CONSTRUCTION NOTES

Obtain Construction Plans from Designer prior to starting job.

Coordinate with Contractor / Engineering Firm for exact locations of proposed structures and facilities prior to installation of gas facilities.

Install new main as shown or as directed in field at time of installation.

All test points should be installed in the boulevard or other acceptable locations and avoid placement in driving lanes.

Verify Coating test results if required prior to abandoning main.

CONSTRUCTION PROCEDURES

1. INSTALL 4" PE CL-6 MAIN ON HILLON RD, SOUTH OF THOMAS DR
2. INSTALL NEW REG STATION AND PIPING
   TEST ALL STEEL MAIN TO CL-6 MAOP
3. PLACE NEW STATION IN SERVICE
4. TAKE TBS ON 123 OUT OF SERVICE
5. MAKE ABANDONMENTS

Install; Clean and Test; and Put in Service; Proposed new main per CenterPoint Energy Construction and Services Manual.

Purge new main until essentially 100% reading is obtained on Combustible Gas Indicator. See CenterPoint Energy Construction and Service Manual Section CS-B-1.230 for purging mains into service.

Cut and Abandon existing main as shown. Purge abandoned mains until essentially 0% gas reading is obtained on Combustible Gas Indicator. See CenterPoint Energy Construction and Service Manual Section CS-B-1.110 and Section CS-B-1.230 for purging mains out of service using air movers.

Install a marker ball at a new end of main, at a valve, at each ell of a horizontal offset, at road crossings and at any fitting or pressure control identified as needing to be located in the future. Refer to CenterPoint Energy Construction and Service Manual section CS-B-1.310 for installation procedures.

NOTE: BORE ALL PAVED STREETS AND DRIVEWAYS
Minimum depth requirements for crossings of state highways and county roads is 60". Minimum depth requirements for crossings of city streets and township roads is 48".
Minimum depth for parallel installations on state highways and county roads is 36". Minimum depth for parallel installations on city streets and township roads is 30". All steel pipe welds to be coated with 2 part epoxy.

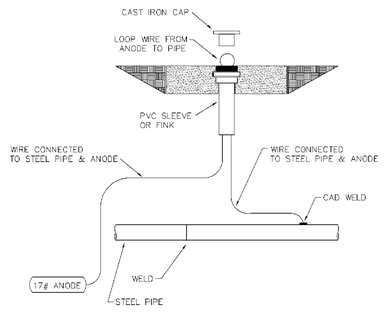
(AT) DENOTES COATING SAMPLE LOCATION. CONTACT CHRISTOPHER LANASA (612-321-5448) IN ENVIRONMENTAL PROGRAMS TO SCHEDULE SAMPLING OF PIPE COATING. GIVE 48 HOURS NOTICE WHEN POSSIBLE TO ARRANGE FOR A LICENSED INSPECTOR.

Project area cleared for internal impacts. Pipe being removed is unregulated for disposal if coating does not exist or is non-asbestos. Refer to CNP Construction and Service Manual CS-B-1.110, CS-B-1.330, and CS-B-1.100, for pipe to be abandoned.

WHEN BUTT FUSING TO EXISTING IN-SERVICE POLYETHYLENE, VISUALLY INSPECT FOR THE PRESENCE OF HYDROCARBON PERMEATION IMMEDIATELY AFTER REMOVING FUSION IRON. IF ANY BUBBLING IS IDENTIFIED ON THE HEATED SURFACE, DO NOT JOIN TO NEW PE PIPE. ALLOW TO COOL AND CUT THIS END OFF (12" LENGTH) AND SEND TO THE GOLDEN VALLEY LAB WITH STREET LOCATION AND W.O. #. COMPLETE TIE- IN/EXTENSION USING AN ELECTROFUSION COUPLING(S). DOCUMENT IN FIELD NOTES.

CP TEST POINT WITH ANODE
ROADWAY INSTALLATION

NOTE:
1. Install roadway cap at final grade.
2. Allow a minimum of 10" of slack in test wires.



CP TEST POINT WITH ANODE AND PLASTIC PIPE LOCATING STATION
ROADWAY INSTALLATION

LOCATING/TRACER WIRE – PIPES

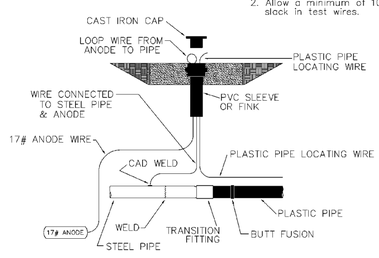
Solid 12 THHN copper tracer wire shall be buried with all plastic pipes.

NOTE: Whenever tracer wires are joined together or connected to plastic pipes or services, the connections shall be coated with moldable sealant/tape.

Tracer wire shall also be terminated with plastic pipes when inserting inside of cast iron pipes.

Where steel pipes and plastic pipe are joined together, the tracer wire will be terminated in a test box as shown in the drawing below. A seperate 12 THHN copper wire will be connected to the steel pipe and also terminated in the same test box with the tracer wire.

NOTE:
1. Install roadway cap at final grade.
2. Allow a minimum of 10" of slack in test wires.

