



CITY OF POST FALLS

ENGINEERING PROJECT CERTIFICATION AND QUALITY CONTROL STANDARDS

July 15, 2010



INTRODUCTION:

City ordinances and construction improvement agreements with developers require the Engineer of Record (Engineer), to be responsible and in-charge of project inspection and quality control for private developments, in which the improvements will be accepted for ownership by the City of Post Falls. The Engineer shall be a Professional Engineer in the State of Idaho, designated by the project developer. The Engineer shall provide project inspection, testing, quality control, project certification and as-built record drawings that conform to these general guidelines.

The intent of these guidelines is to establish the responsibility of the developer's Engineer and to assure that the City of Post Falls is receiving constructed improvements that conform to the project specifications. By assuring conformance with the project specifications, future maintenance and replacement costs to the citizens of Post Falls will be reduced, and overall safety to the general public improved.

While the Engineer may be under contract by the developer, their responsibility in carrying out construction oversight and quality control is to protect the public's interest in obtaining infrastructure that is constructed in compliance with the plans, standards, specifications and intent of the project. These guidelines are intended to establish a minimum standard and are not meant to supersede the Engineer's judgment for the need of additional project oversight in order to provide project certification, at site conditions, project complexity, the contractor's effort and performance will vary with each project.

The guidelines are not intended to cover every detail and specification the Engineer must carry out to insure the project is properly constructed. The City may impose more stringent oversight standards, and require more frequent project meetings with the Engineering Division, as appropriate.

Use of Other Testing/Inspection Firms

The Engineer may employ services from other engineering or testing/inspection firms to assist in fulfilling the Engineer's required project certification responsibility; however, all field notes, test reports, and observations performed by others shall be incorporated into the Engineer's project certification.

Coordination

The City will establish a representative from the City Engineering office (City Representative) for each project, to assist with clear and direct communication and decision making during the course of construction. The Engineer shall meet with the City Representative on a regular basis throughout the project (typically weekly or bi-weekly), as established by the City to review the Engineer's oversight activities. At the regular meetings, the Engineer shall provide a review of the recent and upcoming construction activities; and present all inspection notes, test results, and other documentation relative to their construction oversight activities for the City Representative's review.

ENGINEERING PROJECT CERTIFICATION:

Project certification shall consist of a cover “certification letter” accompanying copies of all inspection and test reports, and established in the following format (which includes minimum inspection and testing standards for the individual project construction elements, and this certification shall be provided as an electronic PDF document):

Certification Statement

I (Engineer’s Name, P.E.) certify that construction observation and quality control for (project, plans with approval date) was performed under my responsible charge. It is my professional opinion that the project was constructed in accordance with the intent of the plans and specifications. The submittal of as-built drawings and the attached documentation within the certification packet provide evidence to support a recommendation of acceptance of the public infrastructure associated with the referenced project plans and specifications.

(Provide Engineer’s seal, signature and date.)

INSPECTION/TESTING FORMAT:

- A. Daily Inspection Reports – provide copies of daily inspection reports, documentation and photographs in consecutive date format.
- B. Erosion Control – verify erosion control measures are in place and conform to the approved submitted erosion control plans prior to the start of construction, storm events, and as necessary during the course of construction.
- C. Site Stripping/Mass Grading – provide copies of all inspections and approvals relative to site stripping and removal of unsuitable soils, along with all laboratory field tests, and observation notes relative to placement of compacted fill and mass grading.
 - 1. Approval of site stripping and removal of unsuitable fill shall be provided prior to placement of structural fill.
 - 2. Mass grading is to be observed on a full or part-time basis, depending upon the nature of the activity, with a minimum 1 density test per lift, per 300 cubic yard of material placed.
 - 3. Certification shall include a site map showing beginning and final topography, and the location and elevation of tests. A boundary survey of the area may be required, depending upon the complexity of the project.

