

CITY OF SPRINGVILLE

REQUEST FOR BIDS FOR THE Manhole Rehabilitation

RFB #2018-028

SECTION 1: PURPOSE

- 1.1 The City of Springville, Utah is requesting bids to: Rehab 5 manholes with polymer inserts (Approximately 1750 West from 550 North to 800 North).

SECTION 2: RECEIPT OF BIDS:

- 2.1 Bid must be received no later than **December 31, 2018 at 2:00 p.m.** A Bid shall be submitted no later than the date and time prescribed and submitted electronically via Sciquest.

“Bid Enclosed – RFB # 2018-028 – MANHOLE REHABILITATION”

- 2.2 The bid submitted is the document upon which the City of Springville will make its initial judgment regarding each Respondent’s qualifications and wherewithal to complete the required services.
- 2.3 Those submitting bids do so entirely at their own expense. There is no expressed or implied obligation by the City to reimburse any firm or individual for any costs incurred in preparing or submitting bids, preparing or submitting additional information requested by the City or participating in selection interviews, if any.
- 2.4 Submission of any bid indicates an acceptance of the conditions contained in this Request for Bids unless the submitted bid clearly and specifically states otherwise.
- 2.5 The City of Springville reserves the right to accept or reject any and all bids in whole or in part, to waive any and all informalities and to disregard all non-conforming, non-responsive, or conditional bids.
- 2.6 Any award of the Manhole Rehabilitation project shall be conditioned on the later execution of a formal written contract agreement. The City of Springville reserves the right to revoke or rescind any award at any time prior to the full execution of a formal written contract agreement. A sample of the formal written contract agreement, which sets forth the terms and conditions of the agreement, is available for review upon request from the person described in Section 11.1 of this Request for Bids.

SECTION 3: QUALIFICATIONS OF RESPONDENT:

ALL RESPONDENTS ARE REQUIRED TO SUBMIT A QUALIFICATION PACKAGE WITH THEIR BID. Qualification package shall contain the following:

- 3.1 Firm is an approved polymer manhole insert installer.

3.2 Firm has the ability to substantially complete, with their own equipment, multiple projects simultaneously or otherwise allowed prior to bid acceptance.

3.3 Valid license to perform this type of work in Utah.

3.4 Evidence of insurability.

SECTION 4: SUBMITTALS

4.1 Each prospective Bidder may obtain copies of the Bidding Documents including the Bid Form, and, if required, the Bid Bond. A copy of the Bid form is to be completed and submitted with the following data:

- A. A tabulation of the Bid consisting of Bid Schedule(s) completely and correctly filled in
- B. Bid Bond;
- C. Contractor's Qualifications;
- D. List of Subcontractors; and
- E. Additional supplemental information demonstrating the BIDDER's ability to complete projects within scheduled times and ability to perform the specific work.
- F. A Bid shall be submitted no later than the date and time prescribed and submitted electronically via Scquest. No non-electronic (i.e. paper) bids will not be accepted, nor will bids be accepted in any other way other than via Scquest. Bidders are encouraged to print the necessary documents for a complete bid, fill out the information needed (including all required signatures, seals, etc.), then scan and upload the documents to Scquest in Adobe PDF format.
- G. While line items, including unit prices, quantities, and amounts, may be entered in and/or tabulated using Scquest in order to aid Bidder with sums (when bid is set up on Scquest to allow for this functionality), this shall not remove the responsibility from the Bidder of submitting a completed tabulation of the Bid consisting of the Bid Schedule completely and correctly filled in. A bid not submitting a Bid Schedule, will be considered incomplete and non-responsive. Discrepancies between the information tabulated by Scquest line items and the Bid Schedule will be in favor of the Bid Schedule.

SECTION 5: PRODUCT

5.1 All products must meet current Springville City standards and specifications, attached specifications, and current APWA standards and specifications. Submittals will be required:

- A. Submittals shall be submitted sufficiently in advance to allow the City not less than ten regular working days for examining and approval. These submittals shall be accurate, distinct, and complete and shall contain all required information, including satisfactory identification of items and unit assemblies in relation to the contract drawings and/or specifications.
- B. The City's review of CONTRACTOR submittals shall not relieve CONTRACTOR of the entire responsibility for the corrections of details and dimensions. CONTRACTOR shall assume all

responsibility and risk for any misfits due to any errors in CONTRACTOR submittals. CONTRACTOR shall be responsible for dimensions and the design of adequate connections and details.

- C. Whenever requested of the City, CONTRACTOR shall submit at least 1 sample of each item or material to the City for acceptance at no additional cost to City. Samples, as required herein, shall be submitted for acceptance prior to ordering such material for delivery to the jobsite, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delay in the Work.
- D. Contractor submittals shall not be measured or paid as a separate item, but shall be included as part of the various items to which it relates.

SECTION 6: QUALITY CONTROL

6.1 Materials

- A. All materials incorporated in the project shall be new and shall fully comply with the specifications. Unless otherwise clearly provided in the specifications, all workmanship, equipment, materials, and articles incorporated in the work covered by the contract are to be of the best available grade of their respective kinds. Whenever, in the specifications, any material, article, device, product, fixture, form, type of construction, or process indicated or specified by patent or proprietary name, by name of manufacturer, or by catalog number, such specifications shall be deemed to be used for the purpose of establishing a standard of quality and facilitating the description of the material or process desired and shall be deemed to be followed by the words "or approved equal" and CONTRACTOR may in such case, upon receiving the ENGINEER's approval, purchase and use any item, type, or process which shall be substantially equal in every respect to that indicated or specified.
- B. Materials and equipment may be used in the Work based upon receipt of a Supplier's certificate of compliance. Certificate must be in possession of CONTRACTOR and reviewed by OWNER prior to use.
- C. Quality Assurance Testing by the City shall not relieve CONTRACTOR of responsibility to furnish materials and work in full compliance with Contract Documents.

6.2 Testing agency and testing for quality control and material testing shall be furnished by CONTRACTOR as part of the project. Results of testing shall be reported to CONTRACTOR and City on site. Reports of the testing shall be transmitted directly to the City.

6.3 There shall be no separate measurement and payment for general quality control & materials testing. General quality control and materials testing include all test requirements of these specifications. Any Contractor costs for general quality control & materials testing shall be considered as included in the contract unit or lump sum prices for the various items of the contract to which it relates.

SECTION 7: SITE CONDITIONS AND OTHER RELATED DATA.

