

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

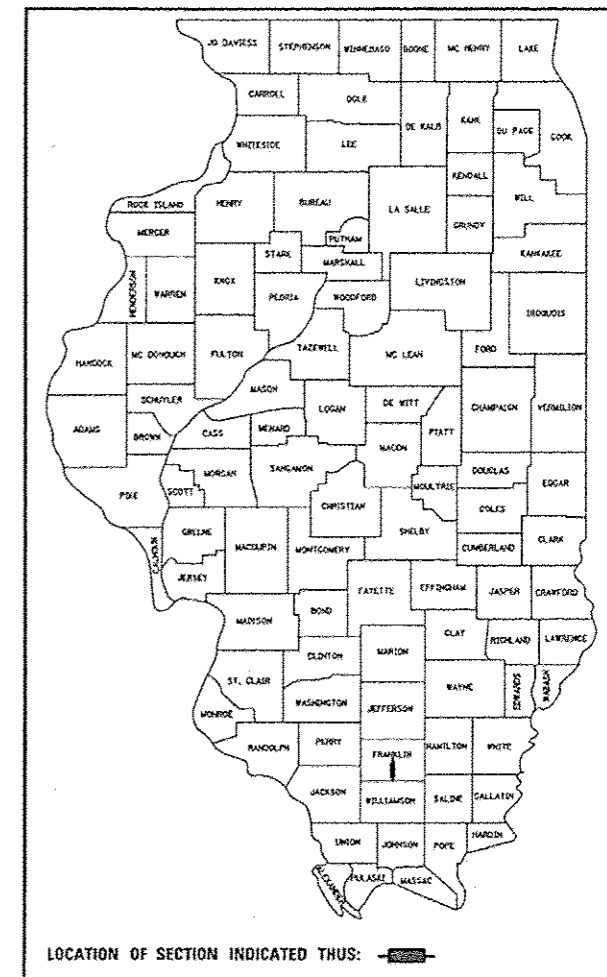
I-57 (F.A.I. 57)
SECTION D9 PUMP STATION REPAIR 2016
I-57 AND IL RTE. 149
PUMP STATION REPAIR
FRANKLIN COUNTY

C-99-029-16

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57		FRANKLIN	5	1
		ILLINOIS	CONTRACT NO. 78527	

