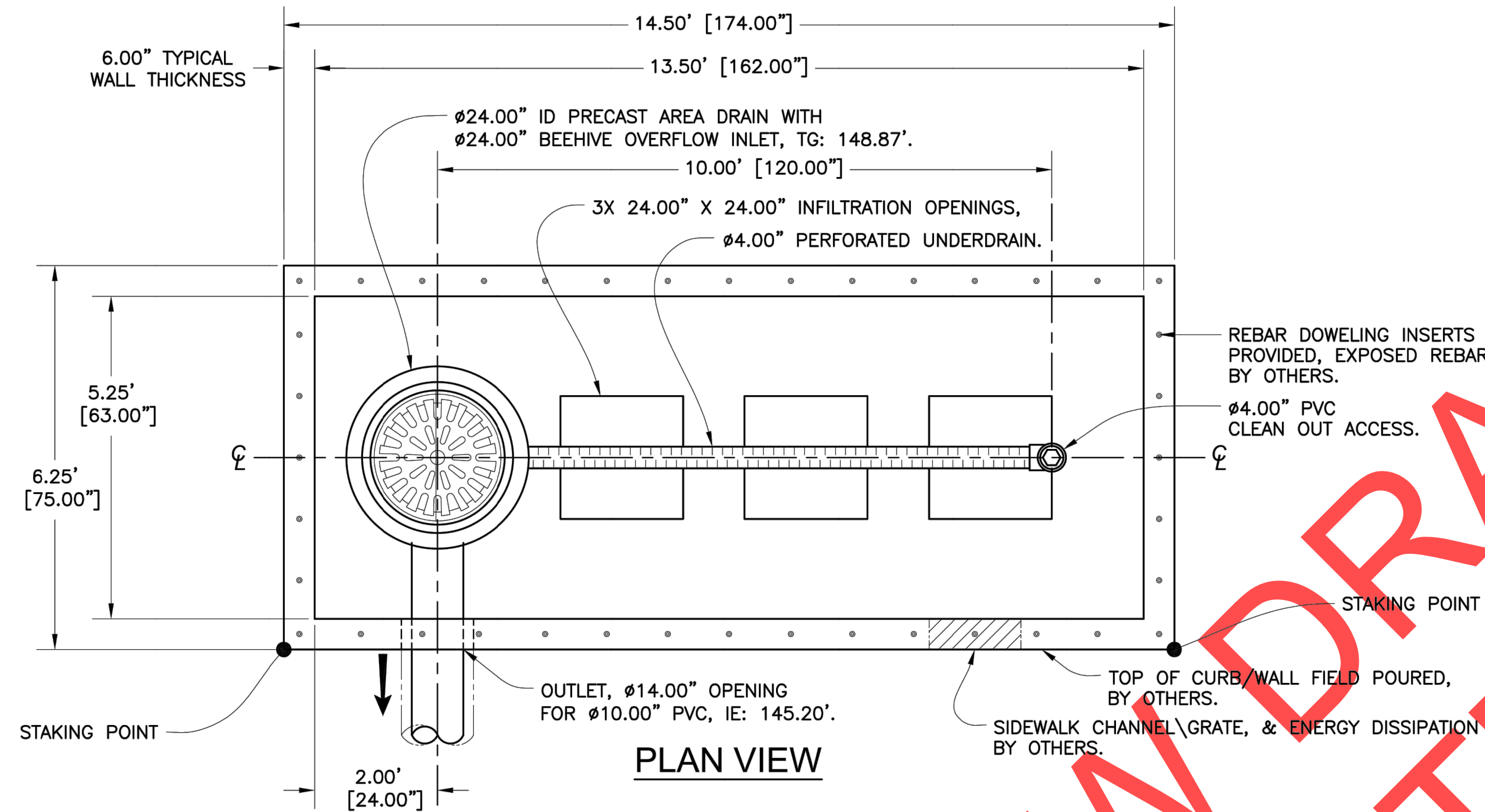


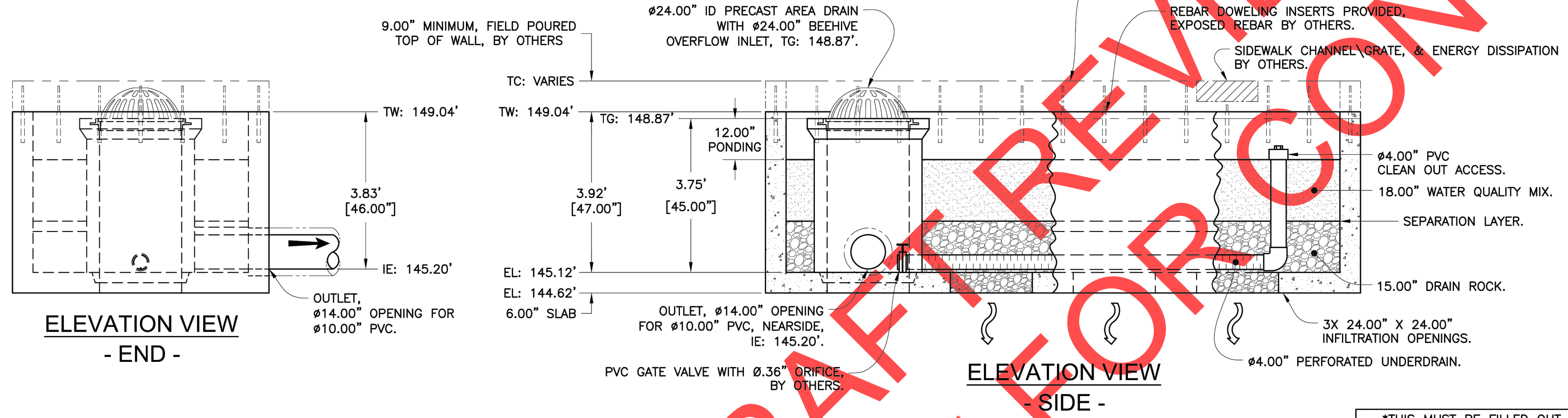
PDD-9133

UNIT: FP-BF 1	
BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	17,750 LBS
Ø24" ID OVERFLOW CATCH BASIN - 1 EACH	SHIPPED LOOSE
Ø24" BEEHIVE GRATE - 1 EACH	SHIPPED LOOSE



NOTES:

- DESIGN LOADINGS:
 - AASHTO HS-20-44 W/ IMPACT.
 - ASSUMED WATER TABLE = BELOW INVERT.
 - DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
- CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
- STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
- CEMENT: ASTM C-150 SPECIFICATION.
- REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
- REFERENCE STANDARD:
 - ASTM C 890
 - ASTM C 913
- THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE PRECAST UPON REVIEW OF THIS SUBMITTAL.
- OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
- ALL EXTERIOR SURFACES SUPPLIED WITH "FORM FINISH"
- CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
- CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED & LEVEL PER PROJECT SPECIFICATIONS)
- SYSTEM SHIPPED EMPTY. INTERNAL PIPE PROVIDED BY OLDCASTLE. SOIL/FILTER MEDIA, DRAIN ROCK PROVIDED & INSTALLED BY OTHERS.
- ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.



REV	DESCRIPTION	BY	DATE
2	OUTLET WAS #12.00", IS #10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	WAS 5.50'X13.00", IS 5.25'X13.50", DIMENSION UNDERDRAIN TO 10.00' TO BYPASS CL. RELOCATED BYPASS, INFILTRATION OPENINGS WERE 24"X36", IS 24"X24".	JPR	11/30/18

THIS MUST BE FILLED OUT BEFORE MANUFACTURING BEGINS

APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

REVISE AND RESUBMIT:

BioMod™ Bioretention System

Customer: **Otak**

Job Name: **5th Street & Kinsman - Wilsonville, OR**

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	MJT	ZHD / JMH		

DRAWING NUMBER: **PDD-9133** SHEET: **1 OF 1**

SIGNATURE _____ DATE _____

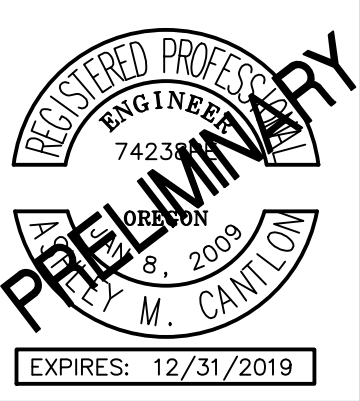


Oldcastle Infrastructure
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REVISIONS



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date	1 February 2019
Scale	AS SHOWN
Designed By	PH/BB
Drawn By	SLR
Checked By	A.HENDY

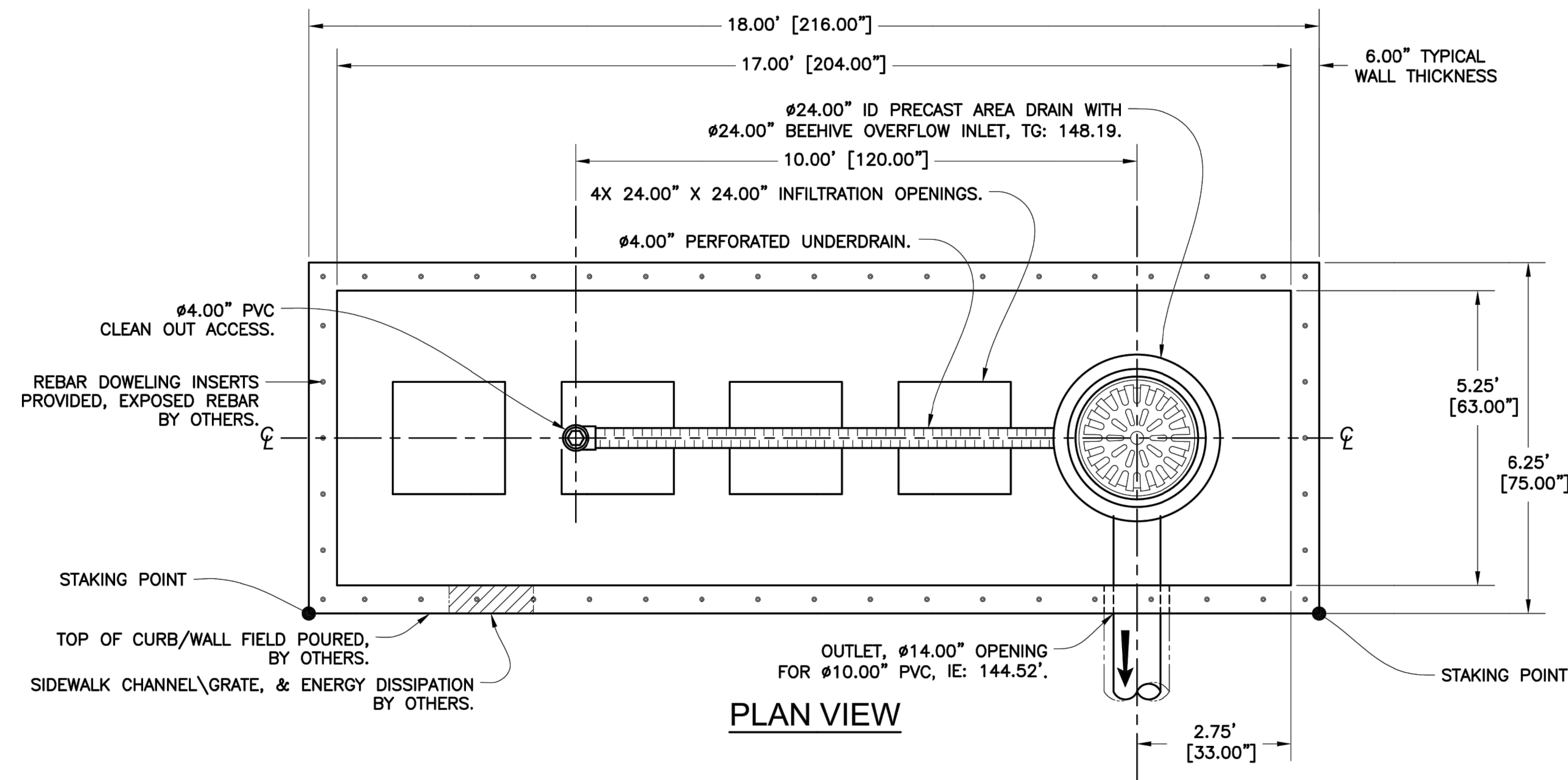
SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



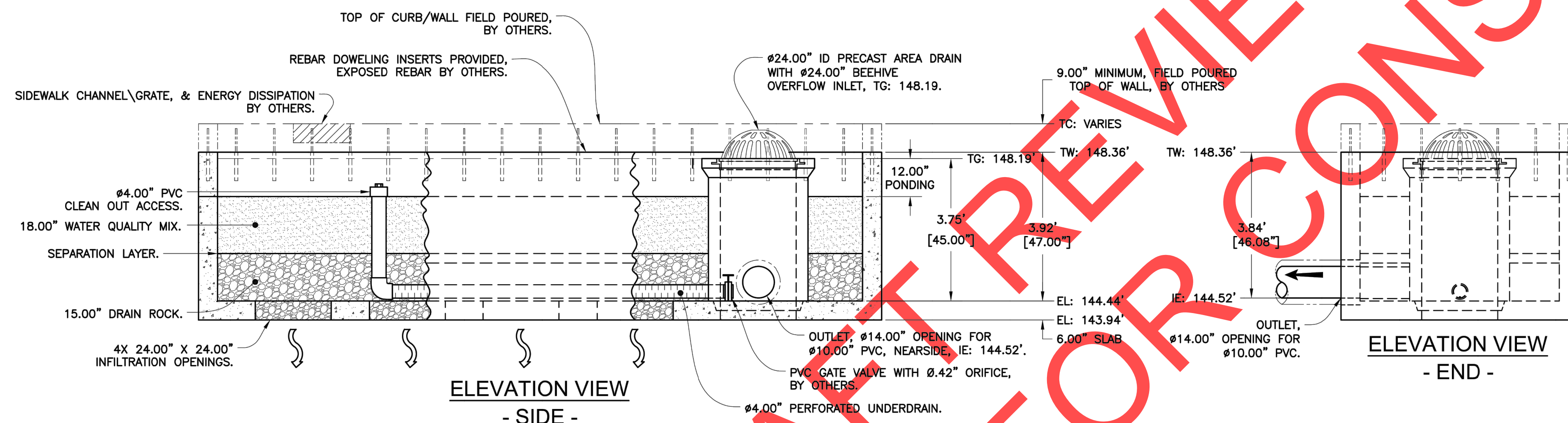
CIP #	4196
PROJECT #	2017-02-001
SF11	
76 of 211	

REVIEW SET - NOT FOR CONSTRUCTION

PDD-9134



PLAN VIEW



ELEVATION VIEW - SIDE -

UNIT: FP-BF 2

BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	17,250 LBS
Ø24" ID OVERFLOW CATCH BASIN - 1 EACH	SHIPPED LOOSE
Ø24" BEEHIVE GRATE - 1 EACH	SHIPPED LOOSE

NOTES:

- DESIGN LOADINGS:
 - AASHTO HS-20-44 W/ IMPACT.
 - ASSUMED WATER TABLE = BELOW INVERT.
 - DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
- CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
- STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
- CEMENT: ASTM C-150 SPECIFICATION.
- REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
- REFERENCE STANDARD:
 - ASTM C 890
 - ASTM C 913
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- OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
- ALL EXTERIOR SURFACES SUPPLIED WITH "FORM FINISH"
- CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
- CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED & LEVEL PER PROJECT SPECIFICATIONS)
- SYSTEM SHIPPED EMPTY. INTERNAL PIPE PROVIDED BY OLDCASTLE. SOIL/FILTER MEDIA, DRAIN ROCK PROVIDED & INSTALLED BY OTHERS.
- ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.



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APPROVED W/ NO EXCEPTIONS TAKEN:
 APPROVED AS NOTED:
 REVISE AND RESUBMIT:

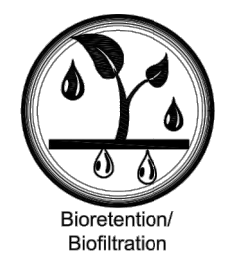
Customer: **Otak**
 Job Name: **5th Street & Kinsman - Wilsonville, OR**

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	MJT	ZHD / JMH		

DRAWING NUMBER: **PDD-9134** SHEET: **1 OF 1**

SIGNATURE _____ DATE _____

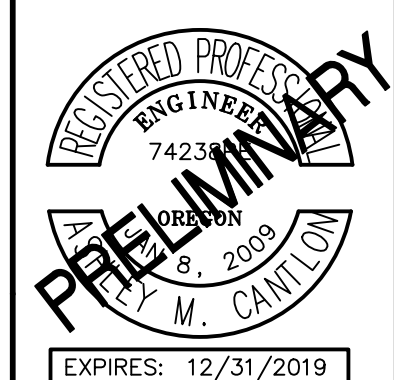
2	OUTLET WAS Ø12.00", IS Ø10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	WAS 5.50"X16.50", IS 5.25"X17.00", DIMENSION UNDERDRAIN TO 10.00' TO BYPASS CL. RELOCATED BYPASS, INFILTRATION OPENINGS WERE 24"X36", IS 24"X24".	JPR	11/30/18



BioMod™ Bioretention System

Oldcastle Infrastructure logo and contact information.

REVISIONS



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: PH/BB
 Drawn By: SLR
 Checked By: A.HENDY

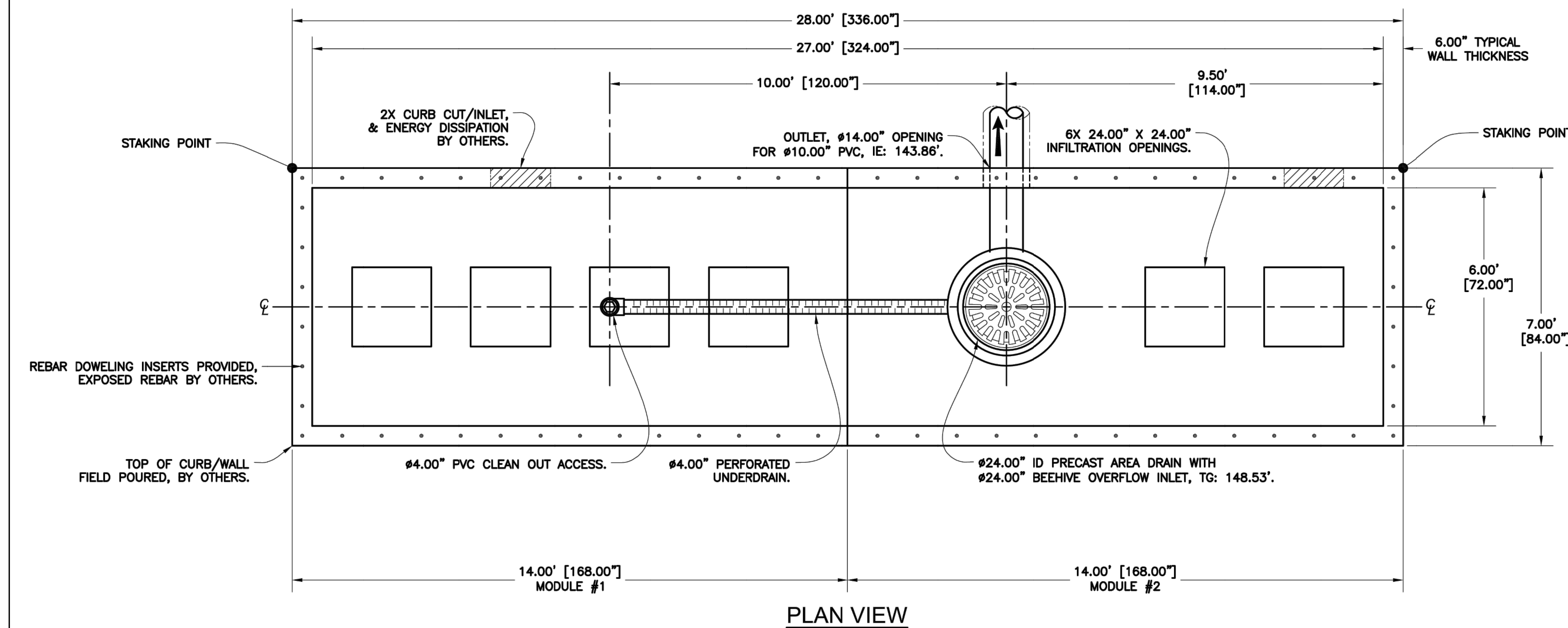
SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



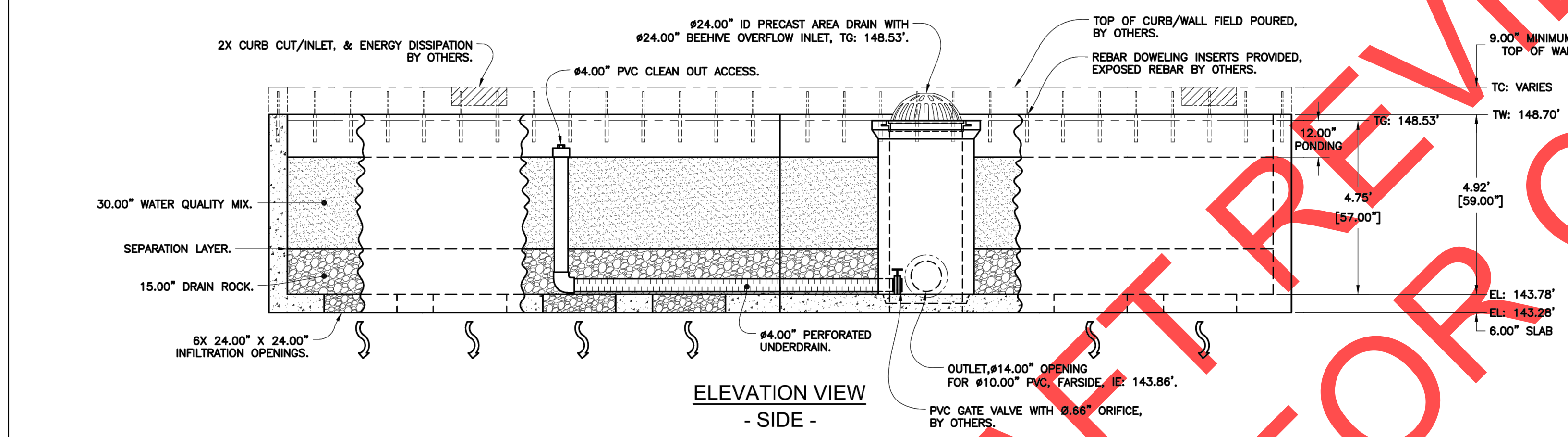
CIP # 4196
 PROJECT # 2017-02-001
 SF12
 77 of 211

REVIEW SET - NOT FOR CONSTRUCTION

PDD-9135



PLAN VIEW

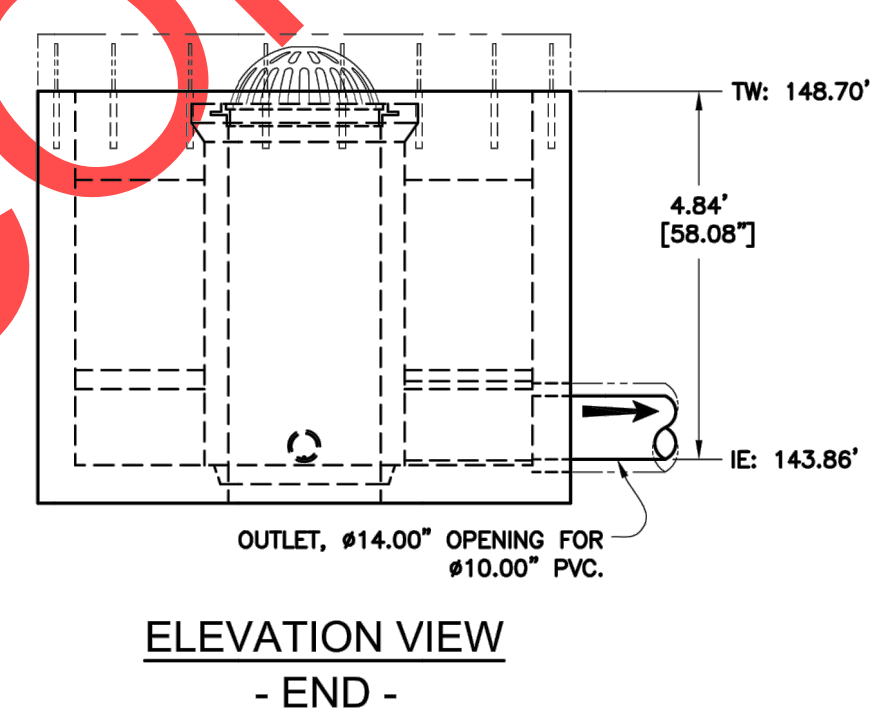


ELEVATION VIEW - SIDE

UNIT: FP-BF 3	
BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	19,250 LBS
MODULE #2	19,750 LBS
#24\"/>	

NOTES:

- DESIGN LOADINGS:
 - AASHTO HS-20-44 W/ IMPACT.
 - ASSUMED WATER TABLE = BELOW INVERT.
 - DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
- CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
- STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
- CEMENT: ASTM C-150 SPECIFICATION.
- REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
- REFERENCE STANDARD:
 - ASTM C 890
 - ASTM C 913
- THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE PRECAST UPON REVIEW OF THIS SUBMITTAL.
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- ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.



ELEVATION VIEW - END

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APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

REVISE AND RESUBMIT:

SIGNATURE _____ DATE _____

BioMod™ Bioretention System

Customer: **Otak**

Job Name: **5th Street & Kinsman - Wilsonville, OR**

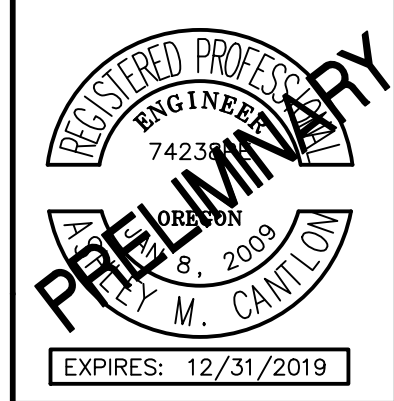
DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	MJT	ZHD / JMH		

DRAWING NUMBER: **PDD-9135** SHEET: **1 OF 1**

REV	DESCRIPTION	REV BY	DATE
2	OUTLET WAS #12.00", IS #10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	ID WAS 23.50", IS 27.00", DIMENSION UNDERDRAIN TO 10.00" TO BYPASS CL. RELOCATED BYPASS, DEPTH WAS 47.00", IS 59.00". INFILTRATION OPENINGS WERE 24"X36", IS 24"X24".	JPR	11/30/18



REVISIONS



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

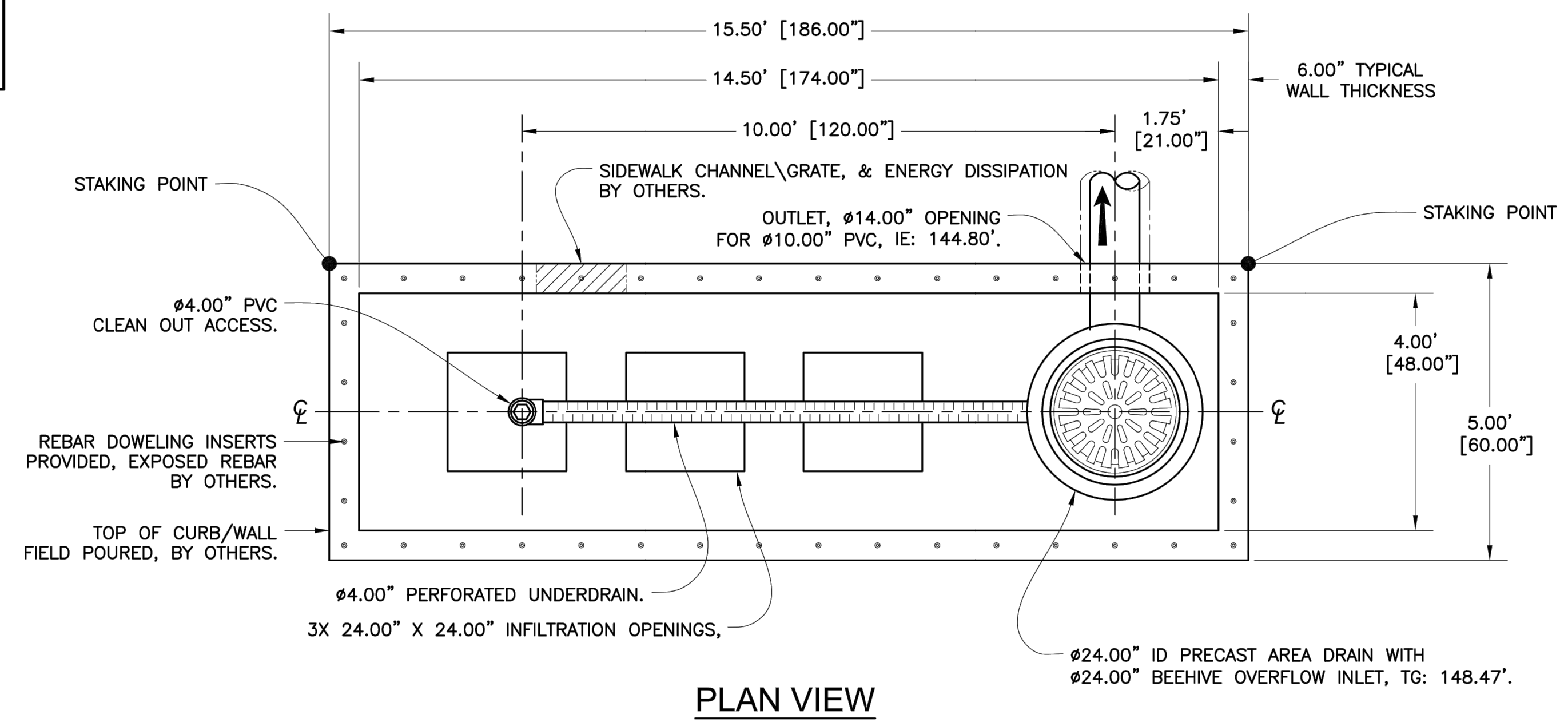
SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



CIP # 4196
PROJECT # 2017-02-001
SF13
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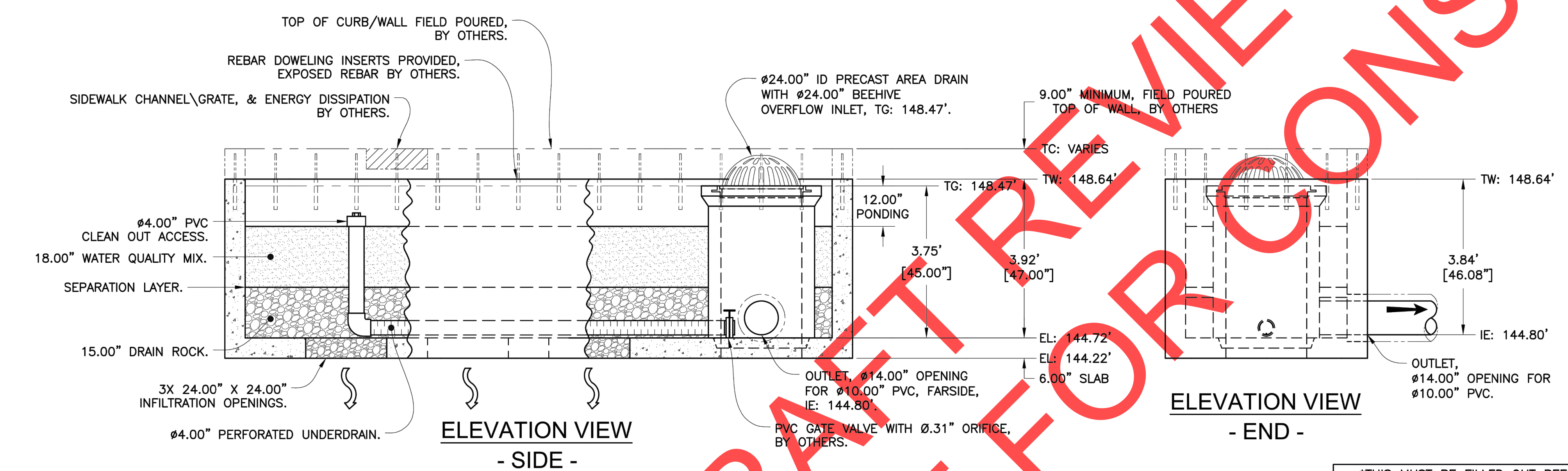
REVIEW SET - NOT FOR CONSTRUCTION

PDD-9137



UNIT: FP-BF 4	
BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	16,750 LBS
Ø24\"/>	

- NOTES:
- DESIGN LOADINGS:
 - A. AASHTO HS-20-44 W/ IMPACT.
 - B. ASSUMED WATER TABLE = BELOW INVERT.
 - C. DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - E. LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - F. NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
 - CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
 - STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
 - CEMENT: ASTM C-150 SPECIFICATION.
 - REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
 - REFERENCE STANDARD:
 - A. ASTM C 890
 - B. ASTM C 913
 - THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE PRECAST UPON REVIEW OF THIS SUBMITTAL.
 - OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
 - ALL EXTERIOR SURFACES SUPPLIED WITH "FORM FINISH"
 - CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
 - CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED & LEVEL PER PROJECT SPECIFICATIONS)
 - SYSTEM SHIPPED EMPTY. INTERNAL PIPE PROVIDED BY OLDCASTLE. SOIL/FILTER MEDIA, DRAIN ROCK PROVIDED & INSTALLED BY OTHERS.
 - ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.



ELEVATION VIEW
- END -

REV	DESCRIPTION	BY	DATE
2	OUTLET WAS Ø12.00", IS Ø10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	WAS 4.50"x13.00", IS 4.00"x14.50", DIMENSION UNDERDRAIN TO 10.00' TO BYPASS CL. RELOCATED BYPASS. INFILTRATION OPENINGS WERE 24"x36", IS 24"x24".	JPR	11/30/18

THIS MUST BE FILLED OUT BEFORE MANUFACTURING BEGINS

APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

REVISE AND RESUBMIT:

BioMod™ Bioretention System

Customer: **Otak**

Job Name: **5th Street & Kinsman - Wilsonville, OR**

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	JMT	ZHD/JMH		

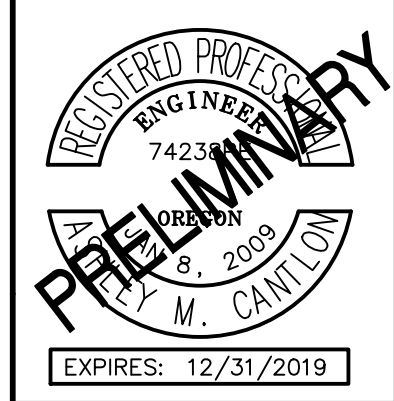
DRAWING NUMBER: **PDD-9137** SHEET: **1 OF 1**

SIGNATURE _____ DATE _____



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REVISIONS



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



CIP# 4196
PROJECT# 2017-02-001
SF14
79 of 211

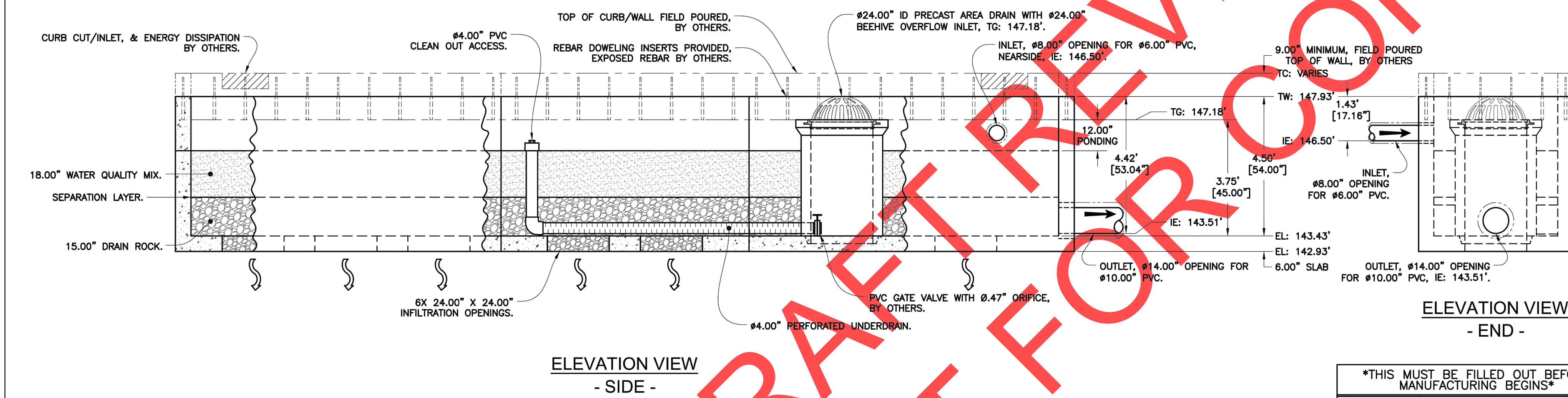
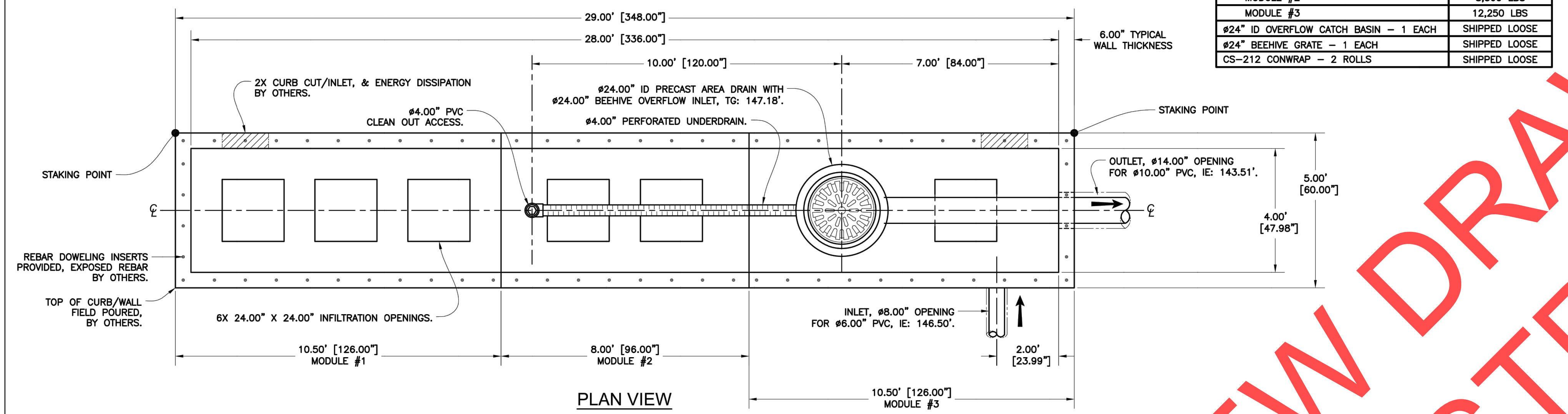
REVIEW SET - NOT FOR CONSTRUCTION

PDD-9138

UNIT: FP-BF 5

BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	12,000 LBS
MODULE #2	8,500 LBS
MODULE #3	12,250 LBS
#24" ID OVERFLOW CATCH BASIN - 1 EACH	SHIPPED LOOSE
#24" BEEHIVE GRATE - 1 EACH	SHIPPED LOOSE
CS-212 CONWRAP - 2 ROLLS	SHIPPED LOOSE

- NOTES:
- DESIGN LOADINGS:
 - AASHTO HS-20-44 W/ IMPACT.
 - ASSUMED WATER TABLE = BELOW INVERT.
 - DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
 - CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
 - STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
 - CEMENT: ASTM C-150 SPECIFICATION.
 - REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
 - REFERENCE STANDARD:
 - ASTM C 890
 - ASTM C 913
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 - OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
 - ALL EXTERIOR SURFACES SUPPLIED WITH "FORM FINISH"
 - CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
 - CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED & LEVEL PER PROJECT SPECIFICATIONS)
 - SYSTEM SHIPPED EMPTY. INTERNAL PIPE PROVIDED BY OLDCASTLE. SOIL/FILTER MEDIA, DRAIN ROCK PROVIDED & INSTALLED BY OTHERS.
 - ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.



NO.	DESCRIPTION	REV. BY	DATE
2	OUTLET WAS #12.00", IS #10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	RELOCATED BYPASS, DIMENSION UNDERDRAIN TO 10.00' TO BYPASS CL. RELOCATED BYPASS, INFILTRATION OPENINGS WERE 24"x36", IS 24"x24".	JPR	11/30/18

THIS MUST BE FILLED OUT BEFORE MANUFACTURING BEGINS

APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

REVISE AND RESUBMIT:

SIGNATURE _____ DATE _____

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BioMod™ Bioretention System

Customer: **Otak**

Job Name: **5th Street & Kinsman - Wilsonville, OR**

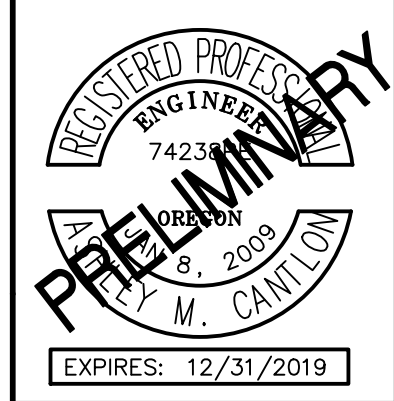
DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	MJT	ZHD/JMH	-	-

DRAWING NUMBER: **PDD-9138** REVISION NUMBER: **2** SHEET: **1 OF 1**



REVISIONS

NO.	DESCRIPTION



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

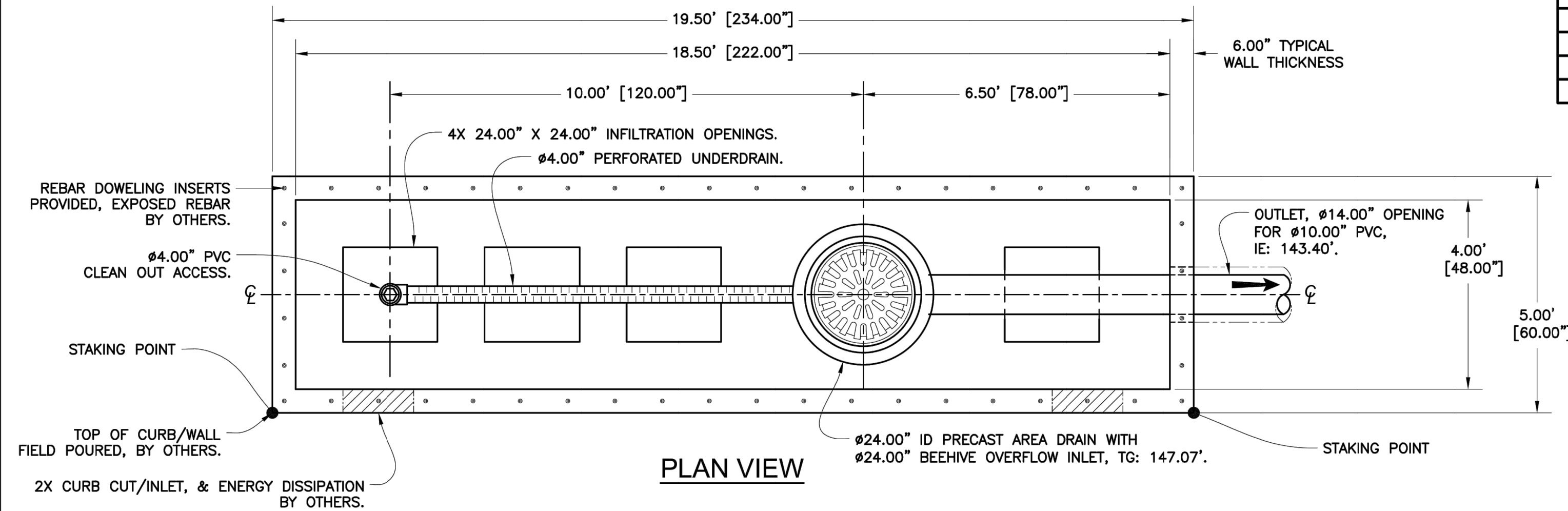
SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



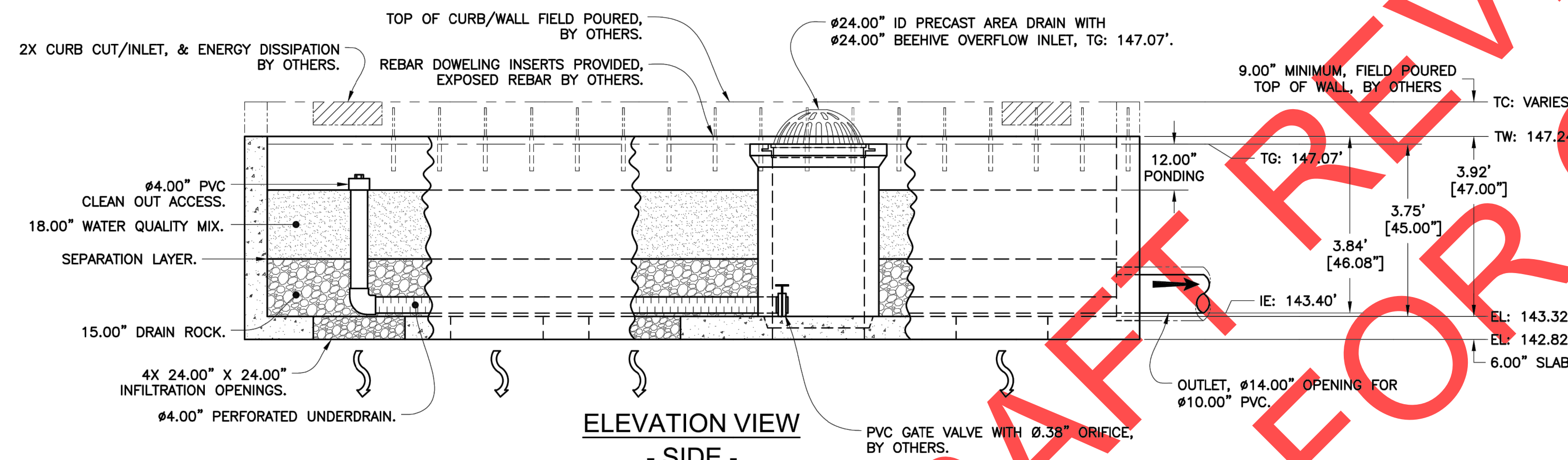
CIP # 4196
PROJECT # 2017-02-001
SF15
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REVIEW SET - NOT FOR CONSTRUCTION

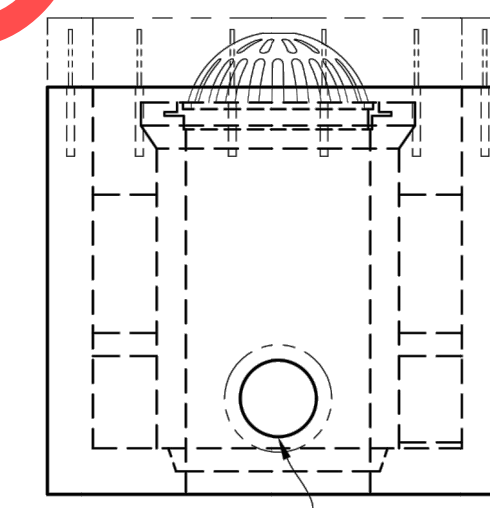
PDD-9139



PLAN VIEW



ELEVATION VIEW - SIDE -



ELEVATION VIEW - END -

UNIT: FP-BF 6	
BILL OF MATERIALS	
ITEM	NOTES
MODULE #1	20,250 LBS
Ø24" ID OVERFLOW CATCH BASIN - 1 EACH	SHIPPED LOOSE
Ø24" BEEHIVE GRATE - 1 EACH	SHIPPED LOOSE

NOTES:

- DESIGN LOADINGS:
 - AASHTO HS-20-44 W/ IMPACT.
 - ASSUMED WATER TABLE = BELOW INVERT.
 - DRY LATERAL EARTH PRESSURE (EFP) = 45 PCF.
 - LATERAL LIVE LOAD SURCHARGE = 80 PSF (APPLIED TO 8' BELOW GRADE).
 - NO LATERAL SURCHARGE FROM ADJACENT BUILDINGS, WALLS, PIERS, OR FOUNDATIONS.
- CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI MINIMUM.
- STEEL REINFORCEMENT: REBAR, ASTM A-615 OR A-706, GRADE 60.
- CEMENT: ASTM C-150 SPECIFICATION.
- REQUIRED NATIVE ALLOWABLE SOIL BEARING PRESSURE = 2,500 PSF.
- REFERENCE STANDARD:
 - ASTM C 890
 - ASTM C 913
- THIS STRUCTURE IS DESIGNED TO THE PARAMETERS NOTED HEREIN. PLEASE VERIFY THAT THESE PARAMETERS MEET PROJECT REQUIREMENTS. IF DESIGN PARAMETERS ARE INCORRECT, REVIEWING ENGINEER/AUTHORITY SHALL NOTIFY OLDCASTLE PRECAST UPON REVIEW OF THIS SUBMITTAL.
- OVERSIZED HOLES TO ACCOMMODATE SPECIFIC PIPE TYPE MUST BE CONCENTRIC TO PIPE ID. AFTER PIPES ARE INSTALLED, ALL ANNULAR SPACES SHALL BE FILLED WITH A MINIMUM OF 3000 PSI CONCRETE FOR FULL THICKNESS OF PRECAST WALLS.
- ALL EXTERIOR SURFACES SUPPLIED WITH "FORM FINISH"
- CONTRACTOR RESPONSIBLE TO VERIFY ALL SIZES, LOCATIONS AND ELEVATIONS OF OPENINGS.
- CONTRACTOR RESPONSIBLE TO ENSURE ADEQUATE BEARING SURFACE IS PROVIDED (I.E. COMPACTED & LEVEL PER PROJECT SPECIFICATIONS)
- SYSTEM SHIPPED EMPTY. INTERNAL PIPE PROVIDED BY OLDCASTLE. SOIL/FILTER MEDIA, DRAIN ROCK PROVIDED & INSTALLED BY OTHERS.
- ADAPTORS/ANGLES AND EXTERNAL PIPING BY OTHERS.

Oldcastle Infrastructure
A CRH COMPANY
Ph: 800.578.8819 | oldcastlestormwater.com
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BioMod™ Bioretention System

Customer: Otak
Job Name: 5th Street & Kinsman - Wilsonville, OR

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
2/15/18	JPR	MJT	ZHD/JMH		
DRAWING NUMBER	REVISION	REV DATE	SHEET		
PDD-9139	1	11/30/18	1 OF 1		

THIS MUST BE FILLED OUT BEFORE MANUFACTURING BEGINS

APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

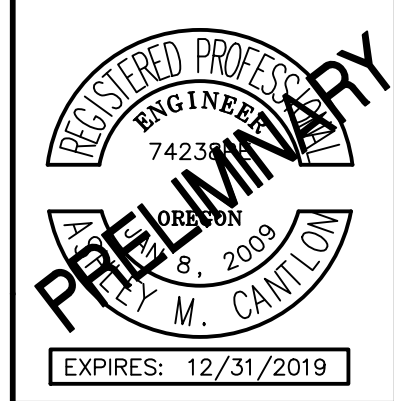
REVISE AND RESUBMIT:

SIGNATURE _____ DATE _____

REV	DESCRIPTION	REV BY	DATE
2	OUTLET WAS Ø12.00", IS Ø10.00", CHANGED LANGUAGE, ADD GATE VALVE.	MJW	12/14/18
1	RELOCATED BYPASS, DIMENSION UNDERDRAIN TO 10.00' TO BYPASS CL. RELOCATED BYPASS, INFILTRATION OPENINGS WERE 24"X36", IS 24"X24".	JPR	10/30/18



REVISIONS



City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS



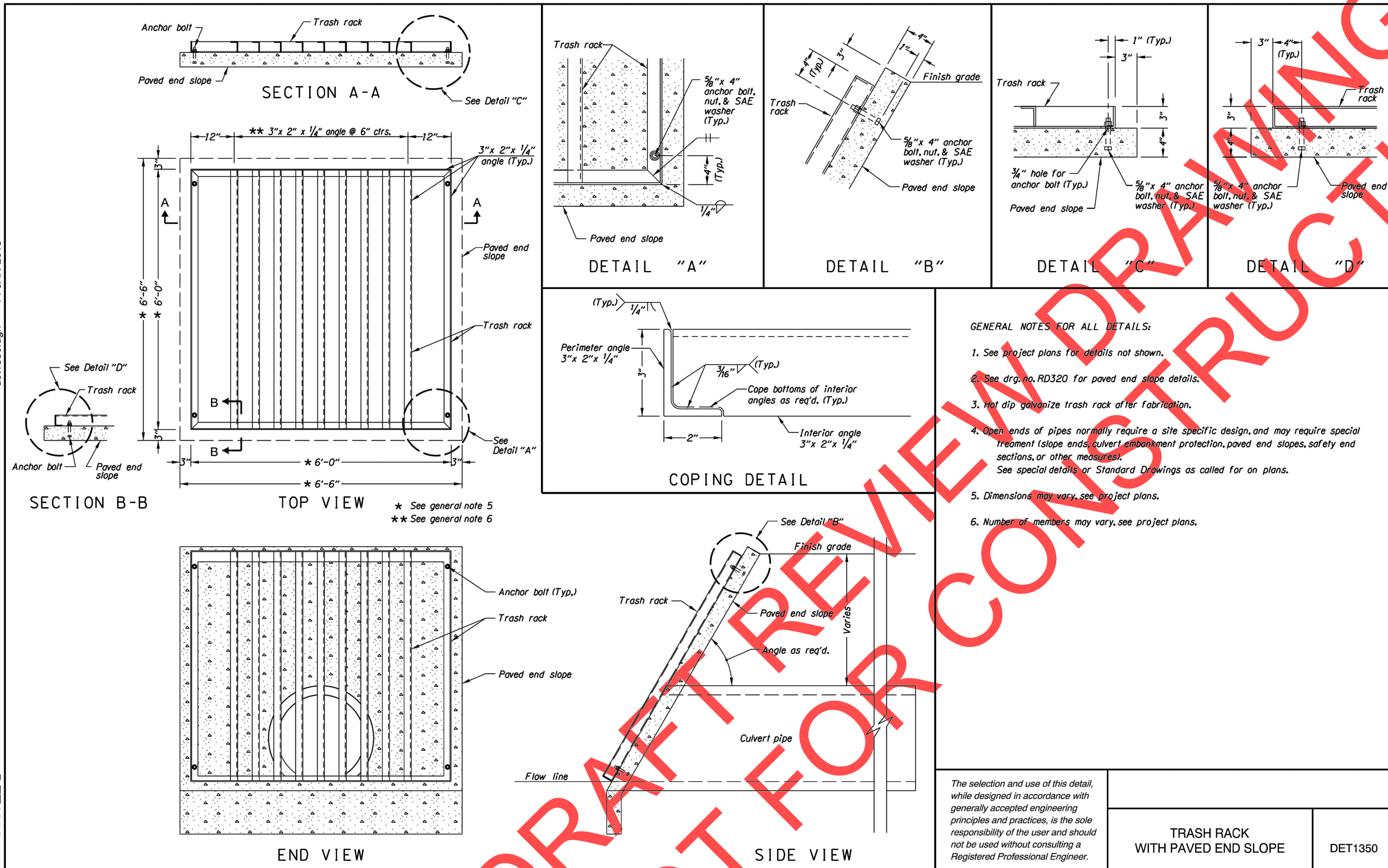
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PROJECT # 2017-02-001
SF16
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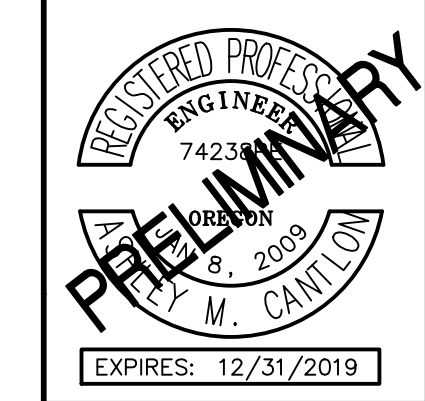
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det1350.dgn 14-JAN-2015

DET1350



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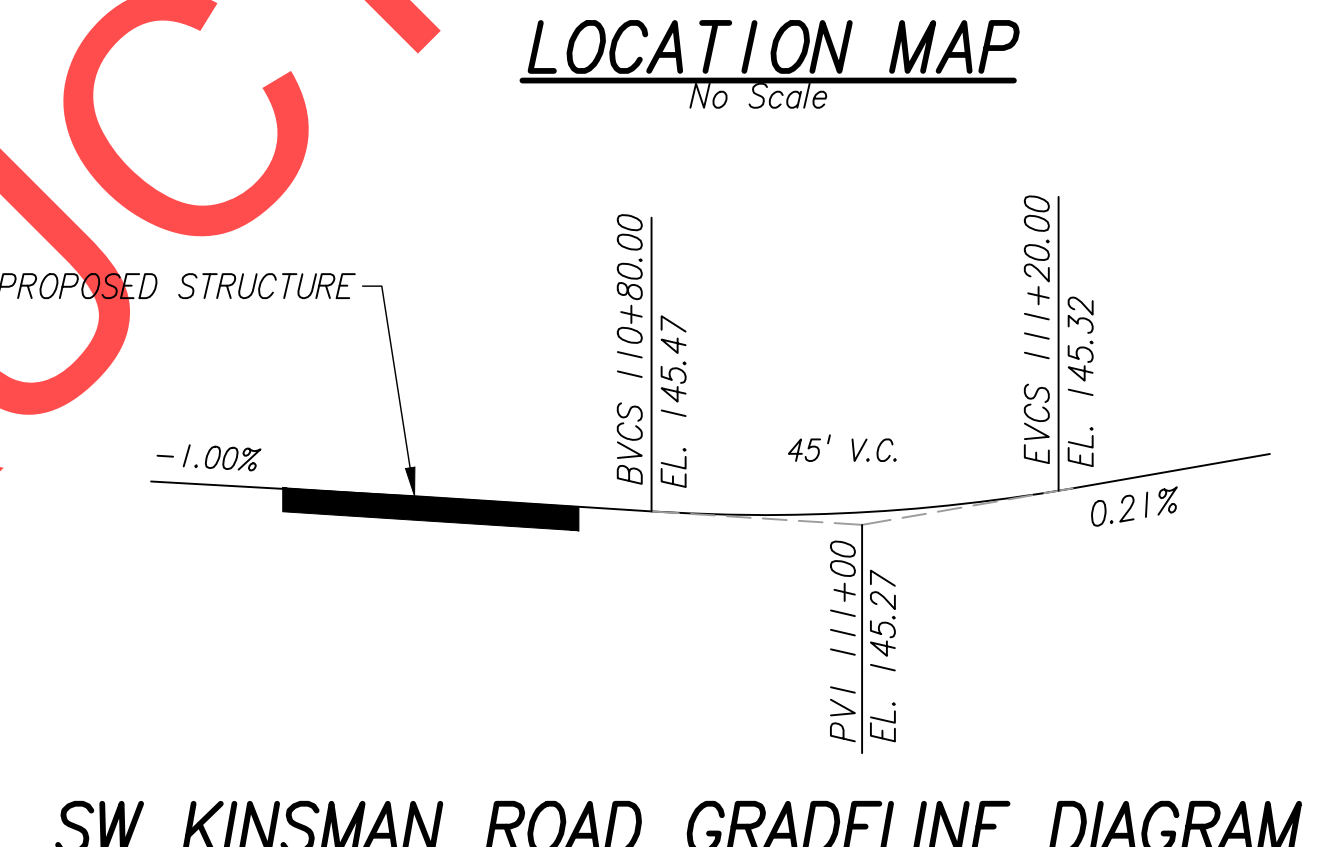
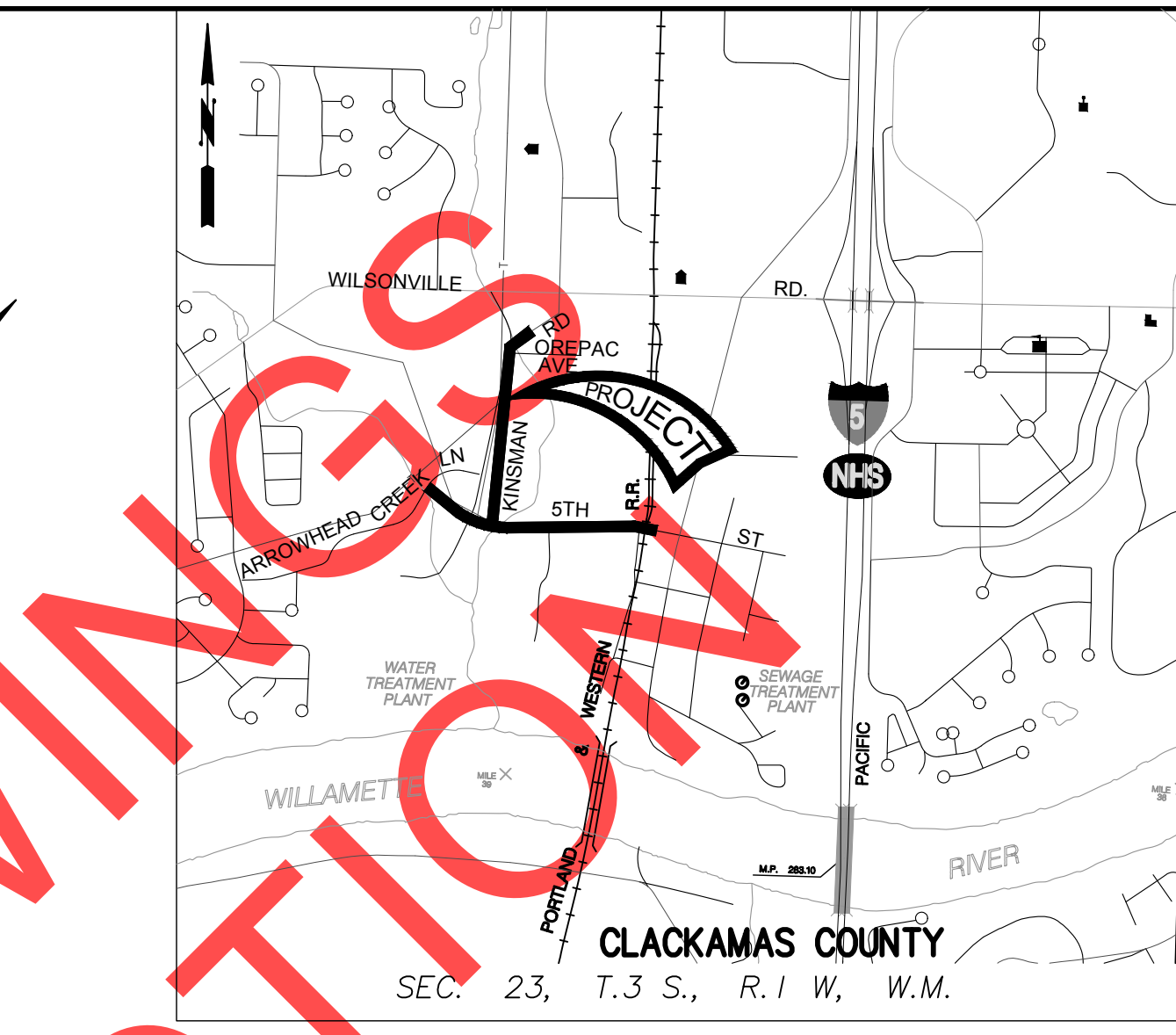
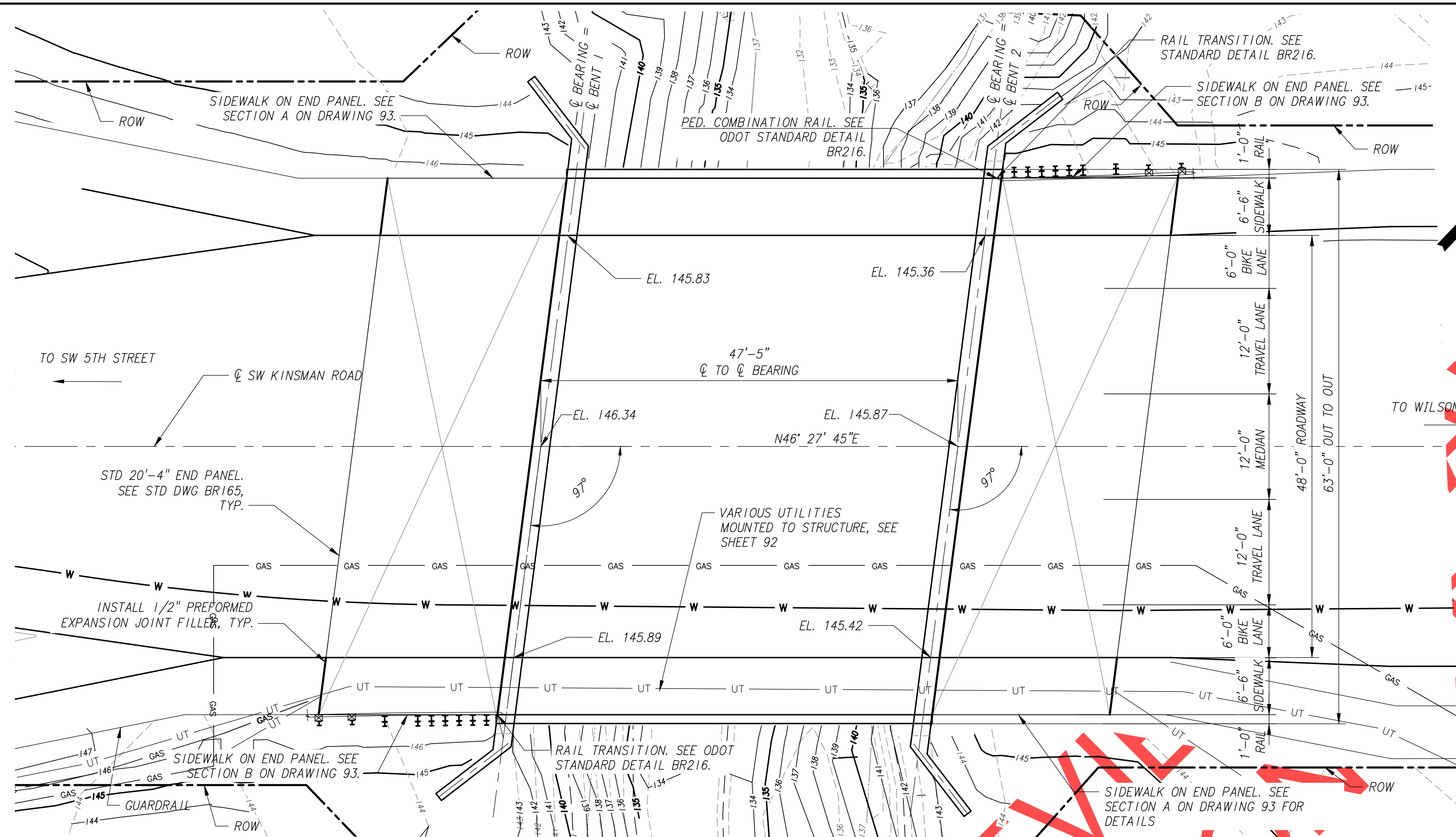
Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
STORMWATER FACILITY DETAILS

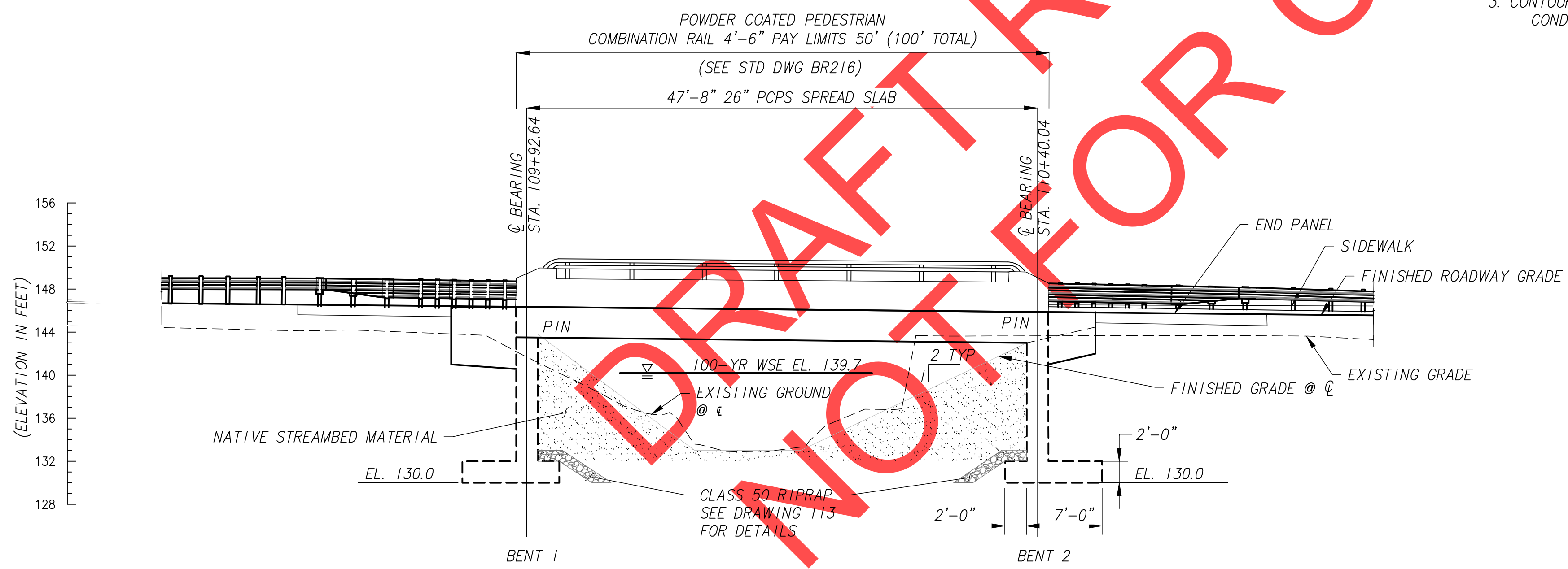
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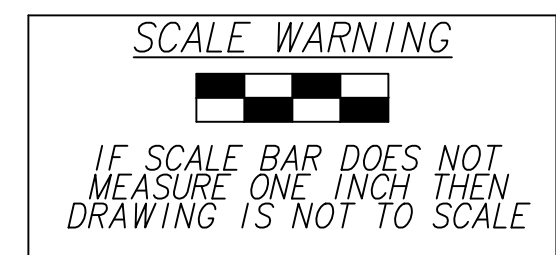


- NOTES:**
1. DECK ELEVATIONS ARE AT FINISH GRADE, TOP OF CONCRETE DECK
 2. ϕ BENTS ARE PARALLEL
 3. CONTOURS SHOWN ARE EXISTING CONDITIONS



HYDRAULIC DATA

ITEMS	UNITS	DESIGN FLOOD	BASE FLOOD	MAX. PROBABLE FLOOD
DISCHARGE	CFS	581	581	730
RECURRENCE INTERVAL	YEARS	100	100	500
HIGH WATER ELEVATION AT UPSTREAM FACE OF BRIDGE ALONG EMBANKMENT	FEET, NAVD	139.7	139.7	140.3
SCOUR ELEVATION	FEET, NAVD	133.0	133.0	133.0



NOTE:
ELEVATIONS SHOWN ARE BASED ON
NORTH AMERICAN VERTICAL DATUM (1988)

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Date: 1 February 2019
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Drawn By: JDP
Checked By: SMW

**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
PLAN AND ELEVATION**

CIP# 4196
PROJECT# 2017-02-001
BR01
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GENERAL NOTES

PROVIDE ALL MATERIALS AND PERFORM ALL WORK ACCORDING TO THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018 AND SUPPLEMENTAL PROJECT SPECIAL PROVISIONS. BRIDGE IS DESIGNED IN ACCORDANCE WITH THE 2014 EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, INCLUDING 2014 THRU 2017 INTERIM REVISIONS, WITH AN ALLOWANCE OF 25PSF FOR FUTURE WEARING SURFACE AND ALL OF THE FOLLOWING LIVE LOADS :

SERVICE AND STRENGTH I LIMIT STATES:
HL-93: DESIGN TRUCK AND THE DESIGN LANE LOAD OR THE DESIGN TANDEMS AND THE DESIGN LANE LOAD.

STRENGTH II LIMIT STATE:
ODOT TYPE STP-5BW PERMIT TRUCK
ODOT TYPE STP-4E PERMIT TRUCK

SEISMIC DESIGN IS PERFORMED IN ACCORDANCE WITH THE "AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN" ("AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS") AS MODIFIED BY THE "ODOT BRIDGE DESIGN & DRAFTING MANUAL" FOR 500- AND 1000-YEAR CRITERIA. THE HORIZONTAL PEAK GROUND ACCELERATION COEFFICIENTS (PGA) FOR THE 1000 YEAR IS 0.258G, BASED ON 2002 USGS SEISMIC HAZARD MAPS. THE BRIDGE SITE IS DEFINED AS A SITE CLASS D WITH SITE FACTOR (FPGA) OF 1.342.

SEE FOUNDATION PLAN FOR FOUNDATION DESIGN NOTES.

PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM SPECIFICATION A706, OR AASHTO M31 (ASTM A615) GRADE 60. USE THE FOLLOWING SPLICE LENGTHS (UNLESS SHOWN OTHERWISE):

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60										f'c = 4.0 ksi
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-3"	4'-1"	5'-2"	6'-4"	NOT PERMITTED
REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60										f'c = 3.5 ksi
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-2"	1'-6"	1'-10"	2'-4"	2'-9"	3'-6"	4'-5"	5'-7"	6'-10"	NOT PERMITTED

ALL FIELD BENT BARS TO BE ASTM SPEC. A706.

INCREASE ALL SPLICE LENGTHS 40% FOR HORIZONTAL OR NEARLY HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.

SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.

SUPPORT THE BOTTOM MAT REINFORCING STEEL FROM THE FORMS WITH PRECAST MORTAR BLOCKS AT 24" MAXIMUM CENTERS EACH WAY. SUPPORT THE TOP MAT OF REINFORCING STEEL FROM THE BOTTOM MAT OF REINFORCING STEEL WITH WIRE BAR SUPPORTS AS SHOWN IN CHAPTER 3 OF THE CRSI MANUAL OF STANDARD PRACTICE (SBU, BBU, OR CHCU). PLACE WIRE BAR SUPPORTS AT 24" MAXIMUM CENTERS.

PLACE BARS 2" CLEAR OF THE NEAREST FACE OF CONCRETE (UNLESS SHOWN OTHERWISE). THE TOP BENDS OF STIRRUPS EXTENDING FROM BEAM STEMS INTO THE TOP SLAB MAY BE SHOP OR FIELD BENT (UNLESS SHOWN OTHERWISE).

PROVIDE CLASS HPC4000 - 1 1/2 , 1, OR 3/4 CONCRETE IN DECK.

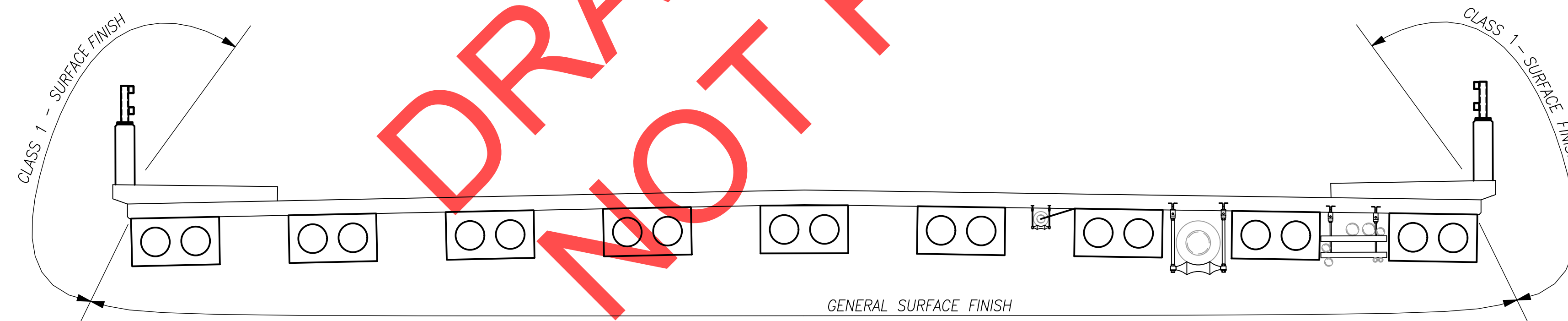
PROVIDE CLASS 3300 - 1 1/2 , 1 OR 3/4 CONCRETE IN FOOTINGS.

PROVIDE CLASS HPC4000 - 1 1/2 , 1, OR 3/4 CONCRETE IN REINFORCED CONCRETE END PANELS.

PROVIDE CLASS 4000 - 1 1/2 , 1 OR 3/4 CONCRETE FOR ALL OTHER CONCRETE.

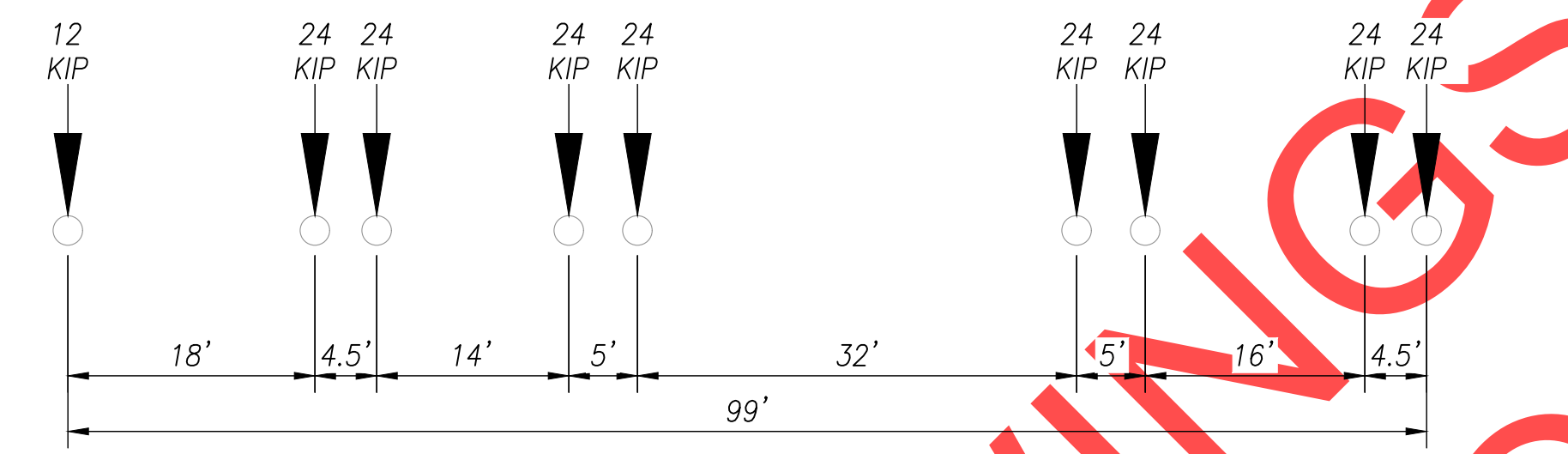
PROVIDE CONCRETE IN PRECAST PRESTRESSED SLABS ACCORDING TO DETAIL PLANS. SEE DWG. BR23.

PROVIDE PRESTRESSING STEEL ACCORDING TO DETAIL PLANS.



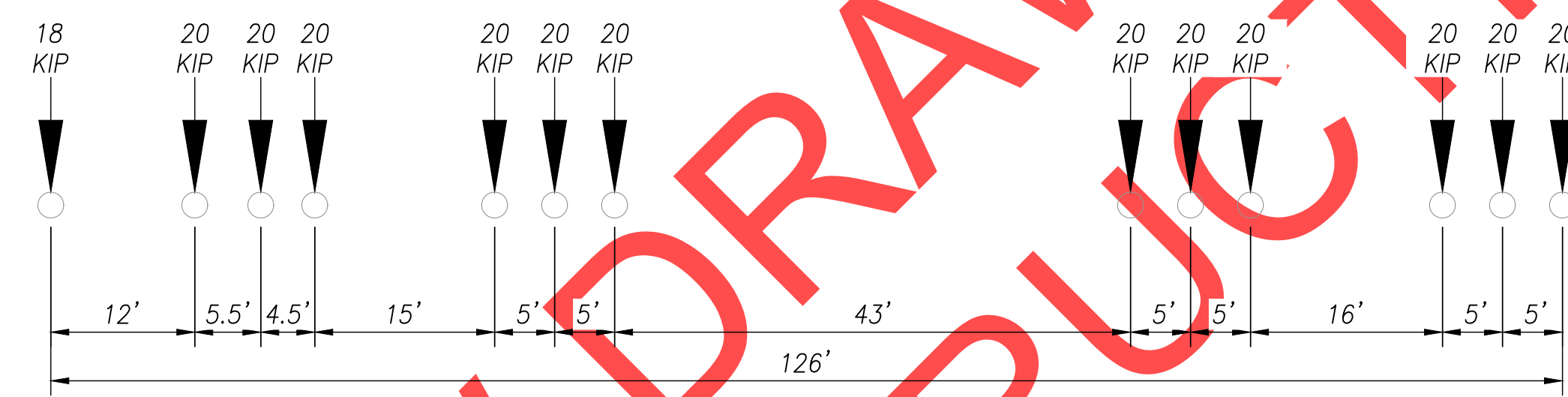
CONCRETE FINISH DIAGRAM

NO SCALE



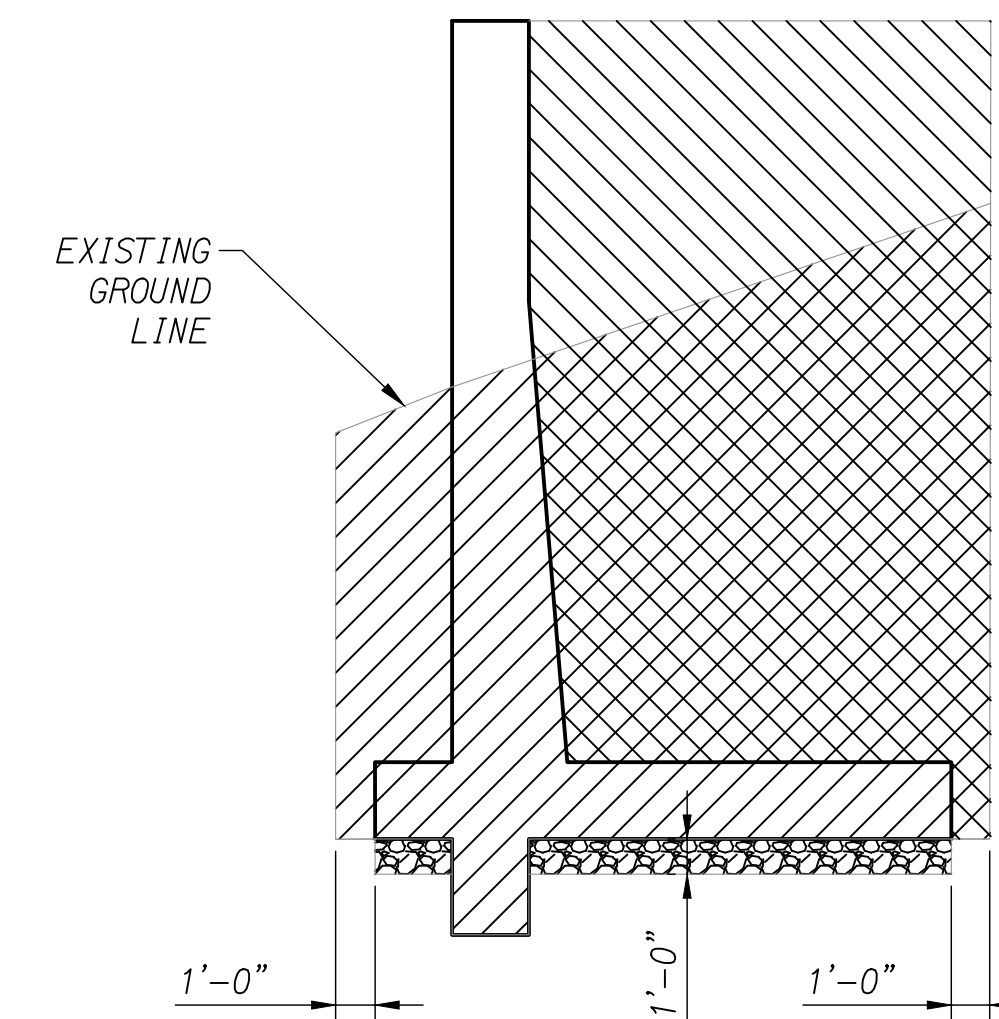
TYPE OR-STP-5BW

9 AXLE VEHICLE GROSS WEIGHT 204K



TYPE OR-STP-4E

13 AXLE VEHICLE GROSS WEIGHT 258K



- PAY LIMITS OF STRUCTURE EXCAVATION
- PAY LIMITS OF GRANULAR WALL BACKFILL
- PAY LIMITS OF GRANULAR STRUCTURAL BACKFILL

PAY LIMITS DIAGRAM

NO SCALE

SCALE WARNING
IF SCALE BAR DOESN'T MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE



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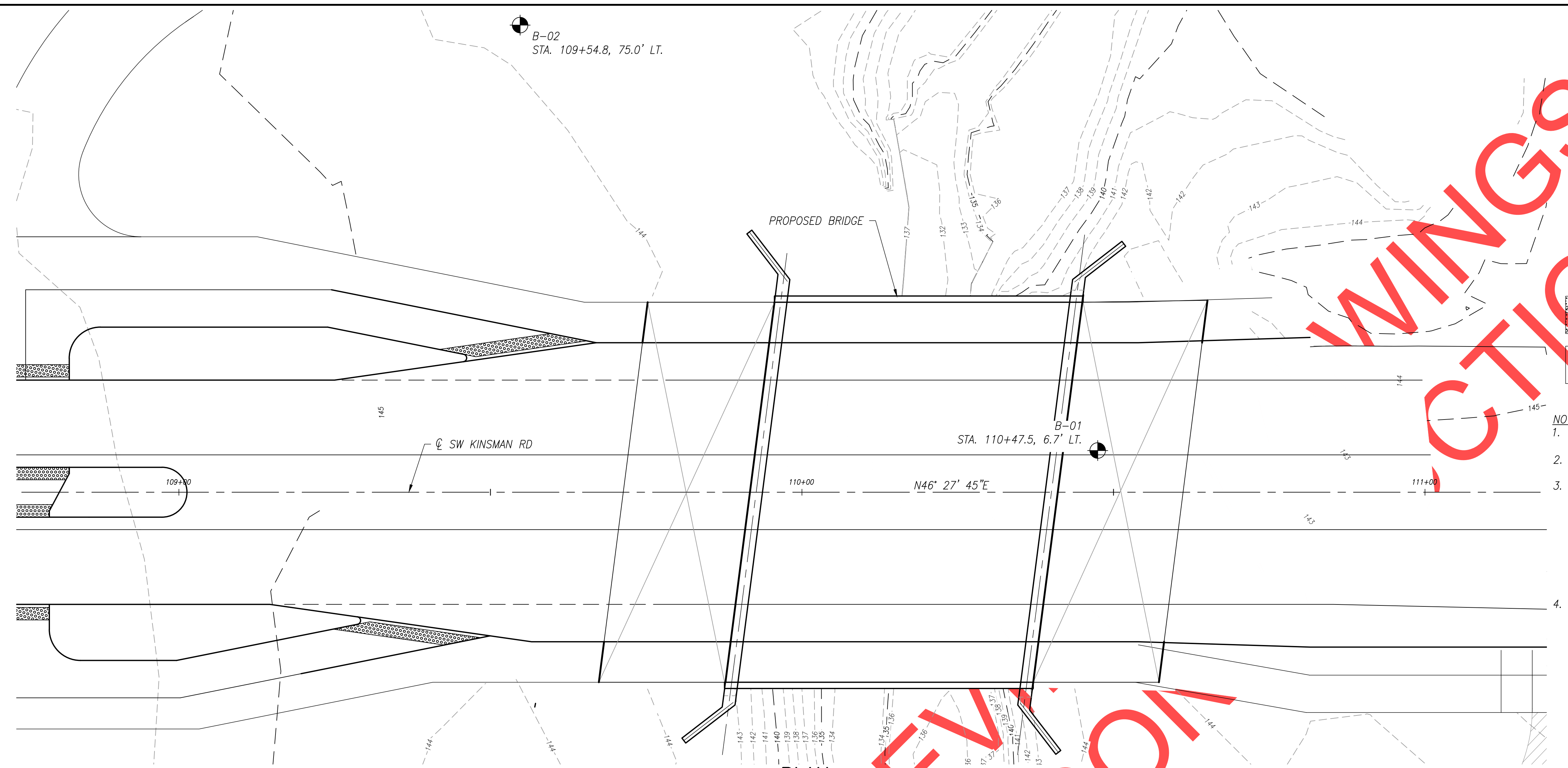


Date: 1 February 2019
Scale: AS SHOWN
Designed By: JDP
Drawn By: JDP
Checked By: SMN

**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
GENERAL NOTES**

CIP# 4196
PROJECT# 2017-02-001
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- LEGEND OF SYMBOLS**
- N-VALUE; UNCORRECTED STANDARD PENETRATION RESISTANCE (ASTM D1586, SEE NOTE 2)
 - UNDISTURBED SAMPLE (ASTM D1587)
 - BORING MADE BY SHANNON & WILSON
 - PLAN FROM FILE BY OTAK

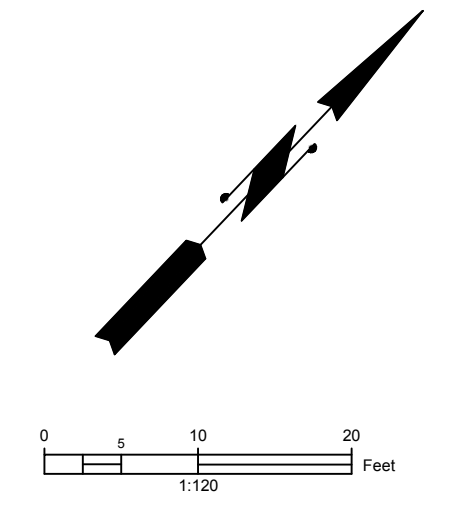
- LEGEND OF MATERIALS**
- ASPHALT CONCRETE
 - BASE AGGREGATE
 - TOPSOIL
 - CLAY
 - SILT
 - SAND
 - SILTY CLAY/CLAY
 - GRAVEL

- NOTES:**
- ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
 - BORINGS WERE SAMPLED WITH A HAMMER EFFICIENCY OF 88%.
 - GEOTECHNICAL DATA SHOWN ON THIS DRAWING ARE A CONSOLIDATION OF INFORMATION AND/OR REVISION IN TERMINOLOGY FROM DRILL LOGS. THE DRILL LOGS AND ANY OTHER EXPLORATION DATA USED IN COMPILING THIS DRAWING ARE AVAILABLE UPON REQUEST. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORTS AND DRILL LOGS AND THE INFORMATION CONTAINED THEREIN.
 - REFER TO THE ODOT SOIL AND ROCK CLASSIFICATION MANUAL (1987) FOR A DESCRIPTION OF THE TERMS USED IN THIS DRAWING.

PLAN
1" = 10'



FOUNDATION DATA
1" = 10'



REVISIONS

NO.	DESCRIPTION

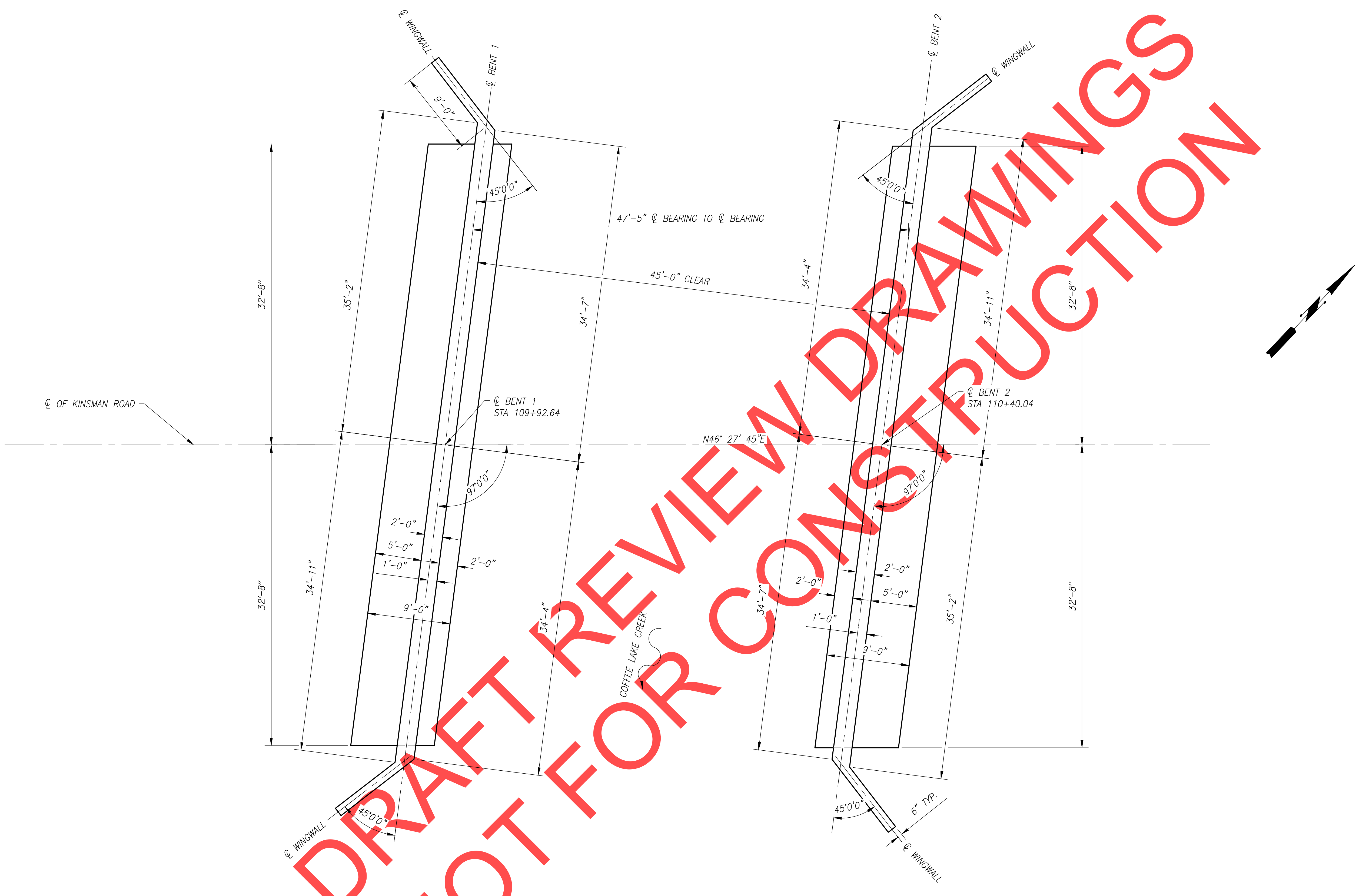
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Date	1 February 2019
Scale	AS SHOWN
Designed By	JW
Drawn By	AEH
Checked By	R. PIAO

SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
FOUNDATION DATA SHEET

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CIP#	4196
PROJECT#	2017-02-001
BR03	
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FOUNDATION PLAN
 $\frac{3}{16}'' = 1'-0''$

SCALE WARNING

 IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE

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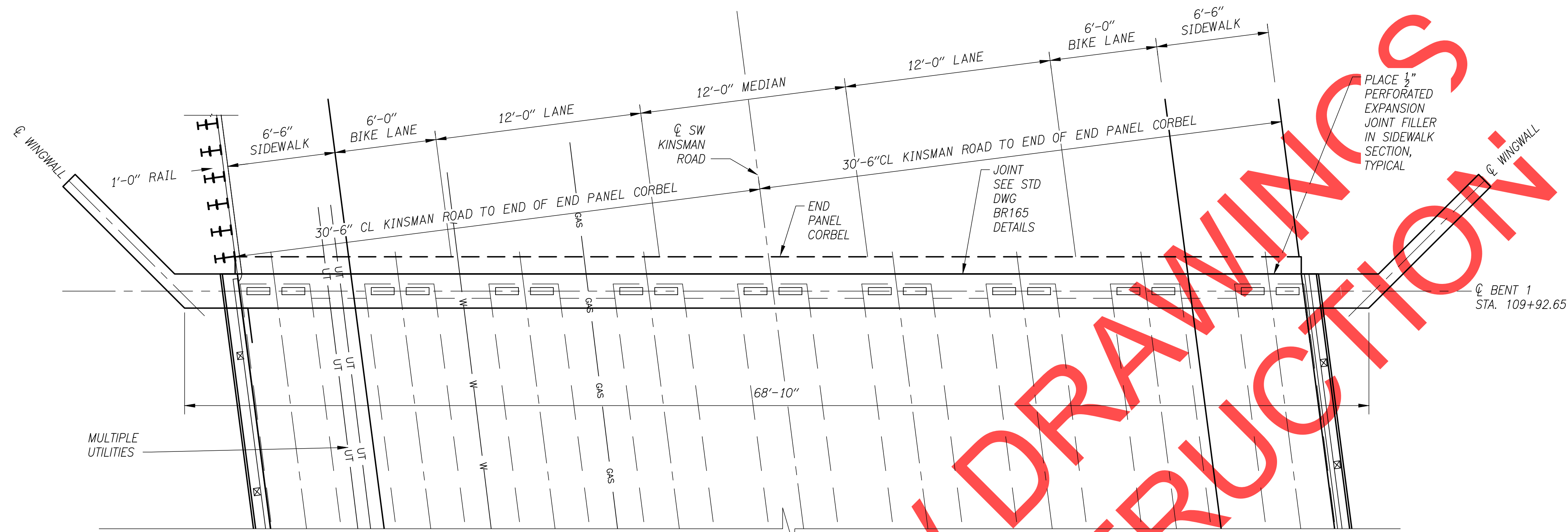
City of Wilsonville
 Engineering Department
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 Wilsonville, OR 97070
 Phone 503-682-4960



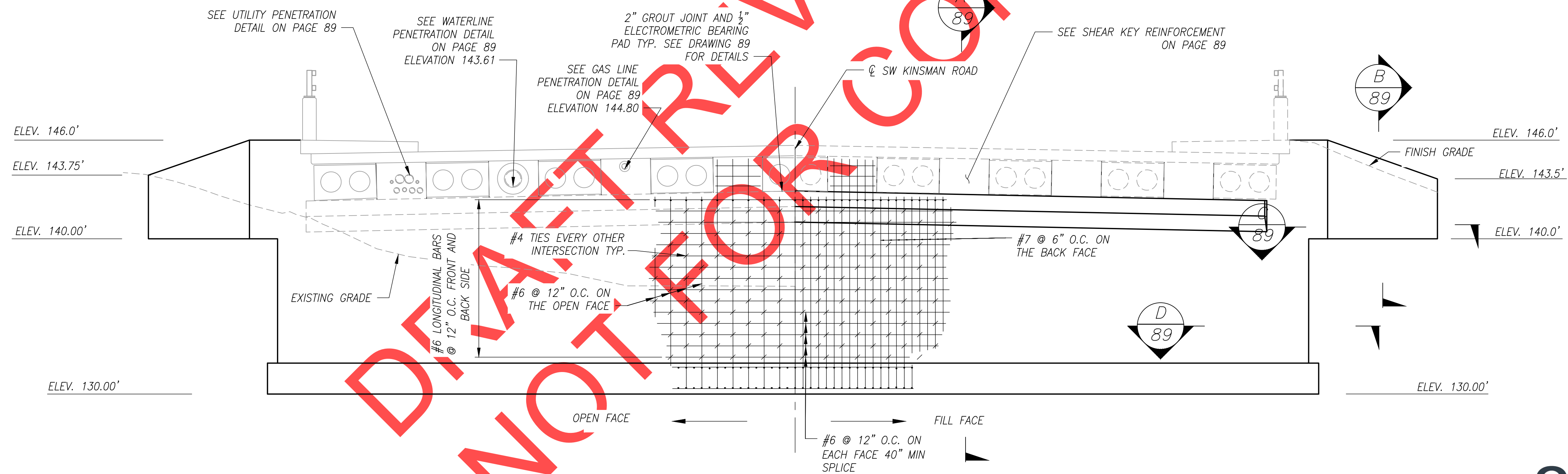
Date	1 February 2019
Scale	AS SHOWN
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Drawn By	JDP
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**SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
 FOUNDATION PLAN**

CIP#	4196
PROJECT#	2017-02-001
BR04	86 of 211



BENT 1 PLAN (BACK ON LINE)
 1/4" = 1'-0"



BENT 1 ELEVATION
 1/4" = 1'-0" (LOOKING BACK ON STATION)

SCALE WARNING
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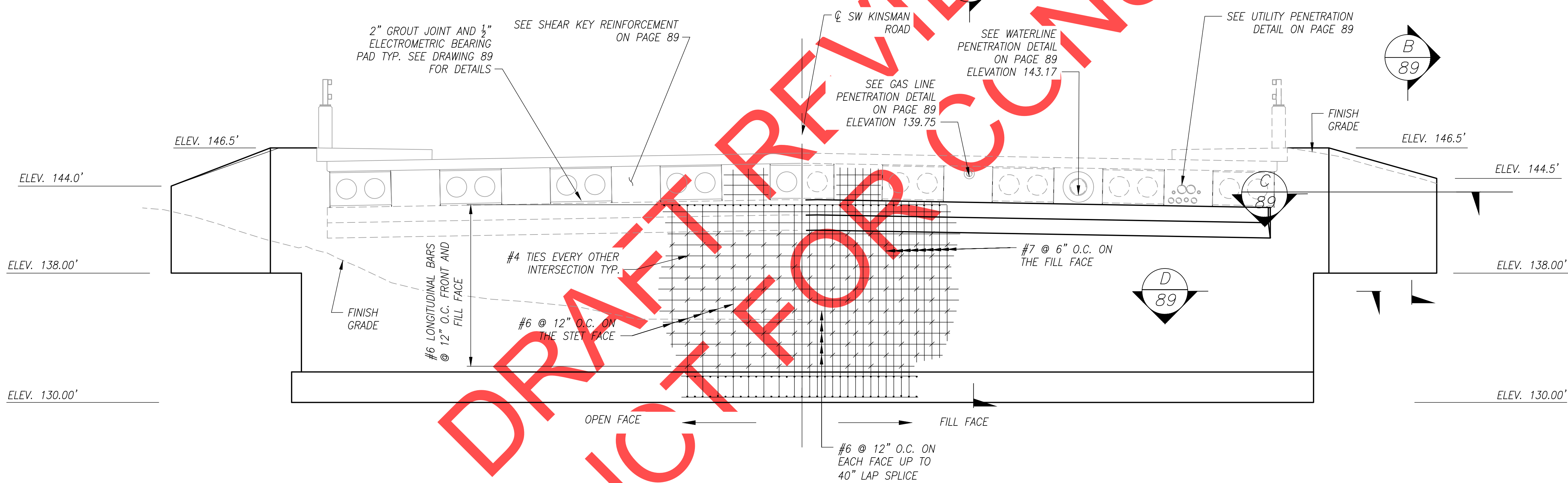
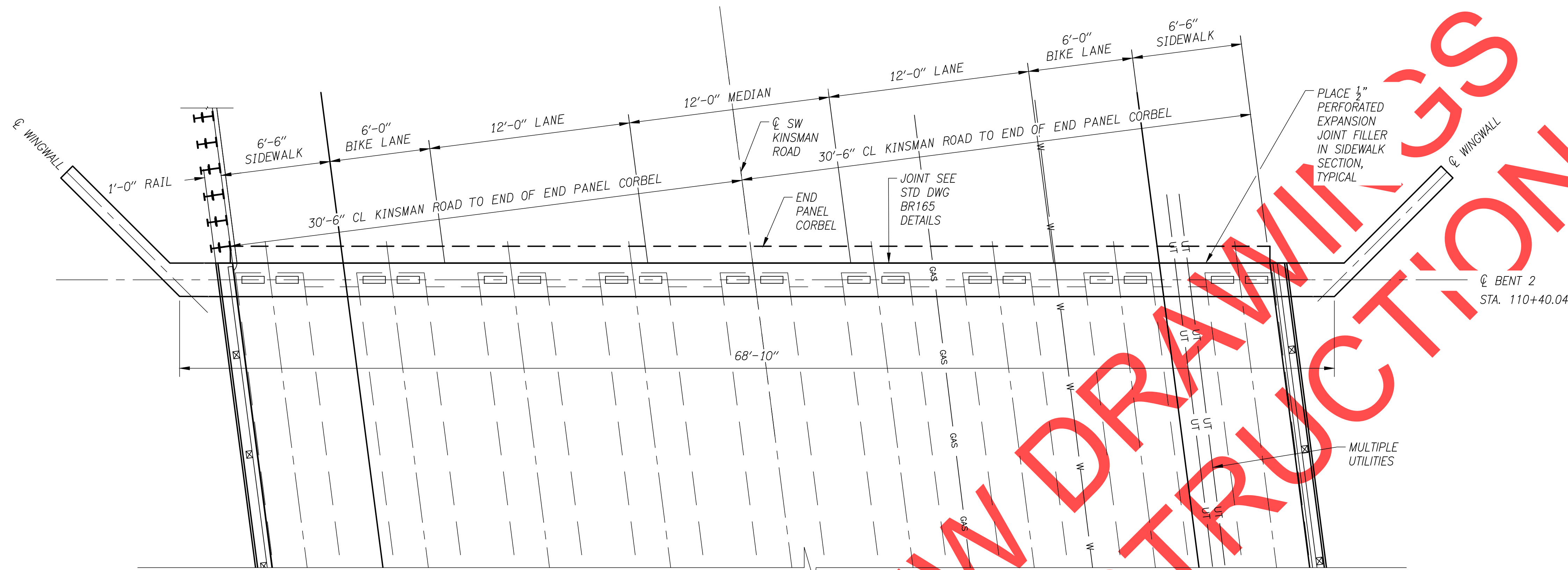


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**SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
 BENT 1 PLAN AND ELEVATION**

CIP# 4196
 PROJECT# 2017-02-001
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 87 of 211

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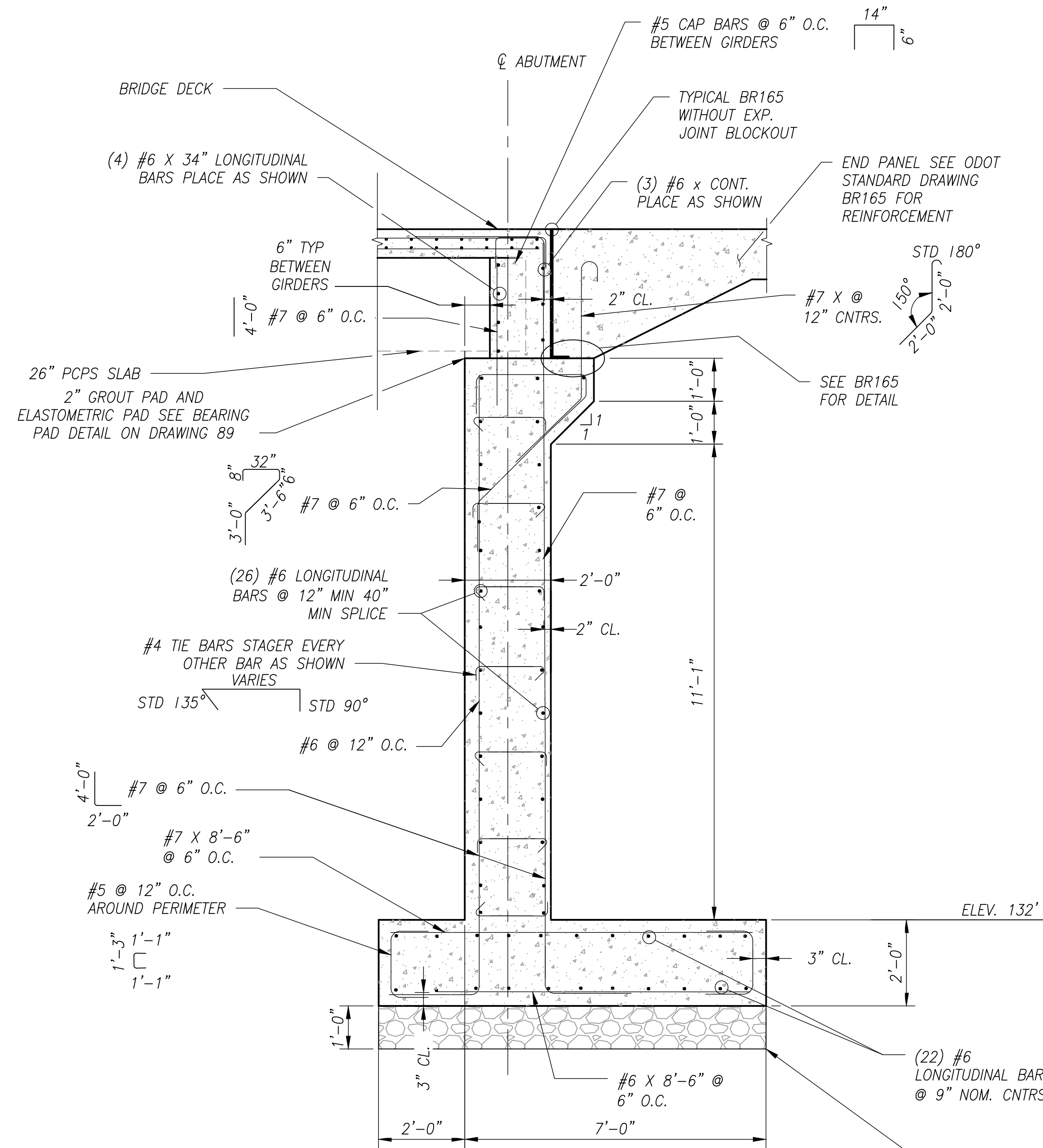
SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
 BENT 2 PLAN AND ELEVATION

SCALE WARNING
IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE

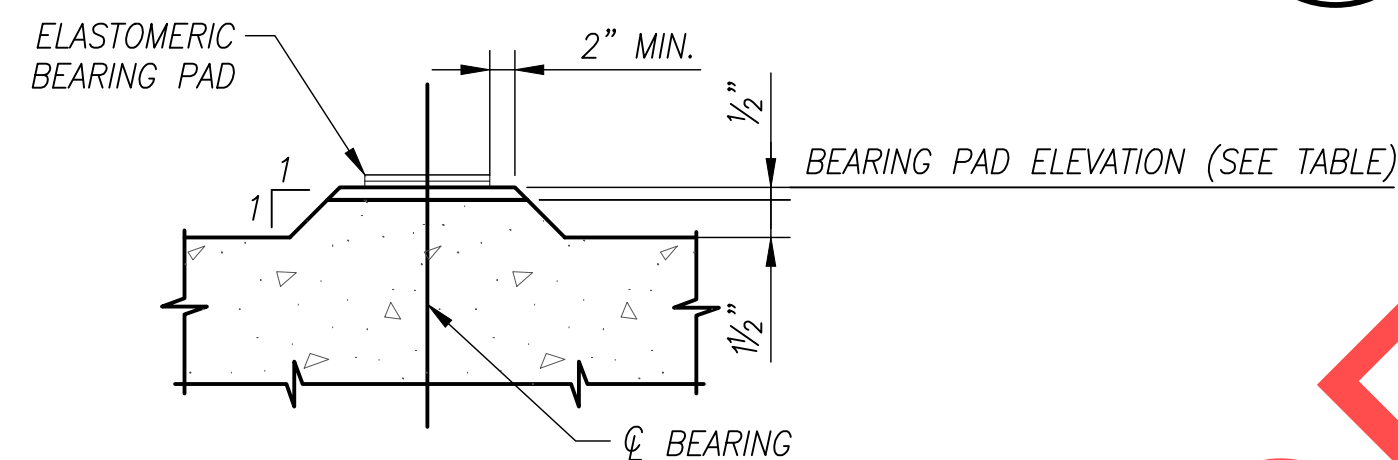
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PROJECT# 2017-02-001
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TYPICAL WALL REINFORCEMENT (A)
1/2" = 1'-0"

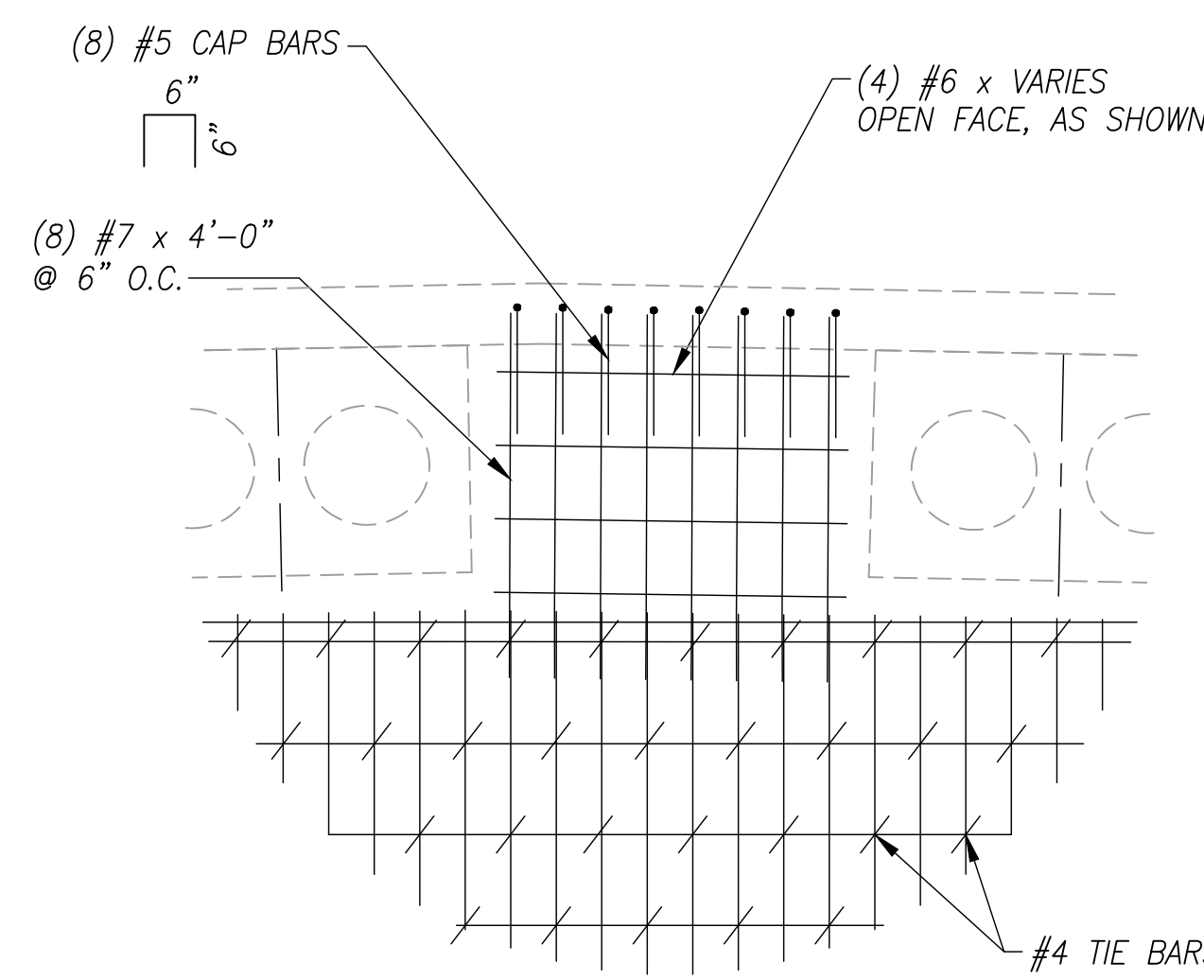


BEARING PAD DETAIL
N.T.S.

