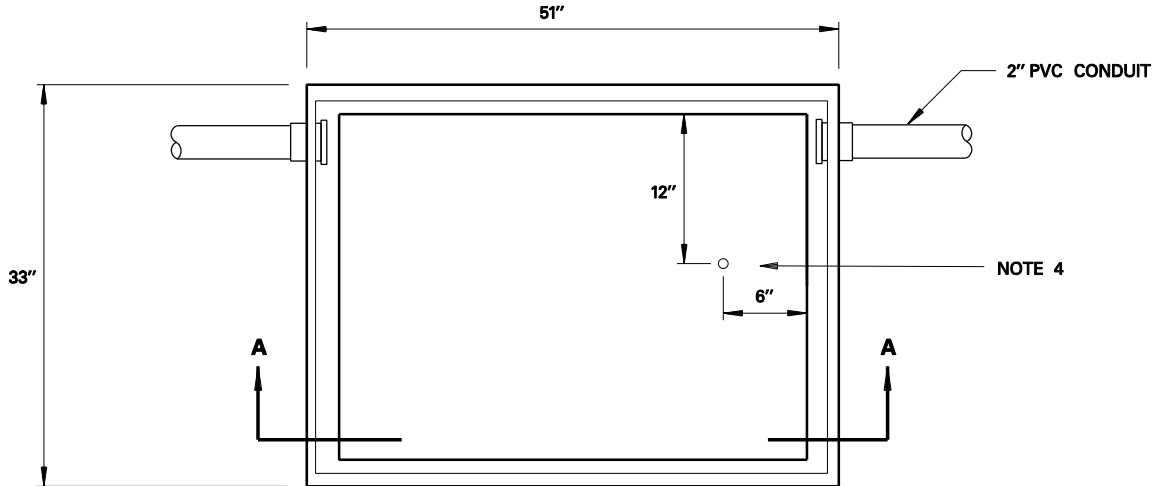
NOTES:

1. PIERS SHALL BE INSTALLED UNDER PAD WHEN DIRT HAS BEEN DISTURBED UNDER THE LOAD BEARING AREA OF PAD. TAMP BACKFILL (95% COMPACTION) TO TOP OF PIER SUPPORTS (USE DITCH SPOIL WHEN POSSIBLE).
2. CUT SUPPORT PIERS FROM SECTION OF 4 IN. PVC CONDUIT.
3. PLACE PIERS AS SHOWN. FILL WITH CONCRETE.
4. TOP OF PIERS SHOULD BE LEVEL AND 3 IN. BELOW FINAL GROUND LEVEL TO A DEPTH OF:
 - (1) MINIMUM OF 36 IN. IN UNDISTURBED EARTH (SOIL).
 - (2) BOTTOM OF DITCH.
 - (3) BEGINNING OF SOLID ROCK.
5. AFTER PLACING PAD, FILL VOIDS UNDER AND AROUND PAD WITH SELECT DITCH SPOIL.
6. ALL BACKFILL UNDER AND AROUND PAD SHALL BE WELL TAMPED.

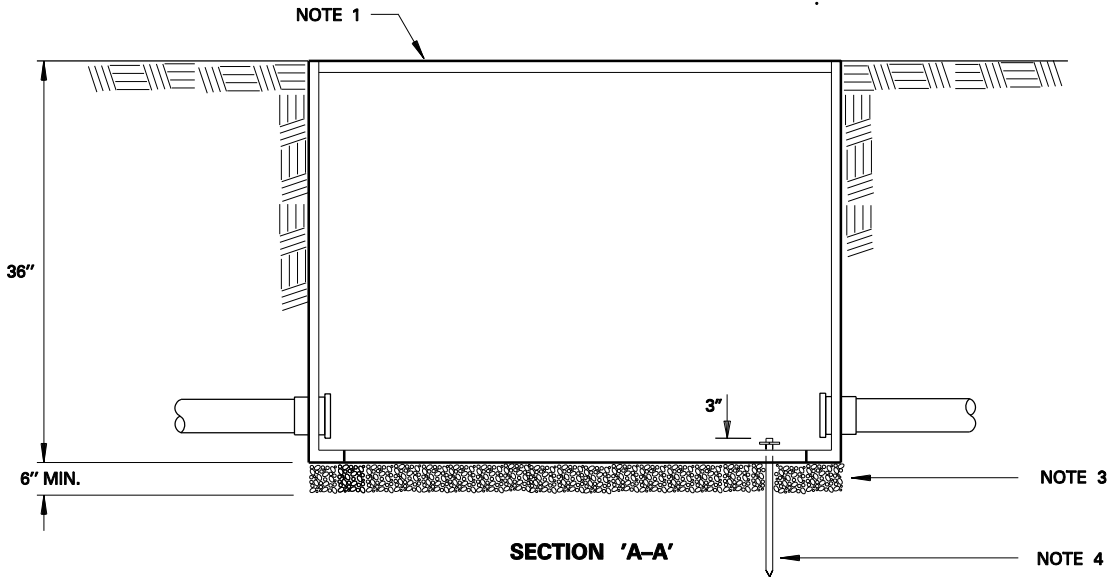


**SINGLE PHASE TRANSFORMER PAD
AND SERVICE ENCLOSURE
PIER INSTALLATION**

DDS-4 UG DETAIL SHEET 17 OF 57



TOP VIEW



SECTION 'A-A'

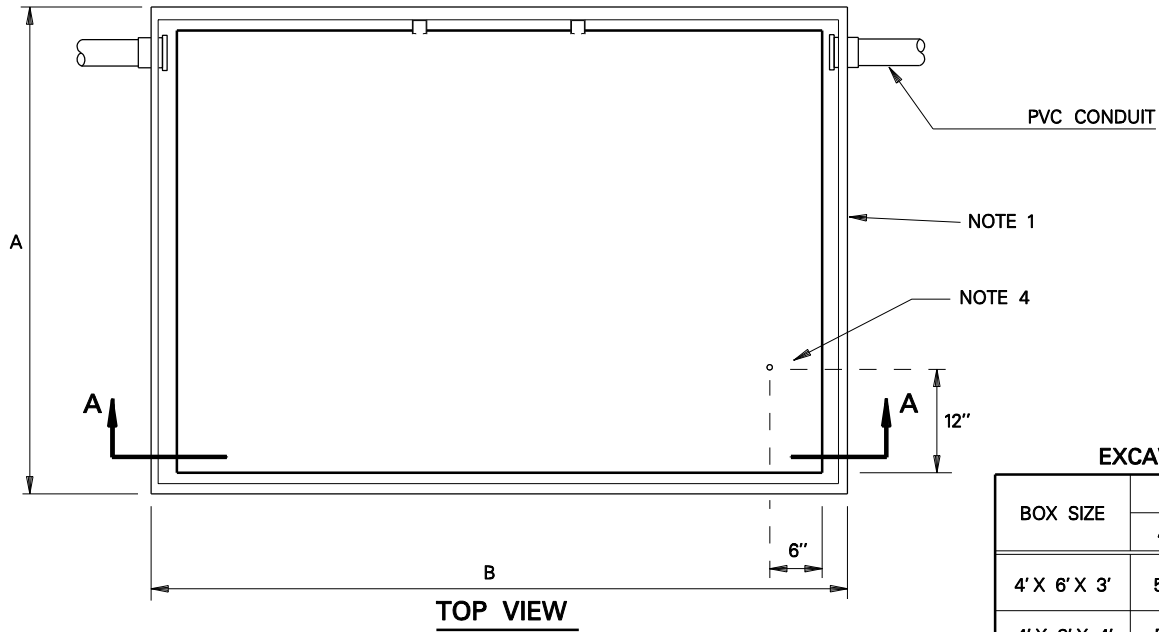
NOTES:

1. 30" X 48" X 36" SPLICE/PULL BOX DESIGNED FOR PARKWAY INSTALLATION WITH H10 LOADING (LIGHT TRAFFIC). CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE SUBSURFACE SPLICE/PULL BOX.
2. THIS BOX IS INTENDED FOR USE AS AN INTERMEDIATE SPLICE BOX AS NEEDED DUE TO LONG PULLING DISTANCES AND RESTRICTED TO SINGLE #1/0 CABLE.
3. TAMP ALL DISTURBED SOIL UNDERNEATH PAD TO 95% COMPACTION AS PER ASTM D 698 AND INSTALL A 6 INCH WELL TAMPED LAYER OF MEDIUM GRAVEL FILL.
4. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 8' COPPER CLAD GROUND ROD. GROUND ROD TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".



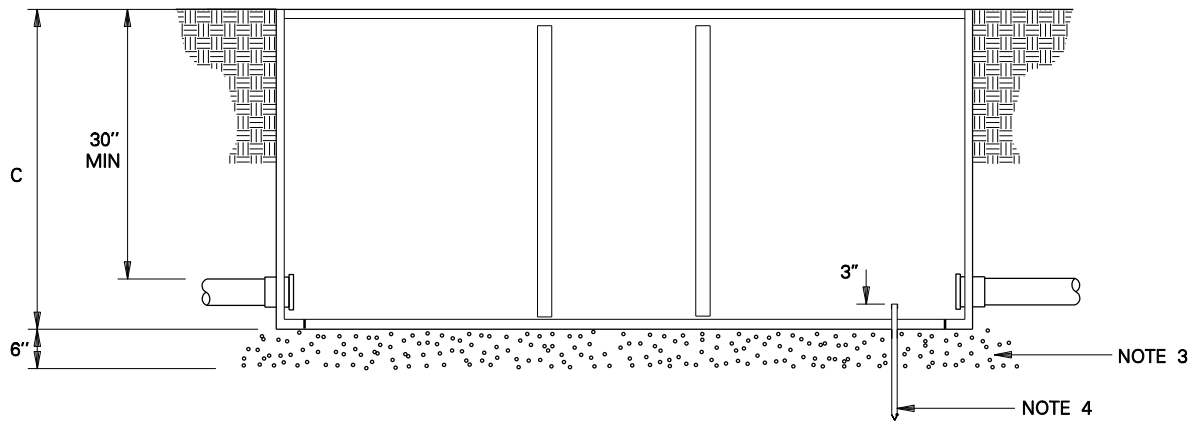
**SINGLE PHASE PRIMARY
SUBSURFACE SPLICE / PULL BOX
INSTALLATION**

DDS-4 UG DETAIL SHEET 18 OF 57



EXCAVATION

BOX SIZE	DIMENSIONS (IN)		
	A	B	C
4' X 6' X 3'	55	79	36
4' X 8' X 4'	56	104	48



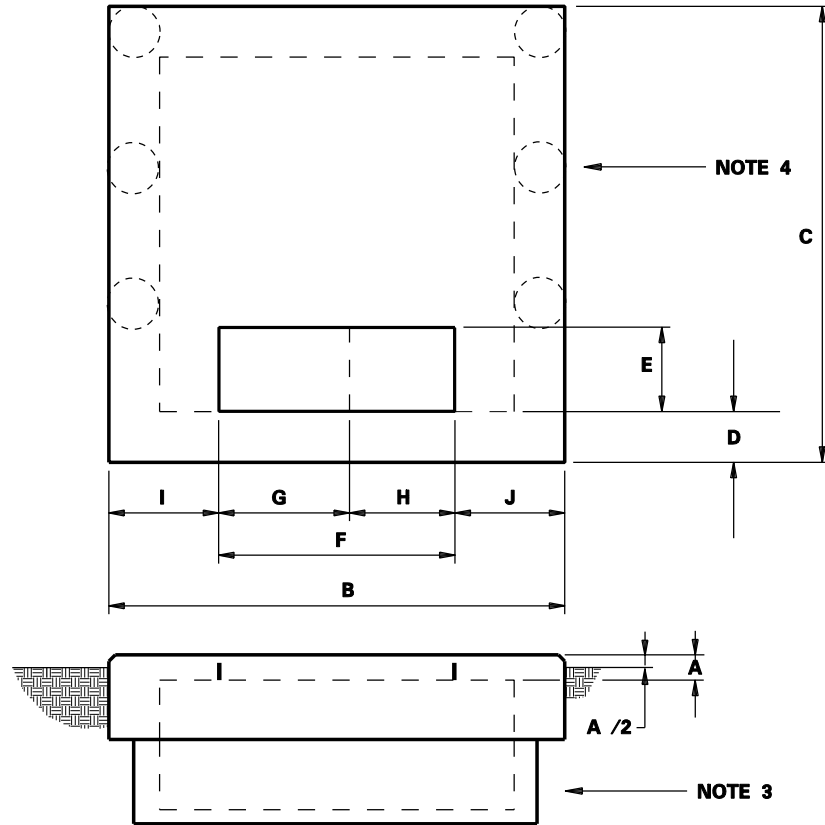
NOTES:

1. SPLICE/PULL BOX DESIGNED FOR PARKWAY INSTALLATION WITH H-10 LOADING (LIGHT VEHICULAR TRAFFIC). CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE SPLICE/PULL BOX.
2. THIS BOX IS INTENDED FOR USE AS AN INTERMEDIATE SPLICE BOX AS NEEDED DUE TO LONG PULLING DISTANCES AND RESTRICTED TO ONE 3 PHASE CIRCUIT.
3. TAMP ALL DISTURBED SOIL UNDERNEATH PAD TO 95% COMPACTION AS PER ASTM D 698 AND INSTALL A 6 INCH WELL TAMPED LAYER OF MEDIUM GRAVEL FILL.
4. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 8' COPPER CLAD GROUND ROD. GROUND ROD TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".



**THREE PHASE PRIMARY
SUBSURFACE SPLICE / PULL BOX
INSTALLATION**

DDS-4 UG DETAIL SHEET 19 OF 57



NOTES:

1. PADS SHALL BE CONSTRUCTED AS PER THE CONCRETE AND REBAR DETAIL SHEETS REFERENCED IN THE TABLE BELOW.
2. DF MEANS DEADFRONT AND LF MEANS LIVEFRONT.
3. CABLE SPREADER WELLS ARE REQUIRED ON LOOP FEED TRANSFORMER PADS. REFERENCE DETAIL SHEETS 28 THRU 37 FOR DIMENSIONS.
4. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 20 FOR PIER DETAILS.

KVA	A	B	C	D	E	F	G	H	I	J	REFERENCE DETAIL SHEET
75 - 150 RADIAL	6"	83"	83"	12"	16"	48"	28"	20"	21"	14"	24
225 - 500 RADIAL	6"	94"	94"	12"	16"	52"	28"	24"	25"	17"	25
750 - 1000 RADIAL	6"	96"	114"	12"	20"	52"	28"	24"	27"	17"	26
1500 - 2500 RADIAL	6"	114"	132"	12"	20"	52"	28"	24"	34"	28"	27
75 - 150 LF LOOP FEED	6"	83"	83"	12"	14"	56"	38"	18"	14"	13"	28 & 29
75 - 150 DF LOOP FEED	6"	83"	83"	12"	14"	62"	37"	25"	11"	10"	30 & 31
225 - 500 LF LOOP FEED	6"	96"	86"	12"	14"	60"	40"	20"	20"	16"	32 & 33
225 - 500 DF LOOP FEED	6"	96"	86"	12"	14"	62"	37"	25"	17"	17"	34 & 35
750 DF LOOP FEED	6"	96"	96"	12"	14"	62"	37"	25"	17"	17"	36 & 37



**TRANSFORMER PADS- CONCRETE
THREE PHASE PAD DIMENSIONS**

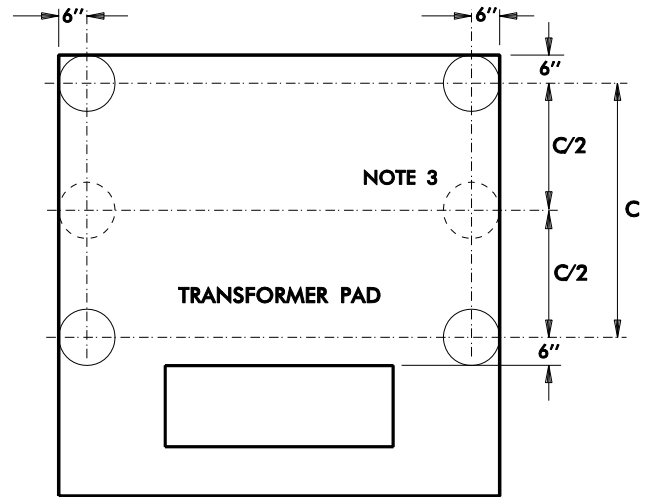
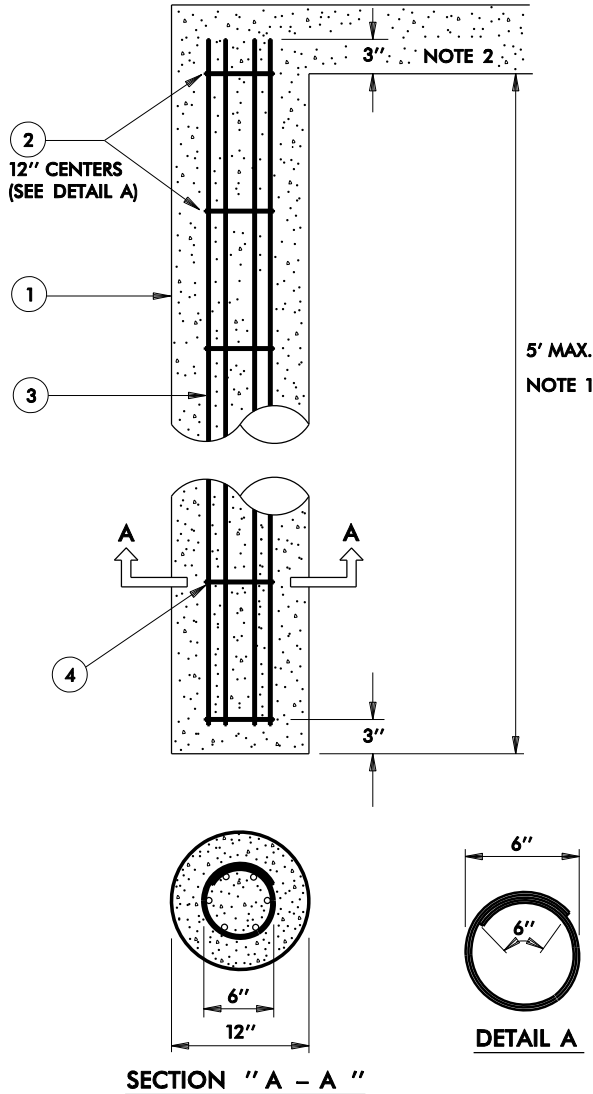
DDS-4 UG DETAIL SHEET 20 OF 57

1. CONTACT COMPANY REPRESENTATIVE FOR PAD SIZE AND NUMBER AND LOCATION OF PRIMARY AND SECONDARY CONDUITS.
2. REFERENCE DETAIL SHEET 9 FOR BEND RADIUS FOR ALL HORIZONTAL AND VERTICAL CONDUIT BENDS.
3. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6". REFERENCE DETAIL SHEETS FOR SIZE.
4. REFERENCE DETAIL SHEET 16 FOR LOCATION OF FOREIGN UTILITY EQUIPMENT GROUND.
5. REFER TO DETAIL SHEETS 51, 52, 53 & 54 FOR MINIMUM CLEARANCES FROM SURROUNDING OBJECTS.
6. PIERS ARE REQUIRED ON ALL SINGLE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 17 FOR PIER DETAIL FOR SINGLE PHASE PADS.
7. BEAMS SHALL BE INSTALLED ON ALL THREE PHASE TRANSFORMER PADS SET IN UNSTABLE SOILS AND IN AREAS WHERE DRAINAGE COULD CAUSE SOIL UNDER THE PAD TO WASH OUT. THE DEPTH OF BEAMS SHALL BE AS SHOWN OR TO ROCK. IF ROCK IS ENCOUNTERED WITHIN THREE INCHES OF SURFACE, BEAMS ARE NOT REQUIRED.
8. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS AND ON ALL SWITCHGEAR PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEETS 22 AND 23 FOR PIERS FOR THREE PHASE TRANSFORMER AND SWITCHGEAR PADS.
9. REINFORCING STEEL SHALL CONFORM TO ASTM A 615 AND SHALL BE DEFORMED, INTERMEDIATE GRADE (GRADE 60). ALL REINFORCING STEEL SHALL BE CLEANED OF ALL COATINGS THAT ADVERSLY AFFECT BONDING CAPACITY. ALL REINFORCING STEEL SHALL BE ACCURATELY POSITIONED AND RIGIDLY HELD IN PLACE DURING POURING.
10. ALL REINFORCING STEEL SHALL HAVE A 3 INCH CLEARANCE FROM THE BOTTOM. THERE SHALL BE A 3 INCH CLEARANCE FROM SIDES TO STEEL RUNNING PARALLEL THEREOF. THERE SHALL BE A 2 INCH CLEARANCE FROM END OF STEEL TO SIDES AND WINDOW.
11. OUTER SURFACE EDGES OF PADS TO BE CHAMFERED 1 1/2" x 45 DEGREES. ROUNDING OF EDGES WITH A ROUNDING TROWEL IS ACCEPTABLE IN LIEU OF CHAMFERING.
12. TAMP ALL DISTURBED SOIL UNDERNEATH PAD TO 95% COMPACTION AS PER ASTM D 698.
13. CONCRETE SHALL CONFORM TO ASTM C 150 FOR TYPE I OR TYPE III HIGH EARLY. CONCRETE SHALL BE PROPORTIONED TO PRODUCE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE SLUMP SHALL BE 3- 4 INCHES.
14. AGGREGATES SHALL CONFORM TO ASTM C 33 AND SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS, ORGANIC MATTER OR OTHER FOREIGN SUBSTANCES. THE MAXIMUM AGGREGATE SIZE SHALL NOT EXCEED 3/4 INCH.
15. MIXING WATER SHALL BE CLEAN AND FREE FROM OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS OR OTHER SUBSTANCES THAT MAY BE DELETERIOUS TO CONCRETE OR STEEL.
16. NO ADMIXTURES WILL BE PERMITTED WITHOUT THE APPROVAL FROM THE COMPANY.
17. CONCRETE MAY BE MIXED ON THE JOB OR READY MIX CONCRETE MAY BE USED.
18. FOR CONCRETE MIXED ON THE JOB, A MIXER WITH A MINIMUM TWO (2) SACK CAPACITY SHALL BE USED. CEMENT AND AGGREGATES SHALL BE PROPORTIONED ON CALIBRATED SCALES. WATER FOR MIXING SHALL BE ACCURATELY MEASURED. ALL CONCRETE SHALL BE PLACED WITHIN ONE HOUR AFTER MIXING.
19. IF READY MIXED CONCRETE IS USED, THE DRIVER OF EACH TRUCK SHALL FURNISH A TICKET SHOWING THE TIME THE TRUCK WAS LOADED AT THE BATCH PLANT. ANY TRUCK WHICH HAS NOT DISCHARGED ITS COMPLETE LOAD ONE HOUR AND THIRTY MINUTES AFTER LOADING SHALL BE REJECTED UNLESS A RETARDANT, APPROVED BY THE COMPANY, HAS BEEN ADDED TO THE CONCRETE AT THE TIME OF BATCHING. READY MIXED CONCRETE SHALL CONFORM TO ASTM C 94.



