

**ADDENDUM No. 2
TO
CONTRACT DOCUMENTS
FOR
LAS VEGAS LANDFILL CORRECTIVE MEASURES AND CLOSURE PROJECT

THE CITY OF LAS VEGAS**

December 3, 2014

This is ADDENDUM No. 2 to the CONTRACT DOCUMENTS FOR LAS VEGAS LANDFILL CORRECTIVE MEASURES AND CLOSURE PROJECT, bid package published November 2014.

This ADDENDUM No. 2 consists of two (2) pages and one (1) item with one (1) attachment.

All interested bidders are hereby notified of the following modifications to the Contract Documents, as described in detail below:

Item 1. Answers to questions.

Question 1: What is the composition of the leachate being filtered into the collection system? Are there any known environmental risks associated with this?

Answer 1: The leachate will exceed state groundwater standards for several constituents since it has flowed through solid waste (trash) and is contaminated. Any water dewatered from trenches for the Leachate cut off wall or within 500 feet of the Leachate cut off wall (up to the cleanouts at station 6+50) will need to be pumped into the City's existing wastewater system and should not be discharged down-stream.

Question 2: Items #13 and #14 (of the bid form) call for CMP, while Specs make no reference to CMP but rather to HDPE. Will HDPE be acceptable for these items?

Answer 2: Yes. Technical specification addressing CMP and HDPE pipe culverts is provided herein as an attachment to this addendum.

Question 3: Will Domestic Material be required for this project?

Answer 3: No

Question 4: What Entity or Agency is Funding this project?

Answer 4: New Mexico Finance Authority (NMFA)

Question 5: Sheet DT-3, Typical Gate Valve Detail shows "Bolted Flanged Fitting (Both Sides)", would MJ valve be acceptable in lieu of Flanged Valve?

Answer 5: Yes

Question 6: What are the compaction requirements for the landfill cover?

Answer 6: Fill material placed on landfill cover shall be compacted to a minimum of 90% standard proctor density.

This Addendum No. 2 constitutes clarification, changes, additions, modifications and/or deletions to the aforementioned contract documents. All provisions of the contract documents not in conflict with Addendum No. 2 shall remain in full force. Receipt of this Addendum shall be acknowledged on the Bid Form.



George Mihalik, P.E.

December 3, 2014
Date

Attachments:
Technical specifications for Pipe Culverts

SECTION 33 42 13

PIPE CULVERTS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Steel Culvert Pipe (CMP).
 - 2. Plastic Culvert Pipe (HDPE).
 - 3. End Sections.
 - 4. Joints and accessories.
 - 5. Bedding.
 - 6. Slope protection at pipe end.

- B. Related Sections
 - 1. Section 31 23 17 - Trenching: Backfilling over piping up to sub-grade elevation.
 - 2. Section 31 23 23 - Backfill: Backfill material.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Pipe Culvert:
 - 1. Basis of Measurement: By linear foot invert length of pipe, not including end sections.
 - 2. Basis of Payment: Includes hand trimming, excavating; removing soft subsoil, bedding fill, compacting; pipe, fittings and accessories assembled; repair of damaged coating.

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T99 - Standard Specification for the Moisture-Density Relations of Soils Using a 2.5 kg (5.5 lb) Rammer and a 305 mm (12 in.) Drop.
 - 2. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

- B. ASTM International:
 - 1. ASTM A929/A929M - Standard Specification for Steel Sheet, Metallic-Coated by the Hot-Dip Process for Corrugated Steel Pipe.
 - 2. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 3. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 4. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

6. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
7. ASTM F2648 - Standard Specification for 2 to 60 inch [50 to 1500 mm] Annular Corrugated Profile Wall Polyethylene (PE) Pipe and Fittings for Land Drainage Applications

1.4 SUBMITTALS

- A. Section 01 00 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on pipe, fittings and accessories.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 00 00 - Execution Requirements: Requirements for submittals.
- B. Project Record Documents:
 1. Accurately record actual locations of pipe runs, connections, and invert elevations.
 2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

PART 2 PRODUCTS

2.1 STEEL CULVERT PIPE (CMP)

- A. Corrugated Steel Pipe: ASTM A929/A929M, galvanized:
 1. Wall thickness: 16 gage minimum.
 2. Helical lock seam.
 3. Coated inside and out with 0.050 inch thick bituminous coating.
 4. Shape: Circular with nominal diameter as shown in plans.
- B. End Sections: Tapered ends of the same material as pipe, factory made, for joining to pipe end.
- C. Coupling Bands: Galvanized steel, 0.052 inches thick x 10 inches wide; connected with two neoprene "O" ring gaskets and two galvanized steel bolts.