D. Watermains/Sanitary Sewer Forcemains:

1. Pipe installation may require full or part-time observation, depending upon the nature of the activity.
2. Observe pouring of thrust block, and construction of major connections and restraint devices.
3. Observe and provide copies of the pressure test results as stated in Section 401, Part 3, 3.6 Pressure Testing of the ISPWC.
4. Verification of all valve operations.
5. Provide final Bacteriological Test results per Section 401, Part 3, 3.9 Flushing and Disinfection of the ISPWC.
6. See trench compaction requirements.

E. Sanitary Sewer Mains:

1. Sewer main installation is to be observed to confirm continual consistency with pipe installation, bedding and compaction efforts.
2. Observe and provide copies of all pressure tests per ISPWC.
3. Review video of sewer and make recommendation for correction and/or acceptance. Forward final video to City.
4. See trench compaction requirements.

F. Stormwater Collection:

1. Stormwater installation is to be observed on a full time or part-time basis.
2. Perform observation to verify proper construction methods.
3. Provide copies of all pressure testing.
4. See trench compaction requirements.

G. Trench Compaction:

1. Perform observation to verify proper construction methods.
2. Trench backfill density test with varying test depths with a minimum one test per two vertical feet of backfill per 100 lineal feet of trench, to verify observations.
3. Full time observation required on trench depth greater than 5 feet, with all initial testing beginning at 5 feet below grade.

H. Sub-grade Inspection/Testing:

1. Sub-grade compaction is to be observed on a full or part-time basis, depending upon the nature of the activity, with one density test per 100 lineal feet horizontally and for each lift of material in areas requiring fill or excavation below sub-grade, of each lane or equivalent for roadways.
2. Visual observation of sub-grade proof rolling.

3. Provide written acceptance of sub-grade, underlying material and utilities to the City prior to the addition of the base coarse or crushed rock lift.

I. Base Coarse/Crushed Rock:

1. Roadway placement of material is to be observed on a full or part-time basis, depending upon the nature of the activity, with one density test per lift per 100 lineal feet of lane or equivalent for roadways.
2. One density test per 100 lineal feet of curb and sidewalk (unless tested as a part of the roadway).
3. Aggregate quality tests shall be determined based upon nature of the project.
4. Provide materials source and test results, unless from an ITD approved source.

J. Asphalt Paving:

1. Full time observations shall be performed during placement of asphalt paving.
2. One density test per 100 lineal foot of each lane, per lift.
3. Asphalt quality tests shall be determined based upon nature of project.
4. Asphalt cores to verify thickness shall be performed as warranted or requested. At a minimum:
 - a) Provide one (1) test to verify gradation per 1,000 tons.
 - b) Provide one (1) test to verify asphalt content per 1,000 tons.
 - c) Provide flood test results as necessary or requested for the City to verify proper drainage and lack of ponding, based upon the nature of the project.

K. Curb, Sidewalk And Above Ground Structures/Surfacing:

1. Approvals of sub-grade, base, formwork, reinforcing, and grade prior to casting or placing structures.
2. Observation of concrete and product finish quality during placement.
3. Concrete quality testing to be determined based upon nature of project.

L. Drainage Facilities:

1. Observation, testing, and approval of any required structures.
2. Observation and approval of all drainage swales relative to size, grade, and elevations.
3. Approval of the function of all drainage swales to meet the design infiltration rates.
4. Flood testing and observation of infiltration may be required, based upon the nature of the project.

- M. Traffic Control Devices – verification that all signage, markings and other traffic control devices conform with the M.U.T.C.D. and have been placed per design and specifications.

N. Street Lighting – verification of the installation of street lighting per design and specification; relative to type of light, location of placement, and function.

O. Lift Stations/Traffic Signals/Other Items:

1. Full or part-time observation, depending upon the nature of the activity.
2. Testing and observation to verify materials and performance, per specifications, prior to acceptance.

P. Street Trees/Landscaping:

1. Provide observation of the installment of street trees, landscaping, and irrigation systems.
2. Provide pressure test results, and verify irrigation system performance.

Q. Other Agencies' Project Approval – provide documentation of acceptance of facilities by other appropriate agencies or purveyors required to provide a complete project.