

XREFs: [CDMS-2436] Images: [Water Main Design Legend]
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C:\Projects\25972-Salem\114941 - Misc_Depot\G001LGND.dwg
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GENERAL NOTES

- PLANS DEVELOPED FROM GIS INFORMATION PROVIDED BY THE TOWN OF SALEM, NH IN JULY 2016.
- THE LOCATION, SIZE AND MATERIAL OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES AND THE LOCATION OF PROPERTY LINES SHOWN ON THESE PLANS ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL ARE SHOWN. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR.
- NOTES PERTAINING TO NEW WORK SHOWN THUS:

NEW WORK
- LOCATION OF NEW UTILITY SERVICES ARE APPROXIMATE AND WILL BE FIELD DETERMINED.
- UNLESS OTHERWISE SPECIFIED, MINIMUM PIPE COVER FOR WATER MAINS SHALL BE 5 FEET FROM GROUND ELEVATION TO CROWN.
- UNLESS OTHERWISE NOTED, DI PIPE SHALL BE CLASS 52, AND FITTINGS AND VALVES SHALL BE OF THE RESTRAINED MECHANICAL JOINT TYPE.
- EXISTING WATER MAINS ARE ASSUMED TO HAVE 5 FEET OF COVER UNLESS SHOWN OTHERWISE. IT IS NOT WARRANTED THAT ALL UTILITIES ARE SHOWN.
- SAW CUT ALL DRIVEWAYS, WALKWAYS AND SIDEWALKS AT EDGE OF RIGHT-OF-WAY OR AS DIRECTED BY ENGINEER TO TRANSITION EXISTING DRIVEWAY TO FINISH GRADE OF PROPOSED BITUMINOUS CONCRETE ROADWAY OR SIDEWALK.
- THE CONTRACTOR SHALL MAINTAIN EXISTING WATER SERVICE DURING THE CONSTRUCTION OF THIS PROJECT, AND SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY SERVICE AS NECESSARY.
- TEST PIT LOCATIONS SHOWN ON THE PLANS ARE PROPOSED LOCATIONS. CONTRACTOR TO EXCAVATE TEST PITS IN LOCATIONS AS DIRECTED BY THE ENGINEER, TEST PITS SHALL BE DUG TO ADJUST PIPING AS REQUIRED BY THE ENGINEER.
- THE CONTRACTOR IS DIRECTED TO COORDINATE THE RELOCATION OF UTILITY POLES WITH EVERSOURCE, AND NEW HAMPSHIRE ELECTRIC COOPERATIVE, NEW ENGLAND TELEPHONE AND TELEGRAPH, AND ALL OTHER AGENCIES AS NECESSARY FOR CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WORK AND LAY DOWN AREA WITH THE OWNER.
- ALL PIPE SECTIONS SHOWING LENGTH IN LINEAR FEET ARE TWO-DIMENSIONAL MEASUREMENTS TAKEN FROM CENTER TO CENTER OF EACH ADJOINING FITTING.
- EXACT LOCATION OF NEW PIPES, VALVES, FITTINGS, ETC. SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- NEW WATER SERVICES INCLUDING CURB STOPS SHALL BE INSTALLED FROM NEW WATER MAINS TO RIGHT-OF-WAY/PROPERTY LINE UNLESS OTHERWISE NOTED.
- LOCATIONS OF NEW WATER SERVICES AS SHOWN ON PLANS ARE APPROXIMATE AND SHALL BE FIELD DETERMINED.
- FITTINGS AND VALVES EQUIPPED WITH RESTRAINED JOINTS SHALL NOT REQUIRE THRUST BLOCKS UNLESS OTHERWISE INDICATED ON DRAWINGS OR DIRECTED BY THE ENGINEER.
- HYDRANT ASSEMBLY INCLUDES HYDRANT (PROVIDED BY OWNER), GATE VALVE, TEE, AND ASSOCIATED PIPING. EXACT LOCATION OF NEW HYDRANTS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- FOR ABANDONED MAINS AND HYDRANTS THE CONTRACTOR SHALL PERFORM THE FOLLOWING. CONTRACTOR SHALL CUT AND CAP EXISTING MAINS TO BE ABANDONED IN PLACE AS SHOWN ON THE DRAWINGS AND AS DIRECTED BY ENGINEER. ABANDONED PIPES SHALL BE CAPPED USING MECHANICAL RESTRAINTS, AT BOTH ENDS. CLOSE ALL VALVES AND REMOVE EXISTING VALVE BOXES PRIOR TO FINAL PAVING. CAREFULLY REMOVE ALL HYDRANTS, CAP ALL HYDRANT BRANCHES AND PROVIDE A THRUST RESTRAINT. REMOVED HYDRANTS SHALL BE DELIVERED BY THE CONTRACTOR TO A LOCATION DETERMINED BY THE OWNER.
- CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE ALL VALVES REQUIRED FOR STREET INTERCONNECTIONS.
- AT LEAST 48 HOURS PRIOR TO A SCHEDULED INTERRUPTION OF WATER SERVICE TO ANY CONSUMER FOR THE PURPOSE OF CONNECTING NEW WATER SERVICE PIPING OR NEW WATER MAINS TO OLD WATER MAINS THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DELIVER WRITTEN NOTIFICATION TO ALL PREMISES AFFECTED BY SAID INTERRUPTION OF SERVICE.
- CONTRACTOR SHALL CONFORM TO SEDIMENTATION AND EROSION CONTROL MEASURES OUTLINED IN SECTION 02270 AROUND ALL CATCH BASINS WITHIN THE PROJECT AREA.

Legend

Cap

New System Valve

Existing System Valve

New Curbstop

Existing Curbstop

Tee

New Hydrant

Existing Hydrant

Sewer Manhole

Test Pit

Remove/Abandon Water Main

New Service Connection

New Water Main

Existing Water Main

Existing Service Connection

Sewer Pipe

Drain Pipe

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. CAREY

DRAWN BY: S. CAREY

SHEET CHK'D BY: J. DIERCKS

CROSS CHK'D BY: D. POLCARI

APPROVED BY: J. DIERCKS

DATE: SEPTEMBER 2016

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TOWN OF SALEM, NEW HAMPSHIRE

MISCELLANEOUS WATER MAIN REPLACEMENTS

LEGEND AND GENERAL NOTES

THE STATE OF NEW HAMPSHIRE

JEFFREY E. DIERCKS

NO. 6821

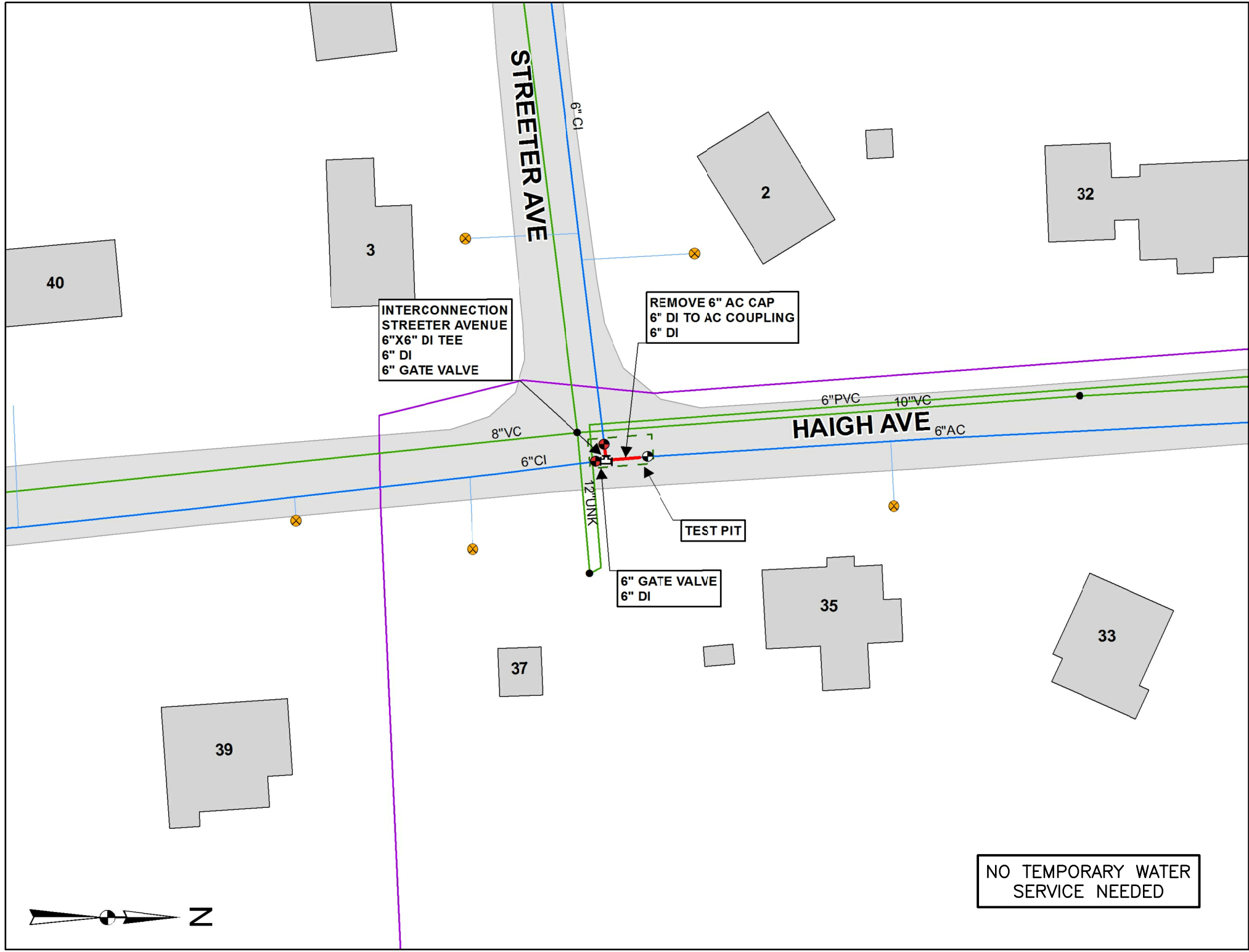
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9/15/2016

