



## Residential Development Guidelines

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ADDRESS: \_\_\_\_\_

DEVELOPMENT: \_\_\_\_\_

OWNER: \_\_\_\_\_

PROJECT MANAGER/DEVELOPER: \_\_\_\_\_

CONTRACTOR(S): \_\_\_\_\_

ENGINEER: \_\_\_\_\_

**PUBLIC IMPROVEMENTS CONSTRUCTION INSPECTION:** Town of Superior - Rick Davis, CPII

**STORMWATER MANAGEMENT INSPECTION:** Town of Superior - Rick Davis, CPII

### **Town of Superior Emergency Phone Numbers / Contact List:**

- Rick Davis – TOS Senior Construction Inspector      Cell: (303) 709-6726
- Ed Johnson – TOS Maintenance Supervisor      Cell: (303) 709-6727
- Alex Ariniello \_ TOS Public Works Director      Cell: (303) 579-9839
- Alex Gorsevski – TOS Civil Engineer      Cell: (303) 381-2014
- Jim Widner – TOS Utilities Superintendent      Cell: (720) 363-0959
- Matt Rarick – TOS Parks Superintendent      Cell: (303) 349-8926
- Alex Bullen – TOS GIS and Permits      Cell: (303) 826-2613

### **1. Permits for the Project**

- Town of Superior Stormwater Quality Permit – Required
- Town of Superior ROW Permit – Required
- Construction Water Meter Permit can be obtained from Town of Superior  
A deposit for the meter is required

**2. Project Information and Submittals for public improvements (allow up to 5 working days for product submittal reviews)**

**Information to be Provided by the Applicant**

- Final design drawings designed and stamped by a Colorado licensed Professional Engineer (unless waived by the Town)
- The fire protection sprinkler system must be designed and approved by a certified fire protection specialist.
- Design drawings must be in compliance with the current version of Town of Superior's Design Standards and Specifications. Samples of the detail drawings that are to be integrated into the design set are included in the back of this packet. The complete set of detail drawings can be found here: (<https://www.superiorcolorado.gov/home/showdocument?id=1454>)
- The drawings must be clear and professional in design and presentation. Drawings not produced in such a manner will be returned to the applicant and not reviewed.
- Design drawings guidelines:
  - The only details that can be included in the design drawings are those that are part of the Town's Design Standards and Specifications.
  - Design drawings must include BMPs from the Town's standards.
  - All existing utilities must be located (potholed) in the field and shown.
  - Cover sheet must include a title, approval block, vicinity map, sheet index, benchmark, basis of bearing, legal description, utility maintenance statement and sheet index.
  - Include Town of Superior General Notes and Engineer's Notes, which are shown in the Standards.
  - At a minimum, include a Site Plan, Utility Plan, Erosion Control Plan (Stormwater Management Plan), Plan and Profile drawings for water and sewer service lines, Grading Plan and Paving Plan.

**Information to be Provided by Contractor**

- Project construction schedule. Must submit prior to any work on site.
- Contractors Emergency Contact List
- Document Pre-Existing Site Conditions
- As-Built Drawings
- Traffic and Pedestrian Control Plans (if Applicable) in Accordance with MUTCD and ADA
  - Provide Qualified Traffic Control Flaggers
  - Continuously Maintain Traffic Control Devices Per MUTCD

**Submittals**

- Domestic Water Materials
- Reuse Water Materials
- Storm Sewer Materials
- Sanitary Sewer Materials
- Erosion Control
- Underdrain Materials
- Concrete Mix Design
- Asphalt Mix Design
- Epoxy Coated Rebar
- Concrete colorants
- Impervious White Concrete Curing Compound
- Concrete Sealants
- Cast Iron Products (Manholes Ring and Cover, Sanitary Sewer Cleanouts)

### 3. Construction Inspection

- A Minimum 24-Hour Notice is Required for Inspections.
- Contractor Responsible For Preparing Work for Inspection, Providing Necessary Workforce, and Providing Safe Access To The Work In Accordance With OSHA Regulations.
- Additional Fees Shall Apply For After Hours Inspections and Re-inspections.

- **Sanitary Sewer Service Line Inspections (Service Lines are Maintained by the Homeowner, from Sewer Main to Lot)**

Bedding

Under Drain

Pipe Slope

Wyes

Connection to Main

12 Inches of Bedding Level Over Top Of Pipe

Backfill – Uniformly Moisture Conditioned Soils, MAXIMUM 8 INCH Lifts, MAXIMUM 4 INCH Lifts For Mechanical Hand Compaction Around Manholes, Cleanout Pipes.

