

ELECTRICAL LEGEND

- 12m. BARRIER, GROUND, OR BRIDGE MOUNTED LIGHTING STANDARD WITH (1) 250W HPS COBRA HEAD LUMINAIRE.
- 12m. BARRIER, GROUND, OR BRIDGE MOUNTED LIGHTING STANDARD WITH (2) 250W HPS COBRA HEAD LUMINAIRE.
- UNDERPASS LUMINAIRE, 1000W MH 240V LUMINAIRE. STERNER #891-CUSTOM-CB-N-N-40100-1000-H-240-E BLACK FINISH AND PROVIDE ACCESSORIES NECESSARY FOR MOUNTING TO BOTTOM SIDE OF BRIDGE
- UNDERPASS LUMINAIRE, 100W HPS 120V LUMINAIRE. LITHONIA #KPSSS100S-R3-120-WL-DBL BLACK FINISH AND PROVIDE WITH ACCESSORIES NECESSARY FOR MOUNTING TO BOTTOM SIDE OF BRIDGE
- LIGHTING CONTROL CENTER
- SERVICE POLE
- IRRIGATION SYSTEM PUMP AND CONTROLLER. SEE IRRIGATION PLANS FOR DETAILS
- GROUND MOUNTED WEATHERPROOF JUNCTION BOX MOUNTED FLUSH WITH GRADE, UNLESS NOTED OTHERWISE. SEE SHEET NO. 668 FOR DETAIL.
- 78mm RMC CONDUIT UNDER ROADWAYS (GALVANIZED).
- A3 CABLE IN DUCT. (53mm MINIMUM). THE A3 INDICATES THE CIRCUIT NUMBER 2/C #6 AWG, 600V. PER CIRCUIT, W/#6 GRD.
- EXISTING LIGHT UNIT TO BE REMOVED
- EXISTING LIGHT UNIT TO REMAIN
- 250W HPS COBRA HEAD LUMINAIRE MOUNTED ON JOINT USE POLE.
- GROUND MOUNTED WEATHERPROOF PULL BOX. SEE SHEET NO. 653 FOR DETAIL.
- 21mm x 3.048m GROUND ROD AND ASSOCIATED JUNCTION BOX FOR BRIDGE MOUNTED LUMINAIRE.
- DUCTBANK. SEE DETAIL THIS SHEET.

APPROVED SUBMITTALS:

- #20.1 - Screw-In Foundation Anchors for Street Light Poles.
- #20.2 - Light Poles.
- #22 - Ground Rod & Clamp Cut Sheets.
- #25 - Utility Marker Tape - Catalog Cut Sheets.
- #26 - Cable-In-Duct Submit Drawings.
- #27 - Light Fixtures & Lamp Drawings.
- #28 - Wire Fuse Holders & Misc. Drawings.
- #31 - A - Lighting Controllers.
- #61 - A - Revised Electric Light Pole Drawings.
- #69 - Color & Finish of Lighting Control Cabinets.
- RFI #3 - Duct Bank Pull Box.

ADDENDUM #2:

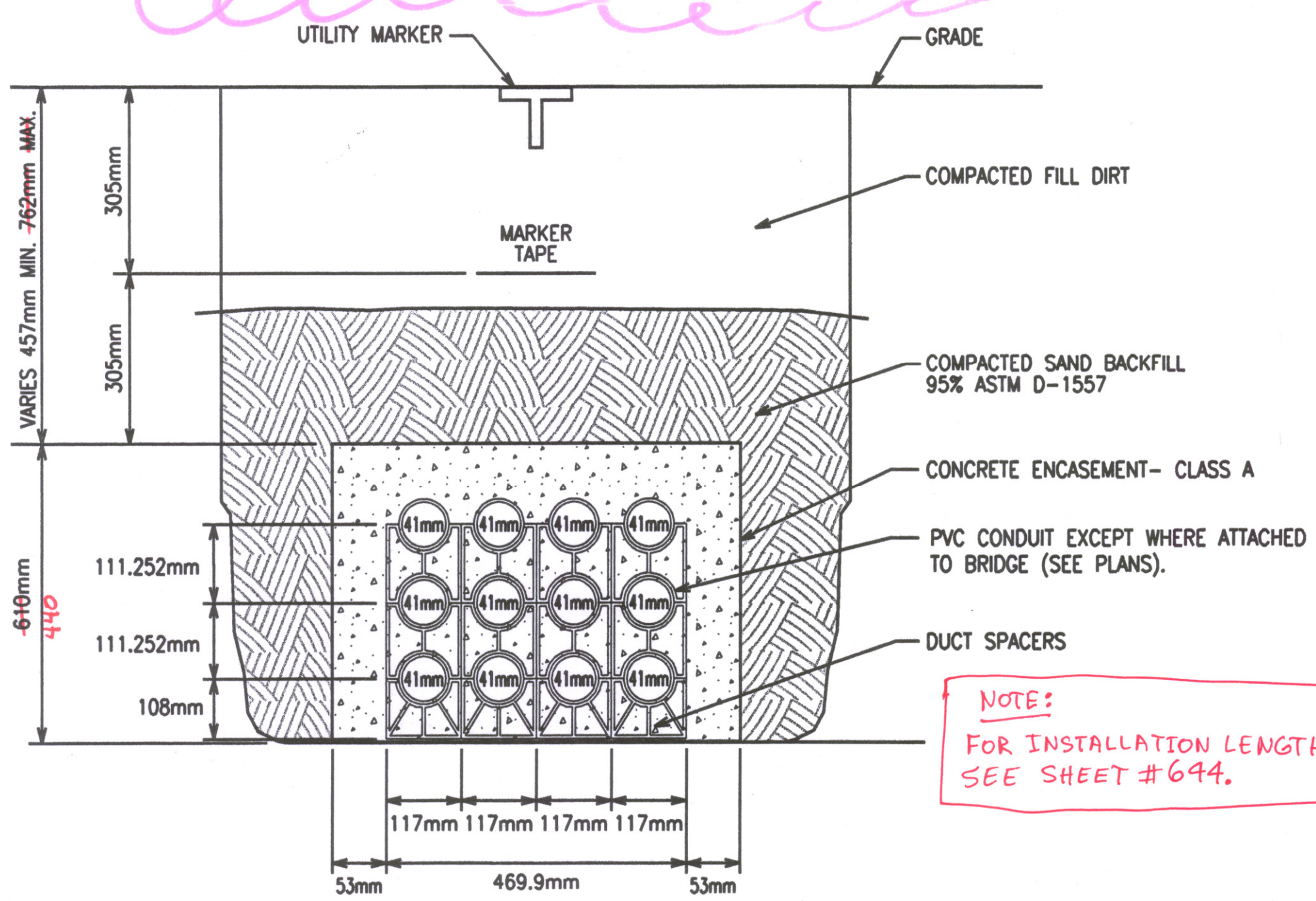
Sheet 632

1. Ductbank Detail: Change the overall height of the concrete encasement from 610 mm to 440 mm. It is acceptable to use excavated trench walls to form the duct bank where soil conditions permit rather than the formed ductbank shown. Delete the maximum depth of 762 mm from the top of the ductbank to the top of the trench. Excavatable flowable fill will only be required under pavement where the depth of backfill from the top of the ductbank to the top of the subgrade exceeds 600 mm.

