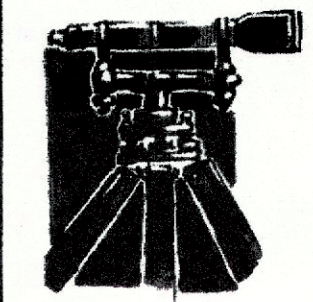


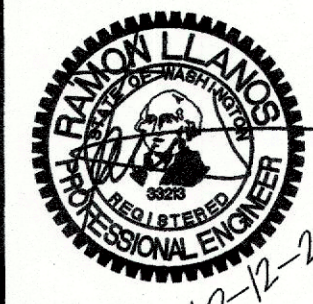
A PORTION OF THE SE 1/4 NW 1/4 OF SECTION 19  
TOWNSHIP 39N., RANGE 2E. OF THE W.M.  
CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON

# WOODRIDGE LONG PLAT

## RECORD DRAWINGS



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705  
DWG. NAME: 705-CIVIL-BASE - AB.dwg  
DESIGNED BY: RL  
DRAWN BY: RL/NC  
CHECKED BY: RL

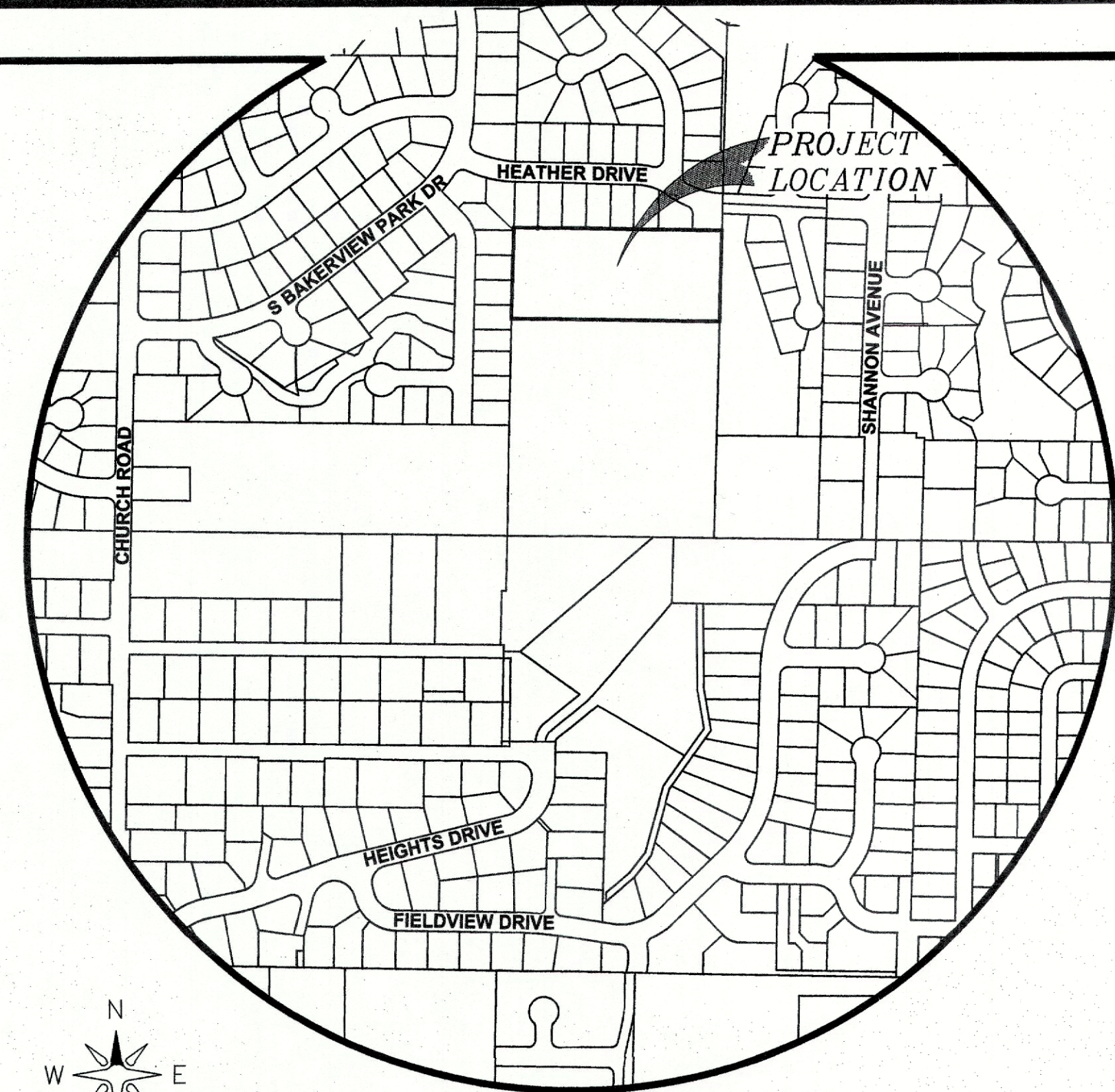
WHATCOM-SKAGIT  
HOUSING

WOODRIDGE LONG PLAT  
CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N., R.2E., W.M.

NO.	REVISION	DATE

COVER  
SHEET

SHEET  
01  
OF 18



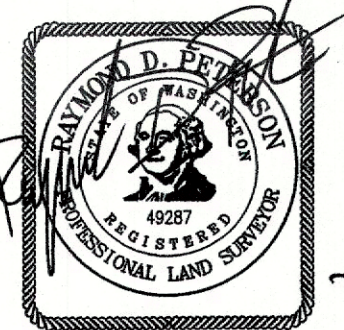
VICINITY MAP 1" = 400'

1. COVER SHEET
2. EXISTING CONDITIONS
3. EROSION CONTROL PLAN
4. SUBDIVISION PLAN
5. COMPOSITE UTILITY PLAN
6. STREET & STORM DRAINAGE PLAN & PROFILE - HETTERVIG PL
7. STORM DRAINAGE PLAN & PROFILE - NORTH & SOUTH
8. STREET & STORM DRAINAGE DETAILS 1
9. STREET & STORM DRAINAGE DETAILS 2
10. VAULT 1 AND CONTROL STRUCTURE DETAILS
11. VAULT 2 AND CONTROL STRUCTURE DETAILS
12. SITE GRADING CROSS-SECTIONS
13. STREET & STORM DRAINAGE DETAILS 3
14. SANITARY SEWER PLAN AND PROFILE
15. SANITARY SEWER DETAILS
16. WATER DISTRIBUTION PLAN AND PROFILE
17. WATER DISTRIBUTION DETAILS
18. CITY OF FERNDAL GENERAL NOTES



ENGINEER'S CERTIFICATION  
I HEREBY CERTIFY THAT THE IMPROVEMENTS  
IN "WOODRIDGE LONG PLAT" HAVE BEEN  
INSPECTED BY LDES AND TO THE BEST OF  
MY KNOWLEDGE, HAVE BEEN CONSTRUCTED  
IN CONFORMANCE WITH THE CITY OF  
FERNDAL DEVELOPMENT STANDARDS, THE  
CITY OF FERNDAL MUNICIPAL CODE,  
SUBSEQUENT STANDARDS ADOPTED BY  
REFERENCE THEREIN, AND STANDARD  
ENGINEERING PRACTICE.

DATE: 10/12/20  
RAMON LLANOS, P.E.



SURVEYOR'S CERTIFICATION  
I CERTIFY THAT THE LOCATIONS,  
ELEVATIONS, DEPTHS, AND AS-BUILT  
COMMENTS REFLECTING MATERIALS  
ACTUALLY USED DURING CONSTRUCTION  
ACCURATELY REFLECT EXISTING FIELD  
CONDITIONS AS DETERMINED BY ME OR  
UNDER MY DIRECT SUPERVISION ON THIS  
DATE: 10/12/20  
RAMON D. PETERSON, P.L.S.

ABBREVIATIONS:					
AB	=	AS-BUILT	HYD	=	FIRE HYDRANT
BMP	=	BEST MANAGEMENT PRACTICE	IE	=	INVERT ELEVATION
BNDRY	=	BOUNDARY	JBOX	=	JUNCTION BOX
CL	=	CENTERLINE	LBS.	=	POUNDS
CMF	=	CORRUGATED METAL PIPE	LF	=	LINEAR FEET
CONC	=	CONCRETE	LT	=	LEFT
CPDP	=	CORRUGATED POLYETHYLENE DRAIN PIPE	MON	=	MONUMENT
CSTC	=	CRUSHED SURFACING TOP COURSE	O.D.	=	OUTSIDE DIAMETER
CSCB	=	CRUSHED SURFACING BASE COURSE	OHWM	=	ORDINARY HIGH WATER MARK
CTRL	=	CONTROL	O/S	=	OFFSET
DI	=	DUCTILE IRON	PERF	=	PERFORATED PIPE
DOE	=	DEPARTMENT OF ECOLOGY	PERM.	=	PERMANENT
DRWY	=	DRIVE WAY	PK NAIL	=	PARKER-KALON NAIL
DTL	=	DETAIL	PRP	=	PROPOSED
E	=	EASTING	PVC	=	POLYVINYL CHLORIDE PIPE
EG	=	EXISTING GROUND	PSE	=	PUCKET SOUND ENERGY
ELEV/EL	=	ELEVATION	PWR.	=	POWER
EOP	=	EDGE OF PAVEMENT	N	=	NORTHING
EXIST/EX	=	EXISTING	R	=	RADIUS
FF	=	FINISH FLOOR	RET	=	RETAINING WALL
FG	=	FINISH GROUND	R/W	=	RIGHT OF WAY
FL	=	FLOW LINE	RT	=	RIGHT
FM	=	FORCEMAIN	RY	=	ROOF AND YARD
FND	=	FOUND	S	=	SLOPE
			SD	=	STORM DRAIN
			SDOB	=	STORM DRAIN CATCH BASIN
			SQ. IN.	=	SQUARE INCHES
			SS	=	SANITARY SEWER
			SSCO	=	SANITARY SEWER CLEAN OUT
			SF	=	SQUARE FEET
			SSMH	=	SANITARY SEWER MANHOLE
			STA.	=	STATION
			STRC	=	STRUCTURE
			SWALK	=	SIDEWALK
			SWMF	=	STORM WATER MANAGEMENT FILTER
			SWMM	=	STORM WATER MANAGEMENT MANUAL
			SWPPP	=	STORMWATER POLLUTION PREVENTION PLAN
			TEL	=	TELEPHONE
			TEMP.	=	TEMPORARY
			TESC	=	TEMPORARY EROSION AND SEDIMENT CONTROL
			TW	=	TOP OF WALL
			TYP.	=	TYPICAL
			WA	=	WATER
			WL	=	WATER LEVEL
			WM	=	WATER MAIN
			WSEL	=	WATER SURFACE ELEVATION
			X-ING	=	CROSSING
			YPC	=	YELLOW PLASTIC CAP
			Ø	=	DIAMETER

### LEGEND:

- = PROPOSED STORMDRAIN CATCHBASIN
  - = PROPOSED STORM DRAIN SERVICE
  - = PROPOSED STORM DRAIN CLEANOUT
  - = PROPOSED STORM DRAIN ROOF STUB
  - = PROPOSED SANITARY SEWER MANHOLE
  - = PROPOSED SANITARY SEWER SERVICE
  - = PROPOSED WATER METER
  - = PROPOSED FIRE HYDRANT
  - = PROPOSED VALVE
  - = PROPOSED REDUCER
  - = PROPOSED BLOW-OFF
  - = PROPOSED CAP
  - = PROPOSED TEE
  - = PROPOSED 45° BEND
  - = PROPOSED 22.5° BEND
  - = THRUST BLOCK
  - = PROPOSED GAS METER
  - = PROPOSED BOLLARD
  - = PROPOSED STREET LIGHT
  - = PROPOSED LANDSCAPE BUSH & TREE
  - = PROPOSED GABION BASKET
  - = PROPOSED STORMWATER PIPE, 8"
  - = PROPOSED STORMWATER PIPE, 12"
  - = PROPOSED CULVERT
  - = PROPOSED DITCH
  - = PROPOSED SEWER LINE, 8"
  - = PROPOSED SEWER LINE, 6"
  - = PROPOSED WATER LINE, 8"
  - = PROPOSED WATER LINE, 6"
  - = PROPOSED WATER LINE, 4"
  - = PROPOSED CUT LINE
  - = PROPOSED FILL LINE
  - = PROPOSED TOP OF BANK
  - = PROPOSED BOTTOM OF BANK
  - = PROPOSED DITCH LINE
  - = PROPOSED PERFORATED PIPE
  - = PROPOSED ROOF & YARD DRAIN
  - = PROPOSED COMMON UTILITIES
  - = PROPOSED CONTOUR (INDEX)
  - = PROPOSED CONTOUR (NORMAL)
  - = EXIST CHAIN LINK FENCE
  - = PROPOSED ASPHALT
  - = PROPOSED CONCRETE
  - = PROPOSED GRAVEL
  - = PROPOSED STRIPING
- [AB] = AS-BUILT INFORMATION

BURIED UTILITIES NOTE:  
ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN  
ARE APPROXIMATE LOCATIONS ONLY AND THERE IS  
NO GUARANTEE THAT ALL UTILITIES ON THIS SITE  
ARE SHOWN. THE CONTRACTOR SHALL FIELD VERIFY  
THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.  
CONTACT THE WASHINGTON STATE UTILITY LOCATED  
CENTER AT LEAST 48 HOURS BEFORE CONSTRUCTION

APPROVED  
OCT 14 2020  
BY: [Signature]  
CITY OF FERNDAL  
PUBLIC WORKS DEPARTMENT



OWNER/APPLICANT  
WHATCOM SKAGIT HOUSING  
FERNDAL, WA 98248  
CONTACT: RAMON LLANOS  
(360) 815-4663

ENGINEER  
LDES, INC.  
5160 INDUSTRIAL PL., SUITE 108  
FERNDAL, WA 98248  
CONTACT: RAMON LLANOS, PE.  
(360) 383-0620

SURVEYOR  
LDES, INC.  
5160 INDUSTRIAL PL., SUITE 108  
FERNDAL, WA 98248  
CONTACT: KYLE HAGGITH, PLS.  
(360) 383-0620

- SURVEYOR'S NOTES:
- 1) DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON FEBRUARY AND MARCH OF 2017.
  - 2) EQUIPMENT USED: LEICA MS60: 001" ± 1 PPM, ±1.5 MM & LEICA GS14 RTK/WSRN. PRECISION EXCEEDS LINEAR CLOSURES OF 1:10,000 PER WAC 332-130-090
  - 3) HORIZONTAL DATUM: CITY OF FERNDAL MONUMENT NETWORK WASHINGTON STATE NORTH ZONE NAD 83/91  
VERTICAL DATUM: NGVD29 (COF MON# 5, ELEV=220.76')
  - 4) PURPOSE OF SURVEY: BOUNDARY AND TOPOGRAPHIC SURVEY.
  - 5) IN ACCORDANCE WITH THE REVISED CODE OF WASHINGTON: 58.09 AND WAC CHAPTER 332-130, THIS RECORD OF SURVEY DEPICTS OCCUPANCY INDICATORS, SUCH AS FENCES. THESE INDICATORS REPRESENT A POTENTIAL FOR CLAIMS OF UNWRITTEN TITLE. THIS SURVEY DOES NOT RESOLVE ANY OF THE LEGAL OWNERSHIP ISSUES THAT MAY ARISE FROM THESE UNWRITTEN TITLE CLAIMS.
  - 6) CONTOUR INTERVALS ARE 1 FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.
  - 7) UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON FIELD LOCATION OF THE SURFACE EVIDENCE OF EXISTING STRUCTURES. UNDERGROUND UTILITY LOCATION SERVICES WERE NOT PROVIDED FOR THIS TOPOGRAPHIC SURVEY AND THE UNDERGROUND ROUTING OF REPORTED BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED WITH THE UTILITY PURVEYOR. ADDITIONAL UTILITY LOCATIONS AND UNDERGROUND UTILITY LOCATION PAINT MAPPING WILL BE REQUIRED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  - 8) ORDINARY HIGH WATER MARK AND WETLANDS DELINEATION BY ATSI ON FEBRUARY 2017.

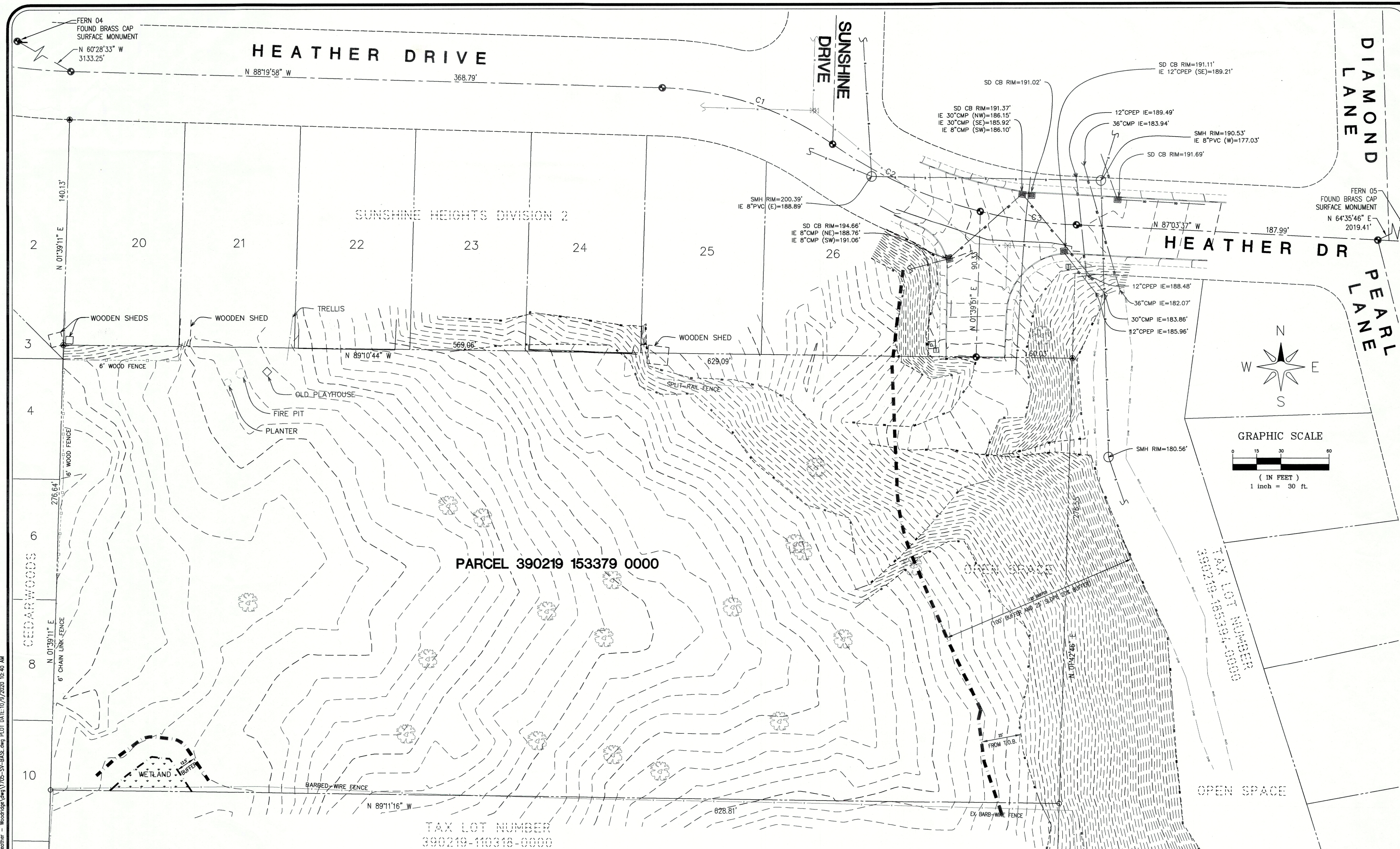
\\SERVER\Share\Common\Land Projects\2017\1705-Civil-BASE - Woodridge Long Plat.dwg PLOT DATE: 10/12/2020 9:52 AM

RECORD DRAWING

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\\SERVER\Share\Common\Land Projects\2017\705-SV-BASE.dwg - Woodridge.dwg V705-SV-BASE.dwg PLOT DATE:10/9/2020 10:40 AM



## SURVEYOR'S NOTES:

- DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION ON FEBRUARY AND MARCH OF 2017.
- EQUIPMENT USED: LEICA MS60: 00"1" ± 1 PPM, ±1.5 MM & LEICA GS14 RTK/WSRN. PRECISION EXCEEDS LINEAR CLOSURES OF 1:10,000 PER WAC 332-130-090
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- ORDINARY HIGH WATER MARK AND WETLANDS DELINEATION BY ATSI ON FEBRUARY 2017.

## LEGAL DESCRIPTION

(PER CHICAGO TITLE COMPANY OF WASHINGTON COMMITMENT No. 2453892291 DATED JANUARY 26, 2017)

THE SOUTH 276.96 FEET OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

## CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH
C1	33°20'25"	194.97'	113.45'
C2	20°47'30"	280.00'	101.61'
C3	12°23'44"	280.00'	60.58'

## CONTROL NOTES:

CITY OF FERNDALE COMPREHENSIVE MAPPING PROGRAM.

BASIS OF BEARING: NAD83/91  
VERTICAL CONTROL: NGVD29

FERN 05: BASIS OF COORDINATE & REFERENCE BENCHMARK  
FOUND A BRASS DISK AT EXIT DRIVEWAY FOR VISTA SCHOOL  
NORTHING: 683'701.32'  
EASTING: 1'214'911.44'  
ELEVATION: 220.76'

FERN-04: BASIS OF BEARING  
FOUND SURFACE MONUMENT NORTH OF CONCRETE CURB EAST SIDE EAST ENTRANCE EAGLE RIDGE SCHOOL  
NORTHING: 684'485.00'  
EASTING: 1'209'546.55'

NORTHWEST CORNER SECTION 19, T39N, R2E W.M.  
FOUND ENCASED 3/4" I.P.  
NORTHING: 684'478.91'  
EASTING: 1'211'142.23'

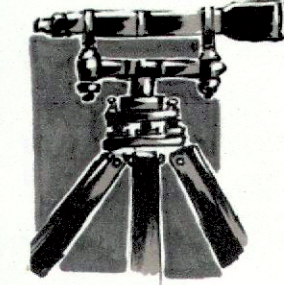
WEST QUARTER CORNER SECTION 19, T39N, R2E W.M.  
FOUND SURFACE 2-INCH BRASS DISK  
NORTHING: 681'855.10'  
EASTING: 1'211'084.36'

SITE BENCHMARKS:  
XXX(NGVD29)

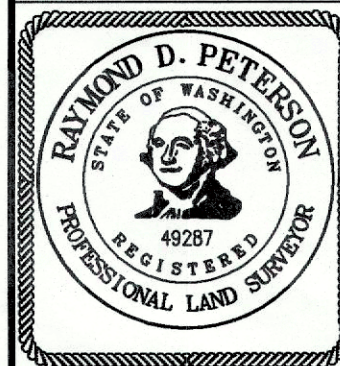
APPROVED

OCT 14 2020

PUBLIC WORKS DEPARTMENT



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705

DWG. NAME: 1705-SV-BASE.dwg

DESIGNED BY: RL

DRAWN BY: RL/EH

CHECKED BY: RL

WHATCOM-SKAGIT HOUSING

WOOD RIDGE PLAT

CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.M.

RECORD DRAWING

NO.	REVISION	DATE

EXISTING CONDITIONS

SHEET

02

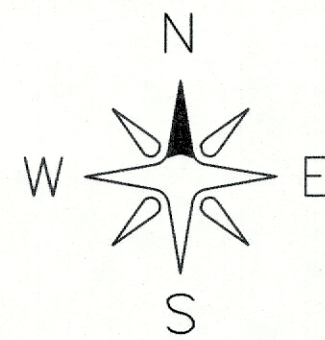
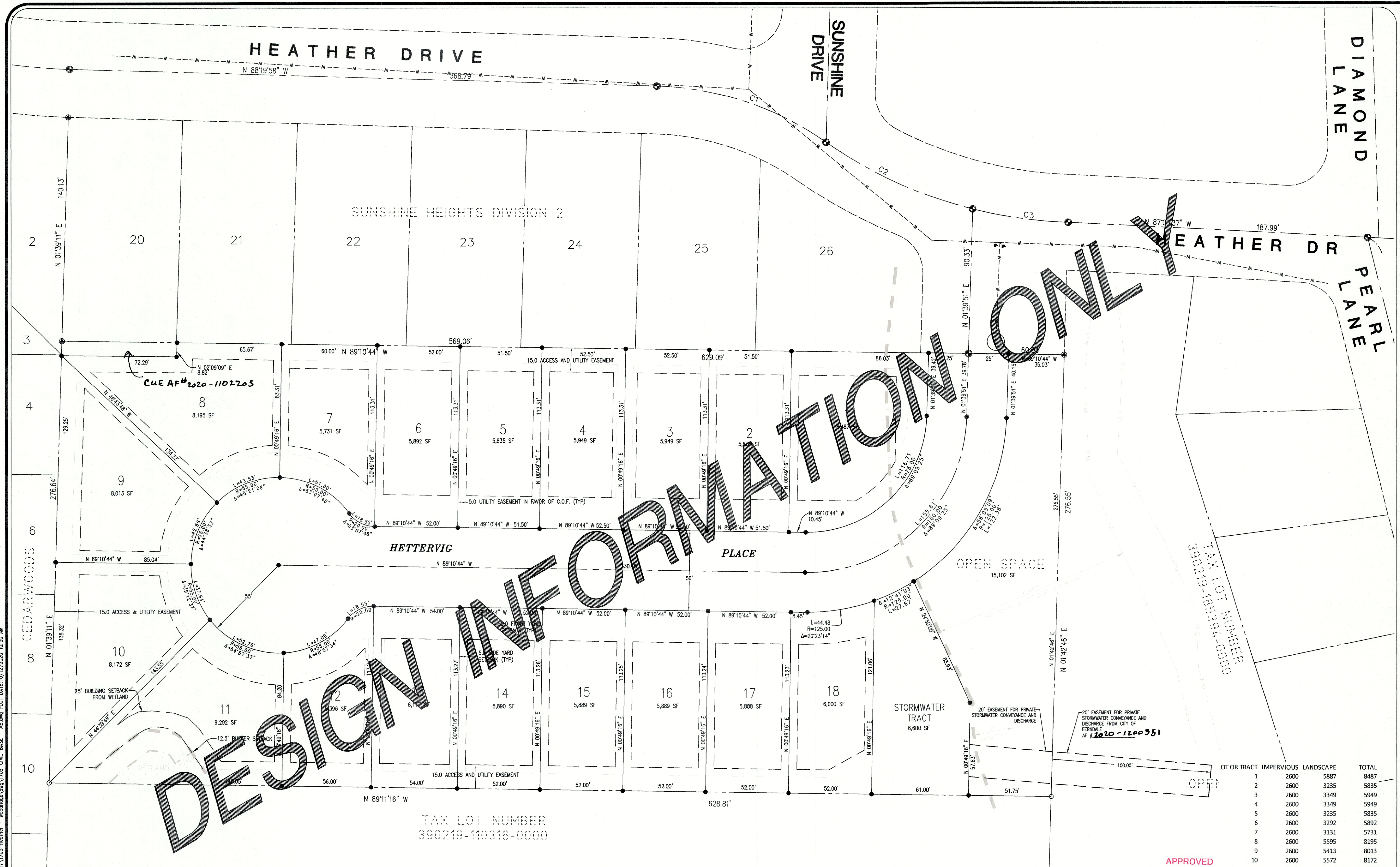
OF 18







\\SERVER\Shawn\Common\Land Projects\2017\705-Heather - Woodridge\Draw\705-Civil-BASE - AB.dwg PLOT DATE:10/12/2020 10:50 AM



GRAPHIC SCALE  
( IN FEET )  
1 inch = 30 ft.

AREA BREAKDOWN  
TOTAL PARCEL AREA:  
RESERVE TRACT AREA:  
ROW AREA:  
TOTAL LOT AREA:

173,945 SF  
21,702 SF  
33,178 SF  
119,065 SF 2.73 ACRES

ZONING:  
ZONING DENSITY:  
DENSITY RANGE FOR PROJECT:

RS MEDIUM SINGLE FAMILY DWELLING  
FOUR TO SEVEN LOTS PER ACRE  
11.1 TO 19.4 LOTS

PRELIMINARY PLAT NOTES:

- 1) THE PRELIMINARY PLAT SHALL EXPIRE AFTER A PERIOD OF FIVE YEARS FROM THE DATE OF APPROVAL BY THE CITY COUNCIL. SUBMITTAL OF A FINAL PLAT APPLICATION MUST COMMENCE WITHIN THIS TIME PERIOD.
- 2) OPEN SPACE AREAS, BUFFERS, OR OTHER TRACTS OF LAND NOT SUITABLE AS BUILDING LOTS, TOGETHER WITH ANY ASSOCIATED FACILITIES OR EQUIPMENT, SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
- 3) WATER AND SEWER CONNECTION FEES SHALL BE PAID PURSUANT TO BUILDING PERMIT CONDITIONS FOR EACH LOT.

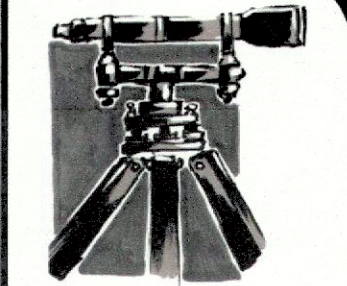
- 4) SCHOOL IMPACT FEES SHALL BE PAID IN ACCORDANCE WITH THE REQUIREMENTS OF THE FERNDALE SCHOOL DISTRICT IN PLACE PURSUANT TO BUILDING PERMIT CONDITIONS.
- 5) STORM SEWER MITIGATION FEES SHALL BE PAID PRIOR TO RECORDING OF THE FINAL PLAT. SOUTHWEST SEWER BYPASS FEE SHALL BE PAID AT TIME OF BUILDING PERMITS.

- 6) A DETAILED LANDSCAPE PLAN THAT MEETS THE REQUIREMENTS OF THE CITY OF FERNDALE LANDSCAPING STANDARDS AND REFLECTING THE CONDITIONS CONTAINED IN THIS PRELIMINARY PLAT SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY OF FERNDALE PLANNING DEPARTMENT PRIOR TO RECORDING OF THE FINAL PLAT. ALL LANDSCAPING SHALL BE INSTALLED AND BONDED FOR PRIOR TO RECORDING OF THE FINAL PLAT.

APPROVED

OCT 14 2020  
BY: [Signature]  
CITY OF FERNDALE  
PUBLIC WORKS DEPARTMENT

LOT OR TRACT	IMPERVIOUS	LANDSCAPE	TOTAL
1	2600	5887	8487
2	2600	3235	5835
3	2600	3349	5949
4	2600	3349	5949
5	2600	3235	5835
6	2600	3292	5892
7	2600	3131	5731
8	2600	5595	8195
9	2600	5413	8013
10	2600	5572	8172
11	2600	6692	9292
12	2600	2796	5396
13	2600	3517	6117
14	2600	3290	5890
15	2600	3289	5889
16	2600	3289	5889
17	2600	3288	5888
18	2600	3400	6000
STORM TRACT	4254	2346	6600
OPEN SPACE	126	14976	15102
ROW	30515	2663	33178
QUIT CLAIM	0	647	647
TOTAL	81695	92250	173945



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDALE, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



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DESIGNED BY: RL

DRAWN BY: RL/EH

CHECKED BY: RL

WHATCOM-SKAGIT HOUSING

WOODRIDGE PLAT

CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, WM.

