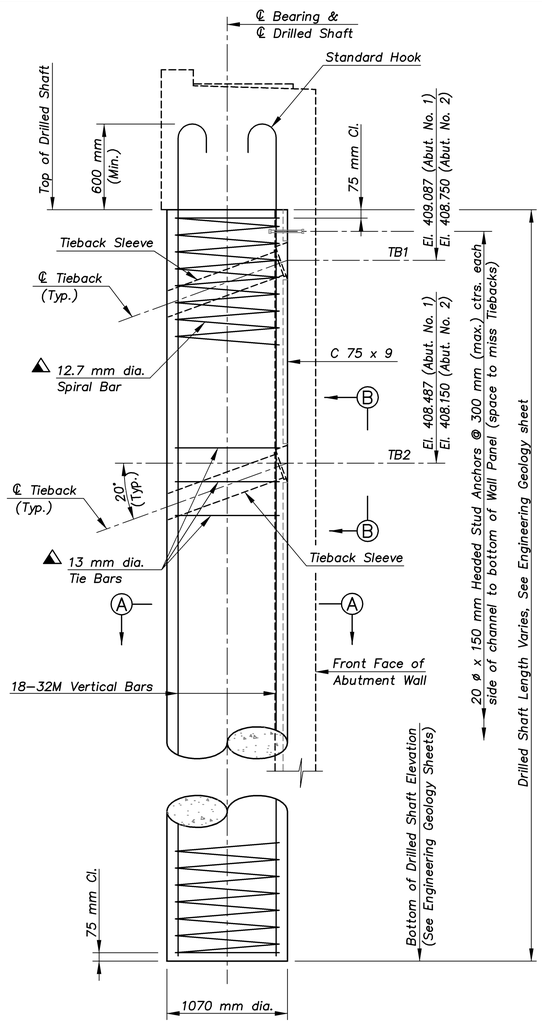
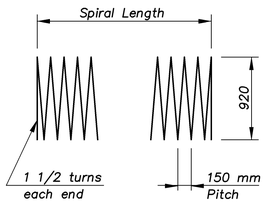
E.F. INDICATES EACH FACE.
N.F. INDICATES NEAR FACE.
F.F. INDICATES FAR FACE.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54–87 K–8258–01	2007	253	556

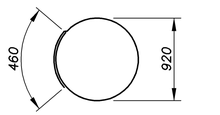


DRILLED SHAFT ELEVATION

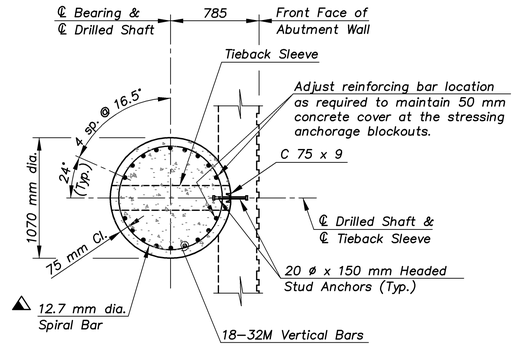
⚠ NOTE: Drilled shaft spirals shall extend the entire length of the drilled shaft, except 13 mm tie bars at 300 mm maximum centers (as shown below) shall be substituted for a portion of the spirals where necessary to avoid reinforcing steel interference with tieback sleeves, stressing anchorages, etc. Drilled shaft reinforcing quantities for information only are calculated assuming spirals extend the entire length of the drilled shafts. The Contractor shall submit integrated shop drawings for the drilled shafts, showing placement and method of securing tieback sleeves, stressing anchorages, and reinforcing steel for the selected tieback system.



SPIRAL BAR DETAIL
(12.7 mm ø smooth bar)



13 mm TIE BAR DETAIL



SECTION A–A

DRILLED SHAFT NOTES:

The Contractor shall be responsible for the design, installation, stressing, grouting and testing of all tiebacks including, but not limited to, tieback sleeves, blockouts, and stressing anchorages. The Contractor shall coordinate the tieback sleeve and blockout dimensions with the tieback system supplier.

Tieback sleeves shall be galvanized steel pipe conforming to ASTM A53, Grade B, and shall be included in the price bid for "Drilled Shaft (1070 mm)". The location, inclination, and alignment of the tieback sleeves shall be as shown on the plans. Inclination and alignment shall be within plus or minus 3 degrees of the planned angle at the face of the drilled shaft, and within plus or minus 75 mm of the planned location at the face of the drilled shaft.

The suggested detail for the connection of the wall panel to the Drilled Shafts is shown in Section A–A. The stud anchors and channel shall not be paid for directly but shall be included in the unit price bid for "Drilled Shaft (1070 mm)". The Contractor may submit an alternate method to the Engineer for review and approval. The use of adhesive or expansion anchors shall not be permitted.

Drilled shaft quantities for information only:

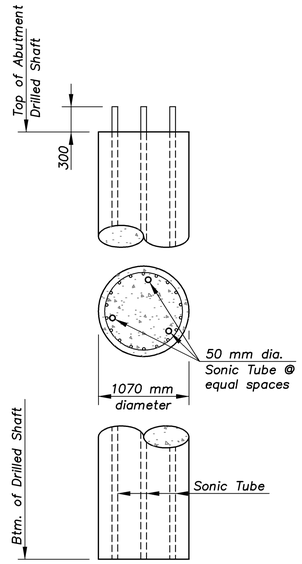
Concrete	=	0.899 m^3/m
Reinforcing Steel	=	23.715 kg/m
1 ½ turns top & btm.	=	8.500 kg

Mass of the reinforcing steel (kg/m) does not include 1 ½ additional turns top and bottom of spiral. Add the mass shown to each spiral.

