



# Wisconsin Department of Transportation

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December 2, 2015

**Division of Transportation Systems Development**

Bureau of Project Development  
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**NOTICE TO ALL CONTRACTORS:**

**Proposal #16: 9670-09-71, WISC 2015 644**  
**Marinette - Wausaukee**  
**Marinette - CTH G**  
**STH 180**  
**Marinette County**

**9670-10-71, WISC 2015 645**  
**Marinette - Wausaukee**  
**CTH G - Fisher Rd**  
**STH 180**  
**Marinette County**

**Letting of December 8, 2015**

This is Addendum No. 01, which provides for the following:

**Special Provisions**

<b>Revised Special Provisions</b>	
Article No.	Description
3	Prosecution and Progress.

<b>Added Special Provisions</b>	
Article No.	Description
35	Culvert Pipe Liners, 30-Inch, Item 520.9700.S.01; Pipe Arch Liner, 87-Inch x 63-Inch, Item 520.9700.S.02; Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.

<b>Deleted Special Provisions</b>	
Article No.	Description
29	Culvert Pipe Liners, 30-Inch, Item 520.9700.S.01; Cleaning Culver Pipes for Liner Verification, Item 520.9750.S

**Schedule of Items**

<b>Added Bid Item Quantities</b>					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
520.9700.S	Pipe Arch Liners (size) 02. 87-Inch x 63-Inch	LF	0	64	64

**Plan Sheets**

<b>Revised Plan Sheets</b>	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
22	Plan Details – Requirement for Pipe Arch Liner added to notes by Station 1176+48
52	Miscellaneous Quantities – Pipe Arch Liner table added to sheet

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

*Mike Coleman*

Proposal Development Specialist  
Proposal Management Section

**ADDENDUM NO. 01**  
**9670-09-71 & 9670-10-71**  
**December 2, 2015**

**Special Provisions**

**3. Prosecution and Progress.**

*Replace entire language under section titled **Northern Long-eared Bats** (*Myotis septentrionalis*) with the following:*

**Northern Long-eared Bat** (*Myotis septentrionalis*)

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees and structures (bridges, culverts, buildings). Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act.

In order to avoid adverse impacts upon the NLEBs, no vegetation clearing and grubbing within the identified clearing and grubbing limits will be allowed from April 1 to September 30, both dates inclusive.

If the required clearing and removal is not completed by March 31, the department will suspend all clearing and associated work directly impacted by clearing. The department will issue a notice to proceed with clearing and associated work directly impacted by clearing after consulting with the United States Fish and Wildlife Service (USFWS).

Submit a schedule and description of Clearing and/or Grubbing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

Notify the Project Leader 14 days in advance of any work on box culverts or bridges between April 1 and September 30 to allow time for department to complete the Bat Presence Structure Inspection Form.

If bats or evidence of bats are not found during the inspection, construction may proceed.

If bats or evidence of bats are found during the inspection, construction activities affecting the structure's roosting potential must stop until the WisDOT Regional Environmental Coordinator completes consultation with the Wisconsin Department of Natural Resources (WDNR) and/or United States Fish and Wildlife Service (USFWS).

**29. DELETED**

**35. Culvert Pipe Liners, 30 -Inch, Item 520.9700.S.01.; Pipe Arch Liner 87-Inch x 63-Inch, Item 520.9700.S.02.; Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.**

**A Description**

This special provision describes providing and pressure grouting culvert pipe liners for circular culverts and pipe arch culverts.

**B Materials**

**B.1 General**

Provide flow calculations at the preconstruction conference. Use contractor-proposed liner properties, the Manning's coefficients listed on the department's approved products list, and base calculations on existing culvert sizes and liner sizes the plans show. Ensure that pipes when lined have a capacity within  $\pm 5\%$  of the original full flow capacity of the pipe.