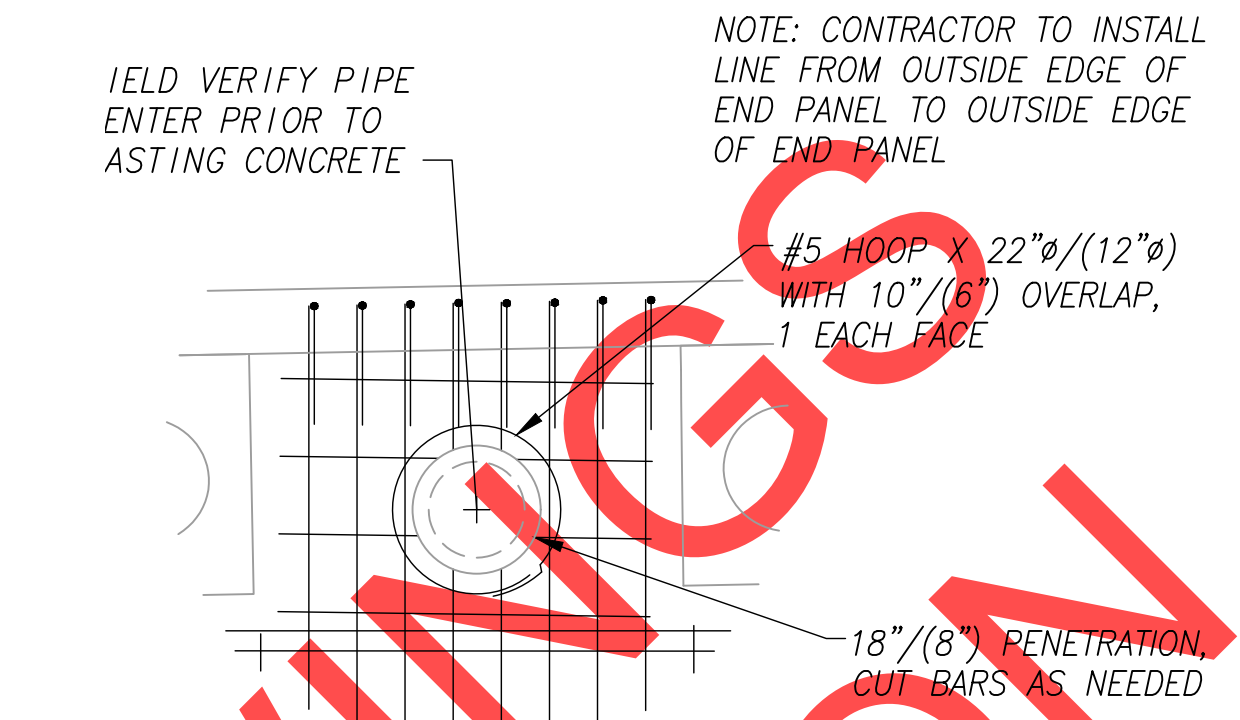
FORM 1 1/2" CONCRETE PAD INTEGRALLY WITH SUPPORTING MEMBER. PLACE 1/2" GROUT LAYER IMMEDIATELY BEFORE PLACING SLABS. PLACE ELASTOMERIC BEARING PADS, PERFORMED EXPANSION JOINT FILLER AND PRESTRESSED SLABS BEFORE 1/2" GROUT IS FULLY SET TO ENSURE UNIFORM BEARING ACROSS FULL WIDTH OF SLAB. IF UNIFORM BEARING IS NOT ACHIEVED, LIFT SLAB AND REPEAT PROCEDURE. REMOVE ANY EXCESS GROUT PROTRUDING ABOVE BOTTOM OF BEARING PADS IMMEDIATELY AFTER PLACING SLABS.

*NOTE: RECEIVE WRITTEN APPROVAL FROM THE ENGINEER OF FOUNDATION PRIOR TO PLACING GRANULAR STRUCTURE BACKFILL

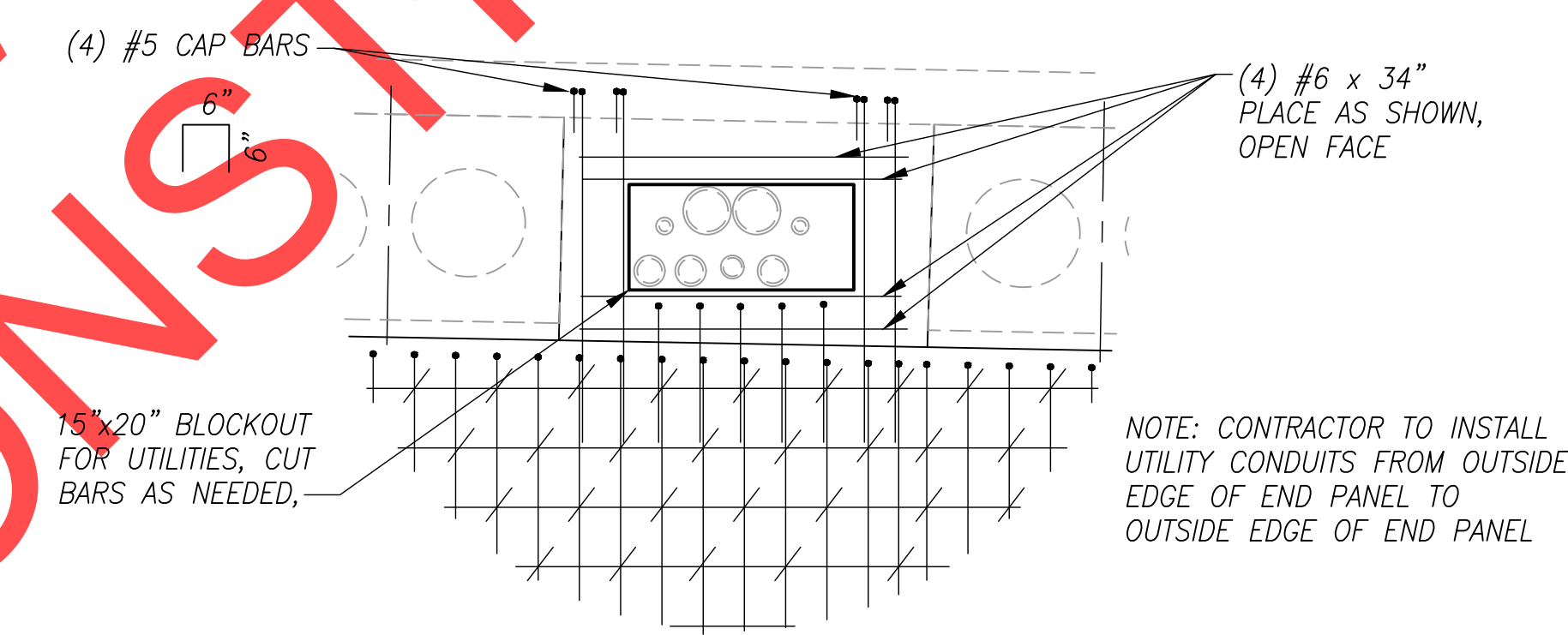
BEARING PAD ELEVATIONS		
GIRDER	BENT 1	BENT 2
A	142.65	142.18
B	142.80	142.33
C	142.96	142.49
D	143.11	142.64
E	143.25	142.76
F	143.13	142.66
G	143.00	142.53
H	142.86	142.38
I	142.73	142.26



SHEAR KEY DETAIL
N.T.S.



WATERLINE/(GAS) PENETRATION DETAIL
N.T.S.



UTILITY PENETRATION DETAIL
N.T.S.

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SCALE WARNING
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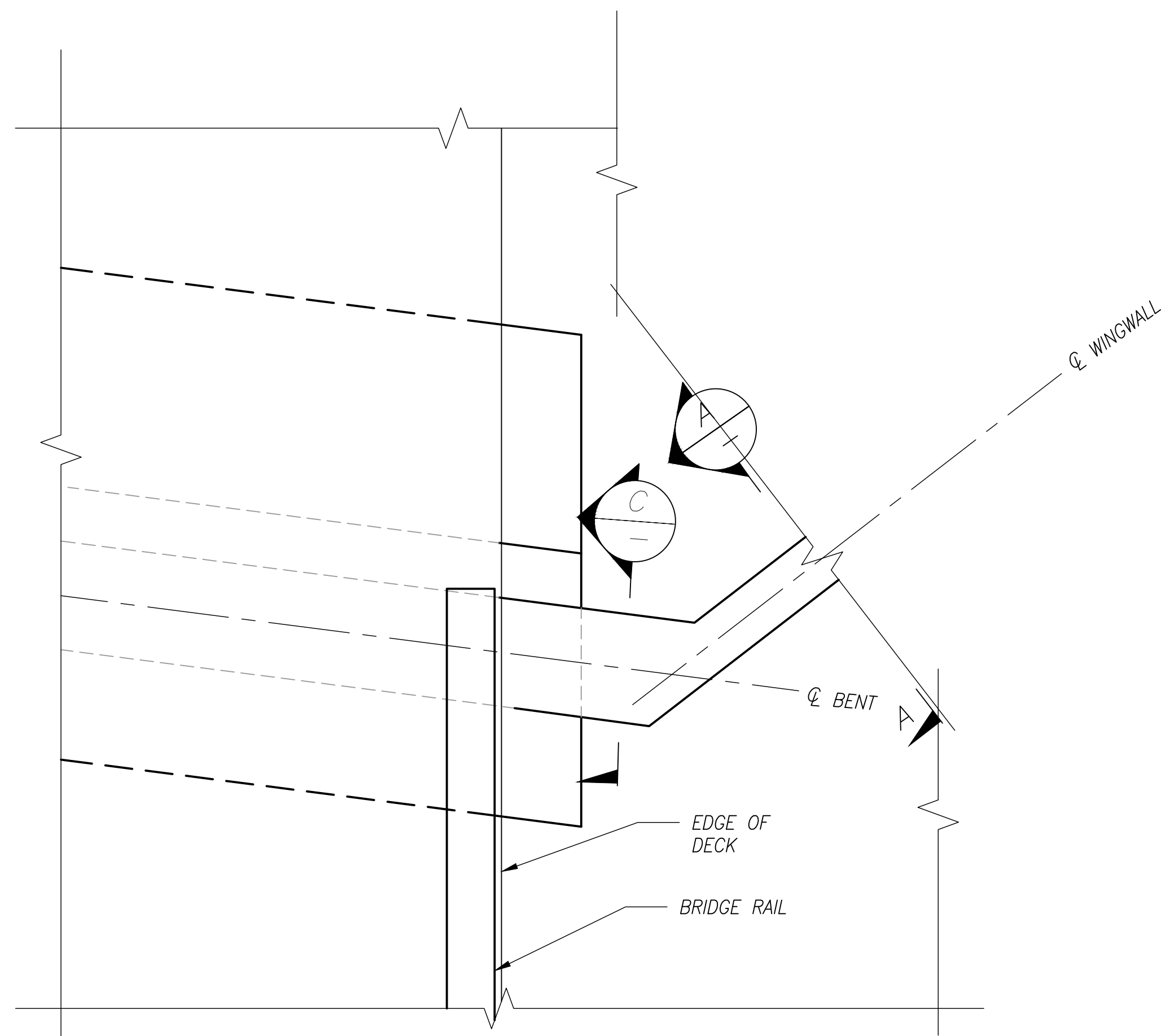


Date: 1 February 2019
Scale: AS SHOWN
Designed By: JDP
Drawn By: JDP
Checked By: SMN

**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
BENT DETAILS**

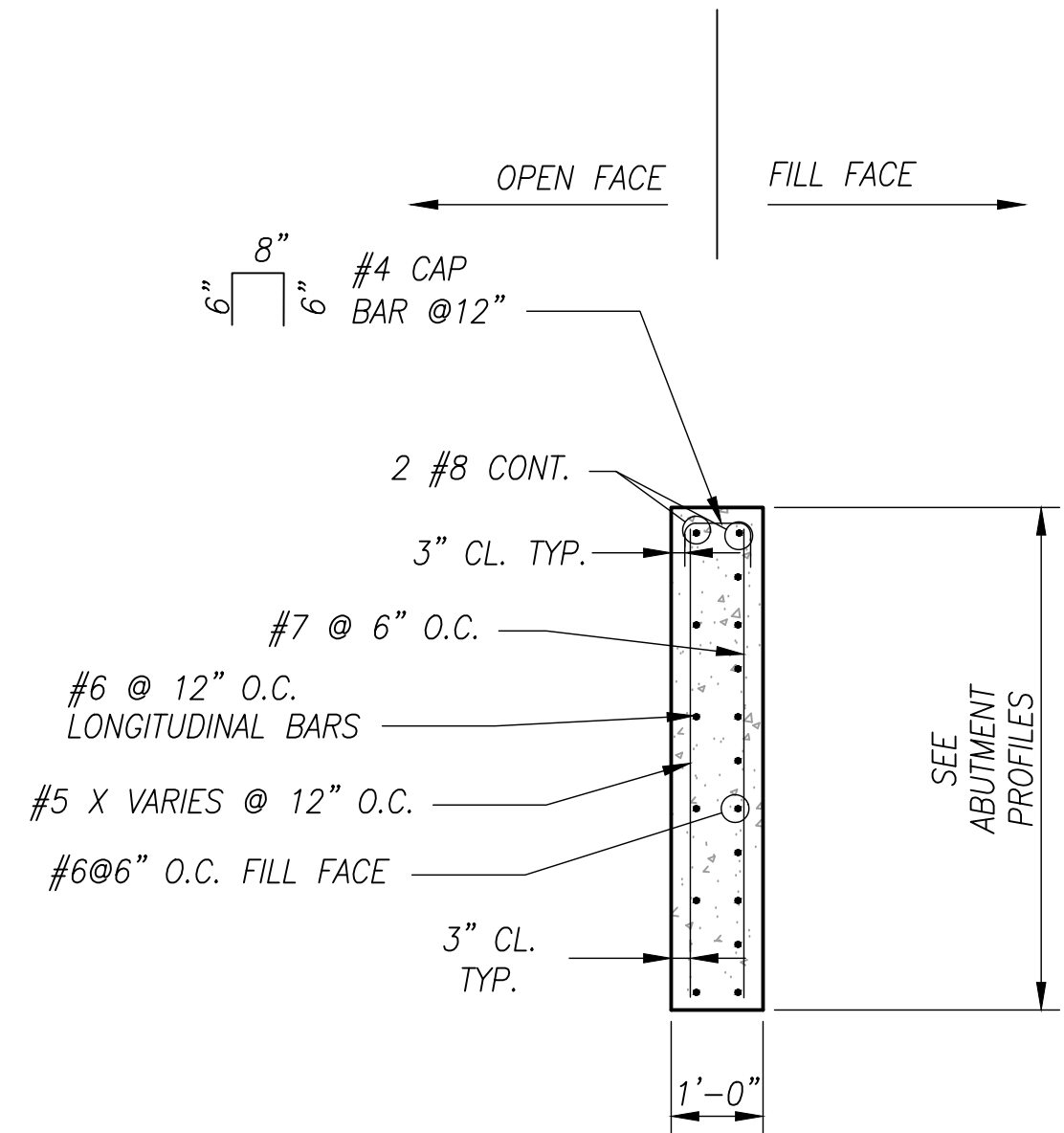
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PROJECT# 2017-02-001
BRO7
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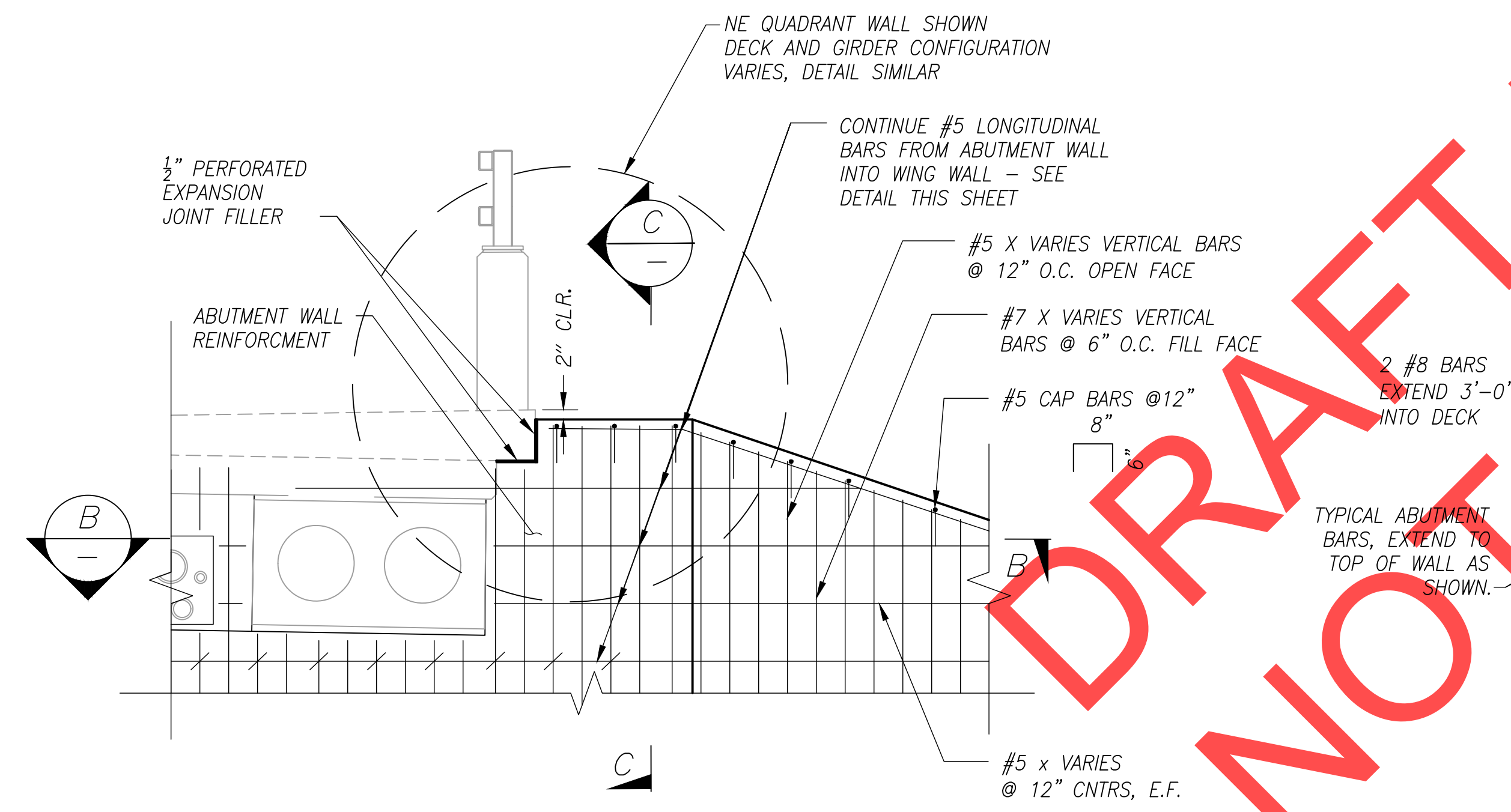
TYPICAL WALL PLAN VIEW

1/2" = 1'-0"



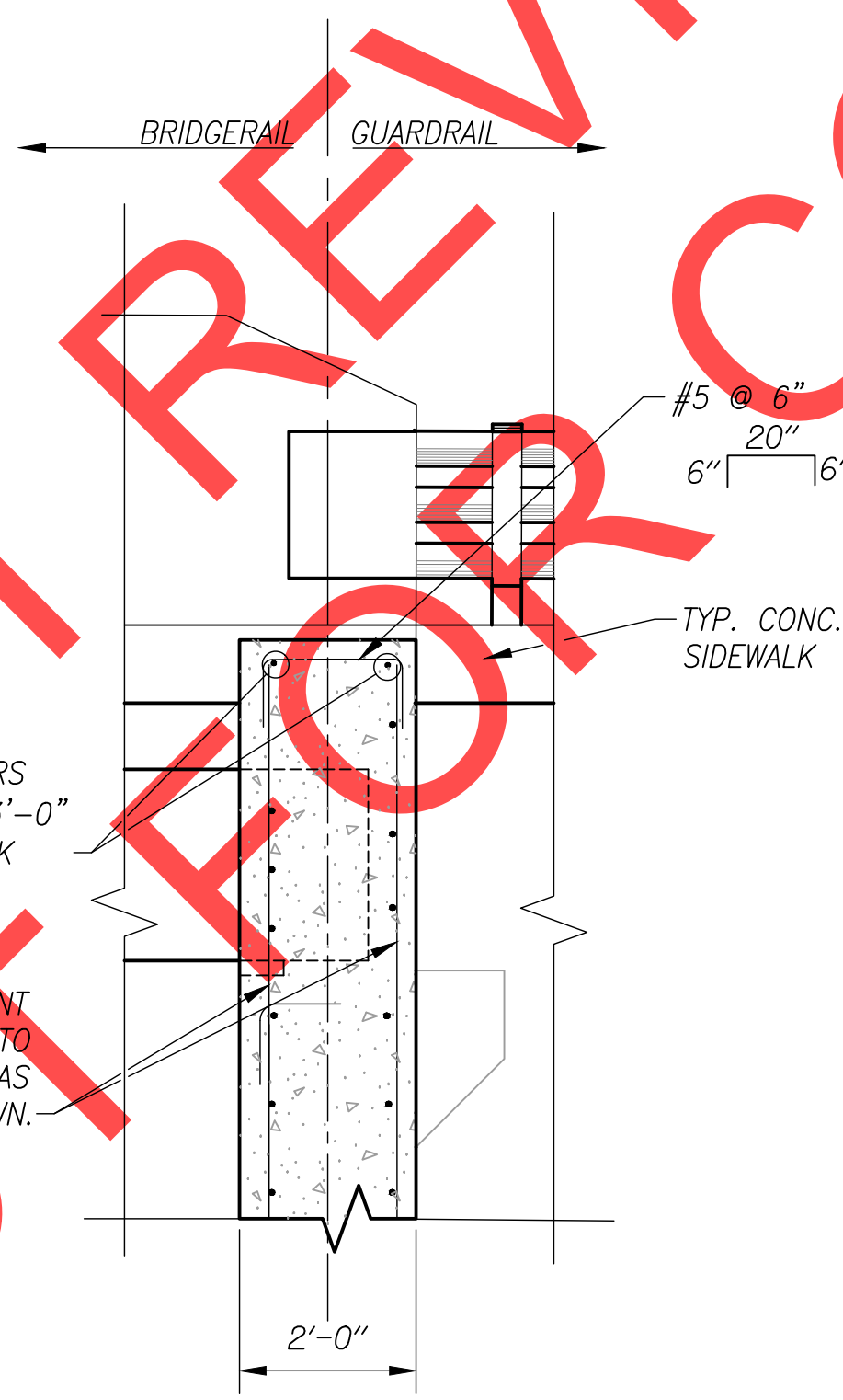
TYPICAL WINGWALL SECTION

1/2" = 1'-0"



TYPICAL WALL REINFORCEMENT

1/2" = 1'-0"



TYPICAL WALL CONNECTION DETAIL

1/2" = 1'-0"

CONTINUE BACK REINFORCEMENT FROM BACK OF ABUTMENT WALL INTO FRONT REINFORCEMENT OF WING WALL, CONTINUE REINFORCEMENT FROM BACK OF WING WALL TO FRONT FACE OF REINFORCEMENT ABUTMENT

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SCALE WARNING
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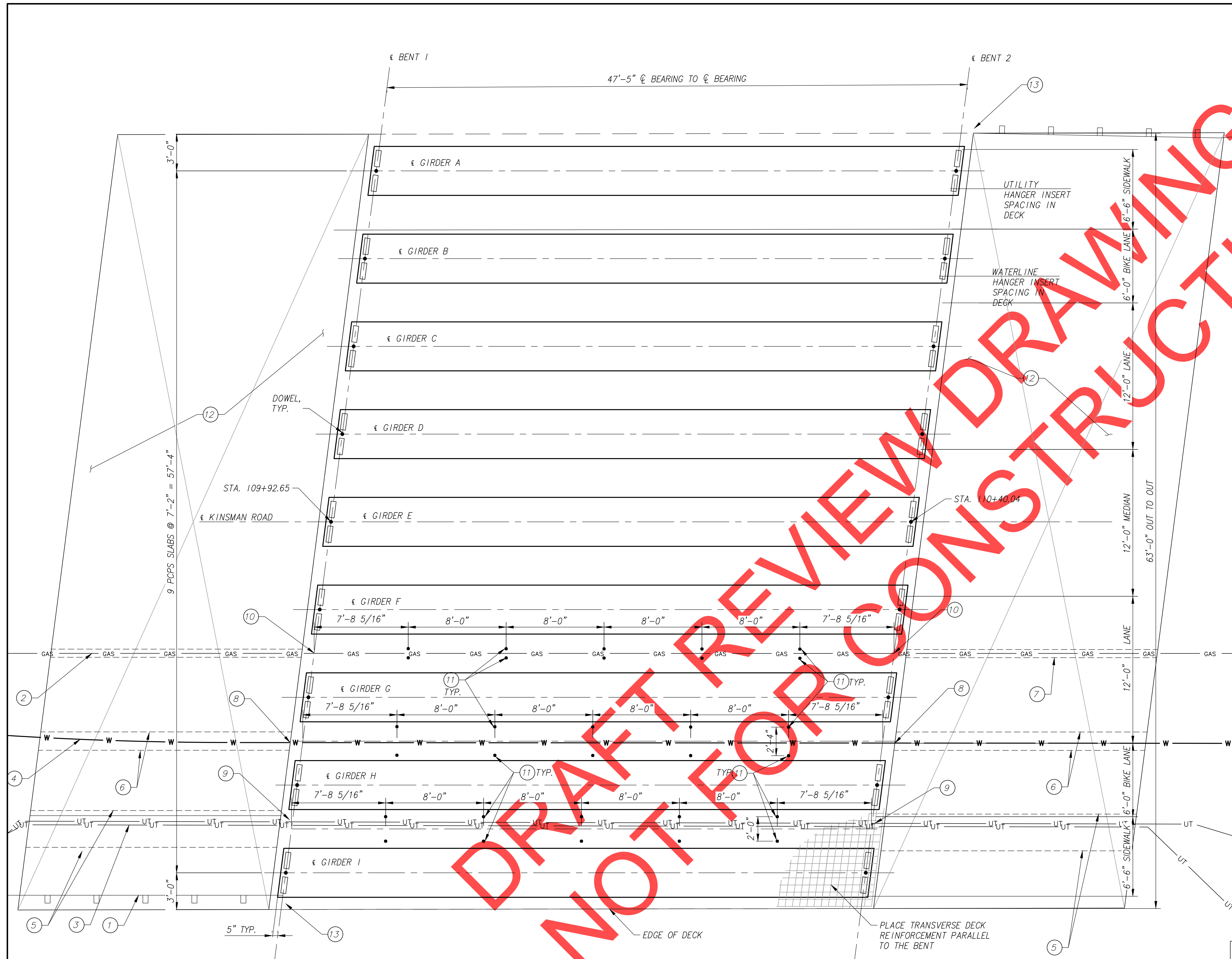


Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: JDP
 Drawn By: JDP
 Checked By: SMN

**SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
 WINGWALL DETAILS**

CIP# 4196
 PROJECT# 2017-02-001
 BR08
 90 of 211

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- CONSTRUCTION NOTES**
- 1 INSTALL STANDARD GUARD RAIL TRANSITION, SEE STD. DWG. BR216 FOR DETAILS.
 - 2 INSTALL 4" GAS LINE, SEE SHT BR10 FOR SECTION.
 - 3 MULTIPLE LINE UTILITY, SEE SHEET BR10 FOR DETAILS.
 - 4 12" DIA WATER. SEE SHT. BR10 FOR DETAILS.
 - 5 INSTALL 24 FOOT NOMINAL TYPE 2, 3'X3' PRECAST UTILITY TUNNEL/TRENCH OLDCASTLE MODEL UT-TYP2 OR APPROVED EQUAL UNDER EACH END PANEL FOR UTILITY INSTALL.
 - 6 INSTALL 20' NOMINAL 18" I.D. SCHEDULE 80 PVC CONDUIT UNDER EACH END PANEL FOR 12" WATER LINE.
 - 7 INSTALL 20' NOMINAL 8" I.D. SCHEDULE 80 PVC CONDUIT UNDER EACH END PANEL FOR 4" GAS LINE.
 - 8 18" DIA BLOCKOUT THROUGH END BENT FOR 12" WATER LINE, SEE SHT BR07 FOR DETAIL.
 - 9 RECTANGULAR BLOCKOUT THROUGH END BENT FOR MULTIPLE UTILITY CHASE, SEE SHT BR07 FOR DETAIL.
 - 10 8" DIA. BLOCKOUT THROUGH END BENT FOR 4" GAS LINE, SEE SHT. BR07 FOR DETAIL.
 - 11 INSTALL FERRULE LOOP CONCRETE INSERT AT LOCATIONS SHOWN FOR UTILITY HANGERS. SEE SHT BR10 FOR DETAIL.
 - 12 INSTALL 20' - 4" END PANEL PER STD DWG. BR 165, SEE SHT BR11 FOR MODIFICATION DETAILS TO INCLUDE SIDEWALK.
 - 13 INSTALL SIDEWALK MOUNTED COMBINATION RAIL WITH PEDESTRIAN/BIKE HEIGHT TOP RAIL. SEE STD DWG. BR216 FOR DETAILS, SEE SHEET BR01 FOR PAY LIMITS

KINSMAN ROAD BRIDGE DECK FRAMING PLAN
1/4" = 1'-0"

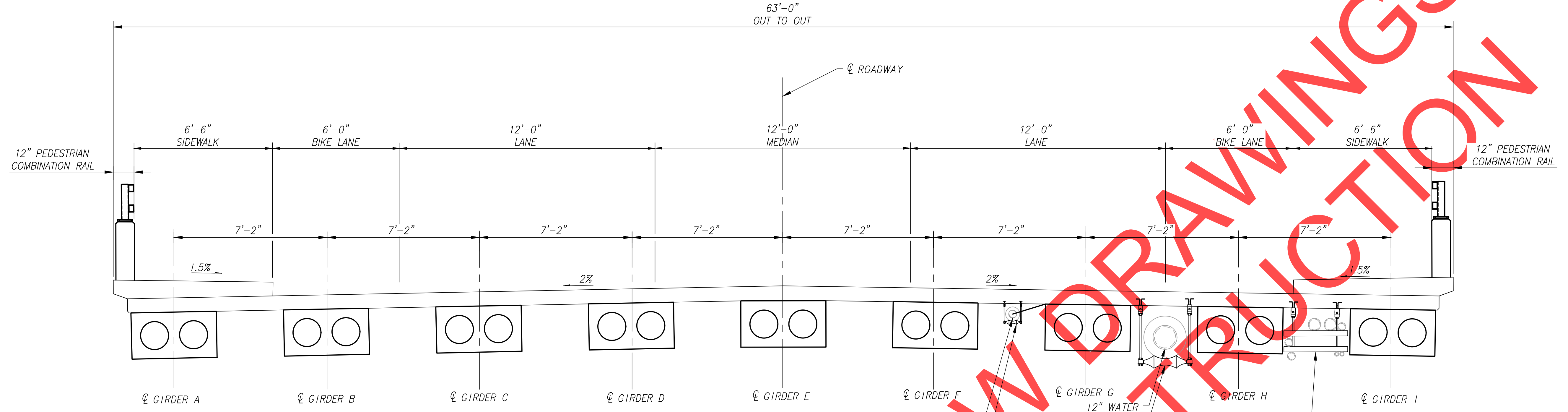
SEE 89 FOR BEARING ELEVATIONS

SCALE WARNING
IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE



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City of Wilsonville Engineering Department 29799 SW Town Center Loop E Wilsonville, OR 97070 Phone 503-682-4960	
Date	1 February 2019
Scale	AS SHOWN
Designed By	JDP
Drawn By	JDP
Checked By	SMV
SW 5TH ST TO SW KINSMAN RD EXTENSION COFFEE LAKE CREEK (KINSMAN RD) BRIDGE DECK FRAMING PLAN	
CIP#	4196
PROJECT#	2017-02-001
BR09	
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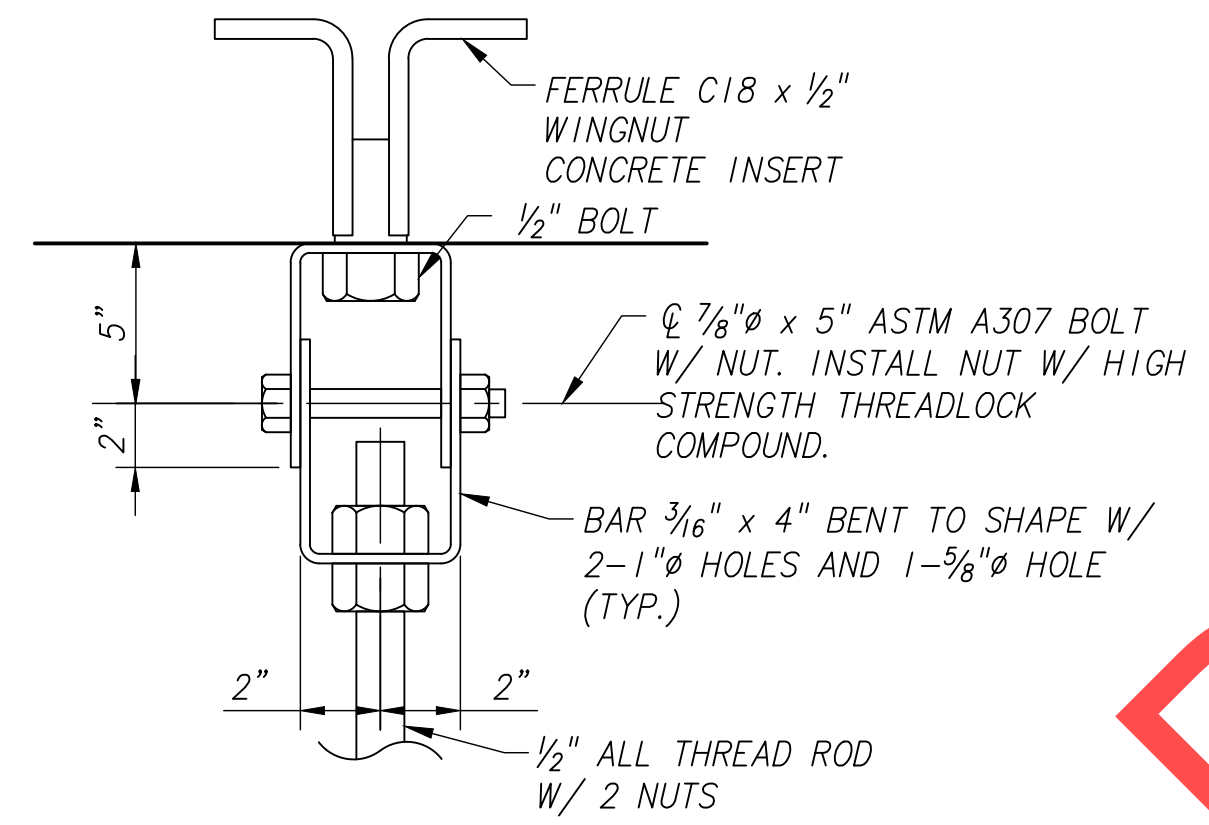


KINSMAN ROAD BRIDGE SECTION

3/8" = 1'-0"

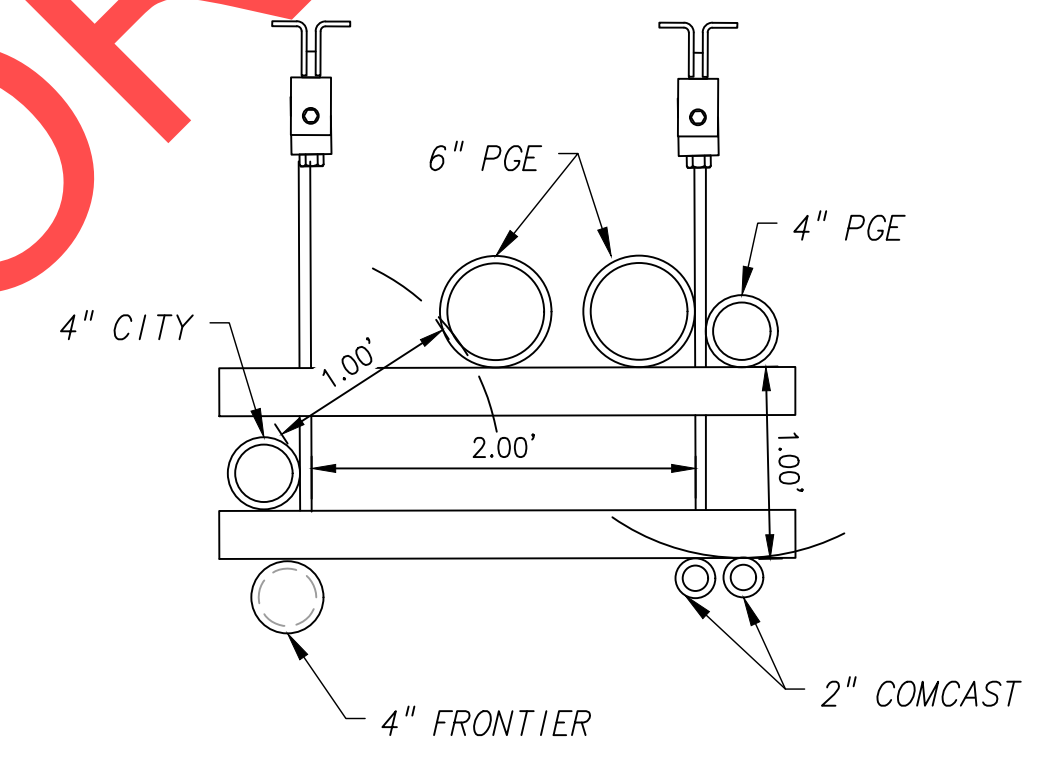
PIPE HANGER NOTES

1. DIMENSIONS TO SLAB INSERTS DEPEND ON CONFIGURATION OF COMPONENTS, INCLUDING PIPE INSTALLATION. INSTALL ACCORDING TO APPROVED SHOP DRAWINGS.
2. HOT DIP GALVANIZE STEEL COMPONENTS, EXCEPT PIPE ROLLERS.
3. PAINT PIPE ROLLERS W/ 3 COATS OF ZINC REPAIR PAINT FROM QPL.
4. CONTRACTOR TO INSTALL CONDUIT FOR ALL UTILITIES EXCEPT 4" GAS LINE
5. UTILITIES TO BE INSTALLED INSIDE OF CONDUIT BY OTHERS
6. PAY LIMITS FOR 6,4,3 AND 2" ELECTRICAL CONDUIT EXTEND FROM OUTSIDE EDGE OF END PANEL TO OUTSIDE EDGE OF END PANEL.



CLEVIS SWIVEL DETAIL

1/3" = 1'-0"



UTILITY CONDUITS DETAIL

1" = 1'-0"

SCALE WARNING

 IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE



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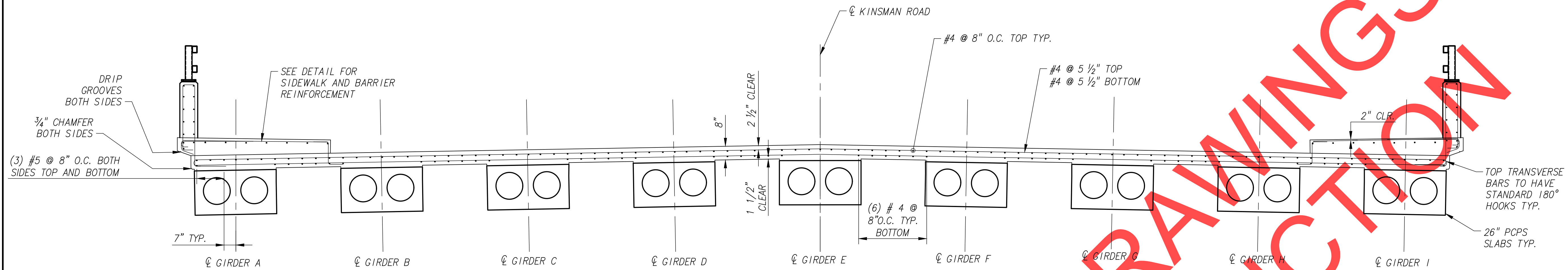
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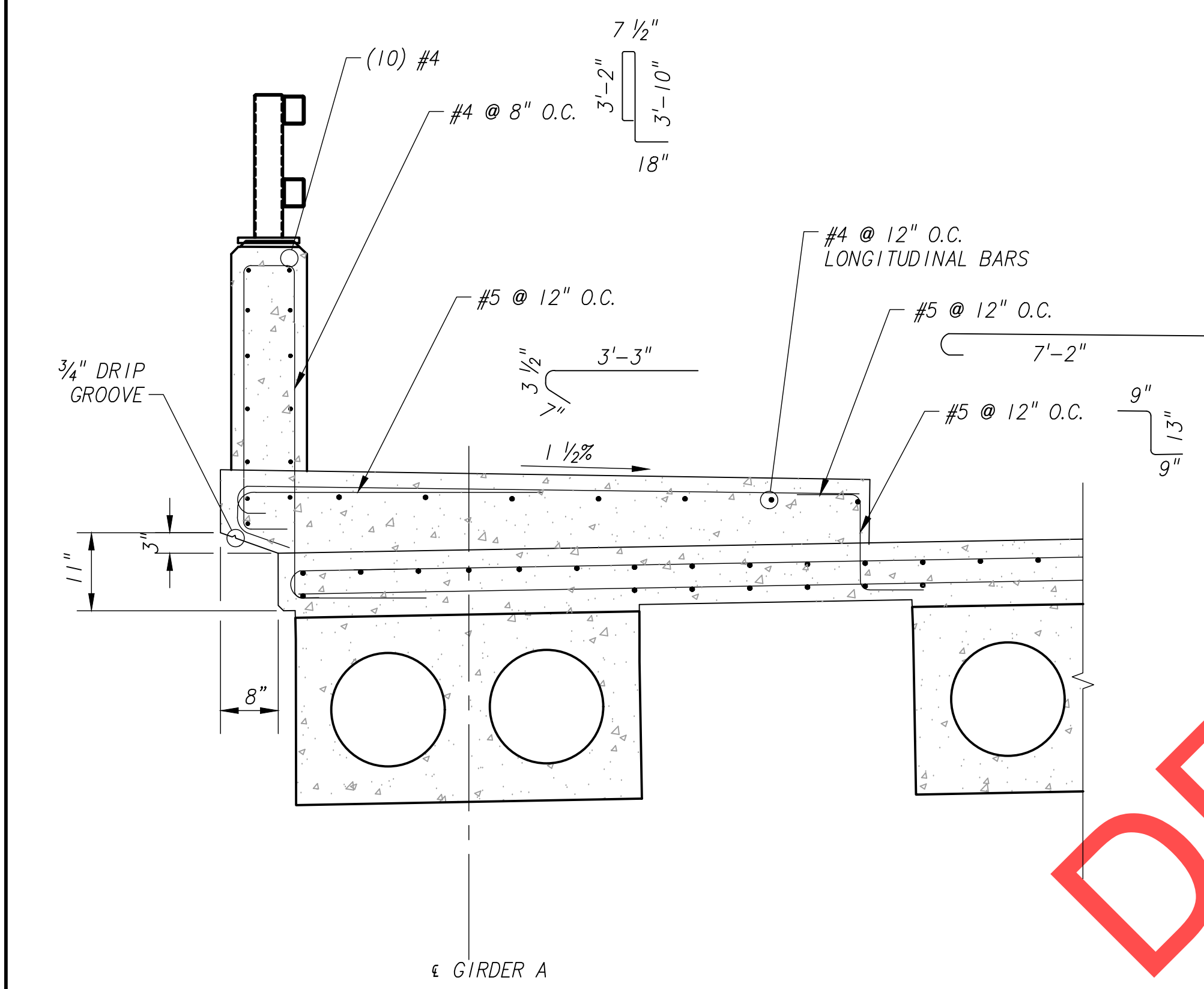
Date: 1 February 2019
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 Drawn By: JDP
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SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
 DECK CROSS SECTION

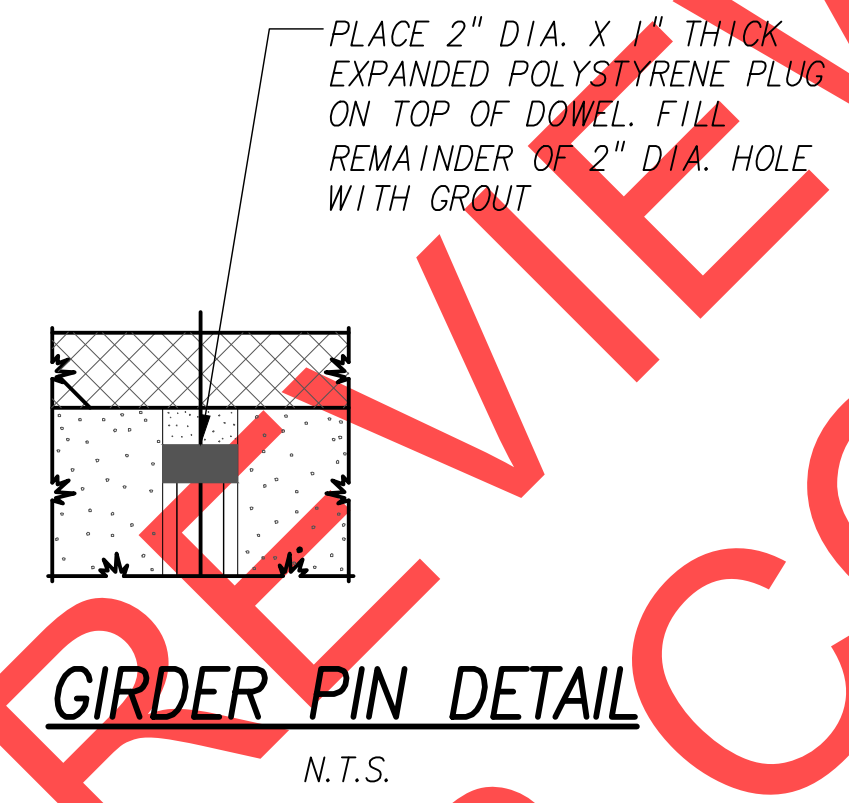
CIP# 4196
 PROJECT# 2017-02-001
 BR10
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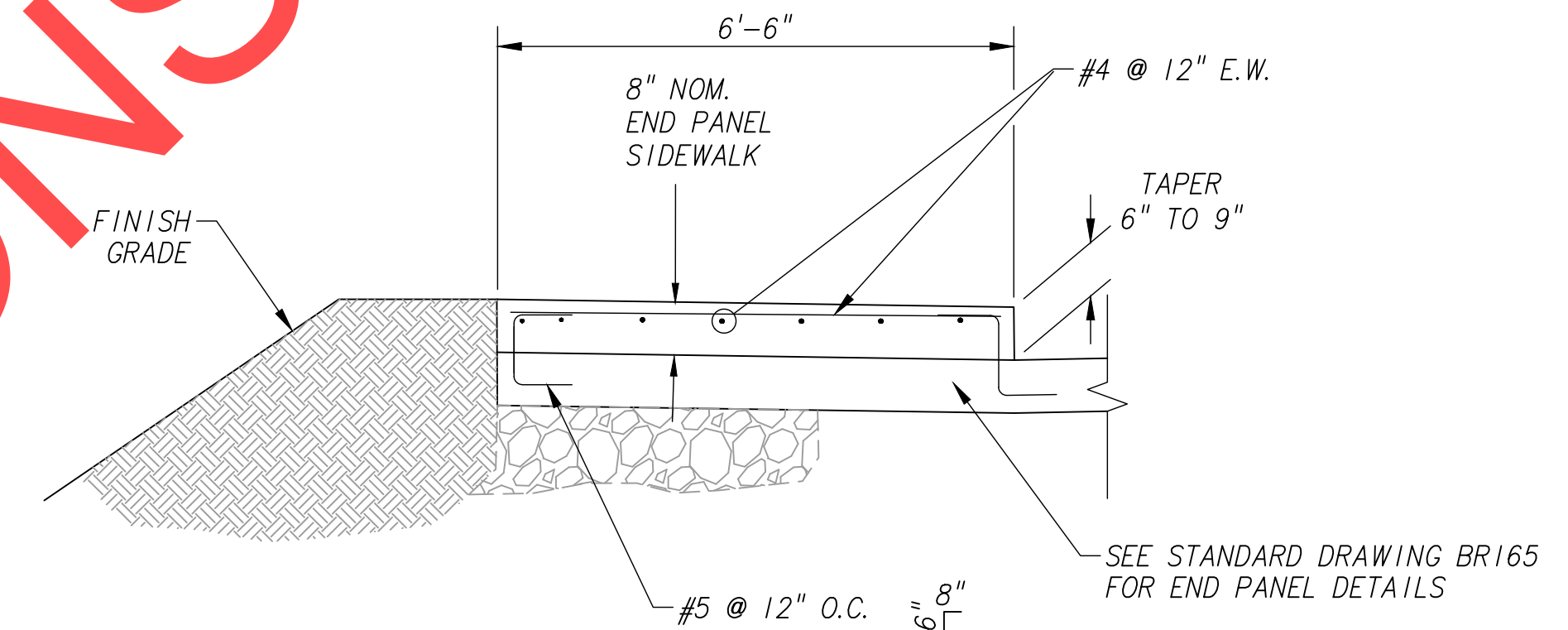
KINSMAN ROAD BRIDGE REINFORCEMENT DETAILS
3/8" = 1'-0"



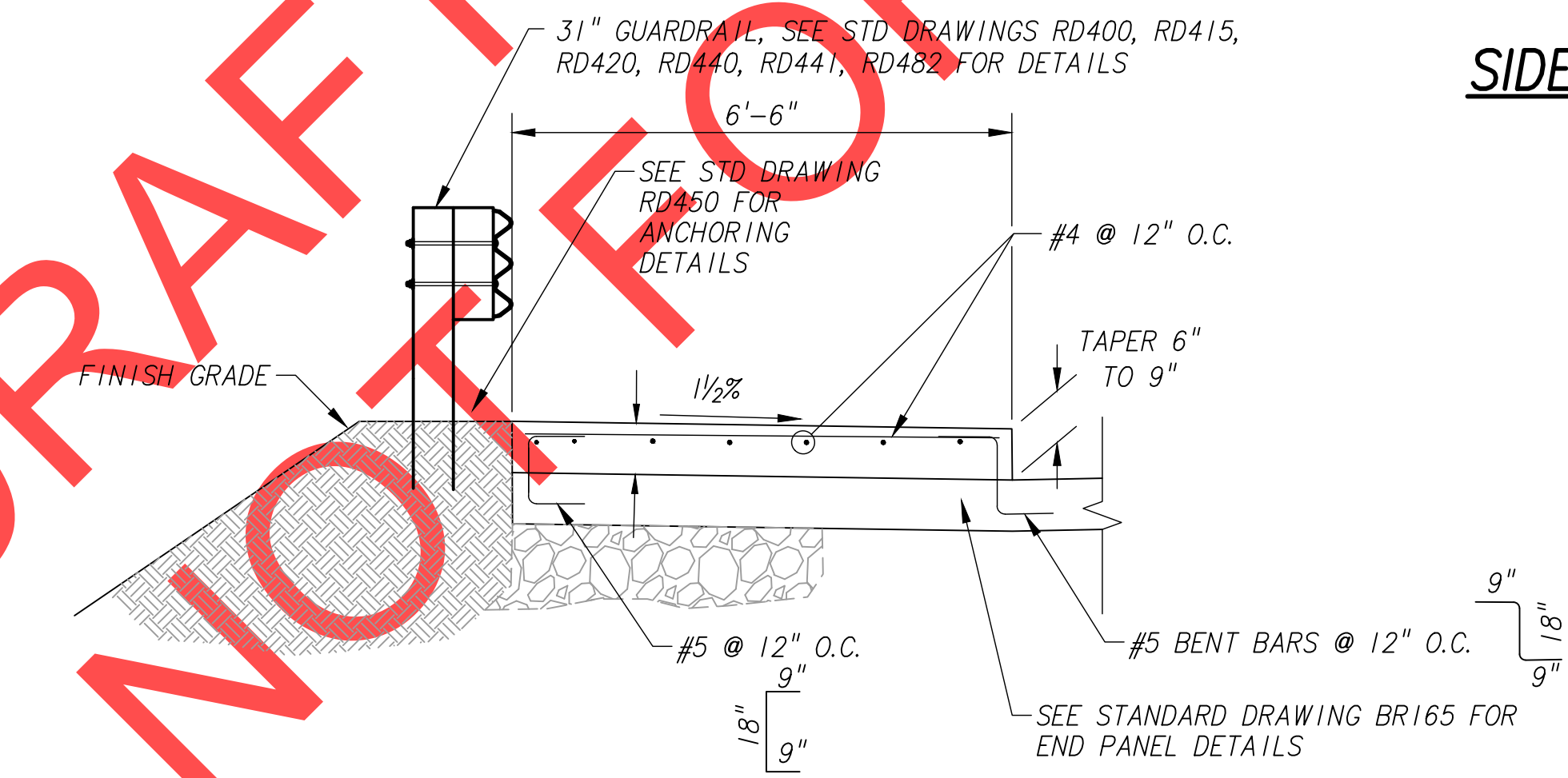
KINSMAN ROAD SIDEWALK AND BARRIER REINFORCEMENT DETAIL
3/4" = 1'-0"



GIRDER PIN DETAIL
N.T.S.



SIDEWALK ON END PANEL W/O GUARDRAIL SECTION (A)
1/2" = 1'-0"



SIDEWALK ON END PANEL W/ GUARDRAIL SECTION (B)
1/2" = 1'-0"

SCALE WARNING
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SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
DECK REINFORCEMENT DETAILS

CIP # 4196
PROJECT # 2017-02-001
BR11
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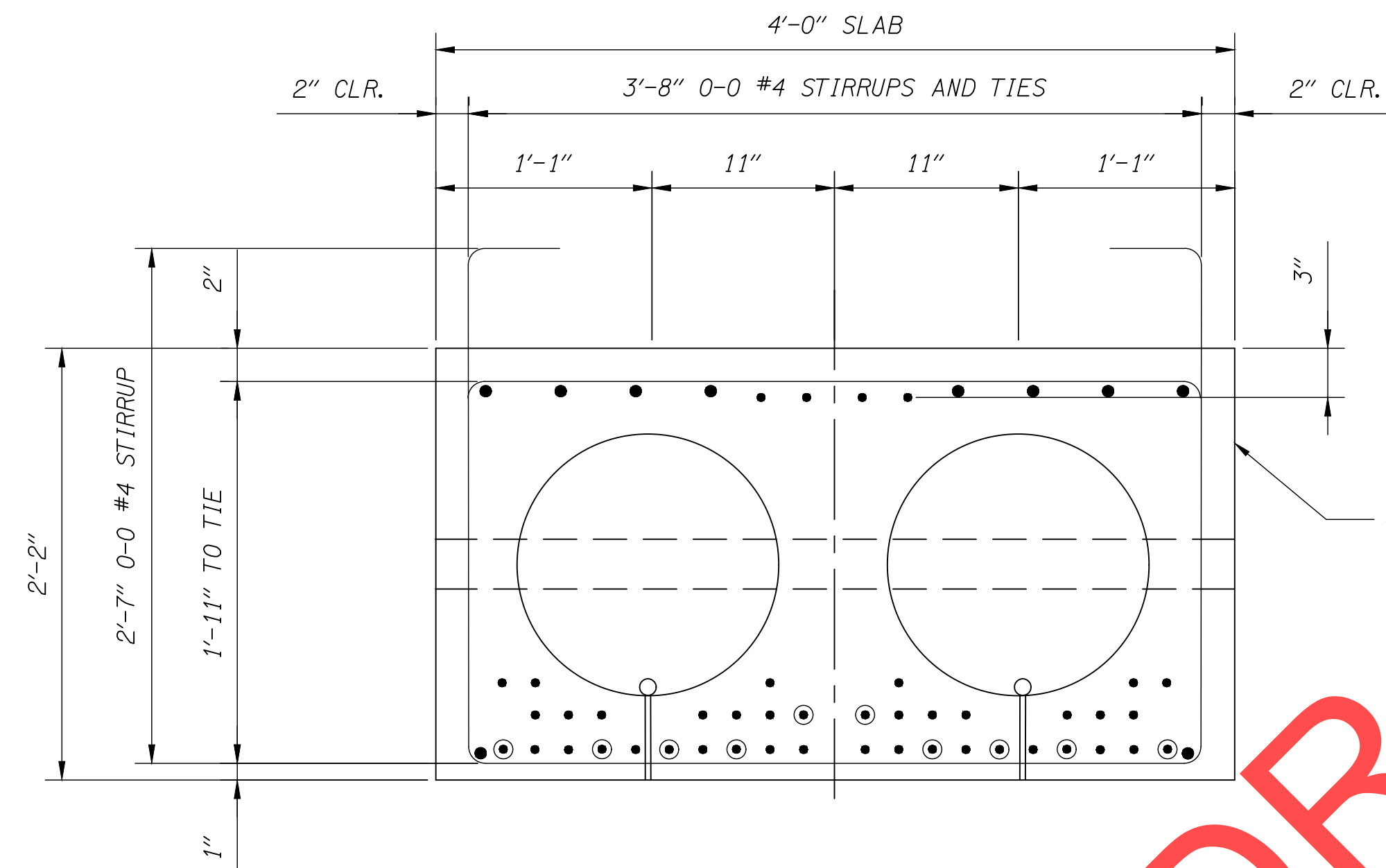
26" STANDARD PRECAST PRESTRESSED SLABS

GENERAL NOTES FOR PRESTRESSED BOXES AND SLABS

SLAB NUMBER	NUMBER REQUIRED	SPAN NUMBER	HORIZONTAL LENGTH 0-0 AT SLAB C. FT. (AFTER SHORTENING)	SKEW ANGLE		NUMBER OF STRANDS	DEBONDED STRANDS	DISTANCE "Yc" TO C.G. STRAND AT MIDSPAN	DISTANCE "Yd" TO C.G.S. AT MIDSPAN SUBTRACTING TOP STRAND, IN.	CONCRETE STRENGTH @ 28 DAYS, KSI	CONCRETE STRENGTH @ RELEASE, KSI	INITIAL TENSION PER STRAND, KIPS	ESTIMATED MIDSPAN DEFLECTION, IN.					ESTIMATED SHORTENING 2 WEEKS AFTER RELEASE, IN
				BACK	AHEAD								UPWARD AT RELEASE	UPWARD 3 MONTHS AFTER RELEASE	UPWARD 5 YEARS AFTER RELEASE	DOWNWARD DUE TO SDL	DOWNWARD DUE TO SDL 5 YEARS AFTER LOADING	
A-1	9	1	48'-3"	7	7	28	-	6.32	3.54	5	4.2	31.0	0.47	0.79	0.55	-0.11	-0.21	5/16

- BOXES AND SLABS ARE DESIGNED FOR LIVE AND SUPERIMPOSED DEAD LOADING AS SHOWN IN THE GENERAL NOTES FOR THE PROJECT.
- PROVIDE THE CLASS OF CONCRETE SHOWN IN THE SLAB OR BOX SCHEDULE WITH NOMINAL MAXIMUM SIZE AGGREGATE OF 1" OR 3/4". TRANSFER PRESTRESS AFTER THE CONCRETE REACHES THE MINIMUM CONCRETE STRENGTH AT TRANSFER SHOWN IN THE SLAB OR BOX SCHEDULE.
- SELECT A KEYWAY GROUT FROM THE OPL FOR FILLING KEYWAYS, LIFTING BLOCKOUTS AND TIE ROD BLOCKOUTS.
- ALLOW TRAFFIC ON THE BRIDGE ONLY AFTER KEYWAY GROUT HAS REACHED DESIGN STRENGTH.
- PROVIDE REINFORCING STEEL AS SPECIFIED IN THE GENERAL NOTES FOR THE PROJECT.
- PROVIDE SMOOTH DOWELS CONFORMING TO AASHTO M31, GRADE 60 (ASTM A615, GRADE 60).
- PROVIDE 1/2" DIAMETER 7 WIRE LOW RELAXATION PRESTRESSING STEEL STRAND CONFORMING TO AASHTO SPECIFICATION M203 (ASTM A416), GRADE 270 SUPPLEMENT 1.
- TENSION STRAND INITIALLY TO 31.0 KIPS PER STRAND (AFTER HARPING DEFLECTED STRAND). DEBOND STRANDS WHERE SPECIFIED USING EITHER SPLIT OR SOLID PLASTIC SHEATHING WITH A MINIMUM WALL THICKNESS OF 0.025".
- PROVIDE HIGH STRENGTH TIE RODS CONFORMING TO ASTM A449. PROVIDE HEAVY HEXAGON NUTS CONFORMING TO ASTM A563. PROVIDE HARDENED STEEL WASHERS CONFORMING TO ASTM F436. HOT-DIP GALVANIZE TIE RODS, PLATES, NUTS AND WASHERS (EXCEPT DTIS) AFTER FABRICATION. TIGHTEN TIE RODS TO 39 KIPS (MINIMUM) USING MECHANICALLY GALVANIZED DIRECT TENSION INDICATORS (DTIS) CONFORMING TO ASTM F959.
- TIGHTEN ALL TIE RODS (PER BOX OR SLAB) TO ABOUT ONE HALF THE SPECIFIED TENSION BEFORE PROCEEDING WITH FINAL TENSIONING.
- KEEP BOXES AND SLABS UPRIGHT AT ALL TIMES. SUPPORT THEM WITHIN 2'-0" OF THE ENDS DURING STORAGE (TO PREVENT EXCESSIVE CAMBER, OVERSTRESS OR FAILURE). LOCATE TRANSPORT SUPPORTS AND LIFTING DEVICES WITHIN 2'-0" OF THE ENDS OF BOXES AND SLABS. TRANSPORT BOXES AND SLABS AFTER THE CONCRETE HAS REACHED THE 28 DAY DESIGN STRENGTH AND A MINIMUM OF 7 DAYS AFTER CASTING.

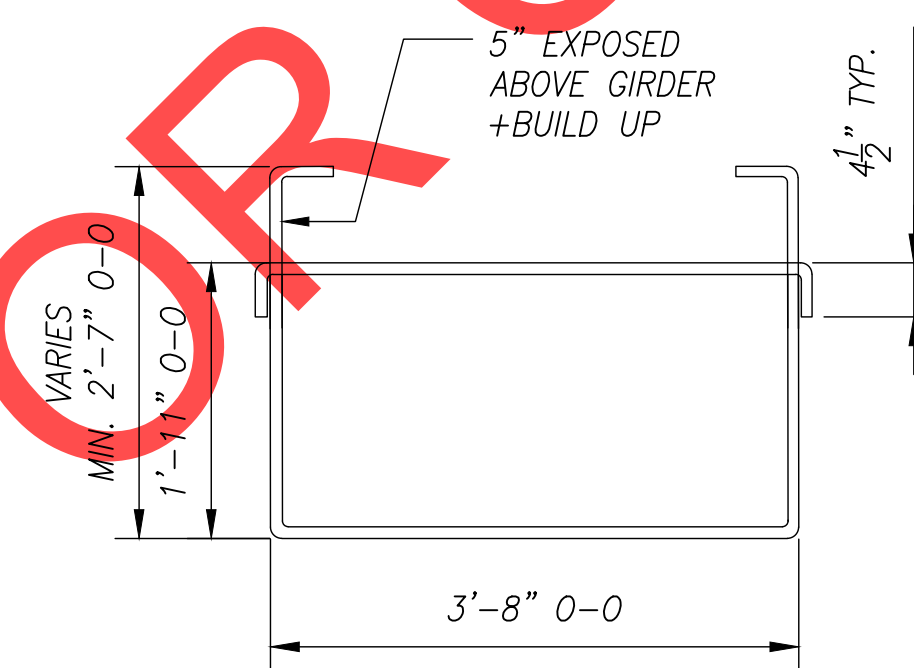
THE SUPERIMPOSED DEAD LOAD (SIDL) IS 60 LBS./SQ. FT. WHICH INCLUDES SIDEWALK, BRIDGE RAILS, UTILITIES AND ALLOWANCE FOR 2" DEPTH OF FUTURE WEARING SURFACE.



26" SLAB TYPICAL SECTION

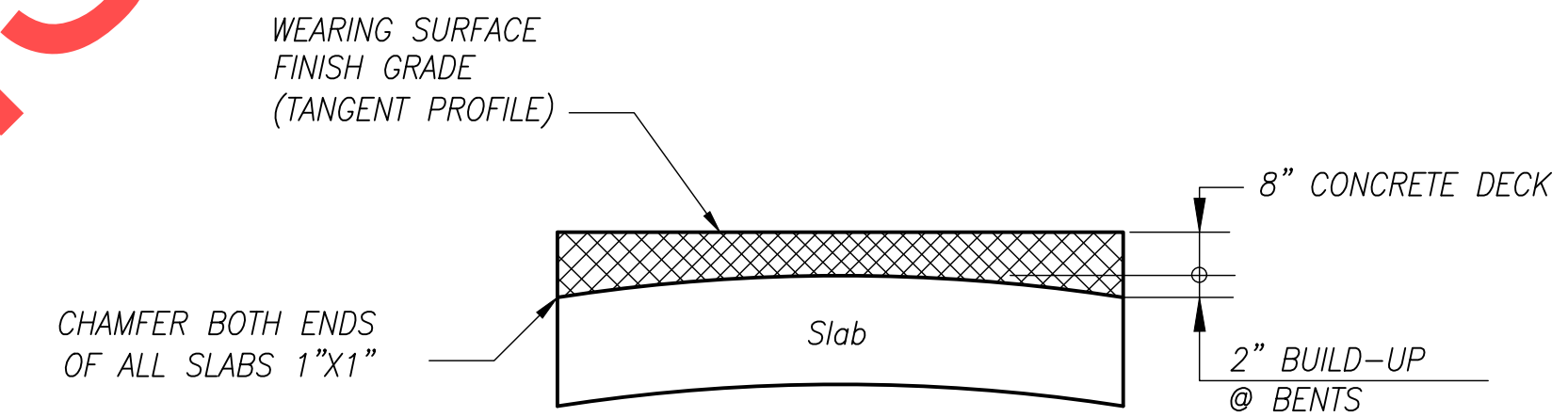
SCALE: 1.5" = 1'-0"

SEE STD. DWGS. BR420 FOR DETAILS NOT SHOWN.



#4 STIRRUP AND TIE DETAIL

SCALE: 3/4" = 1'-0"



	Std. Modified
MIN. DECK-----	8"
ANTICIPATED CAMBER @ 3 MOS.-----	0.79"
DOWNWARD DUE TO DECK-----	0.24"

SCALE WARNING
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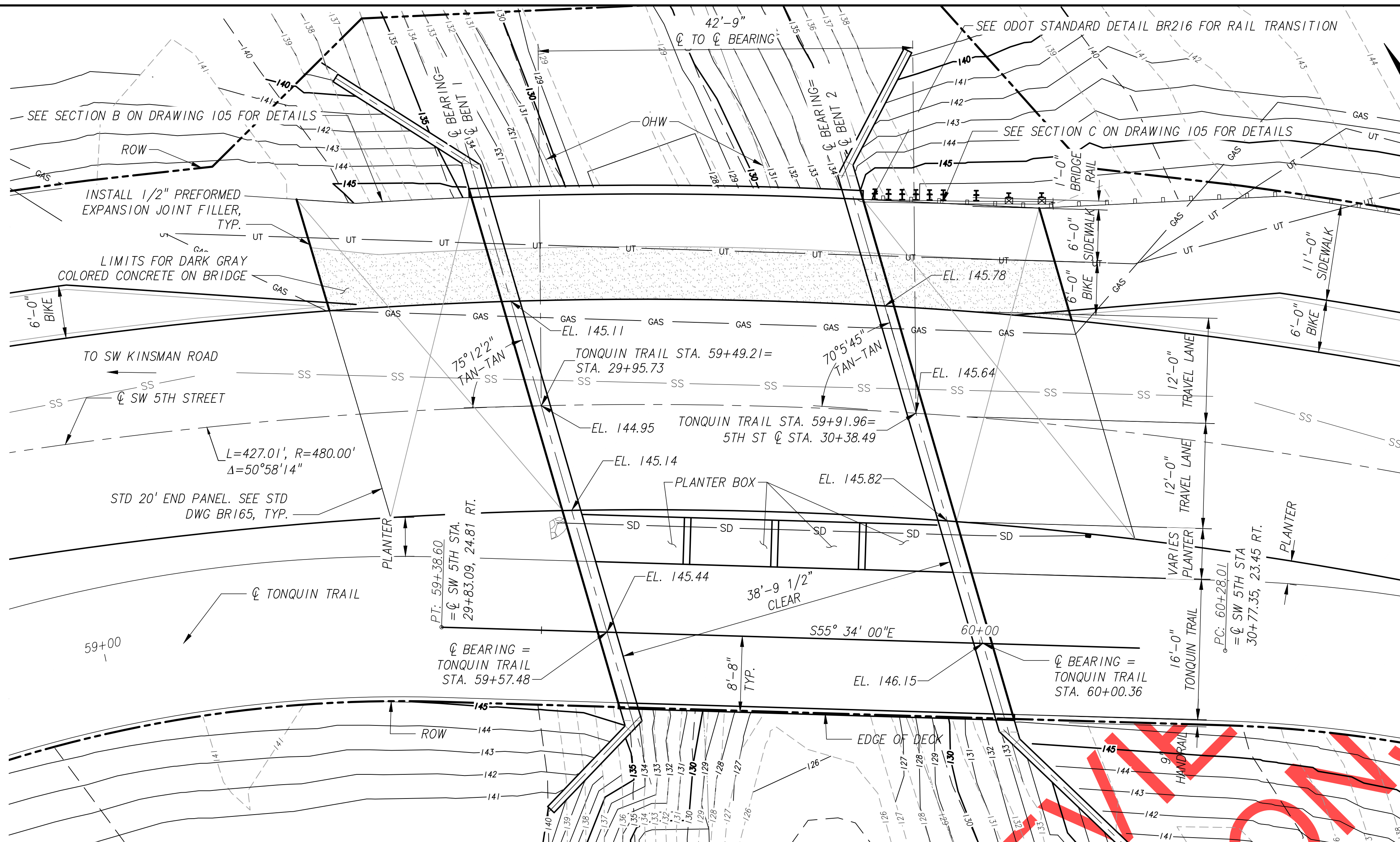
City of Wilsonville
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Phone 503-682-4960



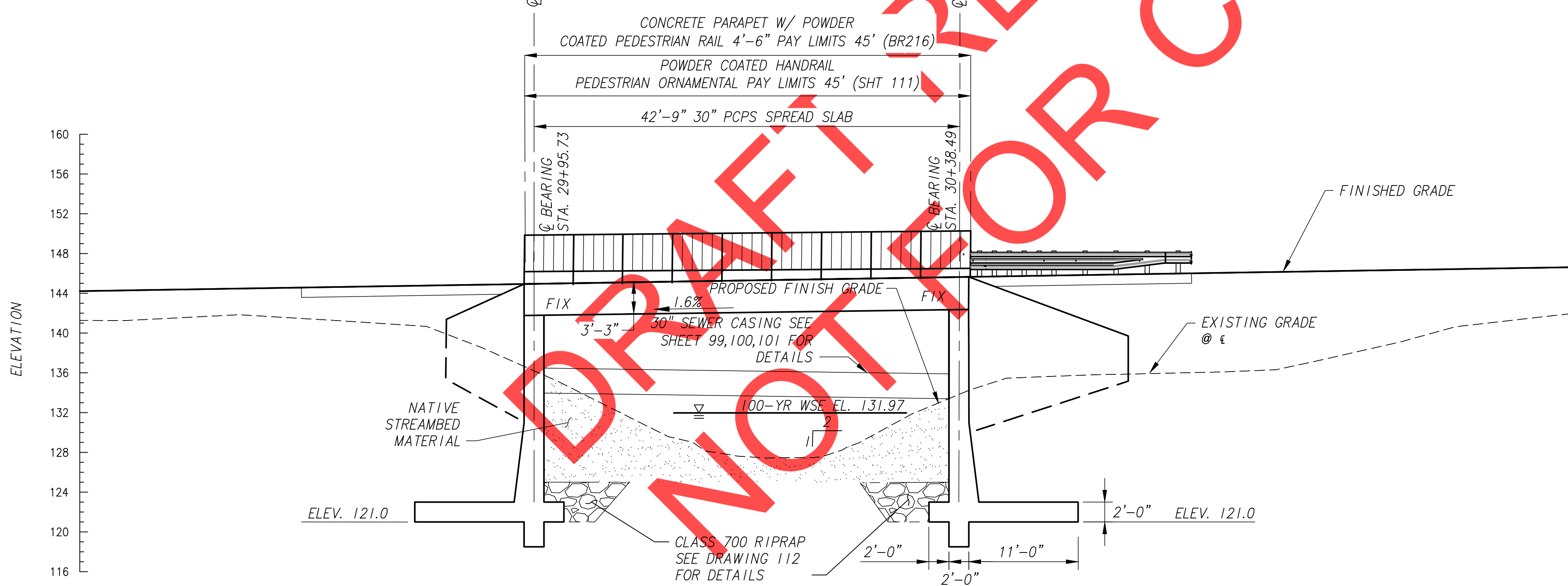
Date: 1 February 2019
Scale: AS SHOWN
Designed By: JDP
Drawn By: JDP
Checked By: SMN

SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (KINSMAN RD) BRIDGE
GIRDER DETAILS

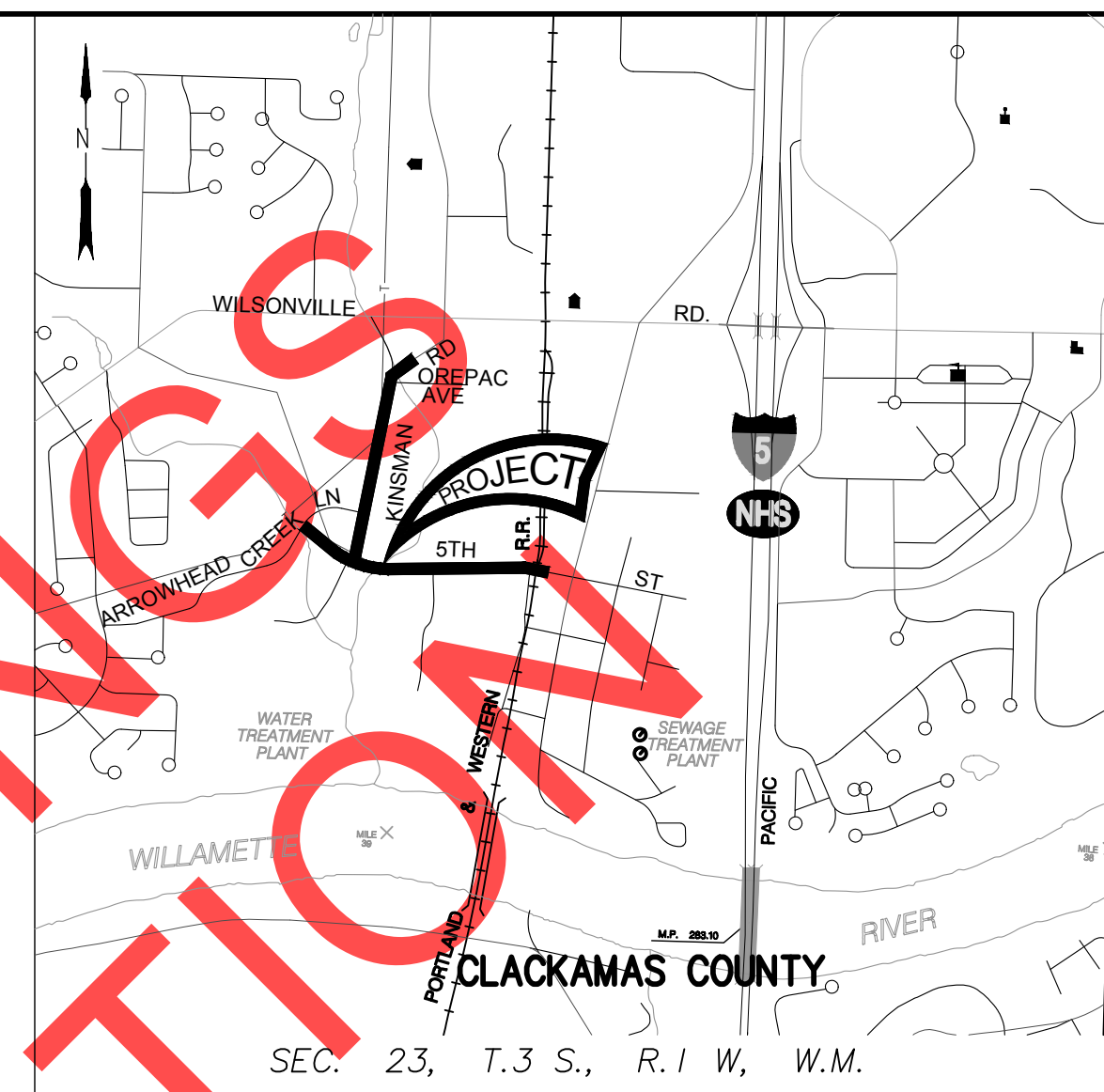
CIP# 4196
PROJECT# 2017-02-001
BR12
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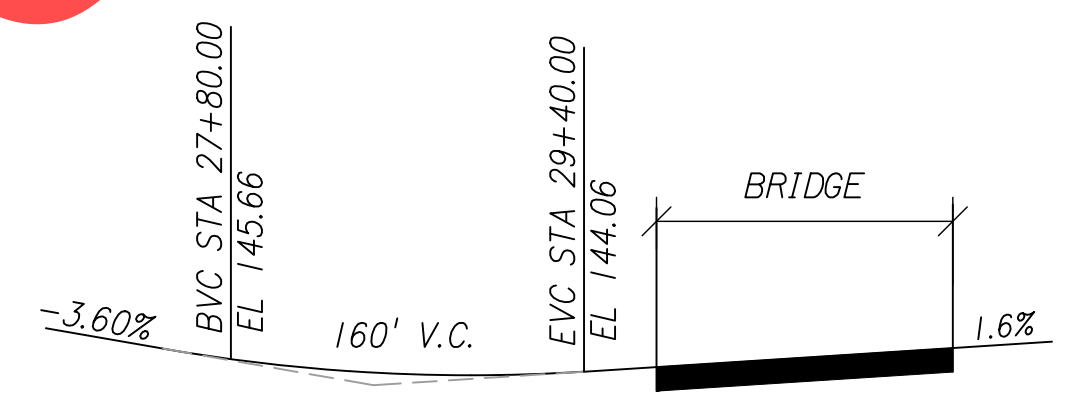
PLAN
1/8" = 1'-0"



ELEVATION
1/8" = 1'-0"



LOCATION MAP
No Scale



SW 5TH ST GRADELINE DIAGRAM
N.T.S.

- NOTES:
1. DECK ELEVATIONS ARE AT FINISH GRADE, TOP OF CONCRETE DECK
2. C OF BENTS ARE PARALLEL

HYDRAULIC DATA

ITEMS	UNITS	DESIGN FLOOD	BASE FLOOD	MAX. PROBABLE FLOOD
DISCHARGE	CFS	581	581	730
RECURRENCE INTERVAL	YEARS	100	100	500
HIGH WATER ELEVATION AT UPSTREAM FACE OF BRIDGE ALONG EMBANKMENT	FEET, NAVD	131.9	131.9	133.0
SCOUR ELEVATION	FEET, NAVD	126.0	126.0	126.0

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Date: 1 February 2019
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Drawn By: JDP
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**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
PLAN AND ELEVATION**

CIP# 4196
PROJECT# 2017-02-002
BR12
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NOTE:
ELEVATIONS SHOWN ARE BASED ON
NORTH AMERICAN VERTICAL DATUM (1988)

GENERAL NOTES

PROVIDE ALL MATERIALS AND PERFORM ALL WORK ACCORDING TO THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018 AND SUPPLEMENTAL PROJECT SPECIAL PROVISIONS. BRIDGE IS DESIGNED IN ACCORDANCE WITH THE 2014 EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, INCLUDING 2014 THRU 2017 INTERIM REVISIONS, WITH AN ALLOWANCE OF 25PSF FOR FUTURE WEARING SURFACE AND ALL OF THE FOLLOWING LIVE LOADS :

SERVICE AND STRENGTH I LIMIT STATES:
HL-93: DESIGN TRUCK AND THE DESIGN LANE LOAD OR THE DESIGN TANDEM AND THE DESIGN LANE LOAD.

STRENGTH II LIMIT STATE:
ODOT TYPE STP-5BW PERMIT TRUCK
ODOT TYPE STP-4E PERMIT TRUCK

SEISMIC DESIGN IS PERFORMED IN ACCORDANCE WITH THE "AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN" ("AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS") AS MODIFIED BY THE "ODOT BRIDGE DESIGN & DRAFTING MANUAL" FOR 500- AND 1000-YEAR CRITERIA. THE HORIZONTAL PEAK GROUND ACCELERATION COEFFICIENTS (PGA) FOR THE 1000 YEAR IS 0.258G, BASED ON 2002 USGS SEISMIC HAZARD MAPS. THE BRIDGE SITE IS DEFINED AS A SITE CLASS D WITH SITE FACTOR (FPGA) OF 1.342.

SEE FOUNDATION PLAN FOR FOUNDATION DESIGN NOTES.

PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM SPECIFICATION A706, OR AASHTO M31 (ASTM A615) GRADE 60. USE THE FOLLOWING SPLICE LENGTHS (UNLESS SHOWN OTHERWISE):

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60										$f'c = 4.0$ ksi
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-3"	4'-1"	5'-2"	6'-4"	NOT PERMITTED

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60										$f'c = 3.5$ ksi
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-1"	1'-6"	1'-10"	2'-4"	2'-9"	3'-6"	4'-5"	5'-7"	6'-10"	NOT PERMITTED

ALL FIELD BENT BARS TO BE ASTM SPEC. A706.

INCREASE ALL SPLICE LENGTHS 40% FOR HORIZONTAL OR NEARLY HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.

SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.

SUPPORT THE BOTTOM MAT REINFORCING STEEL FROM THE FORMS WITH PRECAST MORTAR BLOCKS AT 24" MAXIMUM CENTERS EACH WAY. SUPPORT THE TOP MAT OF REINFORCING STEEL FROM THE BOTTOM MAT OF REINFORCING STEEL WITH WIRE BAR SUPPORTS AS SHOWN IN CHAPTER 3 OF THE CRSI MANUAL OF STANDARD PRACTICE (SBU, BBU, OR CHCU). PLACE WIRE BAR SUPPORTS AT 24" MAXIMUM CENTERS.

PLACE BARS 2" CLEAR OF THE NEAREST FACE OF CONCRETE (UNLESS SHOWN OTHERWISE). THE TOP BENDS OF STIRRUPS EXTENDING FROM BEAM STEMS INTO THE TOP SLAB MAY BE SHOP OR FIELD BENT (UNLESS SHOWN OTHERWISE).

PROVIDE CLASS HPC4000 - 1 1/2", 1, OR 3/4 CONCRETE IN DECK.

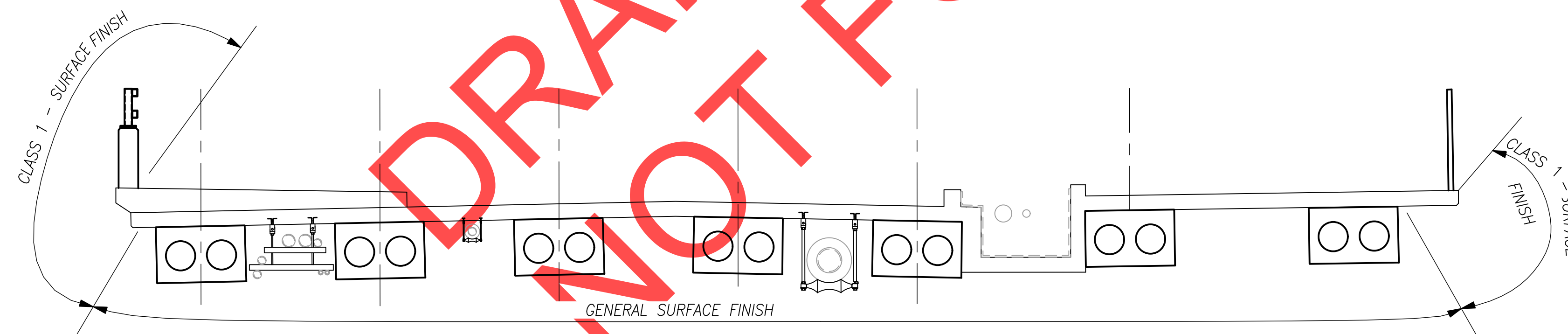
PROVIDE CLASS 3300 - 1 1/2", 1 OR 3/4 CONCRETE IN FOOTINGS.

PROVIDE CLASS HPC4000 - 1 1/2", 1, OR 3/4 CONCRETE IN REINFORCED CONCRETE END PANELS.

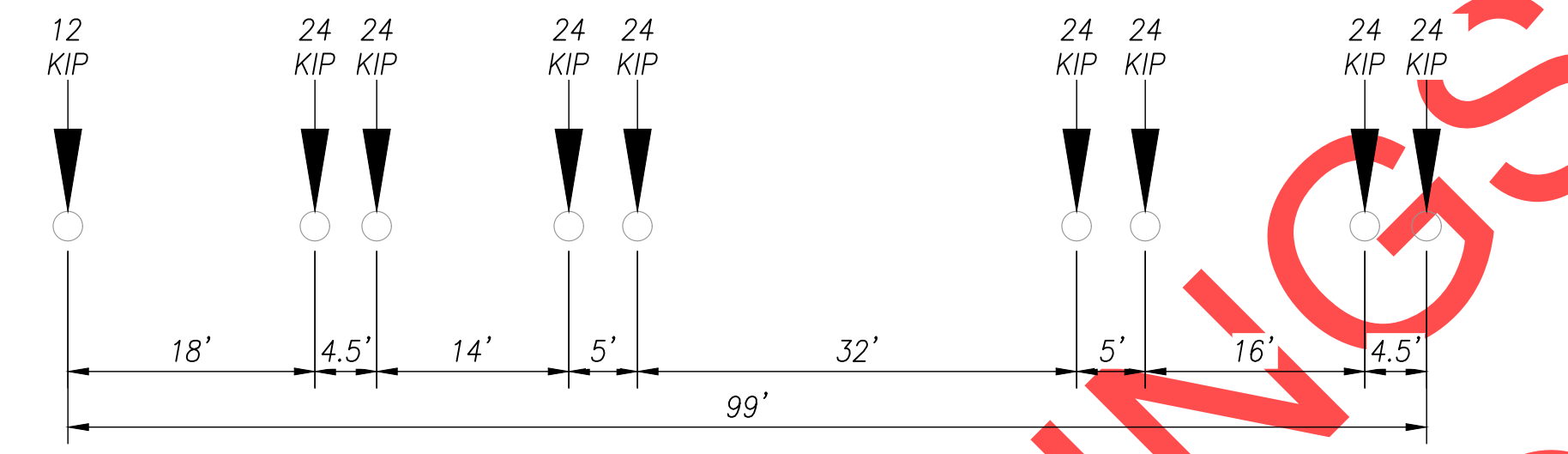
PROVIDE CLASS 4000 - 1 1/2", 1 OR 3/4 CONCRETE FOR ALL OTHER CONCRETE.

PROVIDE CONCRETE IN PRECAST PRESTRESSED SLABS ACCORDING TO DETAIL PLANS. SEE DWG. BR23.

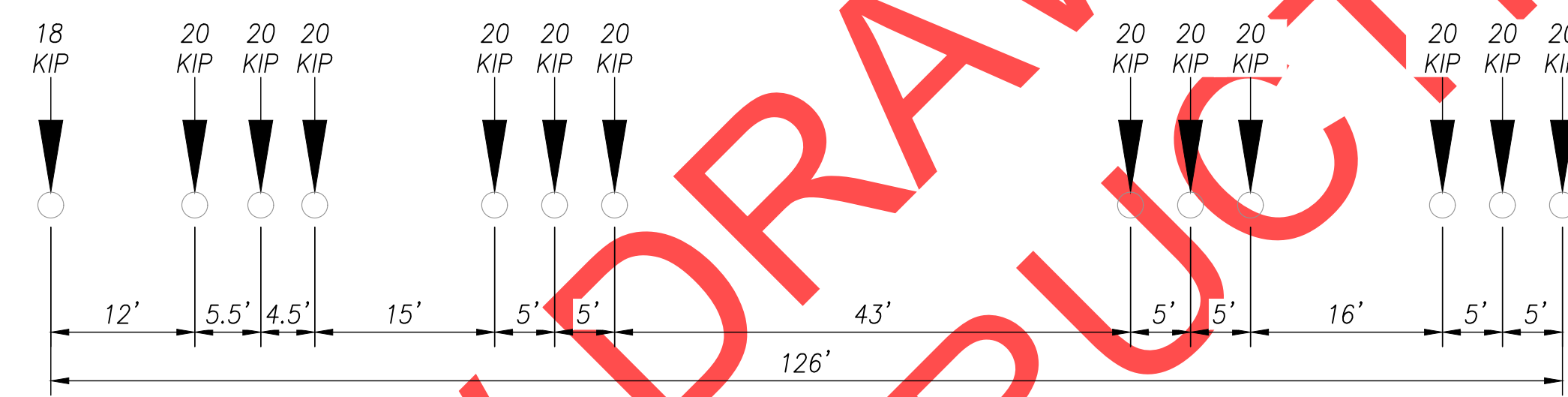
PROVIDE PRESTRESSING STEEL ACCORDING TO DETAIL PLANS.



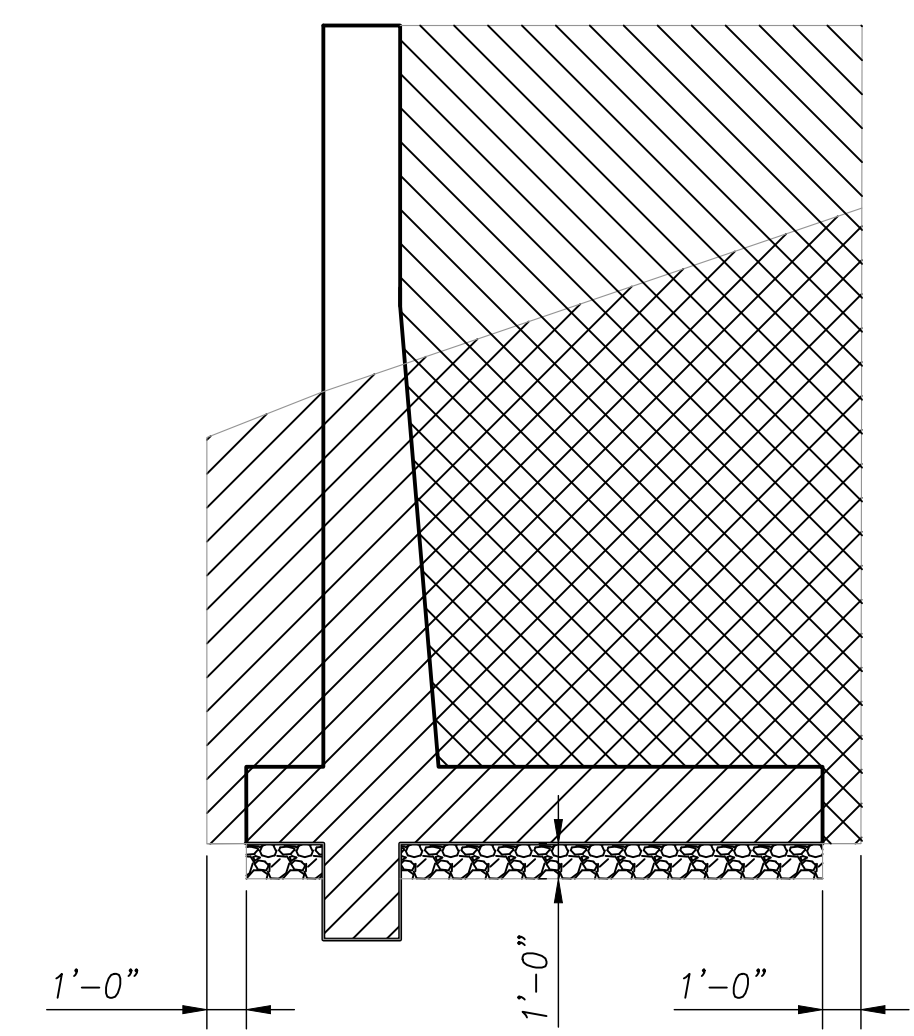
CONCRETE FINISH DIAGRAM
NO SCALE



TYPE OR-STP-5BW
9 AXLE VEHICLE GROSS WEIGHT 204K



TYPE OR-STP-4E
13 AXLE VEHICLE GROSS WEIGHT 258K



- PAY LIMITS OF STRUCTURE EXCAVATION
- PAY LIMITS OF GRANULAR WALL BACKFILL
- PAY LIMITS OF GRANULAR STRUCTURAL BACKFILL

PAY LIMITS DIAGRAM
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SCALE WARNING
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SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
GENERAL NOTES

CIP#	4196
PROJECT#	2017-02-001
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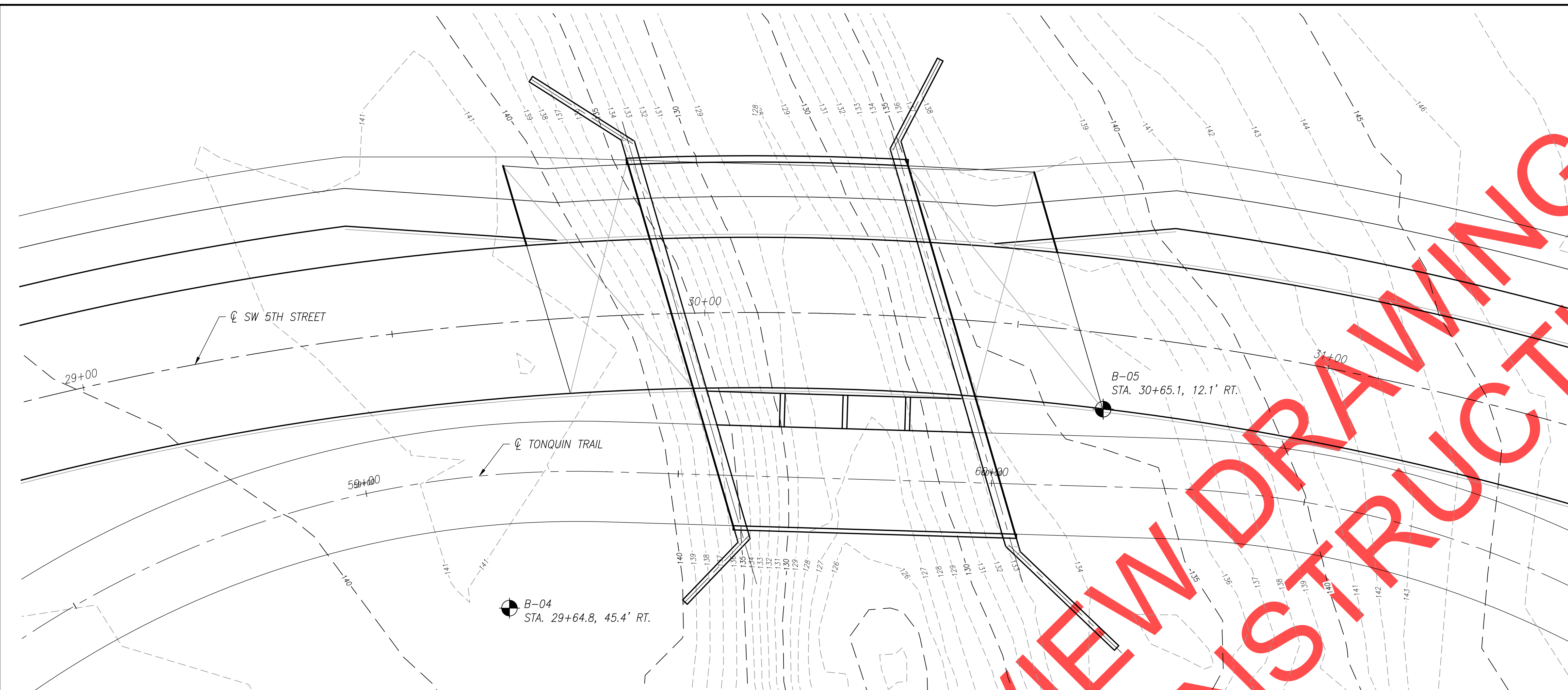
LEGEND OF SYMBOLS

- 6 N-VALUE; UNCORRECTED STANDARD PENETRATION RESISTANCE (ASTM D1586, SEE NOTE 2)
- U-1 UNDISTURBED SAMPLE (ASTM D1587)
- B-X BORING MADE BY SHANNON & WILSON
- PLAN FROM FILE BY OTAK

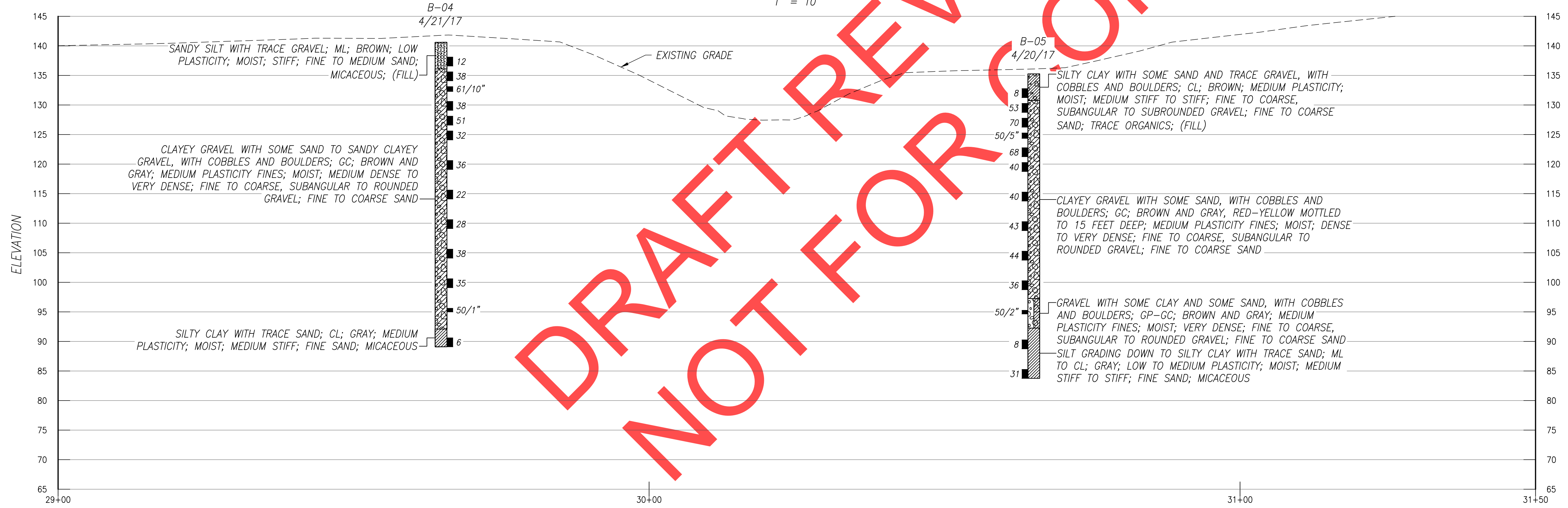
LEGEND OF MATERIALS

- ASPHALT CONCRETE
- BASE AGGREGATE
- TOPSOIL
- CLAY
- SILT
- SAND
- SILTY CLAY/CLAY
- GRAVEL

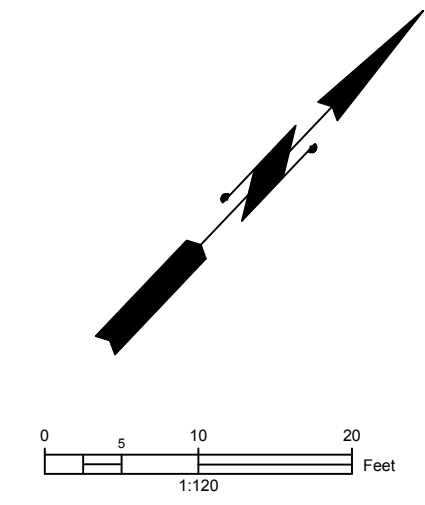
- NOTES:**
- ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
 - BORING B-4 WAS SAMPLED WITH A HAMMER EFFICIENCY OF 87% AND BORING B-5 WAS SAMPLED WITH A HAMMER EFFICIENCY OF 88%. GEOTECHNICAL DATA SHOWN ON THIS DRAWING ARE A CONSOLIDATION OF INFORMATION AND/OR REVISION IN TERMINOLOGY FROM DRILL LOGS. THE DRILL LOGS AND ANY OTHER EXPLORATION DATA USED IN COMPILING THIS DRAWING ARE AVAILABLE UPON REQUEST. CONTRACTOR SHALL REFER TO GEOTECHNICAL REPORTS AND DRILL LOGS AND THE INFORMATION CONTAINED THEREIN.
 - REFER TO THE ODOT SOIL AND ROCK CLASSIFICATION MANUAL (1987) FOR A DESCRIPTION OF THE TERMS USED IN THIS DRAWING.



