

TRACK ALIGNMENT

HORIZONTAL

BSB BEARING OF TANGENT AT SPD
 CC CENTER OF CIRCULAR CURVE
 CS POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
 CS1 POINT OF CHANGE FROM FIRST CIRCULAR CURVE TO COMPOUND SPIRAL
 CS2 POINT OF CHANGE FROM SECOND CIRCULAR CURVE TO LAST SPIRAL
 D DEGREE OF CURVE
 Es EXTERNAL DISTANCE OF SPIRAL CURVE
 k TANGENT DISTANCE FROM TS OR ST TO PC OR PT OF THE EXTENDED CIRCULAR CURVE OF A SPIRALIZED CURVE
 Lc TOTAL LENGTH OF CIRCULAR CURVE
 LC LONG CHORD
 Ls TOTAL LENGTH OF SPIRAL
 LSC LENGTH OF COMPOUND SPIRAL (FROM CS1 TO SC2)
 LSI TOTAL LENGTH OF SPIRAL DOWNSTATION
 LS2 TOTAL LENGTH OF SPIRAL UPSTATION
 L.T. LONG TANGENT - SPIRAL
 P OFFSET FROM THE TANGENT TO THE PC OR PT OF THE EXTENDED CIRCULAR CURVE OF A SPIRALIZED CURVE
 PC POINT OF CHANGE FROM TANGENT TO CIRCULAR CURVE
 PCC POINT OF COMPOUND CURVATURES
 PCS POINT OF COMPOUND SPIRAL
 PF POINT OF FROG
 P1 POINT OF INTERSECTION OF TWO TANGENTS
 Pic POINT OF INTERSECTION - CIRCULAR CURVE
 PITO POINT OF INTERSECTION OF TURNOUT
 Pis POINT OF INTERSECTION - SPIRAL
 POC POINT ON CURVE
 POS POINT ON SPIRAL
 POST POINT ON SEMI-TANGENT
 POT POINT ON TANGENT
 PRC POINT OF REVERSE CURVES
 PS POINT OF SWITCH
 PT POINT OF CHANGE FROM CIRCULAR CURVE TO TANGENT
 R RADIUS OF CURVATURE
 Rc RADIUS OF CIRCULAR CURVE
 SC SPIRAL TO CURVE
 SC1 POINT OF CHANGE FROM FIRST SPIRAL TO FIRST CIRCULAR CURVE
 SC2 POINT OF CHANGE FROM COMPOUND SPIRAL TO SECOND CIRCULAR CURVE
 SPO POINT OF ORIGIN ON COMPOUND SPIRAL
 SS POINT OF CHANGE FROM ONE SPIRAL TO ANOTHER
 ST POINT OF CHANGE FROM SPIRAL TO TANGENT
 S.T. SHORT TANGENT OF SPIRAL
 T LENGTH OF TANGENT
 Tc TANGENT LENGTH OF CIRCULAR CURVE
 Ts TANGENT DISTANCE FROM TS OR ST TO P1
 TS TANGENT TO SPIRAL
 v DESIGN VELOCITY IN MILES PER HOUR
 Xs TANGENT DISTANCE FROM TS TO SC OR ST TO CS
 Ys TANGENT OFFSET AT SC OR CS
 Δ TOTAL CENTRAL ANGLE OF SPIRAL AND CIRCULAR CURVES
 θc CENTRAL ANGLE OF CIRCULAR CURVES
 θc1 SUFFIX (1) AT THE SYMBOL DENOTES DATA FOR THE FIRST CIRCULAR CURVE OF A COMPOUND CURVE
 θc2 SUFFIX (2) SAME AS ABOVE-SECOND CIRCULAR CURVE
 θs CENTRAL ANGLE OF SPIRAL OR SPIRAL ANGLE
 θsAC CENTRAL ANGLE OF COMPOUND SPIRAL OR COMPOUND SPIRAL ANGLE (FROM CS1 TO SC2)
 θsAT TOTAL CENTRAL ANGLE OF COMPOUND SPIRAL OR TOTAL COMPOUND SPIRAL ANGLE (FROM SPO TO SC2)

