

**STATE OF DELAWARE / DELAWARE ARMY NATIONAL GUARD
SANITARY SEWER UPGRADES
ADDENDUM #1
February 28, 2013**

CONTRACT NO.: 11-2012

This addendum is hereby made part of the Bid Proposal for the referenced project. Please note the following additions, changes, corrections, and/or information and include the requirements stated herein in connection with this Proposal. Work or materials not specifically mentioned herein are to be as described in the original Bid Proposal Package. This Addendum consists of five (5) items on twenty seven (27) page(s) of text including this page.

Item 1 – Pre-bid Meeting Minutes and Sign-In Sheet

Attached are the meeting minutes and sign in sheet from the MANDATORY pre-bid meeting held on February 20, 2013.

Item 2 – Bid Form

Delete the Bid Form in its entirety and replace with the attached Bid Form. The Contract Duration has been set at 70 days from Contractor receipt of a Purchase Order. It is anticipated that the Purchase Order will be issued no later than April 11, 2013. On the Bid Form, two Subcontractor Categories have been added and there are three new Bid Items.

Item 3 – Bid Form

Delete Specification Section 01 20 00 – Price and Payment Procedures in its entirety and replace with the attached Specification Section 01 20 00 – Price and Payment Procedures, which includes three new Bid Items.

Item 4 – Electrical Improvements

The facility has two (2) Sewage Grinders that are being electrically upgraded under this project. One is located at Building 135 and the other is located at the RV Lot along Bares Lane. The upgrade at each grinder consist of removing the grinder's power receptacle from its vault/wet well and installing a power outlet box above grade with a PVC raceway sleeve for installation of the grinder's power cord and plug. The RV Lot sewage grinder's sleeve will include the float switch cord and interconnect plug. Refer to the four attached drawings of each sewage grinder location and the power outlet detail for the proposed upgrade work.

Item 5 – Questions from Bidders

1. Is there going to be a mobilization item added to bid form?

Yes. The attached Bid Form has been revised to include Mobilization line item.

2. Could the hot mix patching item be more clearly defined (reads min 2" type C and min 3" type B or match existing). Existing unknown? Could use SY/IN?

Delete Note 4 from the Gravity Sewer Main and Lateral Trench Detail. Contractor is to provide a 2" surface coarse of Type C Hot-Mix over an 8" deep lift base coarse of Type B Hot-Mix regardless of existing conditions.

3. Will infra riser rubber grade rings be required on all manholes even when 1' above grade? Typically they are used only in the paved areas at grade.

Delete all references to Infra Risers. They are not required on this project.

4. There are 24" dia and 30" dia MH frame and Covers detailed on sheet D-01. Which will be used?

Manhole frames and covers shall be 24" in diameter. Delete all references to 30" diameter frames and covers.

5. Do the manhole frame and covers only have to read "Sanitary Sewer" and nothing else?

Manhole covers shall read "Sanitary Sewer".

6. Are the stainless steel anchor bolts for the frame and covers 1/2" diameter as per STANDARD MANHOLE DETAIL or should they be 3/4" diameter?

On the Standard Manhole Detail, delete the reference to 1/2" diameter stainless steel anchor bolts with 1-1/2" embedment. Stainless steel anchor bolts shall be 3/4" in diameter with 4" embedment into precast concrete flat top.

7. STANDARD MANHOLE DETAIL reads minimum 2 courses of concrete grade rings. Will this be required where manholes are above existing grade or can the frame and covers be bolted directly to the slab tops?

Concrete grade rings are not required on this project. Frames and covers shall be bolted directly to precast tops. The top of all precast manholes are to be a minimum of 1'-0" above grade.

8. UTILITY CROSSING DETAIL references concrete encasements on gas line or storm drain. Please clarify what utilities (water, electric, communications etc.) will be required to be encased when crossed. Can a unit price for concrete encasements be added to bid to eliminate the guessing of how many there are going to be?

A line item has been added on the Bid Form for concrete encasements. This line item shall be used when the sewer crosses an existing storm drain, gas or water main.

9. If the existing material is found to be wet due to ground water, can it be stockpiled, dried and reused for backfill?

Yes; however, the Contract Documents require that all open excavations be backfilled at the end of each work day. There will be no additional compensation from Owner to move material to and from stockpile and to dry the material.

10. Will the Test Pits (Item 12A) be quantified and paid for as deemed necessary and at the discretion of the contractor or only as directed by the engineer/inspector ?

Contractor will identify where he requires test pits and request approval from inspector prior to excavation of test pits.

END OF ADDENDUM #1



MANDATORY PRE-BID MEETING MINUTES

Date: February 27, 2013
To: Meeting Attendees
From: Gerald N. Katzmire
Subject: State of Delaware / Delaware Army National Guard
Sanitary Sewer Upgrades
Contract No.: 11-2012

PRE-BID CONFERENCE:

ATTENDEES: Sign In sheet attached.
LOCATION: Bethany Beach Training Site
163 Scannell Blvd
Bethany Beach, DE 19930

On February 20, 2013 there was a mandatory Pre Bid Conference for Bid #11-2012, the Sanitary Sewer Upgrades at the Bethany Beach Training Facility. Bill Davis, Contracting Specialist, and Gerald Katzmire from URS Corporation conducted the meeting. The following items were discussed:

- PB-1 Mr. Davis made introductions and requested that everyone sign in as this was a mandatory pre-bid meeting. Only those contractors on the sign in sheet are permitted to bid on the project. Addenda will be issued only via email.
- PB-2 Mr. Davis informed all attendees that sealed Bids for the DEARNG Contract No. 11-2012 – Bethany Beach Training Site, Sanitary Sewer Upgrades will be received by the Delaware Army National Guard at the Security Officer’s Desk in the main lobby of the Joint Force Headquarters, Sherwood Park II, First Regiment Road, Wilmington, Delaware, 19808-2191 until 2:00 PM local time on March 8, 2013 at which time the Bids will be publicly opened and read aloud in the conference room. All Bids received after the stated time will be returned unopened.
- PB-3 The bid forms provided with the Contract Documents must be used. Do not use any other forms. Please provide your bonding company with the forms included in the contract documents. The non-collusion form must be signed. In general, the State of Delaware procurement regulations will be followed.
- PB-4 Requests for Substitutions must be submitted in writing to URS at least 10 days prior to the Bid Opening. Please review Section 3.3 in the Instruction to Bidders. Any questions are to be

submitted in writing, 7 days or more prior to bid opening date, to Ed Strauss from URS Corporation, e-mail Ed.Strauss@urs.com .