PLAN
1" = 10'



FOUNDATION DATA
1" = 10'



REVISIONS	

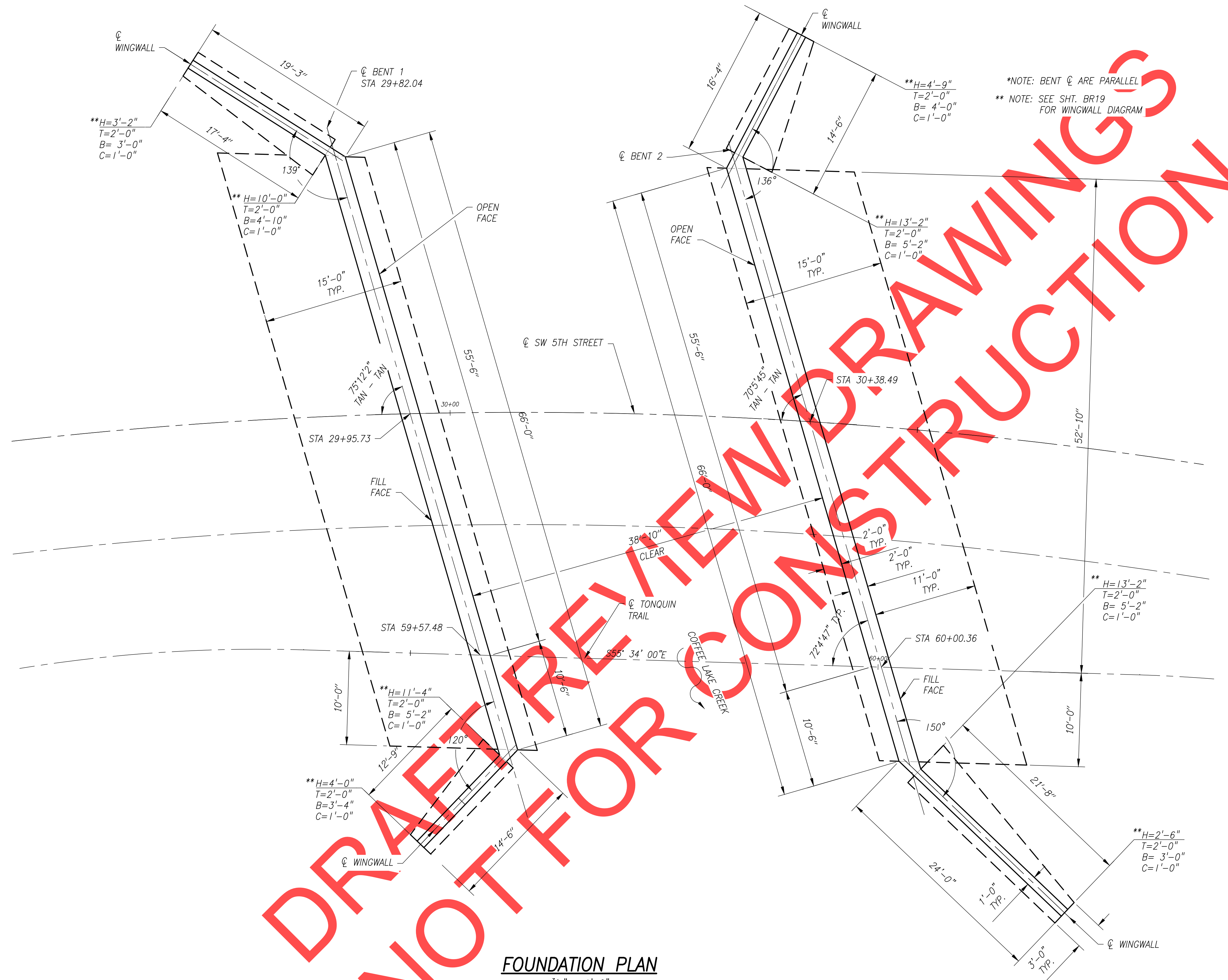
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Wilsonville, OR 97070
Phone 503-682-4960

Date: 1 February 2019
Scale: AS SHOWN
Designed By: JIW
Drawn By: AEH
Checked By: R.PIAO

SW 5TH ST TO SW KINSMAN RD EXTENSION
FOUNDATION DATA SHEET

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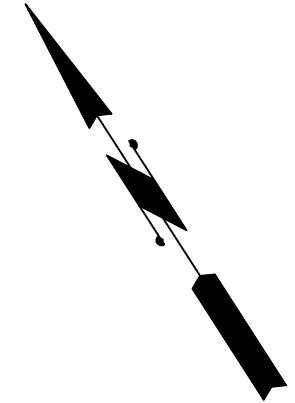
CIP#	4196
PROJECT#	2017-02-001
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DRAFT FOR PREVIEW CONSTRUCTION

FOUNDATION PLAN
 $\frac{3}{16}'' = 1'-0''$

*NOTE: BENT C ARE PARALLEL
 ** NOTE: SEE SHT. BR19 FOR WINGWALL DIAGRAM



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SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (5TH ST) BRIDGE
 FOUNDATION PLAN

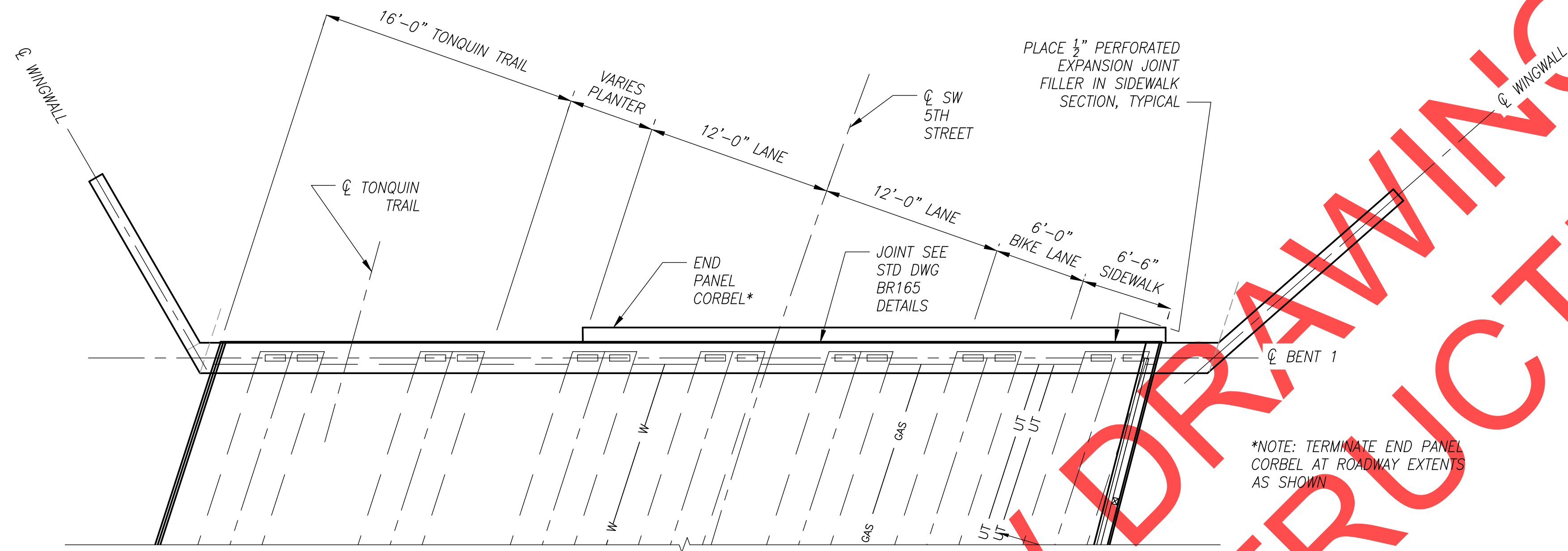
CIP# 4196
 PROJECT# 2017-02-001
 BR15
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SCALE WARNING

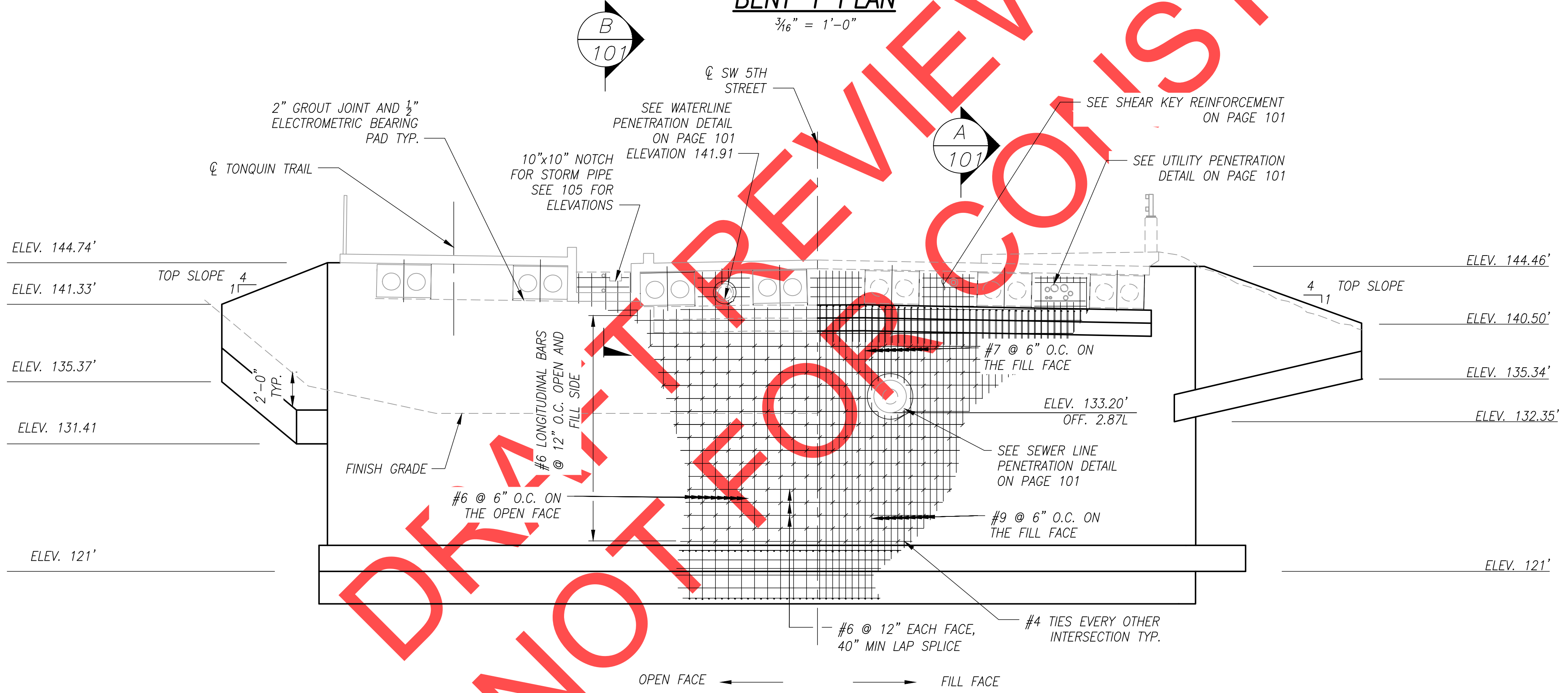
 IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE



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BENT 1 PLAN
3/16" = 1'-0"



BENT 1 ELEVATION
3/16" = 1'-0"

SCALE WARNING
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Phone 503-682-4960



Date	1 February 2019
Scale	AS SHOWN
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Drawn By	JDP
Checked By	SMN

**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
BENT 1 PLAN AND ELEVATION**

CIP #	4196
PROJECT #	2017-02-001
	BR16
	99 of 211

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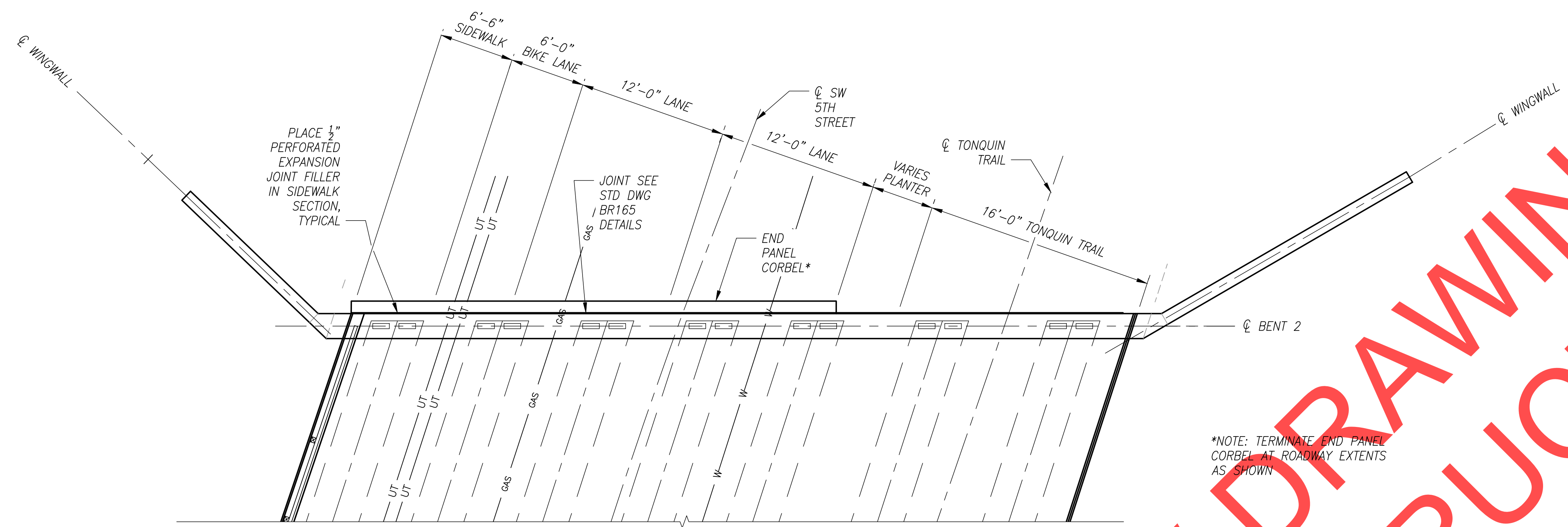
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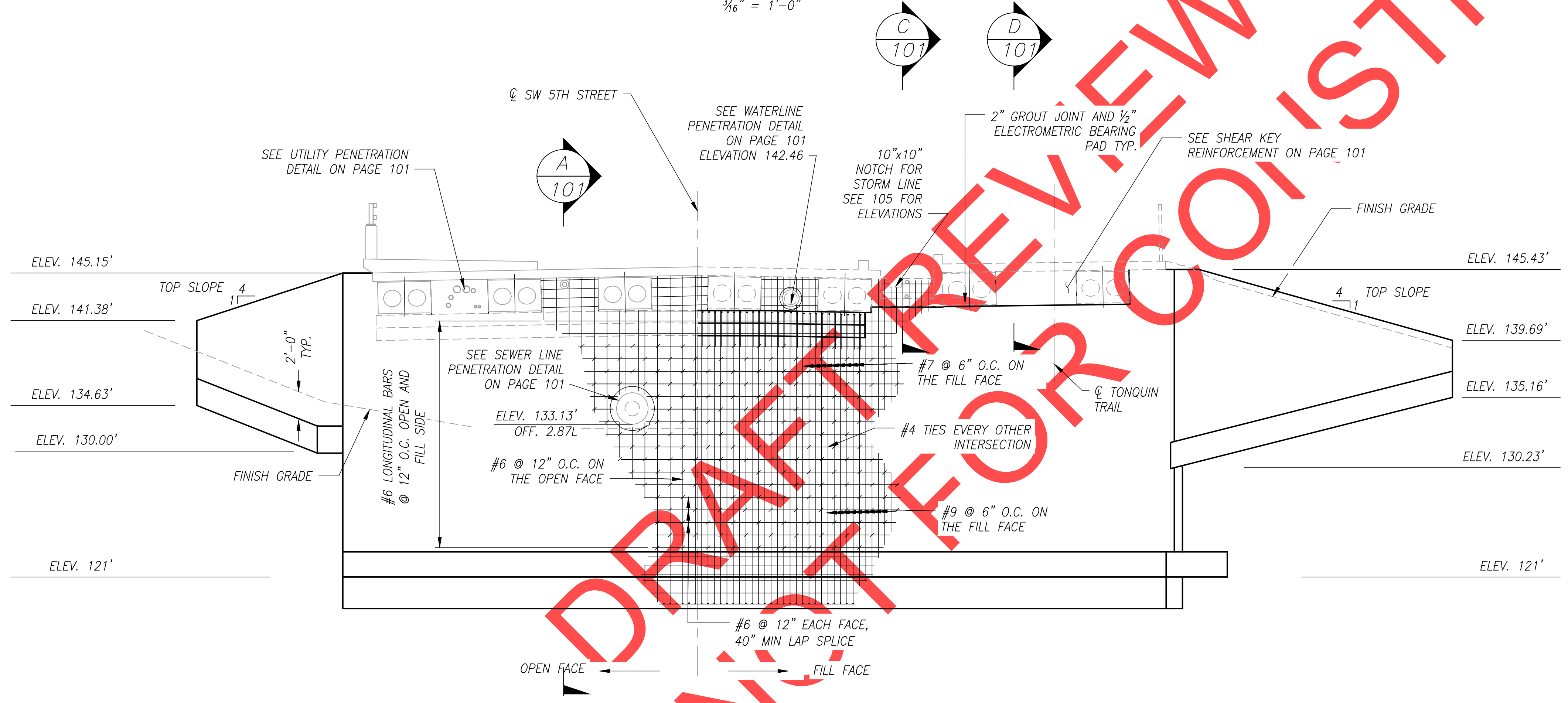
Date: 1 February 2019
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**SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (5TH ST) BRIDGE
 BENT 2 PLAN AND ELEVATION**

CIP# 4196
 PROJECT# 2017-02-001
 BR17
 100 of 211



BENT 2 PLAN
 3/16" = 1'-0"

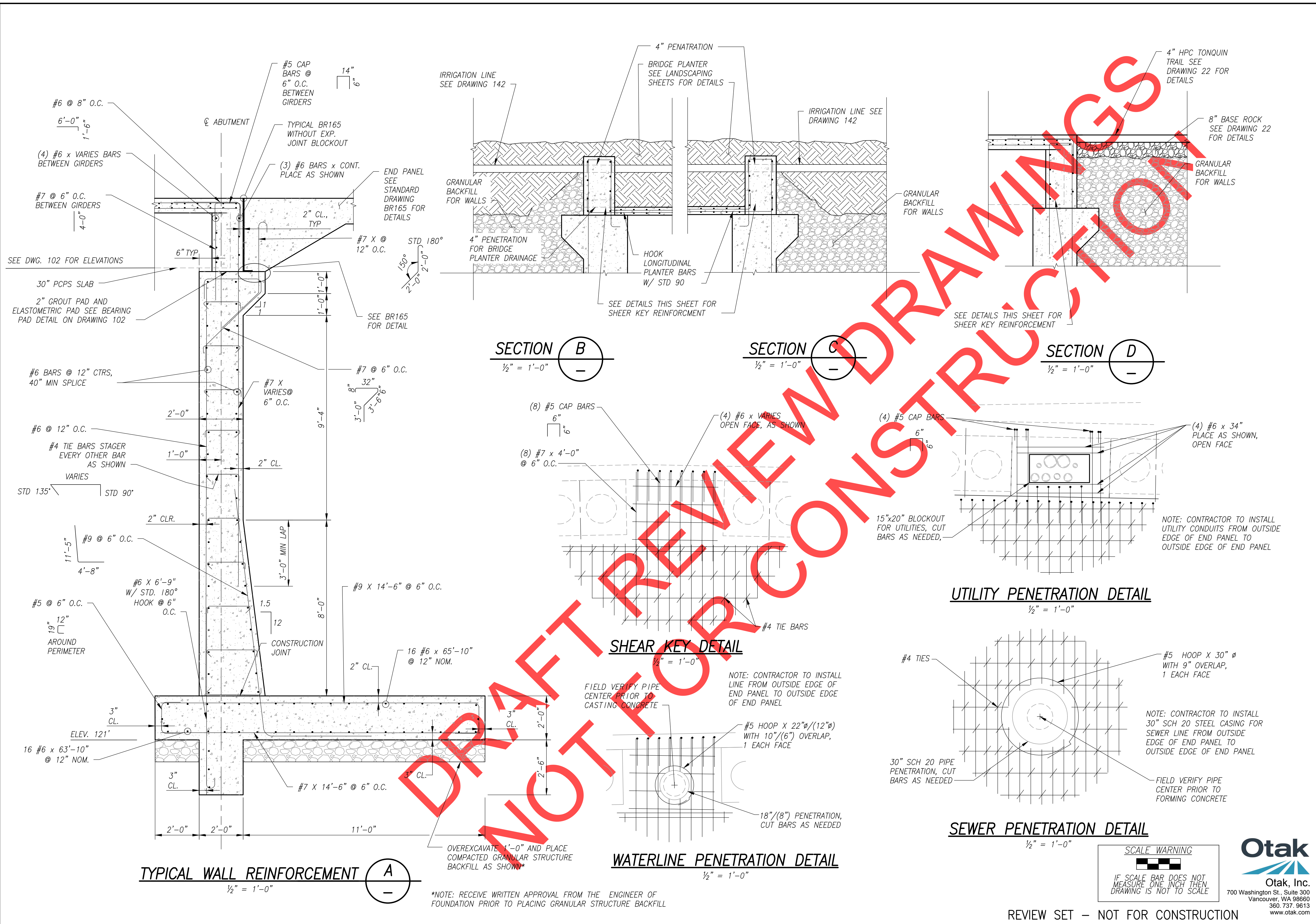


BENT 2 ELEVATION
 3/16" = 1'-0"

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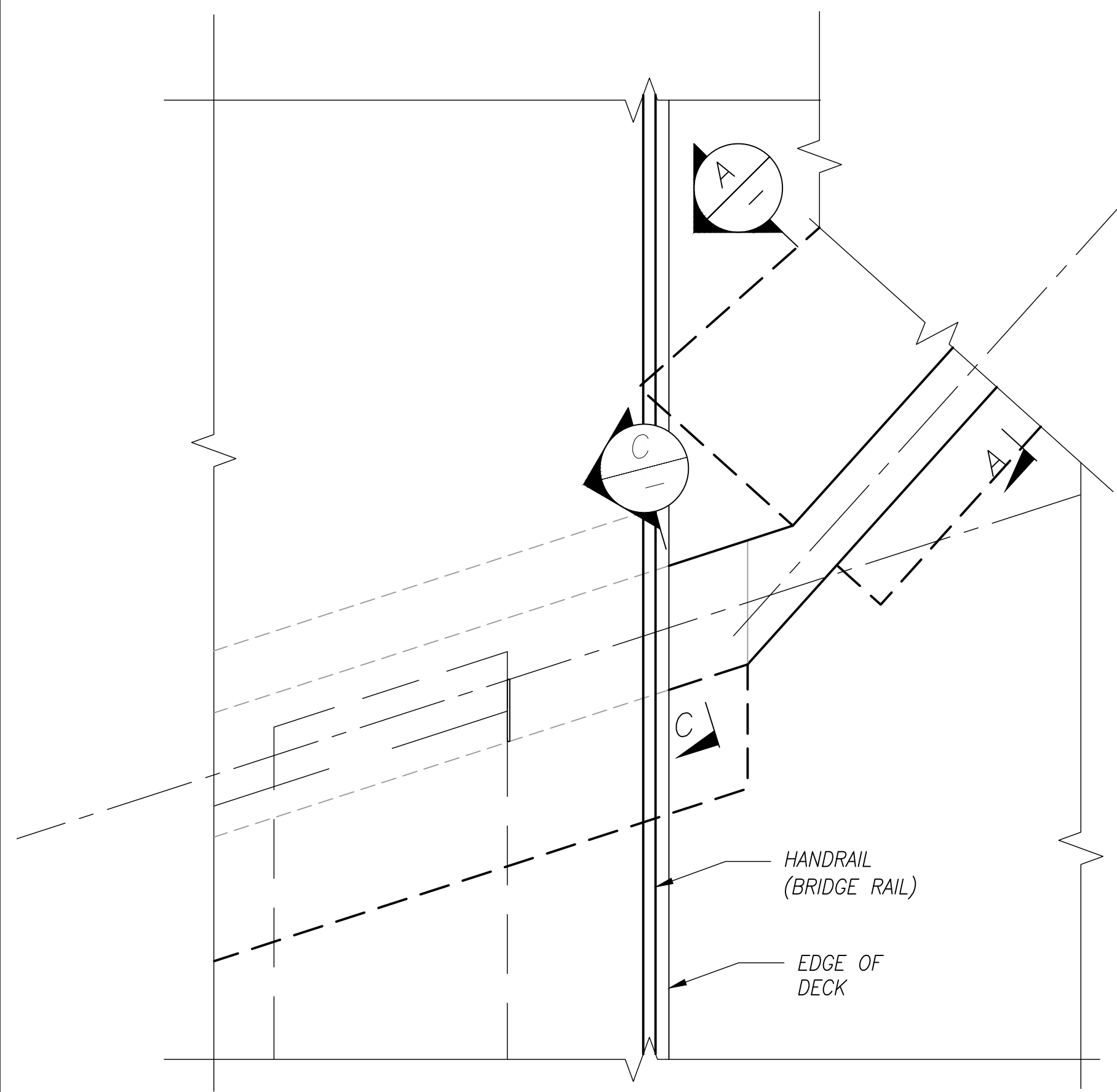
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**SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (5TH ST) BRIDGE
 BENT DETAILS**

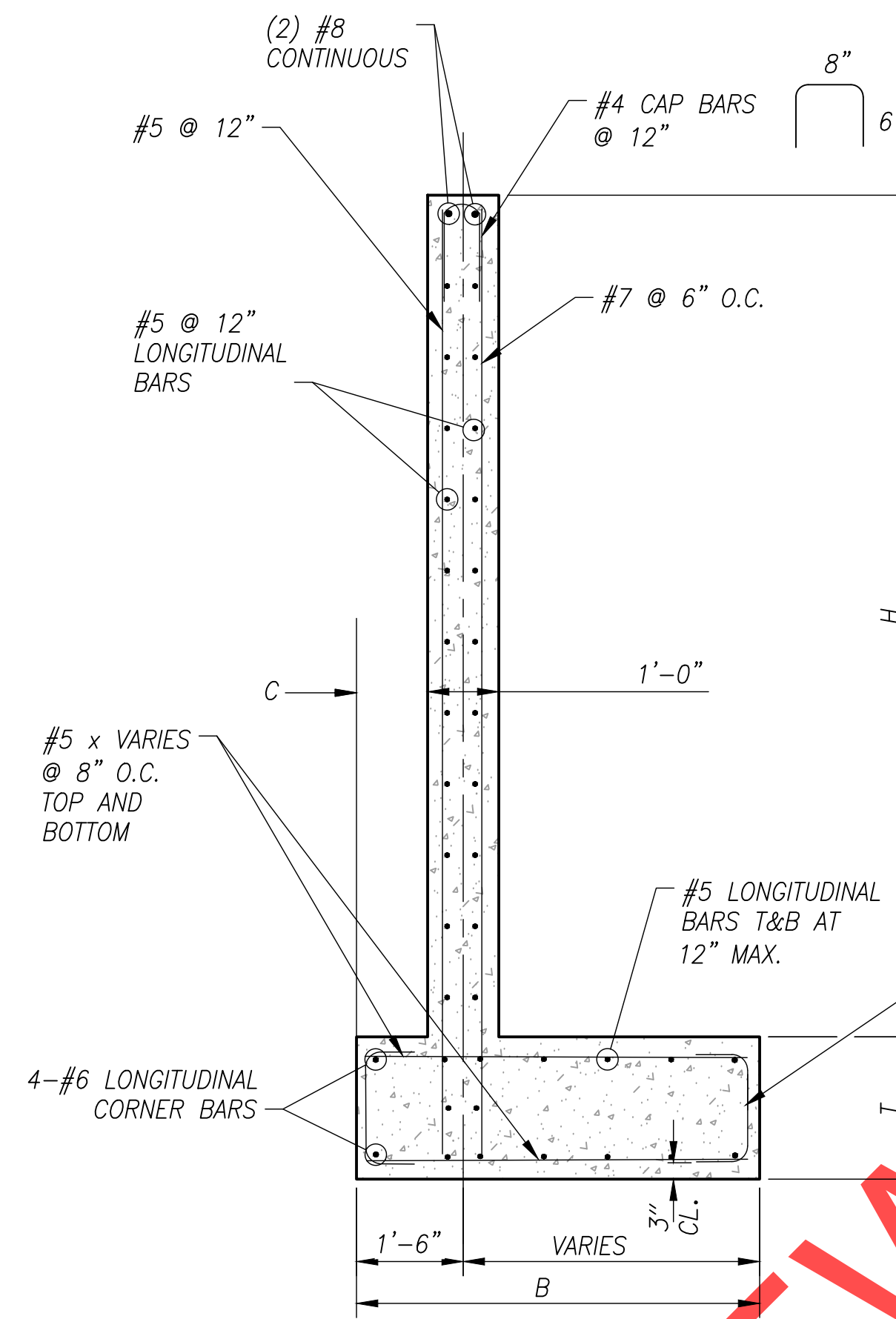
CIP# 4196
 PROJECT# 2017-02-001
 BR18
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TYPICAL WALL PLAN VIEW

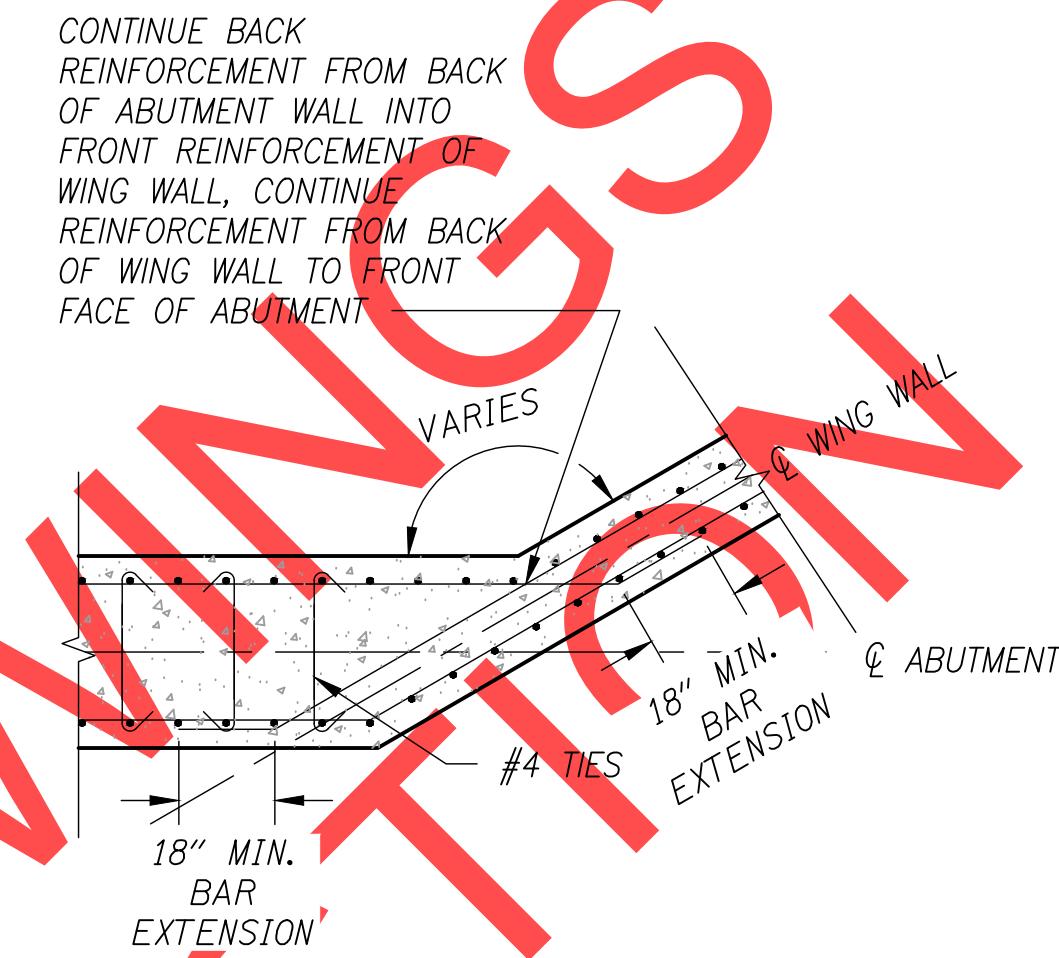
1/2" = 1'-0"



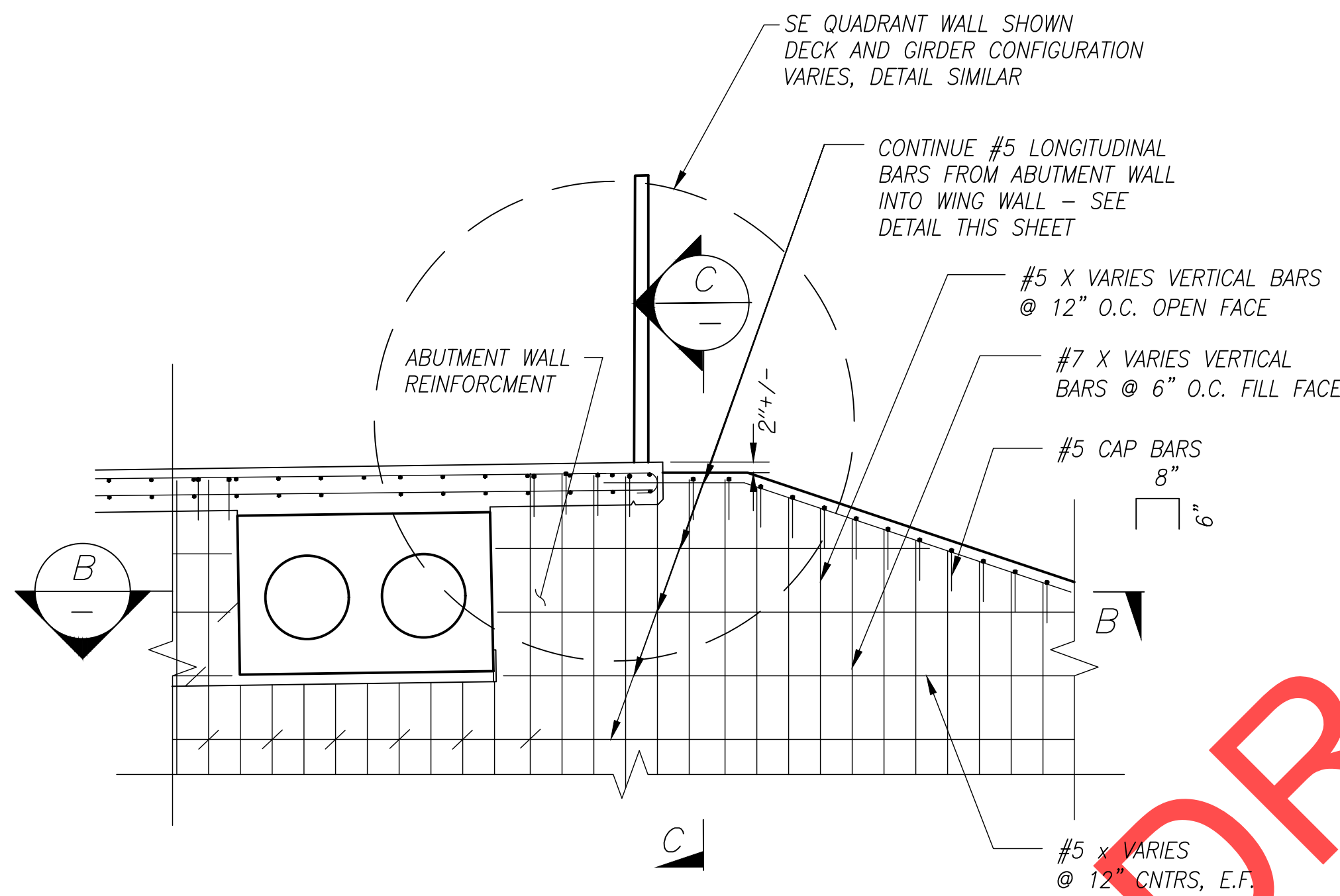
TYPICAL WINGWALL SECTION A-A

1/2" = 1'-0"

ABUTMENT TO WING WALL CONNECTION SECTION B-B

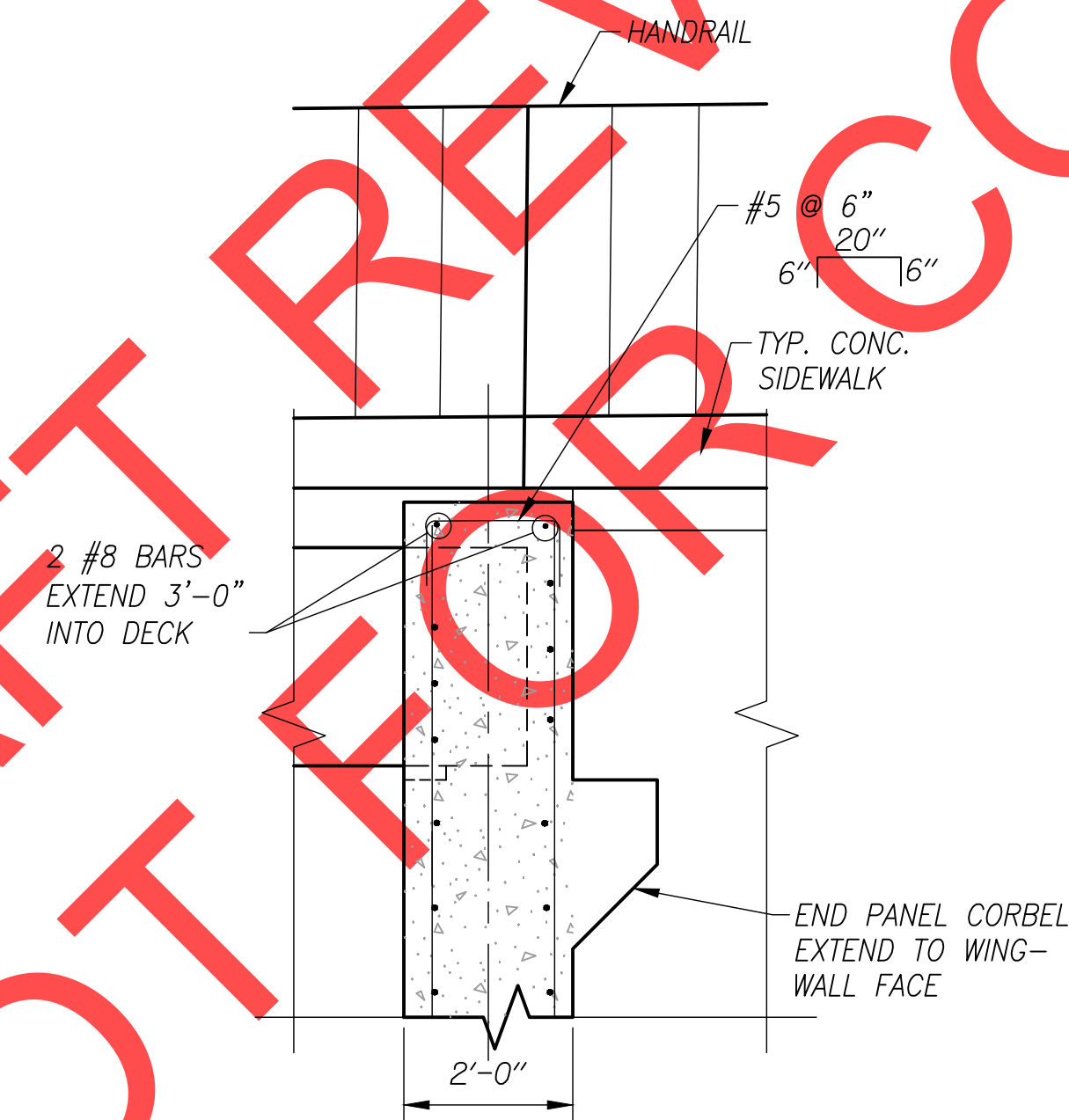


1/2" = 1'-0"



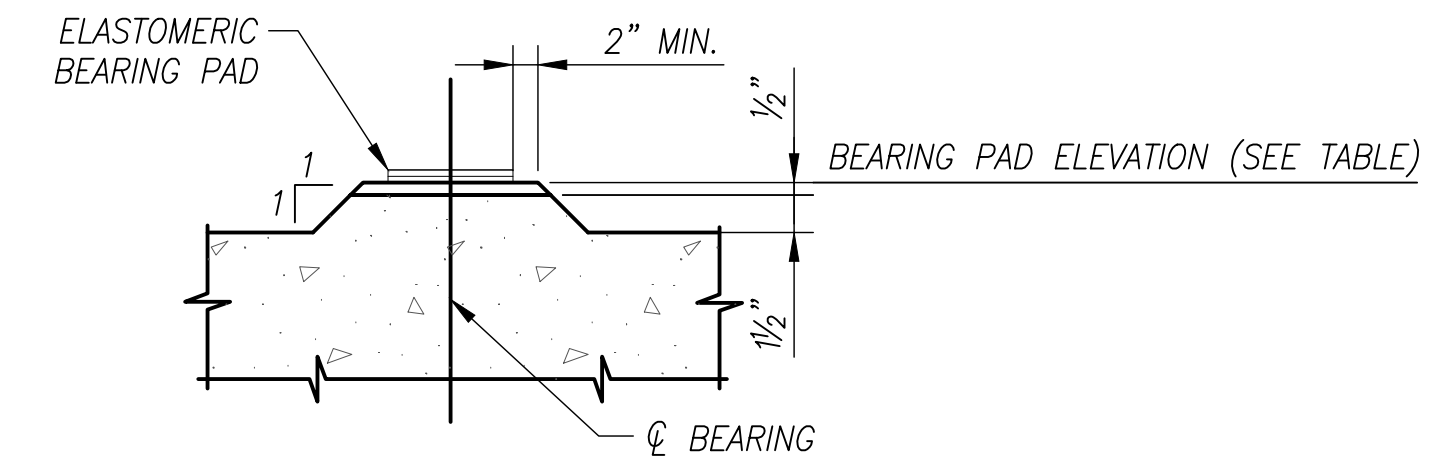
TYPICAL WALL REINFORCEMENT

1/2" = 1'-0"



VIEW C-C

1/2" = 1'-0"



BEARING PAD DETAIL

N.T.S.

FORM 1 1/2" CONCRETE PAD INTEGRALLY WITH SUPPORTING MEMBER. PLACE 1/2" GROUT LAYER IMMEDIATELY BEFORE PLACING SLABS. PLACE ELASTOMERIC BEARING PADS, PERFORMED EXPANSION JOINT FILLER AND PRESTRESSED SLABS BEFORE 1/2" GROUT IS FULLY SET TO ENSURE UNIFORM BEARING ACROSS FULL WIDTH OF SLAB. IF UNIFORM BEARING IS NOT ACHIEVED, LIFT SLAB AND REPEAT PROCEDURE. REMOVE ANY EXCESS GROUT PROTRUDING ABOVE BOTTOM OF BEARING PADS IMMEDIATELY AFTER PLACING SLABS.

BEARING PAD ELEVATIONS		
GIRDER	BENT 1	BENT 2
A	141.00	141.68
B	141.20	141.88
C	141.39	142.09
D	141.51	142.19
E	141.38	142.08
F	142.03	142.77
G	142.23	142.98

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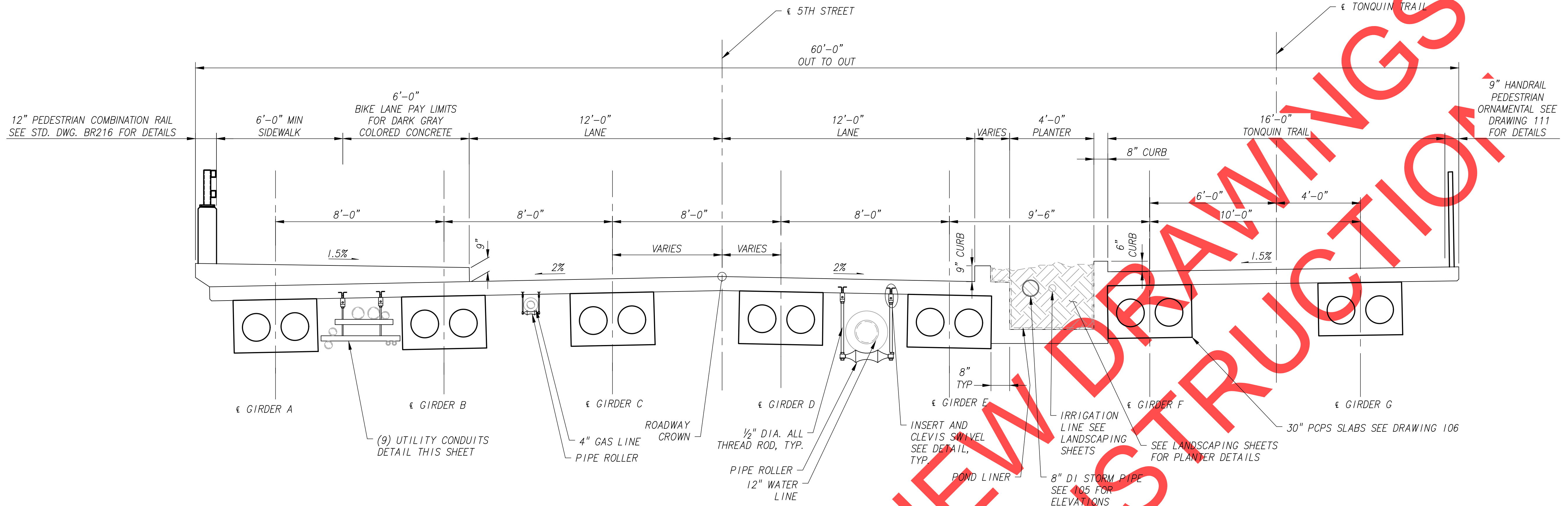
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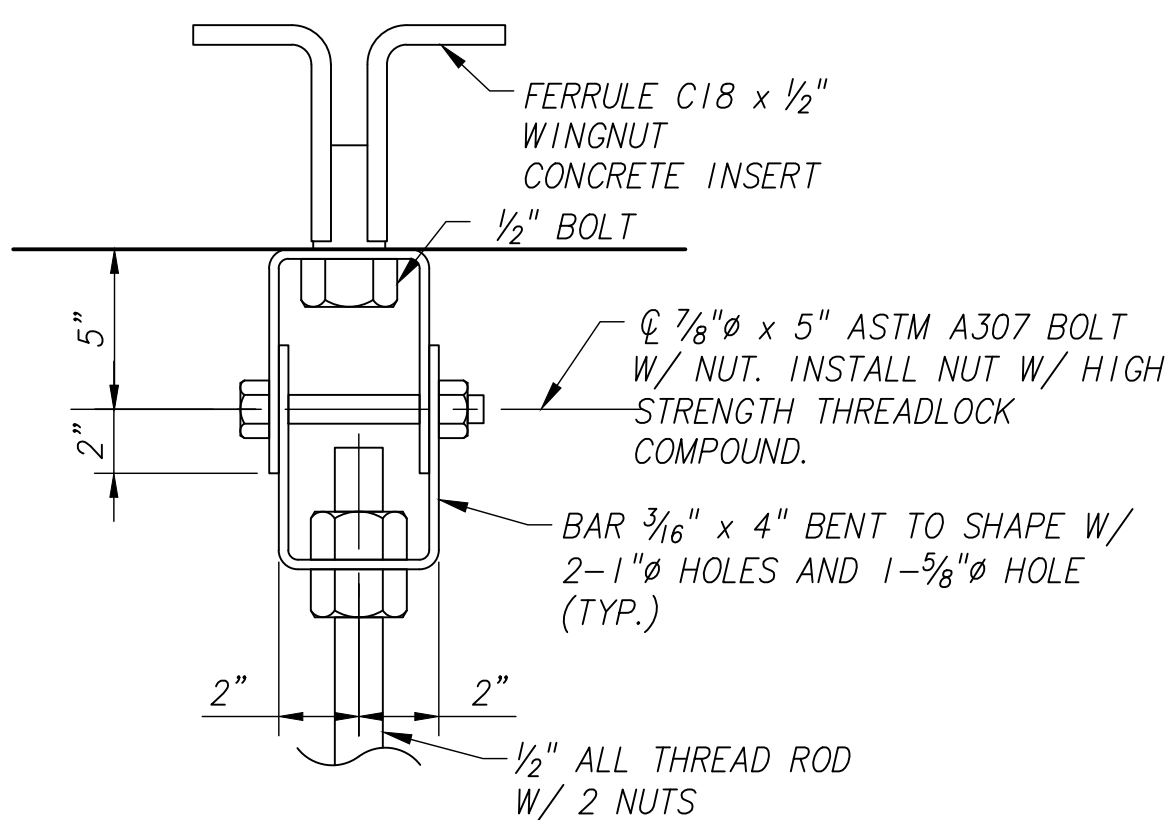
Date: 1 February 2019
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SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
WINGWALL DETAILS

CIP# 4196
PROJECT# 2017-02-001
BR19
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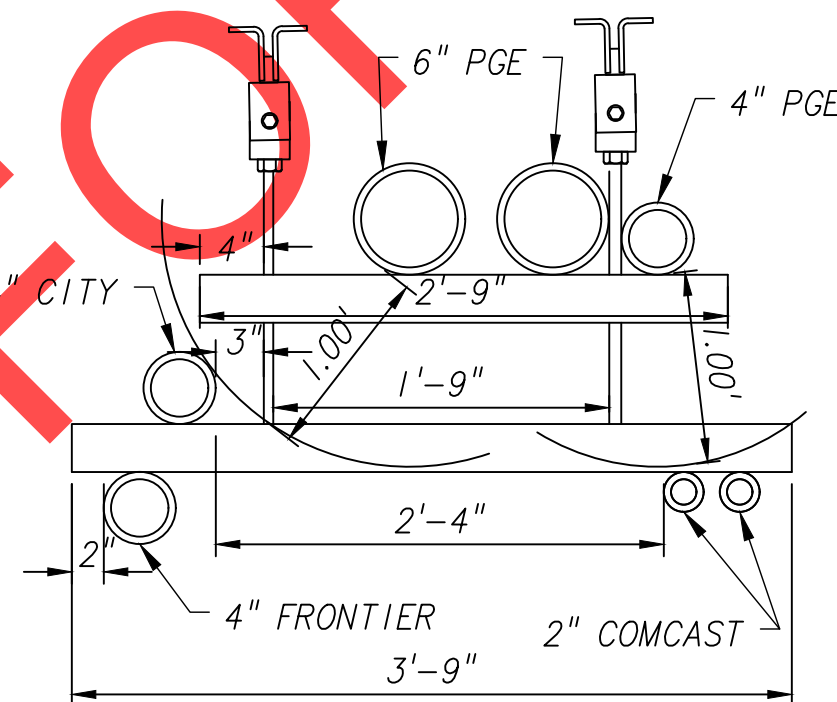
5TH STREET BRIDGE SECTION
3/8" = 1'-0"



CLEVIS SWIVEL DETAIL
1" = 3'-0"

PIPE HANGER NOTES

- DIMENSIONS TO SLAB INSERTS DEPEND ON CONFIGURATION OF COMPONENTS, INCLUDING PIPE INSTALLATION. INSTALL ACCORDING TO APPROVED SHOP DRAWINGS.
- HOT DIP GALVANIZE STEEL COMPONENTS, EXCEPT PIPE ROLLERS.
- PAINT PIPE ROLLERS W/ 3 COATS OF ZINC REPAIR PAINT FROM QPL.
- CONTRACTOR TO INSTALL CONDUIT FOR ALL UTILITIES EXCEPT 4" GAS LINE
- UTILITIES TO BE INSTALLED INSIDE OF CONDUIT BY OTHERS
- PAY LIMITS FOR 6,4,3 AND 2" ELECTRICAL CONDUIT EXTEND FROM OUTSIDE EDGE OF END PANEL TO OUTSIDE EDGE OF END PANEL.



UTILITY CONDUITS DETAIL
1" = 1'-0"

NO.	DATE	DESCRIPTION

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**SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
DECK CROSS SECTION**

CIP# 4196
PROJECT# 2017-02-002
BR20
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SCALE WARNING
IF SCALE BAR DOES NOT MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE



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CONSTRUCTION NOTES

- 1 INSTALL STANDARD GUARD RAIL TRANSITION, SEE STD. DWG. BR216 FOR DETAILS.
- 2 INSTALL 4" GAS LINE, SEE SHT BR20 FOR SECTION.
- 3 MULTIPLE LINE UTILITY, SEE SHEET BR20 FOR DETAILS.
- 4 12" DIA WATER. SEE SHT. BR20 FOR DETAILS.
- 5 INSTALL 24 FOOT NOMINAL TYPE 2, 3'X3' PRECAST UTILITY TUNNEL/TRENCH OLDCASTLE MODEL UT-TYP2 OR APPROVED EQUAL UNDER EACH END PANEL FOR UTILITY INSTALL.
- 6 INSTALL 20' NOMINAL 18" I.D. SCHEDULE 80 PVC CONDUIT UNDER EACH END PANEL FOR 12" WATER LINE.
- 7 INSTALL 20' NOMINAL 8" I.D. SCHEDULE 80 PVC CONDUIT UNDER EACH END PANEL FOR 4" GAS LINE.
- 8 18" DIA BLOCKOUT THROUGH END BENT FOR 12" WATER LINE, SEE SHT BR18 FOR DETAIL.
- 9 RECTANGULAR BLOCKOUT THROUGH END BENT FOR MULTIPLE UTILITY CHASE, SEE SHT BR18 FOR DETAIL.
- 10 8" DIA. BLOCKOUT THROUGH END BENT FOR 4" GAS LINE, SEE SHT. BR18 FOR DETAIL
- 11 INSTALL FERRULE LOOP CONCRETE INSERT AT LOCATIONS SHOWN FOR UTILITY HANGERS. SEE SHT BR20 FOR DETAIL.
- 12 INSTALL 20' - 4" END PANEL PER STD DWG. BR165, SEE SHT BR22 FOR MODIFICATION DETAILS TO INCLUDE SIDEWALK.
- 13 INSTALL SIDEWALK MOUNTED COMBINATION RAIL WITH PEDESTRIAN/BIKE HEIGHT TOP RAIL. SEE STD DWG. BR216 FOR DETAILS, SEE SHEET BR12 FOR PAY LIMITS



DRAFT REVIEW FOR CONSTRUCTION

NO.	REVISIONS

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SW 5TH ST TO SW KINSMAN RD EXTENSION
 COFFEE LAKE CREEK (5TH ST) BRIDGE
 DECK FRAMING PLAN

CIP# 4196
 PROJECT# 2017-02-001
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5TH DECK FRAMING PLAN
 1/4" = 1'-0"

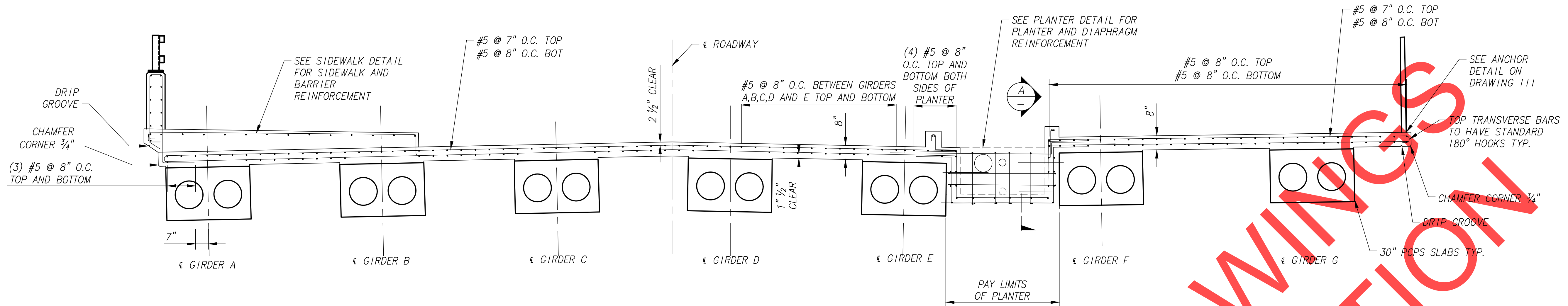
SEE 102 FOR BEARING ELEVATIONS

SCALE WARNING

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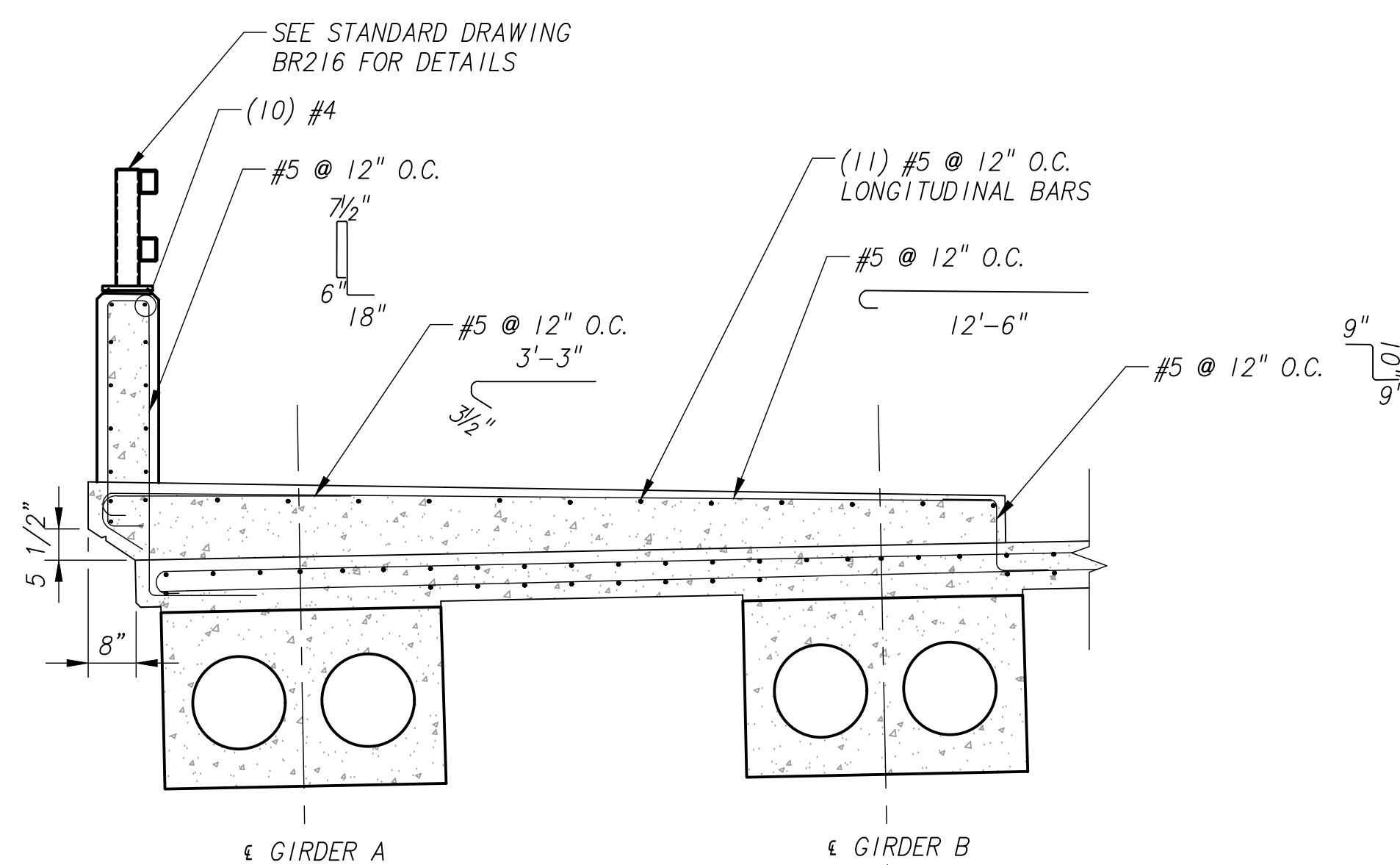


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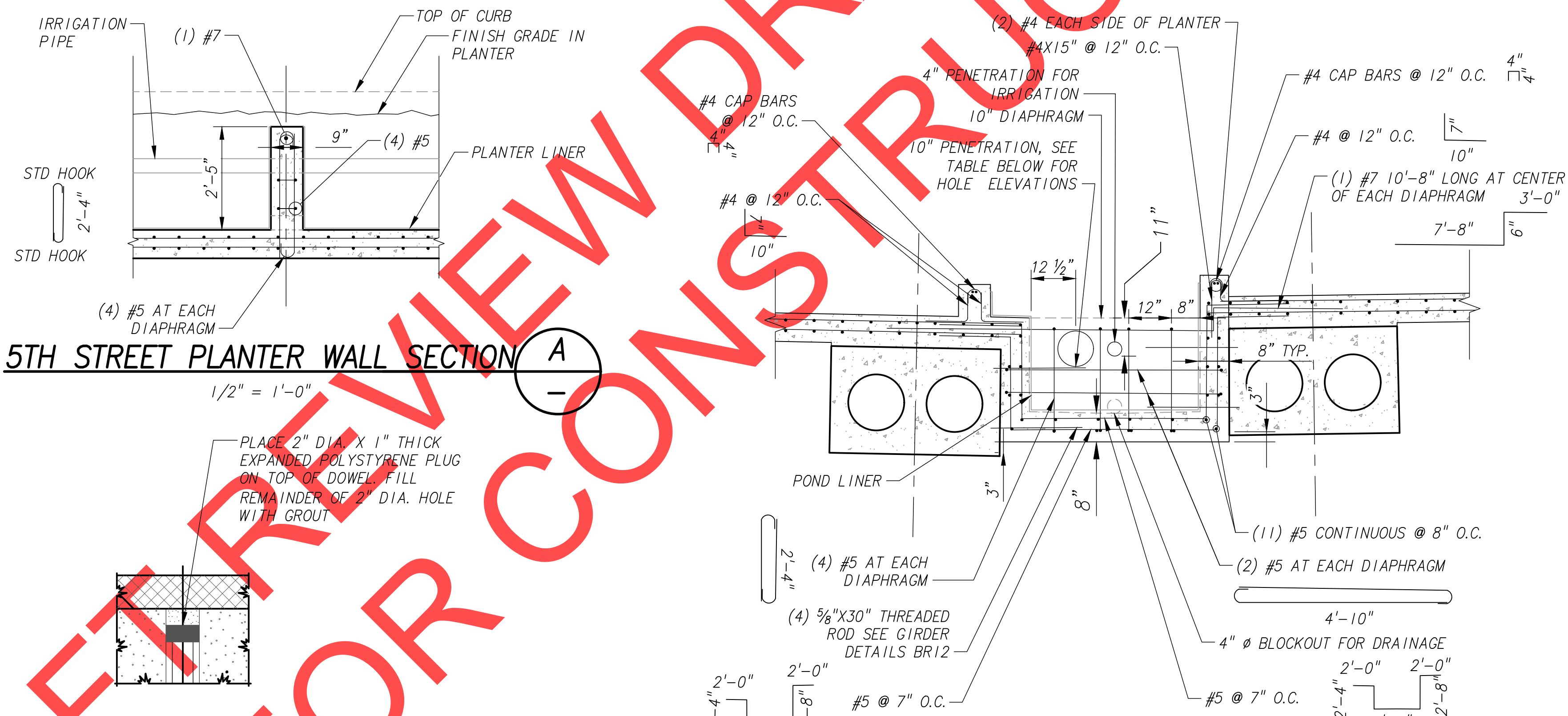
5TH STREET BRIDGE REINFORCEMENT DETAILS

3/8" = 1'-0"



5TH STREET SIDEWALK AND BARRIER REINFORCEMENT DETAIL

1/2" = 1'-0"



5TH STREET PLANTER WALL SECTION A

1/2" = 1'-0"

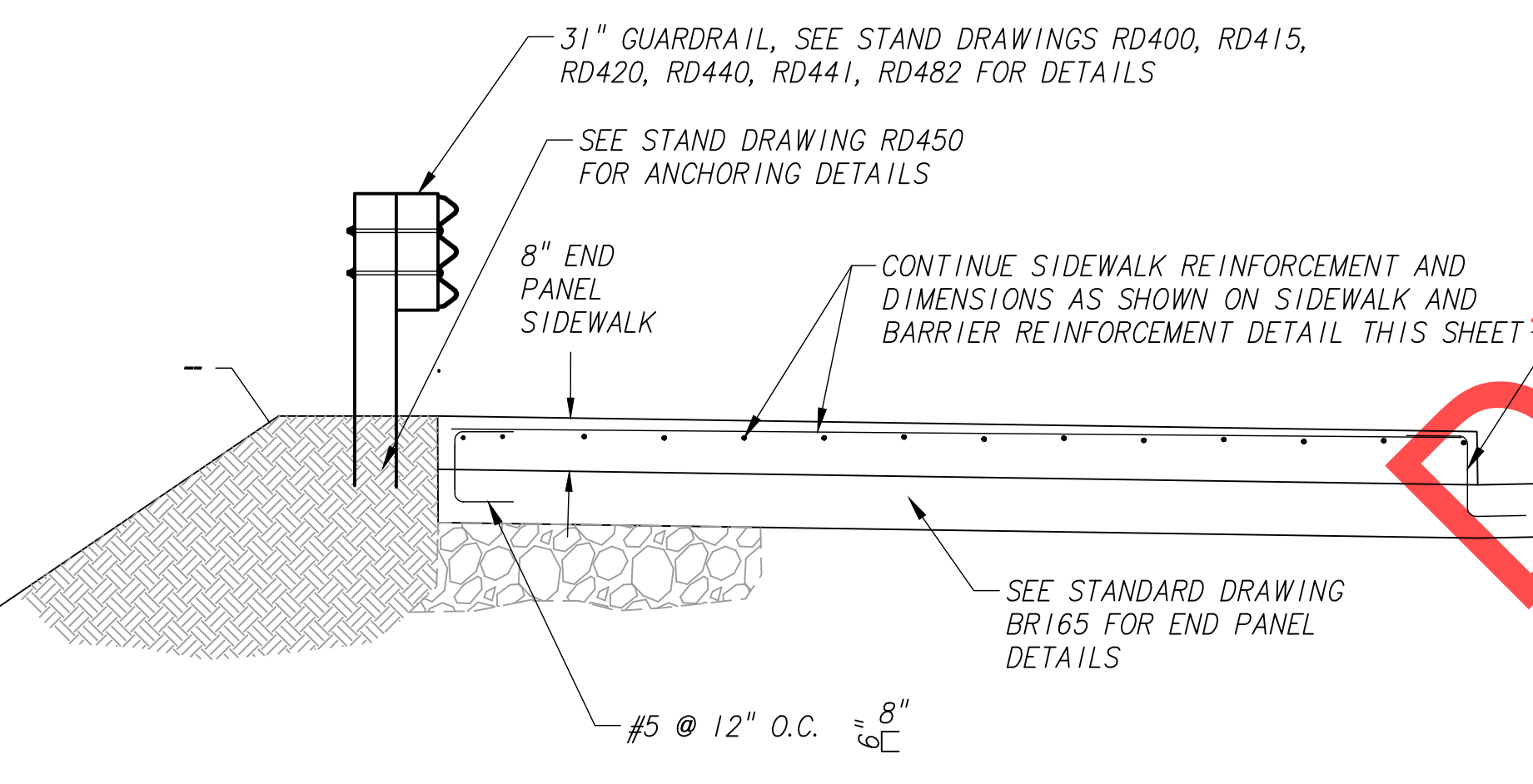
GIRDER PIN DETAIL

N.T.S.

5TH STREET PLANTER AND DIAPHRAGM REINFORCEMENT DETAIL

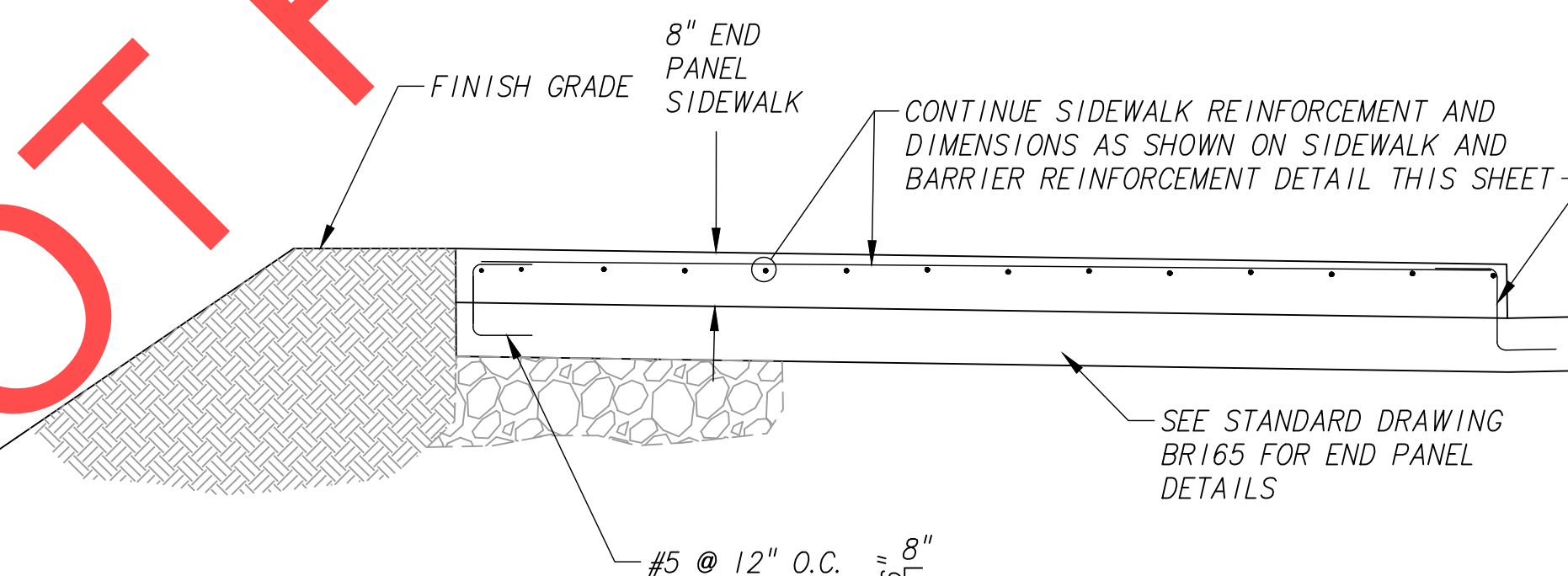
1/2" = 1'-0"

PENETRATION	BOTTOM ELEVATION
BENT 1	143.53'
FIRST DIAPHRAGM	143.72'
SECOND DIAPHRAGM	143.89'
THIRD DIAPHRAGM	144.05'
BENT 2	144.24'



SIDEWALK ON END PANEL W/ GUARDRAIL SECTION B

1/2" = 1'-0"



SIDEWALK ON END PANEL W/O GUARDRAIL SECTION C

1/2" = 1'-0"

SCALE WARNING



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PROJECT# 2017-02-001
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30" STANDARD PRECAST PRESTRESSED SLABS

SLAB NUMBER	NUMBER REQUIRED	SPAN NUMBER	HORIZONTAL LENGTH 0-0 AT SLAB C. FT. (AFTER SHORTENING)	SKEW ANGLE		NUMBER OF STRANDS	DEBONDED STRANDS	DISTANCE "Y _c " TO C.G. STRAND AT MIDSPAN	DISTANCE "Y _u " TO C.G.S. AT MIDSPAN SUBTRACTING TOP STRAND, IN.	CONCRETE STRENGTH @ 28 DAYS, KSI	CONCRETE STRENGTH @ RELEASE, KSI	INITIAL TENSION PER STRAND, KIPS	ESTIMATED MIDSPAN DEFLECTION, IN.					ESTIMATED SHORTENING 2 WEEKS AFTER RELEASE, IN
				BACK	AHEAD								UPWARD AT RELEASE	UPWARD 3 MONTHS AFTER RELEASE	UPWARD 5 YEARS AFTER RELEASE	DOWN DUE TO NON-COMPOSIT DECK	DOWNWARD DUE TO SDL 5 YEARS AFTER LOADING	
A-1	7	1	43'-7"	18	18	30	-	6.29	3.11	5.0	4.0	31.0	0.60	1.02	0.40	-0.14	-0.27	5/16"

GENERAL NOTES FOR PRESTRESSED BOXES AND SLABS

- BOXES AND SLABS ARE DESIGNED FOR LIVE AND SUPERIMPOSED DEAD LOADING AS SHOWN IN THE GENERAL NOTES FOR THE PROJECT.
- PROVIDE THE CLASS OF CONCRETE SHOWN IN THE SLAB OR BOX SCHEDULE WITH NOMINAL MAXIMUM SIZE AGGREGATE OF 1" OR 3/4". TRANSFER PRESTRESS AFTER THE CONCRETE REACHES THE MINIMUM CONCRETE STRENGTH AT TRANSFER SHOWN IN THE SLAB OR BOX SCHEDULE.
- SELECT A KEYWAY GROUT FROM THE OPL FOR FILLING KEYWAYS, LIFTING BLOCKOUTS AND TIE ROD BLOCKOUTS.
- ALLOW TRAFFIC ON THE BRIDGE ONLY AFTER KEYWAY GROUT HAS REACHED DESIGN STRENGTH.
- PROVIDE REINFORCING STEEL AS SPECIFIED IN THE GENERAL NOTES FOR THE PROJECT.
- PROVIDE SMOOTH DOWELS CONFORMING TO AASHTO M31, GRADE 60 (ASTM A615, GRADE 60).
- PROVIDE EXPANDED COIL CONCRETE INSERTS WITH CLOSED-BACK FERRULE THREADED TO RECEIVE 1" DIA. X 2'-3" RODS AASHTO M314, GR. 36 (ASTM A307) THREADED FULL LENGTH.
- PROVIDE 1/2" DIAMETER 7 WIRE LOW RELAXATION PRESTRESSING STEEL STRAND CONFORMING TO AASHTO SPECIFICATION M203 (ASTM A416), GRADE 270 SUPPLEMENT 1.
- TENSION STRAND INITIALLY TO 31.0 KIPS PER STRAND (AFTER HARPING DEFLECTED STRAND). DEBOND STRANDS WHERE SPECIFIED USING EITHER SPLIT OR SOLID PLASTIC SHEATHING WITH A MINIMUM WALL THICKNESS OF 0.025".
- PROVIDE HIGH STRENGTH TIE RODS CONFORMING TO ASTM A449. PROVIDE HEAVY HEXAGON NUTS CONFORMING TO ASTM A563. PROVIDE HARDENED STEEL WASHERS CONFORMING TO ASTM F436. HOT-DIP GALVANIZE THE RODS, PLATES, NUTS AND WASHERS (EXCEPT DTIS) AFTER FABRICATION. TIGHTEN THE RODS TO 39 KIPS (MINIMUM) USING MECHANICALLY GALVANIZED DIRECT TENSION INDICATORS (DTIS) CONFORMING TO ASTM F959.
- TIGHTEN ALL TIE RODS (PER BOX OR SLAB) TO ABOUT ONE HALF THE SPECIFIED TENSION BEFORE PROCEEDING WITH FINAL TENSIONING.
- KEEP BOXES AND SLABS UPRIGHT AT ALL TIMES. SUPPORT THEM WITHIN 2'-0" OF THE ENDS DURING STORAGE (TO PREVENT EXCESSIVE CAMBER, OVERSTRESS OR FAILURE). LOCATE TRANSPORT SUPPORTS AND LIFTING DEVICES WITHIN 2'-0" OF THE ENDS OF BOXES AND SLABS. TRANSPORT BOXES AND SLABS AFTER THE CONCRETE HAS REACHED THE 28 DAY DESIGN STRENGTH AND A MINIMUM OF 7 DAYS AFTER CASTING.

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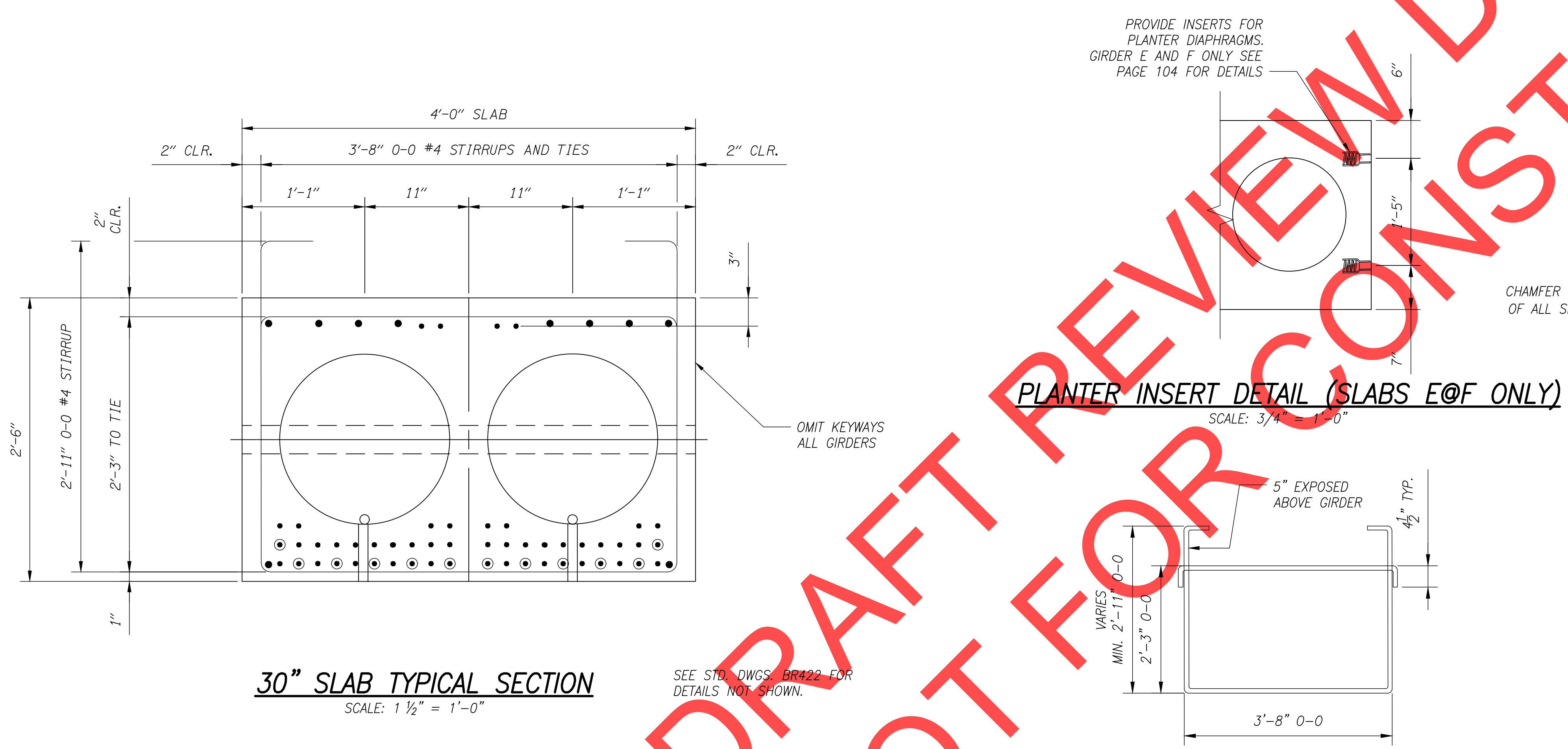
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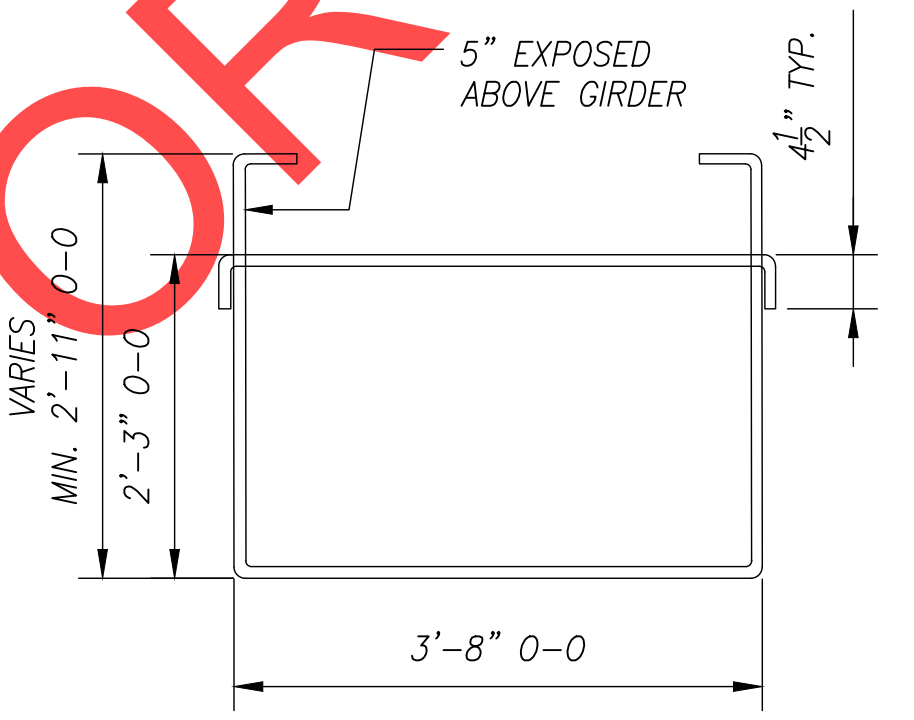
SW 5TH ST TO SW KINSMAN RD EXTENSION
COFFEE LAKE CREEK (5TH ST) BRIDGE
GIRDER DETAILS

CIP# 4196
PROJECT# 2017-02-001
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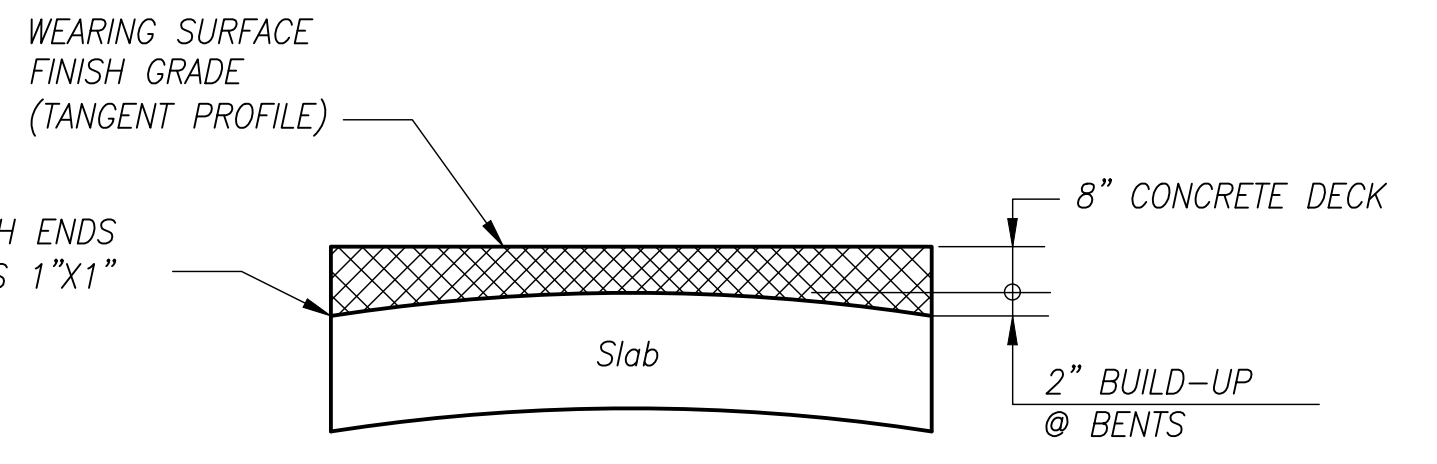
30" SLAB TYPICAL SECTION
SCALE: 1 1/2" = 1'-0"

PLANTER INSERT DETAIL (SLABS E@F ONLY)
SCALE: 3/4" = 1'-0"



#4 STIRRUP AND TIE DETAIL
SCALE: 3/4" = 1'-0"

THE SUPERIMPOSED DEAD LOAD (SIDL) IS 80 LBS./SQ. FT. WHICH INCLUDES SIDEWALK, BRIDGE RAILS, UTILITIES, SOIL, PLANTS AND ALLOWANCE FOR 2" DEPTH OF FUTURE WEARING SURFACE.

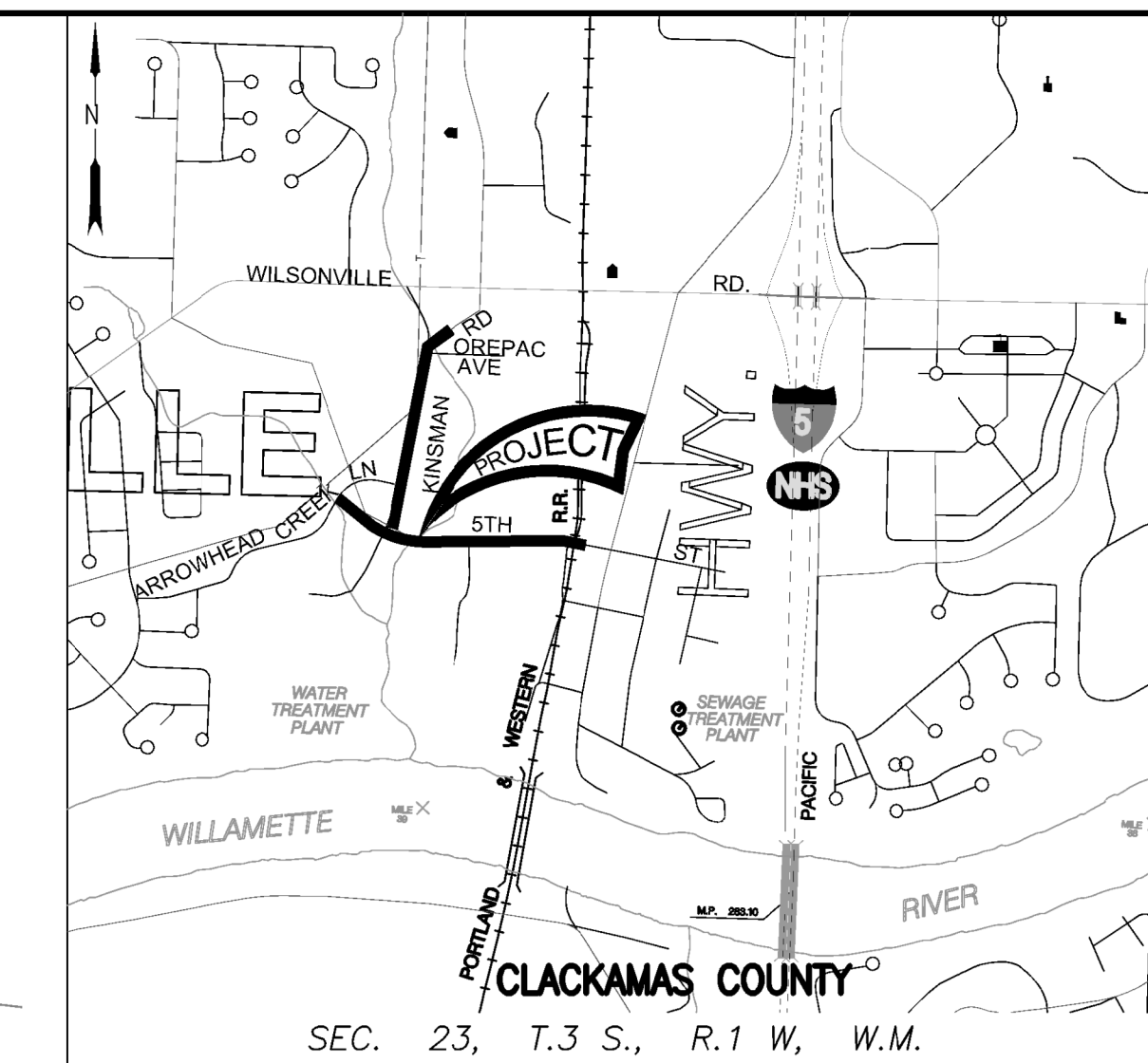


	Std. Modified
MIN. DECK-----	8"
ANTICIPATED CAMBER @ 3 MOS.-----	0.6"
DOWNWARD DUE TO DECK-----	- 0.67"

SCALE WARNING
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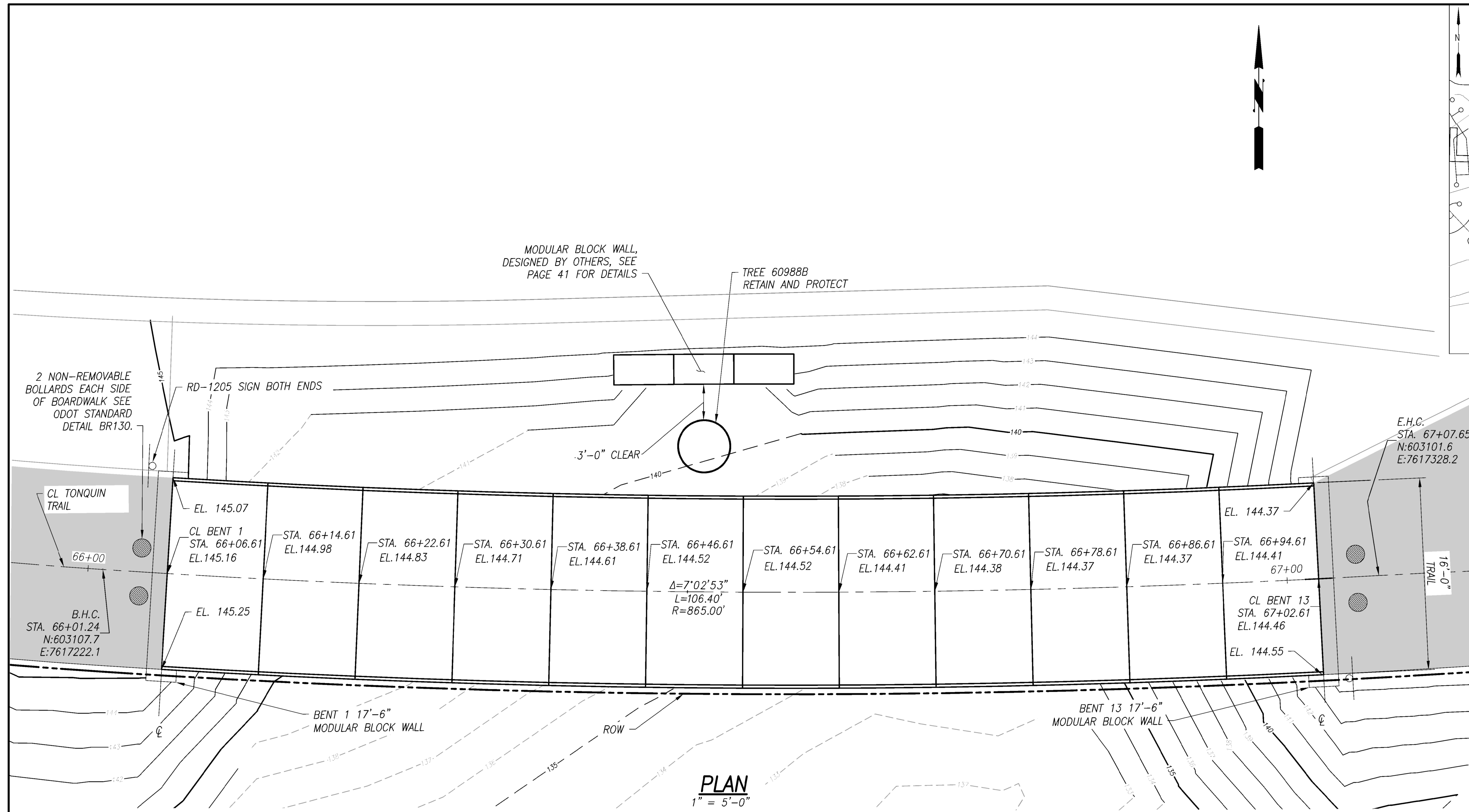
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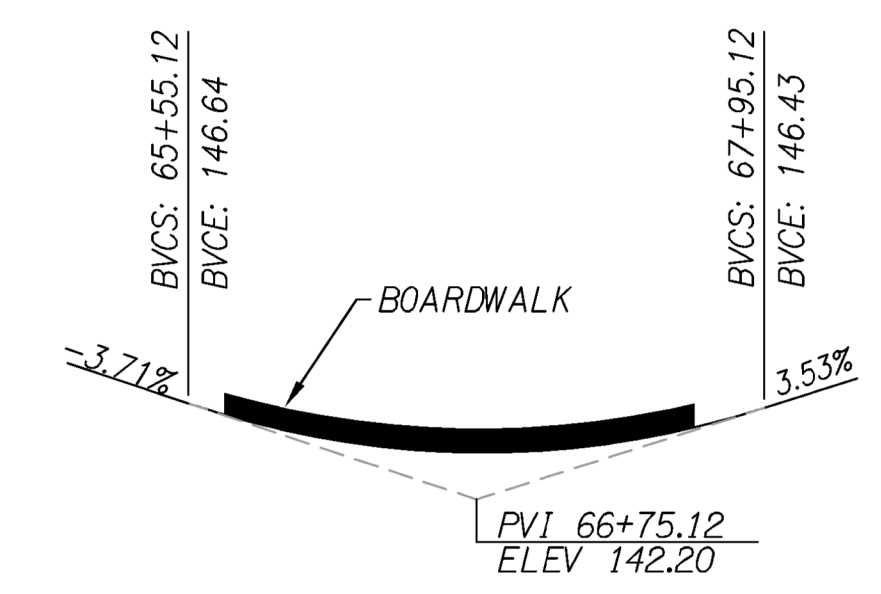
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 Drawn By: JP
 Checked By: SN

**SW 5TH ST TO SW KINSMAN RD EXTENSION
 BOARDWALK - PLAN AND ELEVATION**

CIP# 4196
 PROJECT# 2017-02-001
 BW01
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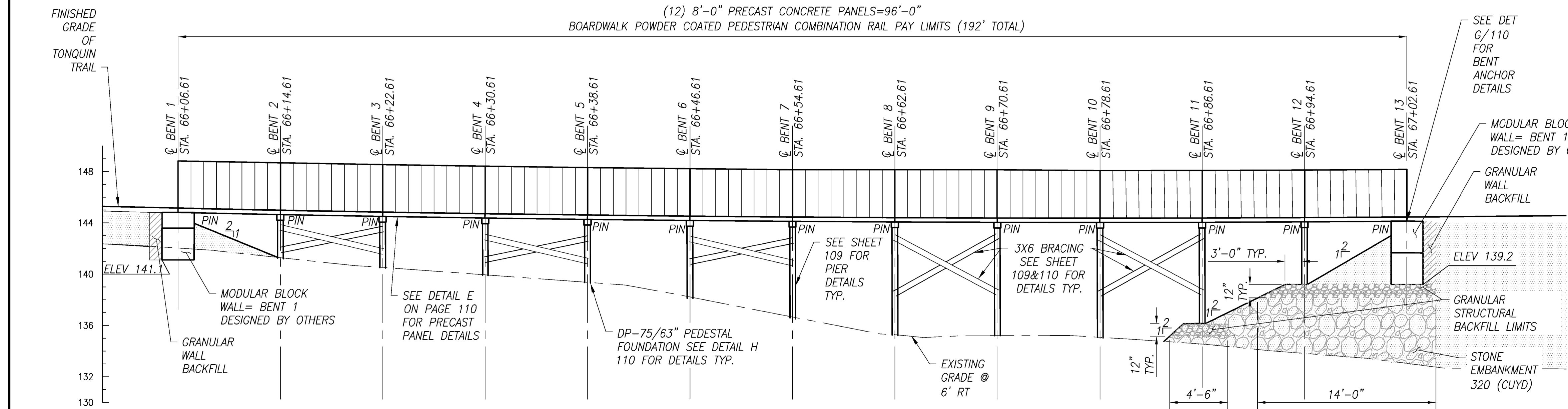


LOCATION MAP
 No Scale



GRADE LINE DIAGRAM
 N.T.S.

NOTE: ALL BENT @ ARE PERPENDICULAR TO THE TONQUIN TRAIL ALIGNMENT.



ELEVATION
 1" = 5'-0"

SCALE WARNING
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NOTE: ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM (1988)

GENERAL NOTES

PROVIDE ALL MATERIALS AND PERFORM ALL WORK ACCORDING TO THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018 AND SUPPLEMENTAL PROJECT SPECIAL PROVISIONS. BRIDGE IS DESIGNED IN ACCORDANCE WITH THE ASCE (AMERICAN SOCIETY OF CIVIL ENGINEERS) 7-10, ACI (AMERICAN CONCRETE INSTITUTE) 318 AND NDS (NATIONAL DESIGN SPECIFICATION WOOD CONSTRUCTION) 2015. WITH ALLOWANCE FOR ALL OF THE FOLLOWING LIVE LOADS :

SERVICE AND STRENGTH I LIMIT STATES:
90PSF PEDESTRIAN LIVE LOAD

SEISMIC DESIGN IS PERFORMED IN ACCORDANCE WITH ASCE 7-10 CHAPTER 15 THE DESIGN CRITERIA ARE AS FOLLOWS: SDS=0.696G, SD1=0.41G. THE RESPONSE MODIFICATION FACTOR (R) IS 1.5. THE IMPORTANCE FACTOR (I) IS 1.0. THE SEISMIC RESPONSE COEFFICIENT IS 0.464. THE BRIDGE SITE IS DEFINED AS A SITE CLASS D WITH SITE FACTOR (FPGA) OF 1.342g.

SEE FOUNDATION PLAN FOR FOUNDATION DESIGN NOTES.

CONCRETE NOTES:

PRECAST CONCRETE PANELS TO BE CLASS 5000

PROVIDE ALL REINFORCING STEEL ACCORDING TO ASTM SPECIFICATION A706, OR AASHTO M31 (ASTM A615) GRADE 60. USE THE FOLLOWING SPLICE LENGTHS (UNLESS SHOWN OTHERWISE):

REINFORCING SPLICE LENGTHS (CLASS B) GRADE 60										f'c = 5.0 ksi
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14 & #18
UNCOATED	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-3"	4'-1"	5'-2"	6'-4"	NOT PERMITTED

ALL FIELD BENT BARS TO BE ASTM SPEC. A706.

INCREASE ALL SPLICE LENGTHS 40% FOR HORIZONTAL OR NEARLY HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.

SPLICE REINFORCING STEEL AT ALTERNATE BARS, STAGGERED AT LEAST ONE SPLICE LENGTH OR AS FAR AS POSSIBLE, UNLESS SHOWN OTHERWISE.

PLACE BARS 2" CLEAR OF THE NEAREST FACE OF CONCRETE (UNLESS SHOWN OTHERWISE). THE TOP BENDS OF STIRRUPS EXTENDING FROM BEAM STEMS INTO THE TOP SLAB MAY BE SHOP OR FIELD BENT (UNLESS SHOWN OTHERWISE).

TIMBER NOTES:

PROVIDE HEM FIR (NON-LAMINATED) TIMBER CONFORMING TO 021902 GRADE NO.2 ACCORDING TO WCLIB RULES.

INCISE AND TREAT SAWN MEMBERS WITH UC4C IN ACCORDANCE WITH AWPAC SPECIFICATION C-2

PROVIDE ALL GLUED LAMINATED TIMBER MEMBERS ACCORDING TO THE REQUIREMENTS OF THE CURRENT AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) TIMBER CONSTRUCTION STANDARDS.

ALLOWABLE STRESSES IN GLUED LAMINATED MEMBERS ARE PER THE LATEST VERSION OF AITC SPECIFICATION 117.

PROVIDE HEM FIR GLUED LAMINATED SILL ACCORDING TO COMBINATION SYMBOL 20F-V9.

MARK GLUED LAMINATED STRINGERS "TOP" ON THE TOP AT BOTH ENDS.

DO NOT CAMBER GLULAMS.

INCISE AND TREAT GLUED LAMINATED TIMBER MEMBERS WITH UC4C IN ACCORDANCE WITH AWPAC SPECIFICATION C-2

CONTRACTOR TO FIELD FIT ALL TIMBER CONNECTIONS.

FIELD TREAT ACCORDING TO AWPAC SPECIFICATION M-4. FIELD TREAT ALL CUT ENDS, INJURED LOCATIONS AND FIELD HOLES TO AWPAC SPECIFICATION M-4.

PROVIDE ALL BOLTS, LAG NUTS AND DRIFT PINS ACCORDING TO AASHTO SPECIFICATION M314, GRADE 35 (ASTM A307) AND/OR AASHTO M314 GRADE 105 (ASTM A449) AS SHOWN ON THE DETAIL PLANS. HOT-DIP GALVANIZE STRUCTURAL STEEL, DOWELS, MISCELLANEOUS METAL, BOLTS, LAG BOLTS AND DRIFT PINS AFTER FABRICATION.

ALL METAL PARTS SHALL BE A36 STEEL, HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A653.

FOUNDATION NOTES:

PEDESTAL FOUNDATION SHALL BE INSTALLED PER SPECIFICATION 00470

DESIGN CAPACITY FOR PEDESTAL FOUNDATION (ALLOWABLE):
BEARING CAPACITY: 4.2KIPS
UPLIFT CAPACITY: 1.6KIPS
LATERAL LOAD CAPACITY: 0.6KIPS

RETAINING WALL NOTES:

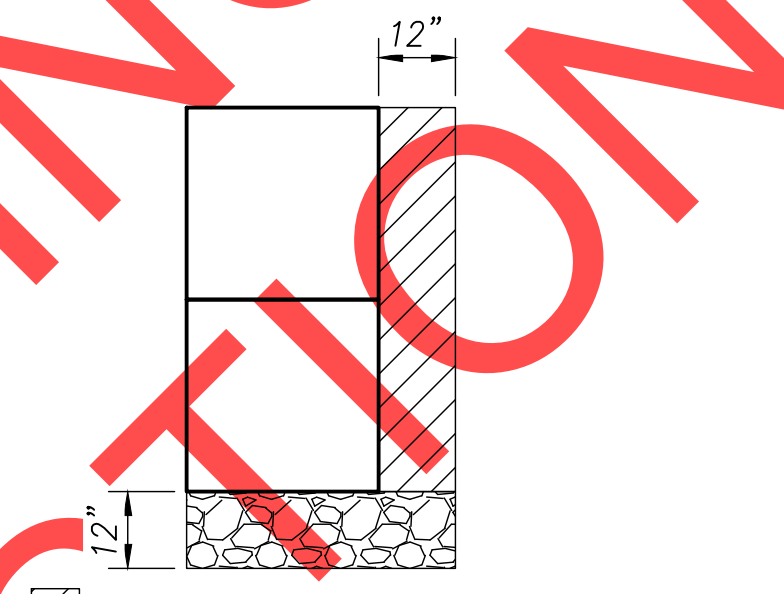
PROVIDE A MINIMUM SERVICE LIFE OF 75 YEARS FOR ALL RETAINING WALL COMPONENTS.

RETAINING WALL SEISMIC DESIGN SHALL BE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATION. APPENDIX A11. THE 500 YEAR SITE PEAK GROUND ACCELERATION (PGA) COEFFICIENT A=0.258G AND AN ASSUMED SITE CLASSIFICATION D.

DESIGN RETAINING WALL FOR THE FOLLOWING SOIL PROPERTIES:

	DENSITY (PCF)	ANGLE OF INTERNAL FRICTION
RETAINED MATERIAL	120	40°
FOUNDATION MATERIAL	135	36°

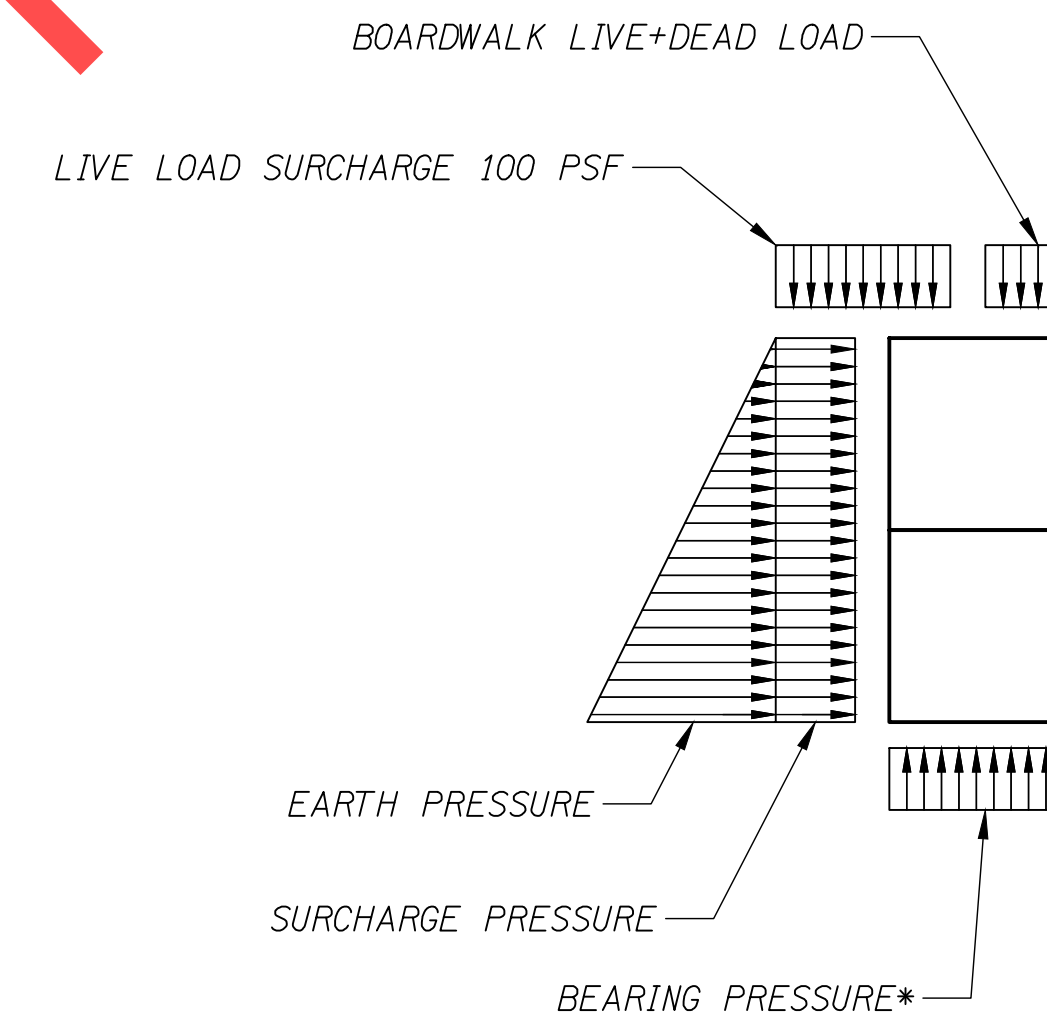
COHESION NEGLECTED, C=0KSF



PAY LIMITS FOR GRANULAR WALL BACKFILL
 PAY LIMITS FOR GRANULAR STRUCTURAL BACKFILL

PAY LIMITS DIAGRAM

NO SCALE



* ALLOWABLE BEARING PRESSURE IS 5000PSF PER "GEOTECHNICAL ENGINEERING REPORT 5TH STREET TO KINSMAN ROAD EXTENSION WILSONVILLE, OREGON"

MODULAR BLOCK WALL LOADING DIAGRAM

N.T.S.

SCALE WARNING
IF SCALE BAR DOESN'T MEASURE ONE INCH THEN DRAWING IS NOT TO SCALE

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Phone 503-682-4960

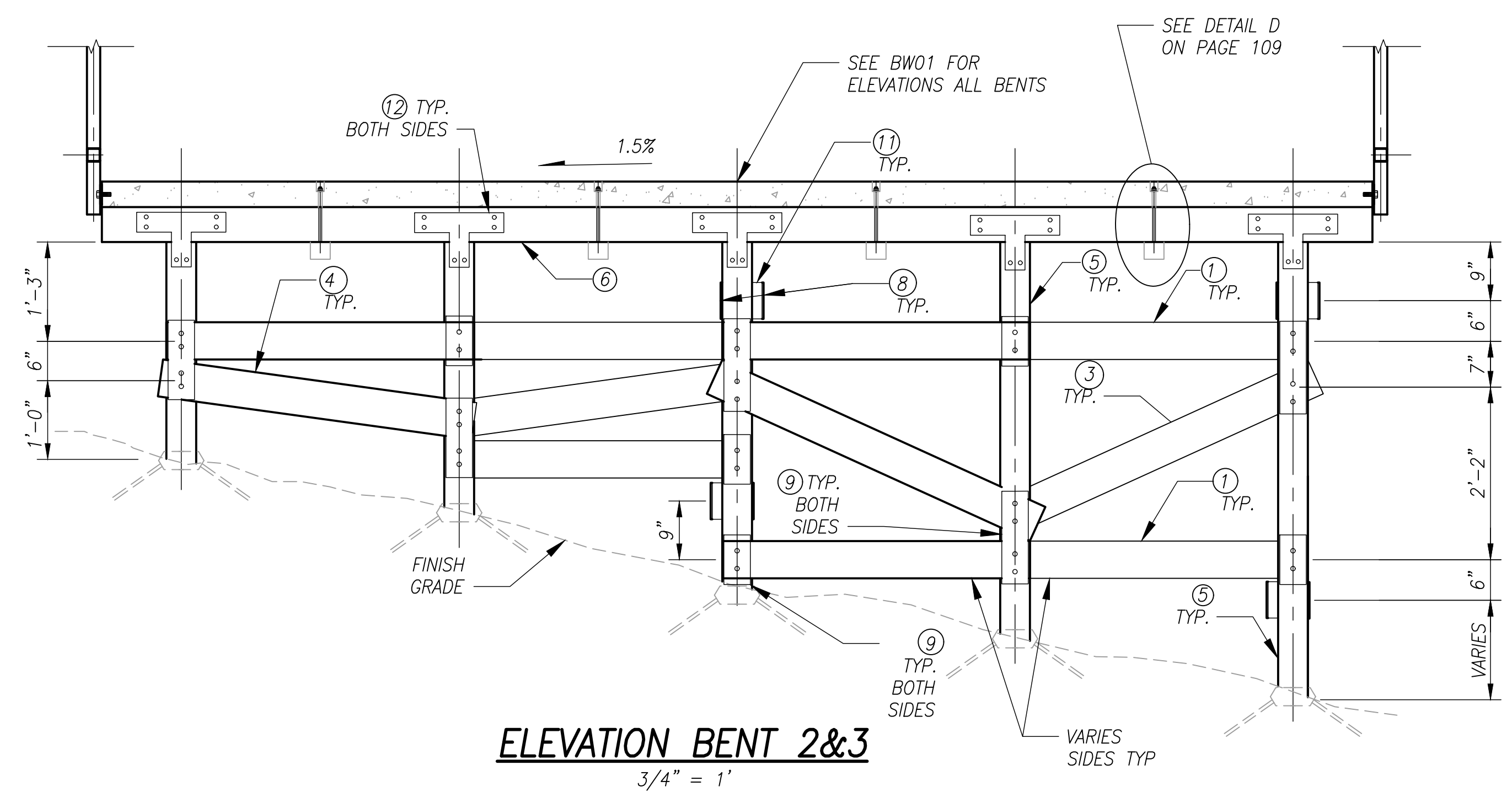


Date: 1 February 2019
Scale: AS SHOWN
Designed By: JDP
Drawn By: JDP
Checked By: SMN

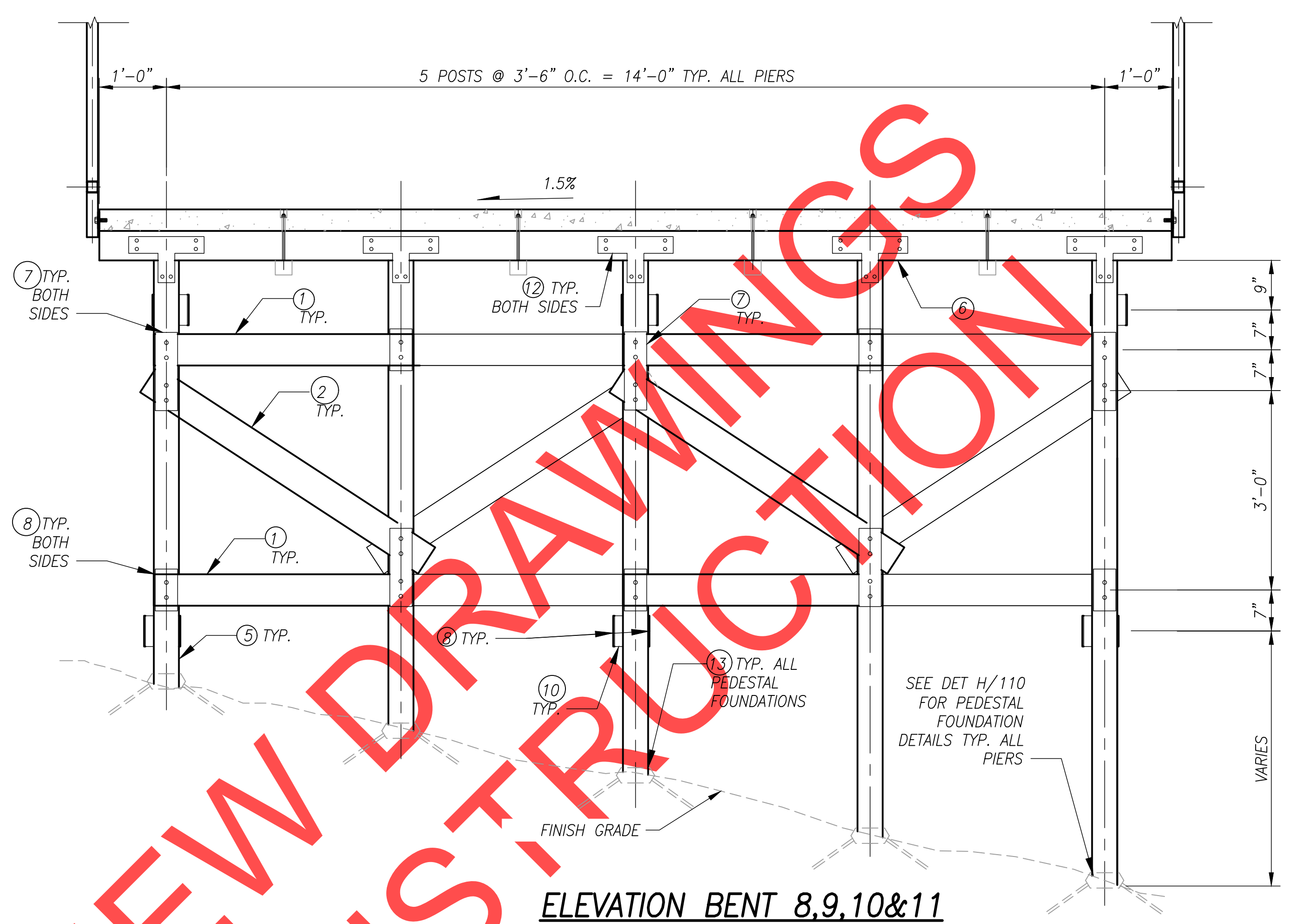
SW 5TH ST TO SW KINSMAN RD EXTENSION
BOARDWALK
BOARDWALK - GENERAL NOTES

CIP# 4196
PROJECT# 2017-02-001
BW02
108 of 211

REVIEW SET - NOT FOR CONSTRUCTION

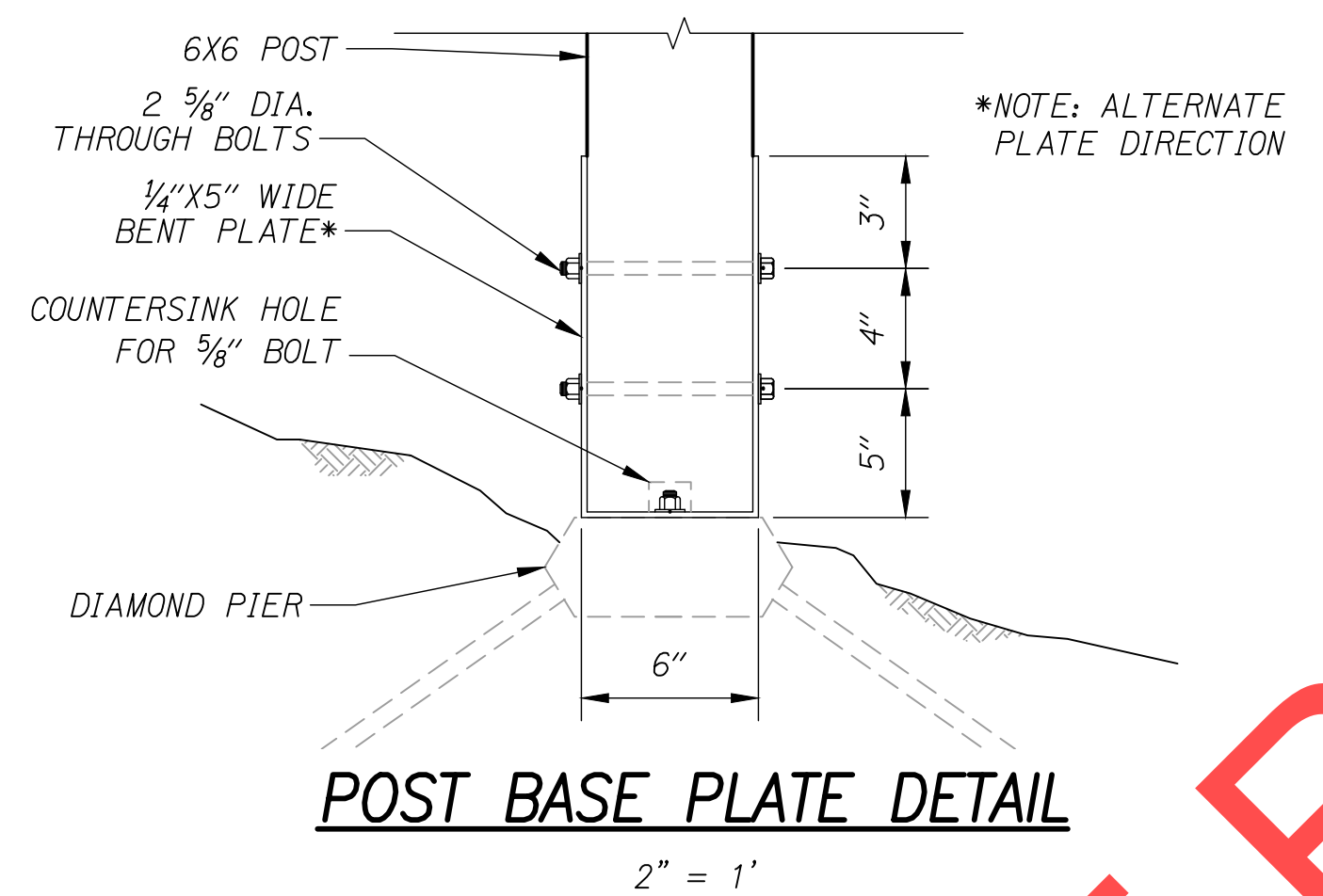


ELEVATION BENT 2&3
3/4" = 1'

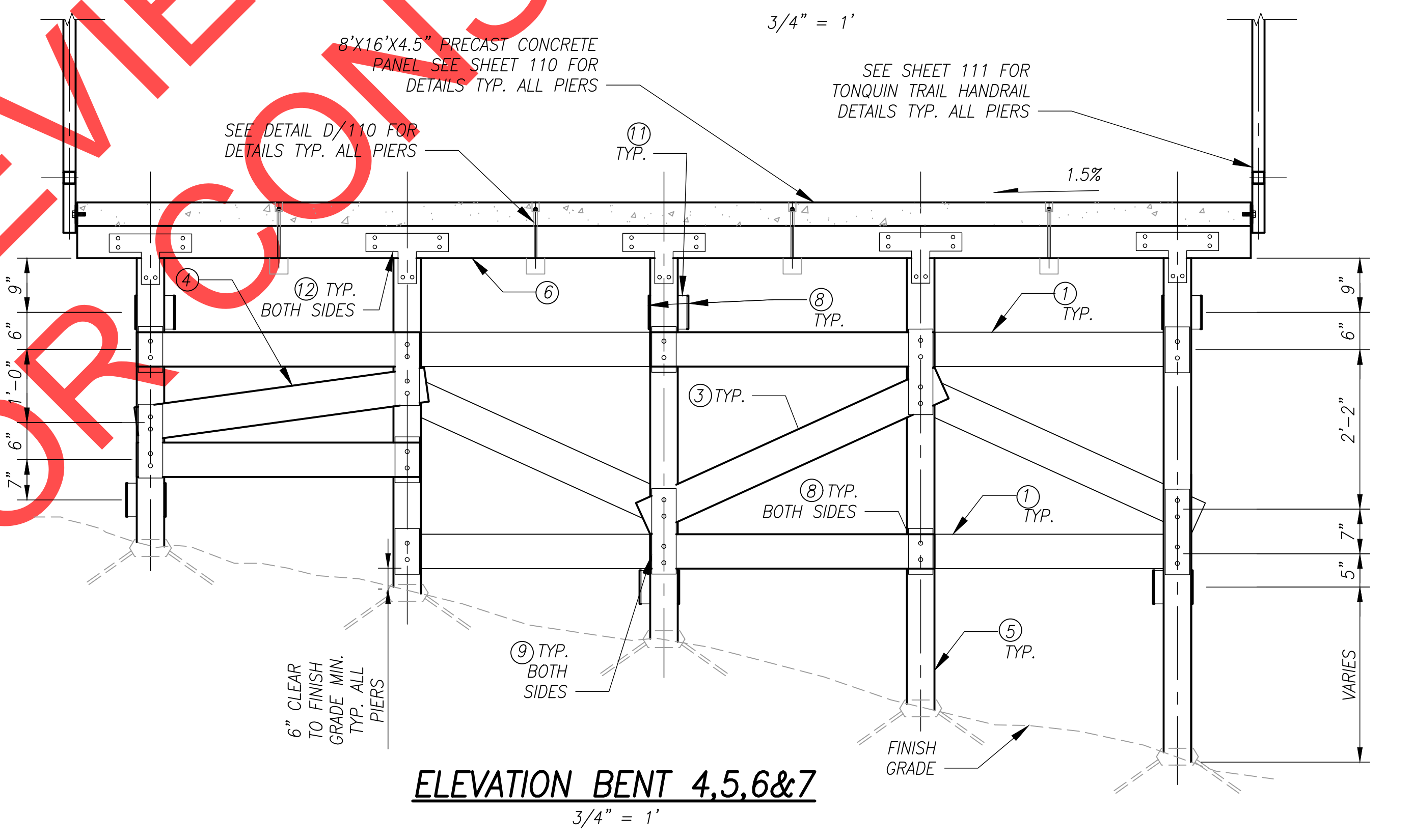


ELEVATION BENT 8,9,10&11
3/4" = 1'

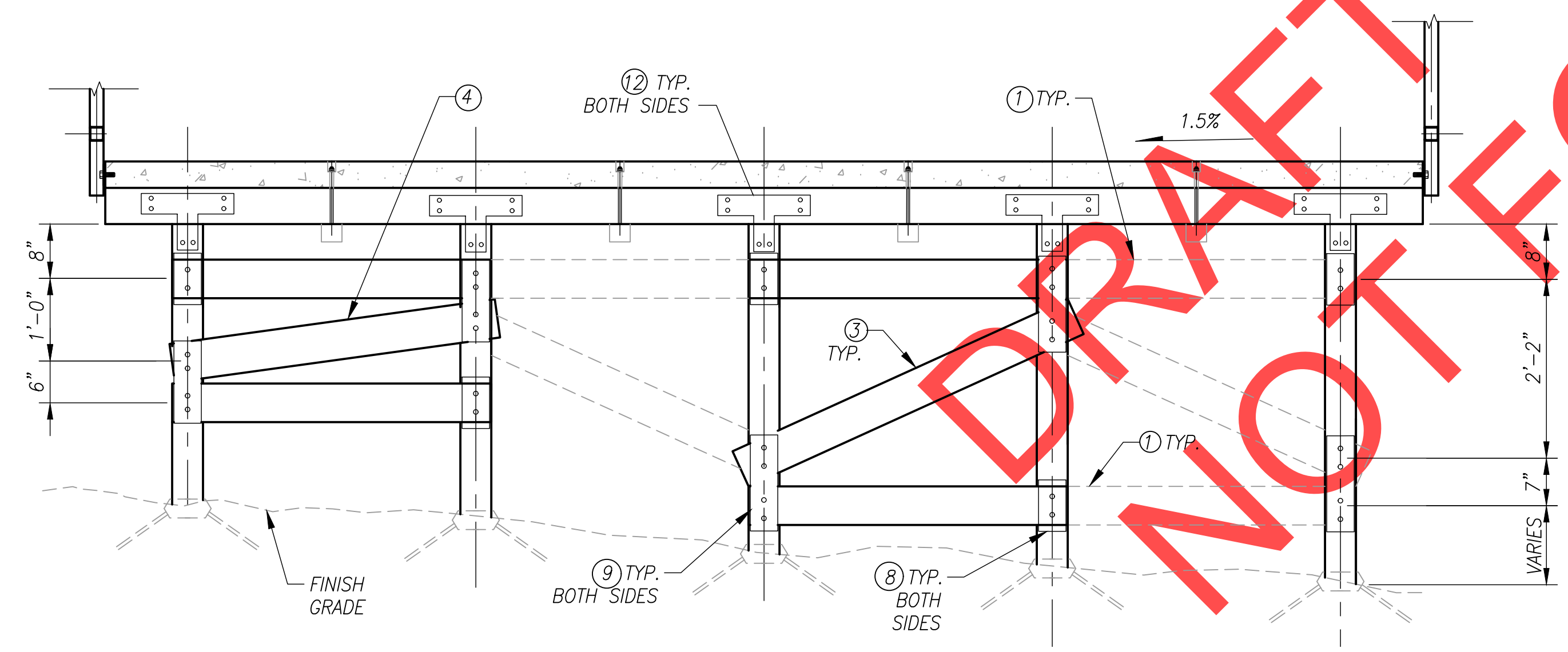
NOTE		QTY.
1	2"x6"x4'-6" SAWN LUMBER	85
2	2"x6"x5'-6" SAWN LUMBER	16
3	2"x6"x5'-0" SAWN LUMBER	19
4	2"x6"x4'-6" SAWN LUMBER	9
5	6"x6"XVARIES SAWN LUMBER	55
6	6 3/4"x9"x16'-0" 20F-V3 GLULAM	11
7	4"x15"x 1/4" PL W/ 5/8" A325 THREADED ROD (DET A/110)	106
8	4"x12"x 1/4" PL W/ 5/8" A325 THREADED ROD (DET C/110)	218
9	4"x9 1/2"x 1/4" PL W/ 5/8" A325 THREADED ROD (DET B/110)	28
10	3"x6"x10'-0" SAWN LUMBER	28
11	3"x6"x9'-0" SAWN LUMBER	16
12	SIMPSON APT4 (DET F/110) OR APPROVED EQUAL	110
13	3/16" A36 PLATE SEE DETAIL THIS SHEET	55



POST BASE PLATE DETAIL
2" = 1'



ELEVATION BENT 4,5,6&7
3/4" = 1'



ELEVATION BENT 12
3/4" = 1'