7.1 Underground Facilities

Information and data shown or indicated in the bidding documents with respect to existing underground facilities at, or contiguous to, the Site is based upon information and data furnished to owner by owners of such underground facilities, including owner, or others

7.2 Hazardous Environmental Condition

No hazardous environmental conditions have been identified

- 7.3 It is the responsibility of each bidder before submitting a bid to:
- A. Examine and carefully study the bidding documents, the Springville Standard Specifications and Drawings manual (latest edition);
 - B. Review inspection reports and become familiar with the conditions that may affect cost, progress, and performance of the work;
 - C. Become familiar with and satisfy bidder as to all federal, state, and local laws and regulations that may affect cost, progress, or performance of the work;
 - D. Obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning site conditions (surface, subsurface, and underground facilities);

7.4 Traffic Control

All work performed on or within the right-of-way of state roads shall have traffic control devices in place before work begins that meet the requirements of Utah Department of Transportation's "Specifications for Excavation on State Highways".

7.5 Coordinating With Adjacent Property Owner

- A. Notice: Notify property owner 10 Days before the start of construction and at least 48 hours in advance of the interruption of utility service or the interruption of access, or the installation of bituminous material.
- B. Access: Provide all weather access to property owner at all times, unless property owner or ENGINEER approve otherwise.
- C. Easements: Where work is on easements on private property, coordinate work with the property owner so that work will minimize inconvenience to property owner.

7.6 Interruption of Utilities

- A. Notify fire and police services in local jurisdiction if emergency is safety related or if construction activities interrupt any utility service.
- B. Contact the affected utility company. Find out how soon repairs can be made as well as when the repairs will begin.
- C. Contact the affected local residences or businesses. Inform when repairs will begin and how long it will take to complete them.
- D. Inform ENGINEER and OWNER.

7.7 CONTRACTOR shall make arrangements for any necessary offsite storage or shop areas necessary for the proper execution of the work

SECTION 8: BID EVALUATION:

8.1 Qualifications

- A. The City will use the product specifications, methodology, and qualifications to determine the awarded contractor.

8.2 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid Schedule.
- B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The quantities shown in the bid schedule are shown for bid purposes only. Final quantities will be different and very depending upon the

work directives. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.

- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- D. The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.
- E. Bid prices will be compared after adjusting for differences in the time designated by Bidders for Substantial Completion. The adjusting amount will be determined at the rate set forth in the Contract Documents for liquidated damages for failing to achieve Substantial Completion for each day before or after the desired date appearing in Section 9.

8.3 Bid Schedule

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL AMOUNT
1	Mobilization	1	LUMP	\$	\$
2	Manhole Rehabilitation	4	EACH	\$	\$
Bid Total					\$

8.4 Measurement and Payment

A. MOBILIZATION

- 1. Measured by lump sum.
- 2. The lump sum price for this item shall include all costs for bonds, Contractor's safety program, insurance, permits, moving equipment and temporary facilities to, from and around the sites, watering and dust control, securing of permits, establishment of offices at the site, preparation of submittals/O&M manuals, project sign, as-constructed plans, SWPPP and all other work required by the Drawings and Specifications which is not specifically set forth in the Bid Form as a pay item. Includes all public involvement and site dewatering. Payment will be made on a percentage basis as follows.

Percent of Original Contract Amount Earned	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
50	30

B. MANHOLE RAHBILITATION

1. Measured by each manhole fully rehabbed.
2. Payment covers the cost of furnishing all necessary materials and equipment, labor, placement, compaction, bypass pumping, dewatering, and testing to install approved Armorock Polymer or equivalent manhole insert in accordance with the attached specifications and installation guide. Items also includes excavation, removing and disposing any existing manholes pieces as needed, and structural fill round manhole.

SECTION 9: CONTRACT TIME:

9.1 Contractor agrees to commence the services required under this Agreement on or before **February 01, 2019** and the entire services performed must be completed on or before **March 15, 2019**. In the event the parties mutually decide to extend this Agreement beyond the term outlined in this Agreement, the parties shall negotiate new terms, conditions and provisions to this Agreement.

SECTION 10: INDEMNIFICATION:

10.1 The selected Respondent will be required to defend, indemnify and save harmless the City of Springville, its employees and agents, from and against all claims, damages, losses and expenses (including without limitations, reasonable attorney's fees) arising out of, or in consequence of, any negligent or intentional act or omission of the selected Respondent, its employees or agents, to the extent of its or their responsibility for such claims, damages, losses and expenses.

SECTION 11: SPECIFICATION CLARIFICATION:

11.1 All inquiries with respect to this Request for Bids shall be submitted through sciquest.

11.2 All questions about the meaning or intent of the specifications shall be submitted in writing through sciquest. Replies will be issued by Addenda through sciquest. Questions received less than three (3) business days prior to the date of submission of bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral or other interpretations or clarifications will be without legal effect.

SECTION 12: MODIFICATION AND WITHDRAWAL OF BIDS:

12.1 Bids may be modified or withdrawn by written request executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.

12.2 If within twenty-four (24) hours after the bids are opened, any Respondent files a duly signed written notice with the City and promptly thereafter demonstrates to the reasonable satisfaction of the City that there was a material and substantial mistake in the preparation of its bid, that Respondent may withdraw its bid. Thereafter, that Respondent will be disqualified from further bid on the work.

SECTION 13: INSURANCE AND SECURITY REQUIREMENTS:

13.1 The selected Respondent will be required to procure and maintain at its own expense the following insurance coverage, which must be issued by an insurer which is licensed to do business in the State of Utah and which has an A.M. Best rating of not less than "A":

- A. **Workers' Compensation and Employer's Liability Insurance:** A policy or policies providing protection for employees in the event of job-related injuries that meets the requirements of Utah State law.
- B. **General Liability Insurance:** A policy or policies of comprehensive general liability insurance with limits of not less than \$2,000,000.
- C. **Product Liability Insurance:** A policy or policies of product liability insurance providing protection for claims for damages arising out of products sold or vended with limits of not less than \$500,000.
- D. **Property Insurance:** A policy or policies of property insurance providing coverage for structures, fixtures and equipment with limits of not less than \$2,000,000.

13.2 Each policy of insurance required shall be in form and content satisfactory to Springville City and shall provide that:

- A. The City of Springville is named as an additional insured on a primary and non-contributing basis.
- B. The insurance policies shall not be changed or cancelled until the expiration of thirty (30) days after written notice to Springville City. In addition, said policies shall be automatically renewed upon expiration and continued in force, unless Springville City is given thirty (30) days written notice to the contrary.
- C. All insurance must be issued by an insurer licensed to do business in the State of Utah and must have an A.M. Best rating of not less than "A". Each policy of insurance required shall be in form and content satisfactory to the City of Springville and shall provide that the City of Springville is named as an additional insured. Before any of the services contemplated by this Agreement may be rendered, Respondent shall provide the City of Springville with a certificate or certificates of insurance, which document compliance with the requirements of this Article.