DUCTBANK CALL-OUT SCHEDULE				
POINT	NORTH	EAST	STATION	OFFSET
DB1	511,356.5379	490,831.0917	14+827.500	-39.2454
DB2	511,365.7550	491,170.2923	15+168.115	-36.1903
DB3	511,380.1444	491,269.2516	15+268.991	-42.5117
DB4	511,392.0219	491,341.2228	15+342.700	-46.8000
DB5	511,396.3736	491,397.7089	15+400.000	-44.2200
DB6	511,423.7002	491,574.7344	15+581.300	-43.9461
DB7	511,439.3241	491,649.9001	15+659.000	-45.1173
DB8	511,456.8695	491,727.9585	15+740.000	-45.9148
DB9	511,465.9959	491,780.6145	15+794.000	-42.8297
DB10	511,488.2265	491,867.7674	15+885.000	-42.9000
DB11	511,495.6828	491,934.2753	15+951.764	-32.3269
DB12	511,534.8318	492,061.8964	16+086.439	-32.3452
DB13	511,549.2826	492,069.5067	16+098.300	-43.7000
DB14	511,579.4460	492,145.5111	16+181.000	-47.6000
DB145	511,603.3739	492,210.3326	16+251.000	-47.8000
DB15	511,634.1422	492,302.0242	16+348.000	-43.0000
DB16	511,695.1210	492,450.2667	16+510.900	-40.0700
DB17	511,834.6190	492,750.6820	16+842.300	-40.0700
DB18	511,904.66	492,893.57	17+001.400	-43.4000
DB19	511,936.2459	492,971.8528	17+085.700	-39.0700
DB20	511,992.2731	493,092.4760	17+218.700	-39.0700
DB21	511,991.1835	493,105.4416	17+230.000	-32.6200
DB22	512,057.5208	493,248.2622	17+387.475	-32.6199
DB23	512,077.2856	493,269.4311	17+415.000	-41.6279
DB24	512,110.6935	493,341.4136	17+493.432	-41.9808
DB25	512,178.8921	493,529.4040	17+688.100	-42.0178
DB26	512,182.0636	493,556.1333	17+714.000	-37.8302
DB27	512,189.8192	493,578.1199	17+736.653	-39.7166
DB28	512,206.3956	493,649.2411	17+807.799	-39.8722
DB29	512,212.5987	493,758.9111	17+914.586	-27.6922
DB30	512,223.4790	493,851.0499	18+005.642	-29.1723
DB31	512,239.3138	494,149.1262	18+303.453	-30.3330
DB32	512,262.1137	494,288.7441	18+444.000	-46.4394
DB33	512,274.7524	494,317.6735	18+473.500	-57.6821
DB34	511,338.2661	491,670.4051	15+659.000	-58.0000
DB35	511,974.3370	493,248.4025	17+352.560	-42.8821
DB36	512,067.8419	493,243.4683	17+387.475	-44.0000