• D9 PUMP STATION REPAIR 2016

D-99-029-16

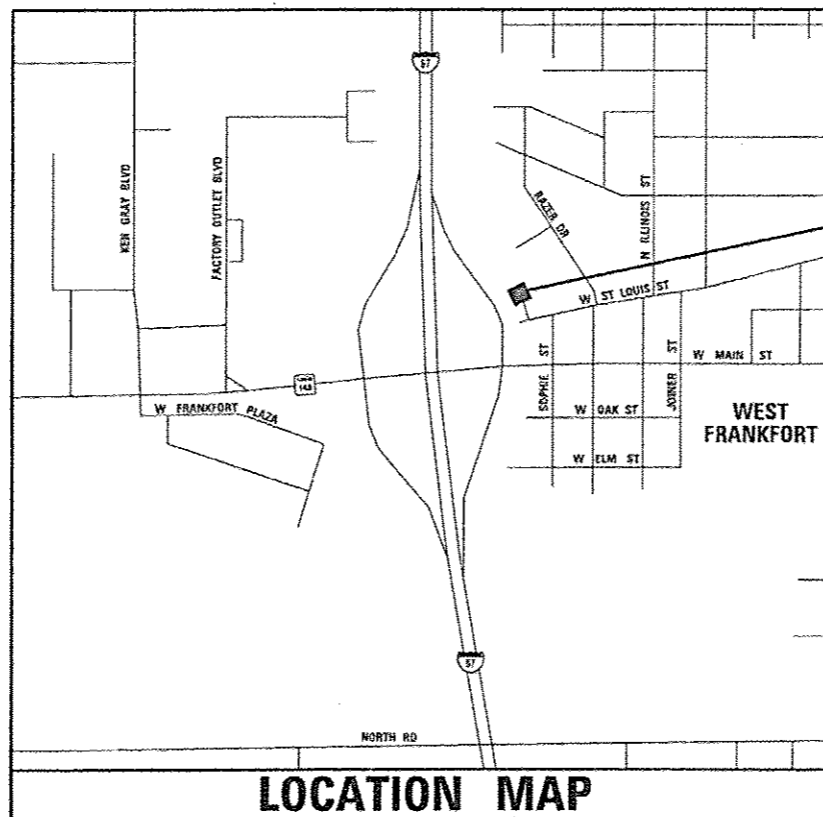


INDEX OF SHEETS	
SHEET NO.	TITLE
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES
3.	GENERAL NOTES
4.	EXISTING SECTIONS
5.	PROPOSED REPAIRS

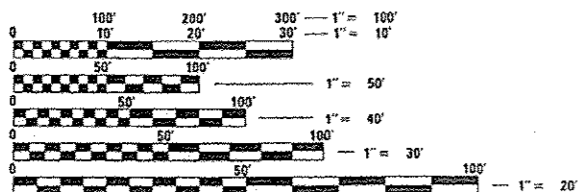
PREPARED BY:

MODJESKI & MASTERS
Experience great bridges.
www.modjeski.com

#4 SUNSET HILLS PROFESSIONAL CENTER
EDWARDSVILLE, ILLINOIS 62025
PHONE (618) 659-9102



PROJECT LOCATION



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CALL **J.U.L.I.E.** (JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS)
48 Hours 12 working days! Before You Dig.
TOLL FREE: 1 (800) 892-0123 OR 811

PROJECT MANAGER: DAVID PICHE (618) 351-5227

CONTRACT NO. 78527



Jeffrey W. Newman 3/7/2016
JEFFREY W. NEWMAN
ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062-061167
EXPIRES 11/30/2017



Jerilyn M. Hassard 3/8/2016
JERILYN M. HASSARD
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2016

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *March 15, 2016*

Jeffrey W. Newman
REGION FIVE ENGINEER

May 6, 2016
M. Addis
ENGINEER OF DESIGN AND ENVIRONMENT

May 6, 2016
David Piche
DIRECTOR OF PROGRAM DEVELOPMENT

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OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES				URBAN	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	FRANKLIN COUNTY
				0040	
67100100	MOBILIZATION	L SUM	1		1
X0335700	PUMP STATION GENERAL WORK	L SUM	1		1
X0783300	PUMP STATION ELECTRICAL WORK	L SUM	1		1
X0783500	PUMP STATION MECHANICAL WORK	L SUM	1		1

4

Prepared By: *[Signature]*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *[Signature]*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *[Signature]*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *[Signature]*