13.3 No agreement will be signed and no services shall be commenced pursuant to this Request for Bids until the selected Respondent has delivered to Springville City proof of issuance of all policies of insurance required by the Contract to be procured by the selected Respondent. If at any time any of said policies shall be or become unsatisfactory to the City, the selected Respondent shall promptly obtain a new policy and submit proof of insurance of the same to the City for approval. Upon failure of the selected Respondent to furnish, deliver and maintain such insurance as above provided, the contract may, at the election of the City, be forthwith declared suspended, discontinued or terminated. Failure of the selected Respondent to procure and maintain any required insurance shall not relieve the selected Respondent from any liability under the contract, nor shall the insurance requirements be constructed to conflict with the obligations of the selected Respondent concerning indemnification.

SECTION 14: NON-COLLUSIVE BID CERTIFICATE AND ACKNOWLEDGMENT:

14.1 Each Respondent shall complete and submit with his or her bid the "Bid Certificate" found on the following page.

BID CERTIFICATE

By submission of this bid, each Respondent and each person signing on behalf of any Respondent certifies, and in the case of a joint bid each party thereto, certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

1. The prices in the bid have been arrived at independently, without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Respondent or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Respondent and will not knowingly be disclosed by the Respondent prior to the opening, directly or indirectly, to any other Respondent or to any competitor; and
3. No attempt has been made or will be made by the Respondent to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
4. The submitted bid shall be good for a period of one hundred eighty (180) days.

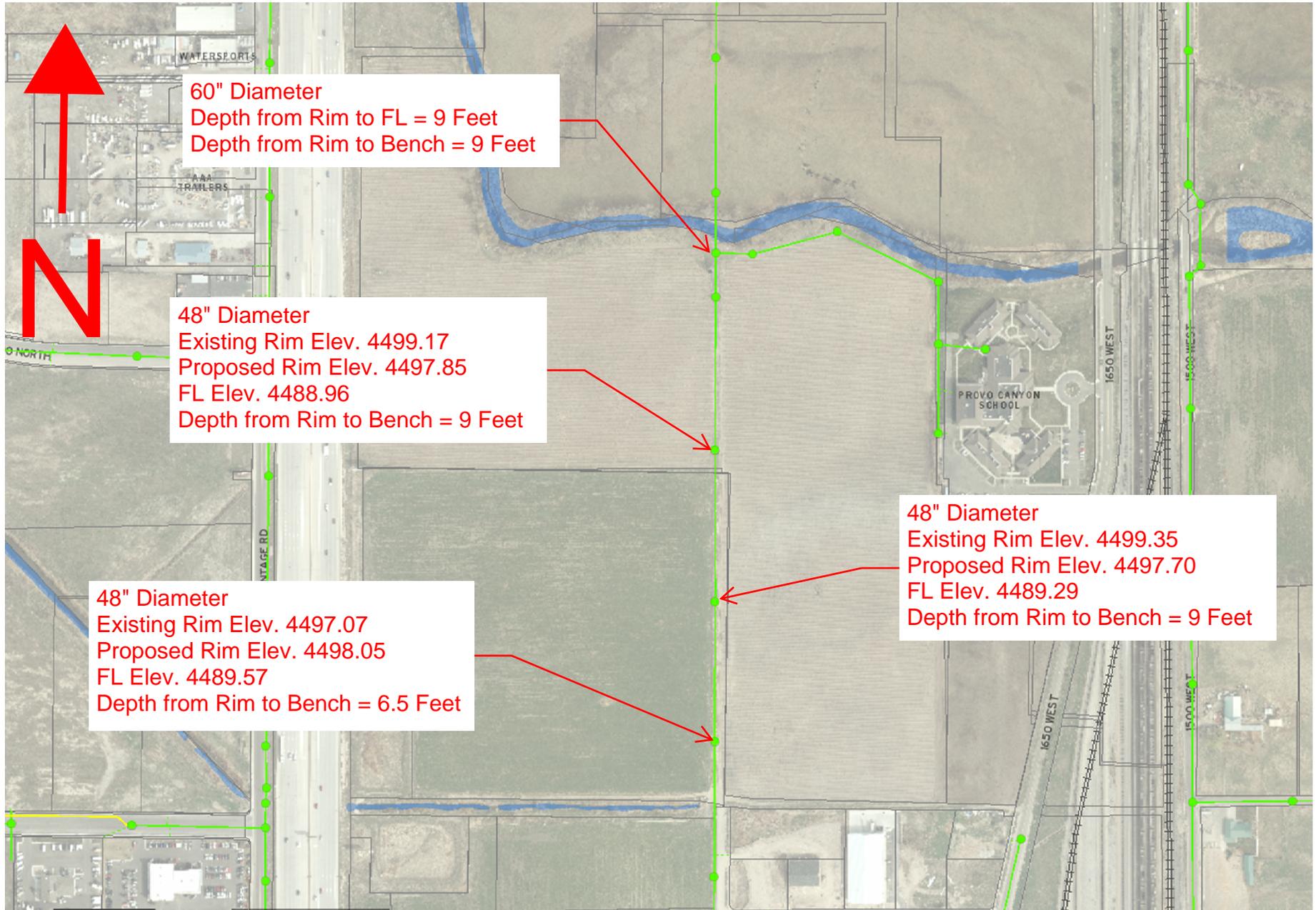
(Signature)

(Print Name and Title)

(Name of Partnership or Corporation)

RESPONDENT

EXHIBIT "A"



60" Diameter
Depth from Rim to FL = 9 Feet
Depth from Rim to Bench = 9 Feet

48" Diameter
Existing Rim Elev. 4499.17
Proposed Rim Elev. 4497.85
FL Elev. 4488.96
Depth from Rim to Bench = 9 Feet

48" Diameter
Existing Rim Elev. 4497.07
Proposed Rim Elev. 4498.05
FL Elev. 4489.57
Depth from Rim to Bench = 6.5 Feet

48" Diameter
Existing Rim Elev. 4499.35
Proposed Rim Elev. 4497.70
FL Elev. 4489.29
Depth from Rim to Bench = 9 Feet

EXHIBIT "B"

Structural Sewer Manhole Rehabilitation System For Existing Manholes

Section 1 - General

1.1 WORK OF THIS SECTION

- A. The Work of this section includes providing a structural resin aggregate manhole insert system such that manholes become structurally sound and impervious to ground water, soil, debris, and are resistant to hydrogen sulfide (sulfuric acid) corrosion. Manhole rehabilitation riser sections shall be constructed of supplier-certified isophthalic polyester resin, sand and aggregate.
- B. The Contractor is cautioned that sewage will continue to flow through the manholes and by-passing of flows may be required.
- C. The Contractor is cautioned that the WORK must be performed under permit required for confined space entry conditions.
- D. The Contractor is responsible for the complete installation of the manhole insert system including the removal of all old loose material, any pre-installation surface preparation and any manhole insert component.
- E. Manholes shall be manufactured in compliance with this specification, as manufactured by Armoroack Polymer Products or engineered pre-approved equal.