VERTICAL

LVC LENGTH OF VERTICAL CURVE (PVC TO PVT)
 POVC POINT ON VERTICAL CURVE
 POVT POINT ON VERTICAL TANGENT
 PVC POINT OF VERTICAL CURVE
 PVCC POINT OF COMPOUND VERTICAL CURVE
 PVI POINT OF INTERSECTION OF TWO PROFILE TANGENTS
 PVRC POINT OF REVERSE VERTICAL CURVE
 PVT POINT OF VERTICAL TANGENT
 VC VERTICAL CURVE

NIC

MISCELLANEOUS

A AMPERE
 ABD ABANDONED
 A/E ARCHITECT/ENGINEER
 A/G AT GRADE
 AASHTO AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
 ACI AMERICAN CONCRETE INSTITUTE
 AGG AGGREGATE
 AGG B AGGREGATE BASE
 AGG SB AGGREGATE SUB-BASE
 AHD AHEAD
 AISC AMERICAN INSTITUTE OF STEEL CONST. INC.
 AISI AMERICAN IRON AND STEEL INSTITUTE
 AL ALUMINUM
 APPROX APPROXIMATE
 ASBCP ASBESTOS CEMENT PIPE
 ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS
 ASPH ASPHALT
 ATSF ATCHISON, TOPEKA & SANTA FE RAILROAD COMPANY
 AVE AVENUE
 AWG AMERICAN WIRE GAUGE
 AZ AZIMUTH
 B/B BACK TO BACK
 B/C BACK OF CURB
 BEG BEGINNING
 BF BOTH FACES
 BH BORED HOLE
 BIT BITUMINOUS
 BK BACK
 BKF BACKFILL
 B BASELINE
 B/L BUILDING LINE
 BLDG BUILDING
 BLK BLOCK
 BLVD BOULEVARD
 B.M. BENCH MARK
 BNRR BURLINGTON NORTHERN RAILROAD COMPANY
 BOT BOTTOM
 BRG BEARING
 B/S BOTTOM OF SLOPE
 BS BOTH SIDES
 BSMT BASEMENT
 BTWN BETWEEN
 BW BOTH WAYS
 CB CATCH BASIN
 CBD CENTRAL BUSINESS DISTRICT
 C/C CUT & COVER
 CC CENTER OF CURVE
 C to C CENTER TO CENTER
 CEM CEMENT
 CF CUBIC FEET
 CFM CUBIC FEET PER MINUTE
 CFS CUBIC FEET PER SECOND
 CG CONCRETE GUTTER
 C & G CURB AND GUTTER
 CH CHANNEL
 CHD CHORD
 CI CAST IRON
 CIP CAST IRON PIPE
 CL CENTERLINE
 C/L CURB LINE
 CL CLASS
 CLR CLEARANCE, CLEAR
 CMP CORRUGATED METAL PIPE
 CND CONDUIT
 CO CLEAN OUT
 CONC CONCRETE
 CONST CONSTRUCTION
 CONT CONTINUATION, CONTINUOUS
 CORR CORRUGATED
 CP CONCRETE PIPE
 CPPEP CORRUGATED PLASTIC POLYETHYLENE PIPE
 CTB CEMENT TREATED BASE
 CTR CENTER
 CULV CULVERT

