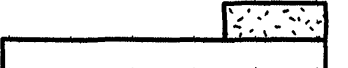
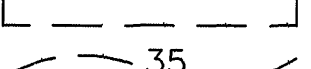
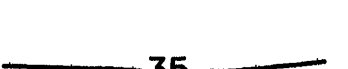
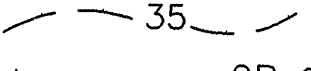
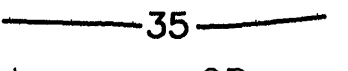
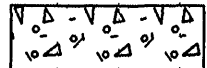
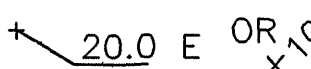
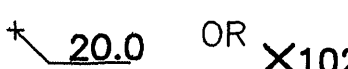
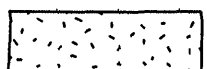
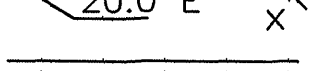
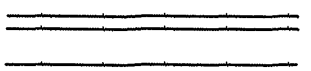
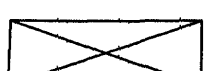
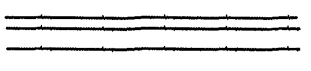
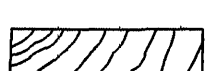
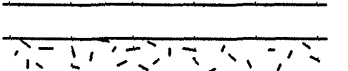
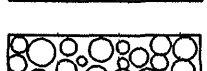
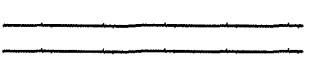
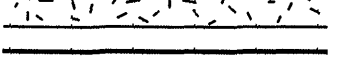
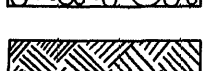
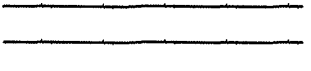
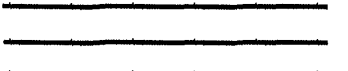
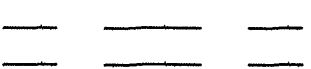
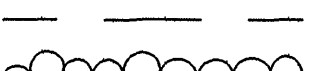
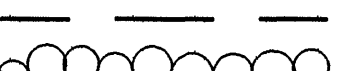
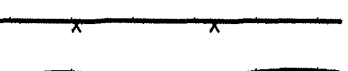
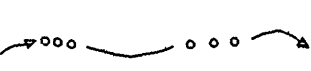
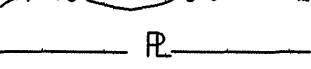
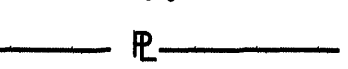
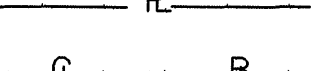
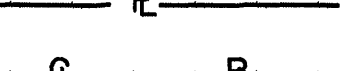
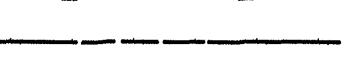
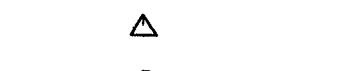
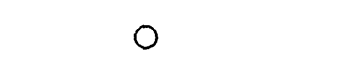
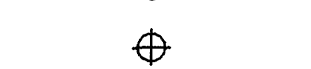
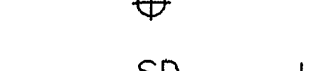
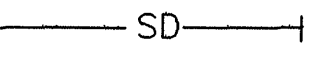
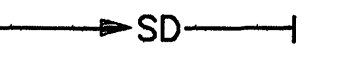
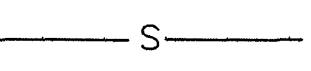
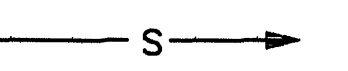
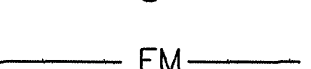
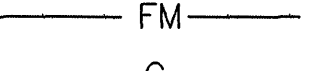
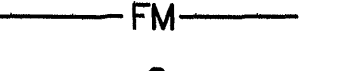
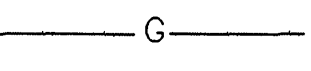
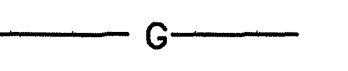
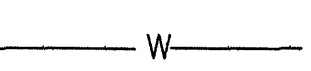
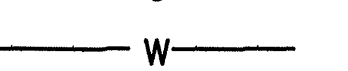
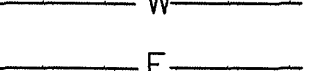
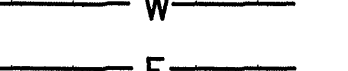
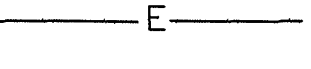
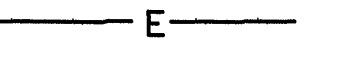
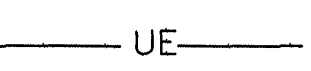
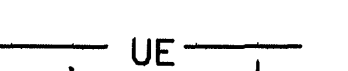
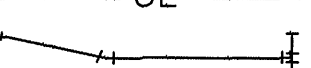
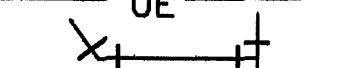
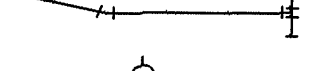
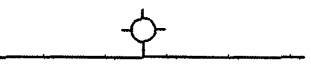
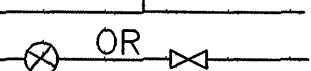
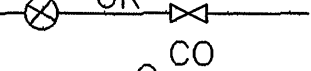
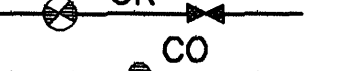
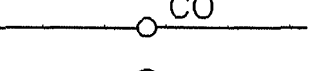
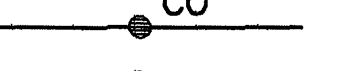
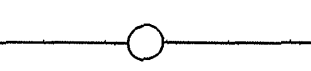
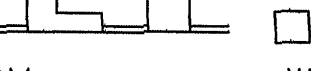
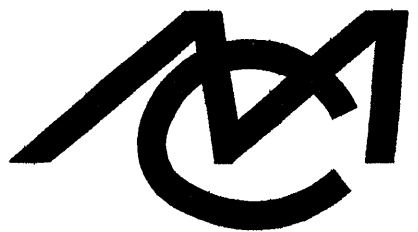
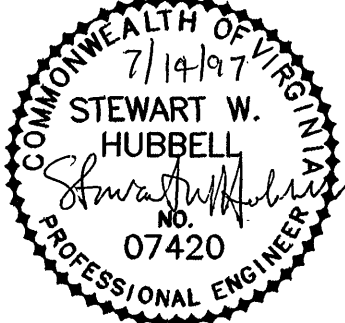


|             |                                  |             |                                         |             |                                         | MATERIALS SYMBOLS                                                                   |                            | EXISTING                                                                              | NEW                                                                                   | DESCRIPTION                          |
|-------------|----------------------------------|-------------|-----------------------------------------|-------------|-----------------------------------------|-------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------|
| AB          | ANCHOR BOLT                      | EW          | EACH WAY, ENDWALL                       | PLYWD       | PLYWOOD                                 |  | METAL                      |     |     | BUILDING WITH PORCH OR STOOP         |
| ABAN        | ABANDON OR ABANDONED             | EXIST       | EXISTING                                | POL         | POINT ON LINE                           |  | BRICK                      |    |    | FOUNDATION ONLY                      |
| ABUT        | ABUTMENT                         | EXP         | EXPANSION                               | PP          | POWER POLE                              |  | CONCRETE MASONRY           |    |    | CONTOUR, CONTOUR WITH ELEVATION      |
| ABV         | ABOVE                            | EXT         | EXTERIOR                                | POT         | POINT ON TANGENT                        |  | CONCRETE                   |    |    | SPOT ELEVATION                       |
| ACT         | ACOUSTICAL                       | FR          | FRAME                                   | PRC         | POINT OF REVERSE CURVE                  |  | GROUT OR FINISHED CONCRETE |    |    | CONCRETE CURB                        |
| ADD         | ADDITIONAL                       | FD          | FLOOR DRAIN                             | PSI         | POUNDS PER SQUARE INCH                  |  | INSULATION (RIGID)         |    |    | CONCRETE CURB & GUTTER               |
| ADJ         | ADJACENT                         | FDN         | FOUNDATION                              | PT          | POINT OF TANGENT                        |  | WOOD BLOCKING              |    |    | CONCRETE WALK OR SLAB                |