Section 2 – Reference Documents

Manhole rehabilitation riser sections shall conform to the following design criteria:

- A. ASTM C – 478 Standard Specification for Precast Reinforced Concrete Manholes Sections (Structural intent only)
- B. ASTM D – 6783 Standard Specification for Polymer Concrete Pipe (material mix design)
- C. ASTM C – 587 Standard Practice for Minimum Structural Design Loading for Underground Utility Structure
- D. ASTM D -- 2584 (most current) Test Method for Ignition Loss of Cured Reinforced Resins
- E. ASTM C -- 497 (most current) Test Methods for Concrete Pipe, Manhole Sections, or Tile
- F. AASHTO HL 93 - LRFD Bridge Design and Axial Load Specifications

Section 3 – Product Description

- 1. Insert system shall contain sufficient structural strength to carry all live, dead and hydrostatic loads for the installation. The original manhole that is being rehabilitated will not be repaired or rehabilitated since the insert system will be capable of providing all necessary structural support.
- 2. Acid resistant polymer manhole riser, cone sections and related components shall conform to the structural intent of ASTM C – 478. ASTM C – 478 material and manufacturing is allowed compositional and dimensional differences required by a polymer product.
- 3. Riser sections and eccentric cones are provided with flush edge configurations assembled with the appropriate alignment guides gaskets and/or butyl mastic to make a continuous and uniform manhole.

4. Polymer manhole riser and cone sections are to be provided in various lengths in combination to provide correct height with the fewest joints.
5. The polymer manhole sleeve will have a minimum wall thickness of 2" and an outside diameter clearance of 1.5". Additional wall thickness may be required for interior dimensions in excess of 72"
6. Excessive compression and tensile strengths (as compared to ASTM C – 478) indicate that no reinforcement is required. Manufacture will determine the need for and type of reinforcement as it pertains to safety and lifting requirements.
7. Surfacing shell material for invert benches shall be an epoxy approved by the municipality and polymer manufacturer.

Section 4 - Design / Design Criteria

Manhole risers, conical tops, slab tops and grade rings shall be designed, by manufacturer, to meet the intent of ASTM C 478 with allowable compositional and sizing differences required by a polymer product and modification to accept polymer construction in lieu of concrete as follows:

1. AASHTO LRFD HL-93 design live loading applied to manhole cover and riser sections.
2. Polymer manholes will be designed based upon live and dead load criteria in ASTM C 857
3. Polymer Mixture - the mixture shall consist solely of thermosetting resin, sand and aggregate. Resin used shall be unsaturated, certified, isophthalic polyester resins or vinyl ester resins. Mixing lots of resin from different manufacturers is not allowed. No cementitious or calcium carbonate materials shall be allowed.
4. Thermosetting Resin - The resin shall have a minimum of deflection temperature of 158° F when tested at 264 psi (1.820 mPa) following Test Method D 648. The resin content shall not be less than 7% of the weight of the sample as determined by test method D 2584. Resin selection shall be suitable for applications in the corrosive conditions to which the structures will be exposed.
5. Required wall thickness for all members will be a minimum of 2". The wall thickness of risers and conical tops shall be not less than that prescribed by the manufacturer's design by more than 5%. A wall greater than the prescribed design shall not be cause for rejection.
6. Manhole joints shall be of a flush flat edge design that on assembly with alignment guides and gaskets and/or butyl mastic will make a continuous and uniform manhole. Joint sealing surfaces shall be free of dents, gouges and other surface irregularities that would affect joint integrity.
7. Each manhole component shall be free of all defects, including indentations, cracks, foreign inclusions and resin starved areas that, due to their nature and degree or extent, detrimentally affect the strength and serviceability of the component part. Variations in height of two opposite sides of risers and conical tops shall not be more the 5/8 inch. The under run in height of a riser or conical top shall not be more than 1/4in. /ft. of height with a maximum of ½ inch in any one section.
8. Marketing and Identification - Each manhole shall be marked on outside with the following information - Manufacturer's name or trademark, Manufacturer's location and Production Date.
9. Invert channels are to provide smooth flow transition waterway with no disruption of flow at pipe-manhole connections. Invert slope through manhole is as indicated on drawings. Provide curves for side inlets and smooth invert fillets for flow transition between pipe inverts. Unexposed support areas for

enclosed invert and bench areas may be constructed of fill material and coated with a covering that will interlink with wall resins to prevent fill material corrosion.

10. Exceptions to ASTM C 478- components shall be designed for the intended combinations of manufacturing materials. Component designs may be as non-reinforced members or reinforced members as recommended by the manufacturer. Steel reinforcement is not required for circumferential reinforcement, joint reinforcement, or hoop reinforcement, but may be placed for the purpose of product handling.

Section 5 – Installation

Manhole installation should strictly follow the manufactures recommended installation procedures.

1. Excavate the area around the manhole as necessary to provide for removal of existing cone and castings while preventing soil and debris from falling into the manhole.
2. Follow all requirements for safety and ventilation in accordance with all applicable federal, state and local requirements.
3. Provide means, labor and equipment to prevent solid waste contamination during construction activities. If necessary install and operate sewage diversion pumping equipment to maintain sewage flows without backup, overflow or spill.
4. Make repairs necessary to existing manhole in order to receive inserts. Power -wash / clean any loose debris from wall areas. Remove dirt, grease, and debris in bench area to prepare bench surfaces for resurfacing. Remove all debris without allowing any to enter the sewage system. Repair any active leaks. Repair and level the bench to prepare for polymer insert installation. Saw cut polymer riser section if necessary to accommodate pipe entry and bench slopes.
5. Depending on invert configuration the bench area should be prepared by building up the bench section with a Portland cement and sand mixture to provide a clean level surface to receive the riser. This build up should allow for a level surface above the existing top of the highest pipe. If pipe inverts are severely staggered the initial polymer sleeve can be modified in the field to accommodate the difference in bench slopes. After grout has set, lower the first riser section, clean and wipe down the polymer riser wall above the bench to allow for application of the epoxy coating. Epoxy coatings will be chosen from those epoxies suggested by the polymer manhole manufacturer. Follow all coating manufacturer's recommendations.
6. When the new bench configuration is sufficiently dry and clean, a thin epoxy shell coating will be built over the bench. The epoxy shell should continue 6" up the polymer riser face to allow for polymer interlinking. No additional surface coating is required as the riser sections are structural and corrosive resistant throughout.
7. All non-booted or flexible coupler pipe entry areas will be grouted by an epoxy patch kit provided by the manufacturer.
8. After the initial bottom seal has cured the additional remaining riser sections and cone shall be installed using the appropriate wall alignment guides, gaskets and/or mastic. The risers will be offloaded and lifted into place with approved manufacturer's lifting device. No other handling apparatus will be acceptable for handling material.