DISTRICT OPERATIONS ENGINEER

Examined By: *[Signature]*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *[Signature]*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *[Signature]*
DISTRICT MATERIALS ENGINEER

• D9 PUMP STATION REPAIR 2016

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to variations found in the field. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary adjustments prior to construction or ordering materials.

Existing plans are available for review in the District Office. Contact David Piche at (618) 351-5227.

See Special Provision for Pump Station General Work, Pump Station Mechanical Work, and Pump Station Electrical Work for design and construction requirements.

The existing ladders and walkways do not adhere to all applicable safety standards. The Contractor shall be responsible for safe access to all levels of the pump station.

SUGGESTED CONSTRUCTION SEQUENCE:

Note: Contractor shall submit to the Engineer a sequence of construction for review and approval prior to construction.

1. Install locking devices for (3) pump motors and (1) maintenance hoist in existing power panel.
2. Repair maintenance hoist.
3. Perform pump 4 pipe stand replacement.
4. Perform pump 1 pipe stand replacement and motor key replacement. Verify pump 1 is operational at completion of repairs and put into service.
5. Perform pump 3 pipe stand replacement. Verify pump 3 is operational at completion of repairs and put back into service.
6. Perform pump 2 pipe stand replacement. Verify pump 2 is operational at completion of repairs and put back into service.
7. Perform pressure transducer well pipe cleanout cover repairs. Note that this repair may be completed at any time.