**GENERAL NOTES FOR
POURED IN PLACE
CONCRETE PAD**

DDS-4 UG DETAIL SHEET 21 OF 57



REINFORCING SCHEDULE			
NUMBER	SIZE	LENGTH	SHAPE
6	#5	5'	STRAIGHT
6	#3	2' - 1"	HOOP (DETAIL A)

0.145 CU YARDS CONCRETE/PIER
TOTAL WEIGHT OF (1) PIER: 565 LBS.

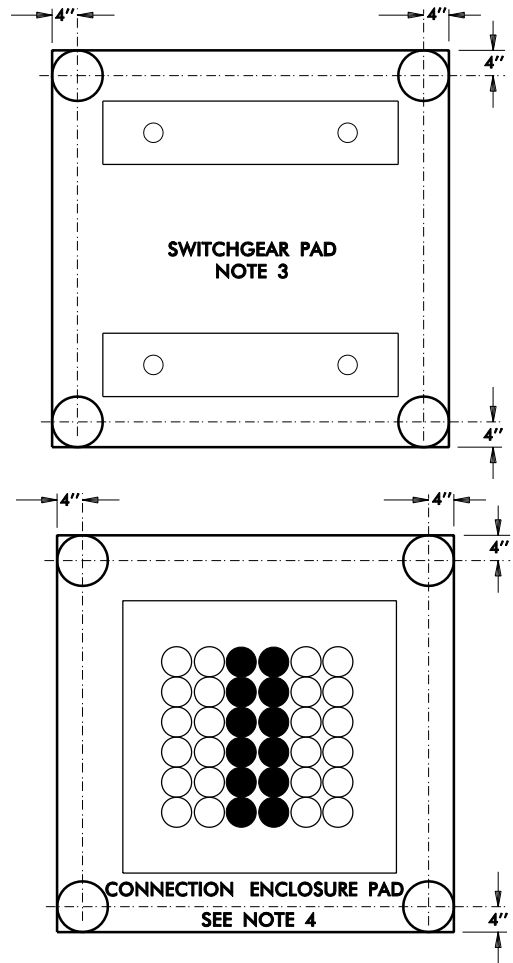
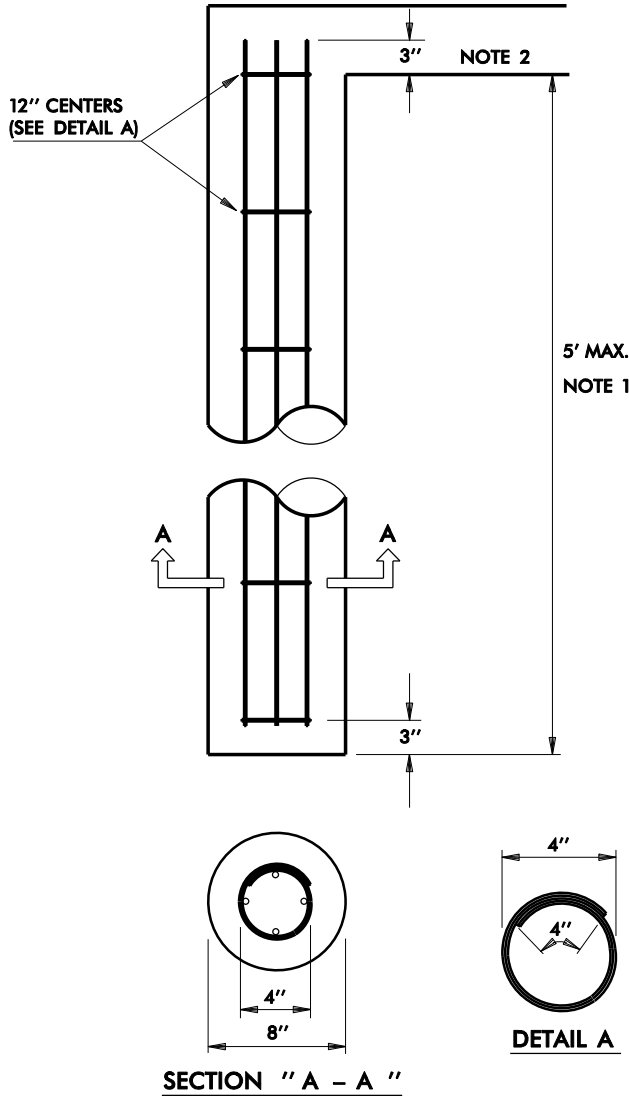
NOTES:

1. PIER DEPTH SHALL BE 5 FEET BELOW BOTTOM OF PAD UNLESS ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED. IF ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED PRIOR TO A 5 FOOT DEPTH, PIER DEPTH SHALL EXTEND 6 INCHES INTO THE HARD SURFACE.
2. PIER REINFORCING TO EXTEND 3 INCHES INTO PAD.
3. FOUR PIERS POSITIONED AS SHOWN ARE RECOMMENDED FOR ALL PAD SIZES EXCEPT THE 114" X 132" PAD. SIX PIERS POSITIONED AS SHOWN ARE RECOMMENDED FOR THIS PAD SIZE.
4. SEE DETAIL SHEET 21 FOR ADDITIONAL NOTES.



**PIER DETAILS
FOR THREE PHASE
TRANSFORMER PADS**

DDS-4 UG DETAIL SHEET 22 OF 57



PIER REINFORCING SCHEDULE			
NUMBER	SIZE	LENGTH	SHAPE
4	#5	5'	STRAIGHT
6	#3	19"	HOOP (DETAIL A)

0.065 CU YARDS CONCRETE/PIER
TOTAL WEIGHT OF (1) PIER: 278 LBS.

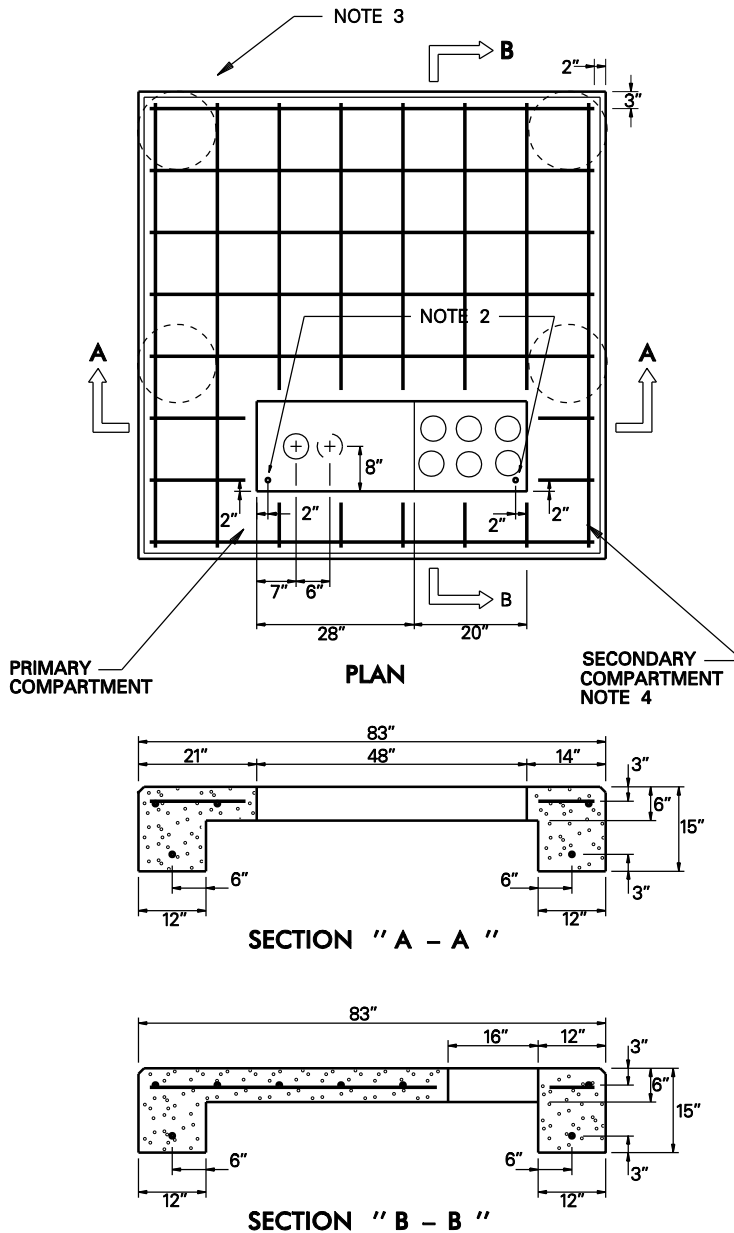
NOTES:

1. PIER DEPTH SHALL BE 5 FEET BELOW BOTTOM OF PAD UNLESS ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED. IF ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED PRIOR TO A 5 FOOT DEPTH, PIER DEPTH SHALL EXTEND 6 INCHES INTO THE HARD SURFACE.
2. PIER REINFORCING TO EXTEND 3 INCHES INTO PAD.
3. SEE DETAIL SHEETS 39, 40, 41, 42 AND 43 FOR CONCRETE SWITCHGEAR PAD DETAILS.
4. SEE DETAIL SHEETS 47 AND 48 FOR CONCRETE CONNECTION ENCLOSURE PAD DETAILS.
5. SEE DETAIL SHEET 21 NOTES.



PIER DETAIL
25 KV / 15 KV LIVEFRONT
SWITCHGEAR PAD

DDS-4 UG DETAIL SHEET 23 OF 57



REINFORCEMENT SPACING: 11" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS (NOTES 2 & 3)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
13	79"	32.2
5	51"	8.0
2	17"	1.1
2	10"	0.6
5	8"	1.2

1.4 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 5,850 LBS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
9	79"	22.3
5	51"	8.0
2	17"	1.1
2	10"	0.6
5	8"	1.2

0.8 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 3,190 LBS

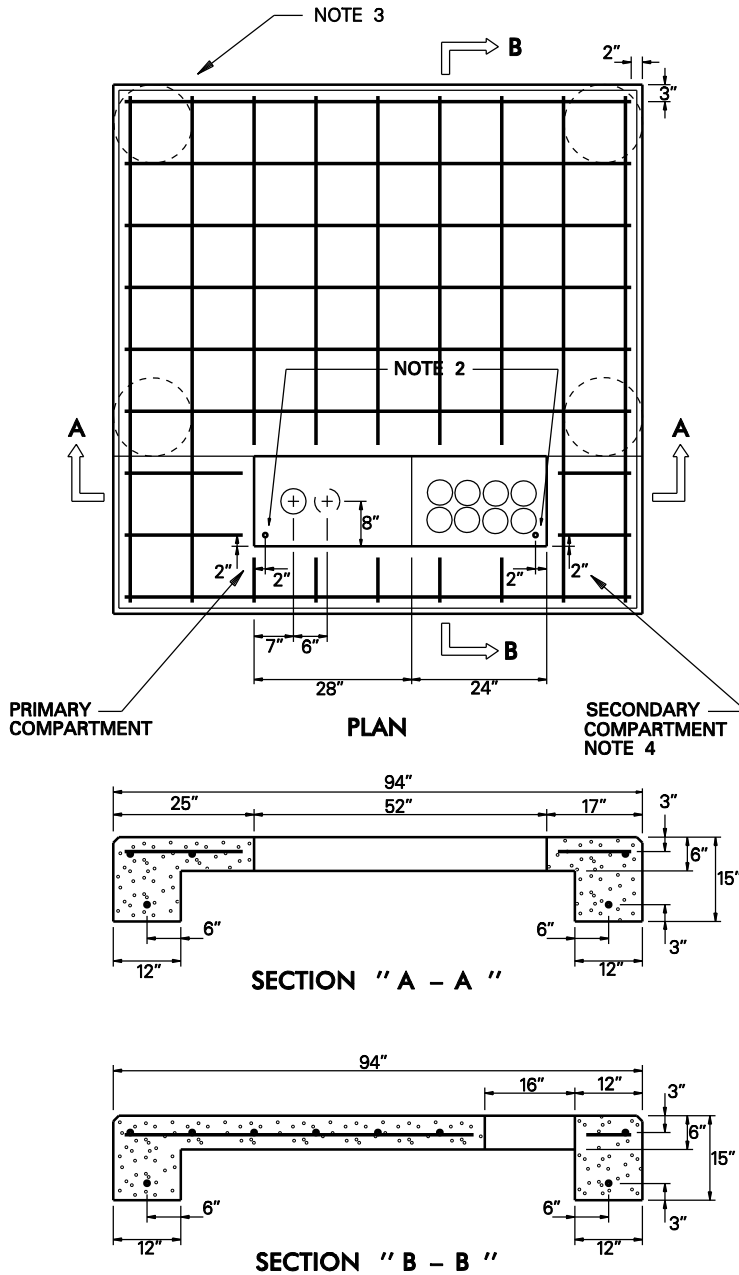
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 8' COPPER GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE
75 - 150 KVA RADIAL**

DDS-4 UG DETAIL SHEET 24 OF 57



REINFORCEMENT SPACING: 11" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS (NOTES 2 & 3)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
15	90"	42.3
5	62"	9.7
2	21"	1.3
2	13"	0.8
5	8"	1.2

1.8 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 7,250 LBS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
11	90"	31.0
5	62"	9.7
2	21"	1.3
2	13"	0.8
5	8"	1.2

1.0 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 4,170 LBS

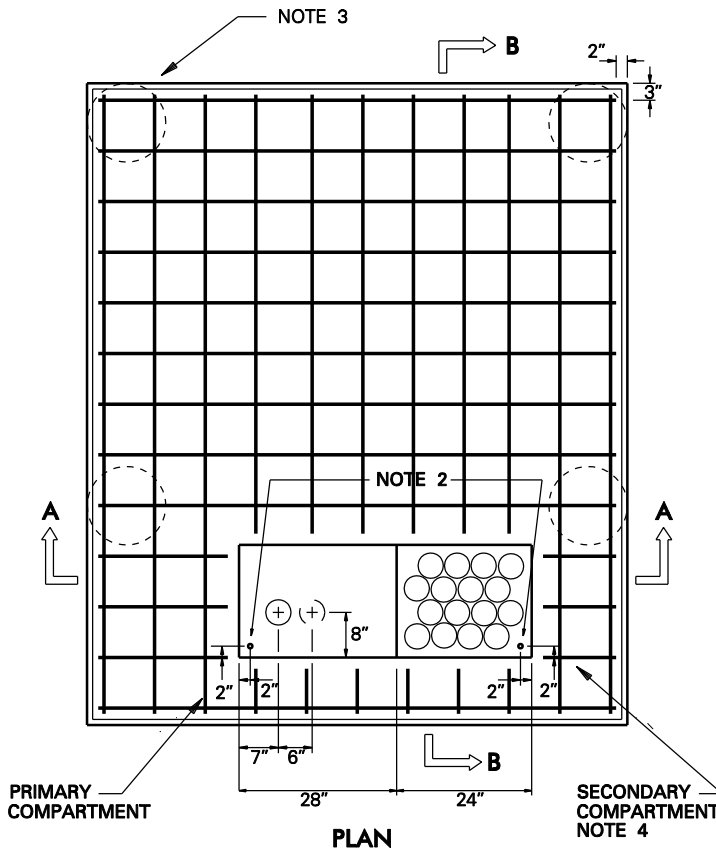
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 8' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE
225 - 500 KVA RADIAL**

DDS-4 UG DETAIL SHEET 25 OF 57



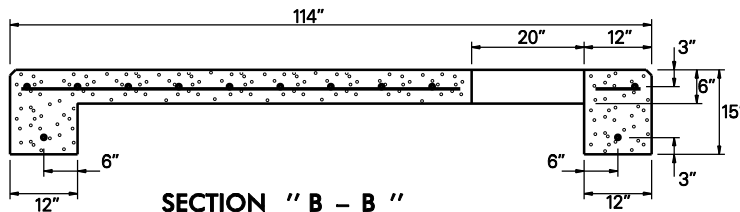
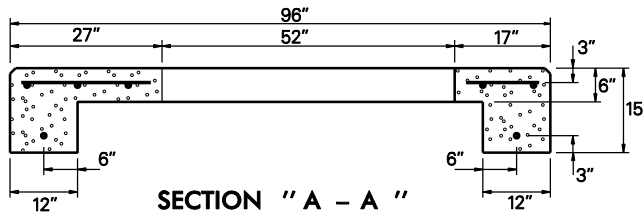
REINFORCEMENT SPACING: 9" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS (NOTES 2 & 3)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
12	92"	34.6
7	110"	24.1
6	78"	14.7
3	23"	2.2
3	13"	1.2
6	8"	1.5

2.1 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 8,645 LBS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
10	92"	28.8
5	110"	17.2
6	78"	14.7
3	23"	2.2
3	13"	1.2
6	8"	1.5

1.3 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 5,160 LBS



NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 8' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.

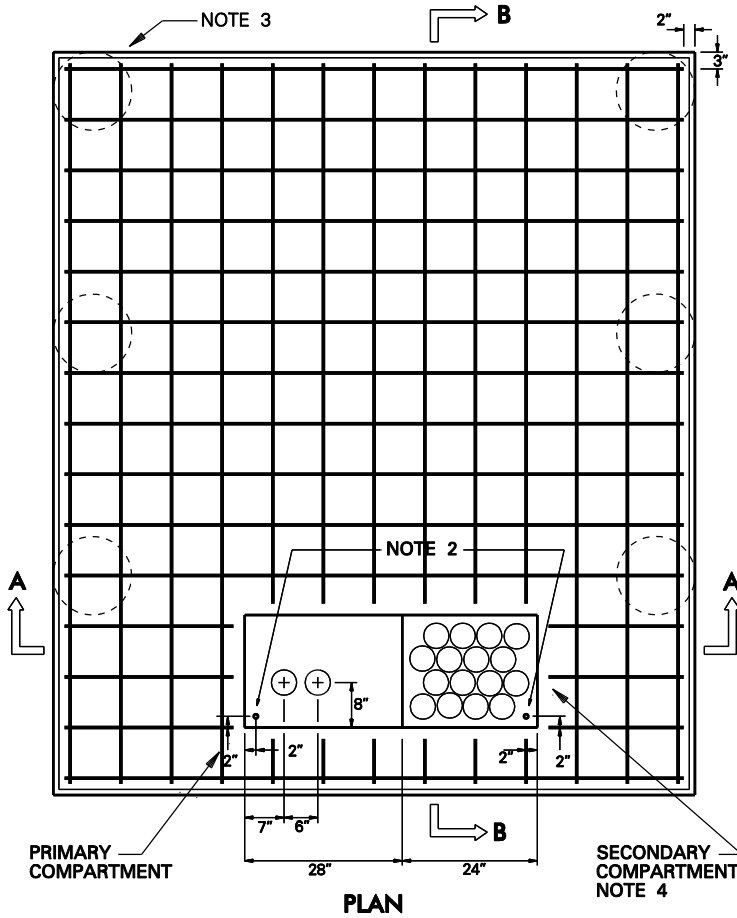


TRANSFORMER PAD

THREE PHASE

750 - 1000 KVA RADIAL

DDS-4 UG DETAIL SHEET 26 OF 57



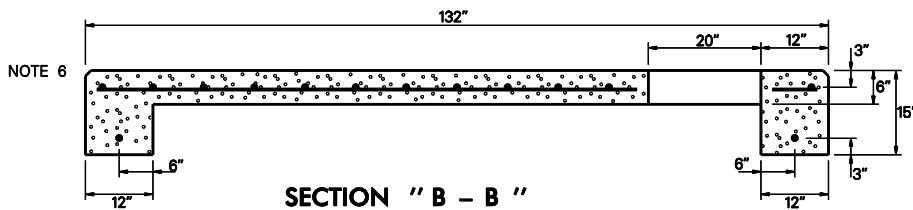
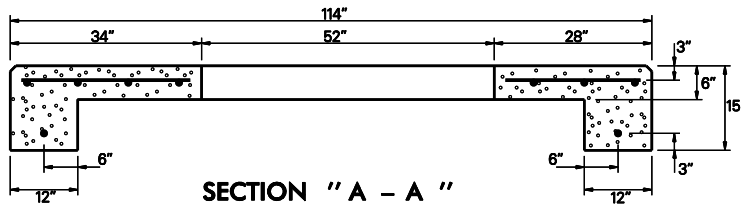
REINFORCEMENT SPACING: 9" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS (NOTES 2 & 3)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
9	128"	36.1
14	110"	48.2
6	96"	18.0
6	8"	1.5
3	30"	2.8
3	24"	2.2

2.8 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 11,460 LBS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
7	128"	28.1
12	110"	41.4
6	96"	18.0
6	8"	1.5
3	30"	2.8
3	24"	2.2

1.8 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 7,300 LBS



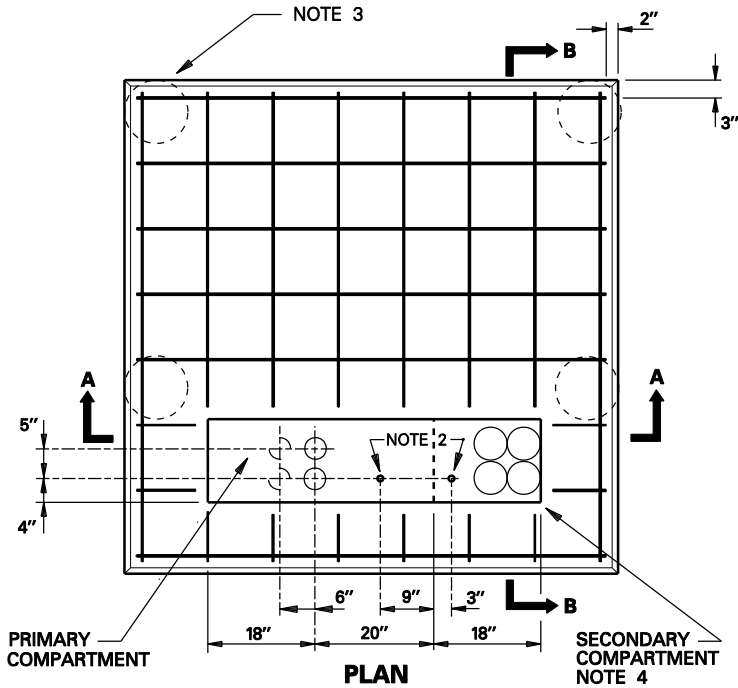
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 8' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE
1500 - 2500 KVA RADIAL**

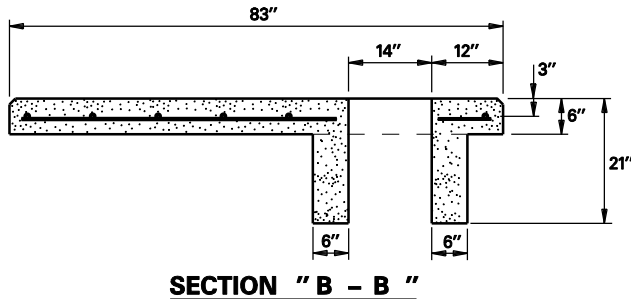
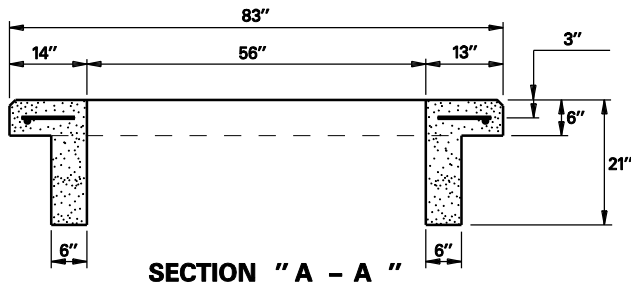
DDS-4 UG DETAIL SHEET 27 OF 57



REINFORCEMENT SPACING: 11" CENTERS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
8	79"	19.8
6	8"	1.50
2	9"	0.56
2	10"	0.63
6	53"	9.96