9. Fill the annular space between old and new structure with a one sack slurry mix / mixed fill, stabilized sand or stone (85% standard proctor) or a backfill material shall be subject to approval by engineer / owner.

10. Install polymer grade rings / concrete epoxy coated grade rings /or non-corrosive EPP grade rings, and casting. Grout where required with the manufacturers grout kit.

11. Finish the remainder of the backfill, remove any deleterious materials and debris from the manhole and replace pavement if required.

12. Upon completion of the installation process the contractor shall remove all surplus materials, protective coverings, accumulated rubbish, and thoroughly clean all surfaces and repair any other installation related damage as required by owner. All external surface areas shall be repaired and returned to its original or required condition. All debris shall be collected and hauled off to a proper disposal site as required by local, state and federal regulations.

Section 6 – Certification / Warranty / Inspection

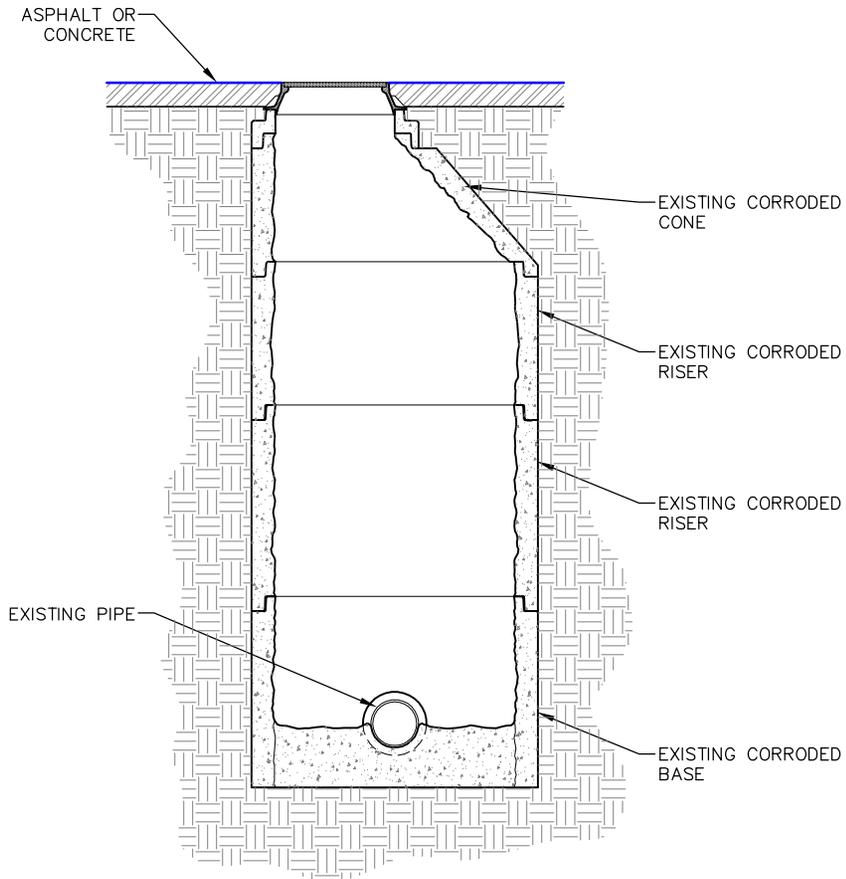
When requested by owner, a certification can be made the basis of acceptance. This will require the material supplier to provide a copy of the appropriate test results that show that the polymer material meets the requirements listed in this specification and for any other qualified specification required by the owner for that particular project at time of bid.

1. The installing contractor shall demonstrate applicable experience and performance history by submitting references from a minimum of 3 other rehabilitation projects or shall have a minimum of five years' experience installing standard sanitary manholes and a certification of training from the manufacturer on a structural manhole insert system.

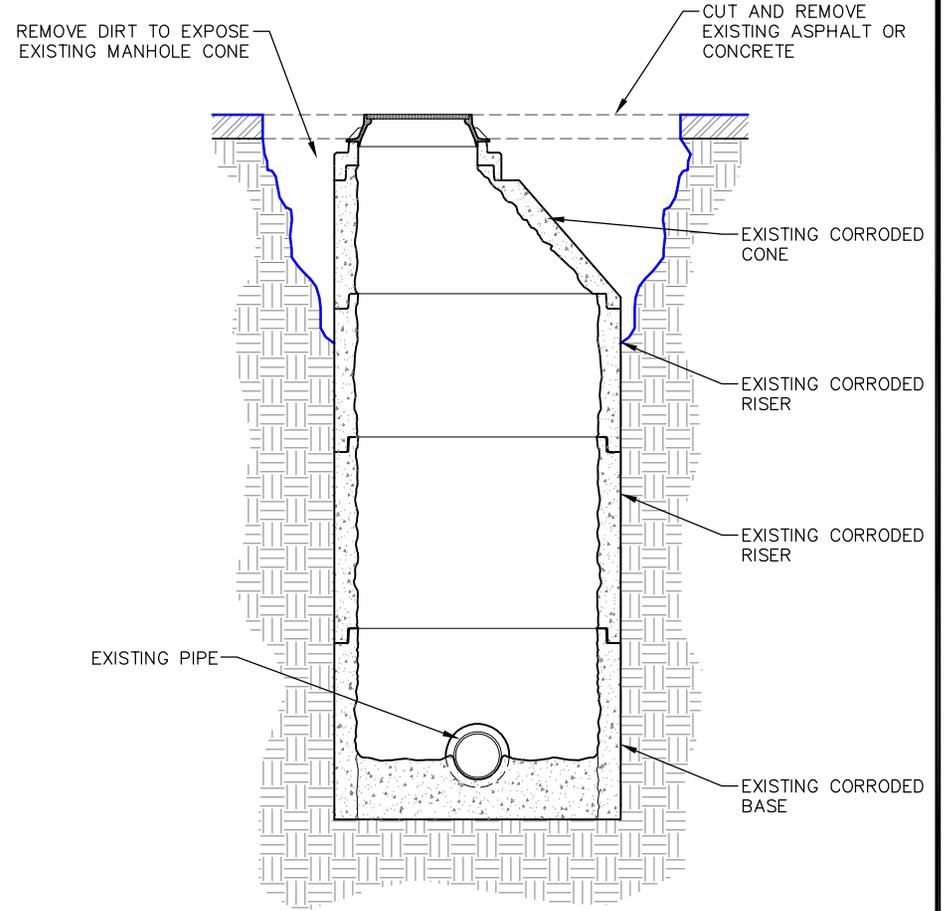
2. The installing contractor will appoint a Quality Assurance Manager to take full responsibility for the quality of work. The Quality Assurance Manager will at a minimum meet the requirements of Section 6 (1) and will coordinate with polymer manufacture on appropriate procedures. A Manufacturer's Field Representative can be made available to the contractor at additional cost.