NO.	REVISION	DATE

SUBDIVISION PLAN

SHEET

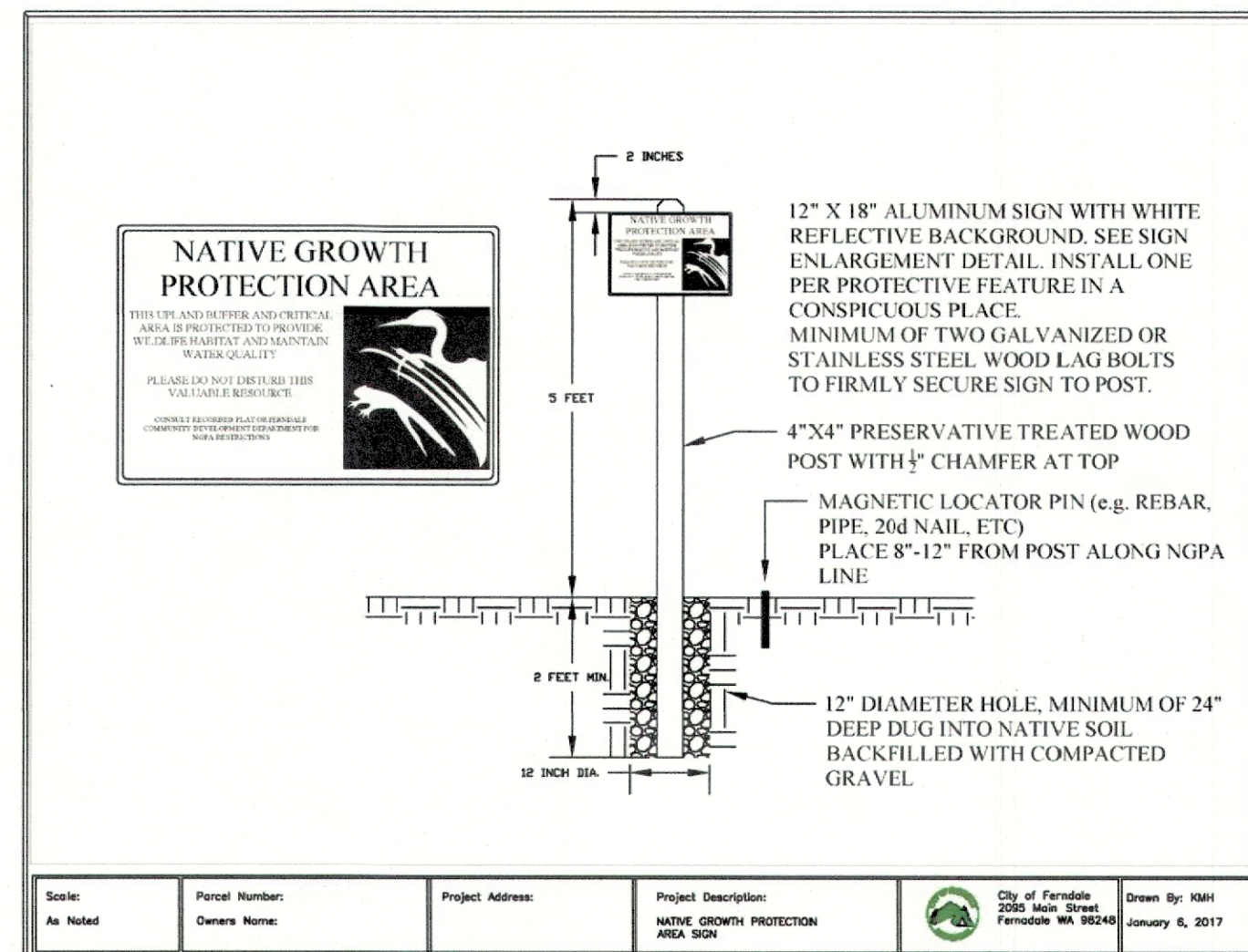
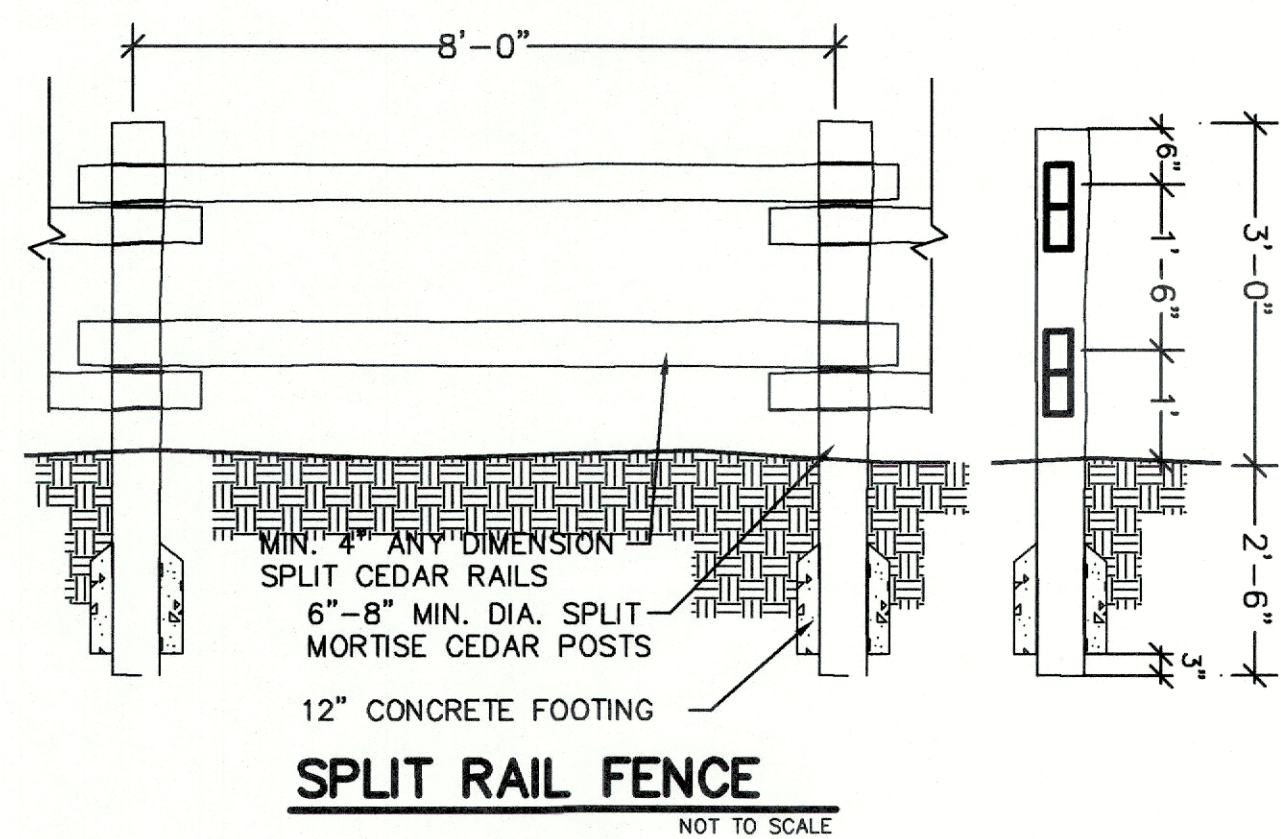
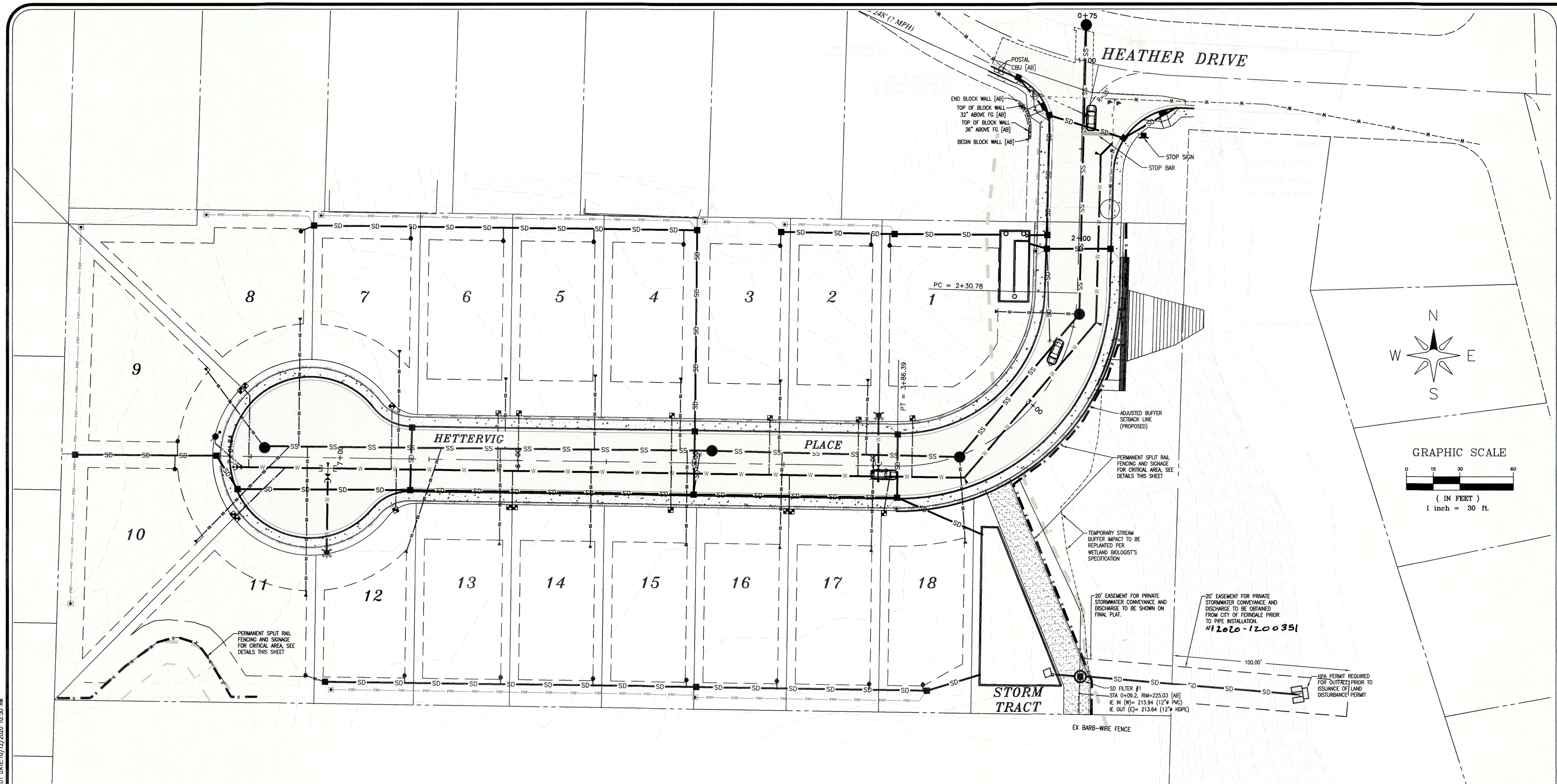
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OF 18

RECORD DRAWING



\\SERVER\Share\Common\Land Projects\2017\705-Heather - Woodridge.dwg 705-CIVIL-BASE - AB.dwg PLOT DATE: 10/12/2020 10:50 AM

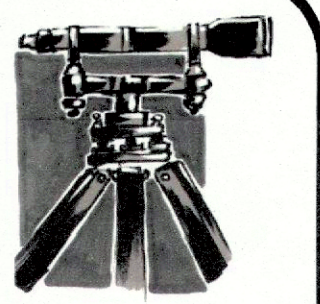


NOTE: ALL SITE FILLS EXCEEDING 18" WILL REQUIRE LOCATION DOCUMENTATION AND COMPACTION CERTIFICATION FROM A LICENSED GEOTECHNICAL ENGINEER. FILL INFORMATION PRODUCED WILL BE INCLUDED WITHIN THE FINAL PLAT DOCUMENTS AND WILL BE REQUIRED PRIOR TO FINAL PLAT APPROVAL.

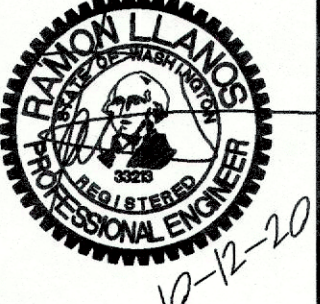
APPROVED

OCT 14 2020

By: *Kevin*  
CITY OF FERDALE  
PUBLIC WORKS DEPARTMENT



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5160 INDUSTRIAL PL. #108  
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WHATCOM-SKAGIT  
HOUSING

**WOODRIDGE PLAT**

CITY OF FERDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.M.

NO.	REVISION	DATE

COMPOSITE  
SITE PLAN

SHEET

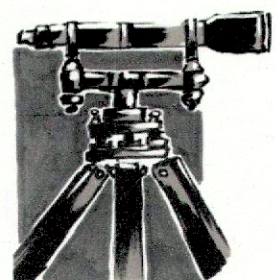
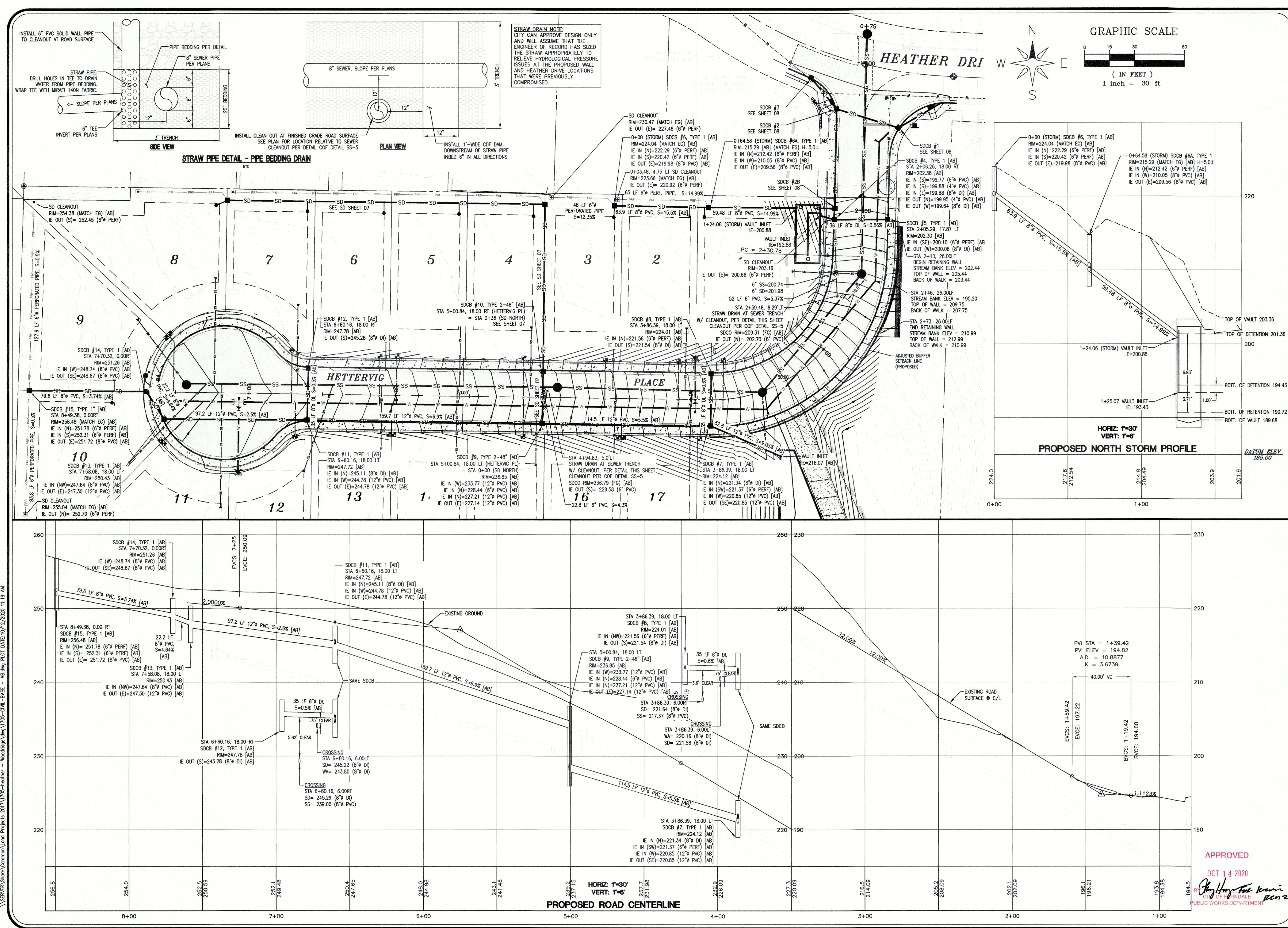
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OF 18

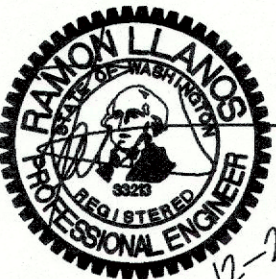
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\\SERVER\Share\Common\Land Projects\2017\1705-heather - Woodridge\DWG\1705-Civil-BASE - AB.dwg PLOT DATE: 10/12/2020 11:19 AM



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RECORD DRAWING

NO.	REVISION	DATE

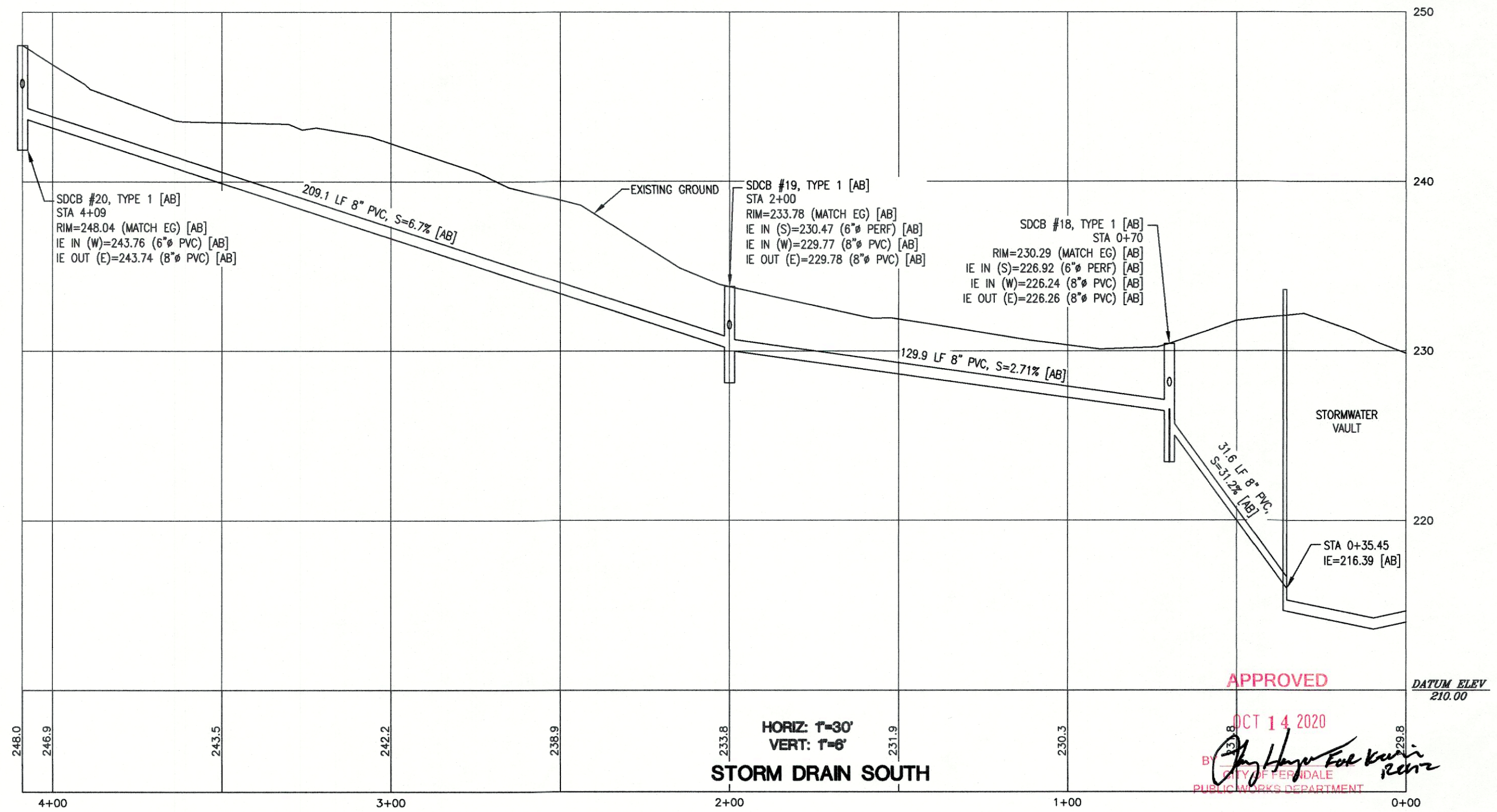
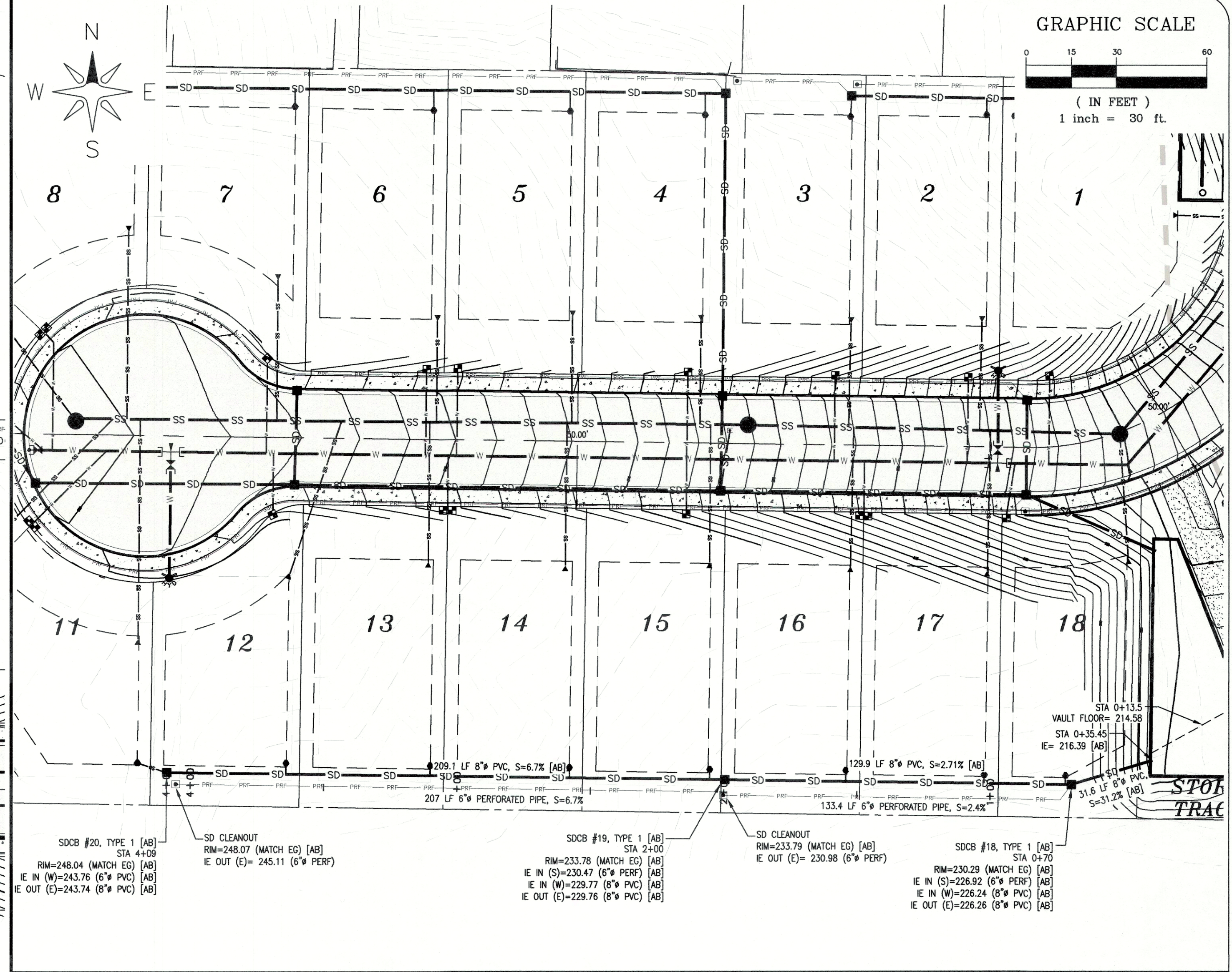
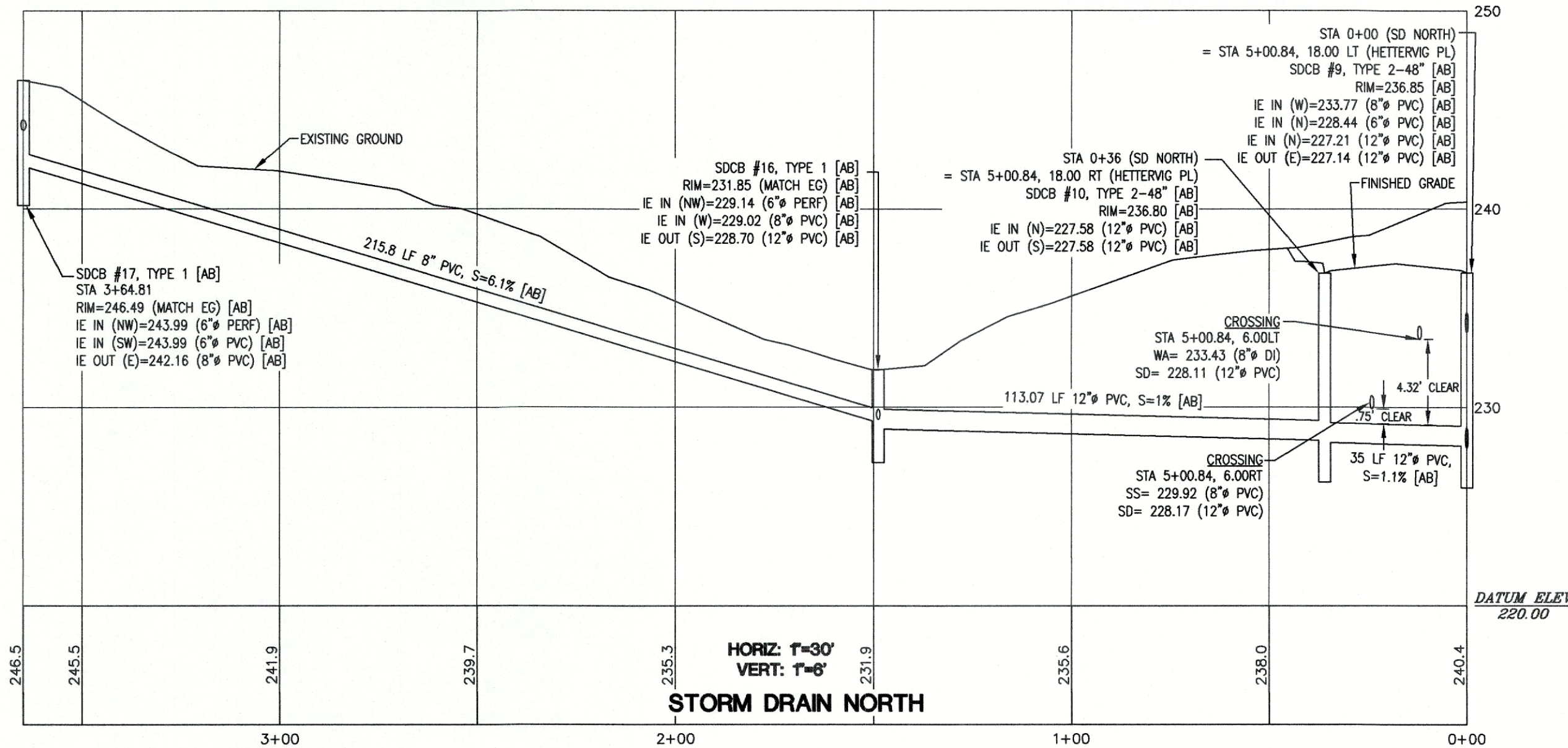
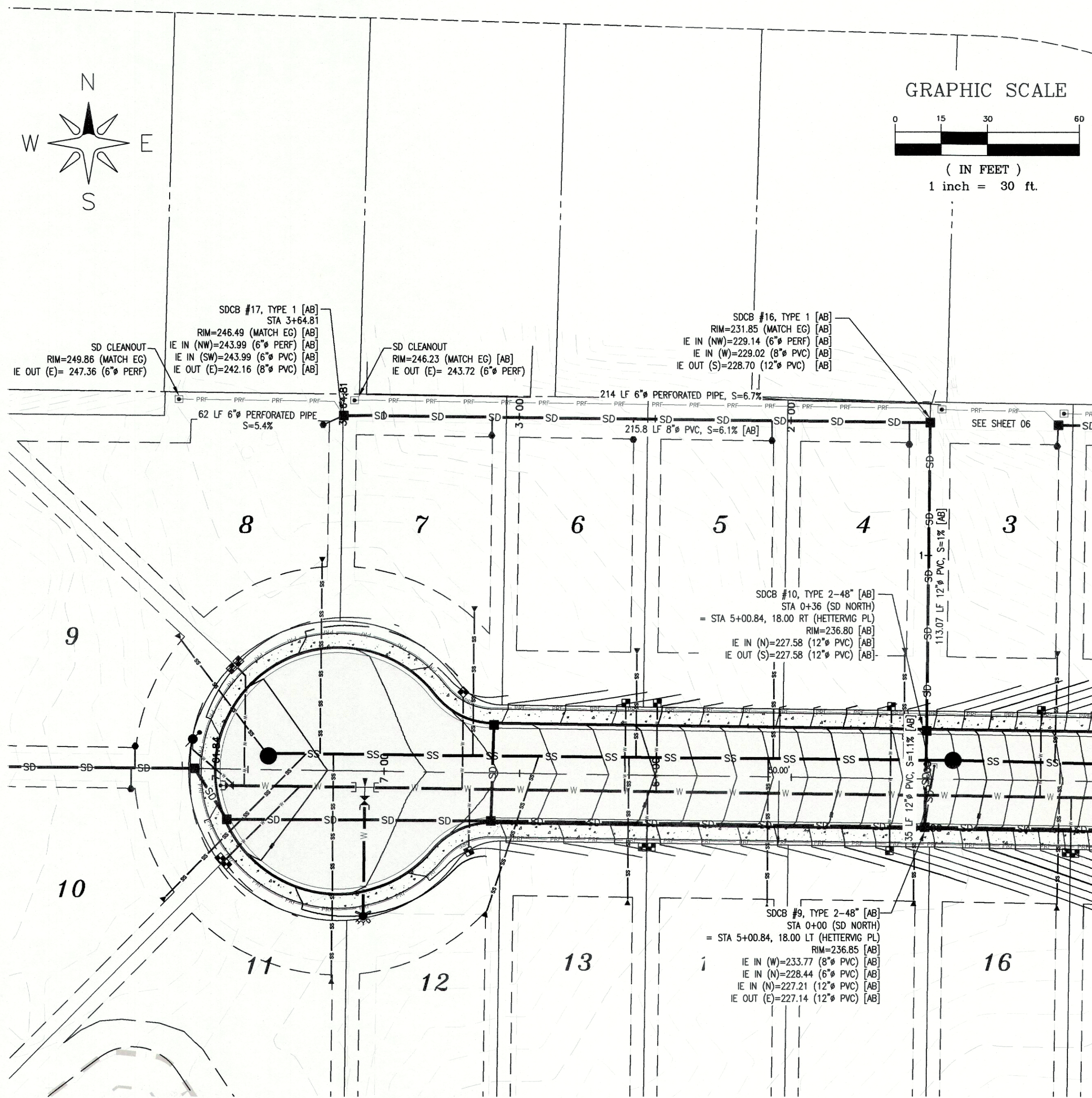
STREET AND STORM DRAINAGE PLAN & PROFILE - HETTERVIG PL

SHEET 06 OF 18

APPROVED  
OCT 14 2020  
By: [Signature]  
CITY OF FERDALE  
PUBLIC WORKS DEPARTMENT



\\SERVER\Share\Common\Land Projects\2017\705-Heather - Woodridge.dwg 1705-CIVIL-BASE - AB.dwg PLOT DATE:10/12/2020 10:51 AM