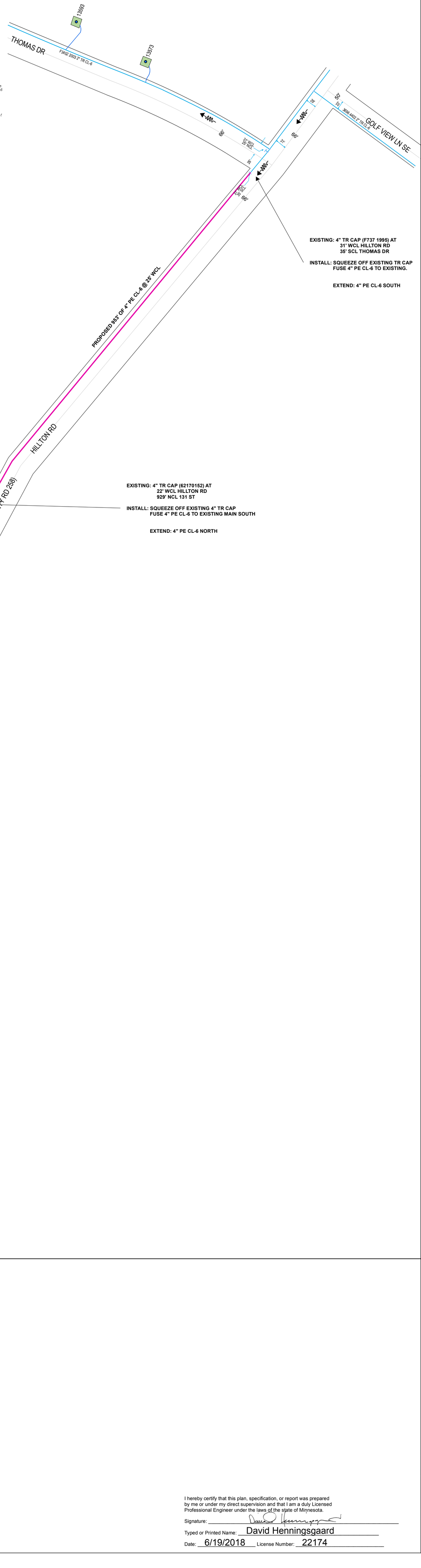


STANDARD GUARD POST FOR REGULATOR STATIONS

GUARD POST INSTALLATION REQUIREMENTS FOR REGULATOR STATIONS

- SHALL BE CONSTRUCTED OF AT LEAST 6" DIAMETER STEEL PIPE FILLED WITH CONCRETE.
- SHALL BE SPACED NOT MORE THAN 4' ON CENTER
- SHALL BE SET NOT LESS THAN 3' FROM THE PROTECTED SYSTEM
- SHALL BE SET APPROXIMATELY 4' DEEP IN A CONCRETE FOOTING NOT LESS THAN 15" IN DIAMETER
- SET WITH THE TOP OF THE POST NOT LESS THAN 3' ABOVE GROUND
- POSTS SHALL BE LEVELED
- CONCRETE FORM AND 6" ST PIPE SHALL BE FILLED WITH CONCRETE
- GROUND AROUND THE GUARD POST SHALL BE WELL COMPACTED TO PREVENT SETTLING
- EACH POST REQUIRES APPROXIMATELY 6 CUBIC FEET OF CONCRETE OR 5-6 BAGS OF SAKRETE

INSTALL 4" PE MAIN BEFORE MAKING 2" PE TIE-IN TO FEED NEW REG LOOP



CenterPoint Energy
MINNESOTA REGION

PROPRIETARY AND CONFIDENTIAL

PROJECT #: **85186137**

M16000 LITTLE FALLS
M15700 LITTLE FALLS TOWNSHIP
ONE CALL:
Morrison
*SW 19 T40/R32
*NW 19 T40/R32
*NW 30 T40/R32
*SW 18 T40/R32
*SE 18 T40/R32
* = this Page

LEGEND:
- ACTIVE MAIN
- DESIGNED MAIN
- PROPOSED ABANDONED/ OUT OF SERVICE MAIN
- ABANDONED/ OUT OF SERVICE MAIN

PIPE REQUIRED:
10' 2" PE CL-6
953' 4" PE CL-6
55' 2" STL CL-6
606' 4" PE CL-2
55' 3" STL CL-2

1679' PIPE

PROPOSED ABANDONED PIPE:
7' 2" STL CL-8
8' 2" STL CL-2
2' 1" STL CL-8
186' 4" STL CL-2

203' PIPE

COPIES:
PIPELINE INTEGRITY PACKET: N
STATION MANAGER: Y
DD NUMBER:
157-002 (NEW)
160-001
CORROSION: PAUL TEESELINK
EMP: Y

FOLLOW INTERNAL PIPE SAMPLING REQUIREMENTS? N

SURVEYOR REQUIRED? N

RETURN PACKET TO ENG? N

GFIP #:
324-2018
325-2018

PERMITS:
LITTLE FALLS TWP (NOTIFY)
MORRISON COUNTY

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: David Henningsgaard

Date: 6/19/2018 License Number: 22174

PROJECT DESCRIPTION: SRIM HILLTON RD

DESIGNER: TJ Haider
PHONE #: 612-321-5132
DRAWN BY: TJ Haider
DESIGN DATE: 4/20/2018

REVISION INFO:

Main
SS# 299-2018

SCALE 1" : 100'
SHEET 1 OF 1

DESIGNER EXPRESS DESIGN
6/1/2018 7:44:28 AM