

IOWA DEPARTMENT OF NATURAL RESOURCES EMERSON BAY RECREATION AREA CAMPGROUND IMPROVEMENTS

DICKINSON COUNTY, IOWA
PROJECT NO. 11-01-30-03



building strong communities.

1360 NW 121ST. Street
Clive, Iowa 50325
515-964-1229
fax 515-964-2370

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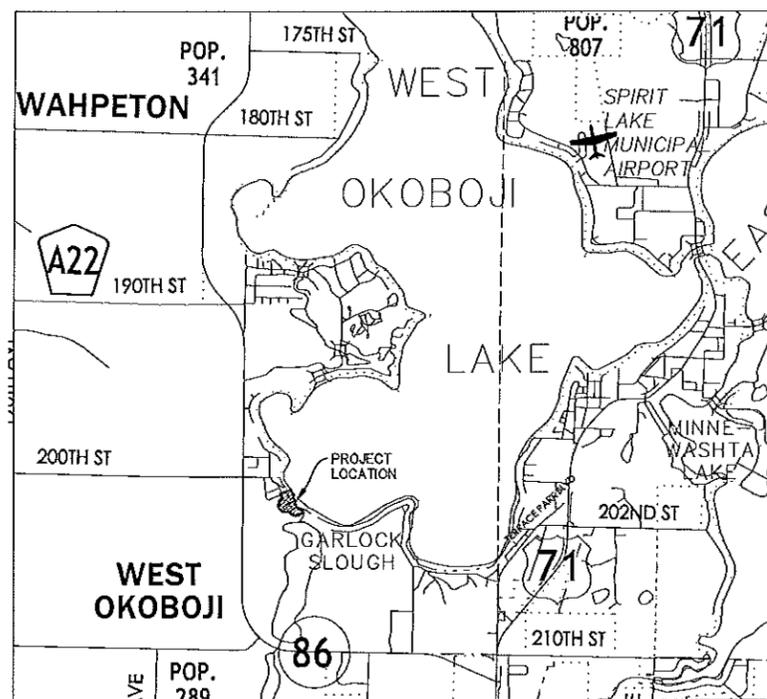


I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

DATE: 2/8/12
GEORGE A. PETERSON, PE NO. 15787

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2013

PAGES OR SHEETS COVERED BY THIS SEAL:
1-26



VICINITY MAP
NO SCALE



IOWA STATE MAP
NO SCALE

AUTHORIZATION TO BID	
ANGELA CORIO, STATE PARK PLANNER - CONSERVATION AND RECREATION DIVISION	DATE
GABE LEE, CHIEF - ENGINEERING BUREAU	DATE

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1-800-292-8989
www.iowaonecall.com



UTILITIES

THE CONTRACTOR SHALL NOTIFY IOWA ONE CALL NO LESS THAN 48 HRS. IN ADVANCE OF ANY DIGGING OR EXCAVATION.

WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE DRAWINGS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

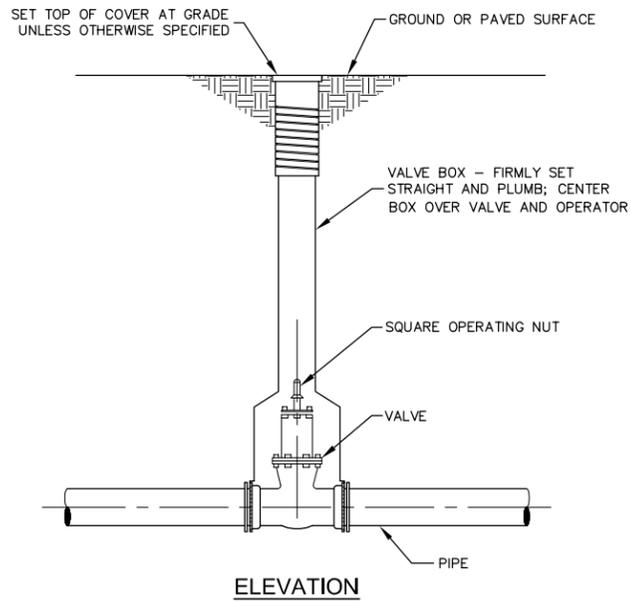
Emerson Bay Recreation Area
Campground
Improvements
Dickinson County, Iowa
2311004
February 8, 2012

