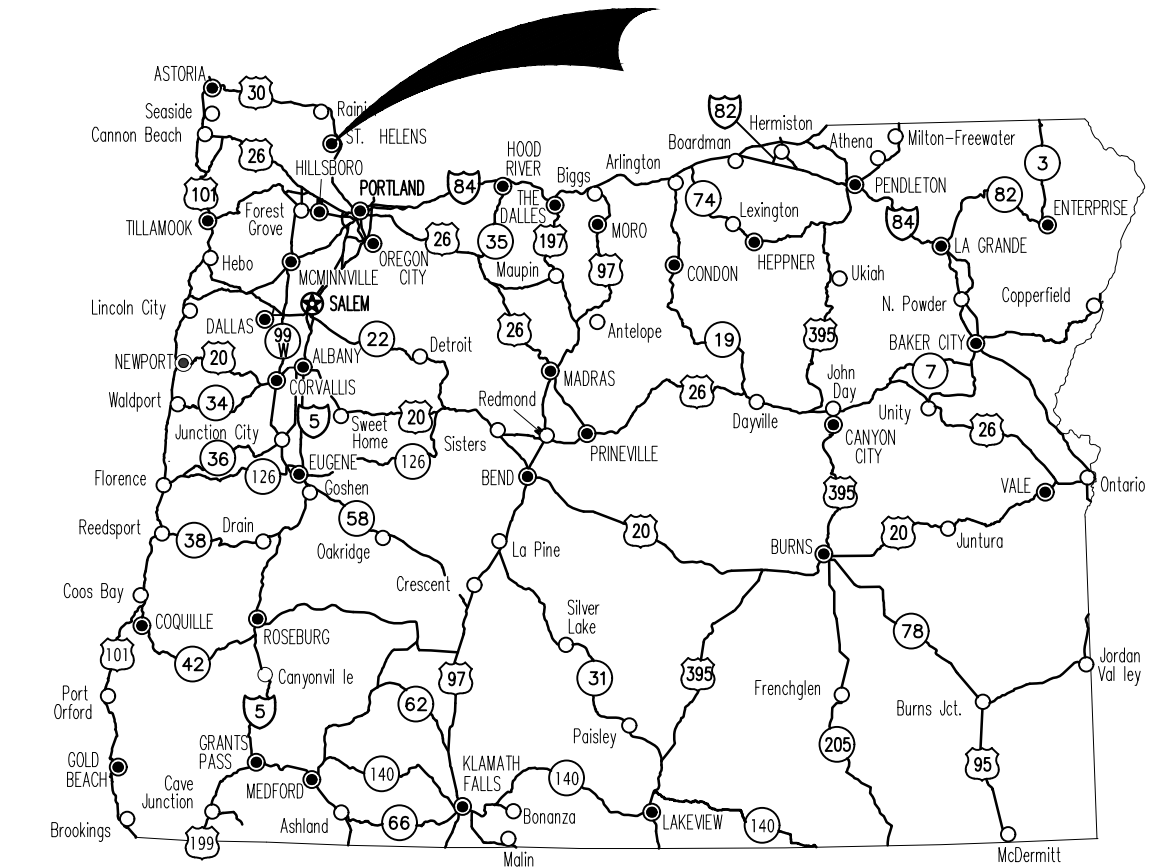


CITY OF ST. HELENS
 PLANS FOR PROPOSED PROJECT
GRADING, DRAINAGE, STRUCTURES, PAVING, CURB RAMPS, SIGNALS & ROADSIDE DEVELOPMENT

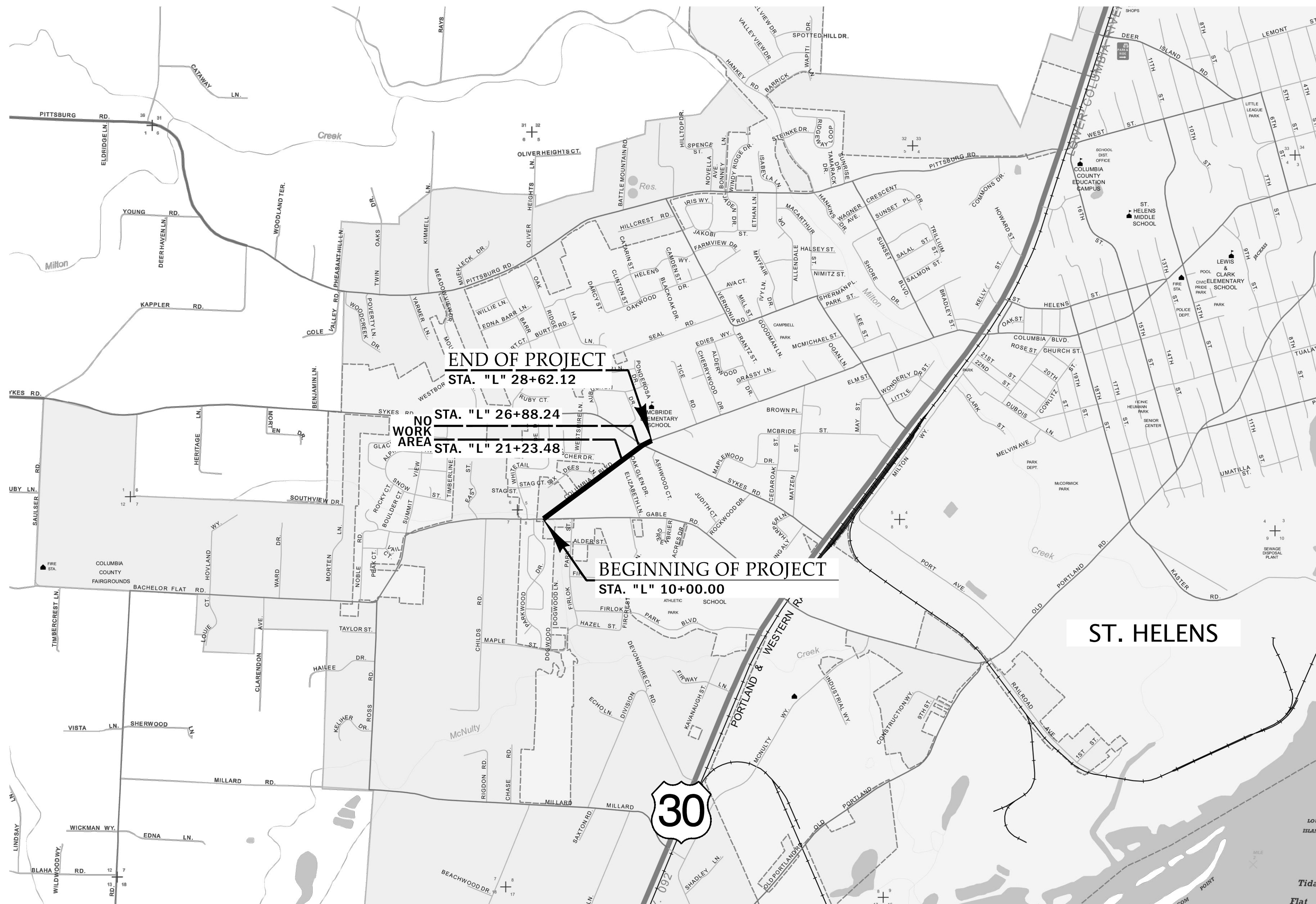
COLUMBIA BOULEVARD SIDEWALK
FROM GABLE RD. TO SYKES RD.

ST. HELENS, OREGON
COLUMBIA COUNTY
SEPTEMBER 2022



Overall Length Of Project - 0.35 Miles

LET'S ALL
 WORK TOGETHER
 TO MAKE THIS
 JOB SAFE



SEC. 05, T. 04 N., R. 01 W., W.M.



PROJECT NO. R-679A

VERTICAL DATUM:
 ELEVATIONS ARE NAVD 88 BASED ON N.G.S. BENCH MARK PID #RD3969.

BASIS OF BEARINGS:
 THE BEARINGS ARE GRID BASED ON OREGON COORDINATE SYSTEM, PORTLAND, (NAD 83 2011 EPOCH).

LOCATES
(48 HOUR NOTICE PRIOR TO EXCAVATION)

OREGON LAW REQUIRES YOU TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES FROM THE CENTER BY CALLING (503) 232-1987



ONE CALL SYSTEM

1-800-332-2344

PUBLIC WORKS SUPERVISOR, DAVE ELDER (503) 397-3532, MUST BE NOTIFIED 48 HOURS IN ADVANCE TO COORDINATE ANY TAPS OR WATER VALVE OPERATION. THE CONTRACTOR IS NOT ALLOWED TO OPERATE ANY WATER VALVES CONTROLLING FLOW TO NEW PIPING FROM THE CITY'S POTABLE WATER SYSTEM

PLANS PREPARED FOR CITY OF ST. HELENS	
DAVID EVANS AND ASSOCIATES, INC. 5121 Skyline Village Loop S., Suite 200 Salem, Oregon 97306 Ph: 503.361.8635	
These plans were developed using AASHTO design standards. Exceptions to these standards, if any, have been submitted and approved by the City of St. Helens Public Works Director or their delegated authority.	
PLANS PREPARED FOR CITY OF ST. HELENS	
<i>Paul Tappa</i> 10/20/2022 Signature & date Paul Tappana, P.E. - Project Manager Print name and title	
COLUMBIA BOULEVARD SIDEWALK SAINT HELENS, OREGON COLUMBIA COUNTY	
COVER	SHEET NO. A01

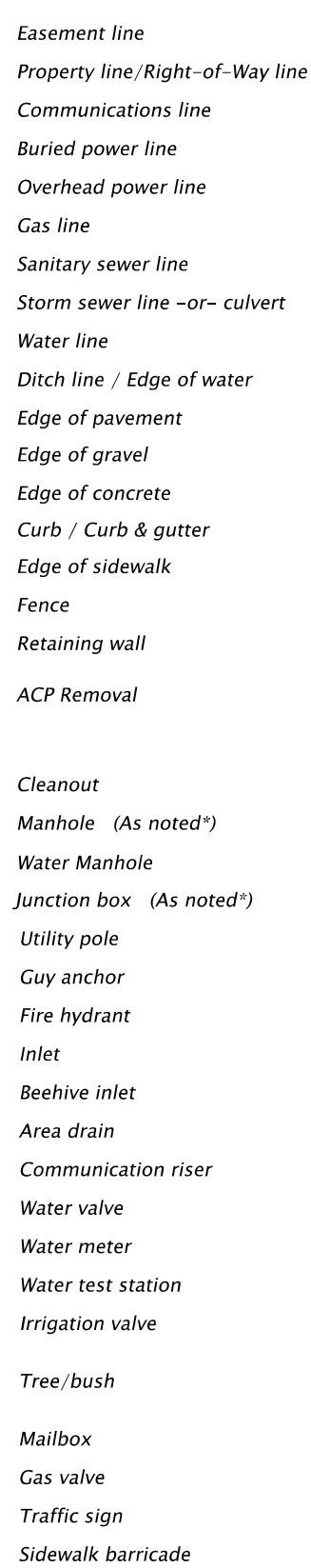
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A01	COVER
A02	INDEX, STANDARD DRAWINGS, & ABBREVIATIONS
BA01	TYPICAL SECTIONS
BB01	DETAILS
BB02	DETAILS
C01	GENERAL CONSTRUCTION
C02	GENERAL CONSTRUCTION
C03	GENERAL CONSTRUCTION
C04	DRAINAGE PROFILES
GB01	RETAINING WALL PLAN
GB02	RETAINING WALL PLAN & DETAILS

ODOT Standard Dwg. Nos.	
RD300	-Trench Backfill, Bedding, Pipe Zone and Multiple Installations
RD339	-Pipe to Structure Connections
RD360	-Manhole frame adjustment
RD363	-Gutter transition at inlet
RD376	-Miscellaneous Drainage Structures, Siphon Box, Inlet Cap & Inlet Adjustment
RD386	-Fill Height Table for Circular Concrete Pipe
RD388	-Fill Height Tables for PVC Pipe
RD700	-Curbs
RD705	-Islands
RD707	-Island Nose Treatments
RD710	-Accessible Route Islands
RD720	-Curb Line Sidewalks
RD721	-Separated Sidewalks
RD722	-Sidewalk Joints and Transition Panels
RD750	-Curb Line Sidewalk Driveways or Allways (Options M & N) Local Jurisdictions
RD815	-Chain Link Fence
RD902	-Detectable Warning Surface Details
RD906	-Detectable Warning Surface Placement for Accessible Route Island
RD920	-Parallel Curb Ramp
RD930	-Combination Curb Ramp
RD938	-Combination Curb Ramp Single Ramp
RD1010	-Inlet Protection, Type 2, 3, 6, 7, 10 and 11
RD1032	-Sediment Barrier Type 8
TM200	-Sign Installation Details
TM457	-Vehicle, Pedestrian Signal and Pushbutton Mounting Option Details
TM467	-Pedestrian Signal Mount and Pedestrian Pushbutton Details
TM500	-Pavement Marking Standard Detail Blocks
TM503	-Pavement Marking Standard Detail Blocks
TM520	-Intersection Pavement Markings (Crosswalk, Stop Bar & Bike Lane Stencil)
TM560	-Alignment Layout: General
TM561	-Alignment Layout: Left Turn Lane, Centerline & Medians
TM671	-3-Second Gust Wind Speed Map
TM676	-Sign Attachments
TM677	-Sign Mounts
TM681	-Perforated Steel Square Tube (PSST) Sign Support Installation
TM687	-Perforated Steel Square Tube (PSST) Anchor Foundation
TM688	-Perforated Steel Square Tube (PSST) Slip Base Foundation
TM689	-Temporary PSST Vane Anchor Installation
TM800	-Tables, Abrupt Edge and PCMS detail
TM820	-Temporary Barricades
TM821	-Temporary Sign Supports
TM822	-Temporary Sign Supports
TM850	-2 Lane, 2 Way Roadways

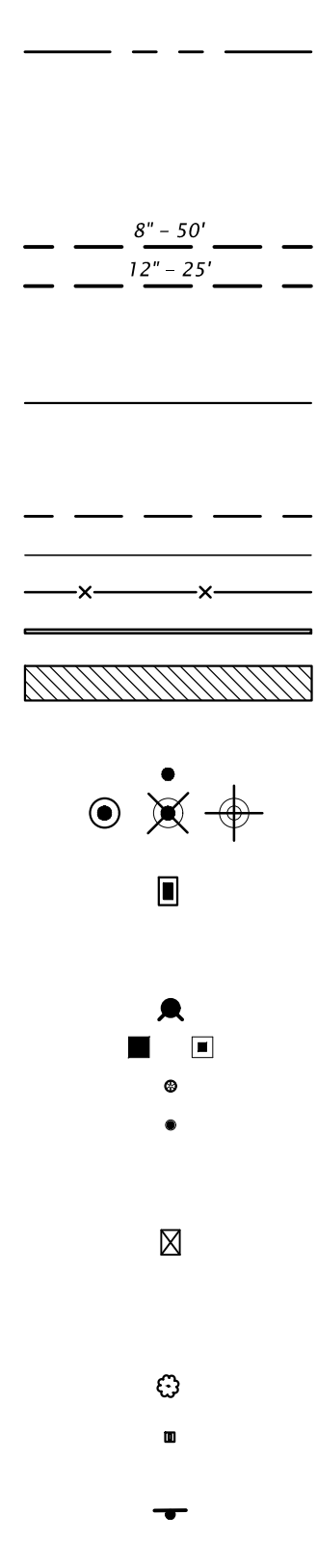
EXISTING



LEGEND



PROPOSED



*As noted:
 C - Cable TV
 D - Storm drain
 E - Electric
 G - Gas
 Irr - Irrigation
 S - Sanitary (manholes) -or- Signal (junction boxes)
 T - Telephone
 U - Unknown
 W - Water