### B.2 30-Inch Pipe Liner

Use liners with a Manning's coefficient value published on the department's approved products list. Upon delivery provide manufacturer certificates of compliance certifying that the liners conform to the following:

Pipe Type	ASTM Designation	ASTM D3350 Resin
<b>High Density Polyethylene (HDPE)</b> Profile Wall Pipe Solid Wall Pipe	F894	345463C
	F714	345463C
<b>Polyvinylchloride (PVC)</b>	F949	---

### B.3 87-Inch x 63-Inch Pipe Arch Liner

Provide pipe arch liner 87-Inch x 63-Inch with a corrugated steel outer shell and a smooth interior liner providing a Manning roughness coefficient "n" of 0.012 or less. Smooth interior liner shall consist of 18 gauge steel. Outer shell shall consist of 12 gauge steel and shall have 3-inch x 1-inch corrugations. Furnish pipe material from galvanized steel meeting the requirements of AASHTO M218 and ASTM A 929. Before fabrication, coat the sheets on both sides with polymer protective coating grade 250/250 according to AASHTO M 246.

Pipe shall meet the requirements of AASHTO M 245, ASTM A762, and ASTM A 760.

Factory install 2-inch grout ports in the pipe wall spaced every 10 feet along the length of the pipe. Position grout ports such that grouting occurs in stages, each stage allows for the grouting of 1/3 of the pipe.

Grout ports shall be welded with a coupling. Plugs shall be inserted into group ports after grouting is complete.

Factory install ports in the top of the pipe to allow for the insertion of vertical jacks hold liner down and prevent floating during grouting. Spacing of ports to be determined by the manufacturer.

### B.4 Grout

Provide grout consisting of:

- One part of type I or II portland cement
- Three parts sand conforming to standard spec 501.2.5.
- Water to achieve required fluidity.

Alternatively the contractor may use an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150	Type I or II
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM	1% by volume
Flow	ASTM C939	35 sec max

## C Construction

### C.1 General

As soon as possible after contract execution, survey existing culvert pipes to determine which culverts need cleaning in order to verify the required liner diameter and length. Notify the engineer before cleaning to confirm payment under the Cleaning Culvert Pipes for Liner Verification bid item.

Pre-installation meeting: A mandatory pre-installation meeting shall be conducted with a representative of the pipe manufacturer, grout supplier, the contractor, and the department prior to the liner installation. Provide to the engineer a dewatering plan. Grouting is not allowed until the dewatering plan has been approved by the engineer in writing. Dewatering is incidental to the liner installation.

Coordinate with the engineer to field verify culvert diameter and length, shape, material, and condition before ordering the liners.

During all work stages, including hauling, storing and installation, avoid damage to the polymer coating. Store polymer coated pipe arch liner on padded supports and protect them from other objects placed against them by using padding at all touch points. Use padded slings and other devices to handle and install the polymer-coated objects. Repair damaged polymer coating with polymer coating similar to and compatible with the original coating, or with a tar base material or asphaltic mastic conforming to AASHTO M 243.

Before installing the liner, clean the pipe with high pressure water blasting and substantially dry. Remove all debris and other materials from the original pipe so that the inserted liner will not be resting on or against nor be irregularly support by such materials. Attachment of guide rails to the original pipe will be allowed to help slide the liner into position. If used, guide rails shall be placed to allow grout to fill annular space under the liner.

Bulkhead the ends of the pipe prior to grouting. Remove bulkheads once grout has sufficiently hardened.

After the pipe arch liner is in place, use grout ports to fill the annular space between the original pipe and the pipe liner. Install vertical jacks along the length of the pipe per the manufacturer's recommendation to keep the pipe from floating during grouting.

### **C.2 Excavating and Cleaning**

Before inserting the liner, clean and dry the pipe. Excavate and pump as required to remove debris and other materials that would interfere with the placement or support of the inserted liner. Dispose of and replace unserviceable endwalls as the engineer directs.

### **C.3 Placing Liners**

Unload liners using slings and boom-type trucks or equivalents. Do not use chains or wire rope to handle liners and do not dump liners from the trucks when unloading.