REVISIONS

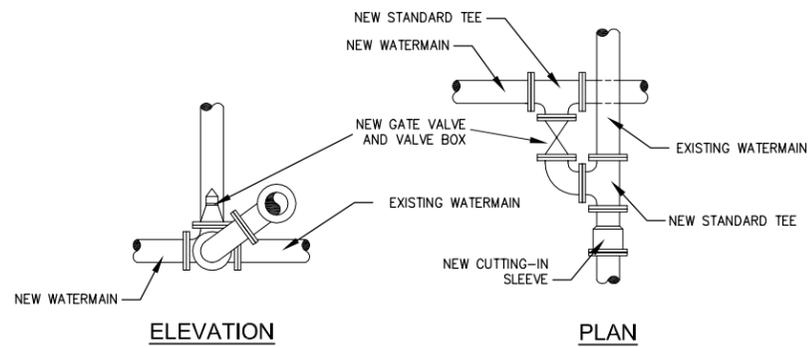
ENGINEER: G. Peterson
DRAWN BY: R. Anderson

CHECKED BY: C. Smith
FIELD BOOK NO.:

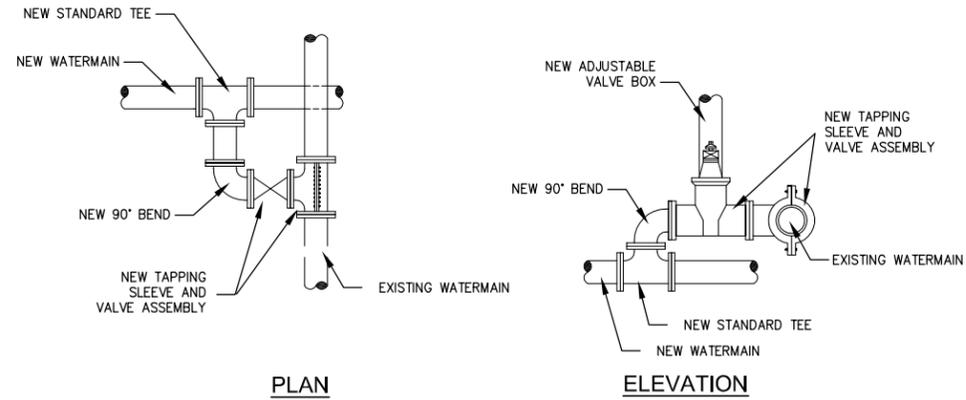
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SHEET NO.: 01 / 26