- **Concrete Inspections**

Subgrade - Uniformly Moisture Conditioned Soils, MAXIMUM 8 INCH Lifts, MAXIMUM 4 INCH Lifts For Mechanical Hand Compaction.

Grade Stakes And Hubs Required To Remain In Place Until After Concrete Is Placed.

All Concrete To Be Plant Batched. The Use Of Hand Mixed Concrete On Site Is Not Permitted.

Concrete Tests With 5 Test Cylinders Every 50 Yards Or Portion Thereof Per Day.

Batch Weights Required For Each Concrete Delivery To The Site.

90 Minutes From Batch Time To Have Concrete Truck Empty.

No Water To Be Used To Aid In Finishing.

The Use Of Confilm, Or Other Finishing Aid Products Is Prohibited.

Light Broom Finish

Sanitary Sewer Service Locations To Be Stamped On Curb Face With A Minimum 4 Inch Tall "S" Stamp.

Water Service Locations To Be Stamped On Curb Face With A Minimum 4 Inch Tall "W" Stamp

Impervious White Curing Compound Shall Be Applied Under Pressure By Mechanical Sprayers At The Rate Of Not Less Than 1 Gallon Per 150 Square Feet Of Surface. Curing Compound To Be Applied In Two Directions For Complete Coverage. Spotting Not Acceptable. The Sides Of Slabs Shall Be Immediately Sprayed With Curing Compound When The Forms Are Removed.

Plastic Or Other Suitable Means Of Protecting Concrete From Rain/Precipitation.

Cold Weather Protection.

Keep Newly Poured Concrete From Freezing By Maintaining 50F For The First 72 Hours, And Maintain Temperatures Above 40F For An Additional Four (4) Days.

- **Water Services Inspection**

- No Taps Within 2 Feet Of A Bell, Fitting, Valve Or Another Service Tap.
  - Tapping Saddle And Corp Inspection
  - No Pipe Dope To Be Used On Any Flare Fitting.
  - K Copper Inspection. No Fittings Or Connection From Corp Stop To Curb Stop.
  - Squeegee Bedding Inspection
  - Curb Stop Inspection
  - Meter Yoke Inspection
  - Grade Beam Inspection
  - Curb Stop Box (Centered And Plumb Over Quarter Turn Valve)
  - Meter Pit And Meter Dome Inspection
  - Meter to be Set by Town Staff

- **Street Subgrade and Paving Inspection**

- Uniformly Moisture Condition Soils & Compact Backfill Of Curb & Gutter Before Starting Streets.
  - All Utilities And Service Lines To Be Installed And Inspected Prior To Starting Street Subgrade Work.
  - Protect Storm Inlet Drains
  - All Subgrade Is Compacted by Proof Rolling or Other Approved Means to Achieve Required Compaction.

**Finish Asphalt Surface To Be ½ Inch Above The Lip Of Gutter. Adjust Crown Accordingly.**

Median Finish Grade To Be Flush With Lip Of Gutter.

**Asphalt Paving Inspection**

Asphalt Tie-Ins Shall Be Neatly Sawcut Vertically, Full Depth, And Perpendicular To The Roadway

Tack Coat shall be applied to all seams

**4. Stormwater Management (Managed by Contractor)**

- Effective April 1, 2019 New Stormwater Permit Regulations Apply. Contractor/Manager To Notify Town If Inspecting Every 7 Days, **Or** Inspecting Every 14 Days **And** Post Storm Event Inspections Using Certified Swmp Inspector. Town Will Inspect Every 45 Days.
- Clean And Maintain BMP's As Often As Necessary To Maintain Performance.
  - Stabilized Staging Area(s) (By Contractor)
  - Administrative Control Measures (By Contractor)
  - Perimeter Controls (By Contractor)
  - Concrete Washout With Visible And Legible Sign (By Contractor)
  - Sanitary Facilities (By Contractor)
  - Solid Waste Containment (By Contractor)
  - Vehicle Tracking Pads (By Contractor At All Points Of Ingress/Egress)

Adequate Spill Containment Kits (By Contractor)

Storm Inlet Protection (By Contractor)

Keep Roadways Clear Of Mud, Debris And Sediment AT All Times. If Mud Tracked, Clean Immediately. (By Contractor)