CY CUBIC YARD
 DART DALLAS AREA RAPID TRANSIT
 DCU DART CONTRACT UNIT
 DEG DEGREE
 DEP DEPRESSED
 DET DETAIL
 DI DROP INLET
 DIA DIAMETER
 DIST DISTANCE
 DPL DALLAS POWER & LIGHT COMPANY
 DCDR DALLAS COUNTY DEED RECORDS
 DRWY DRIVEWAY
 DWG DRAWING
 E EAST
 Ea ACTUAL SUPERELEVATION IN INCHES
 EA EACH
 EC EXPOSED CONSTRUCTION
 EF EACH FACE
 EL ELEVATION
 ELEC ELECTRIC, ELECTRICAL
 EMER EMERGENCY
 ENCL ENCLOSURE
 ENT ENTRANCE
 E/P EDGE OF PAVEMENT
 EQ EQUAL
 EQUIV EQUIVALENT
 E/S EDGE OF SHOULDER
 ESMT EASEMENT
 EST ESTIMATE
 E1 TOTAL SUPERELEVATION IN INCHES
 ET AL AND OTHERS
 ET UX AND WIFE
 ET CON AND HUSBAND
 ETC ET CETERA
 Eu SUPERELEVATION UNBALANCED IN INCHES
 EXIST EXISTING
 EXP EXPANSION
 EXPJT EXPANSION JOINT
 EXPO EXPOSED
 EXPWY EXPRESSWAY
 FDN FOUNDATION
 FF FINISH FLOOR
 F to F FACE TO FACE
 FG FINISH GRADE
 FH FIRE HYDRANT
 FIG FIGURE
 FIN FINISH
 FIR FOUND IRON ROD
 FL FLOW LINE
 FLR FLOOR
 FOW FACE OF WALL
 FRWY FREEWAY
 FS FAR SIDE
 FT FOOT OR FEET
 FTG FOOTING
 FURN FURNISH
 GA GAUGE
 GALV GALVANIZED
 GALVS GALVANIZED STEEL
 GENL GENERAL
 G/L GROUND LINE
 GM GAS METER
 GND GROUND
 GR GRADE
 G/R GUARD RAIL
 GRTG GRATING
 GSC GALVANIZED STEEL CONDUIT
 GV GAS VALVE
 GVL GRAVEL
 HGL HYDRAULIC GRADE LINE
 HMAc HOT MIX ASPHALTIC CONCRETE
 HORIZ HORIZONTAL
 HPT HIGH POINT
 HW HEADWALL
 HWL HIGH WATER LINE

ID INSIDE DIAMETER
 IE INVERT ELEVATION
 IF INSIDE FACE
 IN INCHES
 INCL INCLUDE
 INV INVERT
 IP IRON PIPE
 IR INSIDE RADIUS
 JT JOINT
 LB POUND
 LF LINEAR FOOT
 LG LENGTH
 LH LEFT HAND
 LIN LINEAR
 LOC LOCATION
 LONG LONGITUDINAL
 LPT LOW POINT
 LSG LONE STAR GAS
 L/T LEFT TRACK
 MACH MACHINE
 MAINT MAINTENANCE
 MAX MAXIMUM
 MH MANHOLE
 MIN MINIMUM
 MISC MISCELLANEOUS
 MKT MISSOURI-KANSAS-TEXAS RAILROAD COMPANY
 MON MONUMENT
 MPH MILES PER HOUR
 MSL MEAN SEA LEVEL
 MATL MATERIAL
 N NORTH
 N/A NOT APPLICABLE
 NF NEAR FACE
 N/F NOW OR FORMERLY
 NIC NOT IN CONTRACT
 No. NUMBER
 NOM NOMINAL
 N/S NORTH/SOUTH
 NS NEAR SIDE
 NTS NOT TO SCALE
 OC ON CENTER
 OD OUTSIDE DIAMETER
 OF OUTSIDE FACE
 O to O OUT TO OUT
 OPNG OPENING
 OPP OPPOSITE
 ORD ORDINANCE
 P PILASTER
 P/C PRECAST
 PCY POUNDS PER CUBIC YARD
 PED PEDESTRIAN
 PERF PERFORATED
 PGL PROFILE GRADE LINE
 PS POINT OF SWITCH
 POB POINT OF BEGINNING
 PP POWER POLE
 PROP PROPOSED
 PSF POUNDS PER SQUARE FOOT
 PSI POUNDS PER SQUARE INCH
 PVMT PAVEMENT
 R RADIUS
 RCP REINFORCED CONCRETE PIPE
 RD ROAD
 REF REFERENCE
 REINF REINFORCE, REINFORCING, REINFORCEMENT
 REQD REQUIRED
 REV REVISED, REVISION
 RH RIGHT HAND
 ROW RIGHT-OF-WAY
 RR RAILROAD
 R/T RIGHT TRACK
 RTRN RAILTRAN
 RW RETAINING WALL
 RY RAILWAY