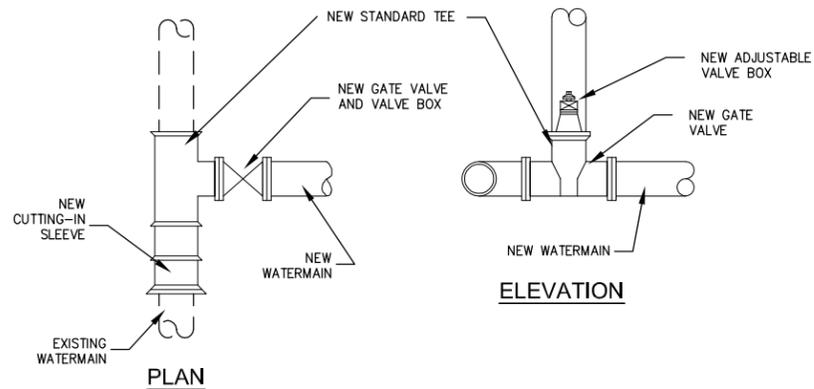
VALVE AND BOX DETAIL
NOT TO SCALE



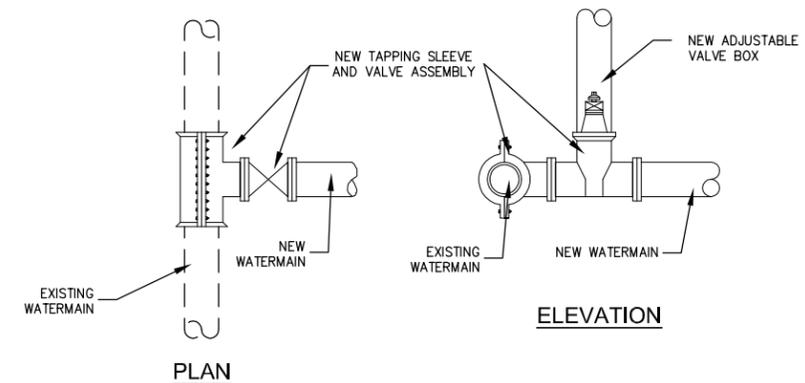
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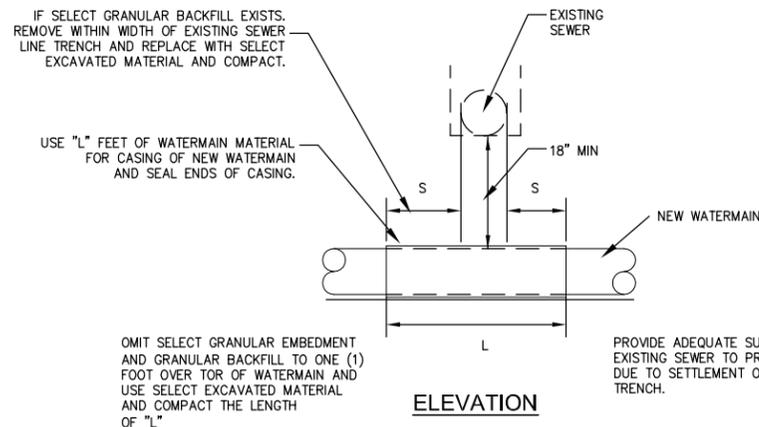
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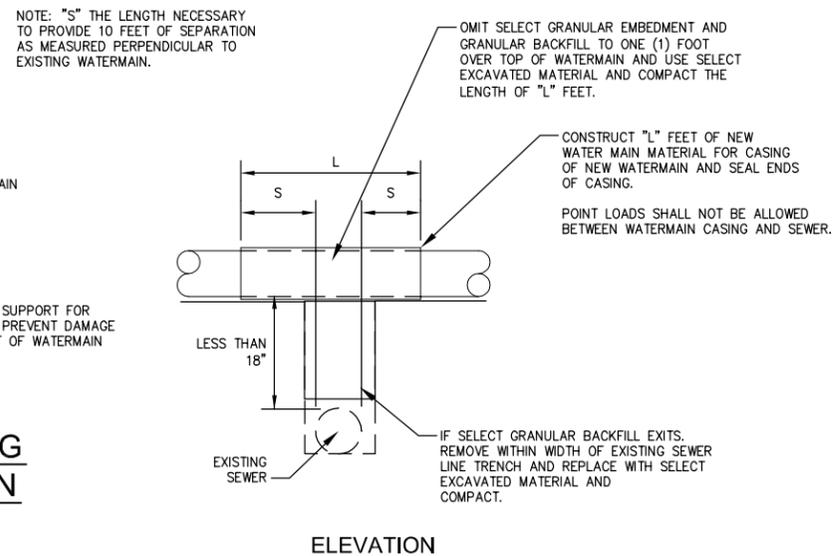
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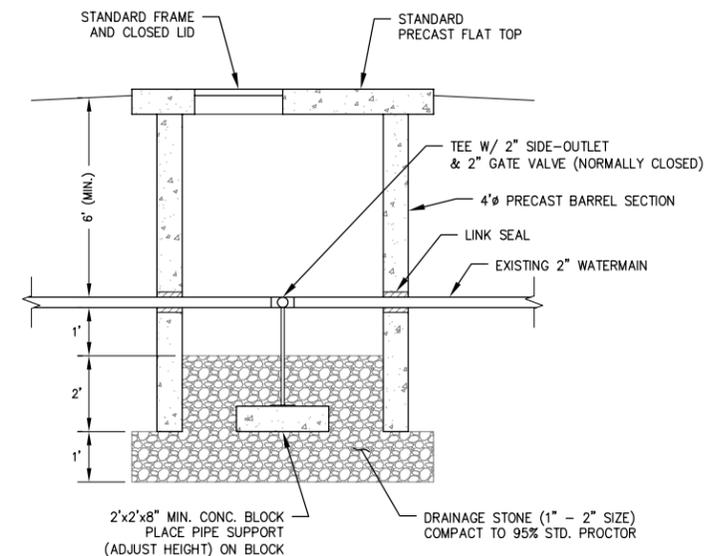
CONNECTION DETAIL, TYPE D (PRESSURIZED)
NOT TO SCALE