SCALE WARNING
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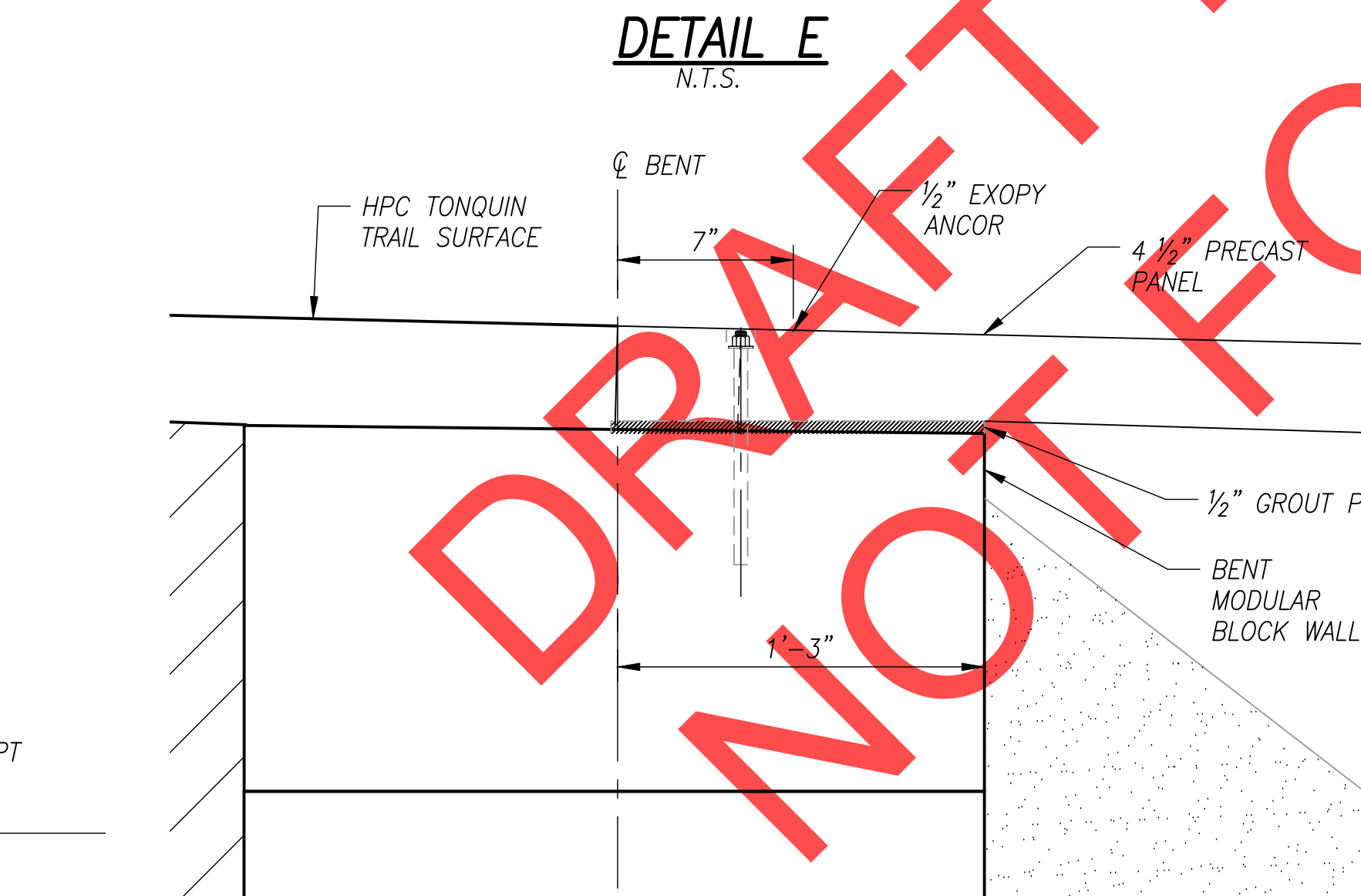
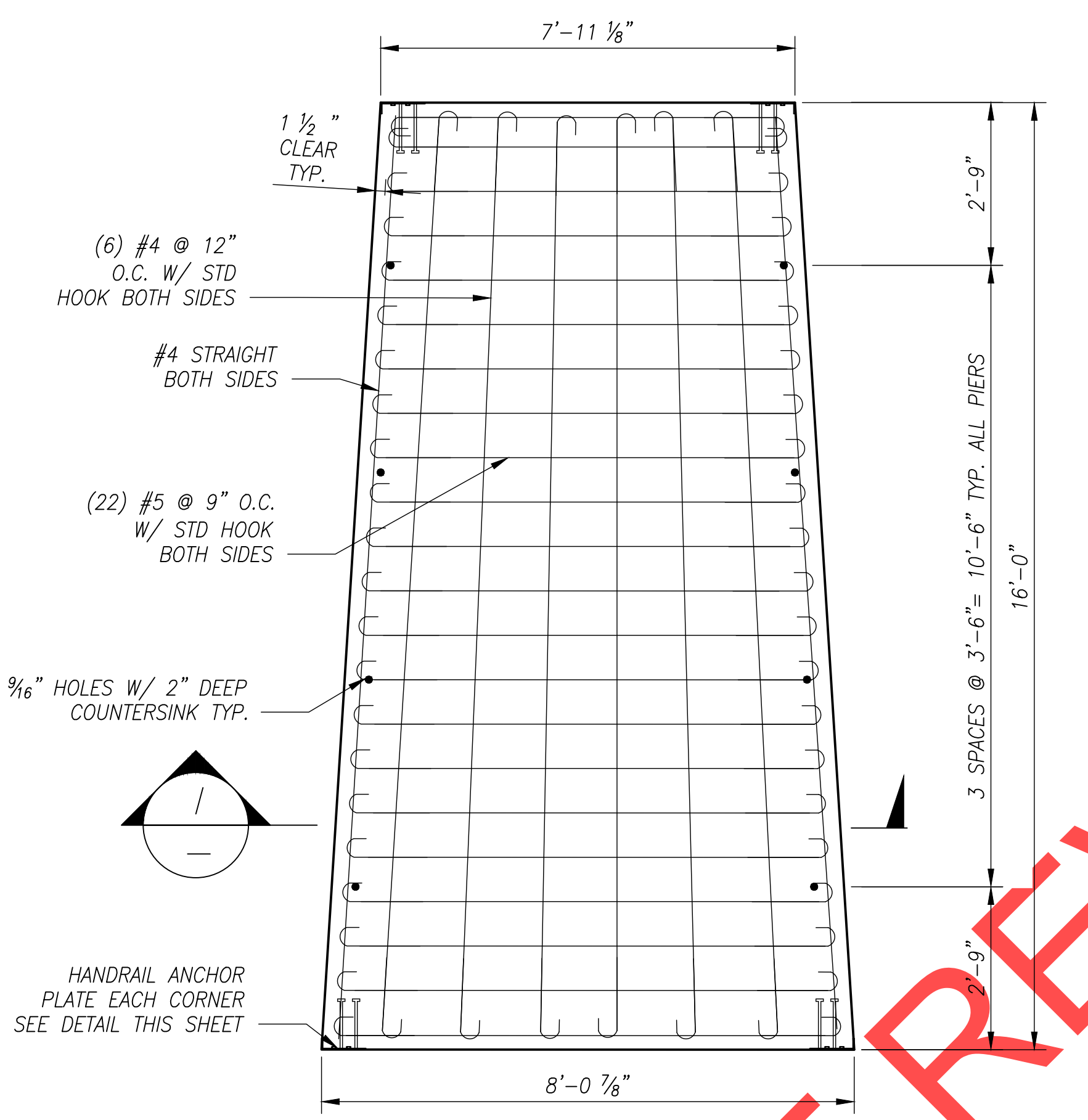
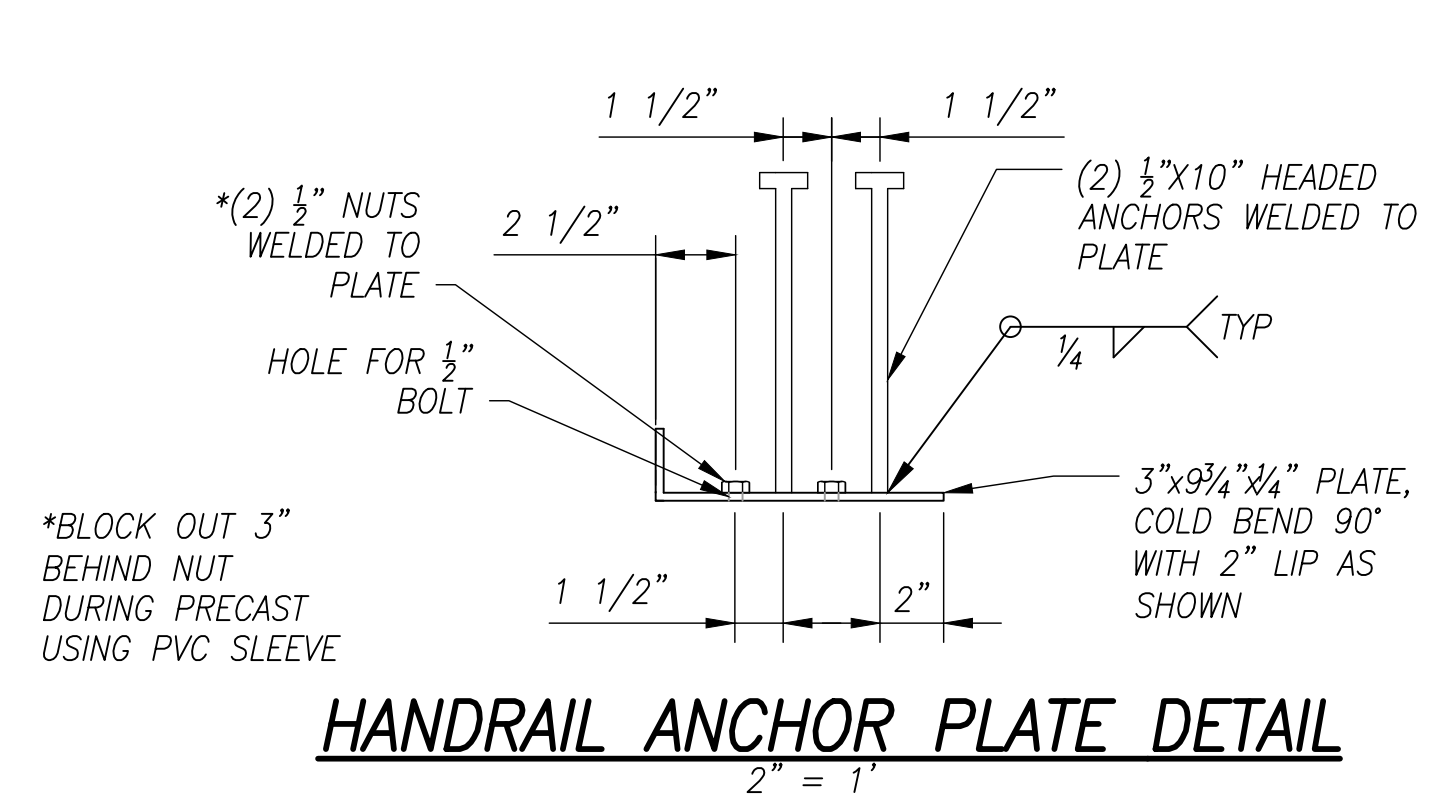
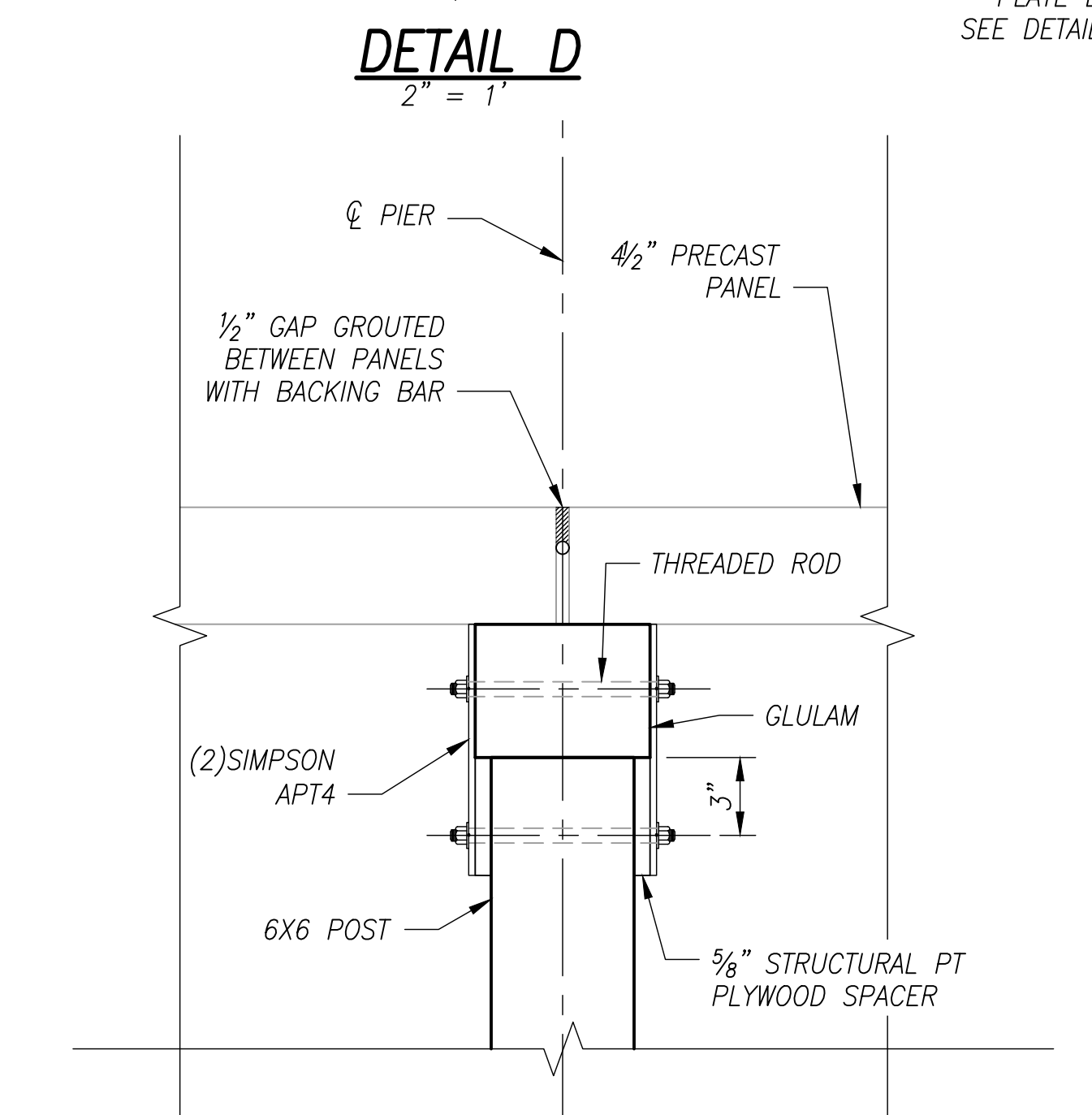
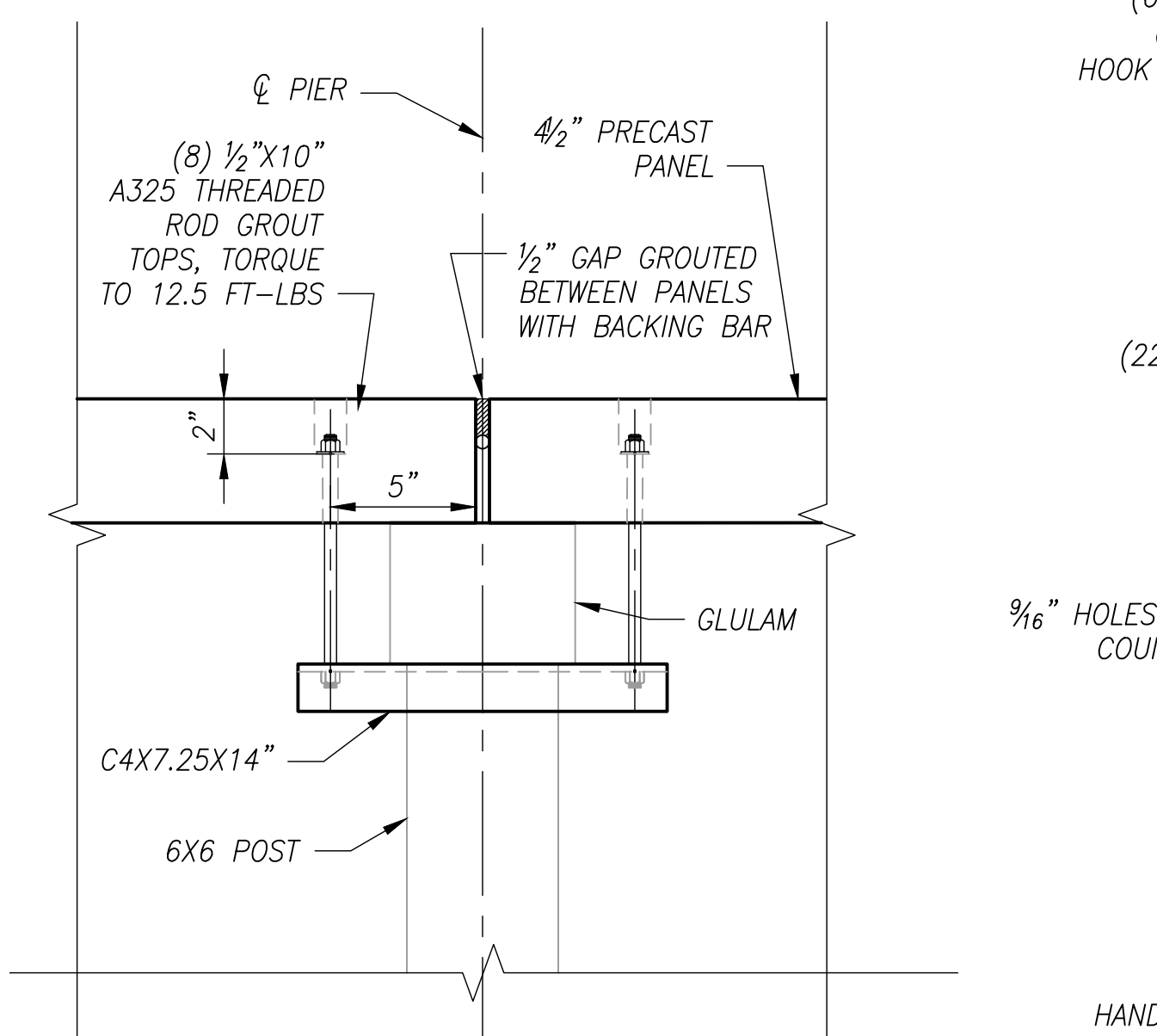
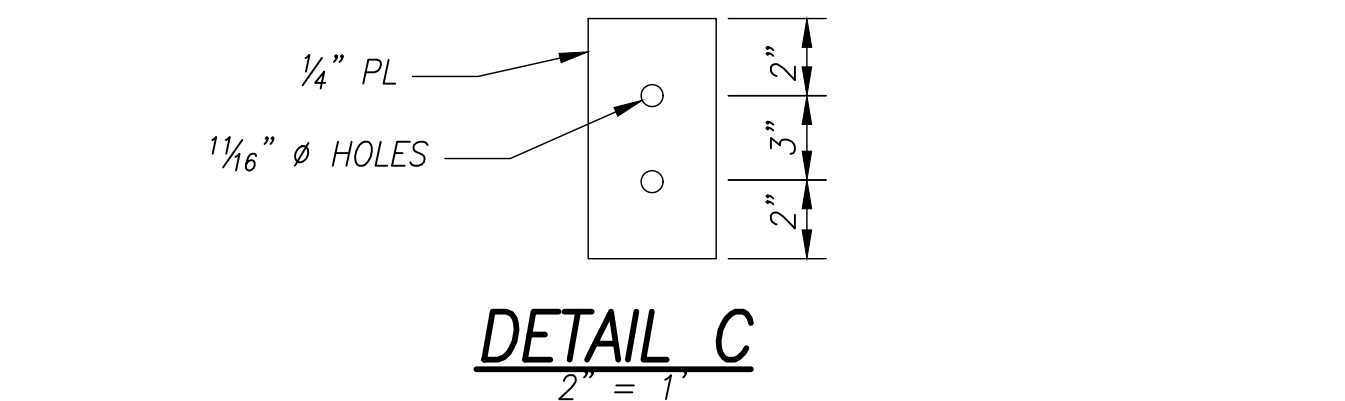
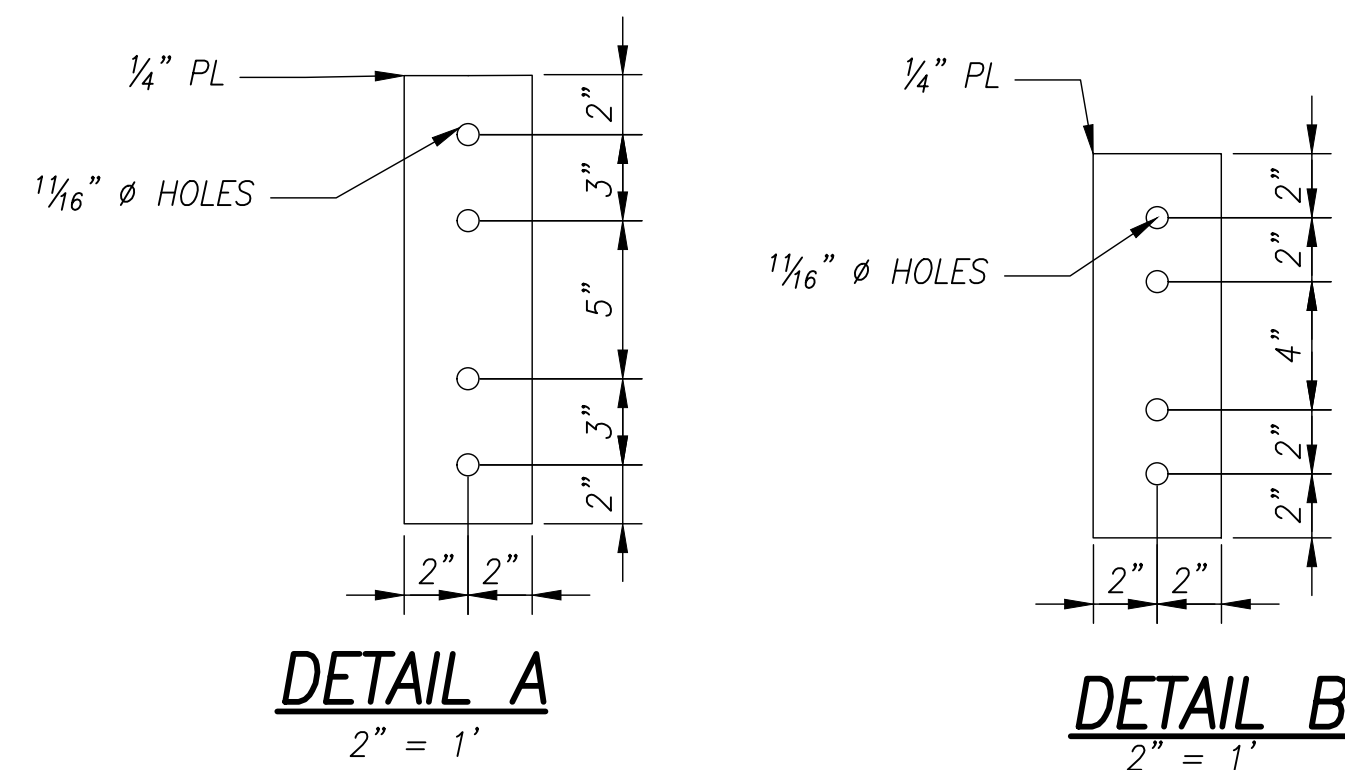
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Wilsonville, OR 97070
Phone 503-682-4960

Date: 1 February 2019
Scale: AS SHOWN
Designed By: GM
Drawn By: JJP
Checked By: NBJ

**SW 5TH ST TO SW KINSMAN RD EXTENSION
BOARDWALK - DETAILS**

CIP# 4196
PROJECT# 2017-02-001
BW03
109 of 211

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DIAMOND PIER® DP-75

ELEVATION W/ PINS

PLAN VIEW W/ PINS

GRADE (Install Pier to Midpoint or deeper)

EXISTING SOILS

DIAMOND PIER® DP-75

US PAT. #5039256, #6910832, & #7326003

PIN FOUNDATIONS, INC.

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(253) 858-8809

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DIAMOND PIER® DP-75

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DETAIL H
N.T.S.

SECTION I
1/2" = 1"

SCALE WARNING

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<p>PRELIMINARY</p>	<p>City of Wilsonville Engineering Department 29799 SW Town Center Loop E Wilsonville, OR 97070 Phone 503-682-4960</p>
<p>SW 5TH ST TO SW KINSMAN RD EXTENSION BOARDWALK - DETAILS</p>	<p>1 February 2019 AS SHOWN GM JP NBJ</p>
<p>CIP# 4196 PROJECT# 2017-02-001 BW04 110 of 211</p>	<p>Otak Otak, Inc. 700 Washington St., Suite 300 Vancouver, WA 98660 360.737.9613 www.otak.com</p>

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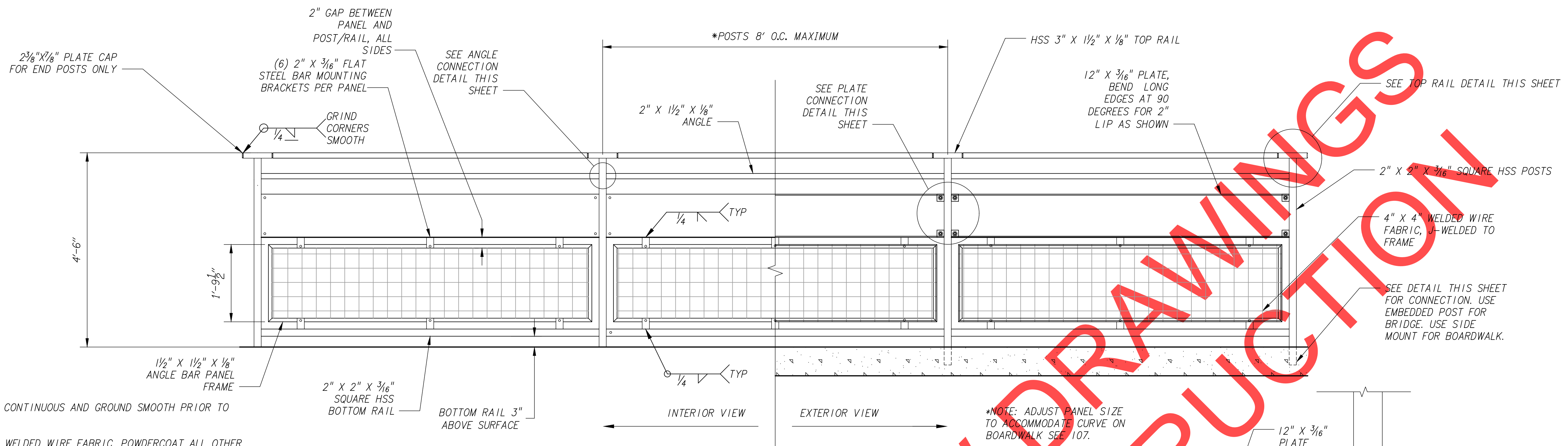
City of Wilsonville
Engineering Department
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Phone 503-682-4960



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Scale: AS SHOWN
Designed By: JDP
Drawn By: JDP
Checked By: SMV

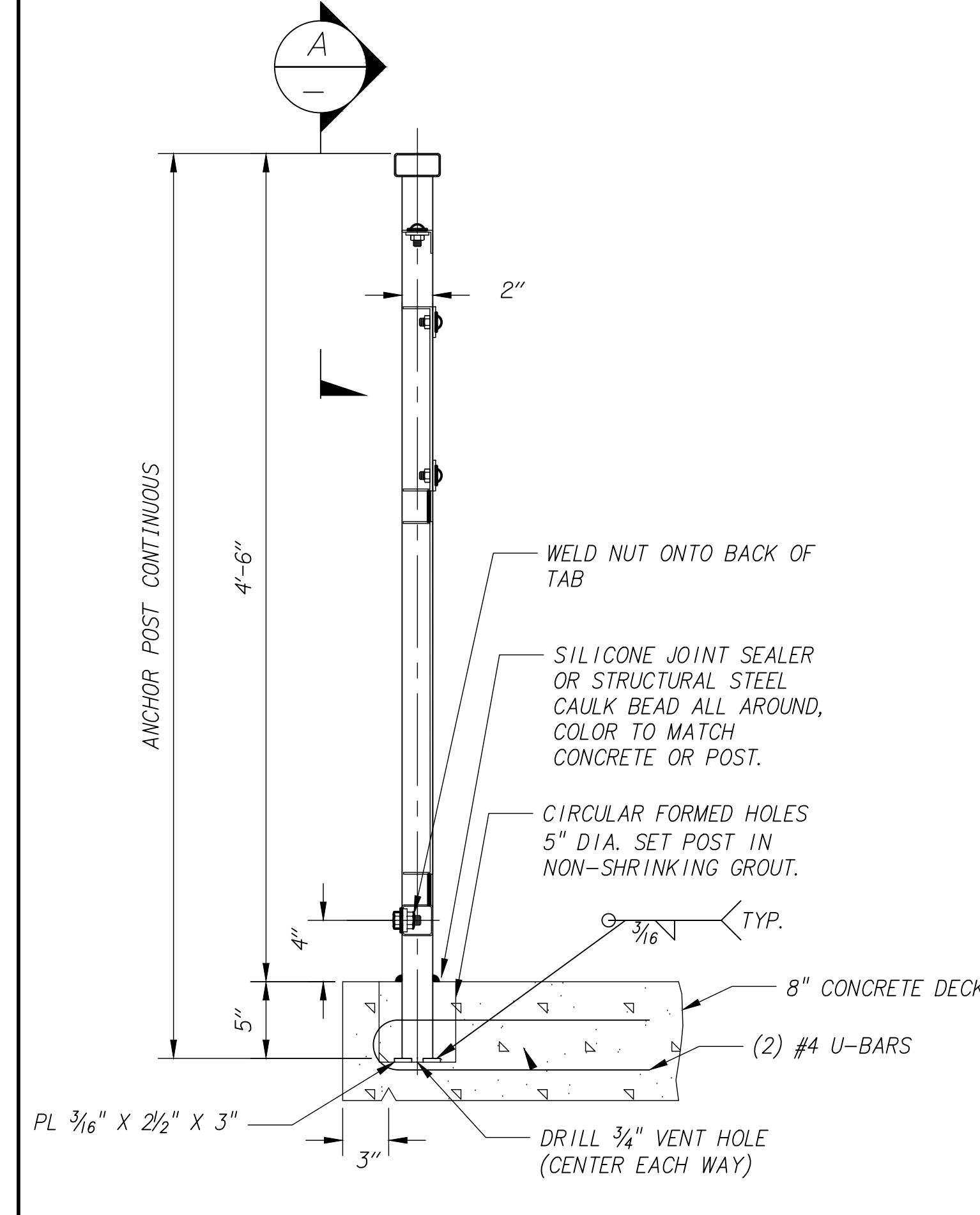
SW 5TH ST TO SW KINSMAN RD EXTENSION
HANDRAIL DETAILS

CIP# 4196
PROJECT# 2017-02-002
HRO1
111 of 211

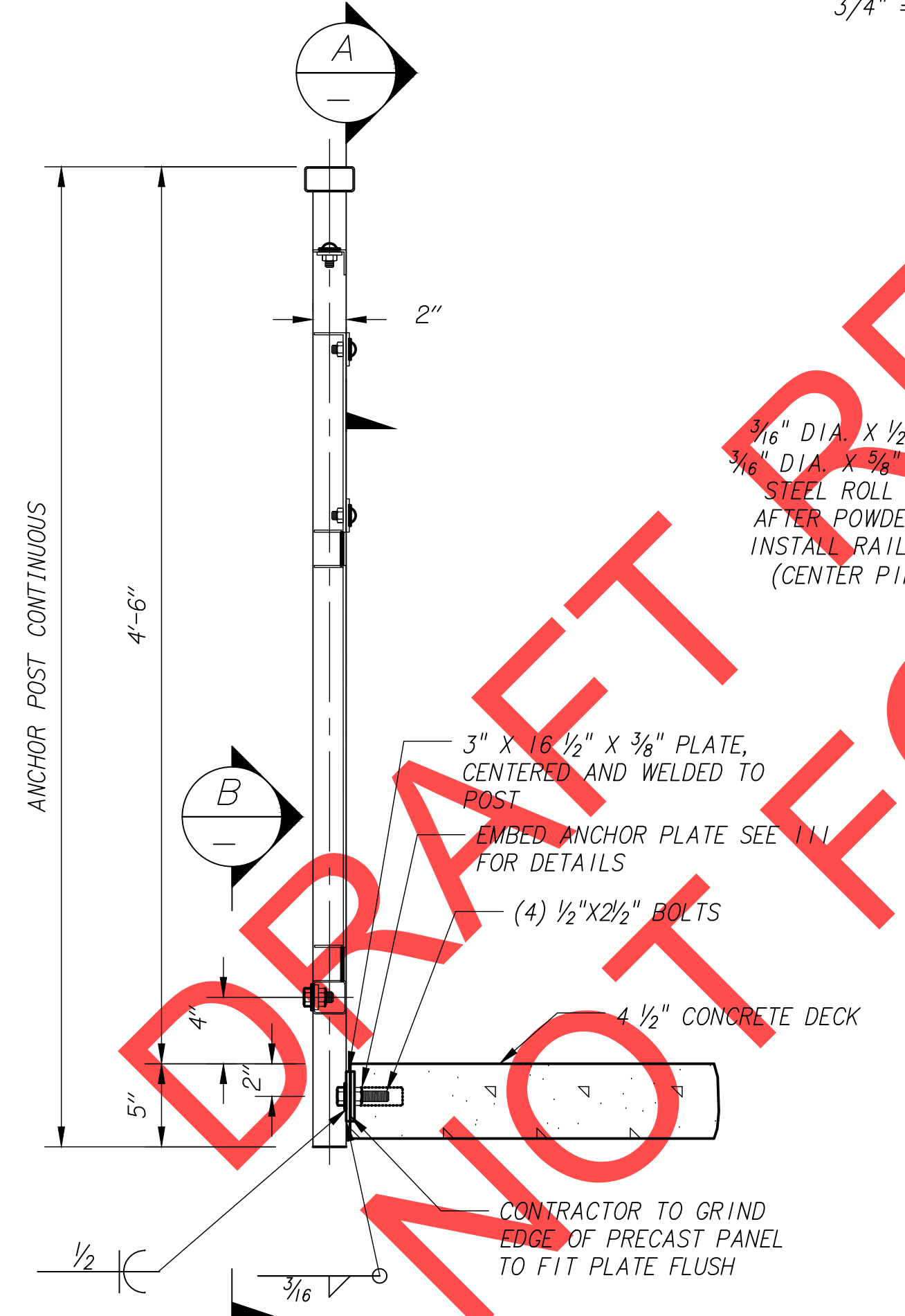


NOTES:
ALL WELDS CONTINUOUS AND GRIND SMOOTH PRIOR TO FINISH.
GALVANIZE WELDED WIRE FABRIC. POWDERCOAT ALL OTHER FENCE COMPONENTS WITH CHARCOAL GRAY COLOR.
A 4" SPHERE SHALL NOT PASS THROUGH ANY OPENING IN THE RAILING.
HANDRAIL DESIGN CRITERIA: 200 LBS ANY DIRECTION

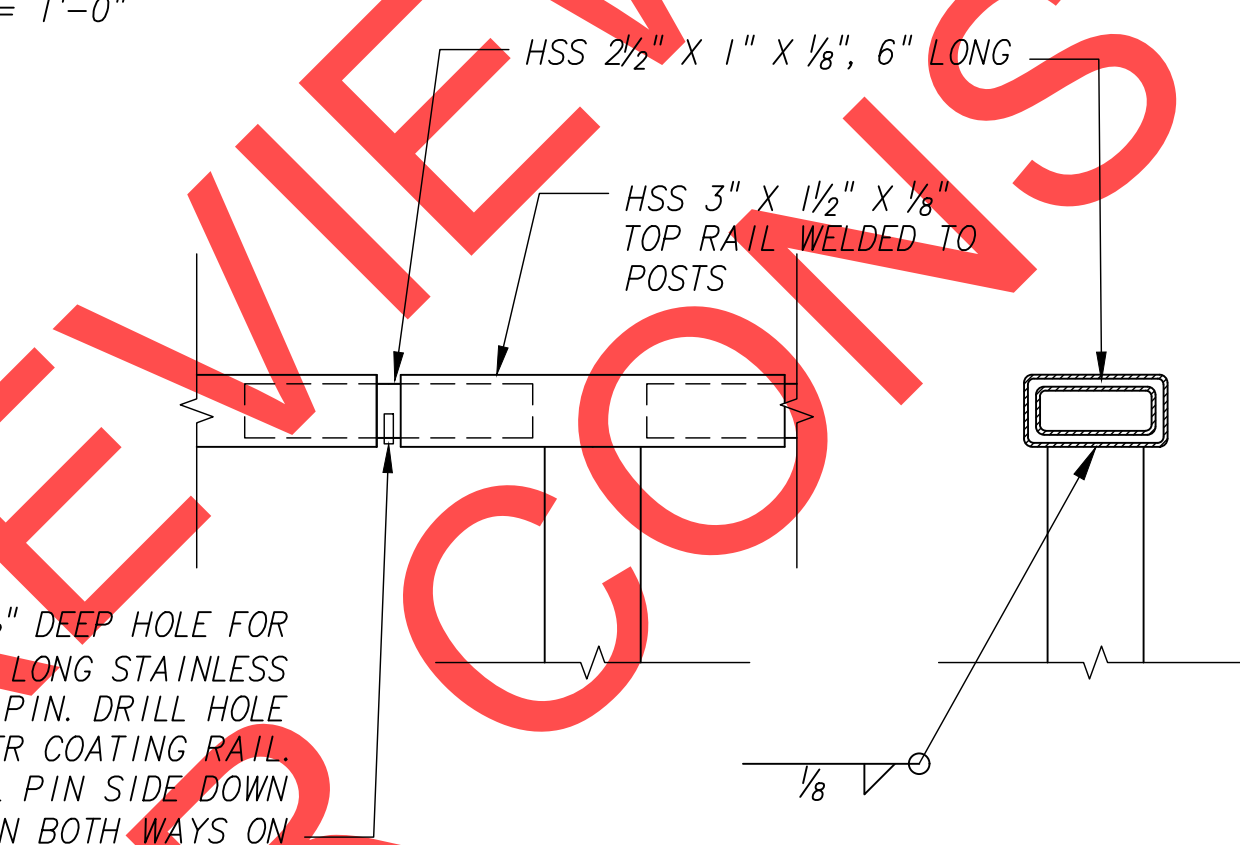
PEDESTRIAN HANDRAIL ELEVATION
3/4" = 1'-0"



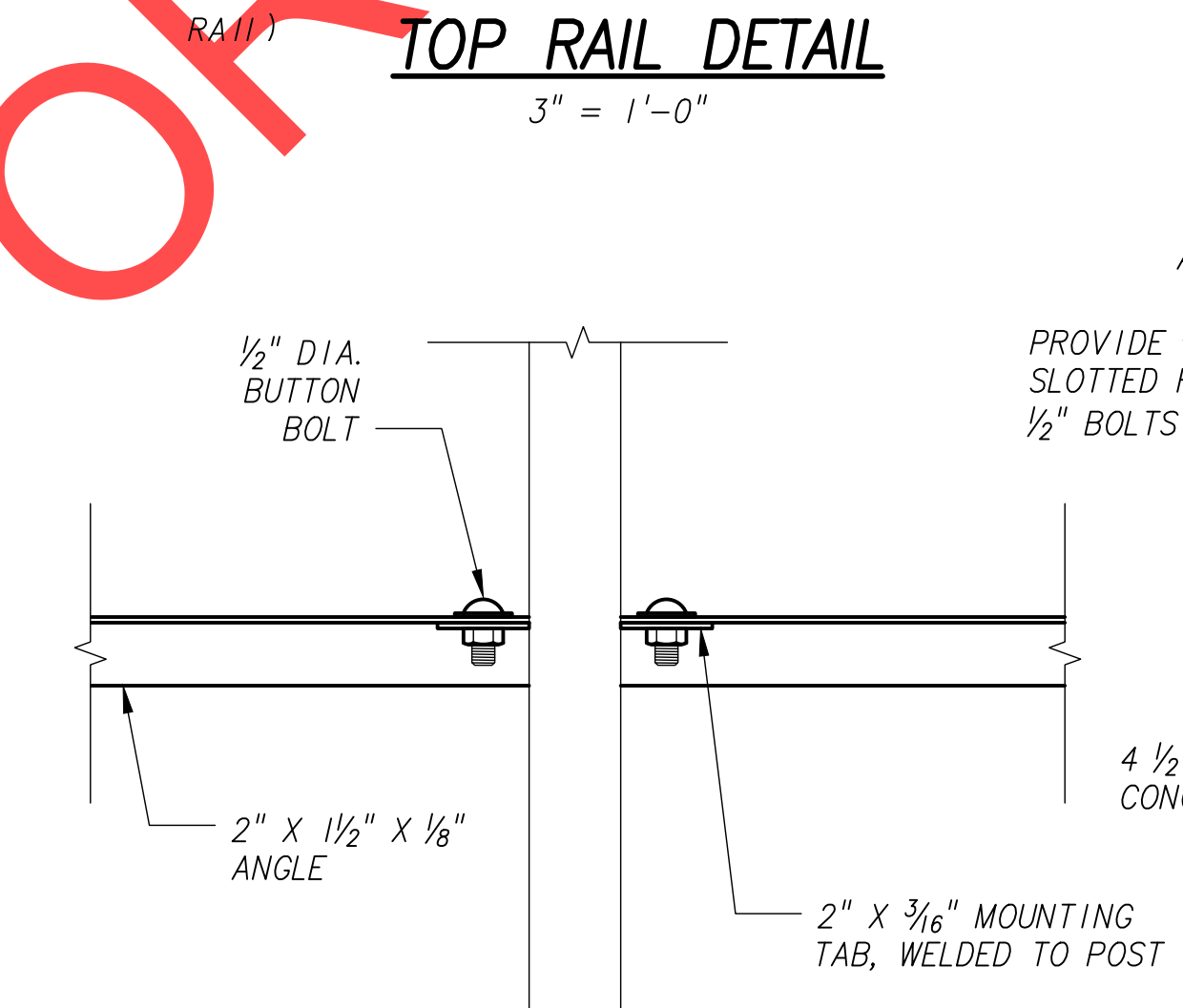
EMBEDDED POST DETAIL (5TH ST. BRIDGE)
1 1/2" = 1'-0"



SIDE MOUNTED POST DETAIL (BOARDWALK)
1 1/2" = 1'-0"



TOP RAIL DETAIL
3" = 1'-0"



ANGLE CONNECTION DETAIL
3" = 1'-0"

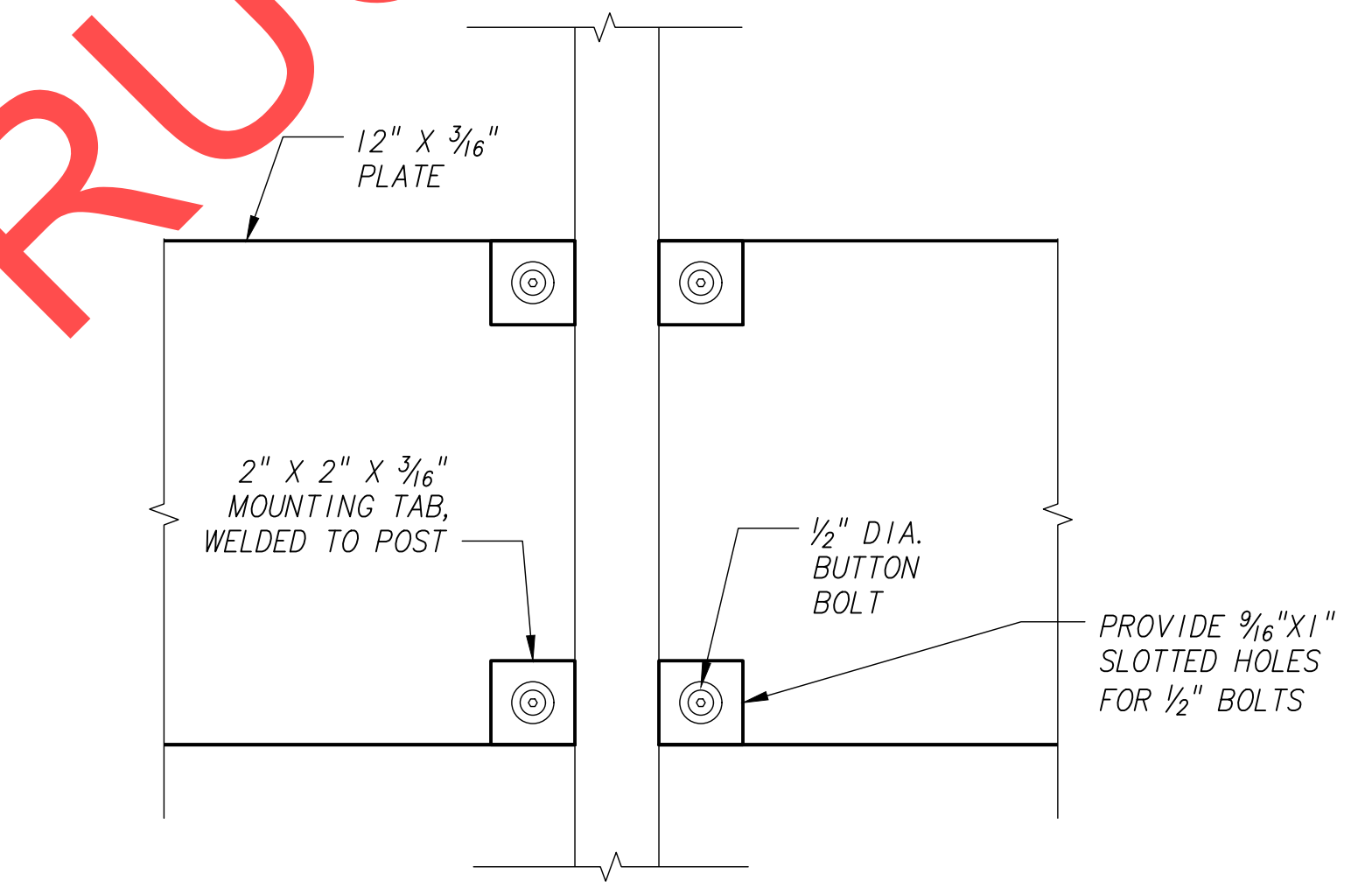
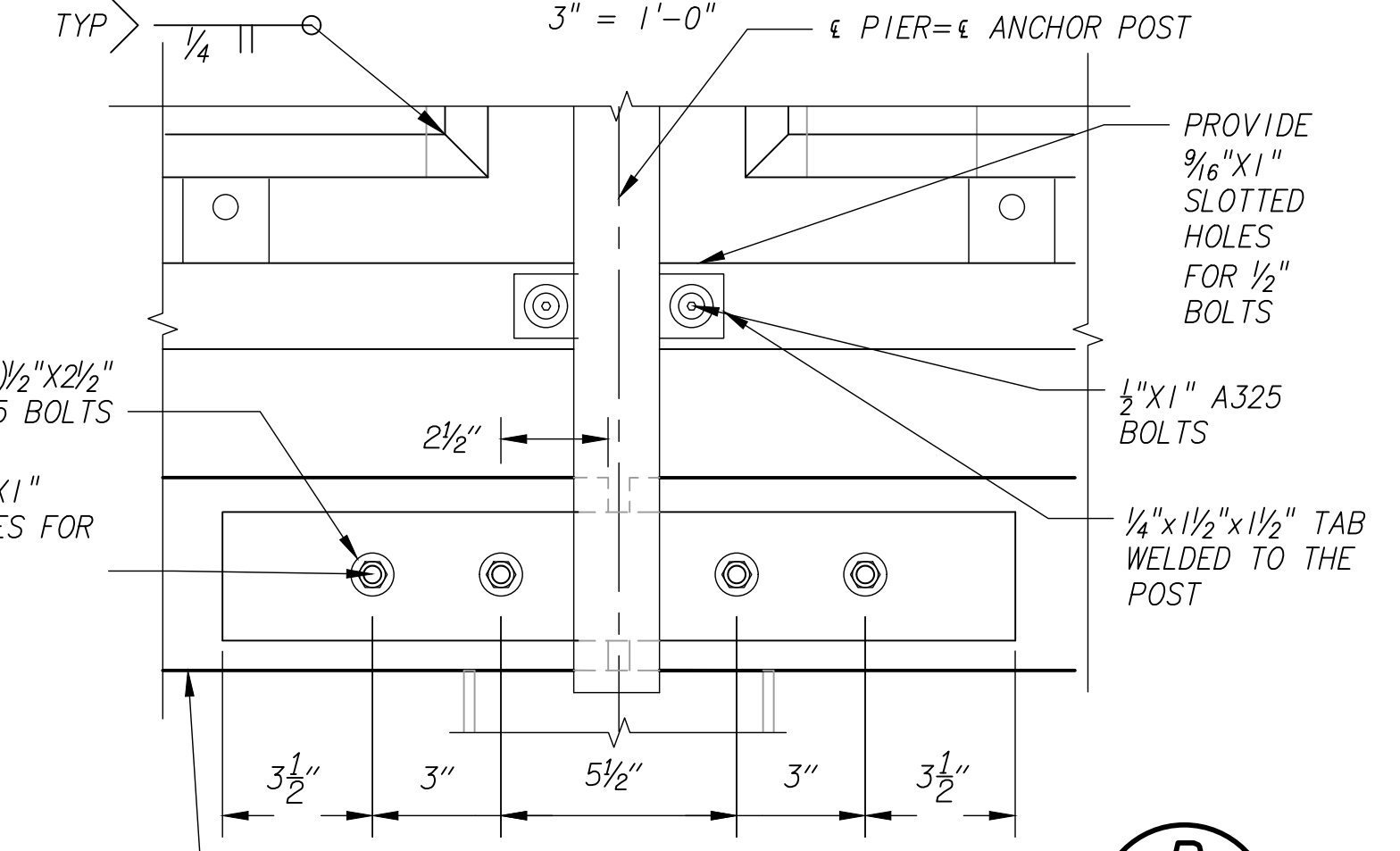


PLATE CONNECTION DETAIL
3" = 1'-0"

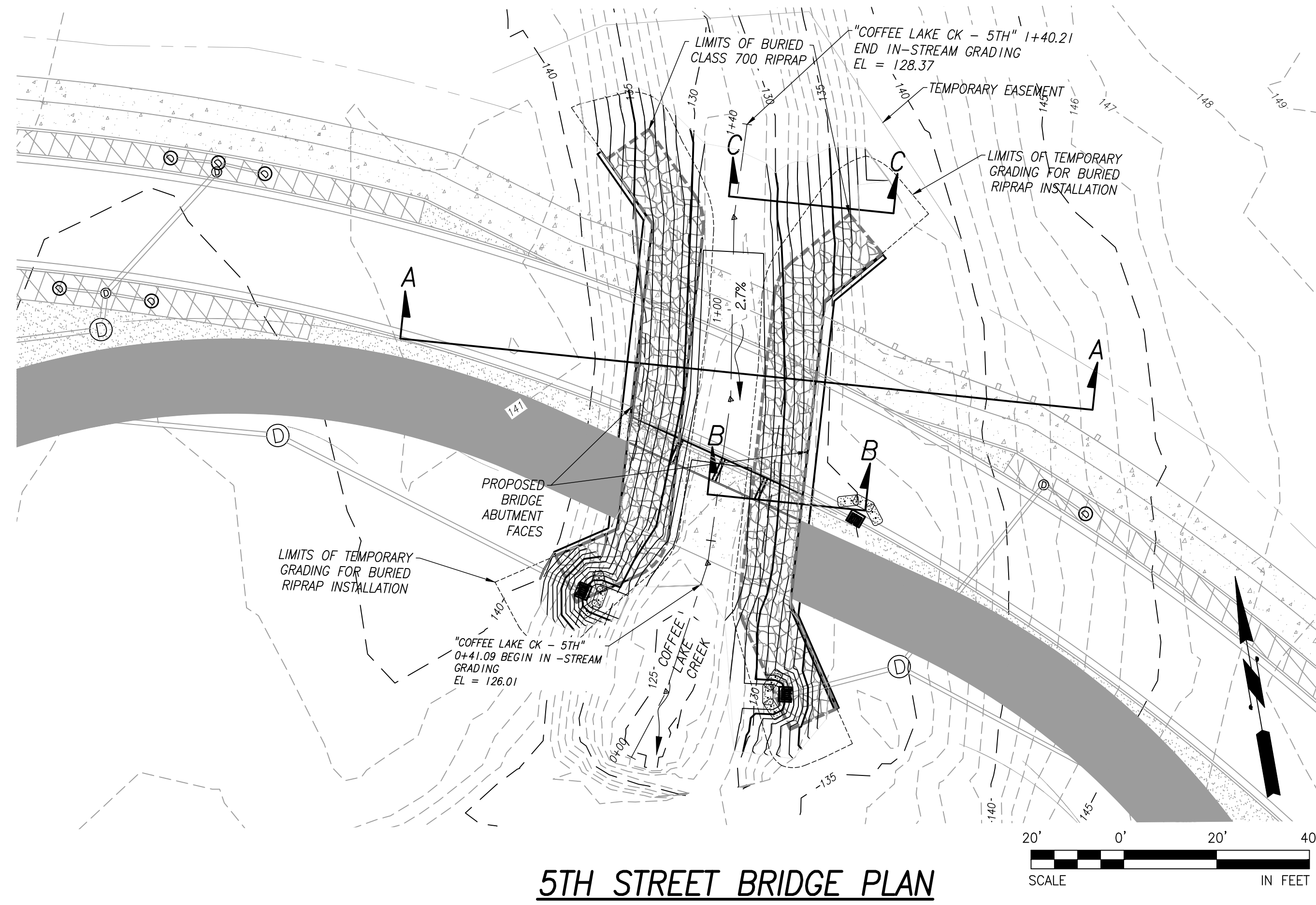


BOARDWALK MOUNTING DETAIL
3" = 1'-0"

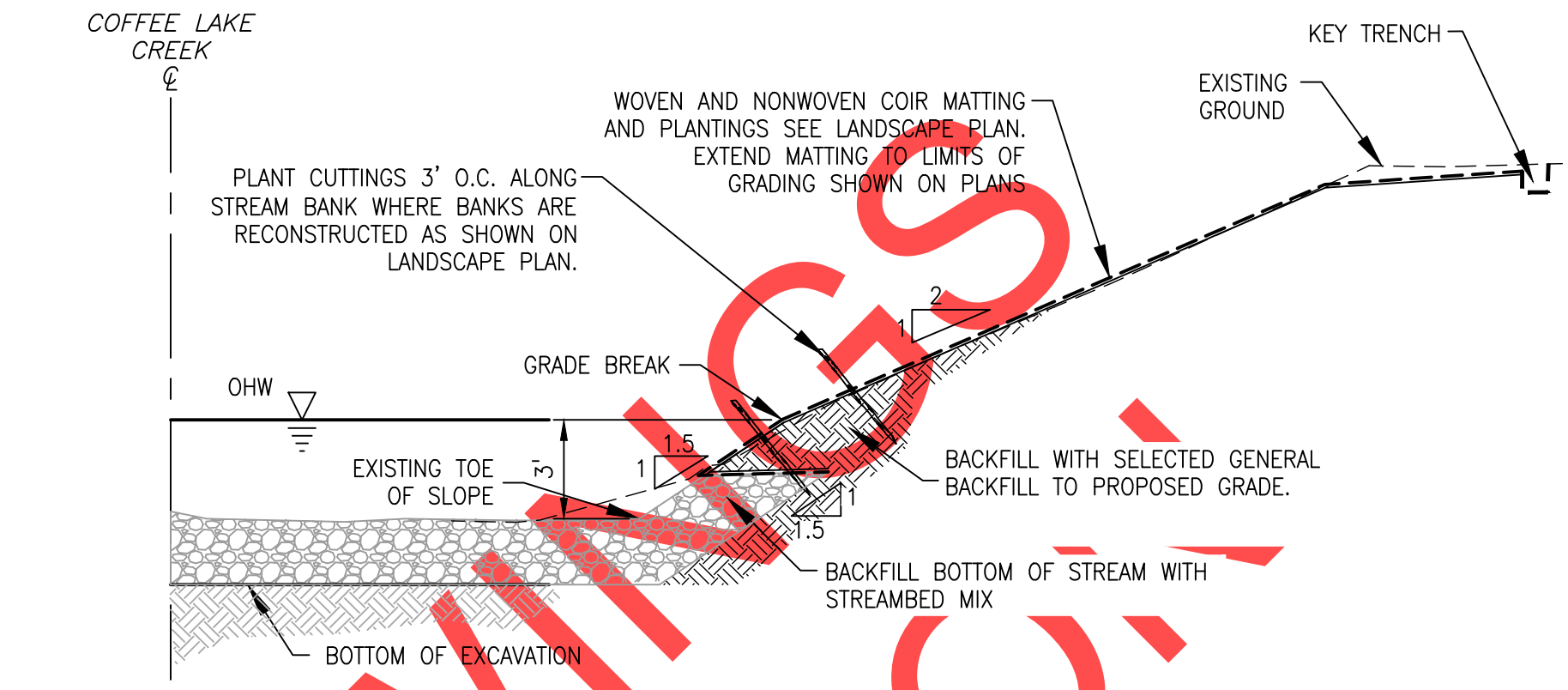
SCALE WARNING
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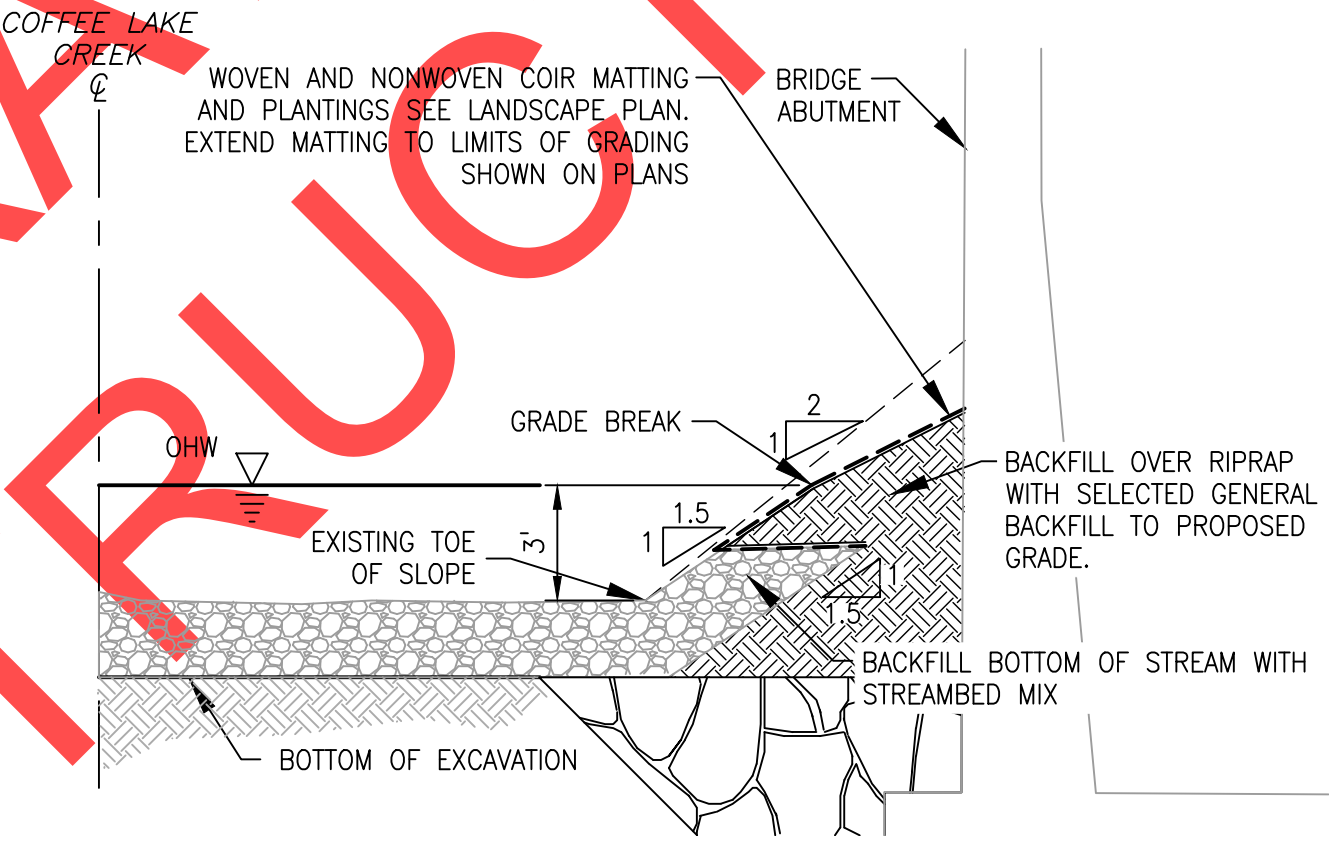
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5TH STREET BRIDGE PLAN
N.T.S.

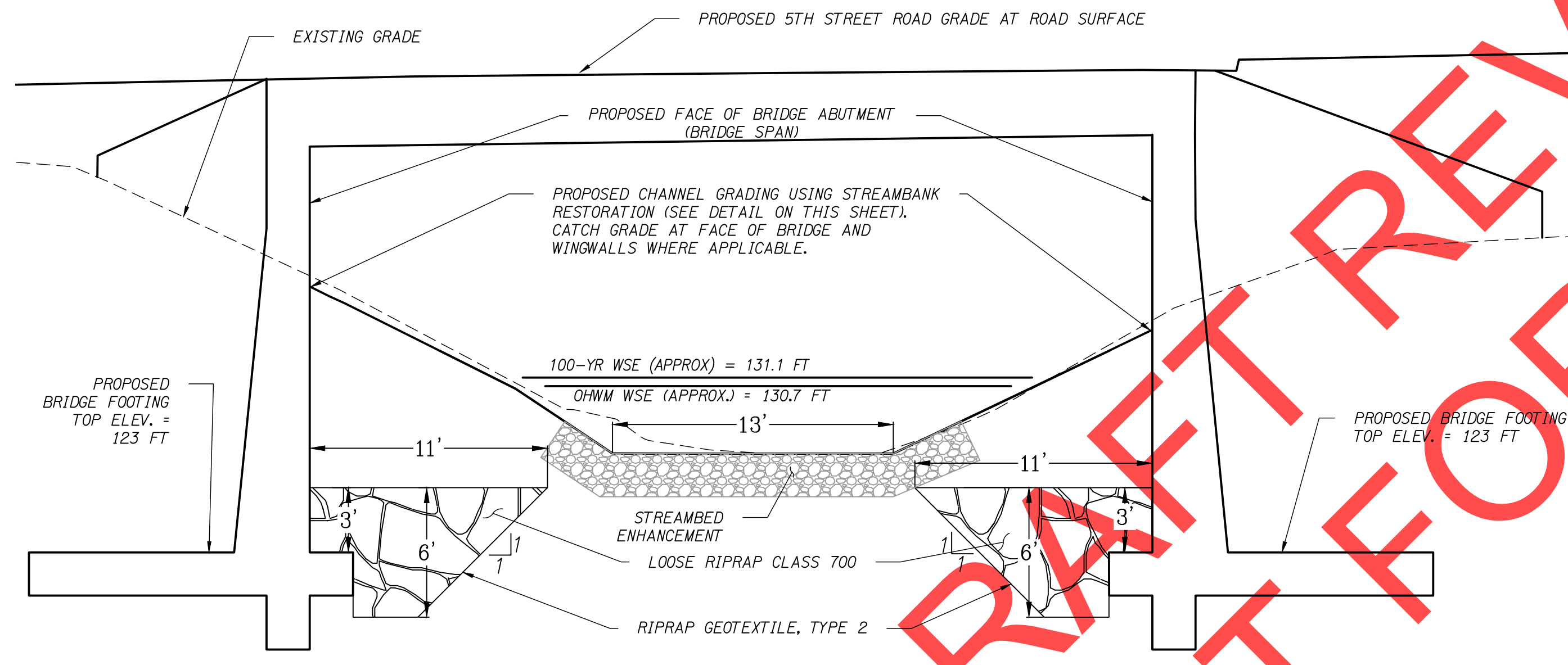


STREAM BANK RESTORATION DETAIL SECTION C-C
N.T.S.

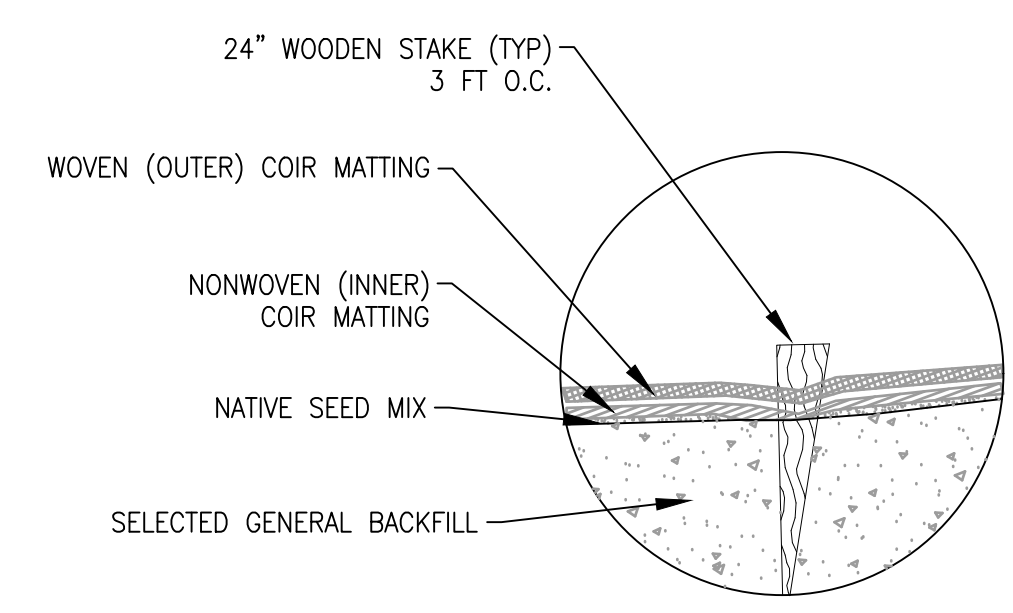


STREAM BANK RESTORATION DETAIL SECTION B-B
N.T.S.

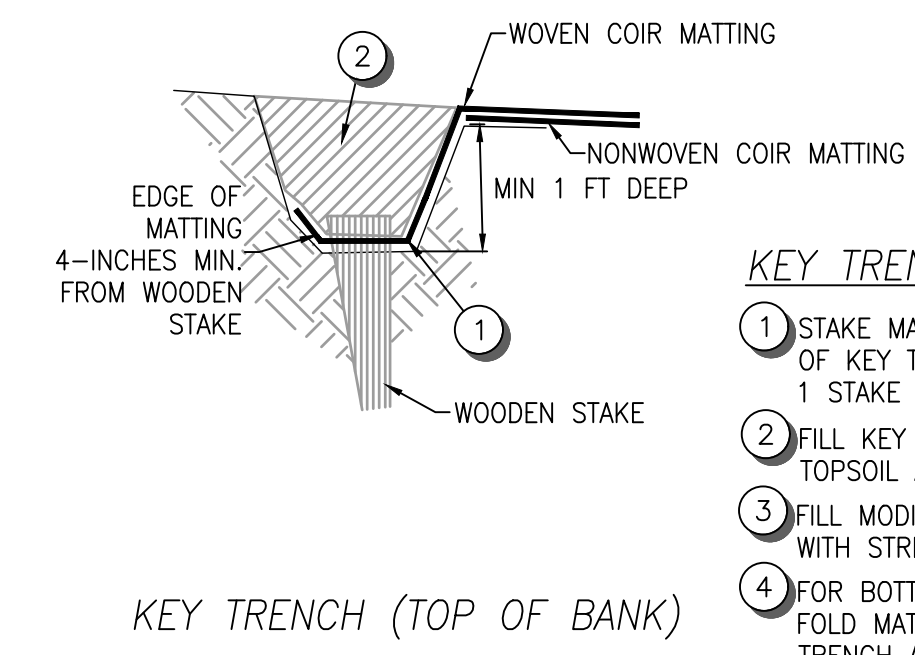
GENERAL NOTES:
 - RESTORATION SHALL BE IMPLEMENTED WHEREVER GRADING ALONG CREEK OCCURS.
 - ROUGHEN GROUND SURFACE TO 6" DEPTH AT INTERFACE OF COMPACTED SOIL AND NATIVE UNDERLYING SOIL.
 - APPLY SEED BEFORE INSTALLING MATTING.
 - NONWOVEN COIR MATTING SHALL BE PLACED DIRECTLY ON FILL, WOVEN COIR MATTING SHALL BE PLACED ON TOP OF NONWOVEN MATTING. SEE COIR MATTING AND STAKES DETAIL ON THIS SHEET.



5TH STREET SECTION A-A
N.T.S.



COIR MATTING AND STAKES DETAIL
N.T.S.



KEY TRENCH NOTES:
 1 STAKE MATTING TO BOTTOM OF KEY TRENCH, 1 STAKE PER 3 L.F.
 2 FILL KEY TRENCH WITH TOPSOIL AND COMPACT.
 3 FILL MODIFIED KEY TRENCH WITH STREAMBED GRAVEL.
 4 FOR BOTTOM OF BANK, FOLD MATTING OVER KEY TRENCH AND STRETCH TIGHTLY TO REMOVE WRINKLES.

KEY TRENCH DETAIL
N.T.S.

NO.	REVISIONS

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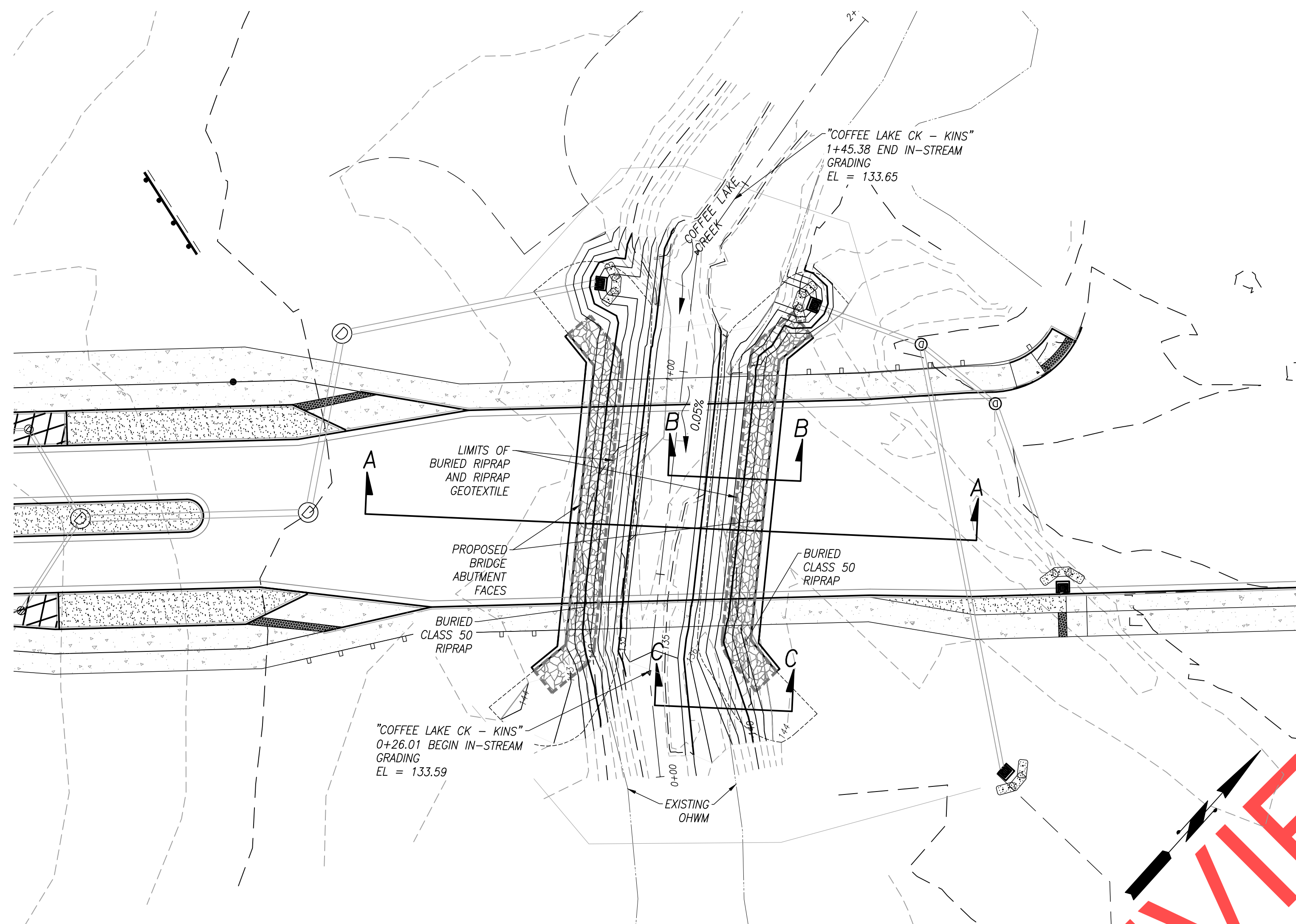
Date: 1 February 2019
 Scale: 20 SCALE
 Designed By: PH/BB
 Drawn By: EID
 Checked By: A HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
5TH ST BRIDGE - SCOUR PROTECTION

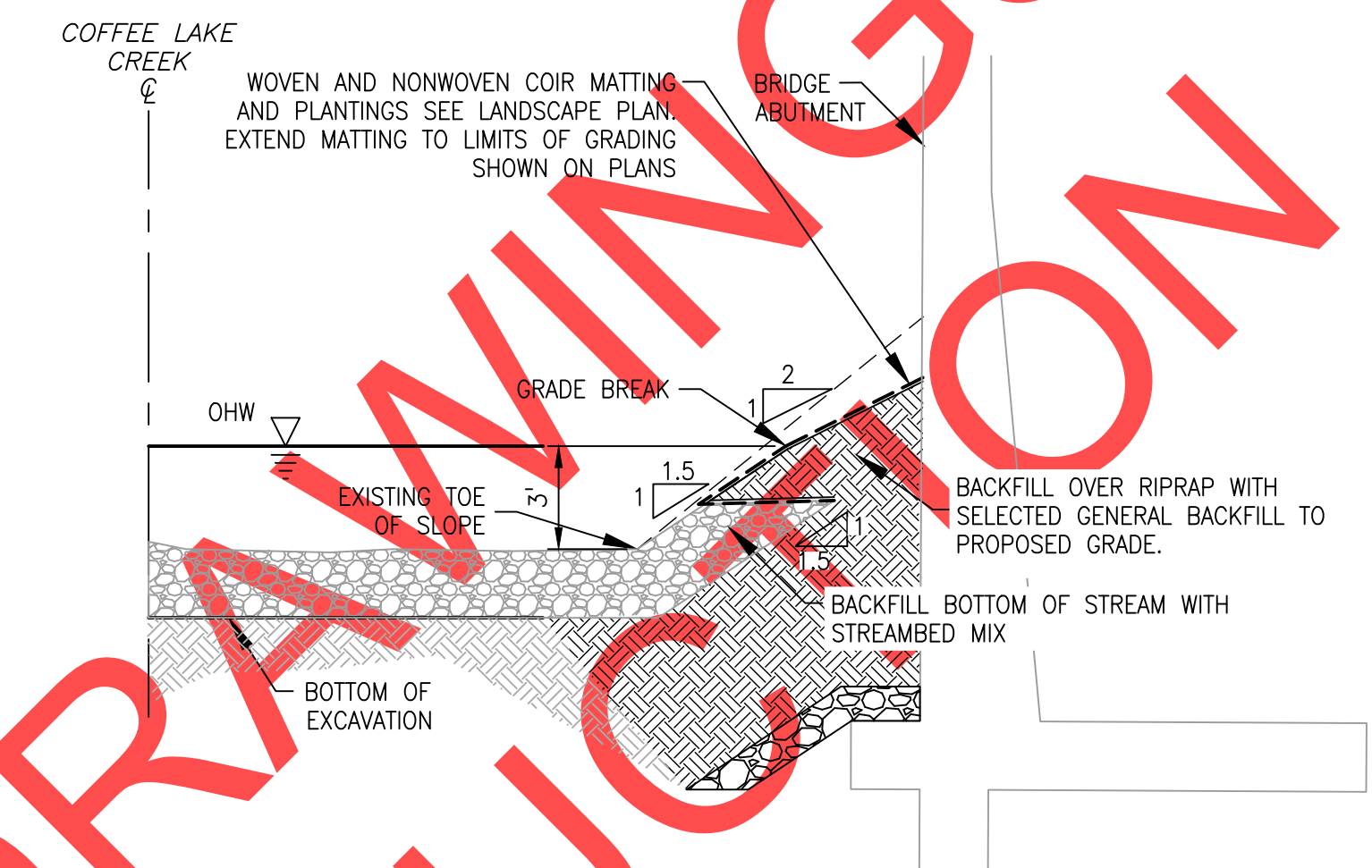
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 SC01
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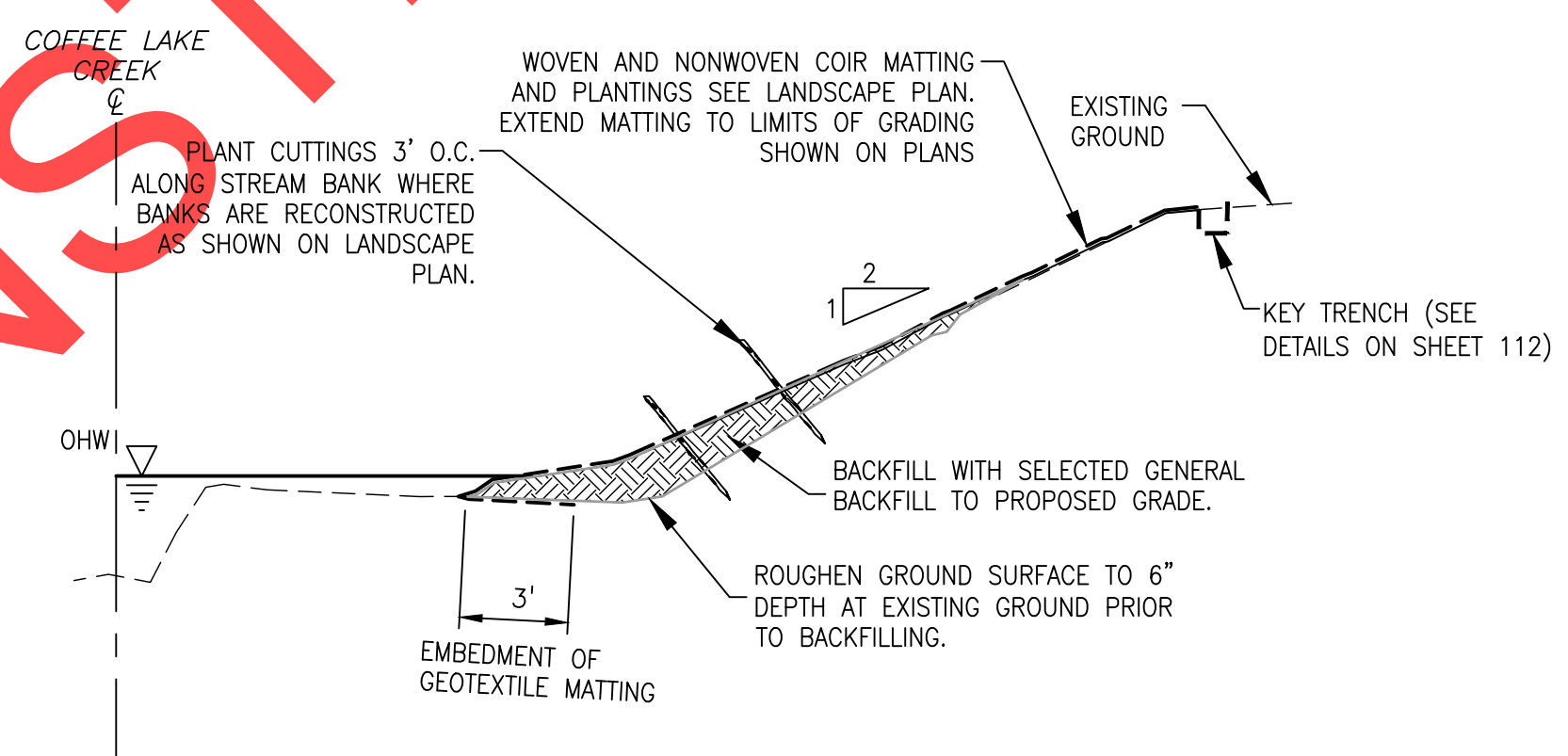
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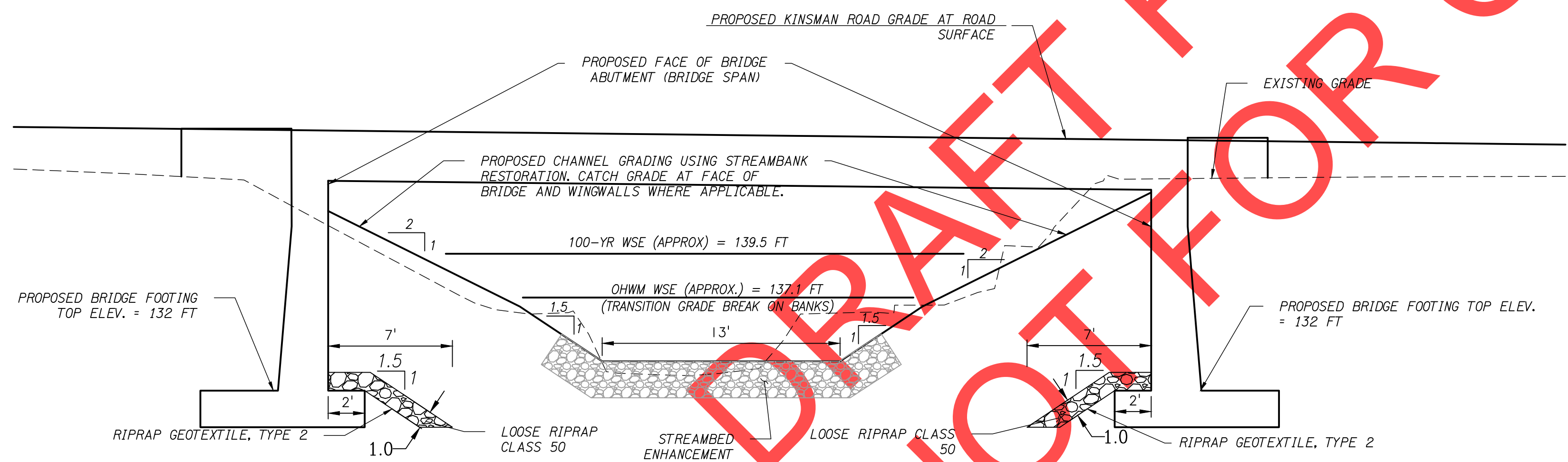
KINSMAN ROAD BRIDGE PLAN



STREAM BANK RESTORATION DETAIL SECTION B-B
N.T.S.



STREAM BANK RESTORATION DETAIL SECTION C-C
N.T.S.



KINSMAN ROAD SECTION A-A
N.T.S.

GENERAL NOTES:
 - RESTORATION SHALL BE IMPLEMENTED WHEREVER GRADING ALONG CREEK OCCURS.
 - ROUGHEN GROUND SURFACE TO 6" DEPTH AT INTERFACE OF COMPACTED SOIL AND NATIVE UNDERLYING SOIL.
 - APPLY SEED BEFORE INSTALLING MATTING.
 - NONWOVEN COIR MATTING SHALL BE PLACED DIRECTLY ON FILL, WOVEN COIR MATTING SHALL BE PLACED ON TOP OF NONWOVEN MATTING. SEE COIR FABRIC AND STAKES DETAIL ON SHEET 112.

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SW 5TH ST TO SW KINSMAN RD EXTENSION
 KINSMAN RD BRIDGE - SCOUR PROTECTION

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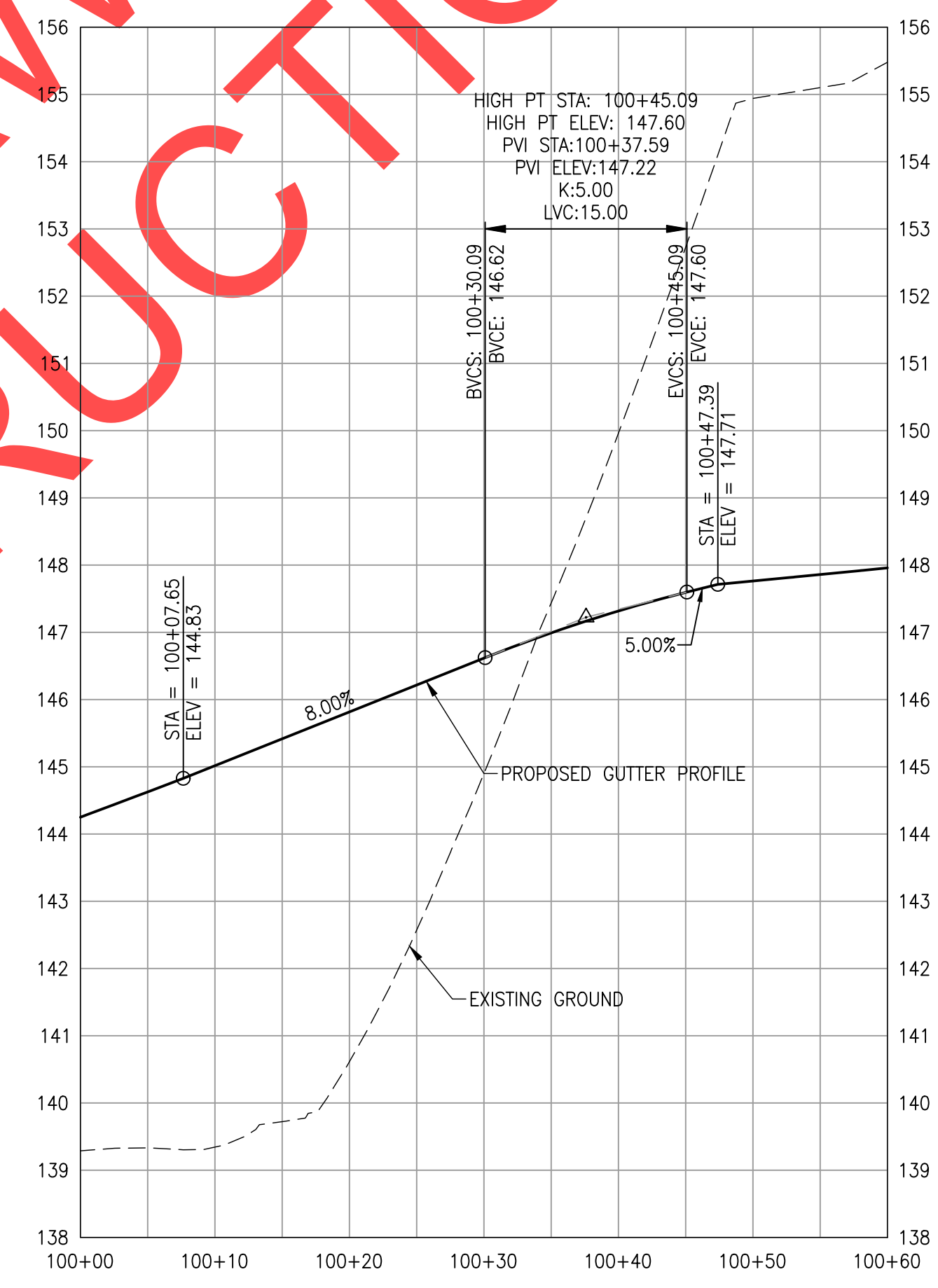
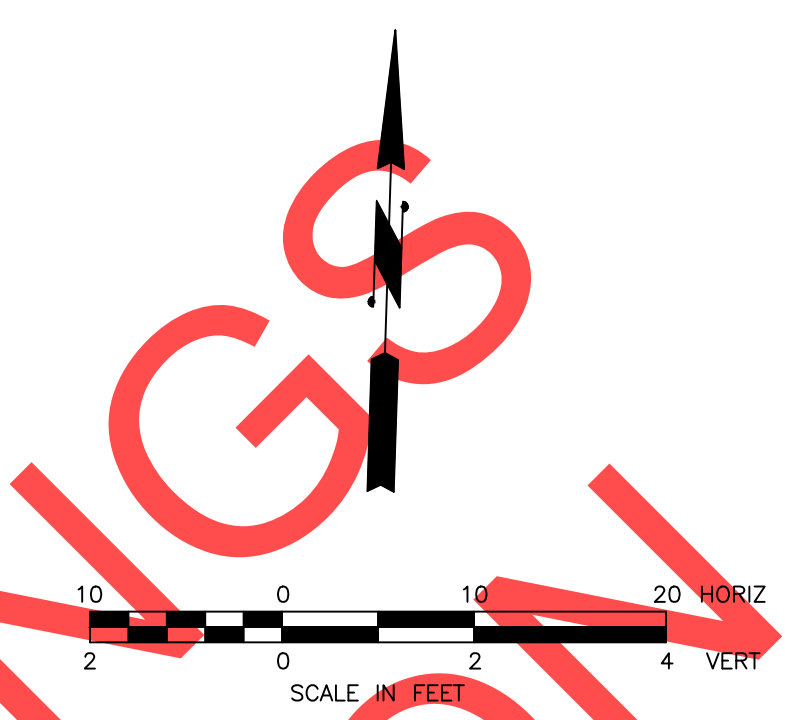
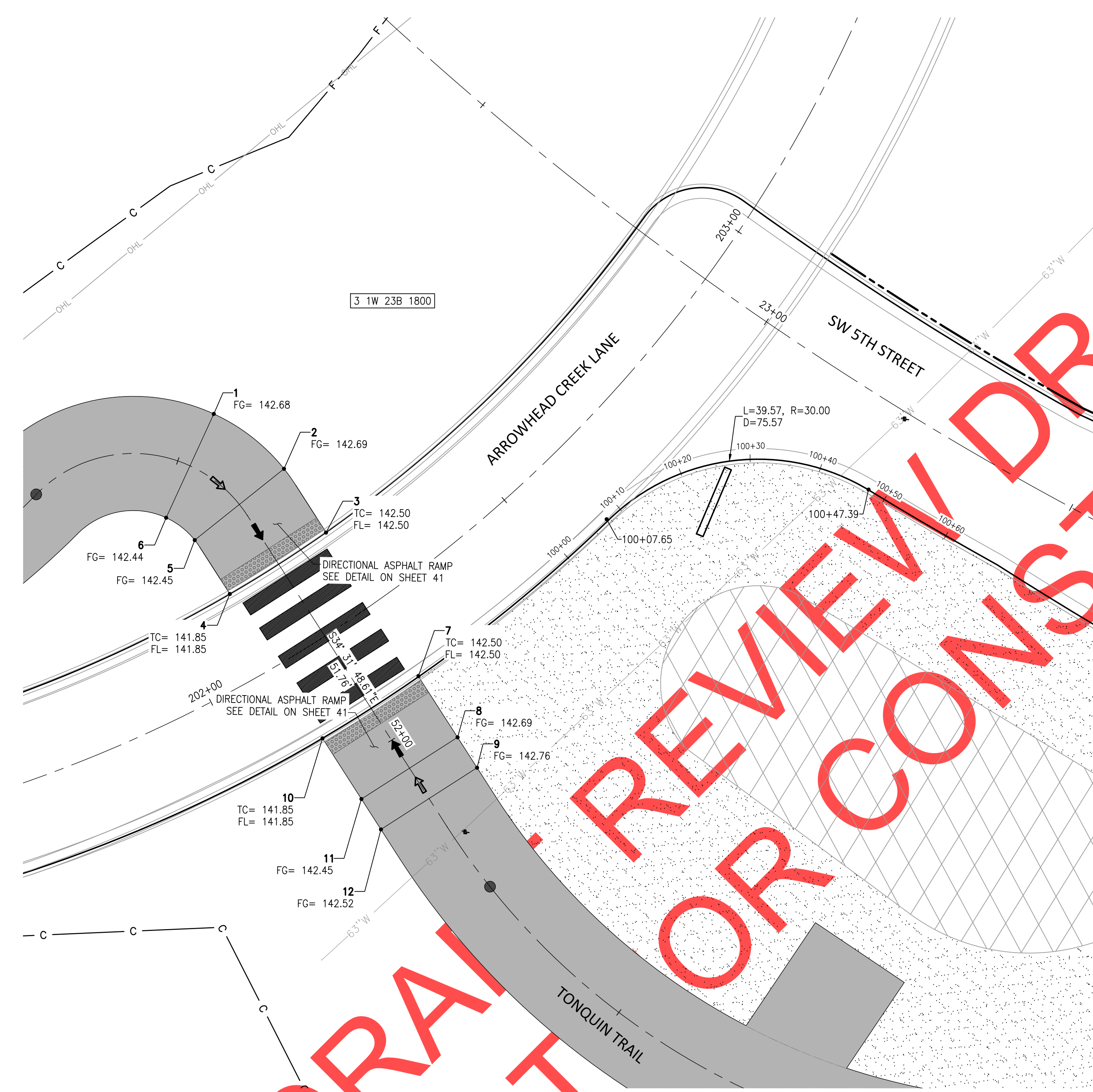


Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/SL
Drawn By: SL
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
INTERSECTION GRADING

CIP# 4196
PROJECT# 2017-02-001
CRO1
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NORTHING & EASTING		
POINT #	NORTHING	EASTING
1	603621.34	7615992.74
2	603613.97	7616002.81
3	603605.23	7616008.97
4	603596.21	7615995.79
5	603603.59	7615990.64
6	603606.60	7615986.53
7	603585.55	7616022.56
8	603577.17	7616028.31
9	603573.00	7616031.18
10	603576.42	7616009.40
11	603568.11	7616015.13
12	603563.94	7616018.00



S CURB RETURN SW 5TH STREET AND ARROWHEAD CREEK LANE - PROFILE

- LEGEND**
- ⇒ 2.00% MAX SLOPE
 - ➔ 8.33% MAX SLOPE
 - TC= TOP OF CURB
 - FG= FINISH GRADE
 - FL= FLOW LINE

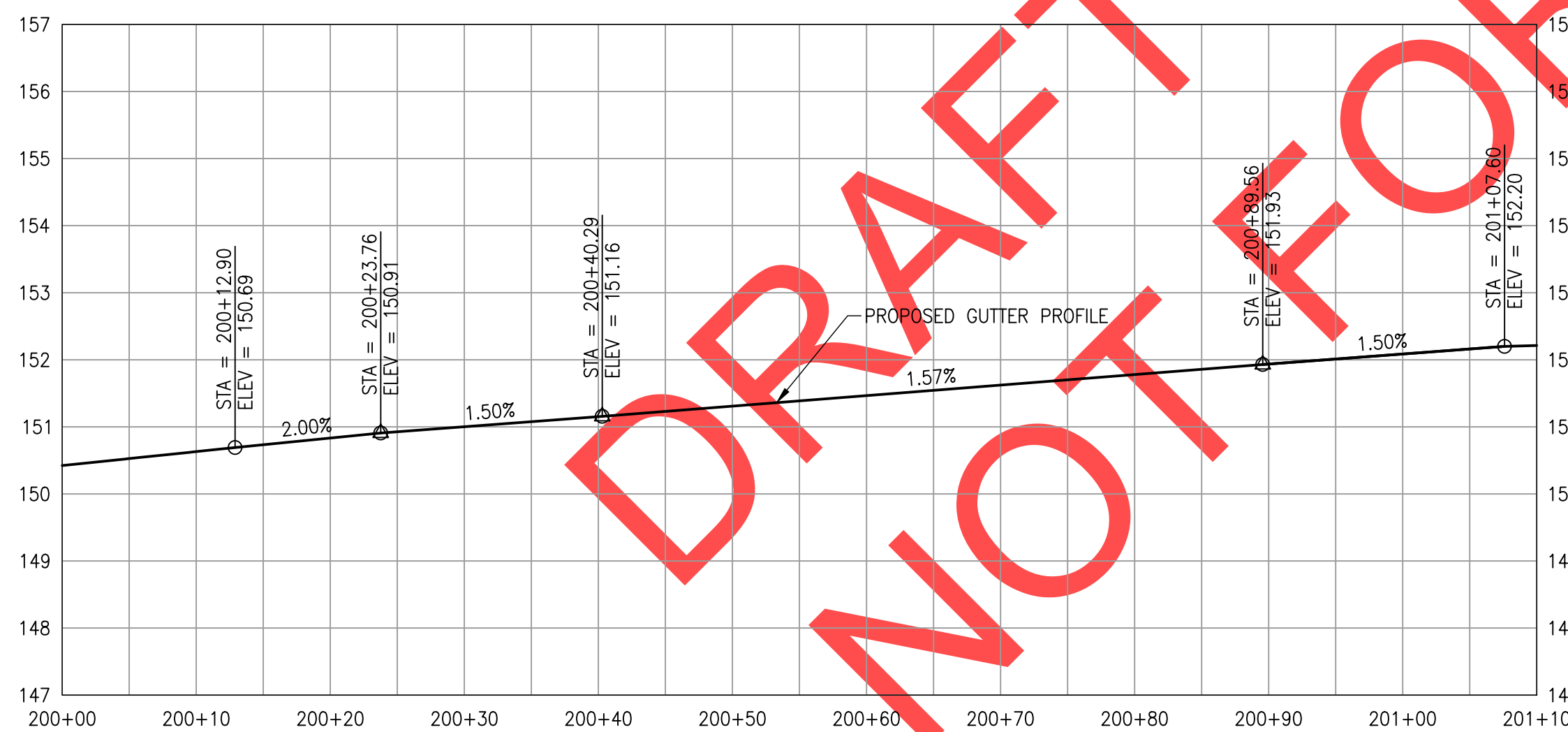
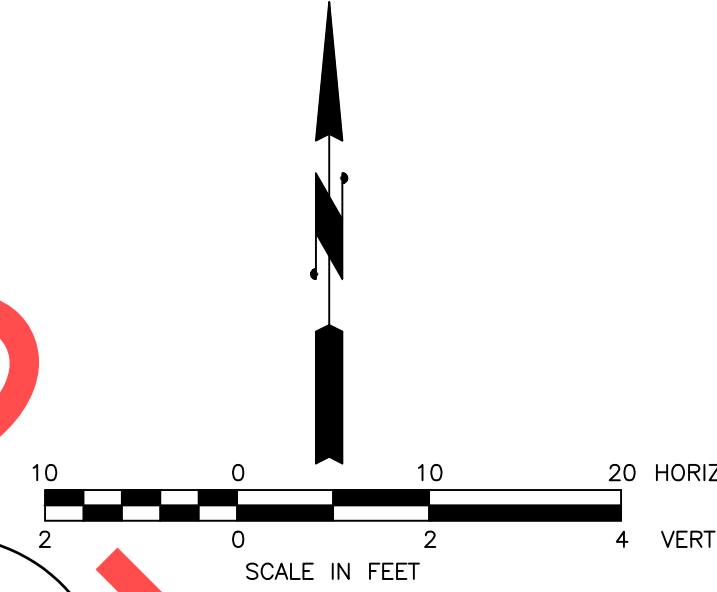
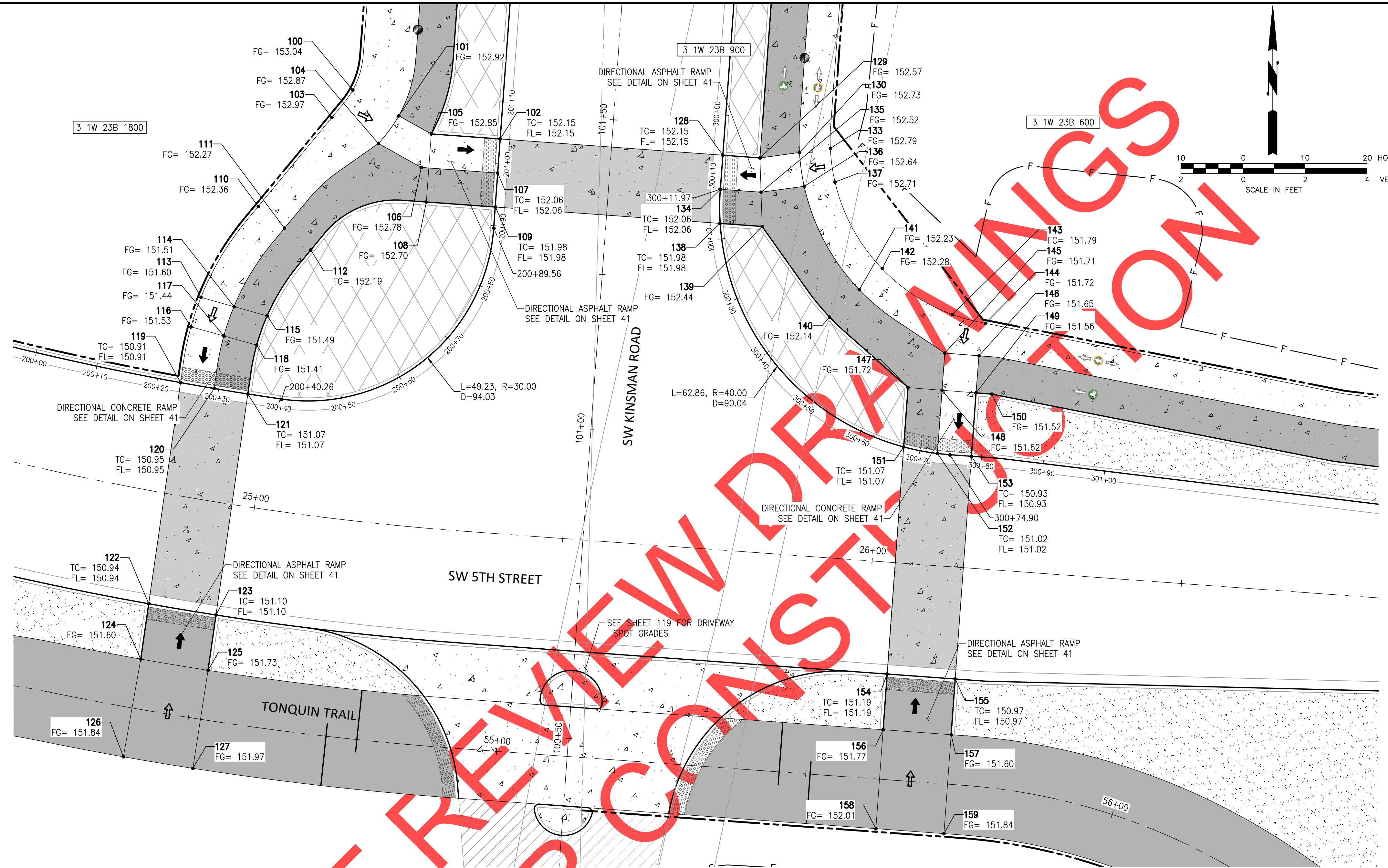


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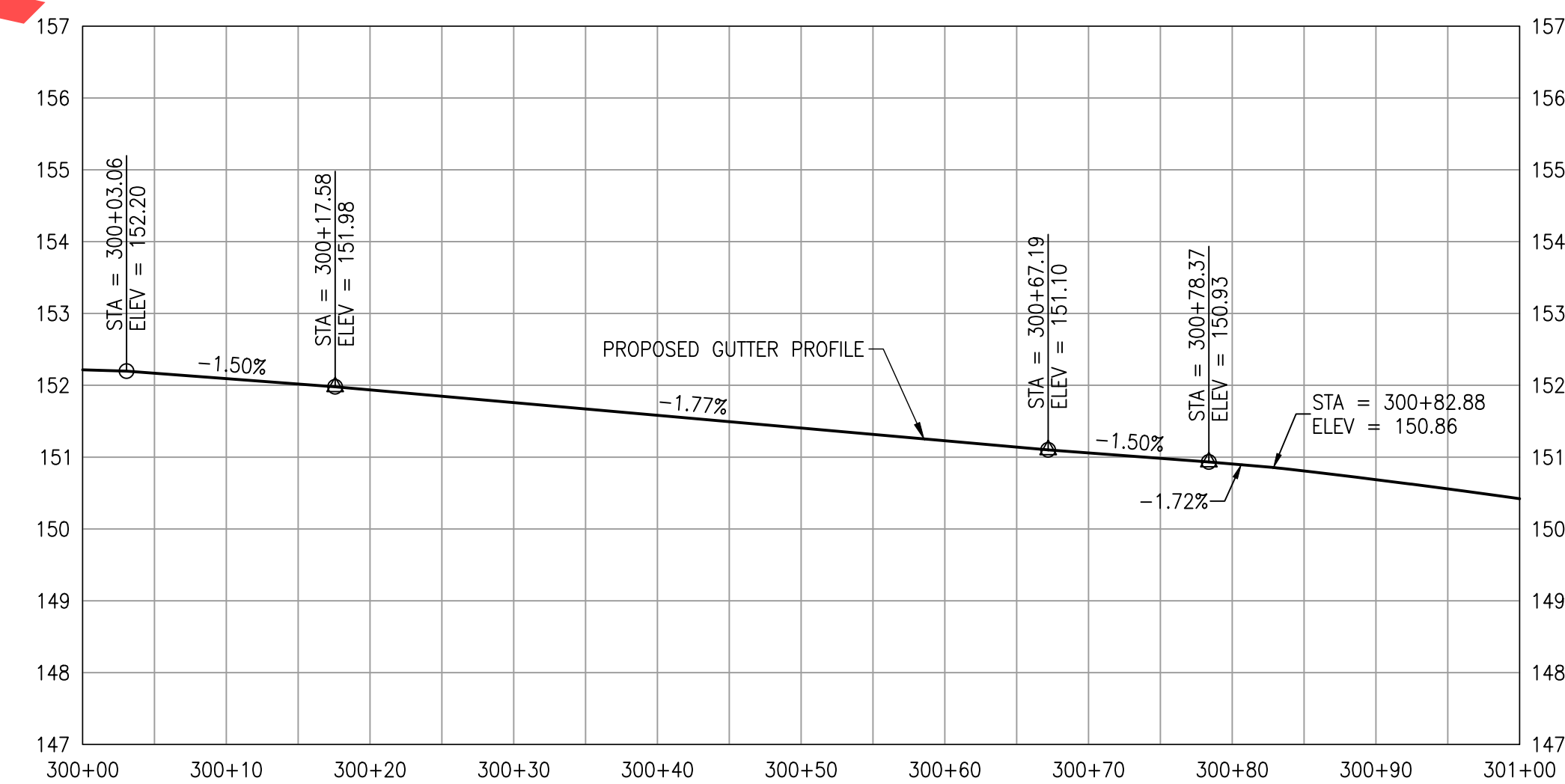
DRAWING NOT FOR CONSTRUCTION

NORTHING & EASTING		
POINT #	NORTHING	EASTING
100	603634.63	7616271.52
101	603630.48	7616278.94
102	603626.74	7616295.28
103	603630.21	7616268.15
104	603626.02	7616275.64
105	603627.55	7616284.17
106	603622.15	7616282.55
107	603621.25	7616294.88
108	603616.58	7616283.37
109	603615.76	7616294.52
110	603615.86	7616256.27
111	603612.36	7616260.51
112	603608.85	7616264.74
113	603601.20	7616247.05
114	603599.71	7616252.37
115	603598.22	7616257.71
116	603596.46	7616245.43
117	603594.98	7616250.73
118	603593.50	7616256.03
119	603587.46	7616243.74
120	603586.51	7616249.16
121	603585.63	7616254.59
122	603551.81	7616238.61
123	603550.01	7616249.47
124	603542.88	7616237.32
125	603541.08	7616248.18
126	603527.13	7616234.53
127	603525.26	7616245.73
128	603624.12	7616331.18
129	603623.69	7616337.17
130	603624.56	7616343.55
133	603625.24	7616348.52
134	603618.64	7616330.78
135	603618.16	7616337.34
136	603619.11	7616344.30

NORTHING & EASTING		
POINT #	NORTHING	EASTING
137	603619.79	7616349.28
138	603613.12	7616330.72
139	603612.63	7616337.52
140	603598.02	7616348.38
141	603602.45	7616353.18
142	603605.87	7616356.88
143	603598.44	7616368.18
144	603597.02	7616373.51
145	603592.22	7616366.96
146	603591.78	7616372.48
147	603586.66	7616361.04
148	603586.20	7616366.52
149	603585.80	7616372.01
150	603585.60	7616374.56
151	603577.09	7616360.34
152	603576.03	7616365.78
153	603575.58	7616371.27
154	603540.47	7616357.68
155	603539.67	7616368.65
156	603531.49	7616357.02
157	603530.69	7616367.99
158	603515.54	7616355.86
159	603514.74	7616366.83



NW CURB RETURN 5TH AND KINSMAN - PROFILE



NE CURB RETURN 5TH AND KINSMAN - PROFILE

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REVISIONS

PRELIMINARY

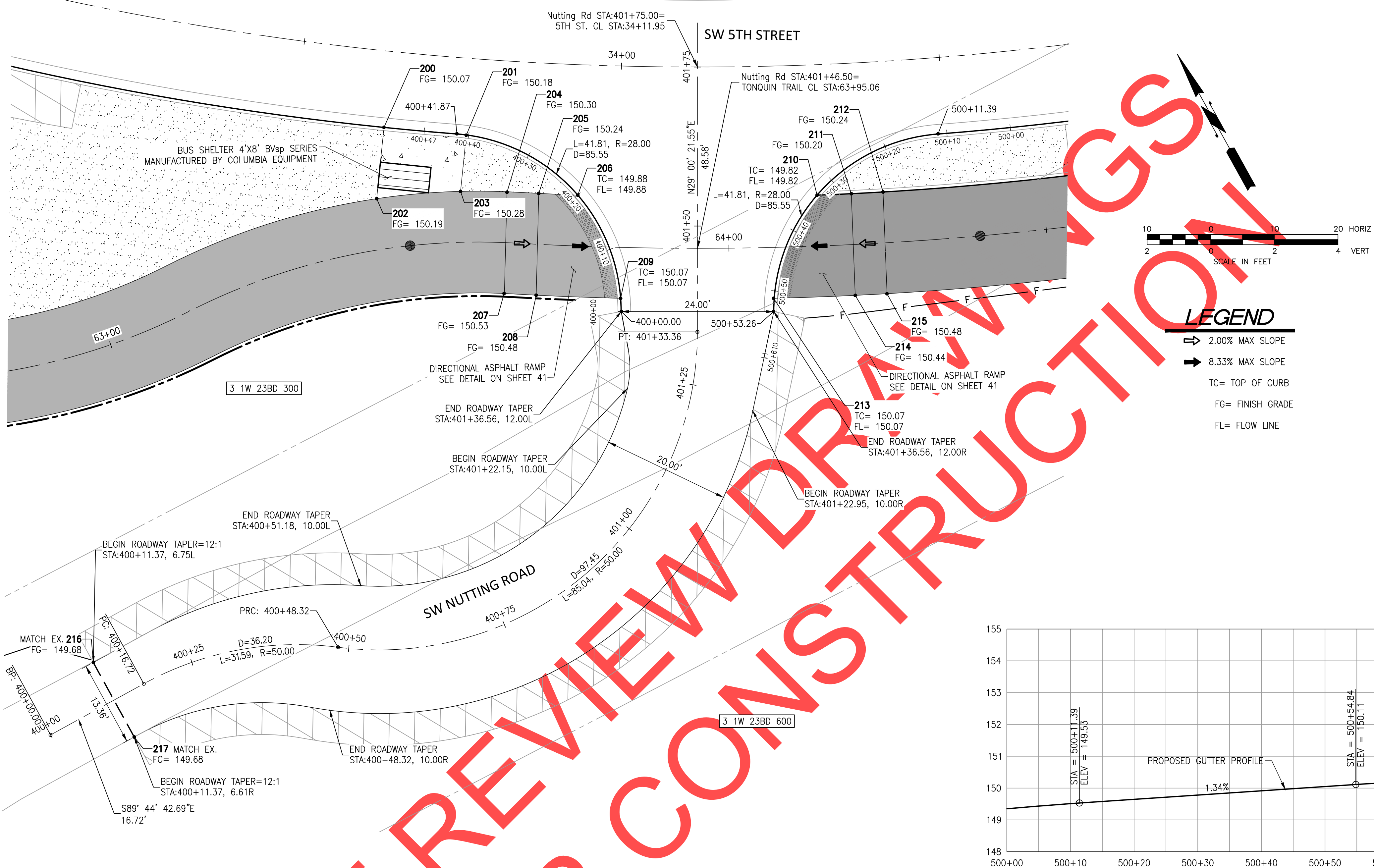
City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960

Date	1 February 2019
Scale	AS SHOWN
Designed By	PH/SL
Drawn By	SL
Checked By	A.HENDY

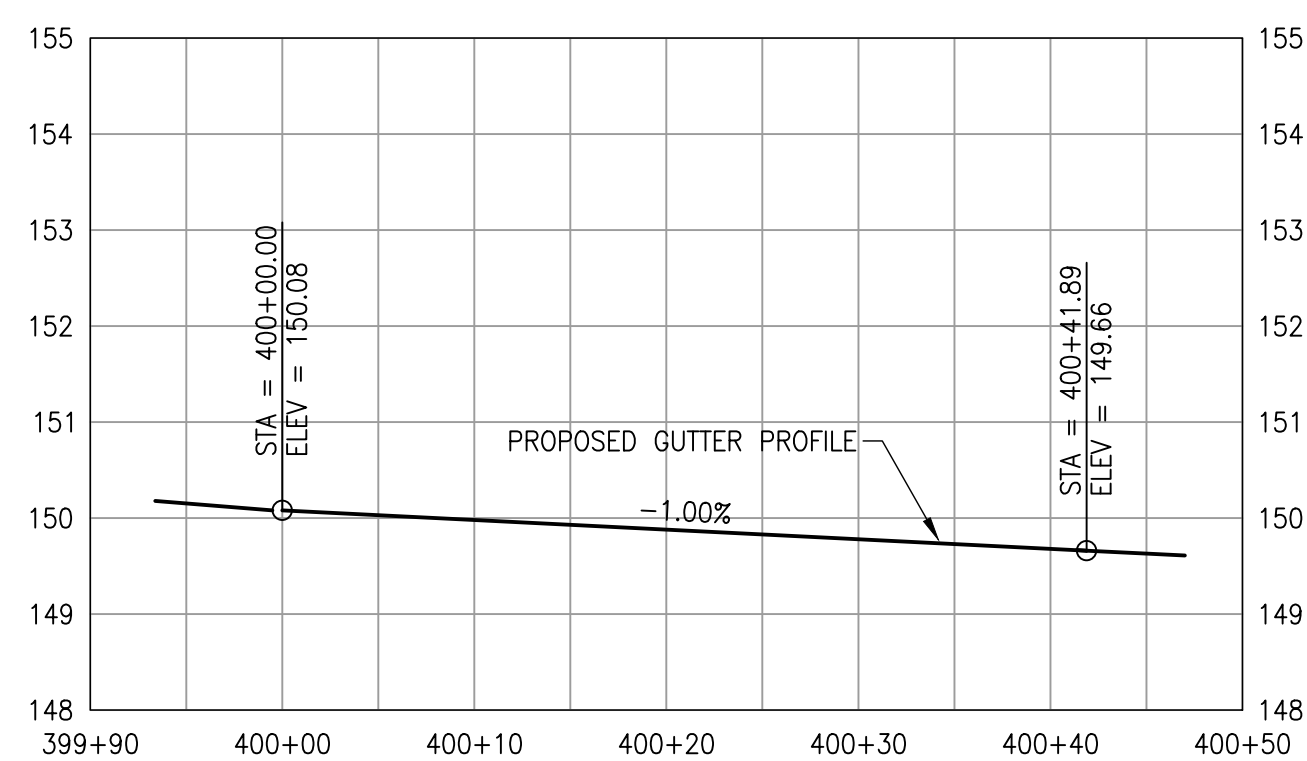
SW 5TH ST TO SW KINSMAN RD EXTENSION
INTERSECTION GRADING

CIP #	4196
PROJECT #	2017-02-001
CRO2	
115 of 211	

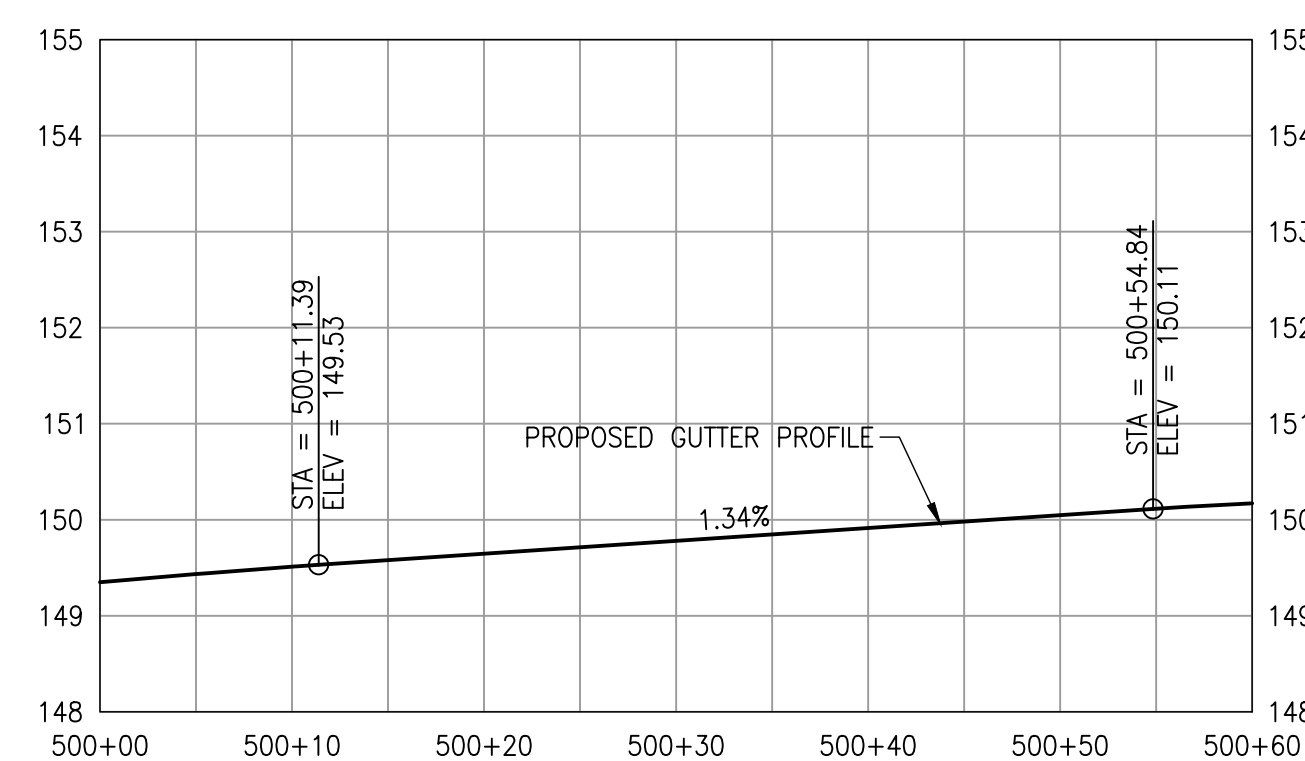
NORTHING & EASTING		
POINT #	NORTHING	EASTING
200	603213.80	7616993.80
201	603206.46	7617004.52
202	603204.56	7616987.38
203	603199.17	7616999.46
204	603195.51	7617005.78
205	603192.93	7617010.06
206	603189.72	7617015.29
207	603181.81	7616997.66
208	603179.13	7617001.95
209	603172.27	7617013.32
210	603171.48	7617048.19
211	603169.07	7617053.01
212	603166.89	7617057.50
213	603160.62	7617034.35
214	603154.79	7617045.79
215	603152.60	7617050.29
216	603162.38	7616913.08
217	603149.02	7616913.02



