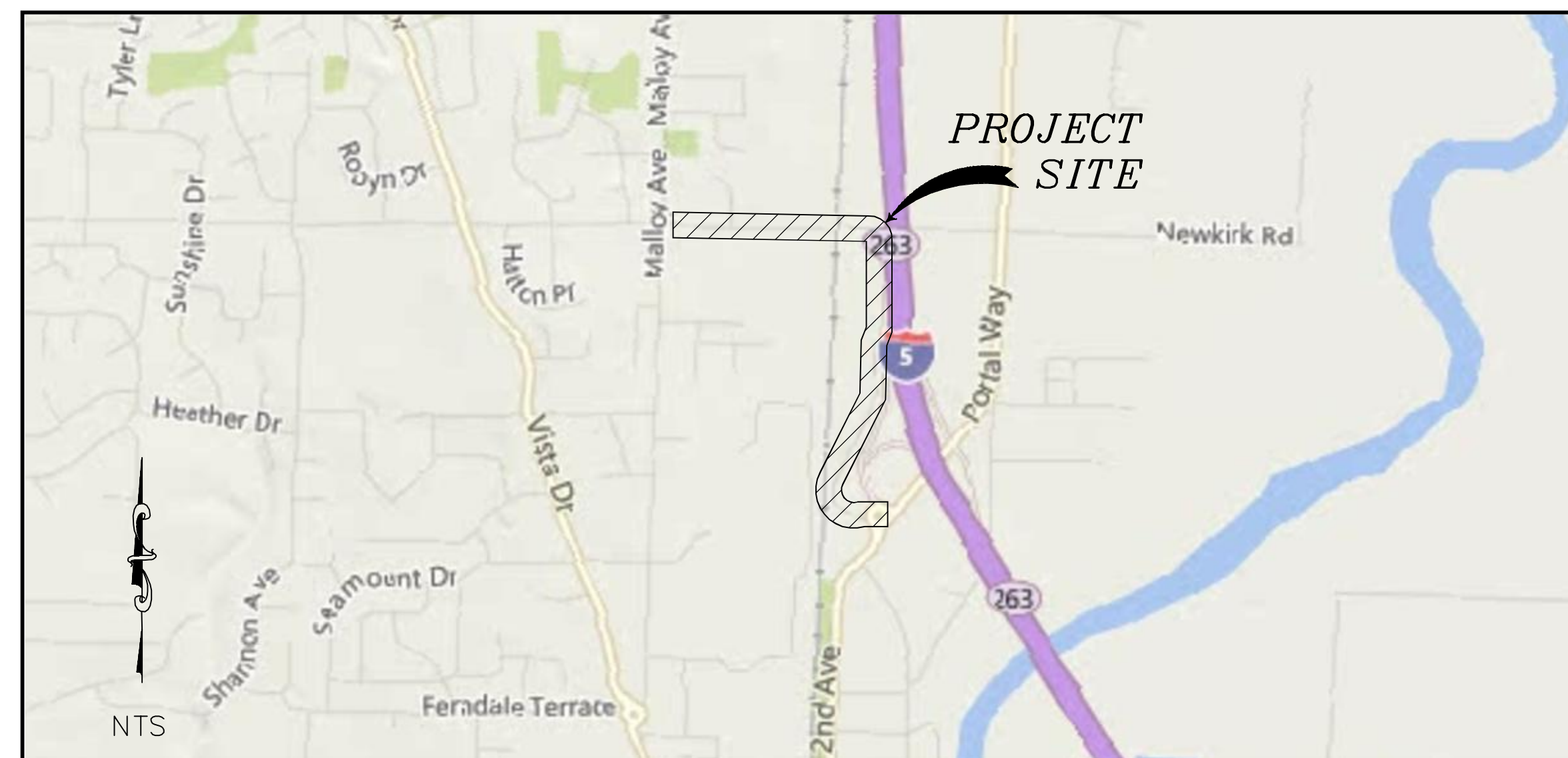


THORNTON STREET SANITARY SEWER

FERNDALE, WA
CITY OF FERNDALE
PROJECT NO. SS2015-03

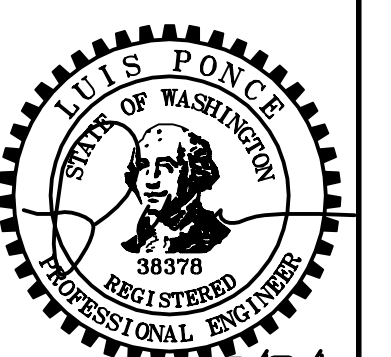
VICINITY MAP

PROJECT LOCATED IN SECTION 17 & 20, TOWNSHIP 39N, RANGE 2E, W.M.



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2	LEGEND AND ABBREVIATIONS
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3	STA 129+00 TO 139+50
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15	STA 129+50 TO 140+75 AND STA 167+00 TO 168+50
16	TEMPORARY ACCESS ROAD
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17	EROSION TESC—DETAIL 1
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22	SEWER DETAILS 5
23	MISC. DETAILS
24	TRAFFIC CONTROL 1
TC1	TRAFFIC CONTROL 2
TC5	TRAFFIC CONTROL 3
TC16	TRAFFIC CONTROL 4



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NO.	DATE	DESCRIPTION	BY

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THORNTON ST
SANITARY SEWER
COVER

DWG 16034 COVER

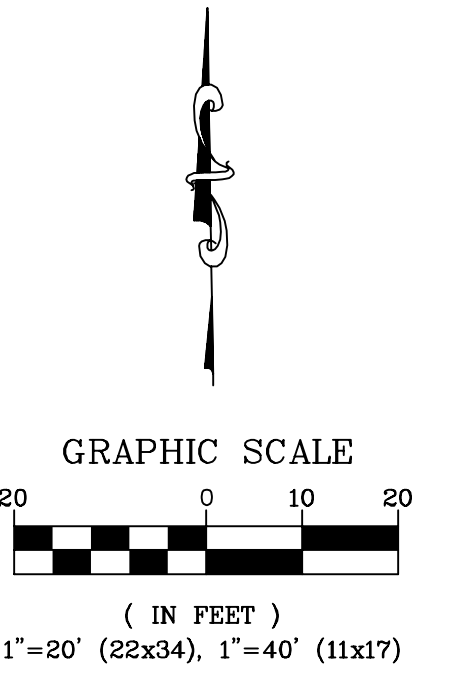
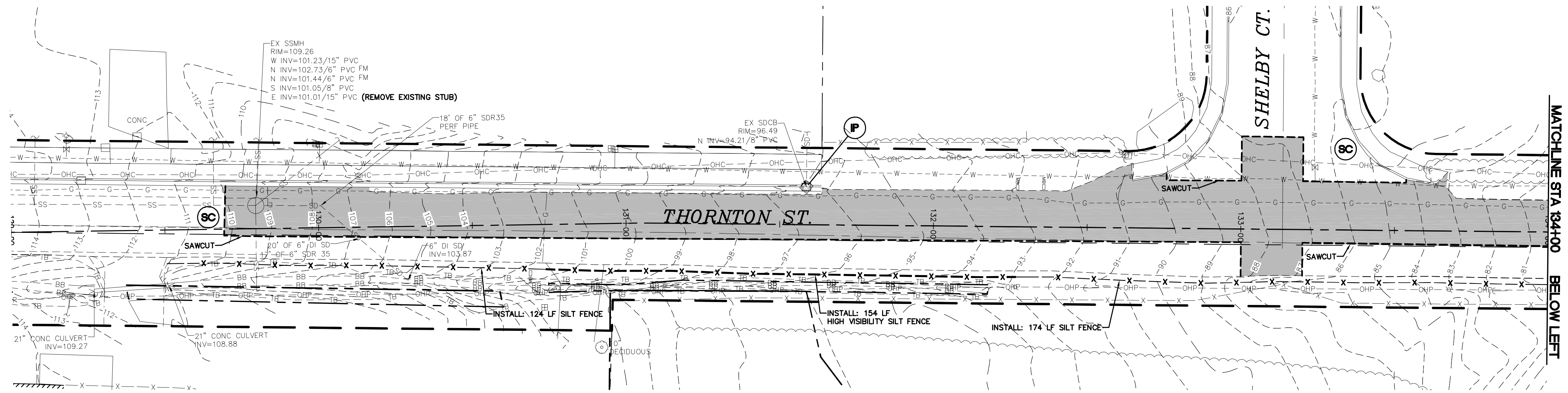
DATE
9/13/2017

JOB#
16034

SCALE
H: N/A V: N/A

SHEET
1
of 24

9/13/17



EROSION CONTROL LEGEND

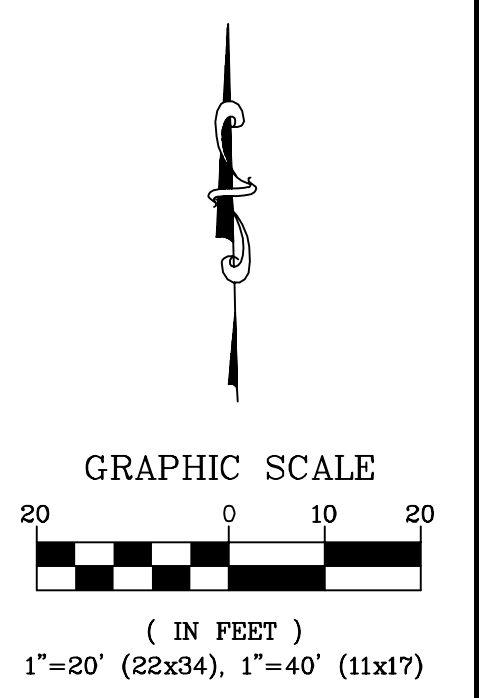
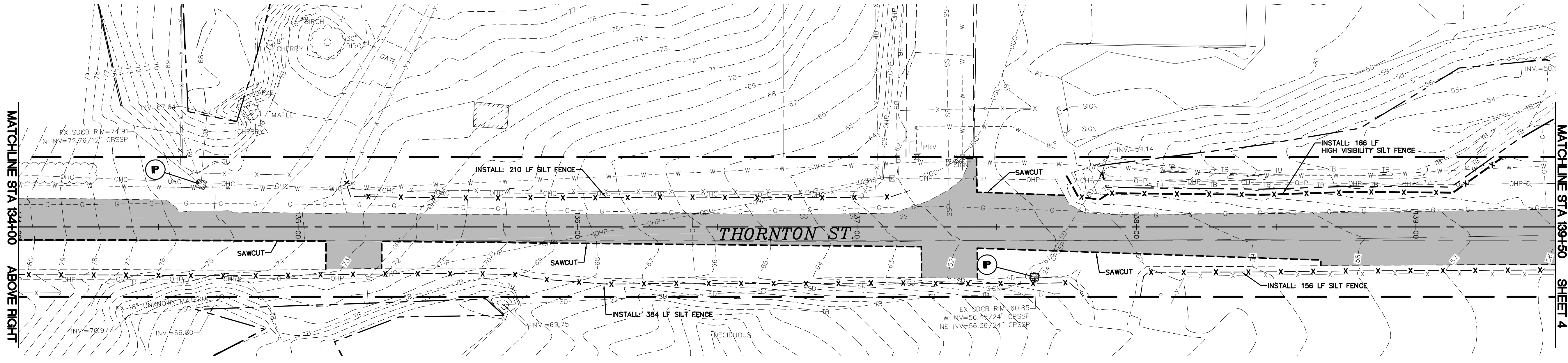
WASHINGTON STATE DEPT. OF ECOLOGY
BEST MANAGEMENT PRACTICES (BMP)
REF.: STORMWATER MANAGEMENT MANUAL
FOR WESTERN WASHINGTON, 2012

NOTES:
1. SEE TESC DETAILS, TESC GENERAL NOTES AND SURFACE ROUGHENING, SHEET 17.
2. GENERALLY THE SILT FENCE AND CLEARING LIMITS FOLLOW THE RIGHT OF WAY UNLESS OTHERWISE DRAWN ON THE PLANS. THERE ARE AREAS WHERE THE HIGH VISIBILITY SILT FENCE IS DELINEATING WETLAND LOCATION IMPACTS.

- SF** = BMP C103 AND C233: CLEARING LIMITS AND SILT FENCE - SEE DETAIL SHEET 17
- CE** = BMP C105/C106: STABILIZED CONSTRUCTION ENTRANCE - SEE DETAIL SHEET 17
- P** = BMP C220: INLET PROTECTION - CB INSERT - SEE DETAIL SHEET 17
- SC** = BMP C105 AND C140: STREET CLEANING
- DC** = BMP C140: DUST CONTROL
- FV** = BMP C101: PRESERVE EXISTING VEGETATION

DEMOLITION LEGEND

- = PROPOSED SAWCUT
- = PROPOSED DEMOLITION AREA



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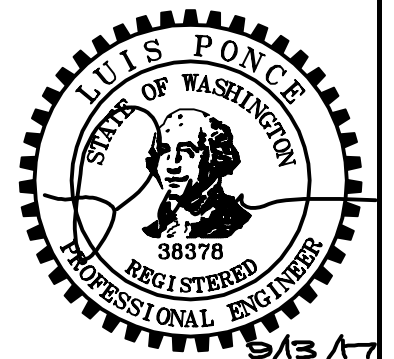
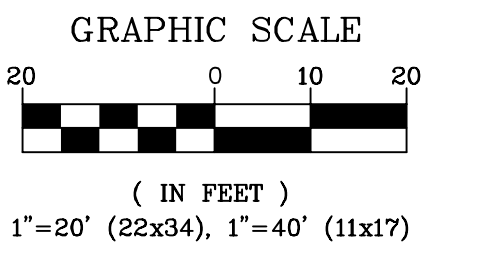
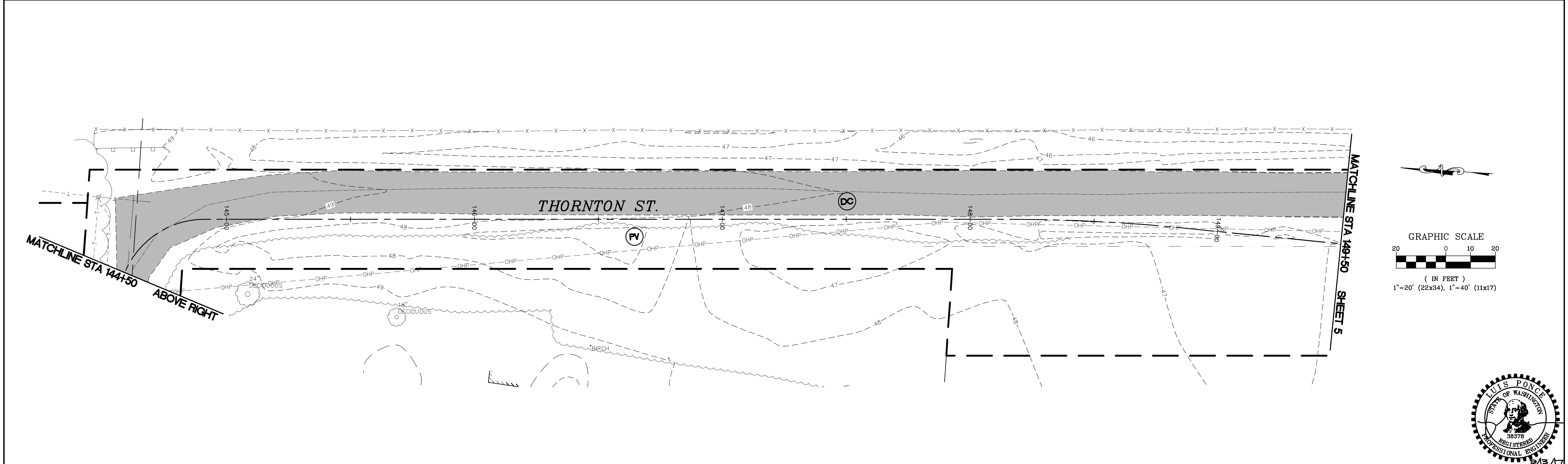
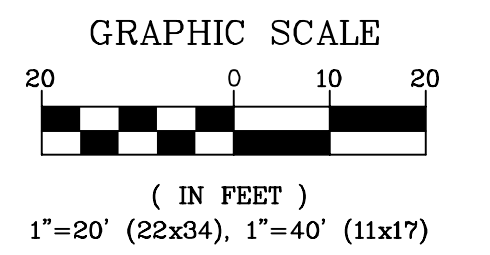
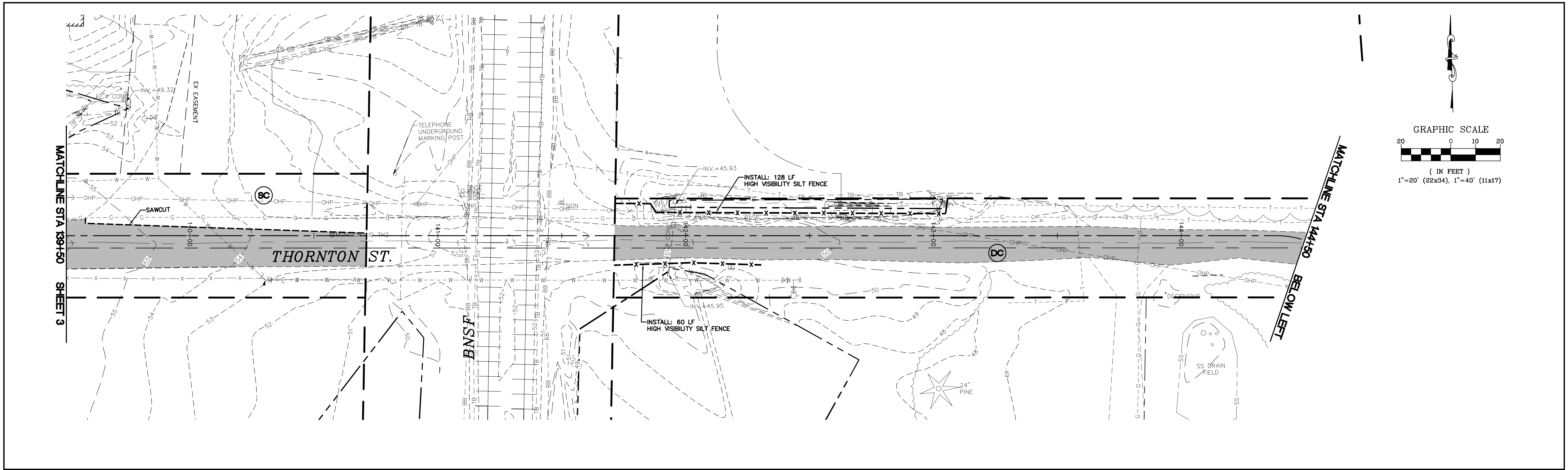
THORNTON ST
SANITARY SEWER
STA 129+00 TO 139+50

DWG 16034 EX COND
JOB# 16034
SCALE H: 1"=20' v: N/A

DATE 9/13/2017
SHEET 3 of 24



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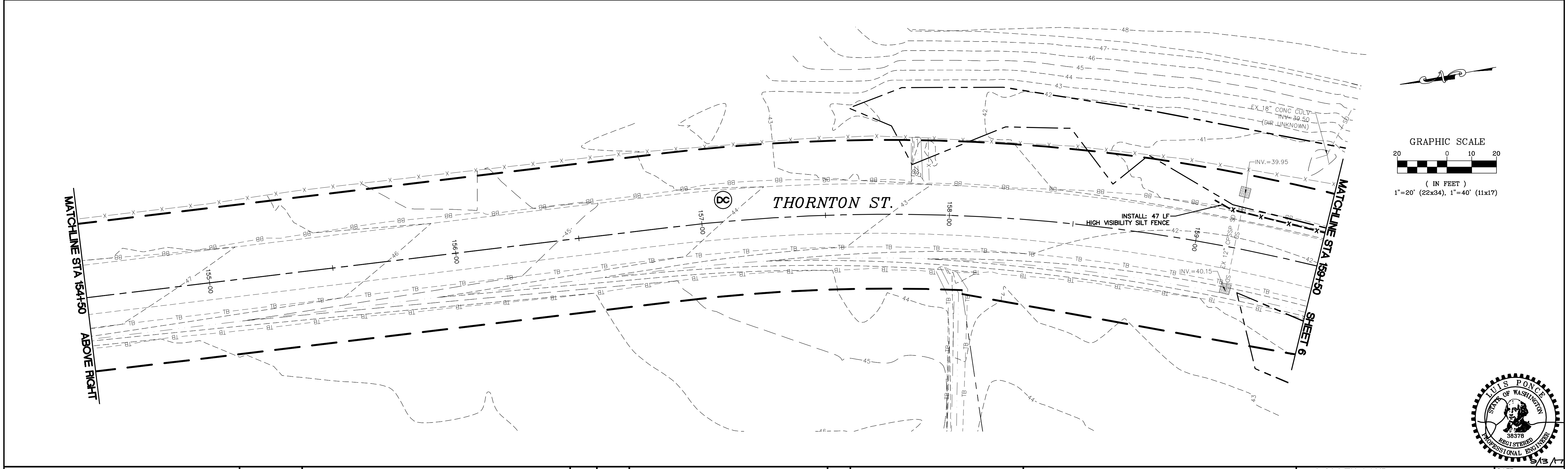
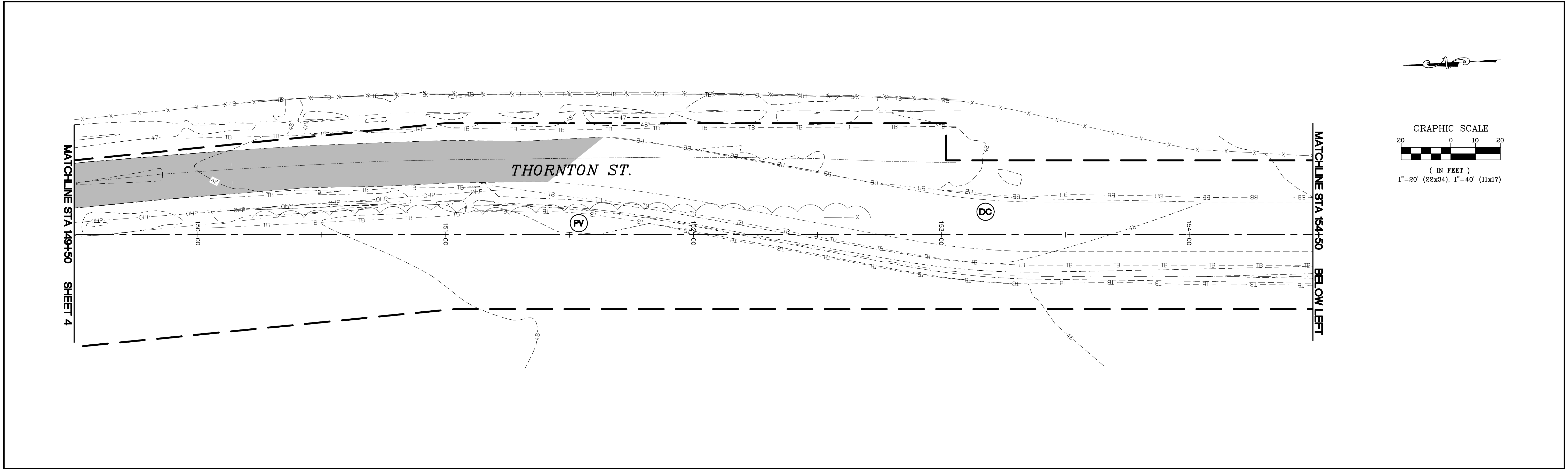
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
STA 139+50 TO 149+50

DWG 16034 EX COND
JOB# 16034
SCALE H: 1"=20' V: N/A

DATE 9/13/2017
SHEET 4 of 24

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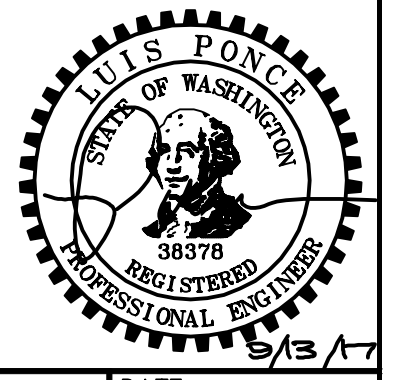
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FERDALE, WA 98248