ABBREVIATIONS

AC	Acres
ACP	Asphalt concrete pavement
addtl	additional
adj.	adjust
aggr.	aggregate
appr.	approach
Approx.	Approximate
ASTM	American Society for Testing and Materials
CACP	Commercial Asphalt Concrete Pavement
CL	Curve Left
Comp.	Compacted
Conc.	Concrete
Cont.	Continued
Const.	Construct
CPRR	Cold plane pavement removal
CR	Curve Right
ctr	center
culv.	culvert
CY	Cubic yards
Dia.	Diameter
Dwg.	Drawing
Drwy.	Driveway
E	Exposure (curb)
El.	Elevation
Emb.	Embankment fill
EP	Edge of Pavement
ease	Easement
Exc.	Excavation
Extg.	Existing
FDC	Full Depth Construction
FL	Flow line
galv.	galvanized
ht.	height
incl.	include
ID	Inside Diameter
Inst.	Install
jt.	joint
LED	Light Emitting Diode
LF	Linear feet
Lt. / Rt.	Left / Right
Max.	Maximum
Min.	Minimum
No. / Nos.	Number(s)
Nom.	Nominal
OD	Outside diameter
PC	Point from tangent to circular curve
PCC	Portland Cement Concrete
Perf.	Perforated
perm.	Perforated
Perp.	Perpendicular
POC	Point on horizontal curve
POT	Point on tangent
Prop.	Proposed
PSST	Perforated Steel Square Tube
Pvmt.	Pavement
R	radius
reinst.	reinstall
Ref.	Reference
Reqd.	Required
R/W	Right of Way
Sl.	Slope
Sch.	Schedule
SF	Square feet
Shldr.	Shoulder
Sht.	Sheet
SSC	Stainless steel clamp
Sta.	Station
Std.	Standard
TCM	Traffic Control Devices
TCP	Traffic Control Measures
TCP	Traffic Control Plan
Thkn.	Thickness
TSS	Temporary sign support
Typ.	Typical
var.	varies

EROSION AND SEDIMENT CONTROL GENERAL NOTES

- The construction, adjustment, maintenance, and upgrading of these Erosion and Sediment Control measures is the responsibility of the contractor for the duration of the project to comply with Section 00280 of the Oregon Standard Specifications for Construction.
- Erosion and Sediment Control measures shown on this plan are for anticipated site conditions. Adjust or upgrade these measures for unexpected storm events to ensure that sediment and sediment-laden water does not leave the site.
- Develop a revised plan of the Erosion and Sediment Control measures shown as required by Section 00280, Oregon Standard Specifications for Construction. Implement this plan for all clearing and grading activities and in segments applicable to each staging phase. Construct in such a manner so as to ensure that sediment and sediment-laden water does not enter the roadway or drainage system, or violate applicable water standards.
- Install measures within the right-of-way unless directed otherwise.
- Erosion Control measures shown are limits of a "No-Work" zone in the protections zone and wetland areas. Work or site disturbance shall not occur outside erosion control limits.

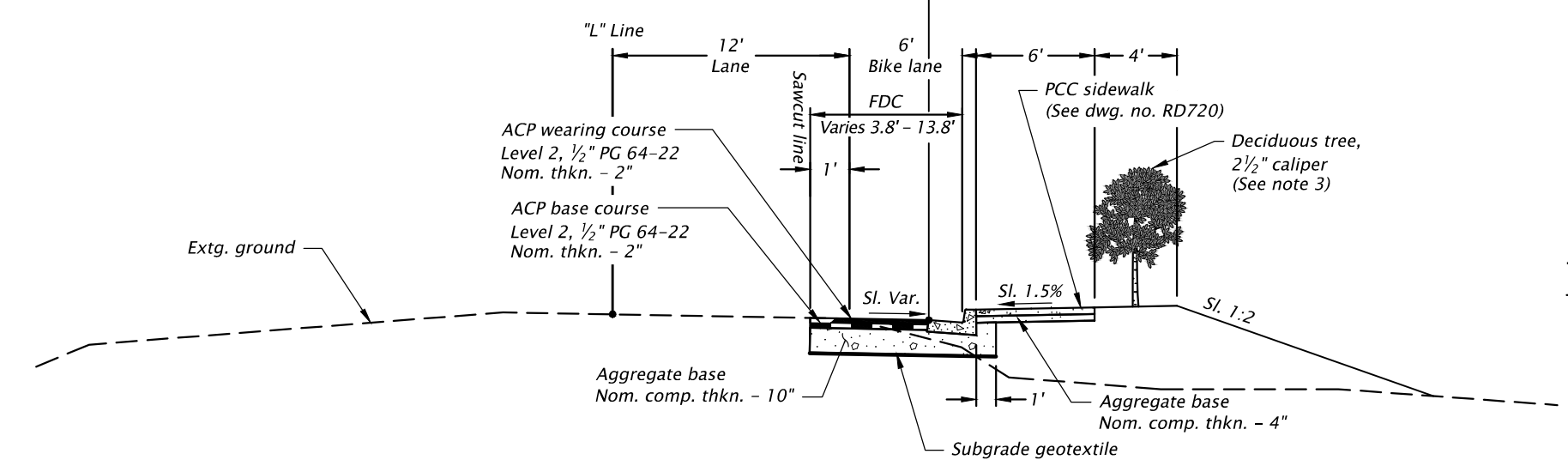
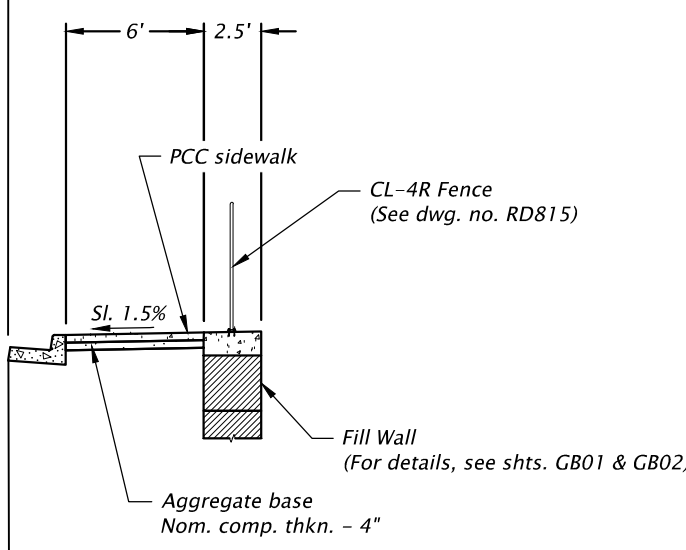
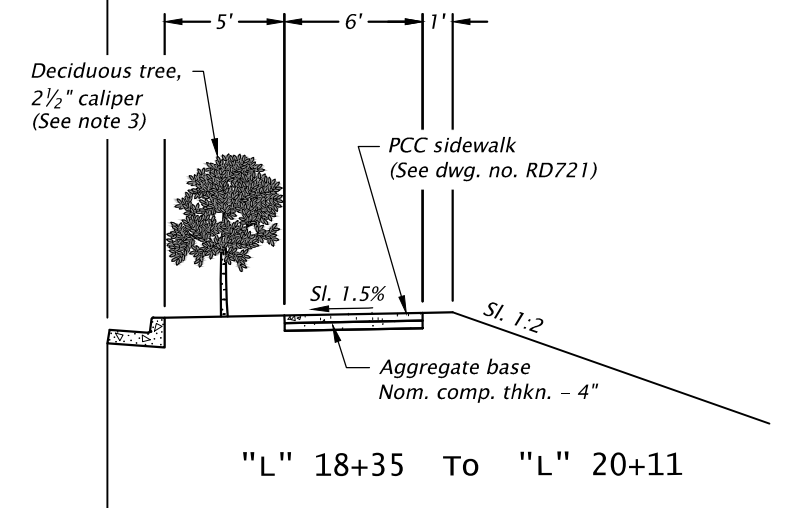
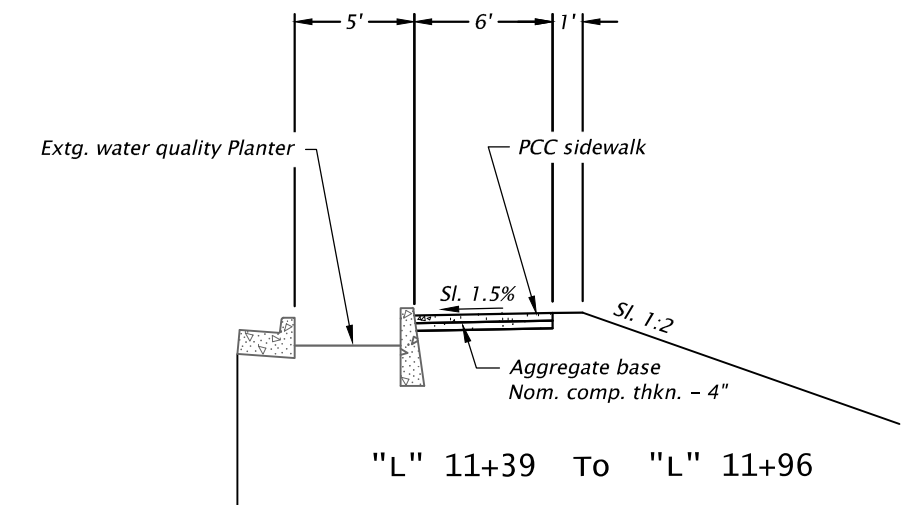
GENERAL NOTES

- Use TM671, TM681, TM689, TM800, TM820, TM821, TM822 and TM850 for traffic control during construction



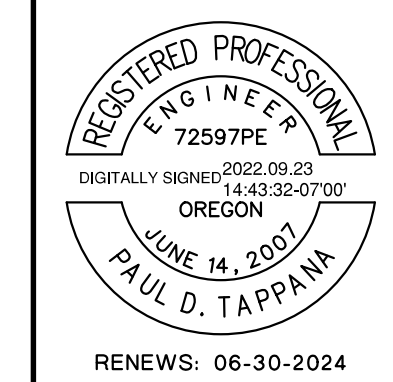
**COLUMBIA BOULEVARD
SIDEWALK**
 SAINT HELENS, OREGON
 COLUMBIA COUNTY

INDEX, STANDARD DRAWINGS, & ABBREVIATIONS

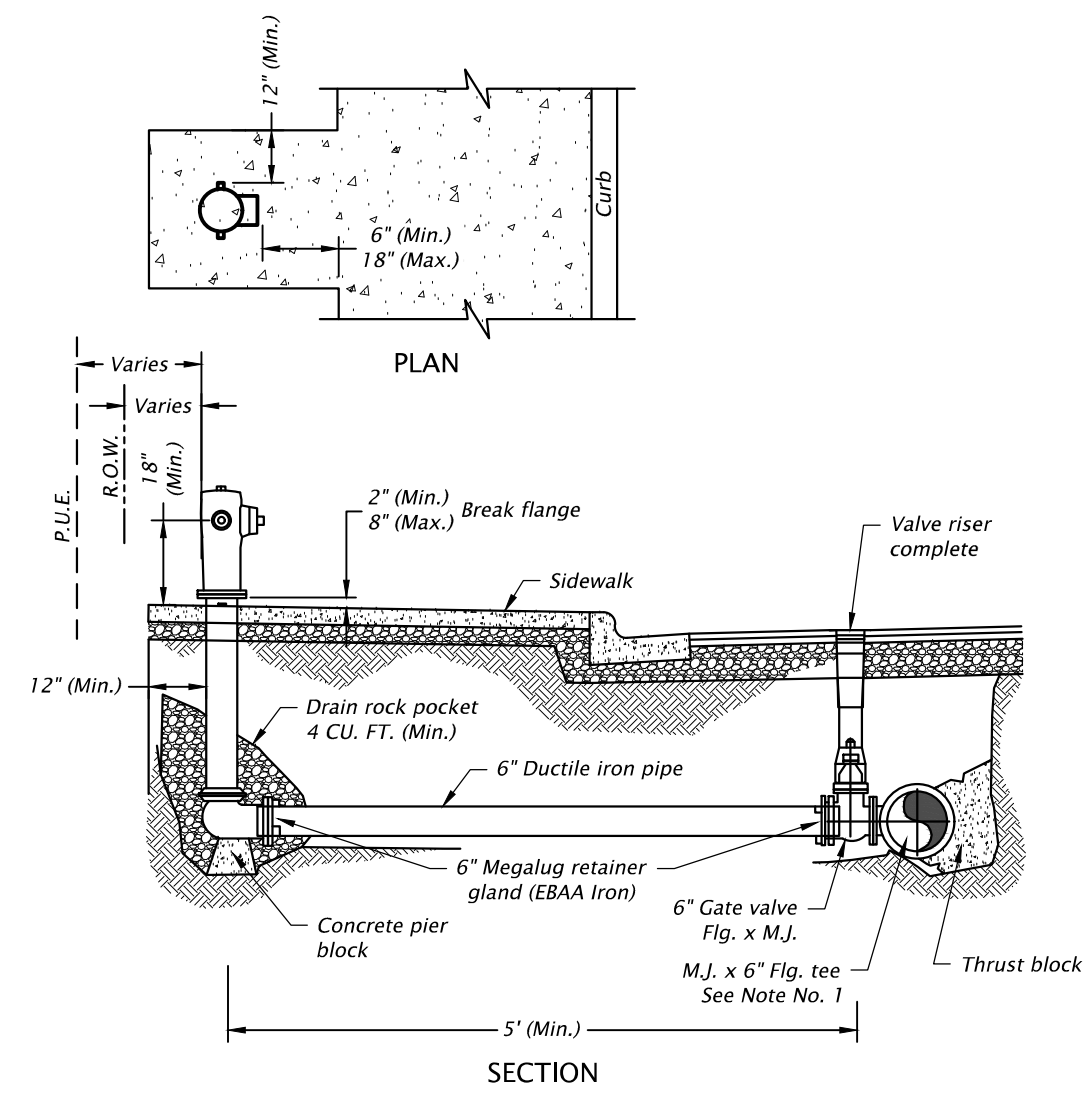


- TYPICAL SECTION NOTES:**
1. Side-slopes are shown as vert. to horiz.
 2. Street connections, driveways, curb ramps and other unique features are not shown in the typical sections. Where they occur, the feature supercedes the typical section.
 3. For addl. details, see "DECIDUOUS TREE PLANTING" detail on sht. B802.