GENERAL NOTES

- ALL EXISTING CONCRETE BASES TO BE REMOVED SHALL BE REMOVED TO A MINIMUM OF 457mm BELOW GRADE AND BACKFILLED, OR AS DIRECTED BY THE ENGINEER.
- ALL METAL PARTS OF SWITCHES, CASES, POLES, CONDUIT, ETC. WHERE USED ABOVE GROUND SHALL BE GROUNDED WITH #6 AWG COPPER WIRE. RESISTANCE TO GROUND SHALL BE LESS THAN 25 OHMS AND SHALL BE CHECKED WITH AN OHM METER FURNISHED BY THE CONTRACTOR.
- ALL ABANDONED CABLE SHALL BE DISCONNECTED FROM THE ENERGIZED CIRCUIT.
- THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF LIGHTING AND TRAFFIC SIGNAL EQUIPMENT WITH ALL EXISTING AND PROPOSED UTILITIES. WHERE CONFLICTS ARISE, THE EQUIPMENT SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
- ALL WIRING SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND THE SPECIFICATIONS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING EQUIPMENT INCLUDING POLES, MAST ARMS, LUMINAIRE, LAMPS, WIRING, CONDUIT FITTINGS, SUPPORTS, CONCRETE BASES FOR POLES, ANCHOR BOLTS, INTERCONNECTIONS, GROUND RODS AND ALL INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATIONS WITHIN THE LIMITS SHOWN ON THE PLANS. THE LIGHTING SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT NECESSARY FOR THE SATISFACTORY OPERATION OF THE LIGHTING SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.
- THE UNDERGROUND CONDUCTOR IN DUCT SHALL BE INSTALLED APPROX. 610mm BELOW GROUND LINE. THE CONDUCTOR IN DUCT CAN BE PLOWED OR TRENCHED AND BACKFILLED. CONDUIT SHALL BE LOCATED WHERE IT WILL NOT CONFLICT WITH PROPOSED LANDSCAPE PLANTINGS (TREE, SHRUBS, ETC.) AND IRRIGATION LINES. ALL CONDUIT FOR MEDIAN LIGHT POLES WAS RUN ON TOP OF Cement Treated Base and encased in concrete pavement.
- ALL TRENCHING AND CIRCUITING SHALL BE DONE WITHIN CITY OF WICHITA AND/OR KDOT R/W.
- BACKFILL IN ALL AREAS SHALL BE FREE OF RUBBLE AND ROCK AND SHALL BE COMPACTED WHERE UNDER PAVEMENT.
- MAKE SPLICES IN THE DUCT SECONDARY CABLE INSIDE OF TOWER BASES AND JUNCTION BOXES ONLY. CONTACT THE BUREAU OF TRAFFIC ENGINEERING FOR APPROVAL OF OTHER SPLICE LOCATIONS.
- OZ EXPANSION JOINTS SHALL BE INSTALLED IN THE CONDUIT RUNS AT ALL BRIDGE EXPANSION JOINTS.
- POSITION ENCLOSURES SO THAT THE PHOTOCELLS ARE POINTED DUE NORTH.
- THE IRRIGATION SYSTEM ELECTRICAL SERVICES SHALL BE 120/240V SINGLE PHASE, THREE WIRE. THE CONTRACTOR SHALL COORDINATE INSTALLATION WITH THE IRRIGATION CONTRACTOR.
- TEMPORARY LIGHTING: THE CONTRACTOR SHALL PROVIDE A MINIMUM LIGHTING LEVEL OF 1 FOOTCANDLE AVERAGE MAINTAINED WITH AN AVERAGE TO MINIMUM UNIFORMITY OF 3:1 OR BETTER FOR MAINLINE THROUGH TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE EXISTING LIGHTING SYSTEM FROM STA. 17+150 TO 18+229. TEMPORARY LIGHTING SHALL BE PROVIDED FOR MAINLINE TRAFFIC ON SHO-FLY DETOURS AND FRONTAGE ROADS. TEMPORARY LIGHTING WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID FOR "TEMPORARY LIGHTING SYSTEM" WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.
- REMOVAL OF LIGHT STANDARDS: LUMINAIRE AND OTHER ELECTRICAL MATERIAL SHALL BE SUBSIDIARY TO THE LUMP SUM BID FOR "ELECTRICAL LIGHTING SYSTEM".
- ALL VISUALLY EXPOSED EXTERIOR SURFACES OF POLES SHALL BE COATED WITH A URETHANE OR TRIGLYCIDYL ISOCYANURATE (TGIC) POLYESTER POWDER TO A MINIMUM DRY FILM THICKNESS (DFT) OF 2.0 mils. PRIOR TO APPLICATION OF TOP COAT, THE SURFACE SHALL BE MECHANICALLY ETCHED AND PRE-HEATED TO 450 DEGREES FAHRENHEIT FOR A MINIMUM OF ONE HOUR. THE COATING SHALL BE ELECTRO-STATICALLY APPLIED AND CURED AT A MINIMUM TEMPERATURE OF 400 DEGREES FAHRENHEIT. THE FINISHED COLOR FOR THE POLES SHALL BE BLACK AND APPROVED BY THE ENGINEER PRIOR TO APPLICATION ON THE BASIS OF COLOR CHIP SUBMITTALS.
- THE LIGHTING CONTROL CENTER CABINET AND MISCELLANEOUS ABOVE GROUND EQUIPMENT SHALL BE SHOP PAINTED WITH AN AEROSOL LACQUER CELLULOSE ESTER. THE CONTRACTOR SHALL SUBMIT TWO COPIES OF THE PROPOSED COATING SYSTEM TO THE ENGINEER FOR APPROVAL PRIOR TO APPLICATION. IN ADDITION TO THE REQUIREMENTS STIPULATED IN THE STANDARD SPECIFICATIONS, BANDING MATERIAL SHALL BE COATED WITH ETHYLENE-VINYL-ALCOHOL (EVA) COPOLYMER. THE COLOR SHALL BE FEDERAL STANDARD 595B COLOR NO. 20372 (BUCKSKIN).
- BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS FOR CLARITY ONLY. CONTRACTOR MAY GROUP SINGLE POLE BRANCH CIRCUITS IN MULTIPLE CIRCUIT HOME RUNS (2 CIRCUITS MAXIMUM). A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
- WIRING FOR THE VARIOUS LIGHTING SYSTEMS SHALL BE KEPT SEPARATE FROM EACH OTHER AND ROUTED IN DEDICATED DUCTS OR CONDUITS. COMMON TRENCHES MAY BE USED. THE LIGHTING SYSTEMS FOR THIS PROJECT INCLUDE:
 - MEDIAN (MAIN LINE) MOUNTED LIGHT FIXTURES.
 - FRONTAGE ROAD AND JOINT-USE POLE LIGHT FIXTURES.
 - UNDER BRIDGE MOUNTED LIGHT FIXTURES.
- SEPARATE ELECTRICAL SERVICES AND METERS WILL BE REQUIRED FOR THE FOLLOWING:
 - MEDIAN MOUNTED LIGHT FIXTURE SYSTEMS.
 - FRONTAGE ROAD AND JOINT-USE POLE LIGHT FIXTURE SYSTEMS.
 - UNDER BRIDGE MOUNTED LIGHT FIXTURE SYSTEM.
 - TRAFFIC CONTROL SYSTEMS.
 - IRRIGATION SYSTEMS.
 COORDINATE ALL SERVICE LOCATIONS AND REQUIREMENTS WITH UTILITY COMPANY.
- SEE SHEET NO. 15 FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL COORDINATE WORK FOR INSTALLATION OF THE UNDERPASS LIGHTING SYSTEM WITH THE BRIDGE CONTRACTOR.