1.15 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 4,511 LBS



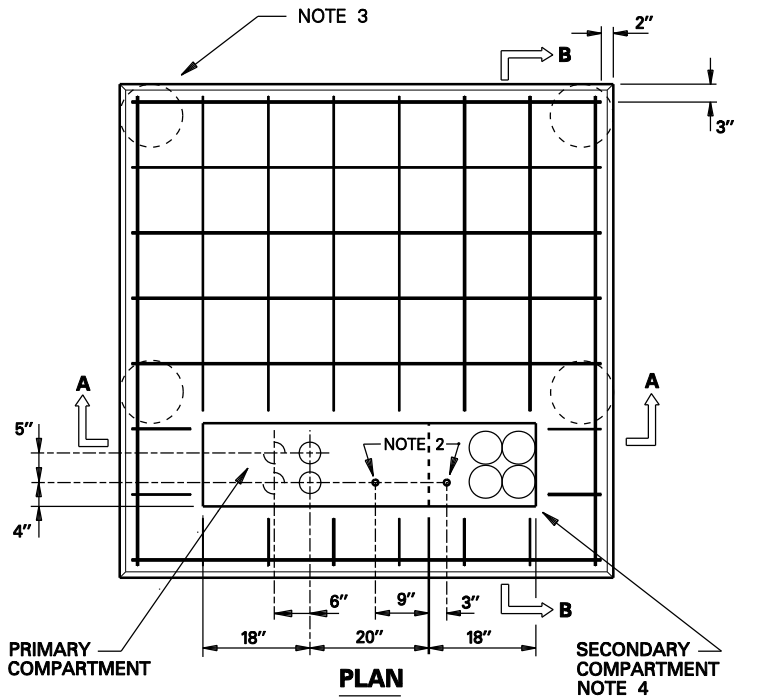
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE 75 - 150 KVA
LIVE FRONT LOOP FEED**

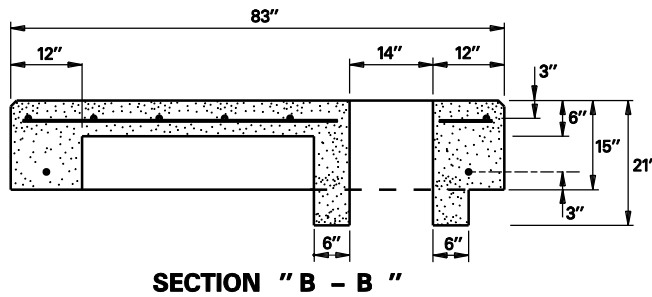
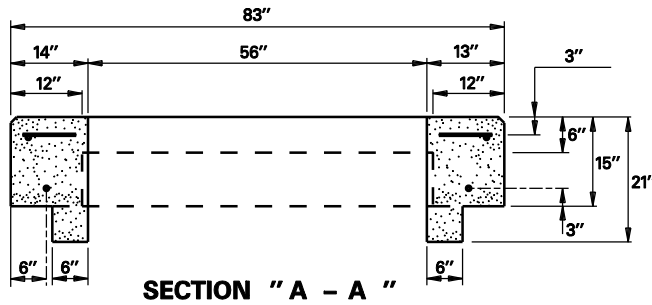
DDS-4 UG DETAIL SHEET 28 OF 57



REINFORCEMENT SPACING: 11" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS(NOTES 4 & 5)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
12	79"	29.7
6	8"	1.50
2	9"	0.56
2	10"	0.63
6	53"	9.96

1.70 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 6,610 LBS



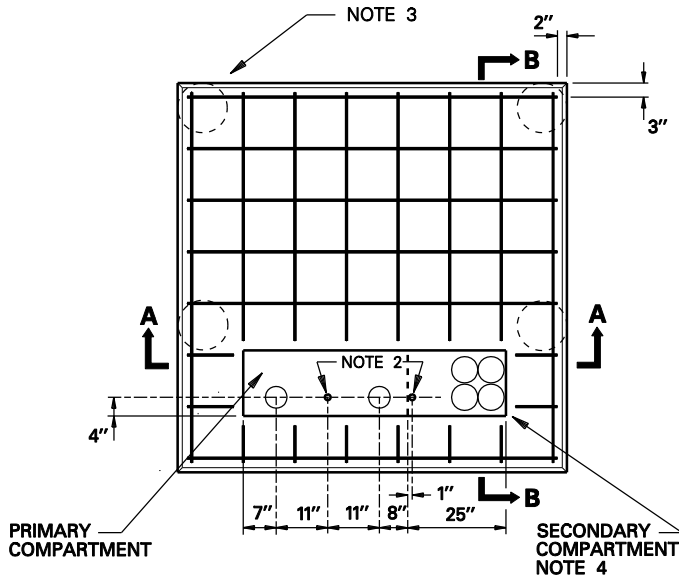
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.

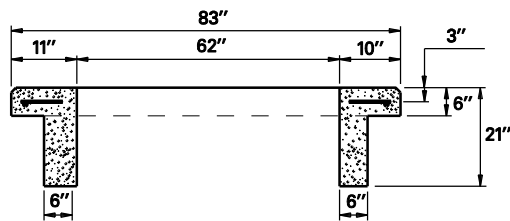


**TRANSFORMER PAD WITH BEAMS
THREE PHASE 75 - 150 KVA
LIVE FRONT LOOP FEED**

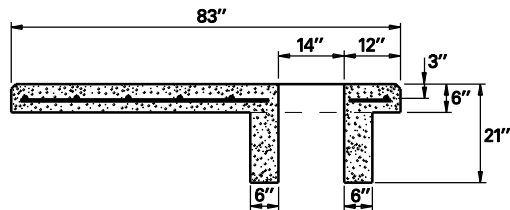
DDS-4 UG DETAIL SHEET 29 OF 57



PLAN



SECTION "A - A"



SECTION "B - B"

NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.

REINFORCEMENT SPACING: 11" CENTERS

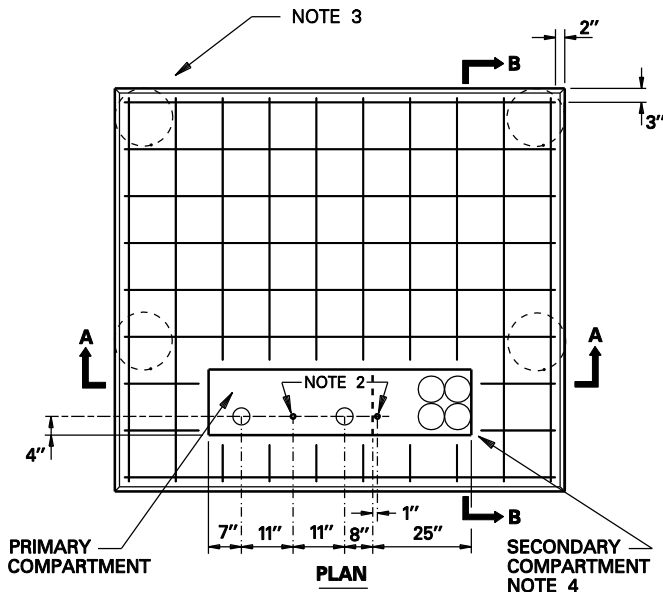
REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
8	79"	19.8
6	8"	1.50
2	6"	0.38
2	7"	0.44
6	53"	9.96

**1.17 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 4,590 LBS**



**TRANSFORMER PAD
THREE PHASE 75 - 150 KVA
DEADFRONT LOOP FEED**

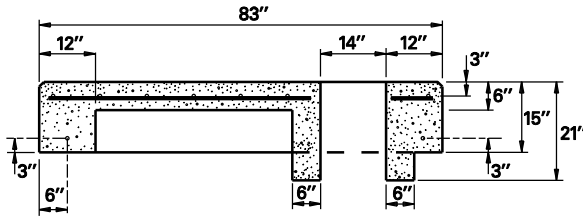
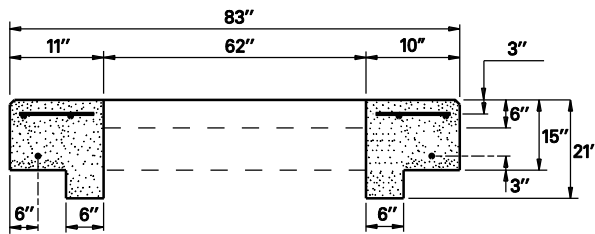
DDS-4 UG DETAIL SHEET 30 OF 57



REINFORCEMENT SPACING: 11" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS(NOTES 4 & 5)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
12	79"	29.7
6	8"	1.50
2	6"	0.38
2	7"	0.44
6	53"	9.96

1.70 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 6,510 LBS



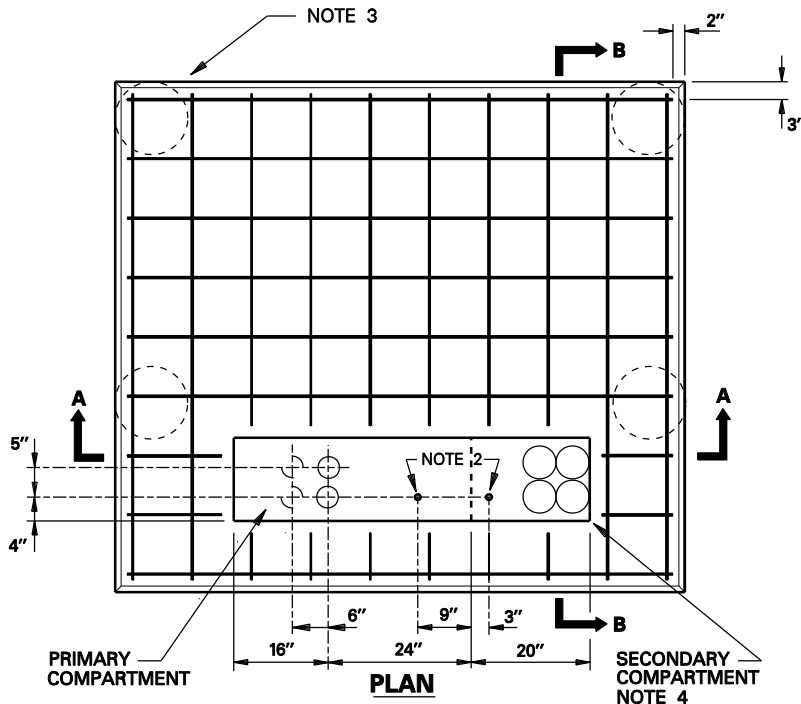
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD WITH BEAMS
THREE PHASE 75 - 150 KVA
DEADFRONT LOOP FEED**

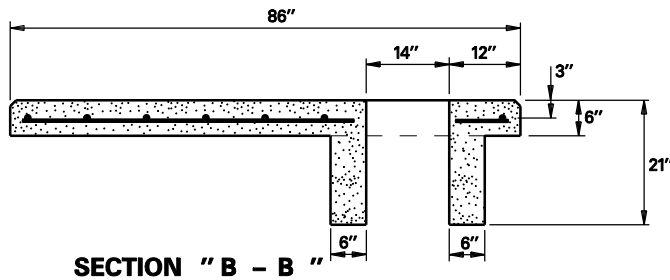
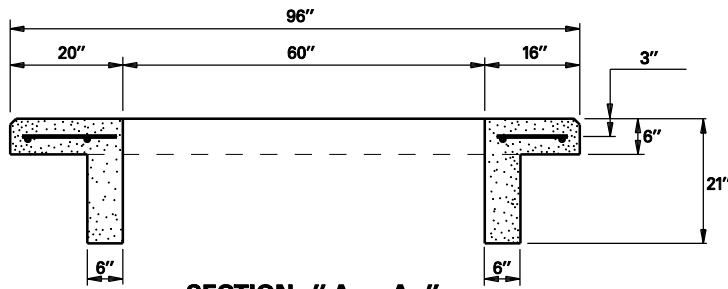
DDS-4 UG DETAIL SHEET 31 OF 57



REINFORCEMENT SPACING: 10" CENTERS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
4	82"	10.3
6	56"	10.5
6	8"	1.50
2	16"	1.00
2	12"	0.75
7	92"	20.2

1.34 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 5,252 LBS



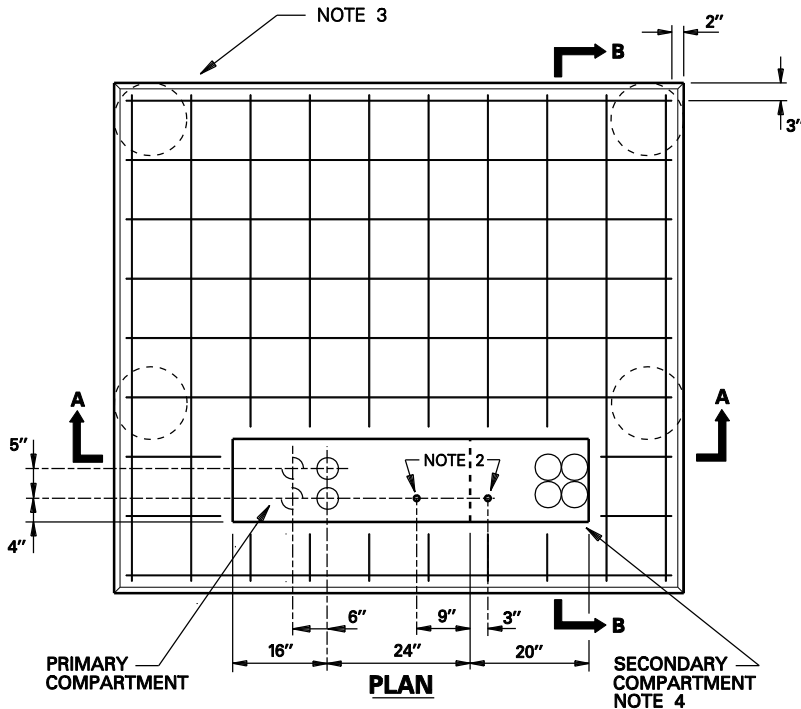
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE 225 - 500 KVA
LIVE FRONT LOOP FEED**

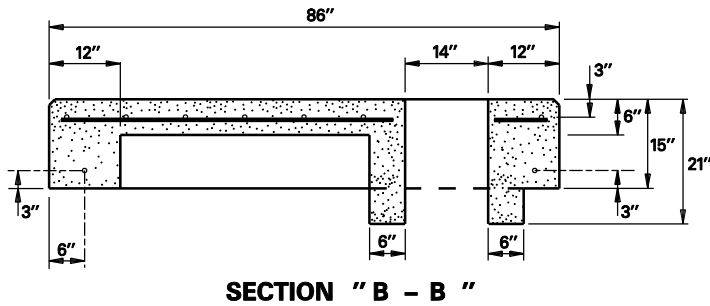
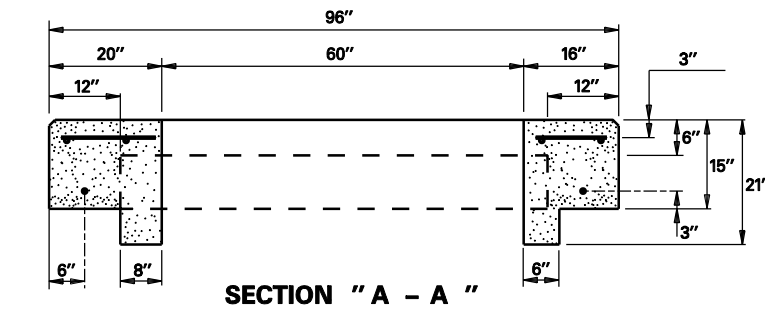
DDS-4 UG DETAIL SHEET 32 OF 57



REINFORCEMENT SPACING: 10" CENTERS

REINFORCING SCHEDULE PAD WITH BEAMS(NOTES 4 & 5)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
6	82"	15.4
6	56"	10.5
6	8"	1.50
2	16"	1.00
2	12"	0.75
9	92"	25.9

2.00 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 7,840 LBS



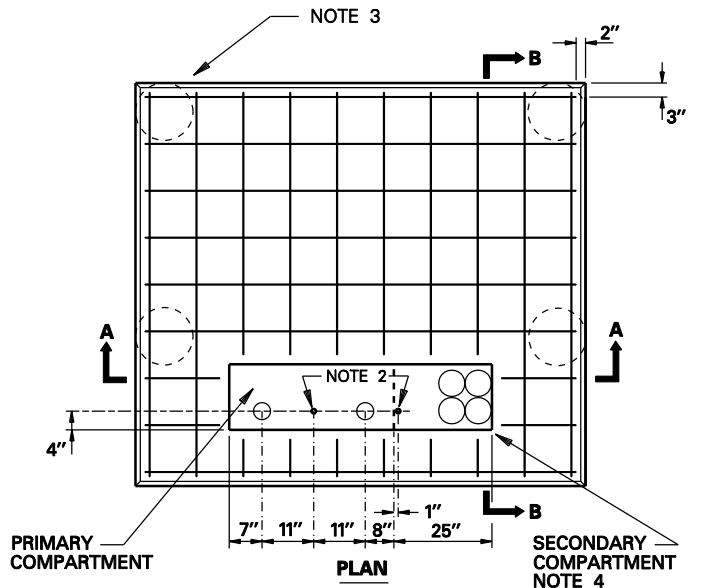
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD WITH BEAMS
THREE PHASE 225 - 500 KVA
LIVE FRONT LOOP FEED**

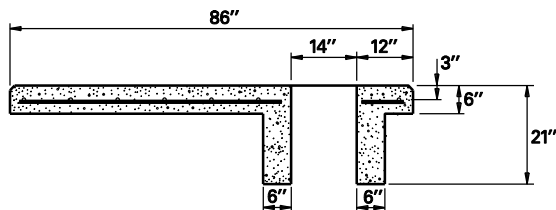
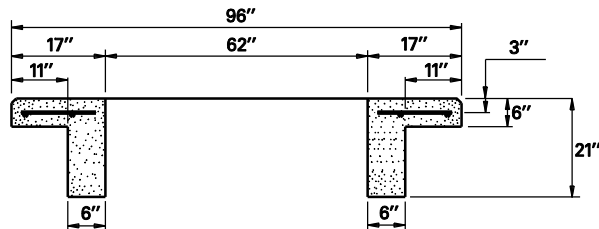
DDS-4 UG DETAIL SHEET 33 OF 57



REINFORCEMENT SPACING: 10" CENTERS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
4	82"	10.3
6	56"	10.5
6	8"	1.5
4	13"	1.6
7	92"	20.2

1.34 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 5,270 LBS



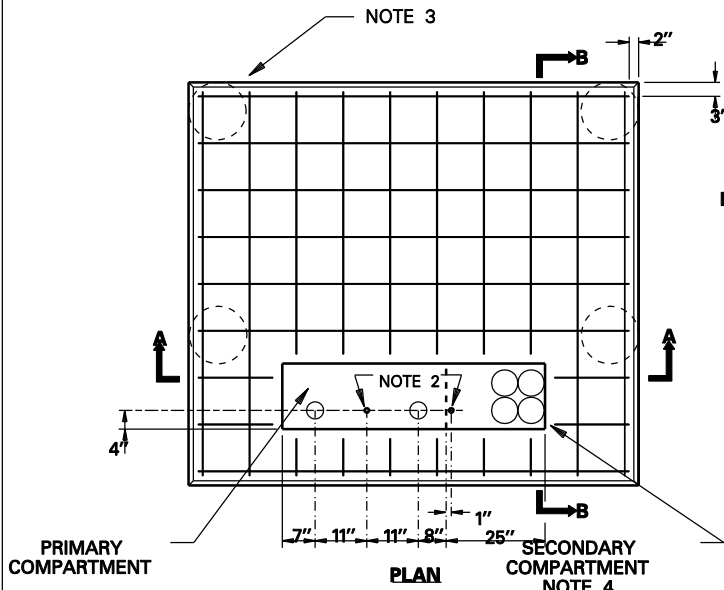
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.

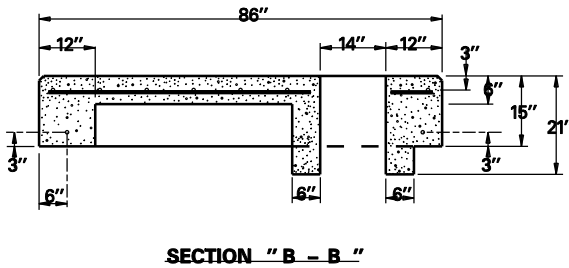
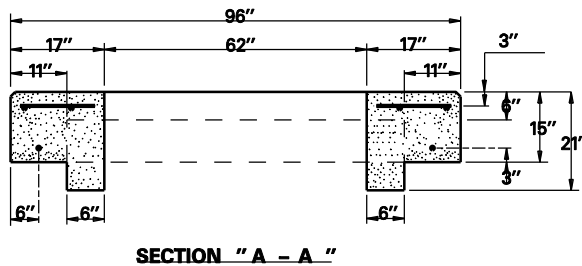


**TRANSFORMER PAD
THREE PHASE 225 - 500 KVA
DEADFRONT LOOP FEED**

DDS-4 UG DETAIL SHEET 34 OF 57



REINFORCING SCHEDULE PAD WITH BEAMS(NOTES 4 & 5)		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
6	82"	15.4
6	56"	10.5
6	8"	1.5
4	13"	1.6
9	92"	25.9



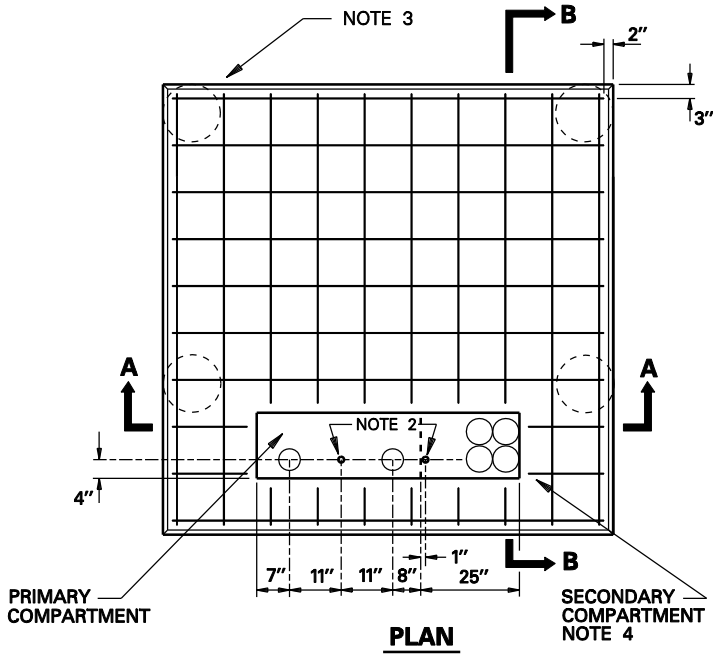
NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD WITH BEAMS
THREE PHASE 225 - 500 KVA
DEADFRONT LOOP FEED**

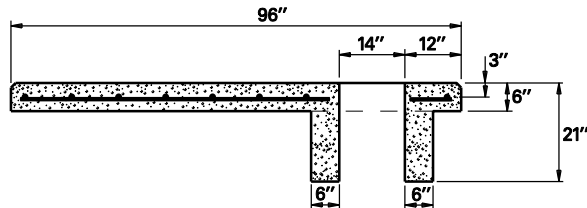
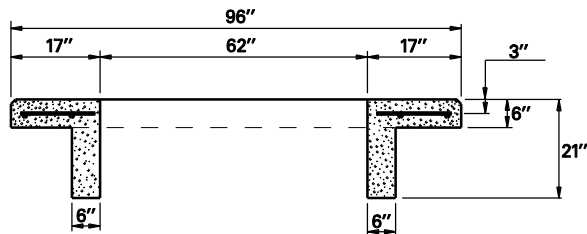
DDS-4 UG DETAIL SHEET 35 OF 57



REINFORCEMENT SPACING: 10" CENTERS

REINFORCING SCHEDULE PAD WITHOUT BEAMS		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
12	92"	34.5
6	8"	1.5
6	66"	12.4
4	13"	1.6

1.47 CU YARDS CONCRETE
TOTAL WEIGHT OF PAD 5,770 LBS



NOTES:

1. SEE DETAIL SHEET 21 FOR GENERAL NOTES.
2. CONTRACTOR TO OBTAIN AND INSTALL (2) 5/8" X 10' GROUND RODS AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
3. PIERS ARE REQUIRED ON ALL THREE PHASE TRANSFORMER PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 22 FOR PIER DETAILS.
4. BEGIN SECONDARY CONDUITS AT RIGHT EDGE OF PAD WINDOW. ADD CONDUITS AS REQUIRED RIGHT TO LEFT. DO NOT CROSS DIVIDING LINE BETWEEN PRIMARY AND SECONDARY COMPARTMENTS.
5. GROUT WINDOW AS PER DETAIL SHEET 15.