- STA. "L" 10+73 To "L" 11+39
- STA. "L" 11+96 To "L" 13+23
- STA. "L" 14+73 To "L" 16+50
- STA. "L" 17+06 To "L" 18+35
- STA. "L" 20+11 To "L" 21+23

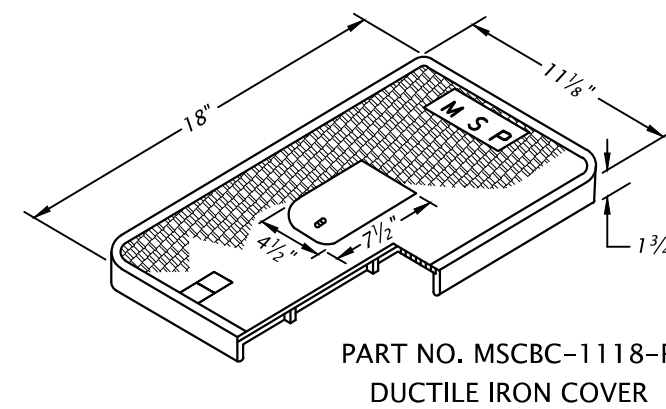


<p>DAVID EVANS AND ASSOCIATES INC. 5121 Skyline Village Loop S., Suite 200 Salem, Oregon 97306 Phone: 503.361.6636</p>		
<p>COLUMBIA BOULEVARD SIDEWALK SAINT HELENS, OREGON COLUMBIA COUNTY</p>		
<p>Designer: Tai Imamura Draftster: Corey Spielman</p>	<p>Reviewer: Ryan Berger Checker: Paul Tappan</p>	<p>SHEET NO. BA01</p>
<p>TYPICAL SECTIONS</p>		<p>RENEWS: 06-30-2024</p>



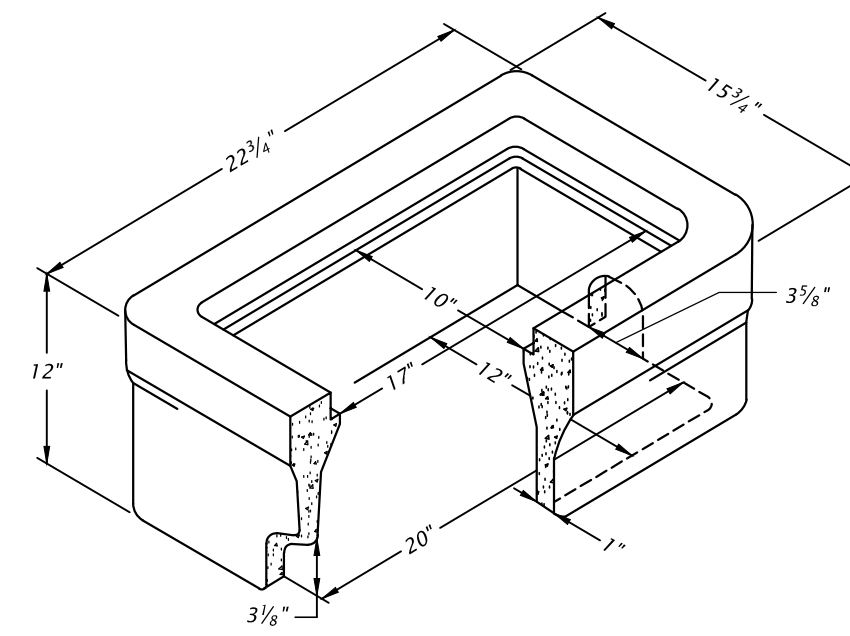
- Notes:**
- Mueller Traditional Centurion or other approved equal. (Verify approved hydrants with City of St. Helens Fire Marshall)
 - No obstructions within 3 ft. of fire hydrant. Sidewalk shall be widened around fire hydrant.
 - Install 5-Ft x 5-Ft PCC restraint collar when hydrant is not within PCC sidewalk. Restraint collar to match sidewalk thickness.
 - All public fire hydrants shall be painted solid yellow (Shop/Factory primary acceptable)
 - Steamer port on hydrant shall be a 5 inch Storz coupling and cap. Steamer port shall point to street or fire access road.
 - A Blue Reflective Mark shall be applied to the center of the road in line with the hydrant

FIRE HYDRANT INSTALLATION
City of St. Helens Dwg. 400



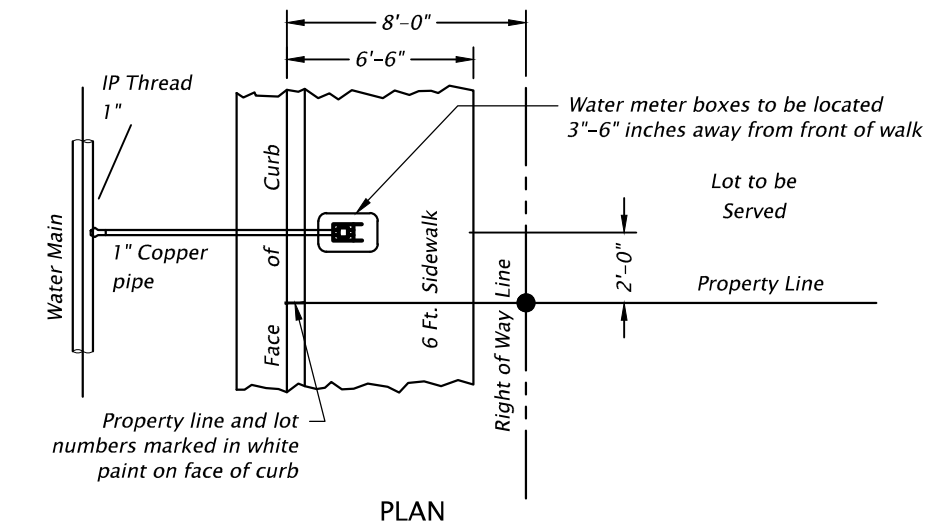
**PART NO. MSCBC-1118-R
DUCTILE IRON COVER**

Note:
City shall provide contractor with new meter boxes for all water meter relocations. Meter box detail is shown for reference.



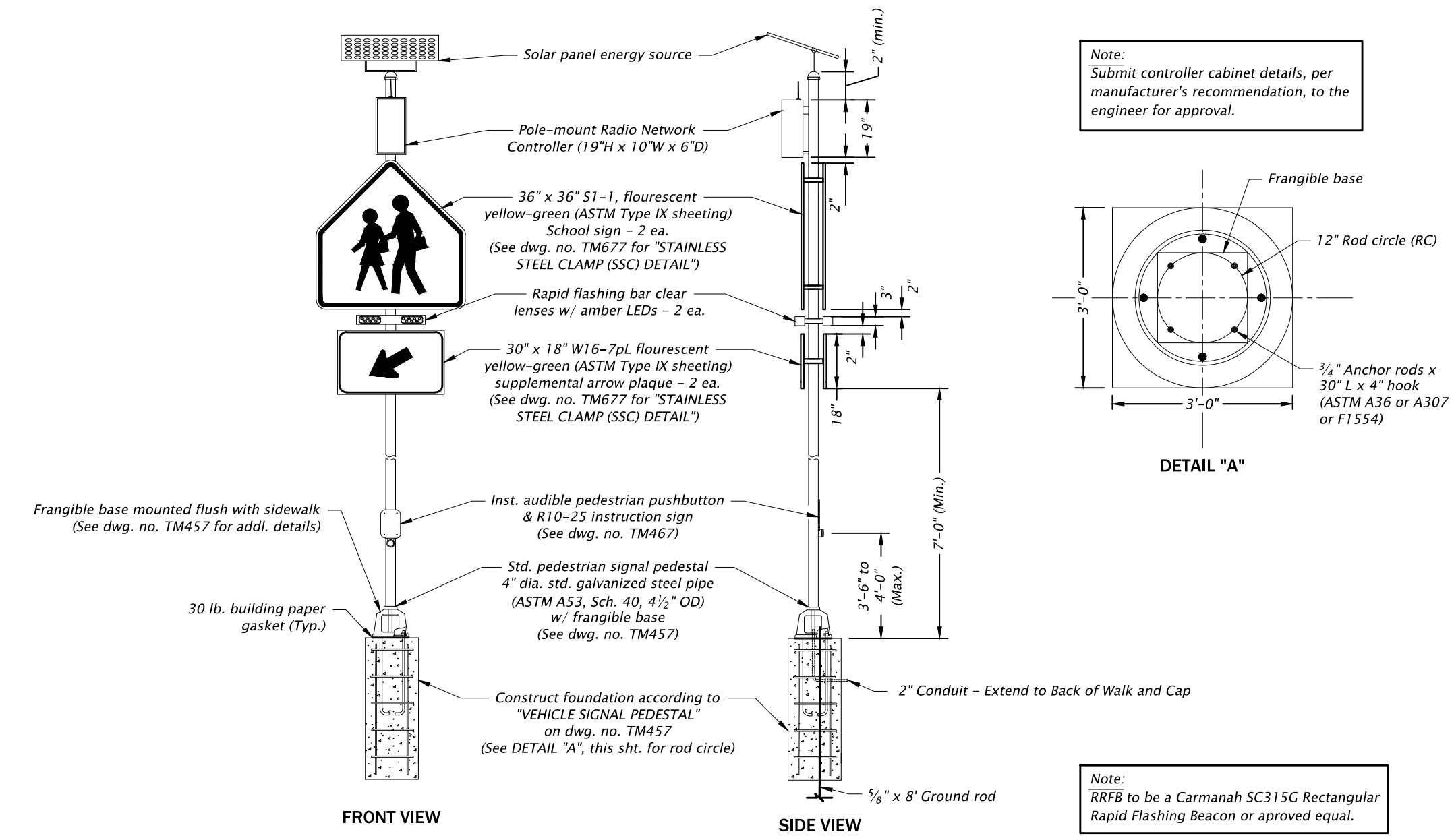
- Notes:**
- No. 37 body with ductile iron cover.
 - Lightweight (LR) boxes not acceptable.

BROOKS 12" X 20" METER BOX FOR 1" WATER METER
City of St. Helens Dwg. 406



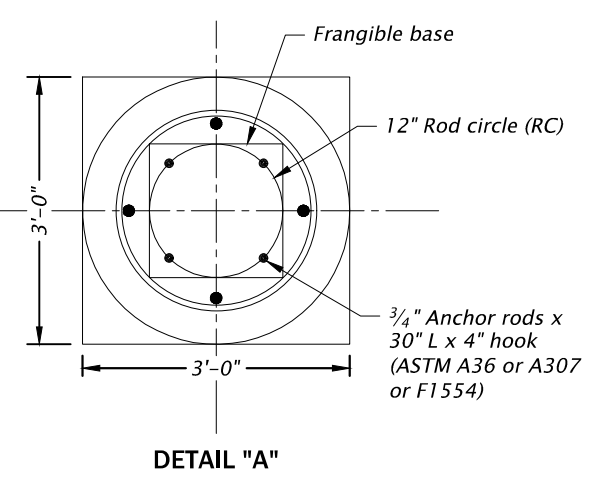
- Notes:**
- Use MSP Ductile Iron Cover Part No. MSCBC-1118-R as approved by the City.
 - Use all compression type fittings.
 - Meters shall not be located in driveway approach.
 - Meters shall be centered in meter box.
 - If copper pipe is dented, bent or crimped, the damaged section shall be removed.

SINGLE WATER SERVICE INSTALLATION
City of St. Helens Dwg. 405

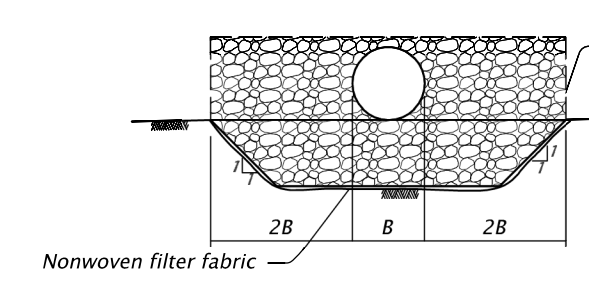
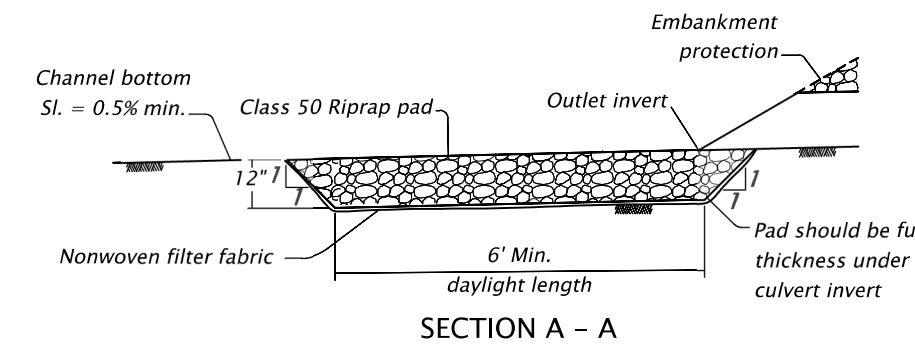
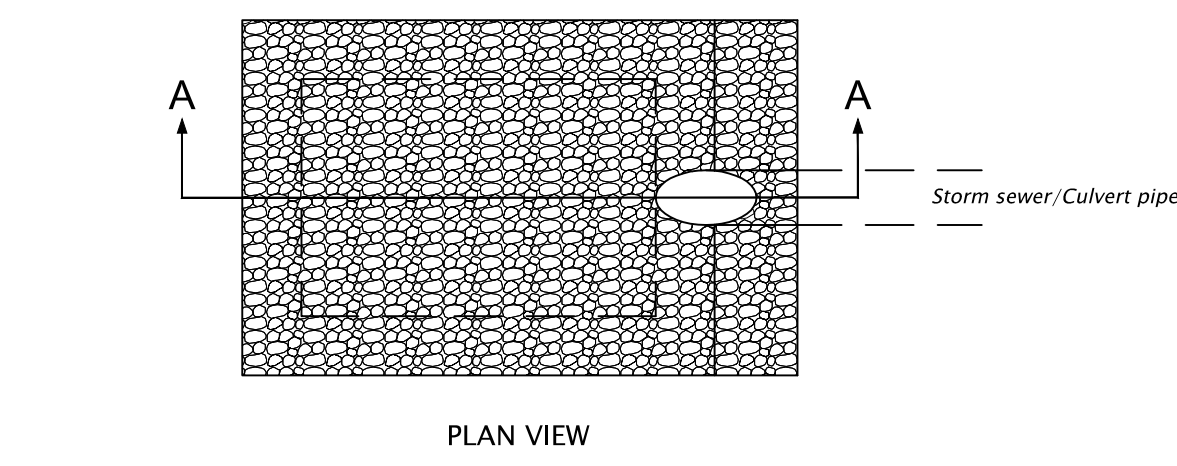


**RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM
PEDESTRIAN PEDESTAL INSTALLATION (TWO-SIDED, SOLAR)**

Note:
Submit controller cabinet details, per manufacturer's recommendation, to the engineer for approval.