NOTE:
FOR INSTALLATION LENGTHS:
SEE SHEET #644.

Electric Lighting System: The following notes apply:

On the Lighting Plans, where multiple circuits are routed together, a single line has been shown for clarity. Multiple conduits or sleeves or cable in ducts will be required depending on the location and quantity of circuits.

Frontage Road light standards and joint use light standards at Maize and Tyler Road intersections will be maintained by Westar Energy. The contractor shall provide the following pole, mast arm, breakaway base and luminaires for all frontage road light standard including standards mounted on the Cowskin frontage road bridges (2 ea):

- 37' (11.3 m) Valmont Pole / DS70-950A370-ODGVHFBBCFP-Black
- 8' (2.4 m) Valmont Arm /DS70-8D-GVFP-Black
- Valmont Breakaway Base / M-093 - Black
- 480 volt, 250 Watt Copper Cobra Head / DVZ25SW83E - Black

All frontage road light standards shall be color black.

The Contractor shall confirm the part numbers with the Engineer and Westar Energy before ordering equipment.

Electric Lighting System (continued):

Mainline Kellogg light standards will be maintained by the Kansas Department of Transportation. All median barrier mounted and mainline bridge barrier mounted light standards shall be per the plans and specifications except that they shall have a galvanized finish instead of black.

NOTE: THE CONTRACTOR SHALL CONSTRUCT THE 12-WAY DUCTBANK AT THE LOCATIONS SHOWN ON THE PLANS. THE VERTICAL ELEVATION OF THE DUCTBANK SHALL BE ADJUSTED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER TO CLEAR STORM SEWERS AND UTILITIES. THIS WORK SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT BID PRICE PER METER FOR "DUCTBANK". THE BID PRICE SHALL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, EXCAVATION, BACKFILL, PULLBOXES, BRIDGE ATTACHMENTS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE SUMMARY OF QUANTITIES INCLUDES QUANTITIES FOR CONDUIT.

DUCTBANK DETAIL
NO SCALE

No.	Revisions	By	Date
CITY OF WICHITA			
ELECTRICAL			
GENERAL NOTES & LEGEND			
SEDGWICK COUNTY			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	SMS	Checked by	SMS
Drawn by	WAN	Date	APRIL, 2002
		Job No.	97362

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