

THRASHER™

Thrasher, Inc.
12330 Cary Circle La Vista, NE 68128
Contact: Rob Olsen
Cell: 402-800-7409
Fax: (402) 393-4002

SUBMITTED TO:
Woodbury County

Kenny Schmitz

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BID SUMMARY

Project Name: Law Enforcement Center Woodbury County
Project Location: 407 7th Street Sioux City, IA
Bid Date: September 12, 2016

BID AMOUNT
\$25,038.90

QUALIFICATIONS

PolyLEVEL

- A pumping unit capable of injecting high density polyurethane material beneath the slab will be utilized. The pumping unit will be capable of controlling the rate of flow of material as required to lift the slabs in a gradual and controlled manner.
- The pumping unit will be equipped with a stroke counter that determines pounds of material used.
- Installations will be completed during acceptable hours (7:00pm-5:00am & 11:00pm-5:00am) as specified.
- The General Contractor/Owner is responsible for providing necessary lighting for proper installation.
- If additional material is needed beyond what is stated in this proposal (3155 lbs), an additional charge of \$8.00 will be added per pound of material used. Additional material will only be installed following client approval. If less material is needed than (3155 lbs), \$8.00 will be subtracted per pound.
- Proposal is based upon a site inspection without extensive information or knowledge of original construction or previous repairs. At times we encounter various obstacles or attempted repairs that impede our progress. These repairs may or may not be known to the Owner. We will do what is necessary to avoid such obstacles, however, if extra work involving additional manpower or trades are required, we will contact the Owner immediately to discuss how the work shall progress.
- Due to the nature of the work, we can not guarantee a perfect lift, however we will lift as close as possible to the desired lift height/benchmark.

Other Qualifications

- This bid includes up to one mobilizations to the work site. Additional mobilizations will cost an additional \$1500 per trip.
- Estimated lead time for crew & product is three weeks after signed contract and approved drawings

EXCLUSIONS

- Any excavation and/or disposal of excavated materials.
- Lighting necessary to provide crew visibility during installation.
- Additional insurance coverage beyond Thrasher, Inc.'s standard coverage.
- Bonding. If required, please add 1.5% to contract amount.

Thrasher, Inc.

SIGNATURE: _____

DATE: October 11, 2016

Acceptance of Proposal - The prices proposed, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. We jointly and severally agree to pay you upon completion of the job, and will further pay your service charge of 1-1/3% per month (18% annum) if our account is 30 or more days past due, and your attorney's fees and costs to collect or enforce this contract. **My signature indicates that I accept the terms of this Proposal.

SIGNATURE: _____

DATE: 10-18-16



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SCOPE OF WORK

This bid submittal includes all labor, materials, equipment and site supervision required to install PolyLEVEL as specified for the above referenced project. This proposal is based on the maximum area of 32' x 91' to be lifted an approximate max of 2".

For detailed scope, please refer to attached POLYURETHANE CONCRETE PAVEMENT/SLAB STABILIZATION APPLICATION document.

PRODUCTS

PolyLEVEL

(3155) Pounds of PL400H - PolyLEVEL two-part high density (4lb) hydro-insensitive polyurethane foam system

Additional Material

(0)

INSTALLATION

PolyLEVEL

- Layout and mark injection locations, drill 5/8" holes through slab and install injection ports.
- Inject PolyLEVEL material at rates necessary to fill voids, stabilize and lift slabs as necessary.
- Remove injection ports and fill access holes with suitable grout material, and clean up work area.
- Monitor slab movement during installation to ensure slab stabilization and accurate lifting.
- A production schedule of approximately 2 day(s). However, unforeseen conditions such as inclement weather, site access issues, acts of God, etc, may affect the project schedule.

POLYURETHANE CONCRETE PAVEMENT/SLAB STABILIZATION APPLICATIONS

1 SCOPE

- 1.1 The work consists of designing, furnishing, and installing two-part, high-density polyurethane material according to the project Plans and this specification.
- 1.2 The parties and contract terms referred to in this specification are as follows:
 - 1.2.1 The Owner is the person or entity that owns the facility or will own the facility once it is completed. The Owner may have contractual agreements with, and be represented by, other parties such as engineers, architects, or contractors that perform services under the direction of the Owner. Where Owner is used in the specification, it refers to the Owner or the Owner's contracted representatives separate from the Installing Contractor.
 - 1.2.2 The Installing Contractor installs the polyurethane material and possibly performs other tasks associated with the project.
 - 1.2.3 The Plans refer to the contract documents; including but not limited to the drawings and specifications for the project.
- 1.3 The work may include void filling, stabilizing and/or lifting pavement and slab structures, or undersealing pavement and faulted joints where required.
- 1.4 The Owner will provide suitable access to the construction site for the Installing Contractor's personnel and equipment.
- 1.5 Unless otherwise noted, the Installing Contractor shall provide all labor, tools, equipment, and material necessary to accomplish the work.
- 1.6 Unless specifically noted otherwise in the contract documents, the Owner will remove and replace structures, utilities, or other surficial improvements in the work area as necessary to facilitate the work.
- 1.7 The Owner will be responsible for overall construction oversight to preclude the development of unsafe conditions.
- 1.8 The Owner will be responsible for soil density testing subsequent to the polyurethane foam injection, unless otherwise noted.
- 1.9 The work does not include any post-installation monitoring unless specifically noted otherwise in the contract documents.