3. The polymer riser and cone sections shall be subject to inspection and approval by the owner or the owner's engineer representative. At the time of inspection all material will be examined for specification compliance and approved drawings. Any sections damaged after delivery and not deemed repairable by the Manufacturer's Representative and owner representative - will be removed and replaced at contractor's expense.

EXHIBIT "C"



SECTION VIEW
(EXISTING MANHOLE)



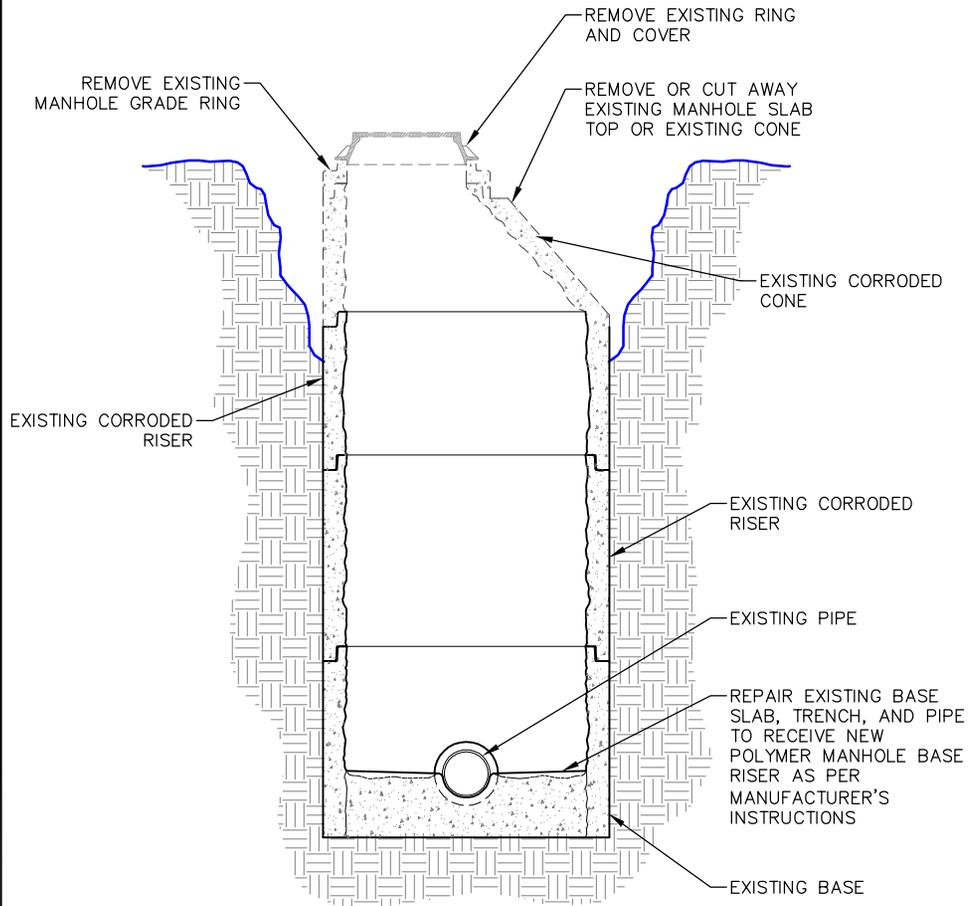
SECTION VIEW
(EXISTING MANHOLE)

NOTES:

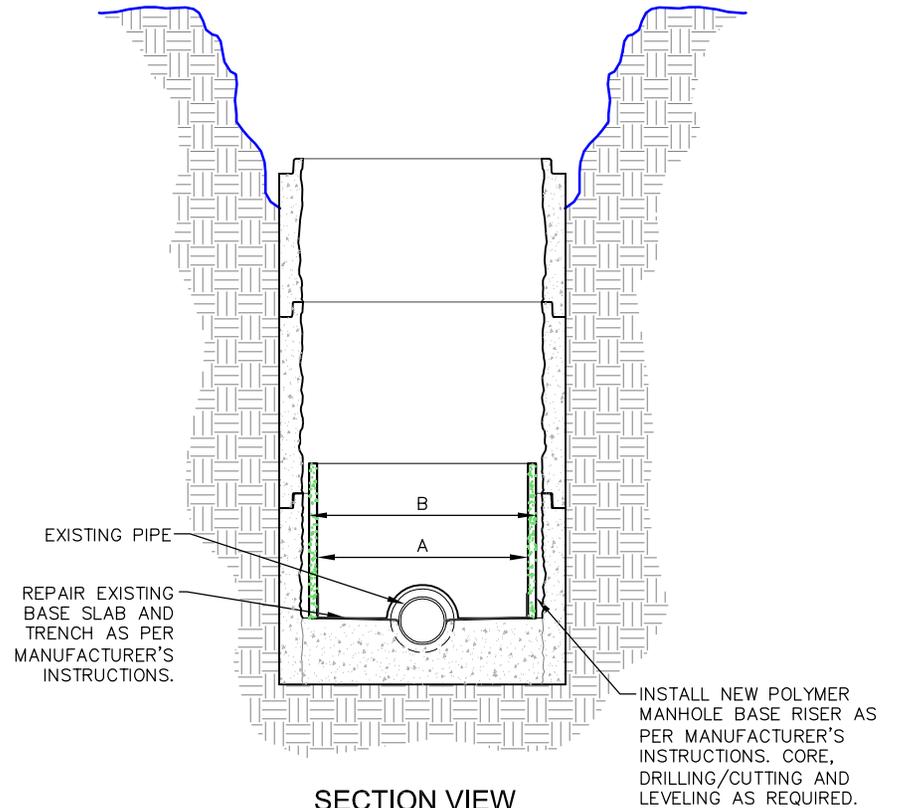
1. THE ABOVE NOTES ARE GENERIC IN NATURE. CONTRACTORS SHOULD CONTACT GENEVA POLYMER PRODUCTS FOR INSTALLATION INSTRUCTIONS/CERTIFICATIONS AND ADDITIONAL INFORMATION
2. CONTRACTOR IS TO FOLLOW CONFINED SPACE PROCEDURES AT ALL TIMES.