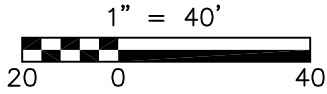
PROJECT NO. 25972-114914
FILE NAME: G001LGND.DWG

SHEET NO.
G-1

XREFs: [CDMS-2436] Images: [Diercks NH PE, Project 2-2 8 1.2x11, Project 3-5 8.5x17, Water Main Design Legend]
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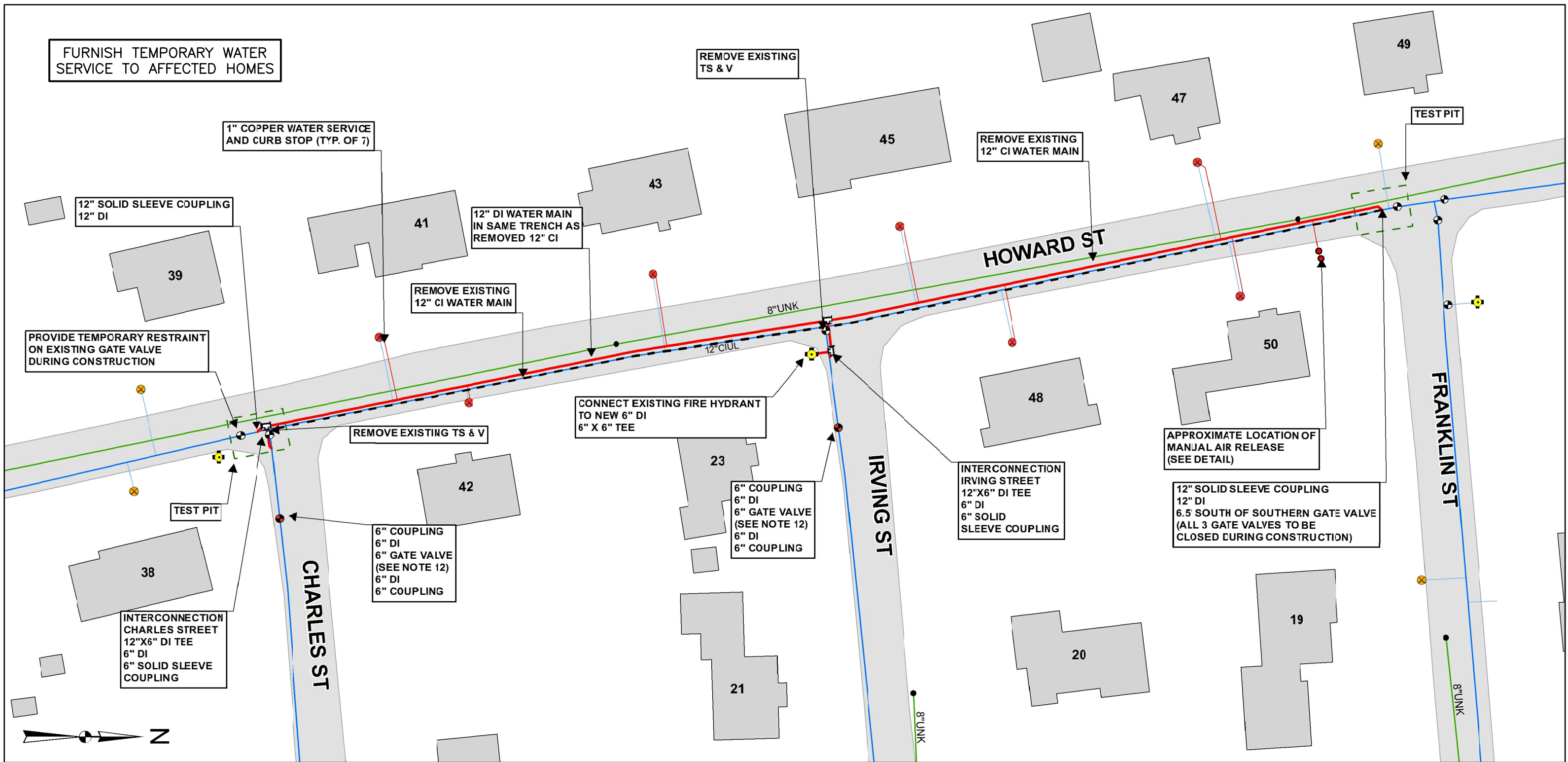


HAIGH AVENUE
PLAN

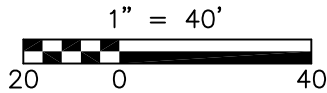


NOTES:

1. THE LOCATION, SIZE AND MATERIAL OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES AND THE LOCATION OF PROPERTY LINES SHOWN ON THESE PLANS ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL ARE SHOWN. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR.
2. LOCATION OF NEW WATER SERVICES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. EXACT LOCATION OF NEW PIPES, VALVES, FITTINGS, ETC. SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. ALL NEW WATER MAIN AND NEW SERVICES SHALL CROSS UNDER ANY EXISTING WATER MAIN AND EXISTING SERVICES UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
5. ALL WATER MAIN SHALL CROSS ABOVE ANY SEWER LINE AND AS CLOSE TO PERPENDICULAR AS POSSIBLE, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
6. ALL WATER MAIN FITTINGS TO BE OF THE RESTRAINED MECHANICAL JOINT TYPE.
7. RESTRAINED PIPE DISTANCE FROM FITTINGS ARE PROVIDED IN SECTION 02616 OF THE SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL RESTRAINED PIPE AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD.
8. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE ALL VALVES REQUIRED FOR STREET INTERCONNECTIONS.
9. AT LEAST 48 HOURS PRIOR TO A SCHEDULED INTERRUPTION OF WATER SERVICE TO ANY CONSUMER FOR THE PURPOSE OF CONNECTING NEW WATER SERVICE PIPING OR NEW WATER MAINS TO OLD WATER MAINS THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DELIVER WRITTEN NOTIFICATION TO ALL PREMISES AFFECTED BY SAID INTERRUPTION OF SERVICE.
10. CONTRACTOR SHALL SUBMIT A CONSTRUCTION PLAN FOR WORK ON HAIGH AVENUE IN ACCORDANCE WITH SPECIFICATION 01170 - SPECIAL PROVISIONS 1.10 A.
11. CONTRACTOR TO NOTE THAT EXISTING WATER MAINS ON CHARLES STREET AND IRVING STREET ARE LOOPED TO MILLVILLE STREET.
12. NEW GATE VALVES ON CHARLES STREET AND IRVING STREET SHALL BE INSTALLED PRIOR TO WATER MAIN REPLACEMENT AND IN A MANNER THAT MINIMIZES SHUT-DOWN TIME. VALVES SHALL BE LOCATED AT LEAST 30 FEET FROM PORTION OF 6" CI MAIN TO BE DISTURBED.