SUGGESTED PROCEDURE FOR ONE PIPE STAND REPLACEMENT:

Note: All work shall be included in the Lump Sum price for Pump Station General Work.

1. Ensure all pump motors are locked out/tagged out according to the Pump Station Electrical Work Special Provision.
2. Install Temporary Jacking and Support System.
3. Drain water from pipe column.
4. Loosen flexible coupling in storage room and any other connections which may require adjustment.
5. Engage jacking system to transfer load from the existing pipe stand to the jacking and shoring system.
6. Detach existing pipe stand and remove any existing anchor bolts to at least 1 inch below the top of slab. Fill the existing anchor bolt holes with non-shrink grout.
7. Use jacking system to align the expansion joint as necessary, being sure to monitor the supported pipes and attachments for excessive displacement or damage.
8. Once existing anchor bolt hole grout is set per the manufacturer's specifications, install the proposed pipe stand assembly. Avoid the location of the existing anchor bolts.
9. Drill the anchor bolt holes and install the anchor bolts. Once the anchor bolts are set, tighten them.
10. Tighten flexible coupling in storage room and any other connections which require tightening. Remove or disengage the temporary jacking and support system and verify the pump system is operational.

• D9 PUMP STATION REPAIR 2016



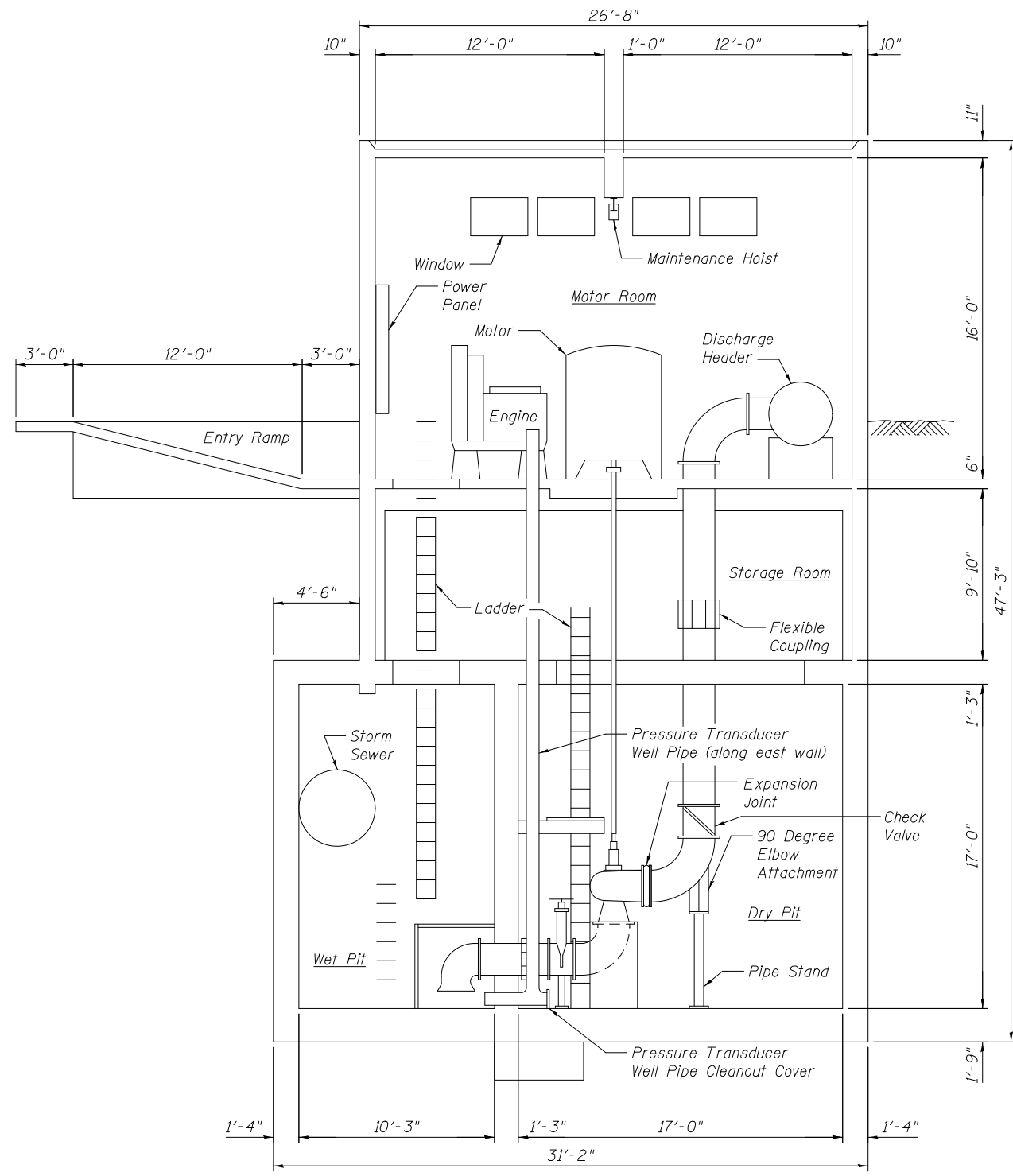
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	CHECKED - JMH/LRL	REVISED
PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 02/29/2016	CHECKED - JTH	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