PB-5 The Project is subject to the Prevailing Wage Rate requirements in the Delaware Code. Prevailing Wages for Sussex County Heavy Construction are included in the Contract Documents.

PB-6 The State of Delaware reserves the right to reject any and all Bids.

PB-7 The Subcontractor List must be filled out for each category. If the Contractor elects to perform the work under a Subcontractor category, he must list himself for that category, and meet all the requirements as stated in the Project Manual for performing the work under that category.

PB-8 The contract time will be listed in the first addendum.

PB-9 Jerry Katzmire discussed the scope of the work.

- The work generally includes the removal and replacement of existing pipe and manholes along with the re alignment of pipe in at least one location. Generally, the depth of the existing pipe is very shallow.
- The Contractor is to completely dewater trenches prior to installation of pipe. Well pointing may be required to properly dewater trenches. If well pointing is required, the Contractor is responsible for obtaining permits and complying with all regulations and permit conditions associated with well pointing.
- It is intended to reuse existing excavated material to backfill excavations. Where existing material is not suitable, Type "C" borrow backfill is to be imported. If the existing material is not suitable for backfill due only to its being wet, the Contractor will not be paid for imported borrow.
- The location of existing utilities shown on the Contract Plans is based on the best available data. Under Bid Item 12, the Contractor is required to retain the services of a Utility Locating Firm to investigate, trace and mark out the location of all utilities at the site in the areas of proposed excavation prior to the excavation taking place. The location of existing utilities shall be verified by test pits.
- All work must be performed in accordance with the Erosion and Sediment Control requirements shown on the Contract Plans.
- Contractor will be expected to conduct his work in a safe manner and in accordance with OSHA requirements including meeting all the requirements for a safe trench including shoring requirements and dewatering.
- The proposed work is being completed within an established and fully operational Delaware Army National Guard Training Facility. The Contract Documents include specification Section 01 31 13 - Project Coordination that requires Contractor notifications and coordination with the Engineer and National Guard prior to execution of the work.
- Contractor should review the Bid Form and Section 01 20 00, Price and Payment Procedures of the Contract Documents in detail for bid items, the scope of work included in each bid item and maximum payment widths.

- There will be at least one addendum issued prior to Bid. The addendum will add a small electrical component to the Project involving shifting two small pump station electrical connections from inside existing wet wells to a box mounted above grade.

Questions and Discussion:

- All work is to be completed by May 24, 2013.
- Works hours are typically 7:00 AM to 4:30 PM Monday through Friday. Work on the weekends is prohibited. On some occasions the work hours are modified to 7:00 AM to 3:30 PM.
- The following days make up what are called Drill Weekends:

April 5-7; May 3-5; May 31-June 2

At the end of the day on the Thursday prior to the start of a Drill Weekend, all roads must be accessible and sewer piping prepared for maximum flows. Work is permitted on Friday, but all roads must be accessible and higher sewer flows are to be expected.

- Site contacts are Chief Conway (302.854.7693, 302.841.5793) and Master Sergeant Hitchens (302.388.1043).
- Flow within the sewers during the week is minor. There are more people present on weekends, potentially as many as 75.
- Existing pipe is VCP and will be replaced with PVC.
- Existing square manholes are to be replaced with round pre-cast manholes with flat tops.
- There are no photo restrictions on the site.
- Potable water will be provided by the facility. A hydrant will be identified for the Contractor's use. Contractor is to provide a backflow prevention device for the water supply.
- If concrete is encountered in the road, it is to be removed and replaced with asphalt as shown on the detail.
- Connections to existing laterals must be televised after construction.
- Pipe will be televised after installation. Care should be taken in laying pipe at the grade required. Bellies and sags in the pipe are unacceptable and pipes with bellies or sags will be deemed unacceptable and the Contractor will be required to remove and replace this unacceptable pipe.

Sign In Sheet

Project: State of Delaware
 Delaware Army National Guard
 Contract 11-2012

Date: February 20, 2013

Meeting: Pre Bid Meeting

PLEASE PRINT INFORMATION CLEARLY

Name	Representing	Phone No.	Email Address
Jerry Katzmire	URS Corporation	302-463-3408 (Cell)	Gerald.Katzmire@urs.com
Ed Strauss	URS Corporation	302-781-5900	Ed.Strauss@urs.com
Derek Jones	George's Lunch	302-736-3031	djones@gedlyn.com
Tim Thickett	White Marsh	302-218-6915	TThickett@white-march.com
Michael Neuman	White Marsh Env.	410-980-8127	mneuman@stivater.com
Paul Peiris	White Marsh	302-218-8534	peris@stivater.com
Scott Fowler	A.P. Collt Son, Inc	302-856-6177	scottf@aperoll.com
CHAD FEED	TEAL CONSTRUCTION, INC	302-678-9500	chad@tealconstruction.com
FRANK STROBE	DAISY CONSTRUCTION CO	302-658-4417	FRANK@DAISYCONSTRUCTION.COM
FRANK ASBURY	DAISY CONSTRUCTION CO	302-293-2780	FRANK@DAISYCONSTRUCTION.COM
DWAYNE ROSLEY	COMMAL SEUSE SAUTONS	302-258-8061	DROSLEY@CSS-DE.COM
WARREN DITFIELD	Thompson Pump Co	410-251-4474	wditfield@thompsonpump.com
Jon Baker	A-Del Construction Co.	302-415-3-8286	jbaker@adel.com
Tom Moore	American Infrastructure	302-883-3501	Tom.Moore@AmericanInfrastructure.com
JOEL CHRISTMAN	JTD, Inc	302-836-0414	jchristman@jtd.com
Dale Brackin	Gedlin/Kylem	856-461-3636	dale.brackin@gedlyn.com
GEORGE THELEN	RAI FOR RENT	856-881-6162	GTHELEN@RAIFORRENT.COM
Scott Whitt	Clean Venture Inc	443-880-3165	SWhitt@CleanVenture.com
Blayne BRIGNARD	Guardian Environmental	302-218-4858	Blayne@guardianenv.com
DWAYNE MATIX	F. DAVIS JONES SURVEYING	410-543-2615	fdjones@jonesurveying.com