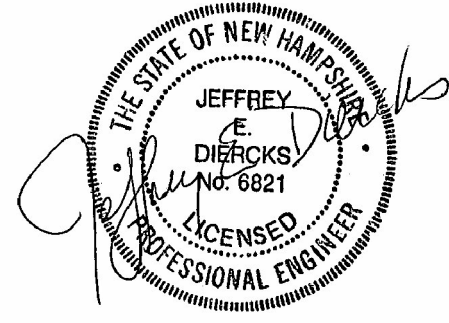


HOWARD STREET
PLAN



Legend

- Cap
- New System Valve
- Existing System Valve
- New Curbstop
- Existing Curbstop
- Tee
- New Hydrant
- Existing Hydrant
- Sewer Manhole
- Test Pit
- Remove/Abandon Water Main
- New Service Connection
- New Water Main
- Existing Water Main
- Existing Service Connection
- Sewer Pipe
- Drain Pipe



9/15/2016

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. CAREY
DRAWN BY: S. CAREY
SHEET CHK'D BY: J. DIERCKS
CROSS CHK'D BY: D. POLCARI
APPROVED BY: J. DIERCKS
DATE: SEPTEMBER 2016

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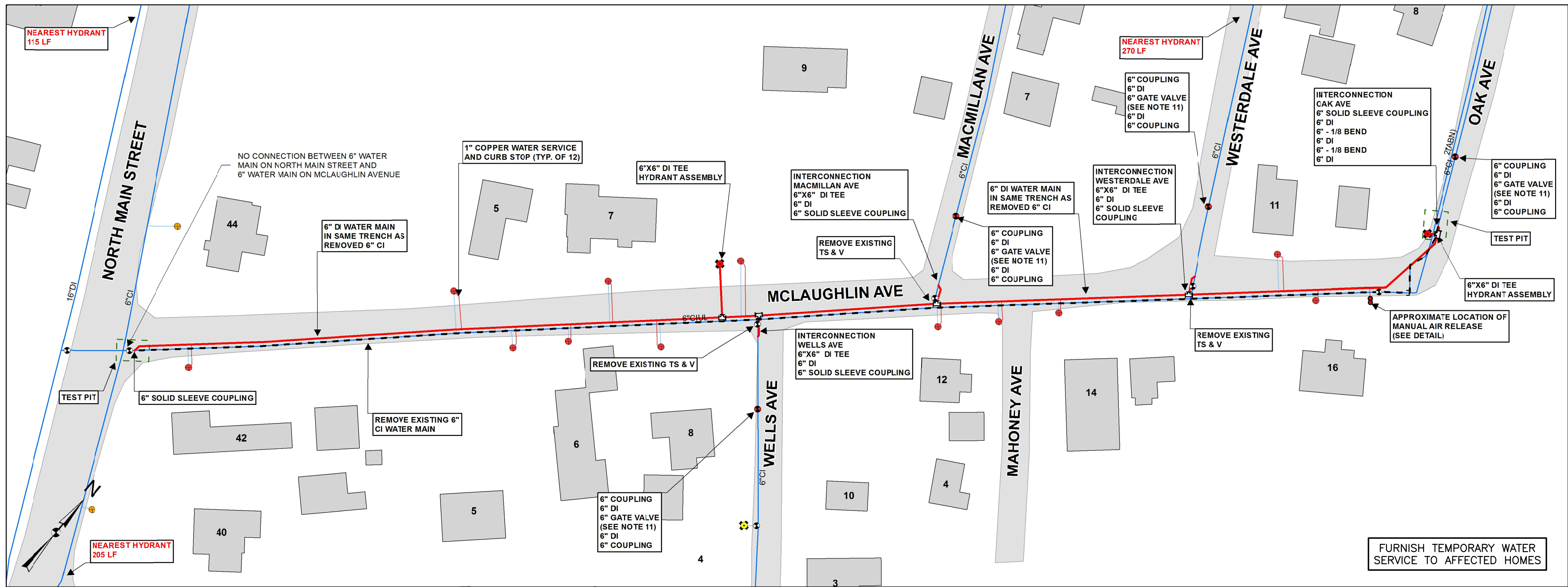
TOWN OF SALEM, NEW HAMPSHIRE
MISCELLANEOUS WATER MAIN REPLACEMENTS

HAIGH AVENUE AND
HOWARD STREET

PROJECT NO. 25972-114914 FILE NAME: CO01STPL.DWG
SHEET NO. C-1

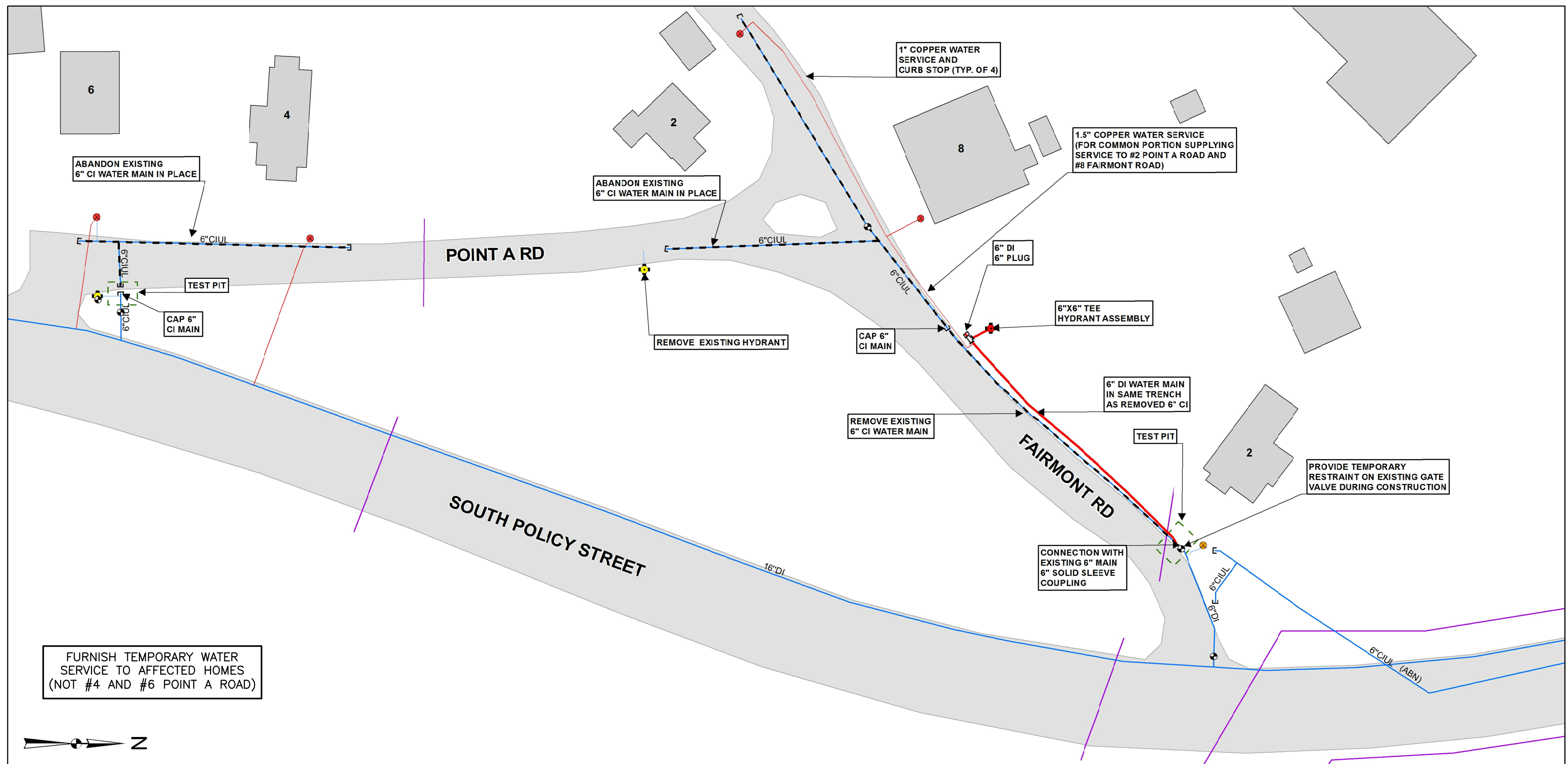
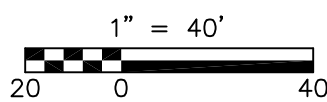
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XREFs: [CDWS-2436] Images: [Diercks NH PE, Project 3--8 8 1.5x22, Project 3--9 & 4--13 10x20, Water Main Design Legend]
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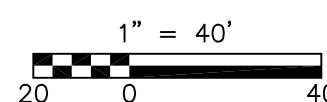
MCLAUGHLIN AVENUE