Weld Headed Stud Anchors with automatically timed stud welding equipment connected to a suitable power source. All stud welding shall conform to KDOT Specifications. No fillet welding of Headed Stud Anchors shall not be allowed.

DRILLED SHAFT PRESSURE: (Working Stress Design)

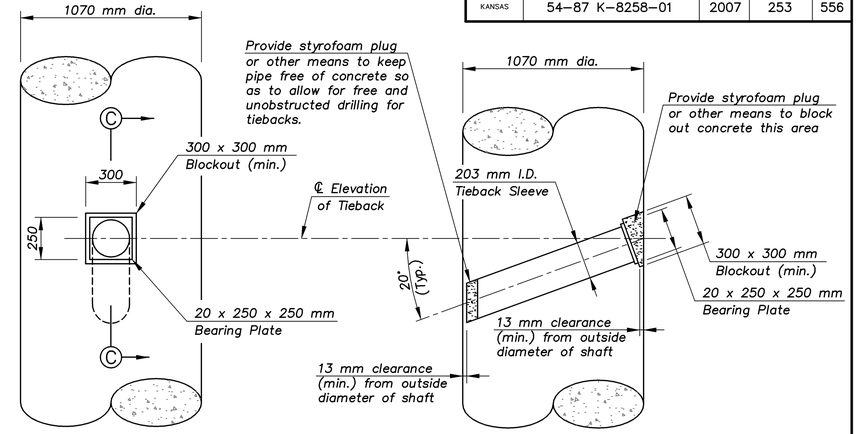
ALLOWABLE:	End Bearing	720	kPa
	Side Friction below Elev. 402.0	76.6	kPa
DESIGN:	(Service Load I)		
	End Bearing	720	kPa
	Side Friction below Elev. 402.0	76.6	kPa



SONIC TUBE DETAIL

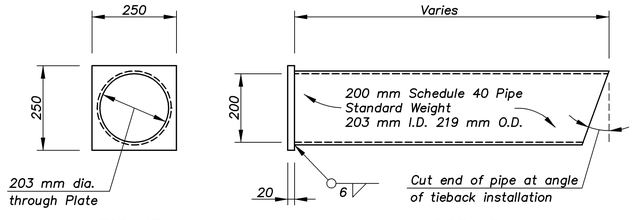
DEFINITIONS

TB1 = Tieback 1
TB2 = Tieback 2
H = Wall Design Height
θ = Tieback Angle



TYPICAL VIEW B–B

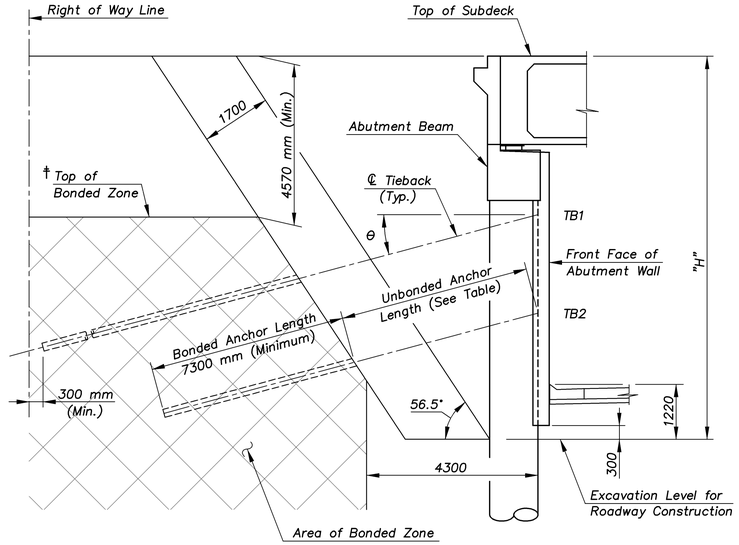
SECTION C–C



TOP VIEW

SIDE VIEW

TIEBACK SLEEVE DETAILS



TIEBACK ANCHORAGE DIAGRAM

† NOTE: The Bonded Zone shall not be located above the top of weathered shale.

TIEBACK UNBONDED ANCHOR LENGTH TABLE

ABUTMENT	DRILLED SHAFT LOCATION	TIEBACK	LOADING	UNBONDED ANCHOR LENGTH
Abutment No. 1	A thru D	TB1	445 kN	5.7 m
Abutment No. 1	A thru D	TB2	445 kN	5.4 m
Abutment No. 2	A thru D	TB1	445 kN	5.7 m
Abutment No. 2	A thru D	TB2	445 kN	5.4 m

NOTE: For Drilled Shaft locations see "Section A–A "or "Section B–B" on "Engineering Geology" sheet.

NOTE: It shall be the Contractor's responsibility to verify that the tiebacks will not interfere with utilities, drainage structures, sign and traffic signal foundations, and other obstructions.

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 54–87–31.12(702) STA. 3+877.518

DRILLED SHAFT DETAILS

ROCK ROAD OVER KELLOGG AVENUE

Proj. No. 54–87 K–8258–01 SEDGWICK COUNTY

Cook, Flatt & Strobel ENGINEERS, P.A.

DESIGNED	R.S.C.	SCALE	Varies
DETAILED	T.R.G.	DATE	
QUANTITIES	T.R.G.	SHEET	7 OF 41

1:100

ROCK/ABUT