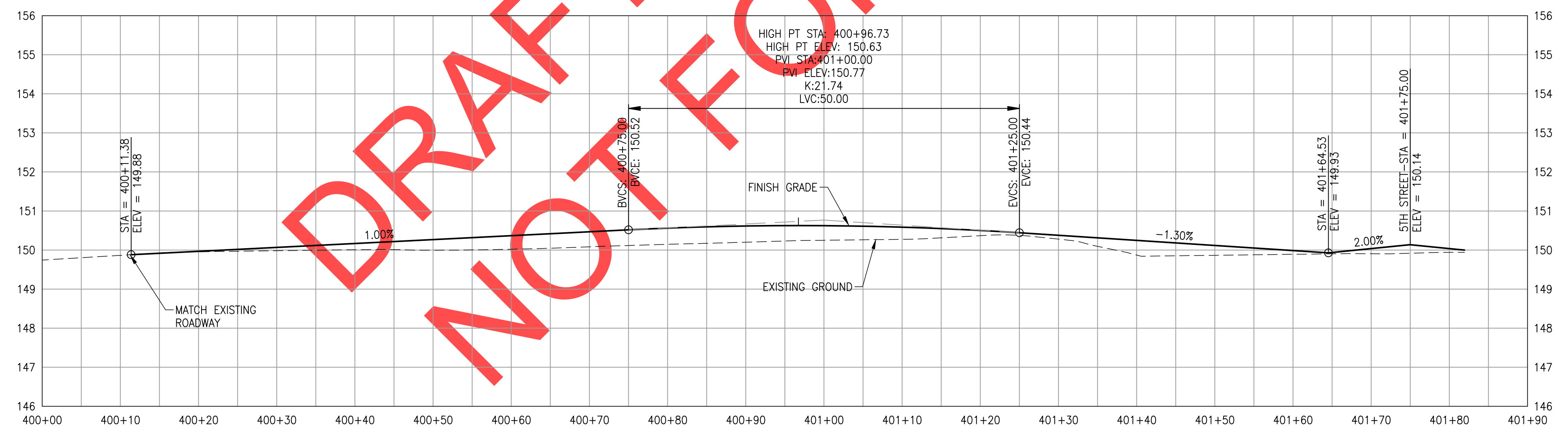
LEGEND
 ⇨ 2.00% MAX SLOPE
 ⇨ 8.33% MAX SLOPE
 TC= TOP OF CURB
 FG= FINISH GRADE
 FL= FLOW LINE



SW CURB RETURN SW 5TH STREET AND SW NUTTING ROAD - PROFILE



SE CURB RETURN SW 5TH STREET AND SW NUTTING ROAD - PROFILE



SW NUTTING ROAD - PROFILE

NO.	DATE	DESCRIPTION

PRELIMINARY

City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



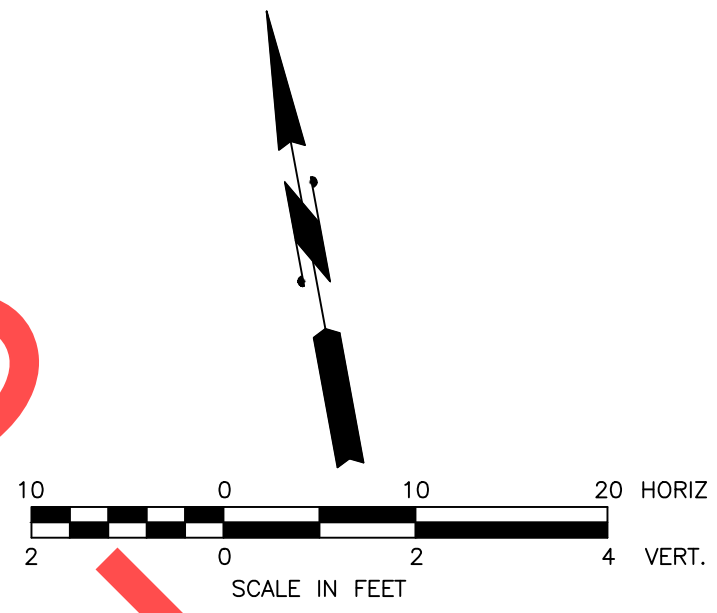
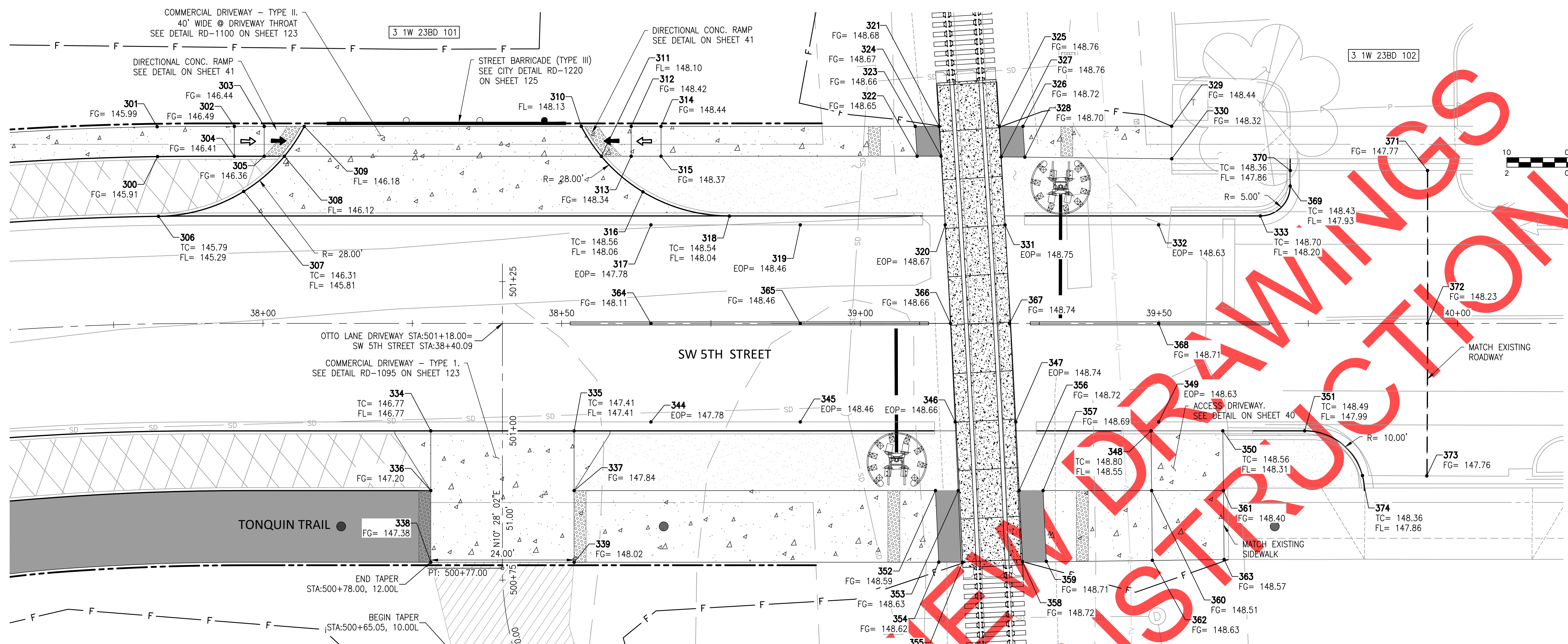
Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: PH/SL
 Drawn By: SL
 Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION INTERSECTION GRADING



CIP # 4196
 PROJECT # 2017-02-001
 CRO3
 116 of 211

REVIEW SET - NOT FOR CONSTRUCTION



LEGEND

- ➔ 2.00% MAX SLOPE
- ➔ 8.33% MAX SLOPE
- TC= TOP OF CURB
- FG= FINISH GRADE
- FL= FLOW LINE
- EOP= EDGE OF PAVEMENT

NORTHING & EASTING

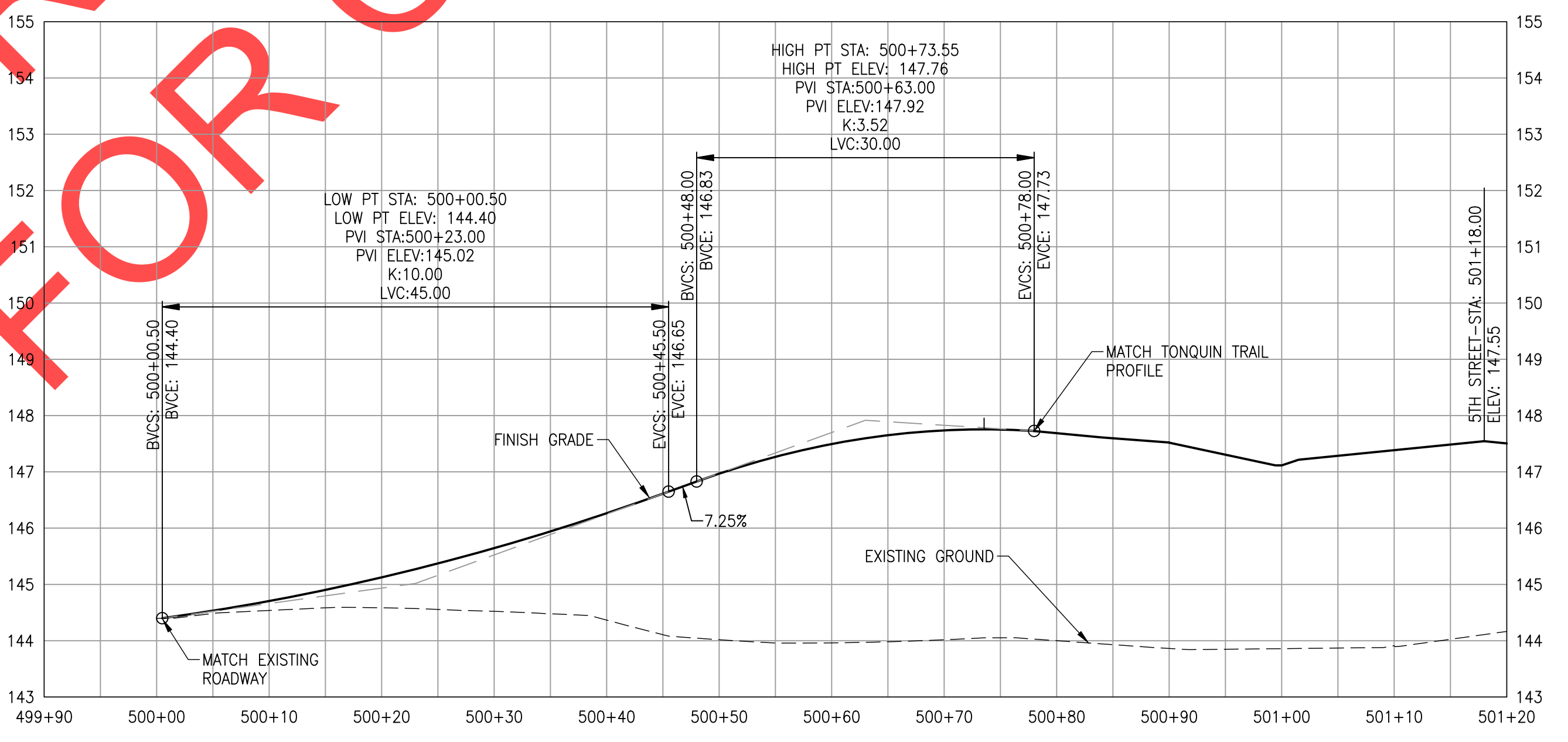
POINT #	NORTHING	EASTING
300	603157.87	7617406.47
301	603162.80	7617407.31
302	603160.51	7617420.03
303	603159.60	7617424.94
304	603155.59	7617419.12
305	603154.68	7617424.04
306	603148.01	7617404.80
307	603149.51	7617419.60
308	603154.07	7617427.36
309	603158.38	7617431.54
310	603149.95	7617477.14
311	603144.43	7617479.53
312	603148.44	7617485.35
313	603143.52	7617484.45
314	603147.53	7617490.27
315	603142.61	7617489.36
316	603137.31	7617485.29
317	603131.61	7617485.61
318	603130.68	7617498.80
319	603127.07	7617510.19
320	603122.66	7617534.06
321	603139.07	7617536.06
322	603134.82	7617531.52
323	603139.80	7617532.12
324	603134.10	7617535.46
325	603137.24	7617545.99
326	603136.53	7617549.85
327	603132.15	7617545.35
328	603131.39	7617549.23
329	603132.03	7617574.34

NORTHING & EASTING

POINT #	NORTHING	EASTING
330	603126.66	7617573.36
331	603120.83	7617543.91
332	603116.17	7617569.19
333	603114.55	7617586.20
334	603104.38	7617443.10
335	603100.02	7617466.70
336	603094.55	7617441.28
337	603090.19	7617464.88
338	603082.75	7617439.10
339	603078.39	7617462.70
340	603049.02	7617466.14
341	603038.29	7617449.27
342	603006.36	7617455.29
343	603005.89	7617475.28
344	603099.16	7617479.61
345	603094.62	7617504.20
346	603089.91	7617529.70
347	603088.06	7617539.68
348	603082.48	7617561.67
349	603083.72	7617563.20
350	603080.29	7617573.48
351	603077.81	7617586.95
352	603079.20	7617524.36
353	603078.50	7617528.12
354	603067.30	7617522.72
355	603066.57	7617526.66
356	603076.65	7617538.14
357	603075.92	7617542.08
358	603064.85	7617536.52
359	603064.17	7617540.46

NORTHING & EASTING

POINT #	NORTHING	EASTING
360	603072.62	7617559.95
361	603070.44	7617571.77
362	603061.12	7617557.95
363	603059.06	7617569.79
364	603115.39	7617482.61
365	603110.84	7617507.19
366	603106.28	7617531.92
367	603104.48	7617541.66
368	603099.94	7617566.20
369	603118.56	7617592.03
370	603121.12	7617592.52
371	603116.94	7617615.11
372	603091.76	7617610.46
373	603066.67	7617605.69
374	603068.68	7617595.11



SW OTTO LANE - PROFILE

REVIEW SET - NOT FOR CONSTRUCTION

REVISIONS

PRELIMINARY

City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960

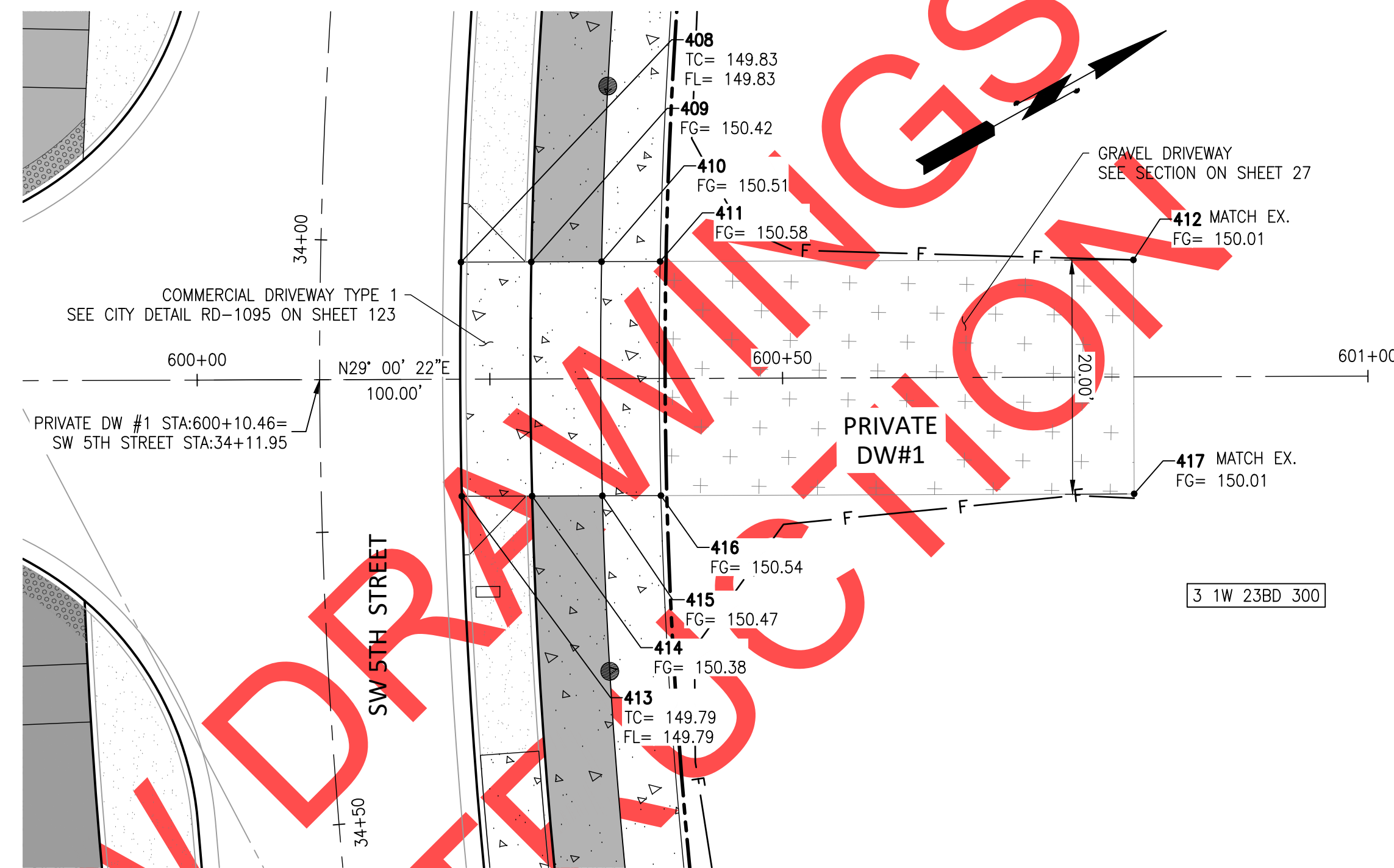
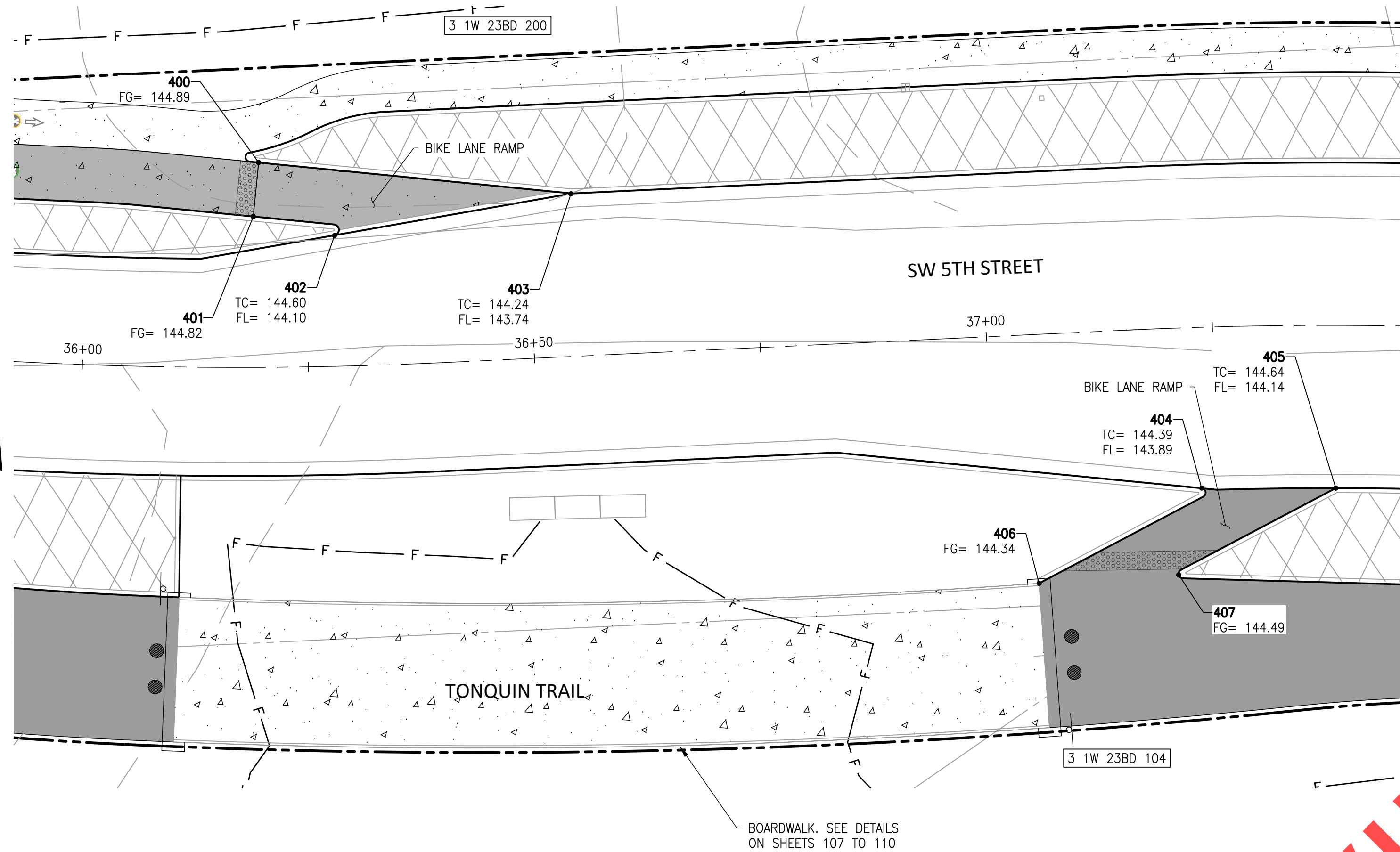
Date: 1 February 2019
Scale: AS SHOWN
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Drawn By: SL
Checked By: A.HENDY

**SW 5TH ST TO SW KINSMAN RD EXTENSION
SPOT GRADES**

OTAK

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700 Washington St., Suite 300
Vancouver, WA 98660
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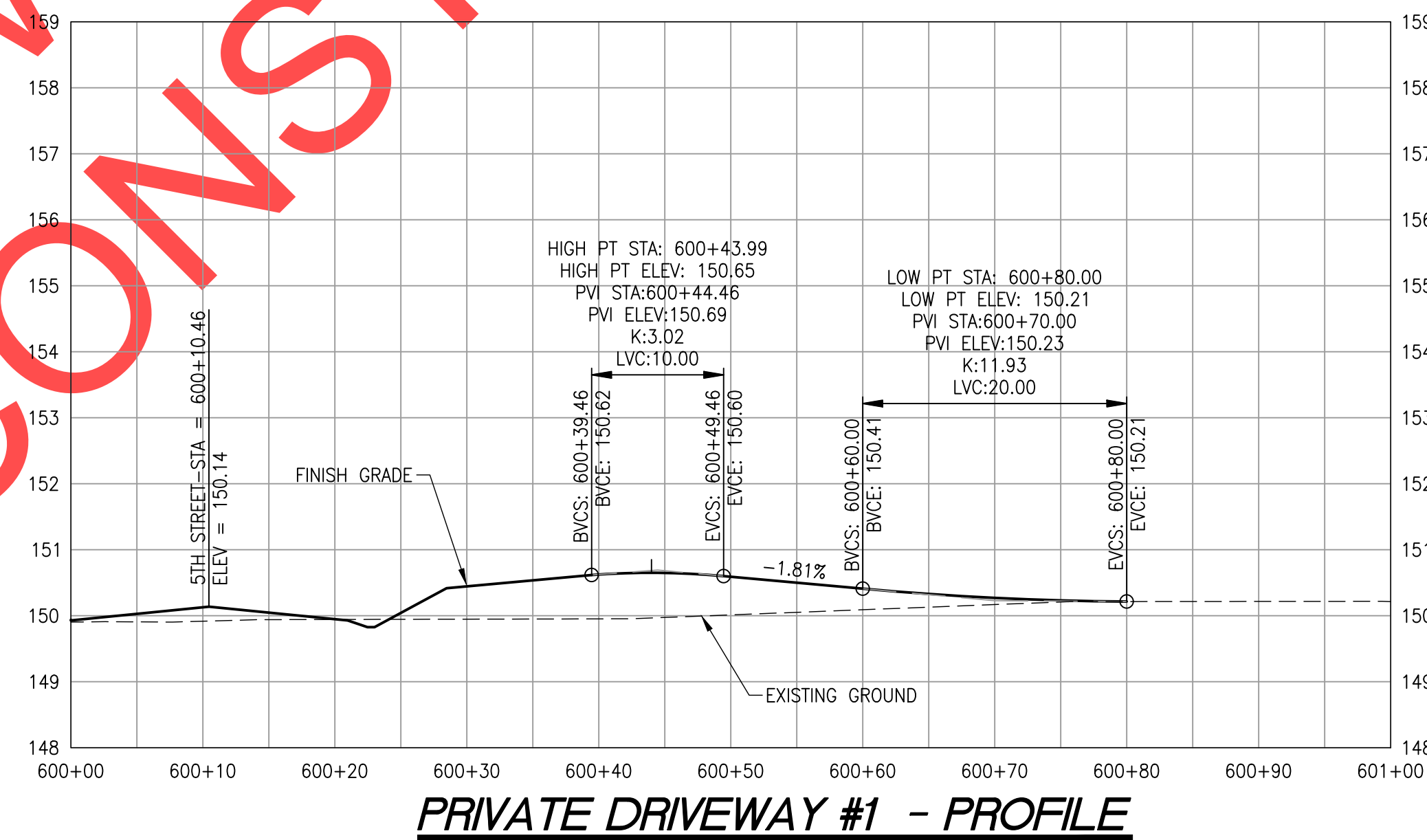
CIP# 4196
PROJECT# 2017-02-001
SG01
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NORTHING & EASTING		
POINT #	NORTHING	EASTING
400	603162.36	7617240.61
401	603156.45	7617239.58
402	603153.69	7617248.38
403	603156.36	7617274.78
404	603118.77	7617341.89
405	603117.67	7617356.68
406	603109.58	7617323.20
407	603109.38	7617338.66
408	603213.65	7617038.64
409	603218.90	7617041.55
410	603224.15	7617044.46
411	603228.52	7617046.88
412	603263.88	7617066.48
413	603203.95	7617056.13
414	603209.20	7617059.04
415	603214.45	7617061.95
416	603218.83	7617064.37
417	603254.18	7617083.97

LEGEND

- TC= TOP OF CURB
- FG= FINISH GRADE
- FL= FLOW LINE



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REVISIONS

PRELIMINARY

City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



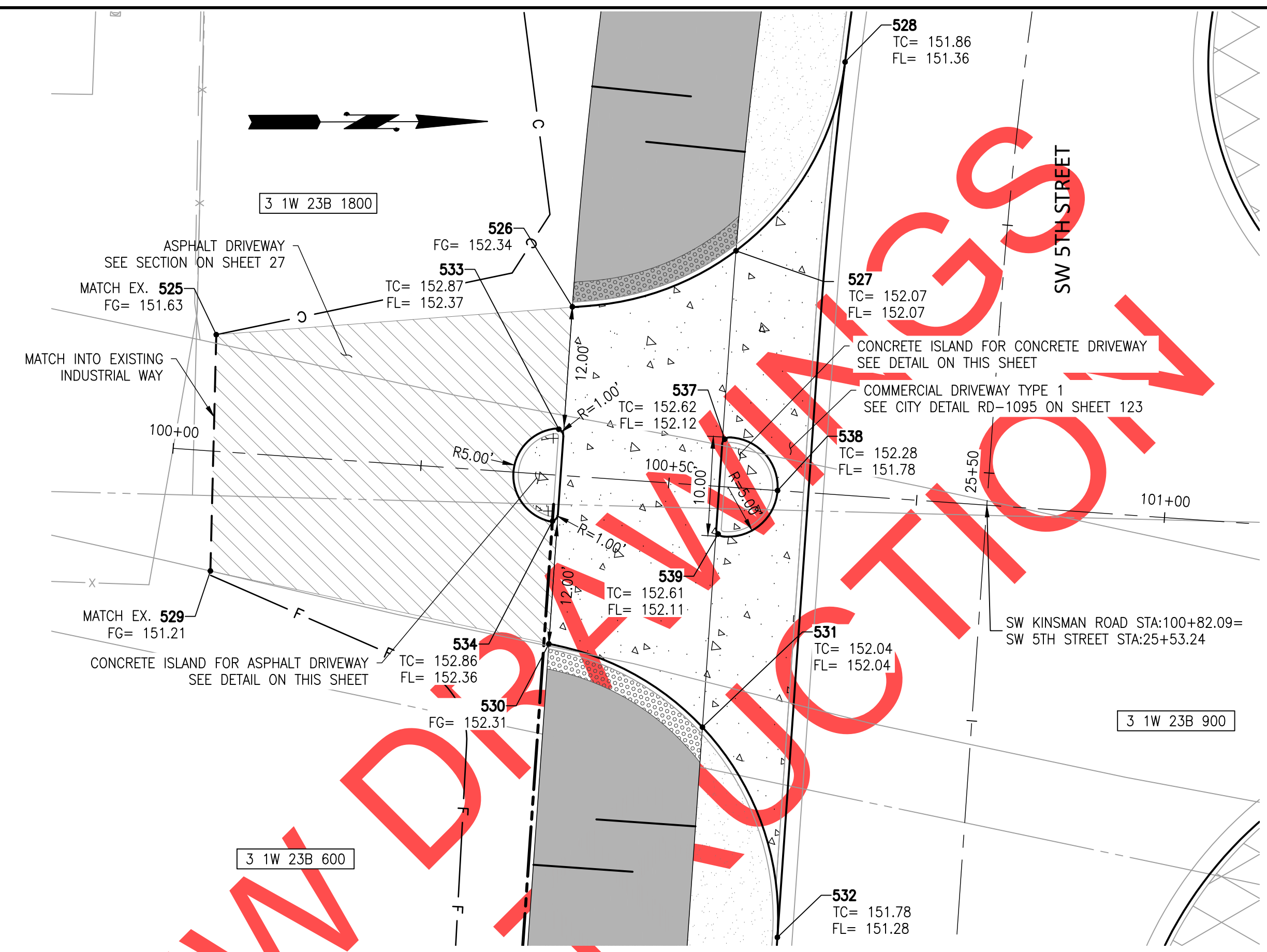
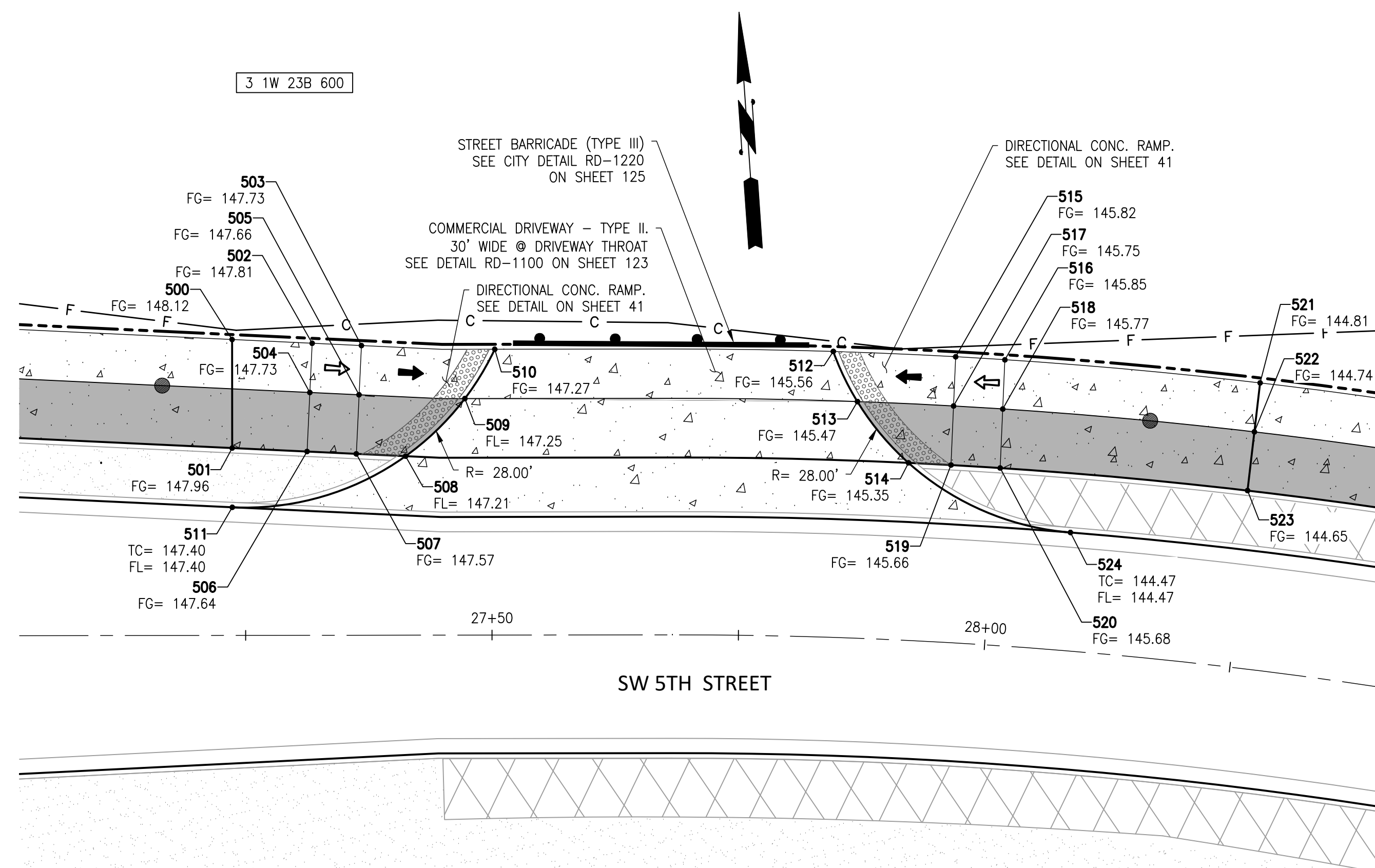
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SW 5TH ST TO SW KINSMAN RD EXTENSION
 SPOT GRADES



CIP # 4196
 PROJECT # 2017-02-001
 SG02
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NORTHING & EASTING		
POINT #	NORTHING	EASTING
500	603579.65	7616480.76
501	603568.67	7616479.96
502	603578.67	7616488.84
503	603578.07	7616493.81
504	603573.71	7616488.23
505	603573.11	7616493.20
506	603567.76	7616487.51
507	603567.15	7616492.47
508	603566.55	7616497.44
509	603571.93	7616503.88
510	603576.70	7616507.27
511	603562.68	7616479.53
512	603573.94	7616541.52
513	603568.69	7616543.58
514	603562.10	7616548.29
515	603572.48	7616553.86
516	603571.80	7616558.81
517	603567.52	7616553.27
518	603566.84	7616558.23
519	603561.56	7616552.57
520	603560.89	7616557.53
521	603567.56	7616584.47
522	603562.64	7616583.52
523	603556.75	7616582.39
524	603553.84	7616564.15

NORTHING & EASTING		
POINT #	NORTHING	EASTING
525	603484.60	7616291.24
526	603520.44	7616288.54
527	603536.92	7616282.95
528	603547.96	7616263.99
529	603483.93	7616315.01
530	603517.97	7616322.45
531	603533.40	7616330.87
532	603540.88	7616352.03
533	603519.04	7616300.85
534	603518.37	7616310.10
537	603535.73	7616301.91
538	603541.03	7616307.08
539	603535.03	7616311.44

LEGEND

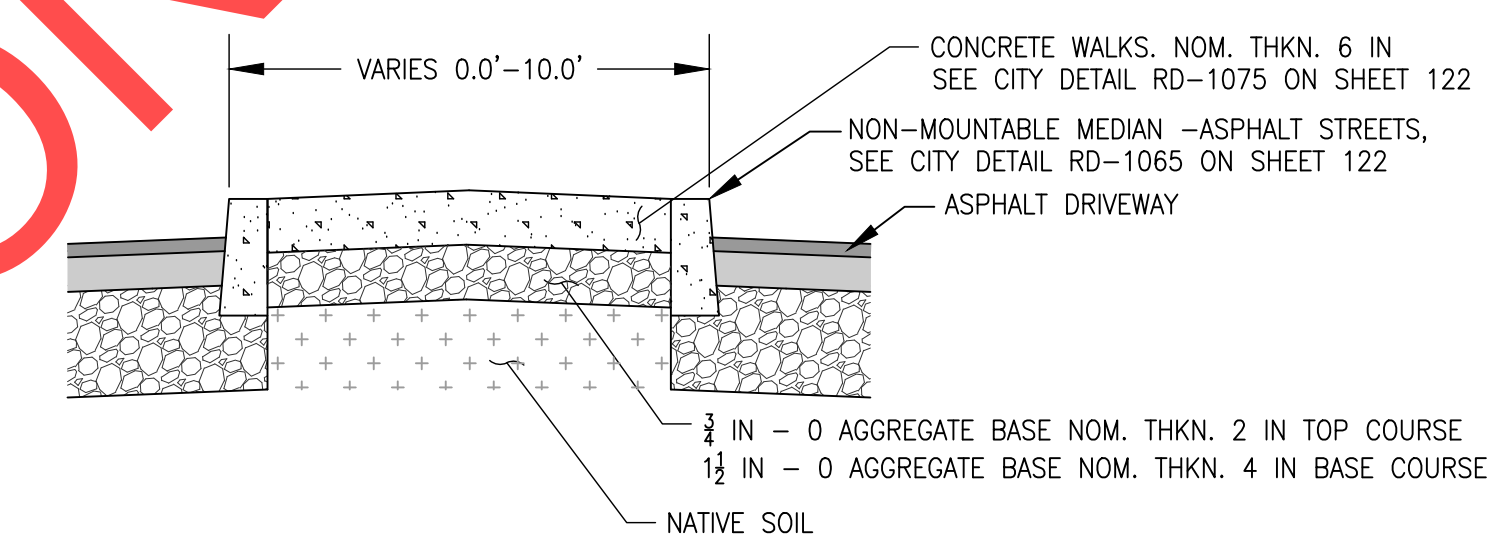
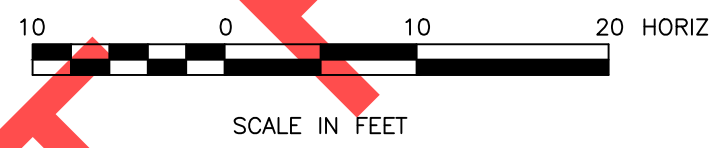
→ 2.00% MAX SLOPE

→ 8.33% MAX SLOPE

TC= TOP OF CURB

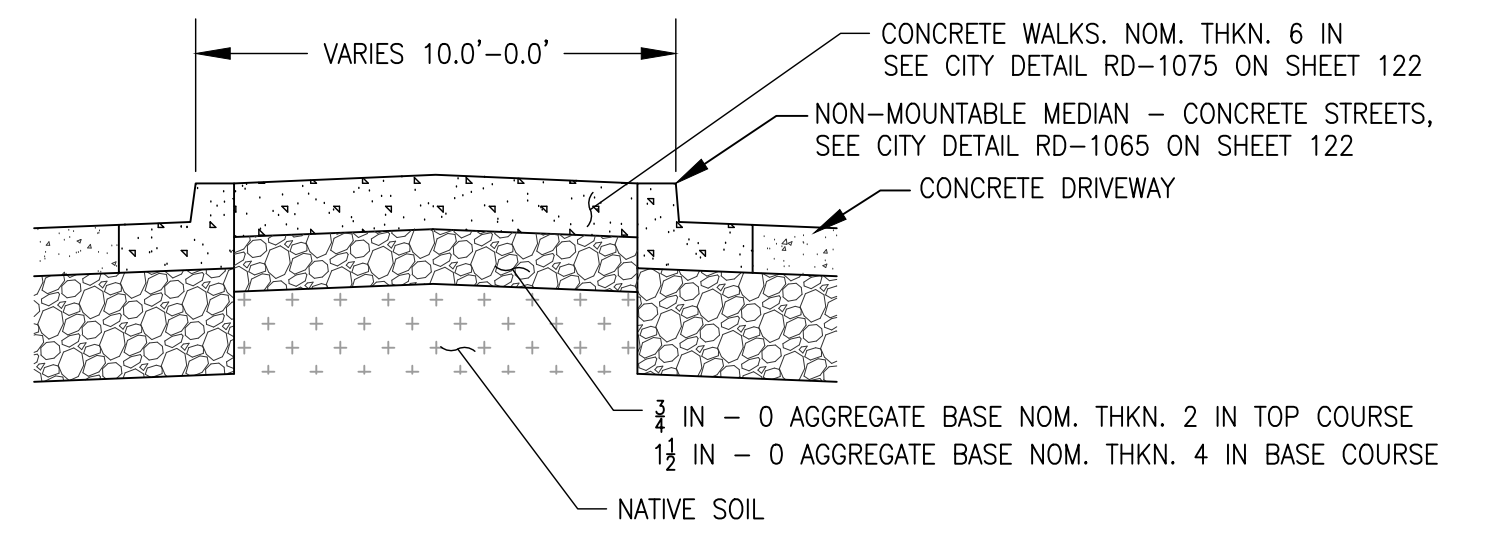
FG= FINISH GRADE

FL= FLOW LINE



CONCRETE ISLAND FOR ASPHALT DRIVEWAY DETAIL

NTS



CONCRETE ISLAND FOR CONCRETE DRIVEWAY DETAIL

NTS

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NO.	REVISIONS

PRELIMINARY

City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/SL
Drawn By: SL
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
SPOT GRADES

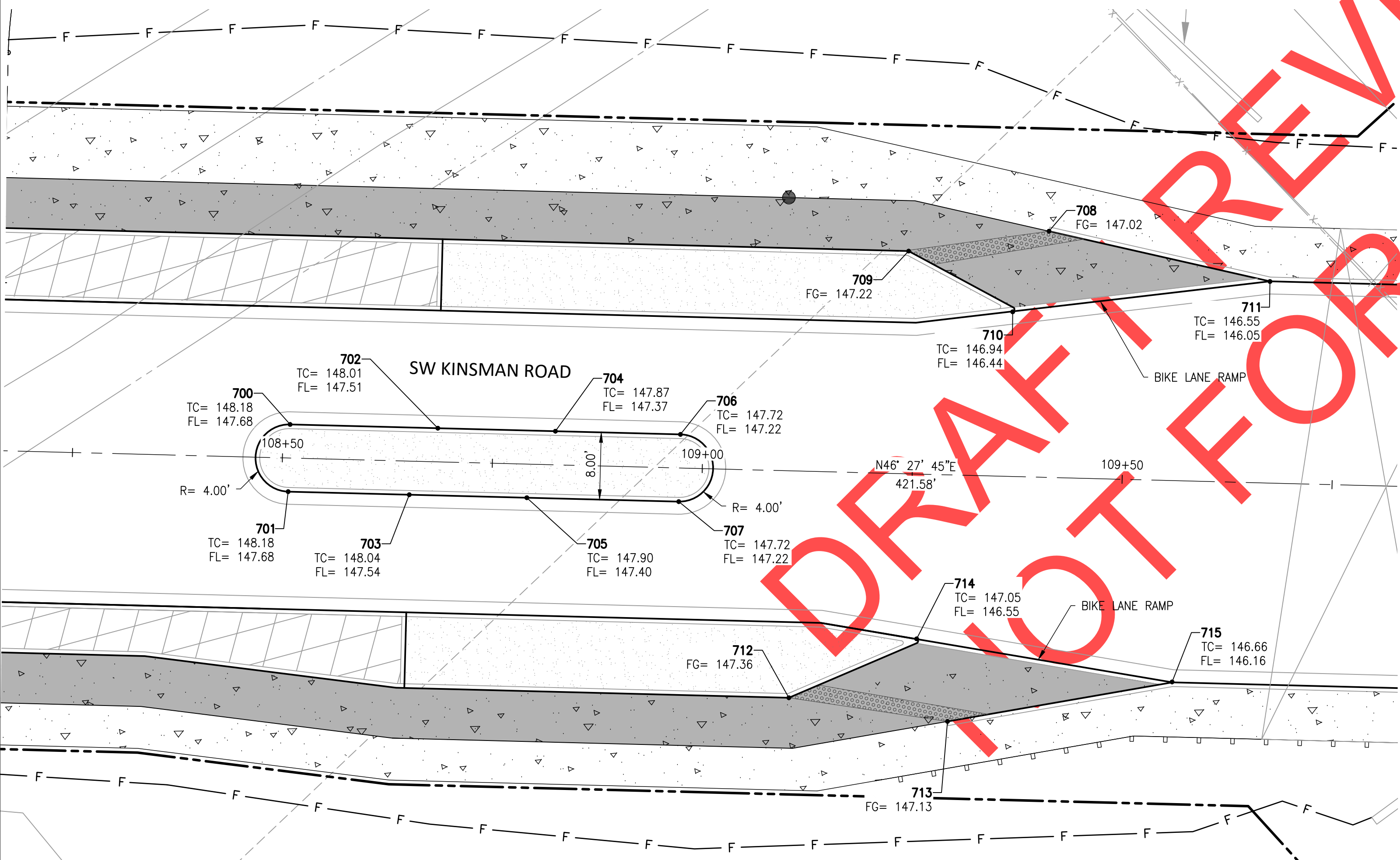
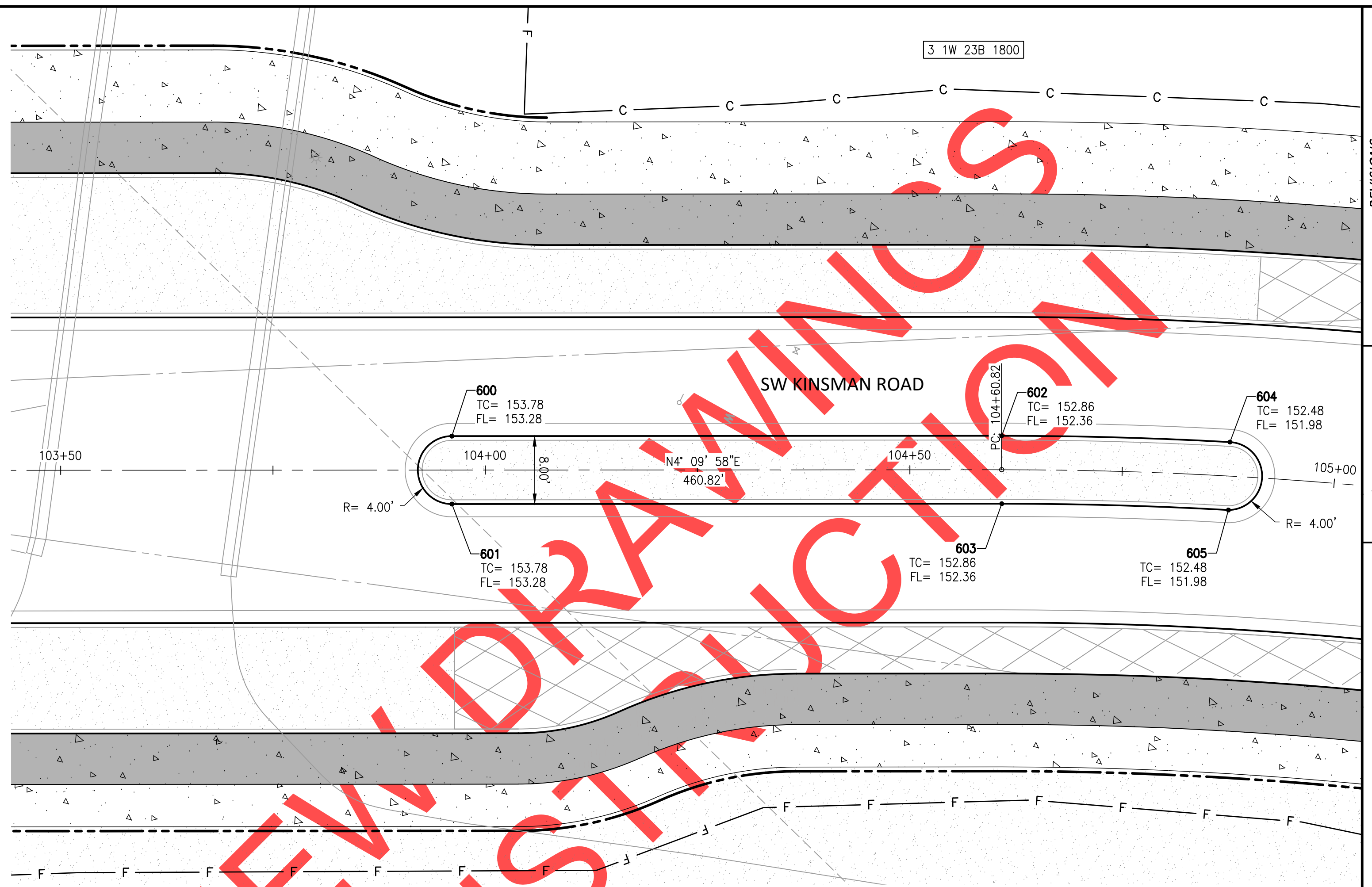


CIP# 4196
PROJECT# 2017-02-001
SG03
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REVIEW SET - NOT FOR CONSTRUCTION

NORTHING & EASTING		
POINT #	NORTHING	EASTING
600	603875.54	7616327.44
601	603874.95	7616335.42
602	603940.11	7616332.14
603	603939.53	7616340.12
604	603966.86	7616334.85
605	603966.10	7616342.82

NORTHING & EASTING		
POINT #	NORTHING	EASTING
700	604279.66	7616508.45
701	604273.83	7616513.94
702	604291.77	7616521.20
703	604283.77	7616524.39
704	604301.42	7616531.35
705	604293.41	7616534.54
706	604311.67	7616542.15
707	604305.87	7616547.66
708	604359.79	7616556.07
709	604346.30	7616545.93
710	604349.96	7616559.80
711	604374.16	7616578.91
712	604298.64	7616573.43
713	604310.00	7616588.77
714	604314.35	7616579.23
715	604332.23	7616604.36



NO.	DATE	DESCRIPTION

PRELIMINARY

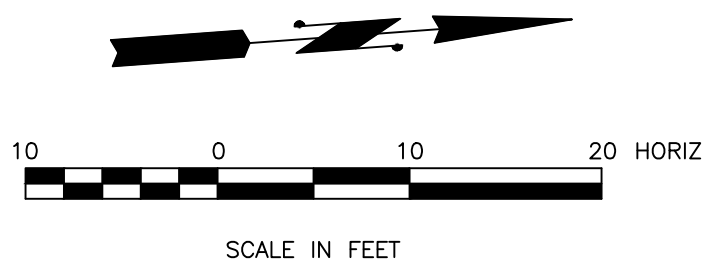
City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: PH/SL
 Drawn By: SL
 Checked By: A.HENDY

**SW 5TH ST TO SW KINSMAN RD EXTENSION
 SPOT GRADES**

CIP# 4196
 PROJECT# 2017-02-001
 SG04
 120 of 211



LEGEND

- TC= TOP OF CURB
- FG= FINISH GRADE
- FL= FLOW LINE

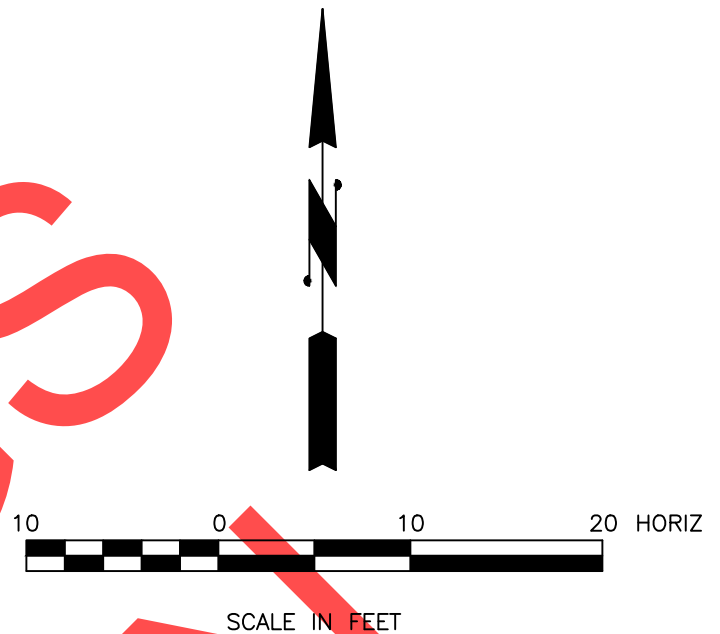
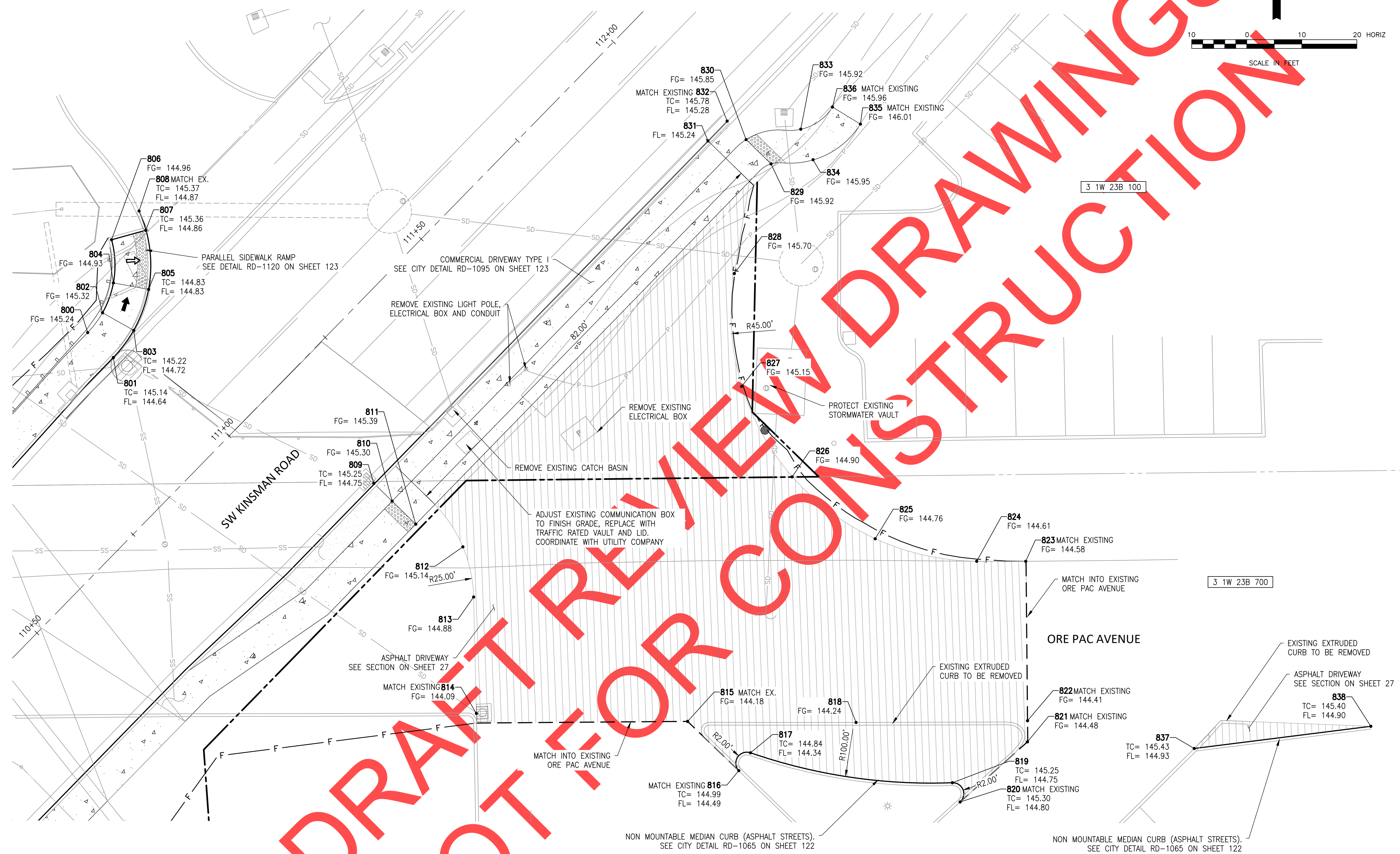


REVIEW SET – NOT FOR CONSTRUCTION

NORTHING & EASTING		
POINT #	NORTHING	EASTING
800	604468.15	7616666.89
801	604463.44	7616671.37
802	604471.64	7616669.72
803	604468.24	7616675.25
804	604476.99	7616671.89
805	604475.57	7616678.24
806	604484.83	7616671.85
807	604486.31	7616678.14
808	604489.87	7616677.05
809	604438.79	7616717.80
810	604435.45	7616721.00
811	604431.10	7616725.13
812	604426.67	7616733.53
813	604417.48	7616735.14
814	604396.33	7616734.83
815	604393.43	7616773.13
816	604384.14	7616782.09
817	604387.30	7616784.33
818	604392.08	7616803.71
819	604380.47	7616820.78
820	604376.93	7616822.06
821	604387.37	7616834.69
822	604391.21	7616834.86
823	604420.17	7616835.63
824	604420.52	7616826.72
825	604425.30	7616808.45
826	604437.11	7616793.79
827	604453.88	7616785.24
828	604474.42	7616784.69
829	604494.07	7616792.11
830	604498.65	7616787.75
831	604498.69	7616780.82
832	604502.14	7616784.44
833	604500.17	7616797.76
834	604494.54	7616799.77
835	604500.68	7616808.61
836	604503.97	7616803.66
837	604385.02	7616864.93
838	604387.84	7616897.15

LEGEND

- ⇒ 2.00% MAX SLOPE
- ➔ 8.33% MAX SLOPE
- TC= TOP OF CURB
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- FL= FLOW LINE
- EOP= EDGE OF PAVEMENT



REVISIONS

PRELIMINARY

City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



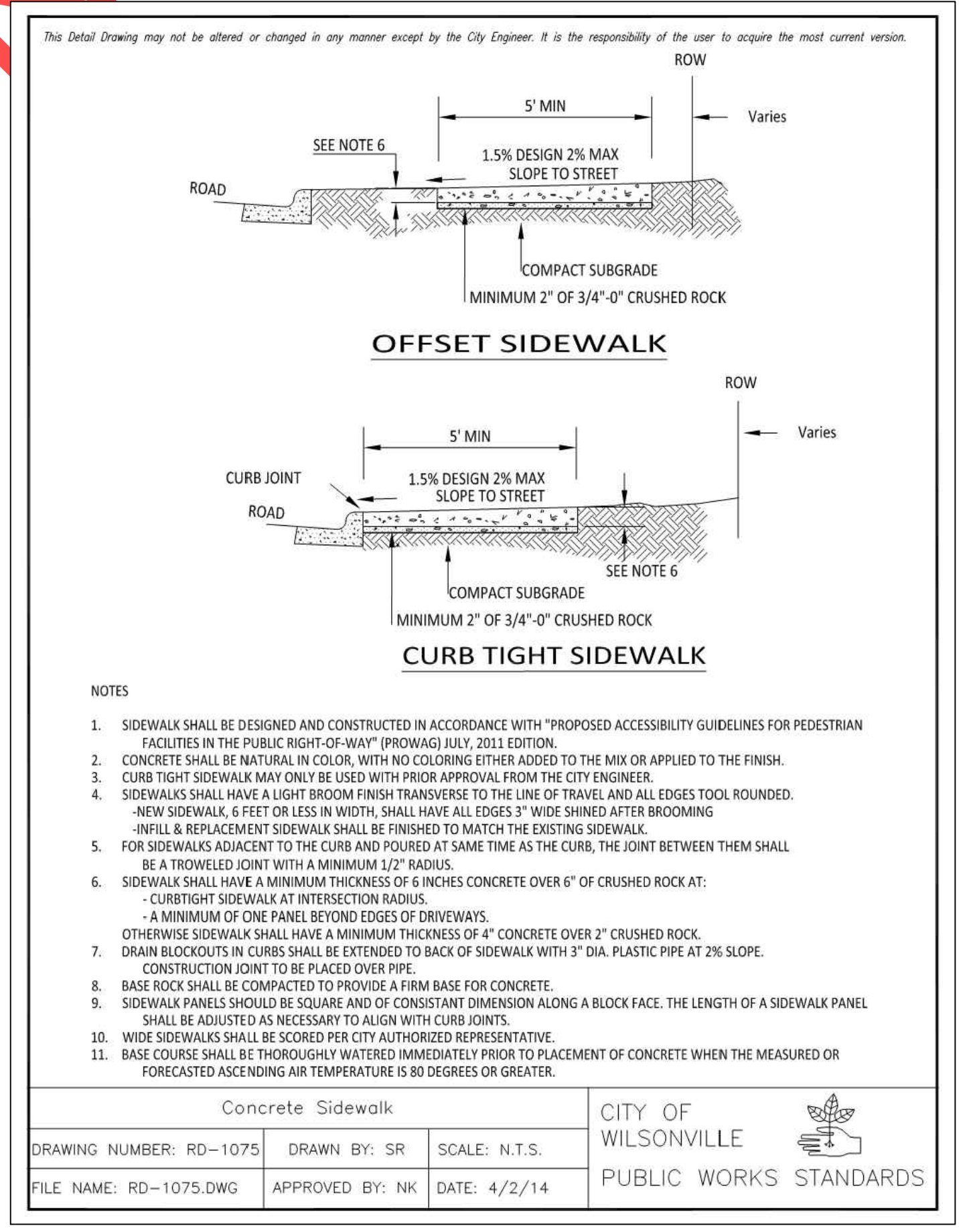
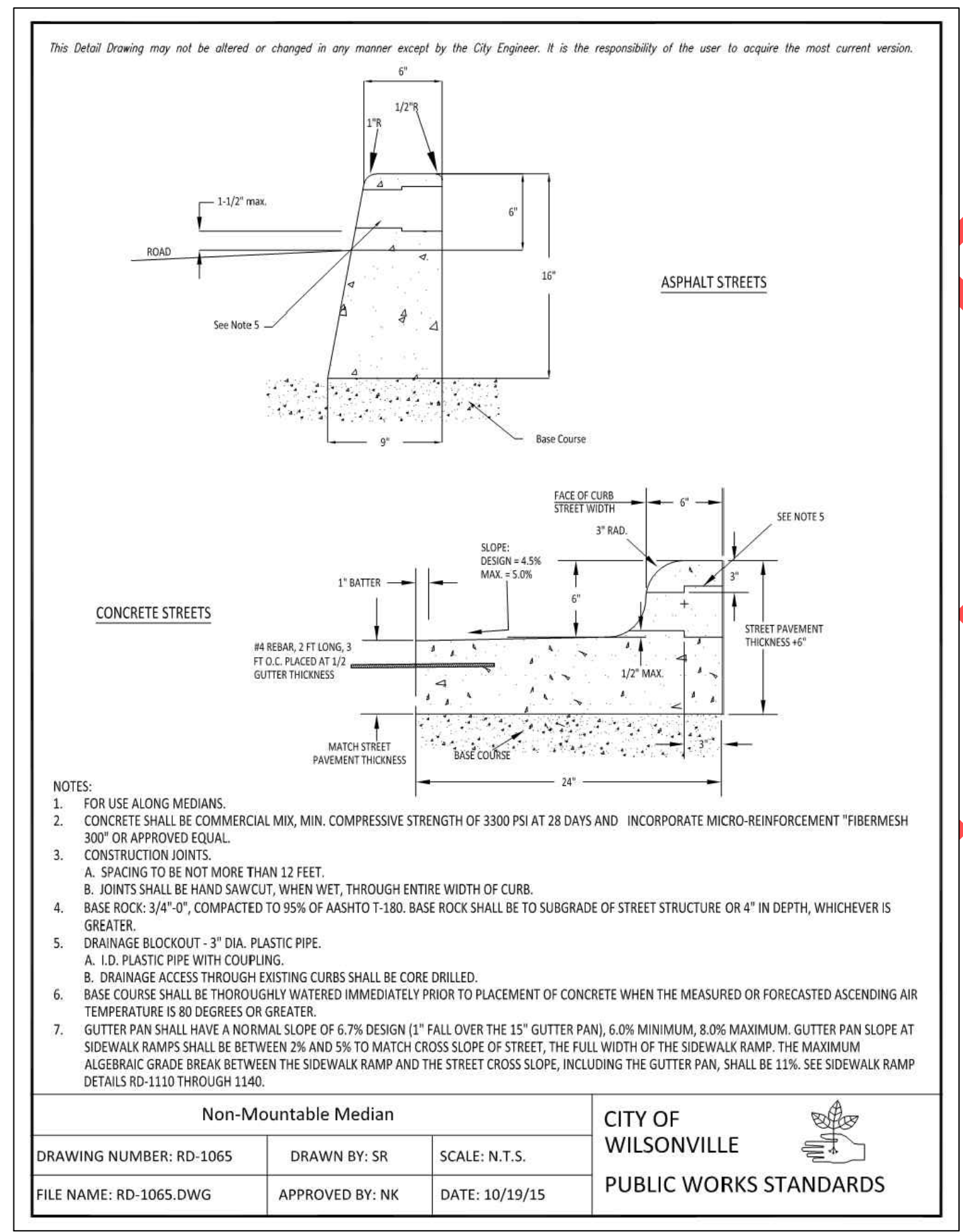
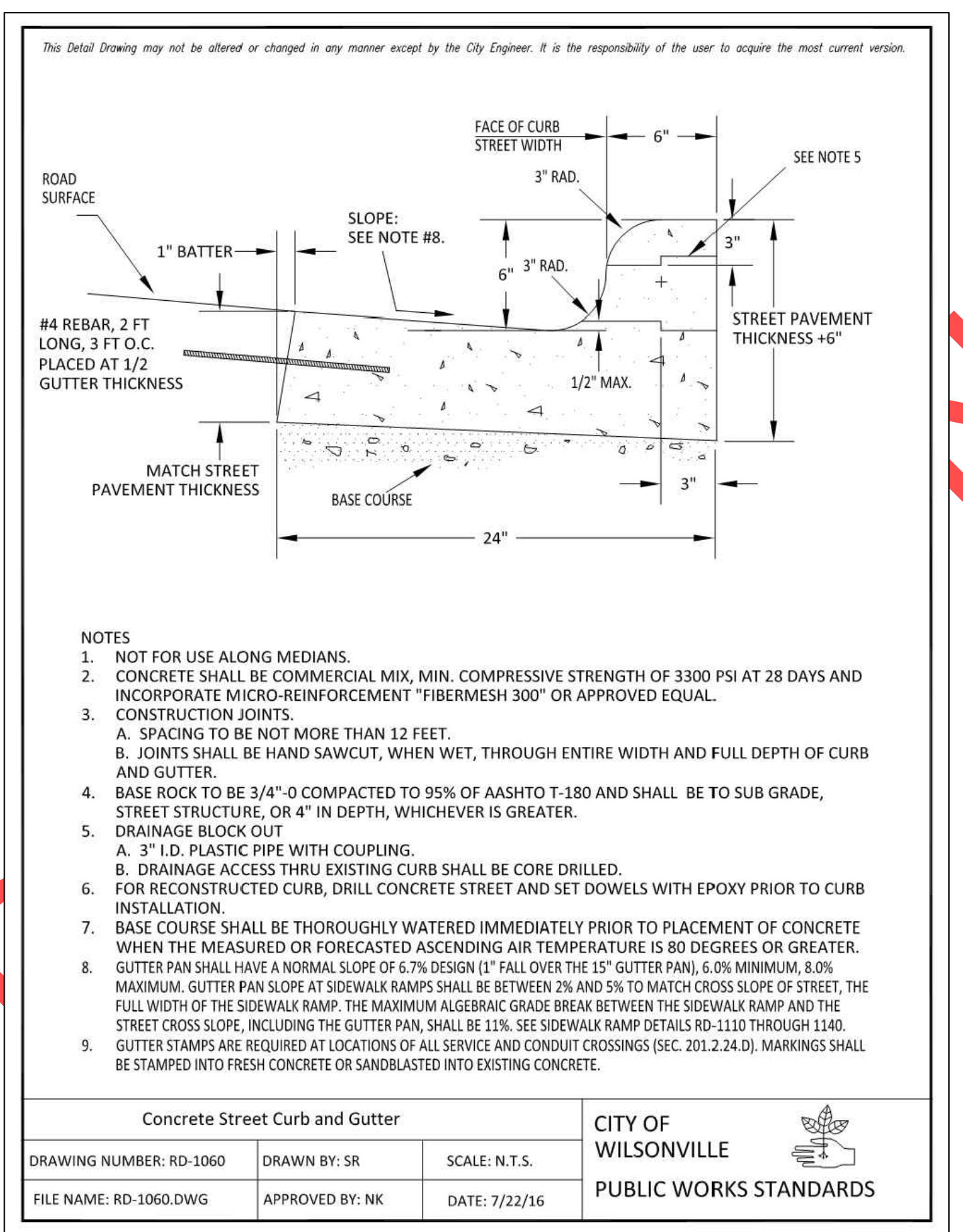
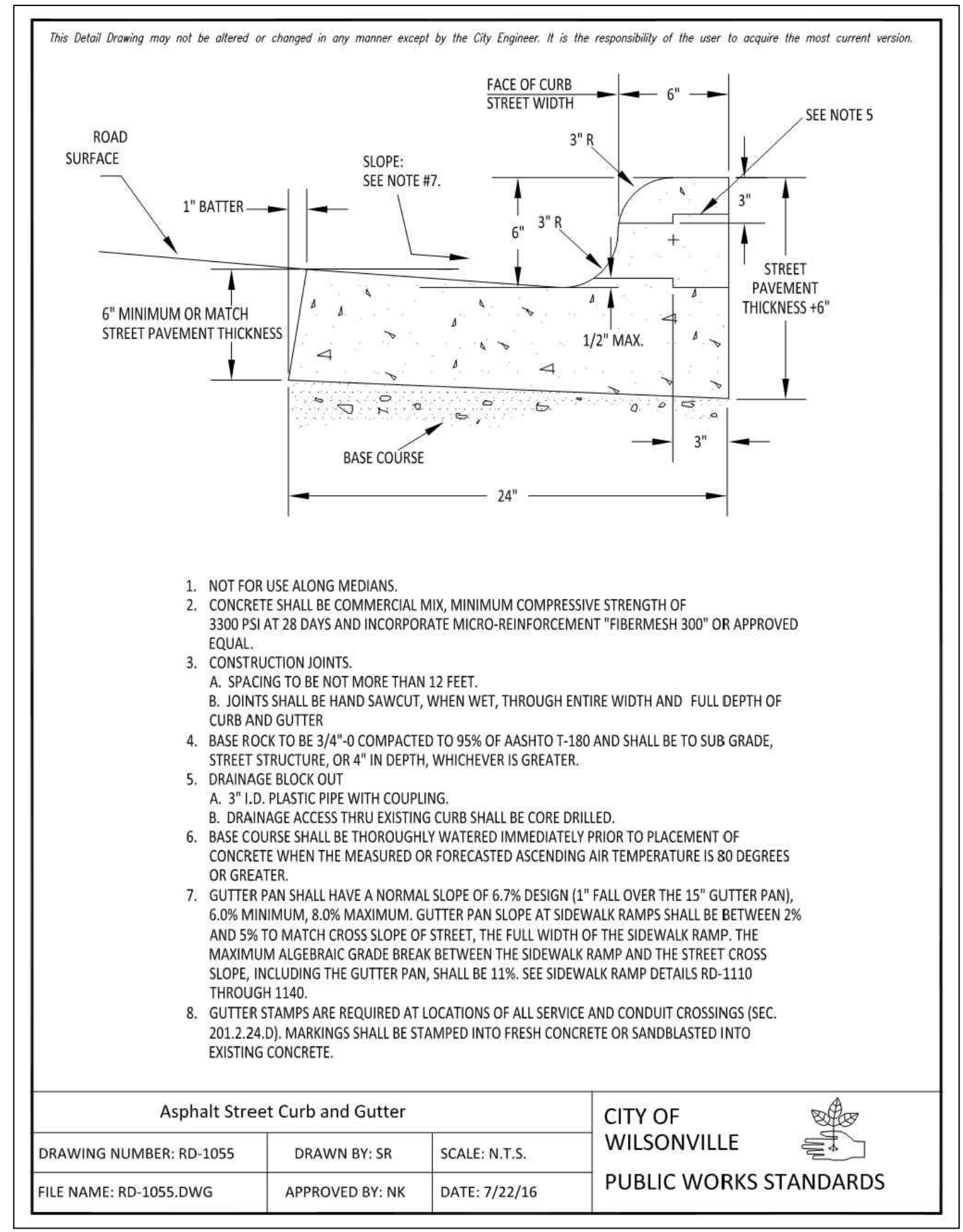
Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: PH/SL
 Drawn By: SL
 Checked By: A.HENDY

**SW 5TH ST TO SW KINSMAN RD EXTENSION
 SPOT GRADES**

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CIP # 4196
 PROJECT # 2017-02-001
 SG05
 121 of 211

REVIEW SET – NOT FOR CONSTRUCTION



FOR REVIEW COMMENTS

REVISIONS

PRELIMINARY

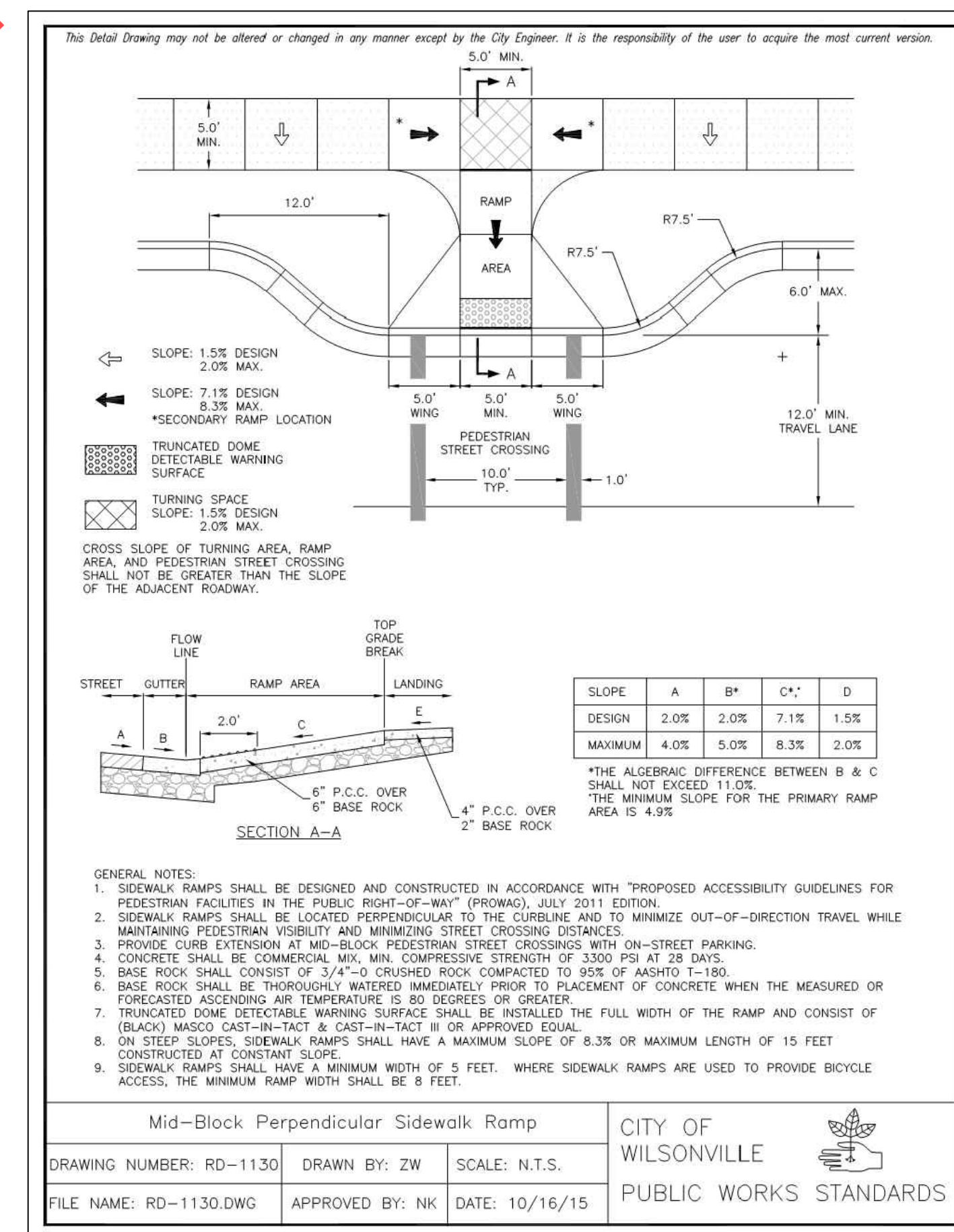
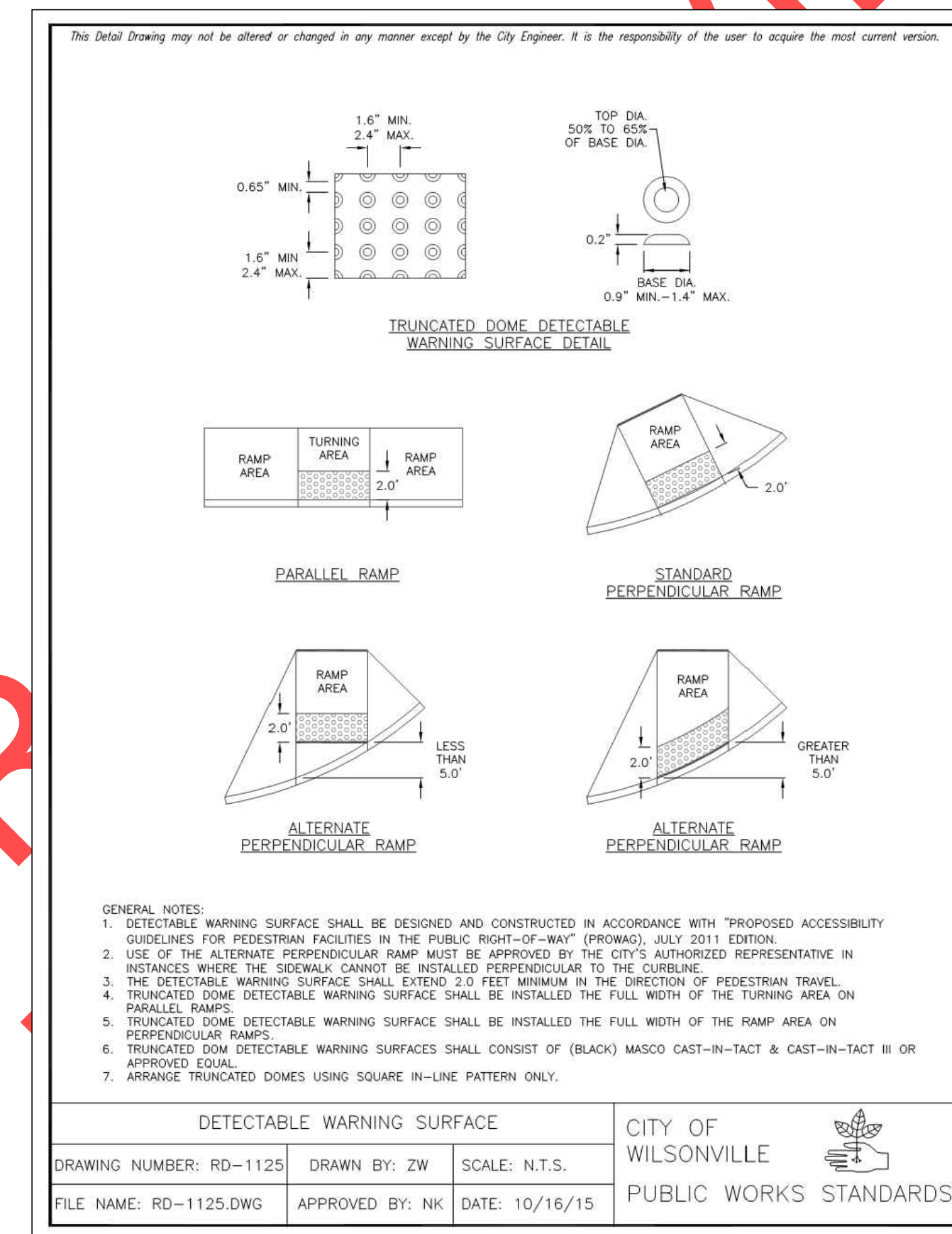
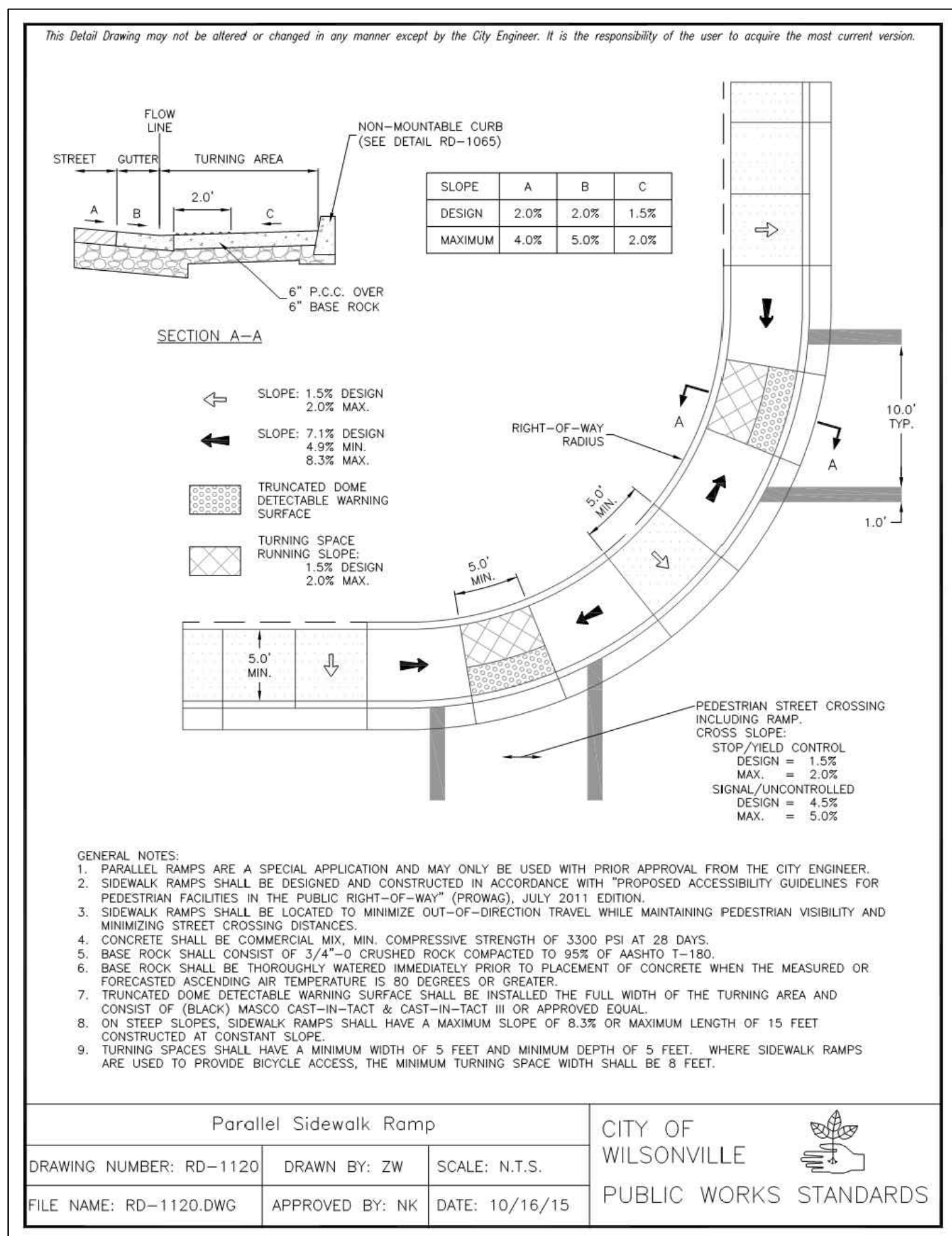
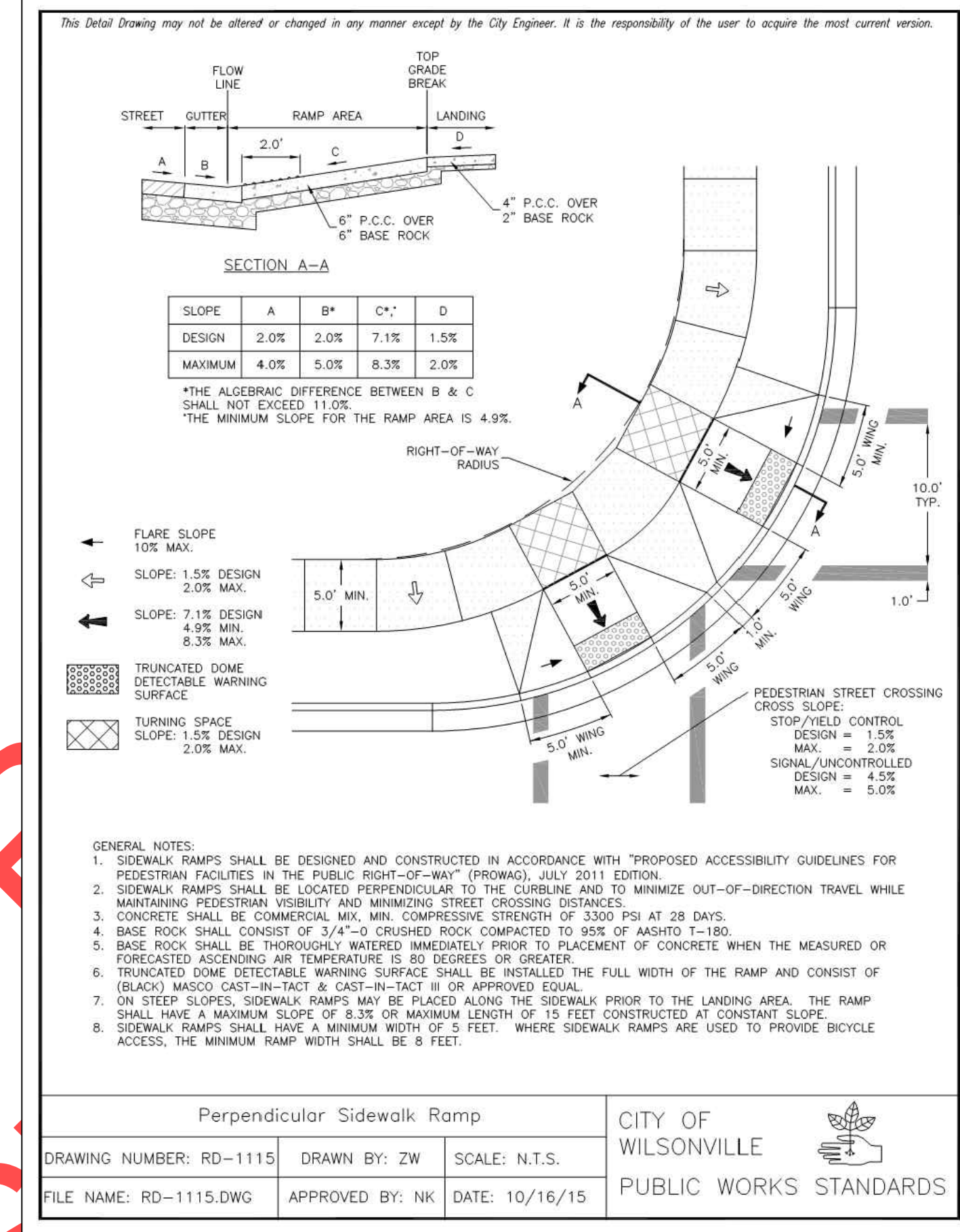
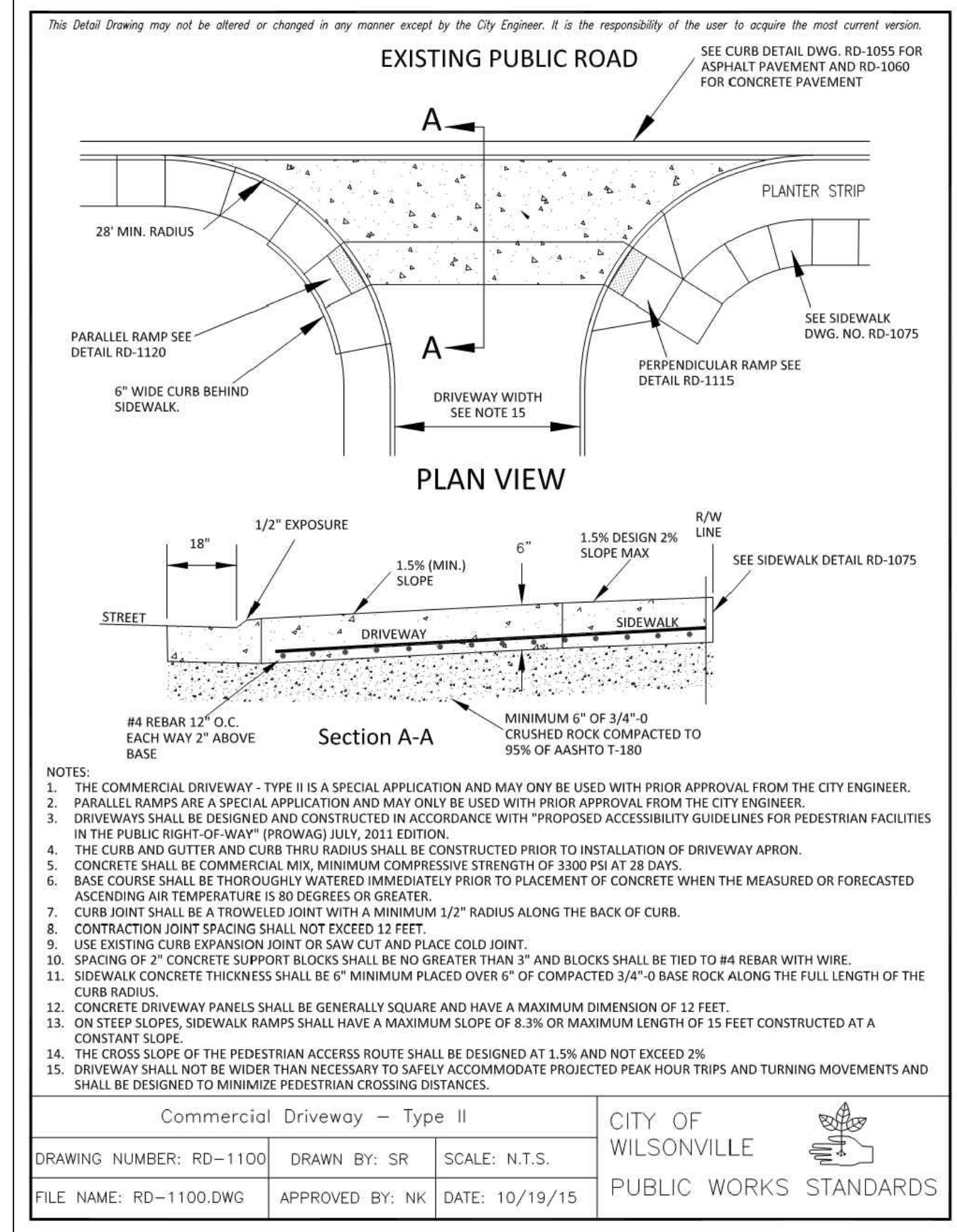
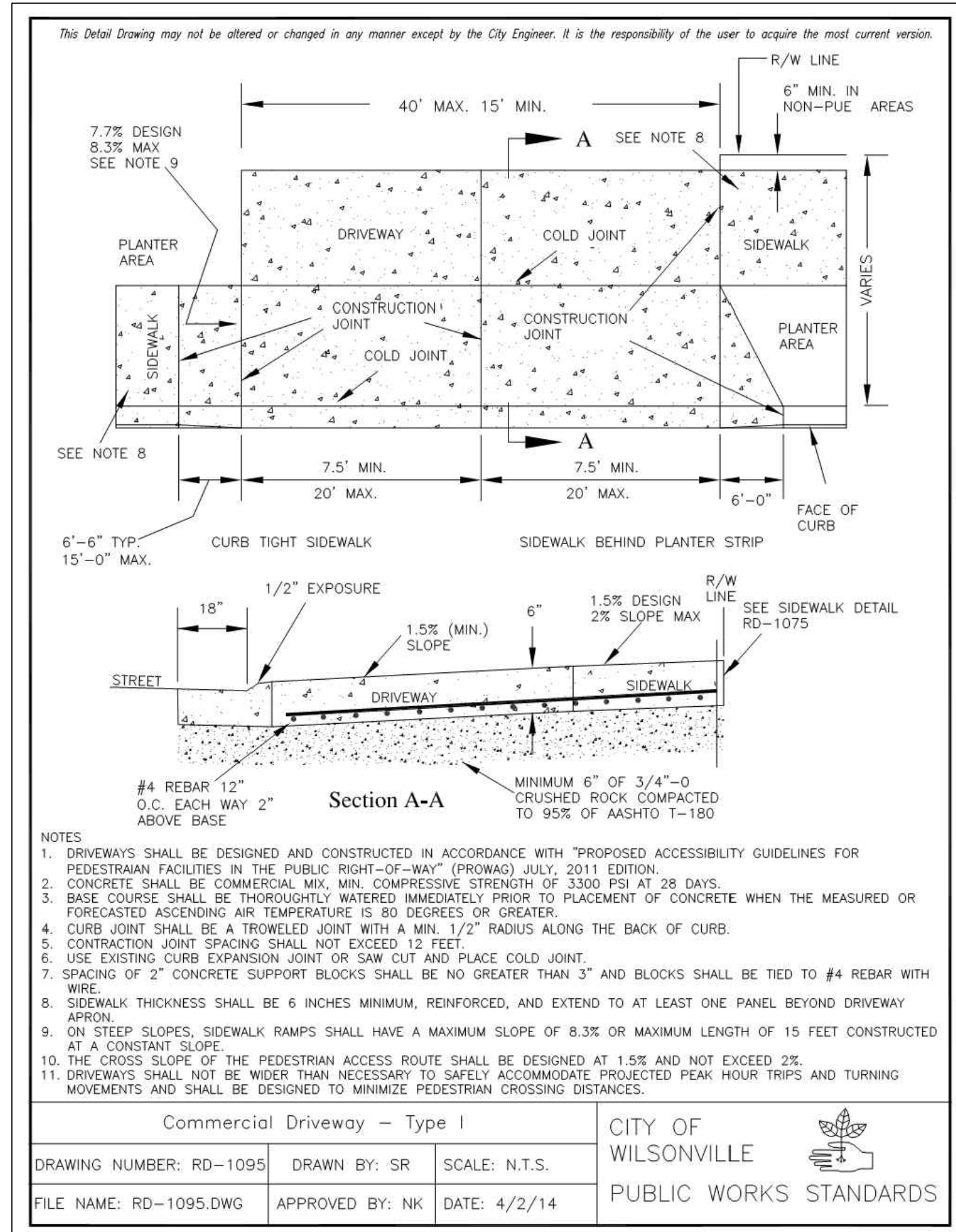
City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960

Date	1 February 2019
Scale	AS SHOWN
Designed By	PH/BB
Drawn By	SLR
Checked By	A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

CIP #	4196
PROJECT #	2017-02-001
DT01	122 of 211

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REVISIONS

PRELIMINARY

City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960

Date: 1 February 2019
Scale: AS SHOWN
Designed by: PH/BB
Drawn by: SLR
Checked by: A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

CIP# 4196
PROJECT# 2017-02-001
D702
123 of 211

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REVIEW SET - NOT FOR CONSTRUCTION

REVISIONS

PRELIMINARY

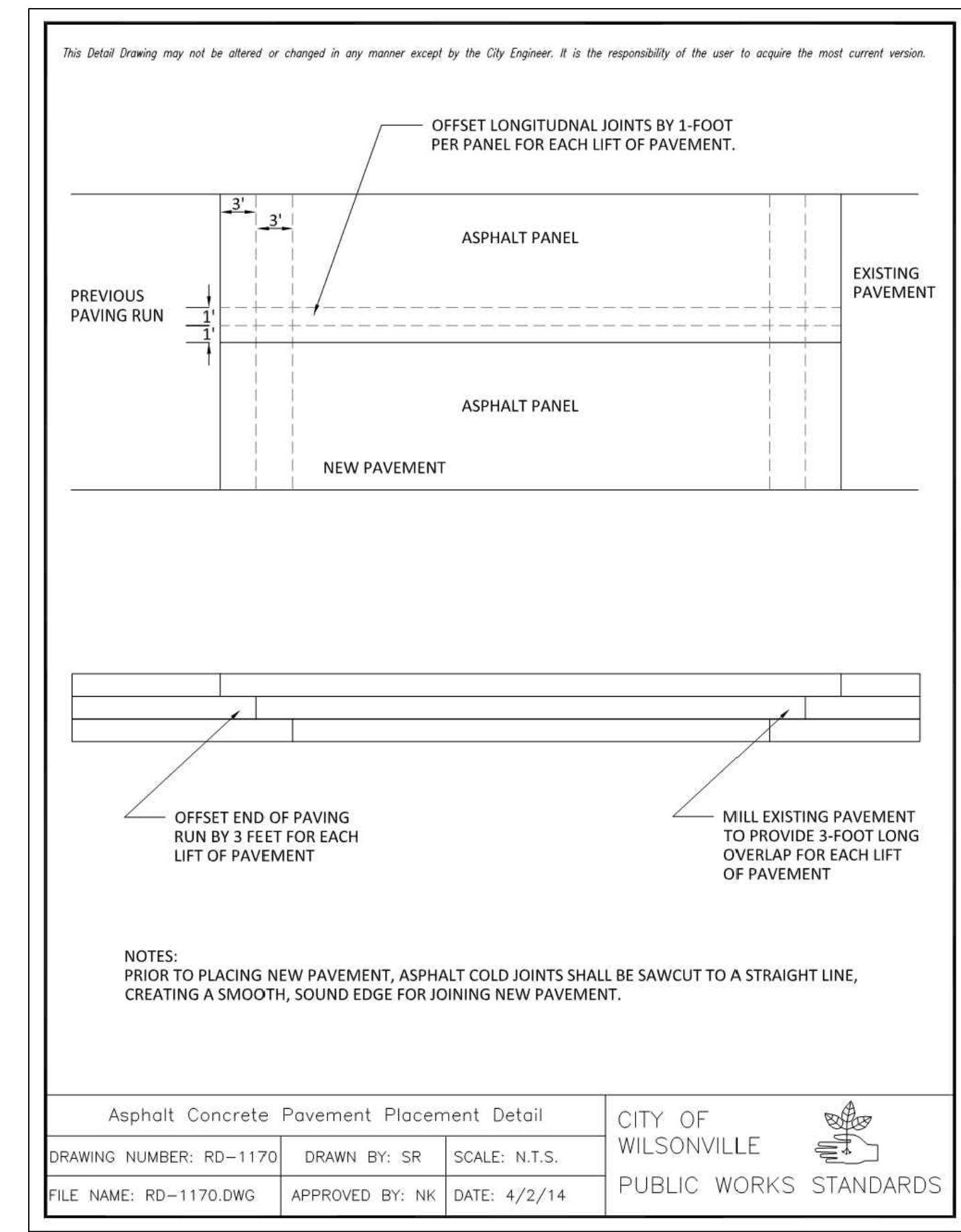
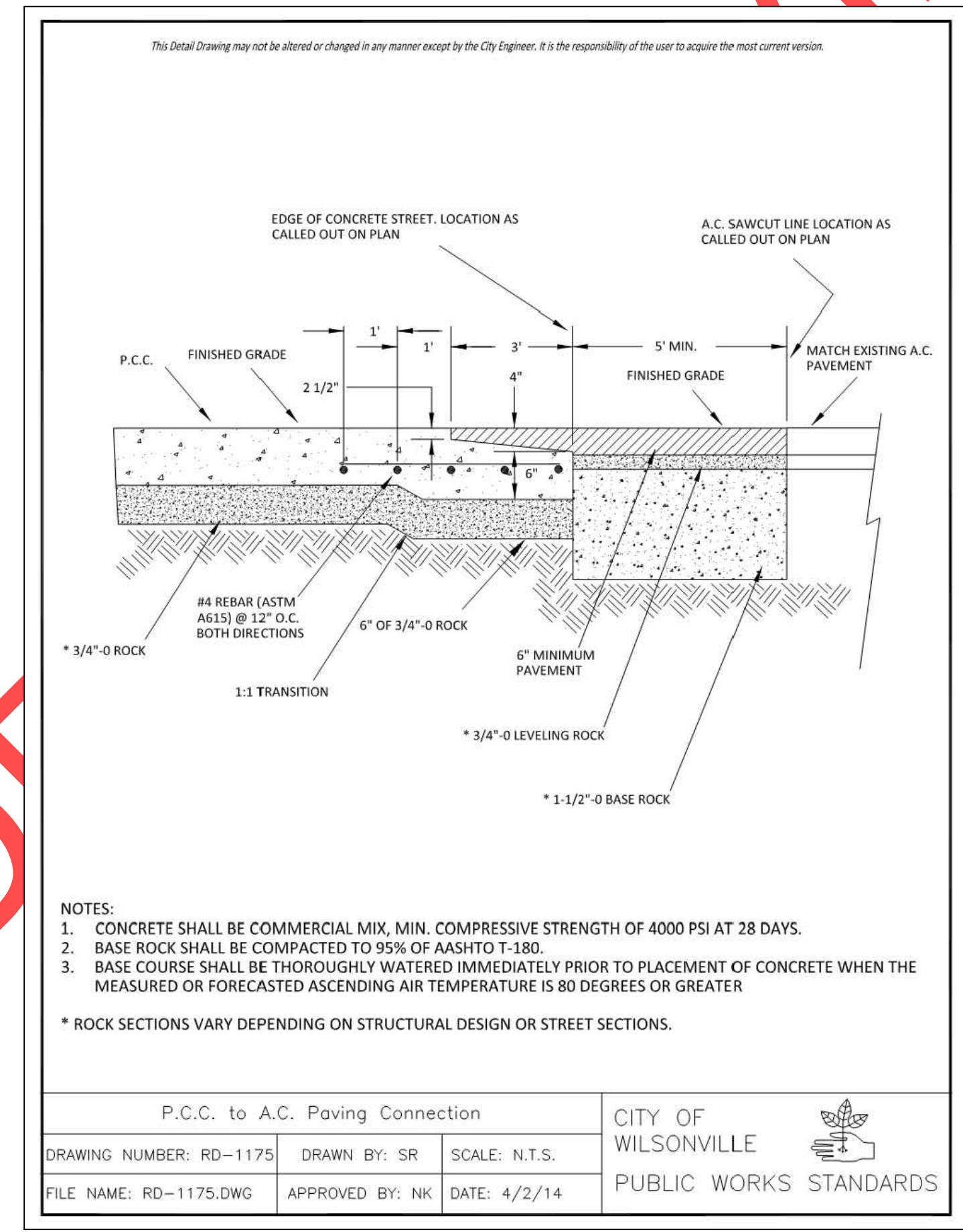
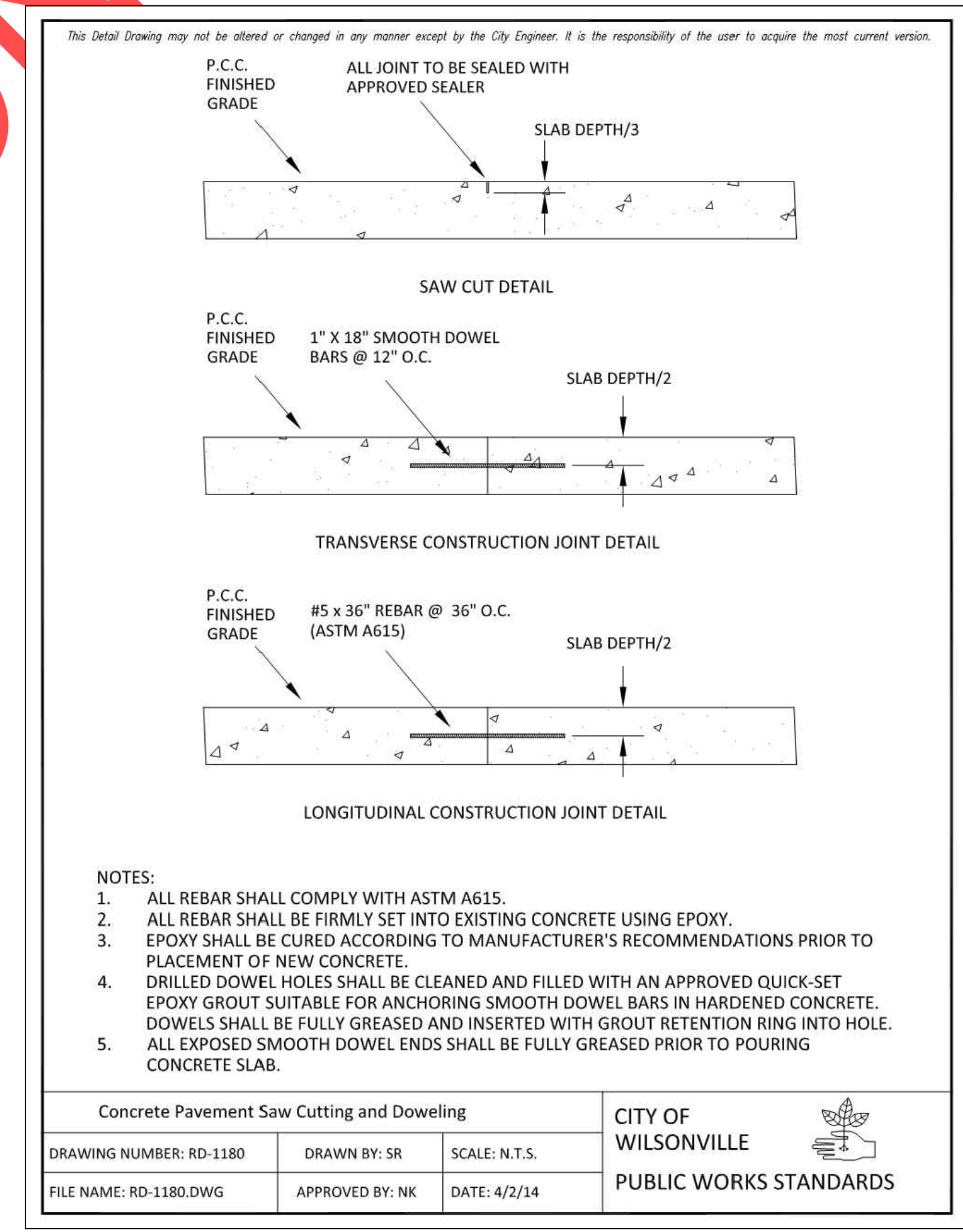
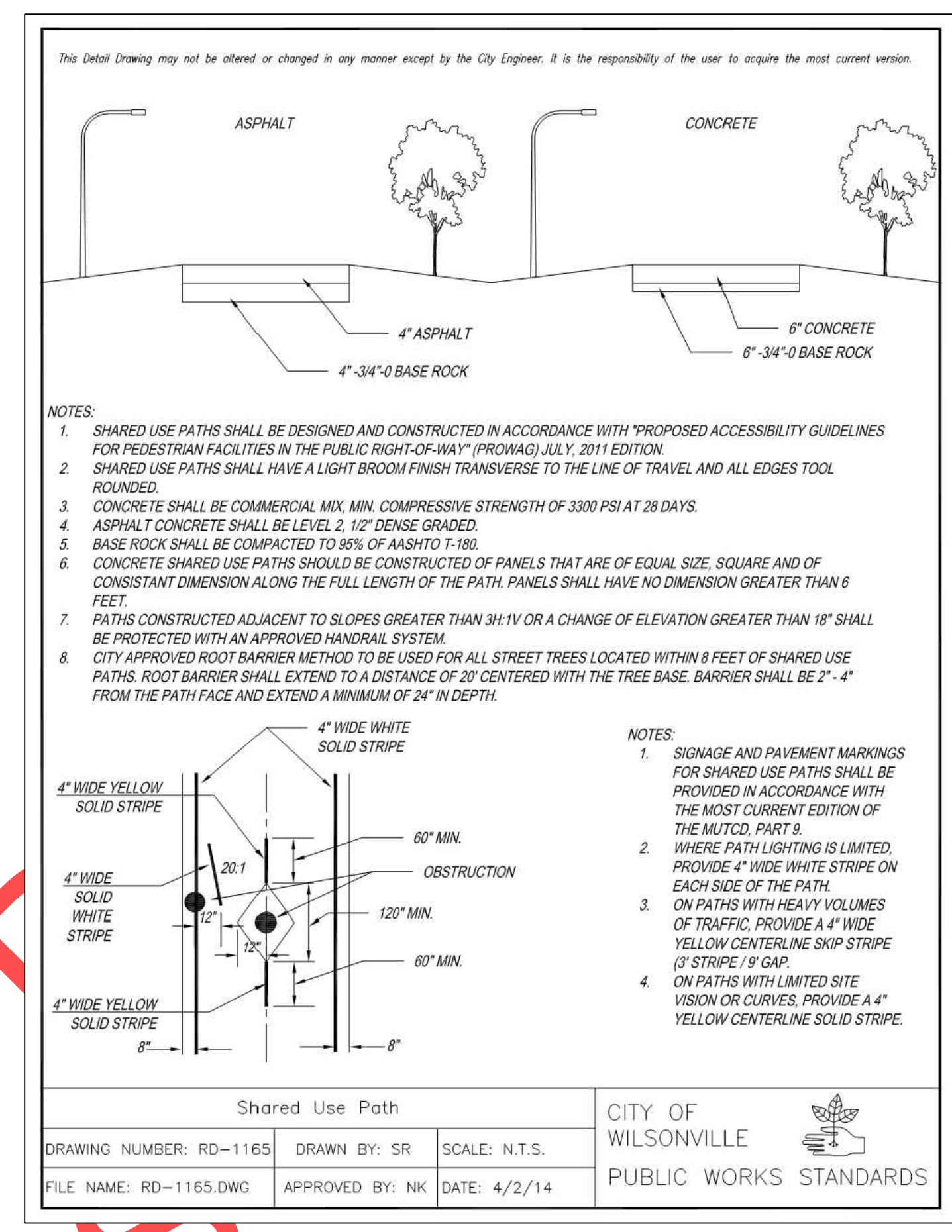
City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

CIP# 4196
PROJECT# 2017-02-001
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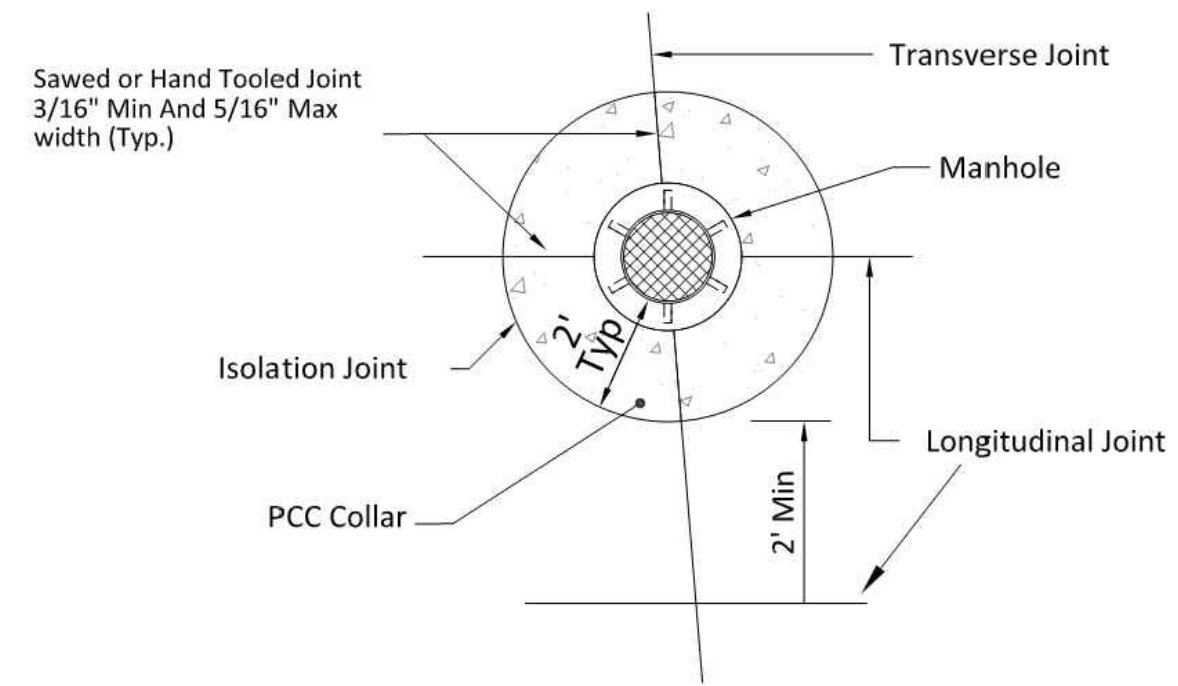


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Manhole Collar Detail

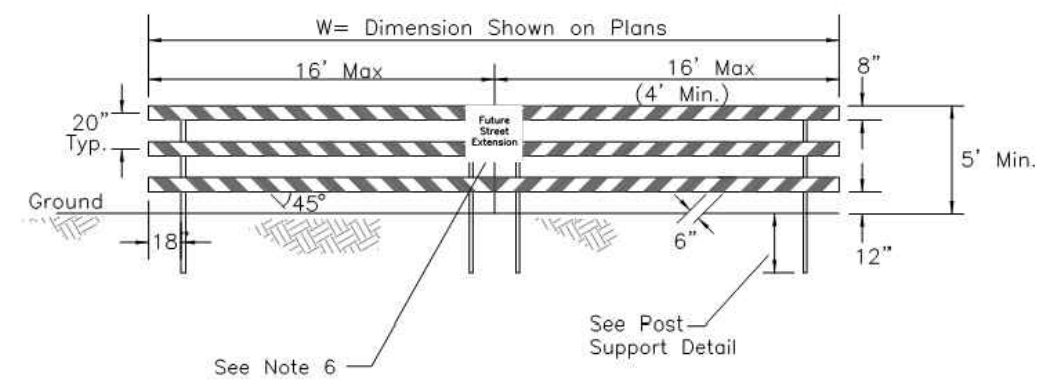
No Scale



- NOTES:**
1. LONGITUDINAL JOINTS SHALL BE SPACED TO EITHER BISECT THE ISOLATION COLLAR OR BE SPACED A MINIMUM OF 2 FEET FROM THE ISOLATION COLLAR.
 2. CONCRETE SHALL BE COMMERCIAL MIX, MIN COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND INCORPORATE MICRO-REINFORCEMENT "FIBERMESH 300" OR APPROVED EQUAL.
 3. BASE COURSE SHALL BE THOROUGHLY WATERED IMMEDIATELY PRIOR TO PLACEMENT OF CONCRETE WHEN THE MEASURED OR FORECASTED ASCENDING AIR TEMPERATURE IS 80 DEGREES OR BETTER.