PLAN



POINT A ROAD AND FAIRMONT ROAD

PLAN

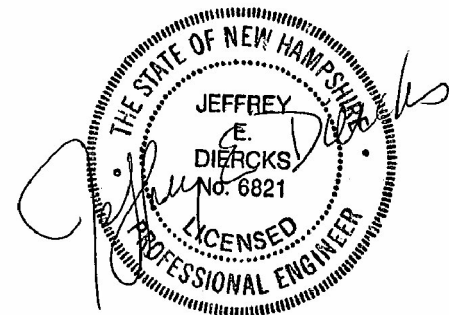


Legend

- Cap
- New System Valve
- Existing System Valve
- New Curbstop
- Existing Curbstop
- Tee
- New Hydrant
- Existing Hydrant
- Sewer Manhole
- Test Pit
- Remove/Abandon Water Main
- New Service Connection
- New Water Main
- Existing Water Main
- Existing Service Connection
- Sewer Pipe
- Drain Pipe

NOTES:

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- CONTRACTOR TO NOTE THAT EXISTING WATER MAINS ON MACMILLAN AVENUE, WESTERDALE AVENUE AND OAK AVENUE ARE LOOPED TO TOWN FARM ROAD. THE EXISTING WATER MAIN ON WELLS AVENUE IS A DEAD END.
- NEW GATE VALVES ON WELLS AVENUE, MACMILLAN AVENUE, WESTERDALE AVENUE AND OAK AVENUE SHALL BE INSTALLED PRIOR TO WATER MAIN REPLACEMENT AND IN A MANNER THAT MINIMIZES SHUT-DOWN TIME. VALVES SHALL BE LOCATED AT LEAST 40 FEET FROM PORTION OF 6" CI MAIN TO BE DISTURBED.



9/15/2016

REV.	NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: S. CAREY
DRAWN BY: S. CAREY
SHEET CHK'D BY: J. DIERCKS
CROSS CHK'D BY: D. POLCARI
APPROVED BY: J. DIERCKS
DATE: SEPTEMBER 2016

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TOWN OF SALEM, NEW HAMPSHIRE
MISCELLANEOUS WATER MAIN REPLACEMENTS

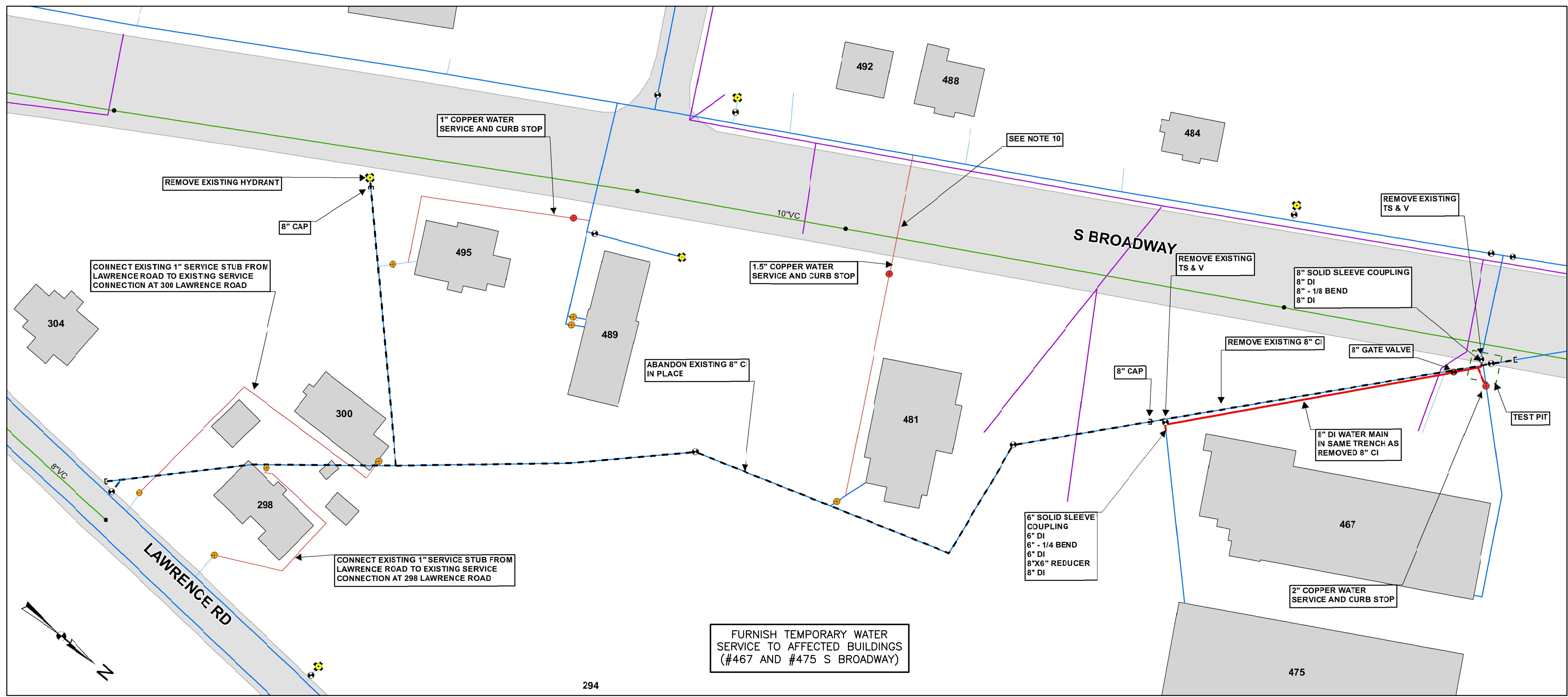
MCLAUGHLIN AVENUE, POINT A ROAD AND
FAIRMONT ROAD

PROJECT NO. 25972-114914
FILE NAME: C002STPL.DWG
SHEET NO.
C-2

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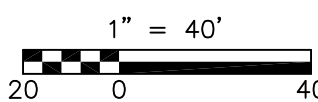
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ALL WORK THIS SHEET IS PART OF
BID ALTERNATE A



SOUTH BROADWAY AND LAWRENCE ROAD

PLAN

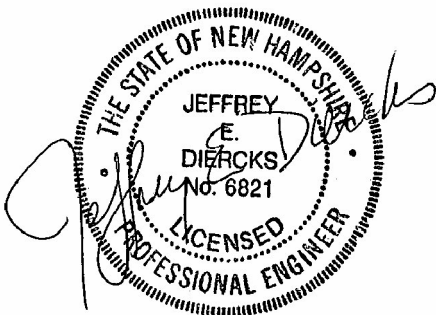


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8. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO LOCATE ALL VALVES REQUIRED FOR STREET INTERCONNECTIONS.
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10. CONTRACTOR SHALL SUBMIT A CONSTRUCTION PLAN FOR WORK ON SOUTH BROADWAY IN ACCORDANCE WITH SPECIFICATION 01170 - SPECIAL PROVISIONS 1.10 B.
11. CONTRACTOR TO NOTE THERE IS AN ADDITIONAL SERVICE TO 467 SOUTH BROADWAY NOT SHOWN ON PLANS THAT WILL BE DISCONNECTED BY OTHERS PRIOR TO CONSTRUCTION. CONFIRM DISCONNECTION AND ABANDON SERVICE DURING CONSTRUCTION.