10-12-20

JOB NO.: 1705

DWG. NAME: 1705-CIVIL-BASE - AB.dwg

DESIGNED BY: RL

DRAWN BY: RL/EH/NC

CHECKED BY: RL

WHATCOM-SKAGIT HOUSING

**WOODRIDGE LONG PLAT**

CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON

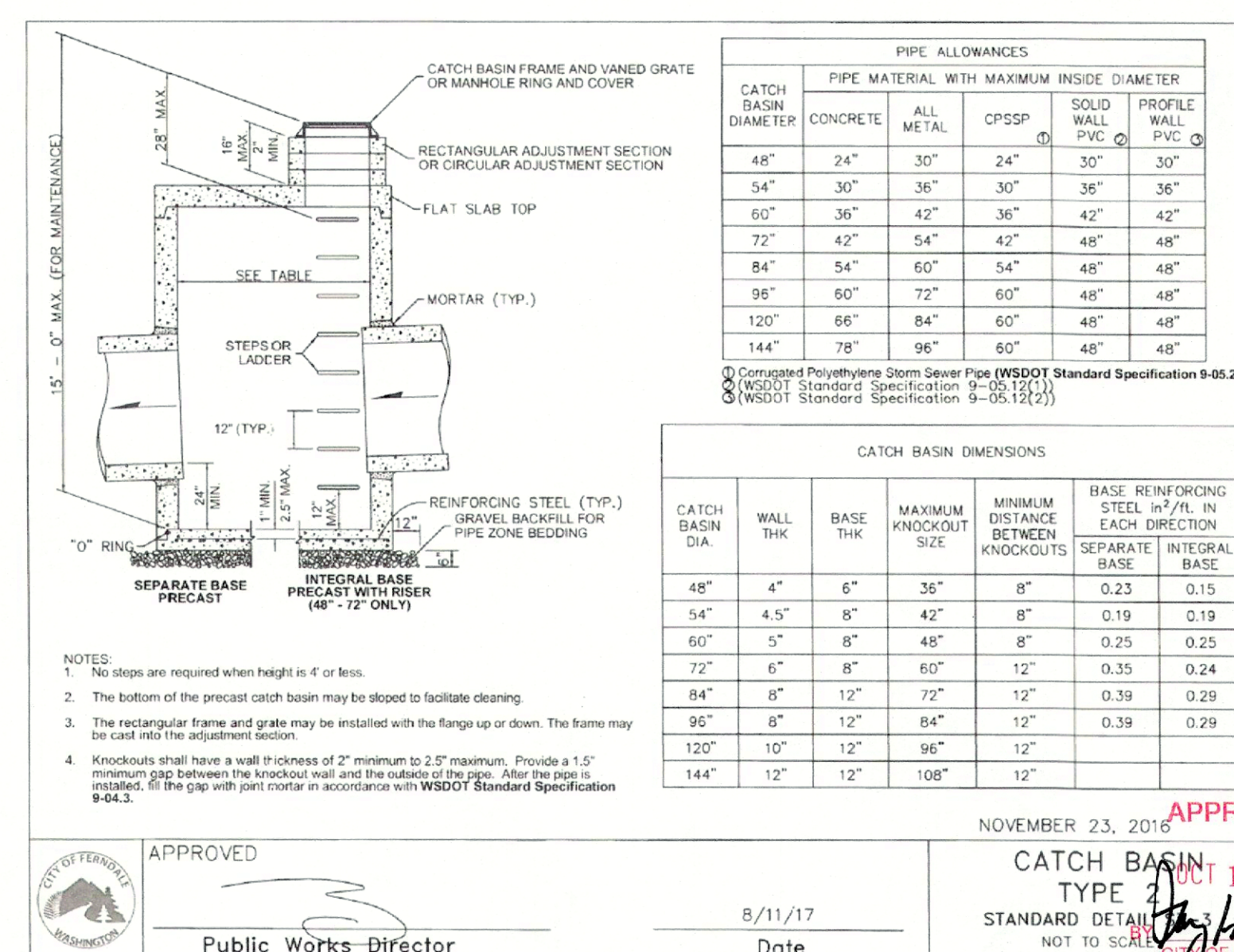
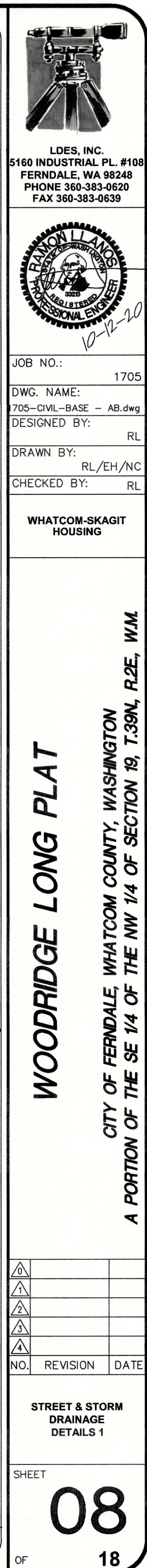
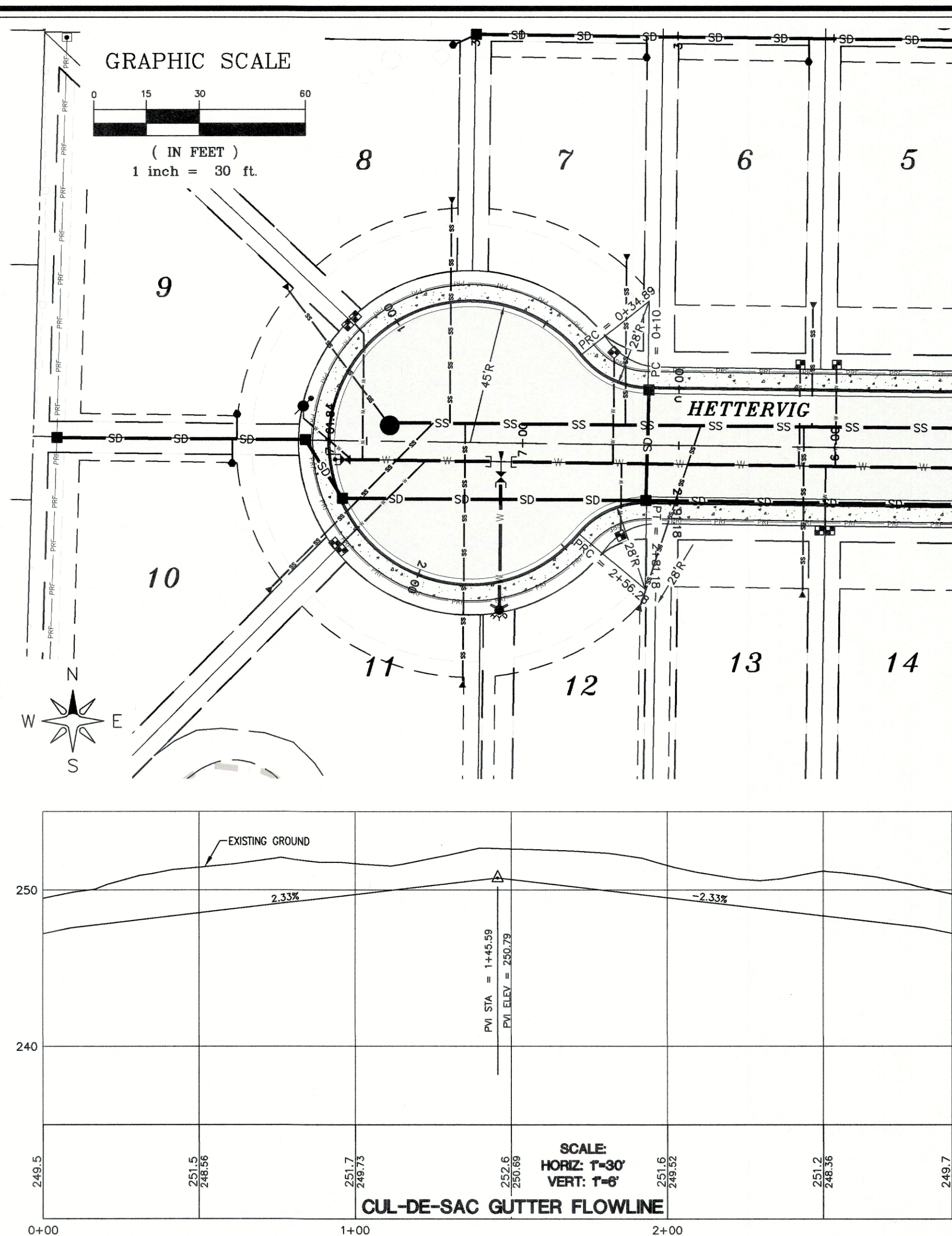
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.1M.

NO.	REVISION	DATE

STORM DRAINAGE PLAN & PROFILE - NORTH & SOUTH

SHEET **07** OF 18

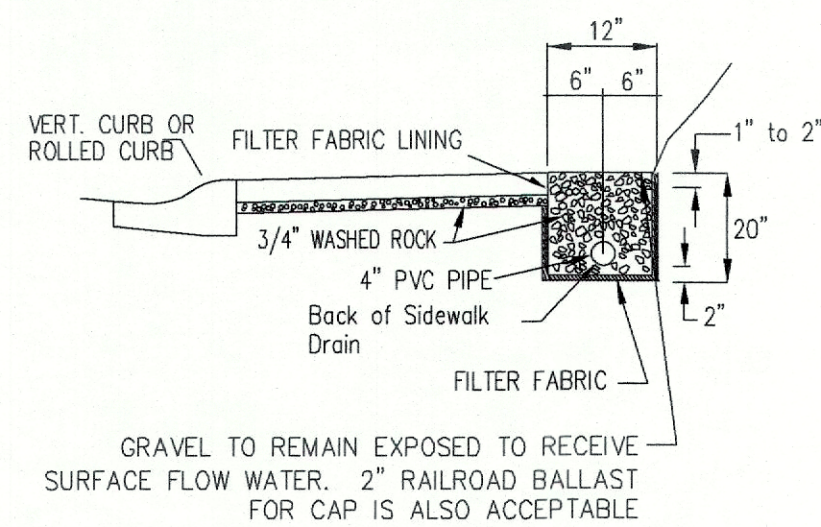




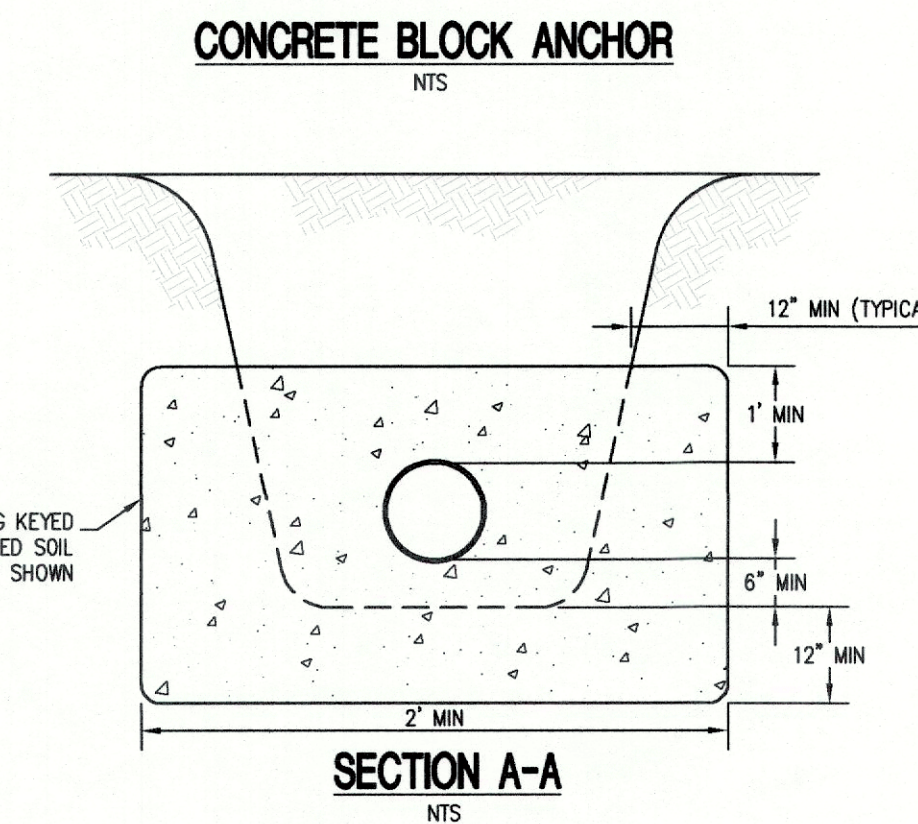
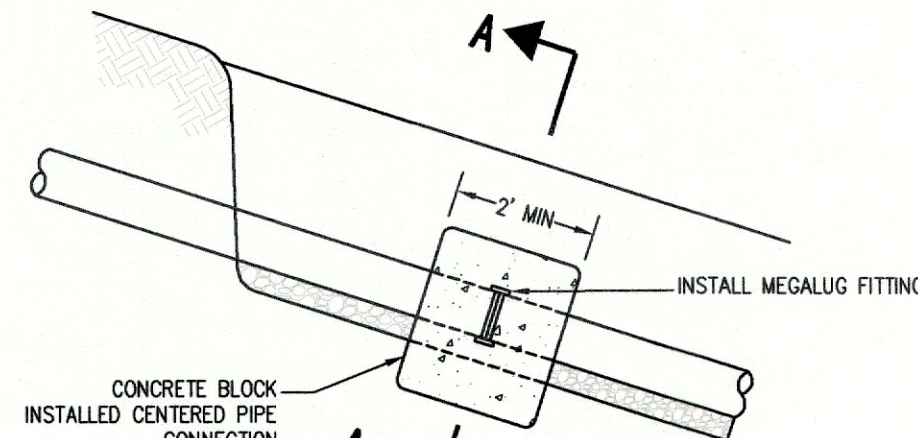


\\SERVER\Share\Common\Land Projects\2017\1705-Heather - Woodridge.dwg 1705-Civil-BASE - AB.dwg PLOT DATE:10/12/2020 10:32 AM

### CUT SECTION BACK OF SIDEWALK DRAIN ONLY MODIFIED FROM CITY OF FERNDALE STANDARD DETAIL ST-13



NOTE:  
BACK OF WALK DRAINS ARE TO BE UTILIZED  
WHEREVER ROLLED CURB IS UTILIZED.



### BEDDING SPECIFICATIONS FOR PVC PIPE

THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE CITY OF FERNDALE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION.

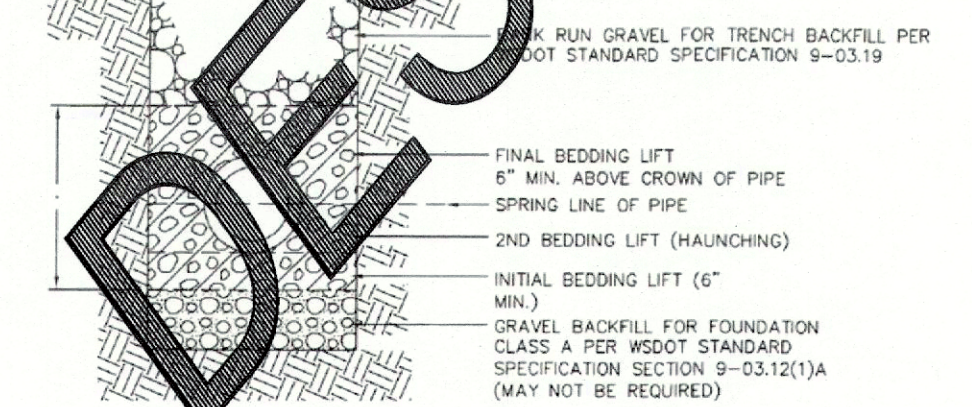
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE--

BEDDING MATERIAL FOR PVC PIPE SHALL BE PEA GRAVEL CONFORMING TO THE FOLLOWING SPECIFICATIONS:

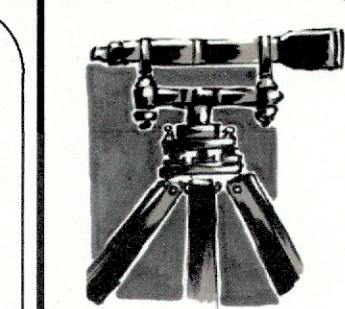
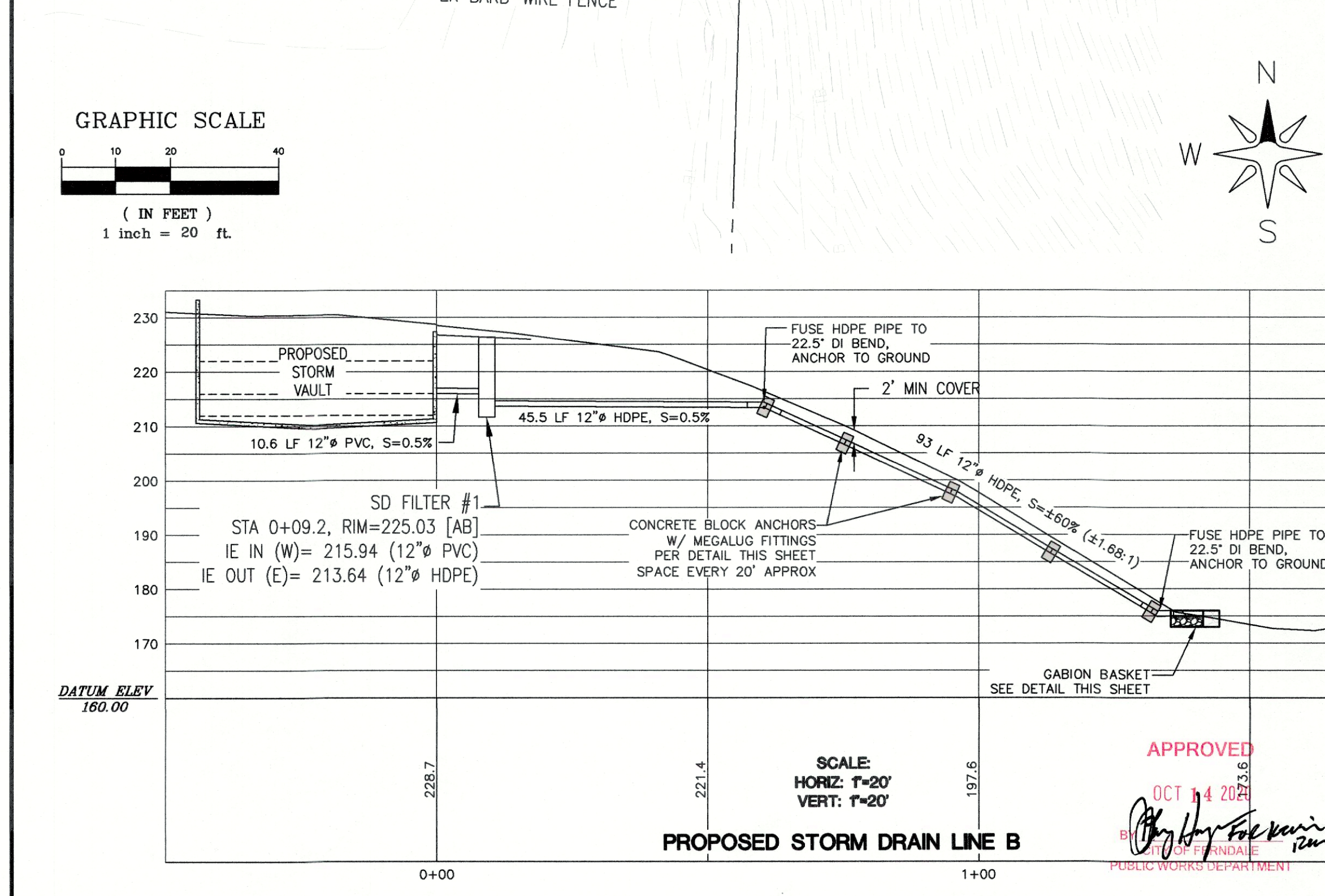
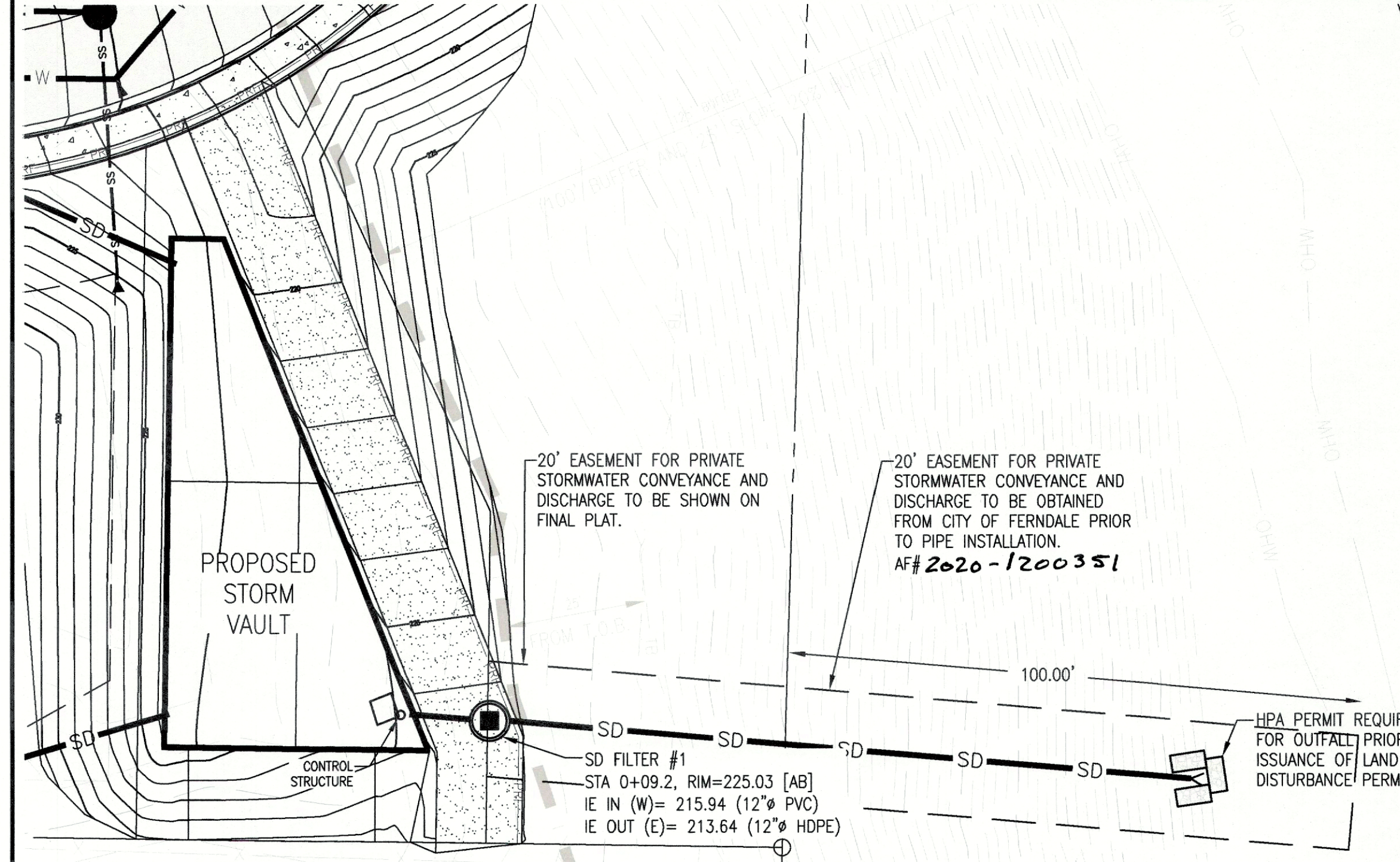
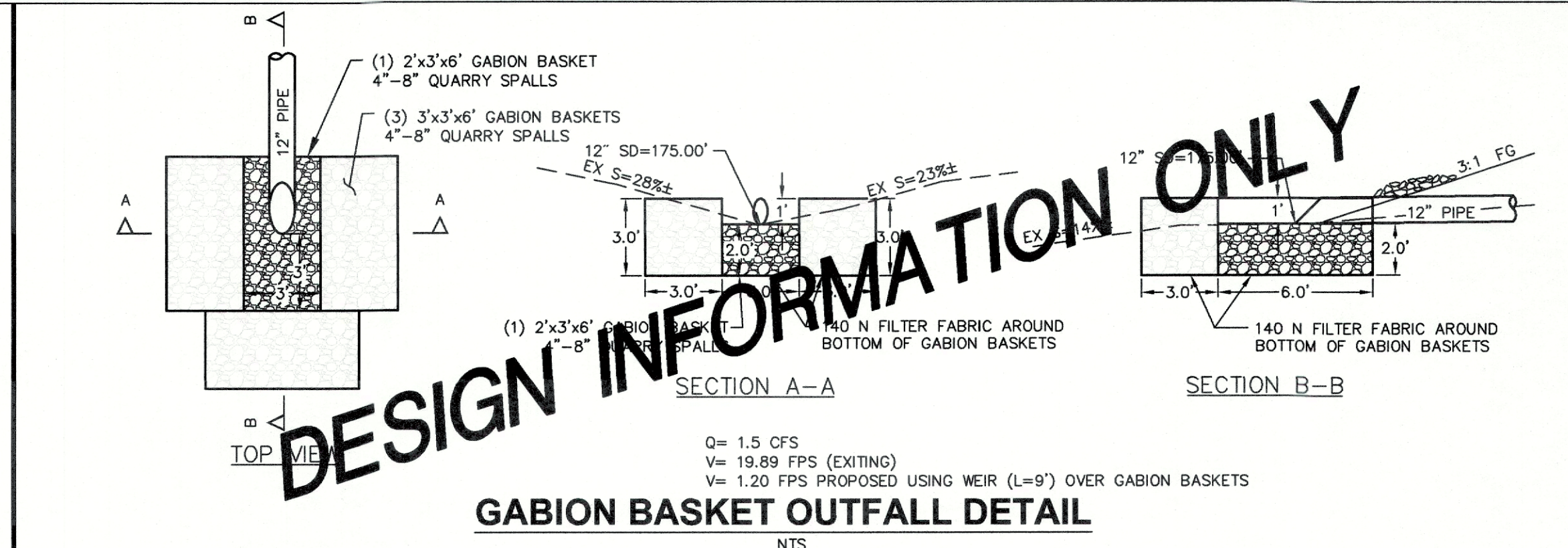
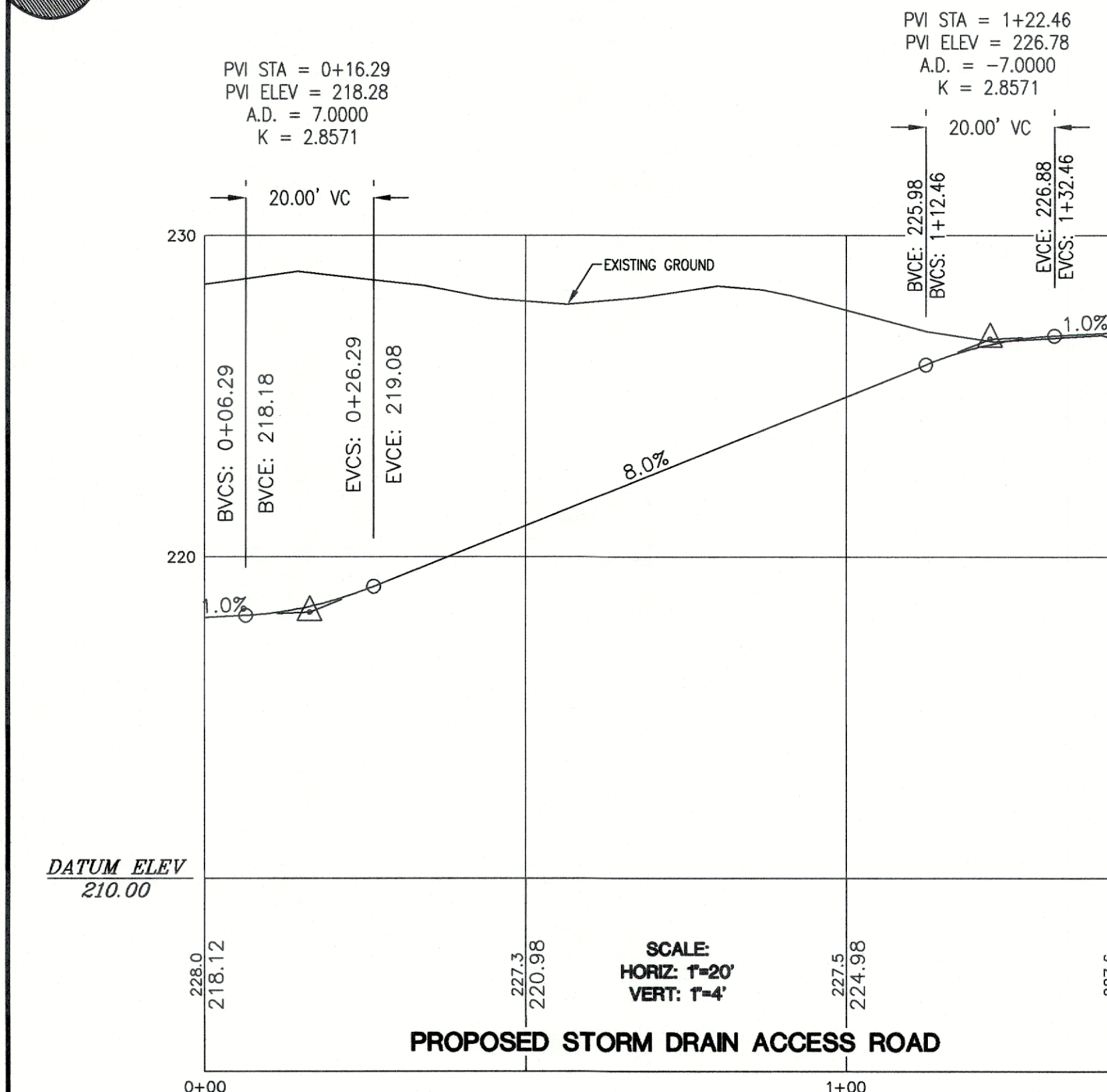
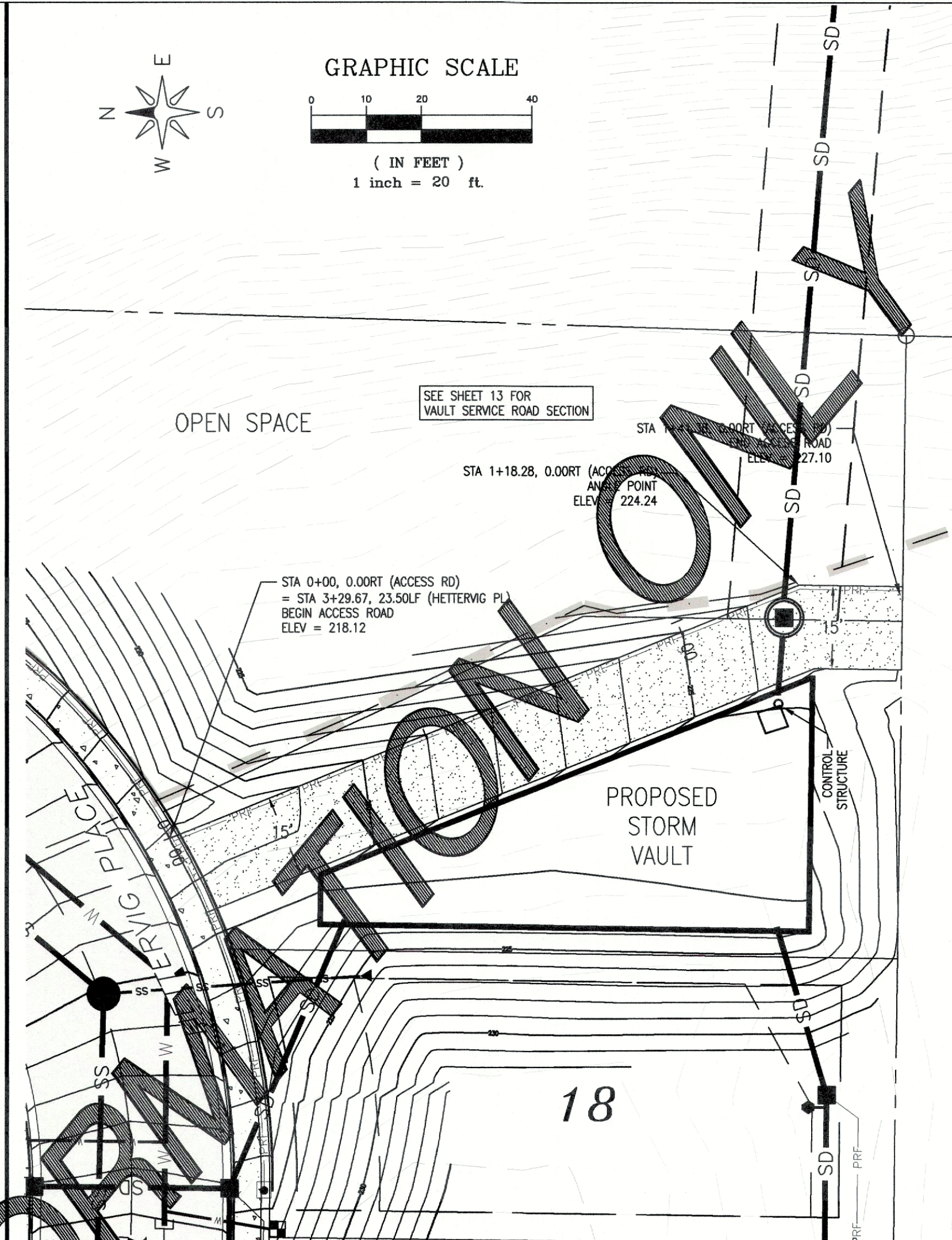
PEA GRAVEL - PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D422:

U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING
3/4"	95-100
3/8"	0-100
#200	0-100

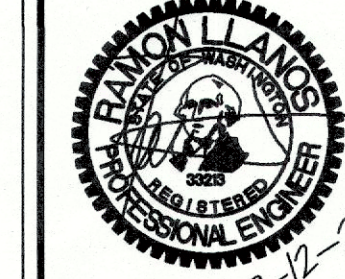
BACKFILL - WHENEVER A TRENCH IS EXCAVATED IN EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT COULD BE DETRIMENTAL TO THE ENTIRE TRENCH ABOVE THE PIPE ZONE, SHALL BE BACKFILLED WITH GRAVEL BACKFILL TO 95% OF MAXIMUM DENSITY.