2.2 PLASTIC CULVERT PIPE (HDPE)

- A. Polyethylene Culvert Pipe: ASTM F2648
 1. Smooth-walled interior
 2. Corrugated exterior
 3. Manufactured from high density polyethylene (HDPE) virgin compounds.
- B. HDPE compounds used in the manufacture of plastic pipe culverts shall conform to the cell classifications as provided in ASTM Designation D3350.

- C. End Sections: Tapered ends of the same material as pipe, factory made, for joining to pipe end.
- D. Pipe Thickness, Stiffness and Unit Mass:
 - 1. Wall thickness of Type S corrugated polyethylene pipe shall be measured at the inside valley of the corrugation.
 - 2. The pipe stiffness shall be determined in accordance with ASTM Designation: D2412 at 5 percent deflection. Average pipe stiffness shall be determined for each manufactured run from three test specimens. The length of each test specimen shall equal the nominal pipe diameter, except that the specimen length shall not exceed 900 mm for pipe larger than 900 mm in nominal diameter.
 - 3. The pipe unit mass shall be computed as the average mass per meter of length determined from three test specimens, taken from each manufactured run. Each test specimen for pipes 600 mm in diameter and less shall be a minimum length of two diameters. The length of each test specimen for pipes larger than 600 mm in diameter shall be one diameter or a maximum of 900 mm, whichever is less. The mass of pipe specimens shall be determined with any suitable weighing device accurate to 0.05-kg.
 - 4. Furnish materials in accordance with New Mexico Public Works Standards.
 - 5. Joints: AASHTO M294, corrugated to match pipe.

2.3 BEDDING AND COVER MATERIALS

- A. Bedding: Fill Type A., B, C or D, as specified in Section 31 23 23.

2.4 ACCESSORIES

- A. Fill at Pipe Ends: Rock pad twice the width of the culvert end section, 10 feet in lengths, using rock with nominal size of 6 inches.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 00 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on Drawings.

3.2 PREPARATION

- A. Remove large stones or other hard matter which could damage piping or impede consistent backfilling or compaction.

3.3 EXCAVATION AND BEDDING

- A. Excavate culvert trench to 12 inches below pipe invert, in accordance with Section 31 23 17 for work of this Section. Hand trim excavation for accurate placement of pipe to elevations indicated.
- B. Place bedding material at trench bottom, level fill materials in one continuous layer not exceeding 6 inches compacted depth, compact to 95 percent.
- C. Maintain optimum moisture content of bedding material to attain required compaction density.
- D. Place filter fabric over compacted bedding.

3.4 INSTALLATION - PIPE

- A. Lift or roll pipe into position. Do not drop or drag pipe over prepared bedding.
- B. Shore pipe to required position; retain in place until after compaction of adjacent fills. Ensure pipe remains in correct position and to required slope.
- C. Repair surface damage to pipe protective coating with two coats of compatible bituminous paint coating.
- D. Install cover at sides and over top of pipe. Install top cover to minimum compacted thickness of 12 inches.
- E. Maintain optimum moisture content of bedding material to attain required compaction density.
- F. Place filter fabric over compacted cover.
- G. Install culvert end gratings.
- H. Refer to Section 31 23 17 for backfilling and compacting requirements. Do not displace or damage pipe when compacting.

3.5 PIPE ENDS

- A. Place fill at pipe ends, embankment slopes and at adjacent construction, as needed.

3.6 ERECTION TOLERANCES

- A. Section 01 00 00 - Quality Requirements: Tolerances.
- B. Lay pipe to alignment and slope gradients noted on Drawings; with maximum variation from indicated slope of 1/8 inch in 10 feet.
- C. Maximum Variation From Intended Elevation of Culvert Invert: 1/2 inch.

- D. Maximum Offset of Pipe From Indicated Alignment: 1 inch.
- E. Maximum Variation in Profile of Structure From Intended Position: 0.1 percent.

3.7 FIELD QUALITY CONTROL

- A. Section 01 00 00 - Execution Requirements: Testing, adjusting, and balancing.
- B. Request inspection prior to and immediately after placing aggregate cover over pipe.
- C. Compaction Testing: In accordance with ASTM D1557.
- D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- E. Frequency of Tests: Every 20 linear feet.

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 00 00 - Execution Requirements: Protecting installed construction.
- B. Protect pipe and bedding from damage or displacement until backfilling operation is in progress.

END OF SECTION