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Surveying Associates

GREGG THOMAS FERGUSON WTB@WORLD 410.677.6793
gregg.thomas@ferguson.com

PAT McNEALS REYBOLT CONSTRUCTION 302 388 6712 P.McNEALS@REYBOLT.COM

John Colpo Harry Cuswell INC. 302-945-5322 Harry.Cuswell.Inc@att.net

SANITARY SEWER UPGRADES
BETHANY BEACH TRAINING SITE
DEARNG CONTRACT NO. 11-2012

BID FORM

For Bids Due: _____

To: **DELAWARE ARMY NATIONAL GUARD**

Joint Force Headquarters

First Regiment Road

Wilmington, DE 19808-2191

Name of Bidder: _____

Delaware Business License No.: _____ Taxpayer ID No.: _____

(Other License Nos.): _____

Phone No.: () _____ - _____ Fax No.: () _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

UNIT PRICES

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

Item No.	Description	Unit	Quantity	Unit Price	Total Price
1	Mobilization	LS	1		
2	Traffic Control	LS	1		
3	Bypass Pumping	LS	1		
4	Restoration	LS	1		
5	Install 8" PVC Gravity Sewer Pipe from 0'-0" to 8'-0" Deep	LF	1450		
6	4" and 6" PVC Gravity Sewer Lateral Connections	LF	150		
7	4'-0" Diameter Manhole at 0'-0" to 8'-0" Deep	EA	14		
8	Remove Existing Concrete Road Subbase	SY IN	540		
9	Well Pointing	LF	1,450		
10	Hot Mix Patching	SY	110		

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11	Dye Testing Service Connections	EA	15		
12	Subsurface Utility Investigation & Location				
	12A - Utility Locating Firm	HR	24		
	12B - Test Pits	EA	15		
13	Type C Select Borrow	CY	500		
14	Removal of Concrete Encased Sewer Pipe and Manholes	CY	100		
15	Concrete Encasement for Utility Crossings	EA	10		
16	Electrical Improvements	LS	1		
	Base Bid				

\$ _____
 (base bid amount written in words)

SANITARY SEWER UPGRADES
BETHANY BEACH TRAINING SITE
DEARNG CONTRACT NO. 11-2012

BID FORM

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for 60 days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within 70 calendar days of the Notice to Proceed.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)
Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Security
- (Others as Required by Project Manuals)

SANITARY SEWER UPGRADES
BETHANY BEACH TRAINING SITE
DEARNG CONTRACT NO. 11-2012

BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City & State)</u>
1. Site Work	_____	_____
2. Electrical	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____

SANITARY SEWER UPGRADES
BETHANY BEACH TRAINING SITE
DEARNG CONTRACT NO. 11-2012

BID FORM

NON-COLLUSION and EPLS DISCLOSURE STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the State of Delaware, Delaware Army National Guard.

In addition, by signing this Statement, the undersigned bidder certifies that it is currently not listed as a suspended or debarred party on the Excluded Parties List System (EPLS.)

All the terms and conditions of *DEARNG CONTRACT NO. 11-2012* have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____ NOTARY PUBLIC _____

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

SECTION 01 20 00 – PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 GENERAL

- A. Payment for the work completed under this Contract will be made at the lump sum and unit prices bid, which shall include the furnishing of all labor, tools, equipment and materials, and performance of all work required to complete the project as indicated and specified in accordance with all requirements of the Contract Documents and to the entire satisfaction of the Owner's Engineer. These payments will be less retainage as defined in the Standard Form of Agreement Between Owner and Contractor.
- B. All incidental and miscellaneous items, work, and materials for which no specific bid item is shown and which are necessary to complete the project in accordance with the contract documents and to maintain and/or repair the work are incidental to the bid items listed below and shall be done and furnished by the Contractor without extra charge.

1.02 AUTHORITY

- A. The Contractor shall provide the services of a Delaware registered surveyor to take all measurements and compute quantities. The Engineer will verify measurements and quantities.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities and measurements indicated in the Bid Tab are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer shall determine payment. The Owner is not liable to the Contractor for any additional compensation based on any variance between the estimated quantities and the actual quantities installed during the course of the Project. The Contractor shall be paid solely for the actual quantities of items installed at the bid price.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.

1.04 MEASUREMENT OF QUANTITIES

- A. Lineal Foot
 - 1. Measurement of lineal feet to be paid under this section shall be the actual number of lineal feet of material installed in accordance with these specifications, measured as described further in this section, complete, in place and accepted.

2. The cost of any connections of couplings shall be included in the price bid per linear foot for this item.

B. Square Yards

1. Measurement of square yards of material to be paid under this section shall be the actual number of square yards of material installed in accordance with these specifications, measured from end to end, complete, in place and accepted.

C. Cubic Yards

1. Measurement of cubic yards of material to be paid under this section shall be the actual volume of cubic yards of material installed in accordance with these specifications, measured from end to end, complete, in place and accepted.
2. The maximum payment width for pipe trenches shall be as shown on the drawings.

D. Each

1. The number of each item installed shall be measured on the actual number of each unit installed in accordance with the plans and specifications, complete, in place and accepted.
2. The cost of any incidentals shall be included in the price bid for this item.

E. Lump Sum

1. This item will not be measured.

F. Tonnage

1. The quantity of tonnage to be measured will be the actual number of tons provided, as documented by certified weight slips, complete, in place and accepted.

1.05 PAYMENT

- A. Payment includes: Full compensation for all required labor, Products, tools, equipment, plant, transportation, services and incidentals, erection, application or installation of an item of the Work; overhead and profit.
- B. Final payment for work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the engineer multiplied by the unit price for work which is incorporated in or made necessary by the work.