Legend

- Cap
- New System Valve
- Existing System Valve
- New Curbstop
- Existing Curbstop
- Tee
- New Hydrant
- Existing Hydrant
- Sewer Manhole
- Test Pit
- Remove/Abandon Water Main
- New Service Connection
- New Water Main
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- Sewer Pipe
- Drain Pipe



9/15/2016

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TOWN OF SALEM, NEW HAMPSHIRE
MISCELLANEOUS WATER MAIN REPLACEMENTS

BID ALTERNATIVE A
SOUTH BROADWAY
AND LAWRENCE ROAD

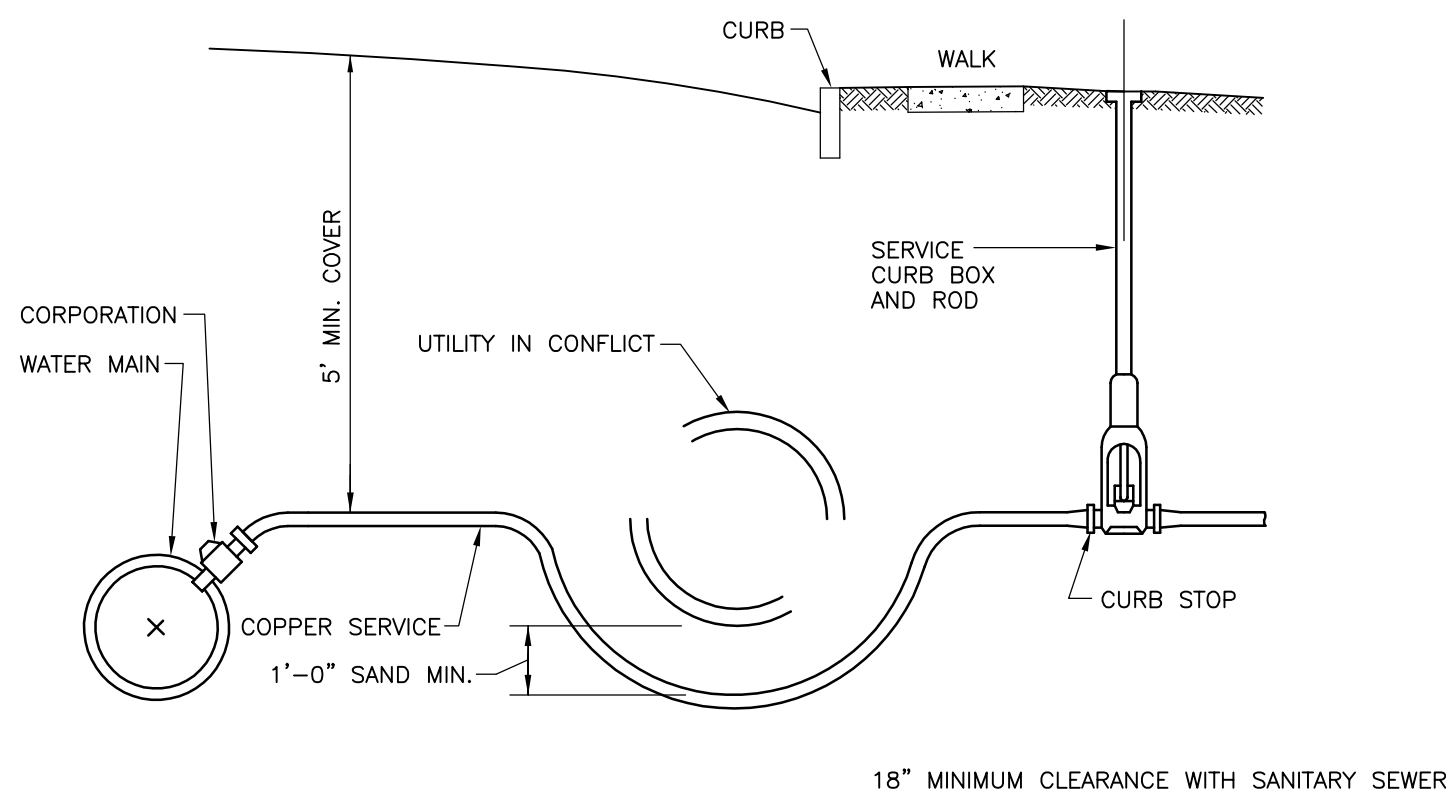
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FILE NAME: CD03STPL.DWG

SHEET NO.

C-3

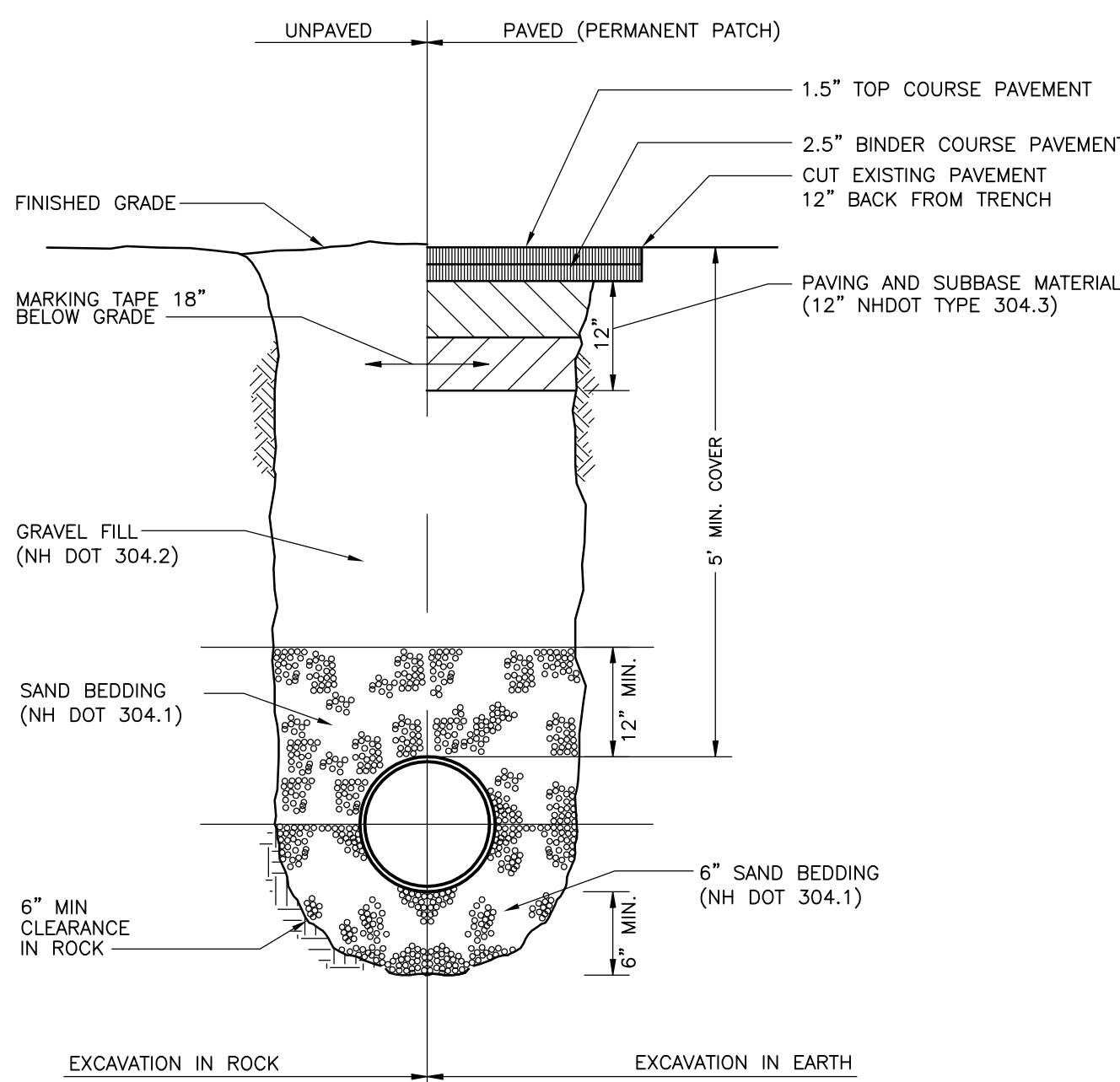
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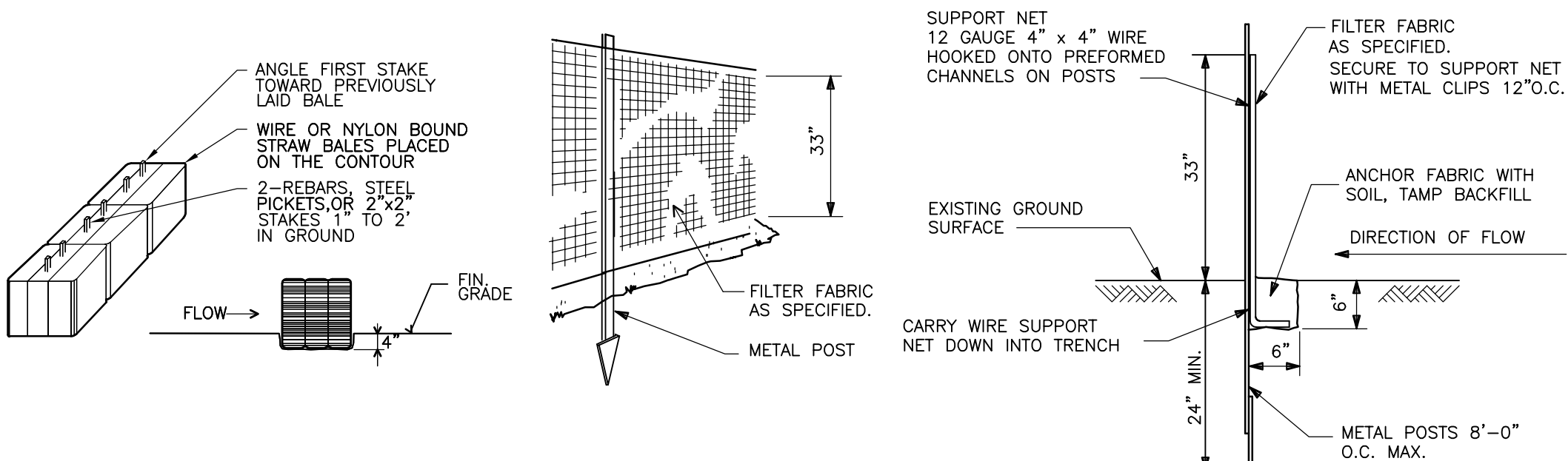
TYPICAL COPPER SERVICE OFFSET DETAIL