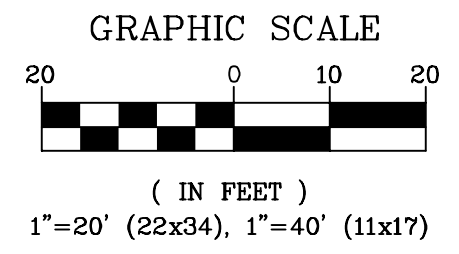
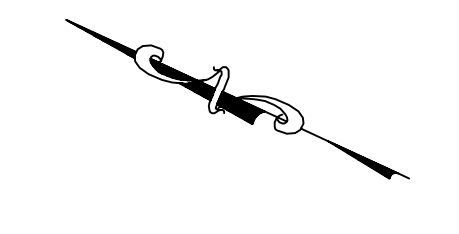
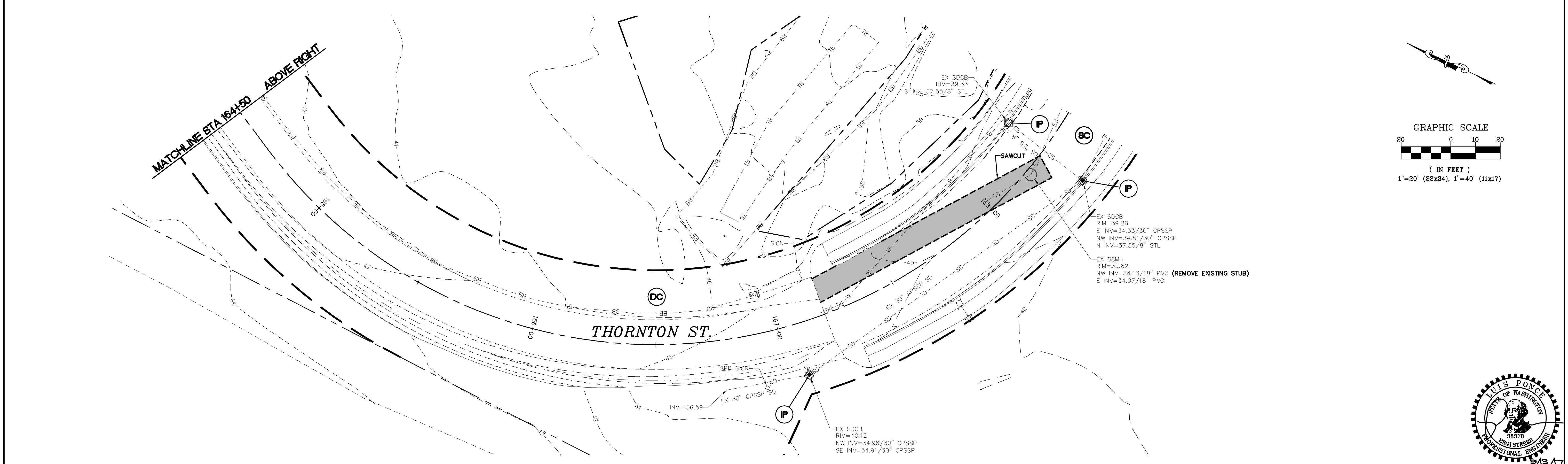
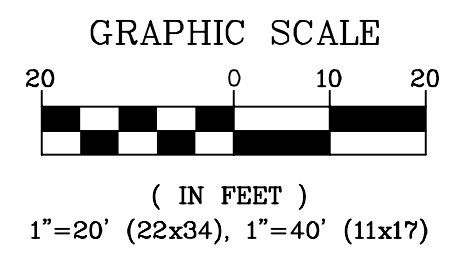
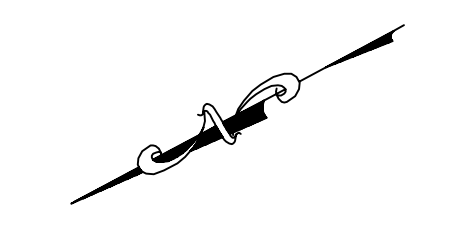
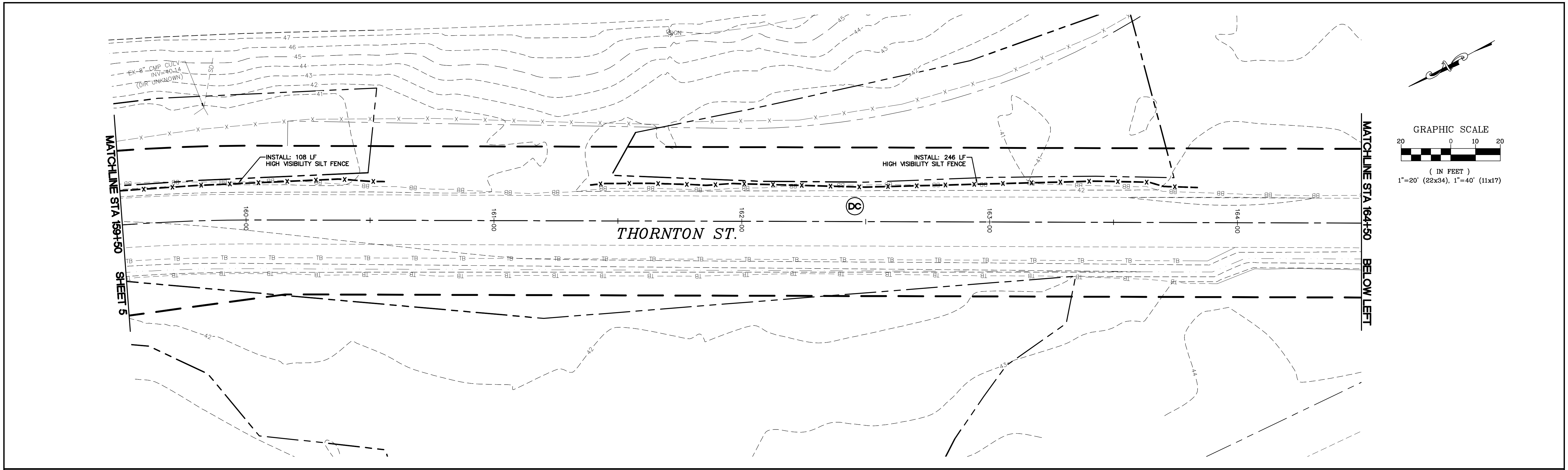
THORNTON ST
SANITARY SEWER
STA 149+50 TO 159+50

DWG 16034 EX COND
JOB# 16034
SCALE H: 1"=20' V: N/A

DATE 9/13/2017
SHEET 5 of 24



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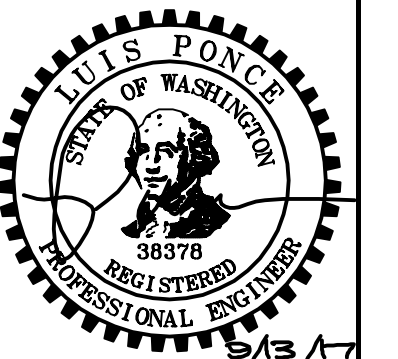
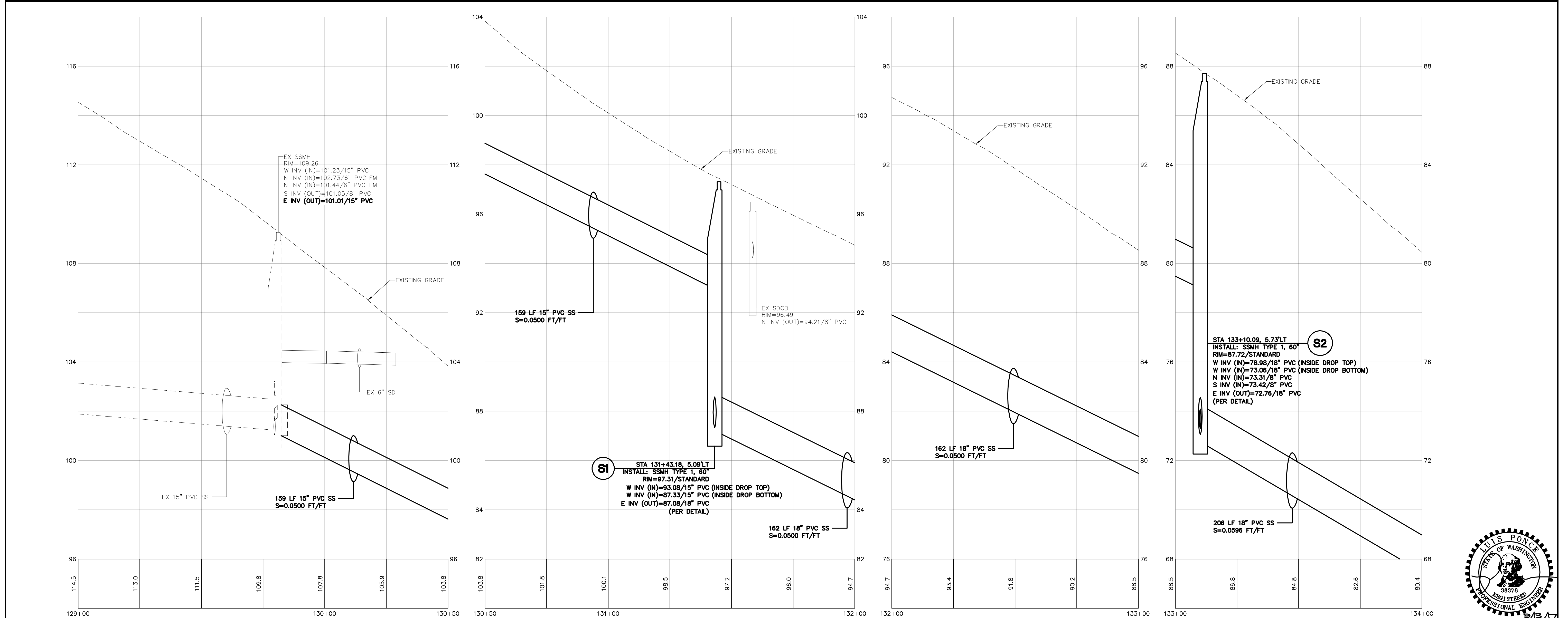
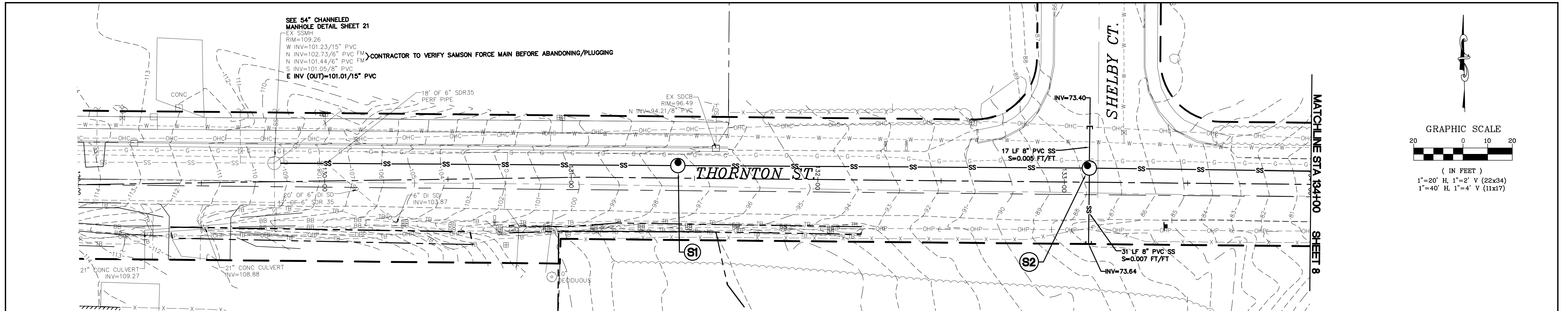
CITY OF FERDALE
 2095 MAIN STREET
 FERDALE, WA 98248

THORNTON ST
 SANITARY SEWER
 STA 159+50 TO 168+50

DWG 16034 EX COND
 JOB# 16034
 SCALE H: 1"=20' V: N/A

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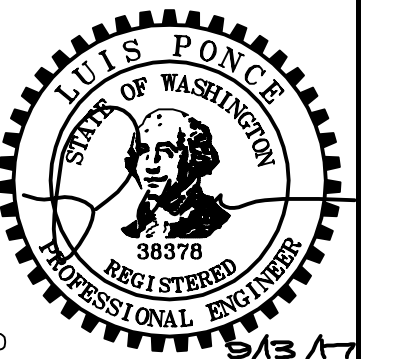
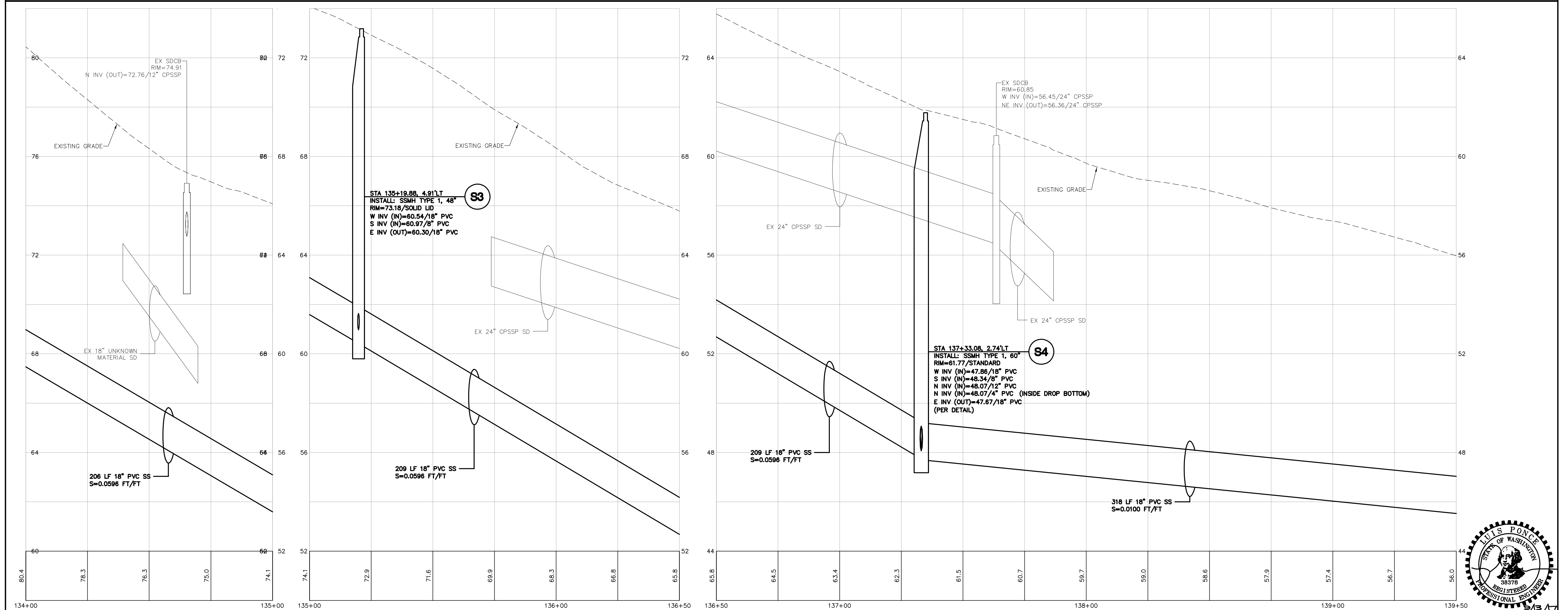
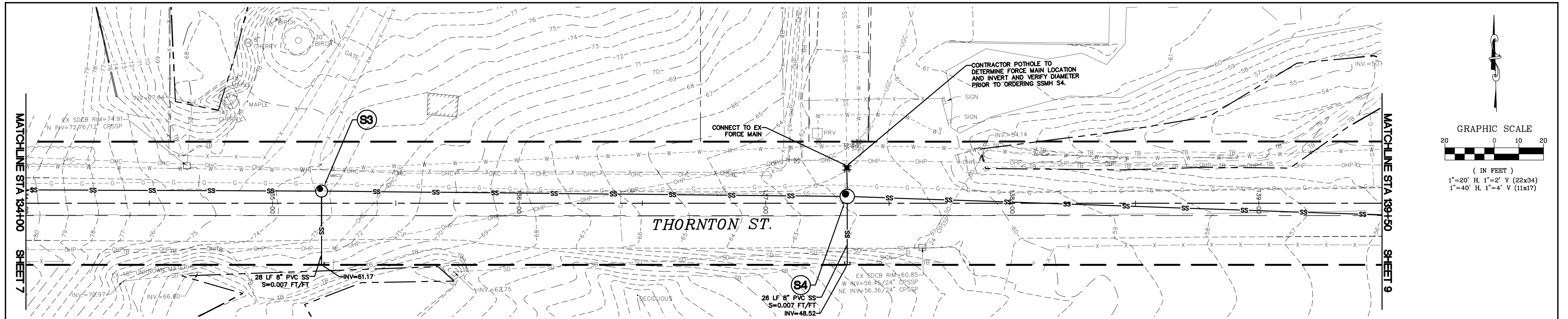
CITY OF FERDALE
 2095 MAIN STREET
 FERDALE, WA 98248

THORNTON ST
 SANITARY SEWER
 STA 129+00 TO 134+00

DWG 16034 SEWER
 JOB# 16034
 SCALE H: 1"=20' V: 1"=2'

DATE 9/13/2017
 SHEET 7 of 24

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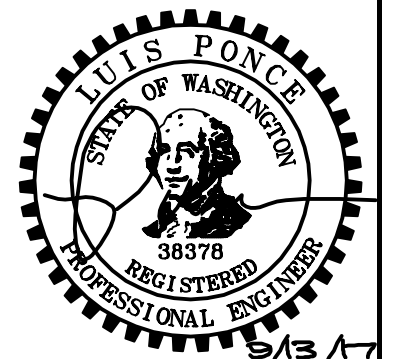
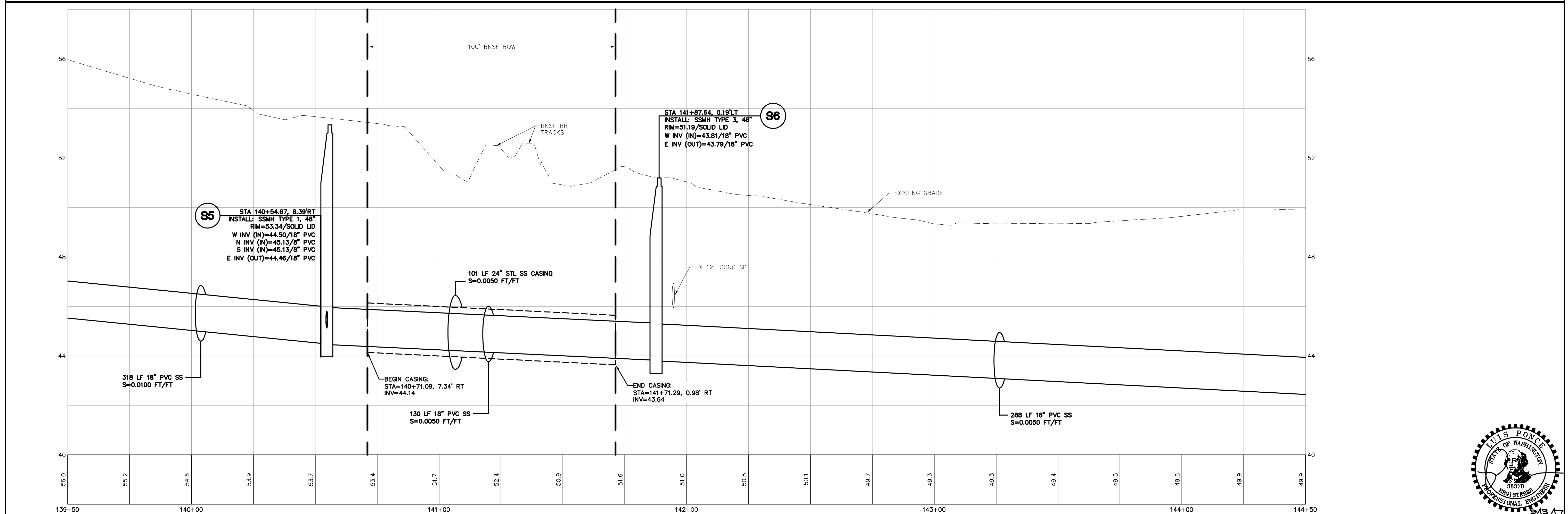
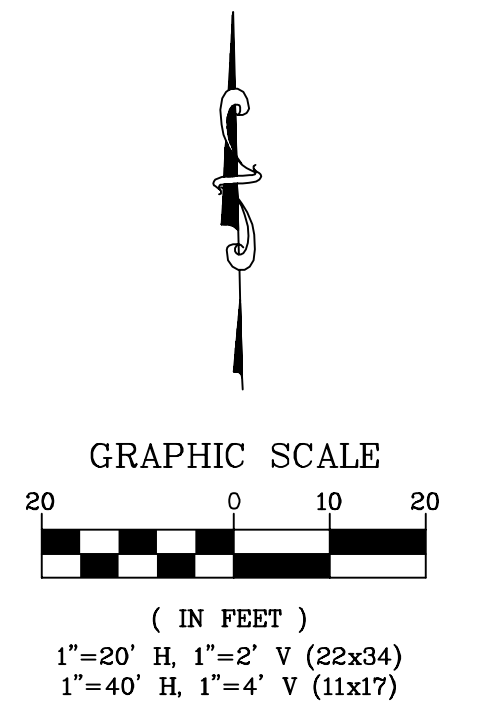
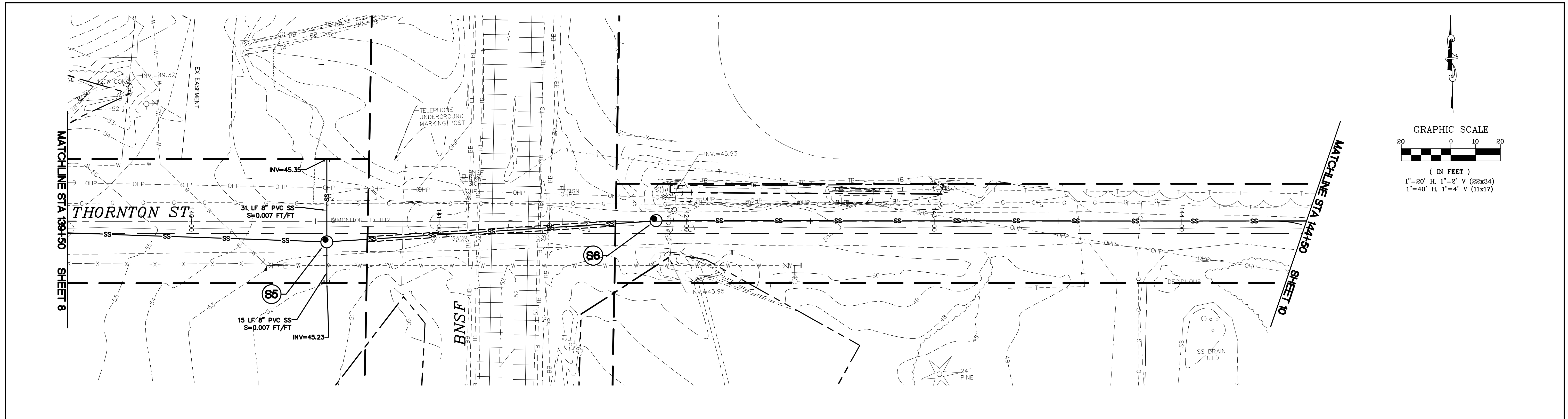
CITY OF FERDALE
 2095 MAIN STREET
 FERDALE, WA 98248

THORNTON ST
 SANITARY SEWER
 STA 134+00 TO 139+50

DWG 16034 SEWER
 JOB# 16034
 SCALE H: 1"=20' V: 1"=2'

DATE 9/13/2017
 SHEET 8 of 24

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NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
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FERDALE, WA 98248