C. Lineal Foot

1. The number of lineal feet as determined above shall be paid for at the contract unit price per lineal foot bid for this item.

D. Square Yards

1. The square yards of material as measured above shall be paid at the contract unit price bid for the item.

E. Cubic Yards

1. The Cubic yards of material as measured above shall be paid at the contract unit price bid for the item.

F. Each

1. The number of each item as determined above shall be paid for at the contract unit price bid for the item.

G. Lump Sum

1. The contract lump sum price will be made under this item in proportion to the amount of work done as determined by the Engineer.

H. Tonnage

1. Tonnage will be paid at the contract unit bid price for this item upon receipt of certified weight slips.

1.06 Bid Items

A. Bid Item 1- Mobilization

1. Measurement - The Lump Sum payment for this item will be full compensation for providing initial services and facilities required to mobilize for and commence the work of this project as shown, specified and required to provide a complete project.
2. Payment: The payment for mobilization will be made at 50 % on the first payment requested with the remainder paid in even monthly increments spread out over the Contract Time. Costs to be included under this item shall include such items as bonds, insurance, shop drawings, submittals, temporary facilities and controls, permits, progress schedules, notifications along with other costs and incidentals associated with initiating the work. The maximum amount bid for this item shall not exceed 5% of the sum of the items 2 through 16.

B. Bid Item 2 - Traffic Control

1. Measurement – This item will not be measured. The lump sum payment for this item is for the control of traffic throughout the course of the project in accordance with the latest edition of the Delaware Manual on Uniform Traffic Control Devices and permit for the project.
2. Payment – Payment will be based upon completion of the work in accordance with the Plans and Specifications. The price bid shall include, but not be limited to furnishing, transporting and setting up all lights, signs, flags, equipment, materials and labor including flagmen when required to complete the work in accordance with the latest edition of the Delaware Manual on Uniform Traffic Control Devices.

C. Bid Item 3 – Bypass Pumping

1. Measurement – This item will not be measured. The lump sum payment for this item will be full compensation for all work related to the bypass pumping of sewage around the work in accordance with the plans and specifications.
2. Payment - The contract lump sum price will be paid under this item in proportion to the amount of work done as determined by the Engineer. The price bid shall include, but not limited to: furnishing and setting up all equipment, labor, and materials necessary to control flow and pump sanitary sewage around the work and segments of pipe being rehabilitated including the bypass pumping of sewage from main line pipe and laterals; energy required for power equipment; temporary installation of by-pass pipes under the pavement of cross streets as may be required for traffic; re-paving of cross streets after removal of temporary by-pass pipes; notifications and coordination with affected property owners, construction facilities and temporary controls and all other necessary equipment, work, and materials required to accomplish sewage by-passing until completion of the rehabilitation process in accordance with the Plans and Specifications. Payment will be based upon completion of the work in accordance with the Plans and Specifications.

D. Bid Item 4 – Restoration

1. Measurement - The Lump Sum payment for this item will be full compensation for all work related to the temporary and permanent restoration of the project work area in accordance with the contract documents, complete, in place and accepted.
2. Payment - The contract lump sum price will be paid under this item in proportion to the amount of work done as determined by the Engineer. The price bid shall include, but not limited to: furnishing and setting up all equipment, labor, and materials necessary to restore the project site in

accordance with the requirements of the contract documents including notifications, coordination, environmental protection, the restoration of incidental obstructions to original or better conditions including concrete curb and sidewalk, temporary seeding, permanent seeding, temporary paving, removal of E&S Controls, storage facilities, clean up, restoration of staging areas, removal and proper disposal of surplus materials, restoration, construction facilities and temporary controls and all other work necessary to restore areas disturbed by construction.

E. Bid Item 5 – Install 8” PVC Gravity Sewer Pipe from 0’-0” to 8’-0” Deep

1. Measurement - Measurement of lineal feet to be paid under this section shall be the actual number of lineal feet of SDR 35 PVC gravity sewer pipe installed in accordance with the plans and specifications, measured along the centerline of installed pipe from center of manhole to center of manhole. The depth of the pipe shall be calculated by averaging the depth of the upstream and downstream manhole measured from the flow channel invert up to existing finished grade.
2. Payment – The number of lineal feet as determined above shall be paid for at the contract unit price bid per lineal foot for 8” SDR 35 PVC gravity sewer pipe installed and tested per the requirements of the Contract Documents. The unit price bid for these items will be full compensation for providing all labor, material, equipment, tools and incidentals necessary to furnish and install the pipe including notifications, test pits to locate utilities, saw cutting and removal of existing bituminous roadway surface and base pavement, sidewalk, curb, E&S controls, excavation, shoring, removal of soil, if required, capping of laterals to be abandoned, dewatering, removal and legal disposal of existing pipe, AASHTO # 7 stone bedding around main and lateral pipes, , placement and compaction of excavated material as backfill, testing of backfill, placement of GABC, temporary paving, CCTV inspection of pipe after placement and all other items of work necessary to furnish and install the gravity piping per the plans and specifications.

The measurement and payment for the removal of concrete road base and Type C Borrow backfill if required is not included in this Bid Item and is measured and paid under a separate bid item.

The measurement and payment for connection of the sewer to the existing wet well is included in this bid item. This water tight connection is to be made with a core drilled opening of sufficient size to accommodate Model S-316 Link-Seal Modular Seal installed in accordance with the manufacturer’s recommendations. Installation must be watertight and not allow water to leak between concrete and link seal into wet well or between link seal and pipe into wet well after the excavation around the wet well has been backfilled and the ground water level has returned to normal.