**TRANSFORMER PAD
THREE PHASE 750 KVA
DEADFRONT LOOP FEED**

DDS-4 UG DETAIL SHEET 36 OF 57

Three-Phase Transformer Size (kVA)	Maximum Number of 4" PVC Conduits		Maximum Number of Cables Including the Neutral	
	208Y/120	480Y/277	208Y/120	480Y/277
75 – 150	6	6	24	24
225 – 300	6	6	24	24
500	8	6	32	24
750	12	6	48	24
1000	16	8	64	32
1500	–	12	–	48
2000	–	16	–	64
2500	–	16	–	64

Notes:

1. For three-phase padmount transformers, the customer's service conductor must be 1000 kcmil or smaller. The maximum number of runs (three phase conductors and one neutral conductor) shall be as shown in above table.
2. For single-phase 240/120 volt transformers, the customer's service conductor must be 500 kcmil or smaller. The maximum number of runs (two phase conductors and one neutral conductor) and the size of the conduits shall be as shown in the following table:

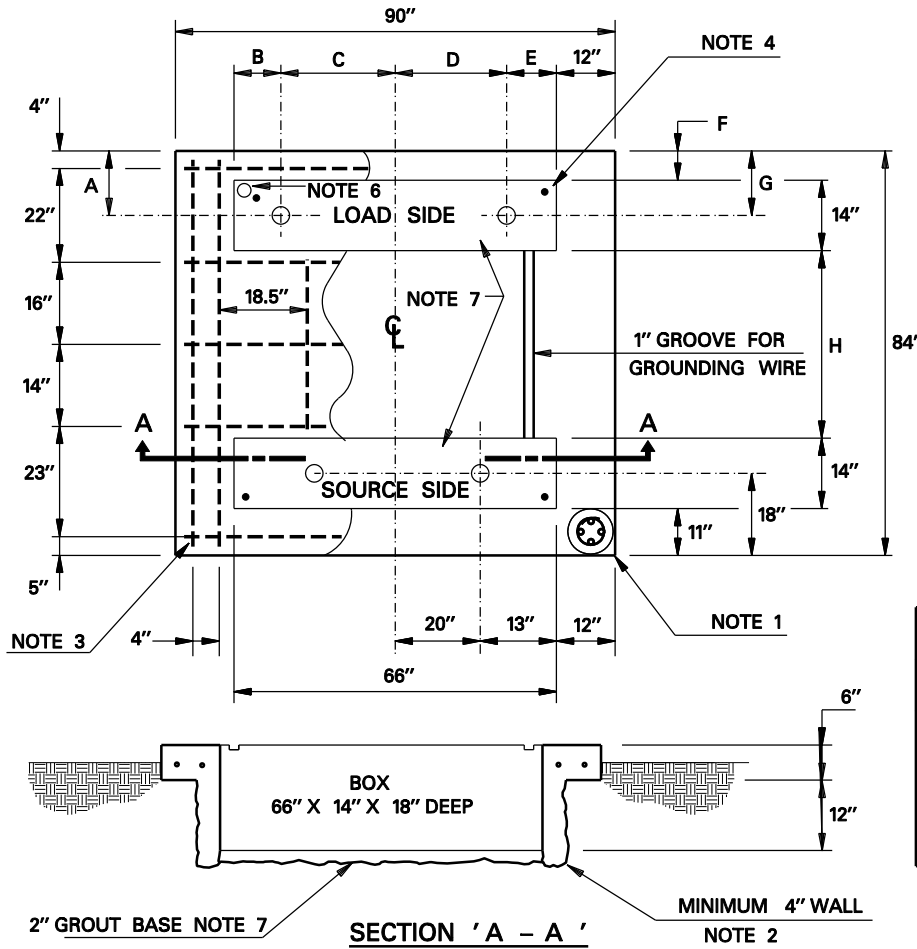
Customer's Conductor Size	Conduit Sizes	Maximum Number of Runs
#6 – #3/0	2"	8
#4/0 – 350 kcmil	3"	6
500 kcmil	4"	4

3. If the number of runs installed by the customer is more than the maximum shown, a connection enclosure with pad may be required. Consult company representative for details.



**MAXIMUM NUMBER OF SECONDARY
CONDUITS AND CABLES
FOR PADMOUNTED TRANSFORMERS**

DDS-4 UG DETAIL SHEET 38 OF 57



REINFORCING SCHEDULE		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
5	86"	13.5
4	80"	10.0
3	33"	3.1

TOTAL WEIGHT (CONCRETE & REBAR) 5280 LBS.

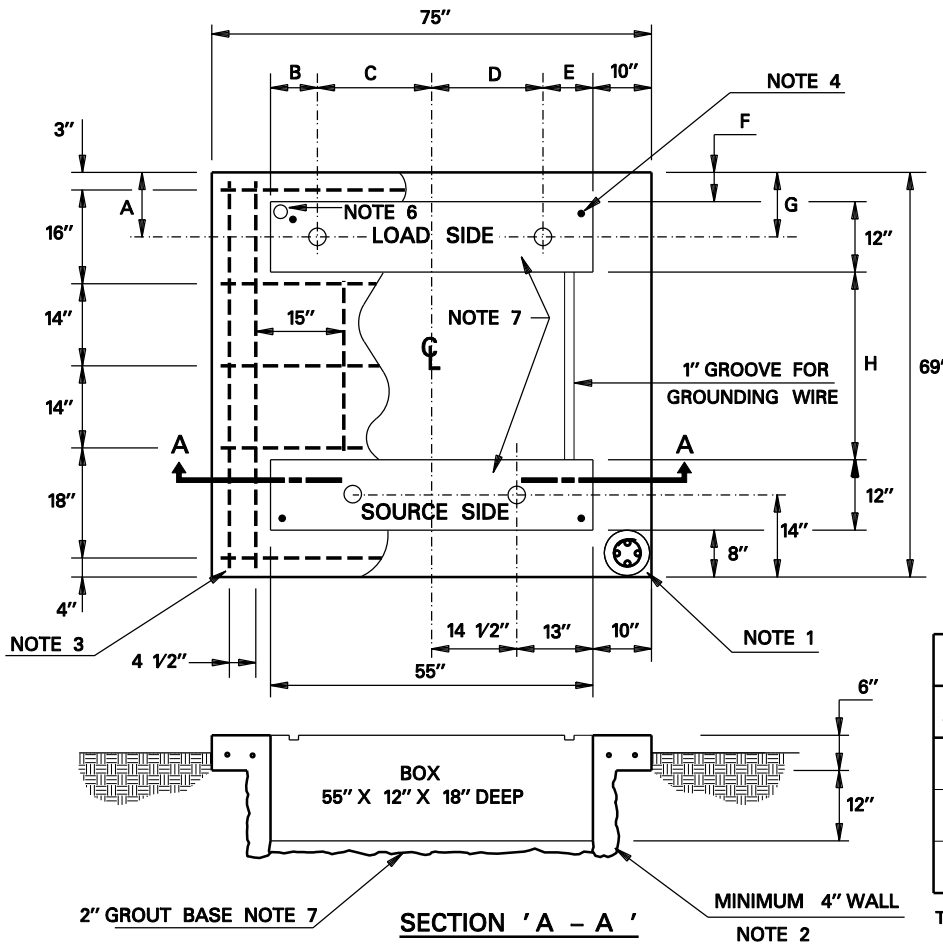
25KV	A	B	C	D	E	F	G	H
PMH - 9	15"	11"	22"	22"	11"	8"	15"	37"
PMH - 10	18"	13"	20"	20"	13"	11"	18"	34"
PMH - 11	15"	11"	22"	20"	13"	8"	18"	37"

NOTES:

- PIERS ARE REQUIRED ON ALL SWITCHGEAR PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 23 FOR PIER DETAIL.
- USE WIRE MESH FOR CONCRETE REINFORCEMENT AROUND DEEPWELL BOX.
- ENDS OF RE-BAR SHALL REMAIN A MINIMUM OF 2" INSIDE OF CONCRETE AND SHALL BE INTERMEDIATE GRADE 60 AND CONFORM TO ASTM A615.
- CONTACT COMPANY REPRESENTATIVE ON WHERE TO OBTAIN 5/8" X 10' COPPER CLAD GROUND RODS. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".
- FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR REFERENCE DETAIL SHEETS 51, 52, 53 AND 54.
- FOR PADS PLUMBED INTO DUCT BANKS, INSTALL 3" COMMUNICATION CONDUIT FROM MANHOLE TO FRONT RIGHT CORNER OF LOAD SIDE CONDUIT OPENING OF PAD.
- GROUT AS PER DETAIL SHEET 15.



**CONCRETE PAD
POURED IN PLACE
25 KV LIVE FRONT SWITCHGEAR
DDS-4 UG DETAIL SHEET 39 OF 57**



REINFORCING SCHEDULE		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
5	71"	11.2
4	65"	8.5
3	28"	2.6

TOTAL WEIGHT (CONCRETE & REBAR) 3911 LBS.

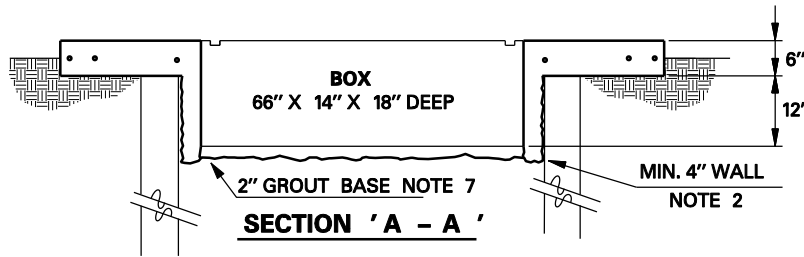
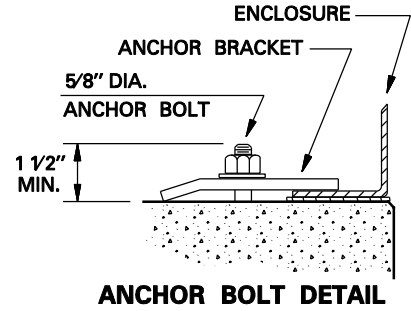
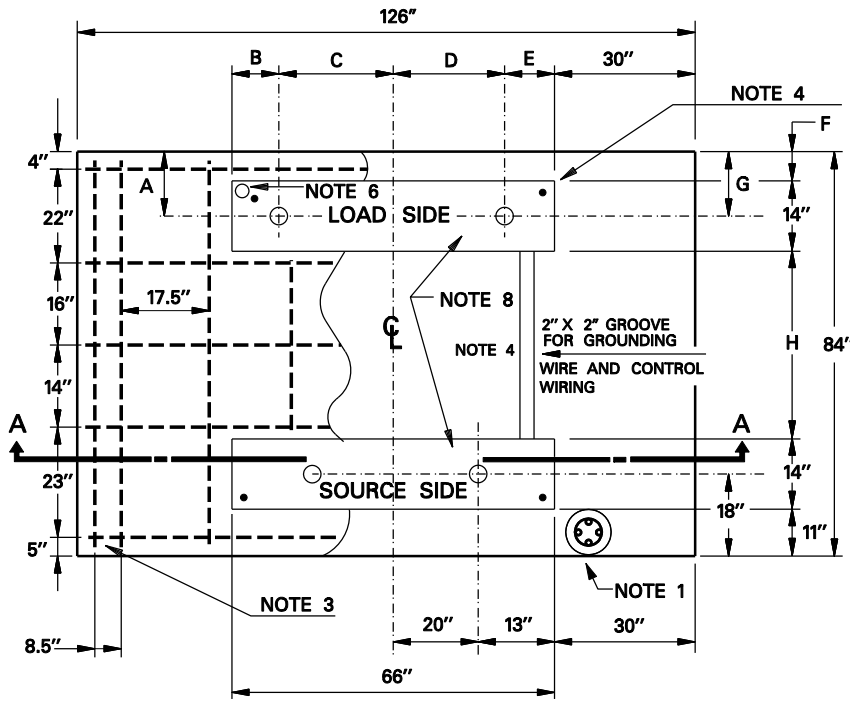
15KV	A	B	C	D	E	F	G	H
PMH - 9	11"	8.5"	19"	19"	8.5"	5"	11"	32"
PMH - 10	13"	13"	14.5"	14.5"	13"	7"	13"	30"
PMH - 11	11"	8.5"	19"	14.5"	13"	5"	11"	32"

NOTES:

- PIERS ARE REQUIRED ON ALL SWITCHGEAR PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 23 FOR PIER DETAIL.
- USE WIRE MESH FOR CONCRETE REINFORCEMENT AROUND DEEPWELL BOX.
- ENDS OF RE-BAR SHALL REMAIN A MINIMUM OF 2" INSIDE OF CONCRETE AND SHALL BE INTERMEDIATE GRADE 60 AND CONFORM TO ASTM A615.
- CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 10' COPPER CLAD GROUND RODS. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".
- FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR REFERENCE DETAIL SHEETS 51 52, 53 AND 54.
- FOR PADS PLUMBED INTO DUCT BANKS, INSTALL 3" COMMUNICATION CONDUIT FROM MANHOLE TO FRONT RIGHT CORNER OF LOAD SIDE CONDUIT OPENING OF PAD.
- GROUT AS PER DETAIL SHEET 15.



**CONCRETE PAD
POURED IN PLACE
15 KV LIVE FRONT SWITCHGEAR
DDS-4 UG DETAIL SHEET 40 OF 57**



REINFORCING SCHEDULE		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
5	122"	19.1
6	80"	15.0
3	33"	3.1

TOTAL WEIGHT (CONCRETE & REBAR) 7040 LBS.

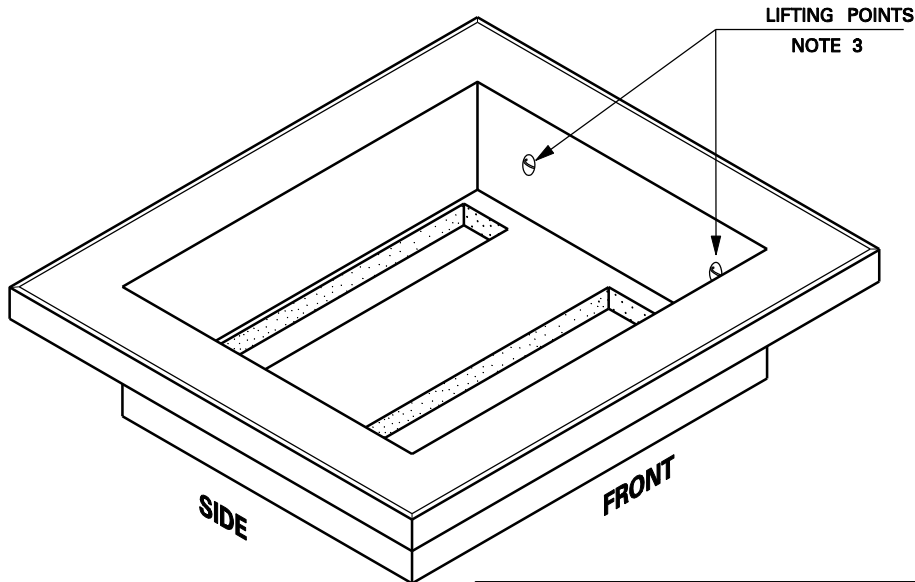
25KV	A	B	C	D	E	F	G	H
PMH - 9	15"	11"	22"	22"	11"	8"	15"	37"
PMH - 10	18"	13"	20"	20"	13"	11"	18"	34"
PMH - 11	15"	11"	22"	20"	13"	8"	18"	37"

NOTES:

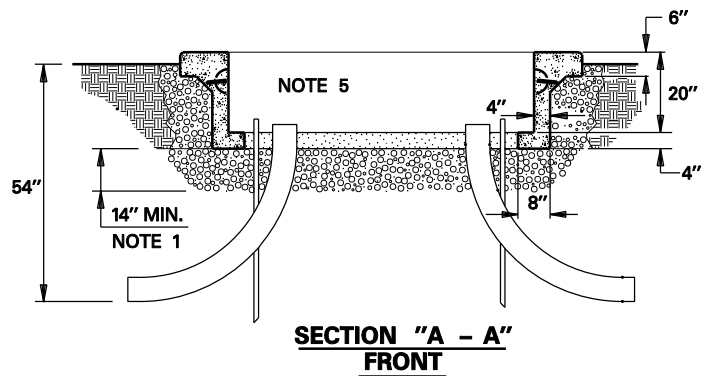
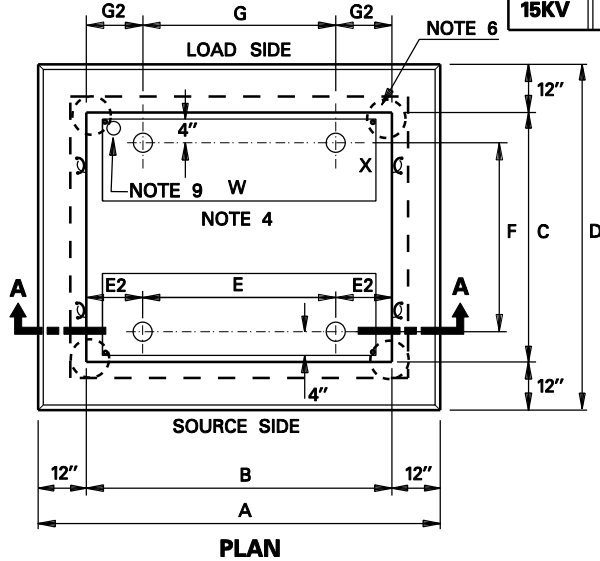
- PIERS ARE REQUIRED ON ALL SWITCHGEAR PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 23 FOR PIER DETAIL.
- USE WIRE MESH FOR CONCRETE REINFORCEMENT AROUND DEEPWELL BOX.
- ENDS OF RE-BAR SHALL REMAIN A MINIMUM OF 2" INSIDE OF CONCRETE AND SHALL BE INTERMEDIATE GRADE 60 AND CONFORM TO ASTM A615.
- CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 10' COPPER CLAD GROUND RODS. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 8'.
- FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR SEE DETAIL SHEETS 51, 52, 53 AND 54.
- FOR PADS PLUMBED INTO DUCT BANKS, INSTALL 3" COMMUNICATION CONDUIT FROM MANHOLE TO FRONT RIGHT CORNER OF LOAD SIDE CONDUIT OPENING OF PAD.
- GROUT AS PER DETAIL SHEET 15.



**CONCRETE PAD POURED IN PLACE
25 KV LIVE FRONT AUTOMATED
SUPERVISORY CONTROL SWITCHGEAR
DDS-4 UG DETAIL SHEET 41 OF 57**



INCHES	A	B	C	D	E	E2	F	G	G2	W	X
25KV	100	76	62	86	40	18	48	44	16	68	15
15KV	84	60	50	74	30	15	36	38	11	52	15



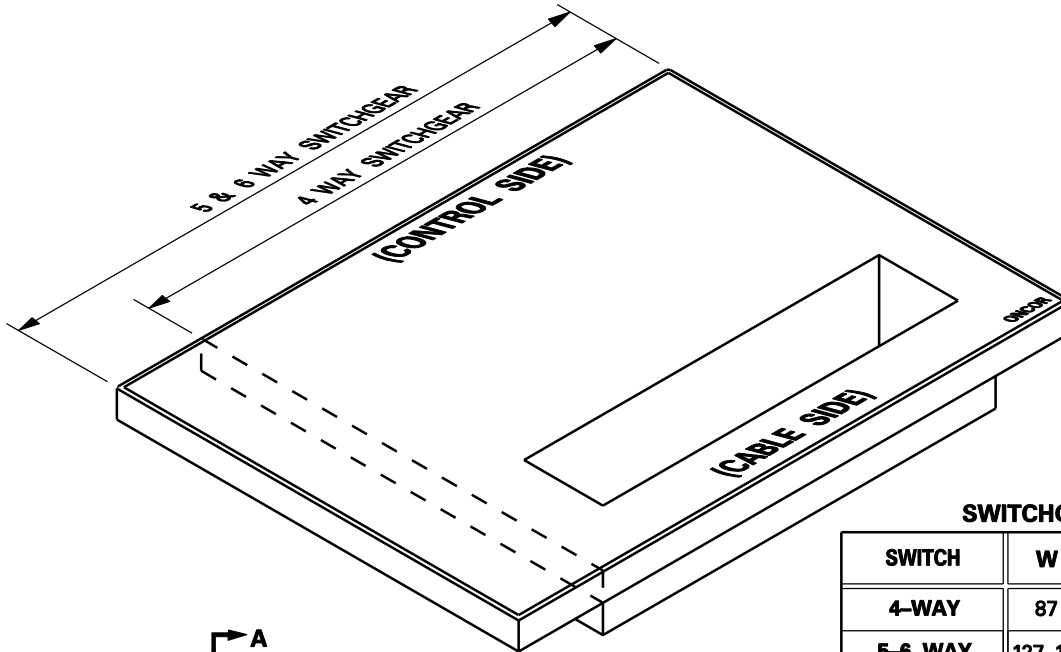
NOTES:

1. INSTALL 14" MINIMUM SMALL TO MEDIUM GRAVEL BASE. INCLUDE MINIMUM 12" GRAVEL FILL AROUND SIDES.
2. FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR SEE DETAIL SHEETS 51, 52, 53, AND 54.
3. EACH PAD WILL INCLUDE FOUR - LIFTING POINTS RATED AT 2000 LBS EACH.
4. WHEN INSTALLING SPARE CONDUIT, CENTER DIMENSION LINES BETWEEN CONDUITS.
5. CONDUIT NOT TO EXTEND MORE THAN 3" ABOVE BOTTOM OF DEEPWELL.
6. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 10' COPPER CLAD GROUND RODS. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".
7. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE PRECAST CONCRETE PAD.
8. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 23 FOR PIER DETAIL.
9. FOR PADS PLUMBED INTO DUCT BANKS, INSTALL 3" COMMUNICATION CONDUIT FROM MANHOLE TO FRONT RIGHT CORNER OF LOAD SIDE CONDUIT OPENING OF PAD.