NEW WATERMAIN BELOW EXISTING SEWER WITH 18" MIN. SEPARATION
NOT TO SCALE



NEW WATERMAIN ABOVE EXISTING SEWER WITH 18" MIN. SEPARATION
NOT TO SCALE



DRAIN MANHOLE DETAIL
NOT TO SCALE

- GENERAL NOTES**
- PIPE MATERIAL AND JOINT TYPES WILL BE AS INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS. TYPICAL DETAILS SHOWN ON THIS SHEET ILLUSTRATE THE ENGINEER'S INTENT FOR INSTALLING WATERMANS. THEY ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS WHICH MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER HIS METHOD OF CONSTRUCTION TO SUIT FIELD CONDITIONS PROVIDED HE SUBMITS HIS PROPOSED ALTERNATE TO THE ENGINEER FOR REVIEW PRIOR TO PERFORMING THE WORK.
 - ALL THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH. COVER ALL FITTINGS WITH PLASTIC SHEETS PRIOR TO POURING CONCRETE.

NOTICE
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WATER MAIN DETAILS

Emerson Bay Recreation Area
Campground Improvements
Dickinson County, Iowa
2311004
February 8, 2012

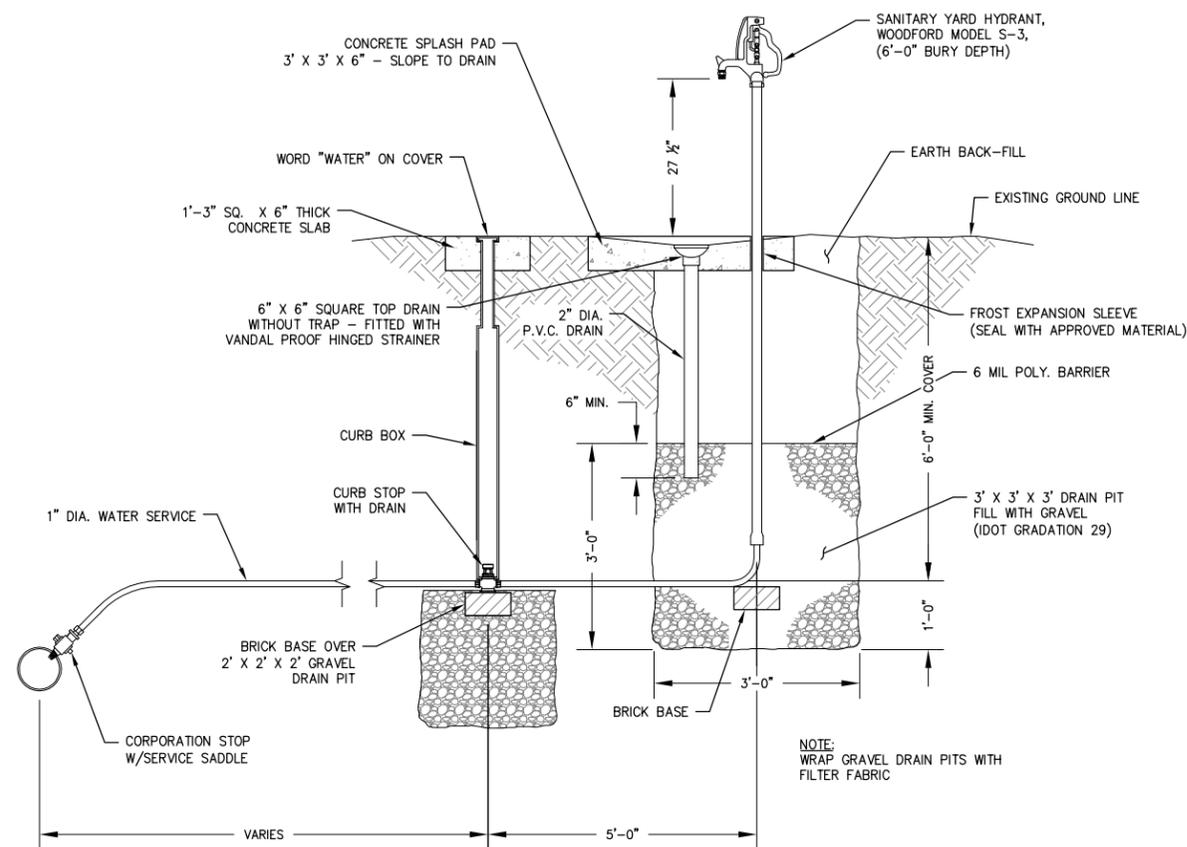
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FIELD BOOK NO.:

DRAWING NO. DE-01
SHEET NO. 03 / 26

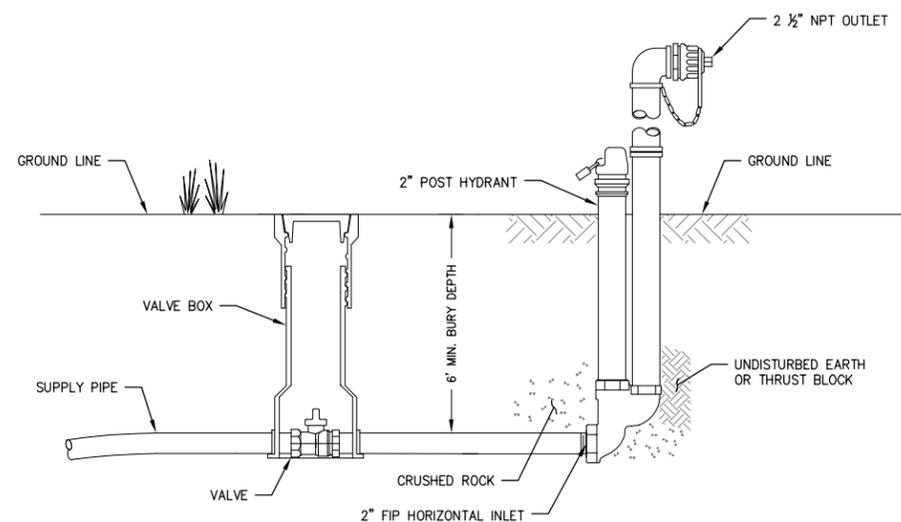
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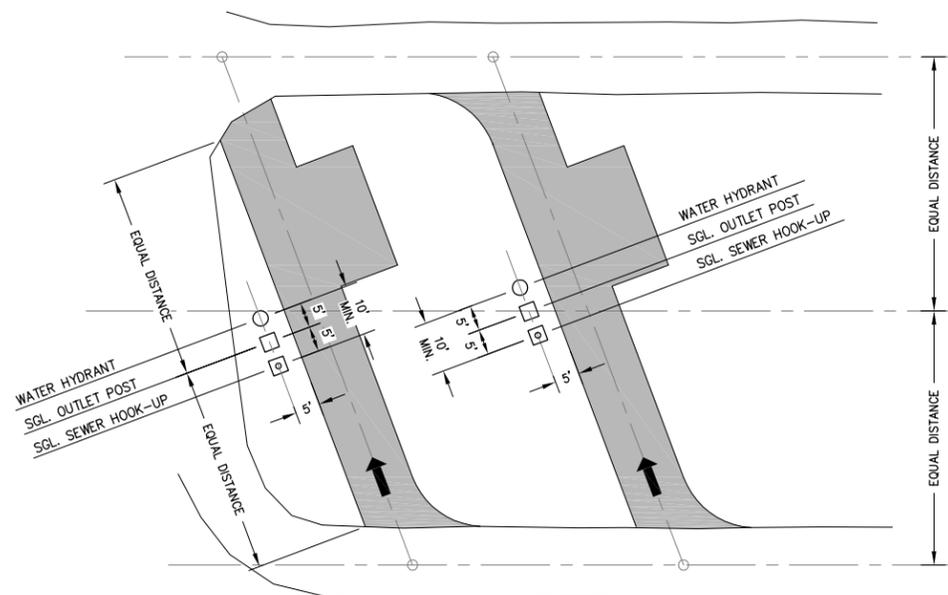
YARD HYDRANT DETAIL