F. Bid Item 6 – 4” and 6” PVC Gravity Sewer Lateral Connections

1. Measurement – Measurement of lineal feet to be paid under this section shall be the actual number of lineal feet of SDR 35 PVC gravity lateral pipe installed in accordance with the plans and specifications, measured along the centerline of installed pipe from center of sewer main to center of proposed clean out.
2. Payment – The number of lineal feet as determined above shall be paid for at the contract unit price bid per lineal foot for 4” and 6” SDR 35 PVC gravity sewer lateral pipe installed and tested per the requirements of the Contract Documents. The price bid to install and connect the 4” and 6” PVC lateral pipes shall include but not be limited to all work necessary to locate the existing lateral pipes to verify size, location, depth and material, notifications, saw cutting and removal of existing bituminous roadway pavement, sidewalk, curb, test pits to locate existing utilities, E&S controls, excavation, shoring, dewatering, removal and legal disposal of existing pipe, the installation of new 4” and 6” PVC lateral piping, AASHTO #57 stone bedding and initial backfill, connection to existing lateral pipes with rigid couplings, the installation of new clean outs and clean out boxes furnish, place and compact existing excavated material, GABC, disposal of existing material, temporary paving, testing and all other items incidental and necessary to complete the work as specified and shown in the contract documents.

G. Bid Item 7 – 4’-0” Diameter Pre-Cast Concrete Manhole 0’-0” to 8’-0” Feet Deep

1. Measurement – Measurement will be based on the actual number of new manholes 0’-0” to 8’-0” deep installed per the requirements of the contract measured from interior downstream invert to top of precast manhole structure.
2. Payment – Payment will be based on the contract unit price bid for each new manhole installed. The price bid to install manholes includes all work necessary to furnish and install the manholes per the requirements of the Contract Documents including notifications, test pits to locate existing utilities, saw cutting and removal of existing bituminous roadway pavement, sidewalk, curb, E&S controls, excavation, shoring, dewatering, removal and disposal of existing manholes **and concrete junction box**, removal of soil material, furnishing and placement of manhole, frame and cover, bedding, rigid couplings to existing pipe as required, interior drop piping, furnish, place and compact existing excavated material as backfill, testing, manhole grade adjustment, manhole frame and cover, installation of SS anchor bolts to attach frames to precast concrete, testing, temporary paving, and all other items incidental and necessary to complete the work as specified and shown in the contract documents.

H. Bid Item 8 – Remove Existing Concrete Road Subbase

1. Measurement - Measurement of square yards inch of removed concrete road subbase to be paid under this section shall be the actual number of square yard inches of concrete subbase removed in accordance with the plans and specifications, measured from end to end for a maximum trench width of 4 feet, complete, in place and accepted.
2. Payment - The square yard inches of material as measured above shall be paid at the contract unit price bid per square yard inch removed and shall be full compensation for providing all labor, material, equipment, tools and incidentals necessary to saw cut, remove and legally dispose of excavated concrete materials in accordance with the Contract Documents.

I. Bid Item 9 – Well Pointing

Dewatering is considered incidental to all Bid Items described above, however “Well Pointing” may be required to properly dewater excavations. Dewatering by well pointing involves installing a series of small PVC or steel wells (well points) into the ground about 1.5 inches in diameter. Each well point is connected to a common header pipe. The header pipe is then connected to a pump with a large amount of vacuum power. The vacuum power produced by the pump sucks the ground water up through thin slits cut into the walls of the well points. The water then travels to the header pipe, through the pump and is discharged through an outfall line away from the site. The Contractor shall assume the well points are driven about 3 feet apart to the depth required to dewater an 8'-0" deep trench with a static groundwater table depth of 1'-0" below existing grade.

1. Measurement –Well Pointing shall be paid on a linear foot basis. The linear footage for this item shall equal to the linear footage of sewer pipe being installed for which well pointing is required, regardless of the actual footage of well pointing installed to achieve the necessary dewatering. Well pointing for manholes, or other items will be included in the footage for the pipe therefore, no additional footage will be calculated for these items. Well pointing for laterals will only be paid if additional well point piping is required and installed specifically for lateral excavation.
2. Payment - The number of linear feet of well pointing measured as described above shall be paid at the contract price for this item which price and payment shall constitute full compensation for all labor, equipment, materials, tools, coordination with DNREC, permit preparation and application to DNREC for withdrawal and discharge permits, well point and header piping, sound attenuated vacuum pump/pumps, notifications, noise control, restoration to areas disturbed by well pointing equipment and discharge piping and incidentals required to keep the excavation dry for the entire period needed to complete the work described in the Contract Documents. The price shall include all items identified in the above description of work without regard to the time needed to achieve the

necessary dewatering. The duration of the well point operation will not, therefore, be factored into the payment for this item.

J. Bid Item 10 – Hot Mix Patching

1. Measurement - Measurement of square yards of material to be paid under this section shall be the actual number of square yards of material installed in accordance with these specifications, measured from end to end for a maximum trench payment width of 7'-0" as indicated below, complete, in place and accepted.
2. Payment - The square yards of Hot Mix Patching as measured above shall be paid at the contract unit price bid for the item. Price shall include full compensation for saw cutting existing pavement, pavement removal, removing pavement base material, replacing pavement base per detail on drawings, furnishing and placing hot mix bituminous concrete in accordance with DELDOT requirements, striping and other incidentals required to complete the work per the requirements of the Contract Documents.

K. Bid Item 11 – Dye Testing Service Connections

It may be necessary for the Contractor to dye test service connections prior to lining the pipe to determine if an existing service connection is live or abandoned.

1. Measurement - Measurement will be based on the actual number of existing service connections dye tested complete, in place and accepted.
2. Payment – The number of each item as determined above shall be paid for at the contract unit price bid for this item. The unit price bid for these items will be full compensation for providing all labor, material, equipment, tools and incidentals necessary to complete the dye testing including notifications, coordination with property owners, construction facilities and temporary controls and all other items of work necessary to complete the dye testing in accordance with the requirements of the Contract Documents.

L. Bid Item 12 – Subsurface Utility Investigation & Location.

The Contractor will be required to retain the services of a Utility Locating firm acceptable to the Engineer to investigate, trace and mark out the location of all buried utilities at the site in the location of existing sanitary sewer pipe and manholes scheduled to be removed and replaced or abandoned in accordance with the Contract Documents. The location of existing utilities shall be verified by test pit.