APPROVED  
Public Works Director  
Date  
NOVEMBER 23, 2016  
PVC PIPE ZONE  
BEDDING  
STANDARD DETAIL ST-15  
NOT TO SCALE



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705  
DWG. NAME: 705-CIVIL-BASE - AB.dwg  
DESIGNED BY: RL  
DRAWN BY: RL/EH/NC  
CHECKED BY: RL

WHATCOM-SKAGIT  
HOUSING

WOODRIDGE LONG PLAT  
CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.M.

NO.	REVISION	DATE
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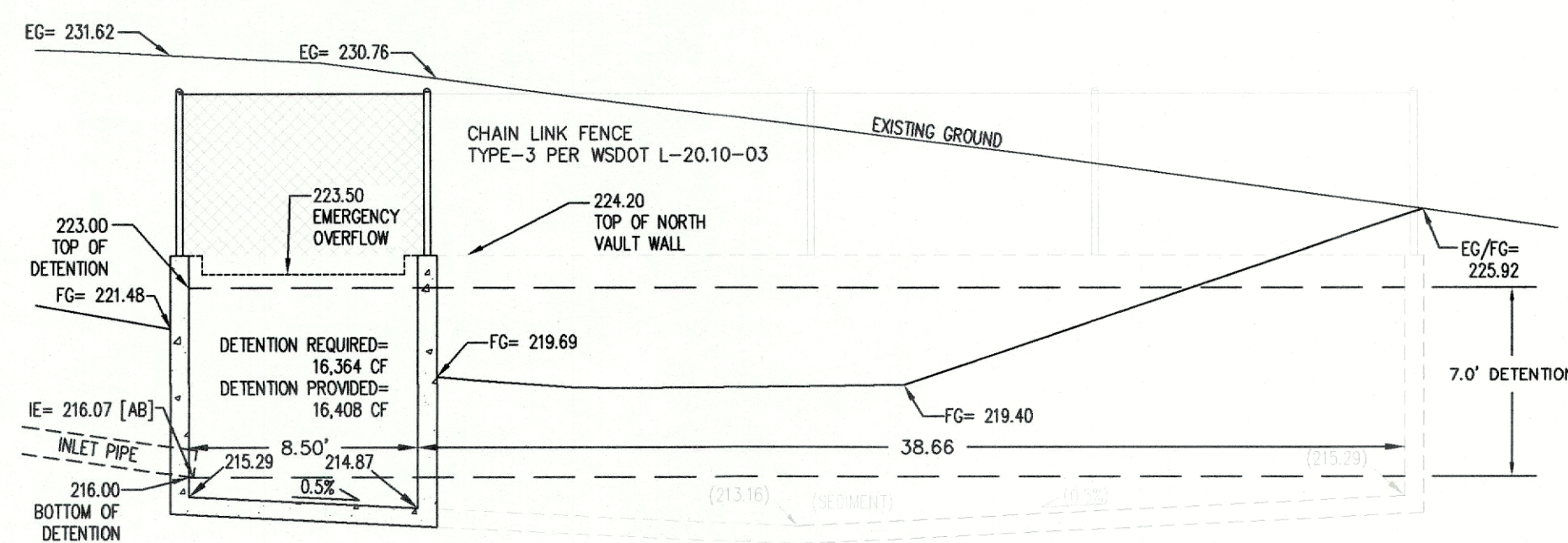
STREET & STORM  
DRAINAGE  
DETAILS 2

09  
18

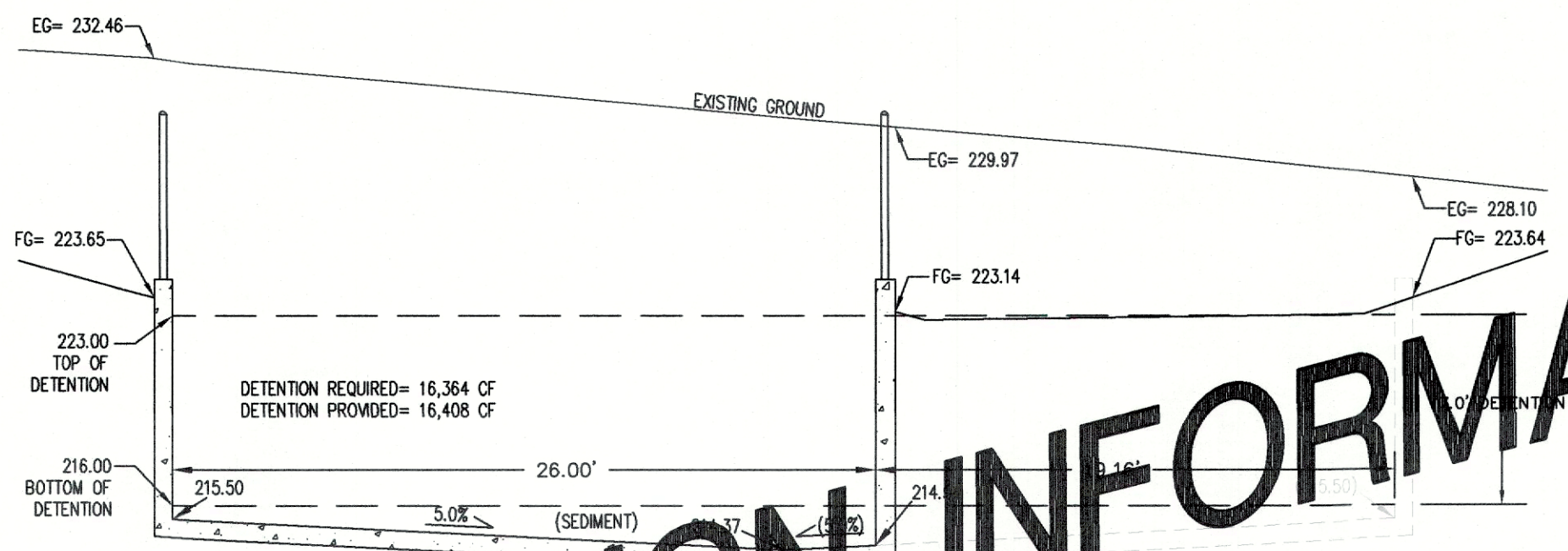
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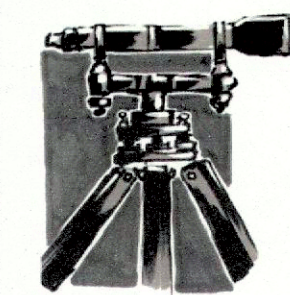
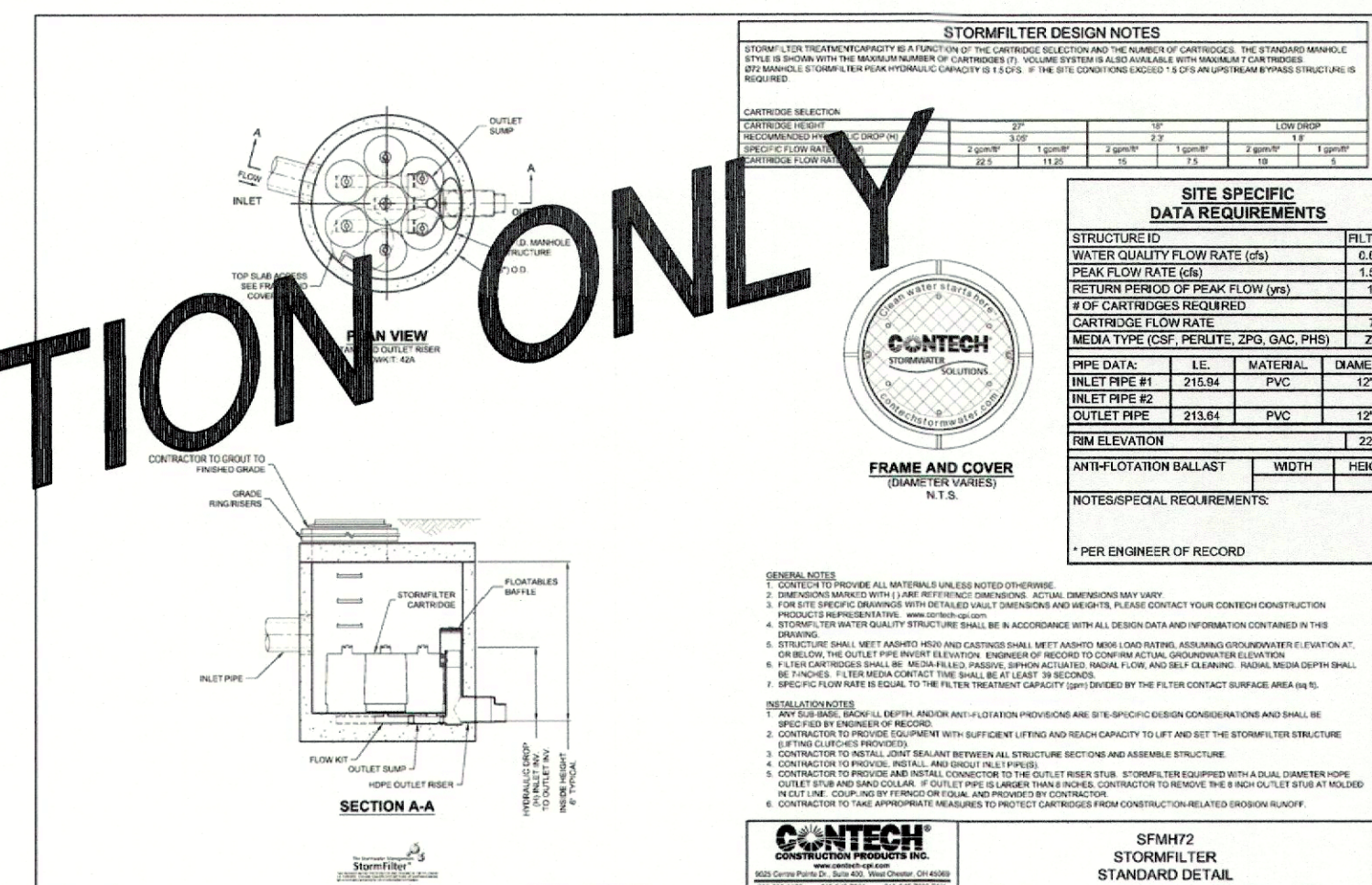




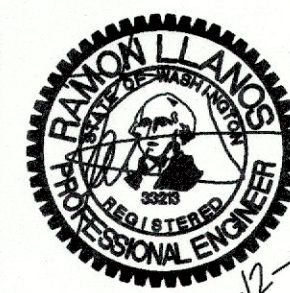
SECTION A-A



SECTION B-B



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDALE, WA 98248  
PHONE 360-383-0620  
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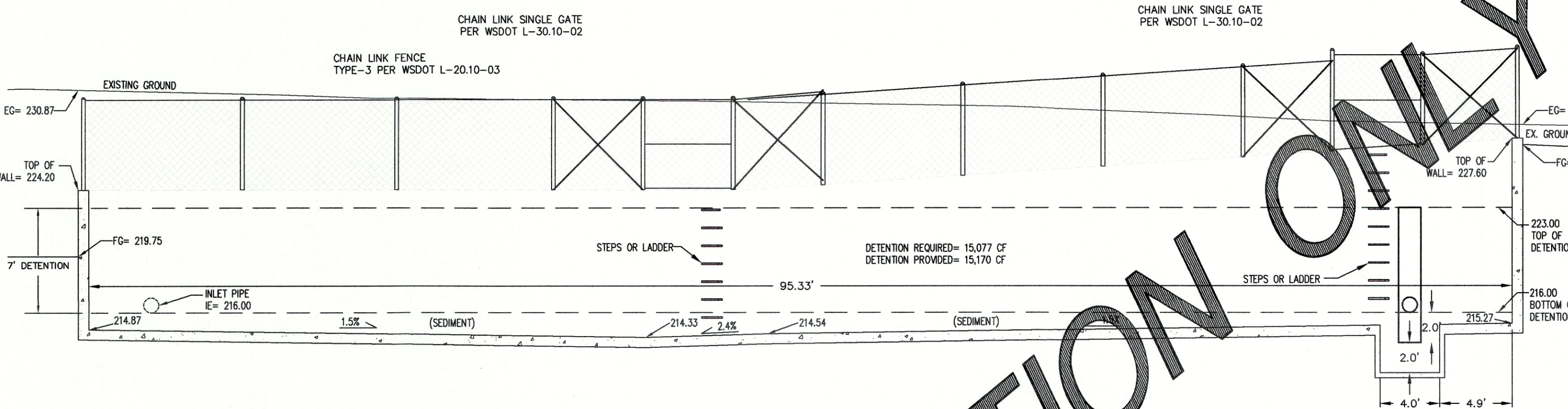
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CHECKED BY: RL

WHATCOM-SKAGIT  
HOUSING

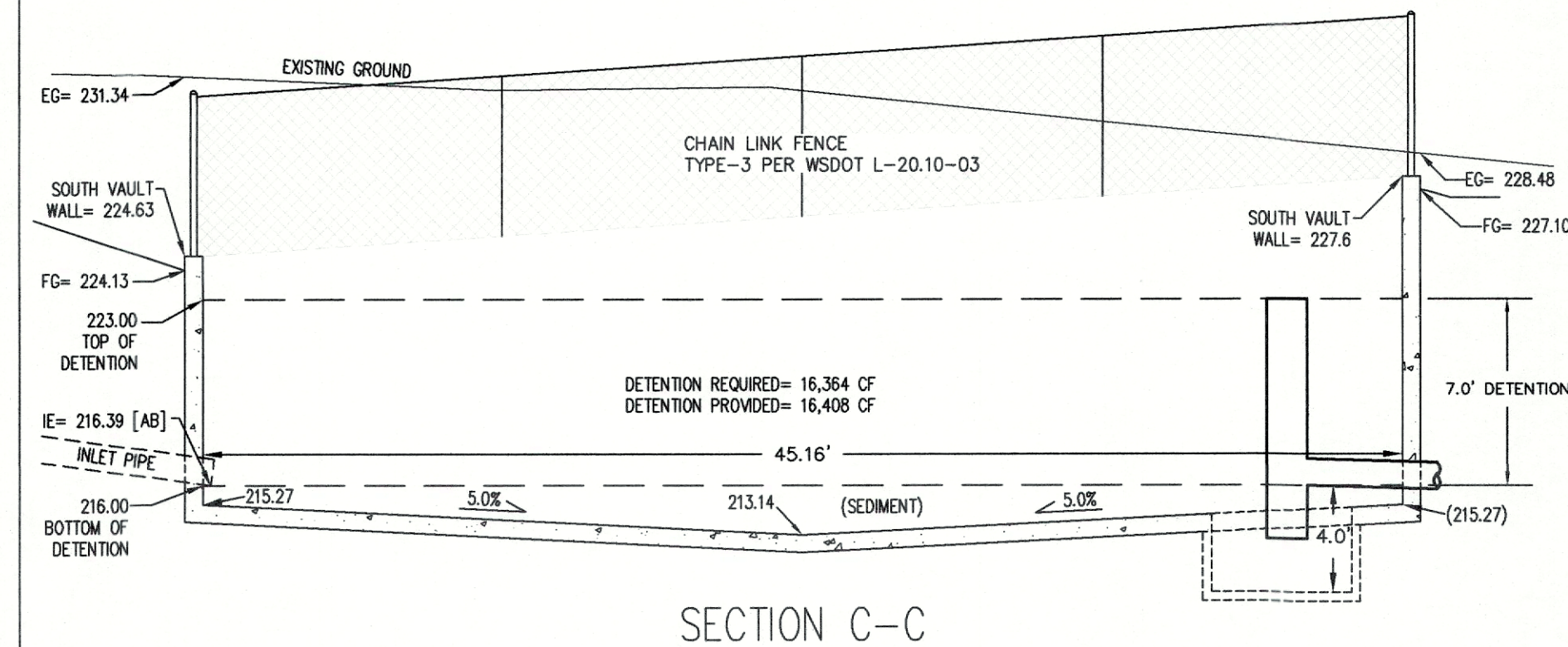
WOODRIDGE LONG PLAT

CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, WM

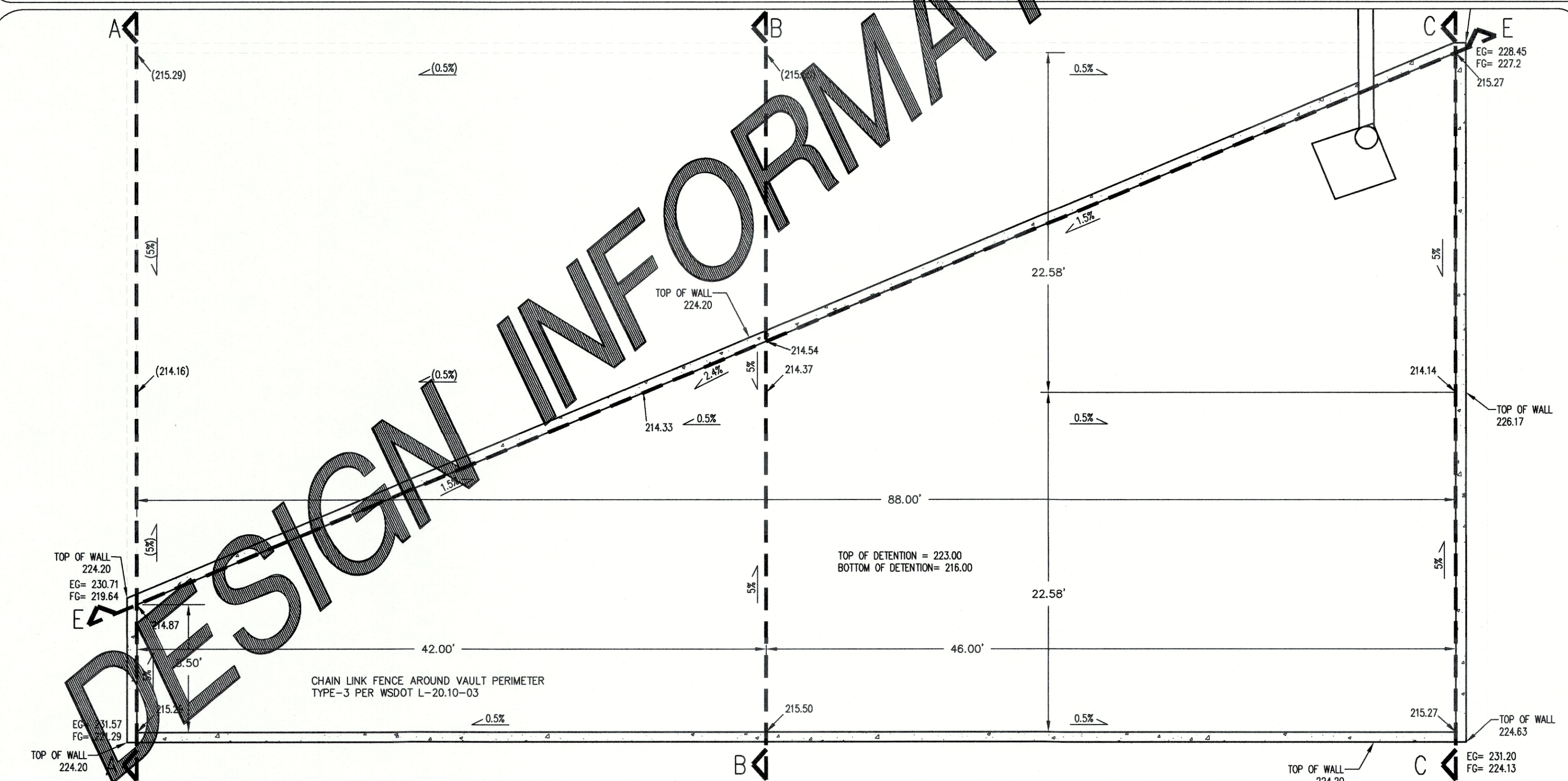
RECORD DRAWING



SECTION E-E

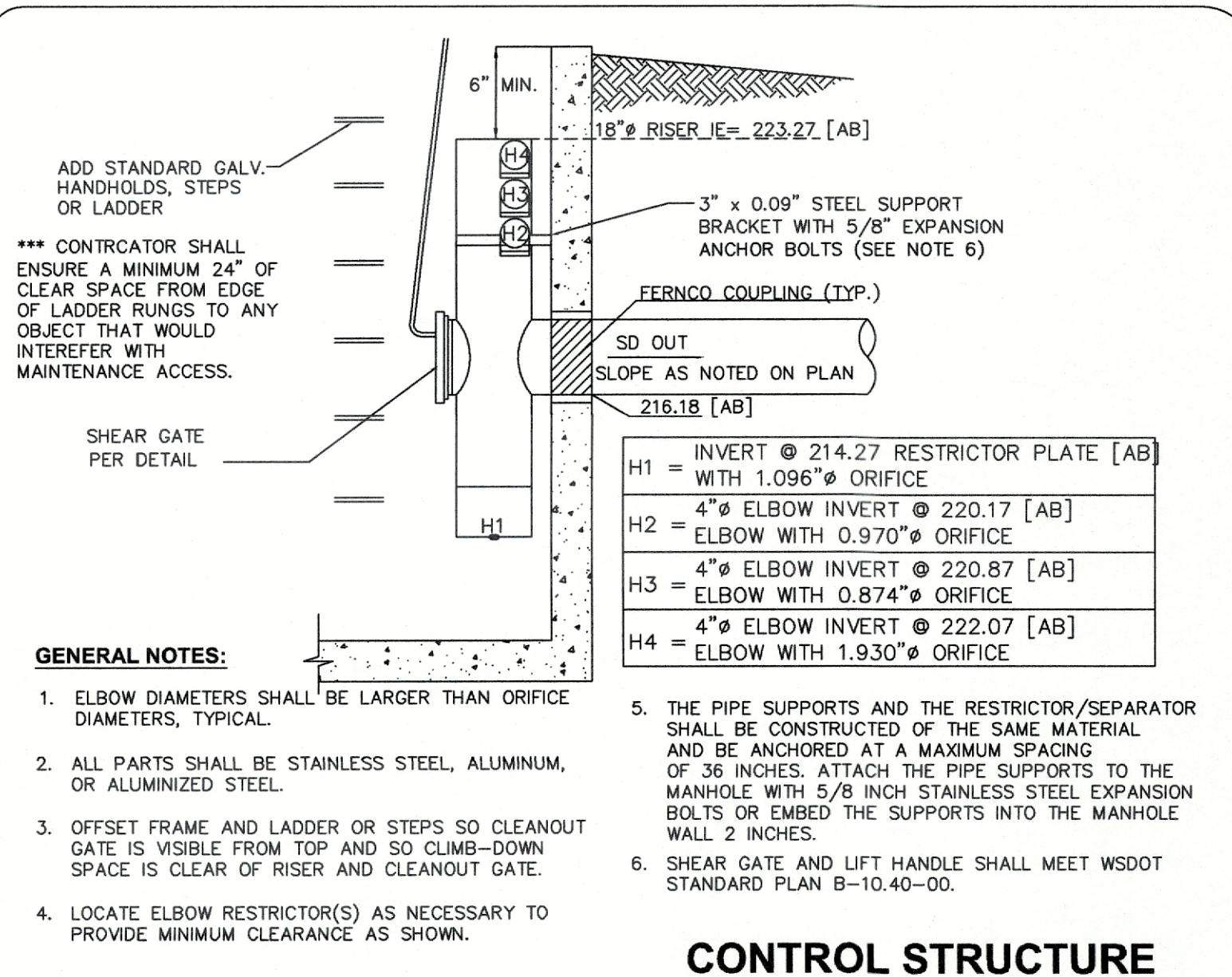


SECTION C-C



#### CONCRETE VAULT NOTES:

- CONSTRUCTION OF THE CONCRETE DETENTION VAULT REQUIRES A COF BUILDING PERMIT.
- THE CONCRETE DETENTION VAULT MUST BE DESIGNED BY A STRUCTURAL ENGINEER OR CIVIL ENGINEER WITH STRUCTURAL EXPERTISE AND MUST PROVIDE STRUCTURAL CALCULATIONS THAT DEMONSTRATE THAT THE VAULT WILL SUPPORT THE LOADING OF A MINIMUM 70,000 LB MAINTENANCE VEHICLE.
- THE CONCRETE DETENTION VAULT MUST BE DESIGNED BY A STRUCTURAL ENGINEER OR CIVIL ENGINEER WITH STRUCTURAL EXPERTISE IN CONFORMANCE WITH THE VOLUME III PAGE 3-48 OF THE 2014 STORMWATER MANAGEMENT VOLUME.
- THE STRUCTURAL PLANS SHALL CALL-OUT THE CONCRETE SPECIFICATION FOR THE VAULT.
- THE STRUCTURAL DESIGN AND CALCULATIONS FOR THE DETENTION VAULT MUST BE APPROVED BY THE COF BUILDING DEPARTMENT AND THE LAND DISTURBANCE PERMIT ISSUED BY PUBLIC WORKS FOR THE VAULT CONSTRUCTION TO BEGIN.
- THE ENGINEER OF RECORD MUST CERTIFY THAT THE STORMWATER VAULT IS CONSTRUCTED IN CONFORMANCE WITH THE 2014 STORMWATER MANAGEMENT MANUAL, THE APPROVED STRUCTURAL DESIGN AND THE APPROVED CIVIL PLANS.
- THE ENGINEER OF RECORD SHALL PROVIDE THE STRUCTURAL ENGINEER WITH APPLICABLE CIVIL PLAN SHEETS APPROVED BY THE COF IN ORDER FOR THE STRUCTURAL ENGINEER TO BE AWARE OF THE ABOVE DESIGN CONDITIONS.