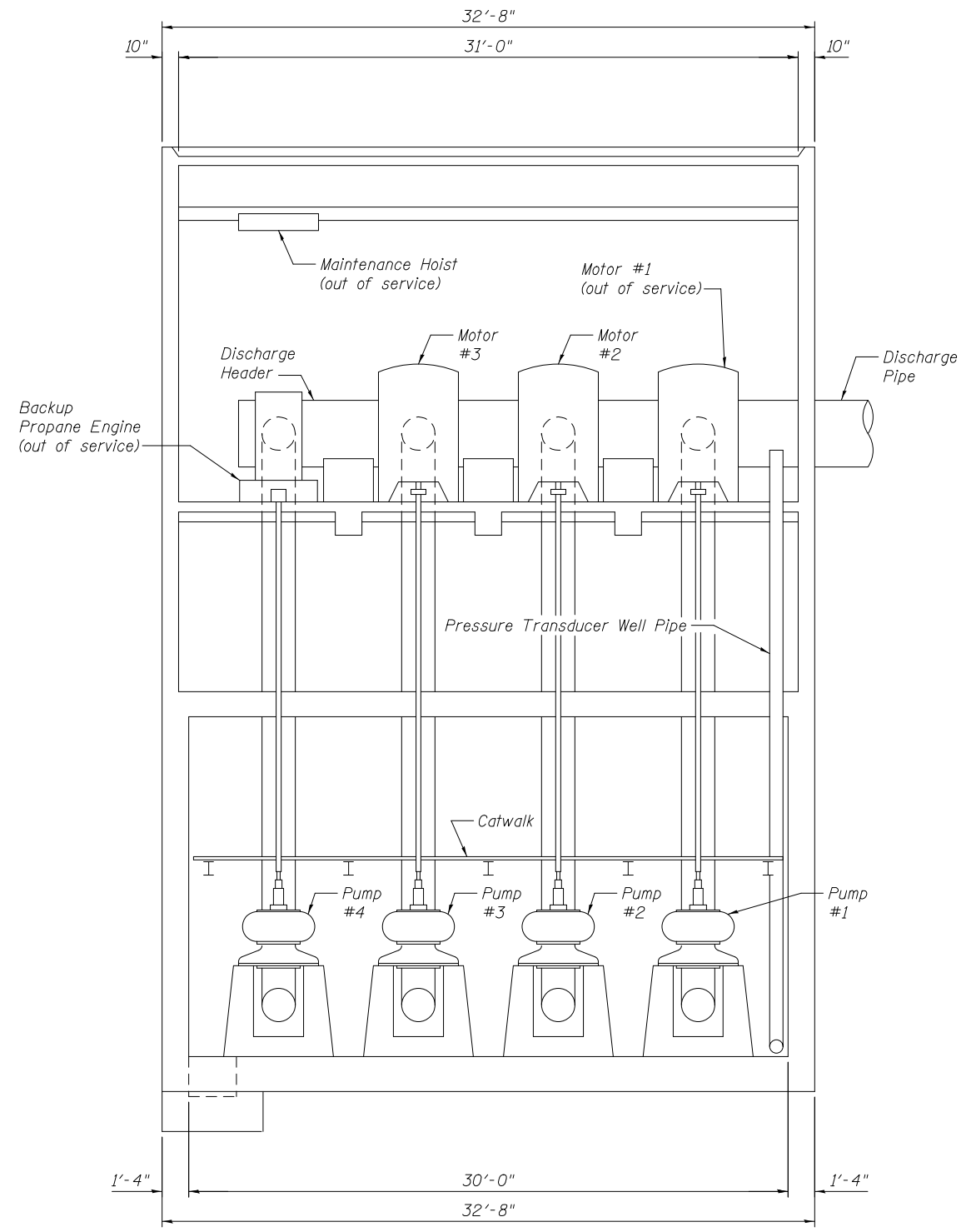
**GENERAL NOTES
I-57 AND IL RTE. 149 PUMP STATION REPAIR**