Bid Item 12A - Utility Locating Firm

1. Measurement – Measurement for this item will be based on the actual number of hours the Utility Locating Firm works to investigate and mark out the location of existing buried utilities in areas designated for the open cut removal and replacement or abandonment of existing sewer pipe and manholes. The Owner will not be responsible to reimburse the Contractor for time related to equipment failures or inefficiencies and lost time due to poor planning. The Engineer will determine the hours to be paid under this item.
2. Payment - The hours worked as determined above shall be paid for at the contract unit price bid per hour of investigative work required to locate and mark out existing buried utilities at the site in areas designated for the open cut removal and replacement or abandonment of existing sewer pipe and manholes, and shall include, but not be limited to the furnishing of a Utility Locating Firm, all materials, labor and all other incidental items required to complete the investigation required to locate, trace and mark out the location of buried electric, telecommunications, fiber optic, water and sewer force mains at the site.

Bid Item 12 B – Test Pits

1. Measurement - Measurement will be based on the actual number of Test Pits completed, in place and accepted.
2. Payment - The number of each item as determined above shall be paid for at the contract unit price bid for this item. The unit price bid for this item will be full compensation for providing all labor, Products, material, equipment, tools and incidentals necessary to excavate and restore test pits for utilities in accordance with these Contract Documents complete, in place and accepted. The work includes but is not limited to notification of Owner personnel, saw cutting and removal of existing bituminous and/or concrete roadway pavement, sidewalk, curb, asphalt base course and disposal of all material including soil generated during the demolition. Also included in this item shall be cost to excavate the test pit, properly identify the existing utility, record its location, backfill the excavation, installation of identification warning tape, material meeting the requirements of type C backfill full depth of excavation, moisture and density control, replacement of concrete or asphalt base course, temporary paving, permanent paving, tack coat, any necessary surface preparation, curb and sidewalk replacement (where applicable), topsoiling, fertilizing, seeding, mulching, and anything else necessary for or incidental to complete this work in accordance with the plans and specifications.

M. Bid Item 13 – Type C Borrow Backfill

It is the intent of the Contract Documents that the Contractor properly dewater excavations and re-use existing excavated material to backfill excavations per the requirements of the Contract Documents. In cases where an excavation has been

properly dewatered and the existing excavated material does not meet the requirements of Type C Borrow, the Contractor, as directed by the Engineer, shall import borrow material meeting the requirements of Type C Borrow as defined by DelDOT and place and compact the Borrow backfill material per the requirements of the Contract Documents.

1. Measurement - Measurement of cubic yards of material to be paid under this section shall be the actual number of cubic yards of material installed in accordance with these specifications, measured from end to end for a maximum trench payment width of 3'-0" regardless of the actual amount of borrow material placed complete, in place and accepted.

Those areas removed or disturbed outside of the maximum payment width requiring the installation of Borrow backfill shall be replaced at no additional cost to the Owner.

2. Payment - The cubic yards of Type C Borrow Backfill as measured above shall be paid at the contract unit price bid for the item. Price shall include full compensation for the removal and disposal of existing excavated material, the furnishing and placement of imported Type C Borrow material, compaction of borrow, testing of backfill and other incidentals required to complete the work per the requirements of the Contract Documents.

N. Bid Item 14 – Removal of Concrete Encased Sewer Pipe and Manholes

The removal and legal disposal of the existing sewer pipe and manholes designated for replacement is incidental to Bid Items 5, 6 and 7. This Bid Item has been added to include a per Cubic Yard dollar amount to remove the pipe and manholes should the Contractor discover the existing pipe and manholes are encased in concrete and will be paid in addition to Bid Items 5,6 and 7

1. Measurement - Measurement of cubic yards of material to be paid under this section shall be the actual number of cubic yards of concrete removed measured from end to end, with the volume of pipe removed from the calculation, complete in place and accepted.
2. Payment - The cubic yards of concrete encasement removed as measured above shall be paid at the contract unit price bid for the item. Price shall include full compensation for the careful removal and disposal of existing concrete pipe and manhole encasements and other incidentals required to complete the work of the Contract Documents.

O. Bid Item 15 – Concrete Encasement for Utility Crossings

This Bid Item has been included to pay for the furnishing and placement of concrete encasements of pipes at utility crossings per the Utility Crossing Detail shown on the Contract Plans. Contractor shall assume that the utility being

encased in concrete is 8” in diameter, the proposed concrete encasement will extend 6” beyond the outside walls of the pipe in all directions and will be 10’-0” in length.

1. Measurement - The number of each concrete encasement furnished and installed shall be measured on the actual number of each unit installed in accordance with the plans and specifications, complete, in place and accepted.
2. Payment - Payment will be based on the contract unit price bid for each concrete utility encasement furnished and installed. The price bid includes all work necessary to furnish and install concrete utility encasements per the Utility Crossing Detail on the plans and as specified.

P. Bid Item 16 – Electrical Improvements

1. Measurement - The Lump Sum payment for this item will be full compensation for all work related to the removal of the electrical receptacles at two existing pumping stations and the installation of two power outlet boxes above grade in accordance with the contract documents, complete, in place and accepted.
2. Payment - The contract lump sum price will be paid under this item in proportion to the amount of work done as determined by the Engineer. The price bid shall include, but not limited to: furnishing and setting up all equipment, labor, and materials necessary to remove the existing receptacles, seal the block walls, install raceway sleeves, and install new above grade power outlet boxes in accordance with the requirements of the contract documents including permits and inspections, notifications, coordination, environmental protection, the restoration of incidental obstructions to original or better conditions including concrete curb and sidewalk, temporary seeding, permanent seeding, temporary paving, removal of E&S Controls, clean up, restoration of staging areas, removal and proper disposal of surplus materials, restoration, construction facilities and temporary controls and all other work necessary to complete the work.