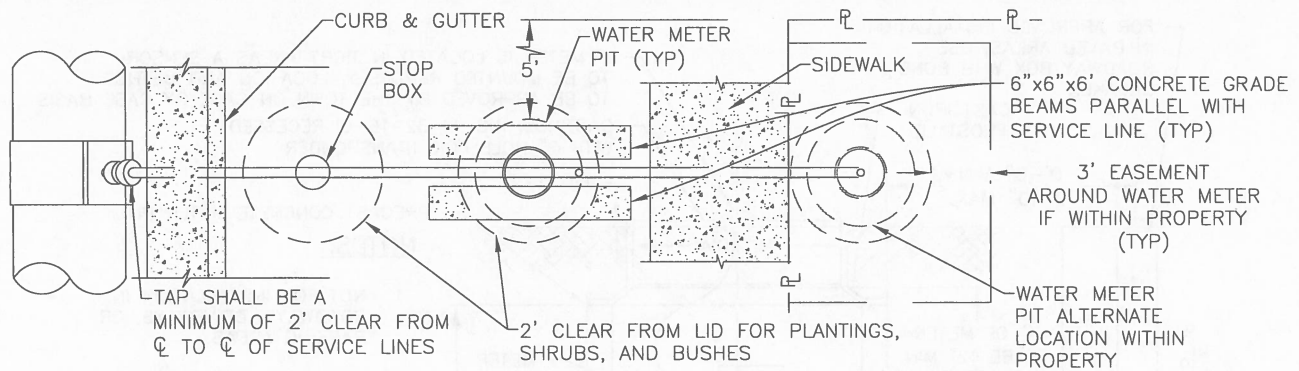
- Strict Compliance With Town Of Superior MS4 Permit And Ordinance
- Keep Logs Of All Inspections In Construction Trailer. **Provide Town With Copies Of All Inspection Reports.**

## 5. Work in the Floodplain

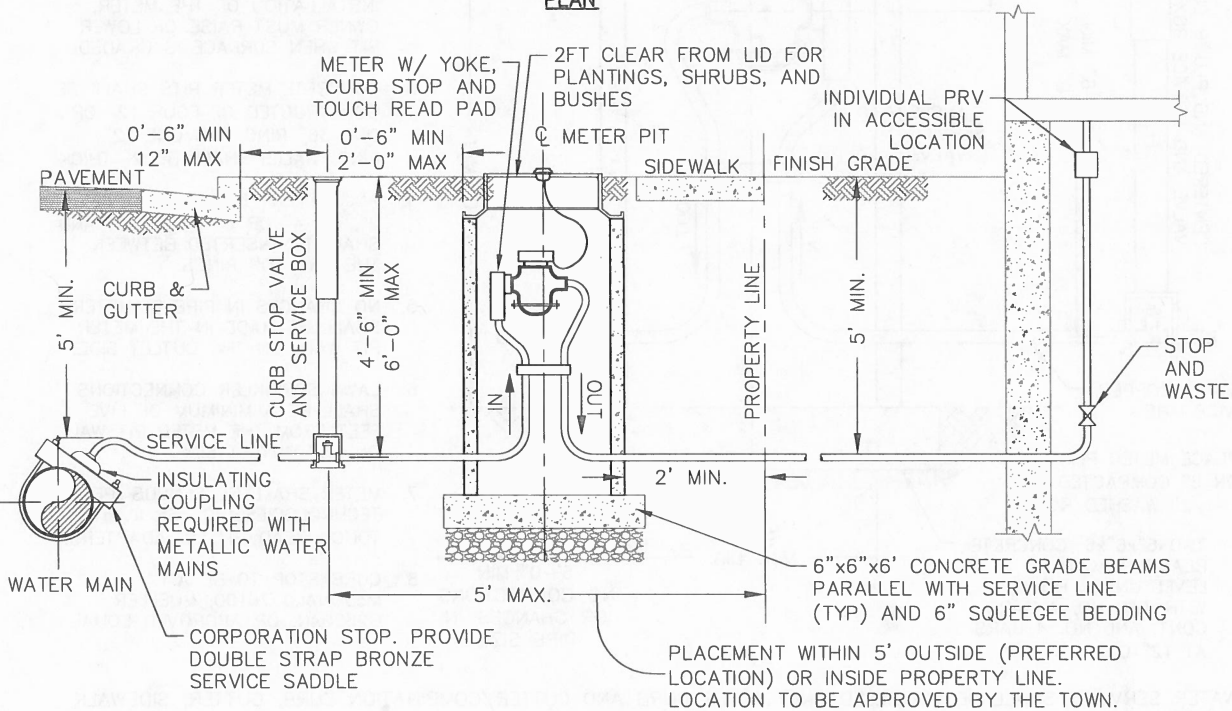
- Temporary or permanent structures, excavated material and any other matter resulting from this work is not permitted within the limits of the 100-floodplain.
- Requests to include any structures or materials within the limits of the 100-year floodplain will require modeling by a professional engineer to confirm a no-rise condition will result from such work, and include the fees incurred by the Town's use of a consultant to review the modeling data.
- Stake the extents of the 100 year floodplain.

