

October 23, 2020

Town of Parker
20120 E Mainstreet
Parker, Colorado 80138

Attention: Michael Waugh

Subject: Quality Control Plan for
Construction Observation and Materials Testing
Trails at Crowfoot, Filing No. 9
Parker, Colorado
Project No. DN50,626.001

CTL | Thompson, Inc. presents this Quality Control Plan for performing Construction Observation and Materials Testing (COMT) for Trails at Crowfoot, Filing No. 9 in the Town of Parker, Colorado. We understand Filing No. 9 includes portions of Scarlet Sage Avenue, Alpine Phlox Street and North Pinery Parkway. COMT may include testing and observation for earthwork, asphalt, reinforcing steel, and concrete. We reviewed the construction plans prepared by CVL and the Town of Parker's Typical Minimum Construction Materials Testing Requirements in preparation of this Quality Control Plan.

The quantities of materials are estimated from the construction plans. The estimated number of tests was determined based on the Town of Parker's requirements. Observation and testing services to be performed in general accordance with the Town of Parker's specification requirements. At the completion of the project we will plot individual tests in either plan or profile view on approved plans. The approved plans should be provided to our firm.

Respectfully submitted,

CTL | THOMPSON, INC.

Mark Gayeski, E.I.T.
Staff Engineer

MG/mg

Attachment: Quality Control Plan Spreadsheet

Via email: Michael Waugh mwaugh@parkeronline.org
Doug Richter djrichter9@gmail.com

Trails at Crowfoot, Filing No. 9 - Minimum Testing Requirements

General Note: The number of tests listed below are estimates and are calculated using the testing frequency requirements of the Town of Parker.

Spec#	Item	Type of Test	Frequency	No. of Tests	Quantity of Item	Comments
203	Roadway (Subgrade)	Moisture/Density	1 per 500 LF for every 1' lift of fill, each lane	22	5500 LF	
203	Roadway (Subgrade)	Proof Roll	All subgrade		5500 LF	Observation Only
203	Utilities; gas electric, phone & cable TV trenches	Moisture/Density	1 per 250 LF for every 1' lift of backfill & each 1' lift within 1' of all structures		N/A	
301	Roadway (Base Course)	Gradation & Atterberg Limits	1 per 1,000 tons		N/A	
304	Roadway (Base Course)	Moisture/Density	1 per 500 LF for each lane and 1 per each 1' lift within 1' of all structures	22	5500 LF	
304, 203	Roadway (Base Course)	Proof Roll	All subgrade, each day		5500 LF	Observation Only
401	Roadway (Asphalt)	Asphalt Cement Content, Gradation, Max Theoretical	1 per 1,000 tons, minimum 1 per day	10	10000 Tons	Assume 1000 tons placed per day
401	Roadway (Asphalt) (Full Time Tester Required)	Density	1 per 500 LF for each lane, all lifts	44	5500 LF	2 lifts
401, 412	Roadway (Asphalt & Concrete)	Cores (Density & Thickness Verification)	1 per 500 LF for each lane	N/A	5500 LF	Cores to be obtained by the Town of Parker
412	Roadway (Concrete) (Full Time Tester Required)	Slump, Air, Cylinders	First 3 batches. If passing, every 100 CY thereafter. One (1) set cylinders cast for every 100 CY.		N/A	
603	Sanitary Sewer/Sanitary Service	Moisture/Density	1 per 200 LF for every 1' lift of backfill & each 1' lift within 1' of all structures. Each 1' lift every service and all isolated runs.	40	1150 LF (mainline) 0 services	Assume avg. depth of sanitary sewer is 10' below grade. First test will be at a depth of 7'
603	Storm Sewer	Moisture/Density	1 per 200 LF for every 1' lift of backfill & each 1' lift within 1' of all structures	96	6400 LF	Assume avg. depth of storm sewer is 5' below grade. First test will be at a depth of 3'
604	Inlets and Manholes (Concrete)	Slump, Air, Cylinders, Reinforcing Steel	1 per day	20	14 inlets 48 manholes	Assume Precast
604, 206	Inlets and Manhole	Moisture/Density	Each 1' of backfill lift around structure	222	53 storm 9 sanitary	Assume first test at 3' for storm and 7' for sanitary
608	Sidewalk, Curb & Gutter	Slump, Air, Cylinders	<u>Machine</u> - First 3 trucks. If passing, then 1 per 100 CY. <u>Hand</u> - 2 trucks day. If passing, then 1 per 50 CY.	20 12	2000 yds 300 yds	Assume 100 yds per day
608, 203	Sidewalk, Curb & Gutter	Moisture/Density	1 per 250 LF	88	22000 LF	Assume subgrade is placed in one lift
608, 203	Sidewalk, Curb & Gutter	Proof Roll	All subgrade		22000 LF	Observation Only
619	Water Main/Water Service	Moisture/Density	1 per 250 LF every 1' of backfill & each 1' lift within 1' of all structures. Each service trench every 1' of backfill. 80% of tests under pavement.	54	4500 LF 0 services	Assume avg. depth of water line is 5' below grade. First test will be at a depth of 3'