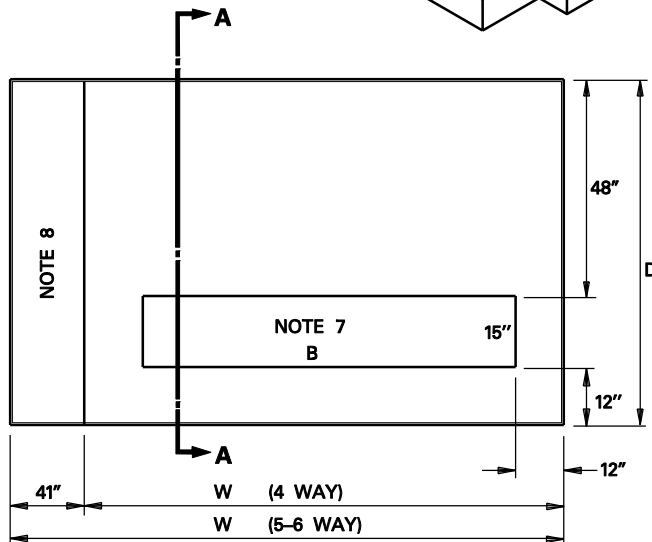
**PRECAST DEEPWELL PAD
25 KV / 15 KV
LIVE FRONT SWITCHGEAR**

DDS-4 UG DETAIL SHEET 42 OF 57

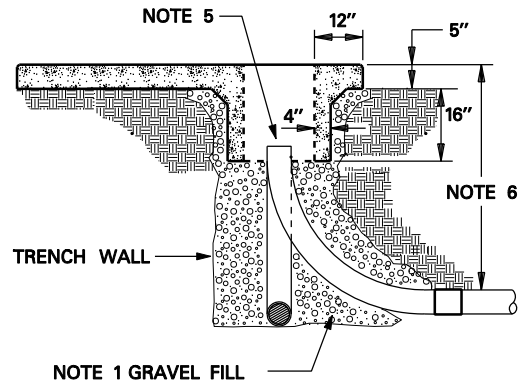


SWITCHGEAR WAYS

SWITCH	W	B	D	WEIGHT
4-WAY	87	64	75	3750LBS
5-6 WAY	127 1/2	94	75	5465LBS
4-5 WAY ATO	127 1/2	94	75	
4-5 WAY RSC	127 1/2	94	75	



PLAN



SECTION "A - A"

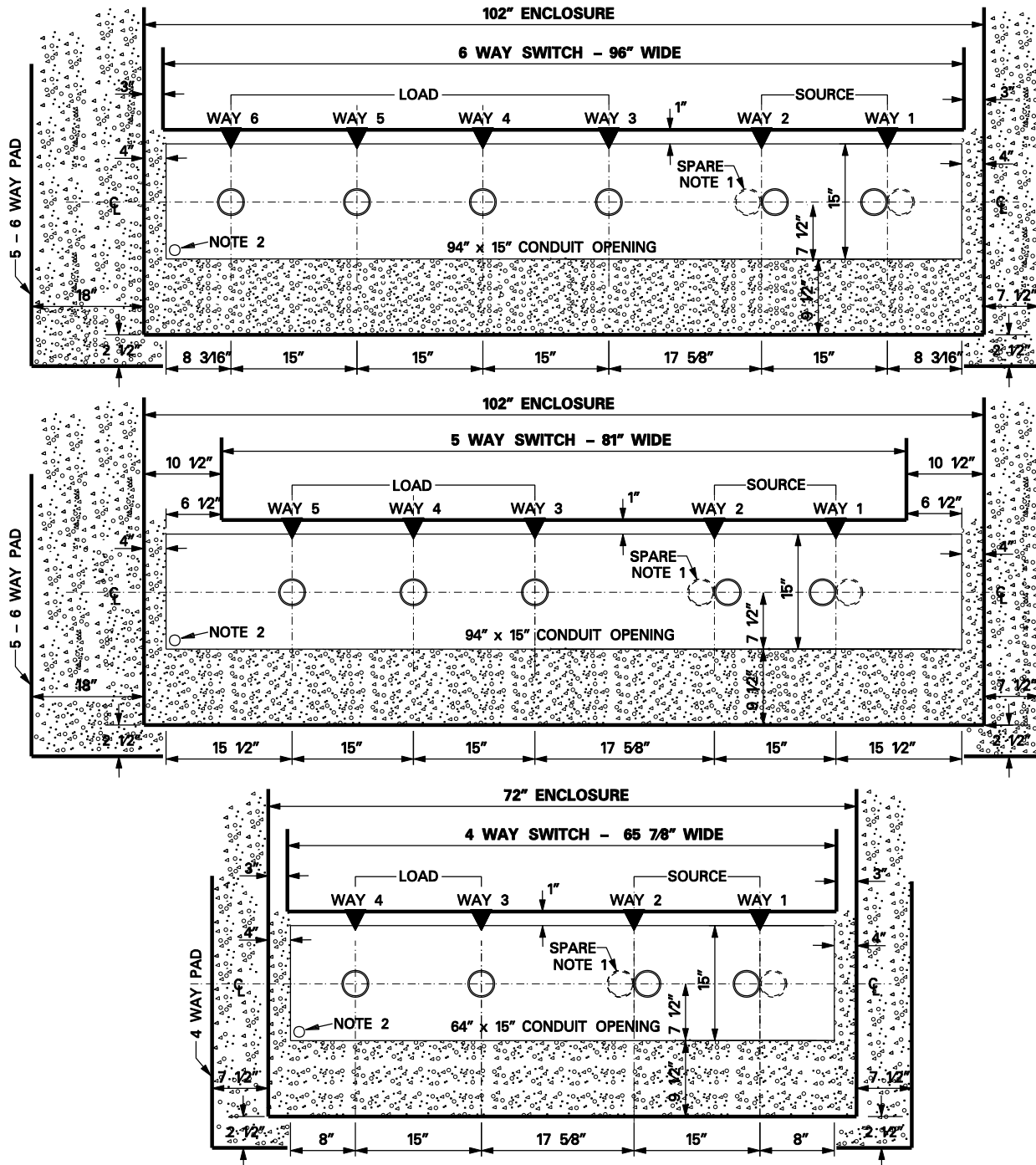
NOTES:

1. FOR STABILIZATION AND DRAINAGE INSTALL SMALL TO MEDIUM GRAVEL UNDER PAD DEEP WELL.
2. FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR SEE DETAIL SHEETS 51, 52, 53 AND 54.
3. PIERS ARE REQUIRED ON ALL PADS UNLESS WAIVED BY THE COMPANY INSPECTOR. REFERENCE DETAIL SHEET 23 FOR PIER DETAIL.
4. LIFT PAD WITH PROVIDED LIFTING POINTS ONLY. SEE LIFTING RINGS INSIDE WALL OF DEEP WELL.
5. CONDUIT NOT TO EXTEND MORE THAN 3" ABOVE BOTTOM OF DEEP WELL.
6. MINIMUM TRENCH DEPTH AT PAD TO TOP OF CONDUIT FOR THE FOLLOWING CONDUITS:
 - 6" CONDUIT — 61"
 - 4" CONDUIT — 47"
 - 2" CONDUIT — 40"
7. REFER TO DETAIL SHEET 44 FOR CONDUIT LOCATIONS.
8. ADDITIONAL AREA FOR CONTROL CABINET WHEN MOUNTING REMOTE SUPERVISORY CONTROLLED SWITCHGEAR.
9. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 10' COPPER CLAD GROUND RODS. GROUND RODS TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".
10. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE PRECAST CONCRETE PAD.



**PRECAST DEEPWELL PAD
FOR 25 KV DEADFRONT
SWITCHGEAR**

DDS-4 UG DETAIL SHEET 43 OF 57

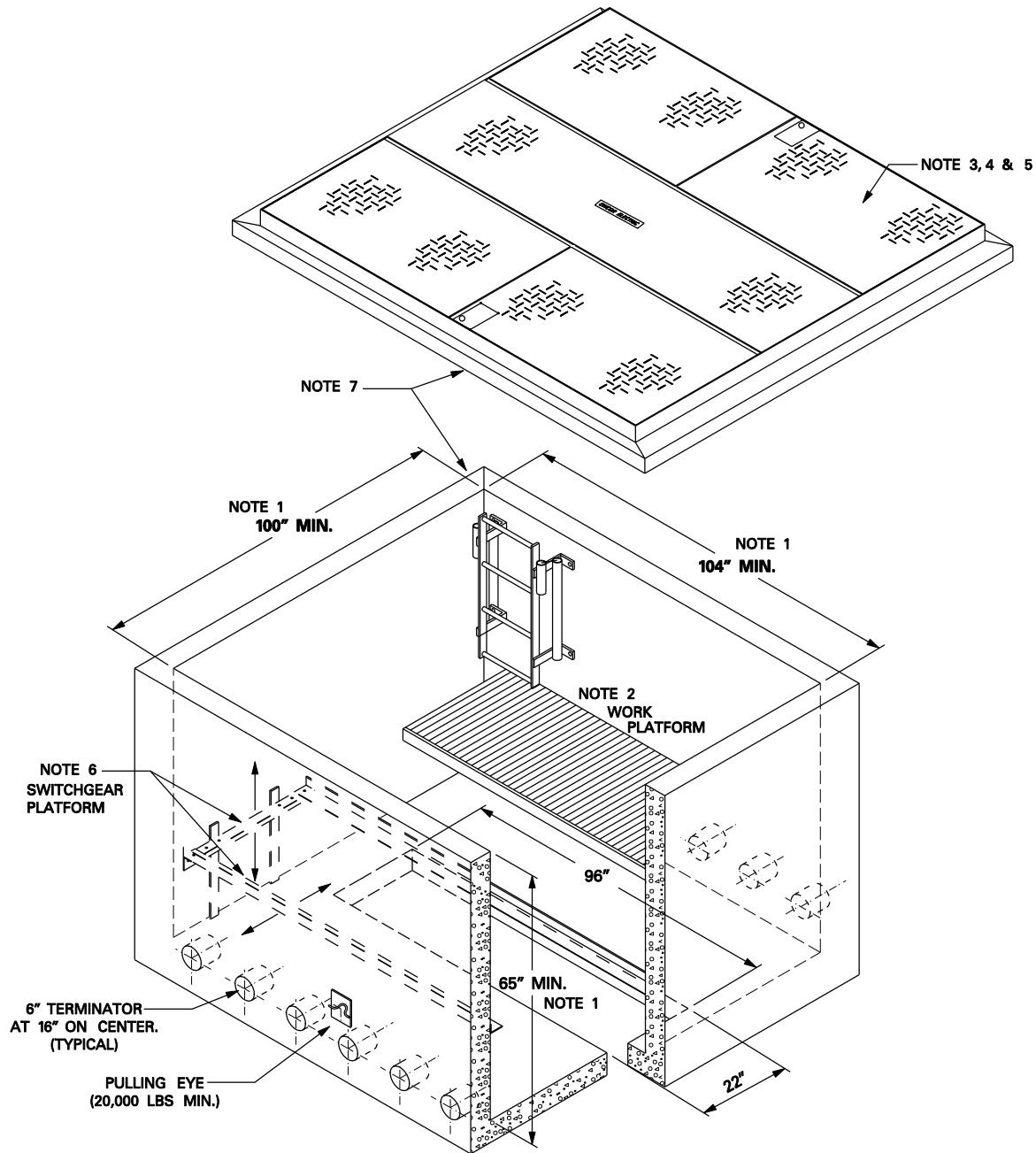


NOTE:

1. CONDUIT SHALL BE CENTERED ON CENTER BUSHING OF EACH SWITCHED WAY. IF SPARE CONDUIT IS REQUIRED, BOTH SHALL BE CENTERED AS SHOWN ON CENTER BUSHING OF SWITCHED WAY.
2. FOR PADS PLUMBED INTO DUCT BANKS, INSTALL 3" COMMUNICATION CONDUIT FROM MANHOLE TO FRONT LEFT CORNER OF THE CONDUIT OPENING OF PAD.



**CONDUIT LOCATIONS
DEAD FRONT PADMOUNT
25 KV VISTA SWITCHGEAR
DDS-4 UG DETAIL SHEET 44 OF 57**



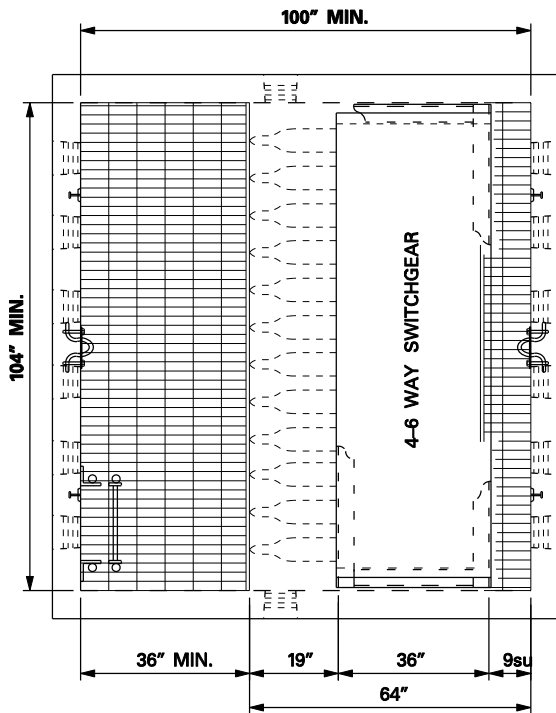
NOTE:

1. ALL DIMENSIONS SHOWN ARE MINIMUM INSIDE MEASUREMENTS. CONTACT DISTRIBUTION STANDARDS FOR ACTUAL MFG. DIMENSIONS.
2. LADDER, PLATFORMS, SUPPORT ANGLES AND COVER ARE PRE-INSTALLED.
3. STEEL DIAMOND PLATE TORSION ASSISTED COVERS.
4. VERTICAL LOADS TO COVER SHALL NOT EXCEED 16,000 LBS LIVE WHEEL WEIGHT.
5. VAULTS SHALL NOT BE INSTALLED IN LOCATIONS DESIGNATED ACCESSIBLE BY VEHICULAR TRAFFIC.
6. ADJUSTABLE SWITCHGEAR PLATFORM FOR 4- 6 WAY SWITCHGEAR.
7. FOR CLEARANCES ON ALL SIDES OF THE SWITCHGEAR SEE DETAIL SHEETS 51, 52, 53 & 54.
8. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE 5/8" X 10' COPPER CLAD GROUND ROD. GROUND ROD TO BE OBTAINED AND INSTALLED BY CONTRACTOR. INSTALLATION DEPTH SHALL BE 7' - 6".
9. CONTACT COMPANY REPRESENTATIVE ON WHERE TO ACQUIRE PRECAST VAULT.

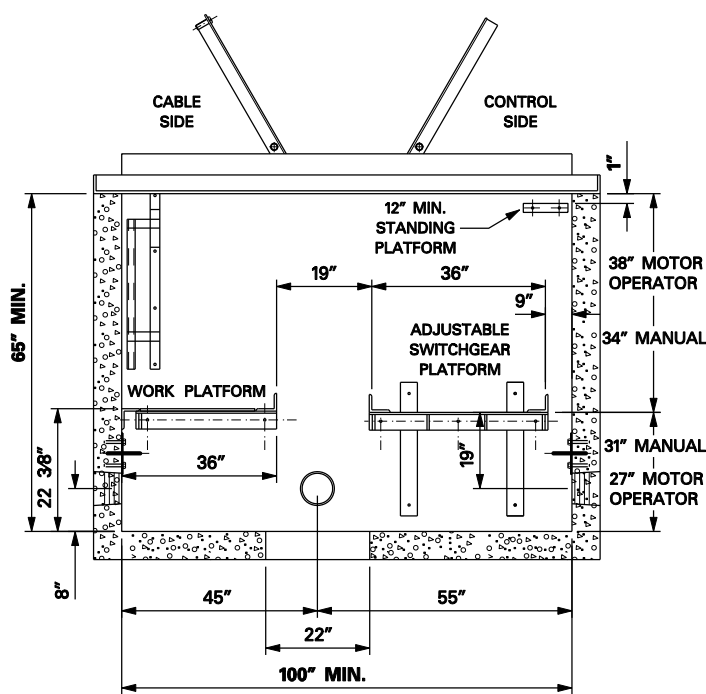
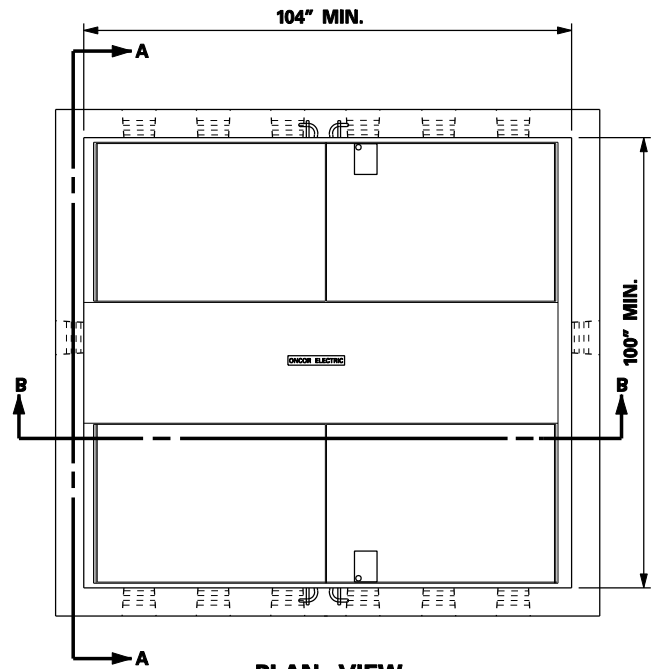


**PRECAST VAULT FOR
SUBSURFACE DEADFRONT
SWITCHGEAR**

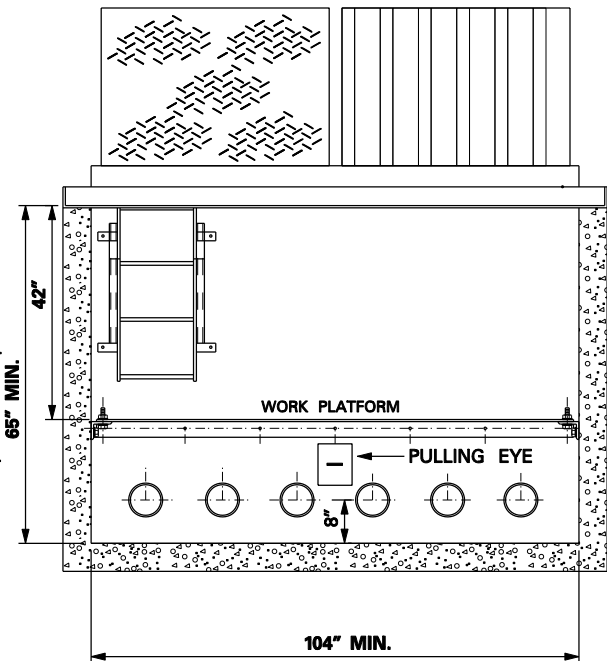
DDS-4 UG DETAIL SHEET 45 OF 57



TOP VIEW



SECTION A-A

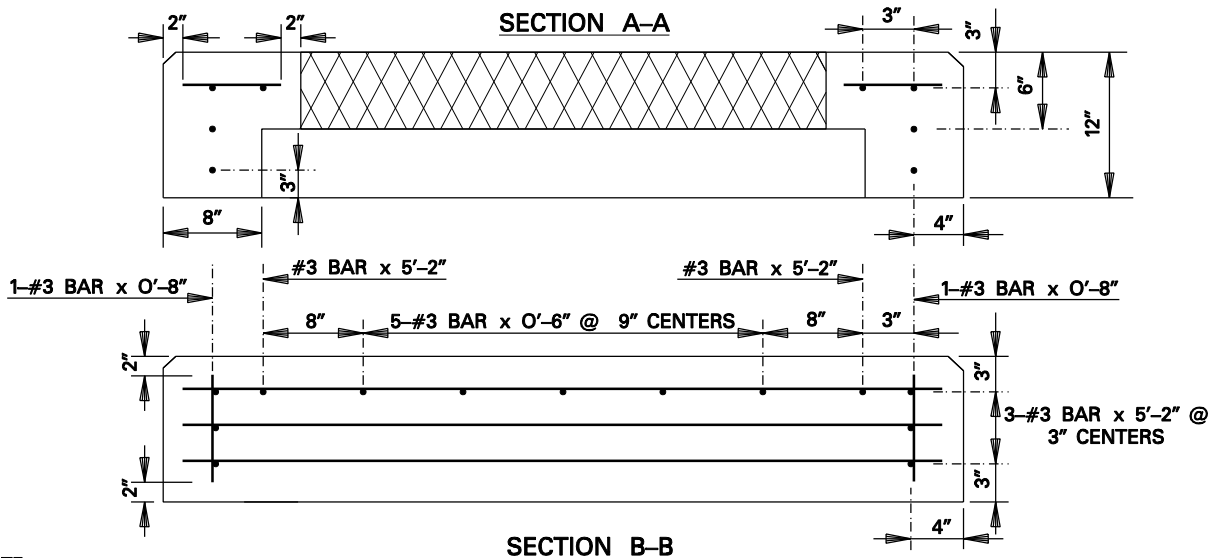
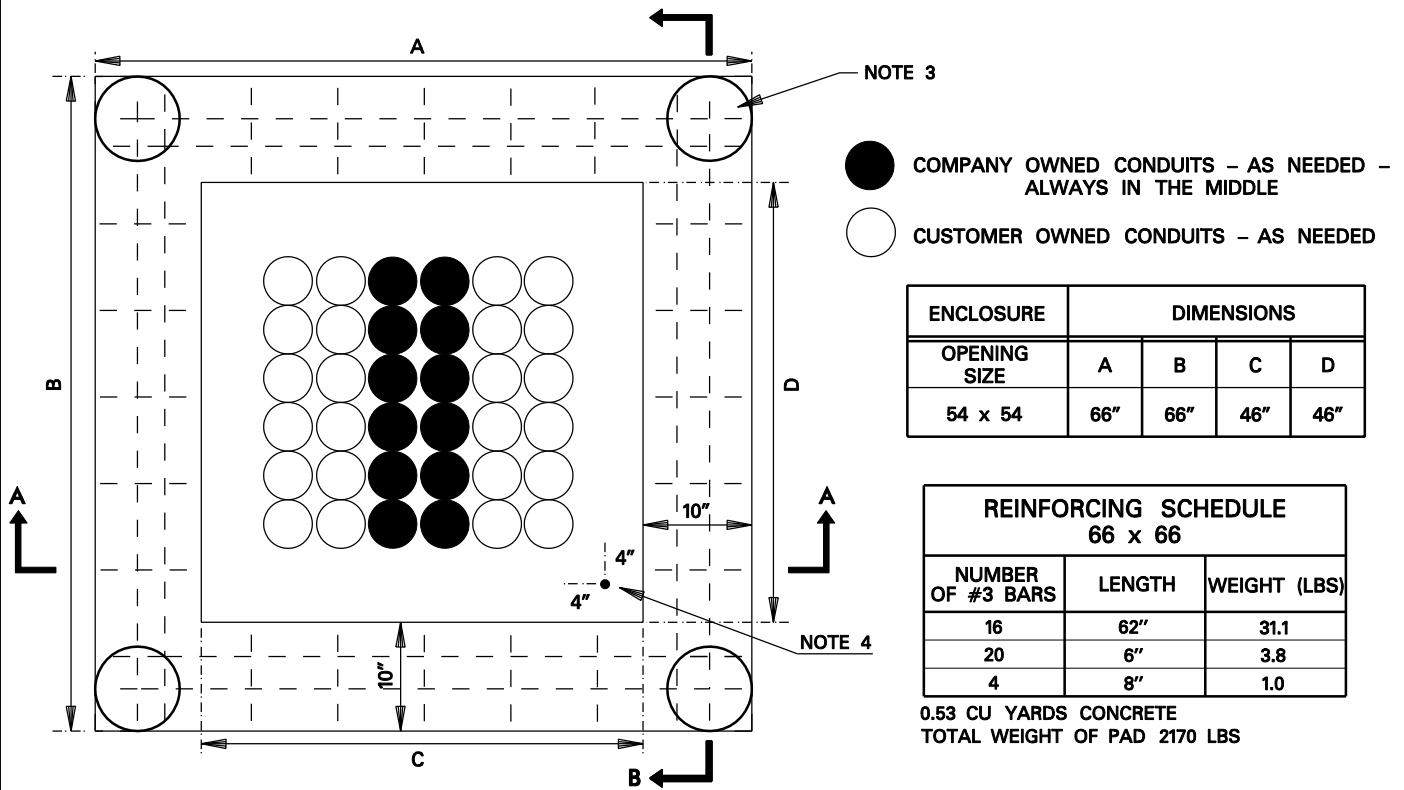