## 6. Additional Requirements

- Construction Access Points/Staging
- Work Hours: **Monday Through Friday, 7 AM - 5 PM Only.** (Includes Fueling Operations)  
No Noise Or Equipment To Be Started Before 7:00am, Per Town Noise Ordinance.  
**No Weekend Or Holiday Work.**
- Employee Parking: Keep To Contractor Staging Area. If Staging Area Is Inadequately Sized, Expand To Accommodate All Vehicles/Equipment.
- Utility Locates
- Chase Drains may be required by the Town.



**PLAN**



**ELEVATION**

**NOTES:**

1. SERVICE LINE TO BE TYPE "K" COPPER.
2. SERVICE LINE AND METER PIT TO BE INSPECTED BY THE TOWN.
3. INSTALL INDIVIDUAL PRESSURE REDUCING VALVE (PRV) UNLESS SPECIFICALLY NOT REQUIRED BY THE ENGINEER. ALTERNATE LOCATION FOR PRV IN METER PIT.
4. CORP STOP TO BE A.Y. McDONALD 74701, CAMBRIDGE BRASS 302NL SERIES, FORD FB-600-x-NL, OR MUELLER B2500N.
5. NO BENDS, FITTINGS, CONNECTIONS, OR CHANGES IN PIPE SIZE FROM THE WATER MAIN TO 5' PAST THE OUTSIDE WALL OF THE METER PIT ON THE CUSTOMER SIDE. SERVICE LINE MAY BE INCREASED ONE PIPE SIZE AFTER THIS POINT.
6. SEE TOWN OF SUPERIOR STANDARDS AND SPECIFICATIONS SECTION 343.00 FOR BEDDING.

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPGRADING FOR SPECIFIC APPLICATIONS.

N.T.S.