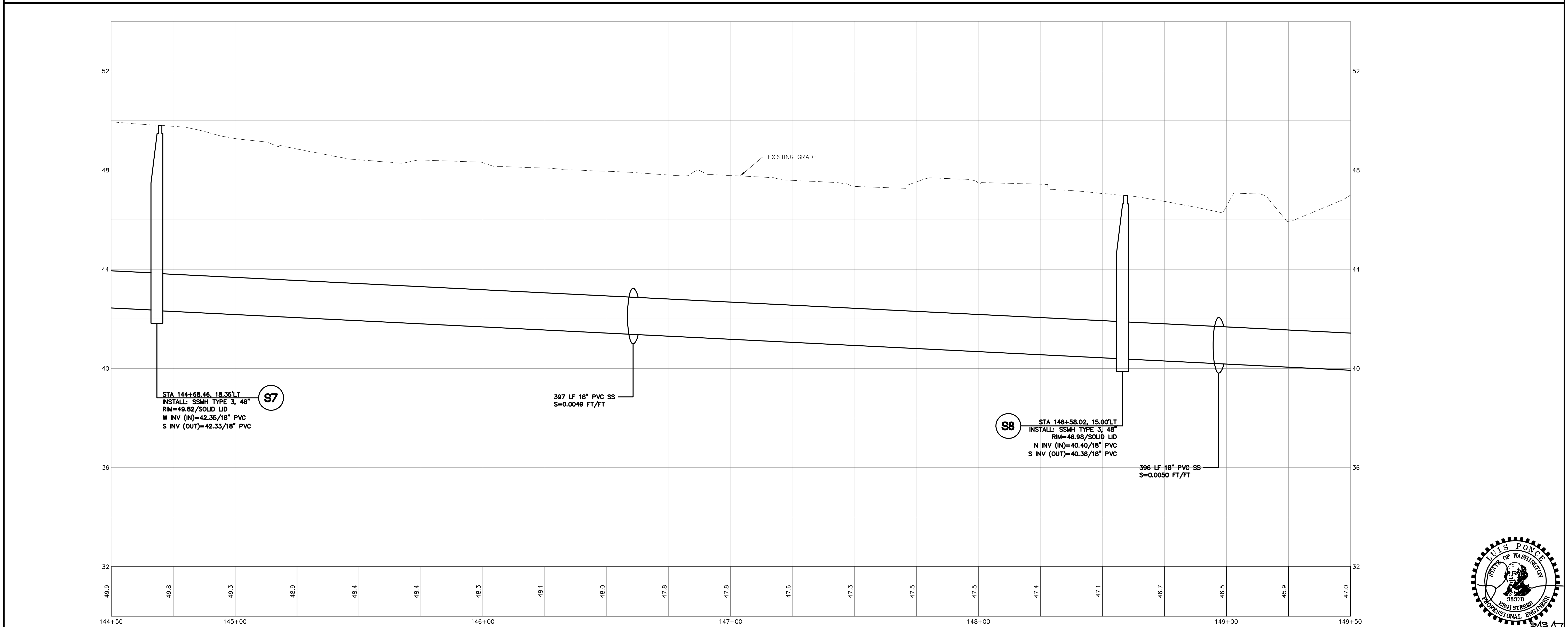
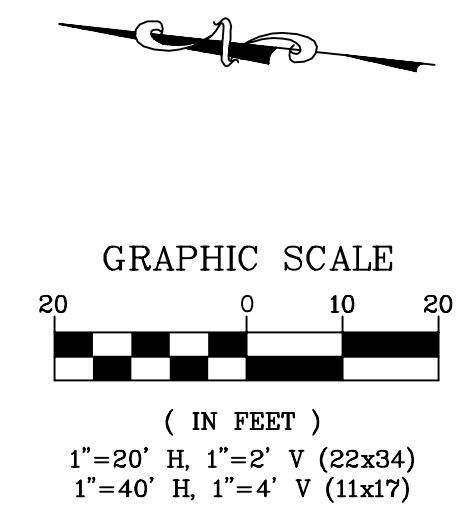
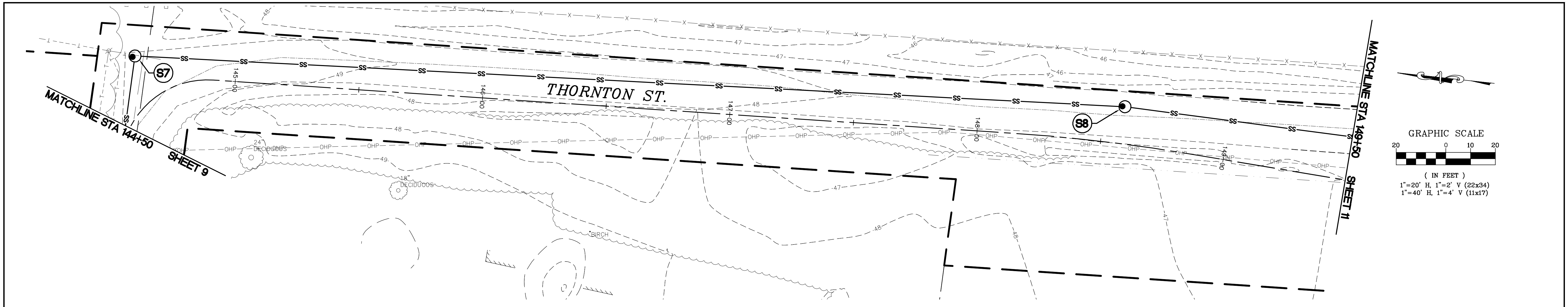
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SANITARY SEWER
STA 139+50 TO 145+50

DWG 16034 SEWER
JOB# 16034

SCALE
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DATE 9/13/2017
SHEET 9 of 24

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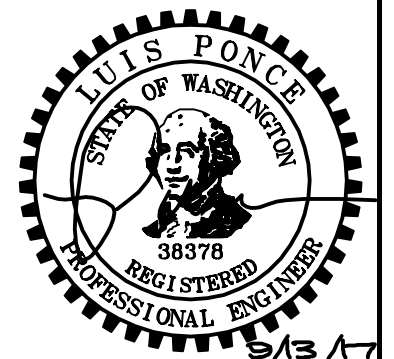
STA 144+88.46, 18.36' LT
 INSTALL: SSMH TYPE 3, 48"
 RIM=49.82/SOLID LID
 W INV (IN)=42.35/18" PVC
 S INV (OUT)=42.33/18" PVC

397 LF 18" PVC SS
 S=0.0049 FT/FT

STA 148+58.02, 15.00' LT
 INSTALL: SSMH TYPE 3, 48"
 RIM=46.98/SOLID LID
 N INV (IN)=40.40/18" PVC
 S INV (OUT)=40.38/18" PVC

396 LF 18" PVC SS
 S=0.0050 FT/FT

49.9	49.8	49.3	48.9	48.4	48.4	48.3	48.1	48.0	47.8	47.8	47.6	47.3	47.5	47.5	47.4	47.1	46.7	46.5	45.9	47.0
144+50	145+00			146+00			147+00				148+00					149+00			149+50	



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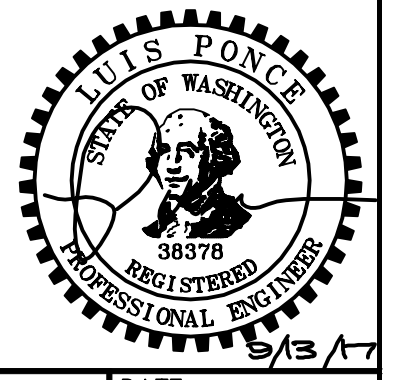
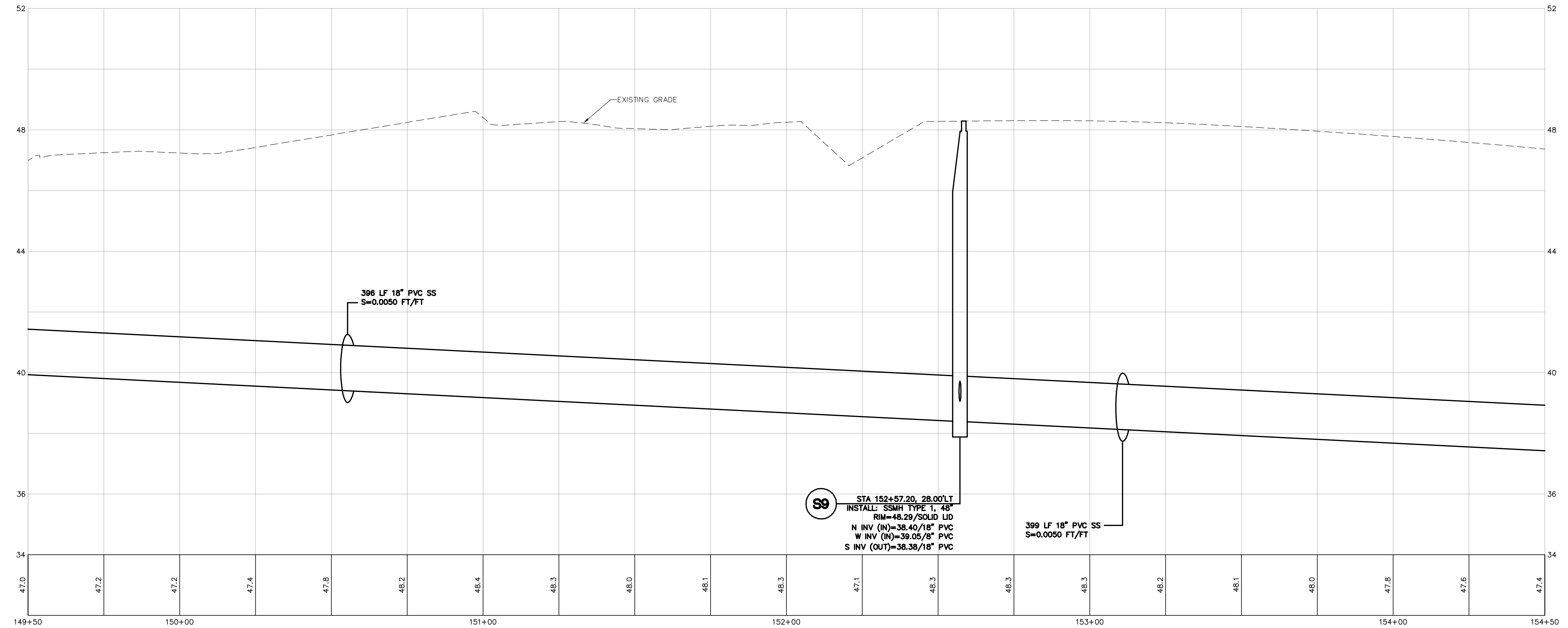
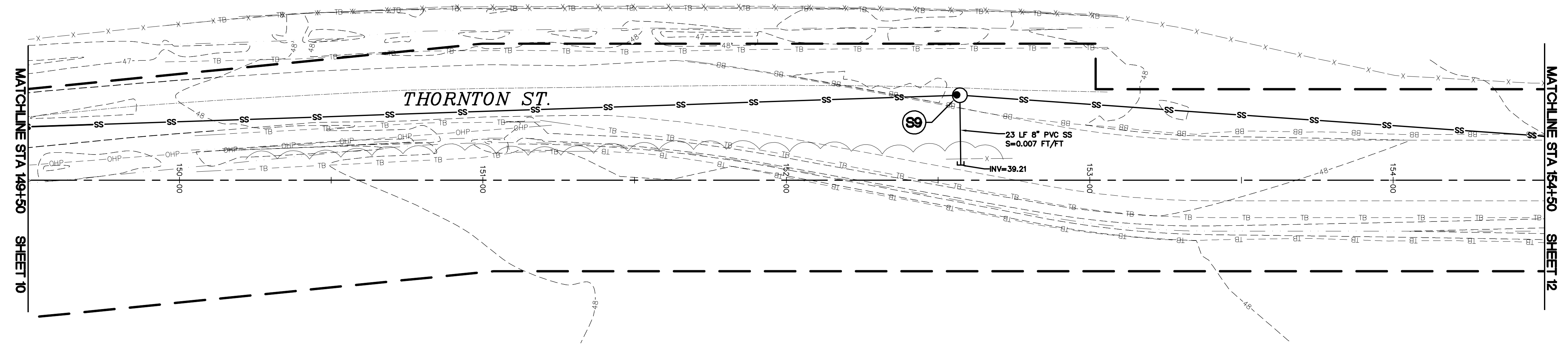
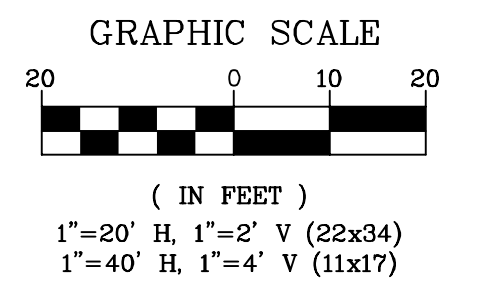
CITY OF FERDALE
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THORNTON ST
SANITARY SEWER
 STA 144+50 TO 149+50

DWG 16034 SEWER
 JOB# 16034

SCALE
 H: 1"=20' V: 1"=2'

DATE 9/13/2017
 SHEET 10 of 24



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2095 MAIN STREET
FERDALE, WA 98248

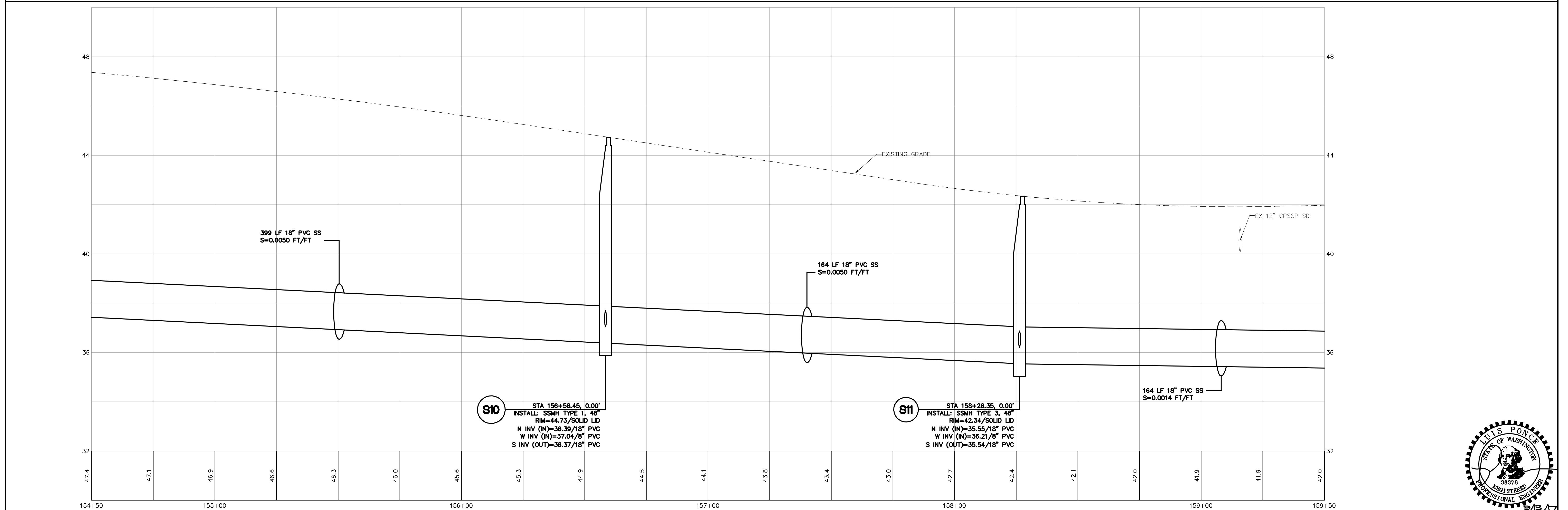
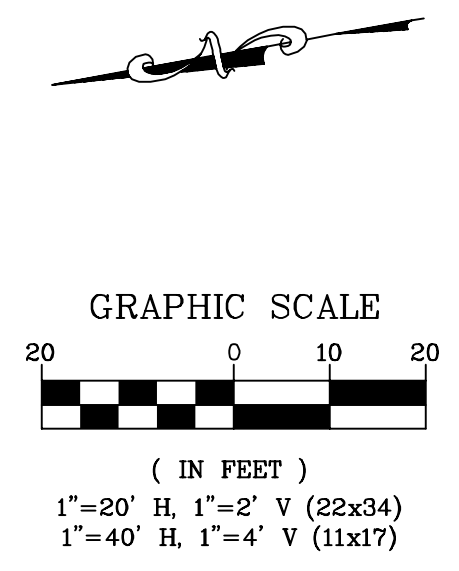
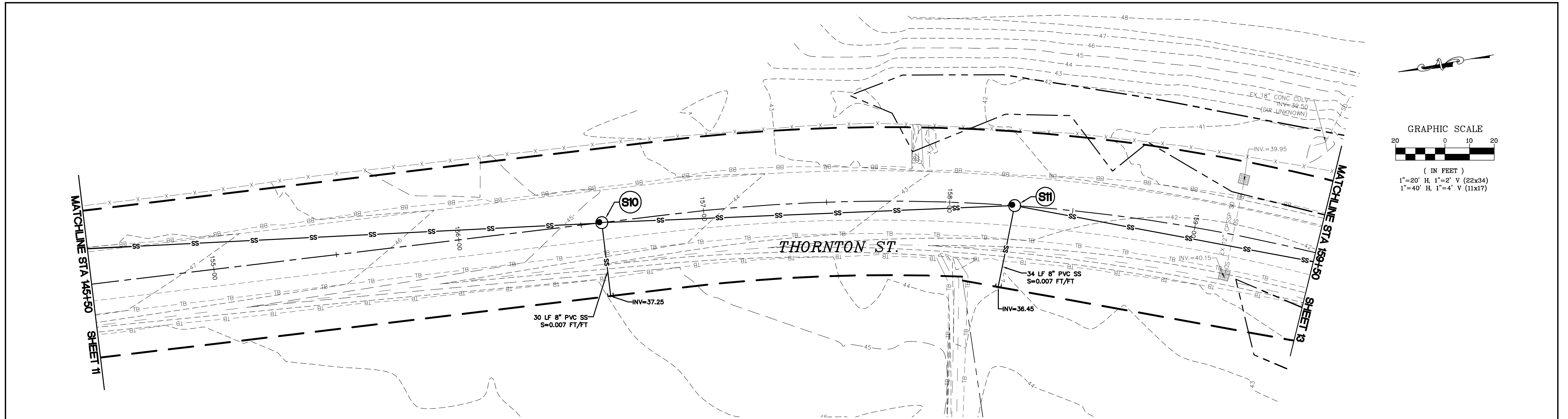
THORNTON ST
SANITARY SEWER
STA 149+50 TO 154+50

DWG 16034 SEWER
JOB# 16034

SCALE
H: 1"=20' V: 1"=2'

DATE 9/13/2017
SHEET 11 of 24

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S10 STA 156+58.45, 0.00'
 INSTALL: SSMH TYPE 1, 48"
 RIM=44.73/SOLID LID
 N INV (N)=36.39/18" PVC
 W INV (N)=37.04/8" PVC
 S INV (OUT)=36.37/18" PVC

S11 STA 158+26.35, 0.00'
 INSTALL: SSMH TYPE 3, 48"
 RIM=42.34/SOLID LID
 N INV (N)=35.55/18" PVC
 W INV (N)=36.21/8" PVC
 S INV (OUT)=35.54/18" PVC



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CITY OF FERDALE
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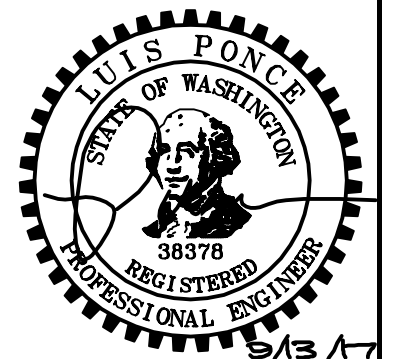
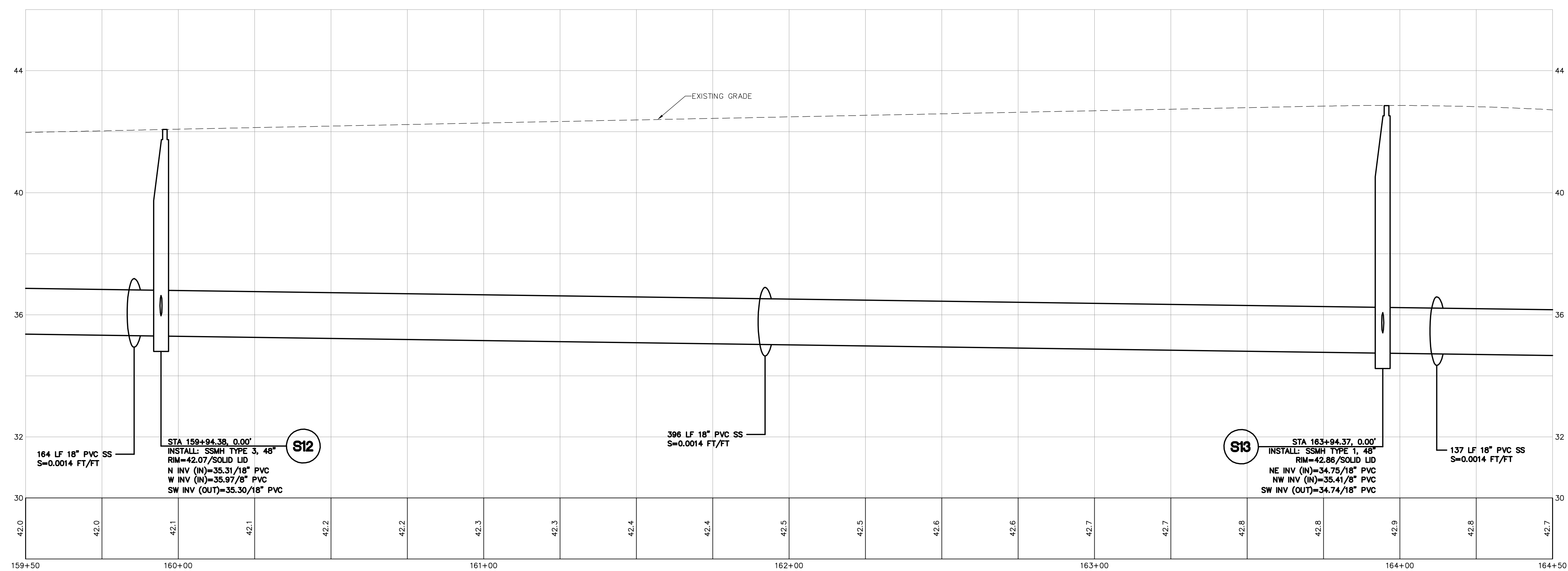
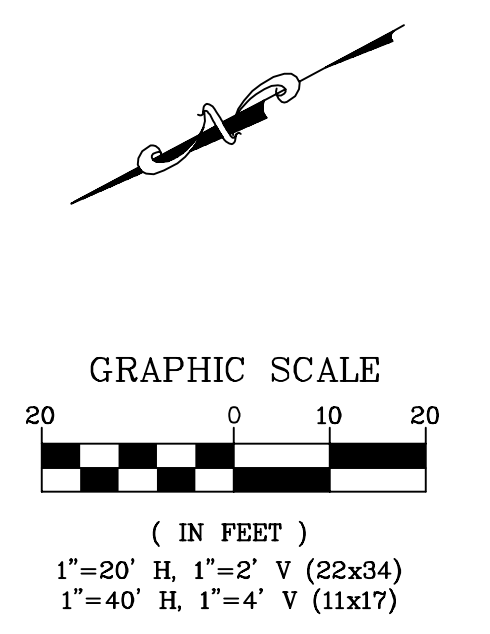
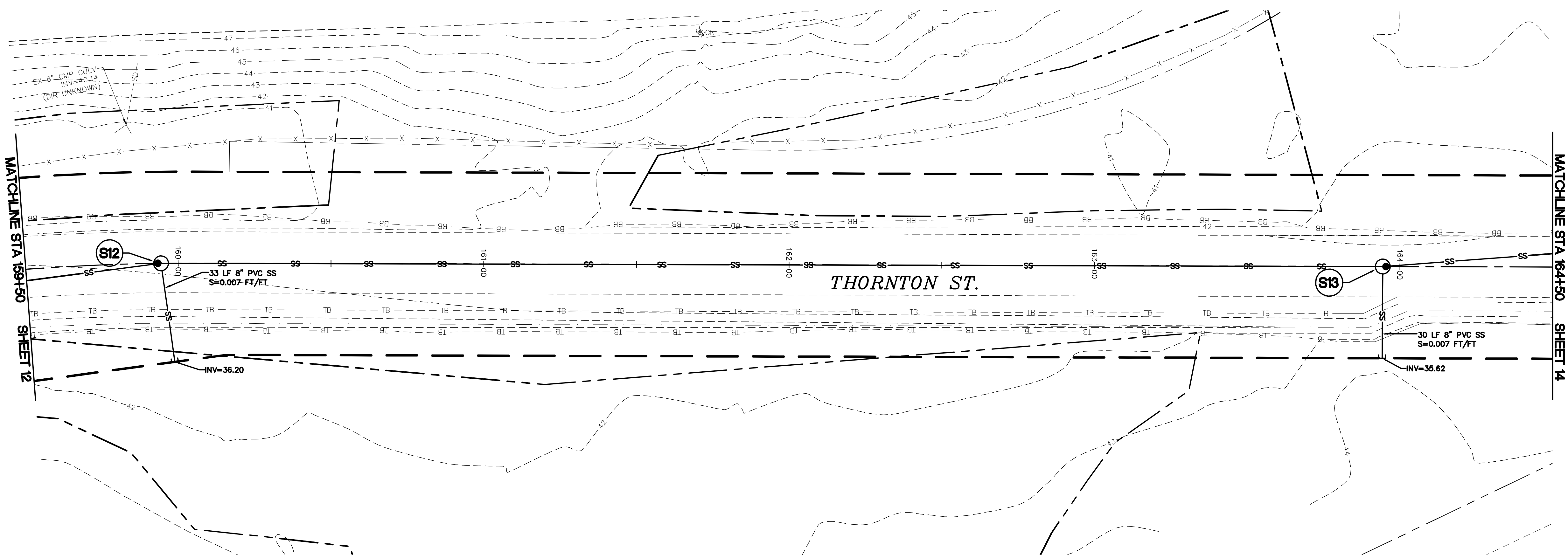
THORNTON ST
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 STA 154+50 TO 159+50