SHEET NO. 3 OF 5 SHEETS

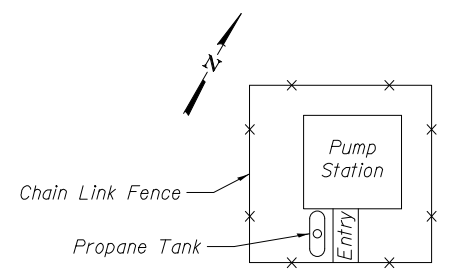
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	5	3
				CONTRACT NO. 78527
ILLINOIS FED. AID PROJECT				



**INTERIOR SECTION
LOOKING WEST**



**INTERIOR SECTION
LOOKING NORTH**



LOCATION SKETCH



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PLOT SCALE =	DRAWN - PRC	REVISED
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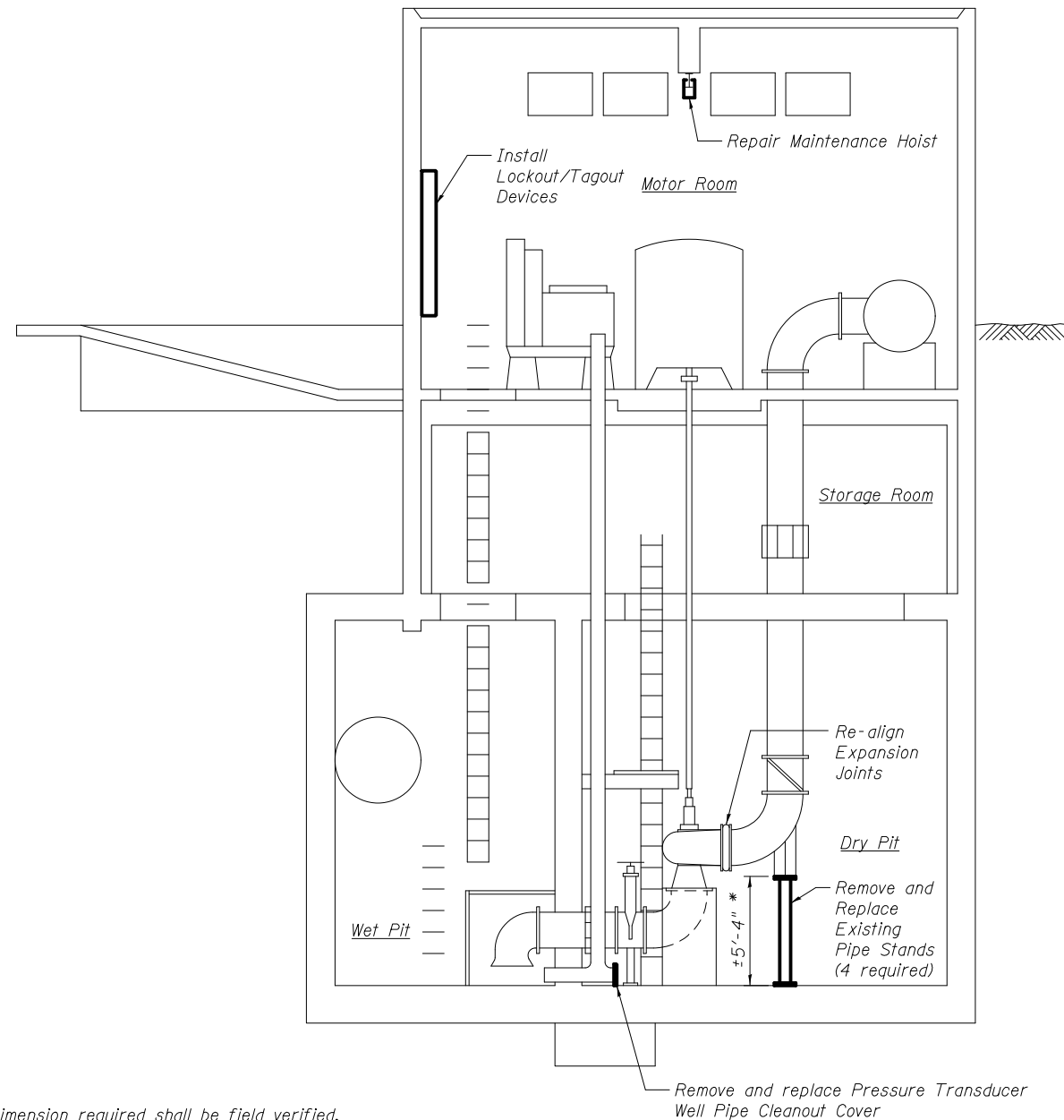
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING SECTIONS
I-57 AND IL RTE. 149 PUMP STATION REPAIR**