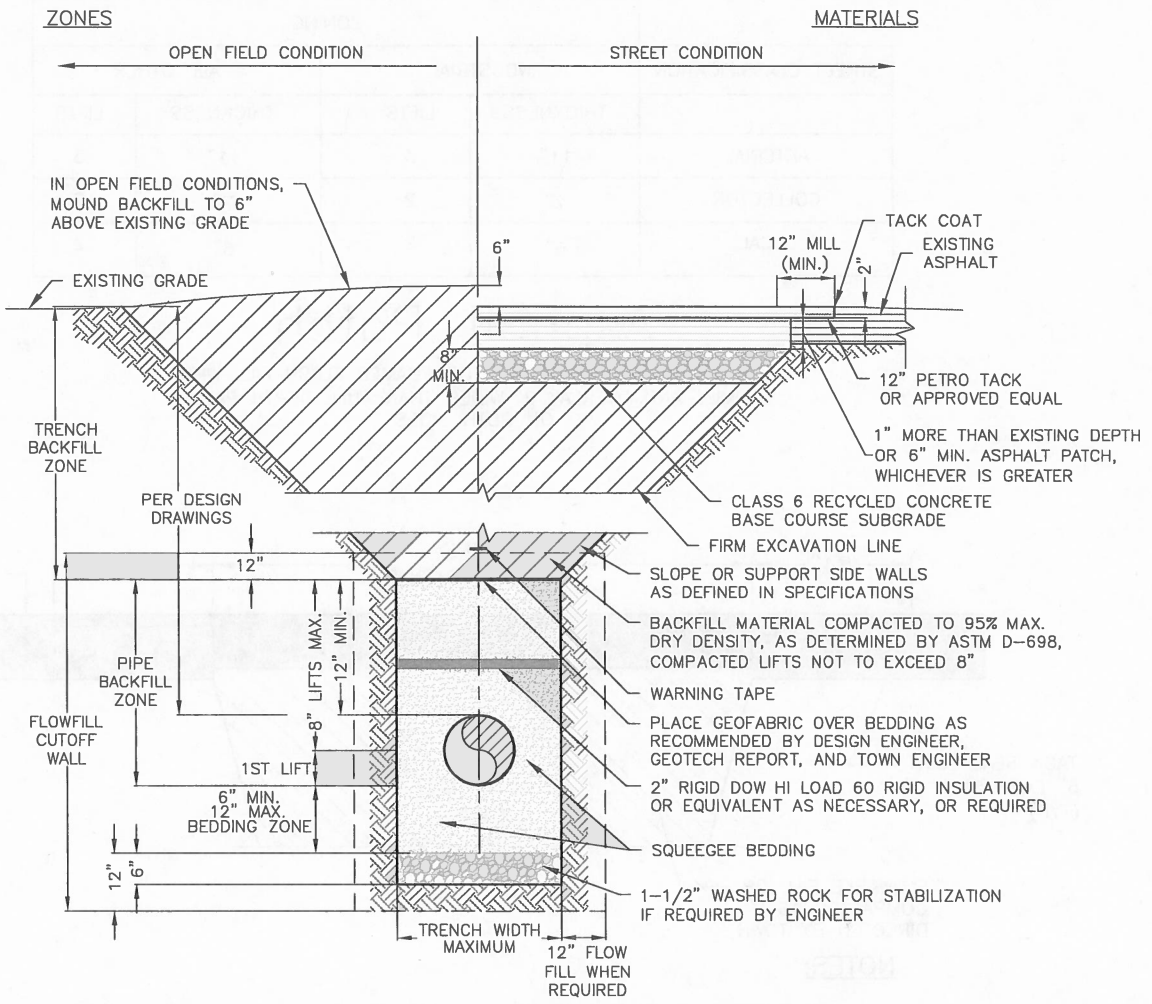


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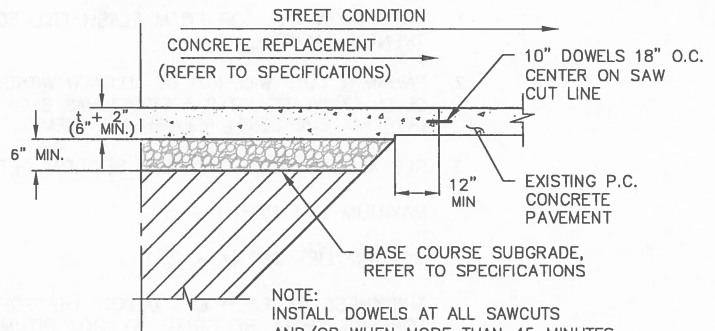
**TYPICAL POTABLE WATER SERVICE DETAIL**

DATE: JANUARY 2019

SHEET 400-8



PIPE DIAMETER (INCHES)	MAXIMUM TRENCH WIDTH (INCHES)
4 and smaller	22
6	24
8	26
10	28
12	30
14	32
16	34
18	36
20	38
24	42
30	48
36	54



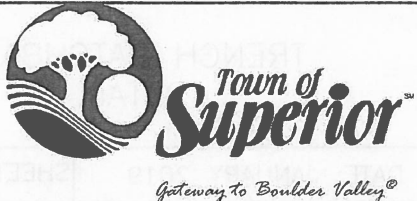
SQUEEGEE SAND	
SIEVE SIZE	% PASSING
3/8"	100
NO. 200	0-5

% PASSING IS TOTAL PERCENT PASSING BY WEIGHT

NOTE:  
INSTALL DOWELS AT ALL SAWCUTS  
AND/OR WHEN MORE THAN 45 MINUTES  
ELAPSES BETWEEN PLACING ANY TWO  
CONSECUTIVE BATCHES OF CONCRETE.

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N.T.S.