PART 2 PRODUCTS

Not Required

PART 3 EXECUTION

Not Required

END OF SECTION

GRINDER PUMP

ROUTE EXISTING GRINDER
POWER & FLOAT CONTROL
CORDS TO NEW POWER
OUTLET BOX

2-1/2" FOR FLOAT
CONTROL PLUG

1-1/2" FOR
PUMP CORD

SCHEDULE 40 PVC
CONDUIT SLEEVES THRU WALL
ABOVE GRADE, VERTICAL RACK
MOUNTED ON WALL

EXISTING DISCONNECT
SWITCH

EXISTING H.L.A.
LIGHT MODULE

WIDE SWEEP
RADIUS

BUILDING WALL

EFFLUENT

WET
WELL

PUMP'S POWER PLUG

PUMP'S FLOAT
CONTROL PLUG

REMOVE EXISTING OUTLET
BOX, WIRING & POWER
CONDUIT WITHIN THE VAULT

EXISTING FLOAT H.L.A. SIGNAL
CONDUIT BEING RETAINED

SEAL VOID AREA OF CORD
ENTRY WITH DUCTSEAL

FILL HOLE WITH
NON-SHRINK GROUT

ABANDON UNDERGROUND
POWER CONDUIT

REMOVE VERTICAL POWER
CONDUIT FROM BELOW GRADE
TO DISCONNECT SWITCH

3/4" C: SCHEDULE 40 PVC
CONDUIT W/ 2#12, #12G

NEW POWER OUTLET BOX
W/ SIMPLEX RECEPTACLE
SEE DETAIL #3

1

BUILDING 135 - SEWAGE GRINDER PLAN

N.T.S.

NEW POWER OUTLET BOX WITH SIMPLEX RECEPTACLE MOUNTED ON BACK OF RACK, SEE DETAIL #4.

LIQUID TIGHT FLEXIBLE METALLIC CONDUIT W/2#12,#12G, CONNECT TO EXISTING FLOAT CONTROL CIRCUIT

SEWAGE GRINDER SERVICE RACK

EXISTING H.L.A. LIGHT MODULE

REMOVE EXISTING RECEPTACLE OUTLET & SEAL VOID AREA OF FLOAT CORD ENTRIES WITH DUCT SEAL

PUMP'S POWER PLUG

FLOAT SW. CABLES

INFLUENT

GRINDER PUMP

FLOAT SWITCH
(1) PUMP CONTROL
(1) HLA SIGNAL

EXISTING DISCONNECT SWITCH

EXISTING UNDERGROUND 120V CIRCUIT FROM LOCAL PEDESTAL MOUNTED PANEL

REMOVE EXISTING PUMP POWER WIRING IN EXISTING UNDERGROUND CONDUIT

NEW 1-1/2" SCH. 40 PVC CONDUIT SLEEVE FOR PUMP POWER CORD

SEAL VOID AREA OF STUBBED CONDUIT WITH DUCTSEAL

ROUTE EXISTING GRINDER POWER CORD TO NEW POWER OUTLET BOX

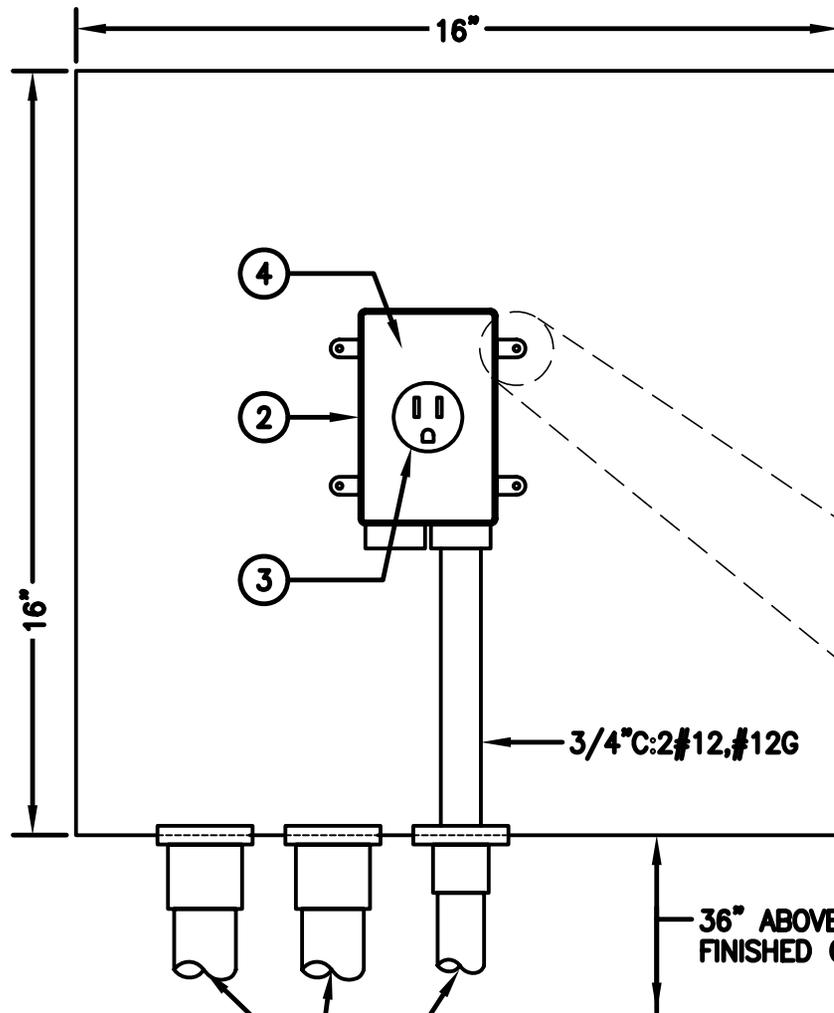
ACCESS COVER

WET WELL

2

RV AREA - SEWAGE GRINDER PLAN

N.T.S.



ITEM	DESCRIPTION
①	ENCLOSURE - 16"x16"x8", NEMA 4X, ALUMINUM, SIMILAR TO HOFFMAN ENCLOSURES CAT. NO. A16H1608ALLP
②	DEVICE BOX - SINGLE GANG, SHALLOW STYLE, NON-METALLIC, TWO HUBS, SIMILAR TO CARLON TYPE FSS, PART NO. E982EFN
③	RECEPTACLE - SIMPLEX, 125 VOLTS, 20 AMPS, 2 POLE 3 WIRE. GROUNDING EXTRA HEAVY DUTY. HUBBELL CAT. NO. HBL5361BK
④	COVER - NYLON. 1 GANG.