Manhole Collar Detail - PCC Streets			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1185	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1185.DWG	APPROVED BY: NK	DATE: 4/2/14	

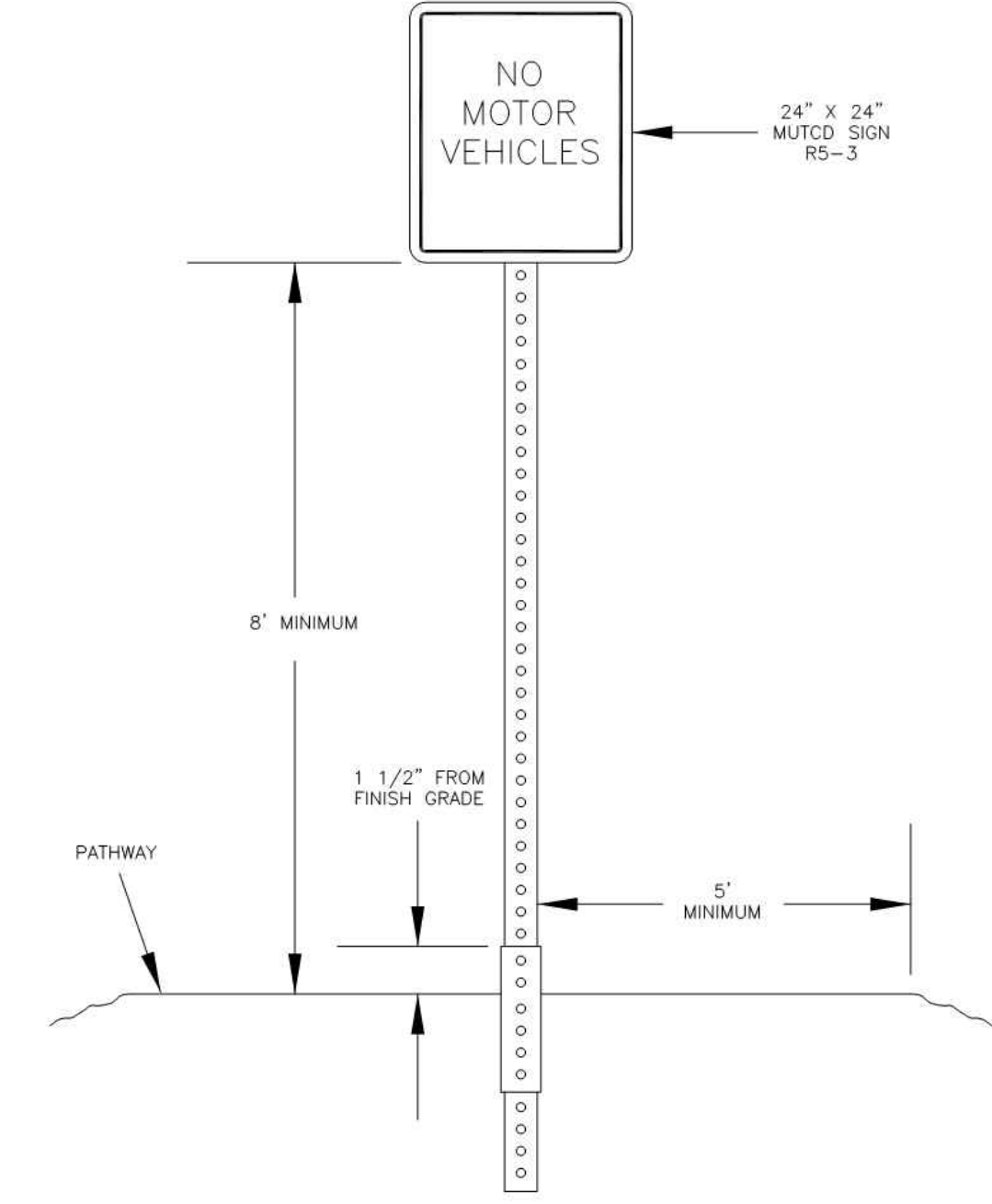
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- Notes:**
1. Materials:
2" X 2" X 63", GA. Galv. Perforated Steel Post.
2 1/2" X 2 1/2" X 18", 12 GA. Galv. Perforated Steel Stiffener Post.
2 1/4" X 2 1/4" X 36", 12 GA Galv. Perforated Steel Anchor.
3/8" X 3 1/2", Galvanized Hex Head Bolt with Lock Washer, or 5/16" Corner Bolt.
7/16" X 5", Galvanized Corriage with Flat and Lock Washer, 2 Bolts per Rail Per Post.
2" X 8" Crossrails with Alternating Red and White Stripes. All Stripes shall have Red and White encapsulated Lens Sheeting, or Aluminum Panels. Attached with 3/4" #10 Wood Screws.
 2. See Manual on Uniform Traffic Control Devices For Streets And Highways And the Oregon Supplement.
 3. All Materials and Workmanship Shall be in Accordance with the Current State of Oregon Standard Specifications for Highway Construction.
 4. Barricade For Sidewalk is Similar.
 5. For each 4' of Panel or Sheeting use minimum 15 screws or nails to attach.
 6. Install Sign Per Detail RD-1225.

Street Barricade (Type III)			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1220	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1220.DWG	APPROVED BY: NK	DATE: 9/6/18	

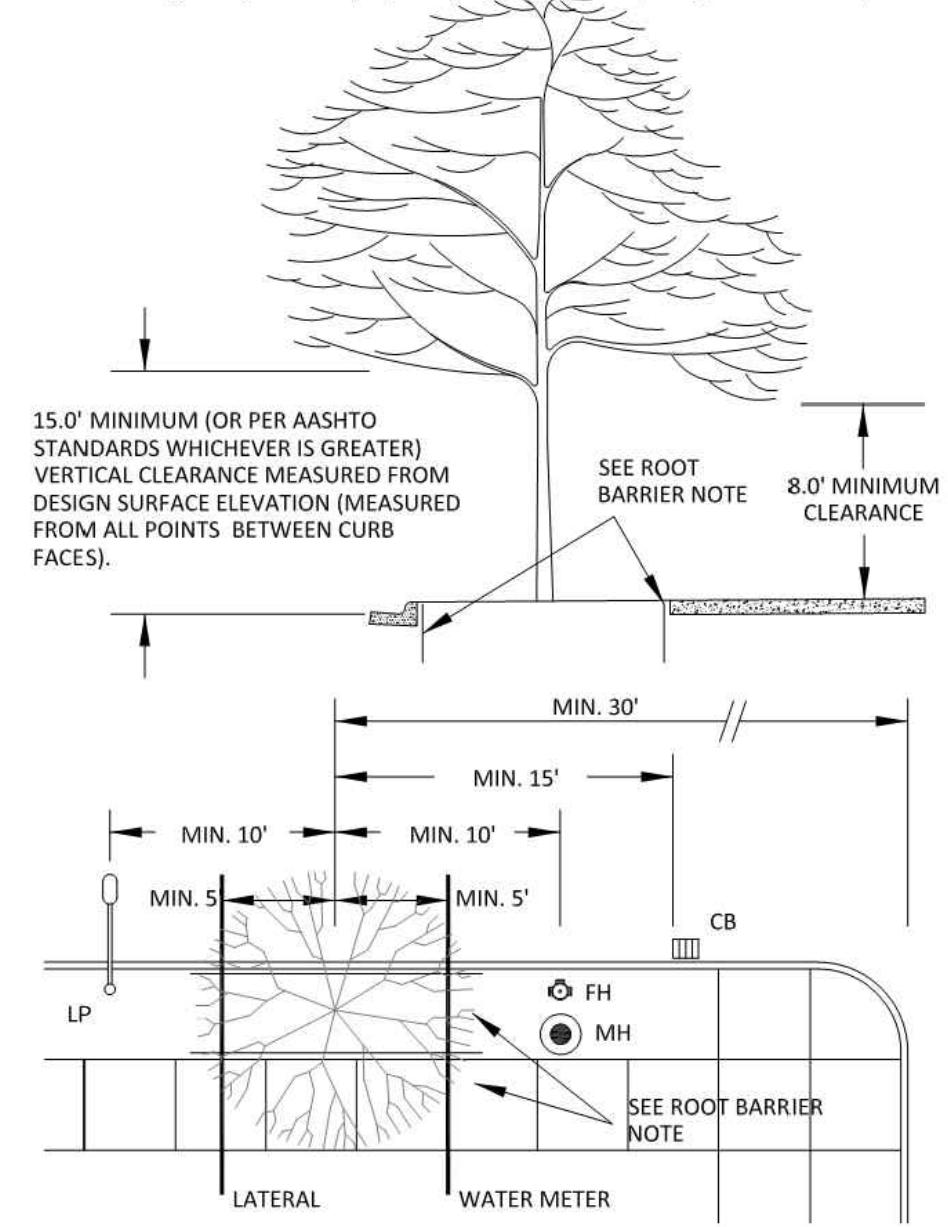
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- NOTES:**
1. ONLY TO BE USED WHEN SPECIFICALLY APPROVED BY THE CITY ENGINEER.
 2. NOT TO BE USED ON FIRE ACCESSSES.
 3. PLACE AT ENTRANCE OF BIKE PATH OR ACCESS AT CENTERLINE.
 4. SEE DETAIL DRAWING RD-1250 FOR MATERIAL DESCRIPTIONS AND INSTALLATION.

Removable Vehicle Barrier Post			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1205	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1205.DWG	APPROVED BY: NK	DATE: 4/2/14	

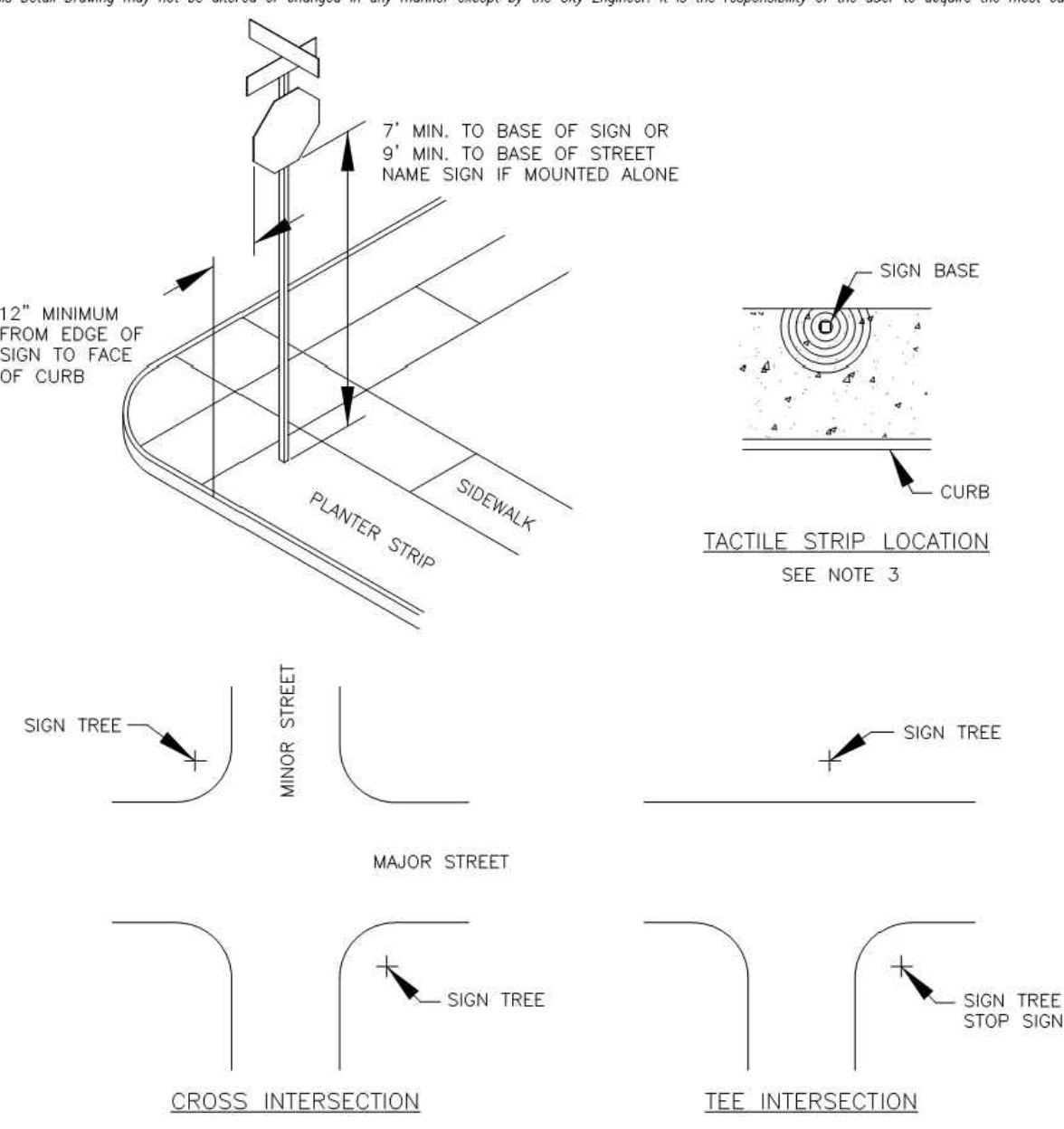
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- NOTES:**
1. 5' MINIMUM CLEARANCE FROM UNDERGROUND UTILITIES AND LATERALS. LANDSCAPE DESIGN OF TREES AND ENGINEERING DESIGN OF UNDERGROUND SERVICES SHALL BE COORDINATED.
 2. TREES SHALL BE CENTERED BETWEEN CURB AND SIDEWALK.
 3. CITY APPROVED ROOT BARRIER METHOD TO BE USED FOR ALL STREET TREES LOCATED WITHIN 8 FEET OF ALL CURBS AND SIDEWALKS. ROOT BARRIER SHALL EXTEND TO A DISTANCE OF 20' CENTERED WITH THE TREE BASE. BARRIER SHALL BE 2"-4" FROM CURB OR SIDEWALK AND EXTEND A MINIMUM OF 24" IN DEPTH.
 4. WHEN TREES ARE WITHIN TREE WELLS, ROOT BARRIER SHALL BE PLACED ON ALL SIDES.
 5. PARALLEL PARKING: LOCATE TREE BETWEEN ON-STREET PARKING SPACES. THIS LOCATION PRECLUDES DOORS OPENING ONTO TREES AND PASSENGERS EXITING IN CONFLICT WITH TREE PLACEMENT.
 6. DIAGONAL PARKING: LOCATE TREE MINIMUM 3' AWAY FROM LEFT STALL LINE TOWARD THE CENTER OF THE PARKING SPACE. THIS LOCATION ATTEMPTS TO AVOID THE FRONT END OF THE PARKED CAR OVERHANGING THE CURB.

Street Tree Location and Clearances			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1240	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1240.DWG	APPROVED BY: NK	DATE: 12/31/14	

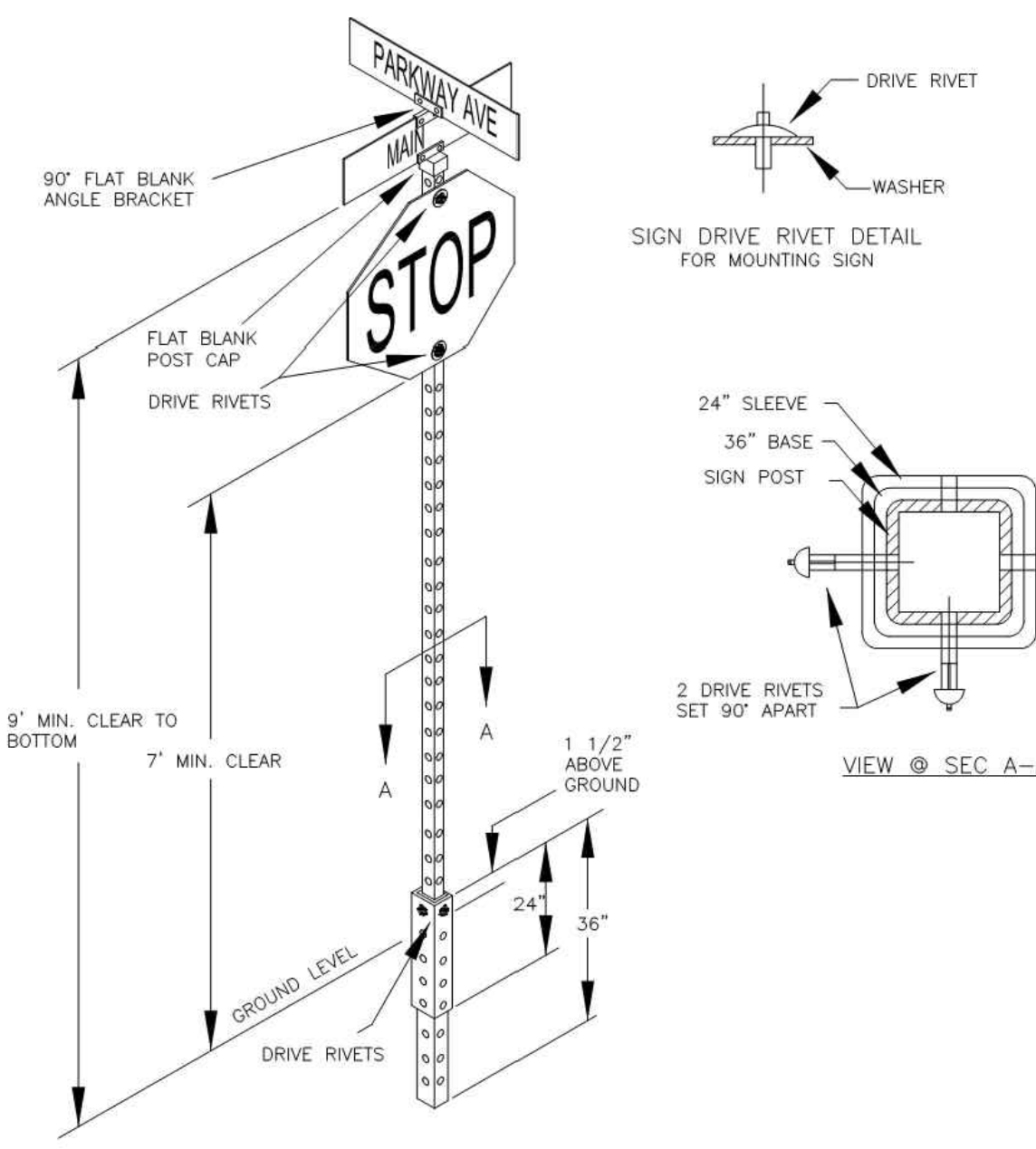
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- NOTE:**
1. SIGN LOCATIONS SHALL BE ACCORDING TO MUTCD AND AS MODIFIED HEREIN.
 2. SIGNS WHERE THE SIDEWALK IS CURB TIGHT SHALL BE LOCATED 6" OUTSIDE THE SIDEWALK TO MAXIMUM DISTANCE OF 7' FROM THE FACE OF CURB.
 3. IF THE SIDEWALK IS WIDER THAN 6', A TACTILE STRIP 2' WIDE FROM A RADIUS POINT FROM THE BASE OF THE SIGN SHALL BE PLACED IN THE WET CONCRETE. THE TACTILE STRIP SHALL BE MADE BY USING A 1/4" TINE METAL BROOM TO A DEPTH OF 1/4".

Street Sign Locations			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1245	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1245.DWG	APPROVED BY: NK	DATE: 4/2/14	

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- Notes:**
1. Sign Post shall be embedded 12" into base.
 2. Surface mount sign posts to be reviewed and approved by City authorized representative prior to use.
 3. All sign hardware to be stainless steel.

Street Sign Assembly			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1250	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1250.DWG	APPROVED BY: NK	DATE: 9/6/18	

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Materials:
Street name signs for local streets with speeds of 25 mph or less shall be 6\"/>

Lettering:
All letters and numbers used to fabricate a street name sign shall be High Intensity White using 3M #3930 white sheeting. The actual name of the street is a Series 'b' with lettering heights as specified above.

Installation:
Mounting hardware shall be style #850 Long (5.25\") Aluminum Caps/Tees. See Drawing No. RD-1250.

Street Name Sign			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: RD-1255	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: RD-1255.DWG	APPROVED BY: NK	DATE: 4/2/14	
APPROVED BY: NK			

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Notes:
1. SEWER MANHOLE TO BE PREFORMED RUBBER O-RING GASKET DESIGN ONLY. ALL MANHOLES SHALL CONFORM WITH ASTM C-478.
2. MANHOLE FRAME AND COVER AS PER DETAIL DRAWING S-2055.
3. ALL PIPES ENTERING OR EXITING SHALL BE WATER TIGHT.
4. CHANNELS SHALL BE 3/4 VERTICAL HEIGHT OF PIPE WITH A SMOOTH FINISH.
5. ALL SEWER MANHOLE JOINTS SHALL BE INSTALLED WITH PREFORMED RUBBER O-RING GASKETS CONFORMING WITH AASHTO M 315 AND ASTM C-443. ALL OTHER MANHOLES MAY USE PREFORMED FLEXIBLE JOINT SEALANT, KENT SEAL NO. 2 OR PREFORMED PLASTIC GASKETS, RAM NEK, OR APPROVED EQUAL CONFORMING TO AASHTO M 159 AND ASTM C 990.
6. 18\"/>

Standard Manhole			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2005	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2005.DWG	APPROVED BY: NK	DATE: 1/20/15	
APPROVED BY: NK			

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Notes:
1. FOR NEW SEWER AND STORM SYSTEMS, CONNECT PIPE SYSTEMS TO MANHOLES WITH A FLEXIBLE CONNECTOR, KOR-N-SEAL BOOT OR APPROVED EQUAL.
2. FLEXIBLE CONNECTORS SHALL BE SPECIFICALLY MANUFACTURED FOR THE INTENDED USE AND CONFORM TO ASTM C923.
3. CONNECT PIPE TO EXISTING MANHOLES WITH A FABRICATED SAND COLLAR BY AN APPROVED MANUFACTURER. SAND COLLAR SHALL BE FABRICATED OF THE SAME MATERIAL AS THE CONNECTING PIPE.
4. FIELD FABRICATED SAND COLLARS ARE NOT ALLOWED.
5. FOR PIPE CONNECTIONS LARGER THAN 24\"/>

Manhole Pipe Connection			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2010	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2010.DWG	APPROVED BY: NK	DATE: 6/4/14	
APPROVED BY: NK			

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Notes:
1. SEWER MANHOLE TO BE PREFORMED RUBBER O-RING GASKET DESIGN ONLY. ALL MANHOLES SHALL CONFORM WITH ASTM C-478.
2. CAST-IN-PLACE CONCRETE MANHOLE BASES MAY BE USED OVER EXISTING PIPELINES ONLY, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY'S AUTHORIZED REPRESENTATIVE.
3. INSTALL MANHOLE IN ACCORDANCE WITH DETAIL NO. S-2005.
4. FOR MANHOLES GREATER THAN 48\"/>

Standard Cast-in-place Concrete Manhole Base			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2015	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2015.DWG	APPROVED BY: NK	DATE: 6/4/14	
APPROVED BY: NK			

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Notes:
1. SUBURBAN TYPE NOT FOR USE IN PCC STREETS OR ARTERIAL ROADWAYS.
2. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30B AND AASHTO M105 CLASS 30B.
3. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
4. NOTCH LID FOR LIFTING HOOK.

Suburban and Standard Manhole Frame and Cover			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2055	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2055.DWG	APPROVED BY: NK	DATE: 6/4/14	
APPROVED BY: NK			

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Notes:
STEPS IN PREFABRICATED MANHOLE SECTIONS MUST BE TIGHT AND FIRMLY EMBEDDED. THEY MUST ALSO MEET ASTM C-497 TEST FOR WITHSTANDING PULL-OUT. TOP STEP SHALL BE NO GREATER THAN 27\"/>

Materials:
PLASTIC:
MUST CONFORM WITH ASTM C-478. STEEL REINFORCING BAR MINIMUM 1/2\"/>

Manhole Step			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2080	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2080.DWG	APPROVED BY: NK	DATE: 6/4/14	
APPROVED BY: NK			

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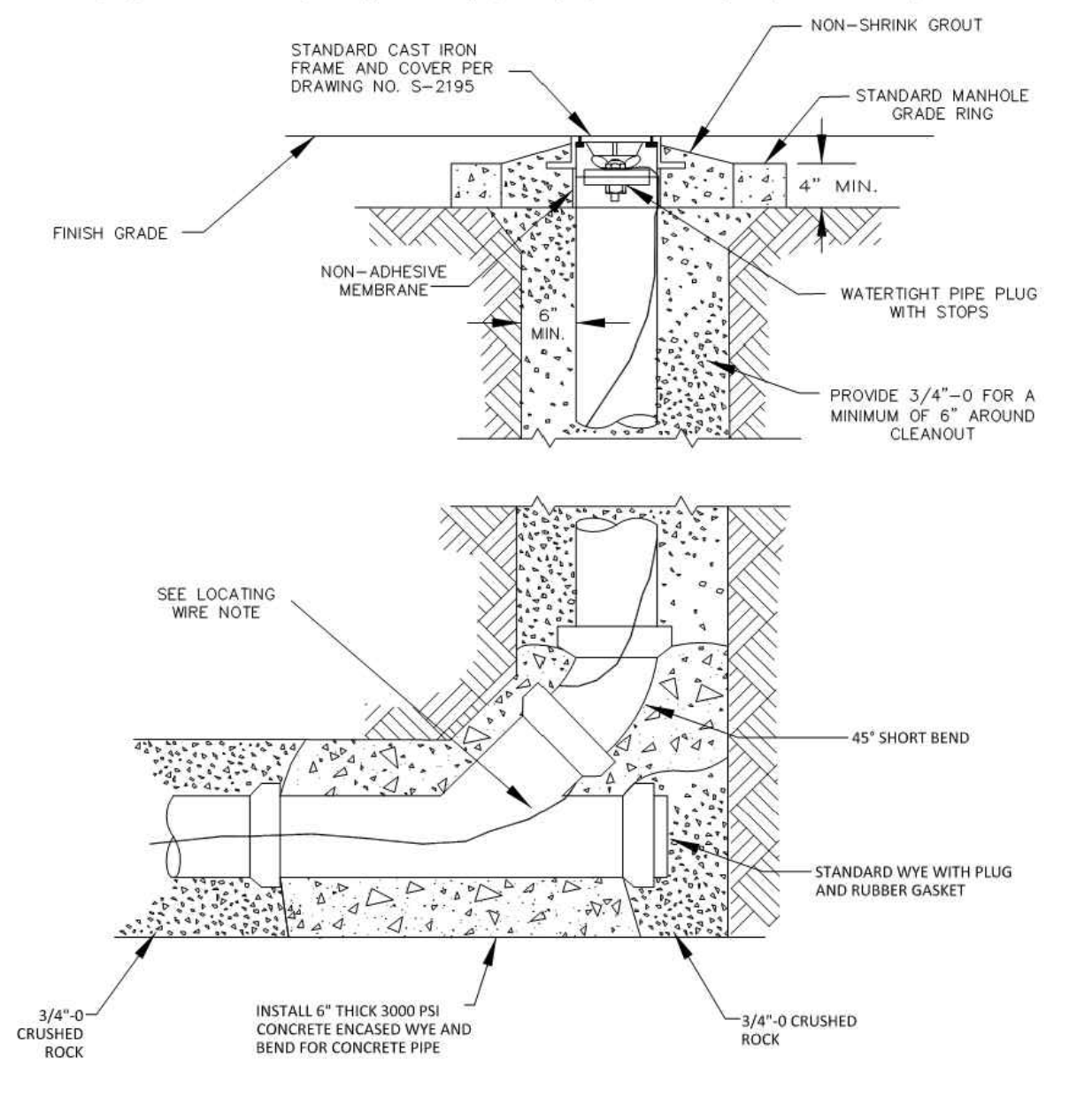
SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

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PROJECT #	2017-02-001
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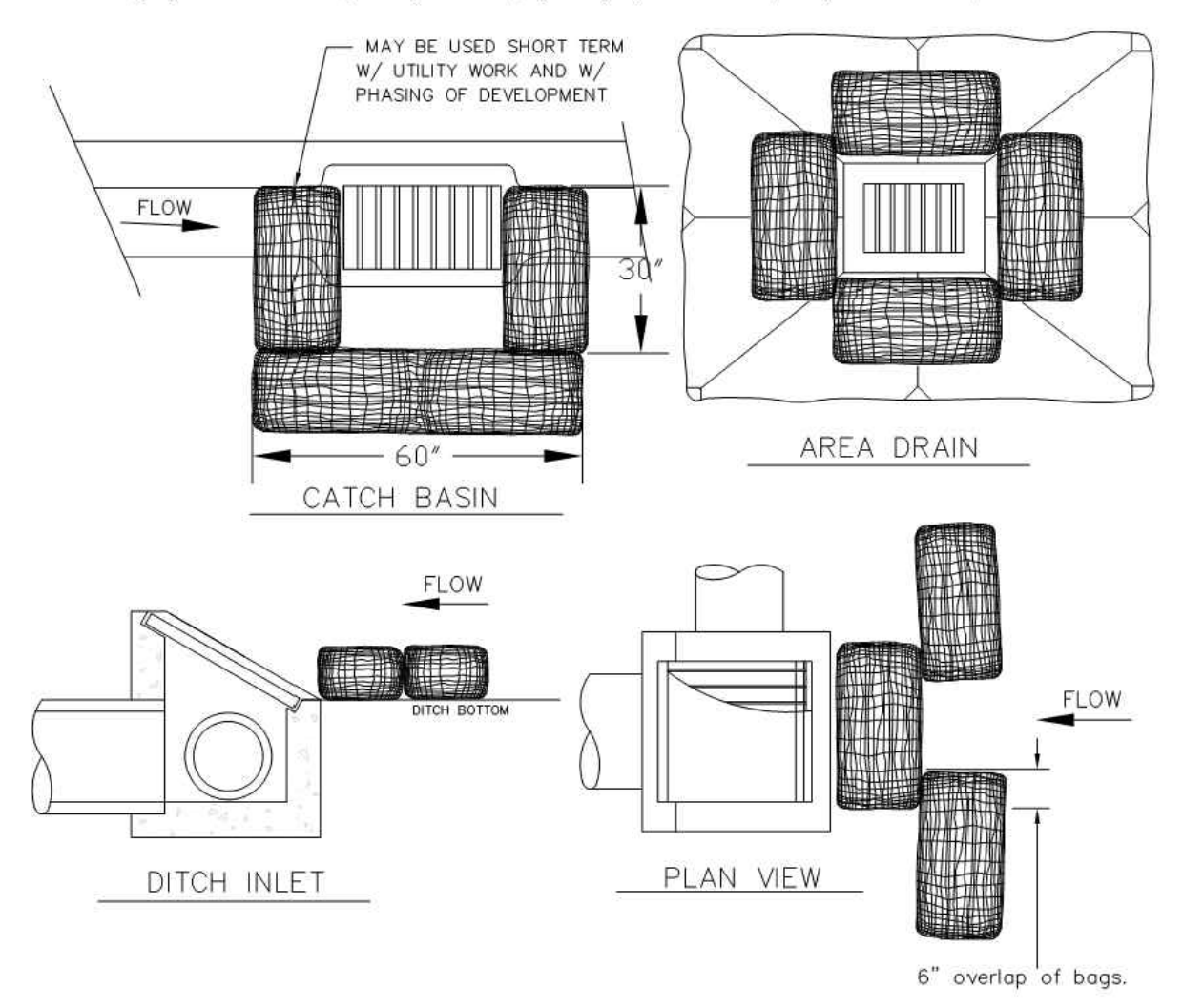
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- NOTE:
- CLEANOUT INSTALLATIONS ARE LIMITED TO EASEMENT AREAS OR MAY BE ALLOWED ON A TEMPORARY BASIS IN RIGHT-OF-WAYS.
 - CONCRETE ENCASE ENTIRE WYE SECTION AND 45° BEND IF CONCRETE PIPE.
 - CLEANOUTS SHALL BE PLACED OUTSIDE OF SIDEWALKS AND DRIVEWAYS.
 - CLEANOUTS IN PLANTER STRIPS SHALL BE LOCATED NEXT TO SIDEWALK.
 - LOCATING WIRE SHALL BE 12 GAUGE, HMW-PE CONTINUOUS, AND TIED TO MAIN AND TO CLEANOUT PLUG. WIRE SHALL BE PLACED ALONG THE SPRING-LINE OF LATERAL WITH EXTRA 2' LENGTH PROVIDED AT THE CLEANOUT. USE GREEN WIRE FOR SANITARY AND WHITE FOR STORM.

Standard Cleanout			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2180	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2180.DWG	APPROVED BY: NK	DATE: 6/4/14	
CITY OF WILSONVILLE PUBLIC WORKS STANDARDS			

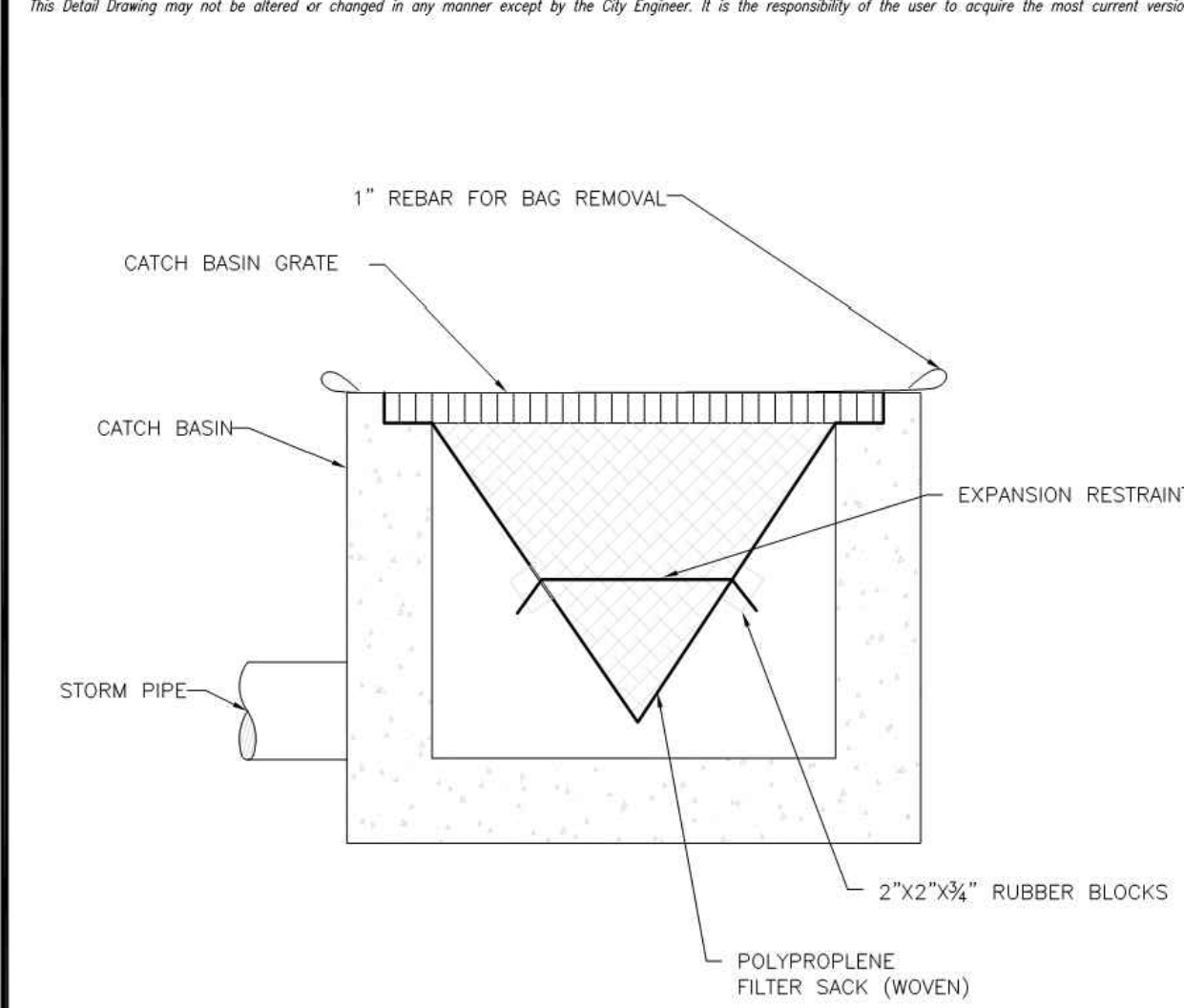
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- Notes:
- ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
 - BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1" X 2" WOODEN STAKES OR APPROVED EQUAL PER BAG OR AREA DRAIN.
 - WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE AT LEAST 4 BAGS AND THEY SHALL BE OVERLAPPED BY A MINIMUM OF 6".

Inlet Protection Type 4			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2126	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2126.dwg	APPROVED BY: NK	DATE: 9/17/14	
CITY OF WILSONVILLE PUBLIC WORKS STANDARDS			

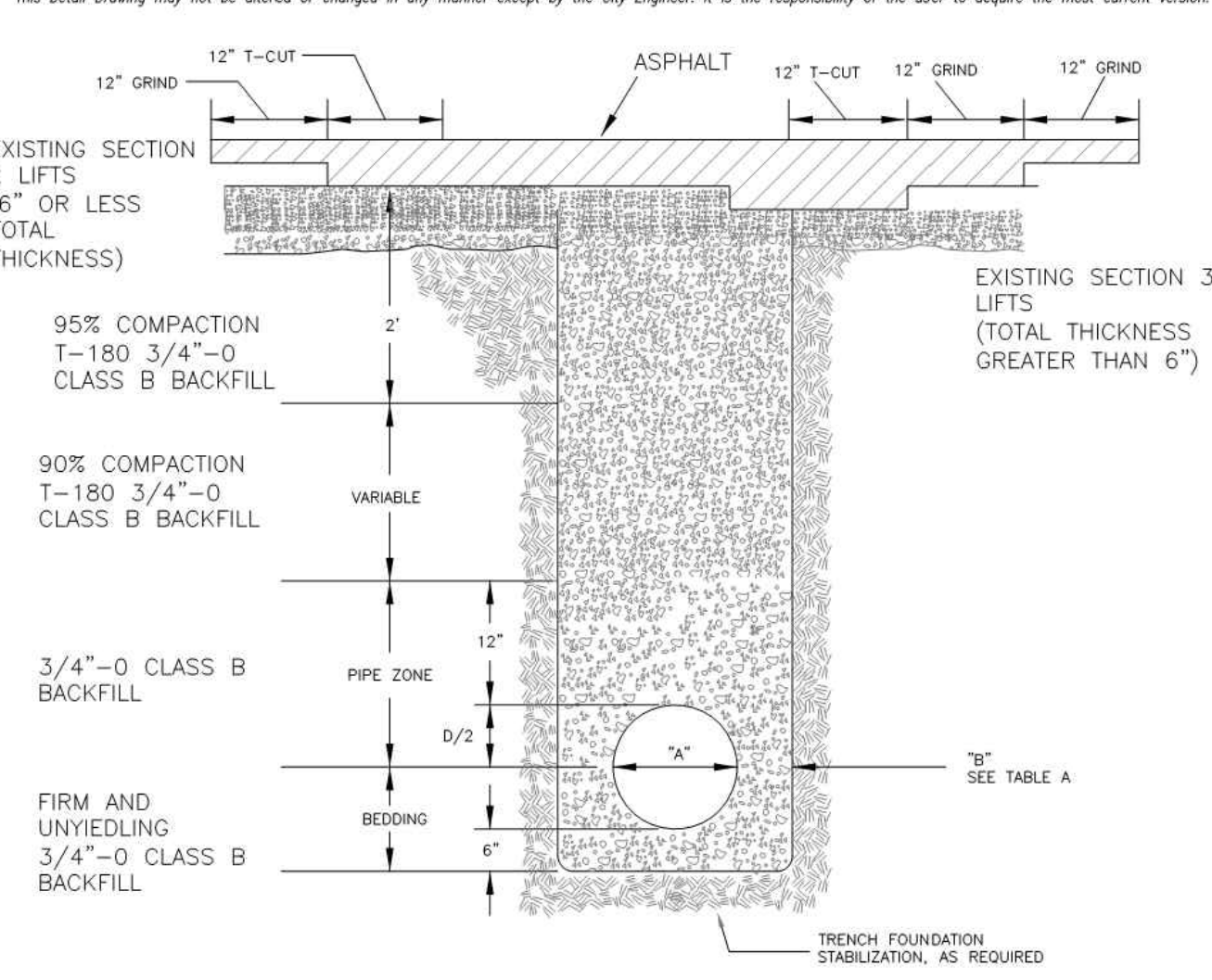
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- NOTE:
- RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.
 - SHALL BE LOW FLOW, NO OVERFLOW STYLE BAGS.

Inlet Protection Type 5			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2127	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2127.DWG	APPROVED BY: NK	DATE: 9/17/14	
CITY OF WILSONVILLE PUBLIC WORKS STANDARDS			

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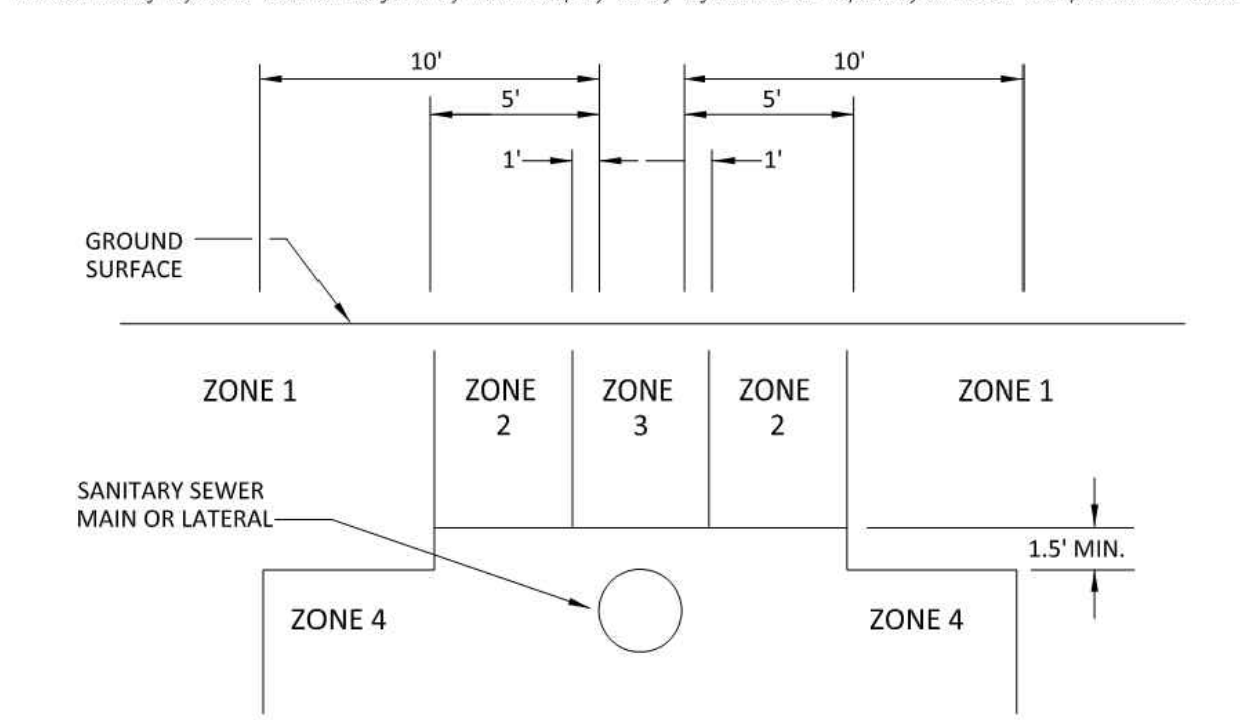


74"	4"	6"	8"	10"	12"	15"	18"	21"	24"	30"	36"	42"	48"	54"	60"	66"	72"
76"	6"	6"	6"	6"	6"	D/2	D/2	D/2	D/2	D/2	D/2	24"	24"	24"	24"	24"	24"

- NOTES:
- COMMERCIAL MIXED CLSM MAY BE SUBSTITUTED FOR 3/4"-0 CLASS B BACKFILL ABOVE THE PIPE ZONE.
 - CLSM SHALL BE PLACED TO TOP OF ROAD BASE ROCK.
 - ASPHALT SHALL BE PLACED IN LIFTS NOT EXCEEDING 3" AND COMPACTED TO 92% OF RICE DENSITY.
 - PIPE ZONE BACKFILL MATERIAL SHALL BE COMPACTED TO ASSURE THAT THERE ARE NO UNFILLED OR UNCOMPACTED AREAS AROUND THE PIPE.
 - IF S/W IS AGAINST CURB, FILL ROCK TO BACK OF S/W.
 - IF S/W IS NOT AGAINST CURB, FILL ROCK 2' BACK FROM CURB.
 - 12" TEE CUT TO BE MADE AFTER INSTALLATION AND COMPACTION OF CRUSHED AGGREGATE.
 - ASPHALT GRINDING TO MATCH NEW TOP LIFT THICKNESS.
 - LIFT THICKNESS MINIMUM OF 2" MAXIMUM OF 3" TO BE COORDINATED WITH CITY INSPECTOR.

Standard Backfill and Street Repair			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2145	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2145.dwg	APPROVED BY: NK	DATE: 6/4/14	
CITY OF WILSONVILLE PUBLIC WORKS STANDARDS			

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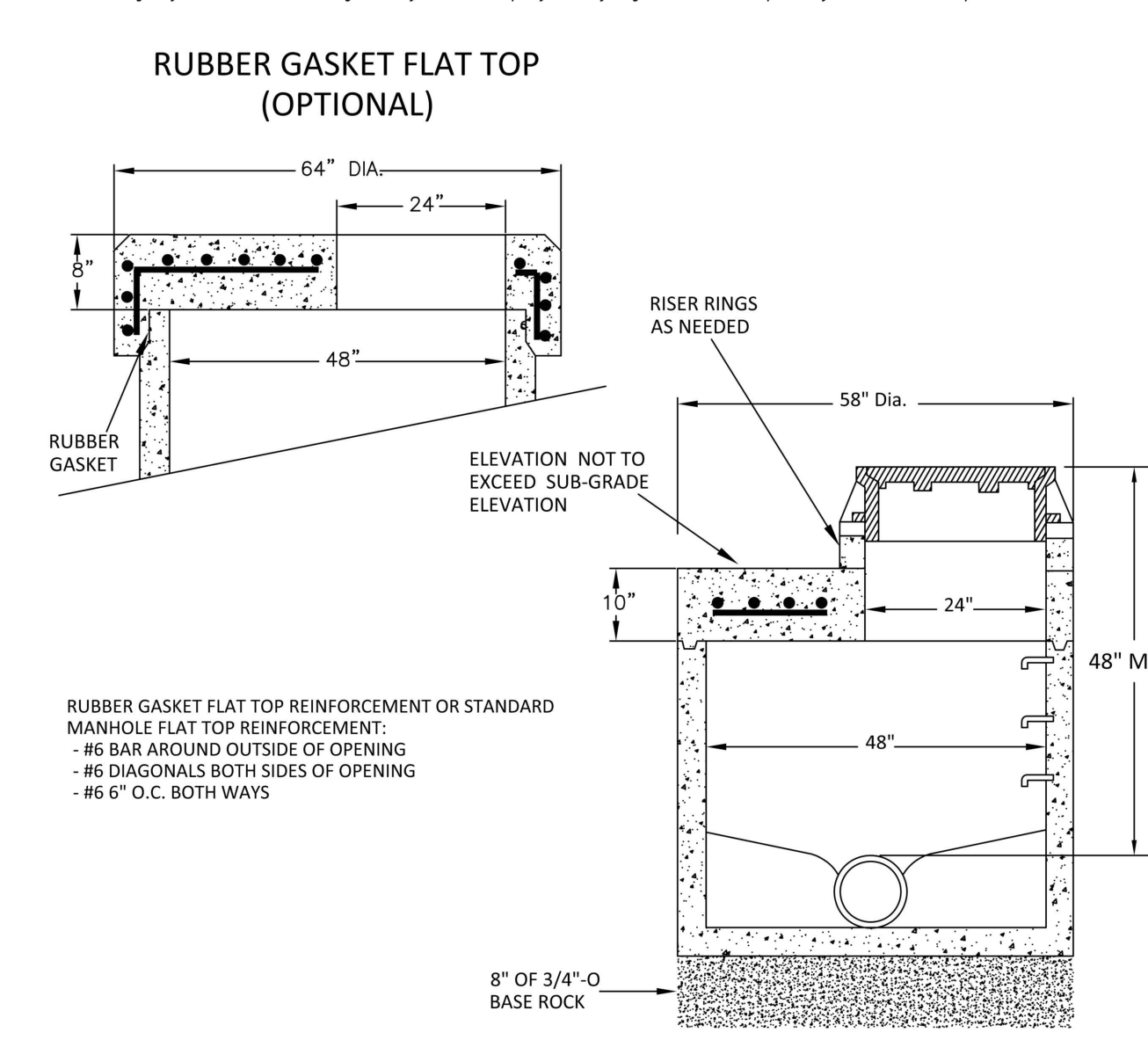


- PARALLEL CONSTRUCTION:
- ZONE 1: ONLY CROSSING RESTRICTIONS APPLY
 - ZONE 2: CONSTRUCT SEWER OF PRESSURE PIPE WITH WATERTIGHT JOINTS WHEN ZONE 1 IS NOT FEASIBLE.
 - ZONE 3: PARALLEL WATER LINE PROHIBITED
 - ZONE 4: PARALLEL WATER LINE PROHIBITED

- CROSSING CONSTRUCTION:
- SANITARY SEWER AND WATER LINE SHALL CROSS AT APPROXIMATELY 90 DEGREES.
 - WHEREVER POSSIBLE, THE BOTTOM OF THE WATER LINE SHALL BE 1.5 FEET ABOVE THE TOP OF THE SEWER LINE, AND ONE FULL LENGTH OF WATER LINE SHALL BE CENTERED AT THE CROSSING.
 - WHERE THE BOTTOM OF THE WATER LINE IS LESS THAN 1.5 FEET ABOVE THE TOP OF THE SEWER LINE, THE WATER LINE SHALL BE REPLACED WITH ONE FULL LENGTH OF WATER PIPE CENTERED AT THE CROSSING. THE SEWER LINE SHALL BE: ENCASED IN A REINFORCED CONCRETE JACKET 10 FEET ON EACH SIDE OF THE CROSSING OR REPLACED WITH ONE FULL LENGTH OF PRESSURE PIPE WITH WATERTIGHT JOINTS, CENTERED ON THE CROSSING.

Sanitary Sewer Crossing			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2150	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2150.DWG	APPROVED BY: NK	DATE: 6/4/14	
CITY OF WILSONVILLE PUBLIC WORKS STANDARDS			

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- NOTES:
- SEWER MANHOLE TO BE PERFORMED RUBBER O-RING GASKET DESIGN ONLY. ALL MANHOLES SHALL CONFORM WITH ASTM C-478.
 - ALL REINFORCEMENT SHALL BE GRADE 60.
 - INSTALL FLAT TOP MANHOLES FOR SHALLOW MANHOLES ONLY WHERE A SHORT ECCENTRIC CONE AS SHOWN IN DETAIL NO. S-2025 IS NOT FEASIBLE AS DETERMINED BY THE CITY'S AUTHORIZED REPRESENTATIVE.
 - INSTALL MANHOLE IN ACCORDANCE WITH DETAIL NO. S-2005 EXCEPT AS MODIFIED HEREIN.
 - GRADE RINGS AND FLAT TOP SECTION SHALL BE DESIGNED TO WITHSTAND AASHTO H-20 LOADINGS.

Flat Top Manhole			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2030	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2030.DWG	APPROVED BY: NK	DATE: 6/4/14	
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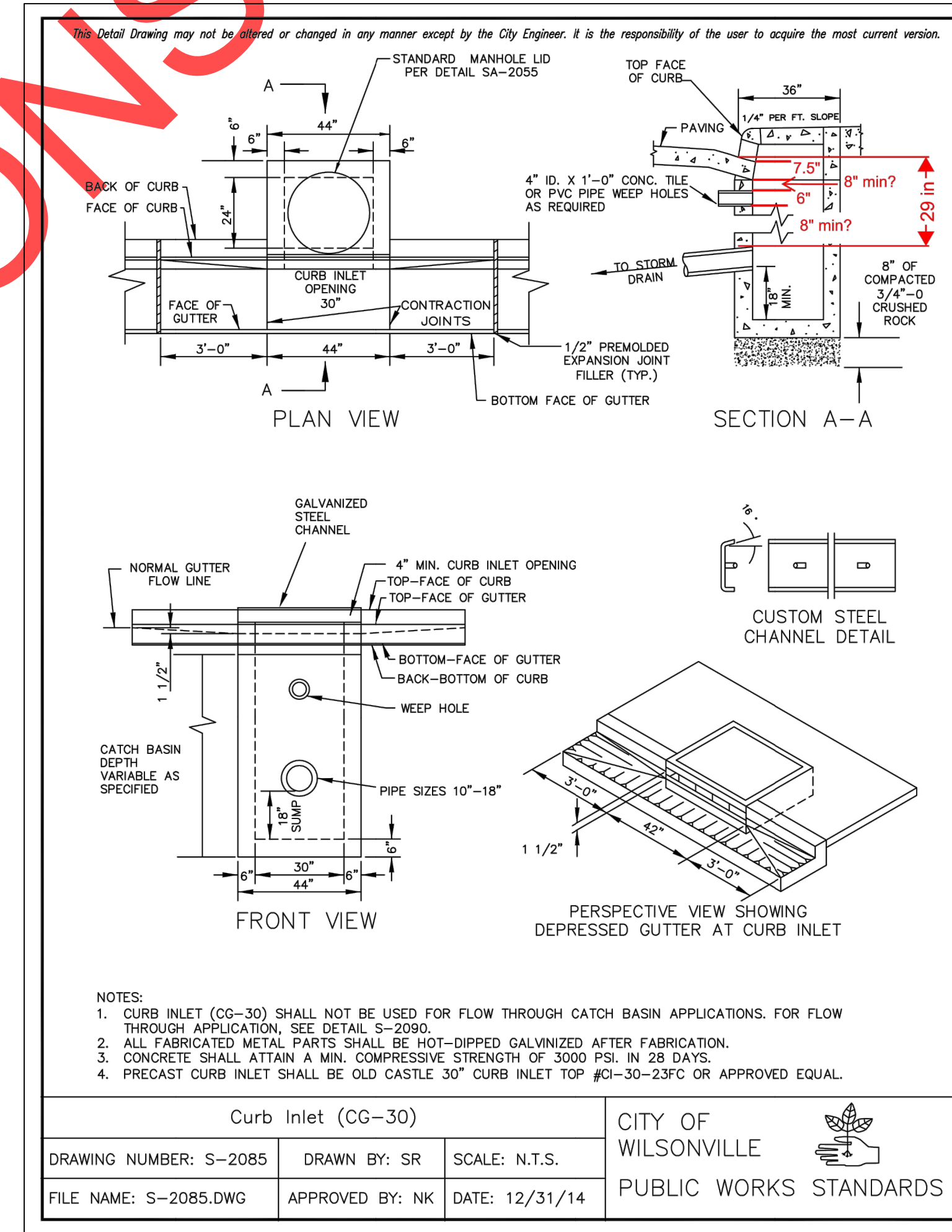
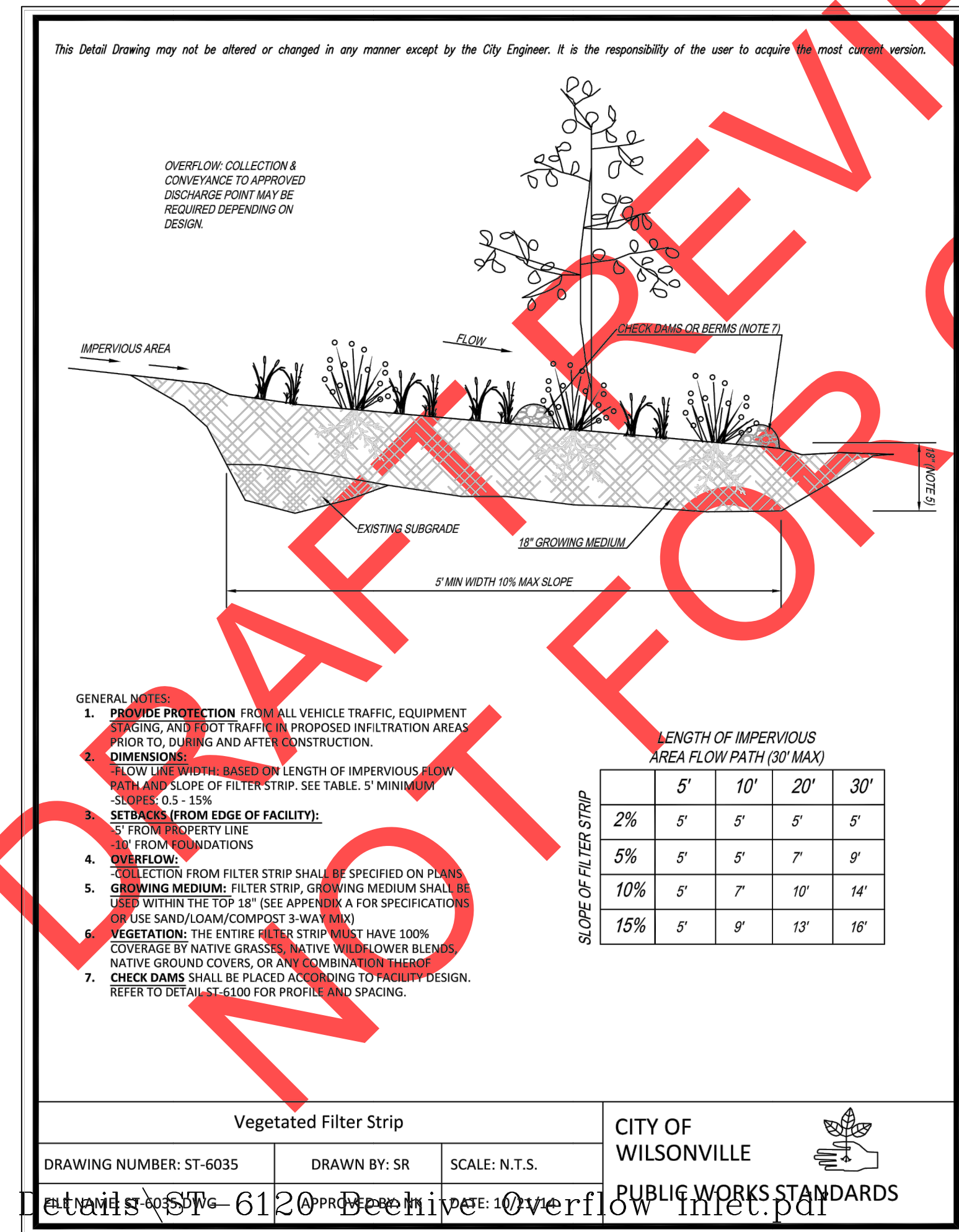
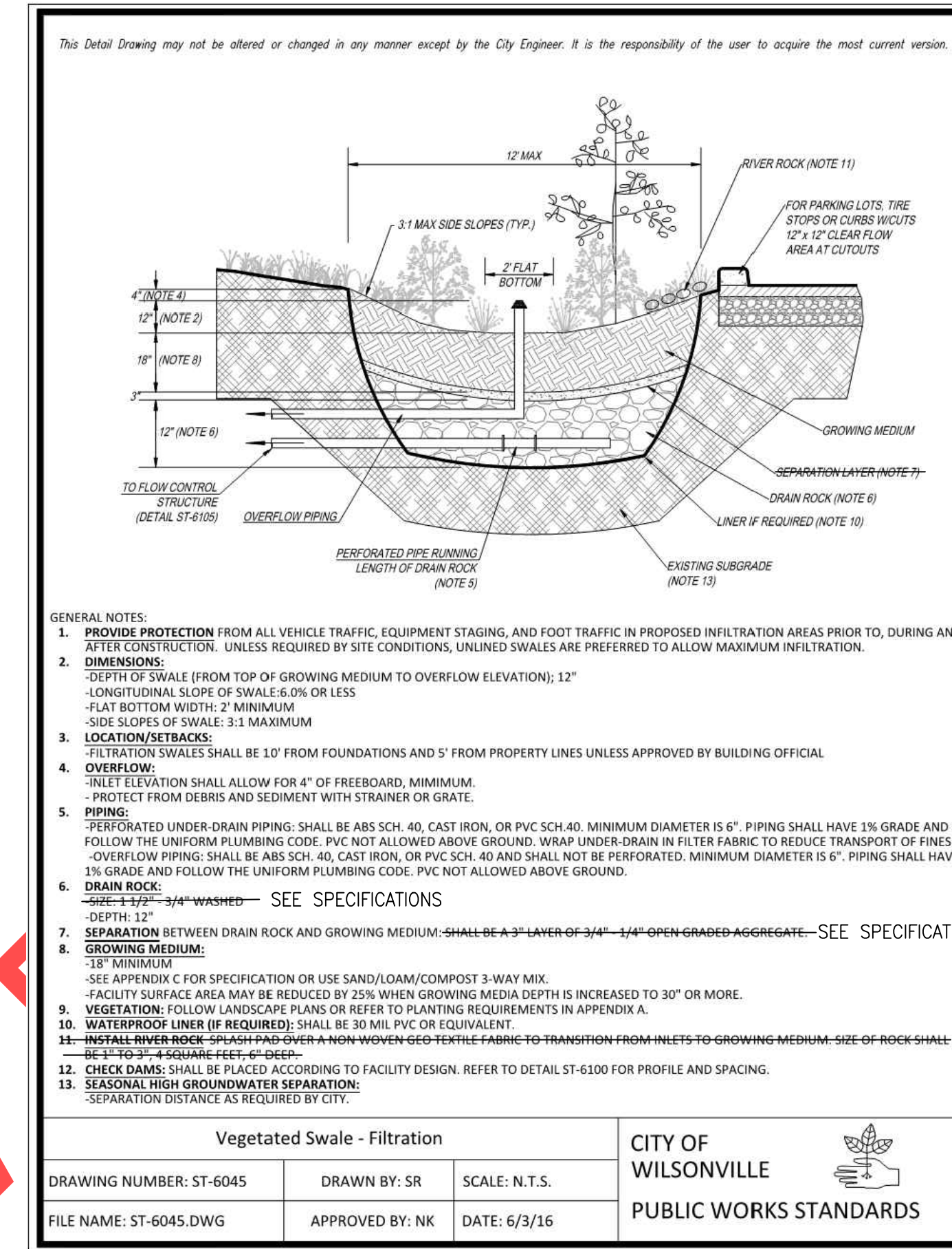
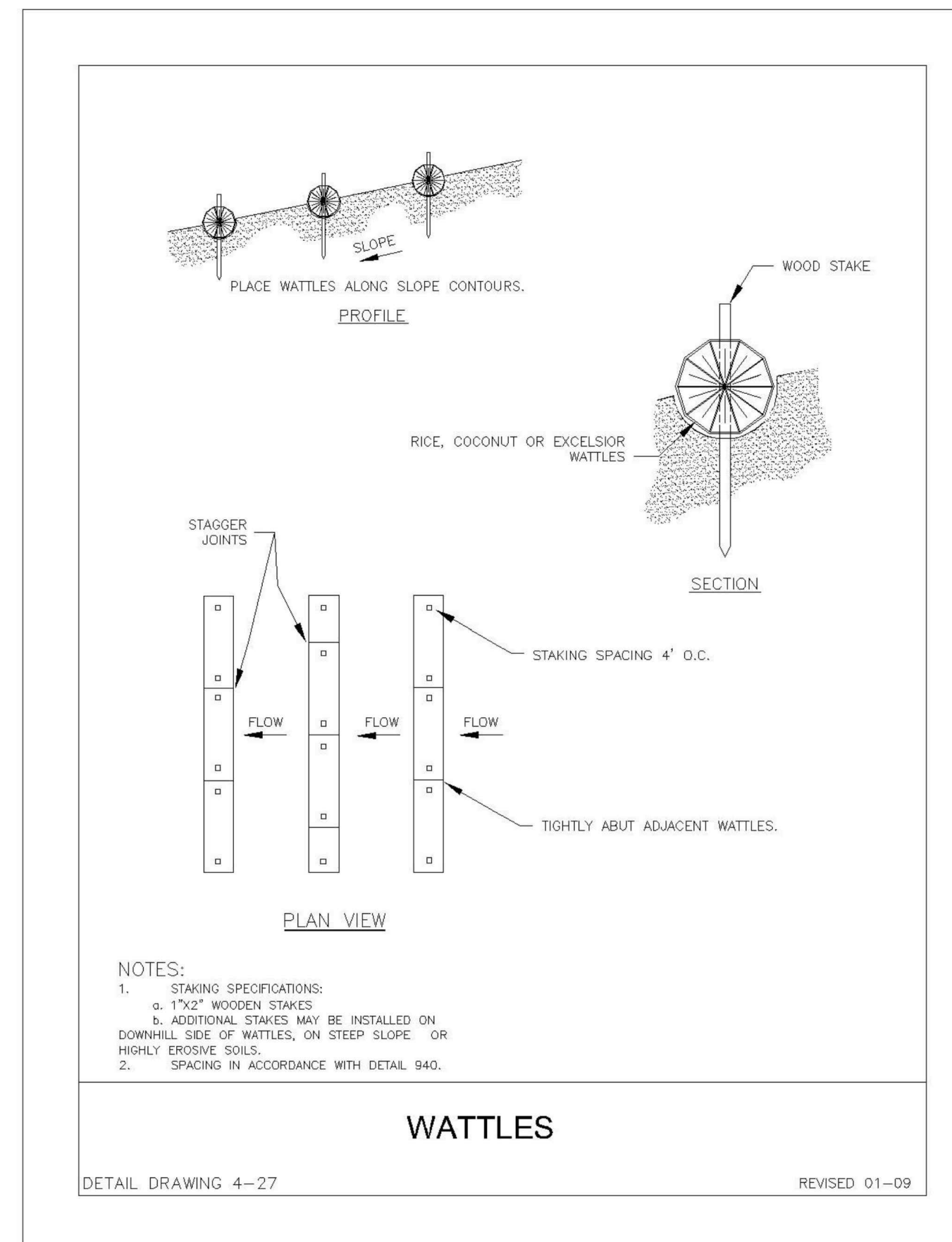
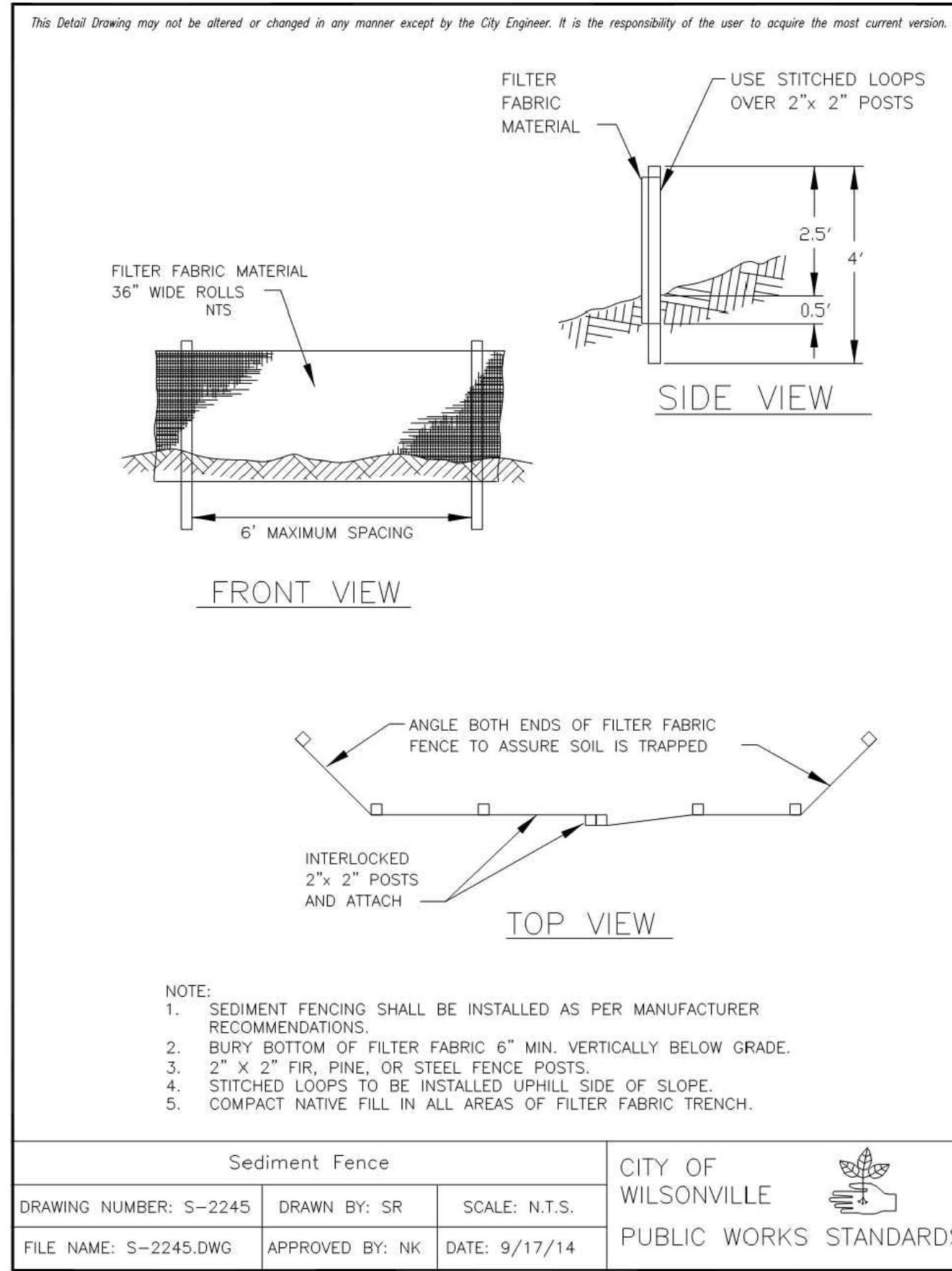
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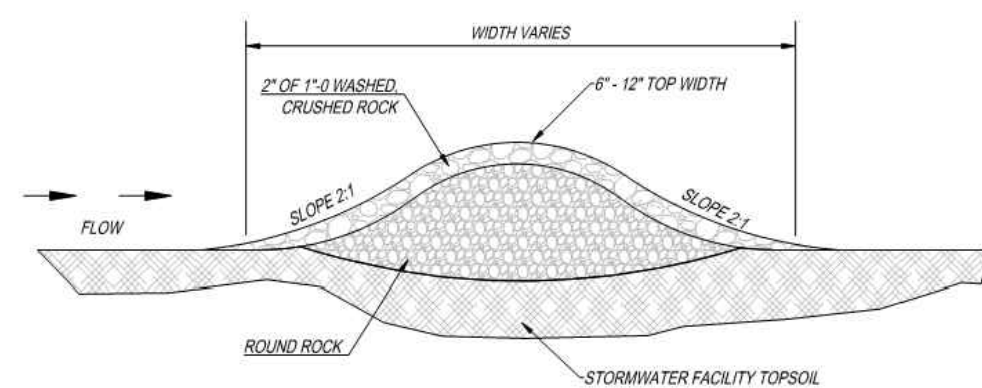
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 DT07
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CHECK DAM

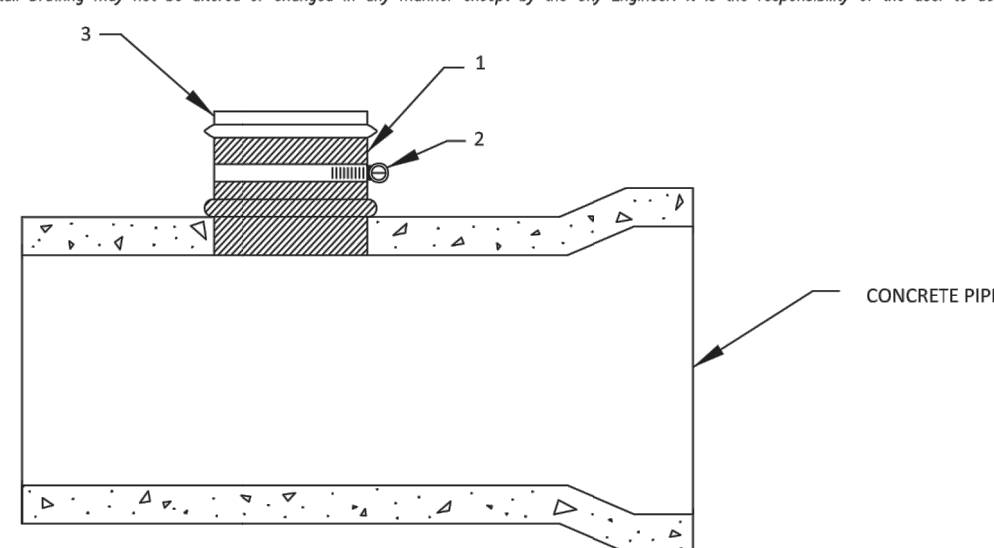
CHECK DAM SPACING TABLE 1

FACILITY LENGTH	LONGITUDINAL SLOPE	# CHECK DAMS (1)	ADDITIONAL INLETS (2)
30	<=1%	0	0
31 - 50	>1%	1	0
51 - 70	<=1%	2	1
71 - 90	>1%	3	2
91 +	<=1%	4	3
	>1%	5	4

- GENERAL NOTES:
- SPACING: CHECK DAMS TO BE EVENLY SPACED BETWEEN INLET AND OUTLET. ADDITIONAL REQUIREMENTS MAY BE NECESSARY ON STEEP SLOPES. PLACE ONE CHECK DAM EVERY 30' WHERE SLOPE EXCEEDS 5%.
 - ADDITIONAL INLETS TO BE PLACED DIRECTLY DOWNSTREAM OF CHECK DAMS.
 - TOP OF CHECK DAM TO BE 1" BELOW GUTTER ELEVATION AT INLET (AT CURB LINE) BUT NOT GREATER THAN 2" BELOW TOP OF CURB.
 - DIMENSIONS: WIDTH: 12" - EXTEND CHECK DAMS LATERALLY ACROSS FULL WIDTH OF THE FACILITY, PERPENDICULAR TO THE FLOW PATH. 3" TO 5" IN HEIGHT

Check Dam Details			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: ST-6100	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: ST-6100.DWG	APPROVED BY: NK	DATE: 10/22/14	

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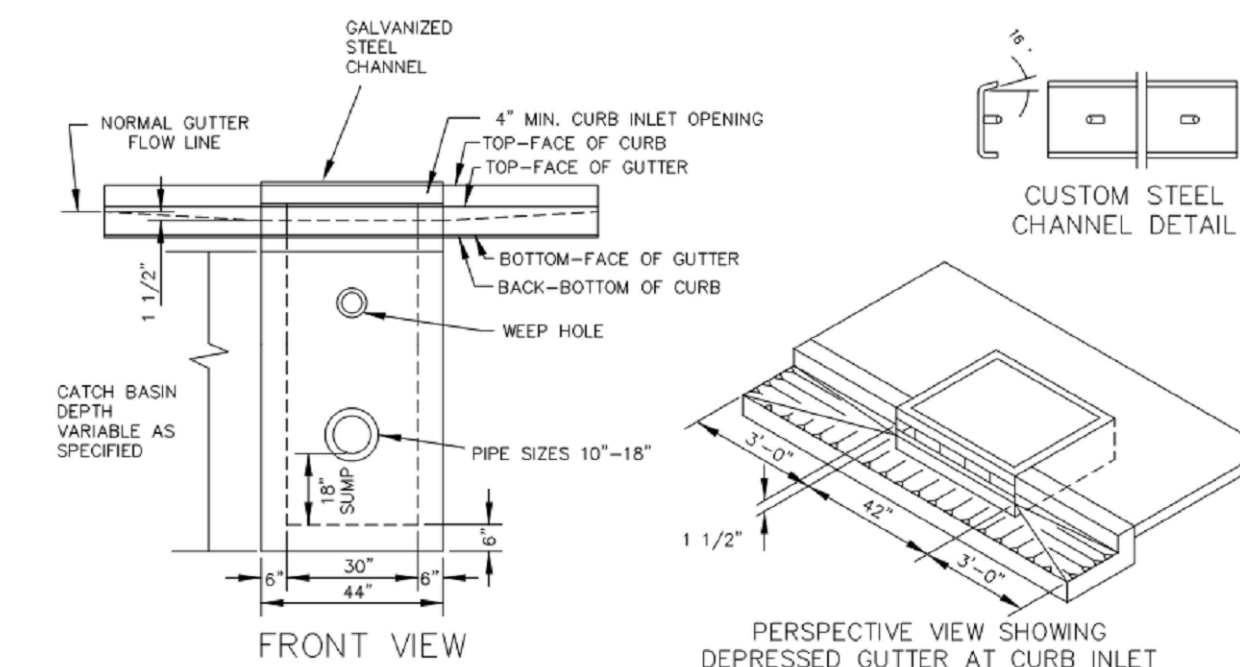
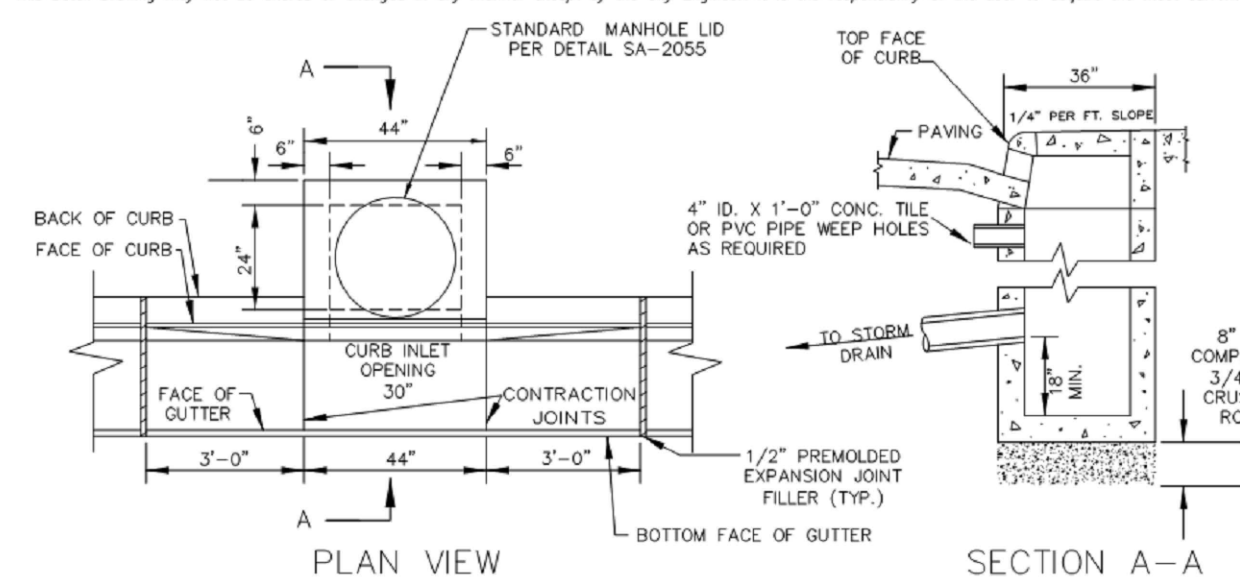


- COMPLETE RUBBER SLEEVE (ASTM C-443) INCLUDES A MOLDED SEGMENT THAT HOLDS IT IN PLACE.
- STAINLESS STEEL BAND (9/16" SERIES 316) SECURES UPPER HALF OF RUBBER SLEEVE TO THE PVC HUB.
- PVC HUB (ASTM C-3034 SDR 35) DRIVE INTO CENTER OF RUBBER SLEEVE AFTER SLEEVE IS PLACED IN HOLE.

- NOTE:
- INSERTA TEES SHALL NOT BE USED ON NEW CONSTRUCTION AND ARE ONLY ALLOWED ON EXISTING THICK WALL PIPE MATERIAL, SUCH AS CONCRETE, DUCTILE IRON, AND RIB PLASTIC.
 - ALL INSERTA-TEE HOLES SHALL BE MACHINE DRILLED AND CORED AND LOCATED A MINIMUM 12" CLEAR DISTANCE FROM PIPE BELL.

Inserta-Tee			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2160	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2160.DWG	APPROVED BY: NK	DATE: 6/4/14	

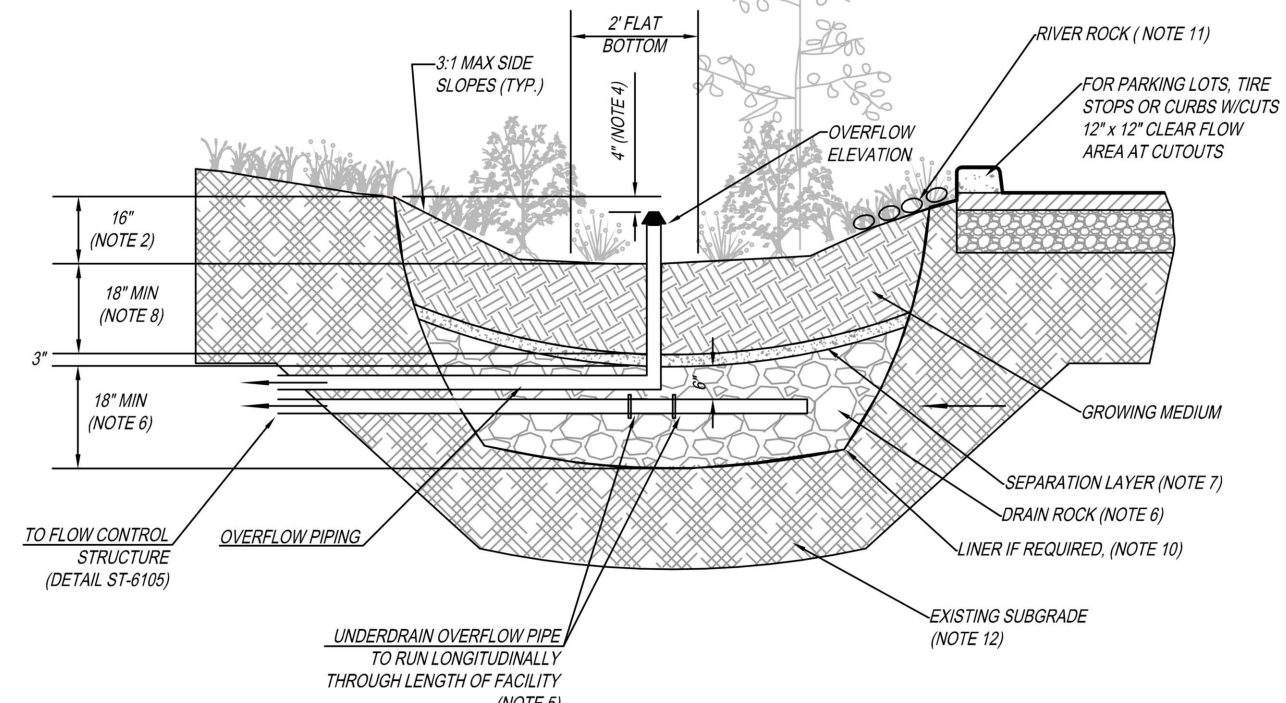
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- NOTES:
- CURB INLET (CG-30) SHALL NOT BE USED FOR FLOW THROUGH CATCH BASIN APPLICATIONS. FOR FLOW THROUGH APPLICATION, SEE DETAIL S-2090.
 - ALL FABRICATED METAL PARTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
 - CONCRETE SHALL ATTAIN A MIN. COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
 - PRECAST CURB INLET SHALL BE OLD CASTLE 30" CURB INLET TOP #C1-30-23FC OR APPROVED EQUAL.

Curb Inlet (CG-30)			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2085	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2085.DWG	APPROVED BY: NK	DATE: 12/31/14	

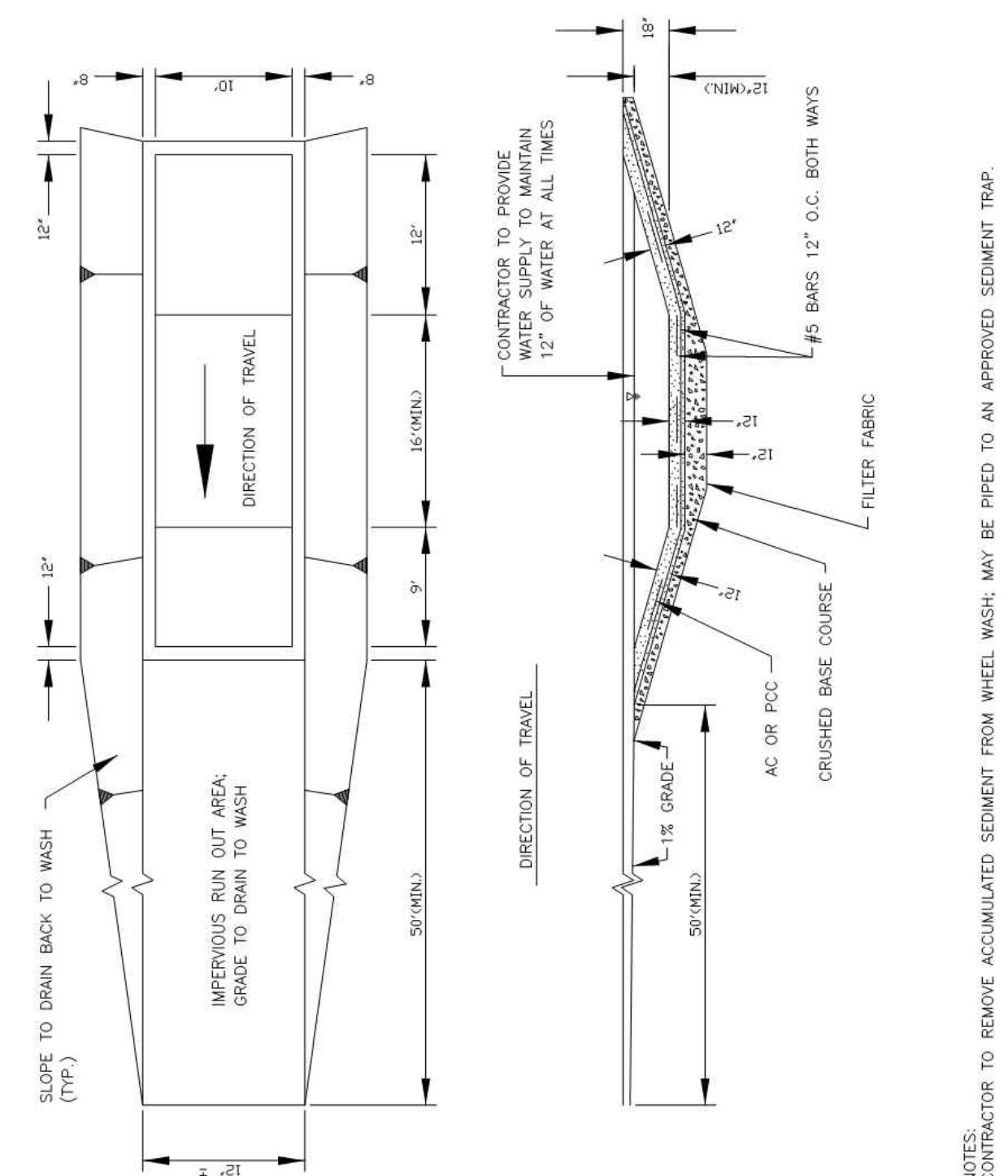
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- GENERAL NOTES:
- PROVIDE PROTECTION FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED RAIN GARDENS ARE PREFERRED TO MAXIMIZE ONSITE INFILTRATION.
 - DIMENSIONS: DEPTH OF BASIN (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12" - FLAT BOTTOM WIDTH: 2' MINIMUM - SIDE SLOPES OF RAIN GARDEN: 3:1 MAXIMUM - CENTERLINE SLOPE OF RAIN GARDEN: 0.5% OR LESS
 - SETBACKS: INFILTRATION RAIN GARDEN SHALL BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL
 - OVERFLOW: OVERFLOW REQUIRED. INLET ELEVATION SHALL ALLOW FOR 4" OF FREEBOARD, MINIMUM. PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE.
 - PIPING: PERFORATED UNDER-DRAIN PIPING: SHALL RUN LONGITUDINALLY THROUGH LENGTH OF FACILITY. SHALL BE ABS SCH. 40, CAST IRON, OR PVC SCH. 40. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND. WRAP UNDER-DRAIN IN FILTER FABRIC TO REDUCE TRANSPORT OF FINES. OVERFLOW PIPING: SHALL BE ABS SCH. 40, CAST IRON, OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING SHALL HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
 - DRAIN ROCK: SIZE: 1 1/2" TO 3" WASHED - SEE SPECIFICATIONS - DEPTH: 18" MINIMUM
 - SEPARATION BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1 1/4" OPEN GRADED AGGREGATE. SEE SPECIFICATIONS
 - GROWING MEDIUM: DEPTH: 18" MINIMUM - SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX. - FACILITY SURFACE AREA MAY BE REDUCED BY 25% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
 - VEGETATION: FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
 - WATERPROOF LINER (IF REQUIRED): SHALL BE 30 MIL PVC OR EQUIVALENT.
 - INSTALL RIVER ROCK SPLASH PAD OVER A NON WOVEN GEO-TEXTILE FABRIC TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" - 3" SQUARE FEET, 6" DEEP.
 - SEASONAL HIGH GROUNDWATER SEPARATION: SEPARATION DISTANCE AS REQUIRED BY CITY.

Rain Garden - Filtration			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: ST-6020	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: ST-6020.DWG	APPROVED BY: NK	DATE: 6/3/16	

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Wheel Wash			CITY OF WILSONVILLE PUBLIC WORKS STANDARDS
DRAWING NUMBER: S-2235	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: S-2235.DWG	APPROVED BY: NK	DATE: 9/17/14	

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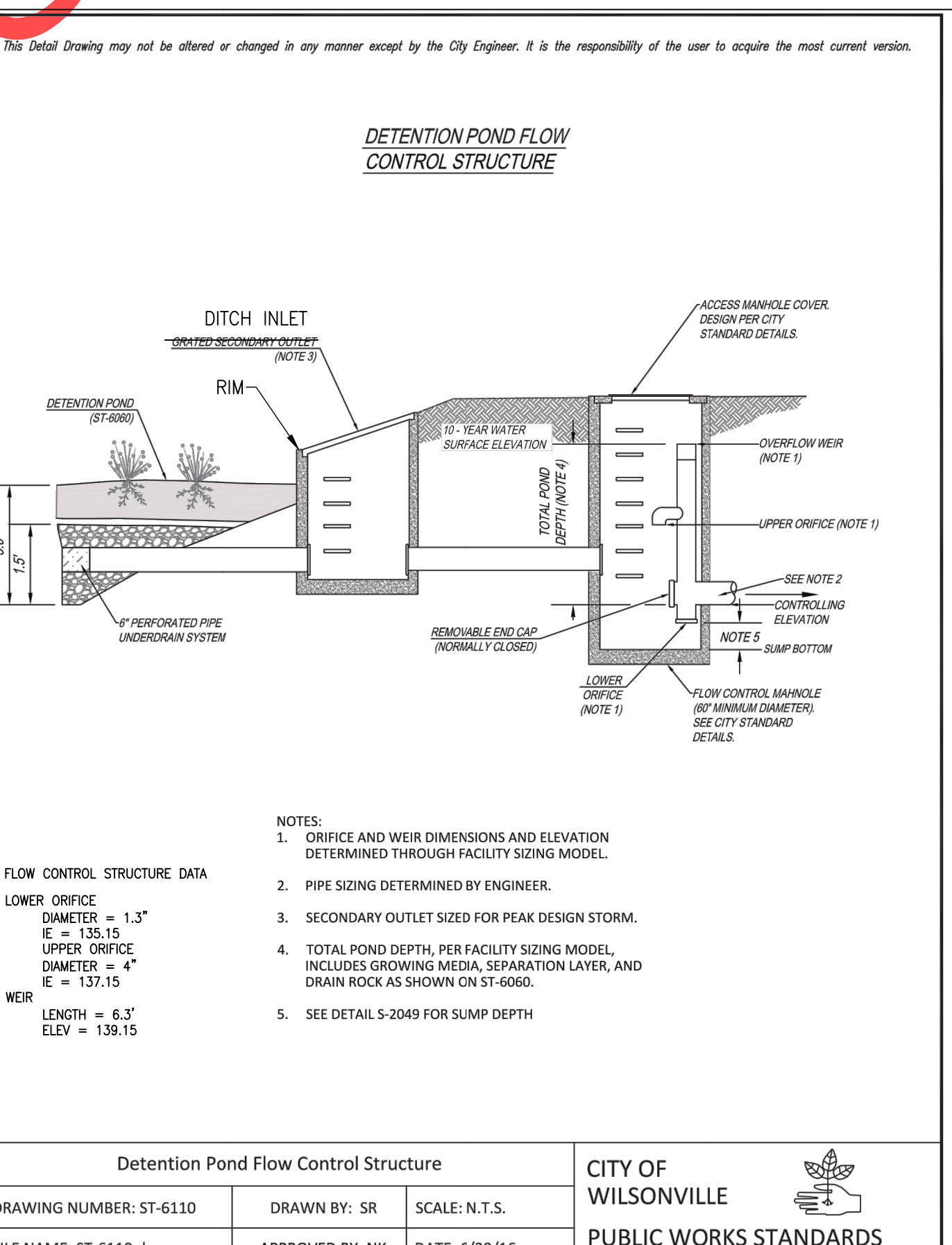
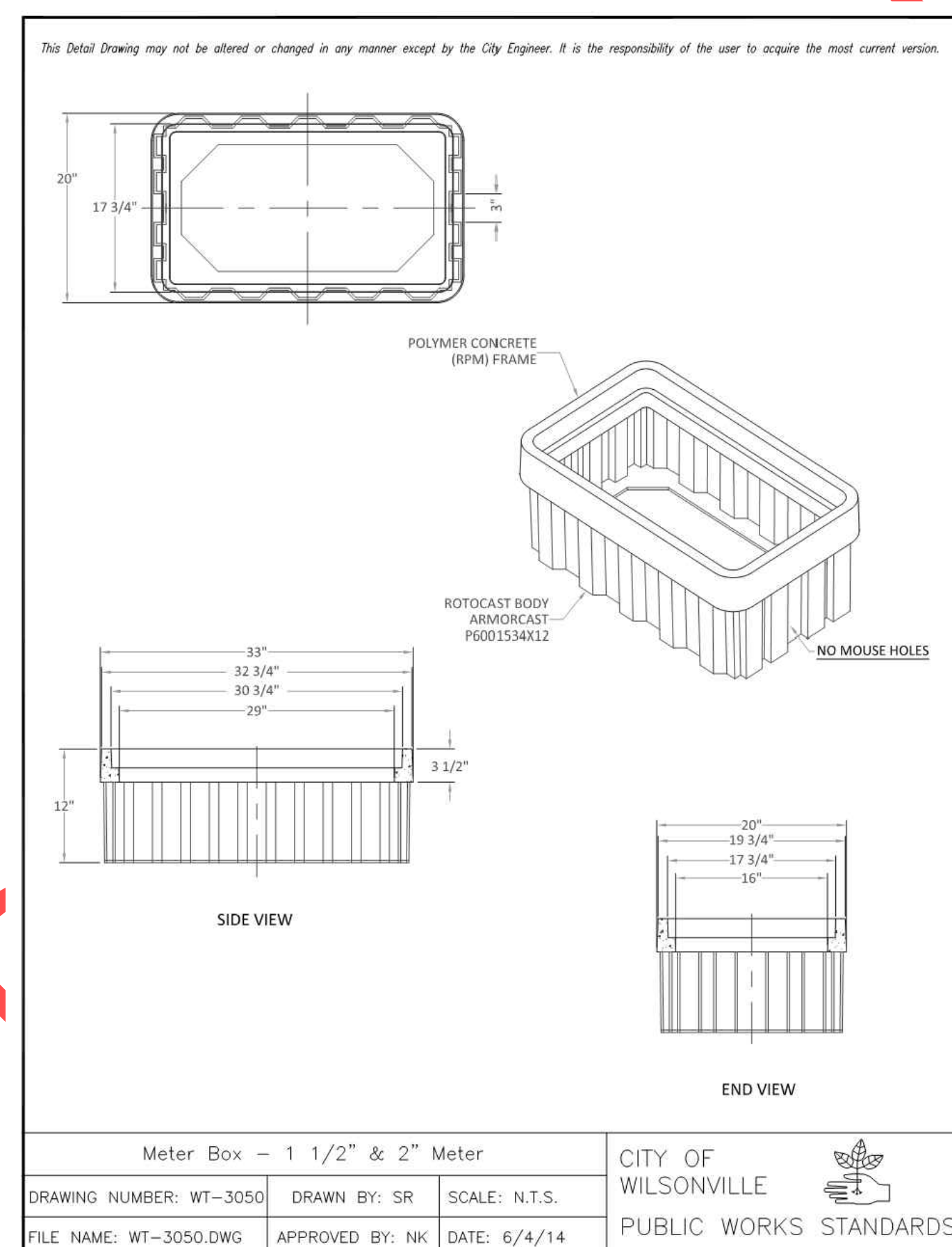
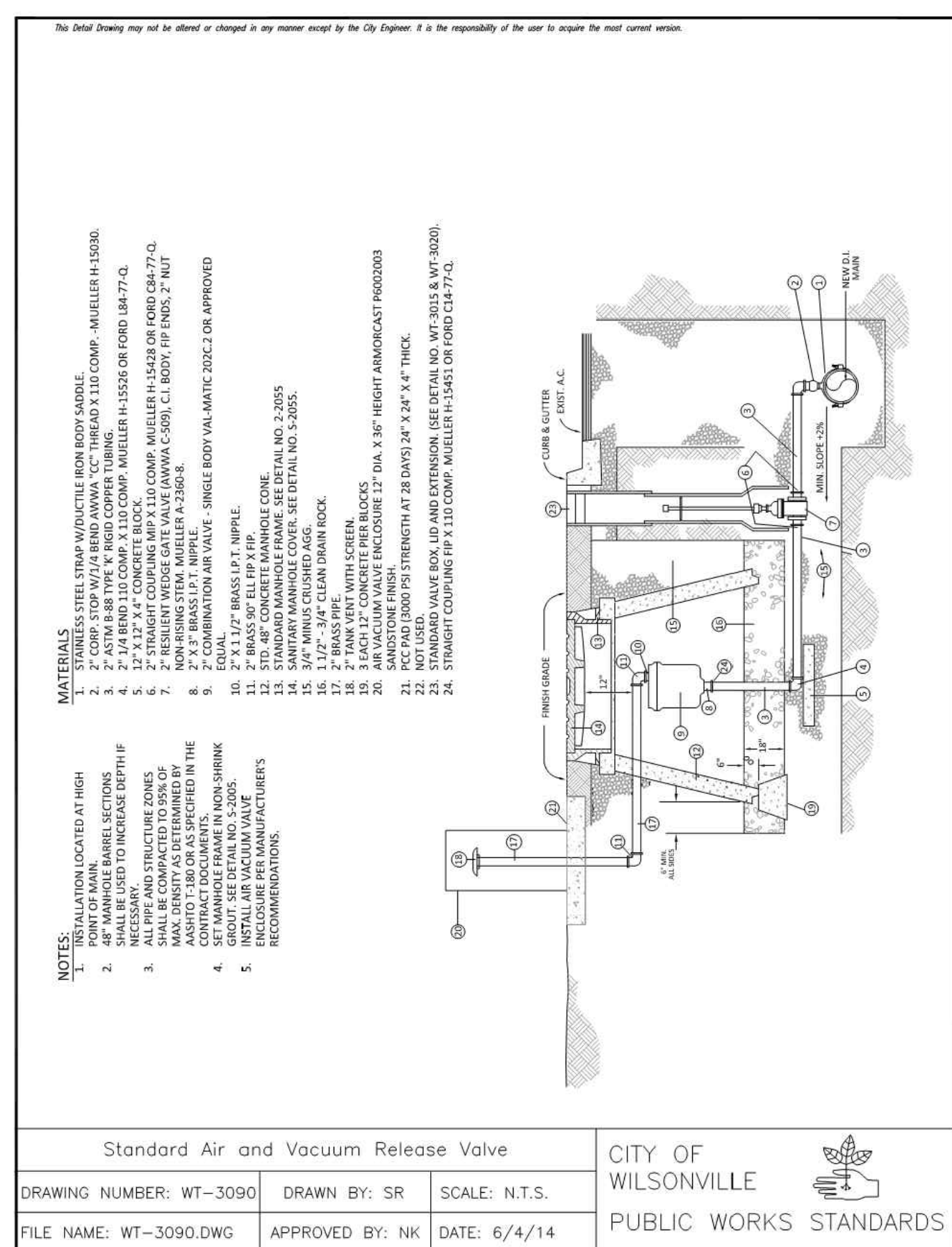
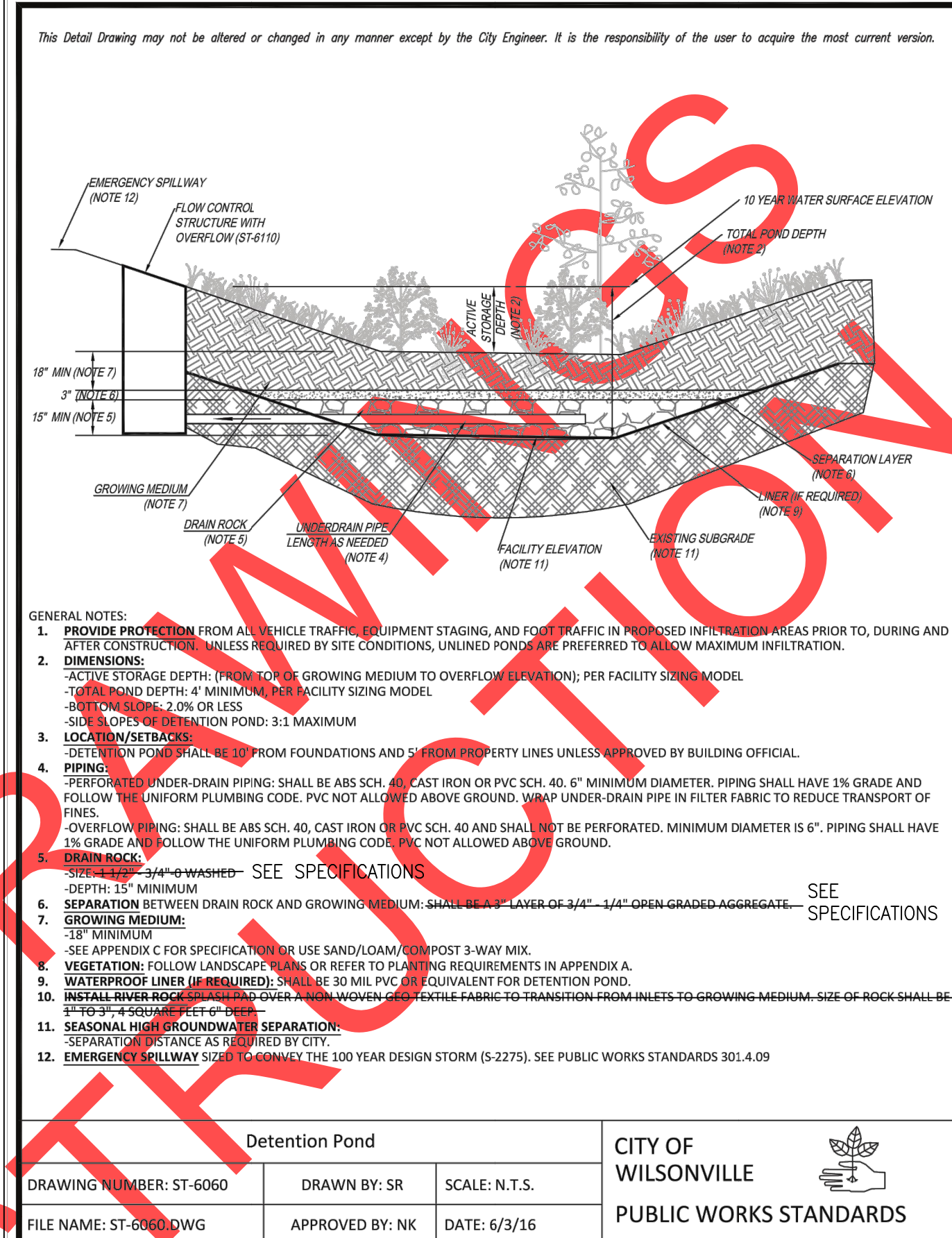
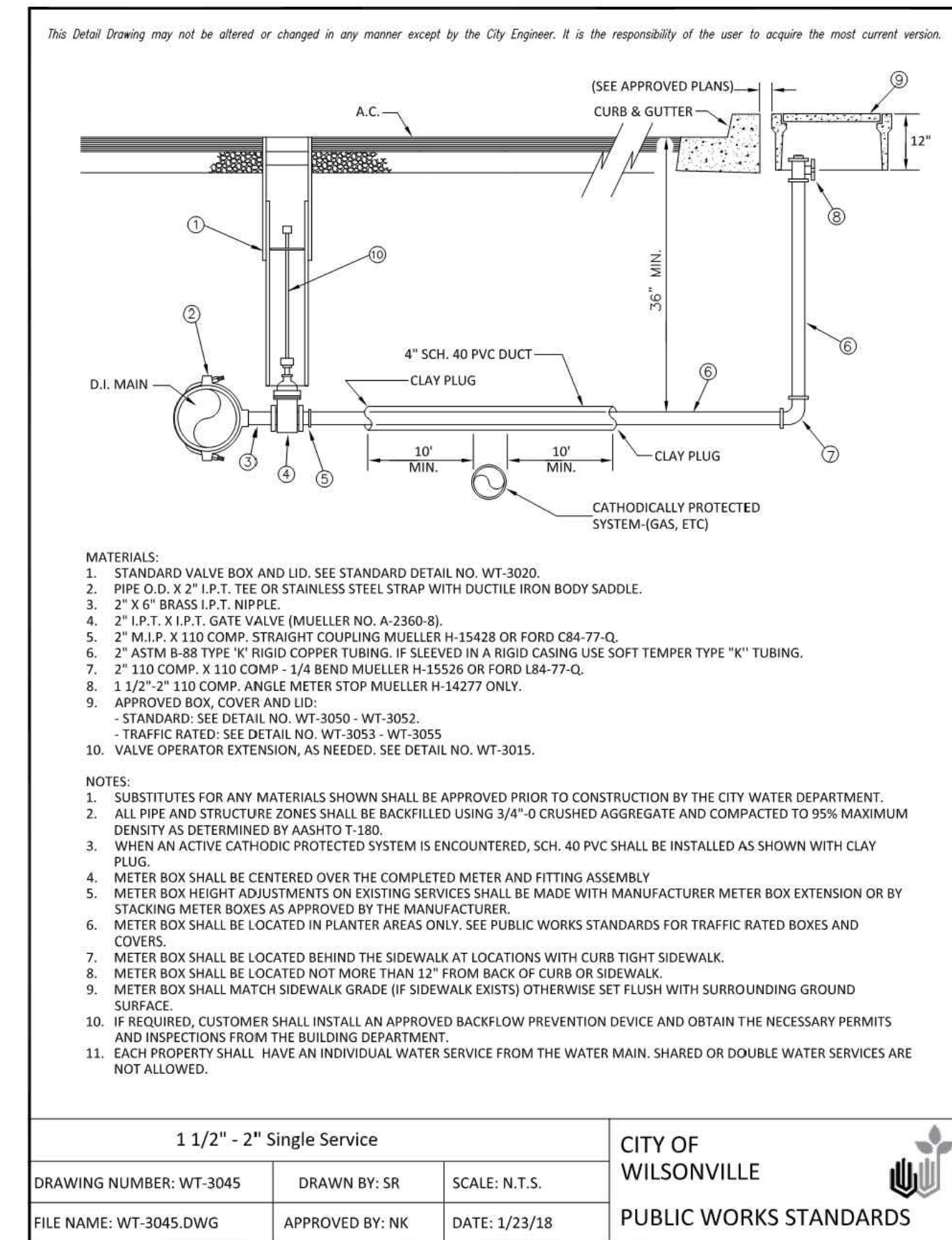
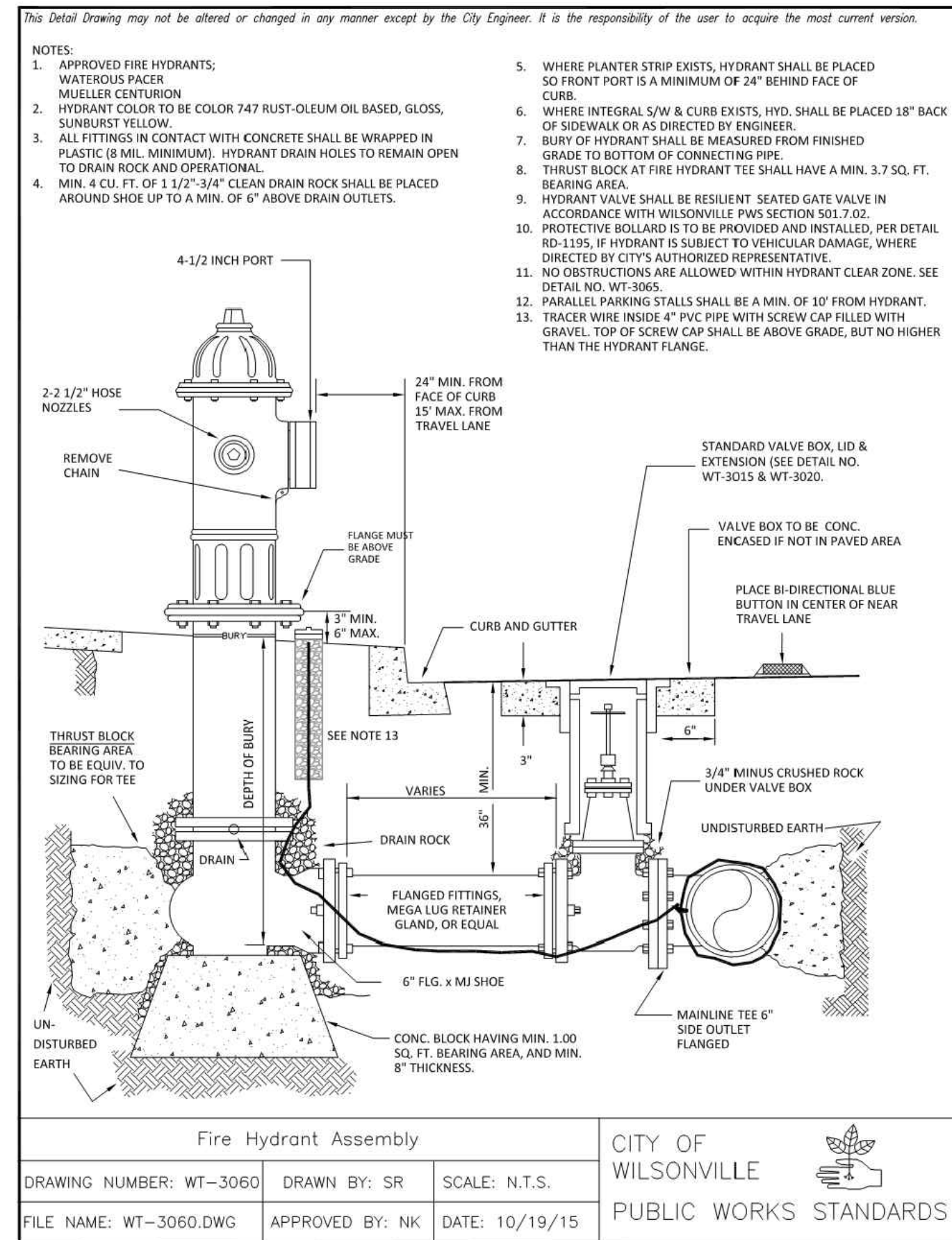
Date: 1 February 2019
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Designed By: PH/BB
Drawn By: SLR
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