DWG 16034 SEWER
 JOB# 16034

SCALE
 H: 1"=20' V: 1"=2'

DATE 9/13/2017
 SHEET 12 of 24

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NO.	DATE	DESCRIPTION	BY

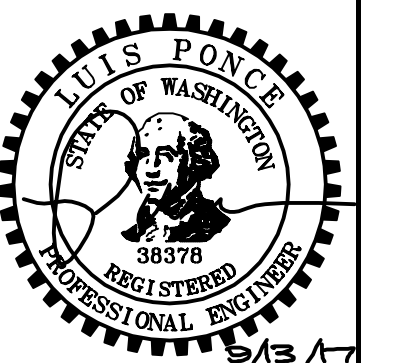
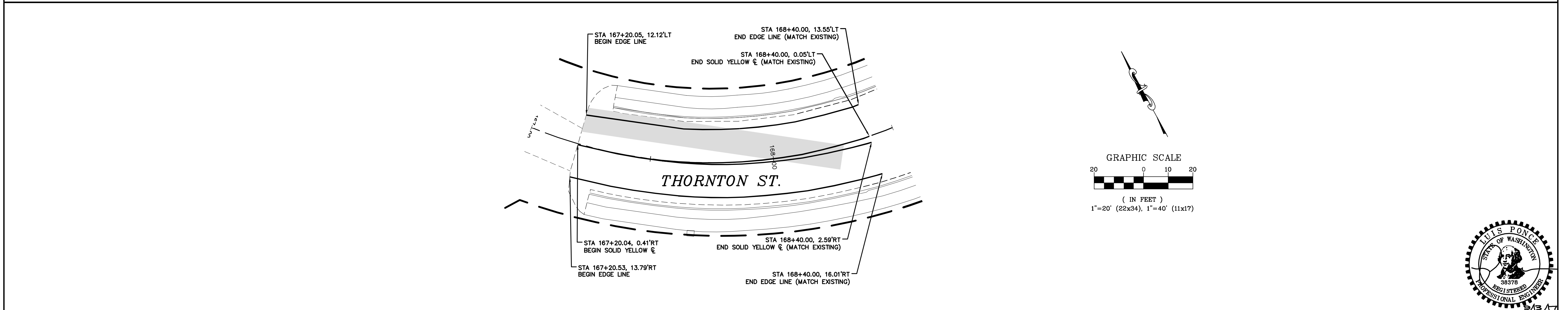
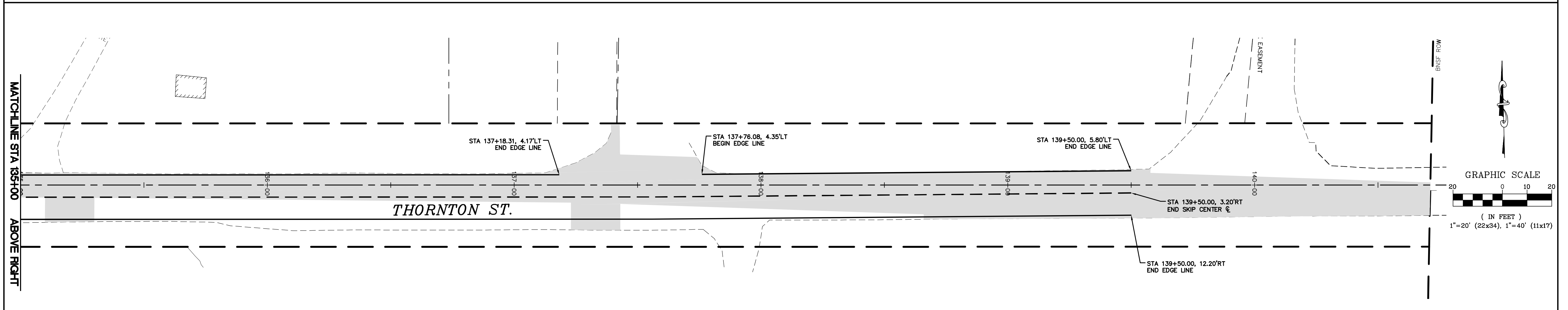
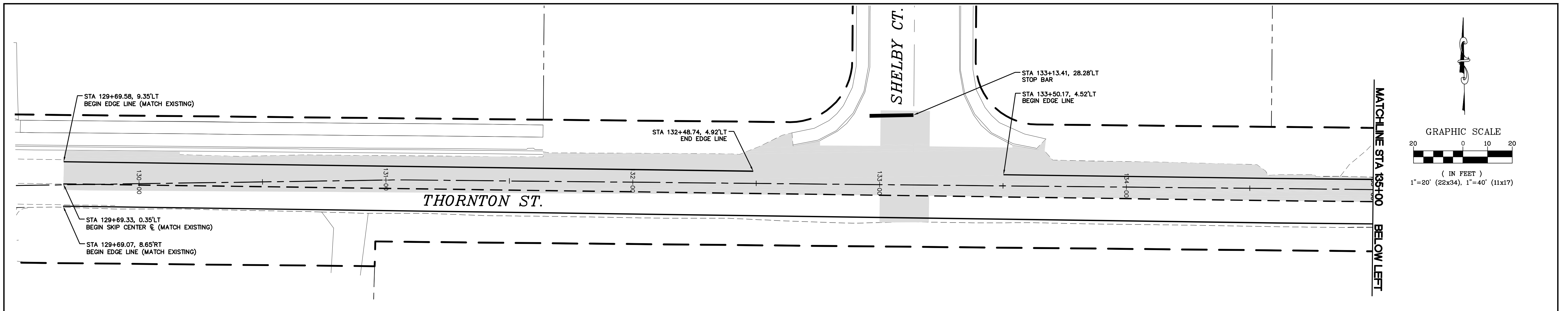
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
STA 159+50 TO 164+50

DWG 16034 SEWER
JOB# 16034
SCALE H: 1"=20' V: 1"=2'

DATE 9/13/2017
SHEET 13 of 24

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ENGINEERING INC

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813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

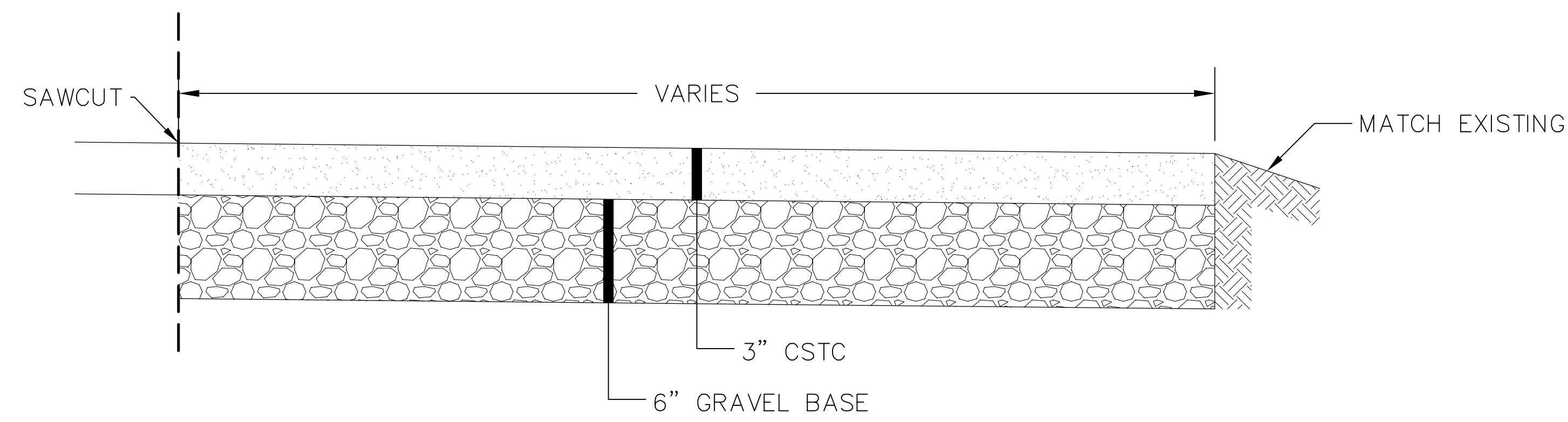
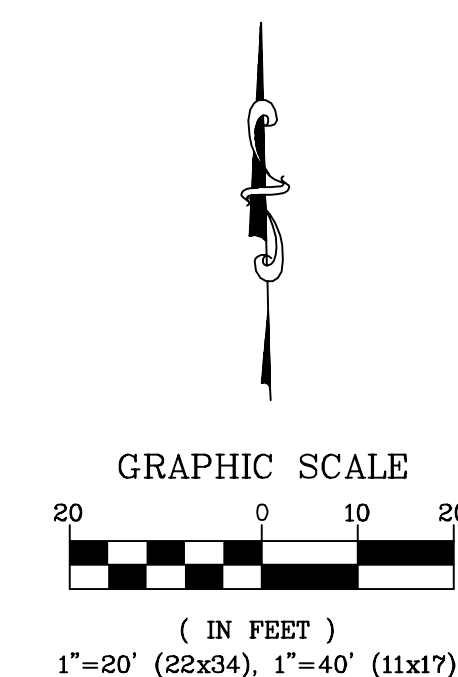
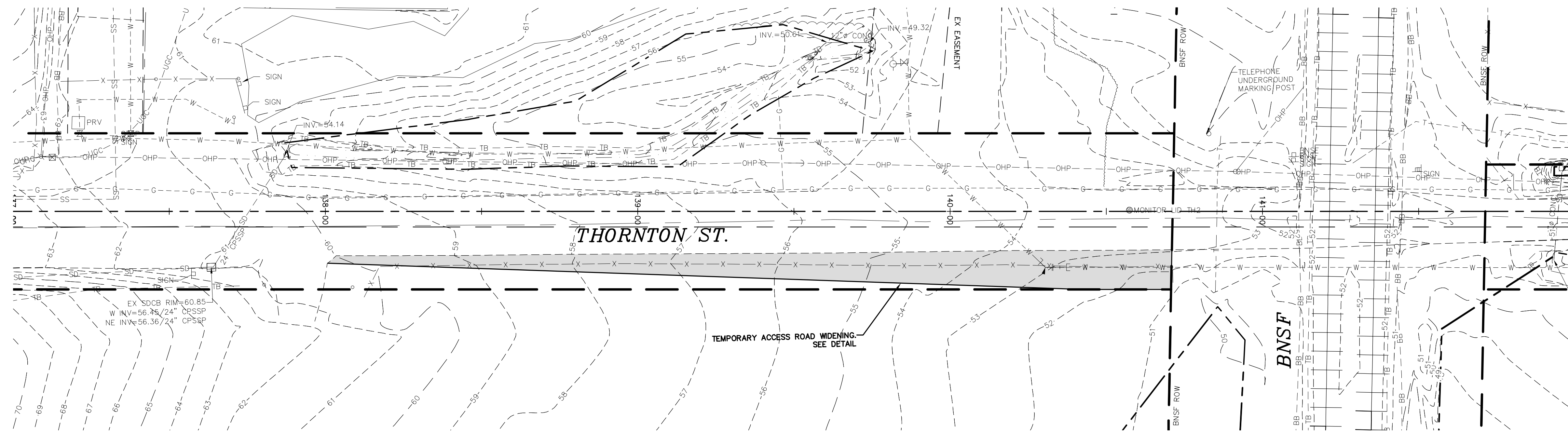
CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
STA 129+50 TO 140+75 AND STA 167+00 TO 168+50

DWG 16034 CHAN
JOB# 16034

SCALE
H: 1"=20' V: N/A

DATE
9/13/2017
SHEET
15
of 24



TEMPORARY ACCESS ROAD DETAIL
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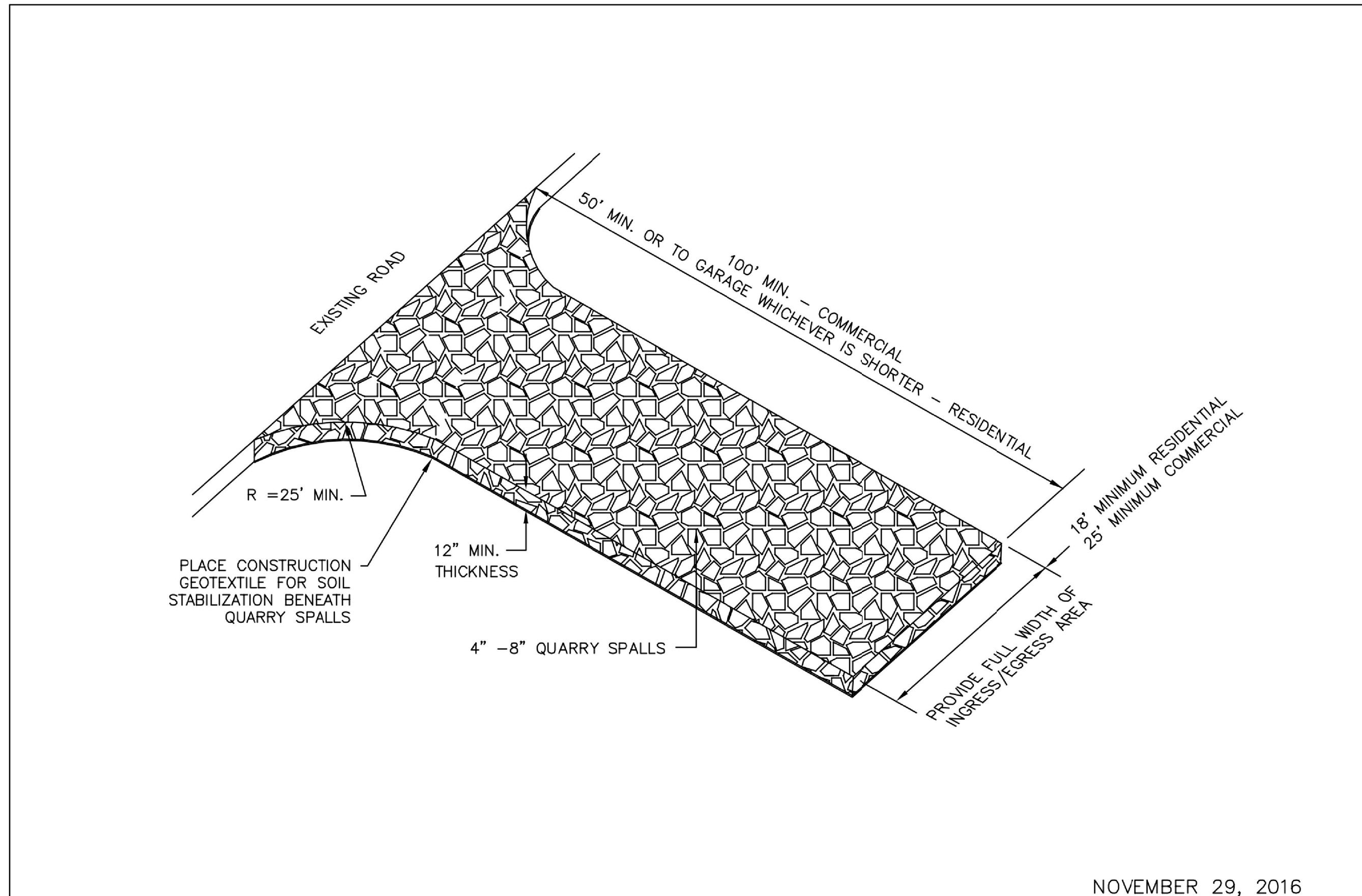
R&E Reichhardt & Ebe ENGINEERING INC
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FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
TEMPORARY ACCESS ROAD

DWG 16034 ACCESS RD		DATE	9/13/2017
JOB#	SCALE	SHEET	16
16034	H: 1"=20' V: N/A	of 24	



NOVEMBER 29, 2016

TEMPORARY CONSTRUCTION ENTRANCE

STANDARD DETAIL ST-25

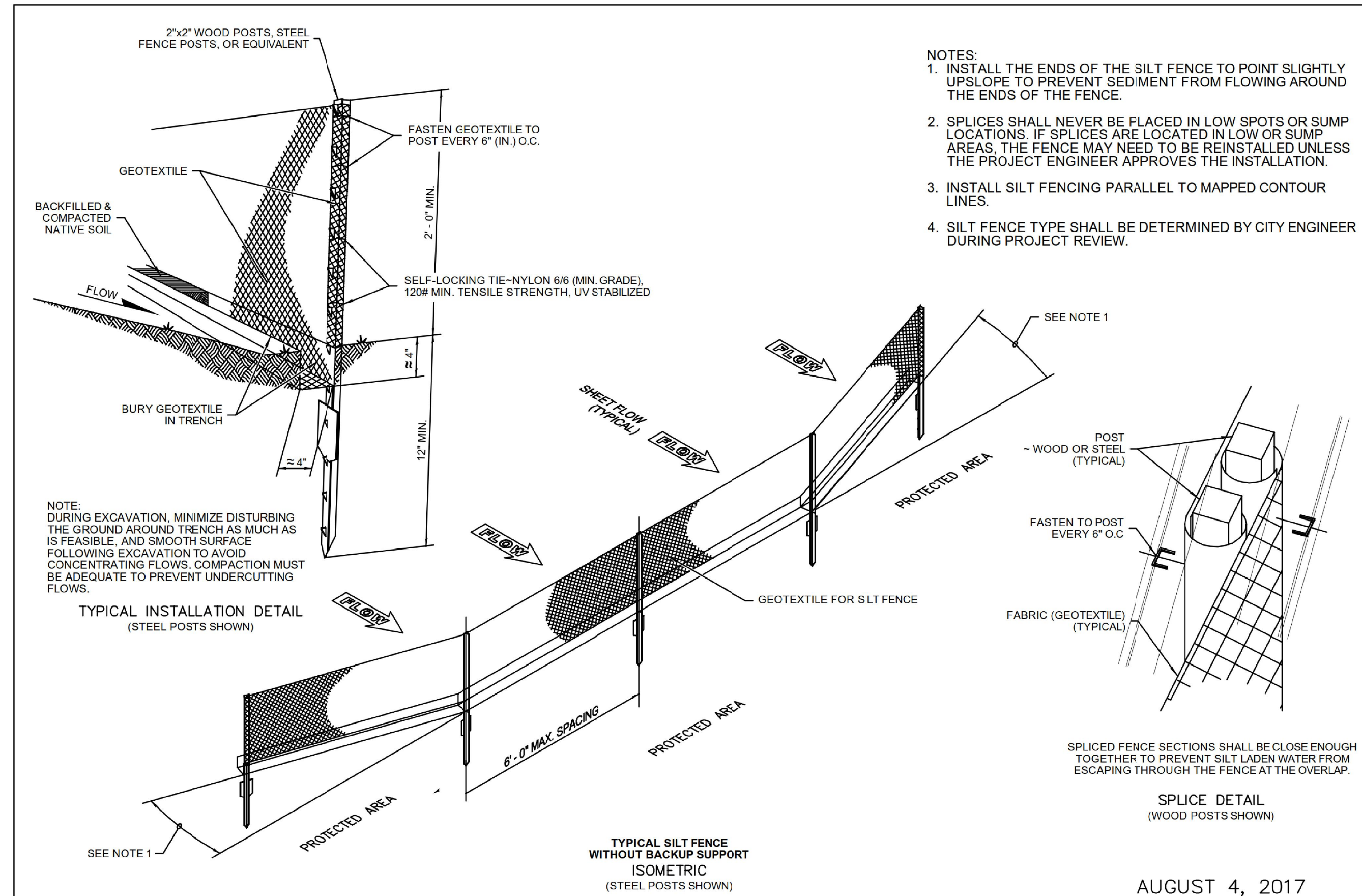
NOT TO SCALE

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Public Works Director

8/11/17

Date



AUGUST 4, 2017

SILT FENCE

STANDARD DETAIL ST-27

NOT TO SCALE

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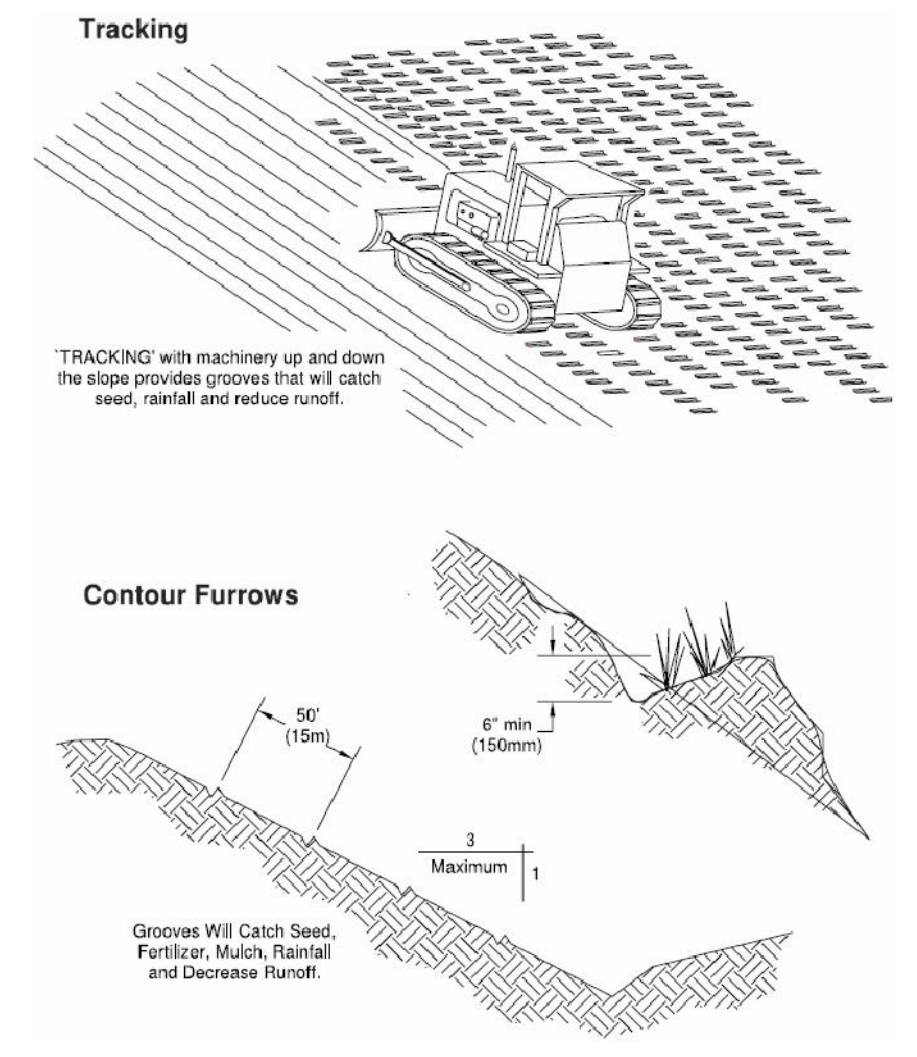
Public Works Director