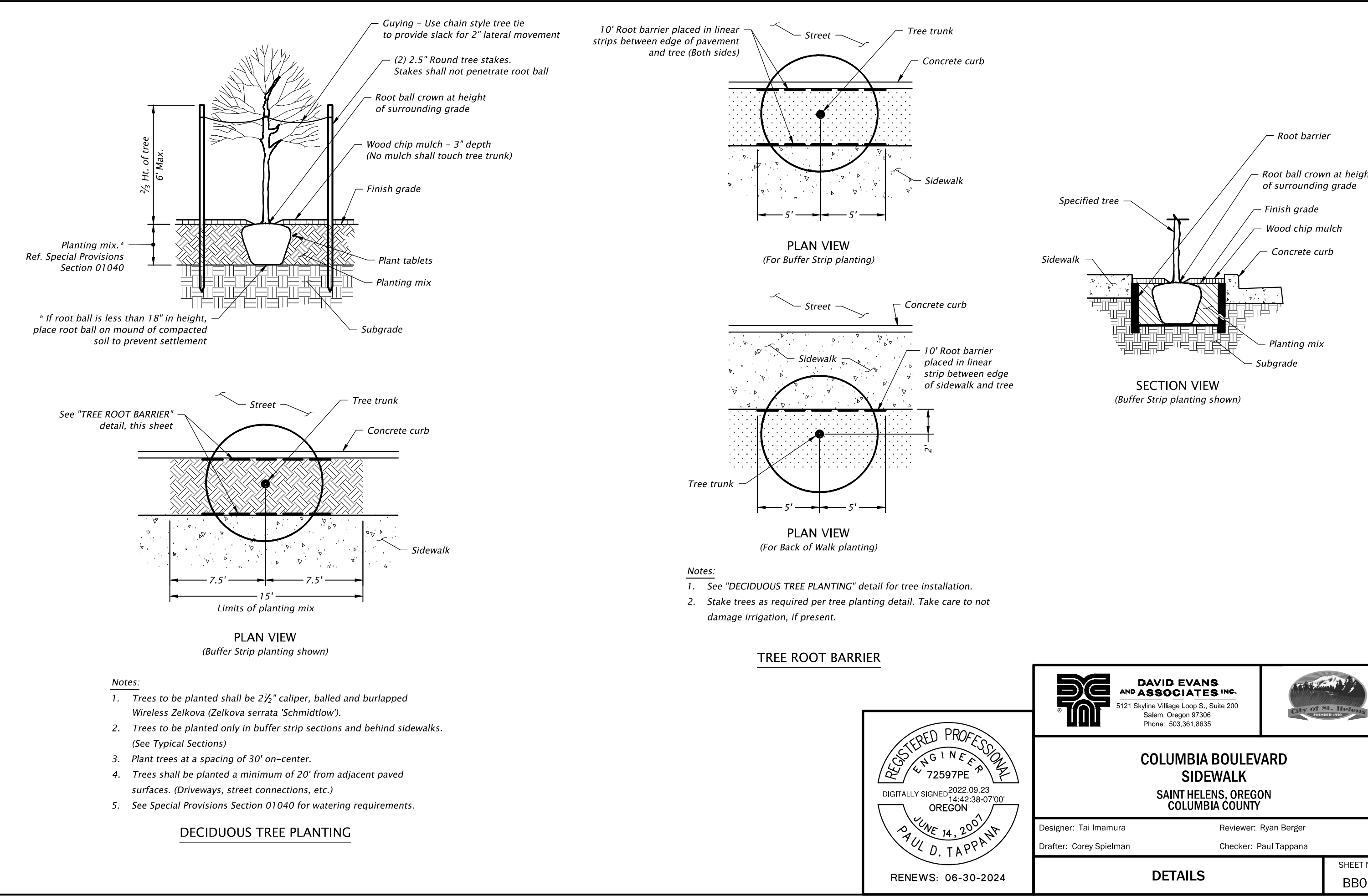
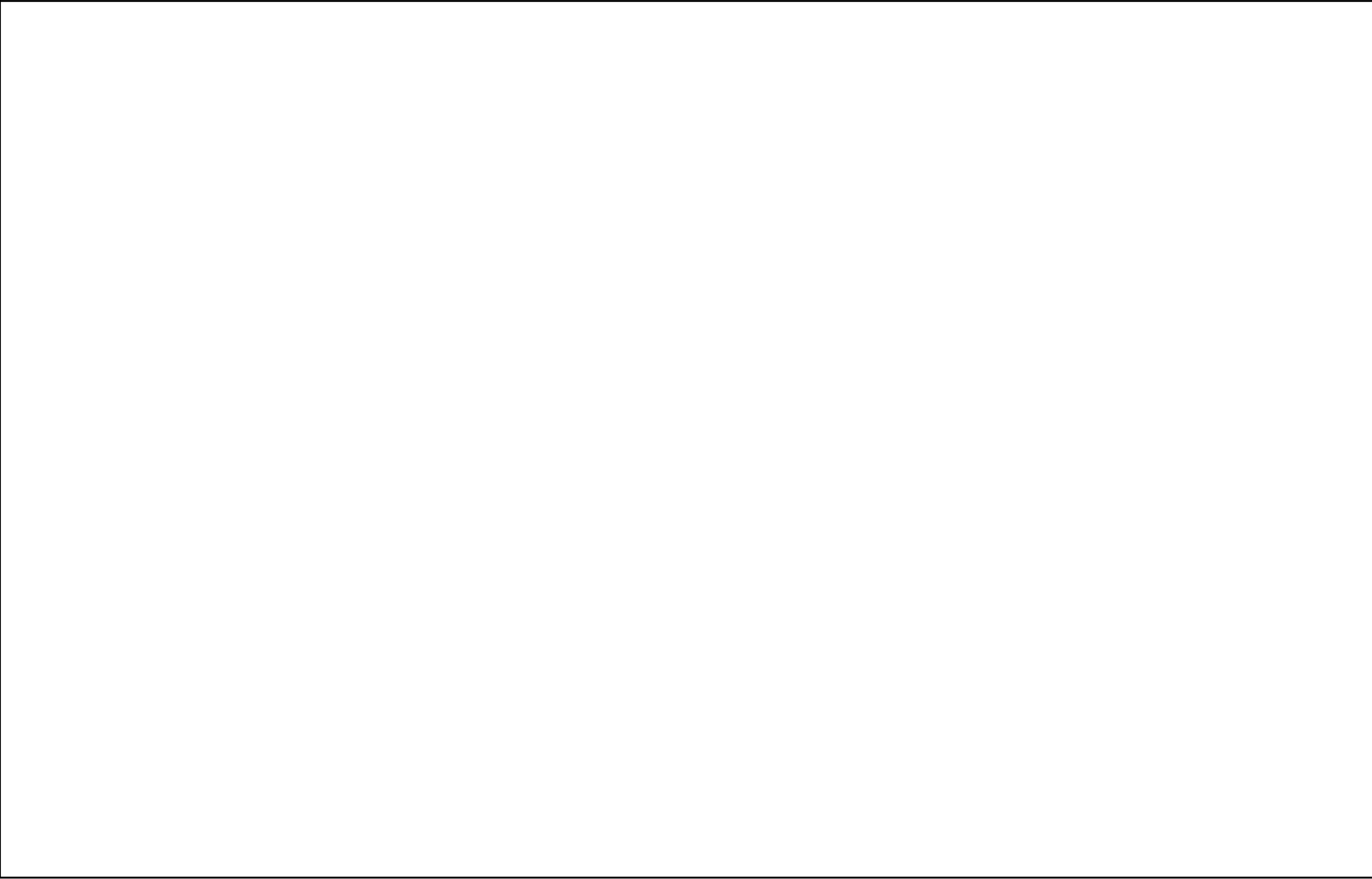
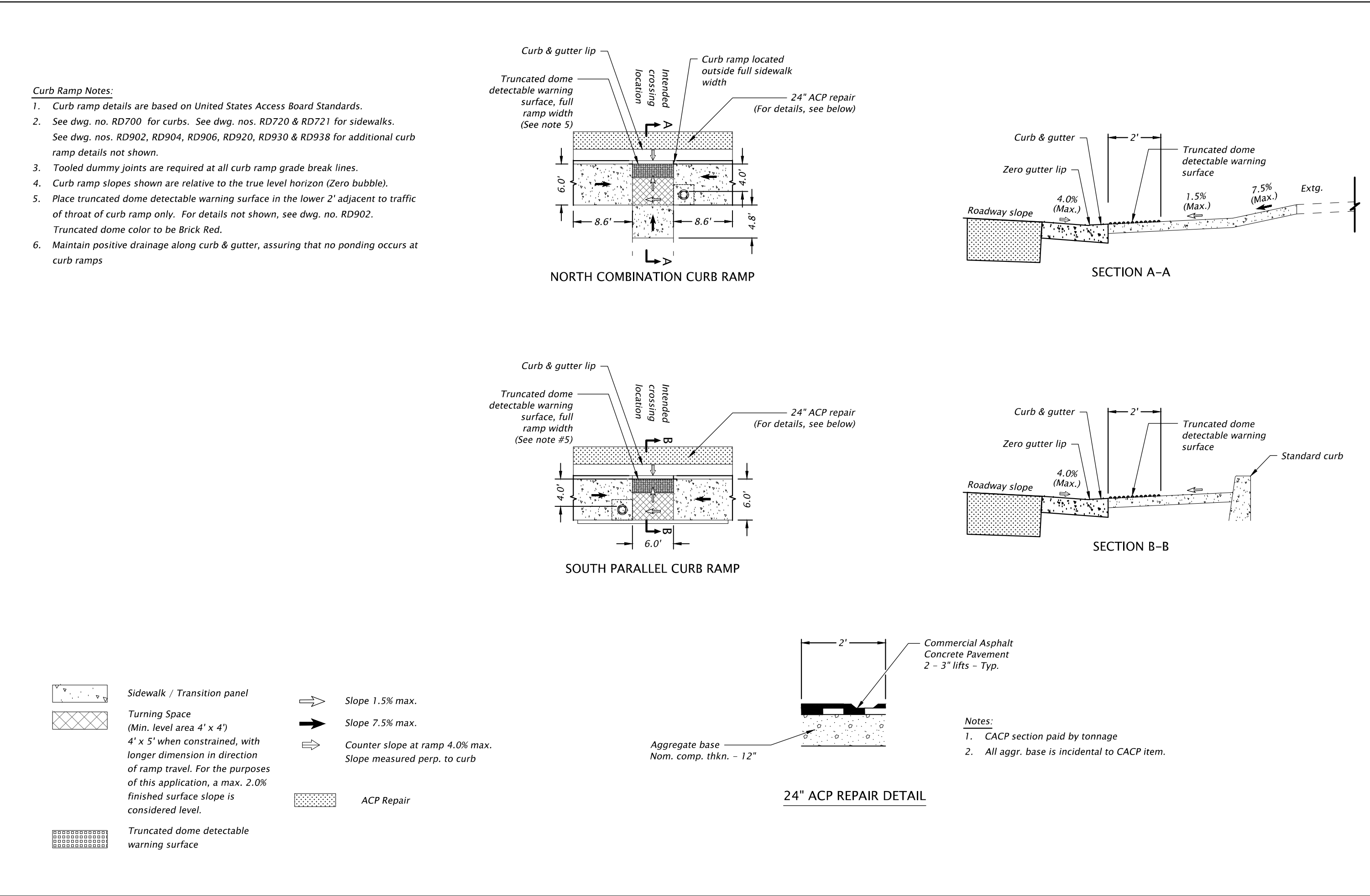
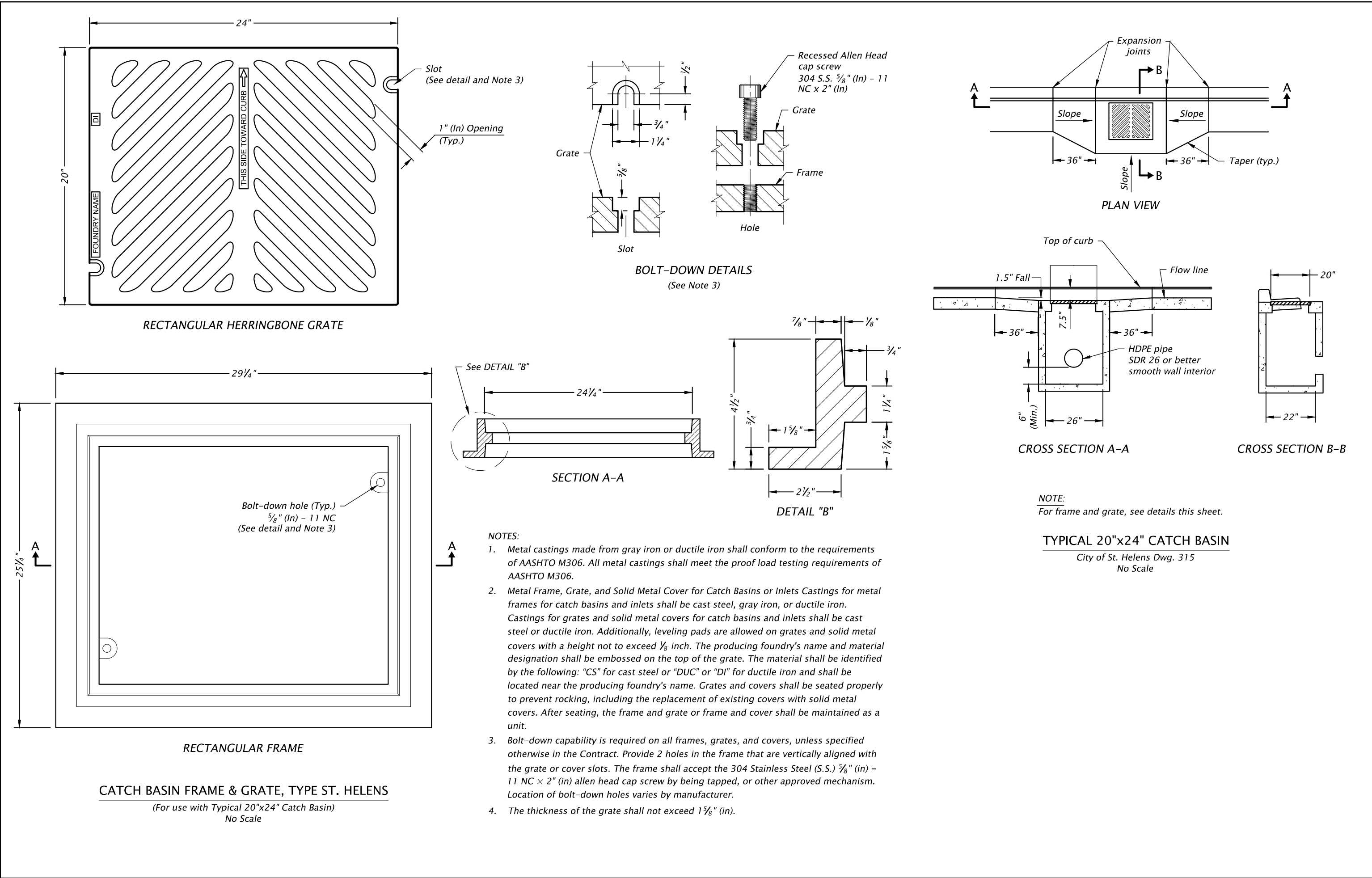


Note:
RRFB to be a Carmanah SC315G Rectangular Rapid Flashing Beacon or approved equal.