SECTION B-B
CROSS SUPPORT ANGLES NOT SHOWN



PRECAST VAULT FOR SUBSURFACE DEADFRONT SWITCHGEAR

DDS-4 UG DETAIL SHEET 46 OF 57



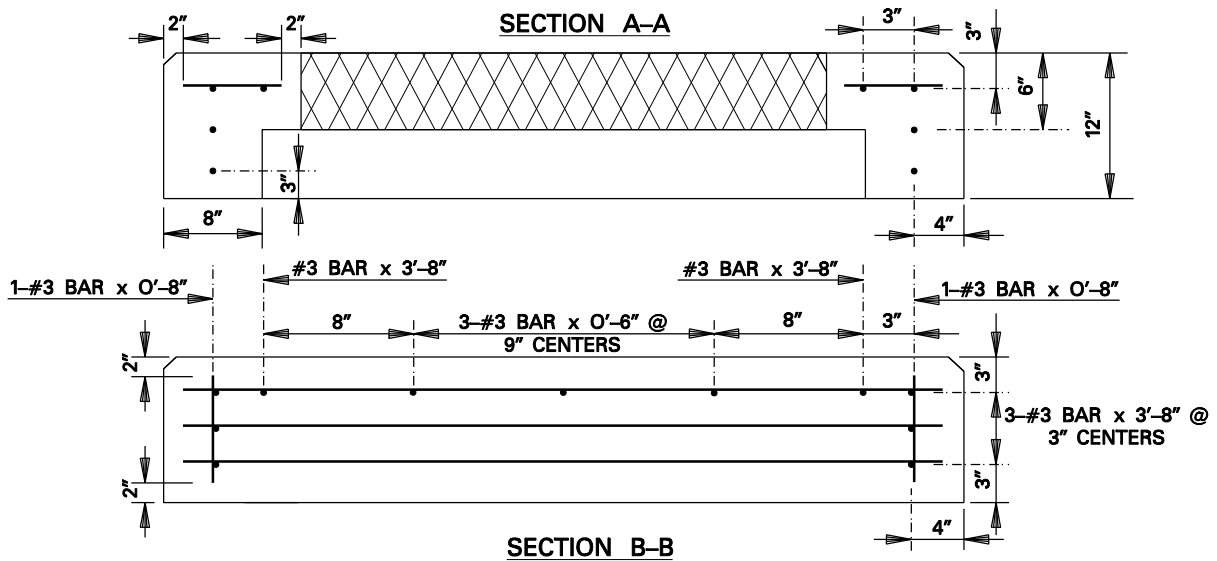
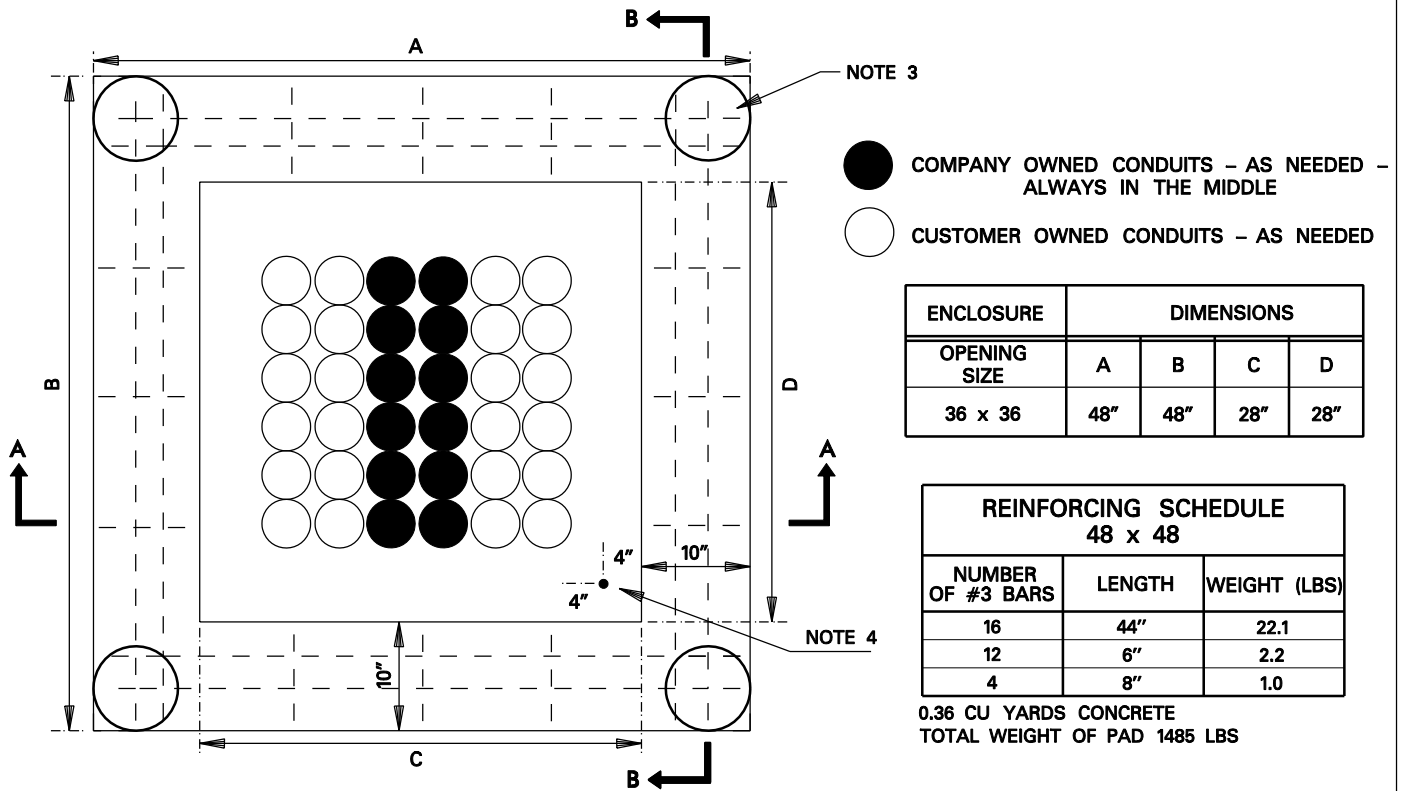
NOTE :

1. SEE SHEET 49 FOR ENCLOSURE DETAILS.
2. CONDUIT CONFIGURATION WILL DEPEND ON QUANTITY AND SIZE OF CONDUITS.
3. PIERS SHALL BE INSTALLED ON ALL PADS. REFERENCE SHEET 23 FOR PIER DETAIL.
4. CONTRACTOR TO OBTAIN AND INSTALL (1) 5/8" X 8' COPPER GROUND ROD AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
5. REFERENCE SHEET 21 FOR ADDITIONAL NOTES.



**PAD DETAILS FOR
54" X 54"
SECONDARY ENCLOSURE**

DDS-4 UG DETAIL SHEET 47 OF 57



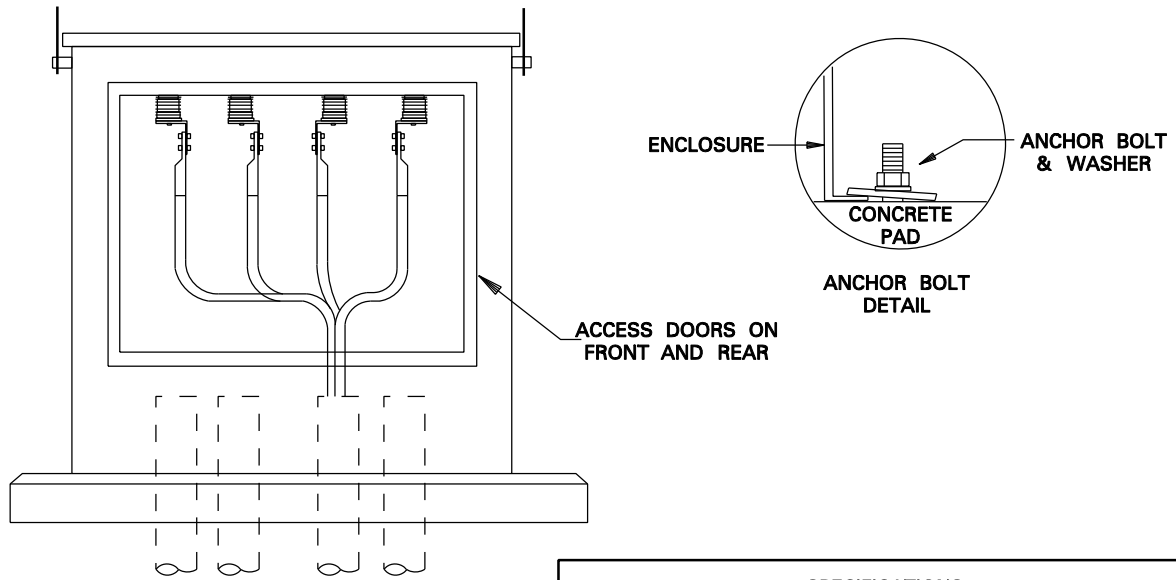
NOTE :

1. SEE SHEET 49 FOR ENCLOSURE DETAILS.
2. CONDUIT CONFIGURATION WILL DEPEND ON QUANTITY AND SIZE OF CONDUITS.
3. PIERS SHALL BE INSTALLED ON ALL PADS. REFERENCE SHEET 23 FOR PIER DETAIL.
4. CONTRACTOR TO OBTAIN AND INSTALL (1) 5/8" X 8' COPPER GROUND ROD AS SHOWN. INSTALLATION DEPTH SHALL BE 7' - 6".
5. REFERENCE SHEET 21 FOR ADDITIONAL NOTES.

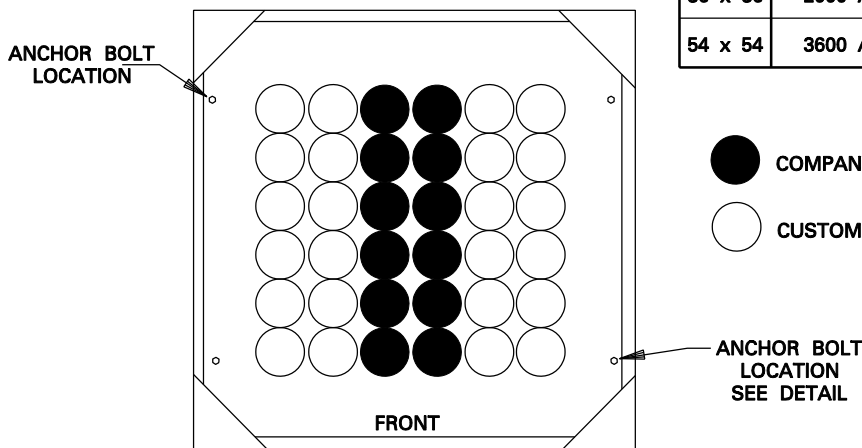


**PAD DETAILS FOR
36" X 36"
SECONDARY ENCLOSURE**

DDS-4 UG DETAIL SHEET 48 OF 57





FRONT VIEW



TOP VIEW

SPECIFICATIONS			
SIZE	NORMAL RATING	CENTER TAP RATING	SETS OF HOLES
36 x 36	2000 AMPS	3500 AMPS	16
54 x 54	3600 AMPS	6300 AMPS	24

-  COMPANY CONDUITS - ALWAYS IN THE MIDDLE
-  CUSTOMER CONDUITS

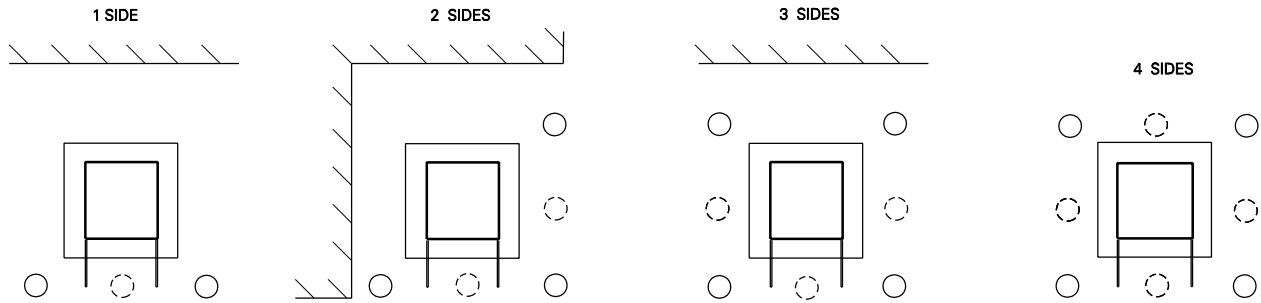
NOTES:

1. WHEN INSTALLING NEAR A TRANSFORMER, MAKE SURE THERE IS AT LEAST 5 FT. OF CLEARANCE FROM THE FRONT AND REAR OF ENCLOSURE AND TRANSFORMER AND 3 FT. OF CLEARANCE ON EACH SIDE.
2. SEE SHEETS 47 AND 48 FOR PAD DETAILS.

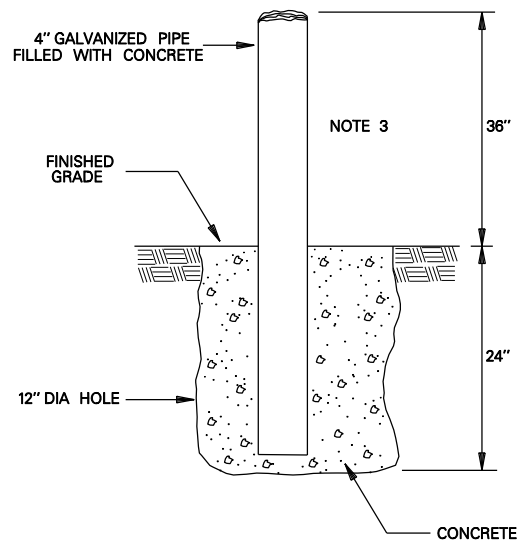
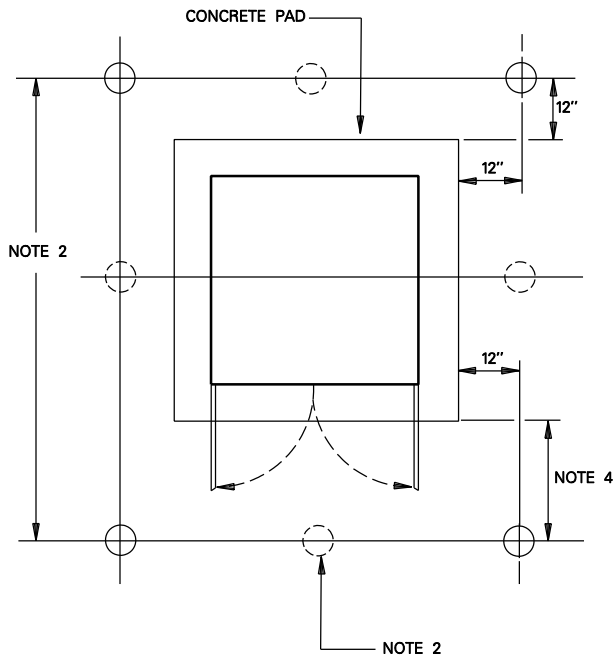


**THREE PHASE
PAD MOUNTED
SECONDARY ENCLOSURE**

DDS-4 UG DETAIL SHEET 49 OF 57



TYPICAL LAYOUT FOR TRAFFIC AND PARKING



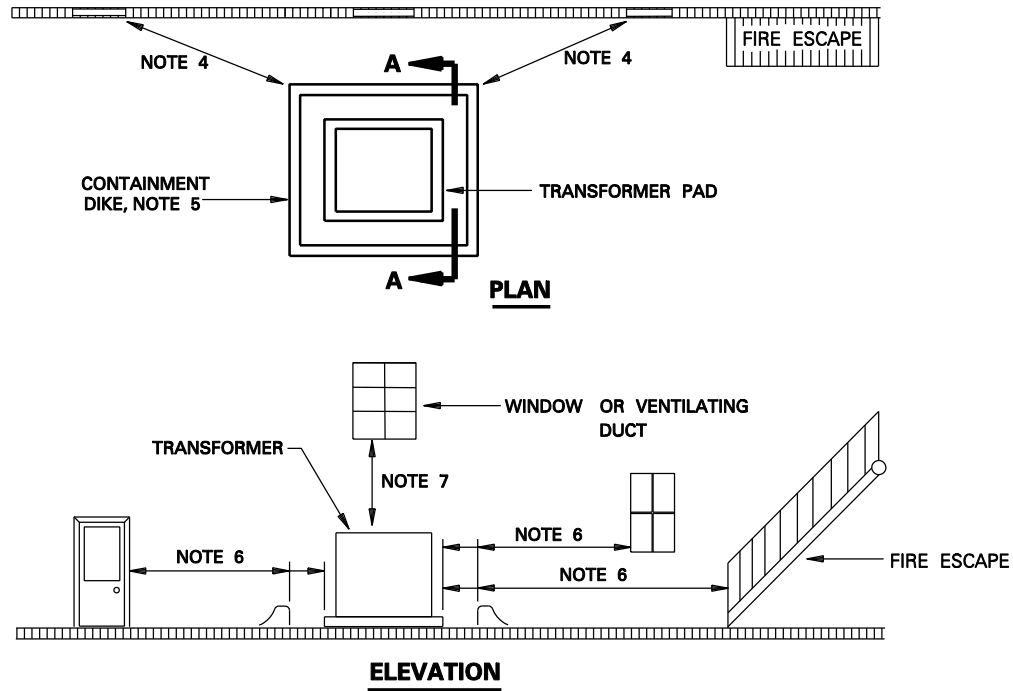
NOTES:

1. INSTALL GUARD POST WHERE PROTECTION FROM DAMAGE DUE TO VEHICULAR TRAFFIC IS NEEDED.
2. DISTANCE BETWEEN POSTS SHOULD NOT EXCEED 4 FEET. ADD ADDITIONAL POSTS WHERE NECESSARY TO MEET THIS CONDITION. VERIFY LOCATION OF POST IN FRONT OF TRANSFORMER TO ALLOW FOR DOOR OPENING.
3. INCREASE HEIGHT TO 48" AND DEPTH TO 36" IN TRUCK LOADING AREAS, AND INCREASE SIZE TO 6" GALVANIZED PIPE.
4. THIS DISTANCE TO BE LARGE ENOUGH TO ALLOW FULL OPENING OF ALL EQUIPMENT DOOR(S). CONTACT COMPANY REPRESENTATIVE TO VERIFY DIMENSION.



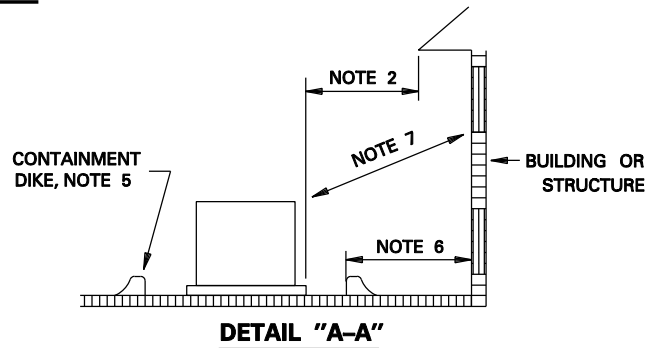
GUARD POST INSTALLATION

DDS-4 UG DETAIL SHEET 50 OF 57



TRANSF. TYPE	BUILDING CONSTRUCTION		WINDOWS, DOORS, & VENTS	FIRE ESCAPES
	FIRE RESISTIVE NOTE 3	NON- FIRE RESISTIVE		
1 PHASE	5'-0"	10'-0"	10'-0"	20'-0"
3 PHASE	5'-0"	15'-0"	15'-0"	20'-0"

CLEARANCE TABLE



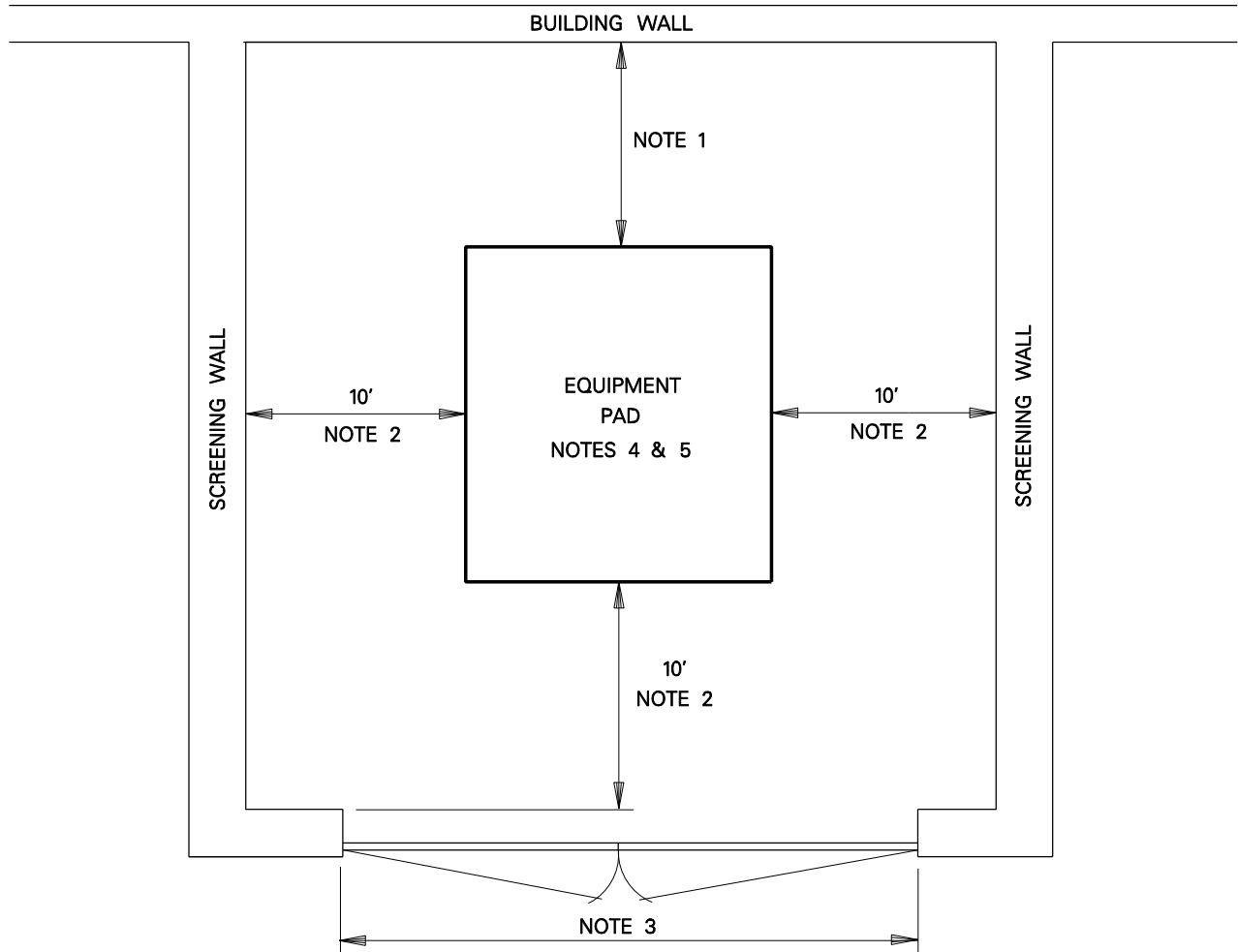
NOTES:

- CLEARANCE FROM BUILDING WALLS SHALL COMPLY WITH THE CLEARANCE TABLE. ALL DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS.
- WHERE THERE ARE BUILDING EAVES OR OVERHANGS WITHIN 25'- 0" ABOVE GROUND, CLEARANCE SHALL BE MEASURED HORIZONTALLY BEGINNING FROM THE EDGE OF THE EAVE OR OVERHANG.
- FIRE RESISTIVE BUILDING WALLS INCLUDE BRICK AND MASONRY STRUCTURES THAT HAVE A 2 HOUR FIRE RATING.
- CLEARANCE TO BUILDING DOORS, WINDOWS, VENTS AND FIRE ESCAPES TO BE MEASURED RADIALLY.
- LIQUID FLOW OF AREA SURROUNDING TRANSFORMER SHOULD BE AWAY FROM BUILDING. WHERE GROUND IS FLAT OR SLOPES TOWARD BUILDING, A DIKE SUFFICIENT TO CONTAIN ALL TRANSFORMER OIL FOR TRANSFORMERS 500 KVA AND LARGER SHALL BE PROVIDED.
- CLEARANCES ARE MEASURED FROM PAD EDGE TO BUILDING WALL, OPENING, OVERHANG OR FIRE ESCAPE UNLESS A CONTAINMENT DIKE IS UTILIZED. IF A CONTAINMENT DIKE IS UTILIZED, CLEARANCE IS MEASURED FROM DIKE.
- CLEARANCES FOR WINDOWS AND VENTS ABOVE TRANSFORMER ARE MEASURED RADIALLY FROM CLOSEST POINT ON TRANSFORMER.
- PADMOUNTED TRANSFORMERS SHALL BE POSITIONED SUCH THAT HOTSTICK USE IS NOT REQUIRED ON THE SIDE FACING THE BUILDING. IF HOTSTICK USE IS REQUIRED ON THE BUILDING SIDE, CLEARANCES SHOWN IN DETAIL SHEET 52 SHALL BE MAINTAINED.
- THERE SHOULD NOT BE ANY ABOVE GROUND OBSTRUCTIONS, SUCH AS SHRUBS, COOLING TOWERS, GAS METERS, FENCING, ETC. WITHIN 5'- 0" OF PAD OR OVERHANGS ABOVE PAD FACILITIES. REFERENCE DETAIL SHEET 52 FOR SCREENING CLEARANCES AROUND PADMOUNTED EQUIPMENT.
- THERE SHOULD NOT BE ANY PIPING OR CONDUIT UNDER THE PAD (EXCEPTION: MUTUALLY AGREED UPON COMMUNICATION CONDUITS) OTHER THAN THOSE ENTERING THE TRANSFORMER.
- TRANSFORMERS SHALL NOT OBSTRUCT FIRE LANE.
- IT IS THE OWNER'S RESPONSIBILITY TO COMPLY WITH ANY INSURANCE REGULATIONS AFFECTING THE PREMISES.