S SOUTH
 SCHED SCHEDULE
 SD STORM DRAIN
 SDWK SIDEWALK
 SERV SERVICE
 Sq Ft SQUARE FOOT
 SH STATE HIGHWAY
 SHC SHOT CRETE
 SHLD SHOULDER
 SHT SHEET
 S SURVEY LINE
 SPT SOUTHERN PACIFIC TRANSPORTATION COMPANY
 SUBD SUBDIVISION
 SPC SPACE
 SQ SQUARE
 SS SANITARY SEWER
 STA STATION
 STD STANDARD
 STL STEEL
 STRUCT STRUCTURE
 STY STORY
 SUB SUBSTATION
 SURF SURFACE
 SY SQUARE YARD
 SYM SYMMETRICAL
 SYS SYSTEM
 TAN TANGENT
 TBD TO BE DETERMINED
 TBM TEMPORARY BENCHMARK
 T/B TEST BORING
 T & B TOP AND BOTTOM
 T/C TOP OF CURB
 T/D TOP OF DITCH
 TEM TEMPORARY
 TERM TERMINAL
 T/G TOP OF GROUND LINE
 THK THICK, THICKNESS
 TLT TRANSMISSION LINE TOWER
 TMUTCD TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
 TOC TOP OF CONCRETE
 TOPO TOPOGRAPHY
 TPL TEXAS POWER & LIGHT COMPANY
 T/P TOP OF PAVEMENT
 TRD TREAD
 TRF SIG TRAFFIC SIGNAL
 TRK TRACK
 T/R TOP OF RAIL
 T/S TOP OF SLOPE
 T/W TOP OF WALL
 TYP TYPICAL
 TUE TEXAS UTILITIES ELECTRIC COMPANY
 UC UNDERCUT
 UD UNDERDRAIN
 UG UNDERGROUND
 UNO UNLESS NOTED OTHERWISE
 UP UNION PACIFIC RAILROAD COMPANY
 VAR VARIABLE
 VCP VITRIFIED CLAY PIPE
 VERT VERTICAL
 VOL VOLUME
 W WEST
 W/ WITH
 WHSE WAREHOUSE
 W/O WITHOUT
 WP WORK POINT
 WS WATER SURFACE
 WTR WATER
 WI WEIGHT
 WV WATER VALVE
 WWF WELDED WIRE FABRIC
 X-ING CROSSING
 X-OVER CROSSOVER
 X-SECT CROSS SECTION

CONFORMED

CONTRACT SHEET No. 5 of 95

CIVIL STANDARD


ABBREVIATIONS

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REV	DATE	DESCRIPTION	BY	DES	CHK	APP	REV	DATE	DESCRIPTION

STATE OF TEXAS
 REGISTERED PROFESSIONAL ENGINEER
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 63424
 Richard D. Seitz
 4-23-92

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 Barton-Aschman Associates, Inc.
 Arredondo, Brunz & Associates, Inc.
 LS Transit Systems
 Hellmuth Obata & Kassabaum, Inc.

DART PROJECT



SCALE	NO SCALE
DRAWN	DART CADD
DESIGNED	E. A. RAINSEK
CHECKED	S. HEBB
IN CHARGE	D.P. KELLY
DATE	06 FEB 92

CONTRACT C-97000138 DWG No. CSI-0007 REV 0