## TYPICAL WATER MAIN, REUSE, AND SERVICE LINE BEDDING AND BACKFILL DETAIL

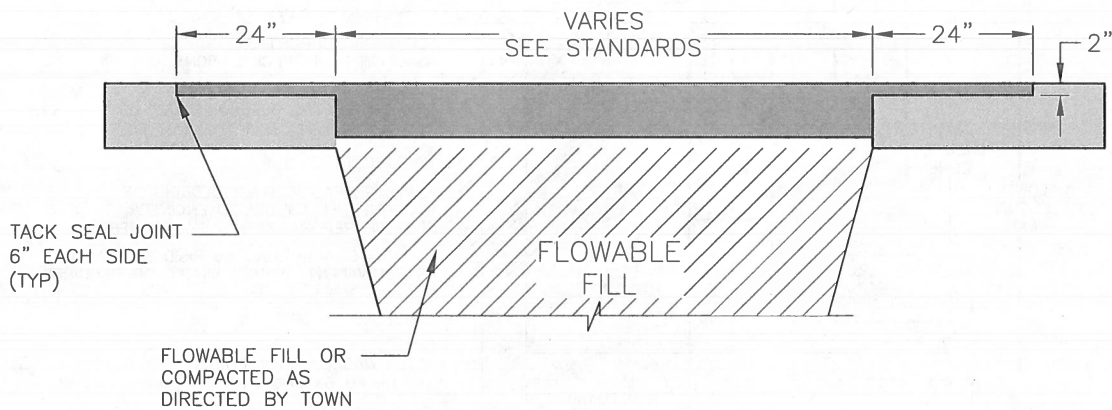
DATE: JANUARY 2019

SHEET 400-25

STREET CLASSIFICATION	MINIMUM ASPHALT PATCH THICKNESS			
	ZONING			
	INDUSTRIAL		ALL OTHER	
	THICKNESS	LIFTS	THICKNESS	LIFTS
ARTERIAL	11"	3	11"	3
COLLECTOR	7"	2	7"	2
LOCAL	6"	2	6"	2

## Asphalt Patch

HMA OVER CDOT FLOW FILL, OR FOAMED FLASH FILL WITH  
2" MILL AND OVERLAY 2' WIDER THAN FULL DEPTH PATCH  
ON BOTH SIDES



### NOTES:

1. CDOT FLOW FILL, OR FOAM FLASH FILL FOR TRENCH BACKFILL.
2. PAVEMENT CUTS WILL NOT BE ALLOWED WITHOUT TOWN ENGINEER APPROVAL WITHIN SEVEN (7) YEARS AFTER A STREET HAS BEEN CONSTRUCTED, RECONSTRUCTED, OR OVERLAID. EMERGENCY REPAIRS ARE EXEMPT.
3. SEE ALSO STANDARD STREET SECTION DETAIL.

MAXIMUM LIFT DEPTH - 5"

MINIMUM LIFT DEPTH - 2"

THICKNESS OF EACH LIFT BELOW THE TOP SHALL NOT VARY MORE THAN 3/8",  
TOP LIFT SHALL BE GRADE SX HOT BITUMINOUS PAVEMENT

FINISH SURFACE TOLERANCE SHALL NOT EXCEED 3/16" IN ANY DIRECTION WHEN  
CHECKED WITH 10 FOOT STRAIGHT EDGE. FINISHED SURFACE SHALL BE RAKED  
FREE OF AGGREGATE PRIOR TO COMPACTION EQUIPMENT BEING USED

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N.T.S.