Connect joints conforming to the manufacturer's recommendations.

### **C.4 Pressure Grouting**

After the liner is in place, fill the area between the original pipe and the liner completely with grout to provide uniform space between the liner and the original pipe. Block, grout in lifts, install vertical jacks, or otherwise secure liners to prevent floatation associated while grouting.

Use a grout plant that is capable of accurately measuring, proportioning, mixing, and discharging by volume and at discharge pressures the liner manufacturer recommends. Do not exceed manufacturer-specified maximum pressures. The contractor may place grout in lifts to prevent exceeding maximum allowable pressures.

### **C.4 Site Restoration**

Replace pipe sections damaged or collapsed during installation or grouting operations. Restore the grade to its original or improved cross section. Properly dispose of waste material.

**D Measurement**

The department will measure the Culvert Pipe Liners and Pipe Arch Liners bid items by the linear foot measured in place for each culvert location, acceptably completed.

The department will measure Cleaning Culvert Pipes for Liner Verification as each culvert, acceptably cleaned. The department will only measure culverts the engineer approves for payment.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
520.9700.S.01	Culvert Pipe Liners 30-Inch	LF
520.9700.S.02	Pipe Arch Liner 87-Inch x 63-Inch	LF
520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH

Payment for the Culvert Pipe Liners and Pipe Arch Liner bid items is full compensation for providing pipe liners; for excavation and pumping; for cleaning the existing pipe before liner installation; for pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

The department will pay the contractor \$150 per cubic yard for grout required in excess of 110 percent of the theoretical quantity required to fill the space between the inside diameter of the existing pipe and the outside diameter of the liner.

Payment for Cleaning Culvert Pipes for Liner Verification is full compensation for cleaning required to verify liner length and diameter; for excavation and pumping; and for disposing of waste material.

The department will pay separately for replacing unserviceable endwalls not rendered unserviceable by contractor operations under the appropriate contract endwall bid item, or absent the appropriate item as extra work.

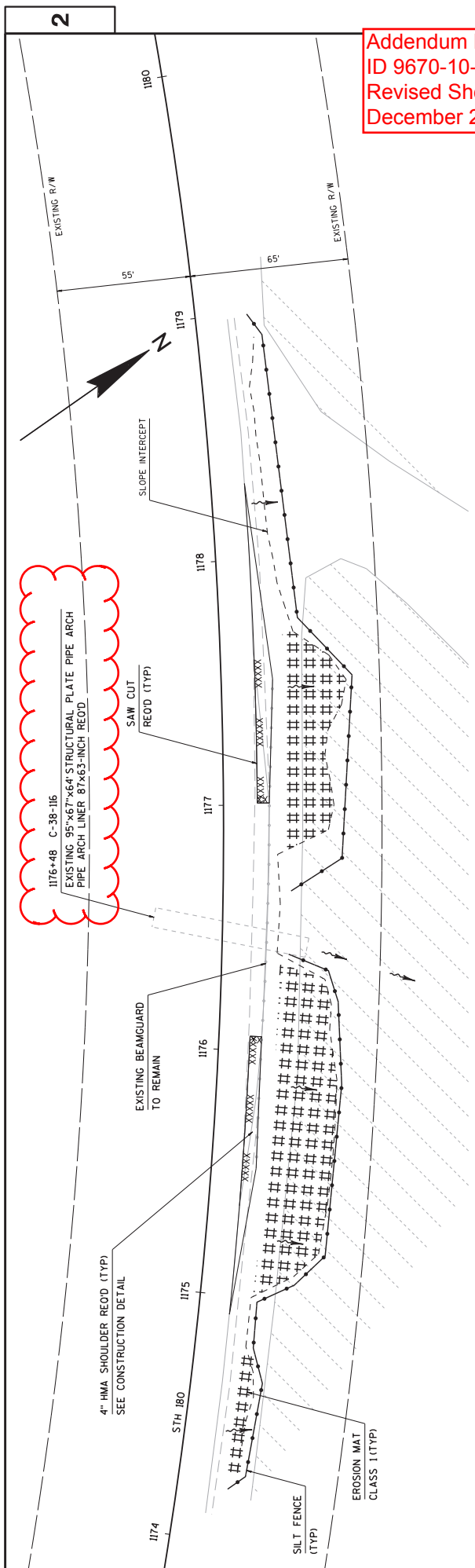
**Schedule of Items**

Attached, dated December 2, 2015, are the revised Schedule of Items Page 16.