DETAIL
NTS



TYPICAL TRENCH DETAIL

DETAIL
NTS

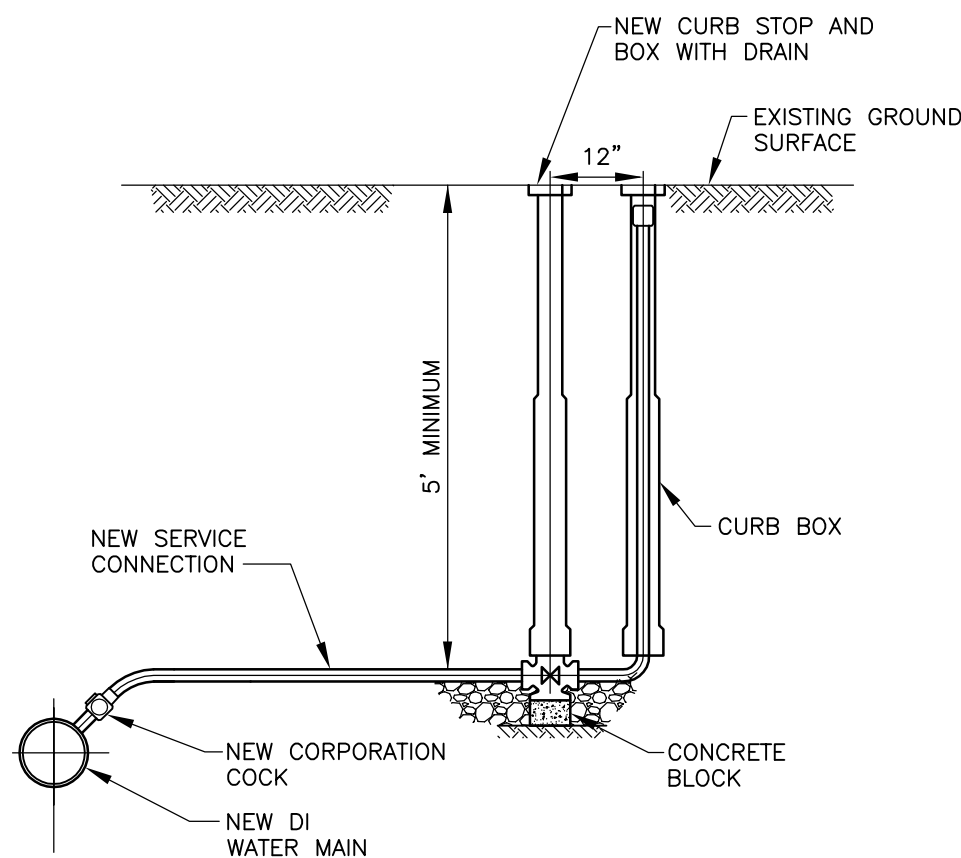


STAKED HAYBALE DETAIL

DETAIL
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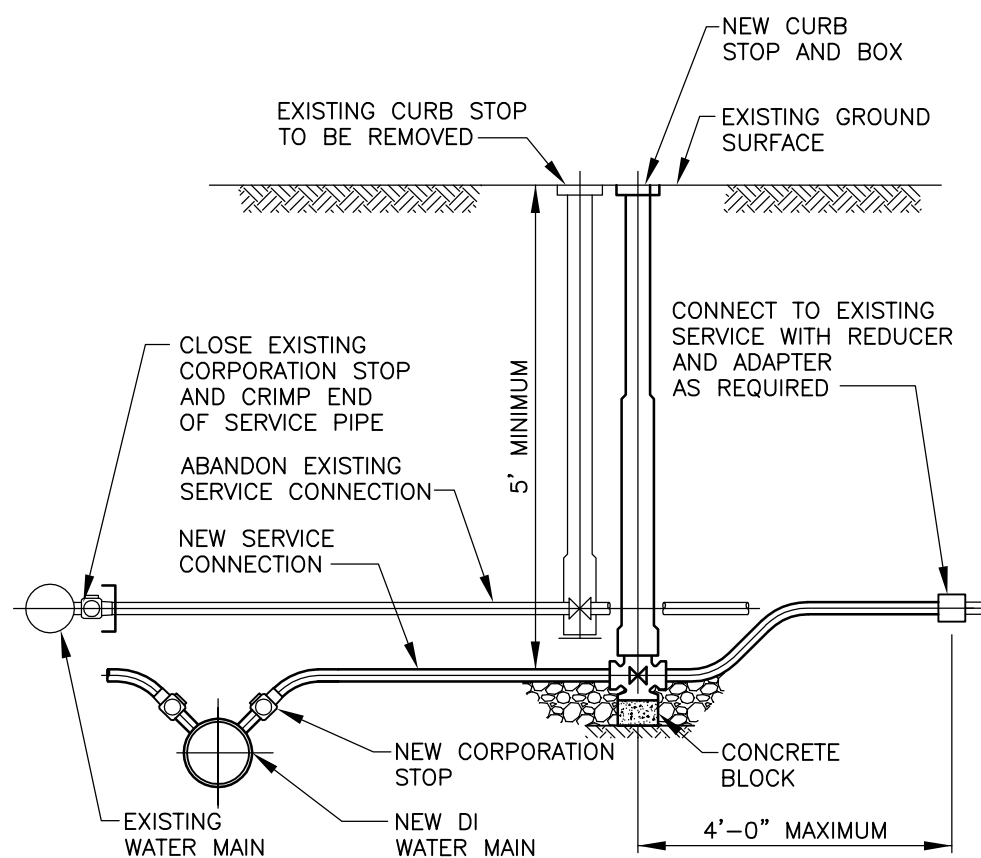
SILTY FENCE DETAIL

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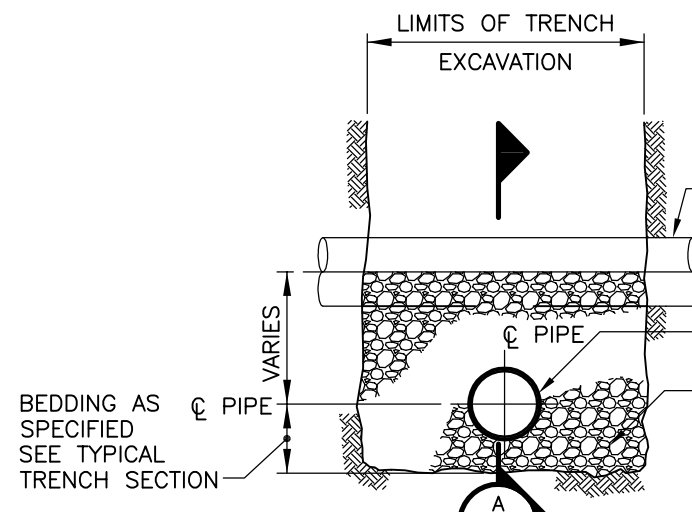
MANUAL AIR RELEASE DETAIL

