CITY OF LAS VEGAS	Public Works Department City Engineering Division Offsite Inspection and Testing Section	Procedure No.: PWOIT – MT 102
	Procedure: Type III Pipe Zone Backfill Material Report	Page 1 of 6

Revision Number	Prepared By	Reviewed By	Approved By	Date Issued
0	GGJ	GGJ	DM	GGJ
Date	1-23-02	2-7-02	3-1-02	3-1-02
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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER DIVISION
Offsite Inspection and Testing Section

City of Las Vegas
Type III Pipe Zone Backfill Material Report

Procedure No. PWOIT-MT 102 Revision 5

The italicized and underlined sections of this policy note Revision 4 changes.

1.0 PURPOSE:

1.1 This policy establishes the guidelines by which the City of Las Vegas (CLV) will review and approve the use of native soils as Type III Pipe Zone Backfill Material for trenches in public / private offsite improvement areas. Type III Pipe Zone Backfill limits are from the bottom of the pipe bedding to twelve (12) inches above the top of pipe in the utility trenches within the offsite area. The public offsite area is defined from the back of sidewalk to back of sidewalk. The private offsite area is defined from the back of curb to back of curb on private streets. The CLV Quality Assurance (QA) Program is limited to monitoring the Type III Pipe Zone Backfill with periodic QA density tests for public and private offsite improvements. A Final Type III Pipe Zone Backfill Material Report is required to be submitted for review and approval from the project Quality Control (QC) Company for all projects *in which Type III Pipe Zone Material is produced.*

1.2 The earthwork operation may include the processing (screening) of the native materials to obtain material that meets the requirements of the Type III Pipe Zone Backfill Material. Typically, stockpiles are established in the area of the processing (screening) operation. Samples shall be obtained from the originally established stockpile for the initial acceptance of backfill material. Additional samples shall be obtained from stockpiles as established. Refer to Section 5.0 Sampling and Testing.

2.0 REFERENCE CODES AND STANDARDS:

***2.1* Associated CLV Procedures:**

2.1.1 PWOIT MT 101 "Submittal of Report".

2.1.2 PWOIT MT 104 "Trench Backfill Report".

2.2 Clark County Uniform Standard Specifications:

2.2.1 Section 105, "Control of Work".

2.2.2 Section 207 "Structural Backfill".

2.2.3 Section 208, "Trench Excavation and Backfill".

2.2.4 Section 704, "Base Aggregates".

2.3 Other:

2.3.1 NRS 338.176, NAC 625.550, the most current ASTM, AASHTO, NDOT test procedures as indicated in the applicable sections of the Uniform Standard Specifications.

3.0 STATEMENT OF POLICY:

3.1 Submittal:

3.1.1 Submittal format shall be completed in accordance with the current CLV procedure and in compliance with the NRS 338.176 and NAC 625.550 statutes.

3.1.2 The project developer or their representative, the project Quality Control Company (QC) shall submit a transmittal letter and Type III Pipe Zone Material Report to the CLV for review and approval. The transmittal and report shall be submitted and approved prior to utilization of the material. A written response will be issued.

3.2 Use of Controlled Low Strength Material (CLSM) in the Final Backfill Zone:

3.2.1 The CLSM backfill shall be as specified in Clark County Standard Specifications, subsection 704.03.07 "Controlled Low Strength Material".

3.2.2 The use of the CLSM shall be as specified in Clark County Standard Specifications, subsection 208.03.09 "Use of CLSM" with the following clarifications:

3.2.2.1 The CLSM mix design shall be an IQAC approved mix design or the mix design shall be submitted to the CLV for review and approval prior to the use of the mix design.

3.2.2.2 A daily Placement Inspection report shall be written including the location of the CLSM placement. The location shall include as a minimum, the utility line being covered, the street name, the station to station location, and beginning and ending elevations.

3.2.2.3 One set of six (6) four-inch diameter by eight-inch high test cylinders shall be made for every 150 cubic yards, per day, or fraction thereof. A report of the results shall be submitted to the CLV project inspector.

3.2.2.4 Placement of backfill or other materials on top to the CLSM shall not be allowed until the CLSM has passed the "ball drop" test per ASTM D6024. Results of this test shall be submitted to the CLV inspector for their review and approval.