**Plan Sheets**

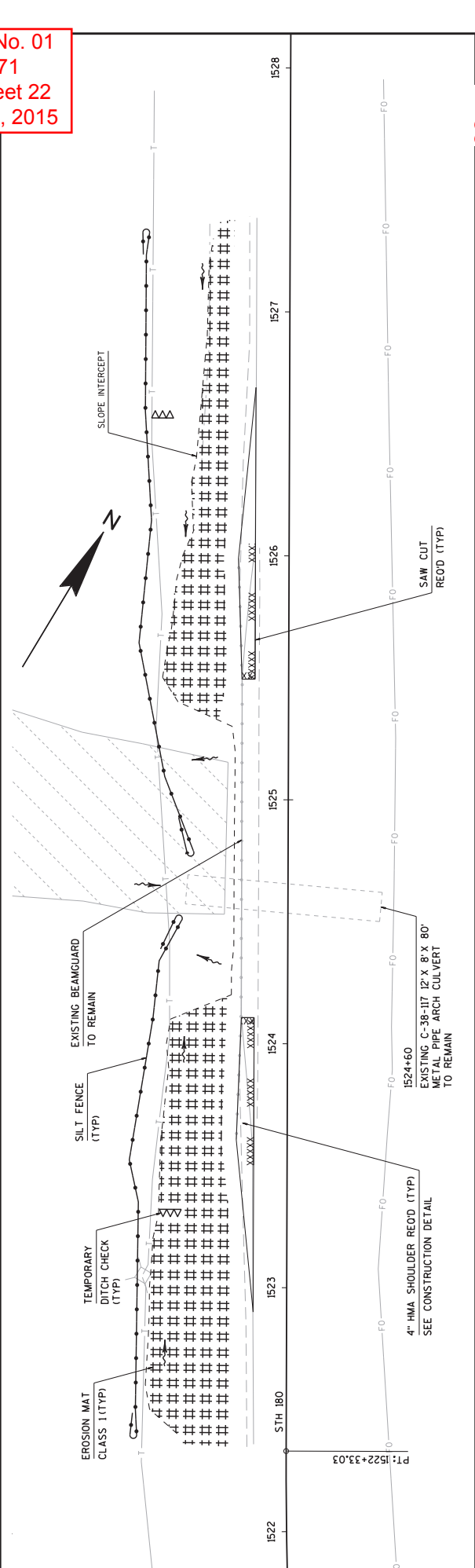
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:  
Revised Project 9670-10-71: 22 & 52