NOT TO SCALE



FLUSHING HYDRANT DETAIL

NOT TO SCALE



**PULL-THRU SITES
UTILITY LOCATIONS**

NOT TO SCALE

UTILITY
DETAILS

Emerson Bay Recreation Area
Campground
Improvements
Dickinson County, Iowa
2311004
February 8, 2012

REVISIONS

ENGINEER
G. Peterson
CHECKED BY
C. Smith

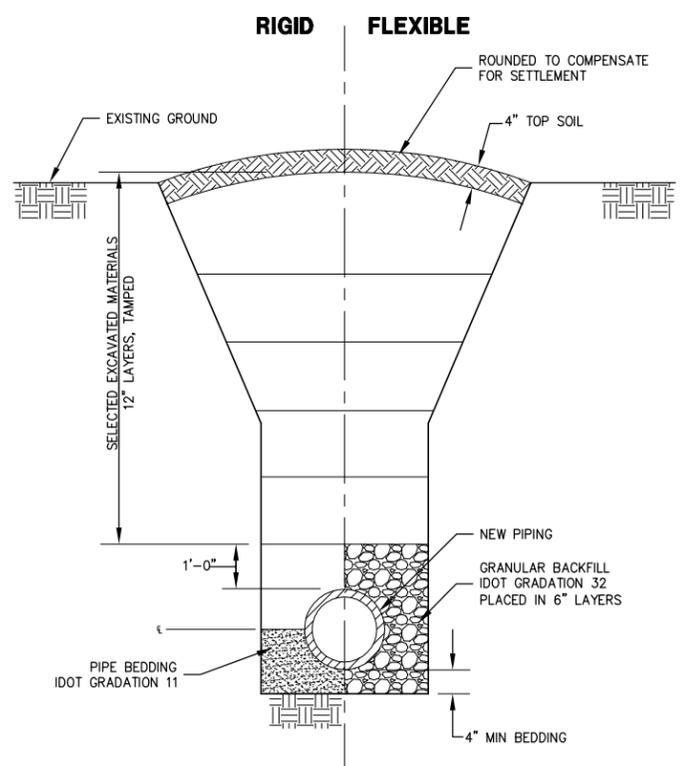
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R. Anderson
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DE-02