CONTROL STRUCTURE

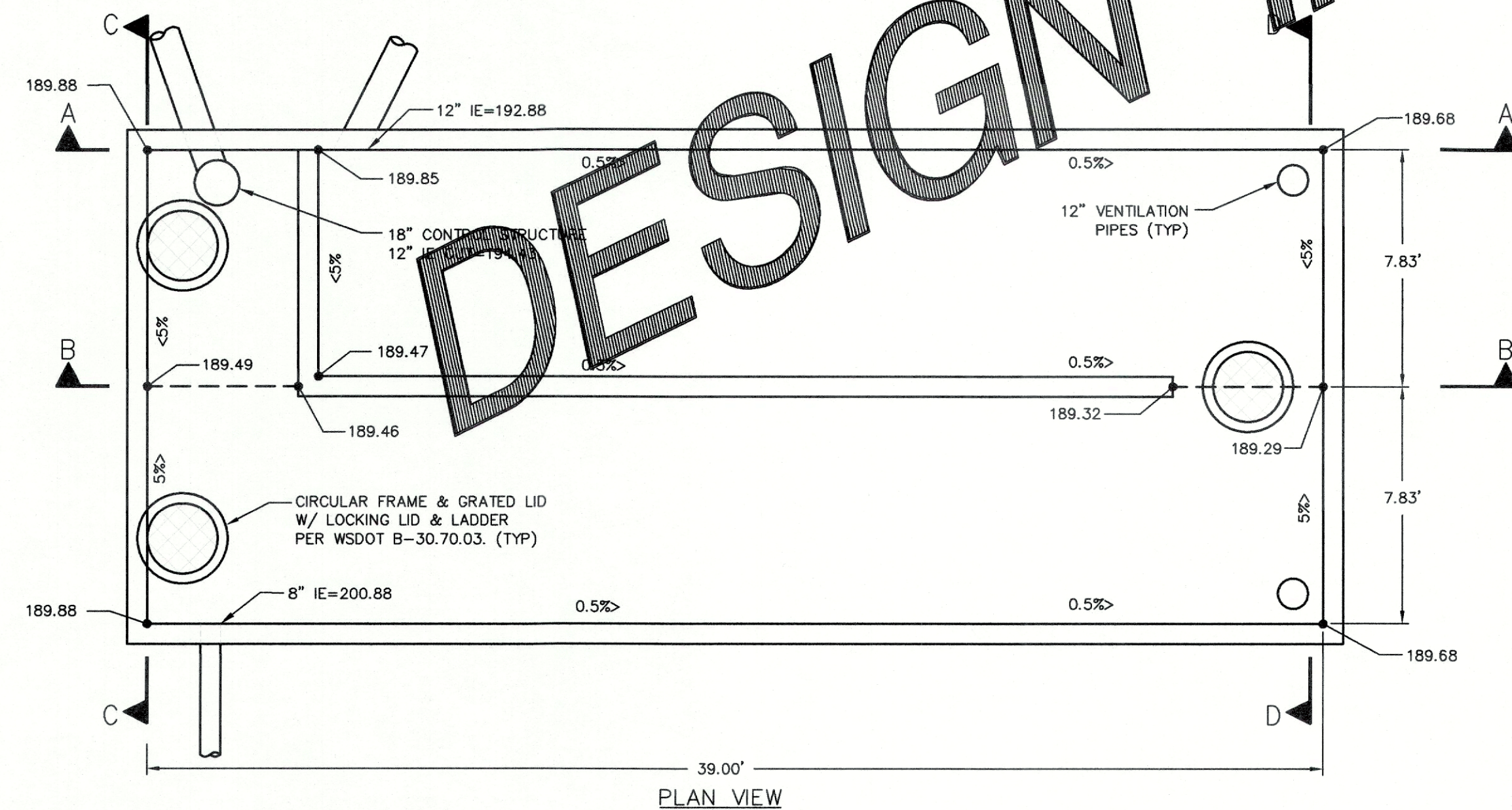
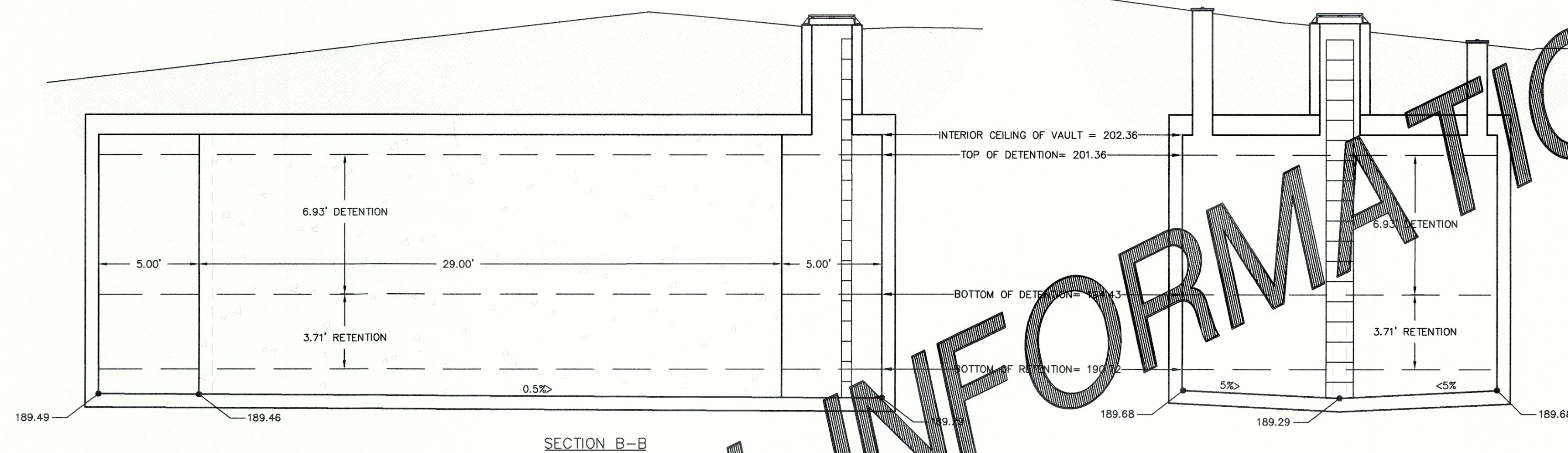
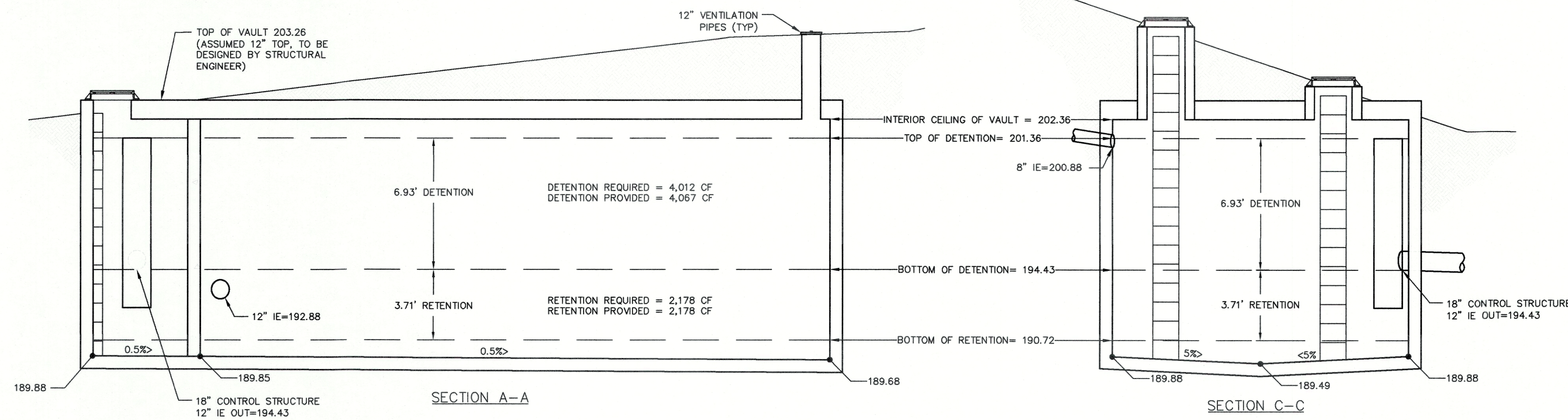
NO.	REVISION	DATE
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VAULT 1 PLAN AND  
CONTROL STRUCTURE  
DETAILS

SHEET

10  
OF 18





STORMWATER VAULT 2  
TOP OF DETENTION: 201.36  
BOTTOM OF DETENTION: 194.43  
BOTTOM OF RETENTION: 190.72  
15.66' WIDE x 39' LONG  
6.93' DETENTION  
3.71' RETENTION

NOTE:  
INSTALL HANGING REMOVABLE CONFINED  
SPACE SIGN UNDER EACH ACCESS LID,  
PER OSHA REQUIREMENTS (TYP).

#### CONCRETE VAULT NOTES:

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- THE ENGINEER OF RECORD SHALL PROVIDE THE STRUCTURAL ENGINEER WITH APPLICABLE CIVIL PLAN SHEETS APPROVED BY THE COF IN ORDER FOR THE STRUCTURAL ENGINEER TO BE AWARE OF THE ABOVE DESIGN CONDITIONS.

- GENERAL NOTES:**
- ALL PARTS SHALL BE STAINLESS STEEL, ALUMINUM, OR ALUMINIZED STEEL.
  - THE PIPE SUPPORTS AND THE RESTRICTOR/SEPARATOR AND BE ANCHORED AT A MAXIMUM SPACING OF 36 INCHES. ATTACH THE PIPE SUPPORTS TO THE VAULT WALL WITH 5/8\"/>

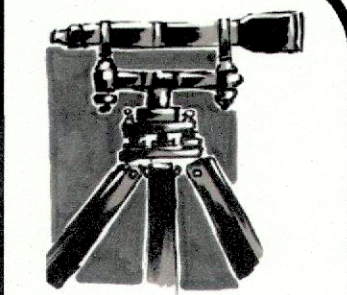
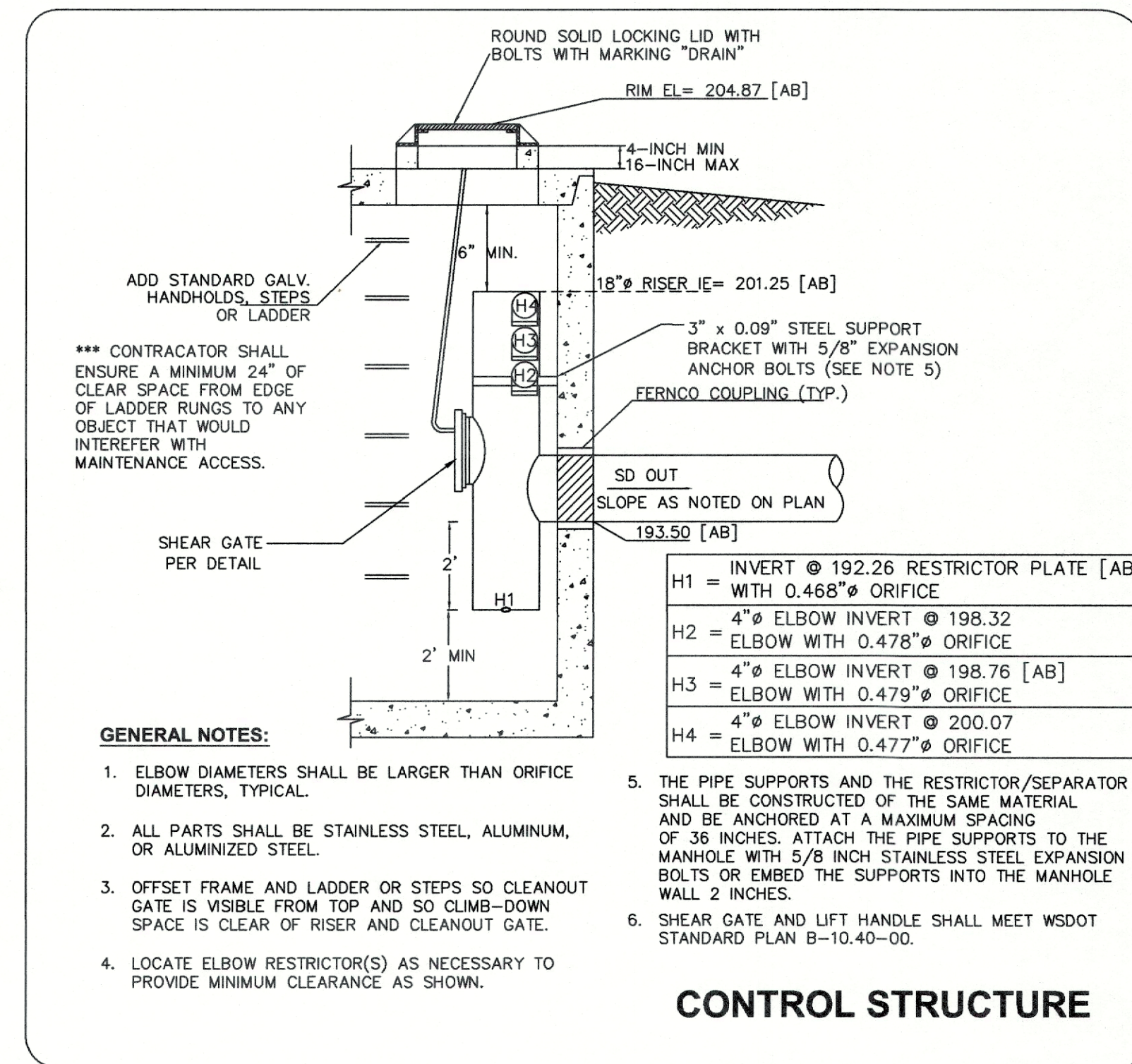
#### STORMWATER INLET DETAIL

- SHEAR GATE NOTES (FROM WSDOT)**
- The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation 2024A, or cast iron in accordance with ASTM A 48, Class 30B.
  - The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion). It may be of solid rod or hollow tubing, with adjustable hook as required.
  - A neoprene rubber gasket is required between the riser mounting flange and the gate flange.
  - Install the gate so that the level-line mark is level when the gate is closed.
  - The mating surfaces of the lid and the body shall be machined for proper fit.
  - All shear gate bolts shall be stainless steel.
  - The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
  - Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches.

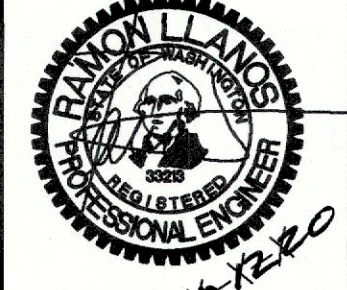
APPROVED

OCT 14 2020

By: *[Signature]*  
CITY OF FERNDALE  
PUBLIC WORKS DEPARTMENT



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705  
DWG. NAME: 705-CIVIL-BASE - AB.dwg  
DESIGNED BY: RL  
DRAWN BY: RL/EH/NC  
CHECKED BY: RL

WHATCOM-SKAGIT  
HOUSING

## WOODRIDGE LONG PLAT

CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.M.

NO.	REVISION	DATE

VAULT 2 AND  
CONTROL STRUCTURE  
DETAILS

SHEET

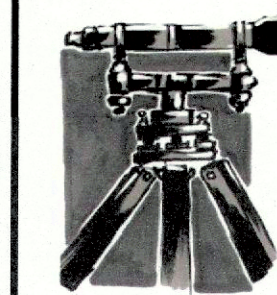
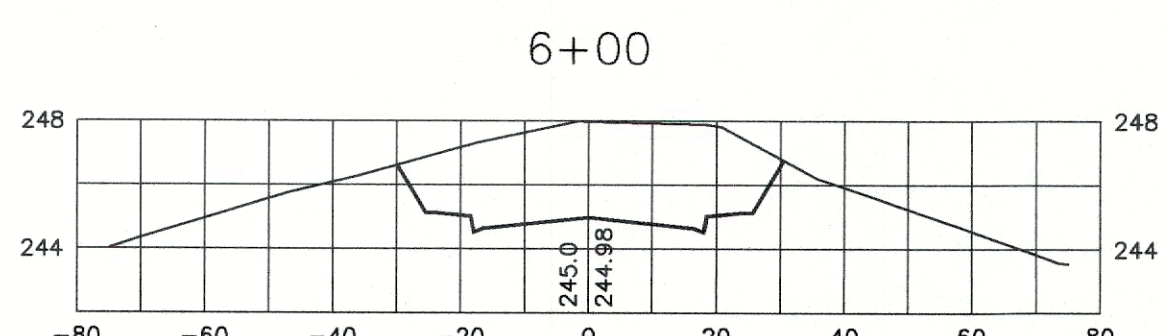
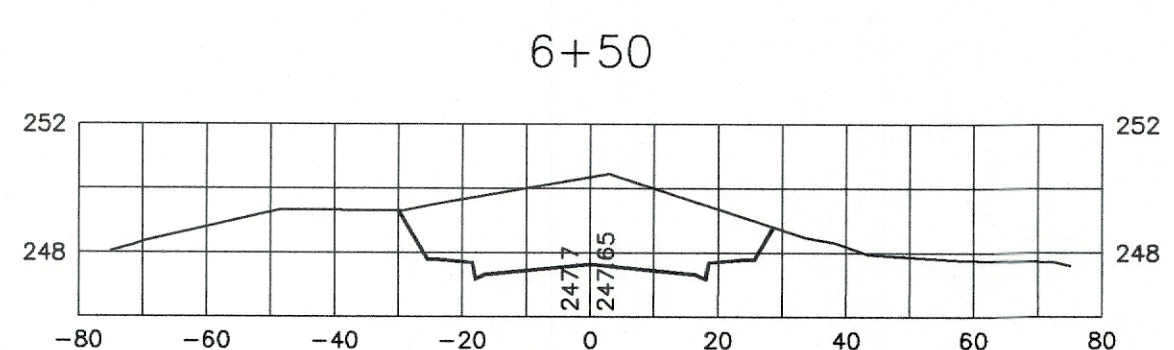
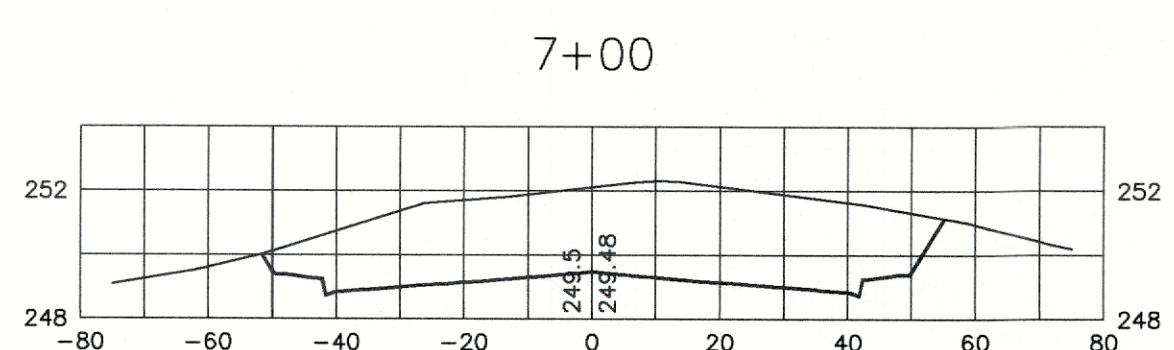
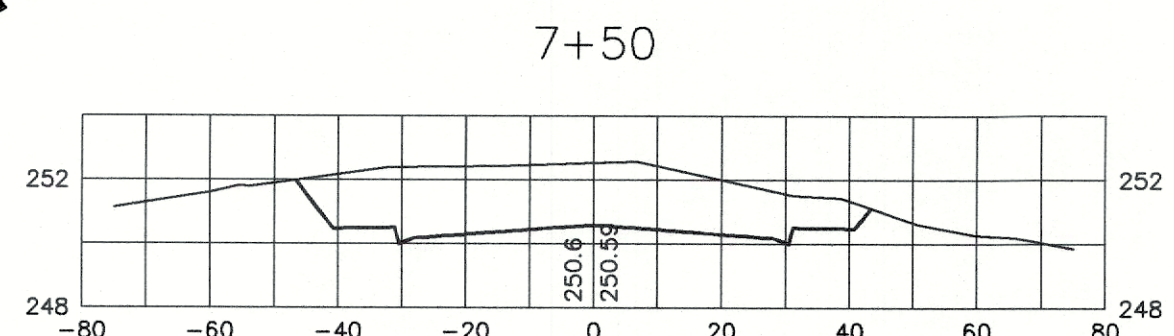
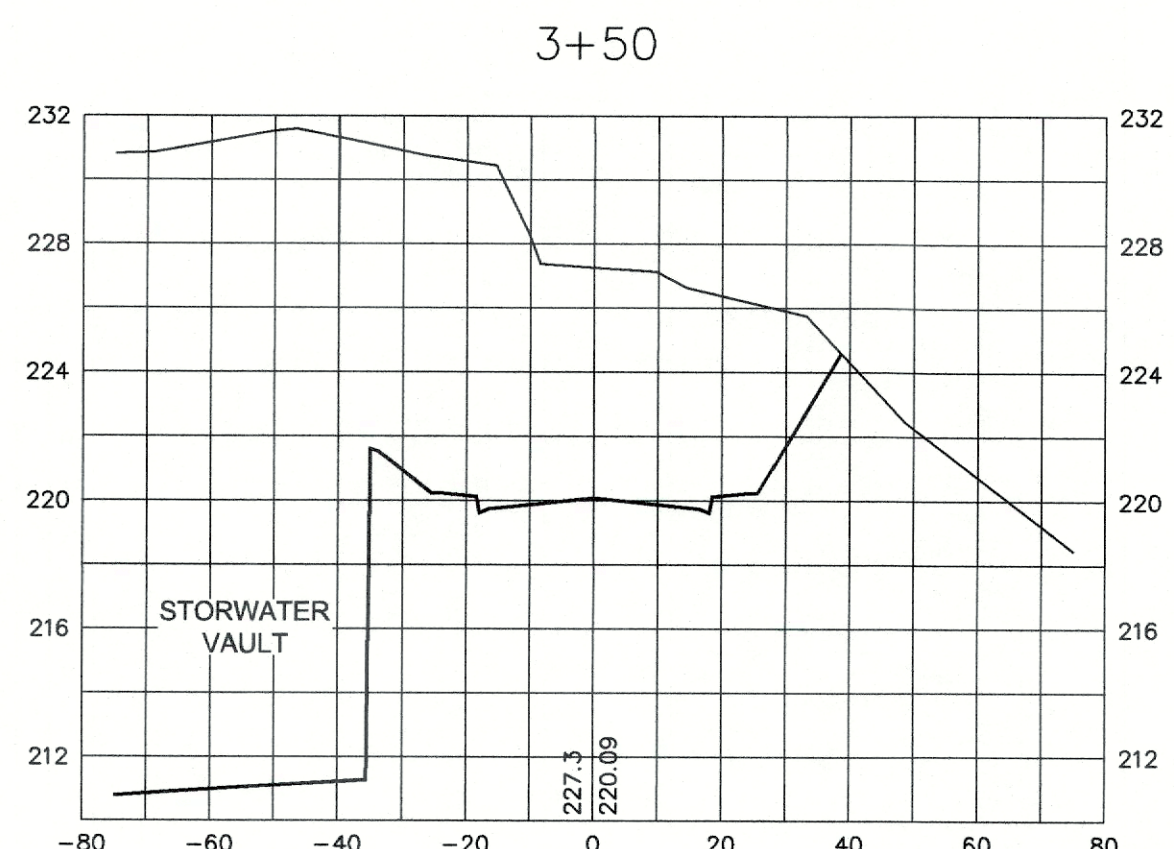
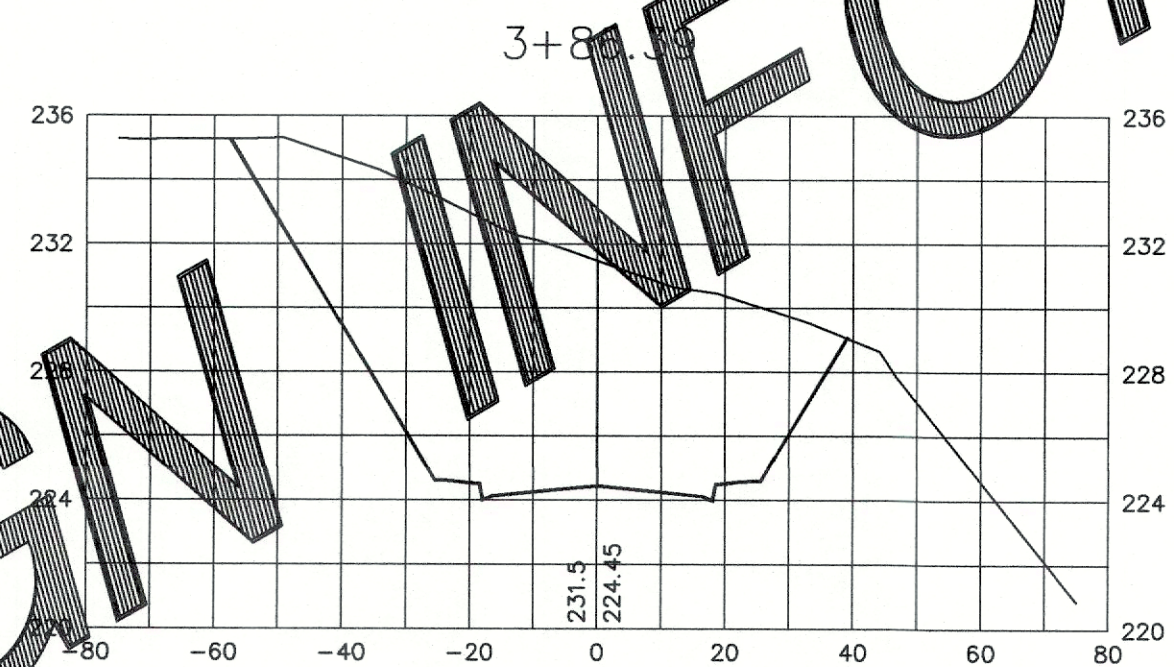
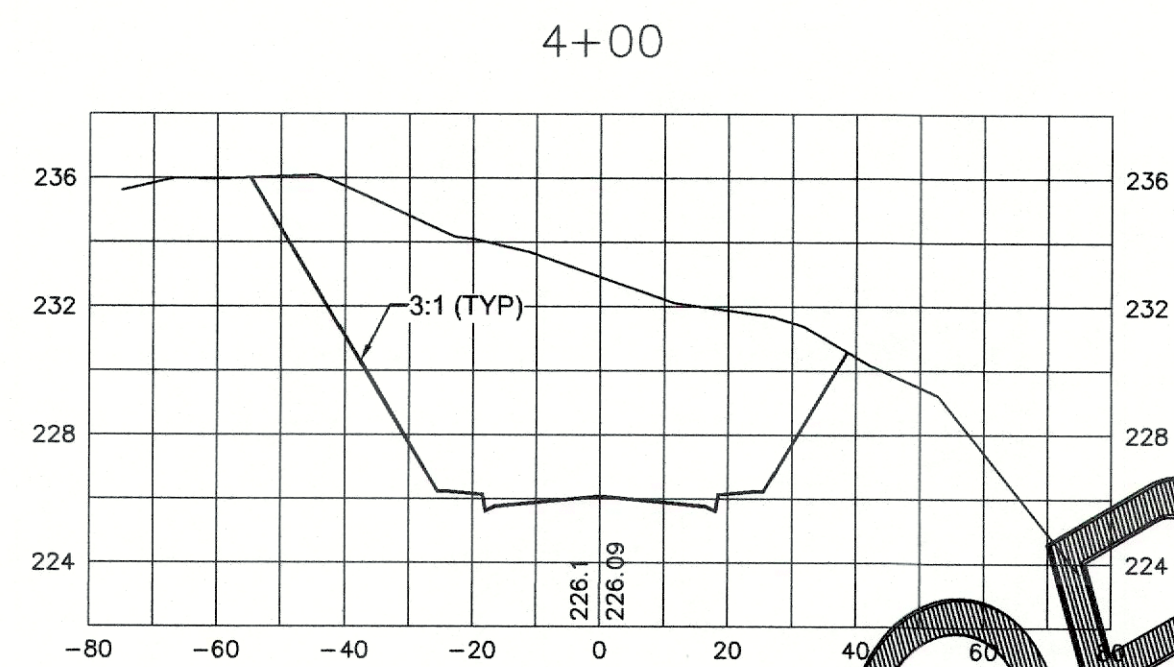
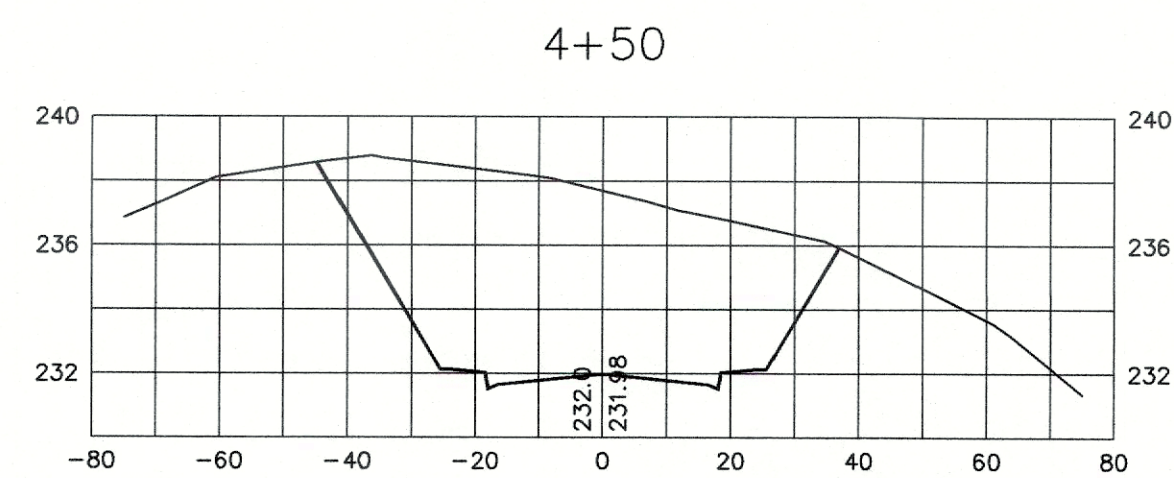
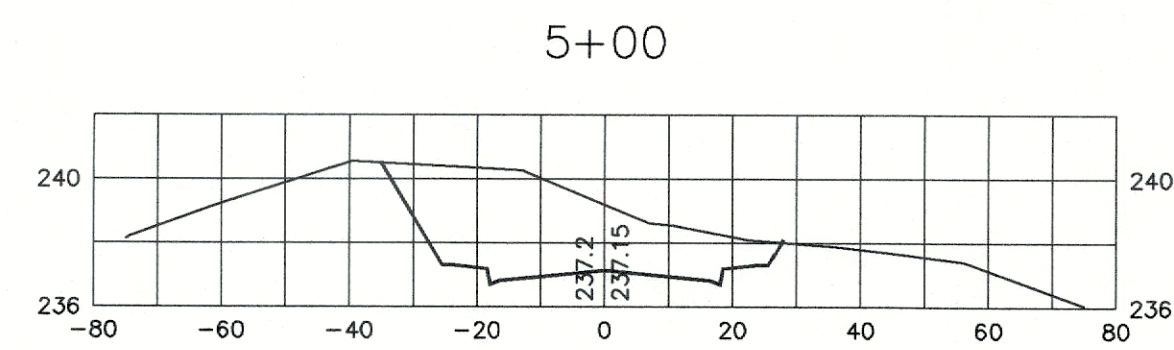
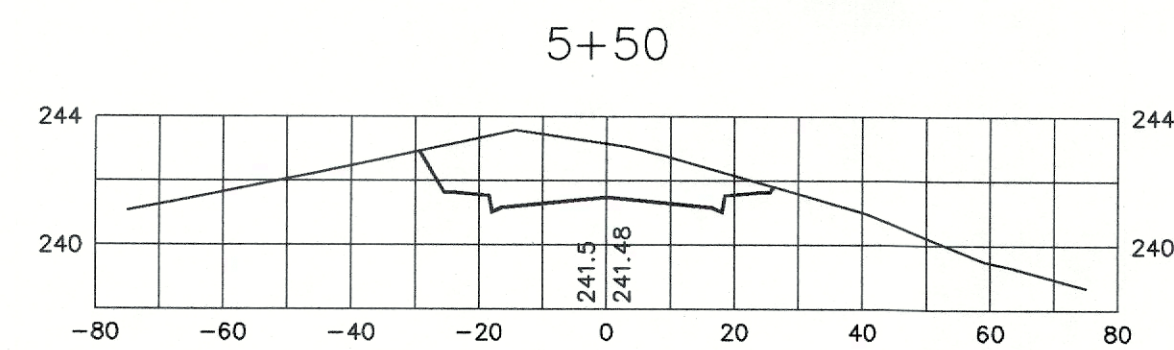
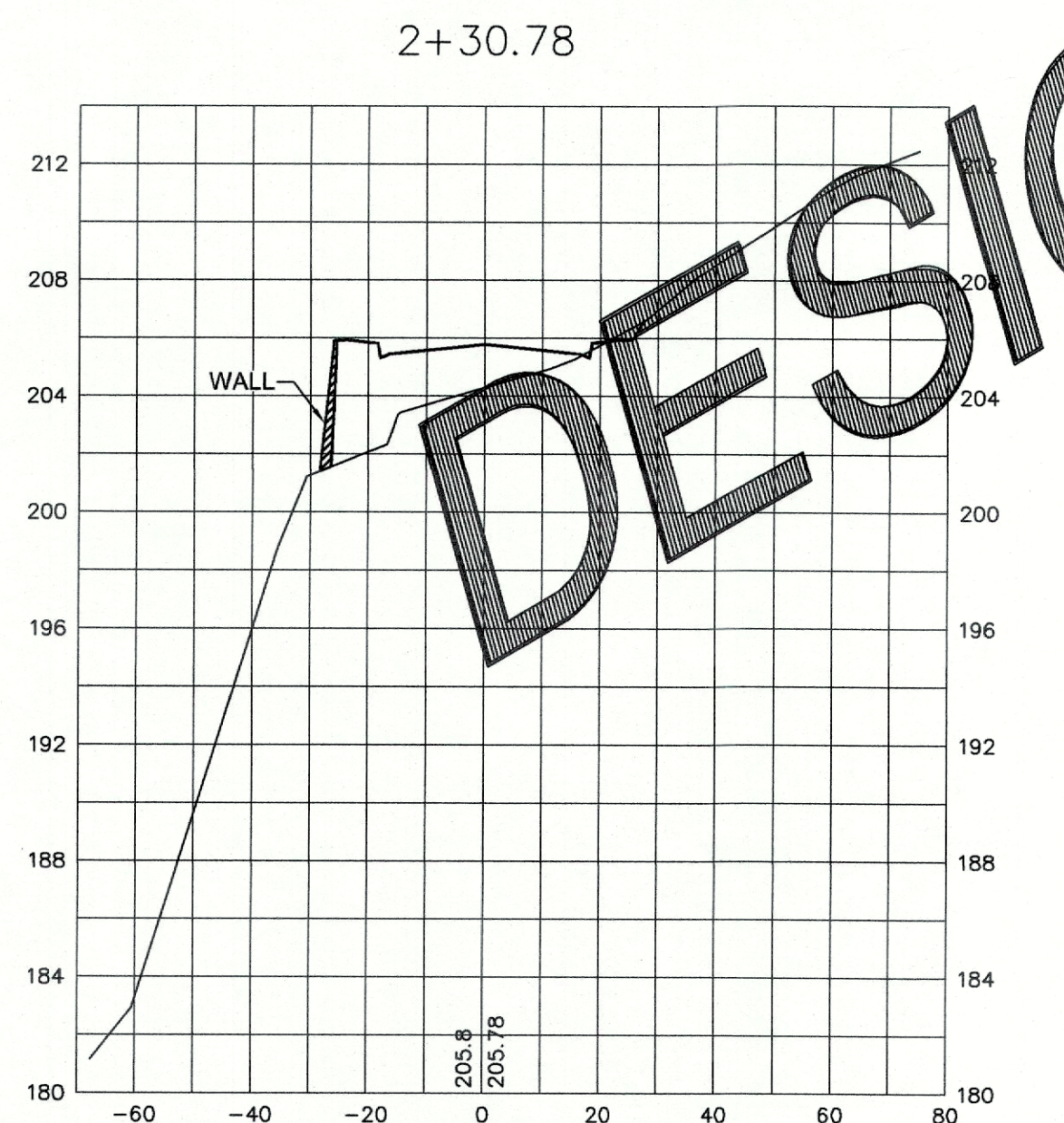
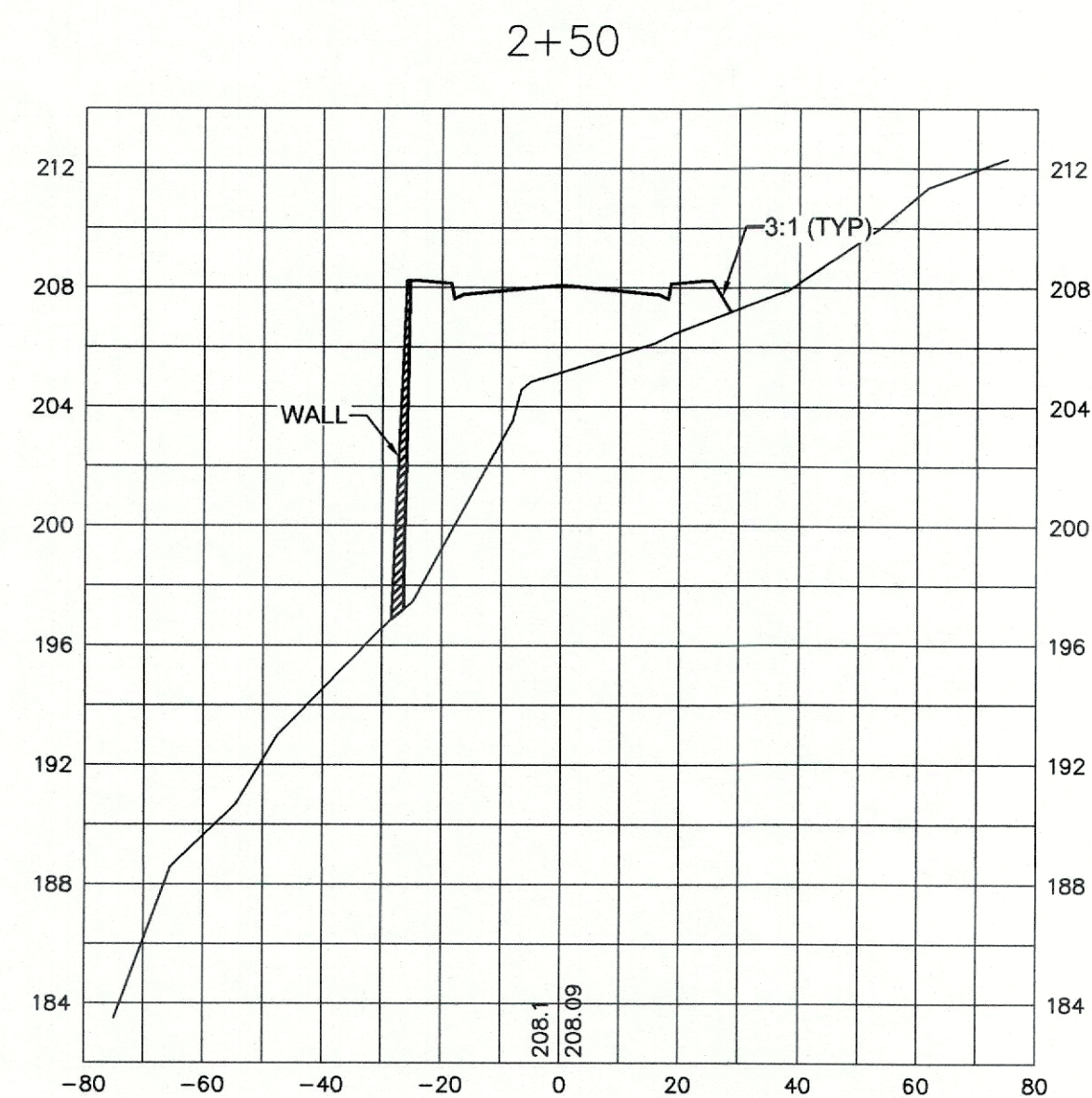
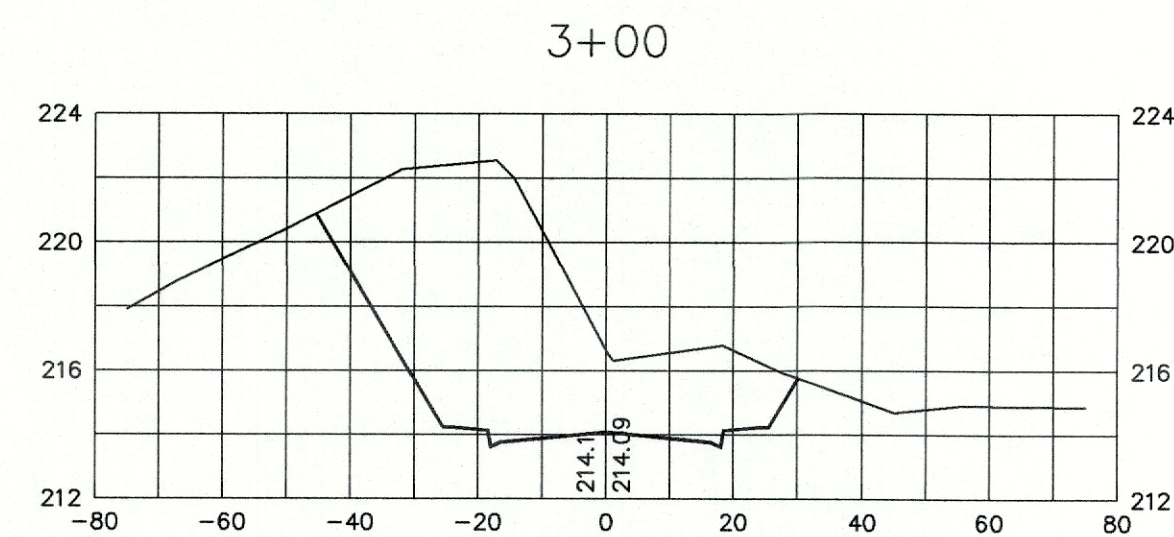
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OF 18