| AFF         | ABOVE FINISH FLOOR               | FES         | FLARED END SECTION                      | PVC         | POLYVINYL CHLORIDE                      |  | FINISHED WOOD OR PLYWOOD   |    |    | PAVEMENT                             |
| AGGR        | AGGREGATE                        | FF          | FINISH FLOOR                            | PVI         | POINT OF VERTICAL INTERSECTION          |  | GRAVEL OR STONE            |    |    | UNPAVED OR GRAVEL ROAD               |
| ALUM        | ALUMINUM                         | FFE         | FINISHED FLOOR ELEVATION                | RD          | ROOF DRAIN, ROAD                        |  | EARTH                      |    |    | TREE LINE                            |
| ALT         | ALTERNATE                        | R           | RADIUS, RISER                           | RDCR        | REDUCER                                 |                                                                                     |                            |    |    | TREE OR SHRUB                        |
| ANC         | ANCHOR                           | RECPT       | RECEPTACLE                              | RECT        | RECTANGULAR                             |                                                                                     |                            |    |    | FENCE                                |
| APPROX      | APPROXIMATE                      | REINF       | REINFORCE, REINFORCEMENT                | REF         | REFERENCE                               |                                                                                     |                            |    |    | CENTERLINE CREEK, SWALE OR DITCH     |
| ARCH        | ARCHITECTURAL                    | REL         | RELOCATED                               | REQD        | REQUIRED                                |                                                                                     |                            |    |    | PROPERTY LINE                        |
| AWWA        | AMERICAN WATER WORKS ASSOCIATION | REV         | REVISION                                | RTE         | ROUTE                                   |                                                                                     |                            |    |    | CENTERLINE OR BASELINE               |
| AVG         | AVERAGE                          | RT          | RIGHT                                   | S           | SANITARY SEWER, SOUTH, SWITCH           |                                                                                     |                            |    |    | LIMIT OF WORK LINE                   |
| BIT         | BITUMINOUS                       | R/W         | RIGHT OF WAY                            | SAN         | SANITARY                                |                                                                                     |                            |    |    | FIELD SURVEY TRAVERSE POINT          |
| BJ          | BELL JOINT                       | S           | SANITARY SEWER, SOUTH, SWITCH           | SCH         | SCHEDULE                                |                                                                                     |                            |    |    | P.C. OR P.T.                         |
| BL          | BASE LINE                        | SCH         | SCHEDULE                                | SD          | STORM DRAIN                             |                                                                                     |                            |    |    | STORM DRAIN AND ENDWALL              |
| BEG         | BEGIN OR BEGINNING               | SD          | STORM DRAIN                             | SECT        | SECTION                                 |                                                                                     |                            |    |    | SANITARY SEWER                       |
| BLDG        | BUILDING                         | SECT        | SECTION                                 | SER         | SERVICE                                 |                                                                                     |                            |    |    | FORCE MAIN                           |
| BLKG        | BLOCKING                         | SER         | SERVICE                                 | SH          | SHEET                                   |                                                                                     |                            |    |    | GAS MAIN OR SERVICE LINE             |
| BM          | BENCH MARK, BEAM                 | SH          | SHEET                                   | SHTG        | SHEETING                                |                                                                                     |                            |    |    | WATER MAIN OR SERVICE LINE           |
| BOTT        | BOTTOM                           | SHTG        | SHEETING                                | SIM         | SIMILAR                                 |                                                                                     |                            |    |    | ELECTRICAL LINE                      |