END OF ADDENDUM



1176+48 C-38-116  
EXISTING 95"x67"x64" STRUCTURAL PLATE PIPE ARCH  
PIPE ARCH LINER 87"x63"-INCH REOD

Addendum No. 01  
ID 9670-10-71  
Revised Sheet 22  
December 2, 2015



**STH 180 CROSS CULVERT SUMMARY**

STATION	LOCATION	522.0124		522.0130*		522.1024		522.1030*		522.1036		522.1042		520.8000 CONCRETE COLLARS FOR PIPE EACH	520.9700.S.01 CULVERT PIPE LINERS 30-IN LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	524.0636 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH EACH	SPV.0060.01 RESETTING PIPE ENDS EACH	** JOINT TIES EACH	REMARKS
		24-INCH LF	30-INCH LF	24-INCH EACH	30-INCH EACH	24-INCH EACH	36-INCH EACH	42-INCH EACH	24-INCH EACH	36-INCH EACH	42-INCH EACH									
477+00	STH 180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
506+45	"	-	80	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	12	
562+89	"	-	88	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	12	
591+00	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	***
611+90	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
648+05	"	-	-	-	-	-	-	-	-	-	-	-	-	-	128	-	-	-	-	EXISTING 36" CPRC
723+76	"	-	16	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	4	
790+60	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
1176+48	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1268+40	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BURY PIPE 6"
<b>TOTAL</b>		8	184	80	48	3	6	2	2	2	2	2	2	4	128	2	2	1	2	66

\* ADDITIONAL QUANTITIES FOUND ELSEWHERE IN THE PLAN  
 \*\* FOR INFORMATION ONLY (PAID FOR UNDER THE CULVERT PIPE ITEMS)  
 \*\*\* REMOVE / DISCARD LAST PIPE ON BOTH ENDS, RESET SECOND PIPE BOTH ENDS, NEW APRON ENDWALL BOTH ENDS

**PIPE ARCH LINER 87 x 63-INCH**

STATION	LOCATION	LF	REMARKS
1176+48	STH 180	64	C-38-116
<b>TOTAL</b>		64	

Addendum No. 01  
 ID 9670-10-71  
 Revised Sheet 52  
 December 2, 2015

**SIDERoads CROSS CULVERT SUMMARY**

STATION	LOCATION	522.0312		522.0130*		522.1012		522.1030*		521.0118		521.0124		521.1518		521.1524		JOINT TIES *** EACH	REMARKS
		12-INCH LF	30-INCH LF	CULVERT PIPE REINFORCED CONCRETE CLASS III	CULVERT PIPE REINFORCED CONCRETE CLASS III	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE	CPRCHE CLASS HE-IV	19X30-INCH LF	19X30-INCH EACH	CORRUGATED STEEL ***	18-INCH LF	24-INCH LF	CULVERT PIPE CORRUGATED STEEL DRAINS STEEL 6 TO 1	18-INCH EACH	24-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE			
57+58	TWIN CREEK RD	32	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	12	
84+51	WINESVILLE RD	-	-	-	-	-	-	-	-	-	88	-	-	-	2	-	-	-	
109+53	BORDERLINE RD	-	-	-	-	-	-	-	-	-	-	76	-	-	-	-	-	-	
129+46	CTH X	-	-	-	-	-	-	-	80	2	-	-	-	-	-	-	-	12	
149+14	FOUR LAKES RD	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	12	
<b>TOTAL</b>		32	64	2	2	2	2	80	2	2	88	76	2	2	2	2	2	36	

\* ADDITIONAL QUANTITIES FOUND ELSEWHERE IN THE PLAN  
 \*\* MINIMUM THICKNESS FOR 18" & 24" CULVERT PIPE CORRUGATED STEEL EQUALS 0.064 INCHES  
 \*\*\* FOR INFORMATION ONLY (PAID FOR UNDER THE CULVERT PIPE ITEMS)



SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20151208016

PROJECT(S):  
9670-09-71  
9670-10-71

FEDERAL ID(S):  
WISC 2015644  
WISC 2015645

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1530	650.9910 Construction Staking Supplemental Control (project) 01. 9670-09-71	LUMP	LUMP			.
1540	650.9910 Construction Staking Supplemental Control (project) 02. 9670-10-71	LUMP	LUMP			.
1550	650.9920 Construction Staking Slope Stakes	46,069.000 LF	.			.
1560	690.0150 Sawing Asphalt	7,972.500 LF	.			.
1570	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000		500.00	
1580	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	2,400.000 HRS	5.00000		12000.00	
1590	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	3,040.000 HRS	5.00000		15200.00	
1600	SPV.0060 Special 001. Resetting Pipe Ends	2.000 EACH	.			.
1610	520.9700.S Culvert Pipe Liners (size) 02. 87-Inch x 63-Inch	64.000 LF	.			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.