**CLEARANCES OF
PADMOUNTED TRANSFORMERS
FROM BUILDINGS**

DDS-4 UG DETAIL SHEET 51 OF 57



NOTES:

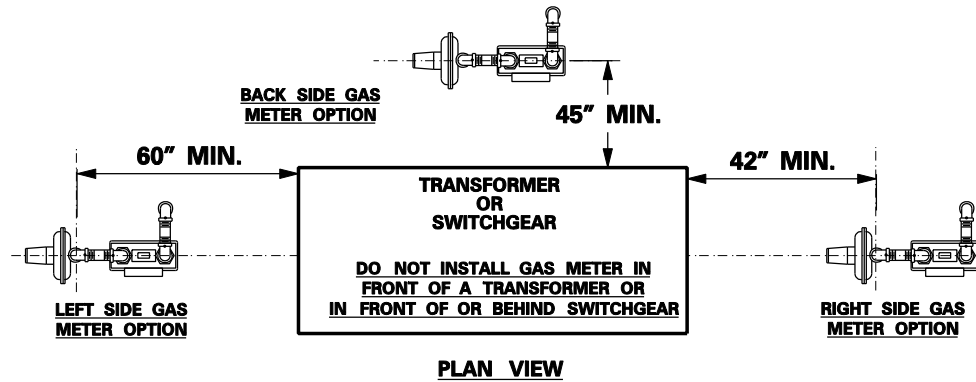
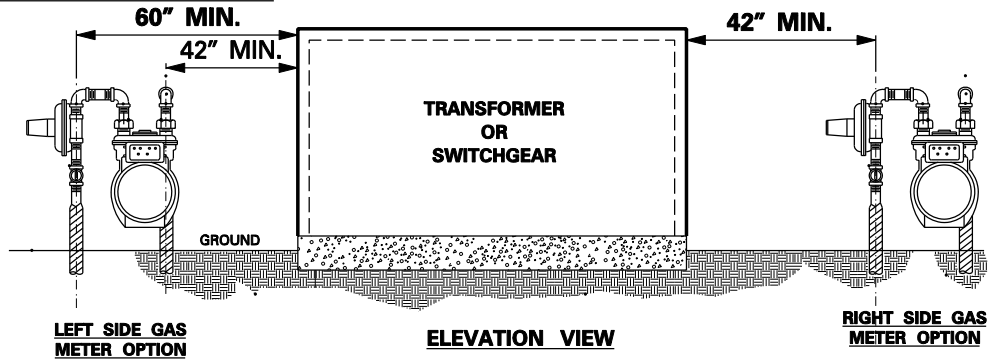
1. CLEARANCES TO BUILDING WALLS SHALL BE THE GREATER OF:
CLEARANCES LISTED IN DETAIL SHEET 51 FOR OIL FILLED EQUIPMENT,
10 FEET IF HOT STICK USE IS REQUIRED ON THIS SIDE OF EQUIPMENT, OR
5 FEET IF HOT STICK USE IS NOT REQUIRED ON THIS SIDE OF EQUIPMENT.
2. A MINIMUM OF 5 FEET CLEARANCE IS ALLOWED IF "HOT STICK" USE IS NOT REQUIRED
3. GATE SHALL OPEN OUTWARD AND THE WIDTH SHALL BE NO LESS THAN 10 FEET.
4. WHERE GROUND IS FLAT OR SLOPES TOWARD BUILDING, A DIKE SUFFICIENT TO CONTAIN ALL OIL FOR TRANSFORMERS 500 KVA AND LARGER SHALL BE PROVIDED. REFERENCE DETAIL SHEET 51.
5. WHEN TRANSFORMERS ARE INSTALLED, SCREENING WALLS SHALL PROVIDE ADEQUATE VENTILATION.



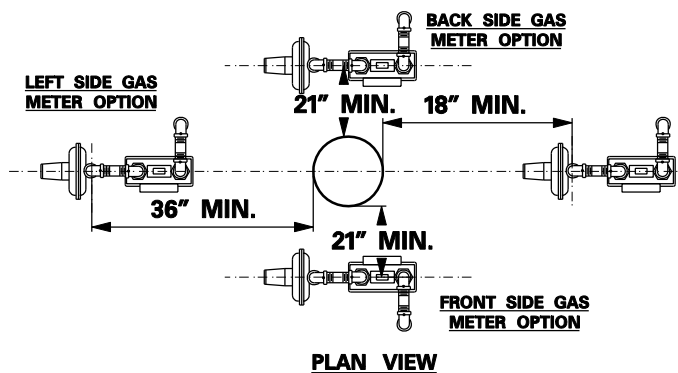
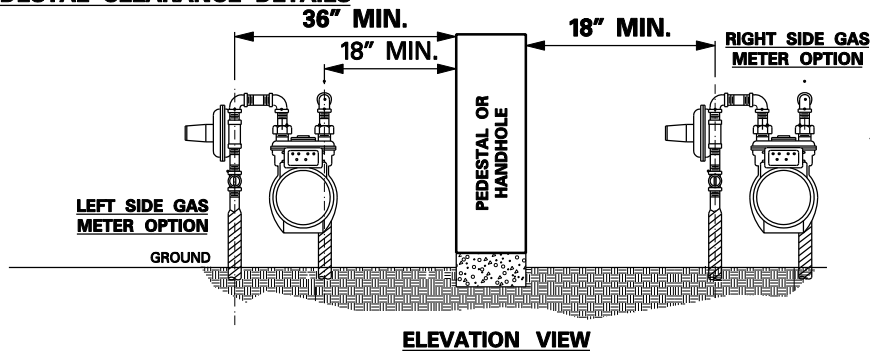
**CLEARANCES AROUND
PADMOUNTED EQUIPMENT**

DDS-4 UG DETAIL SHEET 52 OF 57

TRANSFORMER CLEARANCE DETAILS



PEDESTAL CLEARANCE DETAILS



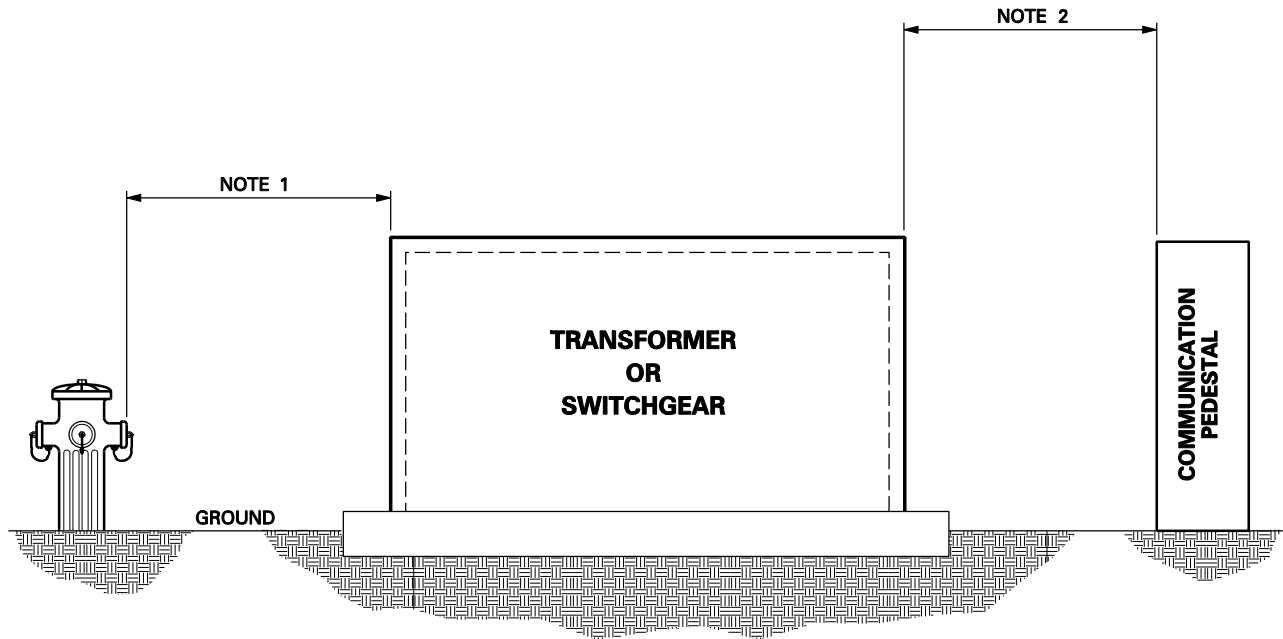
NOTES:

1. MEASUREMENTS ARE REFERENCED FROM THE INLET GAS RISER.
2. THE MEASUREMENTS WILL ENSURE:
 - A. THAT A MINIMUM CLEARANCE OF 36" IN. IS ATTAINED BETWEEN THE ENTIRE GAS METER INSTALLATION AND THE PADMOUNTED EQUIPMENT AND
 - B. THAT A MINIMUM CLEARANCE OF 12 IN. IS ATTAINED BETWEEN THE ENTIRE GAS METER INSTALLATION AND ALL OTHER ABOVEGROUND FACILITIES INCLUDING ELECTRIC AND OTHER UTILITY PEDESTALS AND HANDHOLES.
3. THIS STANDARD APPLIES TO 630 GAS METER INSTALLATIONS AND SMALLER. FOR LARGER METER INSTALLATIONS, CONTACT COMPANY REPRESENTATIVE FOR ASSISTANCE.
4. THIS DRAWING IS TYPICALLY USED WHEN THE GAS MAIN IS LOCATED IN AN ALLEY OR DEDICATED UTILITY EASEMENT.



ABOVEGROUND CLEARANCES FROM GAS METER INSTALLATIONS

DDS-4 UG DETAIL SHEET 53 OF 57

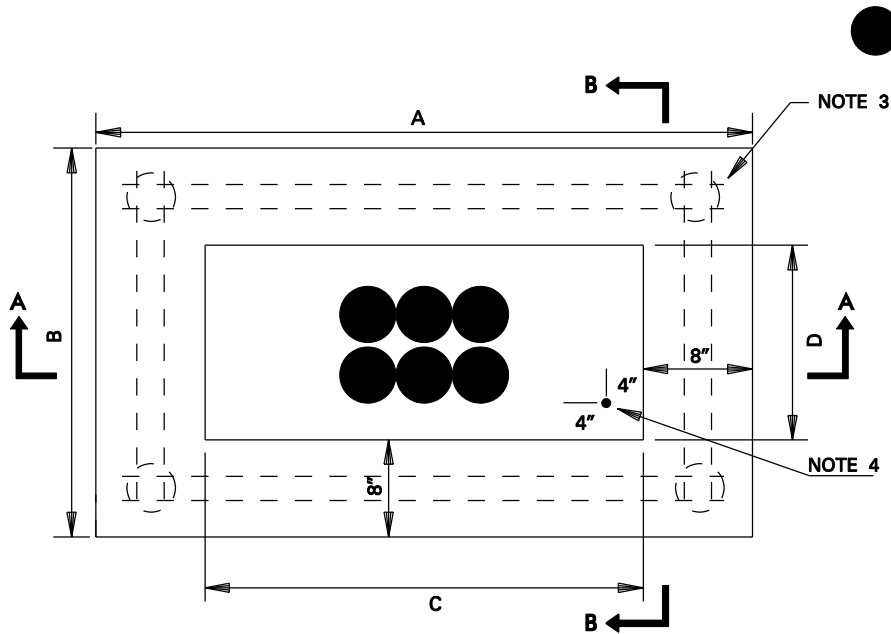


1. PADMOUNTED EQUIPMENT, PEDESTALS AND OTHER ABOVE GROUND ENCLOSURES SHOULD BE LOCATED NOT LESS THAN 4 FEET FROM FIRE HYDRANTS. WHERE CONDITIONS DO NOT PERMIT A CLEARANCE OF 4 FEET, A CLEARANCE OF NOT LESS THAN 3 FEET IS ALLOWED.
2. ALL ABOVE GROUND METALLIC POWER AND COMMUNICATION EQUIPMENT (PEDESTALS, TRANSFORMER CASES, APPARATUS CASES, ETC.) THAT ARE SEPARATED BY A DISTANCE OF 6 FEET OR LESS SHALL BE BONDED. REFERENCE DETAIL SHEET 16 FOR METHOD FOR PROVIDING FOREIGN UTILITY COMPANY EQUIPMENT GROUND.



CLEARANCES OF ABOVEGROUND EQUIPMENT – FOREIGN UTILITIES ENCLOSURES AND EQUIPMENT

DDS-4 UG DETAIL SHEET 54 OF 57

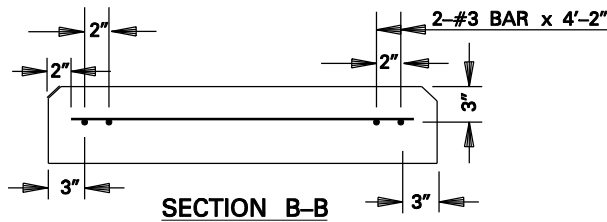
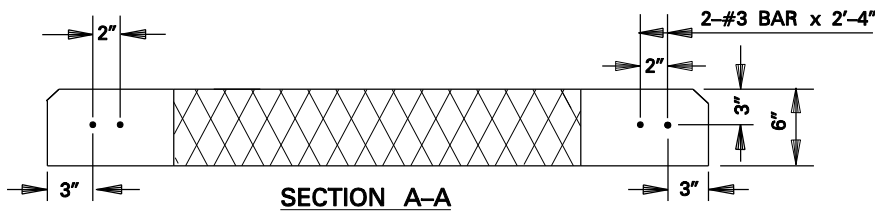


SOURCE CONDUITS, AS REQUIRED,
TYPICALLY IN THE MIDDLE

ENCLOSURE	DIMENSIONS			
ENCLOSURE SIZE	A	B	C	D
44" x 24"	54"	32"	38"	16"

REINFORCING SCHEDULE		
NUMBER OF #3 BARS	LENGTH	WEIGHT (LBS)
4	50"	6.3
4	28"	3.5

0.15 CU YARDS CONCRETE- PAD
0.065 CU. YARDS CONCRETE- PIERS
TOTAL WEIGHT OF PAD- 583 LBS
TOTAL WEIGHT OF PIERS- 262 LBS



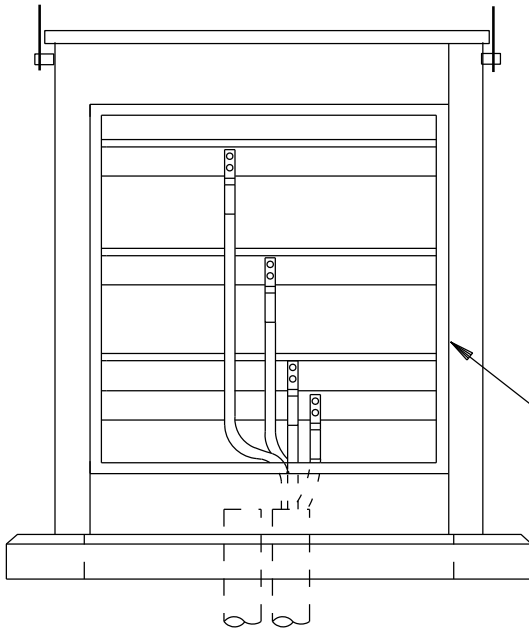
NOTES:

1. SEE SHEET 56 FOR ENCLOSURE DETAILS.
2. CONDUIT CONFIGURATION WILL DEPEND ON QUANTITY AND SIZE OF CONDUITS.
3. PIERS SHOULD BE INSTALLED ON ALL PADS TO A DEPTH OF 5 FEET UNLESS ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED. IF ROCK OR OTHER HARD SURFACES ARE ENCOUNTERED PRIOR TO A 5 FOOT DEPTH, PIERS SHOULD EXTEND 6 INCHES INTO HARD SURFACE. REFERENCE SHEET 17 FOR PIER DETAIL.
4. RECOMMENDED LOCATION FOR 5/8" X 8' COPPER GROUND ROD AS SHOWN.
5. SERVICE ENCLOSURES, WHEN REQUIRED, ARE TO BE PROVIDED BY COMPANY AND INSTALLED BY CONTRACTOR.
6. THE CONTRACTOR IS TO PROVIDE, INSTALL AND MAINTAIN (1) THE PAD, ASSOCIATED RACEWAYS AND CABLE FROM THE SERVICE ENCLOSURE TO THE PADMOUNTED TRANSFORMER AND (2) THE CABLE AND ASSOCIATED RACEWAYS FROM THE SERVICE ENCLOSURE TO THE METERS.

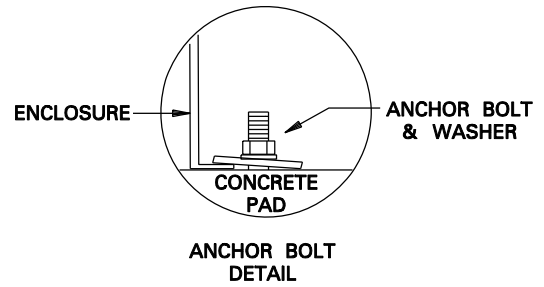


**PAD DETAILS FOR
44" X 52" X 24"
SERVICE ENCLOSURE**

DDS-4 UG DETAIL SHEET 55 OF 57



FRONT VIEW

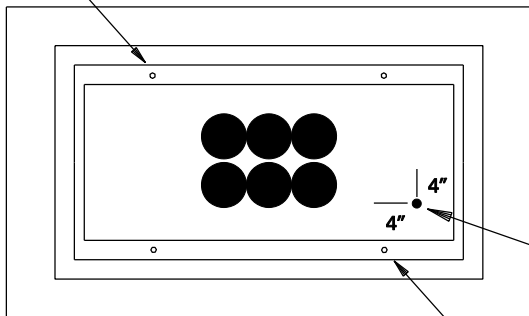


**ANCHOR BOLT
DETAIL**

ACCESS DOOR

SPECIFICATIONS		
CENTER TAP RATING	SETS OF SET SCREWS	SETS OF HOLES
2500 AMPS	30	18

ANCHOR BOLT
LOCATION



TOP VIEW



SOURCE CONDUITS – ALWAYS IN THE MIDDLE

NOTE 3

ANCHOR BOLT
LOCATION
SEE DETAIL

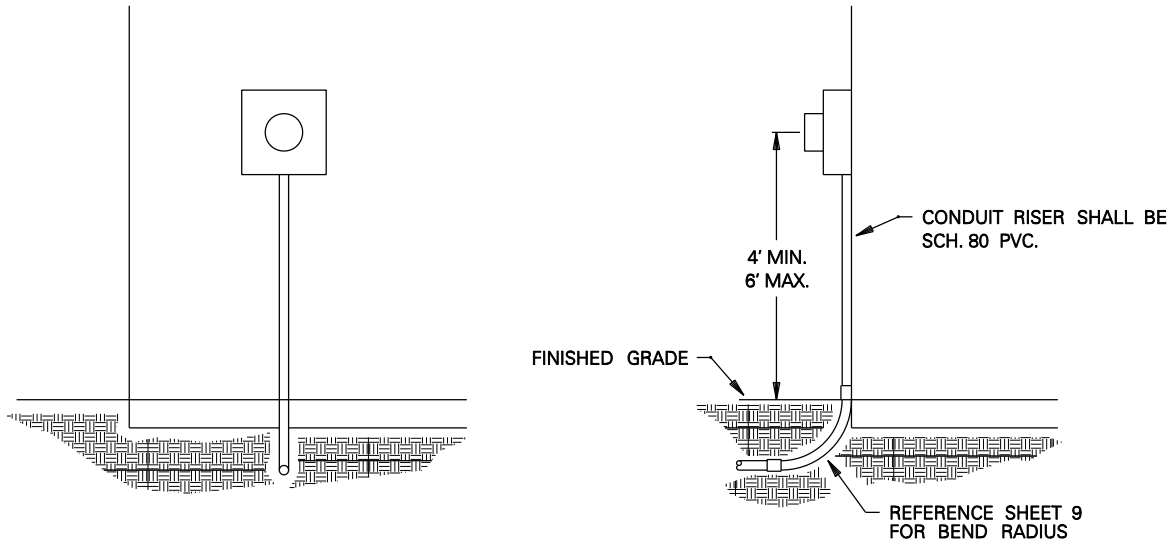
NOTES:

1. SEE SHEET 55 FOR PAD DETAILS.
2. CONDUIT CONFIGURATION WILL DEPEND ON QUANTITY AND SIZE OF CONDUITS.
3. RECOMMENDED LOCATION FOR 5/8" X 8' COPPER GROUND ROD AS SHOWN.
4. SERVICE ENCLOSURES, WHEN REQUIRED, ARE TO BE PROVIDED BY COMPANY AND INSTALLED BY CONTRACTOR.
5. THE CONTRACTOR IS TO PROVIDE, INSTALL AND MAINTAIN (1) THE PAD, ASSOCIATED RACEWAYS AND CABLE FROM THE SERVICE ENCLOSURE TO THE PADMOUNTED TRANSFORMER AND (2) THE CABLE AND ASSOCIATED RACEWAYS FROM THE SERVICE ENCLOSURE TO THE METERS.