| BP          | BYPASS                           | SIM         | SIMILAR                                 | SPEC        | SPECIFICATION                           |                                                                                     |                            |    |    | UNDERGROUND ELECTRICAL LINE          |
| BRG         | BEARING                          | SPEC        | SPECIFICATION                           | SQ          | SQUARE                                  |                                                                                     |                            |    |    | PIPE FITTINGS                        |
| BSMT        | BASEMENT                         | SQ          | SQUARE                                  | SS          | STAINLESS STEEL                         |                                                                                     |                            |    |    | FIRE HYDRANT                         |
| BV          | BUTTERFLY VALVE                  | SS          | STAINLESS STEEL                         | ST          | STREET                                  |                                                                                     |                            |    |    | GATE VALVE                           |
| C           | CHANNEL, COLD                    | ST          | STREET                                  | STA         | STATION                                 |                                                                                     |                            |    |    | CLEANOUT                             |
| C/C, C TO C | CENTER TO CENTER                 | STA         | STATION                                 | STD         | STANDARD                                |                                                                                     |                            |    |    | MANHOLE                              |
| CAB         | CABINET                          | STD         | STANDARD                                | STL         | STEEL                                   |                                                                                     |                            |    |    | DROP INLET (CURB AND GRATING TYPES)  |
| CAP         | CAPACITY                         | STL         | STEEL                                   | STRUCT      | STRUCTURAL                              |                                                                                     |                            |    |    | G.M. - GAS METER, W.M. - WATER METER |
| CF          | CUBIC FEET                       | STRUCT      | STRUCTURAL                              | STY         | STORY                                   |                                                                                     |                            |    |    | TELEPHONE LINE                       |
| CG          | CHANGE OF GRADE                  | STY         | STORY                                   | SUR         | SURVEY                                  |                                                                                     |                            |    |    | TELEPHONE POLE, GUY AND ANCHOR       |
| C & G       | CURB AND GUTTER                  | SUR         | SURVEY                                  | SURF        | SURFACE                                 |                                                                                     |                            |    |    | POWER POLE, GUY AND ANCHOR           |
| CI          | CAST IRON                        | SURF        | SURFACE                                 | S/W         | SIDEWALK                                |                                                                                     |                            |    |    | LIGHT POLE                           |
| CIRC        | CIRCULAR                         | S/W         | SIDEWALK                                | SYMM        | SYMMETRICAL                             |                                                                                     |                            |    |    | TELEPHONE PEDESTAL                   |
| CKT         | CIRCUIT                          | SYMM        | SYMMETRICAL                             | T           | TREAD, TOP                              |                                                                                     |                            |    |    | BURIED TELEPHONE VAULT               |
| CL          | CENTER LINE                      | T           | TREAD, TOP                              | T & B       | TOP AND BOTTOM                          |                                                                                     |                            |    |    | ABANDON OR REMOVE                    |