US PATENT 9,631,339

SHEET:		48" - 60" POLYMER REHAB. MANHOLE	
SCALE:	AS SHOWN	DRAWN:	RMP
DATE:	5-22-2017		
PROJECT:			
INSTALLATION GUIDE			
			Sheet 1



SECTION VIEW
(EXISTING MANHOLE)



SECTION VIEW
(NEW POLYMER REHAB. BASE)

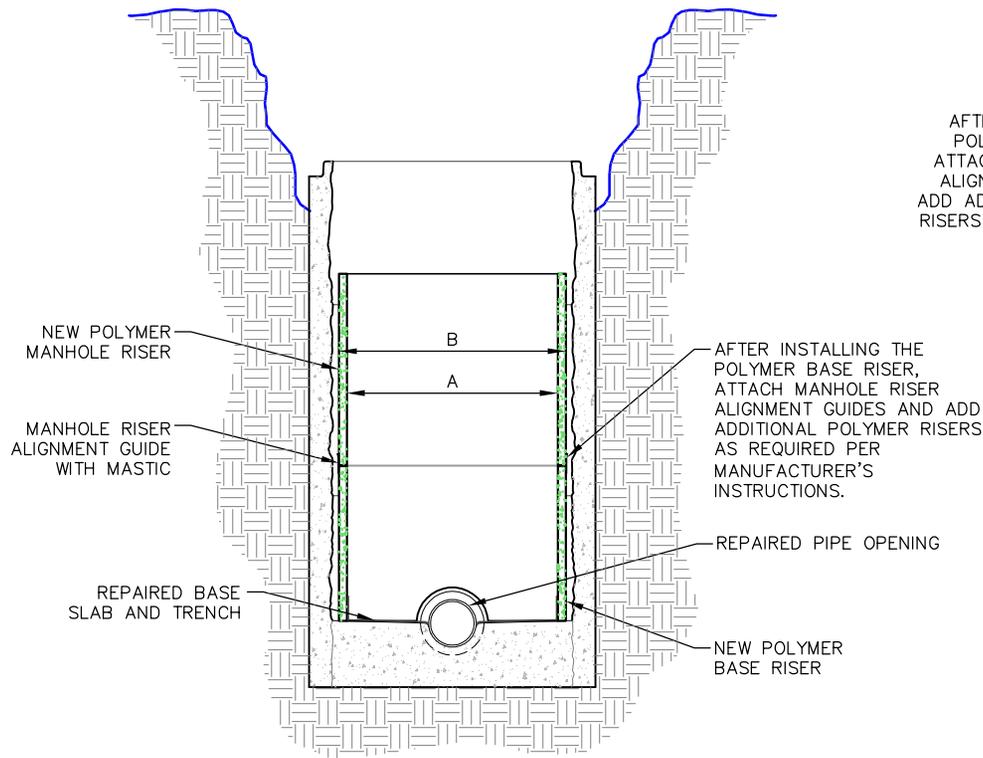
NOTES:

1. THE ABOVE NOTES ARE GENERIC IN NATURE. CONTRACTORS SHOULD CONTACT GENEVA POLYMER PRODUCTS FOR INSTALLATION INSTRUCTIONS/CERTIFICATIONS AND ADDITIONAL INFORMATION
2. CONTRACTOR IS TO FOLLOW CONFINED SPACE PROCEDURES AT ALL TIMES.

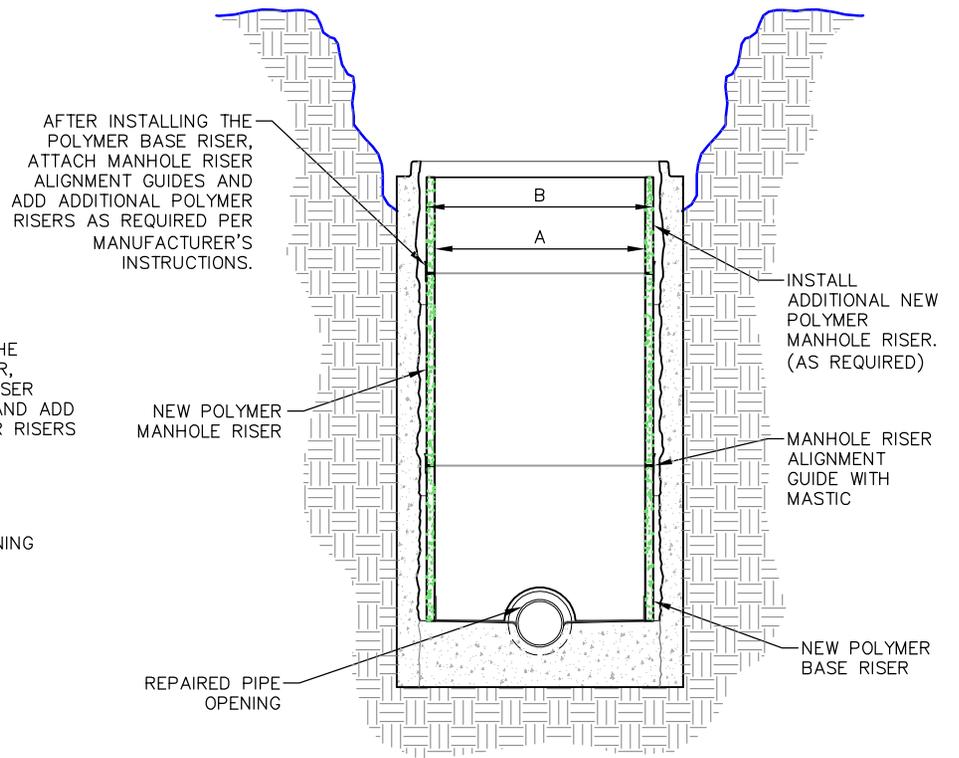
POLYMER REHABILITATION SPECIFICATIONS					
A	B	WALL THICKNESS	AVAILABLE BASE HEIGHTS	AVAILABLE RISER HEIGHTS	WEIGHT PER FOOT
41"	45"	2"	NA	1', 2', 3', 4'	260 lb/ft
53"	57"	2"	NA	1', 2', 3', 4'	330 lb/ft

US PATENT 9,631,339

SHEET:		48" - 60" POLYMER REHAB. MANHOLE	
SCALE:	AS SHOWN	DRAWN:	RMP
DATE:	5-22-2017		
PROJECT:			
INSTALLATION GUIDE			
			Sheet 2



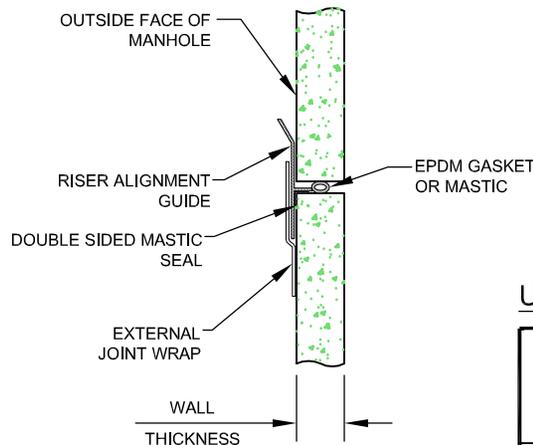
SECTION VIEW
(NEW POLYMER REHAB. BASE AND RISER)