4.0 REPORTS:

4.1 General Requirements for Report Content:

4.1.1 The report shall include, at a minimum, the following information:

4.1.1.1 Revised reports shall include the date *of the report being superseded,* as well as the revision date.

4.1.1.2 Project / Permit Name *(per Off-Site Construction Permit Hard Card)*.

4.1.1.3 Project / Permit Number *(per Off-Site Inspection Permit Hard Card)*.

4.1.1.4 Project / Permit Plan Number *(per Off-Site Inspection Permit Hard Card)*.

4.1.1.5 Referenced reports shall be identified by the accepted QC report issue date and CLV acceptance letter date.

4.1.1.6 The report must be prepared by, or under the direction of a Professional Engineer registered in the State of Nevada. The report shall be signed and stamped by the responsible engineer.

4.1.1.7 Use the appropriate approved project Plan and Profile sheets to determine the specific location for the area being submitted for review and acceptance **for this report**. The locations shall be noted in the text of the report in a similar format as shown below:

Street Name	*Station Number*	*to*	*Station Number*

NOTE 1: If street names are revised after a construction phase report has been submitted to the CLV and approved by the CLV, subsequent construction phase reports shall reference the original street name as well as the revised street name.

4.1.1.8 The report shall contain a statement that verifies that the trench backfill material complies with the requirements and recommendations of the project geotechnical report, project plans, specifications, and current CLV policies and procedures

4.1.1.9 Sieve Analysis.

4.1.1.10 Plastic Index.

4.1.1.11 Proctor information per current AASHTO T180 procedure and include a curve for each material type.

4.1.1.12 Plot plan with sample locations identified and areas indicated that are represented by the sample. The accepted area shall be in such a manner that the area is identifiable on "Xerox" copies.

4.1.1.13 If testing is provided by another laboratory, that data shall be stamped by the responsible engineer and included in the report.

4.2 Additional Requirements for Interim Report:

4.2.1 Interim (partial area release) reports for specific areas of work (i.e., utility trenches in the interior / exterior areas and / or portion of those areas) are acceptable; however they shall be referenced in the Final Type III Pipe Zone Backfill Material Report.

4.2.2 The report title shall be **"Interim Type III Pipe Zone Backfill Material Report".**

4.3 ***Additional Requirements for Final Report:***

4.3.1 This is the **last report**, *for this phase of work,* if Interim Reports were issued. It is the **only report** if Interim Reports were not issued.

4.3.2 The report title shall be **"Final Report for Type III Pipe Zone Backfill Material Report"**.

4.3.3 Referenced CLV approved reports.

4.3.3.1 Interim Type III Pipe Zone Backfill Material Report.

4.3.4 *Report information / test data included with approved reports, per section 4.1.1.5, should not be included with the report being submitted.*

5.0 SAMPLING AND TESTING:

5.1 The material must be obtained and tested by a laboratory that is AASHTO Accredited in the procedures being reported. The most current ASTM, AASHTO, NDOT test procedures shall be used. Testing requirements shall be from the applicable sections of the Uniform Standard Specifications and current CLV policies and procedures.

NOTE 2: The requirement for the AASHTO Accreditation *is* mandatory for all laboratories performing work submitted to the City of Las Vegas, Offsite Inspection and Testing, effective March 1, 2008. Laboratories that are not accredited in the test procedures being submitted shall contact the City of Las Vegas, Offsite Inspection and Testing, prior to submitting the test information.

5.2 Samples for the initial approval of the material shall be taken from the processing (screening) operation stockpile(s). If more than one stockpile is established, a sample shall be taken from each stockpile. **This initial sampling/testing is only for the first 1000 lineal feet of trench.**

5.3 Additional samples shall be obtained from the processed backfill material and tested for every additional 1000 lineal feet of trench and fraction thereof. A minimum of two (2) samples per project. If interior and exterior streets are included in the project, representative samples shall be obtained from both areas.

NOTE 3: These additional samples shall represent the additional material that is being processed and placed for the 1000 linear feet of trench that is being identified in the submitted report.

5.4 Proctor information per current AASHTO T180 procedure and curve for each material type.

6.0 EFFECTIVE DATE AND APPROVALS:

EFFECTIVE DATE: October 27, 2008

10-13-08

Thomas Hayes, P.E. Date
City of Las Vegas
Offsite Inspection and Testing Superintendent

10-9-08

Gary G. Johnson Date
City of Las Vegas
Construction Testing Supervisor