DETAIL
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NEW WATER SERVICE CONNECTION REPLACING EXISTING SERVICE

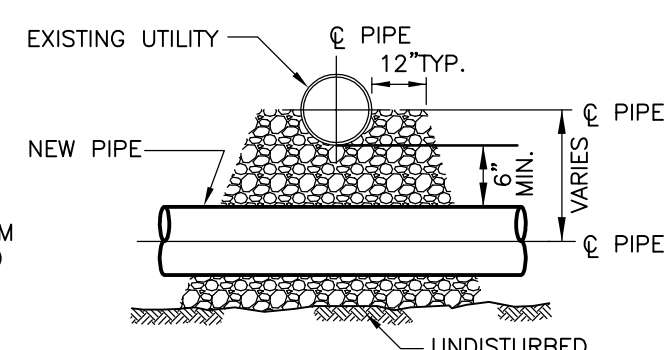
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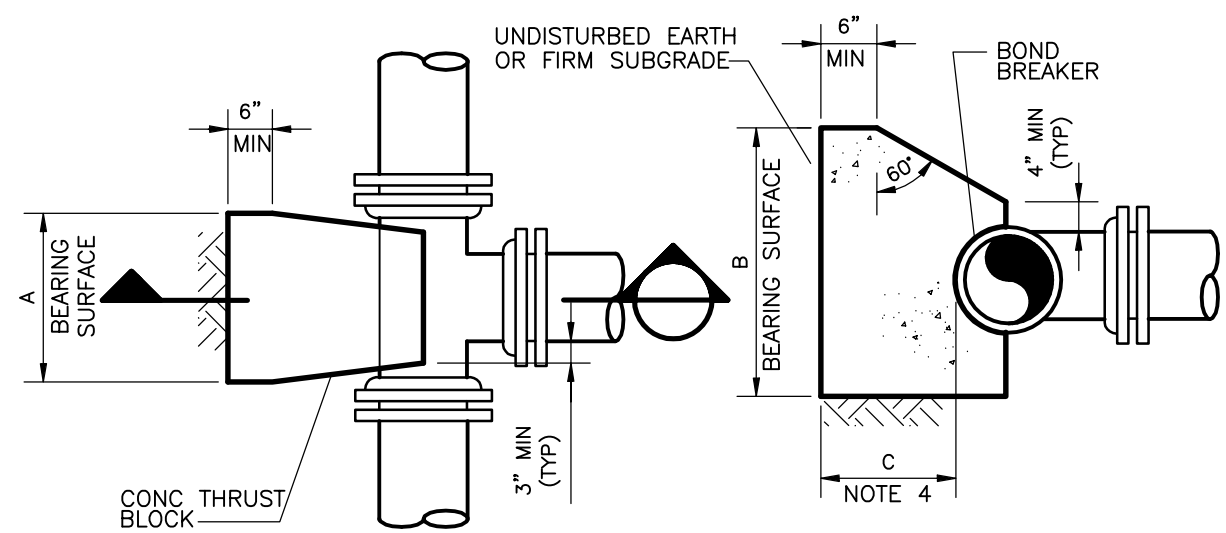
TYPICAL SECTION

EXISTING UTILITY CROSSING DETAIL

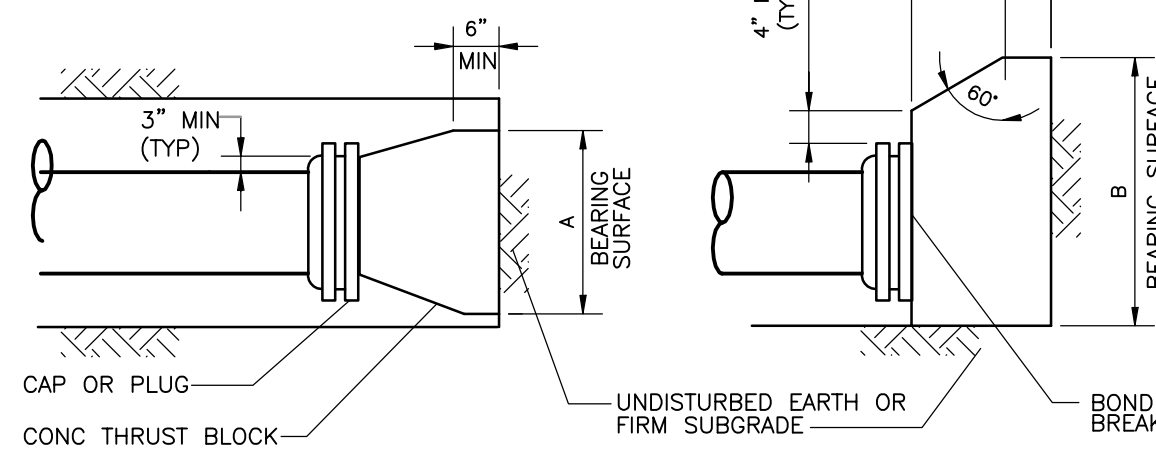
DETAIL
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SECTION A-A



DETAIL FOR TEES



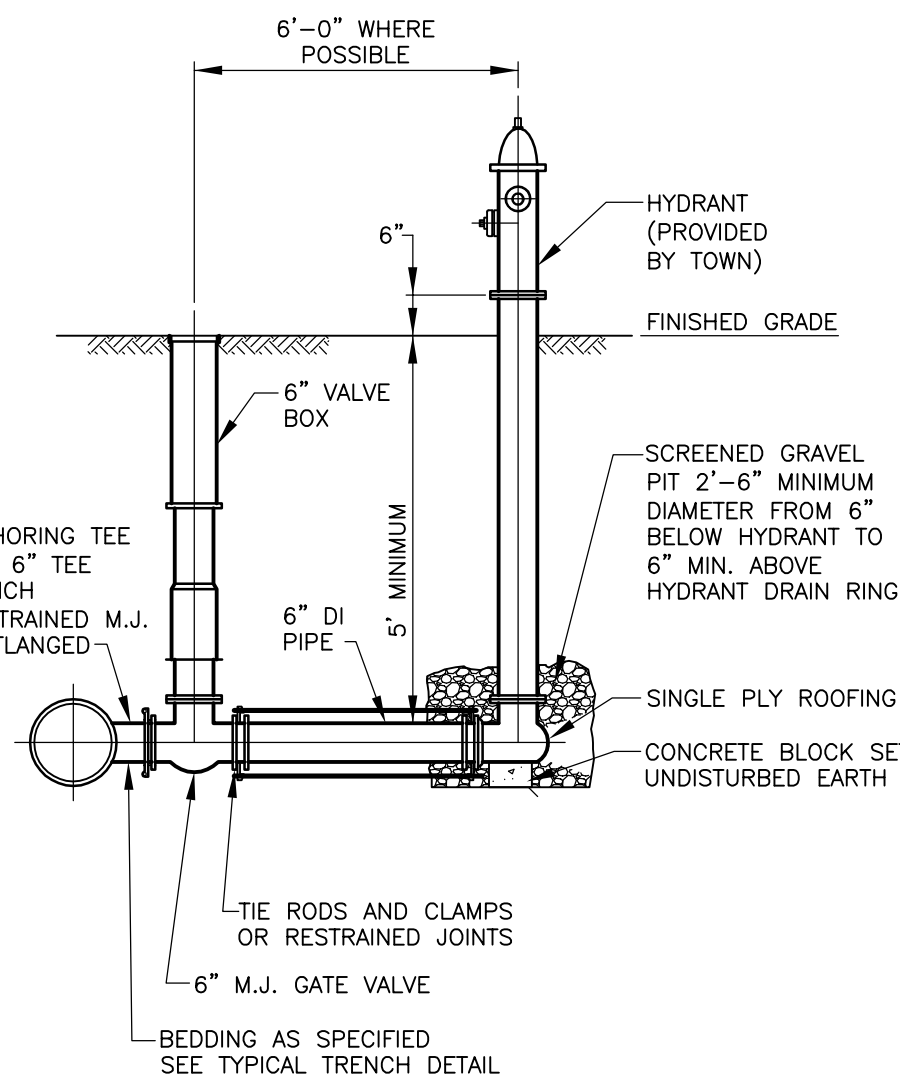
DETAIL FOR CAPS OR PLUGS

NOMINAL PIPE SIZE (IN)	MAXIMUM PIPE OD (IN)	REQUIRED BEARING AREA (SQ FT)
6	6.90	4
8	9.05	7
12	13.20	15

- NOTES:
1. MAXIMUM TEST PRESURE = 1.50x150 PSI
 2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
 3. BEARING AREA = A x B
 4. C SHALL BE GREATER THAN A/2 AND B/2.