CIP # 4196
PROJECT # 2017-02-001
DT08
129 of 211

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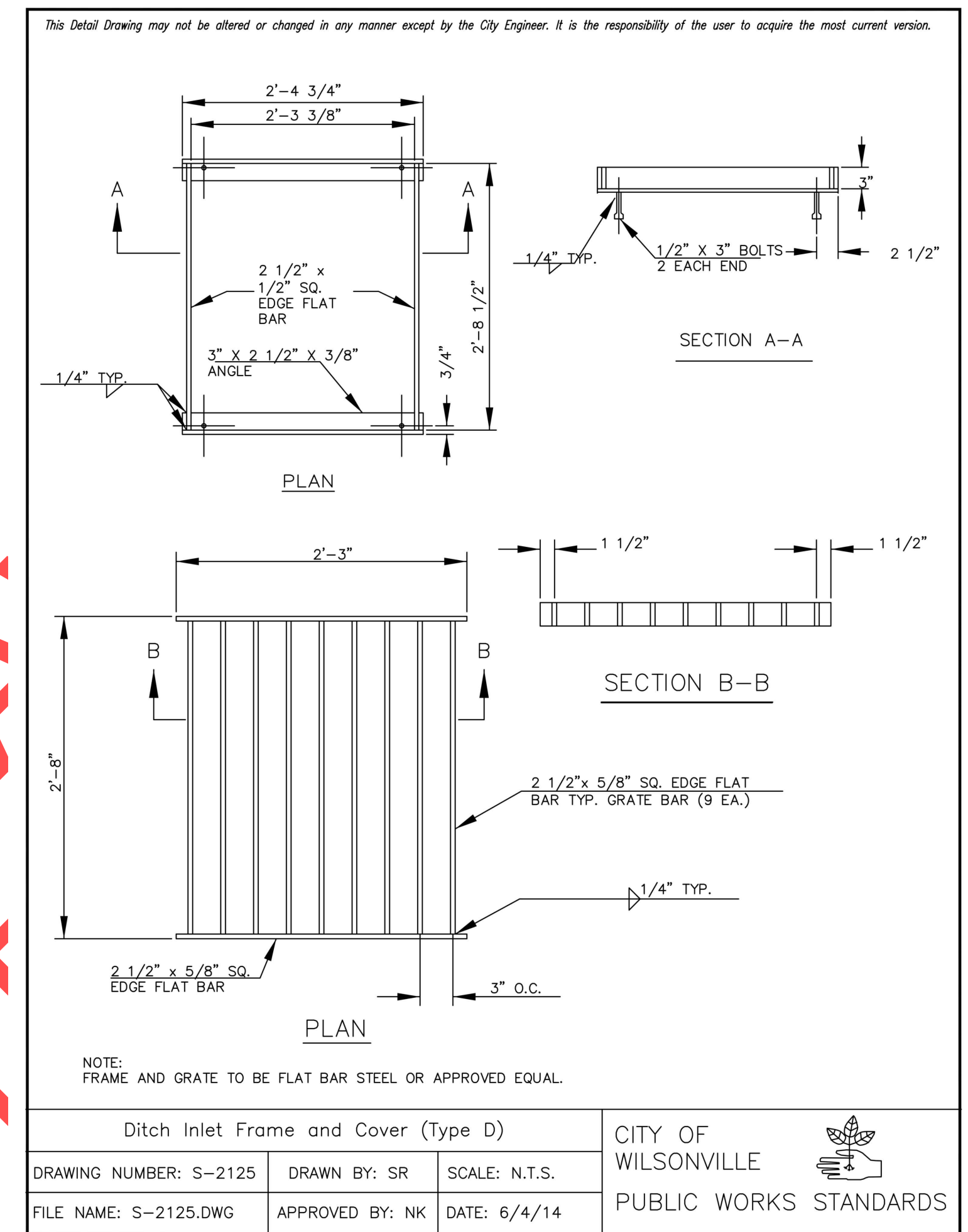
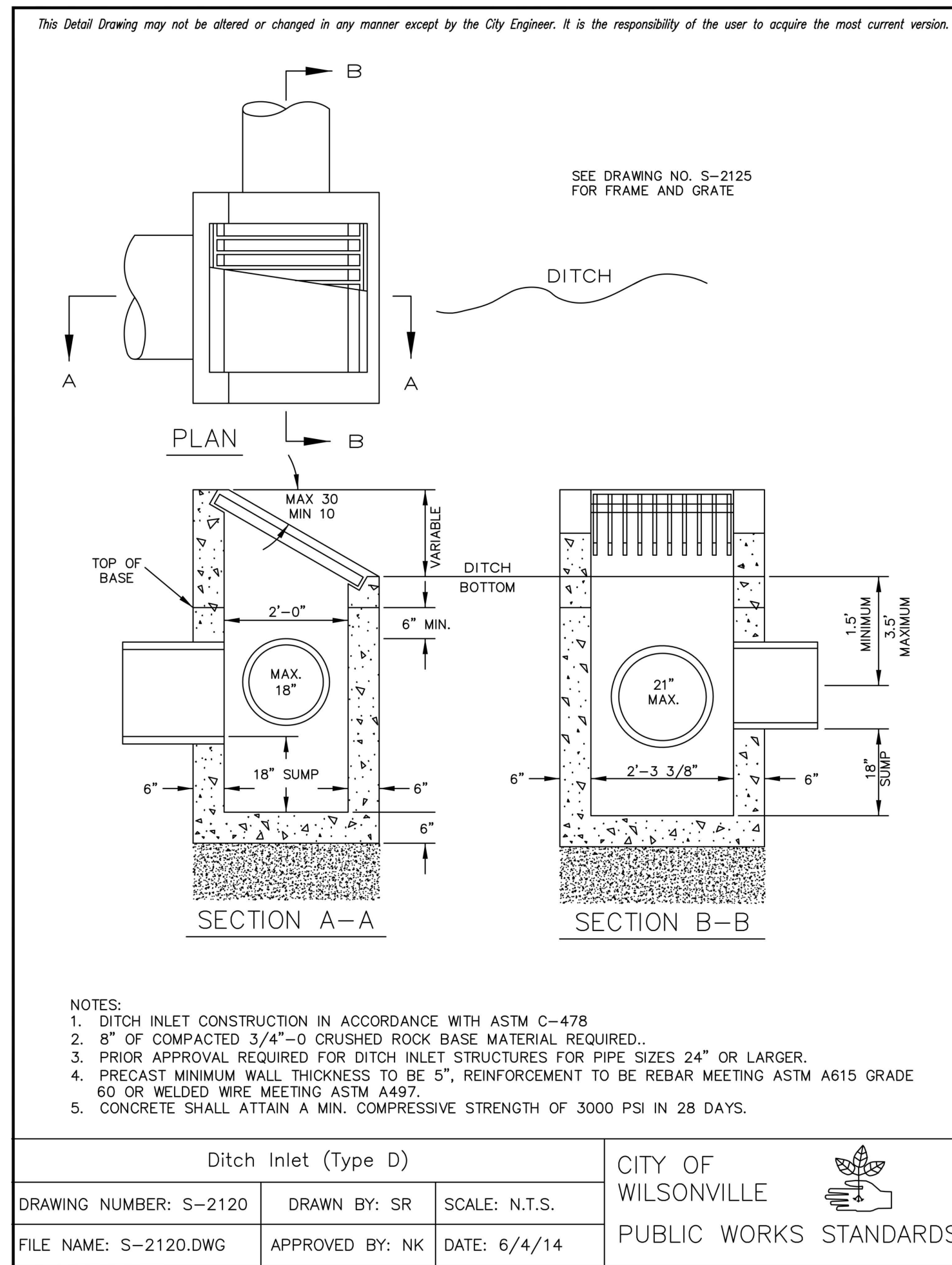
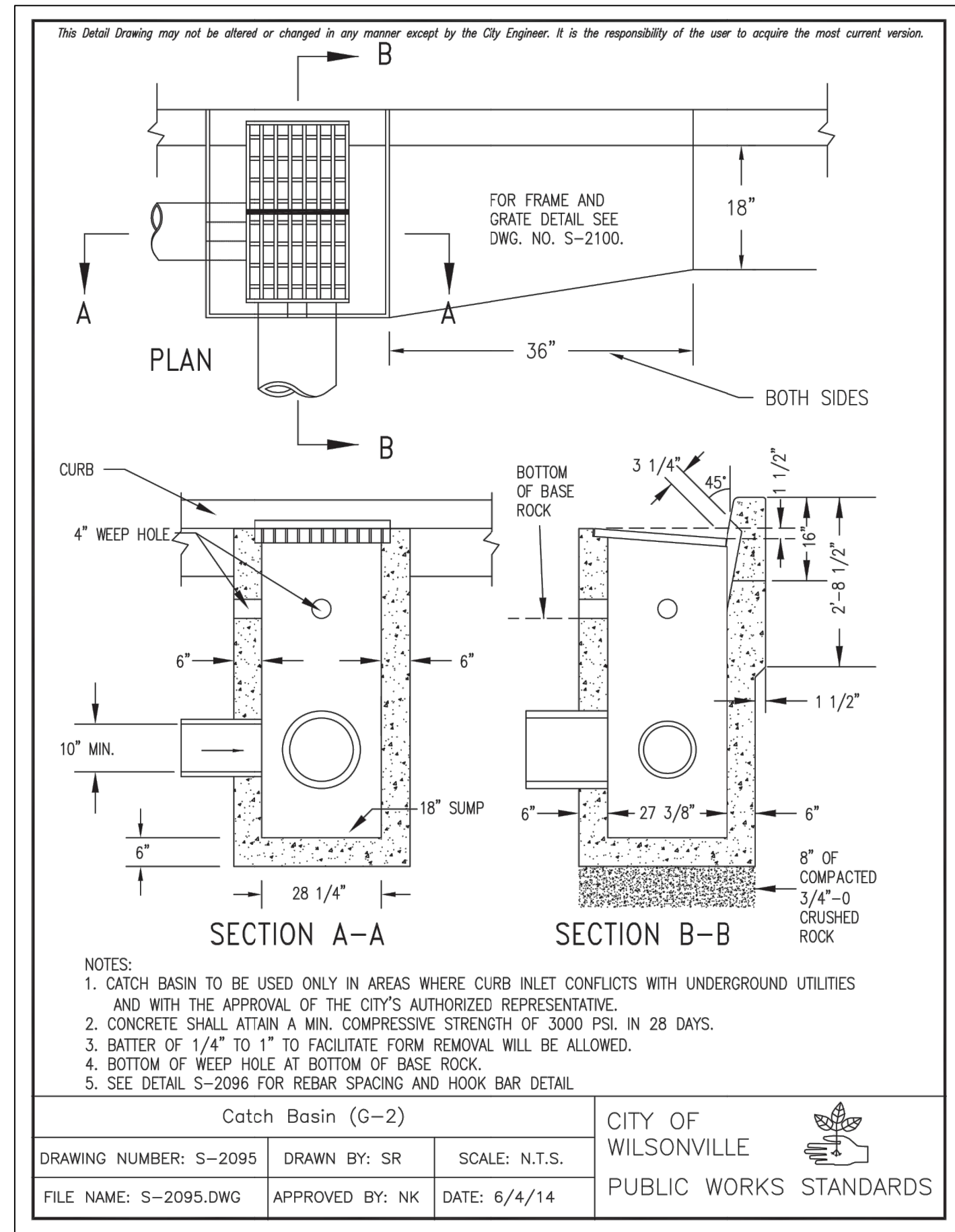
City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960

Date: 1 February 2019
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Designed by: PH/BB
Drawn by: SLR
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SW 5TH ST TO SW KINSMAN EXTENSION
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City of Wilsonville
PUBLIC WORKS STANDARDS

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2017-02-001
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Date	1 February 2019
Scale	AS SHOWN
Designed By	PH/BB
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Checked By	A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

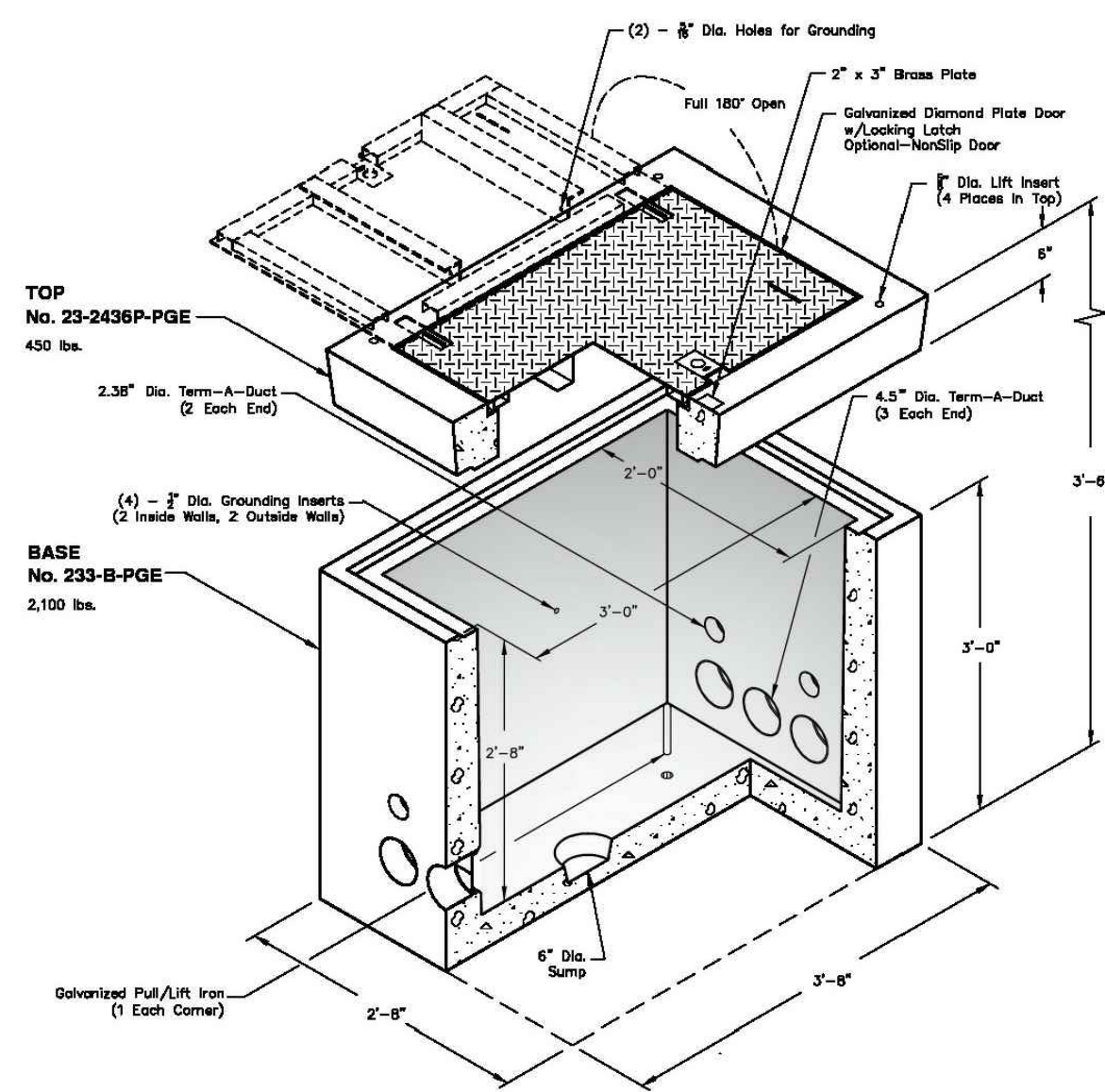
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PROJECT #	2017-02-001
DT10	
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233-PGE

Secondary Cable Vault



Note: Designed for 0 to 5'-0" of Cover

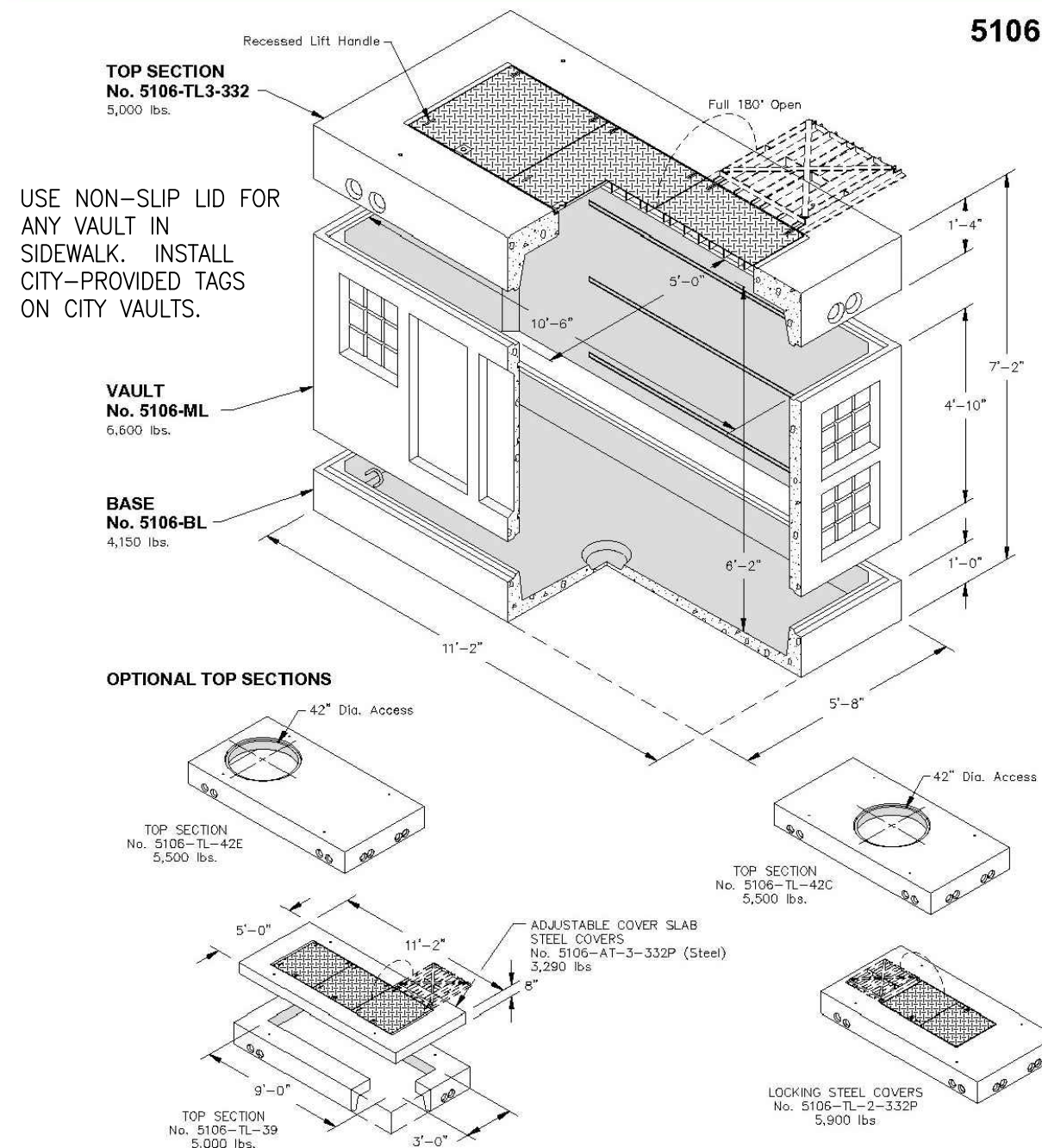
PGE L26100 1-5-12

<p>Oldcastle Precast® PO Box 323, Wilsonville, Oregon 97070-0323 Tel: (503) 682-2844 Fax: (503) 682-2857</p>	<p>233-PGE File Name: 020-233PGE Issue Date: 2016 oldcastleprecast.com/wilsonville</p>	<p>233-PGE 32 x 44 x 42</p>
	1.0	

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Non Skid Covers Available

Items Shown Are Subject To Change Without Notice
Issue Date: April 2015

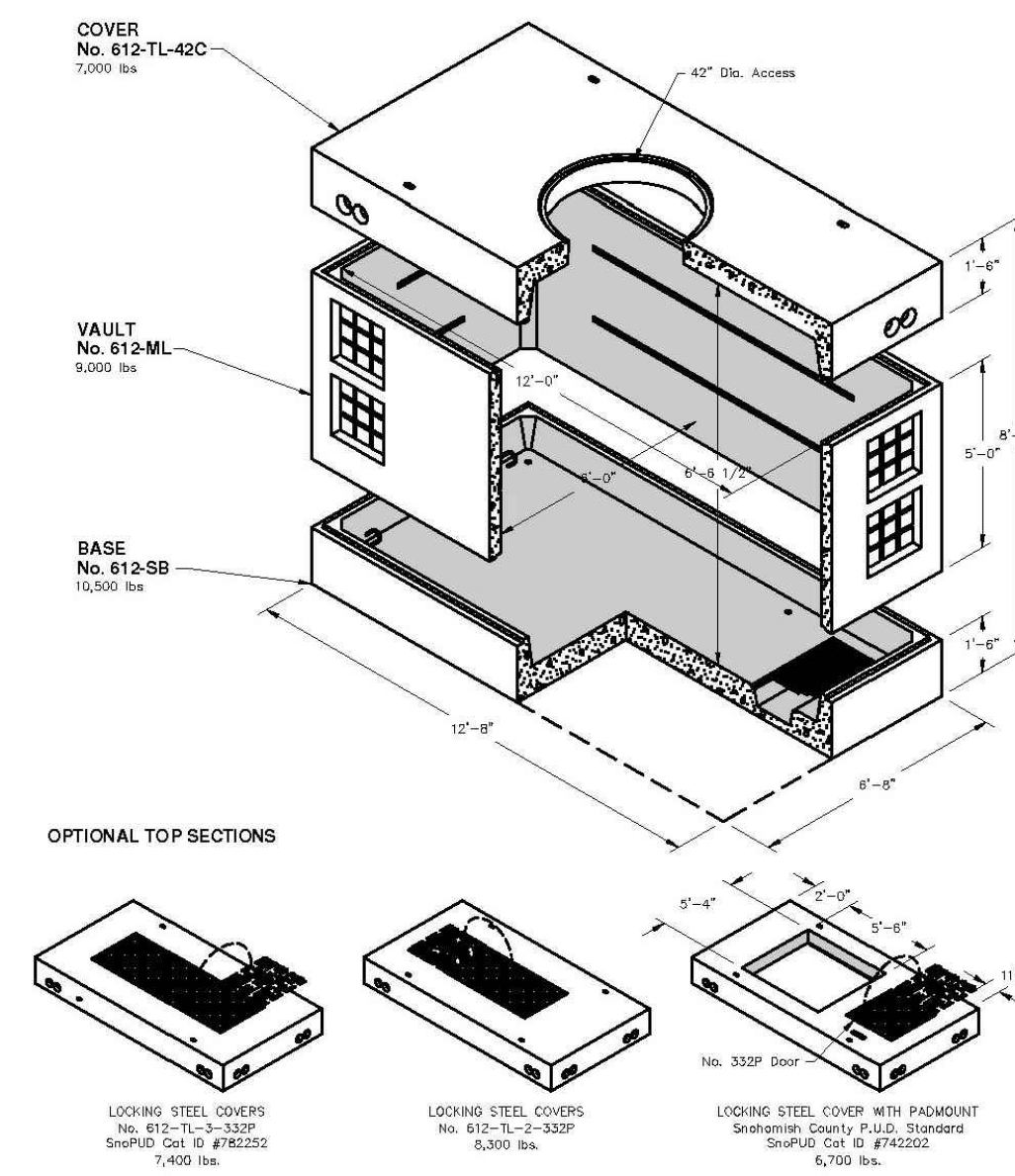
Mailing Address: PO Box 328, Auburn, WA 98071
Phone: 800-892-1538, Fax: 253-730-4201, Email: opaubum@oldcastle.com

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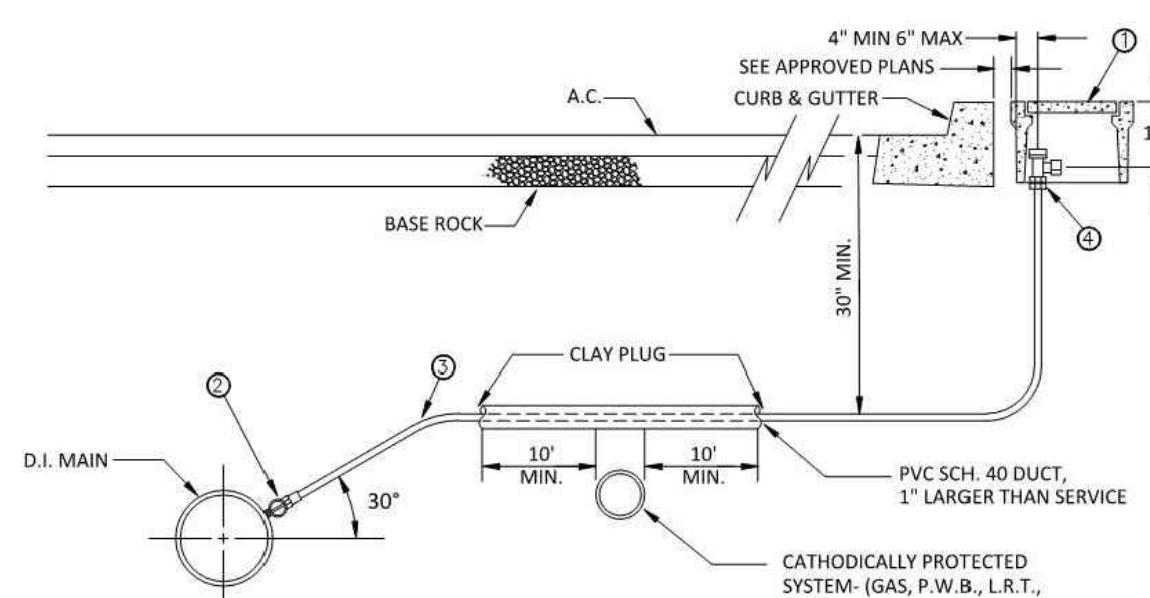
Non Skid Covers Available

FOR DETAILS, SEE REVERSE>>>
Items Shown Are Subject To Change Without Notice
Issue Date: April 2015

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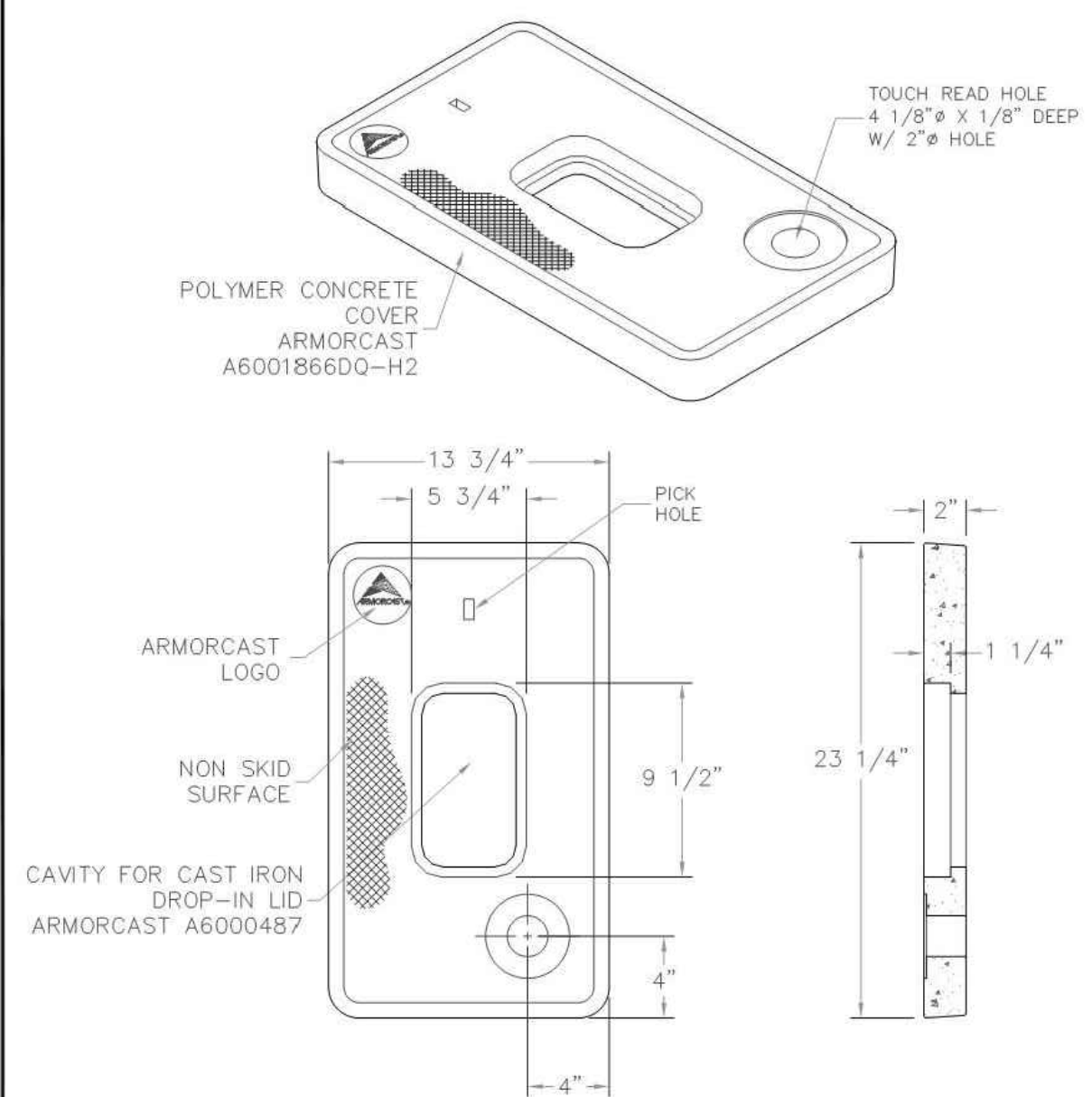


- MATERIALS:**
- APPROVED BOX, COVER AND LID:
 - STANDARD: SEE DETAIL NO. WT-3035 - WT-3037.
 - TRAFFIC RATED: SEE DETAIL NO. WT-3038 - WT-3040.
 - CORP. STOP AWWA "CC" THREADS X 110 COMP. MUELLER H-15008 OR FORD FB1000-*.Q;
 - *=3 FOR 3/4" AND 4 FOR 1" SERVICES, WITH OPERATING NUT AT 3 OR 9 O'CLOCK.
 - SOFT TEMPER, TYPE 'K' COPPER TUBING COMPLYING WITH ASTM B-88.
 - ANGLE METER STOP 110 COMP. MUELLER H-14258 OR FORD KV43-***W-Q;
 - ***=332 FOR 3/4" AND 444 FOR 1" SERVICES.

- NOTES:**
- SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED PRIOR TO CONSTRUCTION BY THE CITY WATER DEPARTMENT.
 - ALL PIPE AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4"-0 CRUSHED AGGREGATE AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-190.
 - WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED AS SHOWN ABOVE WITH CLAY PLUG.
 - ANGLE METER STOP SHALL BE PLUMB AND CENTERED SIDE TO SIDE WITHIN THE METER BOX. THE COMPLETED METER ASSEMBLY SHALL BE LOCATED WITHIN THE METER BOX.
 - METER BOX HEIGHT ADJUSTMENTS ON EXISTING SERVICES SHALL BE MADE WITH MANUFACTURER METER BOX EXTENSION OR BY STACKING METER BOXES AS APPROVED BY THE MANUFACTURER.
 - METER BOX SHALL BE LOCATED IN PLANTER AREAS ONLY; SEE PUBLIC WORKS STANDARDS FOR TRAFFIC RATED BOXES AND COVERS.
 - METER BOX SHALL BE LOCATED BEHIND THE SIDEWALK WITH CURB TIGHT SIDEWALK.
 - METER BOX SHALL BE LOCATED NOT MORE THAN 12" FROM BACK OF CURB OR SIDEWALK.
 - METER BOX SHALL MATCH SIDEWALK GRADE (IF SIDEWALK EXISTS) OTHERWISE SET FLUSH WITH SURROUNDING GROUND SURFACE.
 - IF REQUIRED, CUSTOMER SHALL INSTALL AN APPROVED BACKFLOW PREVENTION DEVICE AND OBTAIN THE NECESSARY PERMITS AND INSPECTIONS FROM THE BUILDING DEPARTMENT.
 - EACH PROPERTY SHALL HAVE AN INDIVIDUAL WATER SERVICE FROM THE WATER MAIN. SHARED OR DOUBLE WATER SERVICES ARE NOT ALLOWED.
 - WHERE RESIDENTIAL METER BOXES ARE PLACED TOGETHER NEAR THE PROPERTY LINES OR IN BANKS OF METERS, THEY SHALL BE INSTALLED IN CONFORMANCE TO DETAIL WT-3100 ALLOWING DUAL REMOTE READER SENSORS TO BE USED.

3/4" & 1" Single Service			<p>CITY OF WILSONVILLE PUBLIC WORKS STANDARDS</p>
DRAWING NUMBER: WT-3030	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: WT-3030.DWG	APPROVED BY: NK	DATE: 1/30/18	

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Meter Box Cover - 3/4" & 1" Meter			<p>CITY OF WILSONVILLE PUBLIC WORKS STANDARDS</p>
DRAWING NUMBER: WT-3036	DRAWN BY: SR	SCALE: N.T.S.	
FILE NAME: WT-3036.DWG	APPROVED BY: NK	DATE: 6/4/14	

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DRAWING

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City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
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Phone 503-682-4960



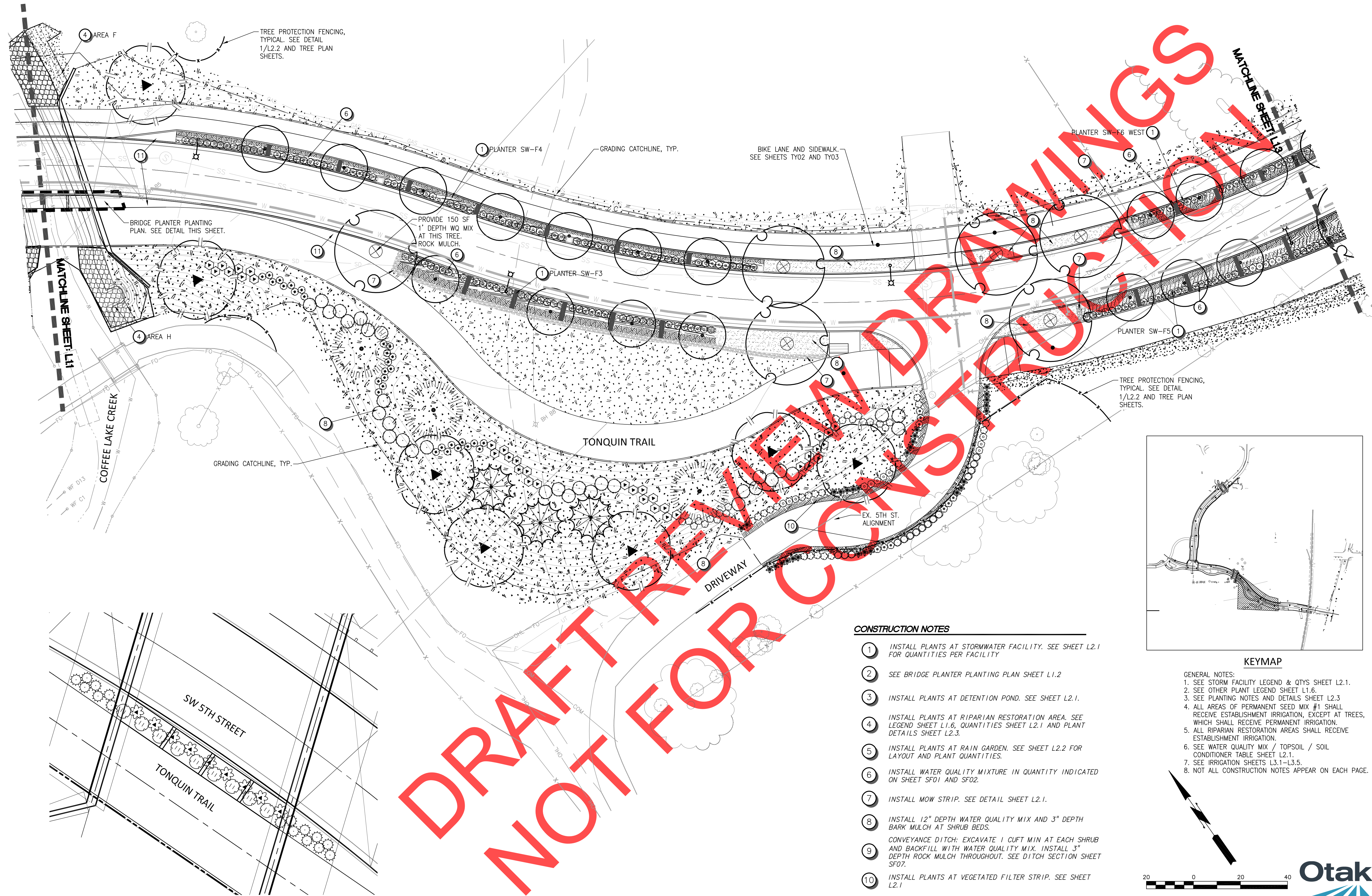
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Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN EXTENSION
STANDARD DETAILS

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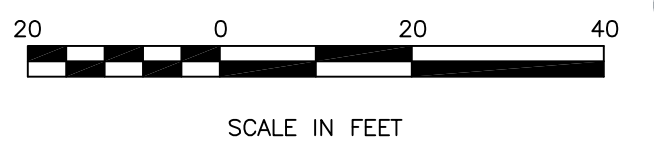
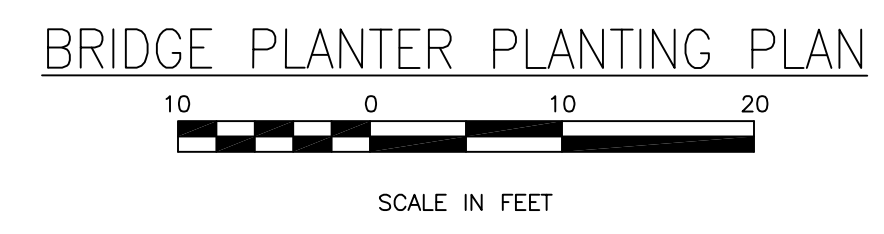
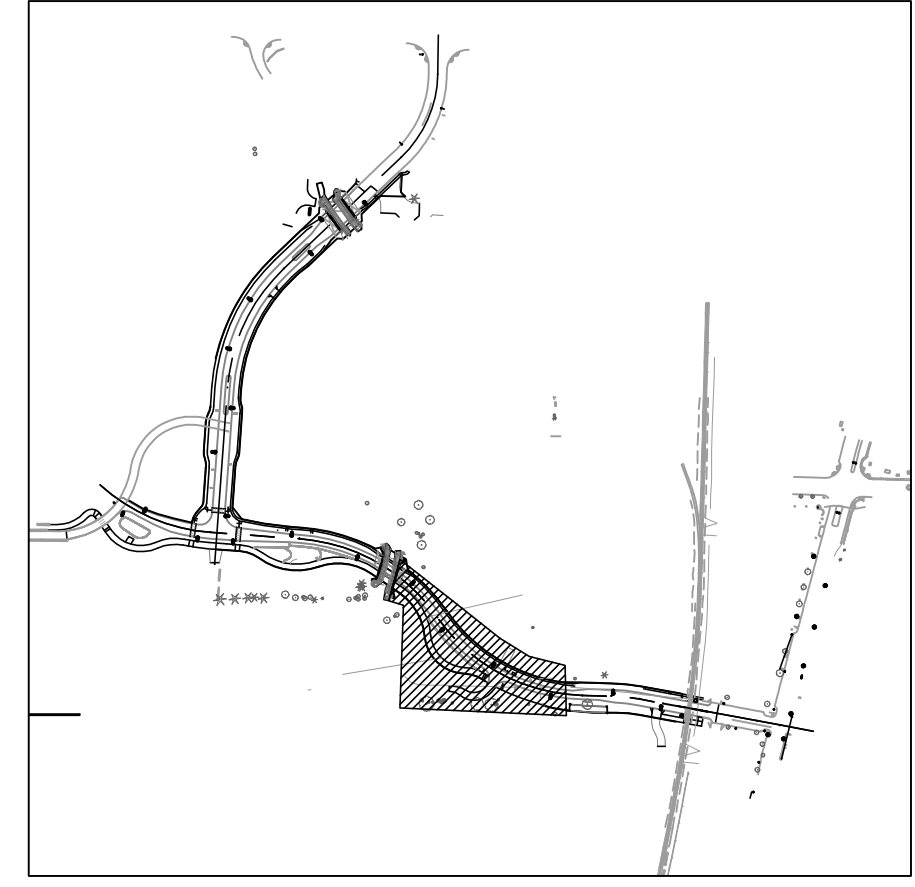
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- CONSTRUCTION NOTES**
1. INSTALL PLANTS AT STORMWATER FACILITY. SEE SHEET L2.1 FOR QUANTITIES PER FACILITY
 2. SEE BRIDGE PLANTER PLANTING PLAN SHEET L1.2
 3. INSTALL PLANTS AT DETENTION POND. SEE SHEET L2.1.
 4. INSTALL PLANTS AT RIPARIAN RESTORATION AREA. SEE LEGEND SHEET L1.6, QUANTITIES SHEET L2.1 AND PLANT DETAILS SHEET L2.3.
 5. INSTALL PLANTS AT RAIN GARDEN. SEE SHEET L2.2 FOR LAYOUT AND PLANT QUANTITIES.
 6. INSTALL WATER QUALITY MIXTURE IN QUANTITY INDICATED ON SHEET SF01 AND SF02.
 7. INSTALL MOW STRIP. SEE DETAIL SHEET L2.1.
 8. INSTALL 12" DEPTH WATER QUALITY MIX AND 3" DEPTH BARK MULCH AT SHRUB BEDS.
CONVEYANCE DITCH: EXCAVATE 1 CUFT MIN AT EACH SHRUB AND BACKFILL WITH WATER QUALITY MIX. INSTALL 3" DEPTH ROCK MULCH THROUGHOUT. SEE DITCH SECTION SHEET SF07.
 9. INSTALL PLANTS AT VEGETATED FILTER STRIP. SEE SHEET L2.1
 10. INSTALL 3" DEPTH ROCK MULCH WITH WEED BARRIER BELOW.



REVISIONS

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263
12/31/18
David D. Hendy
Landscape Architect
PRELIMINARY

City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



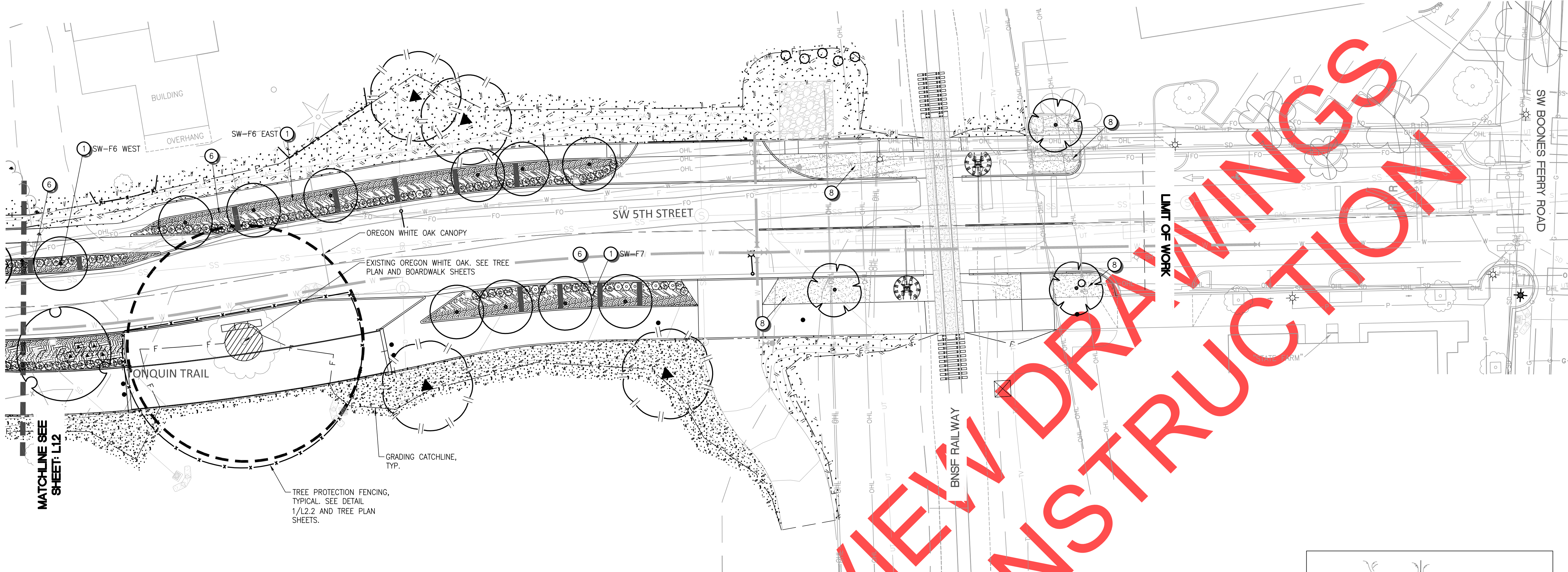
Date	1 February 2019
Scale	AS SHOWN
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Checked By	A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
5TH STREET LANDSCAPE PLAN

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PROJECT# 2017-02-001
L1.2
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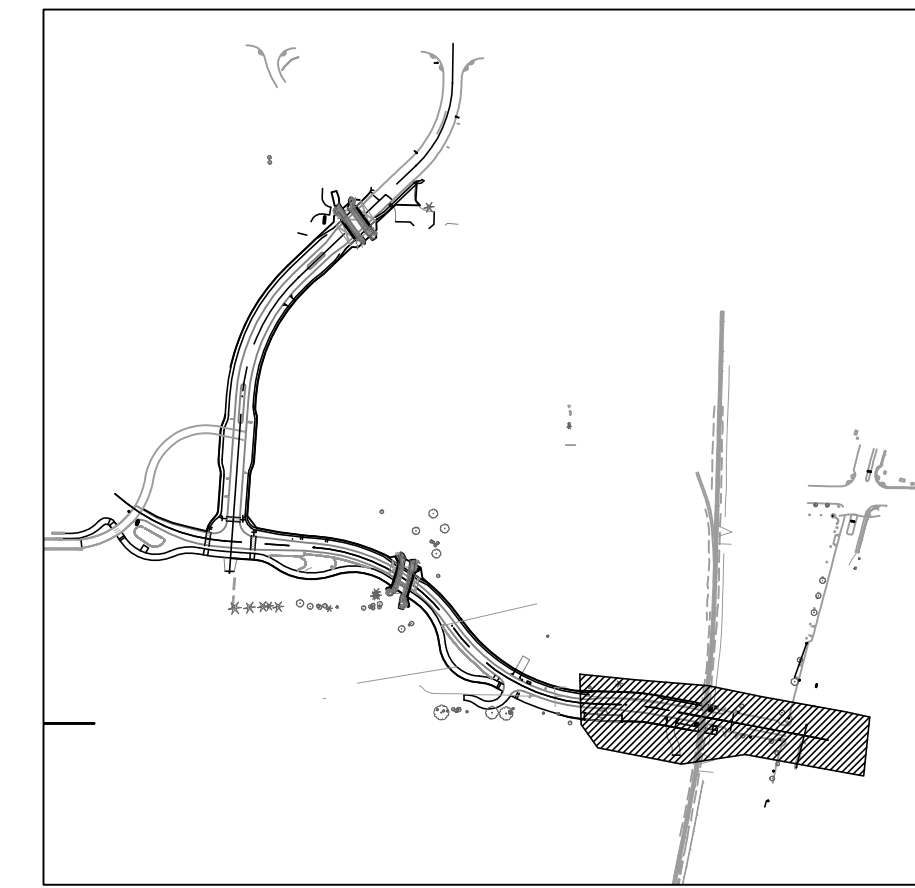


MATCHLINE SEE SHEET: L12

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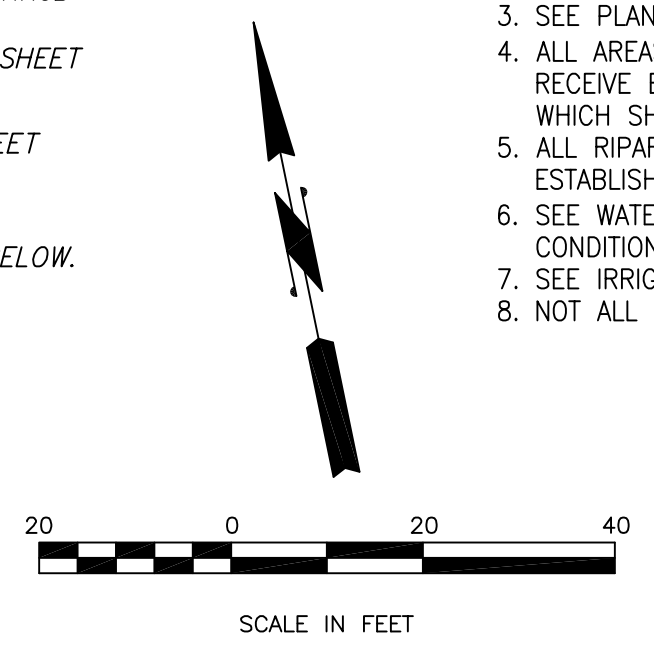
CONSTRUCTION NOTES

- 1 INSTALL PLANTS AT STORMWATER FACILITY. SEE SHEET L2.1 FOR QUANTITIES PER FACILITY
- 2 SEE BRIDGE PLANTER PLANTING PLAN SHEET L1.2
- 3 INSTALL PLANTS AT DETENTION POND. SEE SHEET L2.1.
- 4 INSTALL PLANTS AT RIPARIAN RESTORATION AREA. SEE LEGEND SHEET L1.6, QUANTITIES SHEET L2.1 AND PLANT DETAILS SHEET L2.3.
- 5 INSTALL PLANTS AT RAIN GARDEN. SEE SHEET L2.2 FOR LAYOUT AND PLANT QUANTITIES.
- 6 INSTALL WATER QUALITY MIXTURE IN QUANTITY INDICATED ON SHEET SF01 AND SF02.
- 7 INSTALL MOW STRIP. SEE DETAIL SHEET L2.1.
- 8 INSTALL 12" DEPTH WATER QUALITY MIX AND 3" DEPTH BARK MULCH AT SHRUB BEDS.
- 9 CONVEYANCE DITCH: EXCAVATE 1 CUFT MIN AT EACH SHRUB AND BACKFILL WITH WATER QUALITY MIX. INSTALL 3" DEPTH ROCK MULCH THROUGHOUT. SEE DITCH SECTION SHEET SF07.
- 10 INSTALL PLANTS AT VEGETATED FILTER STRIP. SEE SHEET L2.1
- 11 INSTALL 3" DEPTH ROCK MULCH WITH WEED BARRIER BELOW.



KEYMAP

- GENERAL NOTES:
1. SEE STORM FACILITY LEGEND & QTY'S SHEET L2.1.
 2. SEE OTHER PLANT LEGEND SHEET L1.6.
 3. SEE PLANTING NOTES AND DETAILS SHEET L2.3
 4. ALL AREAS OF PERMANENT SEED MIX #1 SHALL RECEIVE ESTABLISHMENT IRRIGATION, EXCEPT AT TREES, WHICH SHALL RECEIVE PERMANENT IRRIGATION.
 5. ALL RIPARIAN RESTORATION AREAS SHALL RECEIVE ESTABLISHMENT IRRIGATION.
 6. SEE WATER QUALITY MIX / TOPSOIL / SOIL CONDITIONER TABLE SHEET L2.1.
 7. SEE IRRIGATION SHEETS L3.1-L3.5.
 8. NOT ALL CONSTRUCTION NOTES APPEAR ON EACH PAGE.



SCALE IN FEET



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NO.	DATE	DESCRIPTION

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 263
 12/31/18
 David C. ...
 LAMAR ...
 19/89
PRELIMINARY
 ARCHITECT

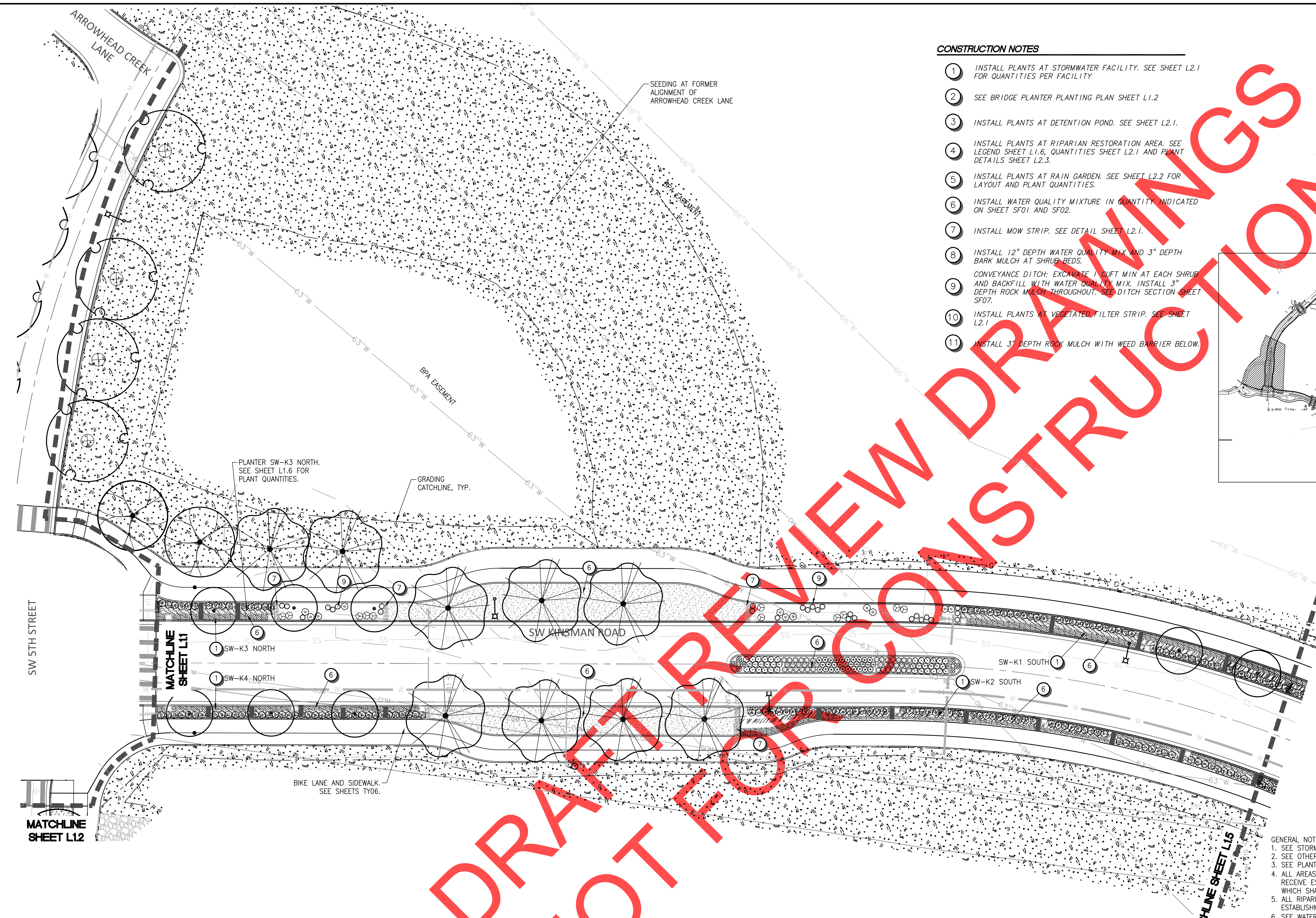
City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



Date: 1 February 2019
 Scale: AS SHOWN
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 Drawn By: MLD
 Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
 5TH STREET LANDSCAPE PLAN

CIP# 4196
 PROJECT# 2017-02-001
 L1.3
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CONSTRUCTION NOTES

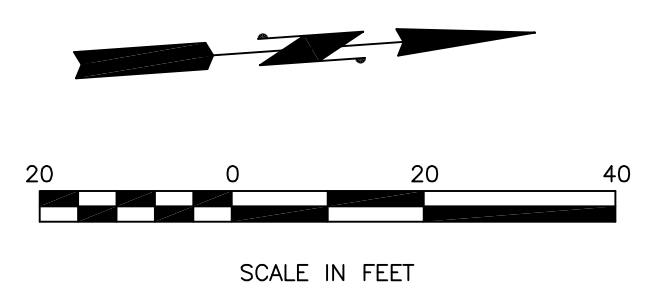
1. INSTALL PLANTS AT STORMWATER FACILITY. SEE SHEET L2.1 FOR QUANTITIES PER FACILITY.
2. SEE BRIDGE PLANTER PLANTING PLAN SHEET L1.2
3. INSTALL PLANTS AT DETENTION POND. SEE SHEET L2.1.
4. INSTALL PLANTS AT RIPARIAN RESTORATION AREA. SEE LEGEND SHEET L1.6, QUANTITIES SHEET L2.1 AND PLANT DETAILS SHEET L2.3.
5. INSTALL PLANTS AT RAIN GARDEN. SEE SHEET L2.2 FOR LAYOUT AND PLANT QUANTITIES.
6. INSTALL WATER QUALITY MIXTURE IN QUANTITY INDICATED ON SHEET SF01 AND SF02.
7. INSTALL MOW STRIP. SEE DETAIL SHEET L2.1.
8. INSTALL 12" DEPTH WATER QUALITY MIX AND 3" DEPTH BARK MULCH AT SHRUB BEDS.
9. CONVEYANCE DITCH: EXCAVATE 1 CUFT MIN AT EACH SHRUB AND BACKFILL WITH WATER QUALITY MIX. INSTALL 3" DEPTH ROCK MULCH THROUGHOUT. SEE DITCH SECTION SHEET SF07.
10. INSTALL PLANTS AT VEGETATED FILTER STRIP. SEE SHEET L2.1
11. INSTALL 3" DEPTH ROCK MULCH WITH WEED BARRIER BELOW.



KEYMAP

DRAFT REVIEW DRAWINGS
 NOT FOR CONSTRUCTION

- GENERAL NOTES:**
1. SEE STORM FACILITY LEGEND & QTY'S SHEET L2.1.
 2. SEE OTHER PLANT LEGEND SHEET L1.6.
 3. SEE PLANTING NOTES AND DETAILS SHEET L2.3
 4. ALL AREAS OF PERMANENT SEED MIX #1 SHALL RECEIVE ESTABLISHMENT IRRIGATION, EXCEPT AT TREES, WHICH SHALL RECEIVE PERMANENT IRRIGATION.
 5. ALL RIPARIAN RESTORATION AREAS SHALL RECEIVE ESTABLISHMENT IRRIGATION.
 6. SEE WATER QUALITY MIX / TOPSOIL / SOIL CONDITIONER TABLE SHEET L2.1.
 7. SEE IRRIGATION SHEETS L3.1-L3.5.
 8. NOT ALL CONSTRUCTION NOTES APPEAR ON EACH PAGE.



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NO.	DATE	REVISIONS

REGISTERED
 263
 12/31/18
 David D. Hendy
 LAMINATOR
 19/89
 PRELIMINARY
 LANDSCAPE ARCHITECT

City of Wilsonville
 Engineering Department
 29799 SW Town Center Loop E
 Wilsonville, OR 97070
 Phone 503-682-4960



Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: DDH
 Drawn By: MLD
 Checked By: A.HENDY

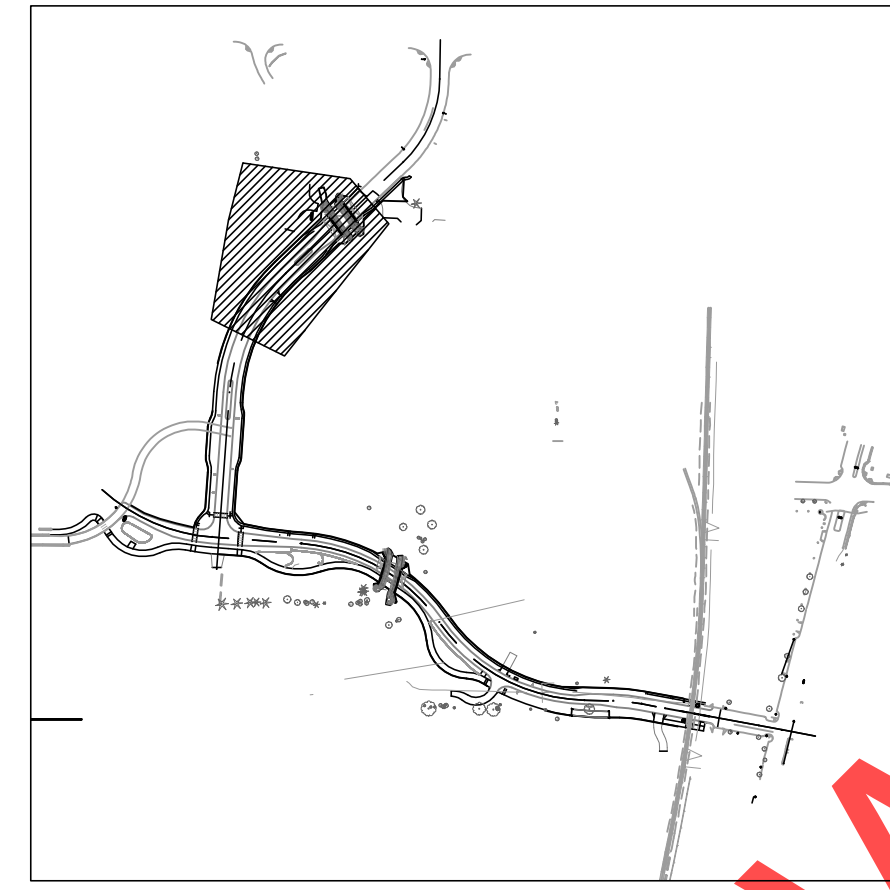
SW 5TH ST TO SW KINSMAN RD EXTENSION
 KINSMAN RD LANDSCAPE PLAN

CIP# 4196
 PROJECT# 2017-02-001
 L1.4
 136 of 211

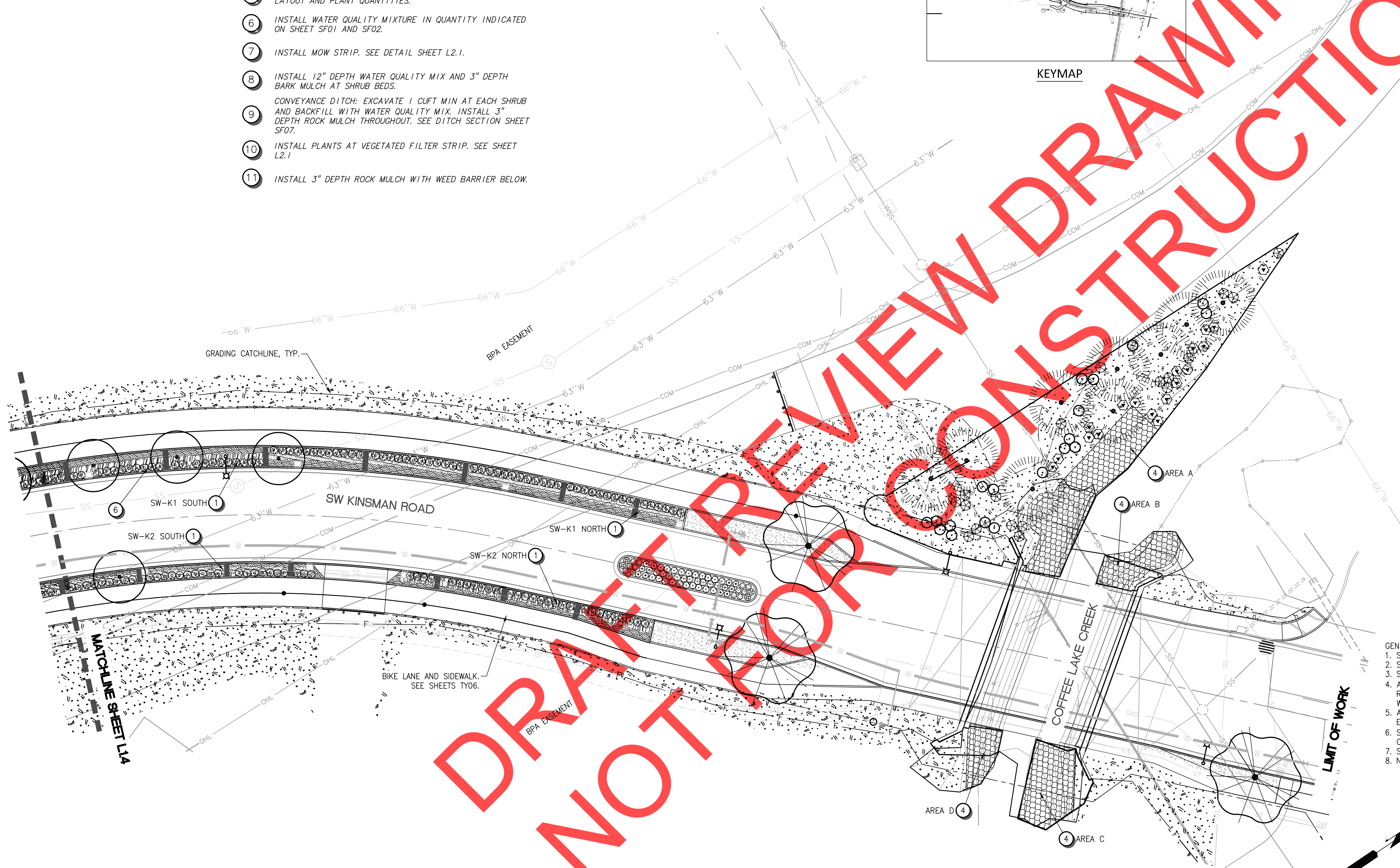
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CONSTRUCTION NOTES

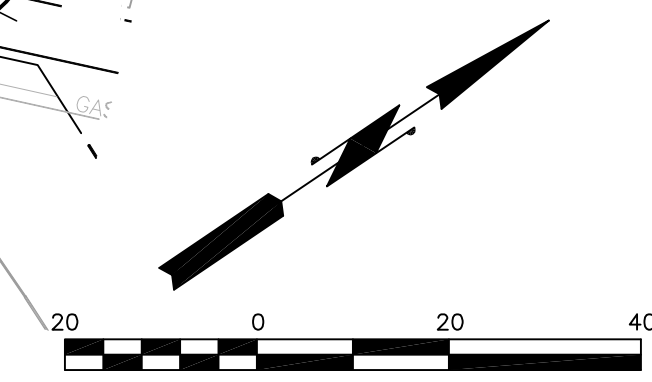
1. INSTALL PLANTS AT STORMWATER FACILITY. SEE SHEET L2.1 FOR QUANTITIES PER FACILITY.
2. SEE BRIDGE PLANTER PLANTING PLAN SHEET L1.2.
3. INSTALL PLANTS AT DETENTION POND. SEE SHEET L2.1.
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KEYMAP



GENERAL NOTES:
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 7. SEE IRRIGATION SHEETS L3.1-L3.5.
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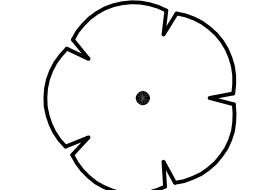
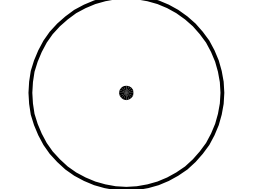
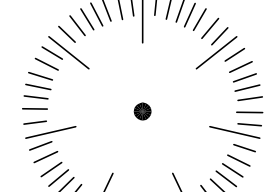
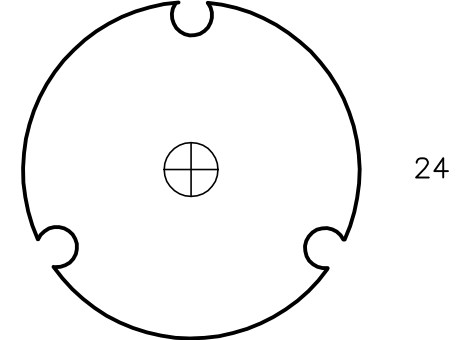
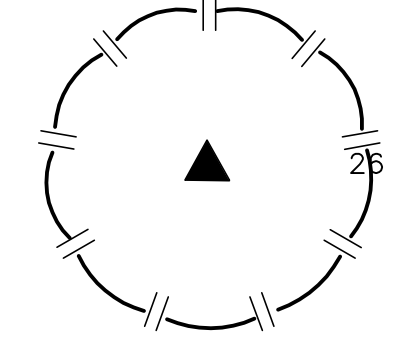
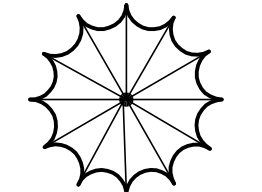
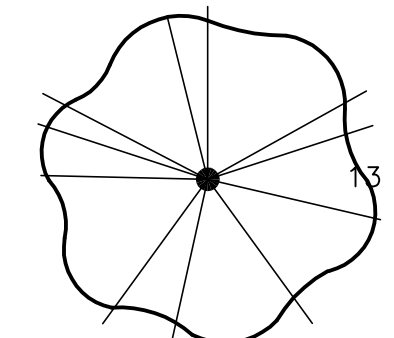
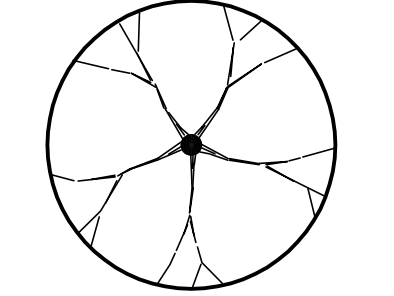


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









SW 5TH ST TO SW KINSMAN RD EXTENSION
 KINSMAN RD LANDSCAPE PLAN

CIP# 4196
 PROJECT# 2017-02-001
 L1.5
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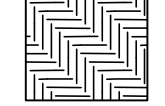
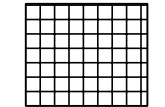
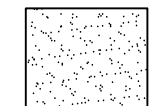
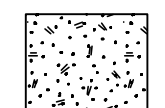

TREE LEGEND

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE
	19	ACER CIRCINATUM / VINE MAPLE	1 GAL		SEEDLING
	25	ACER CIRCINATUM / VINE MAPLE	B&B	4'-6' HT.	MULTI-STEM
	3	ACER GRISEUM / PAPERBARK MAPLE	B&B	2"	
	48	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	B&B	2"	
	28	PINUS PONDEROSA / PONDEROSA PINE	B&B	6'-8' HT.	
	24	QUERCUS COCCINEA / SCARLET OAK	B&B	2"	
	25	QUERCUS GARRYANA / OREGON OAK	B&B	2"	
	9	THUJA PLICATA 'GREEN GIANT' / WESTERN RED CEDAR	B&B	10'-12' HT.	SPECIMEN
	13	TILIA AMERICANA 'REDMOND' / REDMOND AMERICAN LINDEN	B&B	2"	
	2	TILIA CORDATA 'HALKA' / SUMMER SPRITE LINDEN	B&B	2"	

SHRUB LEGEND

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
	3	AUCUBA JAPONICA 'VARIEGATA' / SPOTTED LAUREL	3 GAL	60" o.c.
	66	AZALEA GIRARD HYBRID 'GIRARD'S HOT SHOT' / GIRARD AZALEA	3 GAL	30" o.c.
	9	AZALEA X 'HINO CRIMSON' / HINO CRIMSON AZALEA	3 GAL	36" o.c.
	74	CORNUS SERICEA / RED TWIG DOGWOOD	1 GAL	48" o.c.
	53	CORNUS SERICEA 'KELSEY' / KELSEY DOGWOOD	1 GAL	36" o.c.
	14	HOLODISCUS DISCOLOR / OCEAN-SPRAY	1 GAL	48" o.c.
	65	ILEX X MESERVEAE 'CASTLE SPIRE' / CASTLE SPIRE HOLLY	3 GAL	36" o.c.
	66	ILEX X MESERVEAE 'CASTLE WALL' / CASTLE WALL HOLLY	3 GAL	36" o.c.
	1	MAHONIA AQUIFOLIUM / OREGON GRAPE	1 GAL	36" o.c.
	15	MAHONIA AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE	3 GAL	48" o.c.
	42	PENNISSETUM ALOPECUROIDES 'HAMELN' / HAMELN DWARF FOUNTAIN GRASS	3 GAL	30" o.c.
	61	PENNISSETUM SETACEUM 'FIREWORKS' / FIREWORKS FOUNTAIN GRASS	3 GAL	30" o.c.
	66	PIERIS JAPONICA 'FOREST FLAME' / LILY OF THE VALLEY BUSH	3 GAL	72" o.c.
	49	RHAPHIOLEPIS INDICA 'INDIAN PRINCESS' TM / INDIAN PRINCESS INDIAN HAWTHORNE	3 GAL	36" o.c.
	18	RIBES SANGUINEUM / RED FLOWERING CURRANT	1 GAL	48" o.c.
	62	ROSA X 'FLOWER CARPET RED' / ROSE	3 GAL	30" o.c.
	9	ROSA X 'FLOWER CARPET WHITE' / FLOWER CARPET WHITE ROSE	3 GAL	36" o.c.
	12	RUDBECKIA FULGIDA 'GOLDSTRUM' / CONEFLOWER	1 GAL	30" o.c.
	3	SPIRAEA DOUGLASII / WESTERN SPIREA	1 GAL	48" o.c.
	11	SPIRAEA JAPONICA 'NEON FLASH' / NEON FLASH SPIREA	3 GAL	36" o.c.

GROUND COVER / SEED MIX LEGEND

GROUND COVERS	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
	292	ELYMUS GLAUCUS / BLUE WILDRYE	1 GAL	12" o.c.
	919	EUONYMUS FORTUNEI 'COLORATUS' / COLORATUS PURPLE WINTERCREEPER	1 GAL	12" o.c.
	9,950 SF	LAWN SEEDING / LAWN SEEDING	SEED	
	153,567 SF	PERMANENT SEED MIX #1 / NATIVE PLANT SEED MIX	SEED	
	3,667 SF 676 CUTTINGS	SALIX SPP. / PLANT CUTTINGS AND PERMANENT SEED MIX #2 1 / 3 EACH: SALIX LUCIDA SSP. LASIANDRA / PACIFIC WILLOW SALIX SCOULERIANA / SCOULER'S WILLOW SALIX SITCHENSIS / SITKA WILLOW	LIVE STAKE	30" o.c.

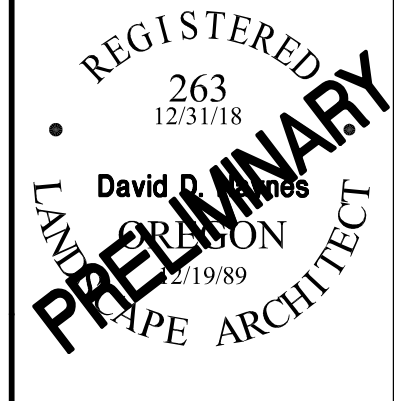
- GENERAL NOTES:
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 - SEE WATER QUALITY MIX / TOPSOIL / SOIL CONDITIONER TABLE SHEET L2.1.
 - SEE IRRIGATION SHEETS L3.1-L3.5.
 - NOT ALL CONSTRUCTION NOTES APPEAR ON EACH PAGE.

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REVISIONS				
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City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: PH/BB
Drawn By: MLD
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
LANDSCAPE PLAN & PLANTING LEGEND

CIP# 4196
PROJECT# 2017-02-001
L1.6
138 of 211

STORM FACILITY PLANT LEGEND

TREES	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE
	ACER CIRCINATUM / VINE MAPLE	1 GAL		SEEDLING
	THUJA PLICATA / WESTERN RED CEDAR	B&B		2' HT.
SHRUBS	BOTANICAL NAME / COMMON NAME	CONT		SPACING
	AUCUBA JAPONICA 'VARIEGATA' / SPOTTED LAUREL	3 GAL		60" o.c.
	CORNUS SERICEA / RED TWIG DOGWOOD	1 GAL		48" o.c.
	CORNUS SERICEA 'KELSEY' / KELSEY DOGWOOD	1 GAL		36" o.c.
	HOLIDISCUS DISCOLOR / OCEAN-SPRAY	1 GAL		48" o.c.
	MAHONIA AQUIFOLIUM / OREGON GRAPE	1 GAL		36" o.c.
	OEMLERIA CERASIFORMIS / INDIAN PLUM	1 GAL		48" o.c.
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK	1 GAL		36" o.c.
	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	1 GAL		36" o.c.
	RIBES SANGUINEUM / RED FLOWERING CURRANT	1 GAL		48" o.c.
	ROSA NUTKANA / NOOTKA ROSE	1 GAL		48" o.c.
	SPIRAEA BETULIFOLIA / BIRCH LEAF SPIREA	1 GAL		36" o.c.
	SPIRAEA DOUGLASII / WESTERN SPIREA	1 GAL		48" o.c.
	SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY	1 GAL		36" o.c.
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT		SPACING
	ARCTOSTAPHYLOS UVA-URSI 'MASSACHUSETTS' / MASSACHUSETTS KINNIKINNICK	4" POT		12" o.c.
	CAREX OBNUPTA / SLOUGH SEDGE	1 GAL		12" o.c.
	CAREX TESTACEA / CAREX	1 GAL		12" o.c.
	ELYMUS GLAUCUS / BLUE WILDRIE	1 GAL		12" o.c.
	FRAGARIA CHILOENSIS / BEACH STRAWBERRY	4" POT		24" o.c.
	JUNCUS ENSIFOLIUS / SWORDLEAF RUSH	1 GAL		12" o.c.
	JUNCUS PATENS / CALIFORNIA GRAY RUSH	1 GAL		12" o.c.
	SCIRPUS MICROCARPUS / SMALL-FRUITED BULRUSH	1 GAL		12" o.c.
	SEDUM OREGANUM / OREGON SEDUM	1 GAL		12" o.c.

RIPARIAN RESTORATION AREA
QUANTITIES: CUTTINGS AND SEED MIX

AREA	SF	Salix lucida spp. / PACIFIC FILLOW	Salix Scouleriana / SCOULER'S WILLOW	Salix stichensis / SITKA WILLOW	PERMANENT SEEDING, MIX #2
A	1,103	68	68	68	1,103
B	387	24	24	24	387
C	547	34	34	34	547
D	241	15	15	15	241
E	330	20	20	20	330
F	407	25	25	25	407
G	249	15	15	15	249
H	403	25	25	25	403
TOTALS:	3,667	225	225	225	3,667

NOTE: SEE SHEET L1.5 FOR AREA A SHRUBS AND TREES

VEGETATED FILTER STRIP PLANT QUANTITIES

QTY	PLANTS				
	Comus sericea 'Kelsey' / KELSEY DOGWOOD	Mahonia aquifolium / OREGON GRAPE	Polystichum munitum / WESTERN SWORDFERN	Spiraea betulifolia / BIRCH LEAF SPIREA	Symphoricarpos albus / SNOWBERRY
11	23	15	29	9	575

WATER QUALITY MIX / TOPSOIL / SOIL CONDITIONER / BARK MULCH TABLE

LOCATIONS:	COMBINED		SOIL CONDITIONER	BARK MULCH
	DEPTH	TOPSOIL TYPE		
SEED MIX #1 (NATIVE PLANT SEEDING) ¹	4"	NATIVE TOPSOIL ²	YES	NO
SEED MIX #2 (RIPARIAN RESTORATION)	4"	NATIVE TOPSOIL ²	YES	NO
LAWN SEEDING	12"	WATER QUALITY MIX	INCLUDED	NO
MEDIANS	12"	WATER QUALITY MIX	INCLUDED	YES
CONVEYANCE DITCHES	12"	WATER QUALITY MIX	INCLUDED	NO
SHRUB AREAS WITHIN SEED MIX #1	12"	WATER QUALITY MIX	INCLUDED	YES
SLOPE DOWN TO DETENTION POND	12"	WATER QUALITY MIX	INCLUDED	YES
BRIDGE PLANTER	12"	WATER QUALITY MIX	INCLUDED	YES
DETENTION POND	WATER QUALITY MIX: SEE SHEETS SF01 AND SF02			
RAIN GARDEN	WATER QUALITY MIX: SEE SHEETS SF01 AND SF02			
VEGETATED FILTER STRIPS	WATER QUALITY MIX: SEE SHEETS SF01 AND SF02			
SWALES	WATER QUALITY MIX: SEE SHEETS SF01 AND SF02			

¹ SHRUB AREAS WITHIN SEED MIX #1 SHALL RECEIVE 12" DEPTH WATER QUALITY MIX
² INCLUDES 3/4 TOPSOIL AND 1/4 SOIL CONDITIONER

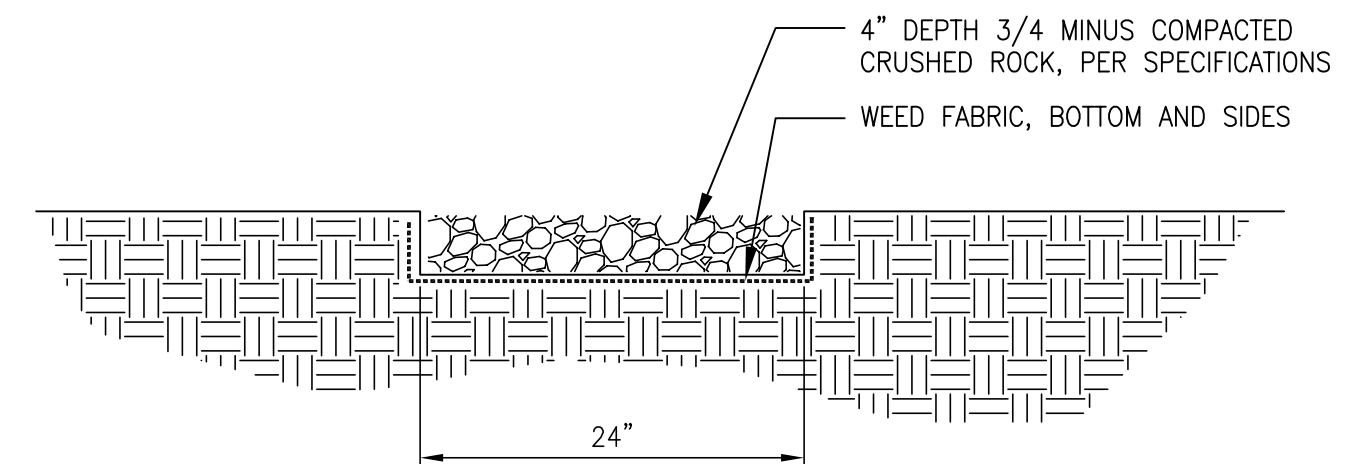
STORMWATER FACILITY PLANT QUANTITIES

FACILITY ID	PLANTS					SOIL MIXTURE, 18" DEPTH (CY)
	Arctostaphylos uva-ursi / urli	Carex obnupta / SLOUGH SEDGE	Carex testacea / ORANGE SEDGE	Elymus glaucus / BLUE WILDRIE	Juncus patens / SPREADING RUSH	
SW-F1	439	0	492	0	369	1,301
SW-F2	255	0	248	0	313	817
SW-F3	428	290	447	0	0	1,165
SW-F4	419	549	417	0	0	1,385
SW-F5	293	0	347	0	232	873
SW-F6 EAST	666	305	622	0	0	1,593
SW-F6 WEST	189	0	205	0	224	618
SW-F7	344	210	357	0	0	911
SW-K1 NORTH	90	0	112	0	114	315
SW-K1 SOUTH	987	359	401	0	357	2,103
SW-K2 NORTH	194	219	183	0	0	596
SW-K2 SOUTH	601	344	599	0	0	1,544
SW-K3 NORTH	136	0	138	0	100	374
SW-K3 SOUTH	324	0	100	160	147	731
SW-K4 NORTH	140	0	206	0	236	582
SW-K4 SOUTH	208	0	45	0	61	314
TOTALS:	5,713	2,275	4,920	160	2,153	15,220

SEE SHEETS SF01 AND SF02 FOR WATER QUALITY MIXTURE QUANTITIES

DETENTION POND (CONSTRUCTED WET POND) PLANT QUANTITIES

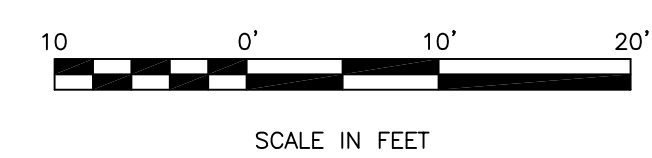
REQUIRED PLANTS	LARGE SHRUBS	SMALL SHRUBS	GC	HERBACEOUS (1' O.C.)									
TOTAL PLANTS REQ'D PROVIDED	Comus sericea / RED TWIG DOGWOODS	Holidiscus Discolor / OCEAN SPRAY	Rosa nutkana / NOOTKA ROSE	Spiraea douglasii / DOUGLAS SPIREA	Mahonia aquifolium / OREGON GRAPE	Polystichum munitum / WESTERN SWORDFERN	Comus sericea 'Kelsey' / KELSEY DOGWOOD	Symphoricarpos albus / SNOWBERRY	Fragaria chiloensis / BEACH STRAWBERRY	Carex obnupta / SLOUGH SEDGE	Juncus ensifolius / DAGGER-LEAF RUSH	Juncus patens / SPREADING RUSH	Scirpus microcarpus / SMALL FRUITED BULRUSH
ZONE S TOTAL SF:	479												
HERBACEOUS	551									237	72	91	152
ZONE A TOTAL SF:	342												
TREES	0												
LARGE SHRUBS	10	3	2	2	3								
SMALL SHRUBS	14				4	2	4	4					
GROUNDCOVERS	44							44					



MOW STRIP

SCALE: N.T.S.

1
L2.1



SCALE IN FEET

- NOTES:
1. SEE PLANTING LEGEND SHEET L2.1.
2. SEE PLANTING QUANTITIES THIS SHEET.
3. SEE PLANTING NOTES AND DETAILS SHEET L2.3
4. SEE IRRIGATION SHEETS L3.1-L3.5.

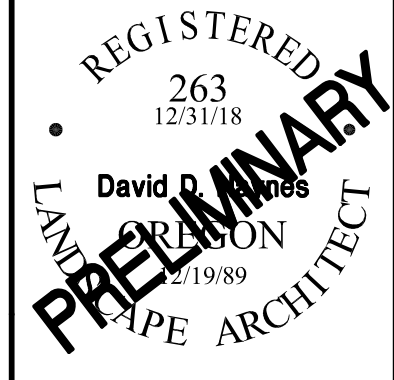


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NO.	DESCRIPTION



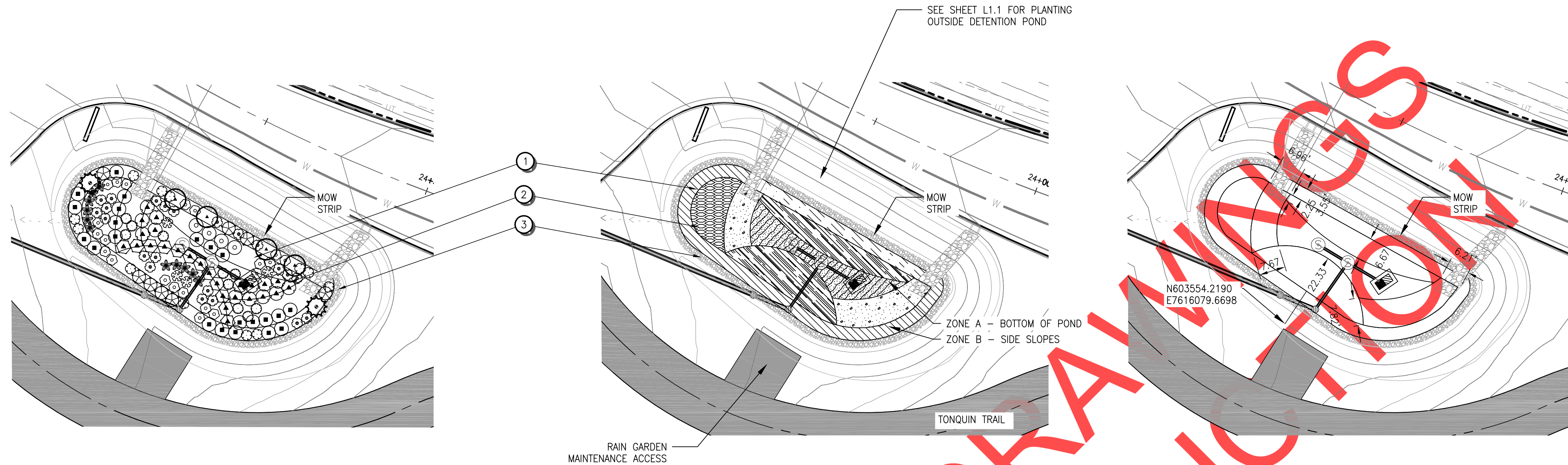
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SW 5TH ST TO SW KINSMAN RD EXTENSION
STORM FACILITY PLANT LEGEND & QTYS

CIP# 4196
PROJECT# 2017-02-001
L2.1
139 of 211



RAIN GARDEN PLANTING PLAN (BR-F)
SHRUBS AND TREES

RAIN GARDEN PLANTING PLAN (BR-F)
GRASSES AND GROUNDCOVER

RAIN GARDEN LAYOUT PLAN (BR-F)

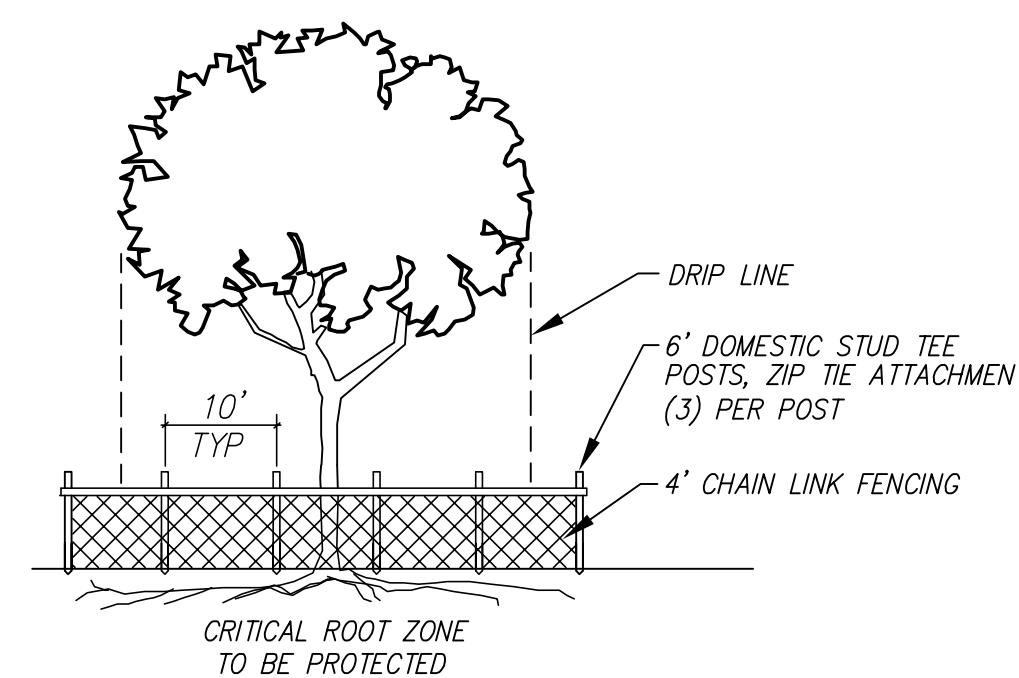
RAIN GARDEN PLANT QUANTITIES																		
REQUIRED PLANTS	TREES	LARGE SHRUBS				SMALL SHRUBS				GC	HERBACEOUS (2' O.C.)							
	Acer cinnamatum / VINE MAPLE	Thuja plicata / WESTERN RED CEDAR	Cornus sericea / RED TWIG DOGWOOD	Hibiscus Discolor / OCEANSPRAY	Oemleria cerasiformis / INDIAN PLUM	Ribes Sanguineum / RED FLOWERING CURRANT	Rosa nutkana / MOOTNA ROSE	Cornus sericea 'Kelsey' / KELSEY DOGWOOD	Mahonia aquifolium / OREGON GRAPE	Physocarpus capitatus / PACIFIC NINEBARK	Polystichum muticum / WESTERN SWORDFERN	Spiraea betulifolia / BIRCHLEAF SPIREA	Symphoricarpos albus / SNOWBERRY	Fragaria chiloensis / BEACH STRAWBERRY	Carex obtusata / SLOUGH SEDGE	Juncus ensifolius / DAGGER-LEAF RUSH	Juncus patens / SPREADING RUSH	Scirpus microcarpus / SMALL FRUITED BULRUSH
ZONE A TOTAL SF:	1,400																	
TREES	0																	
LARGE SHRUBS	42		12	12	4		14											
SMALL SHRUBS	56						14		4	10	11	17						
HERBACEOUS	1,610													631	208	376	394	
ZONE B TOTAL SF:	600																	
TREES	6	4	2															
LARGE SHRUBS	18			10		8												
SMALL SHRUBS	24								12					5				
GROUNDCOVERS	690													690				
TOTALS:	4	2	12	22	4	8	14	14	12	4	10	11	22	690	631	208	376	394

CONSTRUCTION NOTES

- INSTALL PLANTS AS SHOWN IN QUANTITIES LISTED THIS SHEET.
- INSTALL WATER QUALITY MIXTURE
- INSTALL MOW STRIP. SEE DETAIL SHEET L2.2.

- NOTES:
- SEE PLANTING LEGEND SHEET L2.1.
 - SEE PLANTING QUANTITIES THIS SHEET.
 - SEE PLANTING NOTES AND DETAILS SHEET L2.3
 - SEE IRRIGATION SHEETS L3.1-L3.5.

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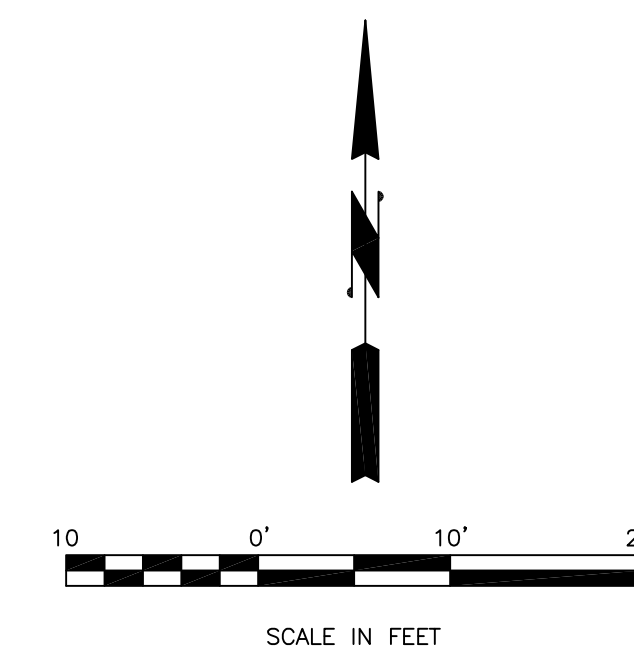


NOTE: EXISTING TREES TO REMAIN (PER PLAN) - PROTECT DURING CONSTRUCTION WITH CHAIN LINK FENCING INSTALLED OUTSIDE OF TREE CANOPY DRIP LINE. NO MATERIAL STORAGE OR DUMPING OF ANY KIND SHALL OCCUR WITHIN THE DRIP LINE OF TREE. FENCES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.

TREE PROTECTION FENCING

SCALE: N.T.S.

1
L2.2



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263
12/31/18
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Landscape Architect
PRELIMINARY

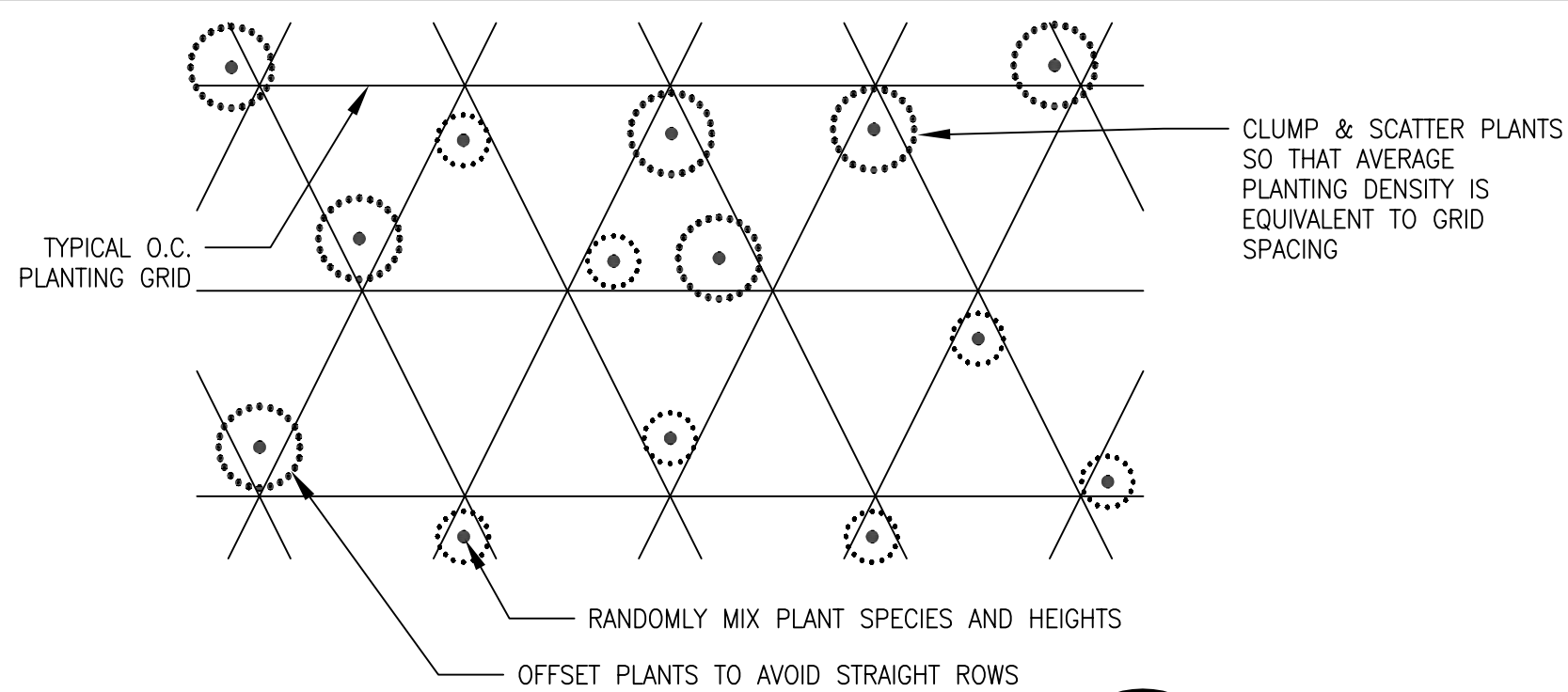
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29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



Date: 1 February 2019
Scale: AS SHOWN
Designed By: DDH
Drawn By: MLD
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
RAIN GARDEN & DET'N POND PLANTING PLAN

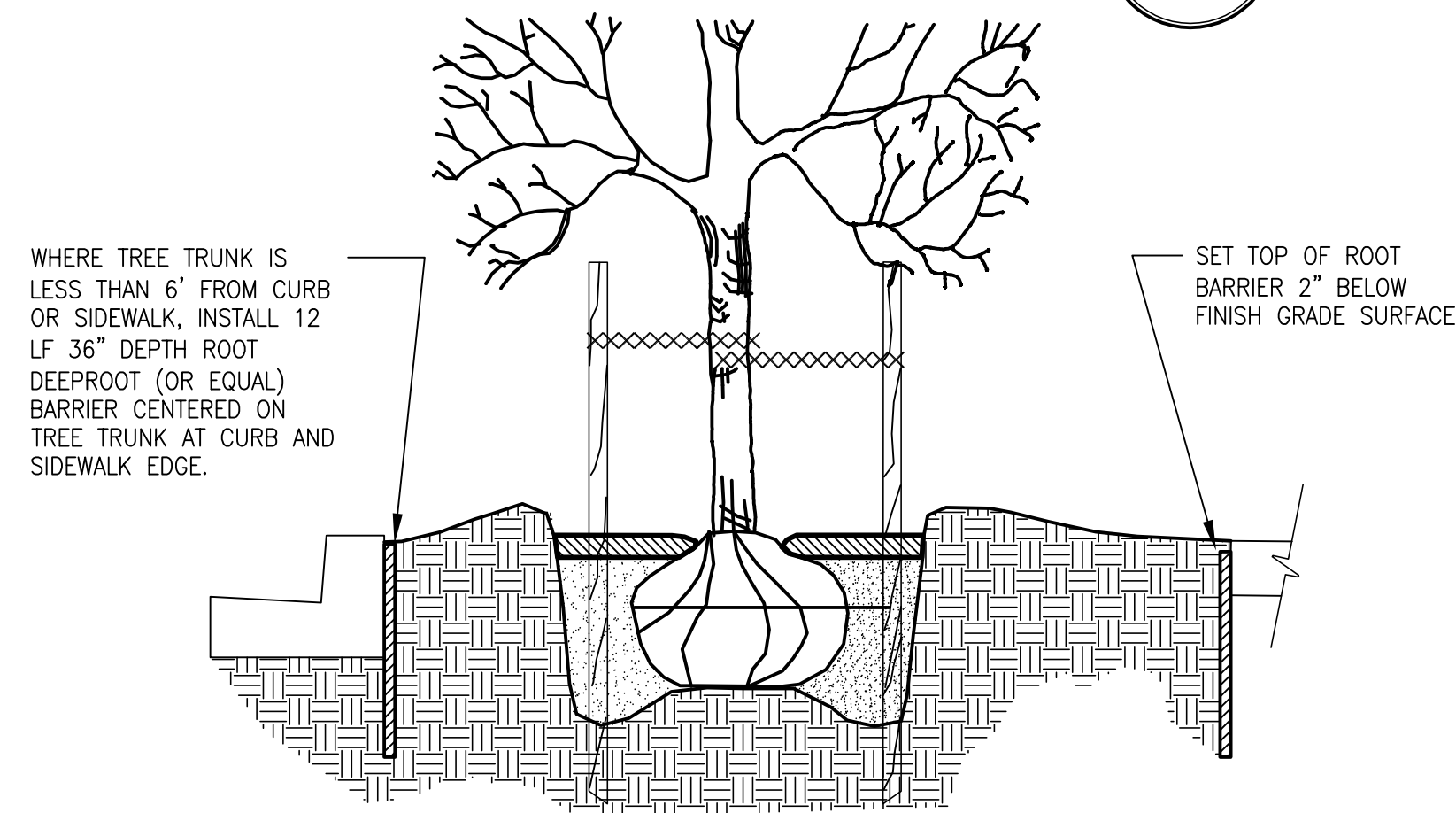
CIP# 4196
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L2.2
140 of 211



RANDOM PLANTING PATTERN

SCALE: N.T.S.

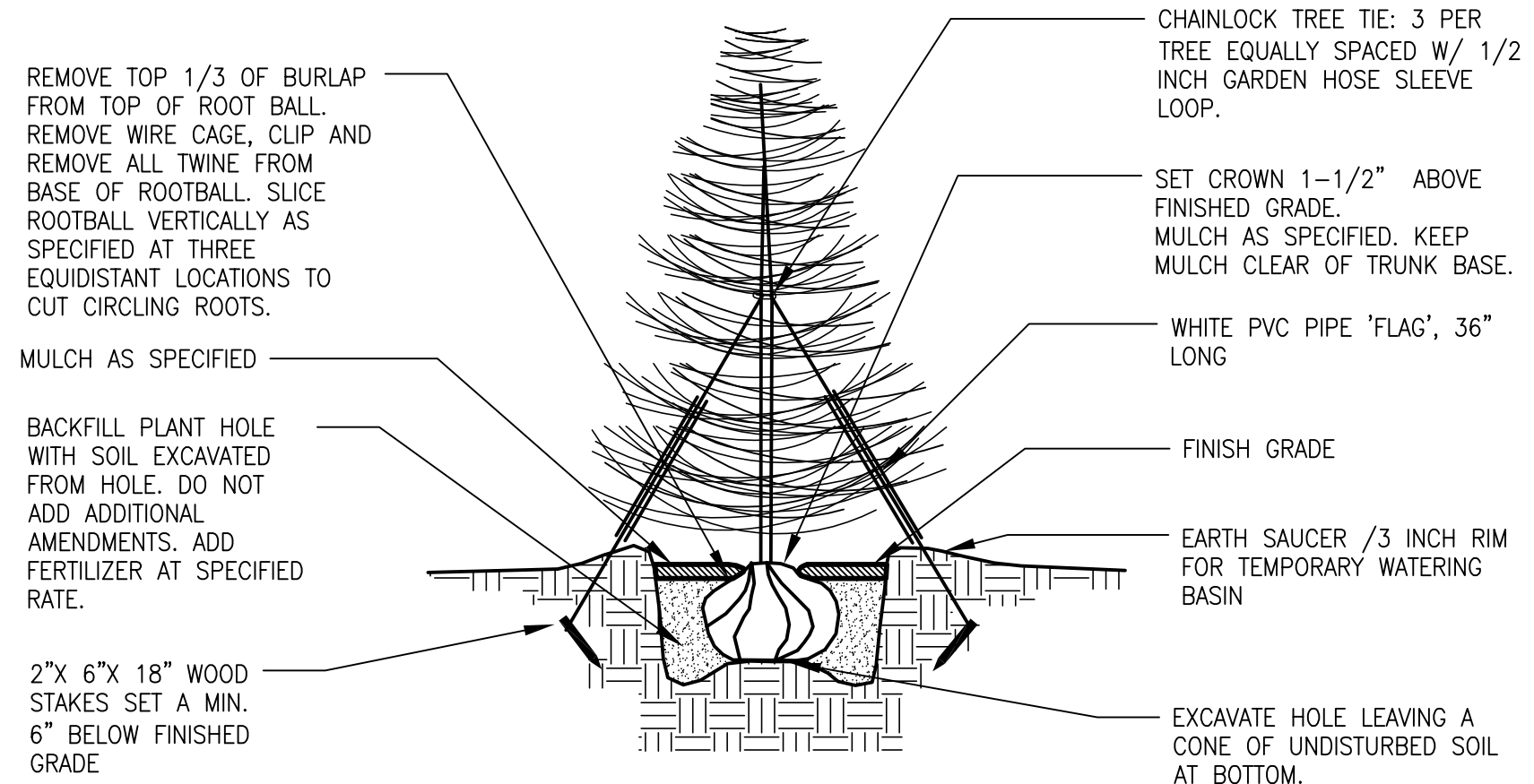
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L2.3



TREE PLANTING WITH ROOT BARRIER

SCALE: N.T.S.

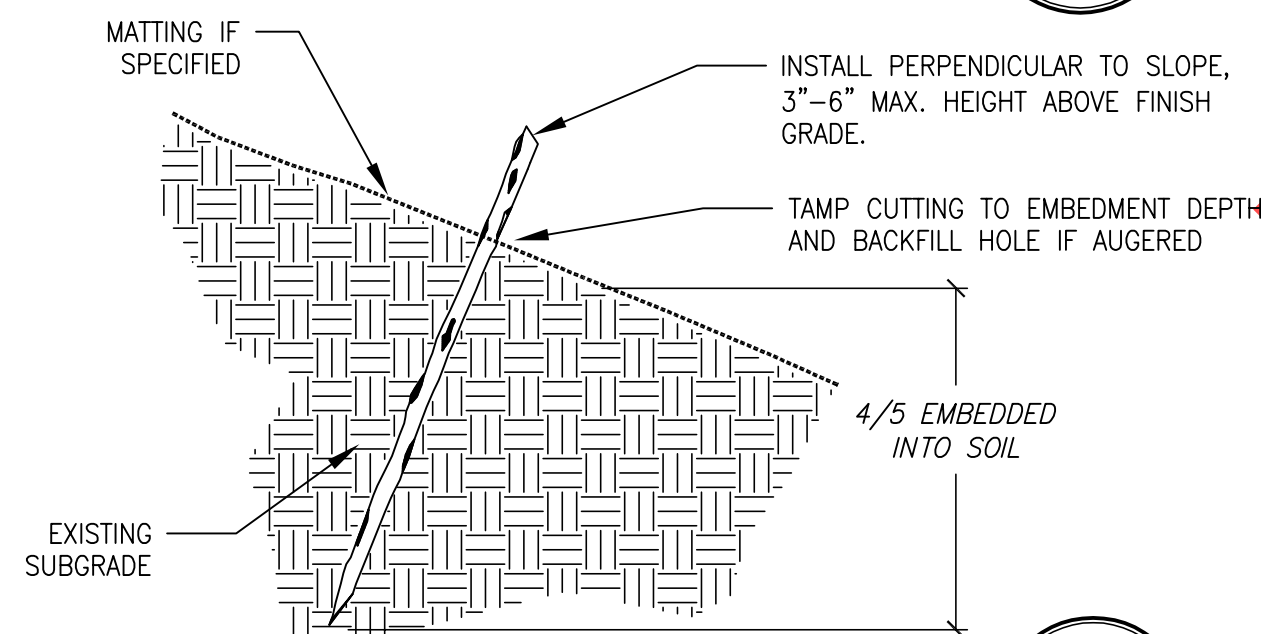
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L2.3



EVERGREEN TREE PLANTING

SCALE: N.T.S.

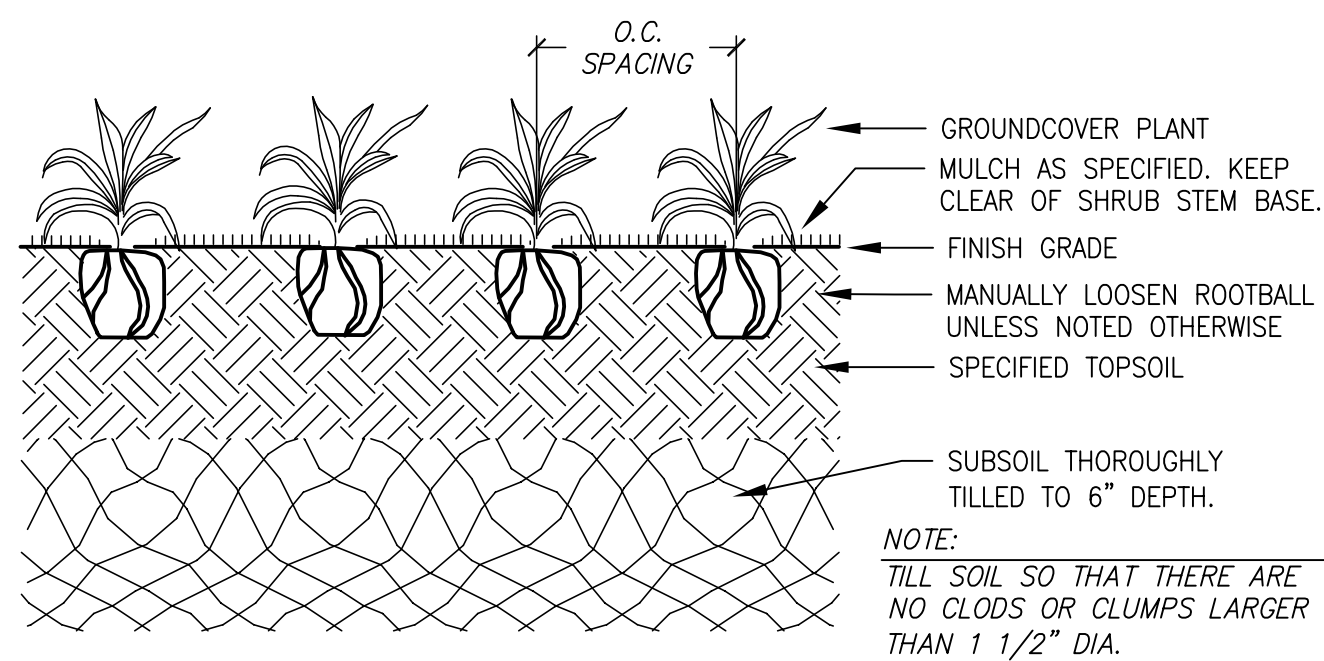
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L2.3



CUTTING ON SLOPE

SCALE: N.T.S.

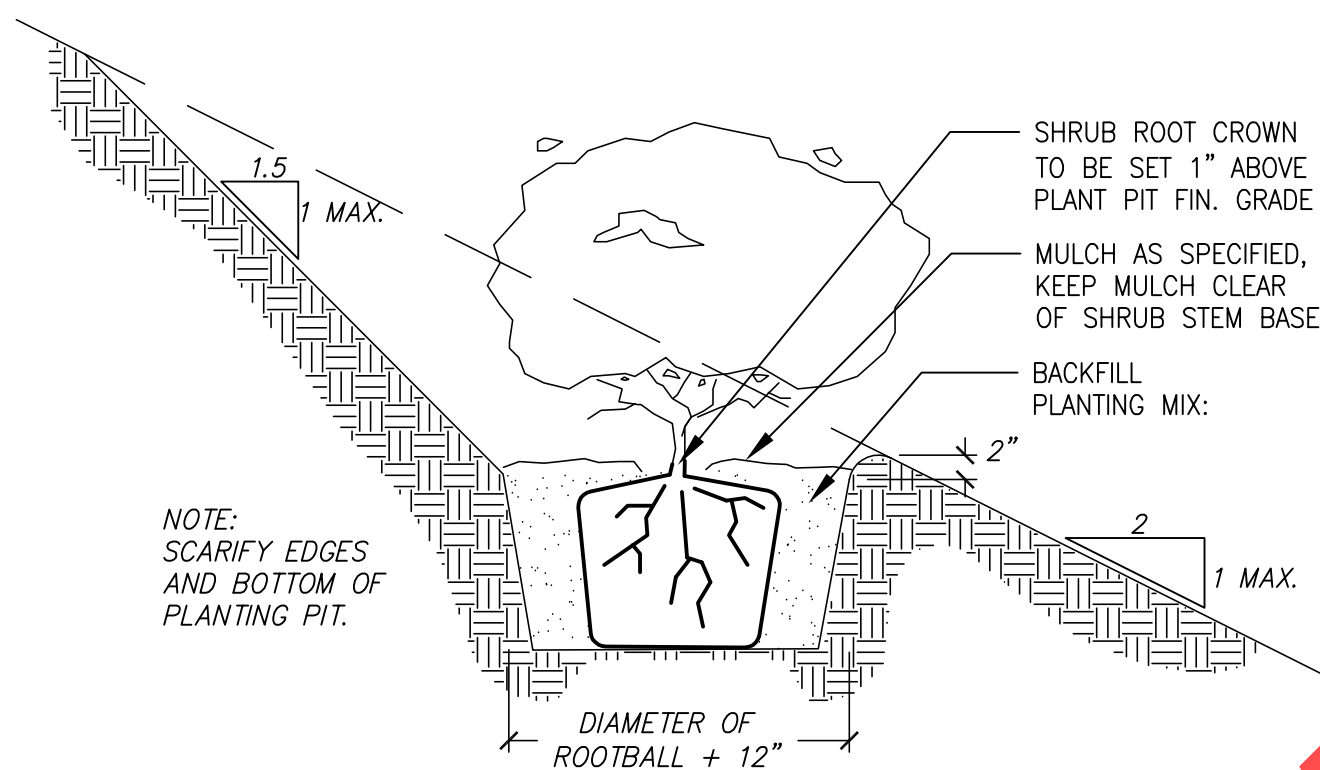
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L2.3



GROUND COVER PLANTING DETAIL

SCALE: N.T.S.