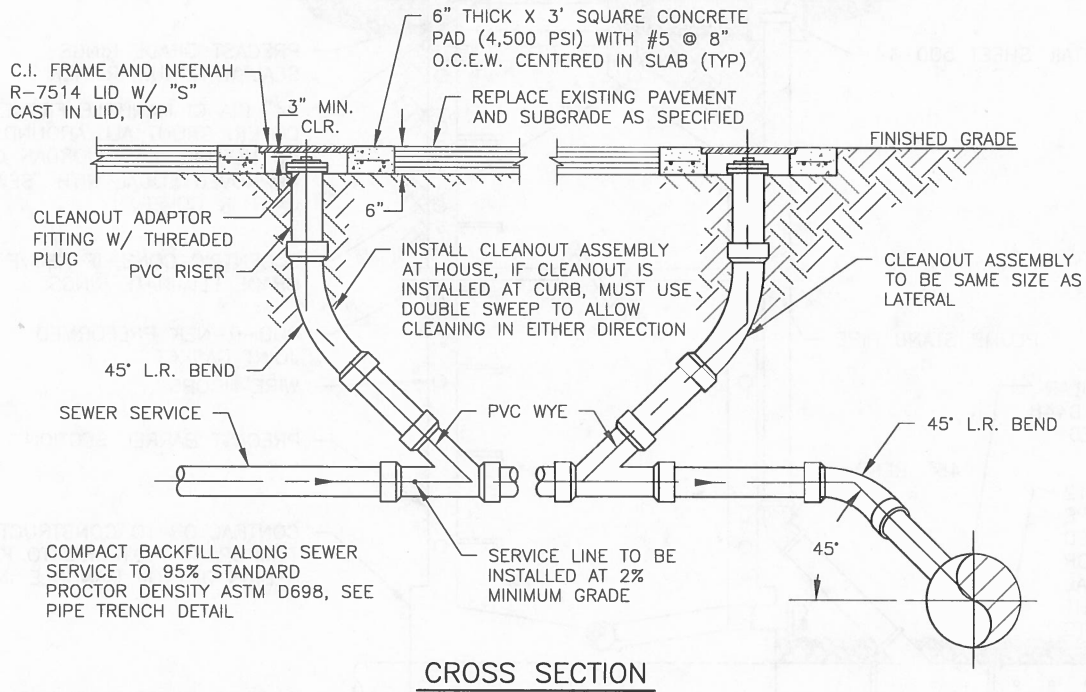
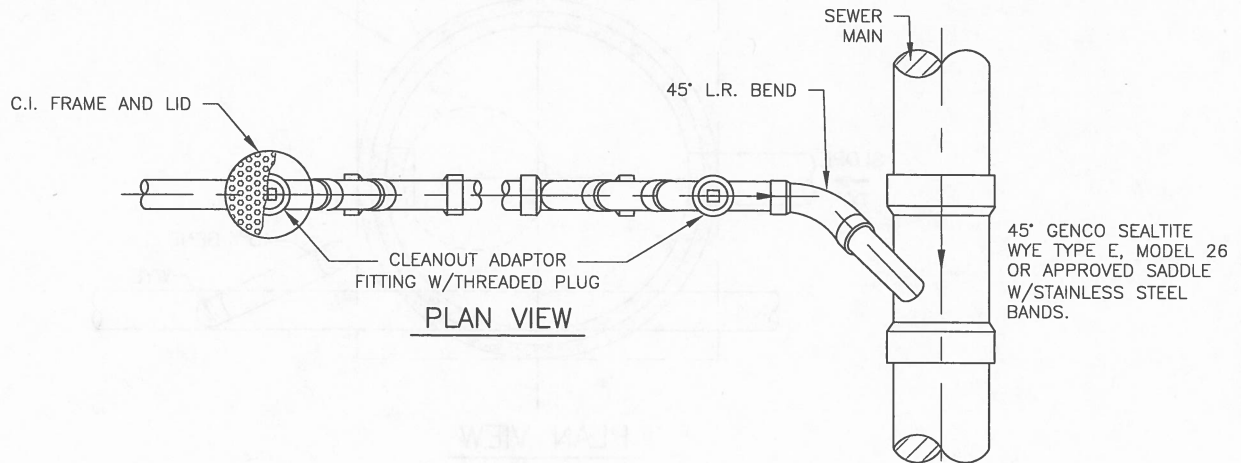
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### TRENCH PATCHBACK DETAIL

DATE: JANUARY 2019

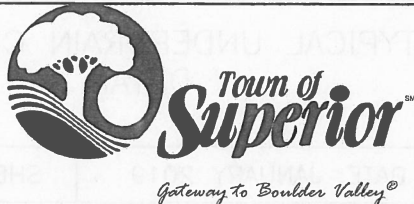
SHEET 400-26





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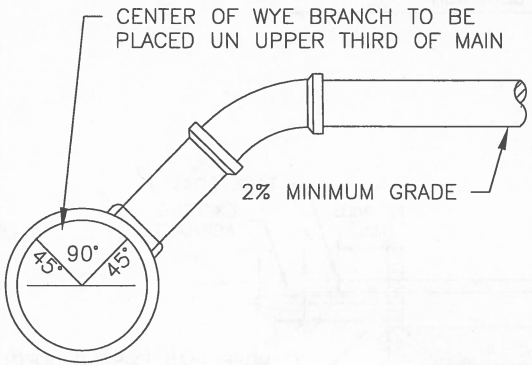
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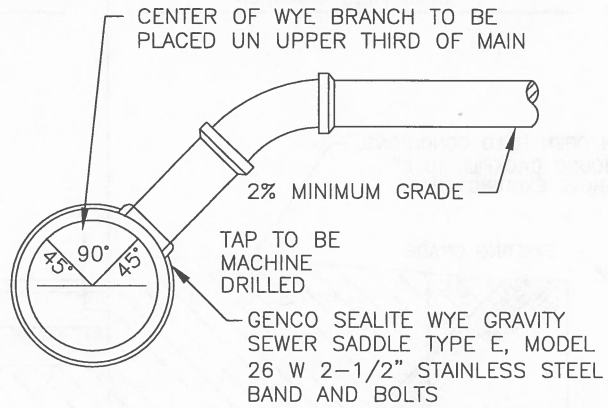
STANDARD CLEAN-OUT SERVICE LINE DETAIL