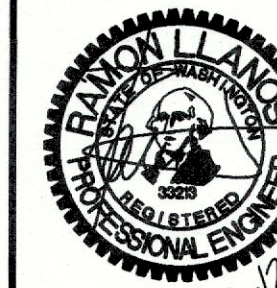
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\\SERVER\Share\Common\Land Projects\2017\1705-meether - Woodridge\wg\1705-CIVIL-BASE - AB.dwg PLOT DATE: 10/12/2020 10:05 AM



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDALE, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705  
DWG. NAME: 705-CIVIL-BASE - AB.dwg  
DESIGNED BY: RL  
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WHATCOM-SKAGIT  
HOUSING

## WOODRIDGE LONG PLAT

CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, W.1M.

NO.	REVISION	DATE

SITE GRADING  
CROSS-SECTIONS

SHEET  
**12**  
OF 18

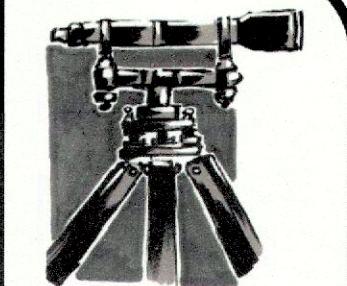
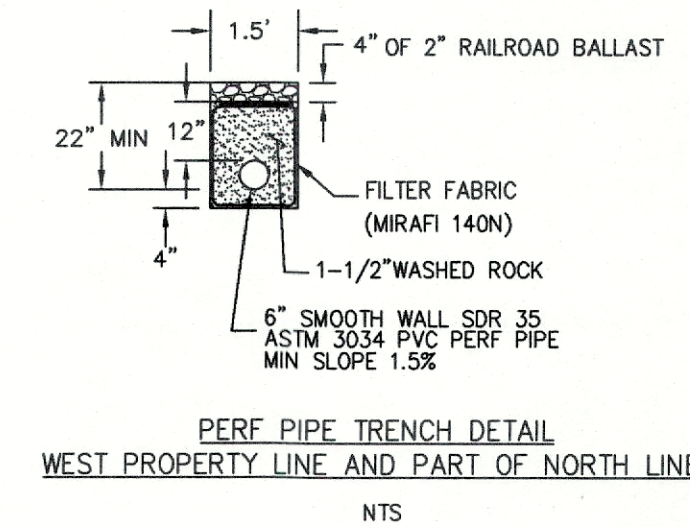
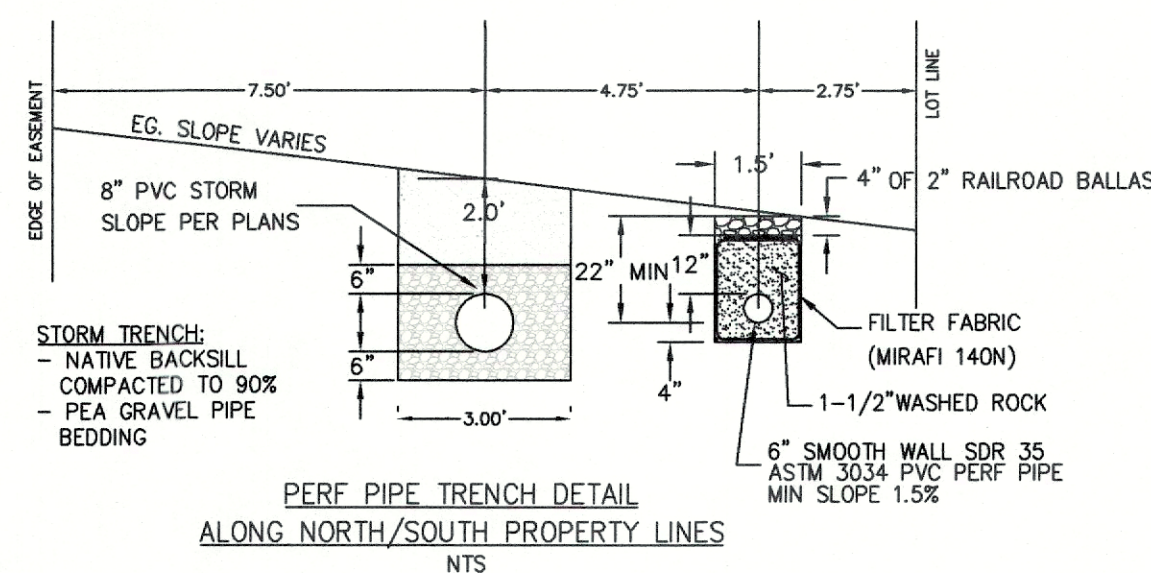
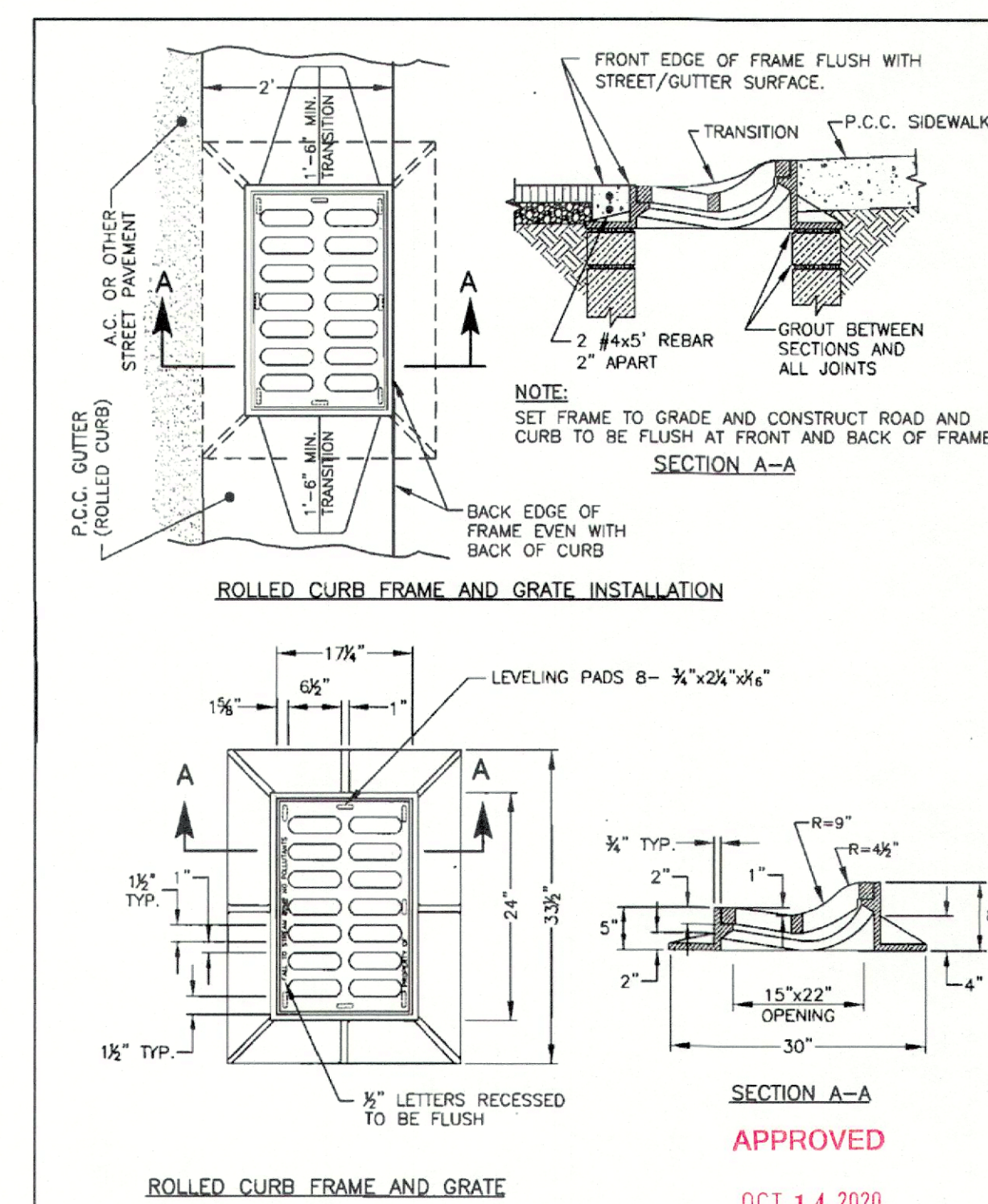
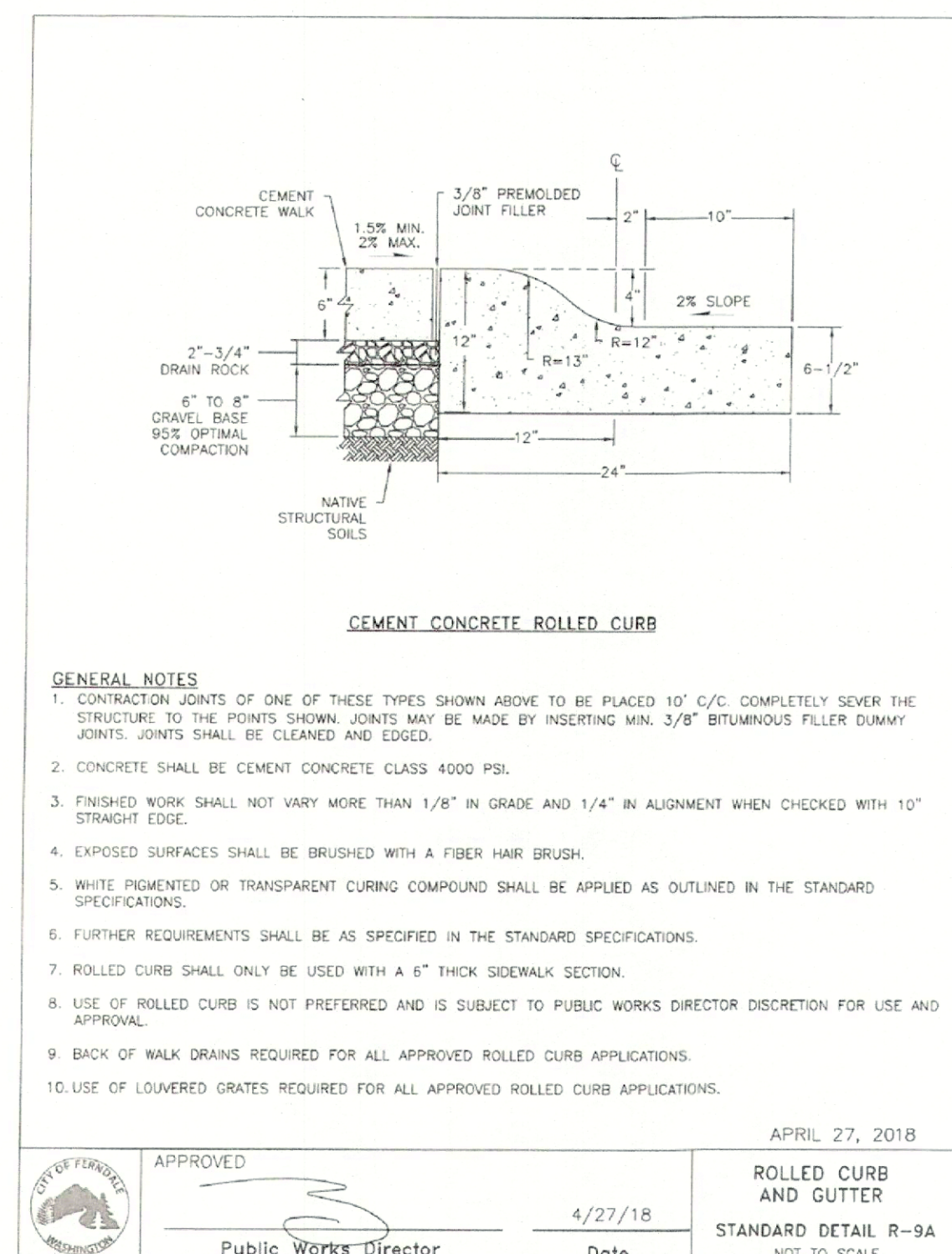
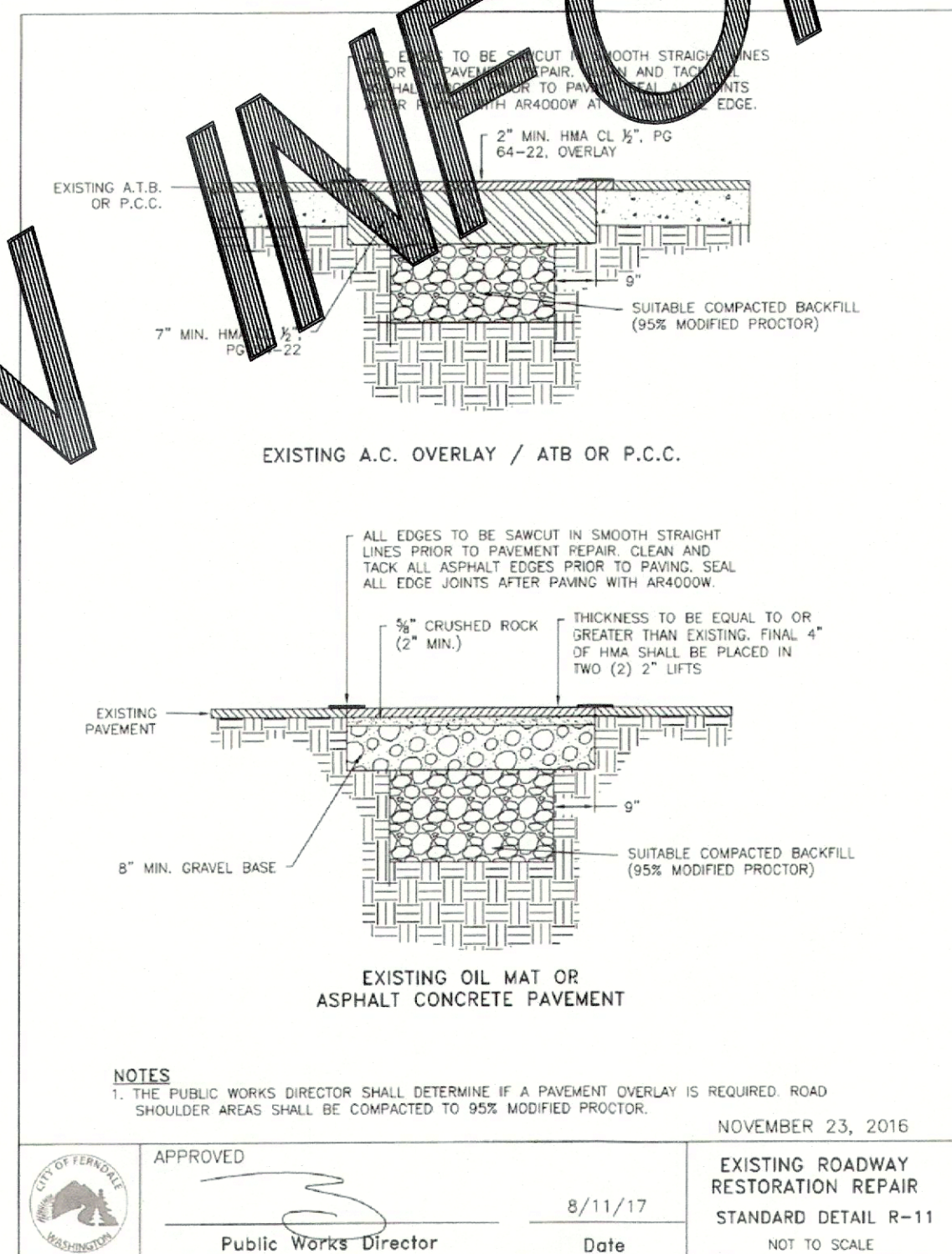
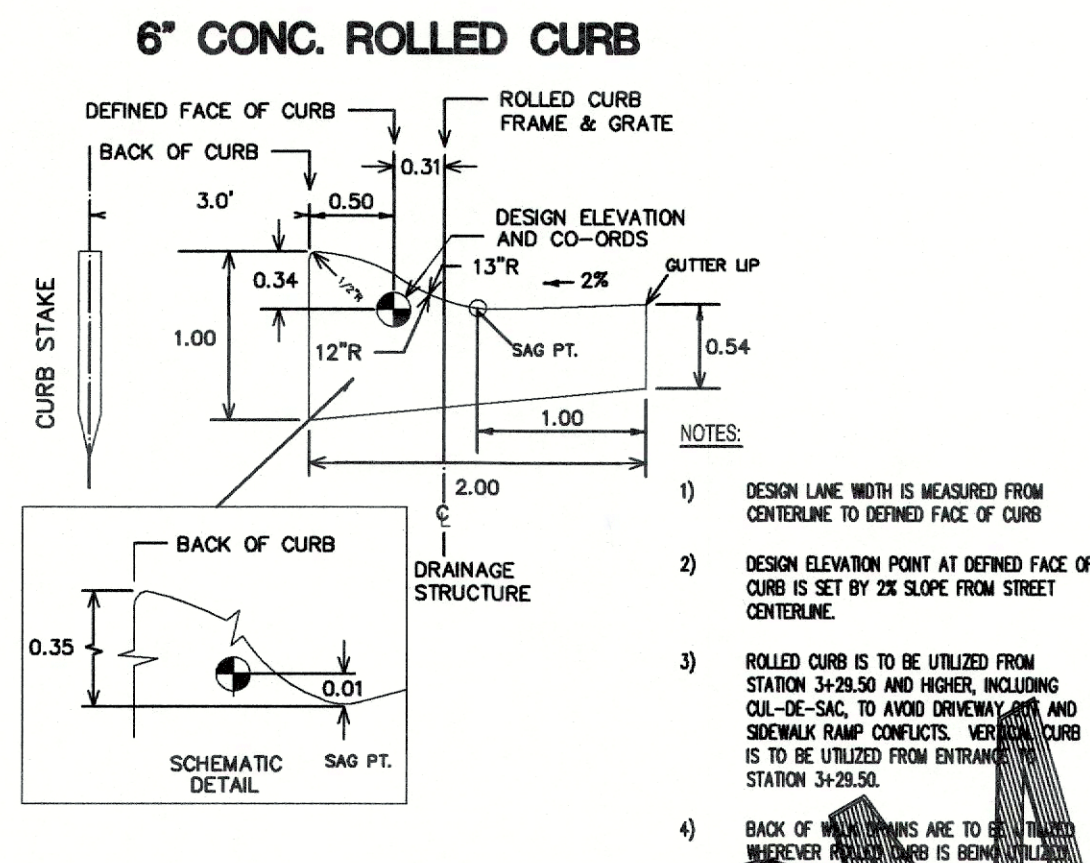
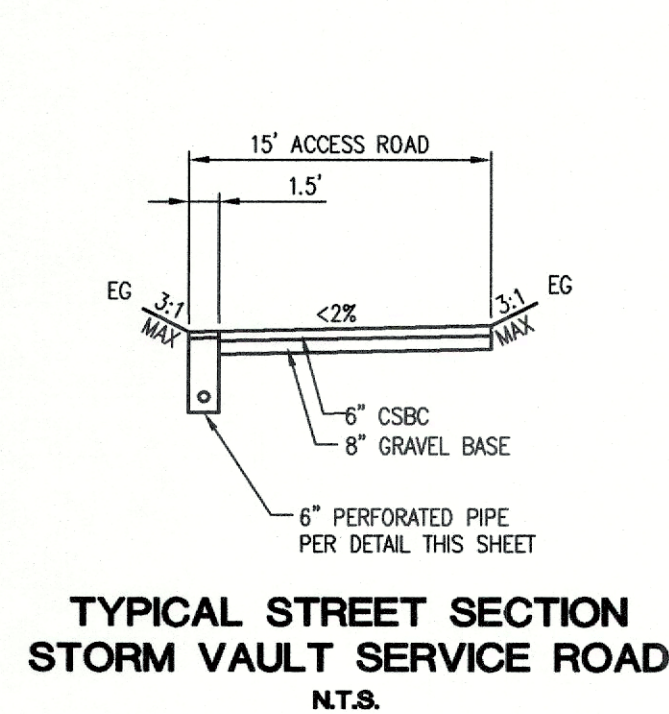
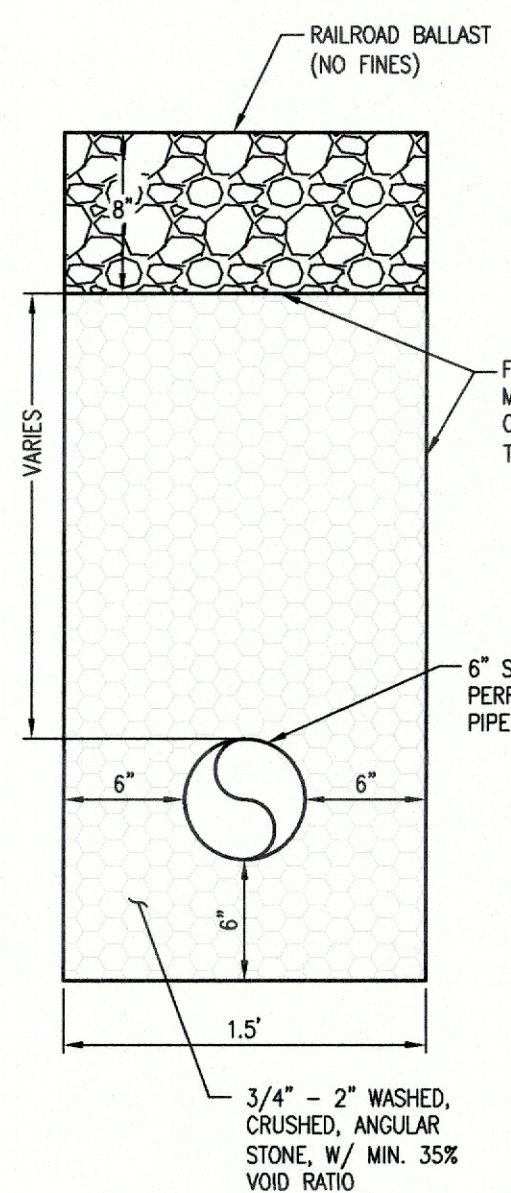
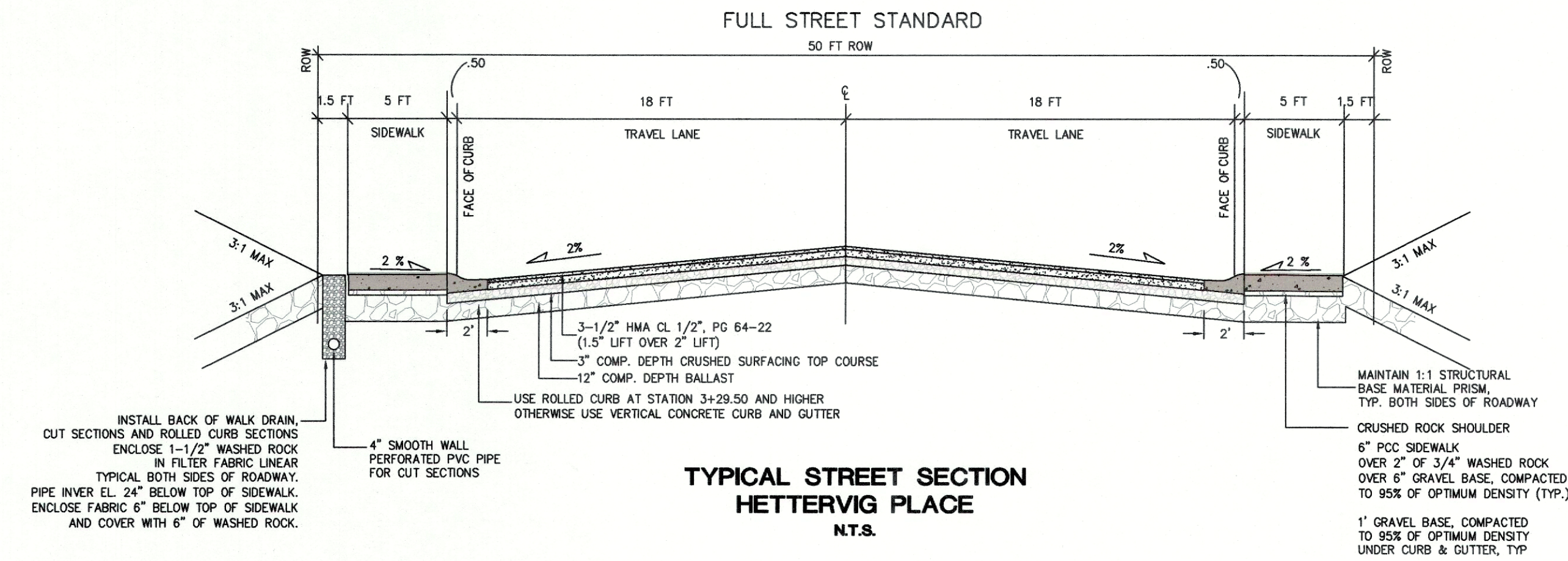
APPROVED

OCT 14 2020

BY *Kevin*  
PUBLIC WORKS DEPARTMENT

RECORD DRAWING





LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
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WHATCOM-SKAGIT  
HOUSING

WOODRIDGE LONG PLAT  
CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 18, T.39N, R.2E, W.1M.