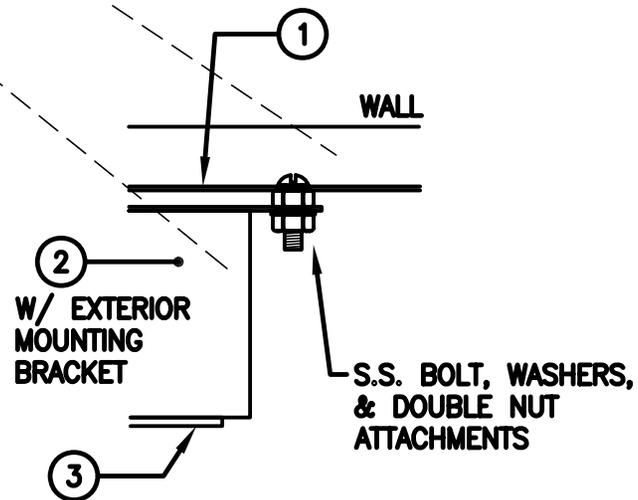
POWER & CONTROL
SCHEDULE 40 PVC
SLEEVES, SEE DETAIL 1

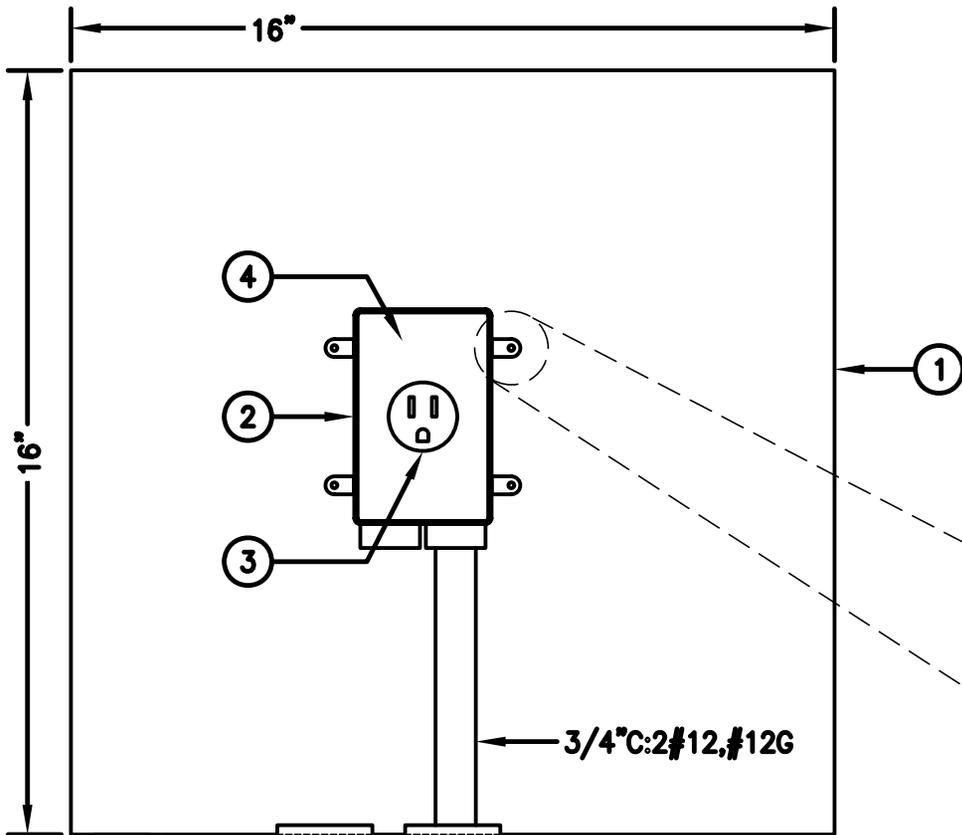
3/4"C:2#12,#12G TO
DISCONNECT SWITCH PER
PLAN, SEE DETAIL 1

③

RECEPTACLE ENCLOSURE

(BUILDING 135 - SEWAGE GRINDER)
N.T.S.





36" ABOVE
FINISHED GRADE

1-1/2" SCHEDULE
40 PVC CONDUIT TO
GRINDER IN WET
WELL, SEE DETAIL 2

3/4" C: 2#12, #12G

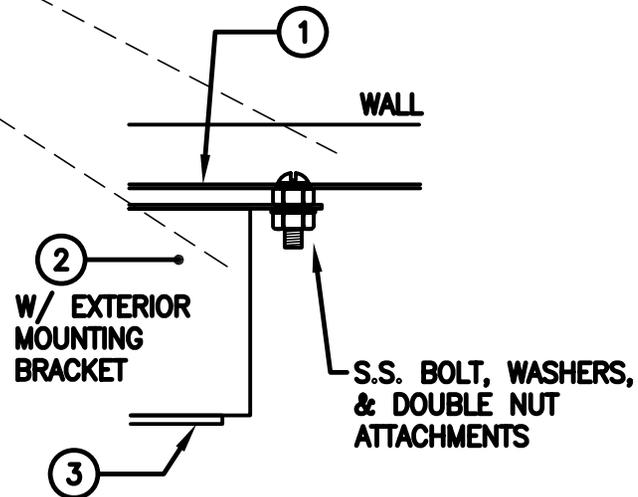
LIQUID TIGHT FLEXIBLE
METALLIC CONDUIT
W/2#12, #12G TO
H.L.A LIGHT MODULE



RECEPTACLE ENCLOSURE

(RV AREA - SEWAGE GRINDER)
N.T.S.

ITEM	DESCRIPTION
①	ENCLOSURE - 16"x16"x8", NEMA 4X, ALUMINUM, SIMILAR TO HOFFMAN ENCLOSURES CAT. NO. A16H1608ALLP
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③	RECEPTACLE - SIMPLEX, 125 VOLTS, 20 AMPS, 2 POLE 3 WIRE. GROUNDING EXTRA HEAVY DUTY. HUBBELL CAT. NO. HBL5361BK
④	COVER - NYLON. 1 GANG.



WALL

②
W/
EXTERIOR
MOUNTING
BRACKET

S.S. BOLT, WASHERS,
& DOUBLE NUT
ATTACHMENTS