8/11/17

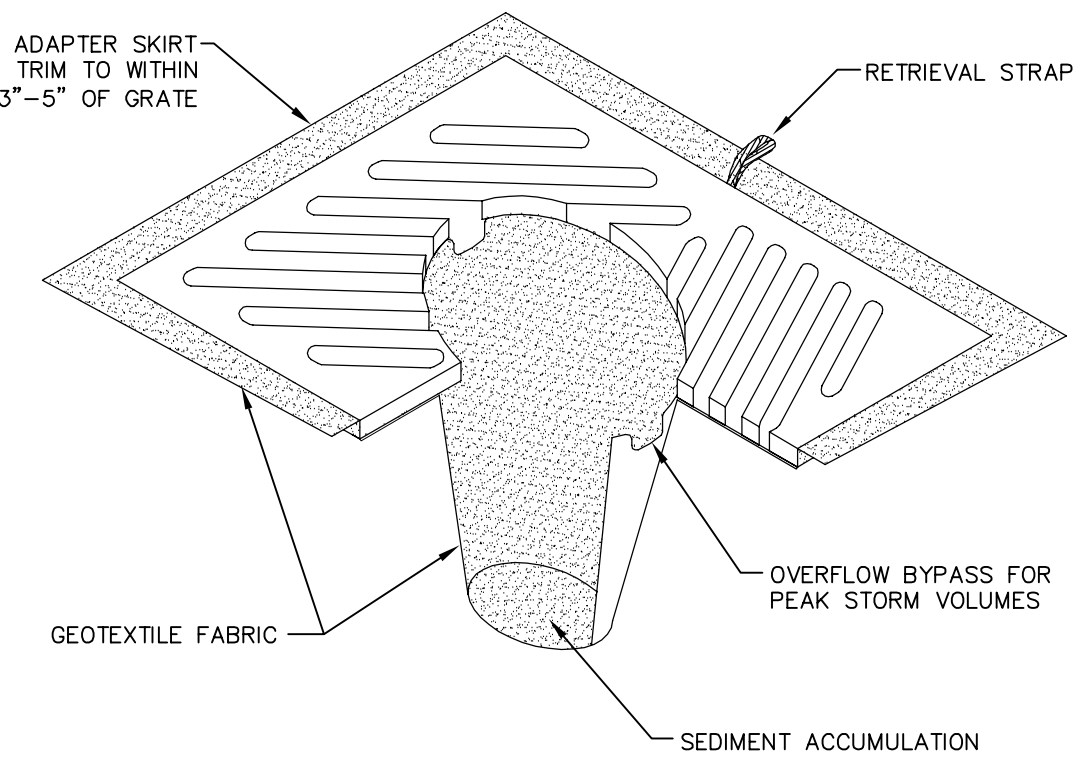
Date

TESC GENERAL NOTES

1. THIS PLAN REPRESENTS THE MINIMUM REQUIREMENTS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE ENGINEER AS ARE FOUND NECESSARY.
 2. THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO ALL OTHER SITE CONSTRUCTION.
 3. ALL CLEARING LIMITS SHALL BE VISIBLY MARKED PRIOR TO CLEARING.
 4. ANY VEGETATION NOT IN THE CONSTRUCTION AREA SHALL BE LEFT UNDISTURBED.
 5. CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE ENGINEER OF ANY PROPOSED CHANGES IN PLAN PRIOR TO CONSTRUCTION OF THAT CHANGE. CONTRACTOR SHALL KEEP RECORD OF DEVIATIONS AND FORWARD TO THE ENGINEER.
 6. MAINTENANCE AND OPERATION OF THE EROSION CONTROL AND SEDIMENTATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SEDIMENTATION AND EROSION CONTROL MEASURES, AS SHOWN AND AS INSTALLED ON AN AS NEEDED BASIS.
 7. THE CONSTRUCTED EROSION CONTROL AND SEDIMENTATION PLAN SHALL BE APPROVED BY THE ENGINEER PRIOR TO PERFORMING ANY SITE GRADING OR CLEARING.
 8. CONTRACTOR WILL HAVE A WATER TRUCK AVAILABLE ON SITE AT ALL TIMES. CONTRACTOR WILL WATER SURFACES OFTEN ENOUGH TO ABATE DUST AS APPROVED BY THE ENGINEER. WATERING WILL INCLUDE WEEKENDS AND HOLIDAYS.
 9. THE CONTRACTOR SHALL PERFORM ALL STREET CLEANING BY HAND OR WITH A SELF-PROPELLED PICKUP STREET SWEEPER. A STANDARD SELF-PROPELLED STREET SWEEPER WILL NOT BE ALLOWED.
 10. ALL DISTURBED AREAS SHALL BE HYDROSEEDED. GRASS SEEDING SHALL BE BROADCAST IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 11. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND FERTILIZED FOR EROSION CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR SLOPE EROSION UNTIL VEGETATION IS FIRMLY ESTABLISHED.
 12. ALL STORM DRAIN FACILITIES WITHIN THE PROJECT BOUNDARY, OR WHICH ARE IMPACTED BY THE PROJECT ARE TO BE CLEARED OF SEDIMENT AND DEBRIS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
 13. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- DUST CONTROL:**
CONTRACTOR SHALL LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE EXCAVATION AND GRADING SHALL TAKE PLACE MAINTAINING THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL. DUST CONTROL METHODS SHALL BE PERFORMED BY METHODS LISTED IN NOTE NUMBER EIGHT OF THE TESC GENERAL NOTES. SURFACES SHALL BE SPRAYED WITH WATER AS NEEDED IN ORDER TO ABATE DUST AS APPROVED BY THE ENGINEER.
- STREET CLEANING:**
CONTRACTOR SHALL PERFORM ALL STREET CLEANING AT A MINIMUM OF AT LEAST ONCE AT THE END OF EVERY DAY WORKED AND ON AN AS NEEDED BASIS BASED ON VEHICLE TRACK OUT. STREET CLEANING SHALL BE PERFORMED BY THE METHODS LISTED IN NOTE NUMBER TEN OF THE TESC GENERAL NOTES AND SHALL NOT ALLOW SEDIMENT INTO STORMWATER CONVEYANCE DITCHES OR STRUCTURES. STREET CLEANING METHODS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.

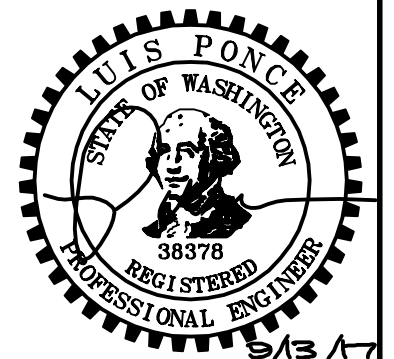


SURFACE ROUGHENING
NTS



INLET PROTECTION
NTS

- NOTES:
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING & GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, & RE-INSERTING IT INTO THE CATCH BASIN.



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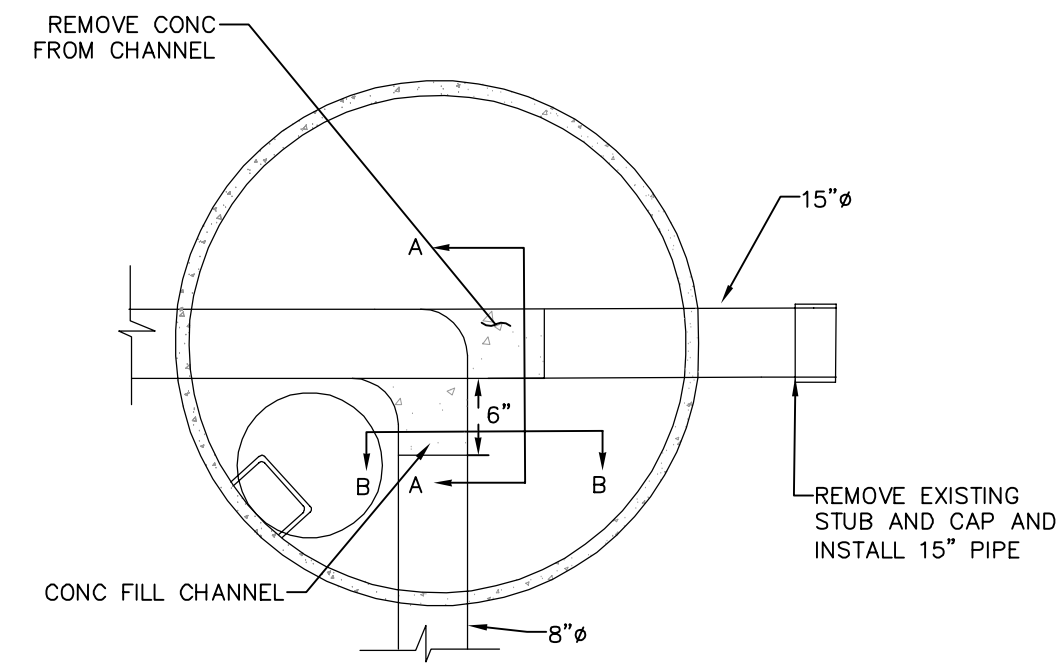
NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALE
2095 MAIN STREET
FERNDALE, WA 98248

THORNTON ST
SANITARY SEWER
EROSION TESC-DETAIL 1

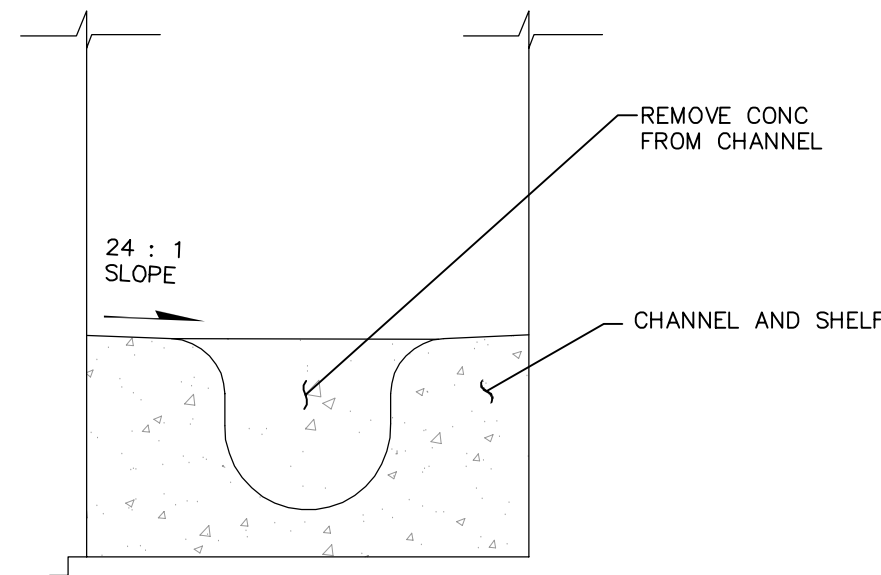
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JOB#	SCALE	9/13/2017
16034	H: N/A v: N/A	SHEET 17 of 24

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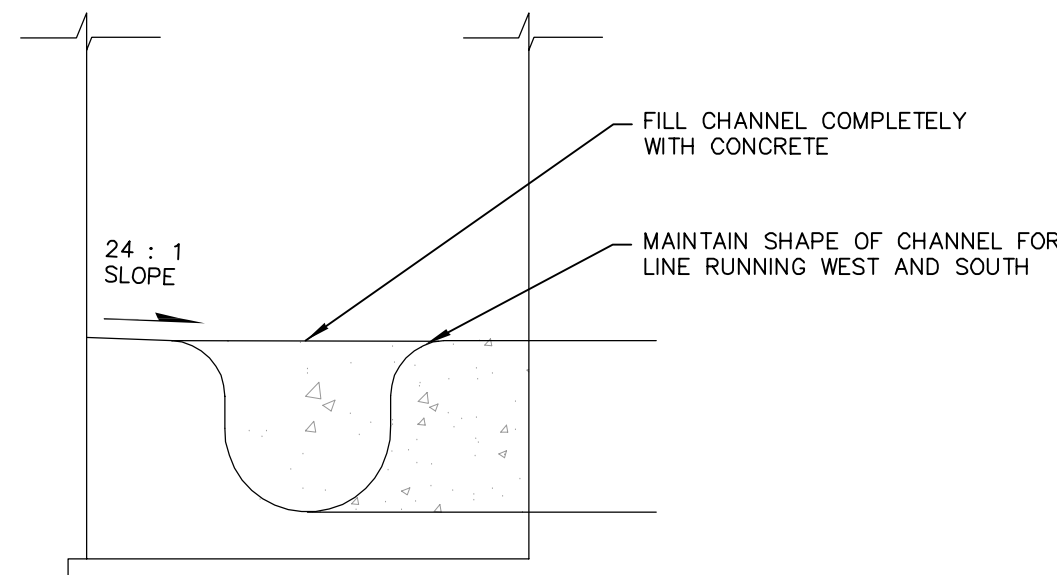


PLAN

NOTE:
1. INSIDE DROP TO NORTH NOT SHOWN FOR CLARITY



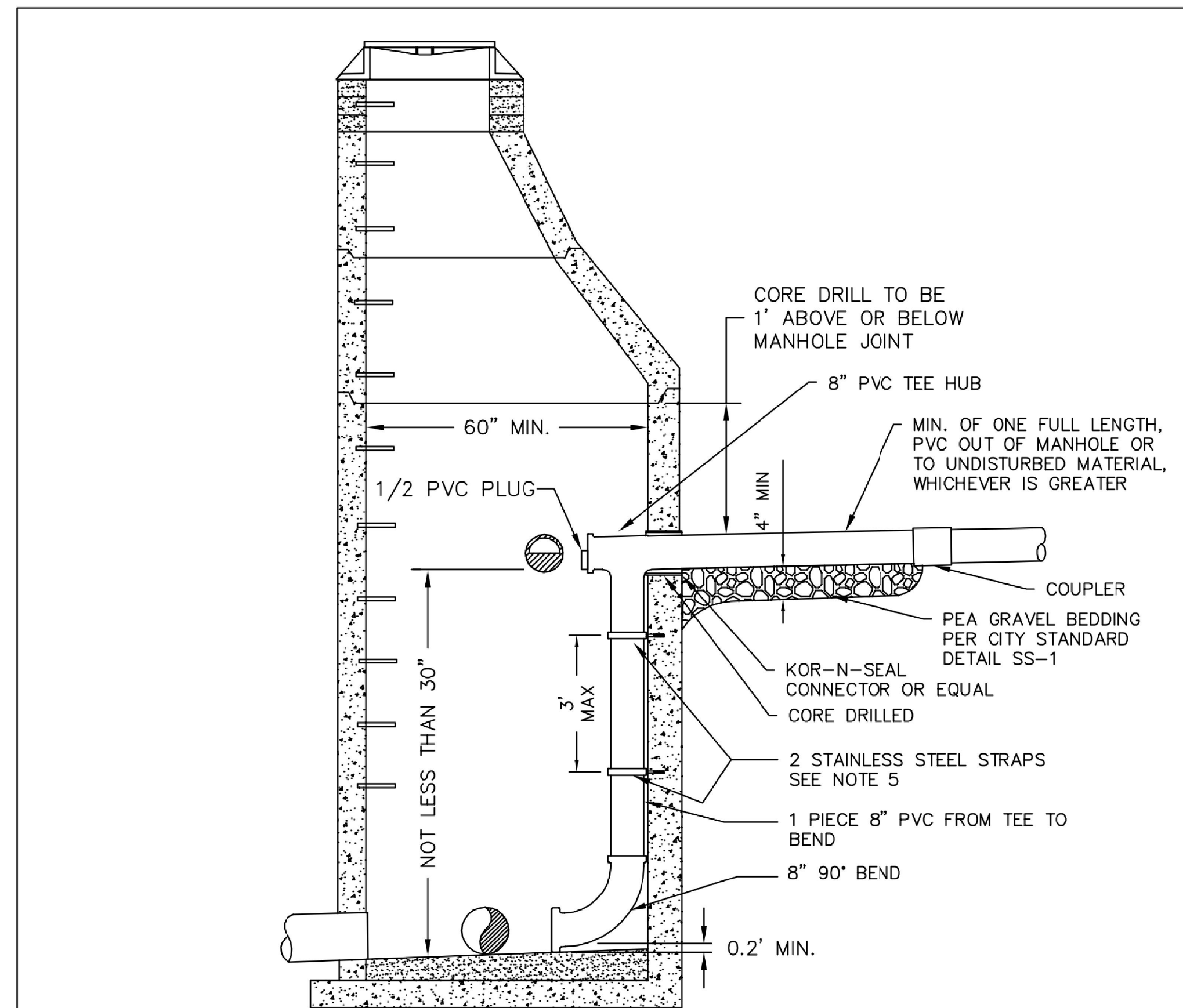
SECTION AA



SECTION BB

54' CHANNELED MANHOLE AT STA 129+80

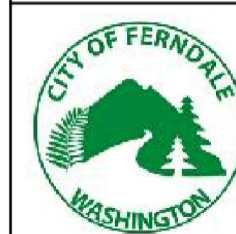
NTS



NOTES:

1. DROP TEE TO BE INSTALLED MINIMUM OF 3' BELOW CONE SECTION.
2. INSIDE DROP MANHOLE SHALL BE INSTALLED ONLY WHERE APPROVED BY THE PUBLIC WORKS DIRECTOR.
3. SIZE OF MANHOLE WILL INCREASE WITH LARGER DIAMETER PIPE AND SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR.
4. CHANNEL TO OUTLET.
5. STAINLESS ADJUSTABLE PIPE BRACKETS AS MANUFACTURED BY RELINER-DURAN INC. OR APPROVED EQUAL. ATTACH TO WALL WITH 3/8" SS ANCHOR BOLTS.
6. INSIDE DROP SEWER MANHOLE CONNECTION FOR EXISTING SANITARY MANHOLE STRUCTURES.

AUGUST 1, 2017



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Public Works Director

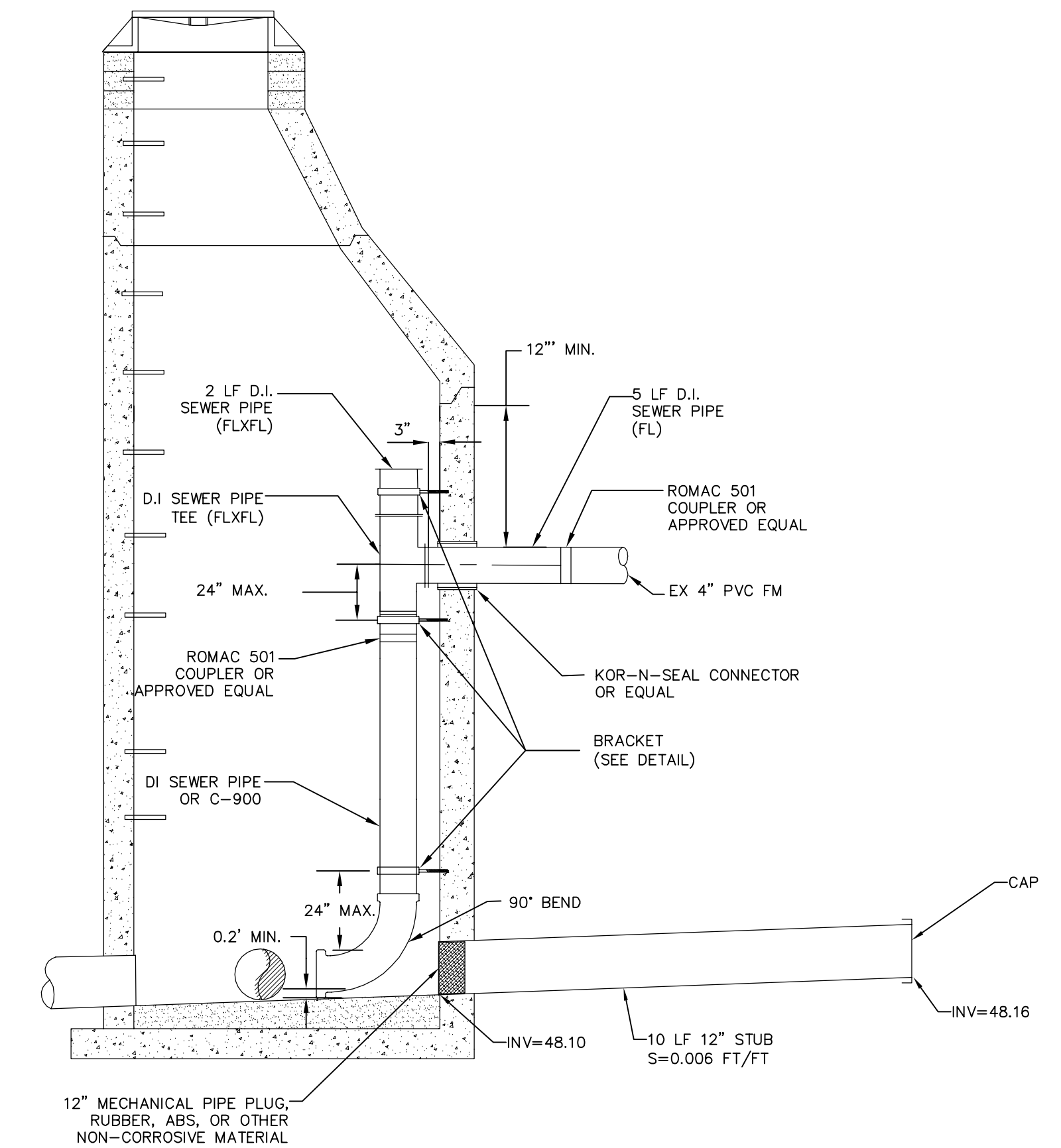
8/11/17

Date

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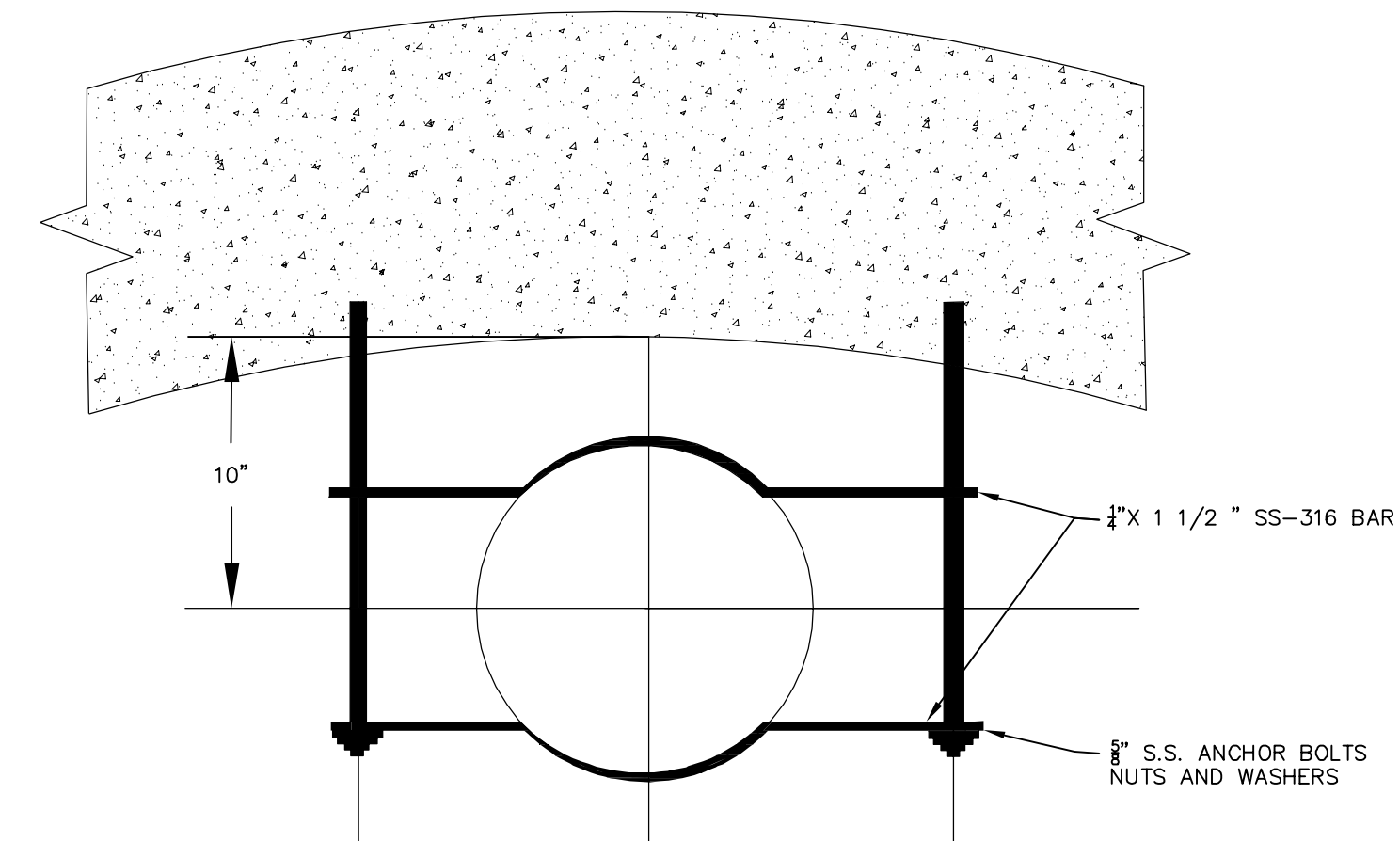
STANDARD DETAIL SS-13

NOT TO SCALE



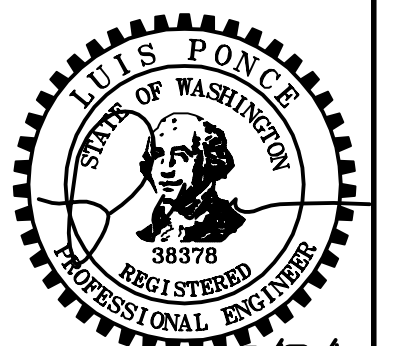
INSIDE FM DROP SEWER MANHOLE CONNECTION, SSMH S4

NTS



BRACKET DETAIL, SSMH S4

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NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
SEWER DETAILS 1