NO.	REVISION	DATE

STREET & STORM  
DRAINAGE  
DETAILS 3

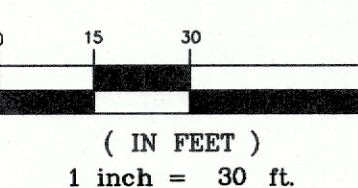
SHEET

13  
OF 18

RECORD DRAWING

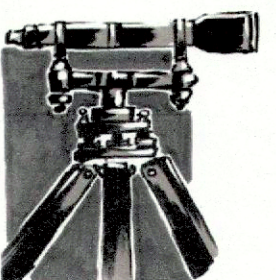
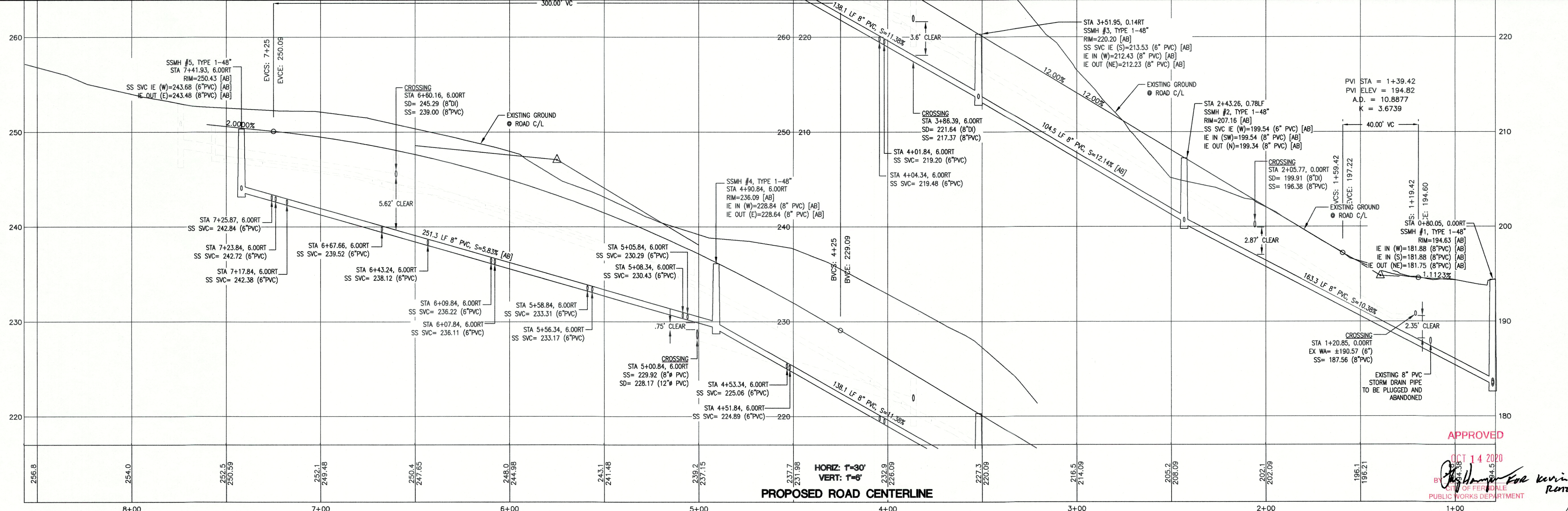
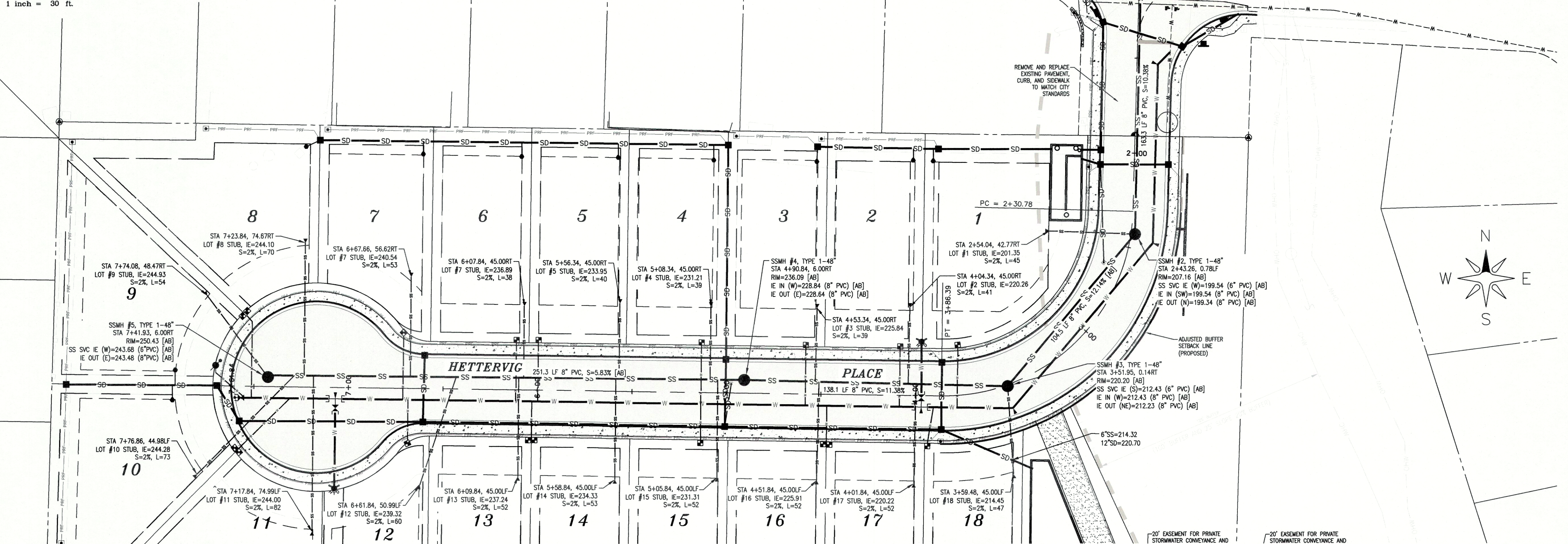


# GRAPHIC SCALE

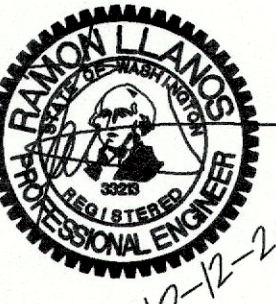


## SEWER SYSTEM NOTES:

- 1) ALL SSMH TO BE A MIN. 48" DIAMETER.
- 2) SSMH #1 TO BE A CUT IN MANHOLE. STRUCTURE SHALL BE A PRE-STUB STRUCTURE, CUT-IN TO THE EXISTING 8" PVC SANITARY SEWER MAINLINE WITH DOUBLE BELL COUPLER CONNECTIONS.
- 3) SEWER BYPASS PLAN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO SCHEDULING IN STREET SEWER WORK AND CONNECTION.



LDES, INC.  
5160 INDUSTRIAL PL. #108  
FERNDAL, WA 98248  
PHONE 360-383-0620  
FAX 360-383-0639



JOB NO.: 1705  
DWG. NAME: 705-CIVIL-BASE - AB.dwg  
DESIGNED BY: RL  
DRAWN BY: RL/EH  
CHECKED BY: RL

WHATCOM-SKAGIT  
HOUSING

## WOODRIDGE LONG PLAT

CITY OF FERNDAL, WHATCOM COUNTY, WASHINGTON  
A PORTION OF THE SE 1/4 OF THE NW 1/4 OF SECTION 19, T.39N, R.2E, WM

## RECORD DRAWING

NO.	REVISION	DATE

SANITARY SEWER  
PLAN & PROFILE

SHEET

14

OF 18

APPROVED

OCT 14 2020

BRANDON L. LILES

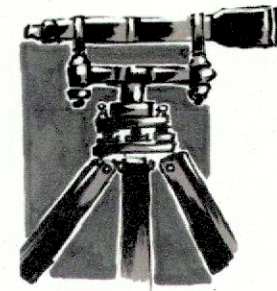
PUBLIC WORKS DEPARTMENT

FOR KERRI RORER

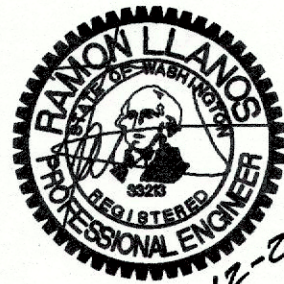
\\SERVER\Share\Common\Land Projects\2017\705-Heather - Woodridge.dwg [705-Civil-BASE - AB.dwg] PLOT DATE: 10/12/2020 10:53 AM

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SANITARY SEWER  
DETAILS

SHEET  
15  
OF 18

RECORD DRAWING

#### BEDDING SPECIFICATIONS FOR PVC PIPE

THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

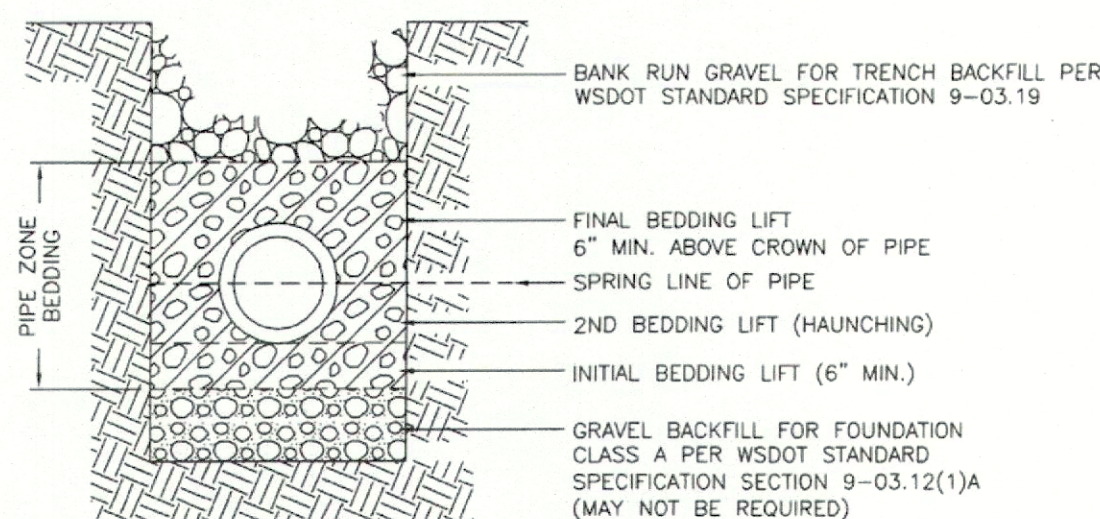
BEDDING FOR SEWERS, DRAINS AND CULVERTS FOR PVC PIPE-

BEDDING MATERIAL FOR PVC PIPE SHALL BE PEA GRAVEL CONFORMING TO THE FOLLOWING SPECIFICATIONS:

PEA GRAVEL - PEA GRAVEL BEDDING SHALL BE A CLEAN MIXTURE FREE FROM ORGANIC MATTER AND CONFORMING TO THE FOLLOWING GRADATION WHEN TESTED IN ACCORDANCE WITH ASTM D422:

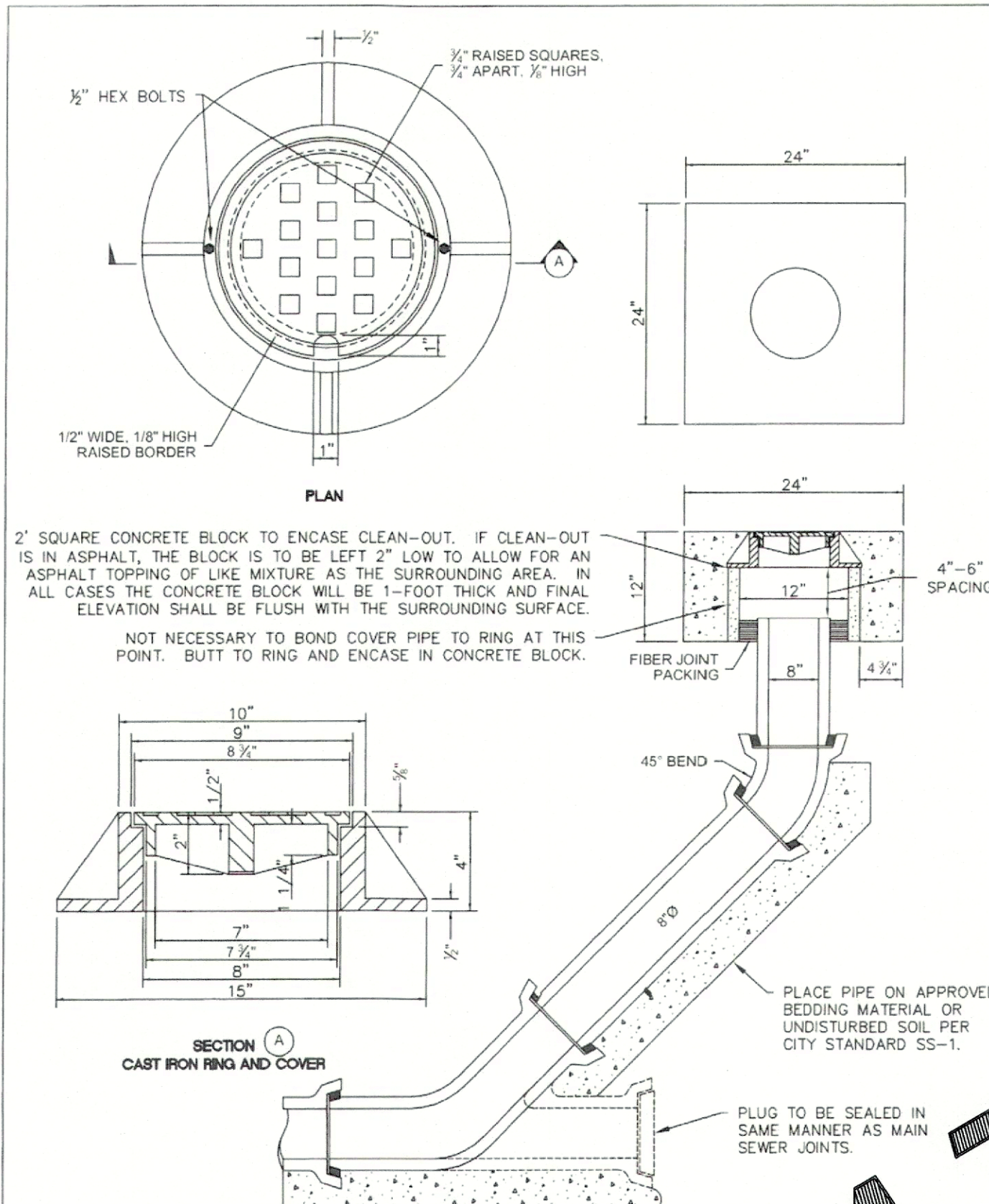
U.S. STANDARD SIEVE SIZE	PERCENTAGE PASSING, BY WT.
3/4"	100
3/8"	95-100
#6	0-10
#200	0-3

BACKFILL - WHENEVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH ABOVE THE PIPE ZONE SHALL BE BACKFILLED WITH BANK RUN GRAVEL BACKFILL TO 95% OF MAXIMUM DENSITY.



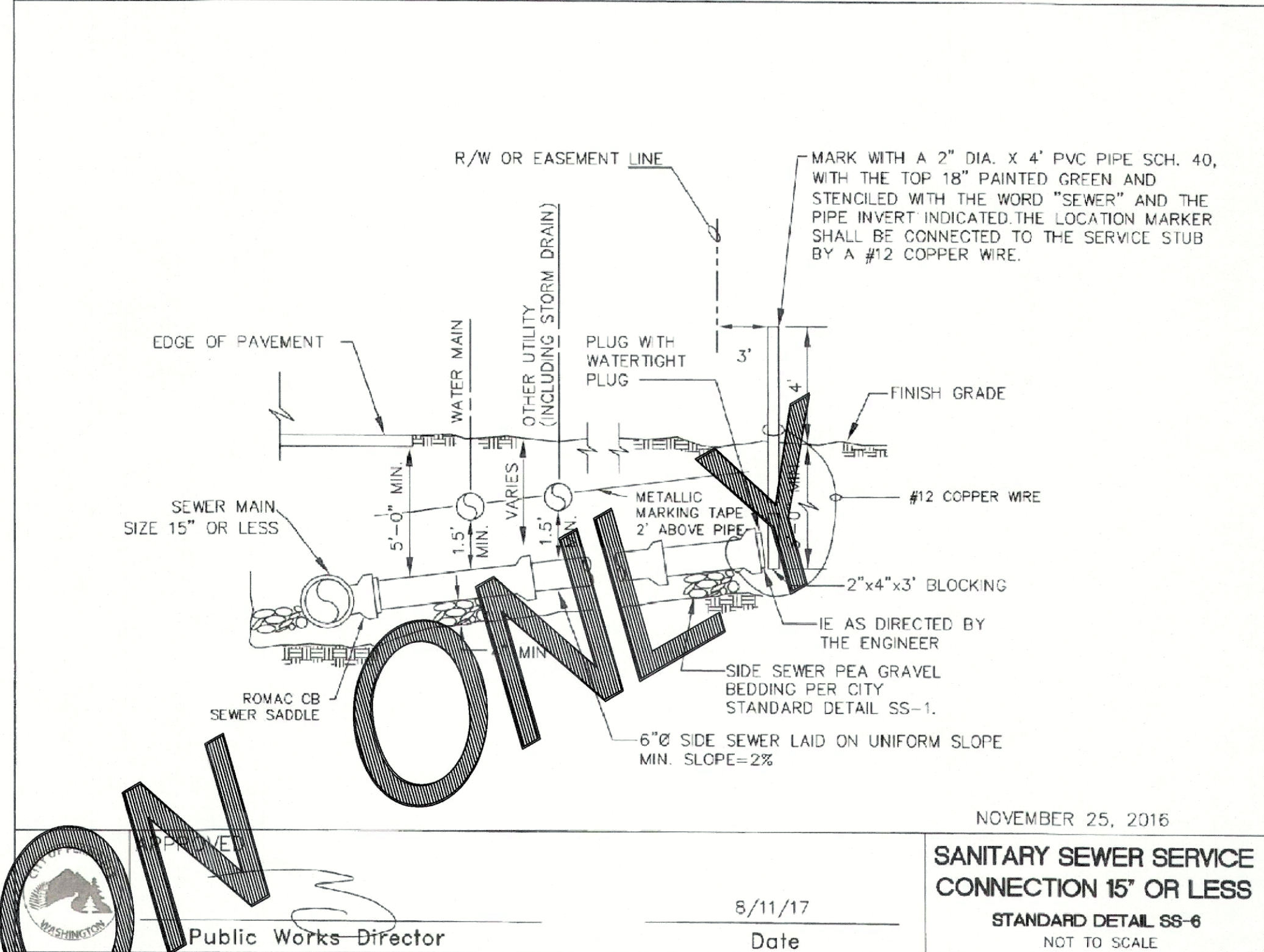
NOVEMBER 23, 2016

	APPROVED		PVC PIPE ZONE BEDDING
	Public Works Director	8/11/17	STANDARD DETAIL SS-1
		Date	NOT TO SCALE



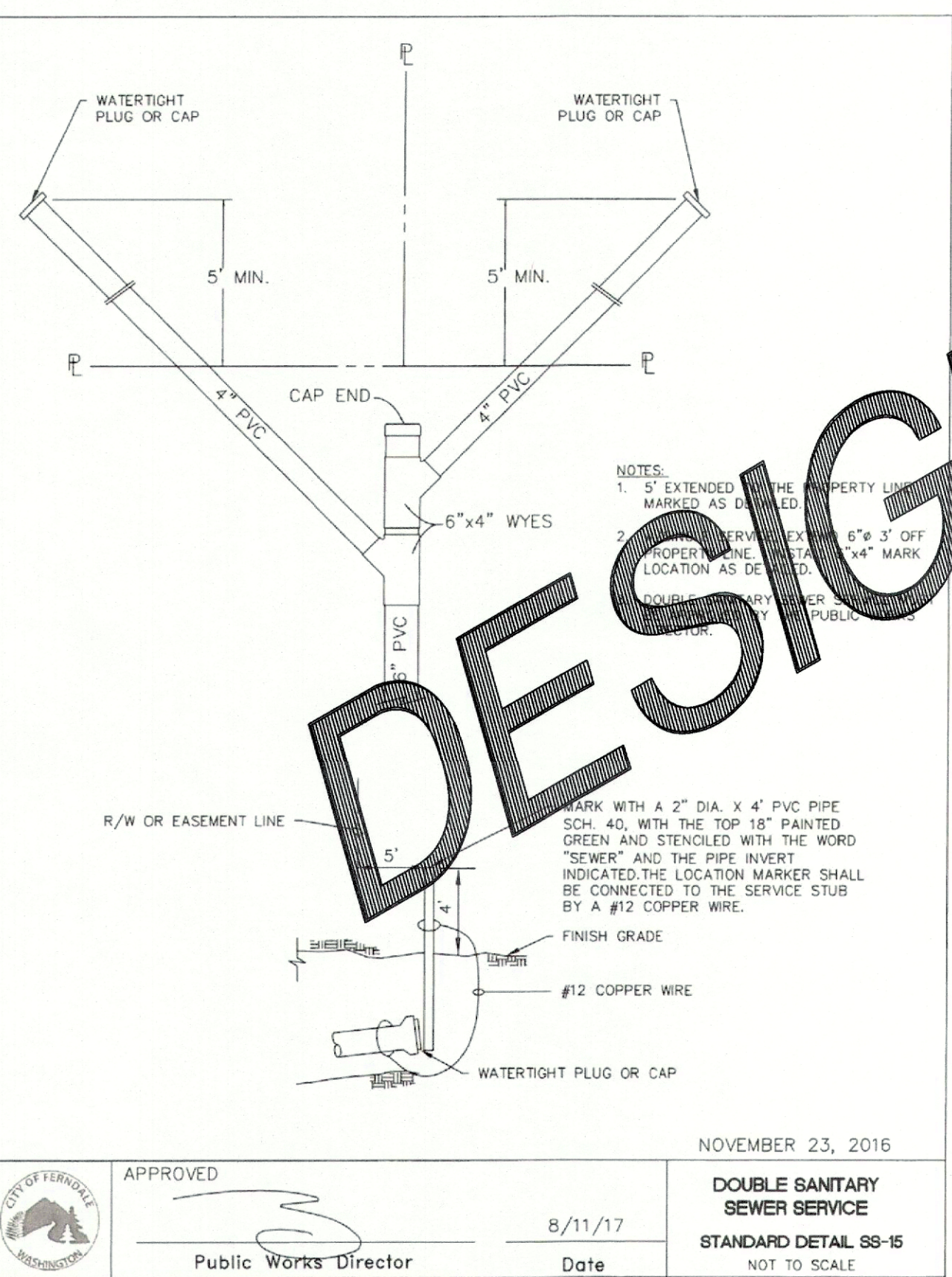
NOVEMBER 23, 2016

	APPROVED		SANITARY SEWER 8\"/>
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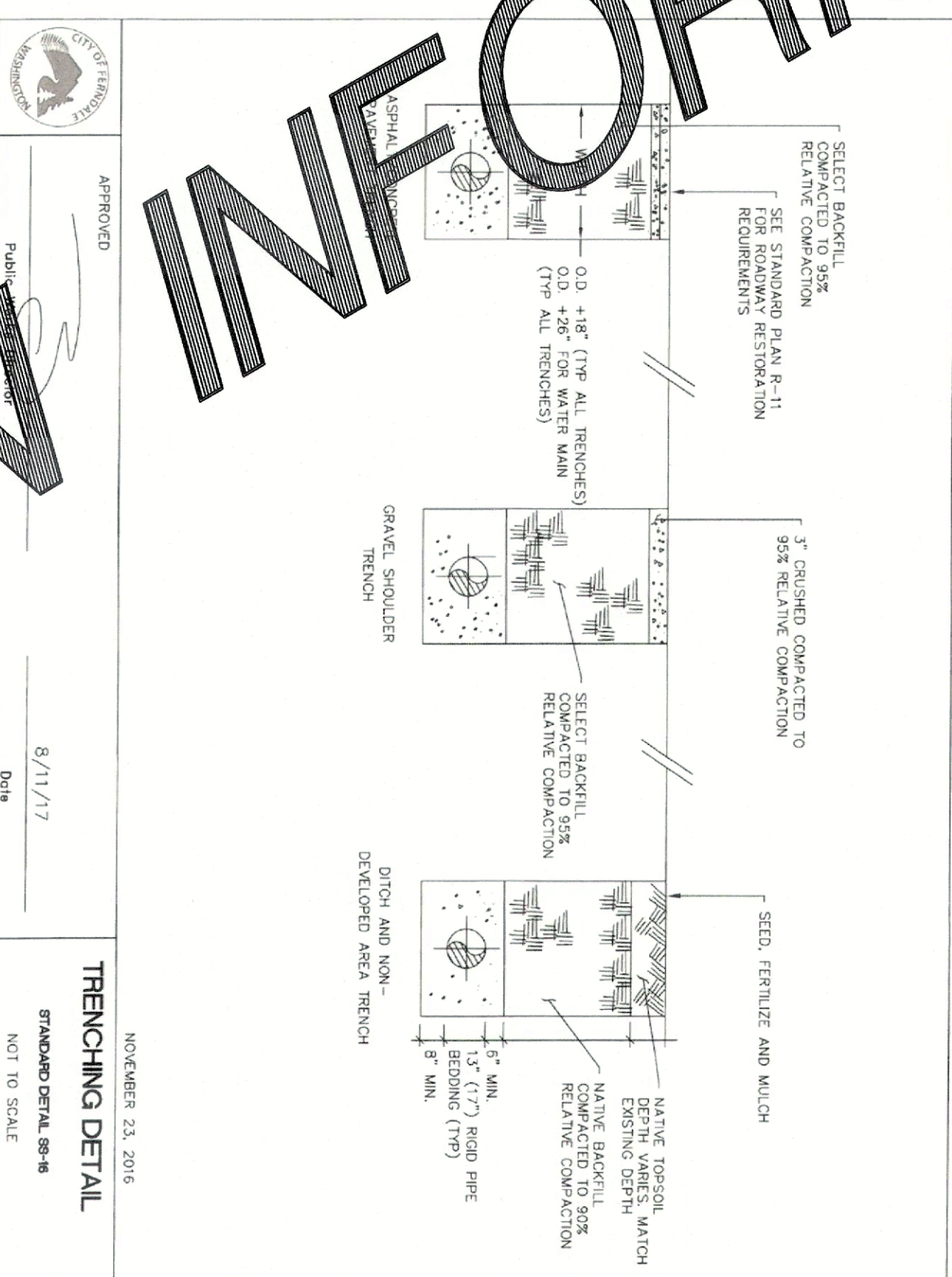
NOVEMBER 25, 2016

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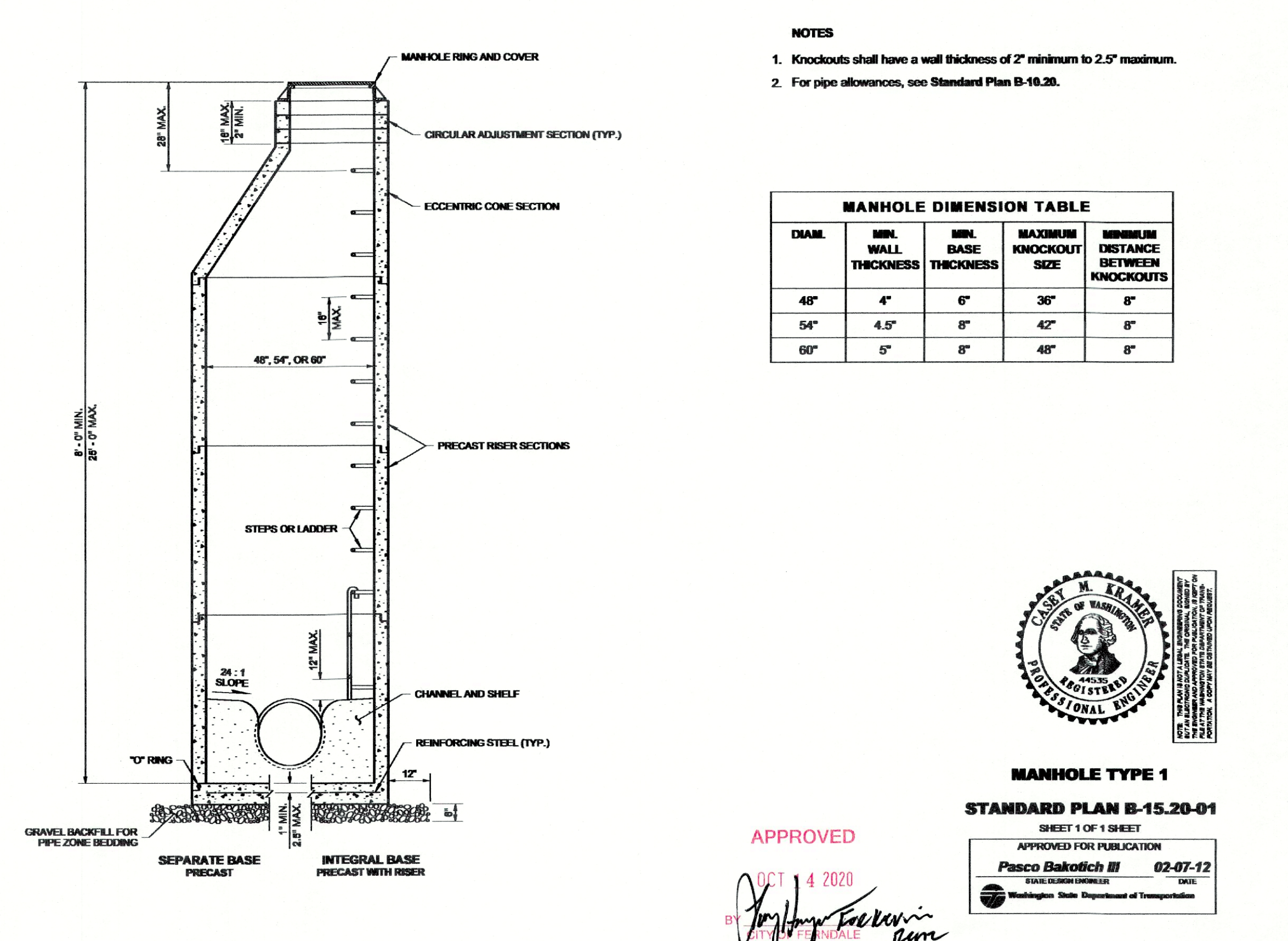
NOVEMBER 23, 2016

	APPROVED		DOUBLE SANITARY SEWER SERVICE
	Public Works Director	8/11/17	STANDARD DETAIL SS-15
		Date	NOT TO SCALE



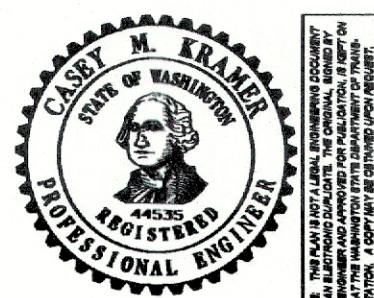
NOVEMBER 23, 2016

	APPROVED		TRENCHING DETAIL
	Public Works Director	8/11/17	STANDARD DETAIL SS-8
		Date	NOT TO SCALE



- NOTES
- Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum.
  - For pipe allowances, see Standard Plan B-10.20.