2 REFERENCES

- 2.1 American Society for Testing and Materials (ASTM)
 - 2.1.1 ASTM S1621: Compressive Properties of Rigid Cellular Plastics
 - 2.1.2 ASTM D1622/D1622M: Apparent Density of Rigid Cellular Plastics

2.1.3 ASTM C273: Shear Properties of Sandwich Core Materials

2.1.4 ASTM D2842: Standard Test Method for Water Absorption of Rigid Cellular Plastics

3 APPROVED POLYURETHANE FOAM MANUFACTURERS

3.1 Foundation Supportworks[®], Inc., 12330 Cary Circle, Omaha, NE 68128; Phone: (800) 281-8545; Fax (402) 393-4002.

3.2 Due to the special requirements for design and manufacturing of polyurethane foam, the system shall be obtained from Foundation Supportworks[®], Inc., or other qualified manufacturer with an approved equivalent product. A request to substitute any other manufactured polyurethane foam product must be submitted to the Owner for review not less than seven (7) calendar days prior to the bid date. The request must include:

3.2.1 Documentation of at least five years of production experience manufacturing polyurethane products for similar applications,

3.2.2 Documentation that the manufacturer's polyurethane products have been used successfully on at least five similar projects within the last three (3) years, and/or,

3.2.3 Product acceptance by the local building code official(s) having jurisdiction over the project.

4 ACCEPTABLE PRODUCTS

4.1 Two-part, closed-cell, polyurethane foam products PolyLEVEL[®] 400 and PolyLEVEL[®] 400H manufactured in accordance with the requirements of Sections 4 and 5 of this specification.

5 MATERIALS

5.1 PolyLEVEL[®] 400 Two-part, High-density Polyurethane Foam

5.1.1 Two-part, one to one ratio by volume, closed-cell, high-density polyurethane foam system.

5.1.2 Viscosity: The viscosities of the resin and diisocyanate are 700 to 900 Centipoise (cps) and 150 to 250 cps, respectively, in accordance with ASTM D2196.

5.1.3 Unit Weight: The unit weights of the resin and diisocyanate are 9.4 lb/gal and 10.25 lb/gal, respectively, in accordance with ASTM D1475.

5.1.4 Minimum free-rise density of at least 3.8 lb/cubic foot per ASTM D1622.

5.1.5 Minimum molded compressive strength of at least 85 psi per ASTM D1621.

5.1.6 Minimum molded shear strength of at least 120 psi per ASTM C273.

5.1.7 Maximum water absorption of less than or equal to 0.03 lb/square foot when tested per ASTM D2842.

5.1.8 Achieve 90% compressive strength in 15 minutes.

5.2 POLYLEVEL[®] 400H Two-part, High-density, Hydrophobic Polyurethane Foam

- 5.2.1 Used in applications where water is present beneath the slab.
- 5.2.2 Viscosity: The viscosities of the resin and diisocyanate are 700 to 950 Centipoise (cps) and 150 to 250 cps, respectively, in accordance with ASTM D2196.
- 5.2.3 Unit Weight: The unit weights of the resin and diisocyanate are 9.7 lb/gal and 10.25 lb/gal, respectively, in accordance with ASTM D1475.
- 5.2.4 Minimum free-rise density of at least 3.8 lb/cubic foot per ASTM D1622.
- 5.2.5 Minimum molded compressive strength of at least 85 psi per ASTM D1621.
- 5.2.6 Minimum molded shear strength of at least 120 psi per ASTM C273.
- 5.2.7 Maximum water absorption of less than or equal to 0.03 lb/square foot when tested per ASTM D2842.
- 5.2.8 Achieve 90% compressive strength in 15 minutes.

6 POLYURETHANE INSTALLATION

- 6.1 Installing Contractor shall furnish and install polyurethane material per the project Plans. In the event of conflict between the project Plans and the Installing Contractors proposed installation method, the Installing Contractor shall not begin work until conflict has been resolved with the Owner.
- 6.2 The Owner shall request marking of underground utilities by an underground utility location service as required by law, and the Installing Contractor shall avoid contact with all marked underground utilities.
- 6.3 The portion of the construction site occupied by the Installing Contractor, including equipment and material stockpiles, shall be kept reasonably clean and orderly.
- 6.4 The installation of polyurethane may be observed by representatives of the Owner for quality assurance purposes. The Installing Contractor shall give the Owner at least 24 hours' notice prior to starting the polyurethane installation.
- 6.5 The polyurethane will be installed with a truck, trailer, or buggy mounted pumping unit capable of injecting high-density polyurethane material under the concrete slab or pavement. The pumping unit will be capable of controlling the temperature and rate of flow of the material, as well as, measuring the total amount of material injected.
- 6.6 If 5/8 inch diameter holes are required for the placement of the polyurethane material, the hole locations may be approved by the Owner prior to installation. After installation, the drilled holes will be cleaned out and filled with non-shrink grout or high-strength mortar mix.
- 6.7 Provide laser levels, manometers, dial indicators, or other measuring devices capable of detecting slab movement within 0.1 inches to verify stabilization and/or lift of the slab and/or structure.
- 6.8 The rate, temperature, and amount of material required will be determined by the Installing Contractor and approved by the Owner.

7 INSTALLATION RECORD SUBMITTALS

7.1 The Installing Contractor shall provide the Owner copies of the polyurethane material usage record within 24 hours after each installation section has been completed. Formal copies shall be submitted within 30 days following the completion of the polyurethane installation. The material usage record shall include, but is not limited to, the following information:

7.1.1 Date and time of installation

7.1.2 Location of installation

7.1.3 Total material used

7.1.4 Comments pertaining to interruptions, obstructions, other relevant information

8 CLEANUP

8.1 With one week of completion of the work, the Installing Contractor shall remove any and all material, equipment, tools, debris, of other items belonging to the Installing Contractor or used under the Installing Contractor's direction.

9 METHOD OF MEASUREMENT

9.1 The high-density polyurethane material shall be measured by the pound. Weight of the injected material will be recorded and documented at each location and at the end of each work shift.