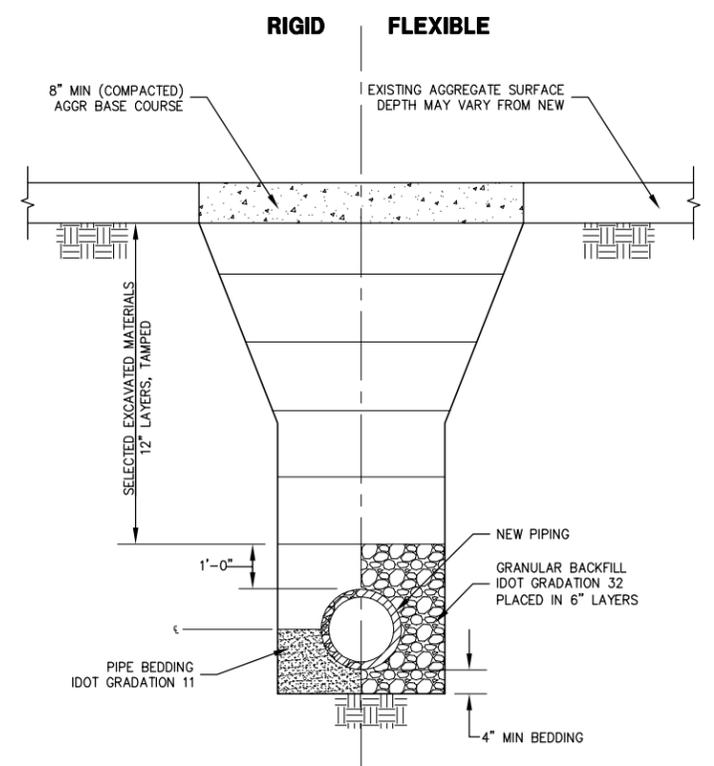
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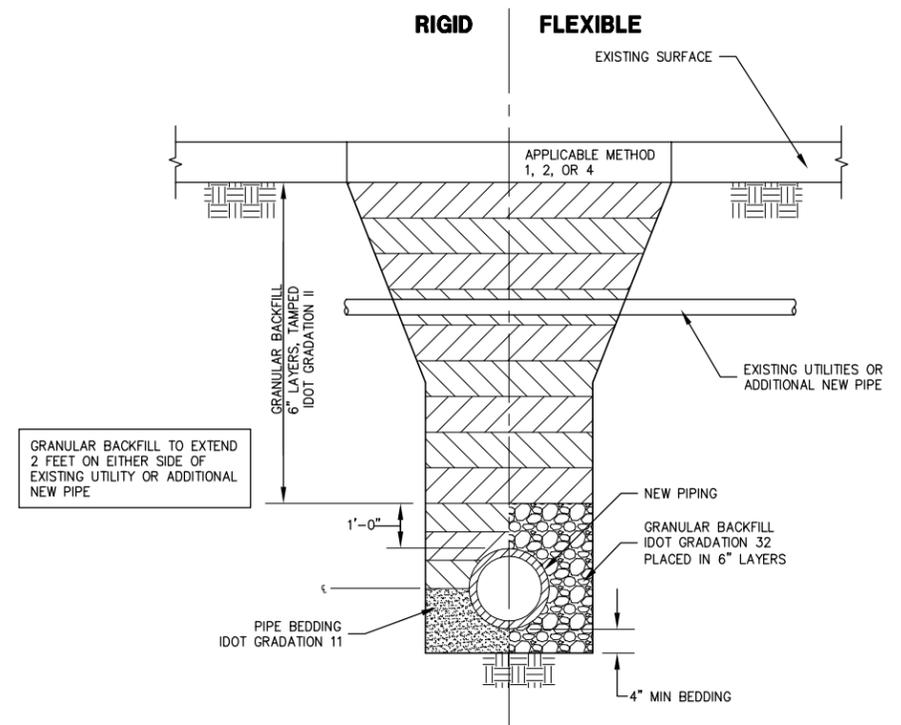
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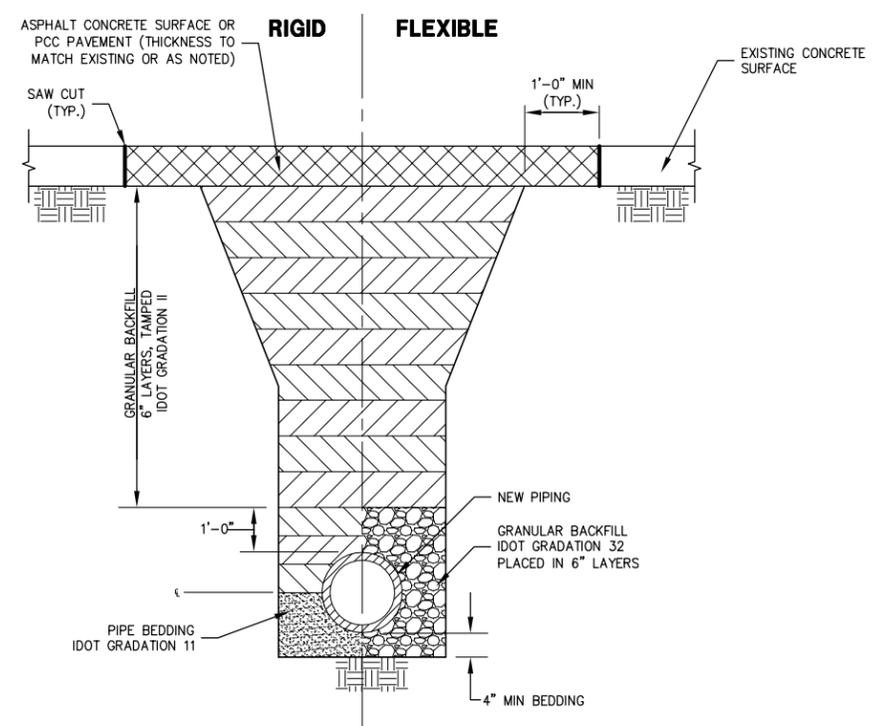
METHOD 1
TRENCH UNDER YARDS AND UNIMPROVED AREAS