**END VIEW
RIPRAP BASIN**

	<p>DAVID EVANS AND ASSOCIATES INC. 5121 Skyline Village Loop S., Suite 200 Salem, Oregon 97306 Phone: 503.361.8635</p>	
	<p>COLUMBIA BOULEVARD SIDEWALK SAINT HELENS, OREGON COLUMBIA COUNTY</p>	
<p>RENEWS: 06-30-2024</p>	<p>DETAILS</p>	<p>SHEET NO. BB01</p>



DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S., Suite 200
Salem, Oregon 97306
Phone: 503.381.8838

REGISTERED PROFESSIONAL ENGINEER
72597PE
OREGON
JUNE 14, 2007
PAUL D. TAPPAN

COLUMBIA BOULEVARD SIDEWALK
SAINT HELENS, OREGON
COLUMBIA COUNTY

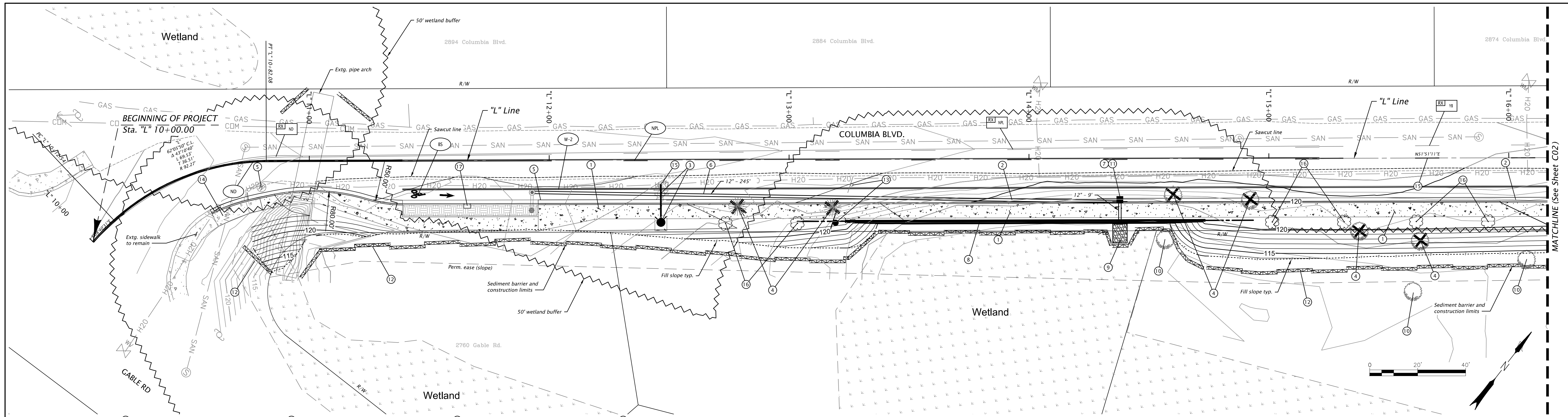
Designer: Tai Imamura
Drafter: Corey Spielman

Reviewer: Ryan Berger
Checker: Paul Tappan

RENEWS: 06-30-2024

DETAILS

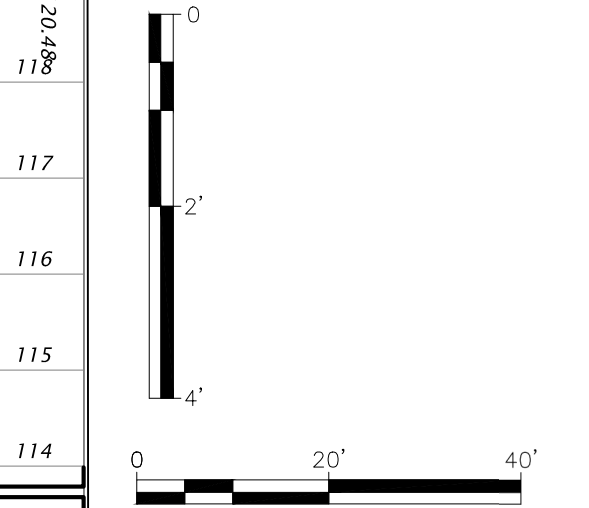
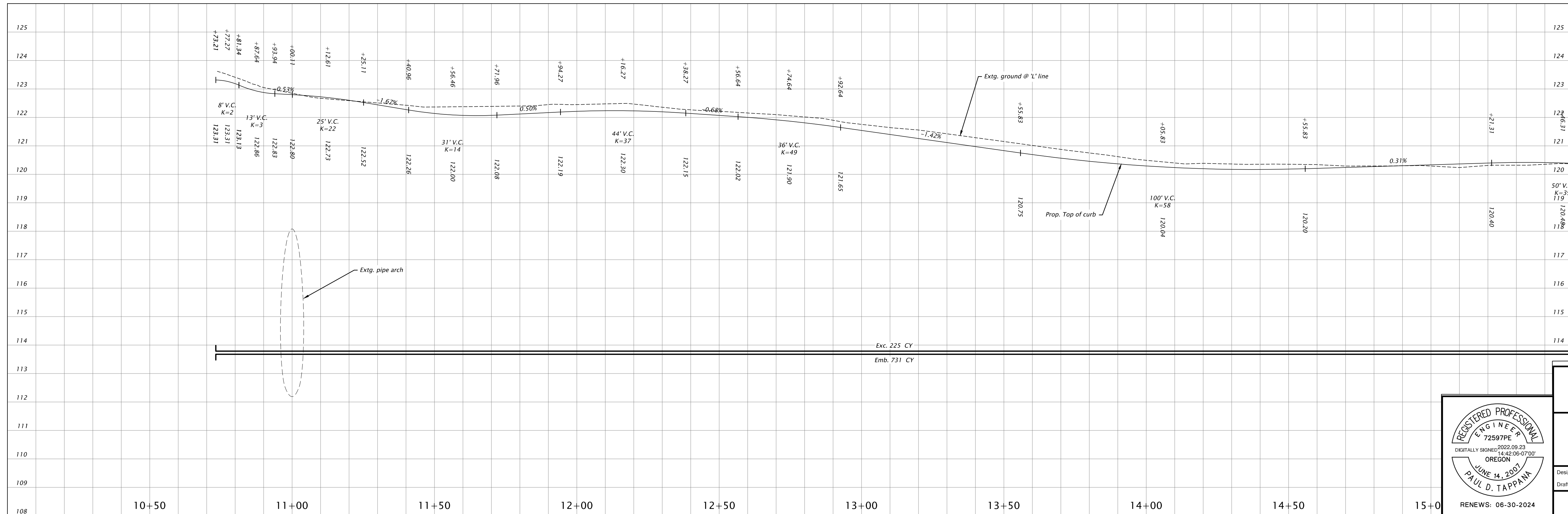
SHEET NO. BB02



- 1 Const. PCC conc. walk - 2,784 sf (See dwg. no. RD720 and RD721)
- 2 Const. curb & gutter - 491' (See dwg. no. RD700)
- 3 Relocate fire hydrant (by others) (For detail, see sht. 8801)
- 4 Remove extg. tree - 6
- 5 Minor adjust manhole (See dwg. RD360)
- 6 Const. 12" storm drain pipe Connect to extg. manhole Inv. 117.00 (NE) Inst. 12" outlet pipe - 245', S=1.02% 5' depth (See dwg. nos. RD300, RD339, RD363, RD386 & RD388) (For details, see sht. 8802) (For profile, see sht. C04, SD-2 Line)
- 7 Sta. "L" 14+37.83, 15.6' Rt. Const. catch basin, type St. Helens Grate elev. 119.19 F.L. In 114.50 (NE) F.L. Out 114.25 (SE) Inst. 12" outlet pipe - 9', S=3.08% 5' depth (For details, see sht. 8802) (For profile, see sht. C04, SD-2 Line)
- 8 Wall no. 1 (Fill) Sta. "L" 13+23 to Sta. "L" 14+73, Rt. Const. retaining wall (For details, see sht. GB01)
- 9 Const. riprap basin (For detail, see sht. 8801)
- 10 Maintain and protect extg. tree - 3
- 11 Inst. inlet protection (Type 3) (See dwg. no. RD1010)
- 12 Const. sediment barrier - 599' (Sediment barrier is construction limits) (See erosion control notes, sht. A02) (See dwg. no. RD1032)
- 13 Remove & save extg. "SPEED 35" sign Reinst. extg. sign on new PSST post 2" - 12ga. - 10' (Anchor base) (See dwg. nos. TM200, TM671, TM676, TM681 TM687)
- 14 Const. transition panel (See dwg. no. RD722)
- 15 Adjust water valve box (See dwg. no. RD258)
- 16 Inst. mitigation tree - 6 (For planting details, see sht. 8802)
- 17 Inst. inlet protection (Type 7) (See dwg. no. RD1010)

- ND Inst. narrow double no-pass Sta. "L" 10+00 to 12+01 - 201' (See dwg. nos. TM500)
- W-2 Inst. 8" white line Sta. "L" 11+39 to 15+50 - 441' (See dwg. nos. TM500, TM560, TM561)
- YB Inst. 4" yellow broken line Sta. "L" 15+21 to 15+50 - 29' (See dwg. no. TM500)
- NPL Inst. no-pass left line Sta. "L" 12+01 to 15+21 - 320' (See dwg. no. TM500)
- BS Inst. bike lane std. stencil (white) Sta. "L" 11+50, Rt. (See dwg. nos. TM503, TM530)
- Remove extg. narrow double no-pass
- Remove extg. no-pass left
- Remove extg. 4" yellow broken line

For Traffic Control, See dwg. nos. TM671, TM681, TM689, TM800, TM820, TM821, TM822 and TM850



DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S., Suite 200
Salem, Oregon 97306
Phone: 503.361.3635

**COLUMBIA BOULEVARD
SIDEWALK**
SAINT HELENS, OREGON
COLUMBIA COUNTY

Designer: Tai Inamura
Drafters: Corey Spielman

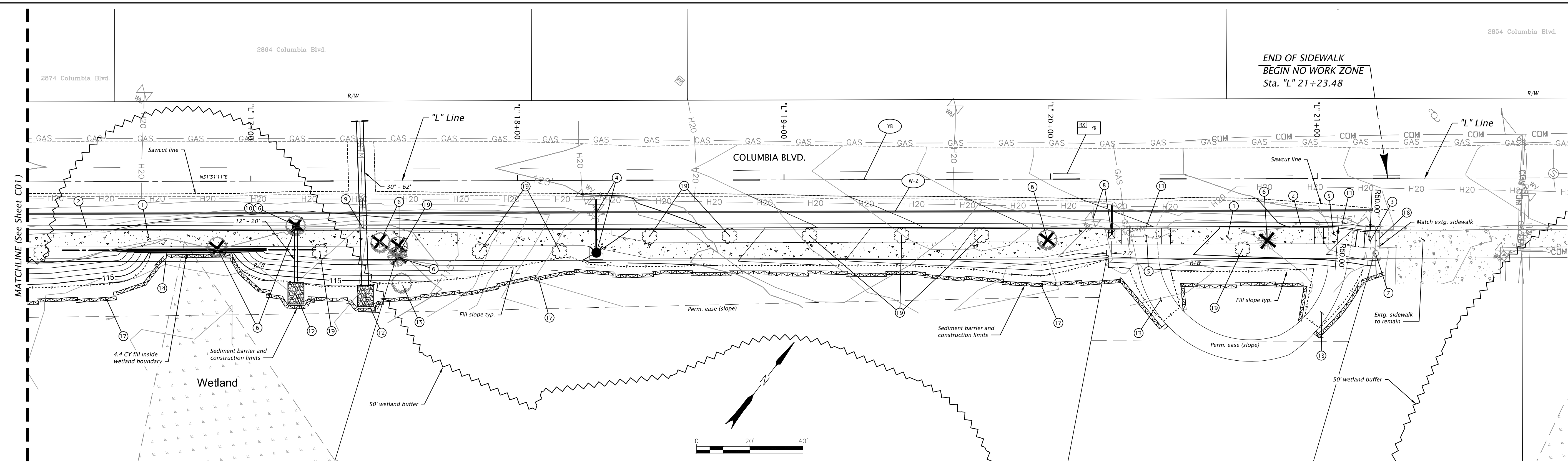
Reviewer: Ryan Berger
Checker: Paul Tappana

RENEWS: 06-30-2024

GENERAL CONSTRUCTION

SHEET NO.
C01

END OF SIDEWALK
BEGIN NO WORK ZONE
Sta. "L" 21+23.48



- 1 Const. PCC conc. walk - 2,671 sf
- 2 Const. curb & gutter - 508'
- 3 Const. sidewalk transition panel
- 4 Relocate fire hydrant (by others) (For detail, see sht. BB01)
- 5 Const PCC dwy. Option (N) - 2 (See dwg. no. RD750)
- 6 Remove extg. tree - 7
- 7 Maintain and protect extg. utility pole

- 8 Relocate water meter & box (by others) (For detail, see sht. BB01)
- 9 Sta. "L" 17+42.16, 18' Rt. Inst. 30" culv. - 62' 10' depth Const. sloped end (For profile, see sht. C04, SD-4 Line)
- 10 Sta. "L" 17+16.85, 15.6' Rt. Const. catch basin, type St. Helens 5' depth Grate elev. 118.90 F.L. Out 115.00 (S) Inst. 12" outlet pipe - 20', S=4.71% Const. sloped end (For details, see sht. BB02) (For profile, see sht. C04, SD-3 Line)