| CLR         | CLEAR                            | T & B       | TOP AND BOTTOM                          | TDC         | TURNED DOWN CURB                        |                                                                                     |                            |    |    | PAVED DITCH                          |
| CONST       | CONSTRUCTION                     | TDC         | TURNED DOWN CURB                        | TELE        | TELEPHONE                               |                                                                                     |                            |    |    | DRIVEWAY CULVERT                     |
| COR         | CORNER                           | TELE        | TELEPHONE                               | TEMP        | TEMPORARY                               |                                                                                     |                            |    |    | CULVERT WITH FLARED END SECTION      |
| CMP         | CORRUGATED METAL PIPE            | TEMP        | TEMPORARY                               | THK         | THICK                                   |                                                                                     |                            |   |   | WATER VALVE                          |
| CMU         | CONCRETE MASONRY UNITS           | THK         | THICK                                   | TP          | TELEPHONE POLE                          |                                                                                     |                            |  |  | HUB AND TACK                         |
| CND         | CONDUIT                          | TP          | TELEPHONE POLE                          | TRTD        | TREATED                                 |                                                                                     |                            |  |  | COORDINATE POINT                     |
| CO          | CLEAN OUT                        | TRTD        | TREATED                                 | TS          | TOP OF SLAB                             |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| COMB        | COMBINATION                      | TS          | TOP OF SLAB                             | TV          | TELEVISION                              |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CONC        | CONCRETE                         | TV          | TELEVISION                              | TW          | TOP OF WALL                             |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CONN        | CONNECT, CONNECTION              | TW          | TOP OF WALL                             | TYP         | TYPICAL                                 |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CONT        | CONTINUOUS, CONTROL              | TYP         | TYPICAL                                 | UG          | UNDERGROUND                             |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CONTR       | CONTRACTOR                       | UG          | UNDERGROUND                             | UON         | UNLESS OTHERWISE NOTED                  |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CONV        | CONVEYOR                         | UON         | UNLESS OTHERWISE NOTED                  | U.S.C.&G.S. | UNITED STATES COAST AND GEODETIC SURVEY |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CP          | COORDINATE POINT                 | U.S.C.&G.S. | UNITED STATES COAST AND GEODETIC SURVEY | USGS        | UNITED STATES GEOLOGICAL SURVEY         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CR STONE    | CRUSHED STONE                    | USGS        | UNITED STATES GEOLOGICAL SURVEY         | V, VAL      | VALVE                                   |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CTR         | CENTER                           | V, VAL      | VALVE                                   | VAP BAR     | VAPOR BARRIER                           |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CULV        | CULVERT                          | VAP BAR     | VAPOR BARRIER                           | VC          | VERTICAL CURVE                          |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| CY          | CUBIC YARD                       | VC          | VERTICAL CURVE                          | VERT        | VERTICAL                                |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| D           | DEPTH OR DEGREE OF CURVE         | VERT        | VERTICAL                                | VOL         | VOLUME                                  |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DEPT        | DEPARTMENT                       | VOL         | VOLUME                                  | VDOT        | VIRGINIA DEPARTMENT OF TRANSPORTATION   |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DF          | DRINKING FOUNTAIN                | VDOT        | VIRGINIA DEPARTMENT OF TRANSPORTATION   | V.S.D.      | VERTICAL SIGHT DISTANCE                 |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DI          | DROP INLET, DUCTILE IRON         | V.S.D.      | VERTICAL SIGHT DISTANCE                 | W.B.L.      | WEST BOUND LANE                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DIA         | DIAMETER                         | W.B.L.      | WEST BOUND LANE                         | W           | WIDE FLANGE, WIDE                       |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DIM         | DIMENSION                        | W           | WIDE FLANGE, WIDE                       | W/          | WITH                                    |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DISC        | DISCONNECT                       | W/          | WITH                                    | WD          | WOOD                                    |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DMH         | DROP MANHOLE                     | WD          | WOOD                                    | WL          | WATER LINE                              |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DN          | DOWN                             | WL          | WATER LINE                              | WS          | WATER SURFACE                           |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DR          | DRIVE                            | WS          | WATER SURFACE                           | WT          | WATERTIGHT, WEIGHT                      |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DS          | DOWN SPOUT                       | WT          | WATERTIGHT, WEIGHT                      | WVDH        | WEST VIRGINIA DEPARTMENT OF HIGHWAYS    |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DTL         | DETAIL                           | WVDH        | WEST VIRGINIA DEPARTMENT OF HIGHWAYS    | WWF         | WELDED WIRE FABRIC                      |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DW,D/W      | DRIVEWAY                         | WWF         | WELDED WIRE FABRIC                      |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DWL         | DWELLING                         |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| DWG         | DRAWING                          |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| E           | EAST                             |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EA          | EACH                             |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| E.B.L.      | EASTBOUND LANE                   |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EF          | EACH FACE                        |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EJ          | EXPANSION JOINT                  |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EL, ELEV    | ELEVATION                        |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| ELEC        | ELECTRICAL                       |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| ENGR        | ENGINEER                         |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| ENTR        | ENTRANCE                         |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EOL         | END OF LINE                      |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EP          | EDGE OF PAVEMENT                 |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EQ          | EQUAL                            |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |
| EQPT        | EQUIPMENT                        |             |                                         |             |                                         |                                                                                     |                            |                                                                                       |                                                                                       |                                      |



**Mattern & Craig**  
CONSULTING ENGINEERS - SURVEYORS

|           |     |                                                                                       |                                                                                       |      |                 |     |      |
|-----------|-----|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|-----------------|-----|------|
| DESIGNED: | TAM |  | REV.                                                                                  | DATE | DESCRIPTION     | BY  | APP. |
| DRAWN:    | SMM |                                                                                       |  | 7/97 | RECORD DRAWINGS | MRL | SWH  |
| CHECKED:  | SWH |                                                                                       |                                                                                       |      |                 |     |      |
|           |     |                                                                                       |                                                                                       |      |                 |     |      |

DATE  
JANUARY 1994  
COMM. NO.  
1245F

LICK RUN SEWER REPLACEMENT  
PROJECT LR-2  
GENERAL ABBREVIATIONS & LEGEND  
CITY OF ROANOKE, VIRGINIA

SHEET  
3