DWG 16034 DETAIL

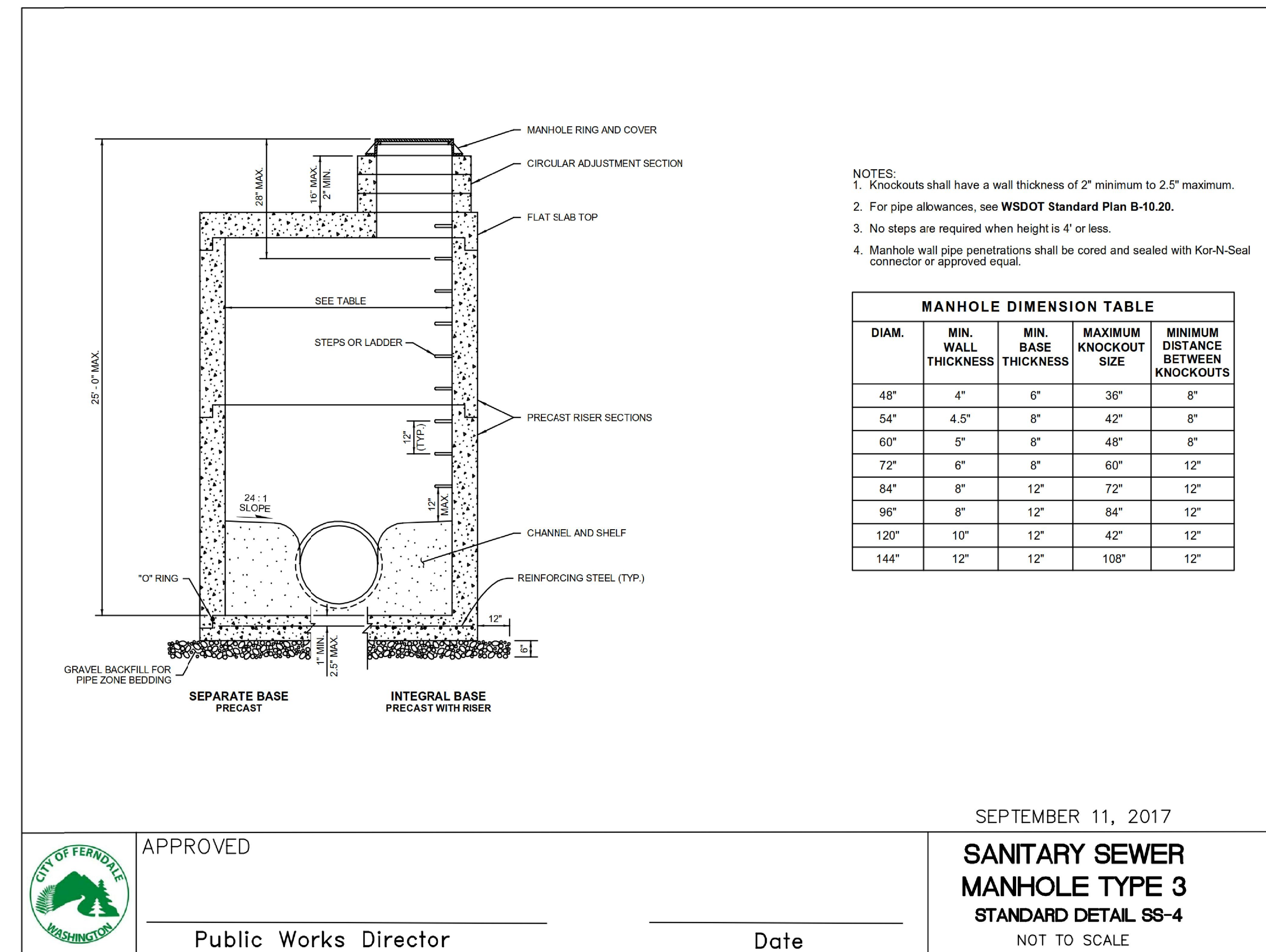
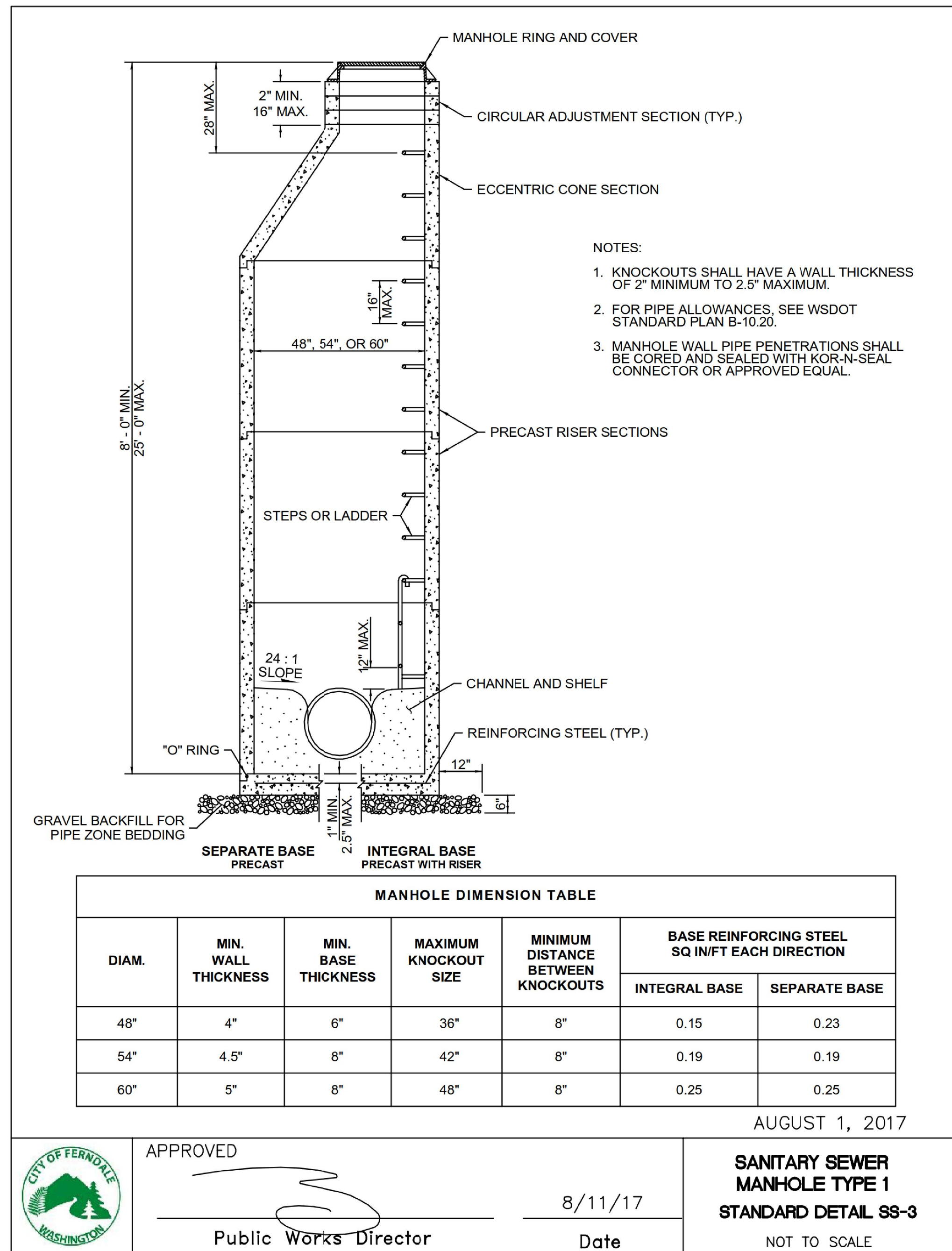
JOB# 16034

SCALE H: N/A V: N/A

DATE 9/13/2017

SHEET 18 of 24

9/13/17



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Public Works Director
8/11/17
Date

SANITARY SEWER MANHOLE TYPE 1
STANDARD DETAIL SS-3
NOT TO SCALE

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Public Works Director
Date

SANITARY SEWER MANHOLE TYPE 3
STANDARD DETAIL SS-4
NOT TO SCALE

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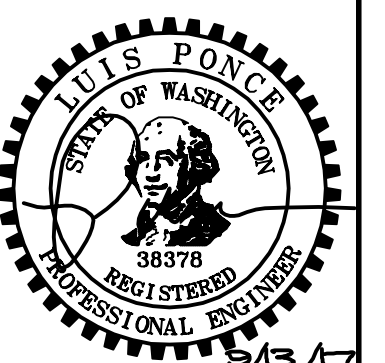
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

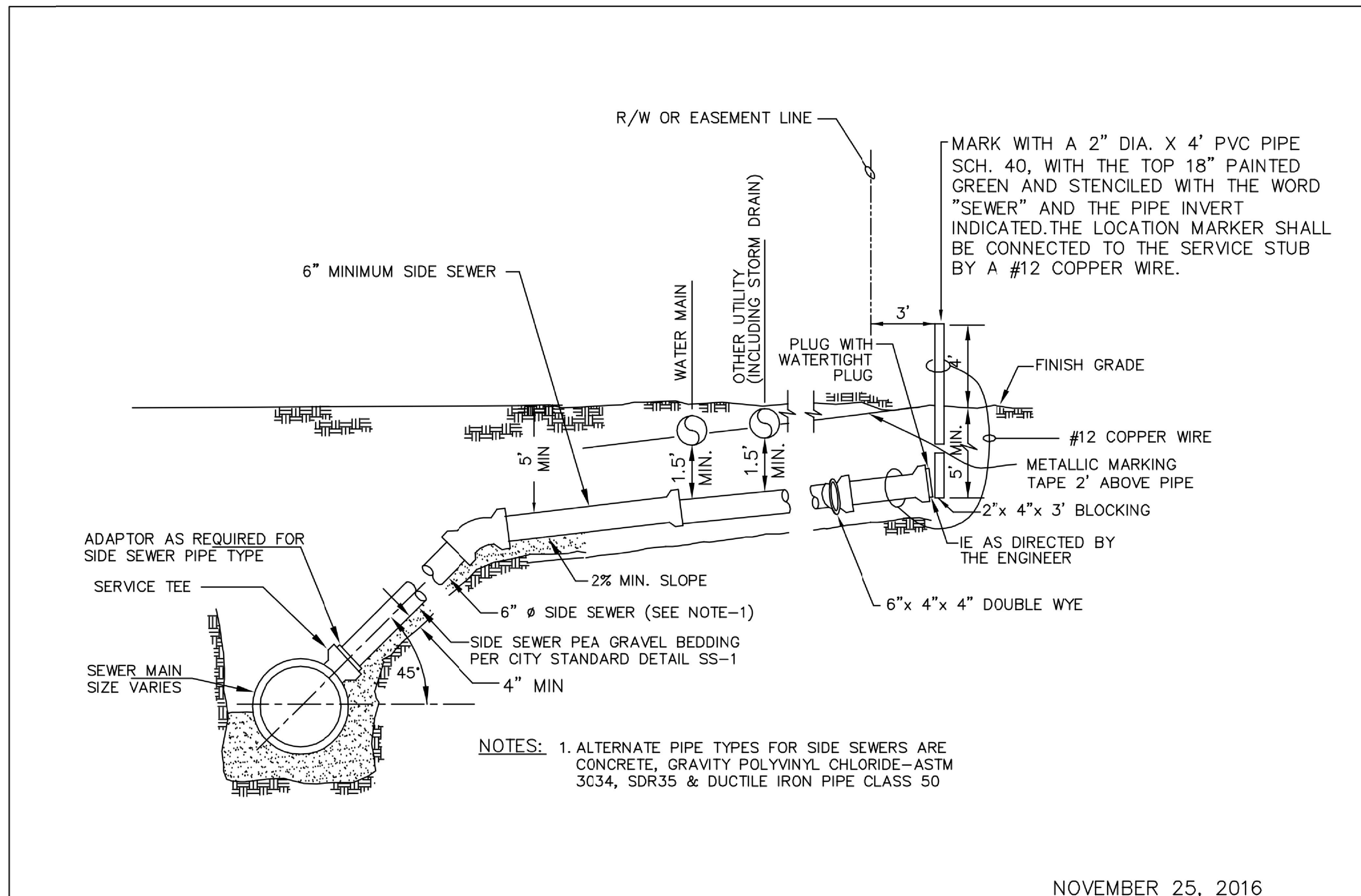
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SANITARY SEWER
SEWER DETAILS 2

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JOB# 16034
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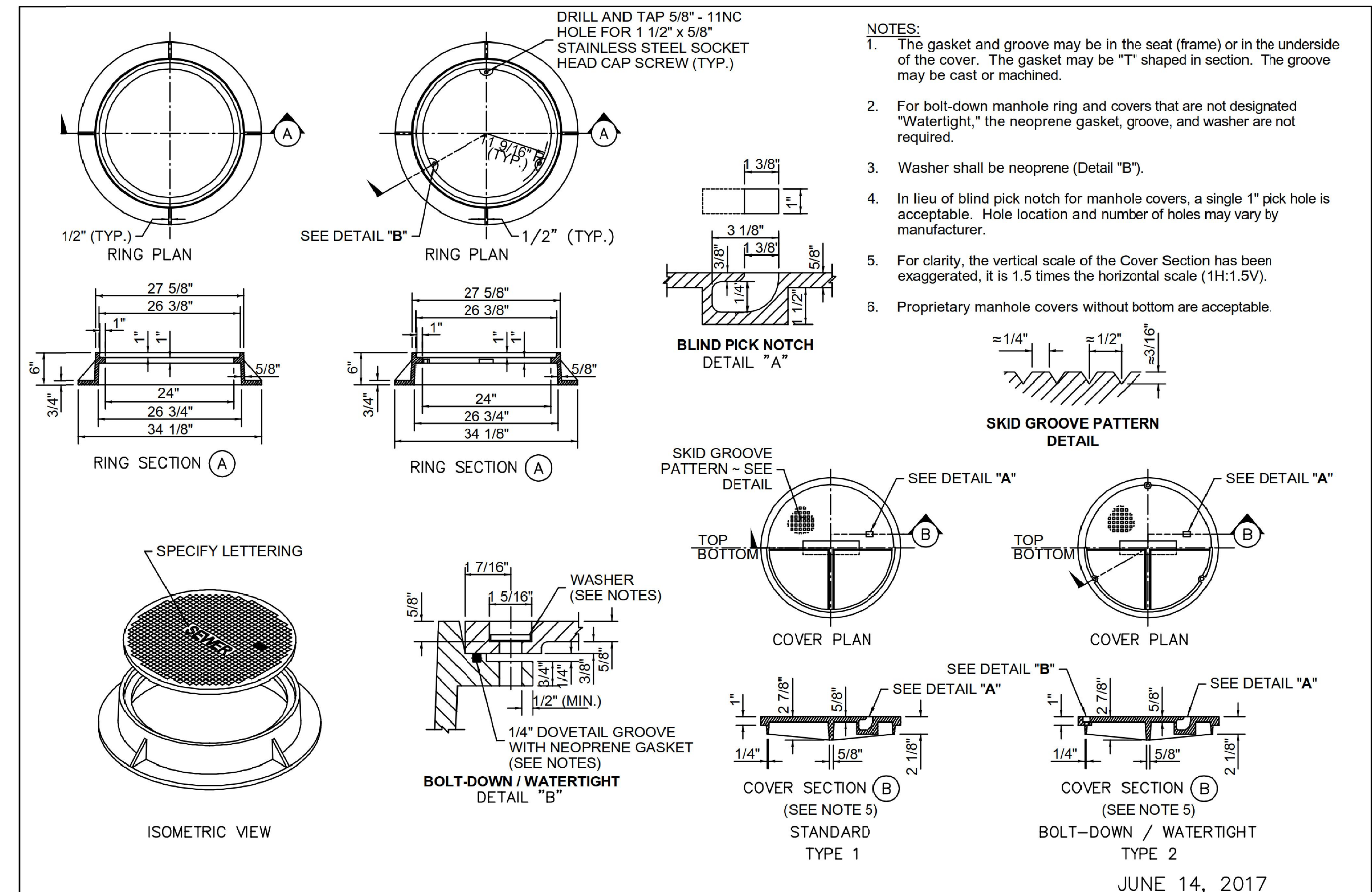
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SHEET 19 of 24



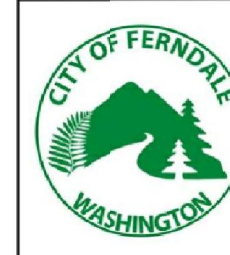
9/13/17



NOVEMBER 25, 2016
SANITARY SEWER SERVICE CONNECTION 18" AND LARGER MAINS
 STANDARD DETAIL SS-7
 NOT TO SCALE

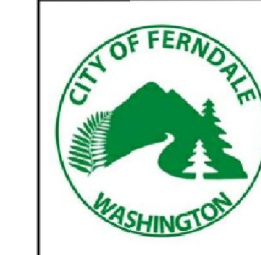


JUNE 14, 2017
CIRCULAR FRAME AND COVER
 STANDARD DETAIL SS-10
 NOT TO SCALE



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 Public Works Director
 8/11/17
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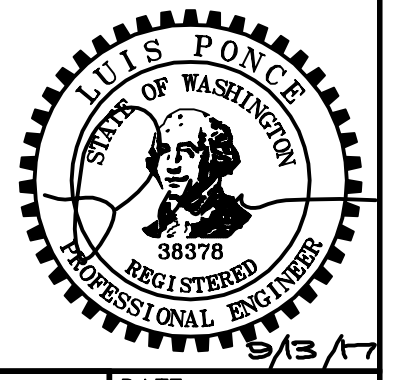


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 Public Works Director
 8/11/17
 Date

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 Public Works Director
 8/11/17
 Date



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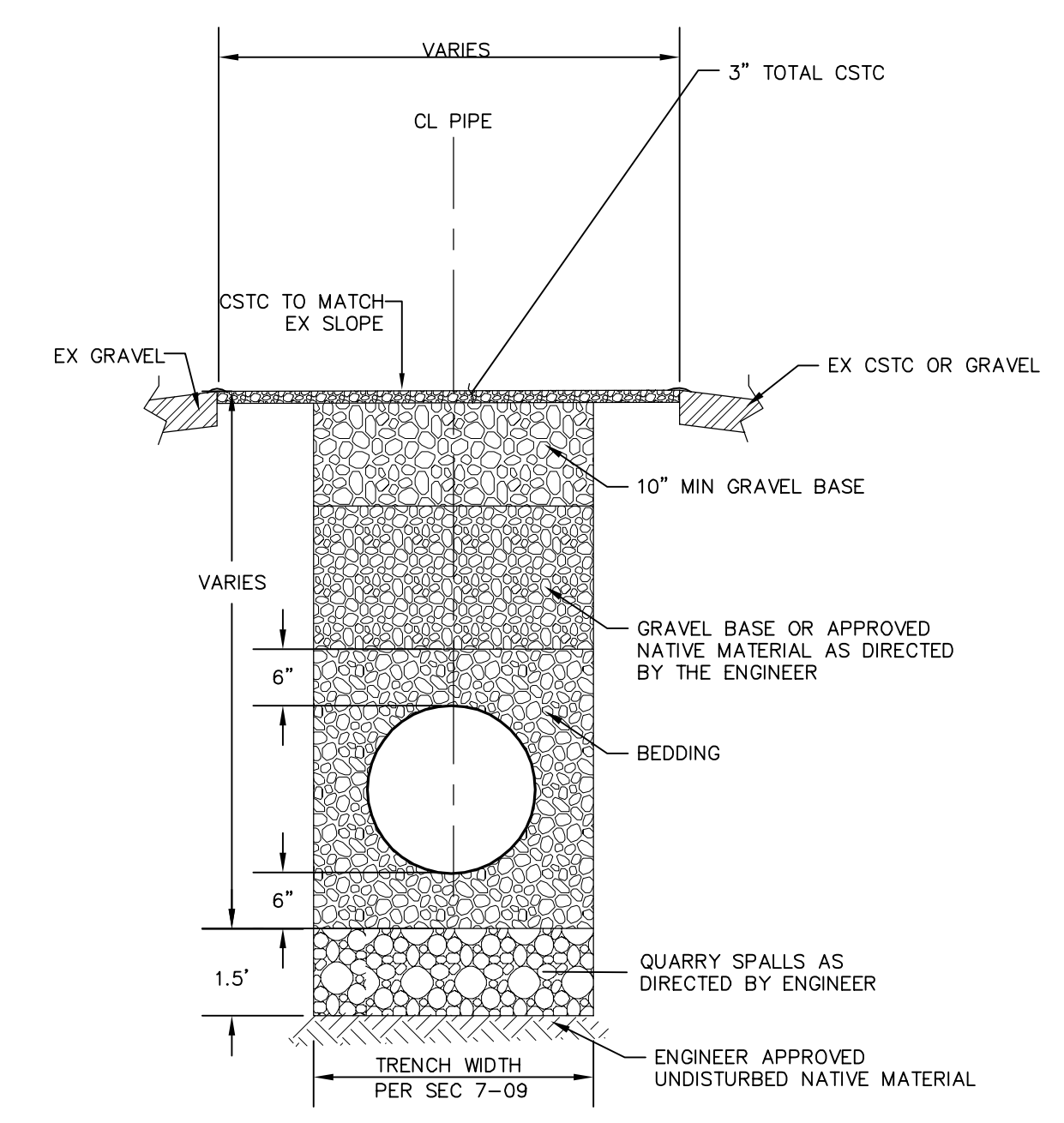
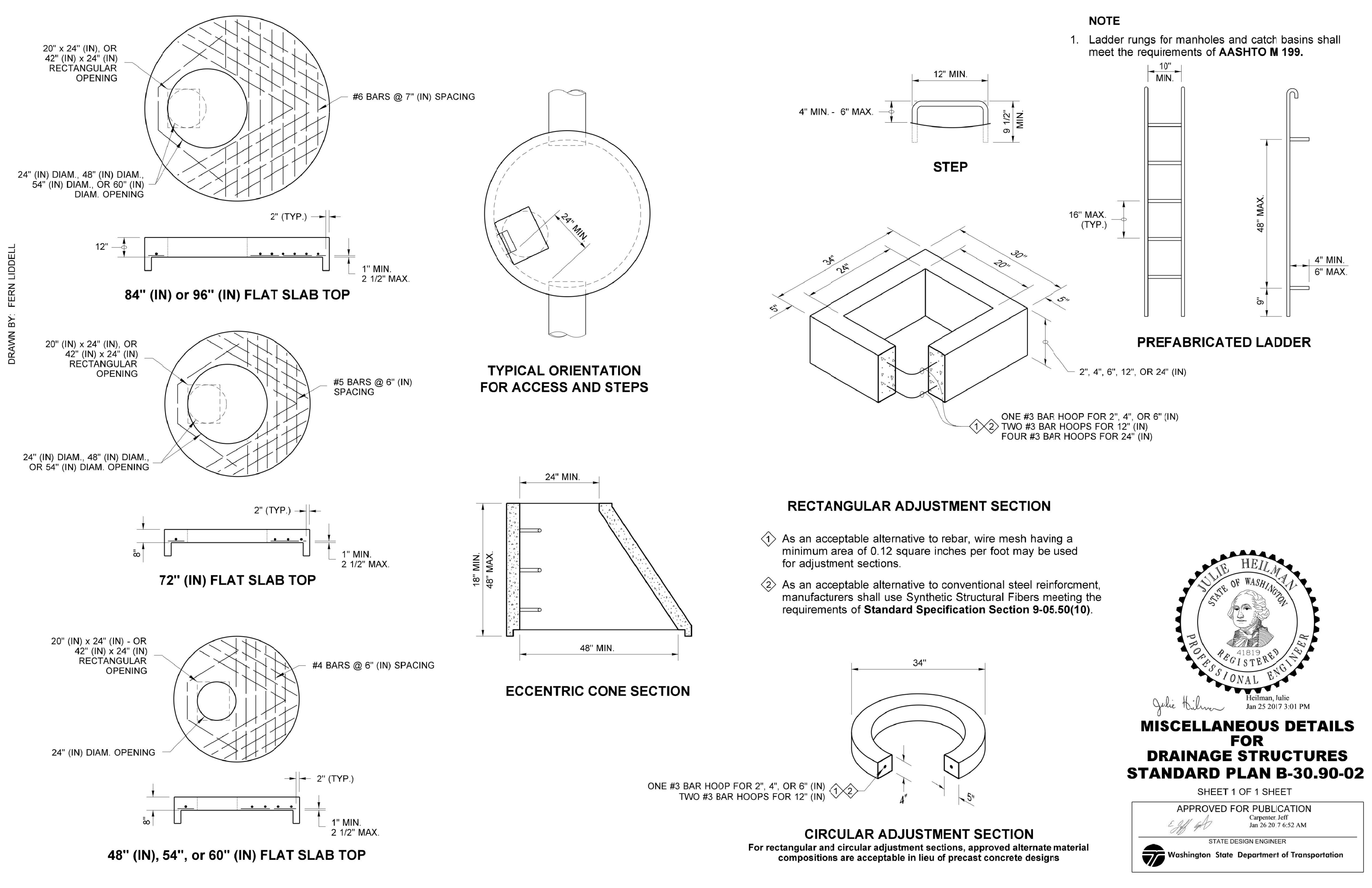
NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
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 FERDALE, WA 98248