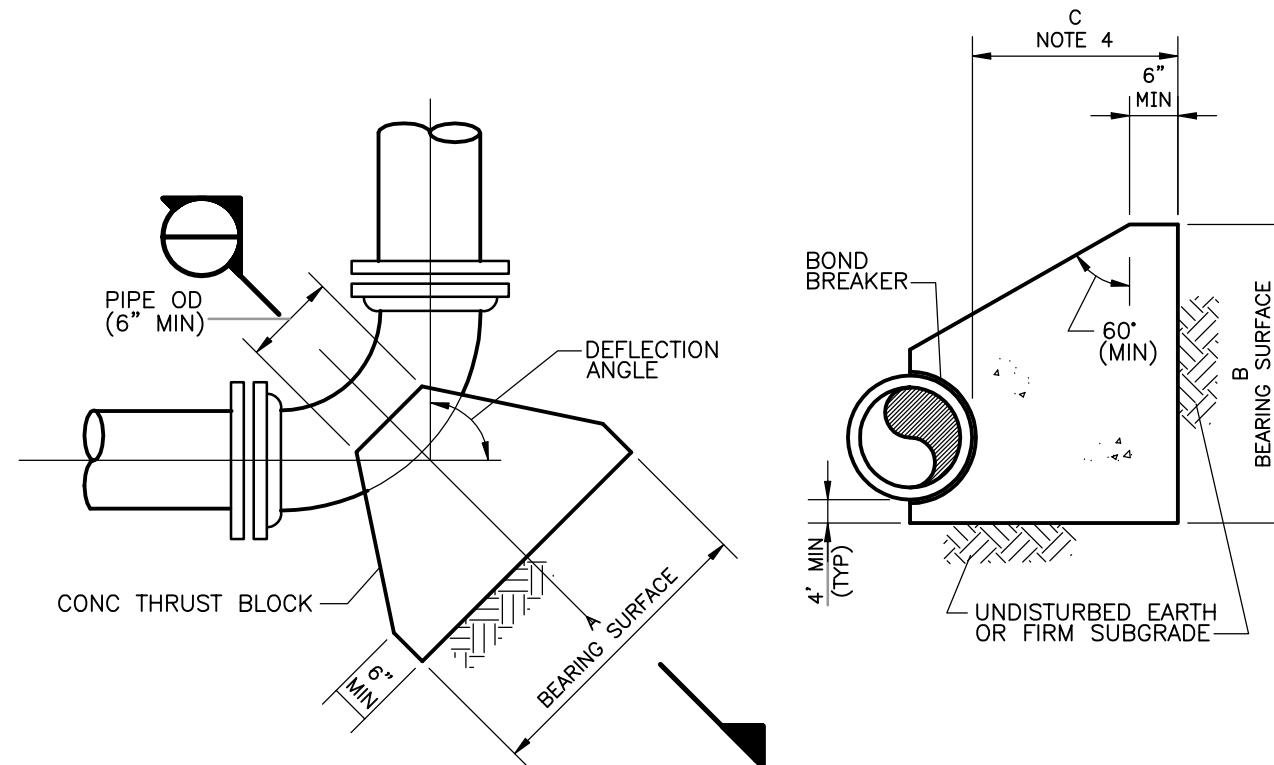
THRUST BLOCK FOR TEES, CAPS AND PLUGS

DETAIL
NTS



STANDARD HYDRANT ASSEMBLY

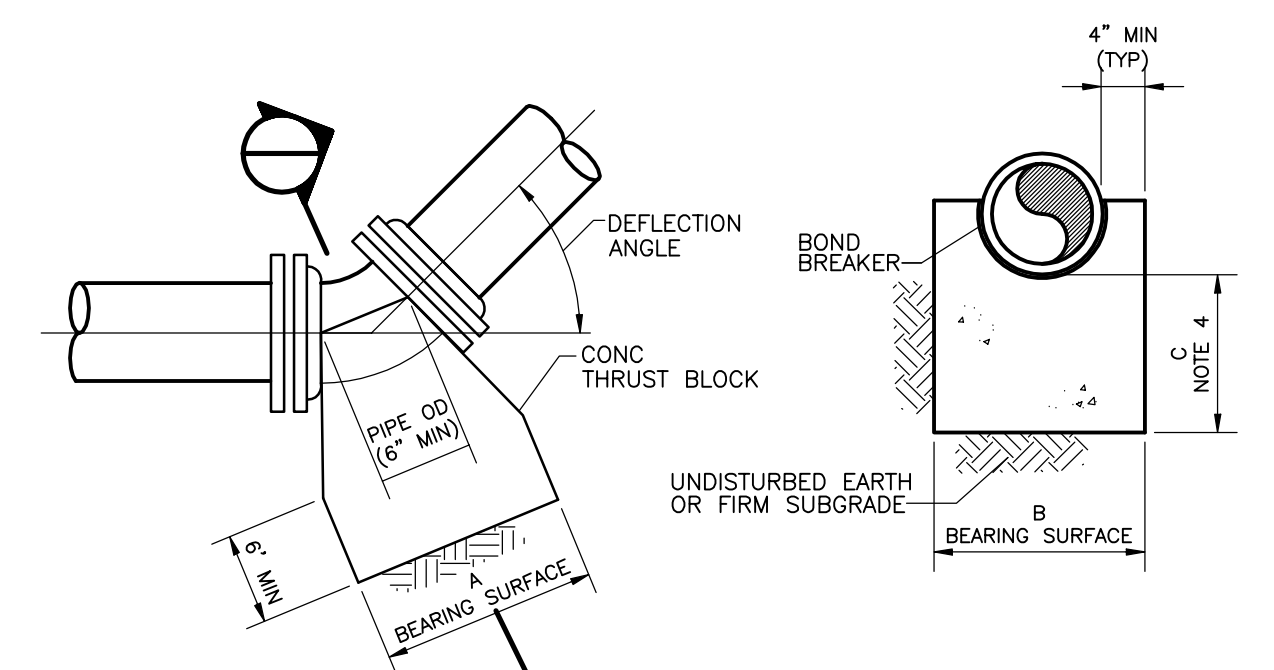
DETAIL
NTS



PLAN

SECTION

DETAIL FOR HORIZONTAL BENDS



ELEVATION

SECTION

DETAIL FOR LOWER VERTICAL BENDS

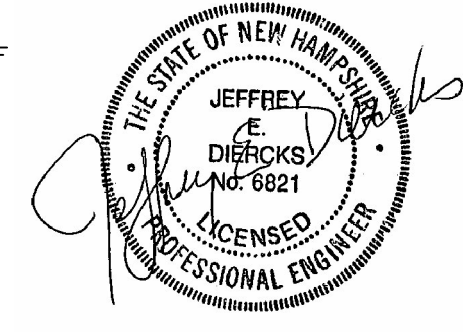
NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT)			
		90 DEG	45 DEG	22.50 DEG	11.25 DEG
6	6.90	6	3	1.6	0.8
8	9.05	10	6	3	1.4
12	13.20	22	12	6	3

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

- NOTES:
1. MAXIMUM TEST PRESSURE = 1.5 x 150 PSI
 2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
 3. BEARING AREA = A x B
 4. C SHALL BE GREATER THAN A/2 AND B/2.

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

DETAIL
NTS



9/15/2016

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	S. CAREY
DRAWN BY:	S. CAREY
SHEET CHK'D BY:	J. DIERCKS
CROSS CHK'D BY:	D. POLCARI
APPROVED BY:	J. DIERCKS
DATE:	SEPTEMBER 2016

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TOWN OF SALEM, NEW HAMPSHIRE
MISCELLANEOUS WATER MAIN REPLACEMENTS

MISCELLANEOUS DETAILS

PROJECT NO. 25972-114914
FILE NAME: CO04STD1.DWG
SHEET NO.
C-4

100% DRAFT - NOT FOR CONSTRUCTION