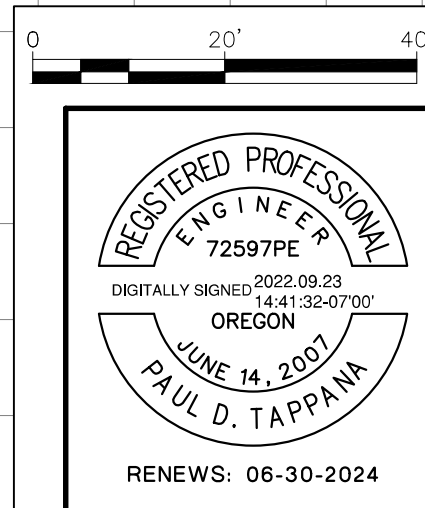
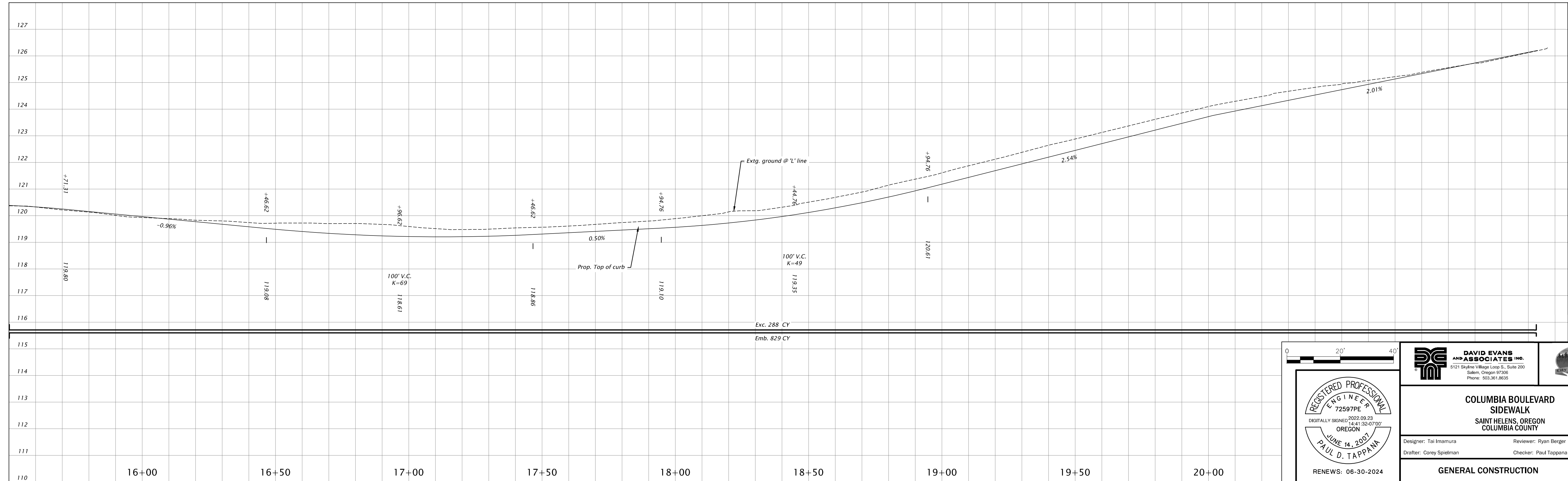
- 11 Remove & dispose of existing culvert - 2
- 12 Const. riprap basin - 2 (For detail, see sht. BB01)
- 13 Regrade driveway as needed to achieve 15% max. slope
- 14 Wall no. 2 (Fill) Sta. "L" 16+50 to Sta. "L" 17+06, Rt. Const. retaining wall (For details, see sht. CB02)
- 15 Maintain and protect extg. tree
- 16 Inst. inlet protection (Type 3)

- 17 Const. sediment barrier - 600' (sediment barrier is construction limits) (see erosion control notes, sht. A02) (See dwg. no. RD1032)
- 18 Remove and dispose of extg. sidewalk barricade
- 19 Inst. mitigation tree - 6 (For planting details, see sht. BB02)

- W-2 Inst. 8" white line Sta. "L" 15+50 to 21+24 - 574'
- YB Inst. 4" yellow broken line Sta. "L" 15+50 to 21+24 - 574'

Remove extg. 4" yellow broken line

For Traffic Control, See dwg. nos. TM671, TM681, TM389, TM800, TM820, TM821, TM822 and TM850



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5121 Skyline Village Loop S., Suite 200
Salem, Oregon 97306
Phone: 503.361.8635

COLUMBIA BOULEVARD SIDEWALK
SAINT HELENS, OREGON
COLUMBIA COUNTY

Designer: Tai Imamura
Checker: Paul Tappara

Reviewer: Ryan Berger
Check: Ryan Berger

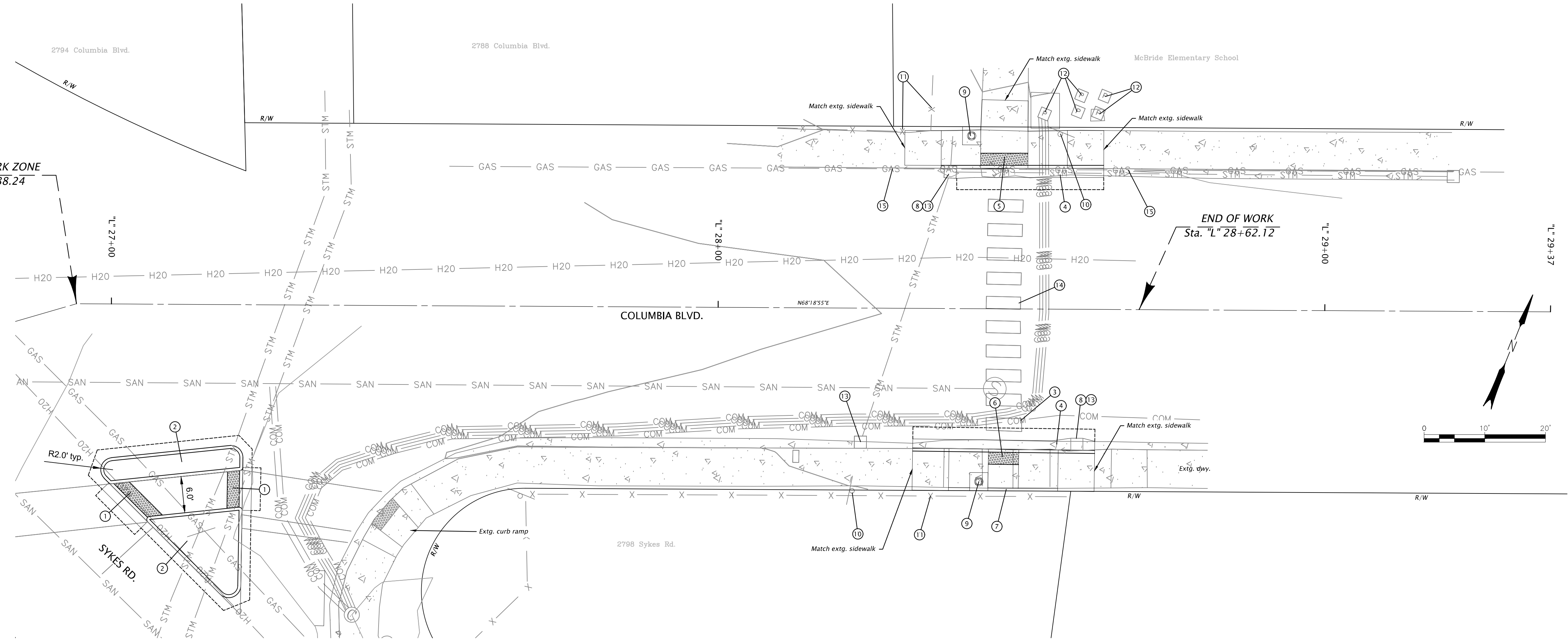
RENEWS: 06-30-2024

GENERAL CONSTRUCTION

SHEET NO. C02

END NO WORK ZONE
Sta. "L" 26+88.24

END OF WORK
Sta. "L" 28+62.12

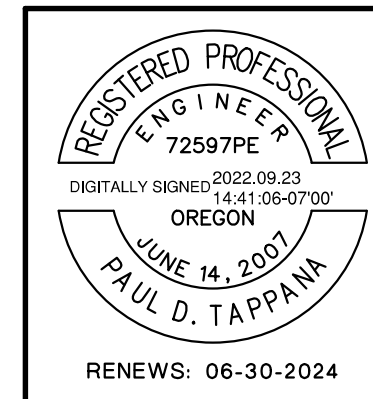
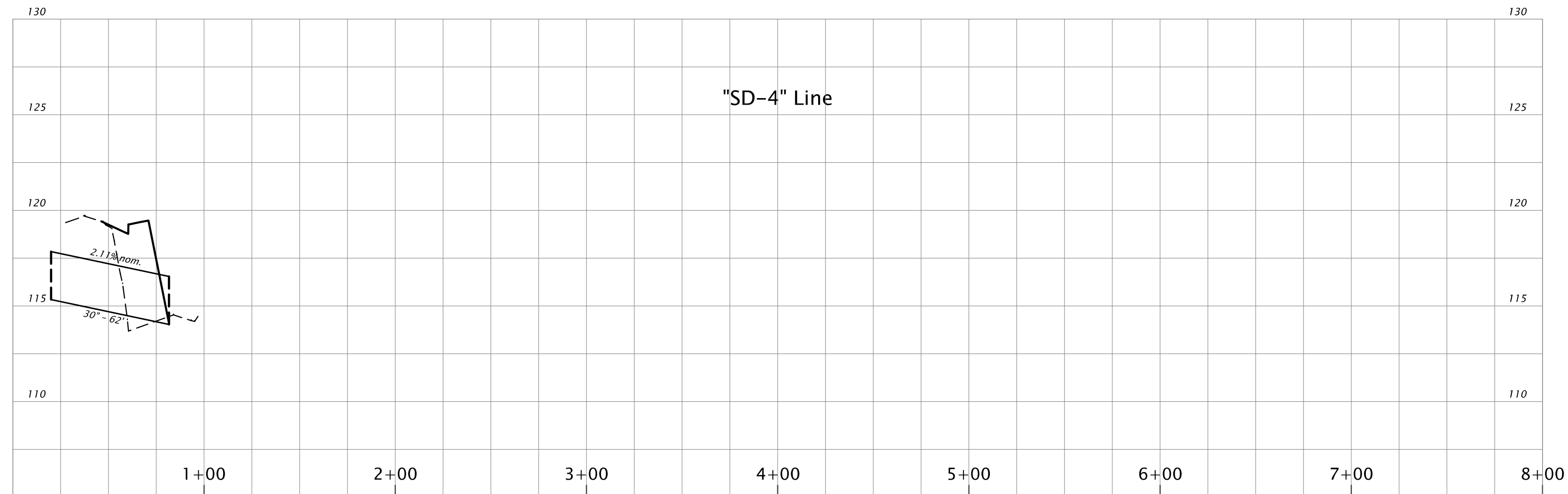
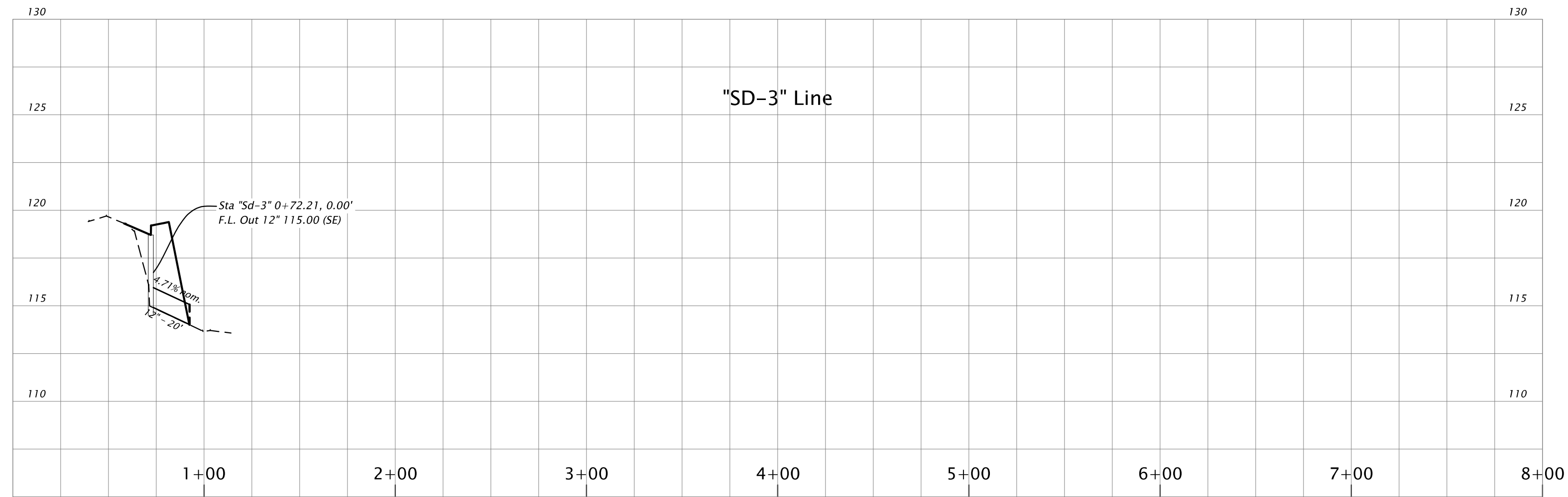
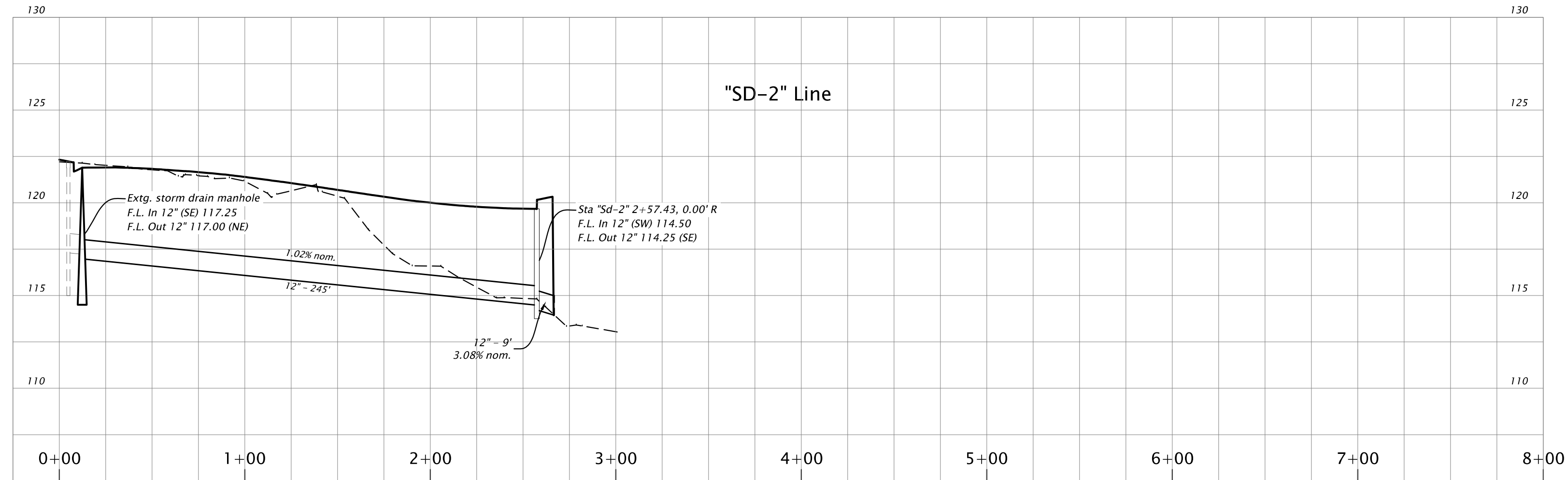