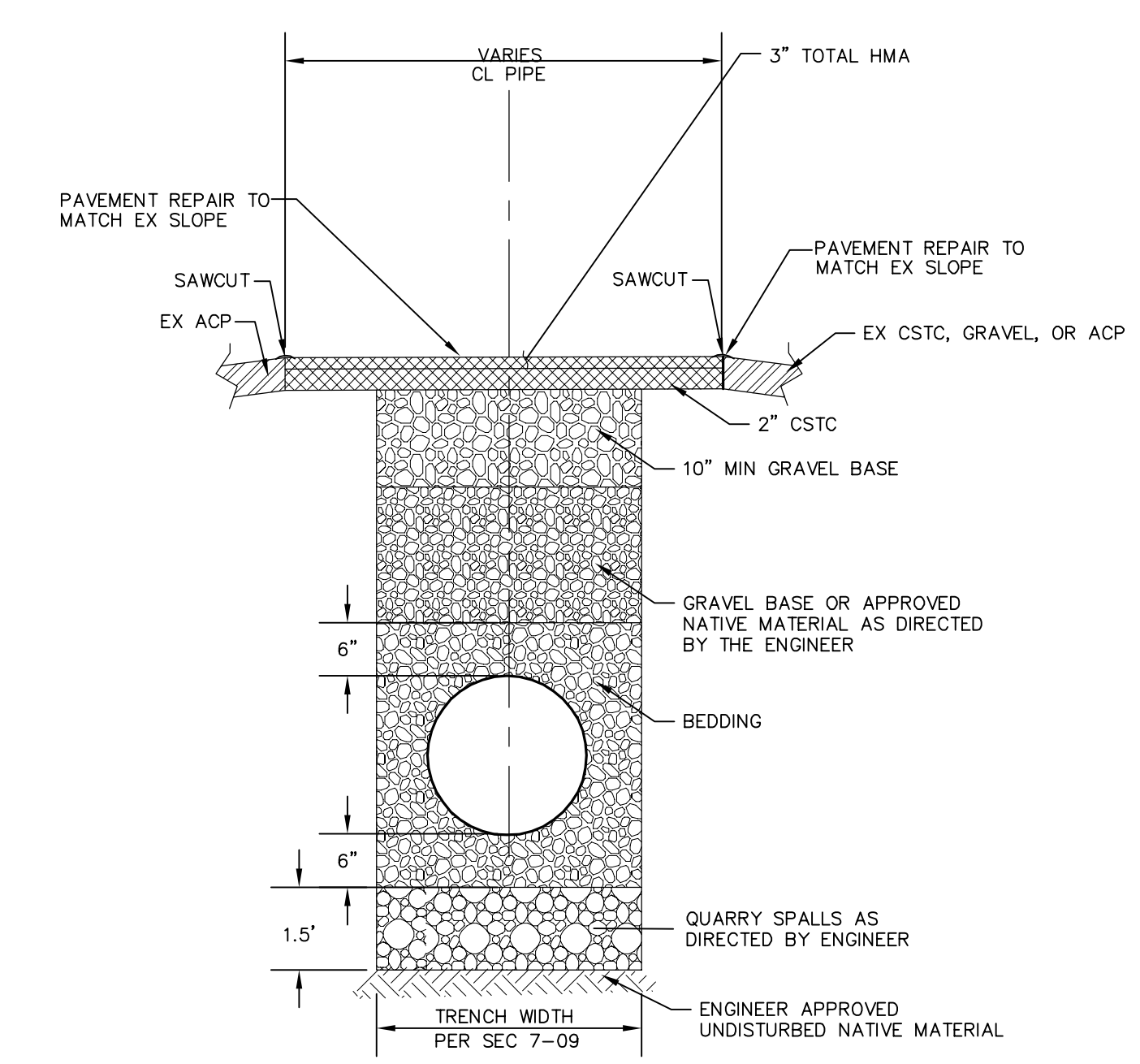
THORNTON ST
 SANITARY SEWER
 SEWER DETAILS 3

DWG 16034 DETAIL		DATE	9/13/2017
JOB#	SCALE	SHEET	20
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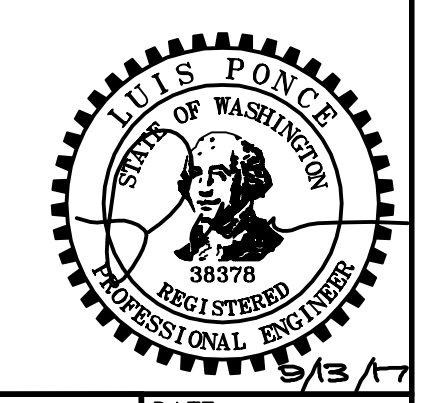
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**TYPICAL TRENCH SECTION
GRAVEL ROAD SECTION**
NTS



**TYPICAL TRENCH SECTION
ASPHALT CONCRETE PAVEMENT SECTION**
NTS



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FERNDALE, WA 98248

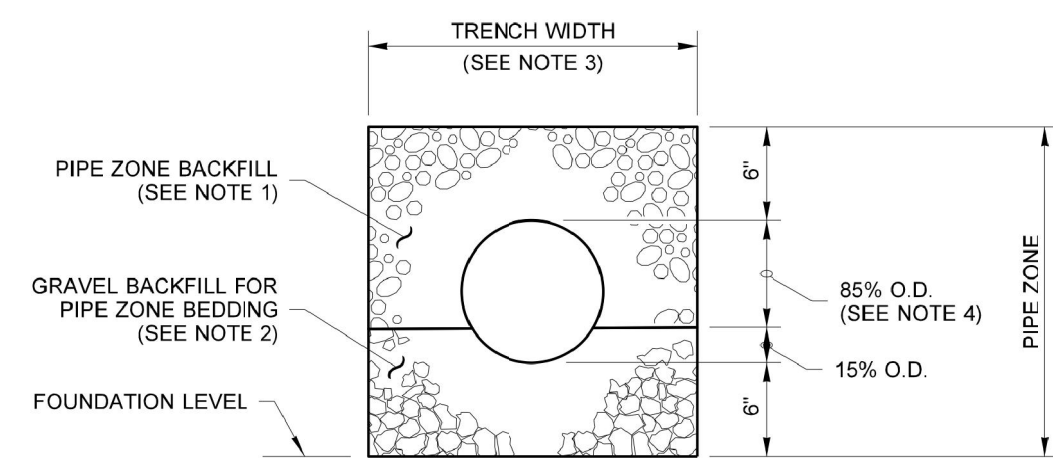
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SANITARY SEWER
SEWER DETAILS 4

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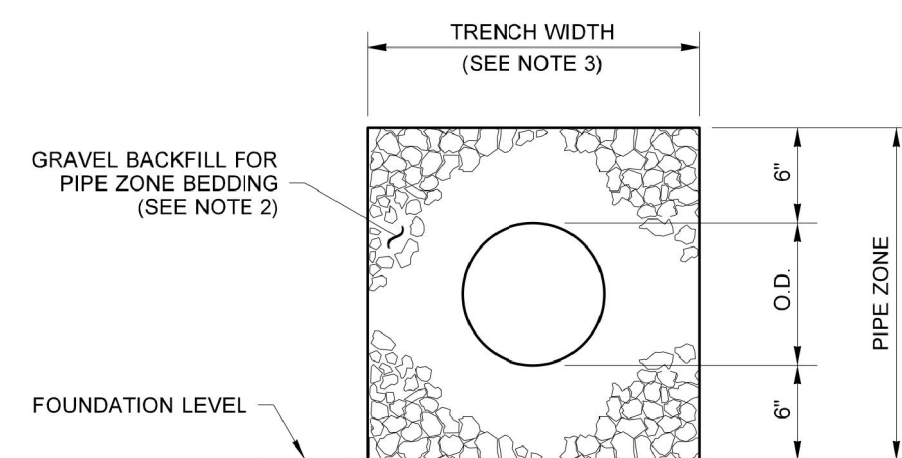
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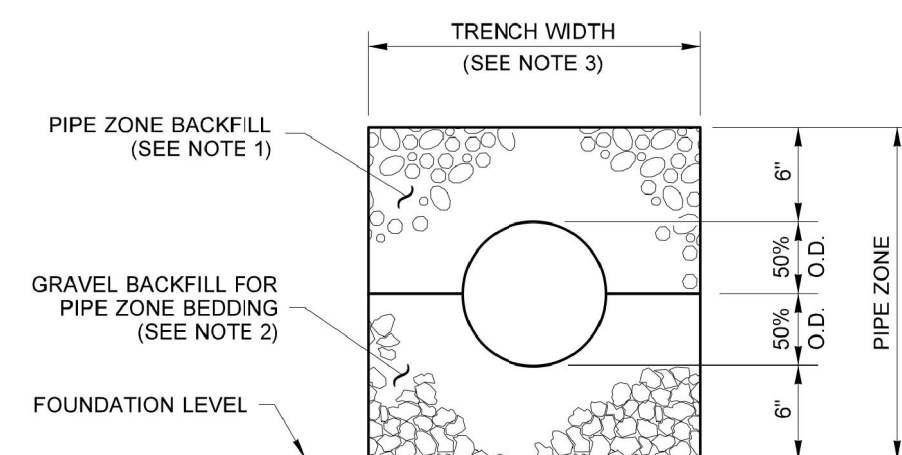
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CONCRETE AND DUCTILE IRON PIPE



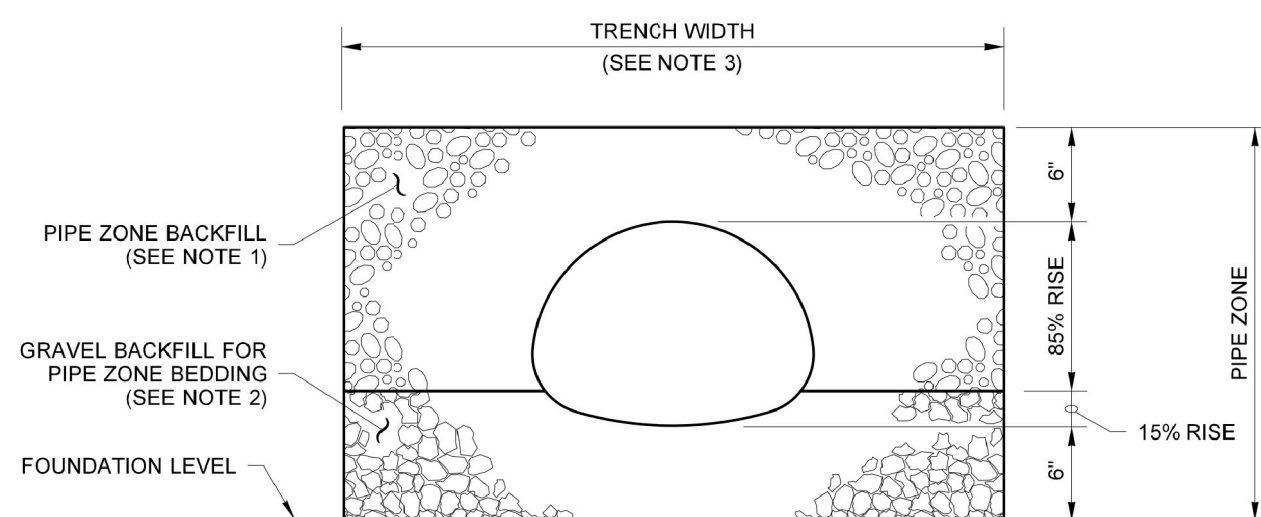
THERMOPLASTIC PIPE



METAL AND STEEL RIB REINFORCED POLYETHYLENE PIPE

NOTES

1. See **Standard Specifications Section 7-08.3(3)** for Pipe Zone Backfill.
2. See **Standard Specifications Section 9-03.12(3)** for Gravel Backfill for Pipe Zone Bedding.
3. See **Standard Specifications Section 2-09.4** for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



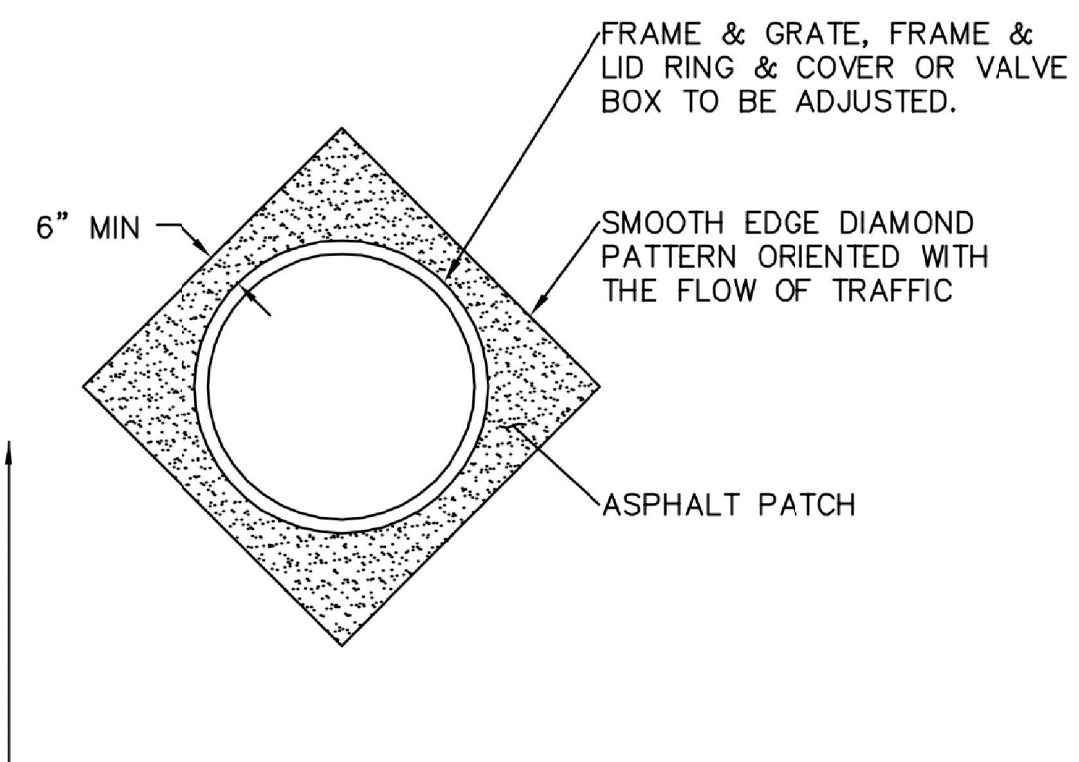
PIPE ARCHES

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS

PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. x 2
	102" to 180"	48"
PIPE ARCH (SPAN)	18" to 36"	12"
	43" to 142"	SPAN x 3
METAL ONLY	148" to 200"	48"



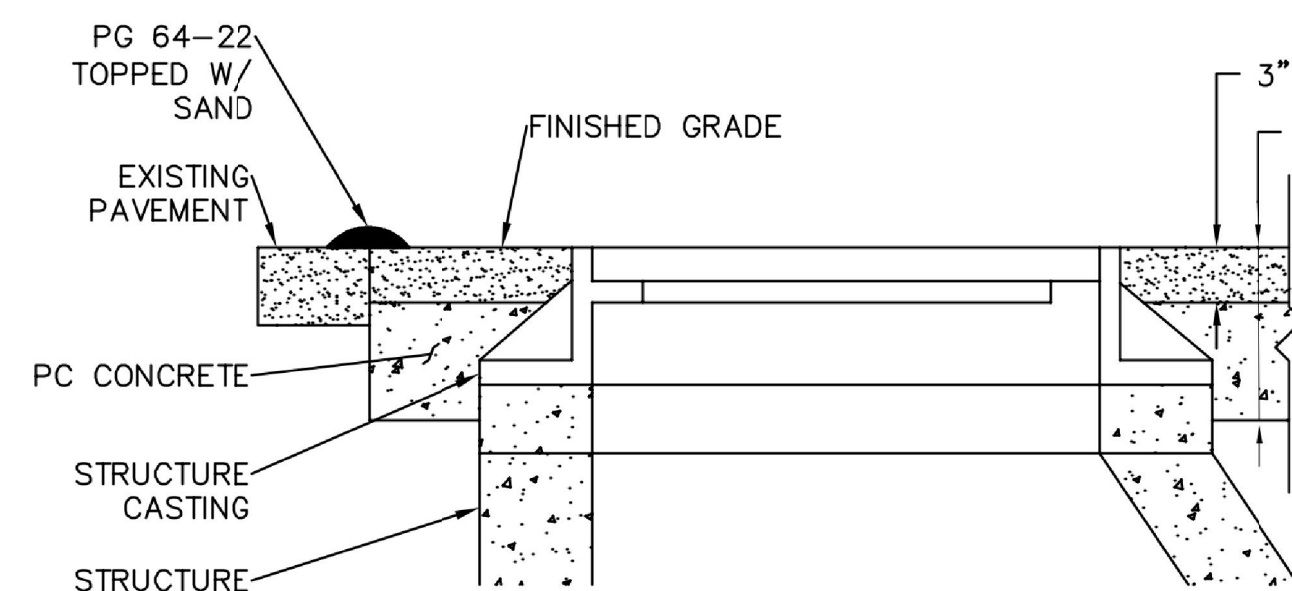
Julie Heilman
 Heilman, Julie
 Jan 25 2017 3:01 PM
PIPE ZONE BEDDING AND BACKFILL
 STANDARD PLAN B-55.20-01
 SHEET 1 OF 1 SHEET
 APPROVED FOR PUBLICATION
 Carpenter, Jeff
 Jan 26 2017 6:53 AM
 STATE DESIGN ENGINEER
 Washington State Department of Transportation



NOTES:

ALL FRAMES, COVERS & VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADE AFTER THE FINAL LIFT OF PAVING HAS BEEN COMPLETED. THE FOLLOWING PROCEDURE SHALL BE USED:

1. CUT THE ASPHALT IN A DIAMOND AROUND THE STRUCTURE CASTING TO BE ADJUSTED.
2. REMOVE THE FILL MATERIAL WITHIN THE CUT PAVEMENT AREA TO 8 INCHES MIN. BELOW FINISH GRADE.
3. PLACE THE CASTING AT FINISH GRADE.
4. PLACE PORTLAND CEMENT CONCRETE TO WITHIN THE TOP 3 INCHES OF FINISH GRADE.
5. APPLY TACK TO THE STRUCTURE CASTING, CUT PAVEMENT, & PC CONCRETE.
6. PLACE & COMPACT 3 INCHES OF HMA TO FINISH GRADE.
7. SEAL PAVEMENT JOINTS W/ HOT PG 64-22 & TOP W/ SAND.



AUGUST 1, 2017



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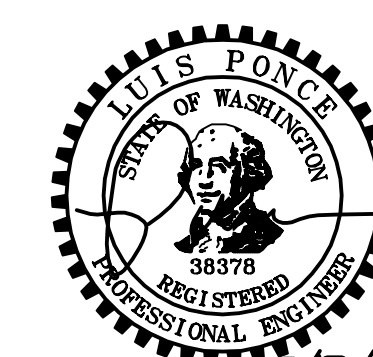
Public Works Director

8/11/17

Date

ADJUSTING CASINGS TO FINISHED GRADE
STANDARD DETAIL SS-19

NOT TO SCALE



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NO.	DATE	DESCRIPTION	BY

CITY OF FERNDAL
 2095 MAIN STREET
 FERNDAL, WA 98248

THORNTON ST
SANITARY SEWER
 SEWER DETAILS 5

DWG 16034 DETAIL

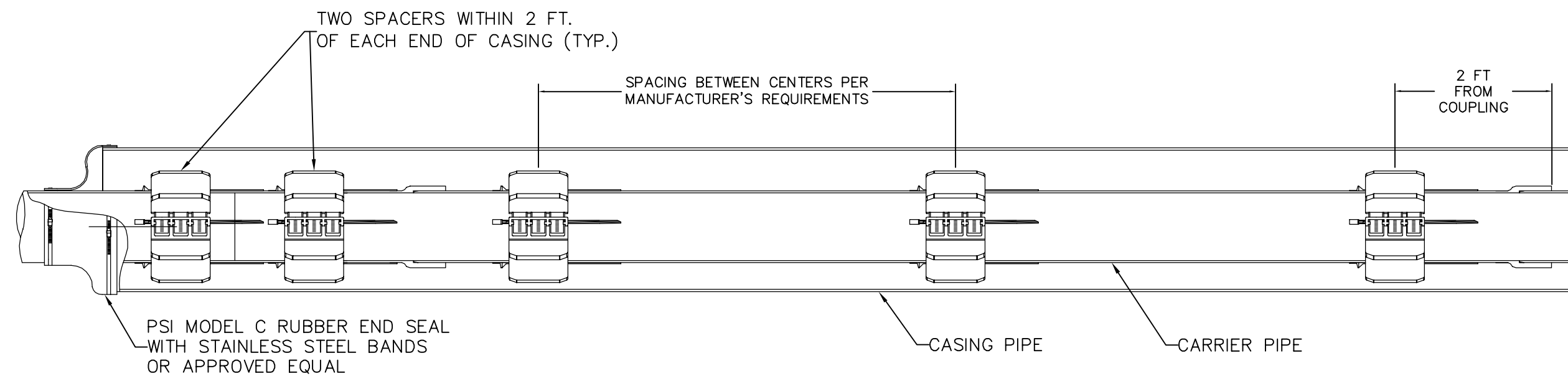
JOB#
16034

SCALE
H: N/A V: N/A

DATE
9/13/2017

SHEET
22
of 24

9/13/17



NOTES:

A. CASING SPACERS
UPON COMPLETION OF THE INSTALLATION OF THE STEEL PIPE ENCASEMENT, THE CONTRACTOR SHALL FURNISH AND INSTALL A RANGER II BOLTLESS CASING SPACER (OR APPROVED EQUAL) ON THE CARRIER PIPE AS DESCRIBED BELOW. WOOD SKIDS ARE NOT AN ACCEPTABLE METHOD OF SUPPORTING THE CARRIER PIPE.

1. CASING SPACERS SHALL BE ALL NON-METALLIC (POLYPROPYLENE), MOLDED IN SEGMENTS FOR FIELD ASSEMBLY WITHOUT ANY SPECIAL TOOLS. SPACER SEGMENTS SHALL BE SECURED AROUND CARRIER PIPE BY INSERTION OF A SLIDE-LOCK. THE CASING SPACER POLYMER SHALL CONTAIN ULTRAVIOLET INHIBITORS AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI, AN 800 VOLTS/MIL DIELECTRIC STRENGTH AND IMPACT STRENGTH OF 1.5 FT-LBS./INCH. EACH CASING SPACER SHALL HAVE FULL LENGTH, INTEGRALLY MOLDED SKIDS EXTENDING BEYOND THE BELL OR MECHANICAL JOINT OF THE CARRIER PIPE. CASING SPACERS SHALL BE SPECIFIED TO "CLEAR BELL ONLY" OR "CENTERED/RESTRAINED".

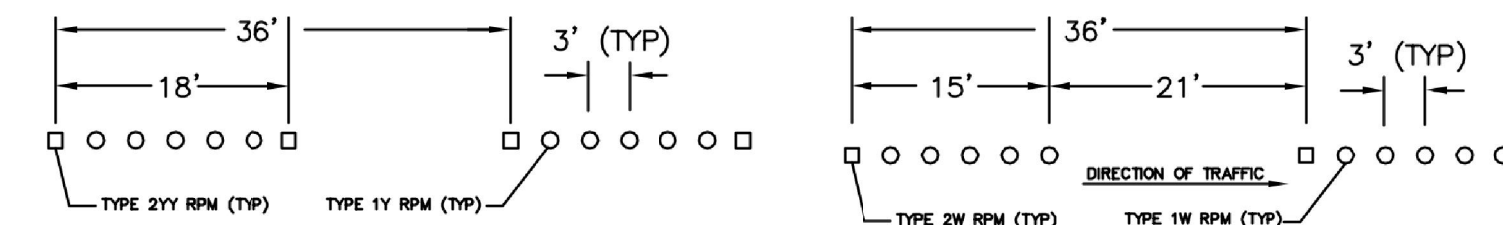
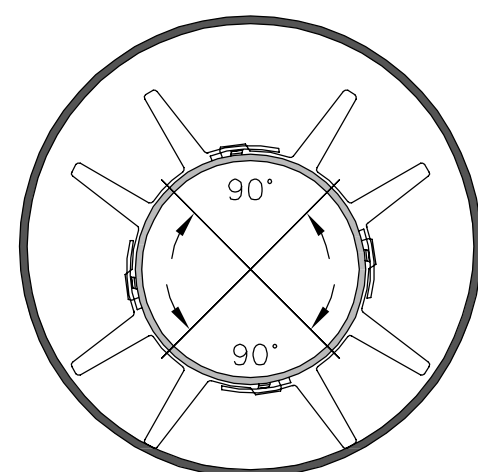
2. SPACERS SHALL BE AT LEAST AS WIDE AS LISTED BELOW.

CARRIER PIPE DIAMETER INCHES	(MM)	RANGER II MODEL	LENGTH INCHES	(MM)
0.83 TO 3.07"	(21 TO 78)	MICRO	2.13"	(54)
2.48 TO 5.51"	(63 TO 140)	MINI	3.15"	(80)
5.51 TO 16.65"	(140 TO 423)	MIDI	5.12"	(130)
16.77 TO 25.98"	(426 TO 660)	MEDI	6.87"	(175)
21.22 TO 37.60"	(539 TO 955)	MAXI	8.86"	(225)

B. END SEALS
AFTER INSERTION OF THE CARRIER PIPE INTO THE CASING, THE ENDS OF THE CASING SHALL BE CLOSED BY INSTALLING 1/8" THICK SYNTHETIC RUBBER END SEALS EQUAL TO THE PSI MODEL "C" END SEAL AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC., HOUSTON, TEXAS OR APPROVED EQUAL.