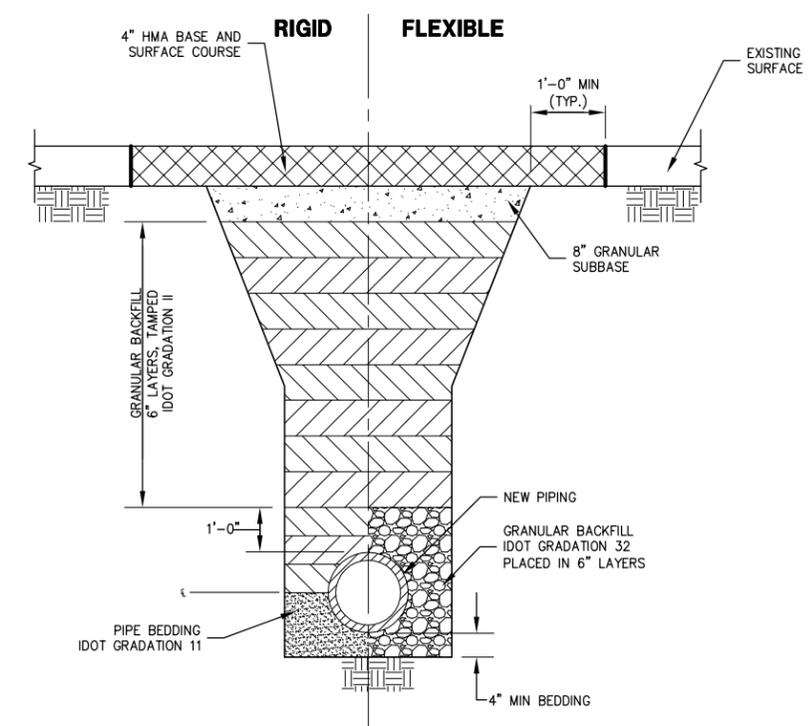
METHOD 2
TRENCH IN PARKING AREAS, DRIVEWAYS AND ALLEYS HAVING PERMANENT SURFACES OR HAVING OIL & CHIP SURFACES



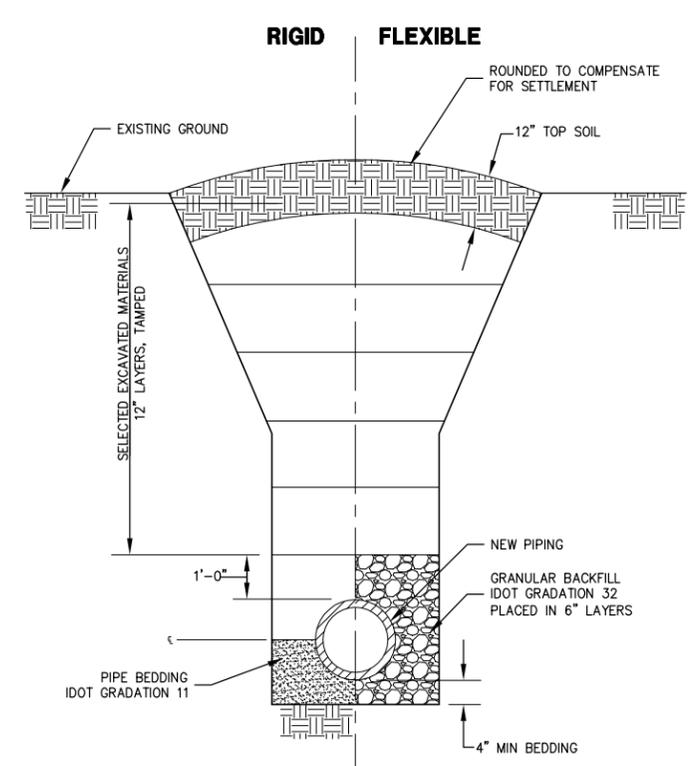
METHOD 3
TRENCH UNDER EXISTING UTILITIES OR STRUCTURES



METHOD 4
TRENCH UNDER PERMANENT CONCRETE OR ASPHALT SURFACES



METHOD 5
TRENCH UNDER OIL AND CHIP SURFACES



METHOD 6
TRENCH UNDER CULTIVATED FIELDS

TRENCH
DETAILS
SHEET 1

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REVISIONS
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