- ① To be constructed by others
Remove extg. ACP
Const. curb & gutter with pvmt. repair
Const. curb ramp, cut-through
Inst. brick red truncated domes on
new surface - 28 SF
Wet set on PCC surfacing
(For details, see sht. BB02)
(See dwg. no. RD902 & RD906)
- ② To be constructed by others
Remove extg. ACP
Const. type "A" conc. island (non-mountable) - 236 SF
Nose treatment opt. "A"
Const. ACP repair
(See dwg. nos. RD705, RD707 & RD710)
- ③ Repair crosswalk bar
(See dwg. no. TM503)
- ④ Remove extg. curb & gutter
Const. curb and gutter with pvmt. repair
(For Details, see sht. BB02)
- ⑤ Remove sidewalk
Const. curb ramp, combination (CC-12)
Inst. brick red truncated domes on
new surface - 10 sq. ft.
Wet set on PCC surfacing
(For details, see sht. BB02)
- ⑥ Remove sidewalk
Const. curb ramp, parallel (PL-1)
Inst. brick red truncated domes on
new surface - 10 sq. ft.
Wet set on PCC surfacing
(For details, see sht. BB02)
- ⑦ Const. std. curb - 21'
(See dwg. no. RD700)
- ⑧ Adjust inlet - 2
(See dwg. no. RD736)
- ⑨ Inst. rectangular rapid flashing beacon (RRFB) - 2
two sided, solar
(For details, see sht. BB01)
- ⑩ Remove extg. school crossing sign & post - 2
- ⑪ Maintain and protect extg. wood fence - 2
- ⑫ Maintain & protect extg. elec. equipment - 5
- ⑬ Inst. inlet protection (Type 3) - 3
- ⑭ Maintain & protect extg. continental crosswalk
- ⑮ Maintain & protect extg. natural gas main

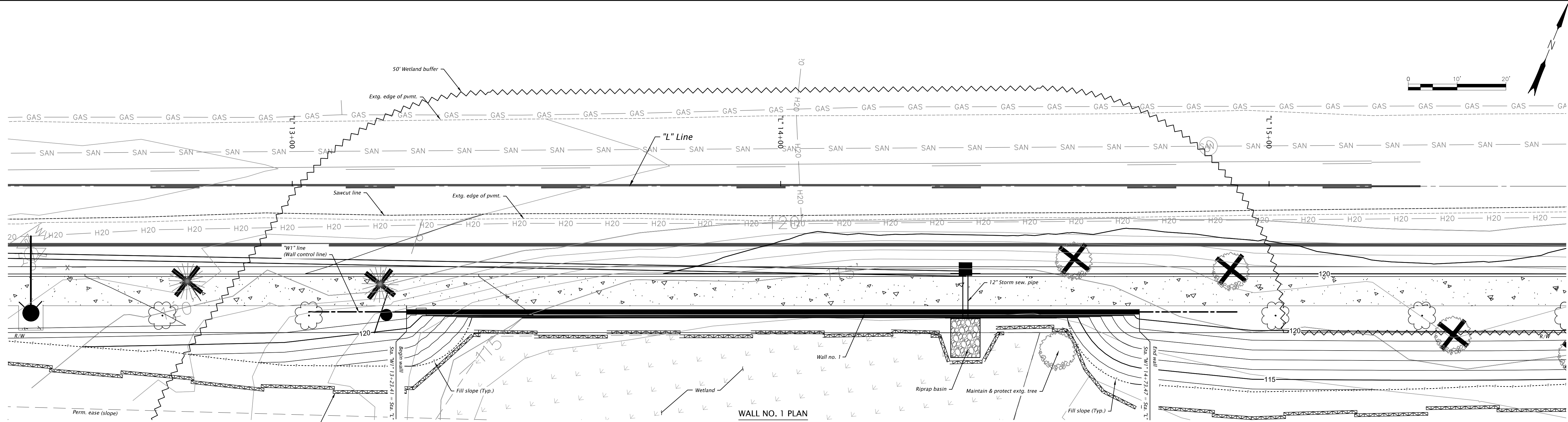
	DAVID EVANS AND ASSOCIATES INC. <small>5121 Skyline Village Loop S., Suite 200 Salem, Oregon 97306 Phone: 503.361.8635</small>	
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**REGISTERED PROFESSIONAL
ENGINEER**
 72597PE
DIGITALLY SIGNED 2022.09.23 14:43:06-0700
OREGON
PAUL D. TAPPANA
 RENEWS: 06-30-2024

COLUMBIA BOULEVARD SIDEWALK SAINT HELENS, OREGON COLUMBIA COUNTY	
<small>Designer: Tai Imamura Drafter: Corey Spielman</small>	<small>Reviewer: Ryan Berger Checker: Paul Tappana</small>
GENERAL CONSTRUCTION	
<small>SHEET NO. C03</small>	

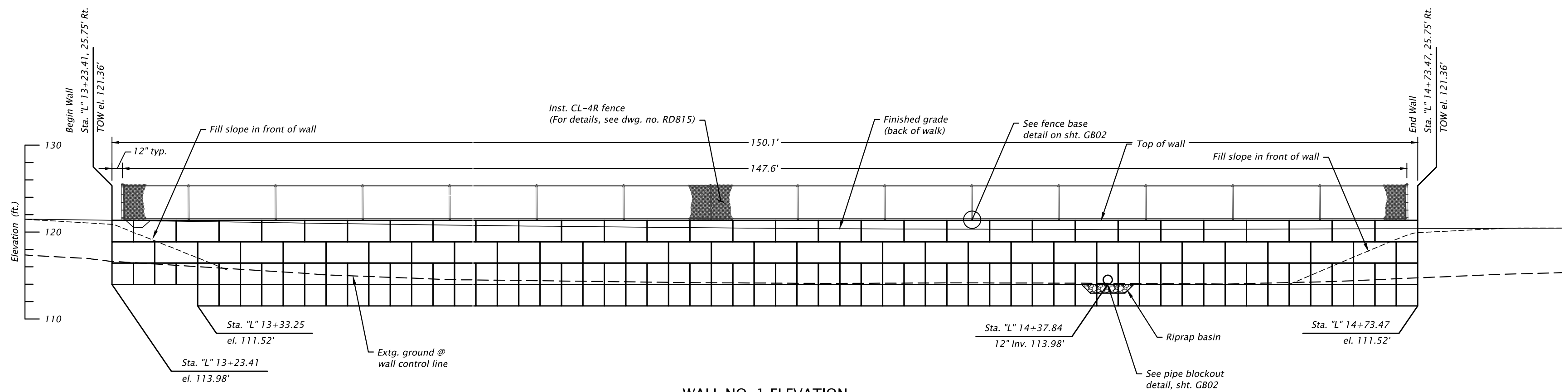


COLUMBIA BOULEVARD SIDEWALK SAINT HELENS, OREGON COLUMBIA COUNTY	
Designer: Tai Imamura	Reviewer: Ryan Berger
Drafter: Corey Spielman	Checker: Paul Tappana
DRAINAGE PROFILES	
SHEET NO. C04	



WALL NO. 1 PLAN
SCALE: 1" = 10'

NOTE
1. For wall typical section, details and construction notes, see sht. GB02.



WALL NO. 1 ELEVATION
SCALE: 1" = 10'

DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S, Suite 200
Salem, Oregon 97306
Phone: 503.361.8635

REGISTERED PROFESSIONAL ENGINEER
90087PE
DIGITALLY SIGNED 2022.09.23 16:08:06-07:00
OREGON
MARCH 12, 2019
MAKENZIE ANN ELLETT

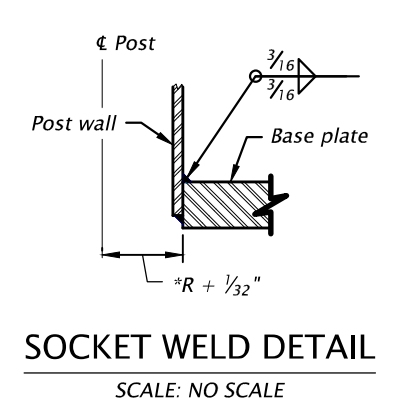
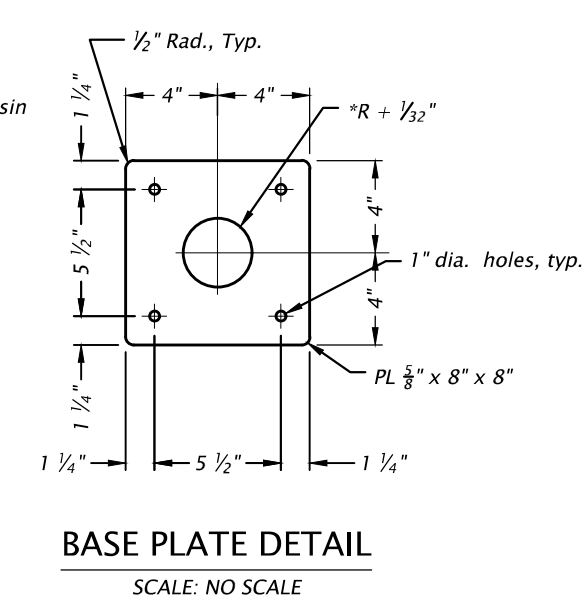
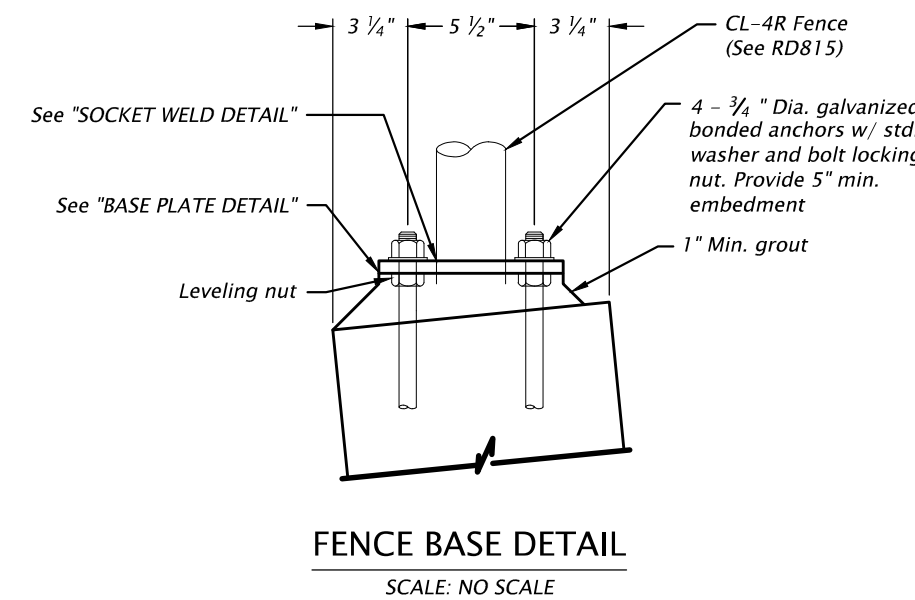
COLUMBIA BOULEVARD SIDEWALK
SAINT HELENS, OREGON
COLUMBIA COUNTY

Designer: Makenzie Ellett Reviewer: Craig Shike
Draftsman: Corey Spielman Checker: Paul Tappano