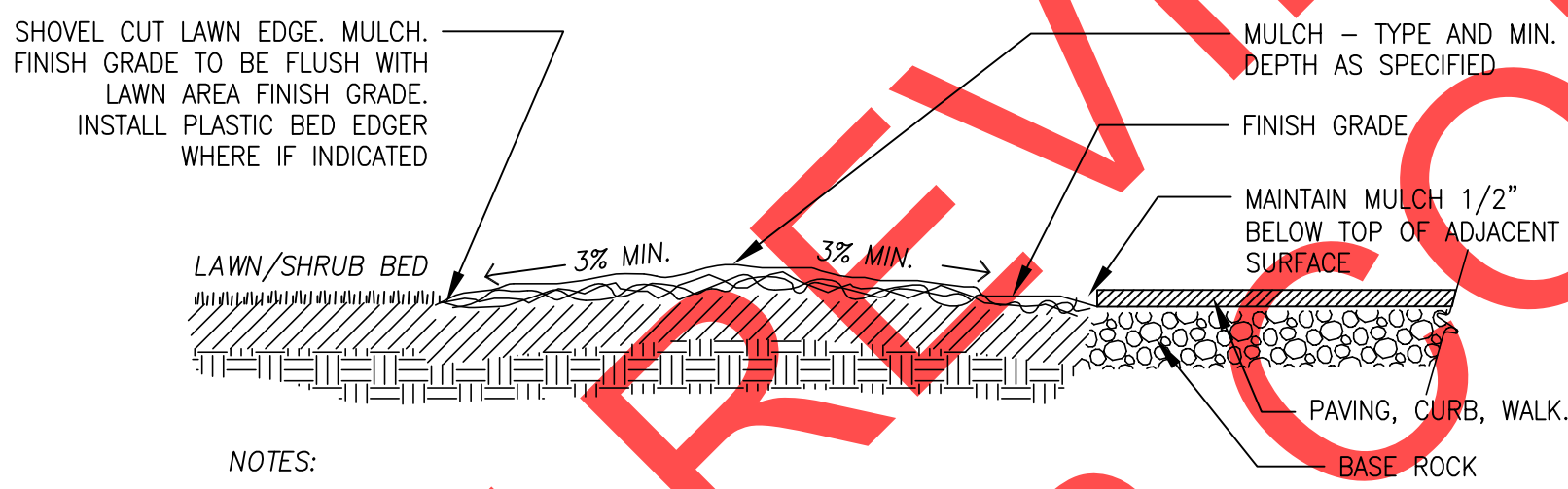
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L2.3



TREE/SHRUB PLANTING ON SLOPE

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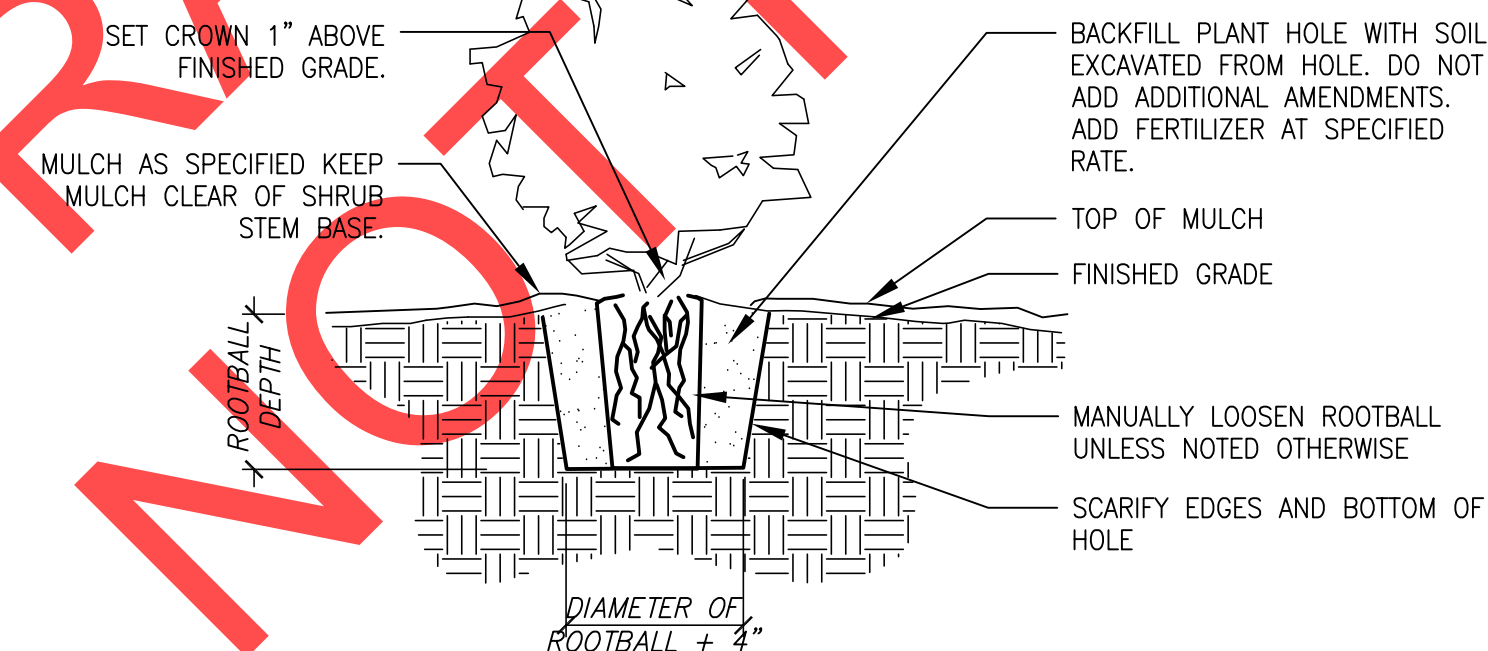
4
L2.3



SECTION - PLANTING BED GRADING

SCALE: N.T.S.

3
L2.3



SHRUB PLANTING DETAIL

SCALE: N.T.S.

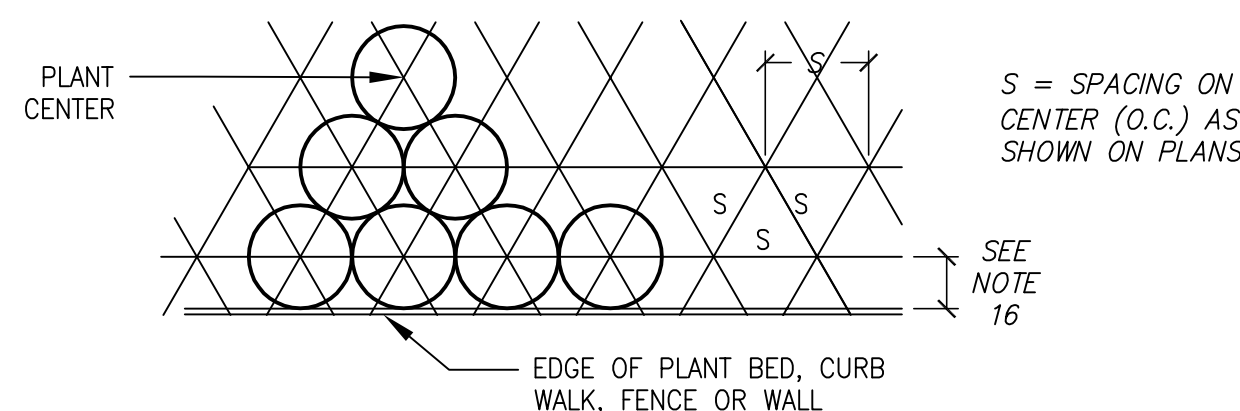
2
L2.3

UTILITY NOTE:

CONTRACTOR IS CAUTIONED THAT EXISTING UNDERGROUND FACILITIES OCCUR THROUGHOUT THE WORK AREAS INCLUDING BUT NOT LIMITED TO POWER, GAS, TELEPHONE, WATER SUPPLY, AND IRRIGATION. CONTRACTOR SHALL MARK THE FACILITIES BEFORE WORK, POT HOLE WHERE NECESSARY, AND PROTECT DURING CONSTRUCTION. IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE IF ANY CONFLICTS ARE FOUND.

LANDSCAPE NOTES:

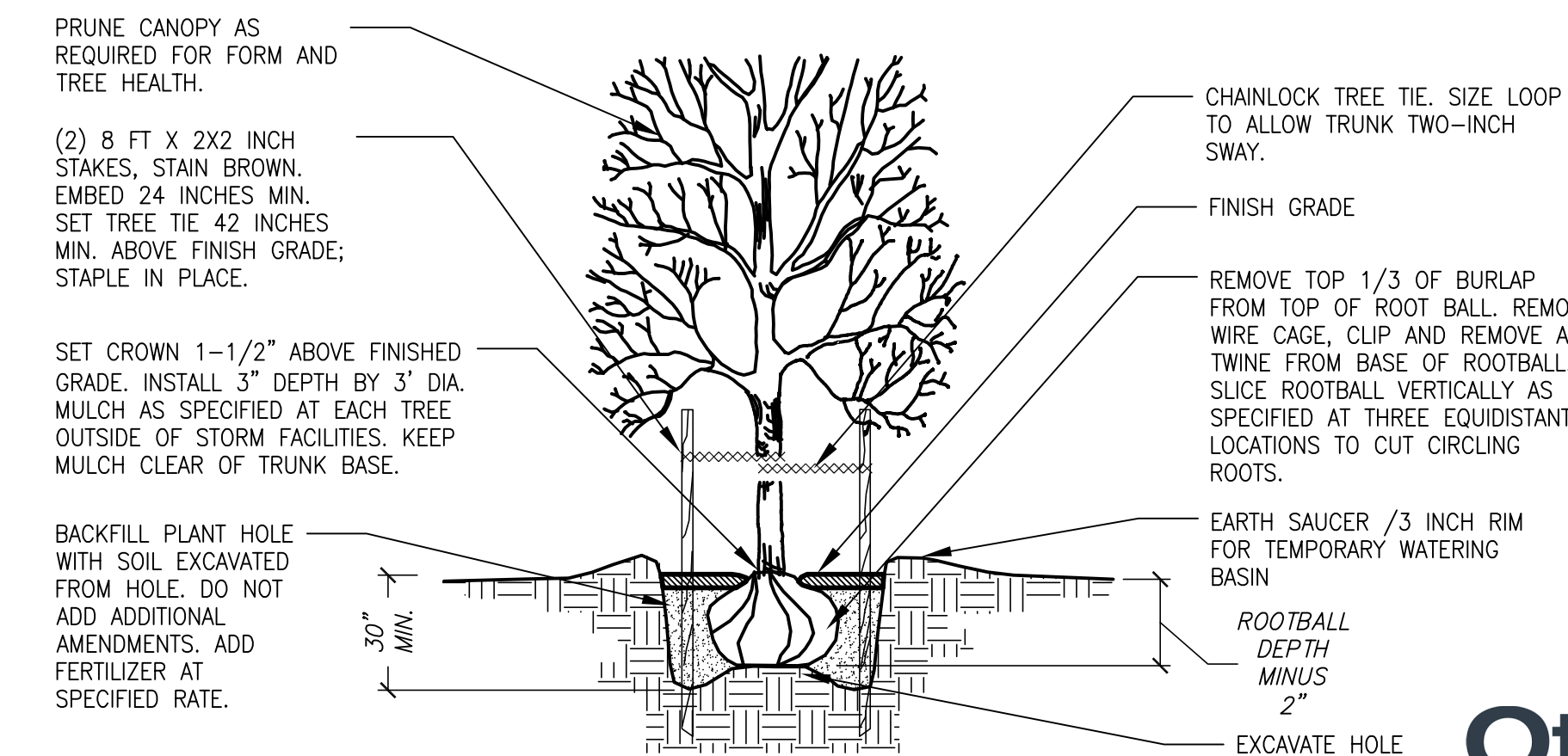
- GENERAL: SEVERAL OF THE FOLLOWING NOTES SUMMARIZE THE PROJECT SPECIFICATIONS FOR THE CONTRACTORS CONVENIENCE. IF A DISCREPANCY EXISTS BETWEEN THESE NOTES AND THE PROJECT SPECIFICATIONS THE SPECIFICATIONS SHALL OVERRIDE.
- THE LANDSCAPE CONTRACTOR IS TO THOROUGHLY REVIEW THE SITE. IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLAN AND THE EXISTING CONDITIONS THE OWNERS REPRESENTATIVE IS TO BE NOTIFIED IMMEDIATELY.
- IF THE LANDSCAPE CONTRACTOR STARTS WORK BEFORE SITE CONDITIONS ARE READY OR CONTINUES WORK IN ADVERSE CONDITIONS WITHOUT PRIOR APPROVAL THEY WILL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS RELATING TO THE CONDITION.
- IMMEDIATELY NOTIFY OWNERS REPRESENTATIVE CONCERNING ANY CONDITION AT ANY TIME DURING CONSTRUCTION THAT IS DETRIMENTAL TO THE HEALTH AND VIGOROUS GROWTH OF THE SPECIFIED PLANT MATERIAL.
- PROVIDE QUANTITY OF PLANT MATERIAL INDICATED IN PLANT LIST OR THE QUANTITY REQUIRED TO COVER AREAS INDICATED AT SPECIFIED SPACING, WHICHEVER IS GREATER.
- IF AN AREA DIFFERS SIGNIFICANTLY IN SIZE FROM THAT SCALED ON DRAWING AND REQUIRES MORE OR LESS MATERIAL THE OWNERS REPRESENTATIVE IS TO BE INFORMED.
- WATER QUALITY MIX: WATER QUALITY MIX SHALL BE PREPARED AND AMENDED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS. SEE TABLES SHEETS SF01 AND SF02 FOR PLACEMENT LOCATIONS.
- SELECTED TOPSOIL SHALL BE PREPARED AND AMENDED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS. SEE TOPSOIL/SOIL CONDITIONER TABLE ON SHEET L2.1 FOR PLACEMENT LOCATIONS AND DEPTHS.
- SOIL ANALYSIS: CONTRACTOR SHALL OBTAIN A COPY OF OWNER-PROVIDED SOIL TEST. AMEND AND FERTILIZE IN CONFORMANCE WITH RECOMMENDATIONS INDICATED IN THE REPORT.
- FERTILIZER: APPLY FERTILIZER TO ALL PLANT HOLES AND TURF AREAS OF THE TYPE, QUANTITY, APPLICATION METHOD, AND TIMING NOTED IN THE SPECIFICATIONS. DO NOT APPLY FERTILIZER AT STORM FACILITIES.
- SOIL CONDITIONER: APPLY SPECIFIED SOIL CONDITIONER AT PLANTING AREAS INDICATED IN TOPSOIL/ SOIL CONDITIONER TABLE ON SHEET L2.1. TILL IN TO NATIVE TOPSOIL TO A DEPTH OF 4 INCHES.
- BARK MULCH: SPREAD 3 INCH DEPTH FINE-MEDIUM GRADE FIR/HEMLOCK BARK OVER ALL SHRUB BEDS EXCEPT AT STORM FACILITIES. KEEP BARK CLEAR OF TREE AND SHRUB STEM BASE.
- ROCK MULCH: SPREAD 3 INCH DEPTH ROCK MULCH OVER WEED CONTROL TEXTILE AT LOCATIONS INDICATED ON PLAN.
- PLANTING POCKETS: BACK FILL PLANT HOLE WITH SOIL EXCAVATED FROM HOLE. DO NOT ADD ADDITIONAL AMENDMENTS.
- ROOT BARRIER: INSTALL "DEEP ROOT" OR EQUAL ROOT BARRIER AS INDICATED WHERE PAVED EDGE IS 6 FT. OR LESS FROM CENTER OF TREE TRUNK.
- PLANT MATERIAL: ALL PLANT MATERIAL SHALL MEET MINIMUM QUALITY AND SIZE REQUIREMENTS ESTABLISHED IN THE AMERICAN STANDARD FOR NURSERY STOCK GUIDELINES.
- LEAVE PLANT NAME IDENTIFICATION TAGS ON TEN PERCENT OF ALL TREES AND SHRUBS INSTALLED TO AID INSPECTORS IN VERIFYING THAT SPECIFIED PLANTS HAVE BEEN INSTALLED.
- PLANT CENTER OF SHRUBS A MINIMUM OF 24 INCHES FROM ADJACENT PAVING. PLANT GROUNDCOVERS A MINIMUM OF 18 INCHES FROM ADJACENT PAVING. WHERE PLANTER IS LESS THAN 6 FEET WIDE, SET PLANTS HALF OF THE NOTED PLANT SPACING FROM ADJACENT PAVING.
- WHERE PLANT BED SLOPE IS LESS THAN 3% MOUND PLANTING BED AREAS 3% MINIMUM FOR POSITIVE DRAINAGE.
- SEE SPECIFICATIONS FOR FINAL INSPECTION, MAINTENANCE, AND WARRANTY REQUIREMENTS UNIQUE TO THIS PROJECT.
- SEE SPECIFICATIONS FOR OTHER LANDSCAPE CONSTRUCTION REQUIREMENTS.



PLANT SPACING

SCALE: N.T.S.

6
L2.3



TREE PLANTING

SCALE: N.T.S.

1
L2.3



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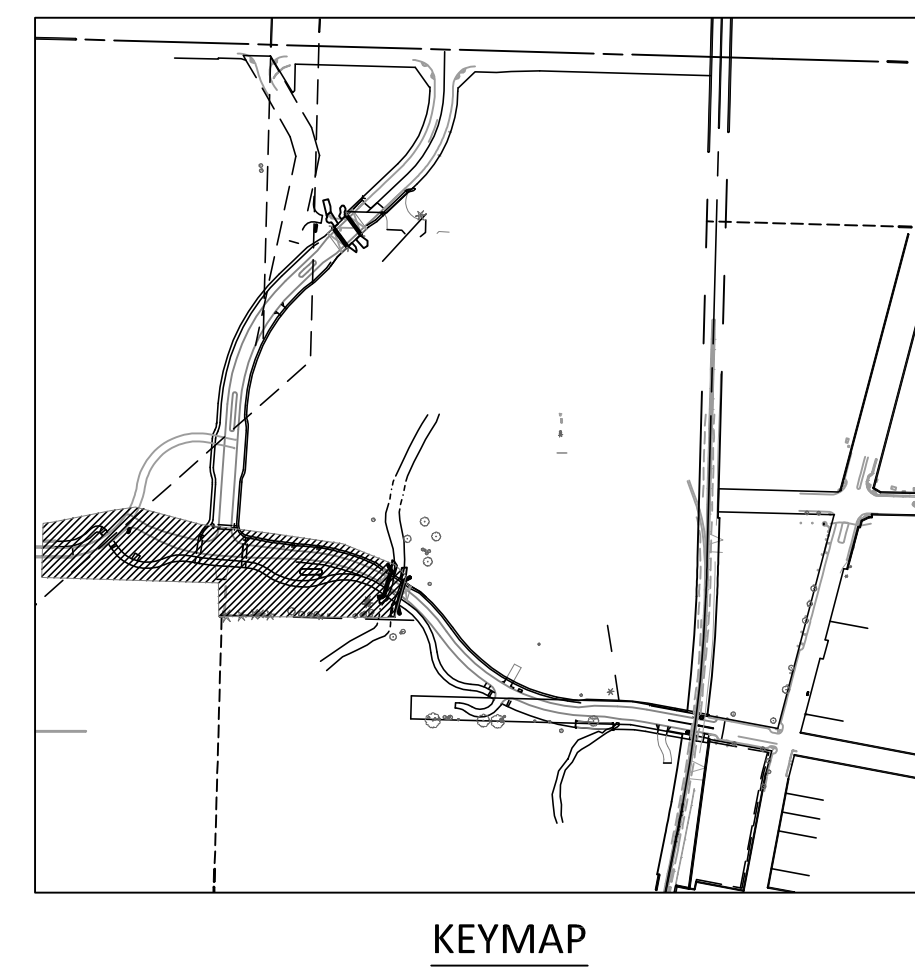
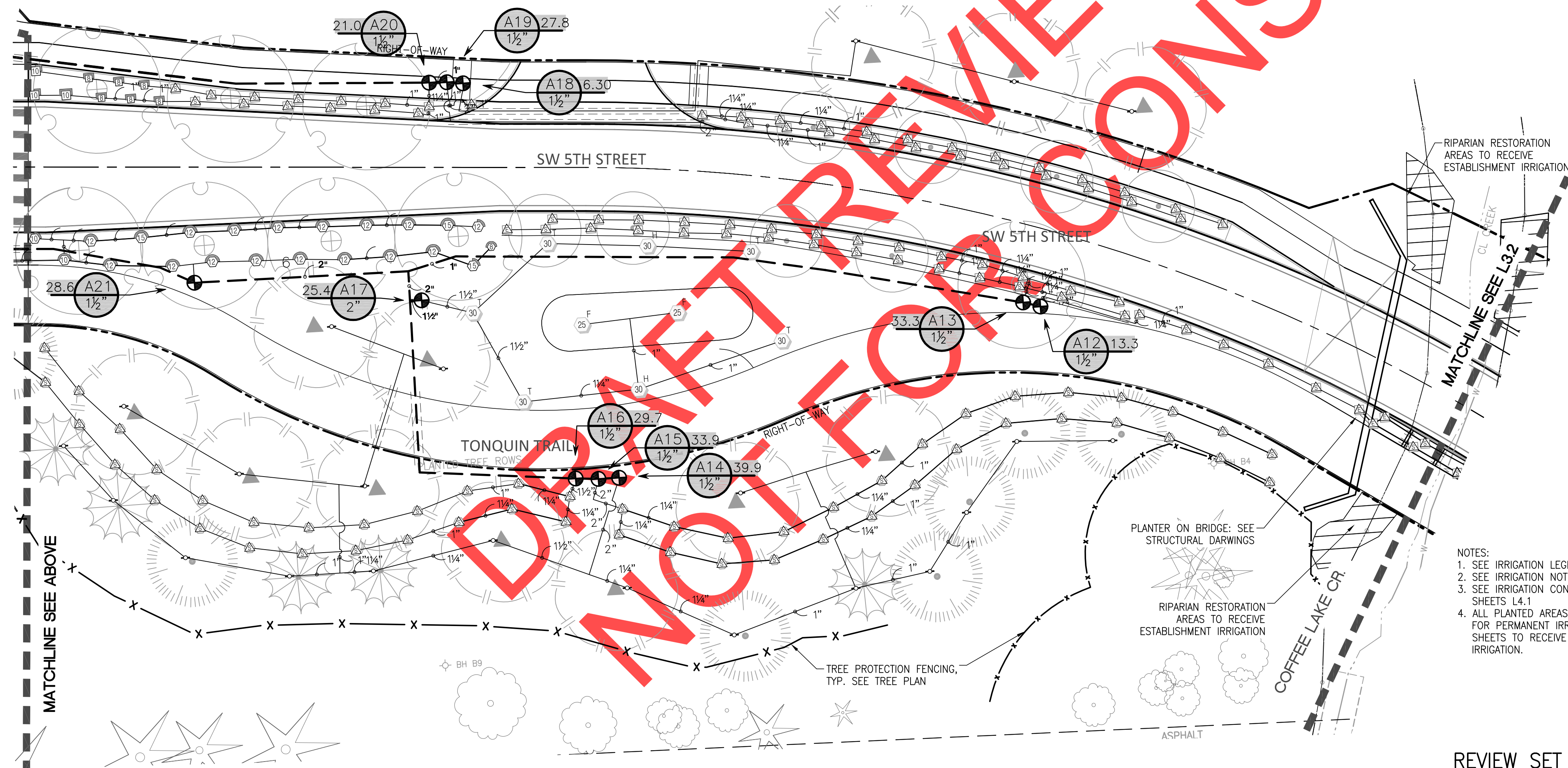
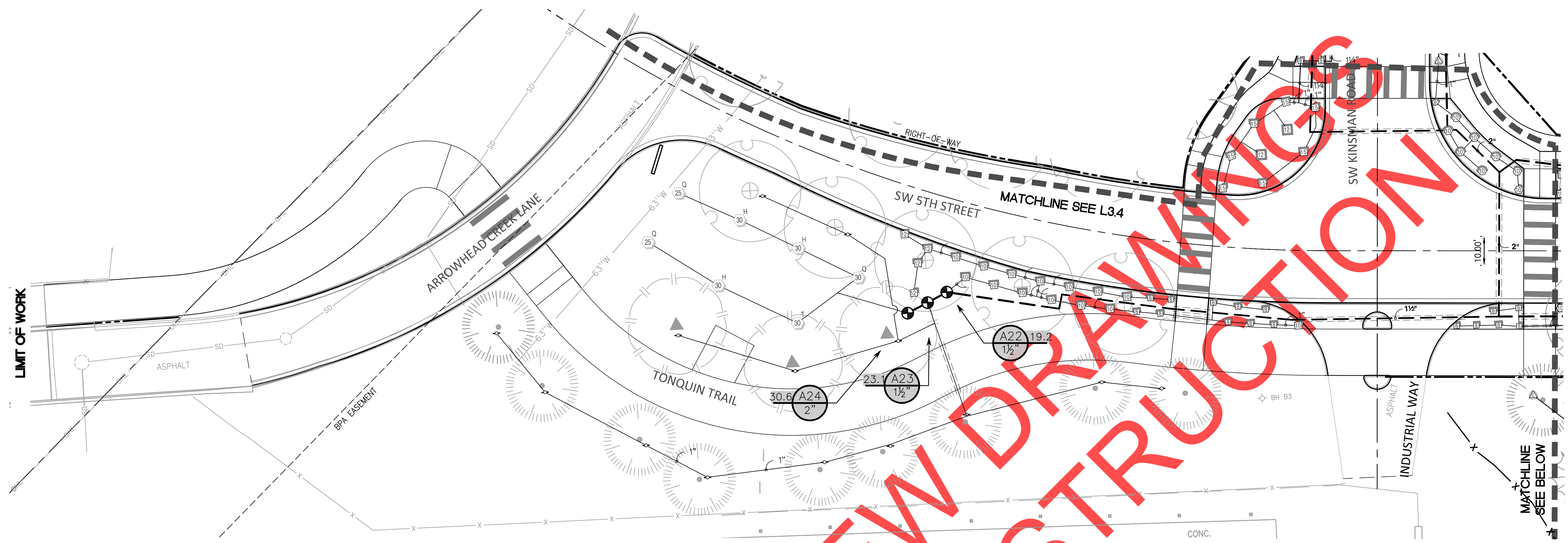
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263
12/31/18
David P. Hendy
Landscape Architecture
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PREMIARY
SHAPE ARCHITECT

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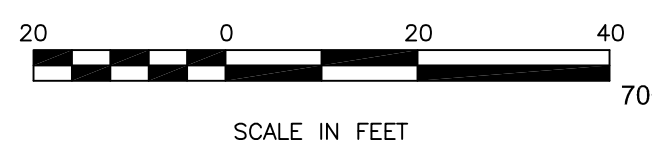
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SW 5TH ST TO SW KINSMAN RD EXTENSION
PLANTING NOTES AND DETAILS

CIP# 4196
PROJECT# 2017-02-001
L2.3
141 of 211



- NOTES:
1. SEE IRRIGATION LEGEND SHEET L3.5
 2. SEE IRRIGATION NOTES SHEET L3.3
 3. SEE IRRIGATION CONSTRUCTION DETAILS SHEETS L4.1
 4. ALL PLANTED AREAS NOT INDICATED FOR PERMANENT IRRIGATION ON THESE SHEETS TO RECEIVE ESTABLISHMENT IRRIGATION.



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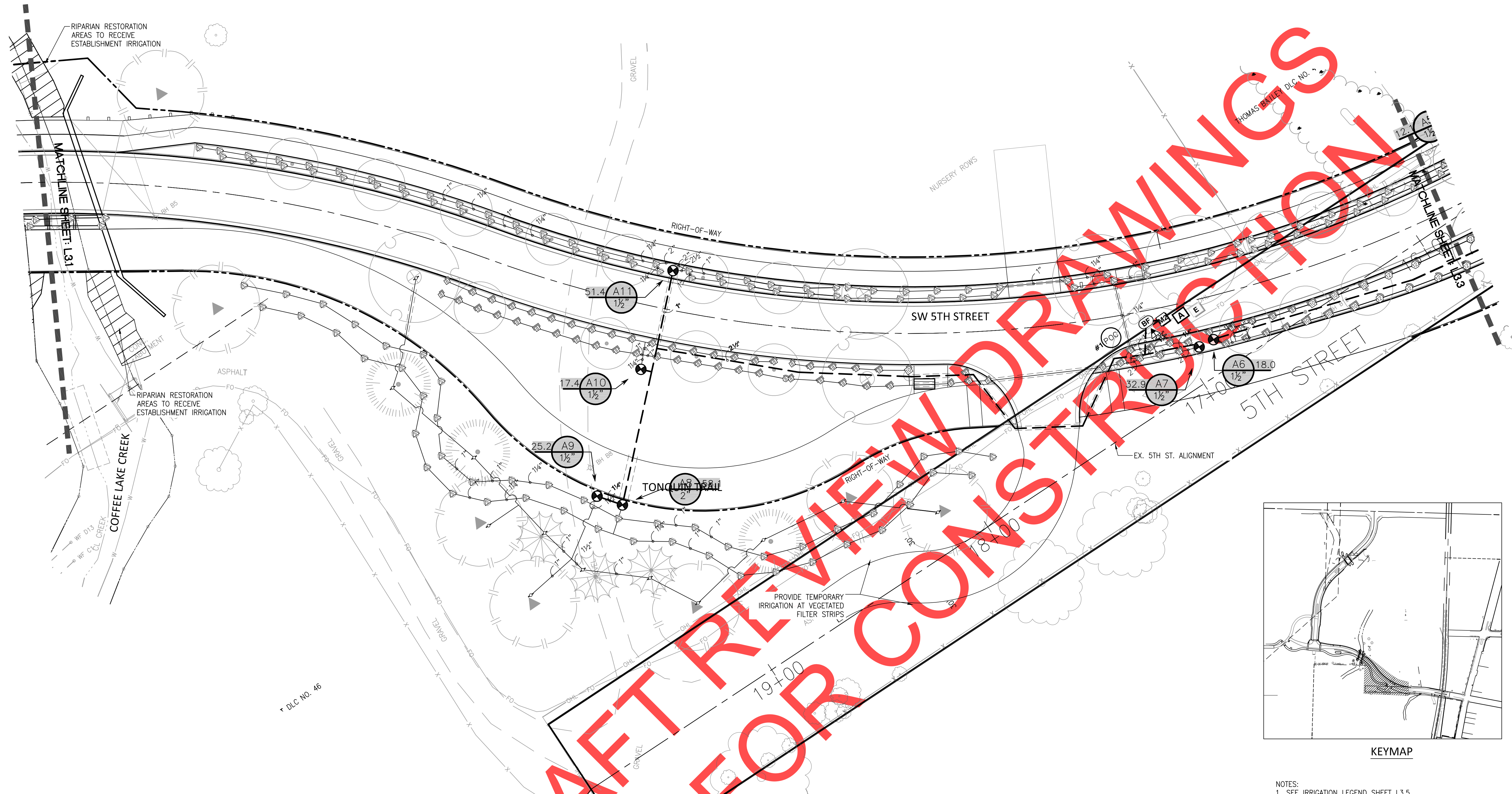
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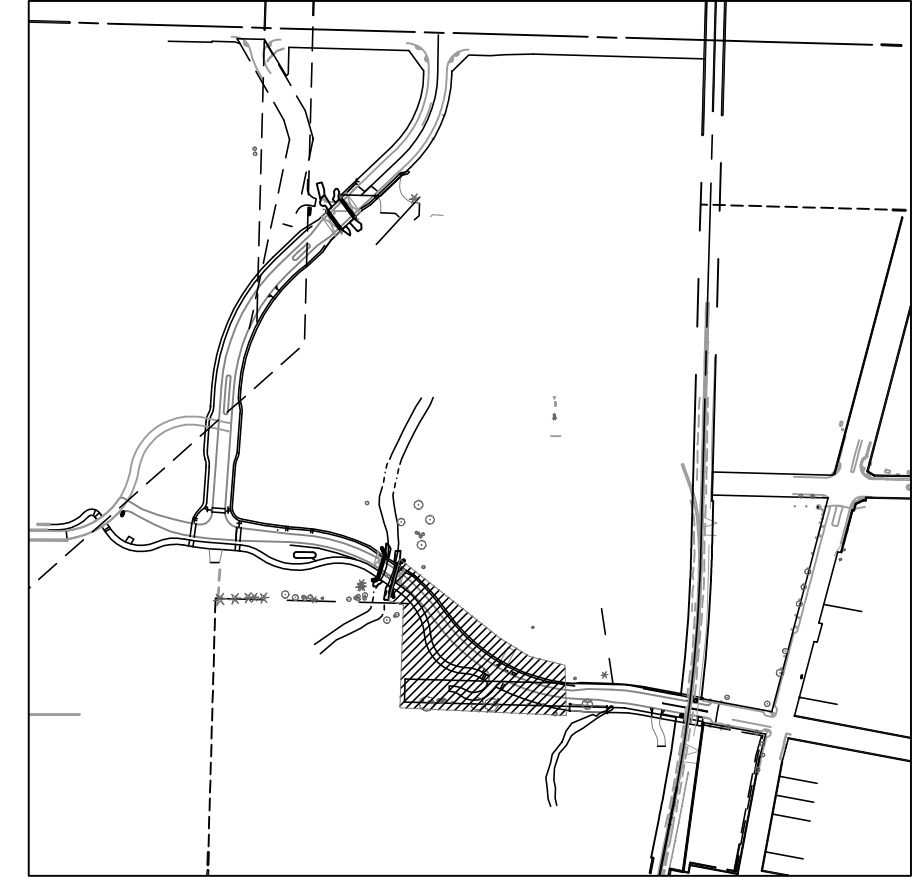
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**SW 5TH ST TO SW KINSMAN RD EXTENSION
 5TH STREET IRRIGATION PLAN**

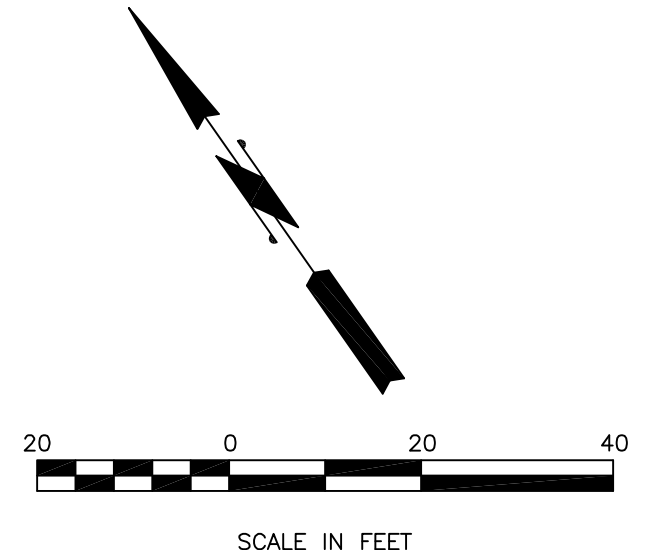
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 PROJECT# 2017-02-001
 L3.1
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- NOTES:
1. SEE IRRIGATION LEGEND SHEET L3.5
 2. SEE IRRIGATION NOTES SHEET L3.3
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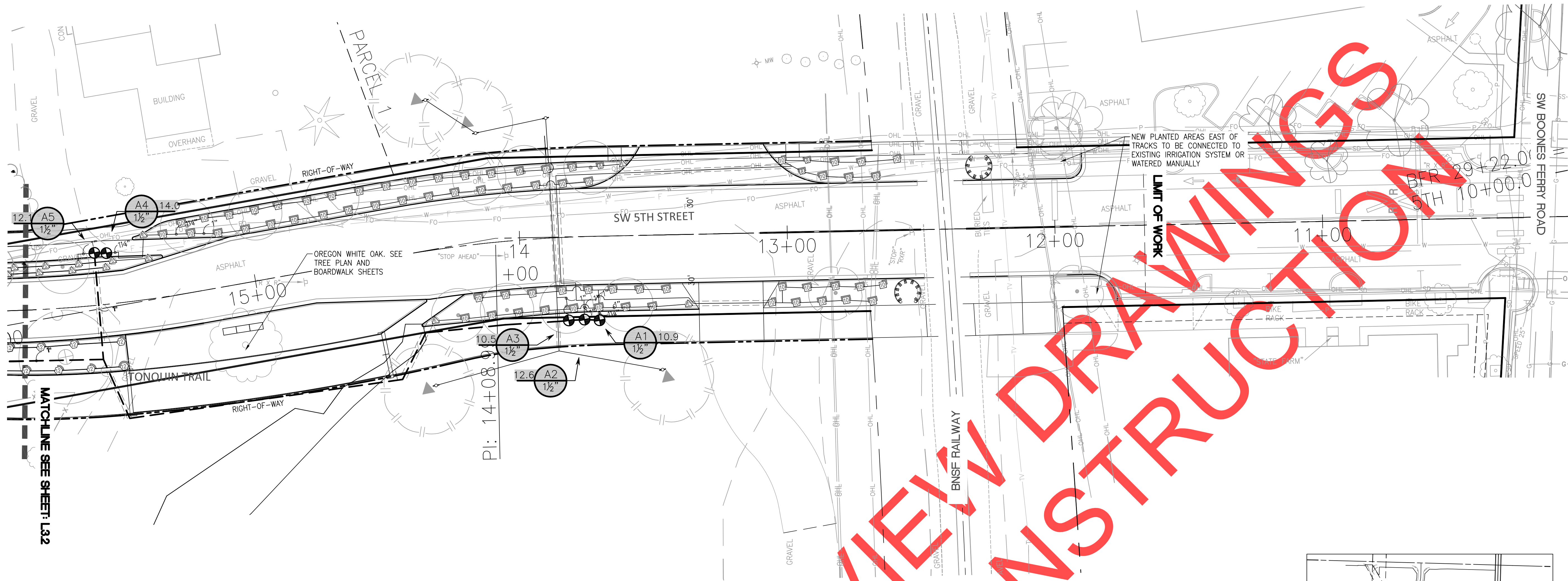
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SW 5TH ST TO SW KINSMAN RD EXTENSION
5TH STREET IRRIGATION PLAN

CIP# 4196
PROJECT# 2017-02-001
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MATCHLINE SEE SHEET: L3.2

OREGON WHITE OAK. SEE TREE PLAN AND BOARDWALK SHEETS

NEW PLANTED AREAS EAST OF TRACKS TO BE CONNECTED TO EXISTING IRRIGATION SYSTEM OR WATERED MANUALLY

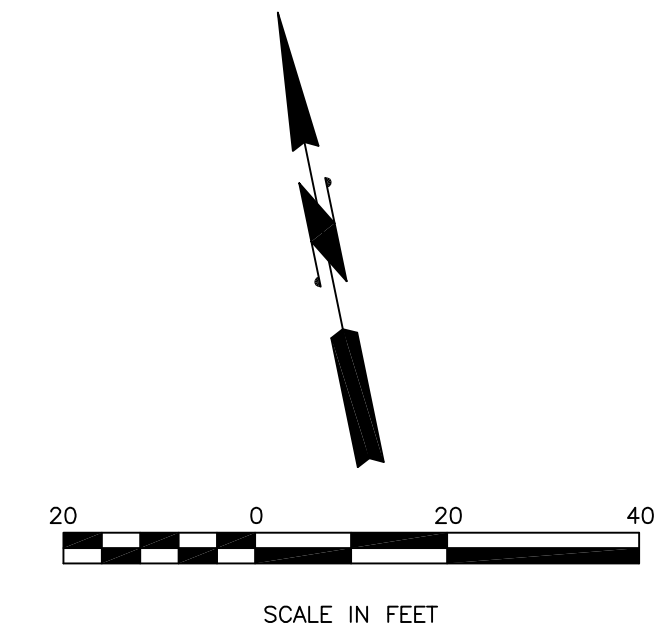
IRRIGATION NOTES

1. LOCATE AND VERIFY ALL UTILITY LINES PRIOR TO EXCAVATION OR CONSTRUCTION.
2. FIELD VERIFY WORKING WATER PRESSURE. SYSTEM IS DESIGNED TO OPERATE AT 50-70 PSI AT POINT OF CONNECTION (P.O.C.).
3. PLACE MANUAL DRAIN VALVES AT ALL LOW POINTS OF SYSTEM. A MINIMUM OF ONE DRAIN VALVE ON MAINLINE AND ONE DRAIN VALVE ON LATERAL LINE PER ZONE.
4. LINE LOCATIONS ARE SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY. LINES ARE TO SHARE COMMON TRENCHES WHEREVER POSSIBLE. IRRIGATION SLEEVES ARE SHOWN AT APPROXIMATE LOCATIONS.
5. IRRIGATION HEADS IN LAWN AREAS AND ADJACENT TO CURBS AND WALKS SHALL BE 4" POP-UP TYPE, AND ALL SHRUB HEADS SHALL BE 6" POP-UP TYPE.
6. SIZE OF LATERAL PIPE IS GENERALLY INDICATED ON FIRST AND LAST SEGMENT OF LIKE SIZED PIPE. PIPE IS SIZED TO MAINTAIN WATER VELOCITIES OF LESS THAN 5 FEET PER SECOND.
7. LOCATE VALVES AT EDGE OF LAWNS AND PLANT BEDS FOR EASY ACCESS.
8. ALL VALVES ARE SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY. PLACE VALVES INSIDE PROJECT BOUNDARY IN ALL CASES. VERIFY IN FIELD.
9. SEE SHEET L4.1 AND L4.2 FOR IRRIGATION DETAILS.
10. CONTRACTOR TO INSTALL WIRE PULL BOX, PULL WIRE, AND CONDUIT TO CONTROLLER LOCATION. CPU TO PROVIDE POWER TO CONTROLLER LOCATION.
11. VERIFY EXACT LOCATION OF OUTDOOR PEDESTAL-MOUNT CONTROLLER WITH ARCHITECT.
12. STAKE TREE LOCATIONS PRIOR TO HEAD LAYOUT. ADJUST HEADS TO AVOID TREE TRUNKS.

- NOTES:
1. SEE IRRIGATION LEGEND SHEET L3.5
 2. SEE IRRIGATION NOTES SHEET L3.3
 3. SEE IRRIGATION CONSTRUCTION DETAILS SHEETS L4.1
 4. ALL PLANTED AREAS NOT INDICATED FOR PERMANENT IRRIGATION ON THESE SHEETS TO RECEIVE ESTABLISHMENT IRRIGATION.



KEYMAP



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L. MASON
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Landscape Architect

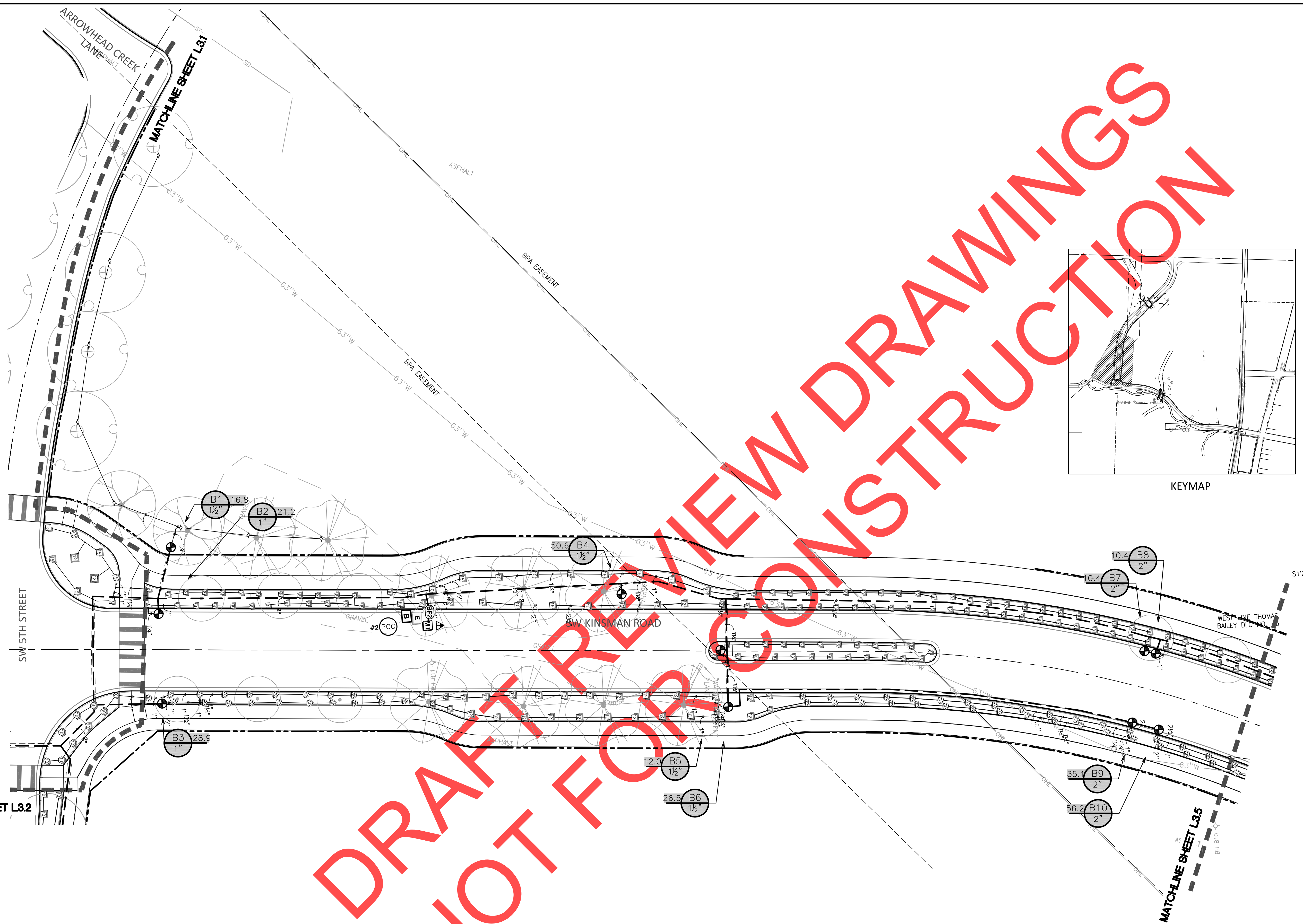
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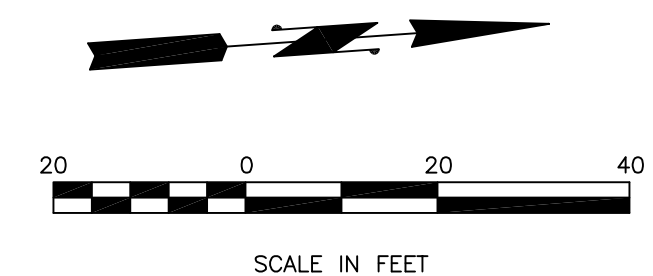
SW 5TH ST TO SW KINSMAN RD EXTENSION
5TH STREET IRRIGATION PLAN

CIP#	4196
PROJECT#	2017-02-001
L3.3	of 211



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- NOTES:
1. SEE IRRIGATION LEGEND SHEET L3.5
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SW 5TH ST TO SW KINSMAN RD EXTENSION
 KINSMAN RD IRRIGATION PLAN

CIP# 4196
 PROJECT# 2017-02-001
 L3.4
 145 of 211

IRRIGATION SCHEDULE

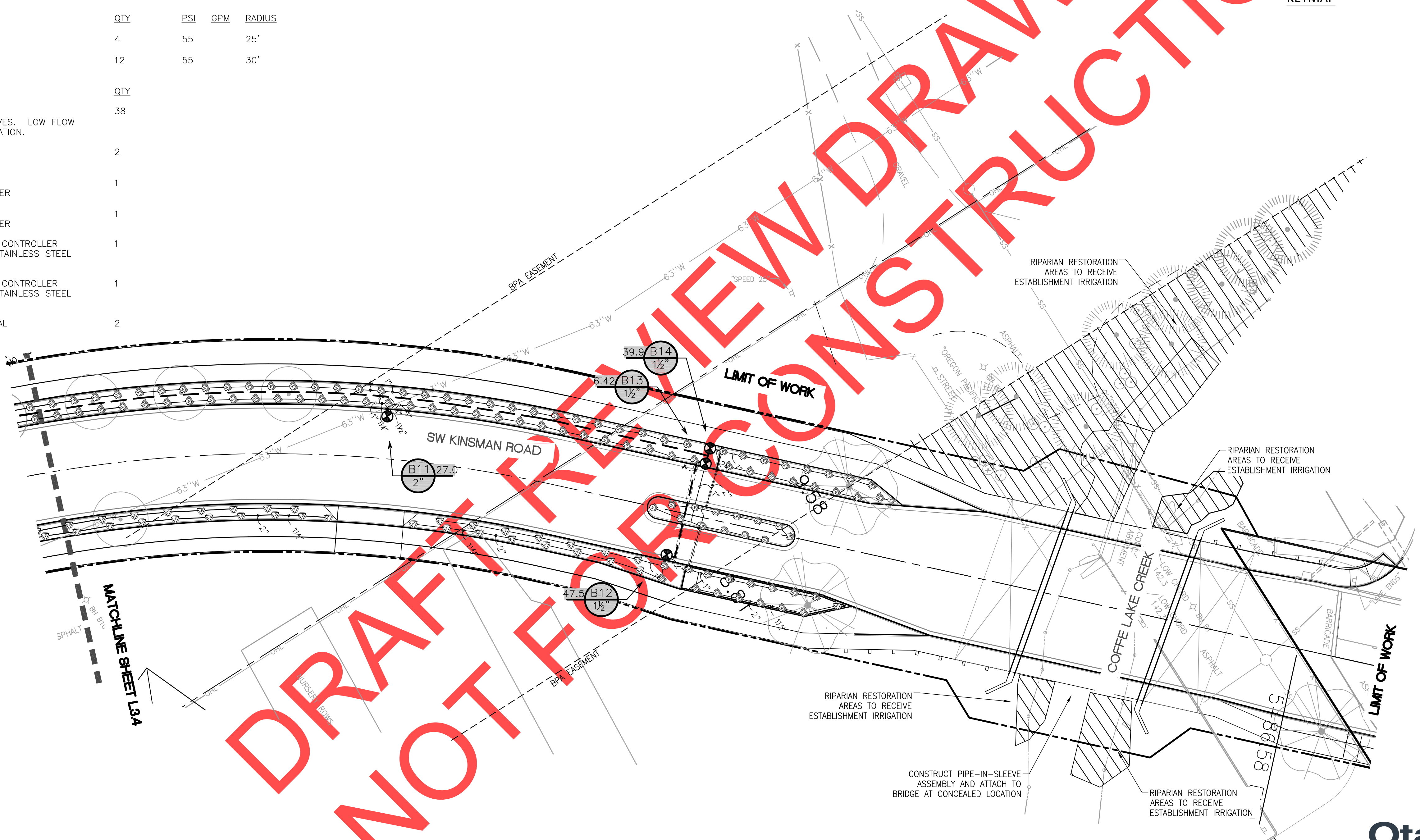
SYMBOL	MANUFACTURER/MODEL	QTY	PSI	GPM	RADIUS
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 15 STRIP SERIES	87	30		
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 5 SERIES MPR	1	30		
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 8 SERIES MPR	299	30		
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 10 SERIES MPR	96	30		
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 12 SERIES MPR	30	30		
	RAIN BIRD 1804-PRS 4" POP-UP SPRINKLER 15 SERIES MPR	20	30		
	RAIN BIRD 1806-PRS 6" POP-UP SPRINKLER 15 STRIP SERIES	275	30		
	RAIN BIRD 1806-PRS 6" POP-UP SPRINKLER 8 SERIES MPR	16	30		
	RAIN BIRD 1806-PRS 6" POP-UP SPRINKLER 10 SERIES MPR	10	30		
	RAIN BIRD 1806-PRS 6" POP-UP SPRINKLER 12 SERIES MPR	29	30		
	RAIN BIRD 1806-PRS 6" POP-UP SPRINKLER 15 SERIES MPR	3	30		
	RAIN BIRD 1806-PRS-1300AF6" POP-UP FLOOD BUBBLER	62	50		

SYMBOL	MANUFACTURER/MODEL	QTY	PSI	GPM	RADIUS
	RAIN BIRD 5004-R-SS-PC,FC-MPR (2)	4	55	25'	
	RAIN BIRD 5004-R-SS-PC,FC-MPR (2)	12	55	30'	

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD PEB 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	38
	BERMAD PRESSURE REDUCING VALVE BERMAD IR-120-50-XZ LINE SIZE	2
	FESCO 825Y 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER	1
	FESCO 825Y 1-1/4" REDUCED PRESSURE BACKFLOW PREVENTER	1
	RAIN BIRD ESP12LXMEF-LXMSS36 STA. CONTROLLER 36 STATION COMMERCIAL CONTROLLER. STAINLESS STEEL PEDESTAL. FLOW SENSING	1
	RAIN BIRD ESP12LXMEF-LXMSS36 STA. CONTROLLER 36 STATION COMMERCIAL CONTROLLER. STAINLESS STEEL PEDESTAL. FLOW SENSING	1
	MILBANK ELECTRICAL METER AND TERMINAL US844-RL-100. SEE ELECTRICAL PLANS	2

IRRIGATION LATERAL LINE: CPVC SCHED
IRRIGATION MAINLINE: PVC SCHEDULE 4

- NOTES:
- SEE IRRIGATION LEGEND SHEET L3.5
 - SEE IRRIGATION NOTES SHEET L3.3
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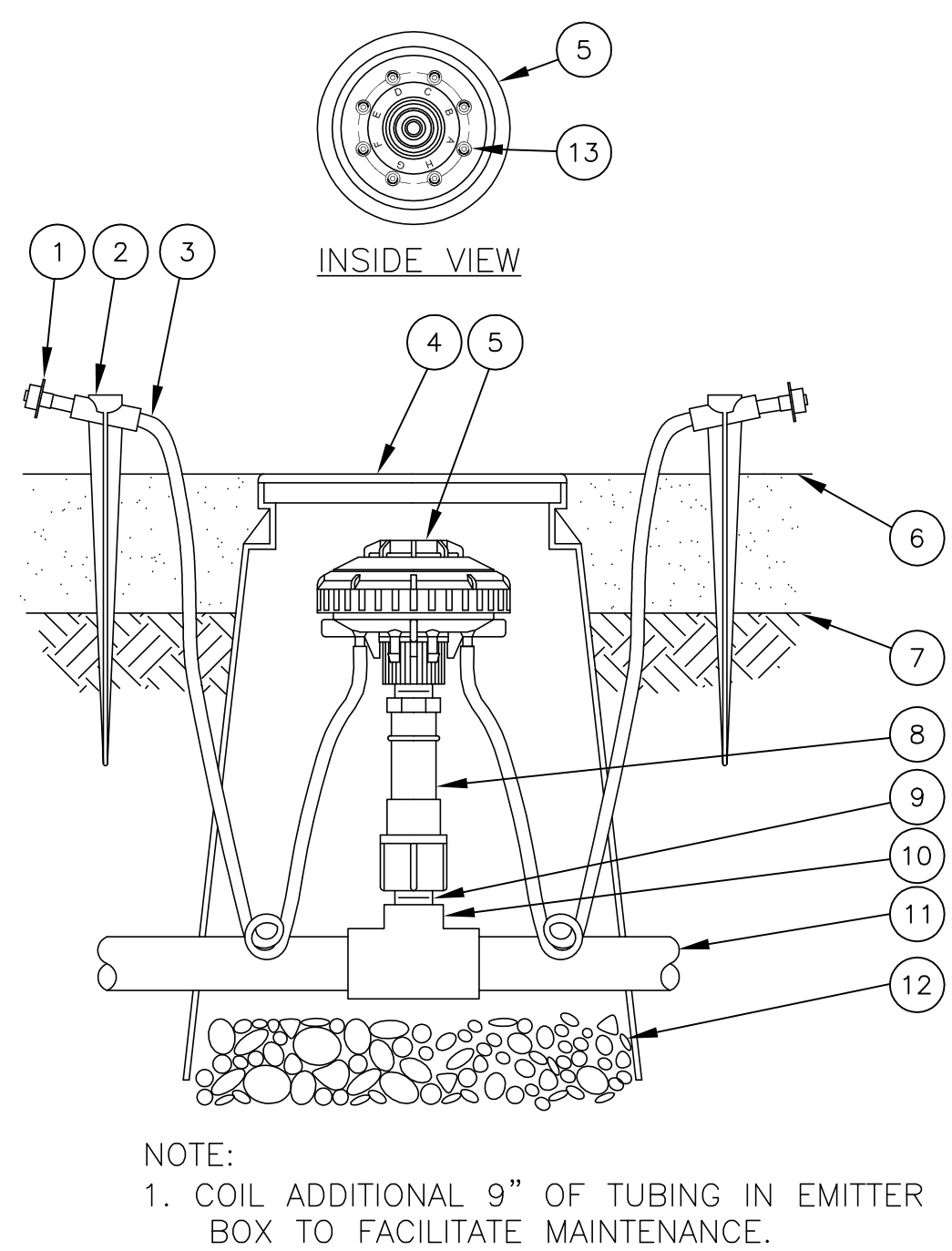
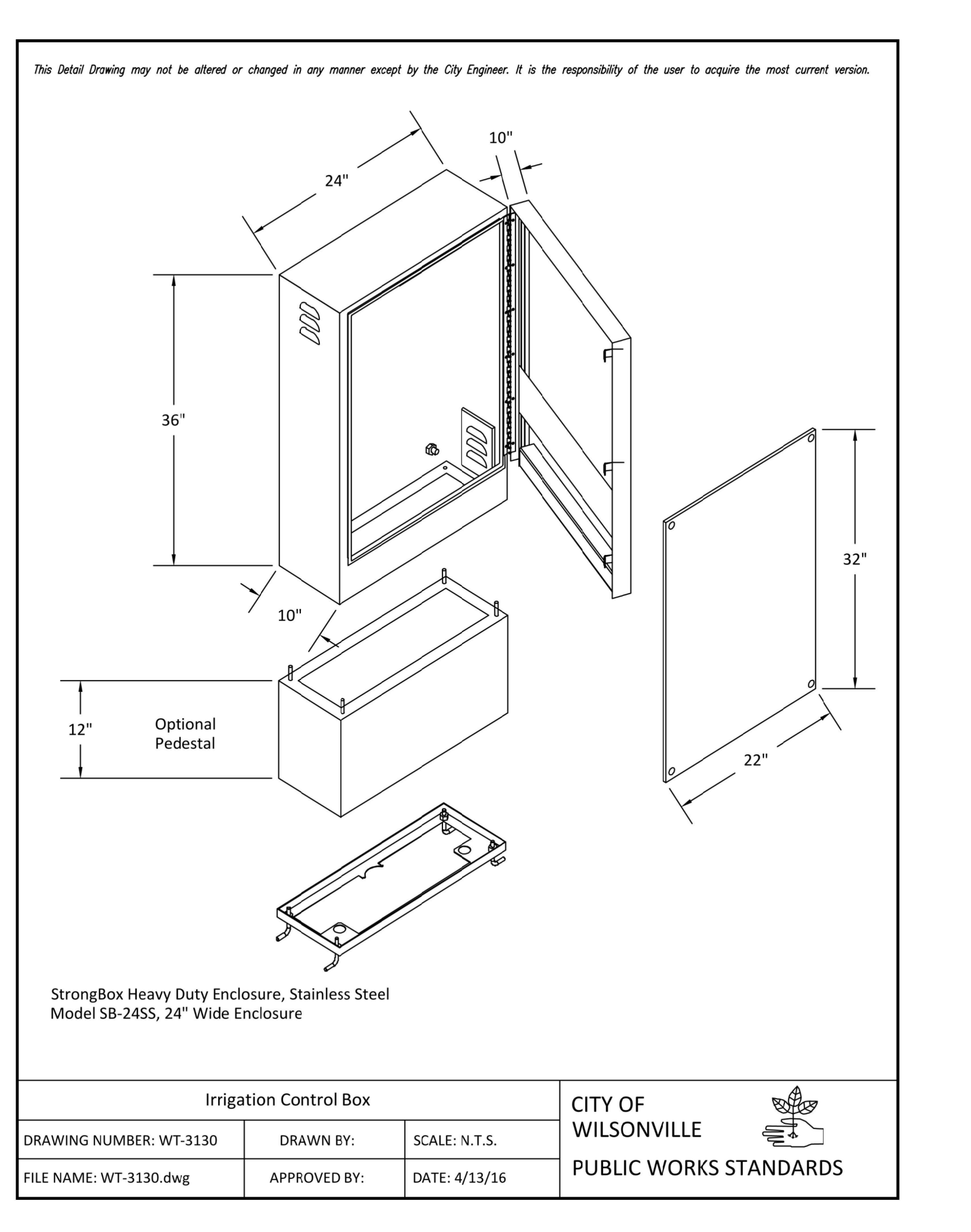
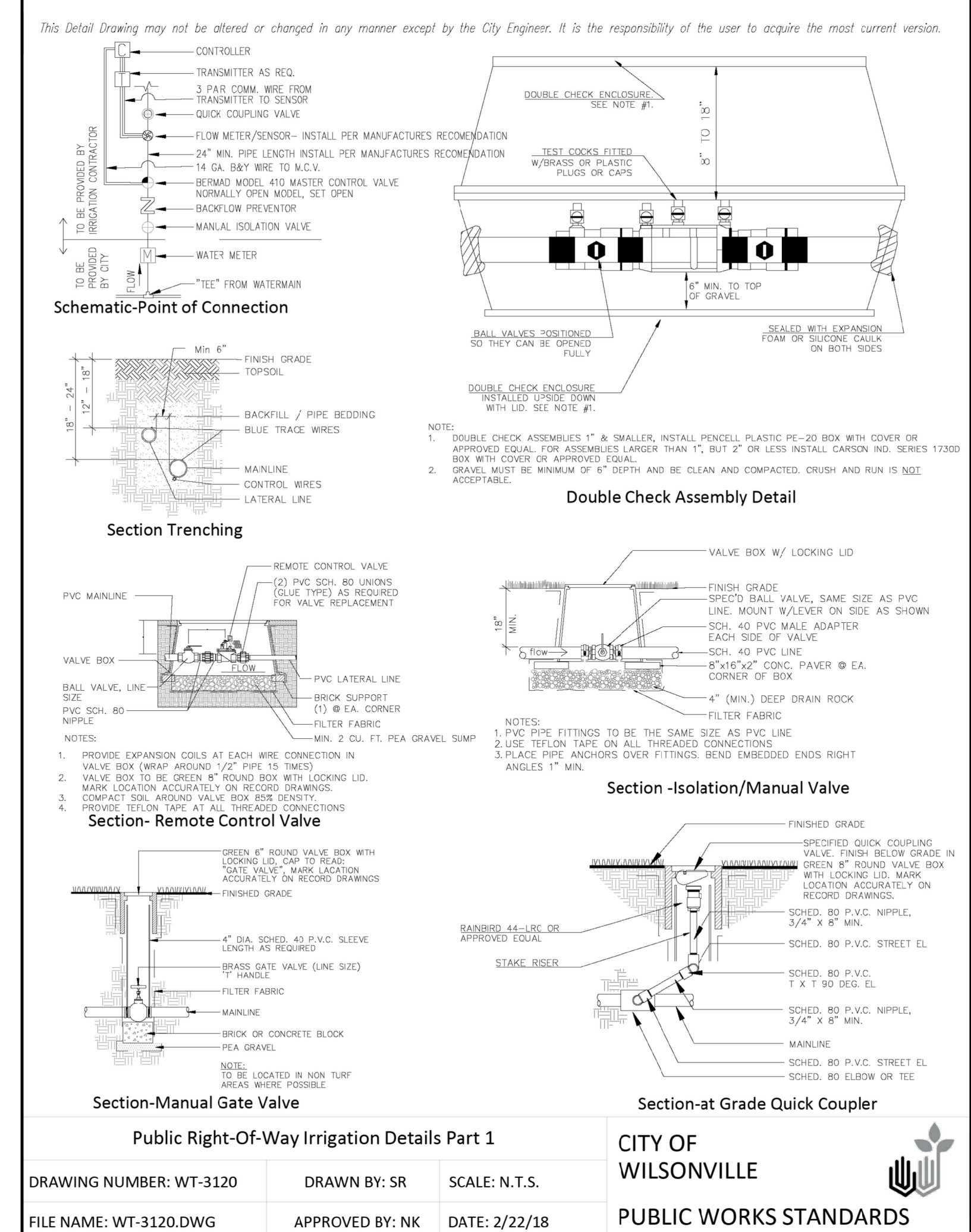
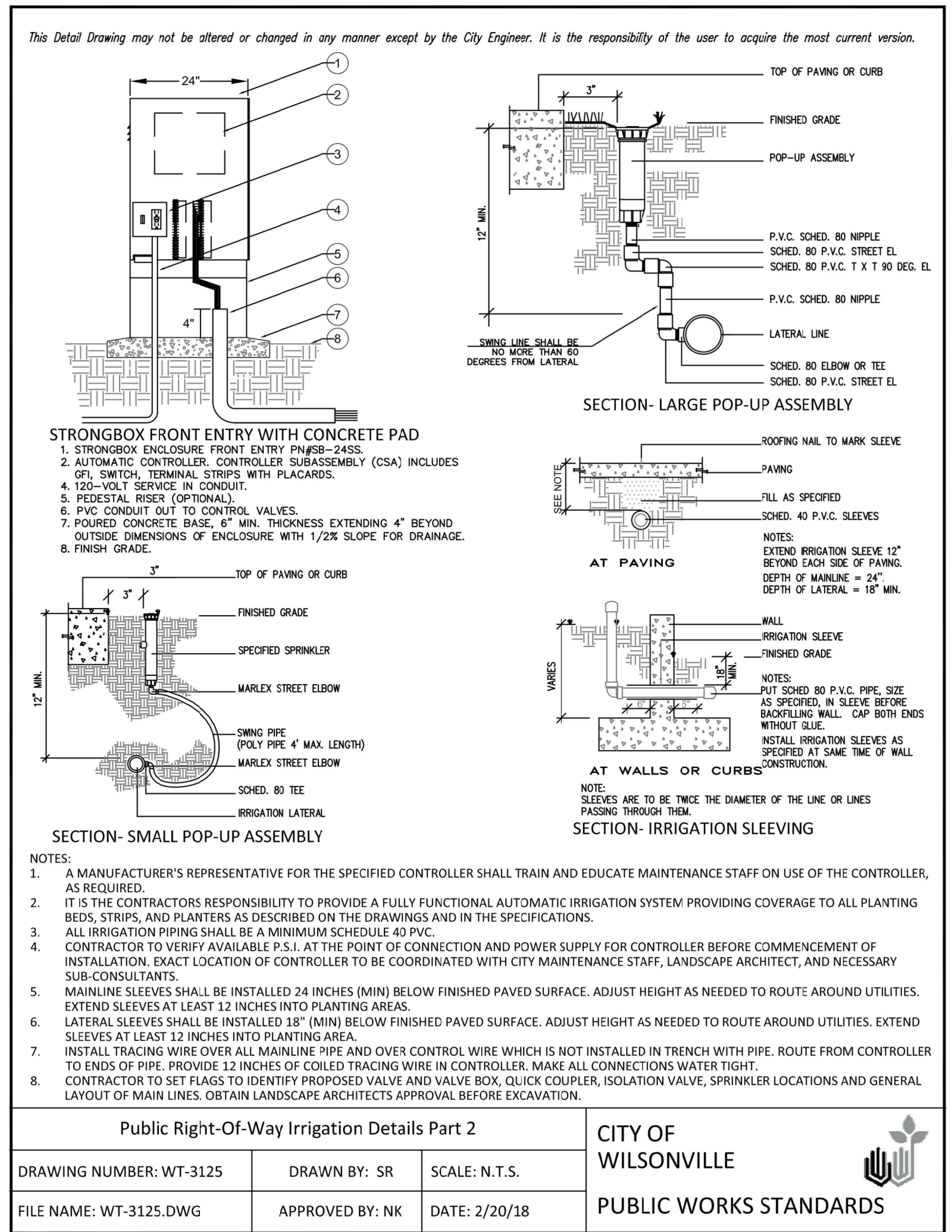
Date: 1 February 2019
Scale: AS SHOWN
Designed By: DDH
Drawn By: MLD
Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
KINSMAN RD IRRIGATION PLAN

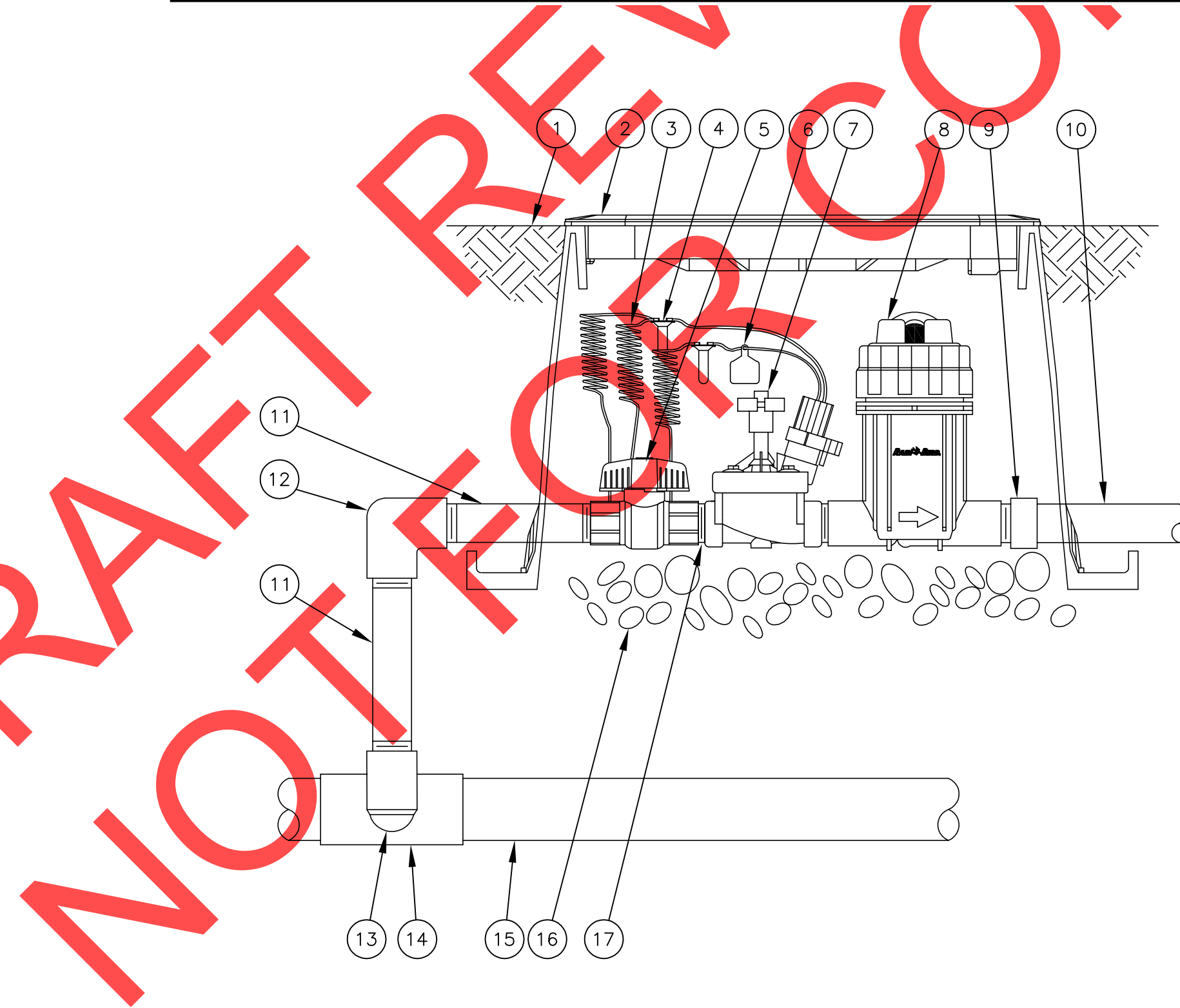
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PROJECT# 2017-02-001
L3.5
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- DIFFUSER BUG CAP: RAIN BIRD DBC-025 (1 OF 2 SHOWN, 8 POSSIBLE)
- UNIVERSAL 1/4" TUBING STAKE: RAIN BIRD TS-025 (1 OF 2 SHOWN, 8 POSSIBLE)
- 1/4" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED) (1 OF 2 SHOWN, 8 POSSIBLE)
- SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
- MULTI-OUTLET EMISSION DEVICE: RAIN BIRD XERI-BIRD XBD-81
- TOP OF MULCH
- FINISH GRADE
- PRESSURE REGULATOR: RAIN BIRD PRS-050-30
- PVC SCH 80 CLOSE NIPPLE
- PVC SCH 40 TEE OR ELL
- PVC LATERAL PIPE
- 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- XERI-BUG EMITTER, 1 GPH FLOW: RAIN BIRD XB-10PC (ONE OF 8 SHOWN, INCLUDED WITH XERI-BIRD XBD-81)



- FINISH GRADE/TOP OF MULCH
- VALVE BOX WITH COVER: RAIN BIRD VB-STD
- 30-INCH LINEAR LENGTH OF WIRE, COILED
- WATERPROOF CONNECTION: RAIN BIRD DB SERIES
- 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
- ID TAG
- REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUDED IN XCZ-PRB-100-COM KIT)
- PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB-QKCHK-100 (INCLUDED IN XCZ-PRB-100-COM KIT)
- PVC SCH 40 FEMALE ADAPTOR
- LATERAL PIPE
- PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- PVC SCH 40 ELL
- PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
- PVC SCH 40 TEE OR ELL
- MAINLINE PIPE
- 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

EIGHT-OUTLET MANIFOLD
SCALE: N.T.S.

2
L4.1

CONTROL VALVE ASSEMBLY - DRIP
SCALE: N.T.S.

1
L4.1

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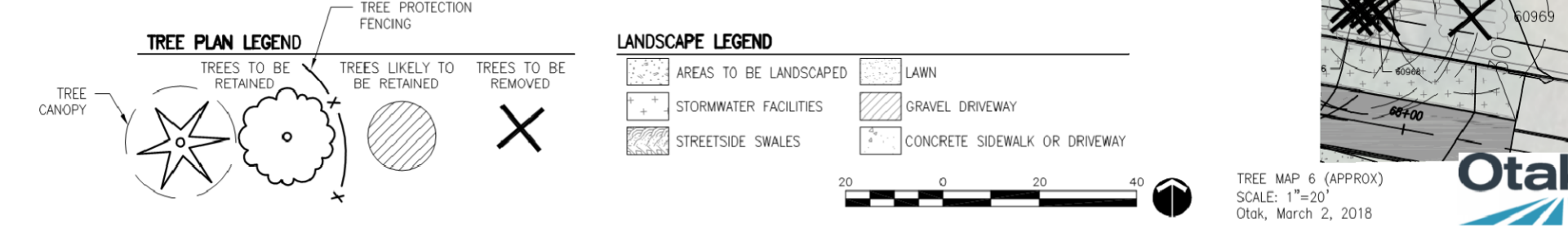
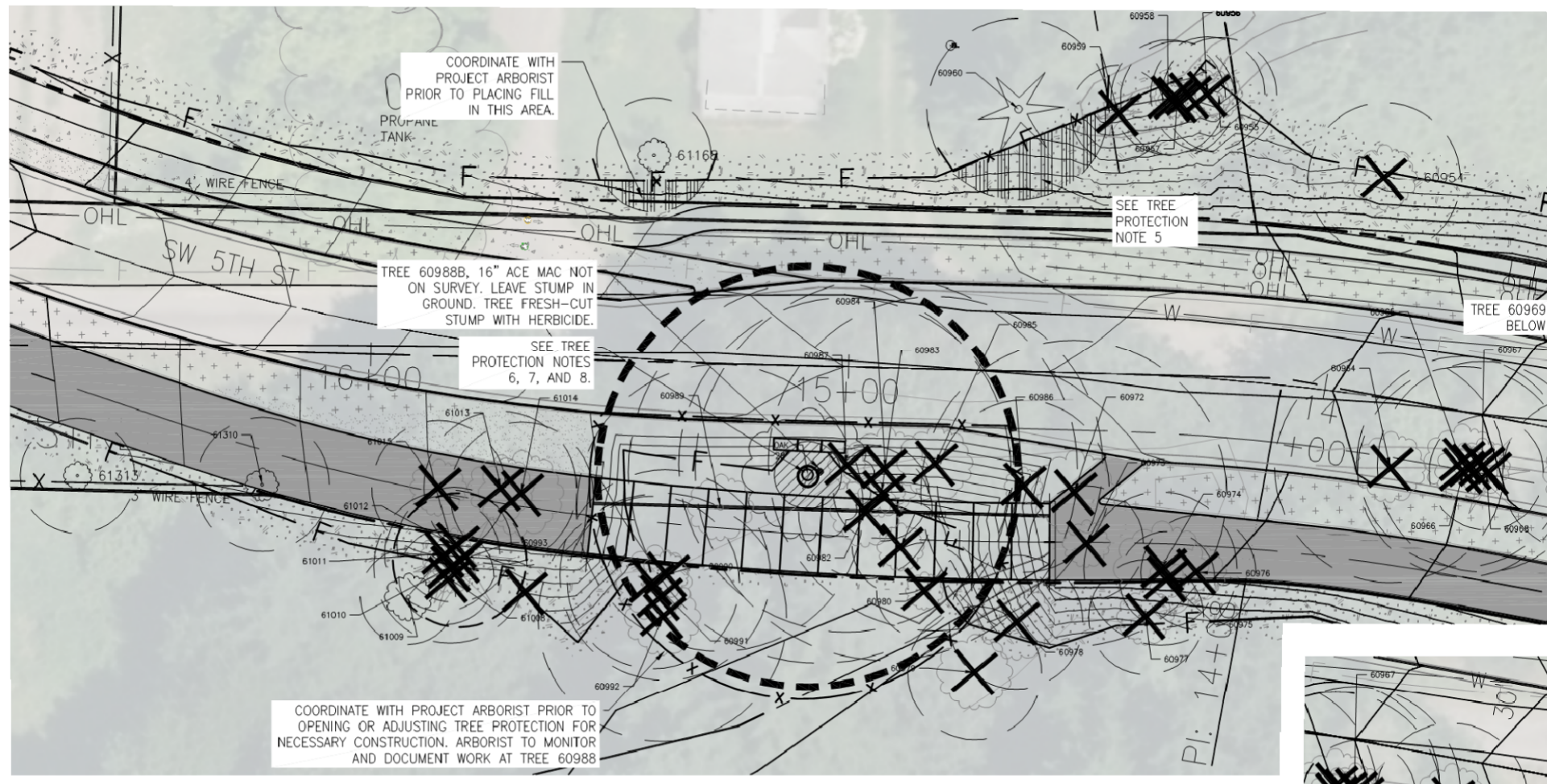
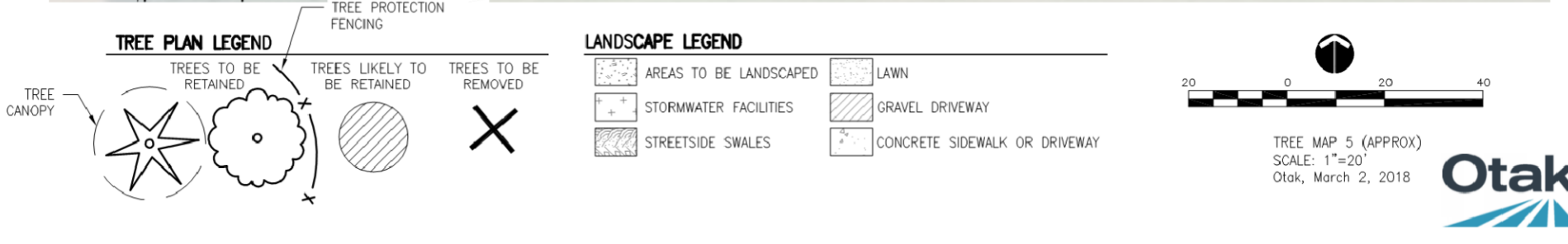
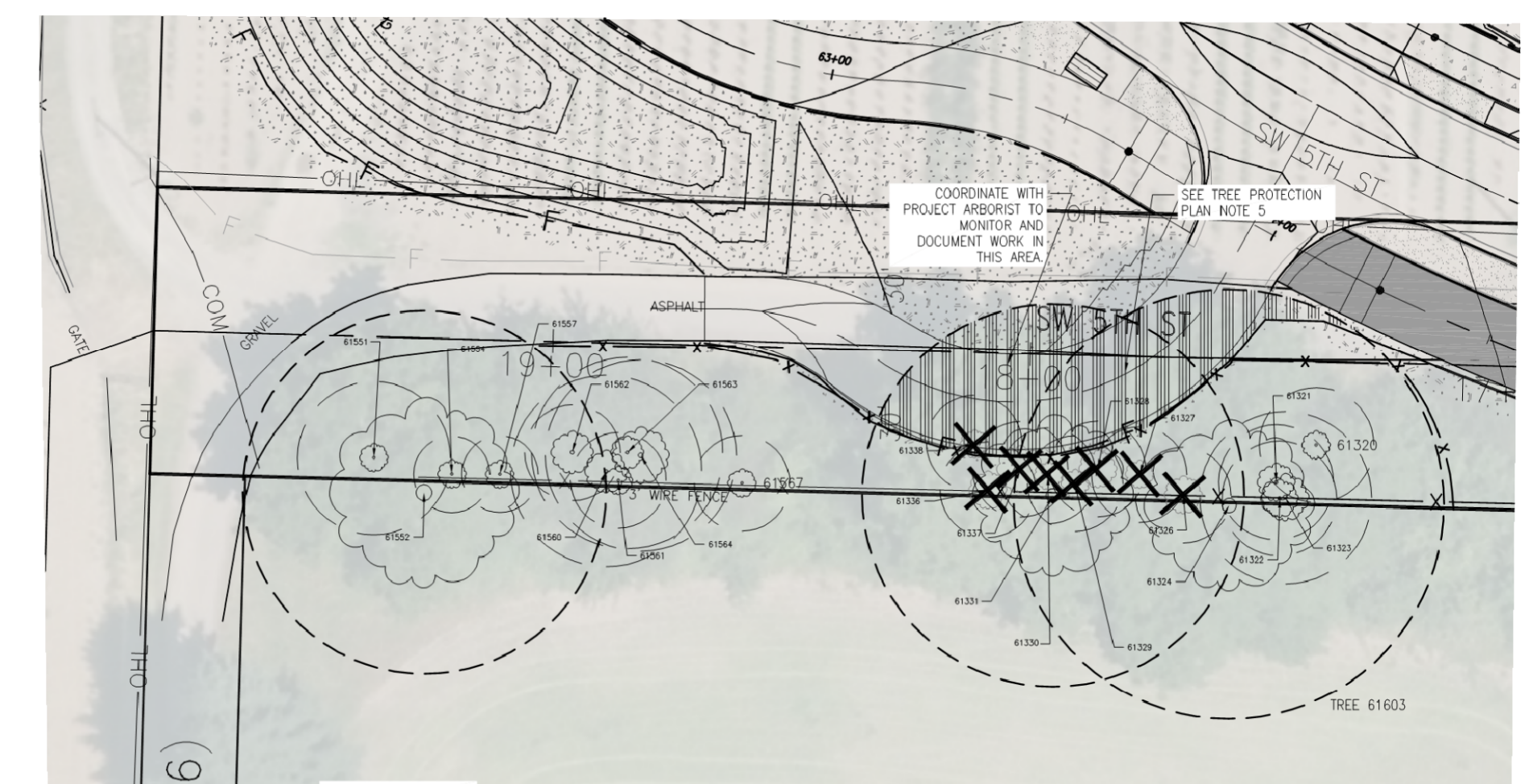
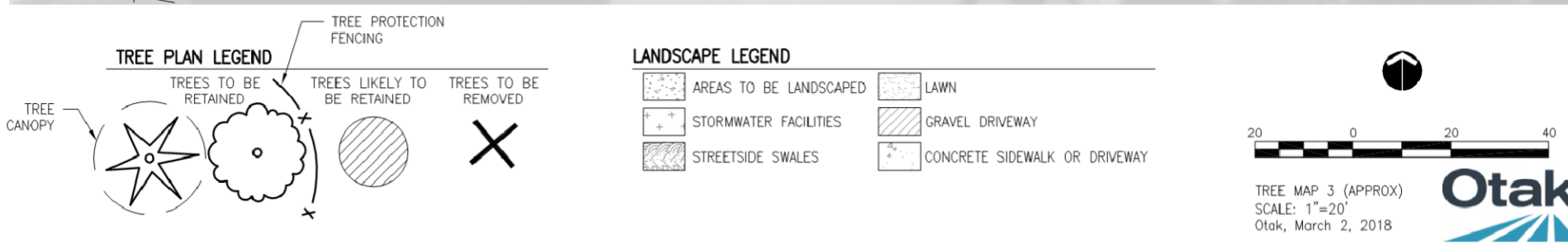
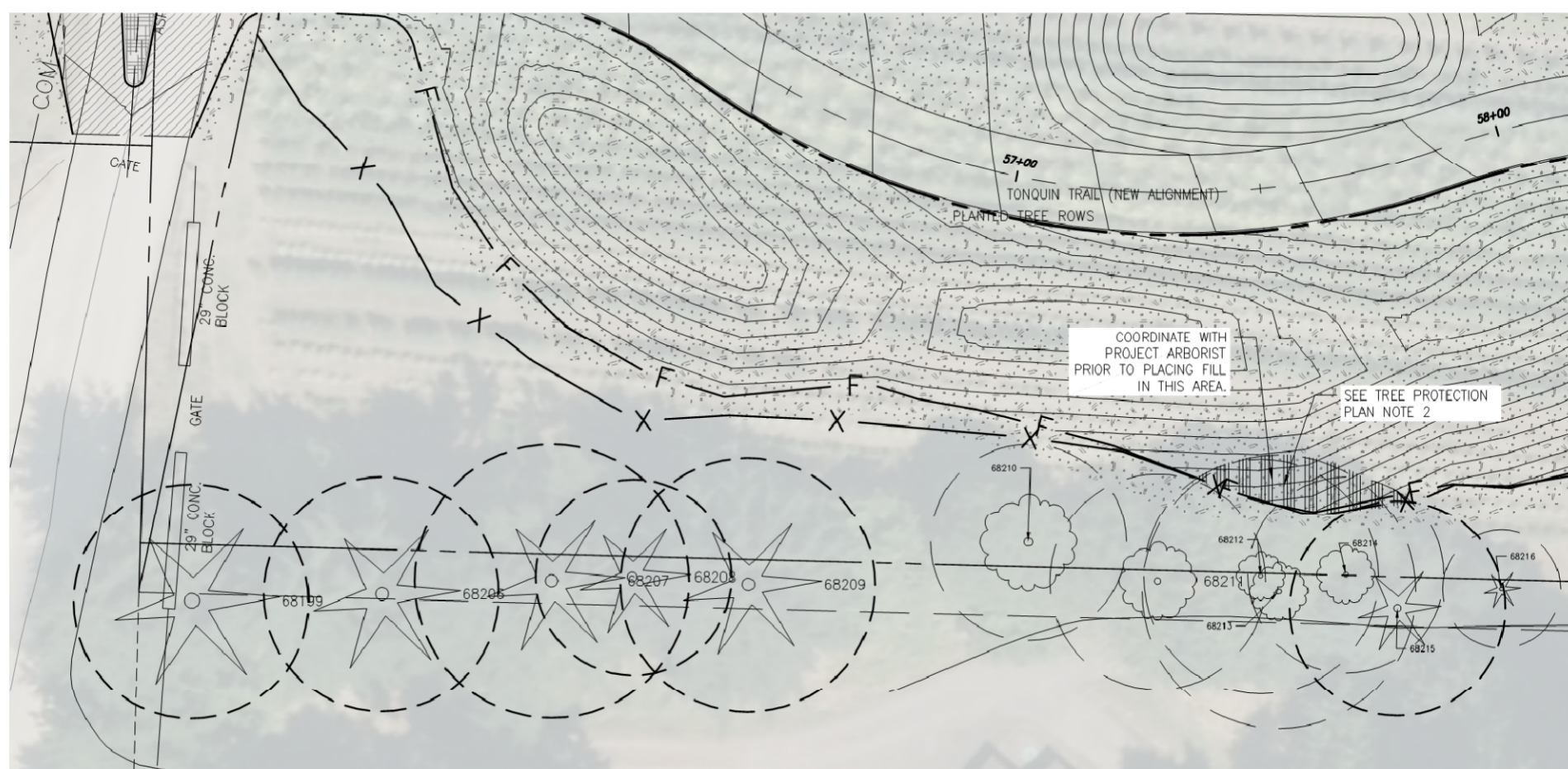
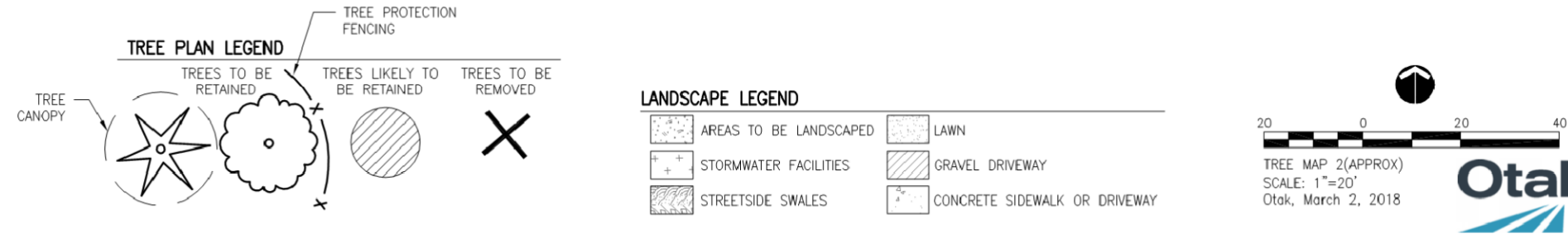
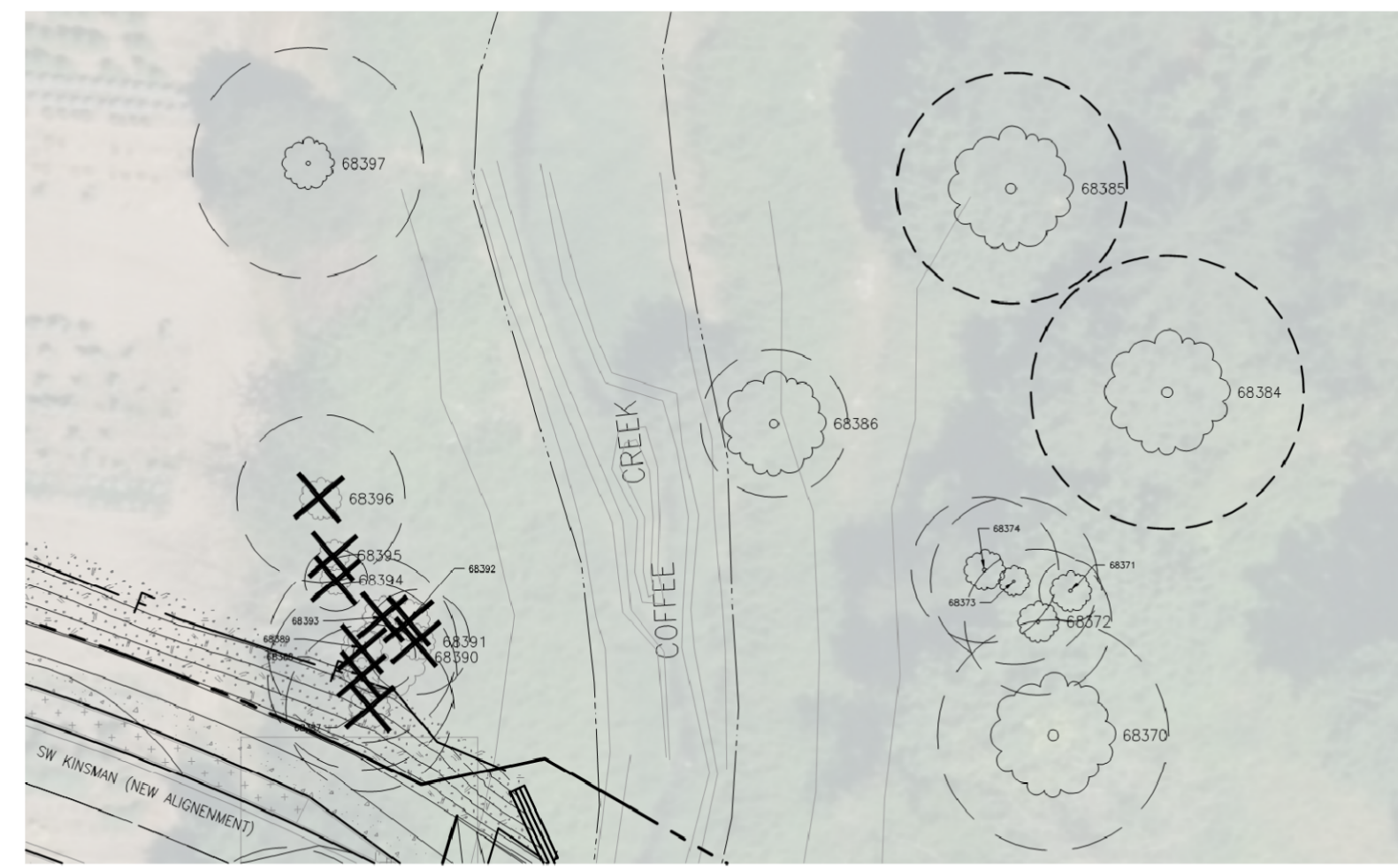
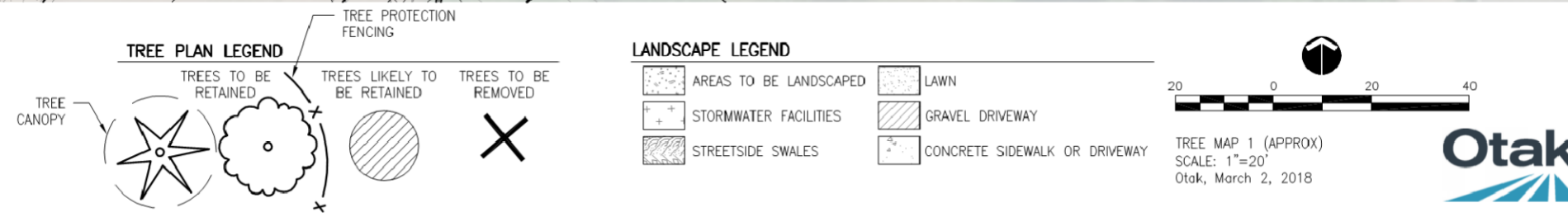
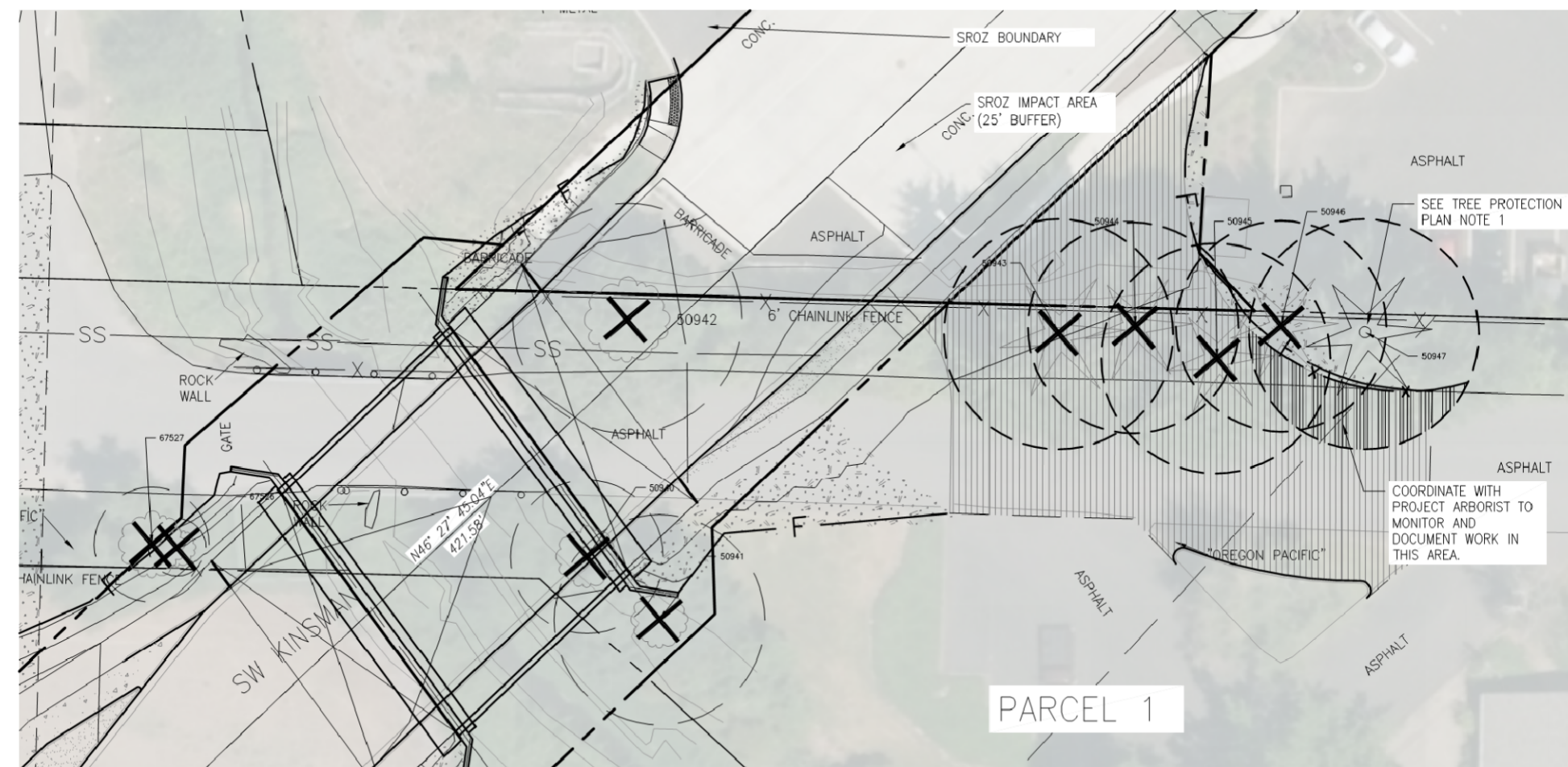
Date: 1 February 2019
Scale: AS SHOWN
Designed By: DDH
Drawn By: MLD
Checked By: A.HENDY

REGISTERED
263
12/31/18
David P. Hendy
PRELIMINARY
Landscape Architect

City of Wilsonville
Engineering Department
29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone 503-682-4960



SW 5TH ST TO SW KINSMAN RD EXTENSION
IRRIGATION DETAILS



TREE PROTECTION PLAN NOTES

1. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO WORKING BENEATH THE DRIPLINE OF TREE #50947. THE PROPOSED GRAVEL DRIVEWAY SHALL BE BUILT UP FROM NATIVE GRADE PER TREE PROTECTION SPECIFICATION #7. THE ARBORIST SHALL PERIODICALLY MONITOR AND DOCUMENT WORK IN THE ALLOWABLE ENCROACHMENT AREA IDENTIFIED ON SHEET TP-1.
2. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO WORKING BENEATH THE DRIPLINES OF TREES #68210-68214. THE PROPOSED FILL SHALL BE MINIMIZED TO THE GREATEST POSSIBLE EXTENT TO REDUCE ENCROACHMENT WITHIN THE DRIPLINE AREA. THE ARBORIST SHALL PERIODICALLY MONITOR AND DOCUMENT WORK IN THE ALLOWABLE ENCROACHMENT AREA IDENTIFIED ON TP-2.
3. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO WORKING BENEATH THE DRIPLINE OF TREE #68346. THE PROPOSED FILL SHALL BE MINIMIZED TO THE GREATEST POSSIBLE EXTENT TO REDUCE ENCROACHMENT WITHIN THE DRIPLINE AREA. THE ARBORIST SHALL PERIODICALLY MONITOR AND DOCUMENT WORK IN THE ALLOWABLE ENCROACHMENT AREA IDENTIFIED ON TP-2.
4. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO WORKING BENEATH THE DRIPLINES OF TREES #61324 AND #61331. THE PROPOSED GRAVEL DRIVEWAY SHALL BE BUILT UP FROM NATIVE GRADE PER TREE PROTECTION SPECIFICATION #7. THE ARBORIST SHALL PERIODICALLY MONITOR AND DOCUMENT WORK IN THE ALLOWABLE ENCROACHMENT AREA IDENTIFIED ON TP-3.
5. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO WORKING BENEATH THE DRIPLINE OF TREES #60960 AND #61168. THE PROPOSED FILL SHALL BE MINIMIZED TO THE GREATEST POSSIBLE EXTENT TO REDUCE ENCROACHMENT WITHIN THE DRIPLINE AREA. THE ARBORIST SHALL PERIODICALLY MONITOR AND DOCUMENT WORK IN THE ALLOWABLE ENCROACHMENT AREA IDENTIFIED ON TP-3.
6. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO CURB CONSTRUCTION BENEATH THE DRIPLINE OF TREE #60988 ON TP-4. THREE 2.5' WIDE BY 5' LONG ECO-BLOCKS SHALL BE PLACED A MINIMUM OF 6' NORTH OF THE TREE TRUNK TO MINIMIZE ENCROACHMENT TO THE GREATEST POSSIBLE EXTENT. THE PROJECT ARBORIST SHALL MONITOR AND DOCUMENT ECO-BLOCK INSTALLATION. ELSEWHERE BEHIND THE NEW CURB WITHIN THE DRIPLINE AREA, 4"+ CLEAN OPEN-GRADED ROCK SHALL BE USED AS FILL. SEE DETAIL XXX OR REFER TO SECTION XXX FOR ADDITIONAL INFORMATION.
7. COORDINATE WITH THE PROJECT ARBORIST PRIOR TO BOARDWALK CONSTRUCTION BENEATH THE DRIPLINE OF TREE #60988 TP-4. THE PROJECT ARBORIST SHALL DIRECT AND DOCUMENT ADJUSTMENTS TO TREE PROTECTION FENCING. THE LOCATIONS FOR PEDESTAL FOUNDATIONS SHALL BE CLEARLY MARK WITH FLAGGING OR OTHER APPROVED METHOD. THE PROJECT ARBORIST SHALL PROBE THE ROOT SYSTEM TO INVESTIGATE POTENTIAL TREE ROOT IMPACTS AND PEDESTALS SHALL BE ADJUSTED AS FEASIBLE IF TREE ROOTS ARE IDENTIFIED. REFER TO SECTION 00570 - TIMBER STRUCTURES FOR ADDITIONAL INFORMATION.
8. TREE #60988 ON TP-4 IS CLASSIFIED AS "LIKELY TO BE RETAINED" AND WORK BENEATH THE DRIPLINE AREA SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE PROJECT ARBORIST. PROPOSED CONSTRUCTION HAS BEEN DESIGNED TO MINIMIZE IMPACTS TO THE GREATEST POSSIBLE EXTENT, HOWEVER THE CRITICAL ROOT ZONE WILL BE AFFECTED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE PROJECT ARBORIST IN A TIMELY MANNER PRIOR TO WORKING BENEATH THE DRIPLINE AREA. IF THE PROJECT ARBORIST DETERMINES DURING THE COURSE OF CONSTRUCTION THAT NECESSARY IMPACTS ARE LIKELY TO BE DETRIMENTAL TO THE HEALTH OR STABILITY OF THE TREE, THE ARBORIST MAY SUBMIT DOCUMENTATION TO THE CITY RECOMMENDING REMOVAL OF THE TREE. THE CITY MAY PERMIT REMOVAL DURING THE COURSE OF CONSTRUCTION IF NECESSARY. THE TREE SHALL CONTINUE TO BE PROTECTED UNTIL IF AND WHEN THE CITY PROVIDES WRITTEN AUTHORIZATION FOR ITS REMOVAL.

PROJECT ARBORIST

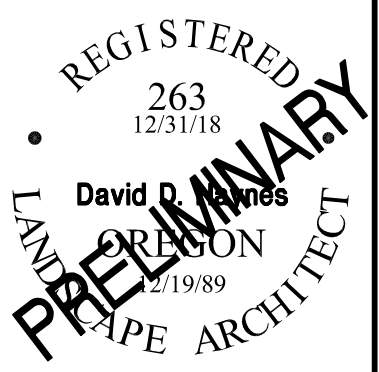
MORGAN HOLEN & ASSOCIATES, LLC
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 PN-6145B
 CELL PHONE: 971.409.9354
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REVISIONS



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 Phone 503-682-4960

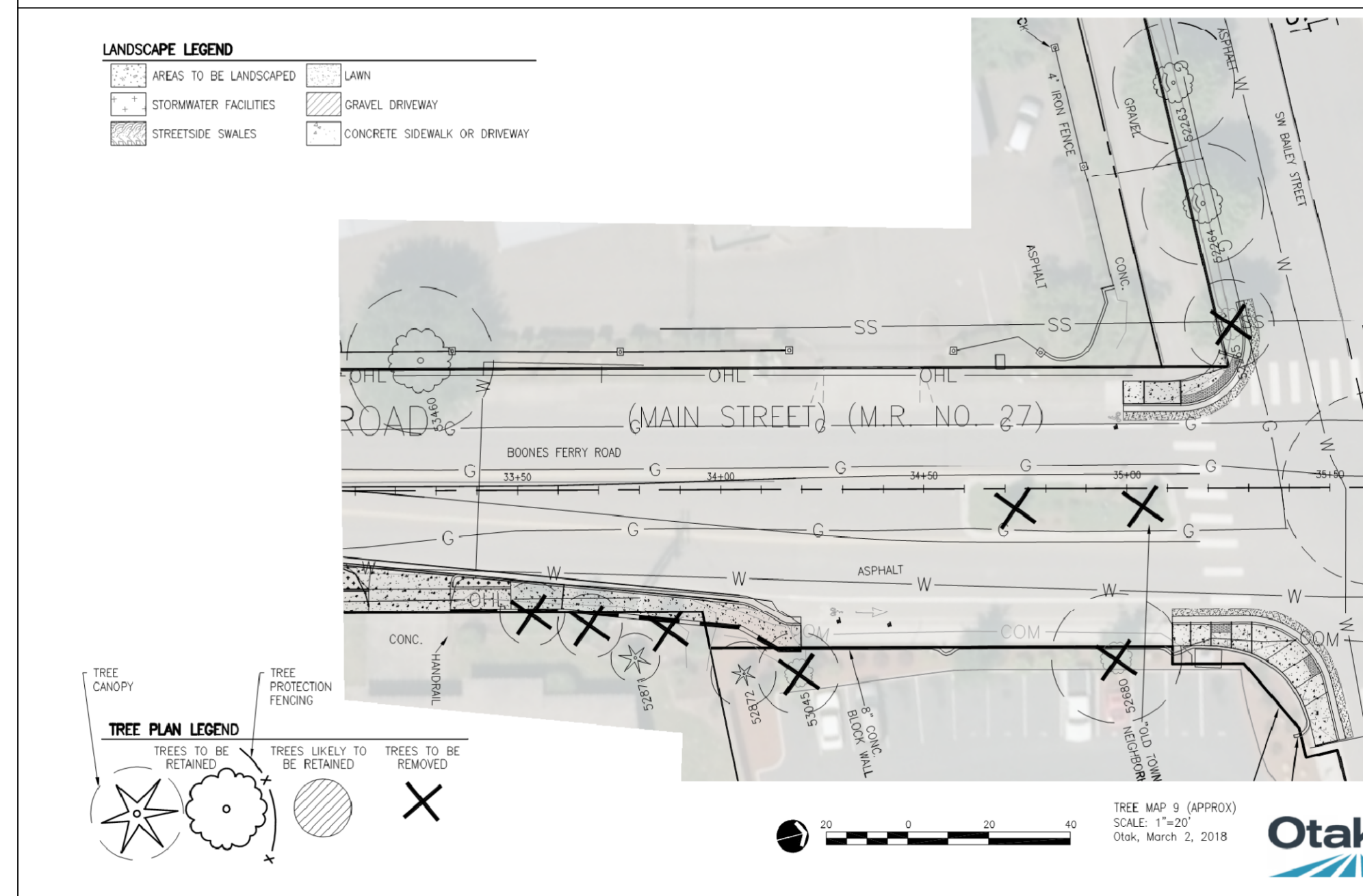
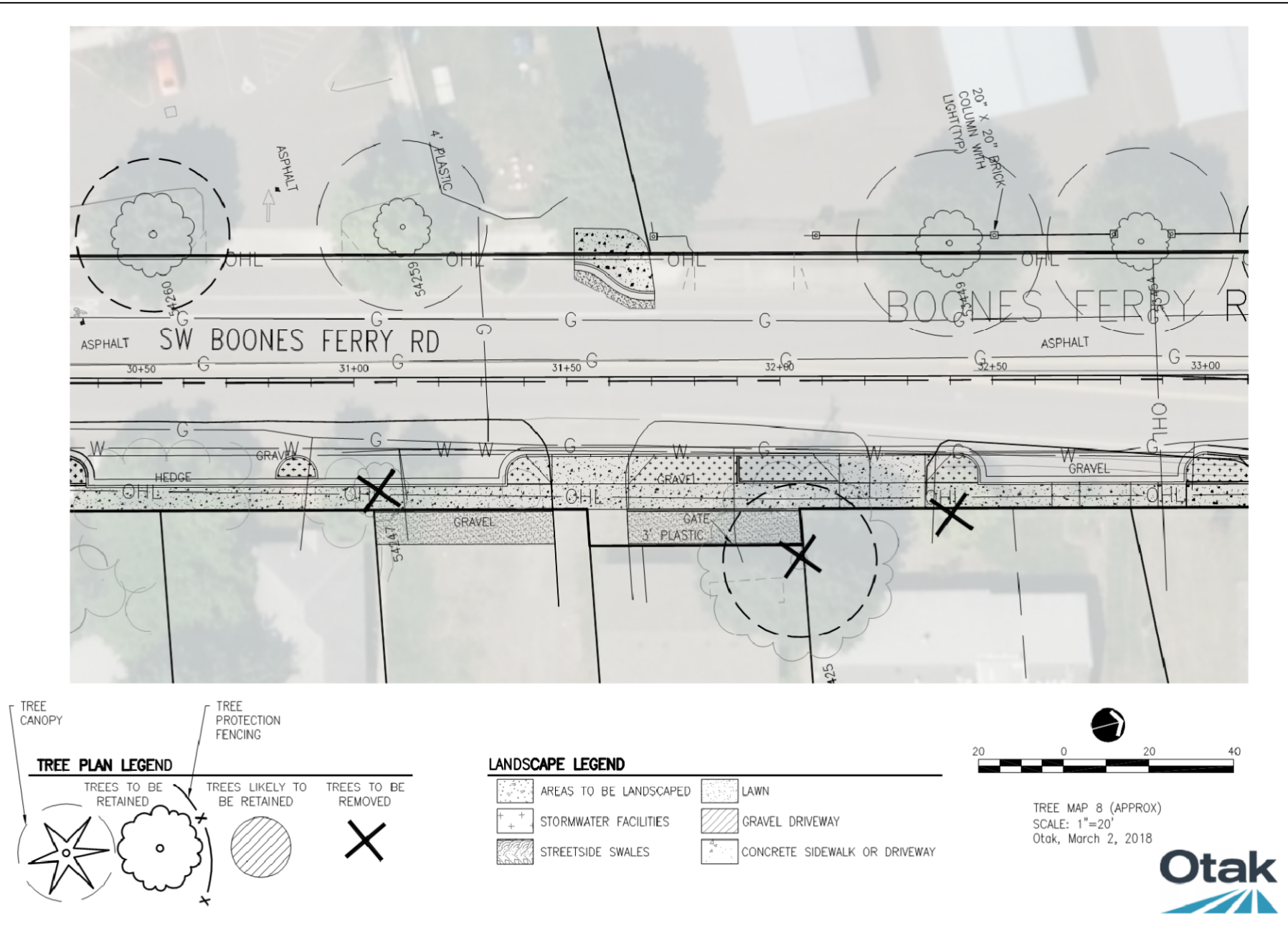
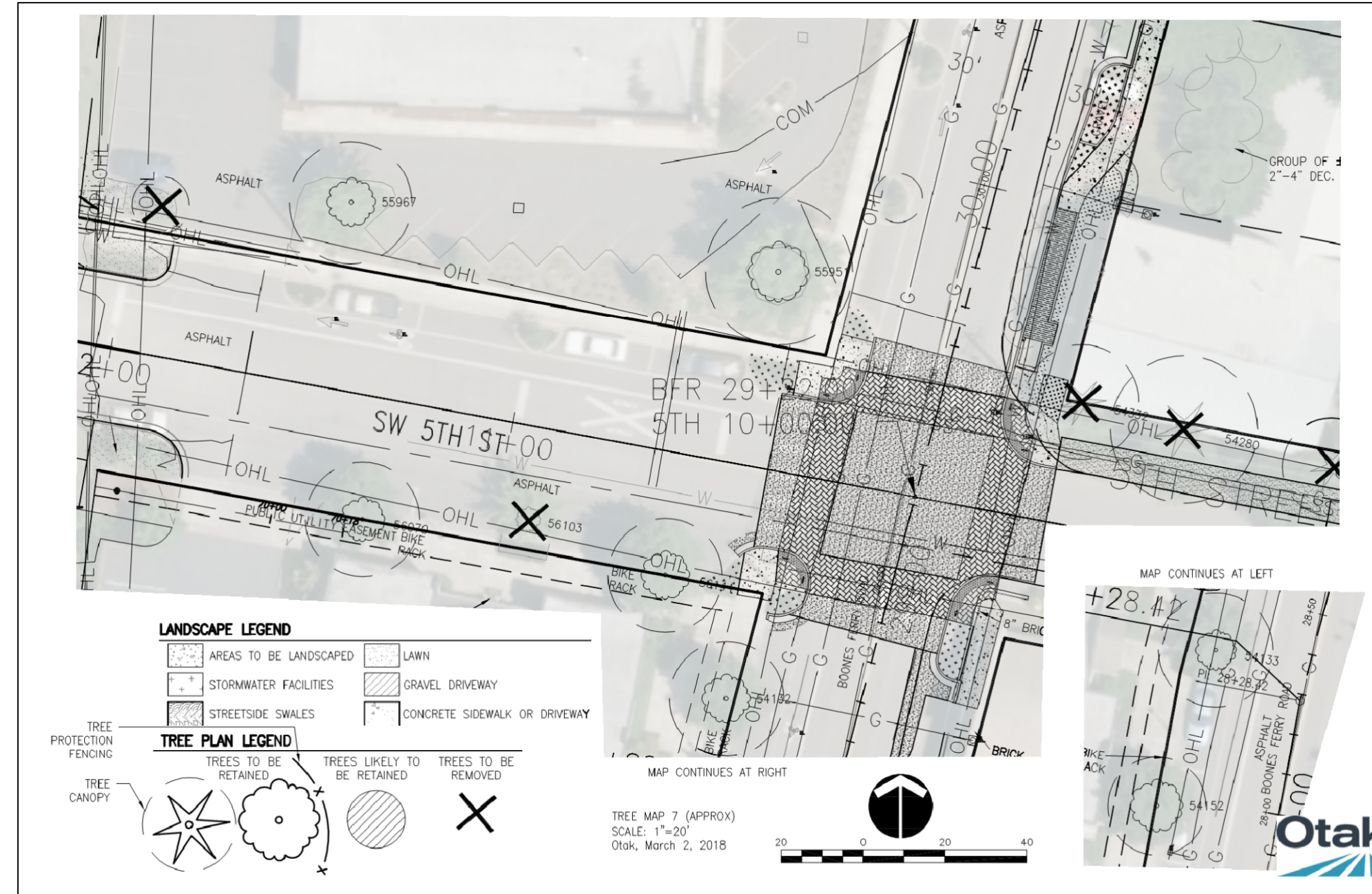


Date: 1 February 2019
 Scale: AS SHOWN
 Designed By: PH/BB
 Drawn By: MLD
 Checked By: A.HENDY

SW 5TH ST TO SW KINSMAN RD EXTENSION
 TREE PROTECTION PLAN 1

CIP# 4196
 PROJECT# 2017-02-001
 TP01
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NO.	DATE	REVISIONS

REGISTERED PROFESSIONAL ARCHITECT
 David C. ...
 263
 12/31/18

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 Engineering Department
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 Wilsonville, OR 97070
 Phone 503-682-4960



Date: 1 February 2019
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SW 5TH ST TO SW KINSMAN RD EXTENSION
 TREE PROTECTION PLAN 2

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