DATE: JANUARY 2019

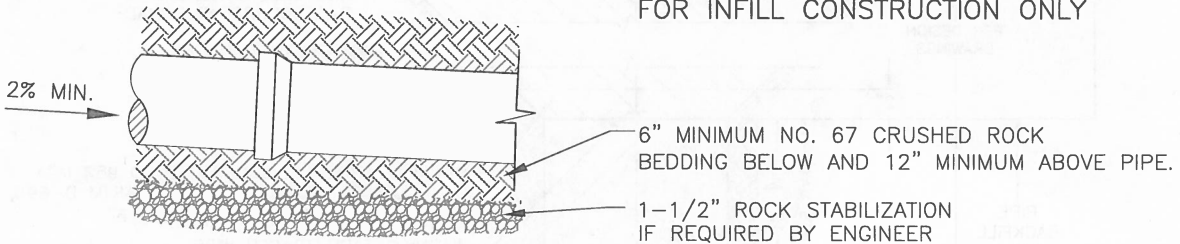
SHEET 500-10



WYE CONNECTION TO TEE



BEND & SADDLE CONNECTION  
FOR INFILL CONSTRUCTION ONLY



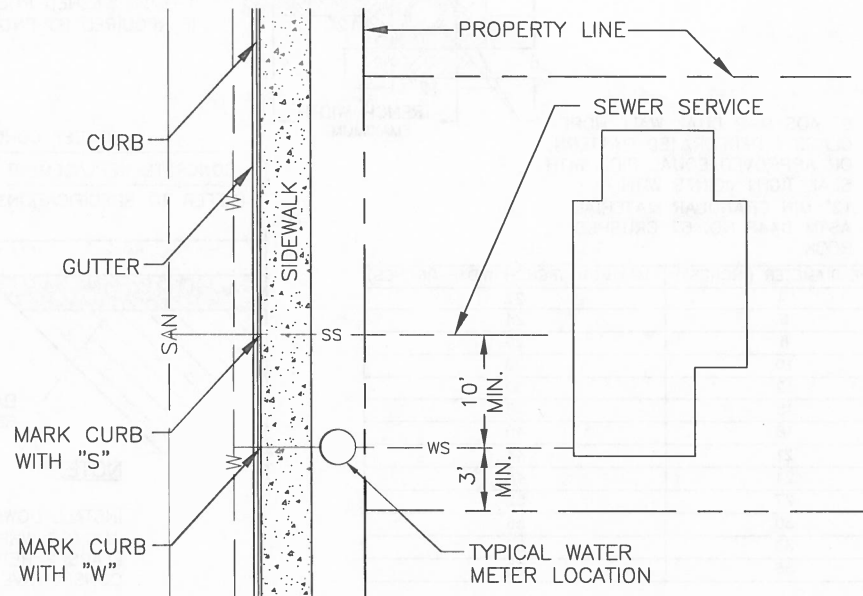
FACTORY PREPARED A.S.T.M. C-425 COMPRESSION TYPE JOINTS ONLY OR APPROVED EQUIVALENT.

BELL SHOULD NOT TOUCH SIDES OR BOTTOM OF BELL HOLE.

ACCEPTABLE BEDDING  
#67 CRUSHED ROCK

NOTES:

1. ALL EXCAVATION UNDER PIPELINES AND FITTINGS SHALL BE BACKFILLED WITH COMPACTED ROCK. SEE TRENCH DETAIL.
2. INSTALL MANHOLE FOR SERVICE LINE CONNECTIONS 6" AND LARGER.
3. 4" MINIMUM SERVICE SIZE.
4. NEW CONSTRUCTION USE WYE CONNECTION.
5. INFILL USE GENCO TAPPING SADDLE
6. REFER TO TOWN OF SUPERIOR STANDARDS AND SPECIFICATIONS SECTION 343.00 FOR BEDDING MATERIALS.



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N.T.S.



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TYPICAL SANITARY SERVICE LOCATION

DATE: JANUARY 2019

SHEET 500-9