REVISIONS: 12-31-2023 RETAINING WALL PLAN SHEET NO. GB01

GENERAL NOTES

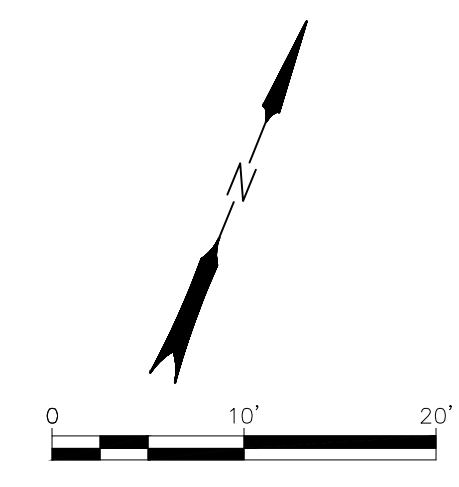
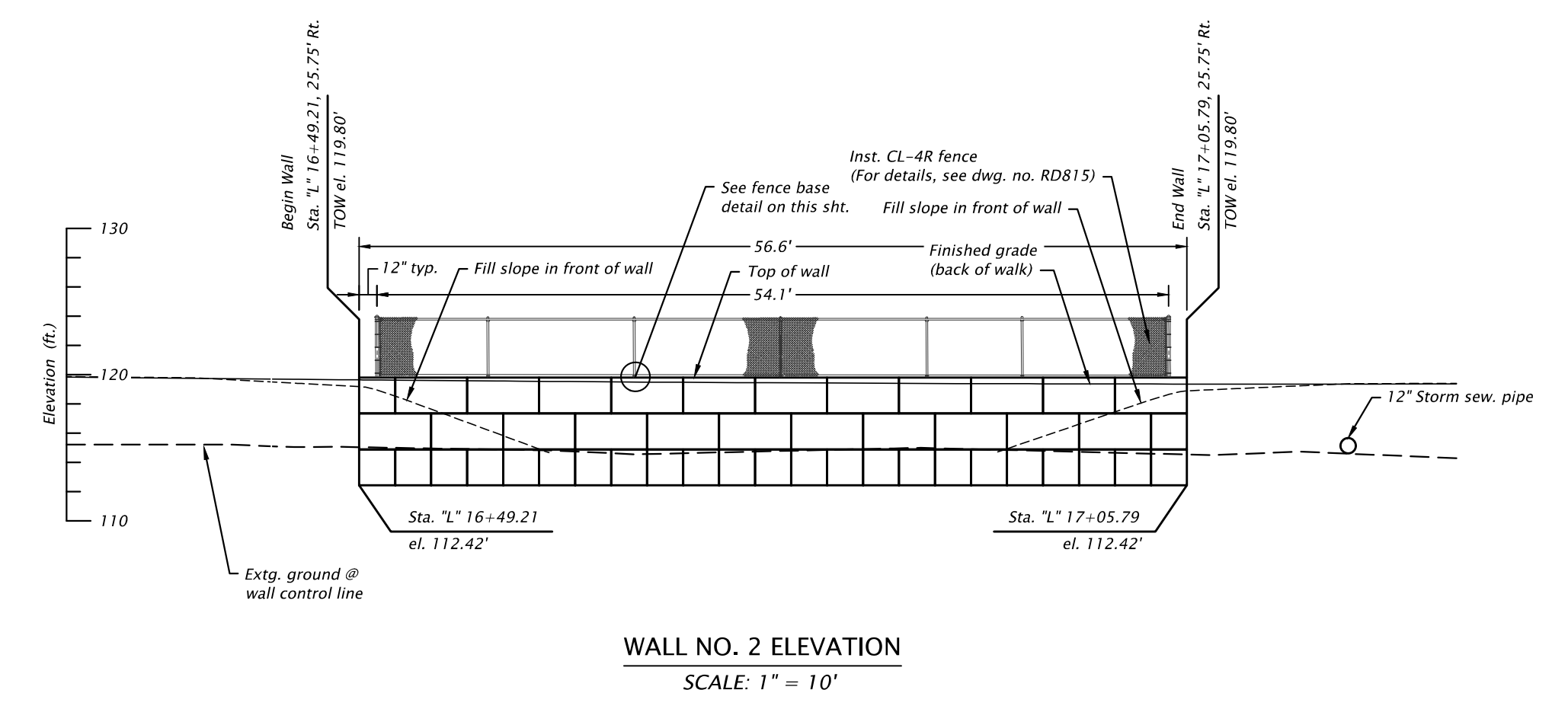
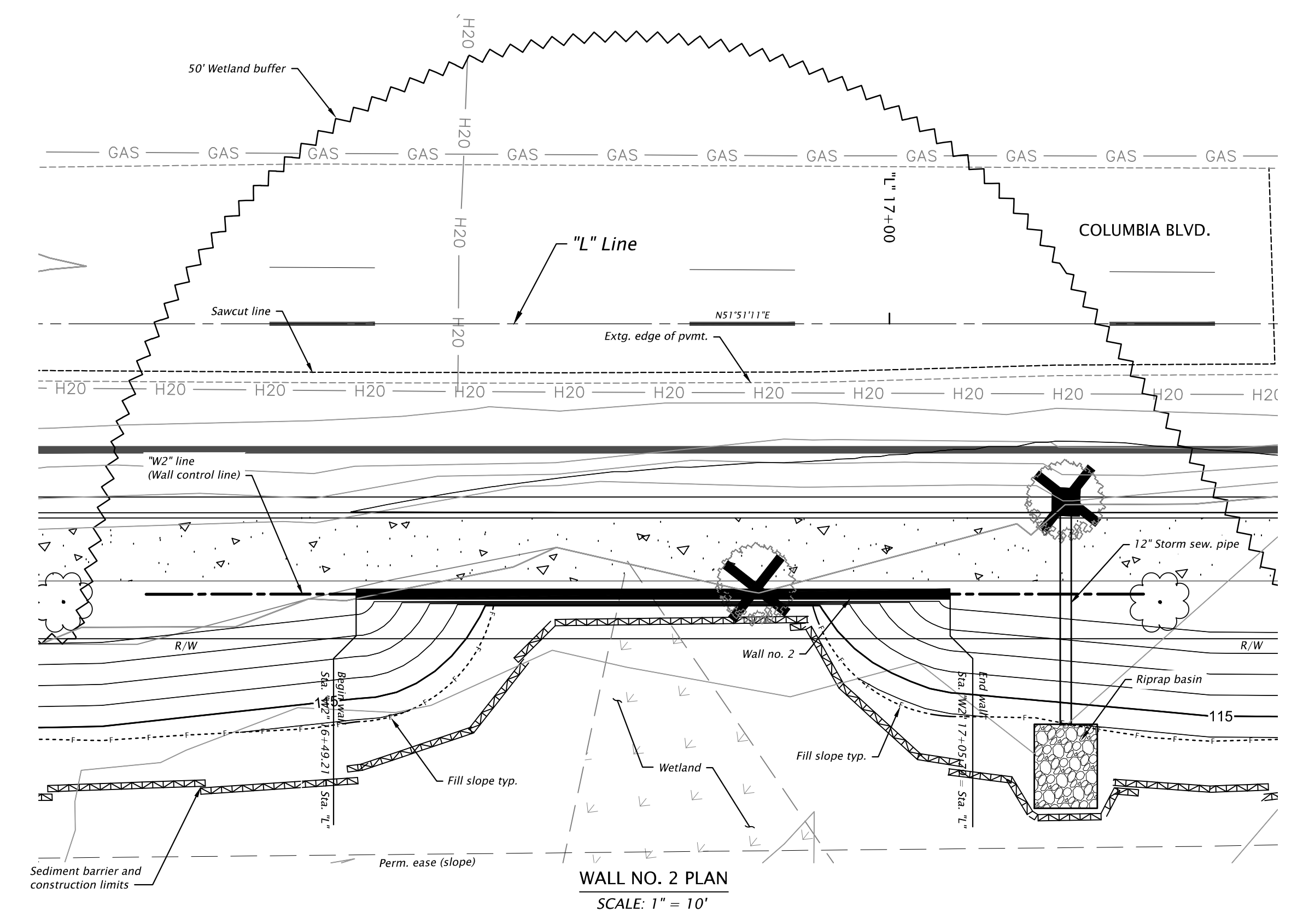
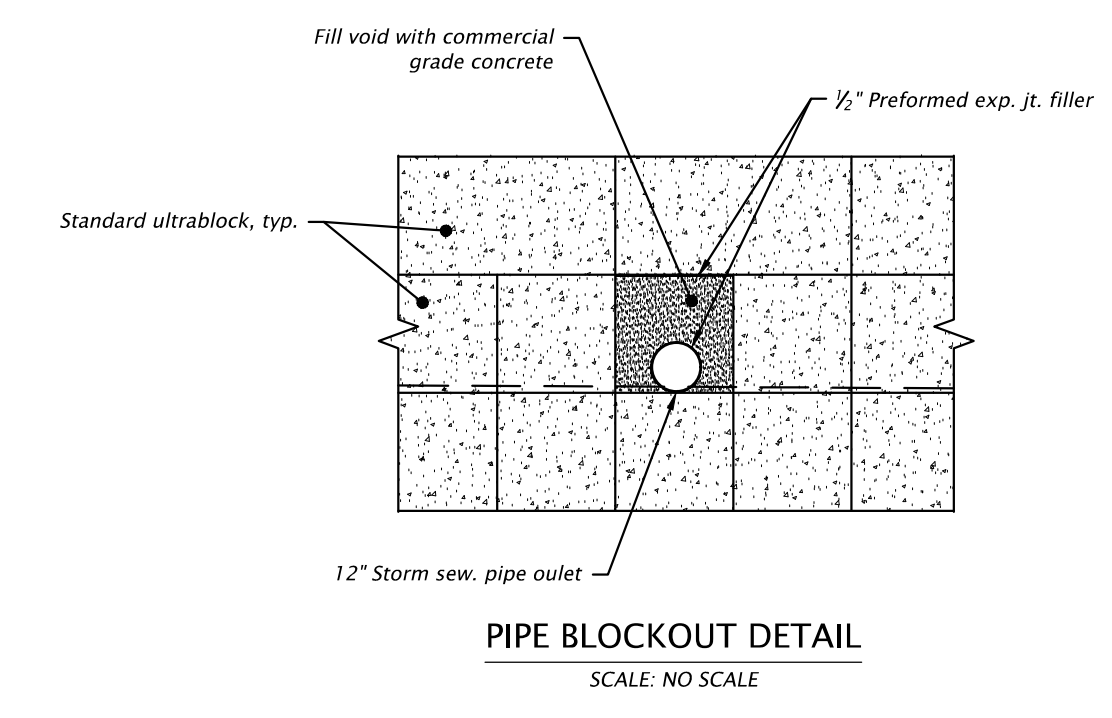
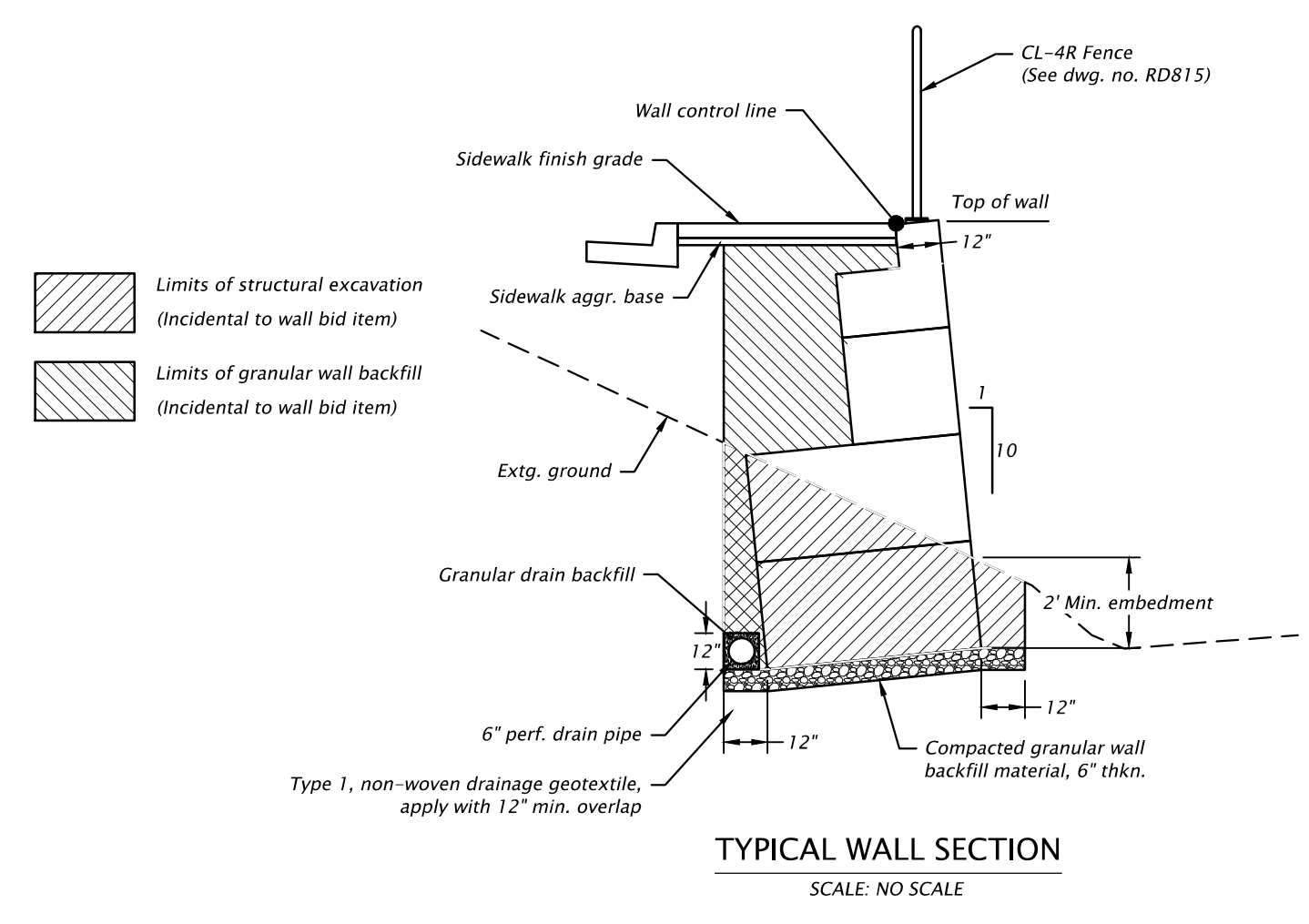
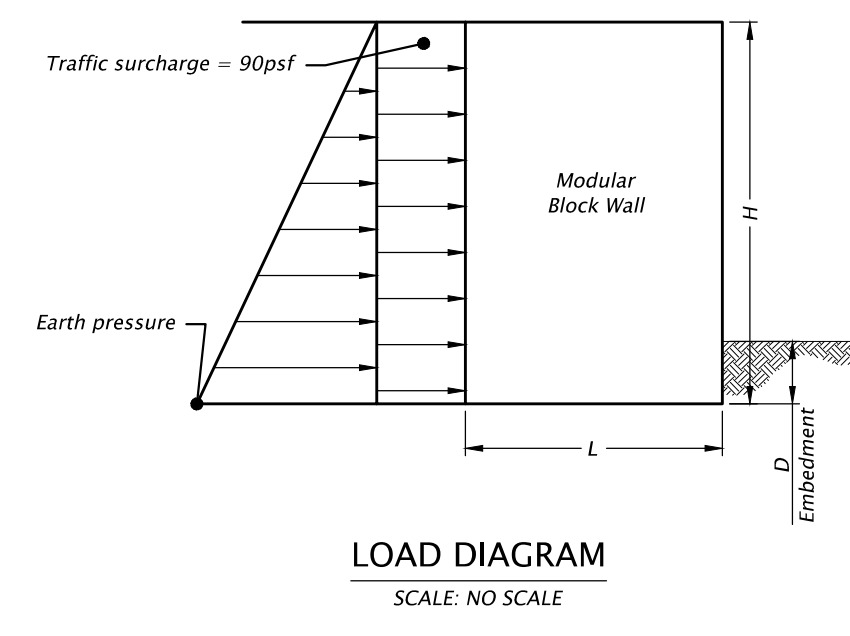
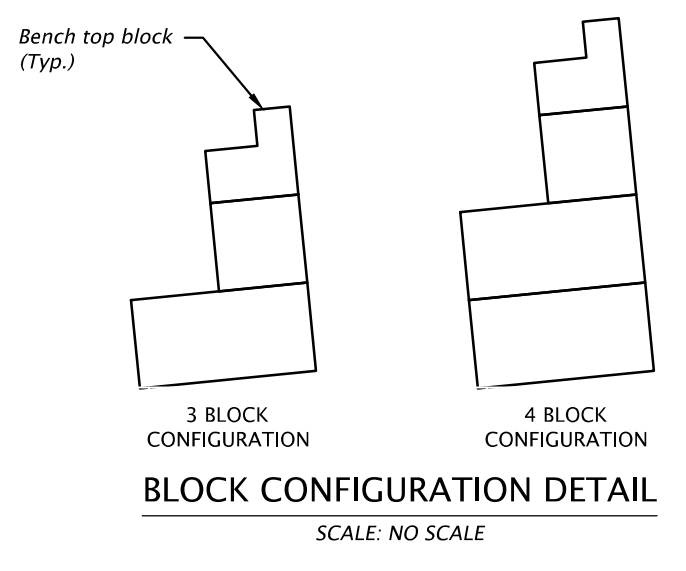
1. Provide all Materials and perform all work according to the 2021 Oregon Standard Specifications for Construction, as supplemented by the Special Provisions.
2. The contractor is solely responsible for all excavation procedures including lagging, shoring and protection of adjacent property, structures, streets and utilities in accordance with all national, state and local safety ordinances.
3. Drawings indicate general and typical details of construction. Where conditions are not specifically indicated, but are of similar characters to details shown, use similar details of construction, subject to review by the engineer.
4. Select a high-strength resin-bonded anchor product from the ODOT Qualified Products list.
5. Provide ASTM A36 hot dip galvanized anchor plates.
6. Provide grade 36 anchors.



Prefabricated Modular Block walls are designed for the following soil property values:

	Density pcf	Angle of Internal Friction	C psf
Granular Wall Backfill	125	34	0

Factored Allowable bearing pressure: 2500 psf



DAVID EVANS AND ASSOCIATES INC.
5121 Skyline Village Loop S., Suite 200
Salem, Oregon 97306
Phone: 503.361.8635

REGISTERED PROFESSIONAL ENGINEER
90087PE
DIGITALLY SIGNED
2022.09.23
16:09:24+07'00'
OREGON
MARCH 12, 2019
MAKENZIE ANN ELLETT

COLUMBIA BOULEVARD SIDEWALK
SAINT HELENS, OREGON
COLUMBIA COUNTY

Designer: Makenzie Ellett
Drafter: Corey Spielman

Reviewer: Craig Shike
Checker: Paul Tappano

SHEET NO. GB02