MANHOLE DIMENSION TABLE				
DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"



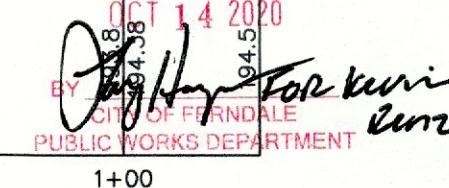
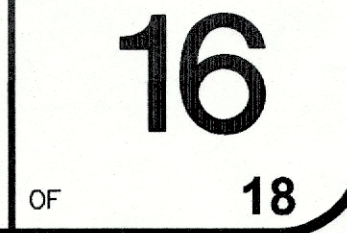
MANHOLE TYPE 1  
STANDARD PLAN B-15.20-01

SHEET 1 OF 1 SHEET  
APPROVED FOR PUBLICATION  
Pasco Bakotich III 02-07-12  
SEAL DESIGN LICENSE NO. 02-07-12  
Washington State Department of Transportation

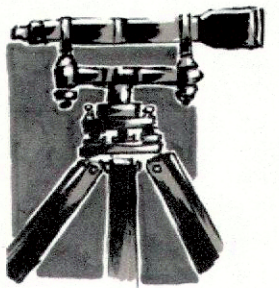
APPROVED

OCT 4 2020  
BY: [Signature]  
PUBLIC WORKS DEPARTMENT

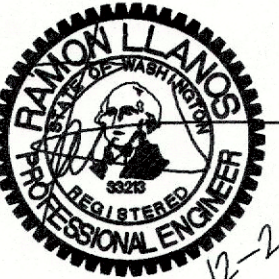








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WHATCOM-SKAGIT HOUSING

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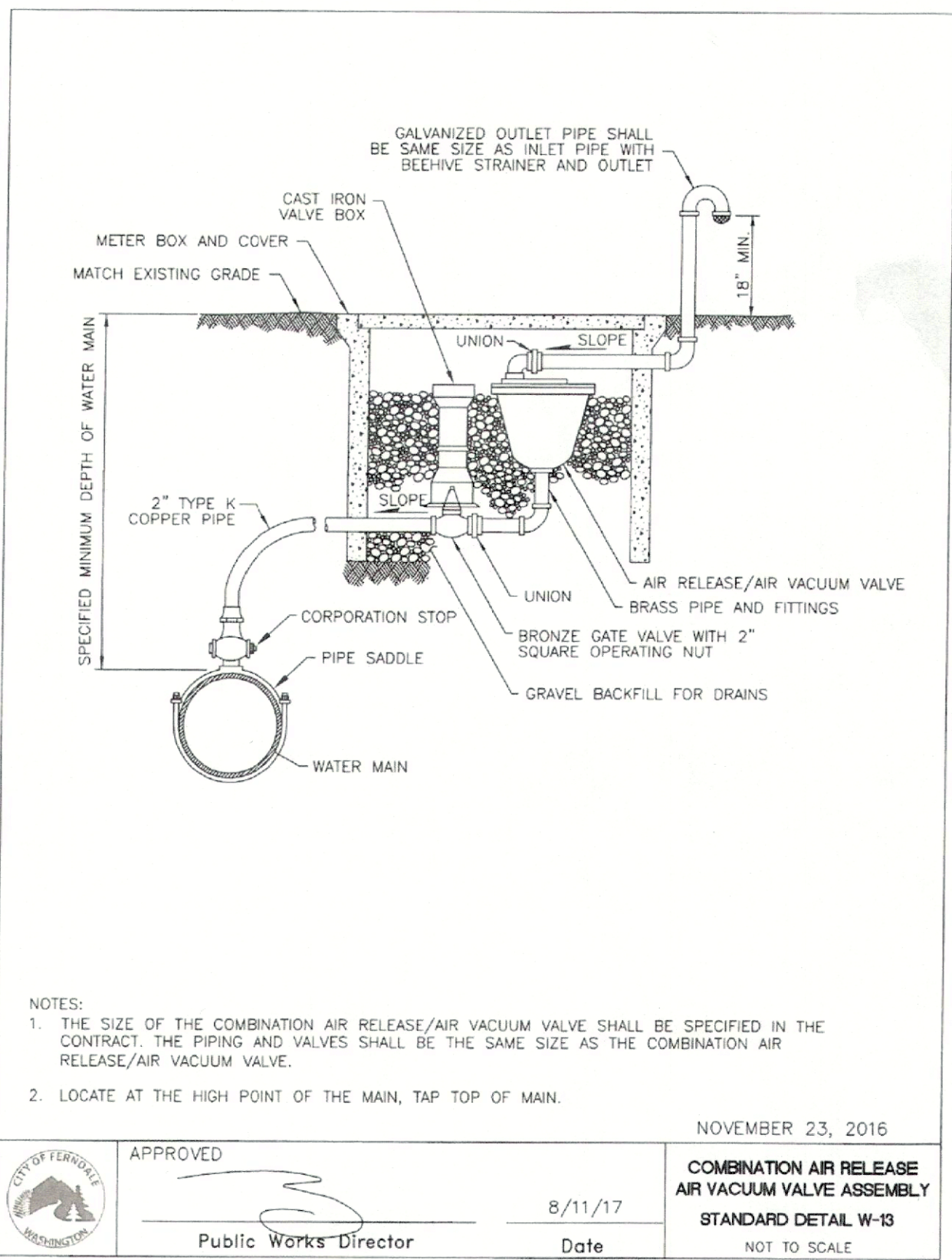
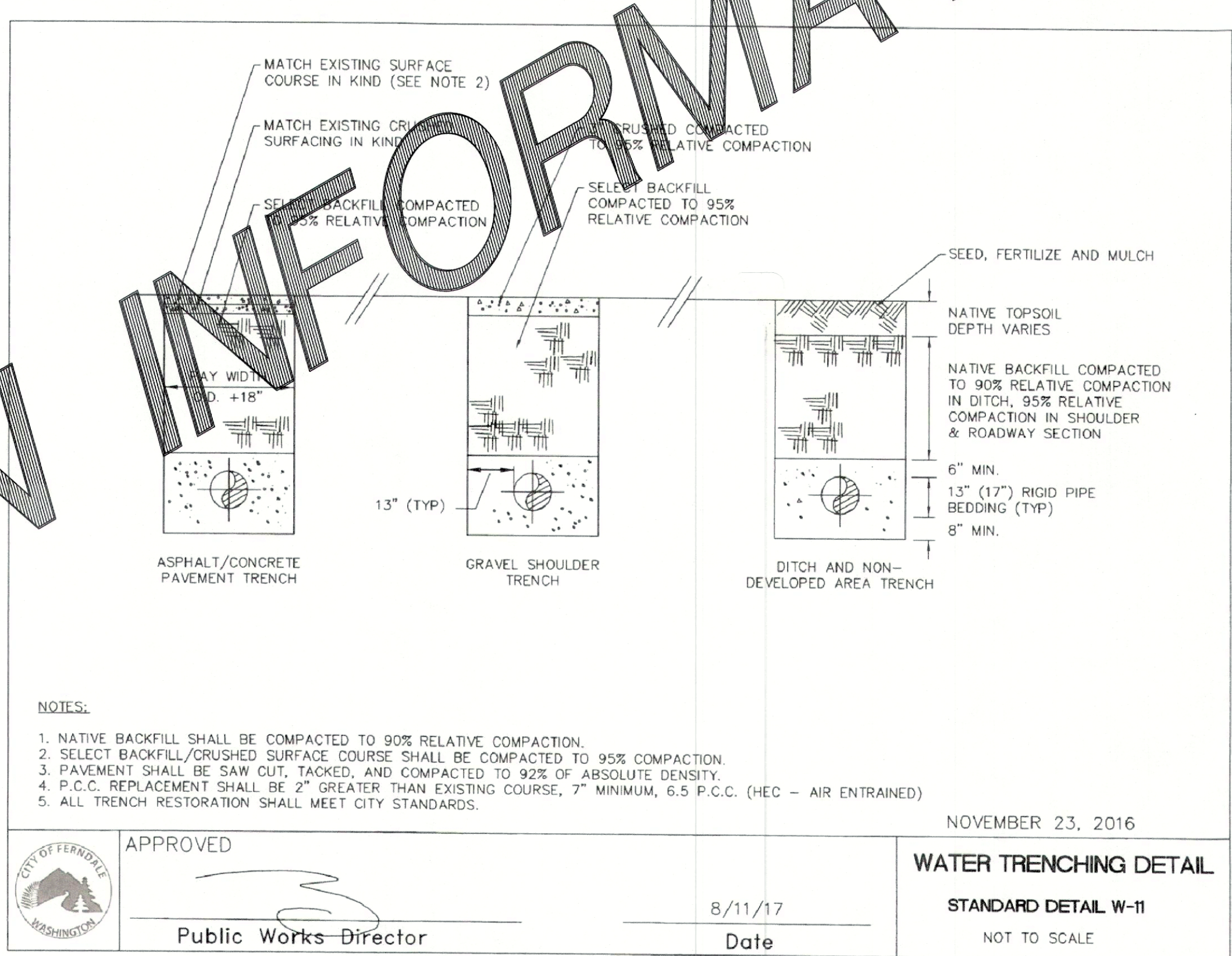
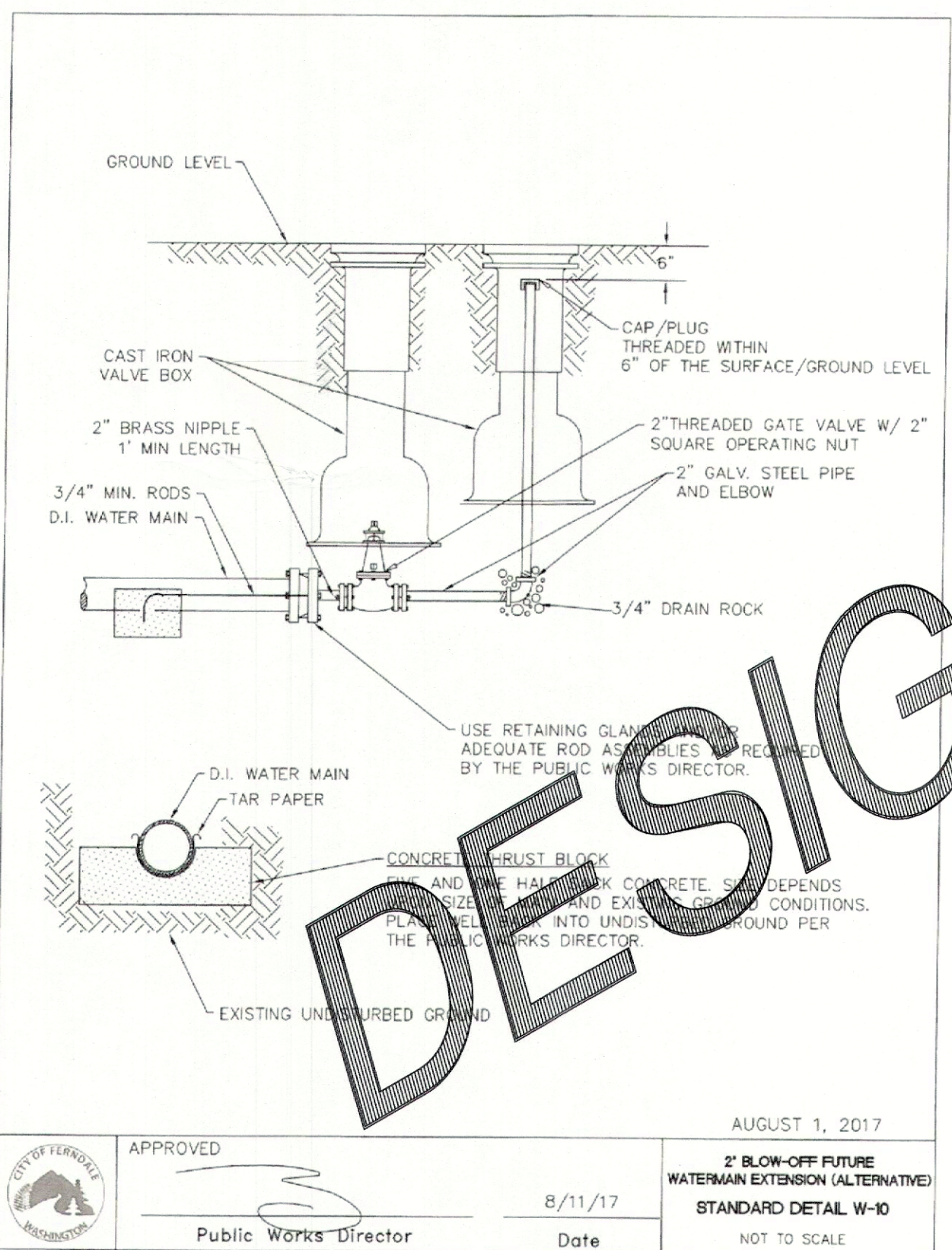
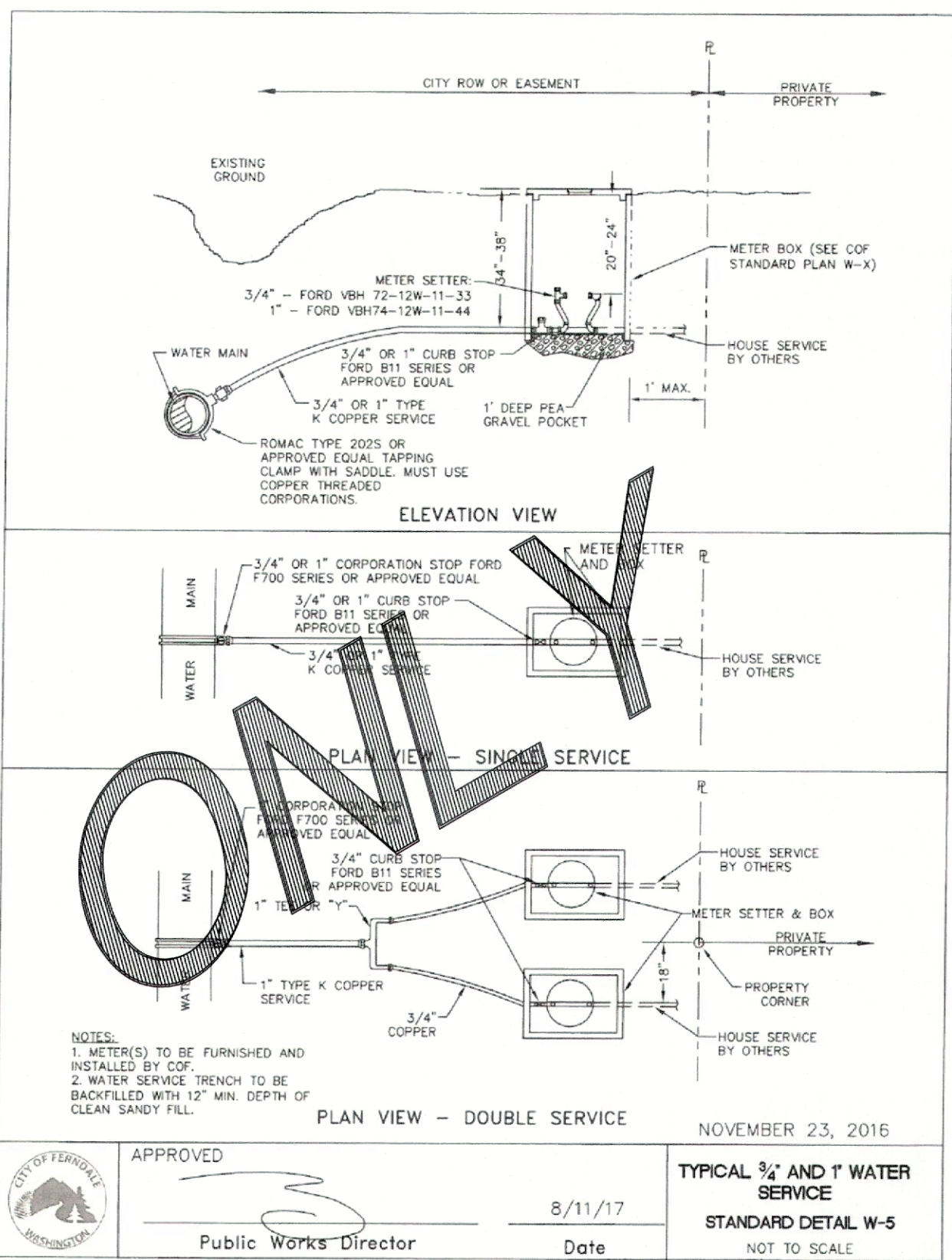
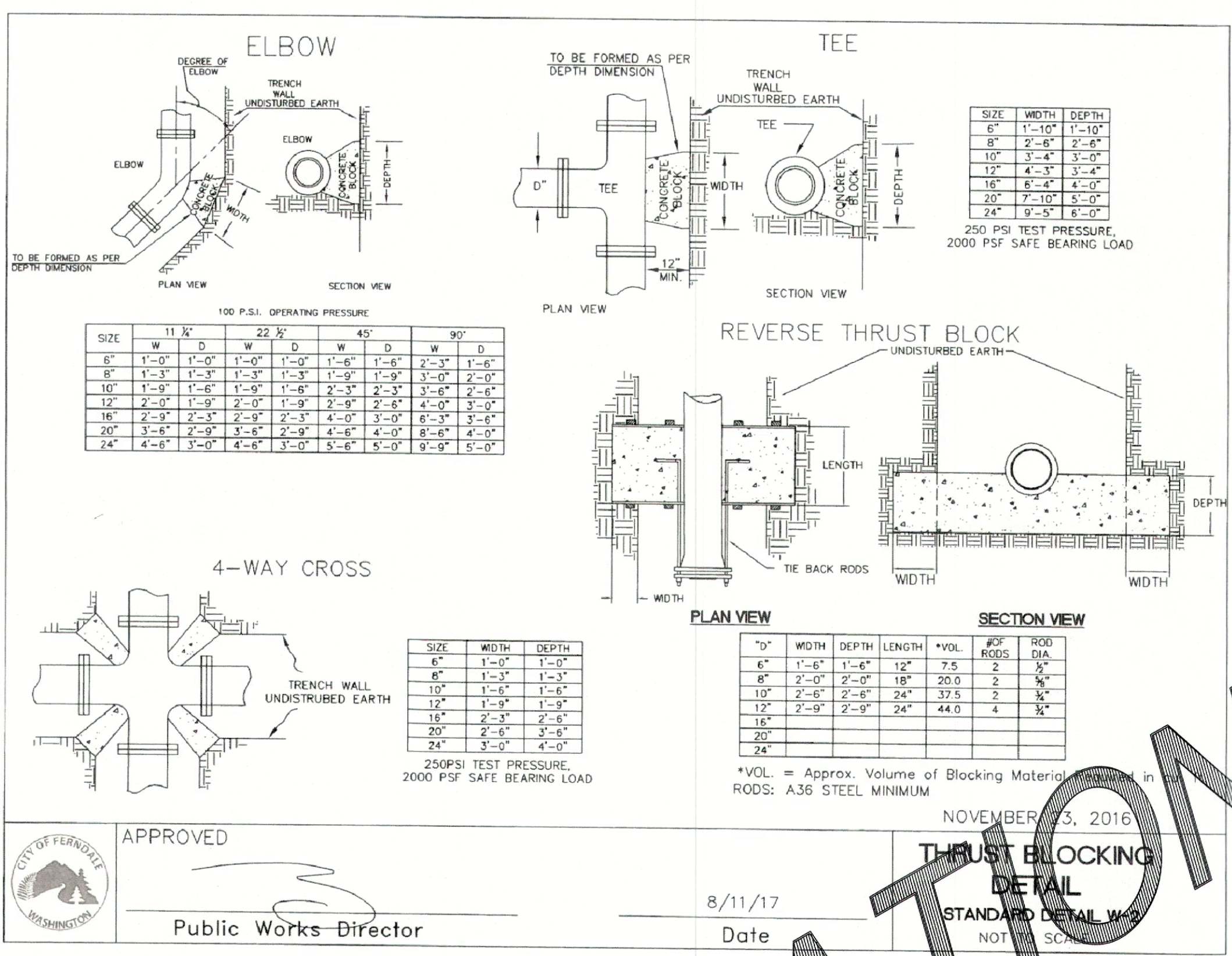
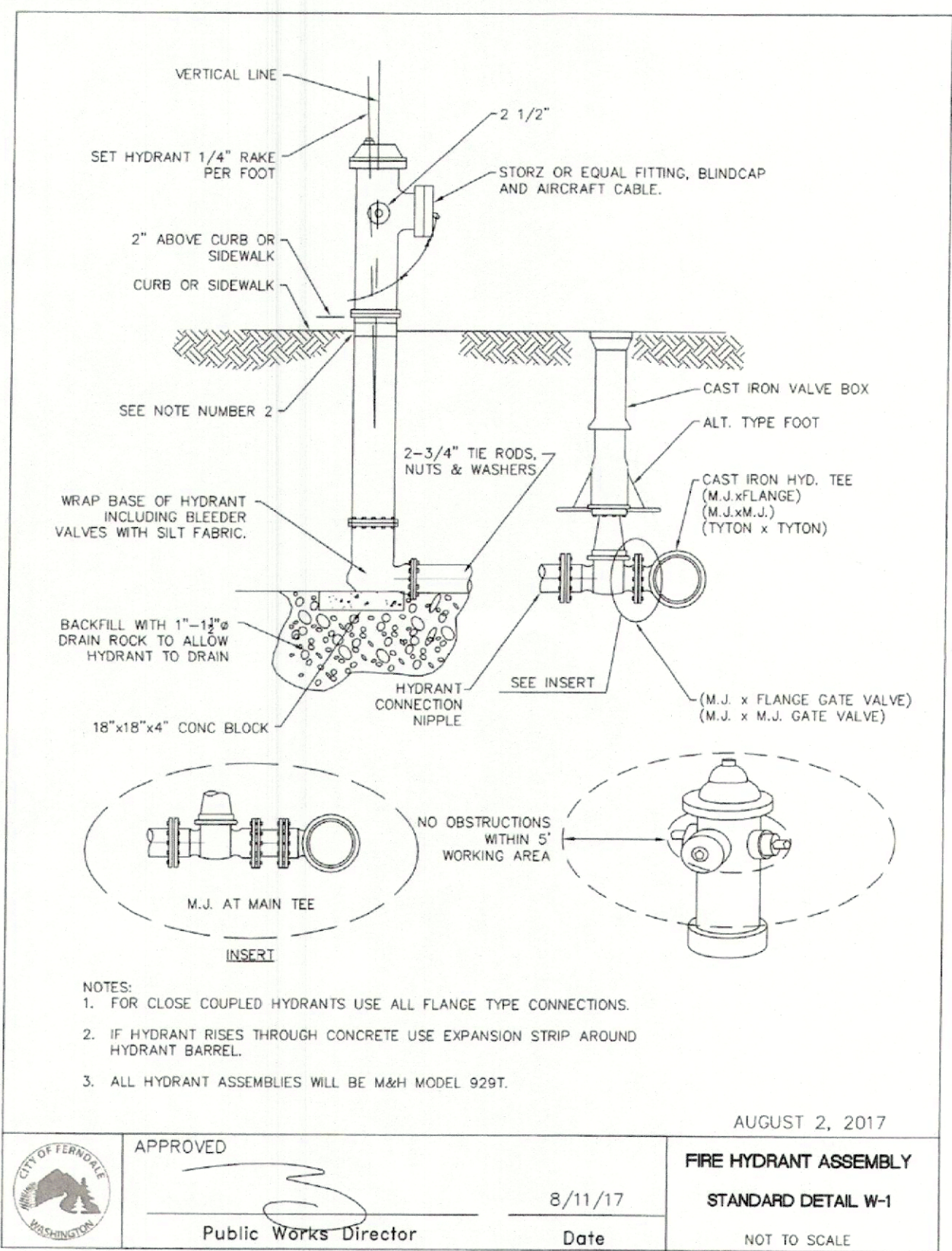
WATER DISTRIBUTION DETAILS

SHEET  
**17**  
OF 18

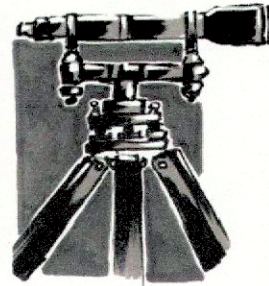
APPROVED

OCT 14 2020

BY: *Jeffrey Fox*  
PUBLIC WORKS DEPARTMENT







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NO.	REVISION	DATE	

CITY OF  
FERNDAL  
GENERAL NOTES

SHEET

18

OF 18

APPROVED

OCT 14 2020

For Rev. in  
PUBLIC WORKS DEPARTMENT

GENERAL REQUIREMENTS:

- ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (WSDOT SPECS.), THE CITY OF FERNDAL DEVELOPMENT STANDARDS (COFDS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOW MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
- THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m., MONDAY THROUGH FRIDAY.
- THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
- THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE EROSION & SEDIMENTATION CONTROL PLAN AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
- SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
- THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDAL AND/OR WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.
- ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT. REPRESENTATIVES FROM THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
  - PLACE OF TEMPORARY EROSION CONTROL MEASURES.
  - CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
  - PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERNDAL.
  - PLACING OR BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDAL, OR OTHER PUBLICLY SHARED FACILITIES.
- GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
  - COMPLETION OF EXCAVATION TO SUBGRADE.
  - COMPLETION OF BALLAST COURSE PLACEMENT
  - COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT
- POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
- ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
- OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
- END OF MAINTENANCE PERIOD
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-107.23 - TRAFFIC CONTROL SHALL APPLY.
- THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDAL PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDAL PUBLIC WORKS DEPARTMENT.
- AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDAL UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDAL DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.
- POTHOLES ALL EXISTING UTILITIES IS REQUIRED PRIOR TO CONSTRUCTION TO VERIFY DESIGN FEASIBILITY. THE CITY DOES NOT GUARANTEE THAT AS-BUILT INFORMATION IN THE CITY DATA DATABASE IS ACCURATE AND WILL NOT BE HELD RESPONSIBLE IF FIELD MODIFICATIONS ARE REQUIRED BECAUSE POTHOLES WAS NOT DONE PRIOR TO DESIGN.
- ALL STRUCTURES AND WATER MAIN CONVEYANCE WILL BE STAKED AND LOCATED BY A LICENSED LAND SURVEYOR PROVIDING OFFSET LOCATION AND ELEVATIONS PRIOR TO CONSTRUCTION AND INSPECTION. FAILURE TO DO SO WILL RESULT IN POTENTIAL RE-INSPECTION AND/OR PROJECT DELAYS.

UNDERGROUND UTILITIES CONSTRUCTION

- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE). VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE PROJECT ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
- THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
  - NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
  - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
  - TRENCH Dewatering DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT POND.
  - WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
- UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDAL DEVELOPMENT STANDARDS.
- ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH 7-INCH MINUS OR 5/8-INCH MINUS WELL GRADED CRUSHED ROCK.
- TESTING OF NEW WATER LINES, STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
- ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% DENSITY IN LIFTS NOT TO EXCEED 24 INCHES WITH A "HOE PACK, OR 8 INCHES WITH HAND-OPERATED COMPACTION."
- OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE FERNDAL STANDARD TRENCH DETAIL(S).
- ALL UTILITY TRENCHES UNDERNEATH AN EXISTING ROADWAY SHALL BE BACKFILLED WITH 150 PSI CONTROLLED DENSITY FILL.
- NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.

EARTHWORK

- THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOLS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
- THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
- UNSATURABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
- THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING

- GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET WSDOT STANDARD SPECIFICATIONS.
- BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
- THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN 1/8 INCH OF FINISHED GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CRUSHED SURFACING TOP COURSE THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

STORM DRAINAGE

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:
  - CATCH BASINS TYPE 1, 1L OR 2 WSDOT STD. DETAILS B-5-20, B-5-40 OR B-10-20
  - "RESIDENTIAL SERVICE LINE" COFSD ST-7 (CITY OF FERNDAL STD DETAIL)
  - CATCH BASINS COFSD ST-16 (CITY OF FERNDAL STD DETAIL)
- STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPPE) UNLESS APPROVED BY THE CITY OF FERNDAL; ALL OTHER STORM SEWER PIPE SHALL BE PVC.
- ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 18" OF COVER IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION). THE PIPES SHALL BE CAST IRON PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.
- COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOAD TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.
- AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREET OR OFF-SITE STORMWATER SYSTEMS.
- POSITIVE LOT DRAINS PER STANDARD DETAIL ST-16.

WATER

- THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:
  - PIPE BEDDING COFSD W-1
  - TRENCH BACKFILL COFSD W-11
  - FIRE HYDRANT ASSEMBLY COFSD W-1
  - THRUST BLOCKING COFSD W-2, W-3 & W-4
  - WATER SERVICE COFSD W-5
- ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDAL DEVELOPMENT STANDARDS, SECTIONS 102 AND 705 AND THE MOST RECENT VERSION OF WSDOT STANDARD SPECIFICATIONS.
- ALL WATER MAIN PIPE SHALL BE DUCTILE IRON MINIMUM THICKNESS CLASS 50, PER AWWA STANDARDS H-10-151-71, WITH JOINT Lining PER AWWA STANDARD C104-71.
- MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND ELBOWS SHALL BE DUCTILE IRON. JOINTS SHALL BE FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO AWWA SPECIFICATIONS C-110-71 AND C-104-71.
- CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDAL DEVELOPMENT STANDARDS, SECTION 102, OR AS APPROVED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(2) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE-CAST BLOCKS ARE ALLOWED.
- CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR SHALL NOTIFY THE CITY OF FERNDAL PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.
- ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(2) AND SECTION 7-09.3(24) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 250 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDAL REQUIREMENTS. THE CITY OF FERNDAL LABORATORY SHALL CONDUCT DISINFECTION AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
- BACKFILL SHALL BE GRAVEL BASE, CLASS 50, ALL STREET CLOSURES SHALL BE RESTORED TO ORIGINAL FINISH ELEVATION AND SHALL BE COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
- ALL PIPES SHALL HAVE A MINIMUM COVER OF 2'-0".
- ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 10 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NON-SERVICE SHUT-OFF PRESSURE OF 150 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE EQUIPPED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE MOUNTED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGED OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.
- WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE COFDS W-5.
- FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFSD W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
  - FIRE HYDRANTS SHALL HAVE TWO INDIVIDUAL PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE EITHER IOWA OR M.H. 929T HYDRANTS.
  - FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
  - IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2" OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
  - UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
  - FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:
  - TYPICAL STREET SECTION PER THESE PLANS
  - PCC CURB AND GUTTER COFSD R-9
  - PCC SIDEWALKS COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
  - PCC CURB RAMPS WSDOT STD. DETAIL F-40.
- ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.05-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
- THE OWNER SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE UNDER ALL PAVING AREAS.
- ASPHALT CONCRETE PAVEMENT SHALL BE CLASS "B" MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 5-04, EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.
- CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).
- CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 6-02.3(2)(b).
- CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH CITY STANDARDS, DRAWING NO. R-12.
- CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE CITY STANDARDS, DRAWING NO. R-15. A 2- INCH LATER OF 3/4 INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.
- CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER. IN ACCORDANCE WITH WSDOT STANDARDS SPECIFICATIONS, SECTION 6-04 AND CITY OF FERNDAL STANDARDS, DRAWING R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD PLANS F-40. WHERE NEW CEMENT CONCRETE CURB AND GUTTER IS CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPIDE FLOW IN THE GUTTER LINE.
- PAVEMENT:
  - SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
  - A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
  - ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. 4R-1000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT, WHERE NEWLY CONSTRUCTED PAVEMENT MEETS EXISTING PAVING. THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROTAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
- THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND CITY STANDARDS, DRAWING NO. R-8.
- TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SECTION 7-08.
- STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION, SECTION 7-04. MATERIAL SHALL BE HANCOCK SURFLOK F477 PIPE OR CITY APPROVED EQUAL. LOTS STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT STANDARD SPECIFICATION, SECTION 9-05.1(2).
- PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT STANDARD SPECIFICATION 7-01.3(2).

SANITARY SEWER SYSTEMS

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF FERNDAL STANDARD SPECIFICATIONS AND DETAILS, AWWA STANDARD SPECIFICATIONS, AND WSDOT STANDARD SPECIFICATIONS, MOST RECENT EDITIONS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.
- ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDAL. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. EXISTING PUBLIC SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY ENGINEER. A CITY ENGINEER SHALL BE PRESENT FOR ALL SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO AWWA STANDARD C900-96. ALL SANITARY SEWER MAINS SHALL BE INSTALLED TO CITY SPECIFICATIONS.
- SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS 50 BANK RUN GRAVEL WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MAXIMUM DENSITY. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
- ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDAL STANDARD DETAILS AND SHALL BE PRE-CHANNELLED. MANHOLE LIDS ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
- ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDAL STANDARD DETAILS SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4". CONTRACTOR SHALL EXTEND SEWER STUB 5 FEET BEYOND UTILITY PERIOD TO 10 FEET BEYOND UTILITY PERIOD.
- EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATER TIGHT PLUG. EACH STUB SHALL BE MARKED WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.