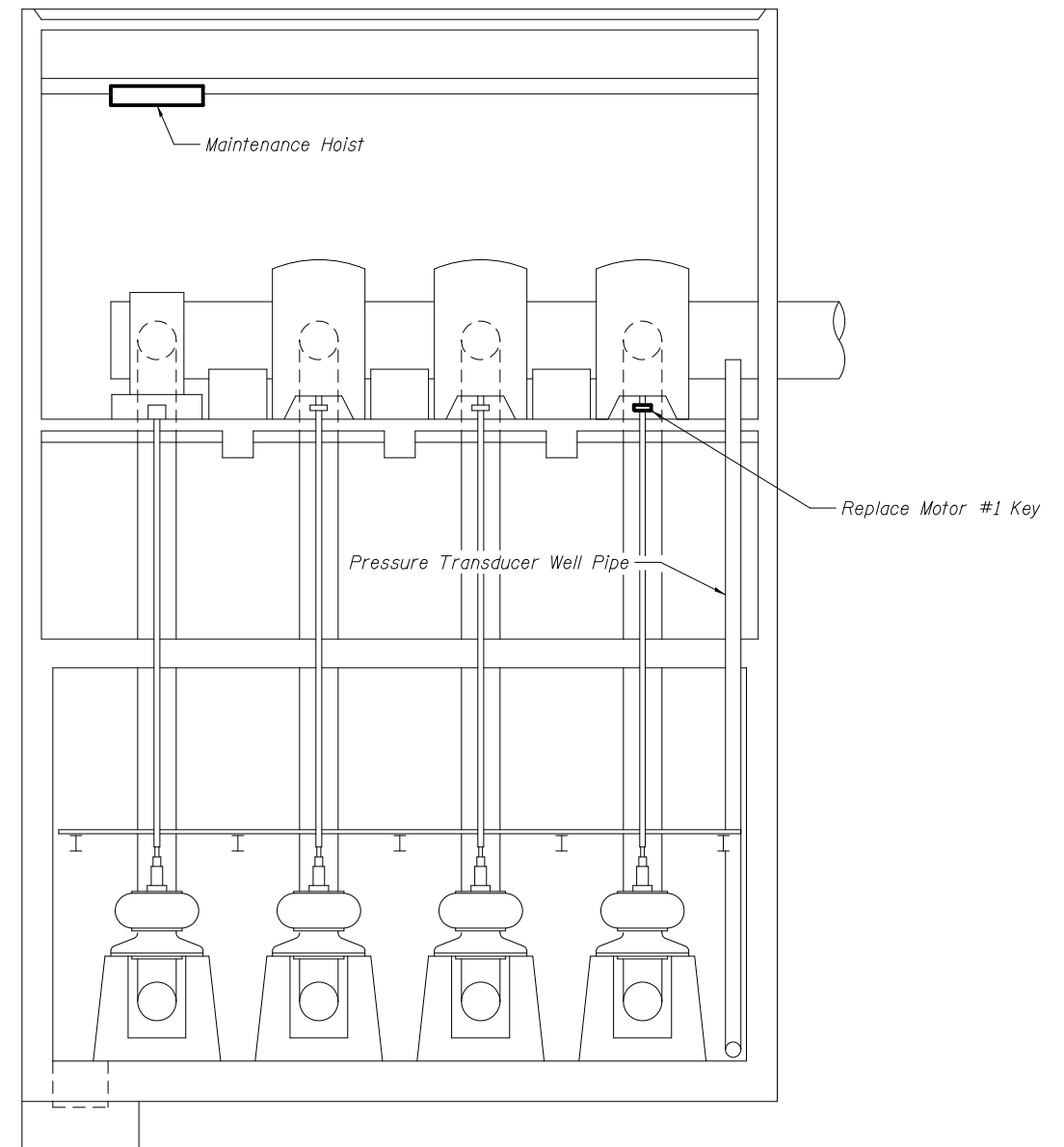
SHEET NO. 4 OF 5 SHEETS

F.A.I. RTE. 57	SECTION *	COUNTY FRANKLIN	TOTAL SHEETS 5	SHEET NO. 4
CONTRACT NO. 78527				
ILLINOIS FED. AID PROJECT				

* D9 PUMP STATION REPAIR 2016



**INTERIOR SECTION
LOOKING WEST**



**INTERIOR SECTION
LOOKING NORTH**

* Dimension required shall be field verified.
Proposed pipe stand height shall account for any necessary adjustments required to re-align the expansion joint.

Remove and replace Pressure Transducer Well Pipe Cleanout Cover

Notes:
See Special Provision for Pump Station General Work for details and payment of removal and replacement of existing pipe stands.
See Special Provision for Pump Station Electrical Work for details and payment of installation of lockout/tagout devices.
See Special Provision for Pump Station Mechanical Work for details and payment of maintenance hoist repairs, motor #1 key replacement, and pressure transducer well pipe cleanout cover replacement.

• D9 PUMP STATION REPAIR 2016



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PLOT SCALE =	DRAWN - PRC	REVISED
PLOT DATE = 02/29/2016	CHECKED - JTH	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED REPAIRS
I-57 AND IL RTE. 149 PUMP STATION REPAIR**

SHEET NO. 5 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	5	5
CONTRACT NO. 78527				
ILLINOIS FED. AID PROJECT				