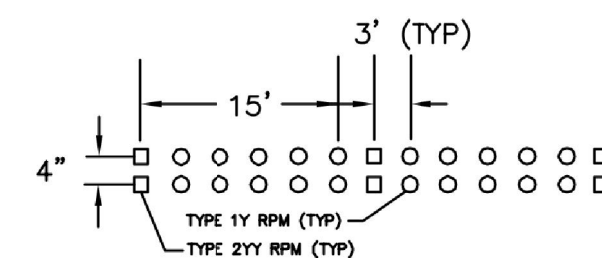
CASING SPACER DETAIL
NTS

END VIEW

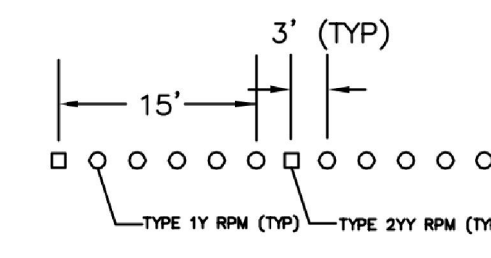


SKIP CENTER STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ

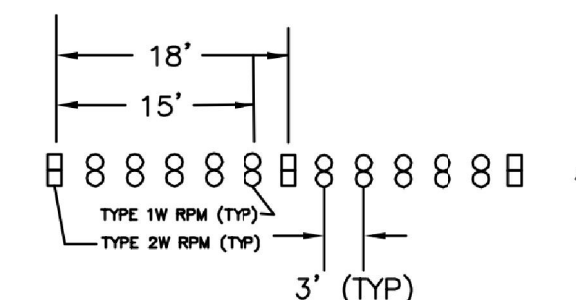
LANE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



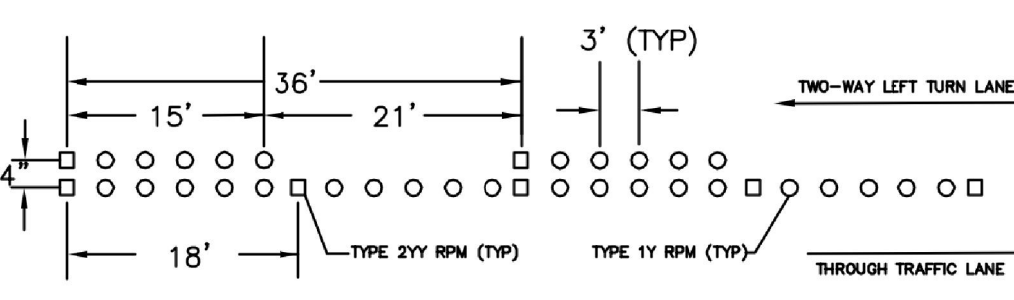
DOUBLE YELLOW STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



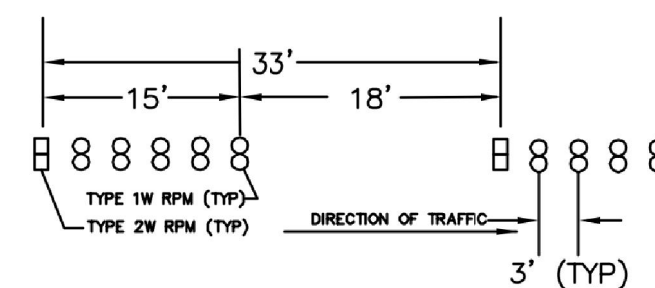
NO PASS STRIPE
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



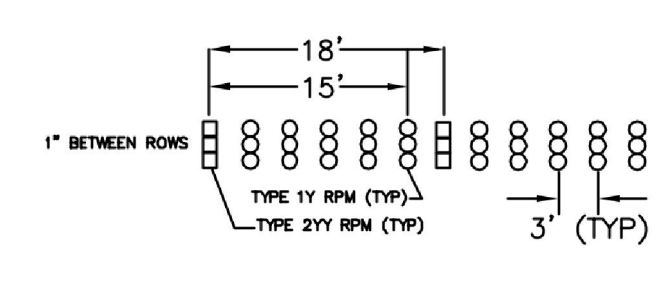
GORE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



TWO-WAY LEFT TURN STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



SKIP GORE STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ



ARRIER STRIPE DETAIL
RAISED PAVEMENT MARKER SUBSTITUTION
PER CITY OF FERNDALÉ

NOVEMBER 25, 2016



APPROVED

Public Works Director

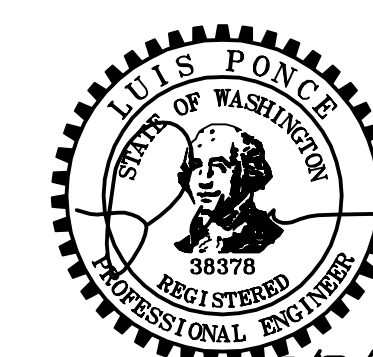
8/11/17

Date

STRIPING

STANDARD DETAIL R-20

NOT TO SCALE



BID SET

DESIGNED BY
KJK
DRAWN BY
KJK/LMH
CHECKED BY
LP

R&E Reichhardt & Ebe
ENGINEERING INC

P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERNDALÉ
2095 MAIN STREET
FERNDALÉ, WA 98248

THORNTON ST
SANITARY SEWER
MISC. DETAILS

DWG 16034 DETAIL

JOB# 16034

SCALE H: N/A

V: N/A

DATE 9/13/2017

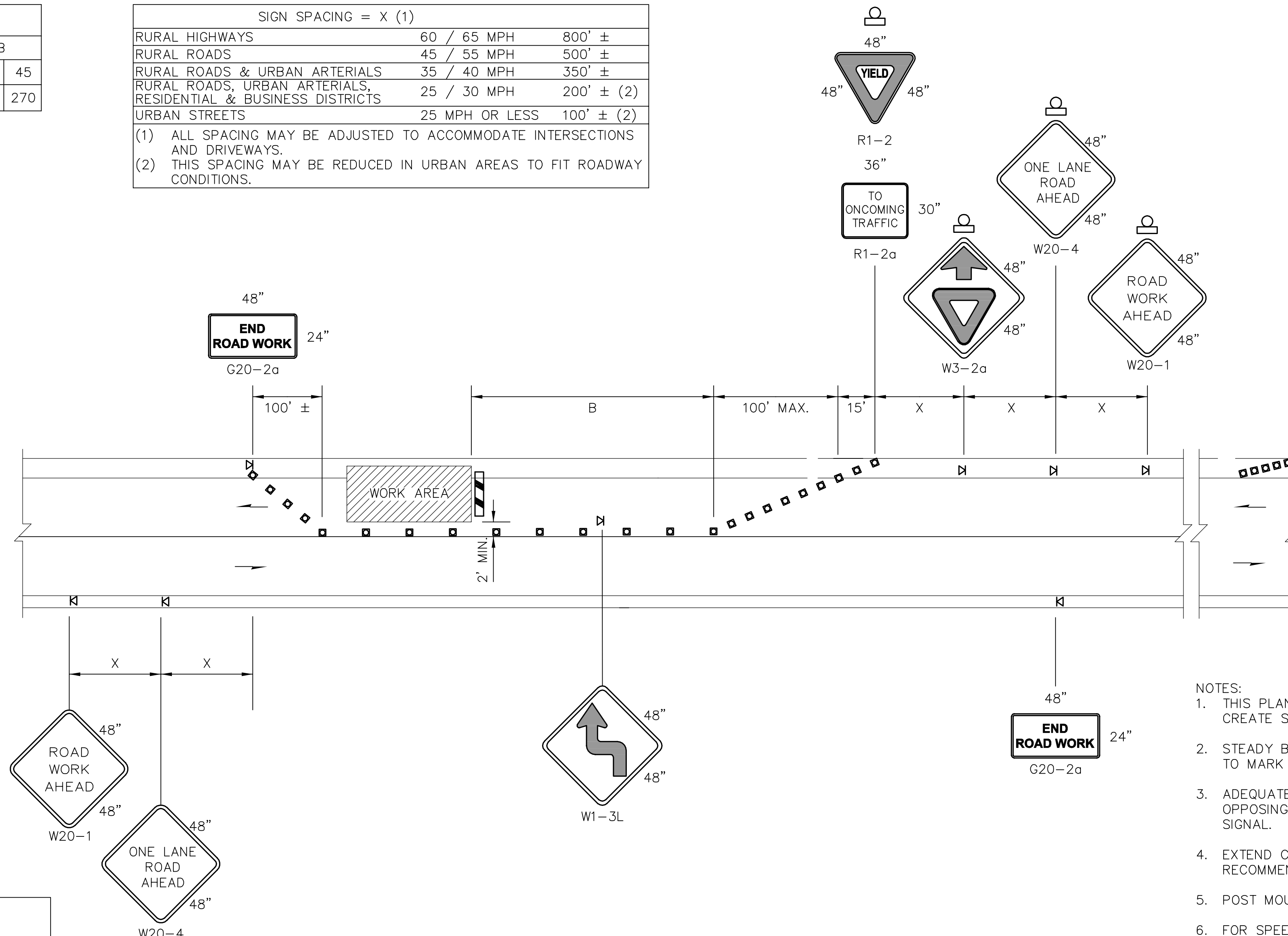
SHEET 23 of 24

9/13/17

BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
SPEED (MPH)	25	30	35	40	45
LENGTH (feet)	55	85	120	170	270

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



CHANNELIZATION DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	10 TO 20	80
35/45	10 TO 20	60
25/30	10 TO 20	40

- NOTES:
1. THIS PLAN IS INTENDED FOR USE ON ROADWAYS WHEN TRAFFIC VOLUMES CREATE SUFFICIENT GAPS FOR MOTOR VEHICLES TO YIELD.
 2. STEADY BURNING WARNING LIGHTS (TYPE C PER MUTCD) SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT.
 3. ADEQUATE SIGHT DISTANCE SHALL BE PROVIDED FOR DRIVERS TO SEE OPPOSING TRAFFIC, OTHERWISE USE FLAGGERS AND/OR TEMPORARY SIGNAL.
 4. EXTEND CHANNELIZING DEVICE TAPER ACROSS SHOULDER ~ RECOMMENDED.
 5. POST MOUNT SIGNS WHEN IN PLACE FOR 3 DAYS OR LONGER.
 6. FOR SPEED LIMIT 35 MPH OR HIGHER REPLACE W1-3R WITH W1-4R.
 7. FOR SIGNS LIMIT REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WSDOT SIGN FABRICATION MANUAL M55-05.
 8. CONSIDER USING A PCMS FOR ADDITIONAL ADVANCE WARNING.

LEGEND

- ⊠ TEMPORARY SIGN LOCATION
- ▣ CHANNELIZING DEVICES
- ▨ BARRICADE ~ TYPE 3 L
- ⊡ FLASHING WARNING LIGHT

LANE CLOSURE WITHOUT FLAGGERS
~ LOW VOLUME ROADS
NTS
THORNTON STREET ~ STA 141+72 TO 168+21



BID SET

DESIGNED BY
KJK
DRAWN BY
KJK/LMH
CHECKED BY
LP

R&E Reichhardt & Ebe
ENGINEERING INC
P.O. Box 978 | 423 Front Street, Lynden, WA 98264 (360) 354-3687
813 Metcalf Street, Sedro-Woolley, WA 98284 (360) 855-1713

NO.	DATE	DESCRIPTION	BY

CITY OF FERDALE
2095 MAIN STREET
FERDALE, WA 98248

THORNTON ST
SANITARY SEWER
TRAFFIC CONTROL 1

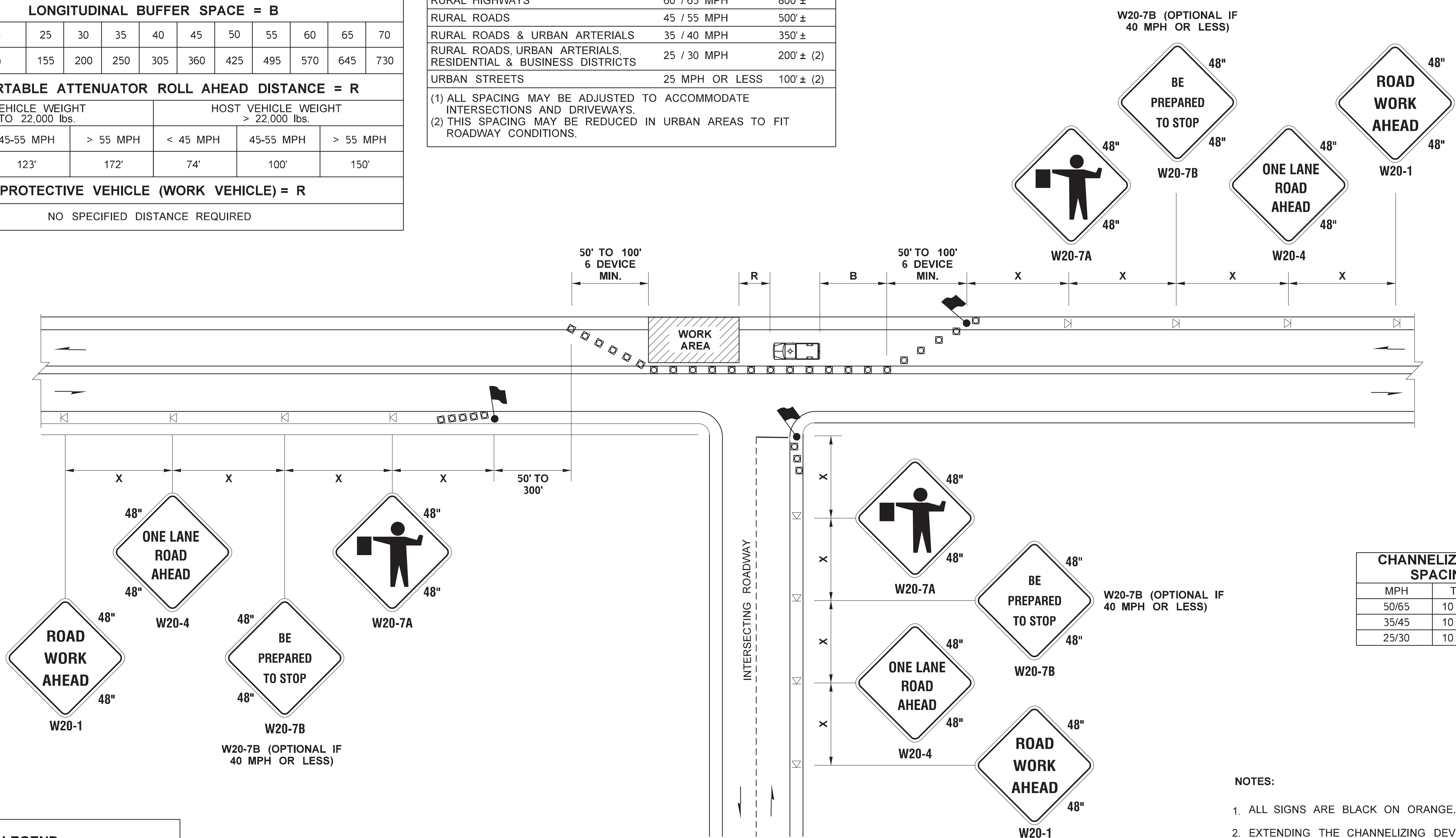
DWG 16034 DETAIL		DATE
JOB# 16034		9/13/2017
SCALE	H: N/A	V: N/A
SHEET		24
of 24		

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BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH	> 55 MPH			< 45 MPH	45-55 MPH	> 55 MPH			
100'	123'	172'			74'	100'	150'			
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



CHANNELIZATION DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
50/65	10 TO 20	80
35/45	10 TO 20	60
25/30	10 TO 20	40

- NOTES:
- ALL SIGNS ARE BLACK ON ORANGE.
 - EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
 - NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

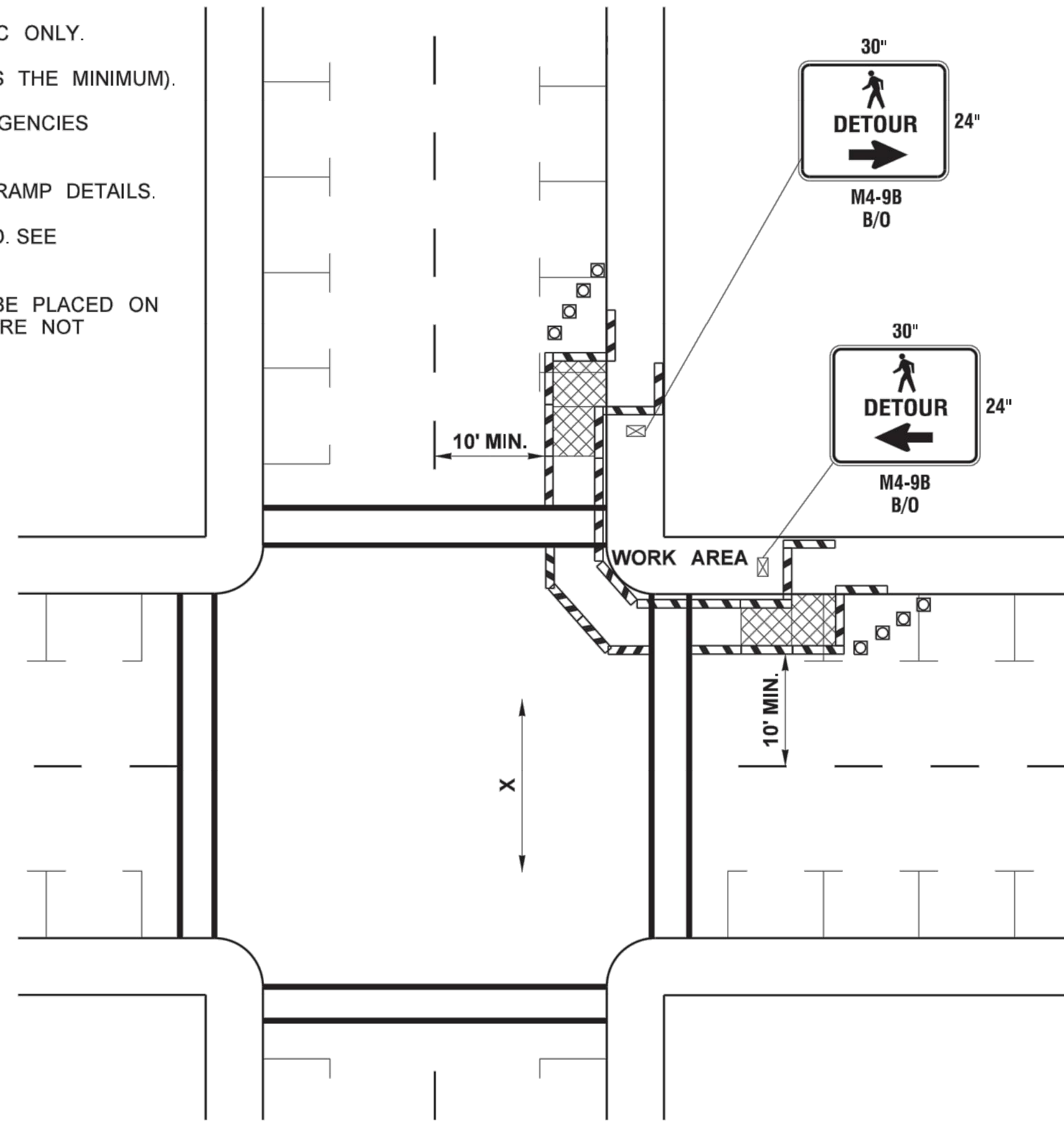
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DATE: 10/14/2016										TC1	
PLOTTED BY: liddelf										SHEET	
DESIGNED BY:										OF	
ENTERED BY:										SHEETS	
CHECKED BY:										 Washington State Department of Transportation	
PROJ. ENGR.											
REGIONAL ADM.											
REVISION DATE BY										TRAFFIC CONTROL PLAN	
REGION NO.					STATE					DATE	
FED.AID PROJ.NO.					WASH						
JOB NUMBER										DATE	
CONTRACT NO.											
LOCATION NO.										P.E. STAMP BOX	

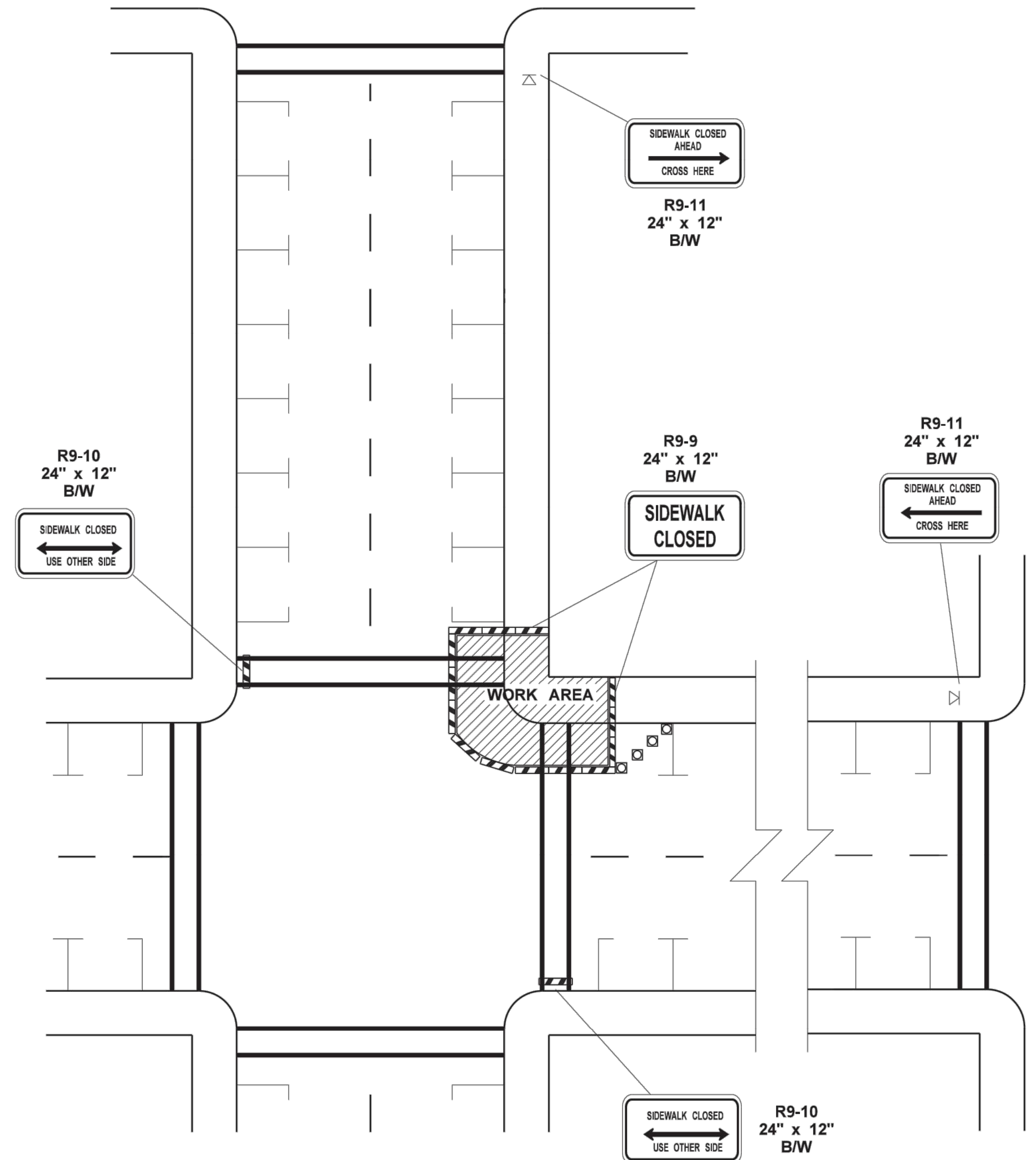
NO PARKING R8-3 24" x 30" R/W
 INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL. PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.

NOTES

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED. SEE STANDARD SPECIFICATION 1-10.2(1)B.
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

- ⊠ TEMPORARY SIGN LOCATION
- ⊠ CHANNELIZING DEVICES
- ▨ PEDESTRIAN CHANNELIZING DEVICES
- TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

INTERSECTION PEDESTRIAN TRAFFIC CONTROL

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standards\2-Plan Sheet Library\01-Published PSL\TC) Work Zone Traffic Control\TC-16) Intersection Pedestrian Traffic Control\TC-16.dgn					REGION NO.	STATE	FED.AID PROJ.NO.	DATE	P.E. STAMP BOX	DATE	P.E. STAMP BOX	Washington State Department of Transportation	Plot 1
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PLOTTED BY	FletcCo					CONTRACT NO.		LOCATION NO.						OF
DESIGNED BY														SHEETS
ENTERED BY														
CHECKED BY														
PROJ. ENGR.														
REGIONAL ADM.						REVISION	DATE	BY						

PEDESTRIAN CONTROL AND PROTECTION