SECTION VIEW
(NEW POLYMER REHAB. BASE AND RISERS)

NOTES:

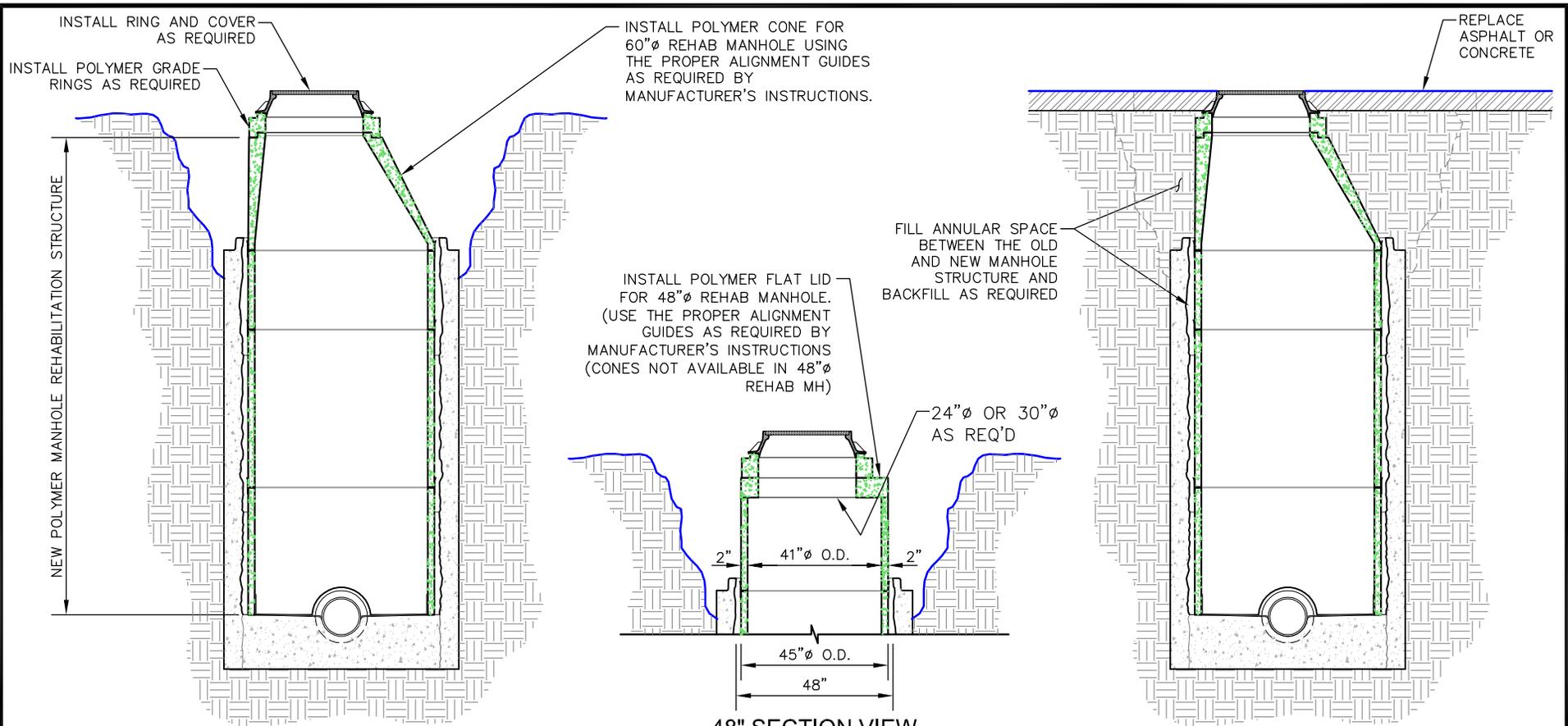
1. THE ABOVE NOTES ARE GENERIC IN NATURE. CONTRACTORS SHOULD CONTACT GENEVA POLYMER PRODUCTS FOR INSTALLATION INSTRUCTIONS/CERTIFICATIONS AND ADDITIONAL INFORMATION
2. CONTRACTOR IS TO FOLLOW CONFINED SPACE PROCEDURES AT ALL TIMES.



POLYMER REHABILITATION SPECIFICATIONS					
A	B	WALL THICKNESS	AVAILABLE BASE HEIGHTS	AVAILABLE RISER HEIGHTS	WEIGHT PER FOOT
41"	45"	2"	NA	1', 2', 3', 4'	260 lb/ft
53"	57"	2"	NA	1', 2', 3', 4'	330 lb/ft

US PATENT 9,631,339

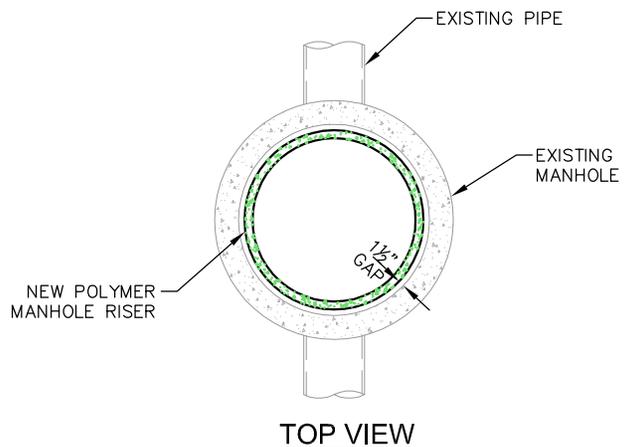
SHEET: 48" - 60" POLYMER REHAB. MANHOLE			
SCALE:	AS SHOWN	DRAWN:	RMP
DATE:	5-22-2017		
PROJECT: INSTALLATION GUIDE			
			Sheet 3



60" SECTION VIEW
(NEW POLYMER REHAB. STRUCTURE)

48" SECTION VIEW
(NEW POLYMER REHAB. STRUCTURE)

BACKFILLED SECTION VIEW
(NEW POLYMER REHAB. STRUCTURE)



TOP VIEW

- NOTES:**
1. THE ABOVE NOTES ARE GENERIC IN NATURE. CONTRACTORS SHOULD CONTACT GENEVA POLYMER PRODUCTS FOR INSTALLATION INSTRUCTIONS/CERTIFICATIONS AND ADDITIONAL INFORMATION
 2. CONTRACTOR IS TO FOLLOW CONFINED SPACE PROCEDURES AT ALL TIMES.

US PATENT 9,631,339

SHEET:		48" - 60" POLYMER REHAB. MANHOLE	
SCALE:	AS SHOWN	DRAWN:	RMP
DATE:	5-22-2017		
PROJECT:			
INSTALLATION GUIDE			
			Sheet 4