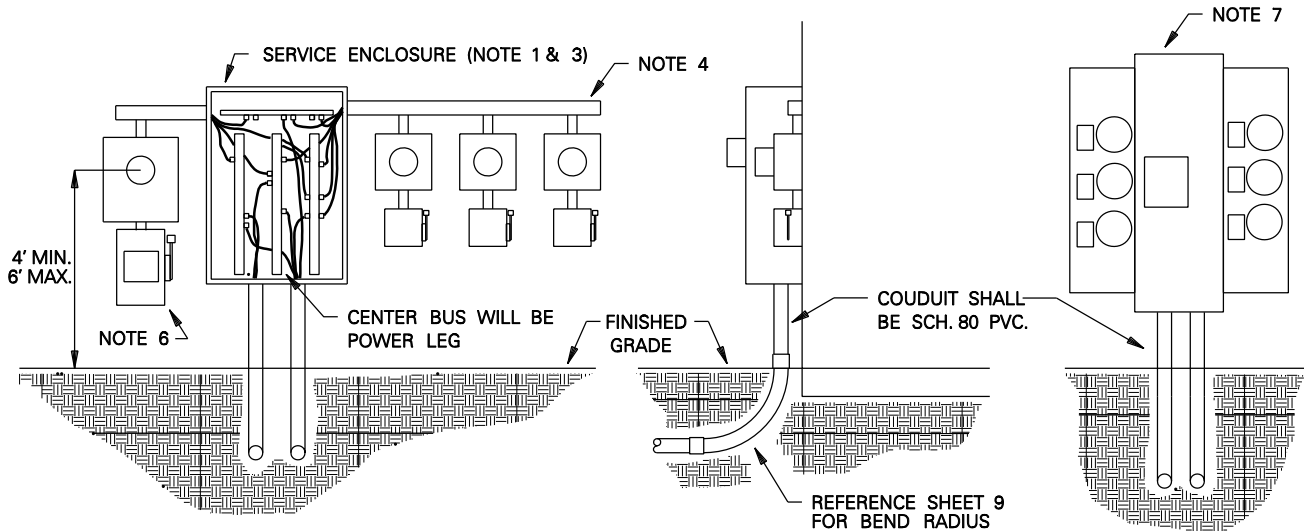


**PAD MOUNTED
SERVICE ENCLOSURE
44" X 52" X 24"**

DDS-4 UG DETAIL SHEET 56 OF 57



TYPICAL SINGLE METER INSTALLATION



TYPICAL MULTIPLE METER INSTALLATION
WITH SERVICE ENCLOSURE

TYPICAL METER PACK
INSTALLATION

NOTES:

1. SERVICE ENTRANCE ENCLOSURE (FOR MULTIPLE METER INSTALLATIONS) PROVIDED BY COMPANY AND INSTALLED BY CONTRACTOR FOR SERVICE ENTRANCES THROUGH 2500 AMPS. CONTACT COMPANY REPRESENTATIVE FOR INFORMATION.
2. METER SOCKETS INSTALLED BY CONTRACTOR.
3. REFERENCE ONCOR'S "ELECTRIC SERVICE GUIDELINES" FOR METER AND SERVICE ENCLOSURE INFORMATION.
4. CONDUCTORS, RACEWAY AND GUTTER PROVIDED AND INSTALLED BY CONTRACTOR.
5. SERVICE ENTRANCE CONDUCTORS TO BE CONTINUOUS FROM METER SOCKET INTO SERVICE ENCLOSURE.
6. METER DISCONNECT SWITCH AS ALLOWED BY LOCAL INSPECTION AUTHORITY. VERIFY ACCEPTANCE PRIOR TO INSTALLATION.
7. CONTACT COMPANY FOR APPROVAL OF METER PACKS PRIOR TO LETTING BIDS AND INSTALLING EQUIPMENT.
8. EACH SOCKET MUST BE CLEARLY AND PERMANENTLY MARKED ON THE INTERIOR AND EXTERIOR OF THE METER SOCKET TO INDICATE EACH APARTMENT OR LOCATION SERVED.



TYPICAL METER INSTALLATIONS

DDS-4 UG DETAIL SHEET 57 OF 57

SECTION IV

SPECIAL PROVISIONS

SPECIAL PROVISIONS

INDEX

SP-1	General	SP-26	Prosecution of Construction
SP-2	Project Description	SP-27	Liquidated Damages
SP-3	Definitions	SP-28	Occupational Safety and Health Act
SP-4	Information Concerning Conditions	SP-29	Easements/Right-Of-Way
SP-5	Addenda	SP-30	Right of Entry
SP-6	Proposed Guaranty	SP-31	Authority and Duties of Inspector
SP-7	Filing of Proposal	SP-32	Owner-Engineer Relationship
SP-8	Rejection of Proposals	SP-33	Professional Inspection by Engineer
SP-9	Disqualification of Bidders	SP-34	Copies of Plans and Specifications Furnished
SP-10	Qualification to Perform	SP-35	Verification of Measurements
SP-11	Award of Contract	SP-36	Pay Items – Incidental Construction
SP-12	Bonds – Amount and Terms	SP-37	Omissions
SP-13	Insurance Requirements	SP-38	Minimum Wage Rates
SP-14	Policy Endorsements and Special Conditions	SP-39	Losses from Natural Causes
SP-15	Order of Work	SP-40	Explosives, Blasting, Etc.
SP-16	Priority of Contract Documents	SP-41	Work with Own Forces
SP-17	Warranty	SP-42	Project Name Construction Signs
SP-18	Lines and Grades	SP-43	Water for Construction
SP-19	Inspection and Testing	SP-44	Owner's Right to Suspend Work and Annul Contract
SP-20	Indemnification	SP-45	Ownership of Drawings
SP-21	Sales Tax	SP-46	Adequacy of Design
SP-22	Traffic Control		
SP-23	Trench Safety		
SP-24	Work-Site Area and Clean-Up		
SP-25	Existing Structures, Facilities and Improvements		

SPECIAL PROVISIONS

SP-1: GENERAL

For this contract, the General Provisions (Division 100) of the "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), October 2004 Edition, with all amendments thereto, shall govern and shall constitute as the Special Provisions except as herein amended, modified or supplemented. Omission of any section from this Project's Contract Documents does not mean that such section is not applicable to this Project. The NCTCOG General Provisions will be referred to as the General Provisions (GP) and will not be physically bound with the other contract documents.. Copies may be obtained from the North Central Texas Council of Governments.

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

SP-2: PROJECT DESCRIPTION

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

1. Installation of electric and telecommunications conduit by open trench, conventional bore, and directional bore
2. Removal and replacement of fences
3. Removal and replacement of turfgrass, shrubs, ornamental trees
4. Property restoration

SP-3: DEFINITIONS

Modify GP Item 101.1 Definitions as follows:

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

The City of North Richland Hills, Texas
4301 City Point Dr.
North Richland Hills, Texas 76180

The word "Engineer" in these documents shall be understood as referring to the project manager within the OWNER's Public Works Department.

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

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

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

SP-4: INFORMATION CONCERNING CONDITIONS

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

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

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

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

SP-5: ADDENDA

Bidders wanting further information, interpretation or clarification of the Contract Documents must make their request in writing to the Engineer **at least eight (8) days prior to the Bid Opening**. Answers to all such requests will be made a part

of the Contract Documents. No other explanation or interpretation will be considered official or binding.

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

SP-6: PROPOSED GUARANTY

Modify GP Item 102.5. Proposal Guaranty to include:

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

SP-7: FILING OF PROPOSAL

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

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

SP-8: REJECTION OF PROPOSALS

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

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

SP-9: DISQUALIFICATION OF BIDDERS

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

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

SP-10: QUALIFICATION TO PERFORM

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

SP-11: AWARD OF CONTRACT

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

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

The right is reserved, as the interest of the OWNER may require, to reject any and all bids and to waive any formality in bids received. It is the intention of the OWNER to award a single contract for this work.

SP-12: BONDS - AMOUNT AND TERMS

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

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

- (1) A good and sufficient Performance Bond in an amount equal to one hundred ten percent (110%) of the total awarded contract price, guaranteeing the full and faithful execution of the work and performance of the contract and for the protection of the City against any improper execution of the work or the use of inferior materials.
- (2) A good and sufficient Payment Bond in an amount equal to one hundred percent (100%) of the total awarded contract price, guaranteeing payment for all labor, materials and equipment used in the construction of the project.

- (3) A good and sufficient Maintenance Bond in an amount equal to twenty percent (20%) of the final contract price, guaranteeing the maintenance in good condition of such project for a period of two (2) years from and after the time of its completion and acceptance by the City.

General conditions for bonds are as follows:

1. The surety on each bond must be a responsible surety company which is licensed and qualified to do business in the State of Texas (surplus lines carriers are not acceptable) and satisfactory to the City. No surety will be accepted who is in default or delinquent on any bond or who is interested in any litigation against the City. Should any surety on the contract be determined unsatisfactory at any time by the City, notice will be given to the CONTRACTOR to the effect, and the CONTRACTOR shall forthwith substitute a new Surety or Sureties satisfactory to the City. (Texas Lloyd's Plan carriers are not acceptable.) No payment will be made under the contract until the new Surety or Sureties, as required, have qualified and have been accepted by the City. The contract shall not be operative nor shall any payments be due until approval of the bonds has been made by the City.
2. The surety company should be listed in the current circular of the "Federal Register - Department of the Treasury - Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsurance Companies".
3. The surety shall/must have an underwriting limitation (as shown in the Federal Register) to cover 110% of the project cost. Exceptions to a requirement may be made in unusual circumstances, subject to approval by the Office of Risk Management and the City Attorney's Office.
4. All bonds shall be made on forms furnished by the City and shall conform to the requirements as set forth herein.
5. Each Bond shall be executed by the CONTRACTOR and the Surety. The name and residence of each individual party to the bond shall be inserted in the body thereof, and each such party shall sign the bond with his/her usual signature on the line opposite the scroll seal, and if signed in the States of Main, Massachusetts, or New Hampshire, an adhesive seal shall be fixed opposite the signature.
6. If the principals are partners, their individual names will appear in the body of the bond or on proceeding pages to be included with said bond with the recital that they are partners composing a firm, naming it, and all the members of the firm shall execute the bond as individuals.

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

SP-13: INSURANCE REQUIREMENTS

In addition to the provisions of GP Item 1.03.4. Insurance, add the following:

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

A. Definitions:

- (1) Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees (including those subject to a coverage agreement) providing services on a project for the duration of the project.
- (2) Building or construction - Has the meaning defined in the Texas Labor Code, §406.096(e)(1).

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

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

- (2) provide to the CONTRACTOR, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the CONTRACTOR, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the CONTRACTOR:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
 - (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.
- J. By signing this contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the governmental entity that all employees of the CONTRACTOR who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may

subject the CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions.

- K. The CONTRACTOR's failure to comply with any of these provisions is a breach of contract by the CONTRACTOR which entitles the governmental entity to declare the contract void if the CONTRACTOR does not remedy the breach within ten (10) days after receipt of notice of breach from the governmental entity.

In accordance with statutory requirements, the CONTRACTOR shall:

- (1) provide coverage for its employees providing services on the project, for the duration of the project based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements;
- (2) provide a certificate of coverage showing workers' compensation coverage to the governmental entity prior to beginning work on the project;
- (3) provide the governmental entity, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the CONTRACTOR's current certificate of coverage ends during the duration of the project;
- (4) obtain from each person providing services on the project, and provide to the governmental entity:
 - (A) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
 - (B) no later than seven (7) days after receipt by the contract, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
- (6) notify the governmental entity in writing by certified mail or personal delivery, within ten (10) days after contractor knew or should have known, of any change that materially affects the

provision of coverage of any person providing services on the project;

- (7) post a notice on each project site informing all persons providing services on the project that they are required to be covered, and stating how a person may verify current coverage and report failure to provide coverage. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30 point bold type and text in at least 19 point normal type, and shall be in both English and Spanish and any other language common to the worker population. The text for the notices shall be the following text in Figure 1 provided by the commission on the sample notice, without any additional words or changes:

Figure 1:

REQUIRED WORKERS' COMPENSATION COVERAGE

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

"Call the Texas Workers' Compensation Commission at (512) 440-3789 to receive information on the legal requirement for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

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

Contractor's General Liability and Property Damage Insurance:	
Bodily Injury (or Death)	\$ 600,000 each occurrence
Property Damage	\$ 600,000 each occurrence

SP-14: POLICY ENDORSEMENTS AND SPECIAL CONDITIONS

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

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

SP-15: ORDER OF WORK

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

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

SP-16: PRIORITY OF CONTRACT DOCUMENTS

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

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

- (1) This Agreement
- (2) Addendum(s)
- (3) "Notice to Bidders" advertisement
- (4) Bidder's Proposal
- (5) Special Instruction to Bidders
- (6) Performance, Payment and Maintenance Bonds

- (7) Certification of Insurance
- (8) Notice to Proceed
- (9) Technical Specifications
- (10) City of North Richland Hills' Public Works Design Manual
- (11) Special Provisions
- (12) General Provisions
- (13) Special Specifications
- (14) Project Construction Plans/Drawings
- (15) Special Material and/or Equipment Specifications
- (16) Special Material and/or Equipment Drawings
- (17) "Public Works Construction Standards - North Central Texas" adopted by the North Central Texas Council of Governments (NCTCOG), October 2004 Edition
- (18) North Central Texas Council of Government references

SP-17: WARRANTY

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

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

SP-18: LINES AND GRADES

Add the following to GP Item 105.4. Construction Stakes:

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

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

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

SP-19: INSPECTION AND TESTING

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

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

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

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

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

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

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

SP-20: INDEMNIFICATION

The CONTRACTOR shall familiarize himself/herself with GP Item 107.2. Indemnification and GP Item 107.19.3.2. Indemnification. Additionally, the following shall be added to both Indemnification items:

This agreement, however, does not waive any governmental immunity available to the OWNER under Texas law and nor any defenses of the parties under

Texas law. The provisions of this paragraph are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity.

SP-21: SALES TAX

Add the following to GP Item 107.14. State and Local Sales and Use Taxes:

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

SP-22: TRAFFIC CONTROL

Add the following to GP Item 107.19.2. Protection of Persons and Property:

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

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

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

SP-23: TRENCH SAFETY

Add the following paragraph to GP Item 107.19.3. Trench Safety:

Per Chapter 756, Texas Health & Safety Code, it shall be the responsibility of the CONTRACTOR to provide and maintain a viable trench safety system at

all times during construction activities. The CONTRACTOR is directed to become knowledgeable and familiar with the standards as set forth by the Occupational Safety and Health Administration for trench safety that will be in effect during the period of construction of the project and the CONTRACTOR is responsible for conforming to such regulations as prescribed by Occupational Safety and Health Administration standards.

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

Add the following to GP Item 107.21. Working Area:

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

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

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

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

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

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

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

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

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

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

SP-25: EXISTING STRUCTURES, FACILITIES AND IMPROVEMENTS

Add the following to GP Item 107.23. Existing Structures, Facilities and Appurtenances:

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

The plans show the locations of most known surface and subsurface structures. However, the OWNER assumes no responsibility for failure to show any or all of these structures on the plans or in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work, or for increasing the pay quantities in any manner, unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades, or requires the building of special works not provided for in the Contract Documents.

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

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

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

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

SP-26: PROSECUTION OF CONSTRUCTION

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

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

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

New Years Day	January 1st
Memorial Day	Last Monday in May
Independence Day	July 4th
Labor Day	First Monday in September
Thanksgiving Holiday	Fourth Thursday in November and the following Friday
Christmas Holiday	December 24th & December 25th

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

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

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

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

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

Delete the Table [Schedule 108.8.1.(a) Liquidated Damages] within GP Item 108.8.1. Priority of Contract Documents and substitute the following:

The contract time for the entire project from the "Notice to Proceed" issuance date through the final completion date is 180 consecutive calendar days (note, this 180 consecutive calendar days is for final completion and not substantial completion). This contract time is both multi-tiered and cumulative.

Liquidated damages will be assessed at the rate of \$150 per calendar day for any unfinished work for the first 30 days beyond the 120th day. This \$150 rate will start on the 121st consecutive calendar day after the "Notice to Proceed" issuance date and continue through the 150th consecutive calendar day after the "Notice to Proceed" issuance date.

Liquidated damages will be assessed at the rate of \$300 per consecutive calendar day for any unfinished work beyond the 150th calendar day after the "Notice to Proceed" issuance date. This rate shall continue until such time that the Project is complete and accepted by the OWNER.

SP-28: OCCUPATIONAL SAFETY AND HEALTH ACT

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

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

thereunder and for the failure of any material and/or equipment furnished under this contract to so comply.

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

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

SP-29: EASEMENTS/RIGHTS-OF-WAY

Without cost to the CONTRACTOR, the OWNER will provide the necessary easements or rights-of-way required for the project. However, the CONTRACTOR may desire additional temporary easements for the duration of the work for his/her construction, storage or access. All such temporary easements shall be obtained by the CONTRACTOR at no additional cost to the contract or the OWNER.

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

SP-30: RIGHT OF ENTRY

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

SP-31: AUTHORITY AND DUTIES OF INSPECTOR

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

to reject materials or suspend the work until any situation at issue can be referred to and decided by the OWNER.

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

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

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

SP-32: OWNER-ENGINEER RELATIONSHIP

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

SP-33: PROFESSIONAL INSPECTION BY ENGINEER

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

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

SP-34: COPIES OF PLANS AND SPECIFICATIONS FURNISHED

Four (4) sets of plans and specifications (not including the General Provisions) shall be furnished to the CONTRACTOR at no charge for construction purposes. Additional sets may be obtained from the Engineer at **\$ 50.00 per set.**

SP-35: VERIFICATION OF MEASUREMENTS

Before ordering any material or doing any work, the CONTRACTOR shall verify all measurements involved and shall be responsible for the correctness of these measurements. No extra charge or compensation will be allowed because of differences between actual dimensions and the dimensions shown on the drawings; any difference which may be found shall be called to the attention of the Engineer for consideration before proceeding with the work.

SP-36: PAY ITEMS - INCIDENTAL CONSTRUCTION

The CONTRACTOR shall be paid only for those items which are listed in the proposal or which are added to the job through a change order. All construction or removal considerations which are not listed as a separate pay item shall be considered as incidental construction. Cost for these items shall be considered in the most appropriate item listed in the schedule(s) of pay items.

SP-37: OMISSIONS

- (a) In the event that the specifications inadvertently omit some of the usual and customary work, auxiliary equipment or material required for the satisfactory installation and operation of all work, equipment or material, the CONTRACTOR shall provide these items as directed by the Engineer at his/her own expense. The CONTRACTOR will be assumed to be an experienced and qualified CONTRACTOR in this type of work, and to have studied the purpose of operation of the equipment and the results to be obtained, and is to furnish equipment suitable for the work to be done.
- (b) In the event that the specifications inadvertently fail to contain a specification for work to be done and material to be furnished, then the Standard Current Specification or Requirements of the A.W.W.A., A.S.T.M., A.S.C.E., A.S.E.E., A.S.M.E., N.B.F.U., N.E.C., N.E.M.A., O.S.H.A., NCTCOG "Standard Specifications for Public Works Construction" or TxDOT "Standard

Specifications for Construction of Highways, Streets and Bridges” shall apply. Should the above specifications not apply, then the work done, equipment or material furnished shall be as directed by the Engineer.

SP-38: MINIMUM WAGE RATES

For the work required of this project, the CONTRACTOR and all sub-contractors shall pay his/her employees the prevailing wage rates in accordance with the Texas Government Code, Chapter 2258. The prevailing wage rates determined applicable for this project are the current prevailing wage rate schedules of the United States Department of Labor adopted in accordance with the Davis-Bacon Act (40 U.S.C. Section 276a, et. seq.) and its subsequent amendments. These prevailing wage rates can be obtained from the following web page: www.wdol.gov/dba.aspx

A CONTRACTOR or sub-contractor who does not pay his/her employees in accordance with these prevailing wages shall pay \$ 60.00 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in these prevailing wage rates to the CITY.

SP-39: LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to the CONTRACTOR arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstance in the prosecution of same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the CONTRACTOR at his/her own cost and expense.

SP-40: EXPLOSIVES, BLASTING, ETC.

Neither explosives nor blasting shall be allowed or used on this project.

SP-41: WORK WITH OWN FORCES

The CONTRACTOR shall perform with his own forces work of a value of not less than fifty percent (50%) of the contract amount.

SP-42: PROJECT NAME CONSTRUCTION SIGNS

The CONTRACTOR shall install two (2) Project Name Construction Signs on Simmons Drive. One sign shall be at or near the intersection of Simmons Drive and Mid-Cities Boulevard and one sign shall be at or near the proposed intersection of Simmons Drive and Grand Avenue. The exact locations shall be approved by the OWNER prior to installation.

These signs shall be in accordance with Figure 2M (R 02-26-2007) of the City of North Richland Hills' Public Works Design Manual. These signs shall be installed within 15 calendar days from the date the OWNER awards the contract and shall remain in place during the entire construction period. These Signs shall be removed within 15 calendar days after the OWNER's acceptance of the project improvements.

Sign Data:

Project Name: **Boulevard 26 Utility Burial Project**
Projected Completion: *To Be Determined After Contract Award*

SP-43: WATER FOR CONSTRUCTION

The CONTRACTOR shall make the necessary arrangements for securing and transporting all water required in the construction, including water required for mixing of concrete, sprinkling, testing, flushing or jetting.

The CONTRACTOR may remit the City a deposit for a fire hydrant water meter; additionally, the CONTRACTOR will be billed for the water used on the construction of this contract and measured by such fire hydrant meter. Additionally, the cost of any temporary pipe line, metering or other equipment which may be necessary to make use of such fire hydrant water meter and water, shall be considered as incidental to the work and payment therefore shall be included in the various bid items of the proposal. If the CONTRACTOR chooses to use such fire hydrant water meter, he/she shall assume full responsibility for it and return it in the same or similar condition as received otherwise the CONTRACTOR will not be returned his/her deposit.

SP-44: OWNER'S RIGHT TO SUSPEND WORK AND ANNUL CONTRACT

Delete GP Item 108.9.(2) and replace it with the following:

- (2) failure of the CONTRACTOR to make the progress set out in the Progress Schedule;

SP-45: OWNERSHIP OF DRAWINGS

All drawings, specifications and copies thereof furnished by the Engineer shall not be reused on other work, and, with the exception of the signed contract sets, are to be returned to him on request, at the completion of the work. All models are the property of the OWNER.

SP-46: ADEQUACY OF DESIGN

It is understood that the OWNER believes it has employed competent engineers and designers. It is, therefore, agreed that the Engineer shall be responsible for the adequacy of the design, sufficiency of the Contract Documents, the safety of the structure and the practicability of the operations of the completed project; provided the CONTRACTOR has complied with the requirements of the Contract Documents, all approved modifications thereof, and additions and alterations thereto approved in writing by the OWNER. The burden of proof of such compliance shall be upon the CONTRACTOR to show that he/she has complied with the requirements of the Contract Documents, approved modifications thereof and all approved additions and alternations thereto.